

WATER HEATER SCHEDULE										
ITEM	NO. REQU'D	TYPE	GALLONS STORAGE	RECOVERY CONNECTIONS				HW	REMARKS	
				GPH	TEMP. RISE	VENT	GAS			CW
WH-1	1	PIONEER MODEL #75 HEAVY DUTY TYPE	75	120	60° F	5"	1/2"	1 1/4"	1 1/4"	EXIST FLR MTD.

PUMP SCHEDULE							
ITEM	NO. REQU'D	TYPE	FLOW G.P.M.	HEAD FEET	MOTOR		REMARKS
					RPM	H.P.	
P-1	1	IN-LINE CIRCUC. B & G OR EQUAL	3	5	3,500	1/12	EXIST.

PLUMBING FIXTURE SCHEDULE										
STATUS	SYMBOL	DESCRIPTION	W.	TRAP	V.	C.W.	H.W.	REMARKS		
EXIST.	WC-1	WATER CLOSET	4"	INT	2"	1"	-	FLUSH VALVE, ADA W/ ELONGATED BOWL & OPEN FRONT SEAT, 1.28 GPF		
	UR	URINAL	1 1/2"	1 1/2"	1 1/2"	3/4"	-	FLOOR MTD., FLUSH VALVE, 0.125 GPF		
	SH-1	SHOWER	2"	2"	1 1/2"	1/2"	1/2"	W/ PRESSURE BALLANCING SHOWER ASSEMBLY 1.80 GPM		
	L-1	LAVATORY	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	WALL MTD., 1.20 GPM FAUCET		
	KS	KITCHEN SINK	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	1.50 GPM FAUCET W/ GARBAGE DISPOSER		
	DF	DRINKING FOUNTAIN	1 1/2"	1 1/2"	1 1/2"	1/2"	-	WALL MTD.		
	FD-1	FLOOR DRAIN	2"	2"	1 1/2"	-	-	W/ TRAP PRIMER		
	FHC	FIRE HOSE CABINET	-	-	-	2"	-			
	HB	HOSE BIBB	-	-	-	3/4"	-	WALL MTD. W/ VACUUM BREAKER		
	GR	GAS RANGE	-	-	-	-	-	1/2" GAS PIPE		
NEW	WC-2	WATER CLOSET	4"	INT	2"	3/4"	-	FLUSH TANK FLOOR MTD. ADA W/ ELONGATED BOWL & OPEN FRONT SEAT, 1.28 GPF		
	SH-2	SHOWER	2"	2"	1 1/2"	1/2"	1/2"	W/ PRESSURE BALLANCING SHOWER ASSEMBLY 1.80 GPM		
	L-2	LAVATORY	2"	1 1/2"	1 1/2"	1/2"	1/2"	COUNTER TOP ADA, 1.20 GPM FAUCET		
	FD-2	FLOOR DRAIN	2"	2"	1 1/2"	-	-	W/ TRAP PRIMER		

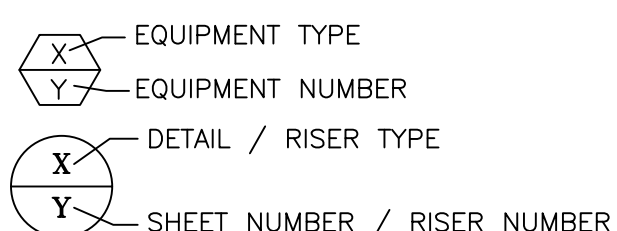
PLUMBING GENERAL NOTES

- CODES AND PERMITS: ALL MECHANICAL EQUIPMENT, INSTALLATION, ETC., SHALL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES, INCLUDING CALIFORNIA TITLE 24. CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING PARTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR): TITLE 24, PART 2, CCR (2019 CALIFORNIA BUILDING CODE W/AMENDMENTS) TITLE 24, PART 3, CCR (2019 CALIFORNIA ELECTRICAL CODE W/AMENDMENTS) TITLE 24, PART 4, CCR (2019 CALIFORNIA MECHANICAL CODE W/AMENDMENTS) TITLE 24, PART 5, CCR (2019 CALIFORNIA PLUMBING CODE W/AMENDMENTS) TITLE 24, PART 9, CCR (2019 CALIFORNIA FIRE CODE W/AMENDMENTS) TITLE 24, PART 11, CCR (2019 CALIFORNIA GREEN BUILDING STANDARDS CODE) CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS & INSPECTIONS.
- SITE INSPECTION: CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND DEPTH OF EXISTING LINES, LATERALS AND WYES BEFORE STARTING. SHOULD IT BE NECESSARY TO REROUTE LINES DUE TO CONDITIONS FOUND ON THE SITE OR IF INDICATED POINTS OF CONNECTIONS CANNOT BE MADE TO THE LINES AS FOUND, THE CONTRACTOR SHALL, BEFORE CONTINUING, NOTIFY THE ARCHITECT PRIOR TO INSTALLING ANY WORK WHICH MAY BE AFFECTED.
- ALL DIMENSIONS AND LOCATIONS PER ARCHITECTURAL DRAWINGS.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY AVAILABLE SPACES FOR INSTALLING THE WORK.
- THE DRAWINGS ARE DIAGRAMMATIC & INTENDED TO SHOW SCOPE. CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES TO PROVIDE BEST ARRANGEMENT OF ALL DUCT, PIPES, CONDUIT, ETC.
- PIPING MATERIALS:
 - SEWER, WASTE AND VENT PIPES SHALL BE CAST IRON, NO HUB, AND AS SPECIFIED.
 - HOT AND COLD WATER TO BE COPPER TYPE "L" FOR ABOVE GRADE AND TYPE "K" FOR BELOW GRADE.
 - CONDENSATE PIPING FOR AC UNITS SHALL BE TYPE "M" COPPER.
 - GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE ABOVE GROUND INSIDE THE BUILDING. USE P.E. PIPE UNDERGROUND OUTSIDE OF THE BUILDING.
- ALL HOT WATER SUPPLY AND RECIRCULATION PIPING TO BE INSULATED AS FOLLOWS:

PIPE SIZE, IN.	INSULATION THICKNESS, IN.
1/2" through 4"	1"
5" through 11"	1 1/2"
12" through 48"	2"
- CLEAN-OUTS SHALL BE INSTALLED AS PER SEC. 707 AND 719 OF THE PLUMBING CODE.
- PROVIDE FELT WITH METAL BACKING VIBRATION ISOLATION SLEEVES OR PADS AT ALL PIPE HANGERS OR SUPPORTS AND ALL POINTS WHERE PIPING COMES IN CONTACT WITH ANY PORTION OF THE STRUCTURE. APPLIES TO ALL WATER AND WASTE PIPING. PROVIDE FELT AROUND ALL PVC PIPING AT SUPPORTS FOR THERMAL EXPANSION.
- ALL PIPES, DUCTS AND CONDUITS SHALL BE SUPPORTED AND BRACED PER "SMACNA" GUIDE LINES, OSHPD PRE- APPROVAL # R0010.
- VALVES SHALL FULL FLOW 1/4 TURN BALL TYPE BE NIBCO, WATTS, CRANE, STOCKHAM OR EQUAL. IDENTIFICATION TAGS ON ALL VALVES. VALVES IN EXPOSED COMMON AREAS TO HAVE LOCKING HANDLES. NO IRON BODY VALVES WILL BE ACCEPTED.
- PROVIDE AND INSTALL DIELECTRIC UNIONS BETWEEN ALL COPPER AND GALVANIZED & IRON PIPING & COMPONENTS. (AS WATTS, ZURN OR EQUAL).
- PENETRATIONS IN WALLS, FLOORS, OR CEILINGS, WHICH REQUIRE PROTECTED OPENINGS SHALL BE FIRE-STOPPED. FIRE-STOPPING SHALL BE AN APPROVED MATERIAL, SECURELY INSTALLED AND CAPABLE OF MAINTAINING ITS INTEGRITY WHEN SUBJECTED TO THE TIME-TEMPERATURE CURVED OF SFM STD. # 12-43-3 AND STD. # 12-43-1. INSTALLATION INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTION AUTHORITY AND BE MAINTAINED AT THE JOB SITE.
- PROVIDE WATERTIGHT FLASHING WHEREVER PIPES PASS THROUGH EXTERIOR WALLS, ROOF & FLOORS.
- CUTTING AND PATCHING: ALL CUTTING & PATCHING OF THE EXISTING STRUCTURE SHALL BE PROVIDED. PROVIDE ALL NECESSARY REQUIREMENTS TO THE PROJECT MANAGER. PROTECTION AGAINST DUST AND DEBRIS SHALL BE TO THE SATISFACTION OF THE PROJECT MANAGER.
- CLEANUP: UPON COMPLETION OF THE WORK UNDER THIS SECTION THE CONTRACTOR SHALL REMOVE ALL SURPLUS MATERIALS. EQUIPMENT & DEBRIS INCIDENTAL TO THIS WORK & LEAVE THE PREMISES CLEAN AND ORDERLY. PROVIDE NEW CEILING TILES (TO MATCH EXISTING) IF ANY DAMAGED DURING CONSTRUCTION.
- FIRE SPRINKLER SYSTEM TO BE HYDRAULICALLY DESIGNED BY FIRE SPRINKLER CONTRACTOR. ALL EQUIPMENT, COMPONENTS & PIPE RUNS SHOWN FOR REFERENCE ONLY.
- ALL SEWER LINES RUN @ SLOPES LESS THAN 2% ARE SUBJECT TO FIELD APPROVAL OF PLUMBING INSPECTOR.
- WATER, SEWER, VENT, FIRE AND GAS PIPES THROUGH CONCRETE WALLS AND FLOORS SHALL HAVE PIPE-SLEEVES WITH NON COMBUSTIBLE SEALING.
- ALL HOSE BIBBS SHALL BE EQUIPPED WITH AN APPROVED NON REMOVABLE VACUUM BREAKER.
- RUN A FULL SIZE DRAIN LINE FROM WATER HEATERS TEMPERATURE AND PRESSURE RELIEF VALVE TO NEAREST FLOOR SINK OR TO AN APPROVED LOCATION.
- PROVIDE ACCESS DOORS TO ALL CONCEALED VALVES, STRAINERS, TRAP PRIMERS, ETC.
- ALL PIPING IN FINISHED AREAS SHALL BE RUN CONCEALED. EXPOSED PIPING, WHERE NECESSARY, SHALL BE RUN IN SPACES ABOVE OR BELOW THE FINISHED FLOOR OR CEILING AND BE PROTECTED BY WALLS, PARTITIONS AND INSTALL.
- NO VENT OUTLET SHALL TERMINATE CLOSER THAN FOUR FEET TO OR ONE FOOT ABOVE ANY DOOR, WINDOW OR GRAVITY AIR INTAKE, NOR CLOSER THAN TEN FEET TO OR THREE FEET ABOVE ANY FORCED OR MECHANICAL AIR INTAKE.
- ALL VENTS AND FLUE OUTLETS SHALL BE A MINIMUM OF 10 FEET FROM ANY FRESH AIR INTAKES.
- TYPE B VENTS SHALL TERMINATE 2 FT. ABOVE OR 8 FT. AWAY FROM ANY VERTICAL SURFACE.
- INSTALL WATER HAMMER ARRESTORS ON EACH COLD AND HOT WATER FIXTURE BRANCH AS RECOMMENDED BY PLUMBING AND DRAINAGE INSTITUTE WH-210 STANDARD. DEVICES SHALL BE FACTORY MADE WITH PERMANENT CUSHION OF GAS OR PROVIDE ACCESS PANEL.
- PLUMBING FIXTURES SHALL BE CERTIFIED BY THE CEC. WATER CLOSET: 1.28 GPF, SHOWER HEAD: 2.2 GPM, SINK FAUCETS: 2.2 GPM, LAVATORY: 0.5 GPM.
- LAVATORY CONTROLS SHALL LIMIT THE FLOW RATE 0.5 GPM AND 110°F.
- SHOWER TUB-SHOWER COMBINATION SHALL HAVE INDIVIDUAL SHOWER CONTROL VALVE OF THE PRESSURE BALANCE OR THE THERMOSTATIC MIXING VALVE TYPE, SET AT 120°F MAXIMUM.
- SEWER PIPE SIZES THAT ARE 3 INCHES OR SMALLER SHALL BE EVALUATED AT 2% SLOPE.
- ALL CAST IRON PIPE & FITTINGS, ABOVE OR BELOW GROUND SHALL BEAR THE COLLECTIVE TRADEMARK OF CISPI AND HAVE NSF CERTIFICATION. STANDARD COUPLINGS FOR NO-HUB PIPE AND FITTINGS COMPLY WITH CISPI 301 & BEAR THE NSF TRADEMARK.
- THE SEISMIC SHUT-OFF VALVE SHALL BE INSTALLED RIGIDLY TO THE EXTERIOR OF THE BUILDING OR STRUCTURE CONTAINING THE FUEL GAS.
- USE FEMALE COPPER NIPPLE TO MALE MALE PLASTIC PIPE FOR COPPER TO PLASTIC TRANSITION.
- APPROVED MATERIALS, FITTINGS, FIXTURES & DEVICES MUST COMPLY WITH HIGH EFFICIENCY & GREEN BUILDING CODE.
- LEAD FREE COMPLIANCE REQUIRED EFFECTIVE JANUARY 1, 2016 PER CALIFORNIA HEALTH & SAFETY CODE SECTION 116875
- ALL HOT & COLD WATER PIPES TO BE SANITIZED.
- ALL WORK SHALL COMPLY WITH 2016 CPC ASSE 1070 REQUIREMENT.
- CONTRACTOR SHALL VERIFY EXACT LOCATIONS & DEPTH OF EXISTING LINES, LATERALS & WYES BEFORE STARTING. SHOULD IT BE NECESSARY TO REROUTE LINES DUE TO CONDITIONS FOUND ON THE SITE OR IF INDICATED POINTS OF CONNECTIONS CANNOT BE MADE TO THE LINES AS FOUND, THE CONTRACTOR SHALL, BEFORE CONTINUING, NOTIFY THE ARCHITECT PRIOR TO INSTALLING ANY WORK WHICH MAY BE AFFECTED.
- INSTALL SHUT-OFF VALVES @ EVERY COLD & HOT WATER RISER W/ ACCESS PANEL, SIZE AS SHOWN ON THE PLANS, & AT EACH COLD & HOT WATER SUPPLY BRANCH W/ W/ 12"x12" ACCESS PANEL.
- PROVIDE TRAP PRIMER FOR FS & FD.
- FOR HANDICAPPED REQUIREMENTS, SEE ARCHITECTURAL DRAWINGS.
- LAVATORY FAUCETS & SINK FAUCETS (NOT INCLUDING SERVICE SINK FAUCETS) SHALL MEET THE FLOW REQUIREMENTS OUTLINED IN THE APPLIANCE EFFICIENCY STANDARDS. STANDARDS 120-1525.
- ALL PLUMBING FIXTURES TO BE APPROVED BY ENERGY CONSERVATION STANDARDS.
- ALL REQUIRED CLEANOUTS SHALL BE INSTALLED AS PER SEC. 707 & 719 OF THE 2016 UNIFORM PLUMBING CODE.
- ALL PLUMBING FIXTURES SHALL BE CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION. (WATER CLOSET 1.28 GPF, LAVATORY 0.25 GPM OR 0.125 GALLON/CYCLE W/ METERED FAUCETS & SINK FAUCETS 1.8 GPM).
- WATER CLOSETS FOR PUBLIC AREAS TO BE ELONGATED BOWL W/ OPEN FRONT SEATS.
- EACH PLUMBING VENT SHALL TERMINATE NOT LESS THAN TEN (10) FEET FROM OR AT LEAST THREE (3) FEET ABOVE ANY WINDOW, DOOR, OPENING, AIR INTAKE OR VENT SHAFT.
- PROPOSED ADDITION ALTERATION OR IMPROVEMENT REQUIRES ALL NON-COMPLIANT FIXTURES TO BE REPLACED W/ WATER CONSERVING PLUMBING FIXTURES. (CIVIL CODE SECTION 1101.5)
- RESIDENTIAL (CIVIL CODE SECTION 1101.4)
- NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE ACCORDING TO THE METHOD SET IN SECTION 609.9 OF THE PLUMBING CODE.
- ALL FIXTURES, EQUIPMENT, PIPING & MATERIALS SHALL BE LISTED.
- ALL PLUMBING FIXTURES SHALL MEET THE FLOW REQUIREMENTS SPECIFIED IN THE LOS ANGELES PLUMBING CODE.
- ALL FAUCETS IN PUBLIC RESTROOMS SHALL BE SELF-CLOSING OR SELF-CLOSING METERING FAUCETS.
- THE PRESSURE REGULATING VALVE (PRV) SHALL BE ACCESSIBLY LOCATED ABOVE GROUND OR IN A VAULT EQUIPPED WITH A PROPERLY SIZING & SLOPED DRAIN TO DAYLIGHT. THE PRV SHALL NOT BE INSTALLED IN A PIT WHERE IT CAN BECOME SUBMERGED IN WATER.
- THE REDUCED PRESSURE BACK FLOW DEVICE (RBF) SHALL BE INSTALLED AT LEAST 12 INCH ABOVE GRADE OR FINISHED FLOOR. THE (RBF) SHALL NOT BE INSTALLED IN A PIT WHERE IT CAN BECOME SUBMERGED IN WATER.
- THE HOT WATER SYSTEM SHALL COMPLY W/ ON OF THE FOLLOWINGS:
 - THE HOT WATER SYSTEM SHALL NOT ALLOW MORE THAN 0.6 GALLONS OF WATER TO BE DELIVERED TO ANY FIXTURE BEFORE HOT WATER ARRIVES.
 - WHERE A HOT WATER RECIRCULATION OR ELECTRIC RESISTANCE HEAT TRACE WIRE SYSTEM IS INSTALLED, THE BRANCH FROM THE RECIRCULATING LOOP OR ELECTRIC RESISTANCE HEAT TRACE WIRE TO THE FIXTURE SHALL CONTAIN A MAXIMUM OF 0.6 GALLONS.
- THE POINT OF CONNECTION BETWEEN THE GRAY WATER PIPING & OTHER WASTE PIPING SHALL BE ACCESSIBLE (AS DEFINED BY LAGB02) & PROVIDED W/ SIGNAGE THAT IS SATISFACTORY TO THE DEPARTMENT.

PLUMBING LEGEND

SYMBOL	ABBREV.	DESCRIPTION
---	S OR W	SOIL OR WASTE ABOVE FLOOR
---	S OR W	SOIL OR WASTE BELOW FLOOR
---SD---	SD	STORM DRAIN
---OD---	OD	OVERFLOW DRAIN
-----V	V	VENT
---	CW	COLD WATER
---	HW	HOT WATER
---	HWR	HOT WATER RETURN
---ICW---	ICW	INDUSTRIAL COLD WATER
---DSP---	DSP	DRY STANDPIPE
---CSP---	CSP	COMBINATION STANDPIPE
---F---	F	FIRE LINE
⊕	FCO	FLOOR CLEANOUT
⊕	WCO	WALL CLEANOUT
+	HB	HOSE BIBB
⊗	SOV	BALL VALVE
⊗	GLV	GLOBE VALVE
⊗	CHV	CHECK VALVE
⊗	PRV	PRESSURE RELIEF VALVE
⊗	PTRV	PRESS. TEMP. RELIEF VALVE
⊕	DN / DRP	DOWN / DROP
⊕		UP / RISE
---CD---		CONDENSATE DRAIN
---COD---		CONDENSATE OVERFLOW DRAIN
⊕	AB	ACCESS BOX
⊕	ACP	ASBESTOS CEMENT PIPE
⊕	AP	ACCESS PANEL
⊕	AGR	AIR GAP RECEPTOR
⊕	BEL	BELOW
⊕	BWV	BACKWATER VALVE
⊕	BV	BALANCING VALVE
⊕	CAP	CAP
⊕	CI	CAST IRON
⊕	CLG.	CEILING
⊕	CDP	CONDENSATE DRAIN PUMP
⊕	CONT.	CONTINUATION
⊕	COTG	CLEANOUT TO GRADE
⊕	E.	PREFIX "E" DENOTES EXIST.
⊕	EXIST.	EXISTING
⊕	FLR.	FLOOR
⊕	FD	FLOOR DRAIN
⊕	FS	FLOOR SINK
⊕	FIN.FLR.	FINISHED FLOOR
⊕	FIN.GR.	FINISHED GRADE
⊕	FU	FIXTURE UNIT
⊕	FTR	FLUE THRU ROOF
⊕	GPM	GALLONS PER MINUTE
⊕	HCW	HOT & COLD WATER
⊕	H.A.	HANDICAPPED ACCESSIBLE
⊕	I.E.	INVERT ELEVATION
⊕	M.H.	MANHOLE
⊕	N.I.C.	NOT IN CONTRACT
⊕	POC	POINT OF CONNECTION
⊕	PT	PLUGGED TEE
⊕	PY	PLUGGED WYE
⊕	SDF	STORM DRAIN FILTER
⊕	TP	TRAP PRIMER
⊕	V.C.P.	VITRIFIED CLAY PIPE
⊕	VTR	VENT THRU ROOF
⊕	WH	WALL HYDRANT
⊕	WHA	WATER HAMMER ARRESTER
⊕	YB	YARD BOX
⊕	G	GAS
⊕	GW	GREASE WASTE
⊕	GRW	GRAY WATER
⊕	⊕	BY PLUMBING CONTRACTOR



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PLUMBING GENERAL NOTES, LEGENDS, EQUIPMENTS, SCHEDULES & SHEET INDEX

CITY OF TORRANCE
 FIRE DEPARTMENT
 FIRE STATION 4 RENOVATION
 5205 CALLE MAYOR
 TORRANCE, CA 90505

Issue	
Date	01.SEP.21
Drawn	FG
Checked	CD
Scale	1/4"=1'-0"
Job. No.	--



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P-1.0