PART 1 – GENERAL

1.1 DESCRIPTION OF REQUIREMENTS

A. Minimum temporary facilities and controls requirements are specified in this Section. Nothing in this Section is intended to limit the types and amounts of necessary temporary facilities required to perform the Work, and no omission from this Section will be recognized as an indication that a necessary temporary facility is not required for successful completion of the Work Order, and compliance with the requirements of the Contract Documents and all applicable codes.

B. Included in this Section are the following headings:

1. Product Delivery, Storage and Handling
2. Project Site - Work Area
3. Protection of Existing Utilities
4. Shutdowns of Existing Equipment and Utility Services
5. Temporary Support Facilities
6. Temporary Enclosures and Miscellaneous Construction
7. Noise and Vibration Control
8. Construction Parking and Staging
9. Construction Traffic

C. Owner’s forms referenced in this Section include (see Appendix A):

1. UW or HMC Utility Shutdown Request form, as appropriate.

D. Behavior:

1. The Owner will not tolerate inappropriate behavior by any worker on a jobsite toward a student, staff, patient, visitor, neighbor or employee.

2. The Contractor shall not allow obscene, offensive or otherwise inappropriate material to be displayed at the Project site, or at remote construction staging and parking areas, including job offices and trailers. If such material is displayed, it shall be immediately removed by the Contractor and/or when requested by the Owner's Representative.

3. Gratuities to Owner's employees by a Contractor are not allowed per Washington Administrative Code, Chapter 42.52 RCW.

E. Conservation: The Contractor shall install and operate temporary facilities and perform construction activities in a manner which reasonably will be conservative and avoids waste of energy and materials, including water.

F. Pest Control: The Contractor shall rid the Project site of rodents, birds, insects, and other pests which may have entered buildings under construction as a result of the work.

G. Pollution Control: The Contractor shall perform the Work so as to prevent water, soil, and air pollution.

1. The Contractor shall not discharge volatile, harmful, or dangerous materials into the Owner's sanitary sewer and storm water drainage systems.

a. Non-storm water discharge into the Owner's storm water system is prohibited, including the following types of discharge, unless the stated conditions are met:

(1) Discharges of potable water for, but not limited to, water line flushing, hyper-chlorinated water line flushing, fire hydrant system flushing, and hydrostatic test water must be de-chlorinated to a concentration of 0.1 parts per million or less, pH-adjusted if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the storm water system.

b. Street sweeping must be performed prior to washing the street at construction sites.

c. All discharges to the sanitary sewer require Owner's prior approval.

2. The Contractor shall not cause or allow visible emissions of fugitive dust from the construction site, unless reasonable precautions are employed to minimize the emissions. Reasonable precautions include, but are not limited to, the following:

a. During high winds, the use of control equipment and/or enclosures, the reduction of construction vehicle speeds, and the curtailment of all dust creating construction procedures shall be implemented.

b. When demolition, excavation, and construction activities generate dust, the construction site shall be sprinkled with water or chemical stabilizers to minimize dispersion.

c. Truck under-carriages shall be brushed to minimize the transporting of dirt off construction sites.

d. Truckloads shall be covered, wetted, or allowed adequate freeboard to prevent the escape of dust-bearing materials.

e. The UW Bothell campus, related to co-location with Cascadia Community College, and the UW Tacoma Campus have additional special considerations related to air, water, and soil pollution control. Discuss with UW Project Manager.

H. Silica Dust Control: The Contractor shall use best engineering and work practice controls to reduce exposure to silica dust at or below the Washington State Permissible Exposure Limit defined in the latest regulations from the Washington State Department of Labor and

Industries (L&I), Puget Sound Clean Air Agency (PSCAA) and any other applicable federal, state, and local government regulations.

1. The Contractor shall assume that silica is present in all concrete, mortar, terrazzo flooring, plaster, sheetrock, fireproofing and other related building products.

2. The Contractor shall implement controls to contain and clean-up silica dust generated by cutting and demolition work and shall provide worker and equipment decontamination provisions. At no time is silica dust from the construction permitted beyond the "work area."

    a. The Contractor shall conduct air sampling for respirable crystalline silica in accordance with the National Institute for Occupational Safety and Health (NIOSH) method 7500.

    b. The Contractor shall comply with OSHA 29 CFR Part 1926.134, WAC 296-62-071 (Respiratory Protection) and ANSI Standard Z88.2-1990 "Practices for Respiratory Protection."

1.2 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver, store, and handle specified products in accordance with the manufacturer's recommendations and use means and methods that will prevent damage, including, but not limited to, moisture damage of materials, deterioration, and loss or theft.

    1. Store materials and products off the ground and protect from weather.

B. Furnish products in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

C. Include a waste reduction provision in purchasing agreements requiring that materials and equipment be delivered in packaging made of recyclable material, that the amount of packaging be minimized, and that packaging be taken back for reuse or recycling.

    1. The Contractor shall require the same provisions in its Subcontractor's purchasing agreements.

D. Inspect products upon delivery to ensure compliance with Contract Documents, and to ensure that products are dry and mold free, undamaged, and properly protected.

E. Store products at the Project site in a manner that will facilitate inspection and measurement of quantity or counting of units.

F. Store heavy products away from the Project structure in a manner that will not endanger the supporting construction.

G. Protect building products subject to damage, under cover in a clean and weather-tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

H. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.

1. Ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.

1.3 PROJECT SITE - WORK AREA

A. Confine operations, equipment, and storage to the designated work area.

1. Maintain the Project site, including adjacent areas and properties, in a clean and orderly manner free from accumulations of combustible materials and construction waste, including rubbish and debris resulting from construction operations. Clean indoor work areas daily of construction waste, dirt, and dust. Do not store construction materials and equipment in Owner-occupied areas unless approved by the Owner. Immediately clean up any spilled material and/or fugitive construction spoils or debris from adjacent properties and vehicle travel ways. Keep streets, fire lanes, and walks clean and free from obstructions.

2. Utility rooms shall not be used for construction storage, unless approved by Owner.

3. All masonry cutting is to be done outdoors. Cut stations for all other work shall be located outdoors or within well ventilated dustproof enclosures or other approved containment.

B. Security:

1. General:

a. Protect work and stored products from theft and vandalism and protect premises from entry by unauthorized persons. At the end of workday, close temporary enclosures and lock exterior doors and/or gate. Secure all openings at any time the Project site is left unoccupied.

b. Owner's Keys: Owner's Representative will issue keys, as required, for the Contractor to perform the Work. Prior to Substantial Completion, the Contractor will return all issued keys. Contractor's responsibility shall include, but not be limited to, the following:

(1) Arrange for the issuance of access keys on a daily basis, or as mutually agreed with Owner.

(a) Owner's costs associated with re-keying a system, including an entire tunnel system, due to lost keys shall be the responsibility of the Contractor.

(2) Lock all access doors when not attended and at the end of each shift.

(3) Provide security barriers, acceptable to Owner, at all utility openings which are created by the removal of gratings and/or the opening of utility tunnels or shafts.

(4) Coordinate Work to minimize need for access to restricted areas.

c. Many buildings and spaces on Campus are high security areas, such as building mechanical and electrical equipment rooms, certain lab spaces, and computer facilities. Contractor shall use due care to maintain an equivalent level of security of Owner's property, where appropriate, and as it normally exists (i.e., secure areas when not actively working). Normally locked or closed doors shall not be propped open.

d. Contractor is advised to lock its gang boxes and secure them to the construction. Owner will not reimburse Contractor for any lost or stolen tools, material or equipment.

2. Tunnel System: Owner maintains rigid controls for persons entering the Owner's tunnel systems. All tunnel doors and certain utility access gratings are equipped with special security locks. The remaining utility access gratings are secured by tack welding.

3. Criminal Background Checks: All construction personnel working in medical centers shall be subject to criminal background checks in accordance with Washington Administrative Code, RCW 43.43.830, et seq.

a. On the first day of work, each worker shall fill out a Washington State Patrol Request for Criminal History Information form and a Request for Criminal History Record form and submit them to the Contractor's superintendent who shall submit the collected forms to the Owner's Representative.

b. The Owner will request the background check from the Washington State Patrol.

c. A worker may be conditionally employed on the Project pending results of the criminal background inquiry.

d. Any worker who does not pass the criminal background check will not be permitted to work on the Project and the Contractor shall immediately remove, or cause the worker to be removed, from the Project.

4. Photo Identification Badges: The Owner requires that all construction personnel working within the following locations shall be required to obtain photo identification

badges: UW Health Sciences, UW and Harborview Medical Centers. The badge shall be worn above the waist with the photo visible at all times that the worker is on-site within the Owner's existing facilities.

a. On the first day of work, the worker shall complete and submit to the Owner a badge application form(s) provided by the Owner's Representative, and schedule a time and location with the Owner's Representative to obtain a badge.

b. The Contractor shall return the badge to the Owner's Representative at completion of each worker's on-site work as a requirement of Final Completion.

C. Construction Waste: Remove construction collected materials from the Project site at a frequency acceptable to the Owner and dispose of in a lawful manner. Do not burn waste material, stockpile waste material, or bury waste material on Owner's property. Do not use Owner's waste containers for construction waste of any kind, unless approved by Owner. Dispose of all refuse and waste material, including excess earth from excavation, off of Owner's property.

1. See Section 01 74 00 "Construction Waste Management" and, when specified, Section 01 11 01 "Summary of Work – Regulated Materials" for additional requirements.

D. Odor Control:

1. General: Adjacent Owner areas and/or neighboring buildings may be occupied during construction. The use of solvents and materials producing noxious fumes or any product or equipment that adversely impacts air quality shall be subject to the approval of Owner. Isolate odor-causing work away from building air intakes, private properties and pedestrian traffic areas. Where solvents are used within enclosed structures, vent to outside areas.

2. Emissions Control Plan: The Contractor shall submit a written procedure for control of emissions prior to any use.

a. The plan shall at a minimum consist of the following items:

(1) Products to be used/Material Safety Data Sheets
(2) Location of Work
(3) Application
(4) Ventilation plan
(5) Hours of operation
(6) Materials handling/storage

b. Considerations shall include, but are not limited to:

(1) Concrete curing
(2) Roofing and waterproofing
(3) Welding
(4) Exterior painting

(5) Adhesive and/or stripping or paint removal
(6) Asbestos abatement
(7) Soil remediation

3. Equipment and trucks producing fumes shall not be parked or located in the vicinity of building air intakes, entrances, and operable windows, unless approved by the Owner.

   a. Trucks that are idling for more than a few minutes shall shut off their engines. If trucks are queued and idling, there must be at least 20 feet between each truck or the exhaust shall be piped to have a 20-foot separation between each exhaust.

   b. All diesel-powered construction equipment shall utilize ultra-low sulfur diesel fuel.

   c. All diesel-powered construction equipment and trucks must be: 2007 model year or later (for vehicles); or Tier II heavy duty (for stationary engines); or equipped with 3-CARB verified oxidation catalyst-based particulate emissions control devices, operating at 600 degrees F or above.

E. Smoking: The University of Washington and Harborview Medical Center have restricted smoking policies. The Contractor shall not permit its employees or the employees of its Subcontractors of any tier to smoke on the Owner's property, except in the areas indicated below:

1. The Owner has designated specified areas where smoking is permitted. These areas are identified on maps that may be found at the following website addresses:

   a. For the Seattle Campus:
   http://www.ehs.washington.edu/psosmoking/smokingareas_sea.shtm

   b. For the Tacoma Campus:
   http://www.ehs.washington.edu/psosmoking/tacoma_map.pdf

   c. For the Bothell Campus:
   http://www.ehs.washington.edu/psosmoking/smokingareas_bothell.jpg

   d. For the Harborview Medical Center:
   Contact Owner's Representative for information.

2. If the Project site includes a fenced construction area, the Contractor shall establish an outside area, within the fenced area, where its employees and the employees of its Subcontractors may smoke, provided that the area is in compliance with the requirements of Chapter 70.160 RCW. The Contractor shall communicate the location of the permitted smoking area to its employees and Subcontractors, and shall require Subcontractors (of any tier) to communicate the location of the smoking area to its employees.

1.4 PROTECTION OF EXISTING UTILITIES

A. The existing concealed utilities shown on the Drawings are not necessarily exact with respect to location or completeness. Therefore, the Contractor shall take the following steps:

1. Notify Owner in writing, with a minimum two (2) week notice for each occasion, of the intent to work near existing known underground utility services or structures or when a new excavation operation is about to begin. Submit procedure for approval to assure safe and continuous operation of the services.

2. Proceed with sufficient caution to preclude damaging any known utilities (i.e., hand digging or probing). In the event unidentified utilities are encountered, notify Owner's Representative immediately.

3. In the event utilities are damaged during construction, temporary services and/or repairs must be made immediately to maintain continuity of services.

   a. Utilities installed by the Contractor, and damaged by the Contractor, shall be repaired at the Contractor's sole expense.

1.5 SHUTDOWNS OF EXISTING EQUIPMENT AND UTILITY SERVICES

A. It is generally critical that all building systems remain operational within occupied buildings, except for brief shutdowns that might be required to integrate or connect new Work. Similarly, continuity of equipment and utility services to adjacent buildings and Owner's site infrastructure shall also be reasonably maintained at all times.

B. Equipment or utility shutdowns required to facilitate the Work shall be accomplished in accordance with the following requirements:

1. Submit a schedule of equipment and utility shutdowns (see Section 01 32 16 "Construction Progress Schedule").

2. Submit a Utility Shutdown Request form to schedule all equipment and utility shutdowns not less than fourteen (14) days prior to the proposed date. For work in the medical centers, submit the Utility Shutdown Request form not less than twenty-one (21) days prior to the proposed date. Include, as a minimum, the following information:

   a. Equipment or utility services affected
   b. Reason shutdown is required
   c. Work to be accomplished during the shutdown
   d. Proposed date and time
   e. Duration of the shutdown
   f. Proposed method of providing back-up service during shut down

3. The actual time and date of all shutdowns will be subject to approval of Owner. Shutdowns normally will be scheduled for nights, weekends, school vacations or other low intensity use periods.

4. The duration of all shutdowns shall be held to a reasonable minimum as determined by Owner.

5. Materials and equipment required for the Work to be accomplished during shutdown shall be complete and available on the job for review by Owner three days prior to the shutdown, if requested. If Contractor is not adequately prepared, the shutdown will be canceled and rescheduled.

6. ONLY OWNER'S PERSONNEL WILL SHUT DOWN AND RESTART OWNER'S EQUIPMENT AND UTILITIES. Owner will inspect the installation prior to restarting and will not restart if an unsafe condition exists. In the event Contractor's Work is not completed during the time scheduled for the shutdown, Owner may elect to restart the equipment or utility service. In that event, additional shutdown requirements shall be rescheduled in accordance with the preceding requirements. Restarting shall not be construed as acceptance of the Work as complete.

7. Include in the bid all costs associated with equipment and utility shutdowns. Owner will make no extra payment for overtime work, schedule changes or failure to complete utility connections within authorized shutdown periods.

C: For building electrical shutdowns involving de-energization of equipment on the campus high-voltage distribution system, including main breakers for a given building, the following enhancements to the requirements listed above apply. The Owner's Representative will determine which shutdowns proposed by the Contractor require such enhancement.

1. A minimum of six (6) weeks before the proposed shutdown, the Contractor shall submit a Proposed Shutdown Plan to the Owner's Representative. This Shutdown Plan shall include the following information:

   a. A description of Contractor tasks and safety measures (such as lock-out/tag-out), necessary to install or otherwise create the project improvements. Include specific names of devices to be switched and a complete list of equipment to be de-energized.
   b. Inspections by the engineer of record, the high voltage shop, and/or the authority having jurisdiction, as applicable. Indicate what inspections are requested and where in the sequence of work they occur.
   c. Proposed dates(s) and time(s) with duration(s) of the shutdown. Alternate dates may be proposed but the earliest of the proposed dates shall be no sooner than six (6) weeks from the date of submittal of the Shutdown Plan.
   d. A draft "UTILITY SHUTDOWN REQUEST" on the standard form in Appendix A.

2. At the Owner's request, participate in a meeting with the Owner's Representative and the University's High Voltage Shop to explain and discuss the Proposed Shutdown

Plan. This meeting shall occur at the time of plan submittal or within two (2) business days of plan submittal. Insofar as the Shutdown Plan would necessitate tasks to be performed by the High Voltage Shop, the University's high voltage electricians will use the information as an aid in formulating their approach to the actual switching, and in determining the level of effort and feasibility of the schedule and shutdown in general.

3. At the Owner's request, check/verify that plans by the University's zone electricians and others to mitigate building impacts are coordinated with, and safely support, the proposed construction activities.

4. If the Proposed Shutdown Plan is approved or approved with conditions, proceed as follows in paragraph 5. If rejected, work with the Owner's Representative to reschedule the shutdown.

5. A minimum of two (2) weeks before the proposed shutdown, review status with the Owner's Representative and submit the final UTILITY SHUTDOWN REQUEST. If deemed necessary by the Owner's Representative, also submit a final Shutdown Plan. These documents shall include, at a minimum, the following information:

   a. The final proposed date, time and duration of the shutdown.
   b. Responses to any conditions imposed on the shutdown by the University's review and approval process.
   c. Any Contractor-proposed changes to the original (draft) plan.

1.6 TEMPORARY SUPPORT FACILITIES

A. Temporary support facilities include: construction power and lighting and heating and water, toilet and hand washing facilities, mobile communications, cranes and hoists, field offices, and field office communications; and similar miscellaneous facilities (i.e., storage sheds, first aid facilities, clean-up facilities, fire protection, waste disposal) as may be reasonably required for proficient performance of the Work and accommodation of personnel at the Project site, including Owner's and A/E's personnel. Locate temporary support facilities for convenience of users, and for minimum interference with construction activities. Placement of all temporary support facilities shall be subject to review and approval by the Owner's Representative.

   1. Do not block Owner's access to adjoining buildings and occupied spaces through the use of temporary support facilities.

   2. Keep temporary support facilities clean and neat in appearance and do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on the site. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload temporary facilities or permit them to interfere with progress.

3. Erection and dismantling of cranes shall occur only on weekends, unless otherwise approved in writing by the Owner.

B. Remove all temporary support facilities including, but not limited to, power and water infrastructure, hoist foundations, and communications cabling and pathway, unless indicated otherwise in the Contract Documents. Restore the Project site to original or new conditions, patching and filling as required to match adjacent surfaces.

C. All connections to Owner utilities must be made in accordance with 1.5 of this Section, "Shutdowns of Existing Equipment and Utility Services."

1. Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to Owner, change over from use of temporary service to use of the permanent service.

D. Electrical Power and Service: Contractor shall pay for, provide, and install all necessary Owner-approved temporary equipment required for use of the Owner's electrical power for minor renovations and/or alterations construction work within the Project site of an Owner-occupied facility. Temporary equipment shall be installed and maintained in accordance with all applicable safety regulations and the Owner's requirements.

1. Electrical power for the operation of small tools and equipment required for work outside of the Project site will be provided by the Owner as reasonably available from approved existing sources.

E. Lighting: Provide and maintain LED (light-emitting diode) type construction lighting to provide adequate general illumination of the work area and trade task lighting. Shield construction lighting from adjacent residential areas**.**

F. Heating and Ventilation: Provide temporary heat as required to protect materials and equipment from dampness, cold, and mold growth. Method of heating is subject to approval of Owner's Representative. Fuel fired "salamander type" heaters are not permitted, unless approved by Owner.

1. Owner's HVAC system shall not be utilized for construction in the UW Medical Center. Supply and return–air grills shall be completely sealed-off within the Project site.

2. New building HVAC systems shall not be operated or used for construction until such time the Contractor has submitted the Contractor's final punch list report, unless otherwise approved by Owner.

3. Renovations of Owner's facilities may utilize existing ducted ventilation supply diffusers but shall not utilize exhaust systems, including return-air grills or fans. Un-ducted plenums over a construction work area must have all ceiling tiles in place, unless otherwise indicated in the Contract Documents or approved by the Owner.

c. If Owner's HVAC system is utilized for construction, the Contractor shall:

(1) Protect the HVAC system from construction dust contamination and provide cleaning of the components exposed to contamination prior to Owner's occupancy.

(2) Install filter media having a minimum efficiency reporting value of 8 (MERV 8) according to the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standard 52.2-1999 at each supply and return-air grill used during construction.

(3) Replace Owner's filtration on any return air fan system with a minimum 85% filtration media (as determined by ASHRAE 52.1-1992) prior to Substantial Completion.

G. Water: For construction purposes, will be furnished by Owner.

1. Contractor shall pay all costs of temporary piping, including pressure reducing station, double backflow preventer, removal of piping and restoration of Owner's utilities at the completion of the Work. Piping of temporary water service shall not exceed the capacity of the Owner's system and shall be limited to 1-1/2" pipe size.

2. Contractor shall provide drinking water from a proven safe source for all those connected with the Work.

a. The Owner's "potable" water drinking facilities may be used, if available and approved by Owner.

H. Toilet and Hand Washing Facilities:

1. The Owner's toilet facilities may be used provided they remain in a clean condition, as approved by Owner.

2. Contractor shall provide alcohol hand sanitizers or hand gel dispensers for workers in medical centers, if restrooms and/or similar hand washing facilities are not available within the Project site.

I. Elevators: Use of Owner's elevators is subject to approval of the Owner, unless indicated for construction use in the Contract Documents.

1. Use requires temporary protection and, if indicated in the Contract Documents, restricted hours of use apply.

J. Mobile Communications: The Contractor shall provide cellular phones with e-mail capability for its key on-site personnel.

1.7 TEMPORARY ENCLOSURES AND MISCELLANEOUS CONSTRUCTION

A. Temporary enclosures include, but not by way of limitation, fire-rated barriers, dustproof enclosures, and site fences to protect the Work and to provide for public protection as required by law and ordinance.

1. Provide one-hour fire-rated barriers of gypsum sheetrock and metal studs with taped joints where shown on the Drawings or when removing and/or compromising existing fire safety partitions indicated on the Drawings, such as corridor walls and/or occupancy separations, to completely isolate the construction area from other occupied building areas. Remove and repair finishes to match existing at completion of Work.

   a. Fire Safety during construction, alteration, or demolition must be provided as indicated by the current edition of the International Fire Code with local amendments and applicable rules. Combustible materials are not permitted to be used as barriers.

2. Provide dustproof enclosures within occupied buildings to enclose the entire work area and completely isolate it from surrounding areas, unless otherwise approved by Owner. At a minimum, construct dustproof enclosures on metal studs from one layer of: 5/8 inch gypsum sheetrock; 1/4 inch fire retardant low VOC (volatile organic compounds) shiny surface materials (such as melamine); 6-mil fire retardant plastic sheathing; or 4-mil fire retardant polypropylene. Tape all joints smoke tight and continuously seal all connection points to existing construction utilizing painters tape for existing surfaces to be retained, melamine tape for melamine enclosures, and duct tape for existing surfaces not to be retained. Enclosures <u>must</u> extend above ceilings to the structure above except when the entire work area ceiling is completely sealed from the above ceiling space, in which case, the seal may occur at the ceiling. If the Contractor employs a combination of temporary enclosures and existing construction to enclose the work area, the Contractor shall seal any penetrations found in the existing construction, including supply and exhaust HVAC duct grills that shall be blocked off and sealed shut.

   a. All existing finishes damaged by construction are to be repaired to their original condition and ceiling tiles damaged by the Contractor are to be replaced with equivalent undamaged tiles at completion of the Work.

   b. An Owner-approved portable mini-enclosure shall be utilized outside the containment area for ceiling work: that will be completed within one shift; with limited dust disturbance/creation; with little anticipated noise; and with no "hot work."

      (1) Portable mini-enclosures shall be constructed of 6-mil fire-retardant plastic sheathing with zipper openings. Completely seal all joints and connection points with smooth vinyl tape. All ceiling tiles removed by Contractor <u>must</u> be placed back into position before the mini-enclosure is removed.

3. Fire barrier and/or dustproof enclosure doors are to be installed in rigid frames and be self-closing and fitted with a gasket or other material to restrict closing noise and inhibit airflow, except for plastic sheathing enclosures which shall have zipper wall doors for personnel access. The door and its frame shall be painted in medical centers.

    a. All interior Project site entrances and exits shall have dust containment walk-off mats (sticky mats) present at all times. Provide 24” x 36” minimum size with layers to be peeled off when fully loaded. Secure mats to floor and install snug to enclosure entrances.

        (1) Mats must be clean, intact and maintained on a constant basis. Avoid locating adhesive walk-off mats in public walking areas and patient transport areas in medical centers.

4. All elevator openings within the work area of occupied buildings, except working construction elevators, shall be sealed airtight from the work area.

5. Site Fences: Provide temporary six (6) foot high chain link fence panels with top rail fastened to tubular metal posts set in heavy concrete bases to prevent ready relocation, unless otherwise indicated, to enclose exterior areas of the Project site and off-site lay-down and Contractor parking areas provided by the Owner. Panels are to be anchored together to prevent entry between panels. Provide gates or equal to facilitate access to fire hydrants, pumper connections and standpipes. No barbwire is permitted.

B. Provide miscellaneous construction to protect the Work. Furnish, install, and maintain for the duration of construction all required tarpaulins, barricades, security barriers, canopies, warning signs, steps, bridges, platforms and other temporary construction necessary for the safe and proper completion of the Work. Maintain the temporary construction in compliance with all pertinent safety and other regulations**.** Temporary barricades that obstruct exit paths from occupied areas shall not be installed unless approved by Owner.

1. Egress Signage: Provide and install temporary exit signs, as needed, to insure a clear direction or emergency exit travel in occupied areas adjacent to the construction project. Review the temporary exiting routes and signage design and location with Owner’s Representative.

2. Other Signage: Provide informational signs, warring signs, and any other sign required by AHJ for the Project.

1.8 NOISE AND VIBRATION CONTROL

A. Construction shall not exceed the maximum permissible sound levels defined by the local AHJ and shall meet the special conditions of the Project.

B. Exterior Construction Noise: Maintain the sound pressure level of exterior construction noise from exceeding decibels with a frequency rating function A (60 dBA) inside adjacent facilities with windows closed between the hours of 8:00 a.m. and 5:00 p.m. weekdays.

1. If required, the Contractor shall meet this criterion by erecting barriers between work equipment and adjacent facilities.

C. Limited Hours of Use With-in Buildings: Noise-producing equipment exceeding 60 DB(A) and/or vibration-producing equipment is subject to approval of Owner and in general will be allowed only before 7 a.m. and after 6 p.m. except within medical centers where use will be allowed from 8 a.m. - 7 p.m., unless otherwise approved by the Owner.

1. When possible, combine noisy and vibration-producing operations into one time period.

2. Specific scheduling is required for Work within the UWMC, HMC and the UW Health Sciences Center. Contractor shall provide its work schedule to Owner for approval no later than three (3) weeks prior to commencing any noisy and/or vibration-producing work.

D. Noise and Vibration Control Plan: Contractor shall submit a written procedure to minimize construction vibration and noise prior to performing physical impacts to, or demolitions of, existing structural components.

E. Machinery & Equipment: Equipment shall be as quiet as feasible for the work being performed. Electric-driven or hydraulically drawn is preferred to gas, diesel, or pneumatic powered machinery. If noise levels on any gear cannot meet the criteria of this Section, either that gear will not be allowed on the job or use times will have to be scheduled subject to approval of the Owner. Conformance to this requirement shall be included in the Contract price and no compensation will be allowed for special equipment or overtime that may be required.

1. Construction personnel shall limit the extent of unnecessary equipment idling.

F. Outdoor Vehicle and Internal Combustion Engine Noise: In addition to the requirements applicable to exterior construction noise in this Section, the sound pressure level of each piece of equipment shall not be greater than 85 DBA when measured at the property line of adjacent real property of another person, and when measured at a distance of 50 feet from the emission source under noisiest operating conditions.

1. Rubber-tired equipment shall be used whenever possible instead of equipment with metal tracks.

2. When required, mufflers for stationary engines shall be “hospital-area” quality of silencing.

a. Contractor is to routinely verify equipment mufflers and/or noise barriers are intact and operational.

G. Air Compressors: Equip air compressors with silencing packages--electric-driven preferred.

H. Arc Welders: No arc welders are to be connected to Owner's utilities, unless approved by the Owner. Provide separate gas generators for arc welders.

I. Jack Hammers and Rotary Hammer Drills: May be used where no other alternative is available, if permitted by the Owner. The use of core-drilling and saw cutting equipment, or electric driven drills is preferred. Time of use is subject to approval by Owner.

1.9 CONSTRUCTION PARKING AND STAGING:

A. Parking permits are required for all vehicles parking on campus. Parking without a valid parking permit will result in citation and possible impound of vehicle.

1. Parking on or near University of Washington and Harborview Medical Center campuses is congested. To minimize disruptions to campus operations and the impact on the adjacent neighborhoods, Contractor shall limit the number of vehicle trips to the Project site and encourage carpooling. In addition, the Contractor shall advise construction workers not to park on city streets and in neighboring residential areas.

a. Parking on the University of Washington campus, outside a fenced Project site, is not available or permitted for Contractor and Subcontractor vehicles on the dates of graduation, convocation, and on Husky football game days.

b. This information shall be posted at the Project site along with bus pass/ticket information.

2. The Contractor is responsible for advising all parties on the Project of their designated parking area and ensuring that all workers park there. If parking needs change for any reason, Contractor shall advise the Owner’s Representative so, to the extent possible, necessary accommodations can be made.

3. A designated parking area, outside the Project site, is for workers’ personal vehicles only and not for the storage of construction equipment or materials.

B. The Contractor shall limit construction parking to area(s) indicated in the Contract Documents.

1. Daily construction parking is available for purchase at the E-1 and E-4 parking lots.

2. Parking permits for construction parking within a staging lay-down area or within a temporary parking area with site fencing will be issued at no cost to the Contractor. Specific responsibilities include:

a. Contractor shall provide Owner's Representative with the projected number of permits required two weeks prior to the month required.

b. Owner's Representative will provide to Contractor the requested number of monthly parking permits no later than the 25th day of the preceding month prior to the month for which permits are to be used.

3. For Projects at UWMC, a limited number of construction parking permits for lot S-8 may be available for purchase through the Owner. Coordinate with the Owner's Representative.

C. There is generally no staging area available at the University of Washington Medical Center and Health Sciences Center areas. Only limited loading and unloading of tools and material will be allowed at the loading docks and for restricted time limits.

D. Seattle campus parking and traffic regulations can be found online by visiting http://www.washington.edu/admin/parking.

E. Seattle campus parking rates website: Current parking rates can be found online by visiting http://www.washington.edu/commuterservices/parking/fees/php

1.10 CONSTRUCTION TRAFFIC

A. The Contractor and the Contractor's Subcontractors and suppliers shall minimize negative traffic impacts on city streets for construction. Scheduled truck traffic shall avoid the peak hours of 7:00 – 9:00 AM and 3:00 – 6:00 PM, Monday through Friday.

B. Deliveries on the Seattle campus: If a Contractor, Subcontractor, or supplier needs to make a delivery, the driver must stop at a Campus gatehouse upon entry during the posted hours of operation for UW Parking Services and obtain a commercial delivery permit.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION