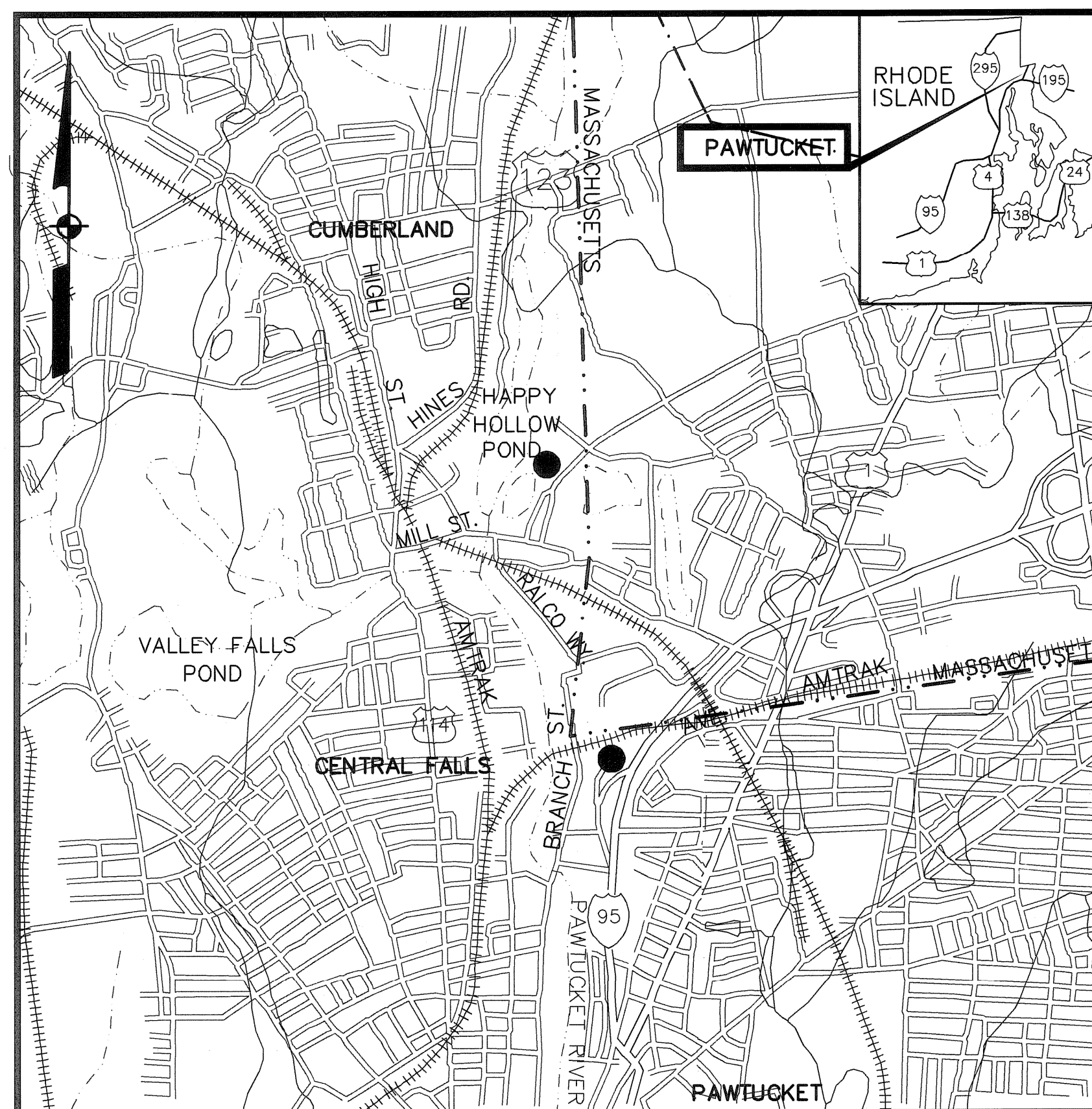


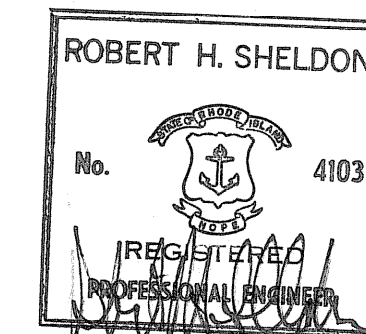
# CONTRACT DRAWINGS - FOR - Pawtucket Regional Water Treatment Facility Pkg 5 - Lab and Office Area

**Pawtucket, Rhode Island**

OCTOBER 31, 2006



LOCUS  
NOT TO SCALE



A Tyco International Ltd. Company

300 Baker Avenue Suite 290 Concord, Mass.

INDEX

<u>DWG.</u>	<u>TITLE</u>
	COVER
	<b><u>ARCHITECTURAL</u></b>
A-1	ABBREVIATIONS AND CODE SUMMARY
A-10	ENLARGED FLOOR PLANS AND SCHEDULES
A-11	DOOR AND WINDOW SCHEDULES AND DETAILS
A-12	DOOR, WINDOW, AND LOUVER DETAILS
A-14	DETAILS
A-15	LAB AND OFFICE AREA
A-16	SECTIONS AND DETAILS
A-19	DOOR AND ROOM FINISH SCHEDULES, ELEVS, HEAD AND JAMB DTLS
	<b><u>HVAC</u></b>
H-1	GENERAL NOTES AND SYMBOLS - HVAC
H-2	HVAC DEMOLITION PLAN
H-3	HVAC PLANS AND DETAILS
H-4	HVAC UPPER FLOOR PLAN, SECTIONS AND DETAILS
H-5	HVAC SCHEDULES
	<b><u>FIRE PROTECTION</u></b>
FP-1	GENERAL NOTES, LEGENDS AND SPECIFICATIONS
FP-2	SPRINKLING PLAN - FIRE PROTECTION
	<b><u>PLUMBING</u></b>
P-1	GENERAL NOTES, LEGENDS AND ABBREVIATIONS - PLUMBING
P-2	DEMOLITION PLAN - PLUMBING
P-3	FLOOR PLAN - PLUMBING SANITARY DRAINS AND VENTS
P-4	FLOOR PLAN - PLUMBING SERVICE WATER
P-5	DETAILS PLUMBING
	<b><u>ELECTRICAL</u></b>
E-1	LEGEND, ABBREVIATIONS AND GENERAL NOTES
E-2	MISC. RISER DIAGRAMS
E-3	PANELBOARD AND MISC. SCHEDULES
E-4	LAB LIGHTING AND MISC. SYSTEMS PLAN
E-5	LAB POWER PLAN

**GENERAL NOTES**

LOCATIONS OF ALL UTILITIES AND SUB-SURFACE STRUCTURES ARE FROM SURVEY AND RECORDS OF TOWN, CORPORATIONS, ETC., AND ARE CONSIDERED APPROXIMATE BOTH AS TO SIZE AND LOCATION AND ARE INDICATED ON THESE DRAWINGS TO GIVE BIDDERS A GENERAL IDEA OF EXISTING CONDITIONS TO BE INVESTIGATED BY THE BIDDER. IT IS UNDERSTOOD AND AGREED THAT EACH BIDDER WILL NOT RELY UPON THESE DRAWINGS FOR SUCH INFORMATION, BUT THAT EACH BIDDER SHALL MAKE EXAMINATIONS IN THE FIELD BY VARIOUS AVAILABLE METHODS AND SHALL OBTAIN INFORMATION FROM UTILITY CORPORATIONS AND INDIVIDUALS AS TO THE LOCATION OF ALL SUB-SURFACE STRUCTURES.

ALL ELEVATIONS REFER TO NATIONAL GEODETIC VERTICAL DATUM OF 1929.

**SYMBOLS USED AS ABBREVIATIONS:**

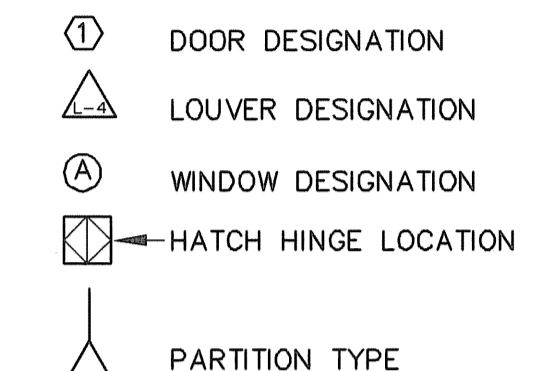
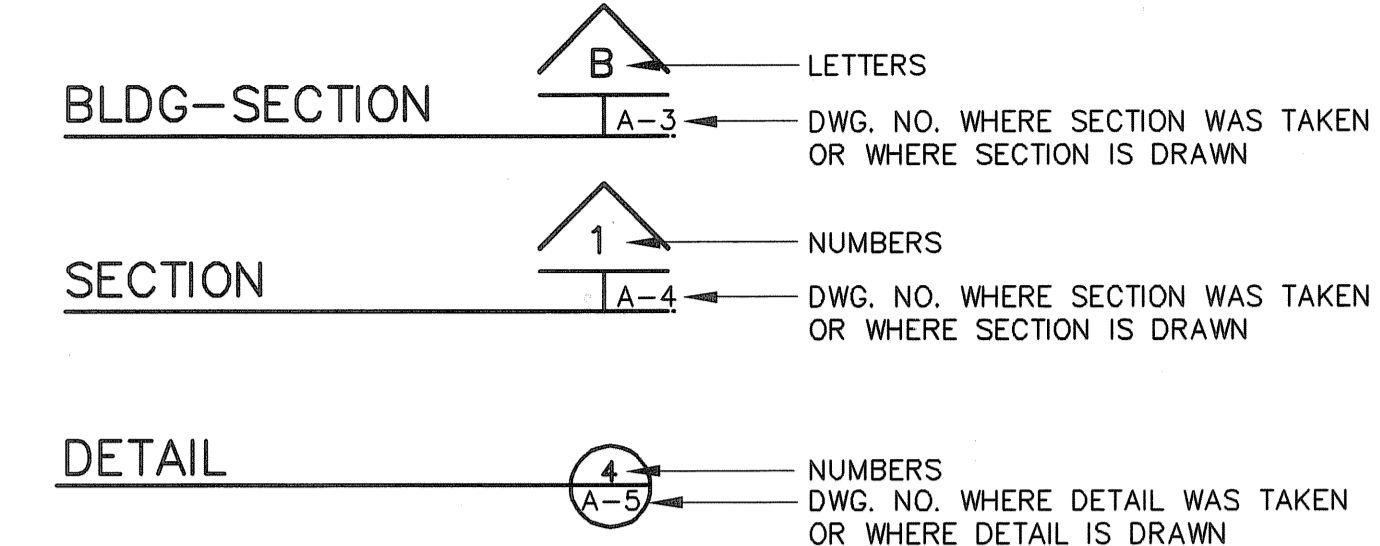
<	ANGLE	⊥	PERPENDICULAR
⊕	CENTERLINE	⊘	PLATE
⊖	CHANNEL	∅	ROUND
P	PENNY		

**ABBREVIATIONS:**

ABF ABOVE	DPR DAMPER	GLF GLASS FIBER
AFF ABOVE FINISHED FLOOR	DP DAMPROOFING	GCMU GLAZED CONCRETE MASONRY UNITS
ASC ABOVE SUSPENDED CEILING	DL DEAD LOAD	GST GLAZED STRUCTURAL TILE
ACC ACCESS	DEM DEMOLISH, DEMOLITION	GB GRAB BAR
ACFL ACCESS FLOOR	DMT DEMOUNTABLE	GD GRADE, GRADING
AP ACCESS PANEL	DEP DEPRESSED	GRN GRANITE
AC ACOUSTICAL	DTL DETAIL	GVL GRAVEL
ACPL ACOUSTICAL PLASTER	DIAG DIAGONAL	GF GROUND FACE
ACT ACOUSTICAL TILE	DIAM DIAMETER	GT GROUT
ACR ACRYLIC PLASTIC	DIM DIMENSION	GPDW GYPSUM DRY WALL
ADD ADDENDUM	DPR DISPENSER	GPL GYPSUM LATHE
ADH ADHESIVE	DIV DIVISION	GPPL GYPSUM PLASTER
ADJ ADJACENT	DR DOOR	GPT GYPSUM TILE
ADJT ADJUSTABLE	DA DOUBLEACTING	
AGG AGGREGATE	DH DOUBLE HUNG	
A/C AIR CONDITIONING	DTA DOVETAIL ANCHOR	
ALT ALTERNATE	DTS DOVETAIL ANCHOR SLOT	
AL ALUMINUM	DS DOWNSPOUT	
ANC ANCHOR, ANCHORAGE	D DRAIN	
AB ANCHOR BOLT	DRB DRAINBOARD	
ANOD ANODIZED	DT DRAIN TILE	
APX APPROXIMATE	DWR DRAWER	
ARCH ARCHITECT (URAL)	DWG DRAWING	
AD AREA DRAIN	DF DRINKING FOUNTAIN	
ASPH ASPHALT	DW DUMBWAITER	
AT ASPHALT TILE		
AUTO AUTOMATIC		
	EF EACH FACE	
	E EAST	
	ELEC ELECTRIC (AL)	
	EP ELECTRICAL PANELBOARD	
	EWC ELECTRIC WATER COOLER	
	EL ELEVATION	
	ELEV ELEVATOR	
	EMER EMERGENCY	
	ENC ENCLOSE (URE)	
	EQ EQUAL	
	EQP EQUIPMENT	
	ESC ESCALATOR	
	EST ESTIMATE	
	EXCA EXCAVATE	
	EXH EXHAUST	
	EXG EXISTING	
	EXMP EXPANDED METAL PLATE	
	EB EXPANSION BOLT	
	EXP EXPOSED	
	EXT EXTERIOR	
	EGCB EXTERIOR GYPSUM CEILING BOARD	
	EXS EXTRA STRONG	
	EES EMERGENCY EYEWASH SHOWER	
	FB FACE BRICK	
	FOC FACE OF CONCRETE	
	FOP FACE OF FINISH	
	FOM FACE OF MASONRY	
	FOS FACE OF STUDS	
	FF FACTORY FINISH	
	FAS FASTEN, FASTENER	
	FN FENCE	
	FBD FIREBOARD	
	FGL FIBERGLASS	
	FIN FINISH (ED)	
	FFE FINISHED FLOOR ELEVATION	
	FFL FINISHED FLOOR LINE	
	FA FIRE ALARM	
	FBRK FIRE BRICK	
	FE FIRE EXTINGUISHER	
	FEC FIRE EXTINGUISHER CABINET	
	FHS FIRE HOSE STATION	
	FPL FIREPLACE	
	FP FIREPROOF	
	FRC FIRE-RESISTANT COATING	
	FRT FIRE-RETARDANT	
	FLG FLASHING	
	LWC FLATHEAD MACHINE SCREW	
	LMS LIMESTONE	
	LTL LINTEL	
	LL LIVE LOAD	
	LVR LOUVER	
	LPT LOW POINT	
	MB MACHINE BOLT	
	MI MALLEABLE IRON	
	MH MANHOLE	
	MFR MANUFACTURE (ER)	
	MRB MARBLE	
	MAS MASONRY	
	MO MASONRY OPENING	
	MTL MATERIAL (S)	
	MAX MAXIMUM	
	MECH MECHANIC (AL)	
	MC MEDICINE CABINET	
	MED MEDIUM	
	MR MEMBER	
	MMB MEMBRANE	
	MET METAL	
	MFD METAL FLOOR DECKING	
	MFR METAL FURRING	
	MRD METAL ROOF DECKING	
	MTHR METAL THRESHOLD	
	M METER (S)	
	MM MILLIMETER (S)	
	MLB MILLWORK	
	MIN MINIMUM	
	MIR MIRROR	
	MISC MISCELLANEOUS	
	MOD MODULAR	
	MLD MOLDING, MOULDING	
	MR MOISTURE RESISTANT	
	MT MOUNT (ED), (ING)	
	MO MASONRY OPENING	
	MOV MOVABLE	
	MULL MULLION	
	NL NAILABLE	
	NAT NATURAL	
	NI NICKEL	
	NR NOISE REDUCTION	
	NRC NOISE REDUCTION COEFFICIENT	
	NOM NOMINAL	
	NMT NONMETALLIC	
	N NORTH	
	NIC NOT IN CONTRACT	
	NTS NOT TO SCALE	
	OBS OBSCURE	
	OC ON CENTER (S)	
	OP OPAQUE	
	OPG OPENING	
	OJ OPEN-WEB JOIST	
	OPP OPPOSITE	
	OPH OPPOSITE HAND	
	OPS OPPOSITE SURFACE	
	OD OUTSIDE DIAMETER	
	OHMS OVALHEAD MACHINE SCREW	
	OHWS OVALHEAD WOOD SCREW	
	OA OVERALL	
	OH OVERHEAD	
	PNT PAINT (ED)	
	PNL PANEL	
	PB PANIC BAR	
	PTD PAPER TOWEL DISPENSER	
	PTR PAPER TOWEL RECEPTOR	
	PAR PARALLEL	
	PK PARKING	
	PBD PARTICLE BOARD	
	PTN PARTITION	
	PV PAVE (D), (ING)	
	PVM PAVEMENT	
	PED PEDESTAL	
	PERF PERFORATE (D)	
	PERI PERIMETER	
	PLAS PLASTER	
	PLAM PLASTIC LAMINATE	
	PL PLATE	
	PG PLATE GLASS	
	PWD PLYWOOD	
	PT POINT	
	PVC POLYVINYL CHLORIDE	
	PE PORCELAIN ENAMEL	
	PCC PRECAST CONCRETE	
	PFB PREFABRICATE (D)	
	PRF PREFORMED	
	PCF POUNDS PER CUBIC FOOT	
	PSC PRESTRESSED CONCRETE	
	PFL POUNDS PER LINEAL FOOT	
	PSF POUNDS PER SQUARE FOOT	
	PSI POUNDS PER SQUARE INCH	
	PL PROPERTY LINE	
	PN FINISHED	
	PTC POST-TENSIONED CONCRETE	
	PM PRESSED METAL	
	QT QUARRY TILE	
	RBT RABBET, REBATE	
	RAD RADIUS	
	RL RAIL (ING)	
	RWC RAINWATER CONDUCTOR	
	REF REFERENCE	
	RFL REFLECT (ED), (IVE), (OR)	
	REFR REFRIGERATOR	
	REG REGISTER	
	RE REINFORCE (D), (ING)	
	RCP REINFORCED PIPE CONCRETE	
	REM REMOVE	
	RES RESILIENT	
	RET RETURN	
	RA RETURN AIR	
	RV ROOF VENT	
	RVS REVERSE (SIDE)	
	REV REVISION (S), REVISED	
	RH RIGHT HAND	
	ROW RIGHT OF WAY	
	R RISER	
	RV RIVET	
	RD ROOF DRAIN	
	RFH ROOF HATCH	
	RFG ROOFING	
	RM ROOM	
	RO ROUGH OPENING	
	RB RUBBER BASE	
	RBT RUBBER TILE	
	RBL RUBBLE STONE	

MIN MINIMUM	SFGL SAFETY GLASS
MIR MIRROR	SCH SCHEDULE
MISC MISCELLANEOUS	SCN SCREEN
MOD MODULAR	SNT SEALANT
MLD MOLDING, MOULDING	SLR SEALER
MR MOISTURE RESISTANT	STG SEATING
MT MOUNT (ED), (ING)	SEC SECTION
MO MASONRY OPENING	SKS SERVICE SINK
MOV MOVABLE	SHTH SHEATHING
MULL MULLION	SHT SHEET
	SG SHEET GLASS
	SH SHELF, SHELVING
	SHO SHORE (D), (ING)
	SIM SIMILAR
	SKL SKYLIGHT
	SL SLEEVE
	SC SOLID CORE
	SP SOUNDPROOF
	S SOUTH
	SPC SPACER
	SPK SPEAKER
	SPL SPECIAL
	SPEC SPECIFICATION (S)
	SQ SQUARE
	SST STAINLESS STEEL
	STD STANDARD
	STA STATION
	ST STEEL
	STO STORAGE
	SD STORM DRAIN
	STR STRUCTURAL
	SCT STRUCTURAL CLAY TILE
	SGFT STRUCTURAL GLAZED FACING TILE
	SUS SUSPENDED
	SYM SYMMETRY (ICAL)
	SYN SYNTHETIC
	SYS SYSTEM
	TKBD TACKBOARD
	TKS TACKSTRIP
	TEL TELEPHONE
	TV TELEVISION
	TC TERRA COTTA
	TZ TERRAZZO
	THK THICK (NESS)
	THR THRESHOLD
	TPTN TOILET PARTITION
	TPD TOILET PAPER DISPENSER
	TOL TOLERANCE
	T&G TONGUE AND GROOVE
	TOMRD TOP OF METAL ROOF DECK
	TOEMRD TOP OF EXISTING METAL ROOF DECK
	TORF TOP OF ROOF
	TSL TOP OF SLAB
	TST TOP OF STEEL
	TW TOP OF WALL
	TB TOWEL BAR
	TR TRANSOM
	T TREAD
	TYP TYPICAL
	UC UNDERCUT
	UNF UNFINISHED
	UR URINAL
	VJ V-JOINT (ED)
	VB VAPOR BARRIER
	VAR VARNISH
	VNR VENEER
	VIF VERIFY IN FIELD
	VRM VERMICULITE
	VERT VERTICAL
	VG VERTICAL GRAIN
	VIN VINYL
	VB VINYL BASE
	VCT VINYL COMPOSITE TILE
	VF VINYL FABRIC
	VP VISION PANEL
	WSCT WAINSCOT
	WTW WALL TO WALL
	WC WATER CLOSET
	WP WATERPROOFING
	WR WATER REPELLENT
	WS WATERSTOP
	WWF WELDED WIRE FABRIC
	W WEST
	WHB WHEEL BUMPER
	W WIDTH, WIDE
	WN WINDOW
	WG WIRED GLASS
	WM WIRE MESH
	WO WITHOUT
	WD WOOD
	WB WOOD BASE
	WPT WORKING POINT

**SYMBOLS**



**INTERIOR PARTITION SCHEDULE**

1		4" CMU FROM FINISH FLOOR TO UNDERSIDE OF STRUCTURE.
2		8" CMU FROM FINISH FLOOR TO UNDERSIDE OF STRUCTURE.
3		8" CMU (2 HR. FIRE RATED UNITS) FROM FINISH FLOOR TO UNDERSIDE OF STRUCTURE.
4		12" CMU FROM FINISH FLOOR TO UNDERSIDE OF STRUCTURE.
5		12" CMU (2 HR FIRE RATING) FROM FINISH FLOOR TO UNDERSIDE OF STRUCTURE.
6		GPDW PARTITION 2" METAL STUDS @ 16" O.C. W/ 5/8" GPDW ON ONE SIDE, STUDS TO UNDERSIDE OF STRUCTURE DRYWALL TO 6" ABOVE FINISHED CEILING
7		GPDW PARTITION 4" METAL STUDS @ 16" OC WITH 5/8" GPDW EACH SIDE FULL HEIGHT, (MOISTURE RESISTANT AND SOUND INSULATION BATTS WHERE INDICATED).

**PARTITION SCHEDULE GENERAL NOTES:**

- ALL CMU PARTITIONS EXTEND TO UNDERSIDE OF STRUCTURE.
- SEE DRAWING A-14 FOR TYPICAL PARTITION DETAILS.

**CODE SUMMARY - W.T.P.**

RHODE ISLAND STATE BUILDING CODE  
8TH EDITION - INTERNATIONAL BUILDING CODE 2003 EDITION

BUILDING DESCRIPTION:  
TWO STORY MASONRY BEARING WALL BUILDING WITH CONCRETE TEE AND STEEL BEAM ROOF FRAMING

BUILDING FOOTPRINT 26,126 SQ. FT.  
BUILDING HEIGHT 2 STORIES - 34 FT. MAX. ABOVE GRADE

USE GROUP F-2 LOW HAZARD FACTORY AND INDUSTRIAL OCCUPANCY EXCEPT FOR CHEMICAL STORAGE AREAS AT FIRST FLOOR WHICH ARE H-4 HIGH HAZARD - HEALTH HAZARDS

CONSTRUCTION TYPE = II B NON COMBUSTIBLE UNPROTECTED

FIRE PROTECTION:  
SPRINKLERS REQUIRED, FIRST FLOOR TO BE SPRINKLERED EXCEPT FOR PUMP ROOM 114 WHICH HAS 5,000 - VOLT MOTORS. THIS ROOM IS TO HAVE 2 HR FIRE SEPARATION FROM REST OF FIRST FLOOR. UPPER FLOOR SPRINKLERED, EXCEPT FOR ELECTRICAL ROOM 205 AND FILTER ROOM 212.

**CODE SUMMARY - LAB AND OFFICE AREA**

RHODE ISLAND STATE BUILDING CODE  
8TH EDITION - INTERNATIONAL BUILDING CODE 2003 EDITION

BUILDING DESCRIPTION:  
EXISTING ONE STORY BUILDING SPACE WITH MECHANICAL MEZZANINE

FOOTPRINT OF RENOVATED AREA 4,900 SQ. FT. ±  
BUILDING HEIGHT EXISTING - 34 FT. ± ABOVE GRADE

USE GROUP B - BUSINESS OCCUPANCY

CONSTRUCTION TYPE = V B COMBUSTIBLE UNPROTECTED

FIRE PROTECTION:  
RENOVATED AREA OF BUILDING SPRINKLERED

**LEGEND**

	CONCRETE		LUMBER
	CONCRETE MASONRY UNIT (C.M.U.)		FINISH WOOD
	CEMENT PLASTER, MORTAR OR GPDW.		PLY-WOOD
	RIGID INSULATION		ACOUSTIC TILE
	FIBERGLASS INSULATION		STEEL

TAMS ARCHITECTS & ENGINEERS, INC. AN EARTH TECH COMPANY - RI COA A-14,324

**EarthTech**  
A Tyco International Ltd. Company  
300 BAKER AVENUE SUITE 200 CONCORD MA 01742 (978) 371-0000

NO.	DATE	BY	REVISIONS
2	07/03/08	AN	AS-BUILT DRAWING FILE
1	10/27/06	AN	ISSUED FOR RT POSTED SET
0	4/05	SC	ISSUED FOR CONSTRUCTION

FULL SIZE DRAWING = 4"

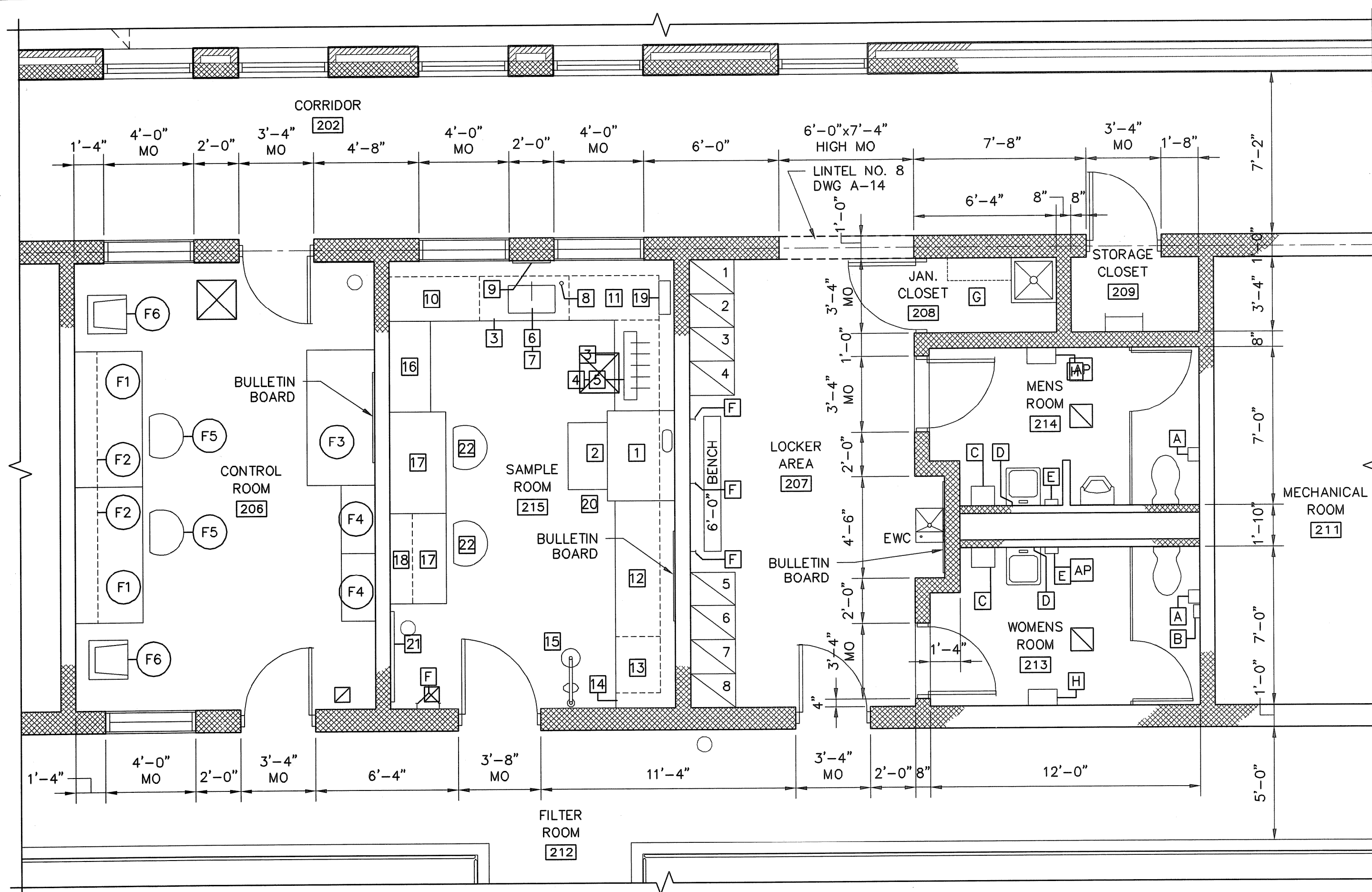
PAWTUCKET, RHODE ISLAND  
PAWTUCKET REGIONAL  
WATER TREATMENT FACILITY  
PKG 5 - LAB AND OFFICE AREA  
ABBREVIATIONS AND CODE SUMMARY

DESIGNED BY: ANN  
DRAWN BY: EDD  
CHECKED BY: [Signature]  
DATE: OCTOBER 31, 2006

DWG SCALE: NTS  
CONTRACT NO: [Blank]

**EARTH TECH**  
AS-BUILT FILE  
JULY 2008

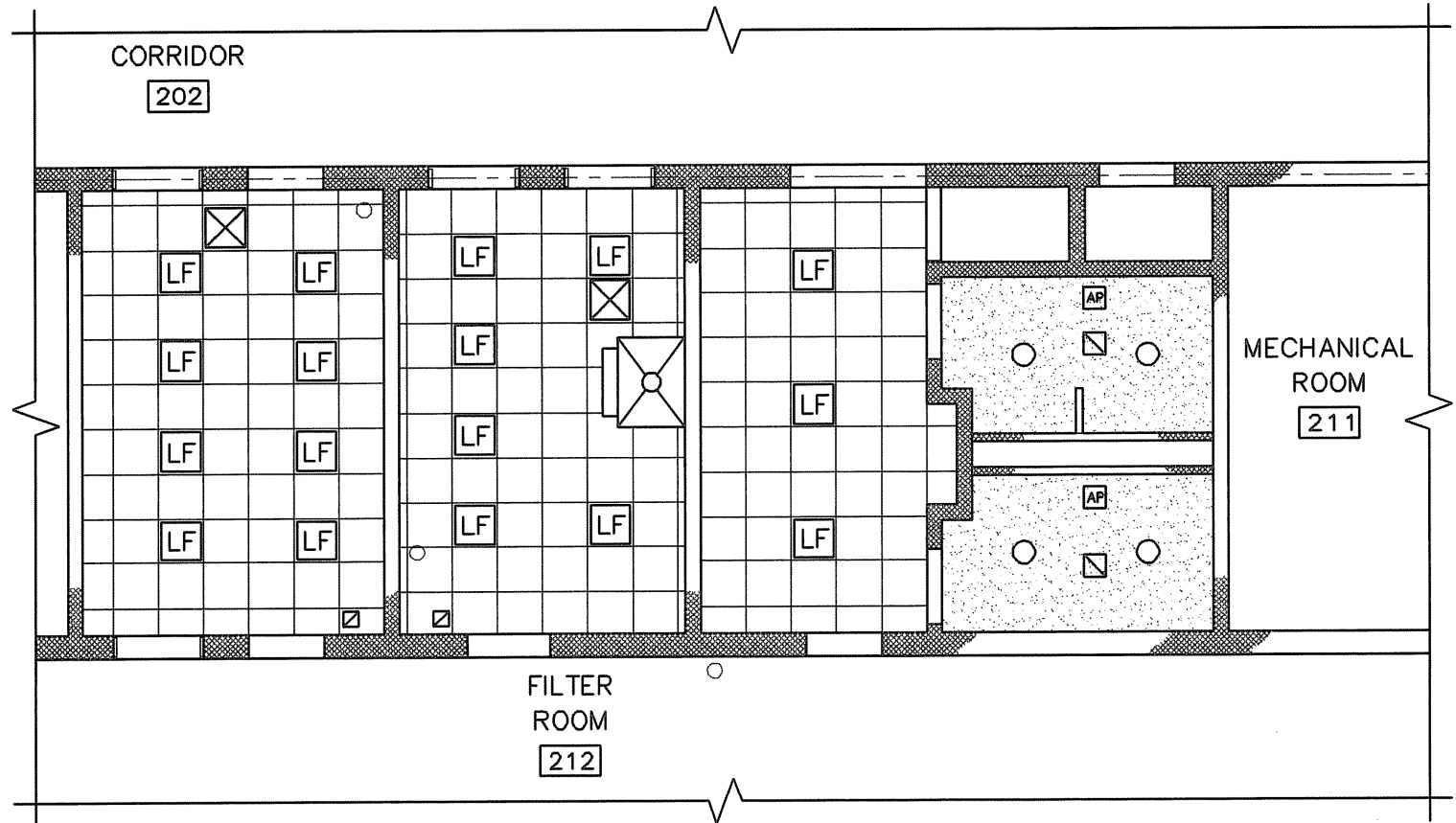
A-1  
SHEET OF



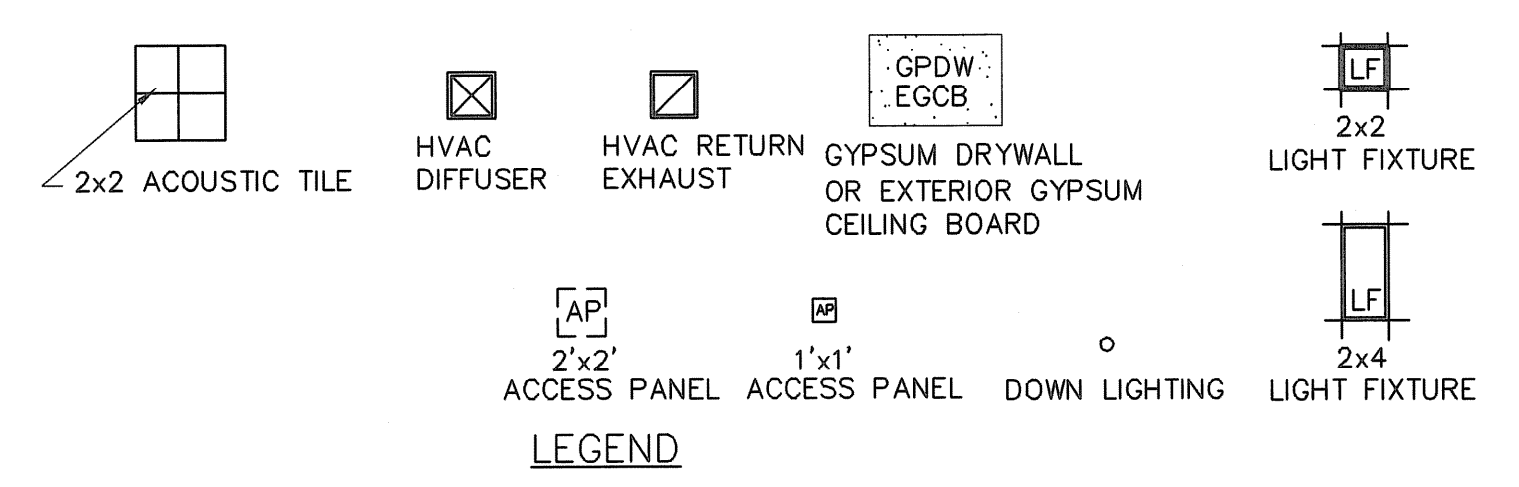
ENLARGED FLOOR PLAN UPPER LEVEL 73.50'  
SCALE: 1/4" = 1'-0"

TOILET AND LOCKER ROOM ACCESSORIES			
ITEM	DESCRIPTION	CAT. NO.	REMARKS
A	SURFACE MOUNTED TOILET PAPER HOLDER	B-4288	MULTI-ROLL
B	SANITARY NAPKIN DISPOSAL	B-270	SURFACE MOUNT
C *	PAPER TOWEL ROLL	B-253	HANDICAPPED MOUNTING HGT. 60" TYP
D *	36" WIDE x 36" HIGH MIRROR	B-290	BOTTOM - 40" AFF
E *	SOAP DISPENSER	B-4112	BOTTOM - 40" AFF
F	COAT HOOK	B-682	
G	SHELF WITH MOP HOLDER	B-239	34" LONG
H	WASTE RECEPTACLE	B-277	

- NOTES:
- ALL ACCESSORIES AND THEIR INSTALLATIONS NOTED WITH AN ASTERISK \* SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL ACCESSIBILITY REQUIREMENTS INCLUDING THE AMERICANS WITH DISABILITIES ACT WHEN USED IN THE MAIN LABORATORY TOILET ROOMS.
  - CATALOGUE NUMBERS REFER TO BOBRICK INDUSTRIES, INC. FOR REFERENCE ONLY.
  - ALL ACCESSORIES SHALL BE MOUNTED WITH CONCEALED FASTENERS.
  - PROVIDE SOLID BLOCKING AND ADDITIONAL STRUCTURAL MEMBERS IN WALL CONSTRUCTION TO SUPPORT ACCESSORIES AND SUPERIMPOSED LOADS.



REFLECTED CEILING PLAN UPPER LEVEL 73.50'  
SCALE: 1/4" = 1'-0"



ROOM	ROOM NO.	FLOOR	BASE	N-WALL	E-WALL	S-WALL	W-WALL	CEILING	CLG. HT.	REMARKS	SUBSTRATE FINISH	
											→	→
STAIR NO.1	101	CONC	CMU	CMU	CMU	CMU	CMU	EGCB	15'-4"	(2) (3) (1)		
MECHANICAL CORRIDOR	102	CONC	CMU	CMU	CMU	CONC	CMU	EXP STR	-	(2)		
	103	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-	(2) (5)		
LIME STORAGE	104	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-	(2)		
FLUORIDE	105	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-	(2) (5)		
	106	CONC	CMU	CONC	CMU	CMU	CMU	EXP STR	-	(2) (5)		
ALUM	107	CONC	CMU	CONC	CMU	CMU	CMU	EXP STR	-	(2)		
WORKSHOP	108	CONC	CMU	CONC	CMU	CMU	CMU	EXP STR	-	(2) (6)		
ACID ROOM	109	CONC	CMU	CONC	CMU	CMU	CMU	EXP STR	-	(2) (5)		
	110	CONC	CMU	CONC	CMU	CMU	CMU	EXP STR	-	(2) (5)		
LIME ROOM	111	CONC	CMU	CONC	CONC	CMU	CMU	EXP STR	-	(2) (5)		
	112	CONC	CMU	CMU	CONC	CONC	CMU	EXP STR	-	(2) (3)		
PIPE GALLERY	113	CONC	CMU/CONC	CONC	CONC	CONC	CMU	EXP STR	-	(2)		
	114	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-	(2) (6)		
		IND FLR	PNT	PNT	PNT	PNT	PNT	PNT	-			
STAIR NO.1	201	CONC	CMU	CMU	CMU	CMU	CMU	EGCB	11'-11 3/8"	(2) (3) (1)		
CORRIDOR	202	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-			
	203	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-	(2)		
WORK AREA	204	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-	(2)		
	205	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-	(2)		
ELECTRICAL ROOM	206	CONC	CMU	CMU	CMU	CMU	CMU	ACT	8'-8"			
	207	CONC	CMU	CMU	CMU	CMU	CMU	ACT	8'-8"			
LOCKER AREA	208	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-	(4)		
	209	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-	(2)		
STAIR NO. 2	210	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-	(2) (3)		
	211	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-	(2)		
MECHANICAL ROOM	212	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	-			
	213	CONC	IND FLR	IND FLR	PNT	PNT	PNT	PNT	-			
WOMENS ROOM	214	CONC	CMU	CMU	CMU	CMU	CMU	EGCB	8'-8"	(1) (4)		
	215	CONC	CMU	CMU	CMU	CMU	CMU	EGCB	8'-8"	(1) (4)		
MENS ROOM	216	CONC	CMU	CMU	CMU	CMU	CMU	EGCB	8'-8"	(1) (4)		
	217	CONC	CMU	CMU	CMU	CMU	CMU	EGCB	8'-8"	(1) (4)		
SAMPLE ROOM	218	CONC	CMU	CMU	CMU	CMU	CMU	ACT	8'-8"			
	219	CONC	CMU	CMU	CMU	CMU	CMU	ACT	8'-8"			

- NOTES:
- EGCB CEILING ON METAL FURRING SUPPORTED BY 6" METAL JOISTS.
  - PAINTED BASES ARE 8 INCHES HIGH (ONE BLOCK COURSE) AND ARE TO BE PAINTED A DIFFERENT COLOR THAN WALL.
  - STAIR TREADS AND INTERMEDIATE LANDING TO RECEIVE HARDENER.
  - FLOOR TO RECEIVE MEMBRANE WATER PROOFING.
  - CHEMICAL CONTAINMENT AREAS TO RECEIVE LINER SPECIFICATION SECTION 09661
  - CONCRETE PADS TO RECEIVE IND FLOORING AT TOP AND SIDES.

TAMS ARCHITECTS & ENGINEERS, INC.  
AN EARTH TECH COMPANY - RI COA A-14,324

**EarthTech**  
A Tyco International Ltd. Company  
300 BAKER AVENUE SUITE 250 CONCORD MA 01742 (978) 371-0000

ROBERT H. SHELDON  
No. 4103  
Professional Seal  
3/7/09

PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
ENLARGED FLOOR PLANS AND SCHEDULES

DESIGNED BY: ARN  
DRAWN BY: ECD  
CHECKED BY: [ ]  
DATE: OCTOBER 31, 2008

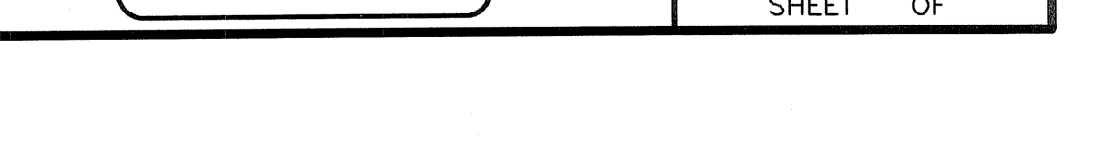
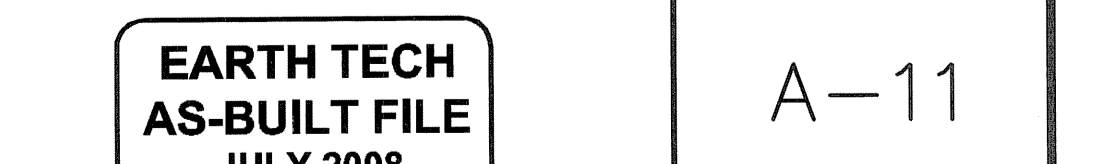
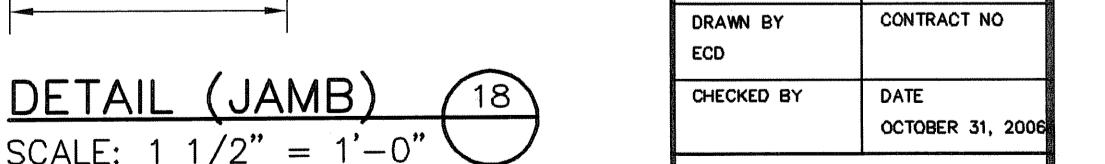
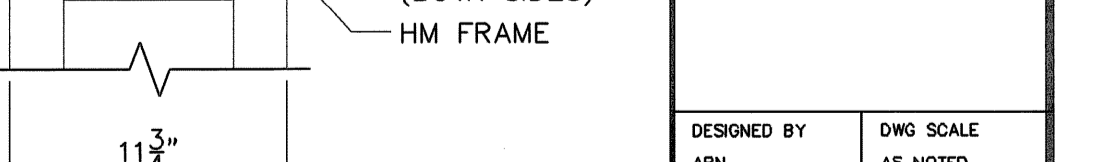
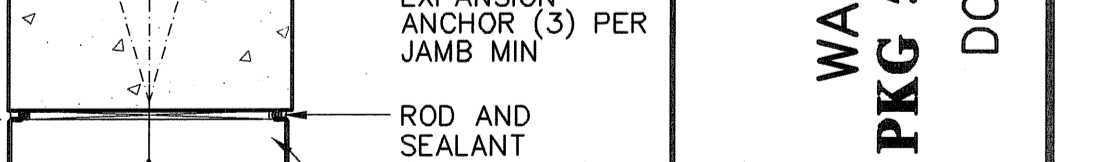
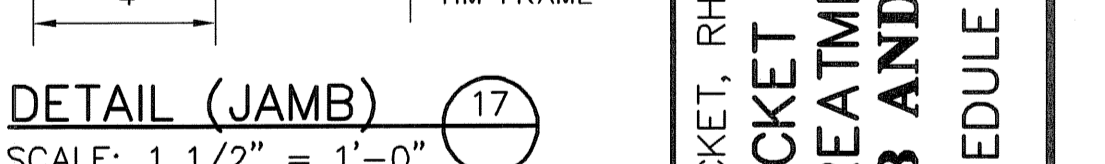
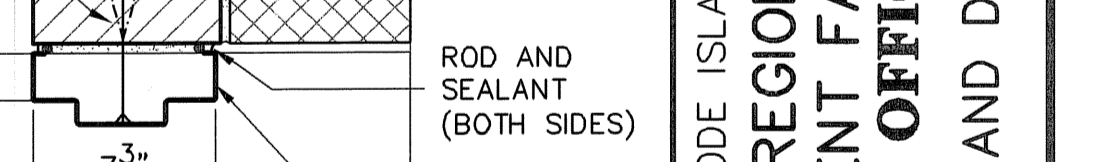
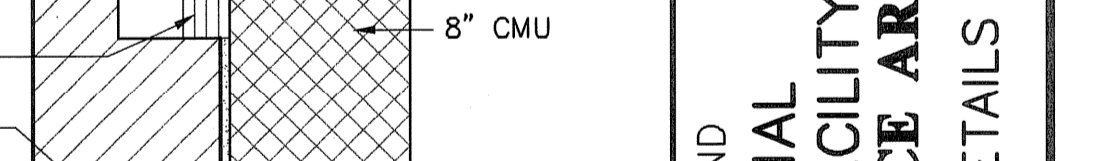
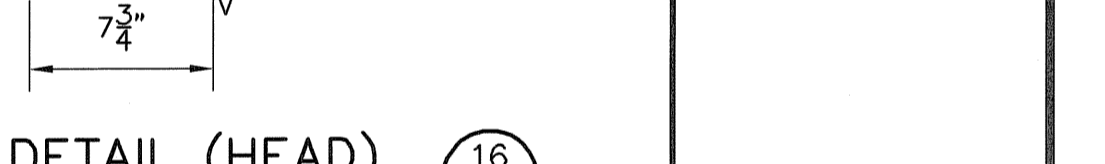
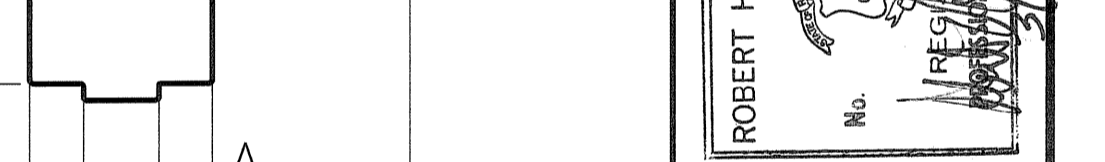
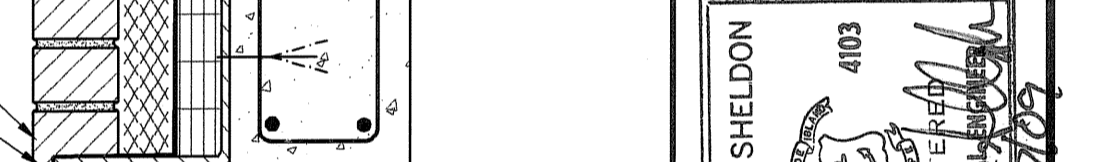
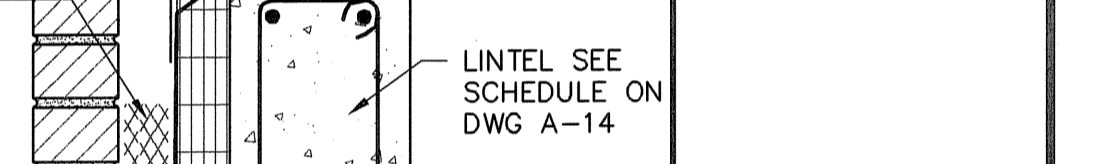
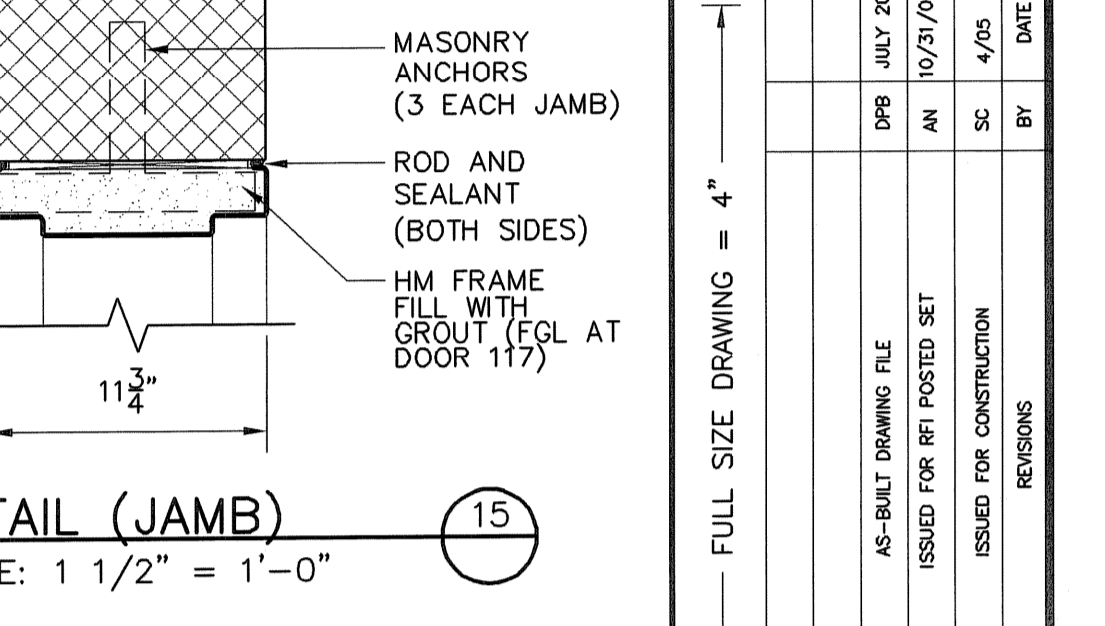
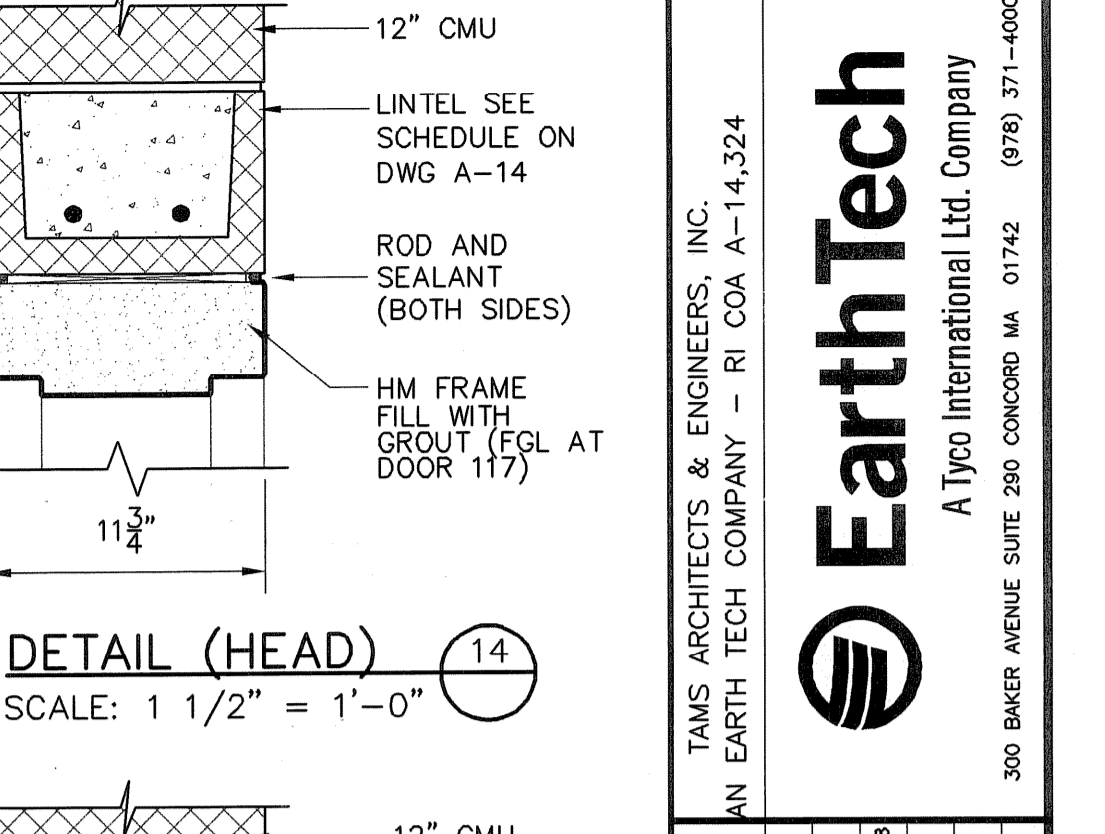
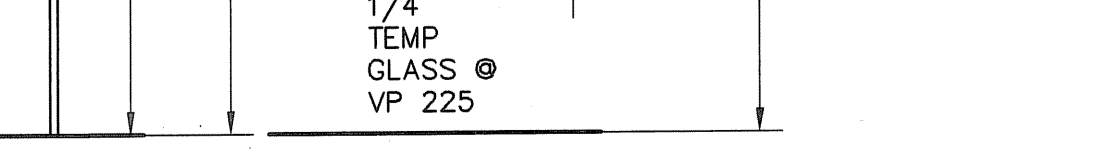
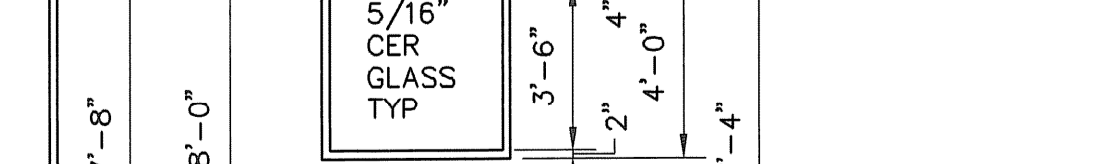
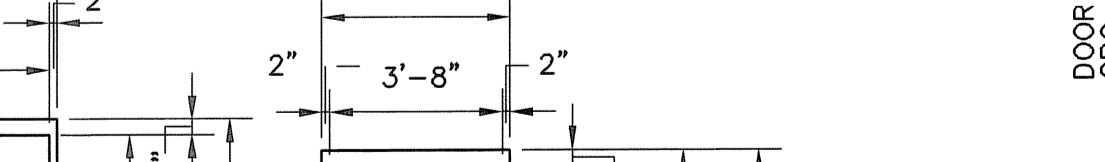
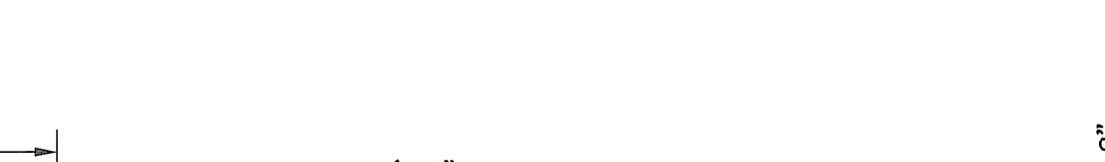
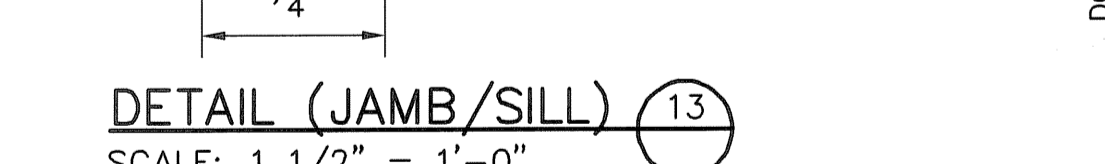
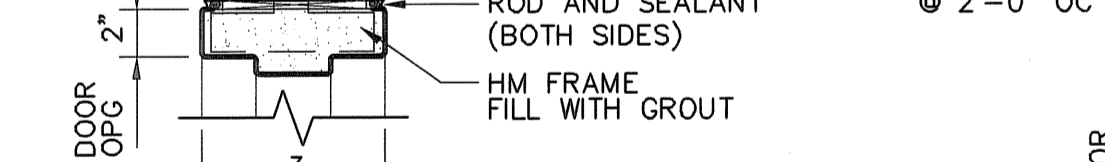
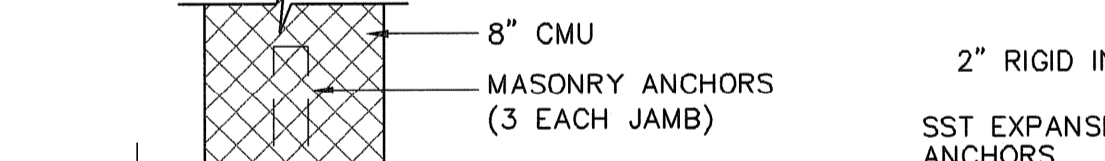
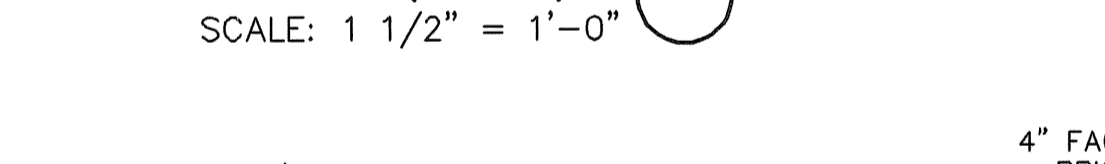
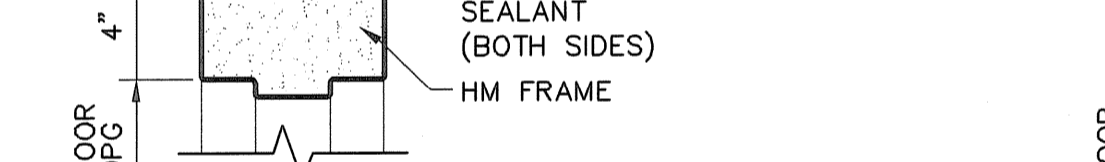
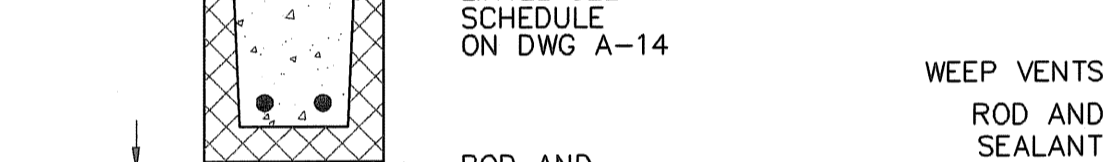
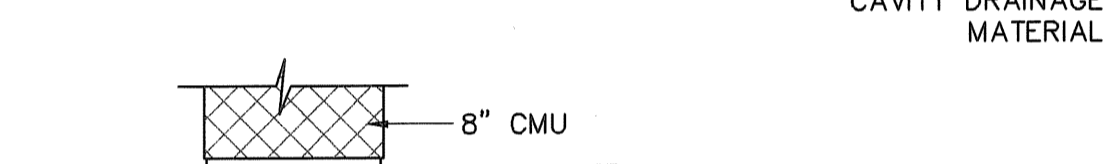
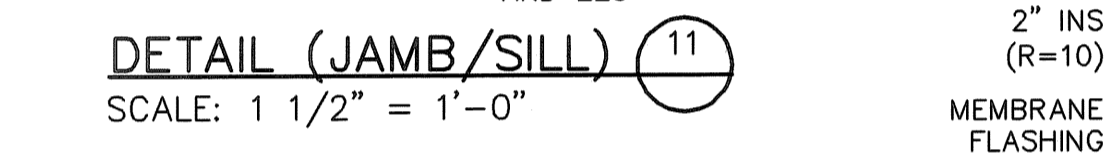
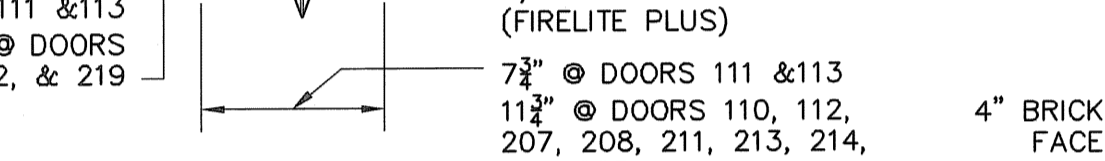
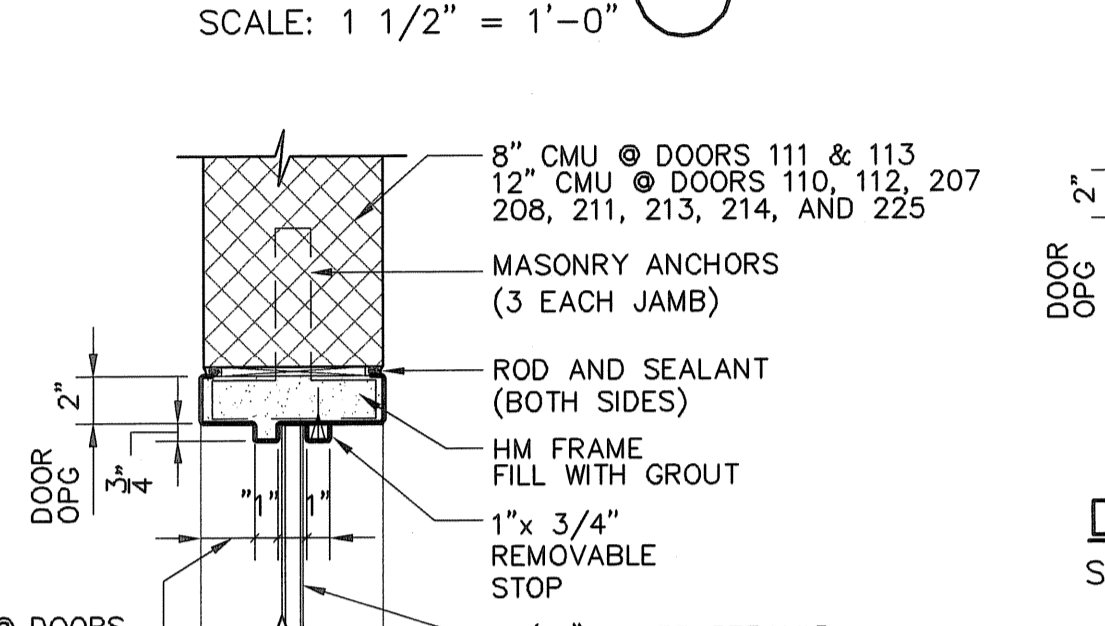
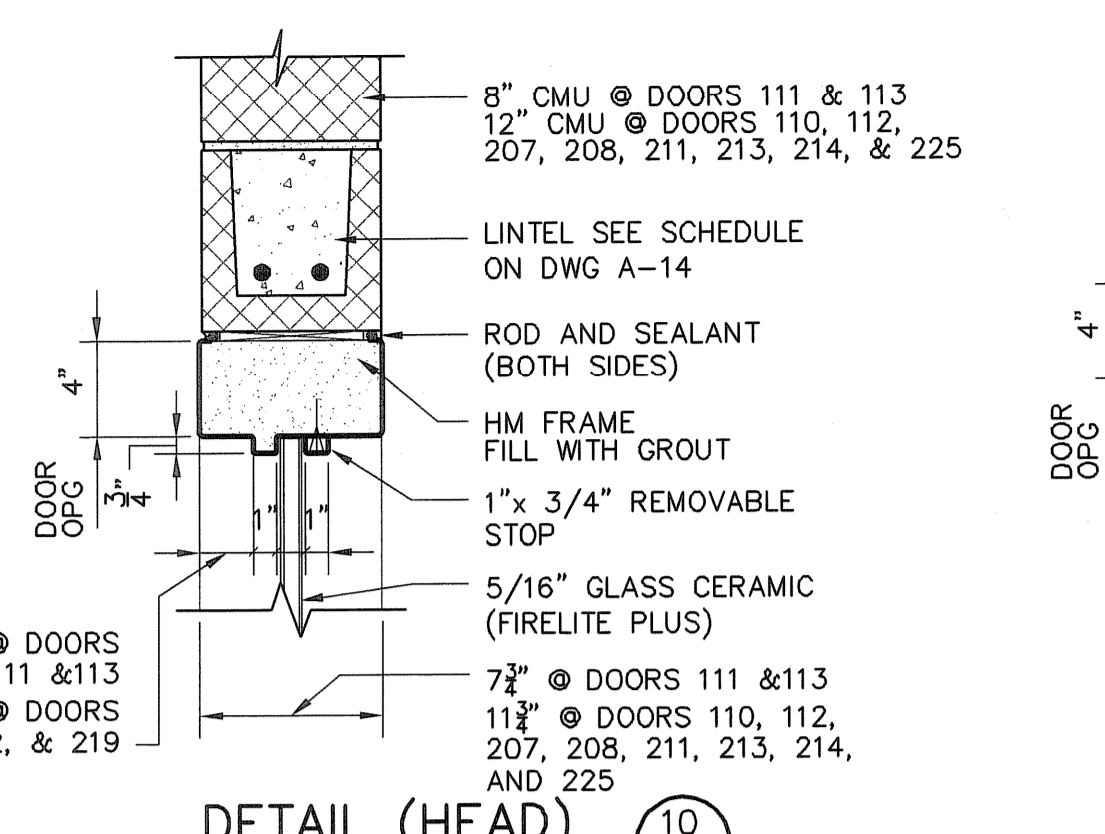
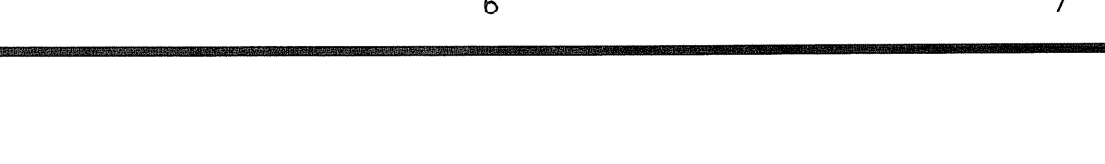
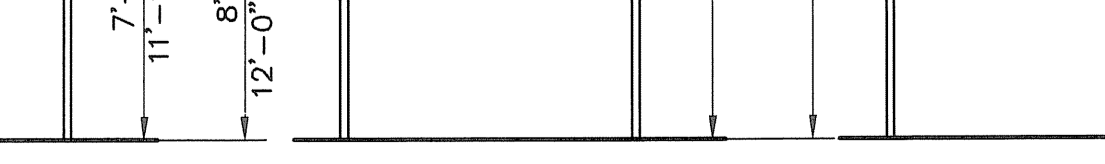
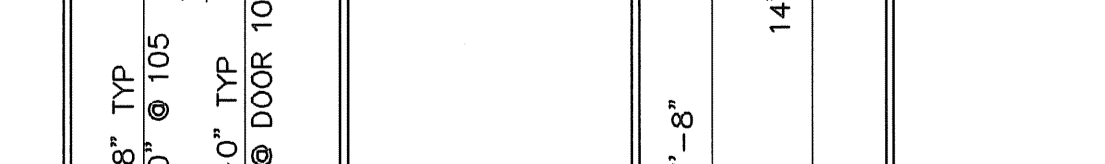
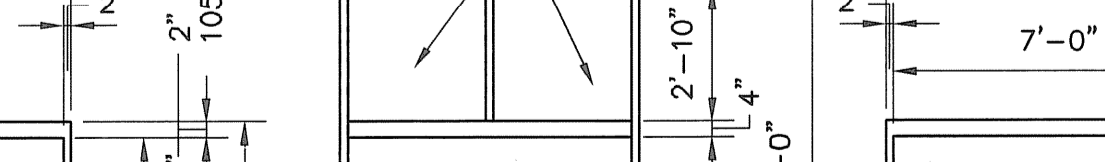
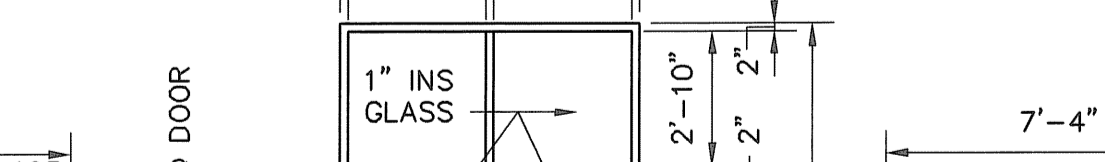
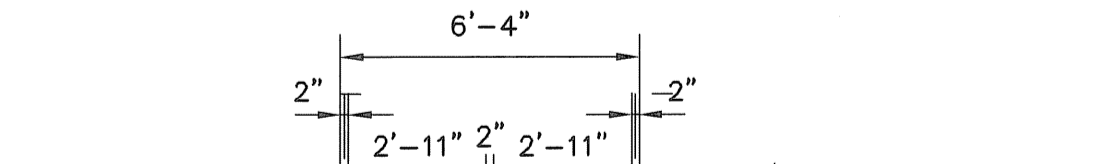
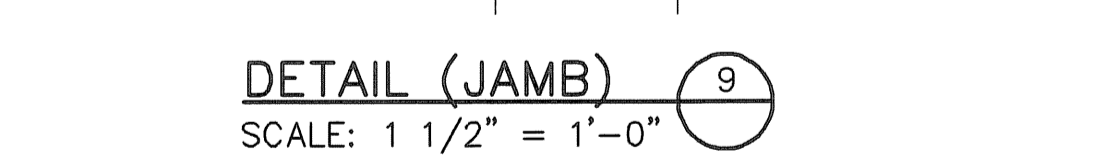
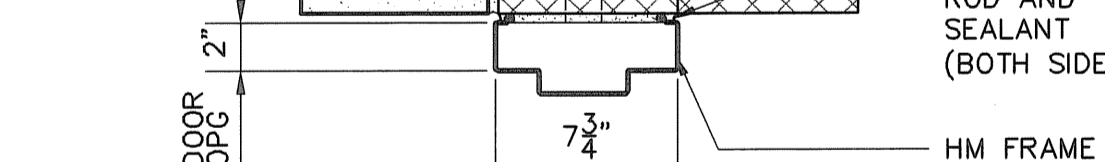
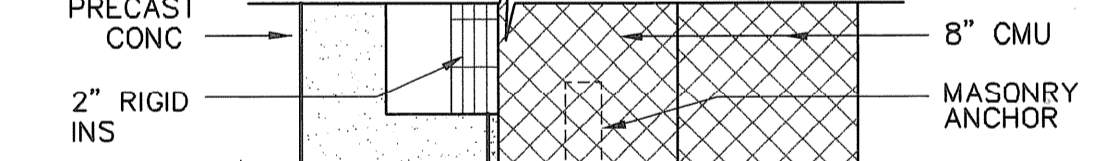
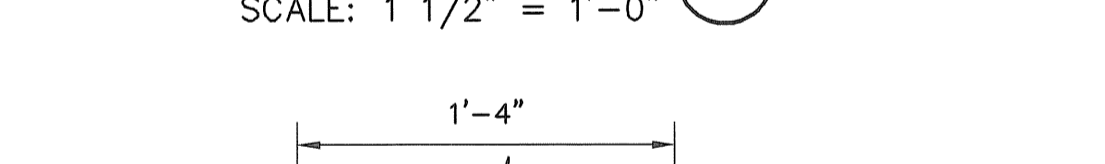
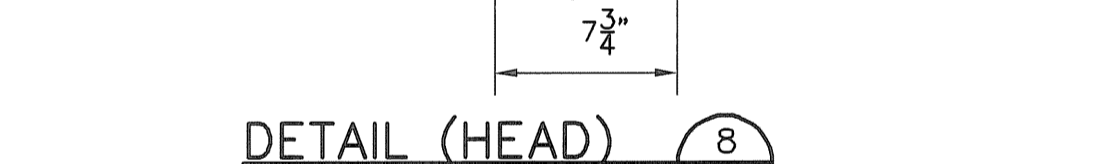
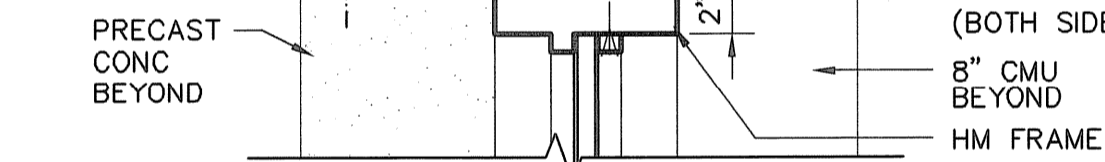
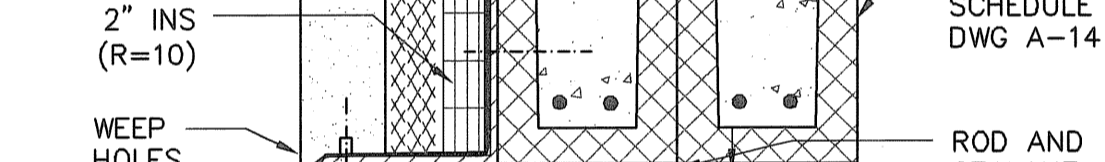
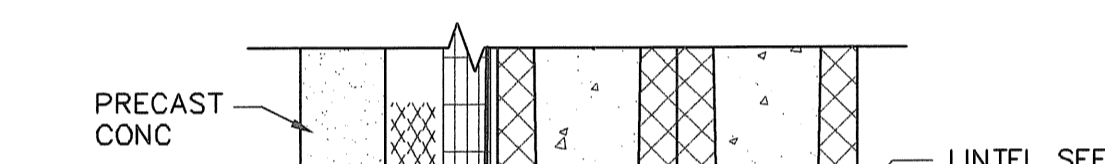
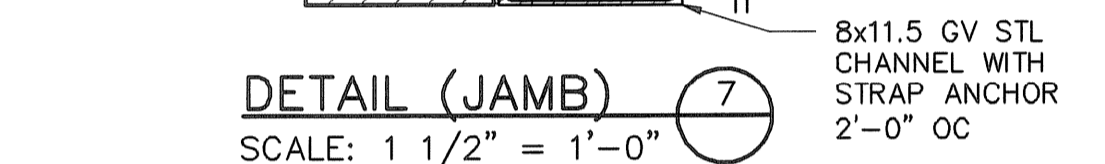
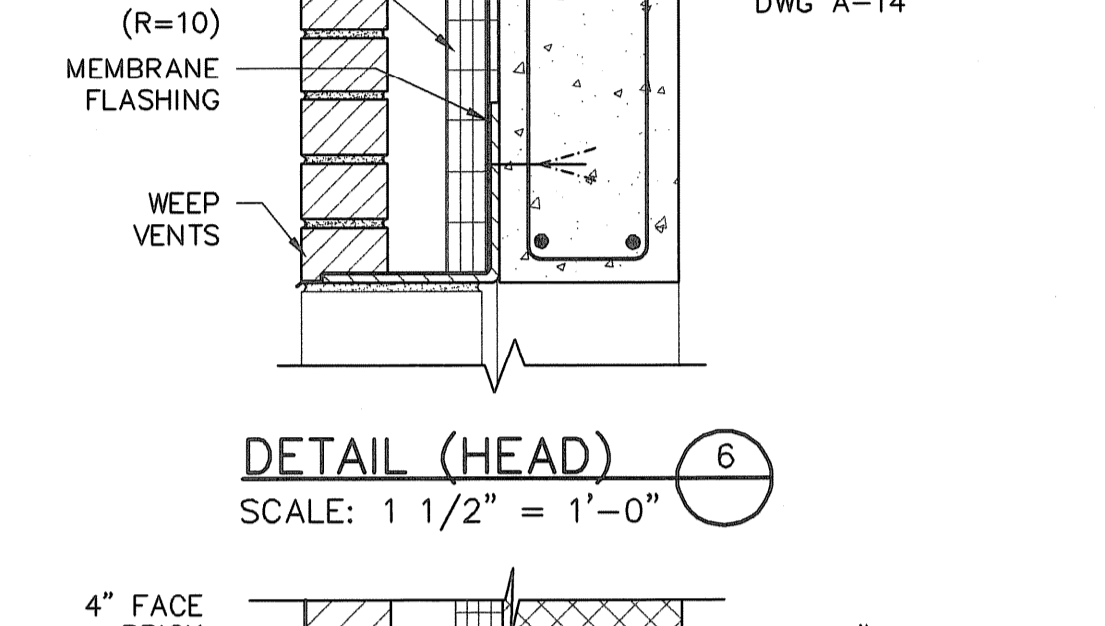
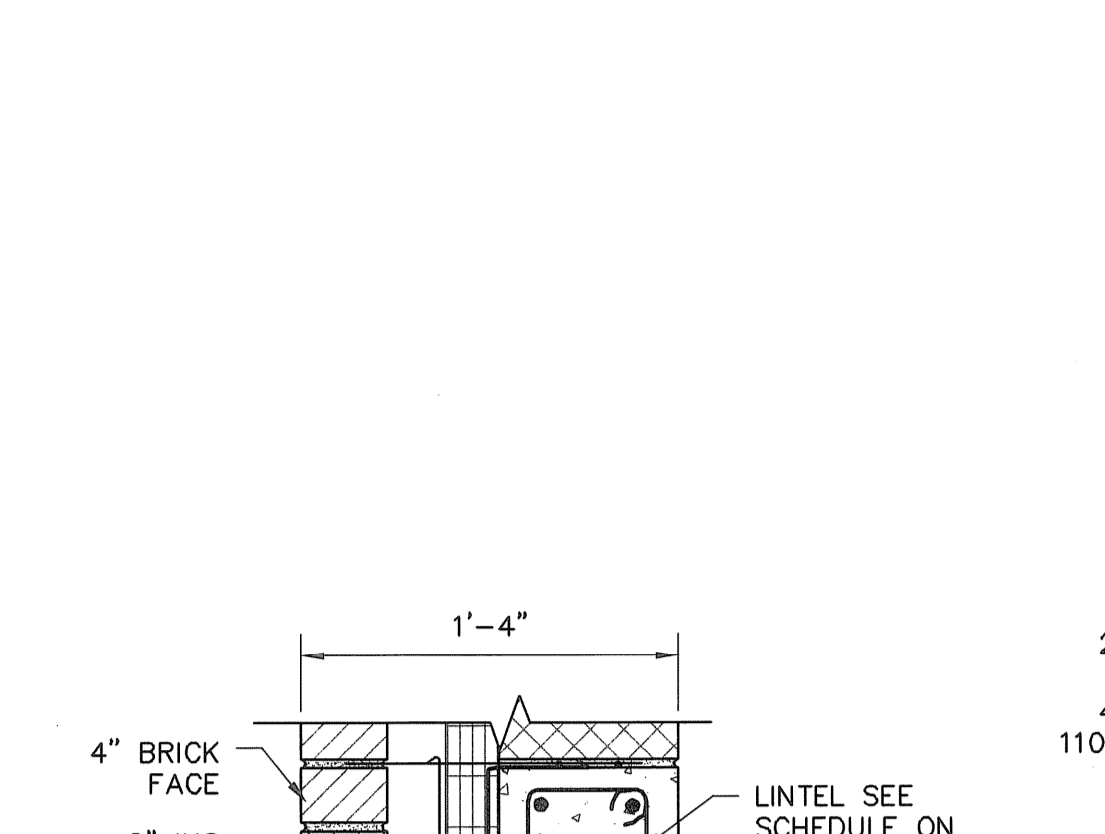
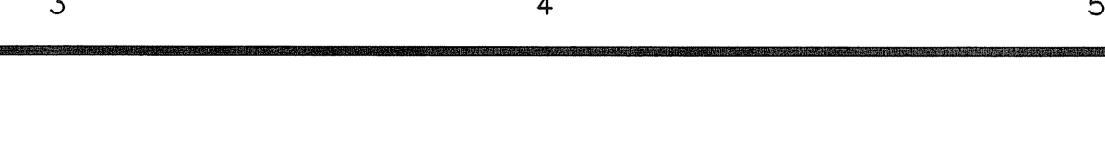
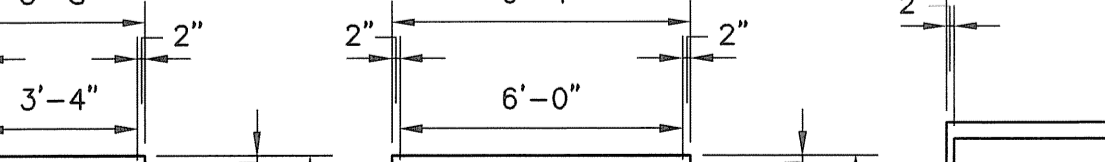
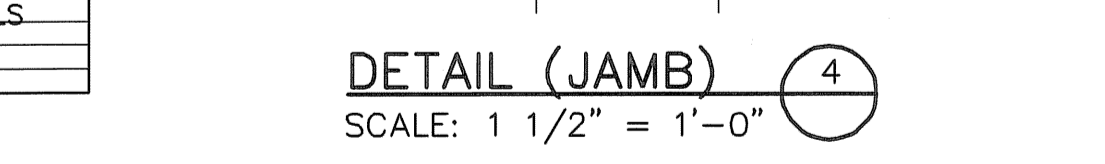
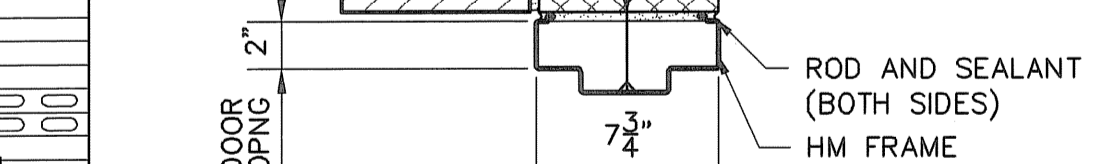
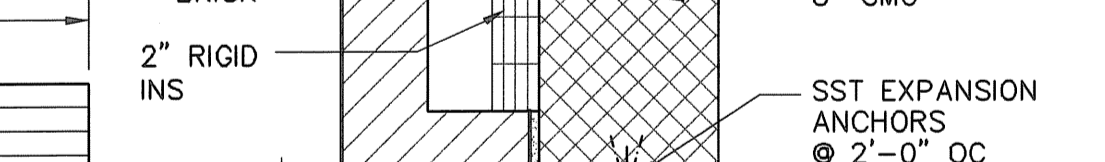
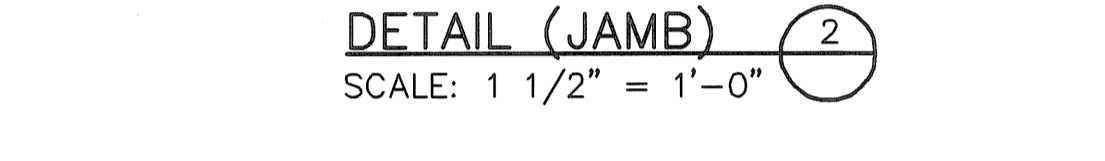
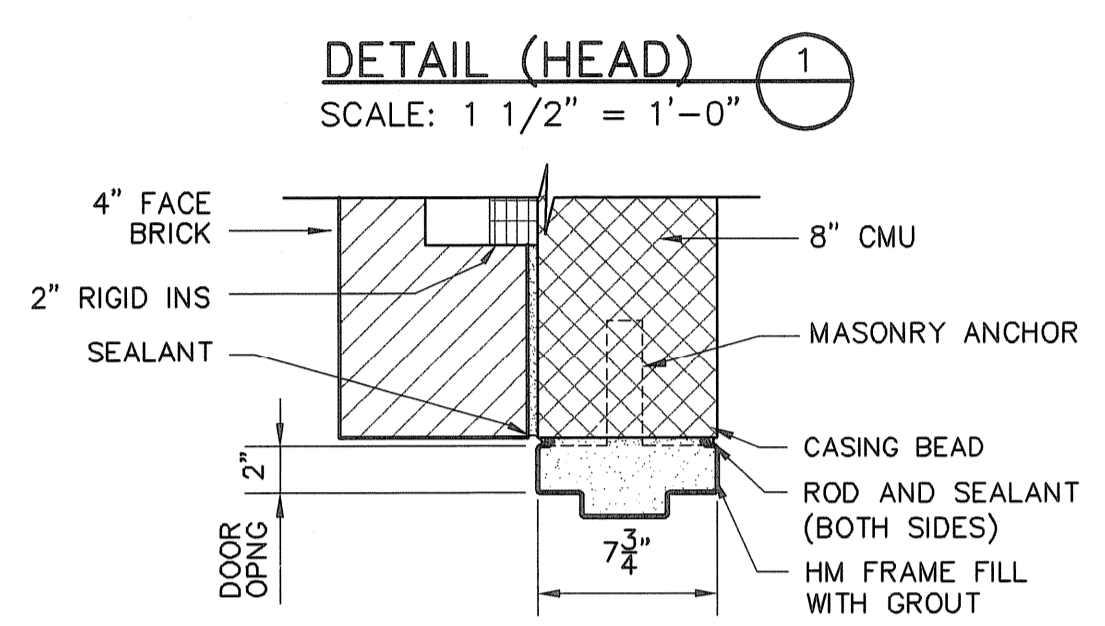
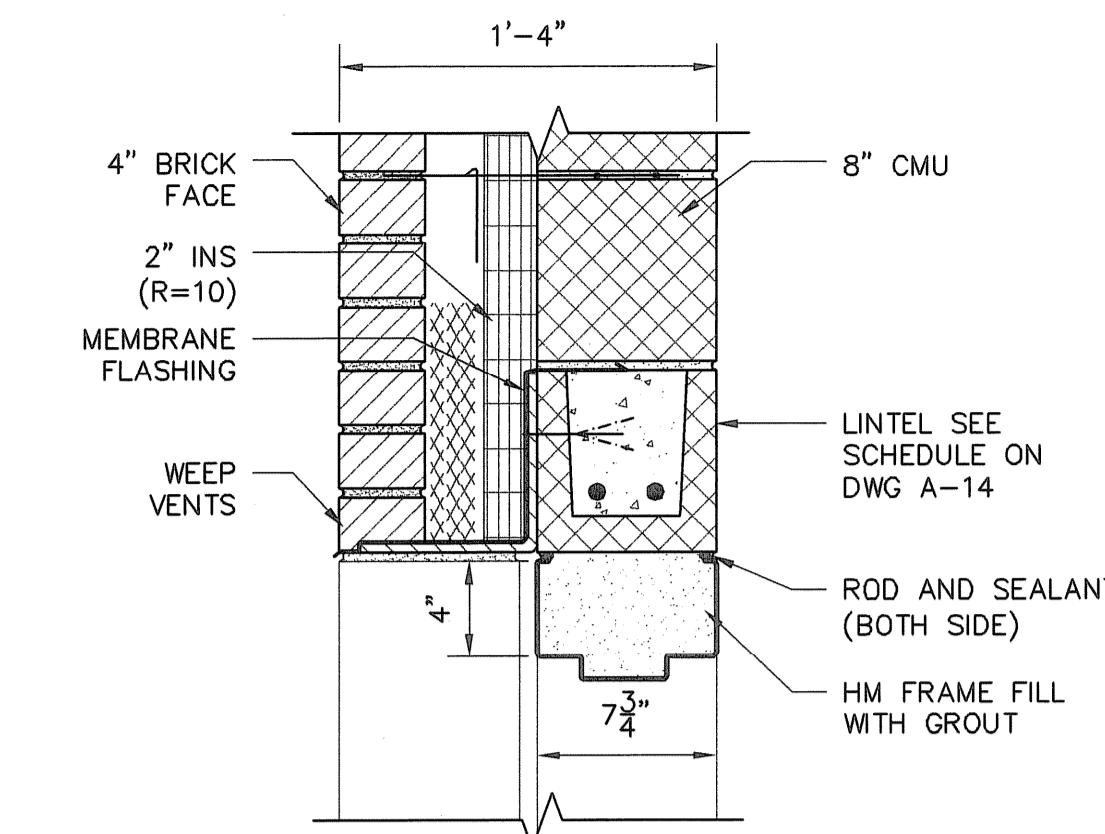
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CONTRACT NO: [ ]

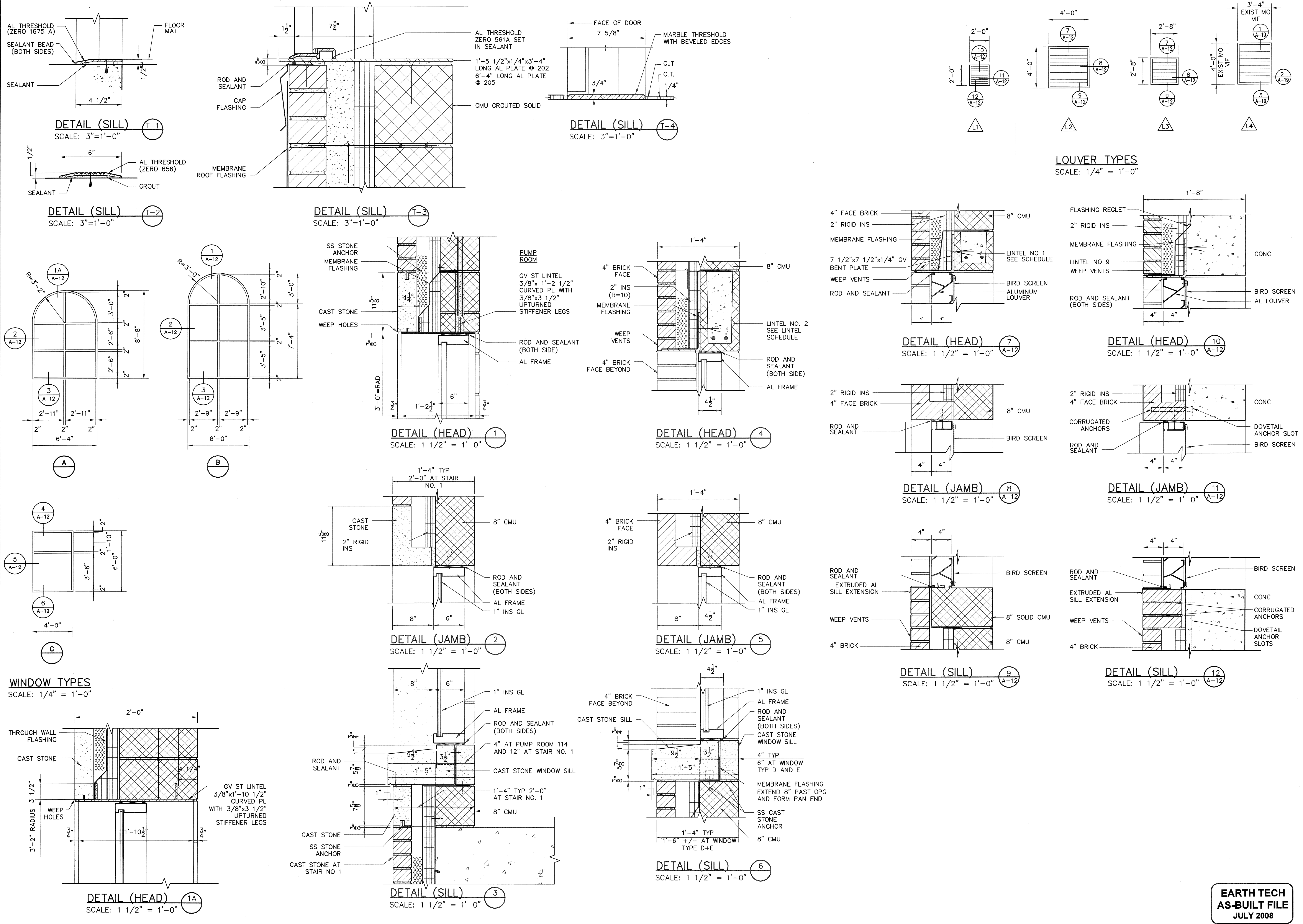
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DOOR SCHEDULE - WTP

DOOR NO.	DOORS		FRAMES				LINTEL NO.	PACKAGE NO.	REMARKS			
	OPENING SIZE WIDTH x HEIGHT	MATERIAL	TYPE	HEAD	JAMB	SILL				TYP		
101	PR 3'-0" x 7'-8"	HM	D	8	9	T-1	6	HM	2/5	X	FRAME DETAILS SHOWN ON A-11	
102	3'-0" x 7'-8"	HM	C	1	2	T-2	2	HM	1	X	SILL DETAILS SHOWN ON A-12	
103	12'-0" x 12'-0"	ST	E	6	7	-	-	-	3	X	ROLL-UP DOOR	
104	3'-0" x 7'-8"	HM	A	14	15	T-2	2	HM	6	X	1 1/2 HR FIRE RATING	
105	-	-	-	-	-	-	-	-	-	-	NOT USED	
106	-	-	-	-	-	-	-	-	-	-	NOT USED	
107	3'-0" x 7'-8"	HM	A	1	2	T-2	2	HM	1	X		
108	3'-0" x 7'-0"	HM	A	1	2	T-2	1	HM	1	X		
109	PR 3'-0" x 7'-8"	HM	B	12	13	T-2	5	HM	4	X	1 1/2 HR FIRE RATING	
110	-	-	-	-	-	-	-	-	-	-	NOT USED	
111	-	-	-	-	-	-	-	-	-	-	NOT USED	
112	-	-	-	-	-	-	-	-	-	-	NOT USED	
113	-	-	-	-	-	-	-	-	-	-	NOT USED	
114	PR 3'-0" x 7'-8"	HM	B	12	13	T-2	5	HM	4	X	1 1/2 HR FIRE RATING	
115	3'-0" x 7'-8"	HM	A	14	15	T-2	2	HM	6	X		
116	PR 3'-0" x 7'-8"	HM	C	14	15	T-2	5	HM	6	X		
117	PR 3'-0" x 7'-8"	FGL	A	14	18	SIM	-	FGL	6	X	1 1/2 HR FIRE RATING	
118	PR 3'-0" x 7'-8"	HM	C	14	15	T-2	5	HM	6	X		
119	PR 3'-0" x 7'-8"	HM	C	14	15	T-2	5	HM	6	X		
120	PR 3'-0" x 7'-8"	HM	C	14	15	T-2	5	HM	6	X		
121	3'-0" x 7'-0"	HM	B	14	15	T-2	1	HM	6	X	1 1/2 HR FIRE RATING	
122	PR 3'-0" x 7'-8"	HM	C	14	SIM	18	T-2	5	HM	-	X	
123	3'-0" x 7'-8"	HM	C	14	SIM	18	T-2	2	HM	-	X	
124	PR 3'-6" x 7'-8"	HM	C	14	SIM	18	T-2	7	HM	-	X	
125	PR 3'-0" x 7'-8"	HM	B	14	SIM	18	T-2	5	HM	-	X	1 1/2 HR FIRE RATING
201	3'-0" x 7'-0"	HM	B	12	13	T-2	1	HM	4	X	1 1/2 HR FIRE RATING	
202	PR 3'-0" x 7'-8"	HM	A	16	17	T-3	5	HM	2	X		
203	PR 3'-0" x 7'-8"	HM	A	1	2	T-2	5	HM	2	X		
204	PR 3'-0" x 7'-8"	HM	A	1	2	T-2	5	HM	2	X		
205	3'-0" x 7'-8"	HM	A	16	17	T-3	2	HM	2	X		
206	3'-0" x 7'-0"	HM	C	14	15	T-2	1	HM	6	X	3/4 HR FIRE RATING	
207	-	-	-	10	11	11	8	HM	6	X	VISION PANEL 3/4 HR FIRE RATING	
208	-	-	-	10	11	11	8	HM	6	X	VISION PANEL 3/4 HR FIRE RATING	
209	3'-0" x 7'-0"	HM	C	14	15	T-2	1	HM	6	X	3/4 HR FIRE RATING	
210	PR 3'-0" x 7'-8"	HM	B	14	15	T-2	5	HM	8	X	1 1/2 HR FIRE RATING	
211	-	-	-	10	11	11	8	HM	6	X	VISION PANEL 3/4 HR FIRE RATING	
212	3'-0" x 7'-0"	HM	C	14	15	T-2	1	HM	6	X	3/4 HR FIRE RATING	
213	-	-	-	10	11	11	8	HM	6	X	VISION PANEL 3/4 HR FIRE RATING	
214	-	-	-	10	11	11	8	HM	6	X	VISION PANEL 3/4 HR FIRE RATING	
215	3'-0" x 7'-0"	HM	A	14	15	T-2	1	HM	6	X	3/4 HR FIRE RATING	
216	PR 3'-0" x 7'-8"	HM	A	14	15	T-2	5	HM	8	X	3/4 HR FIRE RATING	
217	PR 3'-0" x 7'-8"	HM	B	12	13	T-2	5	HM	4	X	1 1/2 HR FIRE RATING	
218	3'-0" x 7'-0"	HM	A	14	15	T-2	1	HM	6	X	3/4 HR FIRE RATING	
219	3'-0" x 7'-0"	HM	C	14	15	T-2	1	HM	6	X	3/4 HR FIRE RATING	
220	3'-0" x 7'-0"	HM	G	12	13	T-4	1	HM	4	X	3/4 HR FIRE RATING	
221	3'-0" x 7'-0"	HM	G	12	13	T-4	1	HM	4	X		
222	3'-0" x 7'-0"	HM	G	12	13	T-1	1	HM	4	X		
223	3'-4" x 7'-0"	HM	C	14	15	T-2	3	HM	6	X		
224	3'-0" x 7'-0"	HM	C	14	15	T-2	1	HM	6	X		
225	-	-	-	10	11	11	8	HM	6	X	VISION PANEL	
226	3'-0" x 7'-0"	HM	C	14	15	T-2	1	HM	6	X		
227	3'-0" x 7'-0"	HM	A	12	13	T-2	1	HM	4	X	1 1/2 HR FIRE RATING	
228	PR 3'-0" x 7'-0"	HM	A	12	13	-	4	HM	4	X		





TAMS ARCHITECTS & ENGINEERS, INC.  
 AN EARTH TECH COMPANY - RI COA A-14-324  
 EarthTech  
 A Tyco International Ltd. Company  
 300 BAKER AVENUE SUITE 200 CONCORD MA 01742 (978) 371-4000

DESIGNED BY	ARM	DWG SCALE	AS NOTED
DRAWN BY	ECG	CONTRACT NO.	
CHECKED BY		DATE	OCTOBER 31, 2008

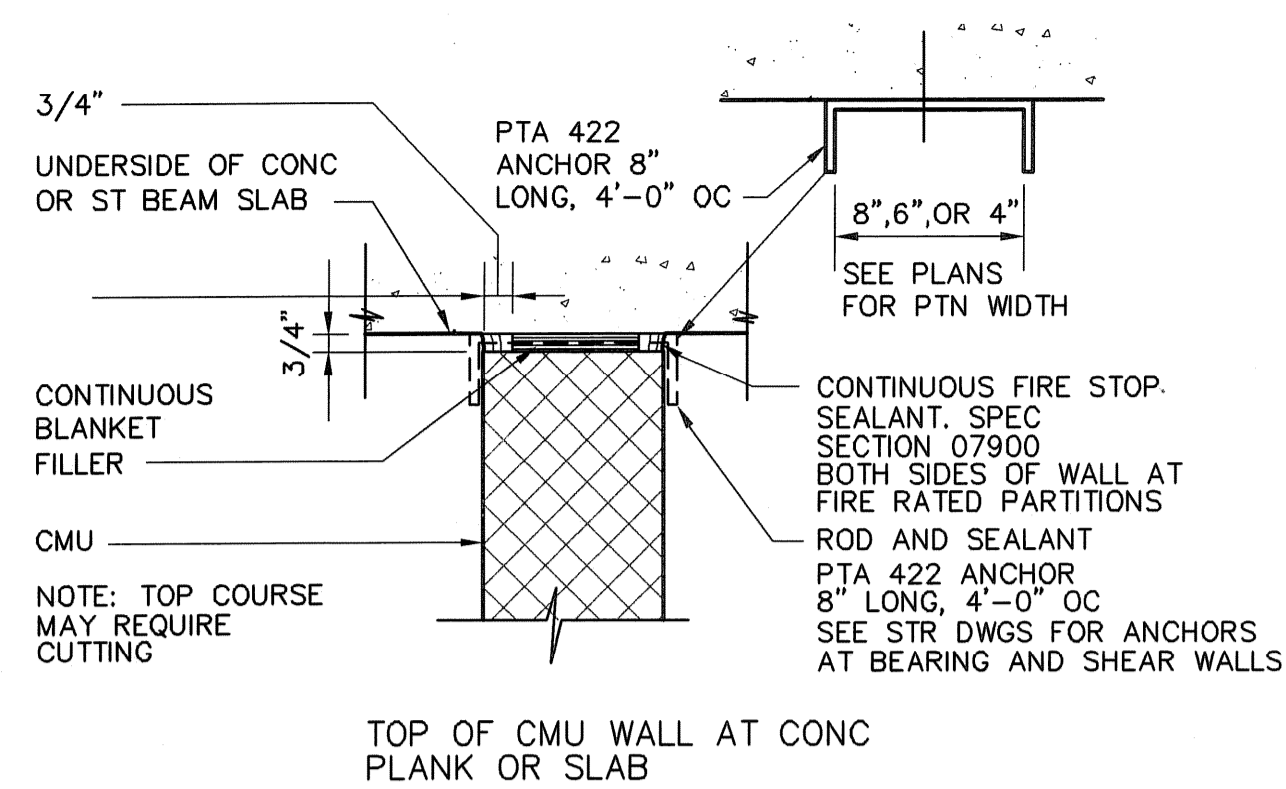
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 AS-BUILT DRAWING FILE  
 ISSUED FOR RFI POSTED SET  
 ISSUED FOR CONSTRUCTION  
 RECORDS

PAWTUCKET, RHODE ISLAND  
 PAWTUCKET REGIONAL  
 WATER TREATMENT FACILITY  
**PKG 5 - LAB AND OFFICE AREA**  
 DOOR, WINDOW, AND LOUVER DETAILS

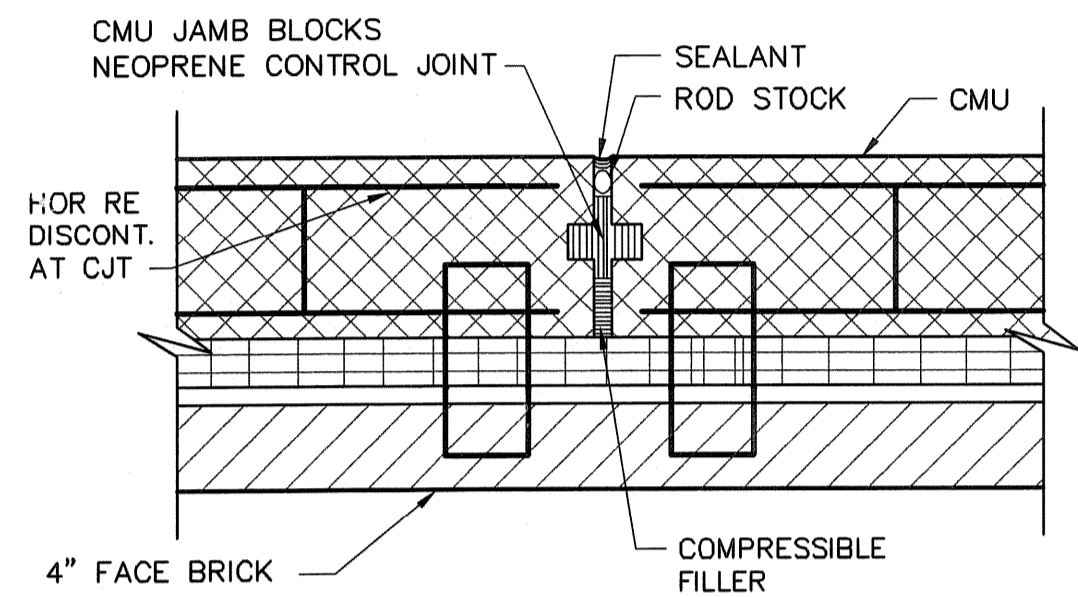
ROBERT H. SHELDON  
 No. 4103  
 REG. LEAD  
 PROFESSIONAL SEAL  
 3/7/08

**EARTH TECH**  
**AS-BUILT FILE**  
**JULY 2008**

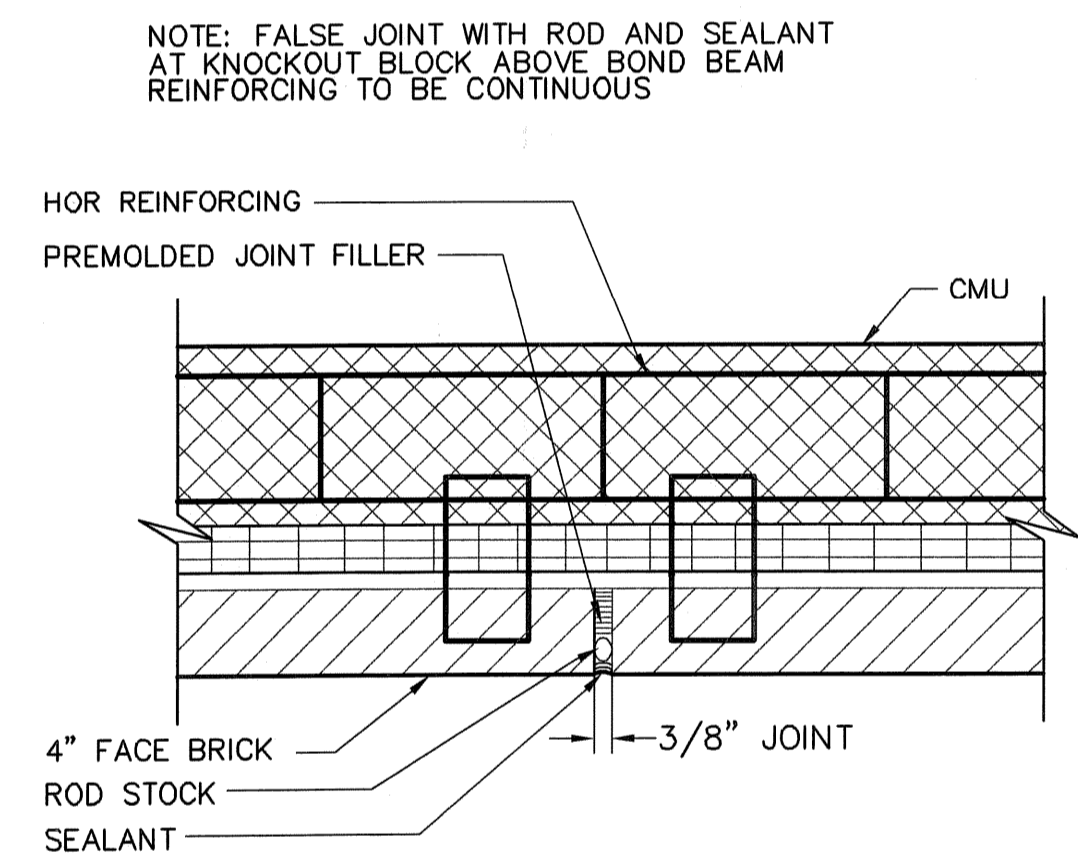
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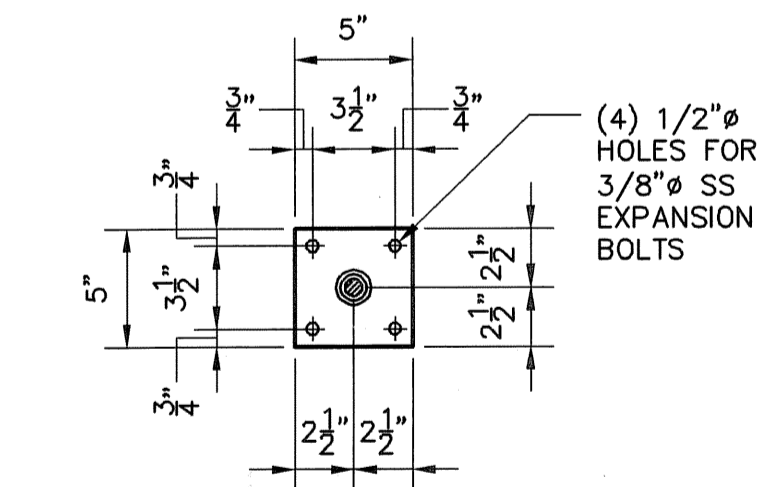
**TYPICAL DETAIL (TOP OF CMU WALL)**  
SCALE: 1 1/2"=1'-0"



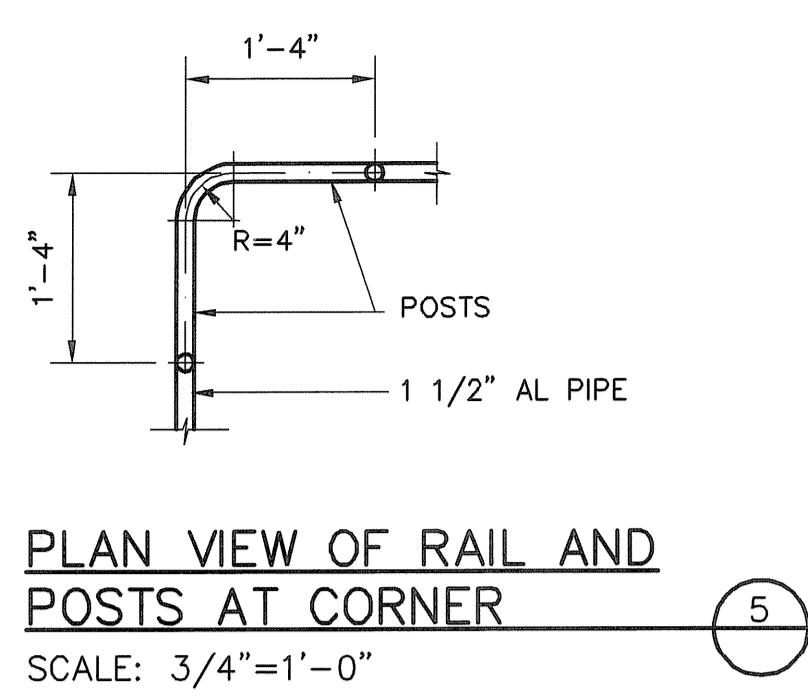
**BACK UP MASONRY CONTROL JOINT**  
SCALE: 1 1/2"=1'-0"



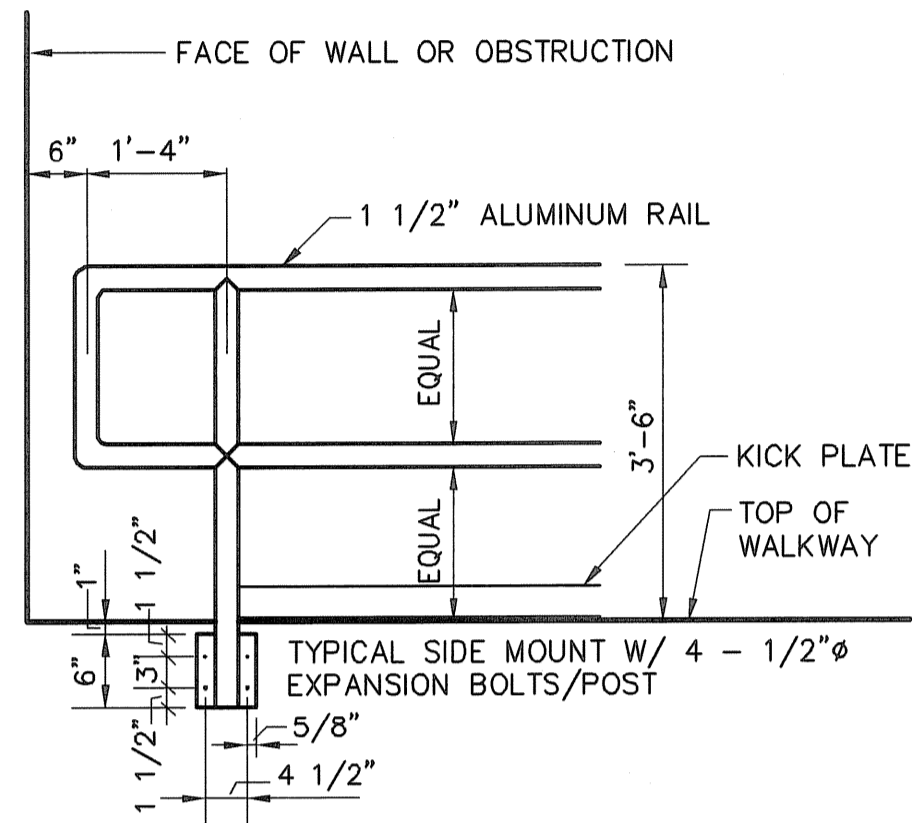
**VENEER CONTROL JOINT**  
SCALE: 1 1/2"=1'-0"



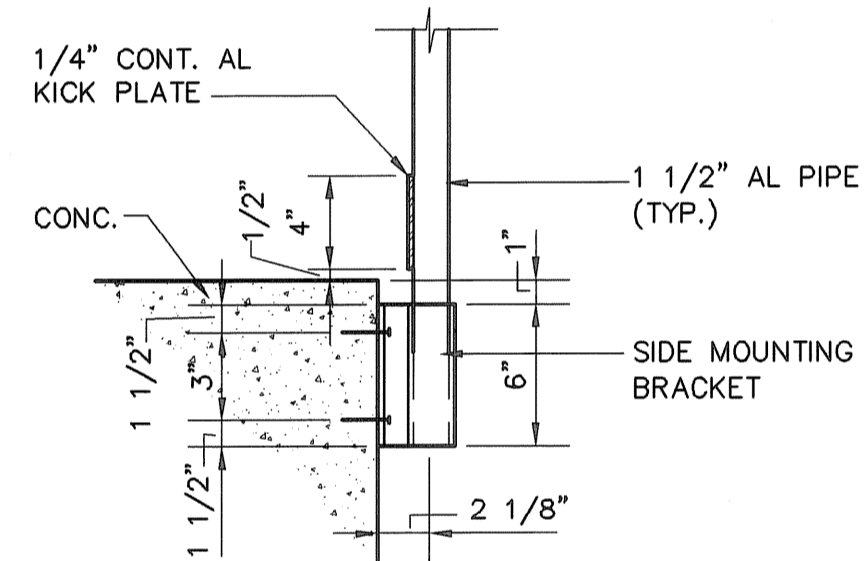
**TYP. TOP MOUNTED POST**  
SCALE: 1 1/2"=1'-0"



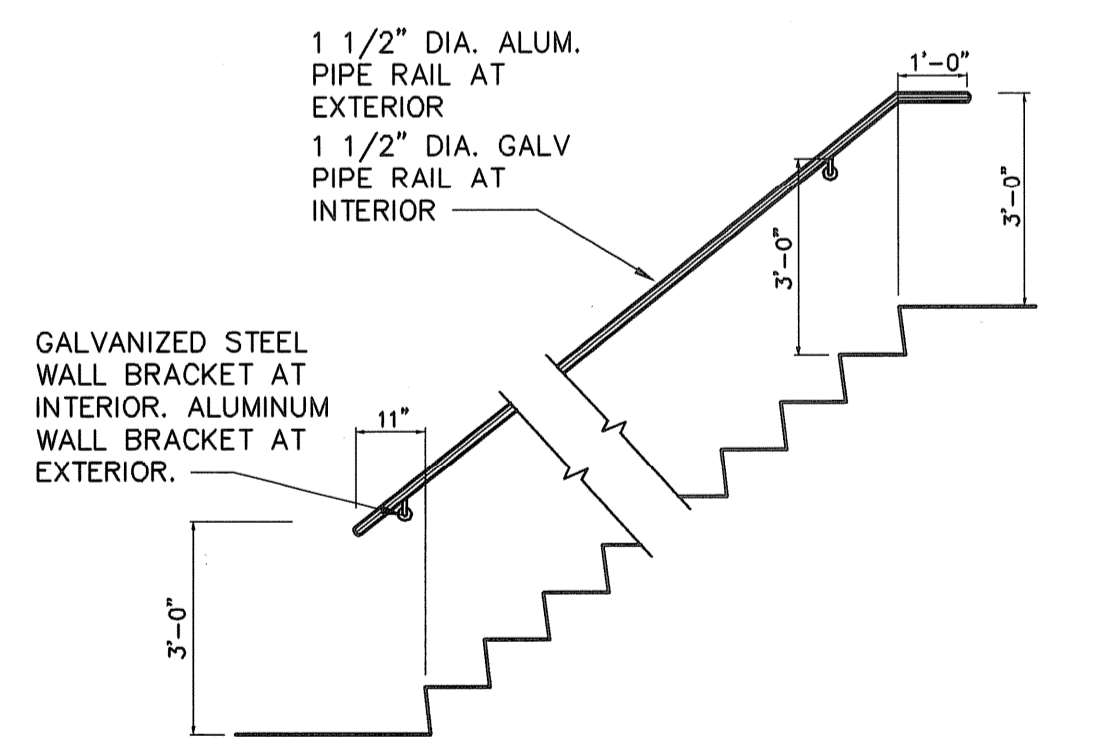
**PLAN VIEW OF RAIL AND POSTS AT CORNER**  
SCALE: 3/4"=1'-0"



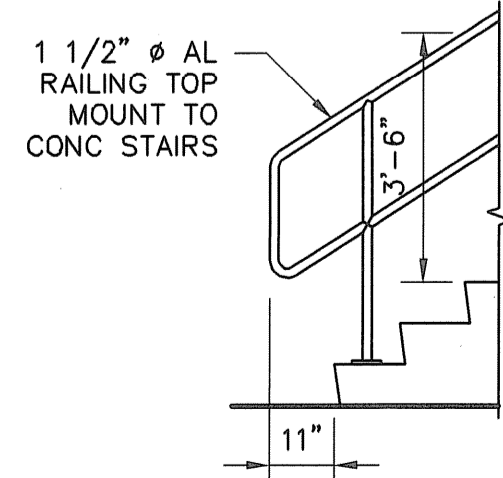
**TYPICAL RAILING**  
N.T.S.



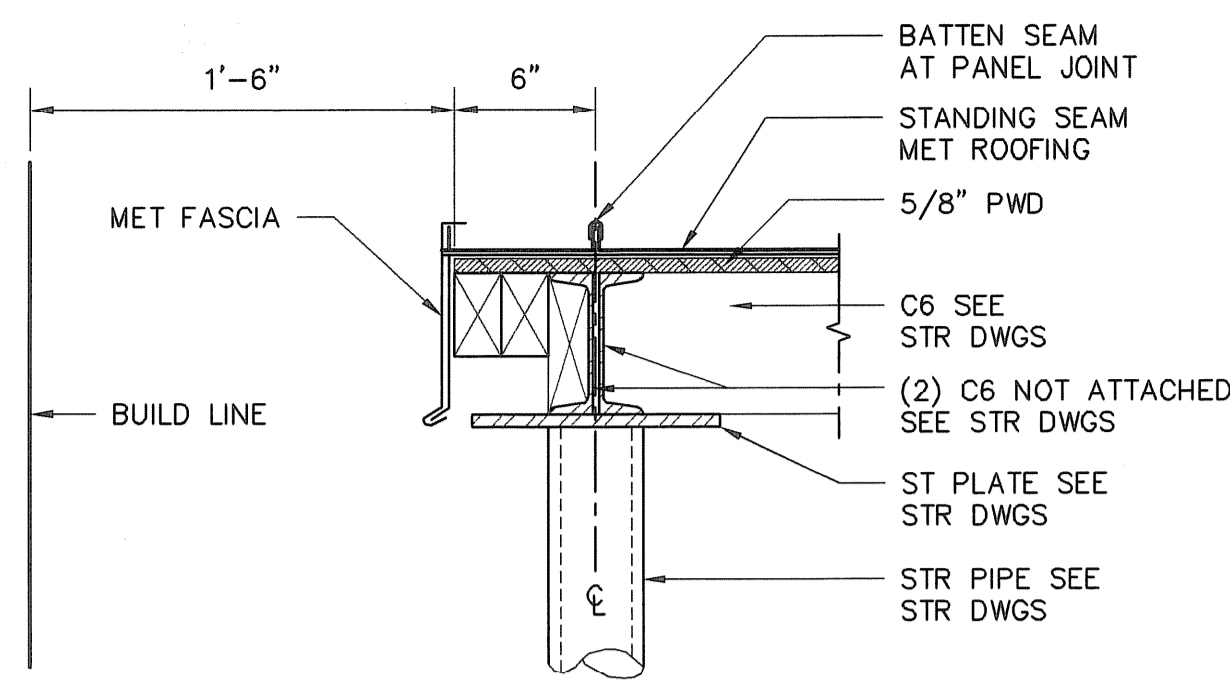
**TYP. SIDE MOUNTED POST**  
SCALE: 1 1/2"=1'-0"



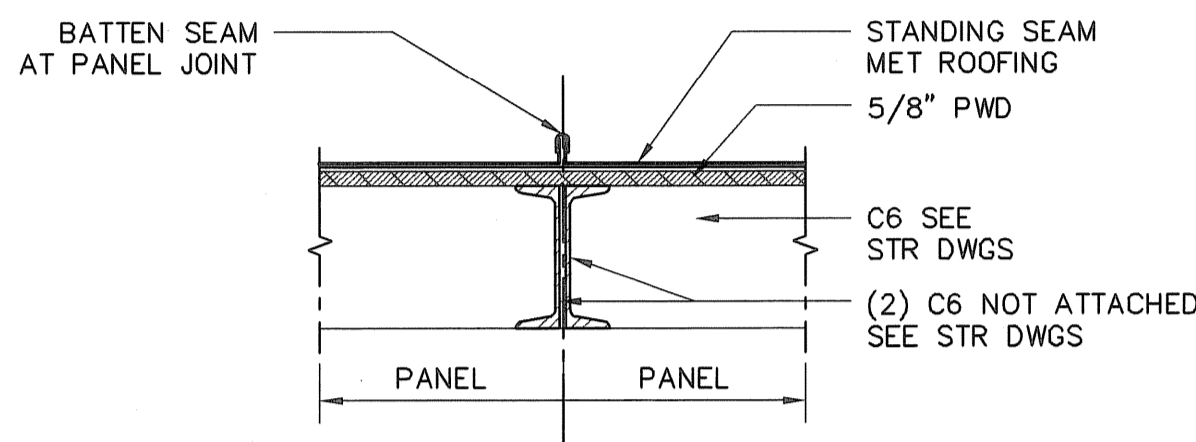
**TYP. WALL MOUNTED STAIR HANDRAIL**  
N.T.S.



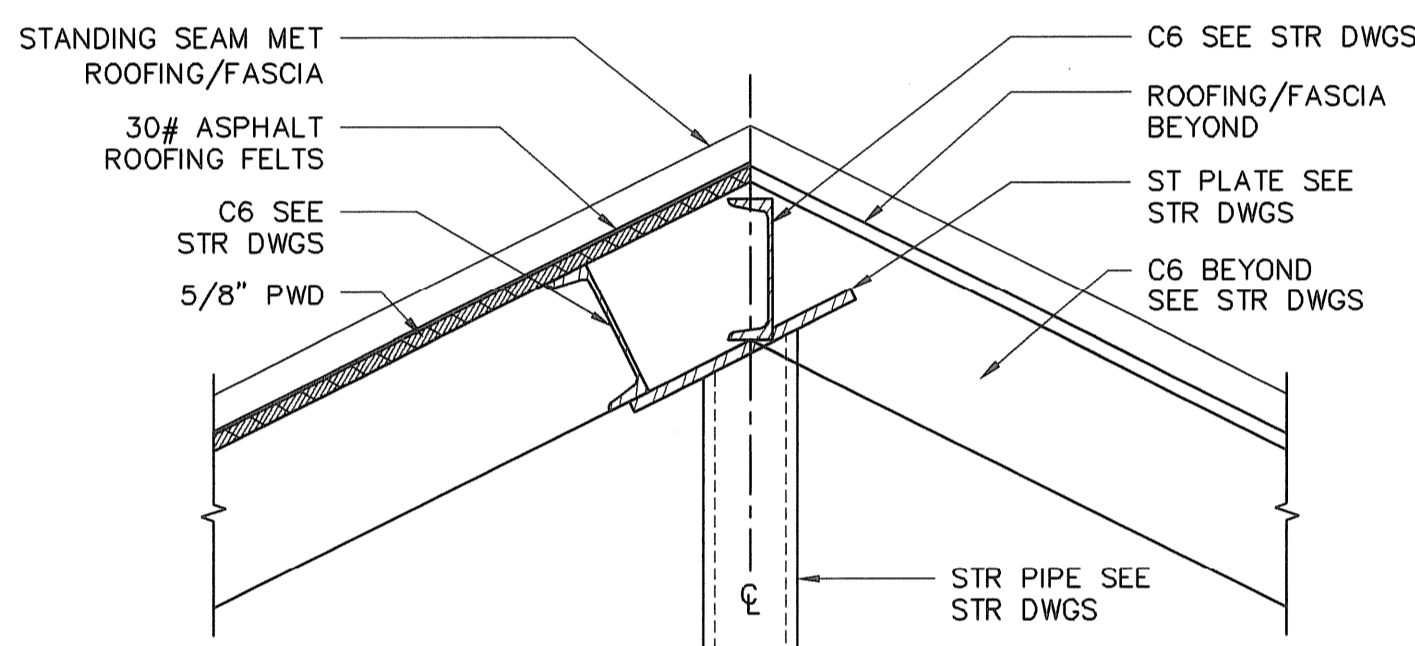
**TYP. RAILING AT STAIR**  
SCALE: 3/8"=1'-0"



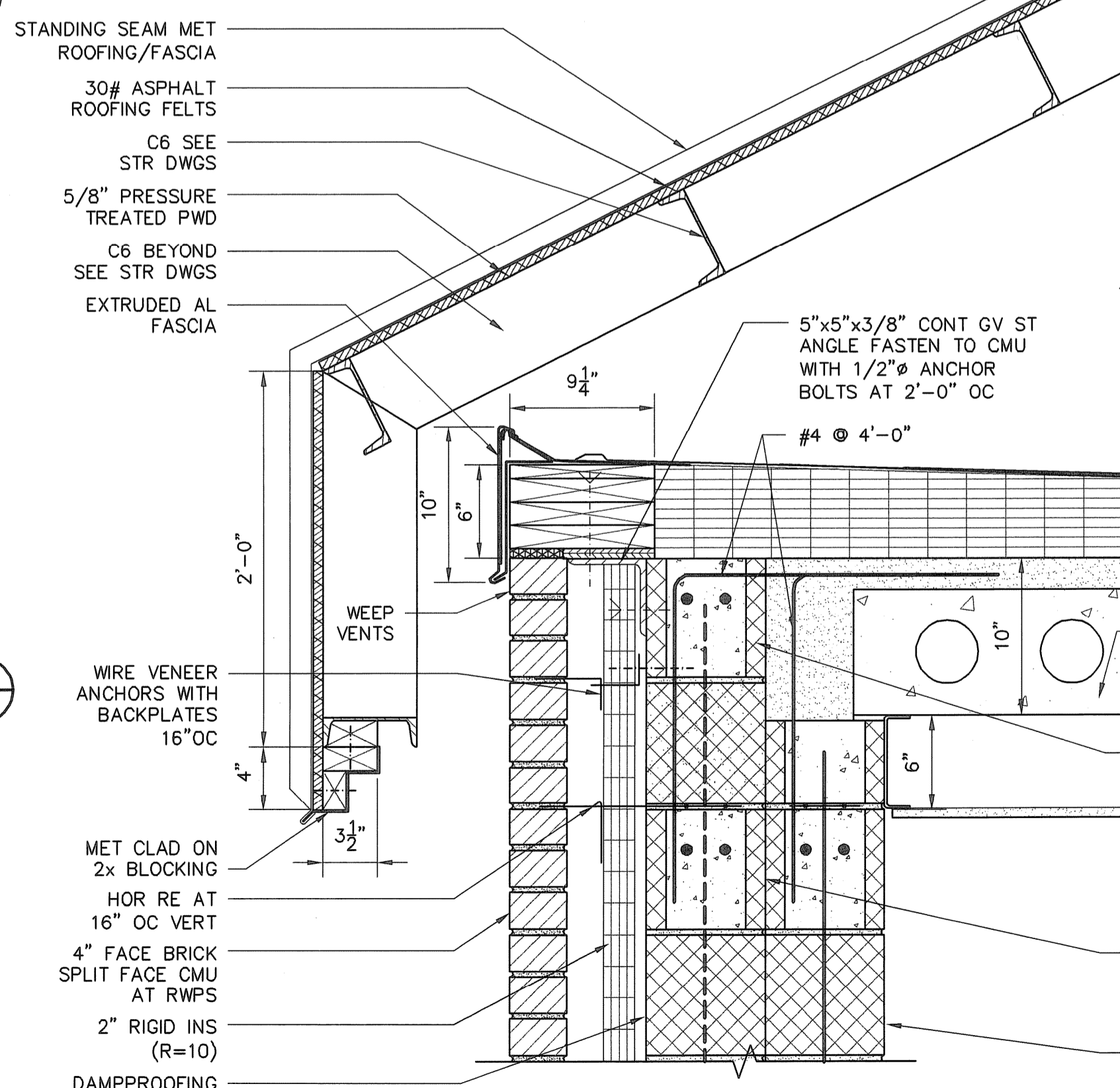
**DETAIL GABLE END OF ROOFING/FASCIA**  
SCALE: 1 1/2"=1'-0"



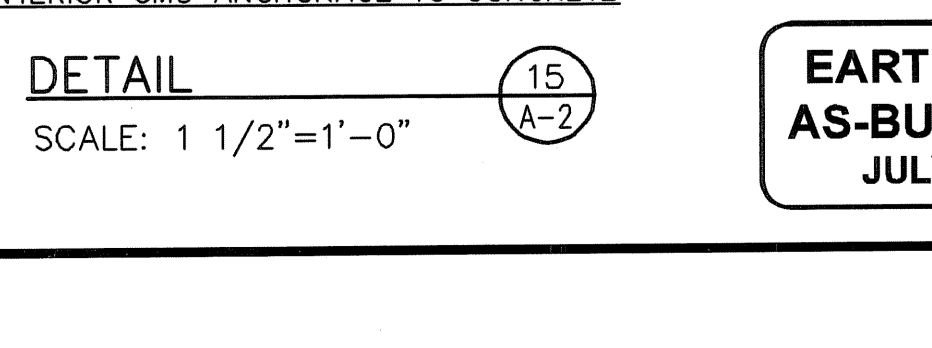
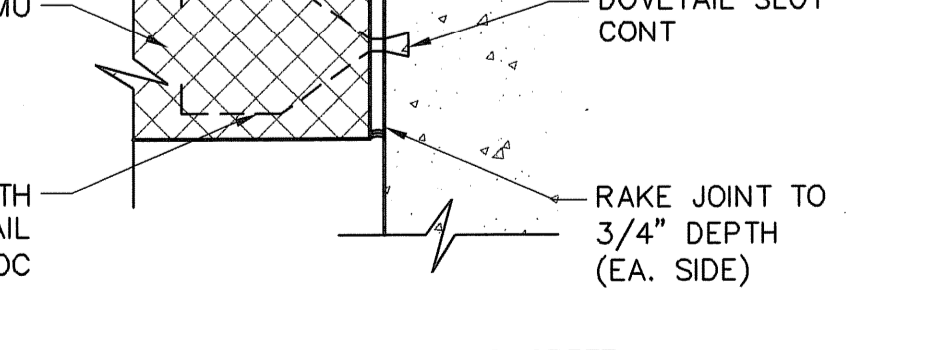
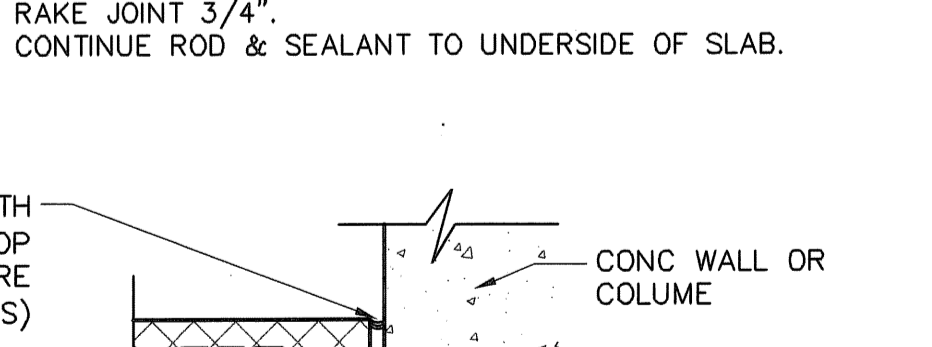
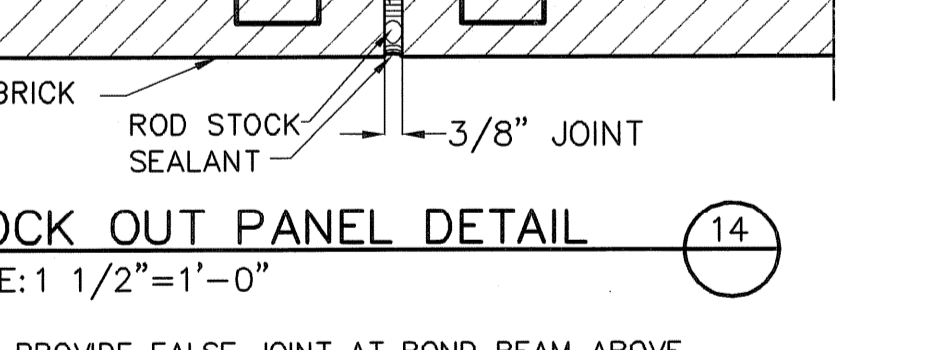
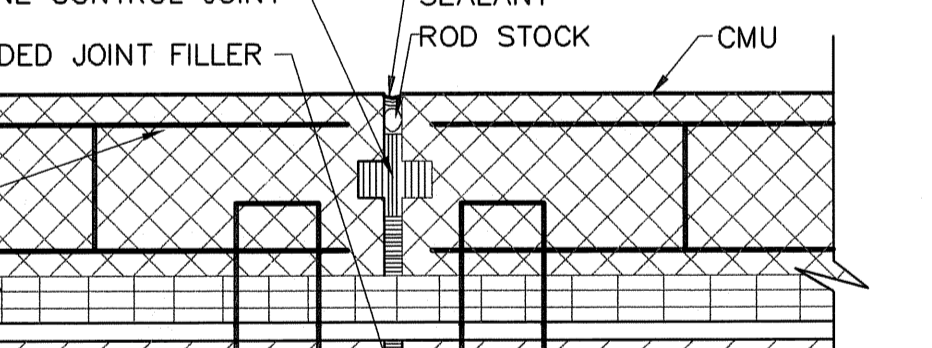
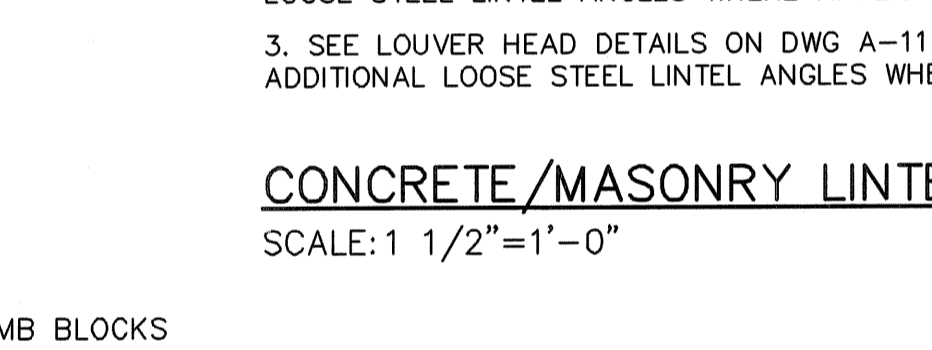
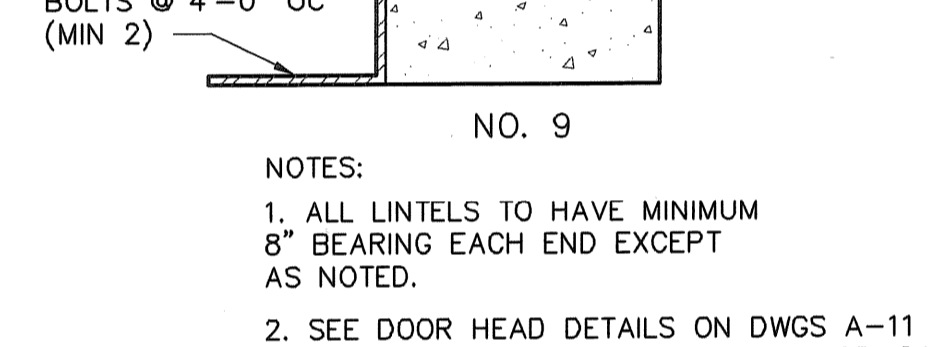
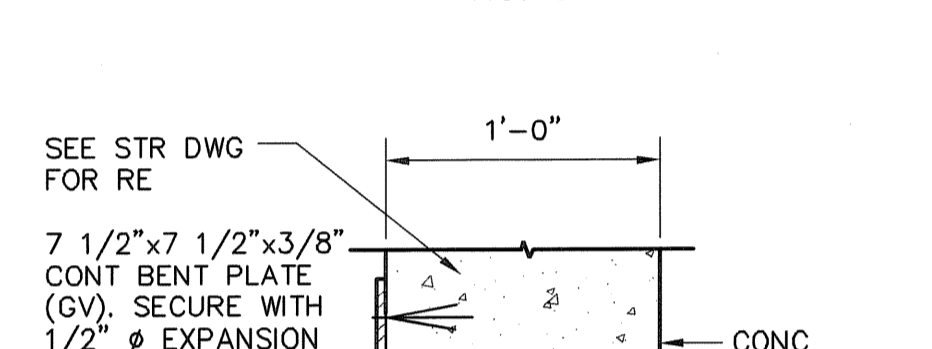
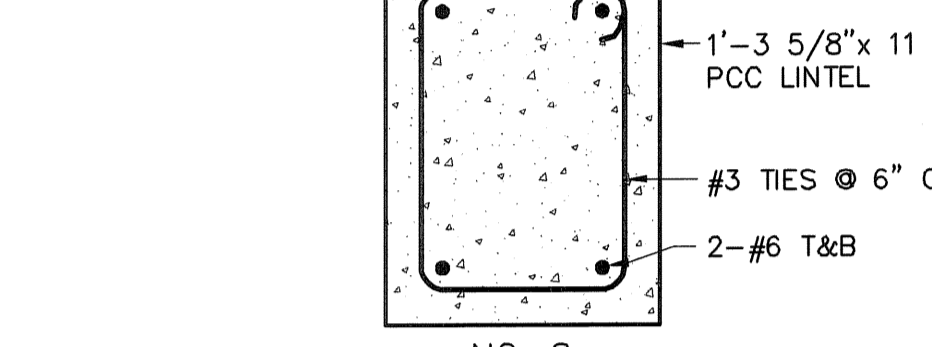
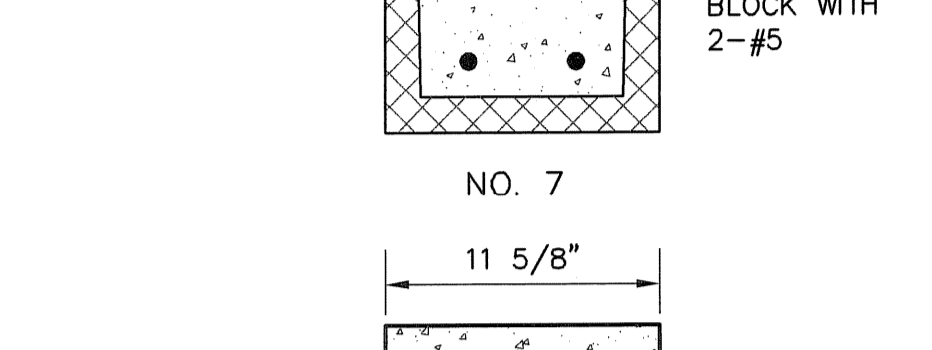
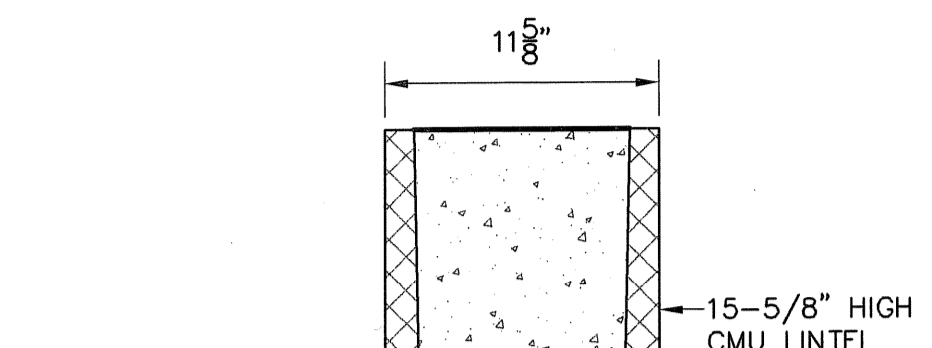
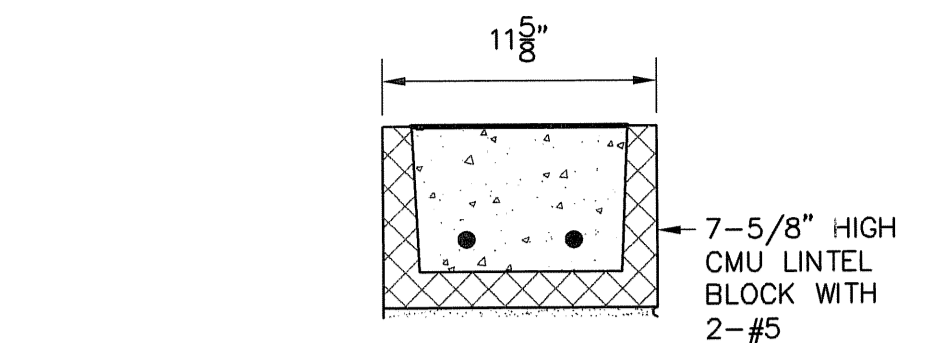
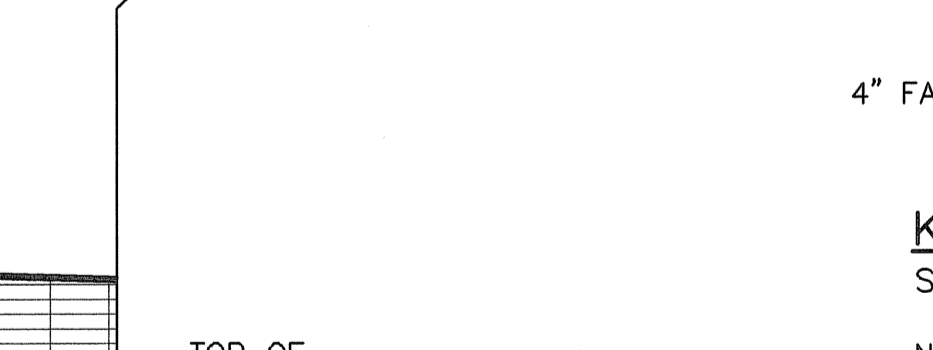
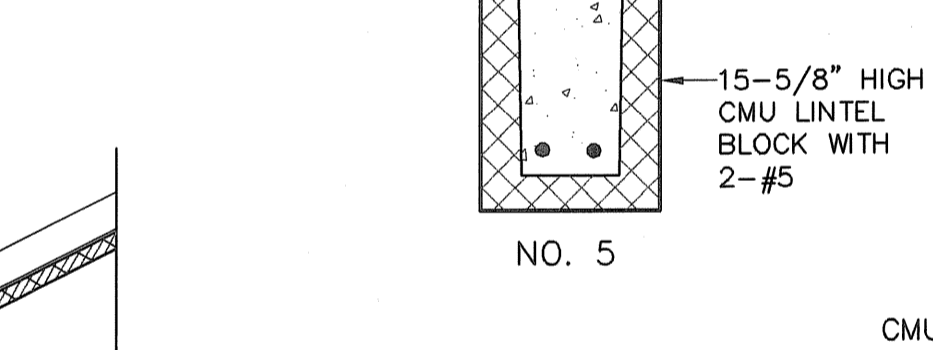
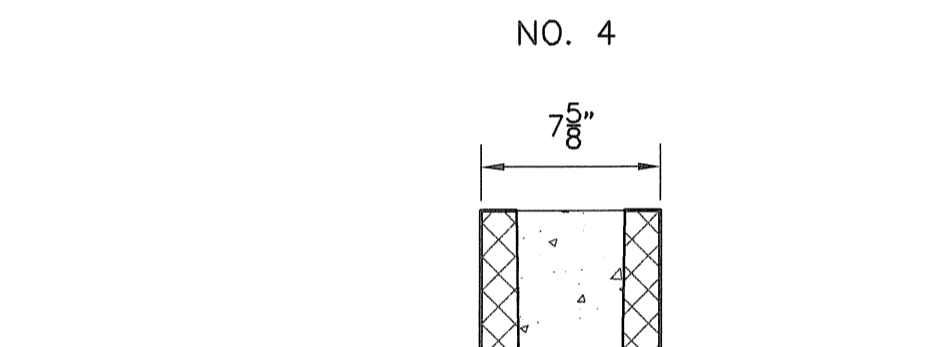
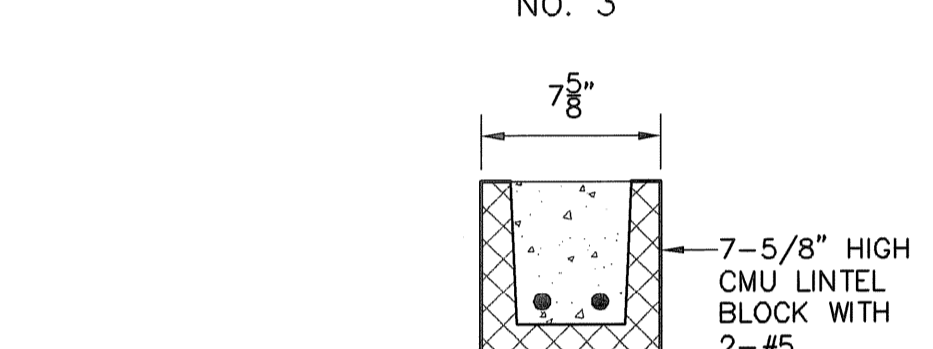
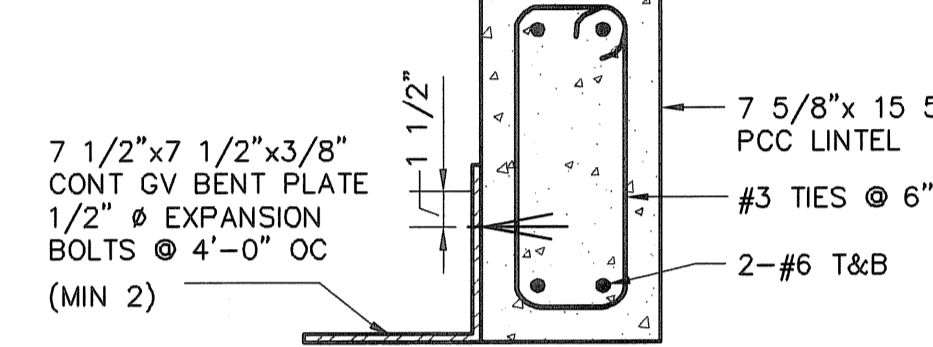
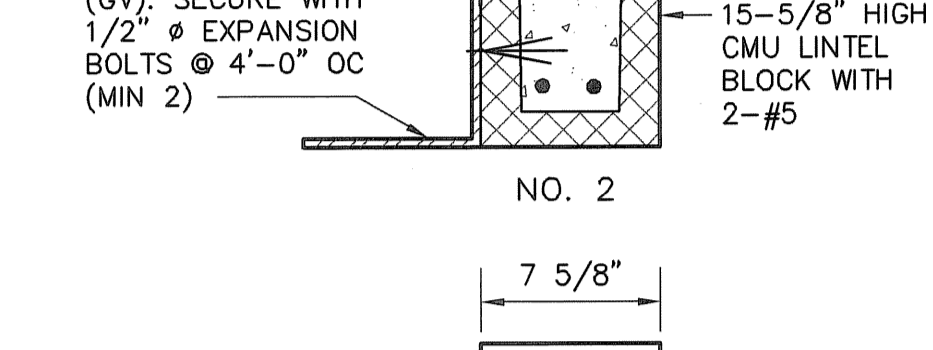
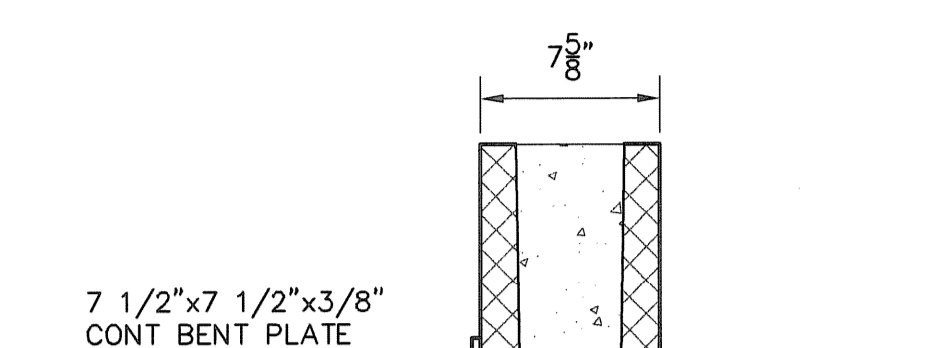
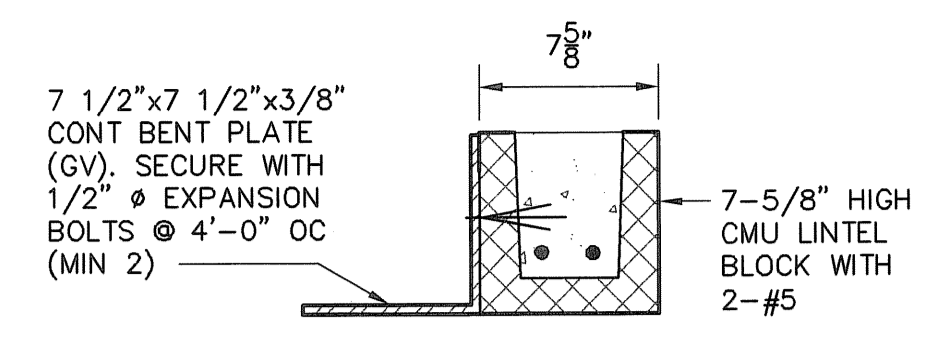
**DETAIL PANEL JOINT**  
SCALE: 1 1/2"=1'-0"



**DETAIL AT PEAK**  
SCALE: 1 1/2"=1'-0"

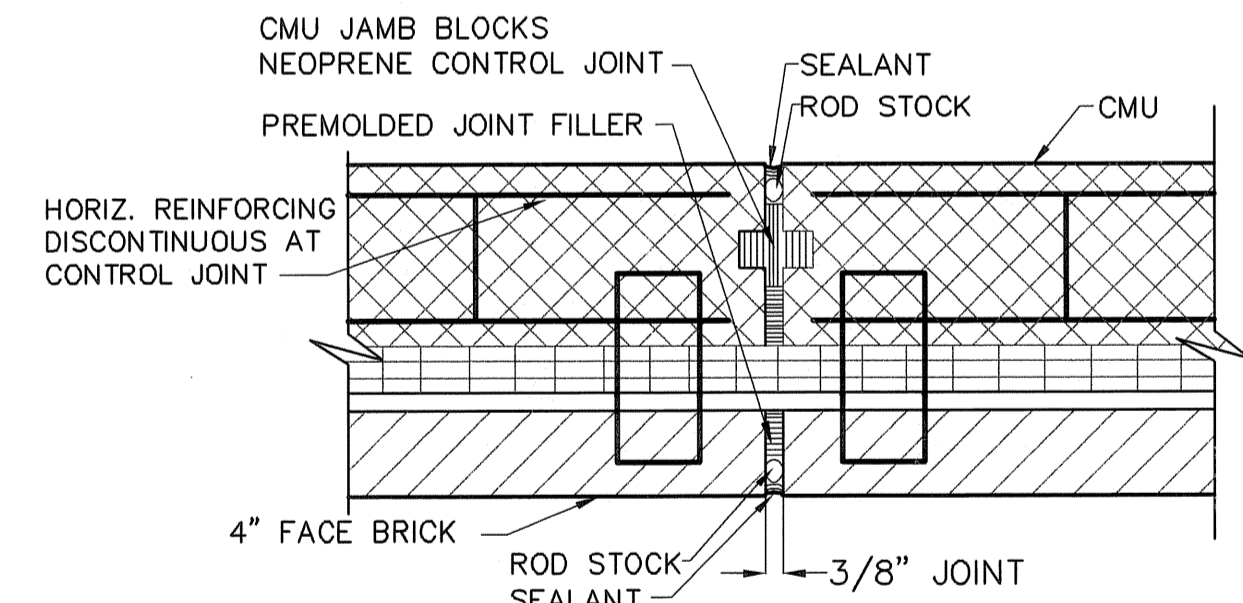


**DETAIL AT CANOPY**  
SCALE: 1 1/2"=1'-0"



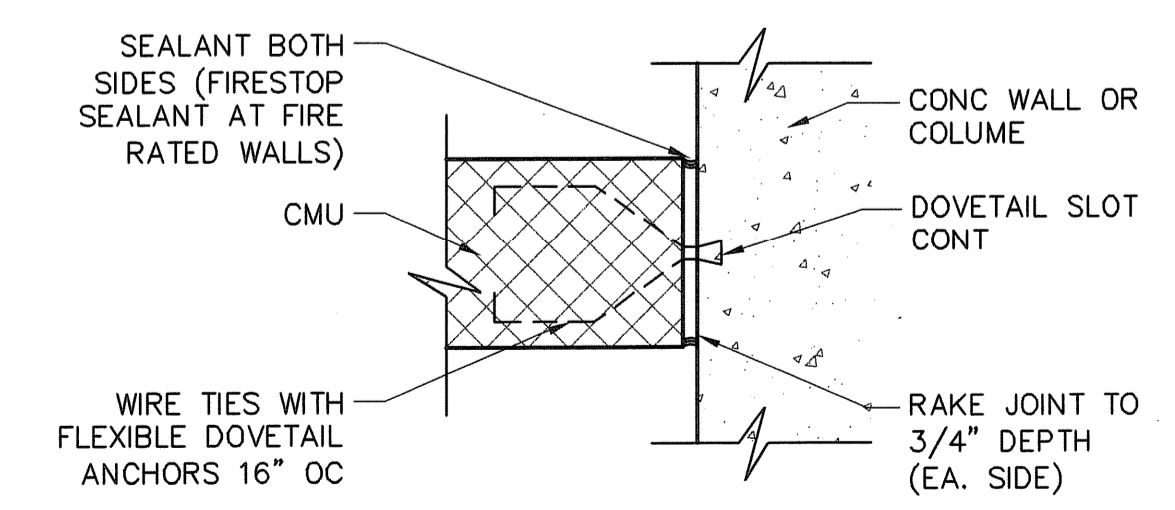
- NOTES:  
1. ALL LINTELS TO HAVE MINIMUM 8" BEARING EACH END EXCEPT AS NOTED.  
2. SEE DOOR HEAD DETAILS ON DWGS A-11 FOR ADDITIONAL LOOSE STEEL LINTEL ANGLES WHERE APPLICABLE.  
3. SEE LOUVER HEAD DETAILS ON DWG A-11 FOR ADDITIONAL LOOSE STEEL LINTEL ANGLES WHERE APPLICABLE.

**CONCRETE/MASONRY LINTEL SCHED**  
SCALE: 1 1/2"=1'-0"



**KNOCK OUT PANEL DETAIL**  
SCALE: 1 1/2"=1'-0"

NOTE: PROVIDE FALSE JOINT AT BOND BEAM ABOVE. RAKE JOINT 3/4". CONTINUE ROD & SEALANT TO UNDERSIDE OF SLAB.



**INTERIOR CMU ANCHORAGE TO CONCRETE**

**DETAIL**  
SCALE: 1 1/2"=1'-0"

TAMS ARCHITECTS & ENGINEERS, INC.  
AN EARTH TECH COMPANY - RI COA A-14.324

**EarthTech**  
A Tyco International Ltd. Company  
300 BAKER AVENUE SUITE 200 CONCORD MA 01742 (978) 371-0000

NO.	DATE	BY	REVISIONS
1	10/27/06	AK	ISSUED FOR PER POSTED SET
2	07/05	DPB	AS-BUILT DRAWING FILE

FULL SIZE DRAWING = 4"

ROBERT H. SHELDON  
4103  
3/17/09

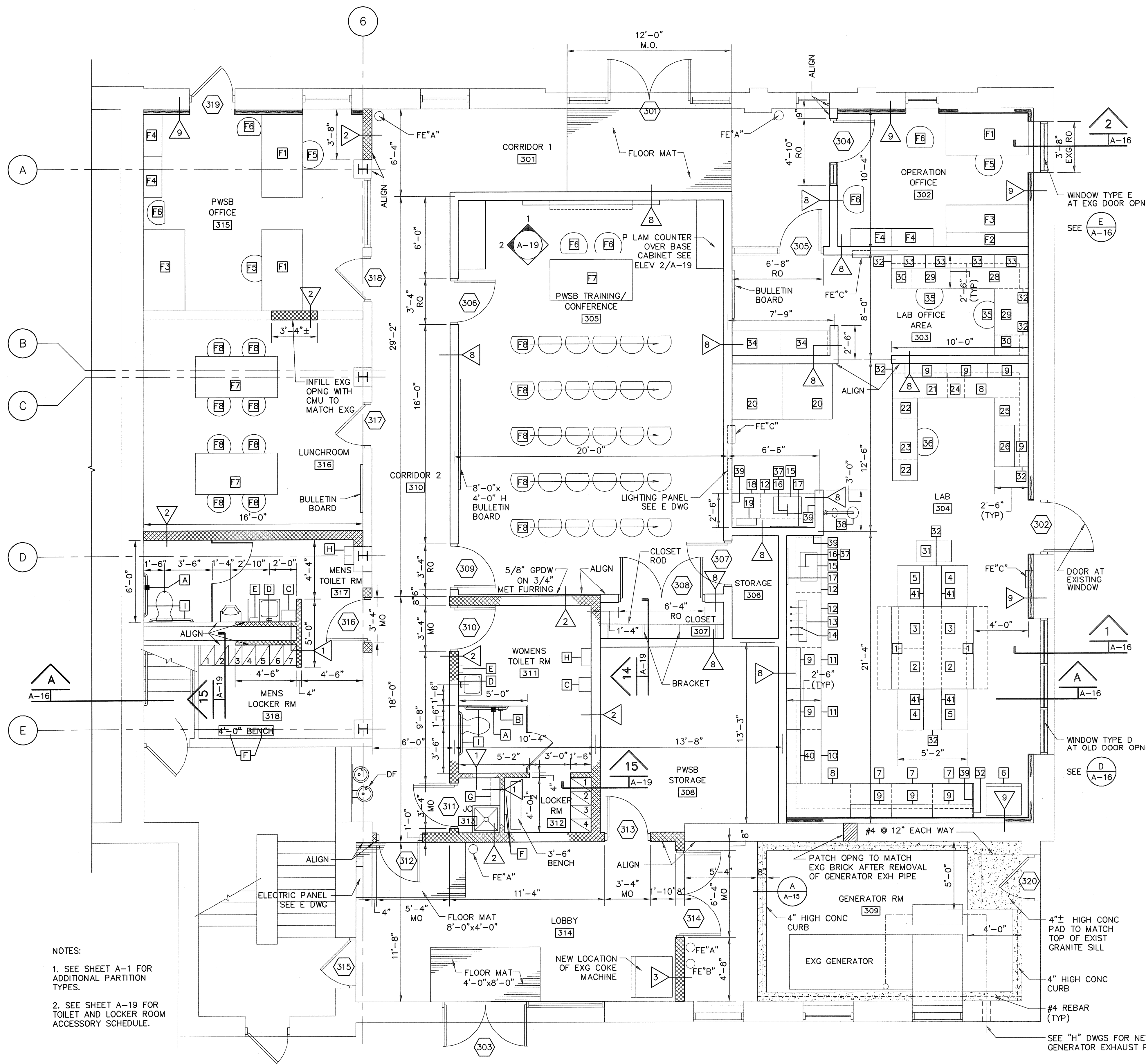
**PAWTUCKET, RHODE ISLAND  
PAWTUCKET REGIONAL  
WATER TREATMENT FACILITY  
PKG 5 - LAB AND OFFICE AREA**

DETAILS

DESIGNED BY ARN	DWG SCALE AS NOTED
DRAWN BY EOD	CONTRACT NO.
CHECKED BY	DATE OCTOBER 31, 2006

**EARTH TECH  
AS-BUILT FILE  
JULY 2008**

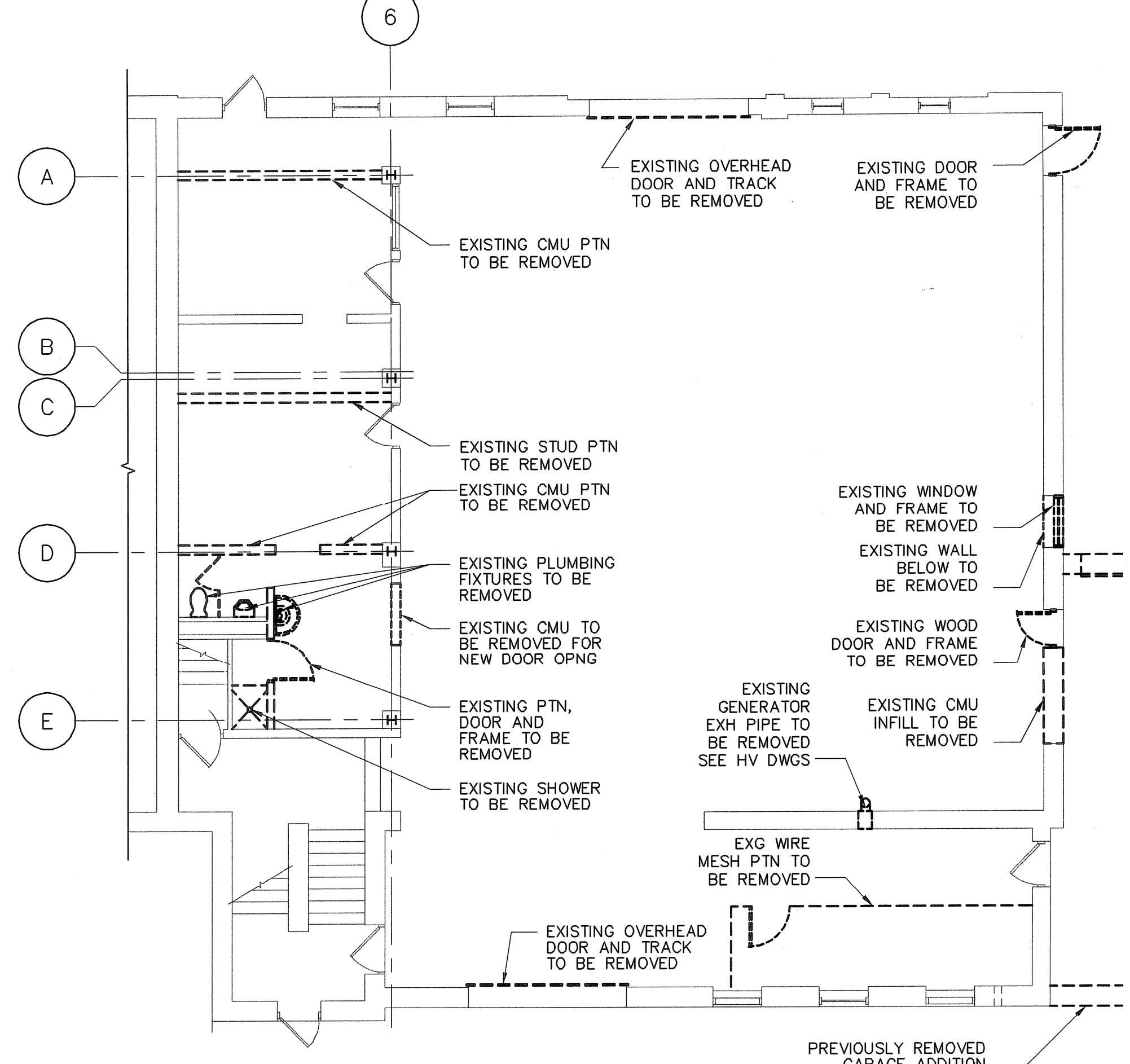
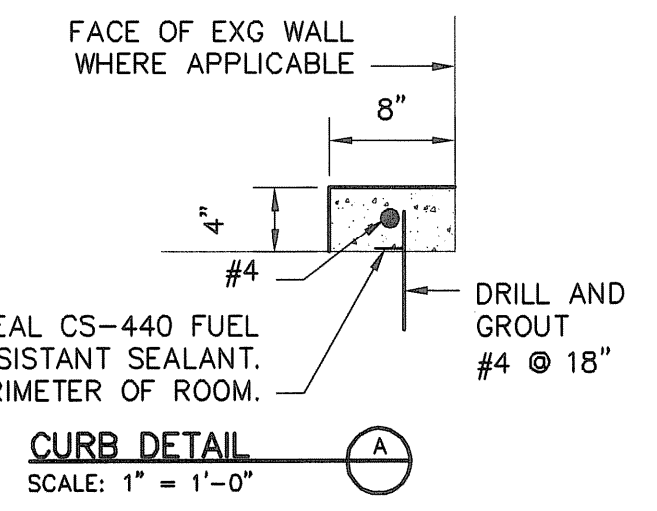
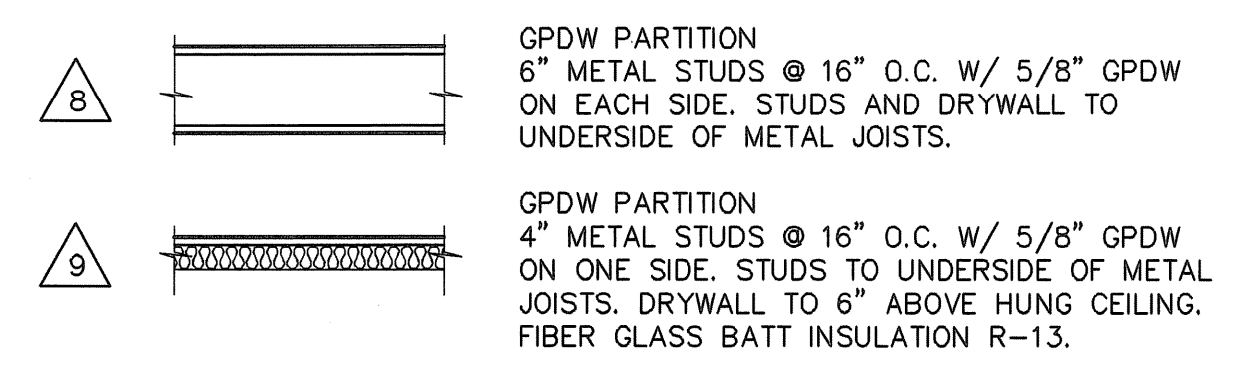
A-14  
SHEET OF



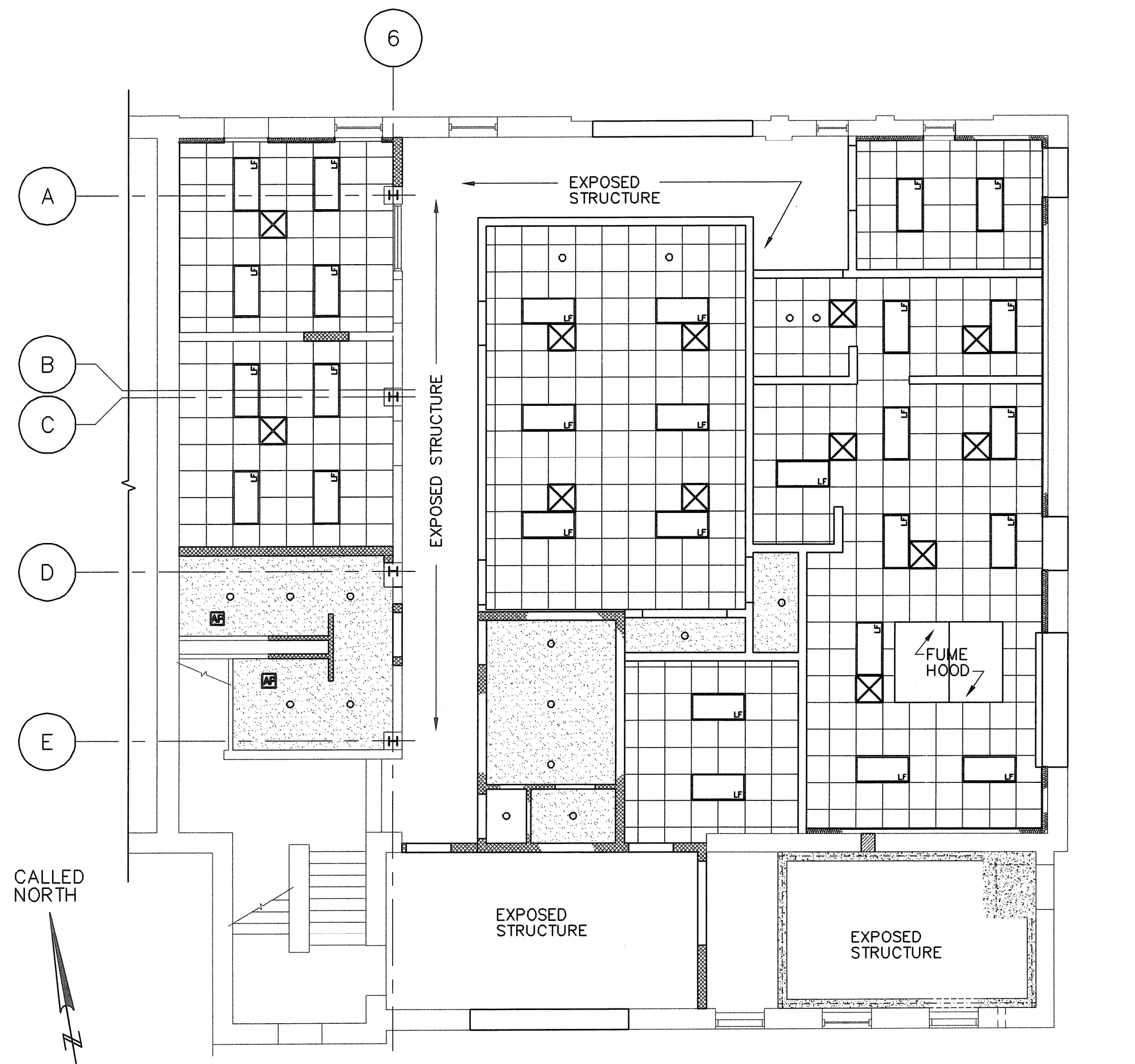
**LAB AND OFFICE AREA FLOOR PLAN**  
 SCALE: 1/4" = 1'-0"

- NOTES:
- SEE SHEET A-1 FOR ADDITIONAL PARTITION TYPES.
  - SEE SHEET A-19 FOR TOILET AND LOCKER ROOM ACCESSORY SCHEDULE.

**PARTITION TYPES**  
 NOT TO SCALE



**LAB AND OFFICE AREA DEMO FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"



NOTES:  
 SEE SHEET A-10 FOR CEILING LEGEND  
**LAB AND OFFICE AREA REFLECTED CEILING PLAN**  
 SCALE: 1/8" = 1'-0"

**EARTH TECH**  
 AS-BUILT FILE  
 JULY 2008

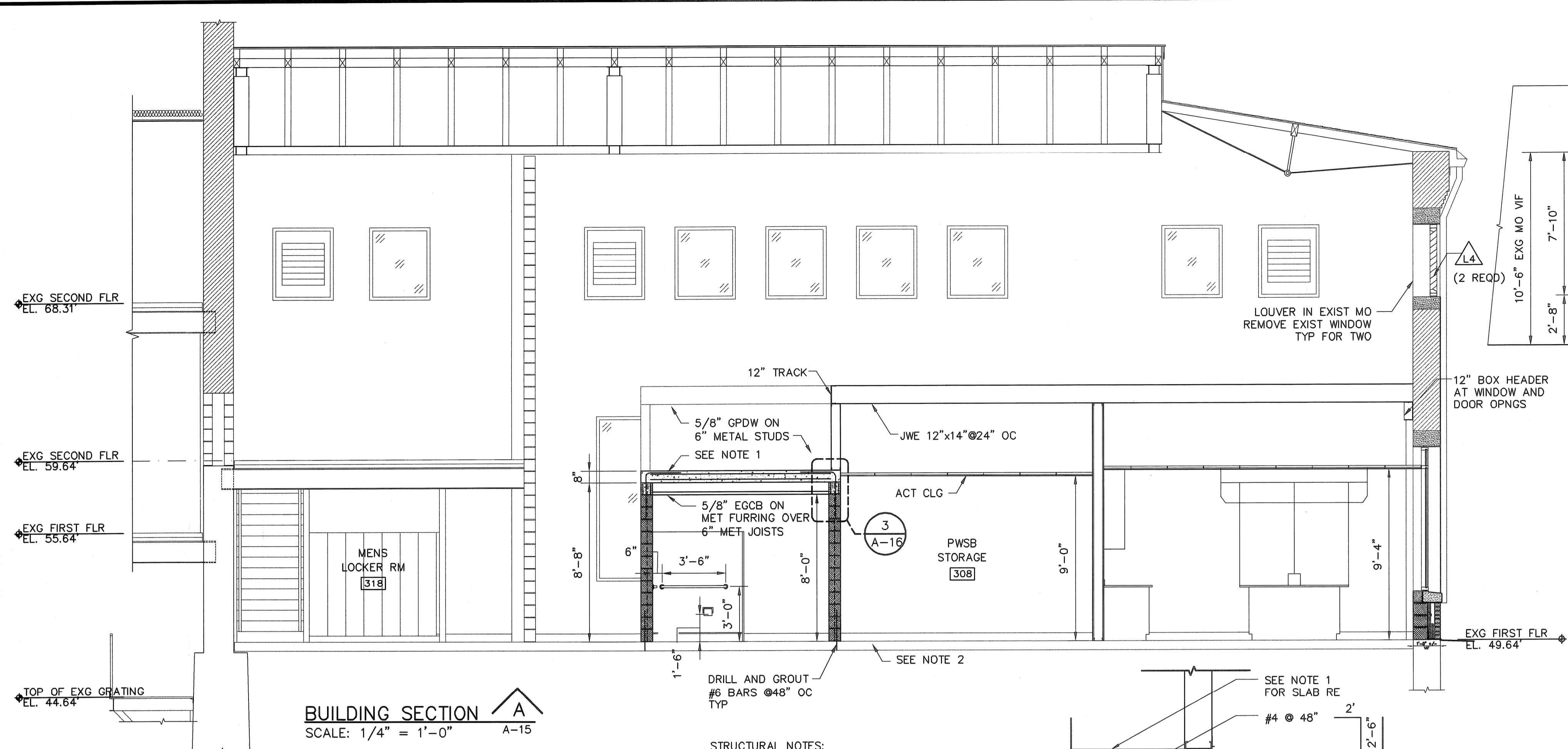
AS-BUILT DRAWING FILE	ISSUED FOR RFI POSTED SET	ISSUED FOR CONSTRUCTION	REVISIONS
2	1	0	
DATE	DATE	DATE	DATE
JULY 2008	10/21/08	4/05	
BY	BY	BY	BY
RMG			

ROBERT H. SHELDON  
 No. 4103  
 REGISTERED PROFESSIONAL ARCHITECT  
 STATE OF RHODE ISLAND  
 3/17/08

PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
 PLANS

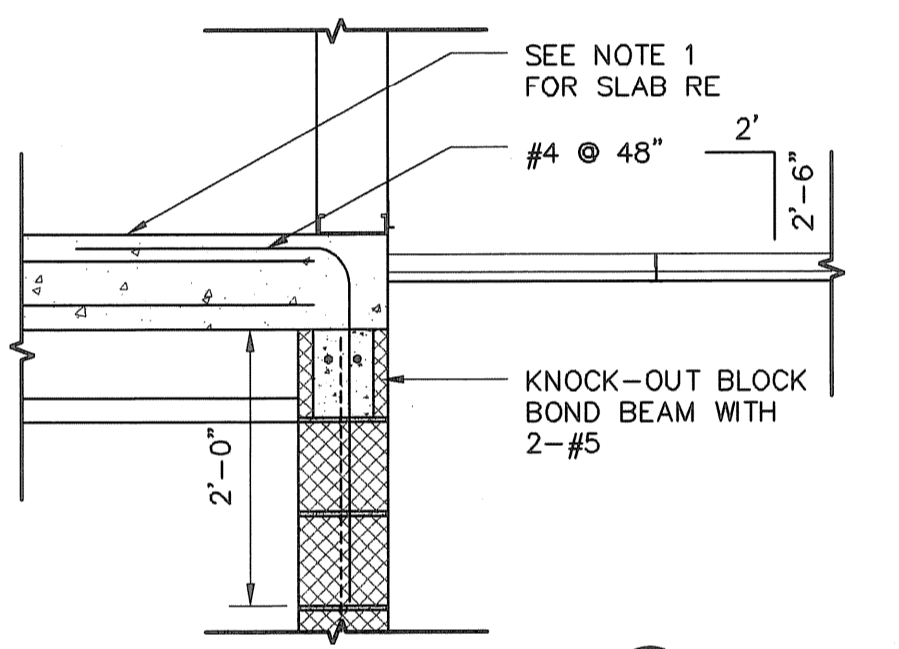
DESIGNED BY	DWG SCALE
ARN	AS NOTED
DRAWN BY	CONTRACT NO.
ECB/AL	
CHECKED BY	DATE
	OCTOBER 31, 2008

Filename: L:\WORK\69993\CAD\AS-BUILT\5) WTP\ARCH\69993A-16.DWG  
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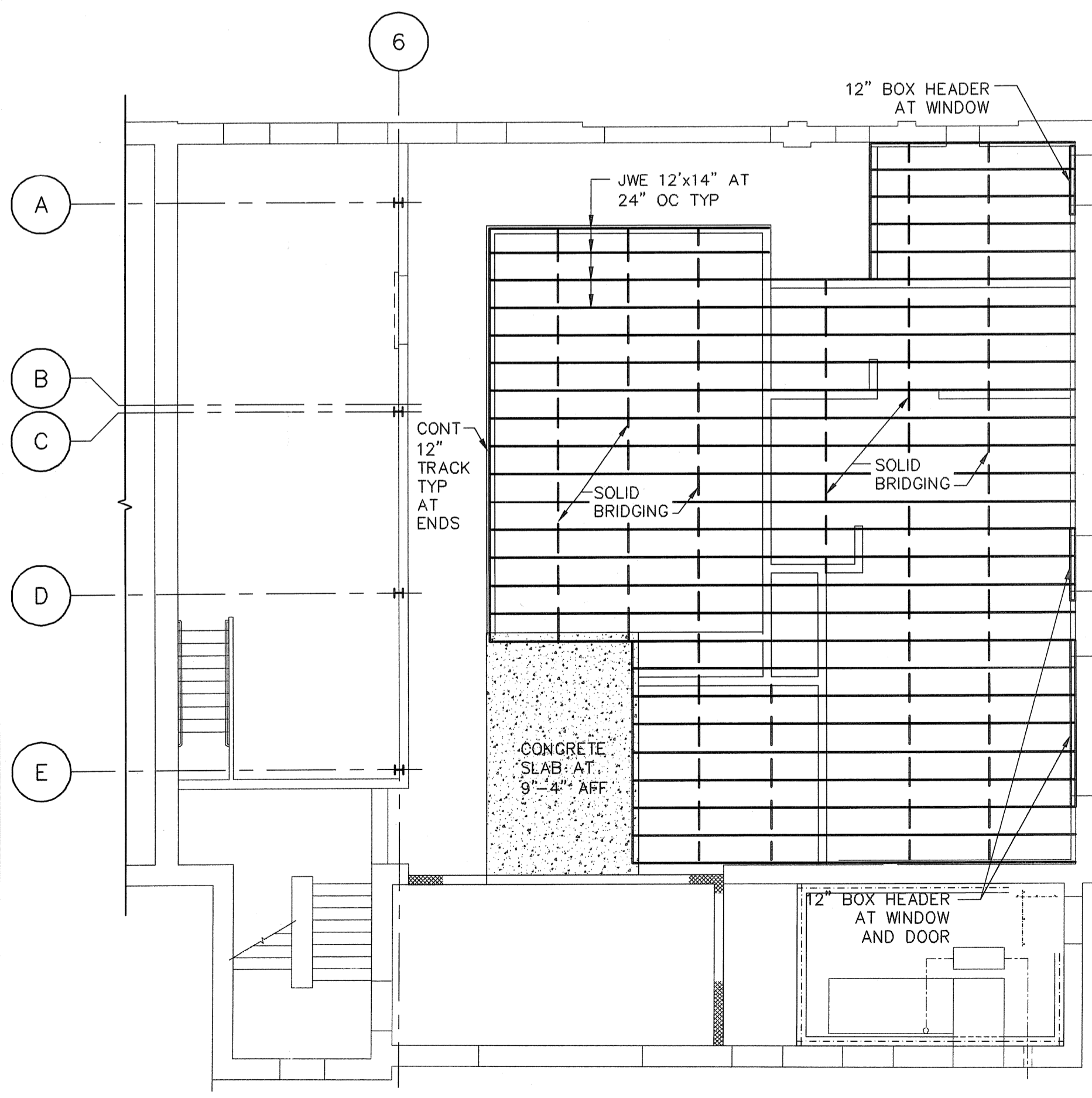


**BUILDING SECTION A-15**  
 SCALE: 1/4" = 1'-0"

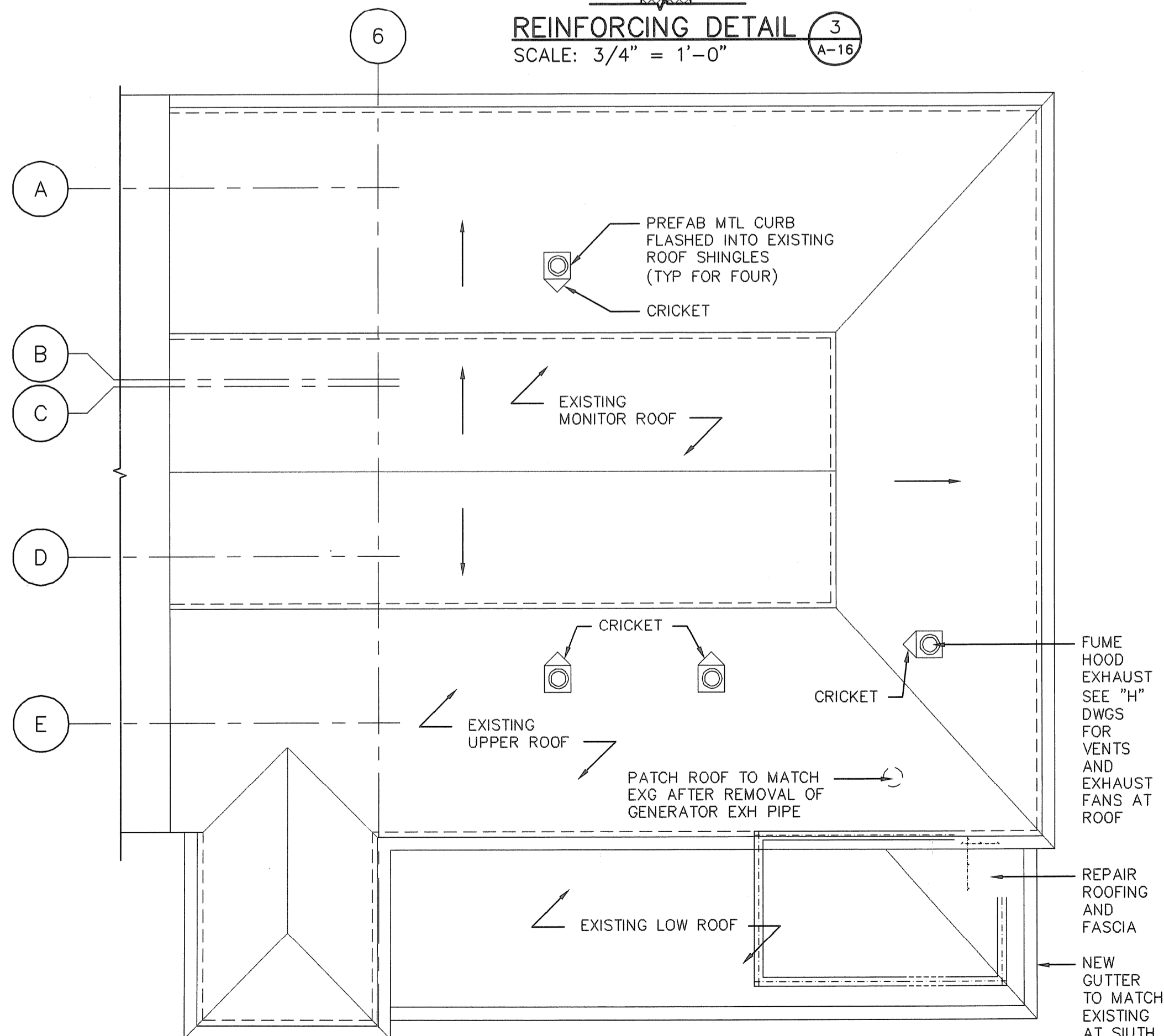
- STRUCTURAL NOTES:**
- 8" CONCRETE SLAB REINFORCED WITH #5 @ 6" BOTTOM EACH WAY, AND #5 @ 12" TOP EACH WAY, PROVIDE 1" CLEAR COVER TO BOTTOM REINFORCING AND 1 1/2" CLEAR COVER TO TOP REINFORCING.
  - CONTRACTOR TO TAKE CORES PRIOR TO WALL CONSTRUCTION TO VERIFY THICKNESS OF CONCRETE SLAB AND NEED FOR ADDITIONAL FOOTING.



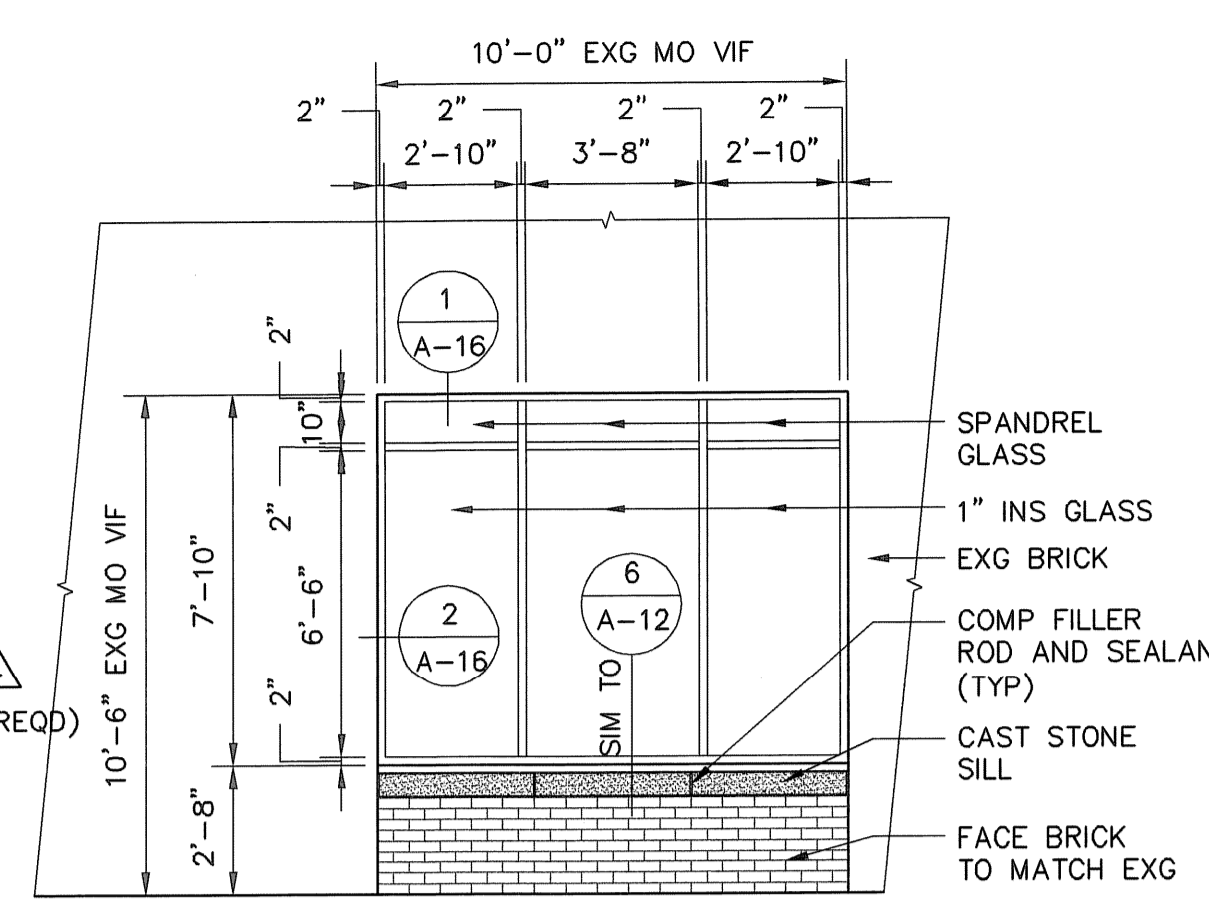
**REINFORCING DETAIL 3**  
 SCALE: 3/4" = 1'-0"



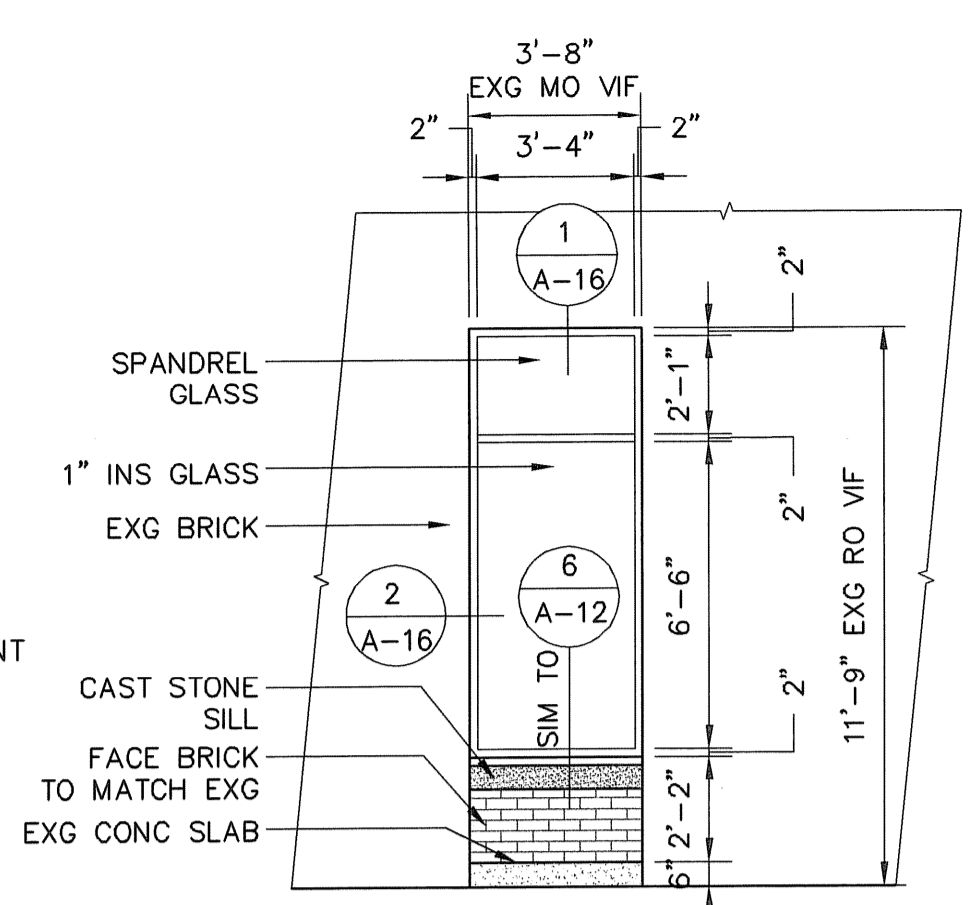
**LAB AND OFFICE AREA FRAMING PLAN**  
 SCALE: 1/8" = 1'-0"



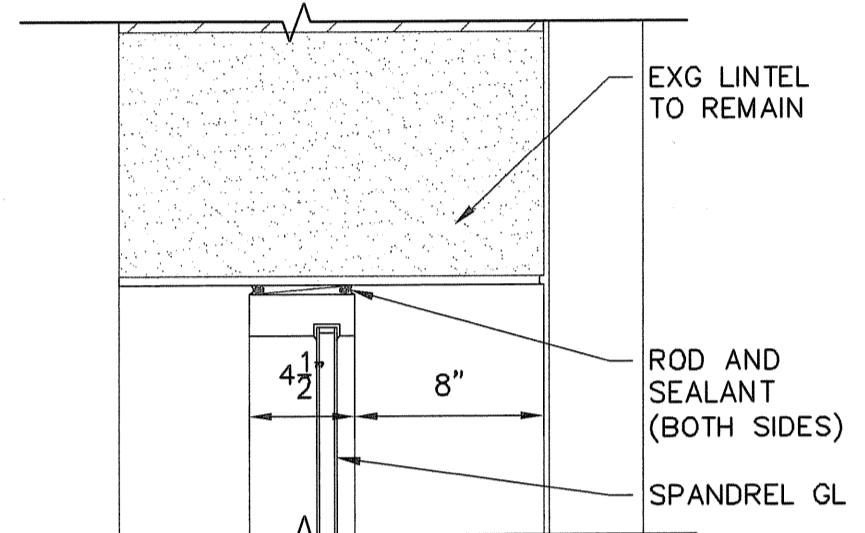
**LAB AND OFFICE AREA ROOF PLAN**  
 SCALE: 1/8" = 1'-0"



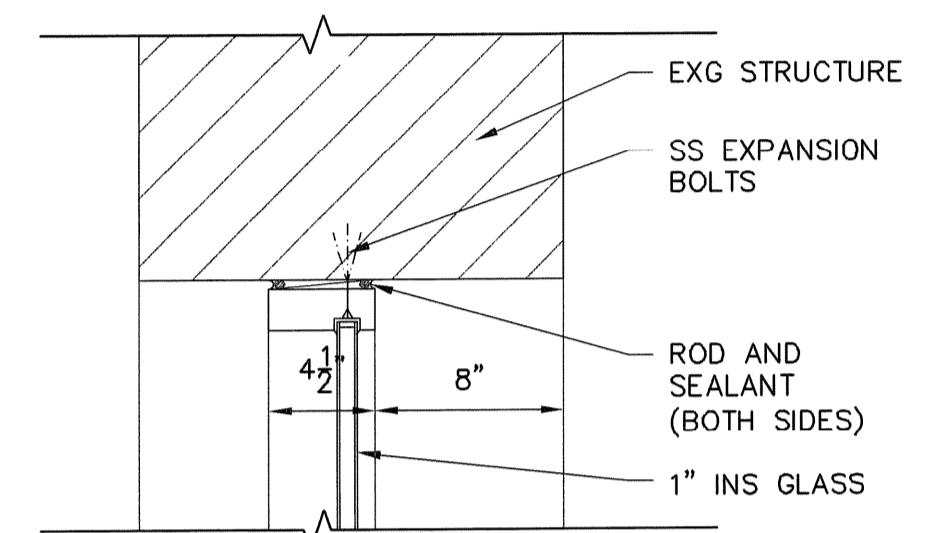
**WINDOW TYPE D ELEV**  
 SCALE: 1/4" = 1'-0"



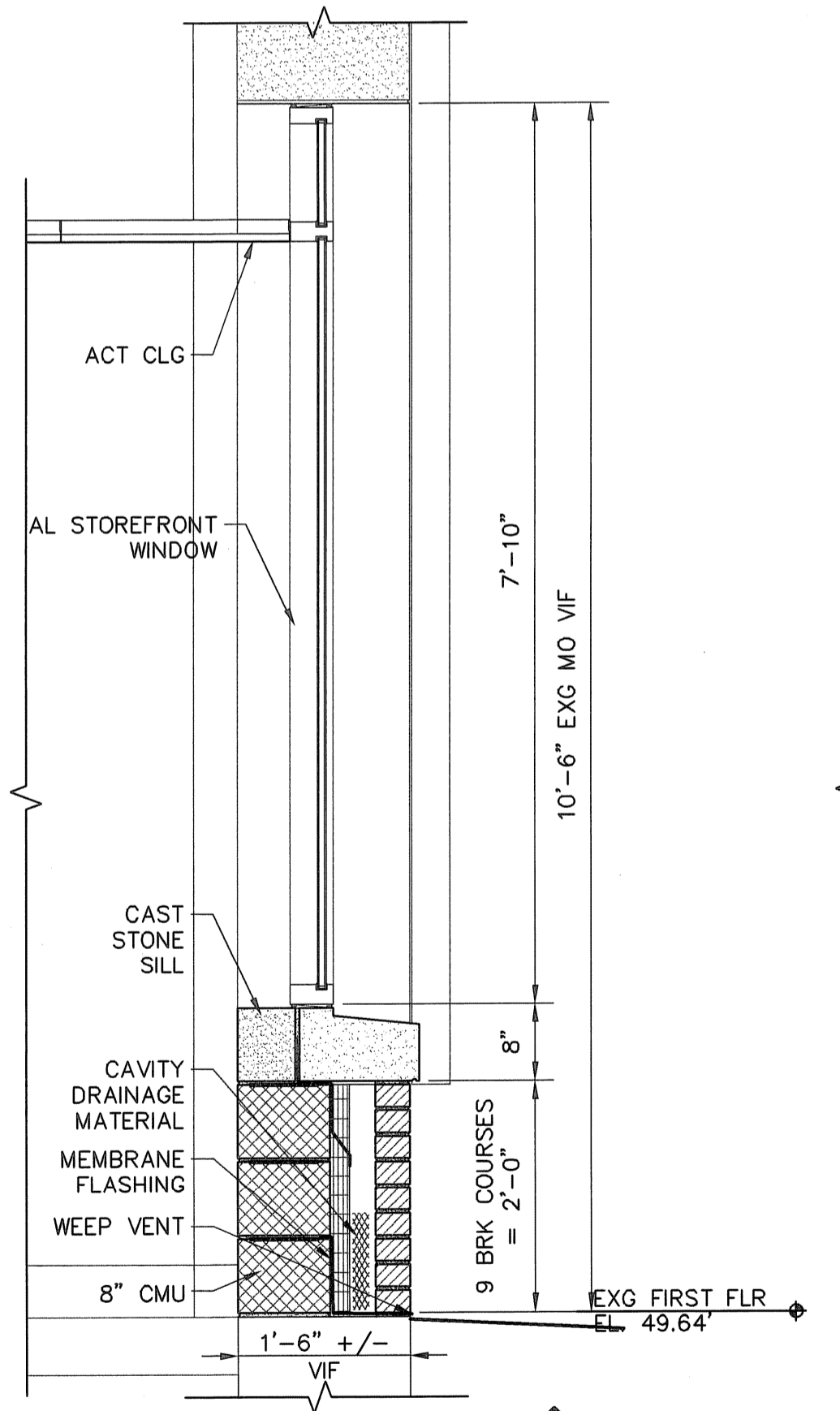
**WINDOW TYPE E ELEV**  
 SCALE: 1/4" = 1'-0"



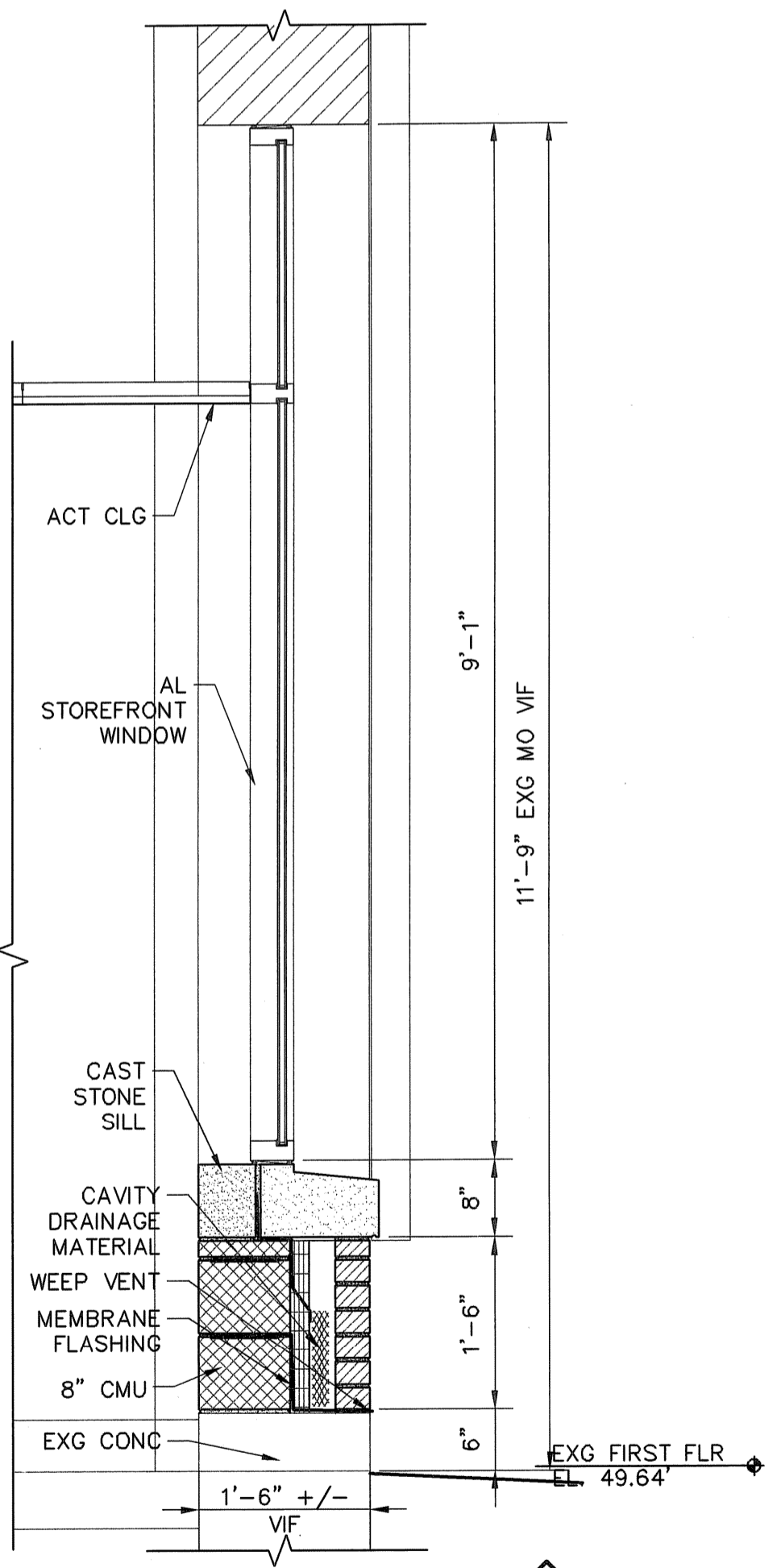
**DETAIL (HEAD)**  
 SCALE: 1 1/2" = 1'-0"



**DETAIL (JAMB)**  
 SCALE: 1 1/2" = 1'-0"



**WALL SECTION 1**  
 SCALE: 3/4" = 1'-0"



**WALL SECTION 2**  
 SCALE: 3/4" = 1'-0"

NO.	DATE	BY	REVISIONS
2	JULY 2008	DPB	AS-BUILT DRAWING FILE
1	10/23/06	AN	ISSUED FOR RFI POSTED SET
0	4/05	SC	ISSUED FOR CONSTRUCTION
			REVISIONS

ROBERT H. SHELDON  
 No. 4103  
 REGISTERED PROFESSIONAL ARCHITECT  
 STATE OF RHODE ISLAND

PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
 PLANS AND SECTIONS

DESIGNED BY ARN	DWG SCALE AS NOTED
DRAWN BY ECP/TL	CONTRACT NO.
CHECKED BY	DATE OCTOBER 31, 2008

**EARTH TECH**  
**AS-BUILT FILE**  
**JULY 2008**



DOOR SCHEDULE										
DOOR NO.	OPENING SIZE WIDTH x HEIGHT	DOORS		FRAMES				LINTEL NO.	PACKAGE NO.	REMARKS
		MATERIAL	TYPE	HEAD	JAMB	SILL	TYPE			
301	PR. 3'-0" x 7'-8"	HM	D	1/A-19	2/A-19	T-1/A-12	9/A-19	HM	--	EXISTING MASONRY OPENING
302	3'-4" x 7'-0"	HM	D	3/A-19	4/A-19	T-1/A-12	10/A-19	HM	--	EXISTING MASONRY OPENING
303	PR. 3'-0" x 7'-8"	HM	C	1/A-19	2/A-19	T-1/A-12	11/A-19	HM	--	EXISTING MASONRY OPENING
304	3'-0" x 7'-0"	HM	A	5/A-19	6/A-19	--	12/A-19	HM	--	
305	3'-0" x 7'-0"	HM	C	3/A-19	6/A-19	--	13/A-19	HM	--	
306	3'-0" x 7'-0"	HM	A	5/A-19	6/A-19	--	1/A-11	HM	--	
307	3'-0" x 7'-0"	HM	A	5/A-19	6/A-19	--	1/A-11	HM	--	
308	PR. 6'-0" x 7'-0"	HM	A	5/A-19	6/A-19	--	4/A-11	HM	--	
309	3'-0" x 7'-0"	HM	A	5/A-19	6/A-19	--	1/A-11	HM	--	
310	3'-0" x 7'-0"	HM	G	12/A-11	13/A-11	T-4/A-12	1/A-11	HM	4	
311	3'-0" x 7'-0"	HM	G	12/A-11	13/A-11	T-4/A-12	1/A-11	HM	4	
312	PR. 3'-0" x 7'-8"	HM	B	12/A-11	13/A-11	--	2/A-11	HM	4	
313	3'-0" x 7'-8"	HM	G	12/A-11	13/A-11	--	2/A-11	HM	4	
314	PR. 3'-0" x 7'-8"	HM	A	12/A-11	13/A-11	--	5/A-11	HM	4	1 1/2 HOUR FIRE RATED DOORS
315	--	--	--	--	--	--	--	--	--	EXISTING DOOR TO REMAIN
316	3'-0" x 7'-0"	HM	G	12/A-11	13/A-11	T-4/A-12	1/A-11	HM	4	
317	--	--	--	--	--	--	--	--	--	EXISTING DOOR TO REMAIN
318	--	--	--	--	--	--	--	--	--	EXISTING DOOR TO REMAIN
319	--	--	--	--	--	--	--	--	--	EXISTING DOOR TO REMAIN

- DOOR SCHEDULE NOTES:
- DOOR TYPE ELEVATIONS SHOWN ON SHEET A-11
  - SILL DETAILS SHOWN ON SHEET A-12
  - LINTEL DETAILS SHOWN ON A-14

**DOOR SCHEDULE**  
NOT TO SCALE

LAB/OFFICE AREA ROOM FINISH SCHEDULE										SUBSTRATE FINISH	REMARKS
ROOM	ROOM NO.	FLOOR	BASE	N-WALL	E-WALL	S-WALL	W-WALL	CEILING	CLG. HT.		
CORRIDOR 1	301	CONC	GPDW	BRICK	GPDW	GPDW	GPDW	EXP STR	--		
OPERATION OFFICE	302	CONC	GPDW	GPDW	GPDW	GPDW	GPDW	ACT	9'-4"		
LAB OFFICE AREA	303	CONC	GPDW	GPDW	GPDW	GPDW	GPDW	ACT	9'-4"		
LAB	304	CONC	GPDW	GPDW	GPDW	GPDW	GPDW	ACT	9'-4"		
PWSB TRAINING CONFERENCE	305	CONC	GPDW	GPDW	GPDW	GPDW	GPDW	ACT	9'-4"		
STORAGE	306	CONC	GPDW	GPDW	GPDW	GPDW	GPDW	EGCB	9'-4"		
CLOSET	307	CONC	GPDW	GPDW	GPDW	GPDW	GPDW	EGCB	9'-4"		
PWSB STORAGE	308	CONC	GPDW	GPDW	GPDW	BRICK/CMU	CMU	ACT	9'-0"		
GENERATOR ROOM	309	--	--	--	--	--	--	--	--		
CORRIDOR 2	310	CONC	GPDW	--	CMU/OPDW	BRICK/CMU	CMU	EXP STR	--		
WOMENS TOILET RM	311	CONC	CMU	CMU	CMU	CMU	CMU	EGCB	8'-0"		
WOMENS LOCKER RM	312	CONC	CMU	CMU	CMU	CMU	CMU	EGCB	8'-0"		
JAN CLOSET	313	CONC	CMU	CMU	CMU	CMU	CMU	EXP STR	--		
LOBBY	314	CONC	CMU	CMU	CMU	BRICK	BRICK	EXP STR	--		
PWSB OFFICE	315	CONC	CMU	GPDW	CMU	GPDW	BRICK	ACT	8'-0"		
LUNCH RM	316	CONC	CMU	CMU	CMU	CMU	CMU	ACT	8'-0"		
MENS TOILET RM	317	CONC	CMU	CMU	CMU	CMU	CMU	EGCB	8'-0"		
MENS LOCKER RM	318	CONC	CMU	CMU	CMU	CMU	CMU	EGCB	8'-0"		

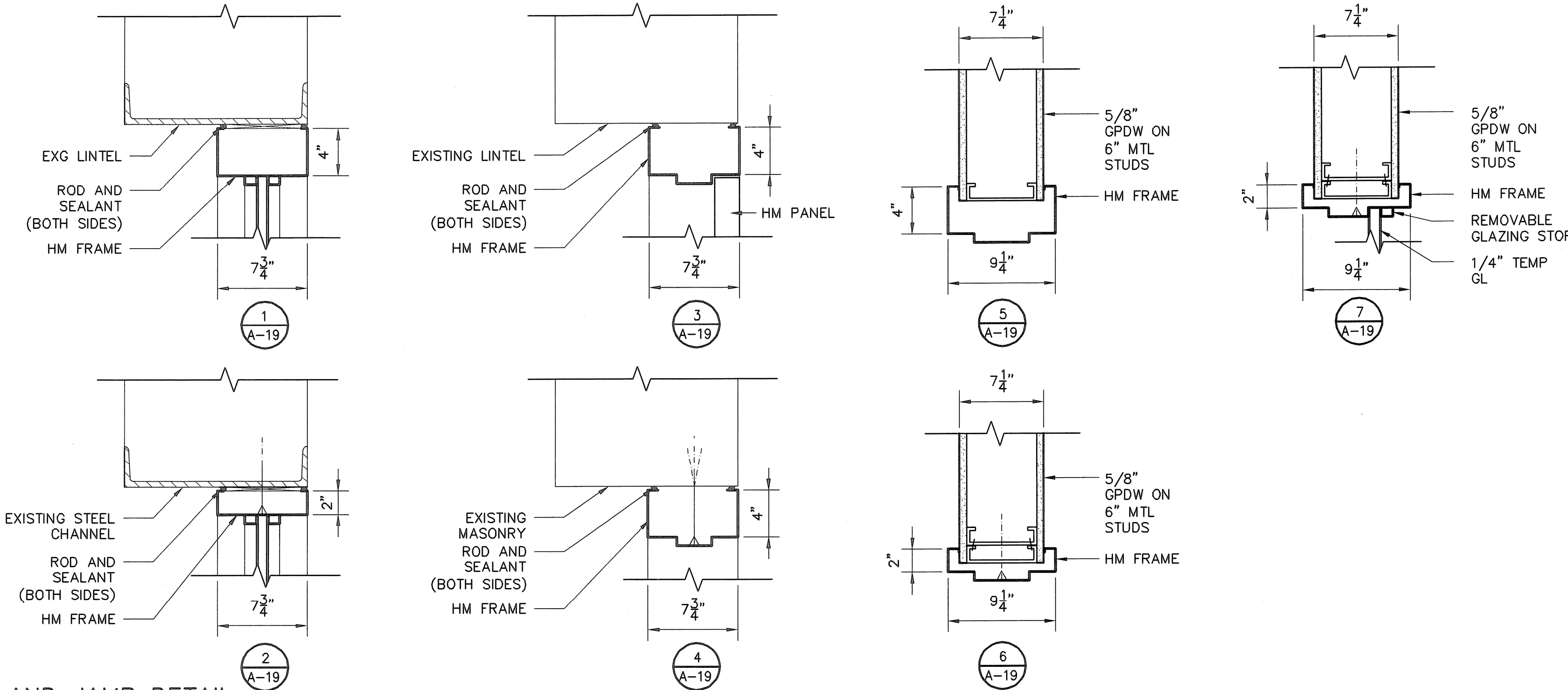
- TYPICAL NOTES FOR LAB/OFFICE AREA:
- PRESSURE WASH ALL EXISTING MASONRY.
  - PRESSURE WASH EXISTING ROOF TRUSSES AND UNDERSIDE OF WOOD ROOF DECK.
  - BEAD BLAST EXISTING CONCRETE FLOORS TO REMOVE SURFACE CONTAMINANTS.
  - INSTALL HCT-BASED SELF-LEVELING UNDERLAYMENT AT EXISTING GARAGE AREA - MAPEI ULTRAPLAN 1 OR EQUAL.

**ROOM FINISH SCHEDULE**  
NOT TO SCALE

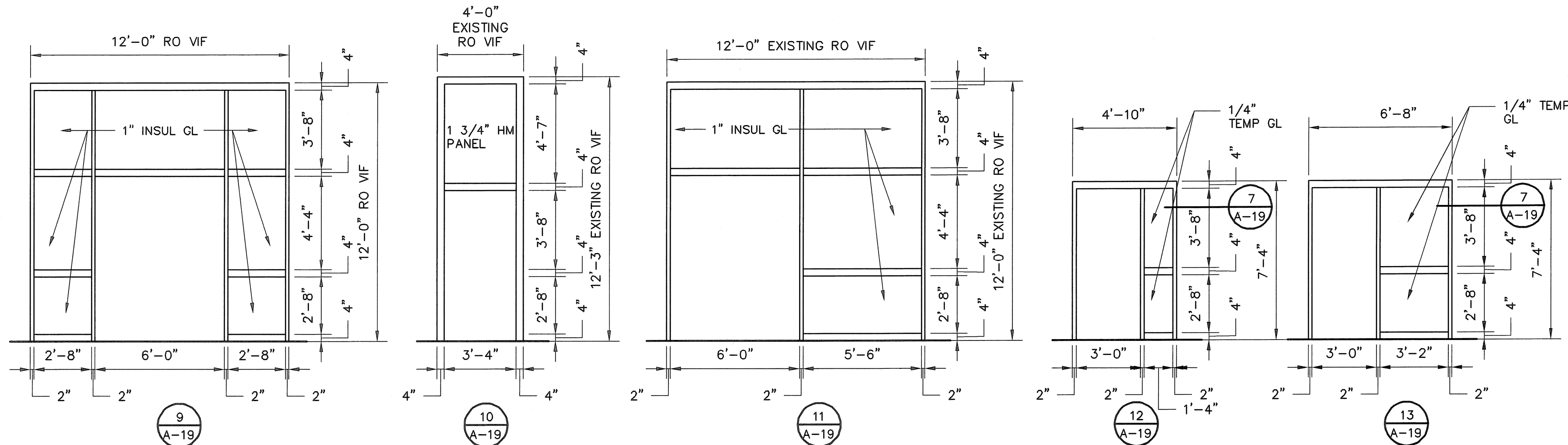
TOILET AND LOCKER ROOM ACCESSORIES			
ITEM	DESCRIPTION	CAT. NO.	REMARKS
A	SURFACE MOUNTED TOILET PAPER HOLDER	B-4288	MULTI-ROLL
B	SANITARY NAPKIN DISPOSAL	B-270	SURFACE MOUNT
C	PAPER TOWEL ROLL	B-253	HANDICAPPED MOUNTING HGT. 60" TYP
D	36" WIDE x 36" HIGH MIRROR	B-290	BOTTOM - 40" AFF
E	SOAP DISPENSER	B-4112	BOTTOM - 40" AFF
F	COAT HOOK	B-882	
G	SHelf WITH MOP HOLDER	B-239	34" LONG
H	WASTE RECEPTACLE	B-277	
I	CONCEALED MOUNTED GRAB BAR	B-5806.99	1 1/4" x 42" LENGTH WITH PEENED GRIP

- NOTES:
- ALL ACCESSORIES AND THEIR INSTALLATIONS NOTED WITH AN ASTERISK \* SHALL COMPLY WITH LOCAL, STATE AND FEDERAL ACCESSIBILITY REQUIREMENTS.
  - CATALOGUE NUMBERS REFER TO BOBRICK INDUSTRIES, INC. FOR REFERENCE ONLY.
  - ALL ACCESSORIES SHALL BE MOUNTED WITH CONCEALED FASTENERS.
  - PROVIDE SOLID BLOCKING AND ADDITIONAL STRUCTURAL MEMBERS IN WALL CONSTRUCTION TO SUPPORT ACCESSORIES AND SUPERIMPOSED LOADS.

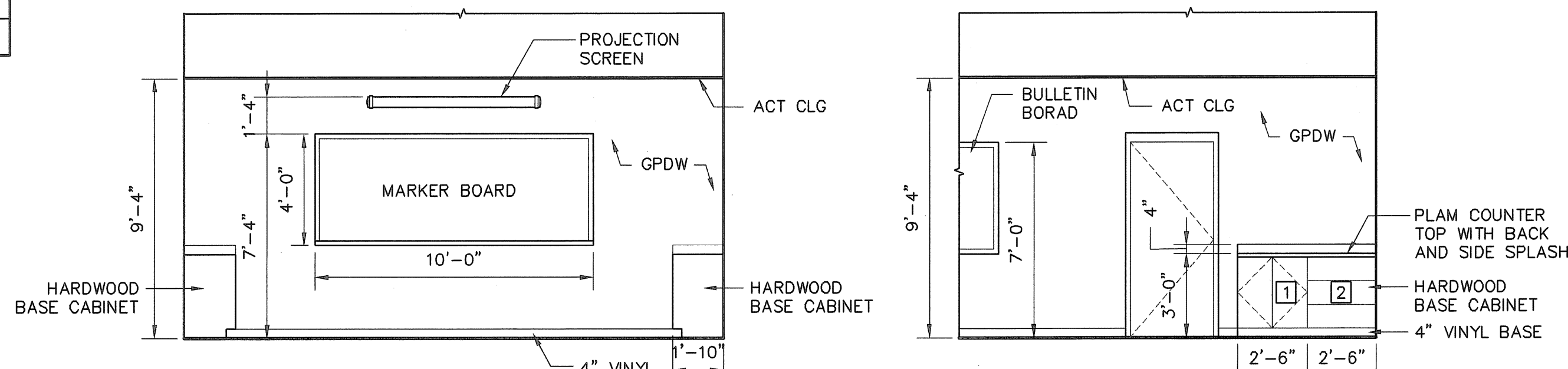
**TOILET AND LOCKER RM ACCESSORIES SCHEDULE**  
NOT TO SCALE



**HEAD AND JAMB DETAIL**  
SCALE: 1 1/2" = 1'-0"

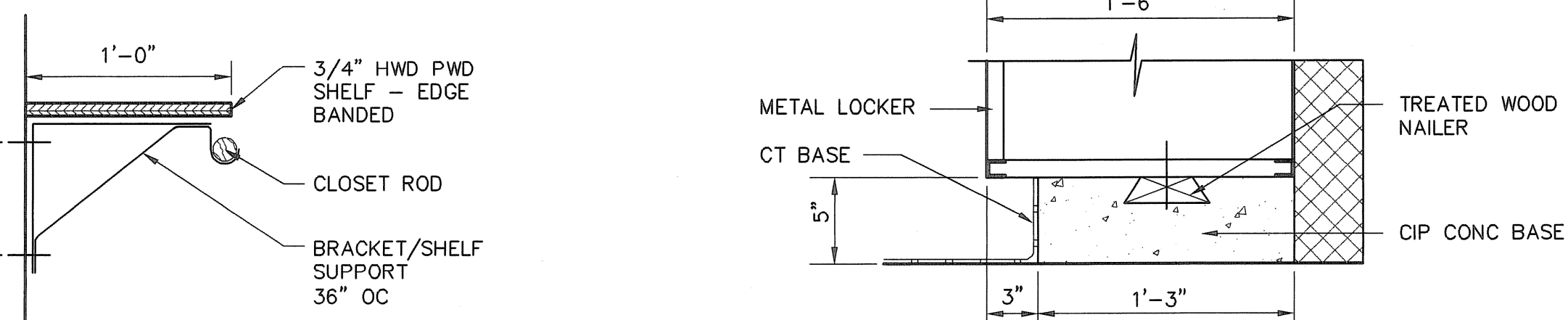


**FRAME TYPES**  
SCALE: 1/4" = 1'-0"

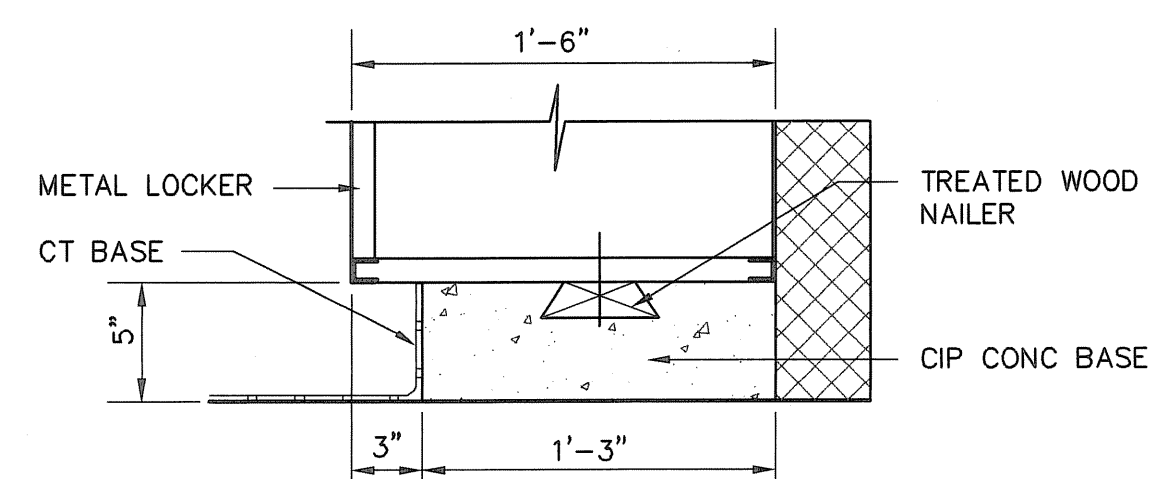


**CONFERENCE RM ELEV (1)**  
SCALE: 1/4" = 1'-0"

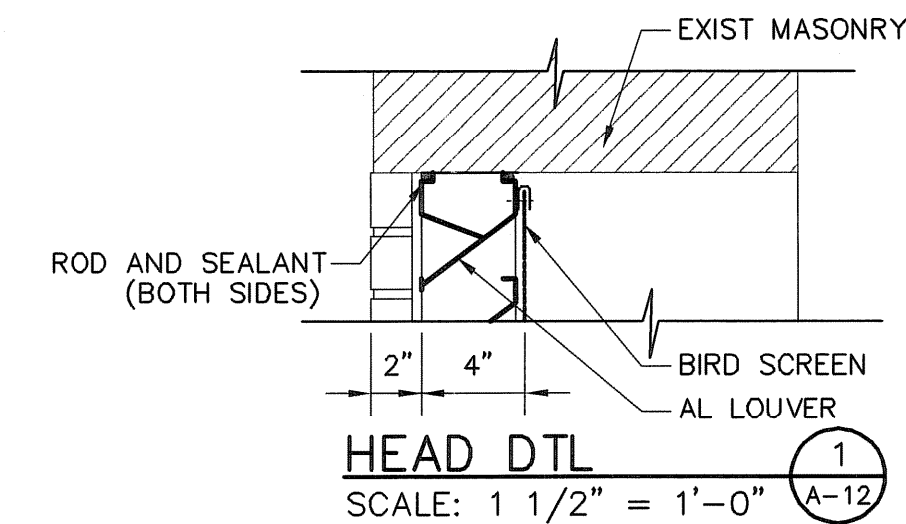
**CONFERENCE RM ELEV (2)**  
SCALE: 1/4" = 1'-0"



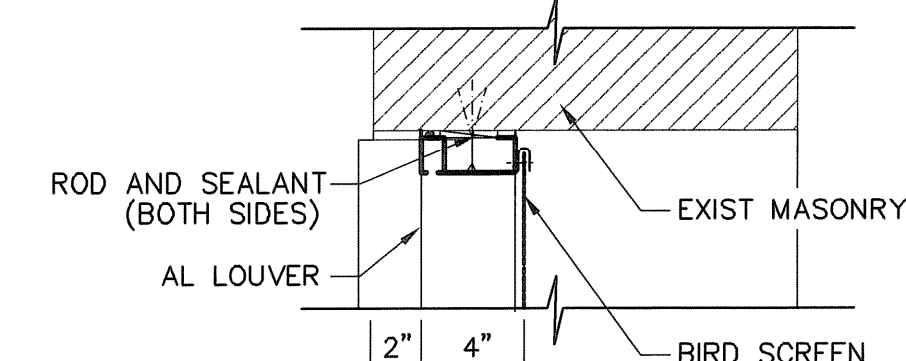
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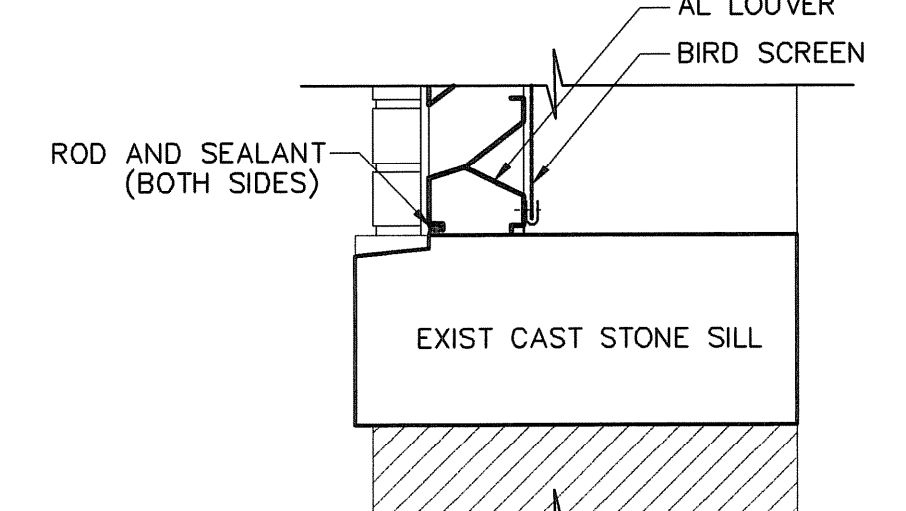
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**HEAD DTL (1)**  
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**JAMB DTL (2)**  
SCALE: 1 1/2" = 1'-0"



**SILL DTL (3)**  
SCALE: 1 1/2" = 1'-0"

**EARTH TECH**  
AS-BUILT FILE  
JULY 2008

TAMS ARCHITECTS & ENGINEERS, INC.  
AN EARTH TECH COMPANY - RI COA A-14,324

**EarthTech**  
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300 BAKER AVENUE SUITE 200 CONCORD MA 01742 (978) 371-4000

AS-BUILT DRAWING FILE	DRB	JULY 2008
ISSUED FOR RFI POSTED SET	AN	10/07/08
ISSUED FOR CONSTRUCTION	SC	4/05
REVISIONS	BY	DATE
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ROBERT H. SHELDON  
No. 4103  
Professional Engineer  
State of Rhode Island  
05/17/09

PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL**  
**WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
DOOR AND ROOM FINISH SCHEDULES,  
ELEVATIONS, HEAD AND JAMB DTLS

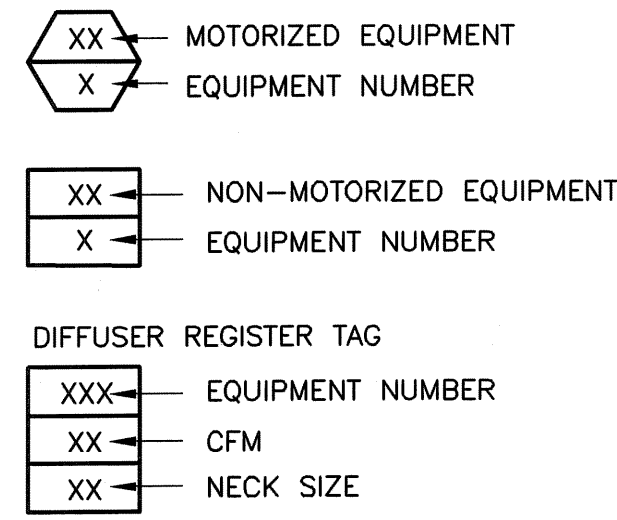
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CHECKED BY		DATE	OCTOBER 31, 2008

A-19  
SHEET OF

**FITTINGS & MISCELLANEOUS ACCESSORIES**

- ① THERMOSTAT
- ① PLAN NOTE DESIGNATION

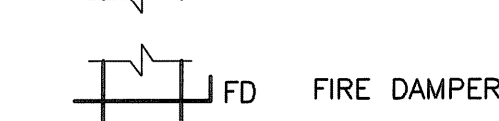
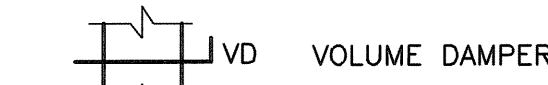
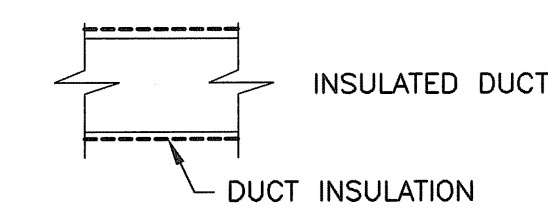
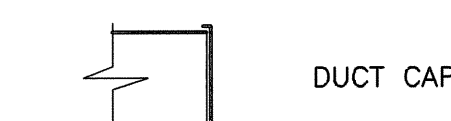
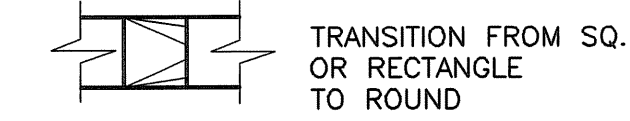
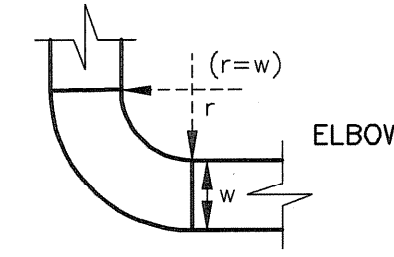
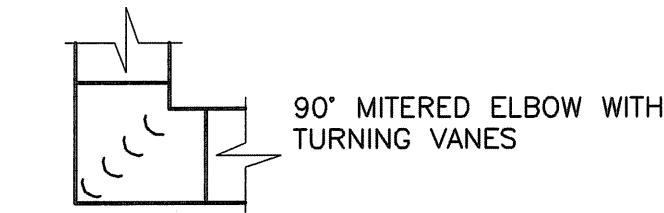
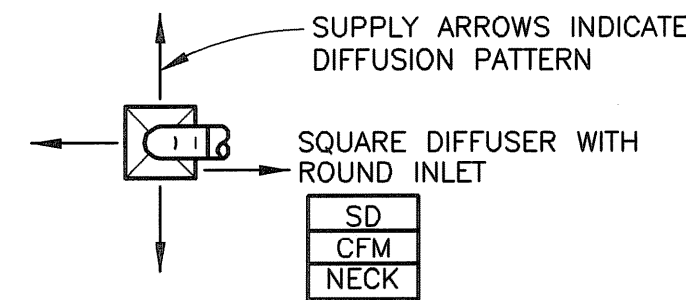
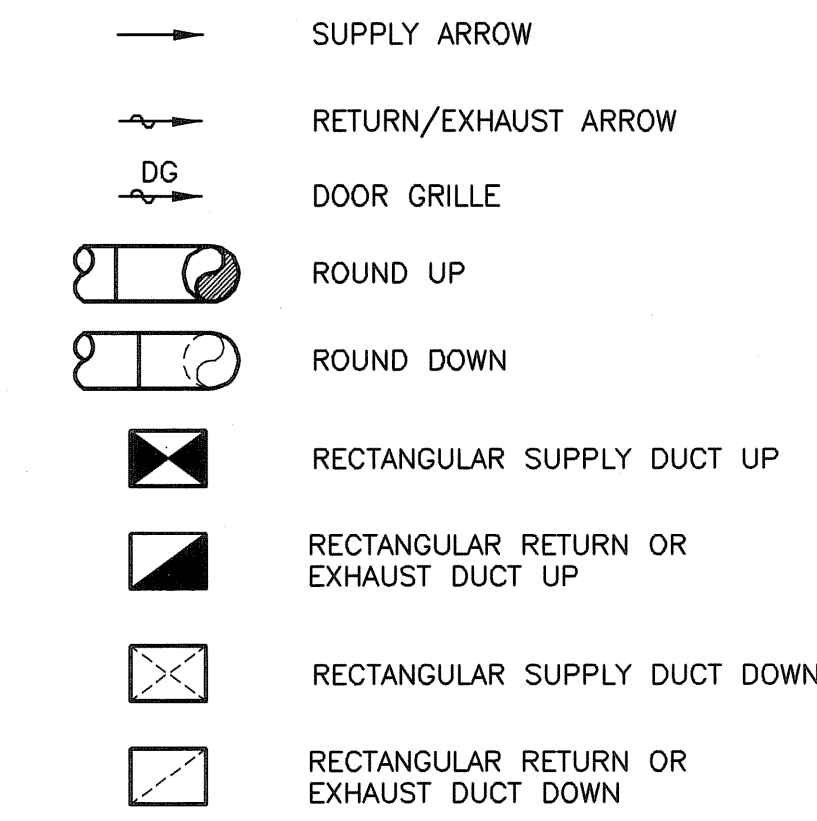
**STANDARD KEY**



**MECHANICAL ABBREVIATIONS**

- AFF ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- ALUM. ALUMINUM
- BDD BACK DRAFT DAMPER
- BHP BRAKE HORSEPOWER
- BLDG BUILDING
- BOD BOTTOM OF DUCT
- BOS BOTTOM OF STEEL
- BTU BRITISH THERMAL UNIT
- DIA DIAMETER
- DN DOWN
- EF EXHAUST FAN
- FLA FULL LOAD AMPS
- FT FEET/FOOT
- G.C. GENERAL CONTRACTOR
- LG LONG
- NC NORMALLY CLOSED
- NO NORMALLY OPEN
- PSIA POUNDS PER SQUARE INCH ABSOLUTE
- PSIG POUNDS PER SQUARE INCH GAUGE
- RAG RETURN AIR GRILLE
- SQ SQUARE
- TSP TOTAL STATIC PRESSURE
- UH UNIT HEATER
- VD VOLUME DAMPER

**DUCTWORK**



**HVAC GENERAL NOTES**

1. THE FOLLOWING ABBREVIATED CONSTRUCTION NOTES AND SPECIFICATIONS HEREINAFTER ARE INCLUDED AS PART OF THE CONTRACT, AND ARE NOT TO BE INTERPRETED AS REQUIRING ANYTHING LESS THAN THE FURNISHING OF SKILLED TRADESMEN ADEQUATELY TRAINED AND EXPERIENCED IN PERFORMING THERE WORK TO STANDARD CONSTRUCTION PRACTICES OF THEIR INDUSTRY AND TRADE COUNCILS, AND TO PROVIDE ALL LABOR, EQUIPMENT, TOOLS, AND MATERIALS NECESSARY TO COMPLETE THE WORK SPECIFIED AND IMPLIED ON THE FOLLOWING CONTRACT DRAWINGS.

**CONSTRUCTION NOTES**

2. A. THE DRAWINGS ARE DIAGRAMMATIC ONLY TO SHOW THE SCOPE OF THE WORK INVOLVED. ANY WORK INSTALLED CONTRARY TO OR WITHOUT APPROVAL SHALL BE SUBJECT TO CHANGE. NO EXTRA COMPENSATION WILL BE ALLOWED. DO NOT SCALE DRAWINGS FOR FABRICATION PURPOSES.
- B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND DRILLING, AND ALL NECESSARY MISCELLANEOUS STEEL FOR THE SUPPORT OF HIS MATERIAL AND EQUIPMENT, ANY AND ALL CUTTING AND WELDING SHALL BE PRE-APPROVED BY THE CONSTRUCTION MANAGER PRIOR TO WORK BEING IMPLEMENTED.
3. PERFORM ALL WORK IN STRICT ACCORDANCE WITH RULES, REGULATIONS, STANDARDS, CODES AND LAWS OF LOCAL, STATE AND FEDERAL GOVERNMENTS.
4. GIVE ALL NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES HAVING JURISDICTION AS REQUIRED TO PERFORM WORK.
5. COOPERATE AND COORDINATE WITH OTHER TRADES IN EXECUTING THE WORK. PERFORM WORK SO THAT PROGRESS OF ENTIRE PROJECT SHALL NOT BE DELAYED. PROVIDE INFORMATION TO OTHER TRADES, AS REQUESTED. OBTAIN FINAL ROUGHING DIMENSIONS AS REQUIRED TO COMPLETE WORK.
6. PERFORM WORK REQUIRED SO AS TO PROVIDE PROPER ACCESS TO MATERIAL AND EQUIPMENT REQUIRING INSPECTION, MAINTENANCE OR SERVICE.
7. DUCTWORK, PIPING AND EQUIPMENT LAYOUT SHOWN IS DIAGRAMMATIC, LOCATION SHALL BE DETERMINED IN FIELD. CONTRACTOR SHALL SUBMIT COORDINATION DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
8. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND PRODUCT INFORMATION TO EARTH TECH. NO WORK SHALL PROCEED WITHOUT WRITTEN APPROVAL ON EACH ITEM SCHEDULED, SPECIFIED OR SHOWN ON PLAN.
9. CONTRACTOR SHALL SUBMIT (2) COPIES OF A CERTIFIED AIR BALANCING REPORT, PREPARED BY AN INDEPENDENT AIR BALANCING CONTRACTOR, NOT THE INSTALLATION CONTRACTOR.
10. ALL HVAC EQUIPMENT SHALL BE AS SHOWN ON EQUIPMENT SCHEDULES OR APPROVED EQUAL.

**DUCTWORK AND ACCESSORIES**

11. A. ALL NEW GALVANIZED SHEET METAL DUCTWORK SHALL BE FABRICATED, SIZED TO GAUGE, AND INSTALLED AS PER SMACNA LATEST STANDARDS.
- B. ALL DUCTWORK SHALL BE FIELD MEASURED PRIOR TO FABRICATION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL REQUIRED DIMENSIONS PRIOR TO FABRICATION OR INSTALLATION. DUCT SIZES MAY BE ALTERED TO ACCOMMODATE CONSTRUCTION AS LONG AS CROSS SECTIONAL AREA OF DUCT IS MAINTAINED.
- C. ALL DIFFUSERS AND REGISTERS SHALL BE OF THE SIZE AND PATTERN AS INDICATED ON THE DRAWINGS EQUIPMENT SCHEDULE.
- D. PROVIDE VOLUME DAMPERS AT EACH DUCT BRANCH AND EACH REGISTER DUCT TAKE-OFF.
- E. DUCTWORK SHALL BE FREE FROM VIBRATION. MAKE AND SEAL DUCT JOINTS PROPERLY.
- F. ALL RECTANGULAR DUCT ELBOWS (SHEET METAL) SHALL HAVE TURNING VANES.
- G. ALL FRESH AIR DUCTWORK SHALL BE INSULATED WITH 1 1/2" THICK FIBERGLASS WITH NON-COMBUSTIBLE 25/50 RATED ALL SERVICE JACKET.

**EQUIPMENT**

12. A. CONTRACTOR SHALL PROVIDE LOCAL THERMOSTATS WHERE SHOWN ON THE DRAWINGS.
- B. PROVIDE COMPLETE AUTOMATIC TEMPERATURE CONTROL SYSTEM AS INDICATED ON DRAWINGS AND AS REQUIRED.
13. FOR FURTHER REFERENCE, SEE SPECIFICATION 15500 WHICH IS PART OF THE DRAWINGS.

**PIPING AND ACCESSORIES**

14. A. REFRIGERANT PIPING SHALL BE ACR TYPE "L" COPPER TUBING WITH SILVER BRAZED JOINTS AND WROUGHT COPPER FITTINGS.
- B. HOT WATER PIPING 2 1/2" AND UNDER SHALL BE TYPE "L" COPPER WITH WROUGHT COPPER FITTINGS 95/5 SOLDER.
- C. HOT WATER PIPING 3" AND OVER SHALL BE SCHEDULE 40 STEEL WITH MALLEABLE FITTINGS.
- D. PIPING SHALL FOLLOW THE GENERAL ROUTING, INDICATED ON DRAWINGS. COORDINATE LOCATION WITH DUCTWORK AND OTHER TRADES.
- E. INSTALL PIPES CLOSE TO WALLS, PARTITIONS AND CEILINGS, ETC. OFFSET ONLY WHERE NECESSARY.
- F. LOCATE GROUPS OF PIPES PARALLEL TO EACH OTHER. SPACE THEM TO PERMIT APPLYING FULL INSULATION AND TO PERMIT ACCESS FOR SERVICING.
- G. ALL PIPING SHALL BE REAMED TO BE FREE OF BURRS. KEEP PIPING FREE FROM SCALE AND DIRT. PROTECT OPEN PIPE ENDS WHENEVER WORK IS SUSPENDED DURING CONSTRUCTION TO PREVENT FOREIGN MATERIAL FROM ENTERING AND LODGING THERE. USE TEMPORARY PLASTIC PLUGS OR OTHER APPROVED MATERIALS FOR PROTECTION.
- H. PROVIDE UNIONS, SCREWED OR FLANGED WHERE INDICATED AND IN THE FOLLOWING LOCATIONS, EVEN IF NOT INDICATED:
  - a. IN LONG RUNS OF PIPING, TO PERMIT CONVENIENT DISASSEMBLY FOR ALTERATIONS OR REPAIRS.
  - b. IN BY-PASSES AROUND EQUIPMENT.
  - c. IN CONNECTIONS TO EQUIPMENT REQUIRING REMOVAL FOR REPAIRS AND/OR REPLACEMENT. LOCATE BETWEEN SHUT-OFF AND EQUIPMENT.
- I. LOCATE VALVES FOR EASY ACCESS AND OPERATION. DO NOT LOCATE VALVES WITH STEMS BELOW HORIZONTAL.
- J. PROVIDE PROPER DRAINAGE FOR ALL PIPING SYSTEMS.
- K. EARTHQUAKE BRACING SHALL BE PROVIDED AS REQUIRED BY THE RHODE ISLAND STATE BUILDING CODE. SHOP DRAWINGS SHALL SHOW LOCATIONS AND TYPE OF BRACING.
15. SEE SPECIFICATIONS FOR PIPING INSULATION.
16. FOR FURTHER REFERENCE SEE SPECIFICATIONS 15500 WHICH ARE PART OF THE DRAWINGS.

**SEQUENCE OF OPERATIONS**

**SEQUENCE OF OPERATIONS**

**AIR HANDLING UNITS (AHU-1 AND AHU-2)**

**AHU-1**

1. AIR HANDLING UNIT SHALL BE STARTED MANUALLY BY AN ON-OFF BUTTON AT THE STARTER. WHEN THE SUPPLY FAN STARTS, FRESH AIR AND RETURN AIR DAMPERS ON THE MIXING BOX SHALL MODULATE TO THEIR PRE-SET POSITIONS.
2. A DUCT STATIC PRESSURE SENSOR SHALL MODULATE THE SUPPLY AIR FAN MOTOR VARIABLE FREQUENCY DRIVE.
3. A DUCT THERMOSTAT SHALL MODULATE THE FACE AND BYPASS DAMPERS, MIX AIR DAMPERS, HOT WATER CONTROL VALVE AND DX COIL TO MAINTAIN A DISCHARGE TEMPERATURE OF 60° F (ADJUSTABLE). A SUMMER/WINTER SWITCHOVER THERMOSTAT SHALL START THE CONDENSING UNIT TO CYCLE REFRIGERANT TO MAINTAIN SETPOINT.
4. A UNIT MOUNTED FREEZESTAT SHALL STOP THE SUPPLY FAN, CLOSE THE OUTSIDE AIR DAMPER, OPEN THE RETURN AIR DAMPER AND TURN ON THE LOW TEMPERATURE WARNING LIGHT IN THE HVAC CONTROL PANEL IF THE TEMPERATURE DROPS BELOW THE FREEZESTAT'S SETPOINT OF 40° F. RETURN TO THE NORMAL MODE OF OPERATION SHALL REQUIRE MANUAL RESET AT THE HVAC CONTROL PANEL.

**AHU-2**

1. AIR HANDLING UNIT SHALL BE STARTED MANUALLY BY AN ON-OFF BUTTON AT THE STARTER. WHEN THE SUPPLY FAN STARTS, FRESH AIR AND RETURN AIR DAMPERS ON THE MIXING BOX SHALL MODULATE TO THEIR PRE-SET POSITIONS.
2. A SPACE THERMOSTAT SHALL MODULATE THE FACE AND BYPASS DAMPERS, MIX AIR DAMPERS, HOT WATER CONTROL VALVE AND DX COIL TO MAINTAIN A ROOM TEMPERATURE OF 72° F (ADJUSTABLE). A SUMMER/WINTER SWITCHOVER THERMOSTAT SHALL START THE CONDENSING UNIT TO CYCLE REFRIGERANT TO MAINTAIN SETPOINT.
3. ROOM PRESSURE SENSOR SHALL MODULATE THE FRESH AIR DAMPER OPEN AND THE RETURN AIR DAMPER CLOSE TO MAINTAIN A SLIGHTLY POSITIVE ROOM PRESSURE (ADJUSTABLE) WHEN EF-4 IS RUNNING.
4. A UNIT MOUNTED FREEZESTAT SHALL STOP THE SUPPLY FAN, CLOSE THE OUTSIDE AIR DAMPER, OPEN THE RETURN AIR DAMPER AND TURN ON THE LOW TEMPERATURE WARNING LIGHT IN THE HVAC CONTROL PANEL IF THE TEMPERATURE DROPS BELOW THE FREEZESTAT'S SETPOINT OF 40° F. RETURN TO THE NORMAL MODE OF OPERATION SHALL REQUIRE MANUAL RESET AT THE HVAC CONTROL PANEL.

**FAN COIL UNIT (FC-1)**

1. WINTER OPERATION: FC-1 SHALL BE CONTROLLED BY A SPACE MOUNTED THERMOSTAT. WHEN THE THERMOSTAT IS IN THE HEATING MODE (VIA HEAT/OFF/COOL SUB BASE ON THERMOSTAT) THE HOT WATER TWO WAY, TWO POSITION CONTROL VALVE SHALL OPEN. UPON A DROP IN TEMPERATURE BELOW 55 DEG. F. VIA REMOTE SENSOR, MD-1 SHALL OPEN THEN FAN SHALL ENERGIZE. WHEN THE SPACE MOUNTED THERMOSTAT SUB BASE IS IN THE OFF POSITION, HOT WATER VALVE SHALL BE CLOSED, MD-1 SHALL BE CLOSED AND THE FAN SHALL BE DE-ENERGIZED.
- SUMMER OPERATION: WHEN THE THERMOSTAT IS IN THE COOLING MODE (VIA HEAT/OFF/COOL SUB BASE ON THERMOSTAT) THE HOT WATER TWO WAY, TWO POSITION CONTROL VALVE SHALL BE CLOSED. UPON A RISE IN TEMPERATURE ABOVE 95 DEG. F. VIA REMOTE SENSOR, MD-1 SHALL OPEN THEN START THE FAN. FAN SHALL DE-ENERGIZE AND MD-1 SHALL CLOSE WHEN SPACE TEMPERATURE FALLS BELOW 95 DEG. F.
- SAFTIES: IF THE TEMPERATURE OF THE DISCHARGE AIR FREEZESTAT FALLS BELOW 40 DEG. F. FAN SHALL DE-ENERGIZE, MD-1 SHALL CLOSE HOT WATER CONTROL VALVE SHALL FULLY OPEN.

**EXHAUST FAN (EF-2)**

1. TOILET ROOM EXHAUST FAN EF-2 SHALL OPERATE ON/OFF AND BE INTERLOCKED WITH A LIGHT SWITCH.

**EXHAUST FAN (EF-3)**

1. EXHAUST FAN EF-3 SHALL BE MANUALLY CONTROLLED WITH AN ON/OFF SWITCH AND SHALL RUN CONTINUOUSLY.

**LABORATORY HOODS - EXHAUST FAN EF-4, SUPPLY FANS SF-1 AND SF-2, AND MOTORIZED DAMPERS MD-5, MD-6, MD-7 AND MD-8**

1. ALL FAN SWITCHES AND STATUS INDICATOR LIGHTS FOR EF-4, SF-1 AND SF-2 SHALL BE INSTALLED ON THE LABORATORY HOODS. SUPPLY FAN SF-1 (HOOD #1) AND SF-2 (HOOD #2) SHALL BE INTERLOCKED WITH EXHAUST FAN EF-4 AND SHALL BE MANUALLY STARTED WITH ON/OFF SWITCHES LOCATED ON EACH LABORATORY HOOD.
2. EF-4 BYPASS DAMPER SHALL BE INTERLOCKED WITH SF-1 AND SF-2. SF-1 SHALL BE INTERLOCKED WITH MD-5 AND MD-7. SF-2 SHALL BE INTERLOCKED WITH MD-6 AND MD-8. MD-5 AND MD-7 SHALL BE IN THE NORMALLY CLOSE POSITION WHEN SF-1 IS OFF. MD-6 AND MD-8 SHALL BE IN THE NORMALLY CLOSE POSITION WHEN SF-2 IS OFF.
3. WHEN EITHER SF-1 OR SF-2 STARTS IT'S RESPECTIVE MOTORIZED DAMPERS (MD-5/7 OR MD-6/8) SHALL OPEN, EF-4 SHALL START AND THE EXHAUST FAN BYPASS DAMPER SHALL BE 50% OPEN. WHEN BOTH SF-1 AND SF-2 ARE RUNNING, EF-4 BYPASS DAMPER SHALL BE FULLY CLOSED. REVERSE SHALL OCCUR WHEN SF-1 AND SF-2 ARE TURNED OFF.
4. PADDLE FLOW SWITCH IN EXHAUST DUCT SHALL TURN OFF SF-1 AND/OR SF-2 UPON DETECTION OF NO AIR FLOW.

**ELECTRIC DUCT HEATERS (EDH-1 AND EDH-2)**

1. EDH-1 SHALL BE INTERLOCKED WITH SF-1 AND EDH-2 SHALL BE INTERLOCKED WITH SF-2. PROPORTIONAL ELECTRONIC DUCT MOUNTED THERMOSTAT SHALL MAINTAIN DUCT SET TEMPERATURE. FACTORY INSTALLED AIRFLOW SWITCH SHALL AUTOMATICALLY SHUT OFF DUCT HEATER WHEN MINIMUM AIRFLOW IS DETECTED. "LOW AIRFLOW" LIGHT SHALL BE INDICATED ON ELECTRIC DUCT HEATER CONTROL PANEL.

**UNIT HEATERS**

1. UH-9, 10, 11, 12 (EXISTING)

UNIT HEATER FANS SHALL BE CONTROLLED BY UNIT MOUNTED THERMOSTATS AND SHALL CYCLE ON/OFF TO MAINTAIN SET TEMPERATURE. AQUASTAT SHALL SHUT OFF UNIT HEATER FAN WHEN RETURN WATER TEMPERATURE FALLS BELOW 100° F.

2. UH-1 (NEW) AND UH-13 (EXISTING)

UNIT HEATER FANS SHALL BE CONTROLLED BY A WALL MOUNTED THERMOSTAT AND SHALL CYCLE ON/OFF TO MAINTAIN ROOM TEMPERATURE. AQUASTAT SHALL SHUT OFF UNIT HEATER FAN WHEN RETURN WATER TEMPERATURE FALLS BELOW 100° F.

**VAV TERMINALS**

1. COOLING: DAMPER SHALL MODULATE OPEN TOWARD THE MAXIMUM CFM SETPOINT BASED ON THE ROOM TEMPERATURE SETPOINT.
2. HEATING: DAMPER SHALL MODULATE CLOSE TOWARD THE MINIMUM SETPOINT BASED ON ROOM TEMPERATURE SETPOINT.
3. REHEAT: DAMPER SHALL OPEN TOWARD THE REHEAT CFM SETPOINT AND TEMPERATURE CONTROL VALVE SHALL MODULATE TO MAINTAIN ROOM TEMPERATURE SETPOINT.
4. ONCE VAV-3 AND MD-3 HAVE BEEN BALANCED TO MAINTAIN THE AIR FLOW SPECIFIED ON DRAWING H-3, AS VAV-3 MODULATES TO MAINTAIN ROOM TEMPERATURE SETPOINT AS DEFINED ON SHEET H-1, MD-3 SHALL PROPORTIONALLY MODULATE TO MATCH VAV-3'S DAMPER POSITION.  
ONCE VAV-4 AND MD-4 HAVE BEEN BALANCED TO MAINTAIN THE AIR FLOW SPECIFIED ON DRAWING H-3, AS VAV-4 MODULATES TO MAINTAIN ROOM TEMPERATURE SE POINT AS DEFINED ON SHEET H-1, MD-4 SHALL PROPORTIONALLY MODULATE TO MATCH VAV-4'S DAMPER POSITION.  
THE DESIGN INTENT OF THIS SYSTEM IS TO MAINTAIN A POSITIVE PRESSURE WITHIN THE OPERATION OF OFFICE AND PWSB OFFICE TO PREVENT INFILTRATION OF ADJACENT LABORATORY AIR AND UNCONDITIONED OUTDOOR AIR.

FULL SIZE DRAWING = 4"

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1	10/07/08	AH	ISSUED FOR RFI POSTED SET
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ROBERT H. SHELDON  
No. 4103  
Professional Engineer  
State of Rhode Island  
No. 0000000000

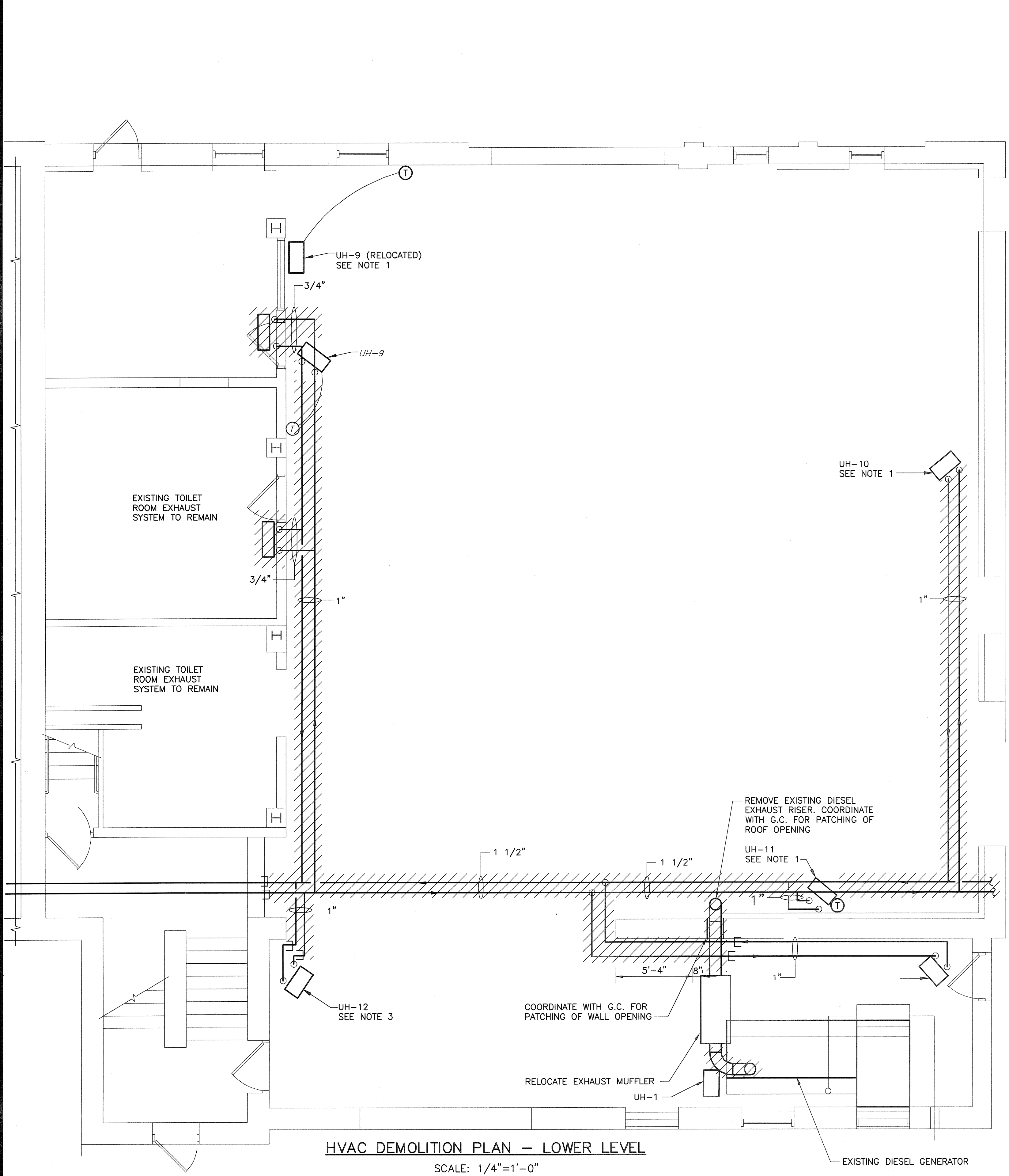
PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL  
WATER TREATMENT FACILITY  
PKG 5 - LAB AND OFFICE AREA**  
GENERAL NOTES AND SYMBOLS - HVAC

DESIGNED BY SC	DWG SCALE N/A
DRAWN BY MAC	CONTRACT NO.
CHECKED BY SC	DATE OCTOBER 31, 2008

**EARTH TECH  
AS-BUILT FILE  
JULY 2008**

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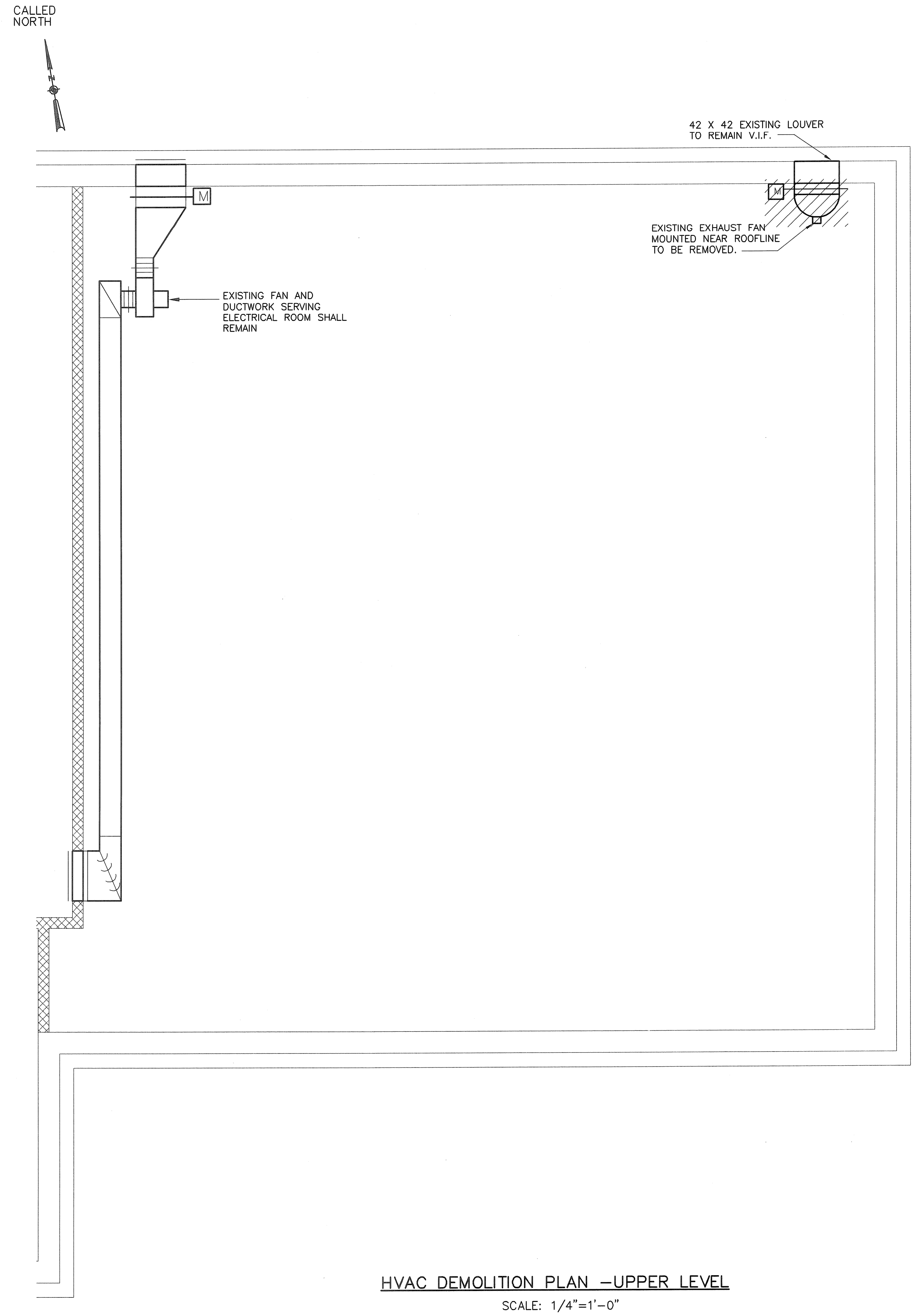
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HVAC DEMOLITION PLAN - LOWER LEVEL

SCALE: 1/4"=1'-0"

- DEMOLITION NOTES:**
1. RELOCATE EXISTING UNIT HEATER UH-9, 10, 11. RAISE UH-10 AND UH-11 TO 20'-0" AFF AND MOUNT THERMOSTAT TO UNIT. LOCATE UH-9 TO 12'-0" AFF.
  2. REMOVE UNIT MOUNTED THERMOSTAT FROM UH-13.
  3. UNIT HEATER UH-12 REMAINS AS IS.

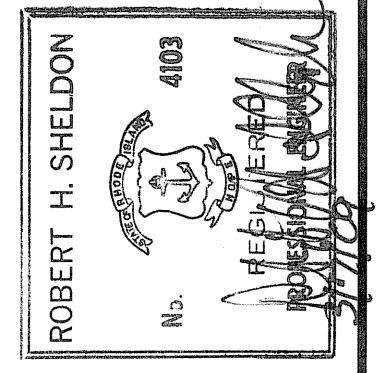


HVAC DEMOLITION PLAN - UPPER LEVEL

SCALE: 1/4"=1'-0"

FULL SIZE DRAWING = 4"

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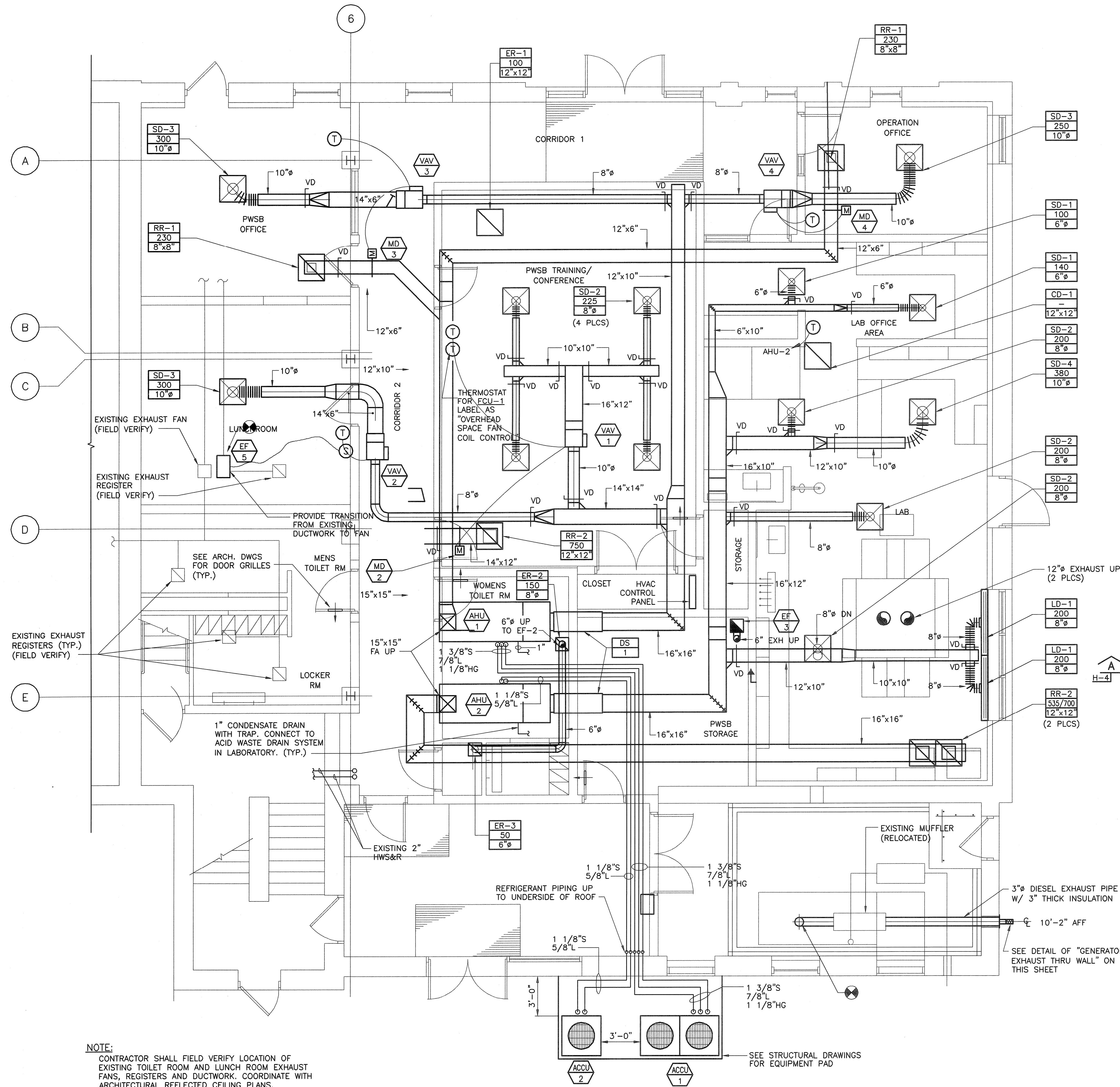
PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL  
 WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
 HVAC DEMOLITION PLAN

DESIGNED BY SC	DWG SCALE AS NOTED
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CHECKED BY	DATE OCTOBER 31, 2008

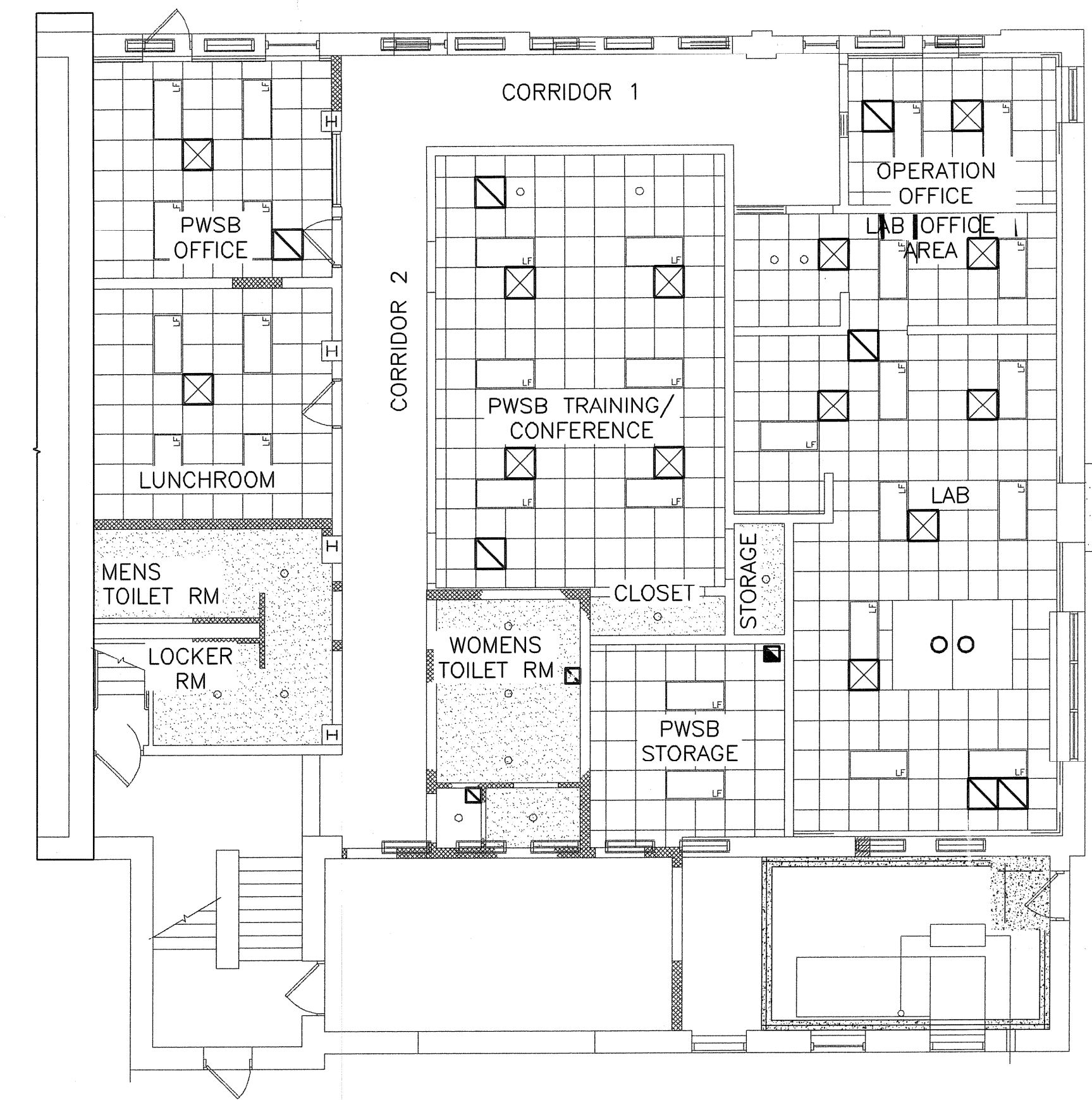
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H-2  
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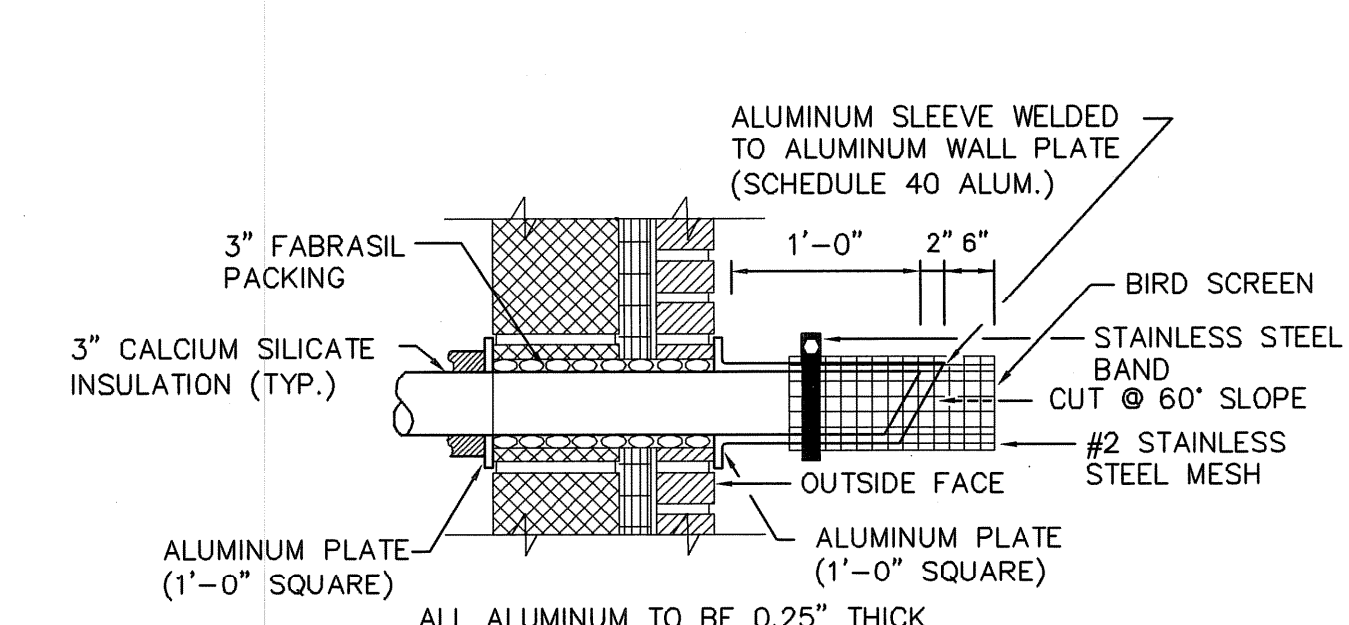
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HVAC FLOOR PLAN - LOWER LEVEL  
 SCALE: 1/4" = 1'-0"



HVAC REFLECTED CEILING PLAN  
 SCALE: 1/8" = 1'-0"



DETAIL OF GENERATOR EXHAUST THRU WALL  
 NOT TO SCALE

**EarthTech**  
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 300 BAKER AVENUE SUITE 200 CONCORD MA 01742 (978) 371-4000

FULL SIZE DRAWING = 4"	
AS-BUILT DRAWING FILE ISSUED FOR RFI POSTED SET ISSUED FOR CONSTRUCTION	REVISIONS NO. DATE BY
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1	10/01/08
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0	DPB

DESIGNED BY: SC  
 DRAWN BY: HJC  
 CHECKED BY: xxx

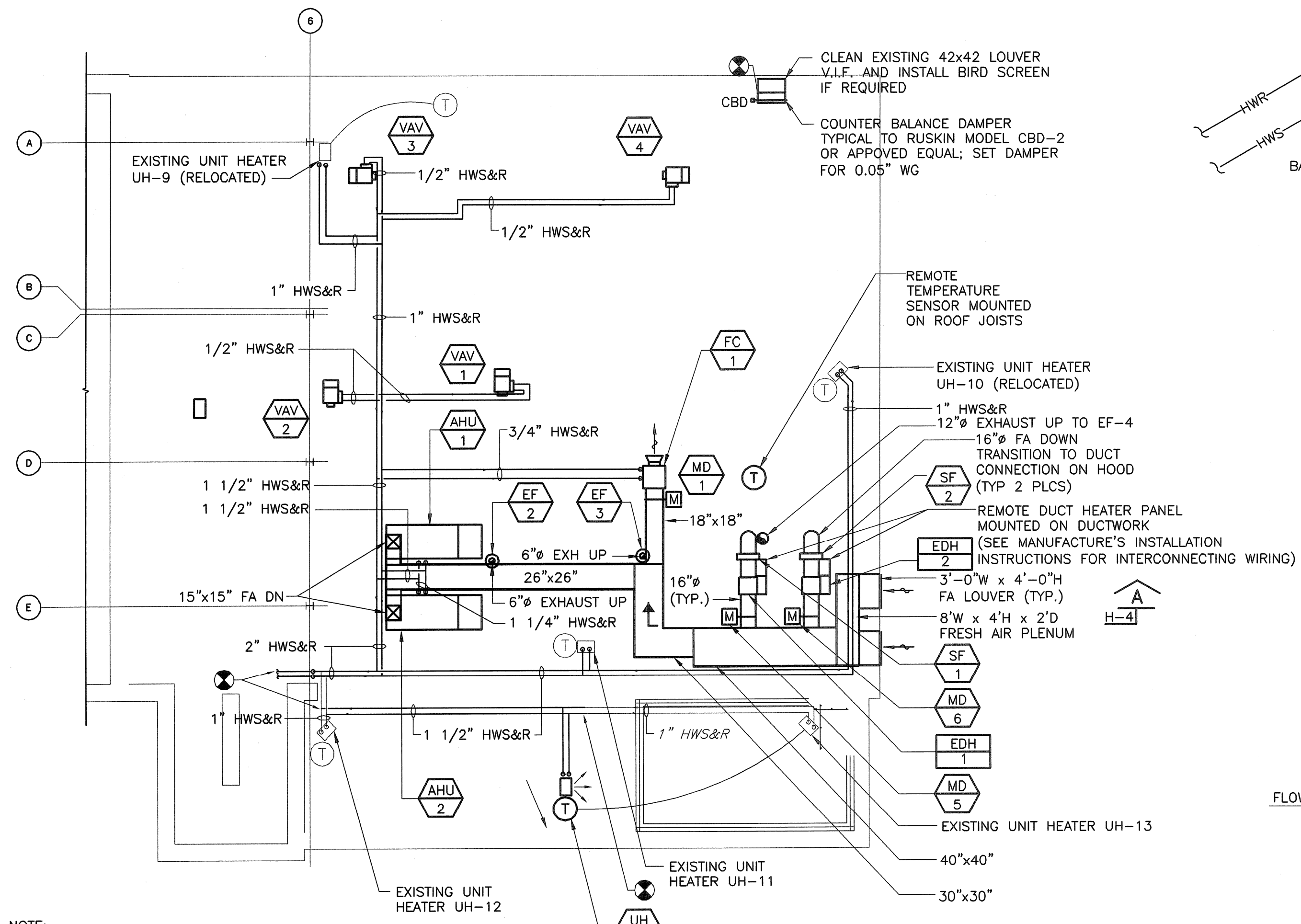
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 DATE: OCTOBER 31, 2008

PAWTUCKET, RHODE ISLAND  
 PAWTUCKET REGIONAL  
 WATER TREATMENT FACILITY  
**PKG 5 - LAB AND OFFICE AREA**  
 HVAC PLANS AND DETAILS

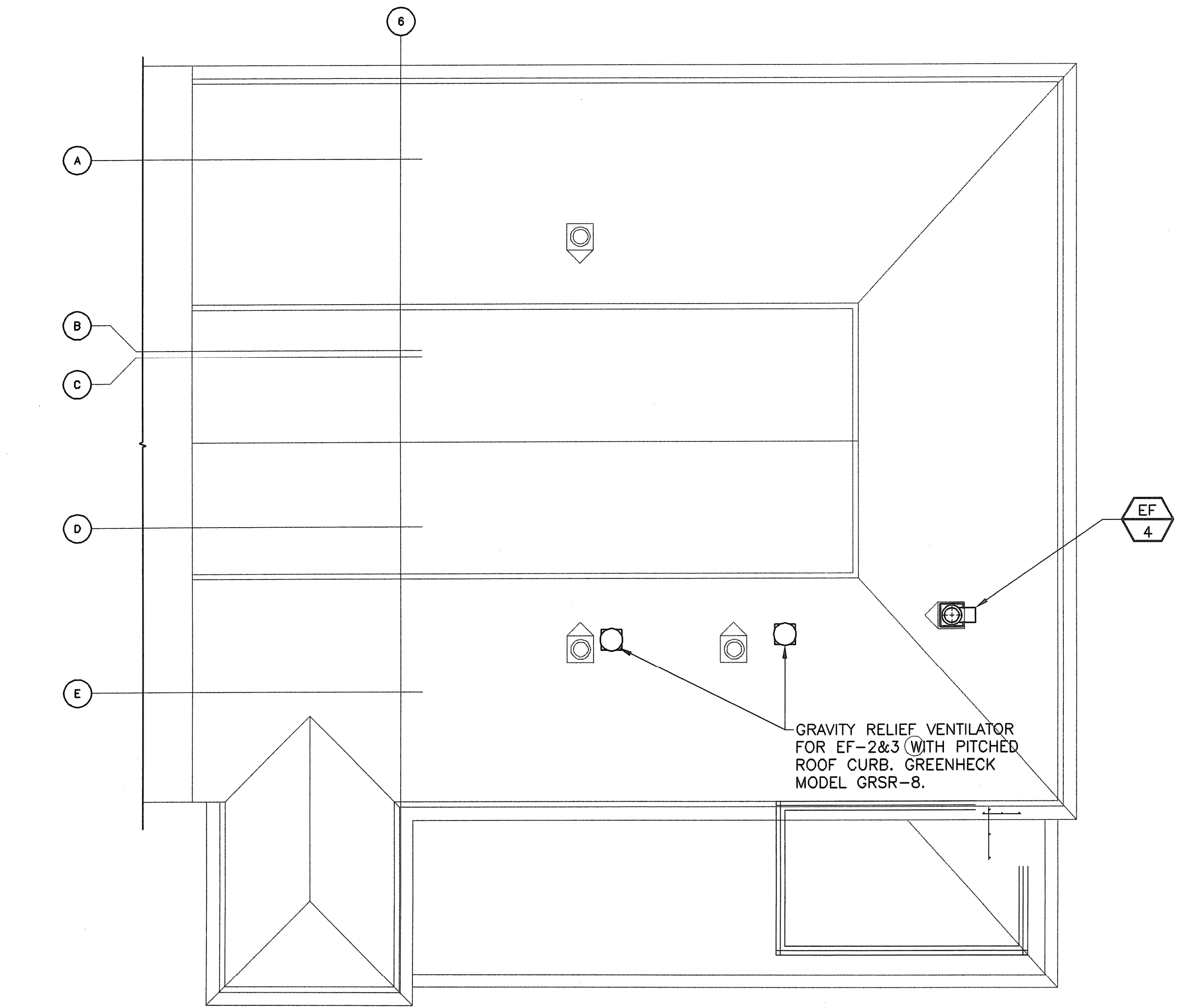
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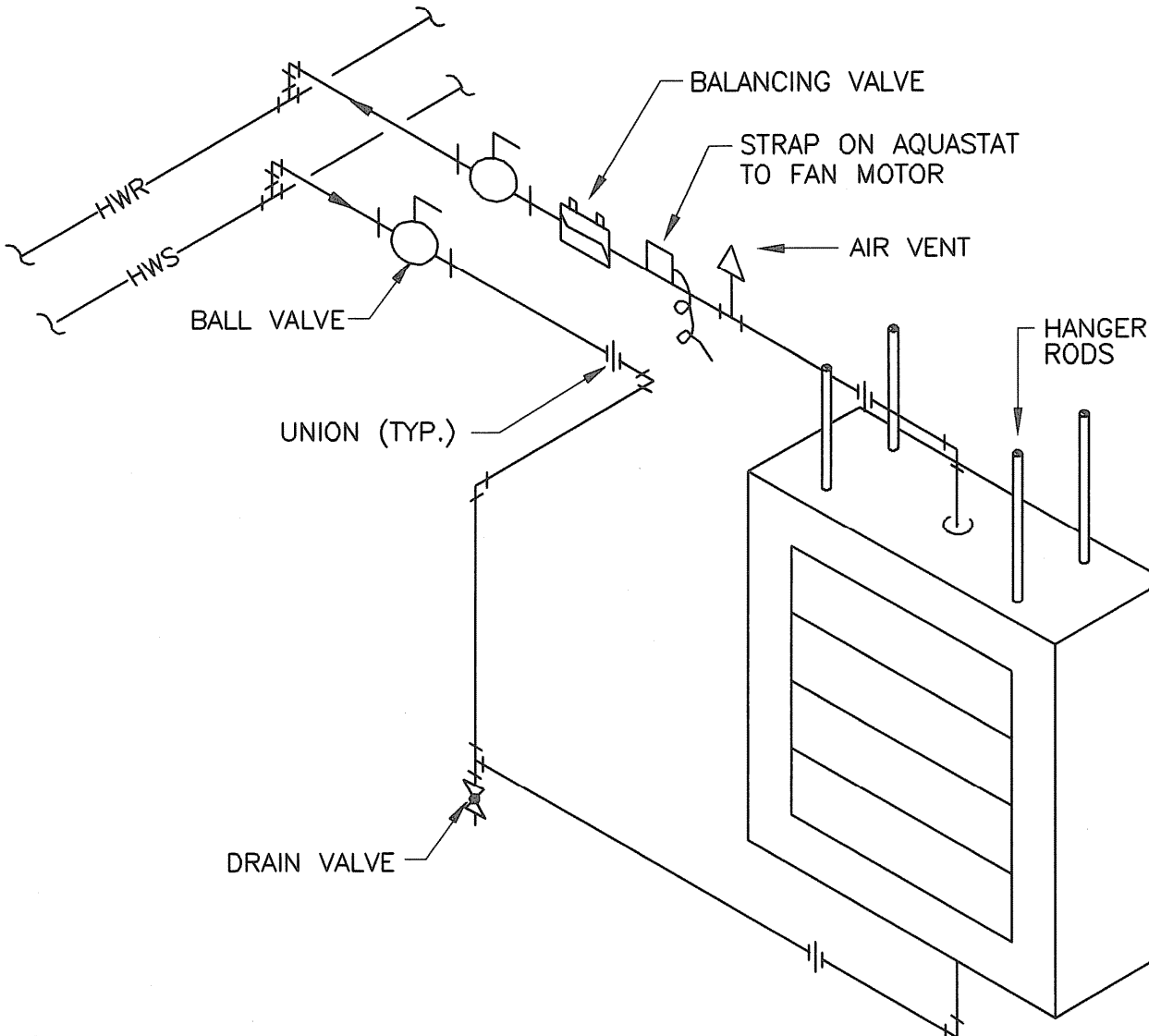
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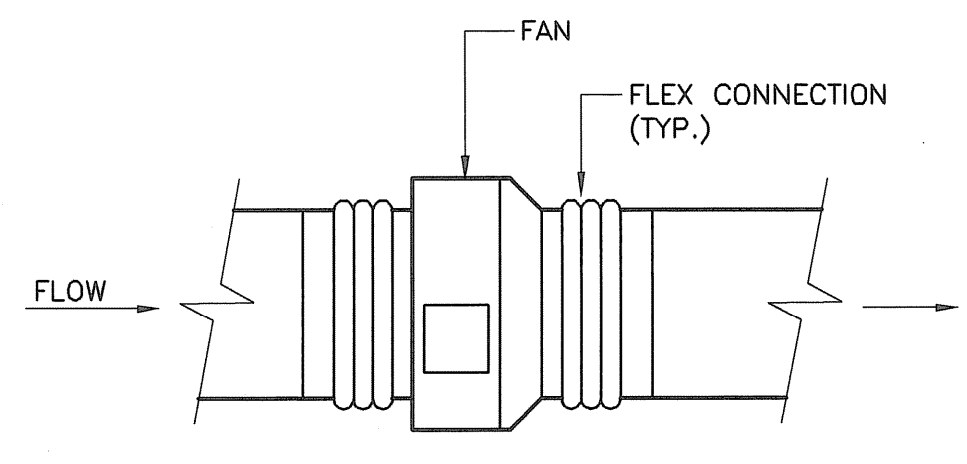
**HVAC FLOOR PLAN - UPPER LEVEL**  
 SCALE: 1/8" = 1'-0"



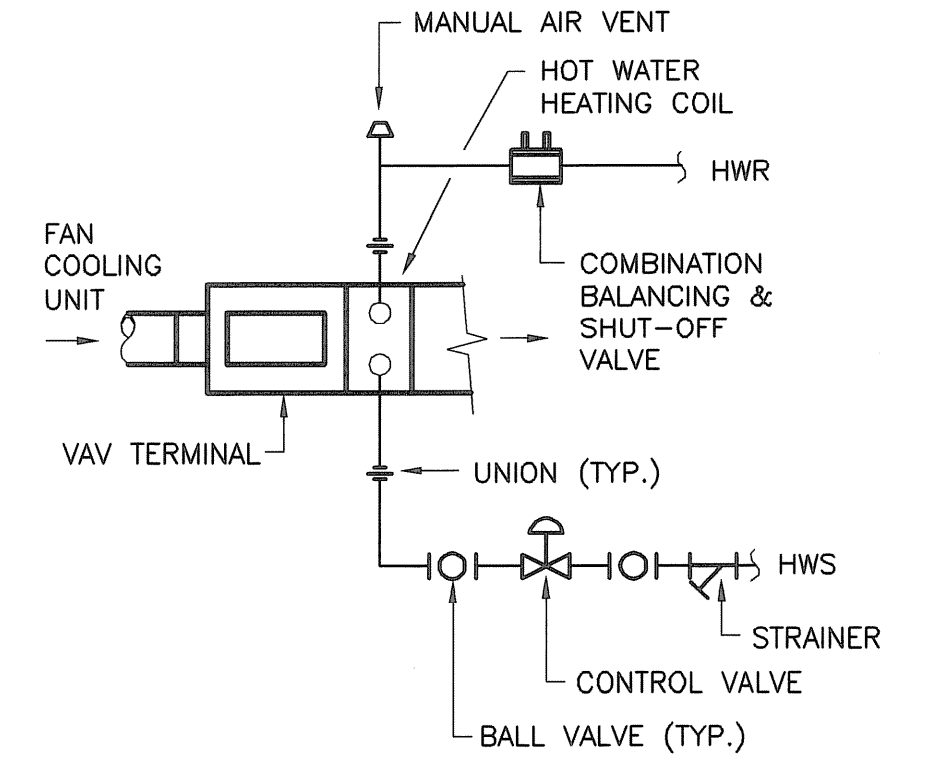
**HVAC ROOF PLAN**  
 SCALE: 1/8" = 1'-0"



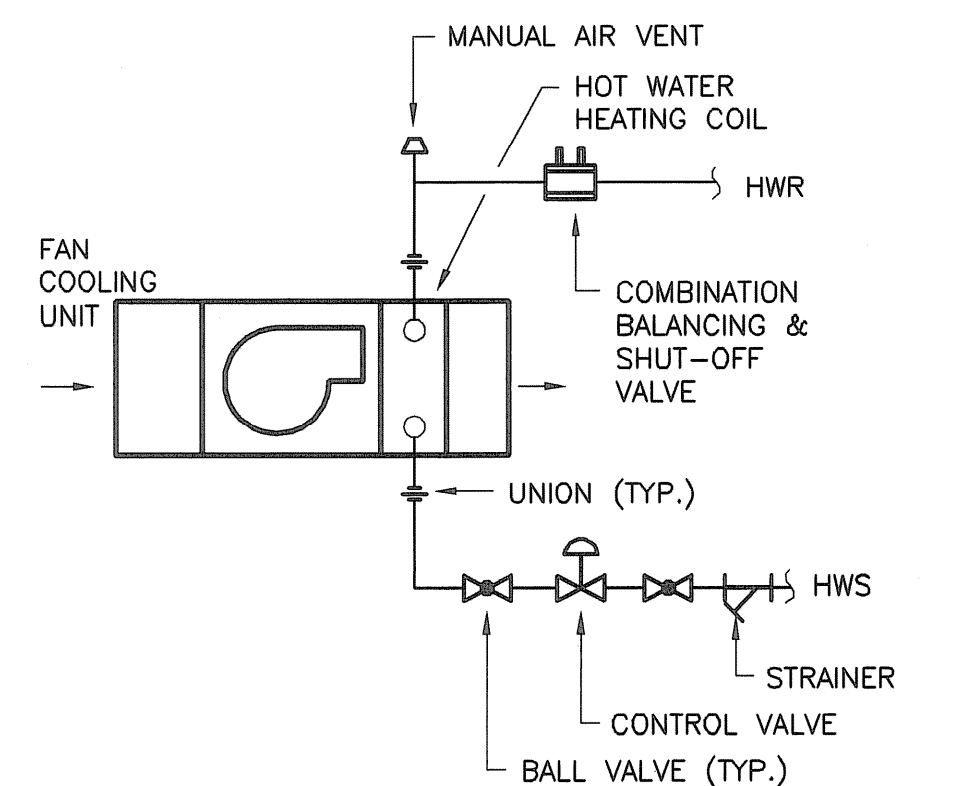
**UNIT HEATER DETAIL**  
 NOT TO SCALE



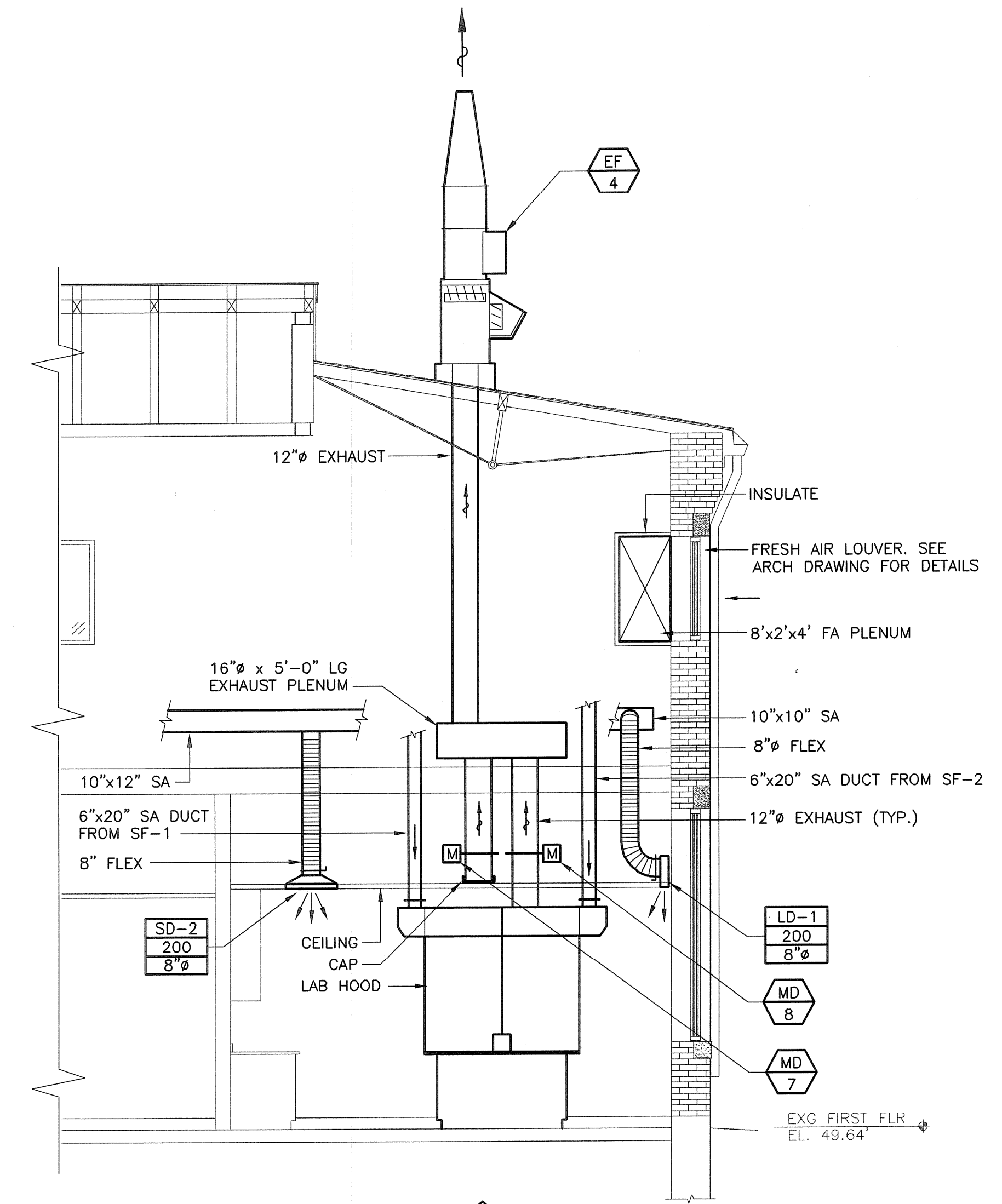
**INLINE EXHAUST AIR OR SUPPLY AIR FAN**  
 NOT TO SCALE  
 (SF-1, SF-2, EF-1, EF-2)



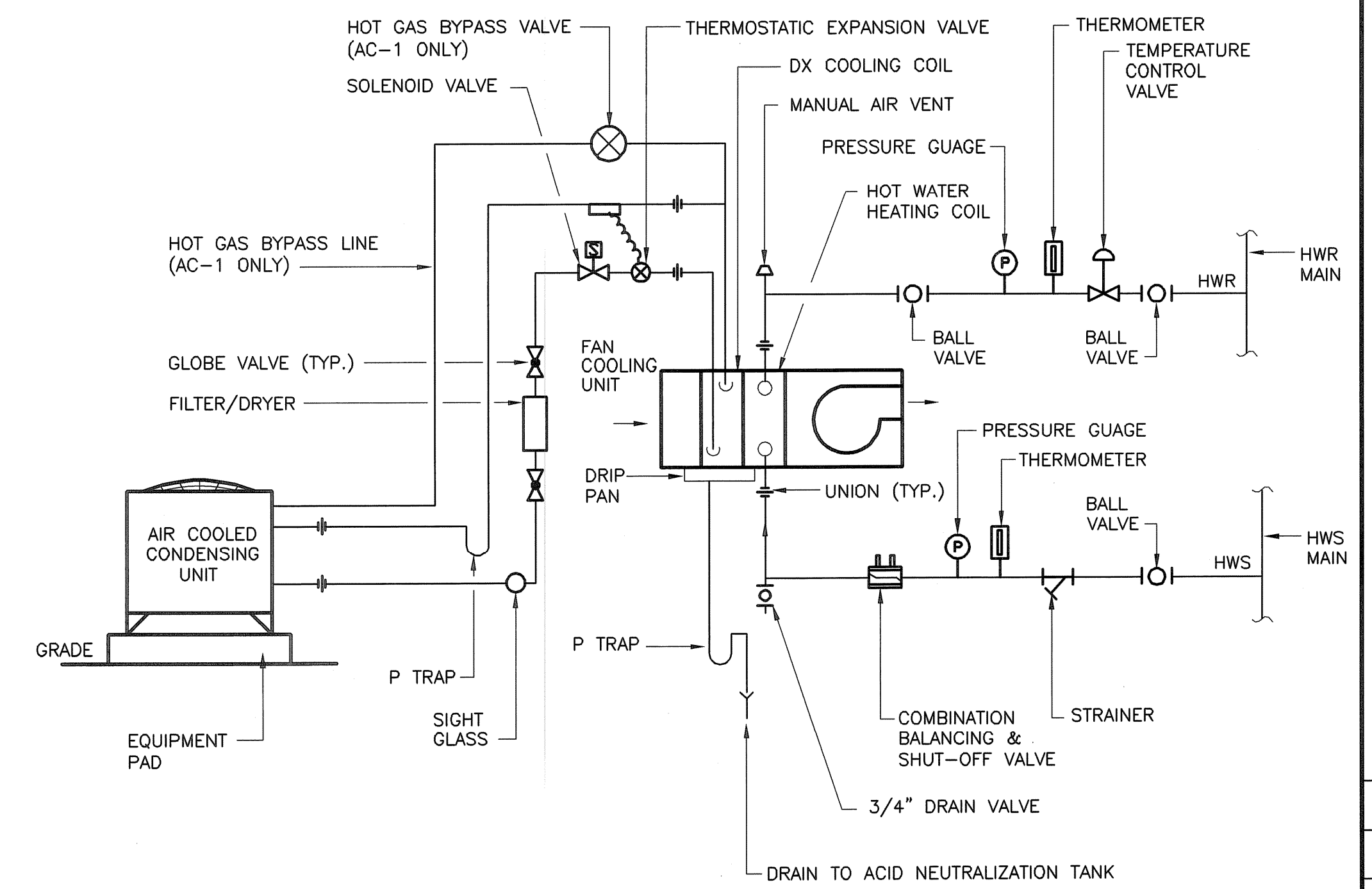
**VAV TERMINAL PIPING DETAIL**  
 NOT TO SCALE



**FAN COIL UNIT (FC-1) PIPING DETAIL**  
 NOT TO SCALE



**SECTION A-H-4**  
 SCALE: 1/4" = 1'-0"



**AIR HANDLING UNIT PIPING DETAIL (AHU-1&2)**  
 NOT TO SCALE

NO.	REVISIONS	DATE	BY
2	AS-BUILT DRAWING SET	10/31/08	SC
1	ISSUED FOR POSTED SET	04/05	SC
0	ISSUED FOR CONSTRUCTION		

ROBERT H. SHELDON  
 4103  
 No. 10/31/08

PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
 HVAC UPPER FLOOR PLAN, SECTIONS AND DETAILS

DESIGNED BY	DWG SCALE
SC	AS NOTED
DRAWN BY	CONTRACT NO.
MJC	
CHECKED BY	DATE
xxx	OCTOBER 31, 2008

**EARTH TECH**  
**AS-BUILT FILE**  
**JULY 2008**

Filename: L:\WORK\69993\CAD\AS-BUILT\5) WTP\HVAC\69993H-5.DWG  
 Plot File Date Created: Sep/22/2008 10:51 AM

FAN SCHEDULE <span style="float:right">EF XX</span>										
TAG NO.	MANUFACTURER MODEL NO. OR EQUAL	TYPE	SERVICE	AIR DATA		FAN RPM	MOTOR DATA			REMARKS
				CFM	ESP (IN. WG)		HP/W	VOLT	PHASE	
-	NOT USED	-	-	-	-	-	-	-	-	-
EF-2	FANTECH FX 6XL	INLINE	WOMENS TOILET ROOM	200	.25	2800	122W	120	1	
EF-3	GREENHECK SP-B110	CEILING	STORAGE ROOM	110	.125	950	80W	120	1	
EF-4	COOK 135-TCHHLE-B08	ROOF	LAB HOODS	2180	3.67	2806	3 HP	460	3	①
SF-1	FANTECH FX 12XL	INLINE	LABORATORY HOOD	785	.125	3280	411W	120	1	②
SF-2	FANTECH FX 12XL	INLINE	LABORATORY HOOD	785	.125	3280	411W	120	1	②
EF-5	GREENHECK SP-B150	INLINE	LUNCH ROOM	150	.125	1050	129W	120	1	②

- ① EF-4 SHALL INCLUDE INLET PLENUM WITH BOTTOM EXHAUST INTAKE LOCATION, SINGLE BYPASS DAMPER WITH HOOD AND INLET SCREEN, ROOF CURB, STATIC PRESSURE CONTROL AND DAMPER ACTUATOR.
- ② INTERLOCK WITH LABORATORY HOOD AND EF-4 BYPASS DAMPER.

DIFFUSER AND REGISTER SCHEDULE <span style="float:right">XX-X CFM NECK SIZE</span>							
TAG NO.	NECK SIZE	CFM	FUNCTION	TYPE	DAMPER	MANUFACTURER MODEL NO. OR EQUAL	REMARKS
SD-1	6"φ	-150	SUPPLY AIR	CEILING DIFFUSER	OBD	METAL AIRE	
SD-2	8"φ	200-225	SUPPLY AIR	CEILING DIFFUSER	OBD	METAL AIRE	
SD-3	10"φ	250-300	SUPPLY AIR	CEILING DIFFUSER	OBD	METAL AIRE	
SD-4	12"φ	380	SUPPLY AIR	CEILING DIFFUSER	OBD	METAL AIRE	
RR-1	8 x 8	230-250	RETURN AIR	CEILING GRILLE	-	METAL AIRE	
RR-2	12 x 12	700-750	RETURN AIR	CEILING GRILLE	-	METAL AIRE	
ER-1	12 x 12	640	EXHAUST AIR	CEILING REGISTER	OBD	METAL AIRE	
ER-2	8"φ	150	EXHAUST AIR	CEILING REGISTER	OBD	METAL AIRE	
ER-3	6"φ	50	EXHAUST AIR	CEILING REGISTER	OBD	METAL AIRE	
CD-1	12"x12"	-	VENT	COOLING GRILLE	-	METAL AIRE	

VARIABLE AIR VOLUME TERMINAL UNITS <span style="float:right">VAV-X</span>												
TYPE	MANUFACTURER MODEL NO. OR EQUAL	MAXIMUM CFM RANGE	MINIMUM CFM RANGE	SP. INCHES W.C.	INLET DIAMETER INCHES	HOT WATER HEATING COIL					REMARKS	
						BTUH	GPM	EWT OF	LWT OF	ROWS		WATER PRESSURE DROP FT.
VAV-1	ENVIRO-TEC MOD #SDR-WC	900	200	.36	10"	3700	.20	180	160	1	.01	
VAV-2	ENVIRO-TEC MOD #SDR-WC	300	110	.21	8"	2400	.10	180	160	1	.01	
VAV-3	ENVIRO-TEC MOD #SDR-WC	300	110	.21	8"	4300	.40	180	160	1	.01	
VAV-4	ENVIRO-TEC MOD #SDR-WC	250	110	.19	6"	4200	.40	180	160	1	.01	

AIR HANDLING UNIT SCHEDULE <span style="float:right">AHU T</span>																									
UNIT NO.	MANUFACTURER MODEL NO. OR EQUAL	ESP	CFM	CFM OA MIN/MAX	COOLING							HEATING							MOTOR DATA			REMARKS			
					MBH TOTAL	MBH -	EAT DB	LAT WB	R-22 SUCT TEMP °F	ROWS	FINS/IN.	MBH TOTAL	GPM	EAT	LAT	EWT	LWT	ROWS	FINS/IN.	V	PHASE		HP		
AHU-1	YORK XT-30x36	.75	1750	540/1030	71.0	49.6	82	68	55.6	54.6	48.8	5	10	73.7	7.5	38.5	77.3	180	159.8	1	12	480	3	3	① ②
AHU-2	YORK XT1-30x36	.75	1600	200/550	64.0	41.8	83	69	58.2	56.1	40	3	11	99.3	9.4	40	97.3	180	158.3	2	8	480	3	2	① ②

- ① AIR HANDLING UNIT SHALL INCLUDE SUPPLY FAN WITH VERTICAL COIL SECTION WITH DX COOLING COIL AND HOT WATER HEATING COIL, EXTERNAL FACE AND BYPASS DAMPER AND COMBINATION FILTER/MIXING BOX SECTION WITH 30% EFFICIENCY FILTERS.
- ② AHU-1 SHALL INCLUDE VARIABLE FREQUENCY DRIVE FAN MOTOR.

AIR COOLED CONDENSING UNIT <span style="float:right">ACC XX</span>														
TAG NO.	MANUFACTURER MODEL NO. OR EQUAL	MAXIMUM COOLING CAP. (MBH)	OA TEMP. (°F)	SAT. SUCT. TEMP. (°F)	REFRIG.	COMPRESSOR			COND. FAN MOTOR			MAX FUSE SIZE	VOLT	PHASE
						RLA	LRA	HP	QTY	FCA				
ACCU-1	YORK HA090	93.0	95	40	R-22	13.5	95	3/4	2	1.60	30	480	3	
ACCU-2	YORK H4DB076546	65.3	95	38	R-22	9.5	73	1/3	1	1.60	20	480	3	

FAN COIL SCHEDULE <span style="float:right">FC XX</span>													
TAG NO.	MANUFACTURER MODEL NO. OR EQUAL	CFM	ESP (IN. WG)	HEATING COIL DATA					MOTOR DATA			REMARKS	
				EAT (°F)	LAT	MBH	GPM	EWT (°F)	LWT	HP	VOLT		PHASE
FC-1	YORK 24YSHW2	600	.10	5	65	40	4.0	180	160	1/4	120	1	ⓧ

DUCT SILENCER <span style="float:right">DS XX</span>						
TAG NO.	MANUFACTURER MODEL NO. OR EQUAL	SIZE	ESP (IN. WG)	AIRFLOW (CFM)	FACE VELOCITY	PRESS DROP (IN. W.G.)
DS-1	IAC-SLFN	18"x18"x60"	.10	1750	778	.11
DS-2	IAC-SLFN	18"x18"x60"	.10	1600	711	.11

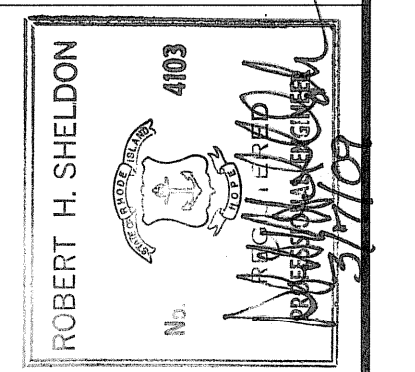
MOTORIZED DAMPER SCHEDULE <span style="float:right">MD XX</span>					
TAG NO.	MANUFACTURER MODEL NO. OR EQUAL	SERVICE	DIMENSION (INCHES)	BLADE DEPTH (INCHES)	REMARKS
MD-1	RUSKIN CD-50	FC-1	18" x 18"	4"	INTERLOCKED WITH FC-1 ②
MD-2	RUSKIN CD-50	PWSB TRAINING ROOM	14" x 12"	4"	INTERLOCKED WITH VAV-1 ②
MD-3	RUSKIN CD-50	OPERATION OFFICE	12" x 6"	4"	INTERLOCKED WITH VAV-3 ②
MD-4	RUSKIN CD-50	PWSB OFFICE	12" x 6"	4"	INTERLOCKED WITH VAV-4 ②
MD-5	RUSKIN CD-50	LAB HOOD	16" x 16"	4"	INTERLOCKED WITH SF-1 ①
MD-6	RUSKIN CD-50	LAB HOOD	16" x 16"	4"	INTERLOCKED WITH SF-2 ①
MD-7	RUSKIN CD-82	LAB HOOD	12" φ	-	INTERLOCKED WITH EF-4 AND SF-1 ①
MD-8	RUSKIN CD-82	LAB HOOD	12" φ	-	INTERLOCKED WITH EF-4 AND SF-2 ①

- ① MOTORIZED ACTUATORS SHALL BE BELIMO MODEL AF120US OR APPROVED EQUAL, 120 V, 1φ MOTOR.
- ② MOTORIZED ACTUATORS SHALL BE BELIMO MODEL AF24-SR, PROPORTIONAL DAMPER CONTROL, 2 TO 10 VDC. PROVIDE 120V, 1φ 24VAC/DC TRANSFORMER.

ELECTRIC DUCT HEATER SCHEDULE <span style="float:right">EDH XX</span>							
UNIT NO.	MANUFACTURER MODEL NO. OR EQUAL	SERVICE	DIMENSIONS	KW	V	PH	REMARKS
EDH-1	INDEECO TF20	HOOD #1 SF-1	16" x 16"	12	480	3	
EDH-2	INDEECO TF20	HOOD #1 SF-2	16" x 16"	12	480	3	

UNIT HEATER SCHEDULE <span style="float:right">UH XX</span>												
TAG NO.	MANUFACTURER MODEL NO. OR EQUAL	CFM	EAT	LAT	MBH	GPM	EWT (°F)	LWT	HP	VOLT	PHASE	REMARKS
UH-1	REZNOR 140/175	2300	60	112	131	3.22	180	160	1/4	120	1	

DESIGNED BY	DWG SCALE
SC	N/A
DRAWN BY	CONTRACT NO
MAC	
CHECKED BY	DATE
XXX	OCTOBER 31, 2008



PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
 HVAC SCHEDULES

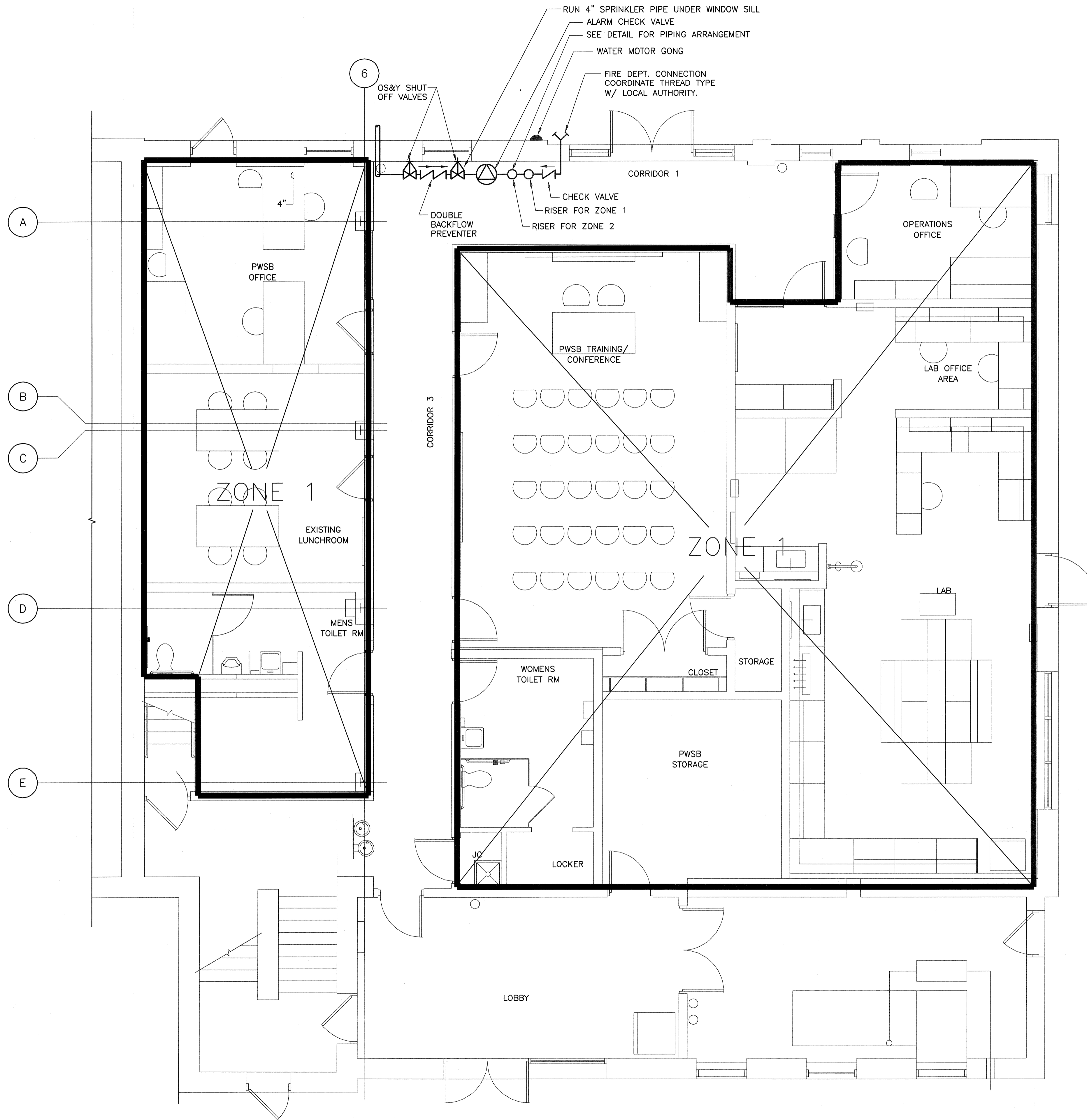
**EARTH TECH**  
 AS-BUILT FILE  
 JULY 2008

H-5  
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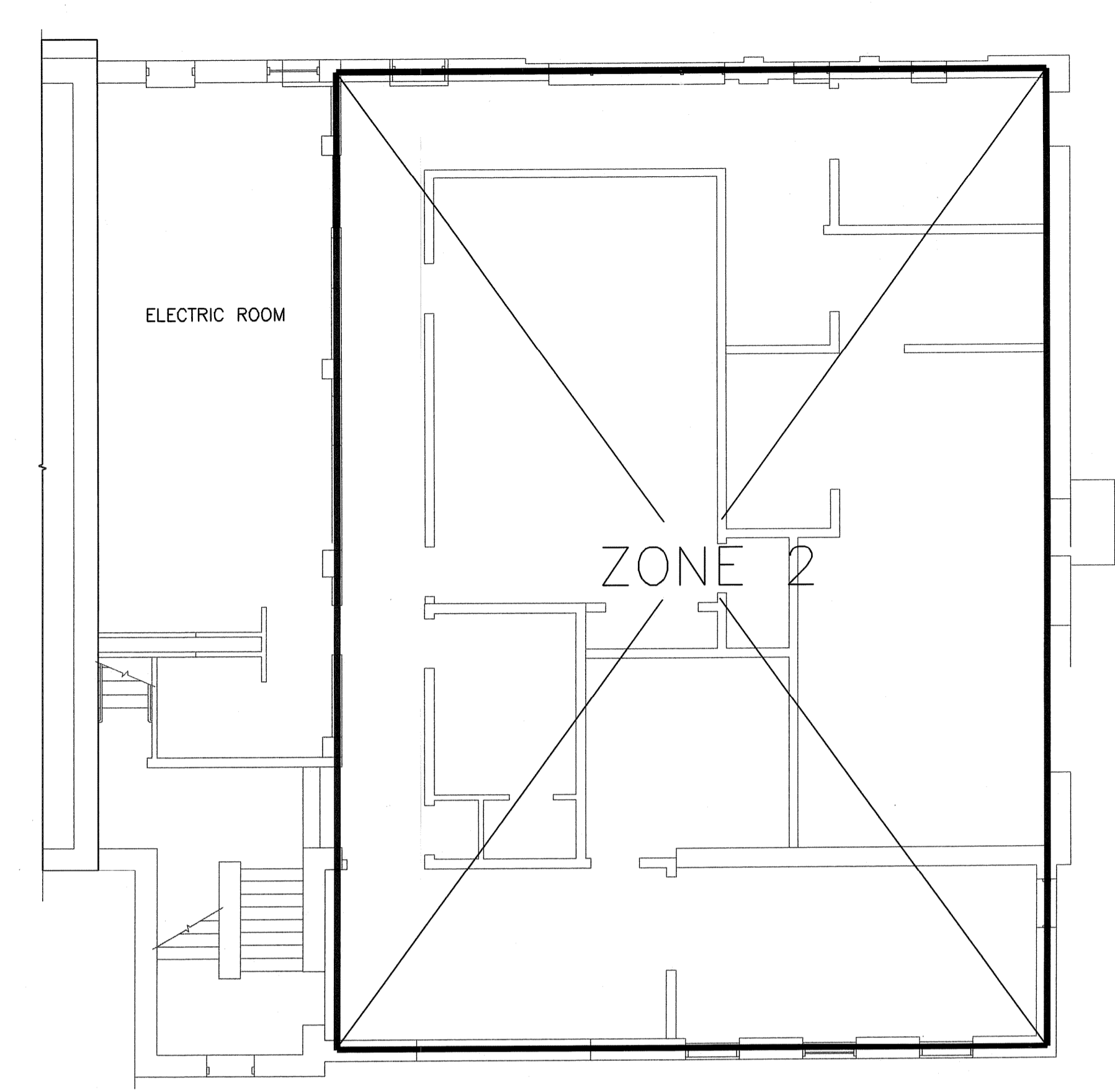
**EarthTech**  
 A Tyco International Ltd. Company  
 300 BAKER AVENUE, SUITE 200 CONCORD, MA 01742 (978) 371-4000



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**FLOOR PLAN - FIRE PROTECTION**  
 SCALE: 1/4" = 1'-0"



**UPPER AREA PLAN - FIRE PROTECTION**  
 SCALE: 1/4" = 1'-0"

NO.	REVISIONS	DATE	BY
2	AS-BUILT DRAWING FILE	07/07/08	SC
1	ISSUED FOR RFI POSTED SET	04/05	SC
0	ISSUED FOR CONSTRUCTION		

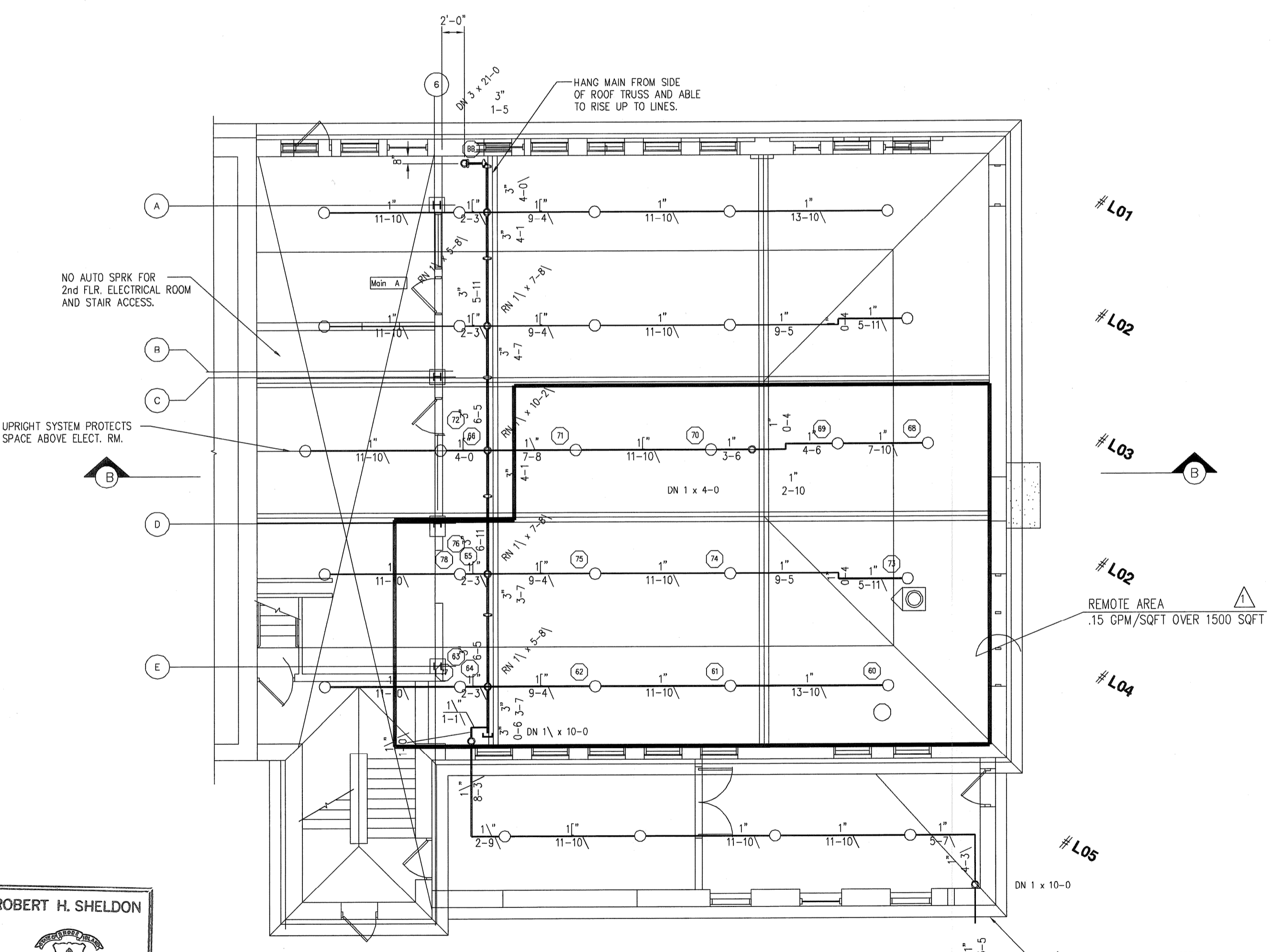
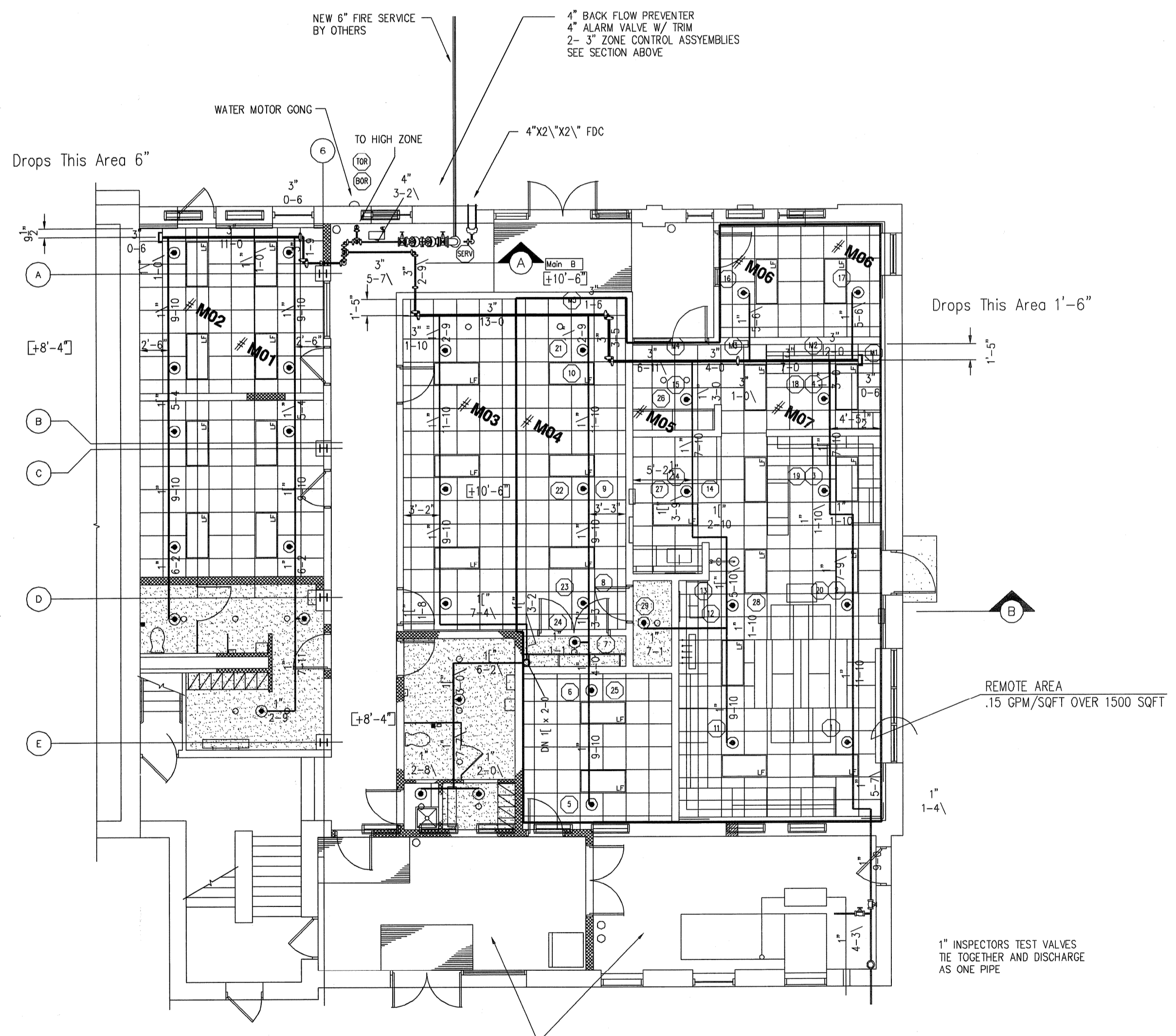
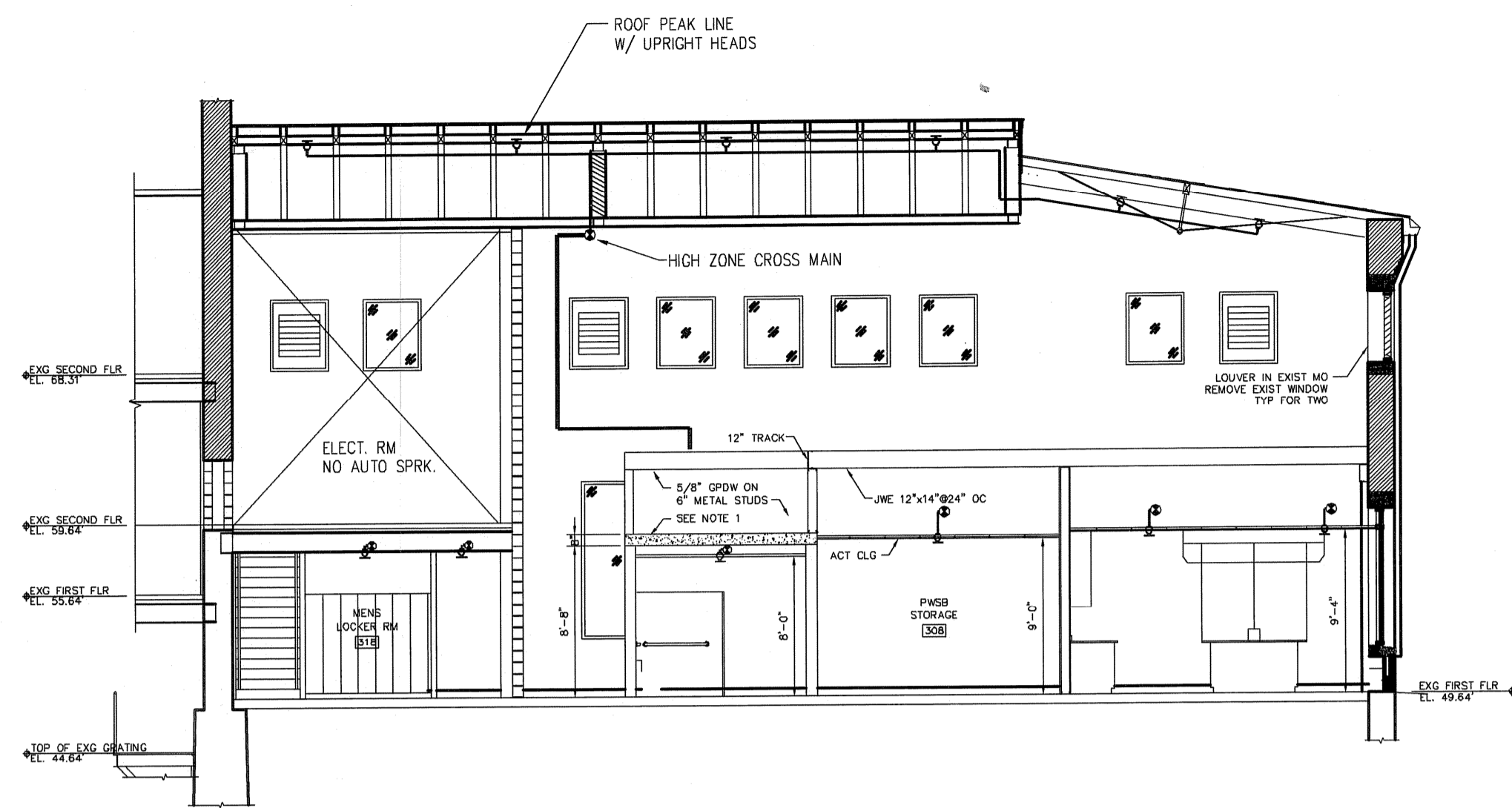
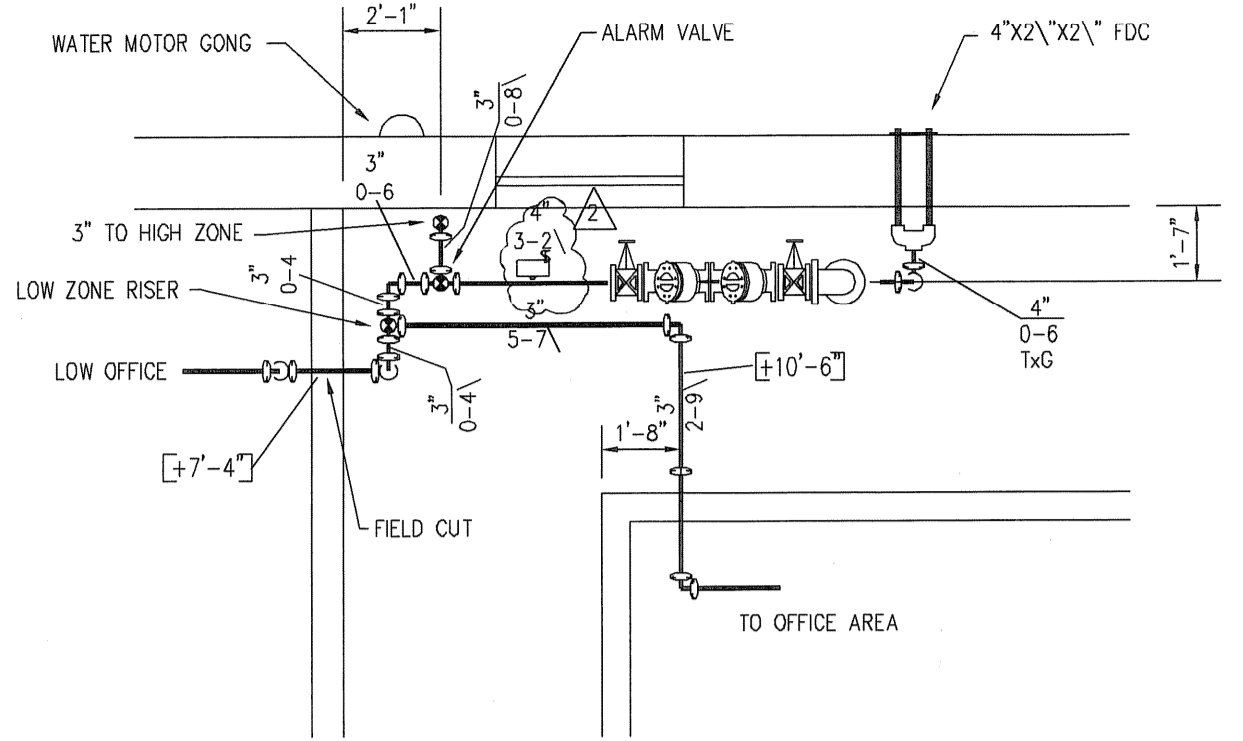
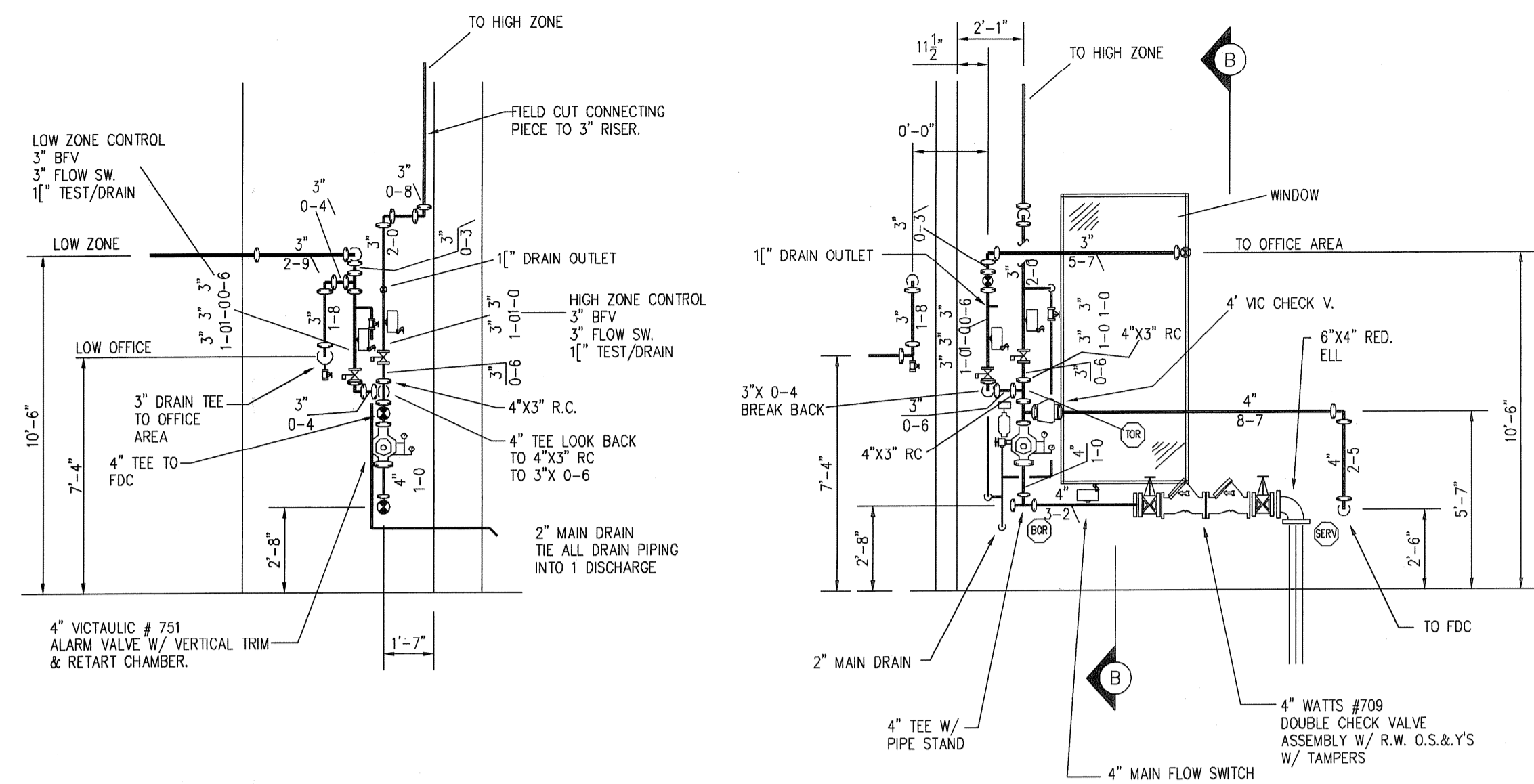
ROBERT H. SHELDON  
 No. 4103  
 No. 1147  
 No. 27109

PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL  
 WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
 SPRINKLING PLAN - FIRE PROTECTION

DESIGNED BY SC	DWG SCALE AS NOTED
DRAWN BY MJC	CONTRACT NO.
CHECKED BY	DATE OCTOBER 31, 2008

**EARTH TECH**  
 AS-BUILT FILE  
 JULY 2008



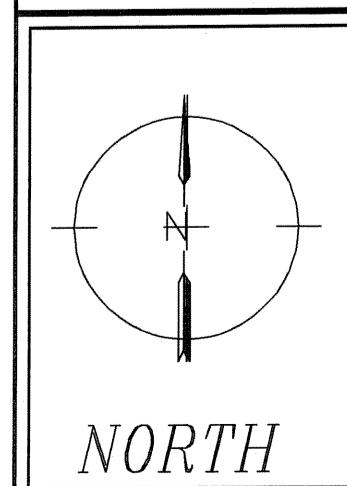


**AS BUILT DRAWING**

**HYDRALIC DESIGN INFO.**  
CALC# 1455 5-1 Office Area  
THIS SYSTEM HAS BEEN HYDRALICALLY CALCULATED BASED ON N.F.P.A. 13 ORDINARY HAZARD (GROUP 1) THIS SYSTEM WILL DELIVER A DENSITY OF .15 GPM/SQFT OF FLOOR AREA OVER A MAX. AREA OF 1500 SQFT WHEN SUPPLIED WITH WATER AT A RATE OF 618 GPM AT 49.8 PSI AT THE BASE OF THE RISER, REF. POINT # TEST  
TOTAL HOSE ALLOWANCE = 250 GPM

**HYDRALIC DESIGN INFO.**  
CALC# 1455 5-2 Above Office  
THIS SYSTEM HAS BEEN HYDRALICALLY CALCULATED BASED ON N.F.P.A. 13 ORDINARY HAZARD GROUP 1 THIS SYSTEM WILL DELIVER A DENSITY OF .15 GPM/SQFT OF FLOOR AREA OVER A MAX. AREA OF 1500 SQFT WHEN SUPPLIED WITH WATER AT A RATE OF 561 GPM AT 69.5 PSI AT THE BASE OF THE RISER, REF. POINT # TEST  
TOTAL HOSE ALLOWANCE = 250 GPM

**ROBERT H. SHELDON**  
No. 4103  
REGISTERED PROFESSIONAL ENGINEER  
3/1/09



**HYDRALIC DESIGN CRITERIA**

Density .15 GPM / 1500 SQ. FT.  
Spacing SEE PLAN  
K Factor 5.6 Head Size 1/2"  
Hose Allowance 250 GPM

Water Supply  
Static 136 PSI  
Residual 134 PSI  
Water Flowing 1500 GPM  
Size of Supply 6"

**SYSTEM DESIGN CRITERIA**

1.Type of Hazard ORDINARY GRP 1 2.Deflector Distance Varies  
3.Pipe Schedule Used N/A 4.Maximum Spacing 130 SQ.FT.  
5.Type of Construction OBSTRUCTED & UNOBSTRUCTED  
6.Maximum Square Footage Allowed 130 SQ.FT. OR SPRK. LISTING  
7.Hazard Group or Hydraulically Calculated  
8.Sprinklers in this system are designed to be in the center of the ceiling tile  
9.Owner is to provide heat throughout the building to prevent water in the system from freezing

**KEY PLAN**

- GENERAL NOTES**
- (\*) Denotes distance down in inches from deck to center line of pipe
  - + [0'-0"] Denotes distance in feet and inches from floor up to center line of pipe
  - Denotes Hydraulic Reference Points.
  - This system has been designed based on N.F.P.A. 13 2002 ed. and all State & Local codes.
  - Denotes pipe sleeve locations.
  - ↙ Denotes seismic brace location.

**REVISIONS**

No.	Date	Description
1	2/27/06	CALCULATED OVER HEAD SYSTEM
2	10/08/07	ADDED MAIN FLOW SWITCH

Symbol HANGERS Description  
ALL HANGERS PER N.F.P.A. 13

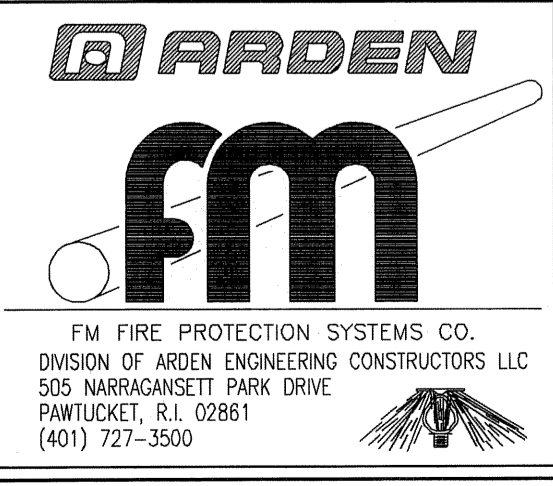
**NUMBER OF SPRINKLERS**

Total This Sheet:			Total This Job:		
Symbol	Size	Degree	Make	Model	No. Req'd
○	1/2"	155	MCTAULIG V2708 Q.R. CHROME REC PENDENT		34
○	1/2"	200	MCTAULIG V2704 Q.R. BRASS UPRIGHT		30

ENGINEERED BY  
**CPL**  
NICET LEVEL IV #93648  
DATE 09/02/05  
SCALE 1/8"=1'-0"  
DRAWING NUMBER  
**FP-5.1**

JOB NAME  
**Package 5 Lab Building  
PAWTUCKET REGIONAL  
WATER TREATMENT FACILITY  
85 BRANCH STREET  
PAWTUCKET, RHODE ISLAND**

STORIES 1 LEVEL CONST.  
CONTRACT No. 1455



**PLUMBING LEGEND**

- |— UNION
- |—|— ISOLATION VALVE
- |—|—|— CHECK VALVE
- |—|—|—|— PIPE DOWN
- |—|—|—|—|— PIPE UP
- |—|—|—|—|—|— PIPE UP AND DOWN
- |—|—|—|—|—|—|— BALL VALVE
- |—|—|—|—|—|—|—|— THERMOSTATIC MIX VALVE

**PLUMBING ABBREVIATIONS**

- AWCO ACID WASTE CLEANOUT
- BFP BACKFLOW PREVENTER
- CO CLEANOUT
- CW COLD WATER
- DWH DOMESTIC WATER HEATER
- ED EQUIPMENT DRAIN
- EFSW EMERGENCY EYE/FACE AND SHOWER WASH
- FCO FLOOR CLEANOUT
- FD FLOORDRAIN
- FPHB FREEZE PROTECTED HOSE BIBB
- G GAS
- HB HOSE BIBB
- HNDCP HANDICAPPED
- HW HOT WATER
- I.E. INVERT ELEVATION
- JS JANITOR SINK
- LAV LAVATORY
- MB MOP BASIN
- MF MIXING FAUCET
- PRV PRESSURE REDUCING VALVE
- SAN SANITARY
- SK SINK
- TW TEMPERED WATER
- V SANITARY VENT
- VB VACUUM BREAKER
- VTR VENT THROUGH ROOF
- WC WATER CLOSET
- WCO WALL CLEANOUT

**UTILITY PIPELINE DESIGNATIONS**

- — — — — COLD WATER
- — — — — HOT WATER
- · · · · · TEMPERED WATER
- — — — — NPW NON-POTABLE WATER
- — — — — G GAS SUPPLY
- — — — — V SANITARY VENT
- — — — — AV ACID WASTE VENT
- — — — — VTR VENT TO ROOF
- — — — — RD ROOF DRAIN
- — — — — ST STORM DRAIN
- — — — — ST STORM DRAIN BELOW GROUND
- — — — — AW ACID WASTE
- — — — — SAN SANITARY BELOW GROUND
- — — — — SAN SANITARY ABOVE GROUND

**PLUMBING GENERAL NOTES – TYPICAL FOR ALL PLUMBING DRAWINGS:**

1. VERIFY PLUMBING FIXTURE ROUGH-INS PRIOR TO START OF WORK.
2. PROVIDE APPROVED FIRE STOP MATERIAL WHERE PIPING PENETRATES FIRE RATED WALLS.
3. ALL SHUT-OFF VALVES, AND WATER HAMMER ARRESTERS SHALL BE LOCATED IN ACCESSIBLE LOCATIONS OR SHALL BE ACCESSIBLE THROUGH AN ACCESS DOOR OR PANEL.
4. FIELD VERIFY ALL SITE UTILITY LOCATIONS AND INVERTS PRIOR TO START OF WORK.
5. NO PORTION OF THE DRAINAGE SYSTEM INSTALLED UNDERGROUND SHALL BE LESS THAN TWO INCHES IN DIAMETER.
6. INSTALL WATER HAMMER ARRESTERS (WHA) PER PDI REQUIREMENTS AND PER GOOD ENGINEERING PRACTICES.
7. DETAILS AND DIAGRAMS SHOW GENERAL INSTALLATION REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL CODES, RULES AND REGULATIONS OF LOCAL AUTHORITY HAVING JURISDICTION.
8. CORE DRILLING OF STRUCTURAL MEMBERS IS PROHIBITED.
9. FLOOR DRAIN OUTLET PIPES SHALL BE THE SAME SIZE AS ATTACHED SERVICE
10. PROVIDE ALL COLD WATER LINES AND HOT WATER LINES TO PLUMBING FIXTURES WITH ISOLATION VALVES.
11. ALL PIPE OPENINGS IN WALLS, CEILINGS AND SLAB REQUIRED BY THE WORK AS SHOWN ON THESE DRAWINGS SHALL BE COORDINATED BY THE CONTRACTOR WITH LOCATIONS AS SHOWN ON THE STRUCTURAL FIELD DRAWINGS.

**PLUMBING FIXTURE SPECIFICATIONS**

- P-1 HANDICAPPED WATER CLOSET: ELJER 111-2875 OR EQUIVALENT, FLOOR MOUNTED, VITREOUS CHINA, SIPHON JET, PROVIDE #124-2106 FRONT SEAT
  - P-1A HANDICAPPED WATER CLOSET: ELJER 111-2185 OR EQUIVALENT, WALL HUNG, VITREOUS CHINA, SIPHON JET, PROVIDE #124-2106 FRONT SEAT
  - P-2 LAVATORY: AMERICAN STANDARD WALL HUNG LAVATORY #9141.011, OR EQUIVALENT. 4" CENTERS, CONCEALED ARM SUPPORT, 27"x20". PROVIDE AMERICAN STANDARD GOOSENECK FAUCET #7516.172, WITH AERATOR AND 4" WRIST HANDLES. MOUNT FIXTURE TO MEET HANDICAPPED REQUIREMENTS.
  - P-3 URINAL: AMERICAN STANDARD 6501.010 WALL HUNG WASH OUT URINAL WITH INTEGRAL EXTENDED SHIELDS, FLUSHING RIM AND TRAP, 3/4" TOP SPUD, 2" IPS FEMALE OUTLET CONNECTION
  - P-4 UTILITY SINK: AMERICAN STANDARD NO. 7695.008 "AKRON" OR EQUAL. 8" CENTERS, ENAMELED CAST IRON WITH RIM GUARD, AMERICAN STANDARD NO. 8340.243 FAUCET, AQUASEAL RENEWABLE VALVES AND SEAT, BUCKET HOOK, ROUGH CHROME FINISH. AMERICAN STANDARD NO. 7798-020 OR EQUAL, STANDARD TRAP WITH STRAINER, AND CLEANOUT PLUG.
  - P-5 WATER COOLER: HALSEY TAYLOR MODEL OVL-11 BY LEVEL FOUNTAIN, WATER FOUNTAIN. MOUNT FIXTURE TO MEET HANDICAP REQUIREMENTS, STAINLESS STEEL WITH PUSH BAR ACTUATION AND INLET STRAINER.
  - P-6 LAB SINK: PROVIDED BY OTHERS IN SPECIFICATION 12300. INSTALLED BY PLUMBING CONTRACTOR IN SPECIFICATION 15400.
  - P-7 CUP SINK: PROVIDED BY OTHERS IN SPECIFICATION 12300. INSTALLED BY PLUMBING CONTRACTOR IN SPECIFICATION 15400.
  - P-8 EMERGENCY SHOWER (INDOOR): SPEAKMAN MODEL SE-236-PR OR EQUIVALENT. SHOWER HEAD, 10" FLUSH MOUNTED, CHROME PLATED, 1" VALVE WITH NPT FEMALE BRASS, CHROME PLATED STAY OPEN VALVE. HIGH VISIBILITY YELLOW ALUMINUM PULL ROD.
  - P-9 EMERGENCY EYEWASH: SPEAKMAN MODEL SE582 OR EQUIVALENT. WALL MOUNTED EYEWASH WITH STAINLESS STEEL BOWL, (2) AERATED YELLOW ABS PLASTIC SPRAY OUTLETS WITH DUST CAPS, 1/2" NPT FEMALE BRASS CHROME PLATED VALVE, STAINLESS STEEL PUSH HANDLE, UNIVERSAL EMERGENCY SIGN. PROVIDE WITH MODEL 9001 VISUAL/AUDIBLE ALARM SYSTEM.
- ELECTRICAL DATA: 5 AMPS, 120V/1ø/5/60. PROVIDE WITH ALARM CONTACT FOR REMOTE ALARM
- FPHB FROST PROOF HOSE BIBB: WOODFORD MODEL 65C - 3/4 INCH, OR EQUAL. POLISHED BRASS FINISH ON BRASS CASTINGS, VACUUM BREAKER - BACK FLOW PREVENTER, LOOSE KEY OPERATOR.
  - FCO FLOOR CLEAN OUT: ZURN MODEL Z-1400 OR EQUIVALENT. HEAVY DUTY ADJUSTABLE FLOOR CLEANOUT. DURA COATED CAST IRON BODY WITH WATERTIGHT ABS TAPERED THREAD PLUG. ROUND SCORIATED HEAVY DUTY DURESIST COVER AND ANCHOR FLANGE.
  - FD-A FLOOR DRAIN: ZURN ZB-551-Y OR EQUIVALENT. 5" TYPE 'B' STRAINER OR EQUAL. 3" OUTLET
  - FD-B FLOOR DRAIN: ZURN ZB-415 OR EQUIVALENT. 5" TYPE 'B' STRAINER OR EQUAL. 4" OUTLET
  - OCO OUTDOOR CLEAN OUT: LABARON MODEL LA0910 OR EQUAL. HEAVY DUTY ADJUSTABLE FLOOR CLEANOUT WITH 5" ROUND NON-SLIP COVER, BRONZE BODY WITH WATERTIGHT ABS TAPERED THREADED PLUG. CLEANOUT TO BE ENCASED IN 18" DIAMETER X 6" DEEP CONCRETE COLLAR.
  - TMV THERMOSTATIC MIX VALVE: POWERS ES-200 MIN FLOW 3.0 GPM, MAX FLOW 30.0 GPM @ 20 PSI
  - ANT ACID NEUTRALIZATION TANK: ASA INDUSTRIES MODEL TC2915KA, 30 GAL CAPACITY, 250 LBS LIMESTONE, 3" INLET AND OUTLET PIPING CONNECTIONS.

**ELECTRIC WATER HEATER SCHEDULE**

TAG NO.	TANK STORAGE (GAL.)	LOCATION	RECOVERY RATE (GPH) AT 100° RISE	TEMP SETTING	HEATING ELEMENT (KW)	VOLTAGE	PHASE	MANUFACTURER AND MODEL NO.
EW-1	85	STORAGE RM	62	120	12KW	480	3	RHEEM MODEL E85-12G

**PLUMBING FIXTURE SCHEDULE**

TAG	PIPE CONNECTION SIZE TO FIXTURES & FITTINGS (INCHES)						FIXTURE OR FITTING
	CW	HW(120°F)	TW (TEMPERED)	NP	SANITARY	VENT	
P-1	1	-	-	-	3	2	WATER CLOSET
P-1A	1	-	-	-	3	2	WATER CLOSET
P-2	1/2	1/2	-	-	2	1 1/2	LAVATORY
P-3	1	-	-	-	2	1 1/2	URINAL
P-4	1/2	1/2	-	-	2	1 1/2	MOP SINK
P-5	1/2	-	-	-	2	1 1/2	DRINKING FOUNTAIN
P-6	1/2	1/2	-	-	2	1 1/2	LAB SINK (1)
P-7	-	-	-	1/2	2	-	CUP SINK (1)(2)
P-8	-	-	1 1/4	-	-	-	EMERGENCY SHOWER
P-9	-	-	1 1/4	-	-	-	EMERGENCY EYEWASH
P-10	-	1/2	-	-	2	1 1/2	DISHWASHER (1)

- (1) FURNISHED BY OTHERS, INSTALLED BY PLUMBING CONTRACTOR.
- (2) LOCATED IN LABORATORY EXHAUST HOOD.

FULL SIZE DRAWING = 4"

NO.	BY	SC	DATE
2	DPB	AM	JULY 2008
1	AM	SC	10/21/06
0	SC	SC	04/05

AS-BUILT DRAWING FILE  
ISSUED FOR RF POSTED SET  
ISSUED FOR CONSTRUCTION

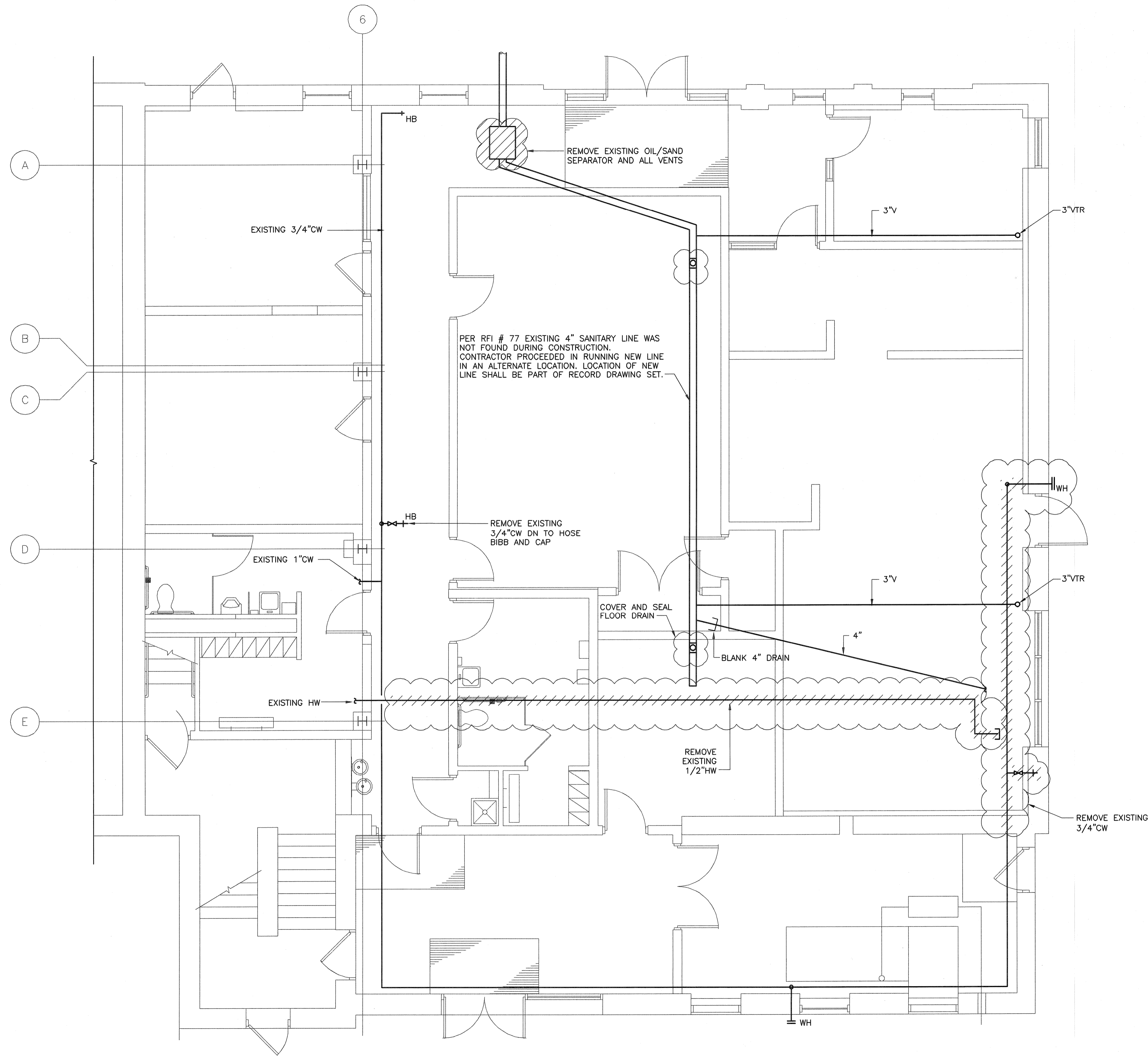
ROBERT H. SHELDON  
4/03  
[Signature]

PAWTUCKET, RHODE ISLAND  
PAWTUCKET REGIONAL  
WATER TREATMENT FACILITY  
PKG 5 - LAB AND OFFICE AREA  
GENERAL NOTES, LEGENDS AND  
ABBREVIATIONS - PLUMBING

DESIGNED BY SC	DWG SCALE N/A
DRAWN BY MJC	CONTRACT NO.
CHECKED BY	DATE OCTOBER 31, 2008

**EARTH TECH**  
AS-BUILT FILE  
JULY 2008

Filename: L:\WORK\69993\CAD\AS-BUILT\5) WTP\PLUMB\69993-P2.DWG  
 Plot File Date Created: Sep/22/2006 10:52 AM



**DEMOLITION PLAN - PLUMBING**  
 SCALE: 1/4" = 1'-0"

FULL SIZE DRAWING = 4"	
NO.	REVISIONS
2	AS-BUILT DRAWING FILE DPB JULY 2008
1	ISSUED FOR RFI POSTED SET AH 10/31/06
0	ISSUED FOR CONSTRUCTION SC 01/05
	BY DATE

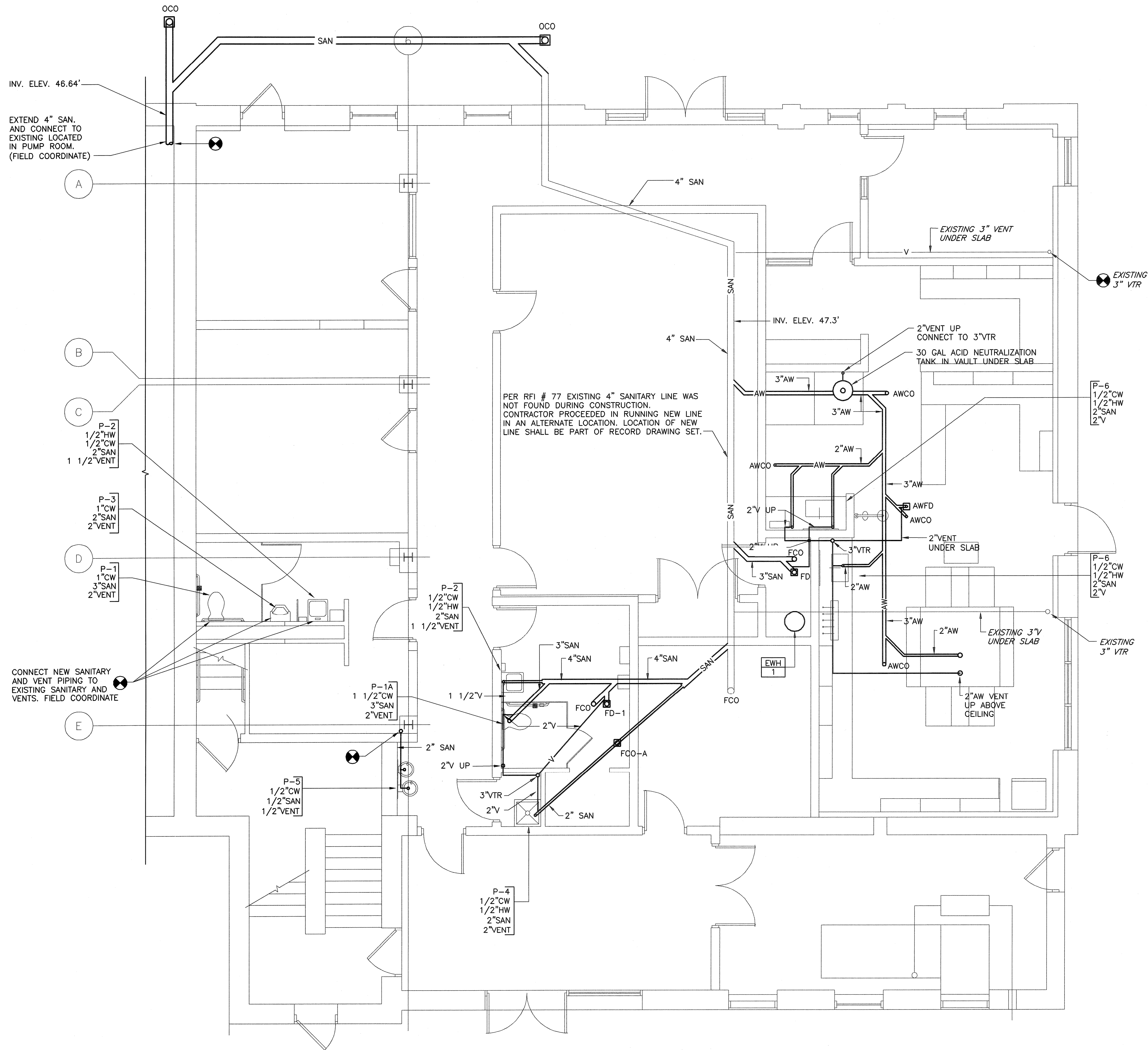
ROBERT H. SHELDON  
 No. 4103  
 State of Rhode Island  
 Professional Engineer  
 No. 17109

PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL  
 WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
 DEMOLITION PLAN - PLUMBING

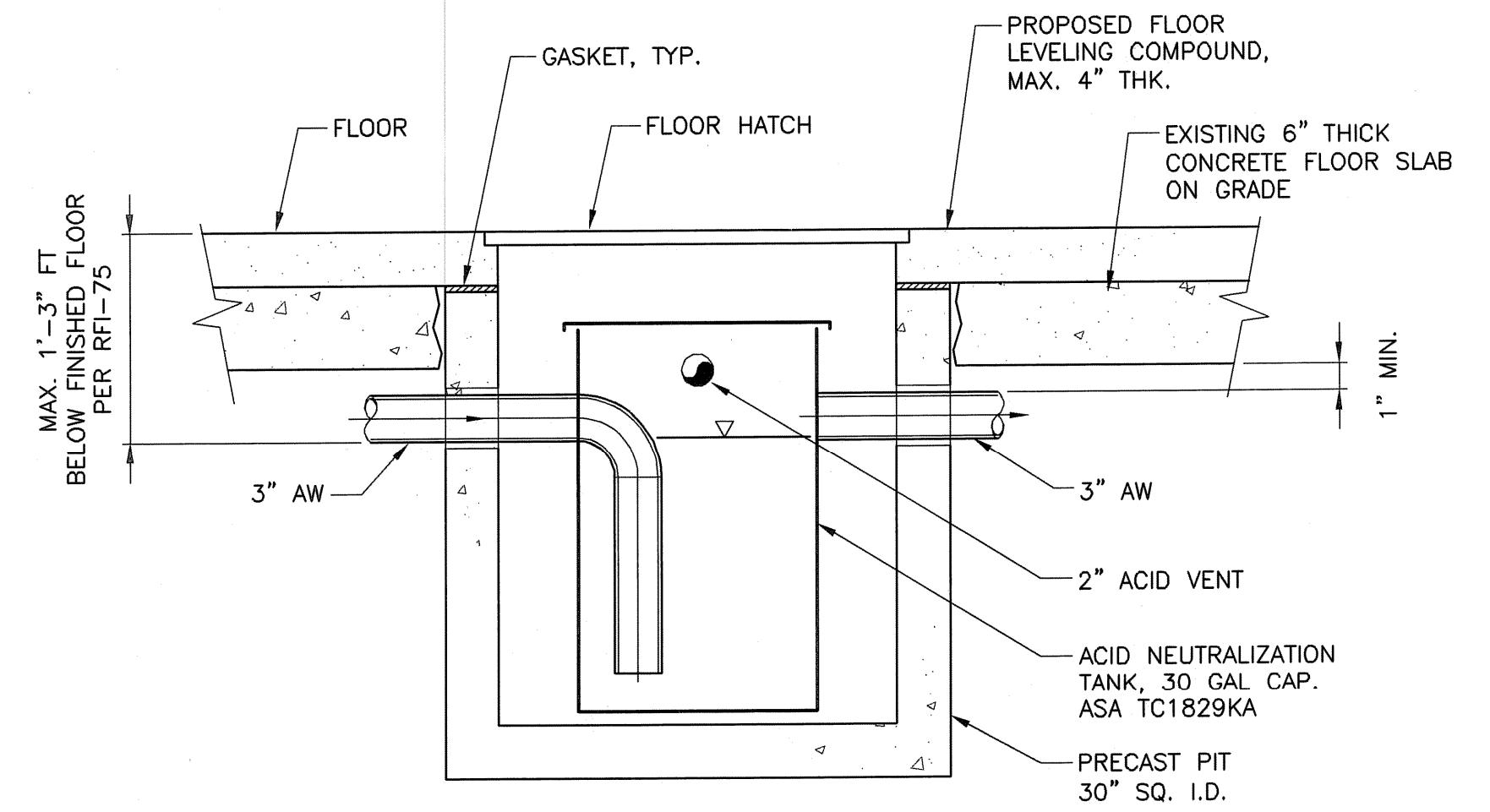
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DRAWN BY MAC	CONTRACT NO.
CHECKED BY XXX	DATE OCTOBER 31, 2006

**EARTH TECH**  
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 JULY 2008

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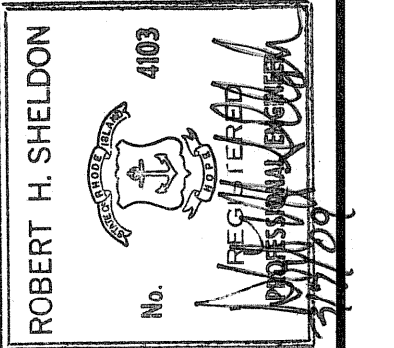


**FLOOR PLAN - SANITARY DRAINS**  
 SCALE: 1/4" = 1'-0"



**ACID NEUTRALIZATION TANK**  
 SCALE: 1" = 1'-0"

FULL SIZE DRAWING = 4"		
NO.	REV.	DATE
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1	ISSUED FOR RFI POSTED SET	10/21/06
0	ISSUED FOR CONSTRUCTION	04/05
	REVISIONS	

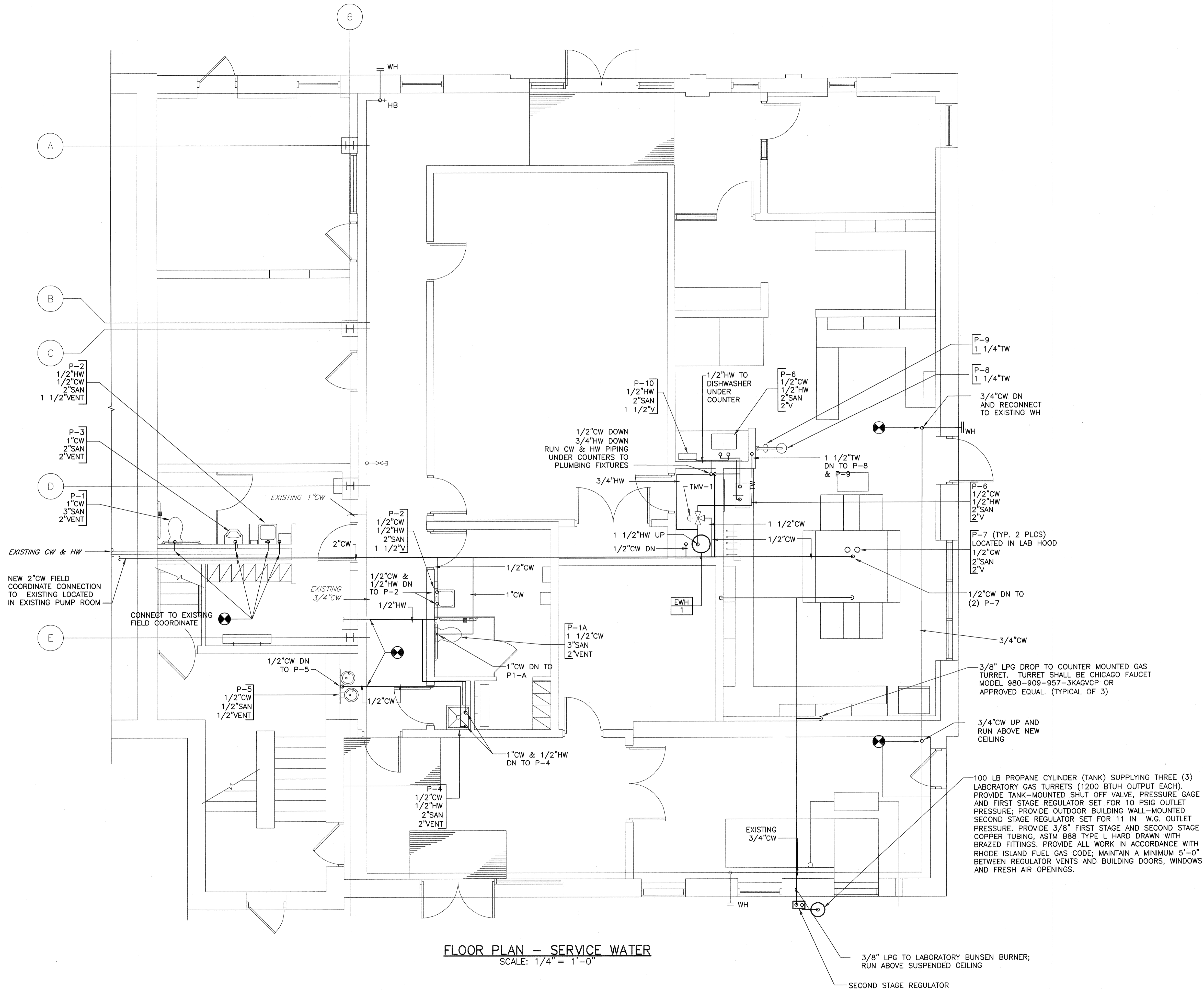


PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
 FLOOR PLAN - PLUMBING  
 SANITARY DRAINS AND VENTS

DESIGNED BY SC	DWG SCALE AS NOTED
DRAWN BY MJC	CONTRACT NO.
CHECKED BY XXX	DATE OCTOBER 31, 2008

**EARTH TECH**  
 AS-BUILT FILE  
 JULY 2008

Filename: L:\WORK\69993\CAD\AS-BUILT\5) WTP\PLUMB\69993-P4.DWG  
 Plot File Date Created: Sep/22/2008 10:52 AM



**FLOOR PLAN - SERVICE WATER**  
 SCALE: 1/4" = 1'-0"

FULL SIZE DRAWING = 4"

NO.	BY	DATE	REVISIONS
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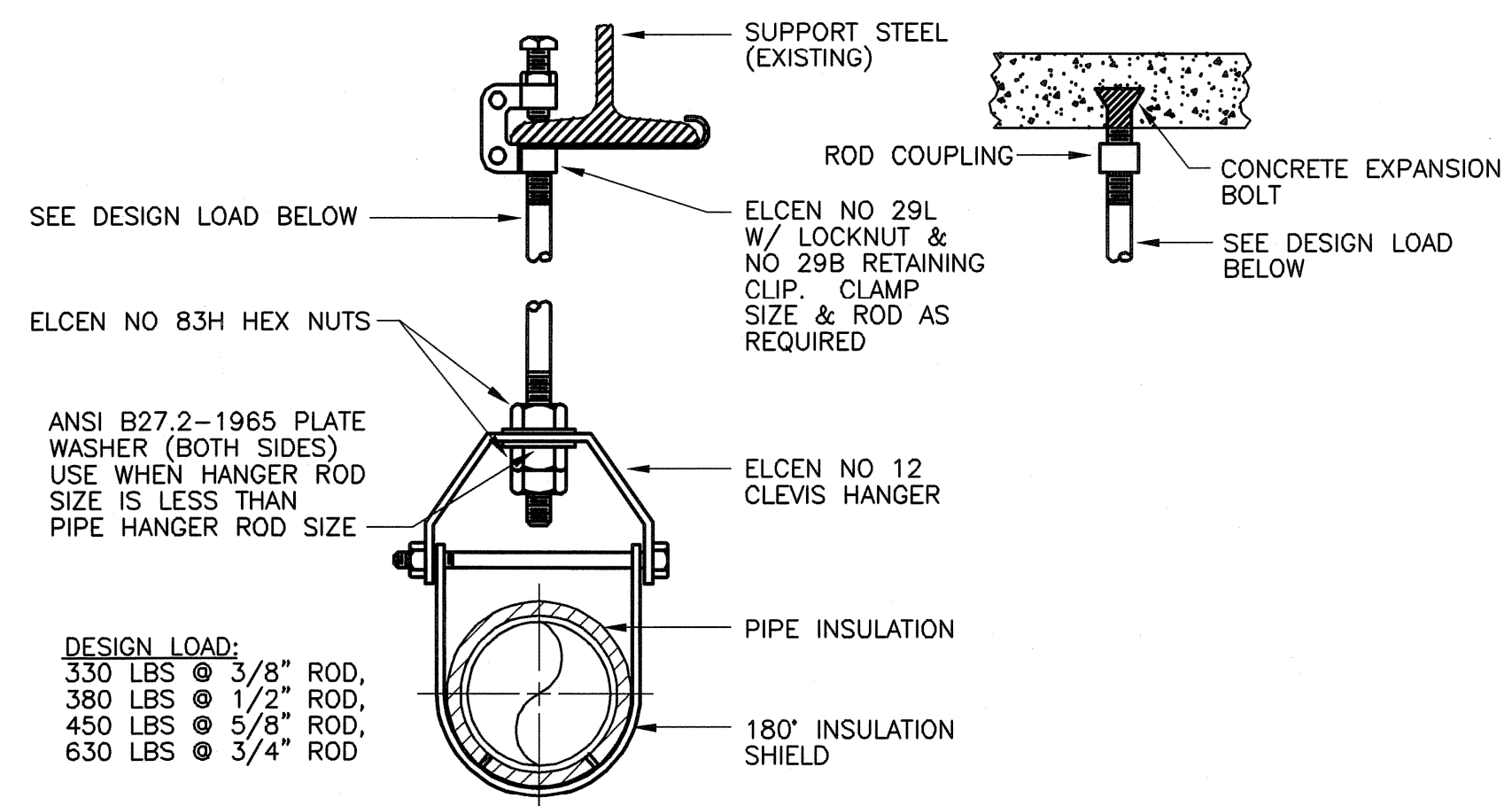
ROBERT H. SHELDON  
 No. 0103  
 [Professional Seal]

PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL  
 WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
 FLOOR PLAN - PLUMBING  
 SERVICE WATER

DESIGNED BY	DWG SCALE
SC	AS NOTED
DRAWN BY	CONTRACT NO.
H.C.	
CHECKED BY	DATE
XXX	OCTOBER 31, 2008

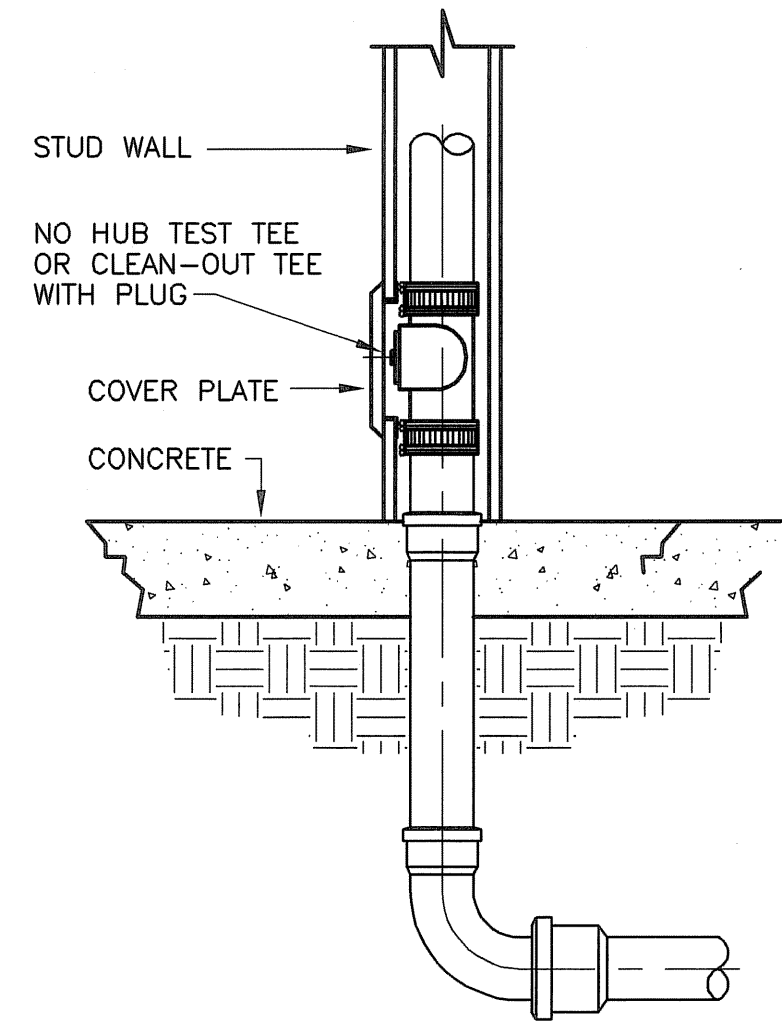
**EARTH TECH**  
 AS-BUILT FILE  
 JULY 2008

P-4  
 SHEET OF

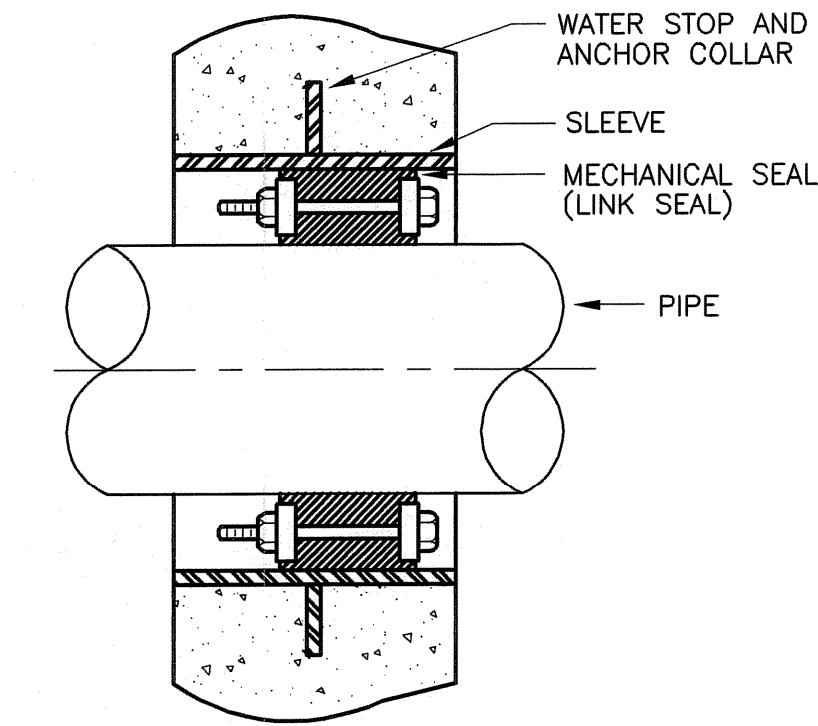


**TYPICAL PIPE SUPPORT DETAIL**  
NOT TO SCALE

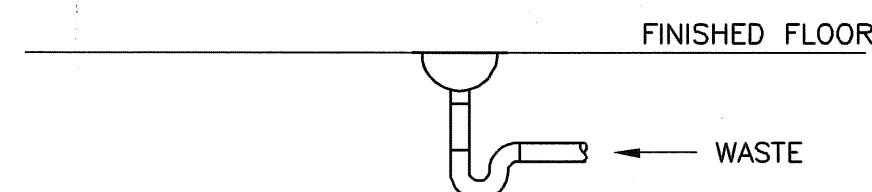
DESIGN LOAD:  
330 LBS @ 3/8" ROD,  
380 LBS @ 1/2" ROD,  
450 LBS @ 5/8" ROD,  
630 LBS @ 3/4" ROD



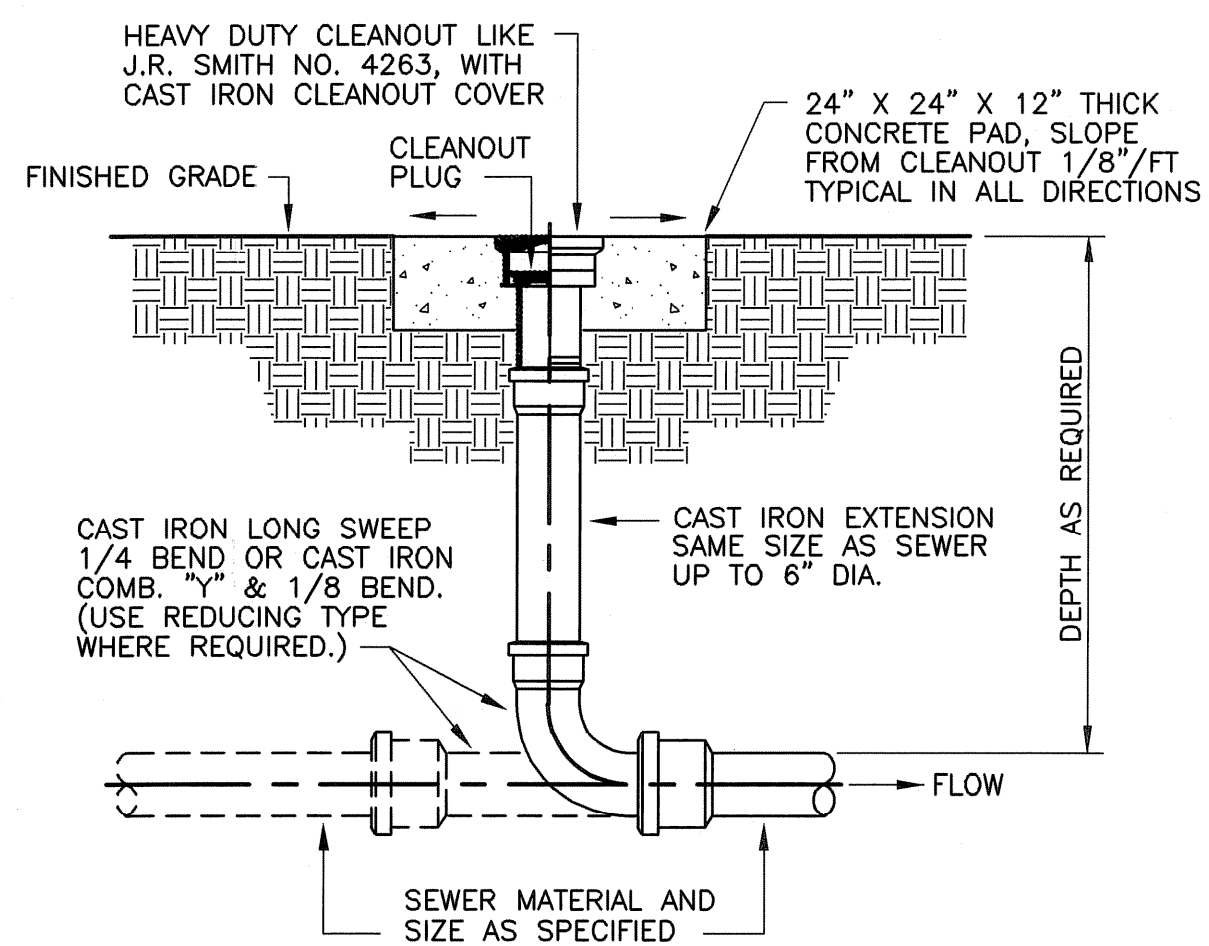
**TYPICAL WALL CLEANOUT DETAIL**  
NOT TO SCALE



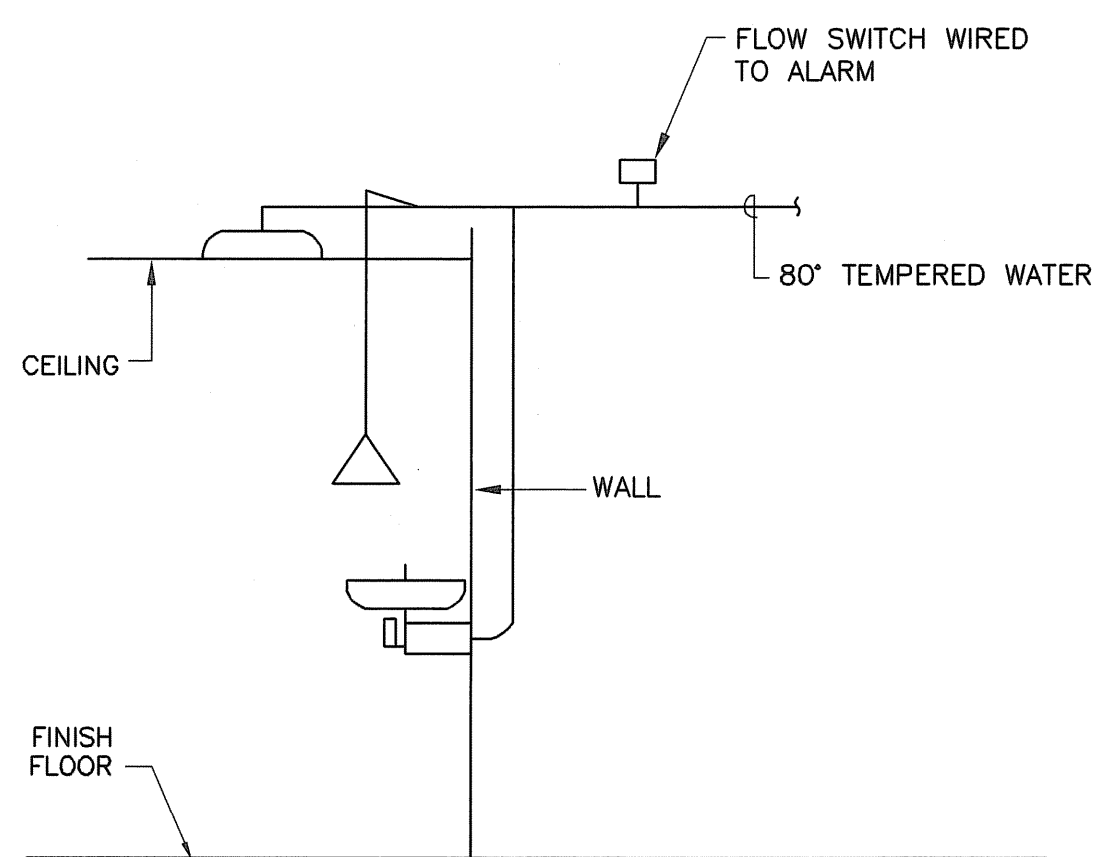
**PIPE SLEEVE THROUGH FLOOR/WALL DETAIL**  
NOT TO SCALE



**FLOOR DRAIN DETAIL**  
NOT TO SCALE

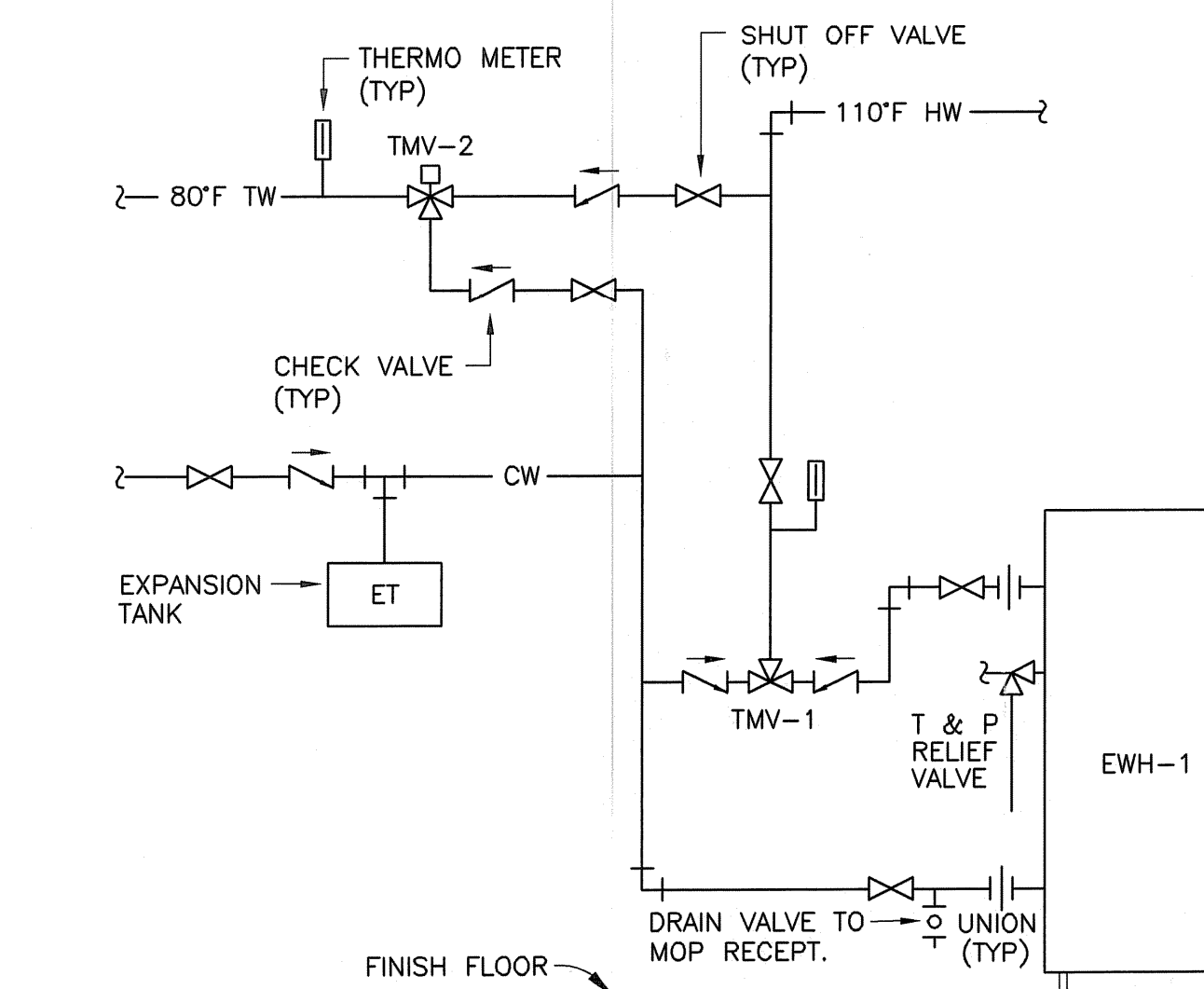


**EXTERIOR CLEANOUT DETAIL**  
NOT TO SCALE



**EYEWASH/SHOWER PIPING DETAIL**  
NOT TO SCALE

NOTE:  
UNIT SHALL INCLUDE FLOW ACTIVATOR SWITCH TO TRANSMIT SIGNAL WHEN UNIT IS IN USE, (DRY CONTACT).



**ELECTRIC WATER HEATER DETAIL**  
NOT TO SCALE

FULL SIZE DRAWING = 4"

NO.	DATE	BY	CHK	REVISIONS
2	JULY 2008	AM	SC	AS-BUILT DRAWING FILE
1	AM	SC	SC	ISSUED FOR BIDDING SET
0				ISSUED FOR CONSTRUCTION
				REVISIONS

ROBERT H. SHELDON  
No. 4103  
Professional Engineer  
State of Rhode Island  
7/7/09

PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL  
WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
DETAILS - PLUMBING

DESIGNED BY SC	DWG SCALE AS NOTED
DRAWN BY MAC	CONTRACT NO.
CHECKED BY	DATE OCTOBER 31, 2008

**EARTH TECH**  
AS-BUILT FILE  
JULY 2008

PLOT FILE: L01E\_C:\PROJECTS\SEP7\21720\DWG 10-26-08

SINGLE LINE AND SCHEMATIC DIAGRAM SYMBOLS

Table containing various electrical symbols and their descriptions, including MCB, MCP, RVNR, transformer symbols, lighting arresters, fuses, motors, and power circuit breakers.

LIGHTING LEGEND

Table of lighting symbols: ceiling outlets, wall mounted fixtures, fluorescent fixtures, night light fixtures, wall outlets, exit signs, emergency lighting units, and remote emergency lighting heads.

SWITCH LEGEND

Table of switch symbols: single pole switch, double pole switch, three way switch, four way switch, and wall mounted timer switch.

WIRING DEVICE LEGEND

Table of wiring device symbols: 20A-2P-3W-208V receptacle, duplex receptacle, simplex receptacle, special purpose receptacle, ground fault receptacle, and duplex receptacle with grounded type.

BRANCH CIRCUIT AND FEEDER LEGEND

Table of branch circuit and feeder symbols: conduit run exposed, homerun, conduit run concealed, conduit run underground, flexible conduit, conduit turning up, and conduit turning down.

MOTOR AND CONTROL LEGEND

Table of motor and control symbols: disconnect switch, manual motor starter, magnetic motor starter, unit heater, lighting or heating contactor, thermostat, emergency push button, and manual motor starter switch.

FIRE ALARM SYSTEM SYMBOLS

Table of fire alarm system symbols: manual fire alarm station, fire alarm audio/visual device, fire alarm beacon, fire alarm visual device, smoke detector, duct smoke detector, remote test station, heat detector, flow switch, tamper switch, fire alarm control panel, fire alarm annunciator panel, and remote alarm indicating light.

ABBREVIATIONS

Large table of abbreviations and their meanings, including LO (Lockout), LR (Latching Relay), LS (Limit Switch), and many others.

GENERAL NOTES

- 1. ALL CONDUIT AND EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND APPLICABLE LOCAL CODES.
2. PROVIDE GROUND CONNECTIONS TO WATER PIPES, IN EACH FACILITY BONDING JUMPERS, CONDUIT CLAMPS AND POINTS OF ATTACHMENT ARE NOT SHOWN ON DRAWINGS.
3. CONDUIT INSTALLATIONS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS.

POWER DISTRIBUTION LEGEND: Symbols for surface mounted power panel, flush mounted power panel, surface mounted lighting panel, flush mounted lighting panel, and transformer.

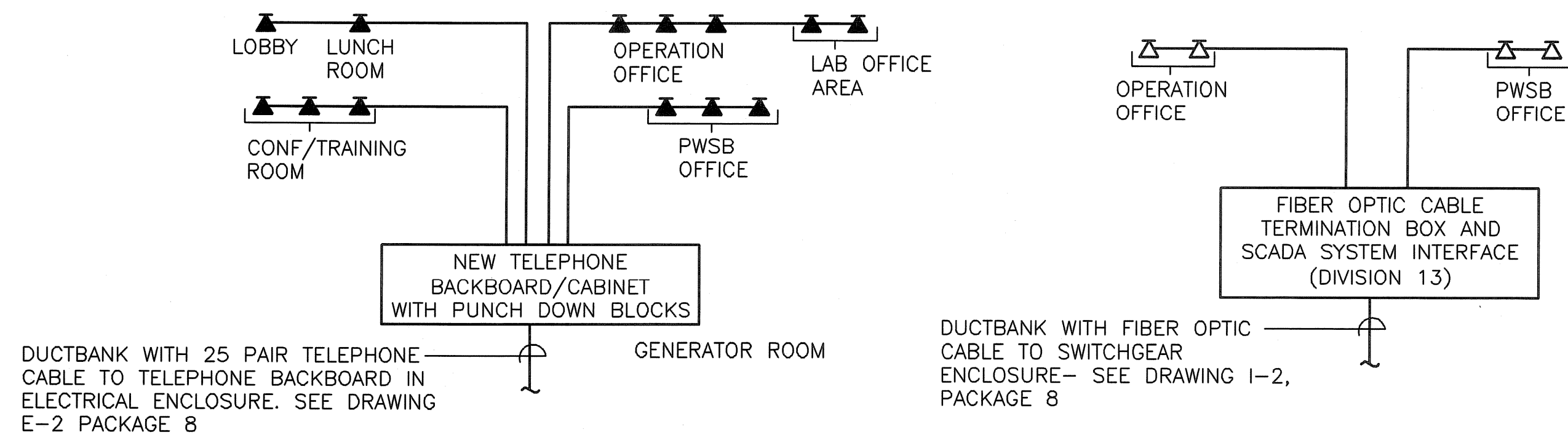
SITE AND GROUNDING LEGEND: Symbols for power company pole, ground rod, and building ground grid.

SECURITY LEGEND: Symbols for magnetic door switch, security alarm control panel, door bell, key pad, card reader, and security alarm beacon.

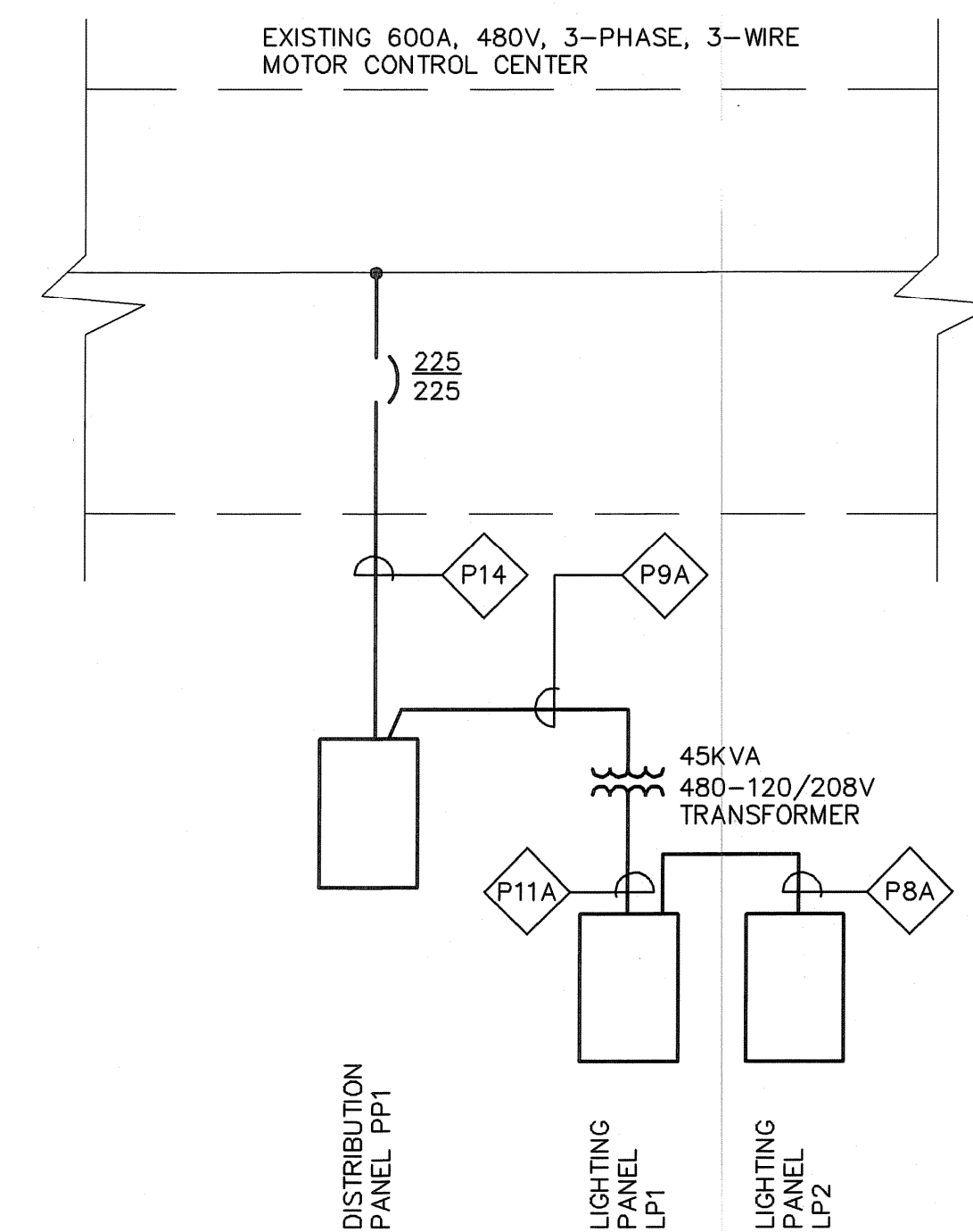
COMMUNICATIONS SYSTEM SYMBOLS: Symbols for telephone outlet, data outlet, ceiling speaker, wall speaker, wall mounted intercom horn, speaker amplifier, and handset.

Vertical sidebar containing EarthTech logo, project title (PAWTUCKET REGIONAL WATER TREATMENT FACILITY), drawing title (PKG 5 - LAB AND OFFICE AREA), legend, abbreviations, and general notes, along with a revision table and design information.

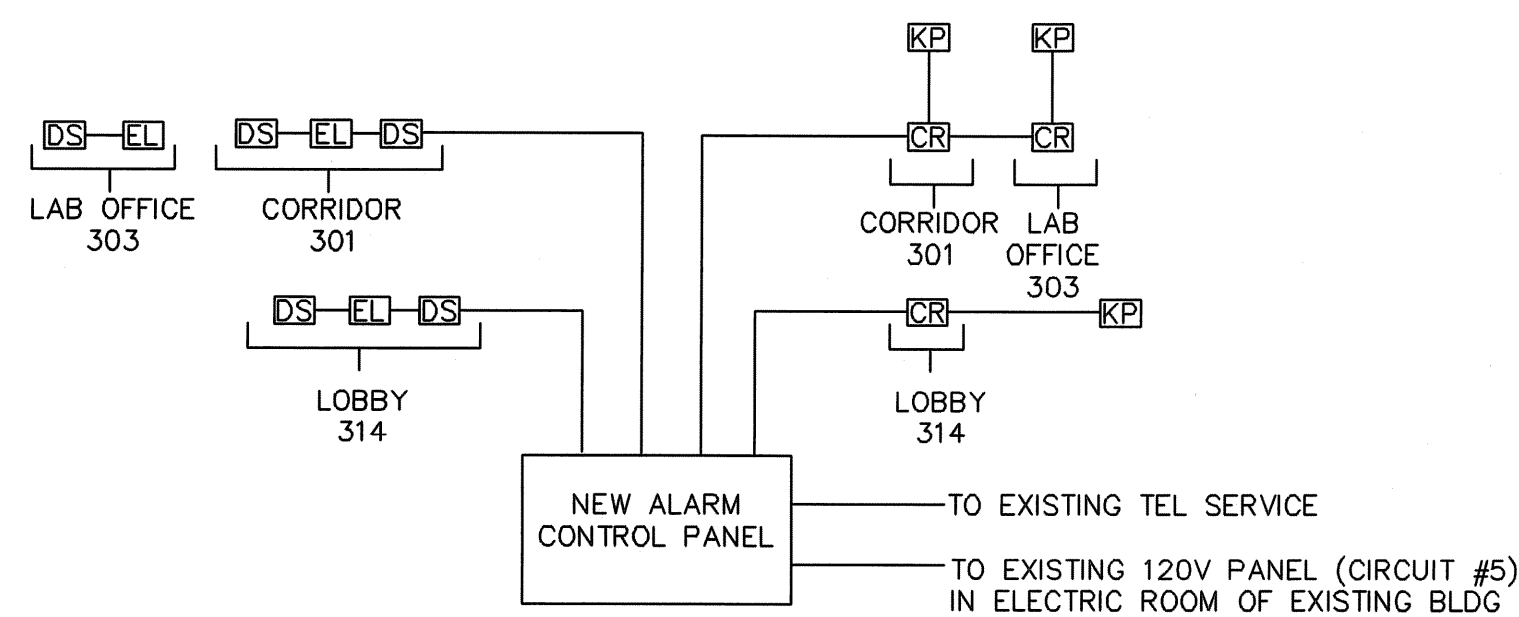
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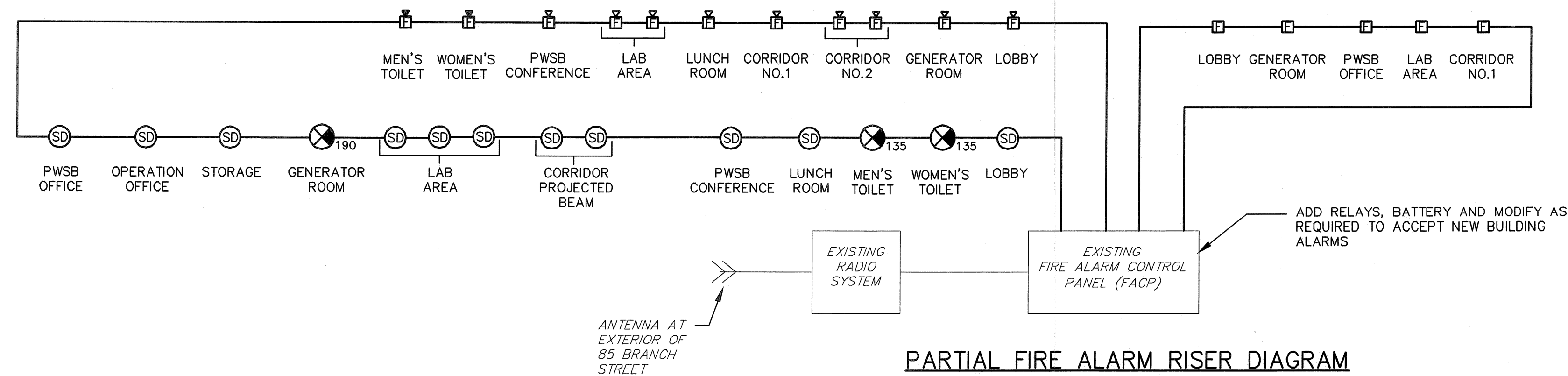
**PARTIAL COMMUNICATIONS/SCADA RISER**  
 NOT TO SCALE



**PARTIAL SINGLE LINE DIAGRAM**  
 NOT TO SCALE



**ADDITIONS TO ACCESS CONTROL/SECURITY SYSTEM RISER DIAGRAM**  
 NOT TO SCALE



**PARTIAL FIRE ALARM RISER DIAGRAM**  
 NOT TO SCALE

**FIRE ALARM SYSTEM NOTES**

1. SEE SHEET E-1 FOR SYMBOLS, ABBREVIATIONS AND GENERAL NOTES.
2. MINIMUM SIZE CONDUIT SHALL BE 3/4" UNLESS NOTED OTHERWISE.
3. SYSTEM WIRING SHALL BE INSTALLED IN ACCORDANCE WITH EQUIPMENT SUPPLIERS APPROVED SHOP DRAWINGS AND WIRING DIAGRAMS.
4. RISER DIAGRAM MAY NOT SHOW ENTIRE SYSTEM. REFER TO FLOOR PLANS FOR FINAL QUANTITIES AND LOCATIONS OF SYSTEM DEVICES AND EQUIPMENT.
5. TWO CIRCUITS ARE REQUIRED FOR AUDIO/VISUAL SIGNALS. SIGNALS SHALL BE ALTERNATELY WIRED.

ROBERT H. SHELDON  
 No. 4103  
 Professional Seal

PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
 MISC. RISER DIAGRAMS

DESIGNED BY DW	DWG SCALE AS NOTED
DRAWN BY DW	CONTRACT NO.
CHECKED BY WS	DATE OCTOBER 31, 2008

**EARTH TECH**  
**AS-BUILT FILE**  
 JULY 2008

E-2  
 SHEET OF

FULL SIZE DRAWING = 4"	
NO.	DATE
2	JULY 2008
1	NOV 21/08
0	4/05
BY	REVISIONS



POWER CABLE/CONDUIT SCHEDULE			
SYMBOL	CONDUIT SIZE	CONDUCTORS	GRD
P1	3/4"	2#12	1#12
P2	3/4"	2#10	1#10
P3	3/4"	2#8	1#10
P4	3/4"	3#12	1#12
P5	3/4"	3#10	1#10
P6	3/4"	4#10	1#10
P7	1"	3#8	1#10
P8	1 1/2"	3#6	1#10
P8A	1 1/2"	3#4	1#10
P9	1 1/2"	4#4	1#10
P9A	1 1/2"	3#2	1#10
P9B	1 1/2"	3#3	1#10
P10	1 1/2"	4#3	1#10
P10A	1 1/2"	3#1	1#6
P11	2"	4#1	1#2
P11A	2"	3#1/0	1#2
P12	2"	3#2/0	1#2
P13	2"	3#3/0	1#2
P13A	(2 SETS OF) 2"	(2 SETS OF) 3#3/0	(2 SETS OF) 1#2
P13B	(2 SETS OF) 2"	(2 SETS OF) 4#3/0	(2 SETS OF) 1#2
P14	2 1/2"	3#4/0	1#2
P14A	2 1/2"	4#4/0	1#2
P15	2 1/2"	3-250 KCMIL	1#2/0
P16	3"	3-350 KCMIL	1#2/0
P16A	(2 SETS OF) 3 1/2"	(2 SETS OF) 3-350 KCMIL	(2 SETS OF) 1#2/0
P17	3 1/2"	3-500 KCMIL	1#2/0
P18	(2 SETS OF) 3 1/2"	(2 SETS OF) 3-300 KCMIL	(2 SETS OF) 1#2/0
P18A	(2 SETS OF) 3 1/2"	(2 SETS OF) 3-300 KCMIL 2#14	(2 SETS OF) 1#2/0
P18B	(4 SETS OF) 3 1/2"	(4 SETS OF) 3-300 KCMIL	(4 SETS OF) 1#2/0
P18C	3 1/2"	3-300 KCMIL	1#2/0
P18D	3 1/2"	4-300 KCMIL	1#2/0

NOTE: THIS IS A STANDARD SCHEDULE AND ALL FIXTURES MAY NOT APPEAR IN EACH PACKAGE OF DRAWINGS.

LIGHTING FIXTURE SCHEDULE									
FIXTURE TYPE	MANUFACTURER	CATALOG NO.	DESCRIPTION	WATTS	FIXTURE			REMARKS	
				FIXT.	TYPE	MTG	LAMPS		VOLTS
A	LITHONIA	N2S32120GEB10RS	1X4 FLUORESCENT UNDER CABINET LIGHT FIXTURE	32	FLUOR.	SURFACE	1-F32T8	120	
A1	HOLOPHANE								
A1	HUBBELL								
A1	LITHONIA	WP-2-32-ACF125-120-GMF-RIF1-GEB10RS	1X4 FLUORESCENT WALL BRACKET	65	FLUOR.	WALL	2	120	MOUNT 18" BELOW FINISHED CEILING
A2	HOLOPHANE								
A2	HUBBELL								
A2	APPLETON	N2S32120GEB10RS	1X4 FLUORESCENT ENCLOSED AND GASKETED INDUSTRIAL LIGHTING FIXTURE	90	FLUOR.	PENDANT	2-T8HO	120	NEMA 4/4X RATED
B	LITHONIA	2PM4GA33218LD120GEB10RS	2X4 FLUORESCENT PARABOLIC LIGHTING FIXTURE	95	FLUOR.	RECESSED	3-F32T8	120	
B	HOLOPHANE								
B	HUBBELL								
C	GOTHAM	AFV-126TRT-6MB-277-GEB10R	6" DOWN LIGHT	26	FLUOR	RECESSED	1-PL	120	
C	HOLOPHANE								
C	HUBBELL								
EL	HOLOPHANE	NAVIGATOR C4 SERIES	EMERGENCY BATTERY PACK, (12V) WITH TYPE WD 12 WATT DUAL REMOTE HEADS AND SHELF			WALL		120	WATTAGE AS REQUIRED, 20% SPARE CAPACITY
EL	GE								
EL	HUBBELL								
EL1	HOLOPHANE	LR SERIES	DUAL REMOTE HEADS	12(eo)		WALL		12	TYPE "NL" IN NEMA 4X AREAS TYPE "DTY" IN ALL OTHER AREAS
EL1	EMERGI LIGHT								
EL1	HUBBELL								
E	HOLOPHANE	MDCE SERIES	DUAL FACE EMERGENCY EXIT SIGN			WALL	LED	120	WITH LEAD ACID BATTERY
E	EMERGI LIGHT								
E	HUBBELL								
E1	HOLOPHANE	MDCE SERIES	SINGLE FACE EMERGENCY EXIT SIGN			WALL	LED	120	WITH LEAD ACID BATTERY
E1	LITHONIA								
E1	HUBBELL								
S	FAILSAFE	MHTWHE70N277F1BLK	EXTERIOR WALL PACK	70	MH	WALL	1	120	WIRE WITH H-O-A AND PHOTOCELL ON BUILDING THROUGH LIGHTING CONTROL PANEL
S	LITHONIA								
S	HUBBELL								

NOTE: THIS IS A STANDARD SCHEDULE AND ALL FIXTURES MAY NOT APPEAR IN EACH PACKAGE OF DRAWINGS.

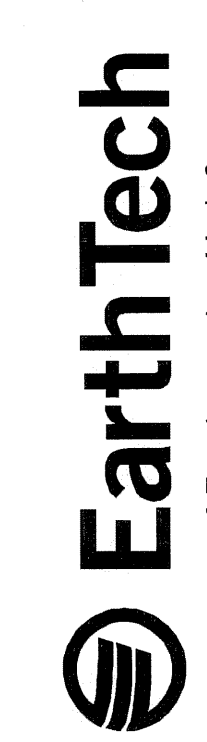
PANELBOARD SCHEDULE "PP1"										
PANEL MAIN		PP1	225A MCB	VOLTS	480	MOUNT.	SURFACE			
				AMPS	225	AIC	25,000			
				PH/WIRE	3/3	LOC.	GENERATOR ROOM			
CIR.	AMPS/POLES	DESCRIPTION OF LOAD	LOAD kVA	LOAD BY PHASE, kVA			LOAD kVA	DESCRIPTION OF LOAD	AMPS/POLES	CIR.
1			1.00	2.00			1.00			2
3	20/3	AHU-1 (3 HP)	1.00		2.00		1.00	AHU-2 (2 HP)	20/3	4
5			1.00			2.00	1.00			6
7			1.00	1.50			0.50			8
9	20/3	ACCU-1	1.00		1.50		0.50	ACCU-2	20/3	10
11			1.00			1.50	0.50			12
13	20/3	EF-4 (3 HP)	0.50	7.96			7.46	TRANSFORMER FOR LIGHTING PANEL LP1	70/3	14
15			0.50		7.10		6.60			16
17			0.50			6.74	6.24			18
19			0.50	4.50			4.00			20
21	20/3	SPARE (WAS TVSS)	0.50		4.50		4.00	ELECTRIC WATER HEATER EWH-1	20/3	22
23			0.50			4.50	4.00			24
25			4.00	8.00			4.00			26
27	30/3	ELECTRIC DUCT HEATER EDH-1	4.00		8.00		4.00	ELECTRIC DUCT HEATER EDH-2	30/3	28
29			4.00			8.00	4.00			30
31										32
33	20/3	SPARE						SPARE	20/3	34
35										36
37										38
39	20/3	SPARE						SPARE	20/3	40
41										42
TOTAL kVA BY PHASE -				23.96	23.10	22.74		TOTAL kVA-	55.84	
DEMAND kVA BY PHASE -				19.17	18.48	18.19		TOTAL AMPERES-	67.28	

PANELBOARD SCHEDULE "LP2"										
PANEL MAIN		LP1	60 MCB	VOLTS	120/208	MOUNT.	RECESSED			
				AMPS	60	AIC	14,000			
				PH/WIRE	3/4	LOC.	LAB			
CIR.	AMPS/POLES	DESCRIPTION OF LOAD	LOAD kVA	LOAD BY PHASE, kVA			LOAD kVA	DESCRIPTION OF LOAD	AMPS/POLES	CIR.
1	20/1	RECEPTACLES (LAB OFFICE)	0.50	0.75			0.25	RECEPTACLE (LAB)	20/1	2
3	20/1	RECEPTACLES (LAB)	0.25		0.50		0.25	RECEPTACLE (LAB)	20/1	4
5	20/1	RECEPTACLES (LAB)	0.25			0.50	0.25	RECEPTACLE (LAB)	20/1	6
7			0.50	0.75			0.25	RECEPTACLE (LAB)	20/1*	8
9	20/3	EXISTING AUTOCLAVE	0.50		0.75		0.25	RECEPTACLE (LAB)	20/1*	10
11			0.50			1.50	1.00	FUME HOOD	20/1	12
13			0.50	1.50			1.00	FUME HOOD	20/1	14
15	20/3	EXISTING AUTOCLAVE	0.50		1.50		1.00	FUME HOOD	20/1	16
17			0.50			1.50	1.00	FUME HOOD	20/1	18
19	20/1*	RECEPTACLE (REFRIGERATOR)	1.00	1.25			0.25	RECEPTACLE (LAB)	20/1	20
21	20/1	RECEPTACLE (LAB)	0.25		0.50		0.25	RECEPTACLE (LAB)	20/1	22
23	20/1	RECEPTACLE (LAB)	0.25			0.50	0.25	RECEPTACLE (LAB)	20/1	24
25	20/1	RECEPTACLE (LAB)	0.25	0.50			0.25	RECEPTACLE (LAB)	20/1*	26
27	20/1	RECEPTACLE (LAB)	0.25		0.50		0.25	RECEPTACLE (LAB)	20/1*	28
29	20/1	RECEPTACLE (LAB)	0.25			1.25	1.00	RECEPTACLE (LAB)	20/1	30
31	20/1	EMERGENCY SHOWER	0.25	0.25			.50	ELECTRIC DOOR RELEASE	20/1	32
33	20/1	SPARE						RECEPTACLE (LAB COUNTER)	20/1	34
35	20/1	SPARE						RECEPTACLE (LAB UC FRIDGE)	20/1	36
37	20/1	SPARE						RECEPTACLE (LAB COUNTER)	20/1	38
39	20/1	SPARE						RECEPTACLE (LAB UC FRIDGE)	20/1	40
41	20/1	SPARE						SPARE	20/1	42
TOTAL kVA BY PHASE -				4.75	3.75	4.25		TOTAL kVA-	10.20	
DEMAND kVA BY PHASE -				3.80	3.00	3.40		TOTAL AMPERES-	28.33	

\* - GFCI CIRCUIT BREAKER

PANELBOARD SCHEDULE "LP1"										
PANEL MAIN		LP1	150	VOLTS	120/208	MOUNT.	SURFACE			
				AMPS	150	AIC	14,000			
				PH/WIRE	3/4	LOC.	GENERATOR ROOM			
CIR.	AMPS/POLES	DESCRIPTION OF LOAD	LOAD kVA	LOAD BY PHASE, kVA			LOAD kVA	DESCRIPTION OF LOAD	AMPS/POLES	CIR.
1	20/1	LIGHTING (LAB)	1.20	2.02			0.82	SUPPLY FANS SF-1, SF-2	20/1	2
3	20/1	LIGHTING (CONFERENCE)	1.00		1.50		0.50	FC-1, MD-1, MD-2	20/1	4
5	20/1	LIGHTING (OFFICE/LUNCH)	1.00			1.50	0.50	RECEPTACLES (TOILETS)	20/1*	6
7	20/1	EXHAUST FAN EF-2, EF-3	1.00	1.25			0.25	RECEPTACLE (WATER COOLER)	20/1*	8
9	20/1	VAV-1, VAV-2, VAV-3, VAV-4	1.00		2.00		1.00	RECEPTACLES (LUNCH ROOM)	20/1	10
11	20/1	LIGHTING CORRIDOR/LOBBY	0.90			1.40	0.50	RECEPTACLES (PWSB OFFICE)	20/1	12
13	20/1*	RECEPTACLE (LOBBY)	1.00	1.75			0.75	RECEPTACLES (PWSB OFFICE)	20/1	14
15	20/1	RECEPTACLES (CONFERENCE)	0.75		1.50		0.75	RECEPTACLES (CORRIDOR)	20/1	16
17	20/1	RECEPTACLES (CONFERENCE)	1.00			1.50	0.50	RECEPTACLES (OPERATION OFFICE)	20/1	18
19	20/1	RECEPTACLES (CONFERENCE)	0.25	0.50			0.25	RECEPTACLES (OPERATION OFFICE)	20/1	20
21	20/1	RECEPTACLES (CONFERENCE)	0.25		0.75		0.50	MOTORIZED DAMPERS	20/1	22
23	20/1	EMERGENCY EYEWASH/SHOWER CP	0.20			1.20	1.00	HVAC CONTROL PANEL	20/1	24
25	20/1	UNIT HEATER UH-1	0.20	0.45			0.25	RECEPTACLE (TELEPHONE)	20/1	26
27	20/1	ELECTRIC DOOR RELEASE	.25		0.25		0.25	RECEPTACLE (SCADA)	20/1	28
29	20/1	EXISTING UNIT HEATERS						FACP	20/1	30
31	20/1	SPARE						SPARE	20/1	32
33	20/1	SPARE						SPARE	20/1	34
35	20/1	SPARE						SPARE	20/1	36
37	20/1	SPARE		3.80			3.80			38
39	20/1	SPARE			3.00		3.00	LIGHTING PANEL LP2	60/3	40
41	20/1	SPARE				3.40	3.40			42
TOTAL kVA BY PHASE -				9.32	8.25	8.00		TOTAL kVA-	20.30	
DEMAND kVA BY PHASE -				7.46	6.60	6.24		TOTAL AMPERES-	56.39	

\* - GFCI CIRCUIT BREAKER



EarthTech  
A Tyco International Ltd. Company  
300 BAKER AVENUE SUITE 200 CONCORD MA 01742 (978) 371-1000

DESIGNED BY: DM  
DRAWN BY: DM  
CHECKED BY: WS

DWG SCALE: AS NOTED  
CONTRACT NO:  
DATE: OCTOBER 31, 2006

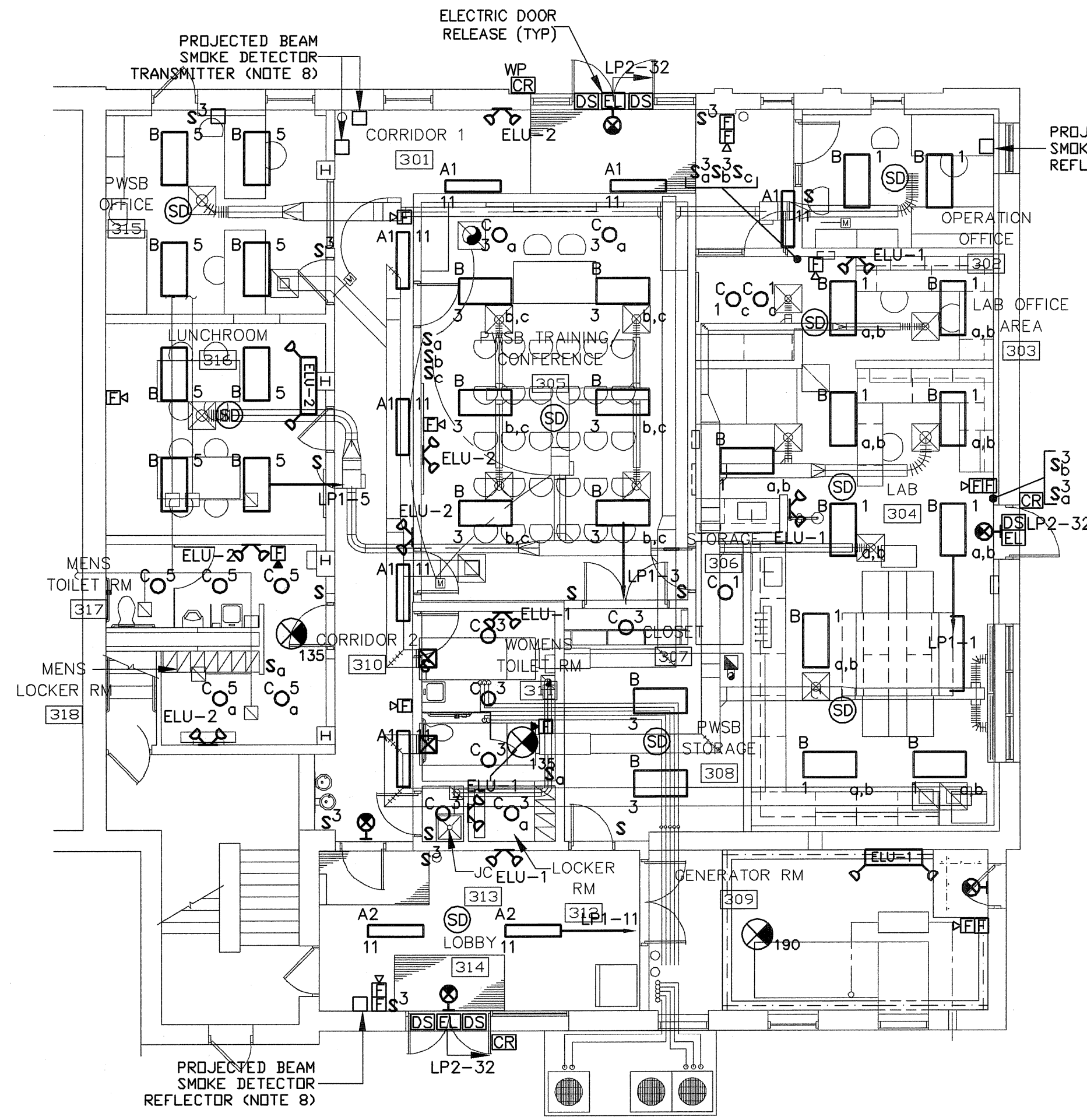
**EARTH TECH AS-BUILT FILE JULY 2008**

**F-3**

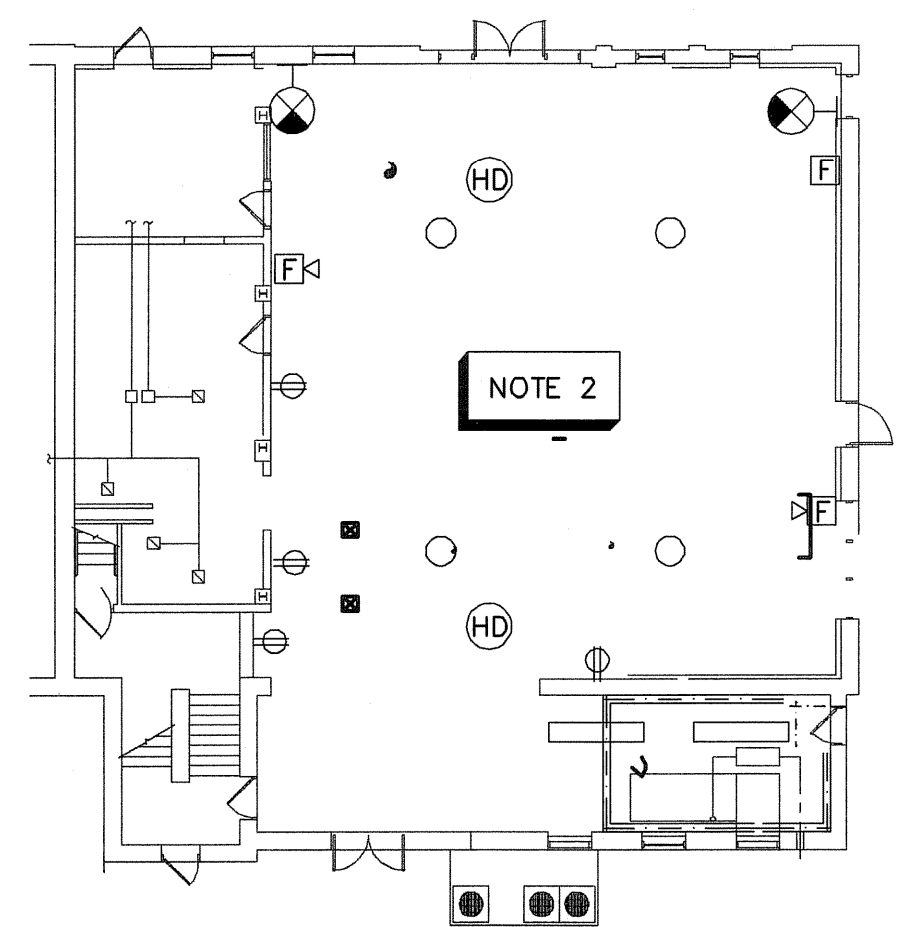
SHEET OF

PAWTUCKET, RHODE ISLAND  
PAWTUCKET REGIONAL WATER TREATMENT FACILITY  
**PKG 5 - LAB AND OFFICE AREA**  
PANELBOARD AND MISC. SCHEDULES

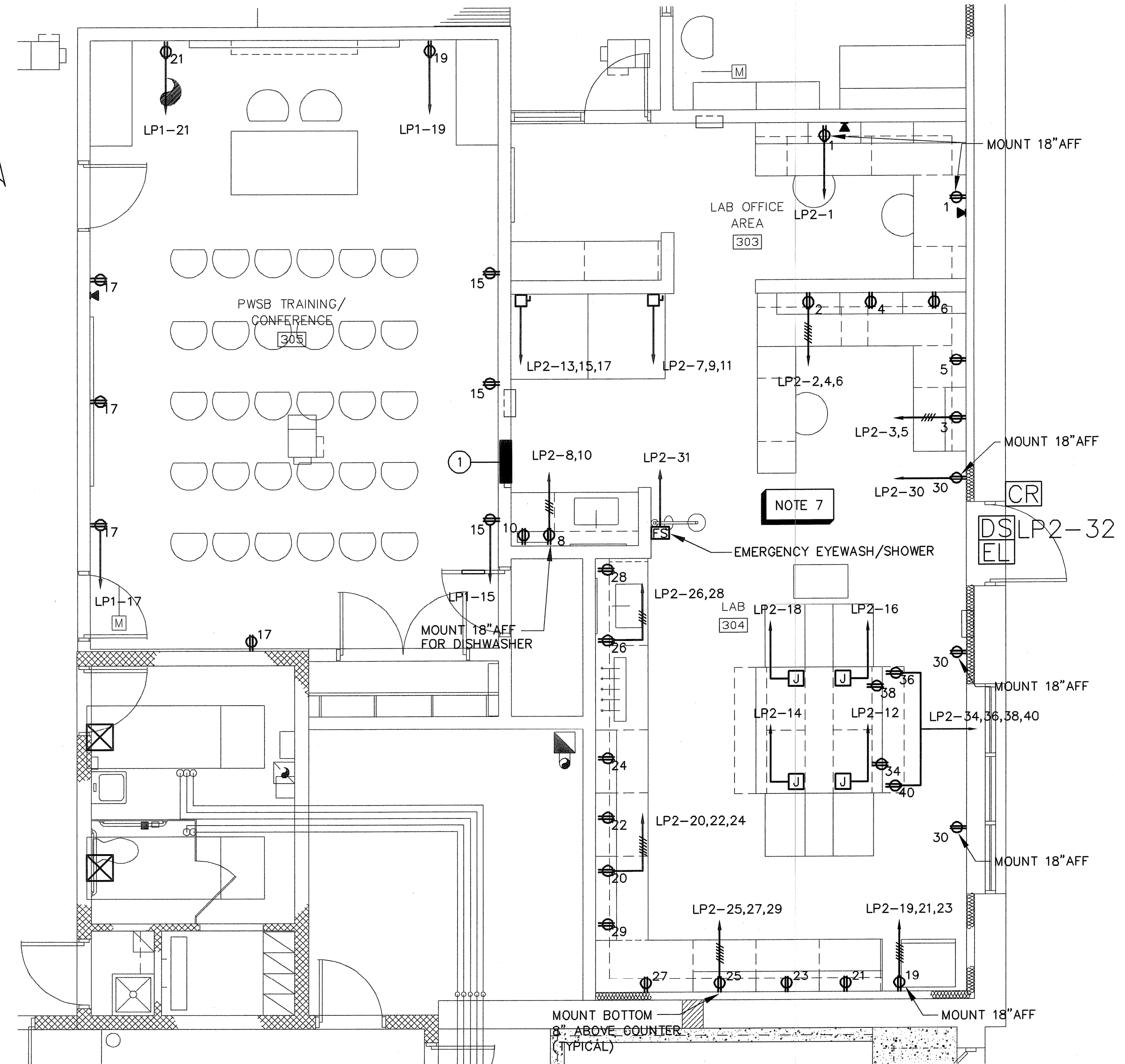
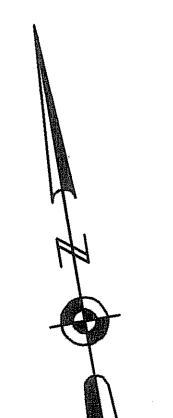
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**LIGHTING AND FIRE ALARM PLAN**  
 SCALE: 1/8" = 1'-0"



**EXISTING CONDITIONS PLAN**  
 SCALE: 1/16" = 1'-0"



**LAB/CONFERENCE ROOM PART PLAN**  
 SCALE: 1/4" = 1'-0"

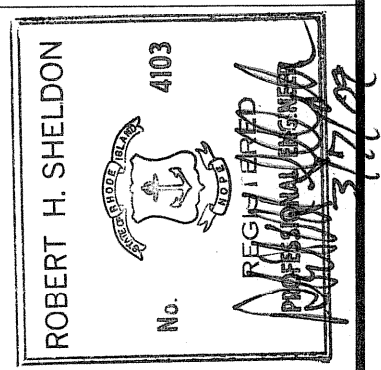
**NOTES:**

- SEE SHEET E-1 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
- NOT ALL EXISTING EQUIPMENT IS SHOWN ELECTRICAL CONTRACTOR SHALL VERIFY IN THE FIELD ALL EQUIPMENT TO BE DISCONNECT AND REMOVE WITHIN AREA OF WORK. ALL CONDUIT AND WIRE ASSOCIATED WITH EQUIPMENT BEING REMOVED SHALL BE REMOVED BACK TO ITS SOURCE.
- CONNECT REMOTE EMERGENCY HEADS IDENTIFIED WITH UNIQUE NUMBERS TO THE EMERGENCY LIGHTING UNITS (ELU) OF THE SAME NUMBER. MINIMUM WIRE SIZE SHALL BE #10 IN 1/2" CONDUIT, WITH RACEWAY TYPE AS REQUIRED BY THE NEMA CLASSIFICATION OF THE AREA SERVED. PROVIDE #8 WIRE TO REMOTE HEADS GREATER THAN 50 FEET CABLE DISTANCE FROM ELU. PROVIDE JUNCTION BOX ABOVE ELU TO SPLICE WIRING TO SIZE REQUIRED FOR ELU.
- EXIT LIGHTS SHALL BE POWERED FROM UNSWITCHED LINE OF NEAREST LIGHTING CIRCUIT.
- VERIFY CORRECT LIGHT SWITCH LOCATION, PRIOR TO INSTALLATION TO INSURE THAT THE SWITCHES ARE NOT INSTALLED BEHIND OPENED DOOR.
- PROVIDE SECURITY DOOR SWITCHES AND CARD READERS AS SHOWN ON THE PLAN AND CONNECT TO EXISTING SECURITY ALARM PANEL.
- ALL RECEPTACLES WITHIN LAB AREA SHALL BE MOUNTED ABOVE COUNTER UNLESS OTHERWISE NOTED.
- PROJECTED BEAM SMOKE DETECTOR TRANSMITTER AND REFLECTOR LOCATIONS ARE SHOWN APPROXIMATE. CONSULT WITH FIRE ALARM CONTRACTOR FOR EXACT LOCATIONS AND MOUNTING HEIGHTS.
- INSTALL WARNING SIGN ON AT TOP OF CORRIDORS 301 & 310 WALLS THAT READS "CAUTION SPACE ABOVE IS PROTECTED BY A PROJECTED BEAM SMOKE DETECTOR".

**EQUIPMENT LEGEND**

- 1 120/208V RECESSED LIGHTING PANEL LP2

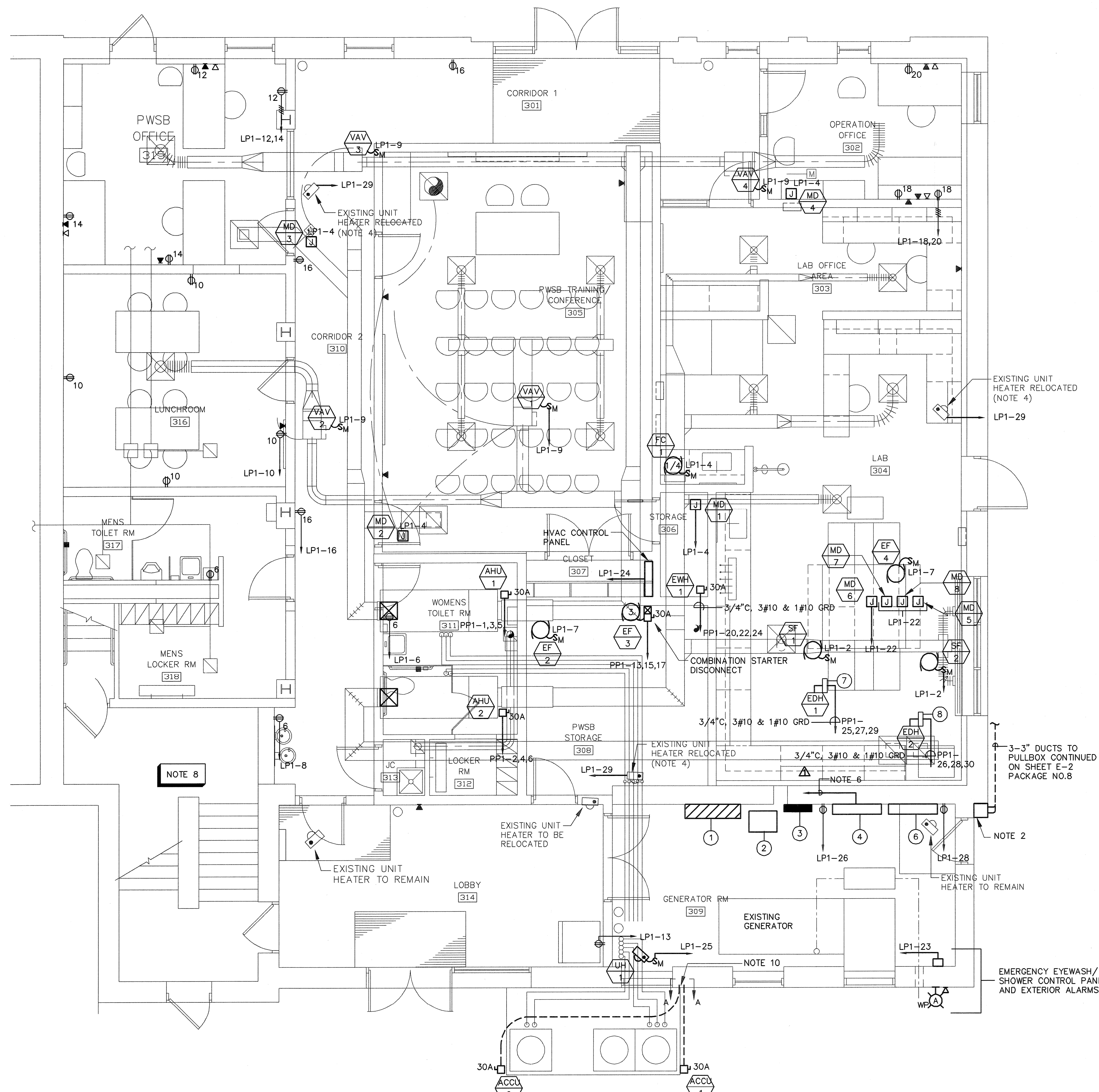
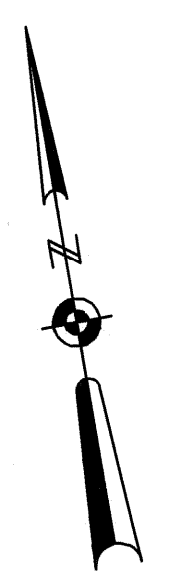
NO.	BY	DATE	REVISIONS
2	DM	JULY 2008	AS-BUILT DRAWING FILE
1	DM	10/31/06	ISSUED FOR RFP POSTED SET
0	DM	4/05	ISSUED FOR CONSTRUCTION



PAWTUCKET, RHODE ISLAND  
**PAWTUCKET REGIONAL WATER TREATMENT FACILITY**  
**PKG 5 - LAB AND OFFICE AREA**  
 LAB LIGHTING AND MISC. SYSTEMS PLAN

DESIGNED BY	DWG SCALE
DM	AS NOTED
DRAWN BY	CONTRACT NO.
DM	
CHECKED BY	DATE
WS	OCTOBER 31, 2008

**EARTH TECH**  
 AS-BUILT FILE  
 JULY 2008



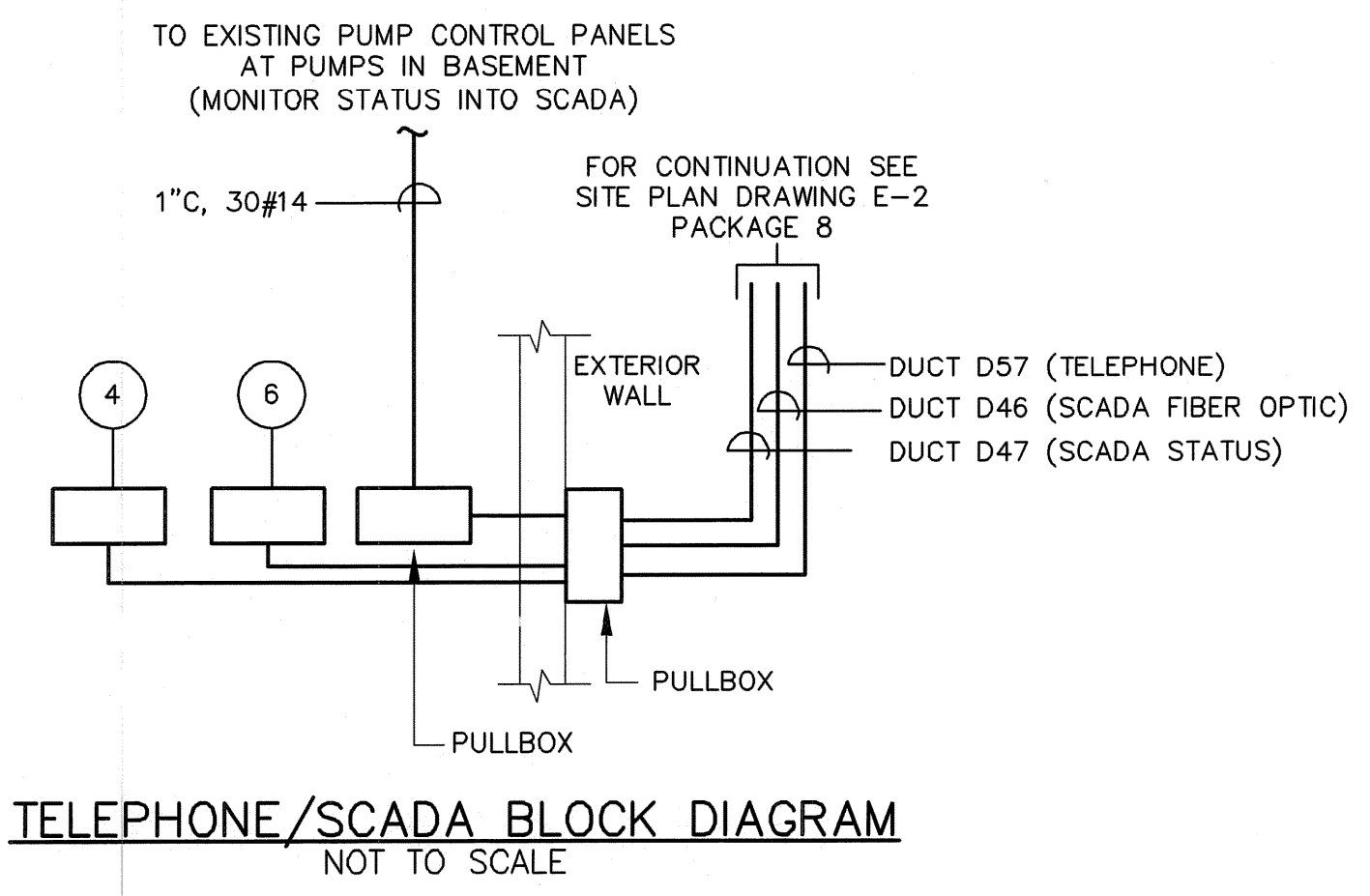
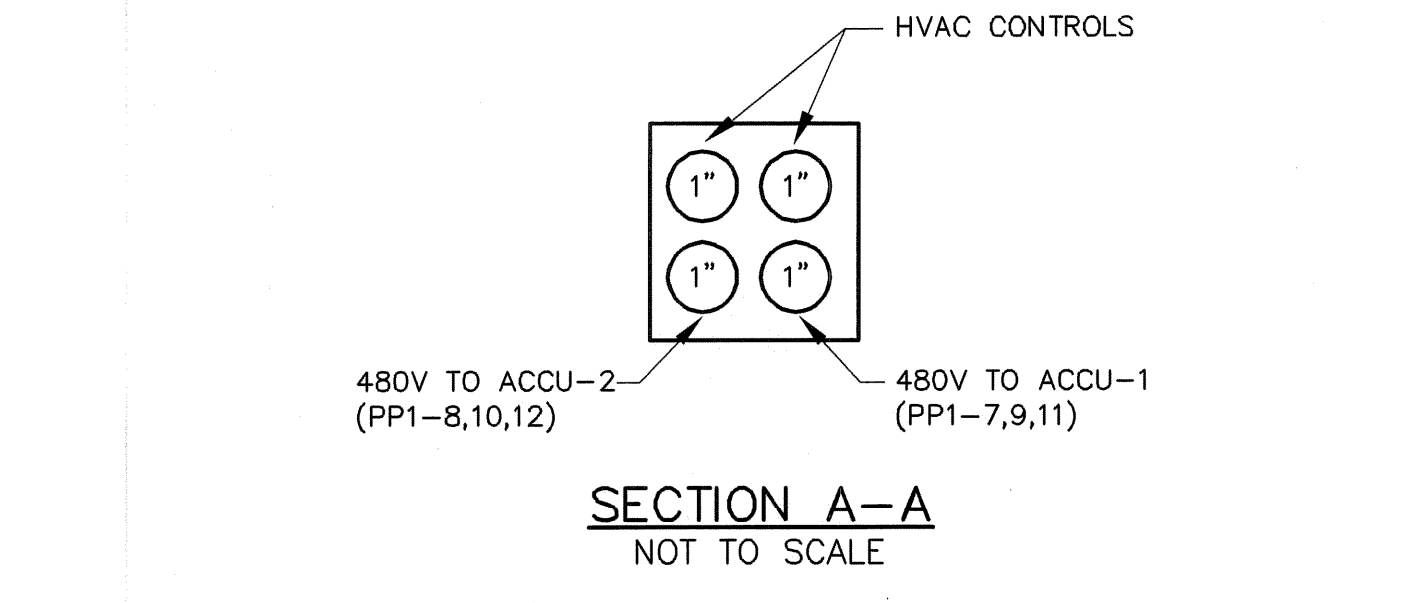
**POWER AND MISCELLANEOUS SYSTEMS PLAN**  
SCALE: 1/4" = 1'-0"

**EQUIPMENT LEGEND**

- 1 480 VOLT PANELBOARD PP1
- 2 45KVA 480V-120/208V TRANSFORMER
- 3 120/208V LIGHTING PANEL LP1
- 4 TELEPHONE BACKBOARD, TELEPHONE CABINET AND PUNCH DOWN BLOCKS WITH SURGE SUPPRESSION AND GROUND BUS
- 5 NOT USED
- 6 FIBER OPTIC TERMINATION/SCADA SYSTEM INTERFACE EQUIPMENT (DIVISION 13 PACKAGE 8)
- 7 EDH-1 CONTROL PANEL (EDH-1CP) W/ DISCONNECT SWITCH
- 8 EDH-2 CONTROL PANEL (EDH-2CP) W/ DISCONNECT SWITCH

**NOTES:**

1. SEE SHEET E-1 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
2. NEMA 4 PULL BOX MOUNTED ON SIDE OF BUILDING UNDER THIS CONTRACT. RUN 3-3" CONDUIT FROM DUCTBANK UP ALONG OUTSIDE OF WALL.
3. PROVIDE NEW 225 AMP CIRCUIT BREAKER WITHIN EXISTING FIVE STAR WESTINGHOUSE MOTOR CONTROL CENTER. USE EXISTING SPACE. NEW CIRCUIT BREAKER SHALL MATCH EXISTING STYLE, MODEL AND AIC RATING.
4. SEE DRAWING H-2 AND H-4 FOR EXACT LOCATION OF UNIT HEATERS. PROVIDE DISCONNECT SWITCH AT NEW LOCATION. EXTEND EXISTING CONDUIT AND WIRE AS REQUIRED TO EXISTING 120V PANELBOARD. NEW CONDUIT AND WIRE SHALL MATCH EXISTING IN SIZE AND TYPE.
5. NOT USED
6. RUN NEW 2" CONDUIT WITH TELEPHONE CABLE FROM NEW TELEPHONE BACKBOARD TO EXISTING TELEPHONE BACKBOARD IN EXISTING ELECTRICAL ROOM.
7. NOT USED
8. STAIRWAY UP TO SECOND FLOOR. (EXISTING ELECTRICAL ROOM-LOCATION OF 480V MCC AND TELEPHONE SYSTEM)
9. AHU-1, AHU-2, SF-1, SF-2, EF-1, EF-2, EF-3, ALL VAV'S AND ALL MD'S ARE LOCATED IN THE UPPER LEVEL ABOVE THE CEILING.
10. ROUTE QUANTITY 4-1" CONDUITS INTO GENERATOR ROOM WALL FOR ACCU-1 AND ACCU-2.



NO.	DATE	BY	REVISIONS
2	JULY 2008	DM	AS-BUILT DRAWING FILE
1	NOV 27/08	MC	ISSUED FOR B1 POSTED SET
0	4/05	DM	ISSUED FOR CONSTRUCTION

ROBERT H. SHELDON  
N.E. 4103  
Professional Engineer Seal

**PAWTUCKET, RHODE ISLAND  
PAWTUCKET REGIONAL  
WATER TREATMENT FACILITY  
PKG 5 - LAB AND OFFICE AREA  
LAB POWER PLAN**

DESIGNED BY DM	DWG SCALE AS NOTED
DRAWN BY DM	CONTRACT NO.
CHECKED BY WS	DATE OCTOBER 31, 2008

**EARTH TECH  
AS-BUILT FILE  
JULY 2008**

PLOT FILE DATE CREATED: SEP/22/2008 10:32 AM