

6. The installing contractor shall be responsible for proper installation of door closers in accordance with degree of opening indicated on hardware schedule. The installing contractor shall be responsible for adjustment of the three individual valves, for proper control as follows:

- 1 - closing speed,
- 2 - latching speed,
- 3 - delayed action, or backcheck.

Spring power adjustments, shall also be the responsibility of the installing contractor as set forth in Part 3 Execution.

7. Where top rail of door is insufficient in width to mount the closer directly to the rail, drop brackets shall be provided.

C. Door Stops:

1. It shall be the responsibility of the hardware supplier to provide door stops for all doors in accordance with the following requirements.
2. Wall type bumpers with a concealed type flange shall be used wherever possible and shall be one of the following:

|               |   |         |
|---------------|---|---------|
| Ives          | - | 407 1/2 |
| Door Controls | - | 3211T   |
| Rockwood      | - | 409     |

3. Where wall type bumpers cannot be used, such as on unreinforced partitions or in situations where door comes in contact with material such as glass, or any other obstruction, provide dome type floor stops of the proper height.

|               |   |              |
|---------------|---|--------------|
| Ives          | - | 436, 438     |
| Door Controls | - | 3310X, 3320X |
| Rockwood      | - | 440, 442     |

D. Silencers:

1. Provide rubber silencers for all interior pressed steel (hollow metal) frames. Silencers shall be pneumatic type 1/2" diameter with 1/8" projection.
2. Provide 3 silencers for the strike jamb of metal frames for single doors and two for the head for metal frames for pairs of doors. Provide 4 silencers for the strike jamb for frames for single dutch doors.

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PART 3 - EX

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E. Kick Plates:

1. Kick plates shall be .050 gauge solid stainless steel 8" high by 2" less door width.
2. Kick plates shall be applied on the push side of all doors where noted.

F. Pulls and Push Bars:

1. Pulls for doors shall be 1" diameter solid stainless steel round bar, 10" center to center, with a projection of 2-1/2", and a clearance of 1-1/2".
2. Pulls shall be fastened with thru-bolts, one at each base.

G. Finish:

|              |                  |
|--------------|------------------|
| Hinges:      | 26D              |
| Closers:     | Sprayed Aluminum |
| Kick Plates: | 26D              |
| Pulls:       | 26D              |

PART 3 - EXECUTION

3.01 INSPECTION

- A. It shall be the General Contractor's responsibility to inspect all door openings and doors to determine that each door and door frame has been properly prepared for the required hardware. If errors in dimensions or preparation are encountered, they are to be corrected by the responsible parties prior to the installation of hardware.

3.02 PREPARATION

- A. All doors and frames, requiring field preparation for finish hardware, shall be carefully mortised, drilled for pilot holes, or tapped for machine screws for all items of finish hardware in accordance with the manufacturer's templates and instructions.

3.03 INSTALLATION/ADJUSTMENT/LOCATION

- A. All materials shall be installed in a workmanlike manner following the manufacturer's recommended instructions.
- B. Door closers shall be installed in accordance with the manufacturer's instructions. Each door closer shall be

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carefully installed. Arm position shall be as shown on the instruction sheets and required by the finish hardware schedule.

- C. The adjustments for all door closers shall be the contractor's responsibility and these adjustments shall be made at the time of installation of the door closer. The closing speed and latching speed valves, shall be adjusted individually to provide a smooth, continuous closing action without slamming. The delayed action feature or back check valve shall also be adjusted so as to permit the corrected delayed action cycle or hydraulic back check cushioning of the door in the opening cycle. All valves must be properly adjusted at the time of installation. Each door closer has adjustable spring power capable of being adjusted, in the field, from size 2 thru 6. It shall be the contractor's responsibility to adjust the spring power for each door closer in exact accordance with the spring power adjustment chart illustrated in the door closer installation sheet packed with each door closer.
- D. Installation of all other hardware, including push-pull latches, overhead holders, door stops, plates and other items, shall be carefully coordinated with the hardware schedule and the manufacturer's instruction sheets.
- E. Locations for finish hardware shall be in accordance with dimensions listed in the pamphlet "Recommended Locations for Builders' Hardware" published by the Door and Hardware Institute.

#### 3.04 PROTECTION

- A. All exposed portions of finish hardware shall be carefully protected, by use of cloth, adhesive backed paper or other materials, immediately after installation of the hardware item on the door. The finish shall remain protected until completion of the project. Prior to acceptance of the project by the Architect and Owner, the General Contractor shall remove the protective material exposing the hardware finish.

#### 3.06 CLEANING

- A. It shall be the responsibility of the General Contractor to clean all items of finish hardware and to remove any remaining pieces of protective materials and labels.

#### 3.07 INSTRUCTIONS AND TOOLS

- A. It shall be the responsibility of the finish hardware supplier to provide installation and repair manuals and

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Door 2: Ex



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adjusting tools, wrenches, etc. for the following operating products:

1. Door closers.

HARDWARE SCHEDULE:

Door 1:

Hinges, push plate, pull, closer, kick plate, stop, silencers.

Door 2: Existing

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SECTION 09250

GYPSUM DRYWALL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 FIRE-RESISTANCE RATINGS: Provide gypsum drywall construction fire-resistance ratings indicated, conforming to assemblies tested per ASTM E 119 by inspecting and testing organization acceptable to authorities having jurisdiction.

1.03 RELATED WORK

- A. SECTION 07200 -INSULATION

PART 2 - PRODUCTS

2.01 PRODUCTS: Subject to compliance with requirements, manufacturers of products which may be incorporated in the work include, but are not limited to, in association with listed requirements, the following:

- A. United States Gypsum Co.
- B. Georgia-Pacific Co.
- C. Gold Bond
- D. Domtar Gypsum Co.
- E. Louisiana-Pacific

2.02 GYPSUM BOARD: Provide gypsum board of types indicated in maximum lengths available to minimize end joints:

- A. Exposed Gypsum Board: ASTM C 36, thickness as indicated.

1. Type: MR.

2. Edges: Tapered.

2.03 TRIM ACCESSORIES: ASTM C 840: mfr.'s standard trim accessories, including cornerbead and edge trim of beaded type with face flanges for concealment in joint compound except where semi-finishing or exposed type is indicated.

- A. Provide cornerbead formed from zinc alloy.

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SECTION 09250

GYPSUM DRYWALL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

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1.03 RELATED WORK

- A. SECTION 07200 -INSULATION

PART 2 - PRODUCTS

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- B. Georgia-Pacific Co.
- C. Gold Bond
- D. Dometar Gypsum Co.
- E. Louisiana-Pacific

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- A. ~~Exposed Gypsum Board;~~ ASTM C 36, thickness as indicated.

1. Type: MR.

2. Edges: Tapered.

2.03 TRIM ACCESSORIES: ASTM C 840: Mfr.'s standard trim accessories, including cornerbead and edge trim of beaded type with face flanges for concealment in joint compound except where semi-finishing or exposed type is indicated.

- A. Provide cornerbead formed from zinc alloy.

2.04 GYPSUM BOARD JOINT TREATMENT MATERIALS: ASTM C 475 and ASTM C 840, and as follows:

- A. Joint Tape: Paper reinforcing tape, unless otherwise indicated.
  - 1. Use open-weave glass fiber tape where recommended by gypsum board mfr. with use of setting-type joint compound.
- B. Drying-Type Joint Compounds: Factory-prepackaged vinyl-based products complying with the following requirements:
  - 1. All-purpose compound formulated for use as both taping and topping compound.

2.05 MISCELLANEOUS MATERIALS: As follows, recommended by gypsum board mfr.:

- A. Gypsum Board Screws: ASTM C 1002.
- B. Fiberglass Batt Insulation: Thicknesses and locations as indicated on drawings.

### PART 3 - EXECUTION

3.01 INSTALL AND FINISH GYPSUM BOARD to comply with ASTM C 840 and as follows:

- A. Install sound attenuation blankets where indicated, prior to gypsum board, unless readily installed after board has been installed.
- B. Locate exposed end-butt joints as far from center of walls and ceilings as possible, and stagger not less than 24 inches in alternate courses of board.
- C. Isolate drywall construction from abutting structural and masonry work; provide edge trim and acoustical sealant as recommended by mfr.
- D. Screw gypsum board to metal supports.
- E. Screw both layers to supports where double-layer work is indicated or otherwise required.

3.02 DO NOT BRIDGE BUILDING EXPANSION JOINTS. Leave space of the width indicated between boards, and trim both edges for installation of sealant or gasket.

3.03 INSTALL DRYWALL MOLDING in 10 ft lengths and securely attach to framing using screws. All joints shall be cut

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accurately and installed with neat joint, all corners shall be mitered. Field applied tape and excess wet plaster shall be removed from molding immediately.

3.04 DRYWALL FINISHING: Apply joint tape and joint compound at joints between gypsum boards. Apply compounds indicated below at accessory flanges, penetrations, fastener heads and surface defects.

- A. Install compound in 3 coats (plus prefill of cracks where recommended by mfr.); sand between coats and after last coat.

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SECTION 09300

TILE

PART 1 - GENERAL

- 1.01 Drawings and general provisions of Contract, including Division One General Supplementary Conditions and related Specification Sections, apply to this Section.
- 1.02 ANSI TILE STANDARDS: Comply with ANSI A13.1 Standard Specification for Ceramic Tile and ANSI 108 series of tile installation standards included under "American National Standard Specifications for the Installation of Ceramic Tile".
- 1.03 ICA INSTALLATION GUIDELINES: TCA "Handbook for Ceramic Tile Installation"; comply with TCA installation methods indicated.
- 1.04 SUBMITTALS: With manufacturer's product data and installation instructions for tile work, submit samples of each type, color and texture of tile.

PART 2 - PRODUCTS

- 2.01 PRODUCTS: Subject to compliance with requirements, manufacturers of products which may be incorporated into the work include, but are not limited to, in association with listed requirements, the following: American Olean
- 2.02 SIZES AND THICKNESSES: As indicated or, if not indicated, as selected by Architect from manufacturer's standard sizes and thicknesses.
- 2.03 FLOORS: Flat tile and as follows:
  - A. Composition: Ceramic.
  - B. Face: Abrasive grain with square edges.
  - C. Manufacturer: American Olean unglazed porcelain ceramic mosaics.
  - D. Size: 2" x 2".
  - E. Color: As indicated on drawings.
    - 1. FLT1 - Field (A31) Quick Silver
    - 2. FLT2 - Accent (R18) Marine
    - 3. FLT3 - Accent (A98) True Blue

- 2.04 TRIM SHAPES: Same material, size, color and texture as field tile. Install preformed inside and outside corners (cut tile unacceptable), and edge trim units.
- 2.05 WALLS:
- A. Composition: Ceramic.
  - B. Face: Glazed.
  - C. Manufacturer: American Olean: Bright and Matte
  - D. Size: 4 1/4" x 4 1/4".
  - E. Colors: As indicated on drawings.
    - 1. WT1 - Field (95) Snow Mist
    - 2. WT2 - Accent (19) Teal
    - 3. WT3 - Accent (28) Azure Blue
  - F. Trim Shapes: Same material, size, color, and texture as field tile. Install preformed inside and outside corners (cut tile unacceptable) and edge trim units.
- 2.06 SETTING MATERIALS: Provide setting materials as follows:
- A. Latex-Portland Cement Mortar: ANSI A118.4.
    - 1. Latex additive as described below, replacing part or all of gauging water, combined at job site with prepackaged dry mortar mix specified by latex additive manufacturer.
      - a. Latex Type: Manufacturer's standard.
- 2.07 GROUTING MATERIALS: Provide grouting materials as follows:
- A. Latex-Portland Cement Grout: ANSI A118.6 of the following composition.
    - 1. Latex additive (water emulsion) replacing part or all of gauging water, added at job site with dry grout mixture, with type of latex and dry grout mix as follows:
      - a. Latex Type: Manufacturer's standard.
      - b. Color to match tile, as approved by Architect.

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2.08 ELASTOMERIC SEALANTS: Manufacturer's standard chemically curing, elastomeric sealants of base polymer indicated that comply with requirements of Division 7 Section "Joint Sealers" including ASTM C 920 as referenced by Type, Grade, Class and Uses.

- A. One-Part Mildew-Resistant Silicone Sealants: ASTM C 920, Type S, Grade NS, Class 25, Uses NT, G, A and O (for use in joints in nontraffic areas). Refer to Section 07900 - Sealants.

PART 3 - EXECUTION

3.01 FIELD-APPLIED TEMPORARY PROTECTIVE COATING: Where indicated under or needed to prevent adhesion or staining of exposed tile surfaces by grout, precoat tile with a continuous film of temporary protective coating indicated below:

- A. Grout release.

3.02 INSTALLATION: Comply with ANSI A108.1 and A108.4 through A108.10, as applicable for type of tile, setting materials, grout, and methods of installation indicated. Comply with manufacturer's instructions for application of proprietary materials.

3.03 JOINT PATTERN: Use grid pattern with 1/16-inch-wide joints.

3.04 EDGE STRIPS: Provide at exposed edge of tile meeting carpet, wood, or resilient flooring, unless otherwise indicated.

3.05 CLEANING: Upon completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.

- A. Remove latex-portland cement grout residue from tile as soon as possible.
- B. Unglazed tile may be cleaned with acid solutions only when permitted by tile and grout manufacturer's printed instructions but no sooner than 14 days after installation. Protect metal surfaces, cast iron, and vitreous plumbing fixtures from effects of acid cleaning. Flush surface with clean water before and after cleaning.

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- C. Remove temporary protective coating, by method recommended by coating manufacturer that is acceptable to brick and grout manufacturer. Trap and remove coating to prevent it from clogging drains.

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SECTION 09512

ACOUSTICAL TILE CEILINGS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 ACOUSTICAL CEILING UNIT STANDARD: ASTM E 1264.

1.03 ACOUSTICAL SUSPENSION SYSTEM STANDARD: ASTM C 635 for materials.

1.04 SURFACE BURNING CHARACTERISTICS: 25 or less for flame spread, 50 or less for smoke developed, per ASTM E 84.

1.05 SUBMITTALS: In addition to submission of product data for each type of acoustical ceiling unit and suspension system required, submit the following:

- A. 6-inch-square samples of each type of acoustical unit required.
- B. Set of 12-inch-long samples of exposed moldings.

1.06 PROVIDE reserve stock for each tile type equal to 2% of newly installed square footage quantity. Deliver extra materials to Owner in protective coverings and identify with appropriate labels.

PART 2 - PRODUCTS

2.01 PRODUCTS: Subject to compliance with requirements, manufacturers of products which may be incorporated in the work include, but are not limited to, in association with listed requirements, the following:

2.02 PROVIDE all labor, material, and equipment required to supply and install ceiling system consisting of acoustical ceiling panels (where indicated), and exposed-grid suspension system including wire hangers, main runners, cross tees, and angle molding.

2.03 SAT A: Acoustical Ceiling Tile "A" shall be Tegular, nominally 24" x 24" x 5/8" thick, Prelude 15/16" Exposed Tee. Style similar to Armstrong Tundra, No. 303.

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A. NRC: .55.

B. Ceiling tile color shall be white.

PART 3 - EXECUTION

- 3.01 GENERAL: Install acoustical ceiling systems to comply with installation standard referenced below, per manufacturer's instructions, and CISCA "Ceiling Systems Handbook."
- 3.02 ACOUSTICAL CONTRACTOR: All acoustical materials and suspension systems shall be installed by a subcontractor thoroughly experienced with this type of installation and approved by the manufacturer. The acoustical contractor shall have all necessary licenses, secure all necessary permits, and pay all costs and fees for the execution of his work.
- 3.03 PREPARATION OF WORK: Building shall be examined before beginning work to determine that it is properly enclosed and the structure is in proper condition to receive acoustical materials and/or suspension systems. Installation of acoustical materials shall not be made when the building is excessively cold and damp or hot and dry. Temperature and humidity conditions closely approximating the interior conditions which will exist when the building is occupied should be maintained before, during, and after installation. Area shall be broom-cleaned and unobstructed for free movement of rolling scaffold. Work is not to proceed until unsatisfactory conditions have been corrected.
- 3.04 INSTALLATION OF SUSPENSION SYSTEM: The acoustical contractor shall furnish and install the grid system as specified. Care shall be taken to insure that the grid is square and in proper alignment.
- 3.05 LAYOUT: Balance ceiling borders on opposite sides, using more-than-half-width acoustical units.
- 3.06 SUSPENSION SYSTEM: Secure to building structure, with hangers spaced 4'-0" minimum along supported members. ADD HANGERS AS NECESSARY TO SUPPORT LIGHT FIXTURES AND MAINTAIN LEVEL CEILING.
- 3.07 EDGE MOLDINGS: Secure to substrate with screw anchors spaced 16 inches o.c. Miter corner joints.
- A. Cope exposed edges of intersecting exposed suspension members to produce flush intersections.

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3.08 INSTALLATION OF ACOUSTICAL MATERIAL: The acoustical contractor shall furnish and install acoustical material in the types, sizes, and surface designs specified above.

A. Field out edges of less than full size tiles where ceiling plane intersects wall plane. Edges at wall moulding shall be straight, clean and true. Do not install ragged or chipped edge tiles.

3.09 PATTERN DIRECTION: One-way, align joints.

3.10 CLEANING

A. Following installation, clean soiled or discolored surfaces of units.

B. Remove or replace units which are damaged or improperly installed.

END OF SECTION

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SECTION 09650  
RESILIENT FLOORING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUBMITTALS: With manufacturer's product data and installation instructions, submit the following:

- A. Samples of each type, color and pattern of resilient flooring and accessories.
- B. Maintenance instructions for each type of flooring.
- C. Replacement material in the amount of one box for every 50 installed for tile and 5 linear yards for sheet flooring, for each type, color and pattern.
- D. COLORS AND PATTERNS: As scheduled or shown, or as selected by Owner from manufacturer's standard colors and patterns.

PART 2 - PRODUCTS

2.01 VINYL COMPOSITION TILE: FS SS-T-312, Type IV, composition as indicated below; 12" x 12" :: 1/8" gage, unless otherwise indicated.

2.02 PRODUCTS: Subject to compliance with requirements, manufacturers of products which may be incorporated in the work include, but are not limited to, in association with listed requirements, the following:

- A. Manufacturer: Armstrong World Industries.
- B. Style: Standard Excelon Vinyl Composition Tile.
- C. Composition 1 - asbestos free.
- D. Colors:
  - 1. VCT 1: Field: Imperial Texture (51931) Misty Green.
  - 2. VCT 2: Accent: Feature Tile Premium (56815) Teal II.



E. RESILIENT ACCESSORIES Mercer and as follows:

1. Vinyl Wall Base: 4" high; 1/8" Rubbermyte wall base; with matching stops and preformed corner units; standard top-set cove; unless otherwise indicated.
  - a. Color: #308 Sea Green
2. Transition Strip from 1/8" VCT to 1/4" porcelain tile.
  - a. Color: #308 Sea Green

PART 3 - EXECUTION

- 3.01 INSTALLATION: Comply with flooring manufacturer's recommendations for type(s) of materials, project conditions, and intended use.
- 3.02 CLEAN FLOORS and apply leveling compound and substrate primer if required, in accordance with flooring manufacturer's instructions.
- 3.03 PLACE RESILIENT FLOORING continuously under locations of movable equipment.
- 3.04 LAY TILE FLOORING from center marks established with principal walls; adjust as required to avoid use of cut units less than 1/2 tile wide at perimeters. Match tiles for color and pattern by using in manufactured and packaged sequence.
  - A. Lay tile in patterns to be coordinated with the Architect.
- 3.05 APPLY WALL BASE in lengths as long as practicable to walls, columns, and all permanent fixtures where indicated. Mitered outside corners not acceptable.
- 3.06 INSTALL RESILIENT EDGE STRIPS at edges of resilient flooring which would otherwise be exposed.
- 3.07 CLEAN FLOORS and accessories after installation and apply protective polish in accordance with flooring manufacturer's instructions. Omit polish on "no-wax" flooring and tile indicated for "no-wax maintenance".
- 3.08 WAX RESILIENT FLOORING with 3 coats of metal crossed link acrylic finish.
  1. Products:
    - a. S.C. Johnson Complete

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3.09 EXTRA STOCK

- A. Deliver stock of maintenance materials to Owner.  
Furnish maintenance materials from same manufacturer  
lot as materials installed and enclosed in protective  
package with appropriate identifying labels.

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SECTION 09900

PAINTING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUBMITTALS: Prior to beginning work, Contractor to furnish color chips for surfaces to be painted.

1.03 DESCRIPTION OF WORK: Painting and finishing of interior and exterior items and surfaces, unless otherwise indicated.

- A. Paint exposed surfaces, except as otherwise indicated, whether or not colors are designated. Colors will be selected by Architect and shall be matched by painting contractor/manufacturer.

1.04 WORK NOT INCLUDED: Unless otherwise indicated, shop priming of ferrous metal items and fabricated components are included under their respective trades. Pre-finished items, acoustic material, and the like, are not included. Unless otherwise indicated, painting not required on surfaces of concealed areas except for piping, equipment and other such items within concealed spaces. Finished metals such as anodized aluminum, stainless steel, bronze, and similar metals will not be painted. Do not paint any moving parts of operating units, or over any equipment identification, performance rating, name or nomenclature plates or code-required labels.

1.05 DELIVERY AND STORAGE: Deliver materials to job site in new, original, and unopened containers bearing manufacturer's name, trade name, and label analysis. Store where indicated in accordance with manufacturer's instructions.

1.06 JOB CONDITIONS: Do not apply paint when relative humidity exceeds 85%. Do not apply paint to damp or wet surfaces.

1.07 PROTECTION: Protect work of other trades. Correct any painting related damages by cleaning, repairing or replacing, and refinishing, as directed by Architect.

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SECTION 09900

PAINTING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

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1.07 PROTECTION: Protect work of other trades. Correct any painting related damages by cleaning, repairing or replacing, and refinishing, as directed by Architect.

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- 1.08 COORDINATION: Provide finish coats which are compatible with prime paints used. Provide barrier coats over incompatible primers where required. Notify Architect in writing of anticipated problems using specified coatings with substrates primed by others.
- 1.09 SURFACE PREPARATION: Perform preparation and cleaning procedures in strict accordance with coating manufacturer's instructions for each substrate condition.
  - A. Remove hardware and accessories, machined surfaces, plates, lighting fixtures and similar items in place and not to be finish-painted or provide surface-applied protection. Reinstall removed items and remove protective coverings at completion of work.
  - B. Seal wood required to be job-painted. Prime edges, ends, face, undersides and backsides of counters, cases, cabinets, counters, etc. Use spar varnish for backpriming where transparent finish is required.
  - C. Seal tops, bottoms, and cut-outs of wood doors with heavy coat of varnish or similar sealer immediately upon delivery to job.
  - D. Clean ferrous surfaces which are not galvanized or shop-coated. Remove oil, grease, dirt, loose mill scale and other foreign substances by solvent or mechanical cleaning. Touch-up shop-applied prime coats wherever damaged.
  - E. Clean galvanized surfaces free of oil and surface contaminants with non-petroleum based solvent.
- 1.10 MATERIAL PREPARATION: Mix, prepare, and store painting and finishing materials in accordance with manufacturer's directions.

PART 3 - EXE

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PART 2 -- PRODUCTS

- 2.01 PRODUCTS: Subject to compliance with requirements, manufacturers of products which may be incorporated in the work include, but are not limited to, in association with listed requirements, the following:
  - A. PAINT MANUFACTURER: Glidden. Paint type shall be as indicated in the paint schedule at the end of this section.  
Contact: Steve Dunn

PART 3 - EXECUTION

- 3.01 APPLICATION: Apply painting and finishing materials in accordance with manufacturer's directions. Use applicators, and techniques best suited for materials and surfaces to which applied.
- A. Apply additional coats when undercoats, stains or other conditions show through final paint coat, until paint film is uniform finish, color and appearance.
  - B. Paint surface behind movable equipment and furniture same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or furniture with prime coat only before equipment is installed.
  - C. Paint interior surfaces of ducts, where visible through registers or grilles, flat, non-specular black.
  - D. Finish doors on tops, bottoms and edges same as faces, unless otherwise indicated.
  - E. Paint all metal door frames
    - 1. Caulk all edges of door frames at junction of frame and G.W.B.
  - F. Omit first coat (primer) on metal surfaces which have been snop-primed and touch-up painted, unless otherwise specified.
  - G. Appl; prime coat to material which is not required to be painted or finished, and which has not been prime coated by others.
- 3.02 COMPLETED WORK: Match approved samples for color, texture and coverage. Remove, refinish or repaint work not in compliance with specified requirements.

SECTION 10155

TOILET PARTITIONS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUBMITTALS: With manufacturer's product data and installation instructions for partitions, submit samples of each color and anchoring details used.

1.03 GUARANTEE: Against delamination, breakage or corrosion for ten (10) years.

PART 2 - PRODUCTS

2.01 PRODUCTS: Subject to compliance with requirements, manufacturers of products which may be incorporated into the work include, but are not limited to, in association with listed requirements, the following: Global Steel Products.

- A. Material: Phenolic: Solid Core Phenolic  
Solid Phenolic Core decorative plastic laminate with multiple resin-impregnated kraft and surface sheets fused at high temperature and pressure; the edges being fused and polished.

1. Doors: 3/4" thick.
2. Panels: 1/2" thick.
3. Pilasters: 1" thick.

- B. Style: Floor mounted, overhead braced.

1. Embassy

- C. Color: As indicated on drawings.

- D. Hardware:

All exposed hardware shall be type 304, 11 gauge satin finish stainless steel. Door hinges shall be surface mounted, for single direction operation toward the side of the door to be opened and shall comprise 11 gauge stainless steel units with a satin finish; at least one hinge to include an adjustable cam to support the door and

establish selected quiescent positions by gravity only. Hardware includes coat hook, bumper, stop and keeper, and all necessary fasteners for installation. Fasteners shall be of chrome plated steel, door hinges and latches will be mounted with theft proof barrel nuts and machine screws; hook and handles will be mounted with theft proof full thread screws; all other fasteners will comprise full thread phillips head screws.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install plumb and level per manufacturer's instructions.

FND OF SECTION

PART 1 - GEN

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1.02 SUBM

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SECTION 10425

SIGNS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUBMITTALS

- A. Prior to beginning work Contractor to submit sample of signage color.

PART 2 - PRODUCTS

2.01 GRAPHIC BRAILLE SIGNS

- A. "Men's Room"
  - B. "Women's Room"
  - C. "Rest Rooms"
  - D. Size: 8" x 8"
- 2.02 Subject to compliance with requirements, manufacturers of products, which may be incorporated in the work include, but not limited to, in association with listed requirements, can be purchased from the following:

Perspectives  
365 Woodfords Street  
Portland, ME  
(207) 772-7305

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Mount "Men's Room" on left hand side of frame 60" (centerline) A.F.F.
- B. Mount "Women's Room" on latch side of door 60" (centerline) A.F.F.

C. Mount "Rest Rooms" as indicated on drawings 60"  
(centerline) A.F.F.

END OF SECTION

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PART I - GEN

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- 1.2 SCOPE
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SECTION 15100  
SUPPLEMENTAL MECHANICAL GENERAL REQUIREMENTS

PART I - GENERAL

1.1 These conditions add to, and supplement, the GENERAL and SPECIAL CONDITIONS of the Contract Documents enumerated earlier. The General and Special Conditions are a part of this Section and shall apply as if written in full herein.

1.2 SCOPE

- A. The work included in this Section shall consist of providing all materials, labor tools, plant, and incidentals necessary to install and make ready for the owner's use, a complete MECHANICAL SYSTEM, for the proposed building as called for in the Contract Documents.
- B. Review all drawings and visit the site: observe dimensions, construction, and details not shown on drawings.
- C. The following sections of Technical Specifications are a part of the Contract Documents and are included as part of the MECHANICAL system. The system shall include, but is not limited to, the Sections:

| Section | Name                             | Pages in Section |
|---------|----------------------------------|------------------|
| 15111   | Balancing and Testing            | 2                |
| 15500   | Ductwork                         | 2                |
| 15525   | Grilles, Registers & Diffusers   | 1                |
| 15700   | Plumbing, Piping and Accessories | 5                |

1.3 RESPONSIBILITY OF BIDDERS

- A.) Bidders shall examine all drawings and specifications issued and SHALL VISIT THE SITE of the work. Bidders must be familiar with the codes, rules, and regulations (and the local interpretations) in effect at the site of the work.
- B.) Where any of the above are at variance with the drawings and specifications, the code requirements shall take precedence and any cost necessary to meet these shall be included and described in the bid price.
- C.) The Contractor is assumed to be skilled in his trade and is solely responsible for compliance with health and safety regulations, performing the work in a safe and competent manner, and in installation procedures required for the work as outlined in these documents.

1.4 MECHANICAL PLANS

- A.) The drawings accompanying this specification, as a part thereof, are working drawings indicating the location and arrangement of the increments of the systems of this section of work. Material deviation from this arrangement, process or means of application, shall bear the Engineer's review stamp before the change is made on the job or materials are ordered. Changes made without such review shall be ordered removed and the original items installed at no additional expense per the judgment of the owner.
- B.) The drawings are not intended to show in minute detail, all minor items of installation in their exact location, the exact dimensions, or all the details of the equipment or materials. The Contractor shall verify the actual dimensions of the equipment proposed to assure himself that the equipment will fit in the available space.
- C.) Installation shall be within the limitations imposed by the architectural, structural, electrical, and plumbing codes and requirements, with space for maintenance as required by manufacturer.

### 1.5 QUESTIONS AND CLARIFICATIONS OF BID DOCUMENTS

- A.) Bidders shall not rely on any verbal clarification of the drawings or specifications. Any questions or clarifications shall be referred to the engineer at least five working days prior to bidding to allow for issuance of an addendum. After the five day deadline, bidder shall make a decision and qualify the bid, if the bidder feels it is necessary to do so.

### 1.6 TEN-DAY PRIOR APPROVAL

- A.) Any equipment or components proposed for this project, other than manufacturer's equipment actually named in the bid documents, shall have pertinent submittal data and descriptive cover sheet submitted to the engineer 5 days prior to the bid date for an inclusion in an addendum if, and when, reviewed and accepted for bidding.
- B.) This is for pre-bid review and is not to be regarded as submittals required for construction.
- C.) Bidder shall base the bid on items of equipment actually named in bid documents or addendum's issued prior to bidding. Verbal acceptance will not be recognized unless verified in writing. It is the bidder's responsibility to ascertain that all equipment has been accepted by requiring copies of the written acceptance from suppliers.

### 1.7 GUARANTEES

- A.) All equipment, materials, and workmanship shall be guaranteed for a period of one year, beginning with the date of acceptance of the project in writing. Special warranties may be called for under some section(s) of EQUIPMENT. This warranty shall be in writing and shall include written copies of factory warranties with expiration dates on items of equipment where the warranty date might differ from the acceptance data. No warranty shall start before the date of acceptance in writing by the engineer after installation and startup have been completed.
- B.) The contractor's warranty shall include at least two inspections of the system to repair and replace any items found to be defective during this period. The first inspection shall be approximately six months after the acceptance of the system and the second at the end of the first year, but prior to it being out of warranty.
- C.) The contractor shall warranty all existing equipment used after checkout of operation and prior to any installation. This warranty shall be for a minimum of one year.

### 1.8 REQUIRED SUBMITTALS

- A.) Prior to starting any installation, submit no less than 3 nor more than 5 copies of items proposed for this work with necessary illustrations, drawings, and engineering data for review by the engineer. Submit in time to allow no less than 10 working days for checking and transmittal without delaying the construction schedule. Submit all items at one time no less than 20 days after the contract has been awarded.
- B.) Submittals shall be clearly designated as to the intended item with identification as to unit number or other marking to show location, service, and function. Submittals not marked to identify the equipment and application will be rejected.
- C.) Any equipment installed without prior acceptance shall be subject to rejection and removal.
- D.) The supplier, by submitting, certifies that the materials or equipment proposed is satisfactory for the application intended, including adverse conditions that may prevail at the job site, and that the materials and equipment are in current production with no known plans to cease production.
- E.) Contractor agrees that submittals processed by the engineer are not

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## PART II PRODU

### 2.1 MATERIALS

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change orders; that the purpose of submittals by the contractor is to demonstrate to the engineer that the contractor understands the design concept; and that the contractor demonstrates this understanding by indicating which equipment and materials he or she intends to furnish and install and the fabrication and installation methods he or she intends to use.

F.) Contractor further agrees that if deviations, discrepancies, or conflicts between submittals and contract documents are discovered either prior to or after submittals are processed by the engineer, the contract documents shall control and shall be followed unless specific exception is received in writing from the engineer and owner.

G.) Submittals shall include but not be limited to:

1. All equipment; exhaust, plumbing, fixtures, controls, etc.
2. All auxiliary equipment
3. Ductwork shop drawings, etc.
4. Exhaust registers, grilles, etc.
5. Pipe, valves, insulation, etc.
6. Voltage, phase, power factor and running load amperage of each electrical items, such as motors, etc.

H.) At the close of the job, prior to final review, three bound copies of the following shall be submitted by transmittal letter to the engineer for review and acceptance.

1. Equipment warranties
2. Contractor's warranty
3. Parts list and manuals for all equipment with installation, operation and maintenance instructions.
4. Balance and Test readings and report
5. Written instructions on maintenance and care of all components (ie; instructions on how to adjust exhaust flow).

## PART II PRODUCTS

### 2.1 MATERIALS AND LABOR - General

- A.) Furnish materials and labor necessary to deliver to the owner, a complete and operable system installed in accordance with the contract documents.
- B.) Materials shall be of the best quality. Workmanship shall be of the highest grade and construction shall be done according to the best practices of the trade.
- C.) Where the words "furnish", "provide", or "install" are mentioned, either singularly or in combination, these words are hereby interpreted to mean "furnish and install" or "provide and install", including materials complete with connections, supplemental devices, accessories and appurtenances, unless specifically otherwise noted. These words are likewise hereby interpreted as being prefixed to materials, equipment, and apparatus hereinafter mentioned, either in abbreviated or scheduled information or in the technical sections of the specifications.
- D.) Substitutions: All material shall be as described herein using the same product type or equal as approved by the Engineer prior to purchase of the material. Substitution of different product type will not be allowed unless all manufacturing specifications of the substitution and the original product type are submitted to the Engineer and is subsequently approved in writing. This will apply to all sections of 15000 through 15999 described herein.
- E.) Review and approval of a substitute item is an indication only that the

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substitute item is compatible with the specified item as a claim of the manufacturer. Ensure dimensional propriety, performance and quality of the substitute item.

- F.) Furnishing of the specified item must still produce the results and performance, dependability and quality, reasonably to be expected within the spirit of the specifications, drawings, and the standard of good mechanical performance normal to the trade.
- G.) When the drawings and/or specifications indicate ONE or TWO manufacturers' names for material or equipment, the bidder may submit a bid based on material or equipment of manufacturers not named but considered by the bidder to be equal to the standard of design and quality specified; however, such substitution must be accepted by the engineer as equal. If the bidder elects to bid on a substitution without securing written consent of the engineer prior to receipt of bids, then it will be understood that proof of compliance with specified requirements is the direct responsibility of the bidder and no such materials or equipment may be purchased or installed without written acceptance from the engineer.

#### 2.2 LABELING

- A.) All electrical operated equipment and items consisting primarily of electrical components shall bear a label of a certified testing laboratory, such as Underwriters' Laboratories (UL).
- B.) Where such testing and labeling service is available for other products, such as fire dampers, fans, diffusers, gravity dampers, etc., the equipment shall bear such a label.
- C.) All equipment and important mechanical parts such as valves, tanks, piping, ductwork, fans, pumps, heat recovery units etc. must be labeled and identified as per the equipment schedule tagging;
- 1.) All piping and ductwork will be labeled at a minimum of every twenty feet using plastic markers and shall identify the flow direction and service.
  - 2.) All valving will be labeled using plastic tags and a valve chart made showing tag, purpose, location and normal position. This chart should be posted and copied to owner for future maintenance reference.

#### 2.3 SPARES

- A.) After project completion and acceptance by engineer in writing, a complete set of spares will be supplied to owner. This set shall include but not be limited to, (as applicable): Solenoid filters, fan belts, grease fittings (2 of each type used on any mechanical equipment), valve packings and washers (2 of each type used in all types of valves).

### PART III - EXECUTION

#### 3.1 WORKMANSHIP

- A.) All work shall be performed by competent mechanics using proper tools and equipment to produce first quality work. All work shall be neatly installed, accessible for maintenance, and complete with all accessories required.

#### 3.2 ACCESSIBILITY

- A.) All equipment shall be installed in such a way that all components requiring access (such as valves, clean outs, control operators, motors, drives, etc.) are so located and installed that they may be serviced, reset, replaced or recalibrated, etc., by service people with normal service tools and equipment. If any equipment or components are shown in

such a position as shown above, the and a decision shall be made as to whether or not the work shall be finished within the time allowed.

#### 3.3 COORDINATION

- A.) All information from all trades, such as work necessary to proceed with the work, shall be coordinated by the affected trades in work allowed to be made by the contractor.

#### 3.4 WORK NOTIFICATION

- A.) Opening in contractor location and frames, in drawings, necessary shown and/or necessary.
- B.) Flashing on contractor flashings contractor.
- C.) Power wiring contractor sensors, to specific that the equipment, requiring effected w
- D.) Power/Fuel provided by

#### 3.5 FOUNDATION

- A.) Furnish and mechanical

#### 3.6 NOISE ABATEMENT

- A.) Install vibration other safe transmitters within the particular
- B.) After installation and vibration

#### 3.7 PERMITS, ETC.

- A.) Work and standards part of the limited to

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such a position that the servicing contractor cannot comply with the above, the installing contractor shall notify the engineer in writing and a decision requested. Access doors shall be installed in locations as shown on drawings to provide access when not readily available. These shall be hinged, lockable, steel type and shall be painted to match finished wall color.

### 3.3 COORDINATION AND COOPERATION BETWEEN TRADES

- A.) All information shall be communicated to General Contractor and to other trades, sufficiently in advance of work of this division, so that any work necessary may be coordinated with other divisions and work can proceed without delays.
- B.) Cutting, patching, furring, painting, electrical, etc., shall be done by the affected trade at this contractor's expense for changes required in work already installed or work required by other trades for changes made by this contractor in type or size of equipment purchased.

### 3.4 WORK NOT INCLUDED

- A.) Opening in floors, walls and roof shall be furnished by the general contractor. This contractor shall inform the general contractor of the location and size required. This contractor shall furnish all sleeves, frames, including framing between joist unless shown on the structural drawings, access doors, prefabricated curbs, and other accessories necessary for a complete installation. Only those items specifically shown and/or specified in other Sections are excluded.
- B.) Flashing of roof for curbs, pipes, stands, etc., shall be by the general contractor (or roofer as determined by the GC). Curbs and counter flashings for Mechanical equipment shall be by this mechanical contractor.
- C.) Power wiring, including final connections, is by the electrical contractor. This contractor shall supply and install all control wiring, sensors, thermostats, switches and other control devices, unless specifically shown on the Electrical drawings. This contractor shall see that the electrical equipment does not block access to service areas of equipment, ie; control access doors of equipment and that all systems requiring power wiring are installed so that the mechanical system effected works normally.
- D.) Power/Fuel for testing and operation during construction will be provided by the General contractor.

### 3.5 FOUNDATIONS AND SPECIAL SUPPORTS

- A.) Furnish and install all special foundations and supports required for mechanical equipment to be installed.

### 3.6 NOISE AND VIBRATION

- A.) Install vibration isolators, flexible connectors, expansion joints, and other safety measures to prevent noise and vibration from being transmitted to occupied areas. Equipment shall be selected to operate within the noise level recommended by the latest standards for the particular type installation in relation to its location.
- B.) After installation, make proper adjustments to eliminate excessive noise and vibration.

### 3.7 PERMITS, CODES AND LAWS

- A.) Work and materials shall conform to the latest rules, regulations and standards listed below and these rules and regulations hereby are made part of this specification. They include, but are not necessarily limited to the following:

Air Moving and Conditioning Association (AMCA)  
American Society for Testing and Materials (ASTM)

Underwriters Laboratories, Inc. (UL)  
 American Society of Heating, Refrigeration and Air Conditioning Engineers  
 (ASHRAE)  
 American Society of Mechanical Engineers (ASME)  
 American Water Works Association (AWWA)  
 National Fire Protection Association (NFPA)  
 National Electrical Code (NEC)  
 Maine State Plumbing Code  
 Building Official Code Administration (BOCA)  
 Office of Safety and Health Administration (CSHA)  
 Local and State Fire Codes  
 Local and State Plumbing Codes  
 Sheet Metal & Air Conditioning Contractor's National Association (SMACNA)  
 The Board of Fire Underwriters  
 Underwriters' Laboratories, Inc. (UL)

- B.) Where any of the above are at variance with the drawings and specifications, the code requirements shall take precedence and any cost necessary to meet these shall be included in the contract and brought to the engineer's attention in writing.
- C.) This contractor is assumed to be skilled in the trade and is solely responsible for compliance with OSHA regulations, performing the work in a safe and competent manner, and in installation procedures required for this work. All supervision assigned to this project shall be experienced in this type of work. This contractor's superintendent shall be designated as the "Safety Inspector" unless the contractor appoints another person and notifies the engineer of this change.

**3.9 CONNECTION TO EQUIPMENT**

- A.) Provide piping and ductwork connections, supports, brackets, compensators, or flexible connections to prevent application of excessive stresses or vibration to the equipment and piping or ductwork.

**3.10 REVIEW BY THE ENGINEER**

- A.) This contractor shall notify the engineer at the following stages of construction so that the engineer may visit the site for review and consultation:
  1. When ductwork or piping installation starts.
  2. When fixture installation starts.
  3. Just prior to any ductwork, piping or lines being concealed.
  4. Just prior to start-up of system.
  5. When Balancing and Testing is started.
- B.) Should this contractor fail to notify the engineer at the times prescribed above, it shall then be the contractor's responsibility and cost to make ductwork accessible, expose any concealed lines, or demonstrate the acceptability of any part of the system. Any extra cost caused by the removal of such work shall be borne by this contractor or the sub-contractor responsible.
- C.) Any reason for delay beyond the control of the contractor shall be immediately reported to the engineer.

**3.11 SHOP DRAWINGS**

- A.) Shop drawings must bear the Engineer's review stamp. In the event that there is a change, the drawings must be revised and again bear the Engineer's review stamp. All shop drawings must bear the General Contractors approval stamp before submittal for review to the Engineer. The General Contractor's approval stamp shows that they are reviewing the shop drawings for specific conformance with each detail of the plans

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- B.) Repeated in the system the item, contractor
- C.) During construction installation specific record to
- 3.10 CLEANING**
- A.) All ductwork cleaned and with the m
- B.) Thoroughly removing s
- C.) Keep the p on a daily site tools leaving th
- D.) All metal metal expo preventati equipment a high qua shall be a
- 3.11 EQUIPMENT**
- A.) Testing of all trades equipment completed repaired
- B.) Prior to required
- C.) Operate s Engineer. the system
- 3.12 MANUFACTURE**
- A.) After all apparatus from the diagrams, instructi
- B.) Data shall locations All valve colored d
- C.) All data approval. to the En



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- B.) Repeated malfunctioning or failure in service of any item or work of the system is sufficient cause for the Engineer to order the removal of the item, and its replacement with a new item at the expense of the contractor.
- C.) During construction, keep an accurate record of deviations to the installation of the work as indicated in the drawings or this specification. Upon completion of the work, furnish a copy of this record to the Engineer for review and distribution.

### 3.10 CLEANING AND PAINTING OF SYSTEMS, EQUIPMENT & SURROUNDINGS

- A.) All ductwork and piping systems, existing or new, shall be thoroughly cleaned and flushed prior to the initial system operation in accordance with the manufacturer recommendations and instructions.
- B.) Thoroughly clean all exposed portions of the mechanical installation, removing shipping labels and foreign substances.
- C.) Keep the premises free from accumulation of waste material or rubbish on a daily basis and at the completion of the work, remove from the job site tools, scaffolding, ladders, surplus materials, and rubbish, leaving the work areas "broom" or "vacuum" clean.
- D.) All metal items inside the building subject to rusting, and all ferrous metal exposed to weather, shall be given at least one coat of rust preventative primer as soon as installed, ie; scratches on painted equipment or any iron fastener or part that is exposed. A finish coat of a high quality industrial enamel as recommended by the Architect/Owner shall be applied at the completion of the project to these same items.

### 3.11 EQUIPMENT STARTING

- A.) Testing or starting of equipment shall be done in collaboration with all trades concerned to ensure safe and proper operation of the equipment. Initial testing and check out of the equipment shall be completed prior to installation. All defective equipment shall be repaired or replaced at the discretion of the owner.
- B.) Prior to starting equipment, provide any necessary lubrication at the required points.
- C.) Operate systems until successful operation is demonstrated to the Engineer. This initial operation shall be in addition to the testing of the system and shall be done after the system is clean and finished.

### 3.12 MANUFACTURERS' INSTRUCTIONS, OPERATION, & MAINTENANCE DATA

- A.) After all work is completed, provide for each item of equipment or apparatus furnished, a complete set of printed instructions obtained from the manufacturer covering proper operation, maintenance, wiring diagrams, lubrication, cleaning, servicing, adjustment, and safety instructions.
- B.) Data shall include a complete set of final shop drawings that shows locations of all needed maintenance items, ie; cleanouts, valves, etc. All valves above drop ceiling will have location identified by placing a colored dot on the ceiling grid closet to the valve.
- C.) All data material shall first be submitted to the Engineer for approval. After Engineer's approval, submit three (3) more copies of all to the Engineer for distribution.

END OF SECTION

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**SECTION 15111**  
**TESTING AND BALANCING OF AIR and WATER SYSTEMS**

**PART I - GENERAL**

- 1.1 The GENERAL and SPECIAL CONDITIONS, Section 15100, are included as a part of this Section as though written in full in this document.
- 1.2 Scope of the Work shall include the furnishing and complete installation of the equipment covered by this section, with all auxiliaries, ready for owner's use.

**Part II - Products**

**2.1 Evaluation of System**

- A.) This contractor shall furnish all materials and equipment necessary to properly measure the air capacity of the system, the electrical voltage and current, fan speeds, static pressures, air velocity, water pressure drops, and all other readings normally necessary to evaluate the performance of a system, adjust the quantities to those called for, and test the system.

**2.2 System Performance**

- A.) This contractor is responsible for the performance of the equipment and the system he installs. Contractor cannot assume that supplier will ship equipment adjusted to meet the job requirements.

**2.3 Equipment Operation**

- A.) All equipment shall be checked for proper operation as soon as electrical power is available to do so. Any malfunction shall be reported to the manufacturer, and corrective action taken as soon as possible to prevent delay of the acceptance of the work.

**2.4 Equipment Problems and Adjustments**

- A.) Required adjustments and minor problems with mechanical equipment are to be expected to some extent, and it is this contractor's responsibility to determine if there are any in the work and to correct them without causing any undue alarm on the part of the owner and without delay of the job.

**Part III - Execution**

**3.1 Initial Balancing**

- A.) As soon as available, the contractor shall check all equipment for proper operation. Check for proper rotation of motors, voltage and current in each leg of each motor etc., and check these measurements against the nameplate data of the equipment.
- B.) Complete ductwork as soon as possible and operate the system. Ensure fan is operating at the maximum design rate, that the damper(s) are fully open and no other obstruction exist in the exhaust duct. Exhaust grilles shall be adjusted to the required air quantity. If air noise level or flow rate, is in great excess, the fan speed shall be reduced until the flow rate is at acceptable levels. If the air quantity or noise at this point is not up to the design, the contractor shall notify the manufacturer and the engineer.

**3.2 Responsibility for Proper Balancing and Testing**

- A.) The general contractor is responsible for the performance of the entire

space, including the work in this section. After this contractor has completed the installation, the site superintendent of the general contractor shall monitor the Balancing and Testing of the system and shall certify that the readings required under this section have actually been made and that all systems are in actual operation. The Test and Balance data shall be signed by the general superintendent. At time of final review, if it is apparent that these readings have not been made, or that equipment is not in operation, the expense for the return of the engineer and/or the architect shall be billed to the general contractor.

### 3.3 Readings Required to be Reported

- A.) The following readings shall be made and reported to the engineer after the space is balanced and all equipment is operating properly.
- B.) All readings shall be recorded on a print of the mechanical system giving the actual raw data read for each opening. All readings made shall be recorded, and if any readings are invalid, they shall be identified as such. Any readings out of line shall be explained by a note on the print. (The original print shall be submitted to the engineer for review.) If additional copies are required, they may be transcribed from this print on to other copies.
- C.) Air quantity readings shall include: Actual measured air quantity of each exhaust inlets shall be read and recorded at initial start up when all OBDs are wide open, and after all adjustment have been made. Measurement shall be made with cone or hood with calibrated outlet equal to Alnor.
- D.) Electrical readings required are:
  - 1.) Measured voltage and amperage on each phase of the exhaust fan, while the equipment is under maximum normal load.
  - 2.) The name plate voltage and current for the exhaust fan.
- E.) The water pressure of each of the fixtures at the point of use and system supply for the water supplies.

### 3.4 System Difficulties

- A.) The above readings shall be made and these readings sent to the engineer for review as early as possible so any apparent difficulties can be resolved before the anticipated close of the job and before such problems are called to the attention of the owner. Minor problems, such as the necessity to adjust a fan sheave, often raise questions and doubts in the owner's mind about the system. Such problems are normal, and if corrected without delay lead to a satisfactory system operation.

### 3.5 Review by Engineer

- A.) After the above information is received by the engineer, it will be reviewed and compared against the design. The engineer will generally review the job for the owner and recommend final acceptance or the holding of funds pending additional work. Such review will not be scheduled until the above information can be reviewed and accepted. The work required under this contract is not complete until this information is accepted as accurate and complete.

END OF SECTION

## PART I - GENERAL

- 1.1 The GENERAL part of this
- 1.2 Scope of the installation auxiliaries
- 1.3 SUBMITTALS
  - A.) Manufacture demonstration submitted with to; static radius, sea
  - B.) Manufacture Include rat
- 1.4 GENERAL
  - A.) Ductwork; u shall be bu Standards, shown on th

## PART II - PRO

- 2.1 SHEET META
  - A.) Construct du quality, gal
  - B.) Curved elbow Provide turn
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- 2.2 AUXILIARY
  - A.) Duct reinfor system shall protection,
- 2.3 ACCEPTABLE
  - A.) Duct fitting system is u equivalent
  - B.) Spiral or O
  - C.) Sealant - H retardant d be less tha
  - D.) Duct tape -

SECTION 15500  
DUCTWORK

PART I - GENERAL

- 1.1 The GENERAL and SPECIAL CONDITIONS, Section 15100, are included as a part of this Section as though written in full in this document.
- 1.2 Scope of the Work shall include the furnishing and complete installation of the equipment covered by this section, with all auxiliaries, ready for owner's use.
- 1.3 SUBMITTALS
- A.) Manufacturer's literature for all factory fabricated items demonstrating compliance with this specification. Items must be submitted with complete engineering data, including but not limited to; static pressure drop per unit, material of construction, lengths, radius, sealant method and thickness.
- B.) Manufacturer's literature for sealant and method of application. Include rating for flame spread or smoke developed per ASTM E84-91A.
- 1.4 GENERAL
- A.) Ductwork, unless otherwise noted, shall be galvanized sheet metal and shall be built as required by the latest SMACNA Duct Construction Standards, Metal and Flexible, latest edition and diagrammatically shown on the drawings.

PART II - PRODUCTS

- 2.1 SHEET METAL
- A.) Construct ducts from ASTM A-525 or A-527 prime grade lock forming quality, galvanized sheet steel, G90 galvanized coating.
- B.) Curved elbows shall have a throat radius equal to 1.5 times duct width. Provide turning vane(s) in elbows wherever rectangular duct is used.
- C.) Round or Flat oval duct may be used in place of rectangular duct, provided the roughness, friction losses and quality of construction are equal or better than that specified.
- D.) All associated reinforcing angles, supports, screws, bolts, etc. shall be of the same material as the sheetmetal ductwork.
- 2.2 AUXILIARY EQUIPMENT
- A.) Duct reinforcing, hangers, and other ferrous metals used in the duct system shall be steel with protective coat of paint or equal protection, or may be galvanized as required by the ductwork.
- 2.3 ACCEPTABLE MANUFACTURERS
- A.) Duct fittings - SPIROsafe system (no sealant required if gasketing system is used) if round or oval system is used, Southwark Co. or equivalent
- B.) Spiral or Oval duct - SPIRO, Ductmate or equivalent
- C.) Sealant - Hardcast Iron Grip Water Duct Sealant 601. UL listed fire retardant during application and in service. Solids content shall not be less than 70%.
- D.) Duct tape - Hardcast DT-300 tape and FTA adhesive as required.

**PART III - EXECUTION**

**3.1 INSTALLATION**

- A.) Remove all ductwork and exhaust grilles not to remain or to be replaced. Install all new ductwork generally as shown on drawings and as required by the SMACNA manual.
- B.) Low-pressure ductwork and fittings shall be made tight for minimum air leakage, (class 3 required). Hard Cast shall be used to seal all duct joints unless the SPIROsafe fitting system with gaskets are used and installed to manufacturers requirements. Large or noisy leaks will not be accepted. Duct tape shall not be used to seal joints, to make transitions, or for any other reason except on the outside of wrapped insulation. If duct tape is used on sheet metal, the job will be rejected!
- C.) Transitions/reductions in ductwork shall be made with a slope not exceeding 30 degrees from the average airflow direction. Preferably 15 -20 degrees.
- D.) Furnish and install any manually operated volume control dampers necessary for the proper balancing of the air handling systems. They shall be factory manufactured as a complete fitting body assembly, with shaft bushings, integral shaft/blade assembly, sheet metal insulation stand-off and a locking blade quadrant with damper position indicator.
- E.) Install new exhaust grilles according to the manufacturer's instructions or hard connect to integral OED as specified. All exhaust grilles must fit into drop ceiling and be framed by the drop ceiling grid for a finished appearance.

END OF SECTION

**PART I - GENERAL**

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**PART II - PERFORMANCE**

- 2.1 GRILLES,
  - A.) Grilles, on the dra size shown NC.
- 2.2 ACCEPTABLE
  - A.) One or more identifiable acceptable
- 2.3 EXHAUST
  - A.) Krueger - Model 58

**PART III - INSTALLATION**

- 3.1 REMOVAL
  - A.) Remove all Cap exist of equal s
- 3.2 INSTALLATION
  - A.) Install al other simi
  - B.) Ensure all designed f
  - C.) Support th against th "frames" t
  - D.) All regist match ceil
- 3.3 QUALITY
  - A.) All work applicatio should be the field

SECTION 15525  
GRILLES, DAMPERS AND DIFFUSERS

PART I - GENERAL

- 1.1 The GENERAL and SPECIAL CONDITIONS, Section 15100, are included as a part of this Section as though written in full in this document.
- 1.2 Scope of the Work shall include the furnishing and complete installation of the equipment covered by this section, with all auxiliaries, ready for owner's use.

PART II - PRODUCTS

- 2.1 GRILLES, DAMPERS AND DIFFUSERS
  - A.) Grilles, dampers, and diffusers shall be style and type listed below or on the drawings. Select all new equipment for proper air quantity and size shown on drawings. Maximum noise shall be 38 dB (On "a" scale) or 40 NC.
- 2.2 ACCEPTABLE MANUFACTURERS
  - A.) One or more manufacturers' names are given below as a means of identification of type of product. Other manufacturers' products acceptable, as approved by the engineer.
- 2.3 EXHAUST REGISTERS
  - A.) Krueger
    - Model S80HF23-OBD w/ standard white face, 35° blades and adjustable OBD

PART III - EXECUTION

- 3.1 REMOVAL
  - A.) Remove all old exhaust grilles except the two in the upstairs bathrooms. Cap existing duct openings with sheet metal to provide a continuous duct of equal size with that of before and after takeoff.
- 3.2 INSTALLATION
  - A.) Install all dampers flush with mating surfaces and level or straight with other similar items.
  - B.) Ensure all connections are properly sealed to maintain proper control of designed flow rates.
  - C.) Support the grille from the duct at the proper level to hold it snug against the ceiling where applicable. Ensure the ceiling contractor "frames" the perimeter of the grille with ceiling grid used.
  - D.) All registers and grilles will be furnished with white face color to match ceiling tile or ceiling color.
- 3.3 QUALITY OF EXECUTION
  - A.) All work shall be done by workers who are thoroughly familiar with such applications. Any changes of exhaust grille layout within the space should be approved prior to installation. Minor changes may be made in the field and recorded on As built drawings.

END OF SECTION

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**SECTION 15700**  
**PLUMBING, PIPING AND ACCESSORIES**

**PART I - GENERAL**

- 1.1 The GENERAL and SPECIAL CONDITIONS, Section 15100, are included as a part of this Section as though written in full in this document.
- 1.2 Scope of the Work shall include the furnishing and complete installation of the equipment covered by this section, with all auxiliaries, ready for owner's use.
- 1.3 In general, the scope of this section includes but is not limited to the following: the piping installation for the hot and cold water supply, fixtures & trim, waste & vent piping, and all associated valving, fittings, fixtures, sleeves etc. for all of the above.

**PART II - PRODUCTS**

**2.1 PIPING**

- A.) Materials for low pressure and/or low temperature, waste with nominal corrosion service shall be as follows, and conform to the following standards:
  - 1.) Copper or copper-alloy tubing      ASTM B42; ASTM B280-88; ASTM B302
  - 2.) PVC      ASTM D1785-91
- B.) Unburied domestic water service (hot and cold), within the building, shall be hard drawn type L copper tubing with solder joint fittings. All piping below the concrete floor slab that is to be used for Domestic water, will be soft tempered type K copper with a Schedule 40 PVC sleeve.
- C.) All vent piping shall be Schedule 40 copper pipe and must be sleeved with Pro-Set firestop penetrators when penetrating fire walls.

**2.2 FITTINGS: ELLS, TEES, TRAPS, BUSHINGS, UNIONS**

- A.) Materials for fittings shall match the pipe system category for pressure, temperature, and corrosion as applied to these piping system.
- B.) Fittings for Low pressure, low temperature shall be wrought or cast copper or bronze, or cast iron and shall conform to ASME B16.23 or B16.29 for copper or copper alloy parts or be made with an approved elastomeric seal in accordance with the manufacturer's instructions as appropriate.
- C.) Fittings for waste lines shall be cast iron or copper and match existing type used.
- D.) Lavatory drains are to be 1-1/4" or 1-1/2" dia., chrome plated 18 gauge seamless brass wall tube with bottom cleanout and shall comply with ASME A112.181M. Handicap Lavatories are to have the Kohler Model K-13885 Optional offset drain to ensure ADA compliance.

**2.3 VALVES - GENERAL**

- A.) All valves shall bear the manufacturer's name and pressure rating clearly marked on the valve body and shall meet all applicable codes.
- B.) Low-Pressure valves:
  - For shut off service, (except at sinks): shall be ball valves two-piece body, full port type, Manufactured by Crane CO. or Nibco Inc..
- C.) Each fixture shall have individual stop valves (1/2" to 3/8" brass type for Lavs), in the hot and/or cold supply piping. Service stop valves for lavatories will be installed inside of a hinged door, lockable wall box



along with the two solenoids (one for each of the supply lines). Wall box will be located inside but flush with wall and just below the Lavs.

**2.4 PIPE JOINTS**

- A.) All joints and connections shall be of an approved type. Joints and connections shall be tight for the typical pressure of the system.
- B.) All pipe ends shall be cut square, reamed and chamfered and be free of all burrs and obstructions. Pipe ends shall have full bore openings and shall not be undercut.
- C.) Copper or copper-alloy pipe joints shall be cleaned and soldered with a solder conforming to ASTM B32. Lead free solder shall be used throughout the domestic water piping system.
- D.) Screwed pipe joints shall be made up using teflon tape or pipe dope.
- E.) Joints between different metallic piping materials shall be made with approved dielectric fittings or brass converter fittings.
- F.) All PVC joints will be of the long sweep type and conform to ASTM D2235, ASTM F402 and manufacturers recommendations.

**2.5 PIPE SUPPORT SYSTEM**

- A.) Provide an adequate pipe suspension system in accordance with recognized engineering practices, using where possible, standard, commercially accepted pipe hangers and accessories, maintaining proper pitch to ensure the most efficient system operation..
- B.) All pipe hangers and supports shall conform to ASA Code for pressure piping; B31.1 and Manufacturers' Standardization Society documents MSS SP-58 and SP-69. All Hangers will provide at least 1/2" surface contact w/ pipe.
- C.) Hangers and strapping material shall be of similar material as the piping to avoid galvanic action.
- D.) The contractor shall submit to the engineer, prior to installation, the following information and data for review and acceptance; Manufacturers' data sheets on all items to be used, Sketches covering all specially designed hanger assemblies and fabrications, Sketches showing locations, loads, calculated travel, type, and sizes of all hangers and hanger assemblies where used.
- E.) The maximum allowable spacing for pipe hangers shall be in accordance with the table listing below. Where concentrated loads of valves, fittings, etc., occur, closer spacing will be necessary and shall be based on the weight to be supported and the maximum recommended loads for the hanger components.

| Piping Material               | Horizontal | Vertical |
|-------------------------------|------------|----------|
| Copper or Copper alloy tubing | 6          | 10       |
| PVC Schedule 40 Pipe          | 4          | 3        |
| Cast Iron Schedule 40         | 4          | 3        |

- F.) Riser clamps; all vertical runs of piping shall be supported at each floor level (including base) by means of the correct clamp and/or support type.

**2.6 EXPANSION AND CONTRACTION**

- A.) Piping systems shall be installed so as to prevent strains and stresses which will exceed the limitations of the pipe. Provision shall be made to allow expansion and contraction due to temperature differences, minimum and maximum operating pressures, and structural settlement. Provide expansion loops, or joints as necessary.
- B.) Expansion joints shall be designed for the service, temperature, and pressure of the system and sized to accommodate the amount of movement

required for piping.

- C.) Provision of water hammer

**2.7 PIPE SLEEVES**

- A.) Provide pipe sleeve shall of the pen and sleeve 1993 build
- B.) Wall sleeve
- C.) Floor sleeve floor and cast in place
- D.) Escutcheon penetration outside of diameter), held in by
- E.) Sleeve shall

**2.8 INSULATION**

- A.) All piping minimum thickness condensate maximum size
- B.) All piping unicellular unless other 1" thickness

**2.9 ROSE BIB**

- A.) All exterior siphon, with key lock acceptable
- B.) Interior hanger bronze, en cover. Acc approved a

**2.11 PLUMBING**

- A.) All fixture manufacturer
- B.) Existing work for use located in exactly. C correct lo owner if n
- C.) All Water resistant
- D.) Wall mount
- E.) Wall mount with



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required from minimum to maximum temperatures encountered by the system piping.

C.) Provision shall be made to deter or prevent water hammer by installing water hammer arresters in the vicinity of the overhead shut off valves.

**2.7 PIPE SLEEVES**

A.) Provide pipe sleeve at each wall or floor penetration. Inside diameter of sleeve shall be a minimum of one size greater than the outside diameter of the penetrating pipe. Annular opening between pipe outside diameter and sleeve inside diameter will be fire-stopped in accordance with BOCA 1993 building code.

B.) Wall sleeves shall be even with both sides of the finished wall.

C.) Floor sleeve shall project approximately 1/2 inch above the finished floor and be even with the underside of the floor. Floor sleeves shall be cast in place or permanently sealed into the floor structure.

D.) Escutcheons will be provided on each side of the wall or floor of a pipe penetration. For insulated pipe, the escutcheon shall surround the outside of the insulation. Escutcheon for small pipes (less than 3/4" diameter), may be spring clip type. Escutcheons for larger pipe shall be held in by setscrews.

E.) Sleeve shall be no lighter than 18 gauge.

**2.8 INSULATION**

A.) All piping within the scope of work shall be insulated to provide a minimum thermal resistance (R), of 4.4, to prevent heat losses or condensation. Insulation used will have a maximum flame spread of 25 and maximum smoke developed rating of 50, both in accordance with UL 723.

B.) All piping insulation shall be the preformed Flexible Elastomeric unicellular thermal insulation type and meet the ANSI/ASTM C534 standard, unless otherwise noted. Insulation was designed on Rubatex R-100-FS with 1" thickness.

**2.9 HOSE BIBS**

A.) All exterior hose bibs will be all bronze, encased, non-freeze, anti-siphon, wall hydrants where shown on drawings. They should be equipped with key locks, 3/4" hose connections and integral backflow preventers. Acceptable manufacturers are Zurn Model Z-1320, Smith, Wade.

B.) Interior hose bibs will be provided in both bathrooms and will be an all bronze, encased, Vari-Temp, with vacuum breaker and locking, hinged cover. Acceptable manufacturers are Zurn Model Z-1325-5, Hammond or other approved equal.

**2.11 Plumbing Fixtures**

A.) All fixtures are to be new vitreous white china. Acceptable manufacturers are Kohler, Mansfield, or Universal-Rundle.

B.) Existing wall-hung fixtures are to be removed, cleaned and given to owner for use elsewhere. Existing carriers are to be removed when presently located in a location that will be close to the new location but not exactly. Carriers are to be cleaned and repainted for reinstallation at correct location and height if compatible with fixture or given to the owner if not compatible.

C.) All Water closets are to receive new matching, Stain and chemical resistant seats with one piece stainless steel, self sustaining hinges.

D.) Wall mounted Urinals are to be Kohler with Zurn Model #1221 plate type mounting system with concealed arms and Sloan Electronic Flushometer.

E.) Wall mounted water closets are to be Kohler wall hung, elongated type with Zurn Model #Z-1203 adjustable horizontal carrier mounting system and

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Sloan Electronic Flushometer.

**2.12 Cross Connections**

- A.) All plumbing cross connections shall be avoided. Cross connection shall be defined as any actual or potential connection between a public water system, any waste pipe, soil pipe, sewer, drain or any source or system unsafe for human consumption.
- B.) Wherever a potential for cross connection exists, an approved backflow preventer shall be installed so as to achieve protection. Portland Water District shall be consulted wherever a questionable situation occurs.
- C.) All backflow preventers shall be UL, AWWA, USC, ASSE and IAFMD approved and shall comply with the Maine State Water Dept. model cross connection control program. Backflow preventers shall be as manufactured by Watts, Hersey or Febco.
- D.) Install all backflow devices in accordance with the Maine State Plumbing Rules and the Manufacturer's requirements. Provide owner with Service and testing requirements of all installed and their locations.

**PART III - EXECUTION**

**3.1 INSTALLATION**

- A.) Install all piping and fittings in the highest quality workmanship manner. Provide pipe hangers and anchors as necessary..
- B.) Protect open ends of pipe during installation, from oxidation, trash and other foreign objects/materials. Clean all debris from pipe ends before making the next joint.
- C.) Small pipe shall be screwed or soldered to produce a tight system with full joints and no leaks. Pipe joints showing seepage and drips shall be dismantled and remade in a proper way, as required by proper installation techniques.
- D.) Pipe shall be carefully reamed back to full inside diameter after threading, and the mating surfaces shall be cleaned by brush.
- E.) Install long radius els wherever els are used.
- F.) Install insulation on all fittings, as well as straight lengths of pipe.
- G.) All carriers will be checked for compatibility with new fixtures. If non-compatible, a new carrier, from specified company, will be installed.
- H.) All piping systems shall be capable of gravity drain. Horizontal waste and vent piping shall pitch uniformly at no less than 1/4" per foot.
- I.) Back vent all fixtures as shown on drawings or as required by code.
- J.) In general, piping shall be run concealed above ceilings in occupied areas. Piping in other areas may be run exposed. All piping will be insulated except supply piping within wall boxes or drain or vent pipe.
- K.) All Handicap accessible fixtures shall be mounted at standard or recommended heights and distances from walls or partitions, to meet ADA compliance.

**3.2 CLEANING AND TREATING OF PIPE SYSTEMS**

- A.) Every pipe system shall be cleaned to remove trash, mill scale, cutting oils, and splatter from the lines before any control devices are installed. If such debris has collected in valves, the valves shall be disassembled and cleaned prior to closing for first time.
- B.) All potable water piping systems shall be sterilized after testing and purging and before the building is occupied. Systems shall be chlorinated in accordance with the recommendations of the AWWA and as required by the

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Portland Water District.

C.) Immediately following sterilization, all potable water systems shall be thoroughly flushed with clean, new water for at least 15 minutes.

3.3 TESTING

- A.) Every pipe system shall be tested to the greater of the maximum system pressure possible, or 1.5 times the average operating pressure or 120psi.
- B.) Pipe and fittings will be leak tested prior to any insulation being installed or pipe being concealed.
- C.) The engineer or representative shall observe all tests. Notice to the engineer shall be given three full days before the testing is to be performed.
- D.) All existing supply, waste and vent piping will be reviewed for obstructions and tested for flow (up to the maximum flow of the sum of all fixtures served by that particular piping), after all demolition has been completed and before any new is begun. Record all flow rates and inform the engineer before proceeding with installation of any new.
- E.) All existing equipment to remain will be tested for function and condition. If equipment condition is questionable it shall be removed and replaced with new.

3.4 DESTRUCTIVE TESTING

- A.) The engineer reserves the right to select, at random, four fittings already completely install for destructive testing. These joints shall be removed, by the contractor, with the connecting pipe, and the contractor shall replace these at the contractor's expense. The Engineer may destroy these joints by cutting them apart, separating soldered joints to check for full coverage, grinding the joint area to observe voids or other defects. If major defects (more than 2 of 4 fittings), are noted in these joints, the contractor shall take corrective action to remedy the cause, and additional testing shall be performed to ensure that the system is adequate and complies with these specifications and good workmanship.

END OF SECTION

SECTION 16000

ELECTRICAL

1. The design and installation of the electrical systems shall be the responsibility of the electrical contractor. Design shall be in conformance with NFPA 101, '94 Edition; BOCA, '93 Edition; and the National Electric Code (latest edition). The electrical systems shall consist of:
  - a. Electrical power/switches. Switches to be located in the field with Architect and Owner's representative.
  - b. Fire alarm/emergency lighting system as approved by Maine State Fire Marshal and local Fire Chief.
  - c. Related Sections: 15000 Mechanical.
2. The drawings reflect a design layout of lighting fixtures and a list of electrical fixtures, as required by the Owner. Submit to the Architect for approval the following:
  - a. Product literature describing all fixtures and equipment.
3. The electrical contractor shall test all systems for conformance to all codes and ordinances. This contractor shall be responsible for all fees and permits related to this portion of the work.
4. The electrical contractor shall warranty the work for (1) one year from the date of written Owner acceptance.
5. Power and Lighting Requirements:
  - a. Add to panel as required to meet requirements as listed below.
  - b. All switches shall be new.
  - c. All lights in rooms shall be single switched. Switches shall be located on the latch side of doorways; standard mounting height; within room of lighting circuit.
  - d. All wiring shall be new; MC type.
  - f. Switches and related covers shall be white.
  - g. In addition, the base bid shall include the following:

- 1) Relocation and addition of the HVAC and wiring as required.

6. Fire Alarm/Emergency Lighting Requirements:

Provide new light/alarm horns as required by pertinent code\*.

\*NOTE: American with Disabilities Act requirements.

- c. This contractor shall verify that horn system has adequate horn wattage to meet decibel requirements in NFPA 726.

- d. Provide emergency lighting and new exit signs as required to meet pertinent codes and as shown on drawings.

- 1) Exit housing to be white.

7. Mechanical Controls:

- a. This contractor is responsible to coordinate and provide any power requirements needed by the mechanical contractor for the mechanical systems and controls. Refer to Section 15000 for scope of mechanical design-build work.

8. Fixture Schedule

Type 'A' Manufacturer: Metalux  
Model: Paralux III  
Number: 2P3GX332S 36I - 120V-Eb81

Type 'B' Manufacturer: DUAL-LITE  
Model: EZ-2 Head

Type 'C' Manufacturer: DUAL-LITE  
Model: Exit Sign with white housing

9. Contractor to provide new lamps for all new fixtures.

END OF SECTION

CITY OF PORTLAND, MAINE

ADDENDUM NO. 1

BID #7495

REST ROOM RENOVATIONS AT  
PORTLAND INTERNATIONAL MARINE TERMINAL

DATE: DECEMBER 29, 1994

The attention of firms submitting proposals for the named work for the above contract is called to the following modifications to the Bid Document.

The items set forth herein, whether of clarification, omission, addition or substitution, shall be included and form a part of the Bidder's submitted material and the corresponding agreement when executed. No claim for additional compensation due to lack of knowledge of the contents of this Addendum will be considered.

Ellen Sanborn  
Director of Budget & Purchasing

Failure to acknowledge all Addenda may cause the proposal to be considered not responsive to the Invitation, which would require its rejection.

All proposers are advised that this sheet must be duly signed and returned as part of your package.

Receipt of Addendum No. 1 to the City of Portland's BID for Rest Room Renovations at Portland International Marine Terminal is hereby acknowledged.

COMPANY: \_\_\_\_\_  
(Corporation, Company or Firm)

SIGNED BY: \_\_\_\_\_

PRINT NAME & TITLE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_ Zip Code

TELEPHONE: \_\_\_\_\_

DATE: \_\_\_\_\_

ADDENDUM #1

TO CONTRACT DOCUMENTS FOR:  
INTERNATIONAL FERRY TERMINAL  
REST ROOM RENOVATIONS  
COMMERCIAL STREET  
PORTLAND, MAINE  
PROJECT NO. 080794

ARCHITECTS:  
GAWRON ASSOCIATES  
153 U.S. Route One  
Scarborough, Maine 04074  
207-883-6307

December 29, 1994

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This addendum modifies, amends and supplements designated parts of the Contract Documents, Project Manual and Drawings for International Ferry Terminal Rest Room Renovations, Commercial Street, Portland, Maine, dated December 1, 1994, and is hereby made a part thereof by reference and shall be as binding as though inserted in its entirety in the locations specified herein. It shall be the responsibility of the Contractor to notify all Subcontractors and suppliers he proposes to use for the various parts of the work of any changes or modifications contained in this addendum.

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Addendum #1



CITY OF PORTLAND, MAINE  
IMT RESTROOM RENOVATIONS  
PRE-BID ATTENDANCE LIST

1. Tom Anuszewski  
Brown Construction  
P.O. Box 1217  
Portland, ME 04104  
797-6152  
797-2948 FAX
2. Wes Grandmont  
C & L Construction Co.  
440 Portsmouth Avenue  
Greenland, NH  
603-436-7522  
603-433-7375 FAX
3. Jon Schissler  
Schissler Construction, Inc.  
P.O. Box 10  
Detroit, ME 04929  
257-4120
4. Paul Stiffler  
Stiffler Construction, Inc.  
268 Dexter Road  
St. Albans, ME 04971  
938-2033  
938-3961 FAX
5. John B. DiSanto & Sons  
P.O. Box 981  
Portland, ME 04104  
772-3611  
773-1403 FAX
6. Leonard Thomsen  
Woodward Thomsen Co.  
P.O. Box 10359  
Portland, ME 04104  
774-9298
7. Thomas Williams  
Coastal Development  
53 Darling Avenue  
South Portland, ME 04106  
780-8022  
780-6678 FAX
8. Michael DiMatteo  
George DiMatteo Co.  
P.O. Box 2197  
South Portland, ME 04116  
799-3307  
799-3032 FAX
9. Scott Schissler  
Schissler Plumbing & Heating  
RR 2, Box 4150  
Newport, ME 04953  
368-2019
10. Mark Booth  
18 Waverly Avenue  
Pittsfield, ME  
481-3465
11. Harry Waning  
Waning & Son, Inc.  
185 Warren Avenue  
Westbrook, ME 04092  
854-9338
12. Dean Grant  
Airtemp Mechanical  
11 Wallace Avenue  
South Portland, ME 04106  
774-2300  
871-1345 FAX
13. Ron Dunsmore  
Eastern Mechanical  
P.O. Box 528  
Biddeford, ME 04005  
282-2387  
284-9096 FAX
14. Larry Guidi  
Kelley Associates  
P.O. Box 1310  
Westbrook, ME  
854-1167
15. Kellie Harris  
Haas, Inc.  
17 West Circle  
Baldmouth, ME 04105



ADDENDUM #1  
INTERNATIONAL FERRY TERMINAL  
REST ROOM RENOVATIONS  
December 29, 1994

CHANGES TO THE PROJECT MANUAL

Section 00005 - Table of Contents

1. Add 10801 - Grab Bars
2. Add 10830 - Mirror Units
3. Add 15550 - Design Build Fire Sprinkler System

Section 01010 - Summary of Work

1. Add 1.08 C:

Note: The Toilet Partitions require 6-8 week lead time.

Section 10801 - Grab Bars

1. Add in its entirety.

Section 10830 - Mirror Units

1. Add in its entirety.

Section 15550 - Design Build Fire Sprinkler System

1. Add in its entirety.

CHANGES TO THE DRAWINGS

ASK - 1

Add in its entirety.

A1 - Architectural Plans

1. Construction Plan

Add Note: Urinal rim to be mounted Maximum 17" A.F.F.

2. Floor Finish Plan

Clarification:

Note: Toilets are wall hung - tile is to be continuous under fixtures.

END OF ADDENDUM #1

IFT

ADDENDUM #1-2

080794

SECTION 10801

TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

PART 2 - PRODUCTS

2.01 MANUFACTURERS: Subject to compliance with requirements, manufacturer of products which may be incorporated in the work include, but not limited to, in association with listed requirements is

- A. Bobrick Washroom Equipment, Inc.

2.02 MATERIALS - GENERAL: Fabricate toilet accessory items from the following materials and in accordance requirements specified for individual accessory items:

- A. Stainless Steel: AISI Type 302/304, with polished No. 4 finish, 22-gage (.034-inch) minimum thickness, unless otherwise indicated.

2.03 STAINLESS STEEL GRAB BARS: Provide grab bars with wall thickness not less than 18 gage (.050 inch) and as follows:

- A. Mounting: Concealed, manufacturer's standard flanges and anchorages.
- B. Clearance: 1-1/2 inches clearance between wall surface and inside face of bar.
- C. Gripping Surfaces: Manufacturer's standard nonslip texture.
- D. Medium-Duty Size: Outside diameter of 1-1/4 inches.
- E. Model: Similar to Bobrick B-490.

PART 3 - EXECUTION

3.01 INSTALLATION: Install toilet accessory units in accordance with manufacturers' printed installations

instructions, using fasteners appropriate to substrate as recommended by manufacturer of unit. Install units plumb and level, firmly anchored in locations and at heights indicated.

3.02 CLEAN AND POLISH all exposed surfaces in strict accordance with manufacturer's recommendations after removing temporary labels and protective coatings.

END OF SECTION

IFT

10801-2

080794

SECTION 10830

MIRROR UNITS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 Warranty: Provide manufacturer's written 5-year warranty against silver spoilage of mirrors.

1.03 GENERAL: Provide mirror units produced by single manufacturer for entire project.

PART 2 - PRODUCTS

2.01 MANUFACTURERS; Subject to compliance with requirements, manufacturers of mirror units which may be incorporated in the work include, but not limited to, in association with listed requirements:

- A. A & J United Machine & Metal Products Corp.
- B. American Specialties, Inc.
- C. Bobrich Washroom Equipment, Inc.
- D. Bradley Corp.
- E. Hallmark-Nutone/Div. Scovill.
- F. G.M. Ketcham Company, Inc.
- G. F.H. Lawson Co.
- I. McKinney/Kidde, Inc.
- J. Parker-Scovill.
- K. P.D. Metal Industries.
- L. Tubular Specialties Mfg., Inc.
- M. Watrous, Inc.

N. Local Glass Suppliers:

1. American Northeast Glass Inc.
  2. Commercial Glass Co.
  3. Messer Mirror & Glass.
  4. Portland Glass.
- 2.02 MIRROR GLASS: 1/4" thick, Type I, Class 1, Quality q2, conforming to FS DD-G-451, with silvering, copper coating, and protective organic coating complying with FS DD-M-411.
- 2.03 GALVANIZED STEEL MOUNTING DEVICES: ASTM A 153, hot-dip galvanized after fabrication.
- 2.04 EDGE PROTECTION: Fabricate glass mirrors smooth, ground "pencilled" edges.
- 2.05 BACKING: Provide mirror backing and support system which will permit rigid, tamperproof glass installation and prevent accumulation of moisture.
- 2.06 HANGERS: Provide frameless system of mounting mirror units which will permit rigid, tamperproof and theftproof installation.
- 2.07 PROVIDE mirror units at all lavatory locations, and locations shown on drawings - 24" X 36" each unit at lavatories and 24' X 60" in hall 102.

PART 3 - EXECUTION

- 3.01 INSTALLATION: Secure mirrors to walls in concealed tamperproof manner with special hangers, adhesives, toggle bolts, or screws. Set units plumb, level and square at locations indicated, in accordance with manufacturer's instructions for type of substrate involved.
- 3.02 CLEAN exposed surfaces of mirror units in compliance with manufacturer's recommendations.
- 3.03 MOUNT bottom of mirror units maximum of 44" A.F.F.

END OF SECTION

SECTION 15500

DESIGN-BUILD SPRINKLER SYSTEM

1. The intent of the work of this section shall be extension and modification of the existing fire sprinkler system as indicated below.
2. Reuse existing elements at Contractor's option and provide the new components for a fully operational NFPA 13 system in the new hall to the men's room. Field test after work is completed.

END OF SECTION

ADDENDUM #1  
INTERNATIONAL FERRY TERMINAL  
REST ROOM RENOVATIONS  
December 29, 1994

CHANGES TO THE PROJECT MANUAL

Section 15700 Plumbing Piping and Accessories

Replace 2.1.C With:

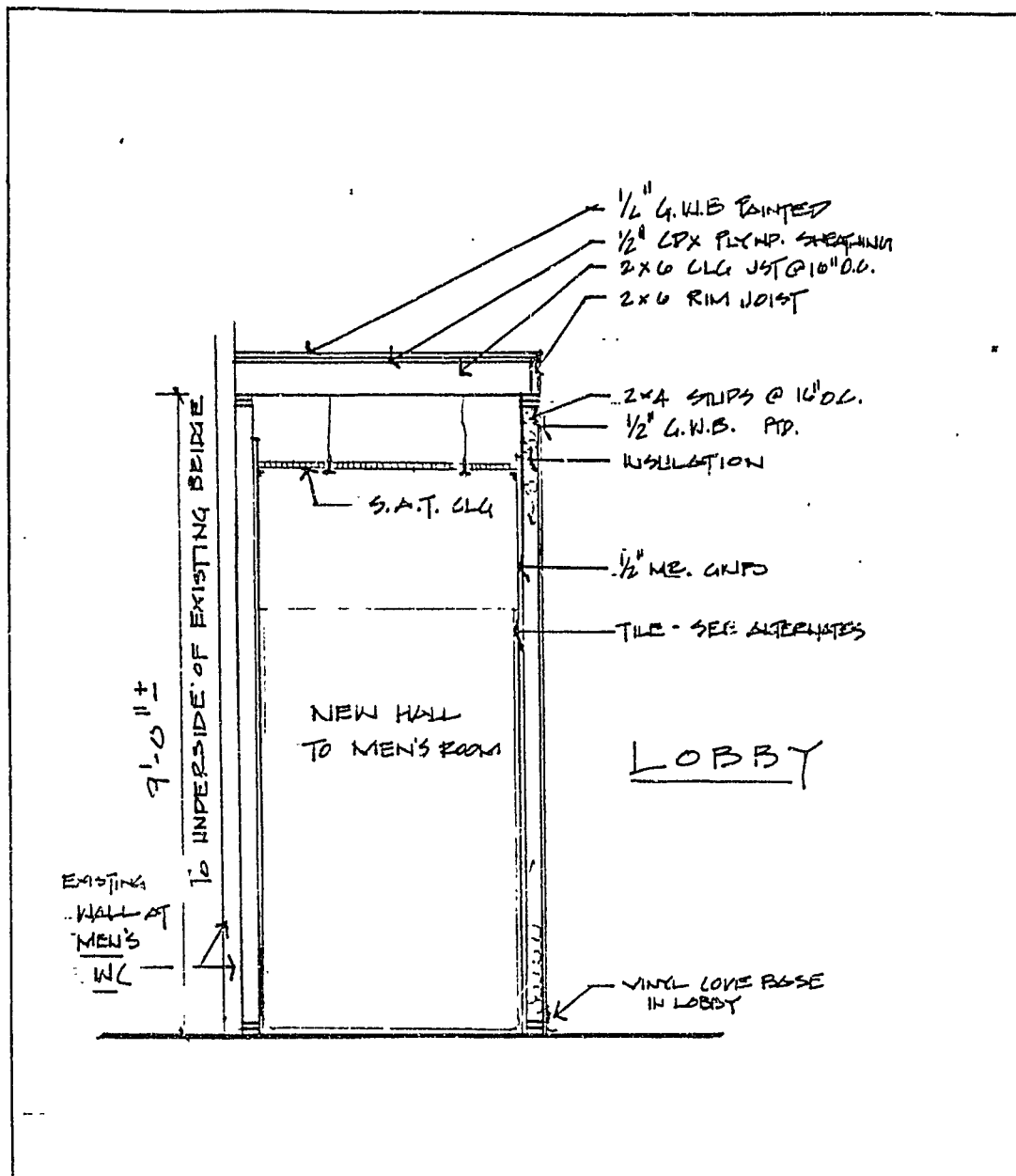
2.1.C All vent piping shall be copper pipe and must be sleeved with Pro-Set Fire Stop penetrators when penetrating fire walls.

CHANGES TO THE DRAWINGS

Sheet P1 - Equipment Schedule

Add: Fixture P-6 Zurn Z-1325 wall hydrant.

Add: Note: Order for correct wall thickness.



**GAWRON ASSOCIATES**

Architecture Interior Design  
Landscape Architecture



153 U S Route One  
Scarborough, Maine 04074  
207-883-6307 FAX 207-883-0361

**INTERNATIONAL FERRY TERMINAL  
REST ROOM RENOVATIONS**

TITLE

SECTION AT MEN'S ROOM

SHEET

**ASK-1**

JOB NO 080794

SCALE 1/2"=1'-0"

DATE Dec. 29, '94

DRAWN JWE



**City of Portland, Maine - Building or Use Permit Application** 389 Congress Street, 04101, Tel: (207) 874-8703, FAX: 874-8716

|   |  |  |  |   |  |   |  |
|---|--|--|--|---|--|---|--|
| Location of Construction: <b>468 Commercial St.</b>             |  | Owner: <b>City of Portland</b>   |  | Phone:  |  | Permit No: <b>951034</b>  |  |
| Owner Address:  |  | Leasee/Buyer's Name: <b>TTO Trading</b>  |  | Phone:  |  | Business Name:  |  |
| Contractor Name: <b>Northern Utilities</b>                      |  | Address: <b>1075 Forest Ave Pkld, #5 04103</b>   |  | Phone: <b>797-8002</b>  |  | Permit Issued: <b>SEP 29 1995</b>   |  |
| Past Use: <b>Portable Office Trailer</b>                        |  | Proposed Use: <b>Same w/ Porpane tank</b>  |  | COST OF WORK: <b>\$</b>   |  | PERMIT FEE: <b>\$ 25.00</b>   |  |
| Proposed Project Description: <b>Install 2-100 gallon tanks</b> |  | FIRE DEPT. <input checked="" type="checkbox"/> Approved<br><input type="checkbox"/> Denied |  | INSPECTION: Use Group: Type:  |  | Zone: CBL:  |  |
|   |  | Signature: <i>[Signature]</i>  |  | Signature: <i>[Signature]</i>   |  | Zoning Approval:  |  |
|   |  | PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)  |  | Action: <input type="checkbox"/> Approved<br><input type="checkbox"/> Approved with Conditions<br><input type="checkbox"/> Denied |  | Special Zone or Reviews:<br><input type="checkbox"/> Shoreland<br><input type="checkbox"/> Wetland<br><input type="checkbox"/> Flood Zone<br><input type="checkbox"/> Subdivision<br><input type="checkbox"/> Site Plan <input type="checkbox"/> minor <input type="checkbox"/> mm <input type="checkbox"/> |  |
| Permit Taken By: <b>Mary Cresik</b>                             |  | Date Applied For: <b>27 Sept 95</b>  |  |   |  | Zoning Appeal:<br><input type="checkbox"/> Variance<br><input type="checkbox"/> Miscellaneous<br><input type="checkbox"/> Conditional Use<br><input type="checkbox"/> Interpretation<br><input type="checkbox"/> Approved<br><input type="checkbox"/> Denied  |  |

- This permit application doesn't preclude the Applicant(s) from meeting applicable State and Federal rules.
- Building permits do not include plumbing, septic or electrical work.
- Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

**PERMIT ISSUED WITH REQUIREMENTS**

- Historic Preservation
- Not in District or Landmark
  - Does Not Require Review
  - Requires Review

- Action:
- Approved
  - Approved with Conditions
  - Denied

Date: *[Signature]*

**CERTIFICATION**

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provisions of the code(s) applicable to such permit

SIGNATURE OF APPLICANT: *[Signature]* **Kevin J. Fitzgerald** ADDRESS: DATE: **27 Sept 95** PHONE:

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE PHONE:

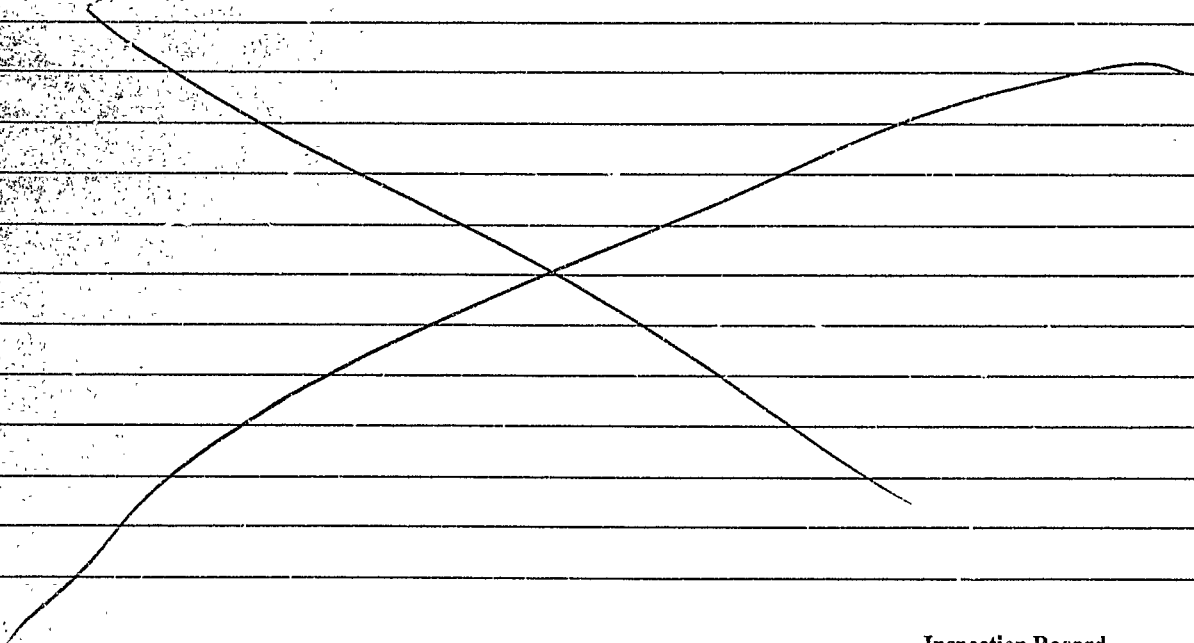
CEO DISTRICT **3**

White-Permit Desk Green-Assessor's Canary-D.P.W. Pink-Public File Ivory Card-Inspector

*[Signature]*

COMMENTS

10-2-95 2-100 gallon Propane tanks installed as shown on plan. Location changed by me on plan. Protected from damage by Jersey barriers.



| Type        | Inspection Record | Date  |
|-------------|-------------------|-------|
| Foundation: | _____             | _____ |
| Framing:    | _____             | _____ |
| Plumbing:   | _____             | _____ |
| Final:      | _____             | _____ |
| Other:      | _____             | _____ |


BUILDING PERMIT REPORT

DATE: 9/28/95  
ADDRESS: 468 Commercial X  
REASON FOR PERMIT: 14 St. 2 ABOVE GROUND L/P TANKS  
BUILDING OWNER: City of Portland  
CONTRACTOR: Northern Utilities  
PERMIT APPLICANT Kevin Fitzgerald  
APPROVED: / DENIED

CONDITION OF APPROVAL OR DENIAL:

- 1.) All above ground L/P storage tanks shall be located in accordance with NFPA #58 standards.
- 2.) Any tank located near the path of vehicle movement shall be protected with appropriate permanent barricades.
- 3.) All piping shall be protected from possible mechanical damage and vandalism.

ITO of NEW ENGLAND  
468 Commercial ST  
Portland, ME  
772-0113 09/01

  
Northern  
Utilities  
natural gas

BY 

Actual location 10-2-95  
2-100 gal tanks  
Jersey Barrier  
PORTABLE OFFICE trailer  
2-100 gal LP TANKS

COMMERCIAL ST

DATE 9-26-95