

February 28, 2025

Edwardsburg Public Schools – Eagle Lake School Renovation 23889 Ave. C Edwardsburg, MI 49112

# TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications and the Drawings dated January 27, 2025, by TowerPinkster. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 2-1 through ADD 2-2 and TowerPinkster Addendum No. 02, dated February 28, 2025, consisting of 53 pages.

# A. SPECIFICATION SECTION 00 00 20 TABLE OF CONTENTS

1. See attached Table Of Contents.

# B. <u>SPECIFICATION SECTION 00 50 00 SCHEDULE OF INSURANCE</u> <u>REQUIREMENTS</u>

1. See attached Schedule Of Insurance Requirements.

# C. <u>Refer to the attached Request For Information summary, Pre-Bid RFI No. 01 though 17</u> <u>are included.</u>

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- 23 21 13
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#### SECTION 00 50 00d - SCHEDULE OF INSURANCE REQUIREMENTS

#### PRODUCER

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURERS AFFORDING COVERAGE

INSU	JRER	Α

INSURER

INSURER C

INSURER D

В

#### COVERAGES

REQUI INSUR	REMENT, ANCE AFF	F INSURANCE LISTED BELOW HAVE BEEN I: TERM OR CONDITION OF ANY CONTRACT C ORDED BY THE POLICIES DESCRIBED HERI VE BEEN REDUCED BY PAID CLAIMS.	OR OTHER DOCUMEN	IT WITH RESPECT TO	WHICH THIS CERTIFIC	CATE MAY BE ISSUED OR MAY	PERTAIN, THE
INSR LTR	ADD'L NSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
	х	GENERAL LIABILITY				EACH OCCURRENCE	\$1,000,000
		COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea. occurrence)	\$50,000
		CLAIMS X OCCUR MADE				MED EXP (Any one person)	\$5,000
						PERSONAL & ADV. INJURY	\$1,000,000
		GEN'L AGGREGATE LIMIT APPLIES PER				GENERAL AGGREGATE	\$2,000,000
		Y POLIC PRO- JECT LOC				PRODUCTS-COMP/OP AGG	\$2,000,000
	х					COMBINED SINGLE LIMIT (Ea. accident)	\$1,000,000
		x ANY AUTO				BODILY INJURY (Per person)	\$
		ALL OWNED AUTOS				BODILY INJURY (Per accident)	\$
		SCHEDULE AUTOS				PROPERTY DAMAGE (Per accident)	\$
		HIRED AUTOS					
		NON-OWNED AUTOS					
		GARAGE LIABILITY				Auto only – ea. accident	\$
		ANY AUTO				Other than EA ACC auto only:	\$
	x	EXCESS/UMBRELLA LIABILITY				AGG EACH OCCURRENCE	\$ \$5,000,000
		OCCUR CLAIMS MADE				AGGREGATE	\$5,000,000
							\$
		DEDUCTIBLE					\$
		RETENTION					\$
	WORKER'S COMPENSATION AND EMPLOYERS'					WC STATU-	\$
LIABILITY						TORY OTH- LIMITS ER	
	MEMBER	PRIETORY/PARTNER/EXECUTIVE OFFICER EXCLUDED?				E.L. EACH ACCIDENT	\$500,000
If yes, describe under SPECIAL PROVISIONS below						E.L. DISEASE – EA EMPLOYEE E.L. DISEASE – POLICY LIMIT	\$500,000
	OTHER						\$500,000
DESCR	IPTION OF	OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIC	ONS ADDED BY ENDOR	SEMENT/SPECIAL PROV	ISIONS		1

Project: 224050.01 - Edwardsburg Public Schools Eagle Lake School Renovation - The Skillman Corporation, and TowerPinkster are added as add'l ins on GL including completed operations & add'l ins on Auto Liab but only w/respects to liability arising out of the work performed by/on behalf of named ins for above project with coverage being primary & noncontributory. 30 day written notice of cancellation applies to General Liability Policy, Auto Liability Policy and Umbrella Liability Policy, if required by written contract.

CERTIFICATE HOLDER	CANCELLATION
Edwardsburg Public Schools c/o The Skillman Corporation 8120 Moorsbridge Road, Suite 101 Portage, MI 49024	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATED THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE (Signed or stamped signature)

#### EPS Eagle Lake School Renovation - Pre-Bid RFI Log

Date - 02.27.2025





RFI #	Company Submitting RFI	Date Received	RFI Description	RFI Response
1	Jergens	2/14/2025	Is the floor slab removal shown on AD401 (Note 13) to be by General Trades or is each trade supposed to cover their own slab removal per Selective Demolition 02 41 19? Seeing General Trades has the Cast In Place Concrete it would make sense that they cover the cutting and removal as shown on the architectural dwgs.	TSC: BC #1 - General Trades will be responsible for all slab and wall demo and putback.
2	Jergens	2/14/2025	TP: Updated Addendum #02 plans show some an P101 shows new domestic water piping connecting to existing plumbing fixtures (sinks, lav's, wc's, et.) and/or metal enclosures.	
3	Jergens	2/14/2025	P301 shows new plumbing fixtures for Restrooms B101/102; however, AD401 does not show the chase walls being opened up so we are assuming that these new fixtures will not require new carriers to be installed and all fixtures are to be mounted on the existing carriers. Please clarify.	TP: Existing carriers will be reused.
4	Jergens	2/14/2025	P301 Enlarged Plumbing Plan – A109/A110 appears to be a completely new configuration yet the new sanitary and domestic water pipe routing is not shown. Please provide.	TP: New piping will be included in Addendum #02.
5	Jergens	2/14/2025	P301 Enlarged Plumbing Plan-B135/B136 appears to have new domestic water piping to the new (L-1) lavatories. Women's room appears to be routed in the furred out wall while the Men's room appears to be routed in a block wall. Again these walls will need to be opened up, patched and refinished by the appropriate trades for the new sanitary, domestic water, and lavatory carriers that need to be installed. Please clarify demolition notes.	TP: All piping to lavatories to be installed in furred wall. A decision was made after construction drawings submission that all existing sanitary waste piping within toilet rooms will be replaced. Revisions will be included in Addendum #02.
6	Jergens	2/14/2025	Which Bid Category is to provide roofing? It appears roofing will be needed for Mechanical at three (3) new exhaust fans and patching of an one (1) existing opening for the removal of an existing fan and the new location of EF-3. A roofing specification and/or information on the current roof warranty (if any) will be needed.	TSC: The individual trade requiring a roofing penetration or patching of a removed item shall be responsible for coordinating and hiring a licensed and qualified roofing contractor to perform this work. TP: A spec. will be included for patching of the roof.
7	Jergens	2/14/2025	There does not appear to be a ceiling demo note on the architectural drawings (AD401) for the restrooms although it appears there is new gypsum ceiling being installed in all three (3) restroom areas. Please clarify if existing ceilings will be removed.	TSC: Refer to sheet AD201. The existing ceilings are called out to be removed in all three restrooms.
8	Jergens	2/14/2025	Will the new bathroom exhaust fans be integrated into an existing BMS system? There does not appear to be specification for this work. If integration is required please provide specification and who (if any) is the preferred Temp Controls Contractor for the district.	TP: There is no BMS system at Eagle Lake.
9	Jergens	2/18/2025	Refer to the attached A119 Restroom Picture. It appears that the water closet is already being served from above (at this location). Is this a typical way they want these fixtures connected to the new piping? Surface mounted and routed back into the wall or will the walls actually be opened up everywhere, so it can be installed properly?	TP: On locations where water supply to fixtures are already routed from above slab and are copper piping, no work is required. Where fixtures are being supplied with galvanized piping, they shall be replaced with copper piping.
10	Jergens	2/18/2025	Refer to "P101 Questions" attachment: -Are new domestic water lines required in the indicated locations? -Appears to be missing main HWR. Please clarify. -Please provide pipe sizes for all branch piping. -Details needed for new on how the new lines should be routed.	TP: Refer to responses on attached PDF drawing.
11	TSC	2/18/2025	The small restrooms in each classroom call for new flooring but do not call for the toilet in each classroom to be removed and reinstalled. Please clarify.	TP: Toilets will need to be removed and salvaged for new flooring. Reinstall existing toilet. TSC: BC #3 - Mechanical will be responsible for removing, storing, and reinstalling classroom toilets for existing flooring demolition and new flooring installation.
12	Pearson	2/18/2025	Please clarify who is responsible for the flooring demolition in Corridor B115.	TSC: B115 was indicated as not containing asbestos material. BC #1- General Trades will be responsible for the floor removal in this corridor. The demolition drawing has notes indicating which areas are to be removed by an abatment contractor. The Abatement Phasing Plan indicates general areas of the school that they will have to occupy.
13	Pearson	2/19/2025	Doors B125A and B125B have glazing types of GL-1 and MG-1 respectively. These doors are listed as 60 minute rated but neither of the glass types are fire rated. What type of glazing should go in these doors?	TP: Refer to spec 088813 for fire rated glazing in rated door and frame assemblies.
14	Pearson	2/19/2025	Please clarify the flooring demolition scope of the General Trades bid category.	TSC: BC #1 - General Trades shall be responsible for all flooring demolition indicated with a #7 Keyed Note on the Architectural Demolition Plans. This includes all carpeting, tile, base, and adhesives. These areas appear to have one layer of carpeting covering one layer of 12"x12" VCT.
15	Johnson Commercial Interiors	2/25/2025	Is there a transition spec'd for between the HVT and the rooms that aren't getting new flooring as well as the areas like the office which is receiving new flooring but the files/storage room that isn't shown to be getting new flooring? Please clarify flooring transitons.	TP: Existing Rooms in the office are CPTL or VCT. CPTL to existing CPTL and HVT to VCT transition to be provided in Addendum 2. Other conditions may need to be verified in field for appropriate flooring transitions
16	Johnson Commercial Interiors	2/25/2025	Please confirm that Vestibule B104 is not getting new flooring.	TP: That is correct.
17	Hi-Tech Electric	2/26/2025	With the fire alarm work being performed, will the rest of the system be required to be brought up-to-code?	TSC: Please include pricing for what is indicated in the drawings and specifications. If it is determined that additional fire alarm changes or upgrades are required, then a future Addendum or Bulletin will be issued.



TowerPinkster Architecture - Engineering - Interiors

DATE

SSUED FOR

PROJECT TITLE EDWARDSBURG EAGLE LAKE SCHOOL

SHEFT TILE FIRST FLOOR OVERALL PLUMBING PLAN EDWARDSBURG PUBLIC SCHOOLS

D. COORDINATE ALL ROUGH IN LOCATIONS WITH ARCHITECTURAL PLANS AND EQUIPMENT.

E. NO PIPING SHALL BE INSTALLED ABOVE ELECTRICAL PANELS AND ELECTRICAL EQUIPMENT. ALL DRINKING FOUNTAINS AND DRINKING WATER FAUCETS TO COMPLY WITH MICHIGANS FILTER FIRST LEGISLATION

PLUMBING KEYED NOTES

1. RECONNECT EXISTING PIXTURE TO REPOUTED DOMESTIC WATER PIPING AS RECURED.



EAGLE LAKE SCHOOL UNIT A UNIT B 

DATE JANUARY 27, 2025

Edwardsburg, Michigan

FIRST FLOOR OVERALL PLUMBING PLAN  $\oplus$ 





# ADDENDUM NO. 2

DATE OF ISSUANCE:	February 28, 2025	
PROJECT:	Edwardsburg Eagle Lake School - Renovation 23889 Ave C St Edwardsburg, MI 49112	
OWNER:	Edwardsburg Public Schools	
ARCHITECT'S PROJECT NO.: 21-201.020		

ORIGINAL BID ISSUE DATE: January 27, 2025

#### SCOPE OF WORK

This Addendum includes changes to, or clarifications of, the original Bidding Documents and any previously issued addenda, and shall be included in the Bid. All of these Addendum items form a part of the Contract Documents. The Bidder shall acknowledge receipt of this Addendum in the appropriate space provided on the Bid Form. Failure to do so may result in disgualification of the Bid.

#### DOCUMENTS INCLUDED IN THIS ADDENDUM

This Addendum includes **4** pages of text and the following documents:

- Bidding Documents: None
- Contract Conditions: None
- Specification Sections: 07 0150.19, 224000, 221005
- Drawings: S 101A, S101B, AD 101A, AD 101B, AD 201, AD 401, A 101A, A 101B, A 201A, A 201B, A 401, IG 002, I 101A, I 101B, P 000, PD 101, PD 301, P 101, P 301, P 302

#### CHANGES TO PREVIOUSLY ISSUED ADDENDA

None.

#### **CHANGES TO SPECIFICATIONS**

#### ADD-2 Item No. S-1 - Preparation for Reroofing

Refer to Specification Section: 07 0150.19

Adding roof spec for sections of roof patching.

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2.28.2025 Addendum No. 2 // Edwardsburg Eagle Lake School - Renovation // 21-201.020

#### ADD-2 Item No. S-2 - Plumbing Fixtures

Refer to Specification Section: 224000

Added Sloan as an acceptable fixture manufacturer.

Revised faucets and flush valves to manual type.

#### ADD-2 Item No. S-3 - Plumbing Piping

Refer to Specification Section: 221005

Revised domestic water piping above ground section.

#### CHANGES TO DRAWINGS

ADD-2 Item No. D-1 - Foundation Plan, Slab on Grade

Refer to Sheet(s): S101A, S101B

Reissued sheets to provide clarity of the slab on grade replacement in the bathroom areas.

#### ADD-2 Item No. D-2 - Demo Work Related to Routing Pipes

Refer to Sheet(s): AD 101A, AD 101B, AD 201

Showing areas of partial wall demolition for plumbing lines.

Expanded region of ceiling removal on reflected ceiling plan.

#### ADD-2 Item No. D-3 - Demo for Sanitary Removal

Refer to Sheet(s): AD 401

Expanded region of floor removal for sanitary line replacement. Showing new wall removal in B101 and B102.

#### ADD-2 Item No. D-4 - New Work Related to Routing Pipes

Refer to Sheet(s): A 101A, A 101B, A 201A, A 201B

Calling out areas of wall patching and showing new pipe enclosures where called out.

Expanded region of ceiling reinstallation on reflected ceiling plan and expanded on keynote 4 to include fire rated caulk at fire partitions.

#### ADD-2 Item No. D-5 - New Work for Sanitary Removal

Refer to Sheet(s): A 401

Expanded region of floor concrete slab replacement for new sanitary lines. Showing new wall construction in B101 and B102.

# **TowerPinkster**

2.28.2	2025	Addendum No. 2 // Edwardsburg Eagle Lake School - Renovation // 21-201.020			
A	ADD-2 Item No	D. D-6 - Intent for Finishes			
R	Refer to Sheet(s): I 101A, I 101B				
C	Clarified the inte	nt for finishes at updated wall demolition and reconstruction locations for piping.			
A	ADD-2 Item No	D. D-7 - Flooring Transitions			
R	Refer to Sheet(s)	: I 101B, IG 002			
L	Jpdated Flooring	g Transition locations and Details.			
A	ADD-2 Item No	o. D-8 - Flooring Extents			
R	Refer to Sheet(s)	: I 101B			
L	Jpdated HVT loc	ation in response to sink adjustments			
A	ADD-2 Item No	o. D-9 - Plumbing Schedule			
R	Refer to Sheet: P	000			
L	Jpdated cleanou	at cover and floor drain strainer to square.			
A	ADD-2 Item No	o. D-10 - Piping Demolition			
R	Refer to Sheet: P	D 101			
R	Revised keyed no	otes.			
A	ADD-2 Item No	D. D-11 - Piping Demolition			
R	Refer to Sheet: P	D 301			
lı	ncluded portion	of hot water circulation piping to be removed.			
A	ADD-2 Item No	D. D-12 - Domestic Water Piping to Existing Fixtures			
R	Refer to Sheet: P	101			
R	Revised domesti	c water piping to existing fixtures per bid RFIs.			
lı	ncluded replace	ment of piping in central and eastern bathrooms per owner's direction.			
R	Revised general i	note.			
A	ADD-2 Item No	o. D-13 - Piping in Toilets			
R	Refer to Sheet: P	301			
lı	ncluded replace	ment of piping in central and eastern bathrooms per owner's direction.			

# **TowerPinkster**

2.28.2025 Addendum No. 2 // Edwardsburg Eagle Lake School - Renovation // 21-201.020

#### ADD-2 Item No. D-14 - Domestic Water Piping to Existing Fixtures

Refer to Sheet: P 302

Added sheet to include enlarged views of revised domestic water piping to existing fixtures per bid RFIs.

END OF ADDENDUM.

#### SECTION 07 0150.19 - PREPARATION FOR REROOFING

PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Re-cover preparation of roof areas indicated on Drawings.
  - 2. Removal of flashings and counterflashings.
  - 3. Temporary roofing.

#### B. Related Requirements:

- 1. Section 01 1000 "Summary" for use of premises and for phasing requirements.
- 2. Section 01 5000 "Temporary Facilities and Controls" for temporary construction and environmentalprotection measures for reroofing preparation.

#### 1.2 DEFINITIONS

- A. EPS: Molded (expanded) polystyrene.
- B. Full Roof Tear-off: Removal of existing roofing system down to existing roof deck.
- C. OSB: Oriented strand board.
- D. Partial Roof Tear-off: Removal of selected components and accessories from existing roofing system.
- E. Roofing Terminology: Definitions in ASTM D 1079 and glossary of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to work of this Section.
- F. Roof Re-Cover Preparation: Existing roofing system is to remain and be prepared for new roof installed over it.

#### 1.3 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
  - 1. Include certificate that Installer is approved by warrantor of existing roofing system.
  - 2. Include certificate that Installer is licensed to perform asbestos abatement.
- B. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, that might be misconstrued as having been damaged by reroofing operations.
  - 1. Submit before Work begins.

C. Landfill Records: Indicate receipt and acceptance of demolished roofing materials and hazardous wastes, such as asbestos-containing materials, by a landfill facility licensed to accept them.

#### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Installer of new roofing.
- B. Regulatory Requirements:
  - 1. Comply with governing EPA notification regulations before beginning roofing removal.
  - 2. Comply with hauling and disposal regulations of authorities having jurisdiction.

#### 1.5 FIELD CONDITIONS

- A. Existing Roofing System: PVC roofing.
- B. Owner will occupy portions of building immediately below reroofing area.
  - 1. Conduct reroofing so Owner's operations are not disrupted.
  - 2. Provide Owner with not less than 72 hours' written notice of activities that may affect Owner's operations.
  - Coordinate work activities daily with Owner so Owner has adequate advance notice to place protective dust and water-leakage covers over sensitive equipment and furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below work area.
  - 4. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below affected area.
    - a. Verify that occupants below work area have been evacuated before proceeding with work over impaired deck area.
- C. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- E. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.
  - 1. A roof moisture survey of existing roofing system is available for Contractor's reference.
  - 2. The results of an analysis of test cores from existing roofing system are available for Contractor's reference.
  - 3. Construction Drawings and Project Manual for existing roofing system are provided for Contractor's convenience and information, but they are not a warranty of existing conditions. They are intended to supplement rather than serve in lieu of Contractor's own investigations. Contractor is responsible for conclusions derived from existing documents.
- F. Limit construction loads on existing roof areas to remain, and existing roof areas scheduled to be reroofed to refer to structural drawings for rooftop equipment wheel loads and refer to structural drawingsfor uniformly distributed loads.

- G. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.
  - 1. Remove only as much roofing in one day as can be made watertight in the same day.
- H. Hazardous Materials: It is not expected that hazardous materials, such as asbestos-containing materials, will be encountered in the Work.
  - 1. Hazardous materials will be removed by Owner before start of the Work.
  - 2. Existing roof will be left no less watertight than before removal.
  - 3. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner.
    - a. Hazardous materials will be removed by Owner under a separate contract.
- I. Hazardous Materials: A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
  - 1. Hazardous material remediation is specified elsewhere in the Contract Documents.
  - 2. Do not disturb hazardous materials or items suspected of containing hazardous materials except according to procedures specified elsewhere in the Contract Documents.
  - 3. Coordinate reroofing preparation with hazardous material remediation to prevent water from entering existing roofing system or building.

#### 1.6 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during reroofing, by methods and with materials so as not to void existing roofing system warranty.

## PART 2 - PRODUCTS

- 2.1 TEMPORARY ROOFING MATERIALS
  - A. Design and selection of materials for temporary roofing are Contractor's responsibilities.

#### 2.2 INFILL AND REPLACEMENT MATERIALS

A. Use infill materials matching existing roofing system materials unless otherwise indicated.

#### 2.3 AUXILIARY REROOFING MATERIALS

A. General: Use auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of existing and new roofing system.

PART 3 - EXECUTION

#### 3.1 PREPARATION

- A. Protection of In-Place Conditions:
  - 1. Protect existing roofing system that is not to be reroofed.
- B. Seal or isolate windows that may be exposed to airborne substances created in removal of existing materials.
- C. Shut off rooftop utilities and service piping before beginning the Work.
- D. Test existing roof drains to verify that they are not blocked or restricted.
  - 1. Immediately notify Architect of any blockages or restrictions.
- E. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work.
  - 1. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- F. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- G. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday.
  - 1. Prevent debris from entering or blocking roof drains and conductors.
    - a. Use roof-drain plugs specifically designed for this purpose.
    - b. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
  - 2. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new roofing system, provide alternative drainage method to remove water and eliminate ponding.
    - a. Do not permit water to enter into or under existing roofing system components that are to remain.

#### 3.2 ROOF TEAR-OFF

- A. Notify Owner each day of extent of roof tear-off proposed for that day and obtain authorization to proceed.
- B. Lower removed roofing materials to ground and onto lower roof levels, using dust-tight chutes or other acceptable means of removing materials from roof areas.
- C. Remove pavers and accessories from roofing.

- 1. Store and protect pavers and accessories for reuse in manner not to exceed structural loading limitations of roof deck.
- 2. Discard cracked pavers.
- D. Remove ballast, protection mat, and EPS insulation from protected roofing membrane.
  - 1. Discard EPS insulation that is damaged or exceeds 8 lb/cu. ft..
  - 2. Store EPS insulation for reuse and protect it from physical damage.
  - 3. Store ballast for reuse in manner not to exceed structural loading limitations of roof deck.
- E. Full Roof Tear-off: Where indicated on Drawings, remove existing roofing and other roofing system components down to the existing roof deck.
  - 1. Remove substrate board vapor retarder roof insulation and cover board.
  - 2. Remove base flashings and counter flashings.
  - 3. Remove perimeter edge flashing and gravel stops.
  - 4. Remove copings.
  - 5. Remove expansion-joint covers.
  - 6. Remove flashings at pipes, curbs, mechanical equipment, and other penetrations.
  - 7. Remove roof drains indicated on Drawings to be removed.
  - 8. Remove wood blocking, curbs, and nailers.
  - 9. Bitumen and felts that are firmly bonded to concrete decks are permitted to remain if felts are dry.
    - a. Remove unadhered bitumen, unadhered felts, and wet felts.
  - 10. Remove excess asphalt from steel deck.
    - a. A maximum of 15 lb/100 sq. ft. of asphalt is permitted to remain on steel decks.
  - 11. Remove fasteners from deck or cut fasteners off slightly above deck surface.
- F. Partial Roof Tear-off: Where indicated on Drawings, remove existing roofing down to existing insulation and immediately check for presence of moisture.
  - 1. Engage a qualified testing agency to perform the following test:
    - a. Coordinate with Owner's testing agency to schedule times for tests and inspections immediately after removal.
  - 2. Survey exposed substrate that is to remain using electrical capacitance/impedance testing according to ASTM D 7954/D 7954M.
    - a. Prepare survey report indicating locations of entrapped moisture, if any, and area calculations of locations of entrapped moisture.
  - 3. Remove wet or damp materials below existing roofing and above deck as directed by Architect.

а.

- 4. Inspect wood blocking, curbs, and nailers for deterioration and damage.
  - a. If wood blocking, curbs, or nailers have deteriorated, immediately notify Architect.

b.

- 5. Bitumen and felts that are firmly bonded to concrete decks are permitted to remain if felts are dry.
  - a. Remove unadhered bitumen, unadhered felts, and wet felts.
- 6. Remove excess asphalt from steel deck that is exposed by removal of wet or damp materials.
  - a. A maximum of 15 lb/100 sq. ft. of asphalt is permitted to remain on steel decks.
- 7. Remove fasteners from deck or cut fasteners off slightly above deck surface.

#### 3.3 DECK PREPARATION

- A. Inspect deck after tear-off of roofing system.
- B. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify Architect.
  - 1. Do not proceed with installation until directed by Architect.
- C. If deck surface is unsuitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect.
  - 1. Do not proceed with installation until directed by Architect.
- D. Provide additional deck securement as indicated on Drawings.
- E. Replace steel deck as indicated on Drawings.
- F. Replace steel deck as directed by Architect.
  - 1. Deck replacement will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.
- G. Prepare and paint steel deck surface.
  - 1. Painting and preparation for painting is specified in Section 09 9113 "Exterior Painting."
- H. Replace plywood roof sheathing as indicated on Drawings.
- I. Replace plywood roof sheathing as directed by Architect.
  - 1. Roof sheathing replacement will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.

#### 3.4 INFILL MATERIALS INSTALLATION

A. Immediately after roof tear-off, and inspection and repair, if needed, of deck, fill in tear-off areas to match existing roofing system construction.

- 1. Installation of wood blocking, curbs, and nailers is specified in Section 06 1000 "Rough Carpentry."
- B. Install new roofing patch over roof infill area.
  - 1. If new roofing is installed the same day tear-off is made, roofing patch is not required.

#### 3.5 ROOF RE-COVER PREPARATION

- A. Remove blisters, ridges, buckles, mechanically attached roofing fastener buttons projecting above roofing, and other substrate irregularities from existing roofing that inhibit new recover boards from conforming to substrate.
  - 1. Remove loose aggregate from aggregate-surfaced, built-up bituminous roofing with a power broom.
  - 2. Broom clean existing substrate.
  - 3. Coordinate with Owner's inspector to schedule times for tests and inspections.
  - 4. Verify that existing substrate is dry.
    - a. Spot check substrates with an electrical capacitance moisture-detection meter.
  - 5. Remove materials that are wet or damp.
    - a. Removal will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.
- B. Remove blisters, ridges, buckles, mechanically attached roofing fastener buttons projecting above roofing, and other substrate irregularities from existing roofing that inhibit new recover boards from conforming to substrate.
  - 1. Remove loose aggregate from aggregate-surfaced, built-up bituminous roofing with a power broom.
  - 2. Broom clean existing substrate.
  - 3. Coordinate with Owner's inspector to schedule times for tests and inspections.
  - 4. Verify that existing substrate is dry before proceeding with installation.
    - a. Spot check substrates with an electrical capacitance moisture-detection meter.
  - 5. Remove materials that are wet and damp.
    - a. Removal will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.

#### 3.6 BASE FLASHING REMOVAL

- A. Remove existing base flashings.
  - 1. Clean substrates of contaminants, such as asphalt, sheet materials, dirt, and debris.
- B. Do not damage metal counterflashings that are to remain.

- 1. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish as existing.
- C. Inspect parapet sheathing, wood blocking, curbs, and nailers for deterioration and damage.
  - 1. If parapet sheathing, wood blocking, curbs, or nailers have deteriorated, immediately notify Architect.
- D. Remove existing parapet sheathing and replace with new parapet sheathing to comply with Section 06 1600 "Sheathing."
  - 1. If parapet framing, wood blocking, curbs, or nailers have deteriorated, immediately notify Architect.
- E. When directed by Architect, replace parapet framing, wood blocking, curbs, and nailers to comply with Section 06 1000 "Rough Carpentry."

#### 3.7 DISPOSAL

- A. Collect demolished materials and place in containers.
  - 1. Promptly dispose of demolished materials.
  - 2. Do not allow demolished materials to accumulate on-site.
  - 3. Storage or sale of demolished items or materials on-site is not permitted.
- B. Transport and legally dispose of demolished materials off Owner's property.

## END OF SECTION 07 0150.19

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#### **SECTION 221005 - PLUMBING PIPING**

#### PART 1 GENERAL

- 1.1 SECTION INCLUDES
  - A. Sanitary waste piping, buried within 5 feet of building.
  - B. Sanitary waste piping, above grade.
  - C. Domestic water piping, buried within 5 feet of building.
  - D. Domestic water piping, above grade.
  - E. Storm drainage piping, buried within 5 feet of building.
  - F. Storm drainage piping, above grade.
  - G. Pipe flanges, unions, and couplings.
  - H. Pipe hangers and supports.
  - I. Pipe sleeve-seal systems.
  - J. Ball valves.
  - K. Balancing valves.
  - L. Pressure reducing valves.
  - M. Pressure relief valves.
  - N. Strainers.
- 1.2 RELATED REQUIREMENTS
  - A. Section 083100 Access Doors and Panels.
  - B. Section 099123 Interior Painting.
  - C. Section 220548 Vibration and Seismic Controls for Plumbing Piping and Equipment.
  - D. Section 220553 Identification for Plumbing Piping and Equipment.
  - E. Section 312316 Excavation.
  - F. Section 312323 Fill.
  - G. Section 330110.58 Disinfection of Water Utility Piping Systems.
- 1.3 REFERENCE STANDARDS
  - A. ANSI Z21.22 American National Standard for Relief Valves for Hot Water Supply Systems; 2015 (Reaffirmed 2020).
  - B. ASME B16.18 Cast Copper Alloy Solder Joint Pressure Fittings; 2021.
  - C. ASME B16.22 Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; 2021.
  - D. ASME B31.9 Building Services Piping; 2020.

- E. ASME BPVC-IX Boiler and Pressure Vessel Code, Section IX Qualification Standard for Welding, Brazing, and Fusing Procedures; Welders; Brazers; and Welding, Brazing, and Fusing Operators; 2023.
- F. ASSE 1003 Water Pressure Reducing Valves for Potable Water Distribution Systems; 2023.
- G. ASTM A47/A47M Standard Specification for Ferritic Malleable Iron Castings; 1999, with Editorial Revision (2022).
- H. ASTM B32 Standard Specification for Solder Metal; 2020.
- I. ASTM B88 Standard Specification for Seamless Copper Water Tube; 2022.
- J. ASTM B88M Standard Specification for Seamless Copper Water Tube (Metric); 2020.
- K. ASTM B813 Standard Specification for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube; 2016.
- L. ASTM B828 Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings; 2023.
- M. ASTM C564 Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings; 2020a.
- N. ASTM C1277 Standard Specification for Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings; 2020.
- O. ASTM C1540 Standard Specification for Heavy-Duty Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings; 2020.
- P. ASTM D1785 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120; 2021a.
- Q. ASTM D2241 Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series);
   2020.
- R. ASTM D2466 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40; 2023.
- S. ASTM D2564 Standard Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems; 2020.
- T. ASTM D2665 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings; 2020.
- U. ASTM D2855 Standard Practice for the Two-Step (Primer and Solvent Cement) Method of Joining Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Piping Components with Tapered Sockets; 2020.
- V. ASTM D3034 Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 2023.
- W. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

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- X. AWWA C550 Protective Interior Coatings for Valves and Hydrants; 2017.
- Y. AWWA C606 Grooved and Shouldered Joints; 2022.
- Z. AWWA C651 Disinfecting Water Mains; 2023.
- AA. CISPI 310 Specification for Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications; 2020.
- BB. FM 1680 Approval Standard for Couplings Used in Hubless Cast Iron Systems for Drain, Waste or Vent, Sewer, Rainwater or Storm Drain Systems Above and Below Ground, Industrial/ Commercial and Residential; 1989.
- CC. ICC-ES AC01 Acceptance Criteria for Expansion Anchors in Masonry Elements; 2018, with Editorial Revision (2020).
- DD. ICC-ES AC106 Acceptance Criteria for Predrilled Fasteners (Screw Anchors) in Masonry; 2018, with Editorial Revision (2020).
- EE. ICC-ES AC193 Acceptance Criteria for Mechanical Anchors in Concrete Elements; 2017, with Editorial Revision (2020).
- FF. ICC-ES AC308 Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements; 2023.
- GG. MSS SP-58 Pipe Hangers and Supports Materials, Design, Manufacture, Selection, Application, and Installation; 2018, with Amendment (2019).
- HH. MSS SP-110 Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends; 2010, with Errata .
- II. NSF 61 Drinking Water System Components Health Effects; 2023, with Errata.
- JJ. NSF 372 Drinking Water System Components Lead Content; 2022.
- KK. UL (DIR) Online Certifications Directory; Current Edition.
- LL. UL 723 Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.
- 1.4 SUBMITTALS
  - A. See Section 013000 Administrative Requirements for submittal procedures.
  - B. Product Data: Provide data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalog information. Indicate valve data and ratings.
  - C. Welders' Certificates: Submit certification of welders' compliance with ASME BPVC-IX.
  - D. Shop Drawings: For non-penetrating rooftop supports, submit detailed layout developed for this project, with design calculations for loadings and spacings.
  - E. Project Record Documents: Record actual locations of valves.
  - F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

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- 1. See Section 016000 Product Requirements for additional provisions.
- 2. Valve Repacking Kits: One for each type and size of valve.

## 1.5 QUALITY ASSURANCE

- A. Perform work in accordance with applicable codes.
- B. Valves: Manufacturer's name and pressure rating marked on valve body.
- C. Welding Materials and Procedures: Comply with ASME BPVC-IX and applicable state labor regulations.
- D. Welder Qualifications: Certified in accordance with ASME BPVC-IX.
- E. Identify pipe with marking including size, ASTM material classification, ASTM specification, potable water certification, water pressure rating.
- 1.6 DELIVERY, STORAGE, AND HANDLING
  - A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.
  - B. Provide temporary protective coating on cast iron and steel valves.
  - C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
  - D. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

## 1.7 FIELD CONDITIONS

A. Do not install underground piping when bedding is wet or frozen.

# PART 2 PRODUCTS

# 2.1 GENERAL REQUIREMENTS

- A. Potable Water Supply Systems: Provide piping, pipe fittings, and solder and flux (if used), that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.
- B. Plenum-Installed Acid Waste Piping: Flame-spread index equal or below 25 and smoke-spread index equal or below 50 according to ASTM E84 or UL 723 tests.
- 2.2 SANITARY WASTE PIPING, BURIED WITHIN 5 FEET OF BUILDING
  - A. PVC Pipe: ASTM D2665 or ASTM D3034.
    - 1. Fittings: PVC.
    - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

# 2.3 SANITARY WASTE PIPING, ABOVE GRADE

- A. PVC Pipe: ASTM D1785 Schedule 40, or ASTM D2241 SDR 26 with not less than 150 psi pressure rating.
  - 1. Fittings: ASTM D2466, PVC.
  - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

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#### 2.4 DOMESTIC WATER PIPING, BURIED WITHIN 5 FEET OF BUILDING

- A. Copper Pipe: ASTM B88 (ASTM B88M), Type K (A), Drawn (H).
  - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
  - 2. Joints: ASTM B32, alloy Sn95 solder.
  - 3. Mechanical Press Sealed Fittings: Double-pressed type, NSF 61 and NSF 372 approved or certified, utilizing EPDM, nontoxic, synthetic rubber sealing elements.
    - a. Manufacturers:
      - 1) FNW; Copper Press: www.fnw.com/#sle.

#### 2.5 DOMESTIC WATER PIPING, ABOVE GRADE

- A. Copper Pipe: ASTM B88 (ASTM B88M), Type L (B), Drawn (H).
  - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
  - 2. Joints: ASTM B32, alloy Sn95 solder.
  - 3. Mechanical Press Sealed Fittings: Double-pressed type, NSF 61 and NSF 372 approved or certified, utilizing EPDM, nontoxic, synthetic rubber sealing elements.
    - a. Manufacturers:
      - 1) Anvil International: www.anvilintl.com/#sle.
      - 2) Apollo Valves: www.apollovalves.com/#sle.
      - 3) FNW; Copper Press: www.fnw.com/#sle.
      - 4) Grinnell Products: www.grinnell.com/#sle.
- 2.6 STORM DRAINAGE PIPING, BURIED WITHIN 5 FEET OF BUILDING
  - A. PVC Pipe: ASTM D2665 or ASTM D3034.
    - 1. Fittings: PVC.
    - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

#### 2.7 STORM DRAINAGE PIPING, ABOVE GRADE

- A. PVC Pipe: ASTM D2665.
  - 1. Fittings: PVC.
  - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.
- 2.8 PIPE FLANGES, UNIONS, AND COUPLINGS
  - A. Unions for Pipe Sizes 3 inch and Under:
    - 1. Ferrous Pipe: Class 150 malleable iron threaded unions.
    - 2. Copper Tube and Pipe: Class 150 bronze unions with soldered joints.
  - B. Flanges for Pipe Sizes Over 1 inch:

- 1. Ferrous Pipe: Class 150 malleable iron threaded or forged steel slip-on flanges; preformed neoprene gaskets.
- 2. Copper Tube and Pipe: Class 150 slip-on bronze flanges; preformed neoprene gaskets.
- C. Mechanical Couplings for Grooved and Shouldered Joints: Two or more curved housing segments with continuous key to engage pipe groove, circular C-profile gasket, and bolts to secure and compress gasket.
  - 1. Dimensions and Testing: In accordance with AWWA C606.
  - 2. Housing Material: Provide ASTM A47/A47M malleable iron or ductile iron, galvanized.
  - Gasket Material: EPDM suitable for operating temperature range from minus 30 degrees F to 230 degrees F.
  - 4. Bolts and Nuts: Hot dipped galvanized or zinc-electroplated steel.
  - 5. When pipe is field grooved, provide coupling manufacturer's grooving tools.
  - 6. Manufacturers:
    - a. Anvil International: www.anvilintl.com/#sle.
    - b. Apollo Valves: www.apollovalves.com/#sle.
    - c. Grinnell Products: www.grinnell.com/#sle.
- D. No-Hub Couplings:
  - 1. Testing: In accordance with ASTM C1277 and CISPI 310.
  - 2. Gasket Material: Neoprene complying with ASTM C564.
  - 3. Band Material: Stainless steel.
  - 4. Eyelet Material: Stainless steel.
  - 5. Manufacturers:
    - a. Ideal Clamp Products, Inc; Standard: www.idealtridon.com//#sle.
    - b. MIFAB, Inc; MI-QHUB: www.mifab.com/#sle.
- E. Shielded, Heavy Duty No-Hub Couplings:
  - 1. Testing: In accordance with ASTM C1540 and FM 1680.
  - 2. Gasket Material: Neoprene complying with ASTM C564.
  - 3. Band Material: Stainless steel.
  - 4. Eyelet Material: Stainless steel.
  - 5. Manufacturers:
    - a. Dallas Specialty & Mfg Co: www.dallasspecialty.com/#sle.
    - b. Ideal Clamp Products, Inc; Yellow Shield Heavy Duty: www.idealtridon.com//#sle.

- c. MIFAB, Inc; MI-QXHUB: www.mifab.com/#sle.
- F. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.

## 2.9 PIPE HANGERS AND SUPPORTS

- A. Provide hangers and supports that comply with MSS SP-58.
  - If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
  - 2. Overhead Supports: Individual steel rod hangers attached to structure or to trapeze hangers.
  - 3. Trapeze Hangers: Welded steel channel frames attached to structure.
  - 4. Vertical Pipe Support: Steel riser clamp.
  - 5. Floor Supports: Concrete pier or steel pedestal with floor flange; fixture attachment.
- B. Plumbing Piping Drain, Waste, and Vent:
  - 1. Hangers for Pipe Sizes 1/2 to 1-1/2 inch: Malleable iron, adjustable swivel, split ring.
  - 2. Hangers for Pipe Sizes 2 inch and Over: Carbon steel, adjustable, clevis.
  - 3. Wall Support for Pipe Sizes to 3 inch: Cast iron hook.
  - 4. Wall Support for Pipe Sizes 4 inch and Over: Welded steel bracket and wrought steel clamp.
  - 5. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
  - 6. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.
- C. Plumbing Piping Water:
  - 1. Hangers for Pipe Sizes 1/2 to 1-1/2 inch: Malleable iron, adjustable swivel, split ring.
  - 2. Hangers for Cold Pipe Sizes 2 inch and Over: Carbon steel, adjustable, clevis.
  - 3. Hangers for Hot Pipe Sizes 2 to 4 inch: Carbon steel, adjustable, clevis.
  - 4. Wall Support for Pipe Sizes Up to 3 inch: Cast iron hook.
  - 5. Wall Support for Pipe Sizes 4 inch and Larger: Welded steel bracket and wrought steel clamp.
  - 6. Floor Support for Cold Pipe: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
  - 7. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.
- D. Hanger Fasteners: Attach hangers to structure using appropriate fasteners, as follows:
  - 1. Concrete Wedge Expansion Anchors: Comply with ICC-ES AC193.
  - 2. Masonry Wedge Expansion Anchors: Comply with ICC-ES AC01.
  - 3. Concrete Screw Type Anchors: Comply with ICC-ES AC193.
  - 4. Masonry Screw Type Anchors: Comply with ICC-ES AC106.

- 5. Concrete Adhesive Type Anchors: Comply with ICC-ES AC308.
- 6. Other Types: As required.
- 7. Manufacturers:
  - a. Powers Fasteners, Inc: www.powers.com/#sle.

#### 2.10 PIPE SLEEVE-SEAL SYSTEMS

- A. Manufacturers:
  - 1. BMW Company: www.bmwcompany.com/#sle.
  - 2. GPT, a company of Enpro Industries, Inc: www.gptindustries.com/#sle.
  - 3. The Metraflex Company; MetraSeal: www.metraflex.com/#sle.
- B. Modular Mechanical Seals:
  - 1. Elastomer-based interlocking links continuously fill annular space between pipe and wall-sleeve, wall or casing opening.
  - 2. Watertight seal between pipe and wall-sleeve, wall or casing opening.
  - 3. Size and select seal component materials in accordance to service requirements.
  - 4. Service Requirements:
    - a. Corrosion resistant.
    - b. Oil, fuel, gas, and solvent resistant.
    - c. Underground, buried, and wet conditions.
    - d. Fire Resistant: 1 hour, UL (DIR) approved.
  - 5. Glass reinforced plastic pressure end plates.
- C. Wall Sleeve: PVC material with water-stop collar, and nailer end-caps.
- D. Sleeve-Forming Disk: Non-conductive plastic-based material, 3 inch thick.
- E. Pipeline-Casing Seals:
  - 1. Coated metallic boltless casing-spacer for 4 inch carrier pipe.
  - 2. Coated metallic boltless modular seal for 6 inch carrier pipe.
  - 3. End Seals: 1/8 inch, pull-on type, rubber or synthetic rubber based.
- 2.11 BALL VALVES
  - A. Manufacturers:
    - 1. Anvil International: www.anvilintl.com/#sle.
    - 2. Apollo Valves: www.apollovalves.com/#sle.
    - 3. Grinnell Products: www.grinnell.com/#sle.
    - 4. Nibco, Inc: www.nibco.com/#sle.

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- 5. SharkBite, a brand of Reliance Worldwide Corporation: www.sharkbite.com/#sle.
- 6. Uponor, Inc: www.uponorengineering.com/#sle.
- B. Construction, 4 inch and Smaller: MSS SP-110, Class 150, 400 psi CWP, bronze or ductile iron body, 304 stainless steel or chrome plated brass ball, regular port, teflon seats and stuffing box ring, blow-out proof stem, lever handle with balancing stops, threaded or grooved ends with union.

#### 2.12 BALANCING VALVES

- A. Manufacturers:
  - 1. Anvil International: www.anvilintl.com/#sle.
  - 2. ITT Bell & Gossett: www.bellgossett.com/#sle.
  - 3. Griswold Controls: www.griswoldcontrols.com/#sle.
  - 4. Taco, Inc: www.taco-hvac.com/#sle.
- B. Construction: Class 125, brass or bronze body with union on inlet and outlet, temperature and pressure test plug on inlet and outlet, blowdown/backflush drain.
- C. Automatic Flow Limiting Cartridge, Size 3/4 inch:
  - 1. Class 125, brass or bronze body, stainless steel cartridge, threaded connections with built-in union, dual PT (hot and cold pressure-temperature) test ports for 400 psi, 0.5 gpm WOG service.
- D. Automatic Flow Limiting Cartridge with Ball Valve, Size 1/2 to 1 inch:
  - Class 125, brass or bronze body, stainless steel cartridge, leak-proof stem, threaded or soldered connections with built-in union, dual PT (hot and cold pressure-temperature) test ports for 400 psi, 0.25 to 1.5 gpm WOG service.
- E. Calibration: Control flow within five percent of selected rating, over operating pressure range of 10 times minimum pressure required for control, maximum minimum pressure 3.5 psi.

## 2.13 PRESSURE REDUCING VALVES

- A. Manufacturers:
  - 1. Amtrol Inc: www.amtrol.com/#sle.
  - 2. Apollo Valves: www.apollovalves.com/#sle.
  - 3. Cash Acme, a brand of Reliance Worldwide Corporation: www.cashacme.com/#sle.
  - 4. Cla-Val Company: www.cla-val.com/#sle.
  - 5. Flomatic Valves: www.flomatic.com/#sle.
  - 6. Watts Regulator Company: www.wattsregulator.com/#sle.
  - 7. Zurn Industries, LLC; 500XL3: www.zurn.com/#sle.

- B. 2 inch and Smaller:
  - 1. ASSE 1003, bronze body, stainless steel, and thermoplastic internal parts, fabric reinforced diaphragm, strainer, threaded single union ends.
  - 2. Pressure Reducing Pilot-Operator:
    - a. Operating Range: 5 to 50 psi.
    - b. Connected into brass or bronze pilot piping and fittings.
    - c. Fixed flow restrictor, pressure gauges, and isolation valves.
- C. 2 inch and Larger:
  - 1. ASSE 1003, cast iron body with interior lining complying with AWWA C550, bronze fitted, elastomeric diaphragm and seat disc, flanged.
  - 2. Pressure Reducing Pilot-Operator:
    - a. Operating Range: 5 to 50 psi.
    - b. Connected into brass or bronze pilot piping and fittings.
    - c. Fixed flow restrictor, strainer, pressure gauges, and isolation valves.
- D. Pilot Operated:
  - 1. Cast bronze, 1-1/2 to 8 inch, NPS in size with flanged end connections. Rated for 300 psi inlet pressure with outlet discharge field-set to system inlet pressure.

## 2.14 PRESSURE RELIEF VALVES

- A. Manufacturers:
  - 1. Cla-Val Co: www.cla-val.com/#sle.
  - 2. Watts Regulator Company: www.wattsregulator.com/#sle.
- B. ANSI Z21.22, AGA certified, bronze body, teflon seat, steel stem and springs, automatic, direct pressure actuated.

## 2.15 STRAINERS

- A. Manufacturers:
  - 1. Armstrong International, Inc: www.armstronginternational.com/#sle.
  - 2. Green Country Filter Manufacturing: www.greencountryfilter.com/#sle.
  - 3. WEAMCO: www.weamco.com/#sle.
- B. Size 1/2 inch to 3 inch:
  - Class 150, threaded forged bronze Y-pattern body, stainless steel perforated mesh screen with cap, and rated for 150 psi, 250 deg F WOG service.
- C. Size 2 inch and Smaller:

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- 1. Threaded brass body for 175 psi CWP, Y pattern with 1/32 inch stainless steel perforated screen.
- 2. Class 150, threaded bronze body 300 psi CWP, Y pattern with 1/32 inch stainless steel perforated screen.
- D. Size 1-1/2 inch to 4 inch:
  - 1. Class 125, flanged iron body, Y pattern with 1/16 inch stainless steel perforated screen.

### PART 3 EXECUTION

- 3.1 EXAMINATION
  - A. Verify that excavations are to required grade, dry, and not over-excavated.

#### 3.2 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Remove scale and dirt, on inside and outside, before assembly.
- C. Prepare piping connections to equipment with flanges or unions.

#### 3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Provide non-conducting dielectric connections wherever jointing dissimilar metals.
- C. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
- D. Install piping to maintain headroom, conserve space, and not interfere with use of space.
- E. Group piping whenever practical at common elevations.
- F. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.
- G. Provide access where valves and fittings are not exposed.
  - 1. Coordinate size and location of access doors with Section 083100.
- H. Install vent piping penetrating roofed areas to maintain integrity of roof assembly.
- I. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc-rich primer to welding.
- J. Provide support for utility meters in accordance with requirements of utility companies.
- K. Prepare exposed, unfinished pipe, fittings, supports, and accessories for finish painting.
  - 1. See Section 099123 for painting of interior plumbing systems and components.
- L. Excavate in accordance with Section 312316.
- M. Backfill in accordance with Section 312323.
- N. Install valves with stems upright or horizontal, not inverted. See Section 220523.
- O. Install water piping to ASME B31.9.

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- P. Copper Pipe and Tube: Make soldered joints in accordance with ASTM B828, using specified solder, and flux meeting ASTM B813; in potable water systems use flux also complying with NSF 61 and NSF 372.
- Q. PVC Pipe: Make solvent-welded joints in accordance with ASTM D2855.
- R. Sleeve pipes passing through partitions, walls, and floors.
- S. Inserts:
  - 1. Provide inserts for placement in concrete formwork.
  - 2. Provide inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams.
  - 3. Provide hooked rod to concrete reinforcement section for inserts carrying pipe over 4 inches.
  - 4. Where concrete slabs form finished ceiling, locate inserts flush with slab surface.
  - 5. Where inserts are omitted, drill through concrete slab from below and provide through-bolt with recessed square steel plate and nut above slab.
- T. Pipe Hangers and Supports:
  - 1. Install in accordance with ASME B31.9.
  - 2. Support horizontal piping as indicated.
  - 3. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
  - 4. Place hangers within 12 inches of each horizontal elbow.
  - 5. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
  - 6. Support vertical piping at every other floor. Support riser piping independently of connected horizontal piping.
  - 7. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
  - 8. Provide copper plated hangers and supports for copper piping.
  - 9. Prime coat exposed steel hangers and supports. Hangers and supports located in crawl spaces, pipe shafts, and suspended ceiling spaces are not considered exposed.
    - a. Painting of interior plumbing systems and components is specified in Section 099123.
  - 10. Provide hangers adjacent to motor-driven equipment with vibration isolation; see Section 220548.
  - 11. Support cast iron drainage piping at every joint.
- U. Pipe Sleeve-Seal Systems:
  - 1. Install manufactured sleeve-seal systems in sleeves located in grade slabs and exterior concrete walls at piping entrances into building.

- 2. Provide sealing elements of the size, quantity, and type required for the piping and sleeve inner diameter or penetration diameter.
- 3. Locate piping in center of sleeve or penetration.
- 4. Install field assembled sleeve-seal system components in annular space between sleeve and piping.
- 5. Tighten bolting for a watertight seal.
- 6. Install in accordance with manufacturer's recommendations.
- V. When installing more than one piping system material, ensure system components are compatible and joined to ensure the integrity of the system. Provide necessary joining fittings. Ensure flanges, union, and couplings for servicing are consistently provided.

## 3.4 APPLICATION

- A. Use grooved mechanical couplings and fasteners only in accessible locations.
- B. Install unions downstream of valves and at equipment or apparatus connections.
- C. Install brass male adapters each side of valves in copper piped system. Solder adapters to pipe.
- D. Install gate valves for shut-off and to isolate equipment, part of systems, or vertical risers.
- E. Install globe valves for throttling, bypass, or manual flow control services.
- F. Provide lug end butterfly valves adjacent to equipment when provided to isolate equipment.
- G. Provide spring-loaded check valves on discharge of water pumps.
- H. Provide flow controls in water recirculating systems where indicated.
- 3.5 TOLERANCES
  - A. Drainage Piping: Establish invert elevations within 1/2 inch vertically of location indicated and slope to drain at minimum of 1/4 inch per foot slope for pipes smaller than 3 inches and 1/8 inch per foot slope for pipes 3 inches and larger, unless noted otherwise.
  - B. Grease waste piping to drain at minimum of 1/4 inch per foot slope regardless of pipe size.
  - C. Water Piping: Slope at minimum of 1/32 inch per foot and arrange to drain at low points.
- 3.6 FIELD TESTS AND INSPECTIONS
  - A. Verify and inspect systems according to requirements by the Authority Having Jurisdiction. In the absence of specific test and inspection procedures proceed as indicated below.
  - B. Domestic Water Systems:
    - 1. Perform hydrostatic testing for leakage prior to system disinfection.
    - 2. Test Preparation: Close each fixture valve or disconnect and cap each connected fixture.
    - 3. General:

- Fill the system with water and raise static head to 10 psi above service pressure. Minimum static head of 50 to 150 psi. As an exception, certain codes allow a maximum static pressure of 80 psi.
- 4. Metal Piping Systems Subject to Freezing Conditions:
  - a. Inject 40 psi of compressed air into piping to spot check for leaks with liquid soap. Document and repair leaks as necessary.
  - b. Raise injected compressed air pressure to 1.5 times rated service pressure or minimum pressure of 100 psi for a duration of 2 hours and verify with a gauge that no perceptible pressure drop is measured.
- C. Test Results: Document and certify successful results, otherwise repair, document, and retest.

# 3.7 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

- A. Disinfect water distribution system in accordance with Section 330110.58.
- B. Prior to starting work, verify system is complete, flushed, and clean.
- C. Ensure acidity (pH) of water to be treated is between 7.4 and 7.6 by adding alkali (caustic soda or soda ash) or acid (hydrochloric).
- D. Inject disinfectant, free chlorine in liquid, powder, tablet, or gas form throughout system to obtain 50 to 80 mg/L residual.
- E. Bleed water from outlets to ensure distribution and test for disinfectant residual at minimum 15 percent of outlets.
- F. Maintain disinfectant in system for 24 hours.
- G. If final disinfectant residual tests less than 25 mg/L, repeat treatment.
- H. Flush disinfectant from system until residual equal to that of incoming water or 1.0 mg/L.
- I. Take samples no sooner than 24 hours after flushing, from 10 percent of outlets and from water entry, and analyze in accordance with AWWA C651.

## 3.8 SERVICE CONNECTIONS

- A. Provide new sanitary sewer services. Before commencing work, check invert elevations required for sewer connections, confirm inverts and ensure that these can be properly connected with slope for drainage and cover to avoid freezing.
- B. Provide new water service complete with approved reduced pressure backflow preventer and water meter with by-pass valves, pressure reducing valve, and sand strainer.
  - 1. Provide sleeve in wall for service main and support at wall with reinforced concrete bridge. Calk enlarged sleeve and make watertight with pliable material. Anchor service main inside to concrete wall.
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2. Provide 18 gauge, 0.0478-inch galvanized sheet metal sleeve around service main to 6 inch above floor and 6 feet minimum below grade. Size for minimum of 2 inches of loose batt insulation stuffing.

## 3.9 SCHEDULES

- A. Pipe Hanger Spacing:
  - 1. Metal Piping:
    - a. Pipe Size: 1/2 inch to 1-1/4 inch:
      - 1) Maximum Hanger Spacing: 6.5 ft.
      - 2) Hanger Rod Diameter: 3/8 inches.
    - b. Pipe Size: 1-1/2 inch to 2 inch:
      - 1) Maximum Hanger Spacing: 10 ft.
      - 2) Hanger Rod Diameter: 3/8 inch.
    - c. Pipe Size: 2-1/2 inch to 3 inch:
      - 1) Maximum Hanger Spacing: 10 ft.
      - 2) Hanger Rod Diameter: 1/2 inch.
    - d. Pipe Size: 4 inch to 6 inch:
      - 1) Maximum Hanger Spacing: 10 ft.
      - 2) Hanger Rod Diameter: 5/8 inch.
    - e. Pipe Size: 8 inch to 12 inch:
      - 1) Maximum hanger spacing: 14 ft.
      - 2) Hanger Rod Diameter: 7/8 inch.
  - 2. Plastic Piping:
    - a. All Sizes:
      - 1) Maximum Hanger Spacing: 6 ft.
      - 2) Hanger Rod Diameter: 3/8 inch.

END OF SECTION

### **SECTION 224000 - PLUMBING FIXTURES**

PART 1 GENERAL

- 1.1 SECTION INCLUDES
  - A. Flush valve water closets.
  - B. Wall hung urinals.
  - C. Lavatories.
  - D. Under-lavatory pipe supply covers.
- 1.2 RELATED REQUIREMENTS
  - A. Section 064100 Architectural Wood Casework: Counters for sinks and lavatories.
  - B. Section 079200 Joint Sealants: Sealing joints between fixtures and walls and floors.
  - C. Section 123600 Countertops: Counters for sinks and lavatories.
  - D. Section 221005 Plumbing Piping.
  - E. Section 221006 Plumbing Piping Specialties.
  - F. Section 260583 Wiring Connections: Electrical characteristics and wiring connections.
- 1.3 REFERENCE STANDARDS
  - A. ASME A112.6.1M Floor-Affixed Supports for Off-the-Floor Plumbing Fixtures for Public Use; 1997 (Reaffirmed 2017).
  - B. ASME A112.18.1 Plumbing Supply Fittings; 2018, with Errata.
  - C. ASME A112.19.2 Ceramic Plumbing Fixtures; 2018, with Errata.
  - D. ASME A112.19.5 Flush Valves and Spuds for Water Closets, Urinals, and Tanks; 2022.
  - E. ASSE 1070 Performance Requirements for Water Temperature Limiting Devices; 2020.
  - F. NSF 61 Drinking Water System Components Health Effects; 2023, with Errata.
  - G. NSF 372 Drinking Water System Components Lead Content; 2022.
- 1.4 SUBMITTALS
  - A. See Section 013000 Administrative Requirements for submittal procedures.
  - B. Product Data: Provide catalog illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.
  - C. Manufacturer's Instructions: Indicate installation methods and procedures.
  - D. Maintenance Data: Include fixture trim exploded view and replacement parts lists.
  - E. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

- 1.5 QUALITY ASSURANCE
  - A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.
- 1.6 DELIVERY, STORAGE, AND HANDLING
  - A. Accept fixtures on-site in factory packaging. Inspect for damage.
  - B. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.
- 1.7 WARRANTY
  - A. See Section 017800 Closeout Submittals for additional warranty requirements.

## PART 2 PRODUCTS

- 2.1 GENERAL REQUIREMENTS
  - A. Potable Water Systems: Provide plumbing fittings and faucets that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.
- 2.2 FLUSH VALVE WATER CLOSETS
  - A. Water Closets:
    - 1. Vitreous china, ASME A112.19.2, floor mounted, siphon jet flush action, china bolt caps.
    - 2. Flush Valve: Exposed (top spud).
    - 3. Flush Operation: Sensor operated.
    - 4. Handle Height: 44 inches or less.
    - 5. Manufacturers:
      - a. American Standard, Inc: www.americanstandard-us.com/#sle.
      - b. Kohler Company: www.kohler.com/#sle.
      - c. Mansfield Plumbing Products LLC: www.mansfieldplumbing.com/#sle.
      - d. PROFLO: www.ferguson.com/#sle.
      - e. Zurn Industries, LLC: www.zurn.com/#sle.
      - f. Sloan.
  - B. Flush Valves:
    - 1. Valve Supply Size: 1 inch.
    - 2. Valve Outlet Size: 1-1/2 inches.
    - 3. Manufacturers:
      - a. American Standard, Inc: www.americanstandard-us.com/#sle.

- b. Sloan Valve Company: www.sloanvalve.com/#sle.
- c. Zurn Industries, LLC: www.zurn.com/#sle.
- 4. Manual Operated:
  - a. Type: ASME A112.18.1 or ASME A112.19.5; diaphragm type complete with vacuum breaker stops, and accessories.
  - b. Supplied Volume Capacity: 1.6 gal per flush.
- 5. Exposed Type: Chrome-plated, escutcheon, integral screwdriver stop.
- C. Toilet Seats:
  - 1. Manufacturers:
    - a. American Standard, Inc: www.americanstandard-us.com/#sle.
    - b. Bemis Manufacturing Company: www.bemismfg.com/#sle.
    - c. Church Seat Company: www.churchseats.com/#sle.
    - d. Olsonite: www.olsonite.com/#sle.
    - e. PROFLO: www.ferguson.com/#sle.
    - f. Zurn Industries, LLC: www.zurn.com/#sle.
  - 2. Plastic: White finish, open front, extended back, self-sustaining hinge, brass bolts with covers.
- D. Water Closet Carriers:
  - 1. Manufacturers:
    - a. Jay R. Smith Manufacturing Company: www.jrsmith.com/#sle.
    - b. JOSAM Company: www.josam.com/#sle.
    - c. Zurn Industries, LLC: www.zurn.com/#sle.
  - 2. ASME A112.6.1M; adjustable cast iron frame, integral drain hub and vent, adjustable spud, lugs for floor and wall attachment, threaded fixture studs with nuts and washers.

### 2.3 WALL HUNG URINALS

- A. Manufacturers:
  - 1. Kohler Company: www.kohler.com/#sle.
  - 2. Mansfield Plumbing Products LLC: www.mansfieldplumbing.com/#sle.
  - 3. PROFLO: www.ferguson.com/#sle.
  - 4. Zurn Industries, LLC: www.zurn.com/#sle.
  - 5. Sloan.

- B. Vitreous china, ASME A112.19.2, wall hung with side shields and concealed carrier.
  - 1. Consumption Volume: 1.0 gal per flush, maximum.
  - 2. Flush Valve: Exposed (top spud).
  - 3. Flush Operation: Sensor operated.
  - 4. Trapway Outlet: Integral.
- C. Flush Valves:
  - 1. Manufacturers:
    - a. American Standard, Inc: www.americanstandard-us.com/#sle.
    - b. Sloan Valve Company: www.sloanvalve.com/#sle.
    - c. Zurn Industries, LLC: www.zurn.com/#sle.
  - 2. Manual Operated:
    - a. Type: ASME A112.18.1 or ASME A112.19.5; diaphragm type, complete with vacuum breaker stops, and accessories.
    - b. Supplied Volume Capacity: 1.0 gal per flush.
  - 3. Exposed Type: Chrome-plated, escutcheon, integral screwdriver stop.
- D. Urinal Carriers:
  - 1. Manufacturers:
    - a. Jay R. Smith Manufacturing Company: www.jrsmith.com/#sle.
    - b. JOSAM Company: www.josam.com/#sle.
    - c. Zurn Industries, LLC: www.zurn.com/#sle.
  - 2. ASME A112.6.1M; cast iron and steel frame with tubular legs, lugs for floor and wall attachment, threaded fixture studs for fixture hanger, bearing studs.

# 2.4 LAVATORIES

- A. Manufacturers:
  - 1. American Standard, Inc: www.americanstandard-us.com/#sle.
  - 2. Kohler Company: www.kohler.com/#sle.
  - 3. Mansfield Plumbing Products LLC: www.mansfieldplumbing.com/#sle.
  - 4. Zurn Industries, LLC: www.zurn.com/#sle.
  - 5. Sloan.
- B. Wall-Hung Basin:

- 1. Vitreous China: ASME A112.19.2; white, rectangular basin with splash lip, front overflow, soap depression, and hanger. Size as indicated on drawings with 4-inch centerset spacing.
- 2. Carrier:
  - a. ASME A112.6.1M; cast iron and steel frame with tubular legs, lugs for floor and wall attachment, threaded studs for fixture hanger, bearing plate and studs.
  - b. Manufacturers:
    - 1) Jay R. Smith MFG. Co: www.jrsmith.com/#sle.
    - 2) JOSAM Company: www.josam.com/#sle.
    - 3) Zurn Industries, LLC: www.zurn.com/#sle.
- C. Supply Faucet:
  - 1. ASME A112.18.1; chrome plated combination supply fitting with open grid strainer, water economy aerator with maximum flow of 0.5 gpm, indexed handles.
- D. Thermostatic Mixing Valve:
  - 1. ASSE 1070 listed with combination stop, strainer, and check valves, and flexible stainless steel connectors.
  - 2. Braided hot and cold water supply lines.
- E. Accessories:
  - 1. Chrome-plated 17 gauge, 0.0538 inch brass P-trap with clean-out plug and arm with escutcheon.
- F. Lavatory Carrier:
  - 1. Manufacturers:
    - a. JOSAM Company: www.josam.com/#sle.
    - b. Zurn Industries, LLC: www.zurn.com/#sle.
  - 2. ASME A112.6.1M; cast iron and steel frame with tubular legs, lugs for floor and wall attachment, threaded studs for fixture hanger, bearing plate and studs.

### PART 3 EXECUTION

- 3.1 EXAMINATION
  - A. Verify that walls and floor finishes are prepared and ready for installation of fixtures.
  - B. Confirm that millwork is constructed with adequate provision for the installation of counter top lavatories and sinks.

# 3.2 PREPARATION

- A. Rough-in fixture piping connections in accordance with minimum sizes indicated in fixture rough-in schedule for particular fixtures.
- 3.3 INSTALLATION
  - A. Install each fixture with trap, easily removable for servicing and cleaning.
  - B. Provide chrome-plated rigid or flexible supplies to fixtures with loose key stops, reducers, and escutcheons.
  - C. Install components level and plumb.
  - D. Install and secure fixtures in place with wall carriers and bolts.

## 3.4 ADJUSTING

A. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.

# 3.5 CLEANING

A. Clean plumbing fixtures and equipment.

# 3.6 PROTECTION

- A. Protect installed products from damage due to subsequent construction operations.
- B. Do not permit use of fixtures by construction personnel.
- C. Repair or replace damaged products before Date of Substantial Completion.

# END OF SECTION



FOUNDATION PLAN - UNIT A SCALE: 1/8" = 1'-0"







FOUNDATION NOTES

ELEVATION SLAB ON GRADE = 100'-0" UNO.
 SEE S001 FOR STRUCTURAL NOTES.
 SEE S201 FOR TYPICAL FOUNDATION DETAILS.

- BLE S2011 OK THINKE FOONDATION DETAILS.
   DOWEL HORIZONTAL REINFORCEMENT FROM NEW FOOTINGS AND FOUNDATION WALLS INTO EXISTING USING HILTI HIT-HY 200 V3 EPOXY (OR APPROVED EQUAL) WITH 6" EMBEDMENT.







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OR NEW FINISH O BE REMOVED BY BY SCHOOLS ABATEMENT	ADDENDUM #2 ISSUED FOR	02-28-2025 DATE
	PROJECT TITLE EDWARDSBURG EAGLE LAKE SCHOOL	
BE PLOTTED IN K AND WHITE, AND OBTAIN	OWNER EDWARDSBURG PUBLIC SCHOOLS	Edwardsburg, Michigan
	sheet title FIRST FLOOR DEMOLITION PLAN - UNIT A	DATE JANUARY 27, 2025
Ŋ	SHEET TITLE FIRST FLOOR A	SHEET NUMBER AD 101A 21-201.020



**KEYED NOTES - ARCHITECTURAL - DEMOLITION** 





**KEYED NOTES - ARCHITECTURAL - DEMOLITION** 

- REMOVE CMU WALL
- 2 REMOVE DOOR, FRAME, AND HARDWARE
- 3 REMOVE TOILET PARTITIONS
- REMOVE TOILET ACCESSORIES, SOAP DISPENSERS, TOWEL DISPENSERS, MIRROR, ETC. (WHERE APPLICABLE)
- 5 REMOVE WALL MOUNTED HAND DRYER
- REMOVE CARPET AND/OR VINYL TILE, BASE AND ADHESIVE. PREPARE FLOOR FOR NEW FINISH
- 8 REMOVE DISPLAY CASE AND ALL ASSOCIATED PARTS
- 9 REMOVE PORTION OF CMU WALL FOR NEW OPENING
- 10 REMOVE ALUMINUM STOREFRONT SYSTEM INCLUDING DOOR AND HARDWARE
- 11 REMOVE WINDOW AND FRAME
- 12 REMOVE FLOOR TILE, BASE AND MORTAR PREPARE FLOOR FOR
- 13 REMOVE CONCRETE SLAB (CROSS HATCH INDICATING AREA OF STRUCTURAL
- 14 REMOVE CERAMIC WALL TILE AND FRAMED WALL CONSTRUCTION
- 15 REMOVE DOOR AND HARDWARE, FRAME TO REMAIN
- 16 REMOVE WATER HEATER REFER TO PLUMBING
- 17 REMOVE VINYL TILE, BASE AND ADHESIVE. PREPARE FLOOR FOR
- 18 REMOVE CARPET AND/OR VINYL TILE, BASE AND ADHESIVE. TO I SCHOOLS ABATEMENT CONTRACTOR.
- 19 REMOVE FLOOR TILE, BASE AND MORTAR. TO BE REMOVED BY S CONTRACTOR  $\bigvee \bigvee$

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<ol> <li>10 REMOVE ALUMINUM STOREFRONT SYSTEM INCLUDING DOOR AND HARDWARE</li> <li>11 REMOVE WINDOW AND FRAME</li> <li>12 REMOVE FLOOR TILE, BASE AND MORTAR - PREPARE FLOOR FOR NEW FINISH</li> <li>13 REMOVE CONCRETE SLAB (CROSS HATCH INDICATING AREA OF DEMO) - REFER TO</li> </ol>		Architec
STRUCTURAL 14 REMOVE CERAMIC WALL TILE AND FRAMED WALL CONSTRUCTION		
15 REMOVE DOOR AND HARDWARE, FRAME TO REMAIN		
16 REMOVE WATER HEATER - REFER TO PLUMBING		
<ul> <li>17 REMOVE VINYL TILE, BASE AND ADHESIVE. PREPARE FLOOR FOR NEW FINISH</li> <li>18 REMOVE CARPET AND/OR VINYL TILE, BASE AND ADHESIVE. TO BE REMOVED BY</li> </ul>		
SCHOOLS ABATEMENT CONTRACTOR.		
19 REMOVE FLOOR TILE, BASE AND MORTAR. TO BE REMOVED BY SCHOOLS ABATEMENT CONTRACTOR	ADDENDUM #2	02-28-2025
20 REMOVE PORTION OF CMU WALL FOR ROUTING NEW PLUMBING LINES - REFER TO PLUMBING	ISSUED FOR	DATE
	PROJECT TITLE EDWARDSBURG EAGLE LAKE SCHOOL	
THIS DRAWING SHEET IS INTENDED TO BE PLOTTED IN COLOR. IF THIS TEXT APPEARS IN BLACK AND WHITE, IT IS PLOTTED INCORRECTLY. DISCARD AND OBTAIN	OWNER EDWARDSBURG PUBLIC SCHOOLS	Edwardsburg, Michigan
AN ACCURATE DRAWING	F	10
EAGLE LAKE SCHOOL	OOR DEMOLITION PLAN - UNIT	1B DATE JANUARY 27, 2025
KEY PLAN SCALE: NO SCALE	SHEET TITLE FIRST FL( B	внеет иимвек АD 10 <sup>-</sup> 21-201.020





OVERALL FIRST FLOOR REFLECTED CEILING DEMOLITION PLAN







2 AD 401 1/4" = 1'-O"



- REMOVE CMU WALL
- 2 REMOVE DOOR, FRAME, AND HARDWARE
- 3 REMOVE TOILET PARTITIONS
- REMOVE TOILET ACCESSORIES, SOAP DISPENSERS, TOWEL DISPENSERS, MIRROR, ETC. (WHERE APPLICABLE)
- REMOVE WALL MOUNTED HAND DRYER
- REMOVE CARPET AND/OR VINYL TILE, BASE AND ADHESIVE. PREPARE FLOOR FOR NEW FINISH
- 8 REMOVE DISPLAY CASE AND ALL ASSOCIATED PARTS
- 9 REMOVE PORTION OF CMU WALL FOR NEW OPENING
- 10 REMOVE ALUMINUM STOREFRONT SYSTEM INCLUDING DOOR AND HARDWARE
- 11 REMOVE WINDOW AND FRAME
- 12 REMOVE FLOOR TILE, BASE AND MORTAR PREPARE FLOOR FOR NEW FINISH
- 13 REMOVE CONCRETE SLAB (CROSS HATCH INDICATING AREA OF DEMO) REFER TO STRUCTURAL
- 14 REMOVE CERAMIC WALL TILE AND FRAMED WALL CONSTRUCTION
- 15 REMOVE DOOR AND HARDWARE, FRAME TO REMAIN
- 16 REMOVE WATER HEATER REFER TO PLUMBING
- 17 REMOVE VINYL TILE, BASE AND ADHESIVE. PREPARE FLOOR FOR NEW FINISH
- 18 REMOVE CARPET AND/OR VINYL TILE, BASE AND ADHESIVE. TO BE REMOVED BY SCHOOLS ABATEMENT CONTRACTOR.
- 19 REMOVE FLOOR TILE, BASE AND MORTAR. TO BE REMOVED BY SCHOOLS ABATEMENT CONTRACTOR  $\sim$  $\gamma \gamma$
- 20 REMOVE PORTION OF CMU WALL FOR ROUTING NEW PLUMBING LINES REFER TO PLUMBING

THIS DRAWING SHEET IS INTENDED TO BE COLOR. IF THIS TEXT APPEARS IN BLACK IT IS PLOTTED INCORRECTLY. DISCARD AN AN ACCURATE DRAWING

	SHEET TITLE ENLARGED DEMOLITION PLANS AND DETAILS
E PLOTTED IN	ш Ш Ш
AND WHITE,	
ND OBTAIN	
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02-28-2025 DATE



# NOTES - ARCHITECTURAL 1 REFER TO CODE COMPLIANCE PLAN FOR WALL RATING LINES. **KEYED NOTES - ARCHITECTURAL - CONSTRUCTION** REMOVAL AREAS) 4 4" CONCRETE SLAB - REFER TO STRUCTURAL -B129 TO INSTALL NEW PLUMBING LINES - REFER TO PLUMBING SIZE WITH PLUMBING PIPE SIZES - REFER TO PLUMBING







NOTES -	ARCHITECTURAL

REFE	R TO CODE	COMPLIANCE	PLAN FC	or Wall	RATING	LINES.

2	REFER TO FL	OOR FINISH	PLANS F	OR INTE	ERIOR ELE	VATION	CAI

2	PEEEP TO SHEET & SOO'S FOP WALL	AND CEILING ACCESS PAN

(E)	YED NOTES - ARCHITECTURAL - CONSTRUCTION
	PATCH AND REPAIR WALL FOR NEW PAINT (INDICATE AT SIMILAR
	PENOVAL APEAS)

- PATCH AND REPAIR WALL WITH LIKE MATERIALS, CASEWORK











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<u>WOMEN'S</u>

**4** 

 $\times 1$ 



2 A 401 1/4" = 1'-0"





TYPICAL BARRIER-FREE MOUNTING HEIGHTS

SHEET TITLE ENLARGED TO BARRIER-FRE MOUNTING HE	SHEET TITLE ENLARGED TOILET ROOM PLANS, BARRIER-FREE DETAILS, TYPICAL MOUNTING HEIGHTS, ETC.	OWNER EDWARDSBURG PUBLIC SCHOOLS	EDWARDSBURG EAGLE LAKE SCHOOL	ADDENDUM #2 ISSUED FOR	
<mark>8 НЕЕТ NUMBER</mark> А 401 21-201.020	DATE JANUARY 27, 2025	Edwardsburg, Michigan		02-28-2025 DATE	Architecture • Engineering • Interiors

1	MANUFACTURER	PATTERN	COLOR	PRODUCT NO.	SIZE	SINGLE SOURCE	BASIS OF DESIGN	ADDITIONAL MANUFACTURERS	REMARKS
CP-1 ACOUSTIC CEILING PANEL PTL-1 CARPET TILE	USG J ¢ J FLOORING	RADAR ANALYTIC FORM	WHITE COOL BLUE	2410 7633 / 3599	2' X 4' 18" X 18"				DISTRICT BUILDING STANDARD   SQUARE EDGE   0.55 NRC   35 CRC   CLASS A FIRE RATING ASHLAR INSTALLATION METHOD
CERAMIC TILE	VITL	BASELINE	ICE	VTLBAIC412G	4" X 12"				REFER TO ENLARGED TOILET ROOM DETAILS FOR INSTALLATION DETAILS
-2 CERAMIC TILE -3 CERAMIC TILE	VITL VITL	BASELINE BASELINE	BLUE UMBER	VTLBABL412G VTLBAUM412G	4" X 12" 4" X 12"	X X			REFER TO ENLARGED TOILET ROOM DETAILS FOR INSTALLATION DETAILS         REFER TO ENLARGED TOILET ROOM DETAILS FOR INSTALLATION DETAILS
-4 CERAMIC TILE PTL-1 ENTRANCE CARPET TILE	VITL J ¢ J FLOORING	BASELINE INCOGNITO	STORM INTELLIGENCE	VTLBAST412G 7069 / 1841	4" X 12" 24" x 24"	X X			REFER TO ENLARGED TOILET ROOM DETAILS FOR INSTALLATION DETAILS           MONOLITHIC INSTALLATION PATTERN
T-1 HYBRID VINYL TILE	EVO FLOORS	HVT HVT	SNOW 320		18" X 18"		x	BENTLEY FLOORING	REFER TO PATTERN PLAN FOR INSTALLATION PATTERN
T-3 HYBRID VINYL TILE	EVO FLOORS EVO FLOORS	HVT	TWILIGHT 345 EMBER 339		18" X 18" 18" X 18" 18" X 18"		× X	BENTLEY FLOORING BENTLEY FLOORING BENTLEY FLOORING	REFER TO PATTERN PLAN FOR INSTALLATION PATTERN         REFER TO PATTERN PLAN FOR INSTALLATION PATTERN         REFER TO PATTERN PLANS AND ELOOP PLANS FOR INSTALLATION PATTERN
T-4 HYBRID VINYL TILE PAINT	EVO FLOORS SHERWIN WILLIAMS	HVT	SLATE 323 OFF WHITE	 SW 1095	18" X 18" 		× ×	BENTLEY FLOORING BENJAMIN MOORE, PITTSBURGH PAINTS	REFER TO PATTERN PLANS AND FLOOR PLANS FOR INSTALLATION PATTERN         DISTRICT STANDARD WHITE
2 PAINT E-1 PRECATALYZED EPOXY PAINT	SHERWIN WILLIAMS SHERWIN WILLIAMS		GAUNTLET GRAY OFF WHITE	SW 7019 SW 1095			X	BENJAMIN MOORE, PITTSBURGH PAINTS BENJAMIN MOORE, PITTSBURGH PAINTS	DOOR FRAMES DISTRICT STANDARD WHITE
1 PORCELAIN TILE	CAESAR CERAMICS	LINK	CHAIN		12" X 24"	X	<u> </u>		1/2 BOND INSTALLATION PATTERN   GROUT: TBD
B-1         PORCELAIN TILE BASE           -1         RUBBER BASE	CAESAR CERAMICS TARKETT	LINK TRADITIONAL DURACOVE			CUT 6" X 24" 4' X 120" COIL5	X	X	 FLEXCO, MANNINGTON, ROPPEE	TILE CUT FROM 12" X 24" TILE   REFER TO TYPICAL TILE DETAILS   GROUT: TBD
F-1 TEXTILE COMPOSITE FLOORING	J & J FLOORING		ZONE	1843 / 1560	24" X 24"	X			ASHLAR INSTALLATION
HYBRID VINYL TILE TO CARPET TILE	PORCEL	LAIN TILE TO HYBRID VINYL TILE	CARP	PET TILE TO EXISTING CARPET TILE					
OR TEXTILE COMPOSITE FLOORING			\					-	A2
HYBRID VINYL TILE			4	CARPET TILE			CARPET TIL	E	
	NE TRANSITION, 48 GREY	PORCELAIN TILE SCHLUTER RENO-U	- SATIN ANODIZED (AE)	JOHNSONITE SL	LIMLINE TRANSITION, 48 GREY. CONFIRM ANSITION IS SUFFICENT FOR APPLICATION	1 IN FIELD		SLIMLINE TRANSITION, 48 GREY. CONFIRM IN FIELD	$\rightarrow$
CARPET TILE		HYBRID VINYL TILE					EXISTING VC		5
		THINSET OR MORTA	R			m	くし		
TYPICAL FLOORING	IRANSITIONS		$\smile$		$\sim$ $\sim$ $\sim$		$\sim$ $\sim$		-
PORCELAIN TILE WALL BASE AT BATHRC	DM WALLS		SOFT JOINTS						
PORCELAIN TILE WALL BASE AT BATHRO CERAMIC OR PORCELAIN WA SCHLUTER JOLLY - SATIN AN TRANSITION GROUT COLOR OF JOLLY TRIM CUT PORCELAIN TILE BASE SCHLUTER DILEX-AHK - SAT PORCELAIN FLOOR TILE - REFER TO SPECIFICATIONS TYPICAL TILE DETA 3" = 1'-0"	LL TILE DDIZED ALUMINUM IN OPPOSITE SIDES	CEILING, DOOR FRAM FIXED BUILDING ELEM PROVIDE GROUT MAN MATCHED SEALANT PORCELAIN OR CERA THINSET OR MORTAR	E, OR OTHER ENT IUFACTURE'S COLOR MIC TILE, TYP.	PROVIDE GROUT MANUFA MATCHED SEALANT PORCELAIN OR CERAMIC THINSET OR MORTAR					
CERAMIC OR PORCELAIN WA SCHLUTER JOLLY - SATIN AN TRANSITION GROUT COLOR OF JOLLY TRIM CUT PORCELAIN TILE BASE SCHLUTER DILEX-AHK - SAT PORCELAIN FLOOR TILE - REFER TO SPECIFICATIONS	LL TILE DDIZED ALUMINUM IN OPPOSITE SIDES	FIXED BUILDING ELEM PROVIDE GROUT MAN MATCHED SEALANT PORCELAIN OR CERA	E, OR OTHER ENT IUFACTURE'S COLOR MIC TILE, TYP.	MATCHED SEALANT PORCELAIN OR CERAMIC					
CERAMIC OR PORCELAIN WA SCHLUTER JOLLY - SATIN AN TRANSITION GROUT COLOR OF JOLLY TRIM CUT PORCELAIN TILE BASE SCHLUTER DILEX-AHK - SAT PORCELAIN FLOOR TILE - REFER TO SPECIFICATIONS	LL TILE DDIZED ALUMINUM IN OPPOSITE SIDES	FIXED BUILDING ELEM PROVIDE GROUT MAN MATCHED SEALANT PORCELAIN OR CERA	E, OR OTHER ENT IUFACTURE'S COLOR MIC TILE, TYP.	MATCHED SEALANT PORCELAIN OR CERAMIC					
CERAMIC OR PORCELAIN WA SCHLUTER JOLLY - SATIN AN TRANSITION GROUT COLOR OF JOLLY TRIM CUT PORCELAIN TILE BASE SCHLUTER DILEX-AHK - SAT PORCELAIN FLOOR TILE - REFER TO SPECIFICATIONS TYPICAL TILE DETA	LL TILE DDIZED ALUMINUM IN OPPOSITE SIDES	FIXED BUILDING ELEM PROVIDE GROUT MAN MATCHED SEALANT PORCELAIN OR CERA	E, OR OTHER ENT IUFACTURE'S COLOR MIC TILE, TYP.	MATCHED SEALANT PORCELAIN OR CERAMIC					
CERAMIC OR PORCELAIN WA SCHLUTER JOLLY - SATIN AN TRANSITION GROUT COLOR OF JOLLY TRIM CUT PORCELAIN TILE BASE SCHLUTER DILEX-AHK - SAT PORCELAIN FLOOR TILE - REFER TO SPECIFICATIONS TYPICAL TILE DETA	LL TILE DDIZED ALUMINUM IN OPPOSITE SIDES	FIXED BUILDING ELEM PROVIDE GROUT MAN MATCHED SEALANT PORCELAIN OR CERA	E, OR OTHER ENT IUFACTURE'S COLOR MIC TILE, TYP.	MATCHED SEALANT PORCELAIN OR CERAMIC					
CERAMIC OR PORCELAIN WA SCHLUTER JOLLY - SATIN AN TRANSITION GROUT COLOR OF JOLLY TRIM CUT PORCELAIN TILE BASE SCHLUTER DILEX-AHK - SAT PORCELAIN FLOOR TILE - REFER TO SPECIFICATIONS TYPICAL TILE DETA	LL TILE DDIZED ALUMINUM IN OPPOSITE SIDES	FIXED BUILDING ELEM PROVIDE GROUT MAN MATCHED SEALANT PORCELAIN OR CERA	E, OR OTHER ENT IUFACTURE'S COLOR MIC TILE, TYP.	MATCHED SEALANT PORCELAIN OR CERAMIC					
CERAMIC OR PORCELAIN WA SCHLUTER JOLLY - SATIN AN TRANSITION GROUT COLOR OF JOLLY TRIM CUT PORCELAIN TILE BASE SCHLUTER DILEX-AHK - SAT PORCELAIN FLOOR TILE - REFER TO SPECIFICATIONS TYPICAL TILE DETA	LL TILE DDIZED ALUMINUM IN OPPOSITE SIDES	FIXED BUILDING ELEM PROVIDE GROUT MAN MATCHED SEALANT PORCELAIN OR CERA	E, OR OTHER ENT IUFACTURE'S COLOR MIC TILE, TYP.	MATCHED SEALANT PORCELAIN OR CERAMIC					







FIRST FLOOR FINISH PLAN - UNIT A







 $\frac{\text{FIRST FLOOR FINISH PLAN - UNIT B}}{1/8" = 1'-0"}$ 

	NO	TES - FINISH PLANS
	1	FINISH TAGS APPLY TO LIKE MATERIALS IN ENTIRE ROOM. I.E. ( ONLY CALLOUT ONE RUN OF CASEWORK, BUT ALL CASEWORK SAME FINISHES, UNLESS TAGGED DIFFERENTLY.
	2	CASEWORK FINISH TAGS DO NOT APPLY TO CUSTOM MILLWOR ENLARGED MILLWORK DETAILS FOR FINISH MATERIALS.
	3	REFER TO ENLARGED FINISH PLANS AND PATTERN PLANS FOR A DETAILS.
	4	DASHED LINE INDICATES LINE OF CEILING ABOVE, REFER TO RE
	5	WHERE NO FINISH TAG IS SHOWN ALL EXISTING FINISHES ARE OTHERWISE NOTED.
$\left( \right)$	KE	YED NOTES - INTERIOR - FINISH PLAN
	1	ALIGN FLOORING TO CORNER
A2	2	HVT TO BE INSTALLED IN A MONOLITHIC PATTERN
3	3	STORAGE ROOM TO RECEIVE HVT-4 AND RB-1
	4	PAINT WALL TO MATCH EXISTING ADJACENT FINISHES
	ノ	



SYMBOL	DESCRIPTION	SYMBOL
	BALANCING VALVE	CW
	CHECK VALVE	
	GATE VALVE	HWR
	BALL VALVE	G
—	BUTTERFLY VALVE	IW
	GLOBE VALVE	SAN
	PRESSURE REDUCING VALVE	V
	SOLENOID VALVE	ST
101/101-	REDUCED PRESSURE BACKFLOW PREVENTER	
×	TEMPERATURE-PRESURE RELIEF VALVE	— —st-
	STRAINER	CW
+	WALL HYDRANT	HW
——————————————————————————————————————	GAS VALVE	HWR
]	PIPE ELBOW	G
0	RISER UP	W
	RISER DN	SAN
	BRANCH UP	V
	BRANCH DN	ST
D	REDUCER	
	UNION	ST
]	САР	
— — <del>)</del> —	45° DOWN	
<b>—</b>	DIRECTION OF FLOW IN PIPE	0
——————————————————————————————————————	BLIND FLANGE	wco
<b>—</b>	POINT OF NEW CONNECTION TO EXISTING	
$\overline{\mathbf{O}}$	POINT OF DISCONNECT FROM EXISTING	
BFP	BACKFLOW PREVENTER	

NOTE: ALL SYMBOLS SHOWN MAY NOT APPEAR ON ALL DRAWINGS.

FIXTURE UNIT VALUES								
	DRAINAGE	SUPPLY						
FIXTURE	DFU	HW	cw	TOTAL				
WATER CLOSET (FLUSH VALVE)	4		10	10				
URINAL	2		5	5				
LAVATORY	1	1.5	1.5	2				

CHAPTER 7, TABLE 709.1. SUPPLY FIXTURE UNIT VALUES TAKEN FROM THE 2021 MICHIGAN PLUMBING CODE, APPENDIX E, TABLE E101B.

WATER HAMMER ARRESTER SCHEDULE								
PDI RATING A B C D E F								
FIXTURE UNIT CAP	1-11	12-32	33-60	61-113	114-154	155-330		
WATER HAMMER ARREST 1. PLUMBING CONTRAC ARRESTERS. REFER	FOR SHALL BE	RESPONSIBL						

• •		0551/05	MODEL NO	DTI/UD	GALLONS	FIRST HOUR	UR GPH @	DIMENSIONS		WATER	VENT	GAS	NOTES
AG	LOCATION	SERVICE	MODEL NO.	BTU/HR	STORAGE	RATING	100°F RISE	DIAMETER	HEIGHT	CONN.	CONN.	CONN.	NOTES
/H-1	MECH. ROOM 107	BUILDING'S DOMESTIC HOT WATER SYSTEM	LC2PDV50H	76,000	50	125	80	24"	67-7/16"	3/4"	3"	1/2"	1, 2, 3, 4

TABLE E101B.

DOMESTIC WATER EXPANSION TANK SCHEDULE									
TAG	LOCATION	SERVICE	MODEL NO.	GALLONS CAPACITY (TOTAL VOL.)	DIMEN DIAMETER	ISIONS HEIGHT	MAX. WORKING PRESSURE	SYSTEM CONNECTION	NOTES
DXT-1	MECH. ROOM 107	DOMESTIC WATER HEATER	ST-5	2.0	8"	12-5/8"	150 PSI	3/4"	1
OMESTIC W	ATER EXPANSION TANK SCHE	DULE NOTES:							

1. BASED ON AMTROL, THERM-X-TROL THERMAL EXPANSION TANK ABSORBERS (NON-ASME). MAXIMUM OPERATING TEMPERATURE 200°F.

PLUMBING RECIRCULATION PUMP											
TAG	LOCATION	SERVICE	MODEL NO.	GPM	HEAD	WATTS	RPM	F.L. AMPS	VOLTAGE	NOTES	
RCP-1	MECH. ROOM 107	BUILDING DOMESTIC HOT WATER SYSTEM	NBF-10	1.0	8.0	52	2800	0.46	115V/1PH	1, 2, 3	
PLUMBING CIRCULATION PUMP SCHEDULE NOTES         1. BASED ON BELL & GOSSETT LEAD-FREE BRONZE, SYSTEM LUBRICATED CIRCULATOR. PROVIDE WITH COMBINATION AQUASTAT AQS-3/4 AND AUTOMATIC TIMER KIT TC-1.         2. INSTALL PER MANUFACTURER INSTRUCTIONS.         3. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.											

		PLUMBING ABBREVIATIONS						
DESCRIPTION	AAV	AIR ADMITTANCE VALVE	F	FAHRENHEIT	0	OXYGEN		
DOMESTIC COLD WATER	AC	AIR COMPRESSOR	FBO	FURNISHED BY OTHERS	O.C.	ON CENTER		
	AD	AREA DRAIN	FCO	FLOOR CLEANOUT	OD	OVERFLOW DRAIN		
	AFF	ABOVE FINISH FLOOR	FD	FLOOR DRAIN	OI	OIL INTERCEPTOR		
DOMESTIC HOT WATER	AHJ	AUTHORITY HAVING JURISDICTION	FF	FINISH FLOOR	OSW	OPEN SITE WASTE		
	AP	ACCESS PANEL	FFA	FROM FLOOR ABOVE	OV	OIL VENT		
DOMESTIC HOT WATER RETURN	ARCH	ARCHITECTURAL, ARCHITECTURE	FFB	FLOM FLOOR BELOW	OIL WASTE	OIL WASTE		
	AUX	AUXILIARY	FFE	FINISHED FLOOR ELEVATION	PBV	PRESSURE BALANCING VALVE		
IATURAL GAS	AV	ACID VENT	FIXT	FIXTURE	PC	PLUMBING CONTRACTOR		
	AVTR	ACID VENT THRU ROOF	FL, FLR	FLOOR	PH	PHASE		
	AW	ACID WASTE	FPS	FEET PER SECOND	PG	PRESSURE GAUGE		
IDIRECT WASTE	BFP	BACKFLOW PREVENTER	FPWH	FROST-PROOF WALL HYDRANT	PLUMB	PLUMBING		
	BHP	BRAKE HORSE POWER	FS	FLOOR SINK	PKG	PACKAGE		
ANITARY (ABOVE GROUND)	BOB	BOTTOM OF BEAM	FSC	FOOD SERVICE CONTRACTOR	POC	POINT OF CONNECTION		
	BOP	BOTTOM OF PIPE	FT HD	FEET IN HEAD	PPM	PRTS PER MILLION		
	BTU	BRITISH THERMAL UNITS	FT	FEET, FLUSH TANK	PRV	PRESSURE REDUCING VALVE		
/ENT	BTUH	BRITISH THERMAL UNITS/HOUR	FV	FLUSH VALVE	PP	PLUMBING PUMP		
	BV	BALL VALVE, BALANCING VALVE	G	NATURAL GAS	PSI	POUNDS PER SQUARE INCH		
TORM (ABOVE GROUND)	BWV CA	BACKWATER VALVE COMPRESSED AIR	GALV GC	GALVANIZED GENERAL CONTRACTOR	PSIG QTY	POUNDS PER SQUARE INCH GAUGE QUANTITY POOL CONDUCTOR		
ANITARY SEWER (UNDERGROUND)	CALC	CALCULATIONS	GI	GREASE INTERCEPTOR	RC	ROOF CONDUCTOR		
	CAP	CAPACITY	GPF	GALLONS PER FLUSH	RD	ROOF DRAIN		
	CB	CATCH BASIN	GPH	GALLONS PER HOUR	RPBP	REDUCED PRESSURE BACKFLOW PREVENT		
TORM SEWER (UNDERGROUND)	CD	CONDENSATE DRAIN	GPM	GALLONS PER MINUTE	RPM	REVOLUTION PER MINUTE		
	CFH	CUBIC FEET PER HOUR	GW	GREASE WASTE	S, SK	SINK		
EXISTING DOMESTIC COLD WATER	CFM	CUBIC FEET PER MINUTE	HB	HOSE BIBB	S, SAN	SANITARY		
	CI	CAST IRON	HD	HUB DRAIN	SB	SETTLING BASIN		
	CLG	CEILING	HD	HEAD (PRESSURE)	SCV	SUPERVISED CONTROL VALVE		
XISTING DOMESTIC HOT WATER	CM	CENTIMETER	HP	HORSE POWER	SCW	SOFTENED DOMESTIC COLD WATER		
	CO	CLEANOUT	HVAC	HEATING/VENTILATION/AIR CONDITIONING	SEP	SEWAGE EJECTOR PUMP		
XISTING DOMESTIC HOT WATER RETURN	COL	COLUMN	HW	DOMESTIC HOT WATER	SEV	SEWAGE EJECTOR VENT		
	COMP	COMPRESSOR	HWP	DOMESTIC HOT WATER PUMP	SF, SQ. FT.	SQUARE FOOT		
	CONC	CONCRETE	HWR	DOMESTIC HOT WATER RETURN	SH	SHOWER		
XISTING NATURAL GAS	COND	CONDENSATE	HZ	HERTZ	SOV	SHUT-OFF VALVE		
	CONN	CONNECTION	HYD	HYDRAULIC	SP	SUMP PUMP		
XISTING WASTE (ABOVE GROUND)	CONT	CONTINUATION	ID	INSIDE DIAMETER	SS	SERVICE SINK		
	CS	CUP SINK	IE	INVERT ELEVATION	SSD	SUB-SOIL DRAIN		
	CW	DOMESTIC COLD WATER	IM	ICE MAKER	ST	STORM		
XISTING SANITARY (ABOVE GROUND)		DOUBLE CHECK VALVE DOUBLE DETECTOR CHECK VALVE	IN IN INSUL	INCH INSULATION	SYS T, THERM	SYSTEM THERMOMETER		
XISTING VENT	DEG DF	DEGREE DRINKING FOUNTAIN	IW KW	INDIRECT WASTE KILOWATT, KITCHEN WASTE	TEMP TFA TFB	TEMPERATURE TO FLOOR ABOVE		
KISTING STORM (ABOVE GROUND)	DIA DIM DIR	DIAMETER DIMENSION DEIONIZED WATER RETURN	LA LAV LBS	LAB AIR LAVATORY POUNDS	TMV TP	TO FLOOR BELOW THERMOSTATIC MIXING VALVE TRAP PRIMER		
XISTING SANITARY SEWER (UNDERGROUND)	DIW	DEIONIZED WATER	LOC	LOCATION	T&P	TEMPERATURE & PRESSURE		
	DN	DOWN	LP	LOW POINT	TS	TAMPER SWITCH		
XISTING STORM SEWER (UNDERGROUND)	DPT	DOMESTIC PRESSURE TANK	LPG	LIQUID PROPANE GAS	TW	TEMPERED WATER		
	DR	DRAIN	LV	LAB VENT	TYP	TYPICAL		
	DS	DOWNSPOUT	LVAC	LAB VACUUM	U, UR	URINAL		
XISTING PIPING TO REMAIN	DST	DOMESTIC WATER STORAGE TANK	LWH	LAB WATER HEATER	U/F	UNDERFLOOR		
	DW	DISHWASHER	MAX	MAXIMUM	U/G	UNDERGROUND		
XISTING PIPING TO BE REMOVED	DWBP	DOMESTIC WATER BOOSTER PUMP	MBH	THOUSAND BRITISH THERMAL UNIT	UNO	UNLESS NOTED OTHERWISE		
	DWG	DRAWING	MC	MECHANICAL CONTRACTOR	V	VENT		
	DWH	DOMESTIC WATER HEATER	MECH	MECHANICAL	VAC	VACUUM		
LOOR CLEANOUT	DWS	DOMESTIC WATER SOFTENER	MH	MANHOLE	VACV	VACUUM VENT		
	DXT	DOMESTIC EXPANSION TANK	MIN	MINIMUM	VB	VACUUM BREAKER		
/ALL CLEANOUT	EA	EACH	MINS	MINUTES	VEL	VELOCITY		
	EEW	EMERGENCY EYEWASH	MB, MSB	MOP SERVICE BASIN	VERT.	VERTICAL		
	EFF	EFFICIENCY	MS	MOP SINK	VOL	VOLUME		
	EL	ELEVATION	N/A	NOT-APPLICABLE	VTR	VENT THRU ROOF		
	EM.EW, EW	EMERGENCY EYEWASH	NB	NEUTRALIZING BASIN	VS	VENT STACK		
XTURE SUPPLY AIR CHAMBER	EM.SH, ES	EMERGENCY SHOWER	NFWH	NON-FREEZE WALL HYDRANT	W	WASTE		
	EQUIP	EQUIPMENT	NIC	NOT IN CONTRACT	W/	WITH		
	EWC	ELECTRIC WATER COOLER	NO.	NUMBER	WC	WATER CLOSET		
	EWH	ELECTRIC WATER HEATER	NPW	NON-POTABLE WATER	WCO	WALL CLEANOUT		
	ET	EXPANSION TANK	NPCW	NON-POTABLE COLD WATER	WH	WATER HEATER, WALL HYDRANT		
	EXIST, EX.	EXISTING	NOHW	NON-POTABLE HOT WATER	WHA	WATER HAMMER ARRESTOR		
	EXP	EXPANSION	NPHWR	NON-POTABLE HOT WATER RETURN	WS	WASTE STACK		
	EWH	ELECTRIC WATER HEATER	NTS	NOT TO SCALE	W/O	WITHOUT		

NOTE: ALL ABBREVIATIONS SHOWN MAY NOT APPEAR ON ALL DRAWINGS.

	IXTURE	SAN	HW	cw	VENT	
LAVATORY		1-1/4"	3/8"	3/8"	1-1/4"	
WATER CL (FLUSHOM	OSET ETER VALVE)	4"		1"	2"	
URINAL (FLUSHOM	ETER VALVE)	2"		3/4"	1-1/2"	
1. DRAINAO CHAPTE	<b>T VALUES NOTES</b> : E FIXTURE UNIT VALUE R 7, TABLE 709.1. FIXTURE UNIT VALUES	(				

MINIMUM SIZE CONNECTION

TAG	ITEM	MANUFACTURER	NAME	MODEL NO.		DESCRIPTION
WC-1	WATER CLOSET	AMERICAN STANDARD	AFFWALL (15" HEIGHT)	3351.101	FIXTURE: FLUSH VALVE: SEAT: CARRIER:	WALL HUNG, ELONGATED BOWL, VITREOUS CHINA, WHITE, SIPHON JET, 1-1/2-INCH INLET SPUD, DUAL FLUSH 1.6/1.1 GPF. MANUAL, AMERICAN STANDARD #6047.121.002, TOP SPUD, DUAL FLUSH 1.6/1.1 GPF. CENTOCO, HEAVY DUTY, OPEN FRONT, SOLID PLASTIC, SLOW CLOSE, MODEL NO. 500STSCCSS (WHITE). REFER TO PLUMBING SPECIFICATIONS.
WC-2	WATER CLOSET (ADA)	AMERICAN STANDARD	AFFWALL (17" HEIGHT)	3351.101	FIXTURE:	SAME AS WC-1, EXCEPT MOUNT AT ADA HEIGHT. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
UR-1	URINAL	AMERICAN STANDARD	TRIMBROOK	6561.017	FIXTURE: FLUSH VALVE: CARRIER:	WALL HUNG, VITREOUS CHINA, WHITE, SIPHON JET, 3/4-INCH INLET SPUD, 2" OUTLET, 1.0 GPF, WITH GRID STRAINER. MANUAL, SLOAN 186-1.0, EXPOSED FLUSHOMETER, CHROME PLATED. REFER TO PLUMBING SPECIFICATIONS.
UR-2	URINAL (ADA)	AMERICAN STANDARD	TRIMBROOK	6561.017	FIXTURE:	SAME AS UR-2, EXCEPT MOUNT AT ADA HEIGHT. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
L-1	LAVATORY (ADA)	AMERICAN STANDARD	LUCERNE (31" TO 34" HEIGHT)	0355.012	FIXTURE: FAUCET: STOPS: TRAP: ACCESSORIES:	WALL HUNG, 4-INCH CENTERS, VITREOUS CHINA, 20"x18" (WHITE), WITH GRID STRAINER. ADA COMPLIANT. MOEN M-DURA MODEL 94170F5, MANUAL SINGLE HANDLE FAUCET, 0.5 GPM, CHROME FINISH. ADA COMPLIANT. 1/2" CHROME PLATED, ANGLE SUPPLY WITH LOOSE KEY. CHROME PLATED P-TRAP. TRUEBRO, LAV-GUARD, UNDERSINK PROTECTIVE PIPE. REFER TO PLUMBING SPECIFICATIONS FOR CARRIER.

SYSTEM.

PLUMBING SPECIALTY SCHEDULE											
TAG	ITEM	MANUFACTURER	NAME	MODEL NO.		DESCRIPTION					
FCO	FLOOR CLEANOUT	ZURN		CO1	FIXTURE:	NO-HUB, CAST IRON BODY, ADJUSTABLE CLEANOUT SQUARE COVER. CLEANOUT COVER FINISH BY ARCHITECT.					
					$\frown \frown $						
FD-1	FLOOR DRAIN	MIFAB		F1100-C-S	FIXTURE: TRAP SEAL:	LACQUERED CAST IRON BODY, ANCHOR FLANGE, 5"X5" HEAVY DUTY, POLISHED STAINLESS STEEL SQUARE STRAINER, HEEL PROOF GRATE. JAY R SMITH QUAD CLOSE TRAP SEAL 2692-03. ASSE-1072.					
				- mun	mm	······································					
TMV-1	THERMOSTATIC MIXING VALVE	WATTS		LFUSG-B	FIXTURE:	ASSE 1070 LISTED FOR SINGLE FIXTURE USE. SET TEMPERATURE TO 110° INSTALL IN ALL LAVATORIES AND SINKS.					
WCO	WALL CLEANOUT	ZURN		Z11446	FIXTURE:	NICKEL BRONZE BODY. NO-HUB INLET, DECORATIVE FACE OF WALL FLAN AND OUTLET NOZZLE, WITH REMOVABLE STAINLESS STEEL SCREEN.					

# GENERAL PLUMBING NOTES

- 1. DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC AND INDICATE GENERAL LOCATION, TYPE, LAYOUT AND EQUIPMENT REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FIXTURE LOCATIONS AND DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE PIPING, CONNECTIONS, FITINGS, VALVES, OFFSETS AND ALL MATERIALS NECESSARY FOR A COMPLETE AND OPERABLE
- SYSTEM. 2. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY GOVERNING CITY AND THE AUTHORITY HAVING JURISDICTION. PUCHASE ALL PERMITS
- ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE. 3. COORDINATE PLUMBING SYSTEMS WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, AND OWNER REQUIREMENTS. PROVIDE PIPE RISERS, DROPS, AND OFFSETTS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES
- BEFORE STARTING WORK.
- 4. VERIFY SERVICE CONNECTION POINTS, SIZES, ELEVATIONS AND METERING LOCATIONS FOR PROJECT WITH LOCAL UTILITY COMPANIES AND/OR CIVIL ENGINEER, AS APPLICABLE.
- 5. COORDINATE ALL ROUGH-IN LOCATIONS WITH ARCHITECTURAL PLANS, FOOD SERVICE CONSULTANT DRAWINGS, AND EQUIPMENT.
- 6. COORDINATE PIPING AND EQUIPMENT WITH ALL OTHER TRADES. 7. NO PIPING SHALL BE INSTALLED ABOVE ELECTRICAL PANELS AND EQUIPMENT.
- 8. CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION TO ENSURE THERE IS
- ADEQUATE PRESSURE FOR THE DOMESTIC WATER AND FIRE SUPPRESSION SYSTEMS. 9. INSTALL PIPING AS HIGH AS POSSIBLE IN ROOMS WITH EXPOSED CEILINGS.
- 10. PROVIDE HANGERS AND SUPPORTS AS REQUIRED BY CODE.
- 11. FIRE/SMOKE STOP ALL WALL, FLOOR, AND CEILING PENETRATIONS WHERE REQUIRED TO MAINTAIN FIRE/SMOKE SEPARATION AND WALL INTEGRITY. USE U.L. LISTED MATERIAL.
- 12. ALL HAND WASHING SINKS SHALL HAVE CONTROLS THAT LIMIT THE HOT WATER TEMPERATURE TO 110°F MAXIMUM.
- 13. ALL ADA FIXTURES SHALL COMPLY WITH CURRENT ADA REQUIREMENTS.
- 14. ALL SHUT-OFF VALVES, CLEANOUTS, AND WATER HAMMER ARRESTORS THAT ARE LOCATED IN AN INACCESSIBLE LOCATION SHALL BE PROVIDED WITH AN ACCESS DOOR.
- 15. PROVIDE DI-ELECTRIC FITTINGS WHERE ANY DISSIMILAR METALS ARE CONNECTED. 16. MAINTENANCE LABEL SHALL BE AFFIXED TO ALL PLUMBING EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED TO THE OWNER.
- 17. ALL NEW HOT AND COLD WATER LINES SHALL BE SANITIZED PER 2021 MI PLUMBING CODE, SECTION 610.1 OR LOCAL WATER DEPARTMENT REQUIREMENTS. FLUSH AND TEST SYSTEM FOR LEAKS. PLUMBING CONTRACTOR IS RESPONSIBLE FOR THE PROPER AND LEAK FREE OPERATION OF THE

CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS, PIPING SUPPORTS, ETC. FOR A COMPLETE AND OPERABLE SYSTEM.
 CONTRACTOR TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS.

PLUMBING SPECIALTY SCHEDULE NOTES:
1. INSTALL PLUMBING FIXTURES, EQUIPMENT, AND ACCESSORIES PER MANUFACTURER RECOMMENDATIONS.
2. CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS, PIPING SUPPORTS, ETC. TO INSTALL EACH PLUMBING FIXTURE PER MANUFACTUER INSTALLATION INSTRUCTIONS AND TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS.







# FIRST FLOOR OVERALL PLUMBING DEMO PLAN SCALE: 1/16" = 1'-0"

# PLUMBING DEMOLITION NOTES

- A. EXISTING PLUMBING SYSTEMS SHOWN ON THIS DRAW ARE BASED ON EXISTING PLANS AND FIELD OBSERVA OF ACCESSIBLE AREAS. CONTRACTOR SHALL FIELD V EXACT LOCATION AND SIZES OF EXISTING SERVICES TO COMMENCING WORK. B. CONTRACTOR SHALL PROTECT ALL EXISTING SERVICE
- REMAIN. C. ALL MATERIALS REMOVED AND NOT TO BE REUSED SH BECOME PROPERTY OF THE CONTRACTOR AND SHALL REMOVED FROM THE SITE.

# PLUMBING KEYED NOTES









2 ENLARGED PLUMBING DEMO PLAN - B101/B102 PD 101 1/4" = 1'-0"







7. EXISTING FIXTURE CARRIER TO BE SALVAGED/REUSED

WITH NEW FIXTURE.

PLUMBING DEMOLITION NOTES A. EXISTING PLUMBING SYSTEMS SHOWN ON THIS DRAWING ARE BASED ON EXISTING PLANS AND FIELD OBSERVATIONS OF ACCESSIBLE AREAS. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION AND SIZES OF EXISTING SERVICES PRIOR TO COMMENCING WORK. B. CONTRACTOR SHALL PROTECT ALL EXISTING SERVICES TO

REMAIN.

REMOVED FROM THE SITE.







# FIRST FLOOR OVERALL PLUMBING PLAN SCALE: 1/16" = 1'-0"

# PLUMBING GENERAL NOTES

- A. DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC SHOWING THE GENERAL LOCATION, TYPE, LAYOUT AN EQUIPMENT REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FIXTURE LOCATIONS. REFER T MANUFACTURER'S STANDARD INSTALLATION DRAWIN FOR EQUIPMENT CONNECTIONS, FITTINGS, VALVES, OFFSETS, AND ALL NECESSARY MATERIALS FOR A COMPLETE AND OPERABLE SYSTEM.
- B. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CO REQUIREMENTS AS APPROVED AND AMENDED BY GOVERNING CITY AND THE AUTHORITY HAVING JURISDICTION. PURCHASE ALL PERMITS ASSOCIATED THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY C
- C. COORDINATE PLUMBING SYSTEMS WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, A OWNER REQUIREMENTS. PROVIDE PIPE RISERS, DROPS AND OFFSETS AS REQUIRED FOR FIELD INSTALLATION A TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- D. COORDINATE ALL ROUGH-IN LOCATIONS WITH ARCHITECTURAL PLANS AND EQUIPMENT.
- E. NO PIPING SHALL BE INSTALLED ABOVE ELECTRICAL P AND ELECTRICAL EQUIPMENT. F. ALL SINKS AND LAVATORIES SHALL BE PROVIDED WITH SIGNAGE PER MICHIGAN'S FILTER FIRST LEGISLATION.

# PLUMBING KEYED NOTES

- 1. RECONNECT EXISTING FIXTURE TO REROUTED
- DOMESTIC WATER PIPING AS REQUIRED. 2. REFER TO ENLARGED PLAN 1 ON SHEET P 302 FOR PIPING INSTALLATION INSTRUCTIONS.
- . PIPING CONFIGURATION SIMILAR TO CLASSROOM B116 REFER TO ENLARGED PLAN 2 ON SHEET P 302.
- 4. RECONNECT EXISTING DOMESTIC WATER RISER IN KITCHEN. FIELD VERIFY EXACT PIPE LOCATION.



А. В. С. Е. <b>F.</b> <b>PL</b>	SHOWING THE GENERAL LOCATION, TYPE, LAYOUT AND EQUIPMENT REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FIXTURE LOCATIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS, FITTINGS, VALVES, OFFSETS, AND ALL NECESSARY MATERIALS FOR A COMPLETE AND OPERABLE SYSTEM. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY GOVERNING CITY AND THE AUTHORITY HAVING JURISDICTION. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE. COORDINATE PLUMBING SYSTEMS WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, AND OWNER REQUIREMENTS. PROVIDE PIPE RISERS, DROPS, AND OFFSETS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK. COORDINATE ALL ROUGH-IN LOCATIONS WITH ARCHITECTURAL PLANS AND EQUIPMENT. NO PIPING SHALL BE INSTALLED ABOVE ELECTRICAL PANELS AND ELECTRICAL EQUIPMENT. ALL SINKS AND LAVATORIES SHALL BE PROVIDED WITH SIGNAGE PER MICHIGAN'S FILTER FIRST LEGISLATION.		Acchiecture - Engineering - Interiors         Construction
		ADDENDUM #2 ISSUED FOR	02-28-2025 DATE
		PROJECT TITLE EDWARDSBURG EAGLE LAKE SCHOOL	
		OWNER EDWARDSBURG PUBLIC SCHOOLS	Edwardsburg, Michigan
	EAGLE LAKE SCHOOL	ING PLAN	025
		SHEET TITLE FIRST FLOOR OVERALL PLUMBING	date JANUARY 27, 2025
	KEY PLAN SCALE: NO SCALE	SHEET TITLE FIRST FLO(	ски страние с страни С страние с ст















PRINCIPAL B118

INSTALL PIPING MOUNTED AS -



# ENLARGED PLUMBING PLAN - A112/B141





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# ENLARGED PLAN PLUMBING PLAN - B145/B146 P 101 1/4" = 1'-0"



2 1/2"CW





CLASSROOM B116

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ROUTE PIPING EXPOSED UNDER -

EX. SINK

1/2"CW —

1/2"HW

THE SINK. KEEP PIPING AS TIGHT

AS POSSIBLE TO BACK WALL

2

P 101 1/4" = 1'-0"

- 1/2"CW DROP 1/2"HW DROP

1/2"HWR DROP

# ----- • • • 3/4"HWR<sup>,</sup> • • • - -----• • 1 1/4"HW<sup>,</sup> • • • • 1 1/4"HW • • -----BALANCING VALVE (0.5 GPM) 1/2"HV 1/2"CW - ROUTE PIPING EXPOSED UNDER THE SINK. KEEP PIPING AS TIGHT AS 1/2"HWR DROP -1/2"HW DROP 1/2"CW DROP POSSIBLE TO BACK WALL - INSTALL PIPING MOUNTED CLASSROOM B112 AS TIGHT AS POSSIBLE TO CLOSET WALL **ENLARGED PLUMBING PLAN - B112/B113**

P 101 1/4" = 1'-0"

P 101 1/4" = 1'-0"

• • 2 1/2"CW • • • • 2 1/2"CW • •

# AND ELECTRICAL EQUIPMENT.

F. ALL SINKS AND LAVATORIES SHALL BE PROVIDED WITH SIGNAGE PER MICHIGAN'S FILTER FIRST LEGISLATION.

# PLUMBING KEYED NOTES

- 1. INSTALL PIPE ENCASEMENT SOFFI-STEEL SYSTEM ON VERTICAL PIPING. PIPE ENCASEMENT FOOTPRINT SHALL
- BE SMALL AS POSSIBLE.
- 2. INSTALL PIPING MOUNTED AS TIGHT AS POSSIBLE TO STORAGE ROOM WALL.

A. DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT AND EQUIPMENT REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FIXTURE LOCATIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS OFFSETS, AND ALL NECESSARY MATERIALS FOR A COMPLETE AND OPERABLE SYSTEM.

PLUMBING GENERAL NOTES

- FOR EQUIPMENT CONNECTIONS, FITTINGS, VALVES,
- B. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY

- GOVERNING CITY AND THE AUTHORITY HAVING JURISDICTION. PURCHASE ALL PERMITS ASSOCIATED WITH
- THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- C. COORDINATE PLUMBING SYSTEMS WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, AND
- OWNER REQUIREMENTS, PROVIDE PIPE RISERS, DROPS, AND OFFSETS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY
- DISCREPANCIES BEFORE STARTING WORK. D. COORDINATE ALL ROUGH-IN LOCATIONS WITH
- ARCHITECTURAL PLANS AND EQUIPMENT. E. NO PIPING SHALL BE INSTALLED ABOVE ELECTRICAL PANELS



