

## PHASE-1B SCOPE OF WORK

1. THE PHASE-1B PLUMBING WORK SHALL CONSISTS OF EXTENDING THE PLUMBING UTILITIES FROM AVAILABLE SITE UTILITY SERVICES AND DISTRIBUTING TO THE NEW ADMINISTRATION BUILDINGS "C". THE UTILITIES SHALL INCLUDE BUT NOT LIMITED TO THE DOMESTIC WATER (CW), FIRE WATER (F), PG&E GAS, SANITARY SEWER AND STORM DRAIN CONNECTIONS.
2. THE REQUIRED UTILITIES SHALL BE COORDINATED WITH THE PHASE-1A SCOPE OF WORK FOR REQUIRED CAPACITY, INVERTS, PIPE MATERIAL, PIPES ZIZE, FLOW CAPACITY REQUIRED AND PRESSURE PRIOR TO THE START OF WORK.
3. THE PLUMBING CONTRACTOR SHALL COORDINATE THE REQUIRED UTILITY SIZES, POINT-OF-CONNECTIONS, PIPE INVERTS, PIPE ROUTING, PIPE MATERIAL TYPE ETC. WITH THE EXISTING SITE UTILITIES AND AS INDICATED IN THE CIVIL & LANDSCAPE DRAWINGS.
4. THE SCOPE SHALL INCLUDE MATERIAL AND LABOR, TRENCHING, BACKFILLING, SUPPORTING, CORROSION PROTECTION, PIPE ANCHORAGE, ETC. AND COORDINATED WITH OTHER TRADE WORK AND IN COMPLIANCE WITH APPLICABLE LOCAL & STATE CODES AND STANDARDS.
5. THE FIRE-PROTECTION WORK SHALL CONSIST OF EXTENDING THE FIRE WATER FROM THE PHASE-1A STUBOUT LOCATIONS AND DISTRIBUTED TO THE FIRE SPRINKLER SYSTEM FOR THE ADMINISTRATION BUILDING "C" AND THE COVERED WALKWAYS. THE DESIGN-BUILD FIRE PROTECTION CONTRACTOR SHALL PREPARE AND SUBMIT PLANS AND SPECIFICATIONS, HYDRAULIC CALCULATIONS AND FIRE PROTECTION SYSTEM LAYOUT INCLUDING HEAD LOCATIONS FOR A FULLY SPRINKLED BUILDING IN ACCORDANCE WITH NFPA-13 AND 14 AND THE CITY OF LIVERMORE FIRE DEPARTMENT REQUIREMENTS. PROVIDE FULL COVERAGE FOR THE BUILDING AND THE COVERED WALKWAYS.

## FIRE PROTECTION GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LATEST NFPA 13 & 14 WITH AMENDMENTS FROM THE LIVERMORE FIRE DEPARTMENT, CFC, CBC AND THE REQUIREMENTS OF THE CITY AND COUNTY FIRE MARSHAL'S OFFICE.
2. THE SCOPE OF WORK INCLUDES BUT NOT LIMITED TO PROVIDING FULL SPRINKLER FIRE PROTECTION COVERAGE FOR THE NEW BUILDING "C", AND THE COVERED WALKWAYS AS A DESIGN-BUILD (D-B) WORK. THE D-B FIRE PROTECTION CONTRACTOR SHALL PREPARE AND SUBMIT PLANS AND SPECIFICATIONS, HYDRAULIC CALCULATIONS AND SPRINKLER SYSTEM SHOP DRAWINGS TO THE CITY OF LIVERMORE PERMIT CENTER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
3. THE D-B FIRE PROTECTION CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADE WORK, CIVIL/SITE WORK, ARCHITECTURAL AND STRUCTURAL FOR PROPER INTERFACING, PIPE ROUTING AND SPRINKLER HEAD LOCATIONS AND MAKE NECESSARY ADJUSTMENTS TO HIS WORK AS REQUIRED.
4. COORDINATE WITH DIVISION-16 FOR MONITORING OF THE FLOW AND TAMPER DEVICES AND ALARM BELL POWER REQUIREMENTS.
5. D-B CONTRACTOR SHALL CONDUCT TESTS AND DEMONSTRATIONS AS REQUIRED BY THE CITY/COUNTY FIRE DEPARTMENT AND OBTAIN FINAL PERMITS & APPROVALS PRIOR TO OCCUPANCY.
6. CONTRACTOR SHALL OBTAIN THE NECESSARY FIRE FLOW TESTS AND STREET MAIN STATIC PRESSURE FROM THE LOCAL UTILITY AND FIRE DEPARTMENT AND CONFIRM THE AVAILABLE STATIC PRESSURE PRIOR TO PREPARING AND SUBMITTING THE HYDRAULIC CALCULATIONS AND SPRINKLER SYSTEM DESIGN.
7. ALL FIRE PROTECTION PIPING, INCLUDING TH FIRE SPRINKLER RISER, SHALL BE LOCATED INSIDE AN APPROVED INDOOR LOCATION.

## PLUMBING GENERAL NOTES

1. PLUMBING CONTRACTOR SHALL PROVIDE PLUMBING WORK PER THE CONTRACT DOCUMENT INCLUDING THE ARCHITECTURAL AND PLUMBING DRAWINGS AND DIVISION-15 SPECIFICATIONS.
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST APPLICABLE FEDERAL, STATE AND CITY OF LIVERMORE PLUMBING CODES, LAWS AND REGULATIONS INCLUDE USGBC LEED REQUIREMENTS FOR WATER EFFICIENCY.
3. CONTRACTOR SHALL SET PLUMBING FIXTURES AND DRAINS TO ELEVATIONS AND LOCATIONS SHOWN ON ARCHITECTURAL PLANS.
4. CONTRACTOR SHALL VISIT THE SITE AND CONFIRM ALL EXISTING CONDITIONS AND REVIEW ALL DISCIPLINE DRAWINGS PRIOR TO SUBMITTING THE BIDS. DISCREPANCIES, IF ANY, MUST BE BROUGHT TO THE ATTENTION OF THE OWNERS' PROJECT MANAGER/ARCHITECT IMMEDIATELY FOR CLARIFICATION.
5. FOR EXACT SCOPE OF WORK AND PHASING REQUIREMENTS, SEE ARCHITECTURAL DRAWINGS.
6. PLUMBING MATERIALS SHALL BE IN COMPLIANCE WITH 2007 CPC. CONNECTION BETWEEN COPPER AND IRON AND STEEL PIPE SHALL BE MADE WITH DIELECTRIC ISOLATING FITTINGS, DIELECTRIC UNIONS OR DIELECTRIC FLANGES.
7. PROVIDE INSULATION FOR ALL DOMESTIC HOT WATER PIPING PER TITLE-24. INSULATE ALL HORIZONTAL COLD WATER PIPING AND PIPES SUBJECT TO FREEZING. INSULATION SHALL BE FIBERGLASS, RIGID MOLDED, NON-COMBUSTIBLE. PROTECT OUTDOOR INSULATION WITH HEAVY DUTY ALUMINUM JACKETING.
8. PENETRATIONS THROUGH THE SLABS, FOUNDATION WALLS AND FOOTINGS SHALL BE SLEEVED AND COORDINATED WITH THE STRUCTURAL AND ARCHITECTURAL PLANS.
9. COORDINATE WITH CIVIL PLANS FOR ROUTING OF THE DOMESTIC WATER, FIRE WATER AND IRRIGATION WATER IN THE JOINT TRENCH.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PLUMBING UTILITY CONNECTIONS TO REFRIGERATORS, COFFEE MAKERS, DRINKING FOUNTAIN, ETC.
11. ON DIRECTION OF ARCHITECT/OWNER, PROVIDE PRODUCTS SAMPLES, MOCK-UPS AS REQUIRED. COORDINATE WITH GENERAL CONTRACTOR AND OTHER TRADE WORK AS NECESSARY TO PROVIDE THE FIELD MOCK-UP AND OBTAIN ARCHITECT/OWNER APPROVALS BEFORE PROCEEDING.
12. COORDINATE PLUMBING WORK WITH CIVIL/SITE WORK AND UTILITY COMPANY FOR PROPER INTERFACING OF THE UTILITY SIZES, PIPE INVERTS, CAPACITY, FLOW, PRESSURE, POINT-OF-CONNECTIONS, MATERIALS OF CONSTRUCTION, SUPPORTING AND CORROSION PROTECTION, ETC. MAKE ADJUSTMENTS TO PLUMBING WORK TO PROPERLY INTERFACE THE WORK WITH SITE UTILITIES.
13. ALL WORK SHALL BE WARRANTED FOR 1-YEAR FROM THE PROJECT ACCEPTANCE BY THE ARCHITECT/OWNER. THE PROJECT ACCEPTANCE SHALL BEGIN AFTER OBTAINING ALL THE OCCUPANCY PERMITS FROM THE CITY, UPON RECEIVING ALL THE OPERATING AND MAINTENANCE (O&M) MANUALS, AS-BUILT PLANS, COMPLETION OF ALL THE PUNCLISTED ITEMS AND SUBMITTING THE WRITTEN WARRANTY FOR THE WORK.
14. PRIOR TO REQUESTING FOR THE SUBSTANTIAL COMPLETION, REMOVE ALL CONSTRUCTION DEBRIS AND DISPOSE OFF, CLEAN ALL THE PLUMBING FIXTURES, SEWER ROD THE DRAINAGE LINES TO UNCLUG CONSTRUCTION DEBRIS, STERILIZE THE POTABLE WATER SYSTEM AND OBTAIN CERTIFICATION FROM THE LOCAL HEALTH DEPARTMENT, PRIOR TO THE PROJECT COMPLETION.

## PIPING SCHEDULE

SYSTEM	LOCATION	SIZE	PIPE	FITTINGS	JOINTS
SANITARY WASTE & VENT SYSTEM	BURIED	ALL	CAST IRON, SOIL NO-HUB	CAST IRON SOIL NO-HUB COUPLING	NO-HUB
	ABOVE GROUND	ALL	COPPER PIPING SOIL NO-HUB	CAST IRON SOIL NO-HUB COUPLING	NO-HUB
	OPTION: ABOVE GROUND SANITARY W & V	W & V 2 1/2" & SMALLER	SCHEDULE 40 GALV. STEEL	GALV. CAST IRON DRAINAGE FITTINGS	SCREWED
INDIRECT WASTE (INCLUDING CONDENSATION PIPING)	ABOVE GROUND	1-1/4" & ABOVE	COPPER PIPING	DWV CAST DRAINAGE	50-50 SOLDER
	ALL	3/4" & 1"	COPPER PIPING	COPPER PIPING	SOLDER
DOMESTIC WATER (CW)	ABOVE GROUND	ALL	COPPER PIPING	COPPER PIPING	95-5 SOLDER
NATURAL GAS	BURIED	PG&E SPECS. & LOCAL CODE REQ'TS.			
	ABOVE GROUND NOTE: ALL PIPING SHALL CONFORM W/LOCAL CODE	3" & LARGER	SCHEDULE 40 BLACK STEEL	BUTT WELDING SEAMLESS STEEL	WELDED
		2 1/2" & SMALLER	SCHEDULE 40 BLACK STEEL	150LB MALLEABLE IRON	SCREWED
	EXPOSED TO WEATHER	ALL GAS PIPING EXPOSED TO WEATHER (ABOVE ROOF, AT METER, ETC.) SHALL BE GALVANIZED. PROVIDE APPROVED COATING (GALVALLOY, OR EQUAL) OVER GALV. PIPING WELDS.			

### NOTES:

1. IF "NO-HUB" IS NOT ACCEPTABLE (BY LANDLORD OR LOCAL CODE) SUBSTITUTE USING TYLER MFGP. CO. TY-SEAL JOINTS.
2. PIPING & FITTINGS SHALL BE MANUFACTURED WITHIN U.S.A.
3. DO NOT SUBSTITUTE ABOVE PIPING & FITTINGS UNLESS APPROVED BY ARCHITECT. IF LOCAL CODE/AUTHORITIES REQ'TS. DIFFER &/OR ARE MORE STRINGENT NOTIFY ARCHITECT PRIOR TO COMMENCING WORK.
4. COPPER PIPING SHALL USE LEAD-FREE SOLDER MEETING ALL CURRENT LOCAL & STATE REQ'TS.
5. ALL EXPOSED WASTE & VENT PIPING IN FINISHED AREAS SHALL BE DWV COPPER W/ WROUGHT COPPER FITTINGS (ALL W & V (2-1/2" & SMALLER)

## ABBREVIATIONS

ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
A.F.F.	ABOVE FINISHED FLOOR
AP	ACCESS PANEL (WALL OR CEILING)
ARCH.	ARCHITECTURAL
AG	AIR GAP
AHU	AIR HANDLING UNIT
BFF	BELOW FINISHED FLOOR
BTU	BRITISH THERMAL UNIT
CD	CONDENSATE DRAIN
CO	CLEAN OUT
COTG	CLEAN OUT TO GRADE
CONT	CONTINUATION
CONN	CONNECTION
CV	CHECK VALVE
CW	COLD WATER
D	SPRINKLER DRAIN
DCDVA	DOUBLE CHECK DETECTOR VALVE ASSEMBLY
DD	DECK DRAIN
DFU	DRAINAGE FIXTURE UNIT
DN	DOWN
DWG	DRAWING
ET	EXPANSION TANK
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FPS	FEET PER SECOND
FT.	FEET
GAL.	GALLONS
GC	GAS COCK
GN	GENERAL NOTE
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GV	GATE VALVE
HB	HOSE BIBB
HP	HORSEPOWER
HR	HOUR
HW	HOT WATER
HWR	HOT WATER RETURN
HZ	HERTZ
ICW	INDUSTRIAL COLD WATER/MAKE-UP WATER
IE	INVERT ELEVATION
IN.	INCHES
IW	INDIRECT WASTE
LV	LAVATORY
LBS	POUNDS
LW	LANDSCAPE WASTE
MAX.	MAXIMUM
MBH	1000 BTU PER HOUR
MECH.	MECHANICAL
MV	MIXING VALVE
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
OD	OVERFLOW DRAIN
PCW	PUMPED COLD WATER
PLBG	PLUMBING
P.O.C.	POINT OF CONNECTION
RD	ROOF DRAIN
RR	ROOF RECEPTOR
RPPB	REDUCED PRESSURE BACKFLOW PREVENTER
S	SEE ARCHITECTURAL DRAWINGS
SAD	SEE CIVIL DRAWINGS
SCD	SEE CIVIL DRAWINGS
SCVA	SPRINKLER CONTROL VALVE ASSEMBLY
SE	SEWAGE EJECTOR
SED	SEE ELECTRICAL DRAWINGS
SI	SAND INTERCEPTOR
SLD	SEE LANDSCAPE DRAWING
SMD	SEE MECHANICAL DRAWINGS
SP	SUMP PUMP
SPR	FIRE SPRINKLER PIPING
SS	SANITARY SEWER DRAINAGE
S.S.D.	SEE STRUCTURAL DRAWINGS
SSK	SERVICE SINK
TD	TRENCH DRAIN
TP	TRAP PRIMER
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
UR	URINAL
V	VENT OR VOLTS
VB	VACUUM BREAKER
VR	VENT RISER
VTR	VENT THRU ROOF
W	WASTE
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WFO	WATER FIXTURE UNIT
WHA	WATER HAMMER ARRESTER
WMB	WASHING MACHINE BOX
WT.	WEIGHT

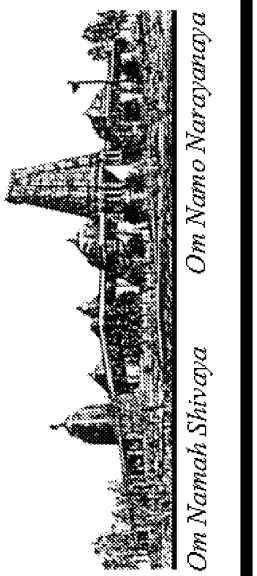
## LEGEND

SYMBOL	ABBR	DESCRIPTION
		RISER IDENTIFICATION
		RISER NUMBER
		DETAIL NUMBER
		DRAWING NUMBER
		EQUIPMENT IDENTIFICATION
		EQUIPMENT NUMBER
	S,W	SANITARY SOIL OR WASTE PIPING ABOVE GROUND
	S,W	SANITARY SOIL OR WASTE PIPING BELOW FLOOR
	SD	STORM DRAIN
	RWL	RAIN WATER LEADER
	V	VENT PIPING
	CW	DOMESTIC COLD WATER PIPING
	HW	DOMESTIC HOT WATER
	HWR	HOT WATER RETURN
	G	NATURAL GAS, LOW PRESSURE, PIPING
	ICW	INDUSTRIAL COLD WATER PIPING
	CA	COMPRESSED AIR
	SOL	SOLAR HAT WATER
	VAC	VACUUM
	F	FIRE PROTECTION PIPING
		SLOPE DOWN
	HB	HOSE BIBB
	CO	CLEAN OUT
	FCO	FLOOR CLEAN OUT
	WCO	WALL CLEAN OUT
	TPRV	TEMPERATURE & PRESSURE RELIEF VALVE
	FD	FLOOR DRAIN
		UNION
		REDUCER
	PG	PRESSURE GAUGE
		LINE CONTINUED
	GV	GATE VALVE
	GC	GAS COCK
	BV	BALL VALVE (2" OR SMALLER)
	GLV	GLOBE VALVE
	CV	CHECK VALVE
		STRAINER
	FCV	FLOW CONTROL VALVE
	PRV	PRESSURE REDUCING VALVE
	SF	SQUARE FEET
	POC	POINT OF CONNECTION

## DRAWING LIST

DWG. NO.	DESCRIPTION
P10.0B	PLUMBING GENERAL NOTES, LEGEND, ABBREVIATIONS
P10.1B	PLUMBING SCHEDULES
P11.1B	PLUMBING RISER DIAGRAMS
P11.2B	PLUMBING SPECIFICATIONS
P12.0B	PLUMBING SITE PLAN (PHASE-1A)
P13.0B	PLUMBING FLOOR PLAN
P14.0B	PLUMBING ROOF PLAN
P15.0B	PLUMBING DETAILS

REVISIONS	BY
05-24-10	HCCC
08-02-10	BPC
HEALTH DEPT PLAN CHECK 08-26-10	HDPC
09-22-10	BPC
10-07-10	HCCC



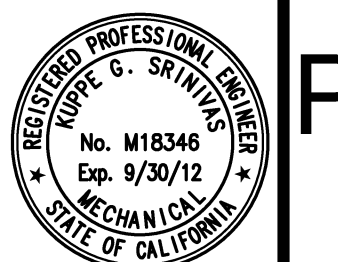
NEW BUILDING "C" - PHASE 1B  
**HINDU COMMUNITY and CULTURAL CENTER**  
 1200 ARROWHEAD AVE. LIVERMORE, CA 94551

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PLUMBING LEGEND  
 DRAWING INDEX  
 GENERAL NOTES

DATE  
 05/28/10  
 SCALE:  
 AS NOTED  
 DRAWN BY:

PROJECT:  
 ARROWHEAD



**P10.0B**

### FIXTURE CONNECTION SCHEDULE

CODE	DESCRIPTION	MANUFACTURER & MODEL NO.	SOIL-WASTE	TRAP	VENT	CW	HW	REMARKS
WC-1	WATER CLOSET (WALL HUNG)	AMERICAN STANDARD, AFWALL FLOWISE, ELONGATED, 1.28 GPF MODEL 3351.128, WHITE, OPEN FRONT SEAT #5905.100,	4"	-	2"	1 1/4"	-	1.28 GPF.PUBLIC USE FLUSH VALVE SLOAN ROYAL 111-1.28 WITH VACUUM BREAKER FLUSH CONN'N.
WC-2	WATER CLOSET ADA (WALL HUNG)	SAME AS WC-1 MOUNT FOR HANDICAP	4"	-	2"	1 1/4"	-	1.28 GPF.PUBLIC USE FLUSH VALVE SLOAN ROYAL 111-1.28 WITH VACUUM BRKER FLUSH CONN'N, ADA HANDLE.
UR-1	URINAL ADA (WALL HUNG)	AMERICAN STANDARD 'FLOWISE STANDARD' FLOWISE FLUSH-FREE WATERLESS URINAL MODEL 6150.100	2"	-	2"	-	-	WALL HUNG, INTEGRAL HOUSING AND DRAIN INSERT ODOR BARRIER LIQUID DRAIN INSERT, WHITE, ADA
LV-1	LAVATORY (COUNTER MOUNT)	AMERICAN STANDARD 'OVALYN' UNDERCOUNTER SINK MODEL 0495.221	2"	1 1/4" X 1 1/2"	1 1/2"	1/2"	1/2"	FOR PUBLIC USE TOILET ROOMS. UNDER COUNTER MOUNTED, ADA COMPLIANT. SLOAN HANDS FREE FAUCET #SF-2350 SERIES BATTERY POWERED
SSK-1	SERVICE SINK	CORNER - FIAT TSBC 1610 SERVICE SINK	3"	3"	2"	3/4"	3/4"	FAUCET - FIAT 830-AA.
DF-1	DRINKING FOUNTAIN	HAWS WALL MOUNTED MODEL 1119	2"	1 1/4" X 1 1/2"	1 1/2"	1/2"	-	HI-LOW TYPE WITH DUAL BUBBLER, ADA ACCESSIBLE
HB-1	HOSE BIBB-INTERIOR	WOODFORD MODEL 24P, 1/2" CHROME PLATED WALL FAUCET WITH VACUUM BREAKER & TEE KEY.	-	-	-	3/4"	-	MOUNT ON WALL UNDER LAV'S IN PUBLIC TOILET ROOMS
HB-2	HOSE BIBB-EXTERIOR	WOODFORD MODEL B74 SERIES 3/4" WALL HYDRANT WITH VACUUM BREAKER, LOOSE TEE KEY, AND DOOR.	-	-	-	3/4"	-	FOR EXTERIOR AREAS. SEE NOTE ②
TP-1	TRAP PRIMER	PROVIDE MIFAB MR-500 SERIES WITH M1-DU 1/2" CW CONNECTION	-	-	-	-	-	SEE NOTE ①
HB-3	HOSE REEL WITH SPRAY VALVE	CHICAGO FAUCET, MODEL #535-NF, WITH RETRACTABLE 35'X3/8" RUBBER HOSE, 3/4" 893 ATM. VACUUM BREAKER, 80H SELF CLOSING SPRAY VALVE, 376 SHUT OFF VALVE, 885VOC EXPOSED T-VALVE FITTING FOR HOT & COLD WATER CONNECTION, ETFC REMOVABLE SERRATED HOSE NOZZLE WITH FLOW CONTROL WALL HYDRANT WITH VACUUM BREAKER, LOOSE TEE KEY, AND DOOR.	-	-	-	3/4"	3/4"	WALL MOUNT VALVE AND HOSE INSIDE THE TRASH ENCLOSURE. CONNECT HOT WATER & COLD WATER CONNECTIONS & INSULATE BOTH HOT AND COLD WATER PIPES TO PROTECT FROM FREEZING.

#### NOTES

- ① PROVIDE TRAP PRIMERS TO ALL FLOOR DRAINS TO MAINTAIN WATER SEAL AT THE TRAPS.
- ② PROVIDE TWO HOSE BIBBS ON EAST AND WEST ENDS OF THE BUILDING AND TWO HOSE BIBBS ON ROOF ON EACH OF EAST & WEST ENDS FOR PERIODIC WASHING SOLAR PV PANELS.

### PLUMBING EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER & MODEL NO.
ET 1	EXPANSION TANK	BELL AND GOSSETT MODEL PTA-12, ASME, 125 PSIG WORKING PRESSURE PROVIDE NORMALLY OPEN VALVE WITH LOCK; WEIGHT WITH WATER = 100 LBS.
GI 1	GREASE INTERCEPTOR	J.R. SMITH 'GREASE INTERCEPTORS' MODEL 8025-25 EMBEDDED IN CONCRETE FLOOR INSIDE THE TRASH ENCLOSURE. SEE PLUMBING DRAWING P12.0B. NO-HUB ADAPTORS, PDI CERTIFIED AND LOCAL CODE COMPLIANT.

#### NOTES

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### WATER HEATER SCHEDULE

CODE	MFR	MODEL	SERVICE/LOCATION	GAS INPUT (BTU/HR)	EFF. (%)	GPH	GALS.	TEMP. RISE	WORKING PRESS. (MAX)	OPERATING WEIGHT (LBS.)	REMARKS (SEE NOTES BELOW)
WH 1	RINNAI TANKLESS	RC98HPI-NG	BLDG-C/JAN ROOM	199,000	96	588	-	60	150	100	TANKLESS, ELECTRONIC IGNITION, LOW PRESSURE GAS, 110 F SUPPLY TO PUB. LAVATORIES
WH 2	POWER STAR TANKLESS ELECTRIC	AE12	TRASH ENCLOSURE	12 KW 240/208V 50 AMP	99	60	-	70	150	10	TANKLESS, ELECTRIC, 130 F SUPPLY TO HOSE BIB IN TRASH ENCLOSURE, THERMOSTATIC ADJUSTABLE CONTROL, UL LISTED

#### NOTES

- ① INSTALL WATER HEATER ON THE ROOM WALL PER MANUFACTURER INSTALLATION GUIDELINES AND MAINTAINING CODE CLEARANCES TO ELECTRICAL PANEL.
- ② PROVIDE DIRECT VENT COMBUSTION AIR INTAKE AND EXHAUST VENTS FROM ROOF PER WATER MANUF. RECOMMENDATIONS.
- ③ TERMINATE WH CONDENSATE DRAIN AND FLUE DRAIN INTO CONDENSATE NEUTRALIZER KIT PRIOR TO TERMINATING INDIRECTLY TO JANITOR SINK.
- ④ 120V/1PH POWER. COORDINATE WITH DIVISION-16 FOR REQUIRED POWER SUPPLY. WATER HEATER SHALL BE CEC TITLE-24 LISTED.
- ⑤ PROVIDE STANDARD DIGITAL CONTROLLER #MC-91-S/W, CEILING/ROOF PENETRATION ASSEMBLY, VENT TERMINATION HEAD, CONDENSATE NEUTRALIZING KIT.
- ⑥ SEISMICALLY ANCHOR THE UNIT TO THE WALL. PROVIDE NECESSARY MOUNTING BRACKETS, HARWARE AND BACKING PLATE SUPPORTS AS REQUIRED.

### WATER HAMMER ARRESTOR SCHEDULE

CODE	J.R. SMITH FIG. NUMBER	PIPE SIZE	PDI SIZE	ALLOWABLE FIXTURE UNITS	REMARKS
WHA-A	5005	3/4"	A	1-11	PROVIDE WITH 8" X 8" S/S WALL MOUNTED ACCESS PANEL
WHA-B	5010	1"	B	12-32	PROVIDE WITH 8" X 8" S/S WALL MOUNTED ACCESS PANEL

### PUMP SCHEDULE

CODE	GPM	TDH FT	MFR:	TYPE & SIZE	V/PH	HP	SERVICE	LOCATION	REMARKS
CP 1	10	20	B&G	NBF-36-1	120V/1	1/3 HP	HOT WATER CIRCULATING	BLDG-C/ JAN ROOM	CIRCULATING PUMP

#### NOTES

- ① PROVIDE B&G AUTOMATIC TIMER KIT TC-1 7 AQUASTAT MODEL AQS-3/4, 120V/1PH.

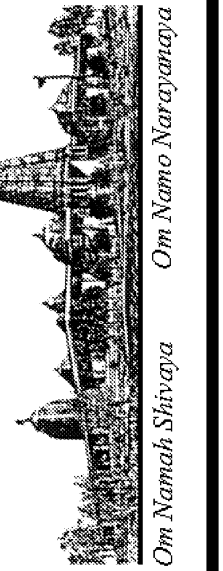
### DRAIN AND CLEANOUT SCHEDULE

CODE	DESCRIPTION - FLOOR FINISH	J.R. SMITH FIG. NUMBER	CONN.	TOP CR. MATERIAL	GRATE SIZE	REMARKS
FD-1	FLOOR DRAIN - TILE	2005Y-B-P050	2"	NB	5" SQ	① ② TOILET ROOMS
FD-2	FLOOR DRAIN - CONCRETE	2005C-B-P050	2"	NB	5" DIA	① ② TOILET ROOMS
FD-3	FLOOR DRAIN - CONCRETE	DX2010-BB-P050	2"	NB	5" DIA	① FOR TRASH ENCLOSURE AND SIMILAR HIGH-TRAFFIC AREAS
FCO-1	FLOOR CLEANOUT-TILE/CONC.	4100S-PB	2" - 4"	-	-	POLISHED BRONZE TOP
WCO-1	WALL CLEANOUT	4402	3" & 4"	-	-	STAINLESS STEEL COVER
RD-1	ROOF DRAIN - MAIN	1010Y-C-R-CL	3" & 4"	-	-	
OD-1	ROOF DRAIN - OVERFLOW	1080Y-C-R-CL	3" & 4"	-	-	

#### NOTES

- ① PROVIDE P-TRAP WITH TRAP PRIMER CONNECTION
- ② LOCATE THE FLOOR DRAINS AWAY FROM FOOT TRAFFIC.

REVISIONS	BY
05-24-10	HCCC
08-02-10	BPC
HEALTH DEPT PLAN CHECK 08-26-10	HDPC
09-22-10	BPC
10-07-10	HCCC

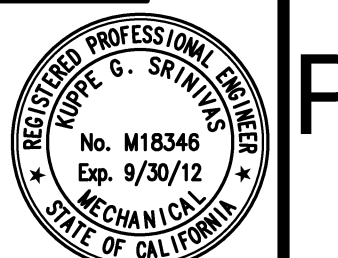


NEW BUILDING "C" - PHASE 1B  
 HINDU COMMUNITY and CULTURAL CENTER  
 1200 ARROWHEAD AVE. LIVERMORE, CA 94551

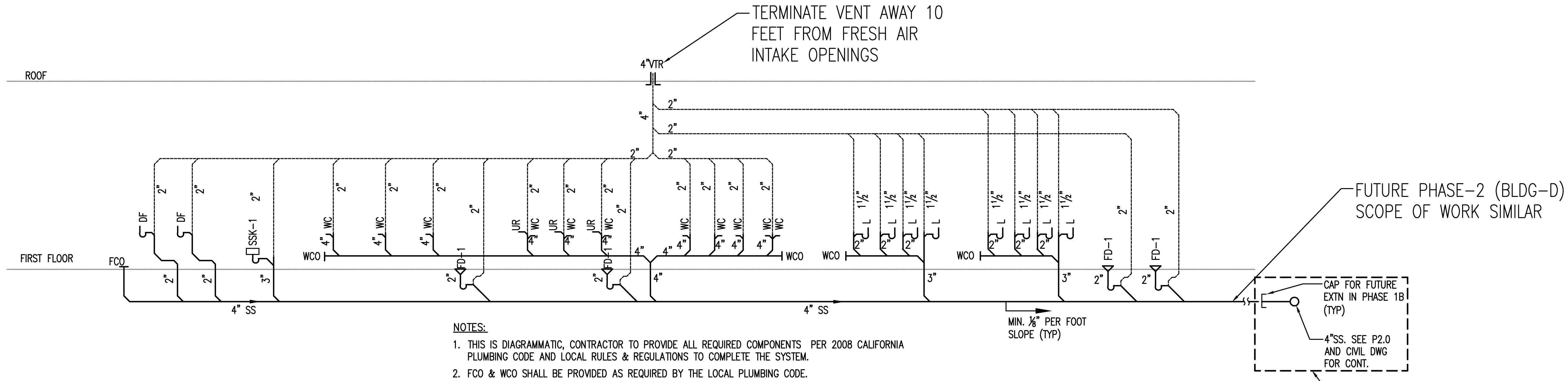
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PLUMBING  
 EQUIPMENT SCHEDULES

DATE  
 05/28/10  
 SCALE:  
 AS NOTED  
 DRAWN BY:  
 PROJECT:  
 ARROWHEAD

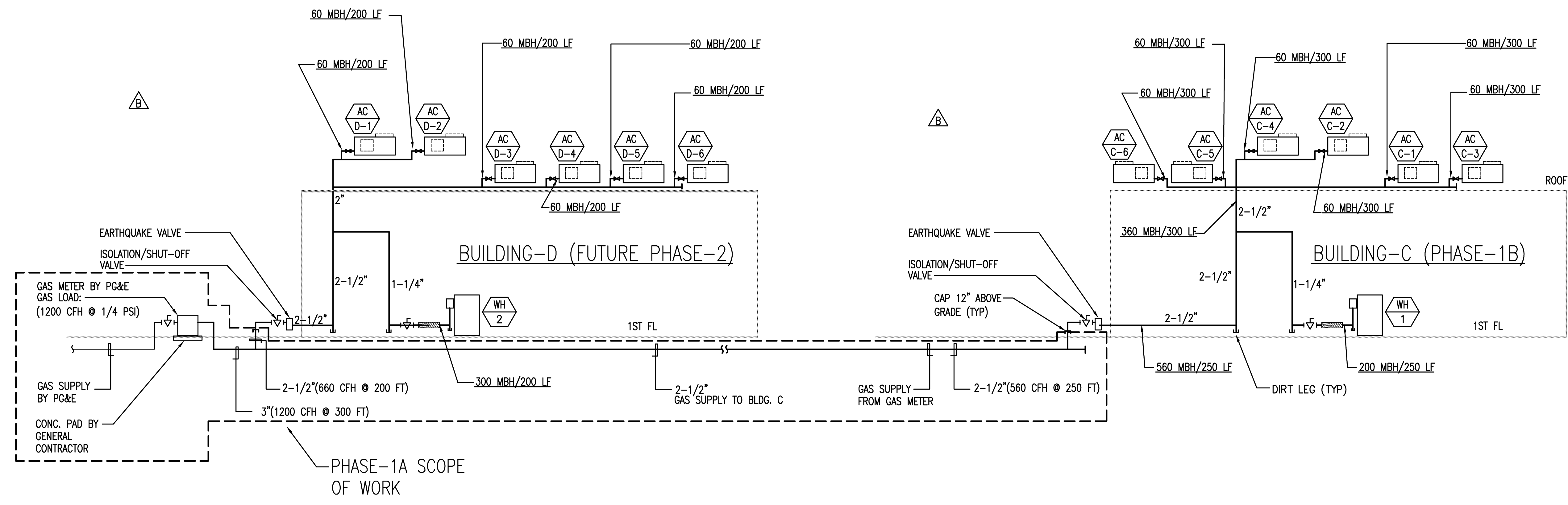


P10.1B



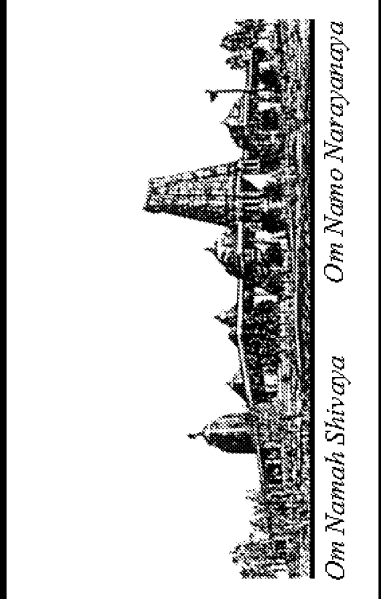
NOTES:  
 1. THIS IS DIAGRAMMATIC, CONTRACTOR TO PROVIDE ALL REQUIRED COMPONENTS PER 2008 CALIFORNIA PLUMBING CODE AND LOCAL RULES & REGULATIONS TO COMPLETE THE SYSTEM.  
 2. FCO & WCO SHALL BE PROVIDED AS REQUIRED BY THE LOCAL PLUMBING CODE.

**1 SANITARY WASTE/VENT RISER DIAGRAM - BUILDING C (PHASE-1B)**  
 SCALE: N.T.S.



**3 NATURAL GAS RISER DIAGRAMS - BUILDING C AND D**  
 SCALE: N.T.S.

REVISIONS	BY
△ 05-24-10	HCCC
△ 08-02-10	BPC
△ HEALTH DEPT PLAN CHECK 08-26-10	HDPC
△ 09-22-10	BPC
△ 10-07-10	HCCC



NEW BUILDING "C" - PHASE 1B  
**HINDU COMMUNITY and CULTURAL CENTER**  
 1200 ARROWHEAD AVE. LIVERMORE, CA 94551

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PLUMBING  
 RISER DIAGRAMS

DATE  
 05/28/10  
 SCALE:  
 AS NOTED  
 DRAWN BY:  
 PROJECT:  
 ARROWHEAD



**P11.1B**



**PLUMBING SPECIFICATIONS:**

**I. GENERAL**

- 1.01 CONDITIONS AND REQUIREMENTS:
  - A. THE GENERAL CONDITIONS AND GENERAL REQUIREMENTS OF THE CONTRACT DOCUMENT ARE HEREBY MADE A PART OF THIS SECTION AS FULLY AS IF REPEATED HEREIN.
- 1.02 DESCRIPTION OF WORK:
  - A. EXTENT OF PLUMBING SYSTEM WORK REQUIRED BY THIS SECTION IS INDICATED ON DRAWINGS, SCHEDULES AND BY REQUIREMENTS OF THIS SECTION.
  - B. TYPE OF WORK SPECIFIED INCLUDE THE FOLLOWING:
    - 1. SANITARY DRAINAGE AND VENT SYSTEMS COMPLETE TO POINT OF CONNECTION.
    - 2. POTABLE WATER SYSTEMS COMPLETE TO POINT OF CONNECTION.
    - 3. DOMESTIC HOT WATER SYSTEMS AS SHOWN TO POINT, PIPING, VALVES AND INSULATION.
    - 4. PLUMBING FIXTURES AND TRIM AS SPECIFIED HERE AND THE ARCHITECTURAL DRAWINGS INCLUDING ALL REQUIRED ACCESSORIES.
    - 5. ACCESS PANELS AS REQUIRED FOR WALL, FLOOR AND GRADE CLEANOUTS AND VALVES.
    - 6. SECURE AND PAY FEES FOR PERMIT, LICENSES, INSPECTIONS AND ROYALTIES REQUIRED FOR WORK OF THIS SECTION.
    - 7. OTHER NECESSARY ITEMS REQUIRED AND INCIDENTAL TO COMPLETING ALL PLUMBING WORK AS INDICATED ON THE DRAWINGS AND DESIGNATED HEREIN.
  - C. FLASHING REQUIRED IN CONJUNCTION WITH WASTE, VENT AND WATER SYSTEMS ARE INCLUDED AS WORK OF THIS SECTION.
- 1.03 QUALITY ASSURANCE:
  - A. MANUFACTURER'S QUALIFICATIONS: FIRMS REGULARLY ENGAGED IN MANUFACTURE OF PLUMBING SYSTEMS, PRODUCTS, OF TYPE, MATERIALS AND SIZES REQUIRED, WHOSE PRODUCTS HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR NOT LESS THAN 5 YEARS.
  - B. INSTALLER'S QUALIFICATIONS: FIRM WITH AT LEAST 3 YEARS OF SUCCESSFUL INSTALLATION EXPERIENCE ON PROJECTS WITH PLUMBING SYSTEMS WORK SIMILAR TO THAT REQUIRED FOR THIS PROJECT.
  - C. CODES AND STANDARDS:
    - 1. 2008 CALIFORNIA PLUMBING CODE COMPLIANCE: COMPLY WITH APPLICABLE PORTIONS OF LOCAL PLUMBING CODE PERTAINING TO SELECTION AND INSTALLATION OF PLUMBING MATERIALS AND PRODUCTS.
    - 2. CCR COMPLIANCE: COMPLY WITH APPLICABLE STATE ENERGY REGULATIONS REQUIREMENTS.
    - 3. AGA COMPLIANCE: ALL GAS APPLIANCES AND EQUIPMENT SHALL COMPLY WITH REQUIREMENTS OF AMERICAN GAS ASSOCIATION.
    - 4. USGBC - LEED v2.2 REQUIREMENTS FOR WATER EFFICIENCY AND WATER SAVINGS.
- 1.04 SUBMITTALS:
  - A. OF ALL PLUMBING EQUIPMENT, PLUMBING FIXTURES CUT SHEETS AND PLUMBING MATERIALS FOR OWNER AND OR ARCHITECTS' APPROVAL.
  - B. PLUMBING PIPING SHOP DRAWINGS AT 1/4"=1'-0" SCALE MINIMUM.

**II. PRODUCTS:**

- 2.01 PIPING:
  - A. DOMESTIC WATER HOT AND COLD: TYPE "L" HARD DRAWN COPPER WITH 95/5 SOLDER JOINTS.
  - B. SOIL, WASTE AND VENT ABOVEGROUND: CAST IRON SOIL, PLAIN END (HUBLESS) SERVICE WEIGHT WITH NEOPRENE SLEEVE AND STAINLESS STEEL SHIELD JOINTS.
- 2.02 VALVES:
  - A. BALL VALVES: STOCKHAM S-217-BR-R-S, EPT SEAT, THREADED, STOCKHAM FIG. S-214-BR-R-T
  - B. CHECK VALVES: THREADED STOCKHAM FIG. B-319 SWEAT, STOCKHAM FIG. B-309
  - C. WATER PRESSURE REDUCING VALVES: WATTS, AW CASH, CLAYTON OR APPROVED SUBSTITUTE. CASH FIGURE EB-24U. SET PRESSURE AT 60 PSI.
- 2.03 PIPING INSULATION:
  - A. GENERAL IN ACCORDANCE WITH TITLE 24 ENERGY REGULATIONS.
  - B. MANUFACTURER: OWEN-CORNING FIBERGLASS, ARMSTRONG, MANVILLE OR CETAIN-TEED.
  - C. PRE-MOLDED 1" FIBERGLASS WITH ASJ, R-4 MINIMUM.

2.04 DRAINAGE AND PIPING SPECIALTIES:

- A. MANUFACTURERS: SMITH, JOSAM, WADE, JONESPEC OR ZURN. 100% USA MANUFACTURED COMPONENTS ONLY.
  - B. CLEANOUTS: PROVIDE WHERE SHOWN; TYPES AND SIZES AS SCHEDULED.
  - C. AIR CHAMBERS: PROVIDE ON ALL COLD AND HOT WATER CONNECTIONS WITHOUT A WATER HAMMER ARRESTOR, 18" HIGH AND DIAMETER SAME SIZE AS SUPPLY. NIBCO MODEL 620L.
  - D. TRAP PRIMER: INSTALL WHERE SHOWN OR REQUIRED BY CODE. PRECISION PLUMBING PRODUCTS OR MIFAB; TYPE AND SIZES AS SCHEDULED.
  - E. FLOOR DRAINS: PROVIDE WHERE SHOWN; TYPE AND SIZES AS SCHEDULED.
  - F. TRAPS: PROVIDE FOR DRAINS, SHOWERS AND SIMILAR TYPE FIXTURES. PROVIDE CLEAN-OUT PLUG IN ALL SINK P-TRAPS.
  - G. HOSE BIBBS: WOODFORD OR APPROVED EQUAL HB-1 - MODEL 24P, CHROME FINISH, VACUUM BREAKER HB-2 - MODEL 24P, BRASS FINISH, VACUUM BREAKER
- 2.05 FIXTURE SUPPORTS:
- A. GENERAL: PROVIDE PLUMBING FIXTURE CARRIERS, SUPPORTS, AND DEVICES TO CARRY LOADS INDEPENDENTLY OF WALLS OR PARTITIONS. SECURELY BOLT SUPPORTS TO FLOOR WITH POWDER-DRIVEN OR DRILLED INSERTS OR STUDS.
  - B. MANUFACTURER: JOSAM, J.R. SMITH, WADE OR ZURN. SELECTION BASED ON J.R. SMITH.

2.06 ACCESS DOORS AND PANELS: (CEILINGS AND WALLS)

- A. WHERE REQUIRED: WHEREVER A PIECE OF EQUIPMENT OR VALVE AND OPERATOR IS INACCESSIBLE AND REQUIRES ACCESS FOR MAINTENANCE, REPAIR OR ADJUSTMENT.
- B. SIZE: SIZE IS DEPENDENT UPON THE RELATIONSHIP OF THE DOOR TO THE PRODUCT BEING SERVICED; THEREFORE, THE SIZE OF THE DOOR SHALL BE SELECTED TO PROVIDE CONVENIENT ACCESS TO ITS CONTENTS. SUBMIT SIZES FOR REVIEW.
- C. MANUFACTURER: INRYCO/MILCOR, OR EQUAL BILCO, CESCO, KARP OR NYSTROM.

2.07 FIXTURE SUPPLIES AND STOPS

- A. LAVATORIES: SPEEDWAY CRSST-1912-A OR APPROVED SUBSTITUTE.
- B. SINKS: SPEEDWAY CRSST-1912-K OR APPROVED SUBSTITUTE.
- C. WALL MOUNTED FAUCETS: SCREWDRIVER STOPS OR FAUCETS MAY HAVE INTEGRAL STOPS IN LIEU OF SEPARATE STOPS.
- D. TANK WATER CLOSETS: SPEEDWAY CRSST-1912-DL

2.08 FIXTURE FLOW CONTROLS: TO COMPLY WITH TITLE 24 AT EACH FIXTURE AS FOLLOWS: MODEL ARE FOR DOLE:

- A. LAVATORIES: TYPE FMB, 0.5 GPM EXCEPT FAUCETS WITH 0.5 GPM FLOW.
- B. SINKS: TYPE SR, 2.0 GPM.

2.14 PLUMBING FIXTURES:

- A. GENERAL: PROVIDE FACTORY-FABRICATED FIXTURES OF TYPE, STYLE AND MATERIAL. FOR EACH TYPE FIXTURE, PROVIDE MANUFACTURER'S STANDARD TRIM, CARRIER, SEATS AND VALVES AS INDICATED BY THEIR PUBLISHED PRODUCT INFORMATION; EITHER AS DESIGNED AND CONSTRUCTED, OR AS RECOMMENDED BY THE MANUFACTURER, AND AS REQUIRED FOR A COMPLETE INSTALLATION. WHERE MORE THAN ONE TYPE IS INDICATED, SELECTION IS INSTALLER'S OPTION BUT ALL FIXTURE OF THE SAME TYPE MUST BE FURNISHED BY A SINGLE MANUFACTURER OR AS INSTRUCTED BY THE OWNER OR THE ARCHITECT.
- B. OTHER MATERIALS:
  - ALL OTHER MATERIALS NOT SPECIFICALLY DESCRIBED BUT REQUIRED FOR A COMPLETE AND PROPER INSTALLATION SHALL BE NEW, FIRST QUALITY OF THEIR RESPECTIVE KINDS, AND SUBJECT TO THE APPROVAL OF THE ARCHITECT.

**III. EXECUTION:**

3.01 GENERAL:

- A. INSPECTIONS:
  - 1. PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE.
  - 2. VERIFY THAT ALL PLUMBING MAY BE INSTALLED IN STRICT ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS AND THE APPROVED SHOP DRAWINGS.
- B. DISCREPANCIES:
  - 1. IN THE EVENT OF DISCREPANCIES, IMMEDIATELY NOTIFY THE ARCHITECT.
  - 2. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.
- C. COORDINATION:
  - 1. COORDINATE WORK WITH RELATED TRADES TO PREVENT UNDUE DELAY IN JOB PROGRESS.
  - 2. CONTRACTOR SHALL PROVIDE A PERSON TO BE RESPONSIBLE FOR MAINTAINING PROPER POSITIONING AND ALIGNMENT OF ALL ITEMS DURING CONCRETE POURING.
  - 3. PROVIDE MATERIALS IN SUFFICIENT QUANTITIES ON JOB SITE TO COMPLETE THE WORK AND TO ACCOMMODATE MINOR UNFORESEEN CHANGES AND ADDITIONS IN THE SCOPE OF WORK.

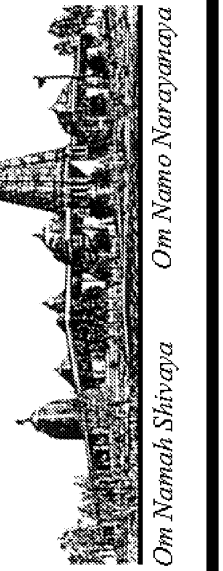
3.02 PIPING:

- A. GENERAL:
  - 1. SYSTEM LAYOUTS AS INDICATED ON DRAWINGS ARE GENERALLY DIAGRAMMATIC, BUT SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION WILL PERMIT.
- B. PIPING:
  - 1. ANY SECTION OF PIPE FOR WHICH SIZE IS NOT SHOWN OR ANY INTERMEDIATE SECTION ERRONEOUSLY SHOWN OBVIOUSLY UNDERSIZED SHALL BE THE SAME SIZE AS THE LARGEST LINE CONNECTING TO IT.
  - 2. INSTALL UNIONS AT CONNECTIONS TO EQUIPMENT, ON SERVICE SIDE OF VALVES AND ELSEWHERE AS REQUIRED OR SHOWN TO FACILITATE MAINTENANCE.
  - 3. INSTALL DIELECTRIC INSULATING CONNECTIONS BETWEEN ALL DISSIMILAR METALS UNLESS OTHERWISE INDICATED.
  - 4. ARRANGE PIPING AND HANGERS TO ALLOW FOR EXPANSION, CONTRACTION AND STRUCTURAL SETTLEMENT. DO NOT INSTALL PIPING IN CONTACT WITH THE BUILDING STRUCTURE.
  - 5. UNLESS SPECIFICALLY INDICATED OTHERWISE, INSTALL PIPING CONCEALED ABOVE CEILINGS, BENEATH THE FLOORS OR IN WALLS.
  - 6. SLOPING, VENTING AND DRAINAGE:
    - SLOPE PIPING AS INDICATED, TRUE TO LINE AND GRADE FREE OF TRAPS AND AIR POCKETS. UNLESS INDICATED OTHERWISE, SLOPE PING IN DIRECTION OF FLOW AS FOLLOWS:

SERVICE	INCLINATION	SLOPE
DOMESTIC WATER	LEVEL	
SANITARY VENT	UP	1/8" PER FT (MIN.)
SANITARY WASTE	DOWN	1/4" PER FT (MIN.)
CONDENSATE DRAIN	DOWN	1/4" PER FT (MIN.)
  - 7. RUN ALL PIPING GENERALLY LEVEL, FREE OF UNNECESSARY TRAPS AND BENDS, ARRANGE TO CONFORM TO THE BUILDING REQUIREMENTS AND TO SUIT NECESSITIES OF CLEARANCE FOR OTHER WORK.
  - 8. DOMESTIC WATER: CONNECT COPPER TUBING TO FIXTURES WITH COPPER FITTINGS; CHROME PLATED WHERE EXPOSED. PROVIDE 12" HIGH AIR CHAMBERS AT FIXTURE CONNECTIONS. PREVENT DAMAGE TO FINISHED SURFACES.
  - 9. COPPER: CRIMPING OF COPPER TUBING IS PROHIBITED. ISOLATE COPPER PIPE AND TUBING FROM CONTACT WITH STEEL.
  - 10. THREADED JOINTS: APPLY TEFLON TAPE TO MALE THREADS.
  - 11. SOLDERED JOINTS: CLEAN SURFACES TO BE JOINT OF OIL, GREASE, RUST AND OXIDES. CLEAN SOCKET OF FITTING AND END OF PIPE THOROUGHLY WITH EMERY CLOTH SO AS TO REMOVE RUST AND OXIDES. AFTER CLEANING, APPLY AND END OF PIPE THOROUGHLY WITH EMERY CLOTH SO AS FLUX TO JOINT SURFACE AND SPREAD EVENLY BEFORE ASSEMBLY OR HEATING.

- 12. DO NOT COVER OR ENCLOSE THE PIPING WORK BEFORE IT HAS BEEN TESTED, INSPECTED AND APPROVED.
  - 13. SEAL ALL PIPING PENETRATING THE ROOF WITH 4 LB. SHEET LEAD FLASHING WITH 8" SKIRT AND COUNTER FLASHING RIM SEALED WITH A NON HARDENING MASTIC.
  - C. PIPE CLEANING:
    - 1. DURING INSTALLATION, PIPING SHALL BE KEPT CLEAN AND DRY. THE PLUMBING CONTRACTOR SHALL PHYSICALLY PRE-CLEAN ALL WATER SYSTEM PIPING TO REMOVE DIRT, DEBRIS, GRASE, OIL AND CORROSION PRODUCTS THAT MAY HAVE ACCUMULATED DURING CONSTRUCTION
  - D. PIPE TESTING:
    - 1. TEST PIPING AS NOTED BELOW WITH NO LEAK OR LOSS OF PRESSURE. EPAIR OR REPLACE DEFECTIVE PIPING UNTIL TESTS ARE ACCOMPLISHED SUCCESSFULLY.
- TEST SCHEDULE:
- | SYSTEM         | MEDIUM | PRESSURE | TEST TIME |
|----------------|--------|----------|-----------|
| DOMESTIC WATER | WATER  | 150 PSIG | 4 HOURS   |
| SANITARY VENT  | WATER  | 15 FEET  | 2 HOURS   |
| SANITARY WASTE | WATER  | 15 FEET  | 2 HOURS   |
| PROPANE GAS    | AIR    | 50 PSIG  | 1 HOUR    |
- E. STERILIZATION OF DOMESTIC WATER PIPING:
    - 1. AFTER PRELIMINARY PURGING, CLEANING, AND FLUSHING OF THE SYSTEM, CHLORINATE THE ENTIRE POTABLE DOMESTIC WATER SYSTEM IN ACCORDANCE WITH THE CURRENT RECOMMENDATIONS OF THE AMERICAN WATER WORKS ASSOCIATION AND IN ACCORDANCE WITH ALL PERTINENT STATE AND LOCAL HEALTH CODES AND REGULATIONS.
    - 2. CHLORINATE ONLY WHEN PRESCHEDULED AND PROVIDE PROPER WARNING SIGNS AT OUTLETS.
    - 3. UPON COMPLETION OF THE STERILIZATION, THOROUGHLY FLUSH THE ENTIRE POTABLE WATER SYSTEM AND IMMEDIATELY FILL THE SYSTEM.
    - 4. WHEN STERILIZATION AND FLUSHING ARE COMPLETE, ARRANGE WITH PERTINENT AGENCIES FOR ALL REQUIRED TESTS ON MAINS AND SYSTEMS.
- 3.03 FIXTURE INSTALLATIONS AND CONNECTIONS:
- A. GENERAL:
    - 1. SET FIXTURES TO EQUAL HEIGHT, PLUMB OR AT RIGHT ANGLES TO WALL. CONNECT TO WASTE AND WATER SUPPLIES IN NEAT, UNIFORM AND FINISHED MANNER. PROVIDE NECESSARY TRIM AND APPURTENANCES FOR COMPLETE INSTALLATION. SEE ARCHITECTURAL DRAWINGS FOR FIXTURE HEIGHTS, SPACING, ARRANGEMENTS, ETC.
  - B. CLEANING AND PROTECTION:
    - 1. CLEAN PLUMBING FIXTURES OF DIRT AND DEBRIS UPON COMPLETION OF INSTALLATION.
    - 2. PROTECT INSTALLED FIXTURES FROM DAMAGE DURING THE REMAINDER OF CONSTRUCTION PERIOD.
  - C. FIELD QUALITY CONTROL:
    - 1. UPON COMPLETION OF INSTALLATION OF PLUMBING FIXTURES AND AFTER UNITS ARE WATER PRESSURIZED, TEST FIXTURES TO DEMONSTRATE CAPABILITY AND COMPLIANCE WITH REQUIREMENTS. WHEN POSSIBLE, CORRECT MALFUNCTIONING UNITS AT SITE, THEN RE-TEST TO DEMONSTRATE COMPLIANCE; OTHERWISE REMOVE AND REPLACE WITH NEW UNITS AND PROCEED WITH RETESTING.
    - 2. INSPECT EACH INSTALLED UNIT FOR DAMAGE TO FINISH. IF FEASIBLE, RESTORE AND MATCH FINISH TO ORIGINAL AT SIRE; OTHERWISE, REMOVE FIXTURE AND REPLACE WITH NEW UNIT. FEASIBILITY AND MATCH TO BE JUDGED BY THE ARCHITECT. REMOVE CRACKED OR DENTED UNITS AND REPLACE WITH NEW UNITS.
- 3.04 CLEANING UP:
- A. PRIOR TO ACCEPTANCE OF THE BUILDINGS, THOROUGHLY CLEAN ALL EXPOSED PORTIONS OF THE PLUMBING INSTALLATION, REMOVING ALL LABELS AND ALL TRACES OF FOREIGN SUBSTANCE, USING ONLY A CLEANING SOLUTION APPROVED BY THE MANUFACTURER OF THE PLUMBING ITEM AND BEING CAREFUL TO AVOID ALL DAMAGE TO FINISHED SURFACES.
  - B. SUBMIT A SIGNED COPY OF ALL TEST REPORTS TO THE ARCHITECTS.

REVISIONS	BY
05-24-10	HCCC
08-02-10	BPC
HEALTH DEPT PLAN CHECK 08-26-10	HDPC
09-22-10	BPC
10-07-10	HCCC

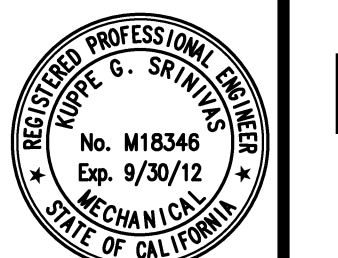


NEW BUILDING "C" - PHASE 1B  
**HINDU COMMUNITY and CULTURAL CENTER**  
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MECHANICAL SPECIFICATIONS  
 BUILDING - C

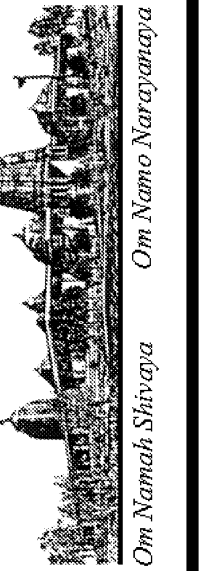
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PROJECT:	ARROWHEAD



**P11.2B**



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△ 05-24-10	HCCC
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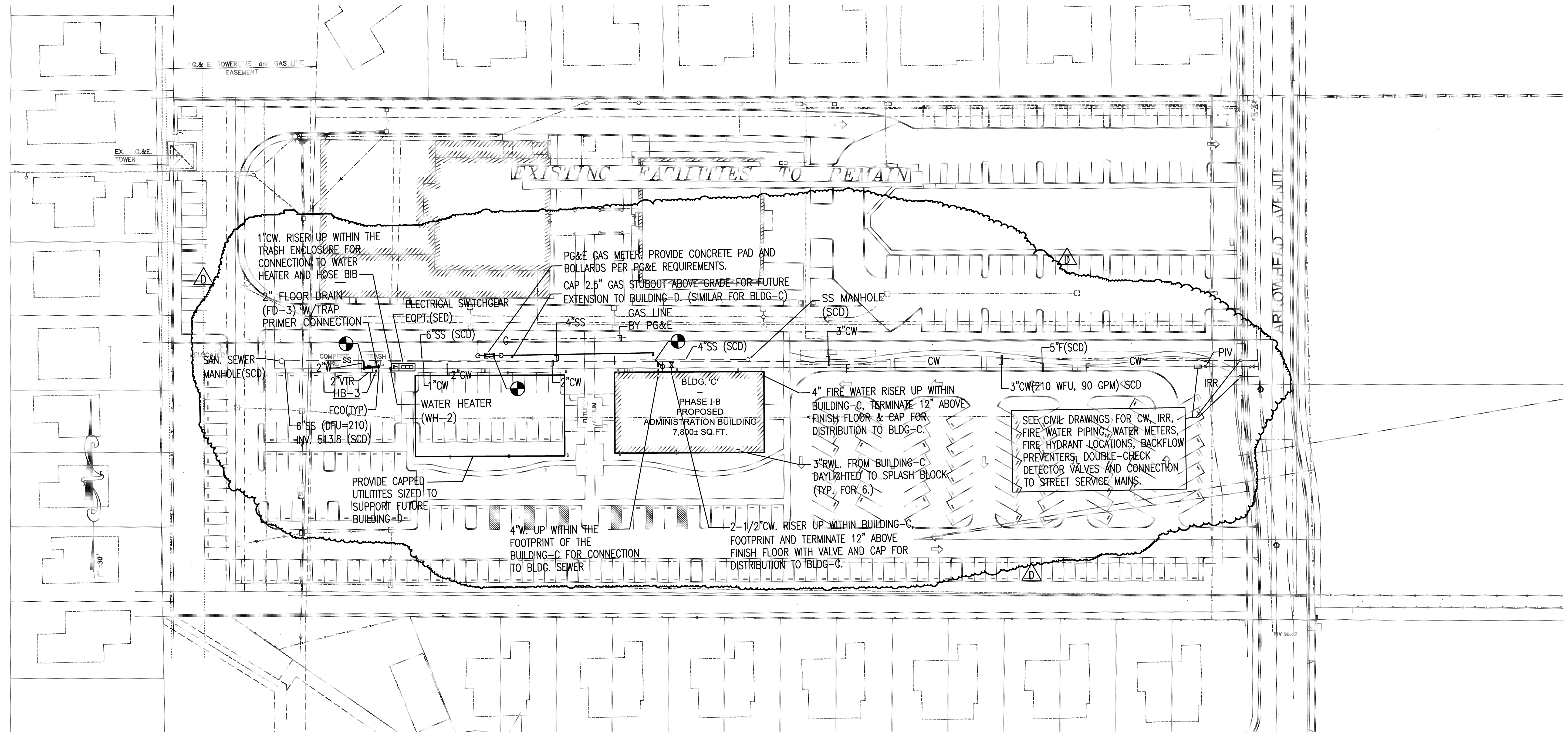
Ajmani & Parnidi Inc.  
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PHASE-1A  
PLUMBING SITE PLAN

DATE  
05/28/10  
SCALE:  
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PROJECT:  
ARROWHEAD

P12.0B

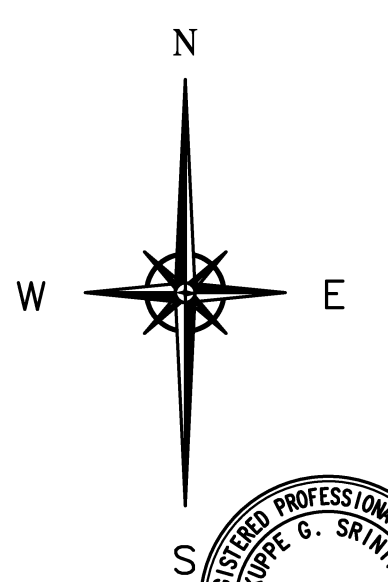


PLUMBING SITE PLAN

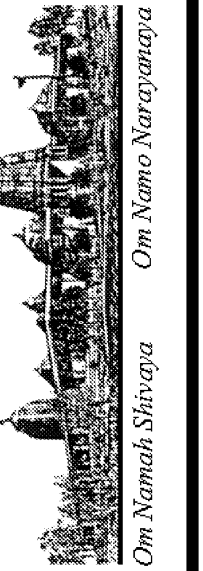
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GENERAL NOTES

- A. ALL WORK SHALL COMPLY WITH CURRENT 2007 CMC AND CPC AND CITY OF LIVERMORE CODES AND REGULATIONS.
- B. SEE CIVIL DRAWINGS (SCD) FOR ALL SITE UTILITY LOCATIONS, SIZES, INVERTS, POINT-OF-CONNECTIONS, PIPE MATERIAL OF CONSTRUCTION, ETC. COORDINATE WORK OF THIS DIVISION WITH THE WORK OF OTHER TRADEWORK - ARCHITECTURAL, STRUCTURAL, CIVIL, LANDSCAPE, PG&E JOINT TRENCH AND ELECTRICAL AND MAKE ADJUSTMENTS TO WORK OF THIS DIVISION AT NOT EXTRA COST. THIS DIVISION PLUMBING CONTRACTOR SHALL COORDINATE ALL THE NECESSARY UTILITY STUBOUT LOCATIONS TO SERVE BUILDING-C AND FUTURE BUILDING-D.
- C. PROVIDE ALL BELOW GRADE PIPING UNDER THE BUILDING AS SCHEDULED. WHEN CONNECTING TO DISSIMILAR MATERIAL PROVIDED UNDER CIVIL SITE WORK, PROVIDE APPROVED TYPE OF TRANSMISSION FITTINGS.
- D. COORDINATE THE UNDERGROUND PIPING WITH THE BUILDING FOOTING AND FOUNDATION PLAN. ROUTE PIPING TO AVOID PENETRATING THE GRADE BEAMS, FOOTINGS AND FOUNDATIONS.
- E. THE TRASH ENCLOSURE ROOM SHALL BE EQUIPPED WITH HOT AND COLD WATER HOSE BIB, A FLOOR DRAIN CONNECTED TO THE GREASE INTERCEPTOR PRIOR TO CONNECTING TO THE SITE SANITARY SEWER SYSTEM.



REVISIONS	BY
△ 05-24-10	HCCC
△ 08-02-10	BPC
△ HEALTH DEPT PLAN CHECK 08-26-10	HDPC
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△ 10-07-10	HCCC



NEW BUILDING "C" - PHASE 1B  
**HINDU COMMUNITY and CULTURAL CENTER**  
 1200 ARROWHEAD AVE. LIVERMORE, CA 94551

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PLUMBING FLOOR PLAN  
 BUILDING C  
 PHASE 1B

DATE  
 05/28/10  
 SCALE:  
 AS NOTED  
 DRAWN BY:  
 PROJECT:  
 ARROWHEAD

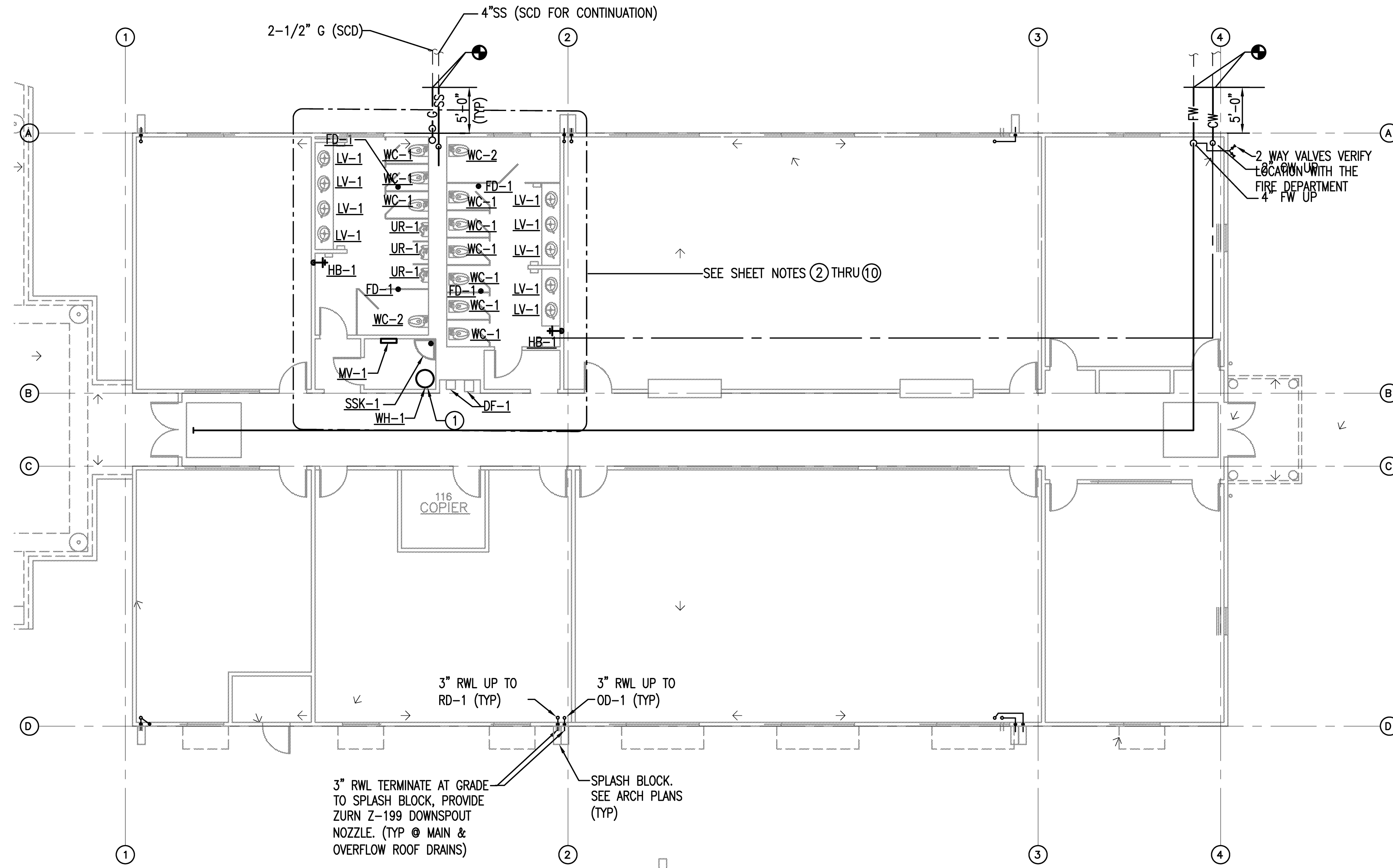
**P13.0B**

**GENERAL NOTES**

- ALL PLUMBING WORK INCLUDING EQUIPMENT, FIXTURES AND INSTALLATION SHALL COMPLY WITH THE CURRENT BUILDING STANDARDS FOR UNIFORMITY, LEED REQUIREMENTS AND THE APPLICABLE CALIFORNIA BUILDING, FIRE, MECHANICAL AND PLUMBING CODES WITH LOCAL AMMENDMENTS.
- REFER TO RISER DIAGRAMS FOR WASTE AND VENT SIZES AND SCHEDULES FOR PLUMBING FIXTURES, FAUCETS, CONNECTION SIZES.
- PROVIDE AUTOMATIC TEMPERING VALVES TO GENERATE 110 DEG F TEMPERED HOT WATER SUPPLY AND DISTRIBUTE TO THE LAVATORIES PER T-24.
- PROVIDE CW DISTRIBUTION TO ALL THE PLUMBING FIXTURES PER CPC.
- PROVIDE CW, GAS, SANITARY WASTE, STORM DRAIN AND FIRE WATER SERVICE CONNECTIONS FROM THE SITE UTILITIES AND EXTEND & DISTRIBUTE TO SERVE THE BUILDING. COORDINATE WITH THE PHASE-1A CIVIL AND LANDSCAPE TRADE WORK FOR EXACT SIZE, LOCATION, INVERT, POINT-OF-CONNECTION, ETC.
- PROVIDE WATER EFFICIENT PLUMBING FIXTURES TO SATISFY THE LEED WATER EFFICIENCY REQUIREMENTS (SEE LEED CHECKLIST) AND PER THE PLUMBING FIXTURE SCHEDULE. INSTALL PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS.
- CONTRACTOR SHALL PREPARE AND SUBMIT DETAILED SHOP DRAWING FOR PLUMBING AND FIRE PROTECTION WORK FULLY COORDINATED WITH THE CIVIL AND LANDSCAPE WORK FOR REVIEW AND APPROVAL BY THE OWNER'S ENGINEERS. AFTER APPROVAL BY OWNER'S ENGINEERS, SUBMIT THE SAME TO CITY AS A DEFERRED SUBMITTAL AND OBTAIN CITY APPROVALS PRIOR TO START OF CONSTRUCTION. COORDINATE THE ROUTING OF THE UNDERGROUND UTILITIES WITH OTHER TRADEWORK AND UTILITY COMPANIES AND MAKE NECESSARY ADJUSTMENTS TO ROUTING TO AVOID CONFLICTS.

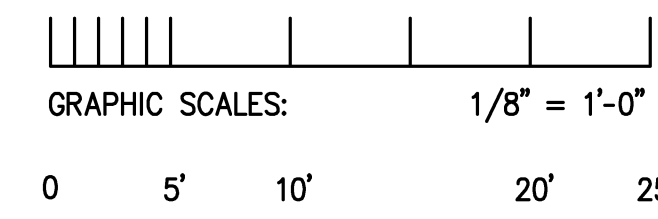
**SHEET NOTES**

- WATER HEATER AIR INTAKE AND FLUE EXHAUST FROM THE ROOF. TERMINATE FLUE EXHAUST MINIMUM 3'-0" ABOVE FINISHED ROOF. COORDINATE WITH SOLAR PV AND THERMAL SYSTEM PROVIDER FOR TERMINATION. PROVIDE FLASHING AND COUNTERFLASHING.
- PROVIDE ALL PLUMBING FIXTURES INDICATED WITH COMPLETE UTILITY DISTRIBUTION PER CPC INCLUDING BUT NOT LIMITED TO COLD WATER, HOT WATER, TEMPERED WATER, SANITARY WASTE AND VENT CONNECTIONS.
- PROVIDE FLOOR DRAINS COMPLETE WITH FLOOR DRAINS, WASTE & VENT CONNECTIONS, TRAP PRIMER CONNECTIONS.
- PROVIDE PROPERLY SIZED WATER HAMMER ARRESTORS FOR COLD WATER AND TEMPERED WATER SUPPLIES PIPING TO PLUMBING FIXTURES PER CPC TO PREVENT WATER HAMMER FROM FLUSH VALVES, AUTOMATIC AND QUICK SHUT-OFF TYPE VALVES.
- PROVIDE STAINLESS STEEL WALL ACCESS PANELS FOR SERVICE ACCESS TO WATER HAMMER ARRESTORS, TEMPERING VALVES, SHUT-OFF VALVES AND OTHER DEVICES CONCEALED BEHIND WALLS AND CEILING THAT REQUIRES ACCESS. COORDINATE LOCATIONS WITH ARCHITECT.
- PROVIDE HEAT TRACING FOR TEMPERED WATER AND HOT WATER PIPING TO THE PLUMBING FIXTURES, COMPLETE WITH POWER SUPPLY, TEMPERATURE REGULATORS, THERMAL INSULATION, ETC. COORDINATE WITH DIVISION-16 FOR POWER SUPPLY.
- PROVIDE THERMAL INSULATION FOR ALL THE HOT WATER & TEMPERED WATER SUPPLY AND HORIZONTAL RAIN WATER LEADERS IN THE CEILING ABOVE. PROVIDE THERMAL INSULATION FOR OUTDOOR WATER PIPING SUBJECTED TO FREEZING. INSULATION SHALL MEET TITLE-24, CPC AND CMC REQUIREMENTS.
- PROVIDE PIPE IDENTIFICATION LABELS AND VALVE TAGS FOR ALL PLUMBING SYSTEM PIPING INCLUDING CW, HW, TW, GAS, SANITARY WASTE & VENT PIPING.
- PROVIDE COMPLETE FIRE SPRINKLER WATER SERVICE EXTENSION FROM THE CITY FIRE WATER SERVICE COMPLETE WITH THE SPRINKLER RISER ASSEMBLY, CONTROL VALVE ASSEMBLIES, FIRE HOSE CONNECTIONS, DISTRIBUTION, QUICK RESPONSE CONCEALED HEADS, INSPECTOR TEST AND DRAIN ASSEMBLY, SPRINKLER ALARM BELL AND FLOW & TAMPER SWITCHES FOR MONITORING BY THE BUILDING FIRE ALARM SYSTEM TO PROVIDE FULL COVERAGE FOR THE BUILDING. SUBMIT COMPLETE DESIGN-BUILD SHOP DRAWINGS AND HYDRAULIC CALCULATIONS. SUBMIT AND OBTAIN ALL NECESSARY APPROVALS FROM THE LOCAL CITY AND COUNTY CODE AUTHORITIES.
- PROVIDE ROOF DRAINS, OVERFLOW DRAINS, RAIN WATER LEADERS, AND TERMINATE AT GRADE ON TO THE SPLASH BLOCK FOR SURFACE DRAINAGE TO BIO SWALES PER CIVIL AND LANDSCAPE DRAWINGS. COORDINATE WITH ARCHITECTURAL PLANS FOR ROUTING THE RAIN WATER DRAIN WITH RESPECT TO WINDOWS.



**BUILDING C - PHASE 1-B**  
**PLUMBING PLAN**

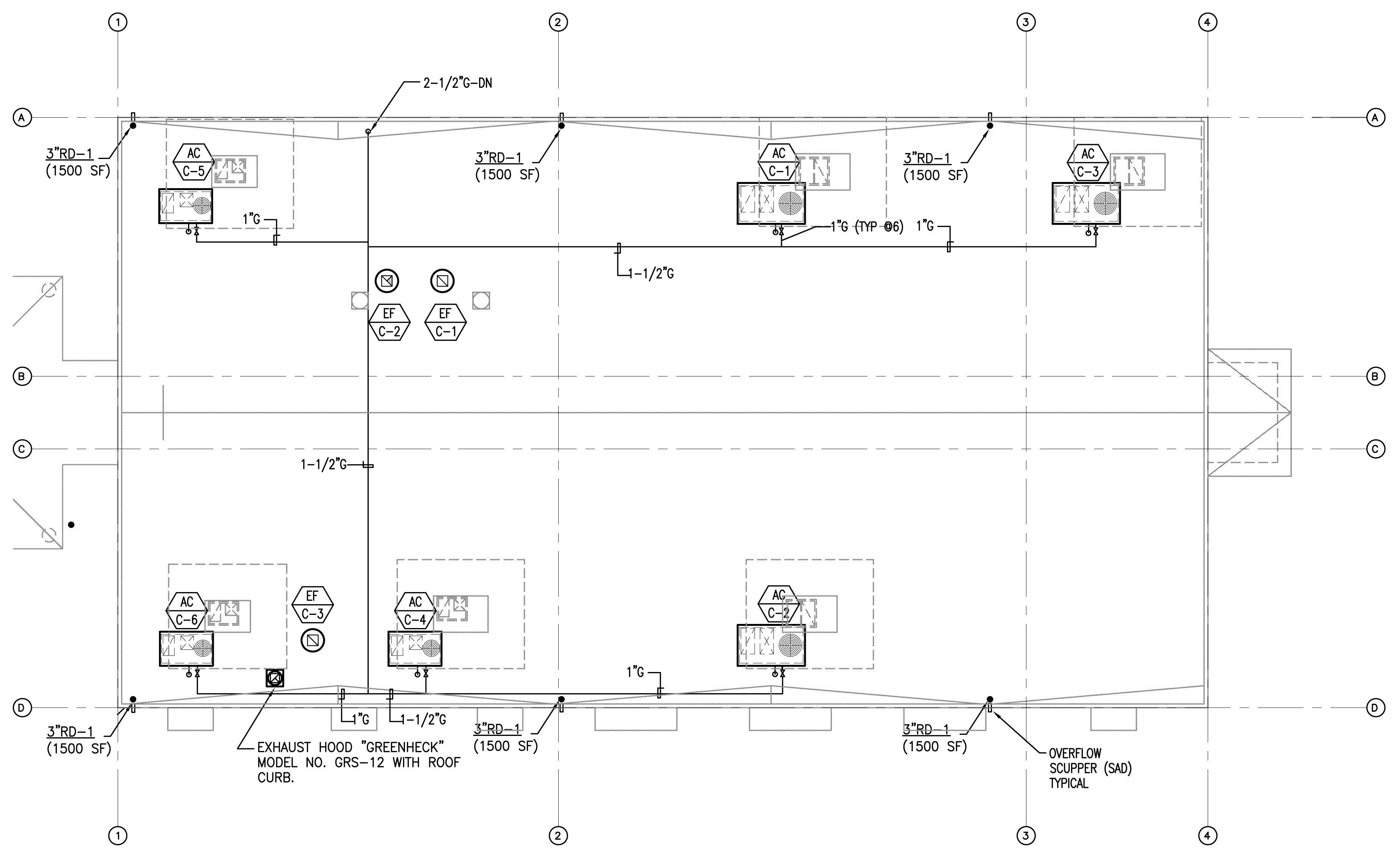
TOTAL 7800 SQ. FT.  
 SCALE: 1/8" = 1'-0"



REVISIONS	BY
△ 05-24-10	HCCC
△ 08-02-10	BPC
△ HEALTH DEPT PLAN CHECK 08-26-10	HDPC
△ 09-22-10	BPC
△ 10-07-10	HCCC

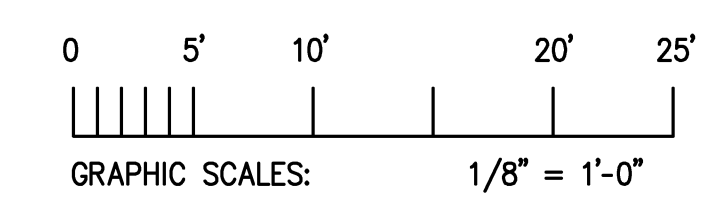
**GENERAL NOTES**

- A. ALL INSTALLATIONS SHALL COMPLY WITH ALL APPLICABLE CALIFORNIA AND LOCAL CODES.
- B. ALL NEW WORK SHALL COMPLY WITH CURRENT 2007 CMC AND CPC REQUIREMENTS.
- C. PROVIDE GALVANIZED PIPING & FITTINGS FOR EXPOSED GAS PIPING ON ROOF. PROVIDE GAS COCK, DIRT LEG, LISTED GAS CONNECTORS RATED FOR OUTDOOR APPLICATION AT CONNECTIONS TO EACH AC UNIT. PROVIDE GAS REGULATORS IF REQUIRED.
- D. PROVIDE TRAPPED CONDENSATE DRAIN FROM THE AC UNIT AND TERMINATE TO THE SERVICE SINK IN JANITOR CLOSET. INSTALL CONDENSATE COLLECTOR DRAIN PIPING WITH MINIMUM 2% SLOPE.
- E. SUPPORT ROOFTOP GAS AND CONDENSATE PIPING AND CONDUITS WITH B-LINE "DURA-BLOCK" DB SERIES SUPPORT BLOCKS ANCHORED TO ROOF. USE DURA-BLOCK "BVT" SERIES INSULATED PIPE CLAMPS (TYP). PROVIDE SLEEPER SUPPORTS AT MAX 6 FT ON CENTERS OR AS REQUIRED TO PREVENT PIPE SAGGING AND TO DRAIN THE CONDENSATE TOWARDS THE JANITOR SINK. MAINTAIN 2% SLOPE ON ROOF FOR CONDENSATE DRAIN PIPE.



**BUILDING C - ROOF PLAN**  
PLUMBING PLAN

TOTAL 7800 SQ. FT.  
SCALE: 1/8" = 1'-0"



NEW BUILDING "C" - PHASE 1B  
**HINDU COMMUNITY and CULTURAL CENTER**  
 1200 ARROWHEAD AVE. LIVERMORE, CA 94551

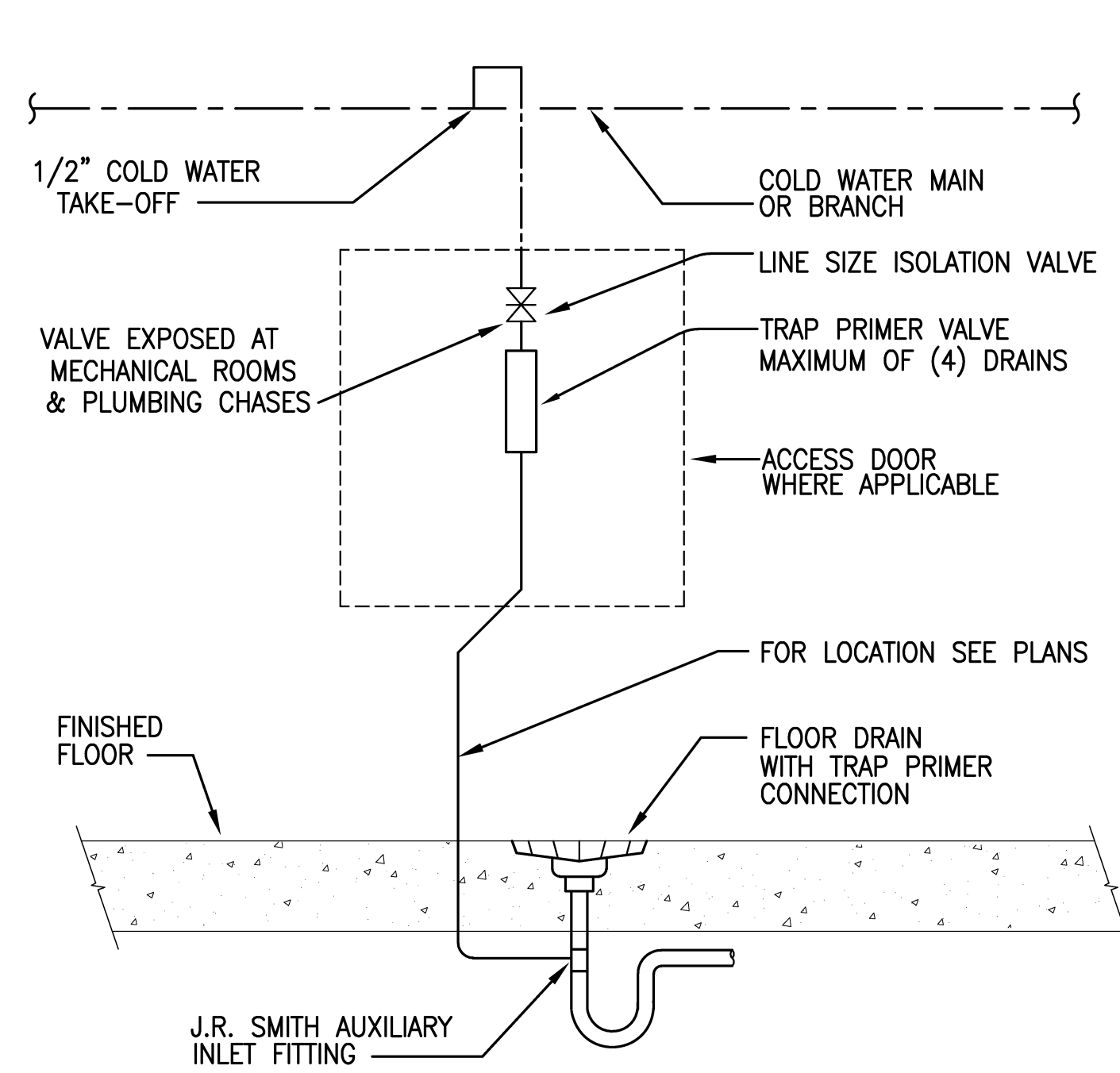
PLUMBING ROOF PLAN  
 BUILDING C  
 PHASE 1B

DATE: 05/28/10  
 SCALE: AS NOTED  
 DRAWN BY:  
 PROJECT: ARROWHEAD



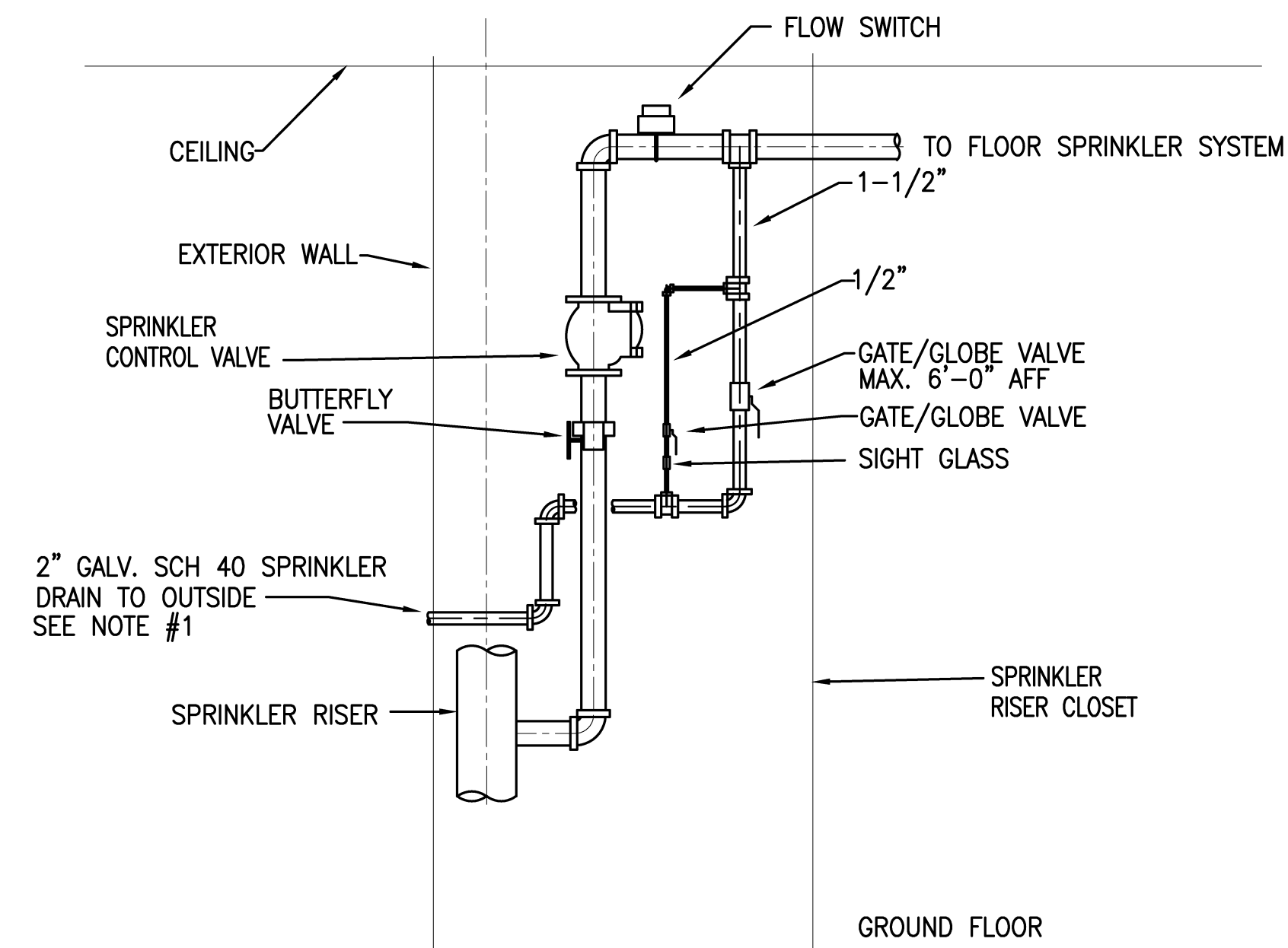
**P14.0B**





**1 TRAP PRIMER PIPING DETAIL**

SCALE: N.T.S.

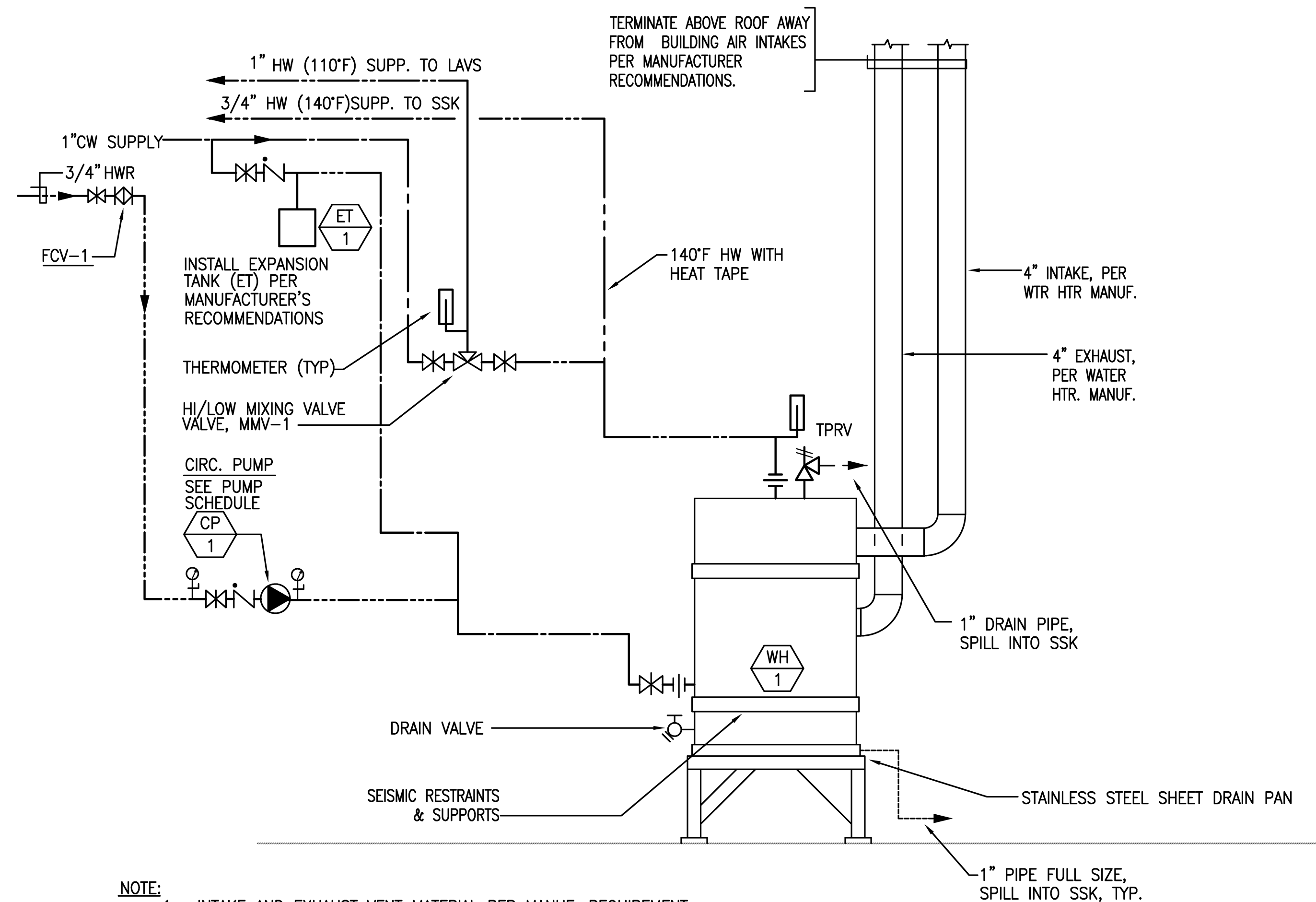


**NOTE:**

1. TERMINATE TEST DRAIN TO OUTSIDE PER THE APPLICABLE CODE.
2. PROVIDE FLOW AND TAMPER FOR MONITORING FROM FIRE ALARM SYSTEM.
3. PROVIDE WATER FLOW ALARM PER LOCAL JURISDICTION REQUIREMENTS.

**2 SPRINKLER CONTROL VALVE ASSEMBLY DETAIL**

SCALE: N.T.S.

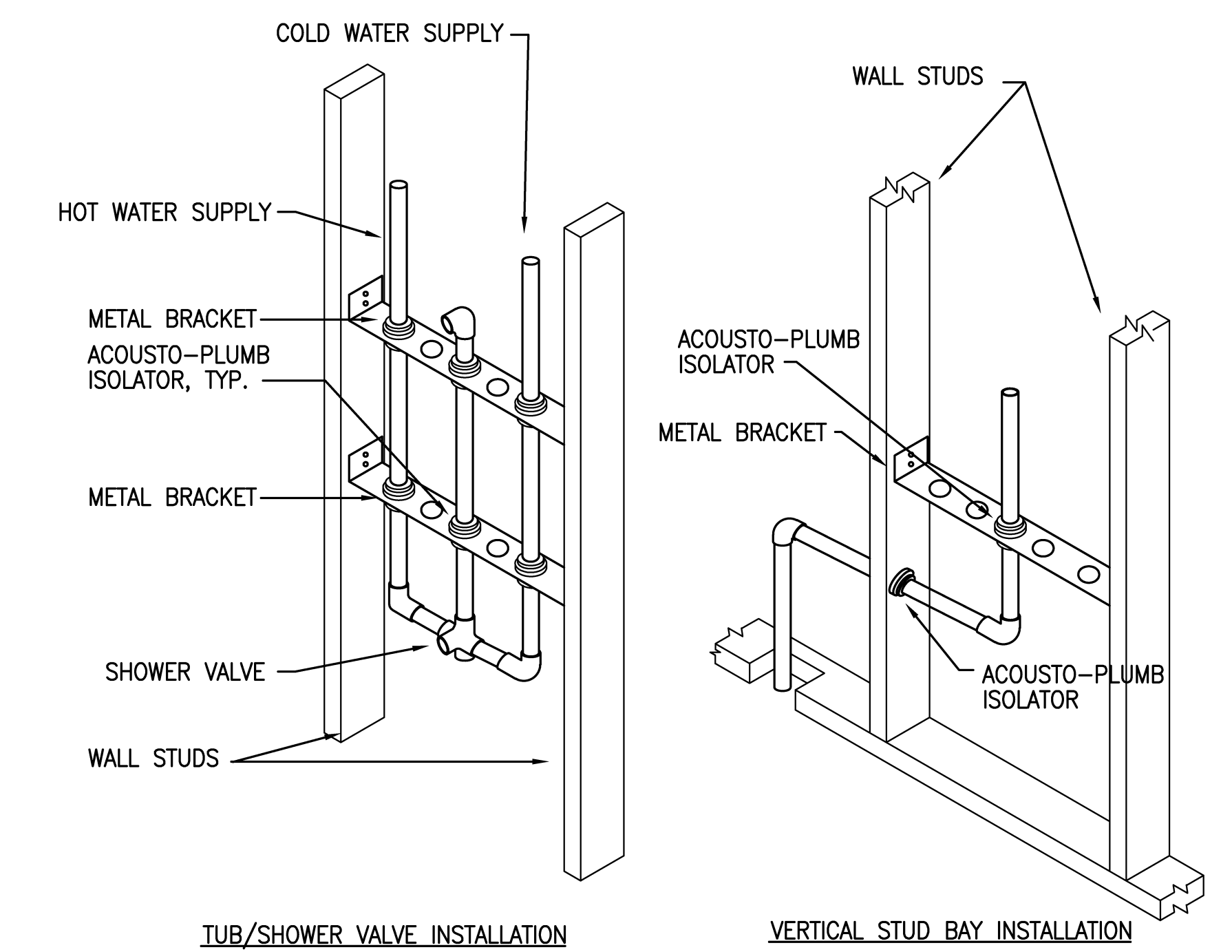
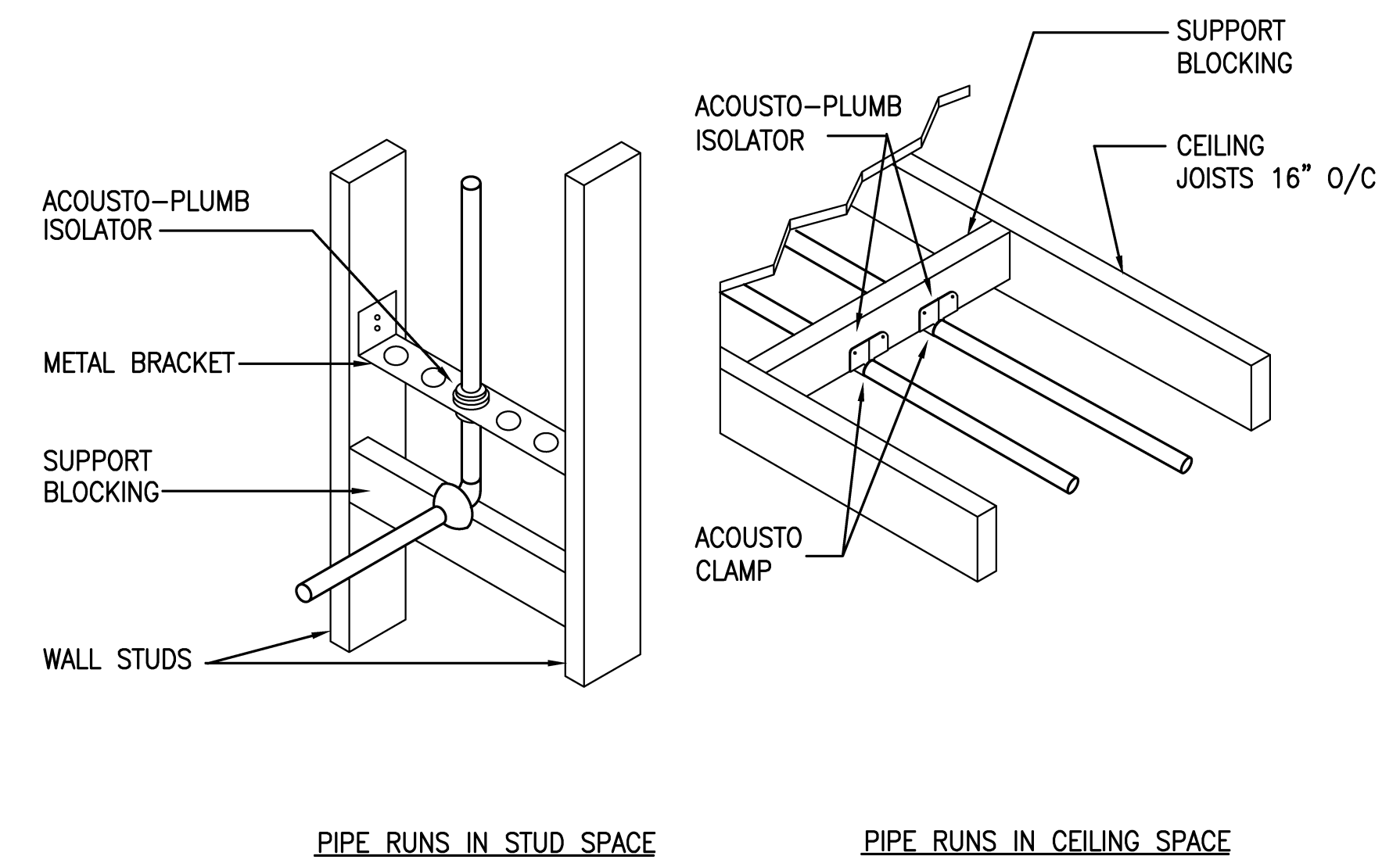


**NOTE:**

1. INTAKE AND EXHAUST VENT MATERIAL PER MANUF. REQUIREMENT.
2. MAINTAIN SEPARATION BETWEEN INTAKE & EXHAUST PER MANUFACTURER'S RECOMMENDATIONS.

**4 WATER HEATER PIPING DETAIL**

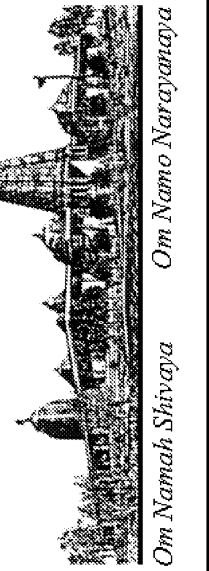
SCALE: N.T.S.



**3 ACOUSTICAL ISOLATION DETAILS**

SCALE: N.T.S.

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08-02-10	BPC
HEALTH DEPT PLAN CHECK 08-26-10	HDPC
09-22-10	BPC
10-07-10	HCCC



NEW BUILDING "C" - PHASE 1B  
**HINDU COMMUNITY and CULTURAL CENTER**  
 1200 ARROWHEAD AVE. LIVERMORE, CA 94551

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 Mechanical & Electrical Engineers  
 121 California St., Suite 2025  
 San Francisco, California 94111  
 PH (415) 543-9544 FAX (415) 543-0870  
 E-mail: Map@ajpandp.com 09/07

PLUMBING DETAILS

DATE: 05/28/10  
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PROJECT: ARROWHEAD



**P15.0B**