SUMMARY OF WORK

PART 1 - GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

- A. The work of the contractor is to provide all labor, materials, supervision, and equipment necessary to create secure entrances at six elementary schools within the district. The project consists of upgrading existing security Head-End to support additional devices and card readers. Upgrading existing lockdown push-button to EPS Standards. Upgrading existing Intercom interface to support additional messages. Adding exterior cameras around the school's based on EPS standards. New walls and doors to create security vestibules at Burnt Bridge Creek Elementary, Fircrest Elementary, Fisher's Landing Elementary, Silver Star Elementary, Riverview Elementary and Sunset Elementary. The Drawings and Specifications are dated February 14, 2020.
- B. Contract Documents: Requirements of the work are contained in the contract documents, and include cross-references to published information, which is not necessarily bound within the documents.
- C. Estimated Construction costs \$1,110,000

1.2 CONTRACTS

A. Construct the Work under a Stipulated Sum Contract, furnished by the Owner.

1.3 WORK SEQUENCE

- A. Coordinate the construction schedule and operations with the Owner's Designated Representative.
- B. Award of Contract is anticipated to occur on March 12, 2020.
- C. The building and site will be available to the Contractor on June 10, 2020.
- D. All Work shall be substantially complete August 24, 2020.

1.4 CONTRACTOR USE OF PREMISES

- A. General: During the entire construction period the Contractor shall have the exclusive use of the premises for construction operations, including full use of the site at areas that scope will occur.
- B. Use of the Site:
 - 1. Assume full responsibility for the protection and safekeeping of Products under this Contract, stored on the Site.
 - 2. Confine operations at the site to the areas permitted. Portions of the site beyond areas on which work is indicated are not to be disturbed.
 - 3. Move any stored Products, under Contractor's control, which interfere with operations of Owner or separate contractors.
 - 4. Keep existing driveways and entrances serving the premises clear and available at all times. Do not use for parking for storage of materials.
 - 5. Maintain continuity of utility services to existing building.
 - 6. Lock automotive type vehicles and other mechanized or motorized construction equipment, when parked and unattended. Do not leave vehicles or equipment unattended with the motor running or ignition key in place.
 - 7. Do not encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to the areas indicated.

SUMMARY OF WORK

1.5 OWNER OCCUPANCY

- A. Partial Owner Occupancy:
 - 1. The Owner reserves the right to place and install equipment in completed areas of the building and to occupy completed areas prior to substantial completion, provided that occupancy does not interfere with completion of the Work.
 - 2. Placing of equipment and partial occupancy shall not constitute acceptance of the Work or any part of the Work.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PROJECT COORDINATION

PART 1 - GENERAL

1.1 GENERAL COORDINATION

- A. Coordinate various elements of the work and entities engaged to perform work.
- B. Coordinate the work with existing facilities/conditions, and with work by separate contractors (if any) and by the Owner.

1.2 MECHANICAL AND ELECTRICAL DRAWINGS

A. n/a

1.3 SURVEY/RECORDING

A. n/a

1.4 INSTALLER INSPECTIONS

- A. Require installer of each major unit of work to inspect substrate and conditions for installation and to report unsatisfactory conditions in writing.
- B. Correct unsatisfactory conditions before proceeding with installation.
- C. Inspect each product immediately before installation.
- D. Do not install damaged or defective products, materials or equipment.
- E. Start of installation shall be understood as acceptance of substrate conditions by the installer.

1.5 CLEARANCES

A. n/a

1.6 CUTTING AND PATCHING FOR MODIFICATION OF EXISTING AND NEW WORK

- A. Repair surfaces adjacent to cut areas to match the adjacent finish.
- B. Refer also to Section 01 73 29 CUTTING AND PATCHING.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

A. Pre-Installation Conference:

- 1. Prior to starting installation of each major component of the work, hold a pre-installation conference attended by each entity involved or affected by planned installation.
- 2. Include technical representatives of product manufacturers and others recognized as expert or otherwise capable of influencing success of the installation.
- 3. Review significant aspects of requirements for the work. Record discussion and distribute as plan of action.

PROJECT COORDINATION

- 4. Pre-installation conferences are specifically required for (but not limited to) the following installations:
 - a. Security system shop drawings specified by the designers

3.2 INSTALLATION

- A. Comply with manufacturer's instructions and recommendations to the extent printed information is more detailed or stringent than requirements contained directly in the contract documents.
- B. Timing: Install work during time and under conditions which will ensure best possible results, coordinated with required inspection and testing.
- C. Anchor work securely in place, properly located by measured line and level, organized for best possible uniformity, visual effect, operational efficiency, durability, and similar benefit to Owner's use. Sufficiently isolate non-compatible materials from contact to prevent deterioration.
- D. Mount individual units of work at industry-recognized mounting heights, if not otherwise indicated. Refer uncertainties to Architect before proceeding.

3.3 OWNER FURNISHED/CONTRACTOR INSTALLED MATERIALS OR EQUIPMENT

- A. Schedule of Owner Furnished/Contractor Installed items:
 - 1. n/a

3.4 CLEANING AND PROTECTION

- A. Clean each element of work at time of installation.
- B. Provide sufficient maintenance and protection during construction to ensure freedom from damage and deterioration at time of Substantial Completion.

PROJECT MEETINGS

PART 1 - GENERAL

1.1 PRE-BID CONFERENCE

A non-mandatory <u>pre-bid conference</u> for Contractors interested in bidding on this project will be conducted at 3:00 p.m. Thursday, February 27, 2020. The pre-bid conference and tour will commence at Burnt Bridge Creek Elementary School, 14619 NE 49th St., Vancouver, WA 98682, then move, if necessary, to Silver Star Elementary School, 10500 NE 86th St, Vancouver, WA 98662.

1.2 PRE-CONSTRUCTION CONFERENCE

A. Purpose:

- 1. To discuss items of interest in such detail that the Contractor shall have a clear understanding of the Owner's requirements, Contact Documents, and conditions affecting the Work. Items to be discussed include, but are not limited to:
 - a. Roles of Architect, Owner, Contractor, and Inspectors.
 - Procedures for handling change orders, requests for payment, and other administrative details.
 - c. Procedures for handling shop drawing, substitutions, inspections, etc.
 - d. Scheduling of the work.
 - e. Contractor's comments on any inaccuracies or ambiguities found in the Contract Documents.
 - f. To discuss any and all questions by the Contractor to make sure that the Contractor is aware of all conditions affecting the work prior to the awarding of the Contract.
- 2. For the General Contractor to discuss with the Owner, Architect, subcontractors, and other interested parties the design, methods, organization, schedule of the work, contract requirements, mutual understandings relative to the Contract Documents, and procedures of the Administration of the Contract. Items to be discussed include, but are not limited to:
 - a. Construction Schedule.
 - b. Project Coordination: Designation of responsible personnel.
 - c. Procedures and processing of submittals, pay requests, change orders.
 - d. Record Document maintenance.
 - e. Hazardous materials.
 - f. Review of existing building conditions.
- B. Date of Conference: Before actual construction begins, when scheduled by the Owner's Representative.
- C. Attendance: The Owner's Representative(s), Architect, Contractor, and his superintendent shall attend as well as subcontractors and suppliers designated by the Owner's Representative, Architect, or Contractor.
- D. Place: To be designated by the Owner's Representative.

1.3 PROGRESS MEETINGS

- A. Purpose: Project meetings will be held each week, from beginning of construction to final acceptance, to discuss items of mutual interest regarding coordination and progress of the work.
- B. Day of Week: To be mutually determined by the Architect, Owner, and the Contractor.

PROJECT MEETINGS

- C. Attendance: The Owner's Representative(s), Architect (if applicable), Contractor, and his superintendent shall attend, or their representatives. Other subcontractors, suppliers, or manufacturer's representatives shall attend when requested by the Contractor, Owner's Representative, or Architect.
- D. Place: Project site or as otherwise designated by the Owner's Representative.
- E. Chairman: The Owner's Representative shall chair the meeting.
- F. Meeting Date Changes: Only the Owner's Representative can change the meeting date after 24 hour notice. The Architect (if applicable) will set the new date.
- G. Meeting Report: The Owner's Representative will later issue a meeting report to the Contractor and Architect.
- H. The Contractor shall be responsible for notifying subcontractors and other representatives of scheduled construction meetings where their attendance is requested.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Submit overall construction schedule, 3-week work schedule, shop drawings, product data, samples, schedule of values, record documents, and products list as specified.
 - 1. Submit to Architect (if Applicable) only through Contractor.
 - 2. Do not submit directly to Consulting Engineers without prior approval by the Architect for each individual submittal.

1.2 QUALITY ASSURANCE

A. Within 7 days of the Award of Contract, submit schedules of values, list of principal subcontractors and suppliers, progress schedule, copies of building permits, and similar start-up authorization.

PART 2 – PRODUCTS

2.1 CONSTRUCTION SCHEDULE

- A. Content: Within 7 days of the award of contract, submit a comprehensive progress schedule indicating a time bar for each significant category of work to be performed. Show product and installation dates for major products. Show dates for each construction activity, Substantial Completion and punch list preparation, Final Completion, and Occupancy.
- B. Designate in the Construction Schedule, the dates for submission and review of Shop Drawings, product data and samples that are needed for the product. Show critical submittal dates or prepare a separate coordinated listing of critical submittal dates.
- C. Updating: Indicate progress of each activity and show revised completion dates. Provide listing of current and anticipated accelerations and delays. Describe proposed corrective action when required. Revise at intervals matching payment requests and redistribute with each payment request.

2.2 SCHEDULE OF VALUES

- A. Submit a Schedule of Values covering various parts of work including quantities aggregating the total sum of the Contract. Show dollar value and percent of total for each unit of work scheduled. This Schedule will be the basis for the Contractor's Application for Payment.
- B. Submit on the latest edition of AIA Document G703, Continuation Sheet, within 7 days of Award of Contract and with each payment request. Revise each time schedule is affected by change order or other revision.
- C. Upon request by the Architect, support values given with data that will substantiate their correctness.

2.3 PAYMENT REQUESTS

A. Submit a request each calendar month. Use the latest edition of AIA Document G702, Application and Certificate for Payment, fully completed, notarized, and executed.

SUBMITTAL PROCEDURES

2.4 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

A. General:

- 1. Review, stamp with Contractor's stamp, and sign each submittal to certify Contractor has reviewed submittal for compliance with Contract Documents prior to submitting to the Architect. Submittals issued without the Contractor's review may be returned to the Contractor without being reviewed by the Architect.
- 2. Provide 3" x 4" clear space on each submittal for the Architect's stamp.
- 3. Provide additional copies as required by governing authorities.
- 4. The Architect will not mark-up more copies than the number established at the Pre-Construction meeting.
- 5. Submit electronic submittals (pdf's) when possible and practical.

B. Shop Drawings:

- 1. Submit shop drawings showing connections, details, dimensions, finishes, fasteners, etc.
- 2. Submit 4 blackline prints. Maintain 1 print as a mark-up copy for the "Record Drawings".
 - a. Electronic submittals (pdf's) may be substituted for blackline prints when possible and practical.
- 3. In the event that the submittal is a partial submittal, identify related shop drawings to be submitted at a later date.
- 4. Submit electronic shop drawings (PDFs) when possible and practical.

C. Product Data:

- 1. Submit manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, and other description data on manufactured products and systems.
- 2. Mark each copy to indicate the actual product to be provided. Show selections from among options in the manufacturer's printed product data.
- 3. Submit 4 copies to Architect. Submittal is for information and record purposes only. Submit PDF electronic files of product data to Architect. Submittal is for information and record purposes only. Maintain 1 copy at the project site for reference purposes.

D. Office Samples:

- 1. Submit 3 sets of samples; 2 sets will be returned. Maintain one returned set at the project site for purposes of quality control comparisons.
- 2. Sample submittals are for Architect's observation of color, texture, pattern, and "kind".

E. Miscellaneous Submittals: Provide copies of miscellaneous submittals as follows:

- 1. Warranties: Submit 3 executed copies, plus additional copies as required for maintenance manual.
- 2. Field Records: Submit 3 copies, including 1 copy that will be returned for inclusion in the submittal of "Record Documents".
- 3. Maintenance Manuals: Submit 3 bound copies.
- 4. "Record Drawings": Submit original maintained marked-up prints.
- 5. Construction Schedule and Schedule of Values: Submit PDF electronic files to the Architect.

2.5 3-WEEK WORK SCHEDULE

A. Each week, provide to the Architect a 3-Week Work Schedule on a form approved by the Architect. Each 3-Week Work Schedule is to show the description of all phases of the work to be accomplished during the week submitted and the 2 following weeks. The 3-Week Work Schedule is to be updated every week and presented to the Architect.

SUBMITTAL PROCEDURES

PART 3 - EXECUTION

3.1 CONTRACTOR'S SUBMITTAL

- A. Review submittals prior to submission and provide stamp of approval signed or initialed by the Contractor indicating the Contractor has inspected the submittals and certifying that they are complete, correct, in compliance with the Contract Documents and suitable for the Project.
- B. Verify field measurements and other field construction criteria.
- C. Submit submittals required by each Specification Section to the Architect. Notify the Architect in writing at time of submission of deviation in submittals from requirements of the Contract Documents.

3.2 ARCHITECT'S REVIEW

- A. Architect will review submittals for design concept and conformance with the Contract Documents and return submittals to the Contractor for distribution with corrections noted thereon.
- B. Stamp: The Architect will stamp each submittal to be returned with a uniform, self explanatory action stamp, appropriately marked and executed to indicate the status of the submittal. The stamp indicates and requires the follow action:
 - 1. No Exception Taken: No further action is required.
 - 2. Make Corrections Noted: Make the corrections upon fabrication of the material only.
 - 3. Rejected: The material submitted is not acceptable and another material submission is required.
 - 4. Revise and Resubmit: The material submittal is not acceptable and it is to be elaborated upon or corrected and resubmitted prior to material fabrication.
 - 5. Submit Specified Item: Submittal is rejected and the material specified is to be submitted.
 - 6. Checking is only for general conformance with the design concept of the Project and general compliance with the information given in the Contract Documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for dimensions which shall be confirmed and correlated at the job site, fabrication processes and techniques of construction, coordination of his work with that of all other trades and the satisfactory performance of his work.
- C. Contractor's responsibility for deviations in submittals from requirements of the Contract Documents is not relieved by the Architect's review of submittals unless the Contractor has made written request for the deviations and the Architect gives written acceptance of specific deviations requested.

3.3 CORRECTIONS

A. Immediately incorporate all required corrections in the submittals and resubmit for further review, if required.

3.4 TIME SCHEDULE FOR SUBMITTALS

- A. Construction Schedule: Submit to the Architect no later than 5 calendar days after receipt of the Notice to Proceed.
- B. Shop Drawings: Submit to the Architect for review. The Architect will review within 15 calendar days. Schedule submissions to allow ample time for ordering and delivery of materials after review.

SUBMITTAL PROCEDURES

- C. Product Data: Submit to the Architect for review. The Architect will review within 15 calendar days. Schedule submissions to allow ample time for ordering and delivery of materials after review.
- D. Office Samples: Submit to the Architect for review. The Architect will review within 15 calendar days. Schedule submissions to allow ample time for ordering and delivery of materials after review.
- E. Schedule of Values: Submit to the Architect no later than 15 calendar days after receipt of the Notice to Proceed.

3.5 SUBMITTAL SCHEDULE

A. Submittals required by Specifications and the Drawings shall be made regardless of whether or not they are scheduled herein. Each specification section should be reviewed for exact submittal requirements. All submittals must be reviewed by the Architect prior to being used and must be submitted in sufficient time to preclude a delay in meeting the approved Construction Schedule.

SECTION	SECTION	REQUIRED
NUMBER	NAME	SUBMITTAL

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Provide all temporary job site facilities and services as required for use and listed, but not limited to, the following articles. Superintend and coordinate temporary facilities normally furnished and maintained as part of subcontractor's work.
- B. Provide temporary services and facilities ready for use when first needed to avoid delay in the work. Maintain, expand, and modify as needed. Do not remove until no longer needed or replaced by authorized use of permanent facilities.
- C. Use Charges: Usage charges for temporary services or facilities are not chargeable to the Owner and are to be provided under the basic cost of the Work.
- D. Note that some of these criteria may not be applicable to the specific needs of this project scope. Nonetheless, the Contractor is obligated to comply with each of these as relevant.

1.2 PERFORMANCE REQUIREMENTS

- A. Temporary facilities shall comply with building codes, ordinances, and regulations of public authorities and local industry standards in the installation and maintenance of temporary services and facilities.
- B. Inspect and test each service before placing temporary utilities in use. Arrange for inspections and tests by governing authorities and obtain certifications and permits for use.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. Provide new materials and equipment for temporary services and facilities. If acceptable to the Architect, used materials and equipment that are undamaged may be used. Provide materials and equipment that are suitable for the intended use.

2.2 SANITARY FACILITIES

- A. Workmen will not be permitted to use existing toilet facilities of the existing building. Provide portable facilities as required for workmen. Keep facilities clean and in sanitary condition. Remove from the site upon completion of the Work.
- B. Comply with governing regulations including safety and health codes for the type, number, location, operation, and maintenance of fixtures and facilities.
- C. Supply toilet tissue, hand sanitizer, and similar disposable materials as appropriate for each facility. Provide covered waste containers for used material.

2.3 TEMPORARY TELEPHONE

A. Provide a separate business cellular type telephone service throughout the construction period. Post a list of operational and emergency telephone numbers.

TEMPORARY FACILITIES AND CONTROLS

2.4 TEMPORARY WATER

- A. If minimal (less than 25 gallons per day) of Water is needed for this project, coordinate with owner to provide access as needed.
- B. If more than noted above is required, obtain water service from the nearby water main as permitted by the local water authority. Pay use charges for water used by entities authorized to perform work at the site. Exercise control over usage to conserve water.
- C. Provide water service stand pipe inside Project Area with one 3/4" diameter hose bibb at 20-psi minimum discharge pressure. Sterilize piping prior to use.
- D. Where water pressure is inadequate, provide temporary pumps to supply the required flow of water at the highest point of use.

2.5 TEMPORARY ELECTRICAL POWER SERVICE

- A. If minimal (miscellanies tools and equipment) of Electricity is needed for this project, coordinate with owner to provide access as needed.
- A. If more than noted above is required, connect service to local power company main supply in the manner directed by utility company officials. Pay usage charges for electricity used by entities authorized to perform the work at the site. Exercise control over power usage to conserve energy.
- B. Provide weathertight, grounded temporary electrical service-entrance and distribution system, with ground- fault circuit interrupters and ground-fault interrupter features of proper types, sizes, electrical ratings, and characteristics to fulfill project requirements.
- C. Comply with applicable requirements of NEMA, NECA, and UL standards and governing regulations.
- D. Install temporary lighting of adequate illumination levels to perform the work specified.

E. Service:

- 1. Comply with NEC pertaining to the installation of temporary wiring service and grounding.
- 2. Provide meters, transformers, and overcurrent protective devices at main distribution panel for power and light circuitry.
- 3. Provide disconnects for equipment circuits.

F. Power Distribution System:

- 1. Provide circuits of proper sizes, characteristics, and ratings for each use indicated.
- 2. Install wiring overhead and risers vertically where least exposed to damage.
- 3. Provide rigid steel conduit to protect wiring on grade, floors, decks, or other areas exposed to possible damage.
- 4. Provide 20 amp, 4-gang receptacle outlets, equipped with ground-fault circuit interrupters, reset button and pilot light, spaced that a 100-foot extension cord can reach each area of work. Use only grounded extension cords. Use "hard-service" cords where exposed to abrasion and traffic.
- 5. Provide warning signs at power outlets that are other than 110/120 volt.
- 6. Provide outlets of proper NEMA configuration to prevent insertion of 110/120 volt plugs into higher voltage outlets.
- G. Provide temporary lighting throughout construction period as required by governing agencies.

TEMPORARY FACILITIES AND CONTROLS

2.6 SEWERS AND DRAINAGE

- A. Connect temporary sewers to the municipal sewer system in the manner directed by the sewer department officials.
- B. If sewer cannot be used, provide drainage ditches, dry wells, or similar facilities.
- C. If neither sewers nor drainage facilities can be used, provide containers for effluent removal and disposal.
- D. Before discharge, filter excessive amounts of soil, construction debris, chemicals, and similar contaminants that might clog sewers or pollute waterways.
- E. Provide temporary filter beds, settlement tanks, and similar devices to purify effluent to acceptable levels.
- F. Maintain temporary sewers and drainage facilities in a clean, sanitary condition ready for maximum use. Following heavy usage, restore normal conditions promptly.

2.7 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION

- A. If needed, provide a neat and uniform appearance in temporary construction and support facilities acceptable to the Architect and the Owner.
- B. Locate field offices, storage and fabrication sheds, and other support facilities for easy access to the Work.
- C. Make the change-over to use of permanent services and facilities at the earliest feasible date to minimize hazards and interferences with performance of the Work.
- D. Maintain field offices, storage and fabrication sheds, temporary sanitary facilities, waste collection and disposal systems, recycling bins, and project identification and temporary signs until near Substantial Completion. Immediately prior to Substantial Completion remove these facilities. Personnel remaining at the site after Substantial Completion will be permitted to use permanent facilities, under restricted use conditions.

2.8 TEMPORARY HEAT

- A. Provide temporary heat where needed for performance of the Work, for curing or drying of recently installed work, or for protection of work in place from adverse effects of low temperatures or high humidity.
- B. Provide UL or FM tested and labeled heating units known to be safe and without adverse effect upon work in place or being installed.
- C. Coordinate with ventilation requirements to produce the ambient condition and minimize fuel or energy consumption.
- D. Maintain a minimum temperature of 45°F in permanently enclosed portions of the building and areas where finished Work has been installed.
- E. Except where use of the permanent heating system is available and authorized, provide properly vented self-contained LP gas or fuel oil heaters with individual space thermostatic control for temporary heat.

TEMPORARY FACILITIES AND CONTROLS

- F. Do not use open burning or salamander type heating units.
- G. Minimum Interior Ventilation: Provide local exhaust ventilation to prevent harmful dispersal of hazardous substances into the atmosphere at all times. Provide ventilation for materials being cured.

2.9 FIELD OFFICES

A. n/a

2.10 FIRST AID SUPPLIES

A. Provide required first aid facilities. Comply with governing regulations and recognized recommendations within the construction industry.

2.11 WASTE RECYCLING

A. Provide a recycling program for the recycling of waste materials that are generated during a construction project. Provide waste recycling bins and containers for metal, glass, cardboard, gypsum, etc. Provide for pick-up on a regular basis so as not to cumbersome the site. Place bins away from any building structures to protect against fires.

2.12 TEMPORARY ENCLOSURE

- A. Provide temporary enclosure of materials, equipment, work in progress, and completed portions of the Work to provide protection from exposure, foul weather, other construction operations, and similar activities.
- B. Provide enclosures where temporary heat is needed and the permanent building enclosure is not completed, and there is no other provision for containment of heat.
- C. Coordinate with ventilating, material drying, or curing requirements to avoid dangerous conditions.
- D. Close openings through the floor or roof decks and other horizontal surfaces with substantial load-bearing wood-framed or similar construction.

2.13 COLLECTION AND DISPOSAL OF WASTES

- A. Establish a system for daily collection and disposal of waste materials.
- B. Enforce requirements strictly.
- C. Do not retain collected materials longer than 7 days during normal weather or 3 days when the daily temperature is expected to rise above 80°F.
- D. Handle waste materials that are hazardous, dangerous, or unsanitary separately from other waste by containerizing.
- E. Dispose of waste material in a lawful manner.
- F. Burying or burning of waste materials on the site or washing waste material down sewers will not be permitted.
- G. Provide silt bags in catch basins and bio-bags around the basins adjacent to construction work.

TEMPORARY FACILITIES AND CONTROLS

- H. On-Site Disposal: Disposal of waste material on the site will be limited to topsoil. Such disposal sites will be as designated by the Owner's Designated Representative.
- I. Off-Site Disposal: Disposal of all other waste materials caused by the construction will be off the Site and will be the responsibility of the Contractor.

2.14 MISCELLANEOUS CONSTRUCTION AIDS, BARRIERS, SERVICES, AND FACILITIES

- A. Design, construct, and maintain miscellaneous services and facilities as needed to accommodate performance of the work, including temporary stairs, ramps, ladders, staging, shoring, scaffolding, temporary partitions, waste chutes, and similar items. Construct and maintain to requirements of governing agencies. Furnish for safety of public and construction personnel.
- B. Provide barriers to protect materials, equipment, new and existing work, construction personnel, and the public.
- C. Completely remove temporary materials and equipment upon completion of construction.
- D. Repair damage caused by installation of temporary items and restore finishes to specified condition.

2.15 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Provide a neat and uniform appearance in security and protection facilities acceptable to the Architect and the Owner.
- B. Maintain site in a safe, lawful, and publicly acceptable manner.
- C. Take necessary measures to prevent erosion.
- D. Except for utilization of permanent fire protection facilities, as soon as available, do not change over to use of permanent facilities until Substantial Completion.

2.16 TEMPORARY FIRE PROTECTION

- A. Until fire protection needs may be fulfilled by permanent facilities, install and maintain temporary fire protection of the types needed to protect against losses.
- B. Comply with recommendations of NFPA Standard 10.
- C. Locate fire extinguishers where most effective. Provide not less than one on each floor at or near each stairwell.
- D. Provide type "A" fire extinguishers for temporary offices and spaces where there is minimal danger of electrical or flammable liquid fires. Provide type "ABC" dry chemical extinguishers elsewhere.
- E. Store combustible materials in containers in fire-safe locations.
- F. Review fire prevention and protection needs with local fire department officials and establish procedures to be followed in the event of fire.
- G. At temporary water outlets, provide hoses of sufficient length to reach construction areas. Hang hoses with a warning sign indicating that hoses are for fire protection purposes and are not to be removed.

TEMPORARY FACILITIES AND CONTROLS

H. At the earliest feasible date, complete installation of the permanent fire protection facility, including connected services, and place into operation and use. Instruct key personnel at the site on how to use facilities that may not be self-explanatory.

2.17 BARRICADES, WARNING SIGNS, AND LIGHTS

- A. Comply with recognized standards and code requirements for erection of substantial barricades where needed to prevent accidents.
- B. Paint with appropriate colors and provide warning signs to inform personnel at the site and the public of the hazard being protected against.
- C. Provide lighting where needed including flashing red lights where appropriate.

2.18 ENVIRONMENTAL PROTECTION

- A. Conduct construction activities, and by methods that comply with environmental regulations, minimize the possibility that air, waterways, and subsoil might be contaminated or polluted, or that other undesirable effects might result from the performance of work at the site.
- B. Avoid the use of tools and equipment that produce harmful noise.
- C. Restrict the use of noise making tools and equipment to hours of use that will minimize complaints.

2.19 ACCESS, PARKING, AND TRAFFIC

- A. Parking area for project visitors and construction personnel shall be at location designated by the Owner's Designated Representative.
- B. Provide barricades, warning signs, flagmen, or other traffic regulators that may become necessary for protection of the public, construction personnel, or property.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Use qualified tradesmen for installation.
- B. Locate temporary services and facilities where they will serve the project adequately and result in minimum interference with the Work.
- C. Temporary Utility Installation:
 - 1. Engage the local utility company to install temporary service or to make connections to existing service.
 - 2. Arrange with the companies and existing users for an acceptable time when service can be interrupted to make connections.
 - 3. Establish a service implementation and termination schedule. As early as possible change to use of permanent service, to enable removal of the temporary utility, and to eliminate any possible interference with completion of the Work.
 - 4. Provide adequate capacity at each stage of construction.
 - 5. Prior to availability at the site, provide trucked-in services for start up of construction operations.
 - 6. Obtain and pay for easements required to bring temporary utilities to the site where the Owner's easement cannot be utilized for that purpose.

TEMPORARY FACILITIES AND CONTROLS

3.2 OPERATION, TERMINATION, AND REMOVAL

A. Supervision:

- Limit availability of temporary services and facilities to essential and intended uses to minimize waste and abuse.
- 2. Do not permit temporary installations to be abused or endangered.

B. Maintenance:

- 1. Operate and maintain temporary services and facilities in good operating condition and in a safe and efficient manner until removal is authorized.
- 2. Do not overload services or facilities.
- 3. Protect from damage by freezing temperatures and similar elements.
- 4. Do not allow unsanitary conditions, public nuisances, or hazardous conditions to develop or persist on the site.
- 5. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24 hour basis where required to achieve indicated results and avoid the possibility of damage to the Work or to temporary facilities.

3.3 PROTECTION

- A. Prevent water filled piping from freezing.
- B. Maintain markers for underground lines.
- C. Protect from damage during excavation.

3.4 TERMINATION AND REMOVAL

- A. Remove each temporary service and facility promptly when need has ended, or when replaced by use of a permanent facility, but no later than Substantial Completion.
- B. Complete, or if necessary, restore permanent work delayed because of interference with the temporary service or facility.
- C. Repair damaged work, clean exposed surfaces, and replace work that cannot be repaired.
- D. At Substantial Completion, clean and renovate permanent services and facilities that have been used to provide temporary services and facilities during the construction period.

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 MATERIAL AND EQUIPMENT SELECTION

- A. Comply with Standards and these Specifications including size, make, type, and quality specified, or as accepted in writing by the Architect.
- B. Manufactured and Fabricated Products:
 - 1. Design, fabricate, and assemble in accordance with the best engineering and shop practices.
 - 2. Manufacture like parts of duplicate units to standard sizes and gauges and to be interchangeable.
 - 3. Two or more items of the same kind shall be considered identical and by the same manufacturer.
 - 4. Provide products suitable for service conditions.
 - 5. Adhere to equipment capacities, sizes, and dimensions shown or specified unless variations are specifically approved in writing.
- C. Do not use material or equipment for any purpose other than that for which it is designed or is specified.
- D. Fabricate and install equipment to deliver its full rated capacity at the efficiency for which it was designed.
- E. Select and install equipment to operate at full capacity without excessive noise or vibration.
- F. Provide electrical products with Underwriter's Laboratories Label or as approved by the local inspection authority.

1.2 MANUFACTURER'S INSTRUCTIONS

- A. Perform work in accordance with manufacturer's printed installation instructions, obtain and distribute copies of such instructions to parties involved in the installation, including 3 copies to the Architect.
- B. Maintain one set of complete instructions at the job site during installation and until completion.
- C. Handle, install, connect, clean, condition, and adjust products in strict accordance with manufacturer's printed instructions and in conformity with specified requirements.
 - 1. Consult with the Architect for further instructions should job conditions or specified requirements conflict with manufacturer's instructions.
 - 2. Do not proceed with work without clear instructions.
- D. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by the Contract Documents.

1.3 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accord with construction schedules; coordinate to avoid conflict with work and conditions at the site.
 - 1. Deliver products in undamaged condition and in manufacturer's original containers or packaging with identifying labels intact and legible.
 - 2. Immediately upon delivery, inspect shipments to assure compliance with requirements of the Contract Documents and to assure products are properly protected and undamaged.

PRODUCT REQUIREMENTS

B. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.

1.4 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions with their seals and labels intact and legible.
 - 1. Store products subject to damage by the elements in weathertight enclosures.
 - 2. Maintain temperature and humidity within the ranges required by the manufacturer's instructions.
 - 3. Protect equipment and systems from moisture, chemical, or mechanical damage before and after installation.
 - 4. Protect shafts and bearing housings from rust.

B. Exterior Storage:

- 1. Store fabricated products above the ground on blocking or skids to prevent soiling or staining. Cover products that are subject to deterioration with impervious sheet covering. Provide adequate ventilation to avoid condensation.
- 2. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- C. Inspection: Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions and free from damage or deterioration.

D. Protection After Installation:

- 1. Provide substantial coverings as necessary to protect installed products from damage by traffic or subsequent construction operations.
- 2. Plug or cap pipe and conduit openings to prevent the entrance of foreign matter.
- 3. Remove when no longer needed.

1.5 PRODUCT OPTIONS

- A. Compliance with Standards: Where the specifications require only compliance with an imposed standard, code, or regulation, select any product that complies with specified requirements provided no product names are indicated and meet the specified standard.
- B. Single Product Named: For products specified by naming one product or manufacturer and "or accepted substitute", the Contractor must submit a request for substitution for any product or manufacturer not specifically named. Submittal is to be in accordance with this Section.
- C. Two or More Products Named: For products specified by naming several products or manufacturers and "or accepted substitute", select any one of the products or manufacturers named, provided the product selected complies with the specifications. If another product or manufacturer not named is to be used, the Contractor must submit a request for substitution for that product or manufacturer in accordance with this Section.
- D. "Or Accepted Substitute" of "Or Equal" Provisions: Where products or manufacturers are specified by name accompanied by the term "or accepted substitute" or "or equal", provide either the product named or comply with the requirements for gaining approval of "substitutions" for the use of an unnamed product.

PRODUCT REQUIREMENTS

- E. Performance Requirements: Where the specifications require compliance with indicated performance requirements, the Contractor has the option of selecting any product that complies with the specific performance requirements, provided no product names are indicated.
- F. Visual Requirements: Where the specifications indicate that a product is to be selected from the manufacturer's standard options, without naming the manufacturer, the Architect has the option of making the selection after the Contractor has determined or selected the manufacturer.
- G. No materials or products containing any hazardous materials are to be used in the construction of this Project. If any material or product specified in this Project Manual is known to contain hazardous materials, it shall be brought to the attention of the Architect before ordering or fabricating that material or product.

1.6 SUBSTITUTION PROCEDURES

- A. Format: Substitution requests will be considered only if they are prepared on a copy of the Portland Chapter Construction Specifications Institute "Substitution Request Form" included at the end of this Section. Additional copies may be obtained from the Architect.
- B. Supporting Data: Submit a separate request for each product, supported with complete data, drawings, and samples as appropriate. Include the following information, as appropriate, with each request for substitution:
 - 1. Provide complete product documentation, including product data and samples.
 - 2. Provide detailed performance comparisons and evaluation, including testing laboratory reports where applicable.
 - 3. Provide coordination information indicating the effect of the substitution on other work and the time schedule.
 - 4. Provide the Contractor's general certification of the recommended substitution.
- C. Substitution Requests: Mechanical and electrical substitution requests shall be sent directly to respective consulting engineers with a copy to the Architect.

1.7 PRE-BID REQUESTS

- A. Time Limitation: To obtain acceptance of unspecified products, the bidders shall submit requests at least 7 calendar days prior to opening of proposals. FAXED SUBSTITUTION REQUESTS WILL NOT BE CONSIDERED WITHOUT PRIOR APPROVAL BY THE ARCHITECT. Each such request shall be submitted with a Request for Substitution form identical to or equivalent in content to the form found in the project manual.
- B. Acceptance: If the bidder complies with the requirements of this Section, and in the Owner's and Architect's opinion the proposed product is acceptable in lieu of the one or more specified, the Architect will include it in an addendum which will be issued to all bidders.
- C. Last Addendum: The last Addendum will be issued no later than 5 calendar days prior to the bid date. Any questions asked after the last Addendum has been issued will not be answered when it would have an effect on the Bids by giving any advantage to a Bidder. An Addendum may be issued during this 5 day period only for the extension of the Bid date and will be faxed to Plan Centers and the registered General Contractors holding plans.

PRODUCT REQUIREMENTS

1.8 AFTER AWARD OF CONTRACT REQUESTS

- A. Normally, requests for substitutions after the contract has been signed will not be allowed.
- B. Consideration: Requests for substitution of specified products after the construction contract is signed will be considered only when they are reasonable, timely, fully documented, and for any one of the following reasons:
 - 1. Owner's or Architect's request.
 - a. Reduction in contract time or contract sum.
 - b. Specified product is not available from any source.
 - c. Specified product would cause significant delay in the Contract time.
- C. Submittal: Submit requests on Proposal Request (AIA G709) Form.
- D. Acceptance: If the Contractor complies with the requirements of this Section, and in the Owner's and Architect's opinion the proposed product is acceptable in lieu of one or more specified, the Architect will issue an Architect's Supplemental Instructions (AIA G710), where contract sum or time is not effected, or a Change Order (AIA G701) or Construction Change Directive (AIA G714), where contract sum or time is affected.

PART 2 - PRODUCTS

1.9 MATERIAL

A. The Contractor warrants to the Owner that the materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

PART 3 - EXECUTION

2.1 NAMEPLATES

A. Except as otherwise indicated for required labels and operation data, do not permanently attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces or products which will be exposed to view either in occupied spaces or on the exterior of the completed project.

SUBSTITUTION REQUEST (During the Bidding Phase)

Project:	Substitution Request Number:
	From:
То:	Date:
	Project Number:
Re:	Contract For:
Specification Title:	Description:
Section:	Page: Article/Paragraph:
Proposed Substitution:	
Manufacturer: Address:	Phone:
Trade Name:	Model No.:
Installer: Address:	Phone:
History: New product 2-5 years old 5	5-10 years old More than 10 years old
Point-by-point comparative data attached - Requ	uired By A/E
Similar Installation: Project:	Architect:
Address:	Owner:
	Date Installed:
Proposed substitution affects other parts of Work:	□ No □ Yes; explain
Savings to Owner for accepting substitution:	_
Proposed substitution changes Contract Time:	No Yes [Add] [Deduct]days.
Supporting Data Attached: Drawings P	Product Data Samples Tests Reports

SUBSTITUTION REQUEST

(Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

• Coordination, install	ation, and changes in	the Work as necessary	for accepted su	bstitution will be comp	plete in all re	spects.
Submitted by:						
Signed by:						
Firm:						
Address:						
Telephone:						
Attachments:						
-						
A/E's REVIEW AND AC Substitution approved Substitution rejected Substitution Request Signed by:	- Make submittals in as noted - Make sub Use specified materi	mittals in accordance vals.			Date:	
Additional Comments:	Contractor	Subcontractor	Supplier	Manufacturer	☐ A/E [

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Provisions of this Section apply to the procedural requirements for the actual closeout of the Work, not to administrative matters such as Final Payment and the changeover of insurance.
- B. Closeout requirements relate to both Substantial and Final Completion of the Work. They also apply to individual portions of completed work as well as the total Work.
- C. Specific requirements contained in other Sections have precedence over the general requirements contained in this Section.

1.2 CLOSE OUT AGENDA

A. Required Procedures:

- 1. Notify the Architect when project is ready for substantial completion inspection. Also applies to certain areas completed for use by the Owner prior to completion of the entire project. The first review copy of the O&M Manuals must be submitted prior to request for substantial completion inspection.
- 2. The Architect will establish the substantial completion inspection date when the Architect determines that the project, or certain Owner requested areas, is ready for Substantial Completion review.
- 3. The Architect, Contractor, and Owner make substantial completion inspection.
- 4. The Architect issues written list of items to be completed or corrected. Substantial Completion date is established and noted on prepared form. The contractor is to issue a letter to the Owner confirming that no asbestos products were used in the construction of the facility or addition.
- 5. The Contractor is normally given adequate time to correct deficiencies shown on correction list.
- 6. The Contractor returns completed project record documents and final payment request including change order adjustments, and requests final inspection.
- 7. The Architect reviews project record documents and schedules final inspection.
- 8. Final inspection made when required submittals are delivered.
- 9. Final payment forthcoming when work is completed, and submittals have been received and approved.

1.3 SUBSTANTIAL COMPLETION

- A. Prerequisites: Comply with the General Conditions and commence the following before requesting Architect's inspection of the Work, or a designated portion of the Work, for certification of Substantial Completion.
 - 1. Submit executed warranties, workmanship bonds, maintenance agreements, inspection certificates, and similar required documentation for specific units of work enabling Owner's unrestricted occupancy and use.
 - 2. Submit record documentation, maintenance manuals, tools, spare parts, keys, and similar operational items.
 - 3. Commence instruction of Owner's operating personnel and start-up of systems.
 - 4. Commence final cleaning and remove temporary facilities and tools.

EXECUTION AND CLOSEOUT REQUIREMENTS

- B. Submit written notice to the Architect that Work, or designated portion thereof, is substantially complete. The Architect and Owner will review the Work within 7 days.
- C. If the Architect determines that Work is not substantially complete, he will promptly notify Contractor in writing. The Contractor shall complete the Work and submit a second written notice of substantial completion to the Architect. The Architect will again observe the Work.
- D. When the Architect concurs that the Work is substantially complete, he will prepare a Certificate of Substantial Completion on AIA Form G704 with a tentative list of items to be completed or corrected. The Architect will submit the Certificate and tentative list to the Contractor for his written acceptance of responsibilities assigned to him in the Certificate.

1.4 FINAL COMPLETION

- A. Submit written certificate that Contract Documents have been reviewed, Project has been inspected, Work is completed in accordance with the Contract Documents, equipment and systems have been tested in the presence of the Owner's Designated Representative and are operational, and Work is ready for review. Architect will review Work within 7 days.
- B. Should the Architect determine that the Work is incomplete or defective, he will notify the Contractor in writing, listing the incomplete or defective Work. The Contractor shall remedy the deficiencies and send a second written certification to the Architect that the Work is complete. The Architect will review the Work.
- C. When the Architect finds that the Work is acceptable under the Contract Documents, he will request the Contractor to make closeout submittals.

1.5 REOBSERVATION FEES

- A. Should the Architect perform more than one reobservation due to failure of the Work to comply with the claims of status of completion made by the Contractor,
 - 1. Owner will compensate the Architect for such additional services, and
 - 2. Owner will deduct the amount of such compensation from the final payment to the Contractor.

PART 2 - PRODUCTS

2.1 PROJECT RECORD DOCUMENTS

- A. Maintain, at the site, 1 copy of the Bid Documents, Contract Forms, Project Manual, Contract Drawings, Construction Change Directives, Addenda, Change Orders, reviewed Shop Drawings, Office Samples, Field Test Records, Architect's Supplemental Instructions, etc.
- B. Store documents and samples in the Contractor's field office separate from documents used for construction.
- C. Keep current record of documents and label "Project Record." Record location of concealed items and utility lines, field changes in dimension or detail, and changes in materials furnished on Project Record Documents. Record changes from the Architect's Supplemental Instructions, Change Orders, Construction Change Directives, and Details not on Contract Drawings.

EXECUTION AND CLOSEOUT REQUIREMENTS

D. Project record documents will be reviewed monthly. The Contractor and his subcontractors are required to update project record documents monthly. The Architect will review the updated project record documents on a monthly basis at the time of the Contractor's application for payment. Failure to have project record documents updated will delay payment. Deliver the project "Record Documents" to the Architect at the end of the project with the Closeout Manuals.

2.2 CLOSEOUT MANUALS

- A. Form of Manuals: Provide 3 complete copies of the manual.
 - 1. Prepare data in the form of instructional manuals for use by the Owner. Use 8-1/2" x 11" manual format in 3-ring binder.
 - 2. Include drawings, indexed tabs, and title for the manual.
 - 3. In addition, provide digital (pdf) copy of each manual.
- B. Content of Manuals:
 - 1. List products, equipment, and systems used in the Project. List project installers, maintenance program, and local source of supply for replacement parts.
 - 2. Include product data with specific product clearly identified.
 - 3. Include drawings of control diagrams, flow diagrams, and system relationships.
 - 4. Include a copy of the letter to the Owner confirming at no asbestos products were used in the construction of the facility.
- C. Materials and Finishes: Provide the following information for products to be included with the manuals.
 - 1. Include manufacturer's data, catalog number, color, and texture of finishes used.
 - 2. Include instructions for care and maintenance on finishes including cleaning agents, methods, and cleaning and maintenance schedule.
- D. Equipment and Systems: Provide the following information for products to be included with the manuals. n/a
 - 1. Include the manufacturer's description, operating characteristics, performance data, testing and balancing data, and printed operating and maintenance instructions.
 - 2. Include the manufacturer's catalog number and replaceable parts list.
 - 3. Include start-up, break-in, operating instructions, control, stopping, emergency instructions, shut-down, and operating sequence.
 - 4. Include summer and winter operating instructions, maintenance procedures, servicing and lubrication schedule, sequence of operation, and control diagrams.
 - 5. Include as-installed color coded piping diagrams and list of piping identification markers.
 - 6. Include circuit directories of panel boards and as-installed color coded wiring diagrams.
 - 7. Include as-installed color coded duct and damper layouts with design air volumes air flow ratings and fan sizes.
 - 8. Include valve tag directory listing tag number, location, service, size, manufacture, model number, and normal position.
 - 9. Include name plate directory listing equipment designation, name plate data, location of equipment, location of switch, and normal position of switch.

EXECUTION AND CLOSEOUT REQUIREMENTS

- E. Warranties and Bonds: Provide the following information for products to be included within the manuals.
 - 1. Assemble warranties, bonds, service and maintenance contracts executed by each manufacturer, supplier, and subcontractor.
 - 2. Include table of contents, beginning date, and duration of warranty, bond, or service contract, and party to contact in case of claim against warranty.
- F. Spare Parts and Maintenance Materials: Tabulate list of spare parts and maintenance materials showing product description, paragraph in Project Manual listing product, and quantity delivered to the Architect and distribute with the manuals.

PART 3 - EXECUTION

3.1 INSTRUCTION OF OWNER'S PERSONNEL

- A. Prior to Final Completion or acceptance, fully instruct the Owner's Designated Representative and maintenance personnel in the operation, adjustment, and maintenance of all products, equipment, and systems.
- B. Operating and maintenance manual shall constitute the basis of instruction.
 - 1. Review contents of manual with Owner's personnel in full detail to explain all aspects of operations and maintenance.
 - 2. Review complete heating and cooling cycles with Owner's Designated Representative. Review location of dampers, valves, and control equipment.

3.2 MAINTENANCE MATERIAL HANDLING

A. Label packages and deliver spare parts and maintenance materials to Owner's storage area. Submit quantity specified in each product section.

3.3 PAYMENTS AND RELEASE OF LIENS

- A. Submit 2 executed copies of the Contractor's Affidavit of Payment of Debts and Claims, AIA G706.
- B. Submit 2 executed copies of the Contractor's Affidavit of Release of Liens, AIA G706A including:
 - 1. "Consent of Surety to Final Payment", AIA G707.
 - 2. Contractor's release or waiver of liens.
 - 3. Subcontractors' and suppliers' release or waiver of liens, as requested by the Architect.

3.4 SCHEDULE OF CLOSEOUT SUBMITTALS

- A. Submit 3 copies in final form of the Closeout Manuals 15 days prior to final review or acceptance.
 - 1. In addition, provide digital (pdf) copy of each manual.

3.5 CLEANING PRIOR TO SUBSTANTIAL COMPLETION INSPECTION

A. At the time of project close out, clean or reclean the Work to the condition expected from a normal, commercial building cleaning and maintenance program.

EXECUTION AND CLOSEOUT REQUIREMENTS

- B. Complete the following cleaning operations before requesting the Architect's inspection for certification of Substantial Completion.
 - 1. Remove grease, dust, dirt, stains, manufacturer's labels, fingerprints, etc., from sight exposed surfaces.
 - 2. Remove non-permanent protection and labels.
 - 3. Wash and polish all interior and exterior glazing and mirrors.
 - 4. Repair, patch, and touch up marred surfaces.
 - 5. Clean heating and cooling ducts, blowers, coils, fixtures, equipment, piping, and grilles.
 - 6. Replace disposable air filters and clean permanent filters.
 - 7. Remove construction debris.
 - 8. Flush water systems and disinfect domestic water lines. Sanitize plumbing and food service facilities.
 - 9. Broom clean new exterior paved surfaces and walks. Vacuum clean interior carpeted surfaces and wet mop hard floor surfaces.
 - 10. Clean light fixtures and replace burned-out lamps and replace damaged lenses.
 - 11. Police yards and grounds.
- C. Maintain in cleaned condition until Final Completion or the Owner's occupancy.

EXECUTION AND CLOSEOUT REQUIREMENTS

ASBESTOS FREE CERTIFICATION

The Contractor agrees that all products and materials furnished in connection with work of execution of the Work shall be free of any asbestos material as defined by 29CFR 1926.58 (b). This promise shall be binding to Contractor and all Sub-Contractors. Should any such materials be furnished, they shall be removed by Contractor of his successors, at no expense to the Owner, upon discovery.

Whenever and wherever during course of performing any work under this contract, if Contractor discovers the presence of asbestos or suspects that asbestos is present, he/she shall stop the work immediately, secure the area, notify the Owner's Representative and await positive identification of the suspect materials.

NOTICE TO SHORT-TERM WORKERS

Any and all work accomplished by what is termed as a short-term worker (e.g. telephone repair worker, utility worker, exterminator, independent contractor) in a building owned by Gresham-Barlow School District No. 10Jt. will be forwarned that the possibility exists that asbestos containing materials may be used in the construction of these facilities. Any pertinent information concerning this is documented in the District's Asbestos Management Plan, which is located in the District Business Office.

Please refer to this plan when working in any of the District's facilities. If there are any questions about the documented information, please contact the designated person identified in the plan.

CERTIFICATION _____ certifies that he/she has received the forgoing information, including the public law (Name of Bidder) described in 29CFR 1926.58 (b) regarding the protection of public buildings from asbestos containing materials. Name of Bidder

Date

Signature

This form must be submitted with the Bid Proposal.

CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. Definition: "Cutting and patching" includes cutting into existing construction to provide for the installation or performance of other work and subsequent fitting and patching required to restore surfaces to their original condition.
- B. Refer to other sections of these specifications for specific cutting and patching requirements and limitations applicable to individual units of work.

1.2 PERFORMANCE REQUIREMENTS

A. Structural Work:

- 1. Do not cut-and-patch structural work in a manner resulting in a reduction of load-carrying capacity or load/deflection ratio.
- 2. Submit proposal and request and obtain Engineer's approval before proceeding with cut-and-patch of structural work.

B. Operational Limitations:

- 1. Do not cut-and-patch operational elements components in a manner resulting in decreased performance, shortened useful life, or increased maintenance.
- 2. Submit written requests and obtain the Engineer's approval before proceeding with cutting and patching.

C. Visual/Quality Limitations:

- 1. Do not cut-and-patch work exposed to view (exterior or interior) in a manner resulting in noticeable reduction of aesthetic qualities of existing or new work.
- D. Limitation on Approvals: The Architect's approval to proceed with cutting and patching does not waive the right to later require removal and replacement of work found to be cut-and-patched in an unsatisfactory manner, as judged by the Architect.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Use materials for cutting and patching that are identical to existing materials.
- B. If identical materials are not available or cannot be used, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect.
- C. Use materials for cutting and patching that will result in equal-or-better performance characteristics

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Before cutting, examine surfaces to be cut and patched and conditions under which the work is to be performed.
- B. If unsafe or otherwise unsatisfactory conditions are encountered, take corrective action before proceeding with the Work.

CUTTING AND PATCHING

3.2 PROTECTION

- A. Temporary Support: To prevent failure, provide temporary support of work to be cut.
- B. Protect other work during cutting and patching to prevent damage.
- C. Provide protection from adverse weather conditions for that part of the project that may be exposed during cutting and patching operations.
- D. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- E. Take precautions not to cut existing pipe, conduit, or duct serving the building but scheduled to be relocated until provisions have been made to bypass them.

3.3 CUTTING

- A. Cut the work using methods that are least likely to damage work to be retained or adjoining work.
- B. Where possible review proposed procedures with the original installer. Comply with original installer's recommendations.
- C. Where cutting is required, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut through concrete and masonry using a cutting machine such as carborundum saw or core drill. Cut holes and slots neatly to size required with minimum disturbance of adjacent work. Do not over cut edges.
- D. To avoid marring existing finished surfaces, cut and drill from the exposed or finished side into concealed surfaces.
- E. Temporarily cover openings when not in use.

3.4 PATCHING

- A. Patch with seams that are durable and as invisible as possible.
- B. Comply with specified tolerances for the work.
- C. Restore exposed finishes of patched areas. Where necessary extend finish restoration into retained adjoining work in a manner that will eliminate evidence of patching and refinishing.