

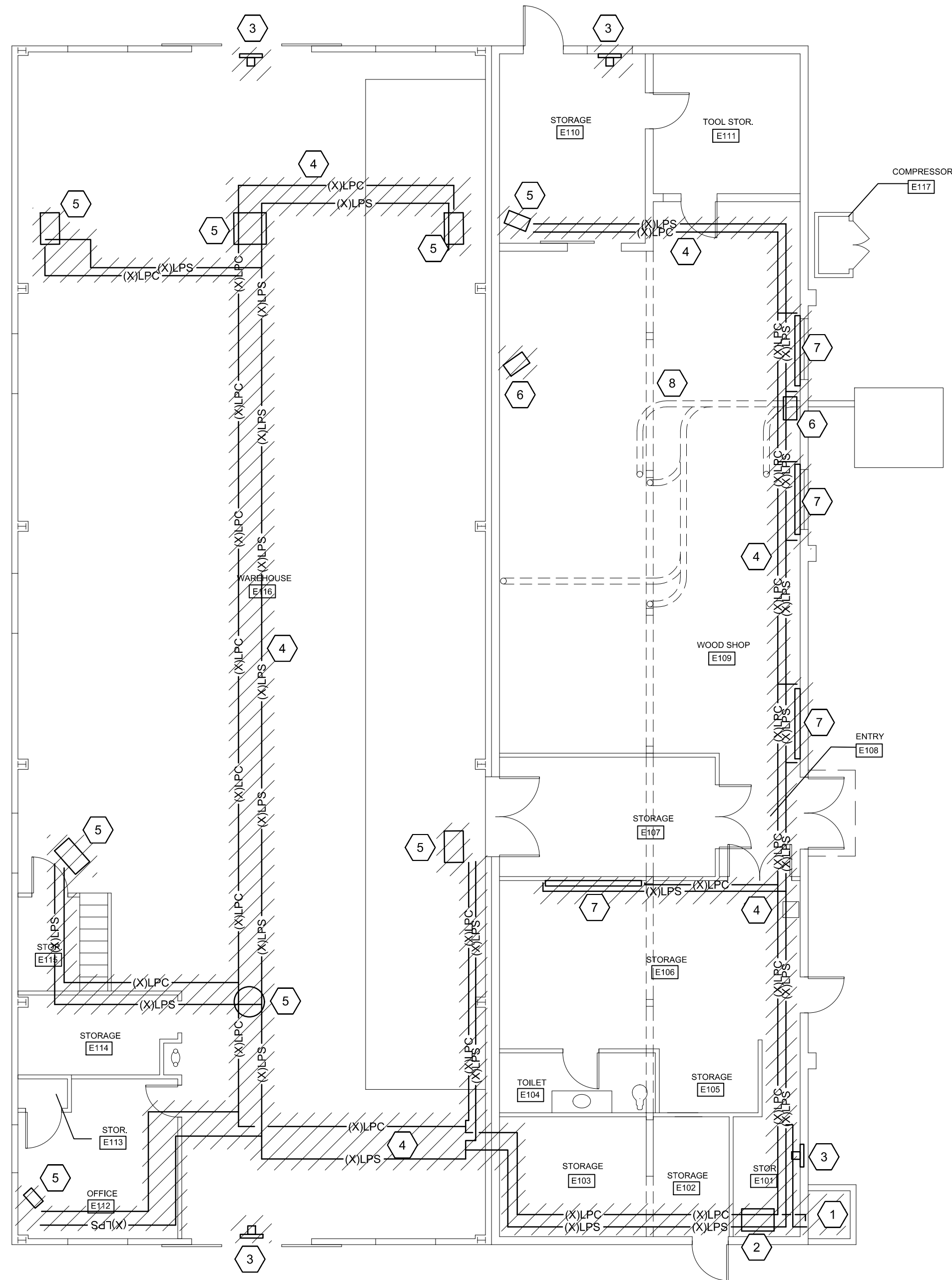
REVISIONS			
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DEMOLITION KEYED NOTES

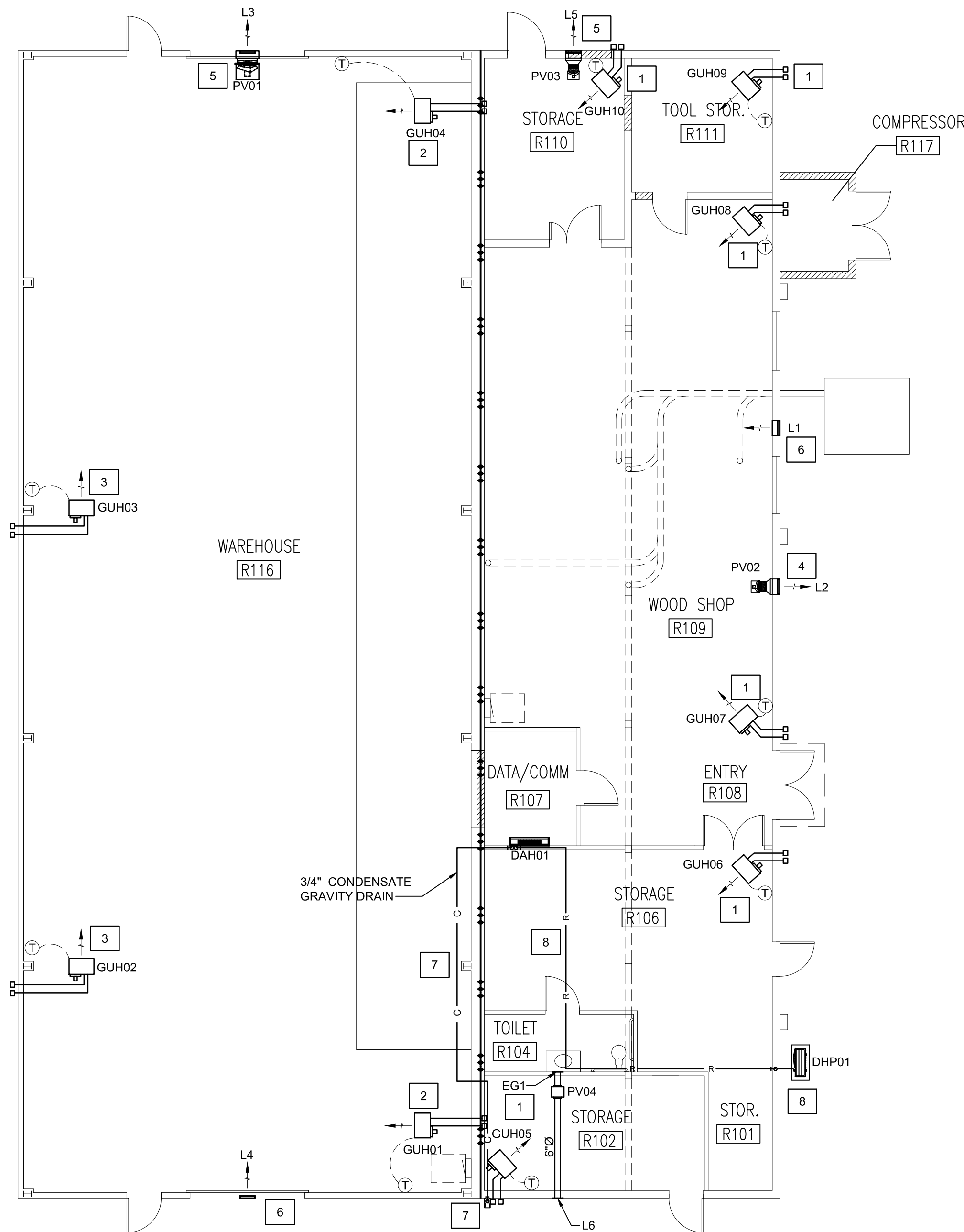
- DEMOLISH EXISTING STEAM PIT CONCRETE PIT, PIPING AND EQUIPMENT. FILL AND MATCH SURROUNDING CONDITIONS.
- DEMOLISH EXISTING CONDENSATE RECEIVER AND EXISTING STEAM AND CONDENSATE PIPING.
- DEMOLISH EXISTING EXHAUST FAN AND LOUVER.
- DEMOLISH EXISTING STEAM AND CONDENSATE PIPING.
- DEMOLISH EXISTING STEAM UNIT HEATER, PIPING AND SUPPORTS.
- DEMOLISH EXISTING ELECTRIC UNIT HEATER AND SUPPORTS.
- DEMOLISH EXISTING RADIATOR HEATER, PIPING AND SUPPORTS.
- EXISTING DUST COLLECTION DUCTWORK. SYSTEM TO BE REMOVED DURING CONSTRUCTION. REFER TO ARCHITECTURAL PLANS.

CONSTRUCTION KEYED NOTES

- MOUNT UNIT HEATER AS HIGH AS STRUCTURE ALLOWS FOLLOWING MANUFACTURERS RECOMMENDATIONS. ALIGN AS SHOWN. ROUTE UNIT INTAKE / EXHAUST THROUGH ADJACENT WALL. SEE DETAIL: 1/M-3.
- MOUNT UNIT HEATER BELOW BUILDING TRUSSES. ALIGN AS SHOWN. ROUTE UNIT INTAKE / EXHAUST THROUGH ADJACENT WALL ABOVE LOWER ROOF. SEE DETAIL: 1/M-3.
- MOUNT UNIT HEATER BELOW BUILDING TRUSSES. ALIGN AS SHOWN. ROUTE UNIT INTAKE / EXHAUST THROUGH ADJACENT WALL. SEE DETAIL: 1/M-3.
- MOUNT EXHAUST FAN AS HIGH AS AS STRUCTURE ALLOWS FOLLOWING MANUFACTURES RECOMMENDATIONS. SEE DETAIL: 2/M-3.
- MOUNT EXHAUST FAN OPENING SHOWN ON ARCHITECTURAL PLANS AND ELEVATIONS. SEE DETAIL: 2/M-3.
- MOUNT AS HIGH AS POSSIBLE. MODIFY STRUCTURE AS REQUIRED TO MAKE WEATHER TIGHT.
- GRAVITY DRAIN CONDENSATE PIPING EXPOSED ALONG WALL AND DISCHARGE TO PLASH BLOCK
- ROUTE REFRIGERANT PIPING CONCEALED FROM INDOOR UNIT TO OUTDOOR UNIT (IN WALLS AND ABOVE CEILINGS.



1 DEMOLITION FLOOR PLAN
1/8" = 1'-0"
0 4 8 16
PLAN NORTH

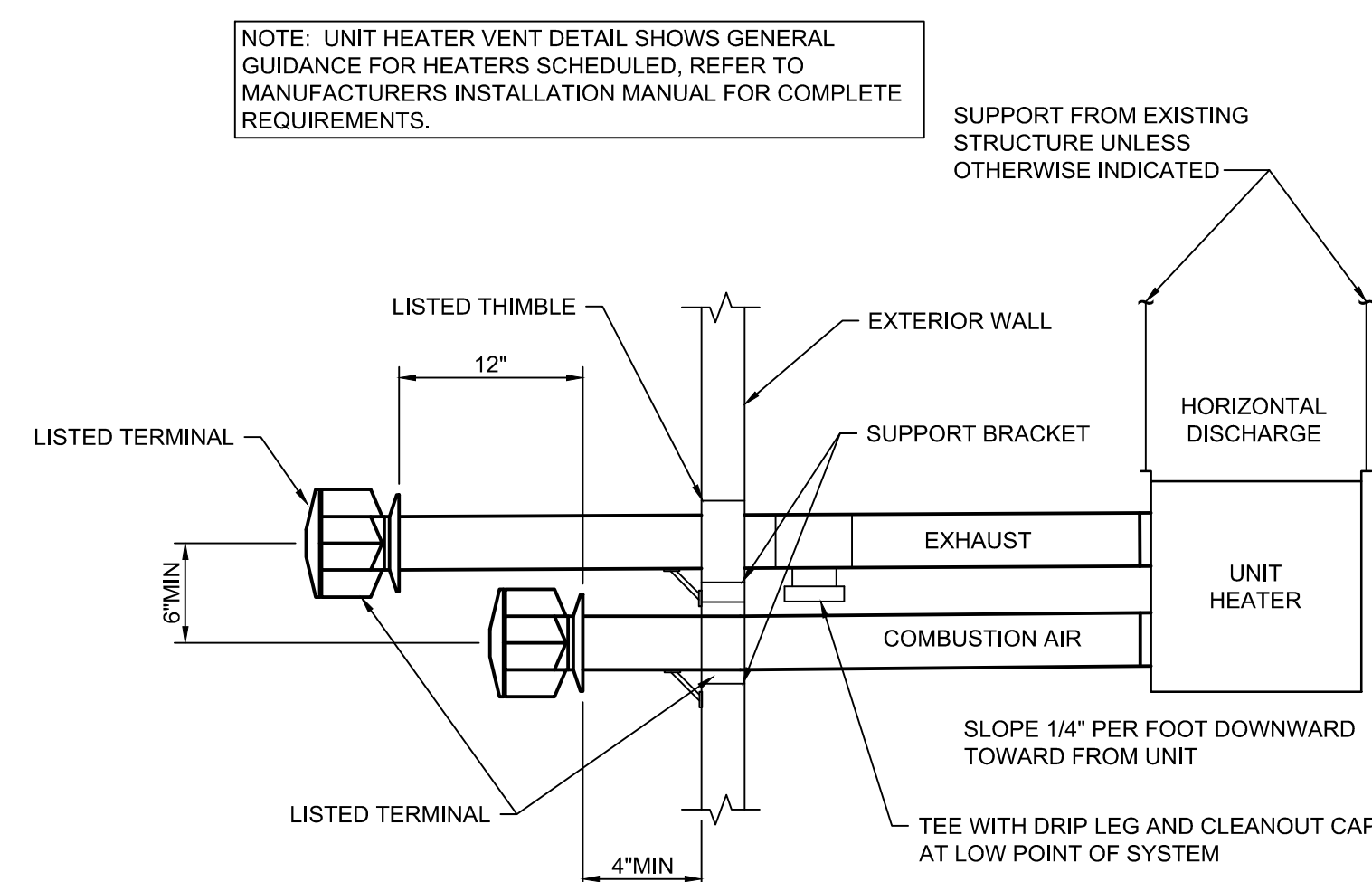


2 FLOOR PLAN
1/8" = 1'-0"
0 4 8 16
PLAN NORTH

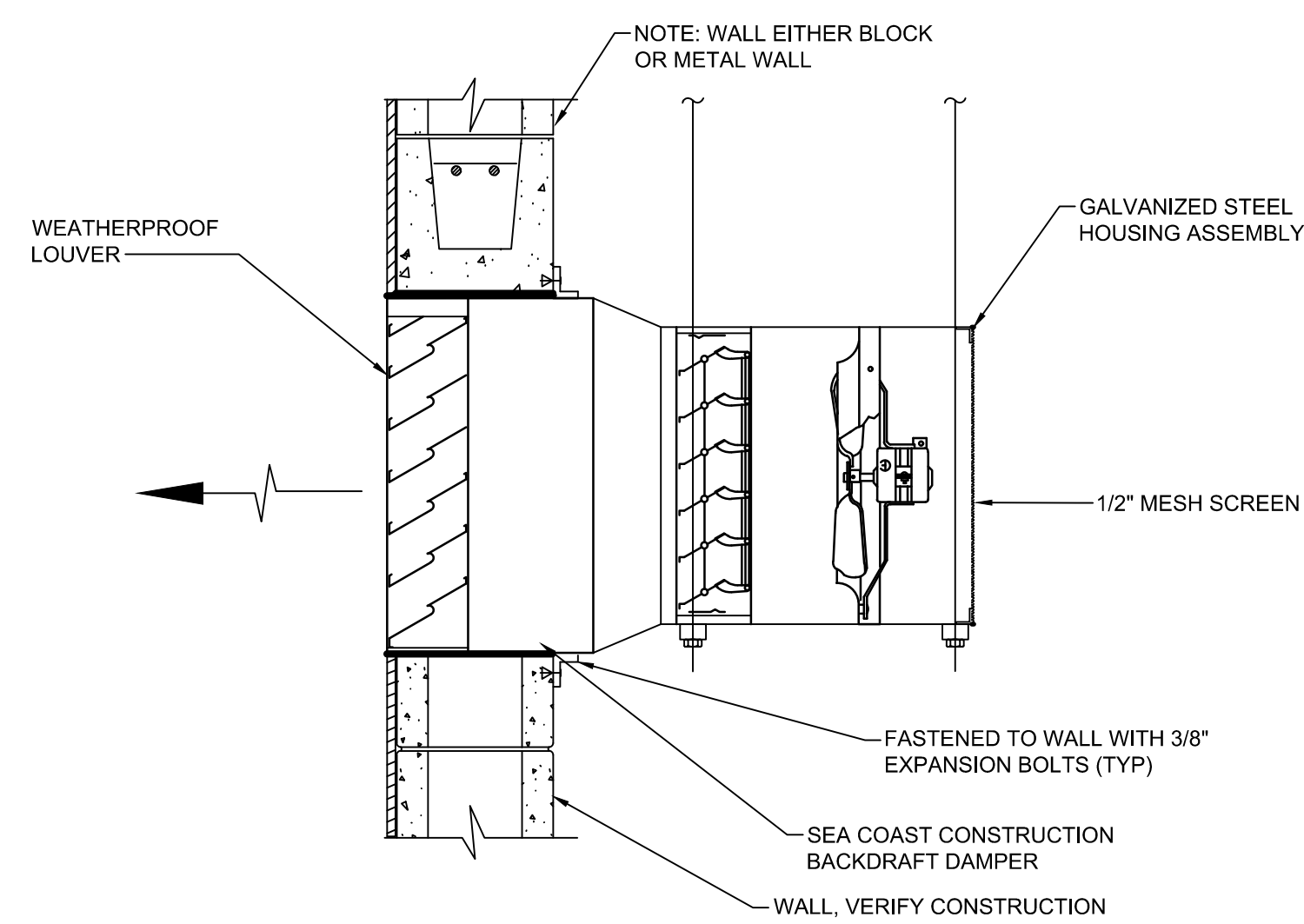
SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET G-1

CBHF Engineers, PLLC 2246 Yaupon Drive Wilmington, NC 28401 Phone: 910.791.4000 Fax: 910.791.5266 www.cbhfenrines.com © Copyright 2019 CBHF Engineers, PLLC NC# 1-008	SHEET TITLE: MECHANICAL HVAC PLANS		M-2	
	TALLEY & SMITH ARCHITECTURE INC. P.O. BOX 518 SHELBY, NC 28151-0518 409 EAST MARION ST. SHELBY, NC 28150		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	
	DES. RWC	INTERIOR/EXTERIOR REPAIRS BLDG. AS124 CAMP LEJEUNE, NORTH CAROLINA		
	DR. RWC			
	CHK. DMH			
	SUBMITTED BY:			
DESIGN DR. T H BURTON, PE	APPROVED:	DATE	SIZE	CODE IDENT. NO.
			F	80091
SATISFACTORY TO:	DATE	SCALE: NOTED	SPEC. 05-17-0075	NAVJAC DRAWING NO. 60024430
JULY 27, 2018		CONST. CONTR. NO. N40085-17-D-0859		
		SHEET 22 OF 34		

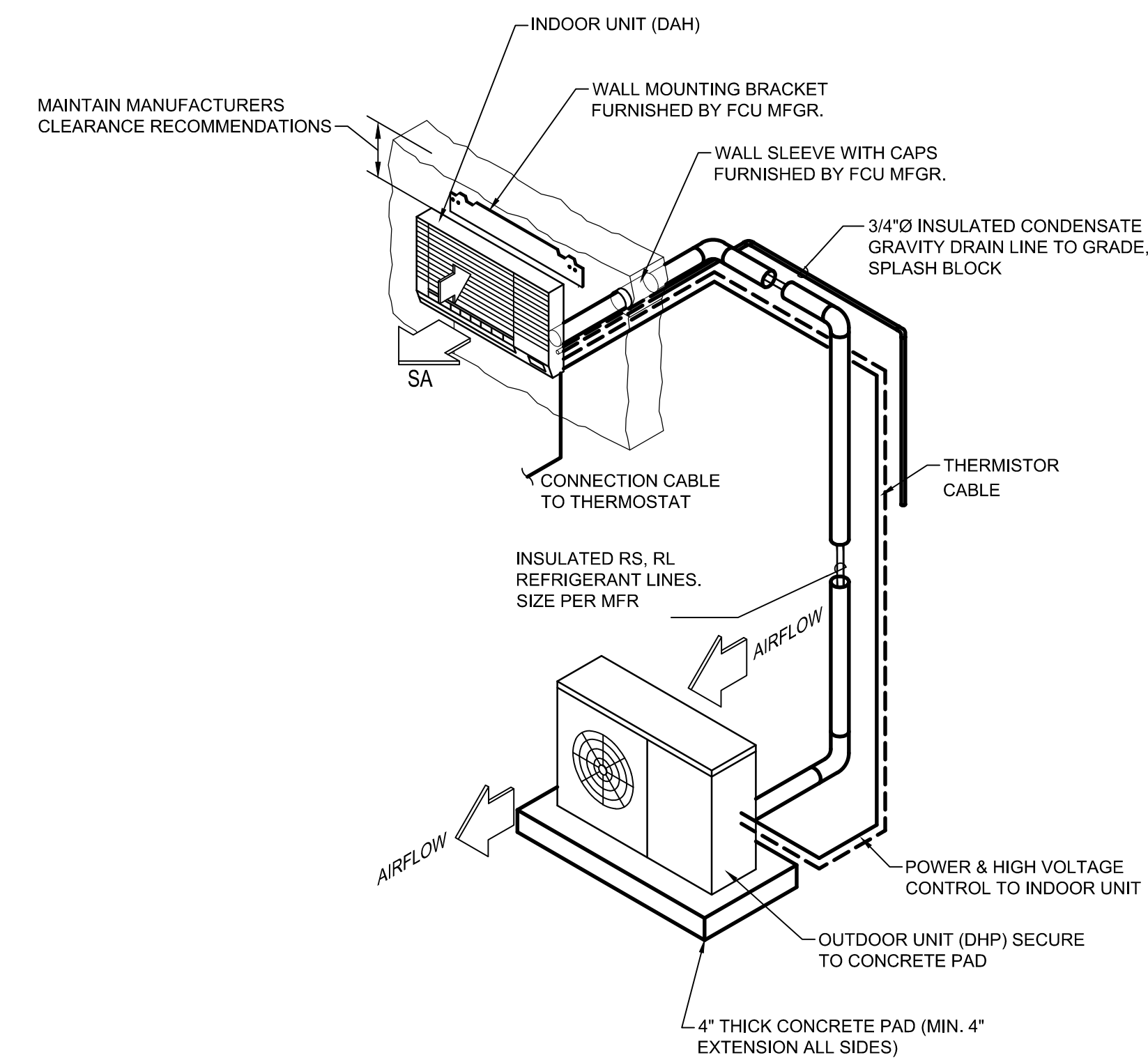
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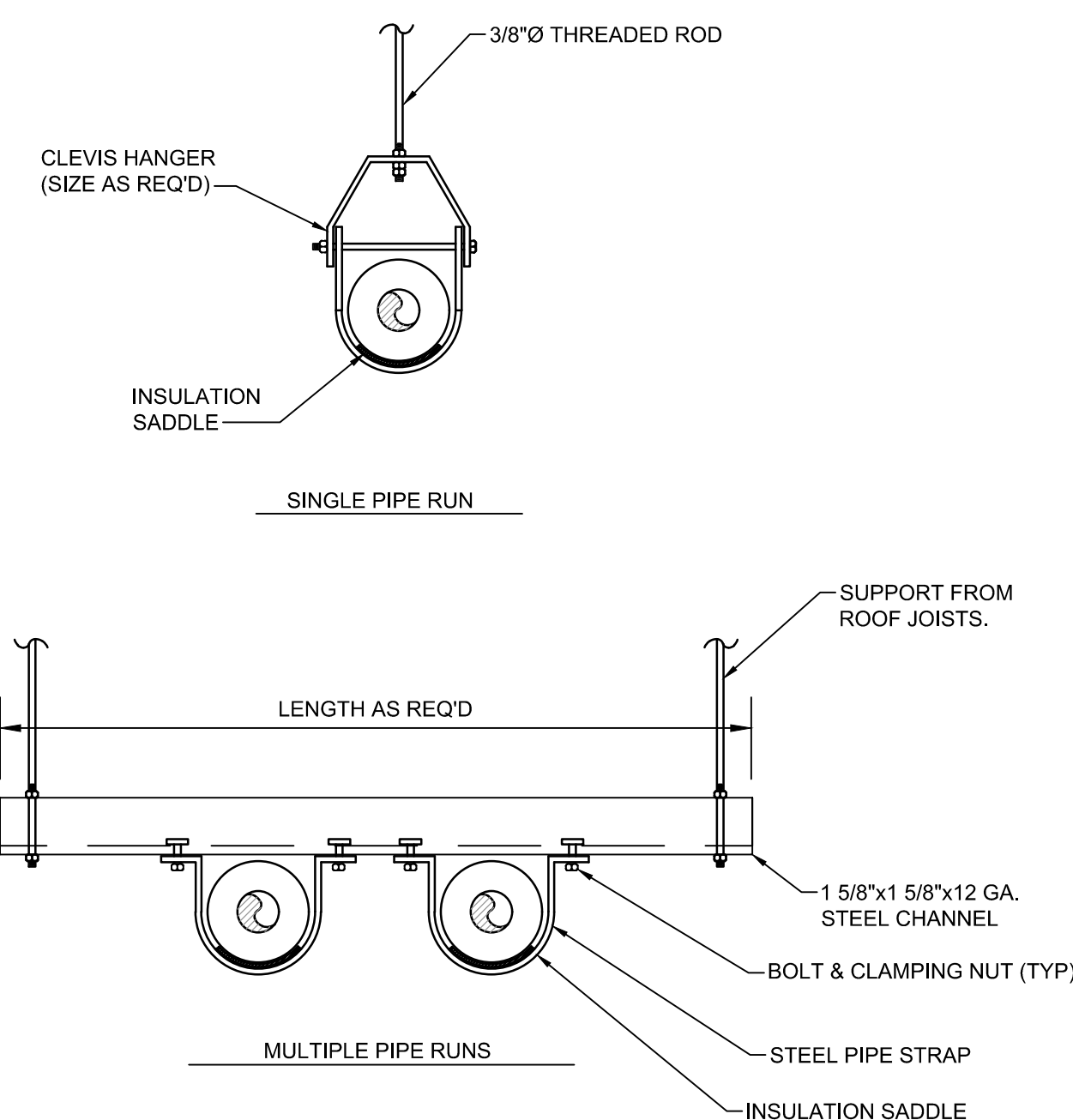
1 GAS FIRED UNIT HEATER VENT DETAIL



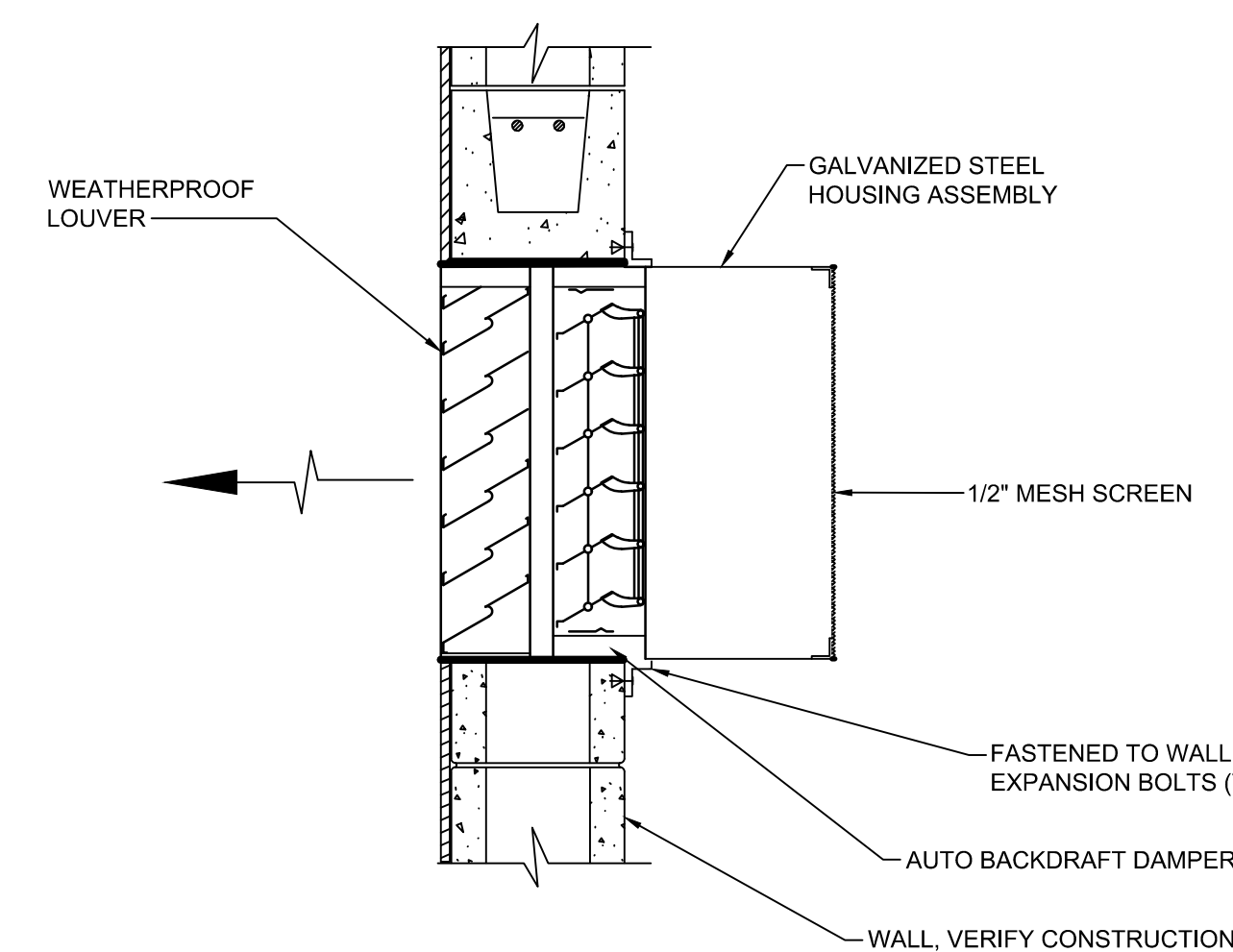
2 EXHAUST FAN/LOUVER DETAIL
NOT TO SCALE



3 DUCTLESS HEAT PUMP UNIT DETAIL



4 PIPE SUPPORT DETAIL



5 TYPICAL LOUVER DETAIL

HILTI
Hilti Firestop Systems

1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 18 in. (457 mm). See Concrete Blocks (CAZT) Category in the Fire Resistance Directory for names of manufacturers.
2. Metallic Sleeve — (Optional) — Nom 18 in. (457 mm) diam (or smaller) Schedule 10 (or heavier) steel sleeve cast or grouted into floor or wall assembly, flush with floor or wall surfaces or extending a max 3 in. (76 mm) above floor or beyond both surfaces of wall.
3. Through Penetrants — One metallic pipe or tubing to be centered within the firestop system. Pipe or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or tubing may be used:
 - A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
 - B. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper tubing.
 - C. Copper Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
4. Tube Insulation — Plastics — Min 1/2 in. (13 mm) to max 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Nom 1 in. (25 mm) thick AB/PVC flexible foam insulation may be used for max 2 hr F and FH Ratings when max 3 in. (76 mm) diam pipe or tubing is used. The annular space shall be min 1/2 in. (13 mm) to max 12 in. (305 mm). When max annular space exceeds 1-1/2 in. (38 mm) the F and FH Ratings are 2 hr.


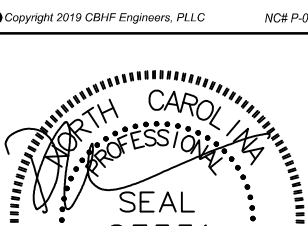
See Plastics* (OMFZZ) Category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-SVA may be used.

5. Firestop System — The firestop system shall consist of the following:
 - A. Packing Material — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
 - B. Fill Void or Cavity Material — Sealant — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall. When max annular space exceeds 1-1/2 in. (38 mm) the min thickness of fill material is 1/2 in. (13 mm).

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. — FS-ONE Sealant or FS-ONE Max Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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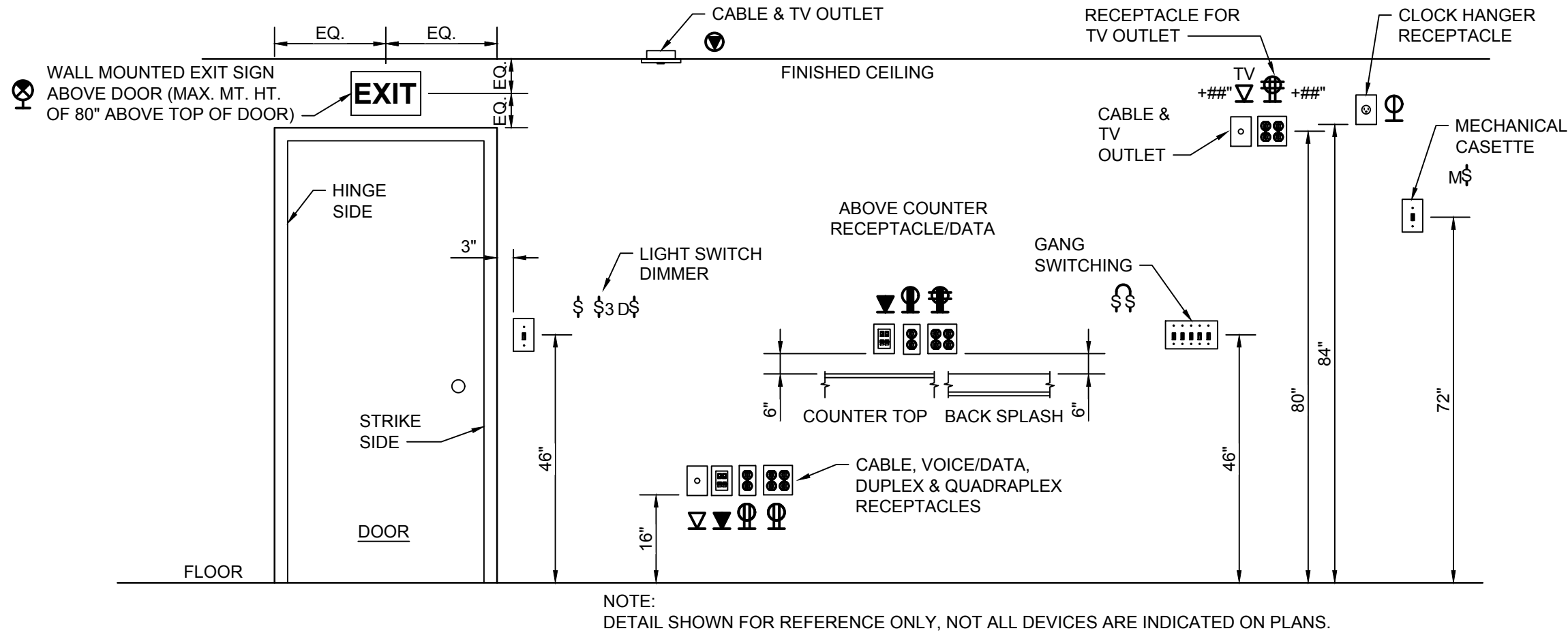
 <p>2246 Yeupon Drive Wilmington, NC 28401 Phone: 910.791.4000 Fax: 910.791.5266 www.cbhfenr.com</p> <p><small>© Copyright 2014 CBHF Engineers, PLLC NCEP-14-010</small></p>  <p>JULY 27 2018</p>	SHEET TITLE: MECHANICAL DETAILS		M-3	
	TALLEY & SMITH ARCHITECTURE INC. P.O. BOX 518 SHELBY, NC 28151-0518 409 EAST MARION ST. SHELBY, NC 28150		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	
DES. RWC DR. RWC CHK. DMH SUBMITTED BY: DESIGN DIR. T H BURTON, PE		INTERIOR/EXTERIOR REPAIRS BLDG. AS124 CAMP LEJEUNE, NORTH CAROLINA		
APPROVED: _____ DATE: _____		SIZE F	CODE IDENT. NO. 80091	NAVFAC DRAWING NO. 60024431
SATISFACTORY TO: _____ DATE: _____		CONST. CONTR. NO. N40805-17-D-0859		
		SCALE: NOTED	SPEC. 05-17-0075	SHEET 23OF 34

REVISIONS			
SYM.		DATE	APPROVED

ELECTRICAL LEGEND		ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	4FT OR 8FT LIGHT FIXTURE, RECESSED OR SURFACE MOUNTED LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)		RECESSED SINGLE/DOUBLE GANG BOX WITH BLANK COVER PLATE, MOUNTED 16" AFF, UNLESS OTHERWISE NOTED
	4FT OR 8FT CHANNEL LIGHT FIXTURE, SUSPENDED OR SURFACE MOUNTED LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)		RECEPTACLE, DUPLEX, 120VAC, 20A, MOUNTED 16" AFF, UNLESS OTHERWISE NOTED. (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	WALL MOUNTED LIGHT FIXTURE LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)		RECEPTACLE, DUPLEX, 120VAC, 20A, MOUNTED 6" ABOVE COUNTER TOP OR BACK SPLASH. +###" - INDICATES MOUNTING HEIGHT OF DEVICE IN INCHES AFF (IF GIVEN) (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	POWER & SWITCH LEG		RECEPTACLE, QUADPLEX, 120VAC, 20A MOUNTED 16" AFF UNLESS OTHERWISE NOTED (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	UNSWITCHED LEG		WP - LISTED WEATHER-RESISTANT TYPE DEVICE WITH WEATHERPROOF, EXTRA DUTY, WHILE IN USE COVER GFI - GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A, MOUNTED 24" AFF
	CONDUIT, HOME RUN TO PANEL BOARD		RECEPTACLE-TWIST LOCK, 20A, WALL MOUNTED 16" AFF, SIZE AND CONFIGURATION AS INDICATED ON DRAWING
	EXIT SIGN, SINGLE FACE, CEILING, ARROW INDICATES DIRECTION. LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)		DISCONNECT SWITCH, FUSED, HEAVY (GENERAL) DUTY, SIZE AS INDICATED ON DRAWINGS ##A" = DISCONNECT SIZE / # = NUMBER OF POLES / # = NEMA RATING, ##AF = FUSE SIZE
	EMERGENCY LIGHTING UNIT, 2-HEAD WITH BATTERY BACK-UP, WALL MOUNTED, "NOT SWITCHED" INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)		COMBINATION STARTER WITH CIRCUIT BREAKER DISCONNECT, FULL VOLTAGE, SIZE AS INDICATED ON DRAWINGS
	PHOTOCELL, REMOTE MOUNTED, 120V, 10 SECOND TIME DELAY, UL WET LOCATION, RATED FOR 1500 W @ 120 VAC (FOR USE WITH LAMP SOURCE(S) SHOWN)		MANUAL MOTOR STARTER, ELECTRICAL CONTRACTOR SHALL COORDINATE POLES AND SIZE WITH EQUIPMENT ### = AMPERAGE RATING WHEN INDICATED ON DRAWING
	SWITCH, SINGLE POLE, 120/277VAC, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED (SEE ELECTRICAL MOUNTING HEIGHT DETAIL). LOWER CASE LETTER INDICATES FIXTURE SWITCHING (WHEN INDICATED)		3 BUTTON - ON/OFF/STOP PUSHBUTTON CONTROLLER
	3-WAY SWITCH, SINGLE POLE 120/277 VAC, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED		PANELBOARD, SURFACE OR RECESSED MOUNTED AS SHOWN. SIZE, RATINGS, AND MOUNTING AS INDICATED ON PANEL SCHEDULE. CONTRACTOR IS RESPONSIBLE FOR REQUIRED CLEARANCE IN FRONT OF ELECTRICAL PANEL. SEE NEC TABLE 110.26 WORKING SPACES FOR ADDITIONAL CLEARANCE CONDITIONS.
	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, 360" COVERAGE		208/120V
	WALL MOUNTED OCCUPANCY SENSOR, SINGLE BUTTON ON/OFF CONTROL, 180" COVERAGE, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.		3 HOUR RATED FIRE WALL
	WALL MOUNTED DATA RACK		GROUND BAR - "TMGB" INDICATES TELECOMMUNICATIONS GROUND BAR - "EGB" INDICATES ELECTRICAL GROUND BAR
	3/4"x4"x8" FIRE RATED PLYWOOD		HATCHING INDICATES ITEMS TO BE DEMOLISHED. REMOVE DEVICE, EQUIPMENT, FIXTURE INDICATED, CIRCUIT, AND CONDUIT BACK TO SOURCE UNLESS OTHERWISE NOTED.
	COMBINATION DATA/TELEPHONE OUTLET, PROVIDE 1 1/4" CONDUIT FROM ROOM R107 TO SURFACE MOUNTED 5 SQUARE BOX. PROVIDE (QTY) 4 - CAT 6A CABLES, COMPLETE FROM EACH DROP TO ROOM R107 DATA RACK.		
	WIRELESS ACCESS POINT, PROVIDE 1" CONDUIT FROM ROOM R107 TO SURFACE MOUNTED 5 SQUARE BOX. PROVIDE (QTY) 1 - CAT 6A CABLE, COMPLETE FROM DATA RACK IN ROOM R107 TO DEVICE LOCATION. (GOVERNMENT MUST PROVIDE SURGE PROTECTOR AND WAP DEVICE, THE ELECTRICAL CONTRACTOR MUST INSTALL.		

ABBREVIATIONS:	
A, AMP	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BOF	BOTTOM OF FIXTURE
BRKR	BREAKER
C, CND	CONDUIT
CAB	CABINET
CAT	CATALOG
CL	CHLORINE
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CP	CONTROL PANEL
CR	CONTROL RELAY, CORROSION RESISTANT
CS	CONTROL SWITCH
CV	CONTROL VALVE
CT	CURRENT TRANSFORMER
CU	COPPER
EF	EXHAUST FAN
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EVH	ELECTRIC WATER HEATER
EPRF	EXPLOSION PROOF
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FLA	FULL LOAD AMPS
FLUOR	FLUORESCENT
FLR	FLOOR
FWE	FURNISHED WITH EQUIPMENT
GEN	GENERATOR
G, GND	GROUND
GFI	GROUND FAULT CIRCUIT INTERRUPTER
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
Hz	HERTZ
IMC	INTERMEDIATE METALLIC CONDUIT
INCAND	INCANDESCENT
JB	JUNCTION BOX
K	THOUSAND
KMIL	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT AMPERE
KW	KILOWATTS
KWH	KILOWATT-HOURS
LP	LIGHTING PANEL, LIGHT POLE
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	MANHOLE
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
N, NEUT	NEUTRAL
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
P	POLE
PA	PUBLIC ADDRESS
PB	PULL BOX, PUSH-BUTTON
PF	POWER FACTOR
PHI, φ	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PP	POTENTIAL TRANSFORMER
PT	POTENTIAL TRANSFORMER
PWR	POWER
RECP, RCP	RECEPTACLE
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL CONDUIT
RM	ROOM
RTU	REMOTE TELEMETRY UNIT
SCR	DC MOTOR DRIVE
SH	SHEET
SPEC	SPECIFICATION
SS	SELECTOR SWITCH
SST	STAINLESS STEEL
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCH GEAR
TEL	TELEPHONE
TPS	TRANSISTED PAIR SHIELDED
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UGND	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UTIL	UTILITY
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE, WATT
WH	WATT-HOUR
WP	WEATHERPROOF
XFMR	TRANSFORMER

LOAD SUMMARY	
VOLTAGE	PHASE
208	3
LARGEST MOTOR APPROX. AMPS	24 AMPS
LARGEST MOTOR APPROX. AMPS x .25	6 AMPS
HVAC	
GUHs(10)	3,996 VA
EXHAUST FANS(4)	2,188 VA
DHP01/DAH01	1,997 VA
SUB-TOTAL HVAC DEMAND	8,181 VA
SUB-TOTAL HVAC DEMAND	23 AMPS
EQUIPMENT	
EW01	2,500 VA
DUST COLLECTOR	8,719 VA
COMPRESSOR	6,017 VA
10" TABLE SAW	2,400 VA
TABLE SAW	7,206 VA
RADIAL ARM SAW	7,926 VA
JOINTER	5,404 VA
DRILL PRESS	1,800 VA
BAND SAW	1,152 VA
MITER SAW	1,152 VA
WET SAW	1,800 VA
SANDER	1,080 VA
BENCH GRINDER	600 VA
SUB-TOTAL EQUIPMENT DEMAND	45,255 VA
SUB-TOTAL EQUIPMENT DEMAND	128 AMPS
ADD FOR LARGEST MOTOR	6 AMPS
TOTAL EQUIPMENT DEMAND	132 AMPS
LIGHTING	
LIGHTS (INTERIOR, BASED ON NEC 220.12)	5,912 VA
LIGHTS (EXTERIOR)	364 VA
SIGN	1,200 VA
TOTAL LIGHTING LOAD	7,476 VA
LIGHTING LOAD x 1.25	9,345 VA
TOTAL DEMAND FOR LIGHTING	26 AMPS
RECEPTACLES	
RECEPTACLES	11,340 VA
FIRST 10000VA	10,000 VA
REMAINDER @ 50%	670 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	10,670 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	30 AMPS
TOTAL DEMAND BUILDING AMPS	210 AMPS
TOTAL DEMAND BUILDING AMPS	75,613 VA
TOTAL BUILDING CONNECTED LOAD	72,252 VA



1 ELECTRICAL DEVICES - MOUNTING HEIGHT DETAIL
NOT TO SCALE

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET G-1

CBHF Engineers, PLLC 2246 Yaupon Drive Wilmington, NC 28401 Phone: 910.791.4000 Fax: 910.791.5266 www.cbhfindengineers.com © Copyright 2018 CBHF Engineers, PLLC NCSP-0008 	SHEET TITLE: ELECTRICAL LEGEND, SUMMARIES, DETAIL		E-1	
	TAILEY & SMITH ARCHITECTURE INC. P.O. BOX 518 SHELBY, NC 28151-0518 409 EAST MARION ST. SHELBY, NC 28150		DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	
DES. JLG DR. JLG CHK. WAC SUBMITTED BY: DESIGN DR. T H BURTON, PE		INTERIOR/EXTERIOR REPAIRS BLDG. AS124 CAMP LEJEUNE, NORTH CAROLINA		
APPROVED: _____ DATE _____		SIZE: F	CODE IDENT. NO. 80091	
SATISFACTORY TO: _____ DATE _____		NAVFAC DRAWING NO. 60024432	CONST. CONTR. NO. N40085-17-D-0859	
JULY 27, 2018		SCALE: NOTED	SPEC. 05-17-0075	
		SHEET 24 OF 34		

REVISIONS			
SYN.		DATE	APPROVED

GENERAL NOTES		GENERAL DEMOLITION NOTES	
<div>1. ALL ELECTRICAL WORK SHALL BE IN FULL COMPLIANCE WITH NFPA 70 THE NORTH CAROLINA STATE BUILDING CODE, ALL LOCAL CODES AND ORDINANCES AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.</div> <div>2. ALL EQUIPMENT PROVIDED BY THE CONTRACTOR SHALL BE LISTED AND LABELED BY A NATIONALLY-RECOGNIZED TESTING AGENCY, ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, FOR THE CONDITIONS OF INSTALLATION. ALL MATERIAL, EQUIPMENT AND DEVICES SHALL BE NEW CURRENT PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH PRODUCTS. EQUIPMENT SHALL BE SUITABLE FOR ITS APPLICATION (E.G. WHEN INSTALLED OUTDOORS, IT SHALL BE WEATHERPROOF, ETC.)</div> <div>3. THE CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR WORK REQUIREMENTS, THE AMOUNT OF SPACE AVAILABLE FOR ELECTRICAL EQUIPMENT, AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER.</div> <div>4. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THOROUGHLY FAMILIARIZING HIMSELF WITH ANY CONTRACTUAL REQUIREMENTS AS MAY BE SET FORTH IN THE OTHER DIVISIONS OF THE PROJECT SPECIFICATIONS.</div> <div>5. UNLESS SPECIFICALLY NOTED OTHERWISE, SYSTEMS PROVIDED OR INSTALLED BY THE CONTRACTOR SHALL BE COMPLETE AND FULLY-FUNCTIONING AFTER INSTALLATION. INCIDENTAL COMPONENTS MAY NOT BE SHOWN, AND ALL WORK WHICH MAY BE REASONABLY IMPLIED AS BEING INCIDENTAL TO THIS WORK, BUT REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT OR SYSTEM, SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE BID. ADDITIONAL CIRCUITS SHALL BE INSTALLED WHEREVER NEEDED TO CONFORM TO THE SPECIFIC REQUIREMENTS OF EQUIPMENT.</div> <div>6. TEMPORARY POWER CONNECTIONS AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE BID. ALL TEMPORARY EQUIPMENT WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. THE CONTRACTOR SHALL PROVIDE DETAILS, METHODS, MATERIALS, ETC. FOR REVIEW PRIOR TO MAKING TEMPORARY CONNECTIONS. FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS INCLUDING CONTROL EQUIPMENT, MOTOR STARTERS, BRANCH AND FEEDER CIRCUIT BREAKERS, PANELBOARDS, TRANSFORMERS, ETC. FOR TEMPORARY POWER. COORDINATE WITH THE ELECTRICAL UTILITY COMPANY AS REQUIRED.</div> <div>7. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF WORK AND ANY MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT.</div> <div>8. ALL EQUIPMENT SHOWN DOTTED OR DASHED IS BY OTHERS OR IS EXISTING, AS NOTED.</div> <div>9. ALL ELECTRICAL EQUIPMENT SHALL, AT ALL TIMES DURING CONSTRUCTION, BE ADEQUATELY PROTECTED AGAINST MECHANICAL INJURY, OR DAMAGE BY WATER AND/OR THE ELEMENTS. ELECTRICAL EQUIPMENT SHALL NOT BE STORED OUT OF DOORS, BUT SHALL BE STORED IN DRY PERMANENT SHELTERS. IF AN APPARATUS HAS BEEN DAMAGED, OR HAS BEEN SUBJECT TO POSSIBLE INJURY BY WATER OR THE ELEMENTS, SUCH DAMAGE SHALL BE REPLACED AT NO ADDITIONAL COST.</div> <div>10. DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS.</div> <div>11. CIRCUIT LAYOUTS ARE NOT INTENDED TO SHOW THE NUMBER OF FITTINGS, OR OTHER INSTALLATION DETAILS. UNLESS NOTED OTHERWISE, THE EXACT ROUTING OF FEEDER AND BRANCH CIRCUIT RACEWAYS AND CABLES IS THE RESPONSIBILITY OF THE CONTRACTOR. RISER AND GENERAL CIRCUIT ARRANGEMENTS ARE SHOWN SCHEMATICALLY/DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL ROUTE CONDUITS AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION.</div> <div>12. UNLESS DIMENSIONED, DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADJUST EXACT LOCATIONS AS REQUIRED TO SERVE THE INTENDED PURPOSE AND TO AVOID CONFLICTS AND INTERFERENCES WITH OTHER TRADES. EXACT DEVICE LOCATIONS SHALL BE AS INDICATED ON THE ARCHITECTURAL DRAWINGS OR AS DIMENSIONED. IF NOT SHOWN ON THE ARCHITECTURAL DRAWINGS OR DIMENSIONED ON THE ELECTRICAL DRAWINGS, VERIFY EXACT LOCATION WITH THE CONTRACTING OFFICER PRIOR TO ROUGH-IN.</div> <div>13. CONDUIT TERMINATING IN PRESSED STEEL BOXES SHALL HAVE DOUBLE LOCKNUTS AND INSULATED BUSHINGS. CONDUITS TERMINATING IN GASKETED ENCLOSURES SHALL BE TERMINATED WITH GROUNDING TYPE CONDUIT HUBS.</div> <div>14. BRANCH CIRCUIT HOMERUNS SHOWN ON DRAWINGS INDICATE PHASE CONDUCTORS, NEUTRAL, EQUIPMENT GROUND CONDUCTORS AS REQUIRED. ADDITIONAL CONDUCTORS REQUIRED FOR CONTROL SHALL BE INCLUDED EVEN IF NOT EXPLICITLY SHOWN.</div> <div>15. SEAL ALL CONDUIT OPENINGS THROUGH EXTERIOR BUILDING WALLS WATERTIGHT.</div> <div>16. IN WET LOCATIONS AND EXTERIOR, ALL WIRING DEVICES SHALL BE WEATHER-RESISTANT LISTED WITH WEATHERPROOF WHILE IN USE COVER. LIGHTING FIXTURES SHALL BE APPROPRIATELY RATED AND LISTED FOR THE ENVIRONMENT ITO BE INSTALLED IN.</div> <div>17. RACEWAYS PENETRATING FLOORS, CEILINGS OR WALLS SHALL BE PROPERLY SEALED SMOKE/TIGHT.</div> <div>18. ALL RACEWAYS SHALL BE CONCEALED WHERE POSSIBLE IF APPLICABLE, MATCH EXISTING RACEWAY INSTALLATION METHODS AND ROUTINGS AT OR NEAR EXISTING FACILITIES.</div> <div>19. INSTALL EXPOSED RACEWAYS PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS, AND FOLLOW THE SURFACE CONTOURS AS MUCH AS POSSIBLE. NO DIAGONAL RUNS WILL BE ALLOWED. ALL CONDUITS SHALL BE RUN STRAIGHT AND TRUE. RUN PARALLEL OR BANKED RACEWAYS TOGETHER ON COMMON SUPPORTS WHERE PRACTICAL. MAKE BENDS IN PARALLEL OR BANKED RUNS FROM SAME CENTERLINE TO MAKE BENDS PARALLEL.</div> <div>20. PATCHING OF WATERPROOFED SURFACES SHALL RENDER THE AREA OF THE PATCHING COMPLETELY WATERPROOF.</div> <div>21. ALL MOTORS, DRY TYPE TRANSFORMERS AND OTHER VIBRATING EQUIPMENT SHALL BE CONNECTED TO THE CONDUIT SYSTEM BY MEANS OF A SHORT SECTION (18 INCH MINIMUM) OF FLEXIBLE CONDUIT UNLESS OTHERWISE INDICATED. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED INSIDE THE FLEXIBLE CONDUIT AND TERMINATE AT THE LOAD END WITH AN APPROVED GROUNDING CLAMP OR LUG.</div> <div>22. SURFACE MOUNTED PANELBOARDS, JUNCTION, OUTLET AND PULL BOXES, RACEWAYS, ETC., INSTALLED ON EXTERIOR SURFACES OR INSIDE ON EXTERIOR WALLS SHALL BE SUPPORTED BY SPACERS TO PROVIDE A 1/4" MINIMUM CLEARANCE BETWEEN THE WALL AND EQUIPMENT.</div> <div>23. CEILING MOUNTED DEVICES INSTALLED IN ACOUSTICAL TILE CEILING AREAS SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE WITH RODS OF SUFFICIENT SIZE TO PREVENT VERTICAL MOVEMENT OF THE OUTLET BOX. BRIDGES ALONE ARE NOT ADEQUATE UNLESS SPECIFICALLY APPROVED. CEILING MOUNTED EXIT LIGHT FIXTURES SHALL BE INSTALLED LEVEL. DO NOT SUPPORT DEVICES FROM ACOUSTICAL CEILING TILE.</div> <div>24. PROVIDE ADHESIVE BACKED RECEPTACLE DEVICE PLATE LABELS IDENTIFYING THE CIRCUIT FEEDING THE DEVICE. LABELS SHALL INDICATE PANEL AND CIRCUIT NUMBER. ALSO PROVIDE IDENTIFICATION FOR MULTI-WIRE BRANCH CIRCUIT PHASE CONDUCTORS IN PANELBOARD.</div> <div>25. FINAL TYPED PANELBOARD DIRECTORIES INSTALLED IN THE PANELBOARD DOOR POCKET SHALL INCLUDE FINAL ACTUAL ROOM NAMES AND NUMBERS IN ADDITION TO THE GENERAL DESCRIPTION SHOWN ON THE PANEL SCHEDULES ON THE DRAWINGS.</div> <div>26. CONDUCTOR SIZING IS BASED ON 75 DEGREE C. COPPER NEC RATINGS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL VERIFY, PRIOR TO INSTALLATION OF CONDUCTORS OR CONDUIT FEEDING ANY EQUIPMENT, THE ELECTRICAL EQUIPMENT IS RATED FOR USE WITH 75 DEGREE C. WIRING. IF ANY EQUIPMENT IS RATED FOR USE WITH LESS THAN 75 DEGREE C. CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER IMMEDIATELY FOR EVALUATION/CORRECTION.</div> <div>27. DO NOT PULL CONDUCTORS UNTIL THE CONDUIT SYSTEM IS COMPLETE IN EVERY DETAIL. IN THE CASE OF CONCEALED WORK, "COMPLETE" MEANS UNTIL ALL ROUGH PLASTERING OR MASONRY HAS BEEN COMPLETED.</div> <div>28. WHERE SIZE IS NOT SHOWN ON THE DRAWINGS, BRANCH CIRCUITS SHALL CONSIST OF #12 OR #10 AWG MINIMUM PHASE, NEUTRAL AND EQUIPMENT GROUND CONDUCTORS IN 3/4" MINIMUM RACEWAY.</div> <div>29. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS WITH A TOTAL INSTALLED LENGTH GREATER THAN 75 FEET AND/OR BRANCH CIRCUIT HOMERUNS LONGER THAN 50 FEET, I.E.; #12 AWG INCREASED TO #10 AWG FOR RECEPTACLE BRANCH CIRCUITS OVER 75 FEET TOTAL LENGTH (INCLUDING THE AWG HOMERUN SEGMENT) AND HOMERUNS OVER 50 FEET.</div> <div>30. COMMON NEUTRAL CONDUCTORS OF MULTIWIRE RECEPTACLE BRANCH CIRCUIT HOMERUNS SHALL BE #10 AWG MINIMUM.</div> <div>31. KEEP CONDUCTOR SPICES TO A MINIMUM. INSTALL SPICES AND TAPES THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN CONDUCTORS BEING SPLICED. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH CONDUCTOR MATERIAL. INSTALL CONDUCTORS AT EACH OUTLET WITH AT LEAST 6 INCHES OF SLACK. CONNECT OUTLETS AND COMPONENTS TO WIRING AND TO GROUND AS INDICATED AND INSTRUCTED BY THE MANUFACTURER.</div> <div>32. DO NOT SPLICE BRANCH CIRCUIT HOMERUNS WITHOUT THE PERMISSION OF THE CONTRACTING OFFICER. HOMERUNS SHALL BE CONTINUOUS FROM THE LAST OUTLET BOX TO THE SERVING PANELBOARD.</div> <div>33. DO NOT COMBINE BRANCH CIRCUIT HOMERUNS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.</div>	<div>34. DO NOT CHANGE CIRCUITING SHOWN WITHOUT PERMISSION OF THE CONTRACTING OFFICER.</div> <div>35. TROUGH TAPS SHALL BE AT SWITCH AMPACITY, UNLESS NOTED OTHERWISE.</div> <div>36. INSTALL WIRING DEVICES AT HEIGHTS AS SHOWN ON THE DRAWINGS. ALSO COORDINATE MOUNTING HEIGHTS WITH THE ARCHITECTURAL DRAWINGS AND CASEWORK DETAILS. IF CONFLICTING, ARCHITECTURAL DRAWINGS AND DETAILS SHALL GOVERN.</div> <div>37. PROVIDE GROUND FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL IN ACCORDANCE WITH THE NEC INCLUDING ALL ELECTRIC WATER COOLERS, EXTERIOR RECEPTACLES AND RECEPTACLES IN AREAS SUBJECT TO POSSIBLE WET CONDITIONS. ALL RECEPTACLES INSTALLED WITHIN 6 FEET OF A SINK SHALL BE GFI PROTECTED. ALL RECEPTACLES IN NON-RESIDENTIAL KITCHENS SHALL BE GFI PROTECTED.</div> <div>38. IN AREAS IN WHICH DUAL LEVEL SWITCHING IS INDICATED (TYPICALLY BY 2 OR MORE ADJACENT, GANGED SWITCHES), PROVIDE THE APPROPRIATE NUMBER OF CONDUCTORS TO FACILITATE THIS FUNCTION (AS TYPICALLY SHOWN).</div> <div>39. CONNECT BATTERY PACK TYPE EMERGENCY AND EXIT LIGHTING FIXTURES TO UN-SWITCHED LIGHTING CIRCUIT SERVING THE SPACE LIGHTED BY THE EMERGENCY AND EXIT FIXTURES. THESE CONNECTIONS ARE INTENTIONALLY NOT SHOWN TO MAINTAIN DRAWING FOR CLARITY.</div> <div>40. COORDINATE LIGHTING FIXTURE LOCATIONS WITH THE ARCHITECTURAL REFLECTED CEILING PLAN. IF CONFLICTS ARE NOTED, REQUEST CLARIFICATION FROM THE CONTRACTING OFFICER BEFORE PROCEEDING.</div> <div>41. ADJACENT SWITCHES SHALL BE GANGED. INSTALL BARRIERS BETWEEN UNLIKE VOLTAGE SECTIONS.</div> <div>42. SEPARATE NEUTRALS ARE REQUIRED FOR ALL DIMMED LIGHTING CIRCUITS.</div> <div>43. WHERE THE DRAWINGS INDICATE A LIGHTING FIXTURE IS TO BE PROVIDED WITH SPECIAL FEATURES/SWITCHING (DIMMING, EMERGENCY BATTERY BALLAST, MULTILEVEL, ETC), THE CONTRACTOR SHALL PROVIDE THESE FIXTURES WITH THE APPROPRIATE BALLASTING TO ACCOMMODATE THE SPECIAL FEATURE. THE CONTRACTOR SHALL PROVIDE THE FIXTURES AS INDICATED IN THE LIGHTING FIXTURE SCHEDULE WITH MODIFICATIONS AS REQUIRED BY DRAWING NOTES.</div> <div>44. COORDINATE LOCATIONS OF PLUMBING, MECHANICAL, DATA AND TELEPHONE AND AUDIOVISUAL EQUIPMENT. GOVERNMENT-PROVIDED TELECOMMUNICATIONS AND DATA CABLES WILL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. LEAVE PULL WIRES OR ROPES OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.</div> <div>45. PROVIDE TELEPHONE, FIBER AND DATA SERVICE ENTRANCE CONDUIT IN SIZES AND LOCATIONS AS SHOWN ON THE DRAWINGS AND AS REQUIRED BY THE GOVERNMENT AND THE SERVICE UTILITIES. UTILITY SERVICE ENTRANCE CABLES WILL BE PROVIDED AND INSTALLED BY THE GOVERNMENT'S SERVICE UTILITIES. LEAVE PULL WIRES OR ROPES OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.</div> <div>46. INSTALLATION INFORMATION PACKED WITH LIGHTING FIXTURES, DEVICES AND EQUIPMENT SHALL BE RETAINED FOR INCLUSION IN THE OPERATIONS AND MAINTENANCE MANUALS.</div> <div>47. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY TO INSTALL ALL EQUIPMENT AS REQUIRED AND SHALL REESTABLISH ALL FINISHES TO THEIR ORIGINAL CONDITION WHERE CUTTING AND PATCHING OCCUR. ALL CUTTING AND PATCHING SHALL BE DONE IN A THOROUGHLY WORKMANSHIP MANNER. SAW CUT CONCRETE AND MASONRY PRIOR TO BREAKING OUT SECTIONS. ALL PATCHING MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY TRADESMEN EXPERIENCED IN THAT WORK. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE RESPECTIVE SUPPLIERS AND VENDORS AND THE GOVERNMENT BEFORE ROUGH-IN. ADJUST LIGHTING FIXTURES, RECEPTACLES AND ELECTRICAL EQUIPMENT TO ACCOMMODATE THIS EQUIPMENT. ADVISE THE GOVERNMENT OF CONFLICTS BEFORE ROUGH-IN.</div> <div>48. BEFORE COMMENCING WORK OR ORDERING MATERIALS, THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND VERIFY THE NAMEPLATE RATINGS OF ALL EQUIPMENT (MOTORS, HEATERS, COMPRESSORS, ETC.) AND ADJUST THE RATINGS OF THE ELECTRICAL EQUIPMENT (SWITCHES, FUSES, CIRCUIT BREAKERS, FEEDERS, ETC.) AS APPROPRIATE TO SERVE THIS EQUIPMENT.</div> <div>49. ENERGIZE EQUIPMENT ONLY AFTER OBTAINING PERMISSION FROM THE CONTRACTOR PROVIDING THE EQUIPMENT.</div> <div>50. UNLESS SPECIFICALLY NOTED OTHERWISE, THE CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL UTILIZATION EQUIPMENT SHOWN ON THE DRAWINGS. VERIFY THE TYPE OF FINAL CONNECTION AND PROVIDE APPROPRIATE WIRING METHOD. THE CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL AND PLUMBING EQUIPMENT, PRIOR TO ORDERING OR INSTALLATION OF ANY EQUIPMENT, TO VERIFY MECHANICAL AND PLUMBING EQUIPMENT REQUIREMENTS ARE PROVIDED IN THE ELECTRICAL DESIGN. THE CONTRACTOR WILL NOT BE COMPENSATED FOR COSTS ASSOCIATED WITH CHANGING THE ELECTRICAL SYSTEMS TO MATCH UTILIZATION EQUIPMENT, EVEN IF THE ELECTRICAL WORK IS INSTALLED PER THE ELECTRICAL DRAWINGS.</div> <div>51. THE CONTRACTOR SHALL FURNISH ALL STARTERS AND CONTROLS FOR THEIR EQUIPMENT. THE CONTRACTOR SHALL PROVIDE ALL SAFETY SWITCHES, SHALL MOUNT STARTERS AND PROVIDE WIRING AND CONNECTIONS TO LINE SIDE OF STARTERS. THE CONTRACTOR SHALL PROVIDE LOAD SIDE WIRING AND CONNECTIONS TO MECHANICAL AND PLUMBING EQUIPMENT. FOR RESISTANCE TYPE LOADS WHERE STARTERS OR CONTACTORS ARE NOT REQUIRED, THE CONTRACTOR SHALL PROVIDE ALL POWER WIRING AND CONNECTIONS COMPLETE TO EQUIPMENT. THE MECHANICAL AND PLUMBING CONTRACTORS SHALL PROVIDE ALL CONTROL WIRING AND CONNECTIONS AND DEVICES FOR THEIR EQUIPMENT.</div> <div>52. TELECOMMUNICATIONS AND DATA CABLES WILL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. LEAVE PULL WIRES OR ROPES OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.</div> <div>54. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY TO INSTALL ALL EQUIPMENT AS REQUIRED AND SHALL REESTABLISH ALL FINISHES TO THEIR ORIGINAL CONDITION WHERE CUTTING AND PATCHING OCCUR. ALL CUTTING AND PATCHING SHALL BE DONE IN A THOROUGHLY WORKMANSHIP MANNER. SAW CUT CONCRETE AND MASONRY PRIOR TO BREAKING OUT SECTIONS. ALL PATCHING MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY TRADESMEN EXPERIENCED IN THAT WORK. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE CONTRACTING OFFICER.</div> <div>55. CORE DRILL HOLES IN EXISTING CONCRETE WALLS AS REQUIRED.</div> <div>56. INSTALL WORK AT SUCH TIME AS TO REQUIRE THE MINIMUM AMOUNT TO CUTTING AND PATCHING.</div> <div>57. CUT OPENINGS ONLY LARGE ENOUGH TO ALLOW EASY INSTALLATION OF THE CONDUIT.</div> <div>58. ABANDONED POWER WIRING, RACEWAYS AND CONDUCTORS, SHALL BE REMOVED BACK TO THEIR SOURCE. THE ACCESSIBLE PORTIONS OF ABANDONED CABLES (VOICE, DATA, VIDEO, ALARM, ETC.) SHALL BE REMOVED.</div> <div>59. THE EXISTING ELECTRICAL SYSTEMS DEPICTED ON THESE DRAWINGS HAVE BEEN COMPILED BY THE ENGINEER FROM THE GOVERNMENT'S RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF THE EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, POINTS OF ACCESS AND FIELD CONDITIONS AFFECTING HIS WORK.</div> <div>60. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING ELECTRICAL SYSTEMS AND THE EXISTING BUILDING. THE SUBMISSION OF THE PROPOSAL BY THE CONTRACTOR SHALL BE CONSIDERED EVIDENCE THAT HE OR HIS REPRESENTATIVE HAS VISITED THE SITE AND BUILDINGS AND NOTED THE LOCATION AND CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED AND THAT HE TAKES FULL RESPONSIBILITY OF ALL FACTORS GOVERNING HIS WORK. NO EXTRAS WILL BE CONSIDERED BECAUSE OF ADDITIONAL WORK NECESSITATED BY EXISTING JOB CONDITIONS THAT ARE NOT INDICATED ON THE DRAWINGS.</div> <div>61. ALL UNUSED OUTLET BOXES SHALL BE REMOVED OR, WITH SPECIFIC APPROVAL OF THE CONTRACTING OFFICER, SHALL BE BLANKED WITH STAINLESS STEEL PLATES. ALL OPENINGS IN EXISTING WALLS AND CEILINGS MADE BY THIS CONTRACTOR SHALL BE REPAIRED TO AN EQUAL FINISH AS ADJACENT SURFACES.</div> <div>62. PROVIDE ALL ELECTRICAL RELOCATION WORK ASSOCIATED WITH THE RELOCATING OF EQUIPMENT FOR THE EXISTING FACILITIES, INCLUDING DISCONNECTING ALL EXISTING WIRING AND CONDUITS AND PROVIDING NEW WIRING AND CONDUITS TO THE RELOCATED EQUIPMENT.</div> <div>63. SEE "KEYED DEMOLITION NOTES" FOR ADDITIONAL REQUIREMENTS.</div> <div>64. SAFETY<div><div>A. COMPLY WITH OSHA AND NEC ARC FLASH PROTECTION REQUIREMENTS.</div><div>B. FOR EQUIPMENT BEING REMOVED AND REPLACED, THE CONTRACTOR SHALL DE-ENERGIZE THE EQUIPMENT AND MAKE IT SAFE PRIOR TO REMOVAL AND COMPLY WITH OSHA REQUIREMENTS FOR LOCKING-OUT AND TAGGING EQUIPMENT TO PREVENT INADVERTENT RE-ENERGIZING.</div><div>C. WHERE EQUIPMENT IS BEING REMOVED, BUT NOT REPLACED, REMOVE THE CONDUCTORS FEEDING THE EQUIPMENT BACK TO THE POINT WHERE THEY RECEIVE POWER. REMOVE ACCESSIBLE CONDUITS. ABANDON-IN PLACE INACCESSIBLE CONDUITS. AFTER REMOVAL OF EQUIPMENT, REPAIR ANY OPENING LEFT TO MATCH SURROUNDING WALLS, CEILINGS, OR FLOORS TO THE CONTRACTING OFFICER SATISFACTION.</div><div>D. COORDINATE WITH THE OTHER TRADES, PRIOR TO BID, AND INCLUDE IN THE BASE BID THE ELECTRICAL DISCONNECTION OF ANY EQUIPMENT BEING DEMOLISHED, EVEN IF NOT EXPLICITLY SHOWN. UNLESS NOTED OTHERWISE, REMOVE ALL DEMOLISHED EQUIPMENT FROM THE PROPERTY.</div></div></div>		

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET G-1

<div><div><div>CBHF Engineers, PLLC</div><div>2246 Yaupon Drive Wilmington, NC 28401 Phone: 910.791.4000 Fax: 910.791.5266 www.cbhfindengineers.com</div><div><small>©Copyright 2018 CBHF Engineers, PLLC</small> <small>NCB 18-008</small></div></div><div><div></div><div>JULY 27, 2018</div></div></div>		SHEET TITLE: <div>ELECTRICAL GENERAL & DEMOLITION NOTES</div>		<div>E-2</div>	
<div><div>TALLEY & SMITH ARCHITECTURE INC. P.O. BOX 518 SHELBY, NC 28151-0518 409 EAST MARION ST. SHELBY, NC 28150</div><div>DES. JLG DR. JLG CHK. WAC SUBMITTED BY: DESIGN DR. T H BURTON, PE</div></div>		<div>DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA</div>			
<div>APPROVED: <div>T H BURTON, PE</div></div>		DATE	SIZE F	CODE IDENT. NO. 80091	NAVFAC DRAWING NO. 60024433
SATISFACTORY TO:		DATE	SCALE: NOTED	SPEC. 05-17-0075	CONST. CONTR. NO. N40085-17-D-0859 SHEET 25 OF 34

REVISIONS			
SYL		DATE	APPROVED

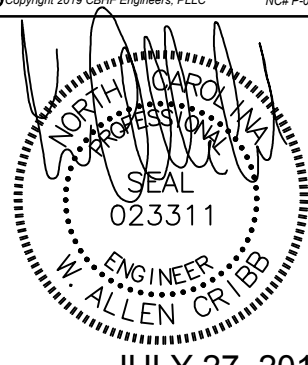
DEMOLITION KEYED NOTES

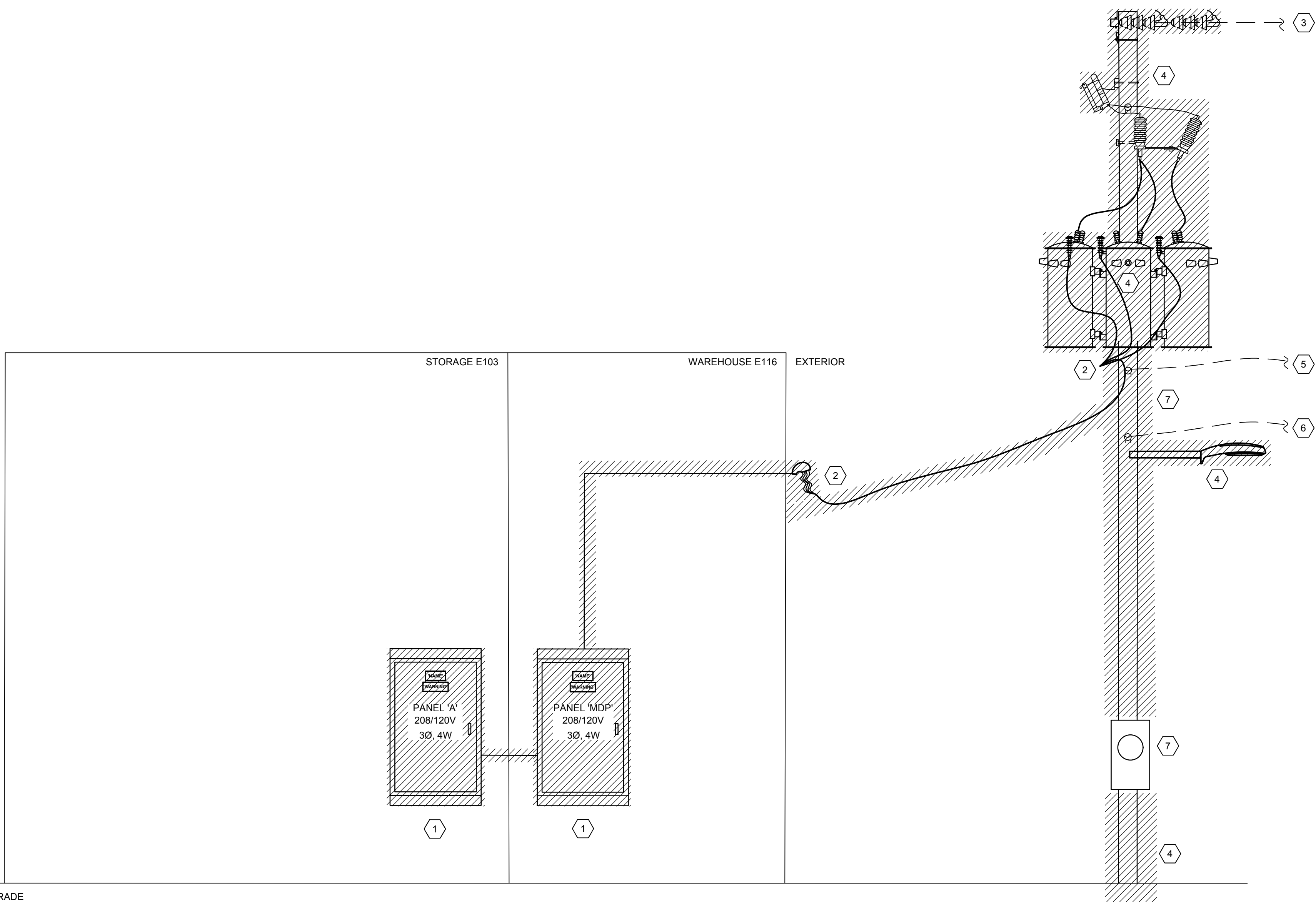
- 1 PANELBOARD: DISCONNECT AND REMOVE FEED CONDUIT AND CONDUCTORS. REMOVE PANEL, BRANCH CIRCUIT CONDUIT AND CONDUCTORS IN THEIR ENTIRETY.
- 2 OVERHEAD SECONDARY: DISCONNECT AND REMOVE CONDUIT, CONDUCTORS AND SUPPORTS IN THEIR ENTIRETY.
- 3 PRIMARY CONDUCTORS: CONTRACTOR SHALL PROTECT DURING DEMOLITION AND CONSTRUCTION FOR RELOCATION AND RE-USE.
- 4 UTILITY POLE & ELECTRICAL EQUIPMENT: CONTRACTOR SHALL REMOVE POLE, POLE MOUNTED TRANSFORMERS, DISCONNECT, LIGHT FIXTURE, WEATHERHEADS, CONDUITS AND CONDUCTORS IN THEIR ENTIRETY.
- 5 SECONDARY SITE LIGHTING FEED CONDUCTORS: CONTRACTOR SHALL PROTECT DURING DEMOLITION AND CONSTRUCTION FOR RELOCATION TO NEW POLE AND RE-USE.
- 6 OVERHEAD UTILITY TELCOM AND CATV CABLING: CONTRACTOR SHALL PROTECT DURING DEMOLITION AND CONSTRUCTION FOR RELOCATION TO NEW POLE AND RE-USE.
- 7 (X)METER PAN, (X)KWH METER AND (X)CURRENT TRANSFORMERS: CONTRACTOR SHALL REMOVE, STORE AND PROTECT DURING DEMOLITION AND CONSTRUCTION FOR RE-USE.

KEYED NOTES

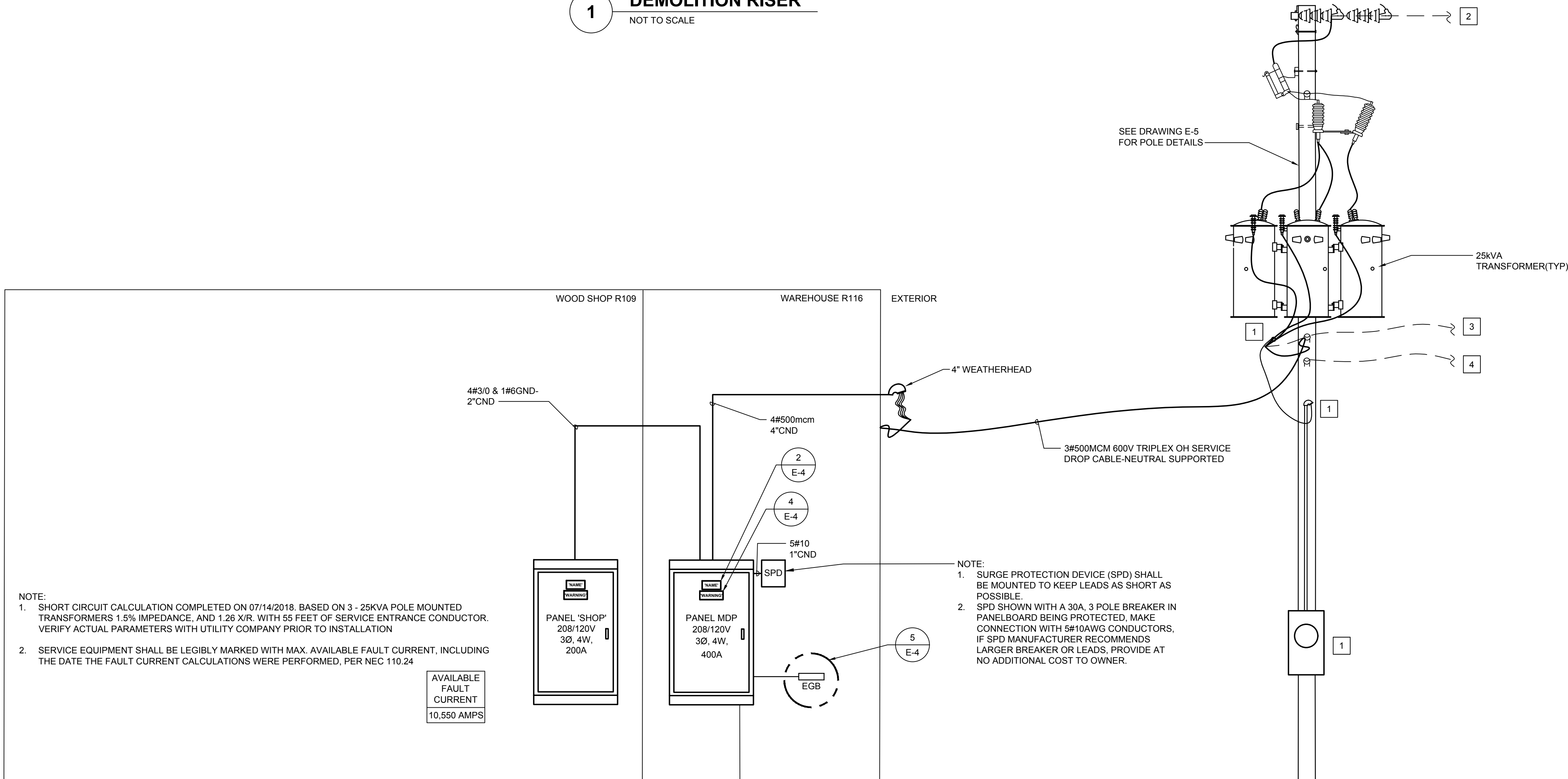
- 1 (X)METER PAN, (X)KWH METER, (X)CURRENT TRANSFORMERS: CONTRACTOR SHALL INSTALL WIRING ALONG WITH (X)KWH METER, (X)METER BASE AND (X)CURRENT TRANSFORMERS REMOVED AND PROTECTED DURING DEMOLITION.
- 2 PRIMARY CONDUCTORS: CONTRACTOR SHALL RELOCATE EXISTING CONDUCTORS PROTECTED DURING DEMOLITION TO POLE AND RE-USE.
- 3 SECONDARY SITE LIGHTING FEED CONDUCTORS: CONTRACTOR SHALL RECONNECT EXISTING CABLING PROTECTED DURING DEMOLITION TO POLE AND FEED (X)DOWNSTREAM LIGHT FIXTURES FROM SECONDARY OF TRANSFORMERS.
- 4 OVERHEAD UTILITY TELCOM AND CATV CABLING: CONTRACTOR SHALL RELOCATE EXISTING CABLING PROTECTED DURING DEMOLITION TO POLE.

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET G-1

CBHF Engineers, PLLC 2246 Yaupon Drive Wilmington, NC 28401 Phone: 910.791.4000 Fax: 910.791.5266 www.cbhfenrines.com <small>©Copyright 2018 CBHF Engineers, PLLC NC# P-008</small>	SHEET TITLE: ELECTRICAL RISER DIAGRAMS		E-3	
	TALLEY & SMITH ARCHITECTURE INC. P.O. BOX 518 SHELBY, NC 28151-0518 409 EAST MARION ST. SHELBY, NC 28150		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	
	DES. JLG	INTERIOR/EXTERIOR REPAIRS BLDG. AS124 CAMP LEJEUNE, NORTH CAROLINA		
	DR. JLG			
	CHK. WAC			
	SUBMITTED BY:	DESIGN DR. T H BURTON, PE		
	APPROVED:	DATE	SIZE F	CODE IDENT. NO. 80091
SATISFACTORY TO:	DATE	SCALE: NOTED	SPEC. 05-17-0075	CONST. CONTR. NO. N40085-17-D-0859
JULY 27, 2018		SHEET 26 OF 34		

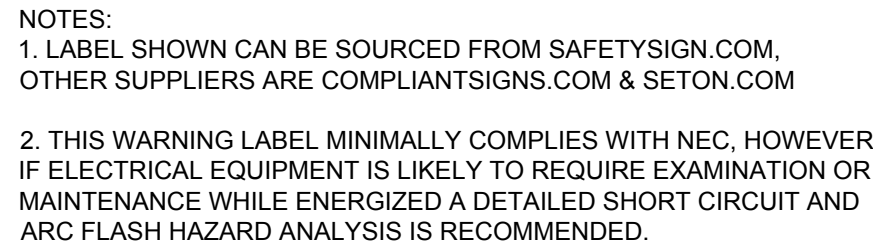


1 DEMOLITION RISER
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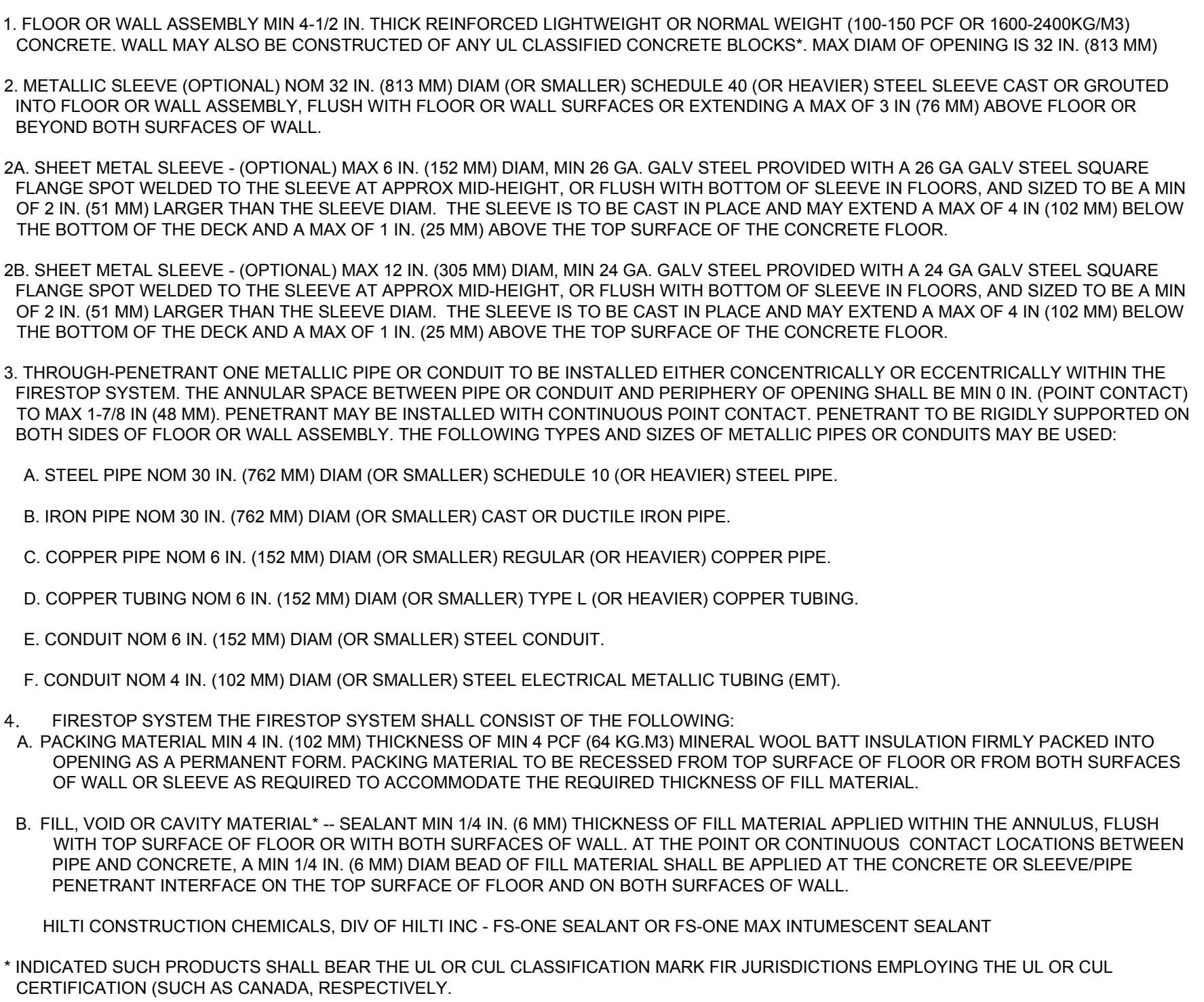
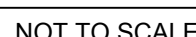
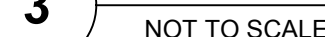
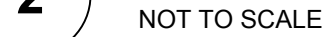


2 RISER
NOT TO SCALE

7 WIRING DIAGRAM - EXTERIOR FIXTURE TYPE 'D'
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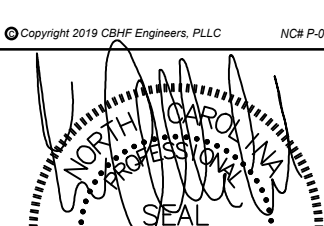


NOT TO SCALE



NOT TO SCALE




 <p>CBHF Engineering, PLLC</p> <p>2246 Yaugon Drive Wilmington, NC 28401 Phone: 910.791.4000 Fax: 910.791.6266 www.cbhfengineering.com</p> <p>©Copyright 2015 CBHF Engineering, PLLC NCBP 0056</p>  <p>JULY 27, 2018</p>	<p>SHEET TITLE:</p>		<p>ELECTRICAL DETAILS</p>		<p>E-4</p>	
	<p>TALLEY & SMITH ARCHITECTURE INC. P.O. BOX 518 SHELBY, NC 28151-0518 409 EAST MARION ST. SHELBY, NC 28150</p>		<p>DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA</p> <p>INTERIOR/EXTERIOR REPAIRS BLDG. AS124 CAMP LEJEUNE, NORTH CAROLINA</p>			
<p>DES. JLG</p> <p>DR. JLG</p> <p>CHK. WAC</p> <p>SUBMITTED BY:</p> <p>DESIGN DIR. T H BURTON, PE</p>		<p>DATE</p> <p>SIZE F</p> <p>CODE IDENT. NO. 80091</p>		<p>NAVFAC DRAWING NO. 60024435</p>		
<p>SATISFACTORY TO:</p>		<p>DATE</p>		<p>CONST. CONTR. NO. N40085-17-D-0859</p>		
<p>SCALE: NOTED</p>		<p>SPEC. 05-17-0075</p>		<p>SHEET 27 OF 34</p>		

PANEL MDP													SERVICE EQUIPMENT LISTED		
TYPE: NEMA 1			208	120	V.	3	PH.	4	WIRE	PROVIDE IF CHECKED:		XX XX	EQUIP. GROUND BUS		
ROU-TION			MOUNT:	SURFACE									NEUTRAL BUS		
DOOR-IN-DOOR WITH-IN HINGED TRIM			FEED:	TOP									GUTTER TAPS		
FRONT COVER													SUB-FEED LUGS		
LOAD SERVED			LOAD	CKT	CKT	LOAD VA			CKT	CKT	LOAD VA	LOAD SERVED			
			VA	BKR		A	B	C	#	BKR					
PANEL SHOP			13,013	200/3	1	13,733			2	20/1	720	RECEPT: R116, EXTERIOR GFI			
			14,295		3	14,655			4	20/1	360	RECEPTS: R116			
			13,289		5			14,009	6	20/1	720	RECEPTS: R116			
GUH03 & GUH02			888	15/1	7	1,608			8	20/1	720	RECEPT: R116			
GUH01 & GUH04			888	15/1	9	1,428			10	20/1	540	RECEPT: R116, EXTERIOR GFI			
PW01			1,176	20/1	11			1,620	12	20/1	444	COMPRESSOR			
DUST COLLECTOR			2,906	40/3	13	4,912			14	30/3	2,006	HUMIDIFIER			
			2,906		15	4,912			16		2,006				
			2,906		17			4,912	18		2,006				
LIGHTS: R116			1,206	20/1	19	1,366			20	20/1	180	LIGHTS: EXTERIOR			
SPARE					20/1	21	172		22	20/1	172	LIGHTS: EXTERIOR			
SPARE					20/1	23		1,200	24	20/1	1,200	SIGN			
SPARE					20/1	25	800		26	20/1	800	LCT & TC1			
DHP01/DAH01(NOTE 2)			998	15/2	27	2,248			28	20/2	1,250	EW1H			
			998		29			2,248	30		1,250				
PW03			696	15/1	31	696			32	20/1		SPARE			
SPARE					33				34	20/1		SPARE			
SPARE					35				36	20/1		SPARE			
SPD				30/3	37				38	20/1		SPARE			
					39				40	20/1		SPARE			
					41				42	20/1		SPARE			
NOTES:			23,115 23,415 23,989 TOTAL VOLT AMPS						400 A. BUS (COPPER)						
1. HVAC & REFRIGERATION EQUIPMENT MUST USE TYPE HACR BREAKERS.			103 195 200 CONN. AMPS						400 A MAIN CIRCUIT BREAKER						
2. CONTRACTOR MUST PROVIDE CONDUIT AND CABLE FROM DHP01 TO DAH01															
									22 KAIC MIN.						

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET G-1

Copyright 2019 C&E Engineers, PLLC HCB P-4

A circular professional engineer seal for the State of North Carolina. The outer ring contains the text "NORTH CAROLINA" at the top and "W. ALLEN CRABB" at the bottom. Inside the ring, the words "REGISTERED" and "ENGINEER" are written in a circular path. In the center of the seal, the text "STATE SEAL" and the number "023311" are displayed. A signature is written across the seal.

JULY 27, 201

LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	SIZE/APERTURE	VOLTS	LAMPS	WATTS	LENS	COLOR	MOUNTING HEIGHT	DRIVER	REMARKS
A	INDUSTRIAL HIGHBAY LED FIXTURE	89.5"L X 4.25"W X 3.125"H	MVOLT	LED 4000K 14,000	116	FROSTED ACRYLIC	WHITE	SUSPENDED 18" AFF	LED DRIVER	4
B	4' SUSPENSION DIRECT/INDIRECT LED FIXTURE FIBERGLASS REINFORCED HOUSING, STAINLESS HARDWARE	46.87"L X 4.25"W X 3.125"H	MVOLT	LED 4000K 2950 LUMENS	32	N/A	WHITE	8'-6" AFF	LED DRIVER	4
C	SURFACE MOUNTED LED WALL PACK, CONSTRUCTION: CAST OR EXTRUDED ALUMINUM POWDER COAT FINISH, POLYCARBONATE LED PROTECTANT COVERS	15"W X 6"D	MVOLT	LED 4000K 4500 LUMENS	21	ACRYLIC	DARK BRONZE	WALL MOUNTED ABOVE DOOR	LED DRIVER	3.5
D	SURFACE MOUNTED LED ENTRANCE LIGHT, CONSTRUCTION: CAST ALUMINUM TOP PLATE AND OUTER RING WITH POWDER COAT FINISH, POLYCARBONATE LED PROTECTANT COVERS	14.5"W X 12.75"H X 7"D	MVOLT	LED 4000K 1029 LUMENS	16.6	ACRYLIC	DARK BRONZE	WALL MOUNTED 7'-6" ABOVE DOOR	LED DRIVER	3.5,8
E	2-HEAD EMERGENCY FIXTURE CONSTRUCTION: INJECTION-MOLDED HIGH-IMPACT THERMOPLASTIC WITH SNAP-FIT COMPONENTS, TRACK AND SWIVEL LAMP ADJUSTMENT	12.5"W X 3.75"D X 3.75"H	MVOLT	2-1.8W LED SQUARE LAMPS	10	N/A	WHITE	WALL MOUNTED 7' 6" AFF	N/A	8
X	EXIT SIGN, SINGLE FACE, 6" RED LETTERS	12"W X 8"H X 2"D	MVOLT	LED	6	N/A	WHITE	SURFACE CEILING 7'-6" AFF WHEN WALL MOUNTED		8

REMARKS:

- 0-10V DIMMING DRIVER
- DAMP LOCATION
- WET LOCATION
- WIREGUARD
- LED REQUIRED SURGE PROTECTION

- HAZARDOUS LOCATION
- DRIVER SHALL BE RATED -20 DEG C to 40 DEG C
- 90 MIN BATTERY BACKUP - INTEGRAL
- 90 MIN BATTERY BACKUP - EXTERNAL REMOTE MOUNTED
- INTEGRAL PHOTOCELL

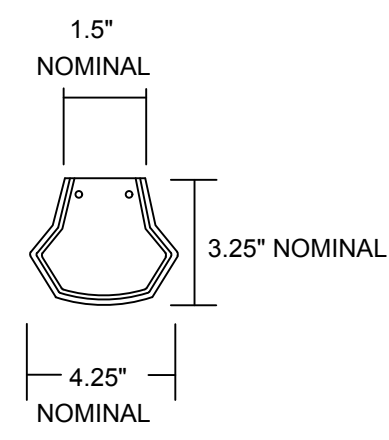
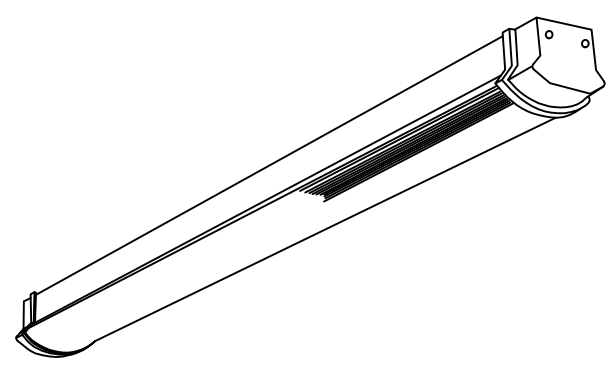
- PROVIDE DIRECTION ARROWS AS INDICATED

GENERAL NOTES:

- THE CONTRACTOR SHALL VERIFY THE LEAD TIME OF ALL PRODUCTS SPECIFIED IN THIS SCHEDULE AT THE TIME OF PACKAGE QUOTE.
- DURING THE BID PROCESS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DELIVERY/SCHEDULING ISSUES.
- NO SUBSTITUTIONS WILL BE ALLOWED DUE TO THE LACK OF COORDINATION OF DELIVERY DATES AND CONSTRUCTION SCHEDULE AFTER BID.
- ALL EXPEDITED EXPENSES SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS.
- FIXTURES TO BE INSTALLED IN CEILINGS, INDICATE ON THE ARCHITECTURAL PLANS AS HAVING INSULATION IN CONTACT WITH THE CEILING SURFACE, SHALL BE IC RATED BY MANUFACTURER.
- LIGHTING FIXTURES SHALL MEET THE AESTHETICS, DESCRIPTION AND SPECIFICATIONS, SUBSTITUTIONS SHALL INCLUDE PT. BY PT. CALCULATIONS.
- LIGHTING FIXTURES, AS SPECIFIED, HAVE BEEN SO SELECTED TO ACHIEVE REQUIRED/DESIRED FOOTCANDLE LEVELS IN THEIR RESPECTIVE AREA. HENCE SPECIFIC FIXTURE CHARACTERISTICS WHICH MAY CREATE PARTICULAR ILLUMINATION RESULTS ARE ESSENTIAL. ANY DEVIATIONS FROM SPECIFIED FIXTURES SHALL DEEM THE SUBMITTING AGENT AND CONTRACTORS RESPONSIBLE IN PROVIDINGSUCH DEVIATION FOR THE ARCHITECT/ ENGINEER AND OWNER TO MAKE AN INFORMED DECISION.
- SUBSTITUTIONS ARE ACCEPTABLE AS LONG AS THEY ARE EQUAL TO THE FIXTURE SPECIFIED, UNLESS OTHERWISE NOTED THIS INCLUDES LENS, COLORS, REFLECTORS, PHOTOMETRICS, HOUSING MATERIAL, FINISHES, ETC. ALL
- ANY FIXTURE WITH THE TEXT "NL" ADJACENT TO IT SHALL INDICATE THAT THAT FIXTURE IS A NIGHT LIGHT (24HR LIGHT). THE FIXTURE SHALL BE CONNECTED TO THE UNSWITCHED HOT LEG OF THE INDICATED CIRCUIT.
- ACRYLIC PRISMATIC LENSES SHALL BE 0.156" NOMINAL MINIMUM THICKNESS.
- ALL EXIT AND EMERGENCY FIXTURES SHALL COMPLY WITH NCSBC STANDARDS AND HAVE AUTOMATIC TESTING DEVICES.
- LED EMERGENCY BATTERY SHALL PROVIDE 1400 MINIMUM LUMENS OUTPUT FROM 1 LAMP FOR 90 MINUTES MINIMUM.
- LED MODULES SHALL BE REPLACEABLE.
- SEE SPECIFICATIONS SECTIONS 265100 AND 265200 FOR ADDITIONAL REQUIREMENTS.
- ELECTRICAL CONTRACTOR SHALL RECEIVE APPROVAL FOR ALL LIGHTING FIXTURES FROM ARCHITECT/OWNER PRIOR TO PURCHASE AND ROUGH-IN.
- ALL LIGHTING FIXTURES PENETRATING RATED FLOOR/CEILING ASSEMBLY SHALL BE PROVIDED WITH ACCESSORIES TO MAINTAIN ASSEMBLY FIRE RATING. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL RATINGS.
- THE ABOVE FIXTURE TYPES ARE LISTED AS THE DESIGN BASIS. THE ACTUAL FIXTURES SUBMITTED SHALL BE MANUFACTURED IN THE UNITED STATES.
- PROVIDE MANUFACTURER INSTALLED NEC 2014 ARTICLE 410.130 (G) COMPLIANT DISCONNECTING MEANS FOR ALL APPLICABLE FIXTURES.

REVISIONS

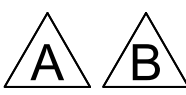
SYM.	DATE	APPROVED



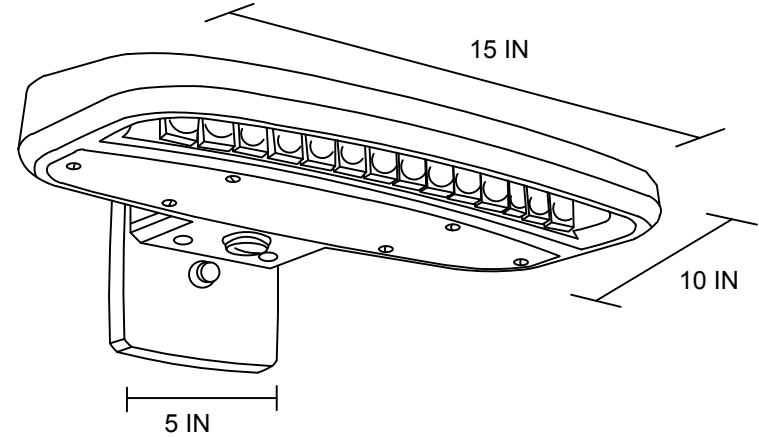
LUMINAIRE REQUIREMENTS:

- HOUSING - 2NOMINAL 4 1/4" X 3 1/4" RECTANGULAR HOUSING FORMED FROM COLD-ROLLED STEEL, AND END CAPS.
- END CAPS - DIE-CAST END CAPS ARE MECHANICALLY ATTACHED WITH NO EXPOSED FASTENERS. FLAT END CAPS STANDARD, SCULPTURED END CAPS OPTIONAL.
- COLOR - HOUSING AND END CAPS IS WHITE, BLACK OR PAINTED ALUMINUM.
- LUMINAIRE LENGTH - 2' AND 4' AND 8' TANDEM LENGTHS TO ACCOMMODATE MANY FIELD APPLICATIONS. 8' TANDEM UNIT IS TWO 4' OPTICAL ASSEMBLIES WITH A CENTER MULLION ON A SINGLE FULL LENGTH CHASSIS.
- SOURCE - MULTIPLE LED LUMEN PACKAGES AND THREE AVAILABLE COLOR TEMPERATURE OPTIONS (3000K, 3500K, AND 4000K) - ALL WITHIN 2.5 MACADAM ELLIPSE.
- OPTICS - FROSTED ACRYLIC DIFFUSER, WIDE LIGHT DISTRIBUTION WITH GLARE CONTROL.
- DIMMING DRIVER - SMOOTH CONTINUOUS AND FLICKER-FREE 0-10V DIMMING TO DARK (0.1%). SYNCING FOR CONTROLS: 2mA MAX. THD <20%. INSIGNIFICANT INRUSH CURRENT AT 120 AND 277VAC. FCC CLASS A AND B TESTED FOR EMI AND RFI.
- ELECTRICAL - LED LIGHT ENGINE - CONSISTING OF MODULAR LED BOARDS AND EL-OLED DIMMING DRIVER - RATED FOR 50,000 HOURS (L80) AT 25°C AMBIENT TEMPERATURE. SPECIFY 120V OR 277V. PRE-WIRED WITH 16WAG FIXTURE WIRE. PLUG-IN ELECTRICAL CONNECTORS INCLUDED.

LED 4' & 8' SUSPENDED DIRECT/INDIRECT FIXTURE



1 TYPE A & B DETAIL NOT TO SCALE



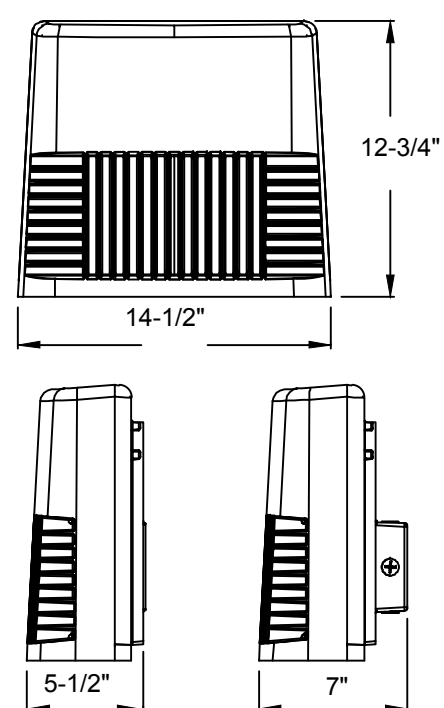
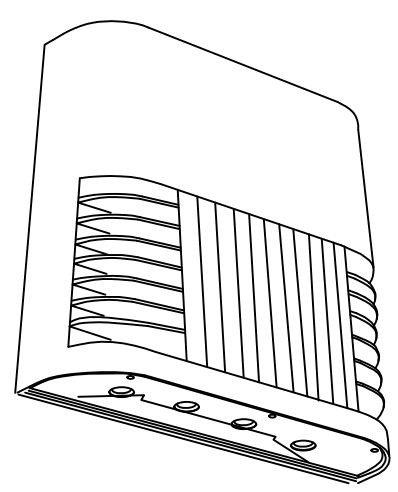
LUMINAIRE REQUIREMENTS:

- HOUSING - DIE-CAST OR EXTRUDED ALUMINUM WITH INTEGRAL PASSIVE COOLING MECHANISM. HEAT SINK SHALL BE INCORPORATED DIRECTLY INTO HOUSING OR DRIVER COMPARTMENT TO ENSURE MAXIMUM HEAT TRANSFER AND DISSIPATION.
- FINISH - MULTI-STAGE PRE-TREATMENT, FINISHED WITH BAKED-ON POLYESTER POWDER COAT. FINISH SHALL PASS 2500 HOUR SALT SPRAY TEST PER ASTM B117. STANDARD FINISH IS DARK BRONZE, WITH OTHER CUSTOM COLORS AVAILABLE.
- POWER SUPPLY/LED DRIVER - CLASS 1 DRIVER SHALL OPERATE AT 120/277 VOLTS, 50/60 HZ, WITH OTHER VOLTAGES OPTIONAL, POWER FACTOR GREATER THAN 0.9 AND THD LESS THAN 20% AT FULL LOAD. MINIMUM EFFICACY SHALL BE 80 LMW AT MAXIMUM 600mA OPERATING CURRENT.
- LED OPTICAL ASSEMBLY - PRECISION MOLDED ACRYLIC LENS PROVIDED FOR MULTIPLE HIGH-POWERED LEDS PRODUCING NEMA TYPE III DISTRIBUTION OR AS OTHERWISE INDICATED. BUG UPLIGHT RATING OF U0, WITH GLARE RATING AS DETERMINED BY LIGHTING ZONE INSTALLED. MINIMUM COLOR RENDERING INDEX (CRI) SHALL BE 70 FOR CORRELATED COLOR TEMPERATURE (CCT) OF 4000-4500 DEGREES K.
- CERTIFICATION - UL AND/OR ETL LISTED FOR DAMP OR WET LOCATIONS AS INDICATED, AND RoHS COMPLIANT.
- OPTIONS - VARIOUS LUMEN OUTPUT RATING AS INDICATED, PHOTOCELL, AND 0-10 VOLT DIMMING DRIVER.
- OTHER - THE ABOVE SKETCH IS A NON-PROPRIETY GRAPHIC REPRESENTATION OF A LUMINAIRE THAT MAY MEET THE SPECIFICATION REQUIREMENTS AND IS NOT INTENDED TO INDICATE A CERTAIN MANUFACTURER'S PREFERENCE. ALL DIMENSIONS ARE NOMINAL AND VARY PER MANUFACTURER.

LED WALL PACK



2 TYPE C DETAIL NOT TO SCALE



FLUSH OR BACKBOX MOUNT

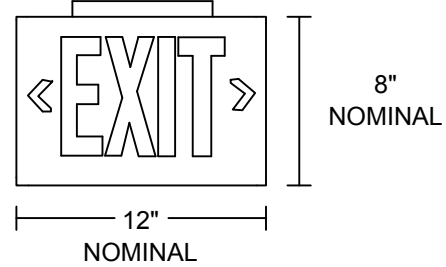
LUMINAIRE REQUIREMENTS:

- HOUSING - CAST ALUMINUM HOUSING.
- FINISH - THERMOSET POWDER COAT FINISH.
- LENS - CLEAR GLASS.
- LAMPS - LEDS.
- DRIVER - ELECTRONIC >90% POWER FACTOR.
- ELECTRICAL - 120/277V
- CERTIFICATION - UL LISTED AND LABELED.
- INTEGRAL 90 MIN BATTERY BACK-UP

LED EXTERIOR EGRESS SURFACE



3 TYPE D DETAIL NOT TO SCALE



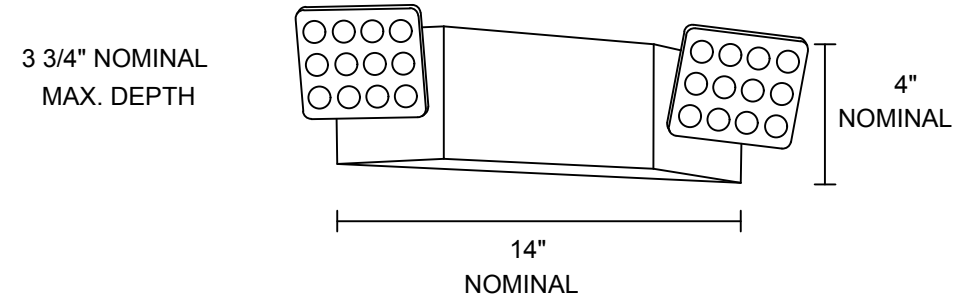
LUMINAIRE REQUIREMENTS

- HOUSING - DIE-CAST ALUMINUM OR HIGH-IMPACT, UV-STABILIZED, INJECTION-MOLDED THERMOPLASTIC. SINGLE OR DOUBLE-FACED AS INDICATED.
- FINISH (ON CAST ALUMINUM HOUSING ONLY) - TEXTURED POWDER COAT FINISH OPTIONS INCLUDE WHITE, WHITE WITH BRUSHED ALUMINUM FACE, BLACK, OR BLACK WITH BRUSHED ALUMINUM FACE.
- LETTERS/CHEVRONS - MINIMUM 6" HIGH WITH 3/4" STROKE. RED OR GREEN LETTERS AS INDICATED. PROVIDE CHEVRONS AS INDICATED EITHER LEFT, RIGHT OR BOTH DIRECTIONS AS INDICATED.
- EMERGENCY PACK - SOLID-STATE, CONSTANT-CURRENT TYPE BATTERY CHARGER WITH MAINTENANCE-FREE, NICKEL-CADMIUM BATTERY, AC-ON INDICATOR LAMP AND TEST SWITCH.
- MOUNTING - UNIVERSAL MOUNTING KIT FOR CEILING, WALL OR END-OF-FIXTURE MOUNTING.
- ILLUMINATION - PROVIDED BY RED, GREEN OR WHITE HIGH-OUTPUT LEDS INSIDE OF FIXTURE HOUSING. PROVIDE POLYSTYRENE DIFFUSER IN COLOR INDICATED WITH FREQUENCY-MATCHED SILKSREEN COATING FOR MAXIMUM LED LIGHT OUTPUT.
- CERTIFICATION - UL LISTED AND CERTIFIED FOR DAMP LOCATIONS.

LED EXIT SIGN



4 TYPE X DETAIL NOT TO SCALE



LUMINAIRE REQUIREMENTS:

- HOUSING - INJECTION-MOLDED, FAME-RETARDANT, HIGH-IMPACT, THERMOPLASTIC HOUSING WITH SNAP-FIT DESIGN COMPONENTS. TRACK AND SWIVEL ARRANGEMENT PERMITS FULL RANGE OF LAMP ADJUSTMENT.
- OPTICS - TWO 1.8W LED LAMPS FOR EMERGENCY LIGHT.
- ELECTRICAL - DUAL-VOLTAGE INPUT 120V OR 277V AC. EMERGENCY UNIT PROVIDED WITH TEST SWITCH, STATUS INDICATOR AND RECHARGEABLE BATTERY. MAINTENANCE-FREE NICKEL-CADMIUM BATTERY, 90 MINUTES OF EMERGENCY POWER.
- LISTINGS - UL LISTED, MEETS UL 924, NFPA 101, NFPA 70-NEC AND OSHA ILLUMINATION STANDARDS. DAMP LOCATION 32°F TO 122°F (0°C TO 50°C) LISTED STANDARD.

EMERGENCY LIGHTING UNIT

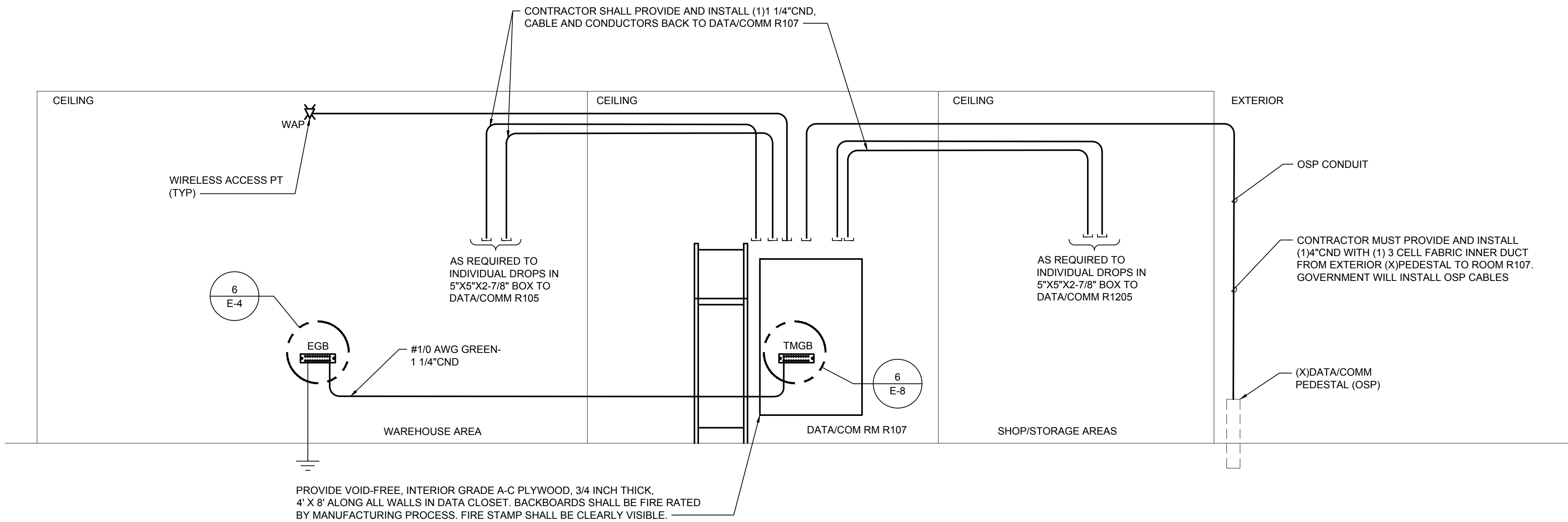


5 TYPE E DETAIL NOT TO SCALE

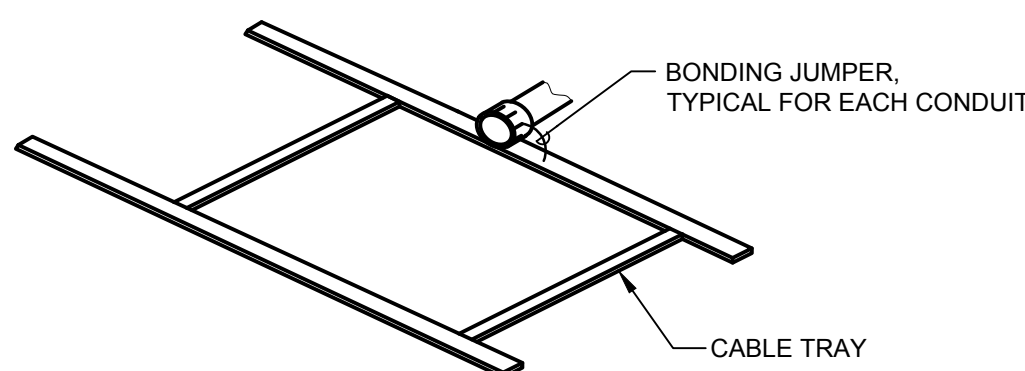
SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET G-1

CBHF Engineers, PLLC 2246 Yaupon Drive Wilmington, NC 28401 Phone: 910.791.4000 Fax: 910.791.5266 www.cbhfenigneers.com	SHEET TITLE: ELECTRICAL LIGHTING SCHEDULE & DETAILS		E-7
	TALLEY & SMITH ARCHITECTURE INC. P.O. BOX 518 SHELBY, NC 28151-0518 409 EAST MARION ST. SHELBY, NC 28150		
DES. JLG DR. JLG CHK. WAC SUBMITTED BY: DESIGN DR. T H BURTON, PE		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	
APPROVED: [Signature] DATE: [Blank]		INTERIOR/EXTERIOR REPAIRS BLDG. AS124 CAMP LEJEUNE, NORTH CAROLINA	
SATISFACTORY TO:		DATE: [Blank]	SCALE: NOTED
CODE IDENT. NO. 80091		NAVFAC DRAWING NO. 60024438	CONST. CONTR. NO. N40085-17-D-0859
SPEC. 05-17-0075		SHEET 30 OF 34	

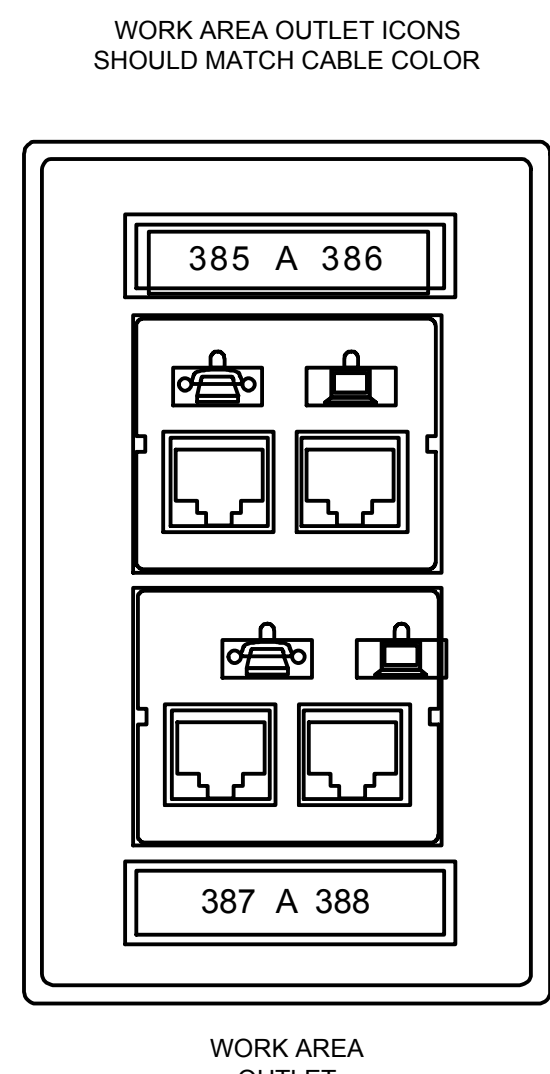
REVISIONS			
SYL		DATE	APPROVED



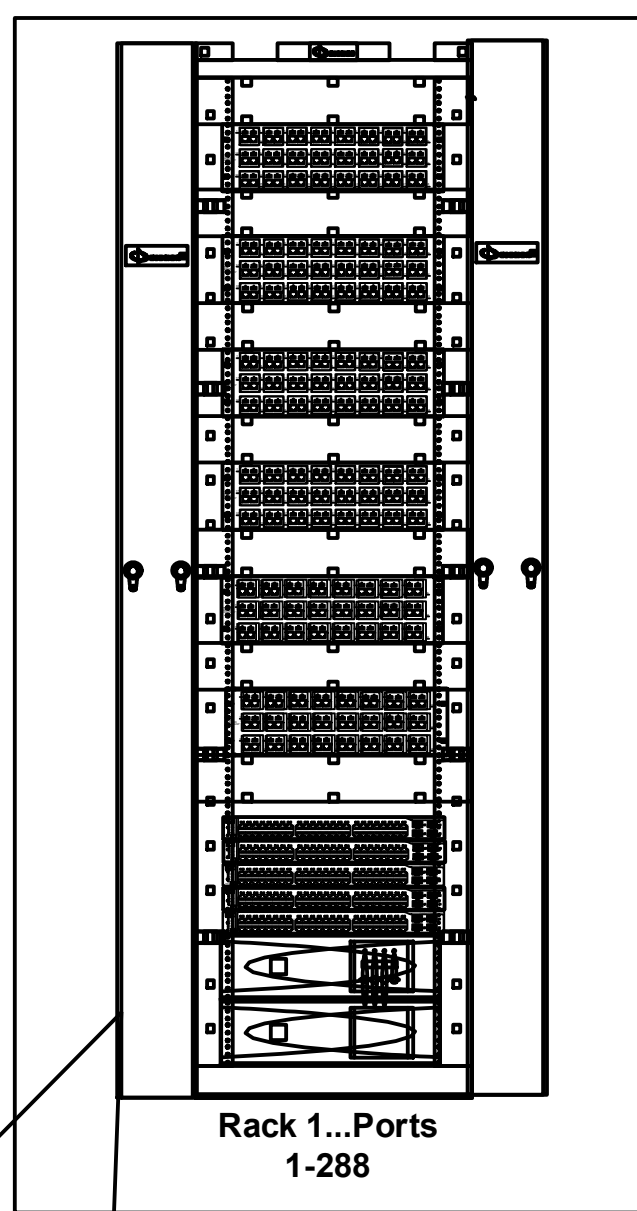
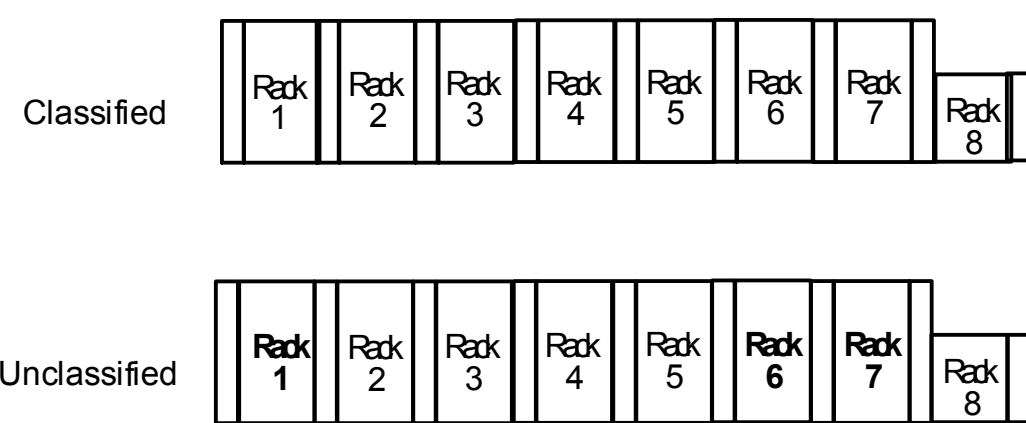
1 TELECOMMUNICATION RISER
NOT TO SCALE



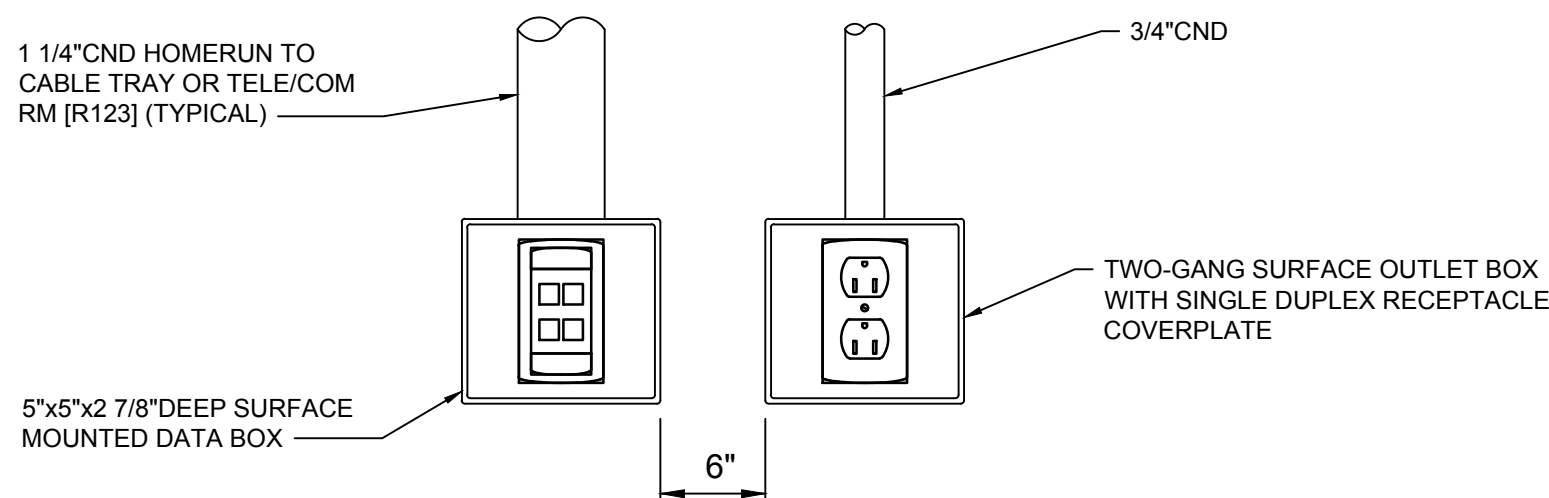
2 CONDUIT TO TRAY BONDING DETAIL
NOT TO SCALE



Labeling Scheme

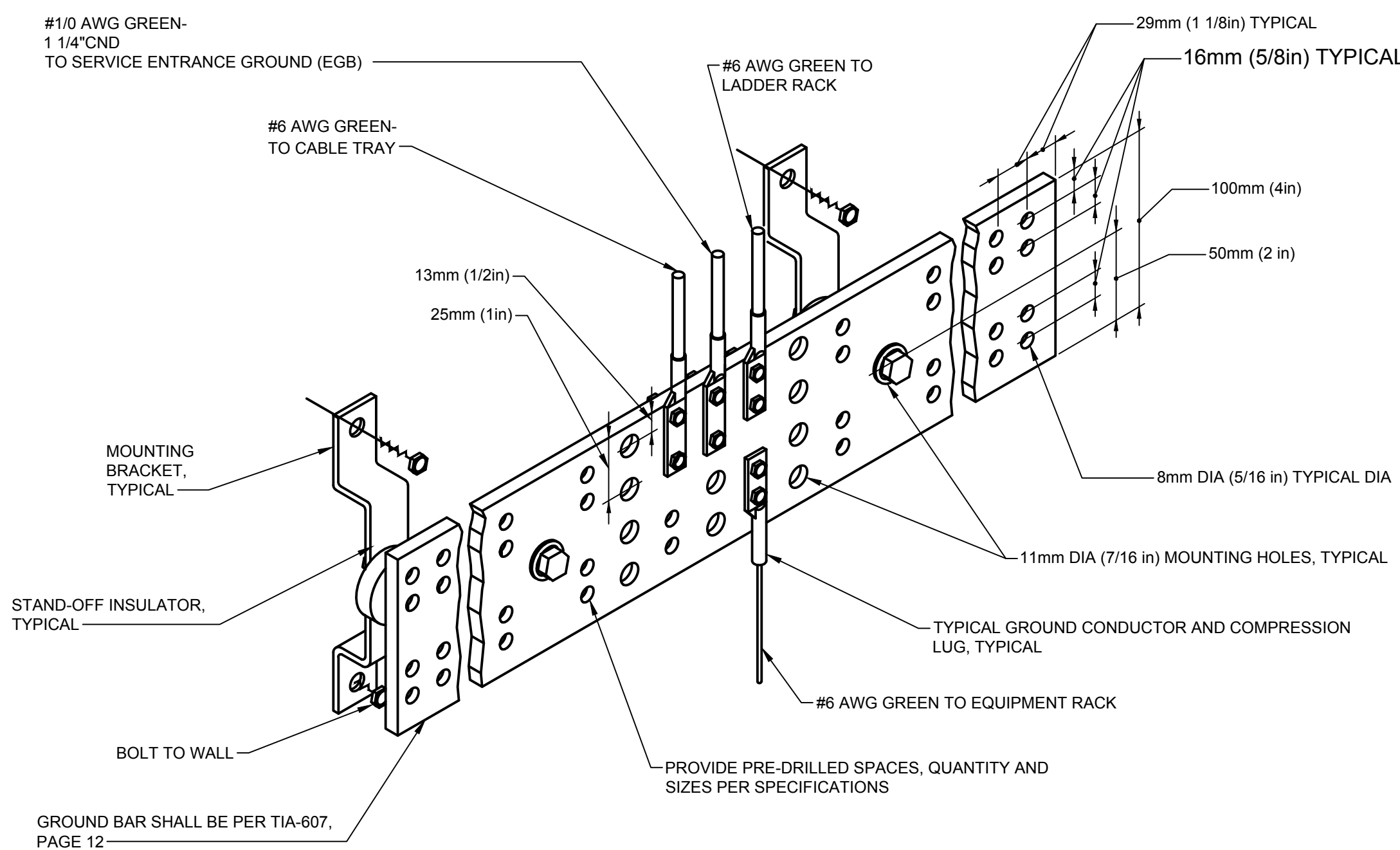


3 DATA OUTLET LABELING DETAIL
NOT TO SCALE



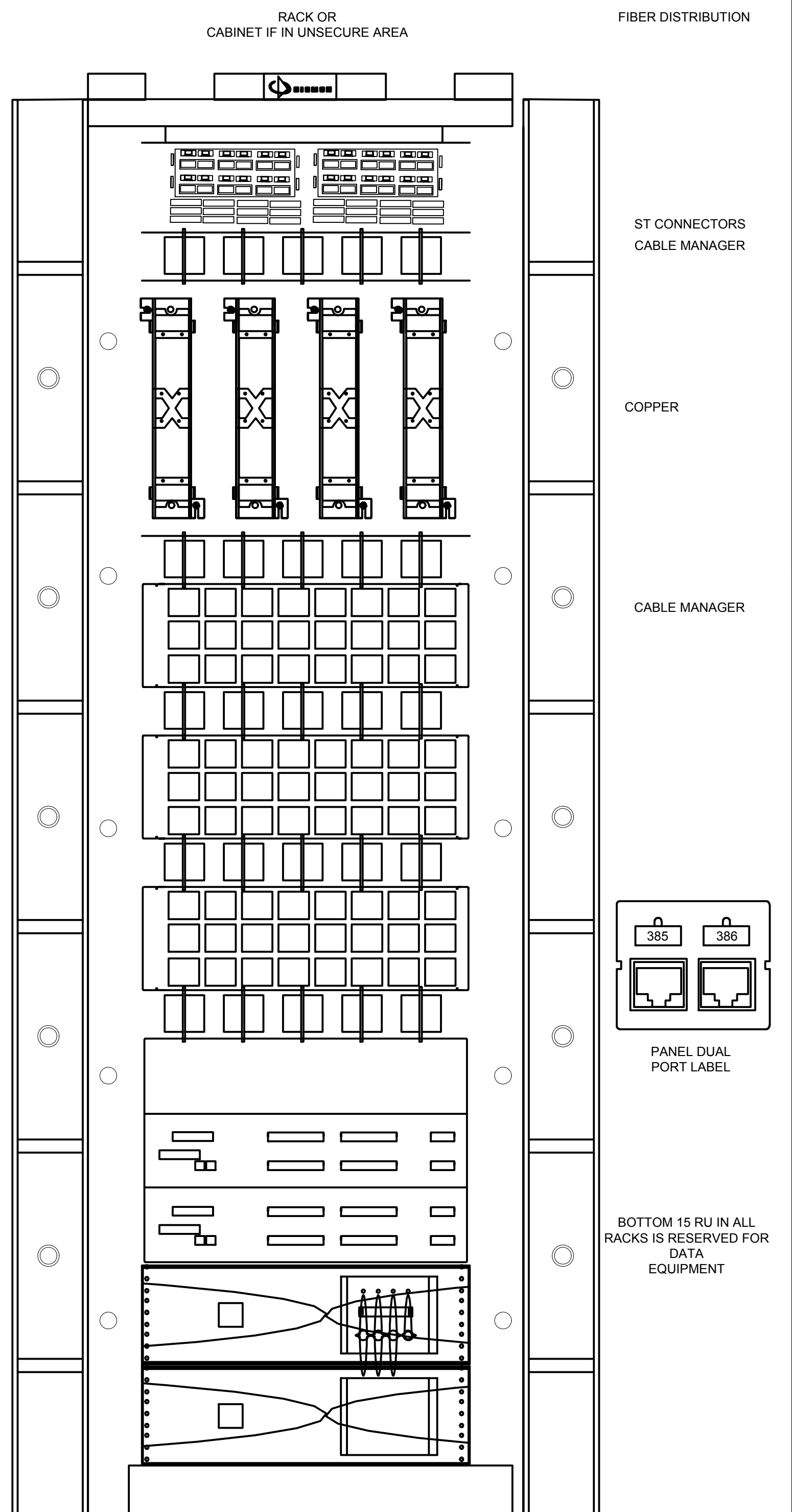
4 TYPICAL DATA OUTLET DETAIL
NOT TO SCALE

5 DATA/RECEPTACLE MOUNTING DETAIL
NOT TO SCALE



6 TELECOMMUNICATIONS GROUND BAR 'TMGB' DETAIL
NOT TO SCALE

ON BACKBOARD - PROTECTOR / BUILDING ENTRANCE (BEP), TMGB
PROPER BONDING & GROUNDING, CABLE MANAGEMENT AND SLACK ON LADDER RACK.
LADDER RACK SHOULD BE ANCHORED FROM COMM. RACK TO AT LEAST TWO WALLS.



7 ENCLOSURE RACK ELEVATION EXAMPLE
NOT TO SCALE

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET G-1

CBHF Engineers, PLLC 2246 Yaupon Drive Wilmington, NC 28401 Phone: 910.791.4000 Fax: 910.791.5266 www.cbhfindengineers.com DESIGNED BY: JLG CHECKED BY: WAC SUBMITTED BY: T H BURTON, PE APPROVED: [Signature] SATISFACTORY TO: [Signature] JULY 27, 2018	SHEET TITLE: ELECTRICAL TELCOM RISER AND DETAILS		E-8	
	TAILEY & SMITH ARCHITECTURE INC. P.O. BOX 518 SHELBY, NC 28151-0518 409 EAST MARION ST. SHELBY, NC 28150		DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	
INTERIOR/EXTERIOR REPAIRS BLDG. AS124 CAMP LEJEUNE, NORTH CAROLINA		CODE IDENT. NO. 80091	NAVFAC DRAWING NO. 60024439	
SCALE: NOTED		SPEC. 05-17-0075	CONST. CONTR. NO. N40085-17-D-0859	SHEET 31 OF 34

REVISIONS			
SYL		DATE	APPROVED

DEMOLITION KEYED NOTES

- 1 RECEPTACLES: DEVICE, BOXES, CONDUIT AND CONDUCTORS SHALL BE REMOVED COMPLETE TO SOURCE. CONCEALED BOXES AND CONDUIT SHALL BE ABANDONED IN PLACE AND CUT FLUSH WITH WALL. BOX SHALL BE FILLED AND PATCHED TO MATCH WALL FINISH.
- 2 HEATER SWITCH: REMOVE SWITCH, BOX, CONDUIT AND CONDUCTORS COMPLETE FROM HEATER TO SOURCE IN ENTIRETY.
- 3 PANELBOARD: DISCONNECT AND REMOVE FEED CONDUIT AND CONDUCTORS. REMOVE PANEL, BRANCH CIRCUIT CONDUIT AND CONDUCTORS IN ENTIRETY.
- 4 WOOD SHOP EQUIPMENT DISCONNECT: REMOVE DISCONNECT, CONDUIT AND CONDUCTORS COMPLETE TO EQUIPMENT AND SOURCE IN ENTIRETY.
- 5 COMPRESSOR DISCONNECT: REMOVE DISCONNECT, CONDUIT AND CONDUCTORS COMPLETE TO COMPRESSOR AND SOURCE IN ENTIRETY.
- 6 DUST COLLECTOR DISCONNECT SWITCH/MOTOR STARTER: REMOVE DISCONNECT/MOTOR STARTER, CONDUIT AND CONDUCTORS COMPLETE TO EQUIPMENT AND SOURCE IN ENTIRETY.
- 7 EXHAUST FAN SWITCH: REMOVE SWITCH, BOX, CONDUIT AND CONDUCTORS COMPLETE TO FAN AND SOURCE IN ENTIRETY.
- 8 DISCONNECT SWITCH: REMOVE DISCONNECT, CONDUIT AND CONDUCTORS COMPLETE TO EQUIPMENT AND SOURCE IN ENTIRETY.
- 9 GABLE EXHAUST FAN: REMOVE SWITCHES, BOXES, COMPONENTS, CONDUIT AND CONDUCTORS COMPLETE TO FANS AND SOURCE IN ENTIRETY.
- 10 LIGHT FIXTURE: REMOVE FIXTURE, BOXES, CONDUIT AND CONDUCTORS COMPLETE TO SOURCE IN ENTIRETY.
- 11 FIXTURE CONTROL: REMOVE CONTROL, BOXES, CONDUIT AND CONDUCTORS COMPLETE TO SOURCE IN ENTIRETY.

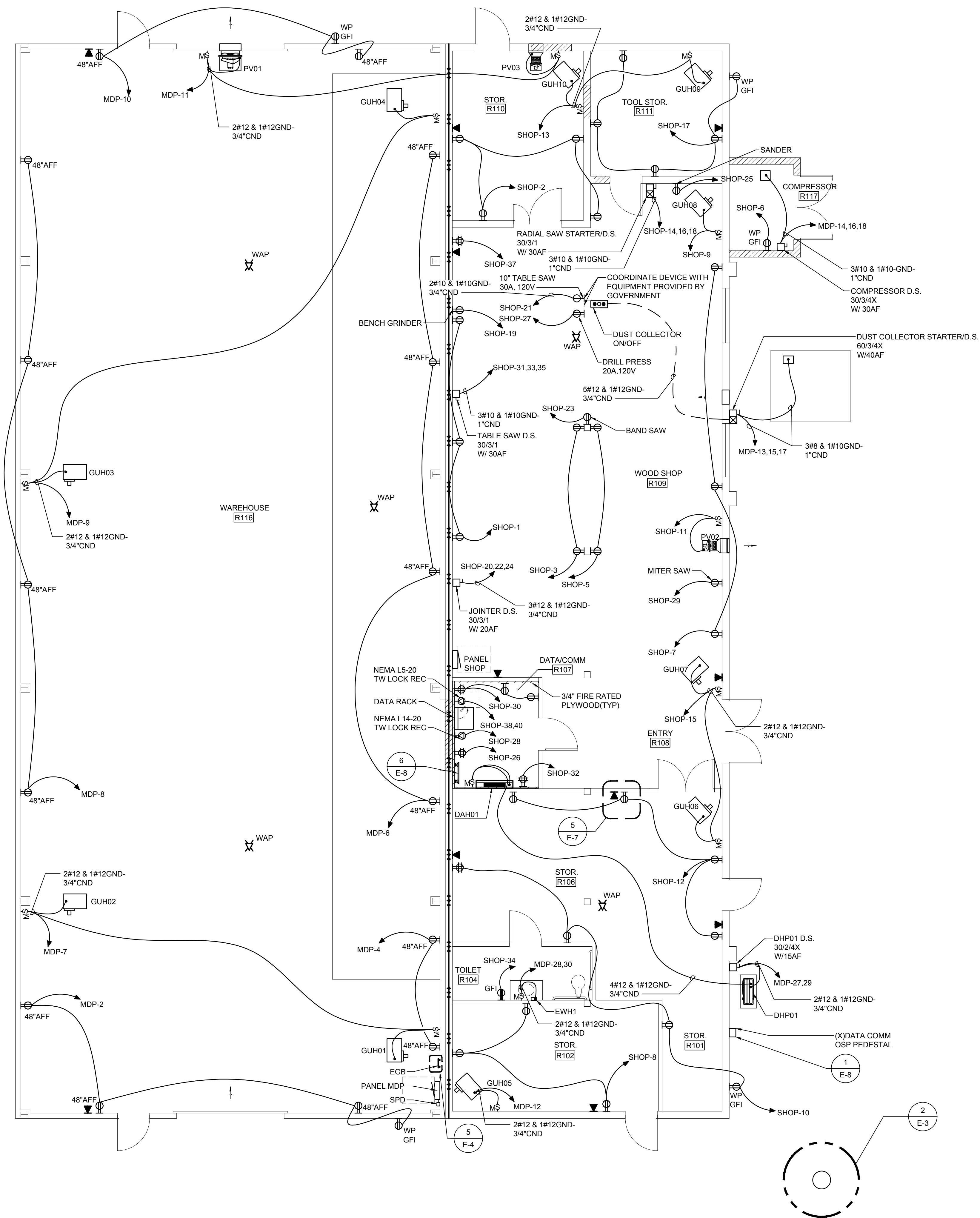


1 DEMOLITION FLOOR PLAN
3/16" = 1'-0"

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET G-1

CBHF Engineers, PLLC 2246 Yaupon Drive Wilmington, NC 28401 Phone: 910.791.4000 Fax: 910.791.5266 www.cbhfenigneers.com	SHEET TITLE: ELECTRICAL DEMOLITION FLOOR PLAN		E-9
	TALLEY & SMITH ARCHITECTURE INC. P.O. BOX 518 SHELBY, NC 28151-0518 409 EAST MARION ST. SHELBY, NC 28150		
	DES. JLG	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	
	DR. JLG	INTERIOR/EXTERIOR REPAIRS BLDG. AS124 CAMP LEJEUNE, NORTH CAROLINA	
	CHK. WAC		
	SUBMITTED BY:		
	DESIGN DR. T H BURTON, PE		
APPROVED:	DATE	SIZE	CODE IDENT. NO.
		F	80091
SATISFACTORY TO:	DATE	SCALE: NOTED	NAVJAC DRAWING NO. 60024440
		SPEC. 05-17-0075	CONST. CONTR. NO. N40085-17-D-0859
JULY 27, 2018			SHEET 32 OF 34

REVISIONS			
SYM.		DATE	APPROVED



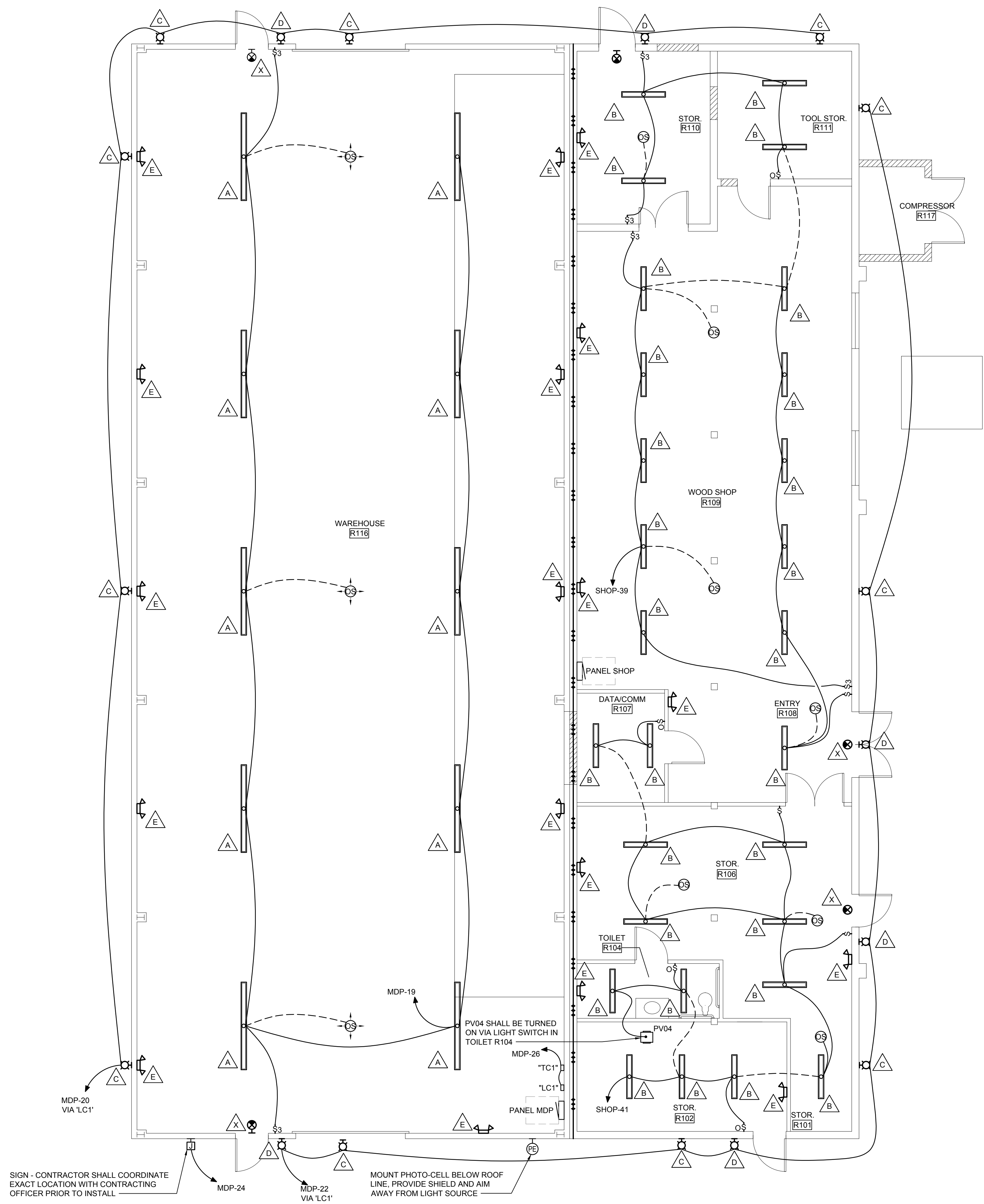
1 POWER AND SYSTEMS FLOOR PLAN
3/16\" = 1'-0"

PLAN NORTH

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET G-1

CBHF Engineers, PLLC 2246 Yaupon Drive Wilmington, NC 28401 Phone: 910.791.4000 Fax: 910.791.5266 www.cbhfenigneers.com	SHEET TITLE: ELECTRICAL POWER & SYSTEMS FLOOR PLAN		E-10
	DES. JLG DR. JLG CHK. WAC SUBMITTED BY: DESIGN DR. T H BURTON, PE		
	APPROVED: _____ DATE _____		NAVFAC DRAWING NO. 60024441
	SATISFACTORY TO: _____ DATE _____		CONST. CONTR. NO. N40085-17-D-0859
SCALE: NOTED		SPEC. 05-17-0075	SHEET 33 OF 34

REVISIONS			
SYM.		DATE	APPROVED



1 LIGHTING FLOOR PLAN
3/16" = 1'-0"



SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET G-1

CBHF Engineers, PLLC 2246 Yaupon Drive Wilmington, NC 28401 Phone: 910.791.4000 Fax: 910.791.5266 www.cbhfenr.com	SHEET TITLE: ELECTRICAL LIGHTING FLOOR PLAN		E-11		
	TALLEY & SMITH ARCHITECTURE INC. P.O. BOX 518 SHELBY, NC 28151-0518 409 EAST MARION ST. SHELBY, NC 28150		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		
	DES. JLG	INTERIOR/EXTERIOR REPAIRS BLDG. AS124 CAMP LEJEUNE, NORTH CAROLINA			
	DR. JLG				
	CHK. WAC				
	SUBMITTED BY:				
DESIGN DIR. T.H. BURTON, PE	APPROVED:	DATE	SIZE F	CODE IDENT. NO. 80091	NAVFAC DRAWING NO. 60024442
SATISFACTORY TO:	DATE	SCALE: NOTED	SPEC. 05-17-0075	CONST. CONTR. NO. N40085-17-D-0859	SHEET 34 OF 34