SECTION 15410 - PLUMBING FIXTURES

PART 1 - GENERAL.................................................................1
  1.1 RELATED DOCUMENTS......................................................1
  1.2 DEFINITIONS..............................................................2
  1.3 SUBMITTALS...............................................................2
  1.4 QUALITY ASSURANCE....................................................3

PART 2 - PRODUCTS...............................................................4
  2.1 SERVICE BASINS..........................................................4
  2.2 SINK FAUCETS............................................................4
  2.3 FIXTURE SUPPLIES.......................................................5

PART 3 - EXECUTION.............................................................6
  3.1 EXAMINATION.............................................................6
  3.2 INSTALLATION............................................................6
  3.3 CONNECTIONS.............................................................8
  3.4 FIELD QUALITY CONTROL.............................................8
  3.5 ADJUSTING.................................................................8
  3.6 CLEANING.................................................................8
  3.7 PROTECTION..............................................................9

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Related Sections include the following:

1. Division 10 Section "Toilet and Bath Accessories."
2. Division 15 Section “Mechanical General Requirements.”
3. Division 15 Section “Basic Mechanical Materials and Methods.”
4. Division 15 Section "Domestic Water Piping Specialties" for backflow preventers; individual fixture, water tempering valves; and specialty fixtures not included in this Section.
5. Division 15 Section “Drainage Piping Specialties” for floor drains, and specialty fixtures not included in this Section.
1.2 DEFINITIONS


B. Accessible Fixture: Plumbing fixture that can be approached, entered, and used by people with disabilities.

C. Cast Polymer: Cast-filled-polymer-plastic material. This material includes cultured-marble and solid-surface materials.

D. Cultured Marble: Cast-filled-polymer-plastic material with surface coating.

E. Fitting: Device that controls the flow of water into or out of the plumbing fixture. Fittings specified in this Section include supplies and stops, faucets and spouts, shower heads and tub spouts, drains and tailpieces, and traps and waste pipes. Piping and general-duty valves are included where indicated.

F. FRP: Fiberglass-reinforced plastic.

G. PMMA: Polymethyl methacrylate (acrylic) plastic.

H. PVC: Polyvinyl chloride plastic.


1.3 SUBMITTALS

A. Product Data: For each type of plumbing fixture indicated. Include selected fixture and trim, fittings, accessories, appliances, appurtenances, equipment, and supports. Indicate materials and finishes, dimensions, construction details, and flow-control rates.

B. Operation and Maintenance Data: For plumbing fixtures and trim to include in operation and maintenance manuals.
1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain plumbing fixtures, faucets, and other components of each category through one source from a single manufacturer.

1. Exception: If fixtures, faucets, or other components are not available from a single manufacturer, obtain similar products from other manufacturers specified for that category.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by an NRTL acceptable to authorities having jurisdiction, and marked for intended use.


E. Regulatory Requirements: Comply with requirements in Public Law 111-380, "Reduction of Lead in Drinking Water Act," about lead content in materials that will be in contact with potable water for human consumption.

F. Comply with NSF 61, "Drinking Water System Components - Health Effects; Sections 1 through 9," and NSF 372 Drinking Water System Components - Lead Content for potable domestic water piping and components.

G. Select combinations of fixtures and trim, faucets, fittings, and other components that are compatible.

H. Comply with applicable ANSI, ASME, ASSE, ASTM, ICC, NSF, and UL standards and other requirements specified for plumbing fixtures, trim, fittings, components, and features.
PART 2 - PRODUCTS

2.1 SERVICE BASINS

A. Service Basins, SS-1:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Crane Plumbing, LLC; Fiat Products; an American Standard Brand.
   b. Ferguson Enterprises, Inc.; ProFlo.
   c. Florestone Products Co., Inc.
   d. Mustee, E. L. & Sons, Inc.
   e. Swan Corporation (The).
   f. Zurn Plumbing Products Group; Light Commercial Operation.

2. Description: Flush-to-wall, floor-mounting, cast-polymer fixture with rim guard.

   a. Shape: Square.
   b. Size: 24 by 24 inches (610 by 610 mm).
   c. Height: 10 inches (255 mm) with dropped front.
   d. Tiling Flange: Not required.
   e. Rim Guard: On all top surfaces.
   f. Color: To be selected by the Architect.
   g. Faucet: SF-1.
   h. Drain: Grid with NPS 3 (DN 80) outlet.

2.2 SINK FAUCETS

A. Sink Faucets, SF-1:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. American Standard Companies, Inc.
   b. Chicago Faucets; Model 897.
   c. Delta Faucet Company; Model 28C2383.
   d. Ferguson Enterprises, Inc.; ProFlo PF1118.
   e. Kohler Co.
f. Moen Commercial.
g. Speakman Company; SC5811-RCP-LEV-5H-WHK.
h. Symmons Industries, Inc.
i. T & S Brass and Bronze Works, Inc.
j. Zurn Plumbing Products Group.

2. Description: Service sink faucet with stops in shanks, vacuum breaker, hose-thread outlet, and pail hook. Include hot- and cold-water indicators; coordinate faucet inlets with supplies and fixture holes; coordinate outlet with spout and fixture receptor. Include 5 foot rubber hose and wall mounted hose clamp.
b. Finish: Polished chrome plate.
c. Maximum Flow Rate: 2.5 gpm (9.5 L/min.), unless otherwise indicated.
d. Mixing Valve: Two handle.
e. Centers: 8 inches (203 mm).
g. Handle(s): Lever.
h. Inlet(s): NPS 1/2 (DN 15).
i. Spout Type: Rigid, solid brass with wall brace and pail hook.
j. Spout Outlet: Hose thread.
k. Vacuum Breaker: Required.

2.3 FIXTURE SUPPLIES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. BrassCraft; a Masco Company.
   3. Any of the approved plumbing fixture manufacturers.

B. Description: Chrome-plated brass, loose-key or screwdriver angle stops with brass stems; rigid, chrome-plated copper risers; and chrome-plated wall flanges.
PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before plumbing fixture installation.

B. Examine cabinets, counters, floors, and walls for suitable conditions where fixtures will be installed.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Assemble plumbing fixtures, trim, fittings, and other components according to manufacturers' written instructions.

B. Install off-floor supports, affixed to building substrate, for wall-mounting fixtures.

   1. Use carrier supports with waste fitting and seal for back-outlet fixtures.
   2. Use carrier supports without waste fitting for fixtures with tubular waste piping.
   3. Use chair-type carrier supports with rectangular steel uprights for accessible fixtures.

C. Install floor-mounting fixtures on closet flanges or other attachments to piping or building substrate.

D. Install fixtures level and plumb according to roughing-in drawings. Install accessible fixtures at heights required by local codes.

E. Install water-supply piping with stop on each supply to each fixture to be connected to water distribution piping. Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.
1. Exception: Fixtures with flushometer valves, and faucets or valves with integral stops.

F. Install trap and tubular waste piping on drain outlet of each fixture to be directly connected to sanitary drainage system.

G. Install tubular waste piping on drain outlet of each fixture to be indirectly connected to drainage system.

H. Install faucet-spout fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.

I. Install water-supply flow-control fittings with specified flow rates in fixture supplies at stop valves.

J. Install faucet flow-control fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.

K. Install traps on fixture outlets.
   1. Exception: Omit trap on fixtures with integral traps.
   2. Exception: Omit trap on indirect wastes, unless otherwise indicated.

L. Install escutcheons at piping wall ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep-pattern escutcheons if required to conceal protruding fittings. Escutcheons are specified in Division 15 Section "Basic Mechanical Materials and Methods."

M. Set service basins in leveling bed of cement grout. Grout is specified in Division 15 Section "Basic Mechanical Materials and Methods."

N. Seal joints between fixtures and walls, floors, and countertops using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Sealants are specified in Division 7 Section "Joint Sealants."
3.3 CONNECTIONS

A. Piping installation requirements are specified in other Division 15 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.

C. Individual water line branches, waste lines, vents, and traps for connection to individual fixtures, fixture fittings and specialties shall be in accordance with the schedule on the Drawings.

3.4 FIELD QUALITY CONTROL

A. Verify that installed plumbing fixtures are categories and types specified for locations where installed.

B. Check that plumbing fixtures are complete with trim, faucets, fittings, and other specified components.

C. Inspect installed plumbing fixtures for damage. Replace damaged fixtures and components.

D. Test installed fixtures after water systems are pressurized for proper operation. Replace malfunctioning fixtures and components, then retest. Repeat procedure until units operate properly.

3.5 ADJUSTING

A. Operate and adjust faucets and controls. Replace damaged and malfunctioning fixtures, fittings, and controls.

B. Replace washers and seals, or cartridges of leaking and dripping faucets and stops.

3.6 CLEANING

A. Clean fixtures, faucets, and other fittings with manufacturers' recommended cleaning methods and materials. Do the following:
1. Remove faucet spouts and strainers, remove sediment and debris, and reinstall strainers and spouts.
2. Remove sediment and debris from drains.

B. After completing installation of exposed, factory-finished fixtures, faucets, and fittings, inspect exposed finishes and repair damaged finishes.

3.7 PROTECTION

A. Provide protective covering for installed fixtures and fittings.

B. Do not allow use of plumbing fixtures for temporary facilities unless approved in writing by Owner.

END OF SECTION 15410
February 9, 2018


The above plans and specifications are modified, supplemented or augmented as follows, and this ADDENDUM NO. TWO, is hereby made a part of the contract documents.

Spec Sections 15410 -Plumbing Fixtures is being issued with this Addendum.

Drawings: Sketch SK-1, AD1.1H, A1.1H, A3.1H, A5.1H, E0.2, E2.1, E3.1 and Spec Section 15410 are being issued with this Addendum.

SPECIFICATION ITEMS:

ITEM NO. AS1: Refer to Spec Section 15410-“Plumbing Fixtures” (Issued)

A. Added Specification Section 15410 in its entirety

ARCHITECTURAL DRAWING ITEMS

ITEM NO. A1: Refer to drawing AD1.1 (issued):

A. Revised drawings as noted

ITEM NO. A2: Refer to drawing A1.1 (issued):

A. Revised drawings as noted

ITEM NO. A3: Refer to drawing A3.1 (issued):

A. Revised drawings as noted

ITEM NO. A4: Refer to drawing A5.1 (issued):

A. Revised drawings as noted
FOOD SERVICE EQUIPMENT DRAWING ITEMS

ITEM NO. FS1: Refer to drawing FSE-2 (not issued) and sketch FSA-1 (issued)

A. Revised drawings as noted

MECHANICAL DRAWING ITEMS

ITEM NO. M1: Refer to M2.0 and M2.1 (Not Re-Issued).

A. Revised Construction Note 11 to read “4 inch high concrete pad for water heater”.

B. Revised CW and HW pipe sizes, in Construction Note 12, from 1 to 1-1/4 inches, to correspond with the pipe sizes indicated on the plan.

C. Revise Construction Note 14 to read “3 gas down within metal stud wall, down to tunnel/basement. All gas pipe fittings within the stud wall shall be welded, no threaded or flanged fittings will be acceptable.”

D. Revise Construction Note 154 to read “Gas header located in stud wall. All gas pipe fittings within the stud wall shall be welded, no threaded or flanged fittings will be acceptable.”

ITEM NO. M2: Refer to M4.1 (Not Re-Issued).

A. Revised Construction Note 8 to read “Abandon existing inoperable temperature gauge.”

ELECTRICAL DRAWING ITEMS

ITEM NO. E1 Refer to E0.2 (Re-Issued).

A. Revised fixture type L1 to be 4’ diameter with a minimum output of 6000 lumens.

ITEM NO. E2 Refer to E2.1 (Re-Issued).

A. Revised layout and quantity of L1 light fixtures as indicated.
ITEM NO. E3: Refer to E3.1 (Re-Issued).

A. Revised location of new cafeteria sound system rack as indicated.

END OF ADDENDUM NO. 2

Cc: Jamie Stottlemyer, Ferndale Public School File
IN LIEU OF BLU-3, PROVIDE BLU-5 W/ MODIFIED TRAYSIDE

IN LIEU OF BLU-4, PROVIDE BLU-3 W/ MODIFIED TRAYSIDE

OMIT TRAY SLIDE FROM #69
#68 TRAY SLIDE TO BE EXTENDED

EXISTING HAND SINK TO REMAIN

OMIT HAND SINK ITEM #45.

SHIFT DISHTABLES TO RIGHT EDGE OF EXISTING TABLE

OMIT TRAY SLIDE FROM #69
#68 TRAY SLIDE TO BE EXTENDED

EXISTING HAND SINK TO REMAIN

OMIT HAND SINK ITEM #45.

SHIFT DISHTABLES TO RIGHT EDGE OF EXISTING TABLE

© 2014 Wakely Associates, Inc./Architects

WAKELY ASSOCIATES, INC. / ARCHITECTS
30500 Van Dyke Avenue, Suite M-7, Warren, Michigan 48093
PH: 586.573.4100
FX: 586.573.0822
www.wakelyaia.com

ADDENDUM NO. 1
FERNDALE PUBLIC SCHOOLS
FERNDALE HIGH SCHOOL
KITCHEN/SERVERY RENOVATION
SCALE: 1/4" = 1'-0"

DRAWN BY: ESW
APPROVED BY: XXX
DATE: 2-9-2018
PROJECT NO.: FSE-2
REFERENCE SHEET: FSA-1

© 2014 Wakely Associates, Inc./Architects