

WESTFORD POLICE FACILITY

53 MAIN STREET, WESTFORD, MASSACHUSETTS 01886



JUNE 25, 1998

KAESTLE BOOS ASSOCIATES, INC.  ARCHITECT

THE ENGINEERING CONSULTANTS
of HARTFORD
DAVID E. ROSS ASSOCIATES, INC.
SAR ENGINEERING, INC.
HAWLEY ASSOCIATES

STRUCTURAL ENGINEERS

CIVIL ENGINEERS & LANDSCAPE ARCHITECT
MECHANICAL & ELECTRICAL ENGINEERS
HARDWARE CONSULTANT

ABBREVIATIONS	
ABOVE FINISH FLOOR	A.F.F.
ACOUSTICAL, ACUSTICAL	AC
ACOUSTICAL TILE	AC. T.
ADDITION	ADDN
AIR CONDITIONING	A/C
AIR HANDLING UNIT	A.H.U.
ALTERNATE	ALT
ALUMINUM	ALUM
ANCHOR, ANCHORAGE	ANCH
ANCHOR BOLTS	AB
AND	&
ANGLE	L
ANNODIZED	ANNOD.
APPROVED	APPR.
ARCHITECT, ARCHITECTURAL	ARCH.
ASBESTOS	ASB.
ASPHALT	ASPH.
ASSEMBLY	ASSY
ASSISTANT	ASST
AT	@
AUTOMATIC	AUTO.
BEAM	BM
BEARING	BRG
BETWEEN	BET.
BEVEL, BEVELED	BEV.
BITUMINOUS	BIT.
BLOCK	BLK
BLOCKING	BLKG
BOARD	BD
BOTTOM	BOTT.
BOTTOM OF	B.O.
BRICK EXPANSION JOINT	B.E.J.
BUILDING	BLDG.
BUILT-UP ROOFING	B.U.R.
CABINET	CAB.
CABINET UNIT HEATER	C.U.H.
CAPACITY	CAP.
CEILING	CLG
CEILING HEIGHT	CLG. HT.
CEMENT	CEM.
CENTER	CTR
CENTERLINE	CL
CERAMIC TILE	CER. T.
CHALKBOARD	C.BD.
CHANNEL	C
CLOSET	CL.
COLUMN	COL.
CONCRETE	CONC.
CONFERENCE	CONF.
CONTROL OR CONSTRUCTION JOINT	CJ
CONTINUOUS	CONT.
CONTRACTOR	CONTR.
CORRIDOR	CORR.
COURSE, COURSES	CRS.
DAMP PROOFING	DAFPG
DEGREE	DEG.
DEMOLITION	DEMO.
DEPARTMENT	DEPT.
DETAIL	DET.
DIAMETER	DIA.
DIMENSION	DIM.
DISTANCE	DIST.
DOOR	DR
DOUBLE	DBL.
DOUBLE HUNG	D.H.
DOWN	DN
DOWNSPOUT	D.S.
DRAWING	DWG
DRINKING FOUNTAIN	D.F.
EACH	EA.
ELECTRIC, ELECTRICAL	ELEC.
ELECTRIC WATER COOLER	EWC
ELEVATION	E.
ELEVATOR	ELEV.
EMERGENCY	EMERG.
EQUL	EQ.
EQUIPMENT	EQUIP.
EXISTING	EXIST.
EXISTING TO REMAIN	E.T.R.
EXPANSION	EXP.
EXPANSION JOINT	E.J.
EXTERIOR	EXT.
EXTERIOR INSULATION & FINISH SYSTEM	E.I.F.S.
FEET, FOOT	FT
FIBERGLASS REINFORCED POLYESTER	FRP
FINISH, FINISHED	FIN.
FIRE DAMPER	F.D.
FIRE EXTINGUISHER	F.E.
FIRE RETARDANT	F.R.
FIREPROOFING	FRPFG.
FIXTURE	FIXT.
FLASHING	FLASH.
FLOOR	FLR
FLOOR DRAIN	F.D.
FLOOR FINISH	FLR. FIN.
FOOTING	FTG
FOUNDATION	FDN
FURNISH, FURNISHED	FURN.
FURRED, FURRING	FURR.
GALISE	GA.
GALVANIZED	GALV.
GYPSUM WALLBOARD	GYP. BD.
HANDRAIL	H.R.
HANDICAPPED	H.C.
HEIGHT	HGT
HIGH POINT	H.P.
HOLLOW METAL	H.M.
HORIZONTAL	HORIZ.
HOSE BIBB	H.B.
INCH OR INCHES	IN. OR
INCLUDE, INCLUDING	INCL.
INFORMATION	INFO.
INSIDE DIAMETER	I.D.
INSULATION	INSUL.
INTERIOR	INT.
KICK PLATE	K.P.
LABORATORY	LAB.
LAVATORY	LAV.
LIGHTING	LTG.
MACHINE	MACH.
MAINTENANCE	MAINT.
MANUFACTURER	MFR
MARKER BOARD	M.BD.
MASONRY	M.S.
MASONRY OPENING	M.O.
MATERIAL	MATL
MAXIMUM	MAX.
MECHANICAL	MECH.
METAL	MET.
MEZZANINE	MEZZ.
MINIMUM	MIN.
MISCELLANEOUS	MISC.
NORTH	N
NOT IN CONTRACT	N.I.C.
NOT TO SCALE	N.T.S.
NUMBER	NO. OR #
OFFICE	OFF.
ON CENTER	O.C.
OPPOSITE HAND	O.H.
OUTSIDE DIAMETER	O.D.
PAINTED	PTD
PAIR	PR
PAPER TOWEL DISPENSER	P.T.D.
PASSAGE	PASS.
PERPENDICULAR	PEPP.
PLASTER	PLAS.
PLASTIC LAMINATE	PL. LAM.
PLATE	PL.
PLUMBING	PLBG
PLYWOOD	PLYWD
POLYVINYLCHLORIDE (PVC)	PVC
PREFAB	P/P
PREFABRICATED EXPANSION JOINT	P.E.J.
PREFABRICATED	PREFAB.
QUANTITY	QTY
QUARRY TILE	Q.T.
RADIUS	RAD.
RAIN WATER CONDUCTOR	RWC
RECEIVING	RECV.
REFRIGERATOR	REFR.
REINFORCE	REINF.
REQUIRED	REQ'D
REVISED, REVISION	REV.
RISER	R.
ROOF DRAIN	R.D.
ROOM	RM
SANITARY NARWIN DISPENSER	S.N.D.
SANITARY NARWIN RECEPTACLE	S.N.R.
SCHEDULE	SCHED.
SCUPPER	SC
SECTION	SECT.
SEISMIC JOINT	S.E.J.
SHEET	SH
SIMILAR	SIM.
SOAP DISPENSER	S.D.
SOUND TRANSMISSION CLASS	S.T.C.
SPECIFICATIONS	SPEC.
SQUARE	S.Q.
SQUARE FEET (FOOT)	S.F.
STAINLESS STEEL	ST. STL.
STANDARD	STD
STEEL	STL
STORAGE	STOR.
STRUCTURAL	STRUCT.
STRUCTURAL GLAZED	SG
FACING TILE	SOFT
STRUCTURAL STEEL	S.STL.
SUSPEND, SUSPENSION	SUSP.
TACKBOARD	T.BD.
THROUGH	THRU
TOILET PAPER DISPENSER	T.P.D.
TONGUE AND GROOVE	T. & G.
TOP OF	T.O.
TREAD	T.
TYPICAL	TP.
UNDERWRITERS' LABORATORIES, INC.	UL
UNIT HEATER	U.H.
UNIT VENTILATOR	U.V.
UNLESS OTHERWISE NOTED	U.O.N.
VENT THROUGH ROOF	VTR
VESTIBULE	VEST.
VINYL COMPOSITION TILE	VCT
WATERPROOFING	WP
WELDED WIRE FABRIC	W.W.F.
WHITE BOARD	W.BD.
WITH	W/
WOOD	WD

SYMBOL LEGENDS	
DEMOLITION PLAN LEGEND	
	WALL TO BE REMOVED
	EXISTING WALLS TO REMAIN
	DOOR / FRAME TO BE REMOVED REFER TO DOOR SCHEDULE
	PLUMBING FIXTURE TO BE REMOVED
FLOOR PLAN LEGEND	
	STONE MASONRY VENEER
	CONCRETE MASONRY
	METAL STUD AND GYPSUM BOARD WALL
	EXISTING WALLS TO REMAIN
	DOOR NUMBER
	COLUMN DETAIL
	WINDOW TYPE
	HOLLOW METAL FRAME TYPE
	BUILDING SECTION
	WALL SECTION
	PLAN DETAIL
	CASEWORK ELEVATION
	INTERIOR ELEVATION
	WALL TYPE
	REVISION MARK
	ROOM NAME
	ROOM NUMBER
CEILING PLAN LEGEND	
	1 X 1 ACOUSTICAL TILE SEE FINISH SCHEDULE
	2X2 SUSPENDED ACOUSTICAL TILE SEE FINISH SCHEDULE
	2X4 SUSPENDED ACOUSTICAL TILE SEE FINISH SCHEDULE
	SUSPENDED GYPSUM BOARD CEILING SEE FINISH SCHEDULE
	PLASTER CEILING SEE FINISH SCHEDULE
	EXPOSED STRUCTURE OR EXISTING CEILING TO REMAIN SEE FINISH SCHEDULE
	RECESSED LIGHT FIXTURE SEE ELECTRICAL DRAWINGS
	SURFACE MOUNTED LIGHT FIXTURE SEE ELECTRICAL DRAWINGS
	PENDANT LIGHT FIXTURE
	EXIST. RECESSED LIGHT FIXTURE SEE ELECTRICAL DRAWINGS
	EXIST. SURFACE MOUNTED LIGHT FIXTURE SEE ELECTRICAL DRAWINGS
	EXIST. PENDANT LIGHT FIXTURE
	HVAC DIFFUSER/REGISTER SEE MECHANICAL DRAWINGS
	EXIT SIGN SEE ELECTRICAL DRAWINGS
	SMOKE OR HEAT DETECTOR
	SPEAKER
	SPRINKLER HEAD
	UPWARD SPRINKLER HEAD
	WALL MOUNTED SPRINKLER HEAD
	ROOF ACCESS HATCH
	ACCESS PANEL
	CABINET HEATER
	T.V. BRACKET SUSPENDED FROM STRUCTURE ABOVE

ROOF PLAN LEGEND	
	ASPHALT SHINGLES
	RIGID INSULATION ON SLOPED CONSTRUCTION
	TAPERED INSULATION ON FLAT CONSTRUCTION WITH PITCH TO DRAIN
	ROOF DRAIN
	VENT STACK
	ELEVATOR VENT
	ROOF DETAIL
FINISH PLAN LEGEND	
	CARPET TYPE 1
	POURED RESIN FLOORING
	VINYL COMPOSITION TILE
	VINYL SHEET FLOORING SEE FINISH SCHEDULE
	HARDENED CONCRETE
	RUBBER TILE / RISERS / LANDINGS
	ATHLETIC FLOORING SEE FINISH SCHEDULE
	CERAMIC TILE
	ENTRY MAT
	DIMENSION STONE TILE

NOTES	
GENERAL NOTES	
1.	SEE EXTERIOR ELEVATIONS FOR MASONRY EXPANSION JOINTS.
2.	PROVIDE A ONE INCH RADIUS BULLNOSE AT ALL EXPOSED CONCRETE BLOCK CORNERS.
3.	SEE STRUCTURAL DRAWINGS FOR DETAILS OF DEPRESSED ELEVATED FLOOR SLABS AND SLABS ON GRADE. COORD. SLAB DEPRESSION WITH ARCHITECTURAL FINISHES AND STRUCTURAL DRAWINGS.
4.	ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF METAL STUD, AND TO THE CENTERLINE OF COLUMNS, UNLESS NOTED OTHERWISE.
5.	GENERAL CONTRACTOR TO VERIFY QUANTITY AND LOCATION OF ROOF PENETRATIONS, AND TO FLASH ACCORDING TO MANUFACTURERS SPECIFICATIONS.
6.	ALL NOTES AND DIMENSIONS DESIGNATED AS TYPICAL APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PROJECT.
7.	CONTRACTOR TO TAKE AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB AND SHALL BE HELD RESPONSIBLE FOR SAME.
8.	STORAGE SHALL BE PLACED ON THE WALL, ADJACENT TO THE LEVER/HINGE SIDE OF DOOR, AT A HEIGHT OF FIVE (5') FEET A.F.F.
9.	THE REQUIREMENTS FOR SEISMIC LOADS HAVE BEEN INCORPORATED IN THE DESIGN OF THE STRUCTURAL, MECHANICAL, AND SUSPENDED ACOUSTICAL TILE CEILING SYSTEMS AS REQUIRED FOR NEW AND EXISTING CONSTRUCTION.
10.	WINDOW OPENINGS IN MASONRY WALLS ARE NOMINAL. OPENINGS AT STUD WALLS ARE DIMENSIONED TO CENTER OF OPENING. SEE SHEETS A11.01 & A11.02 FOR WINDOW SIZES AND DETAILS.
DEMOLITION NOTES	
1.	THE DEMOLITION SHOWN ON THE PLANS IS DIAGRAMATIC AND INTENDED TO SHOW THE GENERAL EXTENT OF THE WORK ONLY. THE CONTRACTOR SHALL INCLUDE ALL DEMOLITION, WHETHER SPECIFICALLY CALLED FOR OR NOT, THAT IS NECESSARY TO ACCOMPLISH THE INTENT OF THE PLANS AND SPECIFICATIONS.
2.	ALL OPENINGS WHERE EXISTING DUCTS, VENTS, PIPING OR ELECTRICAL CONDUIT HAVE BEEN REMOVED SHALL BE FILLED OR PATCHED TO MATCH EXISTING OR NEW FINISH DESIGNATION, INCLUDING FIRE RATINGS.
3.	WHEREVER NEW OPENINGS ARE CREATED, ALL SURROUNDING FINISHES SHALL BE PATCHED TO MATCH EXISTING, OR NEW FINISH DESIGNATED, INCLUDES WHATEVER FLOOR PATCHING, REPAIR OR FILLING IS REQUIRED.
4.	RELOCATE AS NECESSARY ANY PIPING, ELECTRICAL CONDUIT OR OTHER MECHANICAL OR ELECTRICAL DEVICES EXPOSED WHEN EXISTING WALLS, CEILINGS OR FLOORS ARE ALTERED OR PUNCTURED FOR NEW OPENINGS.
5.	ALL AREAS OF FLOORS, WALLS AND CEILINGS DISTURBED FROM DEMOLITION SHALL BE FILLED OR PATCHED TO MATCH EXISTING OR NEW FINISH DESIGNATED.
6.	CONTRACTOR SHALL REFER TO THE DIMENSION FLOOR PLANS AND DETAILS PRIOR TO CUTTING OPENINGS IN EXISTING WALLS.
8.	REFER TO SITE, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION.

CEILING PLAN NOTES	
1.	FOR CEILING HEIGHTS SEE CEILING PLANS AND FINISH SCHEDULE.
2.	SEE MECHANICAL DRAWINGS FOR REGISTER SCHEDULES.
3.	SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF CEILING PANS. COORDINATE WITH SPRINKLER CONTRACTOR.

LIST OF DRAWINGS	
COVER SHEET	
RO.01	INFORMATION SHEET
RO.02	INFORMATION SHEET
RI.01	OVERALL CODE PLANS
DI.01	DEMOLITION PLAN
C-1	EXISTING CONDITIONS AND DEMOLITION
C-2	SITE PLAN
C-3	GRADING AND DRAINAGE PLAN
C-4	LANDSCAPE PLAN
C-5	CONSTRUCTION DETAILS
C-6	CONSTRUCTION DETAILS
C-7	EROSION & SEDIMENTATION CONTROL AND DRAINAGE SYSTEM MAINTENANCE PLAN
C-8	SEWAGE DISPOSAL SYSTEM PLAN
C-9	SEWAGE DISPOSAL SYSTEM SITE PLAN
S1	FOUNDATION PLAN
S2	UPPER LEVEL FRAMING PLAN
S3	ATTIC FLOOR FRAMING PLAN
S4	ROOF FRAMING PLAN
S5	COLUMN SCHEDULE & BRACING FRAMES
S6	FOUNDATION DETAILS
S7	FOUNDATION DETAILS II
S8	UPPER LEVEL DETAILS
S9	UPPER LEVEL DETAILS II
S10	ROOF DETAILS
S11	ROOF DETAILS II
S12	TYPICAL DETAILS & GENERAL NOTES
S13	TYPICAL DETAILS II
A1.01	MAIN LEVEL DIMENSION FLOOR PLAN
A1.02	UPPER LEVEL DIMENSION FLOOR PLAN
A1.03	ATTIC DIMENSION & REFERENCE FLOOR PLAN
A2.01	MAIN LEVEL REFERENCE FLOOR PLAN
A2.02	UPPER LEVEL REFERENCE FLOOR PLAN
A3.01	MAIN LEVEL REFLECTED CEILING PLAN
A3.02	UPPER LEVEL REFLECTED CEILING PLAN
A3.03	ATTIC REFLECTED CEILING PLAN
A4.01	EXTERIOR ELEVATIONS
A4.02	EXTERIOR ELEVATIONS
A5.01	NOT USED
A5.02	WALL SECTIONS I
A5.03	WALL SECTIONS II
A5.04	WALL SECTIONS III
A6.01	WALL SECTIONS IV
A7.01	LARGE SCALE TOILET PLANS
A7.02	LARGE SCALE STAIR PLANS
A8.01	MISCELLANEOUS DETAILS
A8.02	MISCELLANEOUS DETAILS
A9.01	COLUMN DETAILS I
A9.02	COLUMN DETAILS II
A9.03	COLUMN DETAILS III
A9.04	COLUMN DETAILS IV
A10.01	ROOF PLAN
A10.02	ROOF DETAILS I
A10.03	ROOF DETAILS II
A11.01	DOOR & WINDOW ELEVATIONS
A11.02	DOOR & WINDOW DETAILS
A12.01	INTERIOR ELEVATIONS I
A12.02	INTERIOR ELEVATIONS II
A13.01	CASEWORK ELEVATIONS I
A13.02	CASEWORK SECTIONS & DETAILS I
A13.03	CASEWORK SECTIONS & DETAILS II
A13.04	CASEWORK SECTIONS & DETAILS II
A14.01	FINISH SCHEDULE
A14.02	FINISH FLOOR PLANS
H0.01	GENERAL NOTES, LEGEND, SYMBOLS
H1.01	MAIN LEVEL DUCTWORK
H1.02	UPPER LEVEL DUCTWORK
H2.01	ATTIC LEVEL DUCTWORK
H2.02	MAIN LEVEL PIPING
H2.03	UPPER LEVEL PIPING
H2.04	ATTIC LEVEL PIPING
H3.01	FLOW DIAGRAMS
H4.01	DETAILS
H5.01	ENLARGED PLANS & SECTIONS
H6.01	SECHEDULES
E1.00	LEGEND
E1.01	SITE PLAN ELECTRICAL
E1.02	MAIN LEVEL LIGHTING PLAN
E1.03	MAIN LEVEL POWER PLAN
E1.04	UPPER LEVEL LIGHTING PLAN
E1.05	UPPER LEVEL POWER PLAN
E1.06	ATTIC LEVEL POWER AND LIGHTING PLAN
E1.07	POWER RISER DIAGRAM & SCHEDULES
E1.08	RISER DIAGRAM
E1.09	FIXTURE SCHEDULE
FP0.01	LEGEND, NOTES & DETAILS
FP1.01	MAIN LEVEL FIRE PROTECTION PLAN
FP1.02	UPPER LEVEL FIRE PROTECTION PLAN
FP1.03	ATTIC LEVEL FIRE PROTECTION PLAN
PO.01	LEGEND, SCHEDULES & DETAILS
P1.01	MAIN LEVEL PLUMBING PLAN
P1.02	UPPER LEVEL PLUMBING PLAN
P1.03	ATTIC LEVEL PLUMBING PLAN

REVISIONS

DATE	MARK	DESCRIPTION
6/25/96		ISSUED FOR REBID

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS RO.01 & RO.02



WESTFORD POLICE FACILITY

53 MAIN STREET WESTFORD MASSACHUSETTS 01886



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

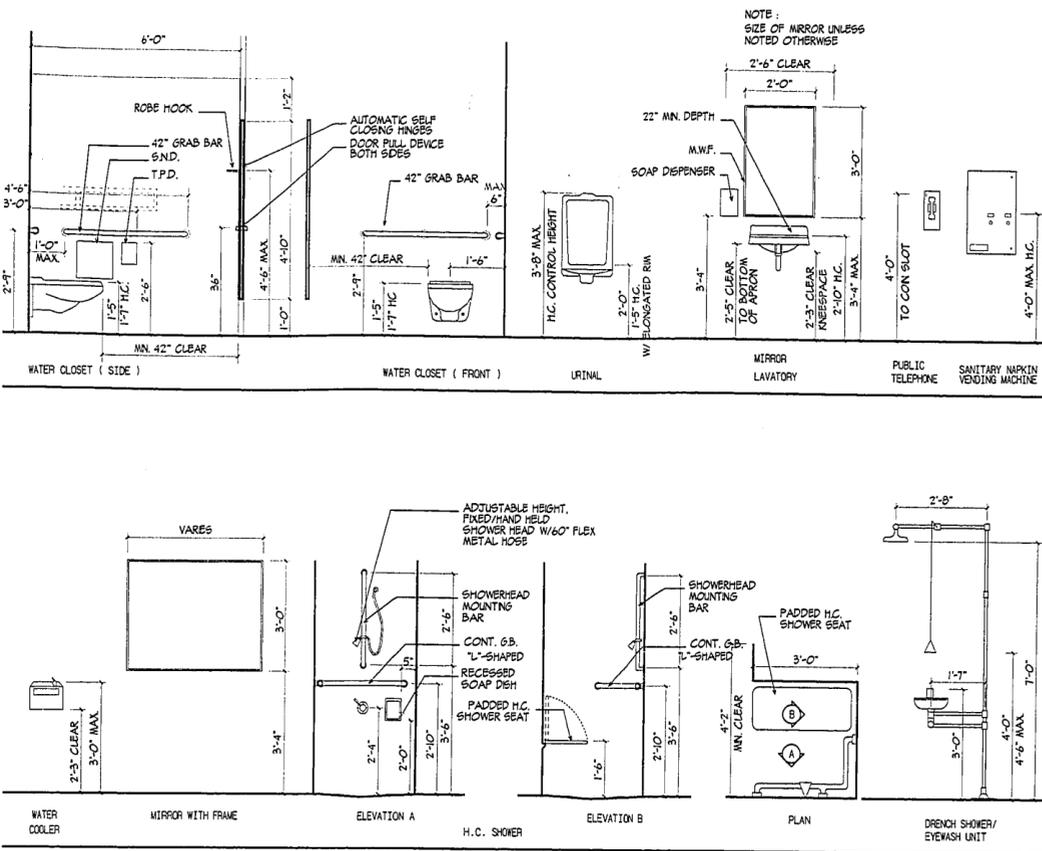
46 Slater Rd. New Britain, Connecticut 06050-2500 609 228-0361
 Drawn by: SDP/RY Scale: N/A

INFORMATION SHEET

Project no. 46077 Drawing no. 46077-2

Date: MARCH 23, 1996 **R0.01**

MOUNTING HEIGHTS FOR ACCESSIBLE FIXTURES



LINTEL SCHEDULE

PROVIDE LINTELS, WHETHER INDICATED OR NOT INDICATED ON STRUCTURAL OR ARCHITECTURAL DRAWINGS OVER ALL OPENINGS IN MASONRY WALLS, AS REQUIRED BY ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. COMBINE VARIOUS TYPES OF MASONRY AS REQUIRED TO SUIT PROJECT. ALL CONDITIONS MAY NOT OCCUR. ALL LINTELS ARE TO HAVE 8" MINIMUM BEARING AT EACH END. CAVITY WALL LINTELS ARE TO HAVE 5/16" THICK BOTTOM PLATE (NOT NECESSARILY SHOWN IN SCHEDULE) ACROSS ENTIRE LENGTH AND WIDTH OF HEAD OF OPENING TO CLOSE CAVITY AT ALL DOORS, WINDOWS AND/OR LOUVERS.

MASONRY OPENING	4" MASONRY	6" MASONRY	8" MASONRY	10" MASONRY	4/3/6 CAVITY	4/4/8 CAVITY
UP TO 4'-0"	1 L - 3 1/2" X 3 1/2" X 5/16"	WT 4 X 9	2 L - 3 1/2" X 3 1/2" X 5/16"	L - 4" X 4" X 5/16" & L - 5" X 5" X 5/16"	COMBINE PREVIOUS DETAILS	COMBINE PREVIOUS DETAILS
4'-0" TO 5'-0"	1 L - 4" X 3 1/2" X 5/16"	WT 7 X 11	2 L - 4" X 3 1/2" X 5/16"	L - 4" X 4" X 5/16" & L - 5" X 5" X 5/16"	COMBINE PREVIOUS DETAILS	COMBINE PREVIOUS DETAILS
5'-0" TO 6'-0"	1 L - 5" X 3 1/2" X 5/16"	WT 7 X 11	2 L - 5" X 3 1/2" X 5/16"	L - 6" X 4" X 5/16" & L - 5" X 5" X 5/16"	COMBINE PREVIOUS DETAILS	COMBINE PREVIOUS DETAILS
6'-0" TO 7'-0"	1 L - 6" X 3 1/2" X 5/16"	WT 7 X 13	2 L - 6" X 3 1/2" X 5/16"	L - 6" X 4" X 5/16" & L - 5" X 5" X 5/16"	COMBINE PREVIOUS DETAILS	COMBINE PREVIOUS DETAILS
7'-0" TO 10'-4"	-	WT 8 X 15.5	WT 8 X 15 & PL 7 1/2" X 5/16"	WT 8 X 15 & PL 9 1/2" X 5/16"	WT 8 X 15 & PL 5/16"	WT 8 X 13 & PL 5/16"
10'-4" TO 14'-4"	-	-	WT 8 X 15 & PL 7 1/2" X 5/16"	WT 8 X 15 & PL 9 1/2" X 5/16"	WT 8 X 15 & PL 5/16"	WT 8 X 18 & PL 5/16"

WALL TYPE NOTES

- INDICATES WALL TYPES USED FOR THIS PROJECT.
 - INDICATES WALL TYPES NOT USED FOR THIS PROJECT.
- FIRECODE GYPSUM BOARD IN A ONE, TWO OR THREE HOUR FIRE RATED PARTITION MUST BEAR THE U.L. CLASSIFICATION MARKING.
 - ALL EXISTING AND NEW FIRE AND SMOKE RESISTANT SEPARATIONS ARE TO EXTEND TO THE UNDERSIDE OF THE FLOOR OR ROOF DECK ABOVE.
 - FOR ALL EXISTING AND NEW FIRE RATED PARTITIONS PROVIDE FIRE SAFING AND SEALANT AT FLOOR, ROOF DECK AND ALL PENETRATIONS TO PREVENT THE PASSAGE OF SMOKE. THE FIRE SAFING AND SEALANT SYSTEM MUST MAINTAIN THE RATING OF THE PARTITION.
 - FOR ALL EXISTING AND NEW SMOKE RESISTANT SEPARATIONS PROVIDE FIRE SAFING AND SEALANT AT FLOOR, ROOF DECK AND ALL PENETRATIONS TO PREVENT THE PASSAGE OF SMOKE.
 - WHERE SOUND BATT INSULATION IS INDICATED AT PARTITIONS, FILL ALL VOIDS INCLUDING METAL DECK FLUTES WHERE PARTITIONS MEET THE STRUCTURE ABOVE, WITH BATT INSULATION.
 - AT ALL NON-RATED PARTITIONS FILL ALL VOIDS AROUND PIPES, ELECTRICAL, CONDUIT, DUCTWORK, ETC. WHERE THEY PENETRATE WALLS, WITH SAFING INSULATION.
 - PROVIDE SMOKE DAMPERS AT ALL MECHANICAL PENETRATIONS THROUGH ALL ONE HOUR FIRE RATED SMOKE BARRIERS.
 - PROVIDE FIRE DAMPERS AT ALL MECHANICAL PENETRATIONS THROUGH ALL TWO HOUR FIRE RATED PARTITIONS.

WALL TYPES

- CONCRETE BLOCK CONSTRUCTION** SERIES 1-5
- 1A 4" CONCRETE BLOCK TO THE UNDERSIDE OF THE DECK
 - 1B 4" CONCRETE BLOCK 8" ABOVE FINISHED CEILING
 - 1C 4" CONCRETE BLOCK TO UNDERSIDE OF DECK SEALED TO PROVIDE A SMOKE RESISTANT SEPARATION.
 - 1D 4" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A ONE HOUR FIRE RATING OF LIGHTWEIGHT (< 105 LBS./CU.F.T.) CONCRETE BLOCK PER ASTM C331 AND ASTM E119 METHOD C140 PER TABLE 902.1.3 OF THE CT. BUILDING CODE.
 - 1E 4" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A ONE HOUR FIRE RATING OF LIGHTWEIGHT (< 105 LBS./CU.F.T.) CONCRETE BLOCK PER ASTM C331 AND ASTM E119 METHOD C140 PER TABLE 902.1.3 OF THE CT. BUILDING CODE, AND SEAL TO PROVIDE SMOKE BARRIER AS PER ASTM E814.
 - 2A 8" CONCRETE BLOCK TO THE UNDERSIDE OF THE DECK
 - 2B 8" CONCRETE BLOCK 8" ABOVE FINISHED CEILING
 - 2C 8" CONCRETE BLOCK TO UNDERSIDE OF DECK SEALED TO PROVIDE A SMOKE RESISTANT SEPARATION.
 - 2D 8" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A ONE HOUR FIRE RATING. ASSEMBLY NUMBER U604-UL.
 - 2E 8" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A ONE HOUR FIRE RATING AND SEALED TO PROVIDE A SMOKE BARRIER. ASSEMBLY NUMBER U604-UL.
 - 2F 8" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A TWO HOUR FIRE RATING. ASSEMBLY NUMBER U604-UL.
 - 3A 8" CONCRETE BLOCK TO UNDERSIDE OF THE DECK, GROUT SOLID AT CELLS & RANGE
 - 3B 8" CONCRETE BLOCK 8" ABOVE FINISHED CEILING
 - 3C 8" CONCRETE BLOCK TO UNDERSIDE OF DECK SEALED TO PROVIDE A SMOKE RESISTANT SEPARATION.
 - 3D 8" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A ONE HOUR FIRE RATING. ASSEMBLY NUMBER U604-UL. GROUT SOLID AT RANGE
 - 3E 8" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A ONE HOUR FIRE RATING AND SEALED TO PROVIDE A SMOKE BARRIER. ASSEMBLY NUMBER U604-UL.
 - 3F 8" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A TWO HOUR FIRE RATING. ASSEMBLY NUMBER U604-UL. GROUT SOLID AT CELLS
 - 3G 8" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A THREE HOUR FIRE RATING. ASSEMBLY NUMBER U604-UL.
 - 3H 8" CONCRETE BLOCK TO CELL CEILING HEIGHT, GROUT SOLID
 - 4A 10" CONCRETE BLOCK TO THE UNDERSIDE OF THE DECK
 - 4B 10" CONCRETE BLOCK 8" ABOVE FINISHED CEILING
 - 4C 10" CONCRETE BLOCK TO UNDERSIDE OF DECK SEALED TO PROVIDE A SMOKE RESISTANT SEPARATION.
 - 4D 10" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A ONE HOUR FIRE RATING. ASSEMBLY NUMBER U604-UL.
 - 4E 10" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A ONE HOUR FIRE RATING AND SEALED TO PROVIDE A SMOKE BARRIER. ASSEMBLY NUMBER U604-UL.
 - 4F 10" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A TWO HOUR FIRE RATING. ASSEMBLY NUMBER U604-UL.
 - 4G 10" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A THREE HOUR FIRE RATING. ASSEMBLY NUMBER U604-UL.
 - 5A 12" CONCRETE BLOCK TO THE UNDERSIDE OF THE DECK
 - 5B 12" CONCRETE BLOCK 8" ABOVE FINISHED CEILING
 - 5C 12" CONCRETE BLOCK TO UNDERSIDE OF DECK SEALED TO PROVIDE A SMOKE RESISTANT SEPARATION.
 - 5D 12" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A ONE HOUR FIRE RATING. ASSEMBLY NUMBER U604-UL.
 - 5E 12" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A ONE HOUR FIRE RATING AND SEALED TO PROVIDE A SMOKE BARRIER. ASSEMBLY NUMBER U604-UL.
 - 5F 12" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A TWO HOUR FIRE RATING. ASSEMBLY NUMBER U604-UL.
 - 5G 12" CONCRETE BLOCK TO UNDERSIDE OF DECK WITH A THREE HOUR FIRE RATING. ASSEMBLY NUMBER U604-UL.
- GYPSUM BOARD AND METAL STUD CONSTRUCTION** SERIES 10-15
- 10A 2 1/2" METAL STUD WITH 5/8" GYPSUM BOARD BOTH SIDES
 - 10B 2 1/2" METAL STUD WITH 5/8" GYPSUM BOARD BOTH SIDES, WITH SOUND ATTENUATION BLANKET, STC *47
 - 10C 2 1/2" METAL STUD WITH 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A ONE HOUR FIRE RATING, ASSEMBLY NUMBER U405-UL
 - 10D 2 1/2" METAL STUD WITH 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A ONE HOUR FIRE RATING, ASSEMBLY NUMBER U405-UL
 - 10E 2 1/2" METAL STUD WITH 2 LAYERS 5/8" GYPSUM BOARD BOTH SIDES, WITH SOUND ATTENUATION BLANKET, STC *47
 - 10F 2 1/2" METAL STUD WITH 2 LAYERS 5/8" GYPSUM BOARD BOTH SIDES, WITH A TWO HOUR FIRE RATING, ASSEMBLY NUMBER U411-UL
 - 10H 2 1/2" METAL STUD WITH 2 LAYERS 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A TWO HOUR FIRE RATING, ASSEMBLY NUMBER U411-UL, WITH SOUND ATTENUATION BLANKET, STC *55
 - 10J 2 1/2" METAL STUD WITH 5/8" GYPSUM BOARD ONE SIDE TO 8" ABOVE FINISH CEILING.
 - 11A 2 1/2" METAL STUD WITH 2 LAYERS 1/2" GYPSUM BOARD ONE SIDE.
 - 12A 3 5/8" METAL STUD WITH 5/8" GYPSUM BOARD BOTH SIDES TO UNDERSIDE OF DECK
 - 12B 3 5/8" METAL STUD WITH 5/8" GYPSUM BOARD BOTH SIDES, WITH SOUND ATTENUATION BLANKET, STC *47 TO UNDERSIDE OF DECK
 - 12C 3 5/8" METAL STUD WITH 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A ONE HOUR FIRE RATING, ASSEMBLY NUMBER U465-UL
 - 12D 3 5/8" METAL STUD WITH 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A ONE HOUR FIRE RATING, ASSEMBLY NUMBER U465-UL
 - 12E 3 5/8" METAL STUD WITH 5/8" GYPSUM BOARD BOTH SIDES TO 8" ABOVE FINISH CEILING
 - 12F 3 5/8" METAL STUD WITH 2 LAYERS 5/8" GYPSUM BOARD BOTH SIDES, WITH SOUND ATTENUATION BLANKET, STC *47 TO 8" ABOVE FINISH CEILING
 - 12G 3 5/8" METAL STUD WITH 2 LAYERS 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A TWO HOUR FIRE RATING, ASSEMBLY NUMBER U411-UL
 - 12H 3 5/8" METAL STUD WITH 2 LAYERS 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A TWO HOUR FIRE RATING, ASSEMBLY NUMBER U411-UL
 - 12J 3 5/8" METAL STUD WITH 2 LAYERS 5/8" GYPSUM BOARD ONE SIDE TO 8" ABOVE FINISH CEILING
 - 12K 3 5/8" METAL STUD WITH ONE LAYER FIBERGLASS BULLET RESISTANT PANEL ON UNDERSIDE OF DECK, WITH SOUND BATT
 - 12L 3 5/8" METAL STUD WITH ONE LAYER FIBERGLASS BULLET RESISTANT PANEL ON THREAT SIDE AND 2 LAYERS 5/8" F.C. GYPSUM BOARD ON BOTH SIDES WITH SOUND ATTENUATION BLANKETS TO UNDERSIDE OF DECK UL * U411
 - 12M 3 5/8" METAL STUD WITH ONE LAYER FIBERGLASS BULLET RESISTANT PANEL ON THREAT SIDE AND 1 LAYER 5/8" GYPSUM BOARD ON BOTH SIDES WITH SOUND ATTENUATION BLANKETS TO UNDERSIDE OF DECK
 - 12N 3 5/8" METAL STUD WITH 5/8" GYPSUM BOARD ONE SIDE.
 - 12P 3 5/8" METAL STUD WITH 2 LAYERS 5/8" GYPSUM BOARD ONE SIDE TO 8" ABOVE CEILING
 - 12Q 3 5/8" METAL STUD WITH 5/8" GYPSUM BOARD ONE SIDE, CEMENTITIOUS BACKER BOARD ON ONE SIDE TO UNDERSIDE OF DECK WITH SOUND ATTENUATION BLANKET
 - 13A 3 5/8" METAL STUD WITH 2 LAYERS 1/2" GYPSUM BOARD BOTH SIDES.
 - 13B 3 5/8" METAL STUD WITH 2 LAYERS 1/2" GYPSUM BOARD ONE SIDE.
 - 13C 3 5/8" METAL STUD WITH 2 LAYERS 1/2" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A ONE HOUR FIRE RATING, ASSEMBLY NUMBER U625-UL, S1V.
 - 14A 6" METAL STUD WITH 5/8" GYPSUM BOARD BOTH SIDES TO UNDERSIDE OF DECK
 - 14B 6" METAL STUD WITH 5/8" GYPSUM BOARD BOTH SIDES, WITH SOUND ATTENUATION BLANKET, STC *47
 - 14C 6" METAL STUD WITH 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A ONE HOUR FIRE RATING, ASSEMBLY NUMBER U465-UL TO UNDERSIDE OF DECK
- GYPSUM BOARD AND WOOD STUD CONSTRUCTION** SERIES 20-21
- 20A 2X4 WOOD STUD WITH 5/8" GYPSUM BOARD BOTH SIDES
 - 20B 2X4 WOOD STUD WITH 5/8" GYPSUM BOARD BOTH SIDES, WITH SOUND ATTENUATION BLANKET, STC *47
 - 20C 2X4 WOOD STUD WITH 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A ONE HOUR FIRE RATING, ASSEMBLY NUMBER U305-UL
 - 20D 2X4 WOOD STUD WITH 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A ONE HOUR FIRE RATING, ASSEMBLY NUMBER U305-UL, WITH SOUND ATTENUATION BLANKET, STC *47
 - 20E 2X4 WOOD STUD WITH 2 LAYERS 5/8" GYPSUM BOARD BOTH SIDES, WITH SOUND ATTENUATION BLANKET, STC *47
 - 20F 2X4 WOOD STUD WITH 2 LAYERS 5/8" GYPSUM BOARD BOTH SIDES, WITH SOUND ATTENUATION BLANKET, STC *47
 - 20G 2X4 WOOD STUD WITH 2 LAYERS 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A TWO HOUR FIRE RATING, ASSEMBLY NUMBER U301-UL
 - 20H 2X4 WOOD STUD WITH 2 LAYERS 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A TWO HOUR FIRE RATING, ASSEMBLY NUMBER U301-UL, WITH SOUND ATTENUATION BLANKET, STC *47
 - 21A 2X6 WOOD STUD WITH 5/8" GYPSUM BOARD BOTH SIDES
 - 21B 2X6 WOOD STUD WITH 5/8" GYPSUM BOARD BOTH SIDES, WITH 1 1/2" SOUND ATTENUATION BLANKET, STC *47
 - 21C 2X6 WOOD STUD WITH 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A ONE HOUR FIRE RATING, ASSEMBLY NUMBER U305-UL
 - 21D 2X6 WOOD STUD WITH 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A ONE HOUR FIRE RATING, ASSEMBLY NUMBER U305-UL, WITH 1 1/2" SOUND ATTENUATION BLANKET, STC *47
 - 21E 2X6 WOOD STUD WITH 2 LAYERS 5/8" GYPSUM BOARD BOTH SIDES, WITH 1 1/2" SOUND ATTENUATION BLANKET, STC *47
 - 21F 2X6 WOOD STUD WITH 2 LAYERS 5/8" GYPSUM BOARD BOTH SIDES, WITH 1 1/2" SOUND ATTENUATION BLANKET, STC *47
 - 21G 2X6 WOOD STUD WITH 2 LAYERS 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A TWO HOUR FIRE RATING, ASSEMBLY NUMBER U301-UL
 - 21H 2X6 WOOD STUD WITH 2 LAYERS 5/8" FIRECODE GYPSUM BOARD BOTH SIDES, WITH A TWO HOUR FIRE RATING, ASSEMBLY NUMBER U301-UL, WITH 1 1/2" SOUND ATTENUATION BLANKET, STC *47
- EXISTING CONSTRUCTION** SERIES 30
- 30A EXISTING 1 HR. CONSTRUCTION OF 6" OR GREATER CONCRETE MASONRY EXTENDS TO DECK ABOVE. SEE WALL TYPE NOTES FOR SEALING ALL VOIDS. PER 1990 BOCA TABLE 902.1.3
 - 30B EXISTING 2 HR. CONSTRUCTION OF 6" OR GREATER CONCRETE MASONRY EXTENDS TO DECK ABOVE. SEE WALL TYPE NOTES FOR SEALING ALL VOIDS. PER 1990 BOCA TABLE 902.1.3
 - 30C EXISTING 3 HR. CONSTRUCTION OF 10" OR GREATER CONCRETE MASONRY EXTENDS TO DECK ABOVE. SEE WALL TYPE NOTES FOR SEALING ALL VOIDS. PER 1990 BOCA TABLE 902.1.3
 - 30D EXISTING SMOKE RESISTANT CONSTRUCTION. SEE WALL TYPE NOTES FOR SEALING ALL VOIDS.
 - 30E EXISTING 1 HR. SMOKE BARRIER CONSTRUCTION. SEE WALL TYPE NOTES FOR SEALING ALL VOIDS. PER 1990 BOCA TABLE 902.1.3
 - 30F EXISTING 20 MIN. CONSTRUCTION SIM. TO U425-UL. SEE WALL TYPE NOTES FOR SEALING ALL VOIDS (5/8" GYPSUM BOARD BOTH SIDES ON STEEL STUDS.)
 - 30G EXISTING 1/2 HR. CONSTRUCTION OF 4" CONC. MASONRY PER 1990 BOCA TABLE 902.1.3
- FURRED OUT WALLS** SERIES 40
- 40A 5/8" FIRECODE GYPSUM BOARD ON 2" METAL 'Z' STUDS WITH 2" RIGID INSULATION
 - 40B 5/8" GYPSUM BOARD ON 7/8" METAL FURRING CHANNELS
- GYPSUM BOARD AND METAL SHAFT WALL STUD CONSTRUCTION** SERIES 50
- 50A 1" GYPSUM BOARD LINER PANELS WITH 2 LAYERS 5/8" FIRECODE GYPSUM BOARD ON FINISHED SIDE, ON 2 1/2" METAL SHAFT WALL STUDS WITH A ONE HOUR FIRE RATING, ASSEMBLY NUMBER U438-UL
 - 50B 1" GYPSUM BOARD LINER PANELS WITH 2 LAYERS 5/8" FIRECODE GYPSUM BOARD ON FINISHED SIDE, ON 2 1/2" METAL SHAFT WALL STUDS WITH A TWO HOUR FIRE RATING, ASSEMBLY NUMBER U438-UL
- SPECIAL WALL CONSTRUCTION** SERIES 90
- 90A 2 1/2" METAL STUDS WITH 2 LAYERS 1/2" GYPSUM BOARD ONE SIDE WITH A ONE HOUR FIRE RATING, UL DESIGN NO. X528, S1V, ADD 1 LAYER 3/4" PLYWOOD, FROM FIN. FLOOR TO 8'-0" A.F.F., TO WALL TYPE.
 - 90B SUBSTITUTE 2 LAYERS 1/2" GYPSUM BOARD WITH 1 LAYER 1/2" GLASS MESH MORTAR UNIT ON 1 LAYER 1/2" WATER RESISTANT GYPSUM BOARD. SEE FLOOR PLANS FOR TOILET ROOM LOCATIONS.
 - 90C 3 5/8" METAL STUDS STAGGERED @ 16" O.C. EACH SIDE WITHIN 6" RUNNERS TOP AND BOTTOM, WITH 2 LAYERS 1/2" GYPSUM BOARD BOTH SIDES, WITH SOUND ATTENUATION BLANKET, STC *47
 - 90D 2 WYTHES OF 4" FACE BRICK TO UNDERSIDE OF DECK (8" FACE TO FACE) BRICKS MUST BE MINIMUM 75% SOLID. JOINT BETWEEN WYTHES MUST BE MORTARED SOLID. BRICK COLOR TO MATCH ADJACENT BRICK WALLS. BASE TO BE 8" GLAZED BLOCK TO MATCH EXISTING.
 - 90E 3 5/8" METAL STUDS @ 2'-0" O.C. WITH R-11 BATT INSULATION AND 1 LAYER 1/2" GYPSUM BOARD ON INTERIOR FACE.

REVISIONS

DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR R5B0

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS R.0.1 & R.0.2



WESTFORD POLICE FACILITY
53 MAIN STREET
WESTFORD MASSACHUSETTS 01886



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

418 Slater Rd. New Britain, Connecticut 06050-2590 (860) 229-0361
Drawn by: GPD/WEY Scale: N/A

INFORMATION SHEET

CODE PLAN LEGEND

SEPARATIONS ARE DESIGNED AS FOLLOWS:

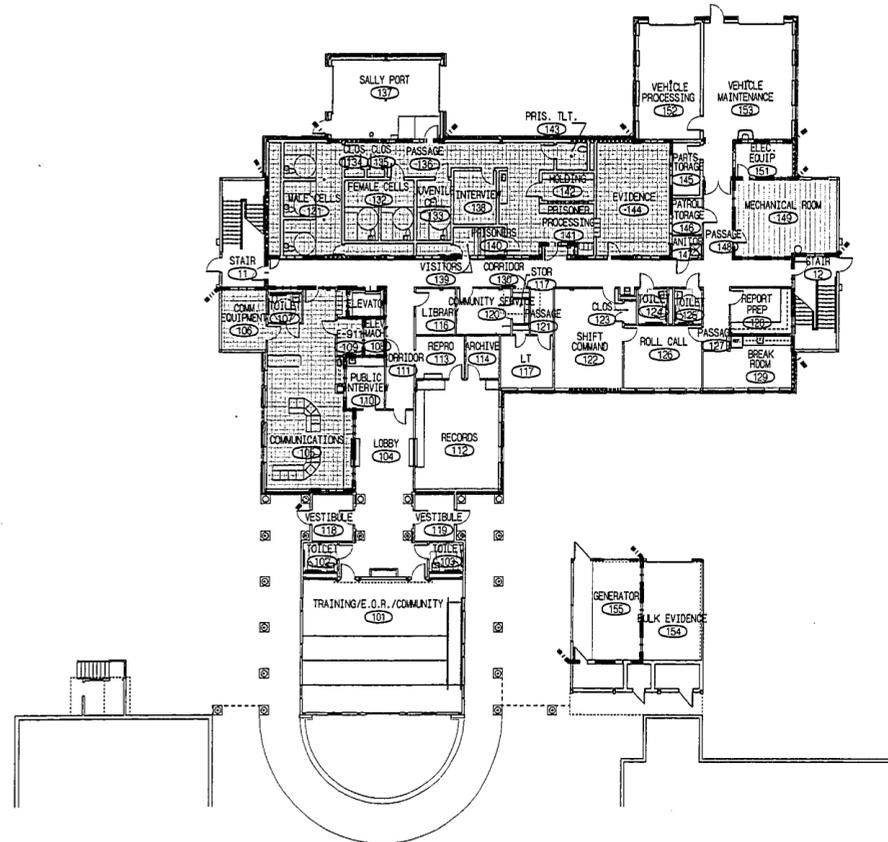
1 HR. FIRE RATED (FIREWALL OR SEPARATION - SEE PLAN)

2 HR. FIRE RATED (FIREWALL OR SEPARATION - SEE PLAN)

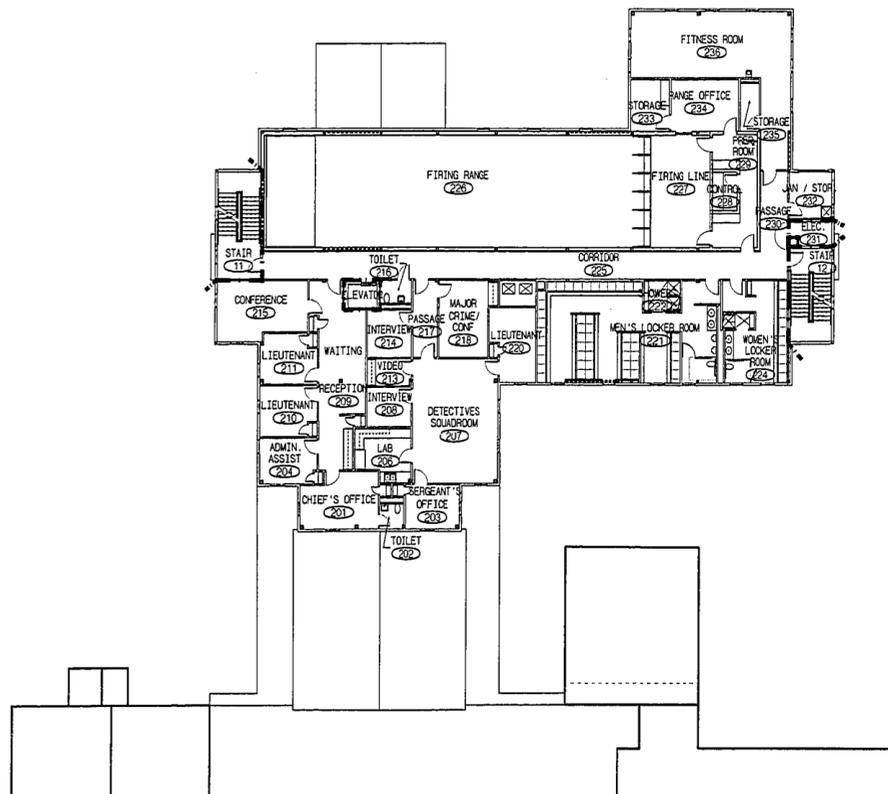
AREA REQUIRING 1HR FIRE PROTECTION OF STRUCTURE AND 1HR FLOOR/CEILING CONSTRUCTION

AREA REQUIRING 2HR FIRE PROTECTION OF STRUCTURE AND 2HR FLOOR/CEILING CONSTRUCTION

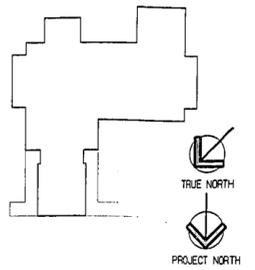
USE GROUP - BUSINESS
CONSTRUCTION TYPE - 2C,
NONCOMBUSTIBLE UNPROTECTED
BUILDING IS FULLY SPRINKLERED.



MAIN LEVEL



UPPER LEVEL



REVISIONS		
DATE	MARK	DESCRIPTION
6/25/96		ISSUED FOR REBD

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS R.O.1 & R.O.2



**WESTFORD
POLICE
FACILITY**

53 MAIN STREET
WESTFORD
MASSACHUSETTS
01886



**KAESTLE BOOS
ASSOCIATES, INC.
ARCHITECTS**

415 Slater Rd. New Britain, Connecticut 00600-2690 860.228-0381
Drawn by: SDEWEY Scale: 1/16" = 1'-0"

**OVERALL
CODE INFO
PLANS**

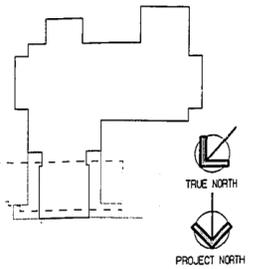
Project no. 96071

Drawing no.

Date: MARCH 23, 1996

R1.01

1-25/96

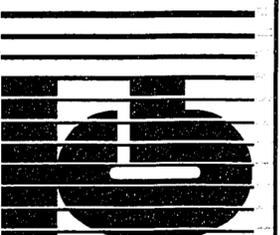


REVISIONS		
DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR RFB

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS RO.01 & RO.02



**WESTFORD
POLICE
FACILITY**
53 MAIN STREET
WESTFORD
MASSACHUSETTS
01886



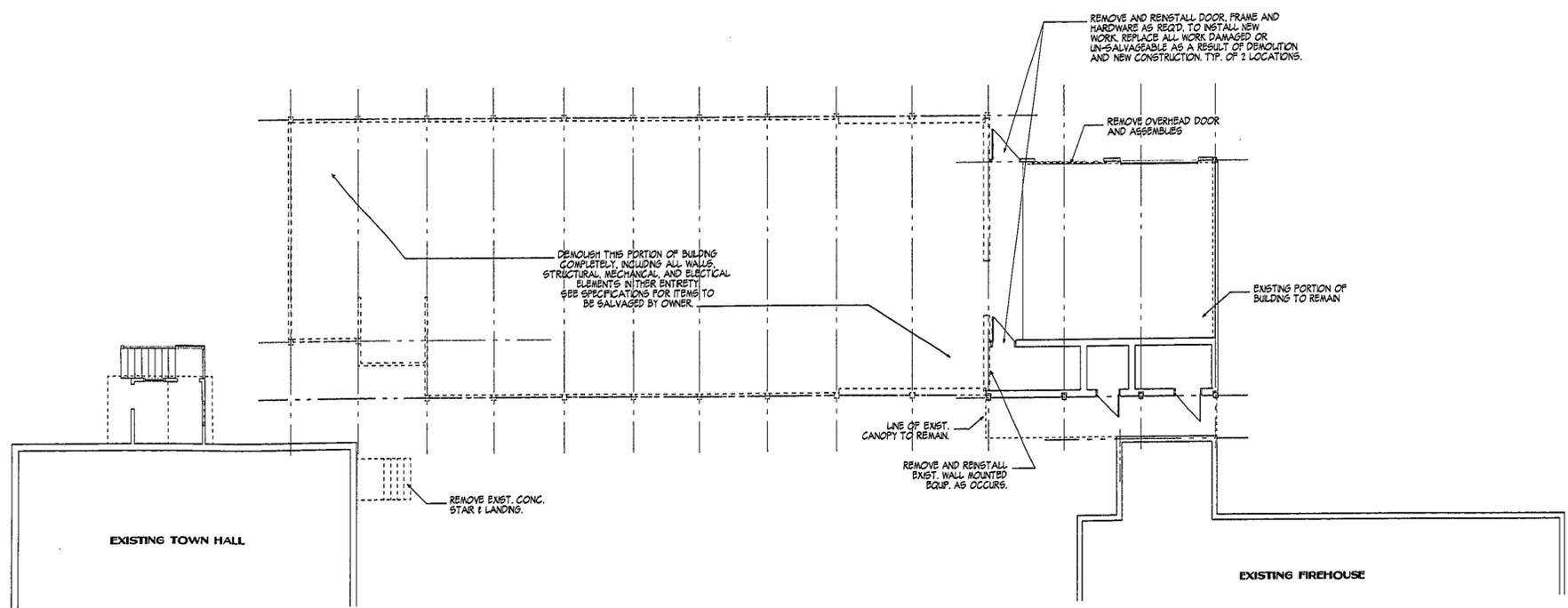
**KAESTLE BOOS
ASSOCIATES, INC.
ARCHITECTS**

416 Slater Rd. New Britain, Connecticut 06050-2590 (860) 229-0361
Drawn by: 60EWEY Scale: 1/8" = 1'-0"

**DEMOLITION
PLAN**

Project no. 96077 Drawing no. 1/13/98-5

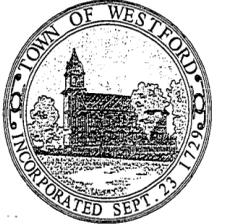
Date: MARCH 23, 1998 **D1.01**



SEE SHEET C-2 FOR LEGEND

REVISIONS	
9/9/97	REVISED PER UPDATED INFO. FROM DIVERSIFIED CIVIL ENGINEERING.
11/5/97	REVISIONS FOR NOTICE OF INTENT SUBMISSION
2/16/98	REVISIONS FOR PRE-BID SUBMISSION
3/23/98	ISSUED FOR BIDS.
6/25/98	REVISED FOR BIDS.

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**WESTFORD
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FACILITY**
53 MAIN STREET
WESTFORD
MASSACHUSETTS
01886



**KAESTLE BOOS
ASSOCIATES, INC.
ARCHITECTS**

Drawn by: WEM/mic (9511P03.dwg) Scale: 1"=40'

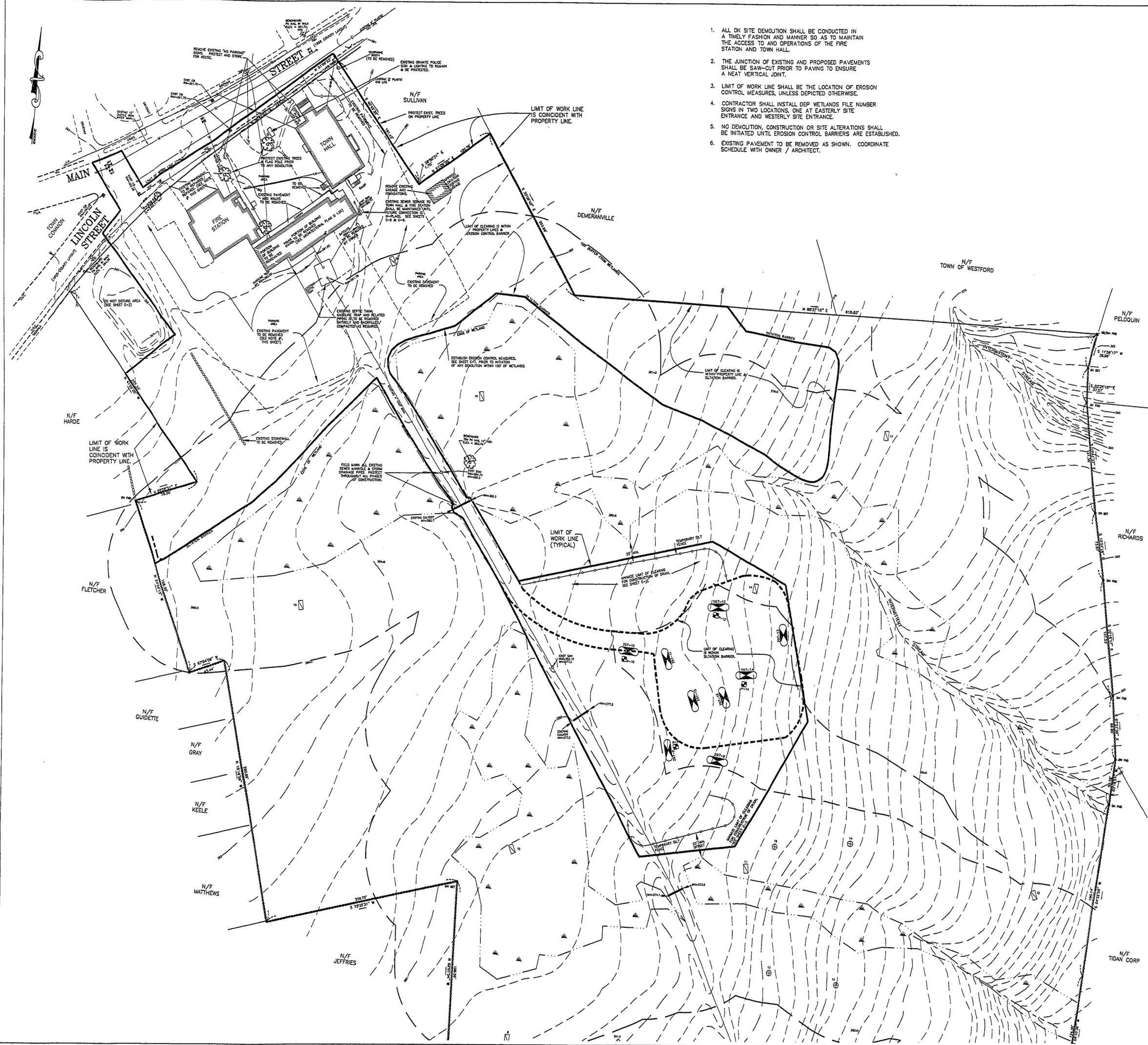
EXISTING CONDITIONS
& DEMOLITION
SITE PLAN

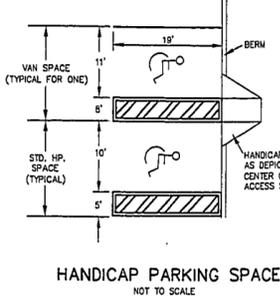
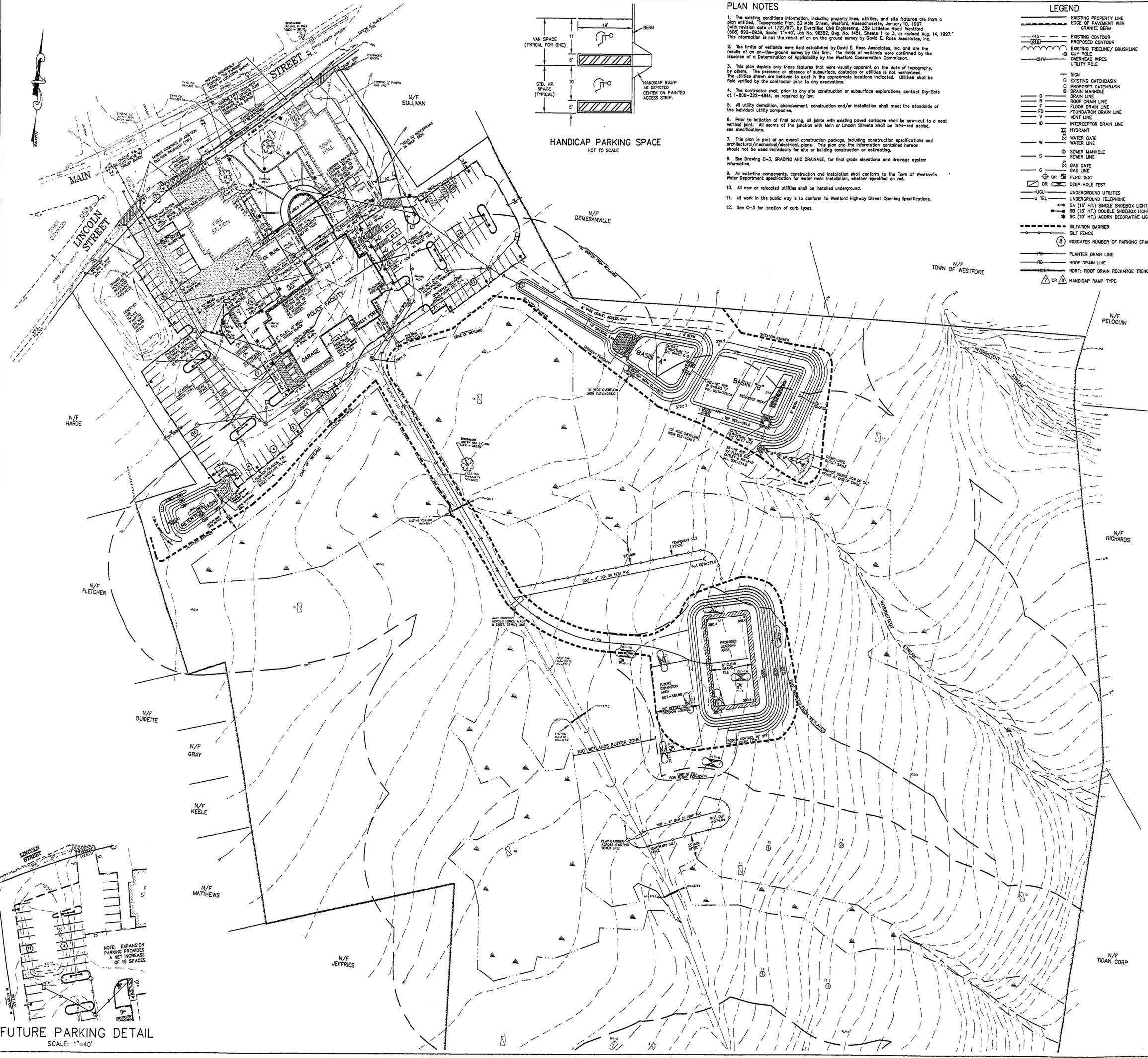
Project no. KB 96077
DERA 9511

Date 03/23/98

1150-6
C-1

1. ALL ON SITE DEMOLITION SHALL BE CONDUCTED IN A TIMELY FASHION AND MANNER SO AS TO MAINTAIN THE ACCESS TO AND OPERATIONS OF THE FIRE STATION AND TOWN HALL.
2. THE JUNCTION OF EXISTING AND PROPOSED PAVEMENTS SHALL BE SAW-CUT PRIOR TO PAVING TO ENSURE A NEAT VERTICAL JOINT.
3. LIMIT OF WORK LINE SHALL BE THE LOCATION OF EROSION CONTROL MEASURES, UNLESS DEPICTED OTHERWISE.
4. CONTRACTOR SHALL INSTALL DEP WETLANDS FILE NUMBER SIGNS IN TWO LOCATIONS, ONE AT EASTERLY SITE ENTRANCE AND WESTERLY SITE ENTRANCE.
5. NO DEMOLITION, CONSTRUCTION OR SITE ALTERATIONS SHALL BE INITIATED UNTIL EROSION CONTROL BARRIERS ARE ESTABLISHED.
6. EXISTING PAVEMENT TO BE REMOVED AS SHOWN. COORDINATE SCHEDULE WITH OWNER / ARCHITECT.





- PLAN NOTES**
- The existing conditions information, including property lines, utilities, and site features are from a plan entitled, "Topographic Plan, 53 Main Street, Westford, Massachusetts, January 10, 1997" (with revision date of 1/29/97), by Diversified Civil Engineering, 359 Littleton Road, Westford (508) 892-0939, Scale: 1"=40', Job No. 98352, Dwg. No. 1451, Sheets 1 to 3, or revised Aug. 14, 1997. This information is not the result of an on the ground survey by David E. Ross Associates, Inc.
 - The limits of wetlands were field established by David E. Ross Associates, Inc. and are the result of an on-the-ground survey by this firm. The limits of wetlands were confirmed by the issuance of a Determination of Applicability by the Wetland Conservation Commission.
 - This plan depicts only those features that were visually apparent on the date of topography, by others. The presence or absence of subsurface, obstacles or utilities is not warranted. The utilities shown are believed to exist in the approximate locations indicated. Utilities shall be field verified by the contractor prior to any excavations.
 - The contractor shall, prior to any site construction or subsurface explorations, contact Dig-Safe at 1-800-322-4844, as required by law.
 - All utility demolition, abandonment, construction and/or installation shall meet the standards of the individual utility companies.
 - Prior to initiation of final paving, all joints with existing paved surfaces shall be saw-cut to a neat vertical joint. All seams at the junction with Main or Lincoln Streets shall be infra-red sealed, see specifications.
 - This plan is part of an overall construction package, including construction specifications and architectural/mechanical/electrical plans. This plan and the information contained hereon should not be used individually for site or building construction or estimating.
 - See Drawing C-3, GRADING AND DRAINAGE, for final grade elevations and drainage system information.
 - All waterline components, construction and installation shall conform to the Town of Westford's Water Department specification for water main installation, whether specified or not.
 - All new or relocated utilities shall be installed underground.
 - All work in the public way is to conform to Westford Highway Street Opening Specifications.
 - See C-3 for location of curb types.

LEGEND

---	EXISTING PROPERTY LINE
---	EDGE OF PAVEMENT WITH GRANITE BERM
---	EXISTING CONTOUR
---	PROPOSED CONTOUR
---	EXISTING TREELINE / BRUSHLINE
---	CLY POLE
---	OVERHEAD WIRES
---	UTILITY POLE
---	SIGN
---	EXISTING CATCHBASIN
---	PROPOSED CATCHBASIN
---	DRAIN MANHOLE
---	DRAIN LINE
---	ROOF DRAIN LINE
---	FLOOR DRAIN LINE
---	FOUNDATION DRAIN LINE
---	VENT LINE
---	INTERCEPTOR DRAIN LINE
---	HYDRANT
---	WATER GATE
---	WATER LINE
---	SEWER MANHOLE
---	SEWER LINE
---	GAS GATE
---	GAS LINE
---	PERC TEST
---	DEEP HOLE TEST
---	UNDERGROUND UTILITIES
---	UNDERGROUND TELEPHONE
---	SA (15' HT.) SINGLE SHOEBOX LIGHT
---	SB (15' HT.) DOUBLE SHOEBOX LIGHT
---	SC (10' HT.) ACORN GEOMETRIC LIGHT
---	SILTATION BARRIER
---	SILT FENCE
---	INDICATES NUMBER OF PARKING SPACES
---	PLANTER DRAIN LINE
---	ROOF DRAIN LINE
---	RDRT: ROOF DRAIN RECHARGE TRENCH
---	HANDICAP RAMP TYPE

DAVID E. ROSS ASSOCIATES, INC.
 Civil Engineer, Landscape Architect,
 Land Surveyor & Environmental Consultant
 DAVID E. ROSS ASSOCIATES, INC.
 111 Fitchburg Road
 P.O. Box 368
 Ayer, MA 01432
 (978) 772-6232 FAX (978) 772-6258

REVISIONS

9/9/97	REVISED PER UPDATED INFO. FROM DIVERSIFIED CIVIL ENGINEERING.
11/5/97	REVISIONS FOR NOTICE OF INTENT SUBMISSION
2/16/98	REVISIONS FOR PRE-BID SUBMISSION
3/23/98	ISSUED FOR BIDS.
6/25/98	REVISED FOR BIDS.

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WESTFORD POLICE FACILITY
 53 MAIN STREET
 WESTFORD
 MASSACHUSETTS
 01886

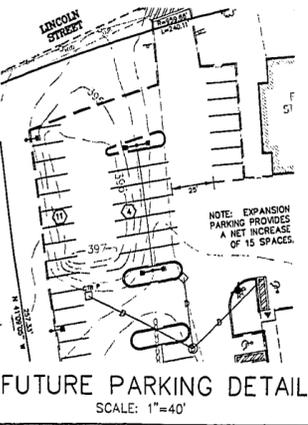


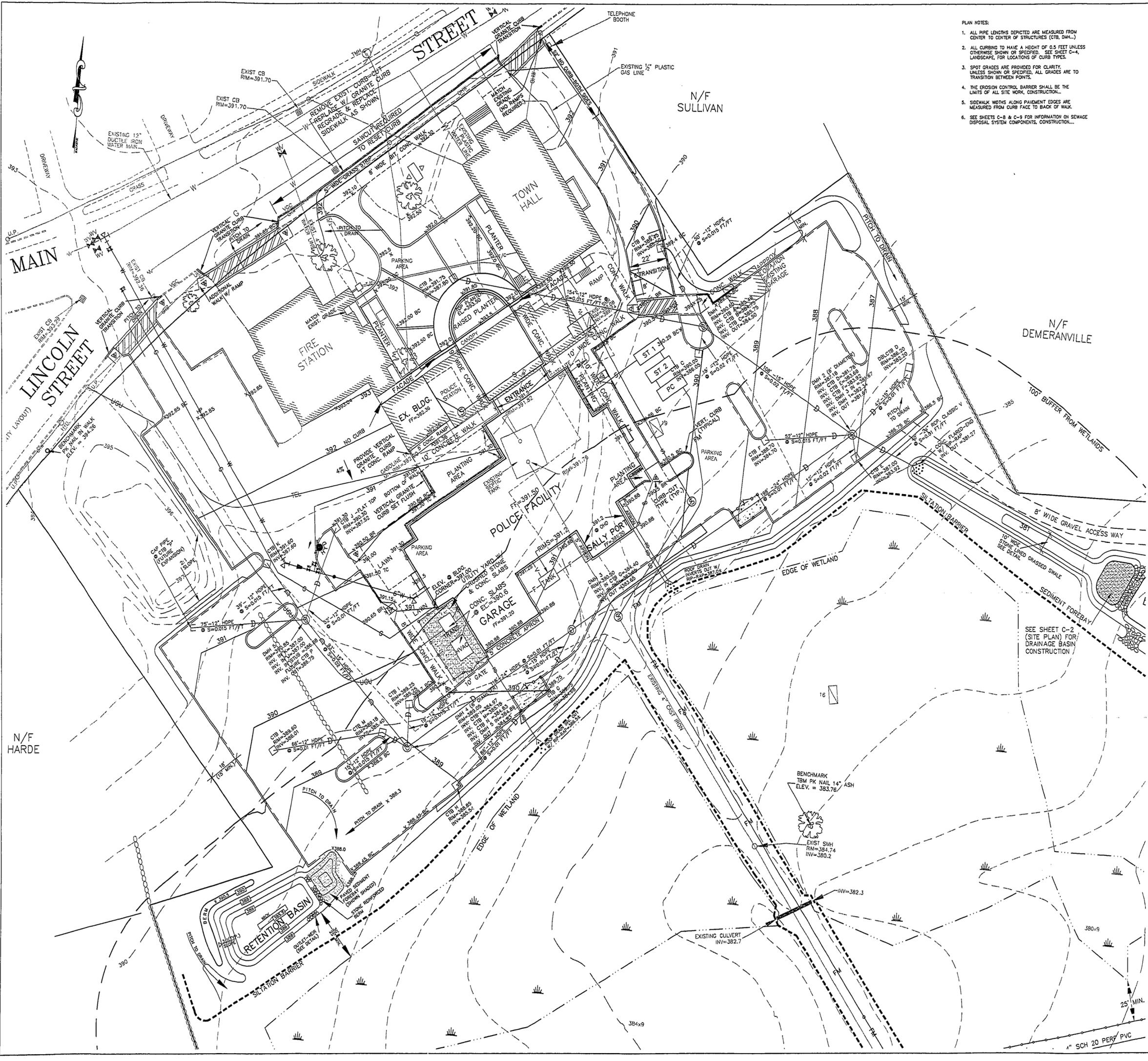
Drawn by WEM/mic (9511P03.dwg) Scale: 1"=40'

SITE PLAN

Project no. KB 96077
 DERA 9511
 Date 03/23/98

Drawing no. **C-2**





- PLAN NOTES:
1. ALL PIPE LENGTHS DEPICTED ARE MEASURED FROM CENTER TO CENTER OF STRUCTURES (CTB, DMH...)
 2. ALL CURBING TO HAVE A HEIGHT OF 0.5 FEET UNLESS OTHERWISE SHOWN OR SPECIFIED. SEE SHEET C-4, LANDSCAPE, FOR LOCATIONS OF CURB TYPES.
 3. SPOT GRADES ARE PROVIDED FOR CLARITY, UNLESS SHOWN OR SPECIFIED, ALL GRADES ARE TO TRANSITION BETWEEN POINTS.
 4. THE EROSION CONTROL BARRIER SHALL BE THE LIMITS OF ALL SITE WORK, CONSTRUCTION...
 5. SIDEWALK WIDTHS ALONG PAVEMENT EDGES ARE MEASURED FROM CURB FACE TO BACK OF WALK.
 6. SEE SHEETS C-8 & C-9 FOR INFORMATION ON SEWAGE DISPOSAL SYSTEM COMPONENTS, CONSTRUCTION...

DAVID E. ROSS ASSOCIATES, INC.
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 Land Surveyor & Environmental Consultant
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 111 Fitchburg Road
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 Ayer, MA 01432
 (978) 772-6232 FAX (978) 772-6258

SEE SHEET C-2 FOR LEGEND

REVISIONS	
9/9/97	REVISED FOR UPDATED INFO. FROM DIVERSIFIED CIVIL ENGINEERING.
11/5/97	REVISIONS FOR NOTICE OF INTENT SUBMISSION
2/18/98	REVISIONS FOR PRE-BID SUBMISSION
3/23/98	ISSUED FOR BIDS.
6/25/98	REVISED FOR BIDS.

THIS PLAN IS PART OF A SET OF PLANS AND SPECIFICATIONS, AND IS NOT TO BE USED AS A SOLE SOURCE OF INFORMATION.



WESTFORD POLICE FACILITY
 53 MAIN STREET
 WESTFORD
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 01886



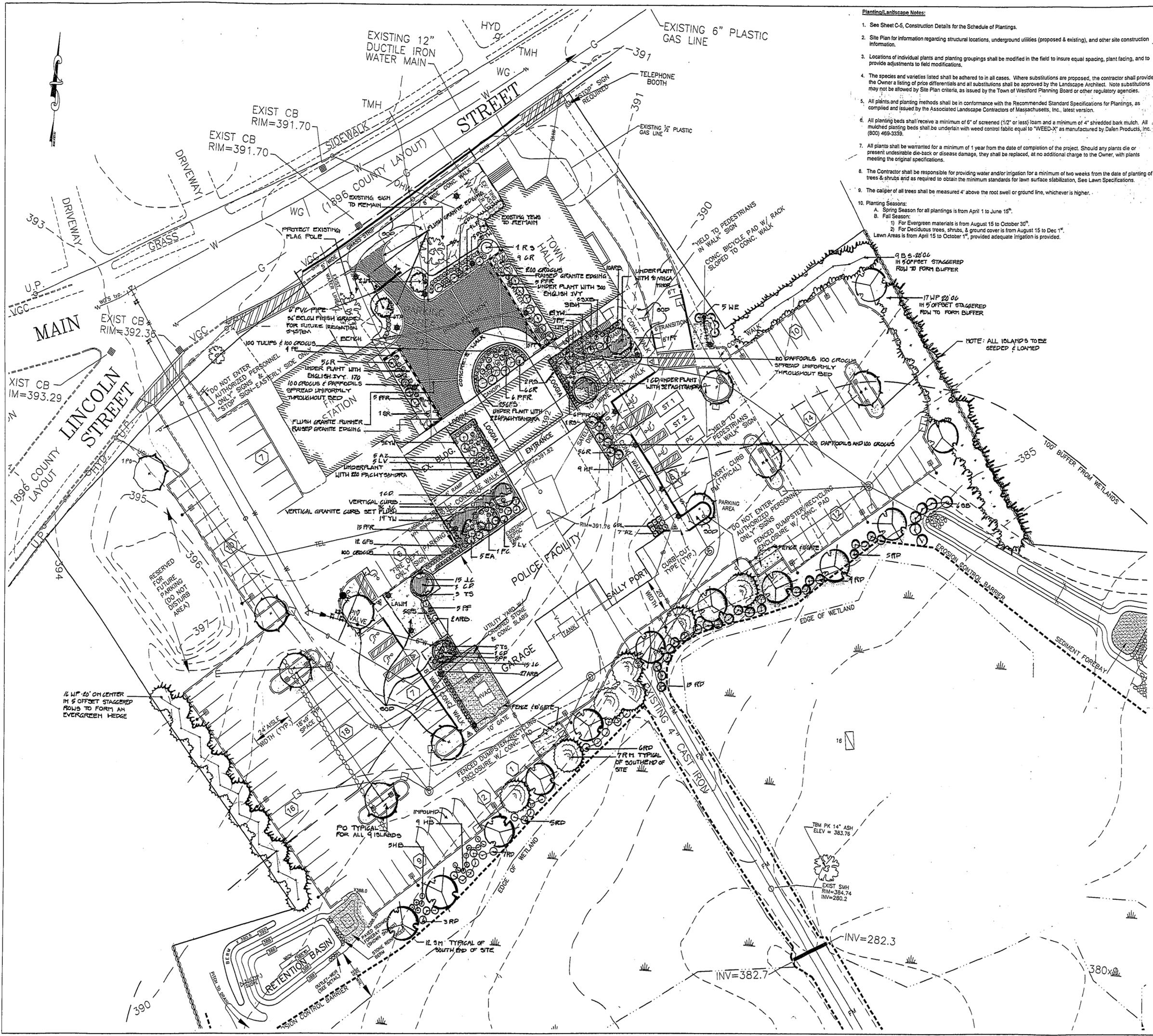
SEE SHEET C-2 (SITE PLAN) FOR DRAINAGE BASIN CONSTRUCTION

KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

Drawn by WEM/mic (9511P03.dwg) Scale: 1"=20'

GRADING AND DRAINAGE PLAN

Project no. KB 96077 DERA 9511 Drawing no. C-3
 Date 03/23/98



- Planting/Landscape Notes:**
- See Sheet C-5, Construction Details for the Schedule of Plantings.
 - Site Plan for information regarding structural locations, underground utilities (proposed & existing), and other site construction information.
 - Locations of individual plants and planting groupings shall be modified in the field to insure equal spacing, plant facing, and to provide adjustments to field modifications.
 - The species and varieties listed shall be adhered to in all cases. Where substitutions are proposed, the contractor shall provide the Owner a listing of price differentials and all substitutions shall be approved by the Landscape Architect. Note substitutions may not be allowed by Site Plan criteria, as issued by the Town of Westford Planning Board or other regulatory agencies.
 - All plants and planting methods shall be in conformance with the Recommended Standard Specifications for Plantings, as compiled and issued by the Associated Landscape Contractors of Massachusetts, Inc., latest version.
 - All planting beds shall receive a minimum of 6" of screened (1/2" or less) loam and a minimum of 4" shredded bark mulch. All mulched planting beds shall be underlain with weed control fabric equal to "WEED-X" as manufactured by Dafen Products, Inc. (800) 469-3339.
 - All plants shall be warranted for a minimum of 1 year from the date of completion of the project. Should any plants die or present undesirable die-back or disease damage, they shall be replaced, at no additional charge to the Owner, with plants meeting the original specifications.
 - The Contractor shall be responsible for providing water and/or irrigation for a minimum of two weeks from the date of planting of trees & shrubs and as required to obtain the minimum standards for lawn surface stabilization, See Lawn Specifications.
 - The caliper of all trees shall be measured 4' above the root swell or ground line, whichever is higher.
 - Planting Seasons:
 - Spring Season for all plantings is from April 1 to June 15".
 - Fall Season:
 - For Evergreen materials is from August 15 to October 30".
 - For Deciduous trees, shrubs, & ground cover is from August 15 to Dec 1".
- Lawn Areas is from April 15 to October 1", provided adequate irrigation is provided.

DAVID E. ROSS ASSOCIATES, INC.
 Civil Engineer, Landscape Architect,
 Land Surveyor & Environmental Consultant
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SEE SHEET C-2 FOR LEGEND

REVISIONS	
9/9/97	REVISED PER UPDATED INFO. FROM DIVERSIFIED CIVIL ENGINEERING.
11/5/97	REVISIONS FOR NOTICE OF INTENT SUBMISSION
2/18/98	REVISIONS FOR PRE-BID SUBMISSION
3/23/98	ISSUED FOR BIDS.

THIS PLAN IS PART OF A SET OF PLANS AND SPECIFICATIONS, AND IS NOT TO BE USED AS A SOLE SOURCE OF INFORMATION.

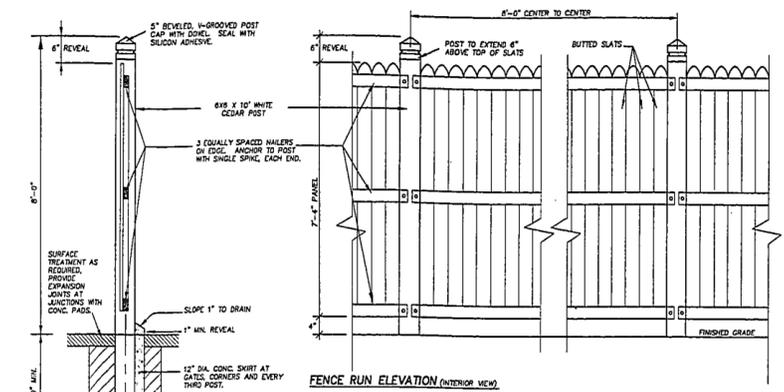
WESTFORD POLICE FACILITY
 53 MAIN STREET
 WESTFORD MASSACHUSETTS
 01886

KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

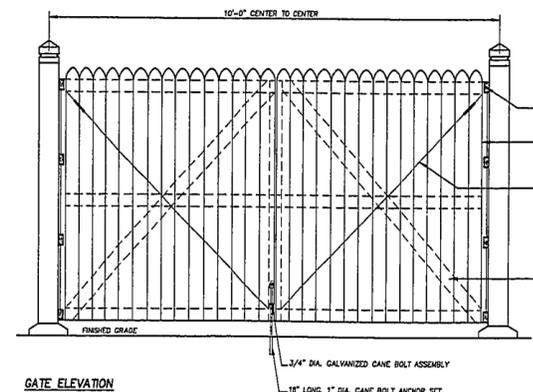
Drawn by: WEM/mic (9511P03.dwg) Scale: 1"=20'

LIGHTING AND LANDSCAPE PLAN

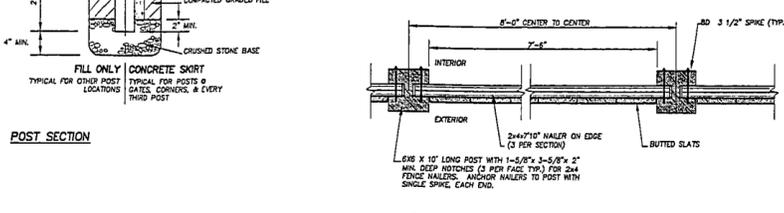
Project no. KB 96077 DERA 9511 Drawing no. C-4
 Date 02/16/98



FENCE RUN ELEVATION (INTERIOR VIEW)

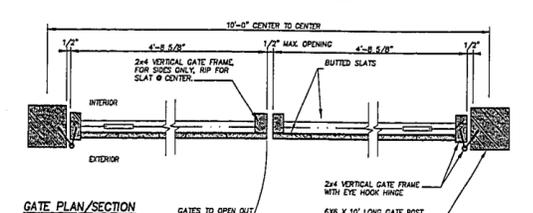


GATE ELEVATION



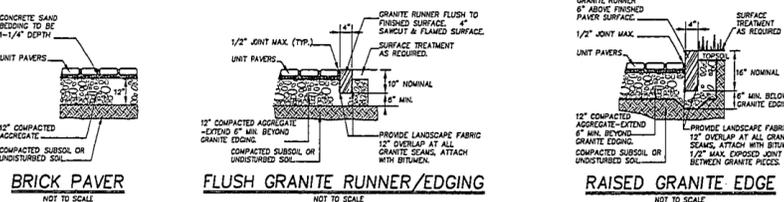
POST SECTION

FENCE RUN PLAN/SECTION



GATE PLAN/SECTION

PICKET FENCING DETAILS
NOT TO SCALE



BRICK PAVER

FLUSH GRANITE RUNNER/EDGING

RAISED GRANITE EDGE

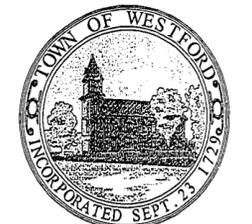
PLANTING SCHEDULE

Quantity & Plan Code	Common Name	Botanical Name	Remarks
TREES:			
39 ARB	Golden Arborvitae	<i>Thuja occidentalis</i> "Lutea"	6-8' Height. Single stem, B&B.
9 BS	Colorado Blue Spruce	<i>Picea pungens glauca</i>	8-10' Height. Single stem, B&B.
4 CD	Chinese Pink flowering Dogwood	<i>Cornus kousa</i>	2" cal., 4' from fin. grade. Single stem, B&B.
1 FC	Flowering Crab	<i>Malus spp.</i> "Centurian"	2" cal., 4' from fin. grade. Single stem, B&B. vigorous upright, rose red flowers.
1 FT	Fringe Tree	<i>Chionanthus virginicus</i>	2" cal., 4' from fin. grade. Single stem, B&B.
3 JM	Japanese Maple	<i>Acer palmatum dissectum</i> "Crimson Queen"	2" cal., 4' from fin. grade. Single stem, B&B.
10 PO	Pin Oak	<i>Quercus palustris</i>	2" cal., 4' from fin. grade. Single stem, B&B.
7 RM	Red Maple	<i>Acer Rubrum</i> "October Glory"	2" cal., 4' from fin. grade. Single stem, B&B.
12 SM	Silver Maple	<i>Acer Palmatum</i>	2" cal., 4' from fin. grade. Single stem, B&B.
1 SR	Japanese Tree Lilac	<i>Syringa Reticula</i>	2" cal., 4' from fin. grade. Single stem, B&B.
32 WP	Eastern White Pine	<i>Pinus strobus</i>	8' Ht. Single stem, Nursery stock only, B&B.
SHRUBS:			
12 AZ	Azalea	<i>Azalea prunifolium</i>	24-36" Ht., 18-24" Spr., B&B. or potted (5 gal. min.) orange-red flowering
3 BH	Blue Holly	<i>Ilex x meserve</i>	24-36" Ht., 18-24" Spr., B&B. "Blue Girl & Blue Boy" or potted (5 gal. min.) provide one male plant per grouping
25 CR	White Carolina Rhododendron	<i>Rhododendron "carolinianum album"</i>	24-36" Ht., 18-24" Spr., B&B. or potted (5 gal. min.) White flowering.
5 EA	Compact Winged Burning Bush	<i>Euonymus alatus "compacta"</i>	24-36" Ht., 24" Spr., B&B. or potted (5 gal. min.)
42 GFS	Gold Flame Spirea	<i>Spiraea x bumalda "Gold flame"</i>	12-18" Ht., 12-18" Spr., B&B. or potted (3 gal. min.)
14 HB	High Bush Blueberry	<i>Vaccinium corymbosum</i>	24-36" Ht., 18-24" Spr., B&B.
9 HB	Hosta	<i>Hosta tardiflora</i>	18-24" Ht., 18-24" Spr., B&B. or potted (5 gal. min.)
66 JC	Blue Rug Juniper	<i>Juniperus chinensis procumbens "Blue Rug"</i>	4-6" Ht., 18-24" Spr., B&B. or potted (5 gal. min.)
14 JV	Lily of the Valley Shrub	<i>Pieris floribunda</i>	24-36" Ht., 24-36" Spr., B&B. or potted (5 gal. min.)
21 PF	Bush Cinquefoil	<i>Potentilla fruticosa "Goldfinger"</i>	24-36" Ht., 18-24" Spr., B&B. or potted (5 gal. min.) Yellow flowers.
37 PFR	White Potentilla	<i>Potentilla fruticosa "Mount Everest"</i>	24-36" Ht., 18-24" Spr., B&B. or potted (5 gal. min.) White flowers.
45 RD	Red Twig Dogwood	<i>Cornus sericea</i>	24-36" Ht., 24-36" Spr., B&B.
3 RS	Rose of Sharon	<i>Hibiscus syriacus "Banner"</i>	36-48" Ht., 24" Spr., B&B. Double white flower.
6 SB	Spice Bush	<i>Lindera Benzoin</i>	24-36" Ht., 18-24" Spr., B&B.
5 SXB	Spirea x Bumalda Anthony Waters	<i>Spiraea x bumalda "Anthony Waters"</i>	18-24" Ht., 18-24" Spr., (5 gal. min.)
13 TS	Japanese Barberry	<i>Berberis Thunbergii "Aurropurpurea"</i>	18" Ht., 18-24" Spr., B&B or potted (5 gal. min.), red-leaved
5 WE	Winged Euonymus	<i>Euonymus alatus</i>	24-36" Ht., 18-24" Spr., B&B
101 YW	Hick's Yew	<i>Taxus x media "Hick's"</i>	24-36" Ht., 18-24" Spr., B&B or potted (5 gal. min.), to form hedge.
GROUNDCOVER & PERENNIALS:			
As shown	Periwinkle	<i>Vinca minor</i>	Flats or cuttings, plant at a rate of 1 plant per 2 square feet of bed.
As shown	Japanese Spurge	<i>Pachysandra terminalis</i>	Flats or cuttings, plant at a rate of 1 plant per 2 square feet of bed.
26	Yellow triplid Daylily	<i>Hemerocallis spp.</i>	Potted, 2 gal., nursery stock
As shown	English ivy	<i>Hedera helix</i>	Flats or cuttings, plant at a rate of 1 plant per 2 square feet of bed.
BULBS:			
A* shown	Crocus Mix including: 50% Giant Crocuses, 50% Joan d'Arc Crocuses		
	Daffodil Mix including: equal proportions of: Carlton Daffodils, King Alfred Daffodils, Salome Daffodils.		
	Tulip Mix including: equal proportions of Red and Gold Apeldoorn Tulips, Peach Blossom Tulips, Red Ridinghood Tulips.		

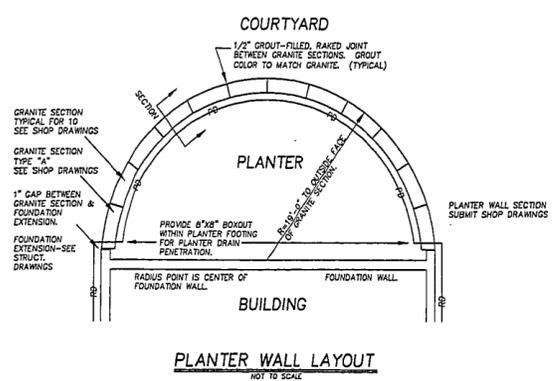
REVISIONS

11/5/97	REVISIONS FOR NOTICE OF INTENT SUBMISSION
2/16/98	REVISIONS FOR PRE-BID SUBMISSION
3/23/98	ISSUED FOR BIDS.
6/25/98	REVISED FOR BIDS.

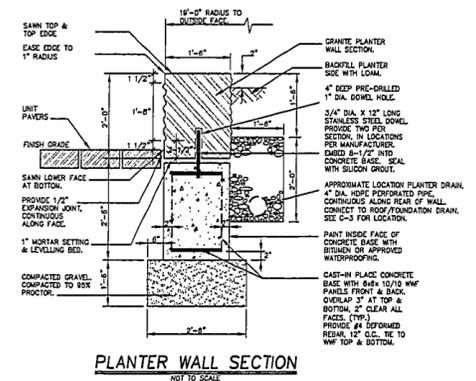
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WESTFORD POLICE FACILITY
53 MAIN STREET
WESTFORD MASSACHUSETTS
01886



PLANTER WALL LAYOUT
NOT TO SCALE



PLANTER WALL SECTION
NOT TO SCALE

KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

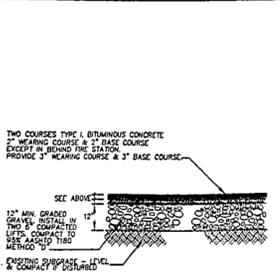
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CONSTRUCTION DETAILS

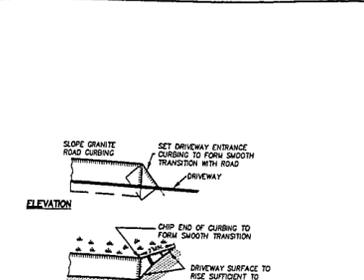
Project no. KB 96077 Drawing no. DERA 9511

Date 03/23/98

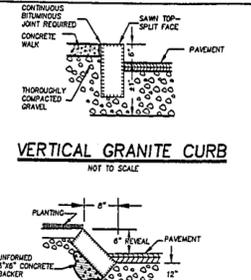
C-5



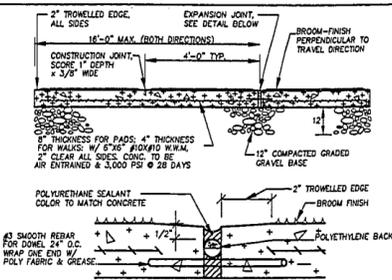
BITUMINOUS CONCRETE DRIVE, WALK & PARKING
NOT TO SCALE



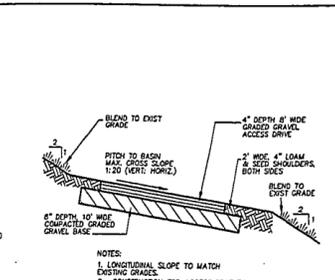
ROAD/DRIVEWAY GRANITE CURB DETAIL
NOT TO SCALE



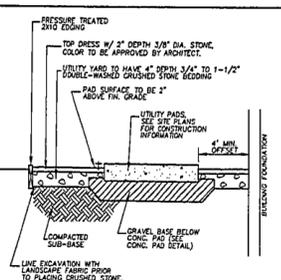
VERTICAL GRANITE CURB
NOT TO SCALE



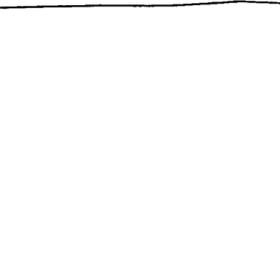
SLOPED GRANITE CURB
NOT TO SCALE



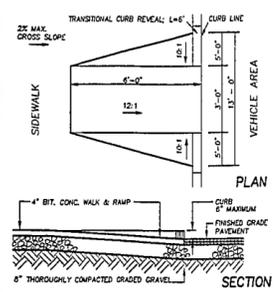
CONCRETE WALK & PADS
NOT TO SCALE



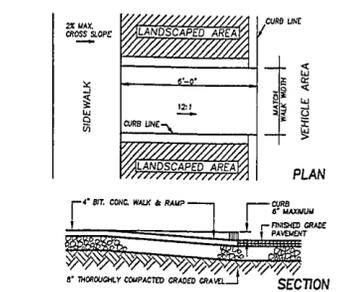
GRAVEL ACCESS WAY
NOT TO SCALE



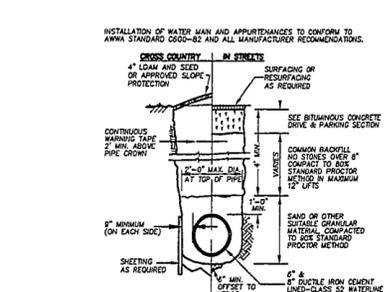
UTILITY YARD SURFACE
NOT TO SCALE



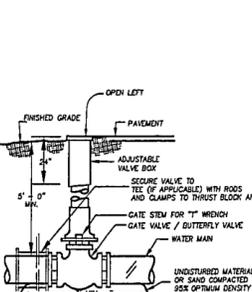
HANDICAP CURB CUT (Type 21.7)
NOT TO SCALE



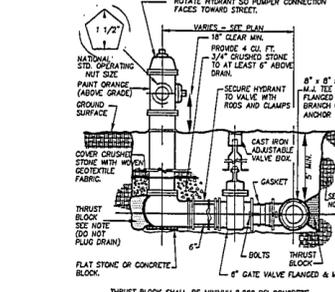
HANDICAP CURB CUT (Type 21.8)
NOT TO SCALE



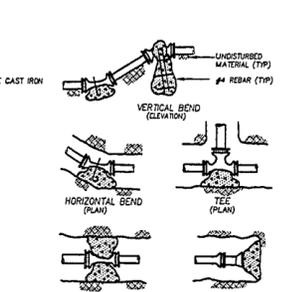
WATER MAIN TRENCH
NOT TO SCALE



GATE VALVE DETAIL
NOT TO SCALE



TYPICAL HYDRANT AND VALVE
NOT TO SCALE



THRUST BLOCK DETAILS
NOT TO SCALE

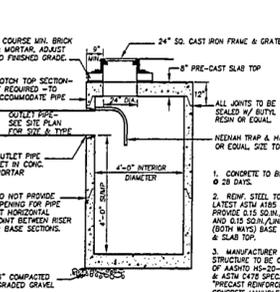
PILE SIZE (IN)	1/4 BEND	1/8 BEND	1/16 BEND	PLUG BEND & TEES
4.0	6.0	2.9	2.3	4.5
10	8.6	5.2	3.3	6.2
12	13.3	6.7	3.7	8.6
16	24.0	11.8	3.7	17.0

NORMAL FITTING DIAMETER	FITTING			
	20"	45"	BETWEEN BRANCH	DEAD END
6"	4	2	2	4
8"	7	4	3	5

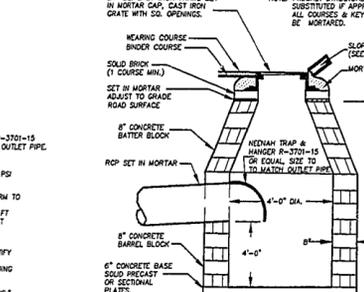
- ALL BENDS, TEES, WYES, HYDRANTS AND DEAD ENDS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS.
- BEARING AREA (IN ²) IS AREA OF CURVE IN CONTACT WITH WALL OF TRENCH.
- HEIGHT (H) & LENGTH (L) AS REQUIRED TO OBTAIN BEARING AREA IN TABLE.
- BOULDERS ARE NOT TO BE USED AS THRUST BLOCKS.

WATER SYSTEM NOTE: ALL CONNECTIONS/ CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE WESTFORD WATER DEPARTMENT.

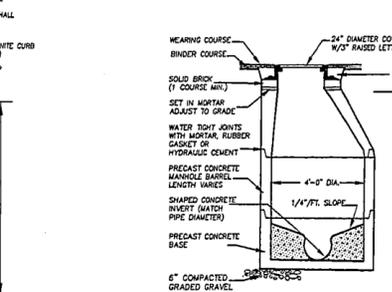
DRAINAGE SYSTEM NOTE: ALL DRAINAGE CONNECTION/ CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE WESTFORD HIGHWAY DEPT.



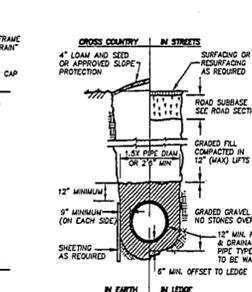
PRE-CAST FLAT TOP CATCHBASIN
NOT TO SCALE (FOR USE WHERE COVER OVER TOP PIPE IS LESS THAN 2')



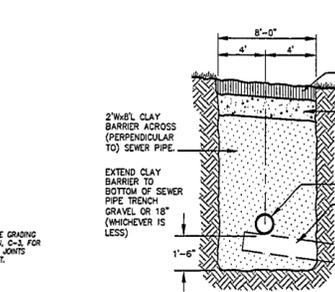
TYP. BLOCK CATCHBASIN W/ TRAP
NOT TO SCALE



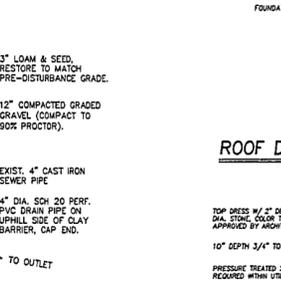
DRAIN MANHOLE DETAIL
NOT TO SCALE



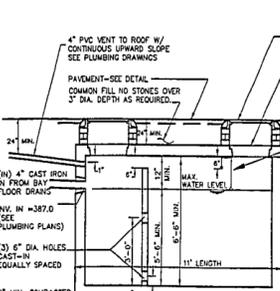
DRAINAGE TRENCH
NOT TO SCALE



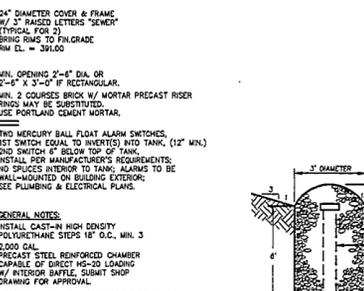
CLAY BARRIER (TYPICAL FOR TWO) SEE SHEET C-2 FOR LOCATION
NOT TO SCALE



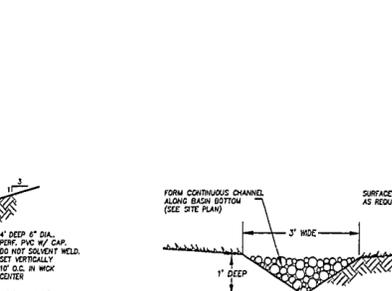
ROOF DRAIN/FUNDATION DRAIN
NOT TO SCALE



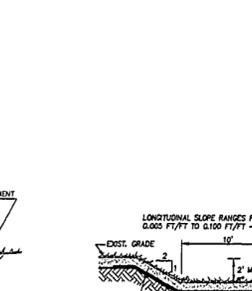
FLOOR DRAIN HOLDING TANK
NOT TO SCALE



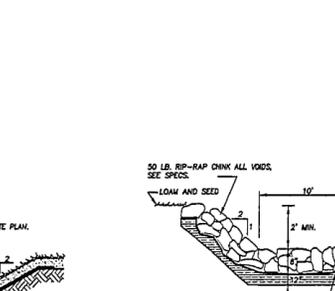
RECHARGE WICK DETAIL
NOT TO SCALE



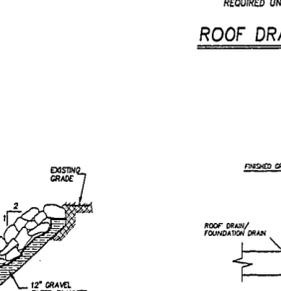
"V"-SHAPED CHANNEL
NOT TO SCALE



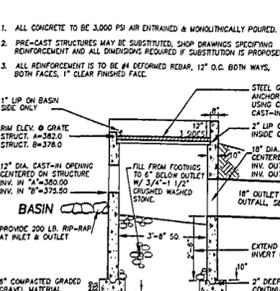
GRASSED SWALE NOT TO SCALE



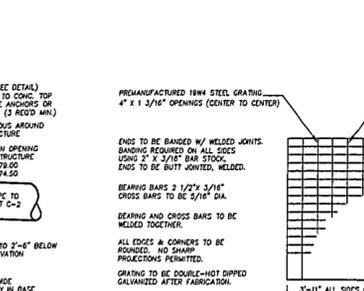
REINFORCED RIP-RAP SWALE NOT TO SCALE



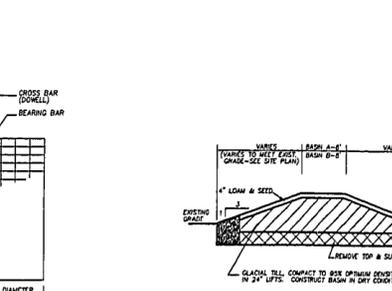
DOWNSPOUT TO ROOF DRAIN CONNECTION
NOT TO SCALE



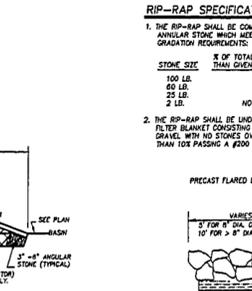
OUTLET STRUCTURE
NOT TO SCALE



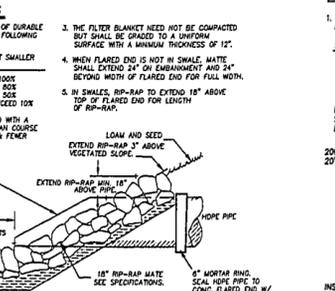
STEEL GRATE - OUTLET STRUCTURES
NOT TO SCALE



STORMWATER BASIN LINER/DIKE DETAIL
NOT TO SCALE



FLARED END INLET / OUTLET WITH RIP-RAP
NOT TO SCALE



REINFORCED OVERFLOW BROAD-CRESTED WEIR
NOT TO SCALE

200LB. RIP-RAP SPECIFICATIONS:

- ALL STONE SHALL BE CLEAN DURABLE ANGULAR STONE MEETING THE FOLLOWING SPECIFICATIONS.
- THE RIP-RAP SHALL BE UNDERLAIN WITH A FILTER BLANKET CONSISTING OF CLEAN, COARSE GRAVEL WITH NO STONES OVER 4" IN LONGEST DIMENSION AND NO FENER THAN 1/8" OF TOTAL VOLUME PASSING A 200# SIEVE.
- THE FILTER BLANKET NEED NOT BE COMPACTED BUT SHALL BE GRADED TO A UNIFORM SURFACE WITH A MINIMUM THICKNESS OF 12".
- WHEN FLARED END IS NOT IN SMALL MATTE, SHALL EXTEND 24" ON ENHANCEMENT AND 24" BEYOND WIDTH OF FLARED END FOR FULL WIDTH.
- IN SWALES, RIP-RAP TO EXTEND 18" ABOVE TOP OF FLARED END FOR LENGTH OF RIP-RAP.

200LB. RIP-RAP SPECIFICATIONS:

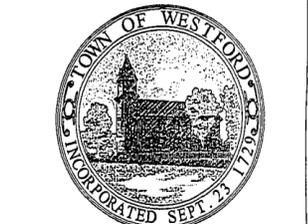
- ALL STONE SHALL BE CLEAN DURABLE ANGULAR STONE MEETING THE FOLLOWING SPECIFICATIONS.
- THE RIP-RAP SHALL BE UNDERLAIN WITH A FILTER BLANKET CONSISTING OF CLEAN, COARSE GRAVEL WITH NO STONES OVER 4" IN LONGEST DIMENSION AND NO FENER THAN 1/8" OF TOTAL VOLUME PASSING A 200# SIEVE.
- THE FILTER BLANKET NEED NOT BE COMPACTED, BUT SHALL BE GRADED TO A UNIFORM THICKNESS OF 12".
- THE FILTER BLANKET SHALL BE OVERLAIN WITH A STRUCTURAL/EROSION CONTROL FABRIC OF THE TYPE SPECIFIED. SUCH FABRIC SHALL BE CONTINUOUS IN LENGTHS EITHER PARALLEL OR PERPENDICULAR TO THE SLOPE AND MUST BE UNDER ALL RIP-RAPPED SURFACES.
- SEE PLAN C-3 GRADING & SURFACE FOR LOCATIONS.

DAVID E. ROSS ASSOCIATES, INC.
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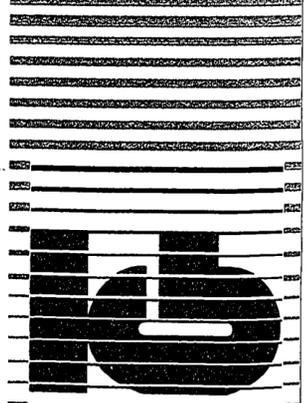
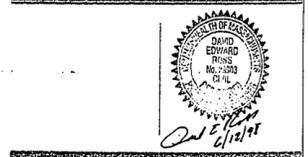
REVISIONS

DATE	REVISIONS FOR NOTICE OF INTENT SUBMISSION
11/5/97	REVISIONS FOR NOTICE OF INTENT SUBMISSION
2/16/98	REVISIONS FOR PRE-BID SUBMISSION
3/23/98	ISSUED FOR BIDS
6/25/98	REVISED FOR BIDS

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WESTFORD POLICE FACILITY
53 MAIN STREET
WESTFORD MASSACHUSETTS
01866



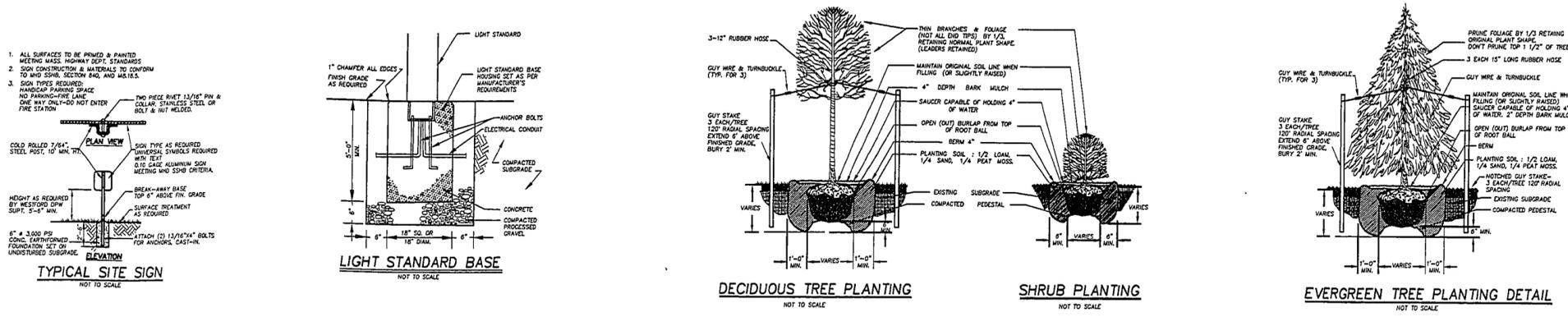
KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

Drawn by WEM/mic Scale AS NOTED (9511D1.1.dwg)

CONSTRUCTION DETAILS

Project no. KB 96077 DERA 9511 Drawing no.

Date 03/23/98 C-6



REVISIONS	
11/5/97	REVISIONS FOR NOTICE OF INTENT SUBMISSION
2/16/98	REVISIONS FOR PRE-BID SUBMISSION
3/23/98	ISSUED FOR BIDS
6/25/98	REVISED FOR BIDS

DRAINAGE SYSTEM OPERATIONS & MAINTENANCE PLAN

STORM WATER COLLECTION SYSTEM:

The stormwater collection system serving this site is intended to both collect storm water runoff and to provide partial treatment of the stormwater prior to its collection into the detention basins or recharge into the groundwater. This system collects runoff generated from the site through the use of catchbasins. Each catchbasin is equipped with a four (4") foot deep sump (which collects sediments and debris) and a oil/gas trap (which prevents the intrusion of hydrocarbons and other floating materials from entering the drainage system). When these two basic control mechanisms are functioning properly they provide for a reduction of contaminants and debris entering the stormwater collection and recharge systems, and therefore downstream receiving waters/metlands.

This site is also served by infiltration systems which collect the generated runoff and recharge it to the ground, thus providing recharge similar to that of the pre-development condition and filtering the runoff as it travels through the existing soils to the groundwater table.

Both of the above-described systems rely upon proper monitoring, operations and maintenance to function as designed and intended. A program of monitoring, operations and maintenance must be on-going throughout the life and use of the site, and is the owner's responsibility. These activities, as described below, are to be initiated after completion of the project and are not related to the construction of the site, except as specifically provided. This plan is specifically for site-related activities, not activities which are interior to the buildings, though there are necessary implications and correlations between the two.

MONITORING:

The drainage systems are required to be monitored by the owner, who shall direct an individual to act as the system manager. The name, address and day and night (or emergency) telephone number of this person or entity shall be provided to the conservation commission prior to the issuance of a certificate of compliance. This individual shall be required to keep a log of all required inspections, observations and maintenance activities. Drainage system components shall be inspected by specific location or the design plan designation, (i.e. C1B to C1D) to avoid confusion or mis-identification. The log shall be made available to the conservation commission within ten (10) days of a written request by that agency.

MONITORING FOR THIS SITE SHALL CONSIST OF THE FOLLOWING:

1. ALL CATCHBASINS SHALL BE INSPECTED TO ENSURE THEY ARE WATER-TIGHT (HOLDING WATER), HAVE ADEQUATE PUMP CAPACITY, ALL OIL/GAS TRAPS ARE IN-PLACE, ALL GRATES AND FRAMES ARE FREE FROM STRUCTURAL DAMAGE, AND ARE DRAINING FREELY. THIS MONITORING SHALL OCCUR AT A MINIMUM OF FOUR (4) MONTH INTERVALS.
2. ALL DRAINAGE MANHOLES SHALL BE INSPECTED TO ENSURE THAT THEY ARE WATER-TIGHT, ALL LIDS AND FRAMES ARE FREE FROM STRUCTURAL DAMAGE, ARE DRAINING FREELY AND ARE NOT PONDING WATER. THIS MONITORING SHALL OCCUR AT A MINIMUM OF ONCE PER YEAR.
3. ALL OUTLETS TO BASINS, OR OTHER DRAINAGE SYSTEMS SHALL BE INSPECTED TO ENSURE THAT NO EROSION IS OCCURRING AT OUTLETS, ALL OUTLETS ARE FREE-FLOWING AND NO DAMAGE HAS OCCURRED AS PART OF SITE MAINTENANCE OR ACTIVITIES.

OPERATIONS:

1. GOOD HOUSE KEEPING AND MATERIAL MANAGEMENT: REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF. A POLLUTION PREVENTION PLAN SHALL BE DEVELOPED WHICH SHALL INCLUDE THE FOLLOWING AT A MINIMUM:
 - A. ALL MATERIALS STORED ON-SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
 - B. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABELS.
 - C. SUBSTANCES SHOULD NOT BE MIXED WITH ONE ANOTHER, UNLESS RECOMMENDED BY THE MANUFACTURER.
 - D. WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF A CONTAINER.
 - E. THE SYSTEM'S MANAGER SHALL INSPECT THE SITE DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ON-SITE.
 - F. ORIGINAL MATERIALS LABELS AND MATERIAL SAFETY DATA SHEETS SHALL BE KEPT; THEY RETAIN IMPORTANT INFORMATION.
2. PETROLEUM PRODUCTS:
 - 1) ALL ON-SITE VEHICLES AND PARKING AREAS SHALL BE REGULARLY MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO PREVENT LEAKAGE.
 - 2) PETROLEUM PRODUCTS SHALL BE STORED UNDER COVER AND SHALL BE IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.
3. FERTILIZERS:
 - 1) FERTILIZERS SHALL ONLY BE USED IN THE MINIMUM AMOUNTS AS RECOMMENDED BY THE MANUFACTURER.
 - 2) THE CONTENTS OF ANY UN-USED FERTILIZER SHALL BE TRANSFERRED TO A CLEARLY LABELED, SEALED PLASTIC BIN, TO AVOID SPILLAGE.
4. PAINTS AND SOLVENTS:
 - 1) ALL PAINTS AND SOLVENTS SHALL BE STORED IN ORIGINAL MANUFACTURER'S CONTAINERS IN A COVERED LOCATION.
 - 2) THE USE OF PAINTS AND SOLVENTS SHALL, WHENEVER POSSIBLE, BE LIMITED TO SERVICE OR STORAGE BAYS AND NOT IN PARKING OR ACCESS WAYS THAT ARE TRIBUTARY TO THE DRAINAGE SYSTEM.

SPILL CONTROL PRACTICES:

1. MANUFACTURER'S RECOMMENDED METHODS SHALL BE CLEARLY POSTED FOR SPILL CLEAN-UP AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF CLEAN-UP INFORMATION AND SUPPLIES.
2. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEAN-UP WILL BE KEPT ON-SITE IN A DESIGNATED STORAGE AREA. EQUIPMENT WILL INCLUDE, BUT NOT BE LIMITED TO, BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, ABSORBENT MATERIALS, SAND/SILOUSIT AND PLASTIC METAL TRASH CONTAINERS SPECIFICALLY KEPT AND LABELED FOR THIS PURPOSE.
3. ALL SPILLS WILL BE CLEANED-UP IMMEDIATELY AFTER DISCOVERY.
4. SPILLS OF TOXIC OR HAZARDOUS MATERIAL OR NATURE WILL BE REPORTED TO THE APPROPRIATE STATE, LOCAL OR FEDERAL AGENCY AS REQUIRED BY-LAW.
5. THE SPILL PREVENTION PLAN WILL INCLUDE PROVISIONS TO ADAPT THIS PLAN TO ENSURE THAT SPILLS WILL NOT REOCCUR, AND HOW TO CLEAN-UP THE SPILL IF THERE IS ANOTHER ONE.

3. SITE OPERATIONS AND DAILY USE SHALL CONSIDER THE ULTIMATE DISPOSITION OF STORMWATER AND OTHER SITE-GENERATED FORMS OF RUNOFF. THE WASHING OF VEHICLES SHALL BE LIMITED AREAS WITHIN THE BUILDING, AS THEY ARE SERVED BY THE FLOOR DRAIN HOLDING TANK. WASH WATER WITH ITS COMBINATION OF SOLVENTS, DETERGENTS AND OILS/GREASES SHOULD NOT BE ALLOWED TO ENTER ANY PART OF THE ON-SITE DRAINAGE SYSTEM.
4. SNOW FLOWING - SNOW FLOWING OPERATIONS SHALL STOPPLETE SNOW, ICE AND ACCUMULATED MATERIALS IN AREAS WHERE SNOW MELT WILL FLOW INTO THE ON-SITE DRAINAGE SYSTEMS, INCLUDING DRAINAGE BASINS. SALT USE SITE-WISE SHALL BE APPLIED TO THE MINIMUM EXTENT POSSIBLE TO MAINTAIN SAFE CONDITIONS, AND ONLY IF NOT SPECIFICALLY EXCLUDED BY ANY SPECIAL CONDITIONS AS PART OF AN ORDER OF CONDITIONS ISSUED BY THE WESTFORD CONSERVATION COMMISSION.

MAINTENANCE:

1. PARKING AREAS, ACCESS WAYS AND OUTLETS SHALL BE SWEEPED CLEAN OF DEBRIS AND ACCUMULATION ON A REGULAR BASIS. AT A MINIMUM, A SPRING AND FALL CLEANING SCHEDULE IS RECOMMENDED.
2. ALL CATCHBASINS SHALL HAVE THE PUMPS CLEANED AT ANY TIME OF THE YEAR WHEN 2" OR LESS SPACE EXISTS BELOW THE OUTLET INVERT, OR A MINIMUM OF ONCE PER YEAR, REGARDLESS OF SUMP ACCUMULATION. ALL DEBRIS FROM THE CLEANING SHALL BE DISPOSED OF OFF-SITE AND IN A MANNER AS PROSCRIBED BY LAW.
3. ALL HYDROCARBON TRAPS SHALL BE CHECKED FOR PHYSICAL INTEGRITY AND SEAL IMMEDIATELY AFTER EACH CATCHBASIN CLEANING.
4. OIL ABSORBING "FLOWS" OR OTHER MEANS SHALL BE USED TO REMOVE ACCUMULATIONS OF HYDROCARBONS (OIL/GREASE) IN CATCHBASINS THAT ARE REGULARLY OBSERVED TO CONTAIN HYDROCARBONS, WHICH DO NOT EXHIBIT OTHER INSPECTION.
5. ALL BROKEN LEAKING OR OTHERWISE DAMAGED STRUCTURES SHALL BE REPAIRED PROMPTLY UPON DISCOVERY. CATCHBASIN GRATES OR MANHOLE LIDS SHALL BE REPLACED WITH SIMILAR WEIGHT AND LOADING CHARACTERISTIC REPLACEMENT PARTS.
6. ALL EROSION AT OUTLETS SHALL BE REPAIRED. THE REPLACEMENT OF ANY PIPE OR DRAINAGE STRUCTURE SHALL MATCH THE ORIGINAL DESIGN SPECIFICATIONS.
7. THE CONSERVATION COMMISSION SHALL BE CONSULTED PRIOR TO THE INITIATION OF ANY REPAIRS INVOLVING THE USE OF HEAVY EQUIPMENT OR DISTURBANCE WITHIN THE 100' BUFFER ZONE. A REQUEST FOR DETERMINATION OF APPLICABILITY OR NOTICE OF INTENT MAY BE REQUIRED.

DETENTION BASIN MAINTENANCE

The detention basins depicted on the site plan are intended to preserve the storage capacity of the stormwater system that is ultimately tributary to the on site wetlands. Simultaneously, the basin will act to entrap sediments and hydrocarbons prior to entering the wetlands. In doing so the basin will accumulate these materials as deposited debris, sediment layers and excessive vegetative growth within the basin. These materials will be required to be removed on a regular basis to ensure the continuing function of the basin. The intent of the basin is to function as a preventative and mitigation system, NOT become a protected receive area. Based upon the above, the following maintenance conditions shall apply and be part of any continuance of the proposed development:

1. WEEDS AND WETLANDS PLANTS SHALL BE REMOVED ON A REGULAR BASIS, BUT NOT LESS THAN ONCE PER YEAR IN THE LATE SUMMER. REMOVAL SHALL BE BY HAND, OR BY APPLICATION OF HERBICIDES IF PLANT GROWTH IS TOO PROLIFIC TO MANAGE BY HAND METHODS. PRIOR TO ANY APPLICATION OF HERBICIDES THE WESTFORD CONSERVATION COMMISSION SHALL BE NOTIFIED AND PRIOR APPROVAL OF THE TIMING, MATERIALS TO BE USED AND APPLICATION METHODOLOGY.
2. SIMILARLY, THE DETENTION POND DRAINAGE SHALL BE INSPECTED AT LEAST ONCE PER YEAR FOR TREE AND BRUSH GROWTH. IF NEEDED, REMOVAL OF THIS GROWTH SHALL BE BY HAND (I.E., CHAINSAW, BRUSHCUTTERS OR MOWERS) BUT SHALL NOT BE REMOVED BY HEAVY MACHINERY OR OTHER METHOD THAT WOULD CONTRIBUTE TO THE UNSTABILITY OF THE BASIN BEDS. DURING ANY REMOVAL OR TRIMMING OPERATIONS CARE SHALL BE TAKEN TO LEAVE THE GRASS/GROUNDCOVER OF THE BERM INTACT TO PREVENT THE POSSIBILITY OF EROSION.
3. THE DETENTION BASIN SHALL BE INSPECTED FOR SEDIMENT ACCUMULATION A MINIMUM OF ONCE PER YEAR. ACCUMULATED SEDIMENTS SHALL BE REMOVED AS REQUIRED BUT AT A MINIMUM OF ONCE EVERY FIVE YEARS. HEAVY MACHINERY MAY BE USED, HOWEVER, ALL AREAS WHICH WERE STABILIZED WITH GRASS/GROUNDCOVER SHALL BE PROMPTLY RE-ESTABLISHED, IF DISTURBED. REMOVAL OF SEDIMENTS ENTRAPPED IN AREAS OF RIP-RAP AND INLET/OUTLET PIPES SHALL ALSO BE REMOVED BY HAND IF NECESSARY. ANY RIP-RAP DISTURBED, SHALL BE RE-ESTABLISHED IN ACCORDANCE WITH THE ORIGINAL CONSTRUCTION SPECIFICATIONS.
4. ALL EROSION AT OUTLETS SHALL BE REPAIRED AND/OR THE REPLACEMENT OF ANY PIPE OR DRAINAGE STRUCTURE SHALL MATCH THE ORIGINAL DESIGN SPECIFICATIONS.
5. THE WESTFORD CONSERVATION COMMISSION SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE REMOVAL OF ANY SEDIMENTS OR DEBRIS WITHIN THE BASIN, IF SUCH REMOVAL REQUIRES HEAVY EQUIPMENT.

THESE REQUIREMENTS SHALL REMAIN IN EFFECT AFTER ANY CERTIFICATE OF COMPLIANCE HAS BEEN ISSUED OR UNTIL RESCINDED BY THE WESTFORD CONSERVATION COMMISSION.

GENERAL:

1. THIS PLAN IS ALSO INTENDED TO PROVIDE GUIDANCE AND INSTRUCTION TO THE OWNER AND CONTRACTOR(S) IN THE PREVENTION OF EROSION AND SEDIMENTATION ON AND OFF-SITE. THIS PLAN IS INTENDED TO ALLOW ANY ORDERS OF CONDITIONS TO BE MORE SPECIFIC IN ADDRESSING ITEMS OF CONCERN. IF, UPON ISSUANCE OF AN ORDER OF CONDITIONS BY THE WESTFORD CONSERVATION COMMISSION, ANY ITEMS SPECIFIED HEREIN ARE IN CONFLICT WITH THE ORDERS OF CONDITIONS, SAID ORDERS OF CONDITIONS SHALL SUPERSEDE THE REQUIREMENTS SPECIFIED ON THIS PLAN.
2. THIS PLAN IS PART OF A SET OF DOCUMENTS THAT ARE TO BE VIEWED AND REVIEW IN THEIR ENTIRETY. SUCH DOCUMENTS INCLUDE THE CONSTRUCTION SPECIFICATIONS, CONSTRUCTION PLANS AND ANY PERMITS ISSUED BY THE TOWN OF WESTFORD, AGENTS OF THE TOWN OF WESTFORD OR OTHER REGULATORY AGENCIES.

EROSION CONTROL MEASURES:

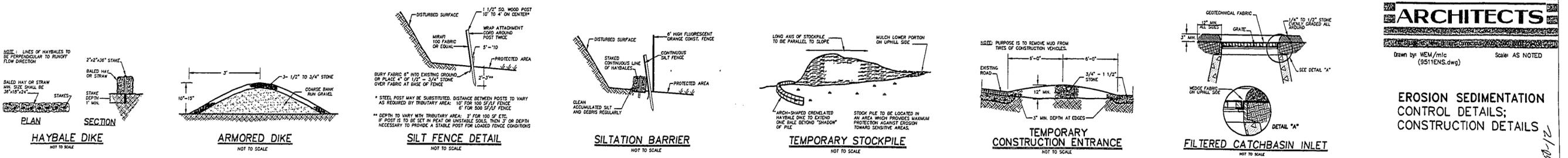
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT EROSION AND SEDIMENTATION ARE CONTROLLED. THIS PLAN SHALL BE ADAPTED TO FIT THE CONTRACTOR'S EQUIPMENT, WEATHER CONDITIONS, AND ANY ORDERS OF CONDITIONS ISSUED BY THE WESTFORD CONSERVATION COMMISSION AND ANY SPECIAL CONDITIONS ISSUED BY THE OTHER REGULATORY AGENCY OF THE TOWN OF WESTFORD.
2. THE MOST IMPORTANT ASPECTS OF CONTROLLING EROSION AND SEDIMENTATION ARE LIMITING THE EXTENT OF DISTURBANCE AND STABILIZING SURFACES AS SOON AS POSSIBLE. OF SECONDARY IMPORTANCE IN EROSION CONTROL IS THE LIMITING THE SIZE AND LENGTH OF THE TRIBUTARY DRAINAGE AREA WITHIN THE WORK SITE AND DRAINAGE STRUCTURES. THESE FUNDAMENTAL PRINCIPLES SHALL BE THE KEY FACTOR IN THE CONTRACTOR'S CONTROL OF EROSION ON THE SITE.
3. THE EXISTING SOIL CONDITIONS PROVIDE THE POTENTIAL OF RUNOFF TO OFF-SITE AREAS WITH EROSION POTENTIAL.
4. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY DIVERSION SWALES AND SETTLING BASINS IN AREAS OF FUTURE CONSTRUCTION. CONSTRUCTION IS PERMITTED BEYOND THE LIMIT OF DISTURBANCE ONLY WHEN ADDITIONAL DRAINAGE MEASURES OR STABILIZATION MEASURES ARE NEEDED, AND ARE SUBJECT TO APPROVAL BY THE WESTFORD CONSERVATION COMMISSION, PRIOR TO WORK OUTSIDE OF DESIGNATED LIMIT OF DISTURBANCE LINE. THE LIMIT OF DISTURBANCE LINE SHALL BE THE EROSION CONTROL BARRIERS.
5. ALL DISTURBED SURFACES SHALL BE STABILIZED A MINIMUM OF 14 DAYS AFTER CONSTRUCTION IN ANY PORTION OF THE SITE HAS CEASED OR IS TEMPORARILY HALTED UNLESS ADDITIONAL CONSTRUCTION IS INTENDED TO BE INITIATED WITHIN 21 DAYS.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ALL EROSION CONTROL DEVICES ON-SITE. ALL EROSION CONTROL DEVICES SHALL BE REGULARLY INSPECTED. ANY SEDIMENTS REMOVED FROM THE CONTROL DEVICES SHALL BE DISPOSED OF OUTSIDE OF THE 100' WETLANDS BUFFER ZONE.
7. AT NO TIME SHALL SILT-LADEN WATER BE ALLOWED TO ENTER SENSITIVE AREAS (WETLANDS, OFF-SITE AREAS AND DRAINAGE SYSTEMS) AND RUNOFF FROM DISTURBED SURFACES SHALL BE DIRECTED THROUGH SETTLING BASINS AND EROSION CONTROL BARRIERS PRIOR TO ENTERING ANY SENSITIVE AREAS.

GENERAL CONSTRUCTION REQUIREMENTS:

1. ANY REFUELING OF CONSTRUCTION VEHICLES AND EQUIPMENT SHALL TAKE PLACE OUTSIDE OF THE 100 FOOT BUFFER ZONE TO THE WETLANDS AND SHALL NOT BE CONDUCTED IN PROXIMITY TO SEDIMENTATION BASINS OR DIVERSION SWALES.
2. NO ON-SITE DISPOSAL OF SOLID WASTE, INCLUDING BUILDING MATERIALS IS ALLOWED IN THE 100 FOOT BUFFER ZONE. THE BURIAL OF STUMPS, CONSTRUCTION DEBRIS OR OTHER MATERIALS SHALL NOT BE ALLOWED ANYWHERE ON-SITE.
3. NO MATERIALS SHALL BE DISPOSED OF INTO THE WETLANDS OR EXISTING OR PROPOSED DRAINAGE SYSTEMS. ALL CONTRACTORS INCLUDING: CONCRETE SUPPLIERS, PAINTERS AND PLASTERERS, SHALL BE INFORMED THAT THE CLEANING OF EQUIPMENT IS PROHIBITED IN AREAS WHERE THE WASH-WATER WILL DRAIN DIRECTLY TO THE WETLANDS OR SITE DRAINAGE SYSTEMS.
4. CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL WHICH SHALL INCLUDE STREET SWEEPING OF ALL PAVED SURFACES WITHIN THE SITE AND OFF-SITE AREAS THAT ARE IMPACTED BY SITE CONSTRUCTION ON A REGULAR BASIS, AS NEEDED.

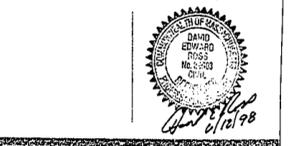
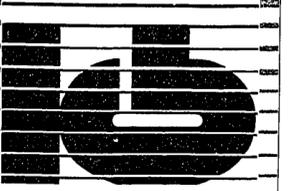
PRE-CONSTRUCTION:

1. AN EROSION CONTROL BARRIER (SEE ABOVE) SHALL BE INSTALLED AS DEPICTED ON THE SITE PLAN, BETWEEN THE AREAS TO BE DISTURBED (E.G. THE EXISTING PARKING LOT) AND WETLAND AREAS. THIS BARRIER SHALL REMAIN IN PLACE UNTIL ALL TRIBUTARY SURFACES HAVE BEEN FULLY STABILIZED. THE EROSION CONTROL BARRIERS SHALL SHOWN ON THE SITE PLAN ARE THE MINIMUM REQUIRED TO PROTECT THE WETLANDS.
2. PHOTOGRAPHS AND/OR VIDEO IMAGES OF THE PRE-CONSTRUCTION CONDITION OF THE SITE AND SURROUNDING AREAS, ESPECIALLY THE ADJACENT STREETS SHALL BE TAKEN, DEVELOPED AND DATED. A COPY OF THESE MATERIALS SHALL BE SUBMITTED TO THE ARCHITECT, OWNER AND CONSERVATION COMMISSION FOR THEIR FILES. THESE PICTURES AND IMAGES SHALL REFLECT EXISTING SITE CONDITIONS AND PERMANENT REFERENCE MARKS TO ENABLE RECOGNITION OF THE AREA BEING PHOTOGRAPHED, AND SHALL REPRESENT A COMPREHENSIVE VIEW OF THE SITE PRIOR TO DEVELOPMENT.
3. THE CONTRACTOR SHALL ESTABLISH A STAGING AREA ON A PORTION OF THE AREA TO BE DISTURBED, IF POSSIBLE IT SHALL BE OUTSIDE OF THE 100' BUFFER ZONE FOR THE OVERNIGHT STORAGE OF EQUIPMENT AND STOCKPILING OF MATERIALS.
4. IN THE STAGING AREA THE CONTRACTOR SHALL HAVE A STOCKPILE OF MATERIALS REQUIRED TO CONTROL EROSION ON-SITE TO BE USED TO SUPPLEMENT OR REPAIR EROSION CONTROL DEVICES. THESE MATERIALS SHALL INCLUDE, BUT ARE NOT LIMITED TO: HAYBALES, SILT FENCE AND CRUSHED STONE.
5. A TEMPORARY STONE CONSTRUCTION ENTRANCE IS REQUIRED TO PREVENT TRACKING OF SILT, MUD, ETC. ONTO EXISTING ROADS. THE STONE SHALL BE REPLACED REGULARLY AS WELL AS WHEN THE STONE IS SILT LADEN OR EQUIPMENT IS OBSERVED TO BE TRACKING SOIL ONTO THE ROADWAYS.
6. THE CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL ON SITE AND SHALL UTILIZE EROSION CONTROL MEASURES WHERE NEEDED, REGARDLESS OF WHETHER THE MEASURES ARE SPECIFIED HEREIN, ON THE PLAN OR IN ANY ORDER OF CONDITIONS.



EROSION SEDIMENTATION CONTROL DETAILS; CONSTRUCTION DETAILS

KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS



WESTFORD POLICE FACILITY
53 MAIN STREET
WESTFORD MASSACHUSETTS
01886



THIS PLAN IS PART OF A SET OF PLANS AND SPECIFICATIONS, AND IS NOT TO BE USED AS A SOLE SOURCE OF INFORMATION.

SEE SHEET C-2 FOR LEGEND & FORTY SCALE DETAIL OF SEPTIC SYSTEM.

REVISIONS

9/9/97	REVISED PER UPDATED INFO. FROM DIVERSIFIED CIVIL ENGINEERING.
2/6/98	REVISIONS FOR PRE-BID SUBMISSION
3/23/98	ISSUED FOR BIDS.
6/25/98	REVISED FOR BIDS.

THIS PLAN IS PART OF A SET OF PLANS AND SPECIFICATIONS, AND IS NOT TO BE USED AS A SOLE SOURCE OF INFORMATION.



WESTFORD POLICE FACILITY
 53 MAIN STREET
 WESTFORD MASSACHUSETTS
 01886



SCHEDULE OF ELEVATIONS

	PROPOSED	AS-BUILT
FINISH FLOOR ELEVATION	391.50	
INV. AT FOUNDATION	387.20	
INV. S.T.-1 INLET	386.44	
INV. S.T.-1 OUTLET	386.19	
TOP S.T.-1	387.9±	
INV. S.T.-2 INLET	386.09	
INV. S.T.-2 OUTLET	385.84	
TOP S.T.-2	387.6±	
INV. PUMP CHAMBER INLET	385.74	
INV. PUMP CHAMBER OUTLET	385.49	
TOP PUMP CHAMBER	387.2±	
TOP OF STONE	379.37	
INV. LATERAL CENTERS	379.07	
INV. LATERAL ENDS	378.83	
BOTTOM OF STONE	378.33	
MIN. GROUNDWATER OFFSET REQUIRED	4'	
GROUNDWATER OFFSET UTILIZED	5'	

DESIGN CRITERIA
 GARBAGE GRINDERS - NOT PERMITTED

PERCOLATION RATES

PERFORMED BY: WILLIAM E. MURRAY, DAVID E. ROSS ASSOC. INC.
 WITNESSED BY: KEVIN JOHNSTON, R.S.-DIR., WESTFORD HEALTH DEPT.

PERC #	RATE (MIN./IN.)	ELEVATION	DEPTH	DATE
P-8	9 MIN./IN.	377.8	60"	7/15/97
P-10	< 2 MIN./IN.	379.5	58"	7/15/97
P-12	15 MIN./IN.	375.6	62"	7/15/97
P-14	11 MIN./IN.	374.8	72"	7/15/97

FLOWS:
 DESIGN FLOWS ARE BASED UPON OCCUPANCY AND SQUARE FOOTAGE.

THE PROPOSED USE (POLICE STATION) IS UNIQUE AND IS NOT DIRECTLY ACCOMMODATED BY THE PROVISIONS OF TITLE 5: 310 CMR 15.203 (2) TO (5).

OCCUPANCY:

OFFICE SPACE: (75 GPD/1000 S.F.)	6520 S.F. X .075 GPD/S.F. = 489 GPD
AUDITORIUM (50 SEAT TRAINING ROOM)	50 SEATS X 3 GPD/SEAT = 150 GPD
HOLDING CELLS (7 CELLS @ 1/2 BEDROOM PER DAY/PER CELL)	7 CELLS X 1/2 X 110 GPD/CELL = 385 GPD
LOCKER ROOM:	81 LOCKERS X 20 GPD/LOCKER = 1220 GPD
TOTAL FLOW:	2,244 GPD
USE FOR DESIGN:	2,500 GPD

SEPTIC TANKS REQUIRED:
 2,500 GPD X 2.0 = 5,000 GAL. TANK
 (2) 5,000 GAL. TANKS IN SERIES REQUIRED

LEACHING AREA PROVIDED:

A. BASIS 15 MIN./IN. PERCOLATION RATE
 B. APPLICATION RATE ALLOWED 0.58 GPD/S.F.
 C. BOTTOM AREA PROVIDED 4512 S.F.
 D. TOTAL GPD PROVIDED 2528

ASSESSOR'S MAP 59 PARCEL 45, 46, 47

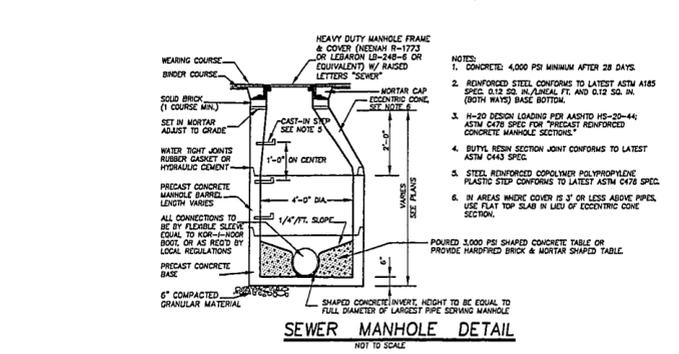
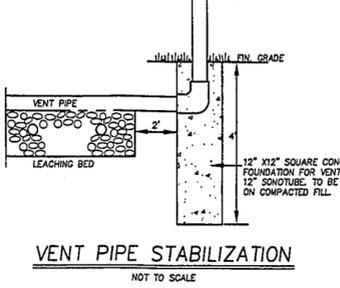
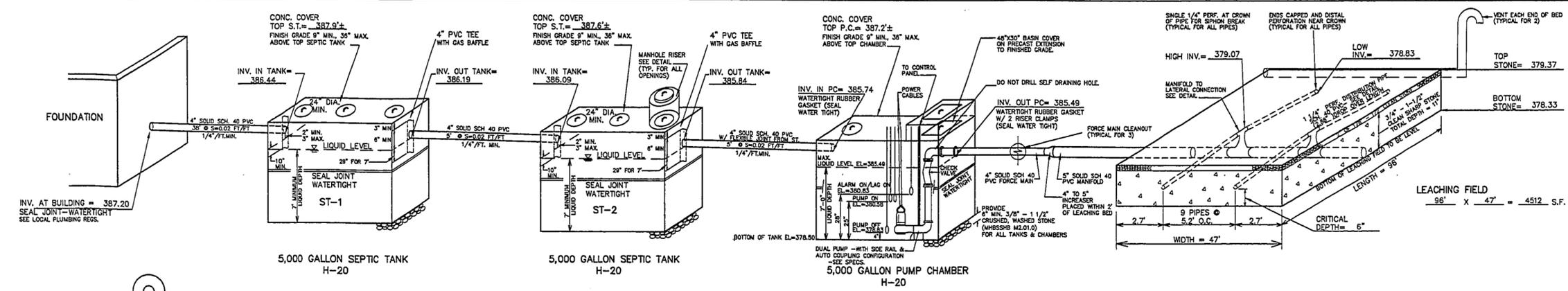
KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

Drawn by WEM/mic (9511SDS.dwg) Scale AS NOTED

SEWAGE DISPOSAL SYSTEM PLAN

Project no. KB 96077 DERA 9511 Drawing no. C-9

Date 03/23/98



PUMPS
 PUMPS SHALL BE VALVED TO ALLOW MANUAL DOSING OF EITHER PORTION OF THE BED IN CASE OF SINGLE PUMP FAILURE.
 PUMPS SHALL BE NON-CLOG SUBMERSIBLE SEWAGE PUMPS CAPABLE OF PASSING A 1 1/4" DIAMETER SOLID AND STRINGY MATERIAL. PUMPS SHALL HAVE A 3.0 H.P. (MINIMUM) MOTOR AND SHALL BE CAPABLE OF PUMPING 185 GPM AGAINST A TOTAL DISCHARGE HEAD (TDH) OF 22 FEET.
 PUMPS MUST BE INSTALLED WITH A VERTICAL SLIDE RAIL-AUTO COUPLING WELL CONFIGURATION. PUMPS MUST BE INSPECTED IN ACCORDANCE WITH 310 CMR 15.254 (2) (D) TITLE 5.

LEVEL CONTROLS
 SEALED FLOAT TYPE MERCURY SWITCHES SHALL BE SUPPLIED TO CONTROL THE SUMP LEVEL AND ALARM SIGNAL. FLOAT SWITCHES SHALL BE USED TO CONTROL THE SUMP LEVEL. PUMP SEQUENCE: 1. PUMPS OFF (PRIMARY LEAD) ON SLAG PUMP & ALARM ON 4 PUMPS MUST ALTERNATE. A SWITCH SHALL BE PROVIDED WITH A POWER SOURCE SEPARATE FROM THE PUMP POWER SOURCE AND SHALL BE THE ALARM UNIT. FLOAT SWITCHES SHALL BE OF THE MERCURY TUBE TYPE SEALED IN POLYURETHANE FLOATS. THE FLOAT LEVEL CONTROLS SHALL BE SET TO OPERATE AT THE ELEVATIONS INDICATED. (SEE PROFILE ON THIS SHEET) A NEMA-1 JUNCTION BOX SHALL BE INSTALLED ABOVE THE HIGH WATER LEVEL. ALL SPLICES SHALL BE WATER-TIGHT. EACH PUMP ACTIVATION SHALL CONSTITUTE A PUMP CYCLE. LEAD AND LAG PUMPS DESIGNATION/ACTIVATION SHALL ALTERNATE AFTER EACH CYCLE.

CONTROL PANELS
 A DUPLEX CONTROL PANEL SHALL BE EQUIPPED WITH A RUN LIGHT FOR EACH OF THE PUMPS AND HAVE PROPERLY SIZED CIRCUIT BREAKERS, A TRANSFORMER TO GIVE PROPER VOLTAGE TO THE CONTROL CIRCUITS AND TWO (2) THREE WAY HAND CONTROL SWITCHES (ONE FOR EACH PUMP). THE SWITCH POSITIONS ARE AS FOLLOWS: 1. PUMP OFF; 2. AUTOMATIC PUMP ON; AND 3. MANUAL PUMP ON. THE CONTROL PANEL SHALL BE HOUSED IN A NEMA-1 CONTROL BOX FOR SUITABLE USE WITH ALL OF THE COMPONENTS MANUFACTURER'S STANDARDS FOR THE EQUIPMENT USED. THE CONTROL PANEL SHALL BE INSTALLED IN THE ELECTRICAL ROOM INSIDE OF THE BUILDING, SEE ELECTRICAL DRAWINGS.

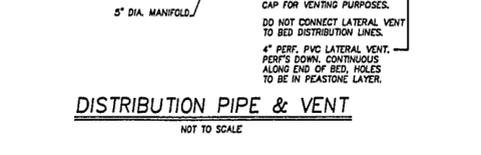
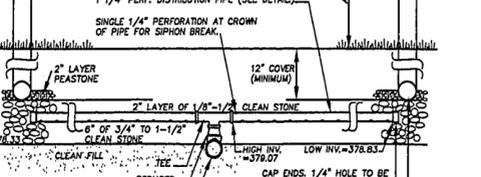
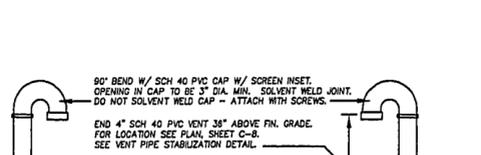
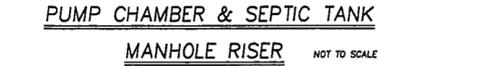
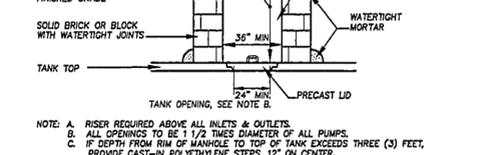
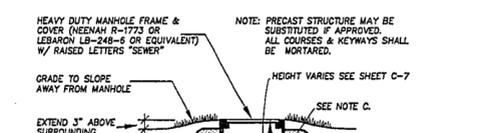
ALARMS
 A HIGH WATER ALARM SHALL BE SUPPLIED WITH BOTH AUDIBLE AND VISUAL ALARM WITH A SEPARATE POWER SUPPLY FROM THE PUMPS. THE ALARM SHALL BE MOUNTED IN A NEMA-1 ENCLOSURE SEPARATE FROM THE CONTROL PANEL. AN ALARM SILENCER BUTTON SHALL BE PROVIDED TO SILENCE THE AUDIBLE ALARM WHILE THE VISUAL ALARM REMAINS LIT UNTIL MANUALLY RESET. THE ALARM PANEL SHALL BE IN AN ACCESSIBLE AREA.

PIPING
 PIPING FROM PUMPS TO 3" OUTSIDE TANK SHALL BE 4" SCH-80 SOLVENT WELDED PVC CHECK VALVE SHALL BE 4" BALL TYPE WITH 2 HOSE CLAMP CONNECTIONS EACH. RISER CLAMPS WITH PVC INSERTS REQUIRED AT PUMP CHAMBER. ALL PIPING SHALL BE SHIELDED FROM ANY ABRASION, INCLUDING FORCE MAIN.

FORCE MAIN
 FORCE MAIN TO HAVE 4" MINIMUM COVER, EXCEPT WITHIN 5' OF THE CHAMBER & MANFOLD WHERE IT SHALL BE PRE-CAST POLYSTYRENE INSULATION SHEETS WITH AN R-VALUE OF NO LESS THAN R-12. PIPE SHALL BE 80 PSI, 4" DIAMETER PVC, ABS OR HIGH DENSITY POLYETHYLENE. JOINTS SHALL BE INSERT FITTINGS WITH DOUBLE HOSE CLAMPS, OR AS REQUIRED BY MANUFACTURER FOR PRESSURE FLOW SYSTEM. TRANSITION BETWEEN PUMP PIPING AND FORCE MAIN SHALL BE WITH A FITTING MADE FOR THAT PURPOSE AND BE CONTAINED WITHIN THE PUMP CHAMBER. PIPES TO BE SET IN CLEAN SAND.

THE FORCE MAIN SHALL BE LAID AT A UNIFORM DEPTH OF 4". ALL PORTIONS OF THE FOAM MAIN LESS THAN 4" IN DEPTH SHALL BE INSULATED WITH 4" RIGID (R-12) FOAM INSULATION.

INSPECTION REQUIREMENTS
 PUMPS, ALARMS AND OTHER EQUIPMENT REQUIRING PERIODIC OR ROUTINE INSPECTION AND MAINTENANCE SHALL BE OPERATED, INSPECTED AND MAINTAINED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. IN NO INSTANCE SHALL INSPECTION BE PERFORMED LESS FREQUENTLY THAN ONCE EVERY THREE MONTHS. THE RESULTS OF SUCH INSPECTIONS SHALL BE SUBMITTED TO THE APPROVING AUTHORITY.



NOTES FOR ALL TANKS AND PUMP CHAMBER

TANKS / SYSTEM TO BE VENTED THROUGH BUILDING PLUMBING SYSTEM AS REQUIRED BY BUILDING CODE, AND AS DEPICED.
 TANKS SHOULD BE INSPECTED AND MAINTAINED. TANKS SHOULD BE PUMPED WHEN SLUDGE DEPTH IN THE BOTTOM EXCEEDS ONE FOURTH OF THE TOTAL LIQUID DEPTH.
 ALL JOINTS ARE TO SEALED WATER-TIGHT UPON INSTALLATION.
 CONSTRUCTION MATERIALS & DIMENSIONS ARE DEPICED TO CONFORM TO TITLE 5. MODIFICATIONS ARE SUBJECT TO DESIGN ENGINEER'S APPROVAL.

ALL STRUCTURES, TANKS, PUMP CHAMBERS, MANHOLES & EXTENSIONS ARE TO BE CAPABLE OF ASHITO HS-20-44 LOADING REQUIREMENTS AS PROVIDED BY THE MANUFACTURER.
 ALL STRUCTURES SHALL BE SET ON A 6" MINIMUM DEPTH BED OF 3/8" TO 1-1/2" CRUSHED WASHED STONE (MEETING MHS SSB SPECIFICATION M2.01.0) AND SHALL BE MECHANICALLY COMPACTED TO FORM A PERMANENT STABLE AND LEVEL BASE.

ALL INLET AND OUTLET COVERS SHALL BE EXTENDED TO 3" ABOVE FINISHED GRADE USING (SEE DETAIL):
 A. PRECAST RISER RINGS (MEETING MHS SSB M4.05.3) OR
 B. HARD FIRE CLAY BRICKS (MEETING MHS SSB M4.05.2) OR
 C. CEMENT MORTAR (MEETING MHS SSB M4.02.15) OR
 D. HEAVY DUTY CAST-IRON MANHOLE LIDS & FRAMES EQUAL TO LEBARON LA 248-8 OR NEEMAH R-1773 OR APPROVED EQUAL.

ALL LOAM, LAKE BOULDERS, OR FOREIGN MATERIAL ENCOUNTERED DURING EXCAVATION TO BE REMOVED FROM THE LEACHING AREA.
 ALL SOIL INTERFACES SHALL BE SCARIFIED PRIOR TO PLACEMENT OF STONE.

ALL STONE IN PLACE SHALL BE DURABLE, FREE FROM IRON, FINES AND DUST.
 WHEN GRAVEL FILL IS REQUIRED, ALL LOAM AND ORGANIC MATERIAL SHALL BE REMOVED FROM AREA TO BE FILLED. FILL SHALL BE COMPACTED TO MINIMIZE SETTLEMENT AND SHALL BE CLEAN GRANULAR MATERIAL, FREE FROM FINES AND ORGANIC MATERIALS AND SHALL BE IN ACCORDANCE WITH 310 CMR 15.255 (3) FOR FILL SPECIFICATIONS.

ALL DISTURBED AREAS TO BE LOAMED, SEEDED AND MAINTAINED TO PREVENT EROSION.

SYSTEM IS DESIGNED TO ACCOMMODATE SANITARY SEWAGE ASSOCIATED WITH NORMAL DOMESTIC USAGE AND CONSISTING OF WATER CARRIED PUTRESIBLE WASTE ONLY.

ALL COMPONENTS OF THE SEWAGE DISPOSAL SYSTEM SHALL BE COVERED BY A MINIMUM OF 36" OF CLEAN GRANULAR MATERIAL, FREE OF STONES AND BOULDERS GREATER THAN 6" IN SIZE. A MINIMUM OF 6" COVER IS ALSO REQUIRED.

PLAN SHOWS ONLY THOSE FEATURES THAT WERE VISUALLY APPARENT ON DATE OF TOPOGRAPHY AND THE ABSENCE OF SUBSURFACE STRUCTURES UTILITIES, ETC., IS NOT INTENDED OR IMPLIED.

ALL PIPING SHALL BE LAID TRUE TO LINE AND GRADE AND BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

THERE ARE NO EXISTING WELLS WITHIN 100' OF THE PROPOSED SEWAGE DISPOSAL SYSTEM. (100' OF THE SEPTIC TANK.)

ALL KNOWN WELLS WITHIN 200' OF THE PROPOSED PRIMARY AND EXPANSION LEACH AREAS ARE SHOWN.

THE DESIGN ENGINEER SHALL BE NOTIFIED PROMPTLY OF ANY PLAN DEFICIENCIES FOUND DUE TO UNFORSEEN SUBSURFACE CONDITIONS OR OTHER REASONS THAT MIGHT AFFECT THE FUNCTION OF THIS DESIGNED SYSTEM.

CONTRACTOR SHALL NOTIFY "DIG SAFE" PRIOR TO ANY EXCAVATION. (1-800-322-4844)

SYSTEM SHALL BE INSPECTED, DURING CONSTRUCTION, IN ACCORDANCE WITH 310 CMR 15.021 (2).

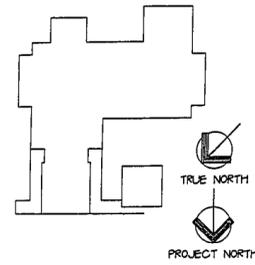
Property lines, topography and historic test locations taken from a plan entitled, "Topographic Plan", 53 Main St. Westford, Massachusetts by Diversified Civil Engineering, dated: January 10, 1997, revised through 2-14-97, dwg. no. 1451.

Topographic Datum refers to NGVD-1929 RM 19, Elevation=399.81'.
 REF: see above referenced plan.

WHOLE LOT PLAN
 SCALE: 1"=100'

Project no. KB 96077 DERA 9511 Drawing no. C-9

Date 03/23/98

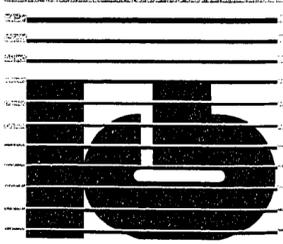


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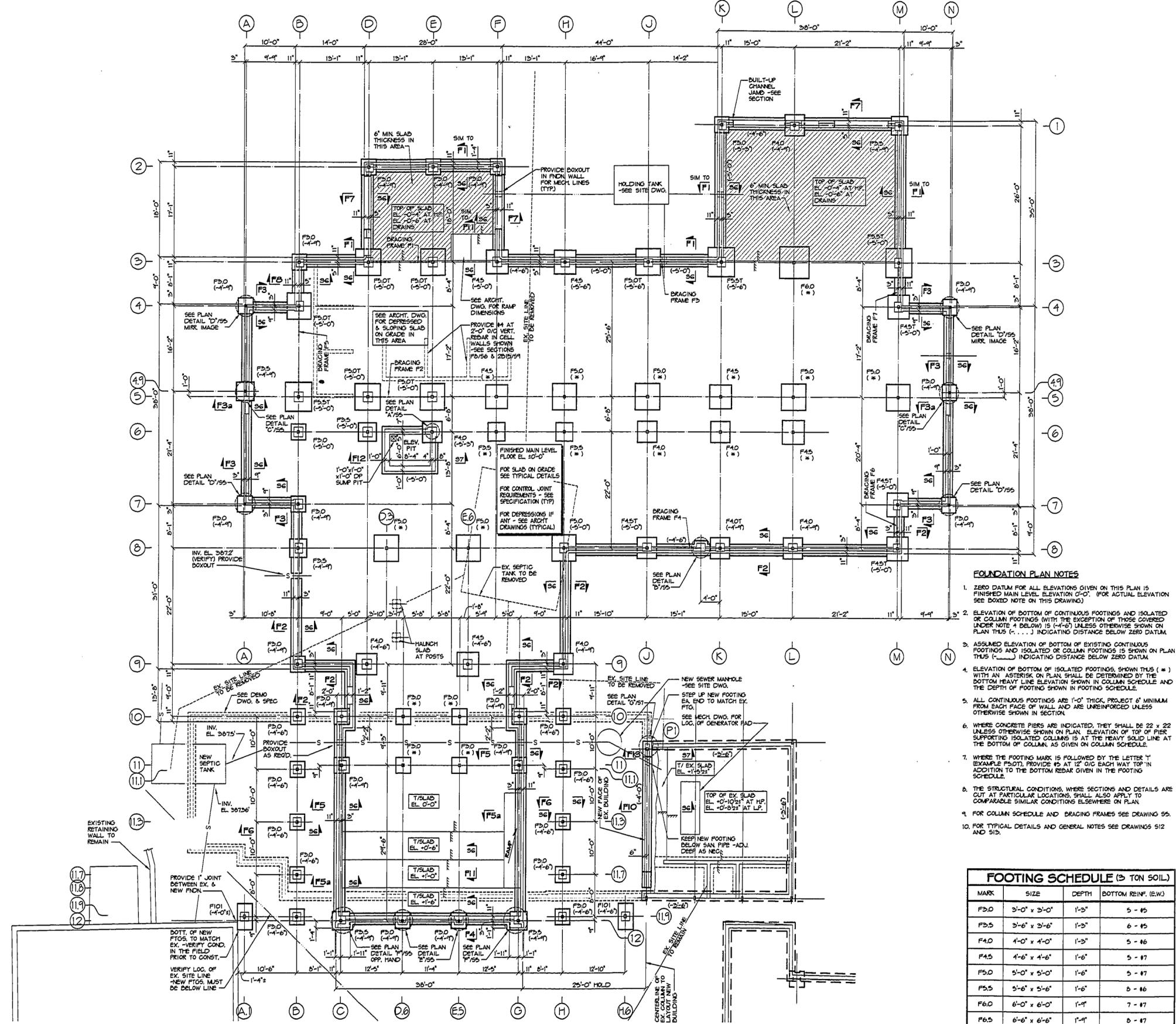


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Drawn by: SM Scale: 1/8"=1'-0"

FOUNDATION PLAN

Project no. 96077 Drawing no. 51
 Date MARCH 23, 1996
 TECH 5901



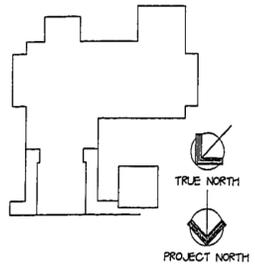
- FOUNDATION PLAN NOTES**
- ZERO DATUM FOR ALL ELEVATIONS GIVEN ON THIS PLAN IS FINISHED MAIN LEVEL ELEVATION 0'-0". (FOR ACTUAL ELEVATION SEE BOXED NOTE ON THIS DRAWING)
 - ELEVATION OF BOTTOM OF CONTINUOUS FOOTINGS AND ISOLATED OR COLUMN FOOTINGS (WITH THE EXCEPTION OF THOSE COVERED UNDER NOTE 4 BELOW) IS (-4'-6") UNLESS OTHERWISE SHOWN ON PLAN THIS (-...) INDICATING DISTANCE BELOW ZERO DATUM.
 - ASSUMED ELEVATION OF BOTTOM OF EXISTING CONTINUOUS FOOTINGS AND ISOLATED OR COLUMN FOOTINGS IS SHOWN ON PLAN THIS (-...) INDICATING DISTANCE BELOW ZERO DATUM.
 - ELEVATION OF BOTTOM OF ISOLATED FOOTINGS, SHOWN THIS (-...) WITH AN ASTERISK ON PLAN SHALL BE DETERMINED BY THE BOTTOM HEAVY LINE ELEVATION SHOWN IN COLUMN SCHEDULE AND THE DEPTH OF FOOTING SHOWN IN FOOTING SCHEDULE.
 - ALL CONTINUOUS FOOTINGS ARE 1'-0" THICK, PROJECT 6" MINIMUM FROM EACH FACE OF WALL AND ARE UNREINFORCED UNLESS OTHERWISE SHOWN IN SECTION.
 - WHERE CONCRETE PIERS ARE INDICATED, THEY SHALL BE 22 x 22 UNLESS OTHERWISE SHOWN ON PLAN. ELEVATION OF TOP OF PIER SUPPORTING ISOLATED COLUMNS IS AT THE HEAVY SOLID LINE AT THE BOTTOM OF COLUMN, AS GIVEN ON COLUMN SCHEDULE.
 - WHERE THE FOOTING MARK IS FOLLOWED BY THE LETTER 'T' (EXAMPLE F3.0T), PROVIDE #5 AT 12" O/C EACH WAY TOP IN ADDITION TO THE BOTTOM REBAR GIVEN IN THE FOOTING SCHEDULE.
 - THE STRUCTURAL CONDITIONS, WHERE SECTIONS AND DETAILS ARE CUT AT PARTICULAR LOCATIONS, SHALL ALSO APPLY TO COMPARABLE SIMILAR CONDITIONS ELSEWHERE ON PLAN.
 - FOR COLUMN SCHEDULE AND BRACING FRAMES SEE DRAWING 95.
 - FOR TYPICAL DETAILS AND GENERAL NOTES SEE DRAWINGS 512 AND 513.

FOOTING MARK SCHEDULE (3 TON SOIL)			
MARK	SIZE	DEPTH	BOTTOM REIN. (E.W.)
F3.0	3'-0" x 3'-0"	1'-3"	5 - #5
F3.5	3'-6" x 3'-6"	1'-3"	6 - #5
F4.0	4'-0" x 4'-0"	1'-3"	5 - #6
F4.5	4'-6" x 4'-6"	1'-6"	5 - #7
F5.0	5'-0" x 5'-0"	1'-6"	5 - #7
F5.5	5'-6" x 5'-6"	1'-6"	6 - #6
F6.0	6'-0" x 6'-0"	1'-9"	7 - #7
F6.5	6'-6" x 6'-6"	1'-9"	8 - #7
F10	3'-0" x 5'-0"	1'-3"	2 - #5 SW. 3 - #7 LW.

FOUNDATION PLAN
 SCALE: 1/8"=1'-0"

NOTE - SEE DEMOLITION
 REFERENCES MADE ON THESE STRUCTURAL DRAWINGS TO DEMOLITION AND/OR REMOVAL OF EXISTING CONSTRUCTION ARE GIVEN FOR THE CONTRACTOR'S CONVENIENCE, AND MUST BE COORDINATED WITH SIMILAR INFORMATION CONTAINED ON THE ARCHITECT'S DEMOLITION DRAWINGS. SUCH REFERENCES ARE NOT INTENDED TO BE ALL-INCLUSIVE OF THE DEMOLITION WORK WHICH MUST BE PERFORMED.

ZERO DATUM FOR ALL ELEVATIONS GIVEN ON STRUCTURAL DRAWINGS IS FINISHED MAIN FLOOR ACTUAL ELEVATION 391.5' = 0'-0"



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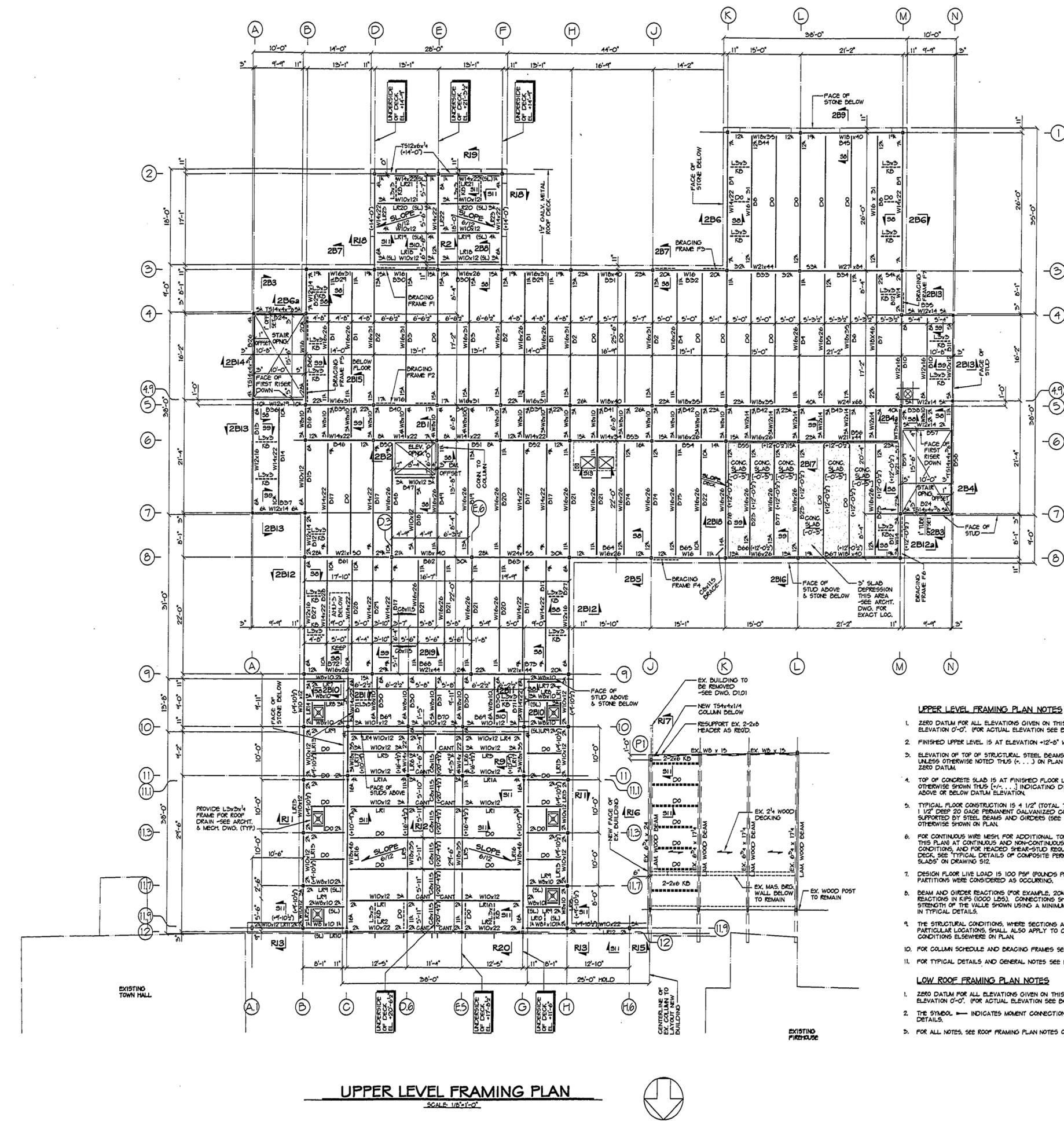


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Drawn by: SM Scale: 1/8"=1'-0"

UPPER LEVEL FRAMING PLAN

Project no. 96077 Drawing no. 1/19/98-16
 Date MARCH 23, 1998
 TECH 5901



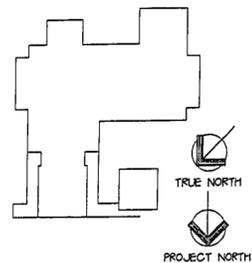
UPPER LEVEL FRAMING PLAN NOTES

- ZERO DATUM FOR ALL ELEVATIONS GIVEN ON THIS PLAN IS FINISHED MAIN LEVEL ELEVATION 0'-0". (FOR ACTUAL ELEVATION SEE BOXED NOTE ON DRAWING 51)
- FINISHED UPPER LEVEL IS AT ELEVATION +12'-0" WITH RESPECT TO ZERO DATUM.
- ELEVATION OF TOP OF STRUCTURAL STEEL BEAMS AND ORDERS IS (+12'-0" / 2) UNLESS OTHERWISE NOTED THIS (...) ON PLAN INDICATING DISTANCE ABOVE ZERO DATUM.
- TOP OF CONCRETE SLAB IS AT FINISHED FLOOR LEVEL IS +12'-0" UNLESS OTHERWISE SHOWN THIS (...) INDICATING DISTANCE OF TOP OF SLAB ABOVE OR BELOW DATUM ELEVATION.
- TYPICAL FLOOR CONSTRUCTION IS 4 1/2" (TOTAL THICKNESS) CONCRETE SLAB ON 1/2" DEEP 20 GAGE PERMANENT GALVANIZED COMPOSITE METAL FORM DECK SUPPORTED BY STEEL BEAMS AND GIRDERS (SEE SPECIFICATION) UNLESS OTHERWISE SHOWN ON PLAN.
- FOR CONTINUOUS WIRE MESH FOR ADDITIONAL TOP SLAB REBARS NOT SHOWN ON THIS PLAN AT CONTINUOUS AND NON-CONTINUOUS SUPPORTS AND EDGE CONDITIONS, AND FOR HEADED SHEAR-STUD REQUIREMENTS, FOR SLAB ON METAL DECK, SEE TYPICAL DETAILS OF COMPOSITE PERMANENT METAL FORM DECK SLABS ON DRAWING 512.
- DESIGN FLOOR LIVE LOAD IS 100 PSF (POUNDS PER SQUARE FOOT), MASONRY PARTITIONS WERE CONSIDERED AS OCCURRING.
- BEAM AND GIRDER REACTIONS (FOR EXAMPLE, 20K) REPRESENTS MAXIMUM END REACTIONS IN KIPS (1000 LBS). CONNECTIONS SHALL DEVELOP A MINIMUM STRENGTH OF THE VALUE SHOWN USING A MINIMUM NUMBER OF BOLTS AS SHOWN IN TYPICAL DETAILS.
- THE STRUCTURAL CONDITIONS, WHERE SECTIONS AND DETAILS ARE CUT AT PARTICULAR LOCATIONS, SHALL ALSO APPLY TO COMPARABLE SIMILAR CONDITIONS ELSEWHERE ON PLAN.
- FOR COLLAN SCHEDULE AND BRACING FRAMES SEE DRAWING 55.
- FOR TYPICAL DETAILS AND GENERAL NOTES SEE DRAWINGS 512 & 513.

LOW ROOF FRAMING PLAN NOTES

- ZERO DATUM FOR ALL ELEVATIONS GIVEN ON THIS PLAN IS FINISHED MAIN LEVEL ELEVATION 0'-0". (FOR ACTUAL ELEVATION SEE BOXED NOTE ON DRAWING 51)
- THE SYMBOL — INDICATES MOMENT CONNECTIONS, SEE PLAN AND TYPICAL DETAILS.
- FOR ALL NOTES, SEE ROOF FRAMING PLAN NOTES ON DRAWING 54.

UPPER LEVEL FRAMING PLAN
 SCALE: 1/8"=1'-0"



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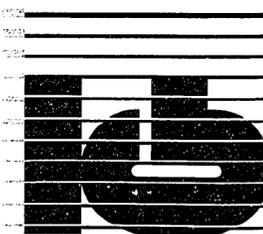
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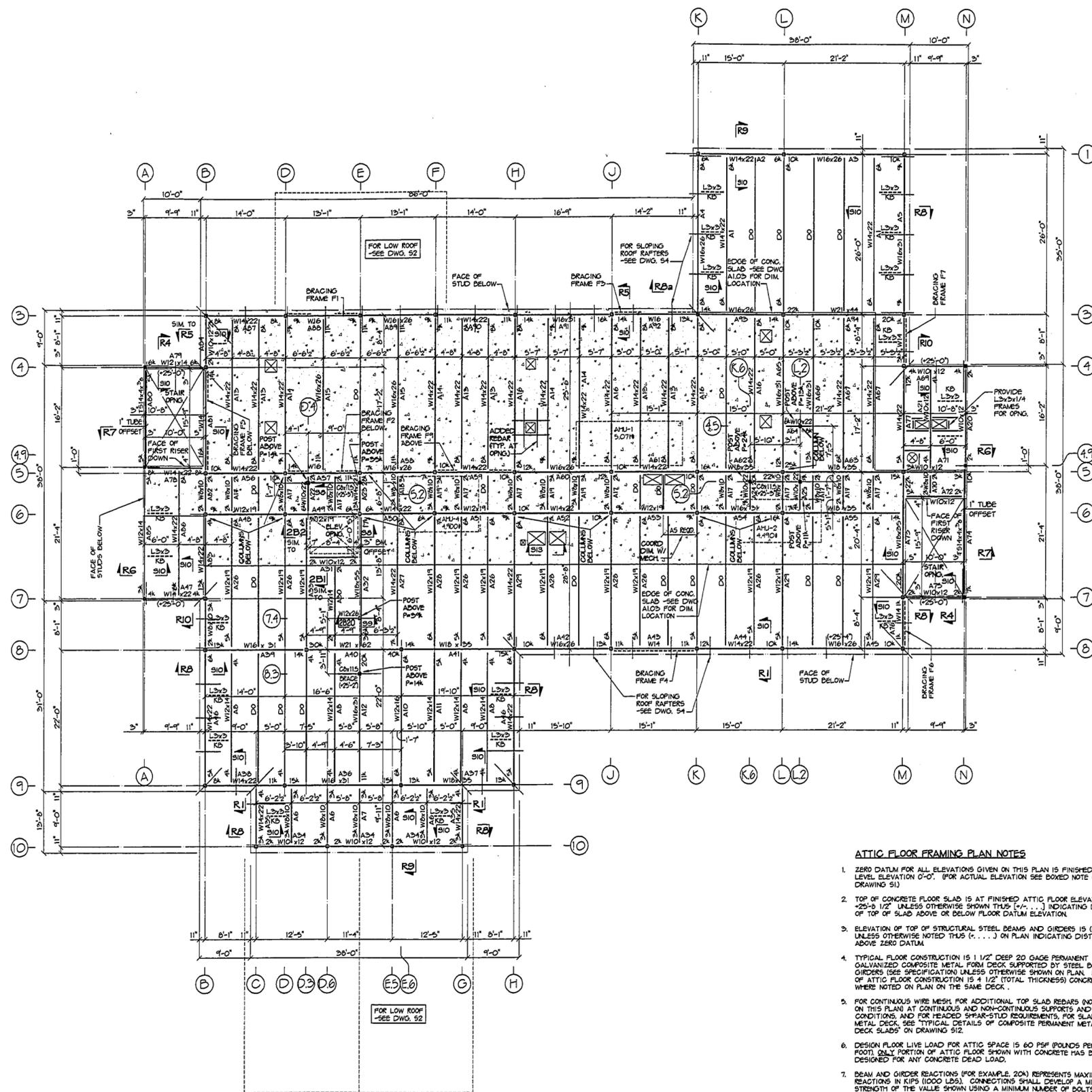
ATTIC FLOOR FRAMING PLAN

Project no. 46077

Drawing no.

Date MARCH 25, 1998

TECH 590.1



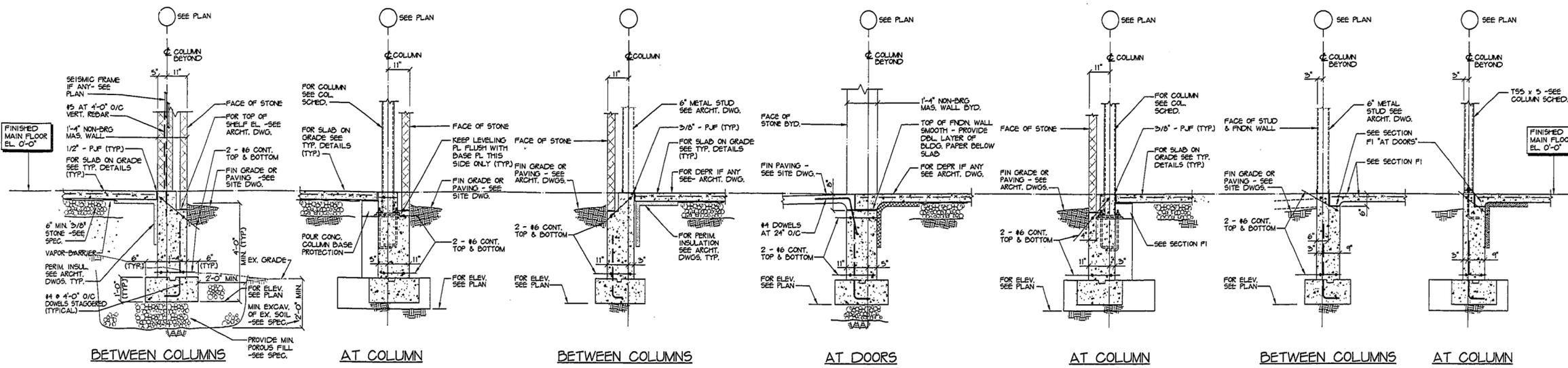
ATTIC FLOOR FRAMING PLAN

SCALE: 1/8"=1'-0"



ATTIC FLOOR FRAMING PLAN NOTES

- ZERO DATUM FOR ALL ELEVATIONS GIVEN ON THIS PLAN IS FINISHED MAIN LEVEL ELEVATION 0'-0". (FOR ACTUAL ELEVATION SEE BOXED NOTE ON DRAWING 51)
- TOP OF CONCRETE FLOOR SLAB IS AT FINISHED ATTIC FLOOR ELEVATION -25'-0 1/2" UNLESS OTHERWISE SHOWN THUS [x'-x"] INDICATING DISTANCE OF TOP OF SLAB ABOVE OR BELOW FLOOR DATUM ELEVATION.
- ELEVATION OF TOP OF STRUCTURAL STEEL BEAMS AND GIRDERS IS (-25'-4") UNLESS OTHERWISE NOTED THUS [x'-x"] ON PLAN INDICATING DISTANCE ABOVE ZERO DATUM.
- TYPICAL FLOOR CONSTRUCTION IS 1 1/2" DEEP 20 GAGE PERMANENT GALVANIZED COMPOSITE METAL FORM DECK SUPPORTED BY STEEL BEAMS AND GIRDERS (SEE SPECIFICATION UNLESS OTHERWISE SHOWN ON PLAN. PORTION OF ATTIC FLOOR CONSTRUCTION IS 4 1/2" (TOTAL THICKNESS) CONCRETE SLAB WHERE NOTED ON PLAN ON THE SAME DECK.
- FOR CONTINUOUS WIRE MESH FOR ADDITIONAL TOP SLAB REBARS (NOT SHOWN ON THIS PLAN) AT CONTINUOUS AND NON-CONTINUOUS SUPPORTS AND EDGE CONDITIONS, AND FOR HEADED SHAP-STEEL REQUIREMENTS, FOR SLAB ON METAL DECK, SEE TYPICAL DETAILS OF COMPOSITE PERMANENT METAL FORM DECK SLABS ON DRAWING 512.
- DESIGN FLOOR LIVE LOAD FOR ATTIC SPACE IS 60 PSF (POUNDS PER SQUARE FOOT). ONLY PORTION OF ATTIC FLOOR SHOWN WITH CONCRETE HAS BEEN DESIGNED FOR ANY CONCRETE DEAD LOAD.
- BEAM AND GIRDER REACTIONS (FOR EXAMPLE, 20K) REPRESENTS MAXIMUM END REACTIONS IN KIPS (1000 LBS.). CONNECTIONS SHALL DEVELOP A MINIMUM STRENGTH OF THE WALLE SHOWN USING A MINIMUM NUMBER OF BOLTS AS SHOWN IN TYPICAL DETAILS.
- THE STRUCTURAL CONDITIONS, WHERE SECTIONS AND DETAILS ARE CUT AT PARTICULAR LOCATIONS, SHALL ALSO APPLY TO COMPARABLE SIMILAR CONDITIONS ELSEWHERE ON PLAN.
- FOR COLUMN SCHEDULE AND BRACING FRAMES SEE DRAWING 55.
- FOR TYPICAL DETAILS AND GENERAL NOTES SEE DRAWINGS 512 AND 515.

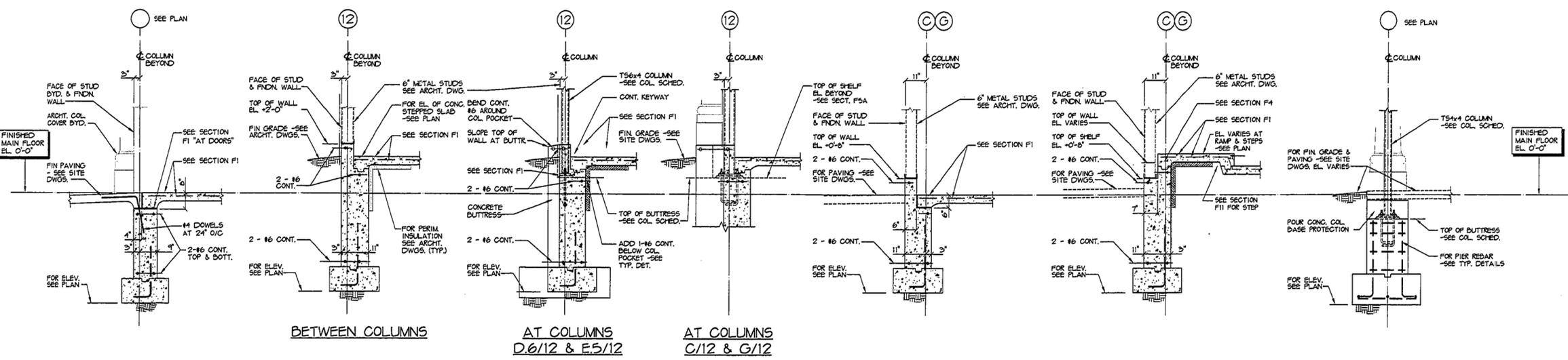


SECTION F1
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SECTION F2
SCALE 1/2"=1'-0"

SECTION F3
SCALE 1/2"=1'-0"

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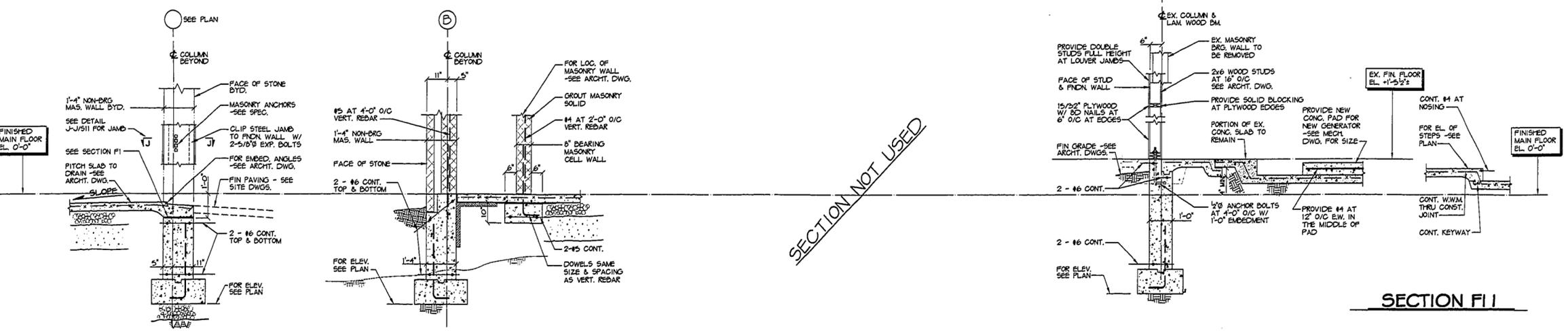
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SECTION F4
SCALE 1/2"=1'-0"

SECTION F5
SCALE 1/2"=1'-0"

SECTION F5a
SCALE 1/2"=1'-0"

SECTION F6
SCALE 1/2"=1'-0"



SECTION F7

SECTION F8

SECTION F9

SECTION F10

SECTION F11



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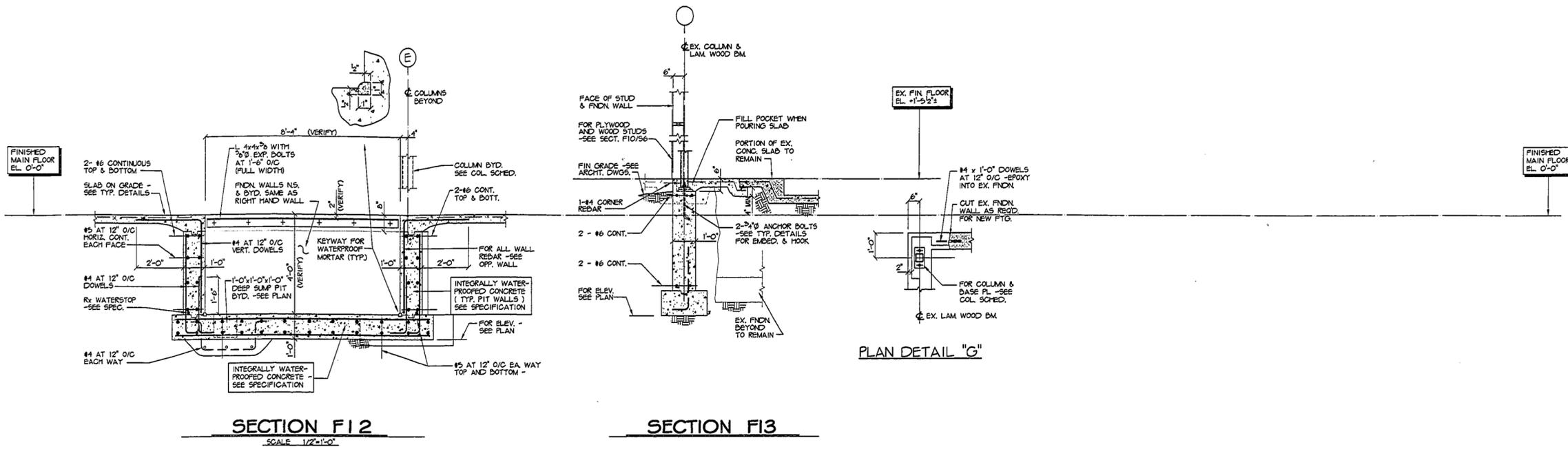
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Project no. 96077 Drawing no. 56

Date: MARCH 25, 1998
 TECH 5901

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SECTION F12
SCALE 1/2"=1'-0"

SECTION F13

PLAN DETAIL "G"



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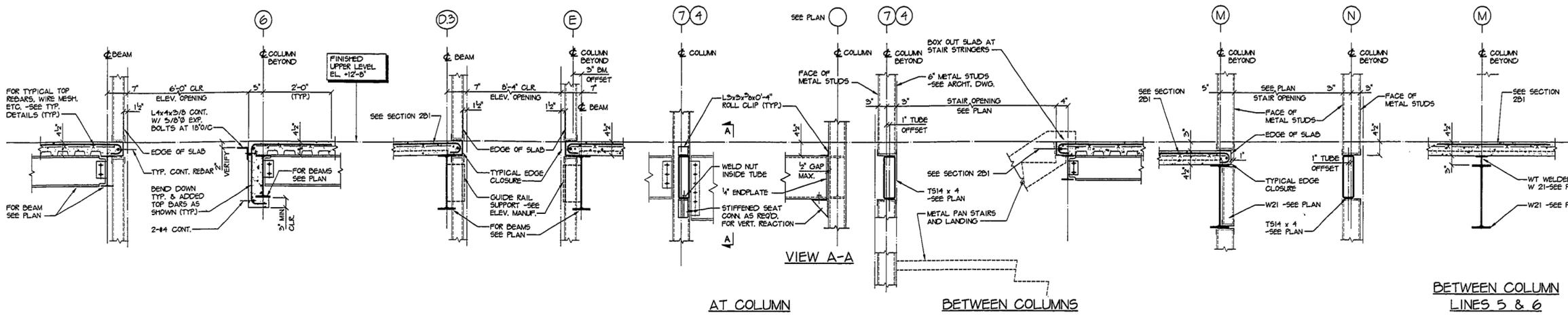


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**FOUNDATION
DETAILS II**

Project no. 96077 Drawing no. 1450-20
Date MARCH 23, 1998
57



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BETWEEN COLUMN LINES 5 & 6

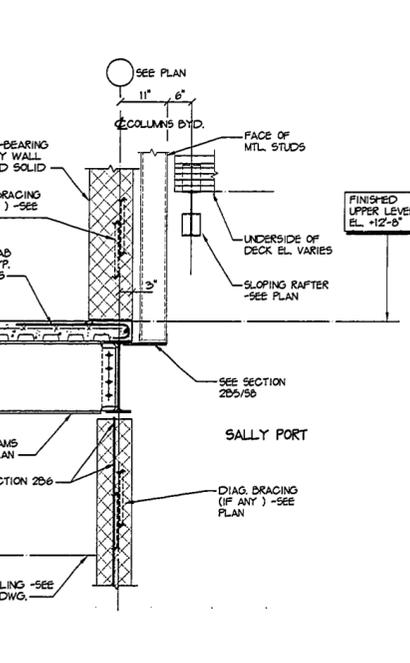
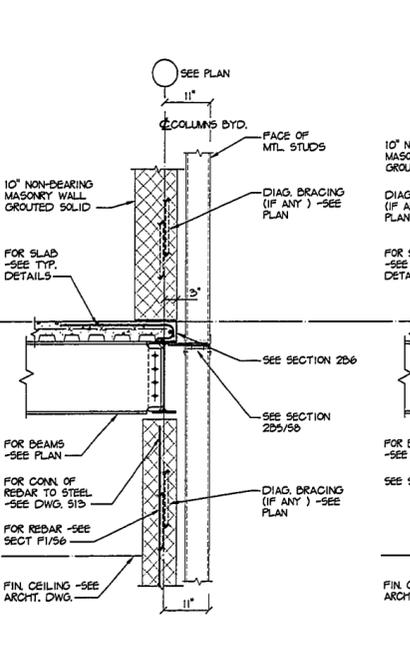
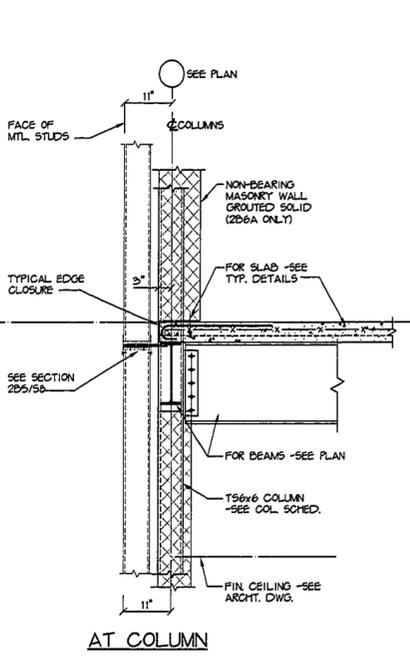
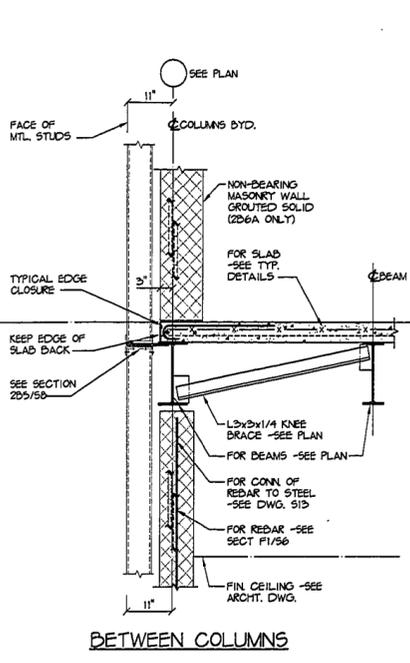
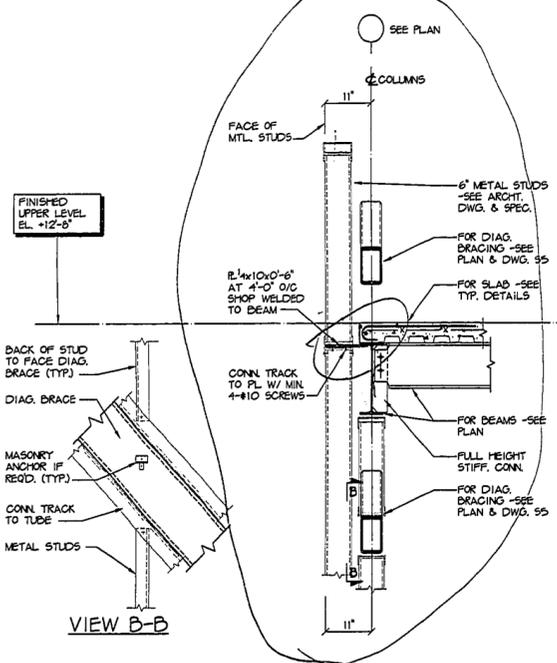
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SECTION 2B2
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SECTION 2B3
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SECTION 2B4
SCALE 3/4"=1'-0"

SECTION 2B4a
SCALE 3/4"=1'-0"

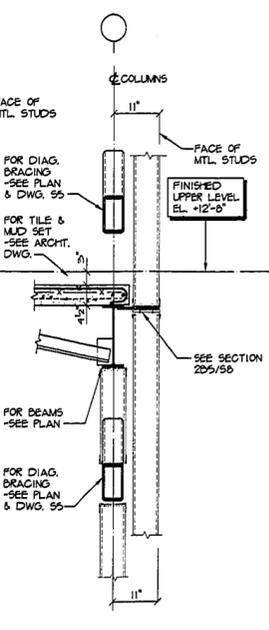
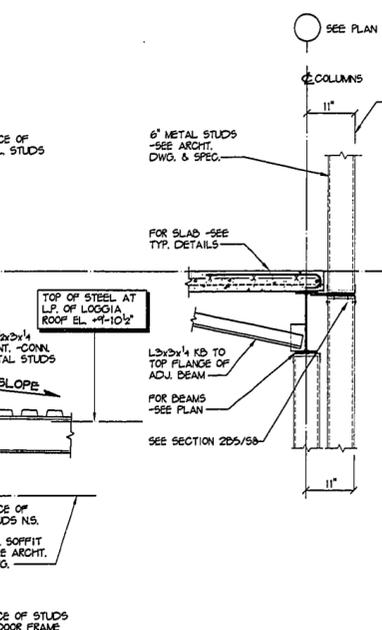
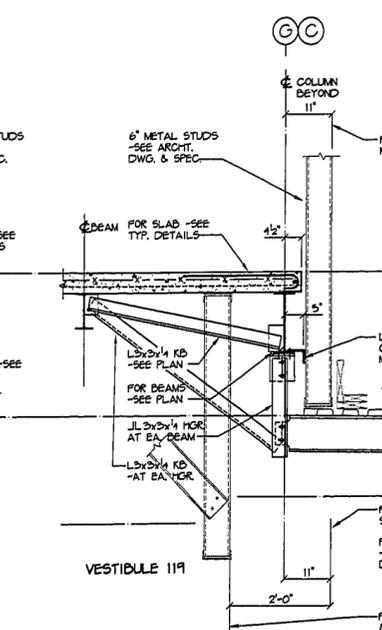
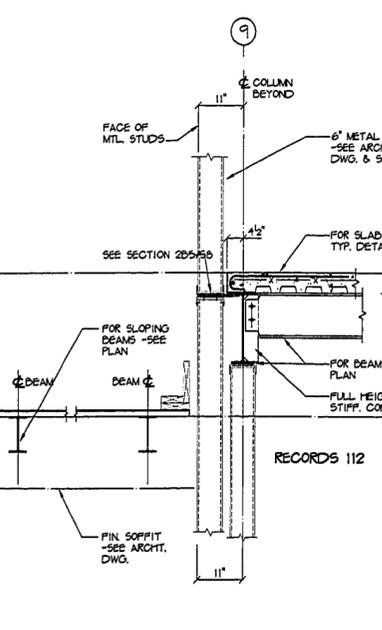
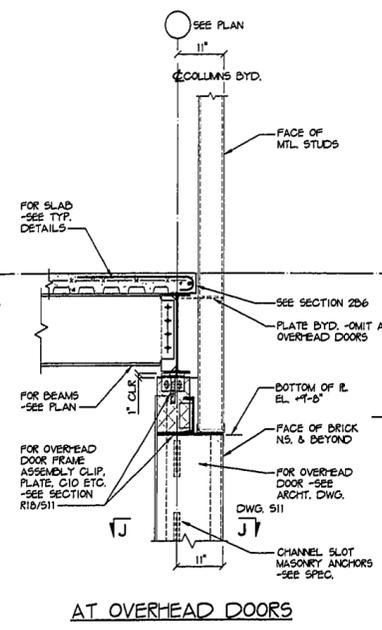
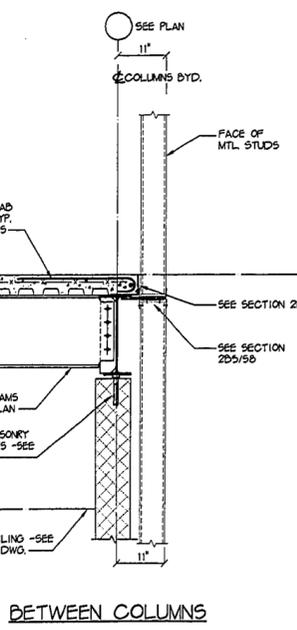


SECTION 2B5
SCALE 3/4"=1'-0"

SECTION 2B6 & 2B6a
SCALE 3/4"=1'-0"

SECTION 2B7
SCALE 3/4"=1'-0"

SECTION 2B8
SCALE 3/4"=1'-0"



SECTION 2B9
SCALE 3/4"=1'-0"

SECTION 2B10
SCALE 3/4"=1'-0"

SECTION 2B11
SCALE 3/4"=1'-0"

SECTION 2B12
SCALE 3/4"=1'-0"

SECTION 2B12a
SCALE 3/4"=1'-0"



WESTFORD POLICE FACILITY
53 MAIN STREET
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01886

THE ENGINEERING CONSULTANTS OF
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HARTFORD, CT 06114
PHONE: (860) 296-8324
FAX: (860) 296-9284
JOHN M. CHIPKO SR., P.E.
VICE PRESIDENT



KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

Drawn by: SM Scale: 3/4"=1'-0"

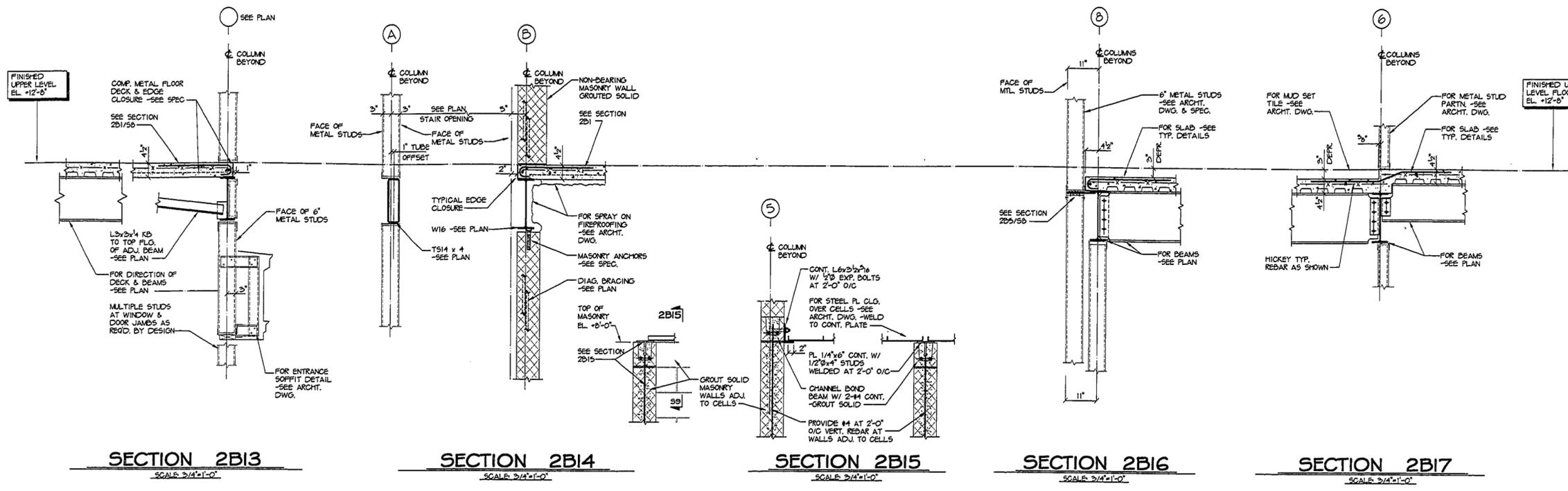
UPPER LEVEL DETAILS

Project no. 96077 Drawing no. 1107-1

Date MARCH 25, 1998

58

TECH 5901



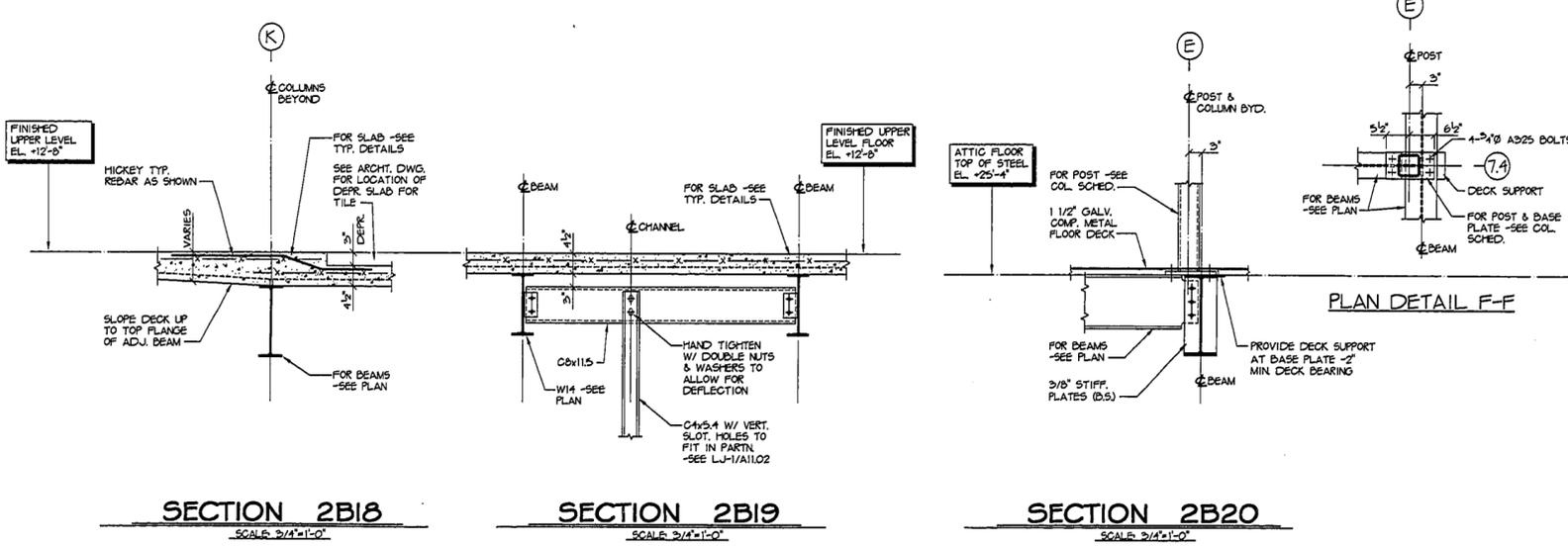
SECTION 2B13
SCALE: 3/4"=1'-0"

SECTION 2B14
SCALE: 3/4"=1'-0"

SECTION 2B15
SCALE: 3/4"=1'-0"

SECTION 2B16
SCALE: 3/4"=1'-0"

SECTION 2B17
SCALE: 3/4"=1'-0"



SECTION 2B18
SCALE: 3/4"=1'-0"

SECTION 2B19
SCALE: 3/4"=1'-0"

SECTION 2B20
SCALE: 3/4"=1'-0"

PLAN DETAIL F-F

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HARTFORD, CT 06114
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FAX: (860) 298-9234
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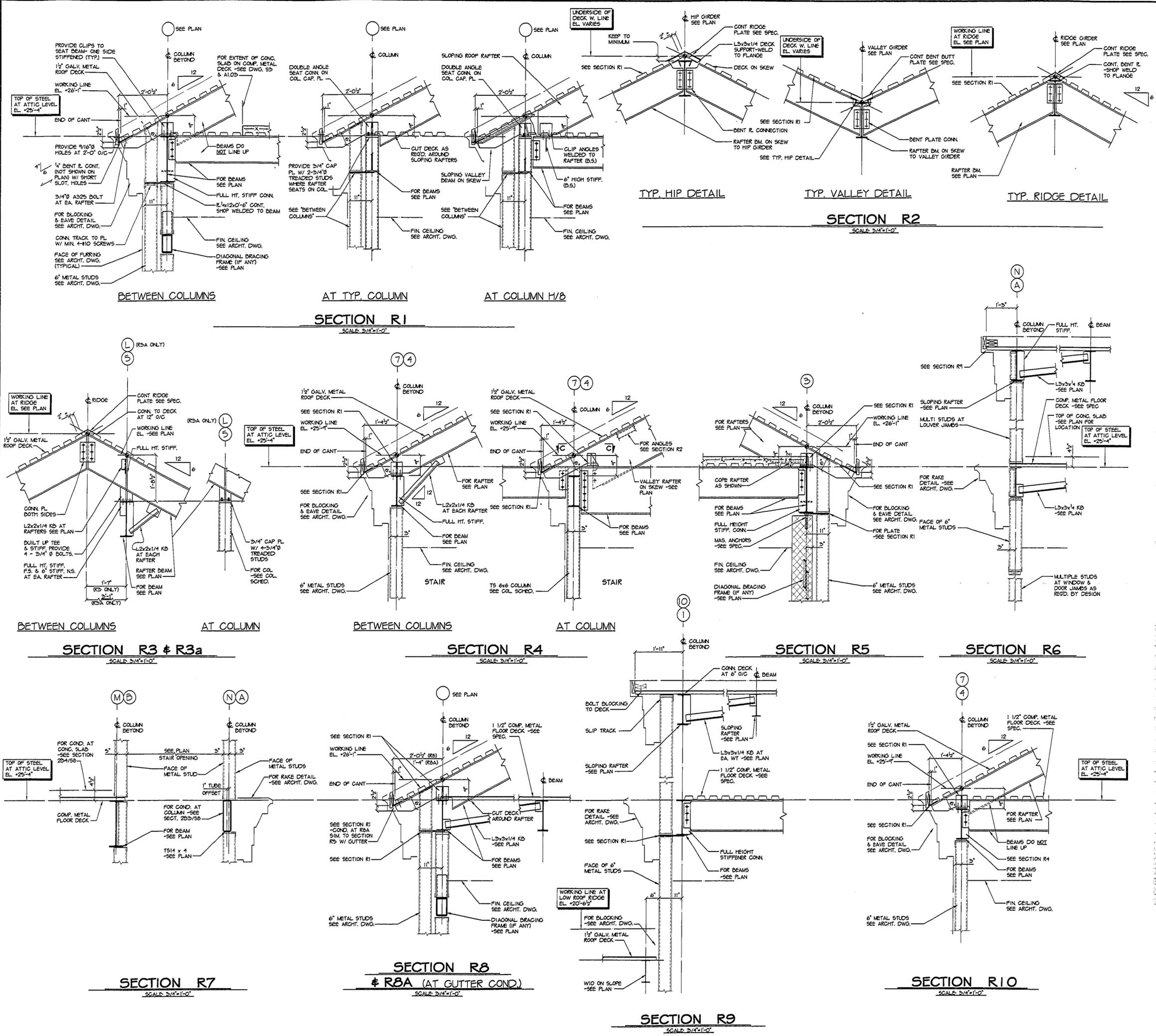


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ASSOCIATES, INC.**
ARCHITECTS

Drawn by: SM Scale: 3/4"=1'-0"

UPPER LEVEL
DETAILS II

Project no. 96077 Drawing no. 450-22
Date MARCH 23, 1998
TECH 5901



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 HARTFORD, CT. 06114
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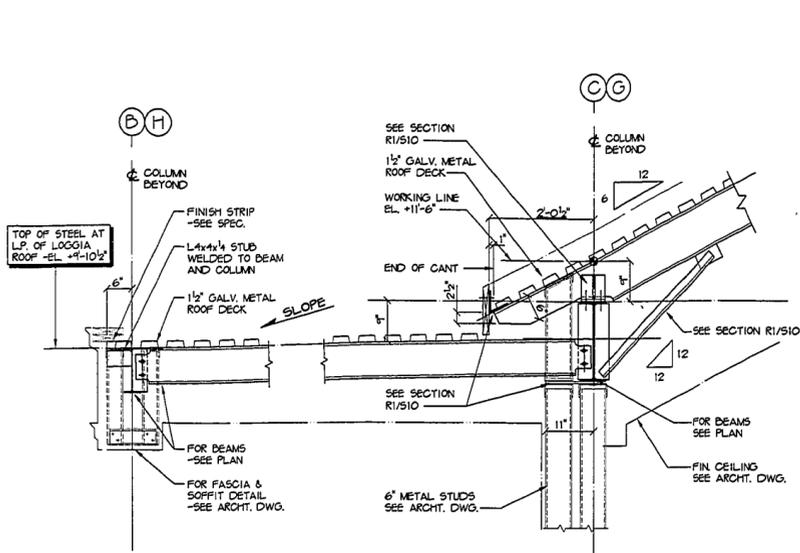
KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

480 State St., New Britain, Connecticut 06002-2507 (203) 229-0200
 Drawn by: SM Scale: 3/4"=1'-0"

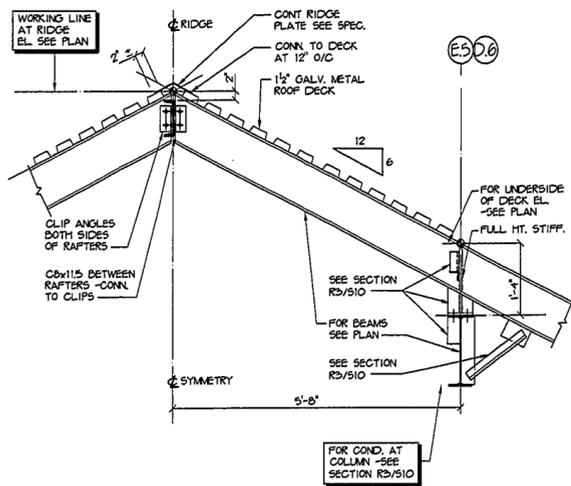
ROOF DETAILS

Project no. 96077 Drawing no. 14570-23

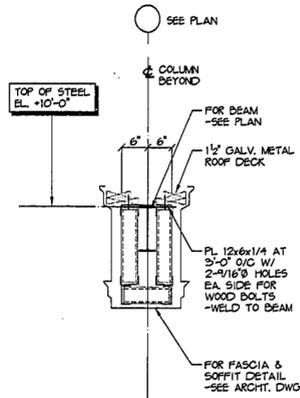
Date MARCH 23, 1998
 TECH 590.1



SECTION R11
SCALE: 3/4"=1'-0"



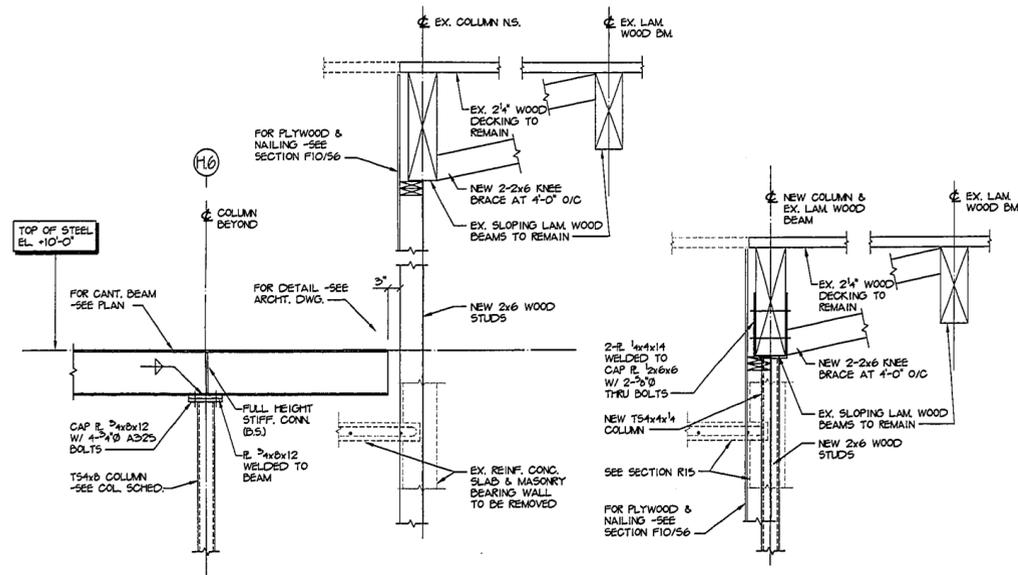
SECTION R12
SCALE: 3/4"=1'-0"



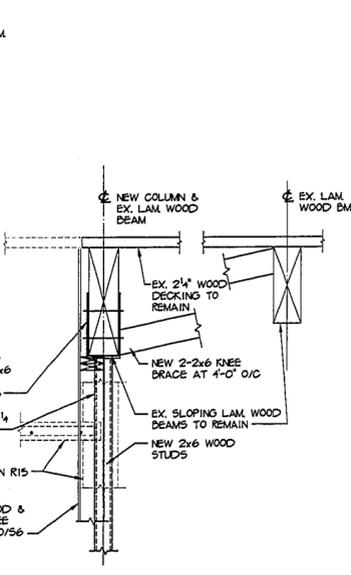
SECTION R13
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SECTION NOT USED

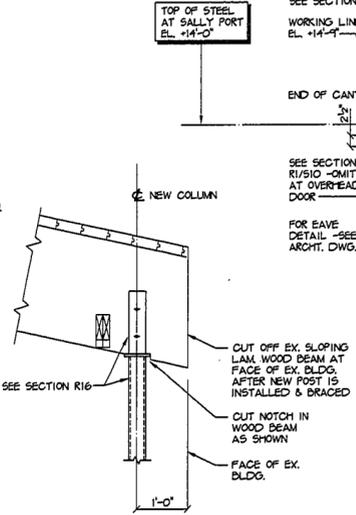
SECTION R14
SCALE: 3/4"=1'-0"



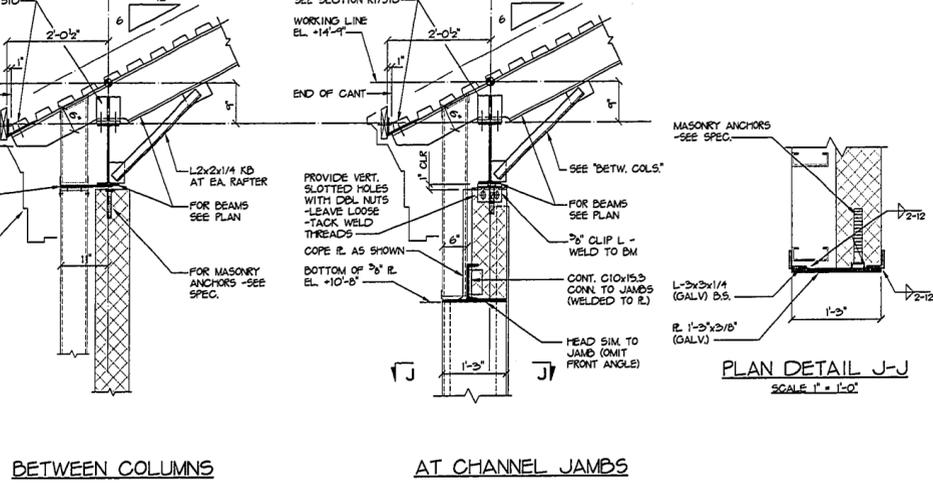
SECTION R15
SCALE: 3/4"=1'-0"



SECTION R16
SCALE: 3/4"=1'-0"

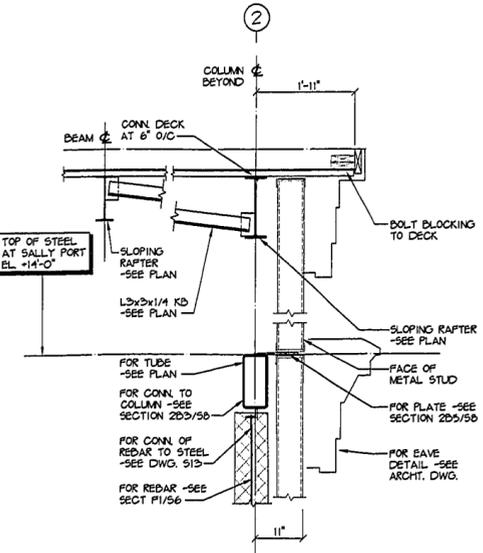


SECTION R17
SCALE: 3/4"=1'-0"

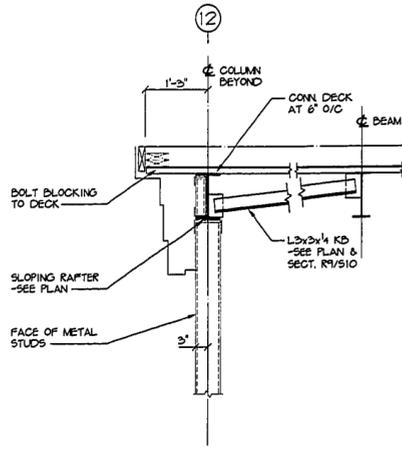


SECTION R18
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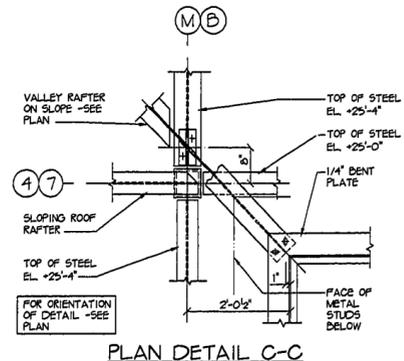
PLAN DETAIL J-J
SCALE: 1"=1'-0"



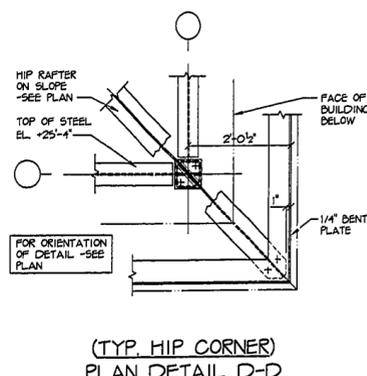
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SCALE: 3/4"=1'-0"



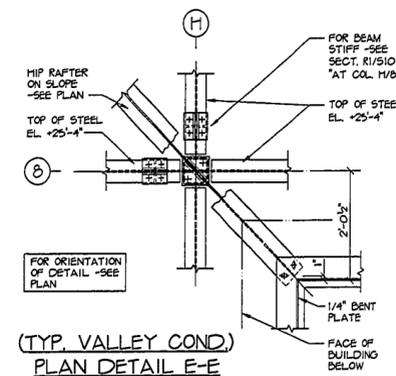
SECTION R20
SCALE: 3/4"=1'-0"



PLAN DETAIL C-C



(TYP. HIP CORNER) PLAN DETAIL D-D



(TYP. VALLEY COND.) PLAN DETAIL E-E

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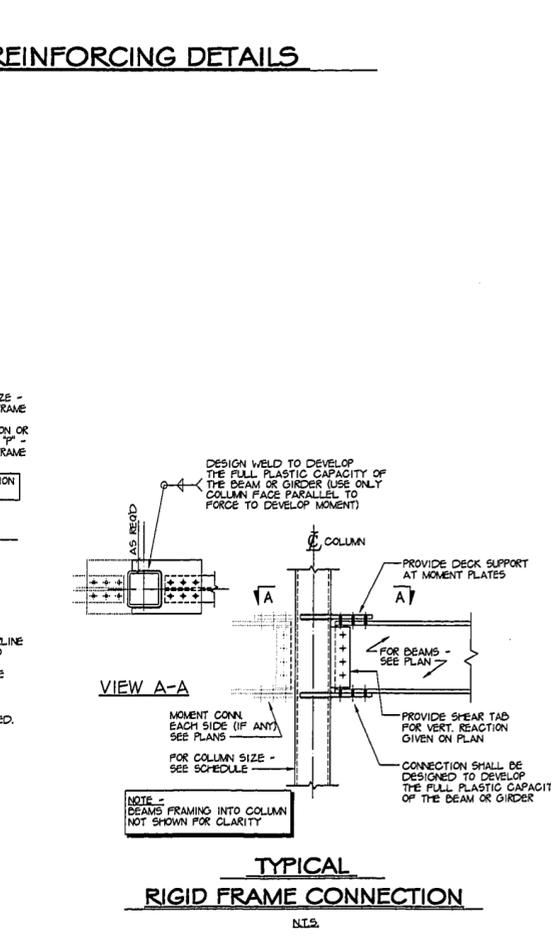
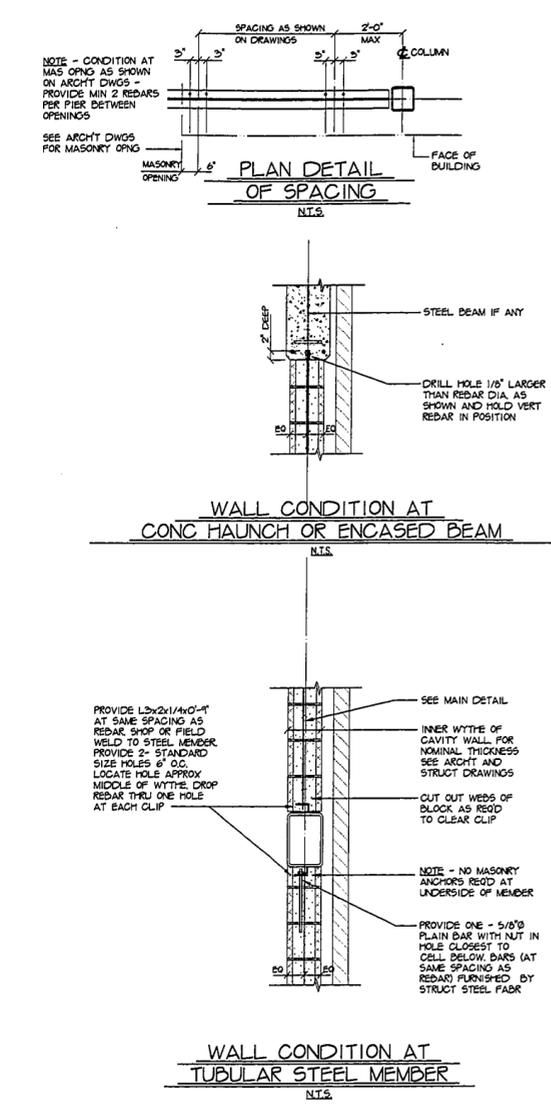
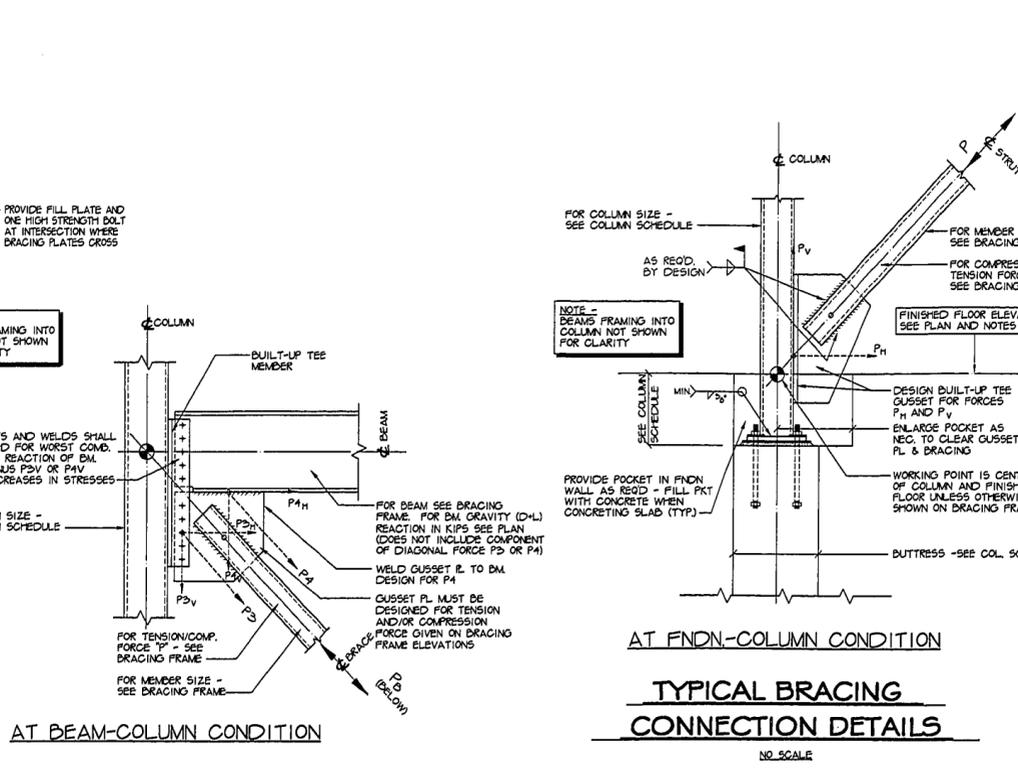
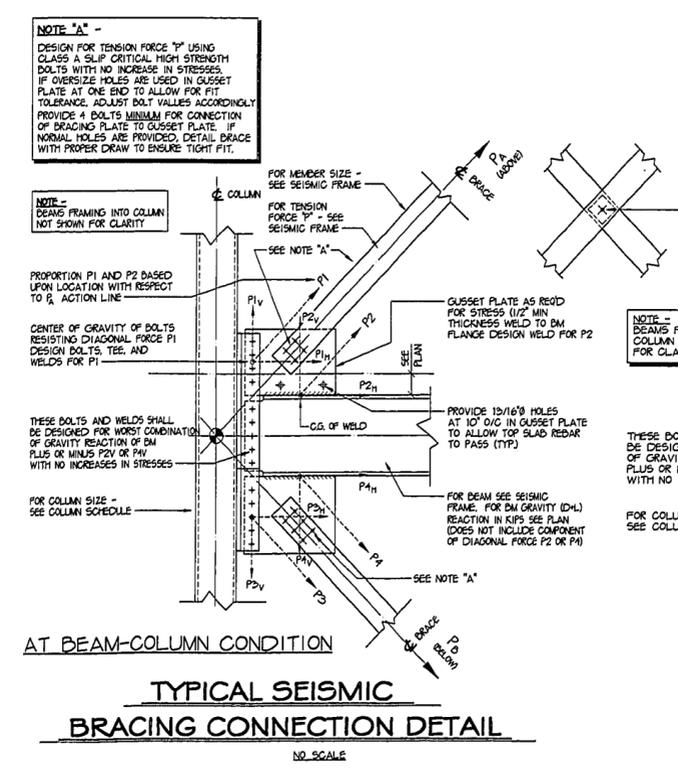
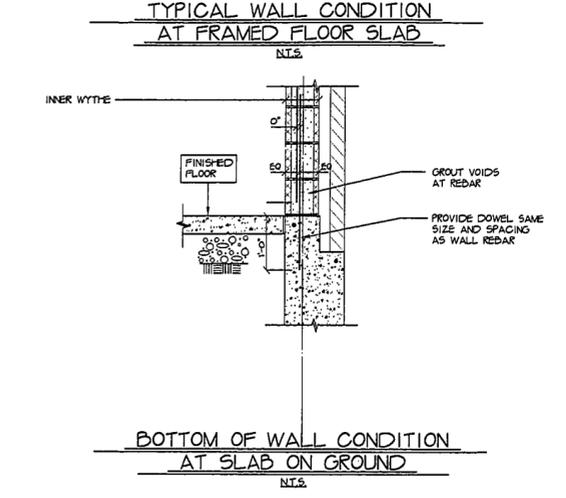
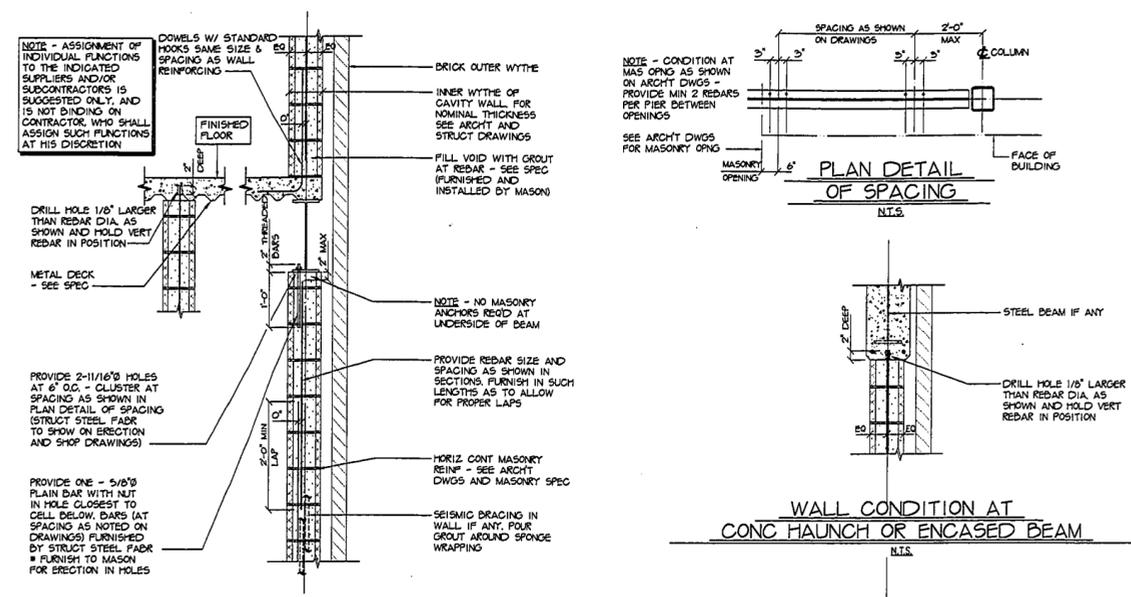
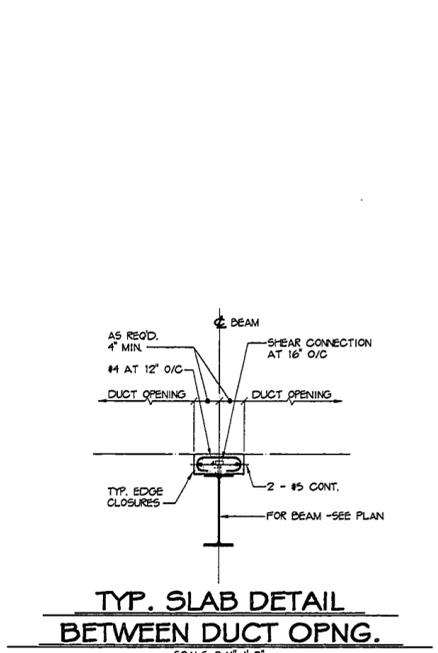
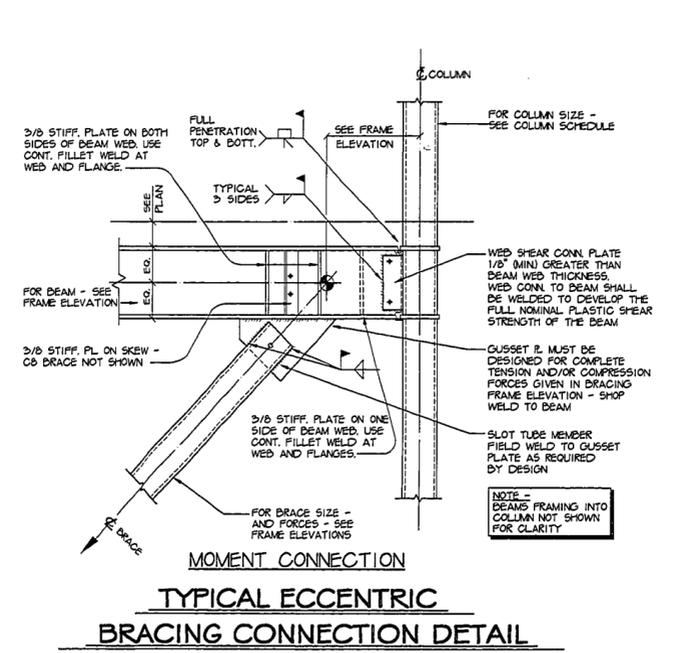
THE ENGINEERING CONSULTANTS OF HARTFORD, P.C.
941 WETHERSFIELD AVENUE
HARTFORD, CT 06114
PHONE: (860) 296-8324
FAX: (860) 296-9294
JOHN M. CHIPKO SR., P.E.
VICE PRESIDENT

KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

Drawn by: SM Scale: 3/4"=1'-0"

ROOF DETAILS II
Project no. 96077 Drawing no. 1150-24
Date MARCH 23, 1998
TECH 5901

C:\DWG\1998-1\1111 Thu Jun 25 08:31:13 1998 Copyright 1998 TECH, P.C.



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WESTFORD POLICE FACILITY
53 MAIN STREET
WESTFORD MASSACHUSETTS 01886

THE ENGINEERING CONSULTANTS OF HARTFORD, P.C.
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HARTFORD, CT. 06114
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KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS
416 State St., New Britain, Connecticut 06050-2600 (203) 229-0261
Drawn by: SM Scale: NO SCALE

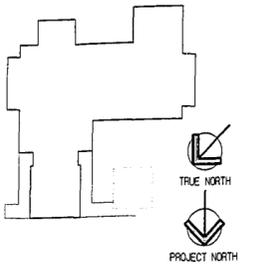
TYPICAL DETAILS II

Project no. 96077 Drawing no. 1157-26

Date MARCH 23, 1998

TECH 510.1

513

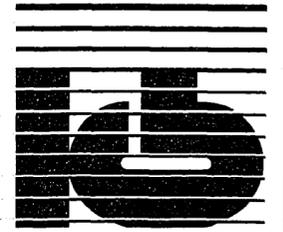


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WESTFORD POLICE FACILITY
53 MAIN STREET
WESTFORD
MASSACHUSETTS
01886



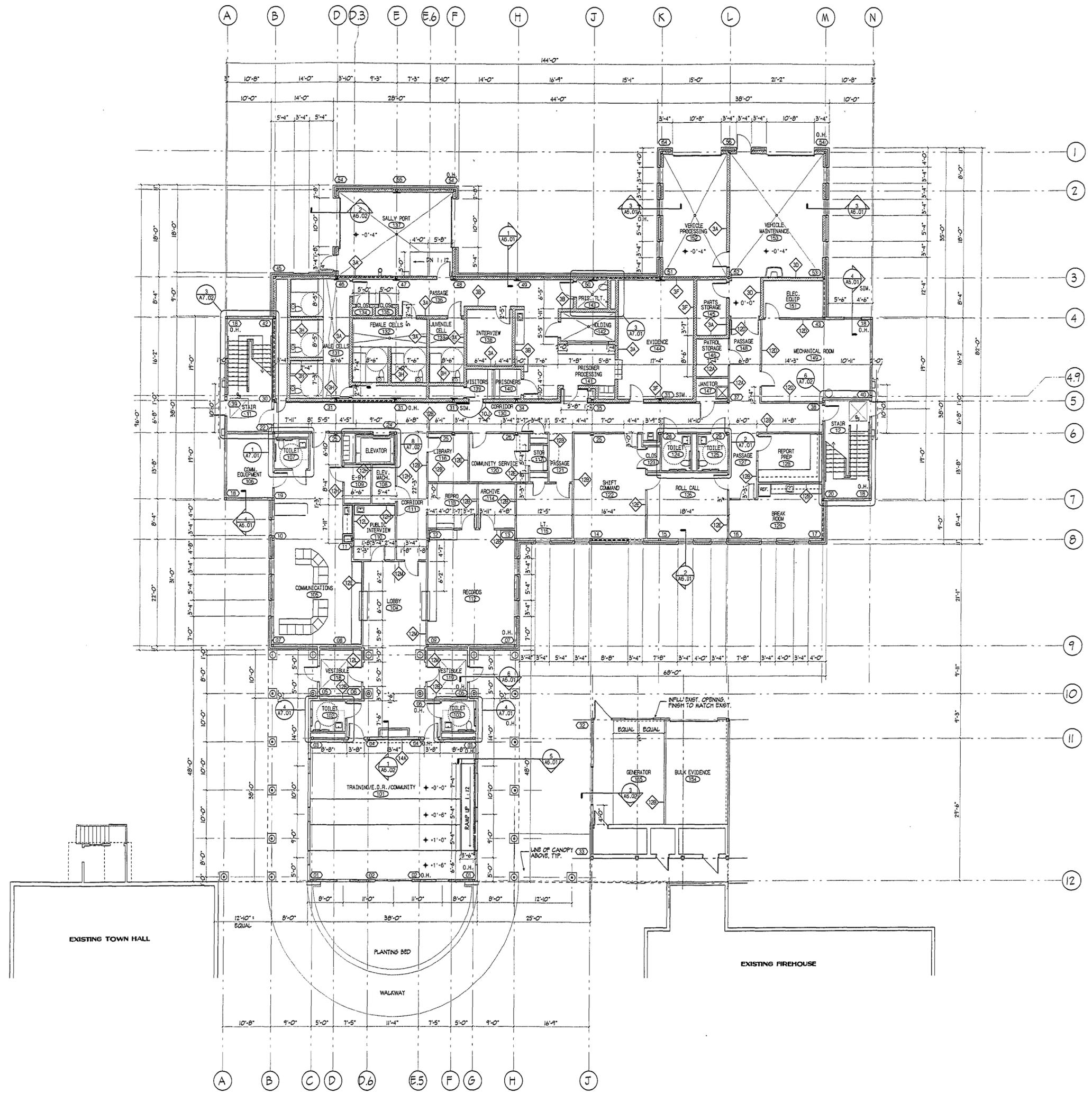
KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

46 Slater Rd. New Britain, Connecticut 06050-2560 B501 229-0361
Drawn by: SDEWEY Scale: 1/8" = 1'-0"

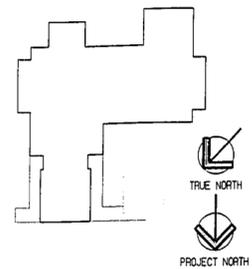
MAIN LEVEL DIMENSION FLOOR PLAN

Project no. 96077 Drawing no.

Date MARCH 23, 1998 **A1.01**



1450-27



REVISIONS		
DATE	MARK	DESCRIPTION
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FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS R.O.01 & R.O.02



WESTFORD POLICE FACILITY

53 MAIN STREET
WESTFORD
MASSACHUSETTS
01886

DATE: 6/25/98

PROJECT NO: 96077

DRAWN BY: R.M.K. / S.DENNEY

SCALE: 1/8" = 1'-0"

CHECKED BY: R.M.K.

DATE: 6/25/98

PROJECT NO: 96077

DRAWN BY: R.M.K. / S.DENNEY

SCALE: 1/8" = 1'-0"

CHECKED BY: R.M.K.

DATE: 6/25/98

PROJECT NO: 96077

DRAWN BY: R.M.K. / S.DENNEY

SCALE: 1/8" = 1'-0"

CHECKED BY: R.M.K.

DATE: 6/25/98

PROJECT NO: 96077

DRAWN BY: R.M.K. / S.DENNEY

SCALE: 1/8" = 1'-0"

CHECKED BY: R.M.K.

DATE: 6/25/98

PROJECT NO: 96077

DRAWN BY: R.M.K. / S.DENNEY

SCALE: 1/8" = 1'-0"

CHECKED BY: R.M.K.

DATE: 6/25/98

PROJECT NO: 96077

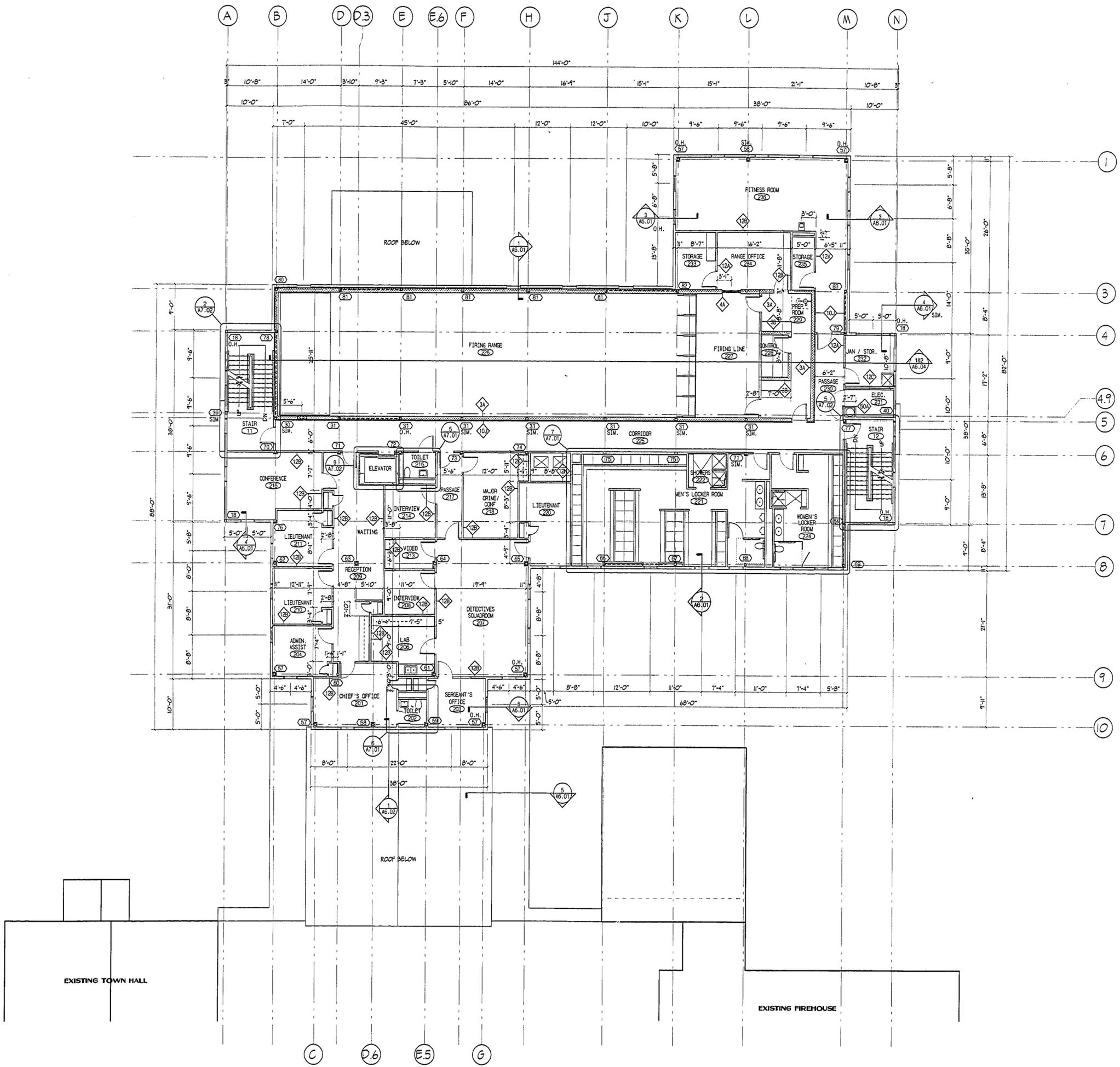
DRAWN BY: R.M.K. / S.DENNEY

SCALE: 1/8" = 1'-0"

CHECKED BY: R.M.K.

DATE: 6/25/98

PROJECT NO: 96077



EXISTING TOWN HALL

EXISTING FIREHOUSE

KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

46 Slater Rd. New Britain, Connecticut 06050-2500 (860) 223-0381

Drawn by: R.M.K. / S.DENNEY Scale: 1/8" = 1'-0"

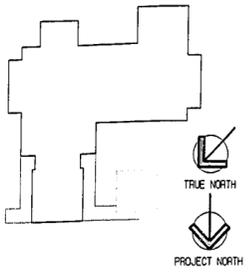
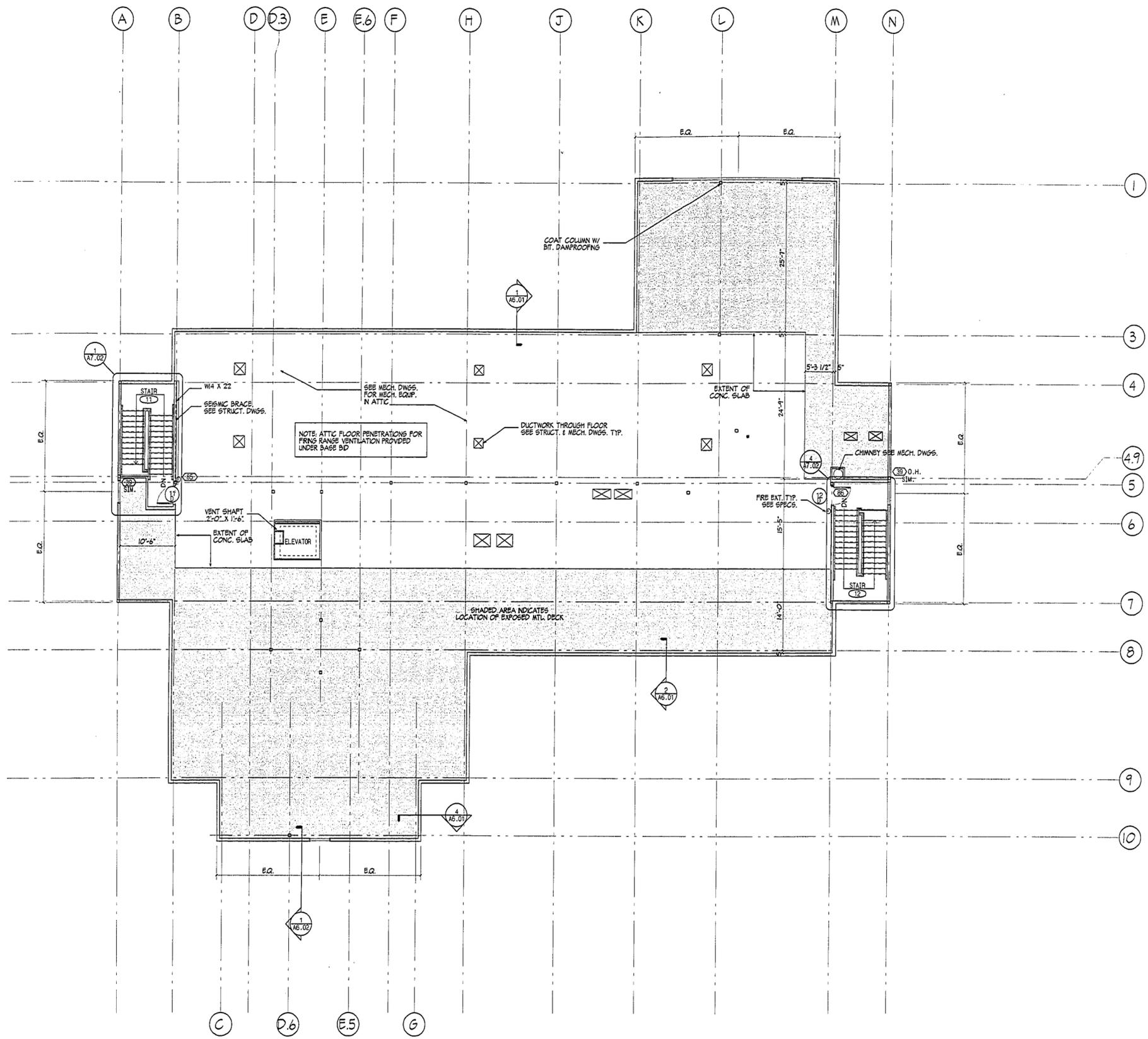
UPPER LEVEL DIMENSION FLOOR PLAN

Project no. 96077 Drawing no.

Date: MARCH 23, 1998

A1.02

1458-28



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MASSACHUSETTS
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ARCHITECTS

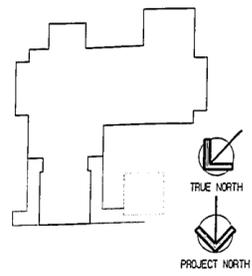
416 Sitter Rd. New Britain, Connecticut 06050-2590 860 229-0361
Drawn by: RMC / SDEWEY Scale: 1/8" = 1'-0"

**ATTIC
DIMENSION
& REFERENCE
FLOOR
PLAN**

Project no. 96077 Drawing no.

Date MARCH 23, 1998 **A1.03**

1450-29



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WESTFORD POLICE FACILITY
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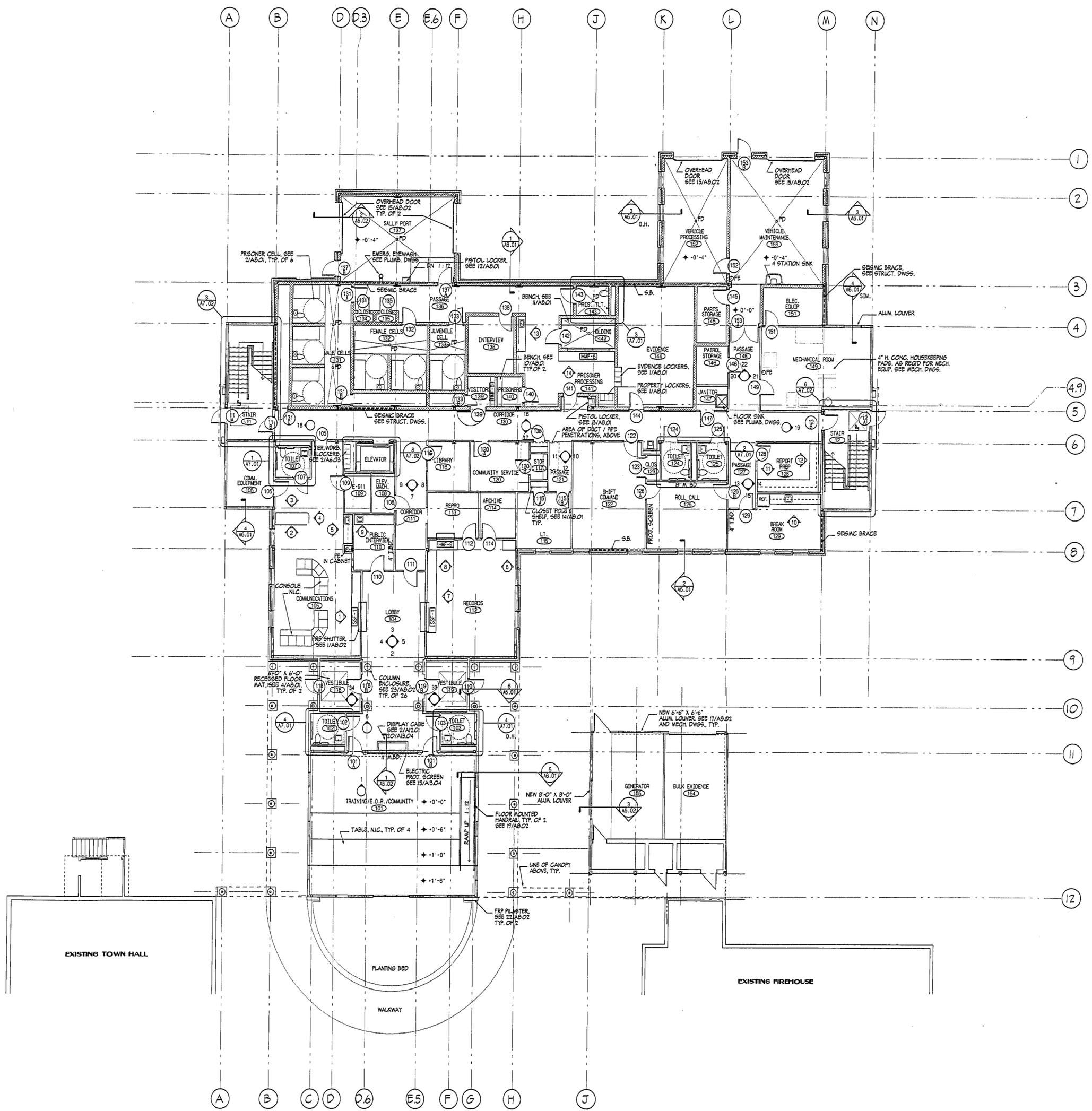
KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

415 Slater Rd., New Britain, Connecticut 06050-2590 860 229-0301
 Drawn by: SDBW/ST Scale: 1/8" = 1'-0"

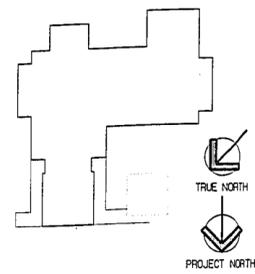
MAIN LEVEL REFERENCE FLOOR PLAN

Project no. 96077 Drawing no.

Date: MARCH 23, 1998 **A2.01**



1450-50



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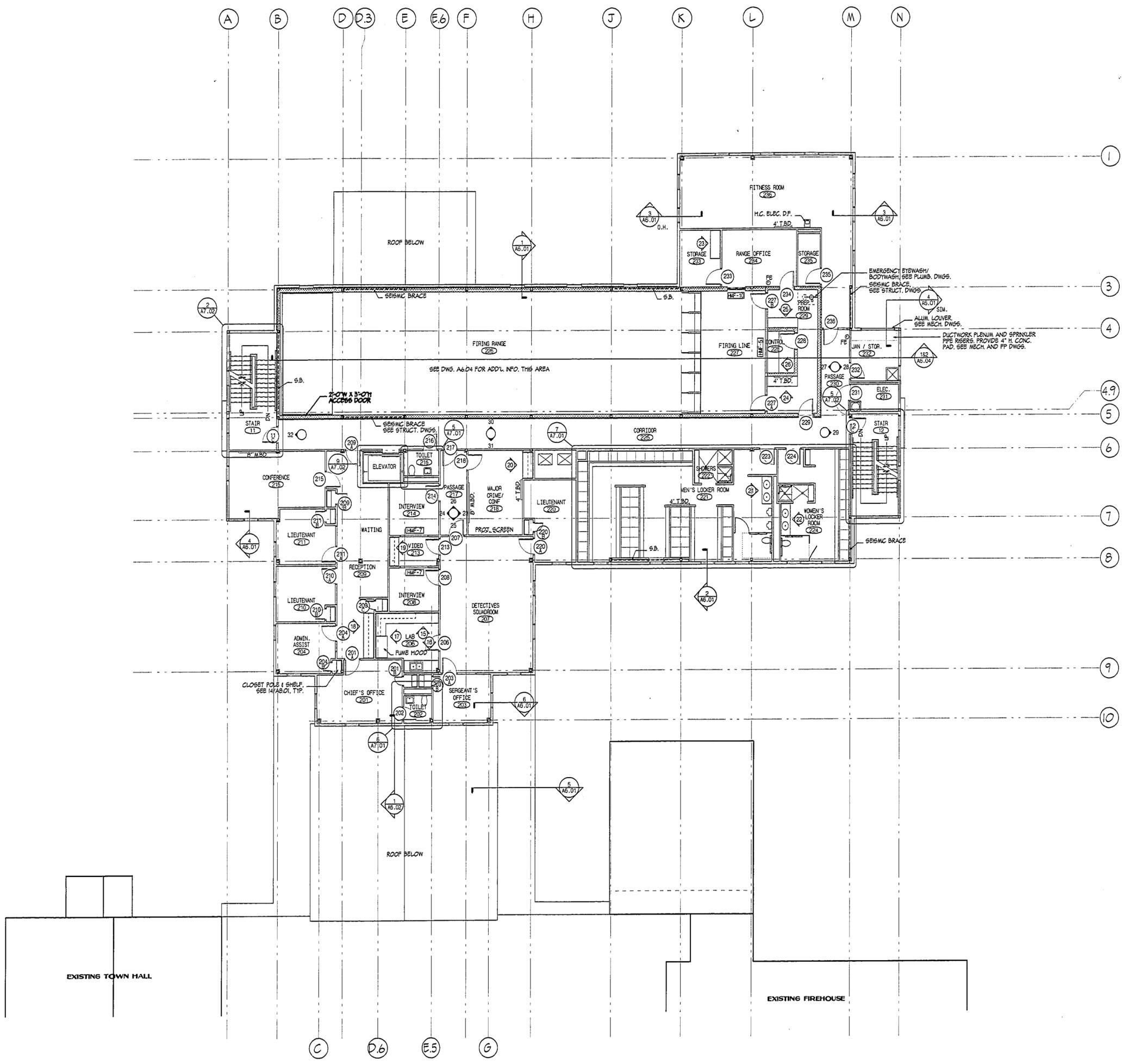
KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

416 Slater Rd. New Britain, Connecticut 06050-2590 (860) 229-0001
Drawn by: SODEMEY Scale: 1/8" = 1'-0"

UPPER LEVEL REFERENCE FLOOR PLAN

Project no. 16077 Drawing no.

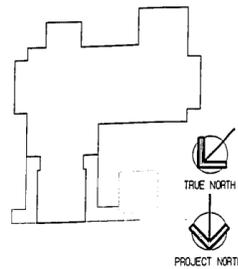
Date MARCH 23, 1998 **A2.02**



EXISTING TOWN HALL

EXISTING FIREHOUSE

1453-31



REVISIONS		
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KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

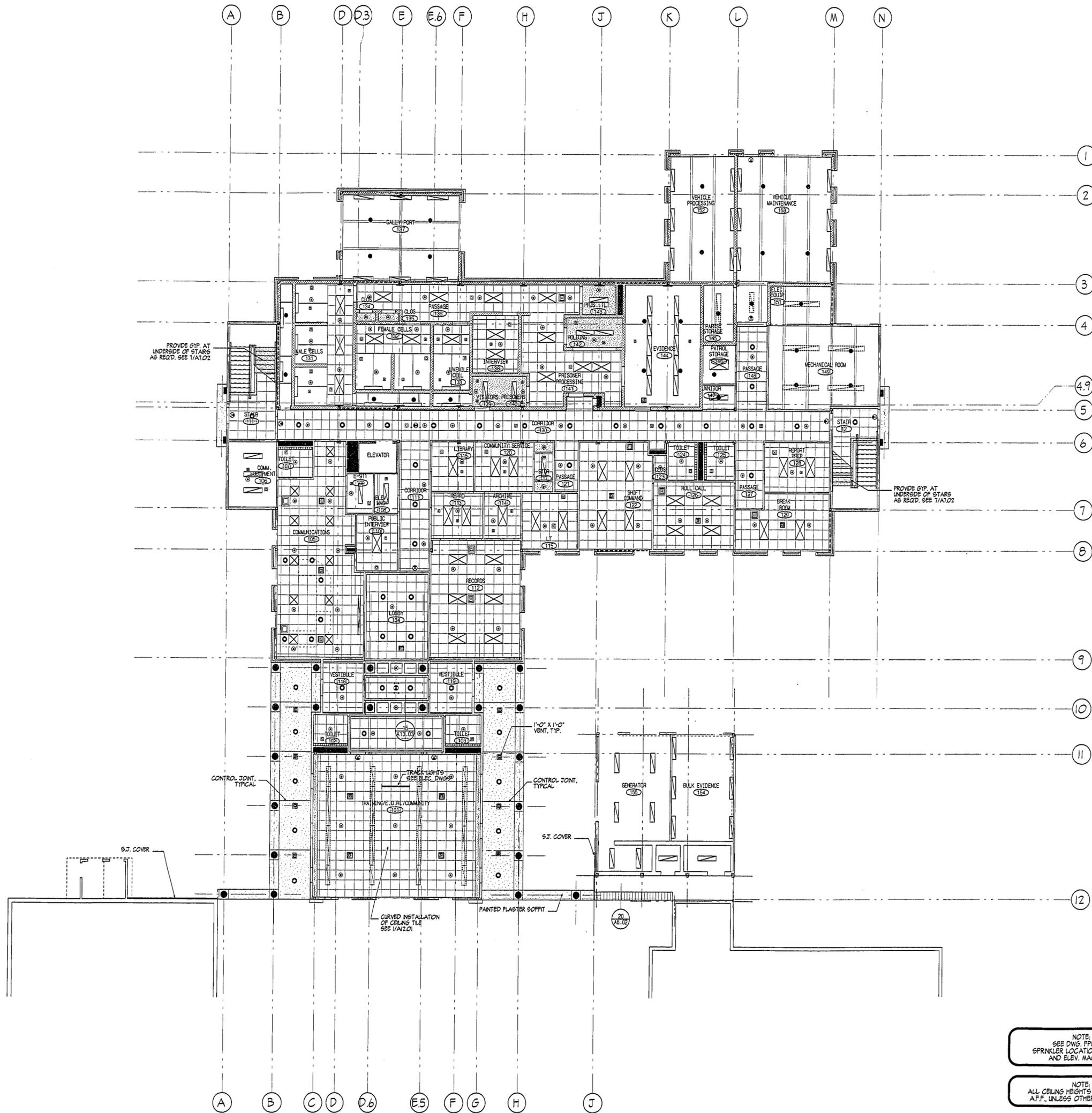
416 Slater Rd., New Britain, Connecticut 06105-2590 (860) 229-0081
Drawn by: SOE/MET Scale: 1/8" = 1'-0"

MAIN LEVEL REFLECTED CEILING PLAN

Project no. 96077 Drawing no.

Date MARCH 23, 1998

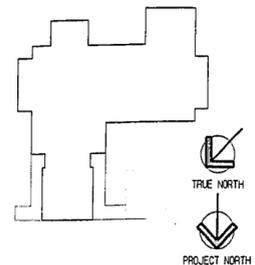
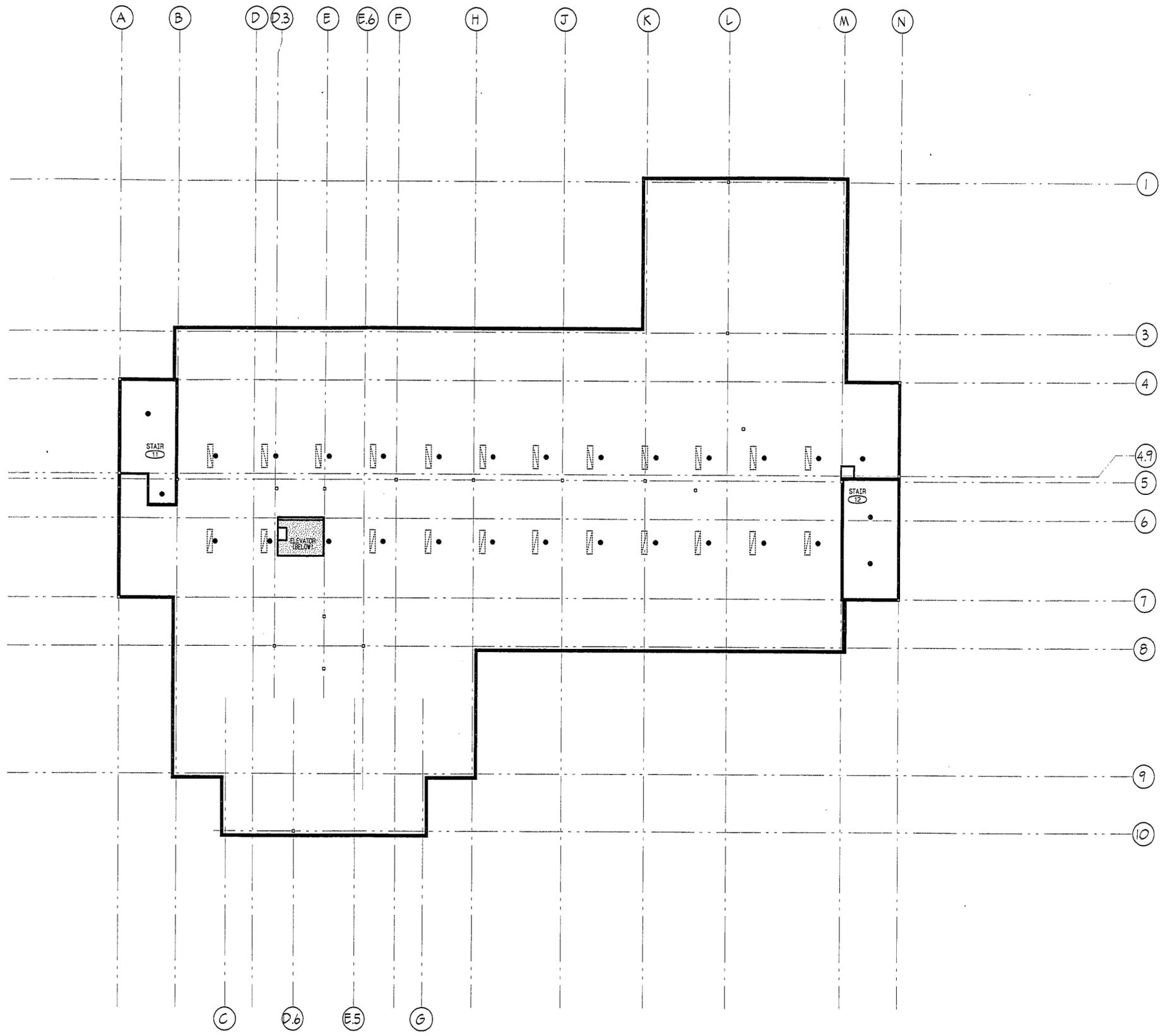
A3.01



NOTE:
SEE DWG. F.P.11 FOR
SPRINKLER LOCATIONS AT ELEV.
AND ELEV. MACH. 108

NOTE:
ALL CEILING HEIGHTS ARE AT 8'-0"
A.F.F., UNLESS OTHERWISE NOTED.

14650-302



REVISIONS		
DATE	MARK	DESCRIPTION
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MASSACHUSETTS
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**KAESTLE BOOS
ASSOCIATES, INC.
ARCHITECTS**

48 Slater Rd., New Britain, Connecticut 06050-2590 (860) 229-0301
Drawn by: SDBWBY Scale: 1/8" = 1'-0"

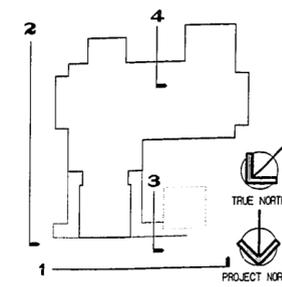
**ATTIC
REFLECTED
CEILING
PLAN**

Project no. 96077 Drawing no.

Date FEBRUARY 16, 1998 **A3.03**

NOTE: SEE DWG. FPI.03 FOR FULL EXTENT OF SPRINKLER LAYOUT

1450-34



REVISIONS		
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FACILITY**
53 MAIN STREET
WESTFORD
MASSACHUSETTS
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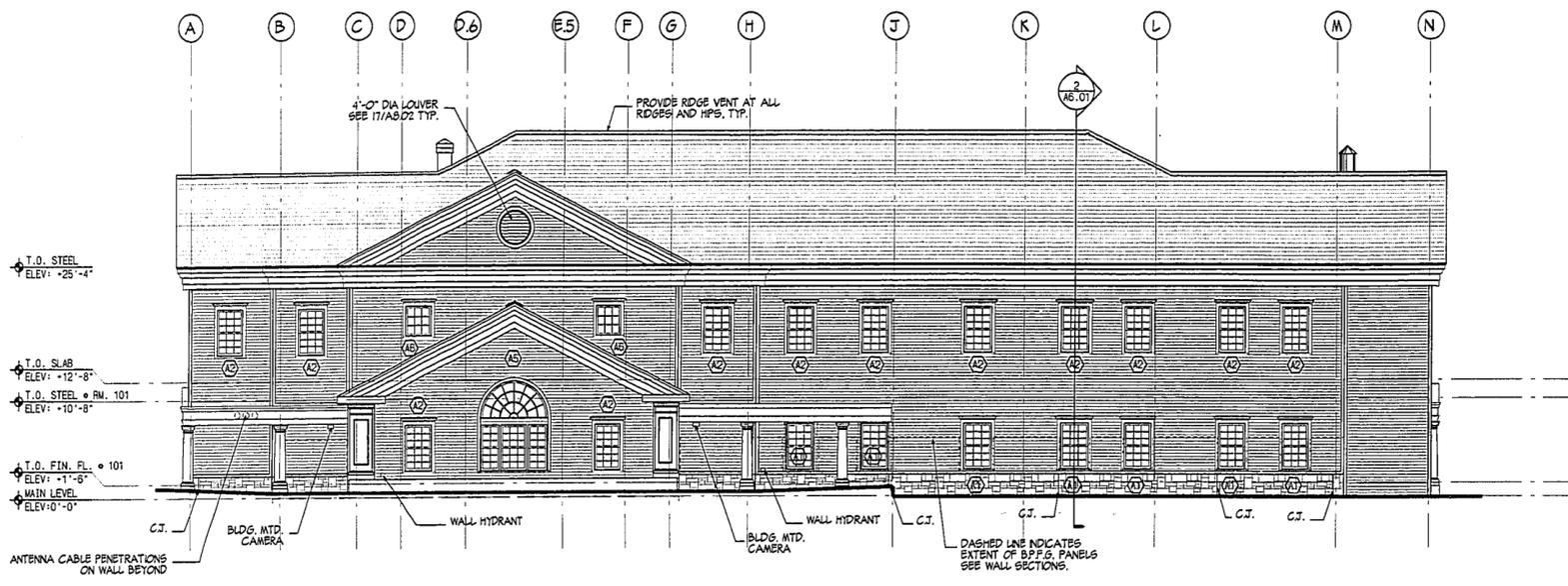
**KAESTLE BOOS
ASSOCIATES, INC.
ARCHITECTS**

415 Slater Rd., New Britain, Connecticut 06050-2550 (860) 229-0261
Drawn by: RMK / JWC Scale: 1/8" = 1'-0"

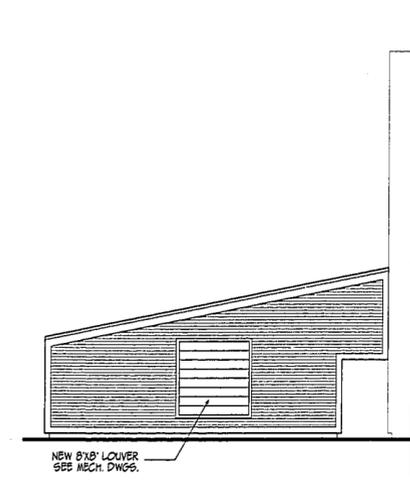
**EXTERIOR
ELEVATIONS**

Project no. 16077 Drawing no. _____
Date MARCH 23, 1998 **A4.01**

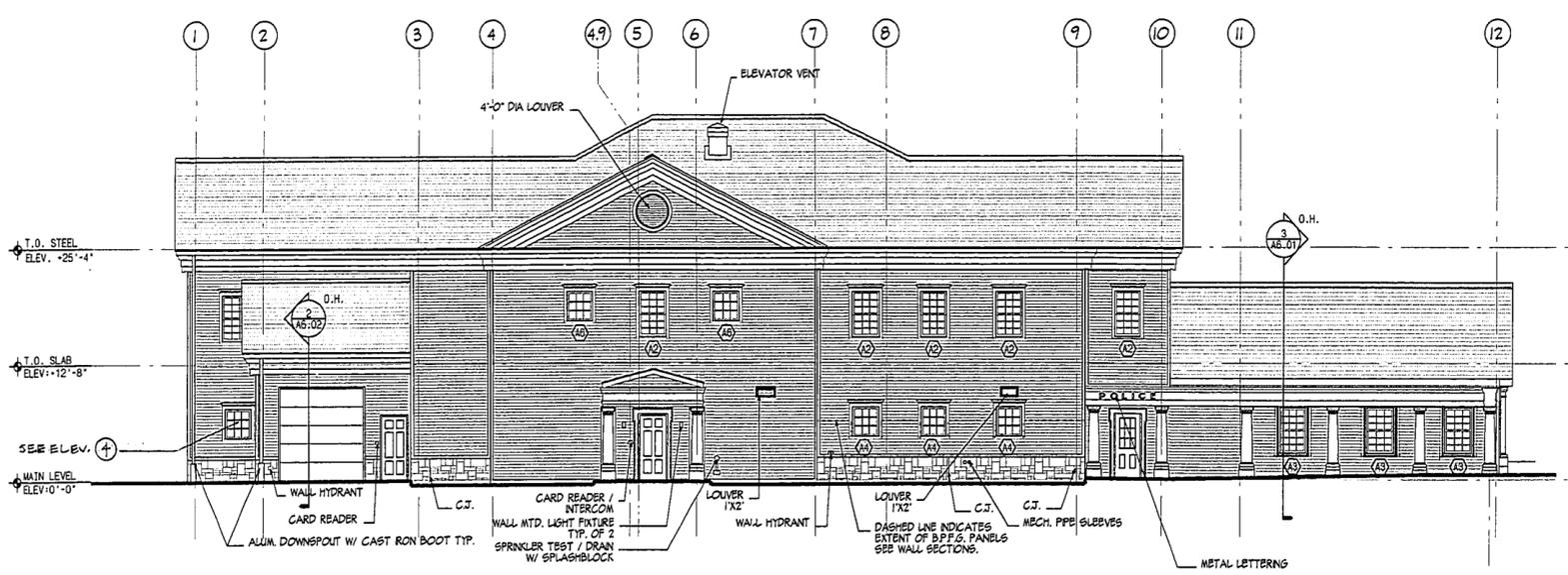
LEGEND	
	VINYL SIDING
	STONE MASONRY VENEER



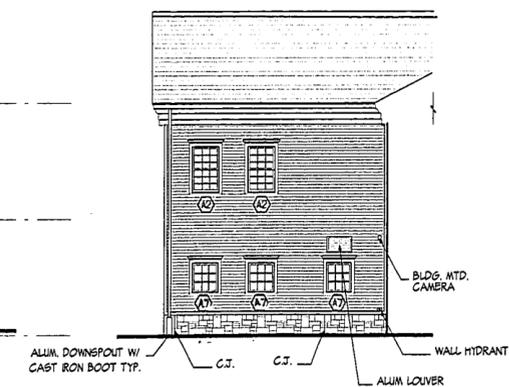
① NORTH ELEVATION [FRONT]



**③ PARTIAL
EAST ELEVATION**
© EXISTING STRUCTURE

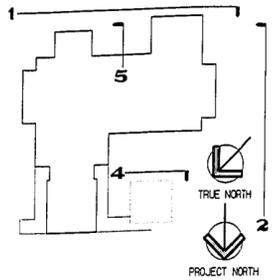


② EAST ELEVATION



**④ PARTIAL
EAST ELEVATION**

14-50-35



REVISIONS		
DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR RBD

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**WESTFORD
POLICE
FACILITY**
53 MAIN STREET
WESTFORD
MASSACHUSETTS
01886



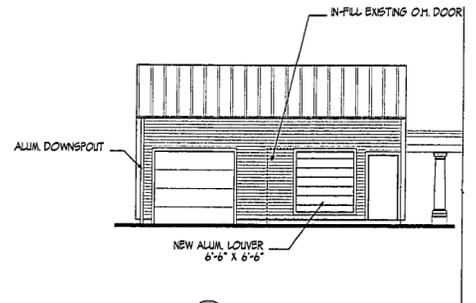
**KAESTLE BOOS
ASSOCIATES, INC.
ARCHITECTS**

418 Slater Rd., New Britain, Connecticut 06050-2590 (860) 229-0361
Drawn by: RMC / JWC Scale: 1/8" = 1'-0"

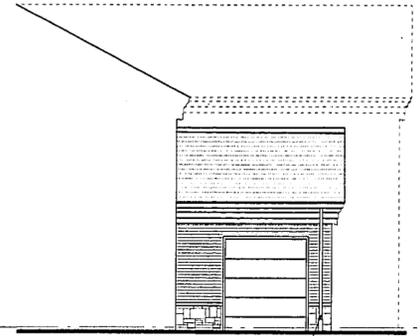
**EXTERIOR
ELEVATIONS**

Project no. 96077 Drawing no. _____
Date MARCH 23, 1998 **A4.02**

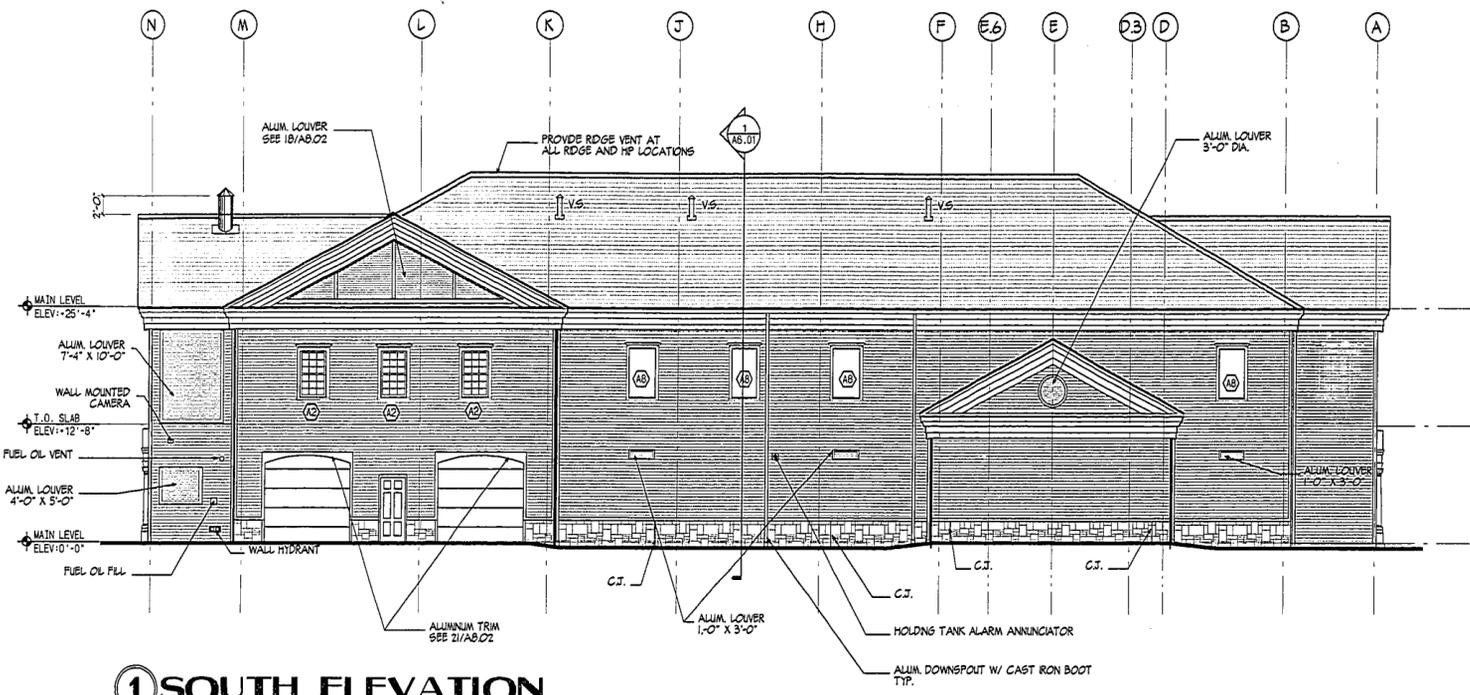
③ NOT USED



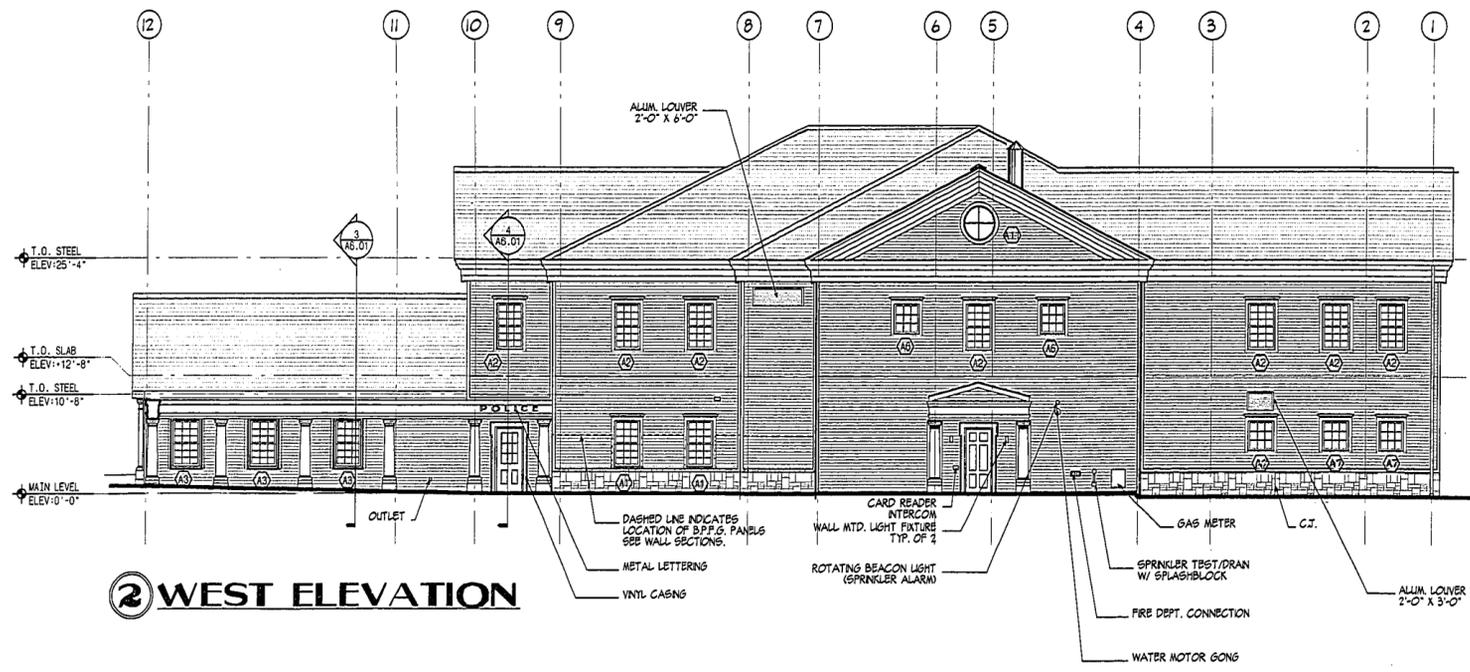
**④ PARTIAL
SOUTH ELEVATION**
⑥ EXISTING STRUCTURE



**⑤ PARTIAL
WEST ELEVATION**



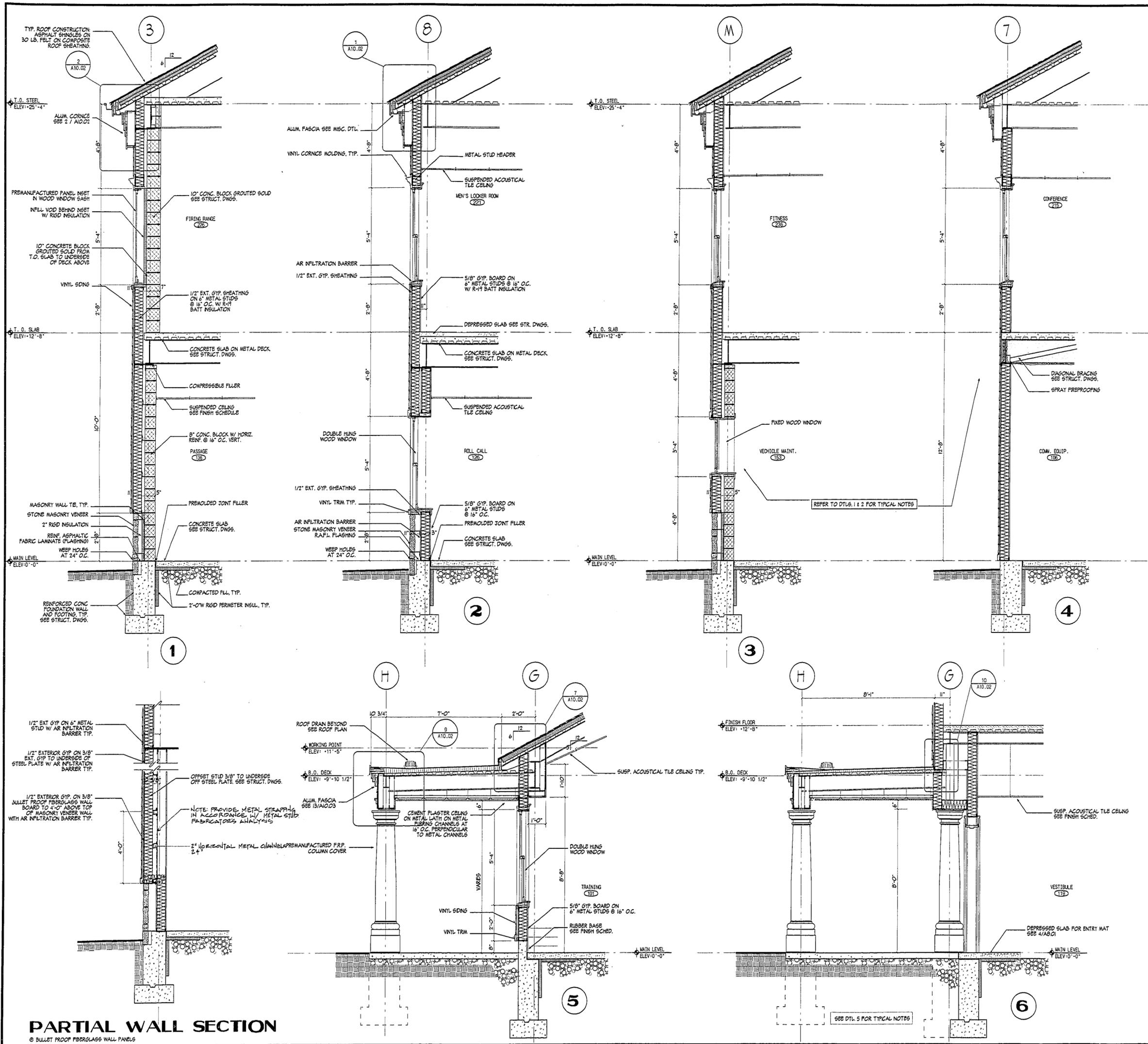
① SOUTH ELEVATION



② WEST ELEVATION

LEGEND	
	VINYL SIDING
	STONE MASONRY VENEER

1150-36



REVISIONS		
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KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

416 Slater Rd., New Britain, Connecticut 06050-2590 (860) 229-0361
 Drawn by: RMK / JWC Scale: 1/2" = 1'-0"

WALL SECTIONS I

Project no. 16077 Drawing no. **A6.01**
 Date MARCH 23, 1998

PARTIAL WALL SECTION
 © BULLET PROOF FIBERGLASS WALL PANELS

15-0671

REVISIONS		
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WESTFORD POLICE FACILITY
 53 MAIN STREET
 WESTFORD MASSACHUSETTS 01886



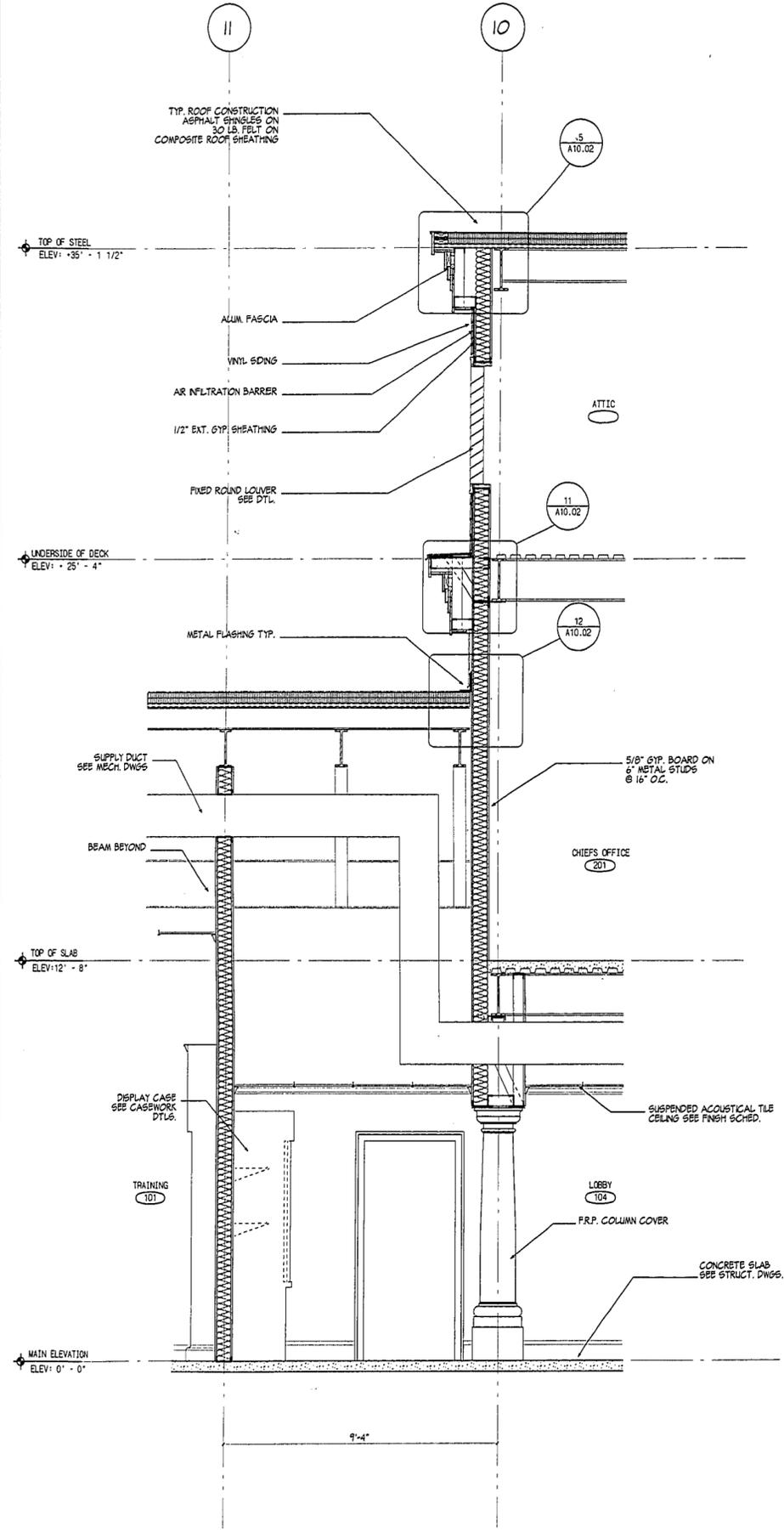
KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

416 Slater Rd. New Britain, Connecticut 06050-2590 860.229-0351
 Drawn by: JWG Scale: 1/2" = 1'-0"

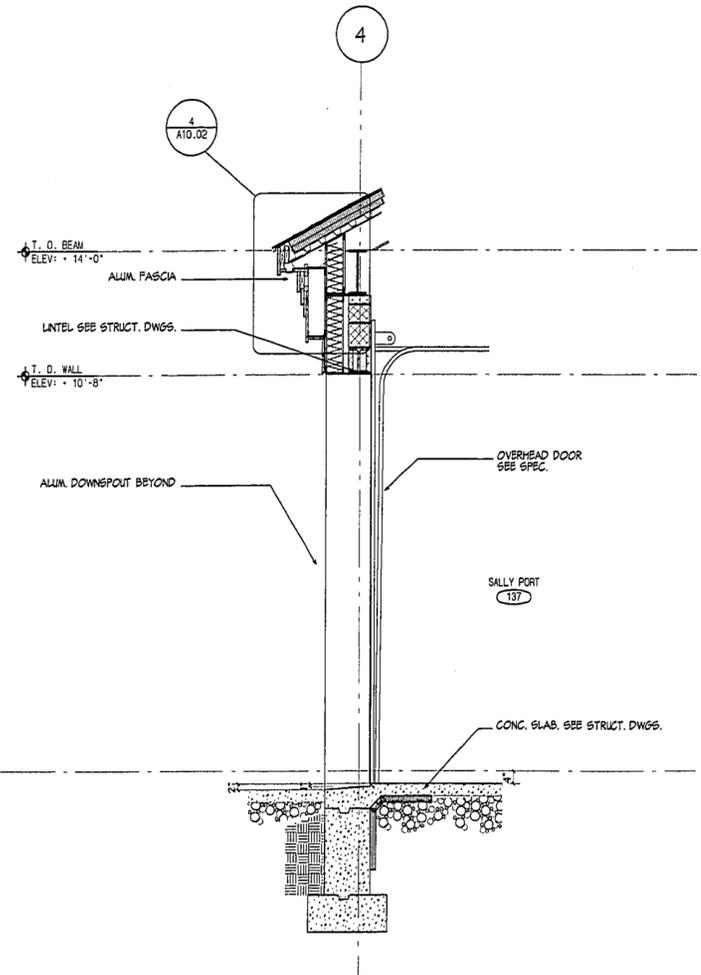
WALL SECTIONS II

Project no. 96077 Drawing no.

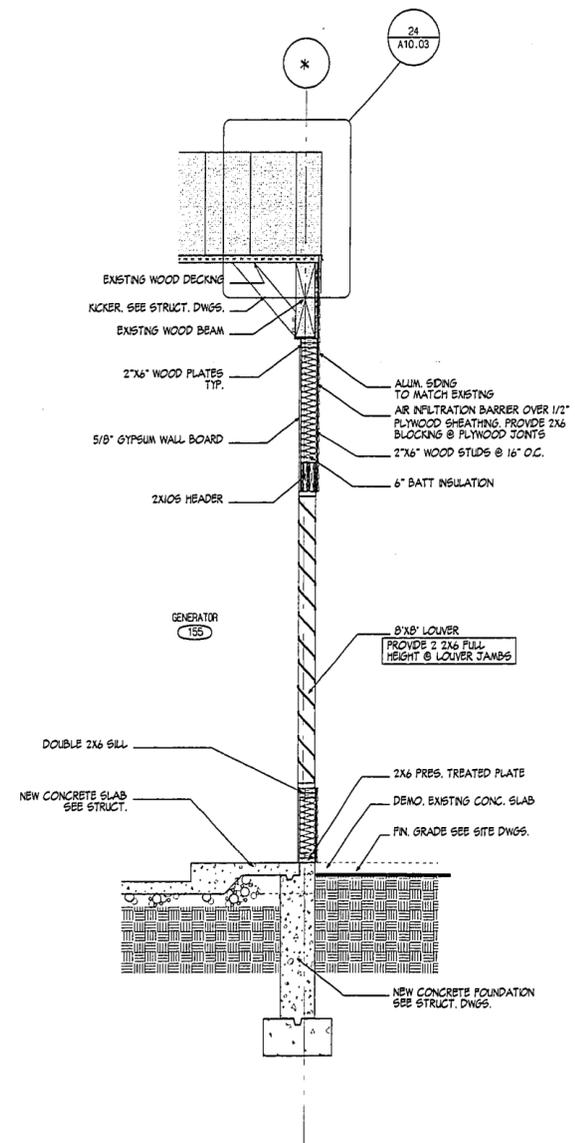
Date MARCH 23, 1998 **A6.02**



1

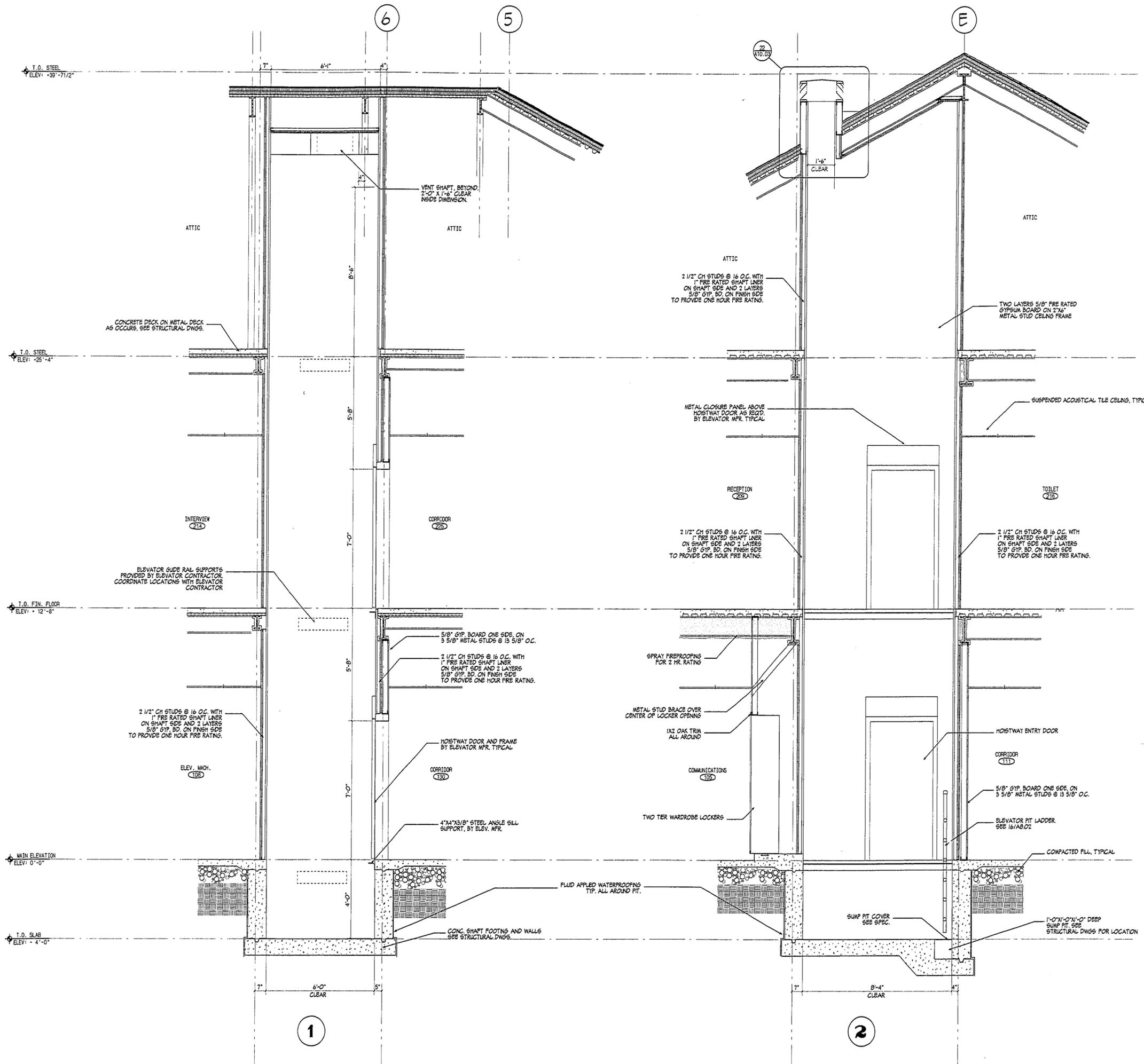


2



3

1450-35



REVISIONS		
DATE	MARK	DESCRIPTION
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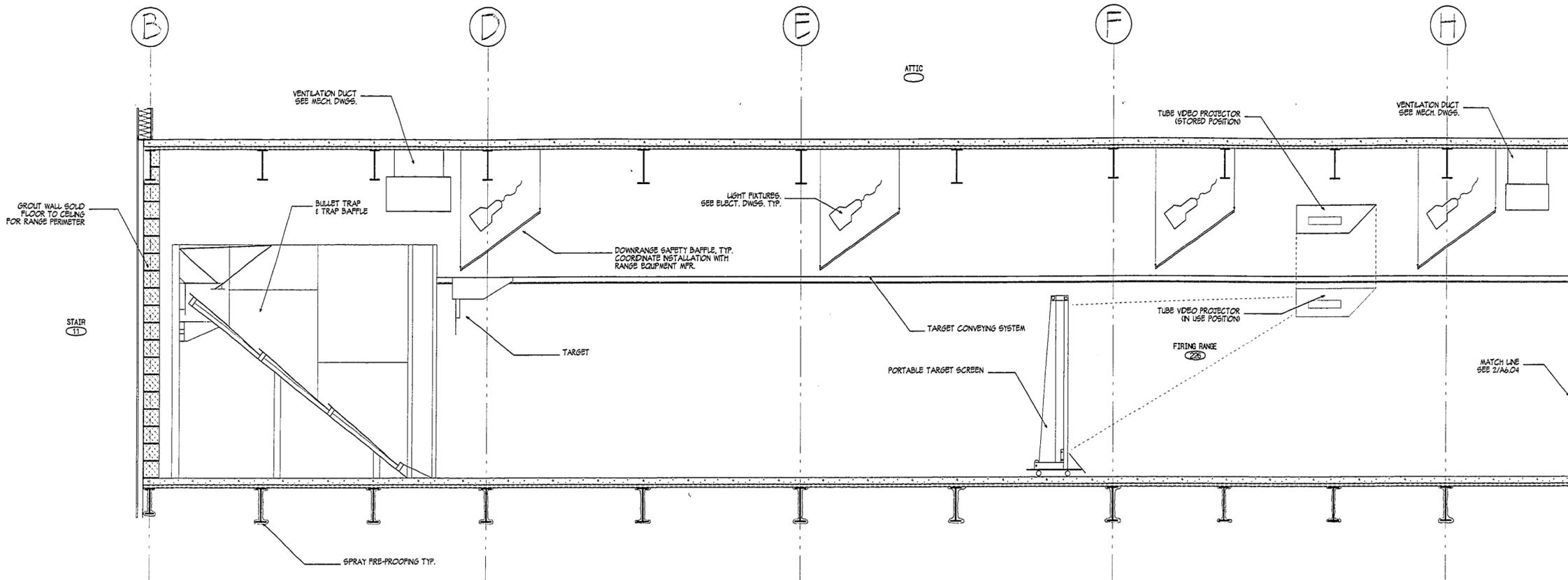
415 Slater Rd. New Britain, Connecticut 06050-2590 B501 229-0351
Drawn by JW7 / 60EWEY Scale: 1/2" = 1'-0"

**WALL
SECTIONS
III**

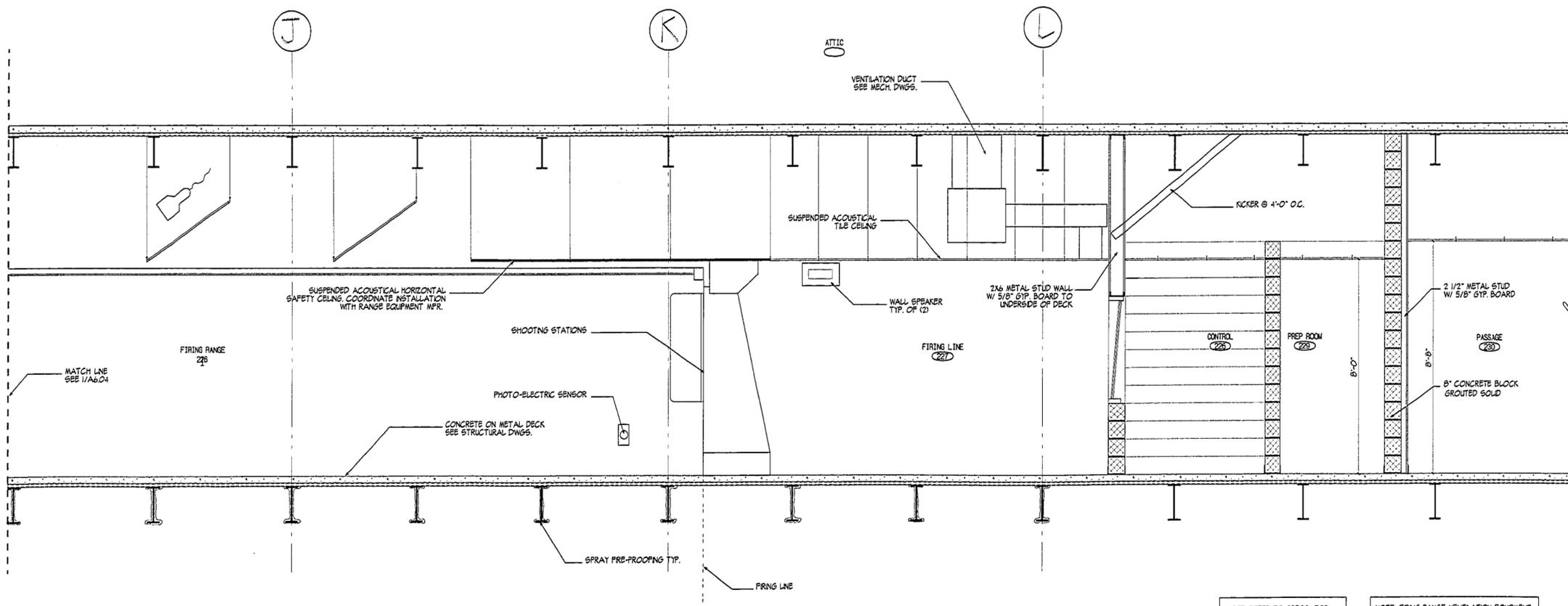
Project no. 96077 Drawing no.

Date: MARCH 23, 1998 **A6.03**

1450-39



1 FIRING RANGE



2 FIRING LINE

NOTE: REFER TO SPECS. FOR INFO ON RANGE EQUIPMENT INCLUDING REQD. POWER SUPPLY & POWER SUPPLY LAYOUT, REQD. LIGHTING & LIGHTING LAYOUT.

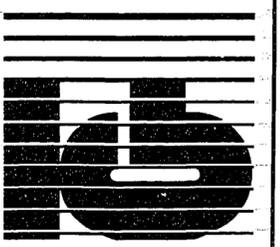
NOTE: FIRING RANGE VENTILATION EQUIPMENT TO BE PROVIDED BY ALTERNATE NO. 1. FIRING RANGE EQUIPMENT TO BE PROVIDED UNDER ALTERNATE NO. 4.

DATE	MARK	REVISIONS	DESCRIPTION
6/25/98			ISSUED FOR RBD

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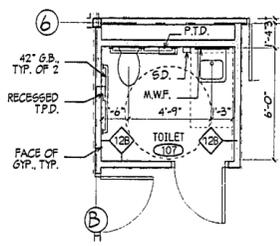
416 Slater Rd., New Britain, Connecticut 06050-2500 860 229-0361
 Drawn by: JWG Scale: 1/2" = 1'-0"

WALL SECTIONS IV

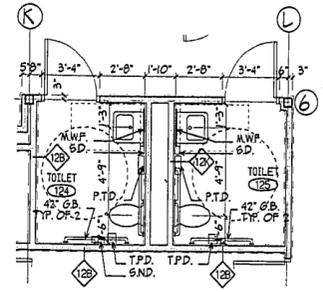
Project no. 96077 Drawing no.

Date MARCH 23, 1998 **A6.04**

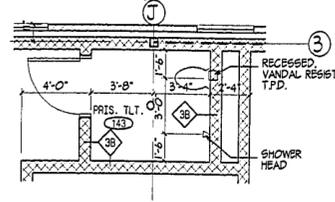
1450-490



1 TOILET 107



2 TOILET 124 & 125



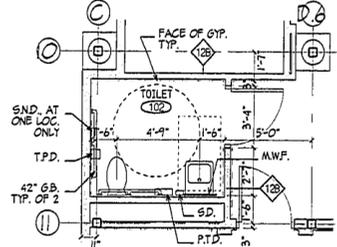
3 PRISONER TOILET 143

REVISIONS		
DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR REBO

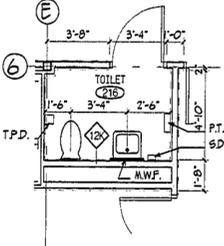
FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS R.O.01 & R.O.02



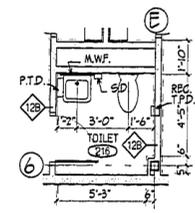
WESTFORD POLICE FACILITY
 53 MAIN STREET
 WESTFORD MASSACHUSETTS
 01886



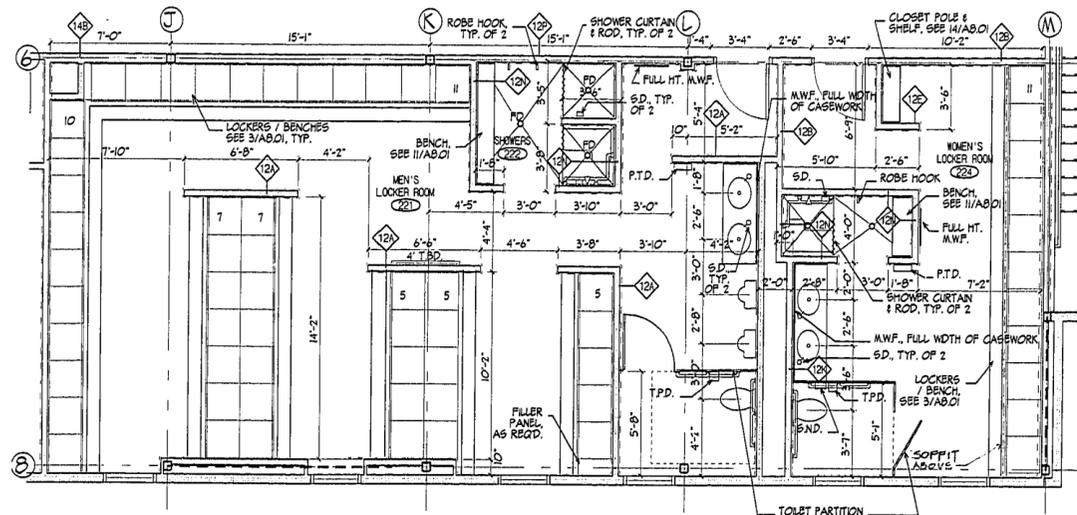
4 TOILET 102 & 103(O.H.)



5 TOILET 216



6 TOILET 202



**7 MEN'S LOCKER 221, SHOWER 222
 WOMEN'S LOCKER 224**



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

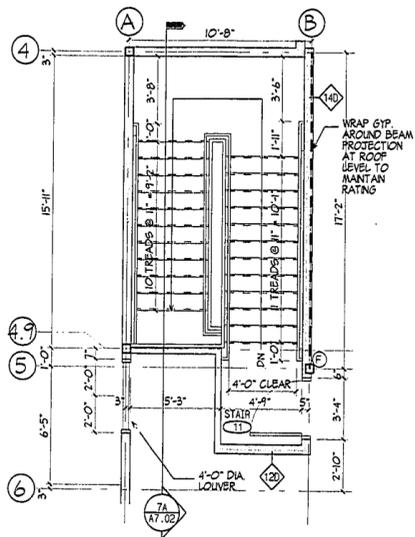
46 State Rd. New Britain, Connecticut 06050-2590 (860) 226-0361
 Drawn by: SDEWET Scale: 1/4" = 1'-0"

LARGE SCALE TOILET PLANS

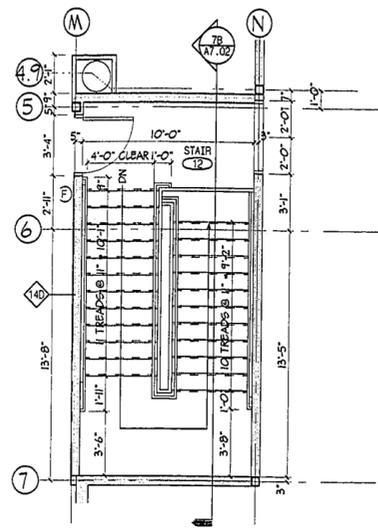
Project no. 960771 Drawing no.

Date: MARCH 23, 1998 **A7.01**

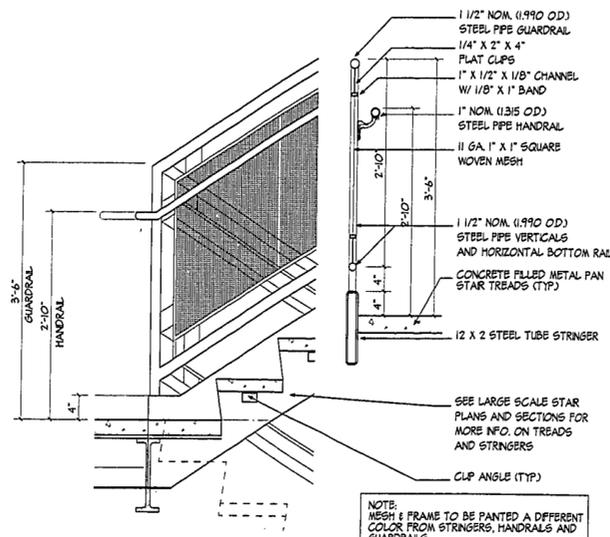
1450-41



1 ATTIC - STAIR 11

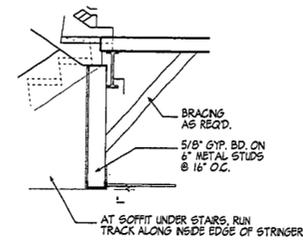


4 ATTIC - STAIR 12
SEE UPPER LEVEL PLAN FOR TYP. WALL TYPES



A HANDRAIL/GUARDRAIL

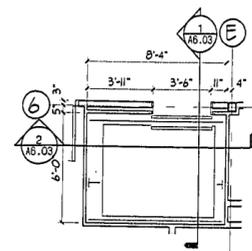
SCALE: 1/4" = 1'-0"



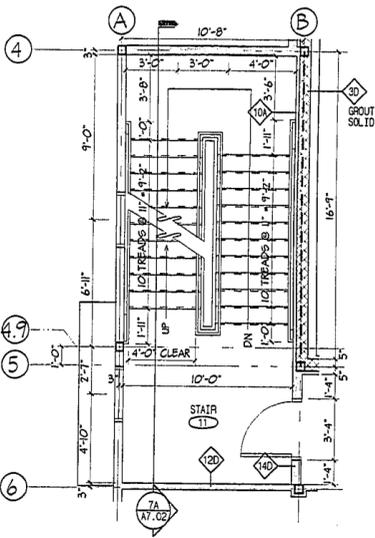
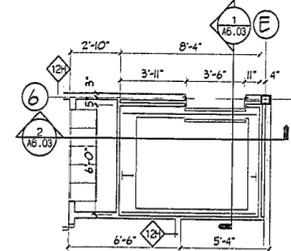
SOFFIT DETAIL

TYP. OF 4
SCALE: 1/2" = 1'-0"

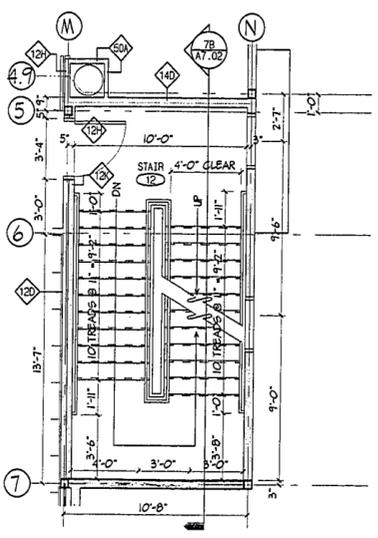
9 ELEVATOR PLAN
UPPER LEVEL



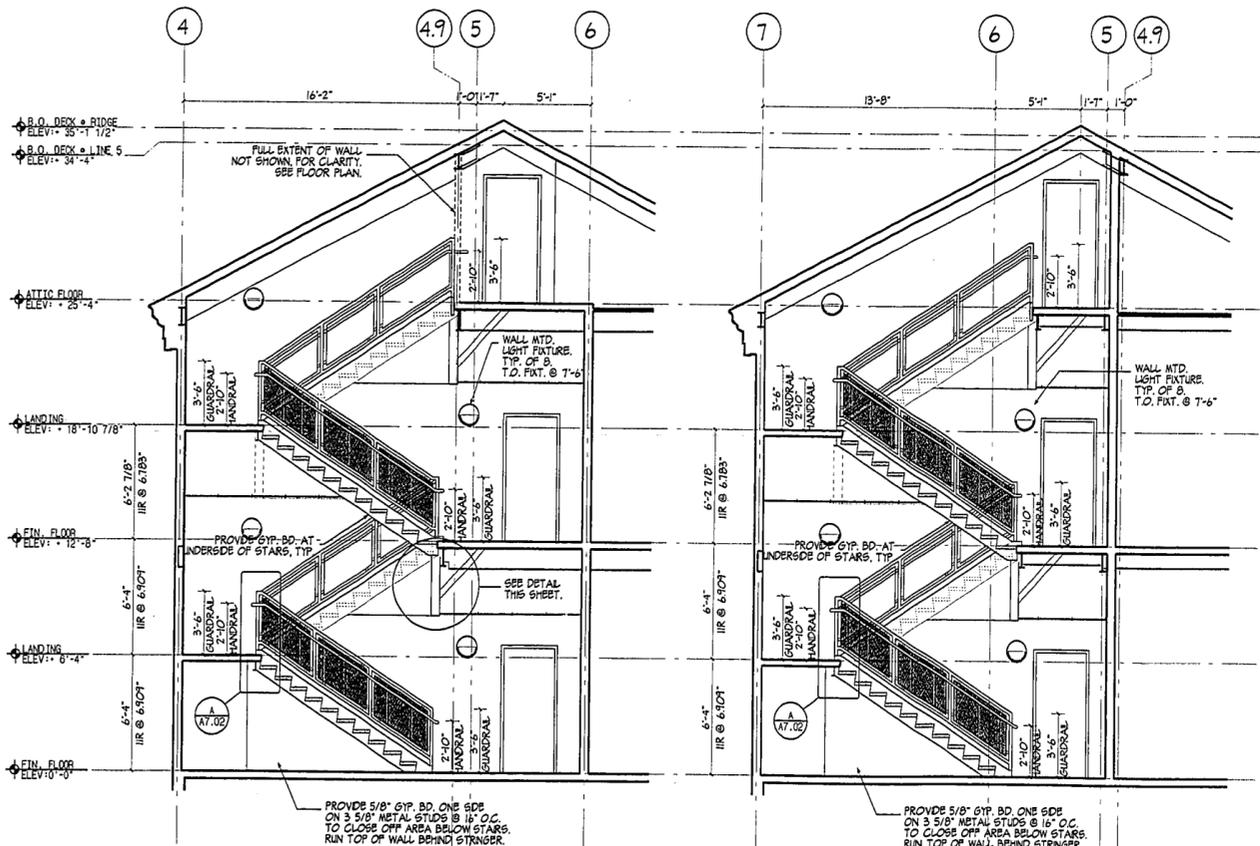
8 ELEVATOR PLAN
MAIN LEVEL



2 STAIR 11
UPPER LEVEL

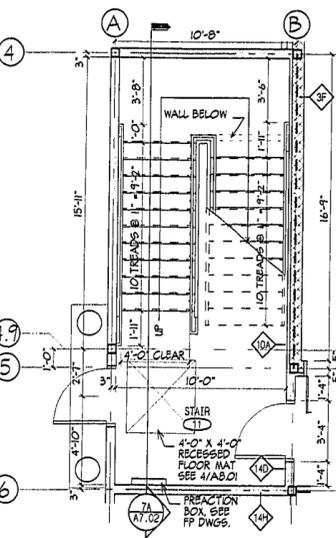


5 STAIR 12
UPPER LEVEL

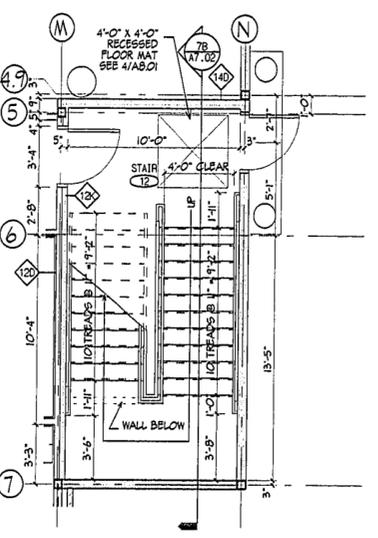


7a SECTION
STAIR 11

7b SECTION
STAIR 12



3 STAIR 11
MAIN LEVEL



6 STAIR 12
MAIN LEVEL

REVISIONS		
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FACILITY**

53 MAIN STREET
WESTFORD
MASSACHUSETTS
01886



**KAESTLE BOOS
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ARCHITECTS

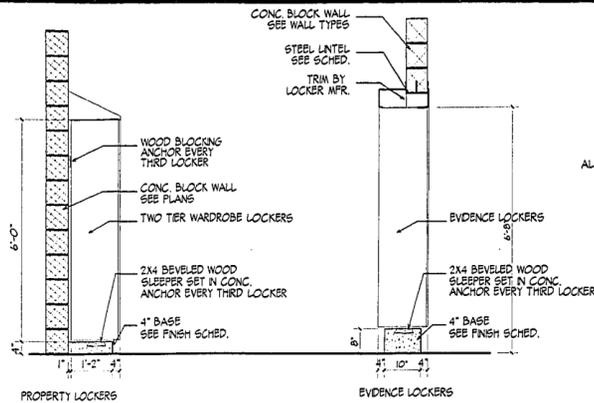
48 Slater Rd., New Britain, Connecticut 06050-2590 (860) 229-0361
Drawn by: SDP/WT Scale: 1/4" = 1'-0"

**LARGE
SCALE
STAIR
PLANS**

Project no. 16077 Drawing no.

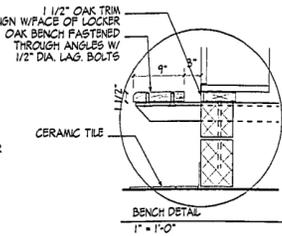
Date: MARCH 23, 1998 **A7.02**

1450-48



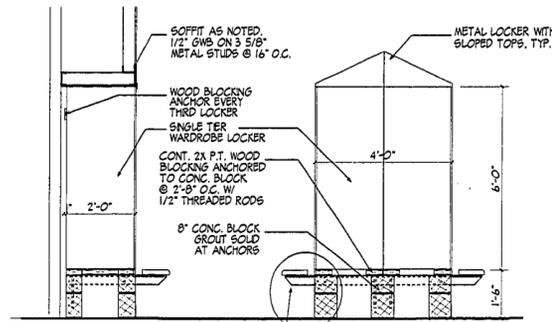
1 LOCKERS

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



3 LOCKER/BENCH

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

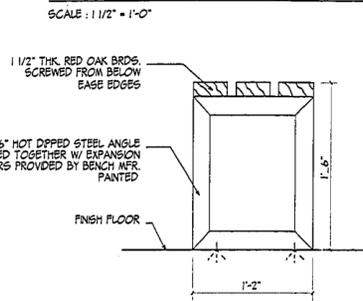
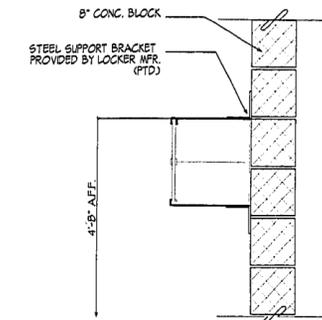


10 PRISONER/VISITOR STOOL

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

12 PISTOL LOCKER @ SALLY PORT

SCALE: 1" = 1'-0"

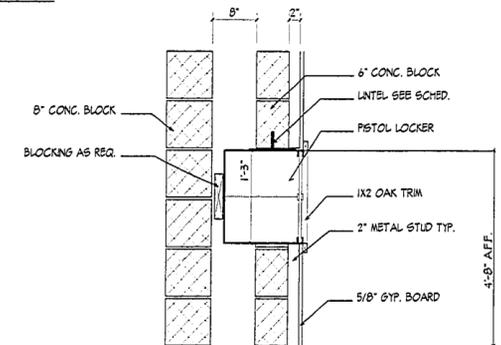


11 BENCH

SCALE: 1 1/2" = 1'-0" HOLDING ROOM AND SHOWERS

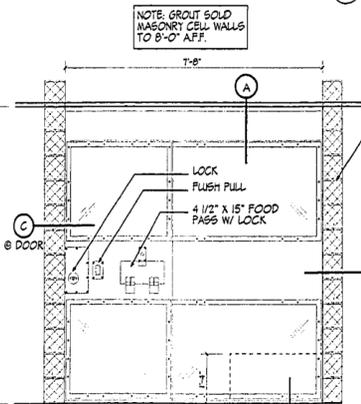
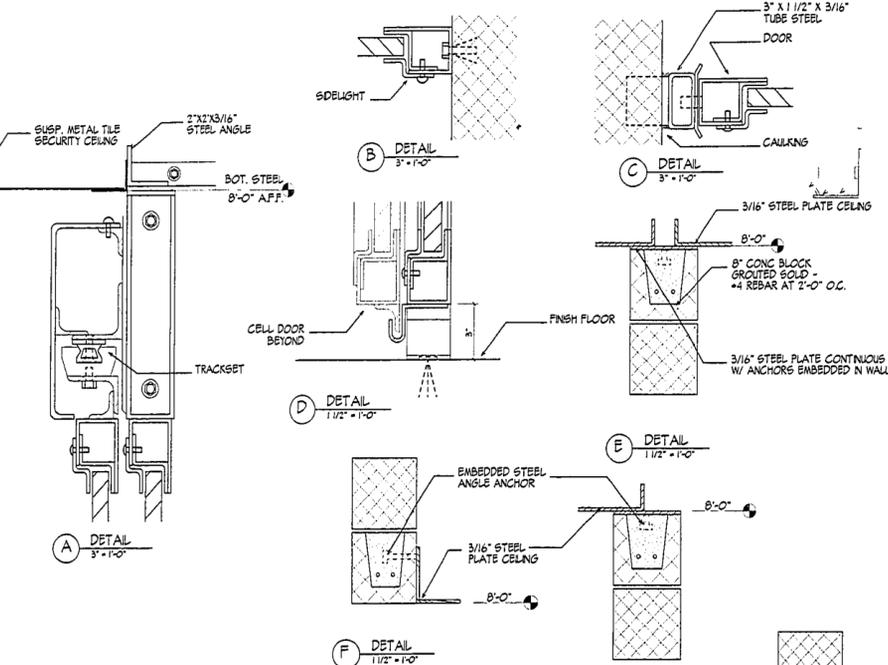
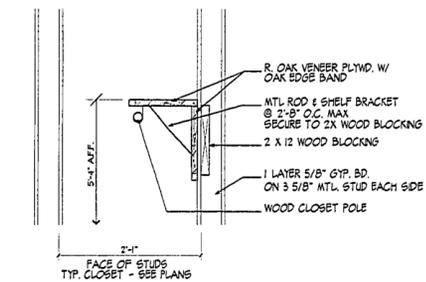
13 PISTOL LOCKER

SCALE: 1" = 1'-0"

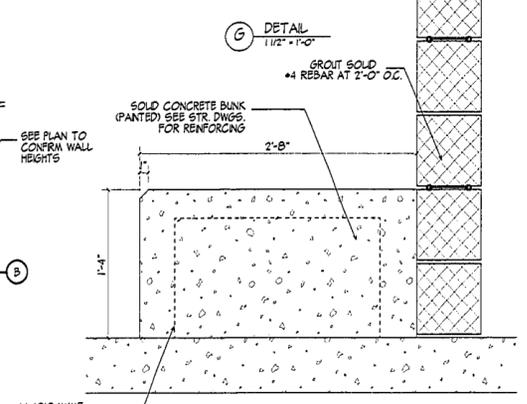


14 CLOSET POLE & SHELF

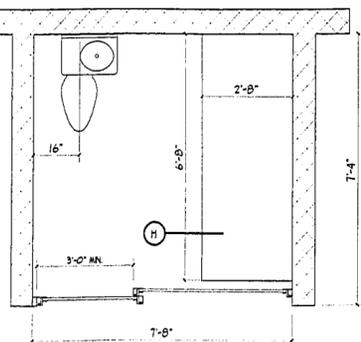
SCALE: 1" = 1'-0"



TYPICAL CELL ELEVATION



TYPICAL CELL REFLECTED CEILING PLAN



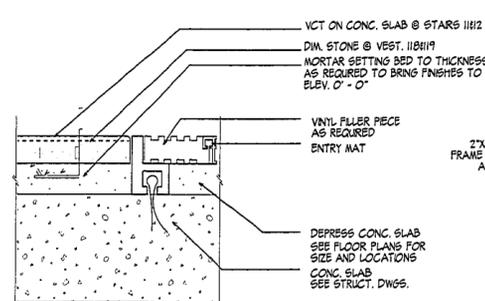
TYPICAL CELL PLAN

2 CELL DETAILS

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

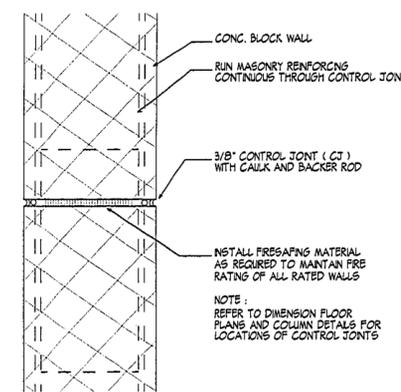
4 ENTRY MAT

NTS.



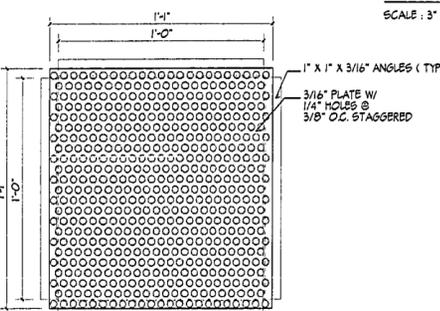
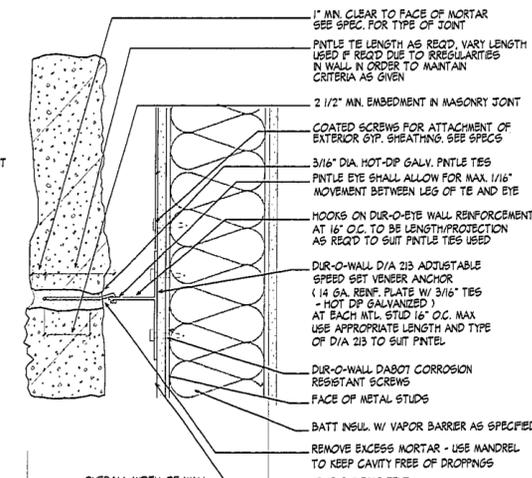
5 MASONRY C.J.

SCALE: 3" = 1'-0"



7 TYP. CAVITY WALL

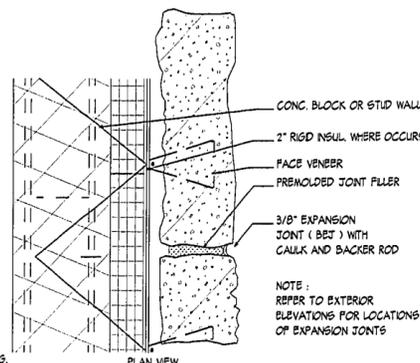
SCALE: 3" = 1'-0"



CELL VENT SECTION

6 CELL VENT

SCALE: 3" = 1'-0"

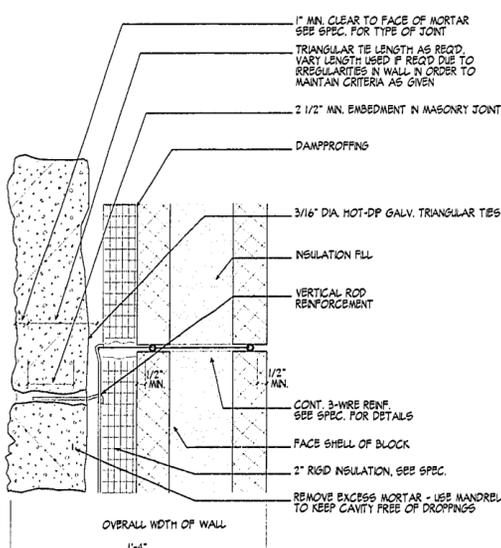


8 MASONRY CONTROL JOINT

SCALE: 3" = 1'-0"

9 TYP. CAVITY WALL

SCALE: 3" = 1'-0"



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416 Slater Rd., New Britain, Connecticut 06520-2590 860 229-0361
Drawn by: SDEW/JWT Scale: AS NOTED

MISC. DETAILS

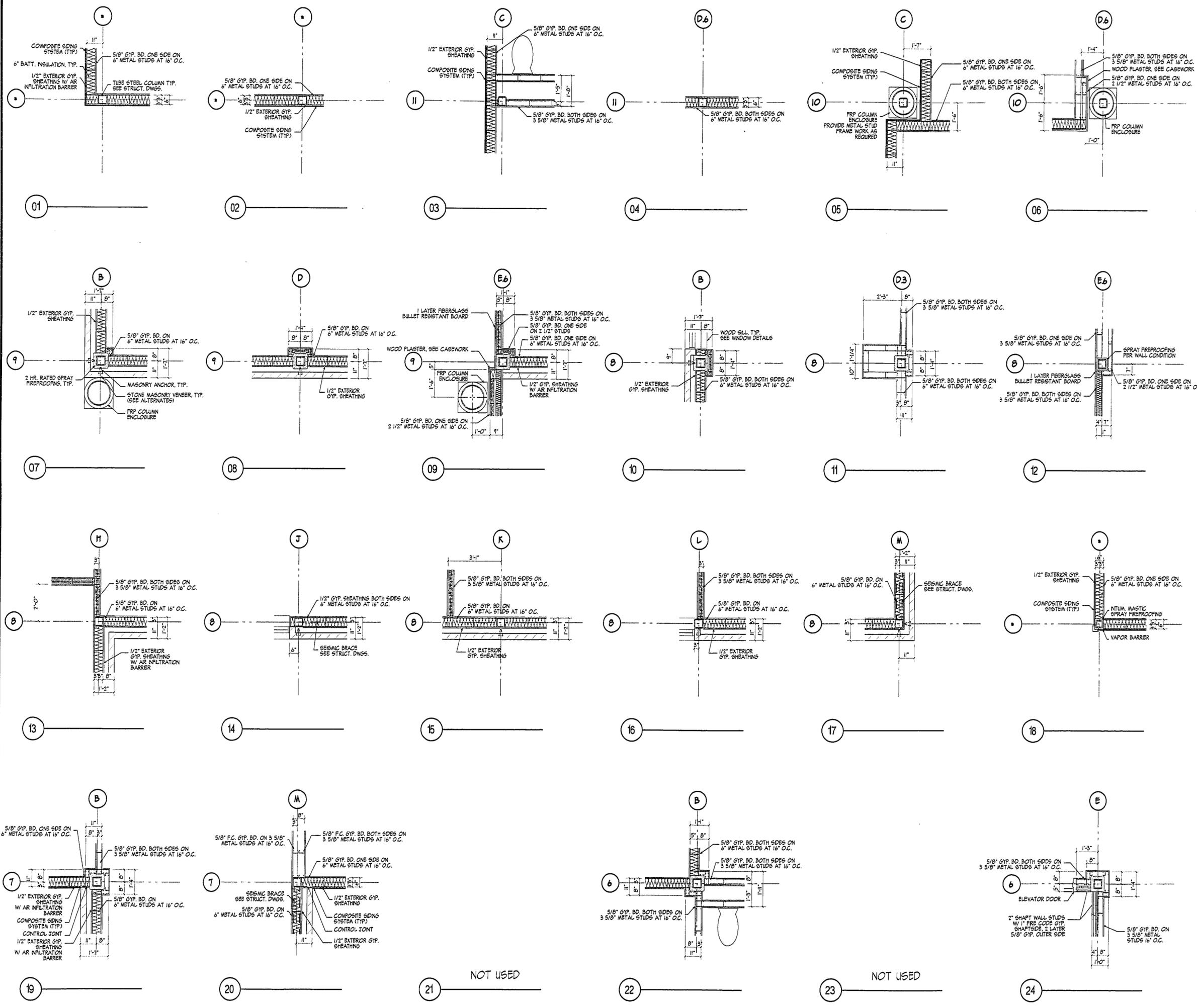
Project no. 96077

Drawing no.

Date: MARCH 23, 1998

11/07/98
18.01

NOTE:
1. SPRAY FIREPROOFING TO BE
CEMENTITIOUS TYPE UNLESS
NOTED OTHERWISE

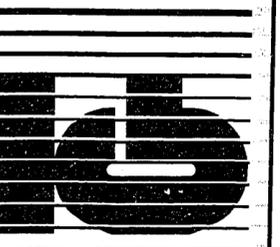


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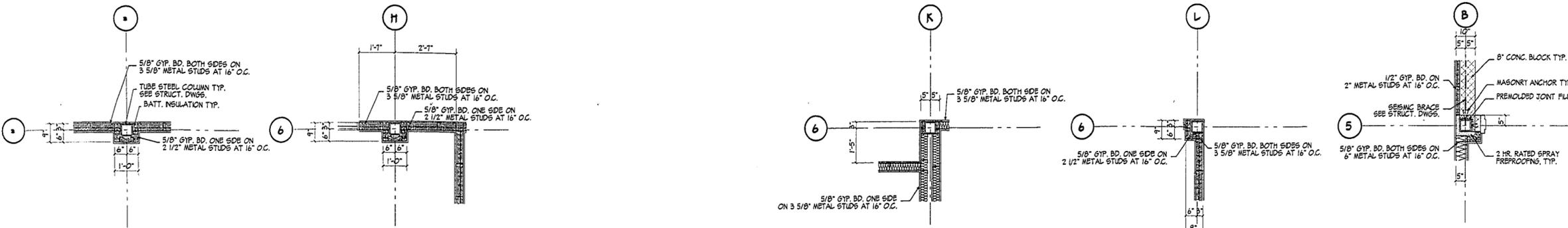
**KAESTLE BOOS
ASSOCIATES, INC.
ARCHITECTS**

46 Slater Rd., New Britain, Connecticut 06050-2500 BSO 229-0361
Drawn by: SDEWBY Scale: 1/2" = 1'-0"

**COLUMN
DETAILS
I
01-24**

Project no. 96077 Drawing no.
Date: MARCH 23, 1998 **A9.01**

54-0271



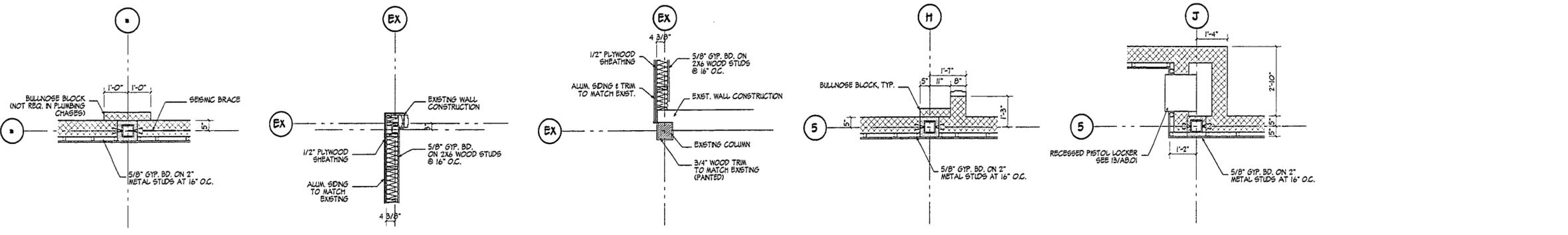
NOT USED

REVISIONS		
DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR REBD

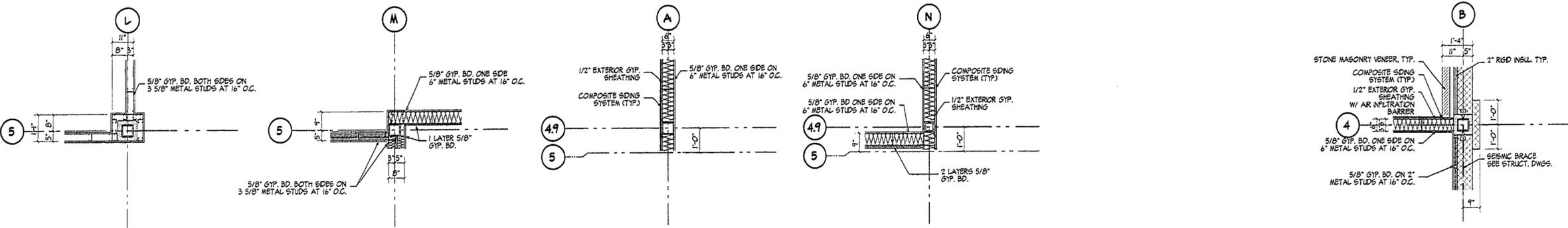
FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS RO.01 & RO.02



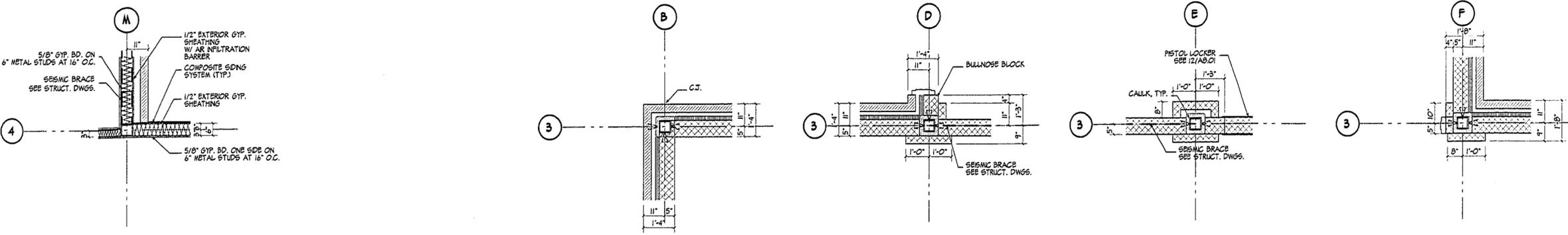
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53 MAIN STREET
WESTFORD MASSACHUSETTS
01886



NOT USED



NOT USED



NOT USED



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

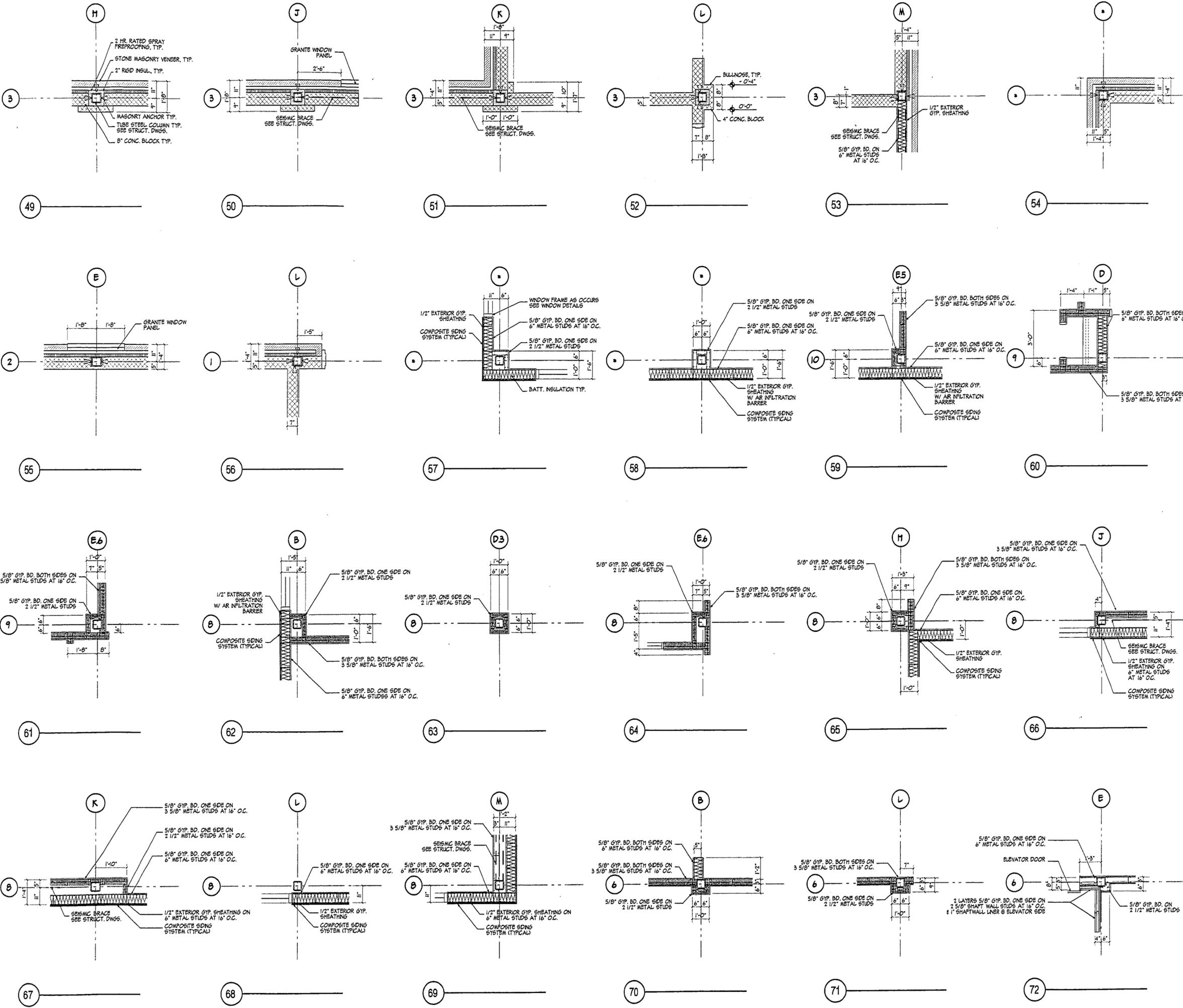
418 State Rd. New Britain, Connecticut 06050-2590 (860) 229-0261
Drawn by: A.G. Scale: 1/2" = 1'-0"

COLUMN DETAILS II 25-48

Project no. 96071 Drawing no.

Date: MARCH 23, 1998 **A9.02**

1440-46

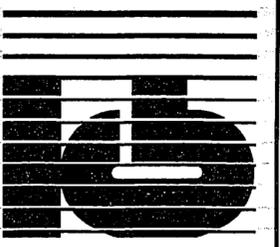


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KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

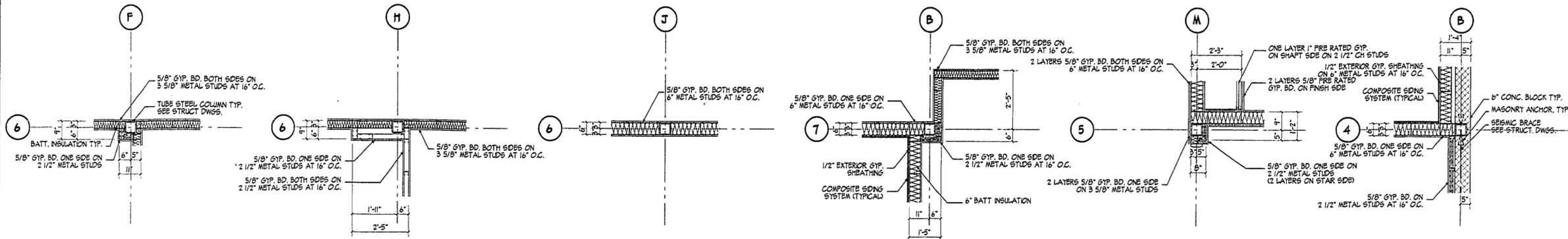
416 Slater Rd., New Britain, Connecticut 06050-2500 (860) 229-0381
 Drawn by: A.G. Scale: 1/2" = 1'-0"

COLUMN DETAILS III
49-72

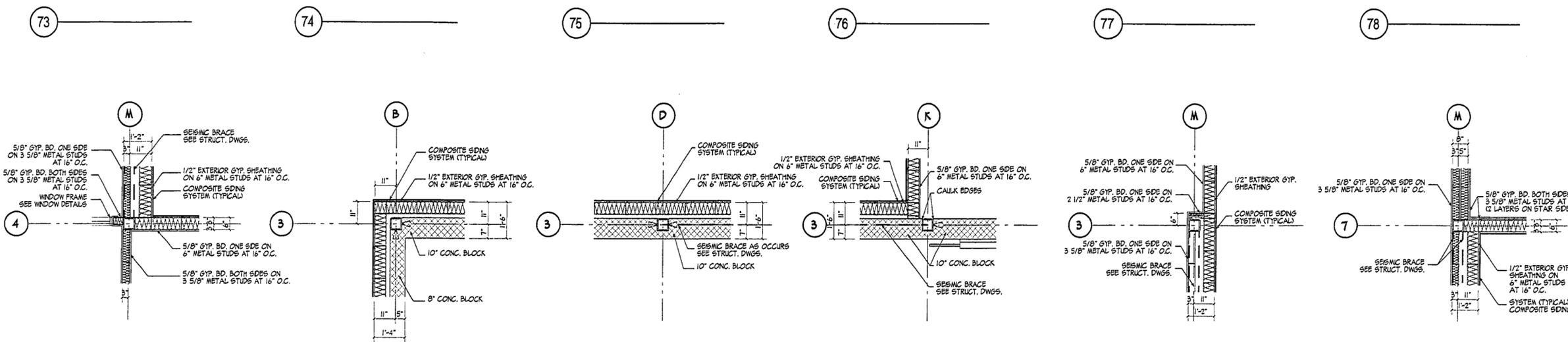
Project no. 16071 Drawing no.

Date: MARCH 23, 1998 **A9.03**

1450-47



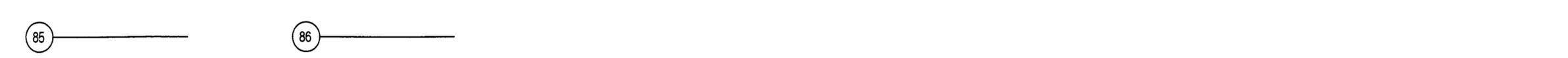
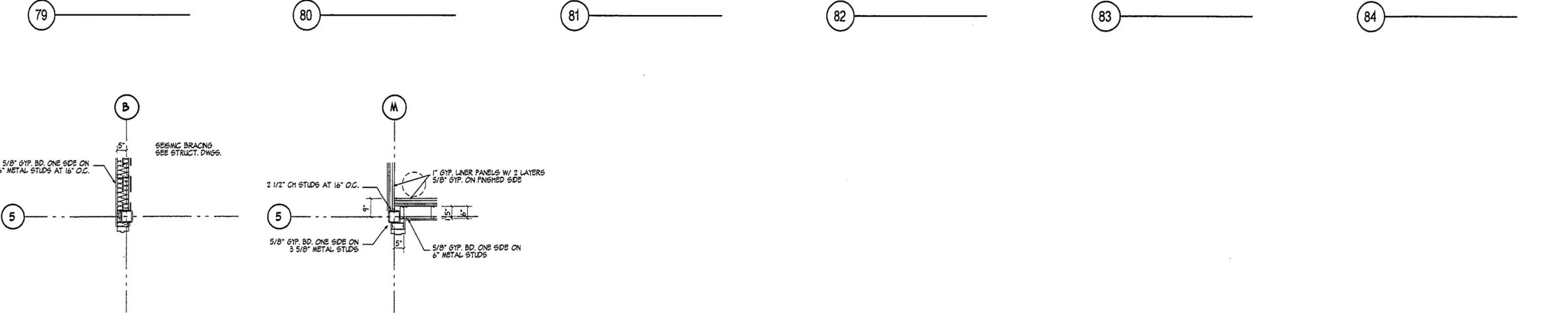
REVISIONS		
DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR RFP



FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS R.O.01 & R.O.02



WESTFORD POLICE FACILITY
 53 MAIN STREET
 WESTFORD MASSACHUSETTS 01886



KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

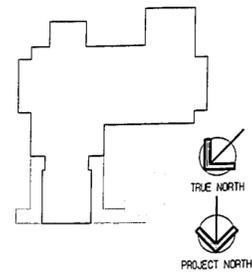
415 Slater Rd. New Britain, Connecticut 06550-2540 (860) 229-0361
 Drawn by: A.G. Scale: 1/2" = 1'-0"

COLUMN DETAILS IV 73-86

Project no. 96077 Drawing no.

Date: MARCH 23, 1998 **A9.04**

1450-44



REVISIONS			
DATE	MARK	REVISIONS	DESCRIPTION
6/25/98			ISSUED FOR REBID

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 01886

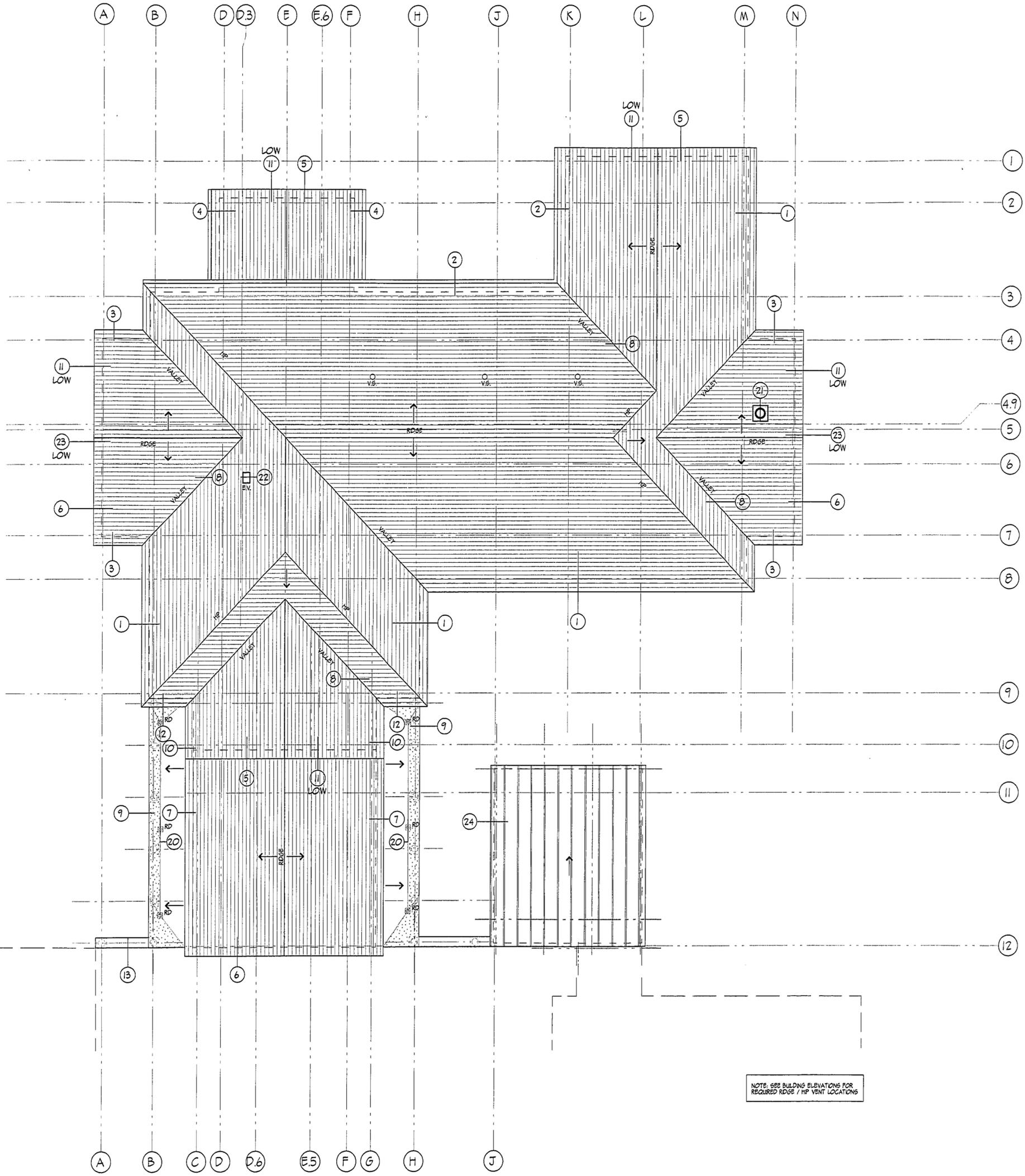


KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

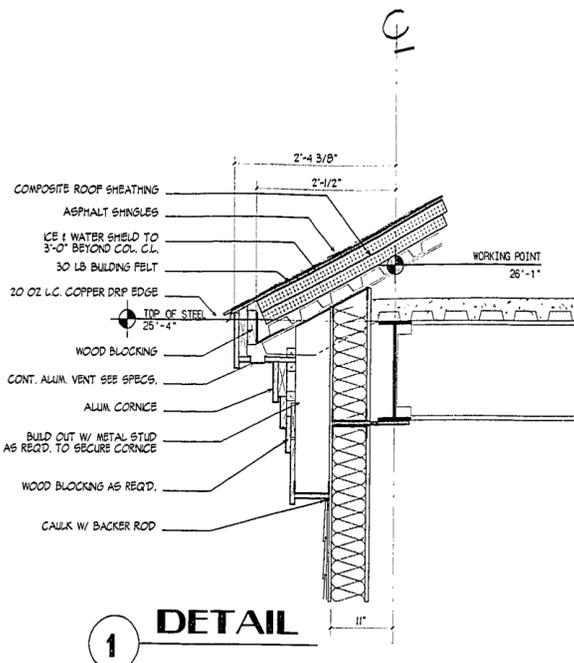
415 Slater Rd. New Britain, Connecticut 06050-2690 B601 229-0361
 Drawn by: JWC Scale: 1/8" = 1'-0"

ROOF PLAN

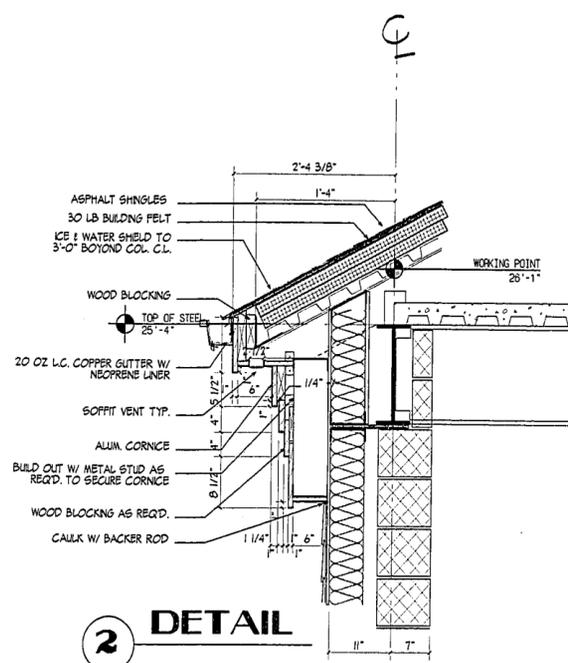
Project no. 96077 Drawing no. **A10.01**
 Date MARCH 23, 1998



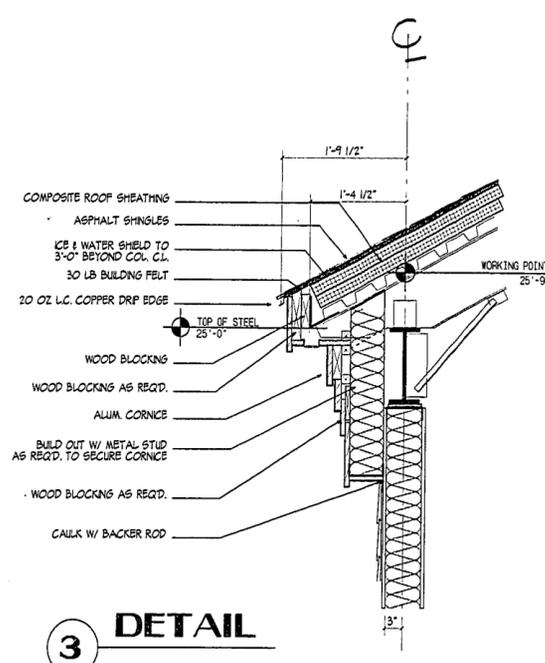
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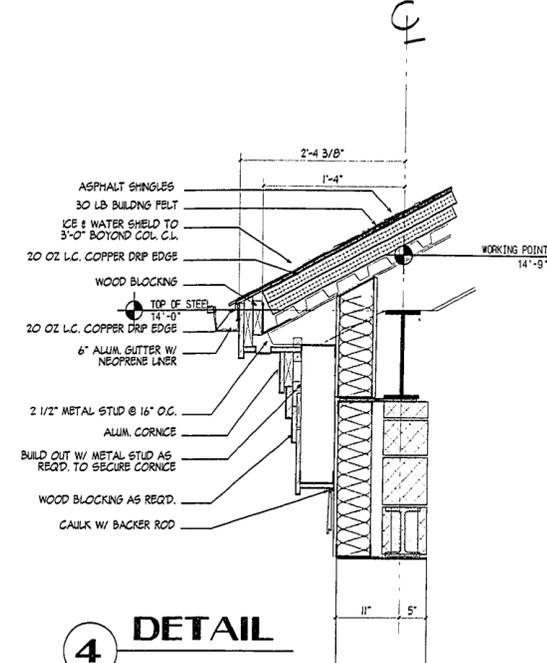
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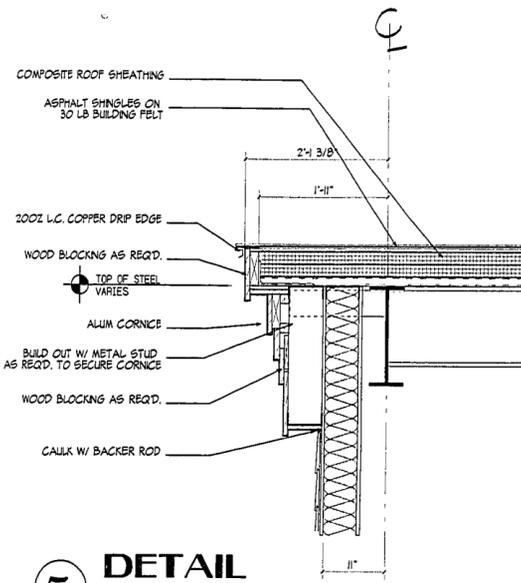
2 DETAIL



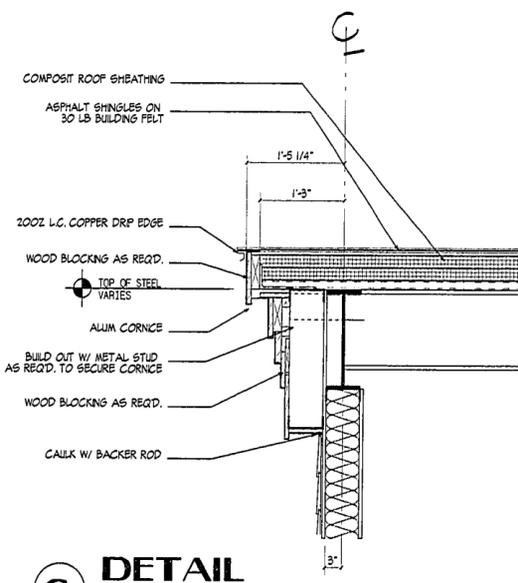
3 DETAIL



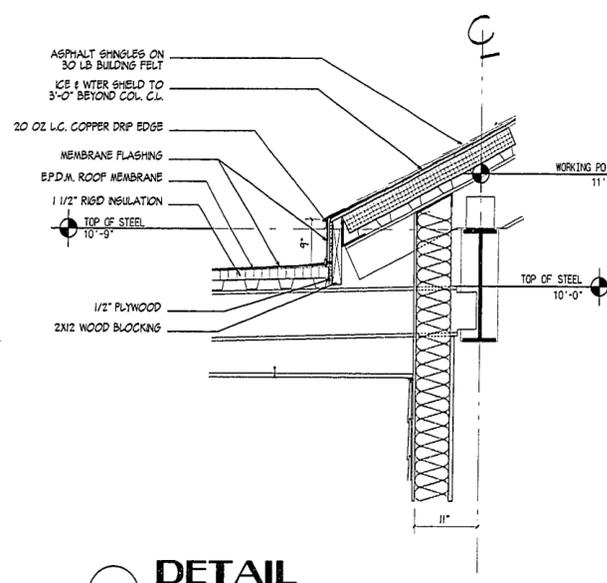
4 DETAIL



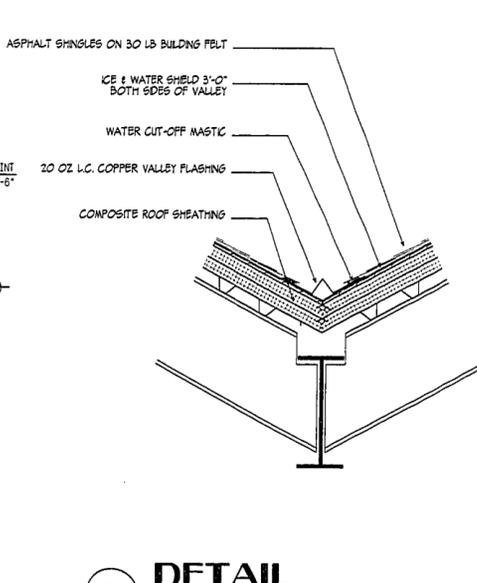
5 DETAIL



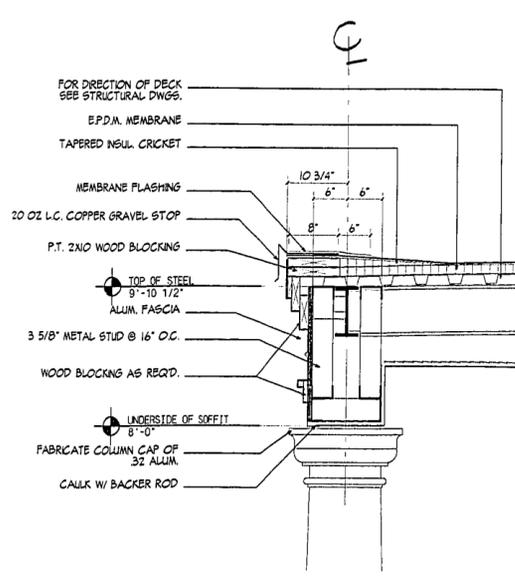
6 DETAIL



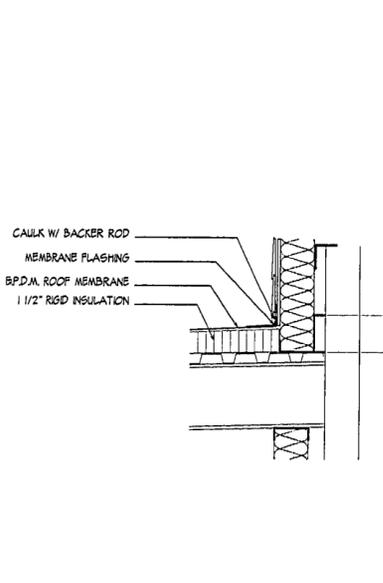
7 DETAIL



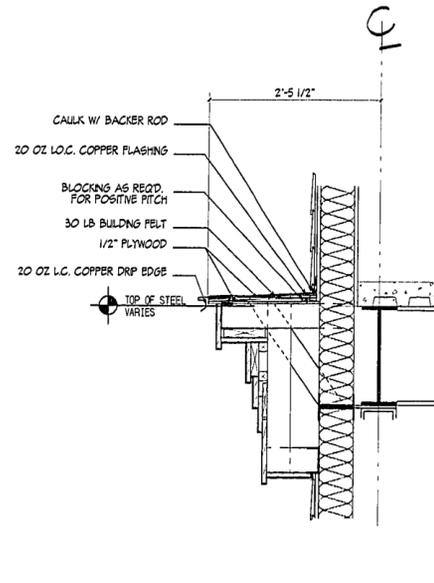
8 DETAIL



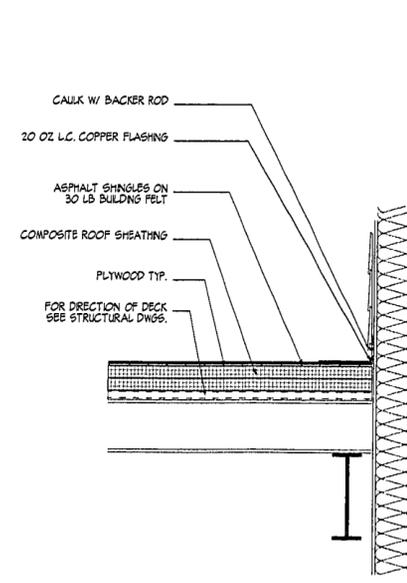
9 DETAIL



10 DETAIL



11 DETAIL



12 DETAIL

REVISIONS

DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR REBO

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS R0.01 & R0.02



WESTFORD POLICE FACILITY
 53 MAIN STREET
 WESTFORD MASSACHUSETTS
 01886



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

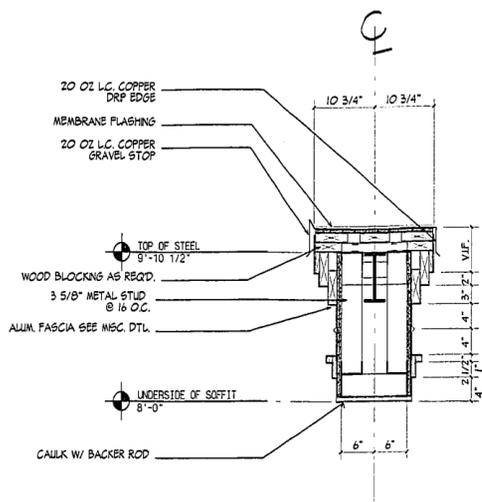
416 Slater Rd., New Britain, Connecticut 06050-2590 (860) 229-0361
 Drawn by: JWC Scale: 1" = 1'-0"

ROOF DETAILS

Project no. 16071 Drawing no.

Date: MARCH 23, 1998 **A10.02**

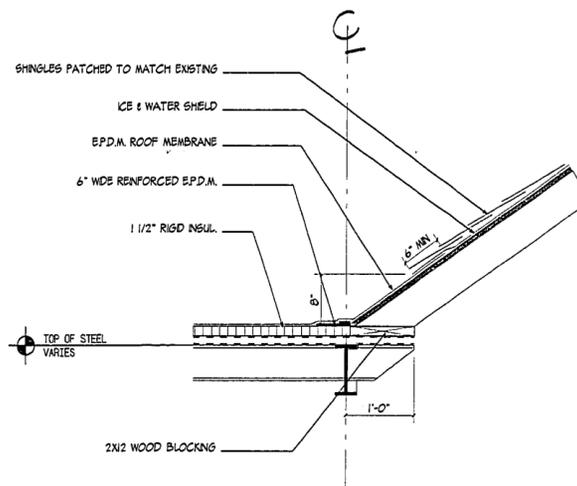
05-0541



13 DETAIL

NOT USED

14 DETAIL



15 DETAIL

NOT USED

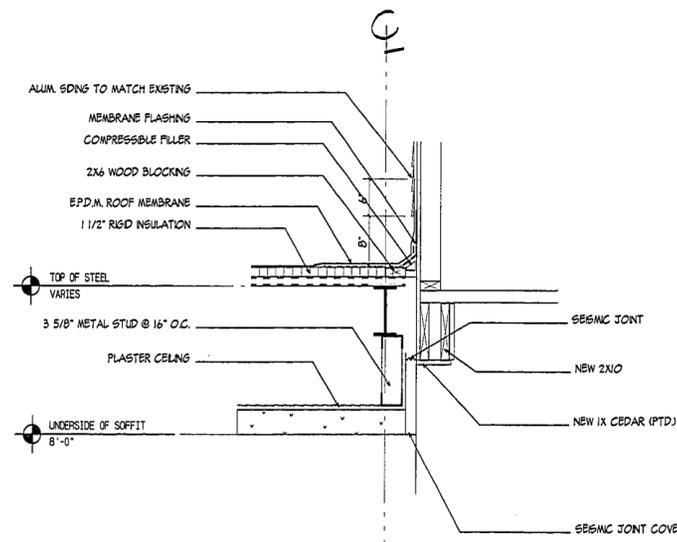
16 DETAIL

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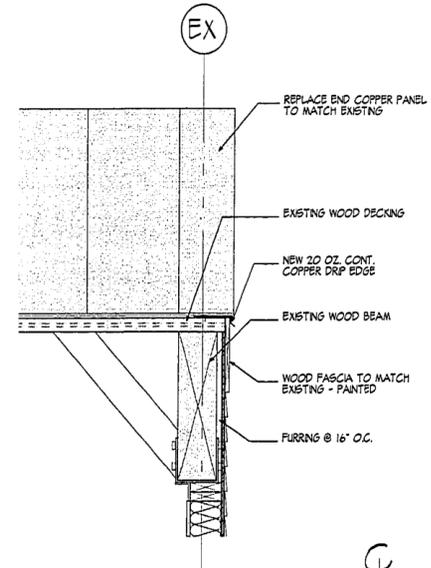
17 DETAIL

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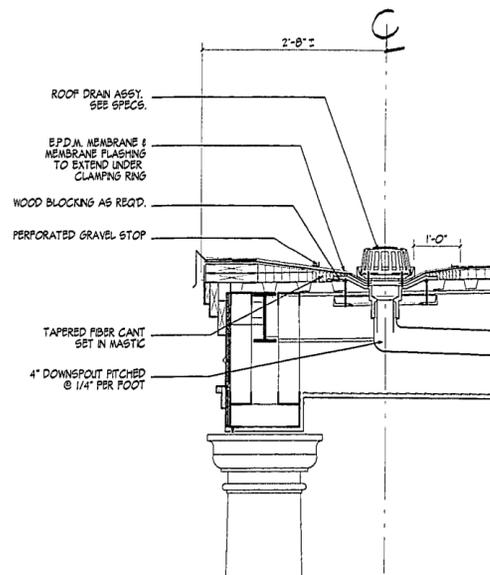
18 DETAIL



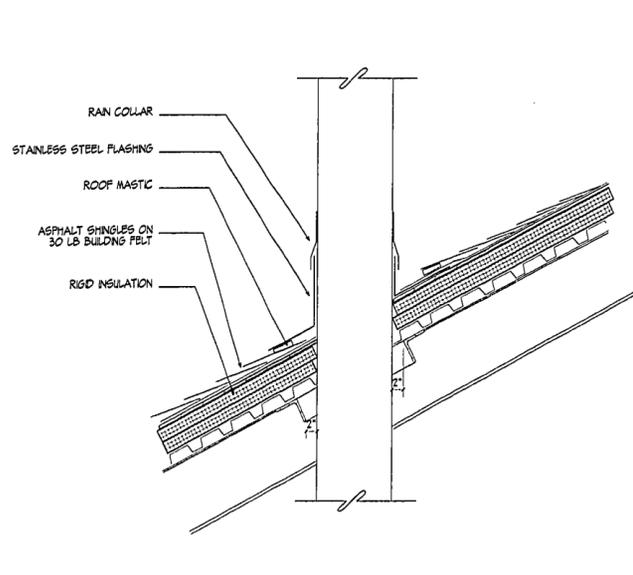
19 DETAIL



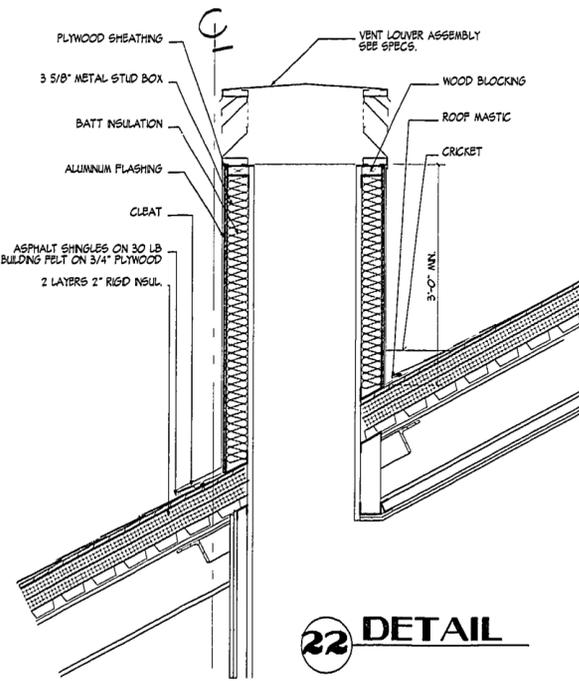
24 DETAIL



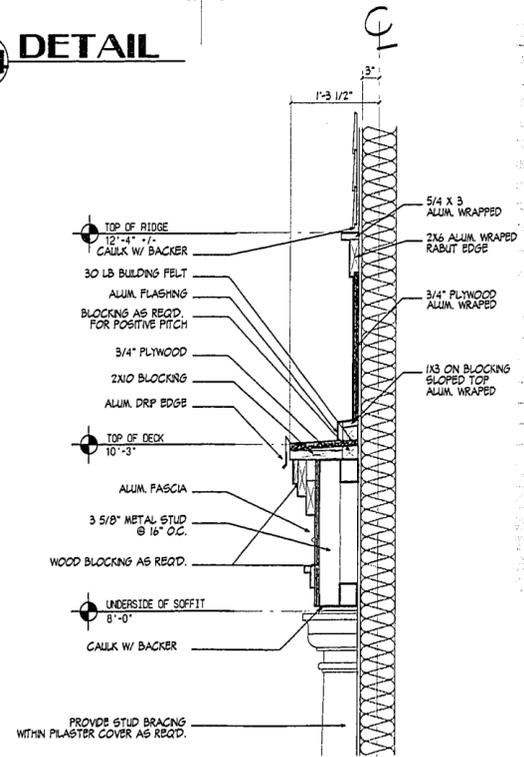
20 DETAIL



21 DETAIL



22 DETAIL



23 DETAIL

REVISIONS		
DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR RBD

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS R.O.1 & R.O.2



**WESTFORD
POLICE
FACILITY**
53 MAIN STREET
WESTFORD
MASSACHUSETTS
01886



**KAESTLE BOOS
ASSOCIATES, INC.
ARCHITECTS**

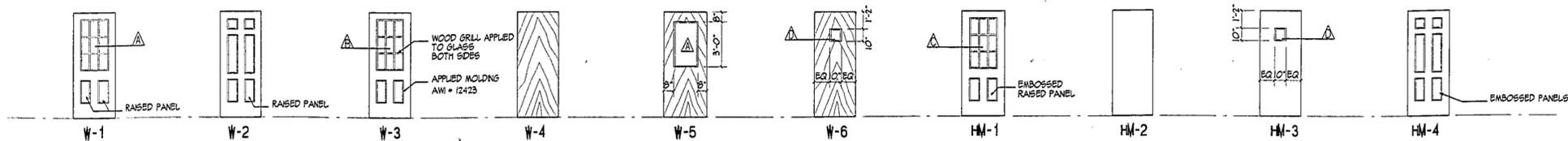
48 Slater Rd., New Britain, Connecticut 06050-2590 860.229-0381
Drawn by: JWC Scale: 1" = 1'-0"

**ROOF
DETAILS
II**

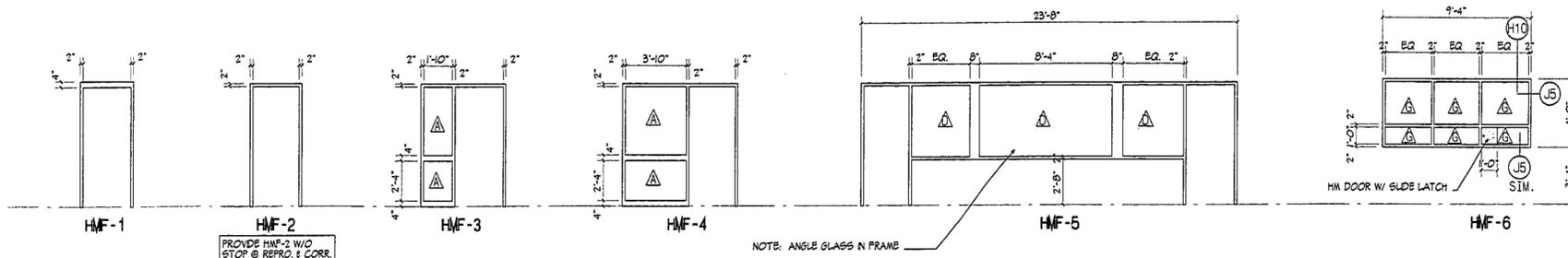
Project no. 96077 Drawing no.

Date: MARCH 23, 1998 **A10.03**

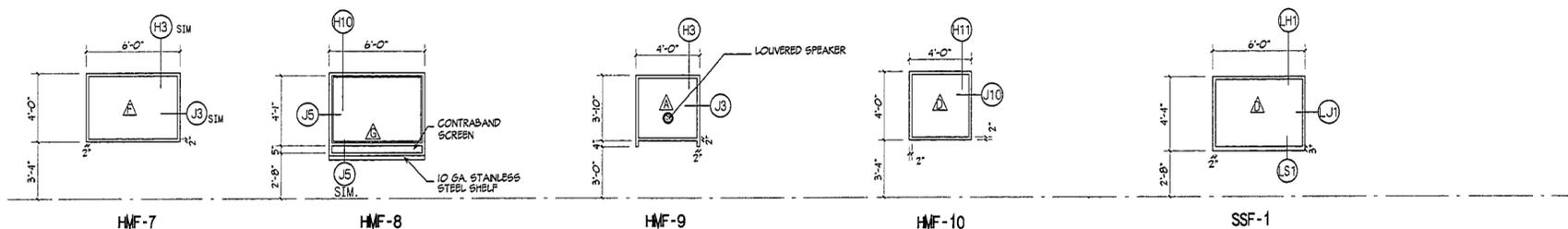
1450-51



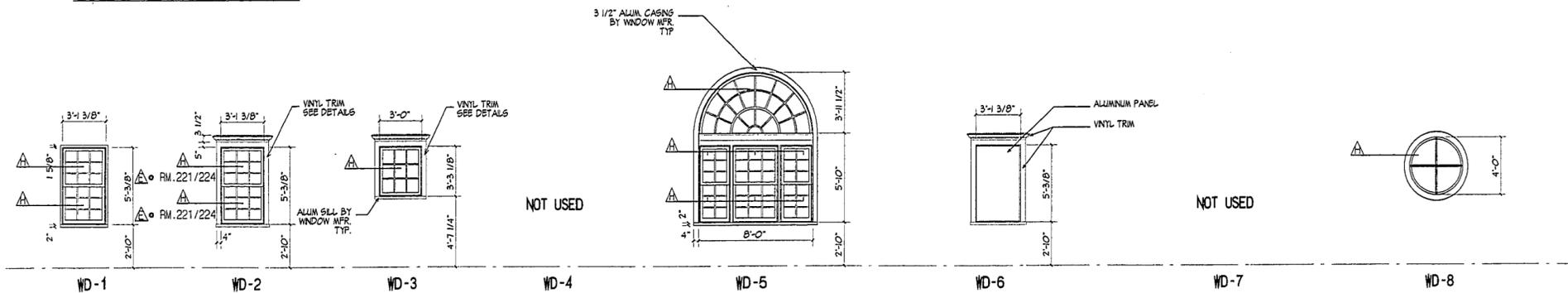
DOOR ELEVATIONS



FRAME ELEVATIONS



FRAME ELEVATIONS



WINDOW ELEVATIONS

GLASS TYPE SCHEDULE		
TYPE	DESCRIPTION	TYPICAL LOCATIONS
△	1/4" CLEAR TEMPERED	ALL INTERIOR NON-FIRE RATED DOORS & WINDOWS
△	WIRE GLASS	ALL INTERIOR FIRE RATED & SMOKE RATED DOORS & WINDOWS
△	1" INSULATING GLASS	ALL EXTERIOR DOORS
△	BULLET-RESISTANT GLASS	LOBBY 104, COMMUNICATIONS 105, RANGE OFFICE 234, FIRING LINE 227
△	OBSCURED GLASS	MENS LOCKER 221, WOMENS LOCKER 224
△	ONE-WAY MIRRORING GLASS	INTERVIEW 208 & 214
△	TRANSPARENT SECURITY ARMOR	VISITOR 139, HOLDING 142
△	3/4" LOW E INSUL GLASS	EXTERIOR WOOD WINDOWS

WINDOW SCHEDULE				
WINDOW TYPE	FRAME TYPE	HEAD DETAIL	JAMB DETAIL	SILL DETAIL
A1	WD-2	WH-1	WJ-1	WS-1
A2	WD-2	WH-2	WJ-2	WS-2
A3	WD-2	WH-6	WJ-2	WS-2
A4	WD-3	WH-1	WJ-1	WS-1
A5	WD-5	WH-6	WJ-2	WS-2
A6	WD-3	WH-2	WJ-2	WS-2
A7	WD-3	WH-7	WJ-3	WS-7
A8	WD-6	WH-3	WJ-3	WS-3
A9	WD-7	WH-5	WJ-5	WS-5
A10	WD-7	WH-8	WJ-5	WS-5
A11	WD-8	WH-6	WH-6	WH-6

REVISIONS		
DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR REBID

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WESTFORD POLICE FACILITY

53 MAIN STREET
WESTFORD
MASSACHUSETTS
01886



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

416 Slater Rd. New Britain, Connecticut 06050-2630 (860) 229-0381
Drawn by: RAK / ZWC Scale: 1/4" = 1'-0"

DOOR AND WINDOW ELEVATIONS

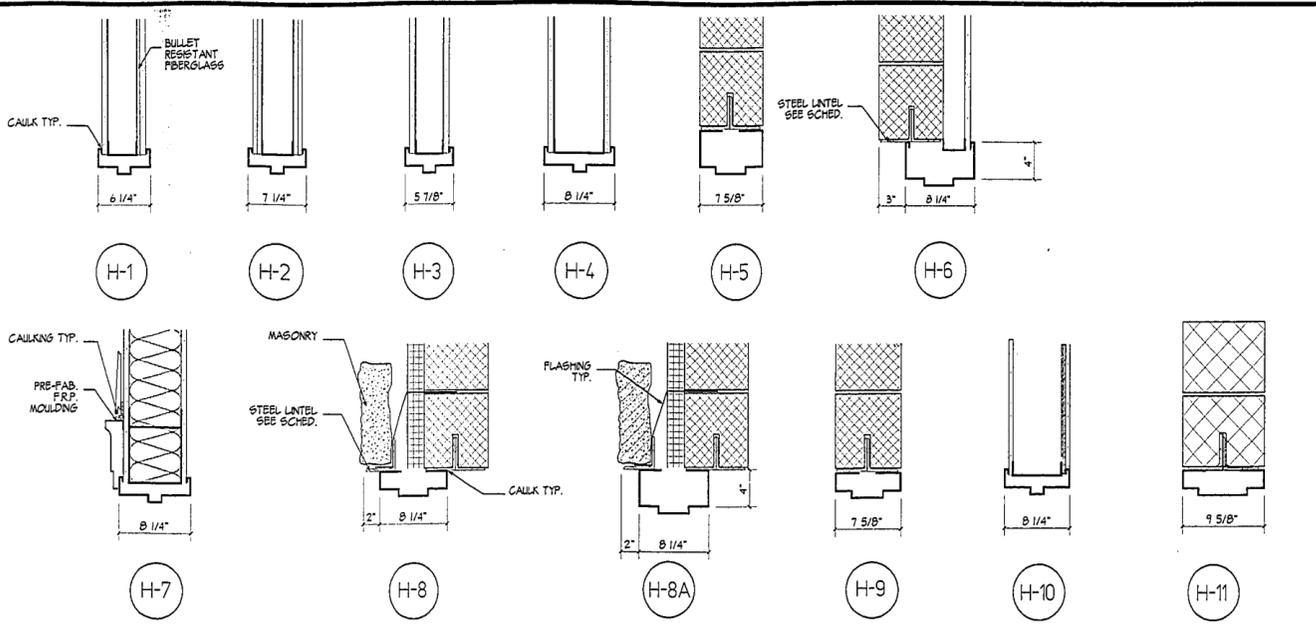
Project no. 46077

Drawing no.

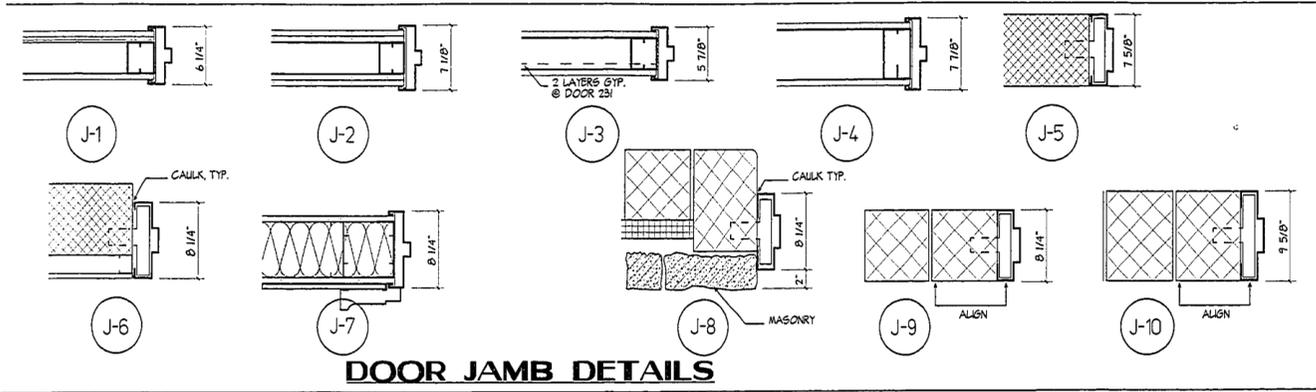
Date: MARCH 23, 1998

A11.01

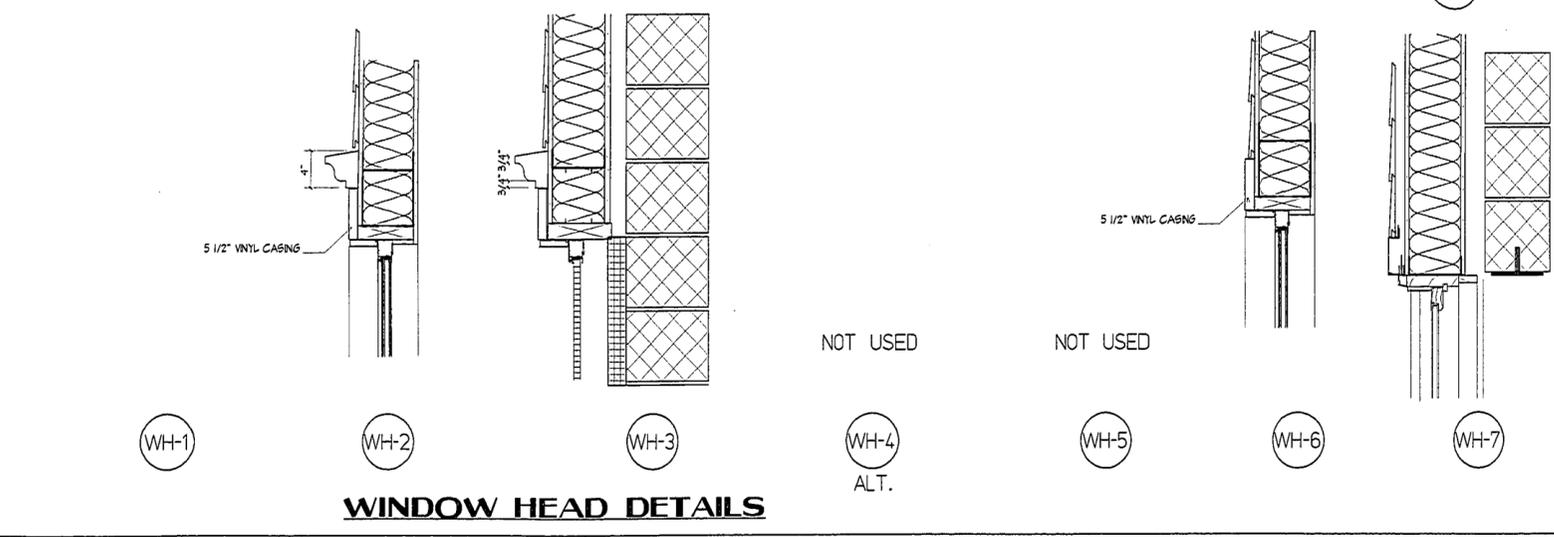
1100-33



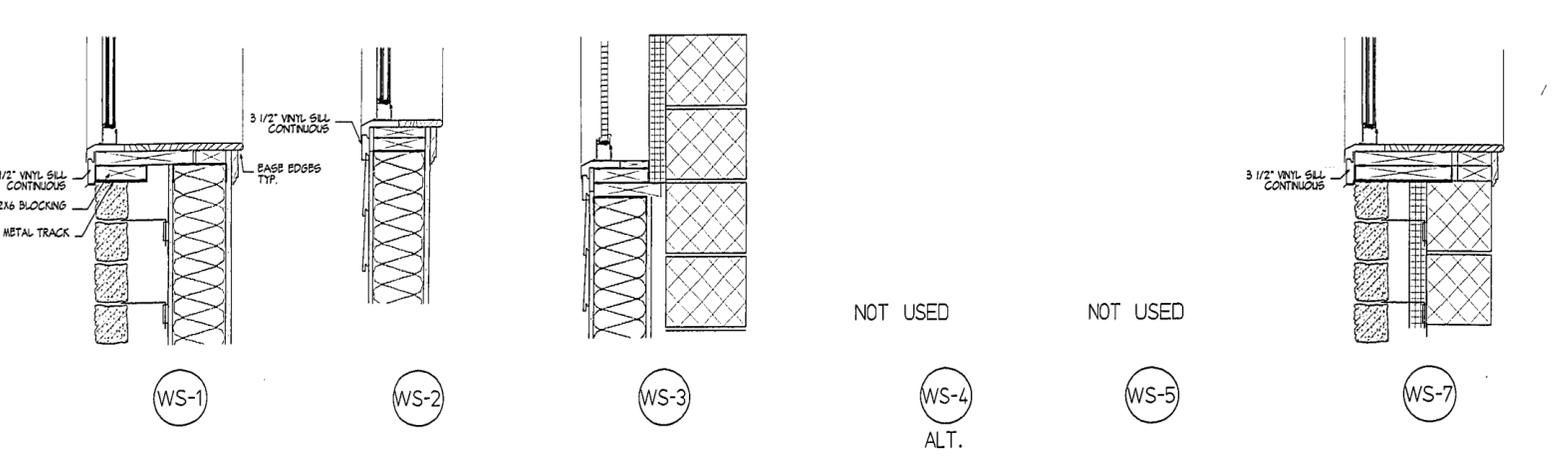
DOOR HEAD DETAILS



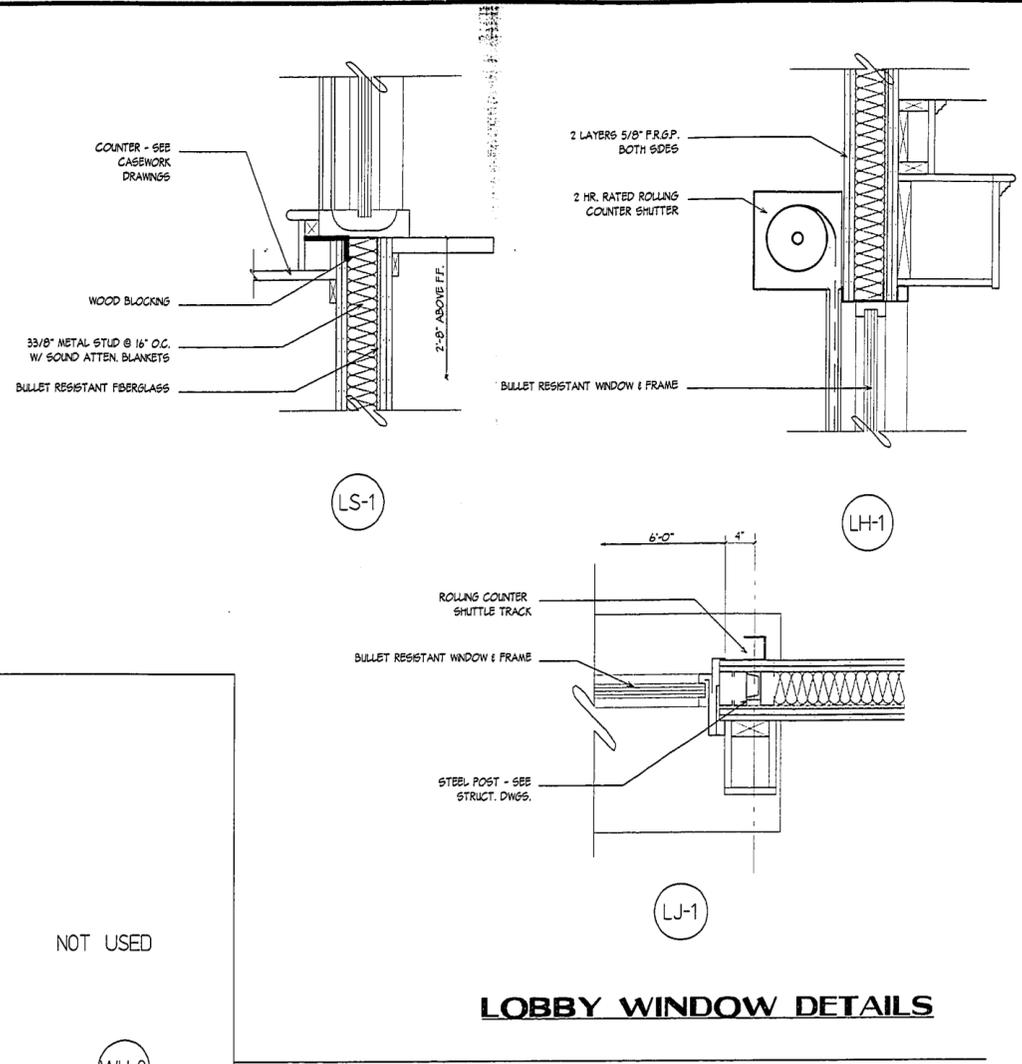
DOOR JAMB DETAILS



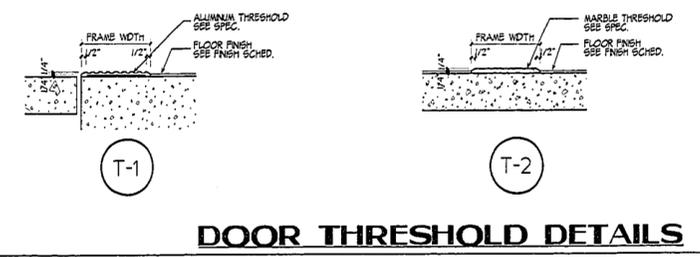
WINDOW HEAD DETAILS



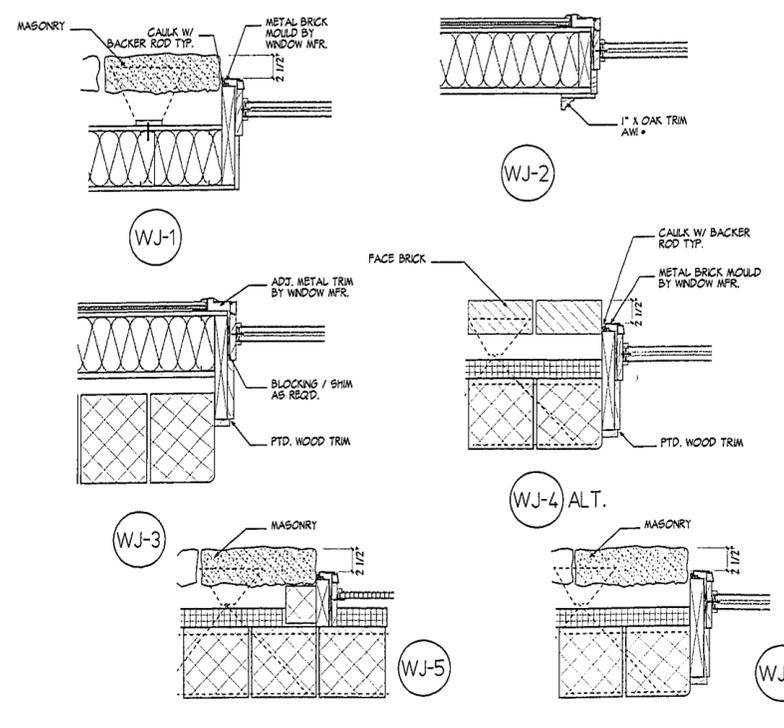
WINDOW SILL DETAILS



LOBBY WINDOW DETAILS



DOOR THRESHOLD DETAILS



WINDOW JAMB DETAILS

REVISIONS		
DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR REBD

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WESTFORD POLICE FACILITY
 53 MAIN STREET
 WESTFORD
 MASSACHUSETTS
 01886



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

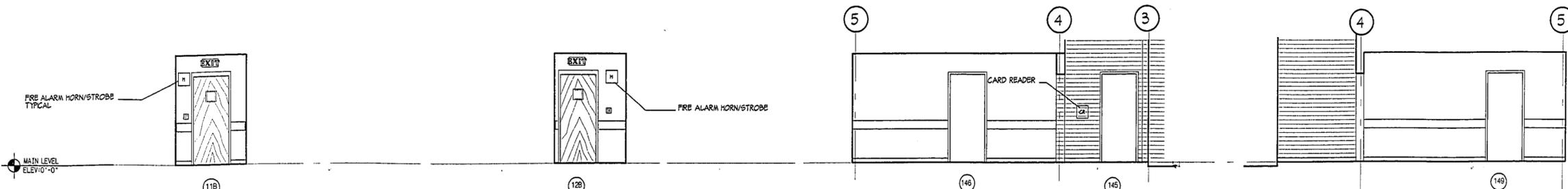
416 Slater Rd., New Britain, Connecticut 06050-2550 (860) 229-0381
 Drawn by: JWC Scale: 1/2" = 1'-0"

DOOR AND WINDOW DETAILS

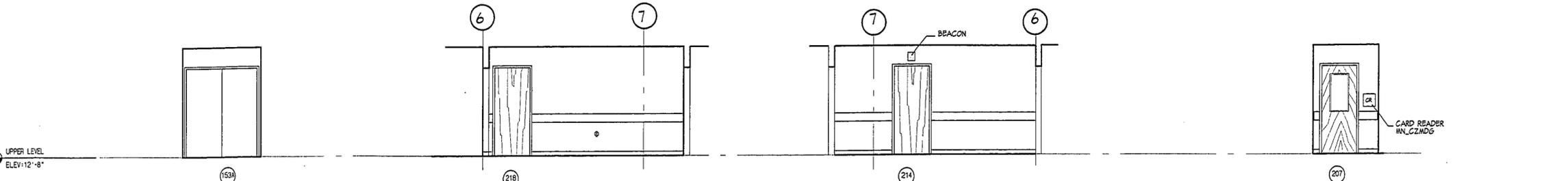
Project no. 96077 Drawing no.

Date MARCH 23, 1998 **A11.02**

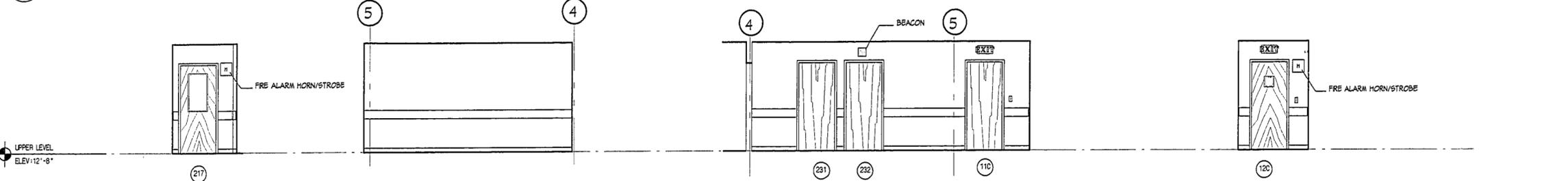
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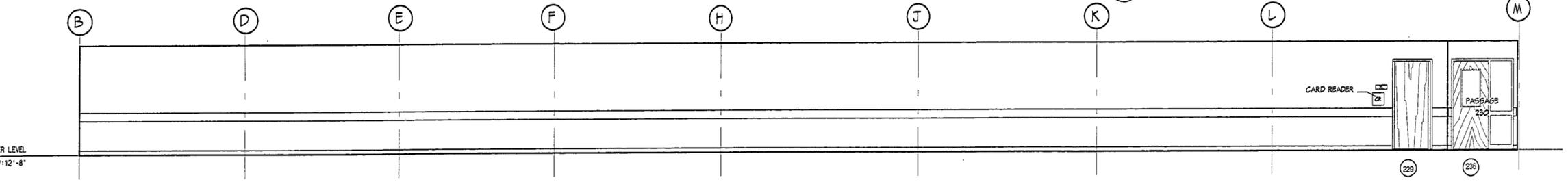
18 CORRIDOR 130-EAST 19 CORRIDOR 130-WEST 20 PASSAGE 148-EAST 21 PASSAGE 148-WEST



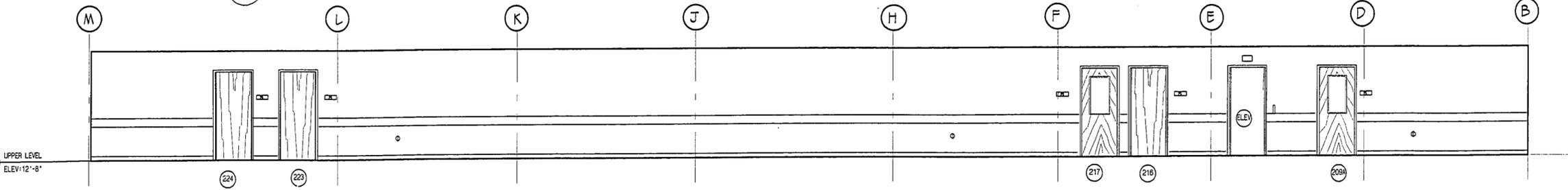
22 PASSAGE 148-SOUTH 23 PASSAGE 217-WEST 24 PASSAGE 217-EAST 25 PASSAGE 217-NORTH



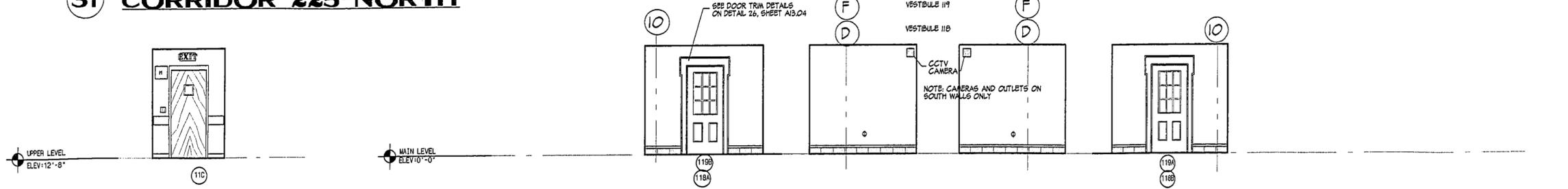
26 PASSAGE 217-SOUTH 27 PASSAGE 230-EAST 28 PASSAGE 230-WEST 29 CORRIDOR 225-WEST



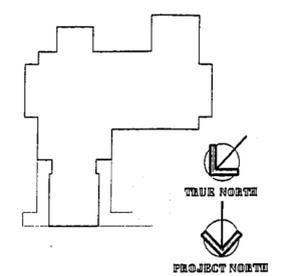
30 CORRIDOR 225-SOUTH



31 CORRIDOR 225-NORTH



32 PASSAGE 225-EAST 33 VESTIBULE 119 WEST NORTH SOUTH EAST 34 VESTIBULE 118 EAST WEST



REVISIONS		
DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR RFP

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WESTFORD POLICE FACILITY
53 MAIN STREET
WESTFORD MASSACHUSETTS
01886



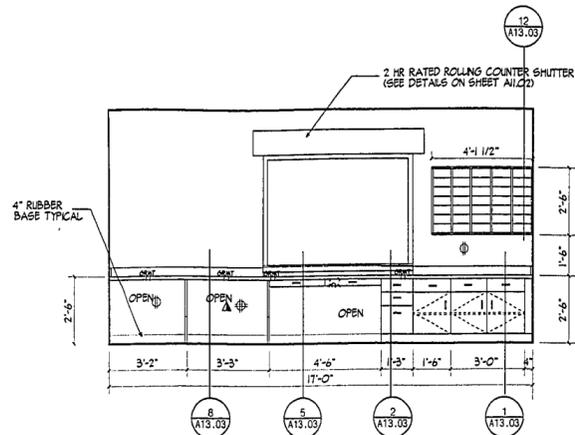
KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

418 State Rd. New Britain, Connecticut 06050-2550 (860) 226-0351
Drawn by: P. MARZELLA Scale: 1/4"=1'-0"

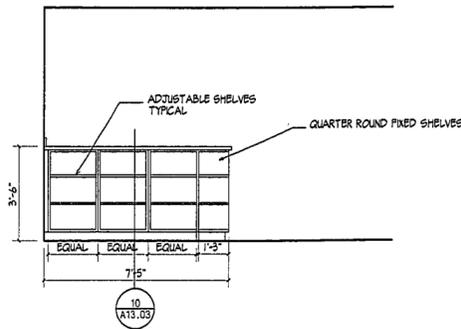
INTERIOR ELEVATIONS II

Project no. 96077 Drawing no. Date MARCH 23, 1998 **A12.02**

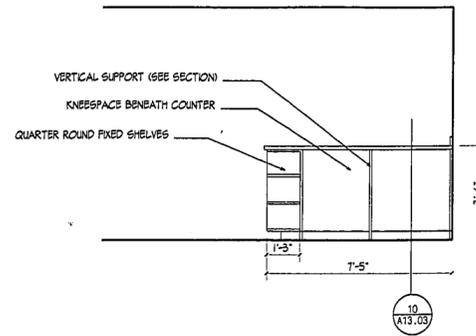
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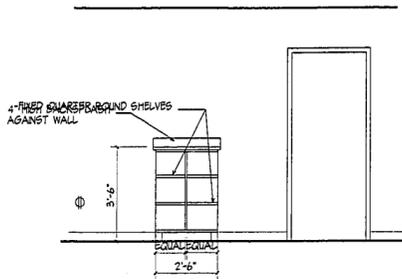
1 COMMUNICATIONS 105



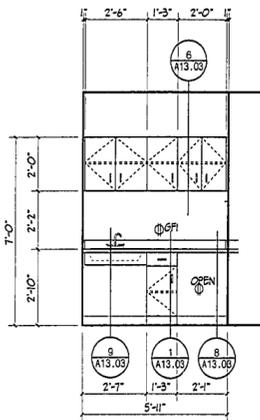
2 COMMUNICATIONS 105



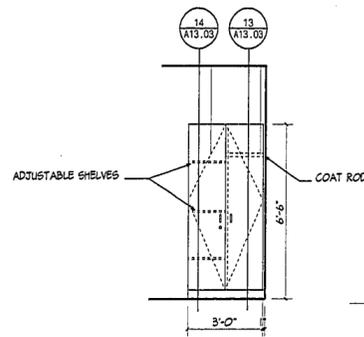
3 COMMUNICATIONS 105



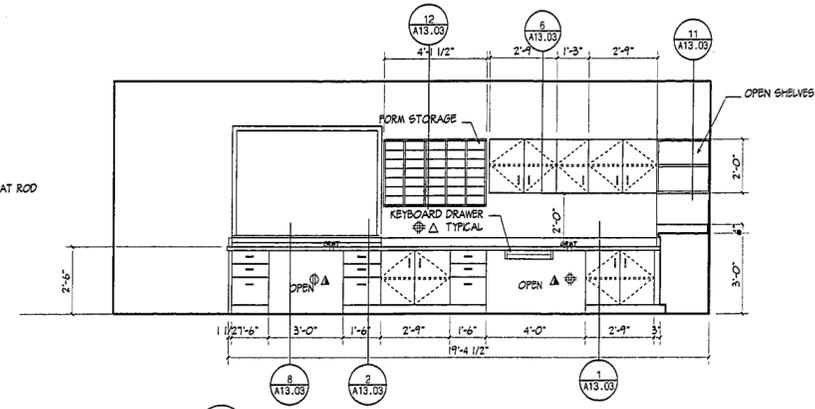
4 COMMUNICATIONS 105



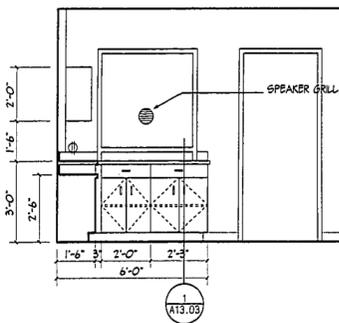
5 COMMUNICATIONS 105



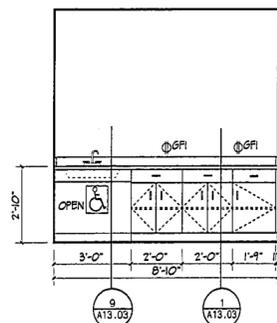
6 RECORDS 112



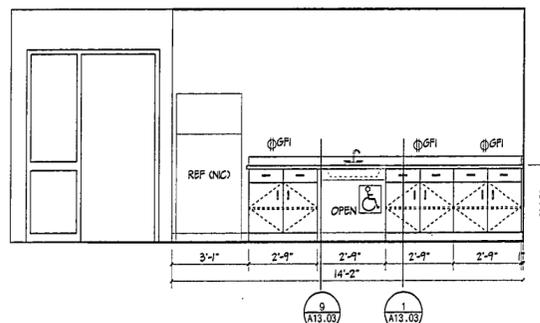
7 RECORDS 112



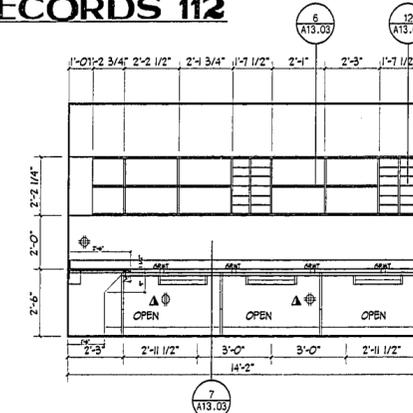
8 RECORDS 112



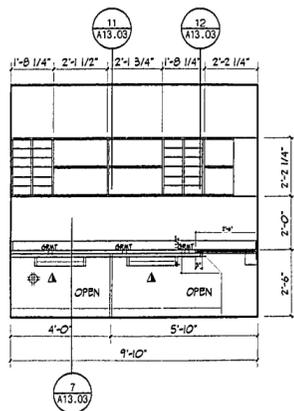
9 PUBLIC INTERVIEW 110



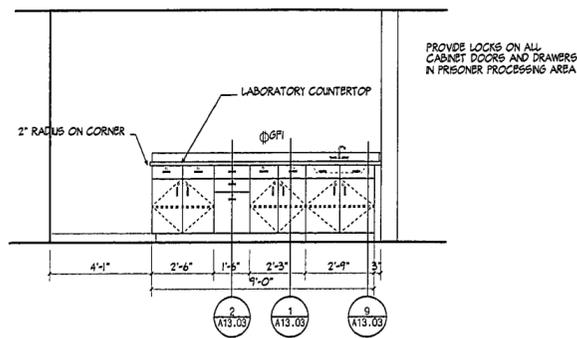
10 BREAK ROOM 129



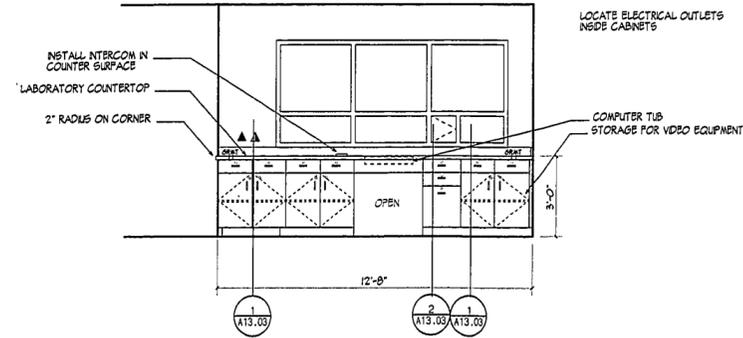
11 REPORT PREP 128



12 REPORT PREP 128



13 PRISONER PROCESSING 141



14 PRISONER PROCESSING 141

REVISIONS		
DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR READ

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WESTFORD POLICE FACILITY
53 MAIN STREET
WESTFORD MASSACHUSETTS 01886



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

119 State Rd. New Britain, Connecticut 06105-2800 (860) 226-0361
Drawn by: P. MARZELLA Scale: 3/8" = 1'-0"

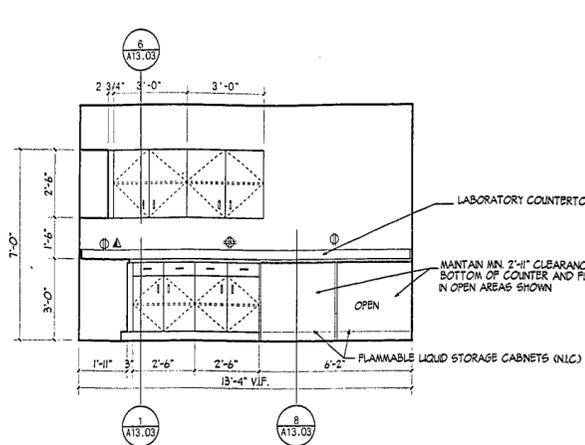
CASEWORK ELEVATIONS

Project no. 96-011 Drawing no.

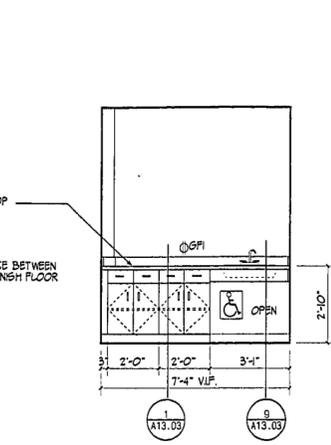
Date MARCH 23, 1998 **A13.01**

shearman & sterne litvack bender & katz llp

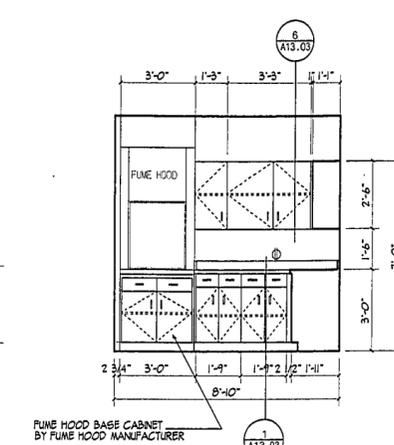
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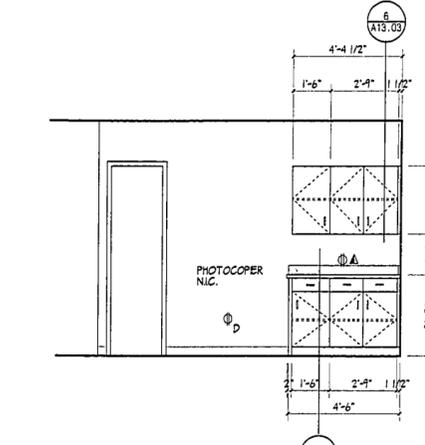
15 LAB 206



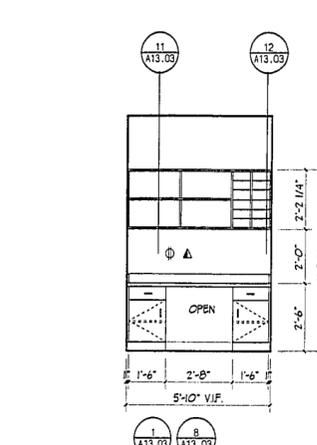
16 LAB 206



17 LAB 206



18 RECEPTION



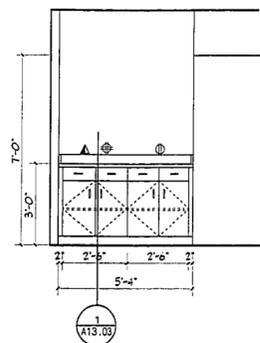
19 VIDEO

REVISIONS		
DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR REBD

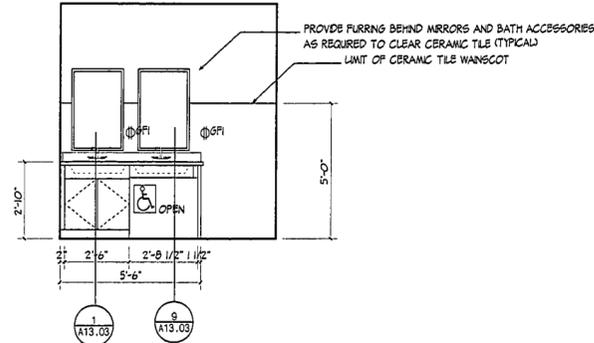
FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS RD.01 & RD.02



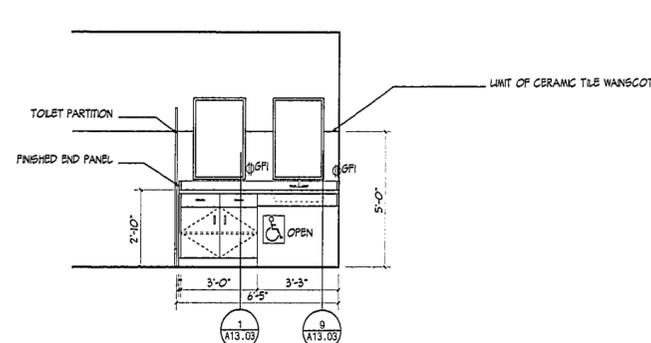
WESTFORD POLICE FACILITY
53 MAIN STREET
WESTFORD
MASSACHUSETTS
01886



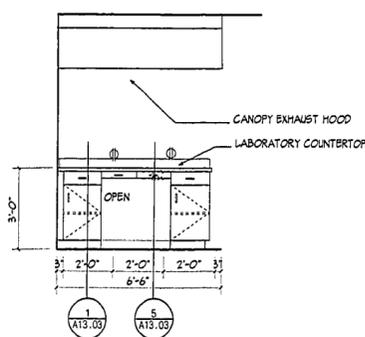
20 MAJOR CRIME/CONF 218



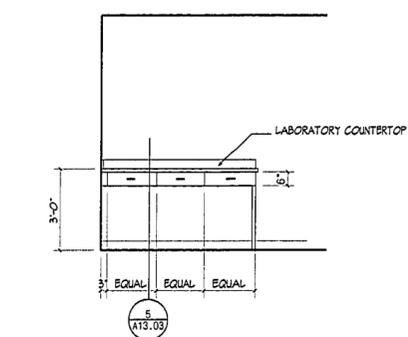
21 MEN'S LOCKER RM 221



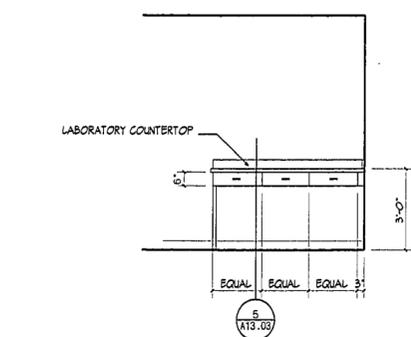
22 WOMEN'S LOCKER RM 224



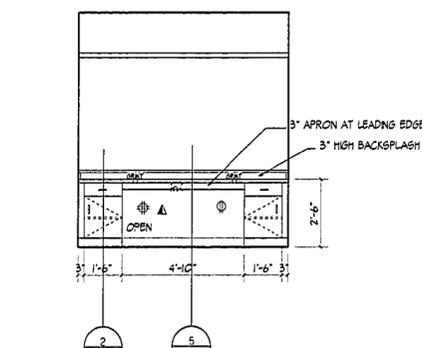
23 STORAGE 233



24 PREP ROOM 229



25 PREP ROOM 229



26 CONTROL 228



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

416 State Rd., New Britain, Connecticut 06520-2500 B03 229-0361
Drawn by P. MARZELLA Scale: 3/8" = 1'-0"

CASEWORK ELEVATIONS II

Project No. 96077

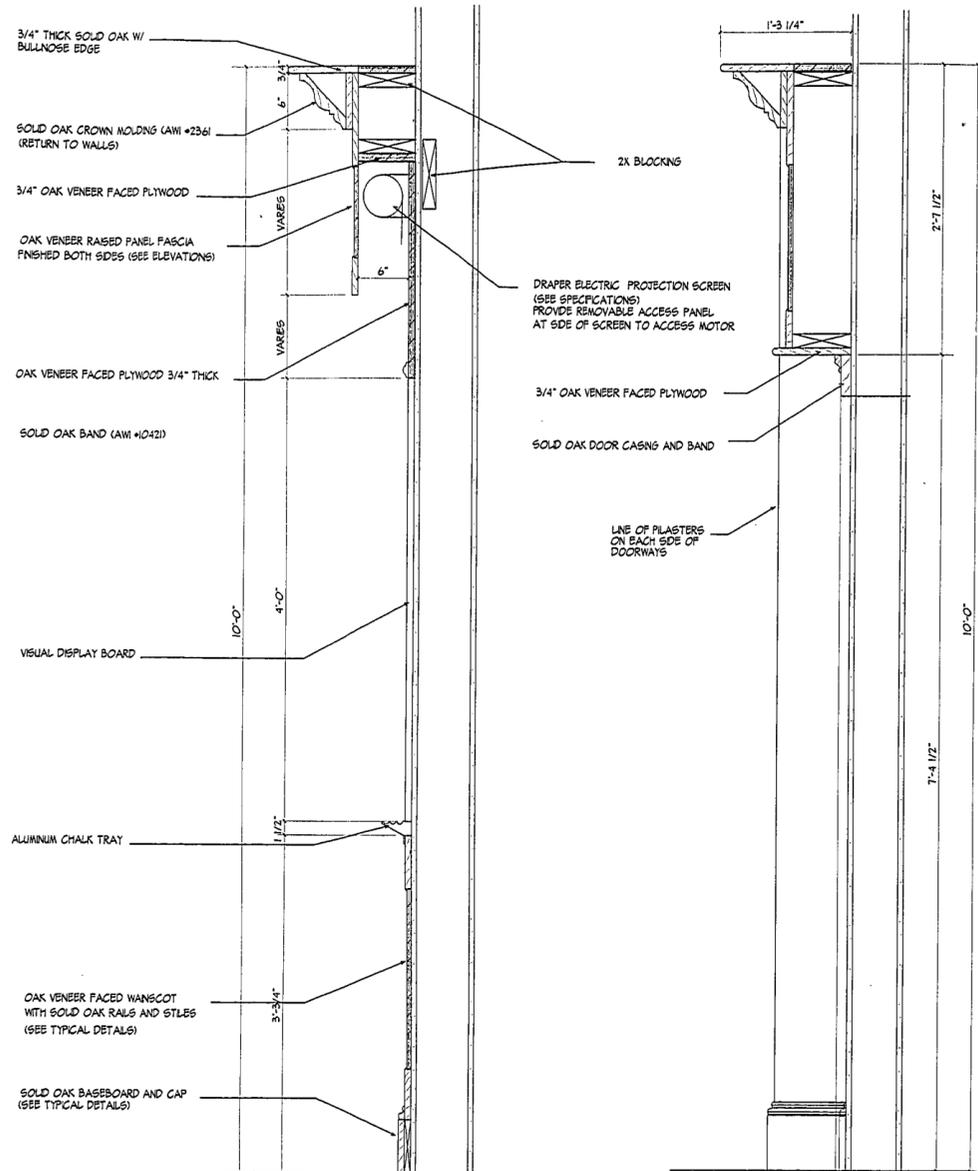
Drawing No.

Date MARCH 23, 1998

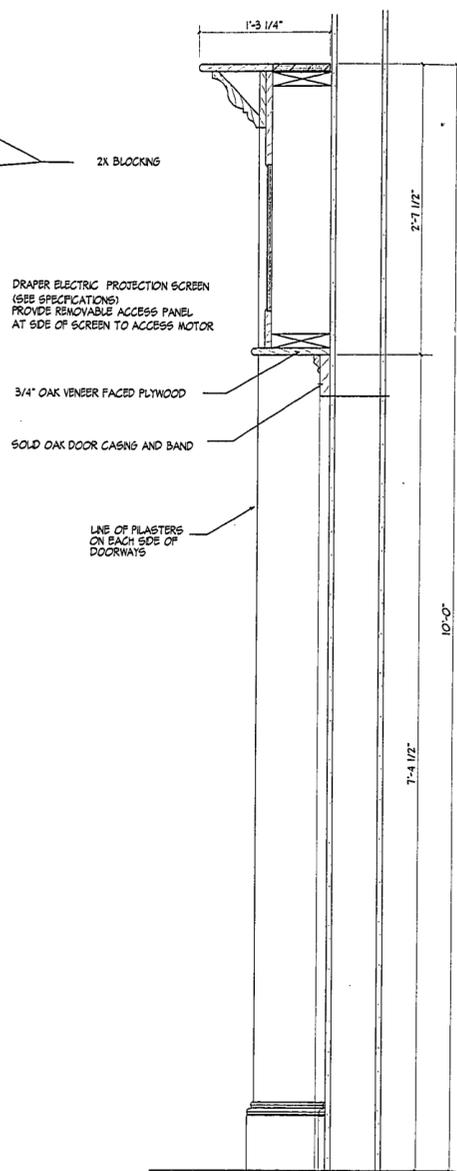
A13.02

1490-57

e:\erman\14\WESTFORD\96077\cbcase_elev.dwg d:\cbcase_2 0714 Thu Jan 25 1998 Copyright, Kaestle Boos Assoc., Inc.



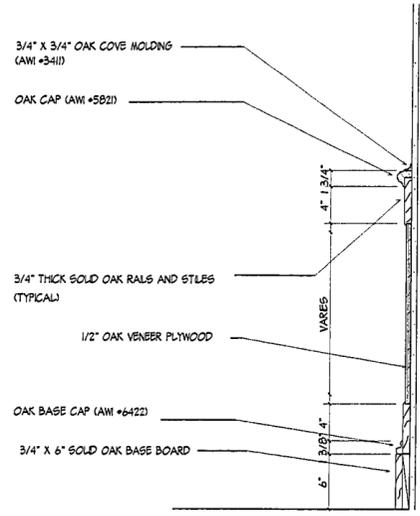
21 TRAINING/E.O.R./COMMUNITY



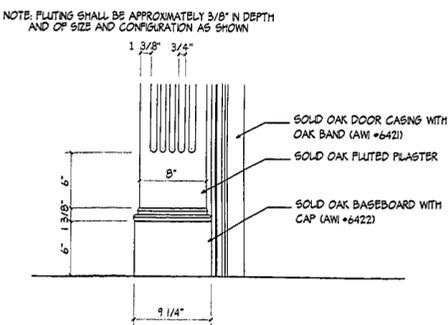
22 TRAINING/E.O.R./COMMUNITY

NOTE: STILES SHALL BE 4" IN WIDTH UNLESS OTHERWISE NOTED

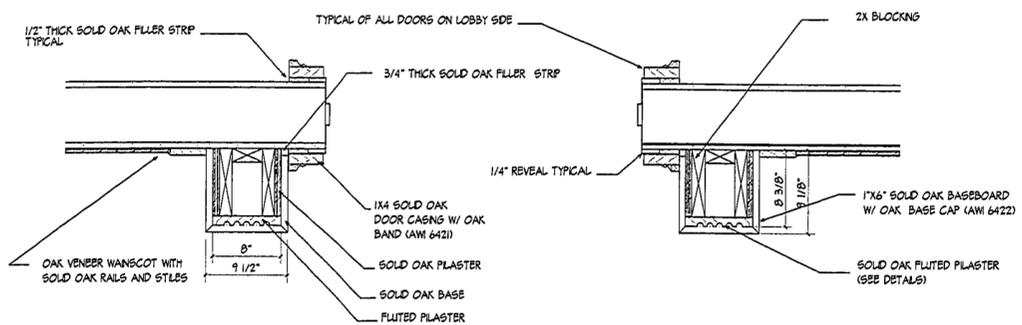
23 TYPICAL STILE SECTION



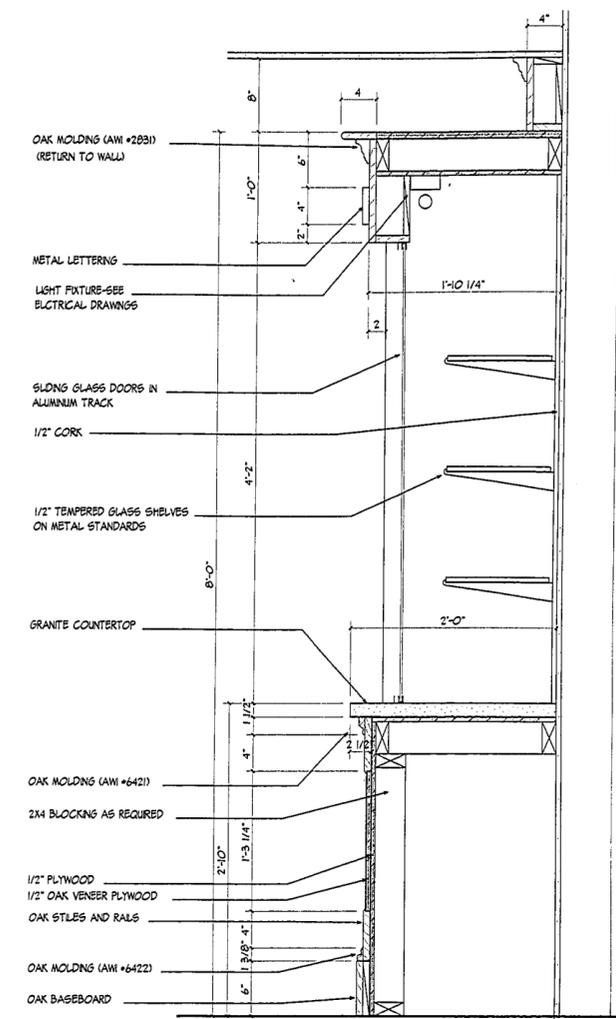
24 TYPICAL OAK WAINSCOT SECTION



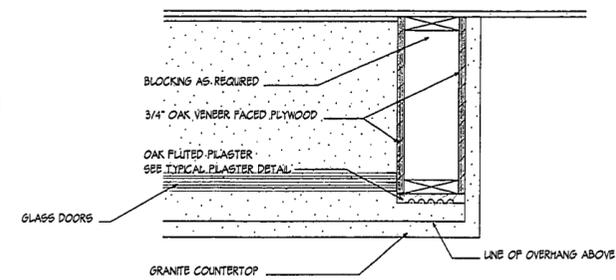
27 TYPICAL PILASTER DETAIL



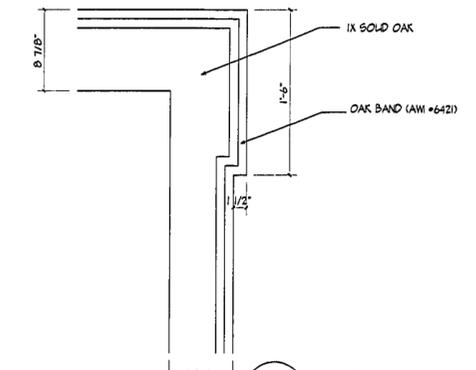
28 PILASTER SECTION



25 LOBBY DISPLAY CASE



26 LOBBY DISPLAY CASE HORIZONTAL SECTION



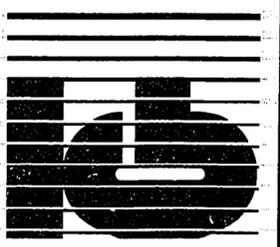
29 DOOR CASING DETAIL DOORS 118A, 118B, 119A, 119B

REVISIONS		
DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR RFBID

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS R001 & R002



WESTFORD POLICE FACILITY
53 MAIN STREET
WESTFORD MASSACHUSETTS 01886



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

416 Slater Rd., New Britain, Connecticut 06052-2500 (860) 229-0361
Drawn by: P. MARZELLA Scale: 1/12" = 1'-0"

CASEWORK SECTIONS AND DETAILS II

Project no. 16077 Drawing no.

Date MARCH 23, 1998 **A13.04**

1400-57

FINISH SCHEDULE

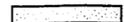
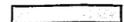
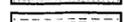
COLOR SCHEDULE

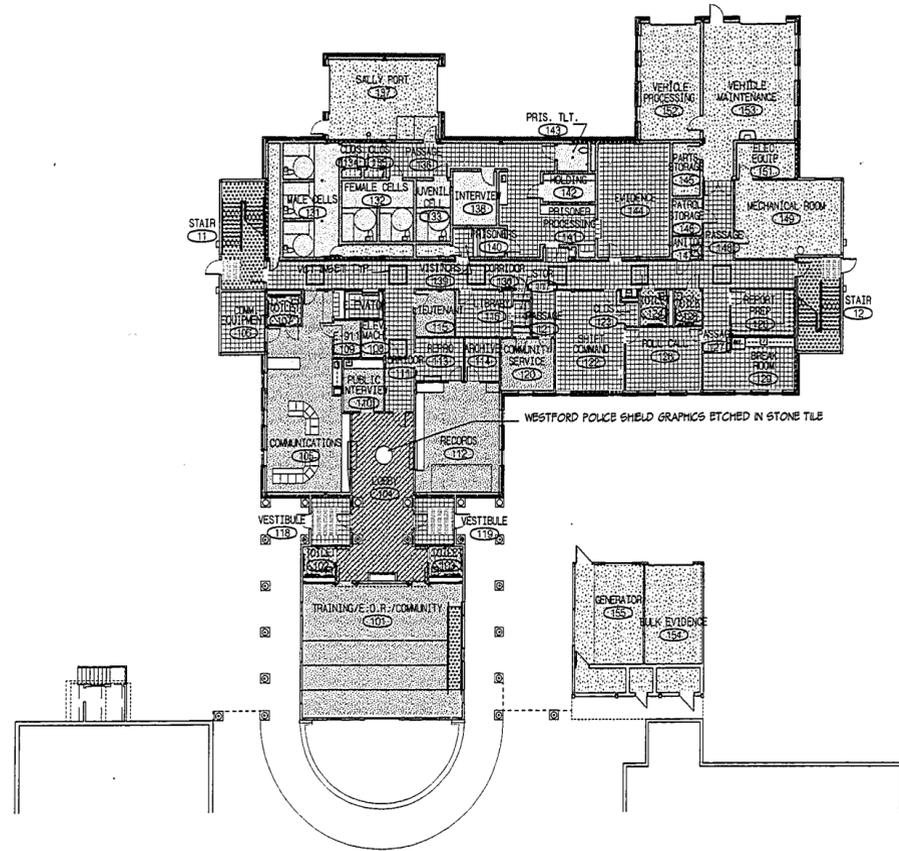
FINISH SCHEDULE

COLOR SCHEDULE

RM NO	ROOM NAME	FLR	BS	WALLS				CLG HT	REMARKS	FLOOR	BASE	WALLS				REMARKS	RM NO	ROOM NAME	FLR	BS	WALLS				CLG HT	REMARKS	FLOOR	BASE	WALLS				REMARKS
				N	S	E	W					N	S	E	W						N	S	E	W					N	S	E	W	
101	TRAINING/EDUC/COMM	F-10	B-3	W-3	W-3	W-3	W-3	C-1	VAR-6	C-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1		216	TOILET	F-2	B-2	W-9	W-9	W-9	W-9	C-1	B-8*	CFT-1.2	CFT-1	P-3	P-3	P-3	P-3	
102	MEN'S HC TOL	F-2	B-2	W-7A	W-7A	W-7A	W-7A	C-4	B-8*	CFT 1.2	CWT-2	CWT-1.2/P-3	CWT-1.2/P-3	CWT-1.2/P-3	CWT-1.2/P-3		217	PASSAGE	F-1	B-3	W-11	W-11	W-11	W-11	C-1	B-8*	VCT-1	RB-1	MCP-1	MCP-1	MCP-1	MCP-1	
103	WOMEN'S HC TOL	F-2	B-2	W-7A	W-7A	W-7A	W-7A	C-4	B-8*	CFT 3.4	CWT-3	CWT-1.3/P-5	CWT-1.3/P-5	CWT-1.3/P-5	CWT-1.3/P-5		218	MAJOR CRIME/CONF	F-10	B-3	W-3	W-3	W-3	W-3	C-1	B-8*	C-1	RB-3	VWC-4	VWC-4	VWC-4	VWC-4	
104	LOBBY	F-5	B-2	W-3	W-3	W-3	W-3	C-1	B-8*		F-5	B-2	VWC-2	VWC-2	VWC-2	VWC-2		219	NOT USED														
105	COMMUNICATIONS	F-10	B-3	W-12	W-12	W-12	W-12	C-1	B-8*		C-1	RB-1	AP-1	VWC-1	VWC-1	VWC-1	P-2, PL-1/2	220	LEUTENANT	F-10	B-3	W-3	W-3	W-3	W-3	C-1	B-8*	C-1	RB-2	VWC-6	VWC-6	VWC-6	VWC-6
106	COMM. EQUIPMENT	F-1	B-3	W-9	W-9	W-9	W-9	C-5		VCT-2	RB-2	P-1	P-1	P-1	P-1		221	MEN'S LOCKER ROOM	F-1	B-3	W-9	W-9	W-9	W-9	C-1C	B-8*	VCT-1	RB-1	P-3	P-3	P-3	P-3	
107	TOILET	F-2	B-2	W-9	W-9	W-9	W-9	C-1	B-8*	CT-1.2	CFT-1	P-3	P-3	P-3	P-3		222	SHOWER	F-2	B-2	W-7	W-7	W-7	W-7	C-4	B-8*	CFT-1.2	CT-1	CT-1.2	CT-1.2	CT-1.2	CT-1.2	
108	ELEV. MACH.	F-13	B-3	W-9	W-9	W-9	W-9	C-4	B-8*	VCT-2	RB-1	P-1	P-1	P-1	P-1		223	WOMEN'S TOILET	F-2	B-2	W-9	W-9	W-9	W-9	C-1C	B-8*	CFT-1.2	CT-1	P-3/CWT-1.2P-3/CWT-1.2P-3/CWT-1.2	P-3/CWT-1.2			
109	E-911	F-1	B-3	W-9	W-9	W-9	W-9	C-5		VCT-2	RB-1	P-1	P-1	P-1	P-1		224	WOMEN'S LOCKER ROOM	F-2	B-2	W-9	W-9	W-9	W-9	C-1C	B-8*	CFT-3.4	CFT-3	P-5/CWT-1.3P-5/CWT-1.3P-5/CWT-1.3	P-5/CWT-1.3	CWT-3/4 N SHOWER, PL-3/4		
110	PUBLIC INTERVIEW	F-10	B-3	W-13	W-13	W-13	W-13	C-1	B-8*	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	P-2, PL-1/2	225	CORRIDOR	F-10	B-3	W-11	W-11	W-11	W-11	C-1	B-8*	VCT-1.2.3.4	RB-1	MCP-1	MCP-1	MCP-1	MCP-1	
111	CORRIDOR	F-1	B-3	W-11	W-11	W-11	W-11	C-1	B-8*	VCT-1	RB-1	MCP-1	MCP-1	MCP-1	MCP-1		226	FRING RANGE	F-13	B-3	W-9	W-9	W-9	W-9	C-1	B-8*							
112	RECORDS	F-10	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	C-1	RB-3	P-6	P-6	P-6	P-6	PL-3 COUNTERTOP W/ WOOD VENEER FACED CABINETS P-7	227	FRING LINE	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-2.4	RB-1	P-4	P-4	P-4	P-4	
113	REPRO	F-1	B-3	W-11	W-11	W-11	W-11	C-1	B-8*	VCT-1.2	RB-1	MCP-1	MCP-1	MCP-1	MCP-1		228	CONTROL	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-2	RB-1	P-4	P-4	P-4	P-4	
114	ARCHIVE	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-1.2	RB-1	P-1	P-1	P-1	P-1		229	PREP	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-2	RB-1	P-4	P-4	P-4	P-4	
115	LEUTENANT	F-10	B-3	W-3	W-3	W-3	W-3	C-1	B-8*	C-1	RB-2	VWC-6	VWC-6	VWC-6	VWC-6		230	PASSAGE	F-1	B-3	W-11	W-11	W-11	W-11	C-1	B-8*	VCT-1	RB-1	MCP-1	MCP-1	MCP-1	MCP-1	
116	LIBRARY	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-1.2	RB-1	P-1	P-1	P-1	P-1		231	ELECTRICAL	F-13	B-3	W-9	W-9	W-9	W-9	C-5	B-8*							
117	STORAGE	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-2	RB-1	P-1	P-1	P-1	P-1		232	JAN/STORAGE	F-13	B-3	W-9	W-9	W-9	W-9	C-5	B-8*	VCT-2	RB-1	P-4	P-4	P-4	P-4	
118	VESTIBULE	F-15/14	B-2	W-3	W-3	W-3	W-3	C-1	B-8*	F-15	B-2	P-1	P-1	P-1	P-1	EM-1, STAINED WOODWORK	233	STORAGE	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-1	RB-1	P-4	P-4	P-4	P-4	
119	VESTIBULE	F-15/14	B-2	W-3	W-3	W-3	W-3	C-1	B-8*	F-15	B-2	P-1	P-1	P-1	P-1	EM-1, STAINED WOODWORK	234	RANGE OFFICE	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-1.2.3	RB-1	P-4	P-4	P-4	P-4	
120	COMMUNITY SERVICE	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	C-1	RB-1	VWC-7	VWC-7	VWC-7	VWC-7		235	STORAGE	F-1	B-3	W-9	W-9	W-9	W-9	C-5	B-8*	VCT-1	RB-1	P-4	P-4	P-4	P-4	
121	PASSAGE	F-1	B-3	W-11	W-11	W-11	W-11	C-1	B-8*	VCT-1.2.3	RB-1	MCP-1	MCP-1	MCP-1	MCP-1		236	FITNESS ROOM	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-1	RB-1	P-4	P-4	P-4	P-4	
122	SHIFT COMMAND	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-1.2.3	RB-1	MCP-1	MCP-1	MCP-1	MCP-1		11	STAR	F-3	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	RS-1	RB-1	P-1	P-1	P-1	P-1	
123	CLOSET	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-1	RB-1	P-1	P-1	P-1	P-1		12	STAR	F-3	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	RS-1	RB-1	P-1	P-1	P-1	P-1	
124	TOILET	F-2	B-2	W-9	W-9	W-9	W-9	C-1	B-8*	CFT-1.2	CFT-1	P-3	P-3	P-3	P-3			ELEVATOR	F-2	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-1						
125	TOILET	F-2	B-2	W-9	W-9	W-9	W-9	C-1	B-8*	CFT-3.4	CFT-1	P-5	P-5	P-5	P-5																		
126	ROLL CALL	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-1.2.3	RB-1	P-1	P-1	P-1	P-1																		
127	PASSAGE	F-1	B-3	W-11	W-11	W-11	W-11	C-1	B-8*	VCT-1	RB-1	MCP-1	MCP-1	MCP-1	MCP-1																		
128	REPORT PREP	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-1.2.3	RB-1	P-1	P-1	P-1	P-1																		
129	BREAK ROOM	F-1	B-3	W-9	W-9	W-9	W-9	C-1	B-8*	VCT-1.2.3	RB-1	P-1	P-1	P-1	P-1																		
130	CORRIDOR	F-1	B-3	W-11	W-11	W-11	W-11	C-1	B-8*	VCT-1.2.3	RB-1	MCP-1	MCP-1	MCP-1	MCP-1																		
131	MALE CELLS	F-8	B-8	W-10	W-10	W-10	W-10	C-6/3	B-8*	PR-1	PRB-1	P-1	P-1	P-1	P-1	INCLUDES CELL INTERIORS																	
132	FEMALE CELLS	F-8	B-8	W-10	W-10	W-10	W-10	C-6/3	B-8*	PR-1	PRB-1	P-1	P-1	P-1	P-1	INCLUDES CELL INTERIORS																	
133	JUNIOR CELLS	F-8	B-8	W-10	W-10	W-10	W-10	C-6/3	B-8*	PR-1	PRB-1	P-1	P-1	P-1	P-1	INCLUDES CELL INTERIORS																	
134	CLOSET	F-1	B-3	W-10	W-10	W-10	W-10	C-6	B-8*	VCT-1	RB-1	P-1	P-1	P-1	P-1																		
135	CLOSET	F-1	B-3	W-10	W-10	W-10	W-10	C-6	B-8*	VCT-1	RB-1	P-1	P-1	P-1	P-1																		
136	PASSAGE	F-1	B-3	W-10	W-10	W-10	W-10	C-6	B-8*	VCT-1	RB-1	P-1	P-1	P-1	P-1																		
137	SALLY PORT	F-13	-	W-10	W-10	W-10	W-10	C-5	B-8*																								
138	INTERVIEW	F-8	B-8	W-10	W-10	W-10	W-10	C-6	B-8*	PR-1	PRB-1	P-1	P-1	P-1	P-1																		
139	VISITORS	F-1	B-3	W-10	W-10	W-10	W-10	C-1	B-8*	VCT-1	RB-1	P-1	P-1	P-1	P-1																		
140	PRISONERS	F-8	B-8	W-10	W-10	W-10	W-10	C-6	B-8*	PR-1	PRB-1	P-1	P-1	P-1	P-1																		
141	PRISONER PROCESSING	F-1	B-8	W-10	W-10	W-10	W-10	C-6	B-8*	VCT-1	RB-1	P-1	P-1	P-1	P-1																		
142	HOLDING	F-1	B-8	W-10	W-10	W-10	W-10	C-4	B-8*	PR-1	PRB-1	P-1	P-1	P-1	P-1																		
143	PRISONER TOILET	F-8	B-8	W-10	W-10	W-10	W-10	C-6	B-8*	PR-1	PRB-1	P-1	P-1	P-1	P-1																		
144	EVIDENCE	F-1	B-3	W-9	W-9	W-9	W-9	C-5		VCT-1	RB-1	P-1	P-1	P-1	P-1																		
145	PARTS STORAGE	F-13	B-3	W-10	W-10	W-10	W-10	C-5	B-8*																								
146	PATROL STORAGE	F-1	B-3	W-9	W-9	W-9	W-9	C-5		VCT-1	RB-1	P-1	P-1	P-1																			

FINISH PLAN LEGEND

-  CARPET TYPE 1
-  POURED RESIN FLOORING
-  VINYL COMPOSITION TILE
-  HARDENED CONCRETE
-  RUBBER TILE / RISERS / LANDINGS
-  CERAMIC TILE
-  ENTRY MAT
-  DIMENSION STONE TILE



MAIN LEVEL

SCALE: 1/16"=1'-0"

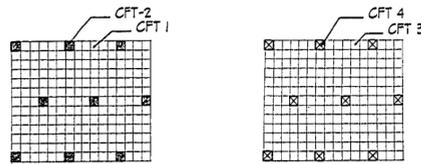
CERAMIC TILE PATTERNS

ROOMS 102, 107, 124, 202, 216, 222, 223 ROOMS 103, 125, 224



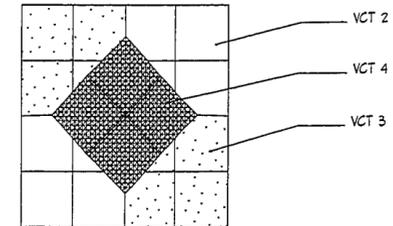
WAINSCOT BORDERS

NOTE:
TOP OF BORDER SHALL BE 5' AFF.
TOP ROW OF WAINSCOT SHALL BE COMPOSED OF BULLNOSE TRIM PIECES



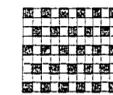
CERAMIC TILE FLOOR PATTERNS

VCT FLOOR PATTERNS



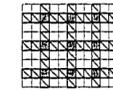
VCT INSET PATTERN

CORRIDORS 130 AND 225



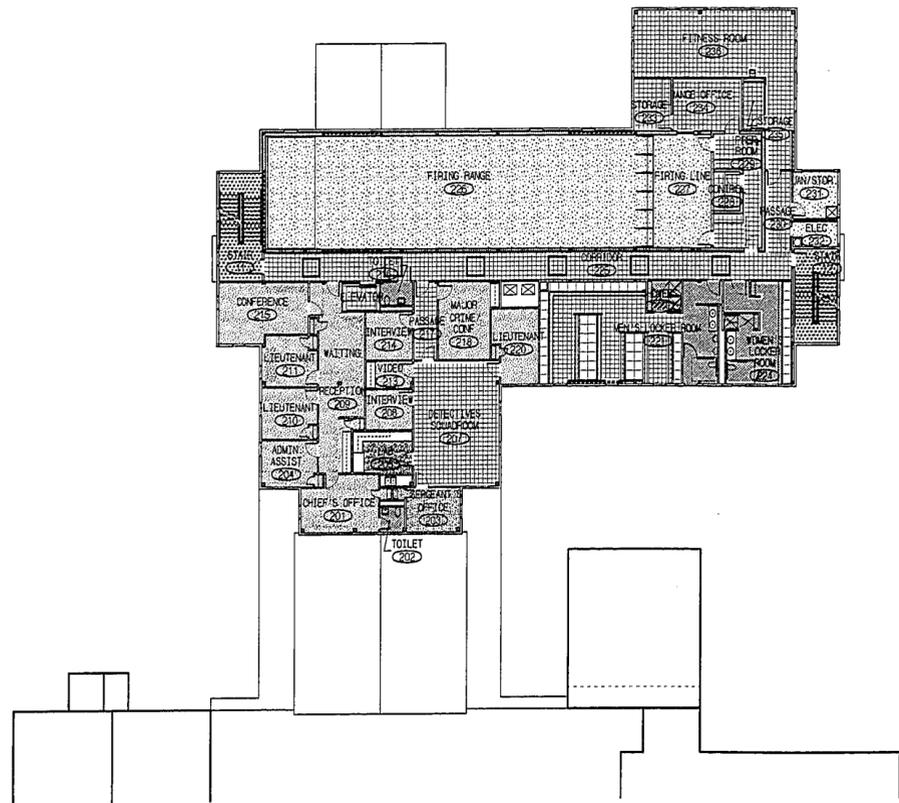
VCT FLOOR PATTERN 1

ROOMS 113, 114, 115, 116, 203



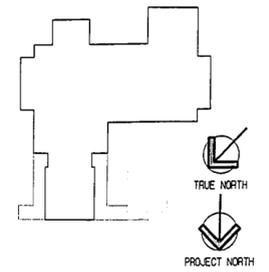
VCT FLOOR PATTERN 2

ROOMS 120, 122, 126, 128, 129, 130, 201, 234



UPPER LEVEL

SCALE: 1/16"=1'-0"



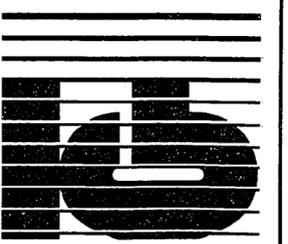
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DATE	MARK	DESCRIPTION
6/25/98		ISSUED FOR REBD
6/25/98		ISSUED FOR REBD

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS R001 & R002



WESTFORD POLICE FACILITY
53 MAIN STREET
WESTFORD MASSACHUSETTS 01886

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KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

416 State Rd. New Britain, Connecticut 06000-2590 B503 229-0361
Drawn by: PM Scale: AS NOTED

OVERALL FINISH FLOOR PLANS

Project no. 16071 Drawing no. Date MARCH 23, 1998 **A14.02**

1450-69

GENERAL NOTES	
1.	HVAC WORK IS INDICATED DIAGRAMMATICALLY. EXACT LOCATIONS OF ALL COMPONENTS ARE TO BE DETERMINED IN THE FIELD AND BY THE ACTUAL BUILDING CONDITIONS. EXISTING DUCTS, PIPING OR EQUIPMENT INTERFERING WITH OTHER INSTALLATIONS SHALL BE RELOCATED AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER. EXACT LOCATIONS MUST HAVE THE APPROVAL OF THE ARCHITECT.
2.	ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES BEFORE ANY INSTALLATION IS MADE.
3.	ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH STATE CODES, MANUFACTURER'S APPROVED PUBLISHED LITERATURE, AND AUTHORITIES HAVING JURISDICTION.
4.	INSTALLATION OF EQUIPMENT SHALL PERMIT ACCESSIBILITY FOR SERVICE AND/OR REPLACEMENT.
5.	ALL CEILING MOUNTED EQUIPMENT SHALL BE INSTALLED IN SUCH A WAY THAT LIGHTS, PIPING, AND DUCTWORK DO NOT BLOCK ACCESS TO UNITS AND RELATED ACCESSORIES.
6.	HVAC CONTRACTOR SHALL COORDINATE ALL WALL, CEILING, FLOOR, ROOF AND BEAM PENETRATIONS WITH ARCHITECT AND STRUCTURAL ENGINEER.
7.	ALL DUCT SIZES SHOWN ARE NET INSIDE CLEAR DIMENSIONS.
8.	PROVIDE VOLUME DAMPERS AT EVERY MAIN BRANCH TAKE-OFF AND AS INDICATED AND IN SUCH OTHER LOCATIONS WHERE REQUIRED TO PROPERLY BALANCE THE SYSTEM.
9.	PROVIDE INSTRUMENT TEST HOLES WITH CAPS IN AIR DISTRIBUTION SYSTEMS AS REQUIRED TO BALANCE SYSTEM.
10.	HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHEETMETAL TRANSITIONS AT AIR TERMINAL UNITS, FANS, COILS, AND OTHER SIMILAR HVAC EQUIPMENT.
11.	ALL OPEN ENDED DUCTS IN THE CEILING PLENUM SHALL BE UNOBSTRUCTED FOR A MINIMUM DISTANCE OF 24" FROM THE OPENING TO ALLOW FREE AIR FLOW AND SHALL HAVE 3/4" WIRE MESH SCREENING.
12.	ALL TRANSFER DUCTS SHALL BE INTERNALLY LINED.
13.	ALL MISCELLANEOUS STRUCTURAL SUPPORTS REQUIRED FOR HVAC EQUIPMENT INSTALLATION SHALL BE PROVIDED BY HVAC SUBCONTRACTOR.
14.	EXACT LOCATION OF CEILING DIFFUSERS, GRILLES AND REGISTERS TO BE DETERMINED BY ARCHITECTURAL REFLECTED CEILING PLAN.
15.	INSTALL ALL PIPING BELOW DUCTWORK UNLESS CLEARANCE CONDITION REQUIRES PIPING TO BE ABOVE.
16.	EXACT ELEVATION FOR SIDE WALL DIFFUSERS, REGISTERS AND GRILLES SHALL BE APPROVED BY THE ARCHITECT BEFORE INSTALLATION.
17.	UNLESS OTHERWISE NOTED, ALL PIPING RUNOUTS SHALL BE 3/4"
18.	ALL EXPOSED EQUIPMENT (REGISTERS, UNIT HEATERS, ETC.) SHALL HAVE COLORS SELECTED BY THE ARCHITECT, UNLESS NOTED OTHERWISE.
19.	HVAC SUBCONTRACTOR SHALL BLANK OFF AND INSULATE ALL UNUSED LOUVER AREA.
20.	PITCH AIR INTAKE PLENUMS AND PROVIDE DRAIN TO NEAREST FLOOR DRAIN.
21.	ALL REGISTERS, GRILLES AND DIFFUSERS LOCATED IN WALLS NEAR FLOOR SHALL BE HEAVY-DUTY TYPE DESIGNED TO WITHSTAND RUGGED IMPACT. REFER TO SCHEDULE. THE SECTION OF DUCTWORK BEHIND THE AIR DEVICE SHALL BE PAINTED FLAT BLACK.
22.	EXACT LOCATION OF THERMOSTAT TO BE COORDINATED WITH FINAL LOCATION OF WALL MOUNTED ARCHITECTURAL AND ELECTRICAL EQUIPMENT.
23.	ALL MAIN BRANCH PIPES FROM RISERS SHALL HAVE ISOLATION VALVES NEAR SHAFTS. PROVIDE SHUT-OFF VALVES AT EACH SUPPLY BRANCH AND COMBINATION BALANCING SHUT-OFF VALVE AT EACH RETURN BRANCH.
24.	PROVIDE FLEXIBLE DUCT CONNECTIONS ON INTAKES AND DISCHARGES OF ALL AIR HANDLING UNITS.
25.	REFRIGERATION PIPING SIZED BY UNIT MANUFACTURER. SUBMIT CALCULATIONS TO ENGINEER FOR APPROVAL.
26.	DUCT MOUNTED SMOKE DETECTOR - FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR, INSTALLED BY THE HVAC CONTRACTOR.
27.	ROOF OPENINGS SHALL BE SIZED FROM APPROVED SHOP DRAWINGS.
28.	ALL FLOOR MOUNTED MECHANICAL EQUIPMENT, BOILERS, PUMPS, AIR HANDLERS, ETC. SHALL HAVE A CONCRETE PAD 4" HIGH AND 6" BEYOND EQUIPMENT FOOT PRINT ON ALL FOUR SIDES. CONCRETE PADS SHALL BE SIZE FROM APPROVED SHOP DRAWINGS.
29.	ALL DAMPER MOTORS SHALL BE 24 VOLT.
30.	PROVIDE DUCT MOUNTED SMOKE DAMPERS AT ALL SMOKE BARRIERS. REFER TO ARCH. DRAWINGS FOR LOCATION. SMOKE DAMPERS SHALL BE CLOSED AND ASSOCIATED EXH. FAN OR AHU SHALL BE SHUT-DOWN UPON DETECTION OF SMOKE AS SENSED BY AREA SMOKE DETECTORS. DAMPERS SHALL BE RUSKIN TYPE SD 60 OR EQUAL.

ABBREVIATIONS	
ACD	AUTOMATIC CONTROL DAMPER
AD	ACCESS DOOR
AFT	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
ARCH	ARCHITECT
ATC	AUTOMATIC TEMPERATURE CONTROL
BDD	BACKDRAFT DAMPER
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
BOD	BOTTOM OF DUCT
CAP	CAPACITY
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CO	CLEANOUT
CP	CONTROL PANEL
DIA	DIAMETER
DB	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DN	DOWN
DWG	DRAWING
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EFF	EFFICIENCY
ELV	ELEVATION
ER	EXHAUST REGISTER
ESP	EXTERNAL STATIC PRESSURE
EWI	ENTERING WATER TEMPERATURE
EXH	EXHAUST
FA	FREE AREA
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FPI	FINS PER INCH
PFM	FEET PER MINUTE
FT	FEET
FTR	FINNED TUBE RADIATION
GAL	GALLONS
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HZ	HERTZ
IN	INCHES
KE	KITCHEN EXHAUST
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LD	LINEAR DIFFUSER
LF	LINEAR FEET
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BTU'S PER HOUR
MCC	MOTOR CONTROL CENTER
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIAMETER
Ø	PHASE
PD	PRESSURE DROP
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
R	RETURN
RA	RETURN AIR
RG	RETURN GRILLE
ROOM	ROOM
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
S	SUPPLY
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
SCT	SATURATED CONDENSING TEMPERATURE
SD	SMOKE DAMPER
SF	SQUARE FEET
SFD	SMOKE/FIRE DAMPER
SP	STATIC PRESSURE
SQ	SQUARE
SR	SUPPLY REGISTER
SST	SATURATED SUCTION TEMPERATURE
STL	STEEL
TYP	TYPICAL
UC	UNDERCUT DOOR
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W/O	WITHOUT
WB	WET-BULB TEMPERATURE
WG	WATER GAUGE
WMS	WIRE MESH SCREEN

PIPING LEGEND	
	CONDENSATE DRAIN
	CHEMICAL FEED
	CHILLED WATER SUPPLY
	CHILLED WATER RETURN
	COLD WATER
	EQUIPMENT DRAINS
	EMERGENCY GENERATOR EXHAUST
	FUEL OIL SUPPLY
	FUEL OIL RETURN
	FUEL OIL VENT
	HOT WATER SUPPLY
	HOT WATER RETURN
	HOT/CHILLED WATER SUPPLY
	HOT/CHILLED WATER RETURN
	REFRIGERANT LIQUID
	REFRIGERANT SUCTION
	VENTS

EQUIPMENT TAG SYMBOLS & ABBREVIATIONS	
	EQUIPMENT NOT REQUIRING ELECTRIC SERVICE
	EQUIPMENT REQUIRING ELECTRIC SERVICE
	FTR-1 MBH LENGTH
	FTR-1 LENGTH
	AIR COOLED CONDENSING UNIT
	AIR HANDLING UNIT
	AIR FILTER
	AIR SEPARATOR
	BOILER
	COOLING COIL
	CHILLER
	COOLING TOWER
	CABINET UNIT HEATER
	CONVECTOR
	EXHAUST FAN
	EXHAUST ROOF VENT
	EXPANSION TANK
	ELECTRIC UNIT HEATER
	FAN COIL UNIT
	FLOW MEASURING STATION
	FIN-TUBE RADIATION
	HEATING COIL
	HEAT PUMP
	HEAT RECOVERY UNIT
	HEATING AND VENTILATING UNIT
	INTAKE ROOF VENT
	MAKEUP AIR UNIT
	PUMP
	PACKAGED TERMINAL AIR CONDITIONER
	RETURN/EXHAUST FAN
	RETURN FAN
	ROOFTOP UNIT
	SOUND ATTENUATOR
	SUPPLY FAN
	TERMINAL UNIT
	UNIT HEATER
	UNIT VENTILATOR

VALVES AND ACCESSORIES	
	GATE VALVE
	BALL VALVE
	BALL VALVE WITH HOSE BIBB, CAP & CHAIN
	BUTTERFLY VALVE
	GLOBE VALVE
	PRESSURE REDUCING VALVE (SELF-CONTAINED)
	BACKPRESSURE REGULATOR (SELF-CONTAINED)
	CHECK VALVE
	CHECK VALVE
	STRAINER W/BALL VALVE, HOSE BIBB & CAP (GATE VALVE FOR STEAM)
	ANGLE VALVE
	BUTTERFLY VALVE, TWO POSITION ACTUATOR
	BALL VALVE, TWO POSITION ACTUATOR
	SOLENOID VALVE
	TWO-WAY AUTOMATIC CONTROL VALVE, MODULATING ACTUATOR
	TWO-WAY AUTOMATIC CONTROL VALVE, TWO POSITION ACTUATOR
	THREE-WAY AUTOMATIC CONTROL VALVE, MODULATING ACTUATOR
	THREE-WAY AUTOMATIC CONTROL VALVE, TWO POSITION ACTUATOR
	AUTOMATIC FLOW CONTROL VALVE (PRESSURE INDEPENDENT)
	COMBINATION FLOWMETER/SHUT OFF/BALANCING VALVE
	FLOW SWITCH
	SAFETY RELIEF VALVE
	UNION OR FLANGE (SEE SPEC)
	BLIND FLANGE
	END CAP
	VACUUM BREAKER
	PRESSURE/TEMPERATURE WELL
	AUTOMATIC AIR VENT WITH ISOLATION VALVE
	MANUAL AIR VENT
	THERMOSTATIC AIR VENT (STEAM ONLY)
	STEAM TRAP
	REDUCER (ECCENTRIC-FLAT ON BOTTOM OR FLAT ON TOP)
	REDUCER (CONCENTRIC)
	FLEXIBLE CONNECTION
	EXPANSION JOINT
	PIPE GUIDE
	ANCHOR
	RISE (SINGLE LINE - PLAN VIEW)
	DROP (SINGLE LINE - PLAN VIEW)
	TOP TAKEOFF
	BOTTOM TAKEOFF
	PIPE BREAK (SINGLE LINE)
	DIRT LEG
	CLEAN-OUT FOR CONDENSATE DRAIN
	RISE (DOUBLE LINE - PLAN VIEW)
	HEAT RECOVERY UNIT
	DROP (DOUBLE LINE - PLAN VIEW)
	PIPE BREAK (DOUBLE LINE)
	DIRECTION OF FLOW IN PIPE
	PITCH PIPE UP IN DIRECTION OF FLOW
	PITCH PIPE DOWN IN DIRECTION OF FLOW

DUCTWORK LEGEND/SYMBOLS	
	RECTANGULAR DUCTWORK - FIRST DIMENSION IS SIDE SHOWN (IN.) FREE AREA
	ROUND DUCT DIAMETER (IN.)
	SUPPLY/OUTSIDE AIR DUCTWORK UP
	SUPPLY/OUTSIDE AIR DUCTWORK DOWN
	RETURN/EXHAUST AIR DUCTWORK UP
	RETURN/EXHAUST AIR DUCTWORK DOWN
	FLEXIBLE CONNECTION
	ACOUSTICALLY LINED DUCTWORK
	CHANGE OF ELEVATION IN DIRECTION OF AIRFLOW (R)RISE,(D)DROP
	RECTANGULAR DUCT TRANSITION
	RECTANGULAR TO SINGLE LINE TRANSITION
	RECTANGULAR TO ROUND TRANSITION
	MITERED ELBOW W/ TURNING VANES
	SUPPLY AIR DIFFUSER BELOW DUCT
	RETURN OR EXHAUST REGISTER BELOW DUCT
	ROUND DUCT UP
	SUPPLY AIR DIFFUSER (SQUARE OR RECTANGULAR)
	SUPPLY AIR DIFFUSER (LINEAR)
	RETURN AIR GRILLE OR REGISTER
	MANUAL VOLUME DAMPER
	SELF-CLOSING FIRE DAMPER W/ACCESS DOOR
	SMOKE DAMPER W/ACCESS DOOR
	AUTOMATIC CONTROL DAMPER
	COMBINATION SMOKE/FIRE DAMPER W/ACCESS DOOR
	SUPPLY AIR BLOW DIRECTION
	EXHAUST / RETURN / OR INTAKE
	UNDERCUT DOOR
DIFFUSER/REGISTER TAG	
	TYPE-BLOW (CD-1 = CEILING DIFFUSER, 1 WAY BLOW)
	CFM
	SIZE
	INLINE CENTRIFUGAL FAN
	ROOF FAN OR VENT
	TERMINAL UNIT (VAV BOX)
	EXHAUST FAN (SHOWN ON ROOF PLAN)
	EXHAUST FAN (SHOWN ON FLOOR PLAN)

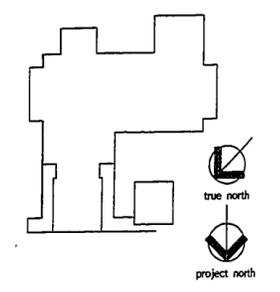
JOB SPECIFIC NOTES	
1.	ALTERNATE 1: AIR HANDLING UNIT # AHU-4, SERVING THE PISTOL RANGE, INCLUDES ALL ASSOCIATED SUPPLY, RETURN, OUTDOOR AIR AND EXHAUST AIR DUCTWORK, ALL PIPING, ALL DUCT AND PIPING INSULATION, ALL RELATED DIFFUSERS AND REGISTERS AND TEMPERATURE CONTROLS IS INCLUDED AS ALTERNATE NO. 1.

INSTRUMENTATION	
	LOCAL PRESSURE GAUGE W/SHUTOFF AND SNUBBER
	DIFFERENTIAL PRESSURE GAUGE W/SHUTOFFS AND SNUBBERS
	LOCAL TEMPERATURE INDICATION
	HEATING ONLY THERMOSTAT
	COOLING ONLY THERMOSTAT
	HEATING/COOLING THERMOSTAT
	TEMPERATURE TRANSMITTER
	PRESSURE TRANSMITTER
	DIFFERENTIAL PRESSURE TRANSMITTER
	SMOKE DETECTOR
	HEAT DETECTOR
	FLOW TRANSMITTER
	STATIC PRESSURE SENSOR
	HUMIDITY SENSOR OR HUMIDISTAT

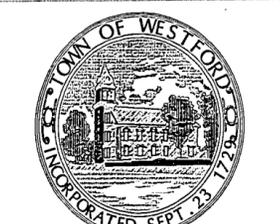
FLOW DIAGRAM EQUIPMENT SYMBOLS	
	CENTRIFUGAL PUMP
	SUCTION DIFFUSER W/STRAINER
	EXPANSION TANK
	AIR SEPARATOR

SINGLE LINE DUCTWORK	
	DUCTWORK
	SUPPLY/OUTSIDE AIR DUCTWORK UP
	SUPPLY/OUTSIDE AIR DUCTWORK DOWN
	RETURN/EXHAUST AIR DUCTWORK UP
	RETURN/EXHAUST AIR DUCTWORK DOWN
	RECTANGULAR DUCTWORK W/ ACOUSTICAL LINING
	FLEXIBLE CONNECTION
	DUCT TRANSITION
	90° TAKE OFF
	90° ELBOW
	BULLHEAD SPLIT SUPPLY/RETURN

SINGLE LINE DUCTWORK	
	DUCTWORK
	SUPPLY/OUTSIDE AIR DUCTWORK UP
	SUPPLY/OUTSIDE AIR DUCTWORK DOWN
	RETURN/EXHAUST AIR DUCTWORK UP
	RETURN/EXHAUST AIR DUCTWORK DOWN
	RECTANGULAR DUCTWORK W/ ACOUSTICAL LINING
	FLEXIBLE CONNECTION
	DUCT TRANSITION
	90° TAKE OFF
	90° ELBOW
	BULLHEAD SPLIT SUPPLY/RETURN

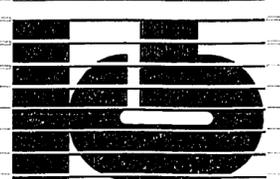


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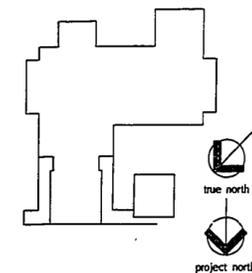


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GENERAL NOTES, LEGEND, SYMBOLS
 Project no. 9602.00 Drawing no. H0.01
 Date MARCH 23, 1998





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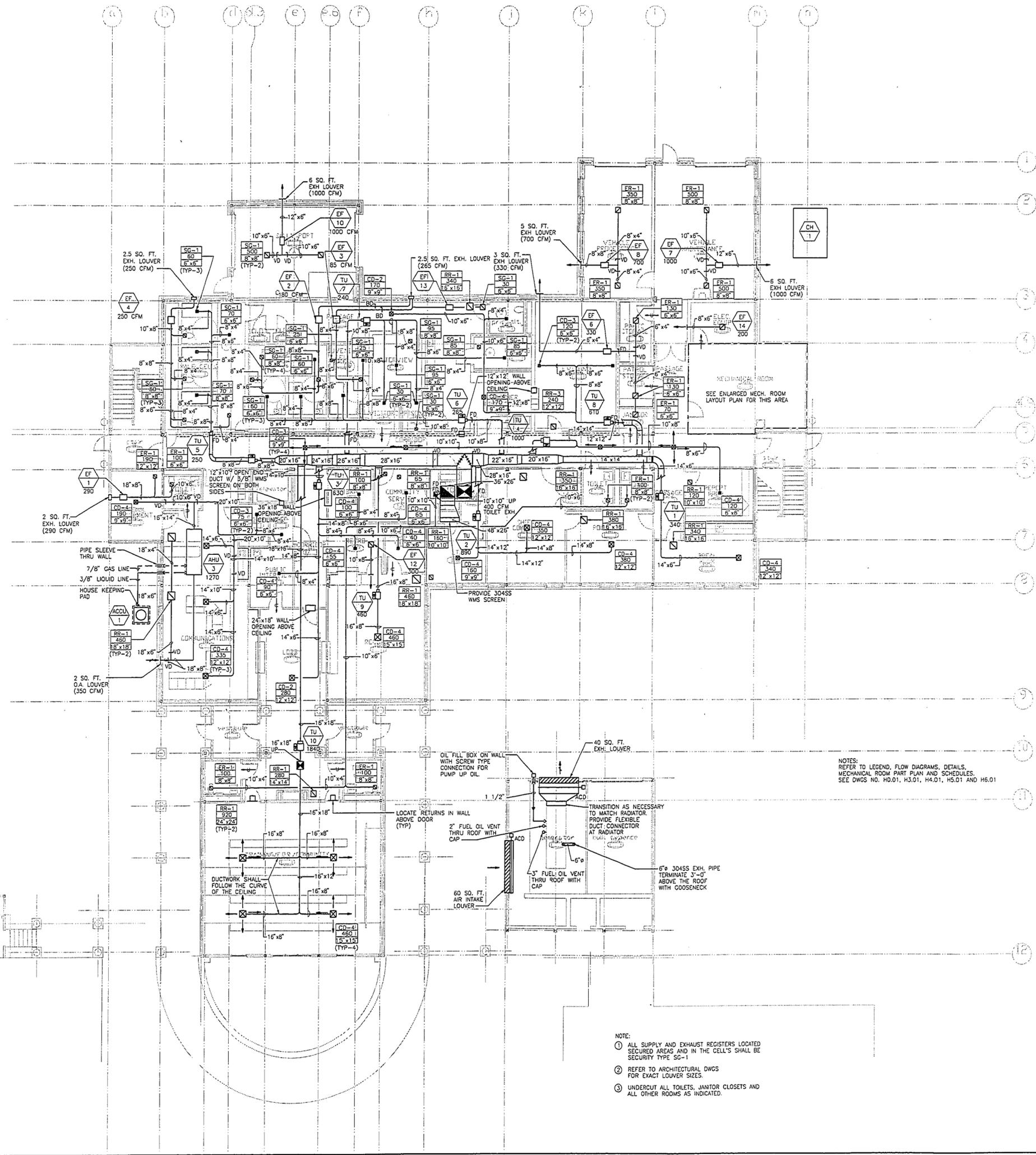
**MAIN LEVEL
DUCTWORK**

Project no. 952500

Drawing no.

H1.01

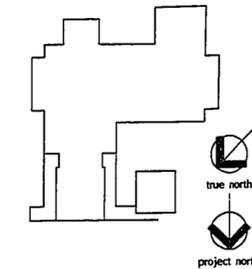
Date: MARCH 23, 1995



NOTES:
REFER TO LEGEND, FLOW DIAGRAMS, DETAILS,
MECHANICAL ROOM PART PLAN AND SCHEDULES.
SEE DWGS NO. H0.01, H3.01, H4.01, H5.01 AND H6.01

NOTE:
① ALL SUPPLY AND EXHAUST REGISTERS LOCATED
SECURED AREAS AND IN THE CELL'S SHALL BE
SECURITY TYPE SG-1
② REFER TO ARCHITECTURAL DWGS
FOR EXACT LOUVER SIZES.
③ UNDERCUT ALL TOILETS, JANITOR CLOSETS AND
ALL OTHER ROOMS AS INDICATED.

1450-63



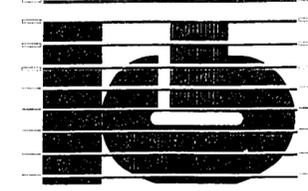
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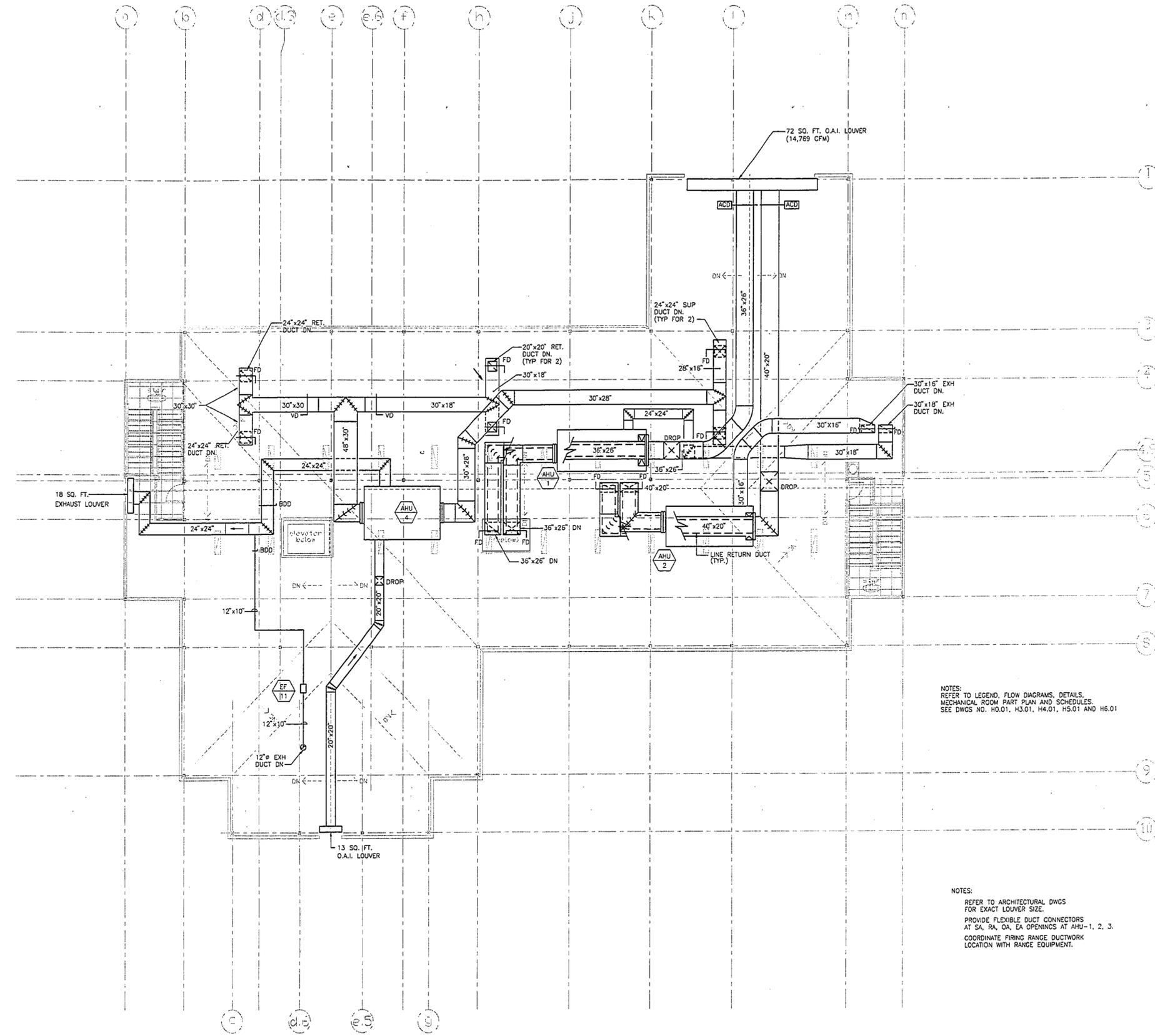
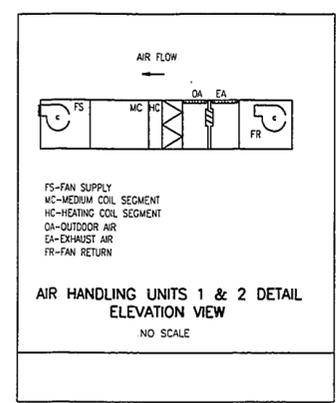


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**ATTIC LEVEL
DUCTWORK**

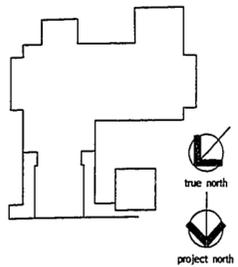
Project no. 962500 Drawing no. H1.03
Date MARCH 23, 1998



NOTES:
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MECHANICAL ROOM PART PLAN AND SCHEDULES.
SEE DWGS NO. H0.01, H3.01, H4.01, H5.01 AND H6.01

NOTES:
REFER TO ARCHITECTURAL DWGS
FOR EXACT LOUVER SIZE.
PROVIDE FLEXIBLE DUCT CONNECTORS
AT SA, RA, OA, EA OPENINGS AT AHU-1, 2, 3.
COORDINATE FIRING RANGE DUCTWORK
LOCATION WITH RANGE EQUIPMENT.

1450-65



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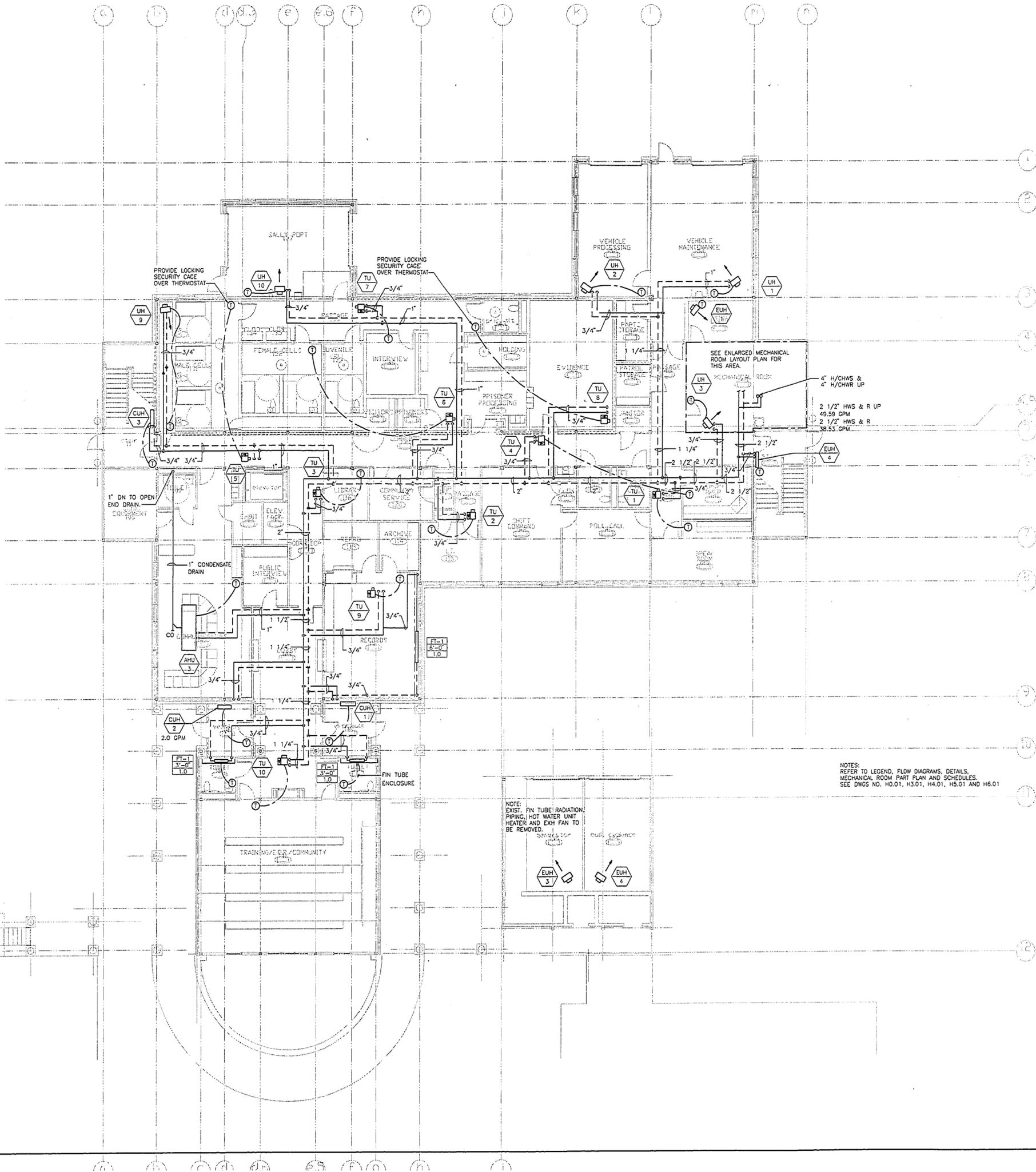
**MAIN LEVEL
PIPING**

Project no. 9625.00

Drawing no.

H2.01

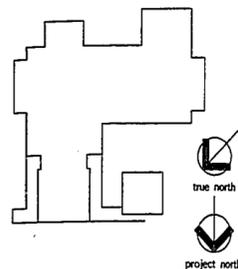
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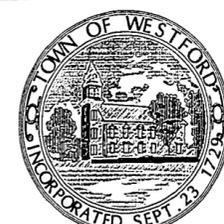
NOTES:
REFER TO LEGEND, FLOW DIAGRAMS, DETAILS,
MECHANICAL ROOM PART PLAN AND SCHEDULES.
SEE DWGS NO. H0.01, H3.01, H4.01, H5.01 AND H6.01

NOTE:
EXIST. FIN TUBE RADIATION
PIPING, HOT WATER UNIT
HEATER AND EXH FAN TO
BE REMOVED.

1450 666



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NOTES:
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SEE DWGS NO. H0.01, H3.01, H4.01, H5.01 AND H6.01

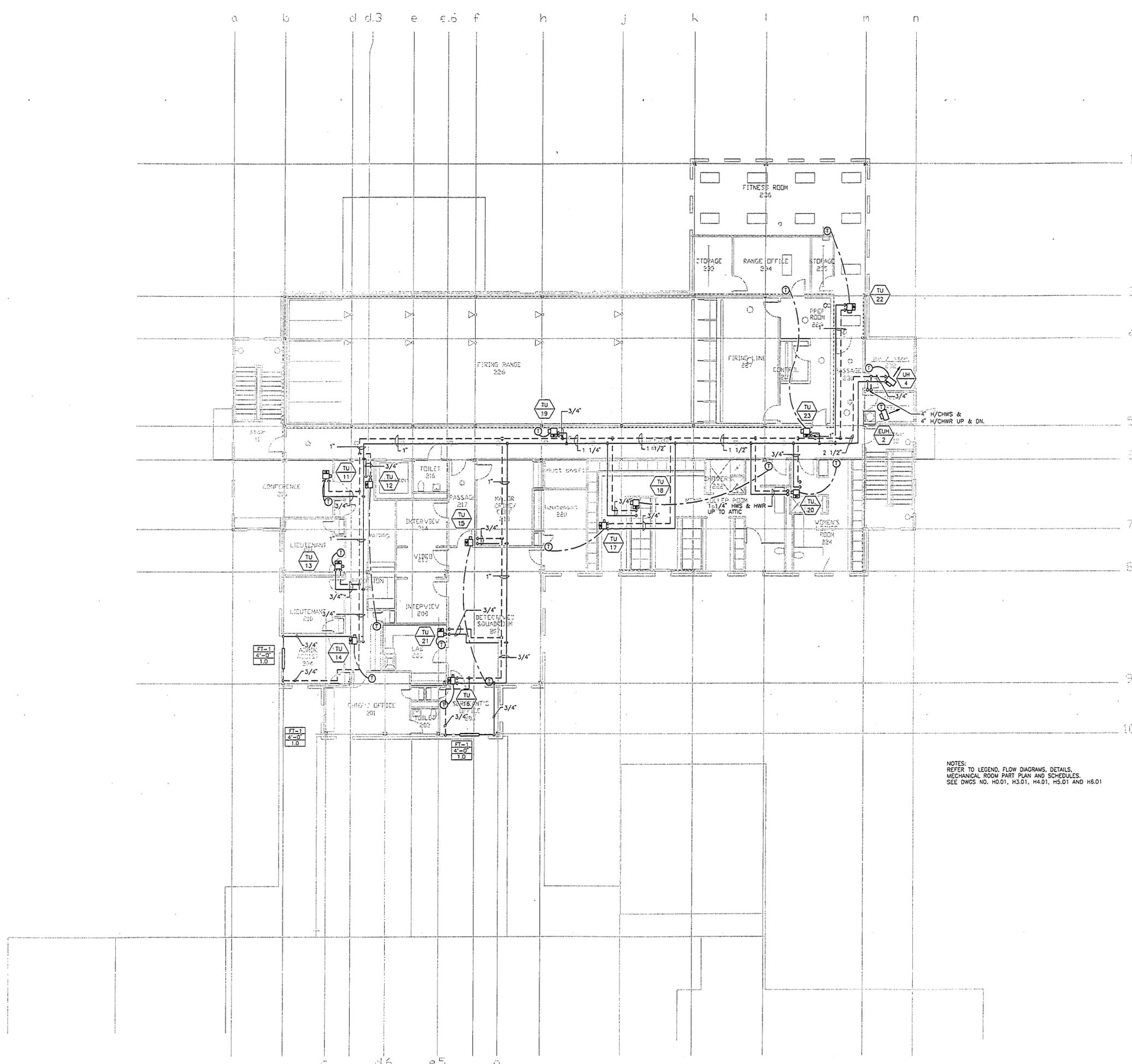


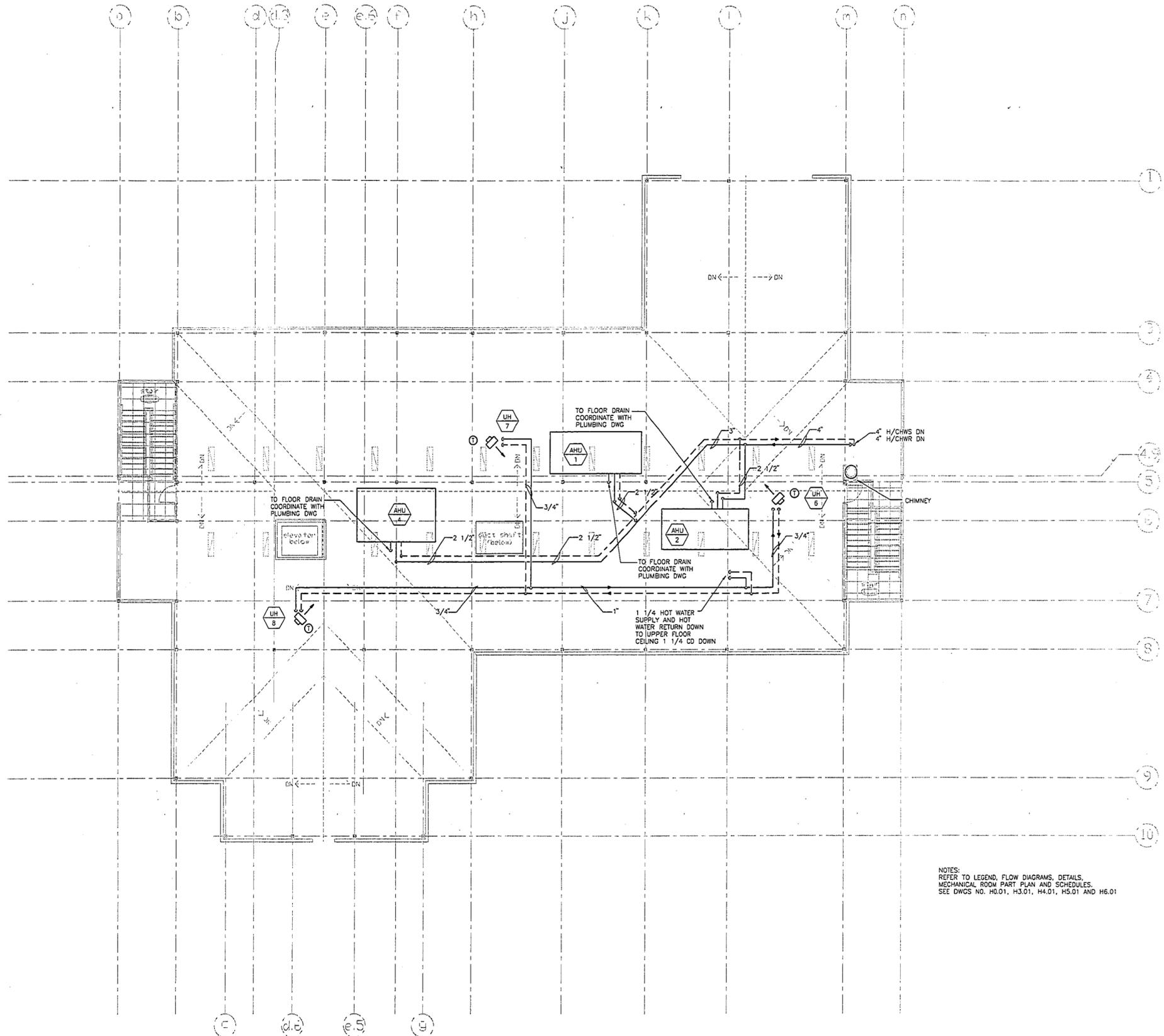
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ARCHITECTS**

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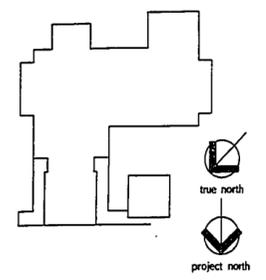
**UPPER LEVEL
PIPING**

Project no. 9925.00 Date: MARCH 23, 1998
Drawing no. H2.02





NOTES:
 REFER TO LEGEND, FLOW DIAGRAMS, DETAILS,
 MECHANICAL ROOM PART PLAN AND SCHEDULES.
 SEE DWGS NO. H3.01, H3.01, H4.01, H5.01 AND H6.01



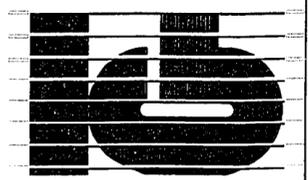
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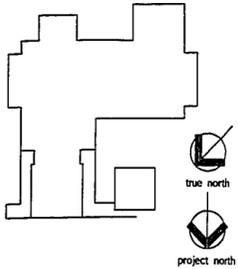
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**ATTIC LEVEL
 PIPING**



Project no. 960500 Drawing no. H2.03
 Date: MARCH 23, 1998

1458-68



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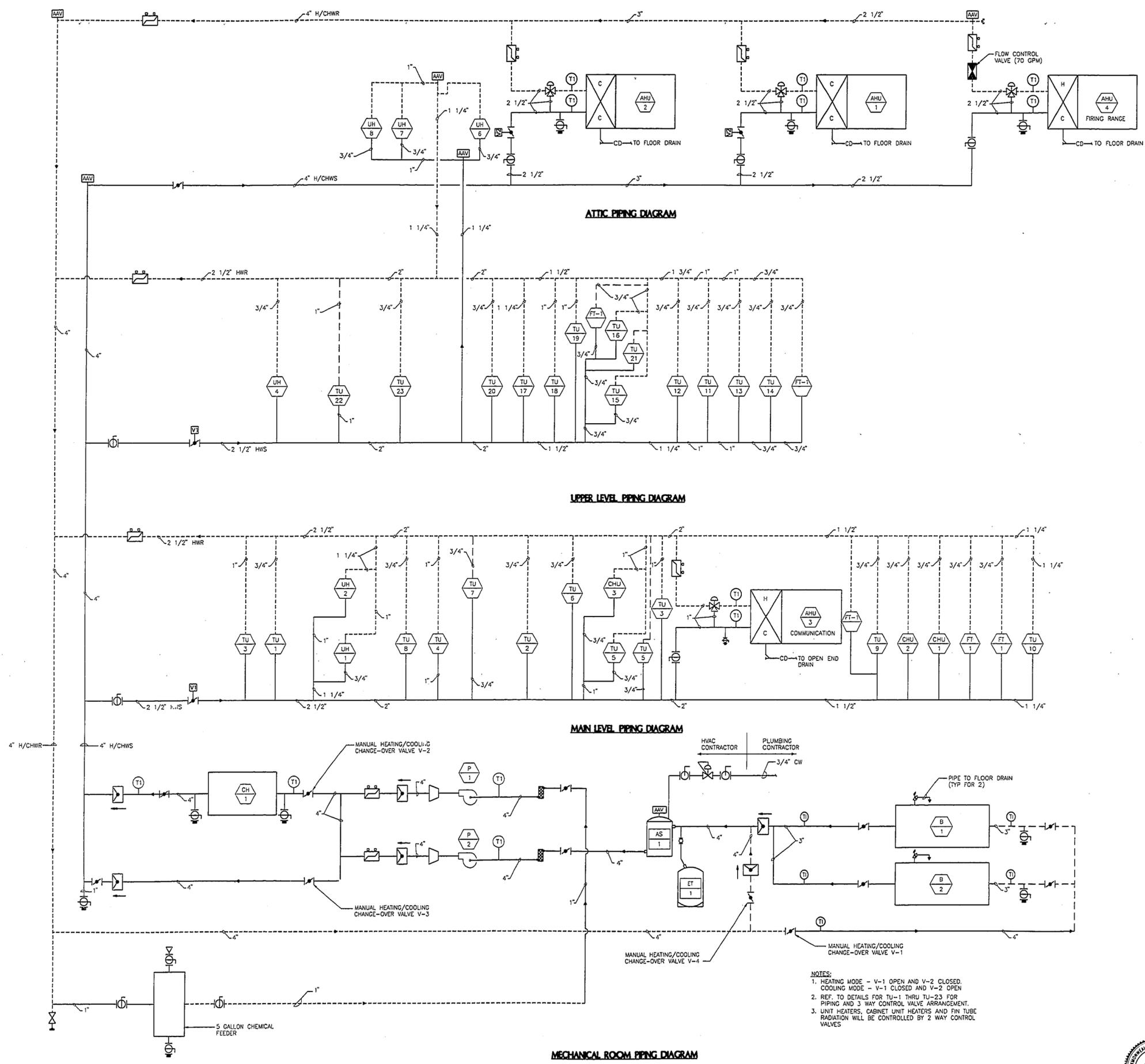


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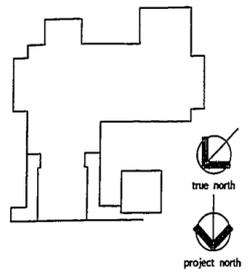
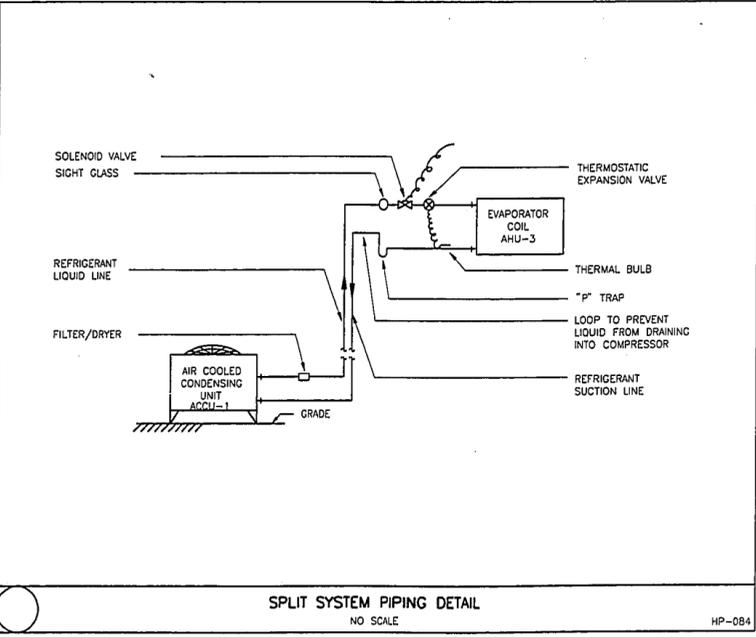
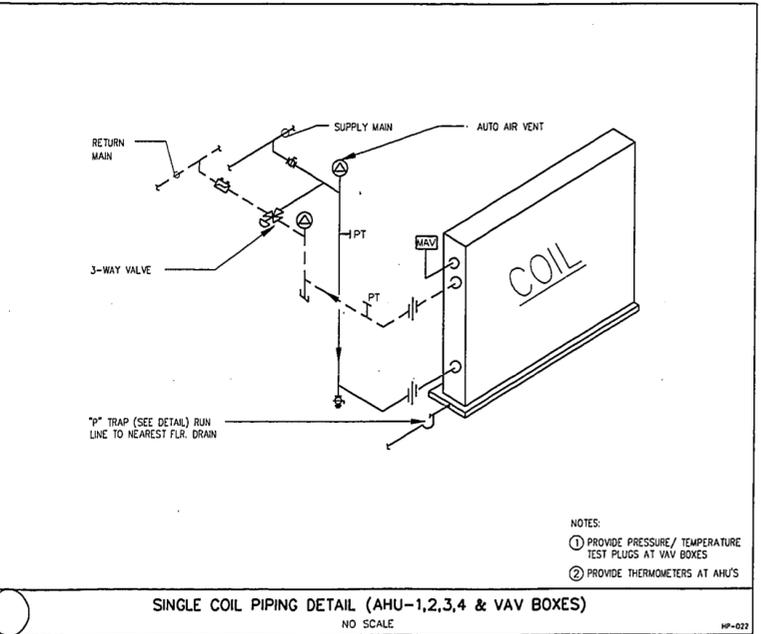
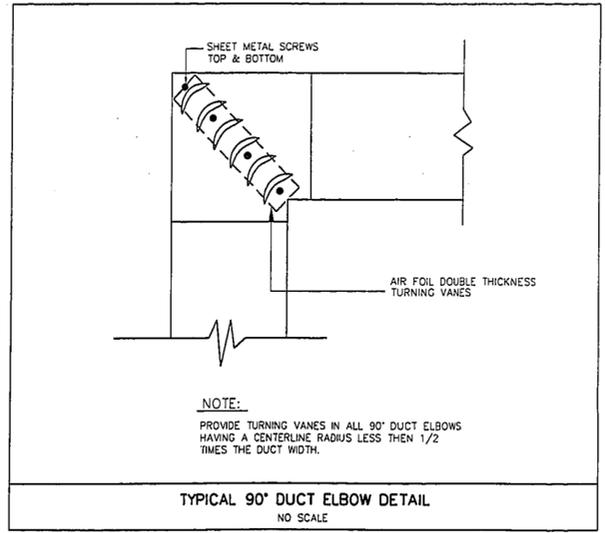
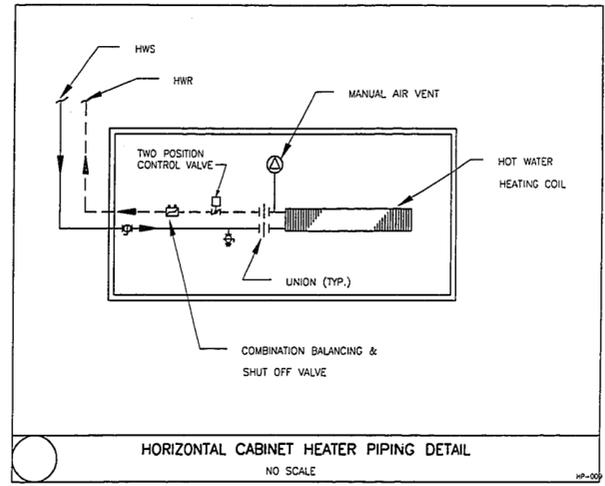
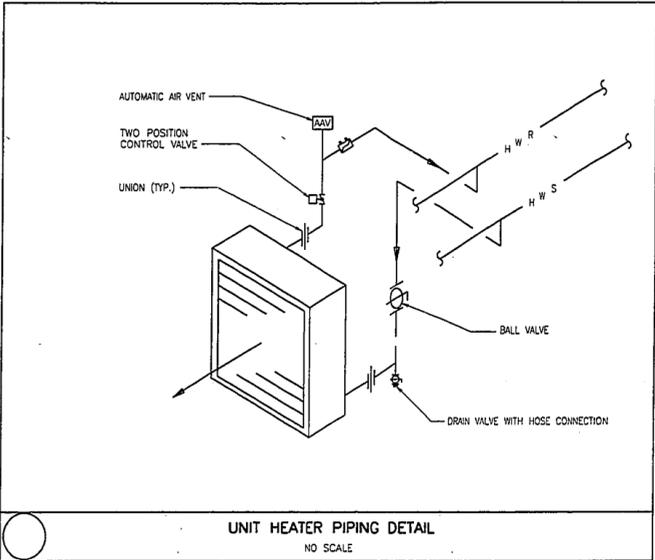
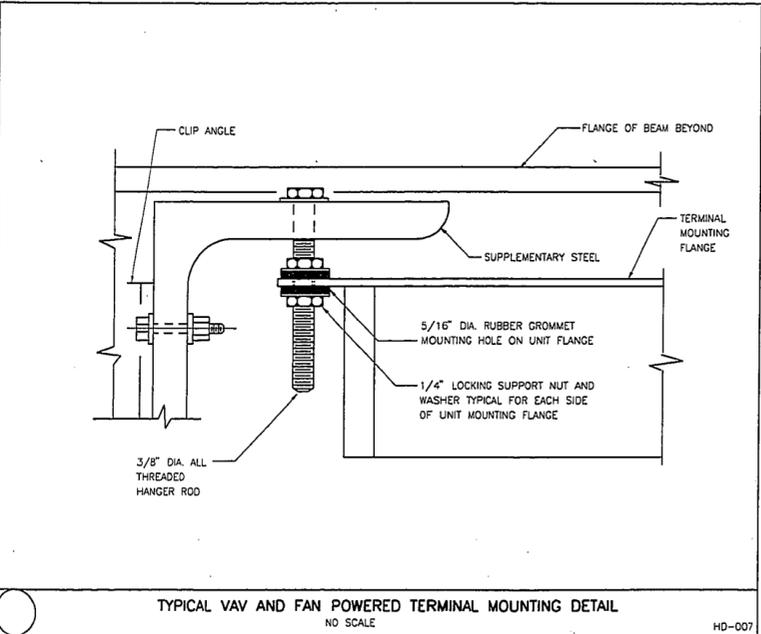
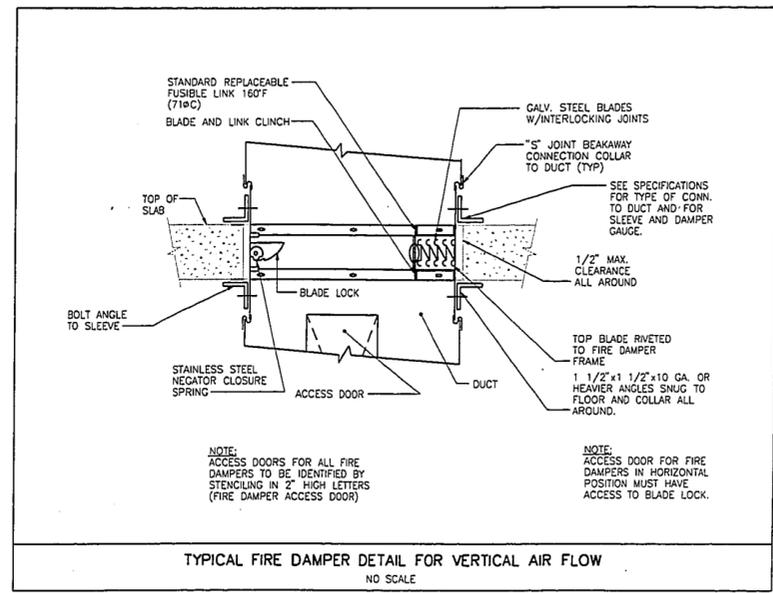
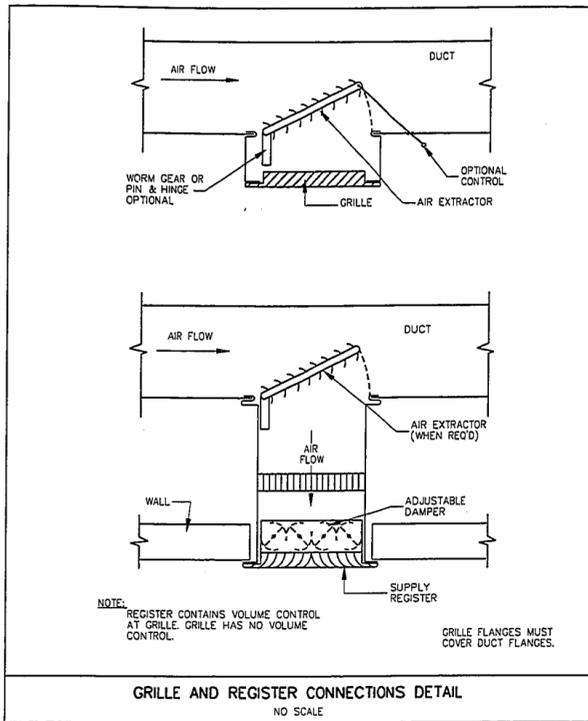
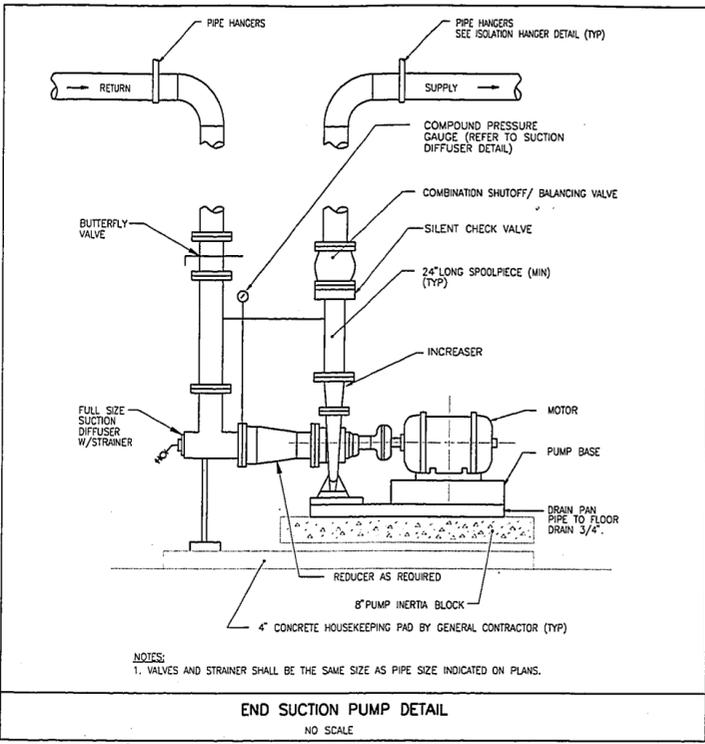
**FLOW
DIAGRAMS**

Project no. 9629.00 Drawing no. **H3.01**
Date: MAR-11-98



- NOTES:**
1. HEATING MODE - V-1 OPEN AND V-2 CLOSED.
COOLING MODE - V-1 CLOSED AND V-2 OPEN
 2. REF. TO DETAILS FOR TU-1 THRU TU-23 FOR PIPING AND 3 WAY CONTROL VALVE ARRANGEMENT.
 3. UNIT HEATERS, CABINET UNIT HEATERS AND FIN TUBE RADIATION WILL BE CONTROLLED BY 2 WAY CONTROL VALVES



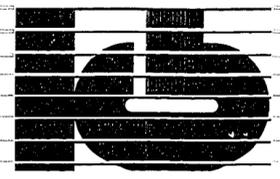


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DETAILS



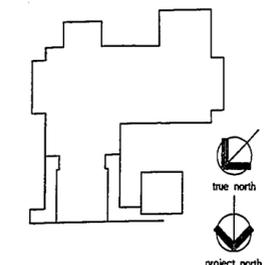
Project no. 9825.00

Drawing no.

H4.01

Date: MARCH 23, 1998

1450-70



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**WESTFORD
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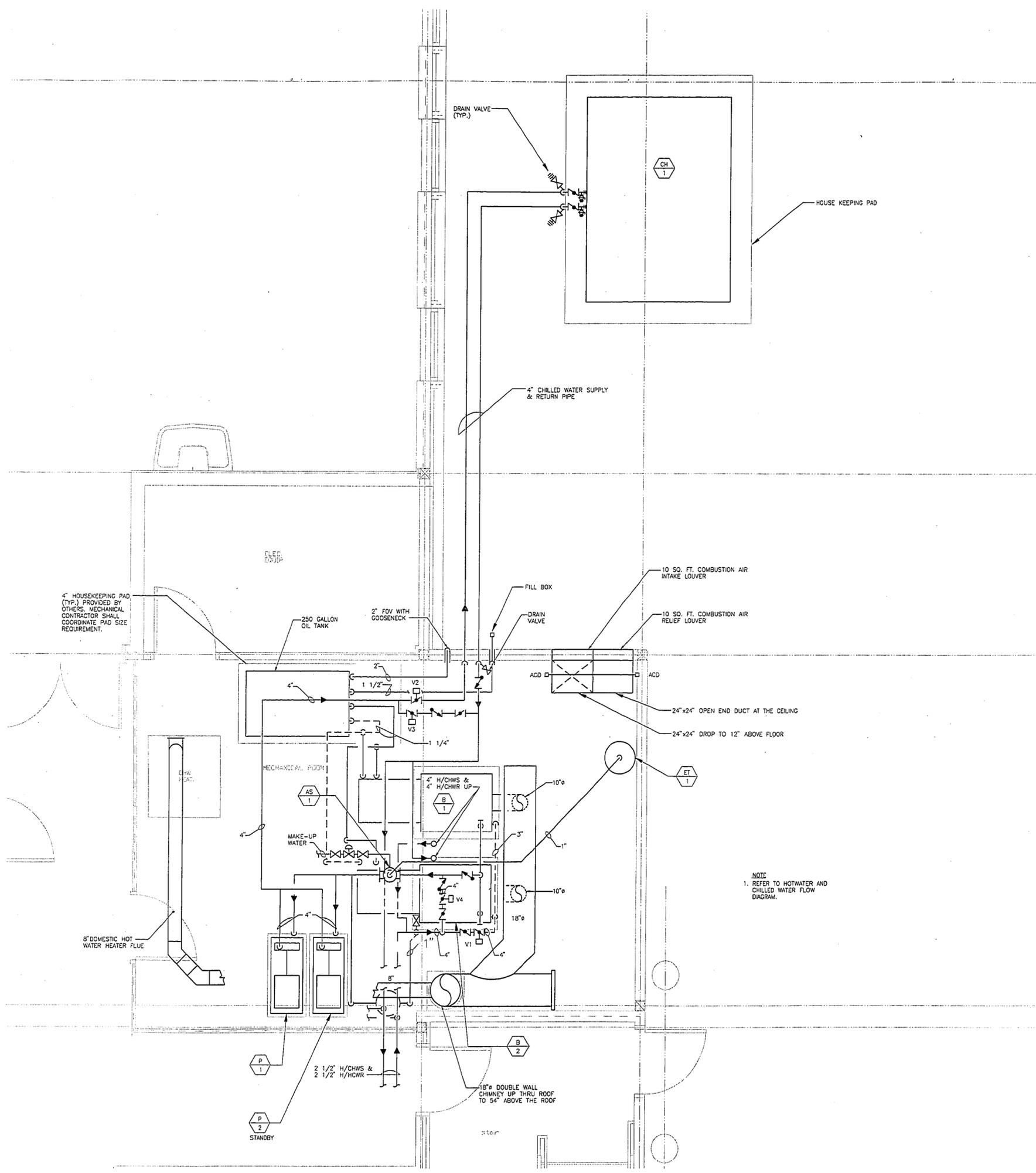


**KAESTLE BOOS
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418 Shain Rd. New Britain, Connecticut 06050-2500 860-229-0261
Drawn by: go Scale: 1/2"=1'-0"

**ENLARGED
PLANS AND
SECTIONS**

Project no. 992500 Drawing no. H5.01
Date MARCH 23, 1998



AIR HANDLING UNIT SCHEDULE																																					
UNIT NO.	SERVICE	MAKE & MODEL	TYPE	CFM		T.S.P.	EXT. S.P.	MIN WHEEL DIA.	MAX BHP	MOTOR HP	COOLING COIL (CHILLED WATER)								HEATING COIL (HOT WATER)								RETURN EXHAUST FAN		REMARKS								
				TOTAL	O.A.						EAT				LAT				CAPACITY (MBH)				GPM	EWT	LWT	CAPACITY (MBH)	LAT DB	EAT DB		EWT	LWT	GPM	MAX WATER ΔP - FT	MAX AIR ΔP - WG	CFM	TSP	HP
				DB	WB						DB	WB	DB	WB	DB	WB	DB	WB	DB	WB	DB	WB															
AHU-1	FIRST FLOOR	YORK AP-150	DRAW THRU	6525	2080	4.0	2.97	-	7.45	10	-	0.60	81.8	68	54	53	211	299	53	43	55	-	52	52	-	-	0	0	-	5280	2.20	5	INLET VANES-VAV				
AHU-2	SECOND FLOOR	YORK AP-150	DRAW THRU	6990	3170	4.0	2.98	-	7.52	10	-	0.59	83.44	69	54	53	222	340	61	43	55	-	52	52	-	-	0	0	-	3820	2.22	5	INLET VANES-VAV				
AHU-3	COMMUNICATIONS	YORK AP-35	DX	1270	350	1.56	1.00	-	0.67	1	-	-	-	-	-	-	-	-	-	45	55	50.4	52.2	89	180	160	5.5	28.2	0.04	-	-	-	CONSTANT VOLUME				
AHU-4	RANGE UNIT	SCANCO 2F4	DRAW THRU	14,560	2,184	6.50	3.00	-	22.75	25	-	0.71	77.25	67.8	71.5	65	90.4	149	26	43	55	232	61.2	76	180	160	2.5	-	-	3640	-	7.5	CONSTANT VOLUME				

* BASED ON 30% PROPYLENE GLYCOL
 AHU-4 AND ALL ASSOCIATED DUCTWORK, PIPING, INSULATION, DIFFUSERS, REGISTERS AND CONTROLS ARE INCLUDED UNDER ALTERNATE NO.1.

AIR-COOLED WATER CHILLER																											
SYMBOL	SERVICE	LOCATION	MINIMUM CAPACITY (TONS)	CHILLED WATER				COMPRESSOR				AMBIENT °F (CONDENSER FAN)				ELECTRIC SERVICE				MANUFACTURER MODEL NUMBER (AS STANDARD)	REMARKS						
				GPM	% GLYCOL	EWT (°F)	LWT (°F)	REFRIG TYPE	QTY	NOMINAL HP EA	TYPE	RANGE	MAX	MIN	QTY	HP EA	RPM	KW	V			Ø	HZ	MCA	MOP		
CH-1	-	UTILITY YARD	70	140	30	55	43	9.3	R22	2	55	RECIP	-	95	45	2	3	850	92.3	460	3	60	173	225		YORK YCAZ880B3	①

① BASED ON 30% PROPYLENE GLYCOL

BOILER SCHEDULE																											
UNIT NO.	LOCATION	GROSS OUTPUT CAPACITY		PRESSURE IN FIREBOX (IN MER COLUMN)	MAX ALLOWABLE WORKING P.R. PSI	WATER				BREACHING SIZE				ELECTRICAL DATA				MANUFACTURER MODEL NUMBER (AS STANDARD)	REMARKS								
		MBH	HP			ENT(DEC F)	LWT(DEC F)	MAX GPM	PD - FT	HP	AMPS	VOLTS	PHASE	CYCLES													
B-1	MECHANICAL ROOM	794	23.7	0.26	70	160	180	80	-	10"	1/2	-	120	1	60		BURNHAM V-907	①									
B-1	MECHANICAL ROOM	794	23.7	0.26	70	160	180	80	-	10"	1/2	-	120	1	60		BURNHAM V-907	①									

① BASED ON 30% PROPYLENE GLYCOL

VARIABLE AIR VOLUME BOX SCHEDULE															
UNIT NO.	FLOOR	SERVICE	CFM		MBH	GPM	FAN CFM	FAN HP	PD IN W.G.	WATER		AIR		MAKE & MODEL NO.	REMARKS
			MAX	MIN						EWT	LWT	EAT	LAT		
TU-1	MAIN	BREAK ROOM	340	-	12.10	1.21	-	-	0.14	180	160	52	85	METAL AIRE 406TH	-
TU-2	MAIN	ROLL CALL, SHIFT COMMAND, COMMUNITY SERVICE	690	-	31.70	3.17	-	-	0.07	180	160	52	85	METAL AIRE 410TH	-
TU-3	MAIN	LIBRARY, PROSECUTOR/INTERVIEW, REPRO, PUBLIC INTERVIEW, LOBBY, ARCHIVE	630	-	22.4	2.24	630	1/3	0.05	180	160	52	85	METAL AIRE 408FCI	-
TU-4	MAIN	PASSAGE, REPORT PREP, CORRIDOR	1000	-	35.6	3.56	1000	1/2	0.19	180	160	52	85	METAL AIRE 410FCI	-
TU-5	MAIN	MALE CELLS	250	-	8.90	0.90	-	-	0.08	180	160	52	85	METAL AIRE 406TH	-
TU-6	MAIN	FEMALE CELLS, JUVENILE CELL	285	-	9.50	0.95	285	1/6	0.09	180	160	52	85	METAL AIRE 406FCI	-
TU-7	MAIN	VISITORS, PRISONERS, INTERVIEW, LOBBY	240	-	8.55	0.85	240	1/6	0.08	180	160	52	85	METAL AIRE 406FCI	-
TU-8	MAIN	EVIDENCE, PRISONER PROCESSING, BIO HAZ, PASSAGE	610	-	21.74	2.17	-	-	0.05	180	160	52	85	METAL AIRE 408TH	-
TU-9	MAIN	RECORDS	460	-	16.39	1.64	-	-	0.04	180	160	52	85	METAL AIRE 408TH	-
TU-10	MAIN	TRAINING/E.O.R./COMMUNITY	1840	-	65.58	6.58	-	-	0.10	180	160	52	85	METAL AIRE 414TH	-
TU-11	UPPER	CONFERENCE	450	-	16.0	1.60	-	-	0.03	180	160	52	85	METAL AIRE 408TH	-
TU-12	UPPER	WAITING, RECEPTION	575	-	20.5	2.05	575	1/3	0.05	180	160	52	85	METAL AIRE 408FCI	-
TU-13	UPPER	LIEUTENANT OFFICES	305	-	10.90	1.09	-	-	0.13	180	160	52	85	METAL AIRE 406TH	-
TU-14	UPPER	ADMIN ASSIST, CHIEF'S OFFICE	500	-	16.93	1.7	-	-	0.04	180	160	52	85	METAL AIRE 408TH	-
TU-15	UPPER	DETECTIVES SQUADROOM	490	-	17.46	1.75	-	-	0.04	180	160	52	85	METAL AIRE 408TH	-
TU-16	UPPER	SERGEANTS OFFICE	245	-	8.13	0.83	-	-	0.10	180	160	52	85	METAL AIRE 408TH	-
TU-17	UPPER	LIEUTENANT	190	-	6.71	0.68	-	-	0.06	180	160	52	85	METAL AIRE 406TH	-
TU-18	UPPER	MEN'S LOCKER ROOM	980	-	34.92	3.50	-	-	0.07	180	160	52	85	METAL AIRE 410TH	-
TU-19	UPPER	CORRIDOR, MAJOR CRIME/CONF, PASSAGE	570	-	18.89	1.9	570	1/3	0.05	180	160	52	85	METAL AIRE 408FCI	-
TU-20	UPPER	WOMEN'S LOCKER ROOM	390	-	13.9	1.39	-	-	0.22	180	160	52	85	METAL AIRE 406TH	-
TU-21	UPPER	LAB	340	-	12.12	1.12	340	1/6	0.12	180	160	52	85	METAL AIRE 406FCI	-
TU-22	UPPER	FITNESS ROOM	1320	-	47.0	4.70	-	-	0.10	180	160	52	85	METAL AIRE 412TH	-
TU-23	UPPER	PREP ROOM, CONTROL ROOM, RANGE OFFICE	635	-	22.45	2.25	630	1/3	0.06	180	160	52	85	METAL AIRE 408FCI	-

PUMP SCHEDULE												
UNIT NO.	MAKE & MODEL NO.	SERVICE	TYPE	RPM	GPM	HEAD FT. H ₂ O	EFF. %	HP	ELECTRIC DATA			REMARKS
									VOLTS	PHASE	CYC.	
P-1	BELL & GOSSETT SERIES 1510-2C	HW/CHW	BASE MOUNTED END SUCTION	1150	140	66	70	5	460	3	60	-
P-2	BELL & GOSSETT SERIES 1510-2C	HW/CHW	BASE MOUNTED END SUCTION	1150	140	66	70	5	460	3	60	-

AIR COOLED CONDENSING UNIT											
UNIT NO.	MAKE & MODEL NO.	NOMINAL CAP. (TONS)	AMB. TEMP.	SUC. TEMP.	FAN HP	COMP.	ELECTRIC DATA			SERVICE	
							VOLTS	PHASE	CYC.		
ACCU-3	YORK H2HD42	3.1	95	45	1/4	-	208/230	1	60	COMMUNICATIONS	

ELECTRIC UNIT HEATER SCHEDULE											
NO. UNIT	LOCATION	MBH	CFM	KW	VOLTS	PHASE	HZ	HP	MAKE & MODEL NO.		REMARKS
									Q.MARK	Q.MARK	
EUH-1	ELEC. RM	3.41	-	1	120	1	60	-	Q.MARK	AFA-1000-IF	-
EUH-2	ELEC. RM	3.41	-	1	120	1	60	-	Q.MARK	AFA-1000-IF	-
EUH-3	GENERATOR RM.	17.0	350	5	208	1	60	1/100	Q.MARK	MUH05-B1	-
EUH-4	BULK EVIDENCE RM	17.0	350	5	208	1	60	1/100	Q.MARK	MUH05-B1	-

* PROVIDE WITH INTEGRATED THERMOSTAT

FIN-TUBE RADIATION SCHEDULE												
TAC NO.	BTU PER FT	% GLYCOL	EWT (°F)	LWT (°F)	PIPE SIZE (IN)	PIPE MTRL	FIN SIZE	FINS PER FOOT	FIN MTRL	ROWS	MANUFACTURER MODEL NUMBER	REMARKS
FT-1	700	30	180	160	3/4	CU	2 3/4X3	40	AL	1	STANDARD TYPE 5 SLOPE-TOP	①

① PROVIDE WITH 5312 ENCLOSURE

DIAPHRAGM EXPANSION TANK SCHEDULE											
UNIT NO.	LOCATION	SERVICE	SYS. TEMP. (°F)		SYS. PRESS. (PSIG)		TANK PRESSURE (PSI)	TANK ACCEPTANCE VOLUME (GAL.)	TANK AIR CHARGE (PSIG)	MANUFACTURER MODEL NUMBER (AS STANDARD)	REMARKS
			MIN	MAX	MIN	MAX					
ET-1	MECH. RM	HOT WATER/ CHILLED WATER SYSTEM	160	180	12	100	125	46	12	EXTROL SX-160	-

DIFFUSER, REGISTER & GRILLE SCHEDULE											
SYMBOL	SIZE	FUNCTION	MATERIAL	BLADE DEFLECT	COLOR	DAMPER	BORDER	RETURN EXHAUST FAN		MANUFACTURER MODEL NO.	
								CFM	HP		
CD-1	AS NOTED	SUPPLY	ALUM	1-WAY	WHITE	OBD	SURFACE			METAL AIRE 5000-1	
CD-2	AS NOTED	SUPPLY	ALUM	2-WAY	WHITE	OBD	SURFACE			5000-1	
CD-3	AS NOTED	SUPPLY	ALUM	3-WAY	WHITE	OBD	SURFACE			METAL AIRE 5000-1	
CD-4	AS NOTED	SUPPLY	ALUM	4-WAY	WHITE	OBD	SURFACE			METAL AIRE 5000-1	
SG-1	AS NOTED	SUPPLY/ EXHAUST	STEEL	SECURITY	WHITE	OBD	1" BORDER			METAL AIRE SGRPD	
ER-1	AS NOTED	EXHAUST	ALUM	0	WHITE	OBD	SURFACE			METAL AIRE CC5D	
ER-2	AS NOTED	EXHAUST	ALUM	45	WHITE	OBD	SURFACE			METAL AIRE RHD	
RR-1	AS NOTED	RETURN	ALUM	0	WHITE	OBD	SURFACE			METAL AIRE RPD	
RR-2	NOTED	RETURN	-	-	WHITE	-	-			SCANCO ②	
RR-3	AS NOTED	RETURN	ALUM	45	WHITE	OBD	SURFACE			METAL AIRE RHD	
SD-1	AS NOTED	SUPPLY	-	-	WHITE	-	-			SCANCO ②	
SR-1	AS NOTED	SUPPLY	ALUM	SINGLE	WHITE	OBD	SURFACE			METAL AIRE VHD	
SR-2	AS NOTED	SUPPLY	ALUM	SINGLE	WHITE	OBD	SURFACE			METAL AIRE H40D4D	
TG-1	NOTED	TRANSFER	ALUM	-	WHITE	-	SURFACE			METAL AIRE CC5	

① PROVIDE WITH TAMPER PROOF SCREWS
 ② PROVIDE BY SCANCO AS A PACKAGE OF AHU-4 MANUFACTURER

CABINET UNIT HEATER SCHEDULE											
SYMBOL	ARRANGEMENT	CFM	MBH	WATER SIDE			MOTOR HP	MANUFACTURER MODEL NO.			
				GPM	EWT	MAX PD					
CUH-1	SURFACE WALL	230	12	2	180	0.24	1/15	STERLING O2			
CUH-2	SURFACE WALL	230	12	2	180	0.24	1/15	STERLING O2			
CUH-3	SURFACE WALL	335	20	3	180	0.55	1/15	STERLING O3			
CUH-4	SURFACE WALL	335	20	3	180	0.55	1/15	STERLING O3			

* BASED ON 30% PROPYLENE GLYCOL
 PROVIDE WITH INTEGRATED THERMOSTAT

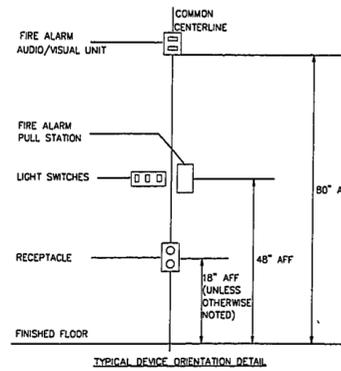
FAN SCHEDULE														
SYMBOL	CFM	ESP	RPM	HP.	NOISE LEVEL (SONES)	ELECT. DATA			AREAS SERVED	TYPE	MINIMUM WHEEL DIAMETER	MAKE AND MODEL NO.	REMARKS	
						V.	PH.	CY.						
EF-1	290	0.5	2650	0.15	2.9	115	1	60	COMMUNICATION	IN-LINE CENTRIFUGAL	-	KANALFLAKT K-8	① ②	
EF-2	180	0.5	2650	0.15	2.9	115	1	60	FEMALE CELLS	IN-LINE CENTRIFUGAL	-	KANALFLAKT K-8	②	
EF-3	85	0.5	2500	0.11	2.9	115	1	60	JUVENILE CELLS	IN-LINE CENTRIFUGAL	-	KANALFLAKT K-8	②	
EF-4	250	0.5	1650	0.15	-									

SYMBOL	DESCRIPTION	NOTES
LIGHTING FIXTURES		
FP	WALL OR CEILING MOUNTED LIGHTING FIXTURE	UPPER CASE LETTERS INDICATE FIXTURE TYPE REFERENCE TO FIXTURE SCHEDULE SUBSCRIPT LOWER CASE LETTERS INDICATE SWITCH CONTROL ASSOCIATIONS
FP	RECEPTACLE FOR FLOOR MOUNTING (FLUSH)	INDICATES RECEPTACLE MTD. ABOVE COUNTER 3'-6" AFF TO CENTER LINE
FP	RECEPTACLE FOR ABOVE CEILING MOUNTED DUPLEX	"G" DENOTES GROUND FAULT INTERRUPTING TYPE RECEPTACLE
FP	DOUBLE DUPLEX OUTLET (ISOLATED GRID TYPE ORANGE) 1 NORMAL OUTLET (COLOR BY ARCHITECT) SEE DETAIL BELOW	"WP" DENOTES WEATHERPROOF
FP	DUPLEX RECEPTACLE ON DESIGNATED SECURITY BRANDING TYPE	INDICATES RECEPTACLE ON EMERGENCY CIRCUIT
FP	WALL SPECIAL PURPOSE POWER RECEPTACLE	
FP	RECEPTACLE FOR LARGE COPY MACHINE	
EXIT SIGNS		
X1	CEILING MOUNTED EXIT SIGN	APPLICATION OF SHADED QUADRANTS AND ARROWS AS REQUIRED
X2	WALL MOUNTED EXIT SIGN	INDICATE LETTERED FACE AND DIRECTIONAL ARROWS AS REQUIRED
	EMERGENCY BATTERY UNIT	UPPER CASE LETTERS INDICATE REFERENCE TO LIGHTING FIXTURE SCHEDULE "X1" - INDICATES FIXTURE TYPE "X2" - INDICATES CIRCUIT NUMBER
WIRING DEVICES-SWITCHES		
S1	SINGLE POLE SWITCH	20A 120-277V AC SUBSCRIPT LOWER CASE LETTERS INDICATE SWITCH CONTROL ASSOCIATIONS
S2	SINGLE POLE SWITCH WITH PILOT LIGHT	
S3	THREE WAY SWITCH	SUBSCRIPT UPPER CASE LETTERS DENOTE SWITCH TYPE AS LISTED IN NON-STANDARD SWITCHES
S4	RAISE LOWER SWITCH FOR PROJECTION SCREEN	UNLESS NOTED OTHERWISE SWITCHES SHALL BE MOUNTED 48" TO CENTER LINE A.F.F.
S5	DIMMER SWITCH SIZE AS INDICATED ON PLANS	DS1 - 3 WAY DIMMER SWITCH
S6a	WHEN SHOWN MORE THAN ONE (1) SWITCH SHALL BE GANGED IN A COMMON PLATE OUTLET.	
LIGHTING CONTROL SYSTEM		
TS	TIME SWITCH	REFER TO CONTROL DIAGRAMS FOR SPECIFIC INFORMATION OF SYSTEM COMPONENTS
TC	TIME CLOCK	REFER TO CONTROL DIAGRAMS FOR SPECIFIC INFORMATION OF SYSTEM COMPONENTS
RS	REMOTE CONTROL SWITCH	REFER TO "PHOTOCELL/TIMECLOCK DETAIL"
FIRE ALARM SYSTEM		
FACP	CONTROL PANEL	
SD	SMOKE DETECTOR	"E" INDICATES DETECTOR ASSOCIATED WITH ELEVATOR RECALL
FS	MANUAL PULL STATION	
AV	AUDIBLE / VISUAL DEVICE	"V" INDICATES VISUAL ONLY DEVICE
DD	DUST SMOKE DETECTOR	
RTS	REMOTE TEST SWITCH AND INDICATING LIGHT	
FATC	FIRE ALARM TERMINAL CABINET	
FARA	FIRE ALARM REMOTE ANNUNCIATOR	
RI	REMOTE INDICATOR	
AM	ADDRESSABLE MODULE	"I" INDICATES CONNECTION TO TEMPER SWITCHES "F" INDICATES CONNECTION TO FLOW SWITCHES "Z" INDICATES ZONE MONITORING
FACA	FIRE ALARM GRAPHIC ANNUNCIATOR	
MB	MASTER BOX	
FACP	FIRE ALARM CONTROL PANEL	
FAR	FIRE ALARM REMOTE ANNUNCIATOR	
AD	FIRE DEPARTMENT AUTO DIALER	
RL	ROTATING BEACON LIGHT	
H	HEAT DETECTOR	
PBD	PHOTO BEAM DETECTOR TRANSMITTER	
PBR	PHOTO BEAM DETECTOR RECEIVER	

SYMBOL	DESCRIPTION	NOTES
WIRING DEVICES - RECEPTACLES		
1	WALL DUPLEX CONVENIENCE OUTLET MTD 18" AFF TO CENTER LINE	20A/125VA 2P, 3W, CNOG, NEMA 5-20R "1" - INDICATES CIRCUIT NUMBER
	FLOOR QUAD DUPLEX CONVENIENCE OUTLET (FLUSH)	SHADING OF SYMBOL THUS: INDICATES RECEPTACLE MTD. ABOVE COUNTER 3'-6" AFF TO CENTER LINE
	RECEPTACLE FOR ABOVE CEILING MOUNTED DUPLEX	"G" DENOTES GROUND FAULT INTERRUPTING TYPE RECEPTACLE
	DOUBLE DUPLEX OUTLET (ISOLATED GRID TYPE ORANGE) 1 NORMAL OUTLET (COLOR BY ARCHITECT) SEE DETAIL BELOW	"WP" DENOTES WEATHERPROOF
	DUPLEX RECEPTACLE ON DESIGNATED SECURITY BRANDING TYPE	INDICATES RECEPTACLE ON EMERGENCY CIRCUIT
	WALL SPECIAL PURPOSE POWER RECEPTACLE	
	RECEPTACLE FOR LARGE COPY MACHINE	
JUNCTION BOXES		
J1	CEILING MOUNTED JUNCTION BOX	"JP" DENOTES CONNECTION FOR PROJECTION SCREEN
J2	WALL MOUNTED JUNCTION BOX	
J3	FLUSH FLOOR JUNCTION BOX	
J4	FREE STANDING JB MOUNTED ON CONDUIT STUBBED UP FROM FLOOR	
J5	PULL BOX	
MOTORS AND CONTROLS		
M	MOTOR	COMPLETE INFO. FOR MOTOR IS INDICATED BY APPLICATION OF INDEXING SYMBOLS REFERENCE TO SCHEDULE OF MECHANICAL EQUIPMENT
MS	MAGNETIC MOTOR STARTER	SUBSCRIPT INDICATES NEMA SIZE COMPLETE INFORMATION FOR CONTROL ITEMS IS INDICATED BY THE INDEXING SYMBOL. REFERENCE APPLIED TO ASSOCIATED EQUIP.
MS	MANUAL MOTOR STARTER (THERMAL OVERLOAD SWITCH)	
CP	CONTROL PANEL	FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR WIRED BY THE ELECTRICAL CONTRACTOR
DISTRIBUTION EQUIPMENT		
	EMERGENCY SURFACE MOUNTED POWER PANEL	
	NORMAL SURFACE MOUNTED POWER PANEL	
T	TRANSFORMER	NUMERALS INDICATE KVA RATING
	OVERCURRENT AND/OR SWITCHING DEVICE	AMPERE RATING OF DISCONNECT SWITCHES SHALL MATCH THE LINE SIZE OF OVERCURRENT DEVICE OR 1.5 TIMES THE LOAD RUNNING AMPS, WHICHEVER IS GREATER VOLTAGE RATING & NUMBER OF POLES SHALL MATCH LINE SIZE OVERCURRENT DEVICE.
	FUSED SAFETY DISCONNECT SWITCH	
	COMBINATION FUSED SWITCH WITH MAGNETIC STARTER	

SYMBOL	DESCRIPTION	NOTES
BRANCH CIRCUITRY		
	LIGHTING AND APPLIANCE BRANCH CIRCUITRY CONCEALED ABOVE	ARROW HEAD INDICATES HOW RUN CIRCUITRY TO 20A-1P CIRCUIT BREAKER (UNLESS NOTED OTHERWISE) NUMBER OF BRANCH POLES REQUIRED IN PANEL
	LIGHTING AND APPLIANCE BRANCH CIRCUITRY CONCEALED BELOW	CROSS MARKS INDICATE NUMBER OR NO. 12 WIRES IN 3/4" CONDUIT PLUS GROUND. ABSENCE OF CROSSMARKS INDICATES 2#12, 1#12 GREEN INSULATED GROUND.
	LIGHTING AND APPLIANCE BRANCH RUN EXPOSED	HOME RUNS ARE INDICATED THUS: LL2 - 1, 3, 5
	INDIVIDUAL RUN TURNING UP	"LL" DENOTES PANEL DESIGNATION. "1,3,5" DENOTES CIRCUIT NOS. 1,3,5 CONTAINING 20A, 1P, CB'S IN PANELBOARD GROUND WIRE NOT SHOWN.
	INDIVIDUAL RUN TURNING DOWN	CONDUIT RUNS REQUIRING CIRCUIT BREAKER GREATER THAN 20A-1P WIRE SIZE GREATER THAN NO. 12 AND CIRCUMFERENCE GREATER THAN 3/4" ARE NOTED THUS: LL2-1, 3, 5 20A 1P #4, 1 #8 GROUND 1-1/4" CONDUIT
	INDIVIDUAL RUN TURNING UP/DOWN	
SECONDARY FEEDERS		
	FEEDER RUN CONCEALED ABOVE	ARROW HEAD INDICATES HOW RUN TO PANEL BOARD
	FEEDER SIZING AS SHOWN	
TAG SYMBOLS		
INDEX SYMBOL	HEXAGONAL SYMBOLS CONTAINING TWO UPPER CASE LETTERS INDICATE REFERENCE TO A SCHEDULE OF SPECIAL EQUIPMENT	
	HEXAGONAL SYMBOLS CONTAINING UPPER CASE LETTERS AND NUMERALS INDICATE REFERENCE TO SCHEDULE OF MECHANICAL EQUIPMENT	
	HEXAGONAL SYMBOLS CONTAINING NUMERALS ONLY INDICATE REFERENCE TO AN EXPLANATION OF ELECTRICAL WORK REQUIREMENT	
GANGING CROSS REFERENCE	THE NOTED INDICATION ADJACENT TO A DEVICE DENOTES THAT THE DEVICE IS TO BE GANGED IN A BOX WITH ANOTHER DEVICE SIMILARLY NOTED AT THE SAME LOCATION ON ANOTHER DRAWING	
SPECIAL MOUNTING HEIGHT INDICATING	DIMENSION NOTED IN PARENTHESES ADJACENT TO ANY ITEM OF THE DRAWINGS INDICATES THE HEIGHT OF ITS HORIZONTAL CENTERLINE ABOVE FINISHED FLOOR	
MOUNTING HEIGHT REFERENCE TO ARCHITECTURAL DRAWINGS		
LINE INDICATING PHYSICAL SIZE OF ELECTRICAL ITEMS	INDICATION USED CIRCUMSCRIBING OTHER SYMBOLS TO DELINEATE PHYSICAL SIZE	
DETAIL TITLE ANNOTATION INDICATING DETAIL NUMBER		
WIRING DEVICE GANGING SYMBOL	GANGING SYMBOL SHOWN IN CIRCUITRY RUN IN COMBINATION WITH ANY WIRING DEVICE SYMBOL THUS: DENOTES RECEPTACLES WHICH ARE TO BE GANGED IN A COMMON PLATE OUTLET	
MISCELLANEOUS EQUIPMENT		
TEL/DATA OUTLET	3/4" ABOVE CEILING ACCESSIBLE AS DENOTES USE OF MTD. RING & PULL STRING TO ACCESSIBLE CLG.	
TELEPHONE OUTLET	AS DENOTES USE OF MTD. RING & PULL STRING TO ACCESSIBLE CLG. AT 54" A.F.F.	
AUDIO SYSTEM SPEAKER	"SP" DENOTES FAX MACHINE	
MAGNETIC DOOR HOLDER		
FLOOR TELEPHONE/DATA OUTLET/POWER		
CARBON MONOXIDE DETECTOR PANEL		
CARBON MONOXIDE ANNUNCIATOR PANEL		
REMOTE GENERATOR ANNUNCIATOR		
CABLE TRAY		
MISCELLANEOUS EQUIPMENT		
R	REMOTE FOR 2 WAY RADIO	
S	REMOTE DOOR RELEASE SWITCH	
ZR	2 WAY RADIO MAIN STATION	
HT	CONNECTION TO HEAT TRACE	
TV	TELEVISION TYPE OUTLET	"2" - DENOTES CATV TYPE OUTLET PROVIDE 75OHMS TYPE CABLE TO HEADEND EQUIPMENT
I	INTERCOM STATION	PROVIDE 3/4" BACK TO COMMUNICATION EQUIPMENT ROOM.
MI	MASTER INTERCOM STATION	
FV	REMOTE FLUSH VALVE FOR CELL TOILETS.	
C	CLOCK OUTLET RECEPTACLE	

SYMBOL	DESCRIPTION	NOTES
SECURITY MANAGEMENT AND CARD ACCESS SYSTEM		
ACCS	ACCESS CONTROL COMMAND CENTER(S)	QUANTITY SHALL BE DETERMINED BY MANUFACTURER PER SPECIFICATIONS
ACP	PRINTER(S) FOR ACCESS CONTROL COMMAND CENTER	PROVIDE (1) PRINTER PER ACCESS CONTROL COMMAND CENTER
ACTC	TERMINAL CONTROLLER	LOCATIONS NOT SHOWN ON PLANS. REFER TO SPECIFICATIONS FOR DETAILS TO FIELD LOCATE.
DR	DOOR STRIKE RELEASE	PROVIDED UNDER DOOR HARDWARE SPEC. WIRED TO ASSIGNED TERMINAL CONTROLLER BY E.C.
DC	DOOR CONTACT	LOCATED ON SECURED SIDE OF DOOR. WIRED TO ASSIGNED TERMINAL CONTROLLER.
DS	INFRARED SENSOR	LOCATED ON SECURED SIDE OF DOOR. REFER TO SPECS FOR SPECIFIC SENSING RANGE. WIRED TO ASSIGNED TERMINAL CONTROLLER.
CR	CARD READER	
ACPS	ACCESS CONTROL POWER SUPPLY UNIT	
IC	COMBINATION INTERCOM STATION & CAMERA	INSTALLED IN 3/4" C.
DB	DOOR RELEASE BUTTON	
CCTV M	MONITOR	"*" INDICATES ASSIGNED ALPHABET DESIGNATION FOR EACH MONITOR
CCTV SW2	SEQUENTIAL SWITCHER	"B" INDICATES (8) POSITION "24" INDICATES (24) POSITION
CCTV SW24		
CCTV VCR	VIDEO RECORDER	
EP	EMERGENCY PANIC	"TP" DENOTES TAMPERPROOF "WP" DENOTES WEATHERPROOF WITH CCTV COAXIAL CABLE OUTLET AND POWER OUTLET
CCTV M	CCTV VIDEO MONITORING CAMERA WITH HOUSING	
CCTV QUAD	QUAD SPLITTER	
AUDIO MONITORING SYSTEM		
AMC	CONTROLLER	STAND ALONE RACK MOUNTED
A	COMBINATION SPEAKER/MICROPHONE	
AM	COMBINATION SPEAKER/MICROPHONE	CEILING MOUNTED VANDAL PROOF.
ABBREVIATIONS		
ABBR	ABBREVIATIONS	LENGTH
A/FAMP	AMPERE	L
AC	ALTERNATING CURRENT	LA
A/C	AIR CONDITIONING	LP
AF	ABOVE FINISHED FLOOR	LTG
AFS	ABOVE FINISHED GRADE	LV
ARCH	ARCHITECTURAL	M
ATS	AUTOMATIC TRANSFER SWITCH	M
BAT	BATTERY	MB
BC	BACKBOARD	MEB
BECO	BOSTON EDISON COMPANY	MEC
BESS	BYPASS ISOLATOR SWITCH	MFC
B	BUS	MFG
C	CATALOG	MTD
CAB	CABINET	N
CB	CIRCUIT BREAKER	NEC
CD	CLOSED CIRCUIT TELEVISION	NEC
CCTV	CIRCUIT CENTERLINE	NEMA
CK	CENTIMETER	NEA
CM	COMPANY	NOT IN CONTRACT
CO	COLUMN	NOT LIGHTING CKT
CO	COLUMN	NORMALLY OPEN
CO	CURRENT TRANSFORMER	NO
COOL	COOL WHITE	ON CENTER OVERCURRENT
DET	DETAIL	OVERLOAD
DISC	DISCONNECT	PB
DN	DOWN	PB
DISC	DISTRIBUTION PANEL	PH
DPDT	DOUBLE POLE DOUBLE THROW	PNL
DPST	DOUBLE POLE SINGLE THROW	PP
DT	DUST TIGHT	PT
DWG	DRAWING	PVC
E	EACH	PWR
EC	ELECTRICAL CONTRACTOR	RCP
EF	EXHAUST FAN	RCS
ELEV	ELEVATION	RECESSED
ELEC	ELECTRIC	RELAY PANEL
ELEV	ELEVATOR	SEC
ES	ENERGY SAVING	SP
FDR	FEEDER	SPEC
FLR	FLOOR	SPECS
FLUO	FLUORESCENT	SPR
GEN	GENERATOR	SW
GFI	GROUND FAULT INTERRUPTER	TB
GFP	GROUND FAULT PROTECTOR	TEL
GND	GROUND	TV
HT	HUNG CEILING HEIGHT	TY
HGT	HEIGHT	UH
HID	HIGH INTENSITY DISCHARGE LAMP	V
HO	HIGH OUTPUT HORSE POWER HEAT PUMP	VA
HP	HIGH PRESSURE SODIUM HEATING VENTILATION AND AIR CONDITIONING	VAC
HV	HVAC	VENT
HZ	HERTZ	VT
IN	INCHES	W
INCHAD	INCHES INCHES/DECENT	W
JB	JUNCTION BOX	WP
KV	KILOVOLT	
KVA	KILOVOLT-AMPERES	
KW	KILOWATT	

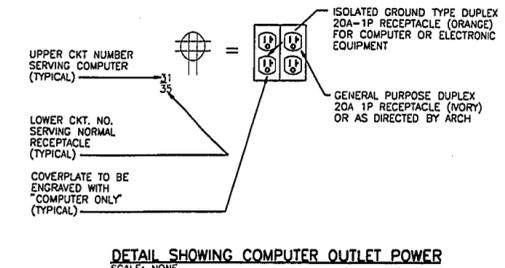


- GENERAL NOTES
- SEE ALL ARCHITECTURAL DWGS FOR VARIATIONS.
 - ALL DEVICES SHARING A COMMON LOCATION SHALL BE SYMMETRICALLY ARRANGED ON A COMMON CENTERLINE.
 - SEE GENERAL NOTES AND FLOOR PLANS FOR VARIATIONS.

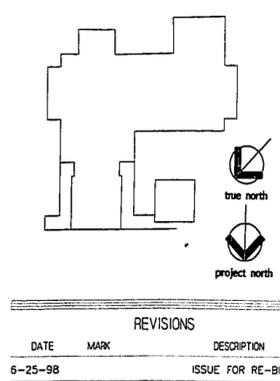
- ALL CONDUITS AND EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE MASS. ELECTRIC CODE AND APPLICABLE LOCAL CODES.
- CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS. EMPTY CONDUITS SHALL HAVE NYLON PULL LINE.
- CONDUITS SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO MOTORS AND OTHER EQUIPMENT.
- NO CONDUIT SMALLER THAN 3/4", NOR WIRE SIZE SMALLER THAN NO. 12 A.W.G. FOR POWER SHALL BE USED UNLESS OTHERWISE NOTED.
- THE WIRING DIAGRAMS, QUANTITY AND SIZE OF THE WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ARCHITECT MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.
- SWITCHES SHALL BE MOUNTED 48" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. RECEPTACLES SHALL BE MOUNTED 1'-6" ABOVE FINISHED FLOOR TO CENTERLINE IN ALL THE FINISHED AREAS UNLESS OTHERWISE NOTED. RECEPTACLES SHALL BE MOUNTED 7" ABOVE COUNTERS UNLESS OTHERWISE NOTED (3'-7" AFF).
- ALL SURFACE MOUNTED PANELS AND PANELBOARDS ON THE INSIDE OF EXTERIOR WALLS ABOVE GRADE OR IN OTHER LOCATIONS CONSIDERED AS DAMP, SHALL BE MOUNTED SO AS TO MAINTAIN A 1/4" AIR SPACE BETWEEN THE ENCLOSURE AND THE WALL.
- ALL PANELBOARDS SHALL BE MOUNTED SO THAT THE DISTANCE FROM THE TOP CIRCUIT BREAKER OPERATING HANDLE TO THE FLOOR SHALL NOT EXCEED 6'-6".
- LIGHTING FIXTURES SHALL BE MOUNTED ACCORDING TO THE MOUNTING HEIGHT GIVEN ON THE DRAWINGS. WITH THE DISTANCE MEASURED FROM THE BOTTOM OF THE LIGHTING FIXTURE TO THE FINISHED FLOOR.
- FOR LOCATION OF HVAC, PLUMBING, FIRE PROTECTION, AND MISCELLANEOUS EQUIPMENT SEE RESPECTIVE TRADE DRAWINGS.
- ALL CONDUIT RUNS CROSSING EXPANSION JOINTS SHALL HAVE EXPANSION OR EXPANSION AND DEFLECTION TYPE FITTINGS AS REQUIRED. FOR EXACT LOCATIONS OF EXPANSION JOINTS SEE STRUCTURAL DRAWINGS.
- ALL MOTOR STARTER AND VFD CONTROL TRANSFORMERS SHALL BE SIZED TO PROVIDE SUFFICIENT VOLT-AMPERE CAPACITY FOR OPERATING ALL ELECTRICAL DEVICES ASSOCIATED WITH CONTROL OF THE MOTOR, IN ADDITION TO THE STARTER COIL. IT SHALL INCLUDE RELAYS, TIMERS, MOTOR HEATERS, INDICATING LIGHTS, ETC. ALL MOTOR STARTERS & VFD SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- CONDUIT AND WIRE (NOT SHOWN) FOR FIXTURES, SWITCHES AND/OR RECEPTACLES SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AND SHALL BE:
 - 3/4" (MIN.) CONDUIT RUN
 - EXPOSED IN UNFINISHED AREAS.
 - CONCEALED ABOVE HUNG CEILINGS AND IN WALLS IN FINISHED AREAS.
 - NO. 12 (MIN.) G. WIRE (MIN.) TYPE "THWN/THHN" NO. OF WIRES AS REQUIRED. PROVIDE GREEN INSULATED GROUND WIRE FOR ALL BRANCH CIRCUITS.
- FOR EQUIPMENT PAD CONSTRUCTION DETAILS SEE STRUCTURAL DRAWINGS.
- PROVIDE POWER FOR ALL HVAC, FIRE ALARM, SECURITY, AUDIO-VISUAL, TELECOMMUNICATIONS, PLUMBING AND ELECTRONIC SYSTEMS ETC., AS REQUIRED. REFER TO RESPECTIVE DRAWINGS.
- FOR REQUIREMENTS OF TELEPHONE/DATA, BOXES, CONDUITS, PULL STRING, ETC. SEE SPECIFICATIONS.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE LAYOUTS FOR ALL ELECTRICAL ROOMS BASED ON ACTUAL EQUIPMENT OF MANUFACTURER SELECTED. SUBMIT FOR REVIEW PRIOR TO INSTALLATION.
- THE ELECTRICAL CONTRACTOR SHALL SUBMIT A PLAN SHOWING ALL ELECTRICAL TELEPHONE, SECURITY, FIRE ALARM AND OTHER SYSTEMS CONDUITS SLAB AND CEILING ETC., COORDINATE WITH OTHER TRADES AND BUILDING'S STRUCTURE TO AVOID ANY CONFLICT.
- ALL TERMINATION LUOS SHALL BE SIZED ACCORDINGLY TO G. MODATE INDICATED CONDUCTORS.
- THE ELECTRICAL CONTRACTOR SHALL SUBMIT PLANS SHOWING ALL COMMUNICATIONS EQUIPMENT AND DEVICES THROUGHOUT THE STATION. THE ELECTRICAL CONTRACTOR SHALL ALSO LABEL AND IDENTIFY ALL THE CONDUITS THAT SERVES DIFFERENT SYSTEMS.
- TYPICAL FOR ALL RECEPTACLES ASSOCIATED WITH COMPUTER, PRINTERS, SECURITY AND SOUND SYSTEM EQUIPMENT. RECEPTACLE SERVING THIS EQUIPMENT SHALL BE ISOLATED GROUND TYPE DEVICES. ORANGE IN COLOR. WIRING TO INCLUDE ALL NECESSARY ADDITIONAL GROUND WIRES REQUIRED BY CODE.
- COVERPLATES ASSOCIATED WITH COMPUTER EQUIPMENT INCLUDING PRINTERS TO BE ENGRAVED WITH "COMPUTER ONLY" TYPICAL.
- OUTLETS BOXES ASSOCIATED WITH TEL/DATA OUTLETS TO BE 2 GANG OUTLET BOX WITH A SINGLE GANG PLASTER RING.
- FIRE ALARM AND SECURITY SYSTEMS WIRING TO BE INSTALLED IN 3/4" CONDUIT MINIMUM. (TYPICAL)
- TYPICAL FOR ALL LOW VOLTAGE WIRING RUNS WITHIN CEILING SPACE TO BE PLENUM RATED CABLE.
- ALTERNATE 1: ELECTRICAL CONNECTION TO THE VENTILATION EQUIPMENT IN THE FIRING RANGE.

ALTERNATE 2: NORMAL AND EMERGENCY ELECTRICAL DISTRIBUTION SYSTEM AND RELATED EQUIPMENT TO THE FIRE DEPARTMENT.

ALTERNATE 4: ELECTRICAL CONNECTION TO THE FIRING RANGE EQUIPMENT.



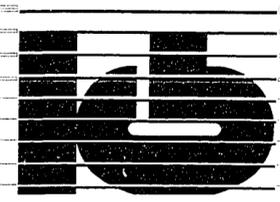
DETAIL SHOWING COMPUTER OUTLET POWER
SCALE: NONE



DATE MARK DESCRIPTION
6-25-98 ISSUE FOR RE-BID



WESTFORD POLICE FACILITY
53 MAIN STREET
WESTFORD MASSACHUSETTS
01886

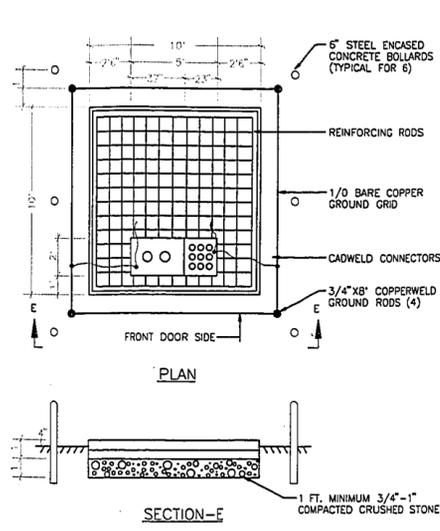


KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

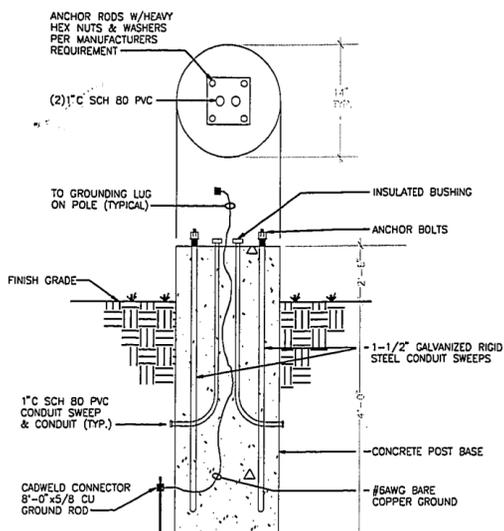
4N State St., New Britain, Connecticut 06050-2500 (860) 229-0001
Drawn by: MDALLA Scale: NONE

LEGEND AND DETAILS

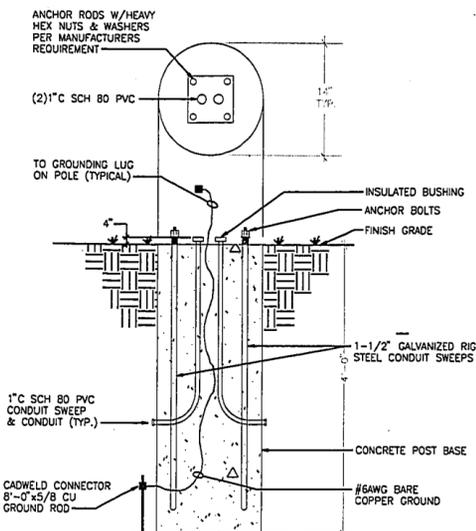
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Date MARCH 23, 1996
David W. Kaestle



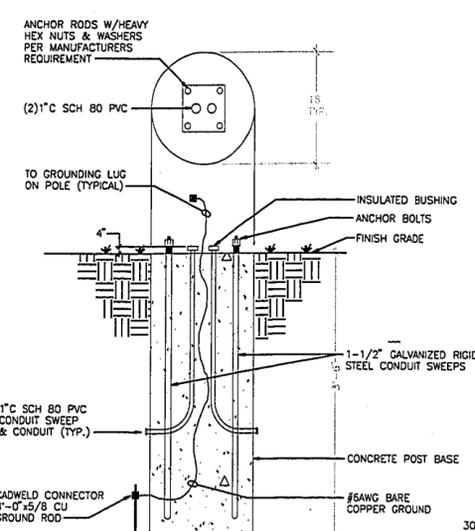
UTILITY TRANSFORMER PAD DETAIL
SCALE: 1/4"=1'-0"



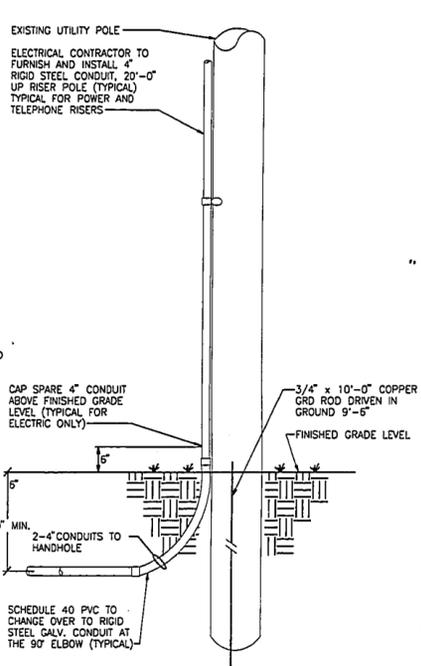
LIGHT FIXTURE POLE BASE DETAIL #1
TYPE "SB"
NTS



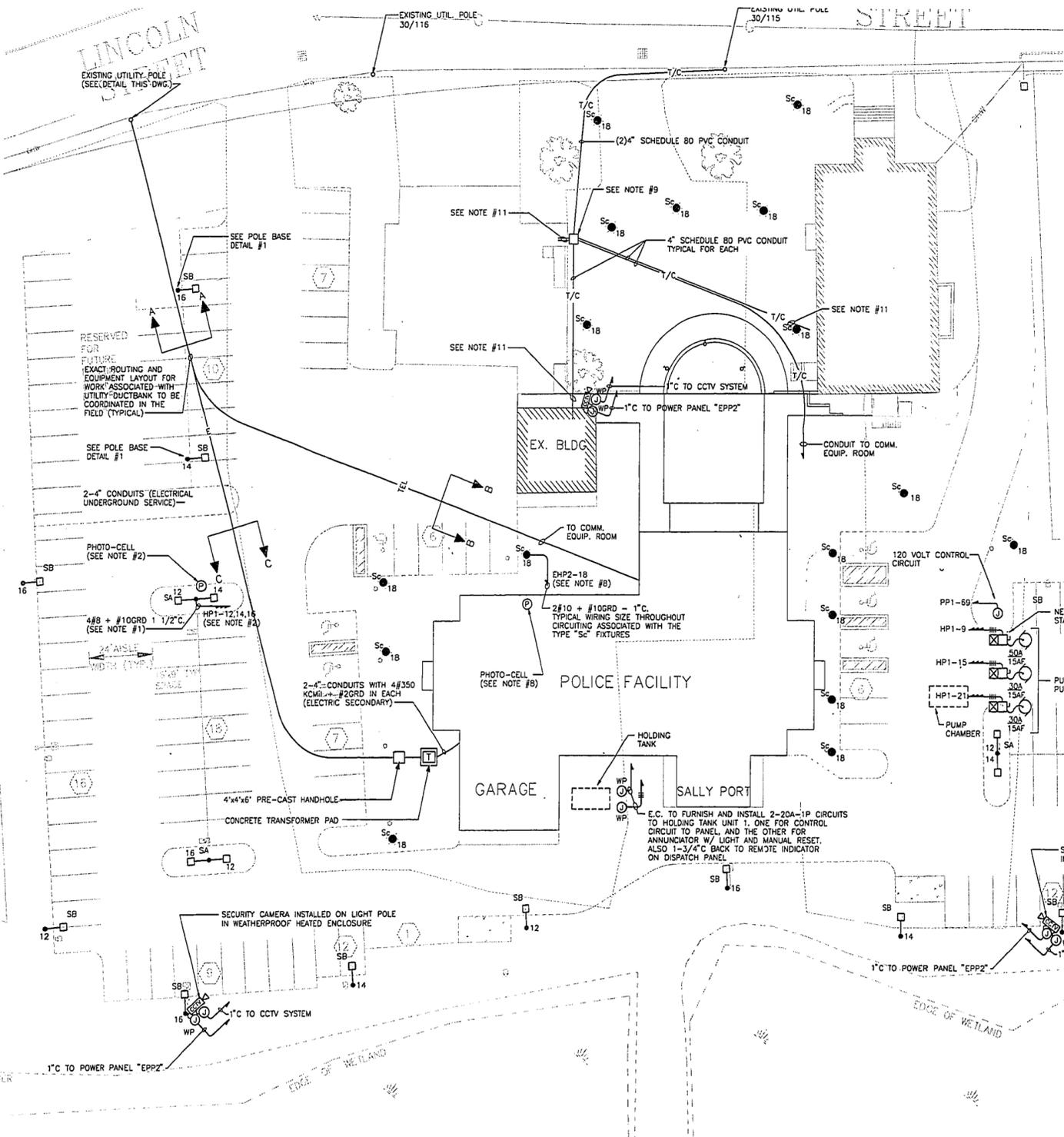
LIGHT FIXTURE POLE BASE DETAIL #2
NTS



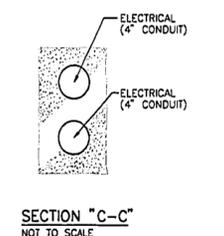
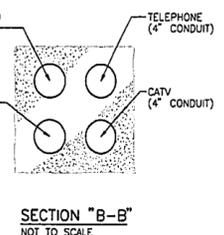
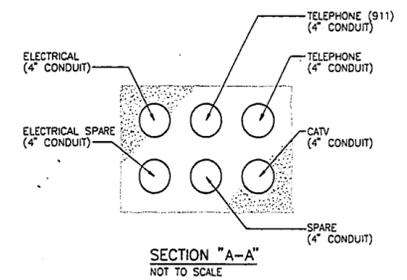
LIGHT FIXTURE POLE BASE DETAIL
TYPE "SC"
NTS



RISER POLE DETAIL
NOT TO SCALE



- NOTES:
1. TYPICAL FOR FIXTURE TYPE "SA" AND "SB" (PARKING AREA LUMINAIRES) WIRING FROM THESE FIXTURES SHALL BE #8 THROUGHOUT THE ENTIRE AREA.
 2. HOMERUN TO VIA TIMECLOCK "TC-1" LOCATED IN ELECTRICAL ROOM WITH PANEL "EHP2". THE TIMECLOCK SHALL BE EQUAL TO TORK CAT. NO. 7300Z. CONTROL OF SITE LIGHTING TO BE PHOTO-CELL "ON" AND "TIMECLOCK OFF". PHOTO-CELL TO BE EQUAL TO TORK CAT. NO. 2008B MOUNTED ON POLE, AS INDICATED FACING THE NORTHERN SKY.
 3. TYPICAL DUCTBANK SHALL HAVE A MINIMUM 1/2" CONCRETE COVER ALL SIDES.
 4. WARNING TAPE SHALL BE INSTALLED 24" BELOW FINISHED GRADE, RUN OVER THE DUCTBANK, WARNING TAPE TO SAY "CAUTION ELECTRICAL CABLES BELOW".
 5. ALL UNDERGROUND GRADED DUCTBANK AND RACEWAY WORK TO BE PERFORMED IN COMPLIANCE WITH THE GOVERNING UTILITY COMPANY'S GUIDELINES AND REQUIREMENTS.
 6. TYPICAL FOR ALL CONDUITS RUNNING UNDERGROUND, THEY SHALL HAVE A MINIMUM COVER OF 30"
 7. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO FIELD COORDINATE THE EXACT LOCATIONS OF THE LIGHT BASES, PULL BOX, CONDUIT DUCTBANK, ETC WITH THE EXISTING UNDERGROUND UTILITIES, AND TO MAKE MINOR MODIFICATIONS WITHIN REASON TO INSTALL EQUIPMENT. SHOULD THERE BE ANY QUESTIONS OR SERIOUS CONFLICT, THE ELECTRICAL CONTRACTOR SHALL CONTACT THE ENGINEER AND ARCHITECT PRIOR TO THE INSTALLATION.
 8. HOMERUN TO RUN VIA TIMECLOCK "TC-2", LOCATED IN ELECTRICAL ROOM WITH PANEL "EHP2". TIMECLOCK TO BE EQUAL TO TORK CAT. NO. 7200Z. FIXTURE TO BE PHOTO-CELL "ON" AND TIMECLOCK "OFF". PHOTO-CELL TO BE EQUAL TO TORK CAT. NO. 2008B MOUNTED ON BUILDING AS INDICATED ON PLAN, PHOTO-CELL TO FACE THE NORTHERN SKY.
 9. ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL A 4"x4"x4" TELEPHONE HANDHOLE AS INDICATED ON PLAN FOR REROUTING OF EXISTING TELEPHONE, COMMUNICATION, 911 AND FIREALARM WIRING. ELECTRICAL CONTRACTOR TO FIELD COORDINATE THE NUMBER AND TYPES OF CABLES TO BE REROUTED.
 10. EXISTING UNDERGROUND ELECTRICAL SERVICE PRESENTLY FEEDING THE FIRE STATION AND POLICE FACILITY. WIRING ASSOCIATED WITH THE POLICE FACILITY TO BE DISCONNECT AND REMOVED BACK TO THE UTILITY CO. POWER SOURCE. THE EXISTING WIRING ASSOCIATED WITH THE FIRE STATION TO BE MAINTAINED. ANY NECESSARY SHUT DOWN TO THIS SERVICE TO BE COORDINATED 24 HOURS PRIOR TO SCHEDULED SHUTDOWN.
 11. ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL UNDERGROUND CONDUITS (SIZES AS INDICATED) FOR RE-ROUTING THE EXISTING TEL/DATA WIRING PRESENTLY RUN BETWEEN TOWN HALL, POLICE FACILITY AND FIRE DEPARTMENT. E.C. TO FIELD COORDINATE THE EXISTING ROUTING. IF ANY SHUT DOWN OR INTERRUPTION TO THE EXISTING SERVICE IS REQUIRED PARTIES TO BE NOTIFIED 24 HOURS PRIOR TO SHUT DOWN.
 12. TYPICAL DUCT BANKS SHALL HAVE A MINIMUM 1/2" CONCRETE COVER ALL SIDES
 13. WARNING TAPE SHALL BE INSTALLED 24" BELOW FINISHED GRADE, RUN OVER DUCT BANK, WARNING TAPE TO SAY "CAUTION ELECTRICAL CABLES BELOW" TYPICAL.
 14. ALL ELECTRICAL WORK SHALL BE PERFORMED IN COMPLIANCE WITH COMMONWEALTH ELECTRIC COMPANY GUIDELINES AND REQUIREMENTS.
 15. ALL CONDUITS RUNNING UNDERGROUND SHALL HAVE A MINIMUM COVER OF 30" TYPICAL
 16. ALL CONDUITS SHALL HAVE A CONTINUOUS SLOPE DOWNWARD TOWARD HANDHOLES/PULLBOXES WITH A PITCH OF NOT LESS THAN 3 INCHES PER 100 FEET.
 17. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO FIELD COORDINATE THE EXACT LOCATIONS OF THE LIGHT BASES, PULLBOX, CONDUIT, DUCTBANK, ETC., WITH THE EXISTING UNDERGROUND UTILITIES, AND TO MAKE MINOR MODIFICATIONS WITHIN REASON TO INSTALL EQUIPMENT. SHOULD THERE BE ANY QUESTION OR SERIOUS CONFLICT, THE ELECTRICAL CONTRACTOR SHALL CONTACT THE ENGINEER AND ARCHITECT PRIOR TO INSTALLATION.



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**KAESTLE BOOS
ASSOCIATES, INC.**
ARCHITECTS
476 Slater Rd., New Britain, Connecticut 06050-2550, 860-262-0361
Drawn by: M.BUTTS Scale: 1/32"=1'-0"

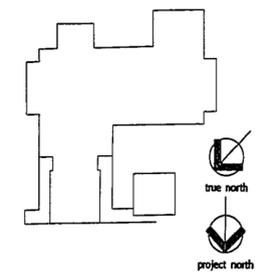
**SITE PLAN
ELECTRICAL**



Project no. 9625.00 Drawing no. E1.01
Date: MARCH 23, 1996

1490-714

- NOTES**
1. TYPE "C1" FIXTURES OUTSIDE COMMUNICATIONS TO BE CONTROLLED BY MEANS DIMMER SWITCH LOCATED WITHIN THE CONSOLE. ("DSC")
 2. E.C. TO INSTALL "545" (AWAY SWITCH) FOR CONTROL OF LOBBY AND VESTIBULE LIGHTING INSIDE COMMUNICATIONS ROOM BUILT INTO THE CONSOLE, ALONG WITH LOCAL SWITCH LOCATIONS AT VESTIBULE DOORS.
 3. TYPE "V" LIGHTING FIXTURES WITHIN COMMUNICATIONS ROOM TO BE CONTROLLED WITH 3WAY DIMMERS, ONE AT THE ENTRANCE OF THE ROOM AND THE OTHER WITHIN THE CONSOLE "DS5" @ CONSOLE & "DS35" @ ENTRANCE.
 4. OUTSIDE BUILDING LIGHTING TO BE CONTROLLED BY THE FOLLOWING MEANS: PHOTO-CELL ON AND TIME CLOCK OFF (TC-1) EQUAL TO TORK CAT. NO. 7300ZZ, PHOTO-CELL TO BE PLACED HIGH ON BUILDING FACING THE NORTHERN SKY. TIME CLOCK LOCATED IN THE FIRE FLOOR ELECTRIC CLOSET.
 5. TYPICAL FOR FIXTURES HALF FILLED IN. THIS DENOTES FIXTURE TO BE PROVIDED WITH BODINE TYPE BALLAST.
 6. DIMMER SWITCHES "DS5" TO BE EQUAL TO LUTRON CAT. NO. NHF-40-277 AND ASSOCIATED 3WAY "DS35" TO BE CAT. NO. NPS-3.
 7. DIMMER SWITCH "DSC" TO BE EQUAL TO LUTRON CAT. NO. NHF-40-277.
 8. TYPICAL FOR LIGHTING FIXTURES SHOWN HALF FILLED-IN OR SOLID. THESE FIXTURES TO BE SUPPLIED WITH BODINE TYPE BALLAST. HALF FILLED IN DENOTES ONE LAMP ON EMERGENCY, SOLID DENOTES ALL LAMPS ON EMERGENCY.
 9. SHOW CASE TYPE LIGHTING FIXTURE TO BE EQUAL TO BELFER CAT. NO. 255225H37, E.C. TO SUPPLY 1-F025/B41 LAMP.
 10. REFER TO ARCH DRAWINGS FOR EXACT MOUNTING HEIGHT AND LOCATIONS OF FIXTURES MOUNTED IN STAIR TYPICAL



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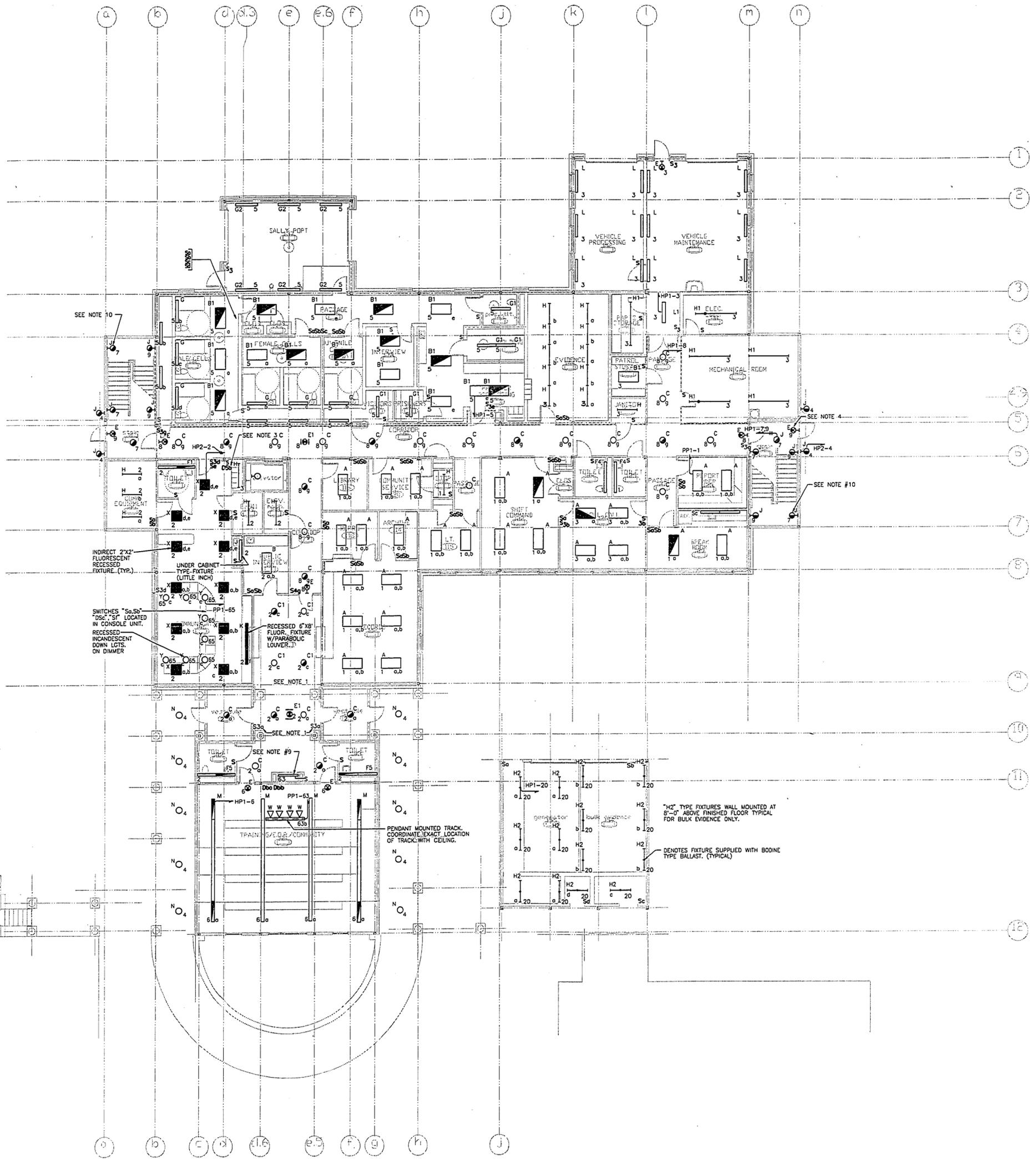


**KAESTLE BOOS
ASSOCIATES, INC.
ARCHITECTS**

40 Slaters Rd., New Britain, Connecticut 06050-2959 (860) 229-0361
Drawn by J.C.A.R.L. Scale: 1/8"=1'-0"

**MAIN LEVEL
LIGHTING PLAN**

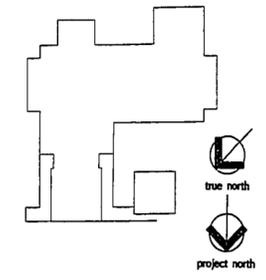
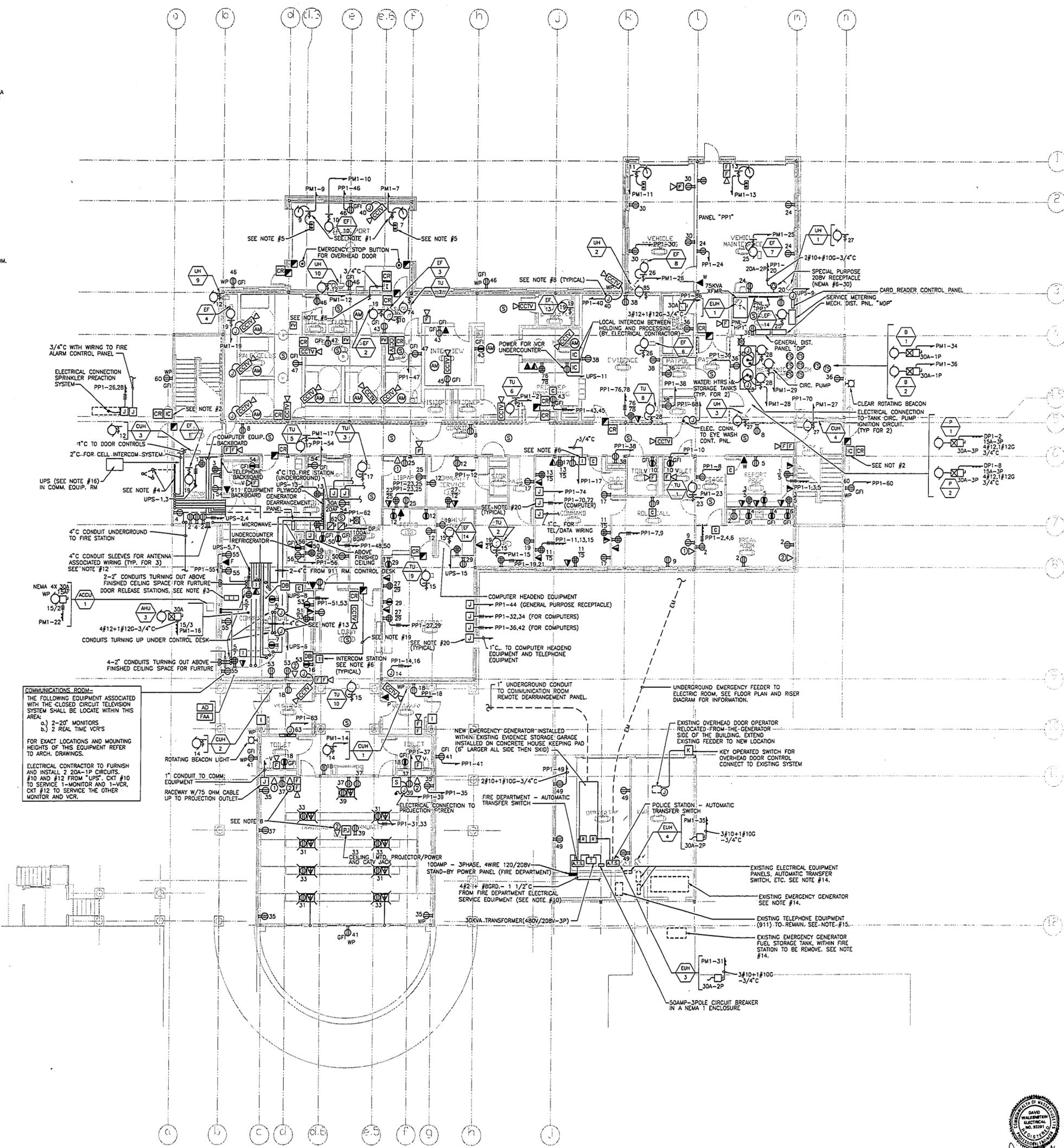
Project no. 9603.00 Drawing no. 14600-15
Date MARCH 23, 1998 E1.02



NOTES:

- OVERHEAD DOORS LOCATED WITH THE SALLY PORT AREA SHALL BE INTERLOCKED SO THAT ONLY ONE (1) DOOR CAN BE OPENED AT A TIME. ENTRANCE DOOR FROM SALLY PORT TO PRISONER PROCESSING AREA TO BE CONTROLLED AT BOTH COMMUNICATION DESK AND CONSOLE. THIS DOOR WILL NOT RELEASE UNTIL OVERHEAD DOORS ARE DOWN.
- DOOR RELEASE STATIONS TO BE CONTROLLED FROM COMMUNICATION EQUIPMENT ROOM.
- EXACT LOCATIONS OF DOOR RELEASE STATIONS AND INTERCOM STATION WITHIN THE CONSOLE TO BE FIELD COORDINATED WITH THE ARCHITECT AND CONSOLE MANUFACTURER.
- PROVIDE COPPER BUS BAR WITH SEPARATE GROUND WIRE TO COUNTERPOISE OUTSIDE THE BUILDINGS. RESISTANCE TO GROUND NOT TO EXCEED 10 OHMS.
- SALLY PORT OVERHEAD DOORS TO HAVE REMOTE CONTROLLERS LOCATED WITHIN THE COMMUNICATION ROOM WITH CONTROLS AT BOTH DESK AND CONSOLE. REFER TO NOTE #3.
- PROVIDE 3/4" CONDUIT WITH WIRING FROM INTERCOM STATION BACK TO THE COMMUNICATION EQUIPMENT ROOM WITH STATIONS LOCATED WITHIN CONSOLE.
- EXACT LOCATION AND MOUNTING HEIGHTS OF DEVICES TO BE AS DIRECTED BY THE ARCHITECT.
- ELECTRICAL CONNECTION TO OUTSIDE CCTV - E.C. TO FURNISH AND INSTALL A JUNCTION BOX ABOVE FINISHED CEILING (AS INDICATED) FOR POWER REQUIREMENTS TO CAMERA HEATER (TYPICAL). PROVIDE LIQUID TIGHT FLEXIBLE CONDUIT THRU WALL TO CAMERA LOCATION. ALSO PROVIDE 1" SLEEVE THROUGH WALL FOR CAMERA VISUAL REQUIREMENT. SLEEVE TO BE FILLED WITH INSULATION (SPRAY IN) AFTER THIS CABLE HAS BEEN INSTALLED.
- FOR DETAILS AND WIRING REQUIREMENTS FOR SECURITY FIRE ALARM SYSTEMS REFER TO RISER DIAGRAMS.
- ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL A NEW 100A-3P CIRCUIT BREAKER IN EXISTING ELECTRICAL SERVICE EQUIPMENT, TO SERVE AS NORMAL FEED TO FIRE DEPT. AUTOMATIC TRANSFER SWITCH. NEW BREAKER TO MATCH EXISTING.
- ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL A NEW 100A-3P CIRCUIT BREAKER IN EXISTING ELECTRICAL SERVICE EQUIPMENT, TO SERVE AS NORMAL FEED TO FIRE DEPT. AUTOMATIC TRANSFER SWITCH. NEW BREAKER TO MATCH EXISTING.
- 4" CONDUIT SLEEVES BETWEEN COMMUNICATION EQUIPMENT ROOM AND OUTSIDE. E.C. TO PROVIDE ISOLATING BUSHINGS ON BOTH ENDS OF SLEEVES.
- E.C. TO PROVIDE ELECTRICAL CONNECTION TO COMM. DESK WIRE WAY 20A-1P TYPICAL FOR 27 CONNECTIONS SEE FLOOR PLAN.
- EXISTING GENERATOR AND ASSOCIATED EQUIPMENT PRESENTLY LOCATED WITHIN EVIDENCE STORAGE GARAGE. THE FOLLOWING WORK SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
 - AFTER THE NEW GENERATOR AND ASSOCIATED WORK AS INDICATED ON PLAN HAS BEEN COMPLETED AND EQUIPMENT TESTED AND APPROVED BY LOCAL AUTHORITY, THE EXISTING GENERATOR AND ASSOCIATED EQUIPMENT TO BE REMOVED. THE EXISTING EQUIPMENT TURNED OVER TO THE TOWN.
- EXISTING TELEPHONE EQUIPMENT PRESENTLY LOCATED WITHIN ROOM AS INDICATED ON PLAN. THIS EQUIPMENT IS TO REMAIN DURING AND AFTER CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE WITH TELEPHONE CO. AND USERS ALONG WITH FIELD CONDITIONS TO MAINTAIN THIS EQUIPMENT. ALSO TO CARRY ANY BACK CHARGES ASSOCIATED WITH WORK. ELECTRICAL CONTRACTOR TO NOTIFY ALL PARTIES INVOLVED 24 HOURS PRIOR TO ANY INTERRUPTION TO THIS SERVICE.
- UPS UNIT ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL UNINTERRUPTIBLE POWER SUPPLY SYSTEM EQUAL TO MITSUBISHI CAT. NO. 8700 RATED AT 20KVA (18KW) UPS UNIT TO BE SUPPLIED WITH 18-20A-1P CIRCUIT BREAKERS WITHIN UNIT TO SERVICE EQUIPMENT INDICATED ON PLANS. SEE RISER DIAGRAM FOR WIRING INFORMATION.
- THE FOLLOWING SYSTEM SHALL BE WIRED VIA THE C.E.B. UNIT LOCATED WITHIN THE COMM. EQUIPMENT ROOM:
 - DOOR CONTROL FOR EXTERIOR DOORS AND SALLYPORT DOORS; AS INDICATED ON PLAN.
 - CELL INTERCOM SYSTEM.
 - VIDEO SYSTEM FOR CELL AND PRISONER PROCESSING.
- PROVIDE 75 OHM CABLE BETWEEN WALL OUTLET AND CEILING MOUNTED PROJECTION SCREEN UNIT.
- LOBBY TO CORRIDOR DOOR TO BE CONTROLLED FROM COMMUNICATIONS FRONT DESK AND CONTROL DESK AND C.E.B. BY MOTOROLA IN COMM. EQUIPMENT ROOM. BUTTONS TO BE EQUAL TO EDWARDS CAT. #695-W INSTALLED IN #147-1 PLATE TYPICAL.
- ELECTRICAL CONTRACTOR TO PROVIDE OUTLET BOXES AS INDICATED, FOR CONNECTIONS TO FLEXIBLE FURNITURE SYSTEM; SINGLE GANG OUTLET BOXES FOR COMPUTER ASSOCIATED POWER AND GENERAL PURPOSE POWER. TEL/DATA ASSOCIATED OUTLET BOX TO BE 4 1/16" SQUARE BOX WITH SINGLE GANG PLASTER RING (TYPICAL) BOXES TO BE FLUSH MOUNTED IN WALL AS INDICATED.

COMMUNICATIONS ROOM-
 THE FOLLOWING EQUIPMENT ASSOCIATED WITH THE CLOSED CIRCUIT TELEVISION SYSTEM SHALL BE LOCATE WITHIN THIS AREA:
 a) 2-20" MONITORS
 b) 2 REAL TIME VCR'S
 FOR EXACT LOCATIONS AND MOUNTING HEIGHTS REFER TO ARCH. DRAWINGS.
 ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL 2 20A-1P CIRCUITS. #10 AND #12 FROM "UPS" CKT #10 TO SERVICE 1-MONITOR AND 1-VCR. CKT #12 TO SERVICE THE OTHER MONITOR AND VCR.



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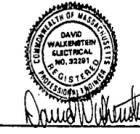


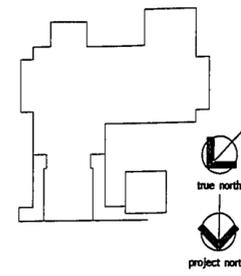
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 ARCHITECTS**

46 State St., New Britain, Connecticut 06050-2950 800-229-0300
 Drawn by JCARLE Scale: 1/8"=1'-0"

**MAIN LEVEL
 POWER PLAN**

Project no. 9625.00 Drawing no. E1.03
 1450-76
 MARCH 23, 1998





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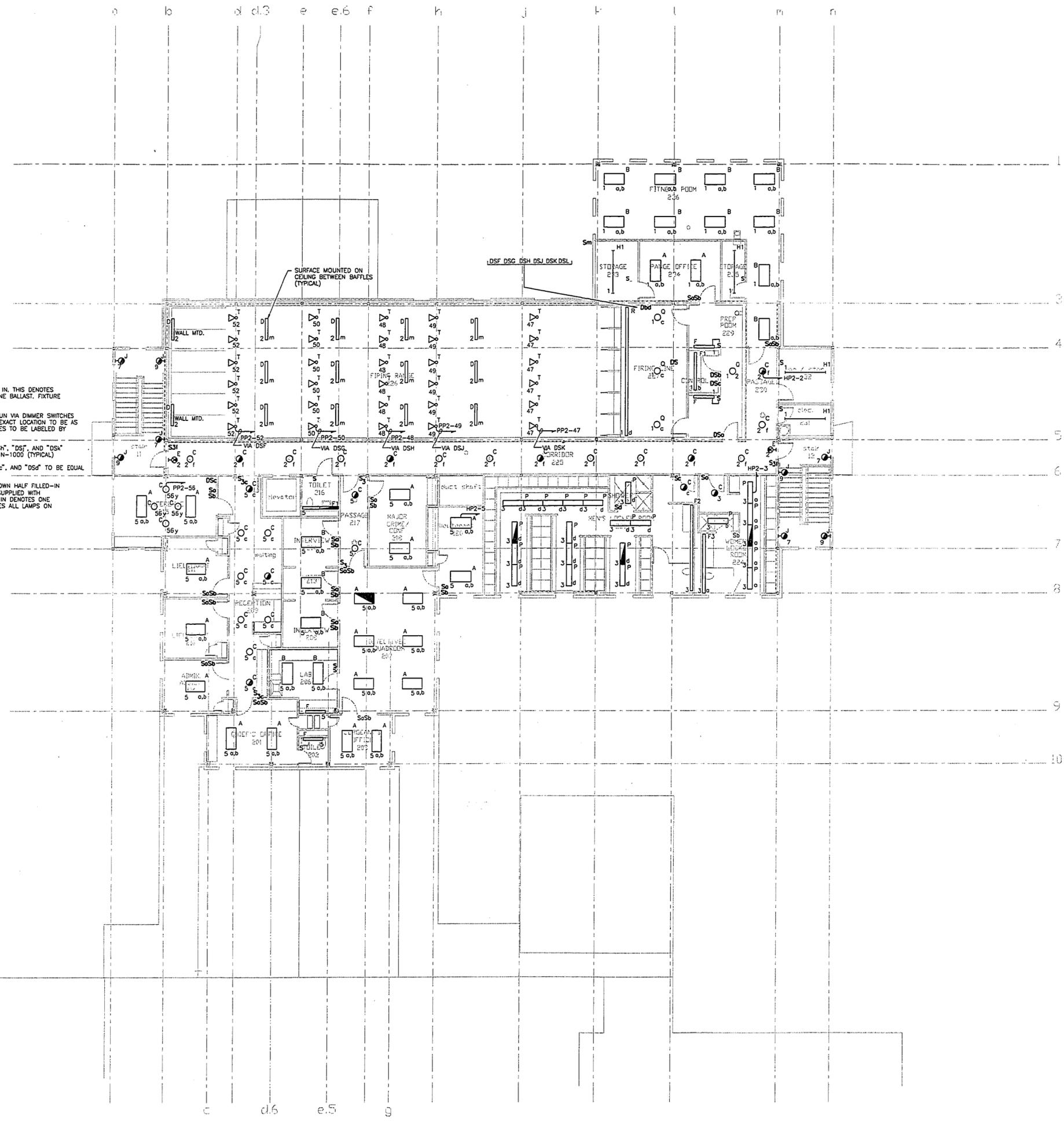
410 State Rd. New Britain, Connecticut 06050-5990 FAX: 203-229-0301
Drawn by: J.CARLE Scale: 1/8"=1'-0"

**UPPER LEVEL
LIGHTING PLAN**



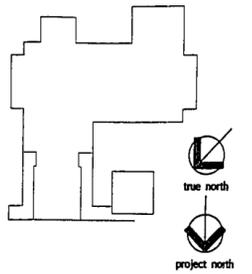
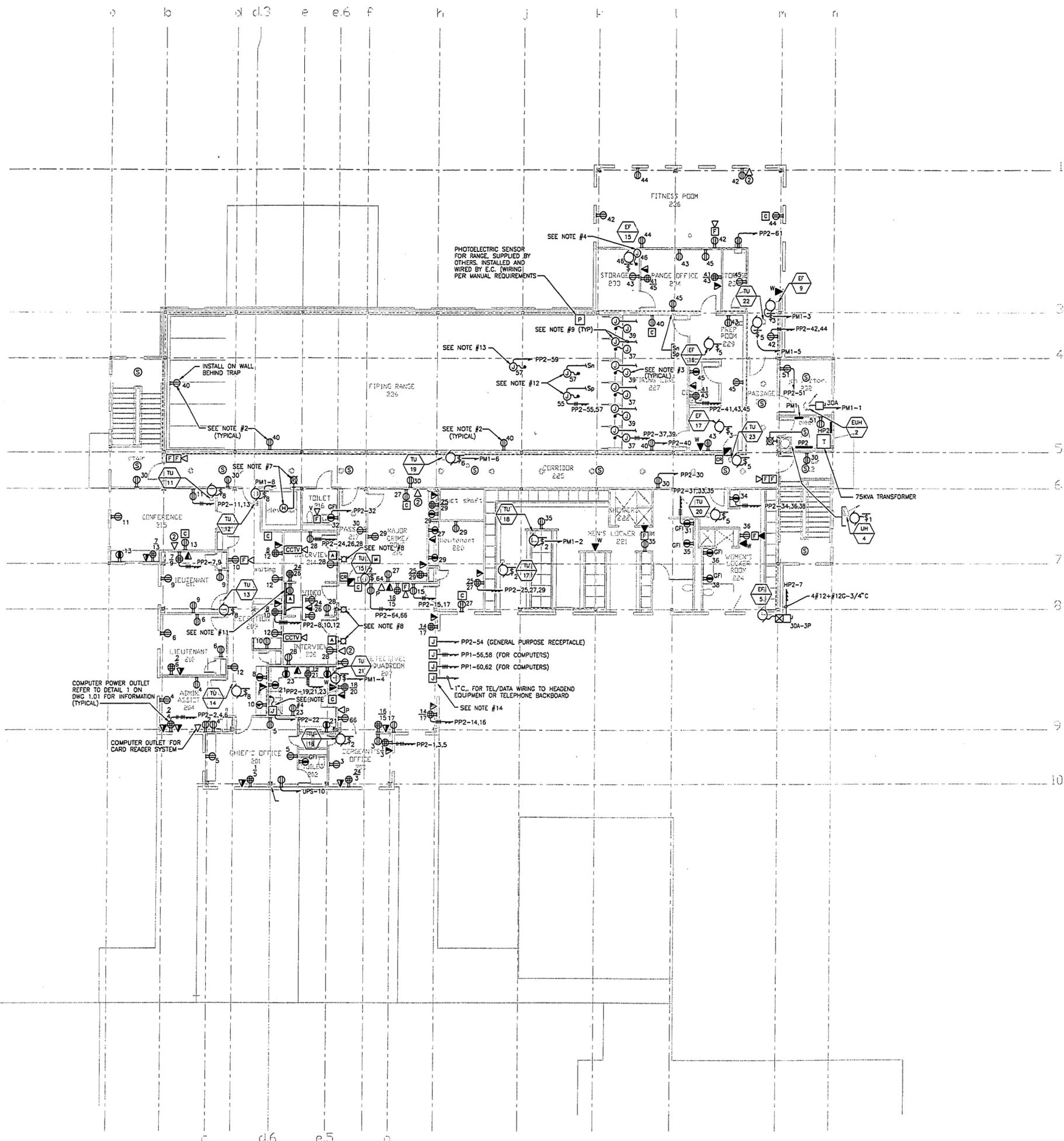
Project no. 9625.00 Drawing no. **E1.04**
MARCH 23, 1998

- NOTES**
1. TYPICAL FOR FIXTURES HALF FILLED IN. THIS DENOTES FIXTURE TO BE PROVIDED WITH BODINE BALLAST. FIXTURE TO BE UNSWITCH.
 2. FIRE RANGE LIGHTING FIXTURE TO RUN VIA DIMMER SWITCHES LOCATED WITHIN FIRING LINE AREA. EXACT LOCATION TO BE AS DIRECTED BY ARCH. DIMMER SWITCHES TO BE LABELED BY ROW SERVICE.
 3. DIMMER SWITCHES "DSF", "DSG", "DSH", "DSJ", AND "DSL" TO BE EQUAL TO LUTRON CAT. NO. N-1000 (TYPICAL)
 4. DIMMER SWITCHES "DSa", "DSb", "DSc", AND "DSd" TO BE EQUAL TO LUTRON CAT. NO. NHF-40-277
 5. TYPICAL FOR LIGHTING FIXTURES SHOWN HALF FILLED-IN OR SOLID. THESE FIXTURES TO BE SUPPLIED WITH BODINE TYPE BALLAST. HALF FILLED IN DENOTES ONE LAMP ON EMERGENCY. SOLID DENOTES ALL LAMPS ON EMERGENCY.



NOTES

1. TYPICAL FOR BOTH INTERVIEW ROOMS, THE ASSOCIATED CAMERAS LOCATED WITHIN VIDEO ROOM, TO HAVE SEPARATE RECORDING CAPABILITY. REMOTE MONITORING TO BE PROVIDED WITHIN THE MAJOR CRIME/CONF. ROOM. ALSO SYSTEM SHALL BE CAPABLE OF BEING MONITORED AT THE COMMUNICATION ROOM. REFER TO CAMERA SYSTEM RISER DIAGRAM.
2. RECEPTACLES LOCATED WITHIN THE FIRE RANGE SHALL BE PROVIDED WITH GASEKETED COVERPLATE.
3. FIRING RANGE AREA E.C. TO PROVIDE NECESSARY ELECTRICAL CONNECTIONS TO ASSOCIATED RANGE EQUIPMENT. EXACT LOCATIONS, MOUNTING HEIGHTS, CONTROL WIRING TO BE COORDINATED WITH THE RANGE MANUFACTURER.
4. ELECTRICAL CONNECTIONS TO FUME HOOD EXACT LOCATION OF EQUIPMENT TO BE FIELD VERIFIED.
5. FLOOR MOUNTED OUTLETS EXACT LOCATIONS TO BE COORDINATED WITH ARCH. AND FURNITURE LAY-OUT.
6. EXACT LOCATIONS AND MOUNTING HEIGHTS OF DEVICES TO BE AS DIRECTED BY ARCH. TYPICAL.
7. HEAT DETECTOR LOCATED AT THE TOP OF THE ELEVATOR HOISTWAY, PROVIDE A REMOTE LED LOCATED IN CORRIDOR AS INDICATED. PLATE TO BE ENGRAVED WITH "SMOKE DETECTOR-HOISTWAY".
8. REMOTE MOUNTED INDICATING LIGHT NOTING "ROOM IN USE".
9. E.C. TO FURNISH AND INSTALL 3/4" CONDUIT BETWEEN INDIVIDUAL FIRING STATIONS AND CONTROL ROOM. CONTROL UNITS ARE PROVIDED BY FIRE RANGE VENDOR. WIRING PER MANUFACTURERS REQUIREMENT. FIELD VERIFY EXACT LOCATION WITH EQUIPMENT.
10. VIDEO ROOM #213- THIS ROOM AND INTERVIEW ROOM SHALL HAVE A STAND ALONE CLOSED CIRCUIT TELEVISION SYSTEM. THE FOLLOWING EQUIPMENT ASSOCIATED WITH THE CCTV SYSTEM SHALL BE LOCATED WITHIN THIS ROOM.
 - a.) 2-20" MONITORS
 - b.) 2 REAL TIME VCR'S
 - c.) 1-ADDITIONAL JACK TO EXCEPT THE MONITOR SHALL BE INSTALLED IN MAJOR CRIME/CONF. ROOM.
 SEE SPEC. AND DRAWINGS FOR INFORMATION. THIS EQUIPMENT TO BE WIRED TO CIRCUIT #13 IN "UPS" UNIT.
11. E.C. TO FURNISH AND INSTALL 5'-0" OF SURFACE MTD. WIREWAY, EQUAL TO WIREWOLD G-4000 INSTALLED PER ARCH. DETAILS. RECEPTACLES AND COMPUTER OUTLET TO BE INSTALLED WITHIN WIREWAY.
12. E.C. CONTRACTOR TO FURNISH 2 OUTLET BOXES MOUNTED ON CEILING AND WIRING DOWN TO SWITCHES AS INDICATED FOR FUTURE POWER AND LIGHTING REQUIREMENTS.
13. ELECTRICAL CONNECTION TO CEILING MOUNTED PROJECTION UNIT. ELECTRICAL CONTRACTOR ALSO TO PROVIDE ANY REQUIRED CONTROL WIRING BETWEEN PROJECTION UNIT AND CONTROL BOOTH.
20. ELECTRICAL CONTRACTOR TO PROVIDE OUTLET BOXES AS INDICATED. FOR CONNECTIONS TO FLEXIBLE FURNITURE SYSTEM. SINGLE GANG OUTLET BOXES FOR COMPUTER ASSOCIATED POWER AND GENERAL PURPOSE POWER. TEL/DATA ASSOCIATED OUTLET BOX TO BE 4 11/16" SQUARE BOX WITH SINGLE GANG PLASTER RING (TYP) FLUSH MOUNTED IN WALL AS INDICATED.



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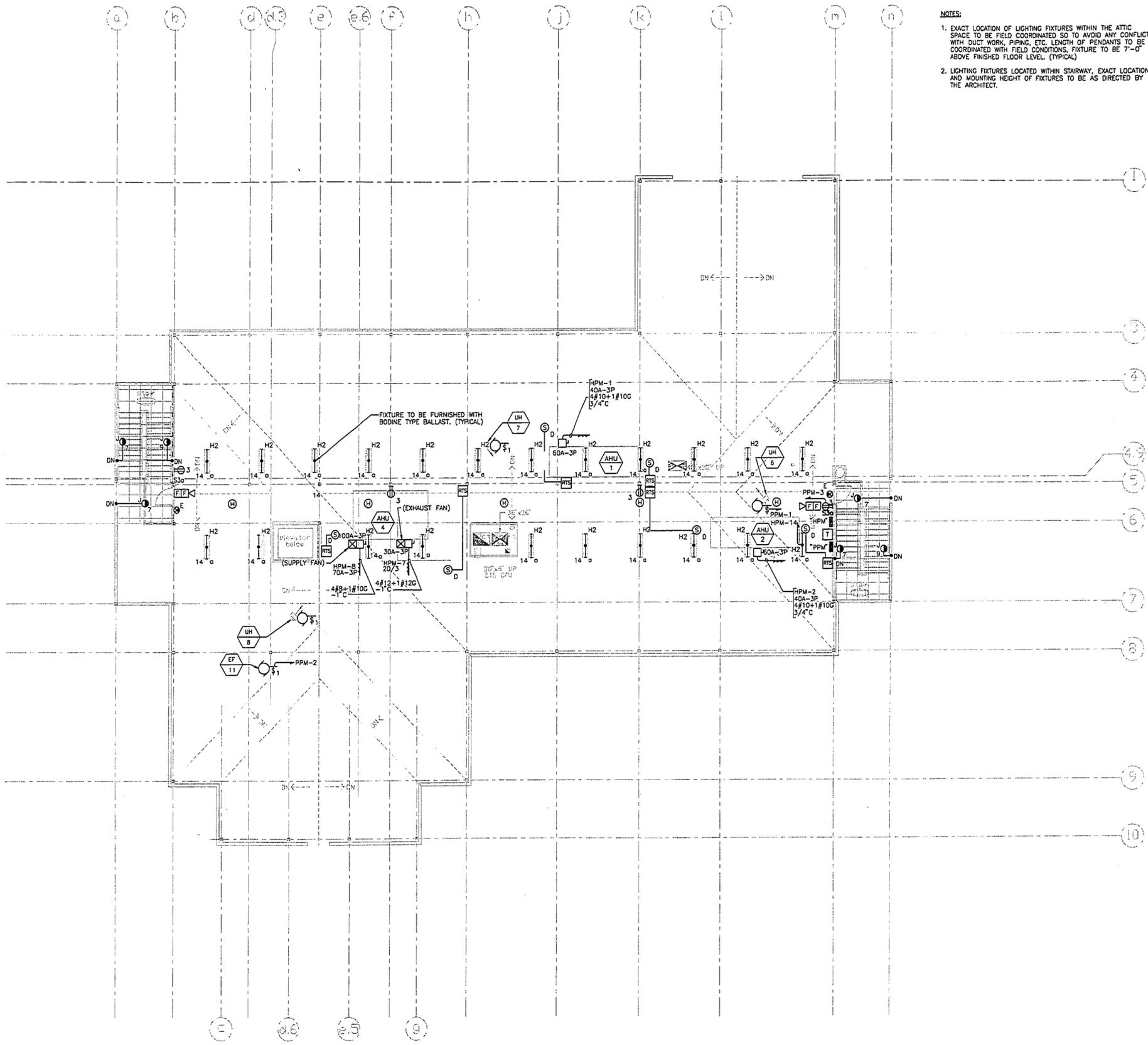
46 - Street, Rt. New Britain, Connecticut 06100-2900; 860-229-0361
Drawn by: JCABLE Scale: 1/8"=1'-0"

**UPPER LEVEL
POWER PLAN**

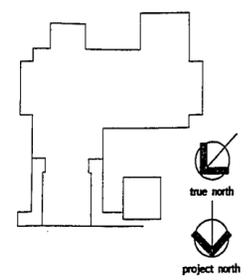


Project no. 96200 Drawing no. E1.05
Date MARCH 23, 1998

1450-78



- NOTES:**
- EXACT LOCATION OF LIGHTING FIXTURES WITHIN THE ATTIC SPACE TO BE FIELD COORDINATED SO TO AVOID ANY CONFLICT WITH DUCT WORK, PIPING, ETC. LENGTH OF PENDANTS TO BE COORDINATED WITH FIELD CONDITIONS. FIXTURE TO BE 7'-0" ABOVE FINISHED FLOOR LEVEL. (TYPICAL)
 - LIGHTING FIXTURES LOCATED WITHIN STAIRWAY, EXACT LOCATION AND MOUNTING HEIGHT OF FIXTURES TO BE AS DIRECTED BY THE ARCHITECT.



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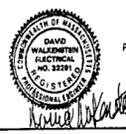


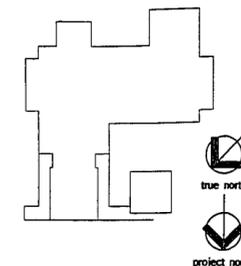
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Drawn by E. WILLIAMS Scale: 1/4"=1'-0"

**ATTIC LEVEL
POWER AND
LIGHTING PLAN**

Project no. 9625.00 Drawing no. E1.06
MARCH 23, 1998
1450-79





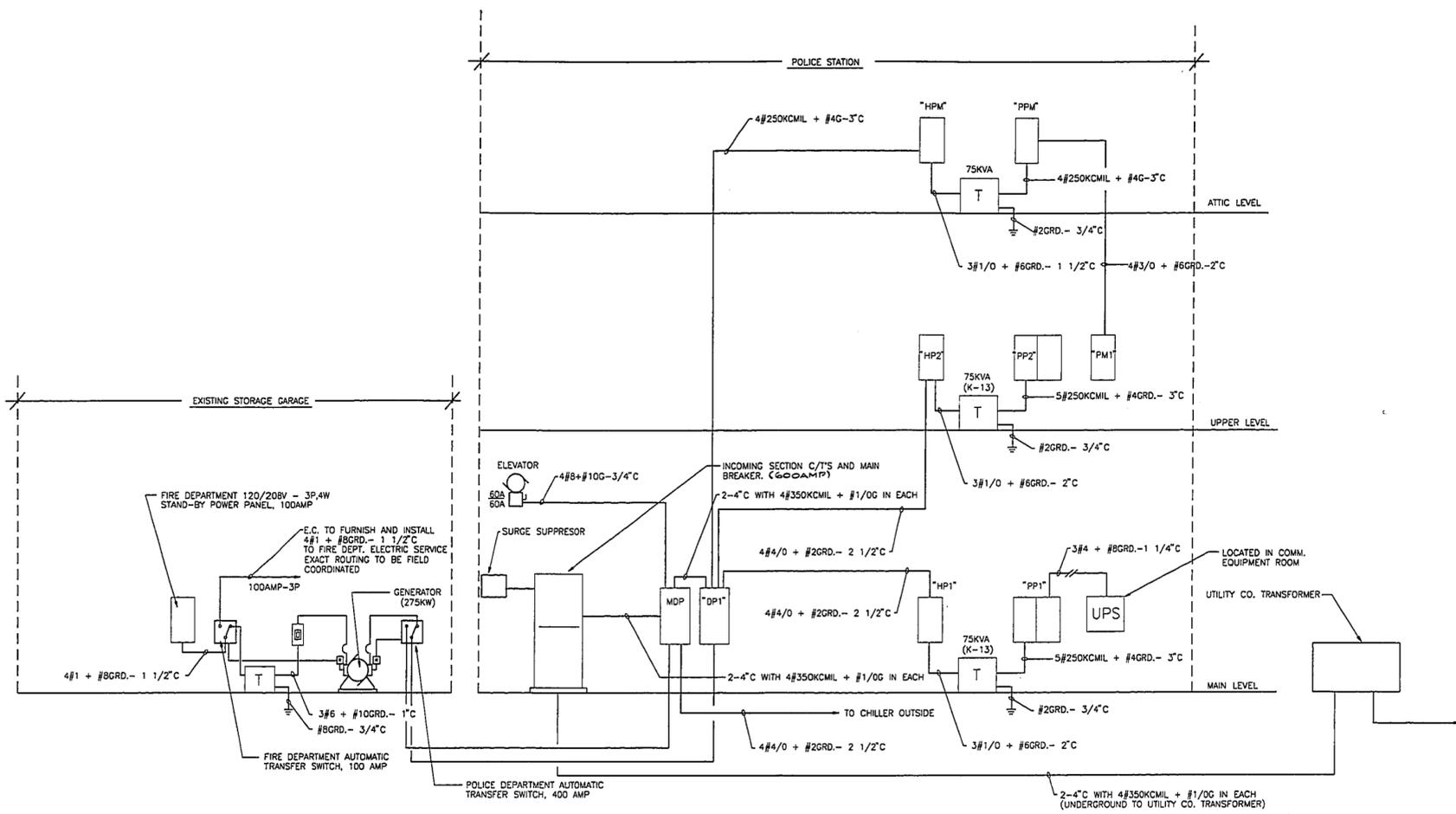
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ELECTRICAL POWER RISER DIAGRAM

NOT TO SCALE

PANELBOARD SCHEDULE																				
PANEL DESIGNATION	VOLTS	PHASE	WIRES	MAINS M.L.O. MAIN LUGS ONLY		BRANCH DEVICES-							GENERAL DESCRIPTION OF LOAD	REMARKS						
				BUS SIZE	TRIP AMPS	OVERCURRENT DEVICE	TRIP AMPS	15	20	25	30	40			50	60	70			
HP1	120/208	3	4	225	225	225												42 S	1-125A-3P	
HP2	120/208	3	4	225	225	225												42 S	1-125A-3P	
HPM	120/208	3	4	225	225	225												42 S	1-125A-3P	
PP1	120/208	3	5	400	400	250												126 S		
PP2	120/208	3	5	400	400	250												84 S		
PM1	120/208	3	4	225	225	150												42 S		
PPM	120/208	3	4	400	400	250													1-150-3P	

DISTRIBUTION PANEL SCHEDULE DP1				
PHASE: 3 WIRE: 4 VOLTAGE: 277/480 MAINS: M.L.O.				
CKT NO	OVERCURRENT DEVICE FRAME	POLES (N-NEUT CONN)	TRIP	DESCRIPTION OF LOAD
1	225	3	225	PANEL HP1
2	225	3	225	PANEL HP2
3	400	3	250	PANEL HPM
4	100	3	15	PUMP #1
5	100	3	15	PUMP #2
6	225	3	225	SPARE
7	100	3	100	SPARE

DISTRIBUTION PANEL SCHEDULE MDP				
PHASE: 3 WIRE: 4 VOLTAGE: 277/480 MAINS: M.L.O.				
CKT NO	OVERCURRENT DEVICE FRAME	POLES (N-NEUT CONN)	TRIP	DESCRIPTION OF LOAD
1	100	3	60	ELEVATOR
2	400	3	400	AUTOMATIC TRANSFER SWITCH
3	225	3	225	CHILLER
4	225	3	225	SPARE
5	100	3	100	SPARE
6				
7				

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Drawn by: J.CARLE Scale: NONE

**POWER RISER
DIAGRAM AND
SCHEDULES**



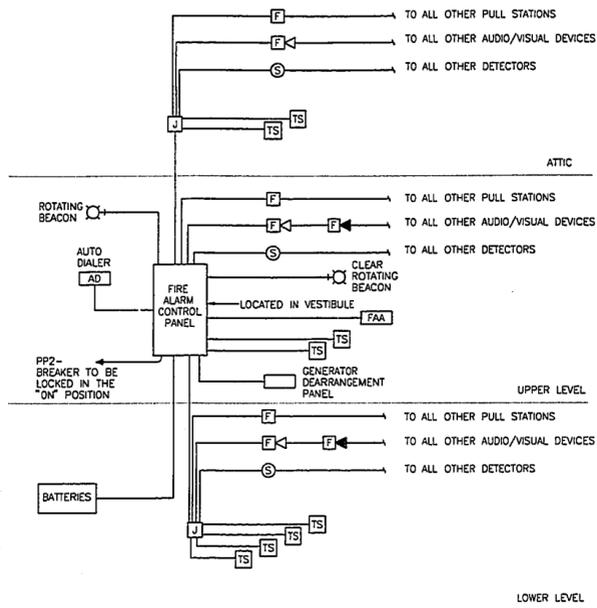
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E1.07

1/25/98

MARCH 23, 1998

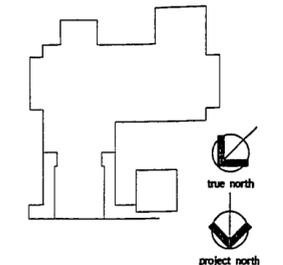
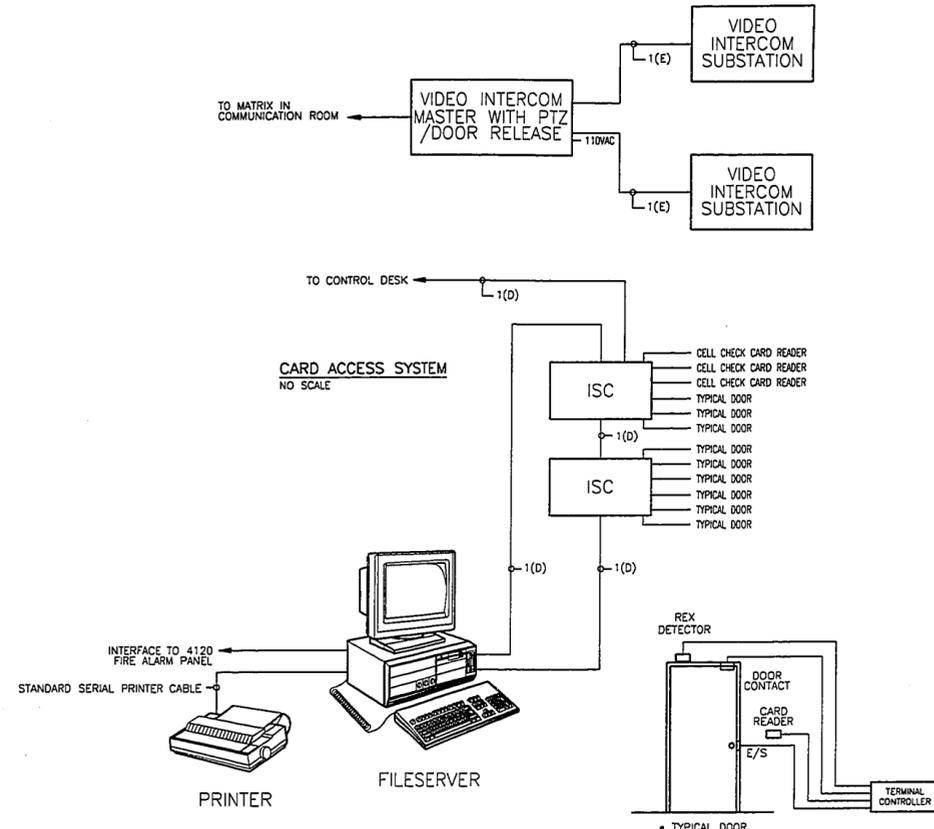


FIRE ALARM RISER DIAGRAM
NO SCALE

NOTES:

1. REFER TO FLOOR PLANS FOR EXACT QUANTITIES OF ALL DEVICES.
2. ALL WIRING SHALL BE PER MANUFACTURER'S REQUIREMENTS.
3. ALL WIRING SHALL BE CLASS A.
4. COORDINATE EXACT REQUIREMENTS FOR AUTOMATIC RECALL WITH ELEVATOR CONTRACTOR.
5. ALL DUCT MOUNTED SMOKE DETECTORS SHALL BE PROVIDED WITH A REMOTE TEST STATION. EXACT LOCATION OF REMOTE TEST STATIONS SHALL BE AS DIRECTED BY LOCAL FIRE MARSHALL.

VIDEO INTERCOM SYSTEM
NO SCALE

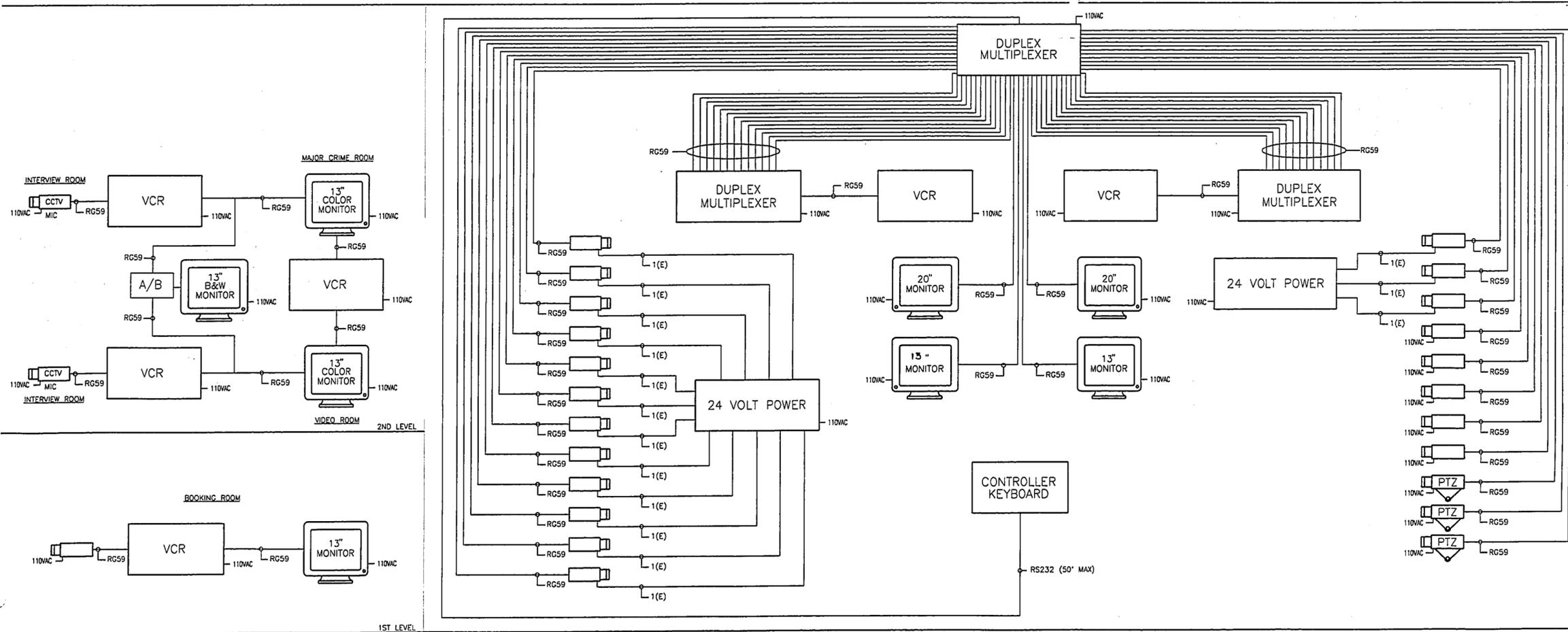


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DATE: 6-25-98
PROJECT: WESTFORD POLICE FACILITY
DRAWN BY: M. BOONILLA
SCALE: NONE



410 State Rd. New Britain, Connecticut 06108-2590; 860/229-0361
Drawn by: M. BOONILLA Scale: NONE

RISER DIAGRAMS

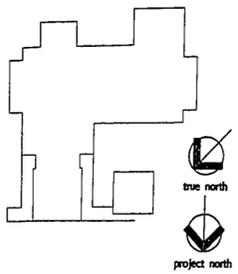
Project no. 9605-00
Drawing no. E1.08

LIGHTING FIXTURE SCHEDULE									
TYPE	DESCRIPTION	MANUFACTURER & CATALOG NUMBER	LAMPS		INPUT		REMARKS	EQUAL MANUFACTURER	
			NUMBER	TYPE	VOLTS	WATTS			
A	RECESSED 2'x4' PARABOLIC FIXTURE	HUBBELL RD3G52-AFB8	3	F032/841	277	105	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, DAYBRITE	
B	RECESSED 2'x4' PARABOLIC FIXTURE	HUBBELL RD3G-NA02-B8	3	F032/841	277	105	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, DAYBRITE	
B1	RECESSED 2'x4' LENSED FIXTURE	KENALL RGD42332EB/277 2/G	3	F032/841	277	105	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	MARK, MORLITE	
C	RECESSED DOWN COMPACT FLUORESCENT	HUBBELL D4226E277-4498W	2	CF2600/E/841	277	65	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, KIRLIN	
D	SURFACE MTD WRAP AROUND TYPE FLUORESCENT	KENALL 7170-277-EB-T8	1	F032/841	277	35	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	MARK, MORLITE	
E	EXIT SIGN SINGLE FACE UNIVERSAL MOUNT	HUBBELL LED-1-1248-R-W-W	-	LED	277	5	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, DAYBRITE	
E1	EXIT SIGN DOUBLE FACE UNIVERSAL MOUNT	HUBBELL LED-2-1248-R-W-W	-	LED	277	10	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, DAYBRITE	
F	RECESSED 6'x4'-0" WITH BAFFLE	NATIONAL R-662-32/OCT-CBG	2	F032/841	277	70	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	MARK, PAL	
F1	RECESSED 6'x7'-0" WITH BAFFLE	NATIONAL R-662-25/32OCT-CBG	2	F025/841 F032/841	277	120	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	MARK, PAL	
F2	RECESSED 6'x16'-0" WITH BAFFLE	NATIONAL R-662-32/OCT-CBG	8	F032/841	277	280	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	MARK, PAL	
F3	RECESSED 6'x11'-0" WITH BAFFLE	NATIONAL R-662-25/OCT-CBG	2	F025/841 F032/841	277	190	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	MARK, PAL	
F4	RECESSED 6'x6'-0" WITH BAFFLE	NATIONAL R-662-25/OCT-CBG	4	F025/841	277	100	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	MARK, PAL	
F5	RECESSED 6'x8'-0" WITH BAFFLE	NATIONAL R-662-25/OCT-CBG	4	F032/841	277	140	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	MARK, PAL	
G	SURFACE MTD. SECURITY FIXTURE	KENALL CC40232EB2772/8-1-EL	2	F032/841	277	70	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	MARK, MORLITE	
G1	RECESSED SECURITY FIXTURE	KENALL 1-F32TB-521-L9-F1-V	2	F032/841	277	70	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	MARK, MORLITE	
G2	SURFACE MTD. SALLY PORT FIXTURE (SEE NOTE #4)	KENALL 7200-C-432-SB2	4	F032/841	277	140	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST MOUNTED @ 8'-0" AFF	MARK, MORLITE	
H	SURFACE MTD. STRIP TYPE FIXTURE (4'-0")	HUBBELL SW42-A4	2	F032/841	277	70	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, DAYBRITE	
H1	SURFACE MTD. STRIP TYPE FIXTURE (8'-0")	HUBBELL SW825-B4	4	F032/841	277	140	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, DAYBRITE	
H2	SURFACE MTD. STRIP TYPE FIXTURE	HUBBELL SW41-A4	1	F032/841	277	35	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, DAYBRITE	
J	SURFACE MTD. FIXTURE 13' ROUND W/VELUD (SEE NOTE #4)	KENALL MR17FLPMB42P2277EL	2	CFM42W/GX240/41	277	90	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	BEGA, DEVINE	
J1	SURFACE MTD. FIXTURE 13' ROUND (SEE NOTE #4)	KENALL MR17FLPMB42P2277EL	2	CFM42W/GX240/41	277	90	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	BEGA, DEVINE	
K	RECESSED 6'x8'-0" PARABOLIC WITH LOUVER WITH DIMMER	NATIONAL R-661-32/OCT-PX-FL	2	F032/841	277	70	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	MARK, PAL	
L	SURFACE MTD. WRAP AROUND TYPE FIXTURE (SEE NOTE #4)	KENALL 37438-277-EB	3	F032/841			FIXTURE SUPPLIED WITH ELECTRONIC BALLAST MOUNTED @ 8'-0" AFF	MARK, MORLITE	
M	PENDANT MTD. EXTRUDED ALUM. FIXTURE	NATIONAL CWC2-101D/D332/OCT PX-ACTR277-24'-0"	18	F032/841			FIXTURE SUPPLIED WITH ELECTRONIC BALLAST		
N	RECESSED HID DOWN LIGHT W/ LENS	HUBBELL LR319-277-739WW/06/11	1	ED-17 MH/100W			FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, KIRLIN	
P	RECESSED LENSED FLUORESCENT FIXTURE	HUBBELL RC2GS102 E4	2	F032/841	277		FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, DAYBRITE	
O	RECESSED COMPACT FLUOR. FIXTURE WITH DIMMING BALLAST	HUBBELL D226-277-DIM4490W	2	CF2600/E/841	277		FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, KIRLIN	
R	RECESSED 5'x24'-0" FLUOR. FIXT. W/DIMMING BALLAST	NATIONAL R-66232/OCT-A-FL277	12	F032/841	277		FIXTURE TO BE PROVIDED WITH GASKETED .156 LENS FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	MARK, PAL	
SA	SITE LIGHTING FIXTURE POLE MOUNTED DOUBLE HEADED UNIT	GARDCO EB-14-2-3-250MH-277-BRA POLE: RA5-20-AF-D2-BRA	2	ED28 250W MH	277	580	TO BE SUPPLIED WITH HIGH POWER FACTOR BALLAST	LIGHTOLIER, KIRLIN	
SB	SITE LIGHTING FIXTURE POLE MOUNTED SINGLE HEADED UNIT	GARDCO EB-14-1-FM-250MH-277-BRA POLE: RA5-20-AF-D1-BRA	1	ED28 250W MH	277	290	TO BE SUPPLIED WITH HIGH POWER FACTOR BALLAST	LIGHTOLIER, KIRLIN	
SC	SITE LIGHTING FIXTURE	LUMEC 100MH-L23-PCFC-RR5-277-SF3-R80-12-BR	1	ED17 100W MH	277	135	TO BE SUPPLIED WITH HIGH POWER FACTOR BALLAST	LUMCA, SPRING CITY	
T	INCANDESCENT TYPE FLOOD W/ GASKETED LENS	HUBBELL 103-72-1048-1052C	1	150W R30 FLOOD	120	150		LIGHTOLIER, STONCO	
U	UNDER COUNTER LIGHT FIXTURE	HUBBELL UL132B	1	F032/841	120	35	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, LITHONIA	
V	NOT USED	NATIONAL STL2232/OCT-PXG-277V	2	F032/841	277	70	FIXTURE SUPPLIED WITH ELECTRONIC BALLAST	LIGHTOLIER, LITHONIA	
W	TRACK FIXTURE ON PENDANT MTD. TRACK	HUBBELL T1340	1	250W PAR38	120	250	FIXTURE INSTALLED ON 8'-0" SECTION LKLT. TRACK COMPLETE WITH REQUIRED ACCESSORIES	LIGHTOLIER, CAPRI	
X	INDIRECT RECESSED 2'x2' FLUORESCENT FIXTURE	NATIONAL WRS22-2-40BX-PFM-T (BODINE BALLAST)	1	FT40W/2G11/RS/41	277	80	FIXTURE SUPPLIED WITH BODINE TYPE BALLAST	LIGHTOLIER, DAYBRITE	
Y	INCANDESCENT DOWNLIGHT TYPE FIXTURE	HUBBELL D401-236W	1	PS 150 RS/41	120	150	LAMP TO BE RATED AT 130 VOLTS	LIGHTOLIER, KIRLIN	

* FIXTURE TO BE INSTALLED WITHIN SECURITY TYPE ACOUSTICAL CEILING SYSTEM, EXACT MOUNTING TO BE COORDINATED WITH CEILING SYSTEM.

NOTES TO LIGHTING FIXTURE SCHEDULE

- ELECTRICAL CONTRACTOR SHALL CARRY IN HIS BASE BID COST THE SPECIFIED MANUFACTURER AND CATALOG # LIGHTING FIXTURES AS LISTED IN SCHEDULES.
- OTHER MANUFACTURER(S) THAT MAY BE CAPABLE OF PROVIDING AN EQUIVALENT SUBSTITUTION TO THE SPECIFIED MANUFACTURER AND CATALOG # LIGHTING FIXTURES QUALITY, PHOTOMETRIC PERFORMANCES, AESTHETIC APPEARANCES, LAMP SOURCE(S), AND OTHER FEATURES, ARE LISTED IN THE "OTHER CAPABLE MANUFACTURER(S)" COLUMN. ANY PROPOSED EQUIVALENT SUBSTITUTION SUBMITTED FOR REVIEW SHALL INDICATE HOW THE SUBSTITUTION OF FIXTURE IS EQUIVALENT TO THE SPECIFIED AND A DEDUCT COST SAVINGS ON A BREAKDOWN BASIS OF PER FIXTURE PER TYPE AND TOTAL QUANTITY.
- TYPICAL FOR LIGHTING FIXTURES SHOWN HALF FILLED IN OR SOLID. THESE FIXTURES ARE TO BE SUPPLIED WITH BODINE TYPE BALLAST. HALF FILLED IN FIXTURES DENOTE ONE (1) OF THE LAMPS ON EMERGENCY. SOLID FIXTURES INDICATES ALL LAMPS ON EMERGENCY. REFER TO FLOOR PLANS.
- FIXTURE TO BE INJECTED MOLDED POLYCARBONATE, WITH LIFETIME WARRANTY ON FIXTURE STANDARD.



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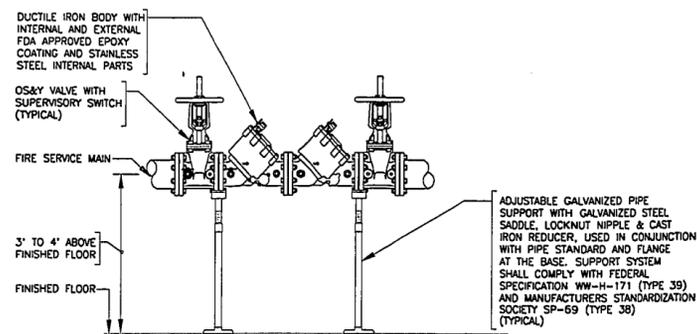
48 State Rd., New Britain, Connecticut 06050-2500 860 229-0261
Drawn by: MBOHLLA Scale: NONE

**FIXTURE
SCHEDULE**



Project No. 962500 Drawing No. E1.09
Date: MARCH 23, 1998

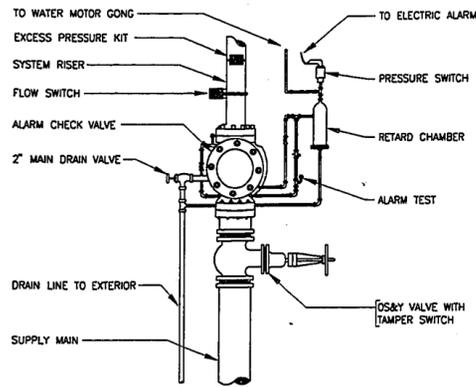
1400-82



NOTES:

1. DOUBLE CHECK VALVES SHALL BE APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AGENCY.
2. DOUBLE CHECK VALVES SHALL BE IN COMPLETE ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION.
3. THE PLUMBING CONTRACTOR SHALL SUBMIT PLANS AND DEVICE INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.
4. THIS CONTRACTOR SHALL ACT AS THE OWNERS AGENT IN SEEKING APPROVAL FROM ALL LOCAL AND STATE AUTHORITIES.
5. THIS CONTRACTOR SHALL SUBMIT ALL PLANS, SPECS, AND APPLICATIONS REQUIRED FOR APPROVAL AND PAY ALL FEES.
6. SEE FLOOR PLANS FOR SIZES.
7. MAINTAIN 1'-0" CLEARANCE FROM WALL.

1 DOUBLE CHECK VALVE ASSEMBLY DETAIL
NO SCALE



2 WET SPRINKLER ALARM CHECK VALVE DETAIL
NO SCALE

FIRE PROTECTION LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
—		ABOVE FLOOR PIPING (INDICATED AS SINGLE LINEWORK)
—		BELOW FLOOR PIPING (INDICATED AS DOUBLE LINEWORK)
—		NEW WORK (INDICATED AS HEAVY LINEWORK)
F	F	FIRE PROTECTION SERVICE MAIN
WS	WS	WET SPRINKLER SYSTEM
PS	PS	PREACTION SPRINKLER SYSTEM
D	D	SPRINKLER TEST/DRAIN
UP	UP	UP (PENETRATES LEVEL ABOVE)
DN	DN	DOWN (PENETRATES LEVEL BELOW)
SS	SS	DIRECTION OF FLOW
SS	SS	SHUTOFF VALVE (OUTSIDE SCREW AND YOKE WITH SUPERVISORY SWITCH)
FDC	FDC	FIRE DEPARTMENT CONNECTION
CV	CV	CHECK VALVE
DCVA	DCVA	DOUBLE CHECK VALVE ASSEMBLY
WACV	WACV	WET ALARM CHECK VALVE
SS	SS	SUPERVISORY SWITCH
FS	FS	FLOW SWITCH
FC	FC	FLUSHING CONNECTION
CC	CC	CAPPED CONNECTION
●		RECESSED PENDANT SPRINKLER HEAD
○		STANDARD BRASS UPRIGHT SPRINKLER HEAD
○		INSTITUTIONAL TYPE PENDANT SPRINKLER HEAD
○		HEAT DETECTOR (PREACTION SYSTEM)
1		DETAIL SYMBOL (INDICATES DETAIL NUMBER AND REFERENCE DRAWING)

FIRE PROTECTION NOTES:

1. THE WORK COVERED CONSISTS OF FURNISHING ALL LABOR AND MATERIALS NECESSARY TO INSTALL, COMPLETE AND READY FOR CONTINUOUS OPERATION, THE FIRE PROTECTION SYSTEMS, APPARATUS AND EQUIPMENT FOR THIS PROJECT.
2. ALL EQUIPMENT AND MATERIALS FURNISHED UNDER THE FIRE PROTECTION SUB-CONTRACT, LABOR AND TESTING PERFORMED HEREIN SHALL BE IN COMPLETE ACCORDANCE WITH THE MASSACHUSETTS STATE BUILDING CODE, THE LOCAL AUTHORITIES, NATIONAL FIRE PROTECTION ASSOCIATION, INSURANCE REGULATIONS AND REQUIREMENTS GOVERNING SUCH WORK.
3. ANY AND ALL PERMITS REQUIRED FOR INSTALLATION OF ANY MATERIAL SHALL BE OBTAINED AS PART OF THE WORK OF THE SPECIFICATION INCLUDING ALL FEES OR EXPENSES INCURRED.
4. UNLESS OTHERWISE NOTED, IT IS THE INTENT OF THESE DOCUMENTS THAT THE BUILDING SHALL BE 100% SPRINKLERED.
5. PROVIDE A COMPLETE HYDRAULICALLY CALCULATED SPRINKLER SYSTEM THROUGHOUT THE BUILDING. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH NFPA 13 INCLUDING ALL RULES AND REGULATIONS OF THE LOCAL FIRE DEPARTMENT.
6. FOR SPRINKLER DENSITY AND AREA OF APPLICATION, REFER TO SPECIFICATIONS.
7. THE SPRINKLER CONTRACTOR SHALL PREPARE WORKING DRAWINGS OF THE SPRINKLER WORK AND OBTAIN APPROVALS FROM THE LOCAL FIRE DEPARTMENT PRIOR TO INSTALLATION.
8. SPRINKLERS SHALL BE LOCATED ABOVE AND BELOW ALL DUCTWORK GREATER THAN 4'-0" IN WIDTH.
9. ROUTING OF SPRINKLER MAINS, BRANCHES AND HEADS SHALL BE THOROUGHLY COORDINATED WITH OTHER TRADES AND BUILDING STRUCTURE PRIOR TO SUBMISSION OF COORDINATED SHOP DRAWINGS.
10. SPRINKLER HEADS IN AREAS WITH NO FINISHED CEILING, UNLESS OTHERWISE INDICATED, SHALL BE UPRIGHT TYPE, LOCATED AS HIGH AS POSSIBLE. IN ALL OTHER AREAS, UNLESS OTHERWISE INDICATED, SPRINKLER HEADS SHALL BE CONCEALED PENDANT TYPE WITH COVER PLATE (COLOR OF COVER PLATE SHALL BE APPROVED BY THE ARCHITECT).
11. THE FIRE PROTECTION CONTRACTOR SHALL MAKE PROVISIONS FOR OBTAINING UPDATED FLOW TEST INFORMATION FOR THIS PROJECT. ANY FLOW TEST INFORMATION NOTED IN THE CONTRACT DOCUMENT ARE CONSIDERED PRELIMINARY. A NEW FLOW TEST SHALL BE REQUIRED AT THIS CONTRACTORS EXPENSE.
12. THE FIRE PROTECTION CONTRACTOR SHALL INSTALL SPRINKLERS WITH A 255° TEMPERATURE RATING IN AREAS UTILIZING UNIT HEATERS (i.e.: SALLYPORT, VEHICLE PROCESSING & MAINTENANCE.)
13. NO HOLES SHALL BE CUT OR BURNED THROUGH THE WEBS OF ANY STEEL BEAMS FOR PIPING WITHOUT WRITTEN APPROVAL FROM THE ARCHITECT AND STRUCTURAL ENGINEER.
14. FOR EXACT LOCATION OF SPRINKLER HEADS REFER TO THE ARCHITECTS REFLECTED CEILING PLANS.

FIRE PROTECTION DESIGN NARRATIVE

FIRE SUPPRESSION CRITERIA

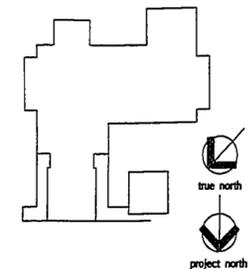
- A. FOR HYDRANT LOCATIONS, REFER TO DRAWING C1.1
- B. HYDRANT FLOW TEST DATA SOURCE: WESTFORD WATER DEPARTMENT
 THE FOLLOWING HYDRANT FLOW TEST WAS PERFORMED BY I.S.O. (INSURANCE SERVICE OFFICES) ON JULY 17, 1997 ON A 12" LOW SERVICE MAIN AT THE INTERSECTION OF DEPOT AND MAIN STREETS WITH THE FOLLOWING RESULTS:
 68 PSI STATIC
 54 PSI RESIDUAL
 TOTAL FLOW: 1793 GPM
 FLOWING 2700 GPM @ 20 PSI
- C. SPRINKLER DESIGN DENSITIES ARE IN ACCORDANCE WITH NFPA 13 LIGHT HAZARD CRITERIA THROUGHOUT.
 SPRINKLER COVERAGE IN LIGHT HAZARD OCCUPANCIES ARE DESIGNED FOR .10 GPM OVER THE MOST REMOTE 1500 SQUARE FEET.
 MAXIMUM VELOCITIES SHALL NOT EXCEED 20 FEET PER SECOND. A 10 PSI CUSHION SHALL BE INCLUDED IN THE CALCULATION.
- D. A SPRINKLER SYSTEM SHALL BE UTILIZED THROUGHOUT THE ENTIRE BUILDING.
- E. FIRE PROTECTION SIGNALING SYSTEMS CONTROL EQUIPMENT AND ANNUNCIATOR PANEL ARE SHOWN ON THE ELECTRICAL DRAWINGS.
- F. THE SPRINKLER LAYOUTS SHOWN ON THESE DRAWINGS HAVE BEEN HYDRAULICALLY CALCULATED. THE RESULTS OF THE HYDRAULIC CALCULATION SHOW THAT THERE IS SUFFICIENT PRESSURE TO OPERATE THE APPROPRIATE NUMBER OF HEADS AT THE MOST REMOTE DESIGN AREAS. PIPE SIZES AND NODE LOCATIONS HAVE BEEN LEFT ON THE PLANS TO INDICATE DESIGN RATIONALE.
- G. THE SPRINKLER CONTRACTOR SHALL FOLLOW THE DESIGN CRITERIA INDICATED ON THE DRAWINGS BUT WILL BE ALLOWED TO VARY THE PIPE SIZES TO ALLOW FOR COORDINATION AND MINOR CHANGES IN THE PREPARATION.

SEQUENCE OF OPERATION

- A. WET SPRINKLER SYSTEM
 1. THE WET PIPE SYSTEM EMPLOYS AUTOMATIC (CLOSED FUSIBLE LINK) SPRINKLERS ATTACHED TO PIPING CONTAINING WATER, UNDER PRESSURE AT ALL TIMES. WHEN FIRE OCCURS, INDIVIDUAL SPRINKLERS ARE ACTIVATED BY HEAT, AND WATER FLOWS IMMEDIATELY. THE FLOW OF WATER RAISES THE ALARM VALVE CLAPPER FROM ITS SEAT. THIS PERMITS WATER TO ENTER THE ALARM LINE. A WATER MOTOR GONG IS ACTIVATED BY THE FLOW RESULTING IN A LOCAL ALARM. A PRESSURE SWITCH ON THE ALARM LINE IS ACTIVATED PROVIDING AN ELECTRIC SIGNAL WHICH IS SENT TO THE MAIN FIRE ALARM CONTROL PANEL. THIS SIGNAL WILL BE FORWARDED TO THE FIRE DEPARTMENT. A FIRE DEPARTMENT CONNECTION IS CONNECTED TO THE DISCHARGE SIDE OF THE WET ALARM VALVE FOR USE BY THE FIRE DEPARTMENT PUMPER TRUCK.

TESTING CRITERIA FOR FINAL ACCEPTANCE

- A. APPROVAL OF SPRINKLER SYSTEM
 1. THE INSTALLING SPRINKLER CONTRACTOR SHALL:
 - A. NOTIFY THE AUTHORITY HAVING JURISDICTION AND OWNERS REPRESENTATIVE OF THE TIME AND DATE TESTING WILL BE PERFORMED.
 - B. PERFORM ALL REQUIRED ACCEPTANCE REQUIREMENTS LISTED IN NFPA 13, 8-2 AND 8-2.2 HYDROSTATIC TESTS.
 - C. COMPLETE AND SIGN THE APPROPRIATE CONTRACTORS MATERIAL AND TEST CERTIFICATES (USE NFPA FIGURES 8-1(A) AND 8-1(B)).
 2. COMPLETE AS-BUILT DRAWINGS AS SPECIFIED.



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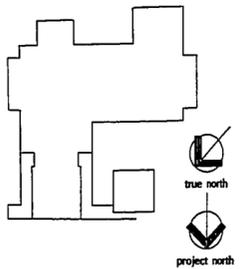
16 State St., New Britain, Connecticut 06050-2500 860 229-0361
Drawn by: T. CLIFFIN Scale: AS NOTED

**LEGEND,
NOTES AND
DETAILS
FIRE PROTECT.**

Project no. 9625.00 Drawing no. FP.01
Date MARCH 23, 1998

a k d d.3 e e.6 f h j k l m n

BRANCH PIPE HYDRAULIC SCHEDULE	
SIZE	QUANTITY OF SPRINKLERS
1"	2
1 1/4"	3
1 1/2"	5
2"	10



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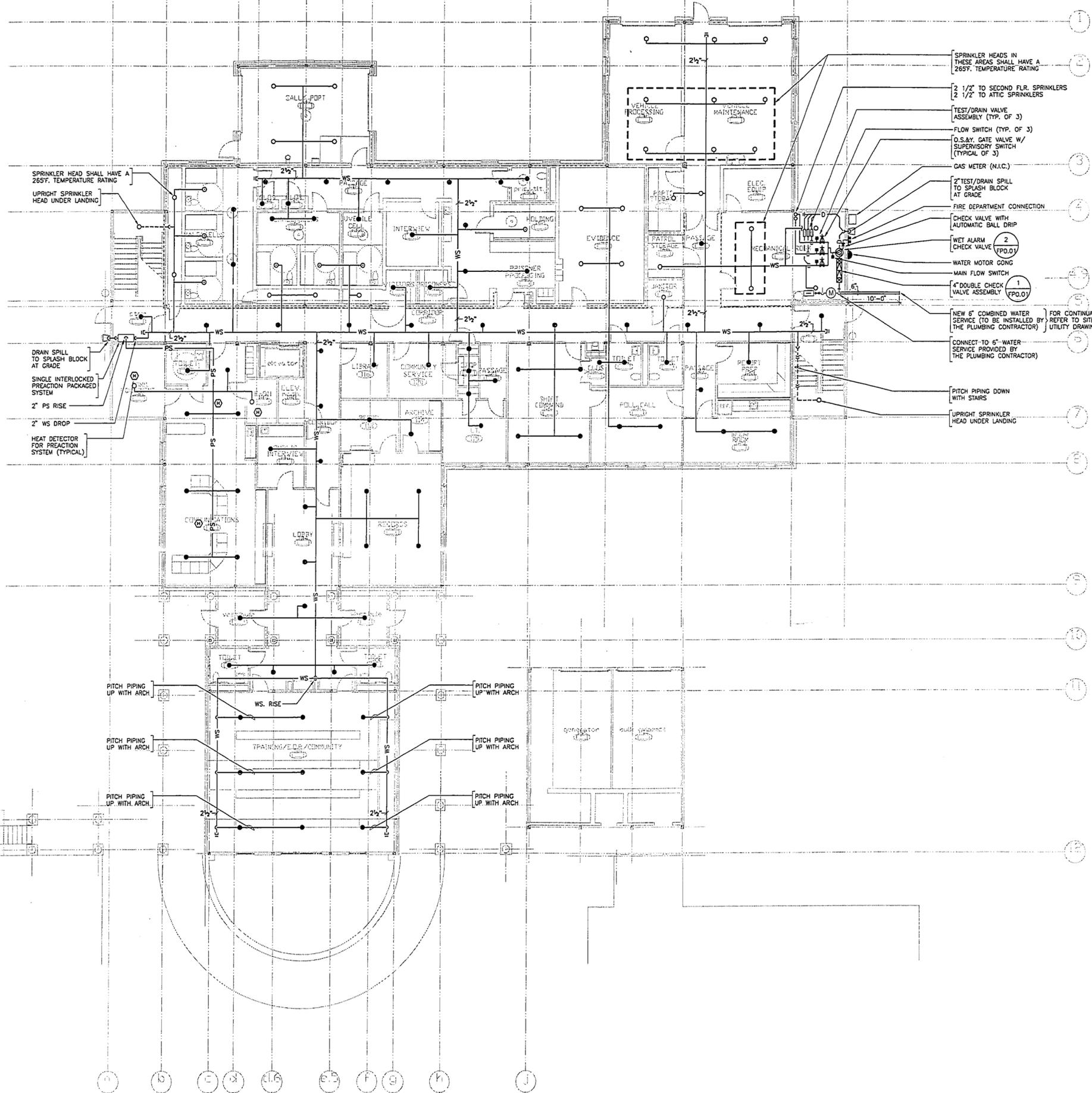


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Drawn by T. CLARK Scale: 1/8"=1'-0"

**MAIN LEVEL
FIRE
PROTECTION
PLAN**

Project no. 962500 Drawing no. FP1.01
Date MARCH 23, 1998

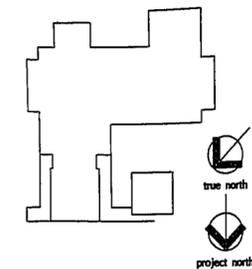


- SPRINKLER HEADS IN THESE AREAS SHALL HAVE A 265°F. TEMPERATURE RATING
- 2 1/2" TO SECOND FLR. SPRINKLERS
- 2 1/2" TO ATTIC SPRINKLERS
- TEST/DRAIN VALVE ASSEMBLY (TYP. OF 3)
- FLOW SWITCH (TYP. OF 3)
- O.S.&Y. GATE VALVE W/ SUPERVISORY SWITCH (TYPICAL OF 3)
- GAS METER (N.I.C.)
- 2" TEST/DRAIN SPILL TO SPLASH BLOCK AT GRADE
- FIRE DEPARTMENT CONNECTION
- CHECK VALVE WITH AUTOMATIC BALL DRIP
- WET ALARM CHECK VALVE (2) (FPD.01)
- WATER MOTOR GONG
- MAIN FLOW SWITCH
- 4" DOUBLE CHECK VALVE ASSEMBLY (1) (FPD.01)
- NEW 6" COMBINED WATER SERVICE (TO BE INSTALLED BY THE PLUMBING CONTRACTOR) FOR CONTINGUATION REFER TO SITE UTILITY DRAWINGS
- CONNECT TO 6" WATER SERVICE PROVIDED BY THE PLUMBING CONTRACTOR
- PITCH PIPING DOWN WITH STAIRS
- UPRIGHT SPRINKLER HEAD UNDER LANDING

- SPRINKLER HEAD SHALL HAVE A 265°F. TEMPERATURE RATING
- UPRIGHT SPRINKLER HEAD UNDER LANDING
- DRAIN SPILL TO SPLASH BLOCK AT GRADE
- SINGLE INTERLOCKED PREACTION PACKAGED SYSTEM
- 2" PS RISE
- 2" WS DROP
- HEAT DETECTOR FOR PREACTION SYSTEM (TYPICAL)

- PITCH PIPING UP WITH ARCH.
- WS. RISE
- PITCH PIPING UP WITH ARCH.

a b c d e.6 f g h j



BRANCH PIPE HYDRAULIC SCHEDULE	
SIZE	QUANTITY OF SPRINKLERS
1"	2
1 1/4"	3
1 1/2"	5
2"	10

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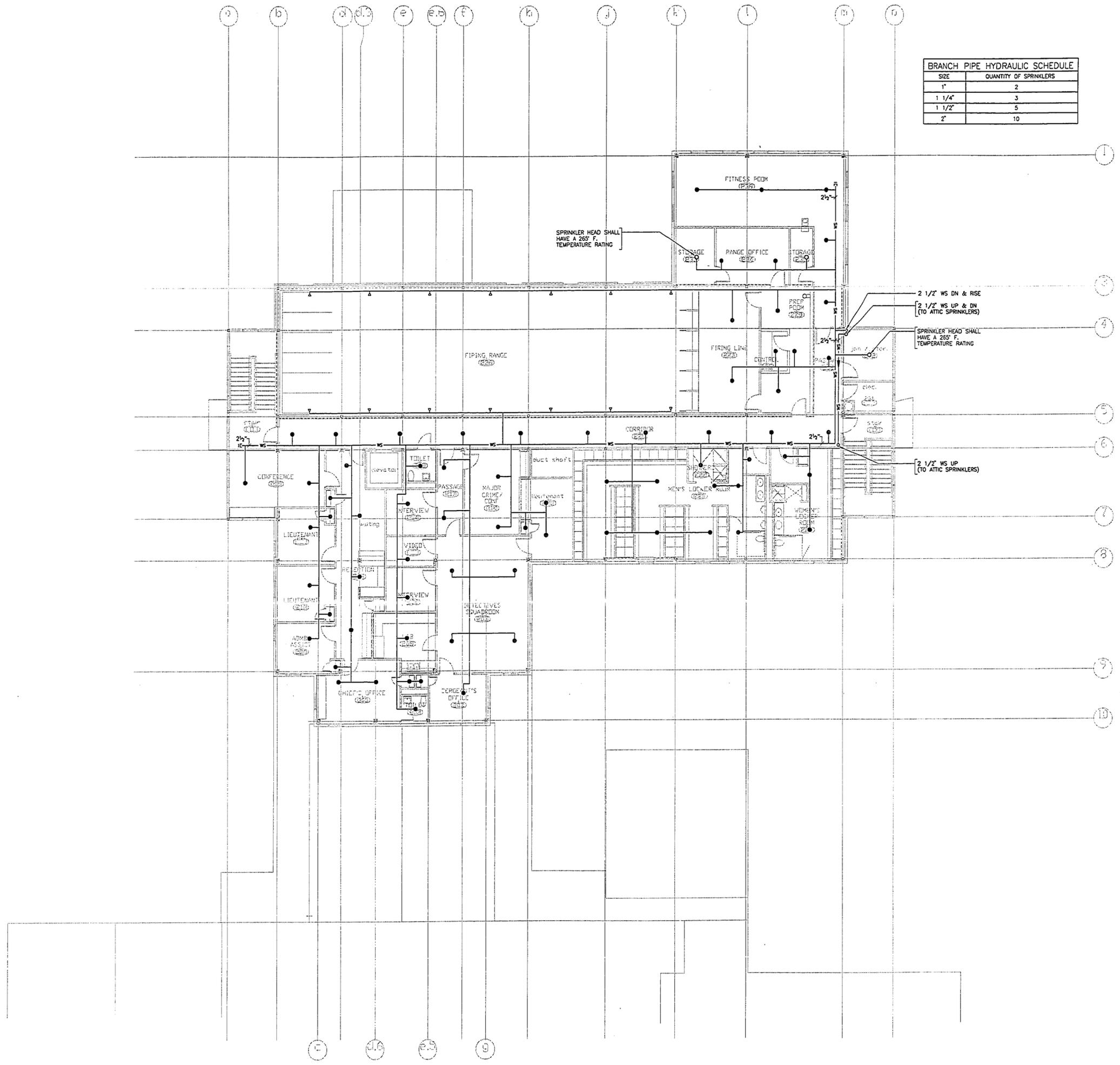
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Drawn by: T. CLARKIN Scale: 1/8"=1'-0"

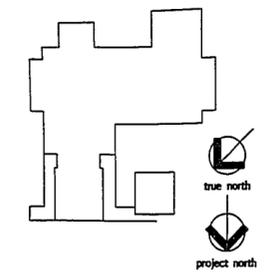
**UPPER LEVEL
FIRE
PROTECTION
PLAN**

Project no. 9625.00 Drawing no. 1467-0
Date MARCH 23, 1998 **FP1.02**

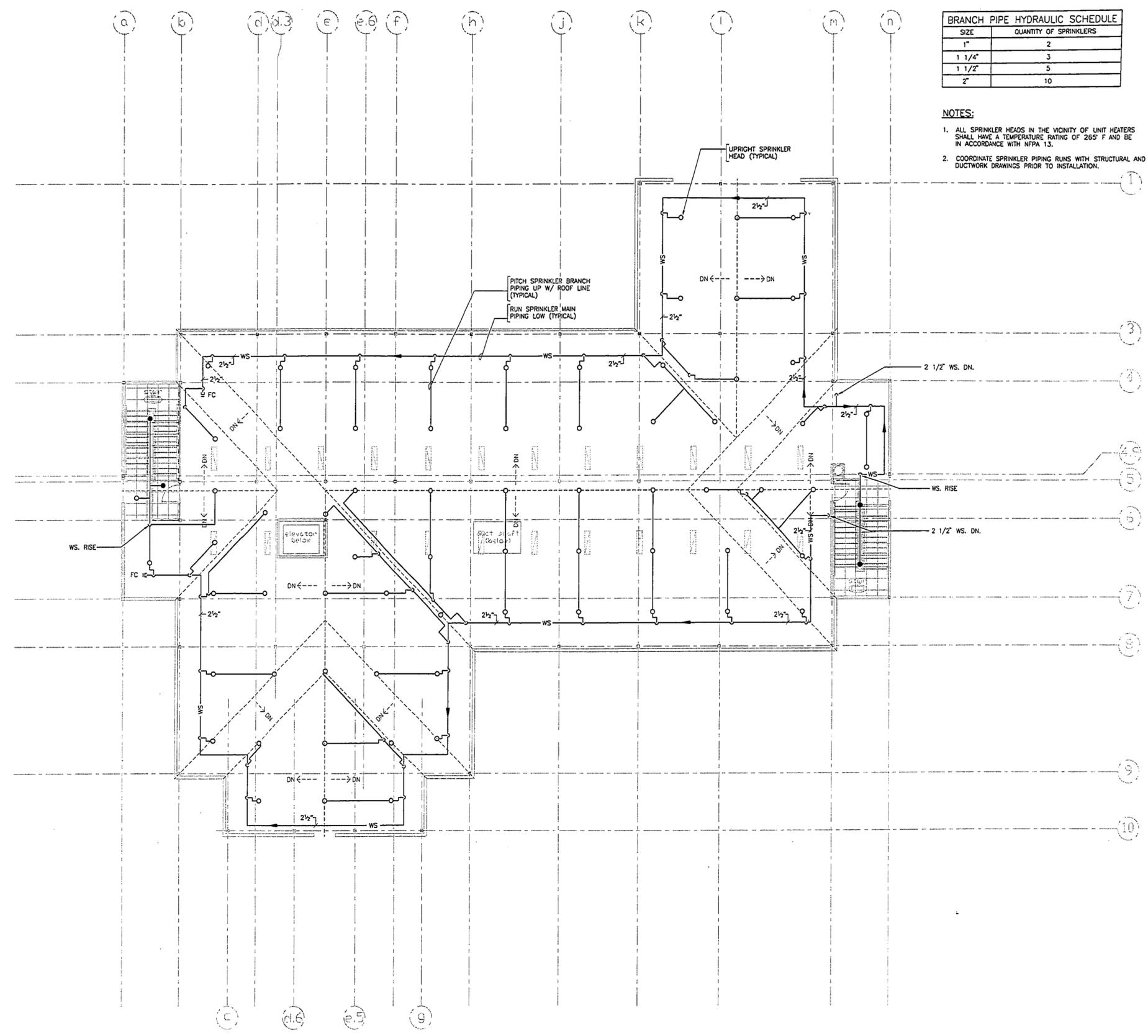


BRANCH PIPE HYDRAULIC SCHEDULE	
SIZE	QUANTITY OF SPRINKLERS
1"	2
1 1/4"	3
1 1/2"	5
2"	10

- NOTES:**
1. ALL SPRINKLER HEADS IN THE VICINITY OF UNIT HEATERS SHALL HAVE A TEMPERATURE RATING OF 265° F AND BE IN ACCORDANCE WITH NFPA 13.
 2. COORDINATE SPRINKLER PIPING RUNS WITH STRUCTURAL AND DUCTWORK DRAWINGS PRIOR TO INSTALLATION.



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Drawn by: T. CLARK Scale: 1/8" = 1'-0"

**ATTIC LEVEL
FIRE
PROTECTION
PLAN**

Project no. 960500 Drawing no. 1450-86
Date: MARCH 23, 1998 **FP1.03**

PLUMBING FIXTURE SCHEDULE									
DESIGNATION	FIXTURE	CONNECTION SIZE					DESCRIPTION		
		CW	HW	S/W	V	TP			
P-1	WATER CLOSET	1/2"	-	4"	2"	-	WALL MOUNTED		
P-1A	WATER CLOSET	1/2"	-	4"	2"	-	WALL MOUNTED WATER CLOSET - HANDICAPPED ACCESSIBLE		
P-2	URINAL	1"	-	2"	2"	-	WALL MOUNTED		
P-2A	URINAL	1"	-	2"	2"	-	WALL MOUNTED URINAL - HANDICAPPED ACCESSIBLE		
P-3	LAVATORY	1/2"	1/2"	2"	2"	-	SELF-RIMMING OVAL		
P-3A	LAVATORY	1/2"	1/2"	2"	2"	-	SELF-RIMMING OVAL - HANDICAPPED ACCESSIBLE		
P-3B	LAVATORY	1/2"	1/2"	2"	2"	-	WALL MOUNTED WITH CARRIER		
P-3C	LAVATORY	1/2"	1/2"	2"	2"	-	WALL MOUNTED WITH CARRIER - HANDICAPPED ACCESSIBLE		
P-3D	WASHFOUNTAIN	1/2"	1/2"	2"	2"	-	3-STATION STAINLESS STEEL - HANDICAPPED ACCESSIBLE		
P-4	MOP RECEPTOR	1/2"	1/2"	3"	2"	-	TERRAZO BASIN WITH STAINLESS STEEL CAP AND FAUCET WITH VACUUM BREAKER AND PAUL HOOK		
P-5	SINK	1/2"	1/2"	2"	2"	-	SELF RIMMING STAINLESS STEEL SINGLE BOWL SINK WITH GOOSENECK FAUCET & WRIST BLADE HANDLES - HANDICAPPED ACCESSIBLE		
P-5A	SINK	1/2"	1/2"	2"	2"	-	SELF RIMMING STAINLESS STEEL DOUBLE BOWL SINK WITH GOOSENECK FAUCET & WRIST BLADE HANDLES - HANDICAPPED ACCESSIBLE		
P-6	SHOWER	1/2"	1/2"	-	-	-	MIXING VALVE, SHOWER HEAD & FLOOR DRAIN (ENCLOSURE BY GENERAL CONTRACTOR)		
P-6A	SHOWER	1/2"	1/2"	-	-	-	SECURITY TYPE SHOWER AT BIO-HAZARD ROOM WITH REMOTE TEMPERING VALVE		
P-7	COMBINATION WATER CLOSET AND LAV.	1/2"	1/2"	2"	2"	-	STAINLESS STEEL COMBINATION WATER CLOSET AND LAVATORY PENAL FIXTURE PROVIDE HYDRAULIC ACTUATOR IN CHASE BEHIND FIXTURE		
P-7A	COMBINATION WATER CLOSET AND LAV.	1/2"	1/2"	2"	2"	-	STAINLESS STEEL COMBINATION WATER CLOSET AND LAVATORY PENAL FIXTURE HANDICAPPED ACCESSIBLE, PROVIDE HYDRAULIC ACTUATOR IN CHASE BEHIND FIXTURE		
P-7B	STAINLESS STEEL WATER CLOSET	1/2"	-	4"	2"	-			
P-8	EMERGENCY SHOWER/EYEWASH	-	-	-	-	1 1/2"	FLOOR MOUNTED WITH BRACING TO WALL		
P-8A	EMERGENCY EYEWASH	-	-	-	-	1 1/2"	FLOOR MOUNTED WITH BRACING TO WALL		
P-9	ELECTRIC WATER COOLER	1/2"	-	1 1/2"	1 1/2"	-	HANDICAPPED ACCESSIBLE (ADA)		

DRAIN SCHEDULE		
DESIGNATION	LOCATION	DESCRIPTION
FD-A	TOILET ROOMS	CAST IRON BODY WITH BRONZE ADJUSTABLE BAR GRATE
FD-B	MECH. AREAS	CAST IRON BODY WITH BRONZE ADJUSTABLE BAR GRATE AND REMOVABLE SEDIMENT BUCKET
FD-C	CELL AREAS	SAME AS FD-A EXCEPT WITH VANDAL-PROOF SCREWS
GD-A	GARAGE BAYS	HEAVY DUTY CAST IRON WITH DUCTILE IRON GRATE AND SEDIMENT BUCKET
RD-A	FLAT ROOF	CAST IRON BODY WITH ALUMINUM DOME

PLUMBING GENERAL NOTES:

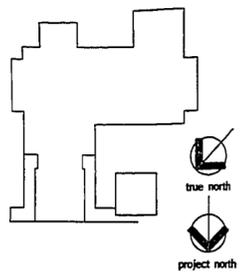
- THE WORK COVERED CONSISTS OF FURNISHING ALL LABOR AND MATERIALS NECESSARY TO INSTALL COMPLETE AND READY FOR CONTINUOUS OPERATION, THE PLUMBING SYSTEMS AND EQUIPMENT FOR THIS PROJECT.
- ALL EQUIPMENT AND MATERIALS FURNISHED UNDER THE PLUMBING SUB-CONTRACT, LABOR AND TESTING PERFORMED HEREIN SHALL BE IN COMPLETE ACCORDANCE WITH THE MASSACHUSETTS STATE BUILDING CODE, MASSACHUSETTS FUEL GAS AND PLUMBING CODES, THE LOCAL AUTHORITIES, MHRA AND INSURANCE REGULATIONS AND REQUIREMENTS GOVERNING SUCH WORK.
- ANY AND ALL PERMITS REQUIRED FOR INSTALLATION OF ANY MATERIAL SHALL BE OBTAINED AS PART OF THE SPECIFICATIONS INCLUDING ALL FEES OR EXPENSES INCURRED.
- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES AND MOUNTING HEIGHTS.
- HANDICAPPED FIXTURES SHALL BE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES AND THE RULES AND REGULATIONS OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD, WHERE THE TWO STANDARDS DIFFER, THE MORE STRINGENT SHALL APPLY.
- FOR FIXTURE CONNECTION SIZES, REFER TO PLUMBING FIXTURE SCHEDULE ON THIS DRAWING. LOCATE ACCESS PANELS IN ACCESSIBLE LOCATIONS WHICH SHALL NOT INTERFERE WITH OTHER PIPING.
- PROVIDE BOLLARDS IN SALLYPORT, VEHICLE PROCESSING AND VEHICLE MAINTENANCE FOR PROTECTION OF PIPING AND PLUMBING EQUIPMENT. COORDINATE WITH THE GENERAL CONTRACTOR.
- INSTALL PRESSURE GAUGES ON INLET AND OUTLET OF WATER METER.

PLUMBING DEMOLITION NOTES:

- DISCONNECT AND DISMANTLE EXISTING PLUMBING SYSTEMS AND EQUIPMENT TO BE DEMOLISHED AND LEAVE DEBRIS AND DISCONNECTED EQUIPMENT IN DESIGNATED AREA FOR REMOVAL BY GENERAL CONTRACTOR.
- REMOVE EXISTING PLUMBING STACKS, MAINS AND BRANCHES WHEN SERVING FIXTURES TO BE REMOVED. REMOVE EXISTING SANITARY AND WATER PIPING BACK TO ACTIVE MAIN SO AS NOT TO INTERFERE WITH NEW CONSTRUCTION AND PROVIDE CAP OR PLUG TO SUIT SYSTEM. SYSTEMS SHALL BE MADE SAFE AT A POINT TO BE DETERMINED BY THE LOCAL WATER AND SEWER DEPARTMENTS.
- ALL LOCATIONS OF EXISTING PIPING, FIXTURES AND EQUIPMENT INDICATED HAS BEEN OBTAINED FROM EXISTING CONDITIONS DURING SITE VISITS AND EXISTING PLANS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING PIPING, PIPE SIZES, POINTS OF DEMOLITION, CUTTING AND CAPPING OF EXISTING PIPING, FIXTURES AND EQUIPMENT PRIOR TO COMMENCEMENT OF WORK.

PLUMBING LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
—		ABOVE FLOOR PIPING (INDICATED AS SINGLE LINEWORK)
==		BELOW FLOOR PIPING (INDICATED AS DOUBLE LINEWORK)
—		NEW WORK (INDICATED AS HEAVY LINEWORK)
---		EXISTING WORK (INDICATED AS LIGHT LINEWORK)
---	CW	COLD WATER
---	HW	HOT WATER
---	HW	HOT WATER RETURN
---	S/W	SANITARY DRAINAGE (SOIL/WASTE)
---	V	SANITARY VENT
---	RL	RAIN WATER LEADER (STORM DRAINAGE)
---	G	NATURAL GAS
---	NP	NON-POTABLE COLD WATER
---	TP	TEMPERED WATER (EMERGENCY SHOWER/EYEWASH)
---	TW	TEMPERED WATER (SECURITY SHOWER)
---	GW	GARAGE WASTE (SALLYPORT & VEHICLE IMPOUND)
---	GV	GARAGE VENT
---	RD	STORM WATER COLLECTION SYSTEM (SITE CONTRACTOR'S WORK)
---	UP	UP (PENETRATES LEVEL ABOVE)
---	DN	DOWN (PENETRATES LEVEL BELOW)
→		DIRECTION OF FLOW
→ .01		DIRECTION & DESIGNATION OF SLOPE (IN FT/FT)
⊥		SHUTOFF VALVE
⊥		CHECK VALVE
⊥	DV	DRAIN VALVE WITH HOSE THREADS
⊥	CO	CLEANOUT
⊥	FCO	FLOOR CLEANOUT
⊥	FD	FLOOR DRAIN
⊥	RD	ROOF DRAIN
⊥	AD	AREA DRAIN
⊥	WH	WALL HYDRANT
⊥	HB	HOSE BIBB
⊥	INV	INVERT ELEVATION
⊥	W&T	WASTE & TRAP
⊥	VV	VALVE IN VERTICAL
⊥	VTR	VENT THRU ROOF
⊥	UN	UNION
⊥	SL	WATER TIGHT SLEEVE
⊥	P=	PLUMBING FIXTURE DESIGNATION



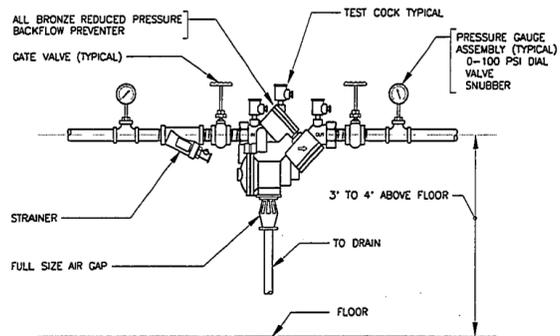
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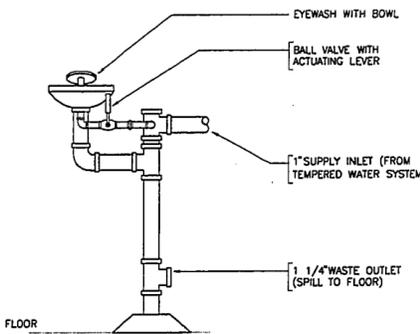
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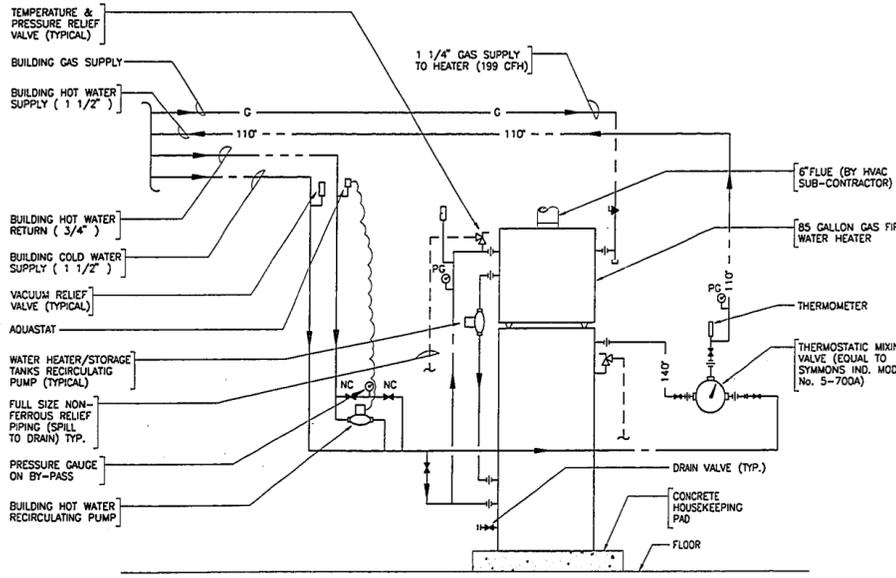
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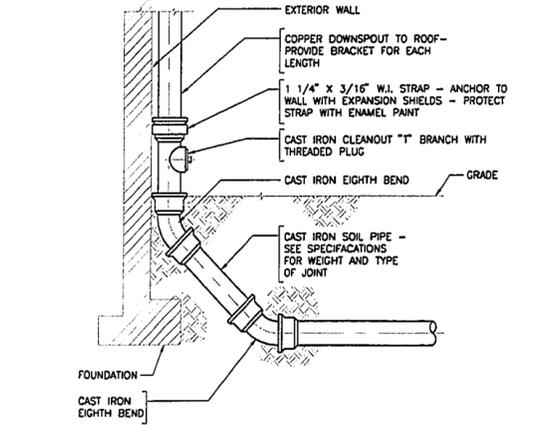
- NOTES:**
- BACKFLOW PREVENTER SHALL BE APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AGENCY.
 - BACKFLOW PREVENTER SHALL BE IN COMPLETE ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION. THE PLUMBING CONTRACTOR SHALL SUBMIT PLANS AND DEVICE INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.
 - FURNISH TO OWNER ONE TEST KIT AND SPARE PARTS KIT FOR EACH DEVICE.
 - THIS CONTRACTOR SHALL ACT AS THE OWNER'S AGENT IN SEEKING APPROVAL FROM ALL LOCAL AND STATE AUTHORITIES. THIS CONTRACTOR SHALL SUBMIT ALL PLANS, SPECS. AND APPLICATIONS REQUIRED FOR APPROVAL AND PAY ALL FEES.
 - SEE FLOOR PLANS FOR SIZES.
 - MAINTAIN 1'-0" CLEARANCE FROM WALL.
- 1 REDUCED PRESSURE BACKFLOW PREVENTER FOR PIPE SIZES 2" AND SMALLER**
NO SCALE



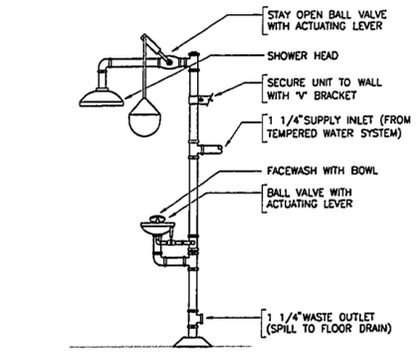
2 EMERGENCY EYEWASH (P-8A) DETAIL
SCALE: NONE



3 GAS FIRED WATER HEATER AND STORAGE TANK DETAIL
NO SCALE



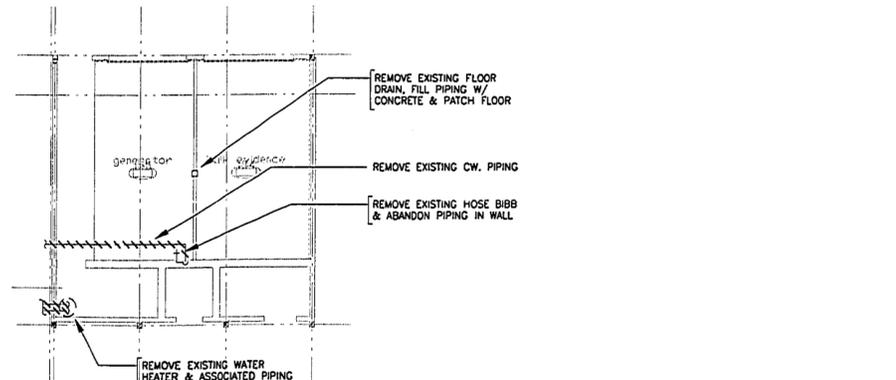
4 CAST IRON SHOE DETAIL
SCALE: NONE



5 EMERGENCY EYEWASH & SHOWER (P-8) DETAIL
SCALE: NONE

NOTES:

- PROVIDE CURTAIN FOR EMERGENCY SHOWER TESTING
- THE PLUMBING CONTRACTOR SHALL SUPPLY AND INSTALL A MECHANICAL SHOCK ARRESTOR ON THE SUPPLY INLET



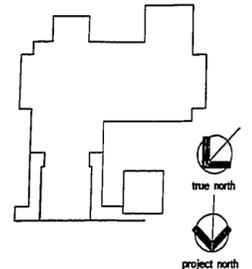
DEMOLITION PART PLAN
SCALE: 1/8" = 1'-0"

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Drawn by: T. CLERTON Scale: AS NOTED

**LEGEND,
SCHEDULES,
AND DETAILS
PLUMBING**

Project no. 9625.00 Drawing no. **P0.01**
Date MARCH 23, 1998

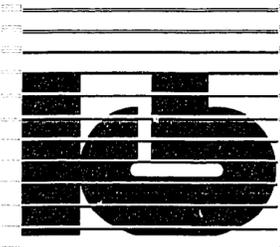


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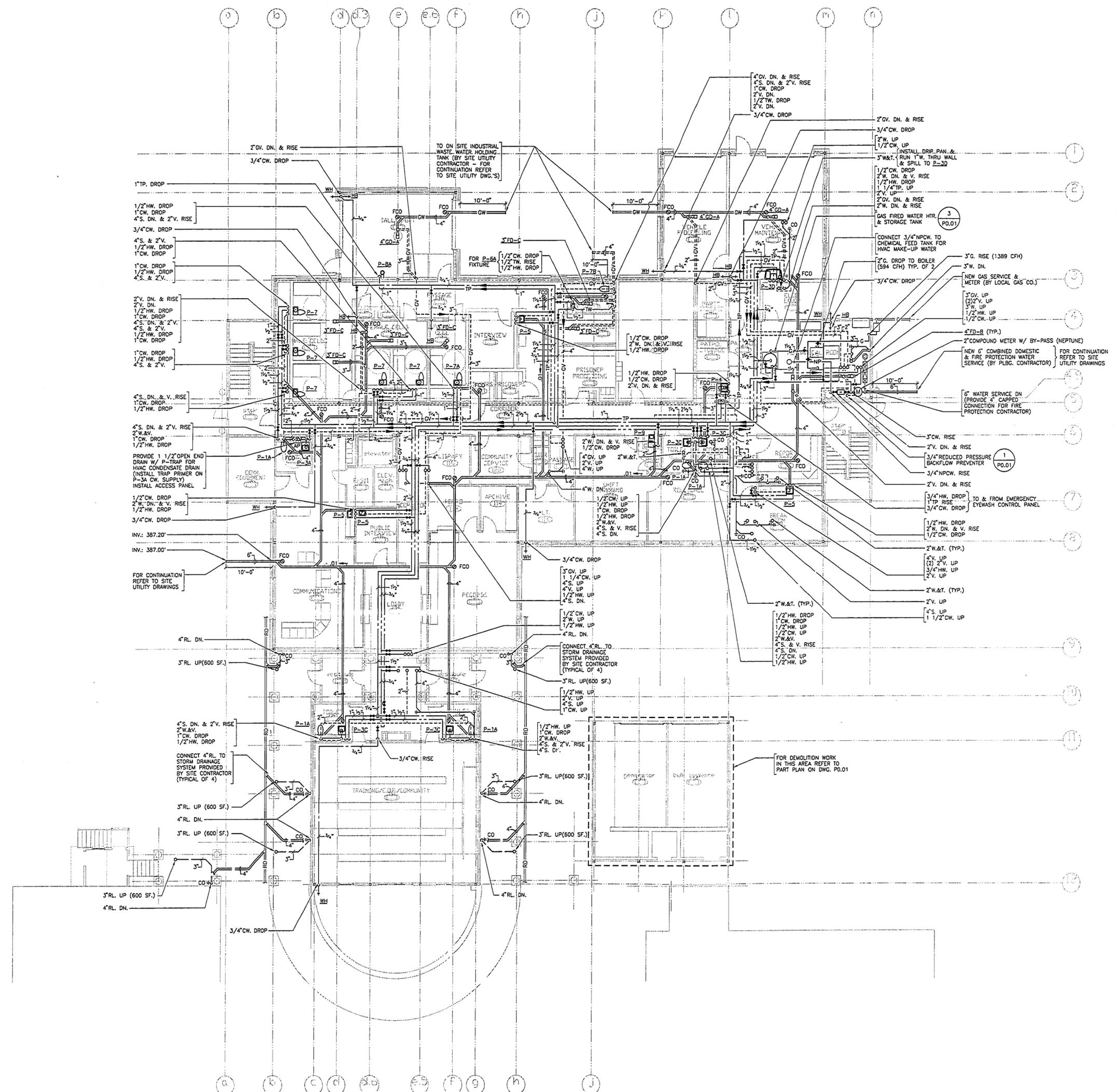


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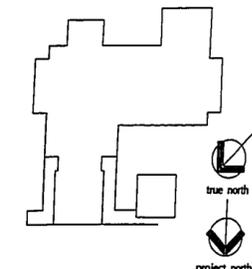
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Drawn by: T. CLRTN Scale: 1/8"=1'-0"

**MAIN LEVEL
PLUMBING
PLAN**

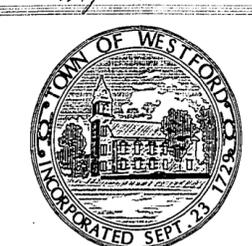
Project no. 9625.00 Drawing no. **P1.01**
Date MARCH 23, 1998



148-0241



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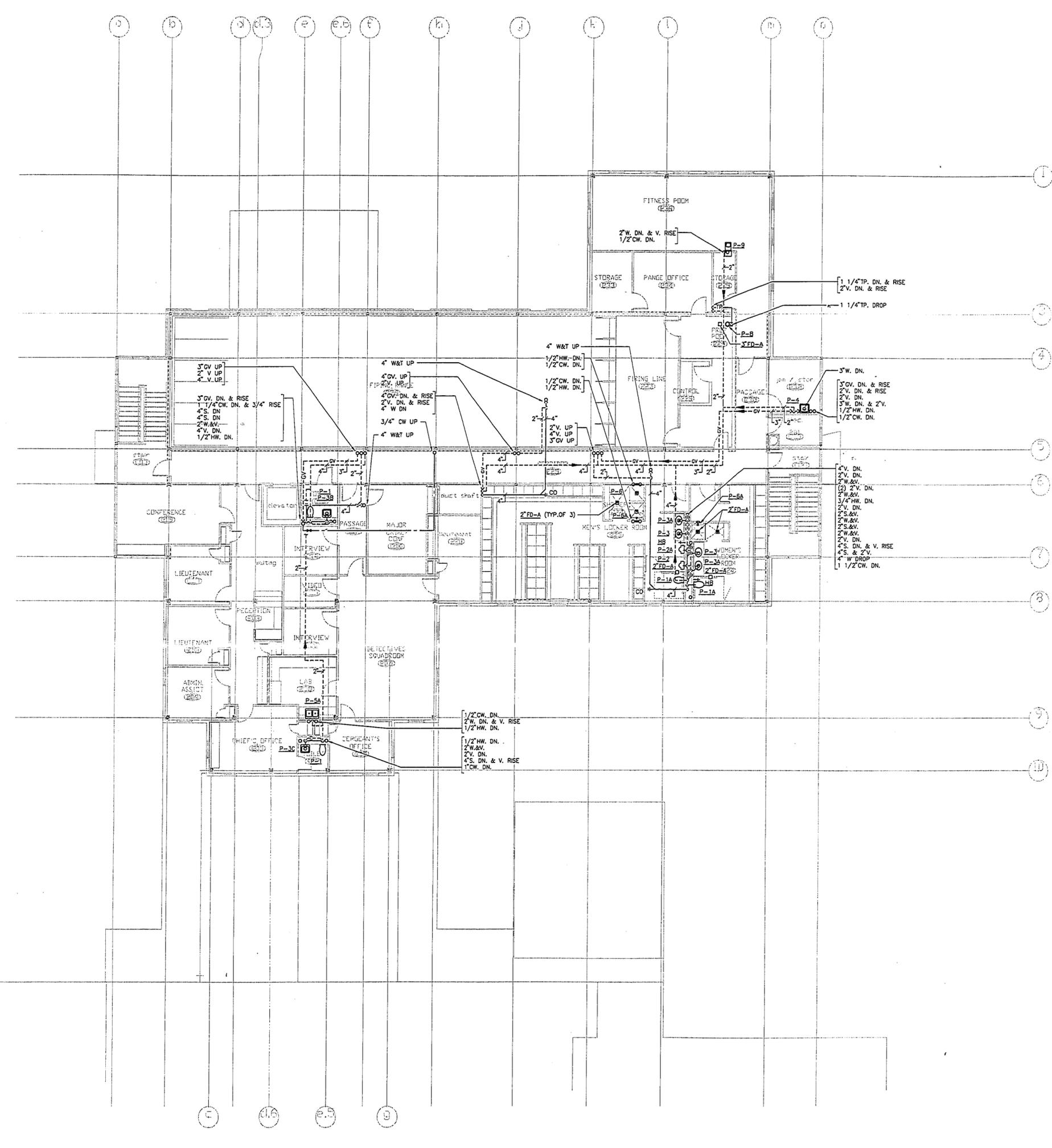
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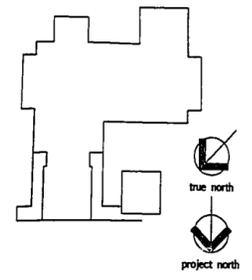
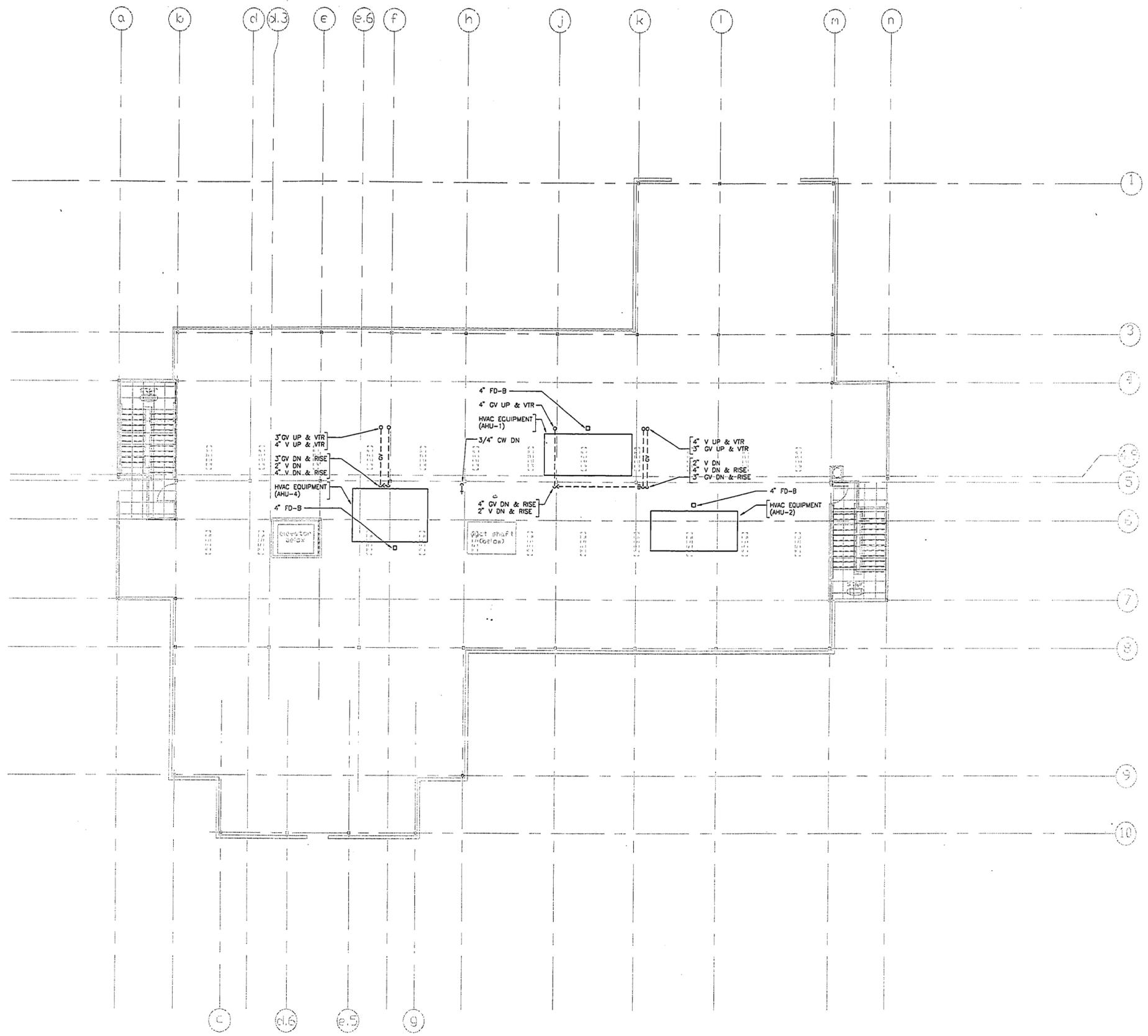
410 State Rd., New Britain, Connecticut 06050-2500 (860) 229-0261
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**UPPER LEVEL
PLUMBING
PLAN**

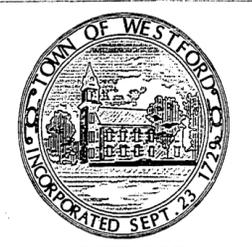
Project no. 0625.00 Drawing no. P1.02
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1450-89



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Drawn by: T. CLERTON Scale: 1/8"=1'-0"

**ATTIC LEVEL
PLUMBING
PLAN**

Project no. 962500 Drawing no. 1450-90
Date: MARCH 23, 1998 **P1.03**