



GENERAL NOTES

- ALL WORK SHALL BE IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND AUTHORITIES HAVING JURISDICTION.
- BEFORE STARTING ANY WORK, VERIFY THE ADEQUACY, LOCATION, SIZE, AND AVAILABILITY OF ALL UTILITIES CONCERNED, INCLUDING WASTE, WATER, AND GAS.
- DRAWINGS INDICATE SIZE AND TERMINATION OF PIPING AND SUGGEST PROPER ROUTES OF PIPING TO CONFORM TO THE STRUCTURE TO AVOID OBSTRUCTION AND TO PRESERVE CLEARANCE. IT IS NOT THE INTENTION TO INDICATE ALL NECESSARY OFFSETS AND IT SHALL BE THE RESPONSIBILITY UNDER THIS SECTION TO INSTALL PIPING IN SUCH A MANNER AS TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM, CLEARANCES AND PASSAGES, CLEAR AND MAKE ALL EQUIPMENT REQUIRING INSPECTION, MAINTENANCE AND REPAIR ACCESSIBLE WITHOUT FURTHER INSPECTIONS OR EXTRA COST.
- THIS CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES FOR CLEARANCES AND WORK INCLUDED PRIOR TO START OF WORK.
- KEEP ALL PIPING CLEAR FROM LOAD BEARING FOOTINGS.
- PROVIDE NECESSARY PROVISIONS WHERE PIPING PENETRATES AN EXPANSION JOINT FOR PIPE MOVEMENT.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT PLUMBING FIXTURE LOCATIONS.
- ALL VENTS THRU ROOF SHALL BE MINIMUM OF THREE FEET VERTICALLY OR TEN FEET HORIZONTALLY FROM ANY FRESH AIR INTAKES.
- PROVIDE AND INSTALL WATER HAMMER ARRESTORS OF REQUIRED SIZE AT LAVATORIES, CLOSING VALVES AND HOT AND COLD WATER HEADERS FOR LAVATORIES.
- CLEANOUTS SHALL BE INSTALLED PER LATEST UPC CODE SECTION 707.0 AND SECTION 719.0.
- PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED. FIRE STOPPING SHALL BE AN APPROVED MATERIAL AS PRESCRIBED IN STATE FIRE MARSHALL STANDARD 43-1, AND SHALL BE U.L. LISTED.
- WATER CLOSETS SHALL BE AN APPROVED LOW FLUSH (1.5 GPF) TYPE.
- URINALS SHALL BE AN APPROVED LOW FLUSH (1.0 GPF) TYPE.
- COORDINATE WITH ELECTRICAL SECTION PRIOR TO ORDERING EQUIPMENT FOR AVAILABLE VOLTAGE AT EQUIPMENT LOCATIONS.
- ALL FIXTURES SHALL BE PROTECTED DURING CONSTRUCTION FROM ANY DAMAGE. FINISHED FIXTURES WILL NOT BE ACCEPTABLE UNDER ANY CONDITIONS.
- PROVIDE TRAP PRIMER CONNECTION AND TRAP PRIMER VALVE FOR FLOOR DRAINS IN TOILET ROOMS.
- HOSE BIBBS SHALL HAVE AN APPROVED VACUUM BREAKER.
- HANDICAPPED USE PLUMBING FIXTURES SHALL BE MOUNTED AT REQUIRED HEIGHTS AND WITH ALL RELATED ACCESSORIES AS REQUIRED BY THE ADMINISTRATIVE AUTHORITIES.
- EXPOSED SUPPLY PIPES, TRAP AND TRAP ARM AT HANDICAPPED LAVATORIES SHALL BE INSULATED W/ TRUBRO 101.
- ALL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH "GUIDELINES FOR RESTRAINTS OF MECHANICAL SYSTEMS, PLUMBING PIPING SYSTEMS" PUBLISHED BY SMACNA.

LEGEND

SYMBOL	ABBR.	DESCRIPTION	ABBR.	DESCRIPTION
W	WASTE PIPING	BEL. FLR.	ABOVE	
C.W.	COLD WATER PIPING	A.P.	ACCESS PANEL	
H.W.	HOT WATER PIPING	BEL.	BELOW	
H.W.R.	HOT WATER RETURN PIPING	CFH	CUBIC FEET PER HOUR	
V	VENT PIPING	CLG.	CEILING	
SOV.	SHUT-OFF VALVE	C.O.	CLEAN OUT	
C.V.	CHECK VALVE	CONN.	CONNECT/CONNECTION	
U.	UNION	DNL.	DOWN	
FLEX	FLEXIBLE CONNECTION	FLR.	FLOOR	
UP	PIPING	F.U.	FIXTURE UNIT	
DN.	PIPING DOWN	GRD.	GRADE	
P.T.R.V.	PRESSURE TEMPERATURE RELIEF VALVE	H.B.	HOSE BIBB	
F.C.O.	FLOOR CLEAN OUT	HDR.	HEADER	
CO/WCO	FLOOR/WALL CLEAN OUT	I.E.	INVERT ELEVATION	
P.O.C.	POINT OF CONNECTION	MIN.	MINIMUM	
G.	GAS LINE	TYP.	TYPICAL	
EXIST.	EXISTING OR EXISTING PIPING	V.T.R.	VENT THRU ROOF	
		W/	WITH	

WATER CALCULATIONS

5.6 PSI. LOSS PER 100 FT.

PIPE SIZE (I.D. DIA.)	FLOW RATE (GPM)	VELOCITY (FT./SEC.)	FLUSH TANK (FL)	FLUSH VALVE (FL)
1/2"	2	2.6	2	2
3/4"	5	3.2	8	8
1"	11	4.1	20	20
1-1/4"	19	4.9	42	42
1-1/2"	29	5.5	83	83
2"	64	6.5	298	171
2-1/2"	113	7.8	-	-
3"	150	7.8	-	-

LOSSES PSI. LEFT

-	75
4	71
11	60
30	30

PSI. AVAILABLE AT STREET: 75 MIN. 80 MAX.
 PSI. LOSS AT METER: 2" METER SIZE
 PSI. AVAILABLE AT BLDG: 53
 LOSS BLDG. HEIGHT: 25 FT. x 0.433
 PSI. REQUIRED FOR FIXTURE: 15
 LENGTH OF RUN: 350 FT.
 EQUIVALENT LENGTH FOR FITTINGS: 50% = 175 FT.
 TOTAL DEVELOPED LENGTH: 525 FT.
 PSI. AVAILABLE FOR FRICTION LOSS: 38
 AVAILABLE PSI: 30
 LENGTH OF RUN 525 FT. x 100 = PSI./100 FT. = 5.7

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	CONNECTION			FIXTURE UNITS			REMARKS/SPECIFICATIONS	
		W.	P-TRAP	V.	H.W.	C.W.	W.		C.W.
WC-1	WATER CLOSET	4"	INT.	2"	1"	4	5	-	FLOOR MOUNT, ELONGATED BOWL, CHURCH 9500C OPEN FRONT LESS COVER, WHITE, SLOAN ROYAL #111 FLUSH VALVE, 1.6 GPF
WC-2	WATER CLOSET (ACCESSIBLE)	4"	INT.	2"	1"	4	5	-	FLOOR MOUNT, ELONGATED BOWL, CHURCH 9500C FLUSH VALVE, 1.6 GPF
L-1	LAVATORY	2"	1 1/2" x 1 1/2"	2"	1/2"	1	1	1	WALL-HUNG, CONCEALED ARMS, DELTA FAUCET 923-WH/WH, SINGLE HANDLE, GRID STRAINER, 0.5 GPM, OUTLET, BRASS CRAFT ROSE 2 1/2" x 1/2" BRASS CHROME PLATED, CODE APPROVED 1/2" TRAP & TRAP ARM
U-1	URINAL	2"	INT.	1 1/2"	3/4"	2	4	-	WALL-HUNG, SLOAN ROYAL OPTIMA 8186-1 FLUSH VALVE, 1.0 GPF, J.R. SMITH CARRIER #644.
U-2	URINAL (ACCESSIBLE)	2"	INT.	1 1/2"	3/4"	2	4	-	WALL-HUNG, SLOAN ROYAL OPTIMA 8186-1 FLUSH VALVE, 1.0 GPF, J.R. SMITH CARRIER #644.
S-1	SINK	2"	INT.	1 1/2"	3/4"	2	1.5	1.5	ELKAY DLR 332210
SS-1	SERVICE SINK	3"	3"	3/4"	3/4"	3	3	3	AMERICAN STD. FLORWELL 7741.000
DF-1	DRINKING FOUNTAIN (ACCESSIBLE)	2"	2"	3/4"	3/4"	1	1	-	HAWES MODEL HWUAC08SS
FD-1	FLOOR DRAIN	2"	2"	1 1/2"	-	-	-	-	J.R. SMITH 2005
HB-1	HOSE BIBB	-	-	-	3/4"	2.5	-	-	ACORN #8126
HB-2	HOSE BIBB	-	-	-	3/4"	2.5	-	-	ACORN #8104
AG-1	AIR GAP FITTING	2"	2"	1 1/2"	-	-	-	-	J.R. SMITH 3955

