

## HVAC AND STRUCTURAL UPGRADES – PATHS

coated hangers, copper colored epoxy paint, or non-adhesive isolation tape.

- (c) Channel Support System Installation: Arrange for grouping of parallel runs of piping and support together on field-assembled channel systems. Field assemble and install according to manufacturer's written instructions.
  - (d) Install building attachments within concrete slabs or attach to structural steel. Space attachments within maximum piping span length indicated in MSS SP-69. Install additional attachments at concentrated loads, including valves, flanges, guides, strainers, and expansion joints, and at changes in direction of piping.
  - (e) Install hangers and supports complete with necessary inserts, bolts, rods, nuts, washers, and other accessories.
  - (f) Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.
  - (g) Load Distribution: Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment.
  - (h) Pipe Slopes: Install hangers and supports to provide indicated pipe slopes and so maximum pipe deflections allowed by ASME B31.9, "Building Services Piping," is not exceeded.
  - (i) Install hangers to provide a minimum of 1/2-inch space between finished covering and adjacent work.
  - (j) Do not support piping from other pipes, ductwork or other equipment that is not building structure.
16. Ductwork shall be supported in accordance with SMACNA standards.

- B. Automatic Temperature Controls: A computerized, direct digital control (DDC) will be provided and shall be Seibe, by Maine Controls. This system shall interface seamlessly with the School Departments existing BAS. Provide a local area network connection for communication to the existing system.
- 1. Each packaged HVAC unit shall have factory supplied controls with the following features: heating / cooling set points with an adjustable dead-band, adjustment of the outside air for ventilation control, and economizer controls. Provide CO2 control at each conference space to automatically increase fresh air intake at the associated unit. System capacity shall overcome worst case status for OA damper position.
  - 2. Each air system will have local override capability for off-hours functions. An override button will convert the system to daytime mode for 2-hours (adjustable

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Contractor shall provide design drawings and specifications produced and sealed by a state of Maine licensed professional engineer with specific experience in the field of Heating, Ventilating and Air Conditioning (HVAC) systems for buildings.

### 1.4 CODE SUMMARY

A. Building:	International Building Code 2003
B. Mechanical:	As referenced in IBC 2003.
C. Sprinkler:	NFPA 13
D. Plumbing:	Not Applicable
E. Ventilation:	ASHRAE 62-2001 – Addendum N
F. Energy:	ASHRAE 90.1-2001
G. Seismic:	Comply with the requirements of IBC 2003

### 1.5 DESIGN CONDITIONS

A. Winter Outside:	-11°F
B. Winter Inside:	72°F
C. Summer Inside:	78°F
D. Summer Inside:	75°F
E. Anticipated building occupancy:	
Typical Office	1 Person
Bus. Dir. Office	2 People
Conference Rm #1	16 People
Superintendent's Office	2 People
Open Office Areas	Per Furniture Layout

Actual programming requirements for each space shall be coordinated with the Architect and Owner through the design phase of construction.

### 1.6 BUILDING ENVELOPE

A. The existing building envelope shall be maintained with respect to walls and windows, unless otherwise noted in the Architectural plans. The walls are uninsulated masonry and the windows are single glazed. The roof will also remain as is, with approximately 1" of fiberboard insulation, a gypsum deck, and a built up membrane. Batt insulation which is currently above the ceiling will be removed and not replaced.

### 1.7 HEATING, VENTILATING and AIR CONDITIONING SYSTEMS

#### A. General

1. Ventilating and Air Conditioning: Packaged rooftop HVAC units shall be utilized for ventilation and cooling. The units will incorporate Dx cooling coils. A minimum of four units shall be utilized, separating interior and perimeter zone exposure. These units, in general, shall be placed over non-occupied spaces wherever possible, such as corridors to minimize noise transmission to occupied spaces. Additionally, the units shall be placed with one side (minimum) over an existing beam, to minimize structural impact. Coordinate with other trades for roof penetration at the roof deck.

3.5 FLUSHING

- A. Fire Protection Systems: After completions of all work in each section of the water-piping systems and prior to testing, thoroughly flush all piping to remove all foreign materials and to thoroughly clean the piping.

3.6 TESTING

- A. Upon completion of the fire sprinkler system installation, furnish all personnel equipment required and test and retest the complete system, making all adjustments necessary to secure the approval of the Fire Rating Bureau and Fire Marshal having jurisdiction. Report testing on the forms provided for above ground piping.
- B. Testing shall include all new sprinkler piping in the building.

3.7 ACCEPTANCE

- A. After the fire sprinkler system has been completely approved, secure a letter of final acceptance from the Fire Rating Bureau having jurisdiction and deliver three copies of the letter to the Owner.

END OF SECTION 13900

criteria delineated, and to be responsible for the actual performance of the system according to these criteria.

B. Sprinkler Design Criteria:

1. The automatic sprinkler system shall conform to the requirements of N.F.P.A. and B.O.C.A.
2. Penetrations of rated assemblies shall be fire stopped.
3. Modifications to the sprinkler system shall not be started until complete plans and specifications (including water supply information) have been approved by the Authority Having Jurisdiction.
4. The actual layout is the responsibility of the Contractor.
7. The Contractor shall perform system hydraulic calculations. The calculations shall be prepared as indicated in NFPA 13. Calculations shall be prepared for as many areas of application as necessary to demonstrate to the satisfaction of the Authority Having Jurisdiction that the design meets the criteria as outlined herein.
8. No construction work shall be done without the approval of the Authority Having Jurisdiction.

3.2 SURFACE CONDITIONS

A. Inspection:

1. Prior to commencement of each stage of the fire sprinkler system installation, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that fire sprinkler system may be installed in complete accordance with all pertinent codes and regulations and the approved shop drawings.

B. Discrepancies:

1. In the event of discrepancy, immediately notify the Owner.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been completely resolved.

3.3 CUTTING AND PATCHING

- A. All cutting and patching incidental to the installation of the apparatus and the work shall be executed by this Contractor, who shall furnish the Owner with all locations and details as required. The contractor shall exercise extreme prudence in the maintenance of existing finishes within the facility.

## PART 2 - PRODUCTS

## 2.1 DESIGN

A. General:

1. The design shall be complete in all regards and shall include, but not necessarily be limited to:
  - a. Connection to and extension of the existing sprinkler system.
2. Sprinkler work shall be laid out to adequately cover the areas of the building in accordance with the requirements of all authorities having jurisdiction over its installation and to afford adequate clearance with the work of other trades. Piping shall generally be run parallel to walls and girders. Before installing any piping, the Sprinkler Contractor shall consult with the Contractors for the other trades to avoid interfering with their work, and he shall be responsible for any expense involved due to negligence in not so doing.
3. All piping in areas having ceilings shall be concealed including supply mains through finished areas.

## 2.2 MATERIALS

## A. The quality of materials required for this installation shall be that required by the agencies having jurisdiction.

1. Sprinkler Heads:

- a. Heads shall be furnished and installed to match those currently in place at areas throughout. Field verify existing conditions.
- b. Temperature rating shall be 165 degrees. Temperature classification shall be ordinary.

2. Pipe: Sprinkler piping shall be all metal and in accordance with NFPA Pamphlet #13.3. Valves: All valves shall be the product of an approved manufacturer and shall be designed for pressures suitable for the duties to be imposed upon them in the system. They must be in accordance with the requirements of authorities having jurisdiction over the work.4. Fittings:



- a. Insulating glass -
  - exterior pane - tempered glass
  - interior pane - tempered glass

Low E, blue or gray tinted coating, applied on surface 2 of insulated glazing, shading light transmittance to match existing windows.

5. Performance characteristics designated for coated insulating glass are nominal values based on manufacturer's published test data for units with lites 0.125 inch thick and space between lites as indicated.

#### D. FABRICATION

1. General: Fabricate aluminum window units to comply with indicated standards. Include a complete system for assembly of components and anchorage of window units.
2. Provide units that are reglazable.
3. Prepare window sash for glazing except where preglazing at the factory is indicated.
4. Thermal-Break Construction: Fabricate window units with an integral concealed low-conductance thermal barrier, located between exterior materials and window members exposed on the interior, in a manner that eliminates direct metal-to-metal contact.
5. Subframes: Provide subframes with anchors for window units, where shown, of profile and dimensions indicated but not less than 0.062-inch-thick extruded aluminum. Miter or cope corners, and weld and dress smooth with concealed mechanical joint fasteners. Finish to match window units.
6. Glazing Stops: Provide screw-applied or snap-on glazing stops, coordinated with glass selection and glazing system indicated. Finish glazing stops to match window units.

#### E. FINISHES

1. General: Comply with NAAMM "Metal Finishes Manual" and AAMA 603.8-92 for recommendations relative to application and designations of finishes.
  - a. Organic 2-Coat Coating System: Manufacturer's standard 2-coat thermocured system, composed of specially formulated inhibitive primer and organic acrylic color topcoat equal to "Duracron" as manufactured by PPG Industries.
  - b. Color and Gloss: finishes to match existing windows.

### PART 3. - EXECUTION

#### A. INSPECTION

1. Inspect openings before beginning installation. Verify that rough or masonry opening is correct and the sill plate is level.
2. Masonry surfaces shall be visibly dry and free of excess mortar, sand, and other construction debris.
3. Metal surfaces shall be dry; clean; free of grease, oil, dirt, rust and corrosion, and welding slag; without sharp edges or offsets at joints.

#### B. INSTALLATION



7. Water Penetration: Provide units with no water penetration as defined in the test method at a static air pressure difference of 10psf.
8. Condensation Resistance: Window units are indicated to be of "thermal-break construction," provide units that have been tested for thermal performance in accordance with AAMA 1503.1 showing a condensation resistance factor (CRF) of 50.
9. Thermal Transmittance: Provide window units that have a U-value maximum of 0.50 BTU/hour/sq. ft./deg F at 15-mph exterior wind velocity, when tested in accordance with AAMA 1503.1.
10. Forced-Entry Resistance: Provide window units that comply with requirements for Performance Level 30 when tested in accordance with ASTM F 588.

#### E. SUBMITTALS

1. General: Submit the following in accordance with Conditions of the Contract and Division I Specification Sections.
2. Product data for each type of window required, including:
  - a. Construction details and fabrication methods.
  - b. Profiles and dimensions of individual components.
  - c. Data including manufacturer's catalog cut-sheets on hardware, accessories, and finishes.
  - d. Recommendations for maintenance and cleaning of exterior surfaces.
3. Shop drawings for each type of window required. Include information not fully detailed in manufacturer's standard product data and the following:
  - a. Layout and installation details, including anchors.
  - b. Elevations: typical window unit elevations at 3/4-inch scale.
  - c. Full-size section details of typical composite members, including reinforcement.
  - d. Glazing details.
4. Samples for Color Selection: Submit actual material samples showing full range of standard and custom colors of each specified finish. Where finishes involve normal color variations, include sample sets showing the full range of variations expected.
5. Certification: Provide certification by a recognized independent testing laboratory or agency showing that each type, grade, and size of window unit complies with performance requirements indicated.

#### F. QUALITY ASSURANCE

1. Standards: Requirements for aluminum windows, terminology and standards of performance, and fabrication workmanship are those specified and recommended in AAMA 101-93 and applicable general recommendations published by AAMA.
2. Single-Source Responsibility: Provide aluminum window units from one source and produced by a single manufacturer.
3. Design Concept: The drawings indicate the size, profiles, and dimensional requirements of the aluminum window types required.

#### G. PROJECT CONDITIONS

1. Field Measurements: Check actual window openings by accurate field measurement before fabrication. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of work.



1. General: Provide lumber for support or attachment of other construction including bucks, nailers, blocking, furring, stripping, and similar members.
2. Fabricate miscellaneous lumber from dimension lumber of sizes indicated and into shapes shown.
3. Moisture content: 19 percent maximum for lumber items not specified to receive wood preservative treatment.
4. Grade: "Standard" grade light-framing-size lumber of any species or board-size lumber as required complying with NELMA standards.

**D. CONSTRUCTION PANELS, GENERAL**

1. Construction Panel Standards: Comply with PS 1 "U.S. Product Standard for Construction and Industrial Plywood" for plywood construction panels and, for products not manufactured under PS 1 provisions, with APA PRP-108.
2. Trademark: Furnish construction panels that are each factory-marked with APA trademark evidencing compliance with grade requirements.
3. All plywood shall be 3/4" to 15/16" thick panels as available or appropriate for application indicated.
  - a. Backer panels for electrical and mechanical equipment shall be fire retardant treated and labeled to indicate UL compliance.

**E. FASTENERS**

1. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
2. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with a hot-dip zinc coating per ASTM A153 or of AISI Type 304 stainless steel.
3. Nails, Wire, Brads, and Staples: FS FF-N-105.
4. Power Driven Fasteners: National Evaluation Report NER-272.
5. Wood Screws: ANSI B18.6.1.
6. Lag Bolts: ANSI B18.2.1.
7. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and where indicated, flat washers.

**F. PRESERVATIVE WOOD TREATMENT BY PRESSURE PROCESS**

1. General: Where lumber or plywood is indicated as preservative-treated wood or is specified herein to be treated, comply with applicable requirements of AWPAs Standards C2 (Lumber) and C9 (Plywood). Mark each treated item with the AWPB or SPIB Quality Mark Requirements.
2. Pressure-treat above-ground items with water-borne preservatives to a minimum retention of 0.25 pcf. For interior uses, after treatment, kiln-dry lumber and plywood to a maximum moisture content, respectively, of 19 percent and 15 percent. Treat indicated items and the following:
  - a. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
  - b. Wood floor plates installed over concrete slabs directly in contact with earth.
3. Pressure-treat wood members in contact with the ground or fresh water with water-borne preservatives to a minimum retention of 0.40 pcf.
4. Complete fabrication of treated items prior to treatment, where possible. If cut after treatment, coat cut surfaces to comply with AWPAs M4. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.

**PART 3. - EXECUTION**

3.4 REPAIRS AND PROTECTION

- A. Repair damaged galvanized coatings on galvanized items with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.
- B. Touchup Painting: After installation, promptly clean, prepare, and prime or reprime field connections, rust spots, and abraded surfaces of prime-painted joists and accessories, bearing plates and abutting structural steel.
- C. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure joists and accessories are without damage or deterioration at time of Substantial Completion.

END OF SECTION 05210

names and addresses, names and addresses of architects and owners, and other information specified.

- D. Research/Evaluation Reports: Evidence of steel joists' compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.

#### 1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing joists similar to those indicated for this Project and with a record of successful in-service performance.
1. Manufacturer must be certified by SJI to manufacture joists complying with SJI standard specifications and load tables.
- B. SJI Specifications: Comply with SJI's "Standard Specifications Load Tables and Weight Tables for Steel Joists and Joist Girders" (hereafter, "Specifications"), applicable to types of joists indicated.
- C. Welding: Qualify procedures and personnel according to AWS D1.1, "Structural Welding Code--Steel"; and AWS D1.3 "Structural Welding Code--Sheet Steel."

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle joists as recommended in SJI's "Specifications."

### PART 2 - PRODUCTS

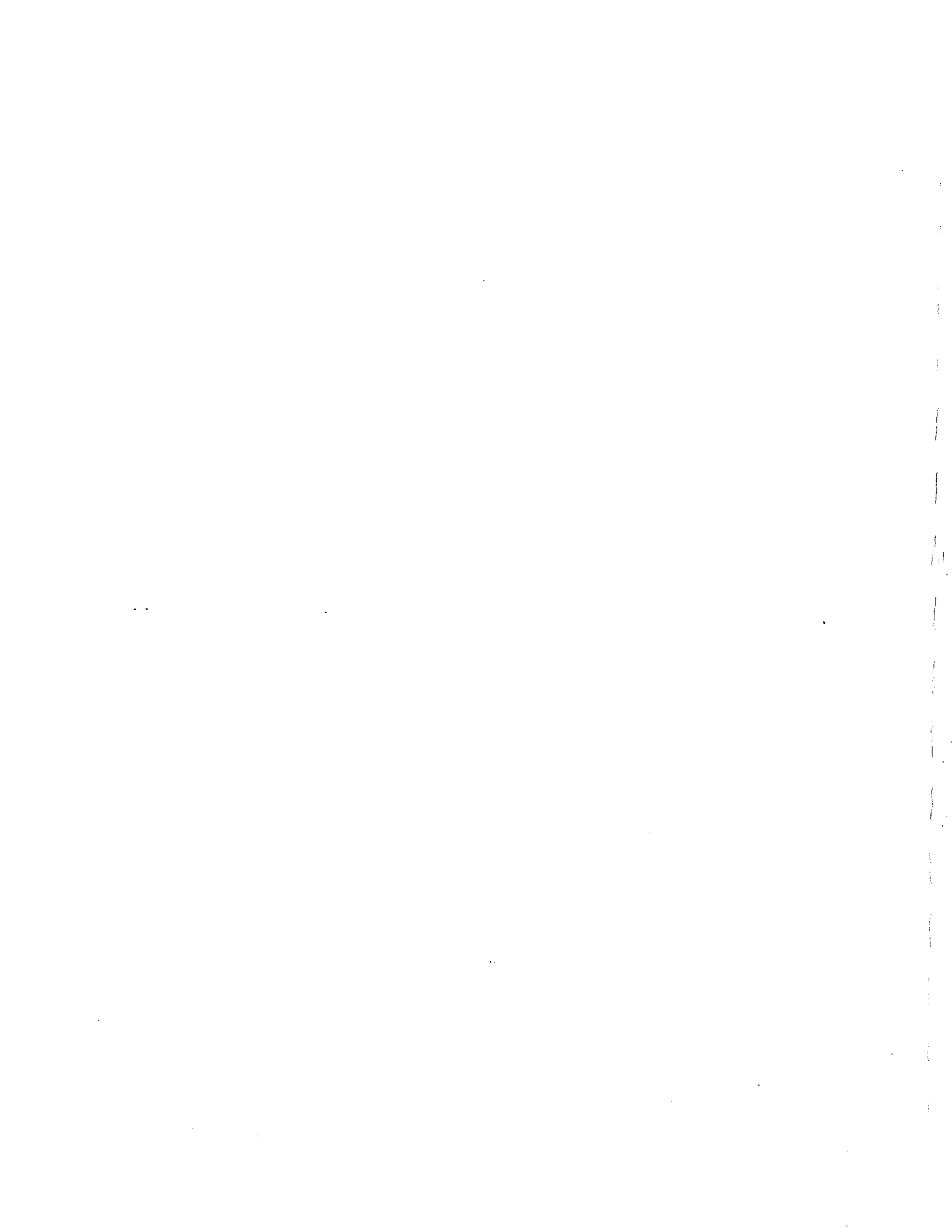
#### 2.1 MATERIALS

- A. Steel: Comply with SJI's "Specifications" for chord and web members.
- B. Steel Bearing Plates: ASTM A 36.
- C. High-Strength Bolts and Nuts: ASTM A 325 Type 1, heavy hex steel structural bolts, heavy hex carbon-steel nuts, and hardened carbon-steel washers.
1. Finish: Hot-dip zinc coating, ASTM A 153/A, Class C.
- D. Welding Electrodes: Comply with AWS standards.

#### 2.2 PRIMERS

- A. Primer: SSPC-Paint 15, Type I, red oxide; FS TT-P-636, red oxide; or manufacturer's standard shop primer complying with performance requirements of either of these red-oxide primers.

#### 2.3 OPEN-WEB K-SERIES STEEL JOISTS



## PART 2 - PRODUCTS

## 2.1 STRUCTURAL-STEEL MATERIALS

- A. Structural steel W-shapes, shall conform to ASTM Specification, Serial Designation A 992, as amended to date. Structural steel shapes (other than W-shapes), plates and bars shall conform to ASTM Specification for Bridges and Buildings, Serial Designation A 36, as amended to date. No secondhand materials shall be used.

## 2.2 BOLTS, CONNECTORS, AND ANCHORS

- A. High Strength Bolts, Nuts, and Washers, A325.
  - 1. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.

- B. Welding Electrodes: Comply with AWS requirements.

## 2.3 PRIMER

- A. Primer: Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer.

## 2.4 SOURCE QUALITY CONTROL

- A. Owner will engage an independent testing and inspecting agency to perform shop inspections and tests and to prepare test reports.

## PART 3 - EXECUTION

## 3.1 WORKMANSHIP - GENERAL

- A. Workmanship shall be equal to the best practice in modern structural shops
- B. All shop and field welding shall be performed by certified welders in conformance with American Welding Society's "Code for Arc and Gas Welding in Building Construction."
- C. Splice members only where indicated.

## 3.2 PREPARATION

- A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place, unless otherwise indicated.

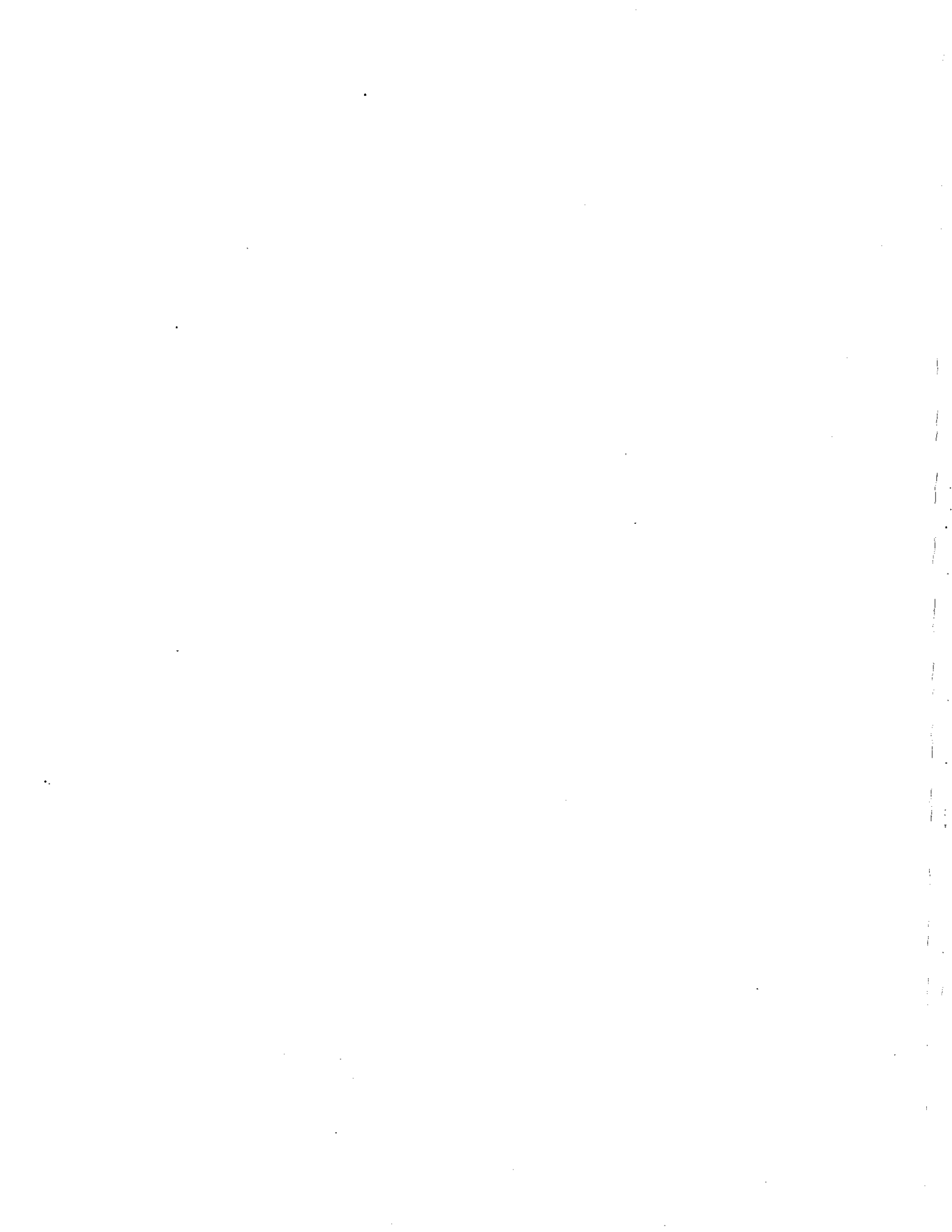




- b. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or element to be demolished and adjacent facilities or work to remain.
  - c. Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.
  - d. Protect floors with suitable coverings when necessary.
  - e. Construct temporary dustproof partitions where required to separate areas where noisy or extensive dirt or dust operations are performed. Equip partitions with dustproof doors and security locks.
  - f. Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces and installation of new construction to ensure that no water leakage or damage occurs to structure or interior areas of existing building.
  - g. Remove protections at completion of work.
5. Damages: Promptly repair damages caused to adjacent facilities by demolition work.
  6. Traffic: Conduct selective demolition operations and debris removal to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
    - a. Do not close, block, or otherwise obstruct streets, walks, or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
  7. Flame Cutting: Do not use cutting torches for removal until work area is cleared of flammable materials. At concealed spaces, such as interior of ducts and pipe spaces, verify condition of hidden space before starting flame-cutting operations. Maintain portable fire suppression devices during flame-cutting operations.
  8. Utility Services: Maintain existing utilities indicated to remain in service and protect them against damage during demolition operations.
    - a. Do not interrupt utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.
    - b. Maintain fire protection services during selective demolition operations.
  9. Environmental Controls: Use water sprinkling, temporary enclosures, and other methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection.
    - a. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

**PART 2. - PRODUCTS (Not Applicable)****PART 3. - EXECUTION****A. PREPARATION**

1. General: Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of areas to be demolished and adjacent facilities to remain.
2. Cease operations and notify Owner's Representative immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.
3. Cover and protect furniture, equipment, and fixtures from soilage or damage when demolition work is performed in areas where such items have not been removed.
4. Erect and maintain dust-proof partitions and closures as required to prevent spread of dust or fumes to occupied portions of the building.



- (1) If any of the requirements listed above are not completed, the Architect/Engineer will refrain from the Initial Inspection until such requirements are proven by the Contractor to be fulfilled.
- (2) Upon conclusion of the Initial Inspection the Architect/Engineer will provide the Contractor with a list of items necessary to be completed for Substantial Completion.
- b. Verification of Completion Procedure: Submit a certified copy of the Architect/Engineer's Initial Inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.
  - (1) Upon receipt the Architect/Engineer will re-inspect and verify the completion of the required Work..
  - (2) The Architect/Engineer will advise, if necessary, the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for Substantial Completion. Substantial Completion will not be issued until all requirements have been found to be complete.
  - (3) After the Verification of Completion review of the Work, the Architect/Engineer will re-inspect if necessary only at the cost of the contractor. This cost will be billed to the Owner at the Architect/Engineer's current rate schedule and payment will be made to the Architect/Engineer at the time of the final payment. The Owner will reduce the amount of the final payment by the amount of this invoice. The Architect/Engineer will prepare the Certificate of Substantial Completion following inspection, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
3. The Architect/Engineer will issue a Certificate of Substantial Completion after all work listed in the Substantial Completion Inspection are complete. Items to be delayed due to acceptable circumstances will be noted.

#### D. FINAL ACCEPTANCE

1. Preliminary Procedures: Before requesting Certification of Final Acceptance and Final Payment, complete the following. List exceptions in the request.
  - a. Submit the final payment request with all releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
  - b. Submit an updated final statement, accounting for final changes to the Contract Sum.
  - c. Submit consent of surety to final payment.
  - d. Submit a final liquidated damages settlement statement.
  - e. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
2. Upon completion of all of listed items above and of all required Work the Architect/Engineer will prepare a certificate of final acceptance.

#### E. RECORD DOCUMENT SUBMITTALS

1. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Architect/Engineer's reference during normal working hours.
2. Record Drawings, Project Manual, Shop Drawings and Product Data: Maintain a clean, undamaged set of each. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever item is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings and Project Manual. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
  - a. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.
  - b. Note related Change Order numbers where applicable.
  - c. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.

4. Specific action: Where a submittal is marked "Submit Specific Item", resubmit that item specifically requested. Other components not marked maybe proceeded with.
5. Do not permit submittals marked "Revise and Resubmit" or "Rejected" to be used at the Project site, or elsewhere where Work is in progress.

**PART 2. PRODUCTS (Not Applicable).**

**PART 3. EXECUTION (Not Applicable).**

**END OF SECTION 01300**

1. The first part of the document is a list of names and addresses.

2. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.
3. Visual Requirements: Do not cut and patch construction exposed in occupied spaces, in a manner that would reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

## PART 2. - PRODUCTS

### A. MATERIALS

1. For finishes and materials exposed to view, use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect
2. Use materials whose installed performance will equal or surpass that of existing materials.

## PART 3. - EXECUTION

### A. INSPECTION

1. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.
2. Before proceeding, meet at the site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

### B. PREPARATION

1. Temporary Support: Provide temporary support of Work to be cut.
2. Protection: Protect existing construction during cutting and patching to prevent damage.
3. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
4. Take all precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

### C. PERFORMANCE

1. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
  - a. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
2. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.
  - a. In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required

## A. GENERAL INSTALLATION PROVISIONS

1. **Inspection of Conditions:** Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
2. **Manufacturer's Instructions:** Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.
3. **Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.**
4. **Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.**
5. **Recheck measurements and dimensions, before starting each installation.**
6. **Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.**
7. **Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.**
8. **Mounting Heights:** Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect for final decision.

## B. CLEANING AND PROTECTION

1. **During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.**
2. **Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.**
3. **Limiting Exposures:** Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

**END OF SECTION 01040**

of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.

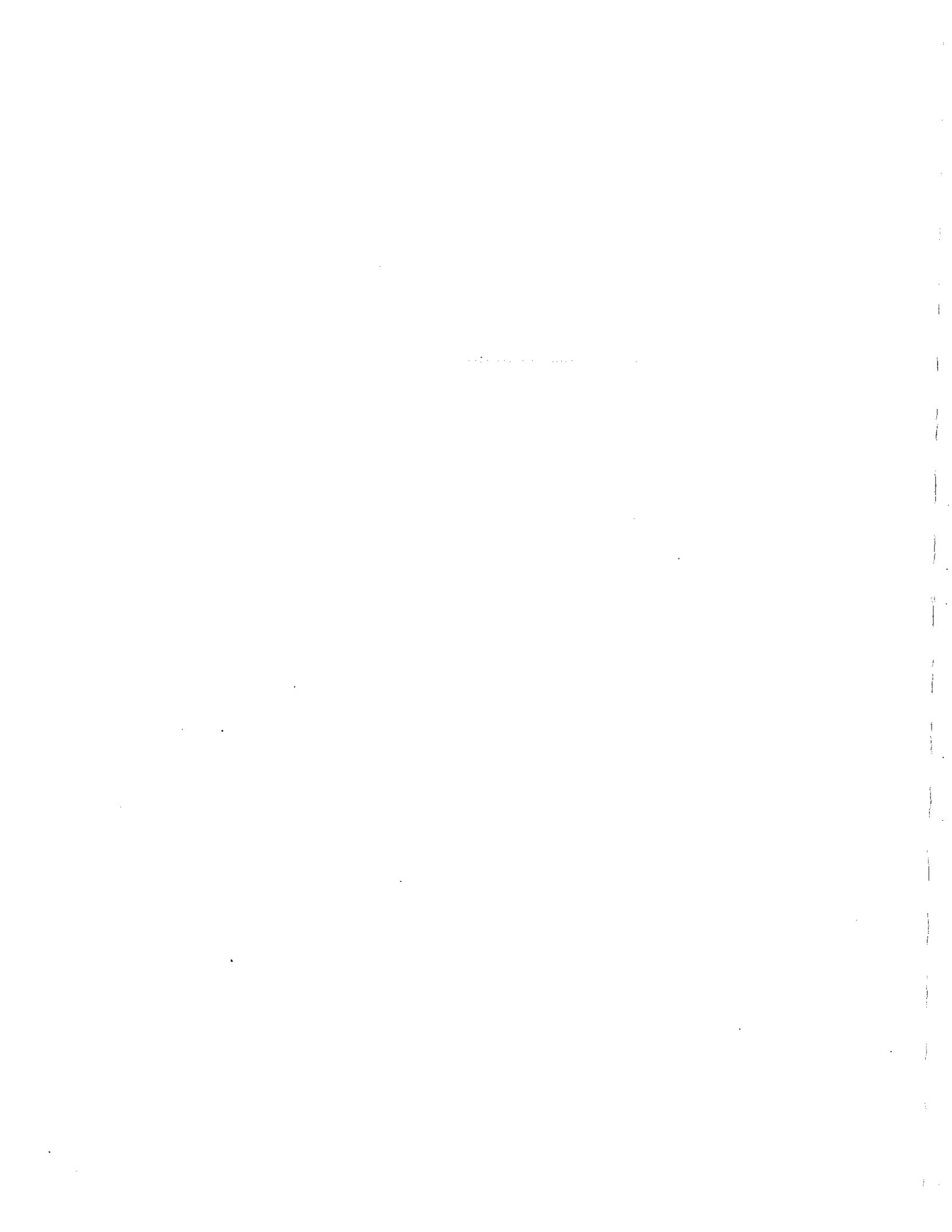
- a. Contain all construction materials, storage units and vehicle parking per Owner directions.
4. Maintain the existing building in a secure and weathertight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.
5. At end of each work period, all building openings shall be secured with the finished window, door or mechanical system installation permanently in place or a temporary closure panel system that is satisfactorily secure in the Owner's judgment.
6. During the daytime periods of occupancy by students and school personnel, no work will be allowed to be partially complete. Do not create potentially dangerous situations by leaving windows, doors or mechanicals in an incomplete stage posing hazards, materials and tools unsecured or any other situation that may endanger the safety of the occupants.

**PART 2. PRODUCTS (Not Used)**

**PART 3. EXECUTION (Not Used)**

**END OF SECTION 01010**





HVAC AND STRUCTURAL UPGRADES - PATHS

5. To the fullest extent permitted by law, the CONTRACTOR shall indemnify and hold harmless the COMMITTEE, its officers, and employees from and against all claims, damages, losses, and expenses, just or unjust, including but not limited to costs of defense arising out of or resulting from the performance of this Agreement provided that any such claims, damage, loss, or expense (1) is attributable to bodily injury, sickness, disease, or death or to injury to or destruction of tangible property, including the loss of use therefrom, and (2) is caused in whole or in part by any negligence, act, or omission of the CONTRACTOR, anyone directly or indirectly employed by it, or anyone for whose act it may be liable.

6. The CONTRACTOR agrees to begin the work on or after June 27, 2005 at 7:30 AM and complete all the work on or before 5 PM on AUGUST 1, 2005. The time for performance may be extended only by the written consent of the School Department Director of Business Services (hereinafter "DIRECTOR").

7. CONTRACTOR shall keep accurate records of all services performed under this Agreement and shall submit such information on forms provided by the DIRECTOR, or his/her authorized representative on a monthly basis. Payment for such services shall be made to CONTRACTOR not more than thirty (30) days after receipt and approval of said forms and acceptance of the work by the Director.

8. The COMMITTEE may terminate this Agreement for cause by written Notice to CONTRACTOR. In the event of such termination, CONTRACTOR shall not be entitled to any further payment under this Agreement from the date of receipt of said Notice.

9. The COMMITTEE shall have the right to terminate this Agreement at any time for its convenience on proper written Notice to CONTRACTOR. If Agreement is terminated by the COMMITTEE for convenience, the COMMITTEE shall pay the CONTRACTOR for all work performed and all materials purchased pursuant to this Agreement prior to the receipt of such Notice.

10. For performance of all the terms and conditions of this Agreement, the COMMITTEE will pay the CONTRACTOR monthly for the CONTRACTOR'S performance. A payment of ninety per cent (90%) of each monthly invoice will be made thirty (30) days after acceptance and approval by the Director and receipt of the CONTRACTOR'S monthly invoice. The invoicing of the retainage of 10% will be allowed upon Final Completion as determined by the Director of the Project and paid within thirty (30) days.

IN WITNESS THEREOF, the said CITY OF PORTLAND SCHOOL COMMITTEE has caused this Agreement to be signed and sealed by Mary Jo O'Connor, its Superintendent of Schools, thereunto duly authorized, the day and year first above written.

WITNESS: CITY OF PORTLAND SCHOOL COMMITTEE

By: Mary Jo O'Connor Signature: \_\_\_\_\_

Title: Superintendent of Schools Date: \_\_\_\_\_

WITNESS: <CONTRACTOR>

By: \_\_\_\_\_

Signature: \_\_\_\_\_

Title \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_  
(Corporation or Firm)

Signature: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Typed or Printed Name)

Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone: ( \_\_\_\_\_ ) \_\_\_\_\_

Date: \_\_\_\_\_, 2005

**NOTE:**  
Bids must bear the handwritten signature of a duly authorized member or employee of the organization making the bid.