# **AMPHITHEATER PUBLIC SCHOOLS 300 WING RENOVATION Amphitheater Public Schools** November 2021 **100% Construction Documents** SFB NO.: BRG-DSGN-00105





Job No. 17.14.55D



17.14.55D

DRAWN BY: SC CHECKED BY: KDB

-NOVEMBER 2021

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**Cover Sheet** 

**G1.0** 

#### **ABBREVIATIONS** NOT IN CONTRACT ANCHOR BOLT N.I.C. NOM. NO. N.T.S. A.B.C. A.C. AGGREGATE BASE COURSE NOMINAL NUMBER AIR CONDITIONING ADJ ADJACENT NOT TO SCALE A E C AFF ACID ETCHED CONCRETE 0/ 0.C. 0.D. 0.F. ABOVE FINISH FLOOR OVER OR ON ALLOW ALLOWANCE ALT ALTERNATE OUTSIDE DIAMETER ALUM ALUMINUM OUTSIDE FACE AMP A.P. AMPERE O.F.C.I. OWNER FURNISHED ACCESS PANEL A.T. ACOUSTICAL TILE O.F.O.I. AT AUTOMATIC AUTO OPNG. OPENING OPP. BD BOARD BUILDING LINE B.L. BLDG. BUILDING P.C. PULL CHAIN BLKG. BLOCKING PE BM. Bot. Brg. BEAM PERP. PERPENDICULAR BOTTOM PLATE PL BEARING PLAS BSMT. BASEMENT PL.GL. PLAS. LAM PLATE GLASS BTWN. BFTWFFN PLASTIC LAMINATE B.U. BUILT UP PLYWD. PLYWOOD PNL. CAB C.B. CABINET PR. PAIR PROJ. Pt CATCH BASIN PROJECT C.BD. CEMENT BOARD CEM. PTN. CEMENT PARTITION CEM. PLAS. CEMENT PLASTER PUB. PUR. PVC PTD. CER. CERAMIC PURLIN C.F.C.I. CONTRACTOR FURNISH POLYVINYL CHLORIDE CONTRACTOR INSTALL PAINTED CFM Ø CUBIC FEET PER MINUTE PHASE CHANNELS C.I. CAST IRON Q.T. QUARRY TILE CIR. C.J. CIRCUIT CONTROL JOINT C.L. CLG. CM. CMU C.O. COL. CENTER LINE RAD. RADIUS CEILING R.A. RCPT. RETURN AIR CULTURED MARBLE RECEPTACLE CONCRETE MASONRY UNIT R.D. **ROOF DRAIN** CLEAN OUT REC. REG. REINF. COLUMN REGISTER COMB. CONC. CONST. COMBINATION REENFORCEMENT CONCRETE REQ'D. CONSTRUCTION REV. REVISION CONT. CPT. CONTINUOUS RFG. CARPET RM. R.O. CSK. C.T. COUNTERSINK ROUGH OPENING CERAMIC TILE s.c. scwd. SOLID CORE C.W. COLD WATER SCHED. SECT. SQ. FT. SHT. SCHEDULE DET. DETAIL D.F. DRINKING FOUNTAIN DIM. DN. DO DR. DIMENSION DOWN SIM. SLV DITTO DOOR S.M. SPECS. SHEET METAL D.S. DOWN SPOUT SPECIFICATIONS DWG. DRAWING SPKR. SQ. S.S. S.STL. STD. STOR. SQUARE EACH EA. SERVICE SINK E.F. EACH FACE E.J. **EXPANSION JOINT** STANDARD ELEC. ELECTRICAL ELEV. ENT. ELEVATION STL. ENTRANCE STRUCT. STRUCTURAL EQ. EQUAL SUSPENDED CEILING SUSP. CLG. EQUIP. EQUIPMEN E.W. EACH WAY EWC EXH. ELECTRIC WATER COOLER T&G TONGUE AND GROOVE EXHAUST TEL. EXIST'G. EXISTING TH. THR. EXP. EXPANSION EXT. EXTERIOR T.O.B. EXISTING (E) T.O.C. T.O.F. TOP OF CURB F.D. FLOOR DRAIN T.O.M. FCO FLOOR CLEAN OUT T.O.W. FDN FOUNDATION T.S. TUBE STEEL F.E. FIRE EXTINGUISHER T.T.B. FIRE EXTINGUISHER CABINET FEC F.F.E. ΤV FINISH FLOOR ELEVATION TYP. FIN. FINISH FLSH. FLASHING FLR. FLOOR UNLESS NOTED OTHERWISE U.N.O. FLUOR. FLUORESCEN<sup>®</sup> F.S. FLOOR SINK V OR VENT VENTILATE FT. FEET VCP FTG. FOOTING VCT FURR. FURRING VERT. VTR VENT THRU ROOF GA. GAUGE GALV. GALVANIZED W/ GFRC GLASS FIBER WATER CLOSET W.C. REINFORCED CONCRET WCO WALL CLEAN OUT GLB GLUE LAMB BEAM W.I. GWB GYPSUM WALL BOARD WRGWB WATER RESISTANT H.B. HOSE BIB WSCT. H.C. HOLLOW CORE WT. WELDED WIRE MESH HDW. HARDWARE W.W.M. H.M. HOLLOW METAL WD. HORIZ. HORIZONTAL WDW. H.P. WATER PROOF HORSEPOWER W.P. HEIGHT W.R. WATER RESISTANT HT. HOT WATER H.W. HWR HOT WATER RETURN ICC. INTEGRAL COLOR CONCRETE I.D. INSIDE DIAMETER I.F. INSIDE FACE INFO. INFORMATION INS. INSULATION INT. INTERIOR JUNCTION BOX J.B. J.C. JANITOR'S CLOSET JST. JOIST JT. JOINT LAV LAVATORY MASONRY MAS. MAT. MATERIAL MAX. MAXIMUM M.B. MACHINE BOLT MCJ MASONRY CONTROL JOINT MECH. MECHANICAL MEMB. MEMBRANE MFG. MANUFACTURER м.н. MANHOLE MIN. MINIMUM MISC. MISCELLANEOUS M.L. MO METAL LATH MASONRY OPENING MTD. MTL. MULL. MOUNTED METAL

# BUILDING SECTION WALL SECTION DETAIL EXTERIOR ELEVATION INTERIOR ELEVATION **Detail or Section Name** Detail or Section Name Plan North section or detail identification number or letter number of sheet on which section or sheet on which detail is drawn condition is referenced ROOM NUMBER $\bigcirc$ CONSTRUCTION NOTE $\Diamond$ FIXTURE NOTE OPENING SYMBOL DEMOLITION NOTE ELEVATION (section) ELEVATION (plan) **REVISION NUMBER** $\square$

SYMBOLS LEGEND

ON CENTER

OPPOSITE

PAVEMENT

PIECE

PLASTER

PANEL

PUBLIC

RISER

RECESSED

REQUIRED

ROOFING

SOLID CORE WOOD DOOR

ROOM

SECTION

SHEET

SIMILAR

SPEAKER

STORAGE

STEEL

TREAD

THICK

TELEPHONE

THRESHOLD

TOP OF BEAM

TOP OF WALL

TELEVISION

TYPICAL

VERTICAL

WITH

TOP OF FOOTING

TOP OF MASONRY

VITRIFIED CLAY PIPE

WROUGHT IRON

WAINSCOT

WEIGHT

WOOD

WINDOW

GYPSUM WALL BOARD

VINYL COMPOSITION TILE

TELEPHONE TERMINAL BOARD

STAINLESS STEEL

SQUARE FOOT

SHORT LEG VERTICAL

PRESSURE TREATED

CONTRACTOR INSTALLED

OWNER FURNISHED

OWNER INSTALLED

CHE DR/

MULLION

# **MATERIALS**

EXISTING WALL REMOVED EXISTING WALL TO REMAIN

NEW WALL (REFER TO KEYNOTE)

EARTH

BASE COURSE

CONCRETE

CONCRETE MASONRY UNITS

BRICK

wood studs

ROUGH FRAMING

BLOCKING

FINISH LUMBER

PLYWOOD

METAL STUDS (SECTION)

STRUCTURAL STEEL

**BATT INSULATION** 

**RIGID INSULATION** 

CEMENT PLASTER

GYPSUM WALL BOARD

**CEILING TILE** 

ASPHALT

WELDED WIRE MESH

FULL HEIGHT INSULATION

STRUCTURAL STUDS

\_\_\_\_\_ \_ \_ \_ \_ \_ 12-06/02/012/012/012/012 2-012/012/012/012/012/012

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# **PROJECT TEAM**

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Contractor

TBD

# Campus Map

N.T.S.

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P3.1	PLUMBING SPECIFICATIONS



# APPLICABLE CODES

PROJECT HAS BEEN DESIGNED TO COMPLY WITH 2018 INTERNATIONAL BUILDING CODE (IBC) AND 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.





PROJECT NO: 17.14.55D

DATE: -NOVEMBER 2021

DRAWN BY: SC

CHECKED BY: KDB

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## Demolition Keynotes

- 1 REMOVE (E) PLASTER FRAME WALL. (E) ELECTRICAL CONDUIT AND RECEPTACLES IN WALL TO REMAIN. (E) SURFACE MOUNTED CONDUIT AND RECEPTACLES SHALL BE RE REMOVED AND REINSTALLED INSIDE NEW WALL.
- $\langle 2 \rangle$  remove (E) wood door and h.m. frame.
- $\langle 3 \rangle$  REMOVE (E) CASEWORK.
- $\langle 4 \rangle$  REMOVE (E) LINOLEUM FLOORING, INTEGRAL COVE BASE, AND RESILIENT BASE.
- $\langle 5 \rangle$  remove and reinstall (e) whiteboard.
- 6 SAWCUT AND REMOVE (E) CONC. SLAB AS REQUIRED TO REMOVE/REPLACE UNDERGROUND WASTE PIPING, SEE PLUMBING.
- $\langle 7 \rangle$  REMOVE (E) CONC. SIDEWALK. PROTECT (E) UTILITIES IN PLACE.
- $\langle 8 \rangle$  remove (E) conc. Locker base and metal lockers.
- $\langle 9 \rangle$  remove and reinstall (E) paper towel dispenser.
- $\langle \overline{10} \rangle$  remove and reinstall (e) soap dispenser.
- $\langle \overline{11} \rangle$  remove and reinstall (E) drying rack.
- $\langle 12 \rangle$  remove and reinstall (e) flag holder.
- (13) REMOVE AND REINSTALL (E) WOOD LABORATORY CASEWORK AS REQUIRED TO REMOVE/REPLACE WASTE PIPING, SEE PLUMBING.
- (E) 24" X 24" SUSPENDED ACOUSTICAL PANEL CEILING TO REMAIN. REPLACE GRID AND TILES AS REQUIRED BY NEW WORK.
- $\langle 15 \rangle$  REMOVE (E) FRAME WALL AS REQUIRED TO REPLACE VENT PIPING, SEE PLUMBING.

# Demolition General Notes

1. BUILDING AND SITE WILL BE OCCUPIED DURING CONSTRUCTION.

- 2. CONDITIONS SHOWN ARE FOR GUIDANCE AND GENERAL INFORMATION ONLY. CONTRACTOR SHALL VISIT THE SITE AND EVALUATE ALL EXISTING CONDITIONS IN THE FIELD AND PROVIDE FOR ALL COSTS RELATED TO ACCOMPLISHING THE WORK. NOTES SHOWN IN THE CONTRACT DOCUMENTS SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS, WHETHER OR NOT SPECIFICALLY REFERENCED.
- 3. CONTRACTOR SHALL PROTECT EXISTING STRUCTURES AND UTILITIES THAT ARE NOT TO BE REMOVED DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATION. DAMAGED SURFACES SHALL BE REPAIRED, AT NO ADDITIONAL COST, TO THEIR ORIGINAL CONDITION.
- 4. ALL SURFACES THAT AN EXISTING ITEM IS REMOVED FROM SHALL BE PATCHED AND REPAIRED TO MATCH ORIGINAL CONDITION OF THE SURFACE. IF THE SURFACE WILL BE ALTERED OR CHANGED BY THE CONSTRUCTION, PATCH AND REPAIR SHALL MEET CONSTRUCTION REQUIREMENTS. ALL PATCHING AND REPAIR SHALL BE WITH MATERIALS TO MATCH EXISTING U.N.O.
- 5. CONTRACTOR SHALL LEAVE AREAS AFFECTED BY DEMOLITION AND SURROUNDING AREAS CLEAN AT THE END OF THE WORK DAY. SURROUNDING AREAS NOT INCLUDED IN THE SCOPE OR LIMITS OF WORK SHALL BE PROTECTED FROM DUST AND DEBRIS.
- 6. DO NOT COMMENCE DEMOLITION WORK UNTIL OWNER HAS REMOVED EXISTING FURNISHINGS, FIXTURES, EQUIPMENT, ETC. AND HAS PROVIDED CONTRACTOR WITH WRITTEN NOTICE TO PROCEED.
- 7. CONTRACTOR SHALL ERECT AND MAINTAIN SAFETY BARRIERS, WARNING DEVICES, ENTRY PORTALS, ETC. AS NOTED IN SPECIFICATIONS TO PROTECT STAFF AND PUBLIC DURING ALL CONSTRUCTION ACTIVITIES.
- 8. THE ARCHITECT SHALL BE NOTIFIED OF ANY EXISTING BEARING WALL, FOUNDATION COMPONENT, STRUCTURAL MEMBER, ANCHORING CONDITION OR REUSED STRUCTURAL CONNECTION WHICH HAS BEEN COMPROMISED BY FIRE, WATER, DEMOLITION ACTIVITIES OR AGE, OR WHICH APPEARS TO BE SUBSTANDARD WITH RESPECT TO THE STANDARDS DEFINED BY CURRENT CODE PRACTICES OF CONSTRUCTION, FOR ASSESSMENT, PRIOR TO FURTHER WORK BEING CONDUCTED IN THE SUSPECT AREA.





05



PROJECT NO: 17.14.55D

DATE: -NOVEMBER 2021

evision schedule:

DESCRIPTION

DRAWN BY: SC CHECKED BY: KDB

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## Demolition Floor Plan



# Construction Keynotes

- 1 4" CONCRETE SIDEWALK.
- 2 NOTE NOT USED.
- (3) NOTE NOT USED.
- (4) REATTACH (E) BRICK VENEER TO FACE OF STEEL COLUMN USING WELDABLE VENEER TIES. REPLACE MORTAR AS REQUIRED TO MATCH (E). IF REQUIRED, LEVEL BRICK BEARING AT FOUNDATION USING MORTAR. MAX. THICKNESS IS 1/2".
- (5) REPOINT MORTAR WHERE CRACKED OR DEGRADED. CLEAN JOINTS PRIOR TO REPOINTING. MORTAR AND TOOL JOINTS SHALL MATCH (E). THOROUGHLY CLEAN EXPOSED MASONRY SURFACES OR EXCESS MORTAR AND FOREIGN MATTER AFTER MORTAR HAS CURED.
- 6 3-5/8" 25 GA. METAL STUDS @ 24" O.C. W/ 5/8" TYPE 'X' GWB FINISHED SIDE(S).
- (7) REINSTALL (E) WOOD LABORATORY CASEWORK.
- (8) REINSTALL (E) WHITEBOARD.
- (9) REINSTALL (E) FLAG HOLDER.



- 1. COORDINATE ALL WORK BETWEEN ARCHITECTURAL, MECHANICAL, AND CIVIL DRAWINGS. CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO BEGINNING WORK.
- 2. ALL DIMENSIONS ARE TO FACE OF METAL STUDS AND FACE OF MASONRY (UNLESS NOTED OTHERWISE). FINISH DIMENSIONS ARE NOTED WITH AN ASTERISK (\*).



Breckenridge

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CHECKED BY: DRAWN BY:	
	7 A4.1 A5.1   TYP. WOOD   EXPOSE (WV-1)   RESILIEN   3'-0"







OPENING S										
No.	Door Type	Door Matl.	Frame Type	Frame Matl.	Head	Jamb	Sill	Mυ		
302B	А	SCWD	1	H.M.	10/A5.1	11/A5.1				
302C	А	SCWD	1	H.M.	10/A5.1	11/A5.1				
304B	А	SCWD	1	H.M.	10/A5.1	11/A5.1				
304C	А	SCWD	1	H.M.	10/A5.1	11/A5.1				

### **OPENING SCHEDULE NOTES:**

1. PROVIDE ROOM IDENTIFICATION SIGN, SEE DETAILS 2 AND 3/A5.1 AND SPECIFICATIONS.









PLUMBING FIXTURE SCHEDULE											
				WASTE FIXTURE UNITS		WATER FIXTURE UNITS*		CONNECTION SIZES (INCHES) **			
MARK	FIXTURE	DESCRIPTION	QTY	FU	TOTAL	FU	TOTAL	WASTE	VENT	НОТ	COLD
P1	SINK	ELKAY DLR252210 3-HOLE, SINGLE BOWL, (21X15-3/4X10 INSIDE DIMENSIONS), SELF-RIMMING, 18 GA. STAINLESS STEEL SINK. PROVIDE CHICAGO FAUCET 786-GN8BVBE7CP W/ 1.5 GPM PRESSURE COMPENSATING AERATOR, WRIST BLADE HANDLES, 8" RIGID/SWING GOOSENECK SPOUT, W/ ATMOSPHERIC VACUUM BREAKER, SERRATED NOZZLE, STAINLESS STEEL BASKET DRAIN, ACID RESISTANT PIPING & P-TRAP. PROVIDE CHROME PLATED LOOSE KEY, QUARTER TURN ANGLE STOPS AND SUPPLIES.	2	2	4	2	4	2	1 1/2	1/2	1/2
		TOTAL FIXTURE UNITS			4		4				

\* PER 2018 IPC SECTION 604.1, THE WATER PIPE SIZE TO CONFORM TO AN ACCEPTED ENGINEERING PRACTICE. PIPE SIZE IS BASED ON USING IAMPO RECOMMENDATIONS THAT IS AN ACCEPTED ENGINEERING PRACTICE AND IS BASED ON LOW FLOW FIXTURES. \*\* FIXTURE SERVICE PIPE SIZE SHALL BE THE SIZE INDICATED WITH REDUCER (IF REQ'D) AS CLOSE TO FIXTURE CONNECTION AS POSSIBLE







#### PLUMBING GENERAL REQUIREMENTS

CODES: CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE FOLLOWING CODES: INTERNATIONAL BUILDING CODE (2018 EDITION), INTERNATIONAL MECHANICAL CODE (2018 EDITION), INTERNATIONAL PLUMBING CODE (2018 EDITION), INTERNATIONAL FUEL GAS CODE (2018 EDITION), INTERNATIONAL ENERGY CONSERVATION CODE (2018 EDITION) AND THE INTERNATIONAL FIRE CODE (2018 EDITION) AS AMENDED BY THE LOCAL GOVERNING AGENCY.

GENERAL: THE WORK COVERED BY THIS SPECIFICATION SHALL INCLUDE THE FURNISHING OF ALL MATERIALS, LABOR, TRANSPORTATION, TOOLS, PERMITS, FEES, INSPECTIONS, UTILITIES AND INCIDENTALS NECESSARY FOR THE COMPLETE INSTALLATION OF ALL WORK REQUIRED BY THE CONTRACT DRAWINGS.

DRAWINGS: THE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND CANNOT SHOW EVERY CONNECTION IN DETAIL OR EVERY PIPE IN ITS EXACT LOCATION. THESE DETAILS ARE SUBJECT TO THE REQUIREMENTS OF ORDINANCES AND ALSO STRUCTURAL AND ARCHITECTURAL CONDITIONS. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE STRUCTURAL AND FINISH CONDITIONS AND SHALL COORDINATE WITH THE SEPARATE TRADES IN ORDER TO AVOID INTERFERENCE BETWEEN THE VARIOUS PHASES OF WORK. WORK SHALL BE LAID OUT SO THAT IT WILL BE CONCEALED IN FURRED CHASES OR ABOVE CEILINGS, ETC., IN FINISHED PORTIONS OF THE BUILDING, UNLESS SPECIFICALLY NOTED OR INDICATED TO BE EXPOSED. WORK SHALL BE INSTALLED TO AVOID CRIPPLING OF STRUCTURAL MEMBERS. ALL WORK SHALL BE RUN PARALLEL OR PERPENDICULAR TO THE LINES OF THE BUILDING UNLESS OTHERWISE NOTED. THE APPROXIMATE LOCATION OF EACH ITEM IS INDICATED ON THE DRAWINGS. THESE DRAWINGS ARE NOT INTENDED TO GIVE COMPLETE AND EXACT DETAILS IN REGARD TO LOCATION. EXACT LOCATIONS ARE TO BE DETERMINED BY ACTUAL MEASUREMENTS OF THE BUILDING.

EQUIPMENT INSTALLATION: PROVIDE AND INSTALL UNIONS AT PROPER POINTS TO PERMIT REMOVAL OF PIPE AND EQUIPMENT WITHOUT DAMAGE TO OTHER PARTS OF THE SYSTEM. ALL EQUIPMENT SHALL BE INSTALLED IN A MANNER TO PERMIT ACCESS TO PARTS REQUIRING SERVICE WITHOUT DISASSEMBLY OF OTHER EQUIPMENT.

EXCAVATION AND BACKFILL: THE CONTRACTOR SHALL PROVIDE ALL EXCAVATION REQUIRED FOR THE INSTALLATION OF THE WORK. CONTRACTOR SHALL BACKFILL, COMPACT AND REPAIR CONCRETE OR PAVING TO MATCH EXISTING FINISH AS CLOSELY AS POSSIBLE.

EXISTING FACILITIES: LOSS OR DAMAGE TO EXISTING FACILITY CAUSED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO THE OWNER'S SATISFACTION AT NO COST TO THE OWNER. THE CONTRACTOR SHALL COORDINATE ALL WORK REQUIRED IN EXISTING AREAS WITH THE OWNER AND SHALL ARRANGE FOR ALL TEMPORARY UTILITY SERVICES, PROTECTION OF THE FACILITY AND ITS CONTENTS, BARRICADES, SAFETY DEVICES, ETC., REQUIRED TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL REMOVE AND REINSTALL EXISTING CONSTRUCTION IF REQUIRED TO ACCOMPLISH THE WORK. NOTIFY THE OWNER AT LEAST TWO DAYS IN ADVANCE OF ALL REQUIRED SERVICE OUTAGES.

SUBSTITUTIONS: EQUIPMENT OF EQUAL QUALITY TO THAT SPECIFIED MAY BE SUBSTITUTED PROVIDED IT MEETS OR EXCEEDS THE CAPACITY SCHEDULED, IS OF SIMILAR CONSTRUCTION, AND WILL FIT IN THE SPACE ALLOTTED WITH AMPLE SERVICE CLEARANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION WITH ALL OTHER TRADES (SUCH AS ELECTRICAL AND STRUCTURAL) OF ANY PRODUCT REQUIRING A CHANGE IN THE WORK OF THAT TRADE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY ADDITIONAL COSTS ASSOCIATED WITH SUCH A CHANGE. MATERIALS OF CONSTRUCTION SHALL BE AS SPECIFIED.

SUPPORTS, ANCHORS AND SLEEVES: SUPPORT HORIZONTAL PIPING WITH STEEL CLEVIS HANGERS AND VERTICAL PIPING WITH RISER CLAMPS. PROVIDE COPPER PLATED HANGERS AND CLAMPS FOR COPPER PIPING OR WRAP THE COPPER PIPE AT HANGERS WITH TWO LAYERS OF PVC TAPE OR EQUIVALENT. HANGER SPACING AND ROD SIZE SHALL BE IN ACCORDANCE WITH THE LOCAL CODE AND/OR ASHRAE STANDARDS. SEAL ALL WALL, ROOF, AND FLOOR PENETRATIONS.

SHOP DRAWINGS: PROVIDE SHOF EQUIPMENT FOR APPROVAL.

WARRANTY: PROVIDE TWO YEAR WAR UNDER THIS CONTRACT.

OPERATION AND MAINTENANCE MANU, MAINTENANCE.

TRAINING: CONTRACTOR SHALL PROVIDE EQUIPMENT.

CLEAN\_UP: CONTRACTOR SHALL MA CLEAN\_UP AT END OF CONSTRUCTION.

SHOP DRAWINGS: PROVIDE SHOP DRAWINGS AND MANUFACTURER'S DATA ON ALL PLUMBING FIXTURES, TRIM AND

WARRANTY: PROVIDE TWO YEAR WARRANTY FROM DATE OF FINAL ACCEPTANCE ON ALL LABOR AND MATERIALS PROVIDED

OPERATION AND MAINTENANCE MANUAL: PROVIDE A COMPLETE INDEXED, BOUND MANUAL OF ALL EQUIPMENT REQUIRING

TRAINING: CONTRACTOR SHALL PROVIDE A MINIMUM OF TWO HOURS TRAINING TO THE OWNER ON THE OPERATION OF ALL

CLEAN\_UP: CONTRACTOR SHALL MAINTAIN PREMISES IN CLEAN CONDITION AT END OF EACH DAY AND THOROUGHLY

PLUMBING:

PIPING (UNDERGROUND): ACID WASTE AND VENT PIPING SHALL BE SCHEDULE 40 POLYPROPYLENE PIPE JOINED BY THE COIL FUSION METHOD. PIPE SHALL BE MANUFACTURED OF NON-FLAME RETARDANT HOMOPOLYMER POLYPROPYLENE. POLYPROPYLENE FITTINGS SHALL BE MANUFACTURED TO SCHEDULE 40 DIMENSIONS. FITTINGS SHALL BE JOINED TO THE POLYPROPYLENE PIPE BY MEANS OF THE COIL FUSION METHOD. ALL COMPONEBTS OF THE SYSTEM SHALL CONFORM TO THE FOLLOWING APPLICABLE STANDARDS, D4101, D3311, D1599, D2122, F1290 AND F1412. ALL PIPING SHALL BE MARKED WITH THE MANUFACTURERS NAME, PIPE SIZE, SCHEDULE TYPE, QUALITY CONTROL MARK AND ASTM INFORMATION. ALL FITTINGS SHALL BE LEGIBLY MARKED SHOWINGMANUFACTURER'S TRADMARK, FITTING SIZE, MANUFACTURERS PART NUMBER, AND SYMBOL INDICATING THE MATERIAL. PIPING AND FITTINGS SHALL BE INSTALLED PER THE MANUFACTURERS RECOMMENDATIONS. PIPE AND FITTINGS SHALL BE FUSEAL PIPE MANUFACTURERED BY GF PIPING SYSTEMS OR IT'S EQUIVALENT.

PIPING (ABOVE GROUND): ACID WASTE AND VENT PIPING SHALL BE SCHEDULE 40 POLYPROPYLENE PIPE JOINED BY THE COIL FUSION METHOD. PIPE SHALL BE MANUFACTURED OF FLAME RETARDANT HOMOPOLYMER POLYPROPYLENE. FLAMMABILITY REQUIREMENTS ARE BASED ON ASTM D635 STANDARD TEST METHOD FOR RATE OF BURNING AND/OR EXTENT AND TIME OF BURNING OF SELF SUPPORTING PLASTICS IN A HORIZONTAL POSITION. POLYPROPYLENE FITTINGS SHALL BE MANUFACTURED TO SCHEDULE 40 DIMENSIONS. FITTINGS SHALL BE JOINED TO THE POLYPROPYLENE PIPE BY MEANS OF THE COIL FUSION METHOD. ALL COMPONEBTS OF THE SYSTEM SHALL CONFORM TO THE FOLLOWING APPLICABLE STANDARDS, D4101, D3311, D1599, D2122, F1290 AND F1412. ALL PIPING SHALL BE MARKED WITH THE MANUFACTURERS NAME, PIPE SIZE, SCHEDULE TYPE, QUALITY CONTROL MARK AND ASTM INFORMATION. ALL FITTINGS SHALL BE LEGIBLY MARKED SHOWINGMANUFACTURER'S TRADMARK, FITTING SIZE, MANUFACTURERS PART NUMBER, AND SYMBOL INDICATING THE MATERIAL. PIPING AND FITTINGS SHALL BE INSTALLED PER THE MANUFACTURERS RECOMMENDATIONS. PIPE AND FITTINGS SHALL BE FUSEAL PIPE MANUFACTURERED BY GF PIPING SYSTEMS OR IT'S EQUIVALENT.

DOMESTIC WATER PIPING ABOVE GRADE SHALL BE TYPE "L" HARD TEMPER COPPER PIPE WITH WROUGHT FITTINGS AND 95\_5 LEAD FREE SOLDER JOINTS.

PIPING SPECIALTIES: CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS OR FLANGES AT ALL LOCATIONS WHERE COPPER OR BRASS PIPING CONNECTS TO FERROUS PIPING OR EQUIPMENT.

PLUMBING FIXTURES: FURNISH ALL STANDARD PRODUCTS OF DELTA, CHICAGO, T&S BRASS, ELKAY OR APPROVED EQUAL. PROVIDE STOPS AT HOT AND COLD WATER CONNECTIONS TO EACH FIXTURE.

EXECUTION: SLOPE DRAINAGE PIPING INSIDE AND OUTSIDE OF BUILDING IN ACCORDANCE WITH REQUIREMENTS OF THE GOVERNING PLUMBING CODES.

ESTABLISH GRADE LINES WITH SURVEYOR'S LEVEL. VERIFY LOCATION OF SEWER TAPS BEFORE START OF WORK AND MAKE NECESSARY GRADE ADJUSTMENTS. DRAIN VENT LINES BACK TO SOIL LINES.

LOCATE CLEANOUTS AT EACH CHANGE OF LINE DIRECTION OF MORE THAN 45 DEG. WHERE MORE THAN ONE CHANGE OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FT. INTERVAL.

BRING EXTERIOR CLEANOUTS UP TO GRADE AND INSTALL IN 18" X 18" CUBE OF CONCRETE. PROVIDE A CAST IRON COVER OVER EACH EXTERIOR CLEANOUT.

INSTALL WATER PIPING TO AVOID CONTACT WITH STRUCTURE WHEN POSSIBLE TO PREVENT EXCESSIVE WATER HAMMER NOISE TRANSMISSION.

ALL PIPING SHALL BE INSTALLED AT RIGHT ANGLES TO THE BUILDING LINES AND PLUMB.

WRAP METALLIC PIPE IN CONTACT WITH CONCRETE BLOCK, SLABS OR STUCCO WITH 10 MIL THICK PVC TAPE TO PREVENT CORROSION.

FLUSH PIPING CLEAN WITH WATER AFTER INSTALLATION. DISINFECT POTABLE WATER SYSTEM PER CODE, AWWA C651, OR AWWA C652 AND SUBMIT TEST RESULTS.

TEST ALL PIPING PRIOR TO COVERING OR BACKFILLING.

TEST WATER PIPING AT 100 PSIG FOR A CONTINUOUS PERIOD OF NOT LESS THAN FOUR (4) HOURS. DURING THIS TIME, CAREFULLY INSPECT THE SYSTEM FOR LEAKS. CONTRACTOR SHALL REPAIR ALL LEAKS IF NECESSARY AND TEST AGAIN UNTIL NO LEAKAGE IS DETECTED.

TEST WASTE AND VENT SYSTEMS BY PLUGGING LINES AND FILLING SYSTEMS WITH WATER TO A STATIC HEAD OF 10 FEET OF WATER. OBSERVE WATER LEVEL FOR A TWO (2) HOUR PERIOD. IF LEVEL IS LOWERED, INDICATING LEAKAGE, REPAIR LEAKS AND TEST AGAIN UNTIL NO FURTHER LEAKAGE IS DETECTED. UNDER NO CIRCUMSTANCES SHOULD THE SYSTEM BE TESTED WITH AIR OR ANY OTHER GAS.



