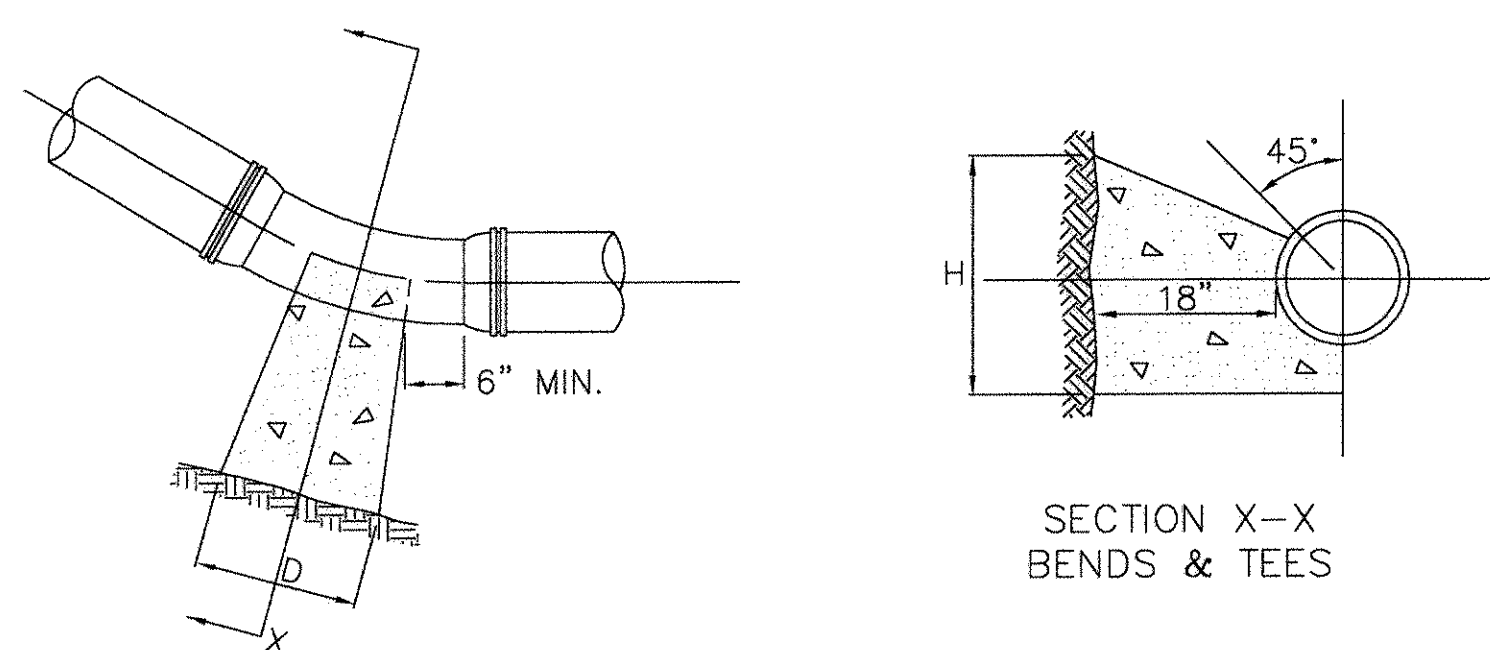
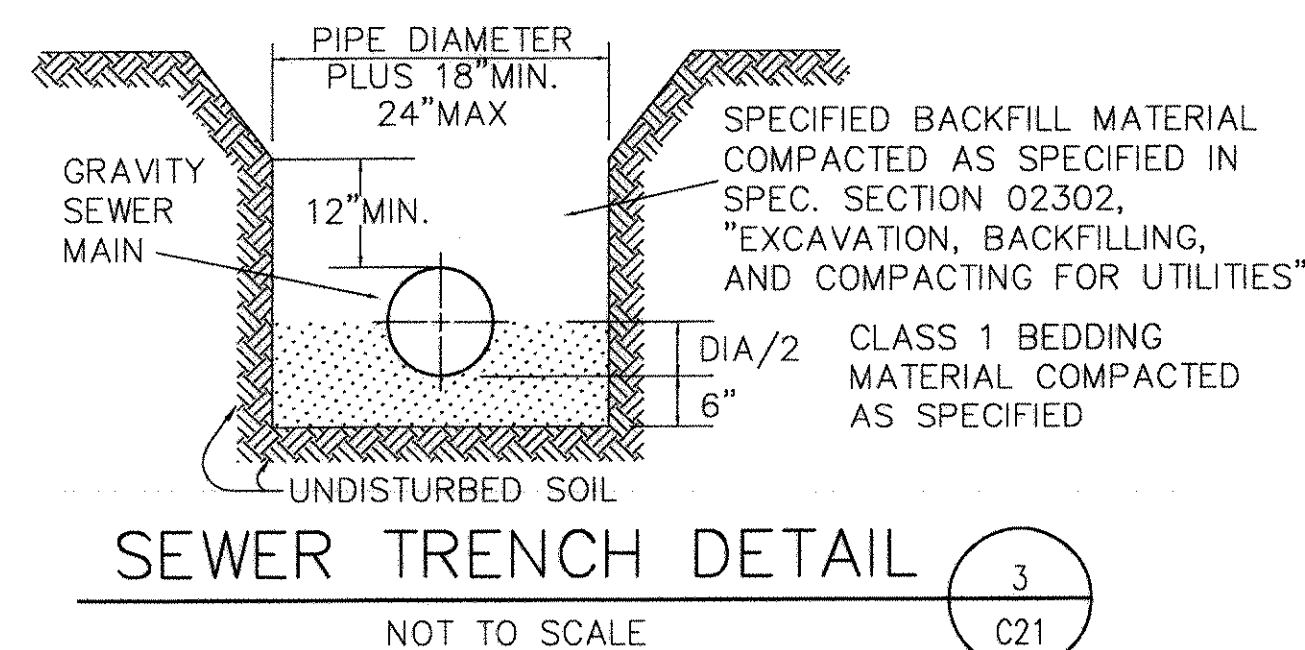
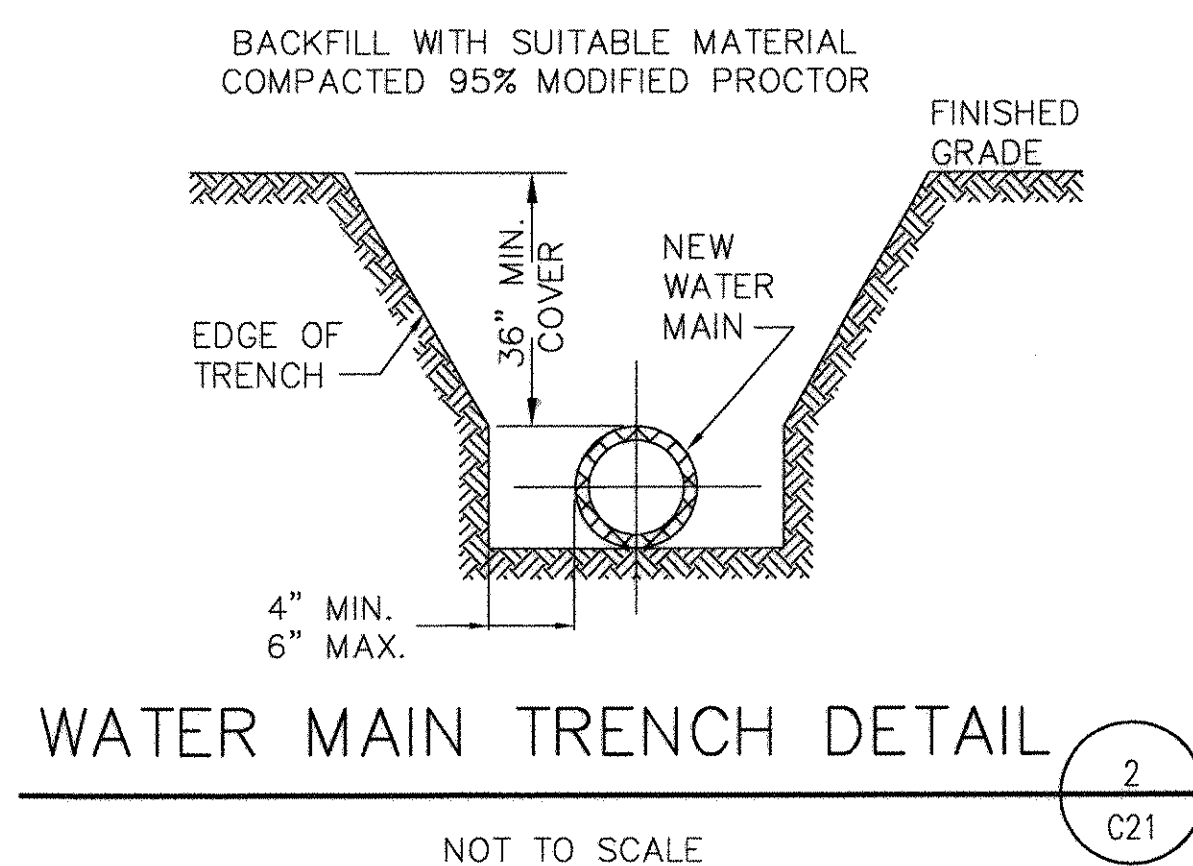
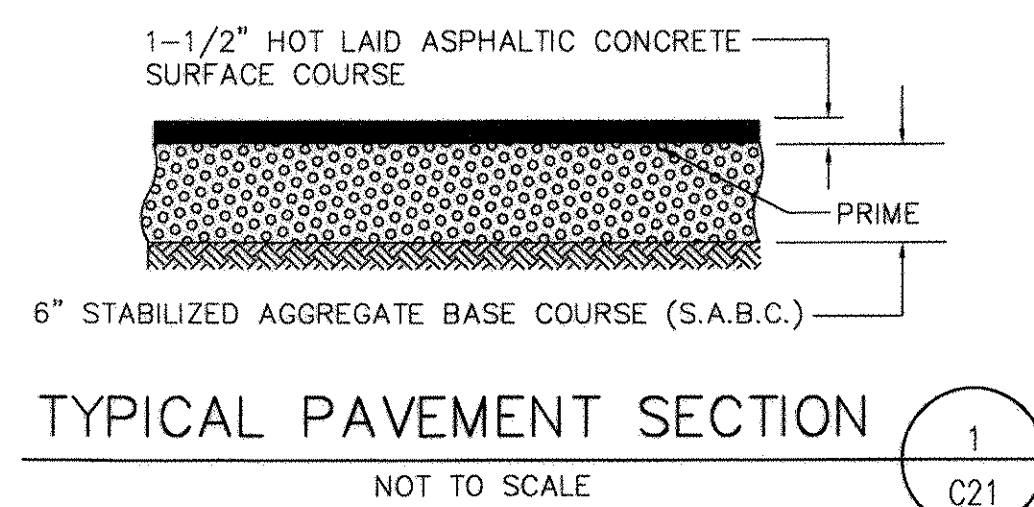
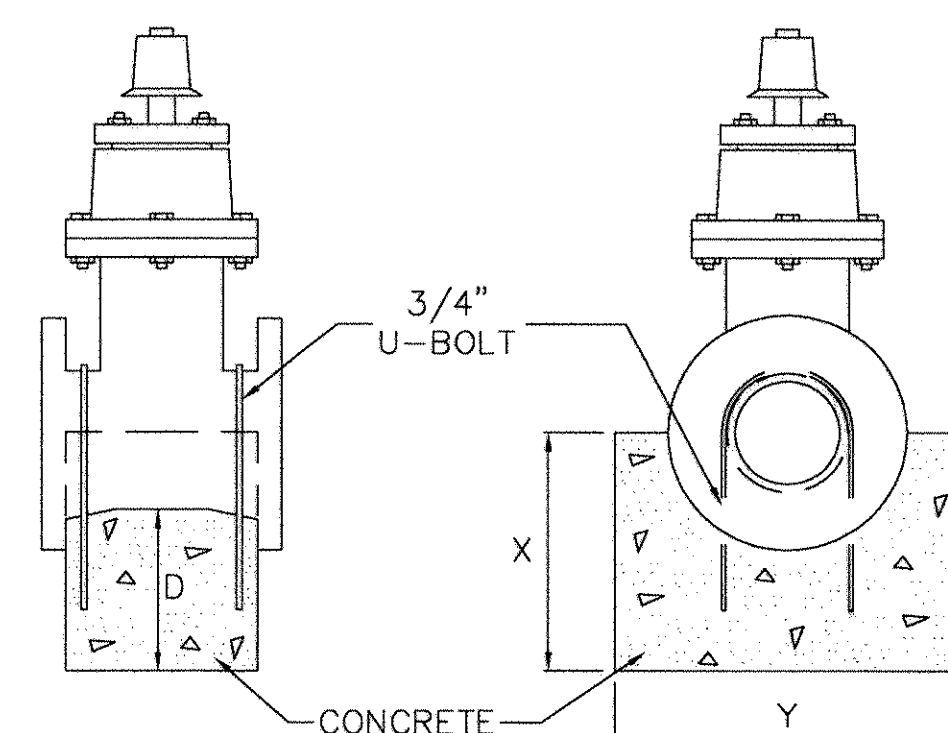


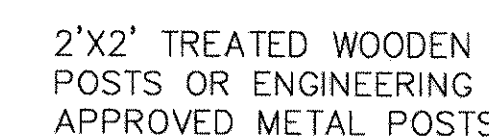
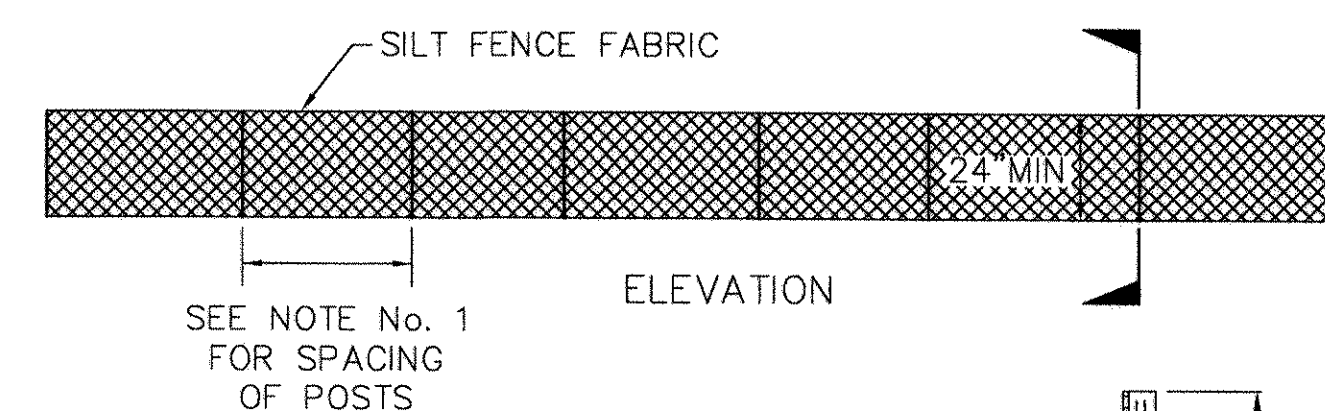
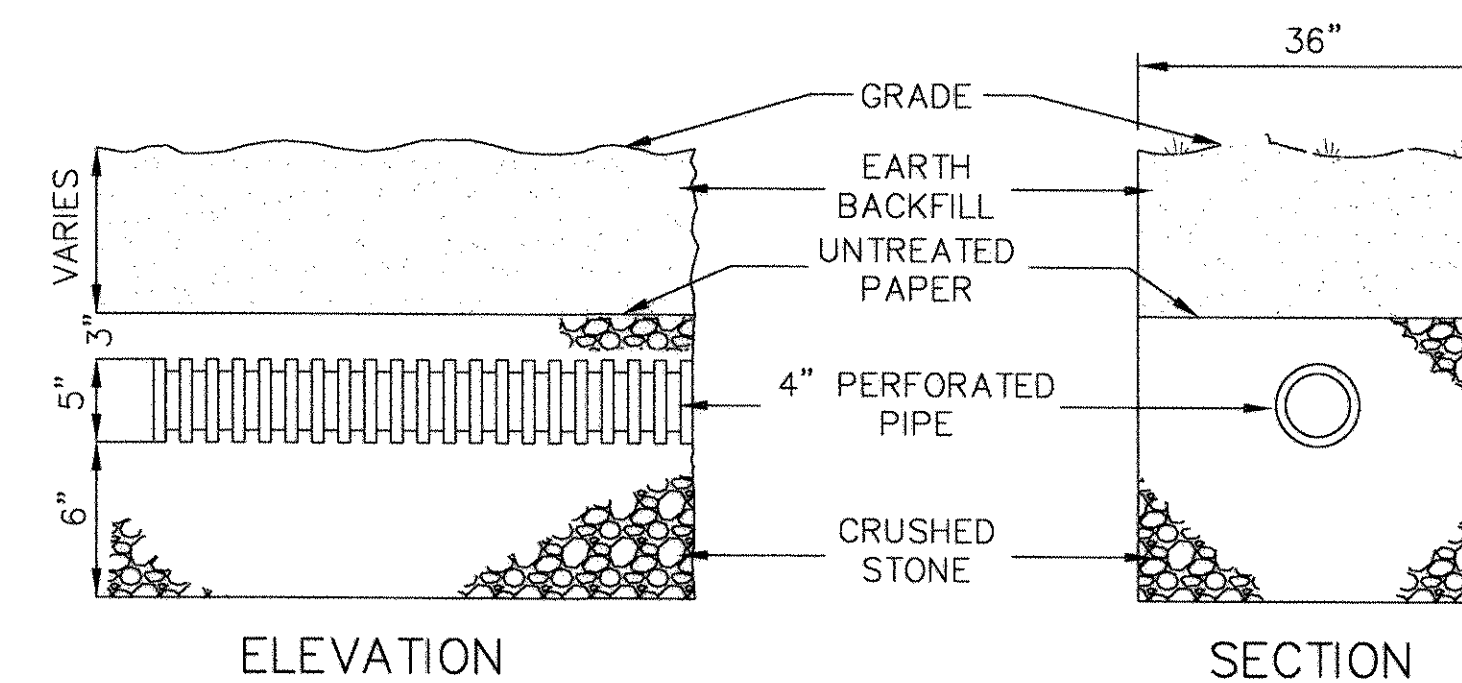
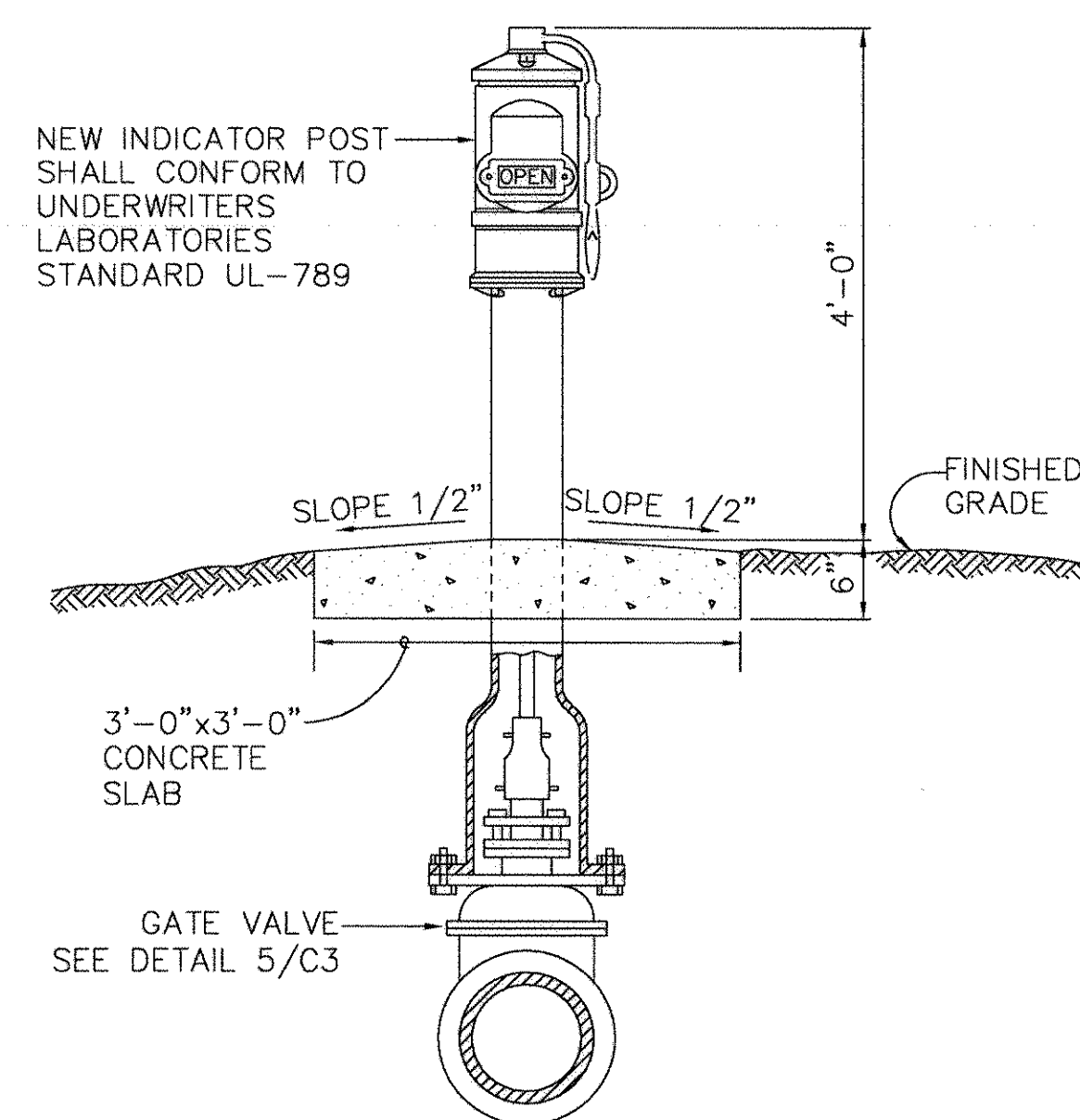


NOTE: DEPTH TO TOP OF BLOCKING SHALL BE GREATER THAN HEIGHT OF BLOCKING									
DIAMETER		22-1/2"		45°		90°		TEE & TERMINUS	
NOMINAL	ACTUAL	B	H	B	H	B	H	B	H
12"	12.58	2.8	2.25	3.7	2.75	4.2	3.5	4.1	3.0



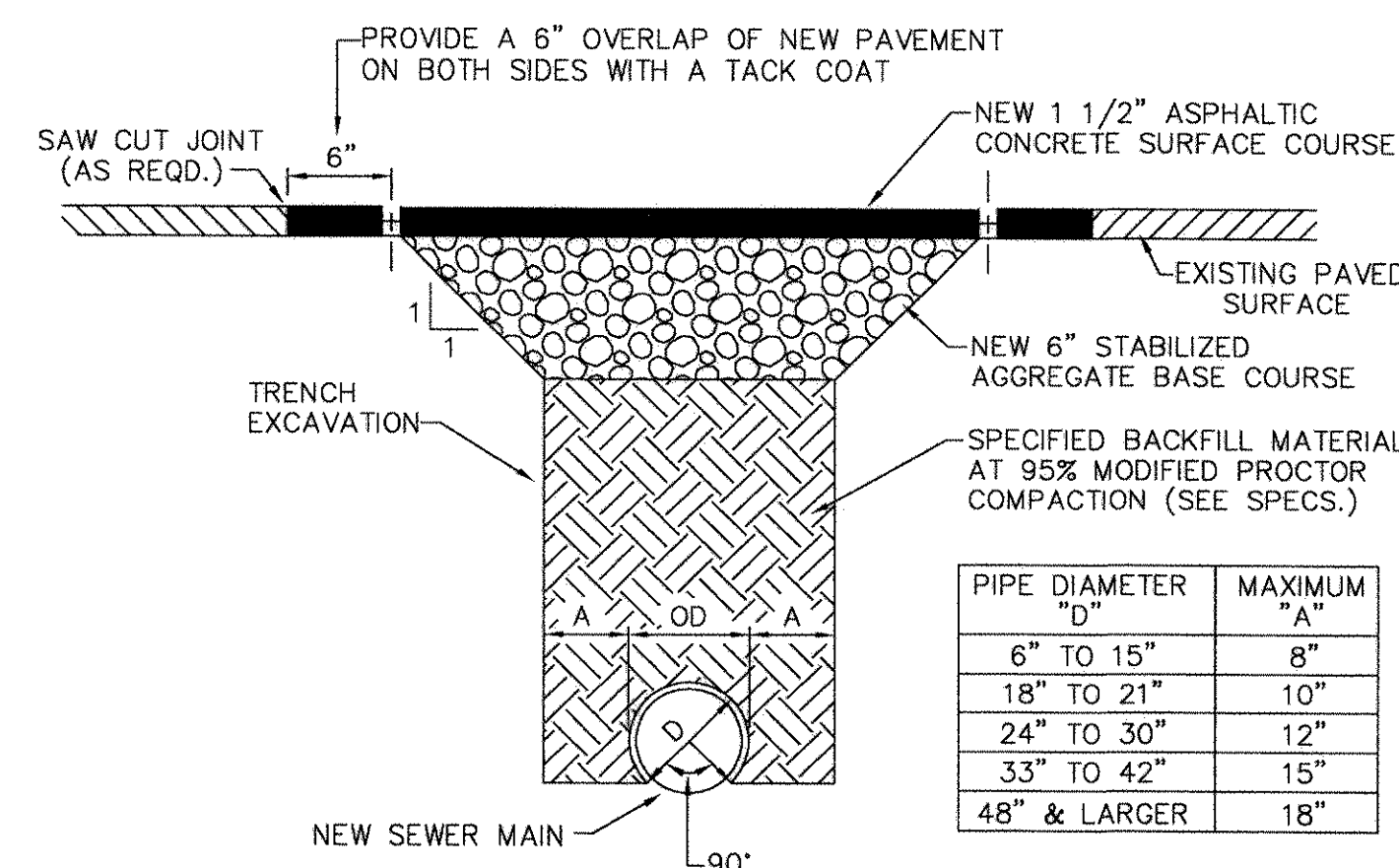
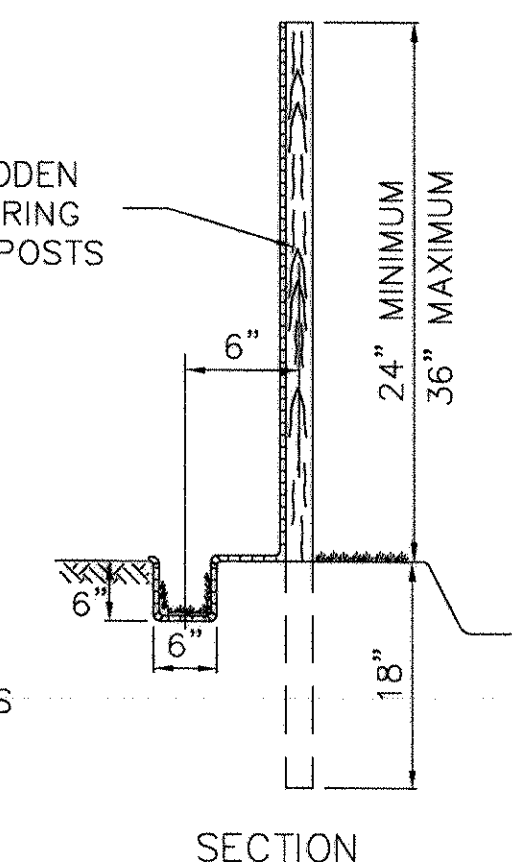
ANCHORAGE SCHEDULE				
VALVE	SQ. FT.	"D"	"X"	"Y"
3"Ø	0.5	4.5"	9"	9"
4"Ø	0.8	6.0"	11"	11"
6"Ø	1.8	9.0"	1'-4"	1'-4"
8"Ø	2.1	10.0"	1'-6"	1'-6"
10"Ø	2.5	10.0"	1'-8"	1'-8"

² NOTE: USE 6"Ø SCHEDULE FOR ALL VALVES LARGER THAN 6"Ø UNLESS NOTED OTHERWISE.



NOTES:

1. SPACE SUPPORTS: 10' MAXIMUM WITH WIRE MESH TO SUPPORT SILT FENCE FABRIC; IF SPACING IS NO MORE THAN 6' WIRE MESH IS NOT REQUIRED.
2. FENCE TO BE PLACED AT EXTREME LIMITS OF CONSTRUCTION AREA, OR AS SPECIFIED ON THE SITE PLAN.
3. MINIMUM 6" OVERLAP AT JOINTS AND JOINTS ARE ONLY TO BE PLACED AT SUPPORT POSTS.



DETAIL/SECTION
INDICATOR

DETAIL/SECTION NUMBER

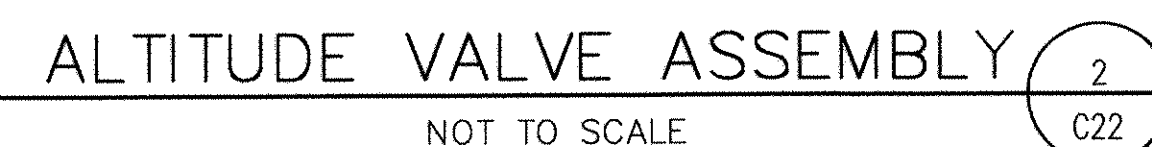
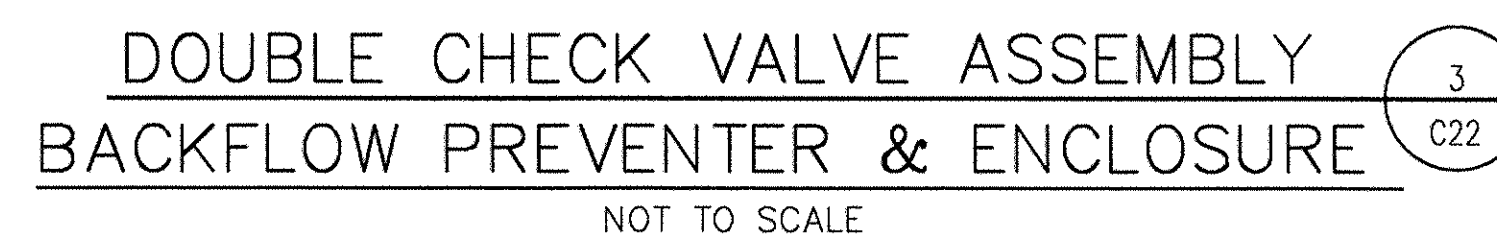
SHEET ON WHICH DETAIL/SECTION IS DEPICTED

Professional Engineer Seal for Forsberg Engineering & Surveying, Inc. No. C00343, State of South Carolina.

DEPARTMENT OF THE NAVY SOUTHERN DIVISION CHARLESTON, S.C.		NAVAL FACILITIES ENGINEERING COMMAND REV. DESCRIPTION AS-BUILT, NO CORRECTIONS, MAY 22, 2001		PREP BY DATE		NUMBER OF RECORDS Click/Boehm & Associates, Inc. Architecture/Planning/Interior Design 247 Meeting Street, Suite 100 Charleston, S.C. 29401 (803) 577-6377	
SEAL AREA SOUTH CAROLINA REGISTERED PROFESSIONAL AND LAND SURVEYOR 11900 SWANELL COUNTRY DRIVE 29511-0101		SUMTER, SOUTH CAROLINA ADAL SQUAD OPS/IGLOO/MAINT. BAY CONSTRUCTION DETAILS		ISOM BETHAY OR ROBINSON ONE FORSEERG SUBMITTED BY (NAME NUMBER - TITLE) PRINCIPAL-22-DEC-97		DRAWING NO. 7360101	
RECORD DRAWING DATE CODE ID, NO. 8 DRAWING SIZE: SPEC. NO. 06-97-09 CONSTR. CONTR. NO. N62467-97-C-09 NAVFAC DRAWING NO. 5348791							
SHEET 23 OF 152 C21							

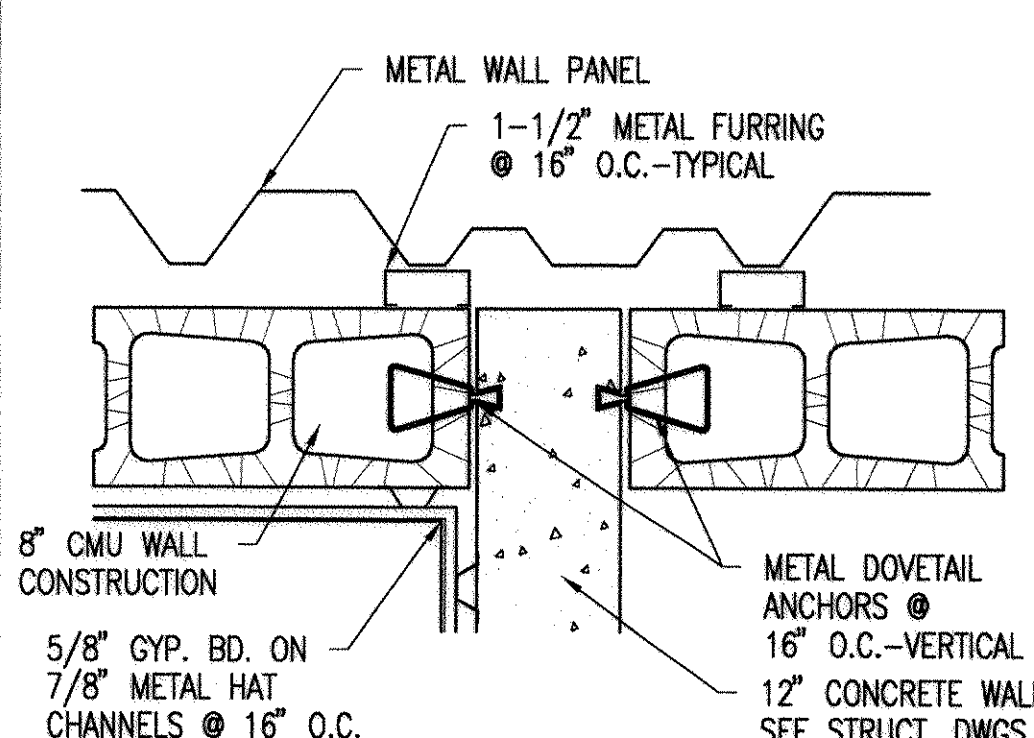
IF SHEET IS LESS THAN (559 MM x 864MM) IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY.

(1610, 1606, 1605) / 106-10-12 //



124

(1610, 1606, 1605) / 106-108



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

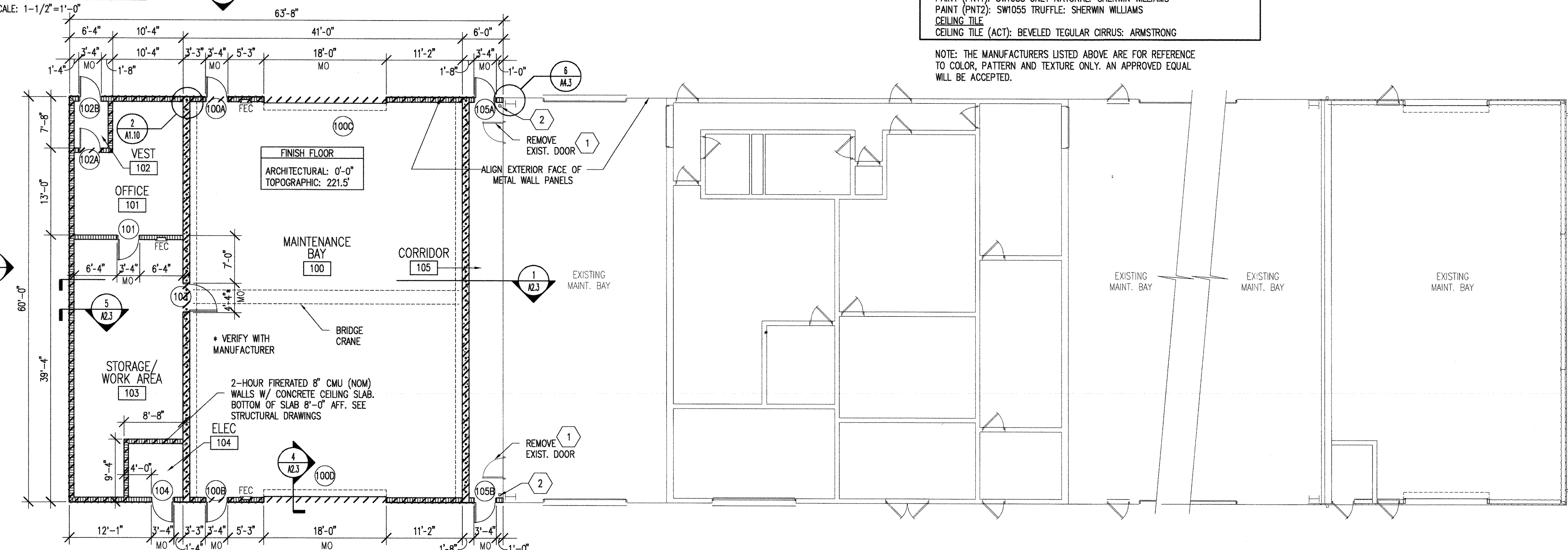
DOOR SCHEDULE													
DOOR NO.	DOOR TYPE	MATERIAL	WIDTH	HEIGHT	THICK.	FINISH	NEW/EXIST	HARDWARE	FRAME TYPE	MATERIAL	FINISH	DETAILS	REMARKS
BUILDING 1816													
100A	A	HM	3'-0"	7'-0"	1-3/4"	PNT2	NEW	SET 6	A	HM	PNT2	1/A4.3	
100B	A	HM	3'-0"	7'-0"	1-3/4"	PNT2	NEW	SET 6	A	HM	PNT2	1/A4.3	
100C	B	HM	12'-0"	10'-0"	1-3/4"	---	NEW	---	---	HM	PNT2	2/A4.3	OVERHEAD ROLL-UP DOOR
100D	B	HM	12'-0"	10'-0"	1-3/4"	---	NEW	---	---	HM	PNT2	2/A4.3	OVERHEAD ROLL-UP DOOR
101	A	HM	3'-0"	7'-0"	1-3/4"	PNT2	NEW	SET 2	A	HM	PNT2	4/A4.3	
102A	A	WD	3'-0"	7'-0"	1-3/4"	PNT2	NEW	SET 6	A	HM	PNT2	4/A4.3	
102B	A	HM	3'-0"	7'-0"	1-3/4"	PNT2	NEW	SET 5	A	HM	PNT2	1/A4.1	
103	A	HM	4'-0"	7'-0"	1-3/4"	PNT2	NEW	SET 8	A	HM	PNT2	3/A4.3	BLAST DOOR, 3HR A LABEL
104	C	HM	3'-0"	7'-0"	1-3/4"	PNT2	NEW	SET 7	A	HM	PNT2	1/A4.3	
105A	A	HM	3'-0"	7'-0"	1-3/4"	PNT2	NEW	SET 5	A	HM	PNT2	1/A4.3	
105B	A	HM	3'-0"	7'-0"	1-3/4"	PNT2	NEW	SET 5	A	HM	PNT2	1/A4.3	

NEW FINISH SCHEDULE-MAINTENANCE BAY							
ROOM NO.	ROOM NAME	FLOOR		WALLS		CEILINGS	
		MATERIAL	BASE	MATERIAL	FINISH	MATERIAL	HEIGHT
100	MAINTENANCE BAY	CONC	NONE	CMU	PNT1	EXP/PNT1	VARIES
101	OFFICE	CPT1	VB1	GB	PNT1	ACT	9'-0"
102	VESTIBULE	CPT1	VB1	GB	PNT1	ACT	9'-0"
103	STORAGE/ WORK AREA	CONC.	NONE	CMU/CONC	PNT1	EXP/PNT1	VARIES
104	ELECTRICAL	CONC.	NONE	CMU/CONC	PNT1	CONC/PNT1	8'-0"
105	CORRIDOR	CONC.	NONE	CONC/CMU	PNT1	EXP/PNT1	VARIES

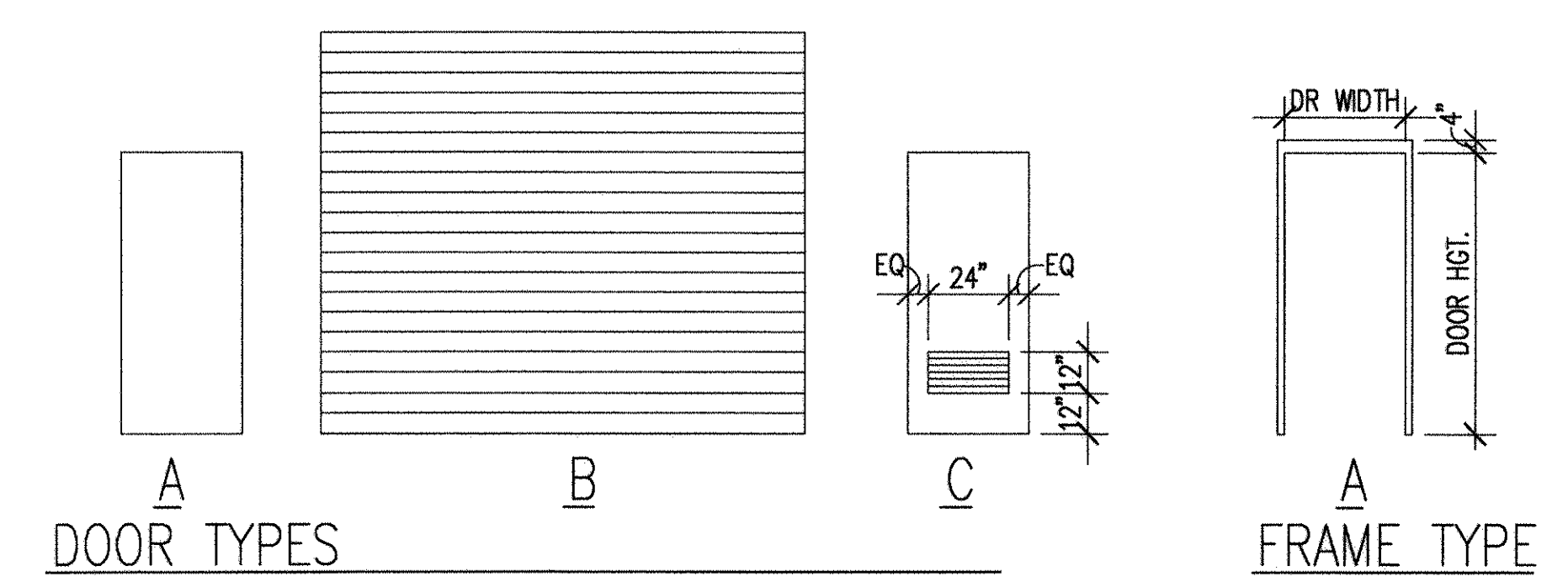
COLOR SCHEDULE- MAINTENANCE BAY	
CARPET	CARPET (OPT1): 507 SLATE BLUE: MOHAWK
VINYL BASE	VINYL BASE (VB1): 767 SPICE: ROPPE
PAINT	PAINT (PNT1): SW1088 ONLY NATURAL: SHERWIN WILLIAMS
PAINT (PNT2):	SW1055 TRUFFLE: SHERWIN WILLIAMS
CEILING TILE	CEILING TILE (ACT): BEVELED TEGULAR CIRRU: ARMSTRONG

NOTE: THE MANUFACTURERS LISTED ABOVE ARE FOR REFERENCE TO COLOR, PATTERN AND TEXTURE ONLY. AN APPROVED EQUAL WILL BE ACCEPTED.

NOTE: EXP.= EXPOSED STRUCTURAL STEEL

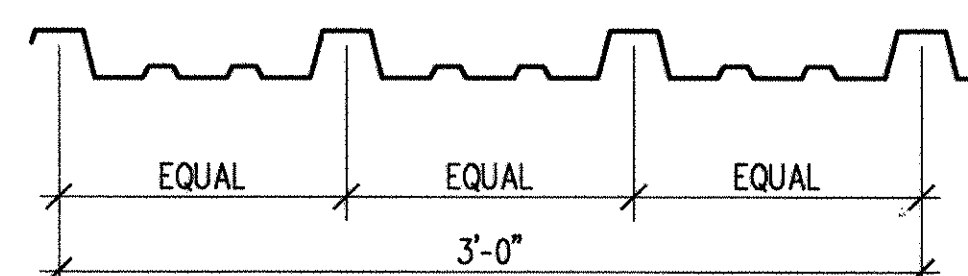


1 FLOOR PLAN
SCALE: 1/8"=1'-0"



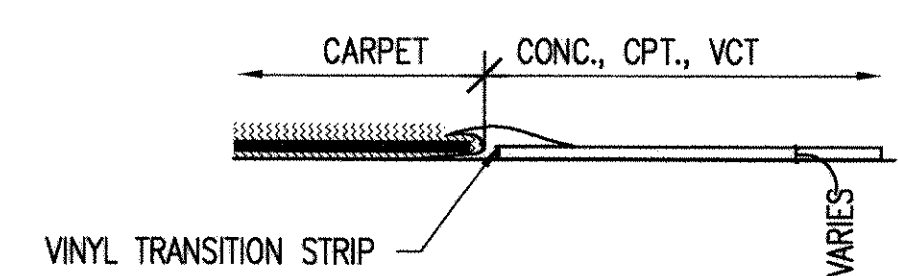
DEMOLITION NOTES

- 1 REMOVE AND DISPOSE OF EXISTING DOOR(S) COATED WITH LEAD BASED PAINTS. DO NOT DAMAGE DOORS OR CREATE DUST. WORKERS SHALL COMPLY WITH 29 CFR 1926.62 AND DISPOSE THE DOORS INTACT, AT A LANDFILL LICENSED BY SCDHEC TO ACCEPT NON-HAZARDOUS LEAD CONTAMINATED WASTE.
- 2 REMOVE EXISTING METAL DOWNSPOUT



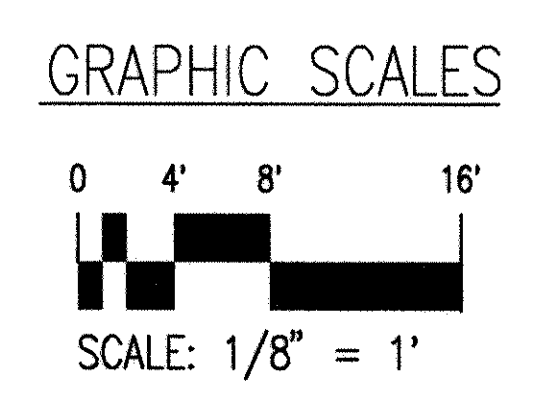
NOTE: CONTRACTOR SHALL VERIFY PROFILE AND SIZE PRIOR TO ORDERING NEW WALL SIDING PANELS.

NOTE
IN ROOMS 101 AND 102 PROVIDE 5/8" GYPSUM BOARD ON 7/8" METAL HAT CHANNEL FURRING @ 16" O.C. FROM FLOOR TO 6" ABOVE CEILING.



TRANSITION STRIP DETAIL
NOT TO SCALE

SQUARE FOOTAGE	
EXISTING BUILDING	11520 S.F.
NEW ADDITION	3840 S.F.
TOTAL SQUARE FOOTAGE	15360 S.F.
NOT TO BE USED FOR BIDDING PURPOSES	



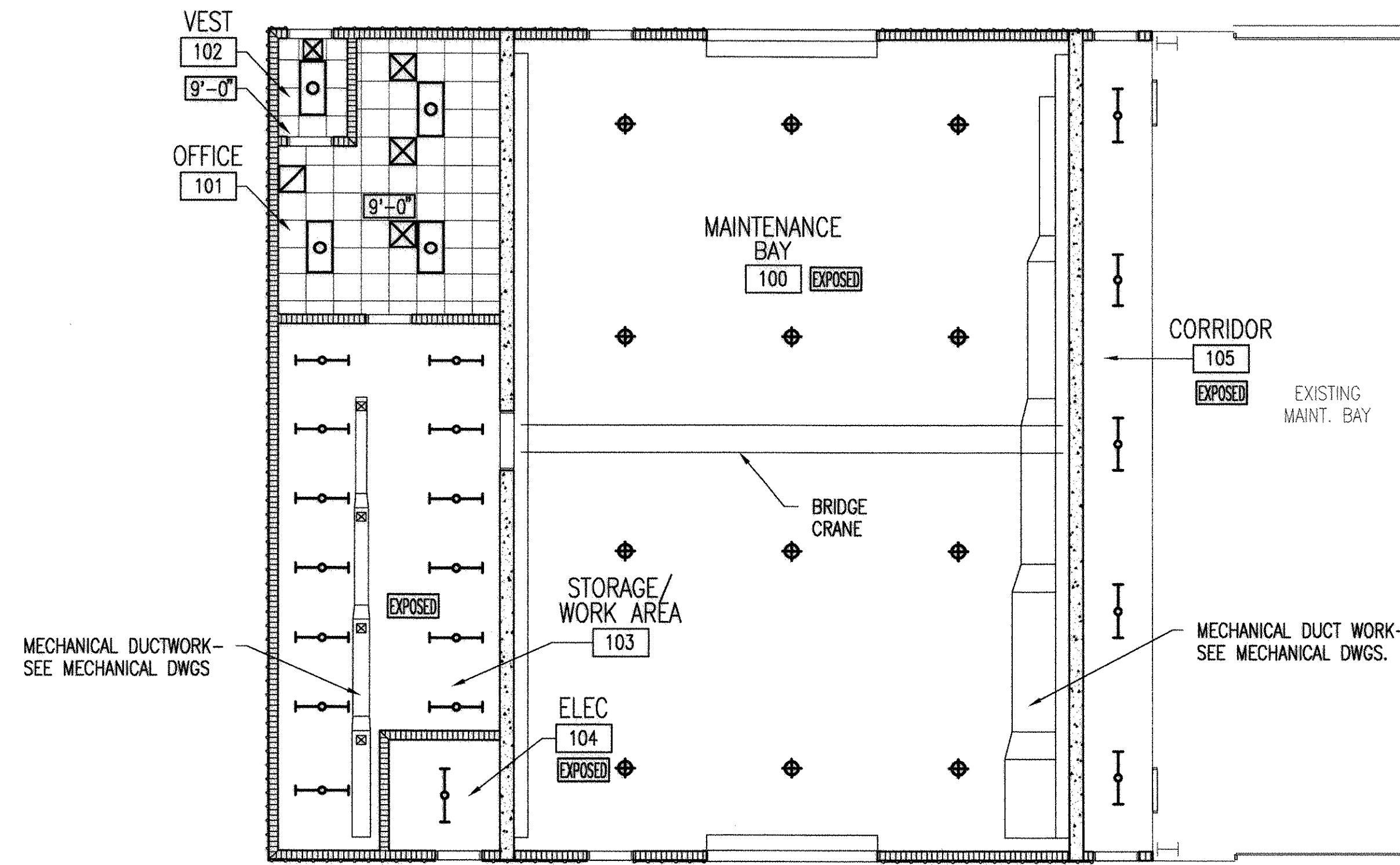
LEGEND	
	EXTERIOR WALL CONSTRUCTION- 8" CMU W/ METAL WALL PANELS
	8" CMU WALL CONSTRUCTION
	12" CONCRETE WALL CONSTRUCTION
	AREA TO MEET STC 45 SOUND ATTENUATION REQUIREMENT STC 35 @ ROOM 100 ONLY
	4 HOUR FIRE RATED WALL
	VEST 102 ROOM NAME & DESIGNATION
	100A NEW DOOR & DESIGNATION

GLICK/BOEHM & ASSOCIATES, INC.
247 MEETING STREET, SUITE 100
CHARLESTON, SC 29401
CH WILSON
CH SIDES
CH ENGR
PRINCIPAL-22 DEC 97

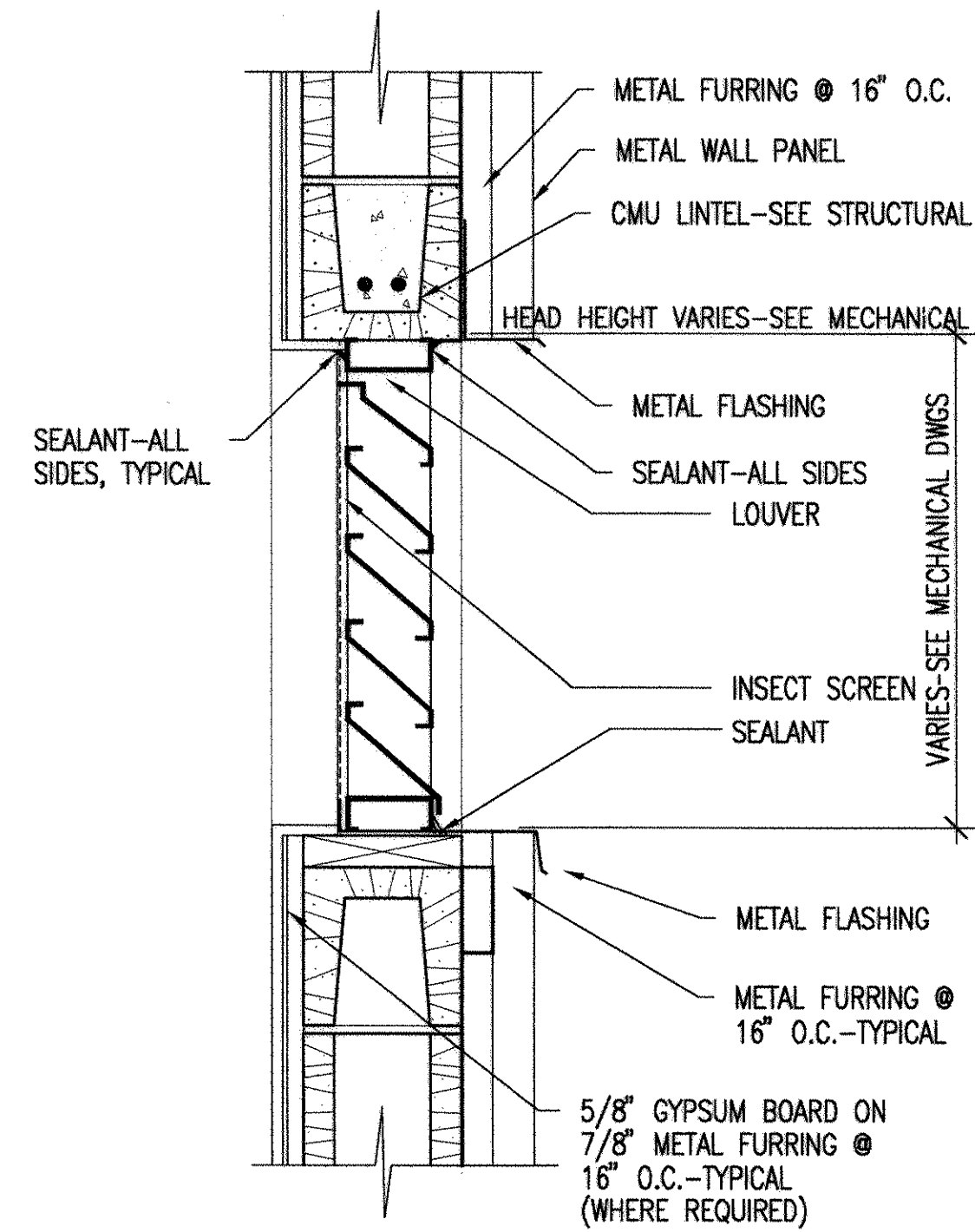
REV. DESCRIPTION PREP BY DATE APPROV
AS-BUILT, NO CORRECTIONS, MAY 22, 2001
SOUTHERN DIVISION
SUMTER, SOUTH CAROLINA
SHAW AIR FORCE BASE
ADAL SQUAD OPS/ IGLOO/ MAINT. BAY
FLOOR PLAN-MAINT. BAY

STATE OF SOUTH CAROLINA
GLICK/BOEHM & ASSOCIATES, INC.
CHARLESTON NO. B-80006
REGISTERED ARCHITECT
RECORD DRAWING DATE: 7/30/01
CODE I.D. NO.:
DRAWING SIZE: D
SPEC. NO. 06-97-0942
CONSTR. CONTR. NO. N62467-97-C-0942
NAVFAC DRAWING NO. 5348794
SHEET 126 OF 152
A1.10

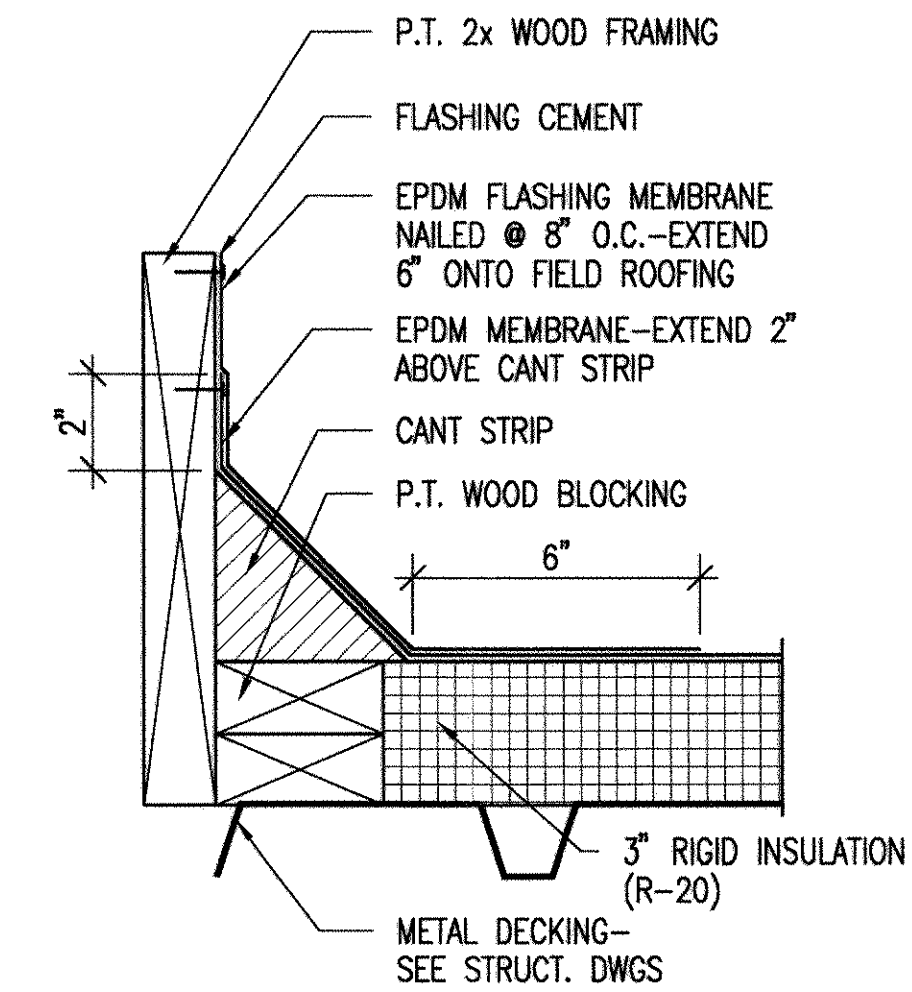
(1610, 1606, 1605) / 105-10"



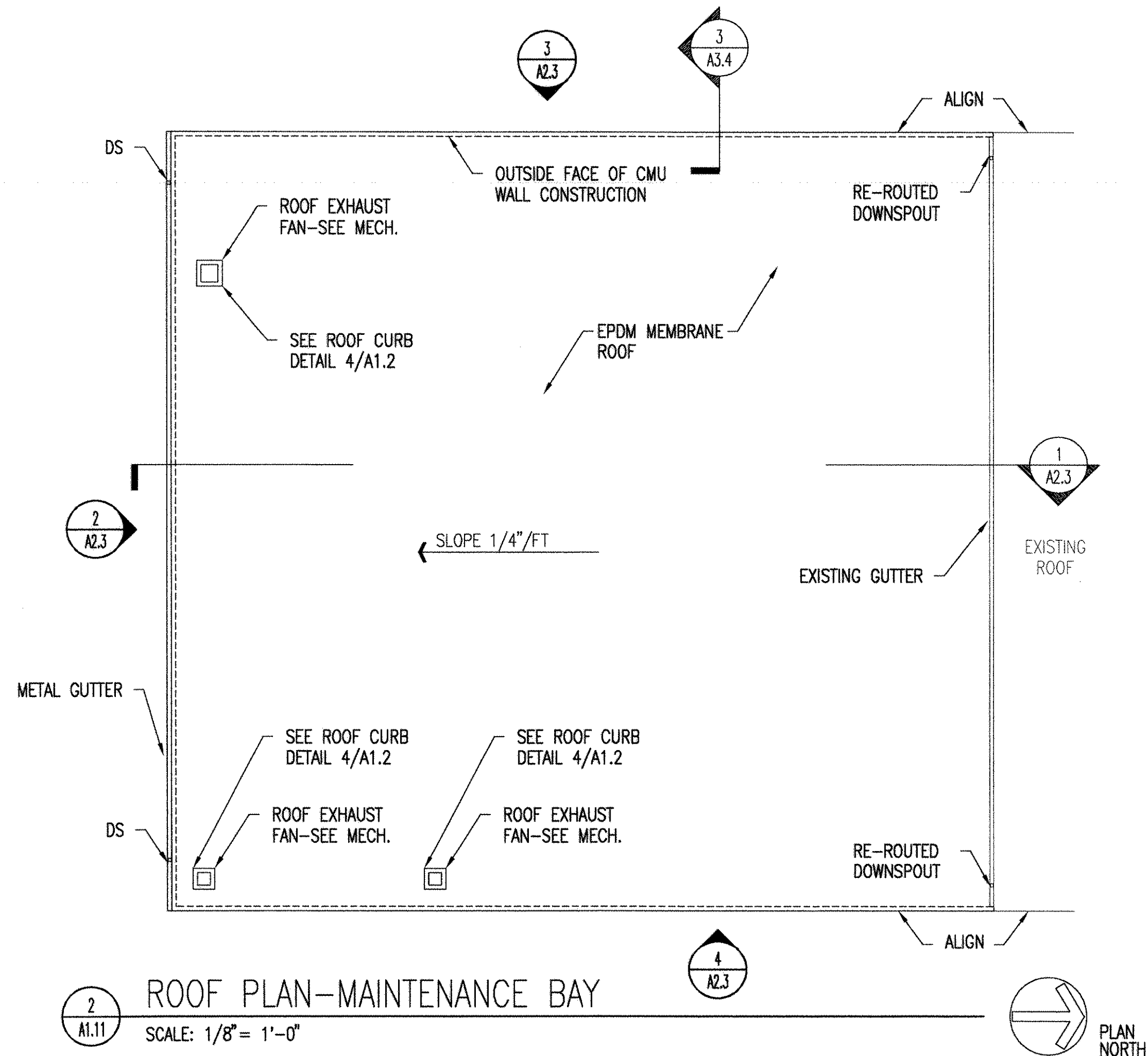
1 REFLECTED CEILING PLAN-MAINTENANCE BAY
SCALE: 1/8" = 1'-0"



3 LOUVER DETAIL
SCALE: 1 1/2" = 1'-0"

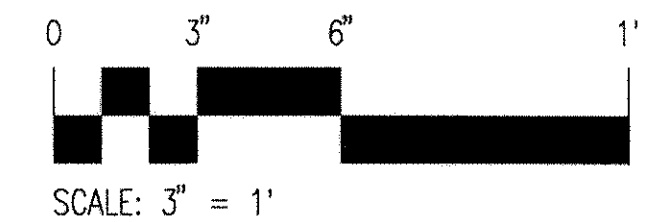
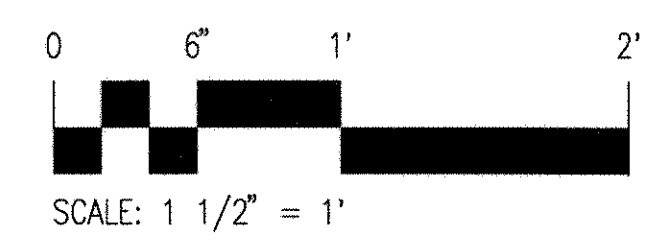
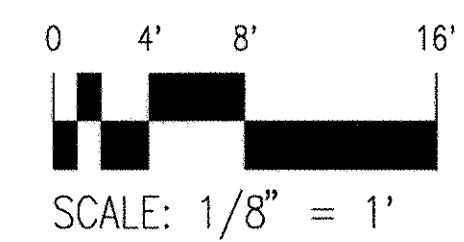


4 ROOF CURB DETAIL
SCALE: 3" = 1'-0"



2 ROOF PLAN-MAINTENANCE BAY
SCALE: 1/8" = 1'-0"

GRAPHIC SCALES

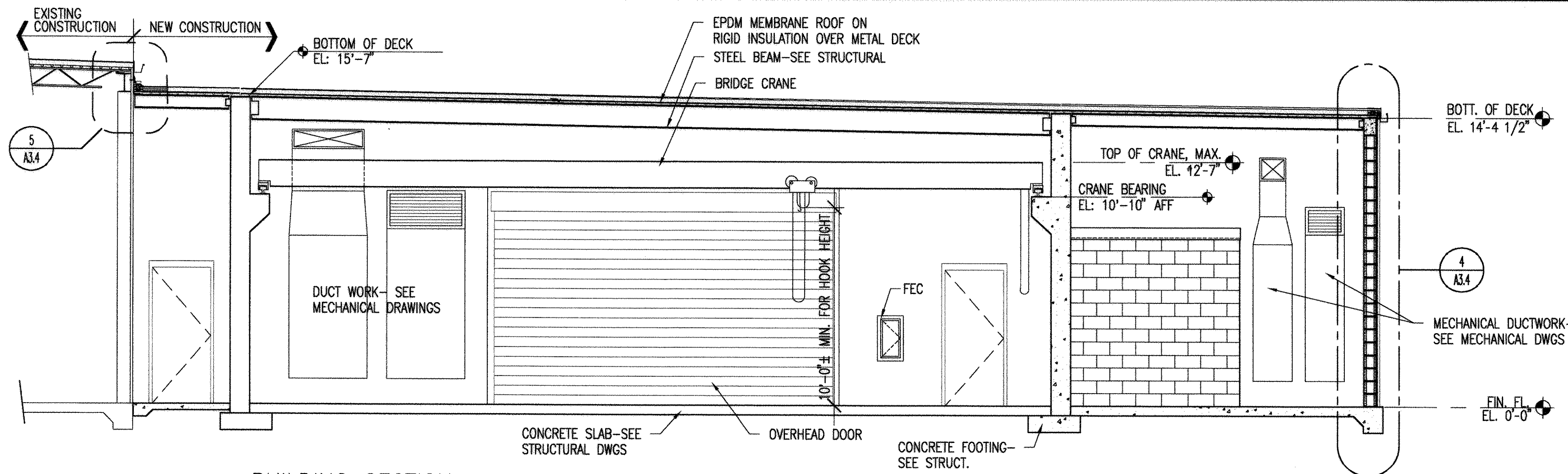


LEGEND

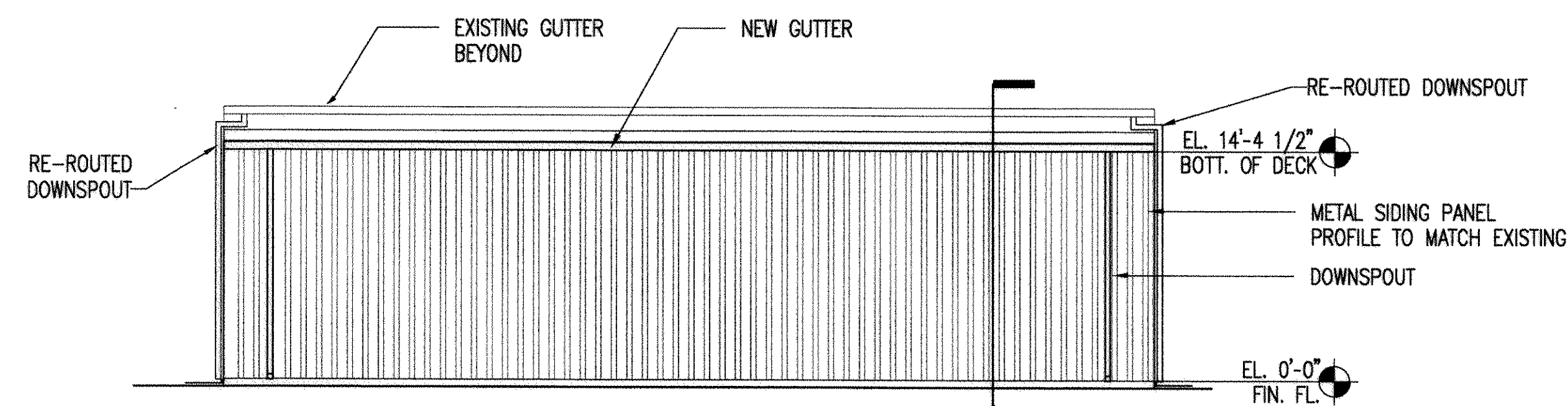
- 2'-0" x 2'-0" CEILING TILE SYSTEM
- 2'-0" x 4'-0" FLUORESCENT LIGHT FIXTURE-SEE ELECTRICAL DRAWINGS
- 1'-0" x 4'-0" FLUORESCENT LIGHT FIXTURE-SEE ELECTRICAL DRAWINGS
- H.I.D. FIXTURE-SEE ELEC. DRAWINGS
- SUPPLY REGISTER-SEE MECHANICAL
- RETURN GRILLE-SEE MECHANICAL

QUICK/BOEHM & ASSOCIATES, INC. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 REG. WILSON DR SIDES SUPPLY GLICK CH. ENGR PRINCIPAL-22 DEC 97		REV. DESCRIPTION DATE APPRVD CONFORMED BID DRAWING AS-BUILT, NO CORRECTIONS, MAY 22, 2001 APPROVED 97C
SHAW AIR FORCE BASE ADAL SQUAD OPS/ ICLOO/ MAINT. BAY ROOF & REFLECTED CEILING PLANS-MAINT. BAY		APPROVED 97C
SOUTHERN DIVISION CHARLESTON, S.C.		APPROVED 97C
SEAL AREA STATE OF SOUTH CAROLINA QUICK/BOEHM & ASSOCIATES, INC. CHARLESTON, S.C. NO. B-80006 REGISTERED ARCHITECT		RECORD DRAWING DATE 7/30/01 CODE I.D. NO. DRAWING SIZE: SPEC. NO. 06-97-0942 CONSTR. CONTR. NO. N62467-97-C-0942 NAVFAC DRAWING NO. 5348795 SHEET 127 OF 152 A1.11

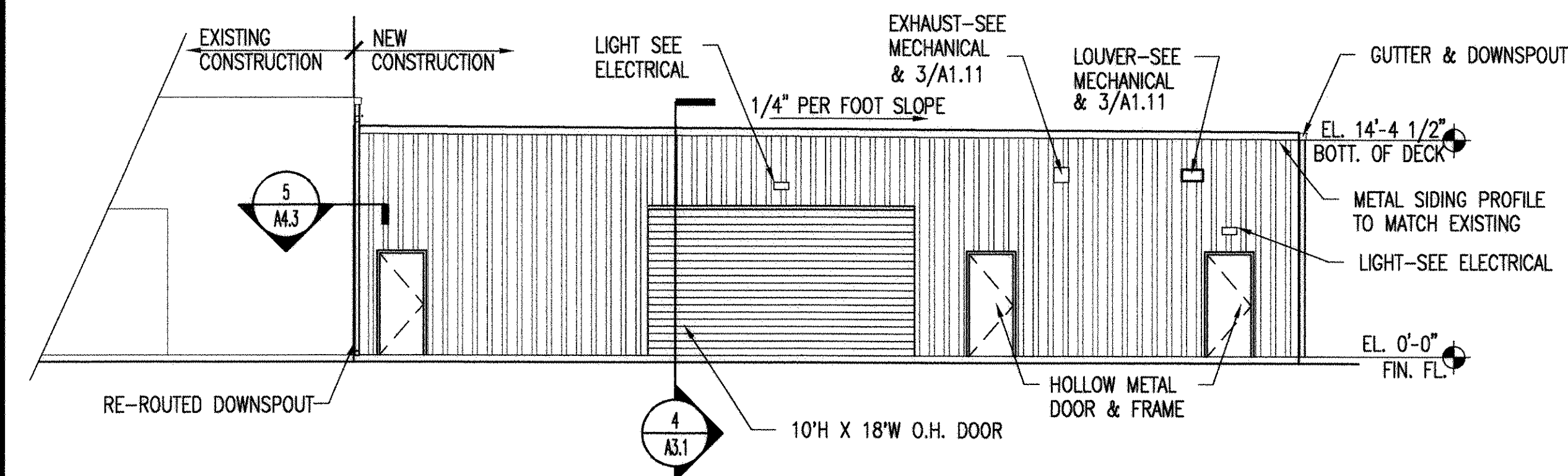
(1610, 1606, 1605)/106-10



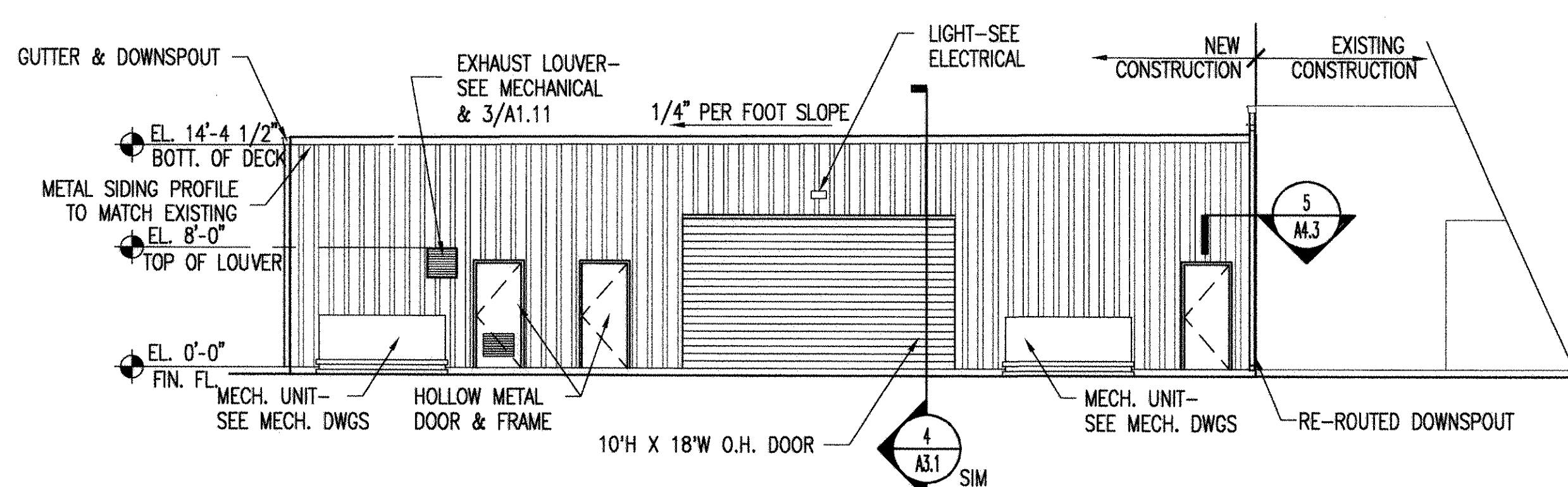
1 BUILDING SECTION
A1.10, A1.11 SCALE: 1/4" = 1'-0"



2 SOUTH ELEVATION
A1.10, A1.11 SCALE: 1/8" = 1'-0"

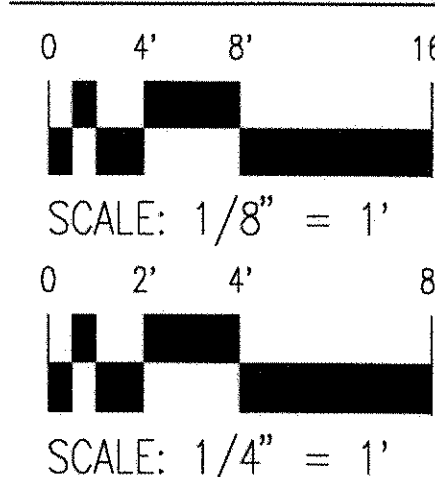


3 WEST ELEVATION
A1.10, A1.11 SCALE: 1/8" = 1'-0"



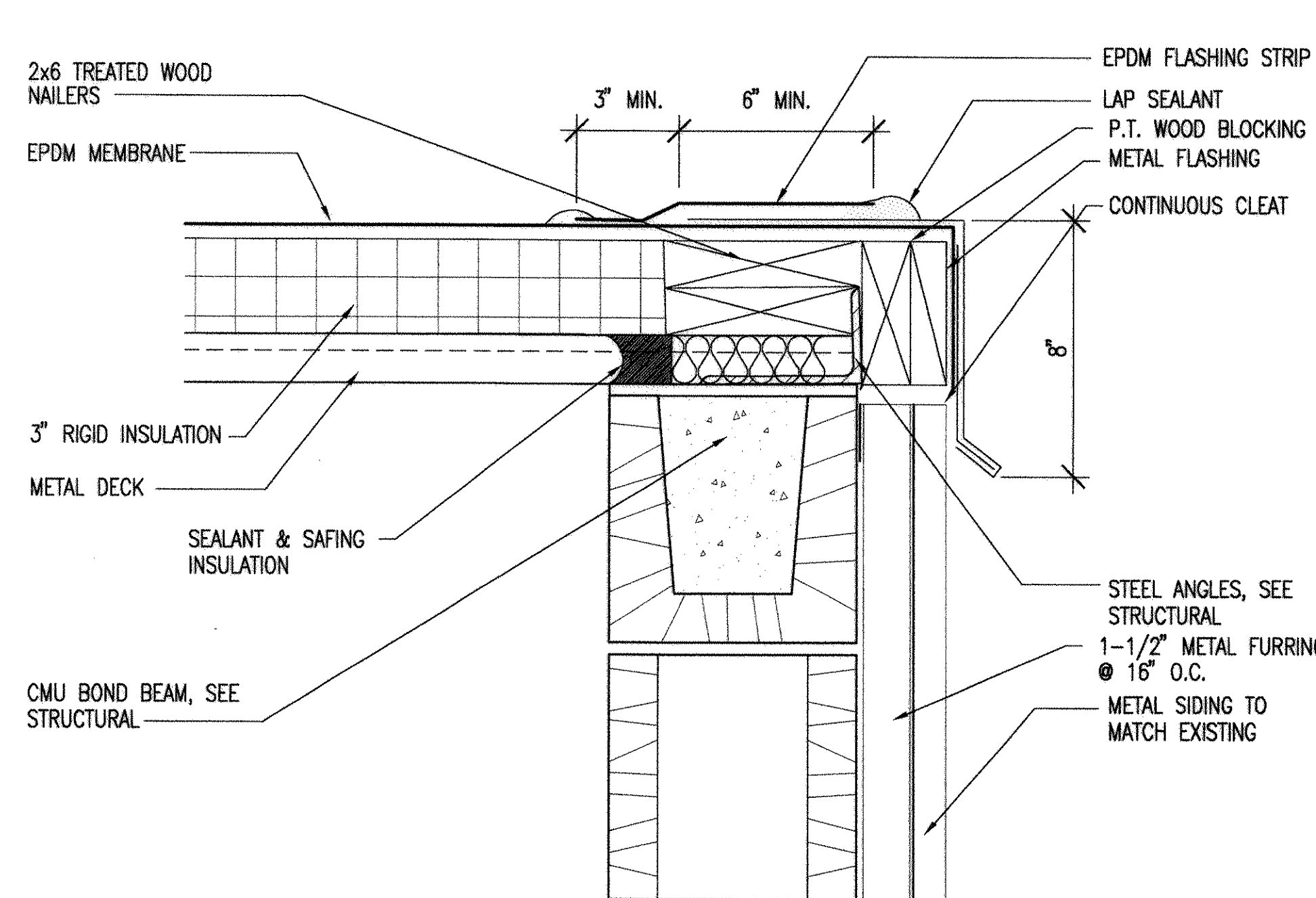
3 EAST ELEVATION
A1.10, A1.11 SCALE: 1/8" = 1'-0"

GRAPHIC SCALES

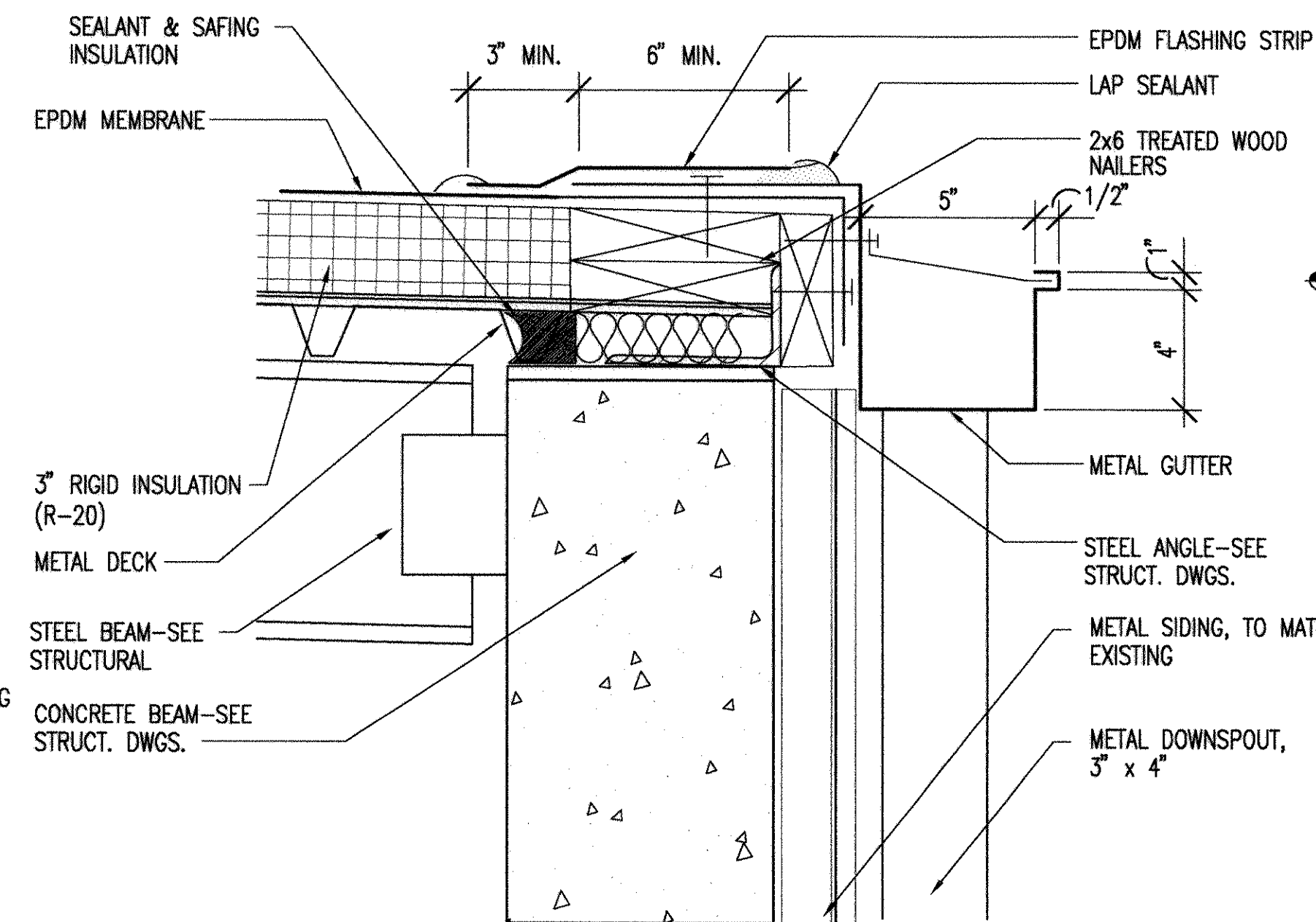


SHAW AIR FORCE BASE ADAL SQUAD OPS/ IGLOO/ MAINT. BAY ELEVATIONS & BUILDING SECTION-MAINT. BAY		SOUTHERN DIVISION CHARLESTON, S.C.		NAVFACILITIES ENGINEERING COMMAND	
REV. DESCRIPTION CONFORMED BID DRAWING AS-BUILT, NO CORRECTIONS, MAY 22, 2001		PREP BY DATE APPROVED		GLICK/BOEHM & ASSOCIATES, INC. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 DESK WILSON DR SIDES CH ENGR SUPV GLICK PRINCIPAL-22 DEC 97	
APPROVED DATE OFFICE IN CHARGE		APPROVED DATE OFFICE IN CHARGE		APPROVED DATE OFFICE IN CHARGE	
RECORD DRAWING DATE 7/30/01		CODE I.D. NO. DRAWING SIZE SPEC. NO. 06-97-0942		CONSTR. CONTR. NO. N62467-97-C-0942	
NAVFAC DRAWING NO. 5348796		SHEET 128 OF 152		A2.3	

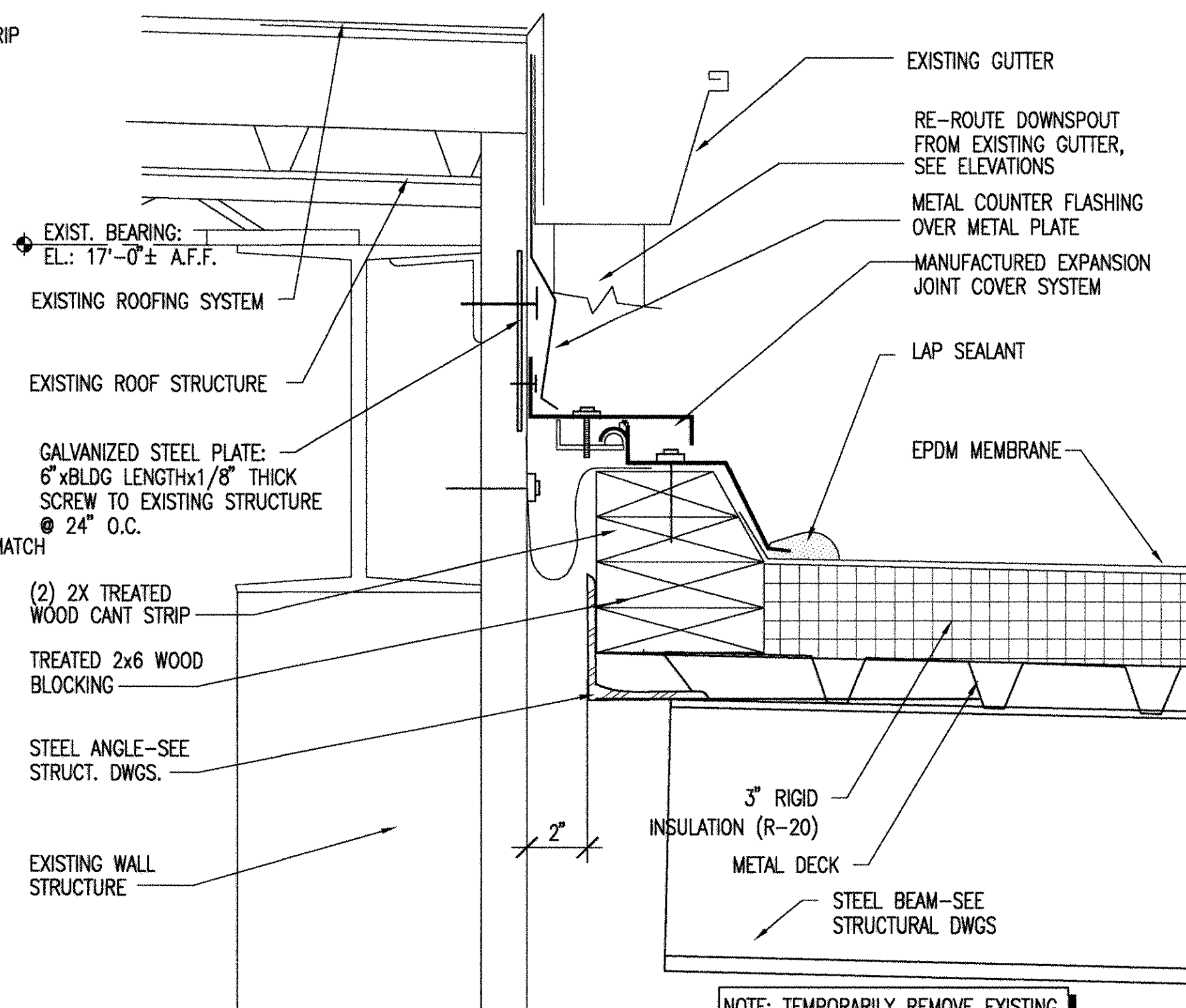
(1610, 1606, 1605)/1606-22



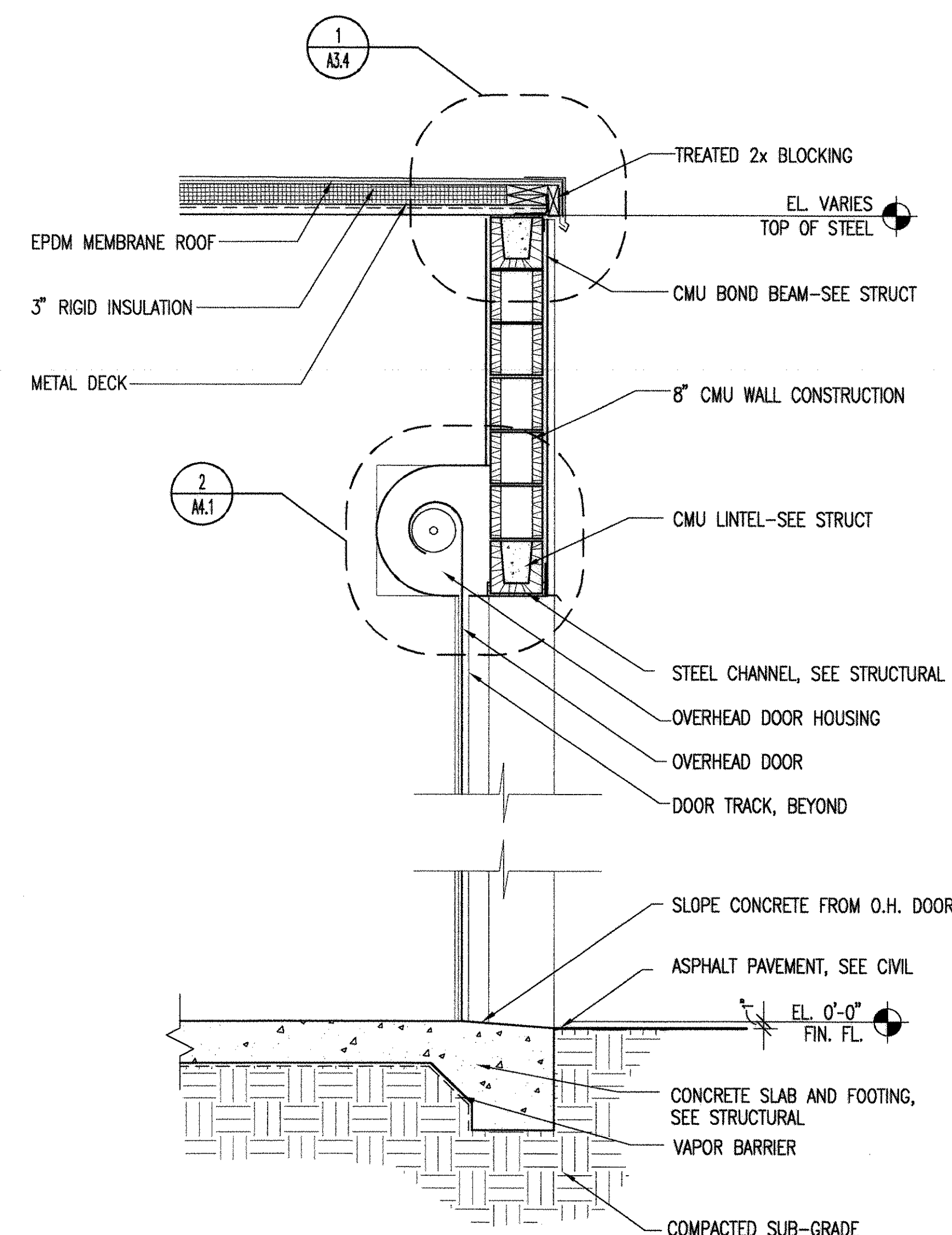
1 ROOF DETAIL
A3.4 SCALE: 3" = 1'-0"



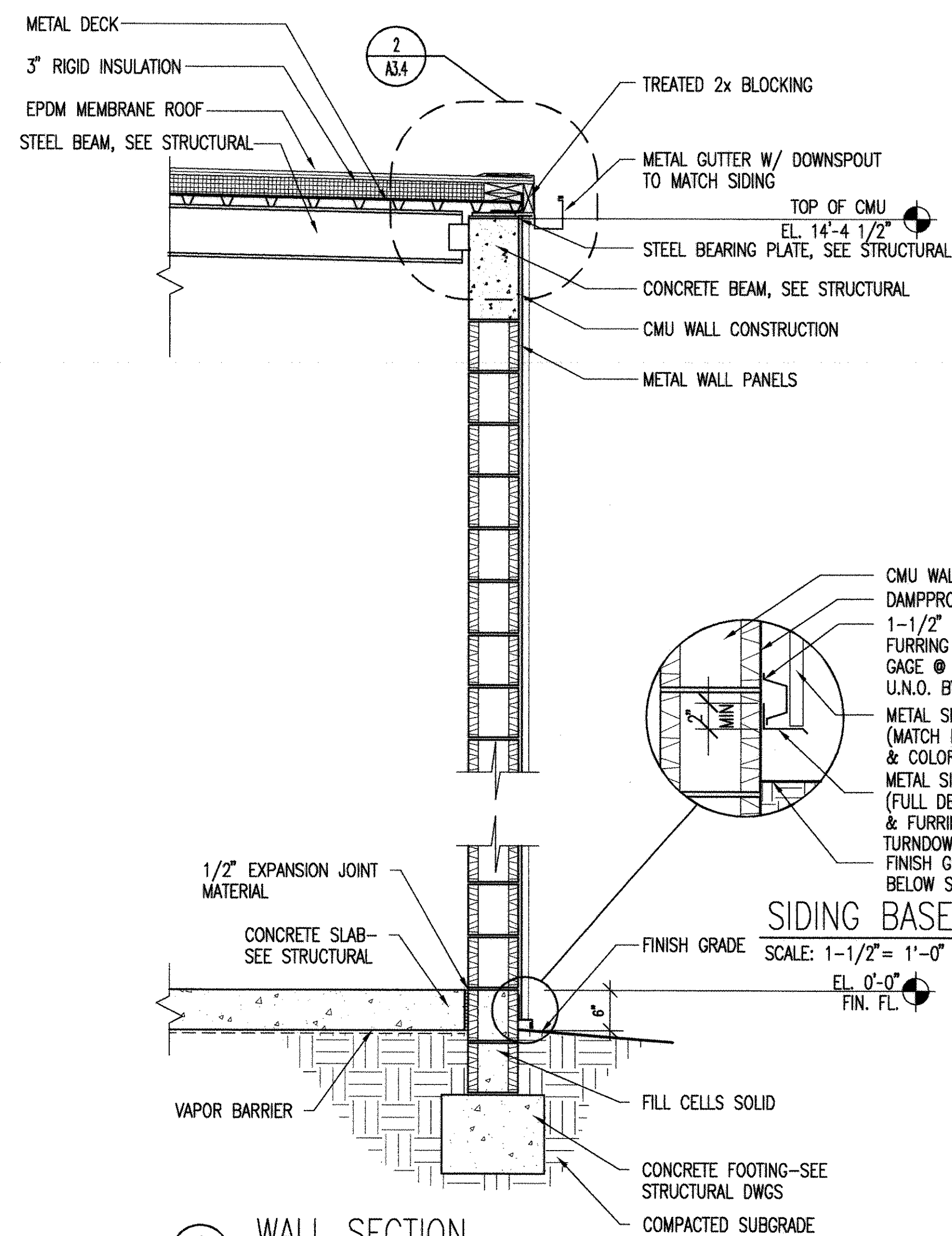
2 ROOF DETAIL
A3.4 SCALE: 3" = 1'-0"



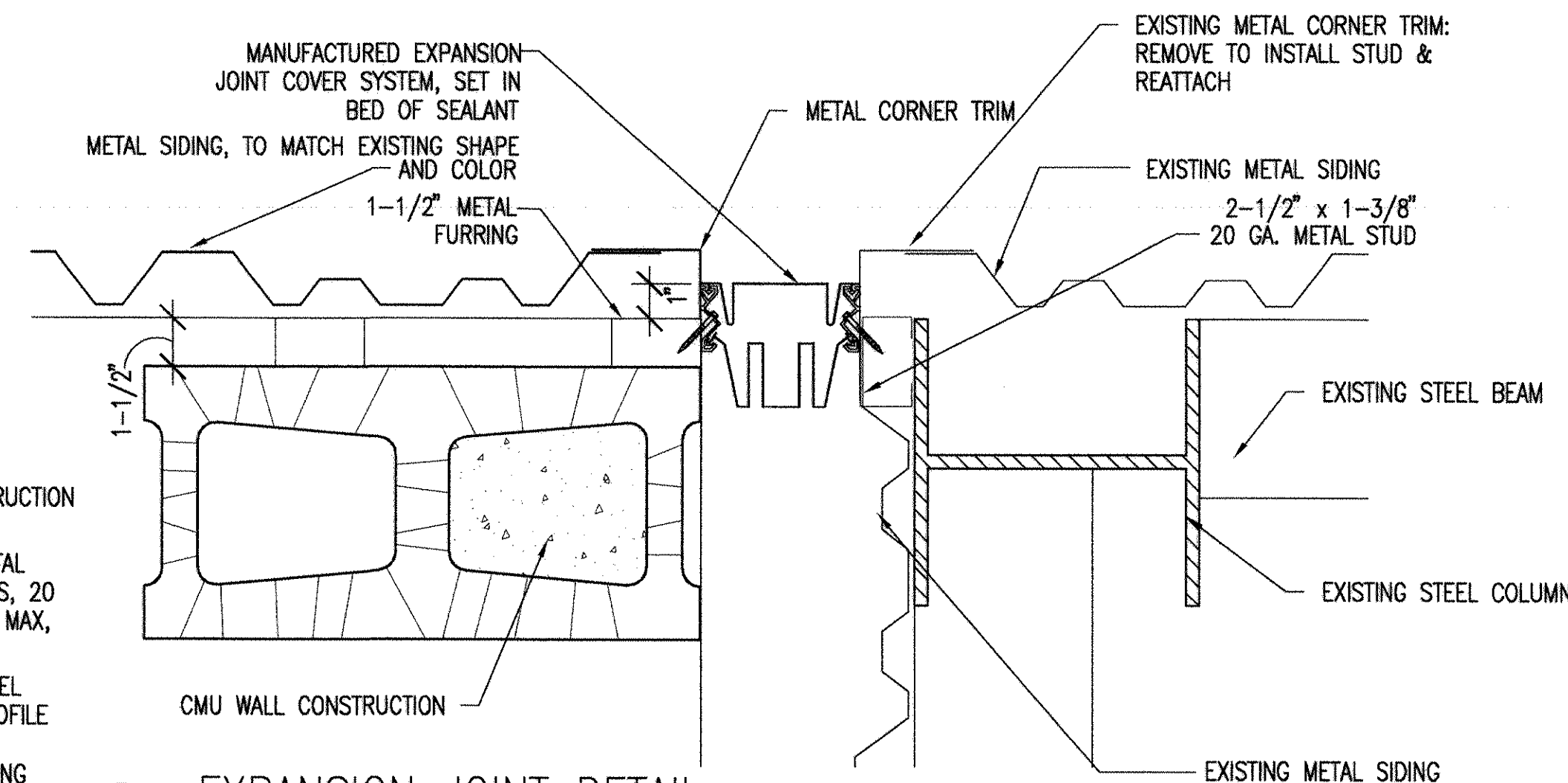
5 ROOF DETAIL
A2.3 SCALE: 3" = 1'-0"



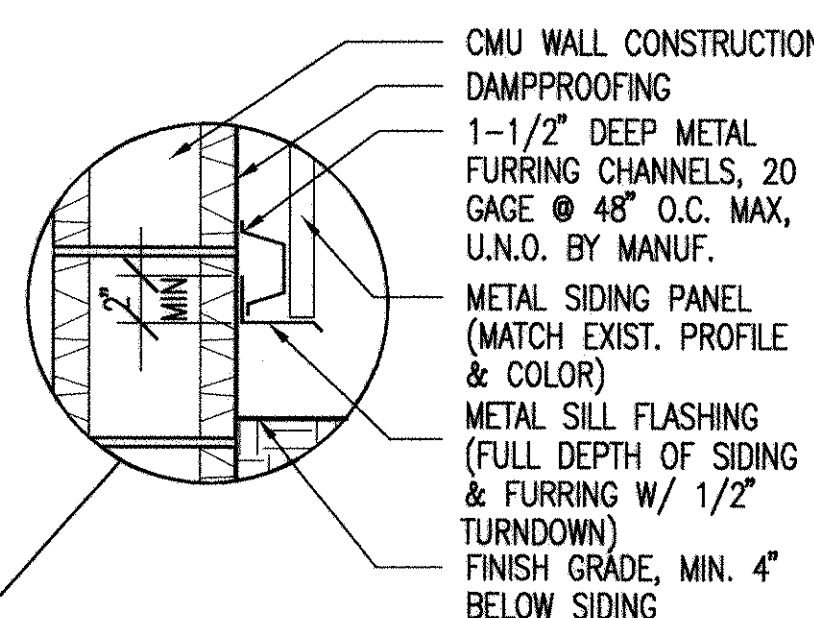
3 WALL SECTION
A2.3 SCALE: 3/4" = 1'-0"



4 WALL SECTION
A2.3 SCALE: 3/4" = 1'-0"

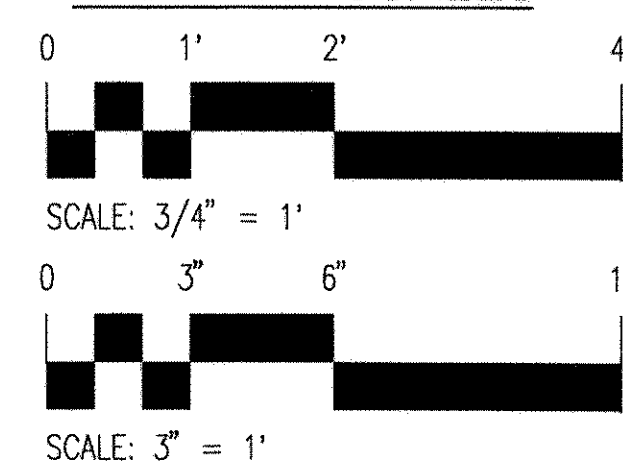


6 EXPANSION JOINT DETAIL
A1.10 SCALE: 3" = 1'-0"



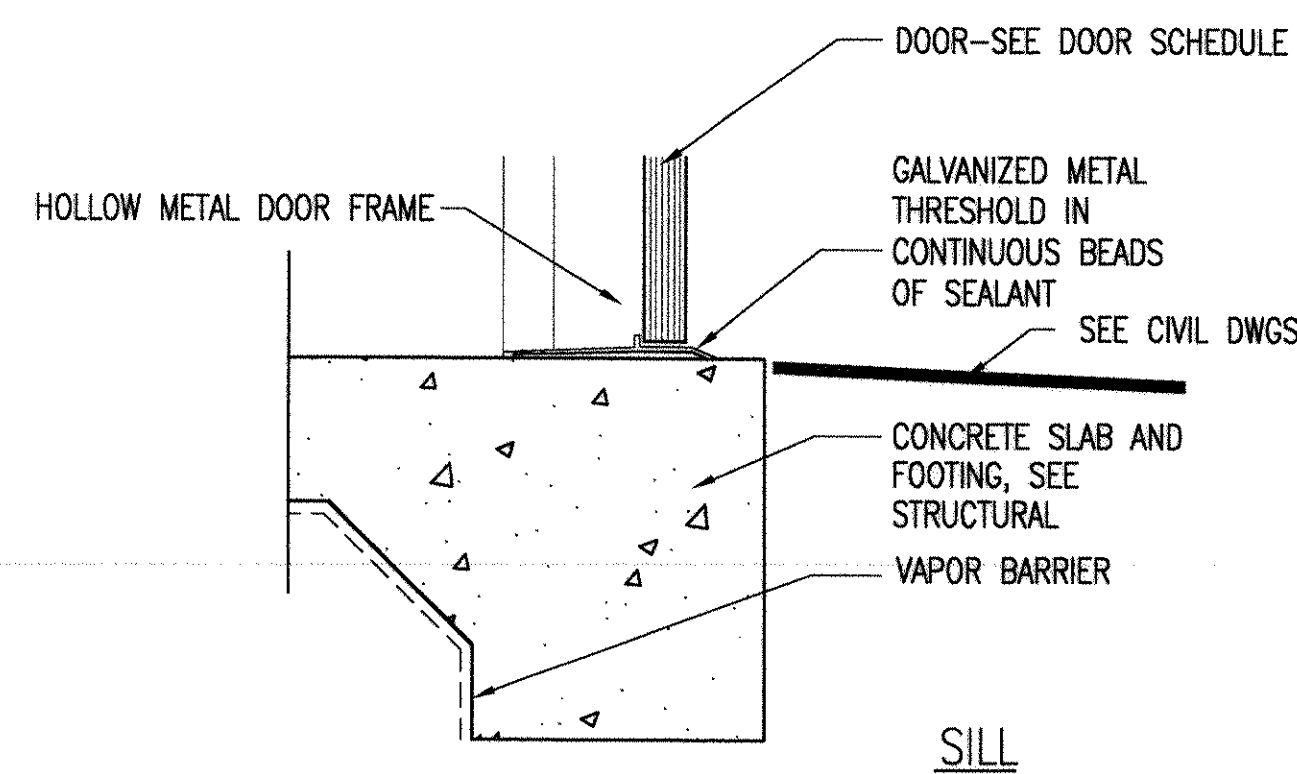
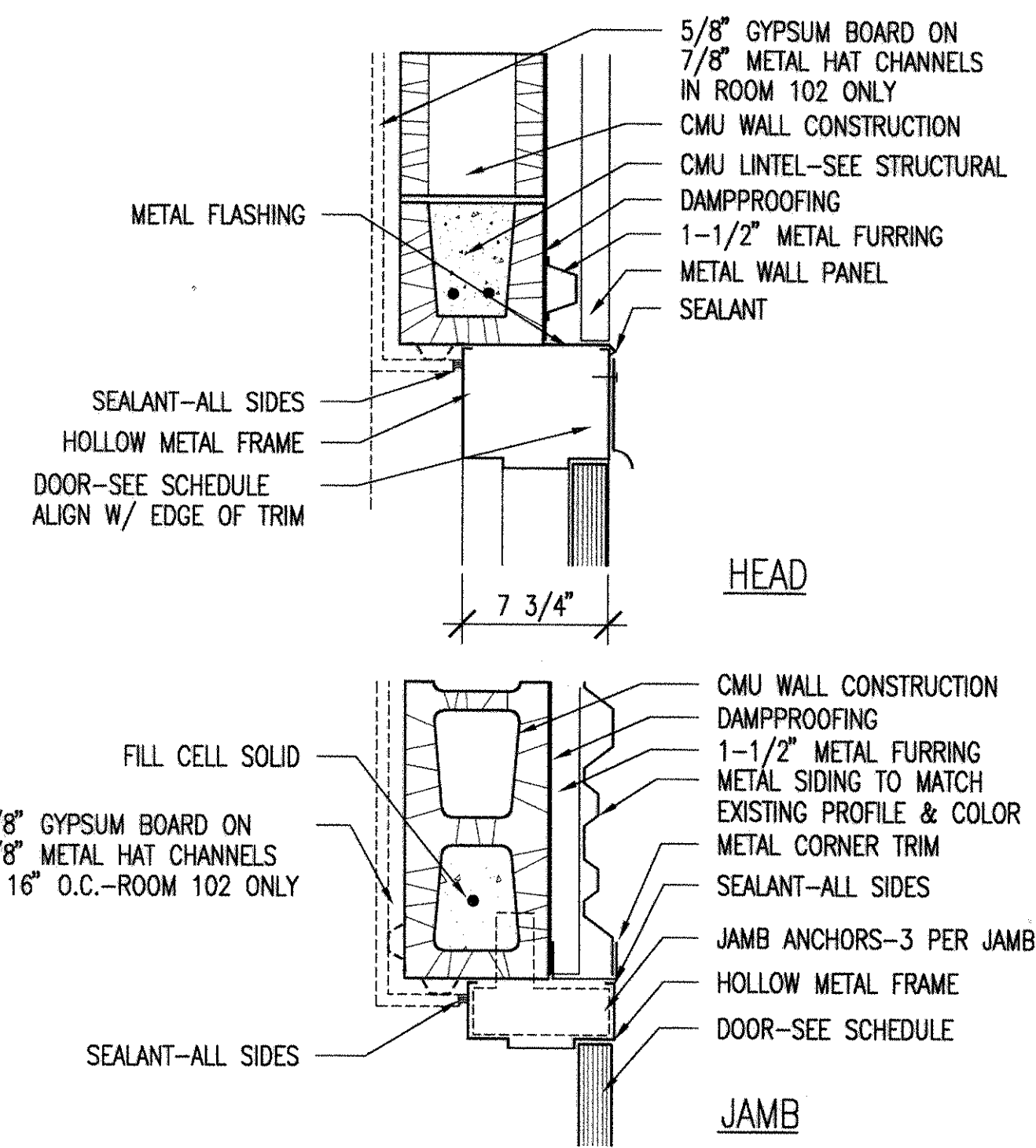
SIDING BASE DETAIL
SCALE: 1-1/2" = 1'-0"

GRAPHIC SCALES

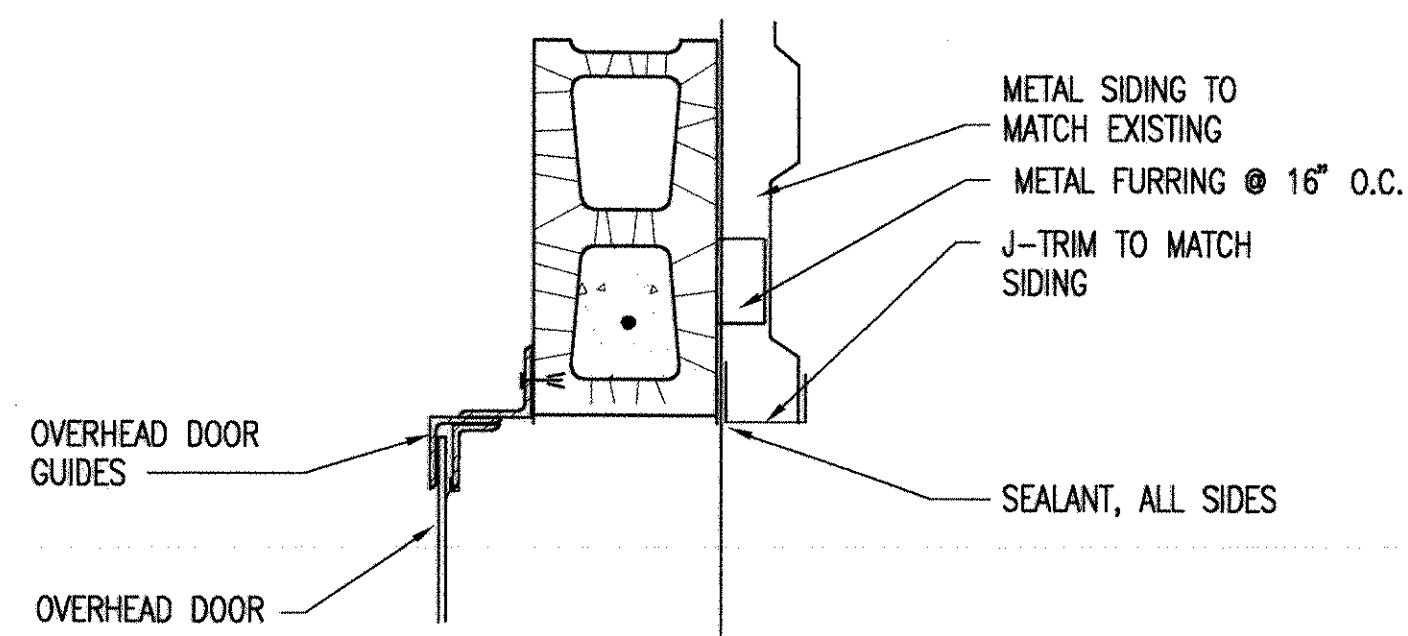
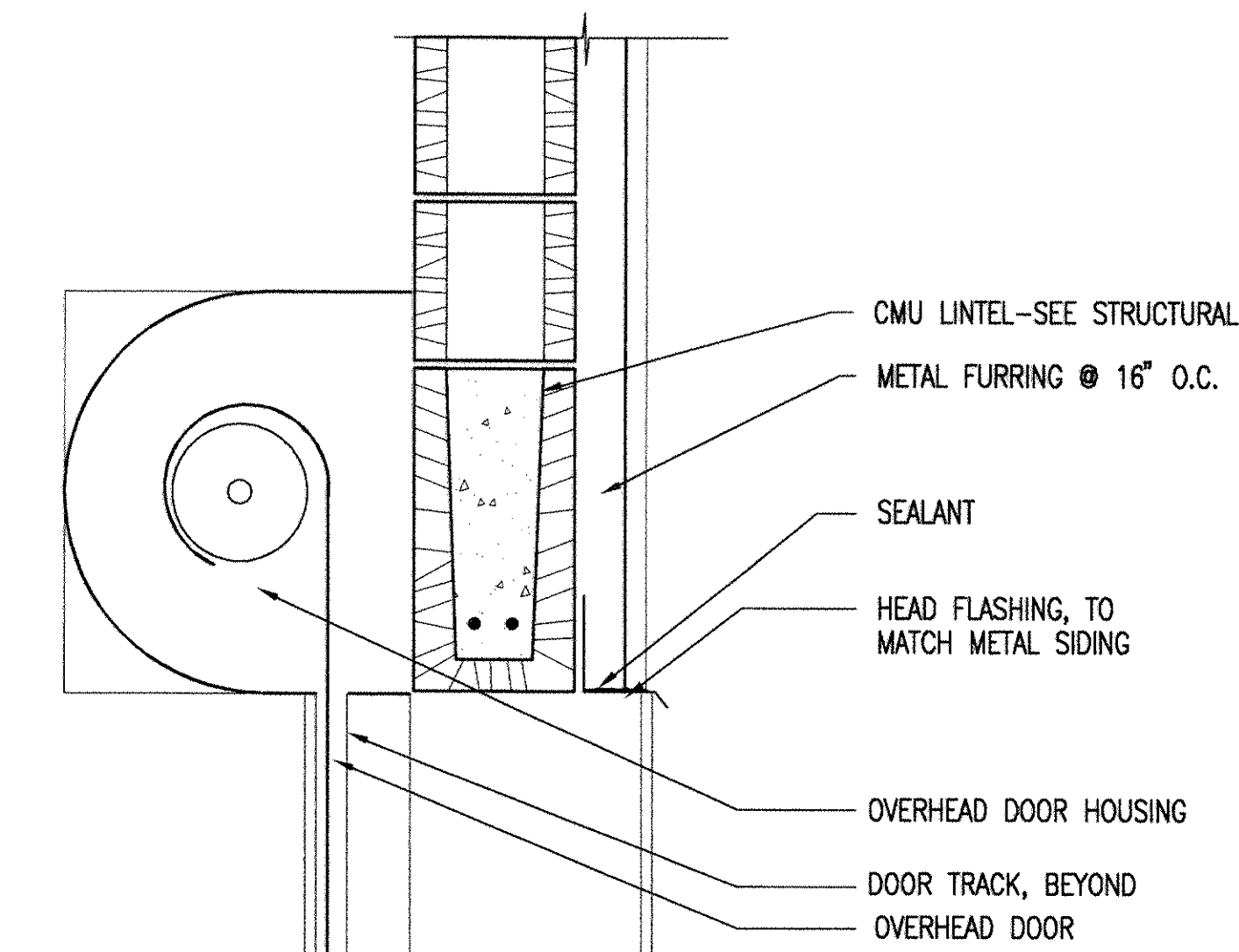


REV. DESCRIPTION 1 CONFORMED BID DRAWING 2 AS-BUILT, NO CORRECTIONS, MAY 22, 2001	PREP BY DATE APPROVED	QUICK/BOEHM & ASSOCIATES, INC. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 DESIGN: WILSON OR SIDES CHECK: WILSON SUPPLY: QUICK DATE: 12/22/97 PROJECT: 129 OF 152 A3.4
	REV. DESCRIPTION 3 SHAW AIR FORCE BASE 4 ADAL SQUAD OPS/IGLOO/MAINT. BAY 5 ROOF DETAILS-MAINT. BAY	
	SOUTHERN DIVISION CHARLESTON, S.C.	
	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND SUMTER, SOUTH CAROLINA	

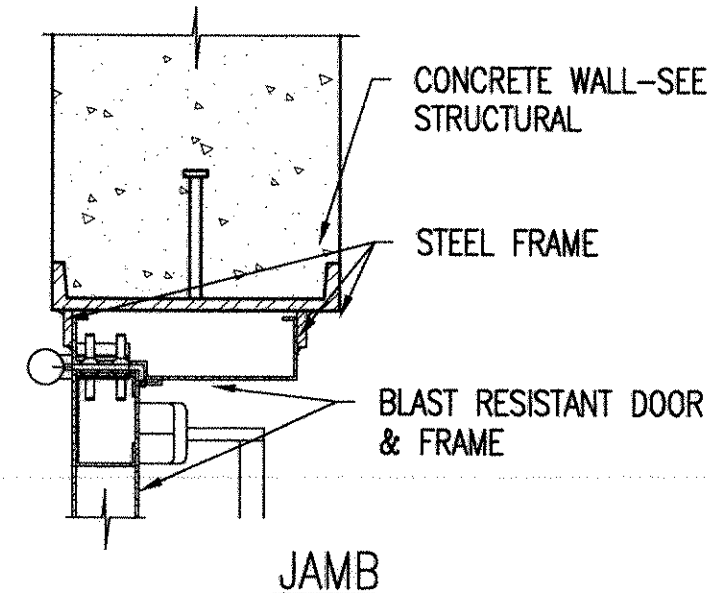
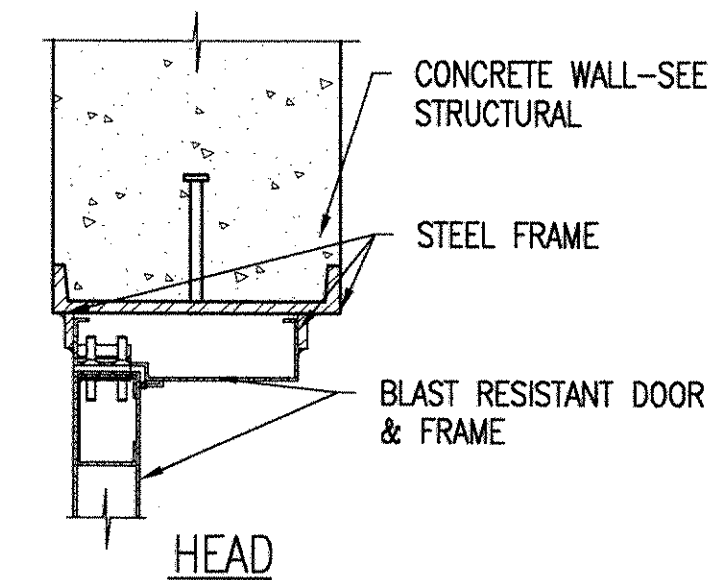
(1610, 1606, 1605) / 106-107



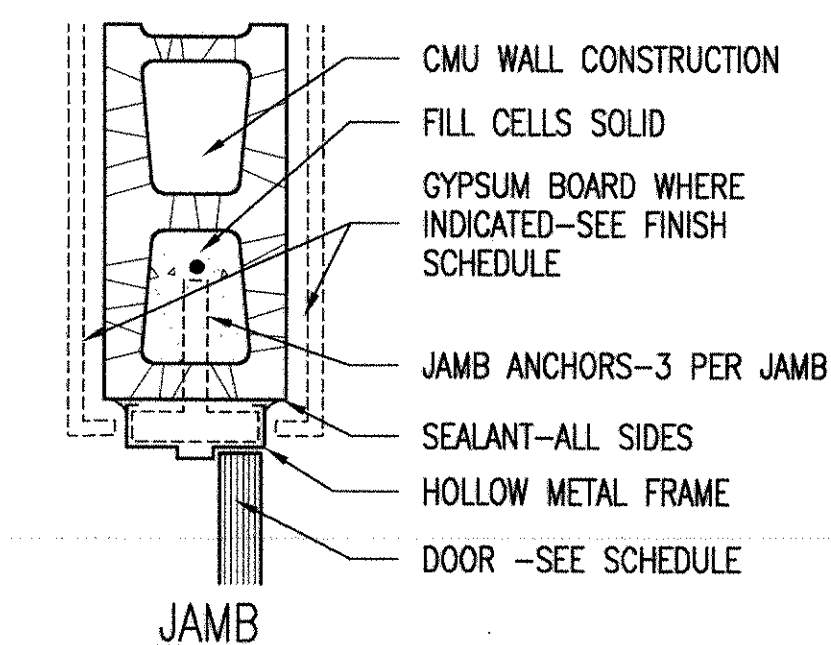
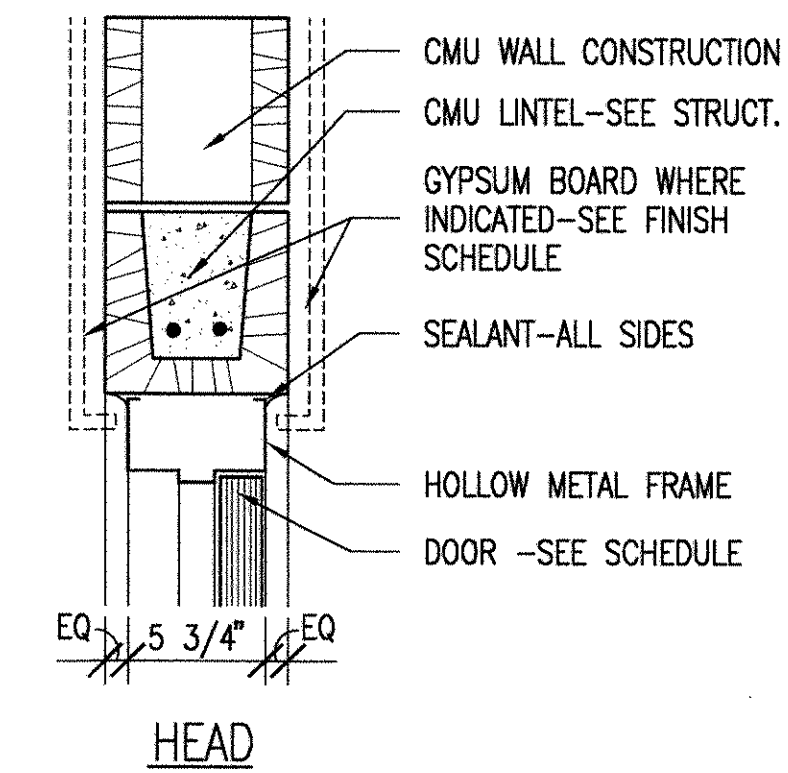
1
A1.10 EXTERIOR DOOR DETAILS
SCALE: 1-1/2" = 1'-0"



2
A1.10 OVERHEAD DOOR DETAIL
SCALE: 1-1/2" = 1'-0"



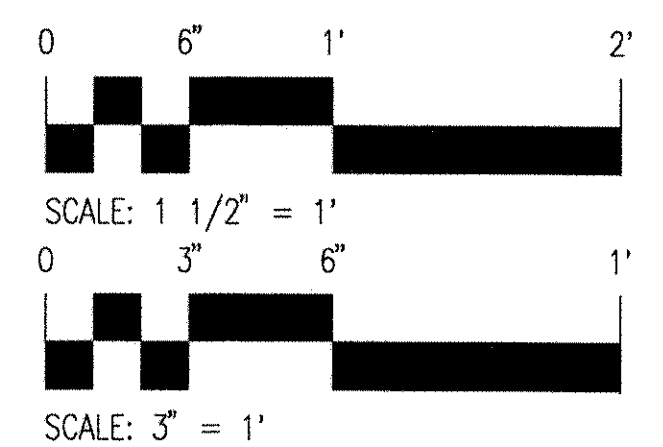
3
A1.10 BLAST RESISTANT DOOR DETAILS
SCALE: 1-1/2" = 1'-0"



4
A1.10 INTERIOR DOOR DETAIL
SCALE: 1-1/2" = 1'-0"

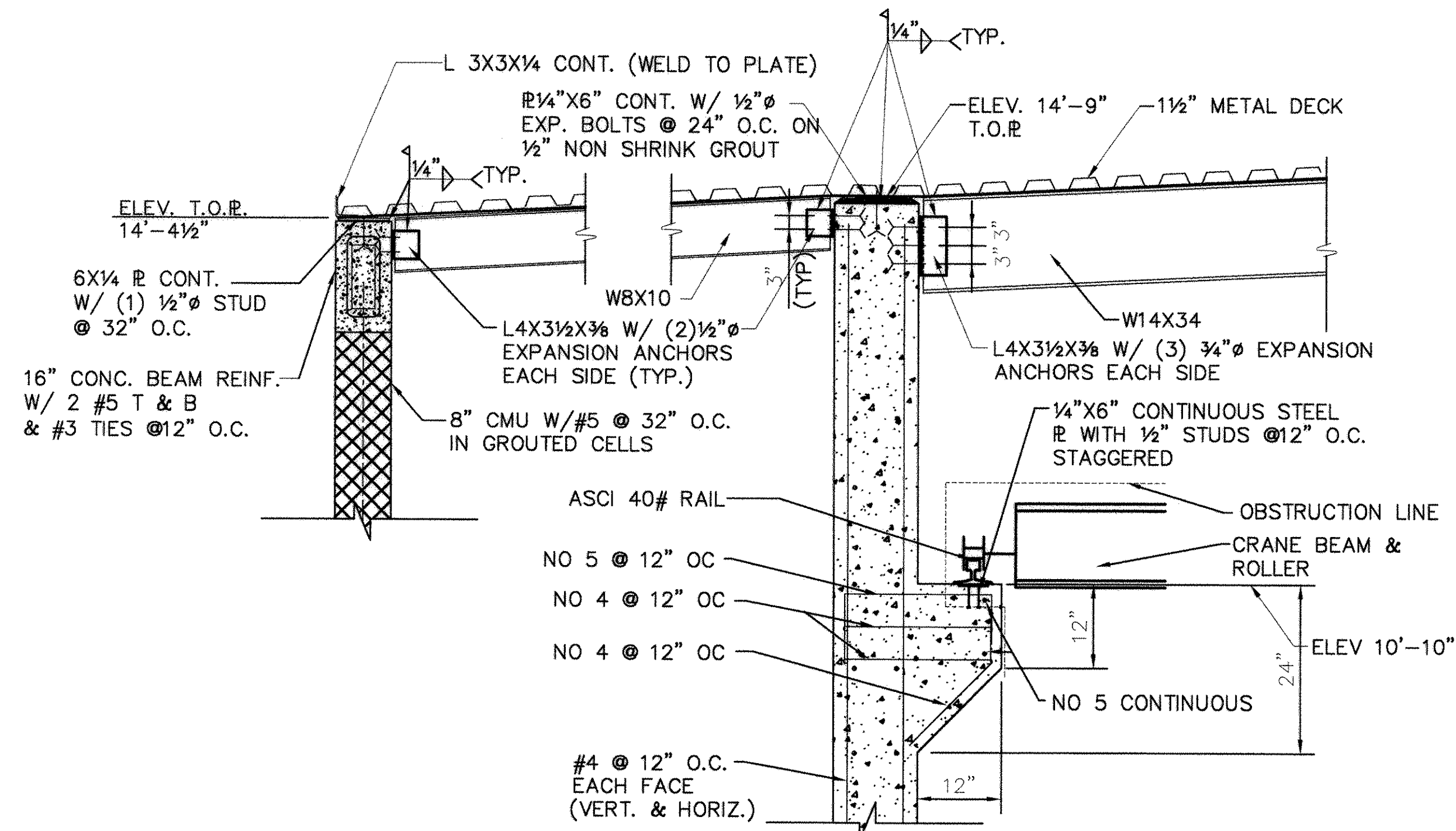
NOTE: ALL ITEMS TO BE DESIGNED AND PROVIDED BY BLAST DOOR MANUFACTURER

GRAPHIC SCALES

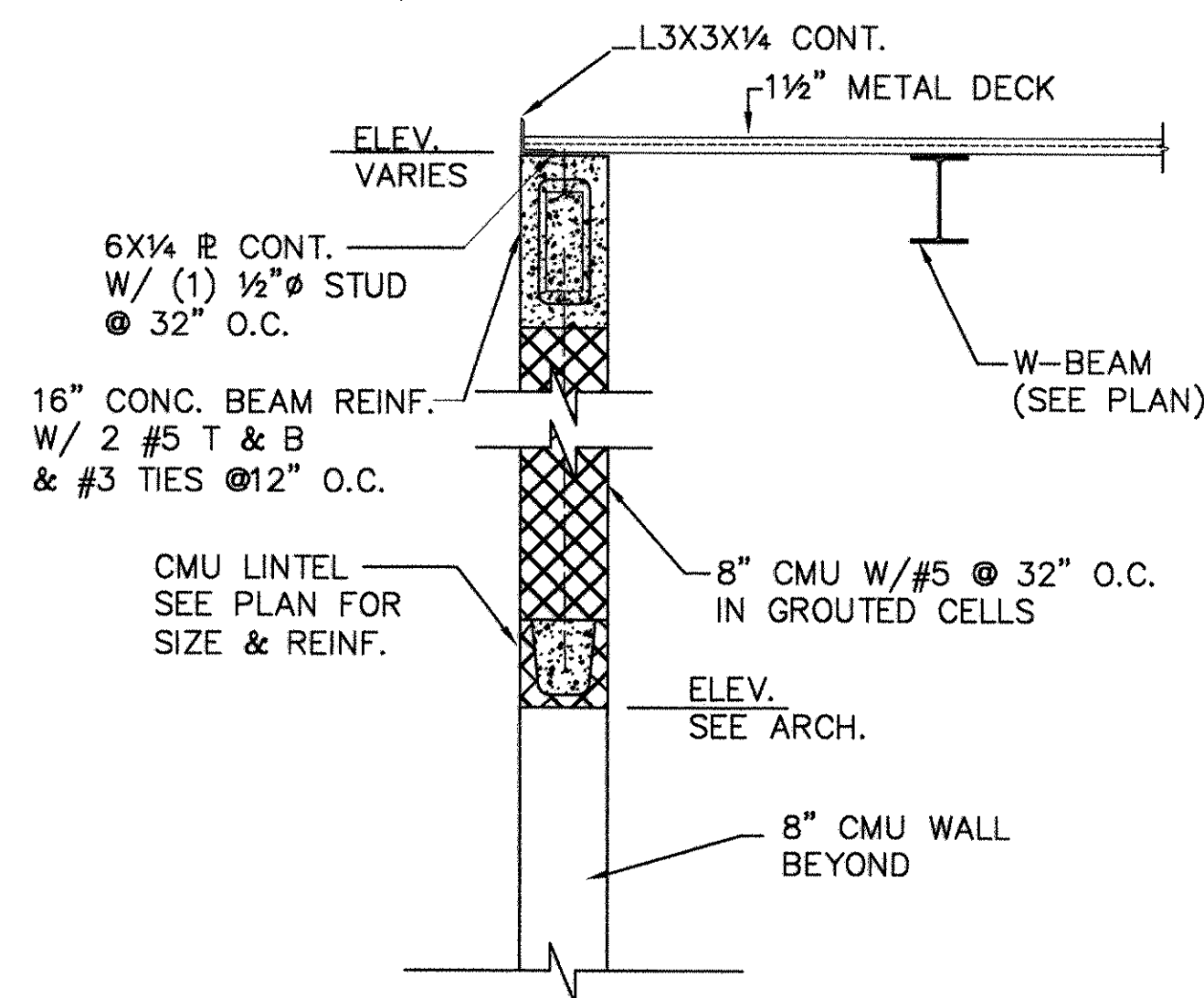


SHAW AIR FORCE BASE ADAL SQUAD OPS/ IGLOO/ MAINT. BAY DOOR DETAILS-MAINT. BAY		SOUTHERN DIVISION CHARLESTON, S.C.		NAVY FACILITIES ENGINEERING COMMAND SUMTER, SOUTH CAROLINA		REV. DESCRIPTION CONFORMED BID DRAWING AS-BUILT, NO CORRECTIONS, MAY 22, 2001		PREP BY DATE APPROVD		GLICK/BOEHM & ASSOCIATES, INC. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 DESGN WILSON SUPPLY GLICK PRINCIPAL-22 DEC 97	
SEAL AREA STATE OF SOUTH CAROLINA GLICK/BOEHM & ASSOCIATES, INC. CHARLESTON NO. B-80008 REGISTERED ARCHITECT		RECORD DRAWING DATE 7/3/01		CODE I.D. NO.		DRAWING SIZE		SPEC. NO. 06-97-0942		CONSTRUCTION NO. N62467-97-C-0942	
NAVFAC DRAWING NO. 5348798		SHEET 130 OF 152		A4.3		OFFICER IN CHARGE DATE		EDC		DOR	

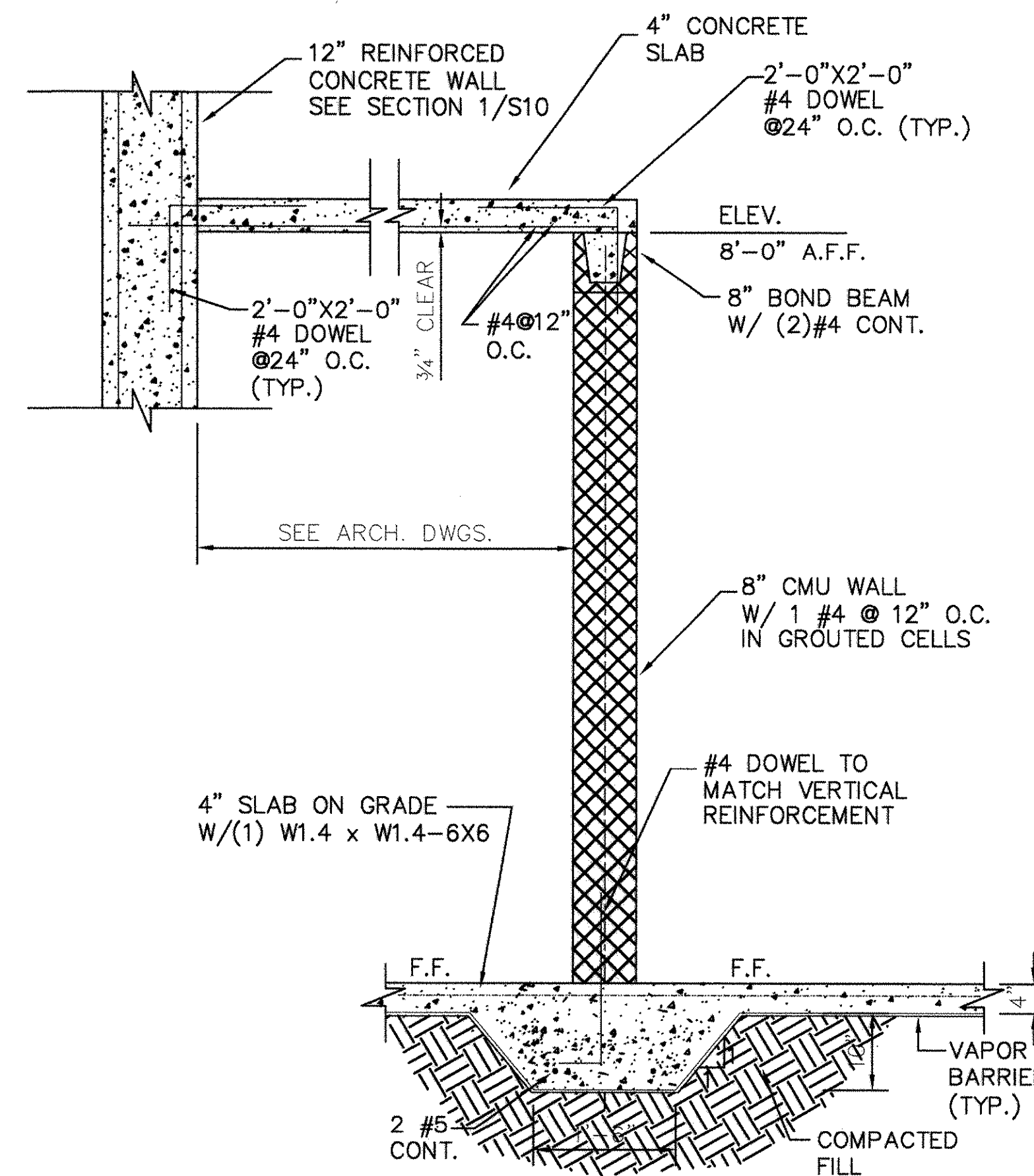
(1610, 1606, 1605) / 1606-2011



1
S10 SECTION
3/4" = 1.0'



2
S10 SECTION
3/4" = 1.0'



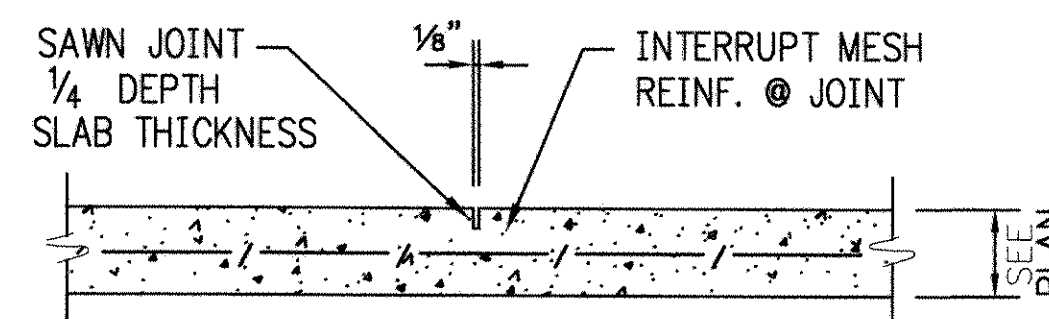
3
S10 SECTION
3/4" = 1.0'

GENERAL NOTES:

1. READ THE SPECIFICATIONS
2. **DESIGN LOADS:** ASCE -7-95
 - A. ROOF LIVE - 20 PSF
 - B. WIND SPEED - 90 MPH
 - C. SEISMIC - ZONE 2A
3. **FOUNDATIONS:**
 - A. SOIL BEARING PRESSURE - 3000 PSF ON UNDISTURBED VIRGIN SOIL.
4. **CONCRETE:**
 - A. DESIGN STRENGTH AT 28 DAYS. = 3000 PSI
 - B. DESIGN STANDARD - ACI 318 - 89
 - C. DETAIL STANDARD - ACI 315 - 88
5. **SEISMIC VARIABLES:**
 1. $A_v \leq 0.15$
 2. $A_o \leq 0.15$
 3. SEISMIC HAZARD EXPOSURE GROUP I
 4. SEISMIC PERFORMANCE CATEGORY C
 5. TYPE S2 SOIL PROFILE
 6. REINFORCED CONCRETE SHEAR WALLS
 7. RESPONSE MODIFICATION FACTOR $R = 4$
 8. DESIGN PERFORMED USING THE EQUIVALENT LATERAL FORCE PROCEDURE, SECTION 1607.4 SBC 1994
6. **CONCRETE REINFORCING:**
 - A. DEFORMED BARS - ASTM A615, GRADE 60
 - B. WELDED WIRE FABRIC - ASTM A135

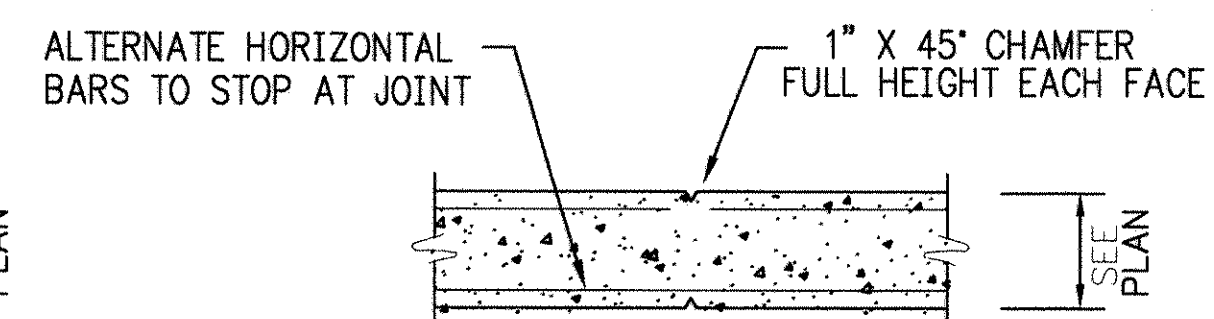
PROVIDE CONTROL JOINTS AS SHOWN IN PLAN

7. **CONCRETE COVER OVER BARS:**
 - A. FOOTINGS - 3" CLEAR
 - B. WALLS - 2"
 - C. FLOOR SLABS - 3/4"
8. PROVIDE ALL NECESSARY TIE BARS, SPACE BARS, CHAIRS, ETC.
9. **STRUCTURAL STEEL:**
 - A. MATERIAL
 1. TYPICAL SECTIONS - ASTM A 36, FY = 36 KSI GALVANIZED
 2. DESIGN STANDARD - AISC 1989
 - B. CONNECTIONS
 1. SHOP - WELDED
 2. FIELD - BOLTED WITH ASTM A 325 BOLTS MINIMUM SIZE 3/4"
9. **STEEL JOISTS:**
 - A. "K" SERIES IN ACCORDANCE WITH THE LATEST SJI SPECIFICATIONS.
10. **METAL DECKING:**
 - A. ROOF DECK - 1 1/2", METAL ROOF DECK, 0.0358" THICK, GALVANIZED
11. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATION OF ALL OPENINGS IN ROOF AND FLOORS NOT SHOWN ON STRUCTURAL DRAWINGS.
12. GENERAL CONTRACTOR TO COORDINATE WITH ARCHITECTURAL & MECHANICAL DRAWINGS FOR MISCELLANEOUS CLIP ANGLES, BRACES, ETC. NOT SHOWN ON STRUCTURAL DRAWINGS.
13. FINISH FLOOR ELEVATION TO MATCH EXISTING FINISHED FLOOR ELEVATION.



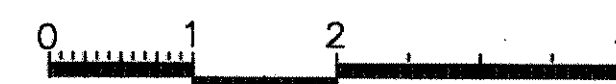
**SLAB ON GRADE
CONTROL JOINT**

JOINT TO BE SAWN WITHIN
12 HOURS AFTER PLACING CONCRETE.



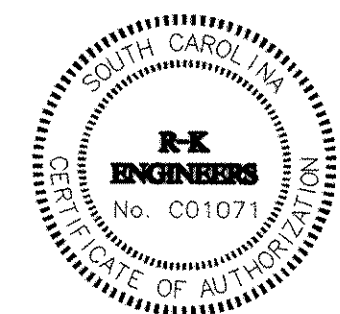
TYP. WALL CONTROL JOINT

TO BE DETERMINED IN FIELD @ APPROX. 30'-0 O.C.



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

NOTE: IF SHEET IS NOT
(22"x34") IT IS A REDUCED
PRINT, SCALE ACCORDINGLY.



Glick/Boehm & Associates, 1000 S. 10th St., Suite 100 Charleston, SC 29401, CH-RKG		PREP BY: CH-RKG DATE: 8/17/01 APPROVED: [Signature] DATE: 8/17/01
REV. DESCRIPTION CONFORMED BID DRAWING CORRECTED TO AS-BUILT, MAY 22, 2001	PROJECT: SUMMIT, SOUTH CAROLINA ADAL SQUAD OPS/IGLOO/MAINT. BAY SECTIONS & GENERAL NOTES-MAINT. BAY	SHEET: 132 OF 152 S11

(1610, 1606, 1605) / 106-11

PACKAGE HEAT PUMP SCHEDULE					
MARK		PHP-1	PHP-2		
FAN	SUPPLY AIR - CFM	4,000	1,200		
	OUTSIDE AIR - CFM	610	160		
	EXT. S.P. - IN. W.G.	0.65	0.5		
	BLOWER MOTOR - HP (MIN.)	2	0.4		
COOLING	TOTAL CAPACITY - BTUH	109,560	34,320		
	SENSIBLE CAPACITY - BTUH	81,840	26,400		
	ENT. AIR TEMP. - °F db/wb	83/67	81/66		
HEATING	CAPACITY AT 25°F db AMBIENT AIR TEMP. AND 70°F INDOOR AIR TEMP.	55,600	17,240		
	AUXILIARY HEATER - KW/STEPS	15/2	5/1		
CONDENSING	AMBIENT AIR TEMP. - °F db	95	95		
	COMPRESSORS - NO.	2	1		
	CAPACITY STEPS - EA. COMP.	1	1		
SEER AT ARI		9.6	10.0		
COP - HIGH TEMP. HEATING AT ARI		3.0	3.0		
TOTAL POWER INPUT - KW		12.92	4.00		
ELECTRICAL - V/ø/Hz		460/3/60	460/3/60		
NOTES		1,2	1,2		

NOTES:

- EXTERNAL STATIC PRESSURE IS FOR DUCTWORK SYSTEM ONLY. FILTERS, COILS AND CASING LOSSES ARE INTERNAL.
- DIRECT DRIVEN BLOWERS SHALL BE PROVIDED WITH 3-SPEED MOTORS. BELT DRIVEN BLOWERS SHALL BE PROVIDED WITH A SECOND DRIVE SET (PULLEY AND SHEAVES) NECESSARY TO BALANCE THE SYSTEM WITH ACTUAL FIELD CONDITIONS.

LOUVER SCHEDULE				
MARK	L-1			
TYPE	OUTSIDE AIR INTAKE			
QUANTITY AIR - CFM	60			
SIZE - WIDTH x HEIGHT	16x8			
MOUNTING HEIGHT (A.F.F.)	12'±			
NOTES	1,2			
NOTES: 1. PROVIDE WITH BIRD SCREEN ON INTERIOR. 2. PROVIDE WITH COLOR TO MATCH WALL COLOR.				

SPLIT SYSTEM HEAT PUMP SCHEDULE				
		MARK	AHU-1	
INDOOR UNIT	FAN	SUPPLY AIR - CFM	600	
		OUTSIDE AIR - CFM	60	
		EXT. S.P. - IN. W.G.	0.35	
		BLOWER MOTOR - HP (MINIMUM)	1/4	
		ELECTRICAL - V/ø/Hz	208/1/60	
	COOLING	TOTAL CAPACITY - BTUH	14,520	
		SENSIBLE CAPACITY - BTUH	11,880	
		ENT. AIR TEMP. - °F dB/wB	81/65	
	HEATING	CAPACITY AT 25°F db AMBIENT AIR TEMP.	10,530	
		AUXILIARY HEATER-KW/STEPS	5/1	
HEAT PUMP UNIT	MARK		HP-1	
	AMBIENT AIR TEMP. - °F db		95	
	TOTAL POWER INPUT - KW		1.70	
	COMPRESSORS - NO.		1	
	CAPACITY STEPS - EA. COMP.		1	
	ELECTRICAL - V/ø/Hz		208/1/60	
SYSTEM SEER AT ARI		11.50		
SYSTEM COP - HIGH TEMP. HEATING AT ARI		3.30		
NOTES		1,2,3		

NOTES:

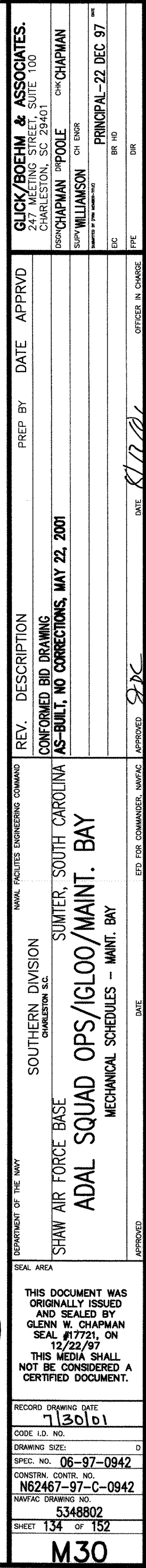
- EXTERNAL STATIC PRESSURE IS FOR DUCTWORK SYSTEM ONLY. FILTERS, COILS AND CASING LOSSES ARE INTERNAL.
- DIRECT DRIVEN BLOWERS SHALL BE PROVIDED WITH 3-SPEED MOTORS. BELT DRIVEN BLOWERS SHALL BE PROVIDED WITH A SECOND DRIVE SET (PULLEY AND SHEAVES) NECESSARY TO BALANCE THE SYSTEM WITH ACTUAL FIELD CONDITIONS.
- PROVIDE INDOOR UNIT WITH SINGLE POINT POWER CONNECTION.

DESIGN CONDITIONS			
	OUTDOOR	INDOOR (OFFICE)	INDOOR (MAINT. BAY/WORK AREA)
SUMMER	95°db/76°wb	78°db/50%RH	78°db/50%RH
WINTER	25°db	68°db	55°db

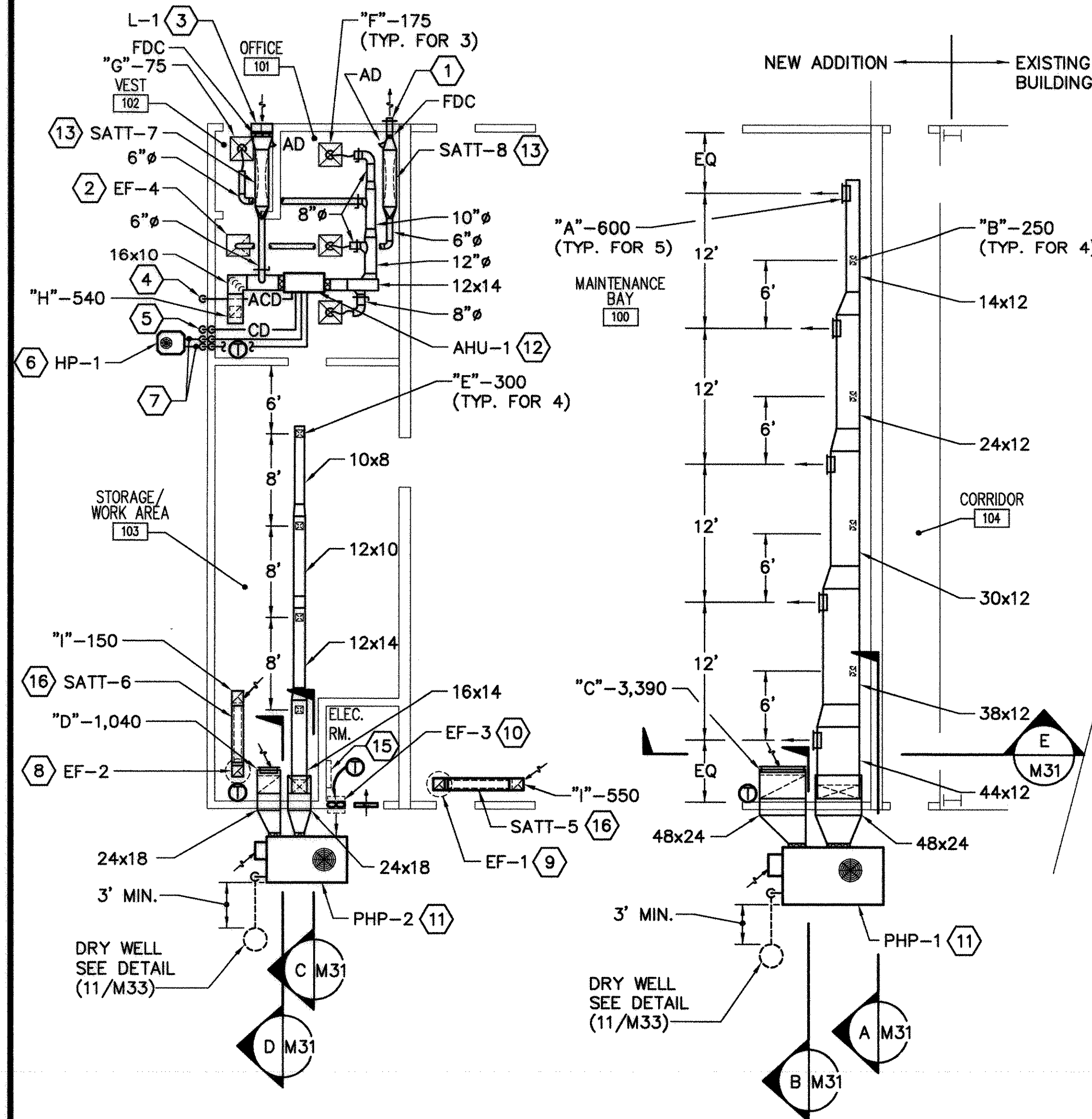
FAN SCHEDULE							
MARK	EF-1	EF-2	EF-3	EF-4			
FAN TYPE	CENTRIFUGAL ROOF EXHAUST	CENTRIFUGAL ROOF EXHAUST	SIDEWALL PROPELLER EXHAUST	CEILING EXHAUST			
AIR QUANTITY - CFM	550	150	400	55			
EXT. S.P. - IN. W.G.	0.375	0.375	0.15	0.375			
DRIVE	BELT	BELT	DIRECT	DIRECT			
SONES (MAXIMUM)	7.5	7.0	7.0	4.0			
MOTOR - HP	1/4	1/4	1/20	NOTE 1			
ELECTRICAL - V/ø/Hz	120/1/60	120/1/60	120/1/60	120/1/60			
NOTES	2	2	3	4			

NOTES:

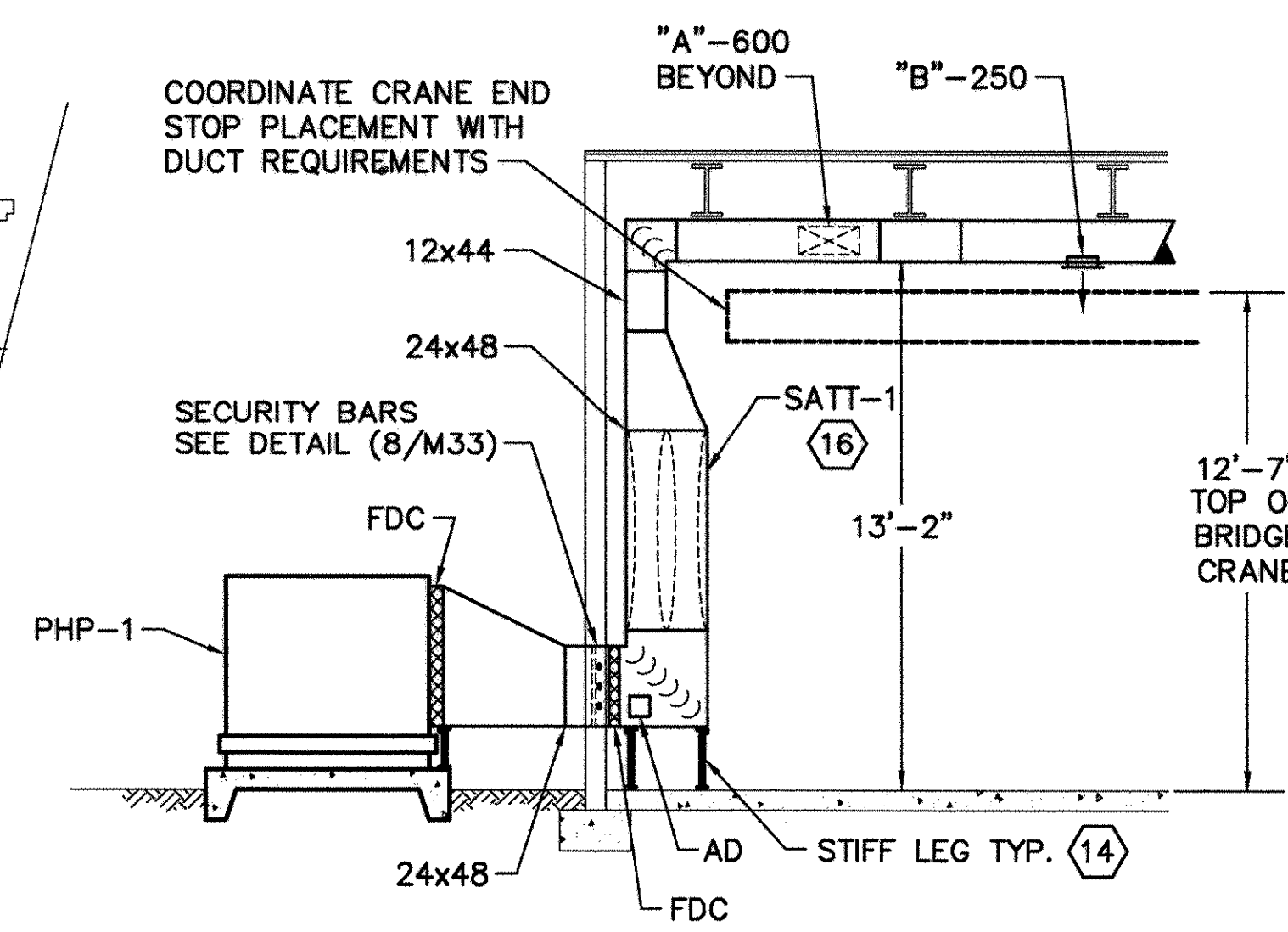
1. MOTOR RATED AT 75 WATTS.
2. PROVIDE WITH ADJUSTABLE SPEED DRIVES, INSULATED ROOF CURB, DISCONNECT, BIRD SCREEN AND BACKDRAFT DAMPER.
3. PROVIDE WITH WALL MOUNTING SLEEVE, OSHA APPROVED REAR GUARD AND DISCHARGE WALL SHUTTER. PROVIDE WALL SHUTTER WITH COLOR TO MATCH WALL COLOR.
4. PROVIDE WITH EXHAUST GRILLE, DISCONNECT, SOLID STATE SPEED CONTROL, AND BACKDRAFT DAMPER.

[illegible]

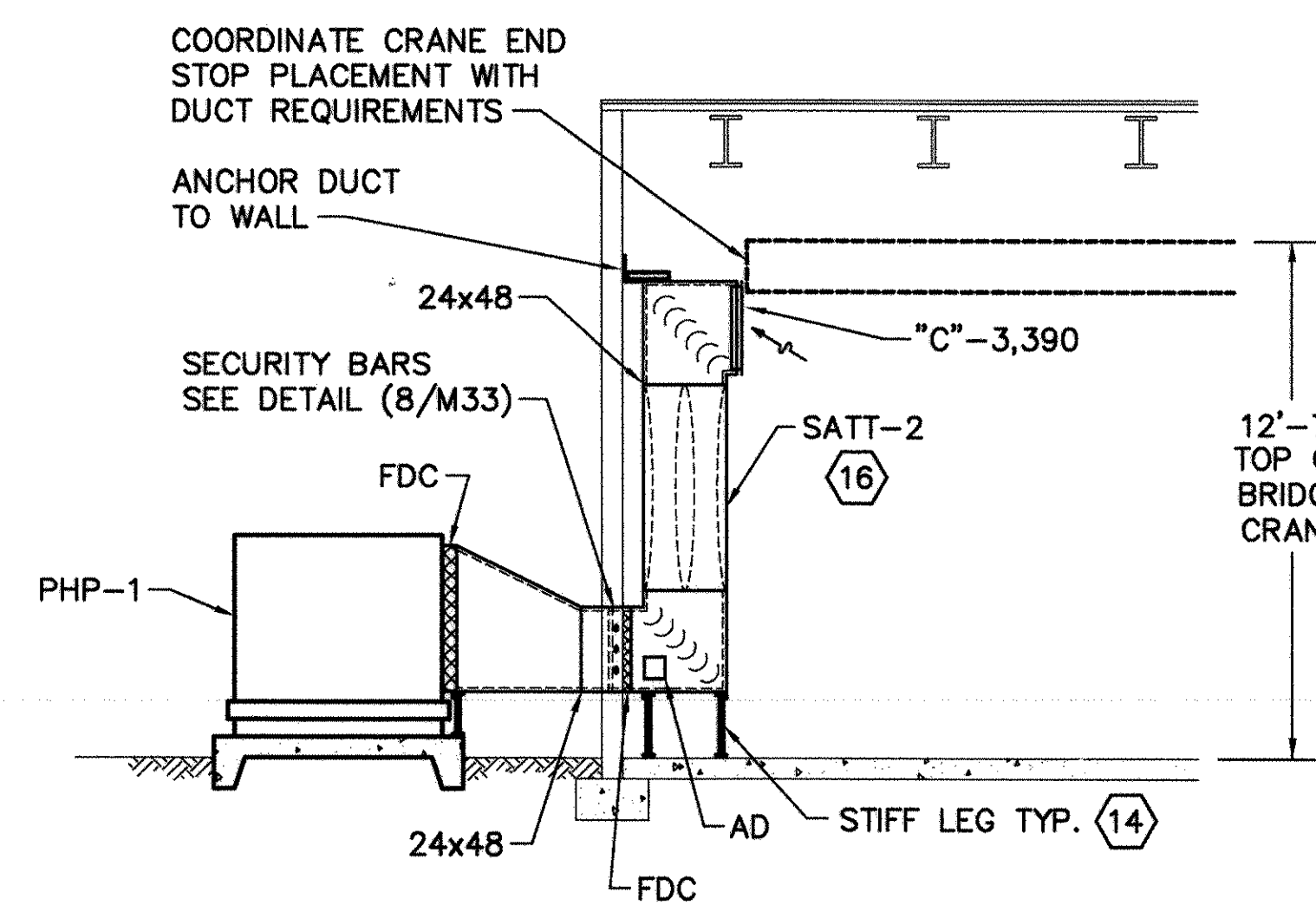
(1610, 1606, 1605) / 106-100 4



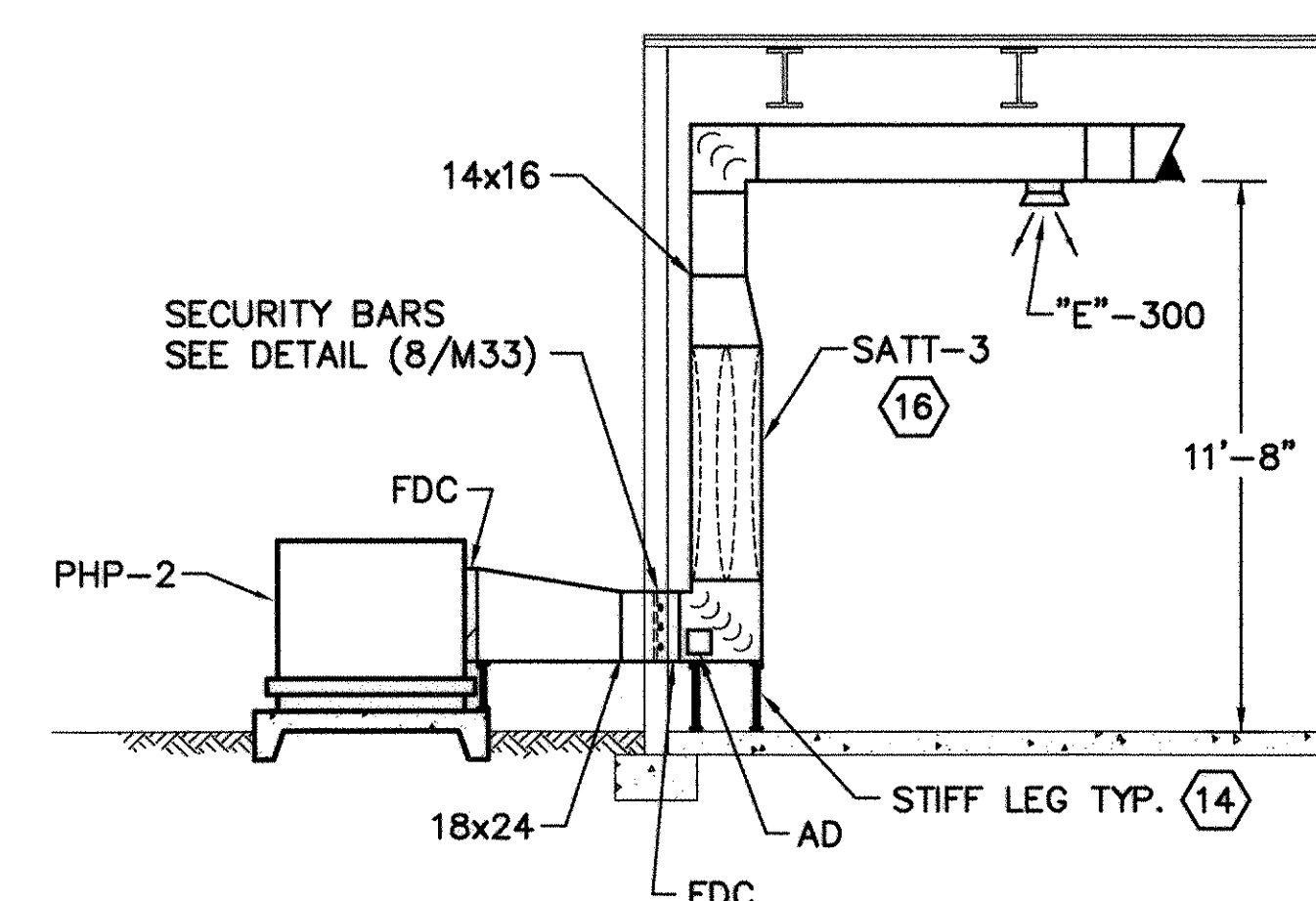
MECHANICAL PLAN - MAINT. BAY
SCALE: 1/8" = 1'-0" 



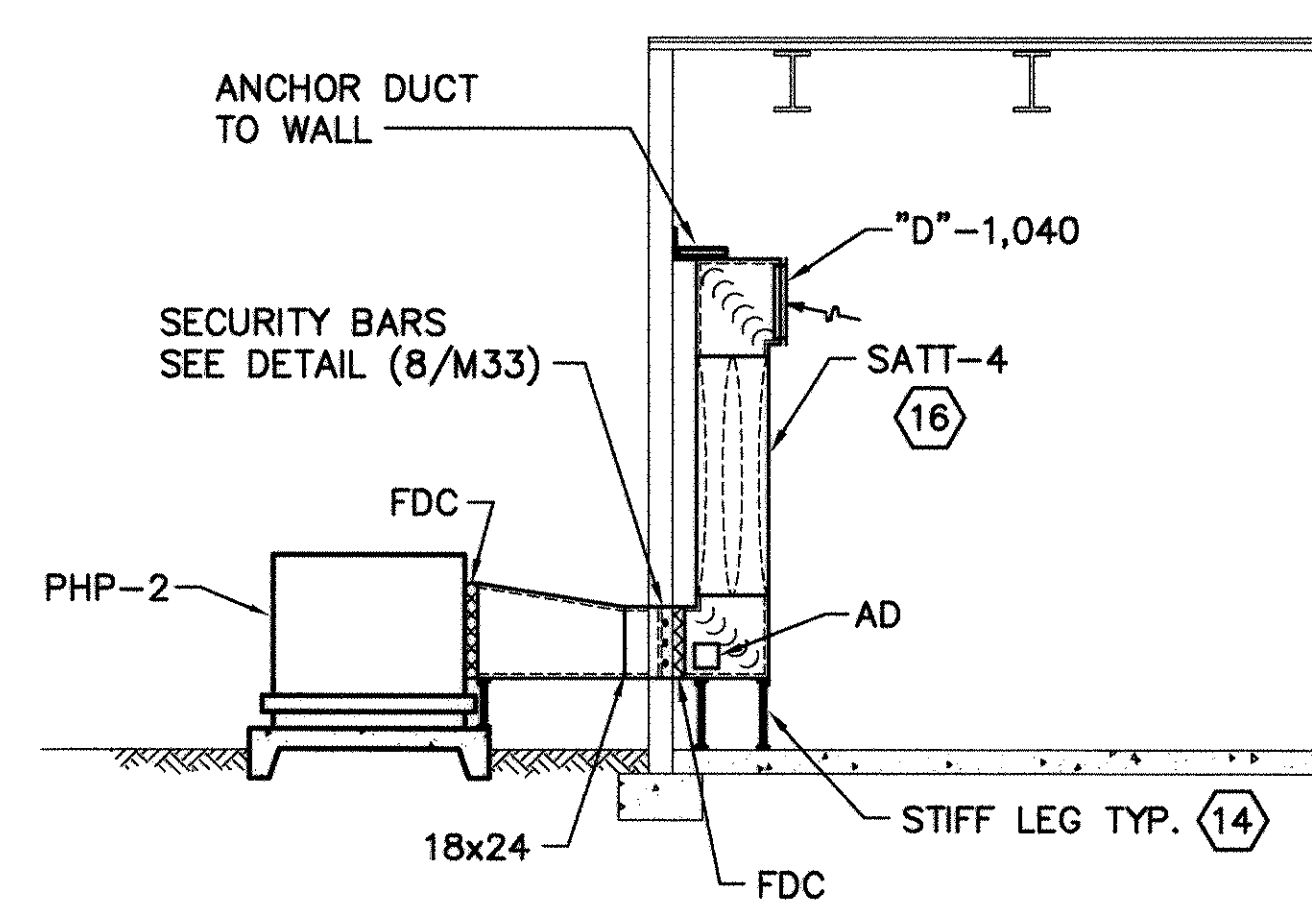
SECTION A
M31 SCALE: 1/4" = 1'-0"



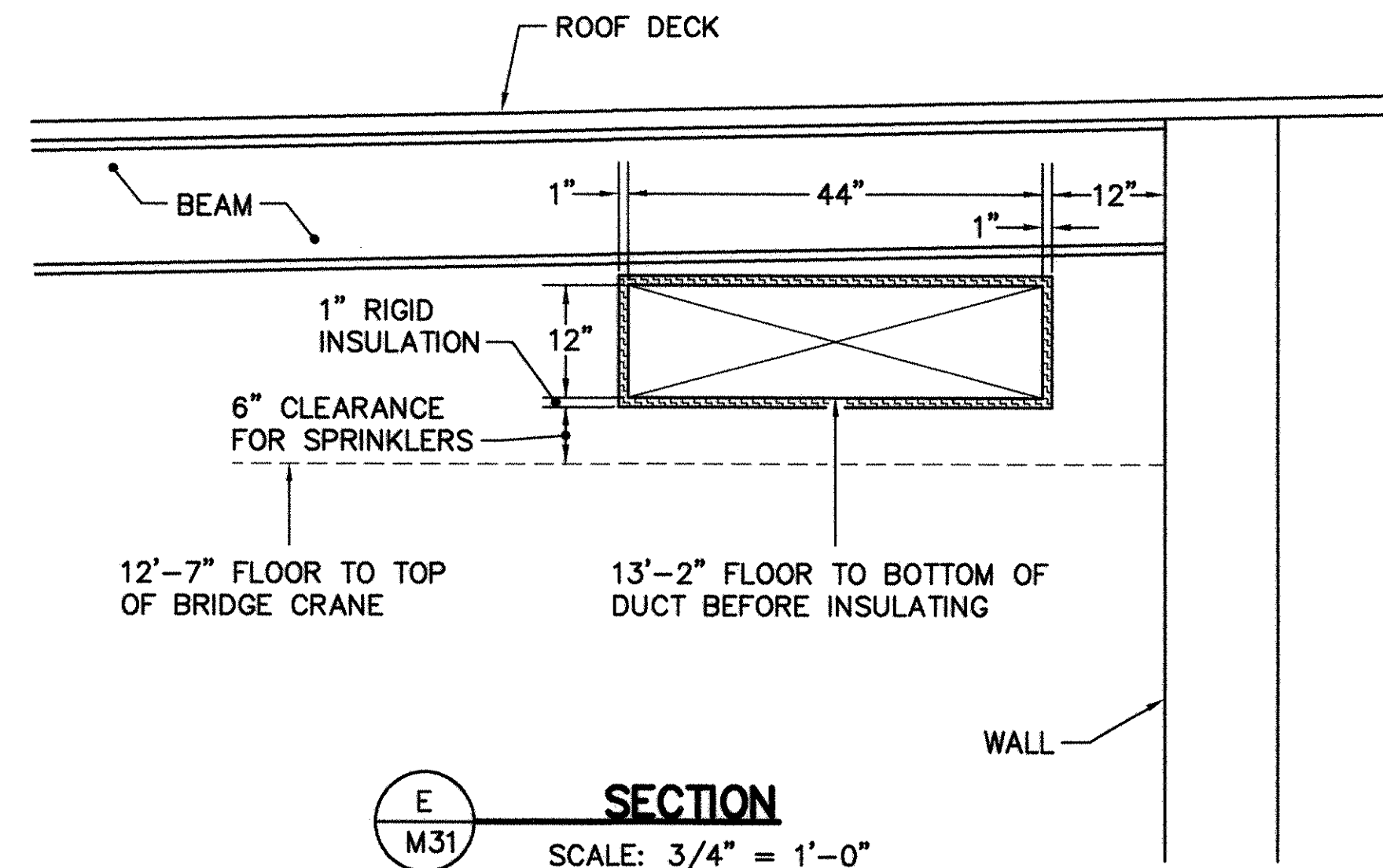
SECTION B
M31 SCALE: 1/4" = 1'-0"



SECTION C
M31 SCALE: 1/4" = 1'-0"

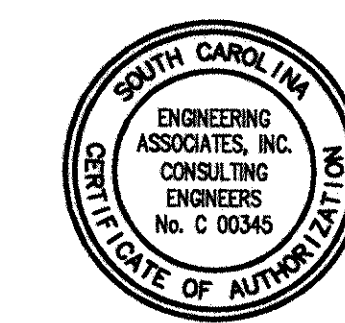
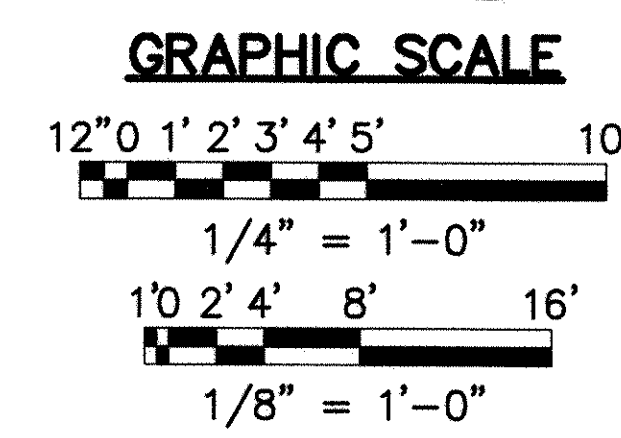


SECTION D
M31 SCALE: 1/4" = 1'-0"



SECTION E
M31 SCALE: 3/4" = 1'-0"

- KEYED NOTES**
- WEATHER PROOF HOODED WALL CAP WITH BIRDSCREEN. PAINT TO MATCH WALL PANEL COLOR. MOUNT 12"± A.F.F. AND CONNECT TO SATT-8. CONNECT SATT-8 TO 6" EXHAUST DUCT FROM EF-4. SEE NOTE 2. SEE NOTE 13.
 - CEILING EXHAUST FAN EF-4.
 - OUTSIDE AIR INTAKE LOUVER L-1. MOUNT 12"± A.F.F. AND CONNECT TO SATT-7. CONNECT SATT-7 TO 6" EXHAUST DUCT TO AHU-1. SEE NOTE 13.
 - EXTEND AUXILIARY DRAIN THROUGH WALL AND TURN DOWN WITH 90 DEGREE ELBOW. PAINT TO MATCH WALL COLOR.
 - TERMINATE CONDENSATE DRAIN WITH 90 DEGREE ELBOW TURNED DOWN 6" ABOVE A 12"x12"x2" THICK CONCRETE SPLASH BLOCK. SEE DETAIL (5/M32).
 - HP-1 MOUNT ON CONCRETE PAD. PAD TO BE 12" WIDER AND 12" LONGER THAN UNIT AND 4" THICK WITH 2"x2" WELDED WIRE FABRIC AT MID DEPTH. TOP OF PAD TO BE 2" ABOVE FINISHED GRADE.
 - EXTEND AND CONNECT REFRIGERANT LINES FROM HP-1 TO AHU-1.
 - 12"x12" EXHAUST DUCT DOWN FROM EF-2. SEE DETAIL (6/M33).
 - 12"x12" EXHAUST DUCT DOWN FROM EF-1. SEE DETAIL (6/M33).
 - SIDEWALL EXHAUST FAN EF-3, MOUNT 72"± A.F.F. SEE DETAIL (7/M33). SEE ARCHITECTURAL SHEETS FOR LOUVERED DOOR TO ELECTRICAL ROOM.
 - PACKAGED HEAT PUMP UNIT. MOUNT ON CONCRETE PAD, SEE DETAIL (9/M33). PROVIDE CONDENSATE DRAIN, SEE DETAIL (10/M33).
 - AHU-1 SUSPENDED ABOVE CEILING. SEE DETAIL (1/M32).
 - INSTALLATION OF SOUND ATTENUATOR AND CONNECTING DUCT WORK SHALL MEET STC-45 SOUND RATING. INSULATE EXTERIOR OF SOUND ATTENUATOR AND DUCTWORK BETWEEN SOUND ATTENUATOR AND WALL WITH 1" THICK RIGID INSULATION.
 - PROVIDE DUCT SUPPORT; A 2x2x1/4" STEEL ANGLE THE FULL WIDTH OF DUCT, WELDED TO TWO 2x2x1/4" STEEL ANGLE STIFF LEGS, WELDED TO 4x4x1/8" STEEL PLATE, ANCHORED TO CONCRETE.
 - BUILDING STAND ALONE CONTROLLER (BSAC) AND ACCESSORIES TO BE MOUNTED IN THIS AREA.
 - INSTALLATION OF SOUND ATTENUATOR AND CONNECTING DUCTWORK SHALL MEET STC-45 SOUND RATING.



GLICK BOEHM & ASSOCIATES, INC. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401	DESIGNER: CHAPMAN CHECKER: CHAPMAN DATE: 22 DEC 97	REV. DESCRIPTION 1. CONFORMED TO DRAWING 2. AS-BUILT, NO CORRECTIONS, MAY 22, 2001	PREP BY: DATE: APPROVED: OFFICE IN CHARGE: DATE: 8/1/01	NAV. FACILITIES ENGINEERING COMMAND SOUTHERN DIVISION CHARLESTON, S.C.	SHAW AIR FORCE BASE ADAL SQUAD OPS/IGLOO/MAINT. BAY MECHANICAL PLAN - MAINT. BAY	RECORD DRAWING DATE: 7/30/01 CODE I.D. NO.: DRAWING SIZE: 0 SPEC. NO.: 06-97-0942 CONSTR. CONTR. NO.: N62467-97-C-0942 NAVFAC DRAWING NO.: 5348803 SHEET 135 OF 152	THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY GLENN W. CHAPMAN SEAL #17721, ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.	M31
--	---	---	--	---	---	--	---	------------

140, 160, 165, 106

1/2" ALL THREAD HANGING RODS WITH RUBBER-N-SHEAR VIBRATION ISOLATORS. SUPPORT FROM STRUCTURE ABOVE. SEE NOTE 1. (TYPICAL OF 4)

OUTSIDE AIR DUCT WITH VOLUME DAMPER
RETURN AIR DUCT

SMOKE DETECTOR. SEE NOTE 2.

1" AUXILIARY DRAIN LINE. REFER TO DETAIL (3/M32).

1" CONDENSATE DRAIN LINE WITH TRAP. REFER TO DETAIL (4/M32).

2"x 2"x 1/4" ANGLE

RUBBER EMBOSSED VIBRATION ISOLATOR PAD (TYPICAL).

REFRIGERANT LINES TO OUTDOOR UNIT, CONCEALED WHERE POSSIBLE.

FLEX DUCT CONNECTOR (TYP.)

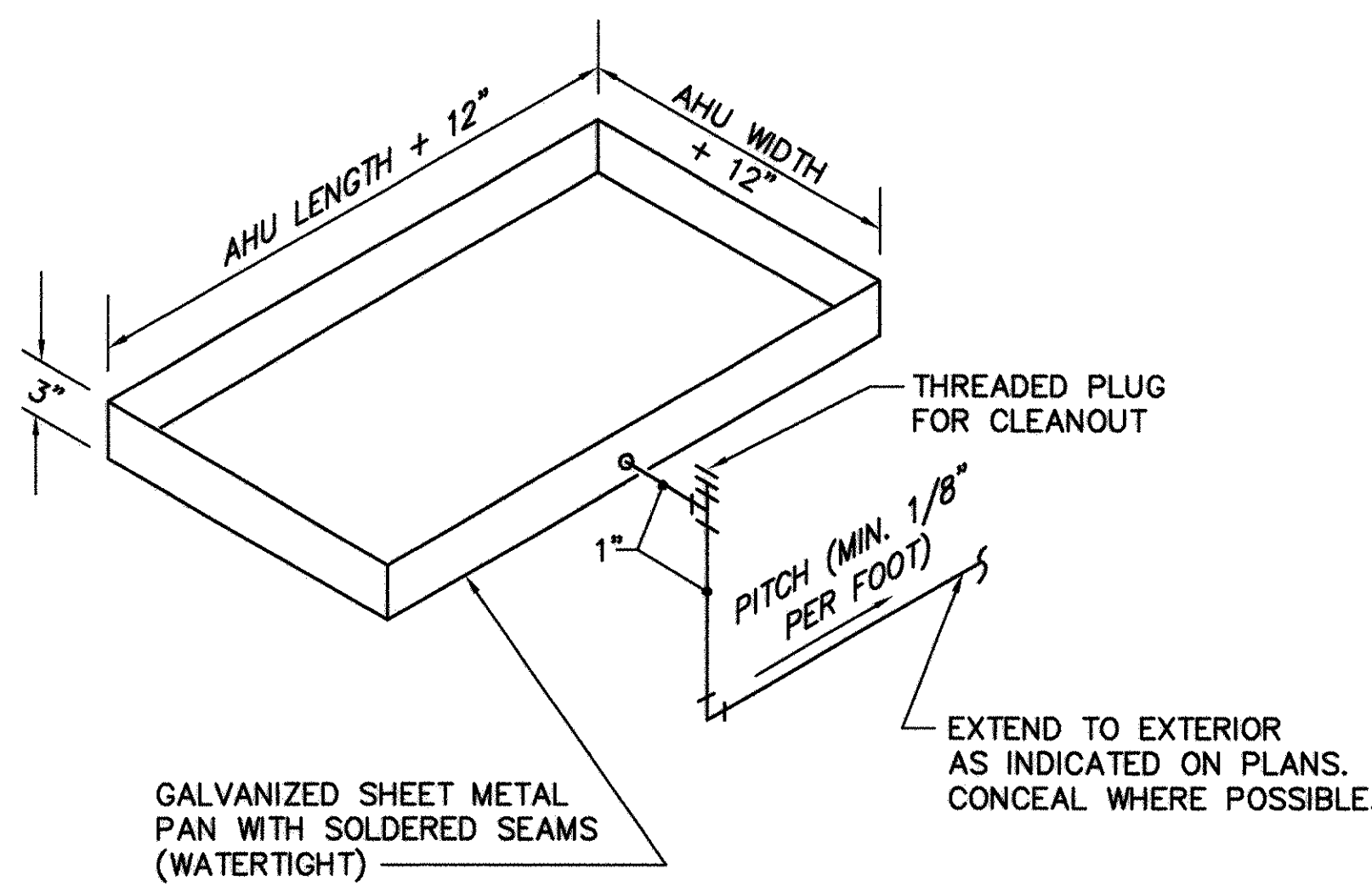
SUPPLY DUCT

AHU

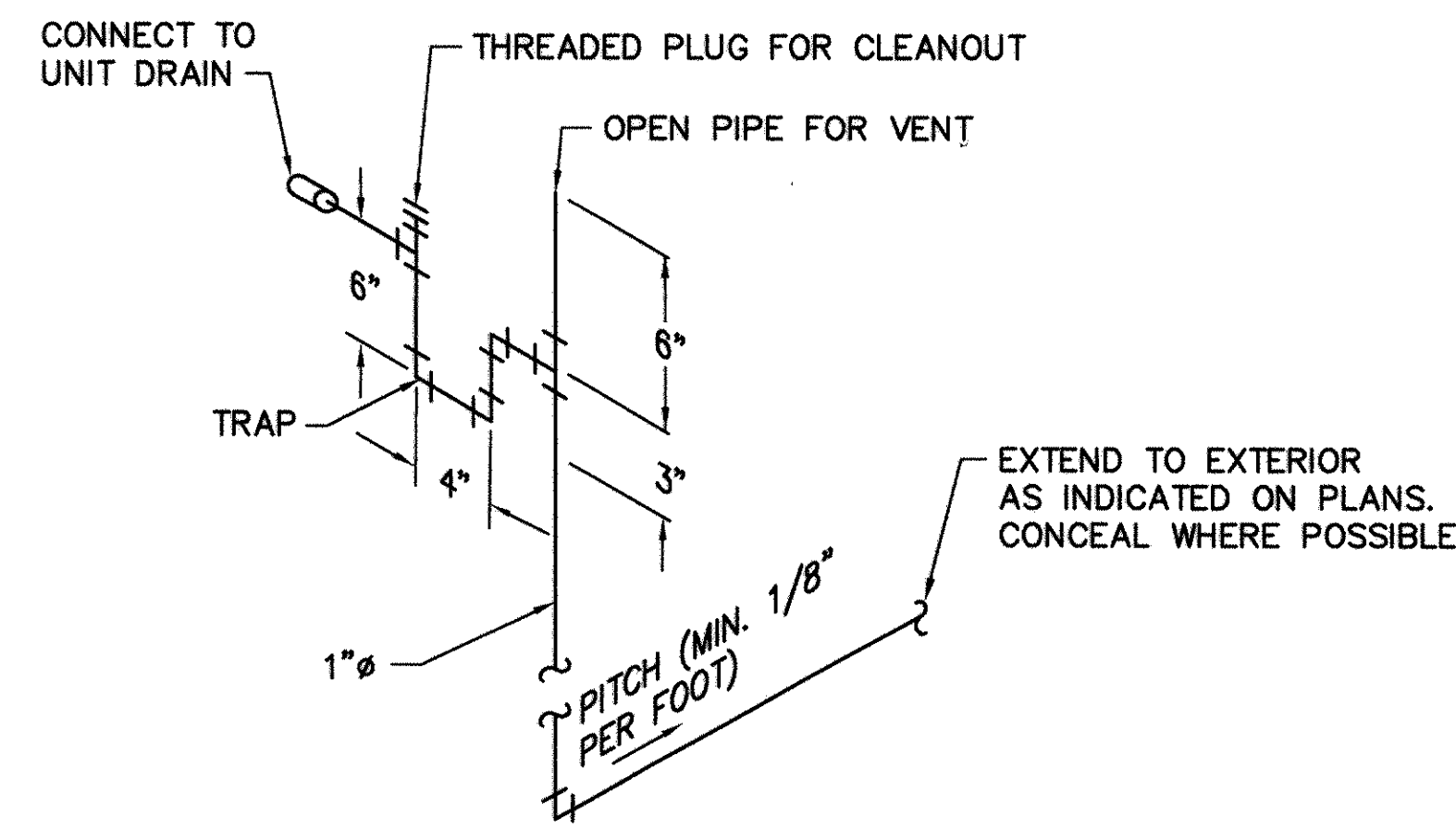
AUXILIARY DRAIN PAN. REFER TO DETAIL (3/M32).

- NOTES:
1. PROVIDE SEISMIC RESTRAINTS, REFER TO DETAIL (2/M32).
 2. PROVIDE SMOKE DETECTOR IN RETURN DUCT AND CONNECT TO AIR HANDLER CONTROLS SUCH THAT UPON DETECTION OF SMOKE, THE FAN, COMPRESSOR, AND ELECTRIC RESISTANCE HEATER SHALL SHUT DOWN. THE SMOKE DETECTOR SHALL BE FURNISHED UNDER SECTION 13852; AND INSTALLED UNDER SECTION 15910.

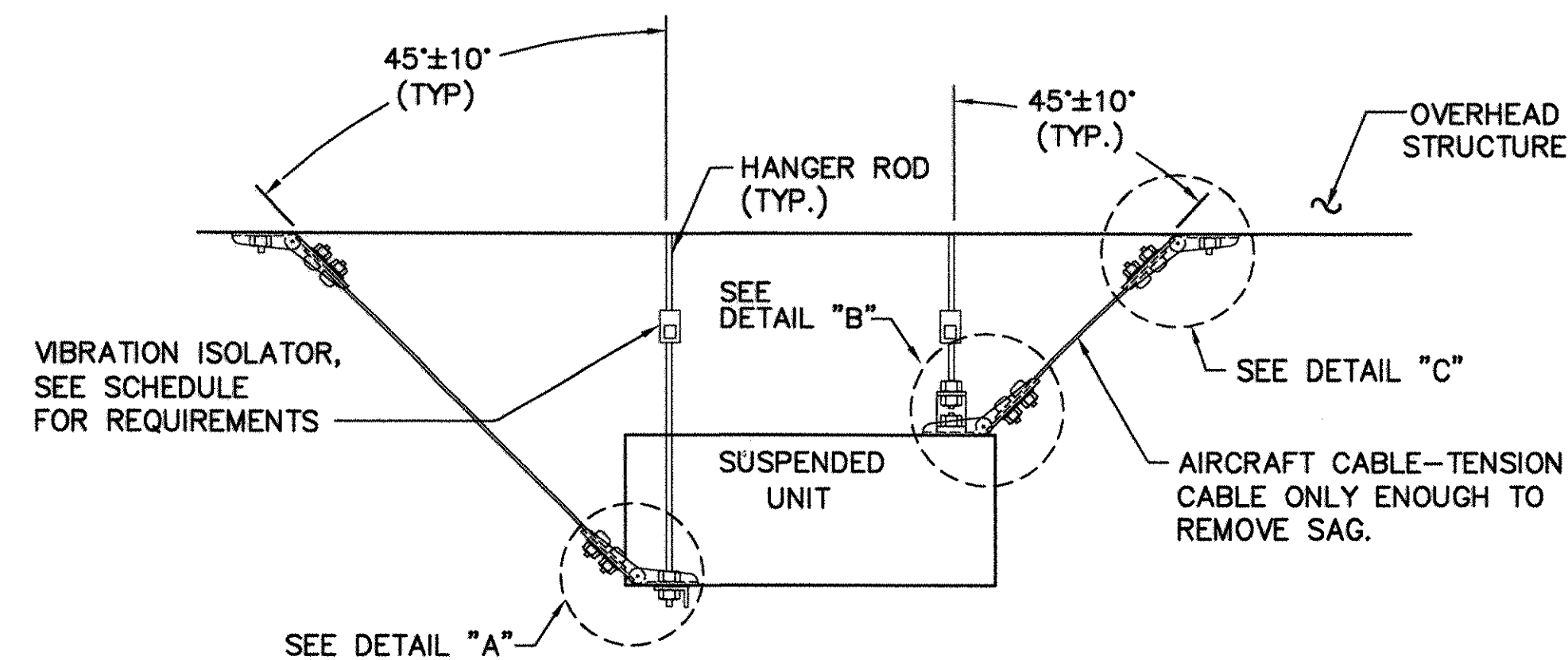
1 **AIR HANDLING UNIT SUSPENDED HORIZONTAL INSTALLATION**
SCALE: NONE



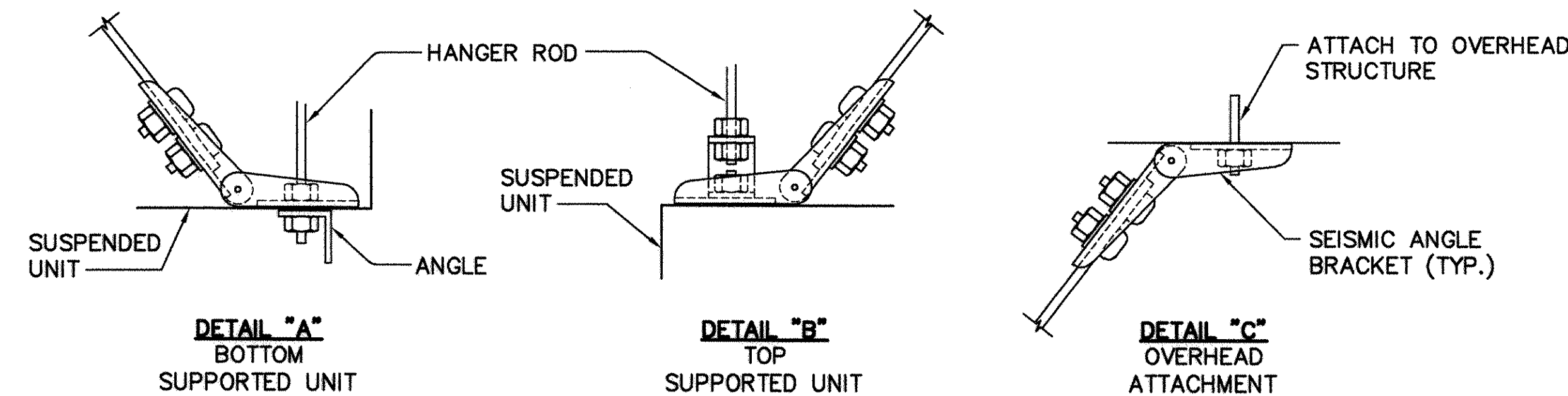
3 **AUXILIARY DRAIN PAN DETAIL**
SCALE: NONE
* M31, M32



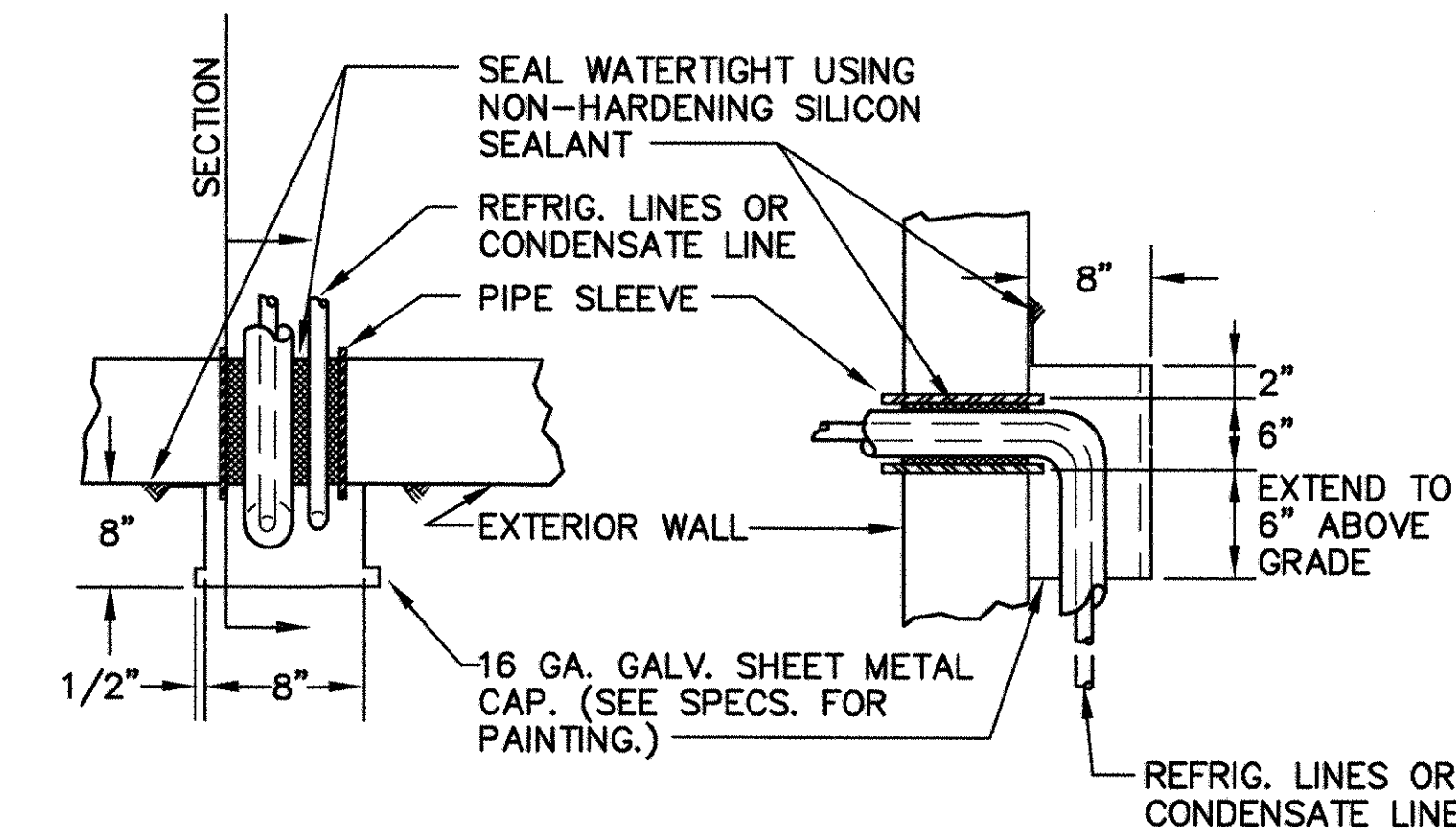
4 **CONDENSATE DRAIN DETAIL**
SCALE: NONE
* M31, M32



ELEVATION OF SUSPENDED UNIT

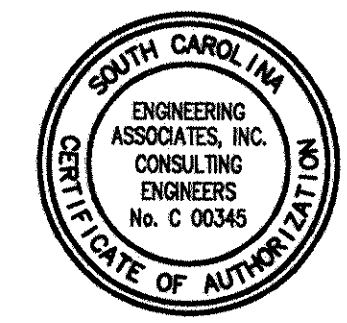


2 **SUSPENDED UNIT SEISMIC RESTRAINT DETAIL**
SCALE: NONE
* M31, M32



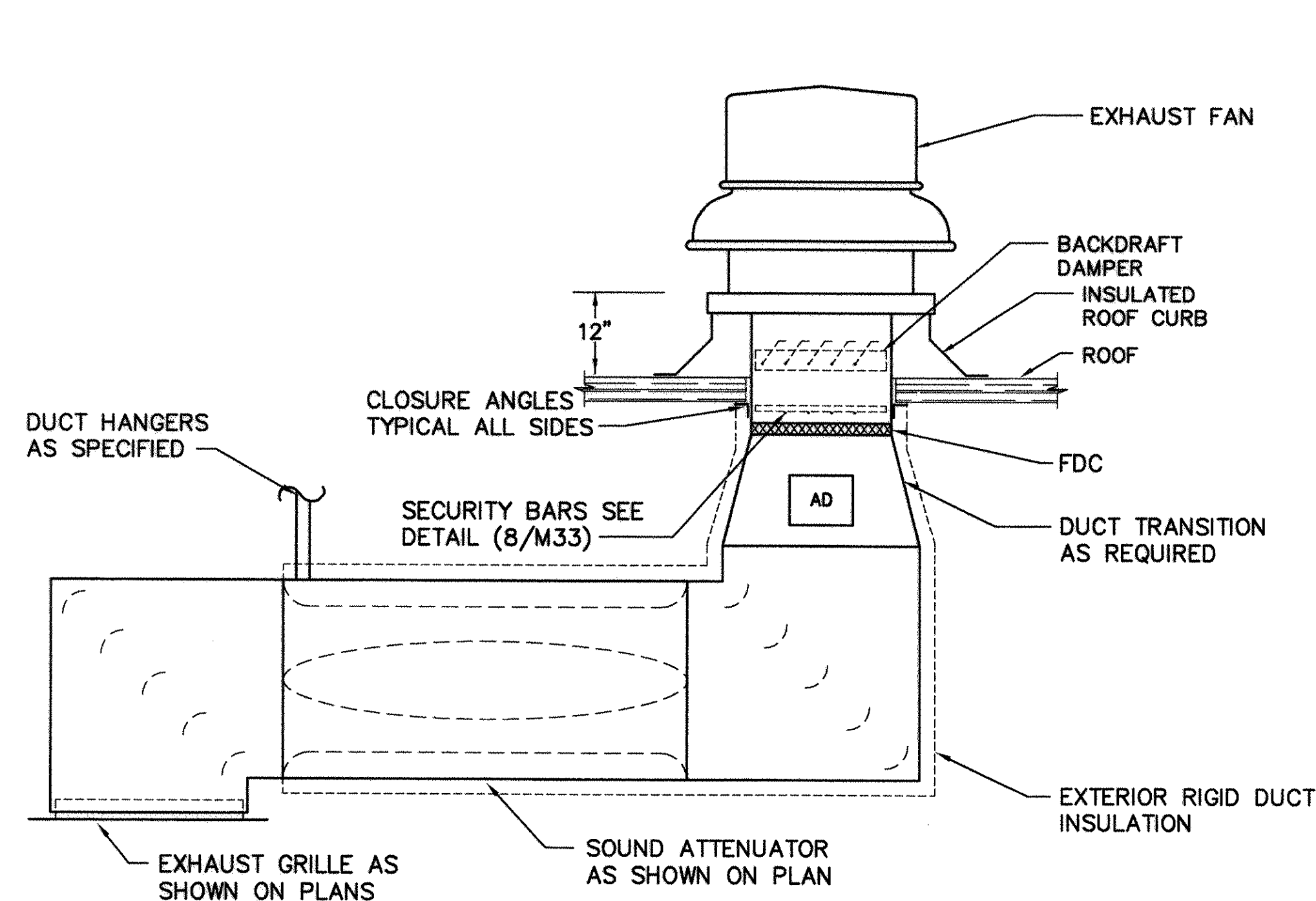
- NOTE:
1. FIELD PAINT ALL METAL SURFACES WITH A MINIMUM OF 1 COAT OF RUST INHIBITING PRIMER AND 2 COATS OF RUST INHIBITING TOP COAT. PAINT TO MATCH WALL PANEL COLOR.

5 **PIPE THROUGH EXTERIOR WALL DETAIL**
SCALE: NONE
M31

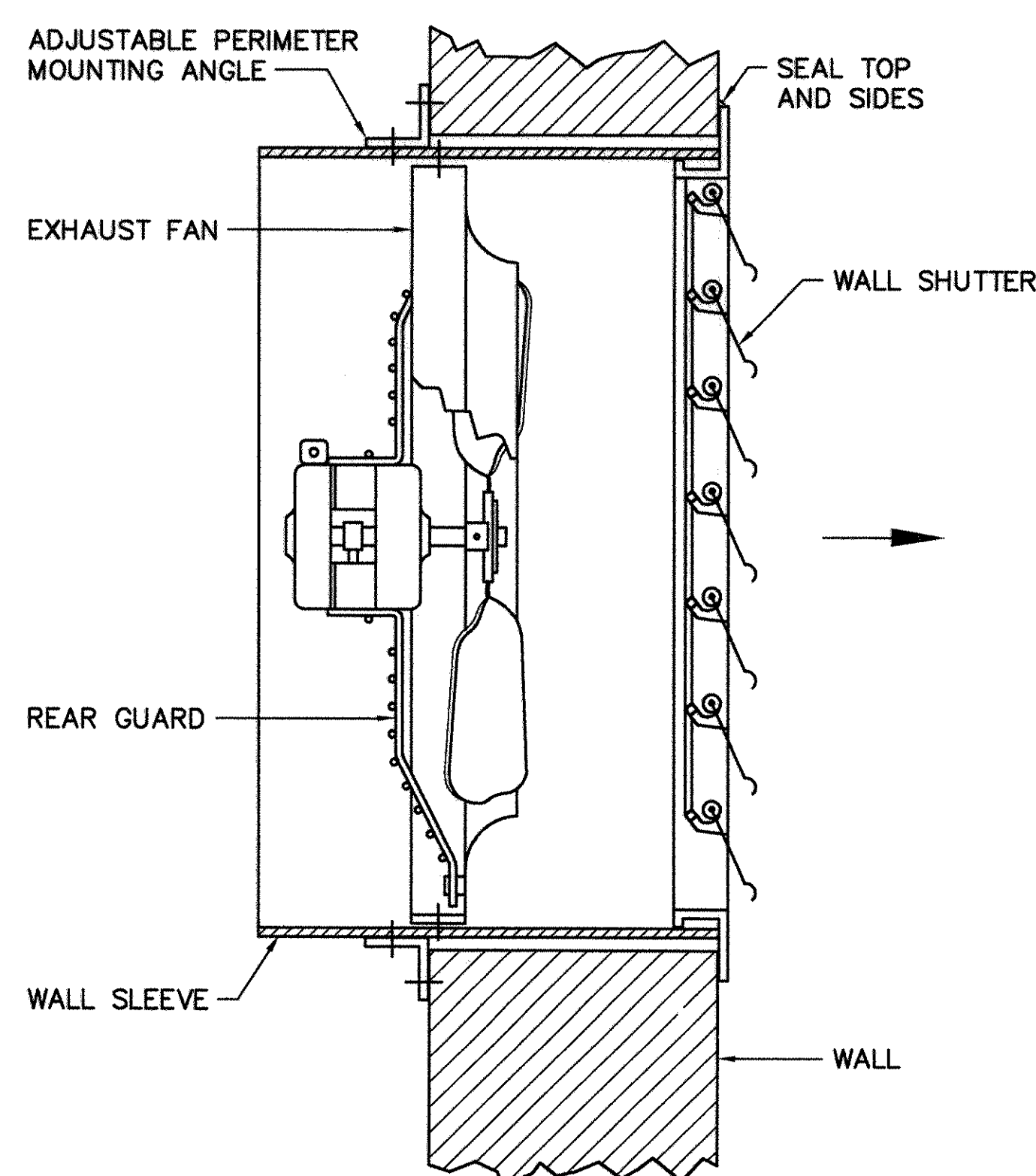


CLICK BOEHM & ASSOCIATES, INC. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 DESIGNED BY: CHAPMAN CHECKED BY: CHAPMAN SUPERVISOR: WILLIAMSON DATE: 22 DEC 97 PRINCIPAL: 22 DEC 97	REV. DESCRIPTION 1 CONFORMED BID DRAWING 2 AS-BUILT, NO CORRECTIONS, MAY 22, 2001	PREP BY: DATE: APPROVED: DATE: OFFICER IN CHARGE: DATE: TYPE: DSC
SOUTHERN DIVISION SUMMER SOUTH CAROLINA CHARLESTON, S.C.	SHAW AIR FORCE BASE ADAL SQUAD OPS/IGLOO/MAINT. BAY MECHANICAL DETAILS - MAINT. BAY	APPROVED: DATE: NAVFAC DRAWING NO. 5348804 SHEET 136 OF 152 M32

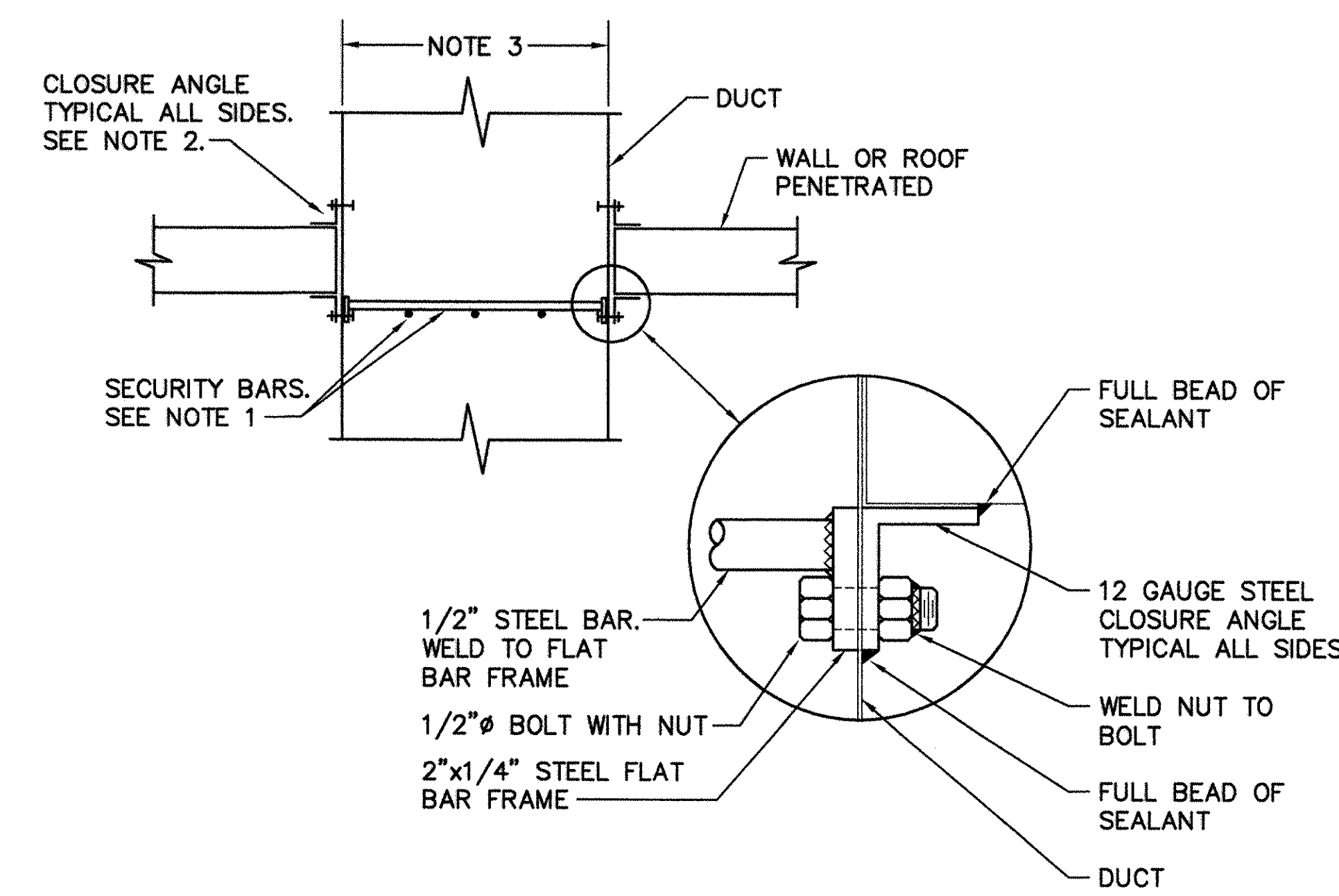
(1610, 1606, 1605) / 106-002



6 **ROOF MOUNTED EXHAUST FAN DETAIL**
M31 SCALE: NONE

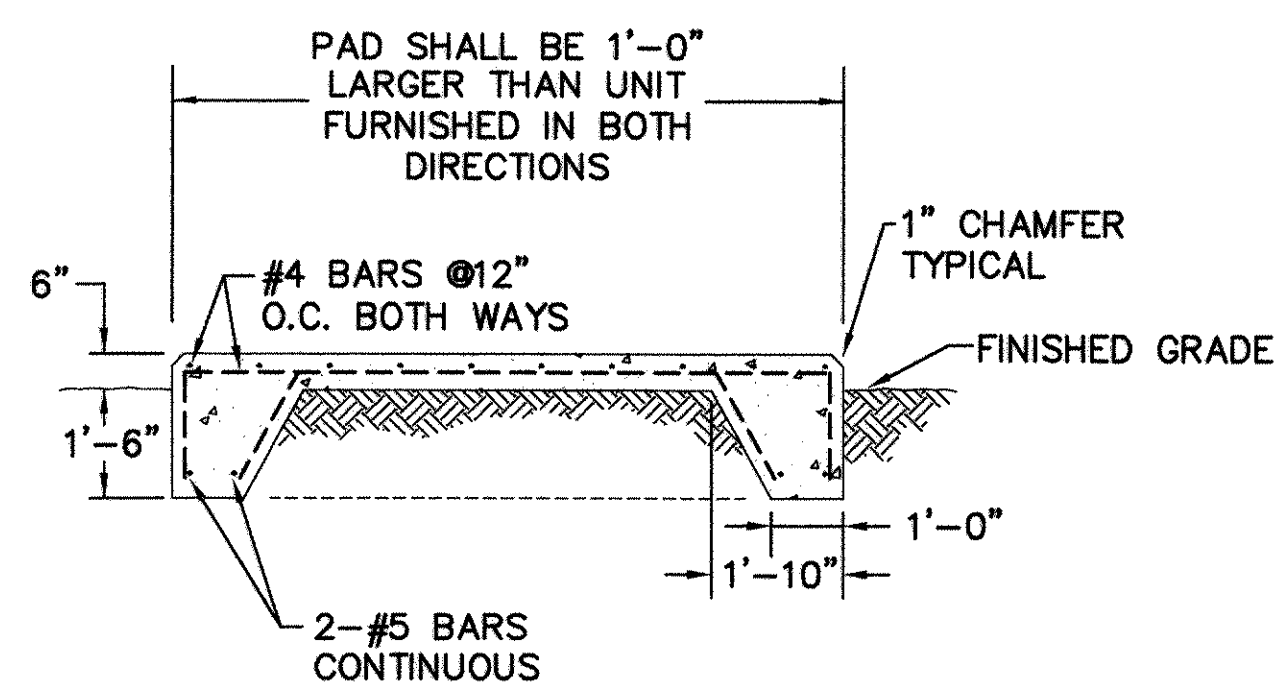


7 **WALL EXHAUST FAN MOUNTING DETAIL**
M31 SCALE: NONE



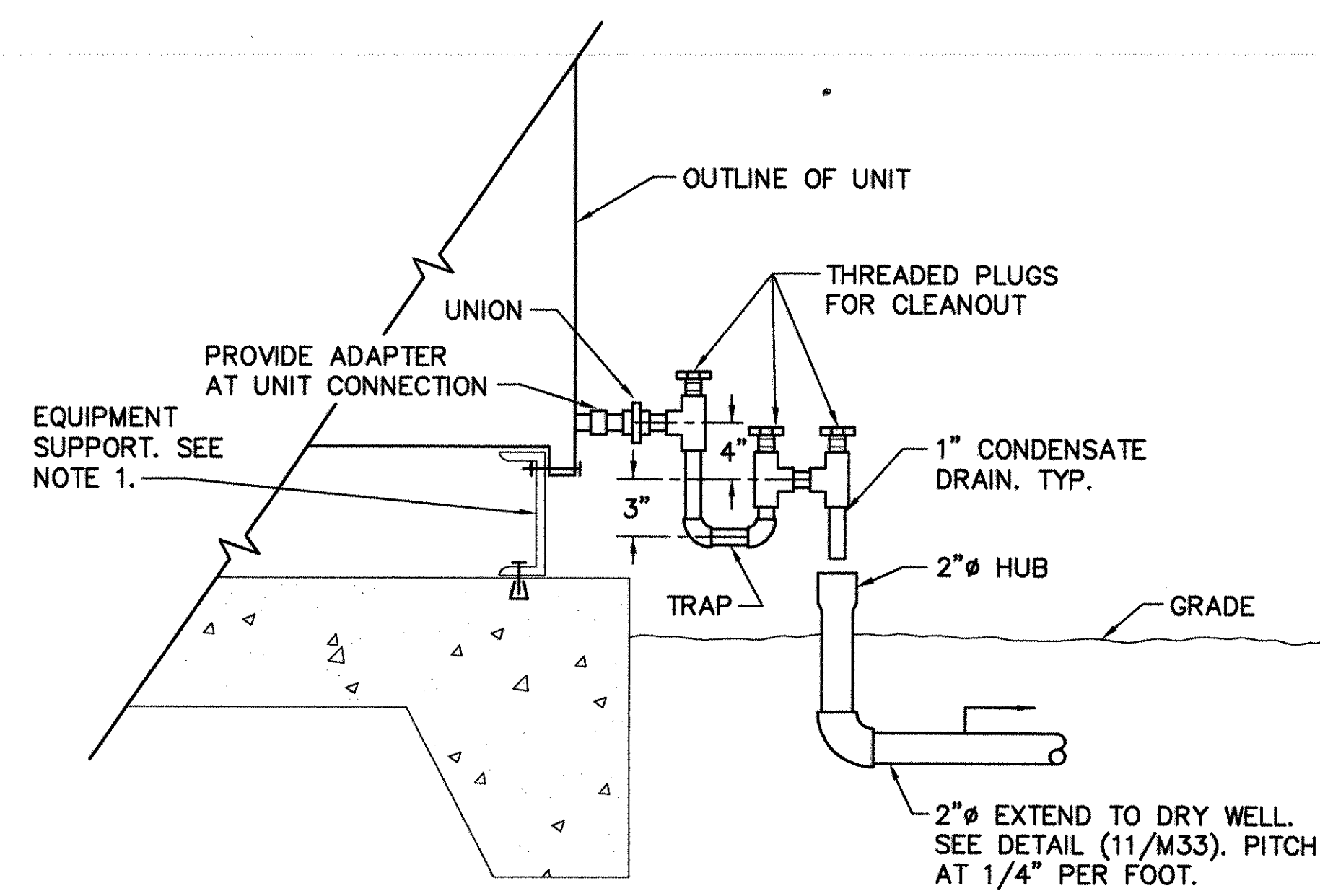
- NOTES:
- 1/2" STEEL BARS 6" O.C. HORIZONTALLY AND VERTICALLY AND WELDED TO A FOUR SIDED 2"x1/4" STEEL FLAT BAR FRAME. THROUGH BOLT FRAME, DUCT AND CLOSURE ANGLES 6" ON CENTER, MINIMUM OF THREE PER SIDE. WELD HORIZONTAL BARS TO VERTICAL BARS WHERE THEY CROSS.
 - 12 GAUGE STEEL CLOSURE ANGLES. FASTEN ANGLES TO DUCT WITH 1/2" BOLTS AND NUTS, 6" ON CENTER, MINIMUM OF THREE PER SIDE, WELD NUTS TO BOLTS. CLOSURE ANGLES SHALL OVERLAP PENETRATED WALL OR ROOF A MINIMUM OF 2". PROVIDE SEALANT BETWEEN CLOSURE ANGLES, WALL OR ROOF, AND DUCT.
 - SEE PLAN FOR DUCT DIMENSIONS.
 - ALL WELDS SHALL BE CONTINUOUS 3/16" FILLET.

8 **SECURITY BARS INSTALLATION DETAIL**
* M31, M33 SCALE: NONE



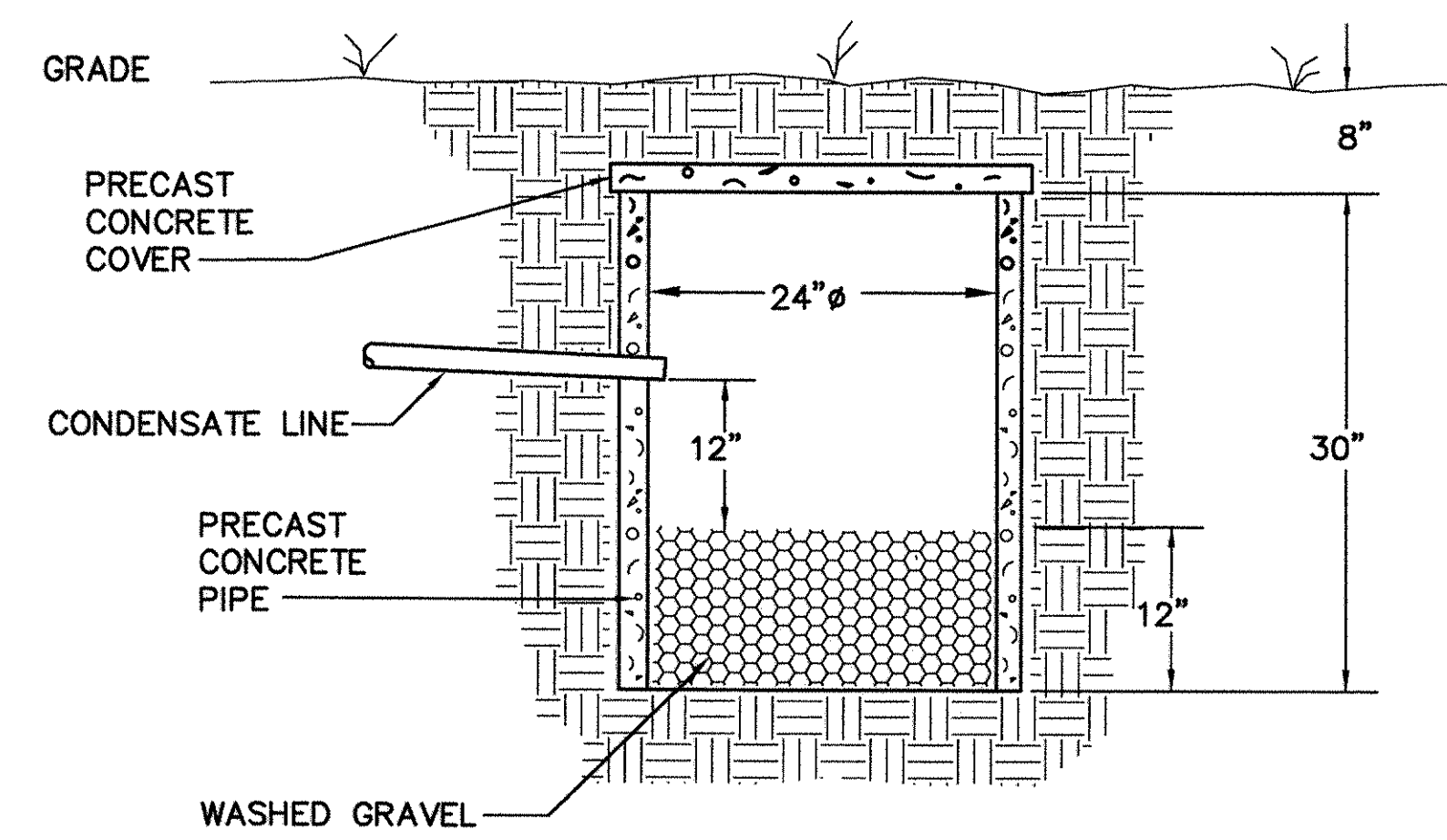
- NOTES:
- CONCRETE SHALL BE 3000 PSI AT 28 DAYS.
 - ALL WORK SHALL CONFORM TO DIVISION 03 "CONCRETE".
 - WHERE EDGE OF PAD IS LOCATED ADJACENT TO ANOTHER STRUCTURE, PROVIDE 1" THICK PREMOLDED EXPANSION JOINT FILLER BETWEEN THE PAD AND OTHER STRUCTURE.

9 **CONCRETE EQUIPMENT PAD DETAIL**
M31 SCALE: NONE



- NOTE:
- PROVIDE A WELDED STEEL CHANNEL EQUIPMENT SUPPORT. FASTEN UNIT TO SUPPORT AND SUPPORT TO CONCRETE PAD. HEIGHT OF SUPPORT SHALL BE AS REQUIRED FOR TRAP INSTALLATION; 6" MINIMUM.

10 **PACKAGED UNIT CONDENSATE DRAIN DETAIL**
M31 SCALE: NONE

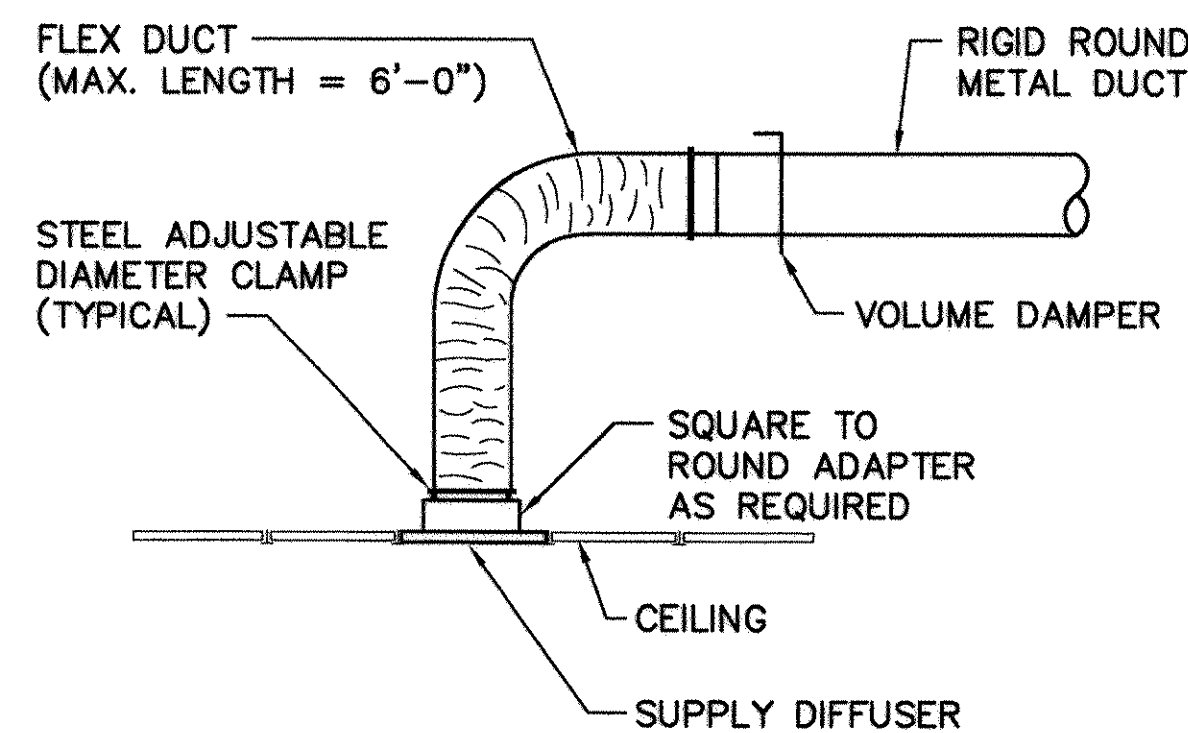


11 **DRYWELL DETAIL**
* M31, M33 SCALE: NONE



QUICK/BOEHM & ASSOCIATES. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 DESIGNED BY: CHAPMAN DRAWN BY: WILLIAMSON CHECKED BY: CHAPMAN DATE: 22 DEC 97		REV.	DESCRIPTION	DATE	APPROVED
CONFORMED BID DRAWING AS-BUILT, NO CORRECTIONS, MAY 22, 2001		1			
SOUTHERN DIVISION CHARLESTON, S.C. SUMMER, SOUTH CAROLINA ADAL SQUAD OPS/IGLOO/MAINT. BAY MECHANICAL DETAILS - MAINT. BAY		2			
DEPARTMENT OF THE NAVY SHAW AIR FORCE BASE ADAL SQUAD OPS/IGLOO/MAINT. BAY		3			
SEAL AREA THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY GLENN W. CHAPMAN SEAL #1721, ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.		4			
RECORD DRAWING DATE 11/30/01 CODE I.D. NO. DRAWING SIZE: 11x17 SPEC. NO. 06-97-0942 CONSTR. CONTR. NO. N62467-97-C-0942 NAVFAC DRAWING NO. 5348805 SHEET 137 OF 152		5			
M33		6			

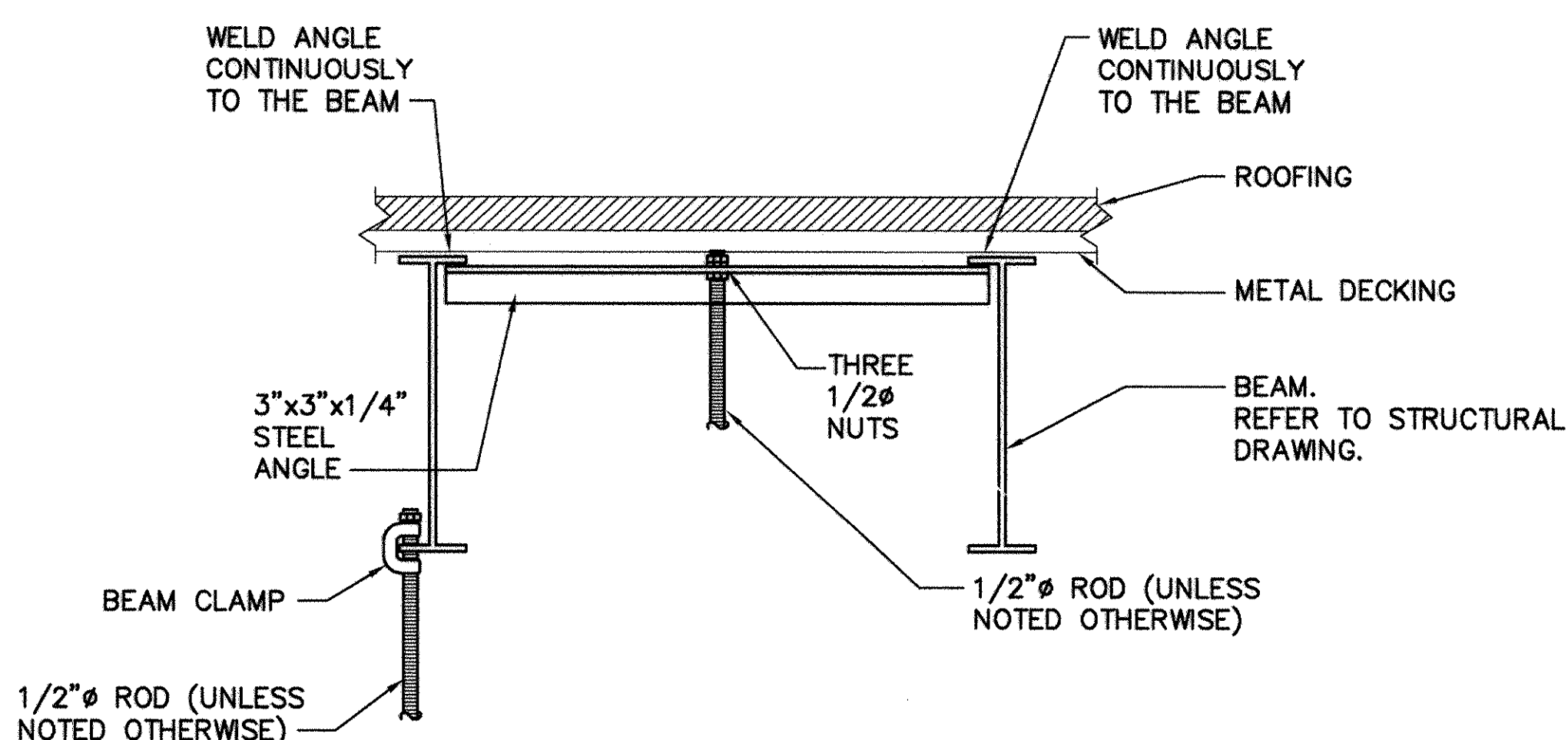
1610, 1606, 1605/106-100



- NOTES:
1. FLEXIBLE DUCT SHALL NOT BE USED FOR OFFSETS OR ELBOWS EXCEPT FOR FINAL TURN DOWN TO DIFFUSER NECK.
 2. FLEX DUCT SHALL ONLY BE USED AT CONNECTION TO SUPPLY DIFFUSERS. RETURN, OUTSIDE AIR, AND EXHAUST GRILLES SHALL BE CONNECTED BY RIGID DUCT.

TYPICAL DIFFUSER CONNECTION DETAIL

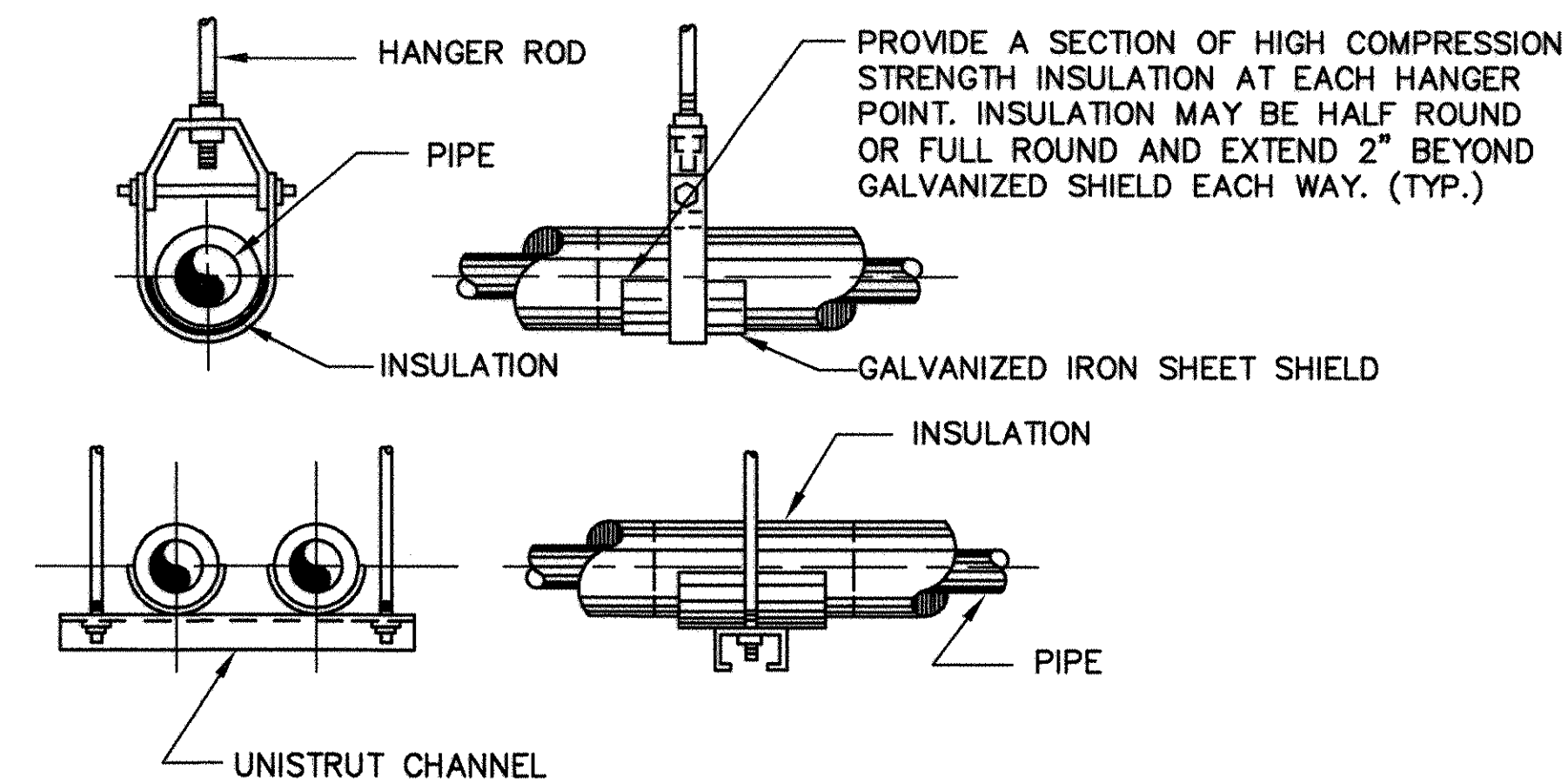
SCALE: NONE



STEEL BEAM CONSTRUCTION

TYPICAL SUPPORT METHODS

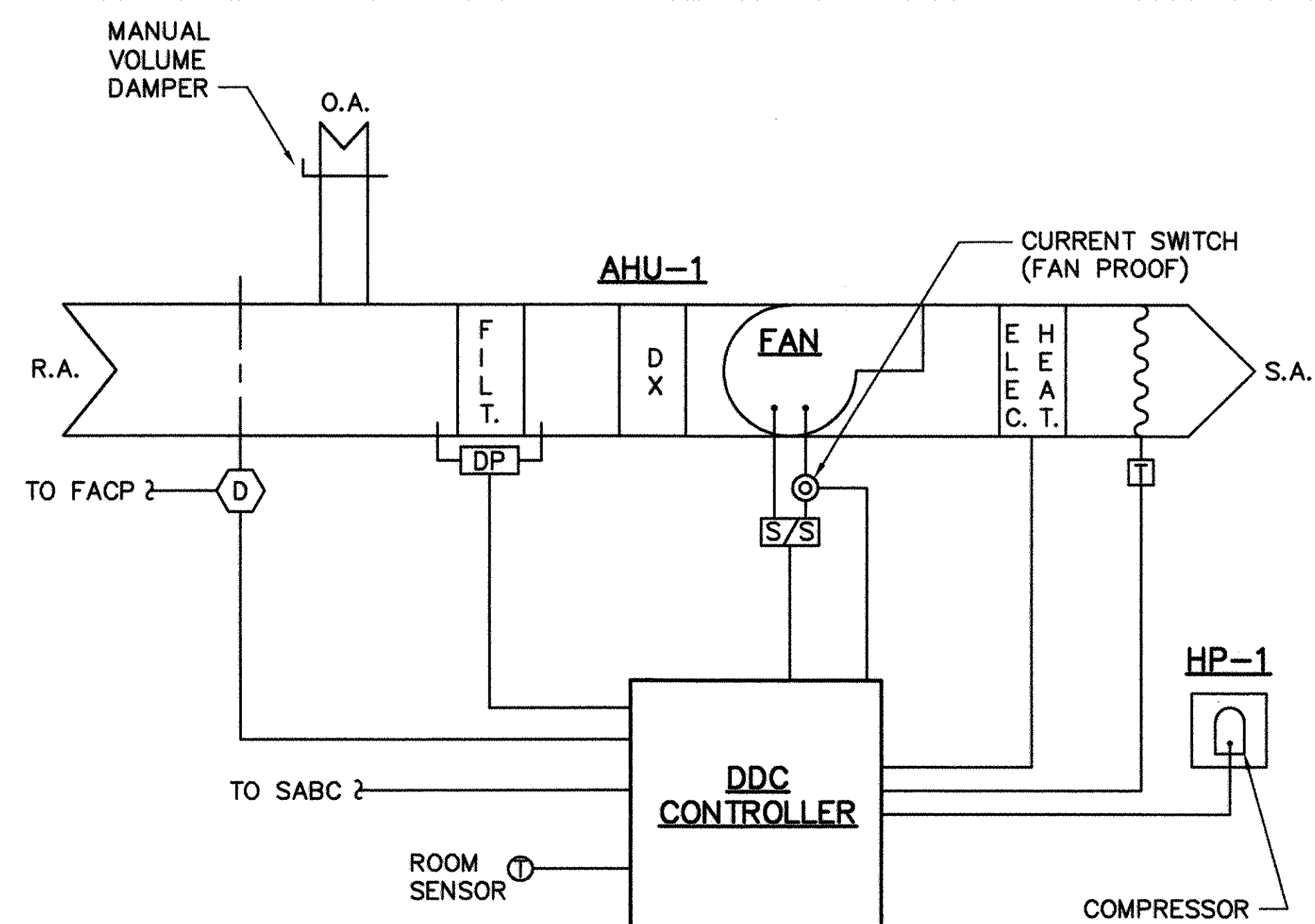
SCALE: NONE



- NOTE:
1. HANGERS FOR NON INSULATED PIPING TO BE SIMILAR.

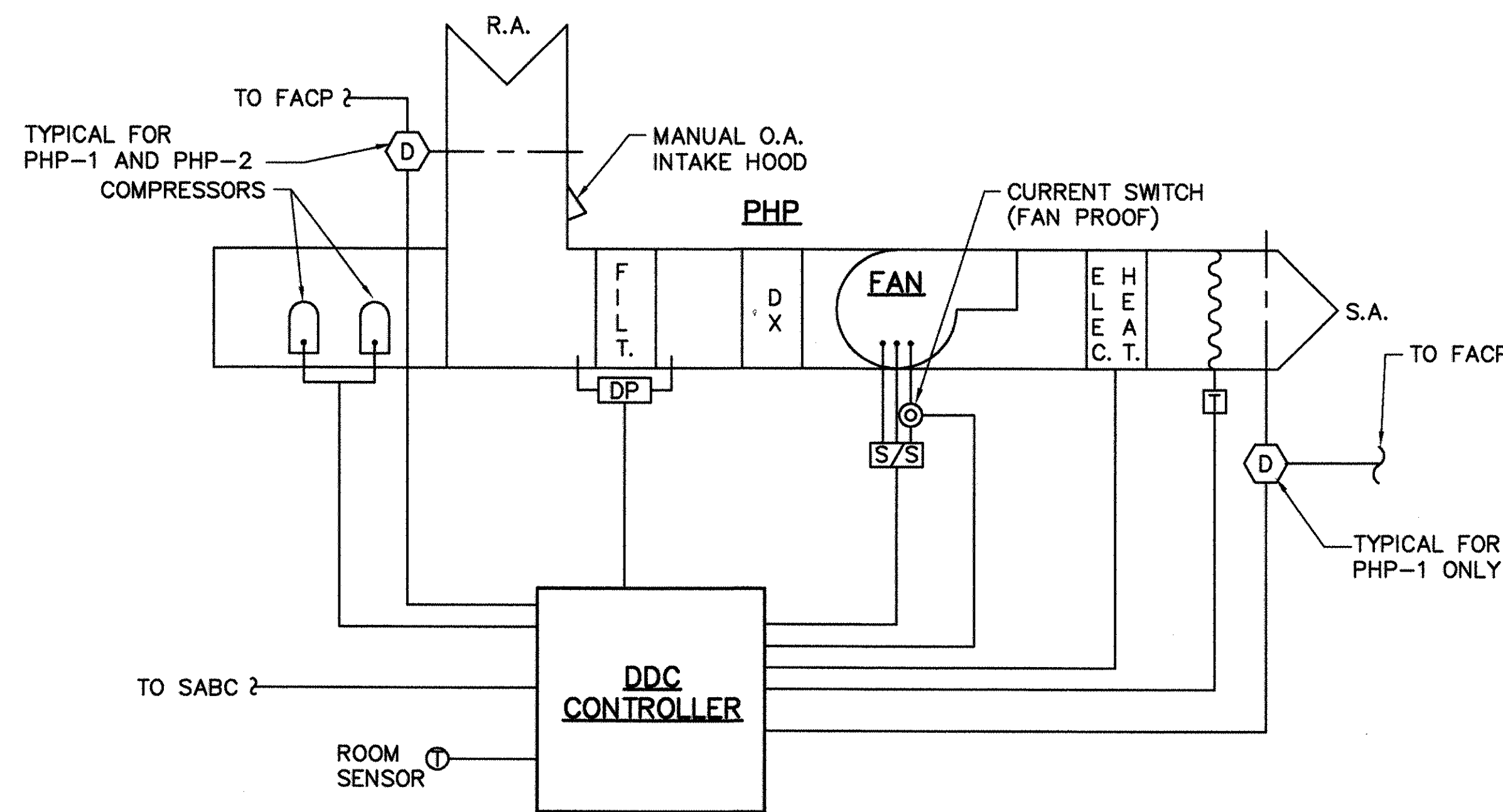
TYPICAL PIPING HANGERS

SCALE: NONE



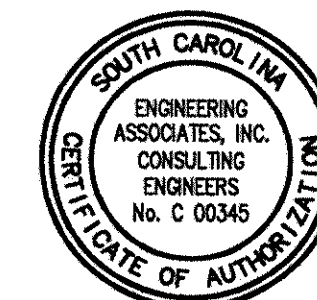
SPLIT SYSTEM HEAT PUMP CONTROL DIAGRAM

(TYPICAL FOR AHU-1 AND HP-1)
SCALE: NONE



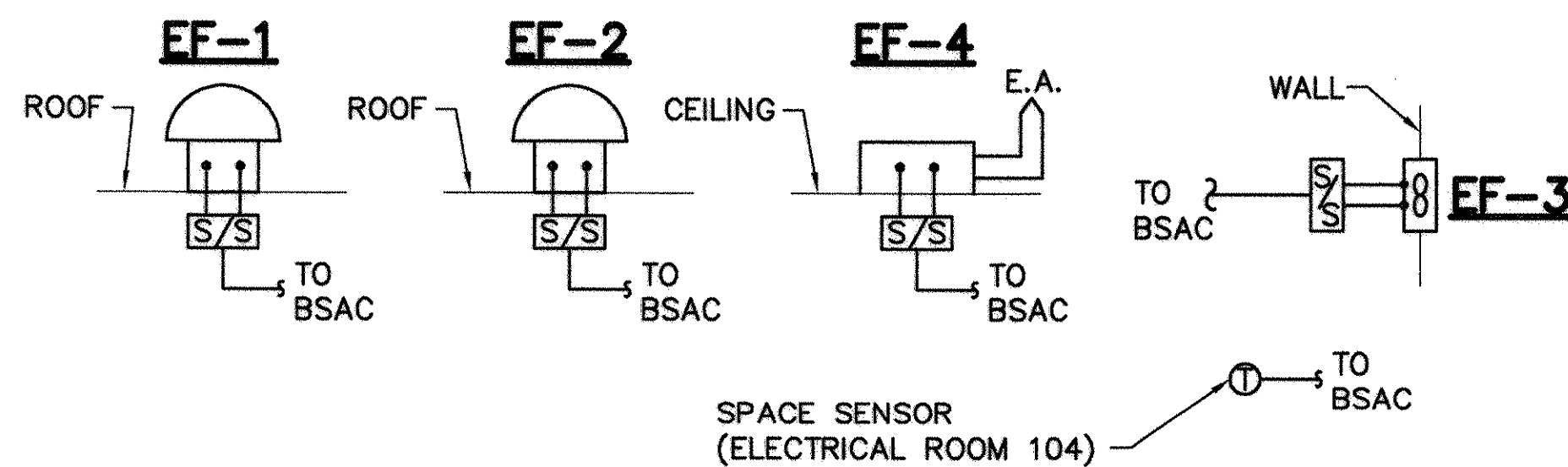
PACKAGED HEAT PUMP CONTROL DIAGRAM

(TYPICAL FOR TWO, PHP-1 AND PHP-2)
SCALE: NONE



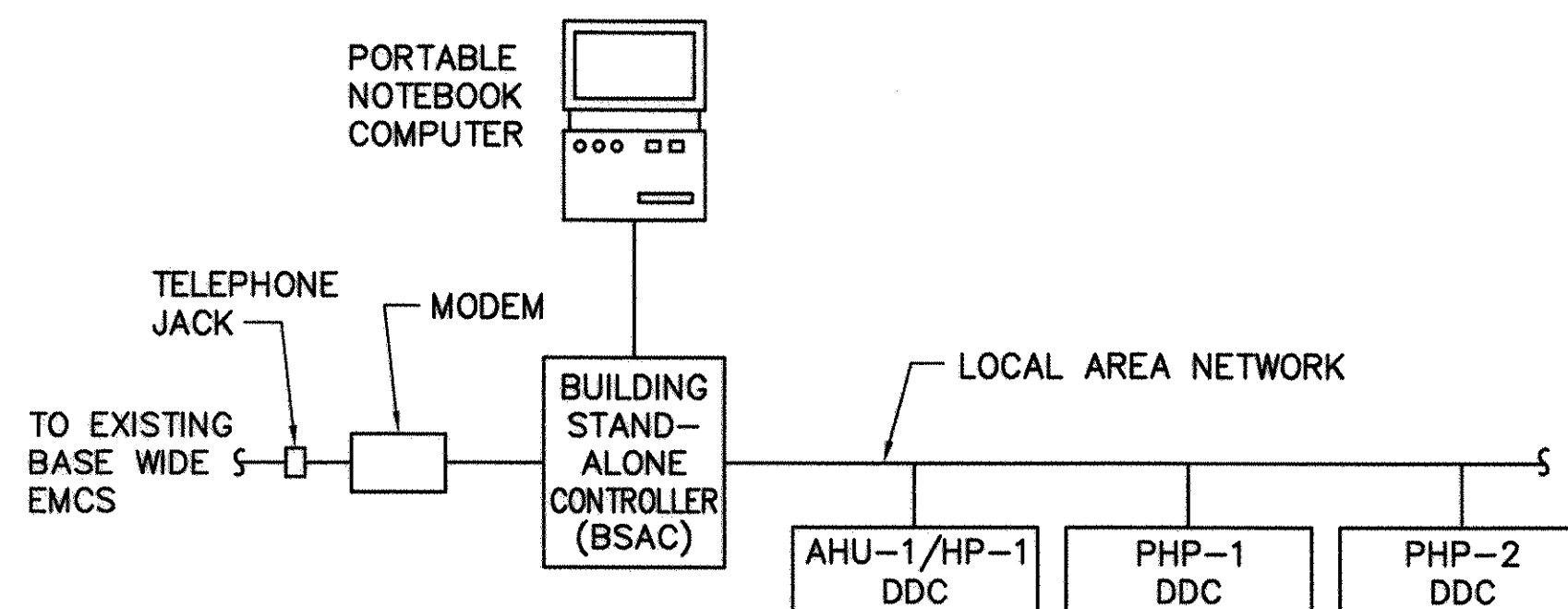
CLICK/ROSE & ASSOCIATES, INC. 245 WESTING STREET, SUITE 100 CHARLESTON, SC 29401 CHAPMAN, GLENN W. CHAPMAN SUPV. WILLIAMSON CH. ENGR PRINCIPAL - 22 DEC 97			
REV.	DESCRIPTION	DATE	APPROVED
1	CONFORMED BID DRAWING		
2	AS-BUILT, NO CORRECTIONS, MAY 22, 2001		
SOUTHERN DIVISION SUMMIT, SOUTH CAROLINA ADAL SQUAD OPS/IGLOO/MAINT. BAY MECHANICAL DETAILS AND CONTROL DIAGRAMS - MAINT. BAY		DATE	OFFICE IN CHARGE
DEPARTMENT OF THE NAVY SHAW AIR FORCE BASE ADAL SQUAD OPS/IGLOO/MAINT. BAY MECHANICAL DETAILS AND CONTROL DIAGRAMS - MAINT. BAY		DATE	OFFICE IN CHARGE
THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY GLENN W. CHAPMAN SEAL #17721, ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.		RECORD DRAWING DATE	
		CODE I.D. NO.	
		DRAWING SIZE:	D
		SPEC. NO.	06-97-0942
		CONSTR. CONTR. NO.	N62467-97-C-0942
		NAVJAG DRAWING NO.	5348806
		SHEET	138 OF 152
		M34	

(1610, 1606, 1605) / 106-22-11



EXHAUST FAN CONTROL DIAGRAM

SCALE: NONE



NOTES:

1. CONNECTIONS BETWEEN BUILDING STAND ALONE CONTROLLER (BSAC), MODEM, DDC UNIT CONTROLLERS, NOTEBOOK COMPUTER, INPUT AND OUTPUT HARDWARE SHALL BE PROVIDED BY CONTRACTOR. CONNECTION BETWEEN MODEM AND TELEPHONE JACK SHALL BE PROVIDED BY CONTRACTOR.
2. TELEPHONE JACK AND CABLE IN CONDUIT TO EXISTING TELEPHONE BACKBOARD WILL BE PROVIDED UNDER DIVISION 16, REFER TO ELECTRICAL DRAWINGS.

DDC ARCHITECTURE DIAGRAM

SCALE: NONE

DDC INPUT/OUTPUT (I/O) SCHEDULE									
BUILDING NO. 1816 - MAINT. BAY		HARDWARE				SOFTWARE			
		OUTPUT		INPUT		ALARMS			
		DIGITAL		DIGITAL	ANALOG	DIGITAL	ANALOG		
UNIT									
AHU-1/HP-1		X	X	X	X	X	X	X	X
PHP-1		X	X	X	X	X	X	X	X
PHP-2		X	X	X	X	X	X	X	X
EF-1		X				X			
EF-2		X				X			
EF-3		X				X			X
EF-4		X				X			

SEQUENCE OF OPERATIONS

GENERAL

1. ALL CONTROLS SYSTEMS SHALL BE COMPLETE AND OPERATIONAL AT THE CONCLUSION OF THE CONSTRUCTION PROJECT.
2. IN A VISIBLE LOCATION ON HVAC EQUIPMENT UNDER DIRECT DIGITAL CONTROLLER (DDC) CONTROL, MOUNT A LAMINATED PLATE INSCRIBED WITH THE FOLLOWING:
"CAUTION: THIS EQUIPMENT IS UNDER CENTRAL CONTROL AND MAY START OR STOP SUDDENLY. CONTACT BASE CIVIL ENGINEERING BEFORE PERFORMING ANY MAINTENANCE OR DISCONNECTING ANY COMPONENTS."
3. DDC CONTROLLERS SHALL UTILIZE SHORT CYCLING DELAYS TO PROTECT NONMODULATING TYPE EQUIPMENT SUCH AS FANS, PUMPS, COMPRESSORS, ETC. FROM SHORT CYCLING.
4. DDC CONTROLLERS SHALL BE STAND-ALONE PROGRAMMABLE AND SHALL BE SELECTED WITH THE APPROPRIATE NUMBER OF INPUTS AND OUTPUTS AS REQUIRED BY THE UNIT'S SEQUENCE OF OPERATION AND THE I/O SCHEDULE.
5. ALL CONTROL AND INTERLOCK WIRING SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE UNIT'S MANUFACTURER'S RECOMMENDATIONS.

AHU-1/HP-1, EF-4

GENERAL

1. AHU-1, HP-1, AND EF-4 SHALL BE STARTED AND STOPPED BY ITS DIRECT DIGITAL CONTROLLER (DDC) BASED ON A TIMED OCCUPANCY AS SCHEDULED THROUGH THE BUILDING STAND-ALONE CONTROLLER (BSAC).
2. A DUCT-MOUNTED SMOKE DETECTOR SHALL SHUT DOWN THE AHU/HP SYSTEM, AND SIGNAL THE BUILDING FIRE ALARM CONTROL PANEL (FACP) UPON SENSING SMOKE.
3. A WALL-MOUNTED SPACE SENSOR SHALL CONTROL ROOM CONDITIONS THROUGH THE DDC AND ENABLE ROOM OCCUPANTS TO VARY THE SPACE SETPOINTS OVER A LIMITED RANGE AS DETERMINED BY THE BSAC.
4. THE SPACE SENSOR SHALL DISPLAY SPACE TEMPERATURE AND SPACE TEMPERATURE SETPOINT.
5. THE SPACE SENSOR SHALL PROVIDE A TIMED OVERRIDE SCHEDULE THROUGH AN ON/OFF BUTTON.

OCCUPIED MODE

1. IN THE COOLING MODE THE DDC SHALL START THE AHU FAN AND STAGE THE HEAT PUMP UNIT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 78 DEGREES F (ADJUSTABLE).
2. IN THE HEATING MODE THE DDC SHALL START THE AHU FAN, REVERSE CYCLE AND STAGE THE HEAT PUMP UNIT AND ELECTRIC AUXILIARY HEAT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 68 DEGREES F (ADJUSTABLE).

3. EF-4 SHALL BE ENERGIZED.

UNOCCUPIED MODE

1. IN THE COOLING MODE THE DDC SHALL START THE AHU FAN AND STAGE THE HEAT PUMP UNIT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 85 DEGREES F (ADJUSTABLE).
2. IN THE HEATING MODE THE DDC SHALL START THE AHU FAN, REVERSE CYCLE AND STAGE THE HEAT PUMP UNIT AND ELECTRIC AUXILIARY HEAT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 55 DEGREES F (ADJUSTABLE).

3. EF-4 SHALL BE DE-ENERGIZED.

SAFETY FEATURES

1. UPON ACTUATION OF ANY SMOKE DETECTOR OR ACTIVATION OF THE BUILDING FIRE ALARM CONTROL PANEL (FACP), THE AHU/HP SYSTEM SHALL SHUT DOWN, EF-4 SHALL REMAIN ENERGIZED OR BE STARTED.
2. A DIFFERENTIAL PRESSURE SWITCH ACROSS THE UNIT FILTERS SHALL ALARM THE DDC AND BSAC FOR FILTER MAINTENANCE.

PHP-1, EF-1

GENERAL

1. PHP-1 AND EF-1 SHALL BE STARTED AND STOPPED BY ITS DIRECT DIGITAL CONTROLLER (DDC) BASED ON A TIMED OCCUPANCY AS SCHEDULED THROUGH THE BUILDING STAND-ALONE CONTROLLER (BSAC).
2. A DUCT-MOUNTED SMOKE DETECTOR SHALL SHUT DOWN PHP-1, AND SIGNAL THE BUILDING FIRE ALARM CONTROL PANEL (FACP) UPON SENSING SMOKE.
3. A WALL-MOUNTED SPACE SENSOR SHALL CONTROL ROOM CONDITIONS THROUGH THE DDC AND ENABLE ROOM OCCUPANTS TO VARY THE SPACE SETPOINTS OVER A LIMITED RANGE AS DETERMINED BY THE BSAC.
4. THE SPACE SENSOR SHALL DISPLAY SPACE TEMPERATURE AND SPACE TEMPERATURE SETPOINT.
5. THE SPACE SENSOR SHALL PROVIDE A TIMED OVERRIDE SCHEDULE THROUGH AN ON/OFF BUTTON.

OCCUPIED MODE

1. IN THE COOLING MODE THE DDC SHALL START PHP-1 AND STAGE THE HEAT PUMP UNIT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 78 DEGREES F (ADJUSTABLE).
2. IN THE HEATING MODE THE DDC SHALL START PHP-1, REVERSE CYCLE AND STAGE THE HEAT PUMP UNIT AND ELECTRIC AUXILIARY HEAT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 55 DEGREES F (ADJUSTABLE).

3. EF-1 SHALL BE ENERGIZED.

UNOCCUPIED MODE

1. IN THE COOLING MODE THE DDC SHALL START PHP-1 AND STAGE THE HEAT PUMP UNIT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 85 DEGREES F (ADJUSTABLE).
2. IN THE HEATING MODE THE DDC SHALL START PHP-1, REVERSE CYCLE AND STAGE THE HEAT PUMP UNIT AND ELECTRIC AUXILIARY HEAT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 40 DEGREES F (ADJUSTABLE).

3. EF-1 SHALL BE DE-ENERGIZED.

SAFETY FEATURES

1. UPON ACTUATION OF ANY SMOKE DETECTOR OR ACTIVATION OF THE BUILDING FIRE ALARM CONTROL PANEL (FACP), PHP-1 SHALL SHUT DOWN, AND EF-1 SHALL REMAIN ENERGIZED OR BE STARTED.
2. A DIFFERENTIAL PRESSURE SWITCH ACROSS THE UNIT FILTERS SHALL ALARM THE DDC AND BSAC FOR FILTER MAINTENANCE.

PHP-2, EF-2

GENERAL

1. PHP-2 AND EF-2 SHALL BE STARTED AND STOPPED BY ITS DIRECT DIGITAL CONTROLLER (DDC) BASED ON A TIMED OCCUPANCY AS SCHEDULED THROUGH THE BUILDING STAND-ALONE CONTROLLER (BSAC).
2. A DUCT-MOUNTED SMOKE DETECTOR SHALL SHUT DOWN PHP-1, AND SIGNAL THE BUILDING FIRE ALARM CONTROL PANEL (FACP) UPON SENSING SMOKE.
3. A WALL-MOUNTED SPACE SENSOR SHALL CONTROL ROOM CONDITIONS THROUGH THE DDC AND ENABLE ROOM OCCUPANTS TO VARY THE SPACE SETPOINTS OVER A LIMITED RANGE AS DETERMINED BY THE BSAC.
4. THE SPACE SENSOR SHALL DISPLAY SPACE TEMPERATURE AND SPACE TEMPERATURE SETPOINT.
5. THE SPACE SENSOR SHALL PROVIDE A TIMED OVERRIDE SCHEDULE THROUGH AN ON/OFF BUTTON.

OCCUPIED MODE

1. IN THE COOLING MODE THE DDC SHALL START PHP-2 AND STAGE THE HEAT PUMP UNIT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 78 DEGREES F (ADJUSTABLE).
2. IN THE HEATING MODE THE DDC SHALL START PHP-2, REVERSE CYCLE AND STAGE THE HEAT PUMP UNIT AND ELECTRIC AUXILIARY HEAT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 55 DEGREES F (ADJUSTABLE).

3. EF-2 SHALL BE ENERGIZED.

UNOCCUPIED MODE

1. IN THE COOLING MODE THE DDC SHALL START PHP-2 AND STAGE THE HEAT PUMP UNIT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 85 DEGREES F (ADJUSTABLE).
2. IN THE HEATING MODE THE DDC SHALL START PHP-2, REVERSE CYCLE AND STAGE THE HEAT PUMP UNIT AND ELECTRIC AUXILIARY HEAT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 40 DEGREES F (ADJUSTABLE).

3. EF-1 SHALL BE DE-ENERGIZED.

SAFETY FEATURES

1. UPON ACTUATION OF ANY SMOKE DETECTOR OR ACTIVATION OF THE BUILDING FIRE ALARM CONTROL PANEL (FACP), PHP-2 SHALL SHUT DOWN, AND EF-2 SHALL REMAIN ENERGIZED OR BE STARTED.
2. A DIFFERENTIAL PRESSURE SWITCH ACROSS THE UNIT FILTERS SHALL ALARM THE DDC AND BSAC FOR FILTER MAINTENANCE.

EF-3

1. EF-3 SHALL BE STARTED WHEN THE SPACE TEMPERATURE RISES ABOVE 90 DEGREES F (ADJUSTABLE) AND STOPPED WHEN THE SPACE TEMPERATURE FALLS BELOW 87 DEGREES F (ADJUSTABLE). IF THE SPACE TEMPERATURE EXCEEDS 105 DEGREES F BSAC SHALL ALARM.

GENERAL CONTROL NOTES

1. ALL CONTROL COMPONENTS SHOWN ARE NEW
2. ELECTRICAL POWER FOR DDC CONTROLLERS SHALL BE PROVIDED FROM THE UNITS WHICH THEY CONTROL, UNLESS NOTED OTHERWISE. PROVIDE CONTROL VOLTAGE TRANSFORMERS.
3. EXISTING BASE WIDE EMCS IS NETWORK 8000 AS MANUFACTURED BY BARBER COLMAN. BSAC SHALL BE FULLY COMPATIBLE WITH THIS SYSTEM. SEE SPECIFICATION SECTION 15910.

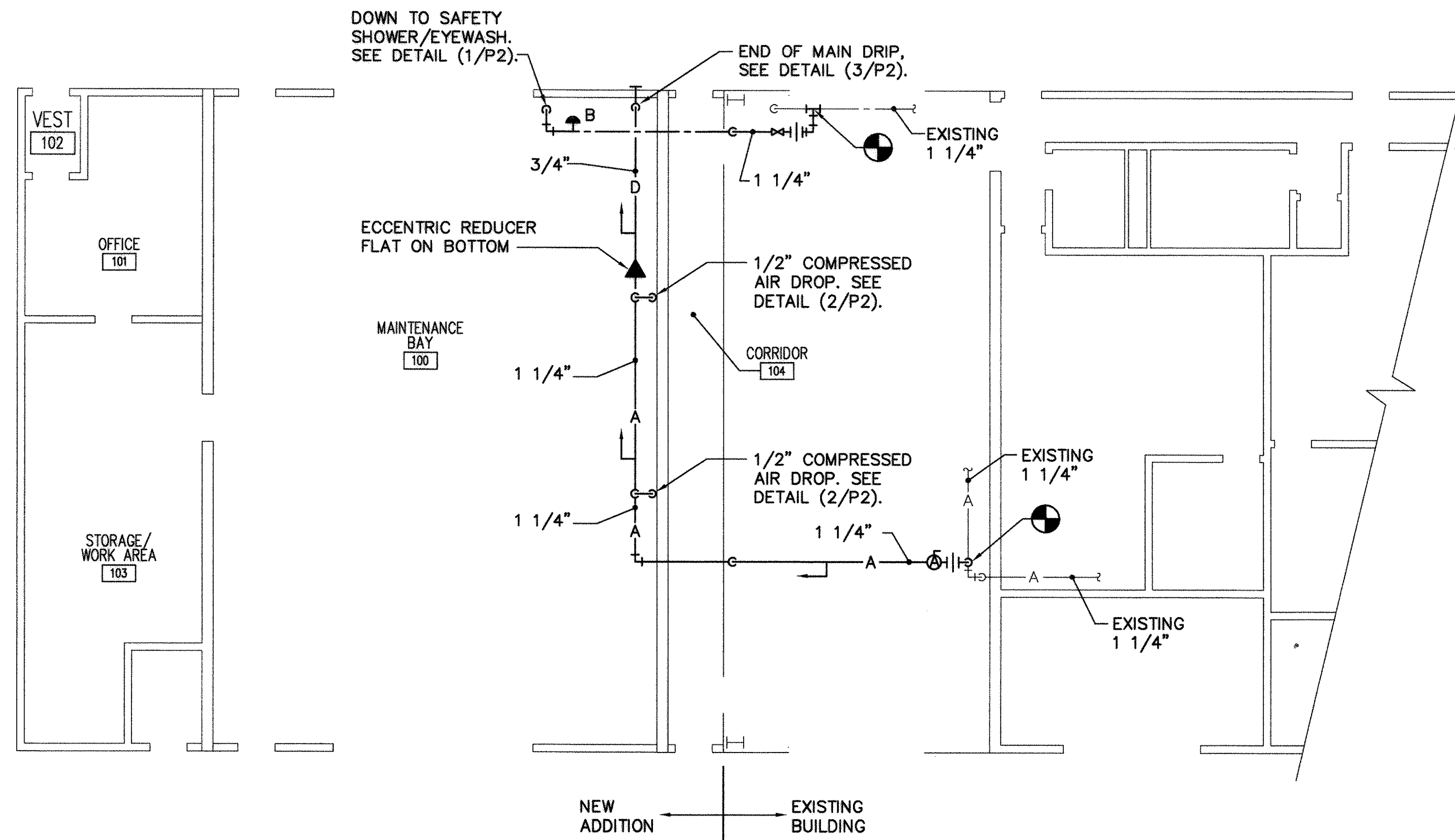
CONTROL LEGEND

- TEMPERATURE SENSOR
- START/STOP
- DIFFERENTIAL PRESSURE SWITCH
- ROOM TEMPERATURE SENSOR WITH OCCUPANT ADJUSTABLE TEMPERATURE RANGE AND SCHEDULE OVERRIDE BUTTON
- DUCT MOUNTED SMOKE DETECTOR
- EMCS ENERGY MANAGEMENT AND CONTROL SYSTEM
- FILT. FILTER
- AHU-# AIR HANDLING UNIT
- HP-# HEAT PUMP
- PHP-# PACKAGED HEAT PUMP
- DX DIRECT EXPANSION
- FACP FIRE ALARM CONTROL PANEL
- BSAC BUILDING STAND-ALONE CONTROLLER
- ⊙ CURRENT SWITCH (FAN OR PUMP PROOF)



GLICK/BOEHM & ASSOCIATES. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 DESIGNED BY: CHAPMAN CHECKED BY: CHAPMAN DRAWN BY: WILLIAMSON DATE: 12/22/97 PROJECT: ADAL SQUAD OPS/IGLOO/MAINT. BAY SHEET: 139 OF 152		REV. DESCRIPTION 1. CONFORMED BID DRAWING 2. AS-BUILT, NO CORRECTIONS, MAY 22, 2001	PREP BY: DATE: APPROVED: OFFICE IN CHARGE:
SOUTHERN DIVISION CHARLESTON, S.C. SHAW AIR FORCE BASE ADAL SQUAD OPS/IGLOO/MAINT. BAY CONTROL DIAGRAMS, SEQUENCE OF OPERATIONS, AND LEGEND - MAINT. BAY		THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY GLENN W. CHAPMAN SEAL #17721, ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.	
RECORD DRAWING DATE: 7/30/01 CODE I.D. NO.: DRAWING SIZE: D SPEC. NO.: 06-97-0942 CONSTR. CONTR. NO.: N62467-97-C-0942 NAVFAC DRAWING NO.: 5348807 SHEET 139 OF 152 M35		139	

(140,1606,1605)/106-201/



PLUMBING PLAN - MAINT. BAY
SCALE: 1/8" = 1'-0"

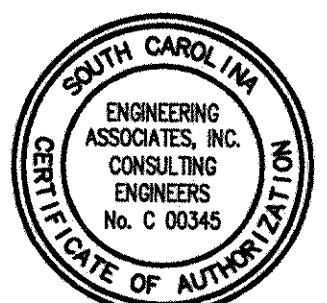
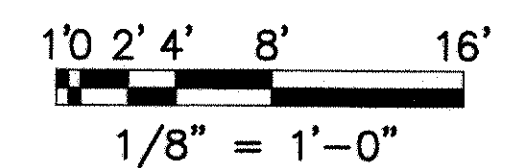


PLUMBING LEGEND	
	GATE VALVE
	ELBOW, 90°
	ELBOW, 45°
	ELBOW, TURNED UP
	ELBOW, TURNED DOWN
	TEE
	UNION
	DRAWING DESIGNATION
	NEW DOMESTIC COLD WATER
	EXISTING DOMESTIC COLD WATER
	CONNECT TO EXISTING
	UNLESS NOTED OTHERWISE
	WATER HAMMER ARRESTOR (LETTER INDICATES P.I.D. UNITS)
	AIR LINE VALVE
	A.F.F.
	REDUCER/INCREASER
	NEW COMPRESSED AIR
	EXISTING COMPRESSED AIR
	NEW INDIRECT DRAIN
	PITCH DOWN IN DIRECTION OF ARROW

GENERAL PLUMBING NOTES

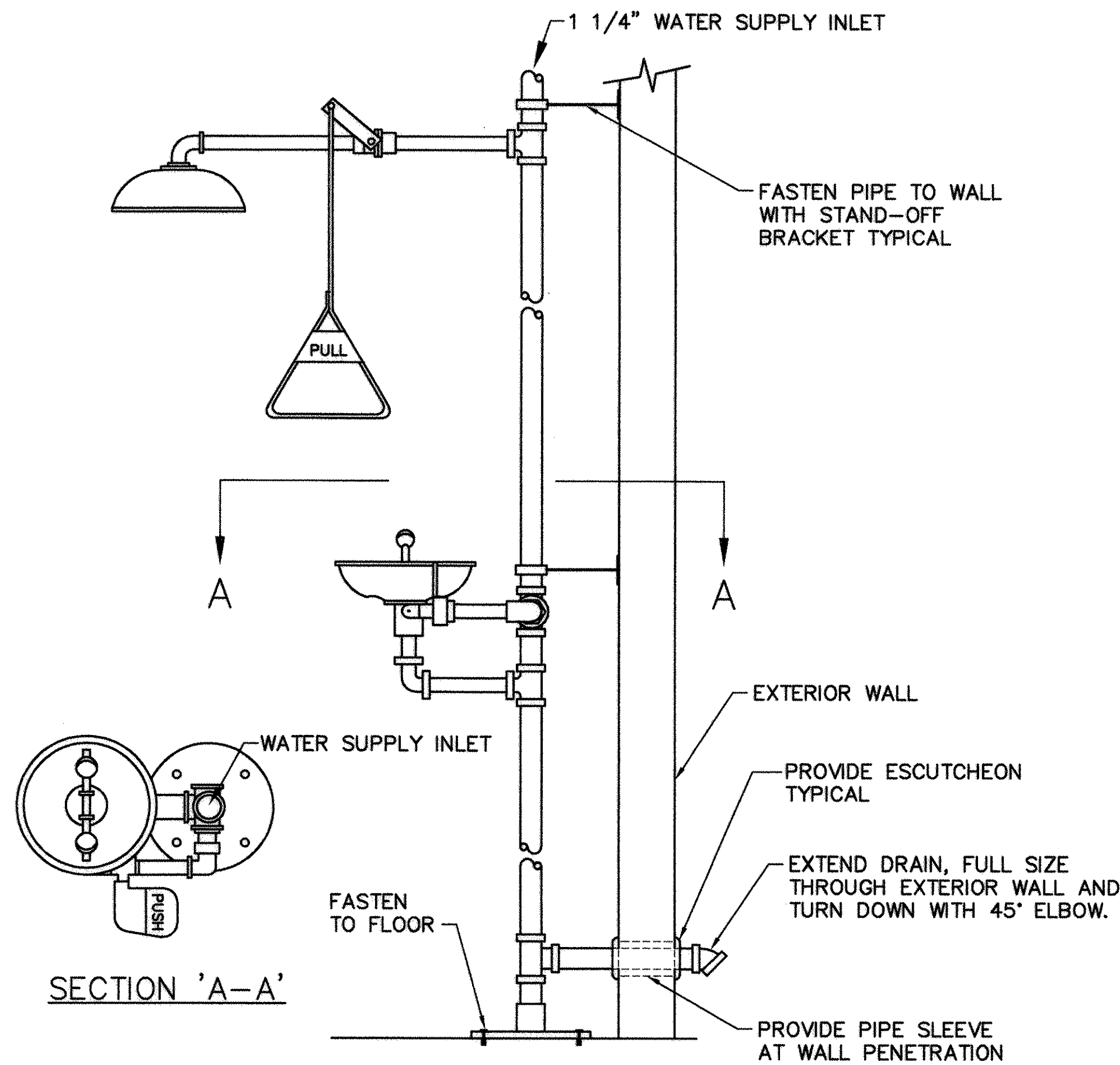
- COORDINATE LOCATION OF PLUMBING WORK WITH OTHER TRADES TO AVOID CONFLICTS AND INTERFERENCES.
- INSTALL ALL EQUIPMENT AND MATERIAL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN PRINTED INSTRUCTIONS AND RECOMMENDATIONS.
- REFER TO SHEET P2 FOR TYPICAL DETAILS.

GRAPHIC SCALE

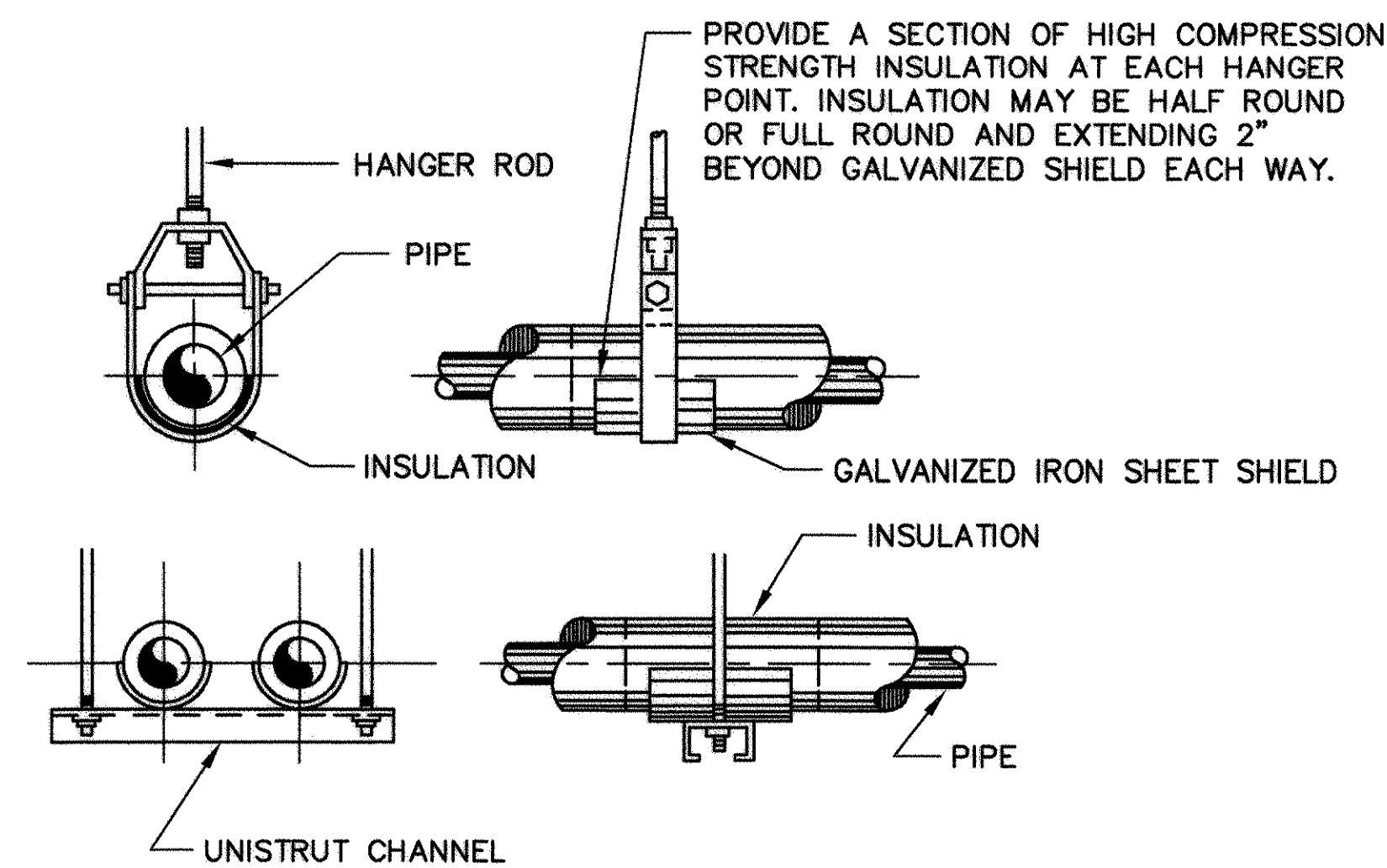


GLICK/BOEHM & ASSOCIATES. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 CHAPMAN CHAPMAN WILLIAMSON CHAPMAN PRINCIPAL-22 DEC 97		PREP BY DATE APPRVD DATE OFFICER IN CHARGE DATE
REV. DESCRIPTION CONFORMED BID DRAWING AS-BUILT, NO CORRECTIONS, MAY 22, 2001		NAVFAC DIVISION SOUTHERN DIVISION CHARLESTON, S.C. SHAW AIR FORCE BASE ADAL SQUAD OPS/IGLOO/MAINT. BAY PLUMBING PLAN - MAINT. BAY
THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY GLENN W. CHAPMAN SEAL #17721, ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.		RECORD DRAWING DATE 7/30/01 CODE I.D. NO. DRAWING SIZE SPEC. NO. 06-97-0942 CONSTR. CONTR. NO. N62467-97-C-0942 NAVFAC DRAWING NO. 5348808 SHEET 140 OF 152 P1

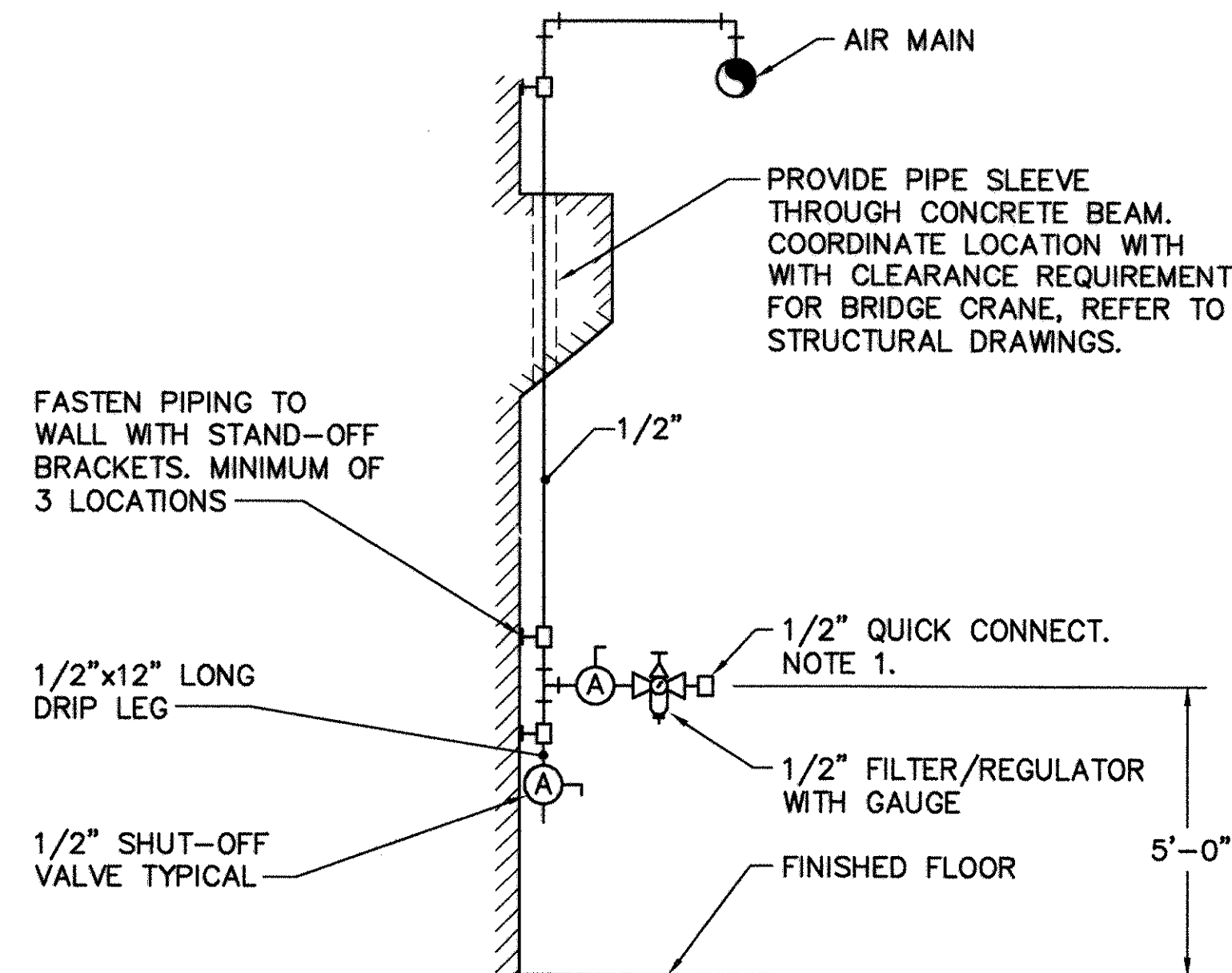
1610, 1606, 1605, 1606-011



1
P1 SAFETY SHOWER/EYEWASH STATION DETAIL
SCALE: NONE

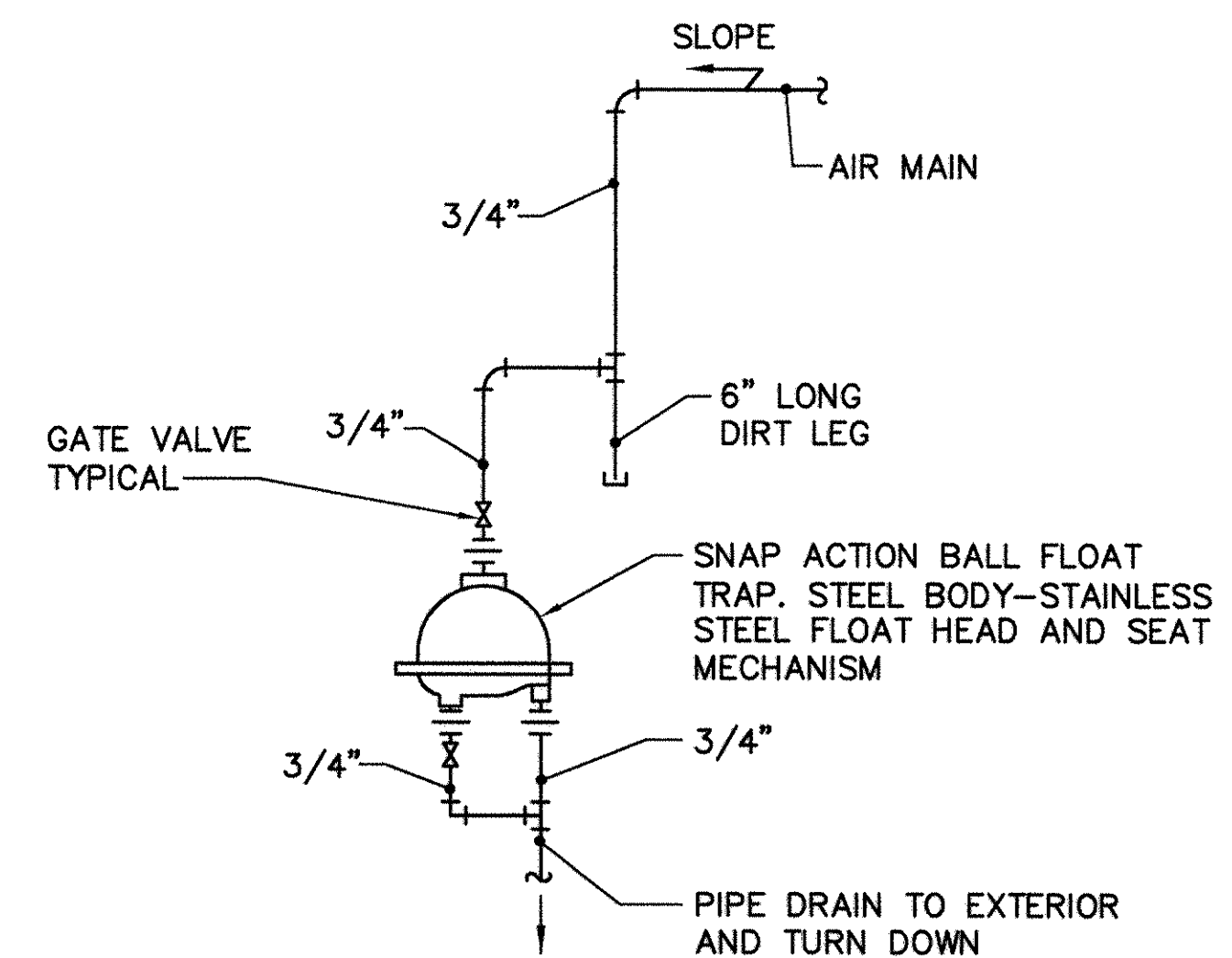


TYPICAL HANGERS FOR WATER PIPING DETAIL
SCALE: NONE

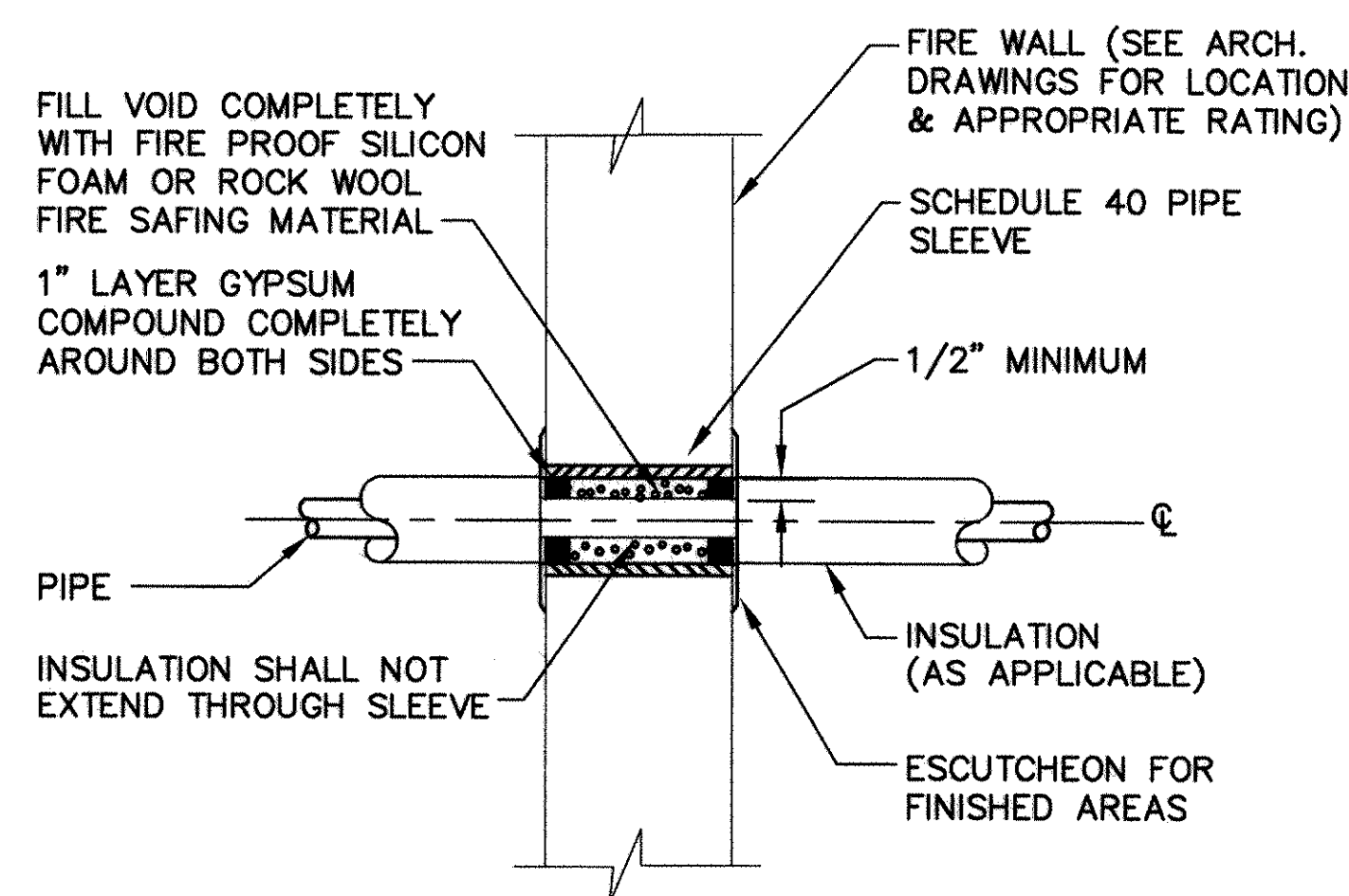


NOTES
1. PROVIDE 1/2"x50' HEAVY DUTY FLEXIBLE COMPRESSED AIR HOSE (ONE FOR EACH AIR OUTLET) RATED FOR 250 PSI, WITH QUICK CONNECTOR ENDS TO MATCH AIR OUTLET AND GOVERNMENT EQUIPMENT AS REQUIRED.

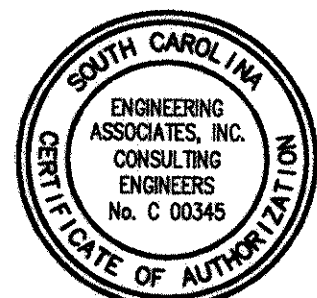
2
P1 TYPICAL COMPRESSED AIR OUTLET DETAIL
SCALE: NONE



3
P1 END OF AIR MAIN DRIP DETAIL
SCALE: NONE



TYPICAL PIPE THROUGH FIREWALL DETAIL
SCALE: NONE



GLICK/BOEHM & ASSOCIATES. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 ISSUED BY: CHAPMAN, GLENN W. CHAPMAN SUPV: WILLIAMSON, D. POOLE DATE: 12/22/97 PROJECT: 1610-1606-1605/1606-1606-1607		REV. DESCRIPTION 1. CONFORMED BID DRAWING 2. AS-BUILT, NO CORRECTIONS, MAY 22, 2001	PREP BY: DATE: APPROVD:
DEPARTMENT OF THE NAVY SOUTHERN DIVISION CHARLESTON, S.C. SHAW AIR FORCE BASE ADAL SQUAD OPS/IGLOO/MAINT. BAY PLUMBING DETAILS - MAINT. BAY		SUMMITER, SOUTH CAROLINA MAY 22, 2001 APPROVED: [Signature] DATE: 5/22/01 OFFICER IN CHARGE:	APPROVED: [Signature] DATE: 5/22/01 OFFICER IN CHARGE:
SEAL AREA THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY GLENN W. CHAPMAN SEAL #7721, ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.		RECORD DRAWING DATE: 7/30/01 CODE I.D. NO.: DRAWING SIZE: D SPEC. NO.: 06-97-0942 CONSTR. CONTR. NO.: N62467-97-C-0942 NAVFAC DRAWING NO.: 5348809 SHEET 141 OF 152	
P2		141	

1610, 1606, 1605/1606-1607

LEGEND

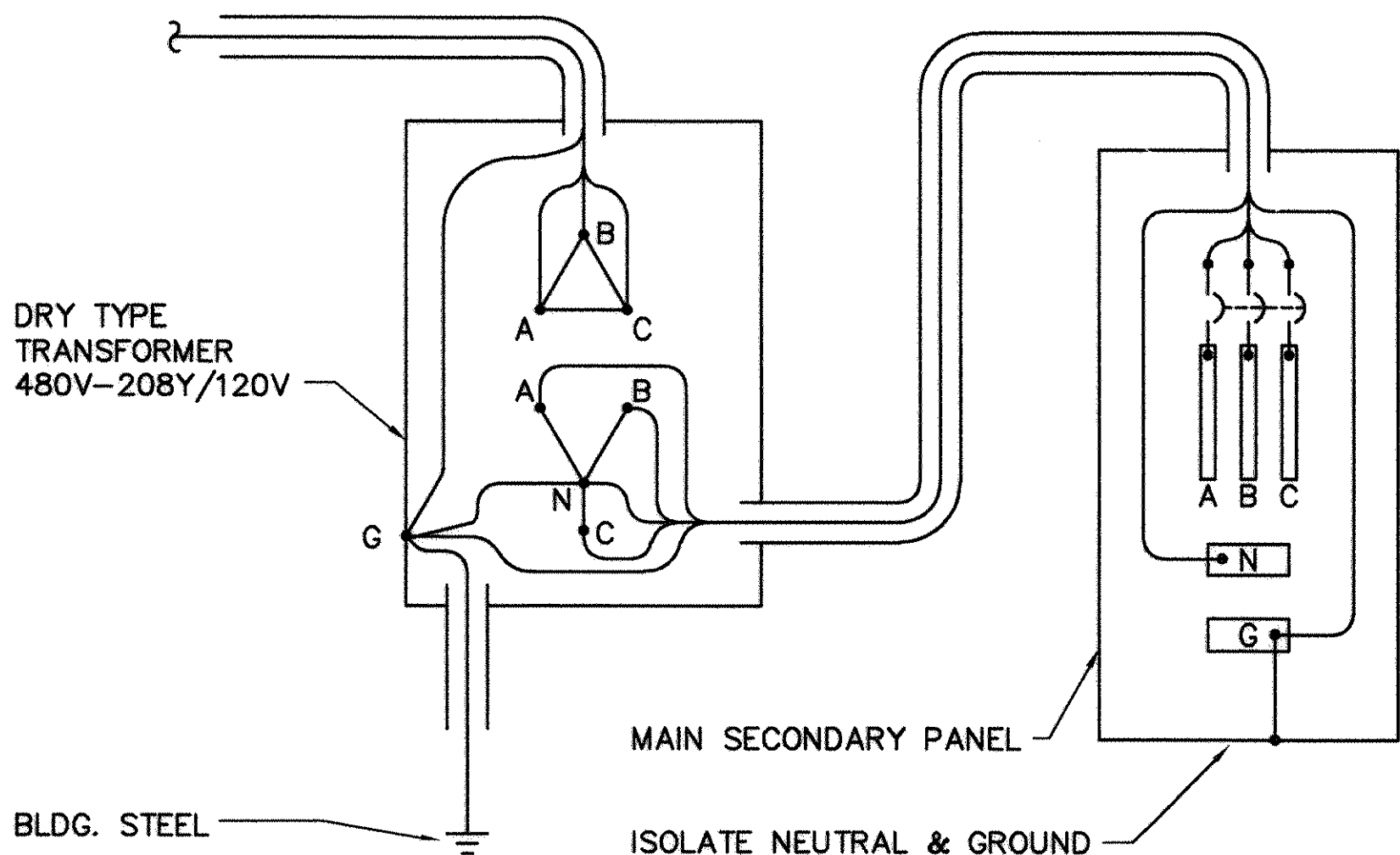
- ENCLOSED FLUORESCENT FIXTURE, LETTER INDICATES TYPE, APPROXIMATE DIMENSIONS AS INDICATED.
- ⊖ OPEN FLUORESCENT FIXTURE, LETTER INDICATES TYPE.
- ⊕A CEILING MOUNTED FIXTURE, LETTER INDICATES TYPE.
- ⊕A WALL MOUNTED FIXTURE, LETTER INDICATES TYPE.
- ⊖ EXIT SIGN, BLACKENED AREA(S) INDICATE FACE(S), DIRECTIONAL ARROWS AS INDICATED.
- ⊖ EMERGENCY LIGHTING UNIT WITH NUMBER OF HEADS INDICATED.
- EM LIGHT FIXTURE IDENTIFIER, INDICATES FIXTURE WITH EMERGENCY BATTERY INVERTER TO OPERATE 1 LAMP WHEN NORMAL POWER FAILS. CONNECT INVERTER TO UNSWITCHED CIRCUIT CONDUCTOR.
- S SWITCH, 20 AMP, 120-277V, AC (48" A.F.F. UNLESS NOTED OTHERWISE).
SUBSCRIPT: NONE - SINGLE POLE
3 - 3 WAY
- ⊖ DUPLEX RECEPTACLE OUTLET, 20 AMP, 125V AC, 2 POLE 3 WIRE, GROUNDING (18" A.F.F. UNLESS NOTED OTHERWISE).
- ⊖ SPECIAL RECEPTACLE. SEE TABLE ON E39.
- ⊖ SPECIAL RECEPTACLE. SEE TABLE ON E39.
- ⊖ SPECIAL RECEPTACLE. SEE TABLE ON E39.
- ⊖ SPECIAL RECEPTACLE. SEE TABLE ON E39.
- ⊖ SPECIAL RECEPTACLE. SEE TABLE ON E39.
- ⊖ JUNCTION BOX.
SUBSCRIPT: C - MOUNT IN CEILING
- ▼ TELEPHONE OUTLET, 4"x4"x1 1/2" BOX WITH SINGLE GANG EXTENSION RING (18" A.F.F. UNLESS NOTED OTHERWISE).
SUBSCRIPT: W - WALL MOUNT 60" AFF
- ▼ DATA OUTLET, 4"x4"x1 1/2" BOX WITH SINGLE GANG EXTENSION RING (18" A.F.F. UNLESS NOTED OTHERWISE).
- ⊖ TRANSFORMER
- ⊖ DISCONNECT SWITCH (SIZED AS SHOWN)
- LB POWER PANEL "LB".
- EXISTING TELEPHONE BACKBOARD.
- LB-21 INDICATES BRANCH CIRCUIT 21 TO PANEL "LB".
- ⊖ GROUNDING CONNECTION/DEVICE.
- ⊖ BRANCH CIRCUIT, ARROW INDICATES HOMERUN, CROSS LINES INDICATE NUMBER OF #12 CONDUCTORS, GROUNDING CONDUCTOR IS NOT SHOWN BUT SHALL BE PROVIDED IN ALL CIRCUITS (2#12, 1#12G, 3/4"C UNLESS NOTED OTHERWISE).
- ⊖ THERMOSTAT (PROVIDED UNDER DIV. 15 - WIRED UNDER DIV. 16).
- ⊖ GROUND ROD. 3/4"x20" COPPER CLAD STEEL.
- ⊖ AIR TERMINAL. SOLID COPPER 5/8"x24".
- ⊖ KEYED DEMOLITION NOTE IDENTIFIER
- ⊖ KEYED RENOVATION NOTE IDENTIFIER
- G--- GROUND WIRE
- LP--- LIGHTNING PROTECTION WIRE
- EXOTHERMIC CONNECTION

KEY DEMOLITION NOTES (THIS SHEET ONLY)

- ⊖ EXISTING FEED TO REMAIN. SEE RENOVATION NOTE 1.
- ⊖ REMOVE EXISTING PANEL AND REPLACE WITH NEW PANEL.
- ⊖ REMOVE EXISTING GROUND WIRE AND PROVIDE NEW. SEE RENOVATION NOTE 2.
- ⊖ EXISTING TO REMAIN.

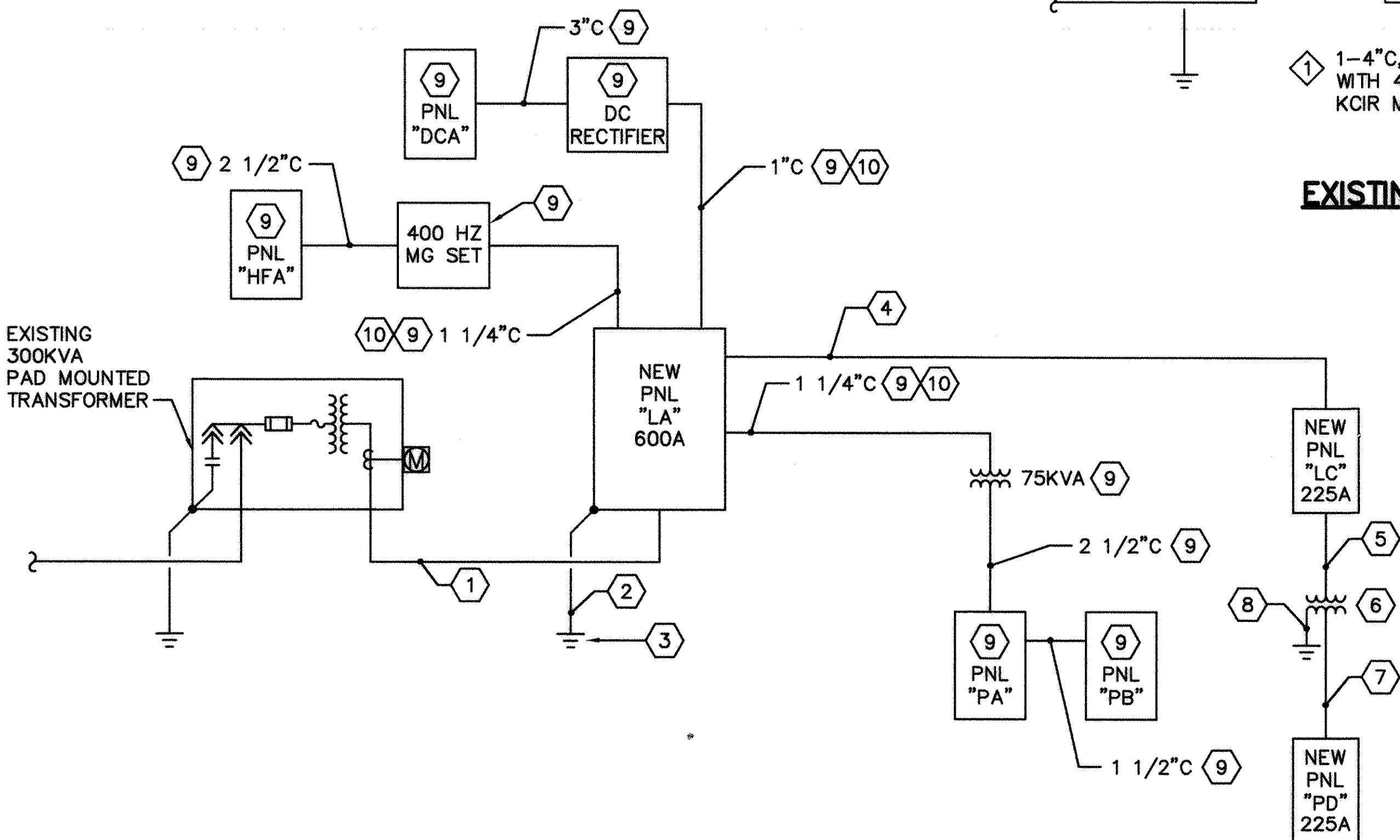
KEYED RENOVATION NOTES (THIS SHEET ONLY)

- ⊖ PROVIDE 4"C WITH 4-500 KCIR MIL CABLES TO PARALLEL EXISTING FEED.
- ⊖ NEW #2/0 BARE COPPER GROUND WIRE IN 1" PVC CONDUIT.
- ⊖ EXISTING GROUND LOOP.
- ⊖ 4#4/0, 1#4G, 2 1/2"C.
- ⊖ 3#8, 1#10G, 3/4"C.
- ⊖ 30 KVA TRANSFORMER 480-208Y/120V 3Ø.
- ⊖ 4#2, 1#8G, 1 1/2"C.
- ⊖ #8 GROUND WIRE.
- ⊖ EXISTING TO REMAIN. RECONNECT TO NEW PANEL LA.
- ⊖ RECONNECT TO NEW PANEL "LA".



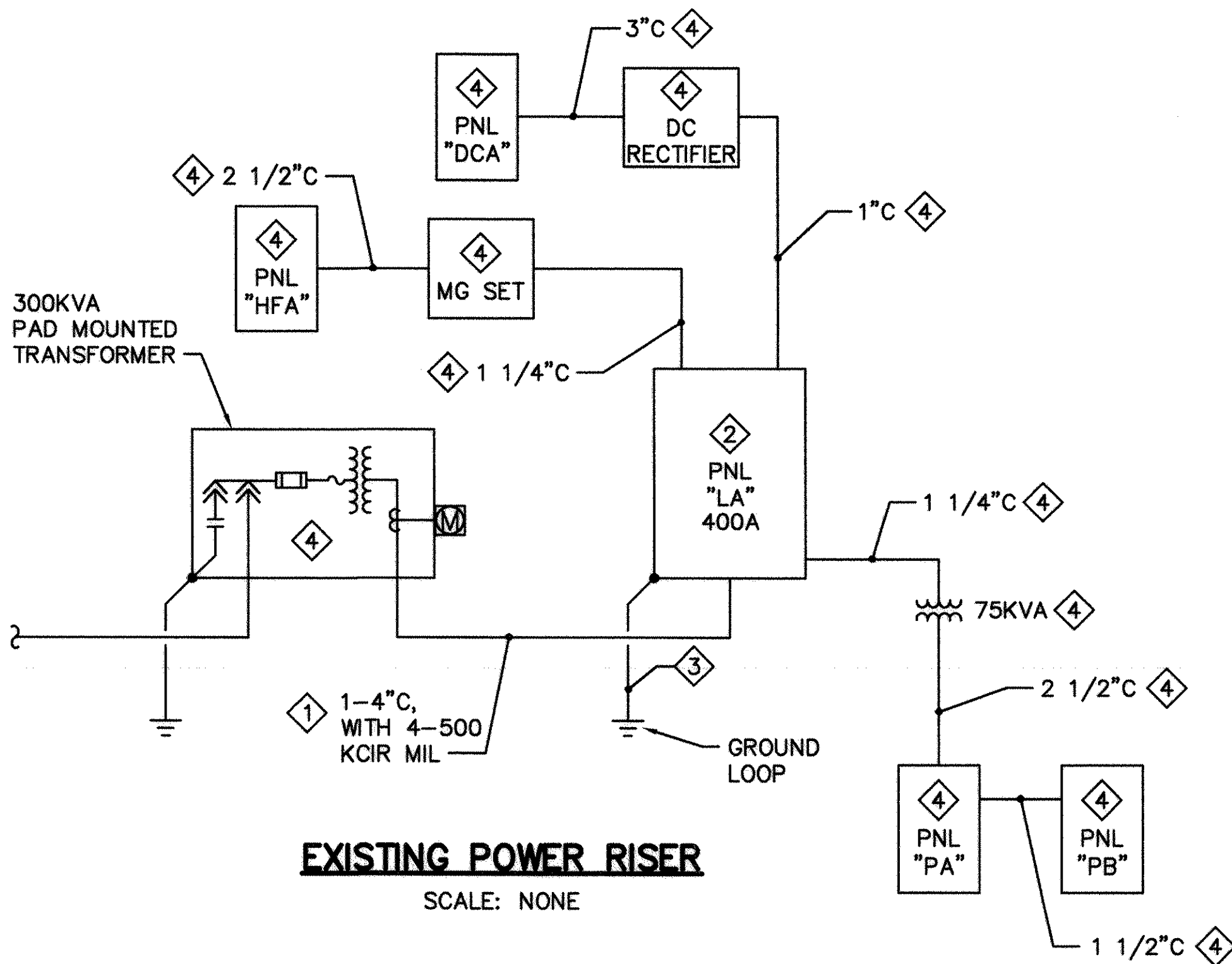
SEPARATELY DERIVED SYSTEM WIRING DIAGRAM

SCALE: NONE



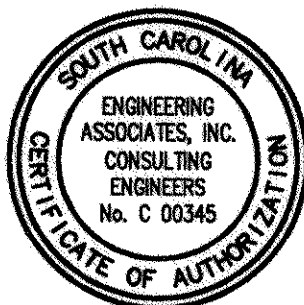
NEW POWER RISER

SCALE: NONE



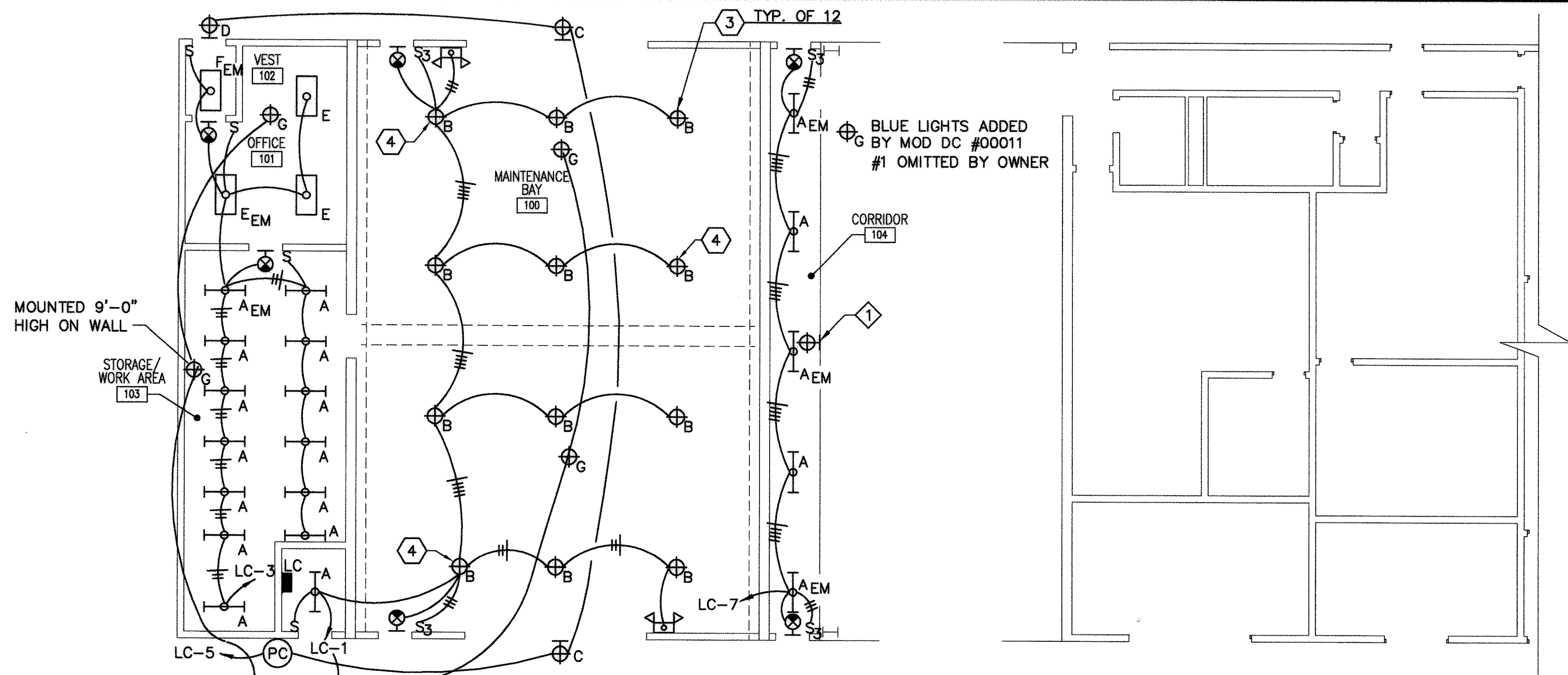
EXISTING POWER RISER

SCALE: NONE

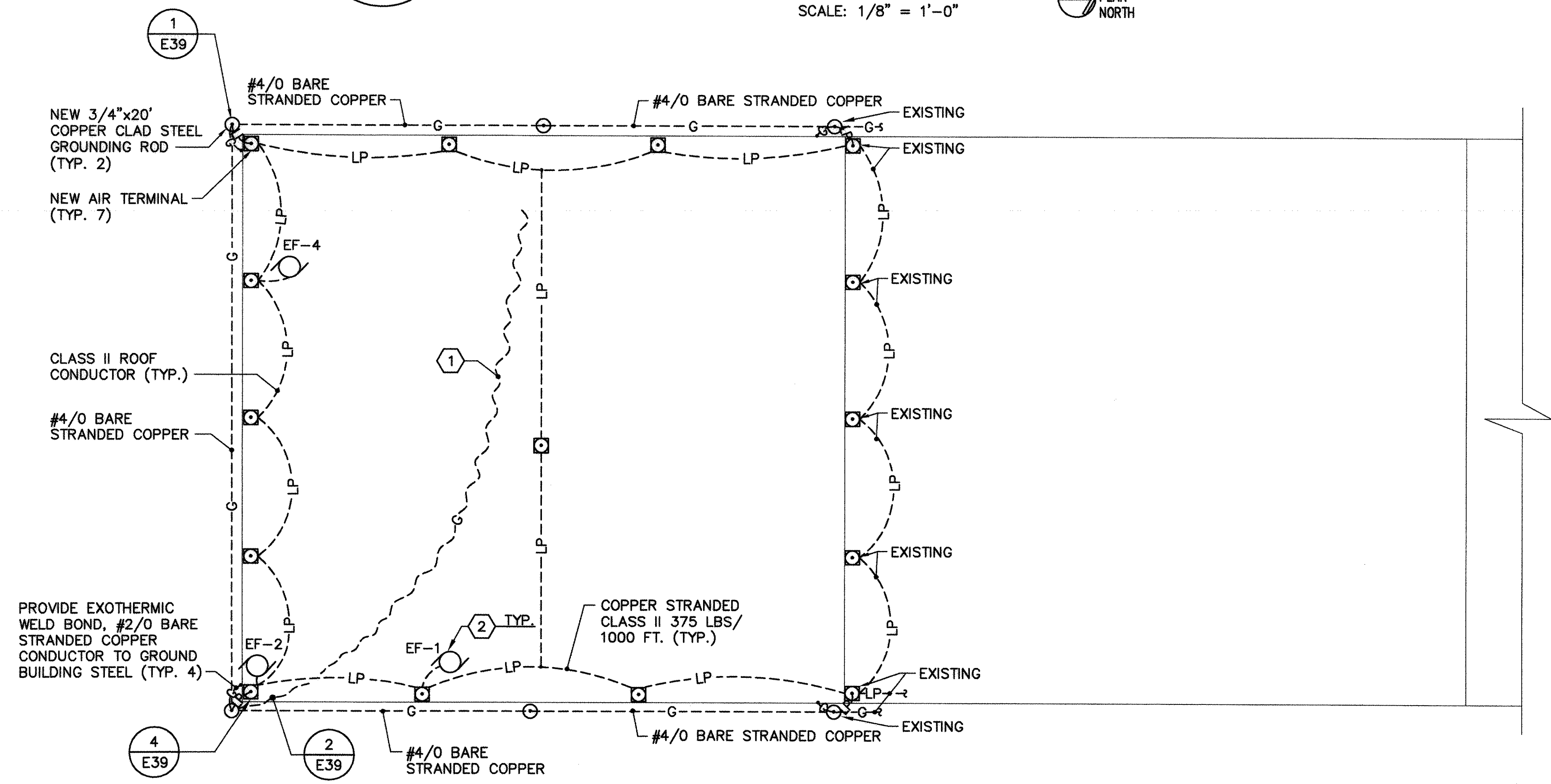


GLICK/BOEHM & ASSOCIATES, INC. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 DR. WILLIAMSON SHIPWILLIAMSON 12/22/97 PRINCIPAL-22 DEC 97		REV. DESCRIPTION CONFORMED BID DRAWING AS-BUILT, NO CORRECTIONS, MAY 22, 2001 SUMTER, SOUTH CAROLINA ADAL SQUAD OPS/IGLOO/MAINT. BAY ELECTRICAL LEGEND AND POWER RISERS - MAINT. BAY	DEPARTMENT OF THE NAVY SOUTHERN DIVISION CHARLESTON, SC SHAW AIR FORCE BASE SEAL AREA
PREP BY DATE APPROVED OFFICER IN CHARGE	DATE APPROVED OFFICER IN CHARGE	RECORD DRAWING DATE 7/30/01 CODE I.D. NO. DRAWING SIZE: SPEC. NO. 06-97-0942 CONSTR. CONTR. NO. N62467-97-C-0942 NAVFAC DRAWING NO. 5348810 SHEET 142 OF 152 E35	THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY J. TRAVIS WILLIAMSON SEAL #10874, ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.

1610, 1606, 1605 / 106-00



LIGHTING PLAN - MAINT. BAY
SCALE: 1/8" = 1'-0" PLAN NORTH



LIGHTNING PROTECTION ROOF PLAN - MAINT. BAY
SCALE: 1/8" = 1'-0" PLAN NORTH

KEYED DEMOLITION NOTES (THIS SHEET ONLY)

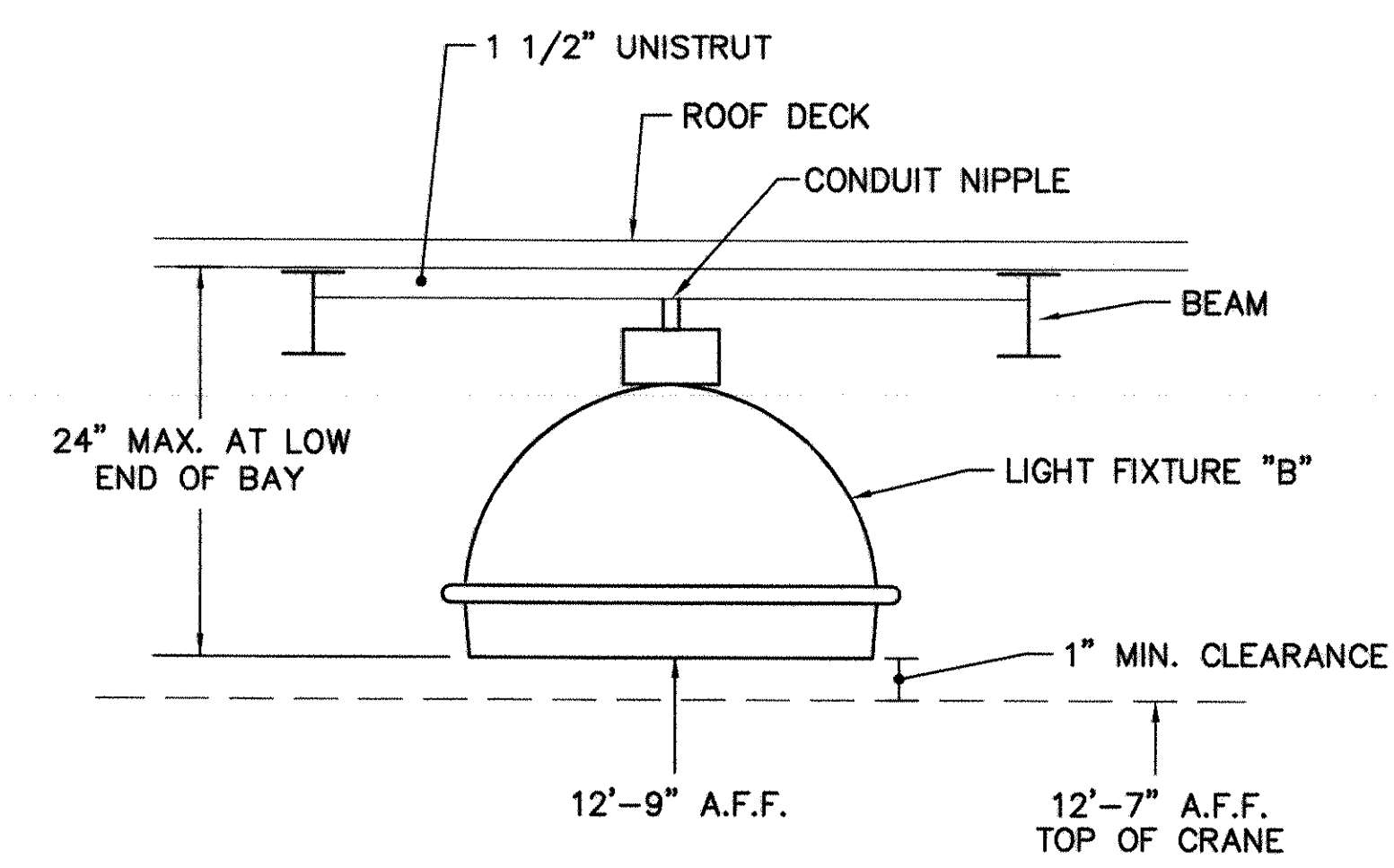
1. REMOVE EXISTING WALL PACK. REMOVE WIRE AND EXPOSED CONDUIT BACK TO NEAREST JUNCTION BOX. INSURE CONTINUITY OF REMAINING CIRCUIT.

KEYED RENOVATION NOTES (THIS SHEET ONLY)

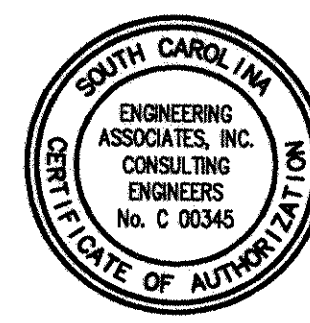
1. PROVIDE #2/0 BARE CABLE IN FLOOR SLAB. EXOTHERMIC WELD AT LEAST 6 REINFORCING RODS TO CABLE. EVENLY SPACE WELDS.
2. BOND EXHAUST FANS AND ALL METAL LOCATED ON ROOF TO LIGHTNING PROTECTION SYSTEM.
3. SEE LIGHT FIXTURE ELEVATION THIS SHEET FOR MOUNTING OF LIGHT FIXTURE "B".
4. PROVIDE FIXTURE WITH QUARTZ RESTRIKE.

GENERAL NOTES

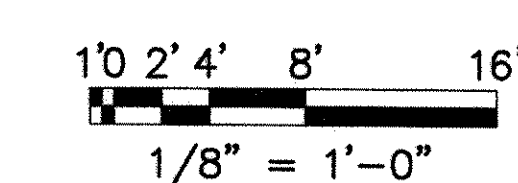
1. FIRE STOP AROUND ALL WALL PENETRATIONS.



LIGHT FIXTURE "B" ELEVATION
SCALE: NONE

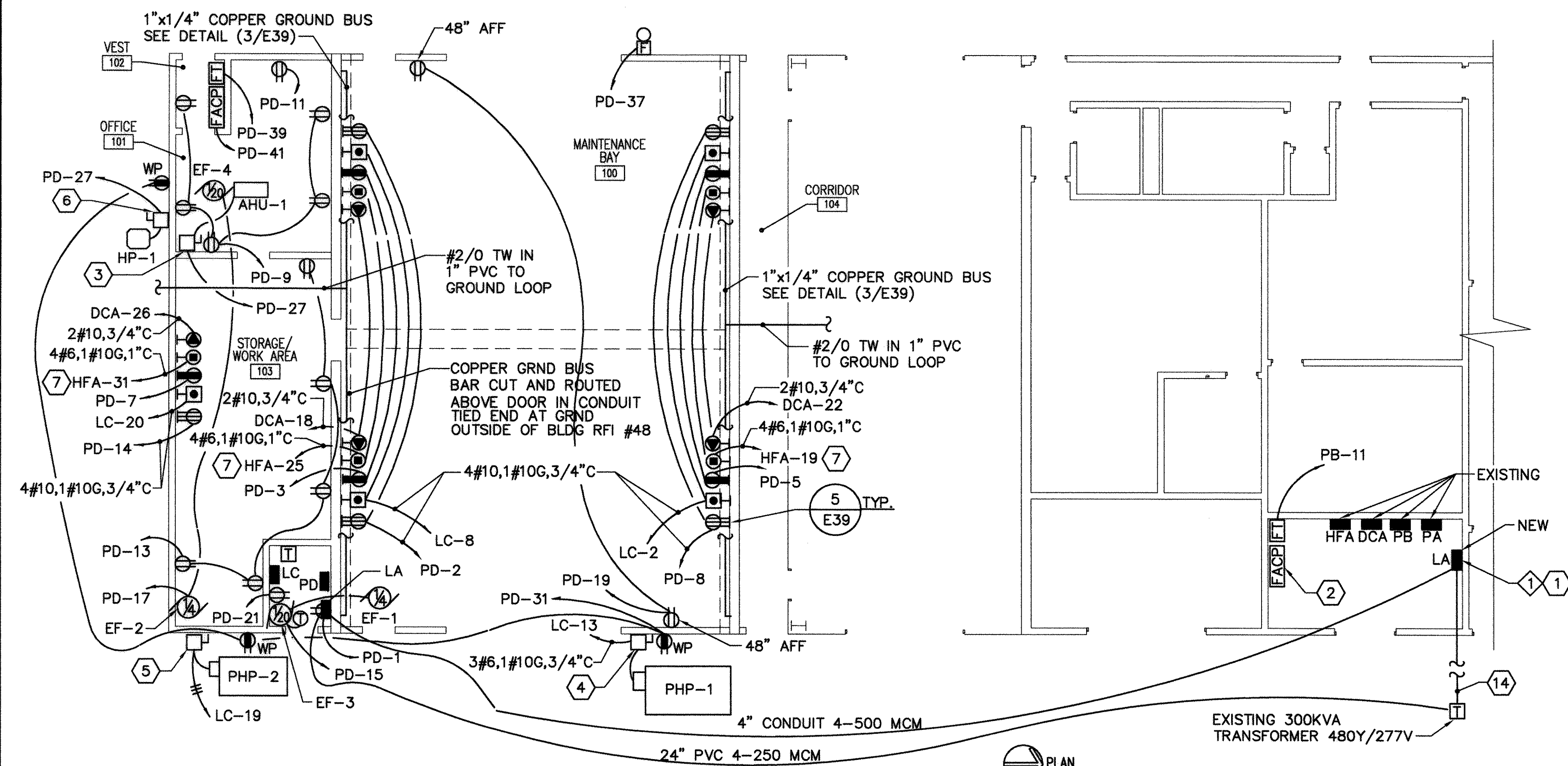


GRAPHIC SCALE

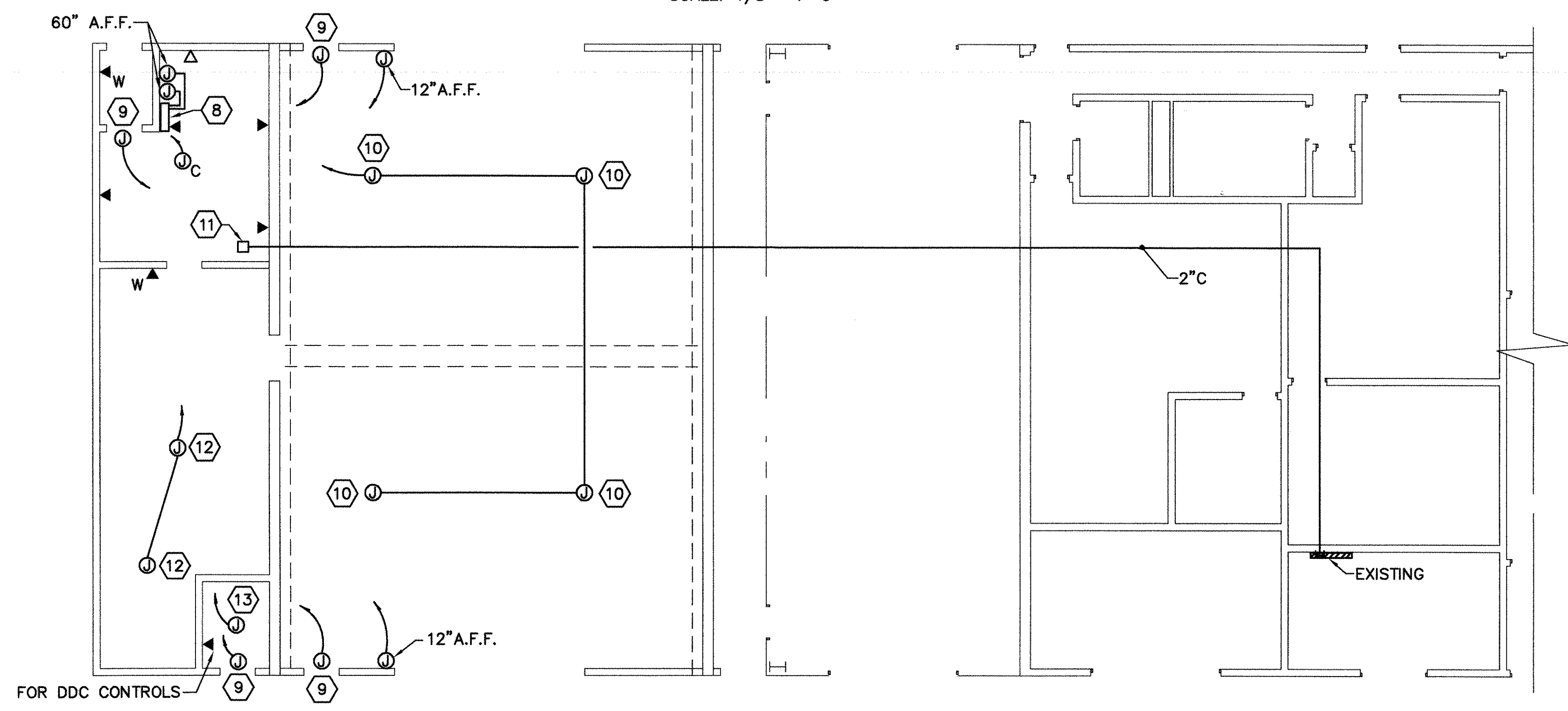


QUICK/BOEHM & ASSOCIATES, INC. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 (803) 799-1111 FAX (803) 799-1112 WWW.QBANDASSOCIATES.COM		PREP BY: WILLIAMSON DATE: 11/13/01 APPROVED: WILLIAMSON DATE: 11/13/01
REV. DESCRIPTION 1. CONFORMED TO AS-BUILT, MAY 22, 2001 2. CORRECTED TO AS-BUILT, MAY 22, 2001		PROJECT: SUMMIT, SOUTH CAROLINA DRAWING: ADAL SQUAD OPS/IGLOO/MAINT. BAY ELECTRICAL LIGHTING AND LIGHTNING PROTECTION PLANS - MAINT. BAY
DEPARTMENT OF THE NAVY SHAW AIR FORCE BASE ADAL SQUAD OPS/IGLOO/MAINT. BAY ELECTRICAL LIGHTING AND LIGHTNING PROTECTION PLANS - MAINT. BAY		SEAL AREA THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY J. TRAVIS WILLIAMSON SEAL #10974, ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.
RECORD DRAWING DATE: 7/30/01 CODE I.D. NO.: DRAWING SIZE: D SPEC. NO.: 06-97-0942 CONSTR. CONTR. NO.: N62467-97-C-0942 NAVFAC DRAWING NO.: 5348811 SHEET 143 OF 152		E36

(1610, 1606, 1605) / 106-60



POWER FLOOR PLAN - MAINT. BAY
SCALE: 1/8" = 1'-0"



COMMUNICATIONS AND EMPTY CONDUIT FLOOR PLAN - MAINT. BAY
SCALE: 1/8" = 1'-0"

KEYED DEMOLITION NOTES (THIS SHEET ONLY)

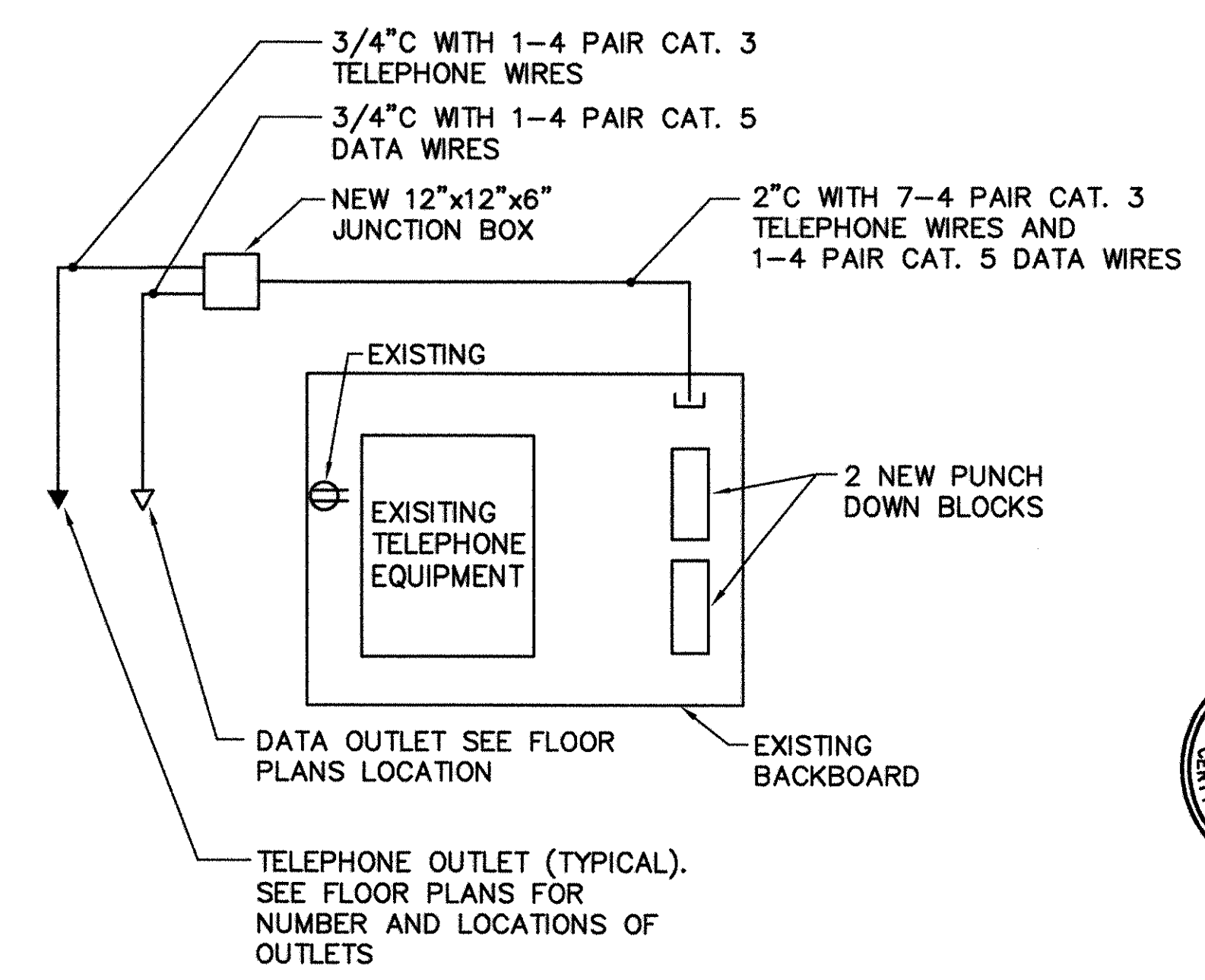
- 1 REMOVE PANEL LA. PROTECT ALL INCOMING CIRCUITS FOR CONNECTION TO NEW PANEL.

KEYED RENOVATION NOTES (THIS SHEET ONLY)

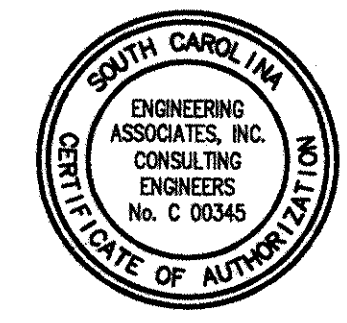
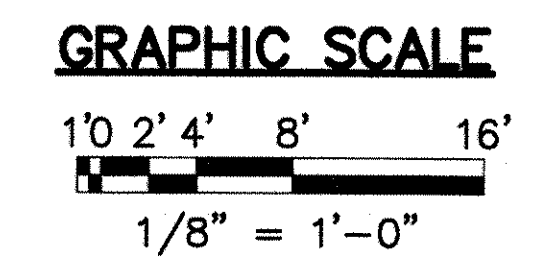
- 1 PROVIDE NEW PANEL LA. RECONNECT ALL EXISTING LOADS.
- 2 RECONNECT NEW FACP TO EXISTING CIRCUIT.
- 3 30/2/1/NF
- 4 60/3/3R/NF
- 5 30/3/3R/NF
- 6 30/2/3R/NF
- 7 PROVIDE ALUMINUM CONDUIT FOR 400HZ WIRING.
- 8 SURFACE MOUNTED BOX FURNISHED BY GOVERNMENT. MOUNTED BY CONTRACTOR. CONTACT JIM HINSON AT 668-5596 FOR BOX.
- 9 FLUSH MOUNT JUNCTION BOX ON WALL CENTERED 1' ABOVE DOOR.
- 10 MOUNT JUNCTION BOX ON BOTTOM OF I BEAMS.
- 11 12"x12"x6" JUNCTION BOX LOCATED ABOVE CEILING FOR TELEPHONE.
- 12 MOUNT JUNCTION BOX BELOW BOTTOM OF MECHANICAL DUCTS.
- 13 MOUNT BOTTOM OF JUNCTION BOX AT THE SAME HEIGHT AS BOTTOM OF LIGHT FIXTURE.
- 14 APPROXIMATE DISTANCE FROM TRANSFORMER TO PANEL LA IS 250 FT.

GENERAL NOTES (THIS SHEET ONLY)

1. EF-1, EF-2, AND EF-4 ARE CONTROLLED BY DDC RELAY.
2. RUN ALL CONDUIT HOMERUNS ON THE EMPTY CONDUIT FLOOR PLAN TO GOVERNMENT FURNISHED BOX.
3. ALL JUNCTION BOXES ON THIS SHEET SHALL BE 3 1/2" OCTAGONAL BY 1 1/2" DEEP WITH COVER. FLUSH MOUNT ALL JUNCTION BOXES UNLESS NOTED OTHERWISE.
4. ALL CONDUIT ON THIS SHEET SHALL BE 3/4" MINIMUM UNLESS NOTED OTHERWISE.
5. FIRE STOP AROUND ALL WALL PENETRATIONS.

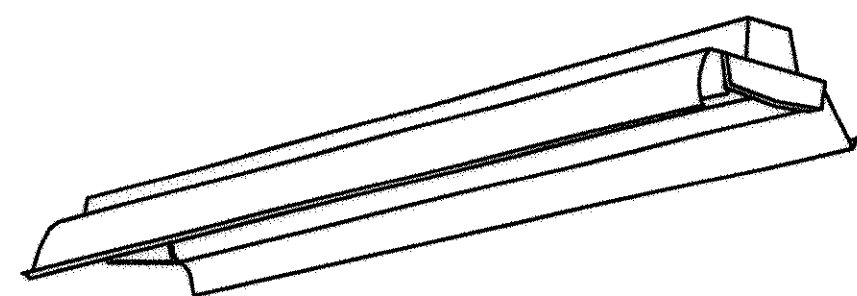


TELEPHONE RISER - MAINT. BAY
SCALE: NONE



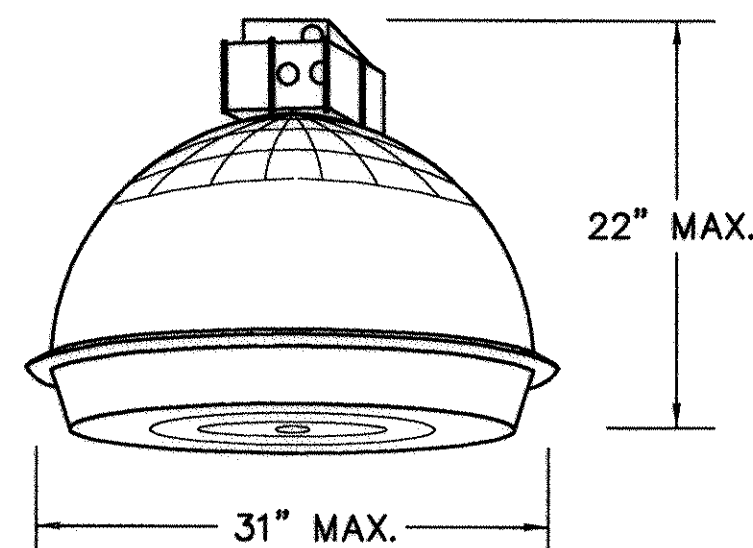
QUICK/ROEM & ASSOCIATES. 247 N. LINDSAY STREET, SUITE 100 CHARLESTON, SC 29403 CHIEF ENGINEER: TRAVIS WILLIAMSON PROJECT ENGINEER: JIM HINSON DATE: 12/22/97 SHEET: 144 OF 152	REV. DESCRIPTION 1. CONFORMED BID DRAWING 2. CONNECTED TO AS-BUILT, MAY 22, 2001	PREP BY: [Signature] DATE: [Blank] APPROVED: [Signature] DATE: [Blank]	OFFICE IN CHARGE: [Blank]
	SUMTER, SOUTH CAROLINA ADAL SQUAD OPS/IGLOO/MAINT. BAY ELECTRICAL POWER, COMMUNICATIONS AND EMPTY CONDUIT PLANS - MAINT. BAY	APPROVED: [Signature] DATE: [Blank]	OFFICE IN CHARGE: [Blank]
	RECORD DRAWING DATE: 7/30/01 CODE: 06-97-0942 SPEC. NO.: 06-97-0942 CONSTR. CONTR. NO.: N62467-97-C-0942 NAVFAC DRAWING NO.: 5348812 SHEET: 144 OF 152	APPROVED: [Signature] DATE: [Blank]	OFFICE IN CHARGE: [Blank]
	THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY J. TRAVIS WILLIAMSON SEAL #10974, ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.	APPROVED: [Signature] DATE: [Blank]	OFFICE IN CHARGE: [Blank]

(160, 1606, 1605) / 106-1000



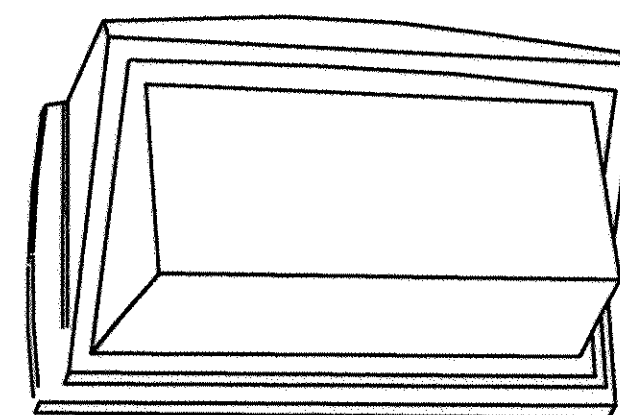
FIXTURE "A"
SCALE: NONE

1. FLUORESCENT INDUSTRIAL.
2. 4' LENGTH, 12" WIDTH, 4" DEPTH.
3. STEEL HOUSING AND REFLECTOR, APERTURED REFLECTOR FOR 5%-10% UPLIGHT, WHITE ENAMEL FINISH.
4. ELECTRONIC BALLAST(S) WITH TOTAL HARMONIC DISTORTION < 20%, POWER FACTOR > .95, U.L. LISTED CLASS P, SOUND RATED A, MAXIMUM ANSI INPUT WATTS FOR 2 LAMPS OF 62 WATTS.
5. 2-F32T8, 3500 K LAMPS.
6. 277 VOLT.
7. MOUNTING HEIGHT 11'-8" A.F.F. TO BOTTOM OF FIXTURE.



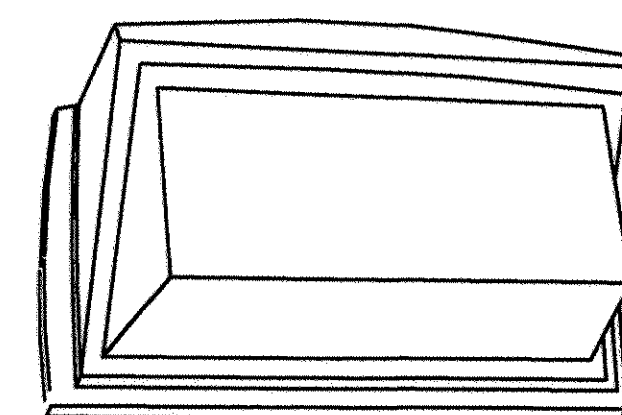
FIXTURE "B"
SCALE: NONE

1. LOW PROFILE, LOW BAY H.I.D. FIXTURE.
2. DIE-CAST ALUMINUM BALLAST HOUSING, ALUMINUM REFLECTOR, ACRYLIC LENS, TOTALLY ENCLOSED AND GASKETED.
3. PENDANT AND HOOK MOUNTED, HOOK SHALL HAVE SAFETY LOCKING DEVICE, PROVIDE TWIST-LOCK RECEPTACLE AND PLUG CONNECTION TO POWER CIRCUIT.
4. U.L. LISTED FOR -30°C TO 40°C AMBIENT OPERATION.
5. 1.8 SPACING TO MOUNTING HEIGHT RATIO.
6. HIGH POWER FACTOR BALLAST (>.9).
7. 1-250 WATT METAL HALIDE.
8. PROVIDE AUTOMATICALLY SWITCHED 150 WATT QUARTZ RESTRIKE SYSTEM WHERE INDICATED.
9. 277V.



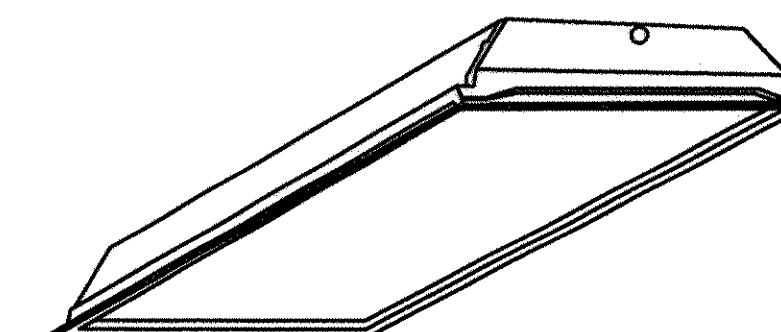
FIXTURE "C"
SCALE: NONE

1. H.I.D. WALL PACK.
2. DIE-CAST ALUMINUM HOUSING AND DOOR FRAME, DARK BRONZE FINISH.
3. TEMPERED GLASS LENS.
4. U.L. LISTED FOR WET LOCATIONS.
5. HIGH POWER FACTOR BALLAST (>.9) FOR STARTING DOWN TO 0°F.
6. 1-100 WATT METAL HALIDE LAMP.
7. 277V.
8. MOUNTING HEIGHT 12'-0" A.F.F. TO BOTTOM OF FIXTURE.



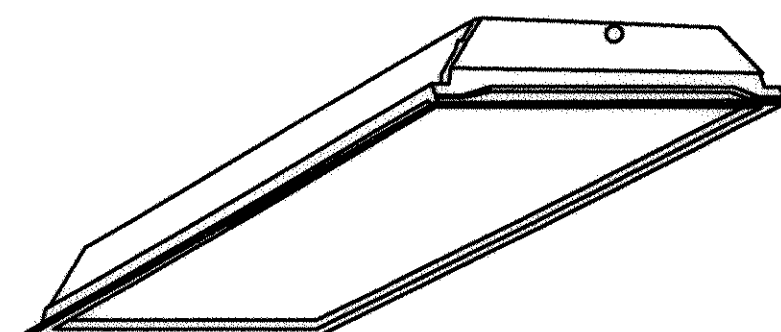
FIXTURE "D"
SCALE: NONE

1. FLUORESCENT WALL PACK.
2. DIE-CAST ALUMINUM HOUSING AND DOOR FRAME, DARK BRONZE FINISH.
3. TEMPERED GLASS LENS.
4. U.L. LISTED FOR WET LOCATIONS.
5. HIGH POWER FACTOR BALLAST (>.9) FOR STARTING DOWN TO 0°F.
6. 1-26 WATT COMPACT FLUORESCENT LAMP.
7. 277V.
8. MOUNTING HEIGHT 10'-0" A.F.F. TO BOTTOM OF FIXTURE.



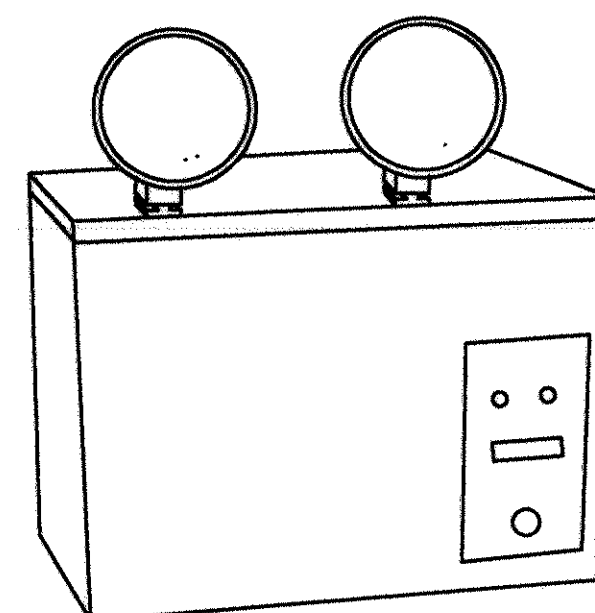
FIXTURE "E"
SCALE: NONE

1. RECESSED FLUORESCENT TROFFER.
2. 2'x4', 3 1/2" (MIN.) TO 4 1/2" (MAX.) HEIGHT.
3. STEEL HOUSING AND FRAME, WHITE ENAMEL FINISH, .125" THICK ACRYLIC PRISMATIC LENS.
4. ELECTRONIC BALLAST(S) WITH TOTAL HARMONIC DISTORTION < 20%, POWER FACTOR > .95, U.L. LISTED CLASS P, SOUND RATED A, MAXIMUM ANSI INPUT WATTS FOR 4 LAMPS OF 115 WATTS.
5. 4-F32T8, 3500K LAMPS.
6. 277V.



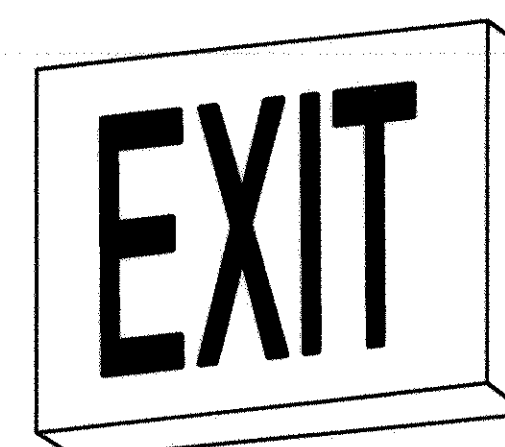
FIXTURE "F"
SCALE: NONE

1. RECESSED FLUORESCENT TROFFER.
2. 2'x4', 3 1/2" (MIN.) TO 4 1/2" (MAX.) HEIGHT.
3. STEEL HOUSING AND FRAME, WHITE ENAMEL FINISH, .125" THICK ACRYLIC PRISMATIC LENS.
4. ELECTRONIC BALLAST(S) WITH TOTAL HARMONIC DISTORTION < 20%, POWER FACTOR > .95, U.L. LISTED CLASS P, SOUND RATED A, MAXIMUM ANSI INPUT WATTS FOR 2 LAMPS OF 62 WATTS.
5. 2-F32T8, 3500K LAMPS.
6. 277V.



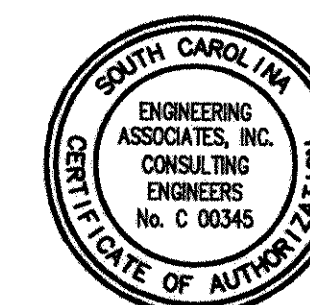
EMERGENCY LIGHTING UNIT
SCALE: NONE

1. STEEL HOUSING, CORROSION-RESISTANT TAN ENAMEL FINISH.
2. MAINTENANCE-FREE LEAD CALCIUM BATTERY.
3. SOLID-STATE CHARGER, TEST SWITCH, CHARGE LIGHT, AUTOMATIC LOW-VOLTAGE DISCONNECT TO PROTECT BATTERY FROM DEEP DISCHARGE.
4. INTEGRAL SELF-DIAGNOSTIC SYSTEM THAT AUTOMATICALLY TESTS LAMPS, BATTERY AND CHARGER BOARD ONCE A MONTH AND INDICATES STATUS.
5. WALL MOUNTED 10' A.F.F.
6. 2-12 WATT PAR 36 SEALED BEAM HALOGEN LAMPS.
7. 277V.



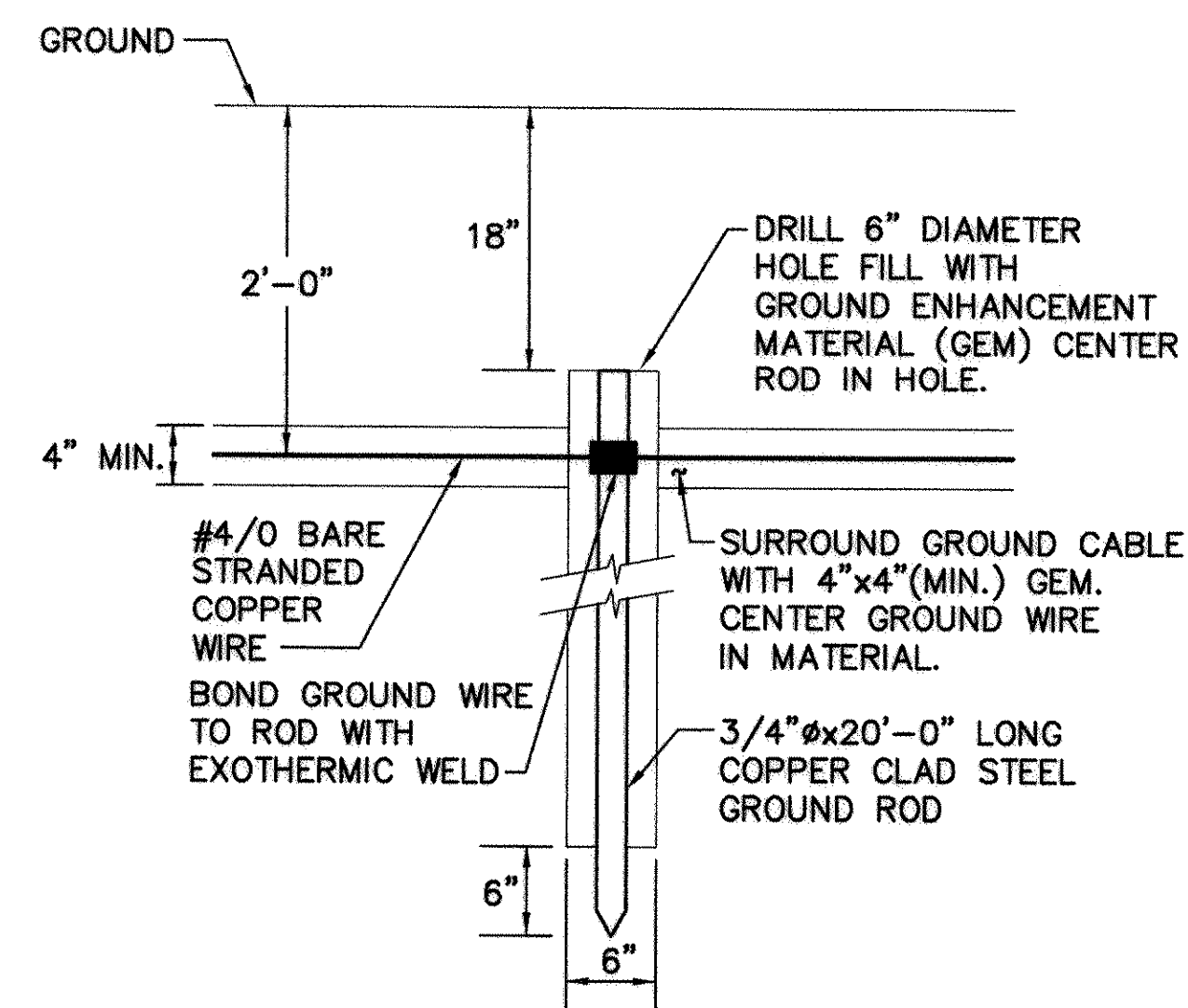
EXIT SIGN
SCALE: NONE

1. LED EXIT SIGN.
2. DIE-CAST ALUMINUM CONSTRUCTION, BLACK TRIM, BRUSHED ALUMINUM STENCIL FACE WITH DIFFUSER, UNIVERSAL MOUNTING.
3. 6" HIGH x 3/4" STROKE RED LETTERS.
4. SINGLE OR DOUBLE FACE AND DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS.
5. MEETS NFPA 101 REQUIREMENTS.
6. EMERGENCY BATTERY POWER PACK FOR 90 MINUTE OPERATION WITH CHARGER, TEST SWITCH AND READY LIGHT.
7. LED LAMPS TO MEET CODE REQUIREMENTS, MAXIMUM FIXTURE WATTAGE OF 6.5 WATTS PER FACE & 25 YEAR MINIMUM LAMP LIFE.
8. 277V.

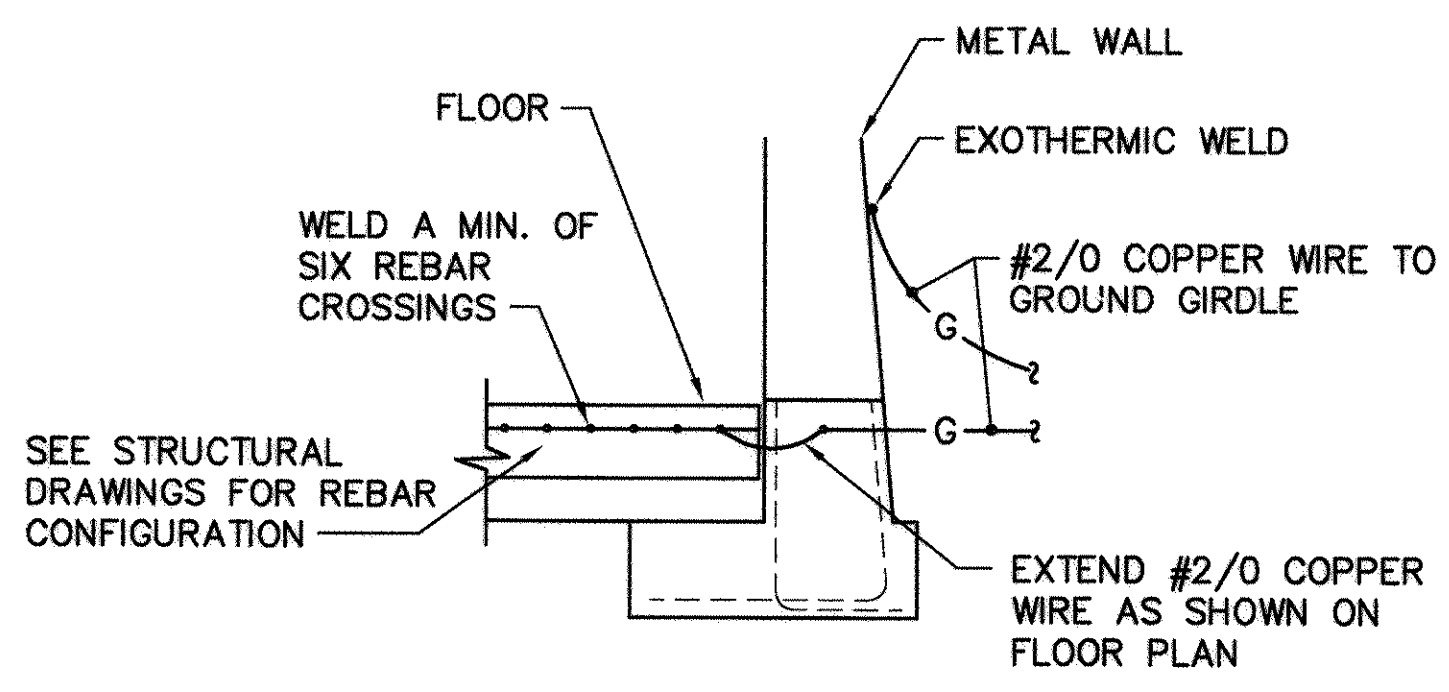


CLICK/ROSEH & ASSOCIATES. 2000 WILKINS STREET, SUITE 100 CHARLESTON, SC 29401		DESIGNER: WILLIAMSON CHECKER: WILLIAMSON DATE: 12/22/97
REV.	DESCRIPTION	DATE
1	CONFORMED BID DRAWING	
2	AS-BUILT, NO CORRECTIONS	MAY 22, 2001
SOUTHERN DIVISION SUMMER, SOUTH CAROLINA		DATE: 8/13/01
SHAW AIR FORCE BASE ADAL SQUAD OPS/ICLOO/MAINT. BAY		DATE: 8/13/01
LIGHTING DETAILS - MAINT. BAY		DATE: 8/13/01
THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY J. TRAVIS WILLIAMSON SEAL #10974, ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.		DATE: 8/13/01
RECORD DRAWING DATE 7/30/01		DATE: 8/13/01
CODE I.D. NO. DRAWING SIZE: SPEC. NO. 06-97-0942		DATE: 8/13/01
CONSTR. CONTR. NO. N62467-97-C-0942		DATE: 8/13/01
NAVFAC DRAWING NO. 5348813		DATE: 8/13/01
SHEET 145 OF 152		DATE: 8/13/01
E38		DATE: 8/13/01

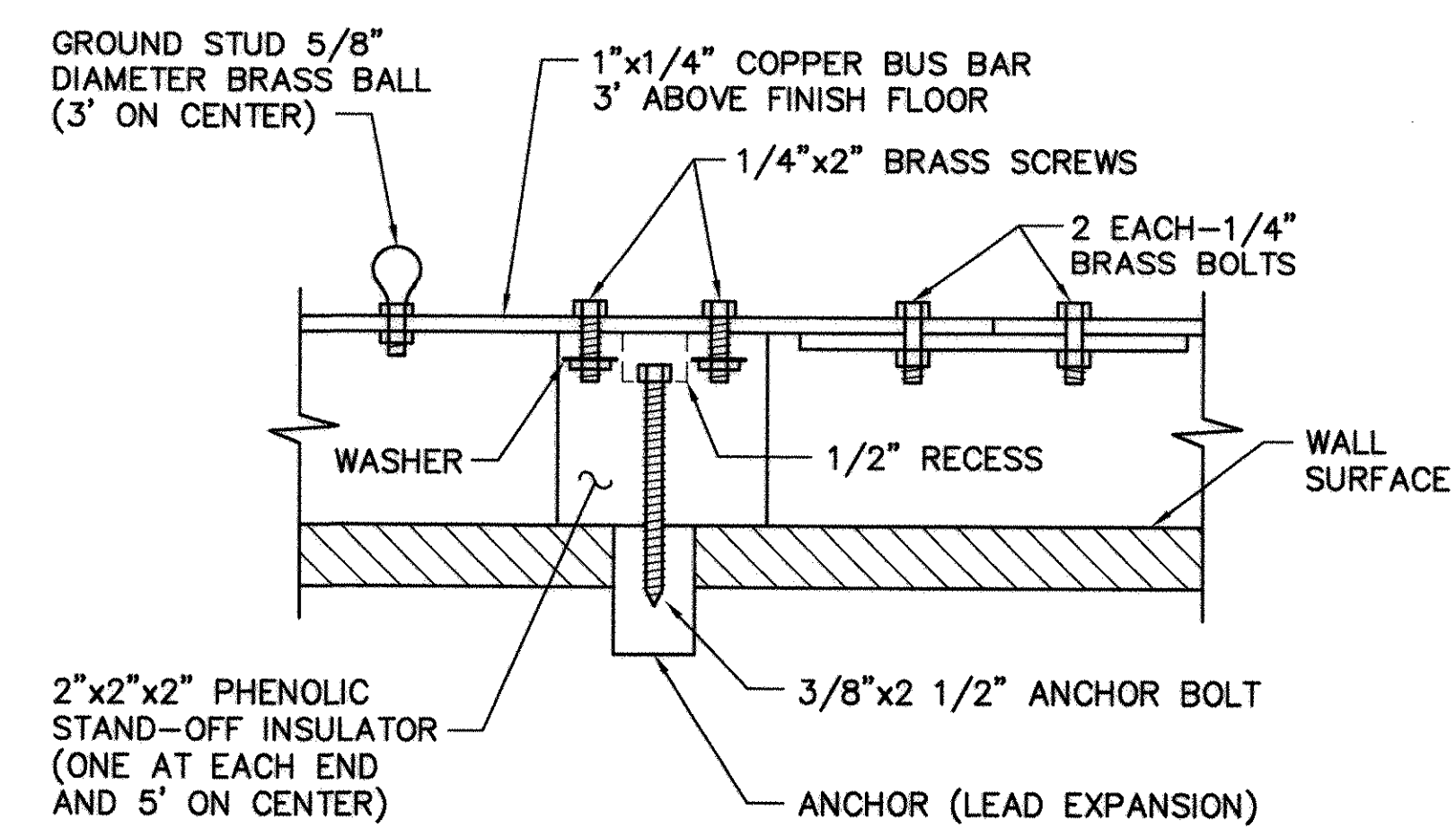
(1610, 1606, 1605) / 106-0000



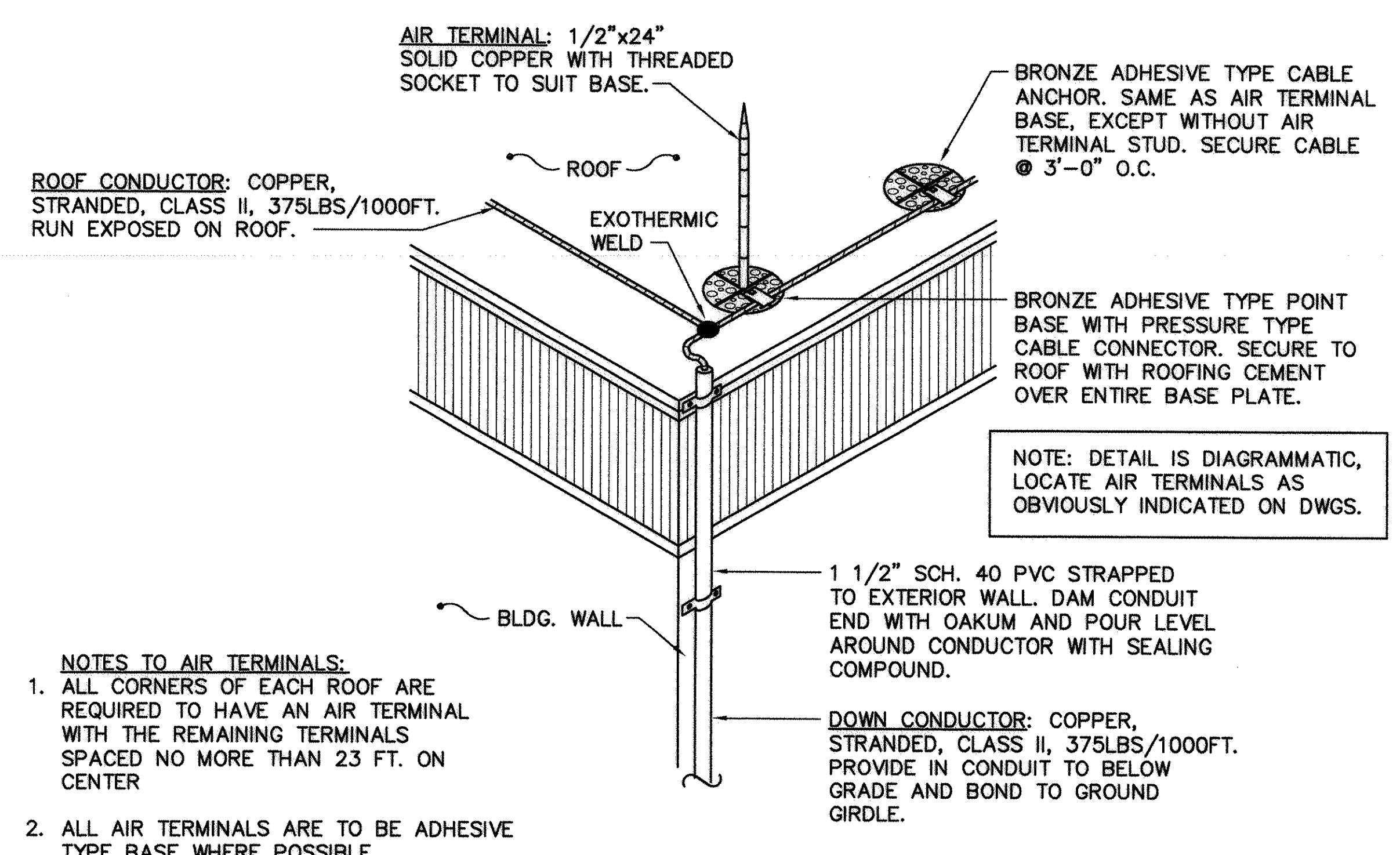
1
E36
GROUND ROD INSTALLATION DETAIL
SCALE: NONE



2
E36
FLOOR SLAB GROUNDING DETAIL
SCALE: NONE

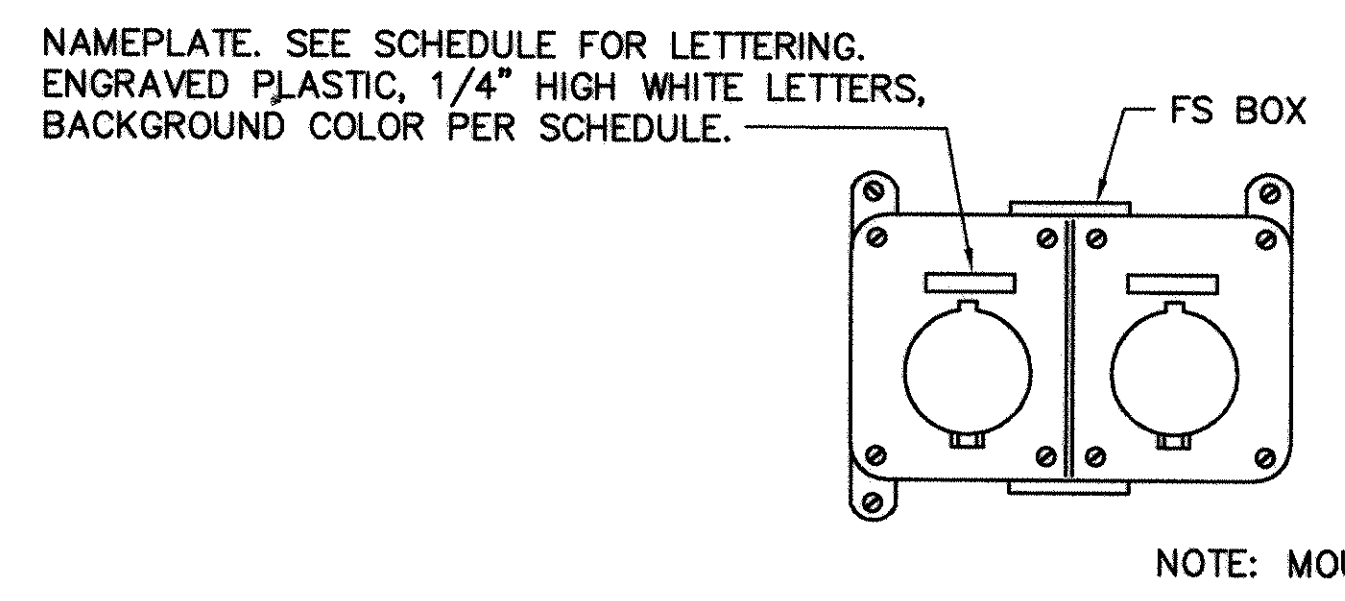


3
E37
GROUND BUS MOUNTING DETAIL
SCALE: NONE



4
E36
TYPICAL AIR TERMINAL AND CONDUCTORS ON FLAT ROOF
SCALE: NONE

SCHEDULE - RECEPTACLES							
SYMBOL	AMP.	VOLTS	PHASE & WIRES	FREQUENCY	NAMEPLATE		
					COLOR	LETTERING	NUMBER
⊙-I	30	28	2 WIRES	DC	BLUE	28 VOLTS - DC	NEMA RECEPT. L2-20R PLUG L2-20P
⊙-I	50	120/208	3 PHASE 4 WIRES & GROUND	400 HZ	YELLOW	120/208 VOLTS - 3 PHASE - 4 WIRES - 400 HERTZ	IEC PLUG PS560P9S RECEPT. PS560R9S BACKBOX PS500B9W
⊙-I	20	120	2 WIRES & GROUND	60 HZ	BLACK	120 VOLTS	NEMA RECEPT. L5-20R PLUG L5-20P
⊙-I	30	277/480	3 PHASE 4 WIRES & GROUND	60 HZ	RED	277/480 VOLTS - 3 PHASE - 4 WIRES - 60 HERTZ	NEMA RECEPT. L22-30R PLUG L22-30P
⊙-I	30	120/208	3 PHASE 4 WIRES & GROUND	60 HZ	BROWN OR GOLD	120/208 VOLTS - 3 PHASE - 4 WIRES - 60 HERTZ	NEMA RECEPT. L21-30R PLUG L21-30P



5
E37
RECEPTACLE DETAIL
SCALE: NONE

NOTE: FURNISH ONE MATCHING PLUG FOR EACH RECEPTACLE. TURN OVER TO THE OFFICER IN CHARGE.



QUICK/ROEHM & ASSOCIATES, INC.
247 W. KING STREET, SUITE 100
CHARLESTON, SC 29403
CHIEF ENGINEER: J. TRAVIS WILLIAMSON
DESIGNER: J. TRAVIS WILLIAMSON
CHECKER: J. TRAVIS WILLIAMSON
DATE: MAY 22, 2001
PRINCIPAL: J. TRAVIS WILLIAMSON
SHEET: 146 OF 152
E39

REV. DESCRIPTION
1. CONFORMED TO DRAWING
2. AS-BUILT, NO CORRECTIONS, MAY 22, 2001
3. APPROVED BY COMMANDER, NAVFAC
4. APPROVED BY OFFICER IN CHARGE

NAVY FACILITIES ENGINEERING COMMAND
SOUTHERN DIVISION
SUMMIT, SOUTH CAROLINA
SHAW AIR FORCE BASE
ADAL SQUAD OPS/IGLOO/MAINT. BAY
DETAILS - MAINT. BAY

THIS DOCUMENT WAS
ORIGINALLY ISSUED
AND SEALED BY
J. TRAVIS WILLIAMSON
SEAL #10974, ON
12/22/97
THIS MEDIA SHALL
NOT BE CONSIDERED A
CERTIFIED DOCUMENT.

RECORD DRAWING DATE
7/30/01
CODE I.D. NO.
DRAWING SIZE: 0
SPEC. NO. 06-97-0942
CONSTR. CONTR. NO.
N62467-97-C-0942
NAVFAC DRAWING NO.
5348814
SHEET 146 OF 152

(1610, 1606, 1605) / 1106-1200

EXISTING GE NHB PANEL

PANEL LA				400 AMP MAINS		SURFACE			
480Y/277 V, 3 PH, 4 W, 60 HZ,				400 AMP MAIN BKR		TOTAL SPACES 42			
ALL BREAKERS SHALL HAVE A MINIMUM INTERRUPTING RATING OF 14,000 AMPS. PANEL SHALL BE PROVIDED WITH SEPARATE GROUND BUS. BOTTOM FEED SERVICE ENTRANCE RATED.									
CKT No.	LOAD DESCRIPTION	BREAKERS		KVA	BREAKERS		LOAD DESCRIPTION	CKT No.	
		POLE	AMP		AMP	POLE			
1	SPACE	1				1	SPACE	2	
3	SPACE	1				1	SPACE	4	
5	EXIST OUTSIDE LTS	1	20	2.7		1	SPACE	6	
7	EXIST OUTSIDE LTS	1	20	2.7	3.4	20	1	LIGHTS	8
9	SPARE	1	20		3.4	20	1	LIGHTS	10
11	SPARE	1	20		3.4	20	1	LIGHTS	12
13									14
15	EXIST RECEPT 1	3	30	16.6	16.6	30	3	EXIST RECEPT 4	16
17									18
19									20
21	EXIST RECEPT 2	3	30	16.6	16.6	30	3	EXIST RECEPT 5	22
23									24
25									26
27	EXIST RECEPT 3	3	30	16.6	16.6	30	3	EXIST RECEPT 6	28
29									30
31									32
33	AIR COMP	3	60	22.4	17.4	40	3	AIR COMP	34
35									36
37	400 HZ POWER SOURCE	3	100	75.0	75.0	100	3	TRANSFORMER	38
39									40
41									42
TOTAL CONNECTED LOAD 301.6 KVA									

PANEL LC (NEW)				225 AMP MAINS		SURFACE		X	
480Y/277 V, 3 PH, 4 W, 60 HZ,				225 AMP MAIN BKR		TOTAL SPACES 30			
ALL BREAKERS SHALL HAVE A MINIMUM INTERRUPTING RATING OF 14,000 AMPS. PANEL SHALL BE PROVIDED WITH SEPARATE GROUND BUS.									
CKT No.	LOAD DESCRIPTION	BREAKERS		KVA	BREAKERS		LOAD DESCRIPTION	CKT No.	
		POLE	AMP		AMP	POLE			
1	LIGHTS BAY 4	1	20	3.6	16.6	30	3	RECEPTACLE BAY 4	2
3	OFFICE & SHOP	1	20	1.4					4
5	OUTSIDE LIGHTS	1	20	.6					6
7	LIGHTS CORRIDOR	1	20	.4					8
9	SPARE	1	20		16.6	30	3	RECEPTACLE BAY 4	10
11	SPARE	1	20						12
13									14
15	PHP-1	3	60	39.9	36.0	45	3	TRANSFORMER	16
17									18
19									20
21	PHP-2	3	20	13.3	8.3	30	3	RECEPTACLE SHOP	22
23									24
25									26
27	SPACE 100A	3					3	SPACE 100A	28
29									29
									30
TOTAL CONNECTED LOAD 130.6 KVA									

EXISTING GE PANEL

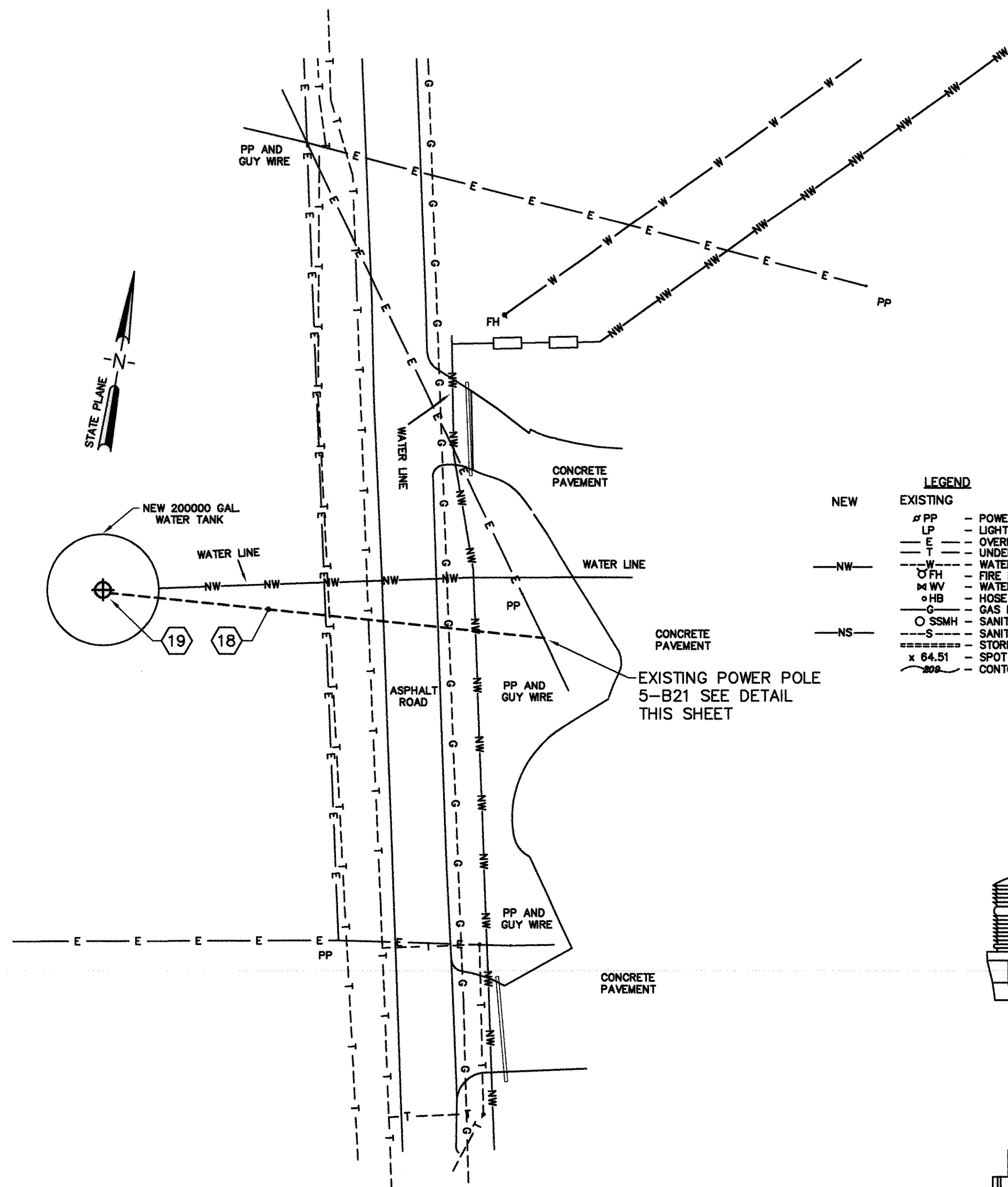
PANEL DCA				400 AMP MAINS				SURFACE			
28 V, DC				400 AMP MAIN BKR				TOTAL SPACES 36			
ALL BREAKERS SHALL HAVE A MINIMUM INTERRUPTING RATING OF 10,000 AMPS. PANEL SHALL BE PROVIDED WITH SEPARATE GROUND BUS.											
CKT No.	LOAD DESCRIPTION	BREAKERS		KVA		BREAKERS		LOAD DESCRIPTION	CKT No.		
		POLE	AMP			AMP	POLE				
1	EXIST RECEPT	2	30	.6	.6	30	2	EXIST RECEPT	2		
3									4		
5	EXIST RECEPT	2	30	.6	.6	30	2	EXIST RECEPT	6		
7									8		
9	EXIST RECEPT	2	30	.6		20	1	EXIST SPARE	10		
11						20	1	EXIST SPARE	12		
13	EXIST RECEPT	2	30	.6		20	1	EXIST SPARE	14		
15						20	1	EXIST SPARE	16		
17	FUTURE RECEPT BAY 3	2	30	.6	.6	30	2	NEW RECEPT BAY 4	18		
19									20		
21	FUTURE RECEPT BAY 3	2	30	.6	.6	30	2	NEW RECEPT BAY 4	22		
23									24		
25	SPACE	1			.6	30	2	NEW RECEPT SHOP	26		
27	SPACE	1							28		
29	SPACE	1					1	SPACE	30		
31	SPACE	1					1	SPACE	32		
33	SPACE	1					1	SPACE	34		
35	SPACE	1					1	SPACE	36		
TOTAL CONNECTED LOAD 6.6 KVA											

PANEL LA (NEW)										600 AMP MAINS	SURFACE
480Y/277 V, 3 PH, 4 W, 60 HZ,		500 AMP MAIN BKR		TOTAL SPACES		42					
ALL BREAKERS SHALL HAVE A MINIMUM INTERRUPTING RATING OF 14,000 AMPS. PANEL SHALL BE PROVIDED WITH SEPARATE GROUND BUS. BOTTOM FEED SERVICE ENTRANCE RATED.											
CKT No.	LOAD DESCRIPTION	BREAKERS		KVA		BREAKERS		LOAD DESCRIPTION	CKT No.		
		POLE	AMP			AMP	POLE				
1	EXIST LIGHTS	1	20	2.7	3.4	20	1	LIGHTS	2		
3	EXIST LIGHTS	1	20	2.7	3.4	20	1	LIGHTS	4		
5	SPARE	1	20		3.4	20	1	LIGHTS	6		
7									8		
9	PANEL LC	3	225	130.6	16.6	30	3	EXIST RECEPT 4	10		
11									12		
13									14		
15	EXIST RECEPT 1	3	30	16.6	16.6	30	3	EXIST RECEPT 5	16		
17									18		
19									20		
21	EXIST RECEPT 2	3	30	16.6	16.6	30	3	EXIST RECEPT 6	22		
23									24		
25									26		
27	EXIST RECEPT 3	3	30	16.6	17.4	40	3	AIR COMP	28		
29									30		
31									32		
33	AIR COMP	3	60	22.4	59.0	225	3	FUTURE PANEL "LB"	34		
35									36		
37	400 HZ POWER								38		
39	SOURCE	3	100	75.0	75.0	100	3	TRANSFORMER	40		
41									42		
TOTAL CONNECTED LOAD 494.6 KVA DEMAND LOAD 294.7 KVA											

PANEL PD (NEW)					225 AMP MAINS		SURFACE		
208Y/120 V, 3 PH, 4 W, 60 HZ,					110 AMP MAIN BKR		TOTAL SPACES 30		
ALL BREAKERS SHALL HAVE A MINIMUM INTERRUPTING RATING OF 10,000 AMPS.									
PANEL SHALL BE PROVIDED WITH SEPARATE GROUND BUS.									
CKT No.	LOAD DESCRIPTION	BREAKERS		KVA	BREAKERS		LOAD DESCRIPTION	CKT No.	
		POLE	AMP		AMP	POLE			
1	RECEPTACLE	1	20	.4	7.0	30	3	RECEPTACLE	2
3	RECEPTACLE	1	20	1.2					4
5	RECEPTACLE	1	20	1.2					6
7	RECEPTACLE	1	20	.6					8
9	RECEPTACLE	1	20	1.0	7.0	30	3	RECEPTACLE	10
11	RECEPTACLE	1	20	.5					12
13	RECEPTACLE	1	20	1.0					14
15	EF-1 & EF-3	1	20	.5					16
17	EF-2 & EF-4	1	20	.5	3.5	30	3	RECEPTACLE	18
19	RECEPTACLE	1	20	.4					20
21	BSAC	1	20	.2					22
23	HP-1	2	15	3.1					24
25									26
27	AHU-1	2	30	7.5			3	SPACE 60A	28
29									30
31	RECEPTACLE	1	20	.6					32
33	SPARE	1	20				3	SPACE 100A	34
35	SPARE	1	20						36
37	FLOW ALARM	1	20	.1					38
39	FT	1	20	.4					40
41	FACP	1	20	.5					42
TOTAL CONNECTED LOAD 37.2 KVA									

EXISTING GE PANEL

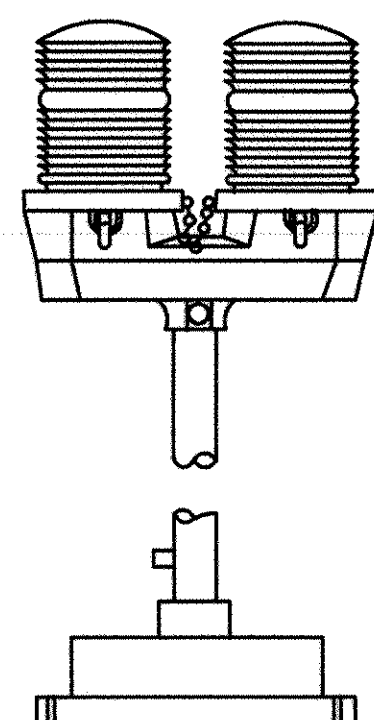
PANEL HFA				400 AMP MAINS		SURFACE ☒			
120/208 V, 3 PH, 4 W, 400 HZ,		300 AMP MAIN BKR		TOTAL SPACES		36			
ALL BREAKERS SHALL HAVE A MINIMUM INTERRUPTING RATING OF 10,000 AMPS. PANEL SHALL BE PROVIDED WITH SEPARATE GROUND BUS.									
CKT No.	LOAD DESCRIPTION	BREAKERS		KVA	BREAKERS		LOAD DESCRIPTION	CKT No.	
		POLE	AMP		AMP	POLE			
1								2	
3	EXIST RECEPT	3	50	12.0	12.0	50	3	EXIST RECEPT	4
5									6
7									8
9	EXIST RECEPT	3	50	12.0	12.0	50	3	EXIST RECEPT	10
11									12
13	EXIST SPARE	1	20						14
15	EXIST SPARE	1	20		12.0	50	3	EXIST RECEPT	16
17	EXIST SPARE	1	20						18
19									20
21	RECEPT BAY 4	3	50	12.0	12.0	50	3	EXIST RECEPT	22
23									24
25									26
27	RECEPT BAY 4	3	50	12.0	12.0	50	3	FUTURE RECEPT BAY 3	28
29									30
31									32
33	RECEPT SHOP	3	50	6.0	12.0	50	3	FUTURE RECEPT BAY 3	34
35									36
TOTAL CONNECTED LOAD								126.0 KVA	



ELECTRICAL SITE PLAN - WATER TANK

SCALE: 1" = 30'-0"

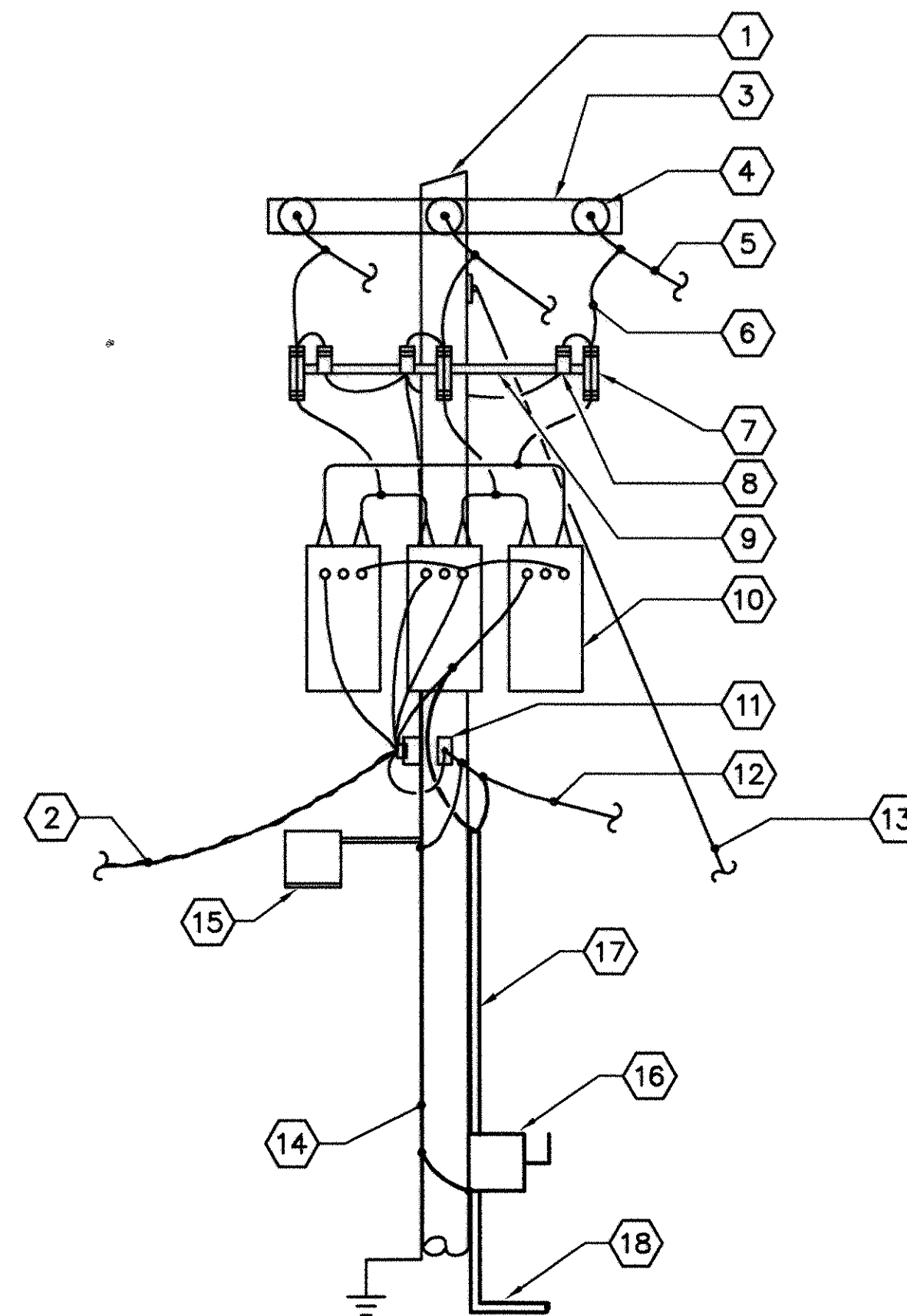
- LEGEND**
- NEW
EXISTING
- PP - POWER POLE
 - LP - LIGHT POLE
 - E - OVERHEAD POWER LINE
 - T - UNDERGROUND TELEPHONE
 - W - WATER LINE
 - OFH - FIRE HYDRANT
 - WV - WATER VALVE
 - HB - HOSE BIB
 - G - GAS MAIN
 - SSMH - SANITARY SEWER MANHOLE
 - S - SANITARY SEWER LINE
 - SD - STORM DRAIN PIPE
 - x 64.51 - SPOT ELEVATION
 - 200 - CONTOUR LINE



FIXTURE "G"

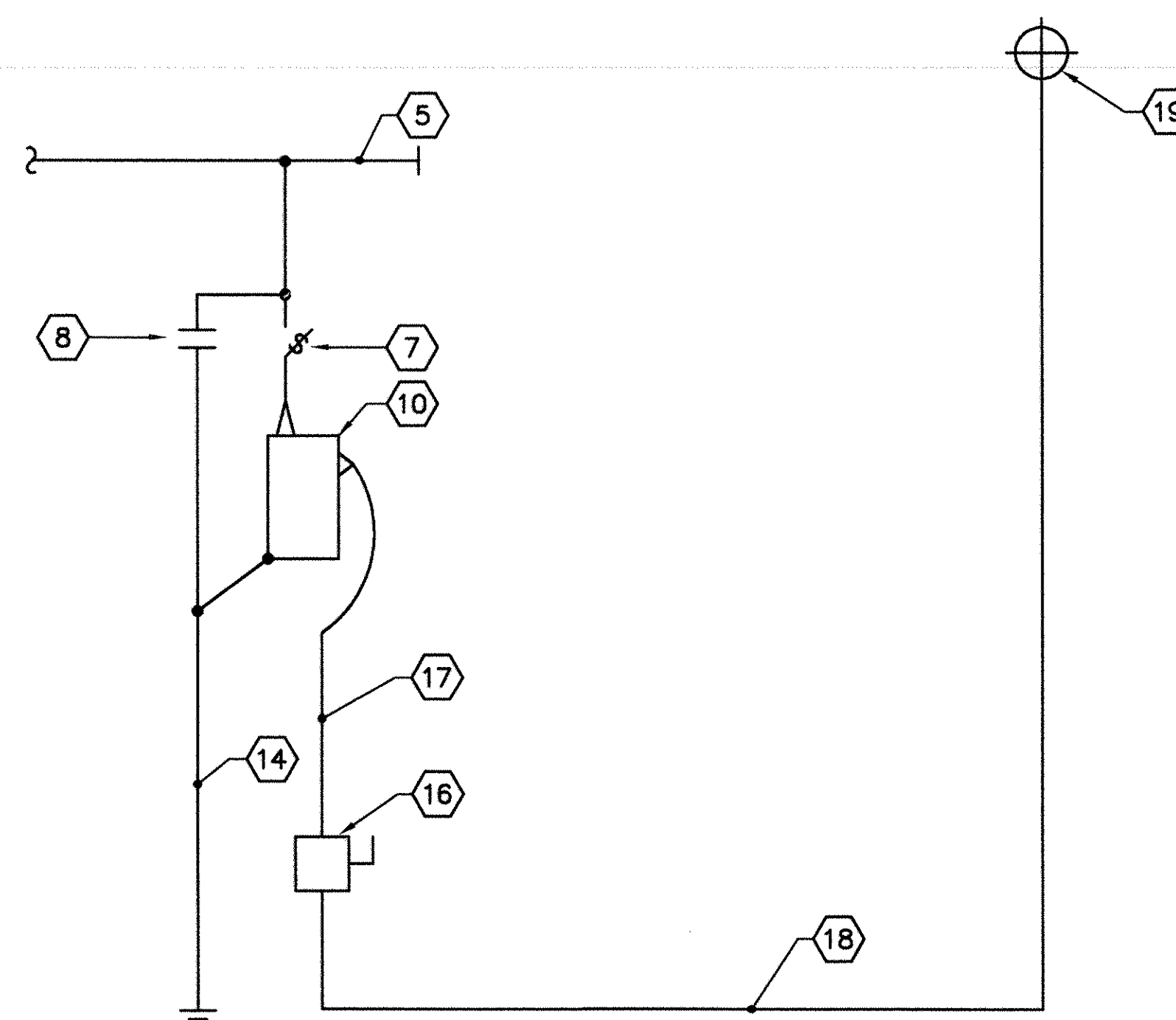
SCALE: NONE

1. OBSTRUCTION LIGHT.
2. LUMINAIRE SHALL MEET FEDERAL AVIATION ADMINISTRATION SPECIFICATIONS FOR OBSTRUCTION LIGHTING (L-810).
3. CAST ALUMINUM HOUSING.
4. ONE PIECE 360° RED HEAT RESISTANT GLASS FRESNEL GLOBE. PROVIDE TOGGLE TYPE LATCHES AND CLAMPING TO SECURE GLOBES. PROVIDE SAFETY CHAINS ON GLOBES.
5. MOUNT PHOTO ELECTRIC CONTROL TO CONTROL LAMPS.
6. MOUNT LUMINAIRE ON 1" RIGID STEEL CONDUIT. PROVIDE JUNCTION BOX AND MOUNTING PLATE AT BASE UNLESS INDICATED OTHERWISE.
7. LAMPS SHALL BE RATED 100 WATT 130 VOLT. MULTIPLE, MEDIUM BASE. TWO LAMPS ARE REQUIRED.
8. PROVIDE WITH RELAY TO OPERATE LAMPS INDIVIDUALLY, SWITCHING AUTOMATICALLY FROM ONE LAMP TO THE OTHER SHOULD ONE LAMP FAIL.
9. PROVIDE INTERNAL GREEN GROUNDING SCREW.
10. 120V.



POLE 5-B21 DETAIL - WATER TANK

SCALE: NONE



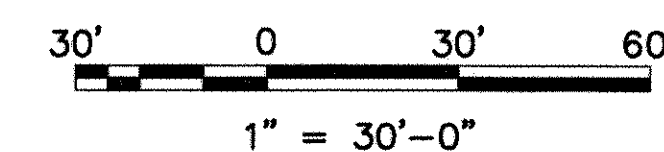
POWER RISER - WATER TANK

SCALE: NONE

KEYED NOTES (THIS SHEET ONLY)

1. EXISTING WOOD POLE 5-B21.
2. EXISTING SERVICE DROP.
3. EXISTING DEADEND CROSSARM.
4. EXISTING SUSPENSION INSULATORS.
5. EXISTING PRIMARY CONDUCTOR.
6. EXISTING JUMPER.
7. EXISTING FUSED CUTOUT.
8. EXISTING LIGHTNING ARRESTER.
9. EXISTING MOUNTING BRACKET.
10. EXISTING 3-25 KVA 240/120V, 1Ø POLE MOUNTED TRANSFORMERS.
11. EXISTING SPOOL INSULATOR ON BRACKET.
12. EXISTING NEUTRAL.
13. EXISTING DOWN GUY AND ANCHOR.
14. EXISTING COPPER GROUND AND GROUND ROD.
15. EXISTING STREET LIGHT.
16. NEW 30/2/3R/5AF LOCKABLE SERVICE EQUIPMENT RATED DISCONNECT. MOUNT 60" ABOVE GRADE. PROVIDE LOCK TO LOCK DISCONNECT IN THE ON OR OFF POSITION.
17. NEW 1" RIGID STEEL CONDUIT RISER WITH 2#10 TYPE THWN CONDUCTORS. SEAL TOP WITH WATERTIGHT SEALANT.
18. NEW 1" CONDUIT UNDERGROUND WITH 2#10 TYPE THWN CONDUCTORS AND 1#10 TYPE TW GROUND TO WATER TANK. BURY CONDUIT A MINIMUM OF 30" BELOW GRADE. CONDUIT UNDERGROUND MAY BE SCHEDULE 80 PVC. CONDUIT ABOVE GROUND TO 30" BELOW GRADE SHALL BE RIGID STEEL INCLUDING ELBOW.
19. OBSTRUCTION LIGHT FIXTURE "G" MOUNTED ON TOP CENTER OF NEW WATER TANK.

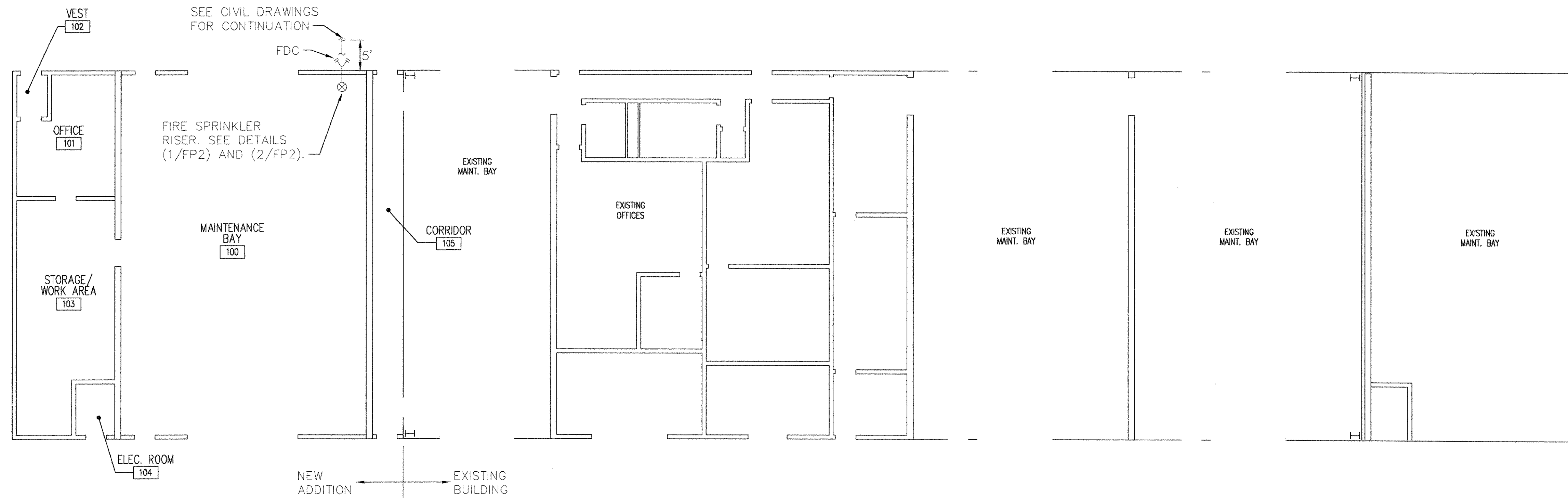
GRAPHIC SCALE



BID ITEM

GLICK/BOEHM & ASSOCIATES 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 DSG WILLIAMSON WILLIAMSON SUP WILLIAMSON CH ENGR CH ENGR PRINCIPAL-22 DEC 97		PREP BY DATE APPROVD
REV. DESCRIPTION CONFORMED BID DRAWING AS-BUILT, NO CORRECTIONS, MAY 22, 2001		REV. DESCRIPTION CONFORMED BID DRAWING AS-BUILT, NO CORRECTIONS, MAY 22, 2001
SOUTHERN DIVISION CHARLESTON, S.C. SHAW AIR FORCE BASE ADAL SQUAD OPS/IGLOO/MAINT. BAY WATER TANK ELECTRICAL SITE PLAN AND DETAILS		SEAL AREA THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY J. TRAVIS WILLIAMSON SEAL #10974, ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.
RECORD DRAWING DATE 7/30/01		SHEET 148 OF 152 E41

1610, 1604, 1605/106-106-11



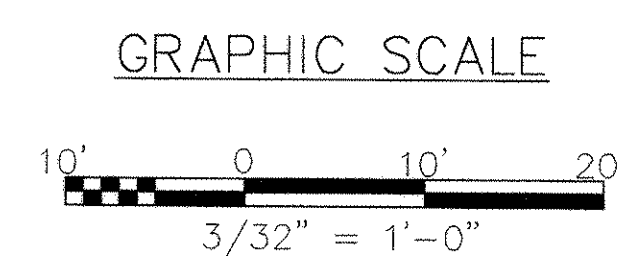
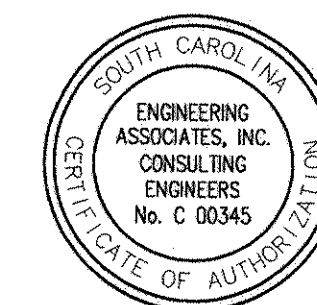
FIRE PROTECTION PLAN — MAINT. BAY
SCALE: 3/32" = 1'-0"

FIRE PROTECTION GENERAL NOTES

1. PROVIDE COMPLETE COVERAGE FIRE SPRINKLER SYSTEM FOR THE NEW ADDITION. SEE SPECIFICATION SECTION 13930 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
2. ALL ITEMS SHALL BE NEW, UNLESS NOTED OTHERWISE.
3. ALL MATERIALS AND EQUIPMENT SHALL BE CURRENT PRODUCTS BY MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH PRODUCTS.
4. COORDINATE LOCATION OF FIRE PROTECTION WORK WITH ALL TRADES TO AVOID CONFLICTS AND INTERFERENCES. REFER TO DRAWING M3 FOR DUCT LOCATIONS.
5. INSTALL ALL EQUIPMENT AND MATERIAL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
6. PROVIDE OWNER WITH CERTIFICATES OF FINAL INSPECTION AND ACCEPTANCE FROM AUTHORITY HAVING JURISDICTION.
7. ALL EQUIPMENT AND PIPE SHALL BE SUPPORTED FROM BUILDING STRUCTURE ABOVE, UNLESS NOTED OTHERWISE.
8. WHERE PIPES PENETRATE FIRE RATED BARRIERS (WALLS, FLOORS AND CEILINGS) SEAL OPENING AROUND PIPES AND DUCTWORK WITH U.L. LISTED FIRE STOPPING MATERIAL TO MAINTAIN THE FIRE RATING OF THE BARRIER.
9. PROVIDE EXPANSION-DEFLECTION JOINTS WHERE PIPE CROSSES BUILDING EXPANSION OR SEISMIC JOINTS.

FIRE PROTECTION LEGEND

FP#	DRAWING DESIGNATION
FDC	FIRE DEPARTMENT CONNECTION
F.S.	FLOW SWITCH
T.S.	TAMPER SWITCH
— F —	FIRE PROTECTION WATER SUPPLY
	FIRE ALARM HORN WITH STROBE
	OS&Y VALVE WITH TAMPER SWITCH
	CHECK VALVE
	RISER SPRINKLER



GLICK/BOEHM & ASSOCIATES, 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 CHAPMAN PRECOURT SUPPLY WILLIAMSON CH ENGR PRINCIPAL-22 DEC 97 EIC OFFICER IN CHARGE		REV. DESCRIPTION CONFORMED BID DRAWING AS-BUILT, NO CORRECTIONS, MAY 22, 2001 APPROVED <i>gdc</i> DATE 8/13/01	PREP BY DATE	APPROVD DATE
SOUTHERN DIVISION CHARLESTON, SC SHAW AIR FORCE BASE ADAL SQUAD OPS/IGLOO/MAINT. BAY FIRE PROTECTION PLAN - MAINT. BAY		SUMTER, SOUTH CAROLINA ETD FOR COMMANDER, NAVFAC DATE	APPROVED DATE	APPROVED DATE
SEAL AREA THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY GLENN W. CHAPMAN SEAL #19721, ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.		RECORD DRAWING DATE 7/30/01 CODE I.D. NO. DRAWING SIZE: D SPEC. NO. 06-97-0942 CONSTR. CONTR. NO. N62467-97-C-0942 NAVFAC DRAWING NO. 5348817 SHEET 149 OF 152	FP1	149

(1610, 1606, 1605) / 106-002

[illegible]

- | | |
|---|--|
|  | KEYED REMOVAL NOTE IDENTIFIER |
|  | KEYED DEMOTION NOTE IDENTIFIER |
|  | DUCT SMOKE DETECTOR (NUMBER INDICATES ZONE) |
|  | FIRE ALARM HEAT DETECTOR (NUMBER INDICATES ZONE) |
|  | TAMPER SWITCH |
|  | FLOW SWITCH |
|  | FIRE ALARM MANUAL PULL STATION (NUMBER INDICATES ZONE) |
|  | ELECTRIC FLOW ALARM |
|  | FIRE ALARM STROBE FLASHER |
|  | FIRE ALARM HORN WITH STROBE FLASHER |
|  | FIRE ALARM INITIATOR |
|  | FIRE ALARM TRANSMITTER |
|  | FIRE ALARM CONTROL PANEL |
- ГЕСЕНД

- ① FIRE ALARM CONTROL PANEL:
EXISTING FIRE ALARM CONTROL PANEL. CONNECT OUTPUT TO NEW
- ② ZONE ARE CONNECTED ON EXISTING FIRE ALARM CONTROL PANEL.
CONNECT TO SAME ZONE AS THE HEAT DETECTORS IN EXISTING
PROVIDE NEW COMBINATION 122.\RATE OF RISE HEAT DETECTOR
- ③ FIRE ALARM CONTROL PANEL AS BEFORE.
RELOCATED BULL STATION. CONNECT TO SAME ZONE ON EXISTING
- ④ PROVIDE NEW FIRE ALARM TRANSMITTER.
- ⑤ PROVIDE NEW DUCT SMOKE DETECTOR.
- ⑥ PROVIDE NEW COMBINATION 122.\RATE OF RISE HEAT DETECTOR.
- ⑦ PROVIDE NEW FIRE ALARM HORN WITH STROBE FLASHER.
- ⑧ PROVIDE NEW BULL STATION.
- ⑨ PROVIDE NEW FIRE ALARM CONTROL PANEL.

KEYED REVISION NOTES (THIS SHEET ONLY)

- RELOCATE EXISTING PULL STATION AS SHOWN.

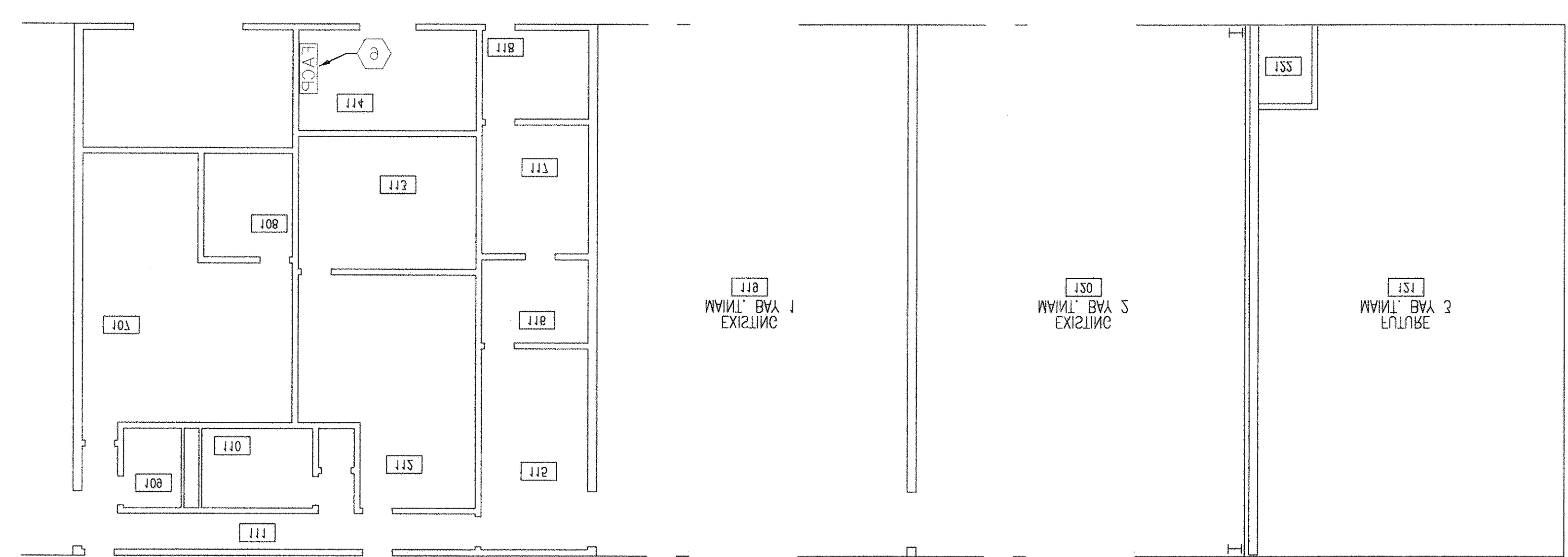
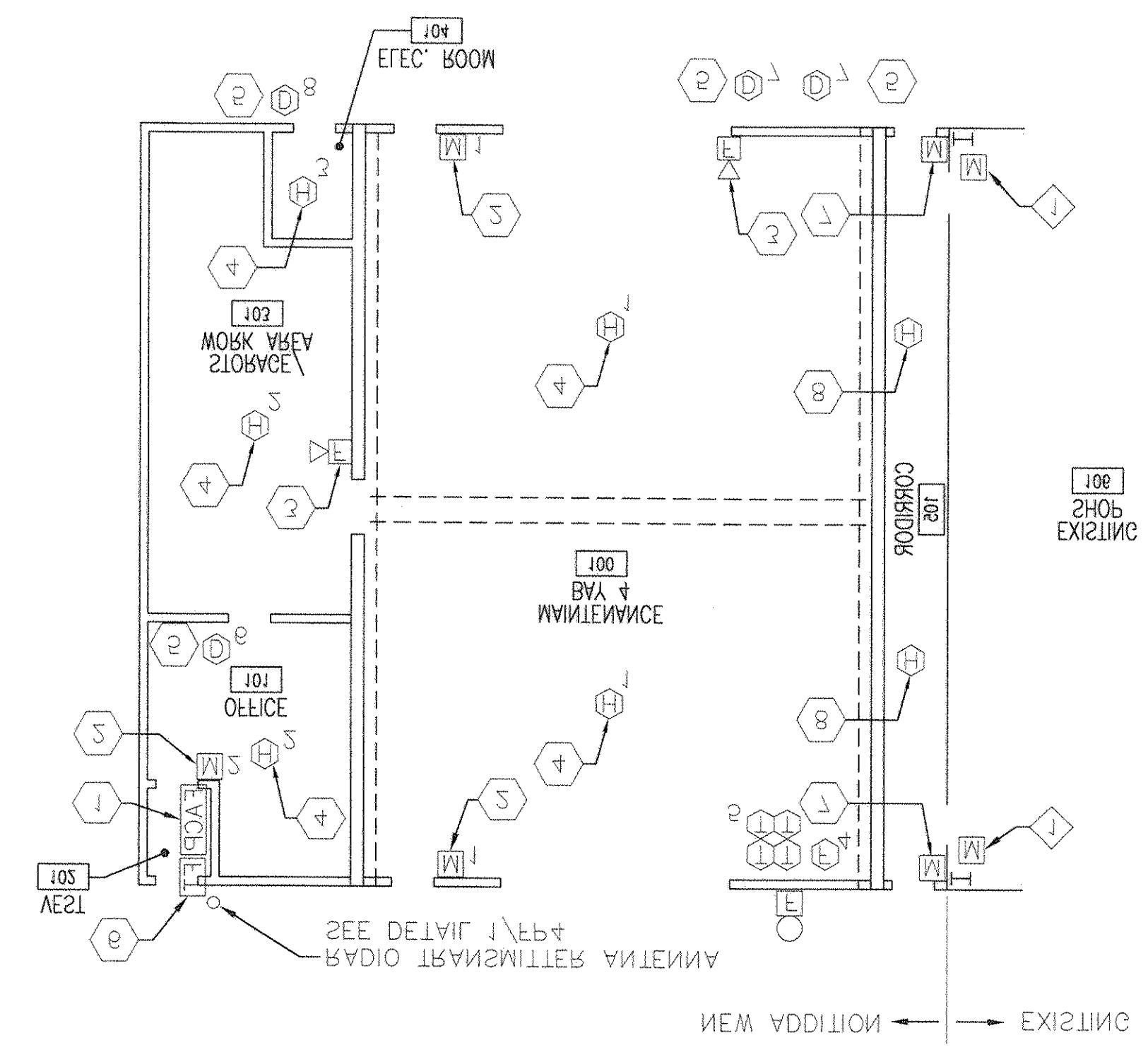
KEYED REVISION NOTES (THIS SHEET ONLY)

1. FIRE STOP AROUND ALL WALL PENETRATIONS:

GENERAL NOTES

SCALE: 3/35, 1, -0,

EIRE ALARM EGOOB BLAI - MAINI. BAY

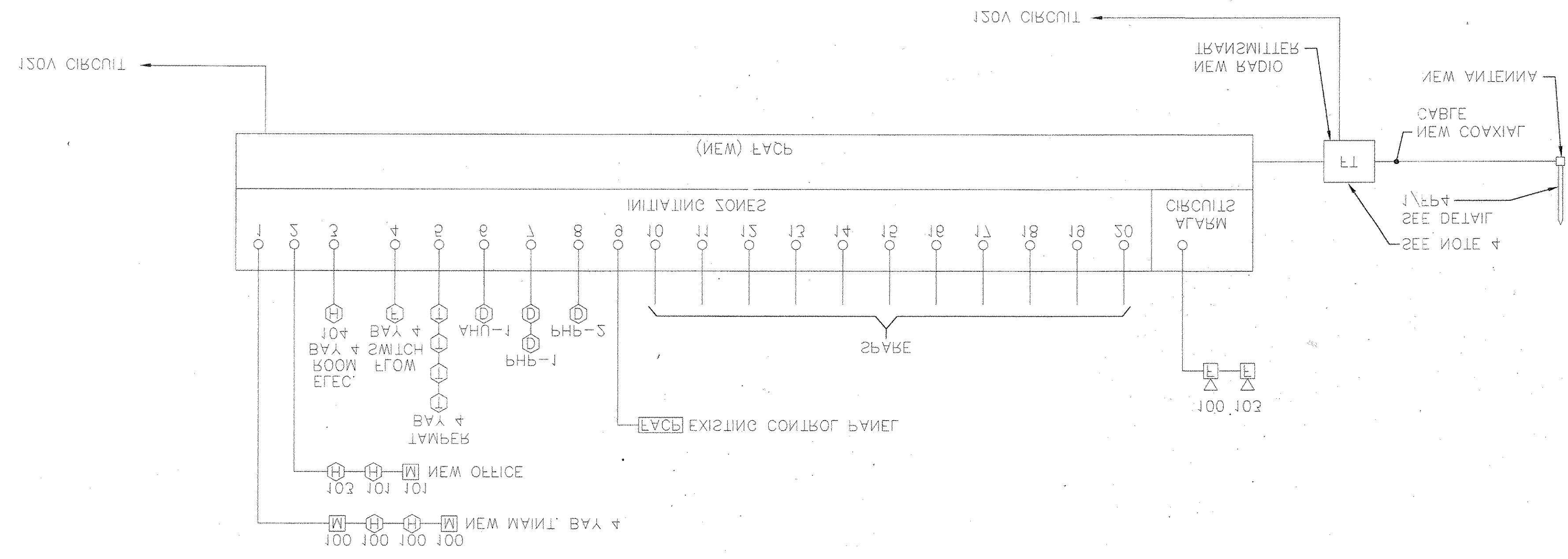


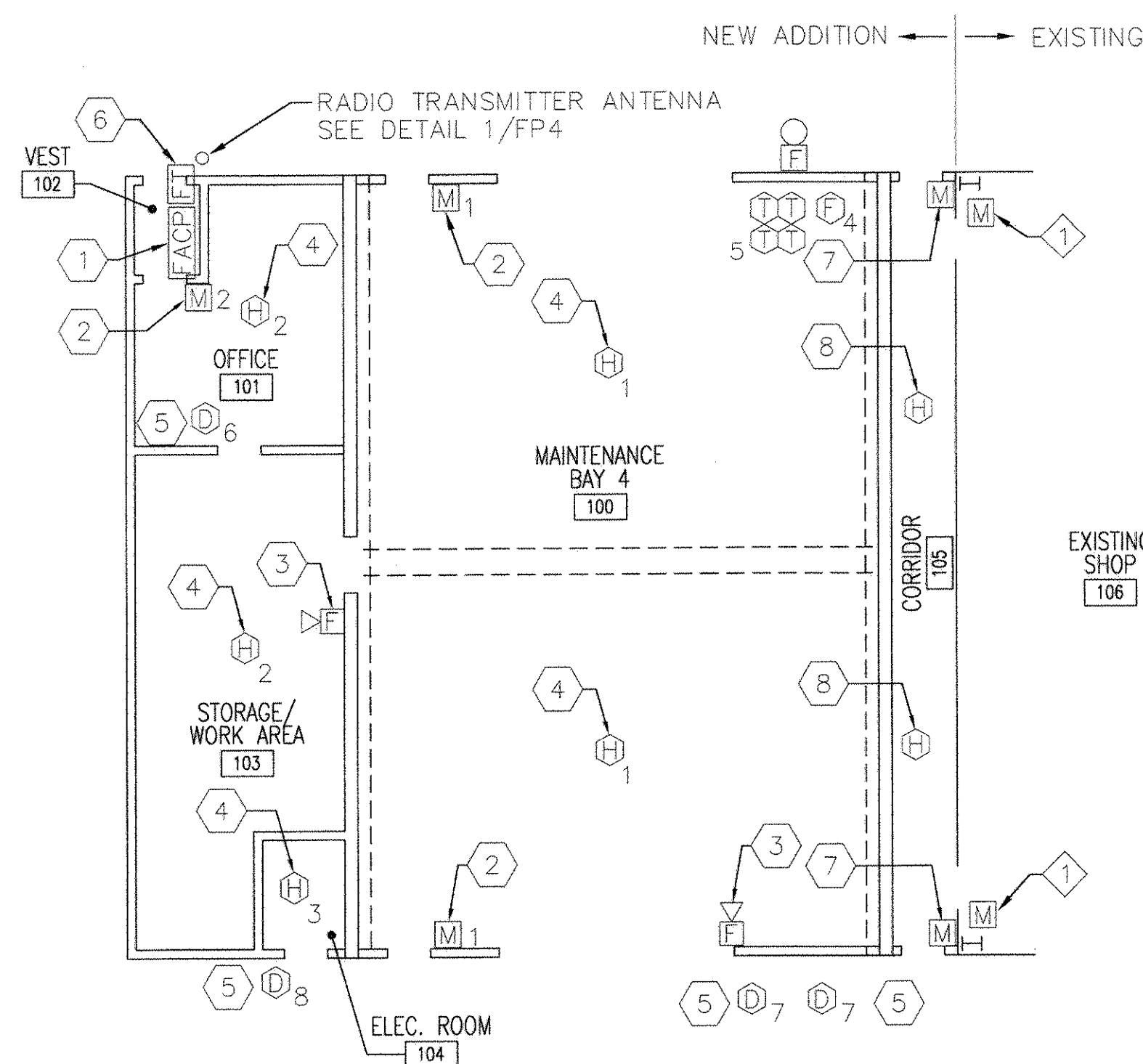
423



SEAT VBEY

DATE	DNR	
EC	BR HD	BRINCHBY - SS DEC 03
CONTINUED BY: LOUIS ROBERTO - JURY		
ZIP#	WETWINSOM	CH ENGRS
COMPANY	WETWINSOM	CH# WETWINSOM
NAME	BOBBI EMMER	
STREET ADDRESS	353 MEETING STREET	SUITE 100
CITY	BOEHM	& VECOVICLES





FIRE ALARM FLOOR PLAN – MAINT. BAY
SCALE: 3/32" = 1'-0" PLAN NORTH

GENERAL NOTES

1. FIRE STOP AROUND ALL WALL PENETRATIONS.

LEGEND

- [FACP] FIRE ALARM CONTROL PANEL.
- [FT] FIRE ALARM TRANSMITTER
- [FAA] FIRE ALARM ANNUNCIATOR
- [FH] FIRE ALARM HORN WITH STROBE FLASHER
- [FS] FIRE ALARM STROBE FLASHER
- [EFA] ELECTRIC FLOW ALARM
- [M] FIRE ALARM MANUAL PULL STATION (NUMBER INDICATES ZONE)
- [FS] FLOW SWITCH
- [TS] TAMPER SWITCH
- [HD] FIRE ALARM HEAT DETECTOR (NUMBER INDICATES ZONE)
- [DS] DUCT SMOKE DETECTOR (NUMBER INDICATES ZONE)
- [1] KEYED DEMOLITION NOTE IDENTIFIER
- [1] KEYED RENOVATION NOTE IDENTIFIER

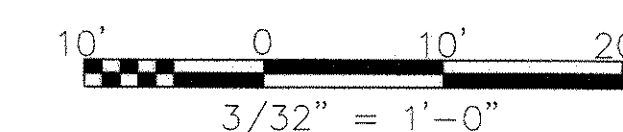
KEYED RENOVATION NOTES (THIS SHEET ONLY)

1. RELOCATE EXISTING PULL STATION AS SHOWN.

KEYED RENOVATION NOTES (THIS SHEET ONLY)

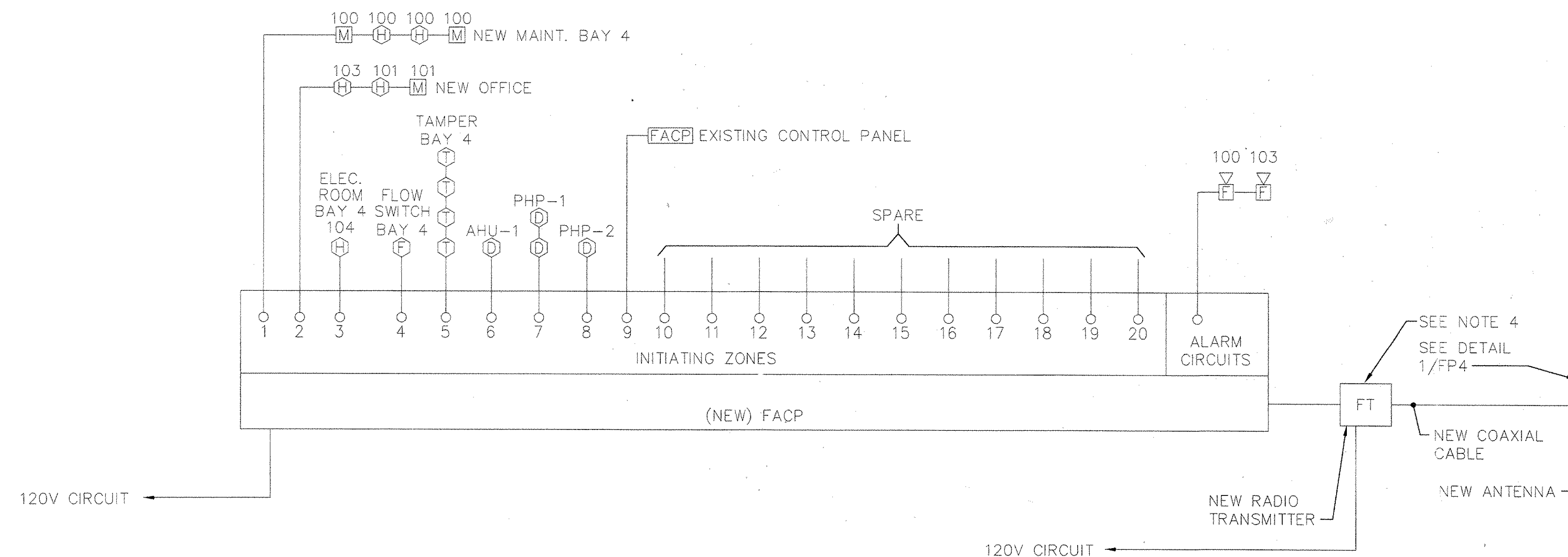
1. PROVIDE NEW FIRE ALARM CONTROL PANEL.
2. PROVIDE NEW PULL STATION.
3. PROVIDE NEW FIRE ALARM HORN WITH STROBE FLASHER.
4. PROVIDE NEW COMBINATION 135°/RATE OF RISE HEAT DETECTOR.
5. PROVIDE NEW DUCT SMOKE DETECTOR.
6. PROVIDE NEW FIRE ALARM TRANSMITTER.
7. RELOCATED PULL STATION. CONNECT TO SAME ZONE ON EXISTING FIRE ALARM CONTROL PANEL AS BEFORE.
8. PROVIDE NEW COMBINATION 135°/RATE OF RISE HEAT DETECTOR. CONNECT TO SAME ZONE AS THE HEAT DETECTORS IN EXISTING SHOP ARE CONNECTED ON EXISTING FIRE ALARM CONTROL PANEL.
9. EXISTING FIRE ALARM CONTROL PANEL. CONNECT OUTPUT TO NEW FIRE ALARM CONTROL PANEL.

GRAPHIC SCALE



SHAW AIR FORCE BASE SOUTHERN DIVISION CHARLESTON, SC		REV. DESCRIPTION CONFORMED BID DRAWING AS-BUILT, NO CORRECTIONS, MAY 22, 2001		PREP BY DATE		APPROVD DATE	
DEPARTMENT OF THE NAVY SHAW AIR FORCE BASE SOUTHERN DIVISION CHARLESTON, SC		REV. DESCRIPTION CONFORMED BID DRAWING AS-BUILT, NO CORRECTIONS, MAY 22, 2001		PREP BY DATE		APPROVD DATE	
SEAL AREA THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY J. TRAVIS WILLIAMSON SEAL #10574 ON 12/22/97 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.		REV. DESCRIPTION CONFORMED BID DRAWING AS-BUILT, NO CORRECTIONS, MAY 22, 2001		PREP BY DATE		APPROVD DATE	
RECORD DRAWING DATE 7/30/01		CODE I.D. NO. DRAWING SIZE: D		SPEC. NO. 06-97-0942		CONSTR. CONTR. NO. NS2467-97-C-0942	
NAVFAC DRAWING NO. 5349174		SHEET 151 OF 152		OFFICE IN CHARGE DATE		TYPE OR	

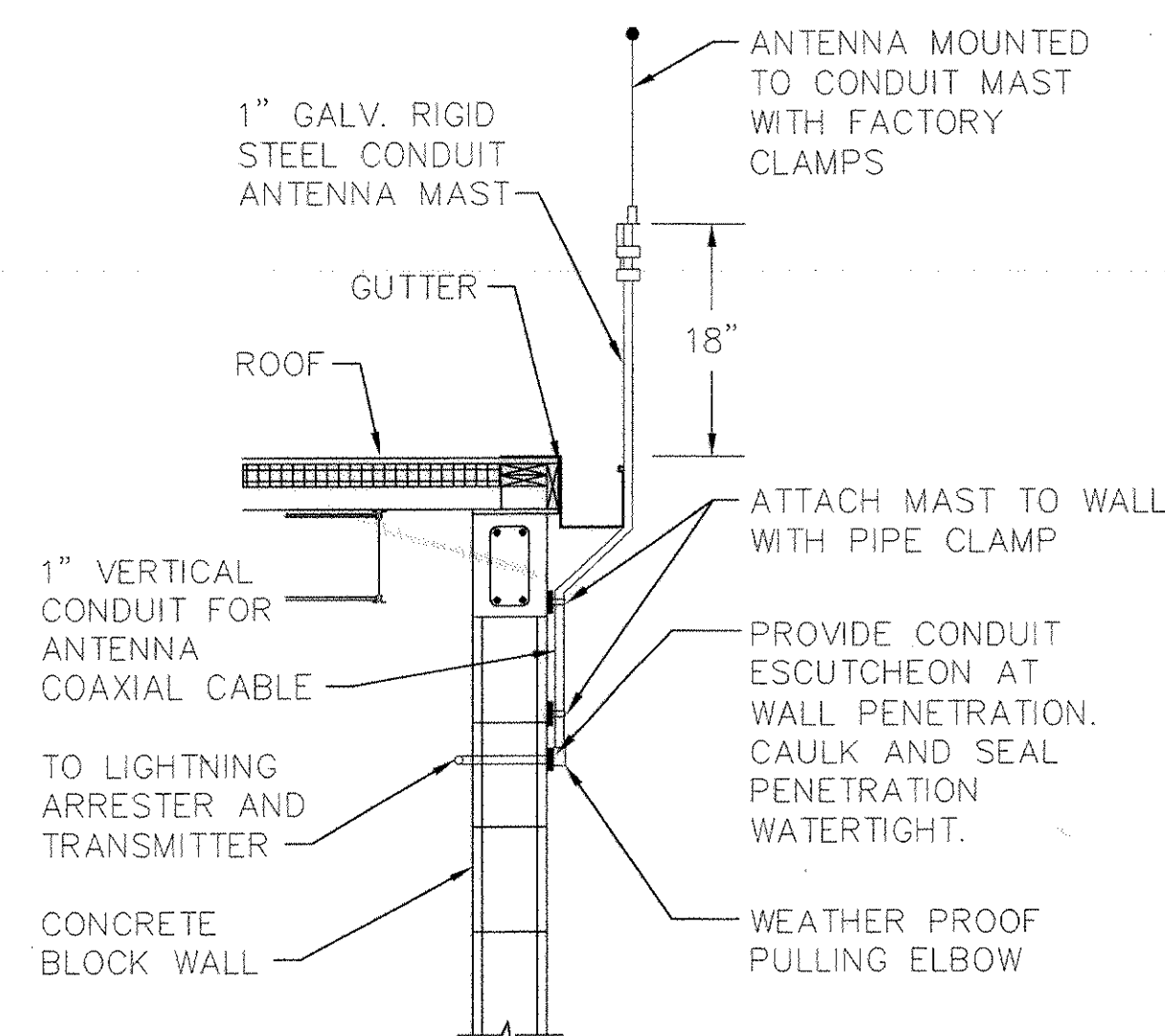
(1610, 1606, 1605) / 106-1002 //



FIRE ALARM RISER - MAINT. BAY
SCALE: NONE

FIRE ALARM NOTES

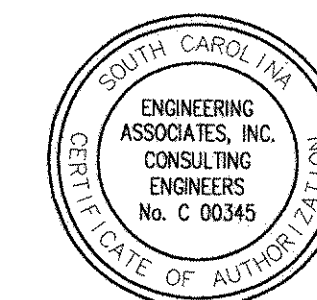
- SEE FLOOR PLANS FOR NUMBER, TYPE AND ZONE DESIGNATION OF INITIATION DEVICES (I.E. SMOKE DETECTORS, HEAT DETECTORS, PULL STATIONS, ETC).
- SEE FLOOR PLANS FOR NUMBER & TYPE OF NOTIFICATION DEVICES (I.E. HORNS, STROBES, ETC).
- FIRE ALARM CONTROL PANEL SHALL HAVE 20 INITIATION ZONES AND BE EXPANDABLE TO 24 ZONES BY ADDING CARDS ONLY.
- TRANSMITTER EQUIPMENT SHALL BE MANUFACTURED BY MONACO ENTERPRISES INC. (5218 N. LAKEWOOD DRIVE; PANAMA CITY, FLORIDA 32404, (904) 785-4557, ATTN: DAN LONG) TO OPERATE WITH THE EXISTING RECEIVER AT THE BASE'S FIRE STATION:
 - ASSEMBLY, BT2-3 MODULE CUSTOMER OPTION, QTY. 1, PART #225-900-00
 - ASSEMBLY, ANTENNA: BSA-1, QTY 1, PART #190-400-00
 - MOUNT, ANTENNA: 7", WALL, PAIR, QTY 1, PART #199-011-00
 - KIT, R-T LIGHTNING ARRESTOR, QTY 1, PART #198-001-01
 - ENCLOSURE: METAL 4Hx4Dx12W, NEMA 3R, QTY 1, PART #081-076-00
 - ASSEMBLY, CABLE: COAX, 20', 92/PL-259, QTY 1, PART #625-100-00
 - ASSEMBLY, CABLE: COAX, 40', BNC/PL-259, QTY 1, PART #626-000-02
- ALL DEVICES ARE NEW.



1 ANTENNA MOUNTING DETAIL - MAINT. BAY
* SCALE: NONE
* FP3,FP4

PANEL ZONES	
ZONE	AREA
1	BAY 4
2	NEW OFFICE & SHOP
3	ELEC. RM. BAY 4
4	FLOW ALARM BAY 4
5	TAMPER BAY 4
6	DUCT DETECTOR AHU-1
7	DUCT DETECTOR PHP-1
8	DUCT DETECTOR PHP-2
9	EXISTING CONTROL PANEL
10	SPARE
11	SPARE
12	SPARE
13	SPARE
14	SPARE
15	SPARE
16	SPARE
17	SPARE
18	SPARE
19	SPARE
20	SPARE

TRANSMITTER ZONES	
ZONE	AREA
1	EXISTING FACILITY
2	SPARE
3	BAY 4 & NEW OFFICE
4	COMMON TROUBLE
5	DUCT DETECTORS



GLICK/BOEHM & ASSOCIATES. 247 MEETING STREET, SUITE 100 CHARLESTON, SC 29401 DESIGNED BY: J. TRAVIS WILLIAMSON CHECKED BY: J. TRAVIS WILLIAMSON DATE: 12/22/97 PRINCIPAL: 22 DEC 97	
REV.	DESCRIPTION
1	CONFORMED BID DRAWING
2	AS-BUILT, NO CORRECTIONS, MAY 22, 2001
3	SUMMER, SOUTH CAROLINA
4	ADAL SQUAD OPS/IGLOO/MAINT. BAY
5	RISER DIAGRAM AND DETAIL - MAINT. BAY
6	ETD FOR COMMANDER, NAVFAC
7	APPROVED
8	DATE
9	OFFICER IN CHARGE
10	DATE
11	OFFICER IN CHARGE
12	DATE
13	OFFICER IN CHARGE
14	DATE
15	OFFICER IN CHARGE
16	DATE
17	OFFICER IN CHARGE
18	DATE
19	OFFICER IN CHARGE
20	DATE
21	OFFICER IN CHARGE
22	DATE
23	OFFICER IN CHARGE
24	DATE
25	OFFICER IN CHARGE
26	DATE
27	OFFICER IN CHARGE
28	DATE
29	OFFICER IN CHARGE
30	DATE
31	OFFICER IN CHARGE
32	DATE
33	OFFICER IN CHARGE
34	DATE
35	OFFICER IN CHARGE
36	DATE
37	OFFICER IN CHARGE
38	DATE
39	OFFICER IN CHARGE
40	DATE
41	OFFICER IN CHARGE
42	DATE
43	OFFICER IN CHARGE
44	DATE
45	OFFICER IN CHARGE
46	DATE
47	OFFICER IN CHARGE
48	DATE
49	OFFICER IN CHARGE
50	DATE
51	OFFICER IN CHARGE
52	DATE
53	OFFICER IN CHARGE
54	DATE
55	OFFICER IN CHARGE
56	DATE
57	OFFICER IN CHARGE
58	DATE
59	OFFICER IN CHARGE
60	DATE
61	OFFICER IN CHARGE
62	DATE
63	OFFICER IN CHARGE
64	DATE
65	OFFICER IN CHARGE
66	DATE
67	OFFICER IN CHARGE
68	DATE
69	OFFICER IN CHARGE
70	DATE
71	OFFICER IN CHARGE
72	DATE
73	OFFICER IN CHARGE
74	DATE
75	OFFICER IN CHARGE
76	DATE
77	OFFICER IN CHARGE
78	DATE
79	OFFICER IN CHARGE
80	DATE
81	OFFICER IN CHARGE
82	DATE
83	OFFICER IN CHARGE
84	DATE
85	OFFICER IN CHARGE
86	DATE
87	OFFICER IN CHARGE
88	DATE
89	OFFICER IN CHARGE
90	DATE
91	OFFICER IN CHARGE
92	DATE
93	OFFICER IN CHARGE
94	DATE
95	OFFICER IN CHARGE
96	DATE
97	OFFICER IN CHARGE
98	DATE
99	OFFICER IN CHARGE
100	DATE

THIS DOCUMENT WAS
ORIGINALLY ISSUED
AND SEALED BY
J. TRAVIS WILLIAMSON
SEAL #10974, ON
12/22/97
THIS MEDIA SHALL
NOT BE CONSIDERED A
CERTIFIED DOCUMENT.

RECORD DRAWING DATE
7/30/01
CODE I.D. NO.
DRAWING SIZE: D
SPEC. NO. 06-97-0942
CONSTRN. CONTR. NO.
N62467-97-C-0942
NAVFAC DRAWING NO.
5349175
SHEET 152 OF 152

FP4

(1610, 1606, 1605)/106-1000