United States Department of the Interior

NATIONAL PARK SERVICE
Golden Gate National Recreation Area
Building 201, Fort Mason
San Francisco, CA 94123-0022

PROJECT SPECIFICATIONS

Replacement of Capehart Roofing Phase IV

PMIS – 336122

June 2026

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SECTION 01 11 00 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Work covered by the Contract Documents.
2. Work under other contracts.
3. Government Furnished Materials.
4. Contractor use of the site
5. Contractor access and use of site
6. Occupancy requirements for buildings.
7. Work Restrictions.
8. Field Verification

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Location: Capehart Housing Units 846, 850, 854, 858, 862, 866, and 870 on Menges St and Bottoms Dr in Sausalito, CA, 94965.

B. Contractor shall provide all labor, materials, tools and other equipment, services and supervision required to complete the work described below. The scope of this project includes only all the items listed below and will be bid according to the contact line items in section 01 27 00. No other restroom facilities nearby or within Golden Gate Recreation area are included in this project scope. No surrounding parking lots or auxiliary structures are included in this project scope.

C. The Work consists of the following:

1. Asbestos and Lead Testing with abatement on Roofs for Each of 6 units.
2. Removal and Replacement of Tar and Gravel Roofing System with Polyurethane Silicone Roofing System on 6 units.
3. Removal and Replacement of Pipe Collars/Vents and Metal Drip Edge on 6 units.
4. Painting of Roof Fascia and Drip Edge on 6 units.
5. Replacement of Downspouts on 6 units.
6. **Option Item 1** - This item consists of all materials, labor, and equipment necessary for the replacement of Unit 870 including replacement of the polyurethane roof, flashing, drip edge, Hazardous Material Testing and Abatement, Painting of the Fascia and Drip Edge, and the Replacement and Painting of the Downspouts.

D. A Construction Schedule laying out project start and completion dates along with scope tasks shall be submitted per the Spec Section 01 32 16 “Construction Schedule.”

E. Project will be constructed under a single Contract.

F. **The Contractor is responsible for verifying quantities, measurements, and existing site conditions**. All interested parties are strongly encouraged to do a site visit to familiarize themselves with local conditions that may affect the cost of contract performance. Interested

parties may coordinate the site visit through the CO.

1.3 PERIOD OF PERFORMANCE

A. The period of performance shall be 90 days after Notice to Proceed (NTP).

B. Contractor shall submit written certification that the project is substantially complete, and final inspection is requested. The Contracting Officer's Representative will complete an inspection within seven (7) business days of receipt of request.

C. When the COR determines that the work is substantially complete, he will prepare a list of deficiencies to be corrected before final acceptance and a Letter of Substantial Completion will be issued by the CO.

D. Contractor shall coordinate manufacturer warranty inspection. Warranty documents shall be provided to the COR within 30 days of project completion.

1.4 WORK UNDER OTHER CONTRACTS

A. General: The National Park Service and/or facilities-based partners of the National Park Service may,during the course of this Contract, have other construction work in progress within the park and near this project site. The Contractor shall work with the Contracting Officer and others as necessary to minimize impacts and coordinate activities of the work.

1.5 GOVERNMENT-FURNISHED MATERIALS:

A. There will be no government furnished materials, and all materials shall be contractor furnished from outside the park.

1.6 CONTRACTOR USE OF SITE

A. The Contractor's use of the premises is restricted to the designated work area. Materials and equipment must be stored inside the work area in contractor provided storage units. **No storage of materials in resident's yards or driveways will be permitted.**

B. Staging Area: Contractor shall work with NPS to identify an appropriate staging area.

C. Protection of Historic Features: The Marin Headlands contains many project locations which are highly sensitive sites and may contain historical resources. The Contractor shall closely follow the plans shown and alert the Contracting Officer immediately of any major deviations. A short start-up meeting with the Contracting Officer will be required prior to beginning work. Confine all operations to work limits of the project. Prevent damage to historic features that lie within the work limits, including but not limited to historic buildings and features, archeological resources including features both above and below grade, cultural landscapes and features including plantings, walkways, etc. Protect historic features from damage due to the work of this contract. Application of spray paint or any permanent markings to site features is prohibited. (Only chalk-based paint or crayon should be used).

D. Preservation of Natural Features:

1. Prevent damage to natural surroundings. Restore damaged areas as directed and approved by the Contracting Officer, at no additional expense to the Government.
2. Take measures to prevent equipment from compacting soils adjacent to or within the construction zone that will not be displaced by a constructed facility such as the parking

lot.

3. All geologic and fossil materials within the park are protected. Avoid disturbing soils or rock within or outside the project are, except as specified in the contract documents or as directed by the Contracting Officer.

E. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to Government, Government's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
   1. Schedule deliveries to minimize use of driveways and entrances.
   2. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

F. Construction Camp: Establishment of a camp within the park will not be permitted.

G. Hauling Restrictions: Comply with all legal load restrictions in the hauling of materials. Load restrictions on park roads are identical to the state load restrictions with such additional regulations asmay be imposed by the Park Superintendent. Information regarding rules and regulations for vehicular traffic on park roads may be obtained from the Office of the Park Superintendent. A special permit will not relieve Contractor of liability for damage which may result from moving of equipment.

H. Contractor shall provide OSHA and other required postings regard safety at the site.

1.7 OCCUPANCY REQUIRMENTS FOR BUILIDINGS

A. Existing Buildings
   1. Partial Government Occupancy: Government may occupy the premises during entire construction period. Cooperate with Government during construction operations to minimize conflicts and facilitate Government usage. Perform the Work so as not to interfere with Government's operations. Maintain existing exits, unless otherwise indicated.
   2. Maintain existing building in a weather tight condition throughout construction period. Repair damage caused by construction operations. Protect building during construction period.

1.8 CONDUCT OF OPERATIONS

A. Contractor personnel shall comply with all Federal and State law and regulations, including the Golden Gate National Recreation Area Superintendent's Compendium. Any exception must be specifically justified and approved in writing by the Contracting Officer.
   1. The Superintendent's Compendium can be found at this internet address: https://www.nps.gov/goga/learn/management/lawsandpolicies.htm

B. No signs or advertisements (except those specified herein) shall be displayed on the construction site or within the park unless approved by the Contracting Officer.

1.9 WORK RESTRICTIONS

A. On Site Work Hours: The 40-hour work week shall be generally performed during normal businessworking hours of 7 a.m. to 5:30p.m., Monday through Friday.
   1. Work will be permitted in the evenings or on Saturdays by prior authorization of the

NPSContracting Officer. Submit requests 48 hours in advance of the work to the Contracting Officer for approval.

2. No onsite work shall be performed during federal holiday periods unless otherwise directedby the Contracting Officer.
3. Smoking: Smoking is not permitted. Designated smoking areas shall be approved by the ContractingOfficer.
4. **Contractor will give 48 hours' notice of any work being done on a particular building outside of the scheduled work, as residents require at least 48 hours' notice for work to take place.**

1.10 DEFINITIONS

A. The Contracting Officer (CO) is the only government official authorized to make changes to the contract. The Contracting Officer's Representative (COR) is the CO's onsite representative to address all matters concerning the contract and ensure work is being completed according to the Statement of Work (SOW).

B. Owner/Government: The sites and buildings where the work will be performed are owned by the US Government - National Park Service (NPS). The term Government is used throughout the SOW to denote the Owner. The following Government personnel will administer the contract.

C. Contracting Officer's Representative (COR): The CO may appoint a COR to assist in administering the contract and provide technical assistance. The COR and their roles and responsibilities will be made known to the Contractor at the time of the Preconstruction Conference or before.

D. Contractor: The person or entity holding the contract is responsible for completing the work of the contractor. Contractor shall appoint a single point of contact for the duration of the work.

1.11 FIELD VERIFICATION

A. See Section 01 73 40 Execution.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION (Not used)

END OF SECTION 01 11 00

SECTION 01 26 01 CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. The work of this section consists of administrative and procedural requirements for contract modifications.

1.2 DEFINITIONS AND ALLOWANCES

A. Home Office Overhead: Those 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 the preparation of modifications will not be allowed. The 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, 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: These are 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 the 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: This is the hourly rate paid directly to the worker.

b. Labor Burden: Employer payments of all applicable burdens, this includes insurance and taxes that 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) FUTA– Cap Rate and percentage to be proportionally allocated over one year.
5) 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 the contractor from claims resulting from bodily injury or property damage to a third party. Include this 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 that the contractor will pay the labor and material costs they have incurred. Banks and Insurance companies charge a premium for each individual project based on a sliding scale which relates to the size of the project. Include this as a separate line item in modification proposals and provide current company bonding rates upon request.

H. Builder's Risk Insurance: This covers the contractor's loss due to fire, high winds, or other natural forces. This is 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. Your proposal must be received in the format and within the time frame specified in the Request for Proposal letter. Costs or delays resulting from failure of contractor to submit within the time frame specified will not be compensable.
2. The proposal must 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 that thatthey 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 Gov't provided form. The government form is available at:

   http://www.nps.gov/dscw/upload/ContractorEstimateForm_1-24-13.xls
3. Requests for extensions of contract time as a result of this change must be justified with a Time Impact Analysis (TIA). TIA and associated costs must 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 the 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 upon request.
5. Contractor must review and approve all subcontractor/supplier pricing in detail for proper format, scope, production rates, and pricing prior to submission to the 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 the cost of labor by itemizing each craft involved, indicating worker hourly rate (base rate + labor burden + fringe benefits) for each and itemizing the hours required for each craft that will be directly engaged in modification work. Any work proposed that will require overtime work or premium pay shall be itemized separately. All 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, 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. The labor cost for foremen shall only be costs for related work required for the modification.

C. Materials:
1. The estimated cost for materials shall include quotes from multiple sources. Material prices must include all 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 the NPS.

D. Equipment:

1. Equipment used for the project must be appropriately sized for the 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 must be broken out separately.
3. Regardless of ownership, the rates to be used in determining equipment rental costs shall be the lowest cost from one of the following sources:

    a. 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. The estimated rental rates shall include the cost of all fuel, oil, lubrication, supplies, small tools, necessary attachments, ground engaging components, tires & tracks,routine repairs, and maintenance (cost of major overhaul is not included), 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 the full rate for equipment only for the duration that the equipment will be utilized to accomplish the work of the modification.
6. Standby unit rates used are to be in accordance with paragraph 1.3, D, 2, above. If the US Army Corp of Engineers is utilized, then their standby rates prevail. If Bluebook or local equipment pricing is accepted, then ½ of the equipment costs minus any operating costs will be accepted.
7. If equipment is in standby mode due solely to a documented NPS delay, the established standby rate shall apply from the first day of the delay.
8. Equipment that is not used and on the jobsite for up to five consecutive days may be classified at standby rates, provided that the equipment is or has been used solely to perform work on the modification and will be necessary to complete additional modification work. Equipment that is 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. The following percentages establish the maximum allowable markups (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, then the partnership may only receive home office overhead and profit in the same amount as an individual contractor (refer to par 1.3.E.1 above). It is the responsibility of the partners to decide on the division of revenue.
4. Combined Increases and Decreases: On proposals involving both increases and decreases in the Contract Price, the overhead and profit mark-ups are required on the 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 (Not used)

PART 3 - EXECUTION (Not used)

END OF SECTION 01 26 01

SECTION 01 27 00 – DEFINITION OF CONTRACT LINE ITEMS

1.1 SUMMARY

A. The intent of this section is to explain, in general, what is and what is not included in a contract line item, and the limits or cut-off points where one item ends and another begins.

B. If no contract line item exists for a portion of the work, include the costs in a related item.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 LIST OF CONTRACT LINE ITEMS

A. Contract Line Item No 1. **Polyurethane Silicone Roof Replacement**

1. This item consists of all materials, labor, and equipment necessary for the replacement of new polyurethane silicon roofing systems for 6 units. Included is the disposal of old roofing materials, final cleaning, and final inspection of all roofs.
2. Payment will be made at the contract lump sum price.

B. Contract Line Item No 2. **Flashing Replacement**

1. This item consists of all materials, labor, and equipment necessary for the replacement of all pipe collars and roof vents on 6 units. Included is the final cleaning and final inspection of all roofs flashing.
2. Payment will be made at the contract lump sum price.

C. Contract Line Item No 3. **Drip Edge Replacement**

1. This item consists of all materials, labor, and equipment necessary for the replacement of all metal drip edge on 6 units. Included is the final cleaning and final inspection of all drip edges.
2. Payment will be made at the contract lump sum price.

D. Contract Line Item No 4. **Hazardous Material Testing and Abatement**

1. This item consists of lead and asbestos testing for 6 roofing systems including certification documentation for each roof from a contractor licensed for hazardous material testing in California.
2. This item also consists of abatement and disposal of hazardous material.
3. Payment will be made at the contract lump sum price.

E. Contract Line Item No 5. **Mobilization and Demobilization**

1. This item consists of cost associated with construction mobilization and demobilization.
2. Payment will be made at the contract lump sum price.

F. Contract Line Item No 6. **Painting of Fascia and Drip Edge**

1. This item consists of all materials, labor, and equipment necessary for the exterior painting

of the new metal drip edge and wood fascia on all 6 roofs. Included is the cleaning, priming, and final inspection of painting work.

2. Payment will be made at the contract lump sum price.

G. Contract Line Item No 7. **Replacement and Painting of Downspouts**

1. This item consists of all materials, labor, and equipment necessary for the replacement of all downspouts for 6 units (number varies by unit, take note on site visit). Included is the final cleaning, recycling of old downspouts, and inspection of new installation.
2. Included is the painting of the new galvanized aluminum downspouts to match fascia and drip edge.
3. Payment will be made at the contract lump sum price.

H. Contract Option Line Item No. 8. **Replacement of Roof Building 870**

1. This item consists of all materials, labor, and equipment necessary for the replacement of Unit 870 including replacement of the polyurethane roof, flashing, drip edge, Hazardous Material Testing and Abatement, Painting of the Fascia and Drip Edge, and the Replacement and Painting of the Downspouts.
2. Payment will be made at the contract lump sum price.

END OF SECTION 01 27 00

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. Construction Coordination.
2. Submittals
3. Coordination Drawings.
4. Project meetings.

B. Related Requirements:

1. Section 01 32 16 “Construction Schedule” for preparing and submitting Contractor’s construction schedule.

1.2 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. Construction Schedule.
3. A comprehensive breakdown of the Schedule of Values.
4. Accident Prevention Plan/Site-Specific Safety Plan.
5. A list of Subcontractors for this project.
6. Written statements from subcontractors certifying compliance with applicable labor standard clauses (SF 1413).
7. Satisfactory evidence of liability insurance coverage and workman’s compensation for the Contactor and all subcontractors.
8. Waste Management Plan.

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.

1.3 PROJECT MEETINGS

A. Preconstruction Conference: Before start of construction, Contracting Officer will arrange an on-site meeting with Contractor.

B. Attending shall be the following:

1. CO and/or COR

2. Contractor's Project Manager
3. Contractor's Superintendent
4. Major subcontractors
5. NPS Project Manager
6. Others as appropriate

C. The meeting agenda will include the following as a minimum:

1. Roles & Responsibilities/ Lines of Authority.
2. Park rules and regulations.
3. Jobsite Safety
4. Workplan & Schedule
5. Resolution of comments on required Division 01 documents.
6. Coordination of Subcontractors.
7. Traffic Control & Safety
8. Labor law application.
9. Modifications.
10. Payments to Contractor.
11. Payroll reports.
12. Contract time.
13. Liquidated damages.
14. Contractor Performance Evaluation.
15. Display of Hotline posters.
16. Notice to proceed.
17. Correspondence procedures.
18. Acceptance/rejection of work.
19. Progress meetings.
20. Submittal procedures.
21. NPS Final Accessibility Inspection.
22. Environmental requirements.
23. Saturday, Sunday, holiday and night work.
24. Reference materials.

D. Progress Meetings: The Contracting Officer will schedule progress meetings at agreed upon regular intervals.

1. Attendees: In addition to Government Representatives, each Contractor, Subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with the Project and authorized toconclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. The meeting agenda will include the following:

    a. Approval of minutes of previous meetings.
    b. Safety items/ 'toolbox' safety meeting topic.
    c. Submittal status.
    d. Review of off-site fabrication and delivery schedules.
    e. Requests for information (RFI) and other issues.
    f. Modifications.
    g. Work in progress and projected.
        1) Status of required inspections (Special Inspections, Accessibility, etc.)
    h. Inspections of work in progress and projected (Special inspections,
    i. Construction Schedule update (provide updated CPM).
    j. Status of Project Record Drawings and O&M manuals.
    k. Other business relating to work.
    l. Permit requirements.

3. Contractor shall:

    a. Prepare agenda for Progress meetings in format approved by the Contracting Officer.

    b. Distribute written notice of each Progress meeting 4 business days in advance of meeting date, except for meetings scheduled at established intervals.

E. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise CO of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

    a. Contract Documents.
    b. Options.
    c. Related Change Orders.
    d. Purchases.
    e. Deliveries.
    f. Submittals.
    g. Possible conflicts.
    h. Time schedules.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION (Not used)

END OF SECTION 01 31 00

SECTION 01 32 16 – CONSTRUCTION SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section consists of Construction Schedule requirements including but not limited to thefollowing:

1. Schedule of Values
2. Construction Schedule Requirements.
3. Construction Schedule Updates.
4. Time Impact Analysis.

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

1.2 SUBMITTALS

A. Electronic Copies: All schedules and reports submitted as noted in paragraphs B through D below, shall be submitted to NPS in the native electronic file format.

B. Schedule of Values:

1. After contract award and before the Pre-Construction conference submit a schedule of dollar values based on the Contract Price Schedule. Include bond costs, mobilization, general condition costs, overhead, and profit, and each major category of work.
2. The total cost of all items shall equal the contract sum. The Schedule of Values will form the basis for progress payments as provided for in the General Conditions.

C. Construction Baseline Schedule: **After contract award and before the Pre-Construction conference, submit baseline schedule which includes the order in which installation will take place and the dates when each roof will be worked on.**

D. Construction Schedule Updates: On or before the 7th day preceding the progress payment request date, submit estimates of the percent completion of each schedule activity and necessarysupporting data.

1. Provide an updated 3 week look ahead for each meeting.

1.3 QUALITY ASSURANCE

A. The Contractor shall meet with the Contracting Officer on the day of the preconstruction conference to go over the following:

1. Verify availability of qualified personnel needed to develop and update schedule.
2. Review and finalize list of construction activities to be included in schedule.
3. Review baseline schedule comments, resolve issues and progress on incorporating them
4. Review procedures for updating schedule.

B. Contractor's Schedule Representative: Before or at the preconstruction conference, designate anauthorized representative to be responsible for the preparation and maintenance of the Construction Schedule. The Scheduler shall have prepared and maintained at least 5 previous

schedules of similar size and complexity similar to this Contract, demonstrating proficiency in the use of scheduling software. The authorized representative will be responsible for preparing the Baseline Schedule, all required updates, revisions, Time Impact Analysis and preparation of reports.

1.4 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 total costs for the component work activities shall equal the contract price for that lump-sum item.

B. The Contracting Officer may request data to verify accuracy of dollar values.

C. 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.

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

PART 2 - PRODUCTS

2.1 CONSTRUCTION SCHEDULE UPDATES

A. Monthly Schedule Updates:

1. General: Update the Construction Schedule on a monthly basis to reflect actual construction progress and activities throughout the entire contract period and until projectsubstantial completion. The status date of each schedule update shall be the 7th day preceding the progress payment request date.
2. Procedure: The Contractor shall meet with the Contracting Officer each month at a Construction Schedule update meeting to review actual progress made through the status date of the Construction Schedule update, including dates activities were started and/or completed and the percentage of work completed on each activity started and/or completed.
3. If the schedule update shows a late finish date after the contract completion date, at a minimum, include the following in the narrative with your submission:
    a. Any known delays.
    b. Actions that will be taken to get back on schedule.
    c. Pending modifications.
    d. Impediments or constraints affecting progress.
4. Progress Payments: The monthly updating of the currently accepted Construction Schedule shall be an integral part of the process upon which progress payments will be made under this contract. If the Contractor fails to provide schedule updates or revisions,then a portion of the monthly payment may be retained until such corrections have been made.

PART 3 – EXECUTION

3.1 PROJECT TIMELINE

A. Project to take place during dry season, consisting of approximately the months May-October to avoid weather delays and water intrusion risks.

B. Any tree trimming needed to access roofs needs to be done outside of March 1-July31

to avoid bird nesting season. Noise disturbance needs to be kept at a minimum during this period if any construction takes place during nesting season.

END OF SECTION 01 32 16

SECTION 01 33 23 - SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals. This section refers solely to electronic submittals and submittal procedures.

1.2 GENERAL SUBMITTAL PROCEDURES

A. General: Prepare and submit submittals required by individual specification Sections. Types of submittals are indicated in individual specific sections.

1. Contracting Officer reserves the right to require submittals in addition to those called for in individual sections.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Review them for legibility, accuracy, completeness, and compliance with Contract Documents.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and relatedactivities that require sequential activity.

2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will notbe delayed because of need to review submittals concurrently for coordination.

a. Contracting Officer reserves the right to withhold action on a submittal requiring coordination withother submittals until related submittals are received.

C. Submittal List: Submittals are described in each section of this specification. The intent is to provide an overall summary of submittal requirements and not a comprehensive list. The requirements of the individual specification Sections, terms and conditions of the Contract still apply regardless of what is shown on the submittal list.

D. Processing Time: Allow enough time for submittal review, including time for re-submittals, as follows. Time for review shall commence when an e-mail notification is received by the Contracting Officer (or designee) indicatingthe submittal has been emailed to the NPS CO and COR and is ready for review. When the Contracting Officer has completed their review, an e-mail notification will be sent to the Contractor indicating the submittal has beenprocessed. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.

1. Action Submittals
   a. Initial Review: Allow 30 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required.
   b. Re-submittal Review: Allow 30 days for review of each re-submittal.

2. Informational submittals
   a. Review: Allow 10 days for review of each submittal.

E. Approved Equals:

1. For each item proposed as an “approved equal,” submit supporting data, including:

a. Drawings and samples as appropriate.
b. Comparison of the characteristics of the proposed item with that specified.
c. Changes required in other elements of the work because of the substitution.
d. Name, address, and telephone number of vendor.
e. Manufacturer's literature regarding installation, operation, and maintenance, including schematicsfor electrical and hydraulic systems, lubrication requirements, and parts lists. Describe availability of maintenance service, and state source of replacement materials.

2. A request for approval constitutes a representation that Contractor:

a. Has investigated the proposed item and determined that it is equal or superior in all aspects to thatspecified.
b. Will provide the same warranties for the proposed item as for the item specified.
c. Has determined that the proposed item is compatible with interfacing items.
d. Will coordinate the installation of an approved item and make all changes required in otherelements of the work because of the substitution.
e. Waives all claims for additional expenses that may be incurred as a result of the substitution.

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

1. All submittals shall be transmitted using email to the CO and COR.

G. Identification: Submittal number or other unique identifier, including revision identifier.

1. Submittal number shall use a sequential number (e.g., .001). Re-submittals shall include an alphabeticsuffix after another decimal point (e.g., 001.A).

H. Re-submittals: Make re-submittals using the same process used with the initial submittal.

1. Note date and content of previous submittal.

2. Note date and content of revision and clearly indicate the extent of revision.

3. Re-submit submittals until they are marked "Approved" or "Approved with notations".

I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers,and others as necessary for performance of construction activities.

J. Use for Construction: Use only final submittals with mark indicating "Approved" or "Approved with notations".Ensure all notations have been incorporated and, at a minimum, keep one copy of the final approved submittal onsite for use during construction.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

A. General: Prepare and submit Action Submittals required by individual specification Sections.

1. Contracting Officer reserves the right to require submittals in addition to those called for in individualsections.

B. Product Data: Collect information into a single submittal for each element of construction and type of product orequipment.

1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.

2. Mark each submittal to show which products and options are applicable.

3. Include the following information, as applicable:

a. Manufacturer's product specifications.
b. Manufacturer's installation instructions: When Contract Documents require compliance withmanufacturer's printed instructions, provide one complete set of instructions to Contracting Officerand keep another complete set of instructions at the project site until substantial completion.
c. Manufacturer's catalog cuts: Submit only pertinent pages; mark each page of standard printed datato identify specific products proposed for use.
d. Wiring diagrams showing factory-installed wiring.
e. Printed performance curves.
f. Operational range diagrams.
g. Compliance with specified referenced standards.
h. Testing by recognized testing agency.

4. Submit product data in PDF file format before or concurrent with samples.

C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as deliveredand installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittalpackage.

2. Complete and email COR and CO for processing and documentation of action on submitted samples.

3. Identification: Attach label on unexposed side of Samples that includes the following:

a. Generic description of Sample.
b. Product name and name of manufacturer.
c. Sample source.
d. Submittal Number and title of appropriate specification Section.

4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisonsthroughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

a. Number of Samples: Submit two full set(s) of available choices where color, pattern, texture, orsimilar characteristics are required to be selected from manufacturer's product line. Contracting Officer will return submittal with options selected.

6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material orproduct proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and in16ction.

a. Number of Samples: Submit two sets of Samples. Contracting Officer will retain two Sample sets.

D. Construction Materials: The Contractor is encouraged to submit for approval products made out of recycled or environmentally responsible material consistent with Section 016700 Product Requirements. Every effort will be made by the National Park Service to approve these materials.

2.2 INFORMATIONAL SUBMITTALS

A. General: Prepare and submit Informational Submittals required by individual specification Sections.

1. Send informational submittals as PDF electronic files directly to the NPS CO and COR.

2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsiblefor preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

3. Informational submittals that do not comply with the requirements specified in the Contract Documents will be rejected and one copy will be returned.

B. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with the requirements in the Contract Documents.

C. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with the requirements in the Contract Documents.

D. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with the requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions.

3.2 CONTRACTING OFFICER'S ACTION

A. General: Submittals will be disapproved without technical review if identification information is missing, not filled in, or if placed on the back of the submittal; an incorrect format of submittals is provided; the transmittal form is incorrectly filled out; submittals are not coordinated; or submittals do not show evidence of Contractor's approval.

1. Any work done or orders for materials or services placed before approval shall be at the Contractor's ownrisk.

B. Action Submittals: Contracting Officer will review each submittal, generate comments on corrections or modifications required, and indicate the appropriate action on the CM-16 Transmittal Form. The submittal will bemarked in one of three ways as defined below:

1. APPROVED: Acceptable with no corrections.

2. APPROVED WITH NOTATIONS: Minor corrections or clarifications required. All comments are clear and no further review is required. The Contractor shall address all review comments when proceeding with the work.

3. DISAPPROVED - RESUBMIT: Rejected as not in accordance with the contract or as requiring major corrections or clarifications. The Contracting Officer will identify the reasons for disapproval. The Contractor shall revise and resubmit with changes clearly identified.

C. Informational Submittals: Contracting Officer will review each submittal and will either accept or reject it.

D. Partial submittals are not acceptable, will be considered non-responsive, and will be returned without review.

END OF SECTION 01 33 23

SECTION 01 35 23 - SAFETY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This section includes establishing an effective accident prevention program and providing a safe environment for all personnel and visitors. Refer to the GOGA Health and Safety Plan review checklist (attached) for reference.

B. Site Specific Safety Plan:

1. A Site-Specific Safety Plan shall be prepared covering on-site work to be performed by the contractor and all subcontractors.

2. The prime contractor shall be responsible for development, implementation, and oversight of the site-specific plan. The site-specific safety plan shall establish in detail, the protocols necessary for recognition, evaluation, and control of hazards associated with each task performed. The plan shall address site specific safety requirements and procedures based upon site specific conditions. The level of detail provided in the site-specific safety plan shall be tailored to the type of work, complexity of operations to be performed, and hazards anticipated. The site-specific safety plan shall address, in as much detail as possible, anticipated tasks, their related hazards, and anticipated control measures.

1.2 SUBMITTALS

A. Site Specific Safety Plan (SSSP): After contract award and before the Pre-Construction conference, submit for review a Site-Specific Safety Plan. The Park Safety Officer will review the proposed Plan. If the plan requires any revisions or corrections, the Contractor shall resubmit the Plan within 10 days. No field work will be allowed until Plan is accepted.

B. Submit a copy of test reports, as required by OSHA, for personnel working with hazardous materials, specifically lead based paint hazards and asbestos-containing material.

C. Submit a report of safety meetings and of inspections.

D. Upon request, submit proof of employees' qualifications to perform assigned duties in a safe manner.

1.3 QUALITY ASSURANCE

A. Comply with contract clauses entitled "Accident Prevention" and "Permits and Responsibilities". 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 understandsigns, 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. Retain copies of all operators' licenses and/or certifications onsite.

1.4 ACCIDENT REPORTING

A. Reportable Accidents: (per OSHA 29CFR 1904) 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 $100. Notify Park Dispatch at 911 or 415-561-5656 to report the accident and request emergency assistance. In addition, Contractor will notify the Contracting Officer immediately in the event of a reportable accident. Within 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 SITE SPECIFIC SAFETY PLAN (SSSP)

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 by reference to specification section or division numbers. Specifically identify the methods of protecting workers and visitors from exposure to lead paint hazard and asbestos-containing material.
5. Training, both initial and continuing.
6. Map to nearest medical facility.
7. JHAs

2.2 FIRST AID FACILITIES

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

2.3 PERSONNEL PROTECTIVE EQUIPMENT

A. Meet requirements of applicable ANSI standards. Selection shall conform to OSHA 29CFR 1926.95 Subpart E.

PART 3 – EXECUTION

3.1 EMERGENCY INSTRUCTIONS

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

3.2 FIRE AND LIFE SAFETY

A. Comply with the requirements of the International Fire Code.

B. Store hazardous materials in accordance with manufacturer's and OSHA recommendations. Maintain readilyavailable, on site, SDS for each chemical.

1. Immediately report all spills of hazardous materials to the park.
2. Maintain a spill emergency response kit.
3. Train employees how to respond to a spill and use the emergency response kit.

3.3 PROTECTIVE EQUIPMENT

A. Inspect personal protective equipment daily and maintain in a serviceable condition. Clean, sanitize, and repairpersonal 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 safeoperation. Retain inspection documentation onsite.

3.4 SAFETY MEETINGS

A. As a minimum, conduct weekly 15-minute "toolbox" safety meetings. These meetings shall be conducted by aforeman 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 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 Site-Specific Safety and Health Plan. The Contracting Officer will attend the meeting and enter the results of the meetings into the daily log. These meetings can be incorporated into weekly site meetings with the approvalof the CO.

3.5 HARD HATS AND PROTECTIVE EQUIPMENT AREAS

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

B. If wearing a hardhat is required, it is the Contractor's responsibility to require all those working on or visiting the site to wear hard hats and other necessary protective equipment at all times during the visit.

3.6 EGRESS

A. Provide and maintain adequate egress at all times in accordance with the International Fire Code. No corridor, aisle, stairway, door, or exit shall be obstructed or used in a manner that interferes with egress.

3.7 TRAINING

A. First Aid: Provide adequate training 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.

3.8 HAZARDOUS MATERIAL PRECAUTIONS

A. Contractors shall comply with GOGA SOP 804, Hazardous Waste and Materials Management.

B. Contractors shall comply with the Resource Conservation and Recovery Act (RCRA), Pub. L. 94–580 codified at 42 U.S.C. 6962; 40 CFR Parts 239-282.

C. Surface preparation done to some exterior surfaces of park buildings may disturb paint containing lead in the areas surrounding the bent metal flashing and roof and asbestos-containing material (ACM) in the wet patch compound. If done incorrectly, surface preparation may release lead and asbestos into the environment, and adversely affect the health of contractors, park employees and park visitors.

D. It will be the responsibility of the contractor to perform lead base paint or asbestos testing for all buildings included in this contract. There is a line item for this service and abatement on the attached bid sheet.

1. Hazardous Building Materials Survey must be completed and submitted to the CO/COR for review and approval prior to start of work. If the survey results show presence of lead or asbestos, the contractor is also required to provide an asbestos or lead compliance work plan for review and approval prior to start of work. If the survey results show presence of Polychlorinated biphenyls (PCBs), the contractor is also required to provide a PCB compliance work plan to the EPS for review and approval prior to start of work.
2. Contractor must use contractors that are State certified to conduct hazardous materials abatement. Proof of qualifications must be provided to the CO/COR for review and approval prior to start of work.
3. Each homogenous layer must include asbestos in addition to lead sampling during hazmat survey. High heat vents, caps, flashing should also be tested for Polychlorinated Biphenyls (PCBs).
4. If any lead is found in testing, the contractor is required to conduct clearance testing before demobilizing, including providing for a third-party representative to conduct the Clearance Examination (CE) inspection. This will include a visual inspection of the soil and removal of any visual lead-based paint chips. Contractor shall provide NPS with a final abatement report for review and revision.

E. All work involving disturbance, removal, storage, disposal or encapsulation of lead paint, and abatement of wet patch compound of the performed as part of this contract, is to conform to applicable federal, state and local laws, including current OSHA and EPA standards.

F. No work will be started until a written Lead Compliance Plan, Asbestos Compliance Plan, and PCB Compliance Plan of action has been approved by the Contracting Officer and Park Safety Officer. Document preparation and cleaning procedures in strict accordance with federal, state and local laws, including current OSHA and EPA standards.

G. Because of the possibility of releasing and dispersing hazardous material debris and dust during this corrective work, non-essential NPS Employees and Park Visitors should not be permitted in the vicinity of the work during the repair activities.

1. The Contractor shall be required to fence or otherwise cordon off the immediate work area to prevent access or, if possible, identify an alternate entrance to the occupied

buildings for NPS staff to use during the normal workday.

H. Many park buildings are occupied and in use on a daily basis. Although access to these buildings will be limited, NPS Staff are expected to require entry during the period of the exterior corrective work.
   1. To allow normal day-to-day operations and the contract work to go on, only partial shut-down the entry to these buildings will be permitted.
   2. A schedule will be submitted and approved by the Contracting Officer prior to any work being performed during the normal working day.
   3. Work activities that require more than one day's work for completion shall be so scheduled that each day's work (including cleanup) can be accomplished within the time frame of a normal working day (8:00 AM to 5:00 PM).

I. Area Protection: Cover all areas immediately adjacent to and below the work with a 6- mil polyethylene film to protect the ground and to retain the wet debris and dust that will be created during the surface treatment.
   1. This covering should extend out horizontally from the base of the wall surface being treated.
   2. Although a 6-mil film is reasonably tough, avoid unnecessary traffic over this surface to reduce the chance of puncture.
   3. In addition, if the ground surface is rough, an additional layer of polyethylene may be required.
   4. Joints and tears shall be repaired immediately with duct tape.

J. Removal of Protective Coverings: At the conclusion of the corrective work or at the end of the day on multi-day activities and when the work area cannot be secured from access, the protective coverings should be carefully removed.
   1. Retain any remaining debris/dust for proper handling/disposal.

K. Disposal of Waste and Debris: All retained liquid waste shall be poured through a filter cloth to remove paint chips and other debris prior to disposal.
   1. The Contractor must make provision for the safe storage of waste onsite for proper disposal.
   2. Waste storage area must be rated as abatement areas and access restricted.
   3. Large quantities of solid waste should be stored in a covered dumpster secured behind a security fence. These dumpsters and storage containers must have appropriate hazard labels.
   4. Lead-based paint should be collected and bagged in 6-mil or double 4-mil plastic bags and stored in a designated secure storage area.
   5. After collection of this debris, the Contractor will be responsible for properly storing and the disposal of the lead-based paint material according to applicable Federal and State regulations.
   6. Contractor will use a magnet to collect any leftover nails or metal left on the ground near the construction site and dispose of according to applicable Federal and State regulations.

END OF SECTION 01 35 23

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.

1.2 DEFINITIONS

A. Quality Assurance Services: Activities, actions, and procedures performed before and during execution of the work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality Control Services: Tests, inspections, procedures, and related actions during and after execution of the work to evaluate that actual products incorporated into the work and completed construction comply with requirements.

C. Field Quality Control Testing: Tests and inspections that are performed on-site for installation of the work and for completed work.

D. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1.3 CONFLICTING REQUIREMENTS

A. Reference Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum 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 Quality Levels: The quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum 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. Contractor's Quality Control Daily Reports: Submit showing all inspections and tests on the first workday following the date covered by the report. Quality Control Supervisor shall utilize the forms attached at the end of this Section.

1.5 ON-SITE CONTROL

A. Notification:

1. Notify the Contracting Officer at least 48 hours in advance of the preparatory phase meeting.
2. Notify the Contracting Officer at least 24 hours in advance of the initial and follow-up phases.

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

1. Review control submittal requirements with personnel directly responsible for quality assurance and quantity control of the work. As a minimum, the Contractor's Quality Control Supervisor and the foreman responsible for the feature of work shall be in attendance.
2. Review all applicable specifications sections and drawings related to the feature of work.
3. Ensure that copies of all referenced standards related to sampling, testing, and execution for the feature of work are available on site.
4. Ensure that provisions have been made for field control testing.
5. Examine the work area to ensure that all preliminary work has been completed.
6. Verify all field dimensions and advise the Contracting Officer of discrepancies with contract documents.
7. Ensure that necessary equipment and materials are at the project site and that they comply with approved shop drawings and submittals.
8. Document all preparatory phase activities and discussions on the Contractor's Quality Control Daily Report.

C. Initial Phase:

1. As soon as work begins, inspect and test a representative portion of a particular feature of work for quality of workmanship.
2. Review control testing procedures to ensure compliance with contract requirements.
3. Document all initial phase activities and discussions on the Contractor's Quality Control Daily Report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

1.6 DOCUMENTATION

A. Maintain Quality Control Daily Reports, Daily Test Report Information Sheets, and Accessibility Inspection Reports (attached) of quality control activities and tests.

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

1.7 ENFORCEMENT

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

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION (Not used)

END OF SECTION 01 40 00

CONTRACTOR'S QUALITY CONTROL DAILY REPORT

REPORT NO. SHEET 1 OF

PROJECT				CONTRACT NO.	DATE
PARK				CONTRACTOR'S REPRESENTATIVE ON THE JOB	
WEATHER (Rain, Snow, Cloudy, Windy, etc.)	RAINFALL Inches	TEMPERATURE MAX.	MIN.	GROUND CONDITIONS (Dry, Damp, Wet, Frozen, etc.)	

1. PRIME CONTRACTOR

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments

WORK PERFORMED BY PRIME CONTRACTOR:

MATERIALS DELIVERED	OFFICIAL VISITORS TO SITE

2A. SUBCONTRACTOR,_____: (If more than one subcontractor use copies of following page.)

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments

WORK PERFORMED BY SUBCONTRACTOR:

3. SPECIFIC INSPECTIONS: (Inspections performed, results, and corrective actions)

4. TESTING: ☐ 1 Check if any testing was performed today. (Complete and attach Test Report Information Sheets.)
Type and Location of Testing: _____

5. VERBAL INSTRUCTION RECEIVED FROM GOVERNMENT ON CONSTRUCTION DEFICIENCIES OR RE-TESTING REQUIRED:

6. REMARKS:

7. CERTIFICATION:

I certify that the above report is complete and correct and that I, or my authorized representative, have inspected all work performed this day by the prime contractor and each subcontractor and determined that all materials, equipment, and workmanship are in strict compliance with the plans and specifications except as may be noted above.

_____
Contractor's Quality Control Representative

SUBCONTRACTOR WORK CONTINUED:	CONTRACT NO.	REPORT NO. _____ SHEET OF

2 SUBCONTRACTOR,

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments

WORK PERFORMED BY SUBCONTRACTOR:

2 SUBCONTRACTOR,

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments

WORK PERFORMED BY SUBCONTRACTOR:

2 SUBCONTRACTOR,

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments

WORK PERFORMED BY SUBCONTRACTOR:

2 SUBCONTRACTOR,

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	COMMENTS

WORK PERFORMED BY SUBCONTRACTOR:

SECTION 01 45 00 - ENVIRONMENTAL PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

A. This section describes requirements related to certain federal, state and regional governmental agencies who have jurisdiction over portions of the Work or who have issued permits prior to the performance of the Work which is in the jurisdiction of such governmental agency. The specific referencing of such permits shall not limit or restrict the obligation of the Contractor to comply with the conditions of all permits affecting the Work, as set forth in the General Conditions.

B. Work activities shall beconducted in a manner to avoid impacts outside of work zones and to reduce impacts within a work zone unless required to accomplish the restoration design.

C. The work is conducted on land owned and managed by the National Park Service, which protects natural and archeological resources.

1.2 REFERENCES TO REGULATORY REQUIREMENTS

A. Codes, laws, ordinances, rules and regulations referred to shall have full force and effect as though printed in full in these specifications. Codes, laws, ordinances, rules and regulations are not furnished to the Contractor, since the Contractor is assumed to be familiar with their requirements. The listing herein of applicable codes, laws, and regulations for hazardous waste abatement work is supplied to the Contractor as a courtesy and shall not limit the Contractor's responsibility for complying with all applicable laws, regulations or ordinances having application to the Work. Where conflict among the requirements exists, the most stringent requirements shall be used.

B. Precedence:

1. Where specified requirements differ from the requirements of applicable codes, ordinances and standards, the more stringent requirements shall take precedence.

2. Where the Plans or Specifications require or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, the Plans and Specifications shall take precedence so long as such increase is legal.

3. Where no requirements are identified in the Plans or Specifications, comply with all requirements of applicable codes, ordinances and standards of governing authorities having jurisdiction.

1.3 LAWS, ORDINANCES, RULES AND REGULATIONS

A. Federal Laws which apply to the Contract Documents include, but are not limited to, the following:

1. Federal Clean Water Act Section 404

2. Federal Rivers and Harbors Act Sections 9-10

3. Coastal Act of 1976 (Public Resources Code Sections 30000-30900)

4. Federal Endangered Species Act, Section 7 5.

5. Architectural Barriers Act

B. During prosecution of Work to be done under the Contract Documents, comply with applicable

laws, ordinances, rules and regulations, including, but not limit to Federal, State of California, and Regional and Local Agencies.

C. Other Applicable Laws, Ordinance and Regulations:

1. Work shall be accomplished in conformance with all rules and regulations of public utilities and utility districts.

2. Where such laws, ordinances rules and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Time and Contract Sum, except where changes in laws, ordinances, rules and regulations occur subsequent to the execution date of the Agreement.

1.4 CONFLICTS

A. Conflicts between referenced regulatory requirements: Comply with the one establishing the more stringent requirement.

B. Between referenced regulatory requirements and the Contact Documents: Comply with the one establishing the more stringent requirement and in accordance with the General Conditions.

1.5 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

A. Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Contracting Officer and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.6 NOTIFICATION

A. The Contracting Officer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

PART 2 - EXECUTION

2.1 WATER RESOURCES

A. The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation unless otherwise indicated.

B. **Chemicals (fuels, paint, etc.) stored outdoors will be stored in a closed, covered, and lockable container with secondary containment that can hold 110% of the total volume of materials.**

C. Contractor will ensure the following Park standards for stormwater management are implemented prior to start of work:

1. At the end of each workday, all debris must be contained, collected, and removed from site, leaving the area visibly clean. Debris that moves downslope must be cleaned up and removed.
2. Non-stormwater discharges into storm drainage systems or waterways are prohibited.

2.2 AIR RESOURCES

A. Equipment operation: Activities, or processes performed by the Contractor shall be in accordance with all Federal and State air emission and performance laws and standards.

B. Dust/Particulates: Dust particles aerosols, and gaseous by-products from construction activities and processing and preparation of materials (such as from asphaltic batch plants) shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. The Contractor must have sufficient particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs. The Contractor shall implement the following control measures for construction emissions of PM10 per Bay Area Air Quality Management District (BAAQD), during construction:

1. Maintain a well-secured, wind-resistant cover over all stockpiles at all times, including both weekdays and weekends, except during the periods when equipment is actively adding to or extracting material from the stockpile.
2. Water all active construction areas as often as necessary to prevent dust.
3. Cover all trucks hauling soil, sand, and other loose materials
4. Limit traffic speeds on unpaved roads to 10 mph
5. Install sandbags or other erosion control measures to prevent silt runoff to public roadways

C. Odors: Odors from construction activities shall be controlled at all times. The odors shall not cause a health hazard and shall be in compliance with State regulations and/or local ordinances.

2.3 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

A. Waste water

1. Disposal of waste water shall be as specified below
    a. Waste water from construction activities, such as onsite material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, forms, etc. shall not be allowed to enter water ways or to be discharged prior to being treated to remove pollutants. The Contractor shall dispose of the constructionrelated waste water off-site in accordance with all Federal, State, Regional and Locallaws and regulations.

2.4 PROTECTION OF WILDLIFE RESOURCES AND SPECIES OF SPECIAL CONCERN

A. The Contractor shall at all times perform all work and take such steps required to prevent interference or disturbance to wildlife and species of special concern.

B. Wildlife: The Contractor shall also take measures to comply with the migratory Bird Treaty Act.

Migratory birds, eggs, and active nests shall be avoided.

PART 3 - EXECUTION (Not used)

END OF SECTION 01 45 00

SECTION 01 60 00 MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.2 DESCRIPTION

A. The work of this section consists of the general procedures for handling, storing, and protecting material and equipment.

1.3 TRANSPORTATION AND HANDLING

A. Arrange deliveries of materials in accordance with construction schedules; coordinate to avoid conflict with work and conditions at the site. Deliver materials in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible. Contractor is encouraged to obtain materials in biodegradable or recyclable/reusable packaging which uses the minimum amount of packaging possible.

1.4 STORAGE AND PROTECTION

A. Store materials in accordance with manufacturer's instructions, with seals and labels accessible for inspection.

B. Interior Storage: Maintain temperature and humidity within the ranges required by manufacturer's instructions.

C. Exterior Storage:

1. Store products subject to damage by the elements in weathertight enclosures.

2. Store fabricated products above the ground, on blocking or skids; prevent soiling or staining. Cover products subject to damage or deterioration with impervious sheet coverings; provide adequate ventilation to avoid condensation.

PART 2 - MEASUREMENT AND PAYMENT

2.1 MATERIAL AND EQUIPMENT

A. Payment will be included in the bid item to which this work relates.

PART 3 - EXECUTION (Not used)

END OF SECTION 01 60 00

SECTION 01 67 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

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

1.2 SUBMITTALS

A. Record Submittals as specified in Closeout Procedures, submit the following:

1. Affirmative Procurement Reporting Form. Submit on form in Appendix A of this Section, or similar form as approved by Contracting Officer.

1.3 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.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will 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 to 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 an 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 the Contract Documents and to ensure that products are undamaged and properly protected.
5. Contractor is encouraged to obtain materials in biodegradable or recyclable/reusable packaging which uses the minimum amount of packaging possible.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weather tight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store cementitious products and materials on elevated platforms.
5. Comply with product manufacturer's written instructions for temperature, humidity,

ventilation, and weather-protection requirements for storage.

6. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.

1.5 PACKAGING

A. Where Contractor has the option to provide one of the 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.

1.6 ENVIRONMENTALLY PREFERABLE PRODUCTS

A. Provide environmentally preferable products to the greatest extent possible.

1. To the greatest extent possible, provide products and materials that have 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 the use of ozone depleting compounds during and after construction where alternative environmentally preferable products are available, consistent with either the Montreal Protocol and Title VI or the Clean Air Act Amendments of 1990, or equivalent overall air quality benefits that take into account life cycle impacts.

1.7 PRODUCT WARRANTIES

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

1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are 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 that have been produced and used successfully in similar situations on other projects.
3. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.

B. Product Selection Procedures:

1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements or approved equal.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements or approved equal.
3. Products: Where Specifications include a 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 a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements or approved equal.
5. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product, system, or approved equal.
6. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers, or approved equal. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named.
7. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Government'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.

8. Visual Selection Specification: Where Specifications include the 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 the 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 the 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 COMPARABLE PRODUCTS

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

1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the

Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.

3. Evidence that 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 (Not used)

END OF SECTION 01 67 00

SAMPLE AFFIRMATIVE PROCUREMENT REPORTING FORM
Recycled Content Materials & Biobased Content Materials

Project Name:_____Project Number: _____

Contractor Name:_____License Number: _____

Contractor Address: _____

Type of Product	Meets CPG require-ments (Y/N)	Meets Biobased require-ments (Y/N)	Meets other EPP require-ments (Y/N)	Exempted indicate 1,2,3,4	Comments

CERTIFICATION

I hereby certify the information provided herein is accurate and that the requisition/procurement of all materials listed on this form comply with current EPA standards for recycled/recovered materials content. The following exemptions may apply to the non-procurement of recycled/recovered content materials:

1. The product does not meet appropriate performance standards
2. The product is not available within a reasonable time frame
3. The product is not available competitively (from two or more sources)
4. The product is only available at an unreasonable price (compared with a comparable non-recycled content product.)

Signature:_____ Date: _____

END OF
AFFIRMATIVE PROCUREMENT REPORTING FORM
Recycled Content Materials & Biobased Content Materials

SECTION 01 73 40 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

1. General installation of products.
2. Quantity Surveys.
3. Progress cleaning.
4. Protection of installed construction.
5. Correction of the Work.

1.2 SUBMITTALS

A. Landfill Receipts: Submit copy of receipts issued by a landfill facility and or recycling facility.

PART 2 - EXECUTION

2.1 EXAMINATION

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

1. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.

2. Before construction, verify the location and points of connection of utility services.

B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.

C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

2.2 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 construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction 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

clarificationof the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to the Contracting Officer in accordance with Division 01 Specification 01 31 00 “Project Management and Coordination”.

2.3 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 ofremoval for replacement.
3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
4. Limit disturbance of existing structure to the greatest extent possible.
5. Prior to the start of work, meet on site with the COR to discuss wiring and piping runs.

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

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 construction 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. 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.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directedby the Contracting Officer.

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

G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous to humans or animals.

2.4 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.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature isexpected to rise above 80 deg F.
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containersappropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris. Cleanup is required at the

end of each workday.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper executionof 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. Contractor shall provide progress cleaning that minimizes sources of food, water, and harborageavailable to pests.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. Ifspecific cleaning materials are not recommended, use cleaning materials that are not hazardous to health orproperty and that will not damage exposed surfaces.

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

F. During handling and installation, clean and protect construction in progress and adjoining materials alreadyin place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

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

H. 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. Provide final cleaning in accordance with ASTM E1971.

2.5 PROTECTION OF INSTALLED CONSTRUCTION

A. Comply with manufacturer's written instructions for temperature and relative humidity.

2.6 CORRECTION OF THE WORK

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

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

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

PART 3 - EXECUTION (Not used)

END OF SECTION 01 73 40

SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

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

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

1.2 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting fromconstruction, 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, oragricultural operations.

D. Debris: Non-hazardous solid waste generated during the construction, demolition, or renovation of a structure which exceeds 2.5 inch (60 mm) 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 agentswhich adversely affect human health or welfare; unfavorably alter ecological balances; or degrade the utilityof 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 Safety Data Sheet (SDS) 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.

1.3 PERFORMANCE REQUIREMENTS

A. General: This project shall minimize the creation of construction, deconstruction, and demolition

waste to protect natural habitats 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 75% percent by weight of total waste generated by the Work. The following waste categories, at a minimum, shall be diverted from a landfill:

1. Clean dimensional wood, palettes
2. Cardboard, paper, packaging, newsprint
3. Metals (from banding, stud trim, piping, rebar, roofing, other trim, steel, iron, galvanized sheet steel,stainless steel, aluminum, copper, zinc, lead, brass, and bronze)
4. Other mixed construction and demolition waste as appropriate

C. The Contractor will ensure that wildlife does not have access to any garbage, debris, or other that contains organic waste products through use of covered, fully wildlife proof dumpsters or other trash receptacles. Open dumpsters are not allowed.

1.4 SUBMITTALS

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

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

C. 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.

D. Progress payment requirements:

1. With each Application for Payment, submit manifests, weight tickets, receipts, and invoicesspecifically identifying the Project and waste material.

E. Closeout Submittals

1. With Closeout Submittals, submit a summary worksheet of the Solid Waste Disposal and Diversionbased on form in Appendix B of this Section.

1.5 QUALITY ASSURANCE

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

PART 2 – NOT USED

PART 3 - EXECUTION

3.1 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

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

B. Recycling Receivers and Processors: Preference should be given to local waste haulers that accept co-mingled construction and demolition debris and can document the quantities diverted. List below is provided for information only; available recycling receivers and processors include, but are not limited to, the following:

1. Bay Area Construction & Demolition Recycling Facilities

Marin Resource Recovery
565 Jacoby Street
San Rafael CA
415-485-5646

Recology (preferred vendor in San Francisco)
501 Tunnel Ave
San Francisco, CA
1-888-404-4008 (debris box);
415-330-1400 (transfer station)

Redwood Landfill and Recycling Center
8950 Redwood Highway
Novato
415-892-2851

Redwood Empire Disposal
3400 Standish Avenue
Santa Rosa
1-800-243-0291

Mill Valley Refuse Service
112 Front Street
San Rafael
415-457-9760

Bay Cities Refuse Service (required vendor in MarinHeadlands)
2525 Garden Tract Road
Richmond
415-332-3646

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. Store components off the ground and protect from the weather.
3. Remove recyclable waste off Governments property and transport to recycling receiver or processor.

3.2 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. Forpallets 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 recyclingwood.

B. Wood Materials:

1. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

3.3 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materialsfrom Project site and legally dispose of them in a landfill 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. Disposal: Transport waste materials off Governments property and legally dispose of them.

END OF SECTION 01 74 19

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Closeout Submittals.
2. Substantial Completion and Final Inspection.
3. Final Acceptance of the Work.
4. Warranties.

1.2 CLOSEOUT SUBMITTALS

A. A list of closeout requirements is below. The intent is to provide an overall summary of requirements and not a comprehensive list. The terms and conditions of the contract still require you to satisfy the requirements of the individual specification sections regardless of what is shown on the list. Submit the following before requesting final inspection:

1. Submit specific warranties, guarantees, workmanship bonds, final certifications, and similar documents. This includes any maintenance documentation and maintenance manuals for future repairs.
2. Environmental Record Documents:

    a. SDS Data: As specified in relevant sections.
    b. Final Summary of Solid Waste Disposal and Diversion: As specified in Section 017419 Construction Waste Management.

3. Remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
4. Complete final cleaning requirements, including touchup painting.
5. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

1.3 SUBSTANTIAL COMPLETION AND FINAL INSPECTION

A. When 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 10 days of receipt of request or will advise the Contractor 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. Contractor shall complete the work described on the Punch List within 30 calendar days, as weather permits. If the Contractor 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 Construction clause of the contract.

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

1.4 FINAL ACCEPTANCE OF THE WORK

A. Prior to requesting inspection for verification of completion of all outstanding items.

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

1.5 WARRANTIES

A. Submittal Time: Submit written warranties on request of Contracting Officer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

PART 2 - EXECUTION

2.1 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
c. Remove tools, construction equipment, machinery, and surplus material from Project site.
d. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces.

e. Remove labels that are not permanent.
f. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

C. Waste Disposal: Comply with requirements of Division 01 Section 017419, “Construction Waste Management and Disposal.”

PART 3 - EXECUTION (Not used)

END OF SECTION 01 77 00

SECTION 02 82 13.21 - ASBESTOS ROOFING ABATEMENT

PART 1 - GENERAL

1.1 SUMMARY OF WORK

A. Drawings, general provisions of the contract, including general and supplementary conditions and other Division 01 specifications, shall apply to the work of this section. The contract documents show the work to be done under the contract and related requirements and conditions impacting the project. Related requirements and conditions include applicable codes and regulations, notices and permits, existing site conditions and restrictions on use of the site, requirements for partial owner occupancy during the work, coordination with other work and the phasing of the work.

B. In the event the Asbestos Abatement Contractor discovers a conflict in the contract documents and/or requirements or codes, the conflict must be brought to the immediate attention of the Contracting Officer for resolution. Whenever there is a conflict or overlap in the requirements, the most stringent shall apply. Any actions taken by the Contractor without obtaining guidance from the Contracting Officer shall become the sole risk and responsibility of the Asbestos Abatement Contractor. All costs incurred due to such action are also the responsibility of the Asbestos Abatement Contractor.

1.2 EXTENT OF WORK

A. Below is a brief description of the estimated quantities of asbestos roofing materials to be abated. These quantities are for informational purposes only and are based on the best information available at the time of the specification preparation. The Contractor shall satisfy himself as to the actual quantities to be abated. Nothing in this section may be interpreted as limiting the extent of work otherwise required by this contract and related documents.

1. Asbestos likely to be found in wet patching materials around roof penetrations. Representative report is included as part of this contract for estimating purposes.

B. Removal, clean-up and disposal of Asbestos Containing Material (ACM) roofing in an appropriate regulated area in the following approximate areas:

1. Wet Patch material near and around roof penetrations.

1.3 TASKS

A. The work tasks are summarized briefly as follows:

1. Hazardous Material Testing on each of the roofs being worked on in this contract.
2. Pre-abatement activities including pre-abatement meeting(s), inspection(s), notifications, permits, submittal approvals, work-site preparations, emergency procedures arrangements, and standard operating procedures for OSHA Class II and EPA Category I asbestos abatement work.
3. Abatement activities including removal, clean-up and disposal of ACM waste, recordkeeping, security, monitoring, and inspections.
4. Cleaning and decontamination activities including final visual inspection, air monitoring and certification of decontamination.

1.4 STOP ASBESTOS REMOVAL

A. If the Contracting Officer; their field representative; the facility Safety Officer/Manager or their designee presents a verbal Stop Asbestos Removal Order, the Contractor/Personnel shall immediately stop all asbestos removal and adequately wet any exposed ACM. If a verbal Stop Asbestos Removal Order is issued, the NPS shall follow-up with a written order to the Contractor

as soon as practicable. The Contractor shall not resume any asbestos removal activity until authorized to do so in writing by the Contracting Officer.

B. A stop asbestos removal order may be issued at any time the Contracting Officer determines abatement conditions/activities are not within specification, regulatory requirements or that an imminent hazard exists to human health or the environment. Work stoppage will continue until conditions have been corrected to the satisfaction of the NPS.

C. The Contractor shall immediately stop asbestos removal/disturbance activities and initiate fiber reduction activities if:
   1. Airborne PCM analysis results equal to or greater than 0.01 f/cc above background levels outside the regulated area.
   2. breach or break in regulated area containment barrier(s).
   3. serious injury/death at the site.
   4. fire/safety emergency at the site.
   5. respiratory protection system failure.
   6. power failure or loss of wetting agent.
   7. any visible emissions observed outside the regulated area.
   8. failure to follow project specification requirements.

1.5 APPLICABLE CODES AND REGULATIONS

A. General Applicability of Codes, Regulations, and Standards:
   1. All work under this contract shall be done in strict accordance with all applicable Federal, State, and Local regulations, standards and codes governing asbestos abatement, and any other trade work done in conjunction with the abatement. All applicable codes, regulations and standards are adopted into this specification and will have the same force and effect as this specification.
   2. The most recent edition of any relevant regulation, standard, document, or code shall be in effect. Where conflict among the requirements or with these specifications exists, the most stringent requirement(s) shall be utilized.
   3. Copies of all standards, regulations, codes and other applicable documents, including this specification and those listed in Section 1.5 shall be available at the worksite in the clean change area of the worker decontamination system and/or the Contractor's on-site Field Office.

B. The Asbestos Abatement Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State and Local regulations related to all aspects of the asbestos abatement project.

C. The Contractor is responsible for providing and maintaining training, accreditations, medical exams, medical records, personal protective equipment (PPE), including respiratory protection, and respirator fit testing, as required by applicable Federal, State and Local regulations.

D. The Contractor shall hold the NPS consultants harmless for any Contractor's failure to comply with any applicable work, packaging, transporting, disposal, safety, health, or environmental requirement on the part of himself, his employees, or his subcontractors.

E. The Contractor will incur all costs of the hazardous material abatement work, including all sampling/analytical costs to assure compliance with OSHA/EPA/State/Local requirements related to failure to comply with the regulations applicable to the work.

1.6 FEDERAL REQUIREMENTS

A. Federal requirements which govern some aspect of asbestos abatement include, but are not limited to, the following regulations:
   1. Occupational Safety and Health Administration **(OSHA)**
      a. Title 29 CFR 1926.1101 - Construction Standard for Asbestos
      b. Title 29 CFR 1926 Subpart E - Personal Protective Equipment and Life
      c. Saving Equipment
      d. Title 29 CFR 1910.134 - Respiratory Protection
      e. Title 29 CFR 1926 - Construction Industry Standards
      f. Title 29 CFR 1926.33 - Access to Employee Exposure and Medical Records
      g. Title 29 CFR 1926.59 same as 1910.1200 - Hazard Communication
      h. Title 29 CFR 1926 Subpart C – General Safety and Health Provisions and Subpart D – Occupational Health and Environmental Controls
   2. Environmental Protection Agency **(EPA)**:
      a. 40 CFR 61 Subpart M - National Emission Standard for Hazardous Air Pollutants - Asbestos.
      b. 40 CFR 763.80 - Asbestos Hazard Emergency Response Act (AHERA) and Asbestos Hazard Abatement Reauthorization Act (ASHARA)
   3. Department of Transportation **(DOT)**
      a. Title 49 CFR 171 - 180 – Transportation

1.7 STANDARDS

A. Standards which govern asbestos abatement activities include, but are not limited to, the following:
   1. American National Standards Institute (ANSI)/ASSP Z9.2-2018 - Fundamentals Governing the Design and Operation of Local Exhaust Systems and ANSI/ASSE Z88.2-2015 - Practices for Respiratory Protection.
   2. Underwriters Laboratories (UL) 586-2009 - UL Standard for Safety of HEPA Filter Units, 9th Edition; ANSI Approval 2017-12-19.

B. Standards which govern encapsulation work include, but are not limited to the following:
   1. American Society for Testing and Materials International (ASTM)

C. Standards which govern the fire and safety concerns in abatement work include, but are not limited to, the following:
   1. National Fire Protection Association (NFPA) 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations.
   2. NFPA 701 - Standard Methods for Fire Tests for Flame Resistant Textiles and Film.
   3. NFPA 101 - Life Safety Code

D. EPA Guidance Documents: EPA guidance documents which discuss asbestos abatement work activities are listed below. These documents are made part of this section by reference.
   1. Guidance for Controlling ACM in Buildings (Purple Book) EPA 560/5-85-024
   2. Asbestos Waste Management Guidance EPA 530-SW-85-007
   3. A Guide to Respiratory Protection for the Asbestos Abatement Industry EPA-560-OPTS-86-001
   4. Guide to Managing Asbestos in Place (Green Book) TS 799 20T July 1990

1.8 SITE SECURITY

A. Regulated area access is to be restricted only to authorized, trained/accredited and protected personnel. These may include the Contractor’s employees, employees of Subcontractors, NPS employees and Representatives, State and Local inspectors, and any other designated individuals.

A list of authorized personnel shall be established prior to commencing the project and shall be located immediately outside the boundary of the regulated work area.

B. Entry into the regulated area by unauthorized individuals shall be reported immediately to the Competent Person by anyone observing the entry. The Competent person shall immediately notify the COR.

C. The Contractor's Competent Person shall control site security during abatement operations to isolate work in progress and protect adjacent personnel.

1.9 PROJECT COORDINATION

A. The following are the minimum administrative and supervisory personnel necessary for coordination of the work.

B. Minimum qualifications for Contractor and assigned personnel are:

1. The Contractor has conducted within the last three (3) years, three (3) projects of similar complexity and dollar value as this project; has not been cited and penalized for serious violations of Federal (and State as applicable) EPA and OSHA asbestos regulations in the past three (3) years; has adequate liability/occurrence insurance for asbestos work as required by the State; is licensed in applicable States; has adequate and qualified personnel available to complete the work; has comprehensive standard operating procedures for asbestos work; and has adequate materials, equipment and supplies to perform the work.
2. The Competent Person has four (4) years of abatement experience of which two (2) years were as the Competent Person on the project; meets the OSHA definition of a Competent Person; has been the Competent Person on two (2) projects of similar size and complexity as this project within the past three (3) years; has completed EPA AHERA/OSHA/State/Local training requirements/accreditation(s) and refreshers; and has all required OSHA documentation related to medical and respiratory protection.
3. The Abatement Personnel shall have completed the EPA AHERA/OSHA abatement worker course; have training on the standard operating procedures of the Contractor; has one year of asbestos abatement experience within the past three (3) years of similar size and complexity; has applicable medical and respiratory protection documentation; has certificate of training/current refresher and State accreditation/license.

C. All personnel shall be in compliance with OSHA construction safety training as applicable.

PART 2 - PRODUCTS

2.1 PRODUCTS

A. Disposal bags – 2-layers of 6-mil poly or approved equivalent for asbestos waste shall be pre-printed with labels, markings and address as required by OSHA, EPA, and DOT regulations.

B. OSHA DANGER demarcation signs, as many and as required by OSHA 29 CFR 1926.1101(k)(7) shall be provided and placed by the Competent Person. All other posters and notices required by Federal, State and Local regulations shall be posted at the outer boundary of the regulated area or approved equivalent.

C. Adequate and appropriate PPE for the project and number of personnel/shifts shall be provided. All personal protective equipment issued must be based on a written hazard assessment conducted under 29 CFR 1910.132(d).

2.2 CONTAINMENT BARRIERS AND COVERINGS IN THE REGULATED AREA

A. Preparation Prior to Sealing the Regulated Area: Place all tools, scaffolding, materials, and equipment needed for working in the regulated area prior to erecting any plastic sheeting. Lock out and tag out any HVAC systems in the regulated area.

B. Controlling Access to the Regulated Area: Access to the regulated area is allowed only at the Competent Person's designated location and shall serve as a personnel decontamination facility (PDF)/Area, if required. All other means of access shall be eliminated, and OSHA Danger demarcation signs posted as required by OSHA.

C. Critical Barriers: Critical penetration points into the building shall be sealed with 2-layers of 6-mil independently installed plastic sheeting (Polyethylene) secured in place at openings such as ducts, windows, louvers, penetrations, or any other opening into the regulated area. Should adjacent areas become contaminated, immediately stop work, and clean up the contamination at no additional cost to the Government.

D. Secondary Barriers: A perimeter drop cloth of 1-layer of 6-mil plastic sheeting will be placed around the outside perimeter of the roof to capture falling debris and to facilitate clean-up at ground level, if necessary.

E. Extension of the Regulated Area: If the enclosure of the regulated area is breached in any way that could allow contamination to occur, the affected area shall be included in the regulated area and constructed as per this section. If the affected area cannot be added to the regulated area, decontamination measures must be started immediately and continue until air monitoring indicates background levels are met.

2.3 MONITORING, INSPECTION AND TESTING BY CONTRACTOR:

A. The Contractor is responsible for managing all monitoring, inspections, and testing required by these specifications, as well as all regulatory requirements adopted by these specifications.

B. The Contractor is responsible for the continuous monitoring of all subsystems and procedures which could affect the health and safety of the Contractor's personnel.

C. Safety and health conditions and the provision of those conditions inside the regulated area for all persons entering the regulated area is the exclusive responsibility of the Contractor/Competent Person.

D. Perform throughout abatement work monitoring, inspection and testing inside and around the regulated area in accordance with the OSHA requirements and applicable Federal, State, and Local regulations. OSHA requires that the employee exposure to asbestos must not exceed 0.1 fiber per cubic centimeter (f/cc) of air, averaged over an 8-hour work shift.

2.4 ASBESTOS HAZARD ABATEMENT PLAN

A. If Asbestos is found during hazardous material testing, the Contractor shall have an established Asbestos Hazard Abatement Plan (AHAP) in printed form consisting of simplified text, diagrams, sketches, and pictures that establish and explain clearly the ways and procedures to be followed during all phases of the work by the Contractor's personnel. The AHAP must be modified as needed to address specific requirements of the project. The AHAP shall be submitted for review and approval prior to the start of any abatement work. The minimum topics and areas to be covered by the AHAP(s) are:

1. Minimum Personnel Qualifications
2. Contingency Plans and Arrangements
3. Security and Safety Procedures

4. Respiratory Protection/Personal Protective Equipment Program and Training
5. Medical Surveillance Program and Recordkeeping
6. Regulated Area Requirements for Abatement
7. Decontamination Entry/Exit Procedures
8. Monitoring, Inspections, and Testing
9. Disposal of ACM waste
10. Regulated Area Decontamination/Clean-up
11. Regulated Area Visual and Air Clearance
12. Project Completion/Closeout

2.5 SUBMITTALS

A. Asbestos Hazard Abatement Plan to be approved by CO/COR and GOGA Safety Office.

B. Submit the name, location, and phone number of the approved landfill; proof/verification the landfill is approved for ACM disposal; the landfill's requirements for ACM waste; the type of vehicle to be used for transportation; and name, address, and phone number of subcontractor, if used. Proof of asbestos training for transportation personnel shall be provided.

C. Submit required notifications and arrangements made with regulatory agencies having regulatory jurisdiction and the specific contingency/emergency arrangements made with local health, fire, ambulance, hospital authorities and any other notifications/arrangements.

D. Submit the name, location and verification of the laboratory and/or personnel to be used for analysis of air and/or bulk samples. Personal air monitoring must be done in accordance with OSHA 29 CFR 1926.1101 (f) and Appendix A. Area or clearance air monitoring shall be conducted in accordance with EPA AHERA protocols.

E. Submit qualifications verification: Submit the following evidence of qualifications. Make sure that all references are current and verifiable by providing current phone numbers and documentation.
   1. Asbestos Abatement Company: Project experience within the past 3 years; listing projects first most similar to this project: Project Name; Type of Abatement; Duration; Cost; Reference Name/Phone Number; Final Clearance; and Completion Date
   2. List of projects halted by owner, A/E, IH, regulatory agency in the last 3 years: Project Name; Reason; Date; Reference Name/Number; Resolution
   3. List asbestos regulatory citations (e.g., OSHA), notices of violations (e.g., Federal, State and Local EPA), penalties, and legal actions taken against the company including the company’s officers (including damages paid) in the last 3 years. Provide copies and all information needed for verification.
   4. Submit copies of State license for asbestos abatement; copy of insurance policy, including exclusions with a letter from agent stating in plain language the coverage provided and the fact that asbestos abatement activities are covered by the policy; copy of AHAP(s) incorporating the requirements of this specification; information on who provides your training, how often; who provides medical surveillance, how often; who performs and how is personal air monitoring of abatement workers conducted.
   5. Submit, before the start of work, the manufacturer's technical data for all types of encapsulants, all SDS and application instructions to be used during this project.

F. Submittals at Completion of Abatement: The Contractor shall submit a project report consisting of the daily logbook requirements and documentation of events during the abatement project including Waste Shipment Records signed by the landfill's agent. It will also include information on the containment and transportation of waste from the containment with applicable Chain of Custody forms. The report shall include a certificate of completion, signed, and dated by the

Contractor, in accordance with Attachment #1. The Contract Officer will retain the abatement report after completion of the project and provide copies of the abatement report to the Safety Office.

PART 3 - EXECUTION

3.1 REGULATED AREA PREPARATIONS

A. Pre-Abatement Activities: The CO/COR, upon receipt, review, and substantial approval of all pre-abatement submittals and verification that all materials and equipment required for the project are on the site, will arrange for a pre-abatement meeting between the Contractor and CO/COR. The purpose of the meeting is to discuss any aspect of the submittals needing clarification or amplification and to discuss any aspect of the project execution and the sequence of the operation. The Contractor shall be prepared to provide any supplemental information/documentation to the CO/COR regarding any submittals, documentation, materials or equipment. Upon satisfactory resolution of any outstanding issues, the CO will issue a written order to proceed to the Contractor. No abatement work of any kind described in the following provisions shall be initiated prior to the CO written order to proceed.

3.2 PRE-ABATEMENT CONSTRUCTION AND OPERATIONS

A. Perform all preparatory work for the first regulated area in accordance with the approved work schedule and with this specification.

3.3 REMOVAL OF OSHA CLASS II AND EPA CATEGORY I ROOFING

A. General: The COR must be notified at least 24 hours in advance of any waste removed from the containment. All applicable requirements of OSHA, EPA, State, Local and DOT shall be followed during Class II work. Keep materials intact; do not disturb; wet while working with it; wrap as soon as possible with 2-layers of 6-mil plastic for disposal or approved equivalent.

B. Outdoor Work Area: Work must be performed on exterior areas of the buildings. If outdoor work is to be performed, all applicable OSHA, State and Local regulations must be followed to ensure that outdoor work areas are in compliance so that workers, the general public and the environment are protected.

C. Roof Fall Protection: The competent person shall determine if the walking/working surfaces on which the employees are to work have the strength and structural integrity to support the employees safely. Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet or more above a lower level shall be protected from falling using guardrail systems, safety net systems, or personal fall arrest system.

D. Removal of Roofing: Roofing material shall be removed in an intact state to the extent that it is feasible.

E. Wet methods shall be used to remove roofing materials that are not intact, or that will be rendered not intact during removal, unless such wet methods are not feasible or will create safety hazards.

F. Cutting machines shall be continuously misted during use unless a competent person determines that misting substantially decreases worker safety.

G. When removing built-up roofs with asbestos-containing roofing felts and an aggregate surface using a power roof cutter, all dust resulting from the cutting operation shall be collected by a HEPA dust collector or shall be HEPA vacuumed by vacuuming along the cut line.

H. Asbestos-containing material that has been removed from a roof shall not be dropped or thrown to the ground. Unless the material is carried or passed to the ground by hand, it shall be lowered to the ground via covered, dust-tight chute, crane, or hoist.

I. Any ACM that is not intact shall be lowered to the ground as soon as is practicable, but in any event no later than the end of the work shift. While the material remains on the roof it shall either be kept wet, placed in an impermeable waste bag, or wrapped in plastic sheeting.

J. Intact ACM shall be lowered to the ground as soon as is practicable, but in any event no later than the end of the work shift.

K. Upon being lowered, unwrapped material shall be transferred to a closed receptacle in such manner to preclude the dispersion of dust.

L. Roof level heating and ventilation air intake sources shall be isolated, or the ventilation system shall be shut down or both. The sealing of air intake sources shall be coordinated with COR and occupant location to ensure acceptable IAQ is maintained within the facility as per ASHRAE Standard 1955.

M. Notwithstanding any other provision of this section, removal, or repair of sections of intact roofing less than 25 square feet in area does not require use of wet methods or HEPA vacuuming as long as manual methods which do not render the material non-intact are used to remove the material and no visible dust is created by the removal method used. In determining whether a job involves less than 25 square feet, the employer shall include all removal and repair work performed on the same roof on the same day.

N. All waste must be wrapped in two layers of 6-mil poly or approved equivalent and lowered carefully to the ground. Roofing may be lowered by way of a dust-tight chute.

3.4 DISPOSAL OF OSHA CLASS ii and EPA Category I WASTE MATERIAL

A. General: Dispose of waste ACM and debris which is packaged in accordance with these specifications, OSHA, EPA and DOT. The landfill requirements for packaging must also be met. Transport will be in compliance with 49 CFR 171–180 regulations. Disposal shall be done at an approved landfill in accordance with State and Local requirements, which are generally more restrictive than Federal EPA. Disposal of non-friable ACM shall be done in accordance with applicable State and Local regulations.

3.5 VISUAL INSPECTION AND AIR CLEARANCE TESTING

A. General: Notify the COR 24 hours in advance for the performance of the final visual inspection. The final visual inspection will be performed by the COR after the cleaning.

B. Visual Inspection: Final visual inspection will include the entire regulated area. If any debris, residue, dust or any other suspect material is detected, the cleaning shall be repeated at no additional cost to the NPS. Dust/ material samples may be collected and analyzed at no additional cost to the NPS at the discretion of the COR to confirm visual findings.

3.6 ABATEMENT CLOSEOUT AND CERTIFICATE OF COMPLIANCE

A. Completion of Abatement Work: After thorough decontamination, complete asbestos abatement work upon meeting the regulated area clearance criteria and fulfilling the following:
   1. Remove all equipment, materials, and debris from the project area.
   2. Package and dispose of all asbestos waste as required.
   3. Fulfill other project closeout requirements as specified elsewhere in this specification.

B. Certificate of Completion by Contractor: The designated NPS inspector shall complete and sign the "Certificate of Completion" in accordance with Attachment 1 at the completion of the abatement and decontamination of the regulated area.

ATTACHMENT #1

CERTIFICATE OF COMPLETION

DATE: _____ NPS Project #:_____

PROJECT NAME:_____ Abatement Contractor:_____

PROJECT ADDRESS:_____

1. I certify that I have personally inspected, monitored, and supervised the abatement work of (specify regulated area or Building):
   which took place from / / to / /
2. That throughout the work all applicable requirements/regulations and NPS specifications were met.
3. That any person who entered the regulated area was protected with the appropriate personal protective equipment and respirator and that they followed the proper entry and exit procedures and the proper operating procedures for the duration of the work.
4. That all employees of the Abatement Contractor engaged in this work were trained in respiratory protection, were experienced with abatement work, had proper medical surveillance documentation, were fit-tested for their respirator, and were not exposed at any time during the work to asbestos without the benefit of appropriate respiratory protection.
5. That I performed and supervised all inspection and testing specified and required by applicable regulations and NPS specifications.
6. That the conditions inside the regulated area were always maintained in a safe and healthy condition and the maximum fiber count never exceeded 0.5 f/cc, except as described below.
7. That all abatement work was done in accordance with OSHA requirements and the manufacturer's recommendations.

Inspector Signature/Date:_____

Inspector Print Name:_____

Abatement Contractor Signature/Date:_____

Abatement Contractor Print Name:_____

ATTACHMENT #2

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

PROJECT NAME:_____DATE:_____

PROJECT ADDRESS:_____

ABATEMENT CONTRACTOR'S NAME:_____

WORKING WITH ASBESTOS CAN BE HAZARDOUS TO YOUR HEALTH. INHALING ASBESTOS HAS BEEN LINKED WITH VARIOUS TYPES OF CANCERS. IF YOU SMOKE AND INHALE ASBESTOS FIBERS, YOUR CHANCES OF DEVELOPING LUNG CANCER IS GREATER THAN THAT OF THE NON-SMOKING PUBLIC.

Your employer's contract with the owner for the above project requires that: You must be supplied with the proper personal protective equipment including an adequate respirator and be trained in its use. You must be trained in safe and healthy work practices and in the use of the equipment found at an asbestos abatement project. You must receive/have a current medical examination for working with asbestos. These things shall be provided at no cost to you. By signing this certificate of worker's acknowledgement you are indicating to the owner that your employer has met these obligations.

RESPIRATORY PROTECTION: I have been trained in the proper use of respirators and have been informed of the type of respirator to be used on the above indicated project. I have a copy of the written Respiratory Protection Program issued by my employer. I have been provided for my exclusive use, at no cost, with a respirator to be used on the above indicated project.

TRAINING COURSE: I have been trained by a third party, State/EPA accredited trainer in the requirements for an AHERA/OSHA Asbestos Abatement Worker training course, 32-hours minimum duration. I currently have a valid State accreditation certificate. The topics covered in the course include, as a minimum, the following:

Physical Characteristics and Background Information on Asbestos
Potential Health Effects Related to Exposure to Asbestos
Employee Personal Protective Equipment
Establishment of a Respiratory Protection Program
State of the Art Work Practices
Personal Hygiene
Additional Safety Hazards
Medical Monitoring
Air Monitoring
Relevant Federal, State and Local Regulatory Requirements, Procedures, and Standards
Asbestos Waste Disposal

MEDICAL EXAMINATION: I have had a medical examination within the past 12 months which was paid for by my employer. This examination included: health history, occupational history, pulmonary function test, and may have included a chest x-ray evaluation. The physician issued a positive written opinion after the examination.

Signature:_____
Printed Name:_____
Witness:_____

ATTACHMENT #3

AFFIDAVIT OF MEDICAL SURVEILLANCE, RESPIRATORY PROTECTION AND TRAINING/ACCREDITATION

NPS PROJECT NAME AND NUMBER:_____
NPS MEDICAL FACILITY:_____
ABATEMENT CONTRACTOR'S NAME AND ADDRESS:_____

1. I verify that the following individual
   Name:_____
   who is proposed to be employed in asbestos abatement work associated with the above project by the named Abatement Contractor, is included in a medical surveillance program in accordance with 29 CFR 1926.1101(m), and that complete records of the medical surveillance program as required by 29 CFR 1926.1101(m)(n) and 29 CFR 1910.20 are kept at the offices of the Abatement Contractor at the following address.
   Address:_____

2. I verify that this individual has been trained, fit-tested and instructed in the use of all appropriate respiratory protection systems and that the person is capable of working in safe and healthy manner as expected and required in the expected work environment of this project.

3. I verify that this individual has been trained as required by 29 CFR 1926.1101(k). This individual has also obtained a valid State accreditation certificate. Documentation will be kept on-site.

Signature of Individual:_____ Date:_____

Printed Name of Individual:_____

Signature of Contractor:_____ Date:_____

Printed Name of Contractor:_____

ATTACHMENT #4

ABATEMENT CONTRACTOR/COMPETENT PERSON(S) REVIEW AND ACCEPTANCE OF THE NPS'S ASBESTOS SPECIFICATIONS

NPS Project Location:_____
NPS Project #:_____
NPS Project Description:_____

This form shall be signed by the Asbestos Abatement Contractor Owner and the Asbestos Abatement Contractor's Competent Person(s) prior to any start of work at the NPS related to this Specification. If the Asbestos Abatement Contractor's/Competent Person(s) has not signed this form, they shall not be allowed to work on-site.

I, the undersigned, have read NPS's Asbestos Specification regarding the asbestos abatement requirements. I understand the requirements of the NPS's Asbestos Specification and agree to follow these requirements as well as all required rules and regulations of OSHA/EPA/DOT and State/Local requirements. I have been given ample opportunity to read the NPS's Asbestos Specification and have been given an opportunity to ask any questions regarding the content and have received a response related to those questions. I do not have any further questions regarding the content, intent and requirements of the NPS's Asbestos Specification.

At the conclusion of the asbestos abatement, I will certify that all asbestos abatement work was done in accordance with the NPS's Asbestos Specification and all ACM was removed properly and no fibrous residue remains on any abated surfaces.

Abatement Contractor Owner's Signature_____Date_____

E N D SECTION 02 82 13.21

SECTION 07 01 50.19 – PREPARATION FOR RE-ROOFING

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Complete roof removal for new roof system installation.
2. Existing roofing membrane preparation for new roofing, diaphragm, and installation.

B. Existing Roofing System: System components include:
1. T&G Decking
2. Plywood roofing diaphragm
3. Tar and Gravel Roofing System
4. Pipe Collars and Vents
5. Galvanized Metal Drip Edge
6. Galvanized Aluminum Downspouts

1.2 RELATED WORK
A. Section 07 57 13, Sprayed Polyurethane Foam Roofing
B. Section 07 60 00, Flashing and Sheet Metal
C. Section 07 92 00, Joint Sealants

1.3 APPLICABLE PUBLICATIONS
A. Applicable publications listed below form a part of this Specification as referenced. Publications are referenced in the text by the number designation only.

B. American Society for Testing and Materials (ASTM):

B209-14.....Aluminum and Aluminum-Alloy Sheet and Plate
D41-11.....Asphalt Primer Used in Roofing, Damp proofing and Waterproofing.
D43-00(R2012).....Coal Tar Primer Used in Roofing, Damp proofing and Waterproofing
D227-11.....Coal-Tar Saturated Organic Felt Used in Roofing and Waterproofing
D312-00(R2006).....Asphalt Used in Roofing
D450-13.....Coal-Tar Pitch Used in Roofing, Damp proofing and Waterproofing.
D751-11.....Test Methods for Coated Fabrics
D1863-11.....Mineral Aggregate Used on Built-Up Roofs
D2178-13.....Asphalt Glass Felt Used in Roofing and Waterproofing
D4586-12.....Asphalt Roof Cement, Asbestos Free
D4601-12.....Asphalt Coated Fiberglass Base Sheet Used in Roofing
D4897-01(2009).....Asphalt Coated Glass Fiber Venting Base Sheet Used in Roofing Materials Using Glass Fiber Reinforcements
F1667-15.....Driven Fasteners: Nails, Spikes, Staples

C. National Roofing Contractors Association (NRCA):

"Quality Control Guidelines for the Application of Built-up Roofing."
"The NRCA Roofing and Waterproofing Manual"

1.4 PREINSTALLATION MEETINGS
A. Conduct preinstallation meeting minimum 30 days before beginning work of this section.

1. Required participants:
    a. Contracting Officer's Representative
    b. Inspection and Testing Agency
    c. Contractor
    d. Installer
    e. Other installers responsible for adjacent and intersecting work, including skylight installers.
2. Meeting Agenda: Distribute agenda to participants minimum 3 days before meeting.
    a. Removal and installations schedule.
    b. Removal and installation sequence.
    c. Preparatory work
    d. Protection before, during, and after installation.
    e. Removal and installation
    f. Temporary roofing including daily terminations.
    g. Transitions and connections to other work.
    h. Inspecting and testing.
    i. Other items affecting successful completion.
3. Document and distribute meeting minutes to participants to record decisions affecting installation.

1.5

A. Submittal Procedures: Section 01 33 23, SUBMITTAL PROCEDURES

B. Schedule:
1. Removal and installation schedule and sequence with approximate dates.
2. Lead and Asbestos removal plan.

C. Manufacturer's Literature and Data:
1. Description of each product.
2. Description of temporary roof system and components.
3. List of patching materials.
4. Recover board fastening requirements.
5. Temporary roofing installation instructions and removal instructions. Preparation instructions to receive new roofing.

D. Photographs: Document existing conditions potentially affected by roofing operations before work begins.

1.6 QUALITY ASSURANCE

A. Installer Qualifications:
1. Licensed to perform asbestos abatement in Project jurisdiction when removal of asbestos-containing material is required.
2. Applicator Qualifications: Installer experienced in installation of systems similar in complexity to that required for this Project, including specific requirements indicated.
3. Work shall be performed by installer approved in writing by roofing material manufacturer.
4. Work shall comply with printed instructions of the roofing materials manufacturer.

1.7 FIELD CONDITIONS

A. Building Occupancy: Perform work to minimize disruption to normal building operations.
1. Due to the residential nature of the buildings, any changes in construction schedule need minimum 48 hours notice to provide to residents before work can begin.

B. Weather Limitations: Proceed with reroofing preparation only during dry weather conditions.

1. Remove only as much roofing in one day as can be made watertight in same day.
2. **Ensure complete watertight conditions at the end of each day. Any water intrusion due to contractor negligence will be remedied as part of this contract at the cost of the contractor.**

C. Hazardous materials are expected in existing roofing system.
1. Follow approved hazardous material removal plan, as outlined in Section 01 35 23.
2. Additional hazardous materials discovered during execution of the work outside the scope of this project will be removed as part of a contract modification or as work of a separate contract.

1.8 WARRANTY

A. Construction Warranty: FAR clause 52.246-21, "Warranty of Construction."

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 PREPARATION

A. Examine and verify substrate suitability for product installation.

B. Protect existing construction and completed work from damage.

C. Protect landscaping from damage.

D. Maintain access to existing walkways and adjacent occupied facilities.

E. Ensure temporary protection materials are available for immediate use in case of unexpected rain.

F. Ensure roof drainage remains functional.
1. Prevent water from entering building and existing roofing system.

G. Essure rooftop utilities such as vents and pipes remain accessible and active during roofing work.

3.2 COMPLETE ROOFING SYSTEM REMOVAL

A. Remove existing tar and gravel roofing system completely, exposing plywood roofing diaphragm.

B. Remove existing drip edge, pipe collars, and roof vents and clean substrates to receive new flashings.

C. Surface preparation done to exterior surfaces of park buildings may disturb asbestos-containing material (ACM) in wet patch compound. If done incorrectly, surface preparation may release asbestos into the environment, and adversely affect the health of contractors, park employees and park visitors. Follow asbestos removal procedures outlined in submitted Asbestos Hazard Abatement Plan.

3.3 DECK PREPARATION

A. Inspect structural roof deck after roofing system removal.

B. Notify Contracting Officer's Representative of any leaks or damage to roof deck.

3.4 TEMPORARY ROOFING

A. Install temporary roofing to maintain building watertight.

B. Remove temporary roofing before installing new roofing.

3.5 DISPOSAL

A. Collect waste materials in containers.

B. Remove waste materials from project site regularly to prevent accumulation. Clean area around houses at the end of each day and dispose of waste in approved waste receptacles.

C. Dispose of hazardous material according to Site Specific Safety plan outlined in Section 01 35 23 and according to Federal and State regulations.

D. Legally dispose of waste materials.

END SECTION 07 01 50.19

SECTION 07 57 13 SPRAYED POLYURETHANE FOAM ROOFING

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section specifies a roofing system consisting of a layer of sprayed in-place urethane foam roof insulation at 30lbs per 100sf covered with a silicon cap sheet coating at 3 gallons per 100sf with 40lbs per 100sf embedded gravel.

1.2 SUBMITTALS

A. Submit in accordance with Section 01 33 23, Submittal Procedures.

B. Qualifications of applicator.

C. Product data for spray polyurethane foam, silicon, sealants, and gravel.

D. Manufacturer's Data: Showing complete instructions for installation.

E. Samples: Gravel

F. Manufacturer warranty.

G. Completed daily job reports provided by NPS detailing work accomplished each day, trades present, and the weather.

H. All MSDS are to be available and copies kept on-site until Project completion. All persons using materials are to be familiar with information contained within the documents and proper safety precautions are to be followed.

1.3 QUALITY ASSURANCE

A. Also See Section 01430, Contractor Quality Control

B. Qualification of Manufacturer: Sprayed polyurethane foam roofing system manufacturer to have a minimum of five (5) years' experience in manufacturing sprayed polyurethane foam and elastomeric coating roofing products specified herein. Submit qualification.

C. Qualification of Applicator: Roofing system applicator to be approved, authorized, or licensed in writing by the sprayed polyurethane foam roofing system manufacturer and to have a minimum of three (3) years' experience as an approved, authorized, or licensed applicator with that manufacturer and be approved at a level capable of providing the specified warranty. Submit qualification.

D. Product/Material Qualifications: Obtain all paint from one manufacturer, at the same time, and from the same distributor to ensure homogeneity of manufacture and formula.

1. All materials will be used according to manufacturer's specifications and standard industry practices.
2. Contractor shall ensure that all project materials are protected from adverse weather during construction.

E. All products shall be stored and installed in a manner which upholds the manufacturer's warranty unless directed to do otherwise by the COR.

F. All materials will be delivered to the site in their original containers bearing manufacturer's label and instructions.

1.4 WARRANTY

A. Construction Warranty: Comply with FAR clause 52.246-21 "Warranty of Construction".

B. Manufacturer Warranty: Manufacturer shall warranty their sprayed polyurethane foam with silicon coating for a minimum of five (5) years from date of installation and final acceptance by the Government. Submit manufacturer warranty.

1.5 COORDINATION

A. Coordinate roofing operations with the work of other trades and with sheet metal work so that flashings are installed to permit continuous roofing operations.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Primer: Polyurethane foam manufacturer's standard factory-formulated primer for substrate to be covered.

B. Urethane Foam:
   1. Henry PremiR+ EVO 70 or approved equal with the following salient characteristics:
      a. Sprayed-in-place, nominal 60 psi compressive strength, rigid, closed-cell spray polyurethane foam (SPF) roofing system.
      b. R-value of 6.2-6.8 per inch and a continuous insulation without thermal breaks
   2. All Roof coating system shall be obtained from the same vendor at the same time.

C. Elastomeric Joint Sealant:
   1. Sikaflex – 1a or approved equal with the following salient characteristics:
      a. Elastomeric Polyurethane joint sealant ¼ inch to ½ inch maximum thickness

D. Silicon Cap Sheet
   1. Henry Pro-Grade 988 Silicone Roof Coating or Approved Equal with the following salient characteristics:
      a. Single component, fluid applied silicone coating 30 mils minimum thickness.
      b. Color to be Dark Grey and match existing roof colors.

E. Roofing Granule:
   1. 3M Blended #11 Grade Roofing Granule Little Rock or approved equal.
   2. Color to be RG87 SLATE

PART 3 - EXECUTION

3.1 GENERAL

A. Installation to comply with the manufacturer's instructions, except as otherwise specified.

B. Perform preparations and cleaning procedures in strict accordance with manufacturer's instructions and as herein specified, for each substrate condition. Progression of work from installation of polyurethane roof coating system to silicone cap sheet shall proceed in a timely fashion so as to not allow time for bared, prepped, unfinished or incompletely finished substrate to dwell unnecessarily in the weather before receiving applications.

C. Take all necessary precautions to protect building elements and finishes from damage by precipitation during work of this Section.

D. Contractor to protect all landscaping, gardens, and historic structure from damage for the duration of the project.

E. All materials shall comply with fire safety standards. Take all necessary precautions to prevent fire and spread of fire.

3.2 PREPARATION

A. Surfaces to receive elastomeric roofing: Dry and free of loose coatings, surface curing agents or other contaminants.

B. Prime substrate as recommended by foam roofing manufacturer.

3.3 PROTECTION OF ADJACENT SURFACES

A. Protect surfaces near roofing operations from spray or roofing materials. Secure and vent protective coverings to prevent collection of moisture on covered surfaces. Provide protective barriers when spraying along open roof edges and walls to prevent uncontrolled overspray. Restore or replace surfaces damaged by roof system products to the satisfaction of the Contracting Officer Representative (COR) at no additional expense to the Government.

B. Cover all areas immediately adjacent to and below the work with a 6- mil polyethylene film to protect the ground and to retain the wet debris and dust that will be created during the surface treatment.
   1. This covering should extend out horizontally from the base of the wall surface being treated.
   2. Although a 6-mil film is reasonably tough, avoid unnecessary traffic over this surface to reduce the chance of puncture.
   3. Joints and tears shall be repaired immediately with duct tape.

C. Removal of Protective Coverings: At the conclusion of the corrective work or at the end of the day on multi-day activities and when the work area cannot be secured from access, the protective coverings should be carefully removed.
   1. Retain any remaining debris/dust for proper handling/disposal.

3.4 INSTALLATION OF POLYURETHANE

A. Install spray polyurethane foam starting at the highest point of the projects and working to the lowest point to promote positive drainage during installation.

B. Install spray polyurethane foam starting at the highest point of the projects and working to the lowest point to promote positive drainage during installation.

C. Spray Polyurethane Foam Primer
   1. Prime surfaces with spray polyurethane foam primer.
   2. Refer to Roof Coating Manufacturer spray polyurethane foam technical data sheet for primer application rates.

D. Install spray polyurethane foam in lifts between 0.5 to 2 inches (10 to 50 millimeters) thick until full thickness is achieved.

E. Apply base coat or protective covering over spray polyurethane foam within 24 hours of spray

polyurethane foam installation.

F. Install at a rate pf 30lbs per 100sf polyurethane foam coating.

G. The finished surface to be smooth, free of voids, bumps, blisters and crevices and free draining toward downspouts. Area around downspouts must slope into the downspout entrance and avoid a volcano effect around the entrance.

H. Cured foam: Free from water, dust, oils and other materials which would impair adhesion of the protective coating.

I. No foam is to be allowed to stand overnight without a base protective coating. Cure foam at least one hour before application of protective coating and according to manufacturer's recommendations.

J. Correct locations of non-adherence of foam to substrate and finish pinholes flush with an approved sealant before final coating is applied.

K. Do not overspray to correct an unacceptable surface condition.

L. The finished roof surface to not vary more than 13 mm (1/2 inch) when measured with a 3048 mm (10 foot) straight edge parallel and perpendicular to the roof slope. Finished roof surface to have no ponding low spots and provide for free drainage of the roof area.

M. Remove and replace polyurethane foam not complying with specified limitation. Remove defective thickness, prepare, and reapply polyurethane foam with acceptable, uniform results.

3.5 SILICON COATING AND GRAVEL

A. Allow polyurethane form to cure as instructed by manufacturer before applying protective coating.

B. Coating to consist of a base coat and a topcoat.

C. No traffic allowed on finished areas for 24 hours after installation.

D. Base coat to have a dry film thickness of not less than 22 mils or 1.5 gallons per 100sf.

E. Coating to completely cover the foam and extend up vertical surfaces so no foam is visible.

F. Coating to be dry and clean before application of topcoat.

G. Total dry film thickness to be not less than 44 mils, or a product application of 3 gallons per 100sf.

H. Granules:
   1. Apply within five minutes of topcoat application at a rate of 40lbs per 100sft embedded granule.
   2. Apply a minimum of two passes made at right angles to each other.
   3. Finished granule system to be uniform over entire surface with no apparent void areas.

3.6 DISPOSAL AND CLEANUP

A. Collect all waste materials in containers.

B. Remove waste materials from project site regularly to prevent accumulation. Clean area around houses at the end of each day and dispose of waste in approved waste receptacles.

C. Legally dispose of waste materials.

D. Remove overspray protection plastic at the end of each day and store for re-use.

E. Store materials at the end of each day in a designated storage location approved by the CO/COR. Materials are not to be stored in driveways or yards.

END OF SECTION 07 57 13

SECTION 07 60 00 - FLASHING AND SHEET METAL

PART 1 – GENERAL

1.1 DESCRIPTION

A. Formed sheet metal work for roof flashing, roof vents, roof drip edge metal, and metal downspouts are specified in this section.

1.2 RELATED WORK

A. Joint Sealants: Section 07 92 00, JOINT SEALANTS.

1.3 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SUBMITTAL PROCEDURES

B. Shop Drawings: For all specified items, including:
   1. Pipe collar flashing and vents.
   2. Downspouts.
   3. Drip Edge.

C. Manufacturer's Literature and Data: For all specified items.

D. Certificates: Indicating compliance with specified finishing requirements, from applicator and contractor.

1.4 PRE-INSTALLATION CONFERENCE

A. Convene a meeting on site, after submittals are received and approved but before any work, to review drawings and specifications, submittals, schedule, manufacturer instructions, site logistics and pertinent matters of coordination, temporary protection, governing regulations, tests and inspections; participants to include CO/COR and all parties whose work is affected or related to the work of this section.

PART 2 – PRODUCTS

2.1 FLASHING AND SHEET METAL MATERIALS

A. Metal Flashing, Pipe Collars, Vents, and Drip edge are to match existing metal.
   1. Drip edge to be 6 inches tall to account for the foam sloping towards the downspouts.

B. Downspouts are to be painted galvanized aluminum to match existing.

C. Sealant: As specified in Section 07 92 00, JOINT SEALANTS for exterior locations.

2.2 SHEET METAL THICKNESS

A. Except as otherwise shown or specified use thickness or weight of sheet metal as follows:
   1. Aluminum: minimum 0.024 inch thick.
   2. Thickness of aluminum and other metal materials shall match current flashing found on the building.

2.3 FABRICATION, GENERAL

A. Expansion and Contraction Joints:

1. Fabricate in accordance with the Architectural Sheet Metal Manual recommendations for expansion and contraction of sheet metal work in continuous runs.
2. Space joints as shown or as specified.
3. Space expansion and contraction joints for aluminum at intervals not exceeding 5400 mm (18 feet), except do not exceed 3000 mm (10 feet) for gravel stops and fascia-cant systems.
4. Fabricate slip-type or loose locked joints and fill with sealant unless otherwise specified.
5. Fabricate joint covers of same thickness material as sheet metal served.

B. Cleats:
1. Fabricate cleats to secure flashings and sheet metal work over 300 mm (12 inches) wide and where specified.
2. Provide cleats for maximum spacing of 300 mm (12 inch) centers unless specified otherwise.
3. Form cleats of same metal and weights or thickness as the sheet metal being installed unless specified otherwise.
4. Fabricate cleats from 50 mm (2 inch) wide strip. Form end with not less than 19 mm (3/4 inch) wide loose lock to item for anchorage. Form other end of length to receive nails free of item to be anchored and end edge to be folded over and cover nail heads.

C. Edge Strips or Continuous Cleats:
1. Fabricate continuous edge strips where shown and specified to secure loose edges of the sheet metal work.
2. Except as otherwise specified, fabricate edge strips of minimum 1.25 mm (0.050 inch) thick aluminum.
3. Use material compatible with sheet metal to be secured by the edge strip.
4. Fabricate in 3000 mm (10 feet) maximum lengths with not less than 19 mm (3/4 inch) loose lock into metal secured by edge strip.
5. Fabricate Strips for fascia anchorage to extend below the supporting wood construction to form a drip and to allow the flashing to be hooked over the lower edge at least 19 mm (3/4-inch).
6. Fabricate anchor edge maximum width of 75 mm (3 inches) or of sufficient width to provide adequate bearing area to ensure a rigid installation using 1.6 mm (0.0625 inch) thick aluminum.

D. Drips:
1. Form drips at lower edge of sheet metal counter-flashings (cap flashings), fascia, gravel stops, wall copings, by folding edge back 13 mm (1/2 inch) and bending out 45 degrees from vertical to carry water away from the wall.

E. Edges:
1. Turn up edges of flashings concealed in masonry joints and opposite drain side 6 mm (1/4 inch) to form dam, unless otherwise specified or shown otherwise.
2. Finish exposed edges of flashing with a 6 mm (1/4 inch) hem formed by folding edge of flashing back on itself when not hooked to edge strip or cleat. Use 6 mm (1/4 inch) minimum penetration beyond wall face with drip for through-wall flashing exposed edge.
3. All metal roof edges must meet requirements of IBC, current edition.

F. Metal Options:
1. Where options are permitted for different metals use only one metal throughout.

2.4 FINISHES
A. Paint in accordance to Specification 09 91 00.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General:

1. Install flashing and sheet metal items as shown in Sheet Metal and Air Conditioning Contractors National Association, Inc., publication, ARCHITECTURAL SHEET METAL MANUAL, except as otherwise shown or specified.
2. Anchor sheet metal flashing and trim and other components of the work securely in place with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants and other miscellaneous items as required, to complete flashing and trim assemblies.
3. Apply Sealant as specified in Section 07 92 00, JOINT SEALANTS.
4. Apply sheet metal and other flashing material to surfaces which are smooth, sound, clean, dry and free from defects that might affect the application.
5. Remove projections which would puncture the materials and fill holes and depressions with material compatible with the substrate. Cover holes or cracks in wood wider than 6 mm (1/4 inch) with sheet metal compatible with the roofing and flashing material used.
6. Confine direct nailing of sheet metal to strips 300 mm (12 inch) or less wide. Nail flashing along one edge only. Space nails not over 100 mm (4 inches) on center unless specified otherwise.
7. Install bolts, rivets, and screws where indicated, specified, or required in accordance with the SMACNA Sheet Metal Manual. Space rivets at 75 mm (3 inch) on centers in two rows in a staggered position. Use neoprene washers under fastener heads when fastener head is exposed.
8. Coordinate with roofing work for the installation of metal base flashings and other metal items having roof flanges for anchorage and watertight installation.
9. Nail continuous cleats on 75 mm (3 inch) on centers in two rows in a staggered position.
10. Nail individual cleats with two nails and bend end tab over nail heads. Lock other end of cleat into hemmed edge.
11. Install flashings in conjunction with other trades so that flashings are inserted in other materials and joined together to provide a watertight installation.
12. Where required to prevent galvanic action between dissimilar metal isolate the contact areas of dissimilar metal with sheet lead, waterproof building paper, or a coat of bituminous paint.
13. Isolate aluminum in contact with dissimilar metals others than stainless steel, white bronze or other metal compatible with aluminum by one of the following:
    a. Paint dissimilar metal with a prime coat of zinc-chromate or other suitable primer, followed by two coats of aluminum paint.
    b. Paint dissimilar metal with a coat of bituminous paint.
    c. Apply an approved caulking material between aluminum and dissimilar metal.
14. Paint aluminum in contact with or built into mortar, concrete, plaster, or other masonry materials with a coat of bituminous paint.
15. Paint aluminum in contact with absorptive materials that may become repeatedly wet with two coats of bituminous paint or two coats of aluminum paint.

3.2 BASE FLASHING

A. Install flashing at intersections of roofs with vertical surfaces or at penetrations through roofs, to provide watertight construction.

B. Install metal flashings and accessories having flanges extending out on top of the built-up roofing before final bituminous coat and roof aggregate is applied.

C. Set flanges in heavy trowel coat of roof cement and nail through flanges into wood nailers over bituminous roofing.

D. Secure flange by nailing through roofing into wood blocking with nails spaced 75 mm (3 inch) on centers or, when flange over 100 mm (4 inch) wide terminate in a 13 mm (1/2 inch) folded edge anchored with cleats spaced 200 mm (8 inch) on center. Secure one end of cleat over nail heads. Lock other end into the seam.

E. For long runs of base flashings install in lengths of not less than 2400 mm (8 feet) nor more than 3000 mm (ten feet). Install a 75 mm (3 inch) wide slip type, loose lock expansion joint filled with sealant in joints of base flashing sections over 2400 mm (8 feet) in length. Lock and solder corner joints at corners.

F. Extend base flashing up under counter flashing of roof specialties and accessories or equipment not less than 75 mm (3 inch).

3.3 COUNTERFLASHING

A. General:
1. Install counterflashing over and in conjunction with installation of base flashings, except as otherwise specified or shown.
2. Install counterflashing to lap base flashings not less than 100 mm (4 inch).
3. Install upper edge or top of counterflashing not less than 225 mm (9 inch) above top of the roofing.
4. Lap joints not less than 100 mm (4 inch). Stagger joints with relation to metal base flashing joints.
5. Use surface applied counterflashing on existing surfaces and new work where not possible to integrate into item.
6. When fastening to concrete or masonry, use screws driven in expansion shields set in concrete or masonry. Use screws to wood and sheet metal. Set fasteners in mortar joints of masonry work.

B. One Piece Counterflashing:
1. Where flashing is surface mounted on flat surfaces.
   a. When top edge is double folded anchor flat portion below sealant "V" joint with fasteners spaced not over 400 mm (16 inch) on center:
      1) Locate fasteners in masonry mortar joints.
      2) Use screws to sheet metal or wood.
   b. Fill joint at top with sealant.
2. Where flashing or hood is mounted on pipe.
   a. Secure with draw band tight against pipe.
   b. Set hood and secure to pipe with a one by 25 mm x 3 mm (1 x 1/8 inch) bolt on stainless steel draw band type clamp, or a stainless worm gear type clamp.
   c. Completely fill joint at top with sealant.

C. Two-Piece Counterflashing:
1. Surface applied type receiver:
   a. Secure to face construction in accordance, with manufacturer's instructions.
   b. Completely fill space at the top edge of receiver with sealant.
2. Insert counter flashing in receiver in accordance with fabricator or manufacturer's instructions and to fit tight against base flashing.

D. Where vented edge occurs install so lower edge of counterflashing is against base flashing.

END SECTION 07 60 00

SECTION 07 92 00 - JOINT SEALANTS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Section covers all sealant and caulking materials and their application, wherever required for complete installation of building materials or systems.

1.2 QUALITY CONTROL

A. Installer Qualifications: An experienced installer who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint-sealant installations with a record of successful in-service performance.

B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

C. Product Testing: Obtain test results from a qualified testing agency based on testing current sealant formulations within a 12-month period.

D. Preconstruction Field-Adhesion Testing: Before installing elastomeric sealants, field test their adhesion to joint substrates in accordance with sealant manufacturer's recommendations:
   1. Locate test joints where indicated or, if not indicated, as directed by Contracting Officer.
   2. Conduct field tests for each application indicated below:
      a. Each type of elastomeric sealant and joint substrate indicated.
      b. Each type of non-elastomeric sealant and joint substrate indicated.
   3. Notify RE/COR seven days in advance of dates and times when test joints will be erected.

E. Meet VOC requirements of pertinent CARB and/or SCAQMD Rule for sealants VOC (4 percent by weight VOC or less in less than 16-ounce package or less than 250 g/L in larger package). All non-porous sealant primers must be below 250g/L and primers for porous substrates less than 775 g/L.

1.3 CERTIFICATION:

A. Contractor is to submit to the COR written certification that joints are of the proper size and design, that the materials supplied are compatible with adjacent materials and backing, that the materials will properly perform to provide permanent watertight, airtight or vapor tight seals (as applicable), and that materials supplied meet specified performance requirements.

1.4 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SUBMITTAL PROCEDURES

B. Manufacturer's installation instructions for each product used.

C. Manufacturer's warranty.

D. Cured samples of exposed sealants for each color where required to match adjacent material.

E. Manufacturer's Literature and Data:
   1. Caulking compound.

2. Primers.
3. Sealing compound, each type, including compatibility when different sealants are in contact with each other.

F. Preconstruction Laboratory Test Reports: From sealant manufacturer, indicating the following:

1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
2. Interpretation of test results and written recommendations for primers and substrate preparation are needed for adhesion.

1.5 PROJECT CONDITIONS

A. Environmental Limitations:
   1. Do not proceed with installation of joint sealants under following conditions:
      a. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 4.4 °C (40 °F).
      b. When joint substrates are wet unless advised otherwise by manufacturer instructions.

B. Joint-Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.

C. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

1.6 DELIVERY, HANDLING, AND STORAGE

A. Deliver materials in manufacturers' original unopened containers, with brand names, date of manufacture, shelf life, and material designation clearly marked thereon.

B. Carefully handle and store to prevent inclusion of foreign materials.

C. Do not subject to sustained temperatures less than 5° C (40° F) or exceeding 32° C (90° F).

1.7 DEFINITIONS

A. Definitions of terms in accordance with ASTM C717 and as specified.

PART 2 - PRODUCTS

2.1 ELASTOMERIC JOINT SEALANT

A. Sikaflex – 1a or approved equal with the following salient characteristics:
   1. Elastomeric Polyurethane joint sealant ¼ inch to ½ inch maximum thickness

2.2 COLOR

A. Match color of adjacent materials or approved color by COR.

2.3 JOINT SEALANT BACKING

A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.4 PRIMER

A. As recommended by manufacturer of caulking or sealant material.

B. Stain free type.

2.5 CLEANERS-NON POUROUS SURFACES

A. Chemical cleaners acceptable to manufacturer of sealants and sealant backing material, free of oily residues and other substances capable of staining or harming joint substrates and adjacent non-porous surfaces and formulated to promote adhesion of sealant and substrates.

PART 3 – EXECUTION

3.1 INSPECTION

A. Inspect substrate surface for bond breaker contamination and unsound materials at adherent faces of sealant.

B. Coordinate for repair and resolution of unsound substrate materials.

C. Inspect for uniform joint widths and that dimensions are within tolerance established by sealant manufacturer.

3.2 PREPARATIONS

A. Prepare joints in accordance with manufacturer's instructions and as specified only when installers are ready to initiate sealant application as soon as practicable after preparation and before subsequent surface deterioration.

B. Clean surfaces of joint to receive caulking or sealants leaving joint dry to the touch, free from frost, moisture, grease, oil, wax, lacquer paint, or other foreign matter that would tend to destroy or impair adhesion.
   1. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

C. Do not cut or damage joint edges.

D. Apply masking tape to face of surfaces adjacent to joints before applying primers, caulking, or sealing compounds.
   1. Do not leave gaps between ends of sealant backings.
   2. Do not stretch, twist, puncture, or tear sealant backings.
   3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

E. Apply primer to sides of joints wherever required by compound manufacturer's printed instructions.
   1. Use brush or other approved means that will reach all parts of joints.

F. Take all necessary steps to prevent three-sided adhesion of sealants.

3.3 SEALANT DEPTHS AND GEOMETRY

A. At widths up to 6 mm (1/4 inch), sealant depth equal to width.

B. At widths over 6 mm (1/4 inch), sealant depth 1/2 of width up to 13 mm (1/2 inch) maximum depth at center of joint with sealant thickness at center of joint approximately 1/2 of depth at adhesion surface.

3.4 INSTALLATION

A. Comply with manufacturer's written installation instructions for products and applications indicated.

B. For application of sealants, follow requirements of ASTM C1193 unless specified otherwise.

3.5 CLEANING

A. Fresh compound accidentally smeared on adjoining surfaces: Scrape off immediately and rub clean with a solvent as recommended by the caulking or sealant manufacturer.

B. After filling and finishing joints, remove masking tape.

C. Leave adjacent surfaces in a clean and unstained condition.

3.6 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END SECTION 07 92 00

09 91 00 - PAINTING

PART 1 - GENERAL

1.1 DESCRIPTION

A. The work done under this section includes all labor, materials and incidentals required to do a complete job of painting the pipe collars/vents, metal drip edge, and metal downspouts on 7 residential buildings located in the Golden Gate National Recreation Area.

B. One coat of primer and two coats of paint are required.

C. "Paint", as used herein, means all coating systems materials, including primers. emulsions, enamels, sealers, and fillers, stains, and other applied materials, whether used as prime, intermediate, or finish coats.

D. The paint color shall match existing and will be specified in the following sections.

1.2 SUBMITTALS

A. All submittals shall be transmitted by email to the CO and COR as outlined in 01 33 23: SUBMITTAL PROCEDURES.

B. The following submittals are required but do not represent a comprehensive list:
   1. Surface Preparation Plan for exterior surfaces.
   2. Samples: Samples shall be large enough to illustrate clearly the functional characteristics and full range of color, texture, or pattern.
      a. Colors: Paint samples may be taken from the buildings to allow the Contractor's paint supplier to match the existing colors as closely as possible. The final determination of actual color shall be selected by the Contracting Officer. Samples to be 12" x 12" minimum; provide adequate samples until sheen and finish are acceptable. These will serve as quality comparisons.
      b. Sealants and caulks: Provide three samples of proposed products.
   3. Manufacturers' Catalog Sheets: Submit only pertinent pages: mark each copy of standard printed data to identify specific products proposed for use. Submit copies of manufacturer's specifications, including paint label analysis and application instructions for each material specified. **Data is to be submitted and approved before work begins.**
   4. Manufacturer's Application Instructions: When contract documents require compliance with manufacturer's printed instructions, provide one complete set of instructions for Contracting Officer and keep another complete set of instructions at the project site until substantial completion.
   5. Certification from the manufacturer that materials furnished for use on this project meet or exceed specified requirements and comply with applicable federal, state, and local requirements regarding lead and VOC content.

C. COR reserves the right to require submittals in addition to those called in individual sections.

D. Approved Equals:
   1. For each item proposed as an "approved equal," submit supporting data including:
      a. Drawings and samples as appropriate.
      b. Comparison of the characteristics of the proposed item with that specified.
      c. Changes required in other elements of the work because of the substitution.
      d. Name, address, and telephone number of vendors.

2. A request for approval constitutes a representation that Contractor:
    a. Has investigated the proposed item and determined that it is equal or superior in all respects to that specified.
    b. Will provide the same warranties for the proposed item as for the item specified.
    c. Has determined that the proposed item is compatible with interfacing items.
    d. Will coordinate the installation of an approved item and make all changes required in other elements of the work because of the substitution.
    e. Waives all claims for additional expenses that may be incurred as a result of the substitution.

1.3 QUALITY ASSURANCE

A. Qualifications of Painters: Use only qualified journeyman painters for the mixing application of paint on exposed surfaces; in the acceptance or rejection of installed painting, no allowance will be made for the lack of skill on the part of the painters.

B. Project inspection: Surface preparation and application of primer (or first coat) on the trim and all other painted surfaces shall be inspected (and approved) by the COR prior to the next (or final) coat of paint shall be applied.

C. Federal Specifications: Federal Specifications referenced define the general type and quality of paint required but are not intended to limit acceptable materials to an exact formulation.

D. Comply with applicable regulations of OSHA, 28 CFR 1926-1993, and EPA and State of California regulations regarding Volatile Organic Compounds (VOC).

E. Paint thickness, where specified, is minimum dry film thickness. Paint thickness shall meet manufacturer’s recommendation for minimum dry film thickness measured in mils.

F. Guarantee all surface finishes for the guarantee period to remain free of defects including serious or uneven fading, and evidence of blistering, peeling or chalking.

G. General: Except for tests or other items of work specified to be performed by the Government, the quality of all work shall be the responsibility of the Contractor. Inspect and test all work often enough to ensure that the quality of materials, workmanship, construction, finish, and functional performance is in compliance with applicable specifications and drawings.

H. Quality Control Staff: The Contractor's job supervisory staff may be used for quality control, supplemented as necessary by additional technicians. The Contractor's designated Quality Control Supervisor shall be employed full time at the project site whenever contract work is in progress.

I. Provide products from a single manufacturer, do not mix products of different manufacturers without approval of Contracting Officer and the manufacturers involved.

1.4 ENFORCEMENT

A. The Contractor shall stop work on any item or feature pending satisfactory correction of any deficiency noted by the quality control staff or the COR. Construction shall not proceed on any feature of work containing uncorrected work.

1.5 PROJECT CONDITIONS

A. The use of burning tools or any other source of flame is strictly prohibited.

B. Sandblasting is prohibited as is power washing of wood materials. Washing with detergent and scrub brushes, in combination with scraping, as described below, is acceptable.

C. The painting locations in this contract are subject to fog and wind conditions for some of the year. The contractor shall schedule the work such that painting occurs only when conditions at the individual project sites satisfy the requirements of this section.

D. Apply finish material when the temperature of surfaces to be painted and the surrounding air temperatures are between 50 and 90 degrees F, unless otherwise permitted by the paint manufacturer's printed instructions. Apply finishes only when air is free of dust that would speck the finish.

E. Do not apply exterior materials in damp, rainy weather, or when the relative humidity exceeds 85 percent. Do not apply paint on damp or wet surfaces, or on surfaces in direct sunlight. Painting may be continued during inclement weather only if the areas and surfaces to be painted are enclosed and heated within the temperature limits specified by the paint manufacturer during application and drying periods.

F. Measure moisture content of surfaces using an electronic moisture meter and verify moisture content with the Contracting Officer’s Representative.
   1. Do not apply finishes unless moisture content of surfaces is below following maximums:
      a. Exterior Wood: 18%.

G. Do not allow fire hazards to occur on the project sites; remove from the area daily all oily rags, waste, and other combustibles not in covered metal containers.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Comply with requirements of Section 01 43 00.

B. Deliver products to site in manufacturer's sealed and labeled containers; inspect to verify compliance with specified requirements.

C. Label containers to indicate manufacturer's name, product name and type of coating, brand code or stock number, date of manufacture, coverage, surface preparation, drying time, cleanup, color designation and instructions for mixing and reducing.

D. Store coating materials in tightly covered containers in well-ventilated areas at ambient temperatures of 45 degrees F minimum and 90 degrees F maximum, unless required otherwise by manufacturer. Maintain containers in clean condition, free of foreign materials and residue with labels in legible condition. Chemicals (fuels, paint, etc.) stored outdoors will be stored in a closed, covered, and lockable container with secondary containment that can hold 110% of the total volume of materials.

E. Take precautionary measures to prevent fire hazards and spontaneous combustion.

PART 2 - PRODUCTS

2.1 COLORS AND FINISHES

A. Paint, surface treatments, and finishes shall be applied following manufacturer’s application instructions.

B. Contractor will be required to match the color of paint chips; the colors selected will match as closely as possible to each buildings color scheme.

C. Final acceptance of color will be from samples applied on the job.

D. Proprietary names used to designate colors or materials are not intended to imply that products of the manufacturers are required to the exclusion of equivalent products of other manufacturers.

E. Paint Coordination: Provide finish coats which are compatible with prime paints used. Primer shall be of a different tint than that of the finish coats.

F. Exterior drip edge, pipe collars/vents, fascia, and downspout finish color to match existing color of PRESIDIO WHITE SATIN from DUNN-EDWARDS or approved equal. Paint and primer must be compatible with the painting surfaces and the environment in which they will be painted.

2.2 MATERIAL QUALITY

A. Provide the best quality grade of the various types of coatings as regularly manufactured by approved paint materials manufacturers. Materials not displaying the manufacturer's identification as a standard, best-grade product will not be acceptable.

B. Paint shall not settle badly, cake or thicken in the container, shall be readily broken up with a paddle to a smooth consistency and have easy brushing properties. Paint shall be ready mixed except that thinning may be done at the job.

C. Provide undercoat paint produced by the same manufacturer as the finish coats. Use only thinners approved by the paint manufacturer and use only within recommended limits.

2.3 MATERIALS

A. Unless otherwise specified, the products shall be comparable, quality products of Dunn Edwards or an approved equal which will produce similar results would be acceptable.

B. Colors used shall be selected for their performance and non- fading qualities.

PART 3 – EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions under which painting work is to be applied. Notify the COR, in writing, of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected. Provide a plan for handling and disposing of lead-based paint chips and debris if found in hazardous material testing prior to beginning work.

B. Starting of painting work will be construed as the Applicator's acceptance that the surfaces and the conditions within any area are within scope.

C. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to the formation of a durable paint finish.

3.2 SURFACE PREPARATION

A. Recommended Action: Deteriorated surfaces are to be repaired to obtain a smooth surface which can be repainted. This will require corrective work starting with the removal of loose paint and

dust, cleaning the surfaces, and resealing the surface by painting. The purpose of this procedure is to restore the integrity of the exterior paint surface and control further deterioration of the paint.

B. Area Protection: Cover all areas immediately adjacent to and below the work with a 6- mil polyethylene film to protect the ground and to retain the wet debris and dust that will be created during the surface treatment. This covering should extend out horizontally from the base of the wall surface being treated. Although a 6-mil film is reasonably tough, avoid unnecessary traffic over this surface to reduce the chance of puncture. In addition, if the ground surface is rough, an additional layer of polyethylene may be required. Joints and tears shall be repaired immediately with duct tape.

C. Surface Preparation: Perform preparation and cleaning procedures in strict accordance with the paint manufacturer's application instructions and as herein specified for each substrate condition.

1. Protect all hardware, hardware accessories, machined surfaces, plates lighting fixtures, and similar items in place and not to be finish-painted. prior to surface preparation and painting operations. Remove, if necessary. for the complete painting of the items and adjacent surfaces. Following completion of painting of each space or area, reinstall the removed items by workmen skilled in the trades involved.
2. All surfaces to be painted shall be thoroughly cleaned to remove any loose material down to finished wood or tight painted surface. Remove oil and grease prior to mechanical cleaning. Program the cleaning and painting so that contaminants from the cleaning process will not fall onto wet, newly painted surfaces.
3. Sand, scrape, and prepare existing surfaces to remove loose or scaling material. Feather edges to provide for smooth finish. Patch existing surfaces as required to provide smooth, even surface ready to receive new finish.
4. Remove surface contamination and oils from all metals and prepare for priming in accordance with metal manufacturer's recommendations. Prime with a rust inhibitive metal primer.
5. Remove dirt, loose mortar, scale, powder, and other foreign matter from concrete and concrete block surfaces which are to be painted. Remove oil and grease with a solution of Tri-sodium Phosphate, rinse well, and allow to thoroughly dry.
6. Any mildew must be removed, and area coated with a 50- 50 solution of bleach and water. This is to be allowed to dry before painting. All surfaces shall be washed with a bleach solution or Tri-sodium Phosphate.
7. Windows or other surfaces not to be painted shall be masked off to prevent over spray.
8. Remove temporary labels, wrappings, and protective coverings from surfaces to be coated.
9. Seal any stains, marks, and other imperfections which may bleed through surface finishes.
10. Test compatibility of existing coatings by applying new coating to small, inconspicuous area. If new coatings lift or blister existing coatings, request recommendation from COR.

3.3 MATERIALS PREPARATION

A. Mix and prepare painting materials in accordance with manufacturer's directions.

B. Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing, and application of paint in a clean condition, free of foreign materials and residue.

C. Stir materials before application to produce a mixture of uniform density and stir as required during the application of the materials. Do not stir surface film into the material. Remove the film and. if necessary, strain the material before using.

3.4 APPLICATION:

A. Apply paint in accordance with the manufacturer's directions. Use applicators techniques best suited for the type of material being applied. Materials shall not unduly thinned.
   1. Apply additional coats when undercoats, stains, or other conditions show through the final coat of paint, until the paint film is of uniform finish, color and appearance.
   2. Paint the back sides of access panels and removable or hinged covers to match the exposed surfaces.
   3. Omit the first coat (primer) on metal surfaces which have been shop primed and touch-up painted, unless otherwise specified.
   4. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
   5. Touch-up Paint: The Contractor shall provide one gallon of touch- up paint for each different color and type of paint utilized for each structure painted. The paint will be provided in clean, unopened containers with a label describing the following information: manufacturer's name, color/type of paint and building number where it was applied.

3.5 CLEANUP AND PROTECTION

A. Cleanup: All paint materials**,** rubbish, cans, and rags which might constitute a fire hazard shall be placed in a metal container or destroyed at the end of each day**.**
   1. Upon completion of painting work, clean all window glass and other paint splattered surfaces. All scaffolding, painters' equipment and containers shall be removed from the work. Remove splattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.

B. Protection: Contractor shall be responsible for protection of surrounding Government or private property throughout the painting operation. Correct any damages by cleaning, repainting, or replacing, and repainting as directed by the Contracting Officer at no cost to the NPS.
   1. Provide "**Wet Paint**" signs as required to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.
   2. If completed construction is damaged beyond normal cleaning or repair by painting operations, replace damaged items at no additional cost to NPS.
   3. Maintain premises and storage areas free of unnecessary accumulation of tools, equipment, surplus materials, and debris.

3.6 PREPARATION AND FINISHING ALUMINUM/METAL

A. Preparation:
   1. Remove all oil, grease, soil, and other foreign material by solvent cleaning. Do not use steel wool or wire brushes for cleaning.
   2. Apply first coat within 1 to 4 hours after cleaning.

3.7 ONE YEAR WARRANTY

A. Contractor shall provide documentation of all product warranties issued by the manufacturer.

B. Contractor shall warranty all workmanship for a period of one (1) year starting from the date of final acceptance. Contractor shall provide written documentation of this warranty as part of the closeout submittals.

END OF SECTION 09 91 00