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**PART 1 GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General Conditions and Division 1 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. This Section includes requirements for ensuring the most environmentally conscious Work feasible within the limits of the Construction Schedule, Contract Sum and available materials, equipment, and products.
1. Contractor shall participate in promoting efforts of Owner and Architect to create an environmentally-sensitive structure.
  2. Contractor shall use recycled, toxic-free and environmentally-sensitive materials, equipment, products and procedures to the greatest extent possible.
  3. Contractor shall protect the environment, both on-site and off-site, during demolition and construction operations.
  4. Contractor shall prevent environmental pollution and damage.
  5. Contractor shall effect optimum control of solid wastes.
- B. Related Requirements:
1. Division 1 Section "Sustainable Design Requirements".

**1.3 DEFINITIONS**

- A. Environmental Pollution and Damage: The presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humanity; or degrade the utility of the environment for aesthetic, cultural or historical purposes.
- B. Inert Fill: A permitted facility that accepts inert waste such as asphalt and concrete exclusively.
1. Inert Solids/Inert Waste: Non-liquid solid waste including, but not limited to, soil and concrete, that does not contain hazardous waste or soluble pollutants at concentrations in excess of water-quality objectives established by the authority having jurisdiction and does not contain significant quantities of decomposable solid waste.
- C. Class III Landfill: A landfill that accepts non-hazardous waste such as household, commercial and industrial waste, including construction, remodeling, repair and demolition operations.
- D. Construction and Demolition Waste: Includes solid wastes, such as building materials, packaging, rubbish, debris and rubble resulting from construction, remodeling, repair and demolition operations.
1. Rubbish: Includes both combustible and noncombustible wastes, such as paper, boxes, glass, crockery, metal and lumber scrap, tin cans, and bones.
  2. Debris: Includes both combustible and noncombustible wastes, such as leaves and tree trimmings that result from construction or maintenance and repair work.
- E. Chemical Waste: Includes petroleum products, bituminous materials, salts, acids, alkalis, herbicides, pesticides, organic chemicals and inorganic wastes.
- F. Sanitary Wastes:
1. Garbage: Refuse and scraps resulting from preparation, cooking, distribution or consumption of food.
  2. Sewage: Domestic sanitary sewage.

**1.4 SUBSTITUTIONS**

- A. Notify Owner and Architect when Contractor is aware of materials, equipment or products that meet the aesthetic and programmatic intent of Contract Documents, but which are more environmentally-sensitive than materials, equipment or products specified or indicated in the Contract Documents.
- B. Substitutions: Comply with General Conditions using form in Division 1 Section "Substitution Request Form".

**1.5 SUBMITTALS**

- A. Submit the following according to Conditions of the Construction Contract and Division 1 Specification Sections.
- B. Solid Waste Management and Environmental Protection Plan: After award of Contract and prior to the commencement of the Work, schedule and conduct meeting with Owner and Architect to discuss the proposed Solid Waste Management and Environmental Protection Plan and to develop mutual understanding relative to details of environmental protection, recycling, and rebate programs.
  - 1. Not more than 20 days after the meeting, prepare and submit a written and/or graphic Solid Waste Management and Environmental Protection Plan including, but not limited to, the following:
    - a. List of federal, state and local laws, regulations and permits concerning environmental protection, pollution control, noise control and abatement that are applicable to the Contractor's proposed operations.
    - b. Procedures to be implemented to provide the required environmental protection and to comply with the Contractor's proposed applicable operations.
    - c. Permit or license and the location of the solid waste disposal area(s).
    - d. Procedures for Recycling/Re-Use Program.
    - e. Procedures for Rebate Program(s).
  - 2. Revise and resubmit Solid Waste Management and Environmental Protection Plan as required by Owner.
  - 3. Review of the Contractor's Solid Waste Management and Environmental Protection Plan, will not relieve the Contractor of responsibility for adequate and continuing control of pollutants and other environmental protection measures.

**1.6 RECYCLING REQUIREMENTS**

- A. Recycling: Implement a recycling program that includes separate collection of waste materials as required for LEED MRc2:
- B. Handling:
  - 1. Materials shall be free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to recycling process.
    - a. Clean materials which are contaminated prior to placing in collection containers.
  - 2. Arrange for collection by or delivery to the appropriate recycling center or transfer station that accepts construction and demolition waste for purpose of recycling.
- C. Rebates, tax credits, and other savings obtained for recycled or re-used materials shall accrue to Contractor.

**1.7 ENVIRONMENTAL CONTROLS**

- A. Comply with federal, state and local regulations pertaining to water, air, solid waste, chemical waste, sanitary waste, sediment and noise pollution.
- B. Protection of Natural Resources: Preserve the natural resources within the Project boundaries and outside the limits of permanent work performed under this Contract in their existing condition or restore to an equivalent or improved condition upon completion of the Work.
  - 1. Confine demolition and construction activities to areas defined by public roads, easements, and work area limits indicated on the drawings.
    - a. Temporary Construction: Remove indications of temporary construction facilities, such as haul roads, work areas, structures, stockpiles or excess or waste materials, and other vestiges of construction as directed by Owner.
  - 2. Water Resources: Comply with applicable regulations concerning the direct or indirect discharge of pollutants to underground and natural waters.
    - a. Oily Substances: Prevent oily or other hazardous substances from entering the ground, drainage areas, or local bodies of water in such quantities as to affect normal use or aesthetics or produce a measurable ecological impact on the area.
      - 1) Store and service construction equipment at areas designated for collection of oil wastes.
  - 3. Dust Control, Air Pollution, and Odor Control: Prevent creation of dust, air pollution and odors.
    - a. Use temporary enclosures, and other appropriate methods to limit dust and dirt rising and scattering in air to lowest practical level.
    - b. Store volatile liquids, including fuels and solvents in closed containers.
    - c. Properly maintain equipment to reduce gaseous pollutant emissions.

4. Noise Control: Perform demolition and construction operations to minimize noise.
  - a. Perform noise producing work in less sensitive hours of the day or week as directed by the Owner or as required by the local authority having jurisdiction.
  - b. Repetitive, high level impact noise will be permitted only between the hours of 8:00 A.M. and 6:00 P.M. or as required by the local authority having jurisdiction.
    - 1) Repetitive impact noise on the property shall not exceed the dB limitations as required by the local authority having jurisdiction:
  - c. Provide equipment and sound-deadening devices, and take noise abatement measures that are necessary to comply with the requirements of this Contract and the local authority having jurisdiction.
  - d. At least once every five successive working days while work is being performed above 55 dB noise level, measure sound level for noise exposure due to the construction or as required by the local authority having jurisdiction.
    - 1) Measure the sound levels on the A weighing network of a General Purpose sound level meter at slow response.
    - 2) To minimize the effect of reflective sound waves at buildings, measurements may be taken three to six feet in front of any building face.
    - 3) Submit the recorded information to the Owner noting any problems and the alternatives for mitigating actions.
5. Disposal Operations:
  - a. Promptly and legally transport and dispose of removed and demolished items and waste materials that are not identified to be recycled or reused.
  - b. Do not burn, bury or otherwise dispose of rubbish and waste materials on Project site.

#### **1.8 JOBSITE ADMINISTRATION**

- A. Contractor shall review the environmental goals of this Project with all subcontractors and sub-subcontractors.
  1. The Contractor shall make a proactive effort to increase awareness of these goals among all jobsite workers.
- B. Secure Material Safety Data Sheets (MSDS) for all products for which MSDS Sheets are available.
  1. Review MSDS sheets with workers on the jobsite.
  2. Discuss alternatives to minimize exposure to potentially harmful substances.
- C. Schedule work so that potentially harmful substances or VOC-releasing work is completed at least 72 hours prior to installation of materials or systems that may absorb these substances.
  1. Reference 01 8113 for product VOC LEED requirements.
- D. Schedule work involving VOC-releasing substances or potentially harmful substances at night or on weekends when the least number of workers are present.
  1. Separate these work areas with plastic and provide separate ventilation and exhaust during installation and for a minimum of 72 hours after installation is complete.
  2. Exhaust directly to the exterior of the structure, taking care that exhaust is located at least 100 feet from air intakes, inhabitants or workers.
  3. Reference 01 8113 for product VOC LEED requirements.

#### **PART 2 PRODUCTS (NOT USED)**

#### **PART 3 EXECUTION (NOT USED)**

**END OF SECTION**