PLUMBING LEGEND

ITEMS LISTED BELOW MAY NOT BE ON THE DRAWINGS

SYMBOL	ABBREVIATION	DESCRIPTION
	PROPOSED	PLUMBING FIXTURE
	SAN / S	SANITARY WASTE
	STORM / ST	STORM DRAINAGE LINE
	GW	GREASE WASTE
	V	VENT
	DCW	DOMESTIC COLD WATER PIPING
	DHW	DOMESTIC HOT WATER PIPING
	DHWR	DOMESTIC HOT WATER RETURN PIPING
	NG	NATURAL GAS
	FCO	FLOOR CLEAN OUT
	ECO	EXTERIOR CLEANOUT
	WCO	WALL CLEANOUT
	FD	FLOOR DRAIN
	FS	FLOOR SINK
P 1		RISER IDENTIFICATION
		ELBOW UP
		ELBOW DOWN
		BALL VALVE
	B.V.	BALANCING VALVE
		GAS VALVE
		GATE VALVE
		GLOBE VALVE
	C.V.	CHECK VALVE
S		SOLENOID VALVE
		CAP AND SEAL
	VTR	VENT THROUGH ROOF
	F.F.L.	FINISHED FLOOR LEVEL
	I.L.	INVERT LEVEL
	(E)	EXISTING
	(R)	RELOCATED

GENERAL NOTES

1. CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE, AND APPLICABLE CODES. 2017 NEC, 2017 IBC, NFPA, ETC., AND ALL OTHER LOCAL CODES AND AMENDMENTS WHERE THERE ARE CONFLICTS BETWEEN CODES, STANDARDS, DRAWINGS AND SPECIFICATIONS ARISE, THE MORE STRINGENT SHALL APPLY.
2. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL OFFSETS. INSTALL PIPING AS CLOSE AS POSSIBLE TO LOCATIONS SHOWN. WHERE INTERFERENCE'S WITH COMPONENTS OF OTHER TRADE'S WORK (STRUCTURAL FOUNDATIONS OR OTHER BUILDING ELEMENTS) REQUIRE ROUTINGS AND LOCATIONS THAT VARY FROM THOSE SHOWN, THE CONTRACTOR SHALL OBTAIN PROJECT ENGINEER'S APPROVAL PRIOR TO INSTALLATION. NO ADDITIONAL COST SHALL BE GRANTED FOR THESE CHANGES.
3. BEFORE BEGINNING EXCAVATIONS OR DEMOLITION OF ANY NATURE WHATSOEVER, CONTRACTOR SHALL LOCATE ALL SERVICES AND UTILITIES OCCURRING WITHIN THE BOUNDS OF THE PROJECT. THE CONTRACTOR SHALL THEN PROCEED WITH CAUTION IN HIS WORK SO THAT NO UTILITY OR LINE SERVING AREAS THAT ARE TO REMAIN BE DAMAGED WITH A RESULTANT LOSS OF SERVICE. VERIFY THE SOURCE AND SERVICE OF EACH AND EVERY LINE ENCOUNTERED AND RECORD SERVICE, SIZE AND LOCATION ON RECORD DRAWINGS.
4. ROUGH-IN PLUMBING PIPING USING DIMENSIONS SHOWN ON ARCHITECTURAL DRAWINGS. LOCATION OF ALL PIPING SHALL ALLOW INSTALLATION OF FIXTURES WITHOUT THE NEED TO FURR-OUT WALLS.
5. PROVIDE CLEANOUTS IN EXCESS OF THOSE SHOWN WHICH ARE REQUIRED BY THE PLUMBING CODE.
6. INDIVIDUAL FIXTURE SUPPLY AND DRAIN SERVICES ARE NOT SHOWN DUE TO DRAWING SPACE LIMITATIONS. THIS CONTRACTOR SHALL PROVIDE ALL SERVICES FOR A COMPLETE FIRST CLASS INSTALLATION.
7. FURNISH AND INSTALL ALL NECESSARY VALVES, TRAPS, GAUGES, STRAINERS, UNIONS, ETC. FOR EACH PIECE OF EQUIPMENT HAVING PLUMBING CONNECTIONS TO FACILITATE PROPER FUNCTIONING AND SERVICING.
8. SEAL ALL PENETRATIONS THROUGH RATED WALLS, FLOORS AND CEILINGS WITH A UL LISTED ASSEMBLY TO PROVIDE A RATING EQUAL TO OR GREATER THAN THE RATING OF THE WALL, FLOOR OR CEILING.
9. EACH CONTRACTOR SHALL VISIT THE SITE AND ASCERTAIN FOR HIMSELF THE CONDITIONS TO BE MET THERE IN IMPLEMENTING HIS WORK AND MAKE DUE PROVISIONS FOR THE SAME. IT IS ASSUMED THAT THE CONTRACTOR HAS VISITED THE PREMISES AND THAT HIS COST ESTIMATE COVERS ALL NECESSARY LABOR AND MATERIALS TO PROPERLY ACCOMPLISH HIS WORK. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR OMISSIONS OR FAULTY WORK OR FOR THE PAYMENT OF ADDITIONAL COMPENSATION.
10. FIELD VERIFY EXISTING AND FUTURE GRADES WITHIN AREAS WHERE WORK IS BEING DONE.
11. VERIFY EXACT LOCATION OF EQUIPMENT PRIOR TO INSTALLATION OF FLOOR DRAINS. RELOCATION DUE TO MISPLACEMENT SHALL BE AT CONTRACTORS EXPENSE.
12. ALL VENT LINES SHALL SLOPE UP TO VENT THRU ROOF. VENT THRU ROOF SHALL BE 10'-0" MINIMUM FROM ANY FRESH AIR INTAKES.
13. THE CONTRACTOR SHALL PROVIDE WATER HAMMER ARRESTERS IN ACCORDANCE WITH LATEST ASSE AND SHALL BE ACCESSIBLE.
14. PROVIDE MANUAL SHUT OFF VALVES AT EACH BRANCH LINE OF ALL WATER PIPING. PROVIDE ISOLATION VALVES AT ALL FIXTURES. PROVIDE SCREWED ACCESS PANEL FOR ALL VALVES PLACED BEHIND OR ABOVE HARD CEILINGS AND WALLS.
15. THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT FOR FLOOR SLOPING TO FLOOR DRAINS AND FLOOR SINKS PRIOR TO POURING OF CONCRETE SLAB.

MATERIAL LEGEND

1. SANITARY WASTE AND VENT PIPING: (BELOW GRADE)

   SCHEDULE 40 PVC, CONFORM TO ASTM D-1785 SOIL AND WASTE VENT PIPING. FITTINGS SHALL BE COMPATIBLE MATERIAL WITH SOLVENT CEMENT TYPE JOINTS.

   SANITARY WASTE AND VENT PIPING: (ABOVE SLAB)
   PIPE: CAST IRON ASTM A 74, HUBLESS, SERVICE WEIGHT.

   JOINTS: NO HUB, ASTM C 564 NEOPRENE GASKETS AND STANDARD STAINLESS STEEL CLAMP AND SOLID SHIELD ASSEMBLIES CONSTRUCTED OF TYPE 300 SERIES STAINLESS STEEL. CLAMP ASSEMBLIES SHALL CONFORM TO FM 1680 WHERE REQUIRED BY THE ADMINISTRATIVE AUTHORITY.

   FITTINGS: CAST IRON, ASTM A 888 DRAINAGE PATTERN.

2. DOMESTIC WATER (ABOVE SLAB)
   TYPE "L" COPPER TUBING WITH WROUGHT COPPER FITTINGS AND 95/5 (TIN/ANTIMONY) SOLDER JOINTS.

3. **STORM DRAINAGE (BELOW GRADE)**
   SCHEDULE 40 PVC, CONFORM TO ASTM D-1785 SOIL AND WASTE VENT PIPING. FITTINGS SHALL BE COMPATIBLE MATERIAL WITH SOLVENT CEMENT TYPE JOINTS.

   STORM DRAINAGE (ABOVE SLAB ONLY)
   PIPE: CAST IRON ASTM A 74, HUBLESS, SERVICE WEIGHT.

   JOINTS: NO HUB, ASTM C 564 NEOPRENE GASKETS AND STANDARD STAINLESS STEEL CLAMP AND SOLID SHIELD ASSEMBLIES CONSTRUCTED OF TYPE 300 SERIES STAINLESS STEEL. CLAMP ASSEMBLIES SHALL CONFORM TO FM 1680 WHERE REQUIRED BY THE ADMINISTRATIVE AUTHORITY.

   FITTINGS: CAST IRON, ASTM A 888 DRAINAGE PATTERN.

GRAVITY DRAINAGE SLOPING

1. BUILDING SEWERS SHALL BE RUN IN PRACTICAL ALIGNMENT AND AT A UNIFORM SLOPE OF NOT LESS THAN ONE-FOURTH (1/4) OF AN INCH PER FOOT TOWARDS THE POINT OF DISPOSAL. WHEN ALLOWED BY THE LOCAL AHJ PIPING FOUR (4) INCHES AND LARGER MAY BE INSTALLED AT A UNIFORM SLOPE OF NOT LESS THAN ONE-EIGHTH (1/8) OF AN INCH PER FOOT TOWARDS THE POINT OF DISPOSAL. DRAINAGE PIPING SHALL BE INSTALLED AT A DEPTH NOT LESS THAN EIGHTEEN (18") BELOW THE BUILDING SLAB AND OR GRADE OUTSIDE THE BUILDING PERIMETER.

PLUMBING FIXTURE SCHEDULE

[1. FIXTURES LISTED BELOW ARE SUBJECT TO OWNER AND/OR ARCH. APPROVAL.] - [2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL MOUNTING HEIGHTS.]

TAG	FIXTURE NAME	PROVIDE THE FOLLOWING SIZE BRANCH CONNECTION TO THE DISTRIBUTION MAIN - UNLESS OTHER WISE SPECIFIED					MAKE, MODEL AND DESCRIPTION
		TRAP	WASTE	VENT	CW	HW	
L-1	LAVATORY (WALL MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	1/2"	0355.012 AMERICAN STANDARD "LUCERNE", WALL HUNG LAVATORY, BARRIER FREE, VITREOUS CHINA, SELF-DRAINING DECK AREA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, 3 HOLES 4" CENTER.
L-1A							A [FACULTY FAUCET] - 420-T41E2805ABCP CHICAGO FAUCET, [0.5 GPM], MANUAL FACUET, 4" FIXED CENTER SINGLE LEAVER HOT AND COLD WATER.
L-1B							B [STUDENT FAUCET] - 333-336COLD 333-336COLDABCP, [0.25 GAL/CYCLE MAX], DECK-MOUNTED METERING FAUCET, SINGLE HOLE, SINGLE TEMPERED WATER SUPPLY.
TMV	THERMOSTATIC MIXING VALVE	-	-	-	3/8"	3/8"	LF-170 LEONARD, THERMOSTATIC MIXING VALVE WITH THE OUTLET TEMPERATURE TO BE SET AT 105°F. TMV SHALL COMPLY WITH ASSE 1070 & 1017. INLETS AND OUTLETS SHALL BE 3/8" BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP, CHROME PLATED, CONVERTIBLE LOOSE KEY HANDLE. SUPPLY STOP VALVE SHALL BE CERTIFIED BY CSA OR OTHER RECOGNIZED TESTING AUTHORITY AND SHALL BEAR MANUFACTURER AND TESTING MARK. STOP TO BE CERTIFIED TO 200 PSI LINE PRESSURE. 149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. WROUGHT BRASS SINK STRAINER WITH 20 GA TAILPIECE AND BRASS LOCK AND COUPLING NUTS. FITS SINK DEPTH UP TO 3/4". CHROME PLATED. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG AND 11INCH CENTER TO END. FURNISHED WITH SLIP NUTS, 17 GAUGE SEAMLESS TUBULAR BRASS WALL BEND, AND STEEL SHALLOW FLANGE. 102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT. WALL CARRIER SHALL BE BY JAY R. SMITH - Series 700 OR EQUAL. REFER TO ARCHITECT FOR ALL MOUINTING HEIGHTS
L-2	LAVATORY (COUNTER TOP MOUNTED)	1 1/4"	2"	2"	1/2"	1/2"	0490.027 AMERICAN STANDARD "RONDALYN", COUNTER TOP MOUNTED LAVATORY VITREOUS CHINA, SELF RIMING, FRONT OVERFLOW, POLISHED CHROME. SINGLE HOLE
L-2A							4" A [FACULTY FAUCET] - 420-T41E2805ABCP CHICAGO FAUCET, [0.5 GPM], MANUAL FACUET, 4" FIXED CENTER SINGLE LEAVER HOT AND COLD WATER.
L-2B							B [STUDENT FAUCET] - 333-336COLD 333-336COLDABCP, [0.25 GAL/CYCLE MAX], DECK-MOUNTED METERING FAUCET, SINGLE HOLE, SINGLE TEMPERED WATER SUPPLY.
TMV	THERMOSTATIC MIXING VALVE	-	-	-	3/8"	3/8"	LF-170 LEONARD, THERMOSTATIC MIXING VALVE WITH THE OUTLET TEMPERATURE TO BE SET AT 105° F. TMV SHALL COMPLY WITH ASSE 1070 & 1017. INLETS AND OUTLETS SHALL BE 3/8" BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP, CHROME PLATED, CONVERTIBLE LOOSE KEY HANDLE. SUPPLY STOP VALVE SHALL BE CERTIFIED BY CSA OR OTHER RECOGNIZED TESTING AUTHORITY AND SHALL BEAR MANUFACTURER AND TESTING MARK. STOP TO BE CERTIFIED TO 200 PSI LINE PRESSURE. 149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. WROUGHT BRASS SINK STRAINER WITH 20 GA TAILPIECE AND BRASS LOCK AND COUPLING NUTS. FITS SINK DEPTH UP TO 3/4". CHROME PLATED. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG AND 11INCH CENTER TO END. FURNISHED WITH SLIP NUTS, 17 GAUGE SEAMLESS TUBULAR BRASS WALL BEND, AND STEEL SHALLOW FLANGE. 102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT. 0700 J.R. SMITH, LAVATORY SUPPORTS WITH CONCEALED ARMS. REFER TO ARCHITECT FOR ALL MOUINTING HEIGHTS

ELECTRIC WATER HEATER SCHEDULE

TAG	MANUFACTURE - MODEL	PHASE	VOLT	HEATING ELEMENTS	SIMULTANEOUS OPERATION	GPH @ 80°F RISE	TANK SIZE GAL	LOCATION
EWH-1	A.O. SMITH - DRE-52-24	3	480	6 @ 4KW =24KW	YES	123	80	MECH RM
EWH-2	A.O. SMITH - DRE-52-24	3	480	6 @ 4KW =24KW	YES	123	80	MECH RM

NOTE:
1. LEAVING TEMPERATURE SHALL BE 140°F.
2. PROVIDE EXPANSION TANK ON THE COLD WATER INLET FOR EACH WATER HEATER.
3. PROVIDE 4" CONCRETE PAD BELOW WATER HEATER. ROUTE T&P AND AUX. DRAIN LINES TO FLOOR SINK. PROVIDE ADEQUATE SUPPORTS FOR T&P AND AUX. TO WALL TO PREVENT ANY MOVEMENT. DRAIN LINES SHALL ROUTE TO THE FLOOR SINK WITH A 1" AIR GAP. REFER TO WATER HEATER DETAIL FOR MORE INFORMATION.
4. PROVIDE TMV-1 LEONARD MIXING VALVE MODEL 370. INLET SIZE 3/4" AND OUTLET SIZE 3/4". MIXING VALVE HOT WATER OUTLET TEMP SHALL BE SET TO (122°F) TO PREVENT BACTERIA GROWTH.

CIRCULATING PUMP SCHEDULE

TAG	MANUFACTURE - MODEL	GPM	HEAD	HP	MOTOR RPM	TYPE	VOLT.	LOCATION
CP-1	BELL & GOSSETT - PL-30B	5	20	1/12	1725	IN LINE BRONZE	120 / 1PH	JAN. CLOSET

NOTE:
1. ALL BRONZE CIRCULATOR.
2. HOT WATER CIRCULATION PUMP SHALL BE PROVIDED WITH TIMER SWITCH TO DE-ENERGIZE THE PUMP UNDER DURING UNOCCUPIED PERIODS PER IECC-2015. PROVIDE NEMA 1 INDOOR STEEL CASE.
3. PROVIDE ADJUSTABLE, SURFACE MOUNTED AQUASTAT - HONEYWELL L6006C.
4. SET AQUASTAT TO SHUT OFF RECIRCULATION PUMP AT WATER HEATER SET POINT AND ON AT 10°F BELOW SET POINT.

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ISSUES AND REVISIONS

NO	DATE	DESCRIPTION
A	07-22-2019	ISSUED FOR PERMIT
B	08-16-2019	ISSUED FOR BID

STATE OF TEXAS
DAVIA ANN GERNAND
109903
LICENSED
PROFESSIONAL ENGINEER
16 AUG 2019

GH SCHOOL
4724 N MAIN STREET

SHEET TITLE
SCHEDULES NOTES & LEGEND

SHEET NUMBER
P102

PROJECT # 19.02

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