

- LIFE SAFETY PLAN REQUIREMENTS:**
- ☒ FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7) - SEE NOTE 1
  - ☒ ASSUMED AND REAL PROPERTY LINE LOCATIONS - SEE NOTE 2
  - ☒ EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8) - SEE NOTE 3
  - ☒ OCCUPANCY TYPES FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.5)
  - ☒ OCCUPANT LOADS FOR EACH AREA
  - ☒ EXIT ACCESS TRAVEL DISTANCES (1017)
  - ☒ COMMON PATH OF TRAVEL DISTANCES (1006.2.1 & 1006.3.3)
  - ☒ DEAD END LENGTHS (1020.5) - SEE NOTE 4
  - ☒ CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
  - ☒ MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.1)
  - ☒ ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR
  - ☒ A SEPARATE SCHEMATIC PLAN INDICATING WHERE FIRE RATED FLOOR/CEILING AND/OR ROOF STRUCTURE IS PROVIDED FOR PURPOSES OF OCCUPANCY SEPARATION. SEE NOTE 5
  - ☒ LOCATION OF DOORS WITH PANIC HARDWARE (1010.2.9) - SEE NOTE 6
  - ☒ LOCATION OF DOORS WITH DELAYED EGRESS LOCKS AND THE AMOUNT OF DELAY (1010.2.11) - SEE NOTE 7
  - ☒ LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1008.1.9.8) - SEE NOTE 7
  - ☒ LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES - SEE NOTE 7
  - ☒ LOCATION OF EMERGENCY ESCAPE WINDOWS (1031) - SEE NOTE 7
  - ☒ THE SQUARE FOOTAGE OF EACH FIRE AREA (202) - SEE NOTE 8
  - ☒ THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT (407.5) - SEE NOTE 9
  - ☐ NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

- LIFE SAFETY PLAN NOTES:**
1. SEE LEGEND FOR RATED WALLS.
  2. ALL ASSUMED AND REAL PROPERTY LINES  $\geq 20'$
  3. ASSUMED PROPERTY LINES = 15'; UNLIMITED; 705.8.1 EXC. 2
  4. NO DEAD ENDS OVER 10'; 20' ALLOWED
  5. NO RATING REQUIRED FOR THIS STRUCTURE.
  6. PANIC HARDWARE NOT REQUIRED.
  7. NO DELAYED EGRESS LOCKS; ELECTROMAGNETIC LOCKS, HOLD OPEN DEVICES, OR EMERGENCY ESCAPE WINDOWS
  8. FIRE AREAS DO NOT EXCEED CODE ALLOWANCE
  9. BUILDING MEETS CODE REQUIREMENTS WITHOUT SUBDIVISION INTO SMOKE COMPARTMENTS; NO SMOKE COMPARTMENTS

**EXIT REQUIREMENTS:  
NUMBER AND ARRANGEMENTS OF EXITS**

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM <sup>2</sup> NO. OF EXITS		TRAVEL DISTANCE		ARRANGEMENT MEANS OF EGRESS <sup>1,3</sup> (SECTION 1016-1021)	
	REQ'D.	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1017.2)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS
S-1	2	6	200'	141'-3"	117'-0"	146'-0"

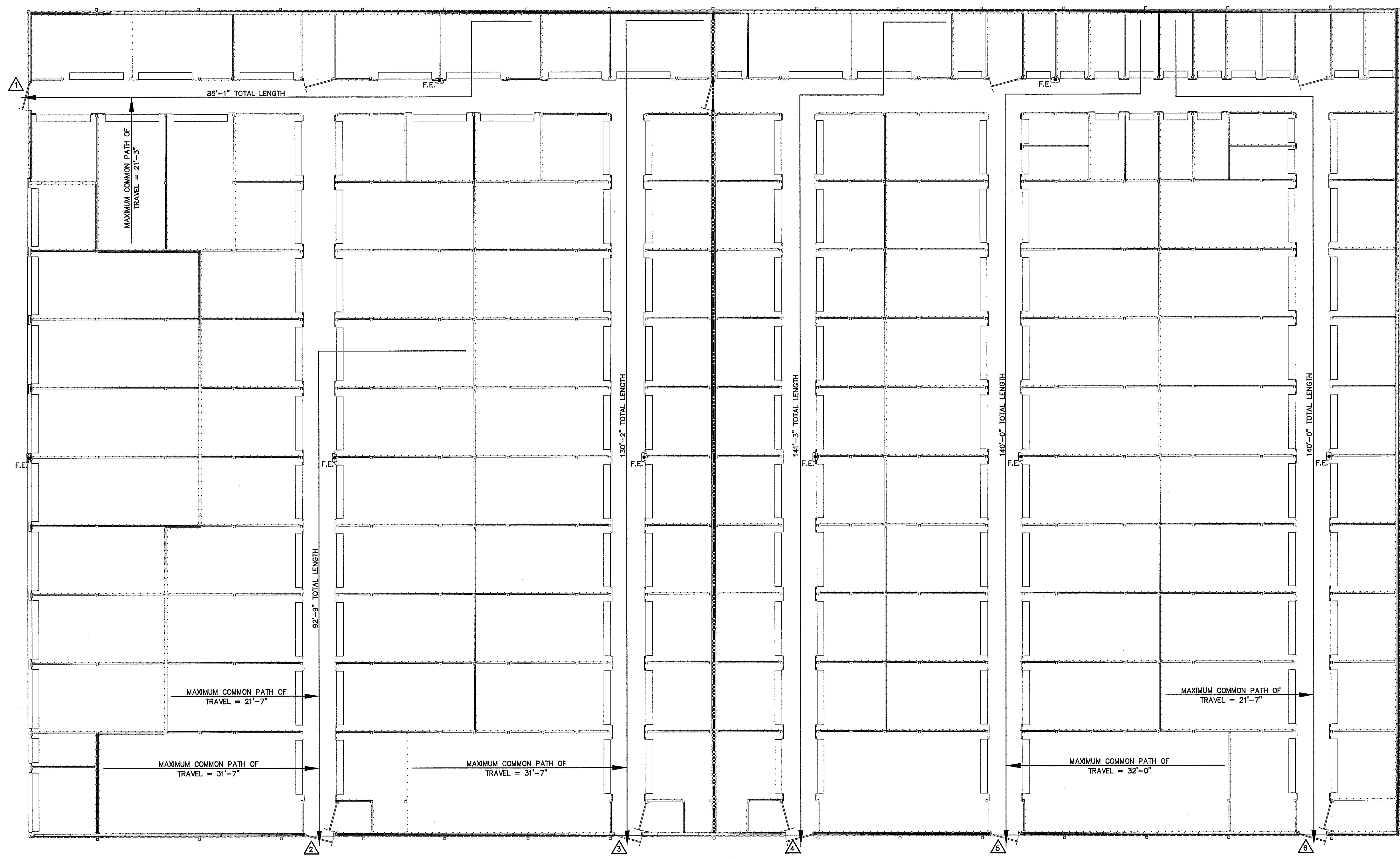
1. CORRIDOR DEAD ENDS (SECTION 1020.4)
2. BUILDINGS W/SINGLE EXITS (TABLE 1006.3.2(2)), SPACES W/ONE EXIT OR EXIT ACCESS DOORWAY (TABLE 1006.2.1)
3. COMMON PATH OF TRAVEL (SECTION 1029.6)

**EXIT WIDTH**

USE GROUP OR SPACE DESCRIPTION	(a)		(b)		(c)		EXIT WIDTH (h)			
	AREA <sup>1</sup> SQ. FT.	AREA <sup>1</sup> PER OCCUPANT (TABLE 1004.5)	CALCULATED OCCUPANT LOAD (a/b)	EGRESS WIDTH PER OCCUPANT (TABLE 1005.3.2)	REQUIRED WIDTH (SECTION 1005.1) (a/b) x c	ACTUAL WIDTH SHOWN ON PLANS	STAIR	LEVEL	STAIR	LEVEL
S-1	24,000	500 GROSS	48	N/A	.2	N/A	9.6"	N/A	282"	
TOTAL	24,000									

1. SEE TABLE 1004.5 TO DETERMINE WHETHER NET OR GROSS AREA IS APPLICABLE. SEE DEFINITION "AREA, GROSS" AND "AREA, NET" (SECTION 202)
2. MINIMUM STAIRWAY WIDTH (SECTION 1011.2); MIN. CORRIDOR WIDTH (SECTION 1020.2); MIN. DOOR WIDTH (SECTION 1010.1.1)
3. MINIMUM WIDTH OF EXIT PASSAGEWAY (SECTION 1024.2)
4. SEE SECTION 1005.6 FOR CONVERGING EXITS.
5. THE LOSS OF ONE MEANS OF EGRESS SHALL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50% OF THE TOTAL REQUIRED (SECTION 1005.5)
6. ASSEMBLY OCCUPANCIES (SECTION 1029)

- MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.1)
1. 47" CLEAR WIDTH DIVIDED BY .2" = 235 OCCUPANTS  
CALCULATED OCCUPANCY PER EXIT = 8 PEOPLE  
CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
  2. 47" CLEAR WIDTH DIVIDED BY .2" = 235 OCCUPANTS  
CALCULATED OCCUPANCY PER EXIT = 8 PEOPLE  
CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
  3. 47" CLEAR WIDTH DIVIDED BY .2" = 235 OCCUPANTS  
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CALCULATED OCCUPANCY PER EXIT = 8 PEOPLE  
CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
  5. 47" CLEAR WIDTH DIVIDED BY .2" = 235 OCCUPANTS  
CALCULATED OCCUPANCY PER EXIT = 8 PEOPLE  
CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
  6. 47" CLEAR WIDTH DIVIDED BY .2" = 235 OCCUPANTS  
CALCULATED OCCUPANCY PER EXIT = 8 PEOPLE  
CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.

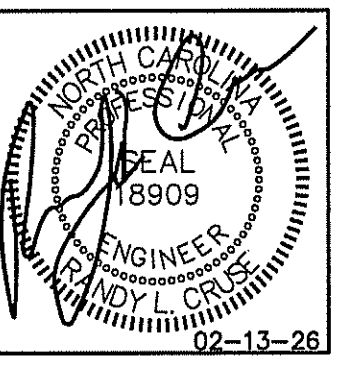


**LEGEND**  
 - - - - - 3 HOUR RATED WALL  
 U419

**NOTE:**  
 AREA/ROOM/SPACE DESIGNATIONS USED ON LIFE SAFETY PLANS ARE EXCLUSIVE TO LIFE SAFETY PLAN ONLY, AND ARE NOT INDICATIVE OF ANY ACTUAL SPACE DESIGNATIONS USED ELSEWHERE.

**LEGEND**  
 ⊕ F.E. FIRE EXTINGUISHER  
 CLASS ABC 10 POUNDS

**LIFE SAFETY PLAN BUILDING "H"**  
 SCALE: 1/8" = 1'-0"



**PLANS FOR:**  
**AMPLE STORAGE**  
**BUILDING "H"**  
**ERWIN, NORTH CAROLINA 28339**

**REVISIONS**

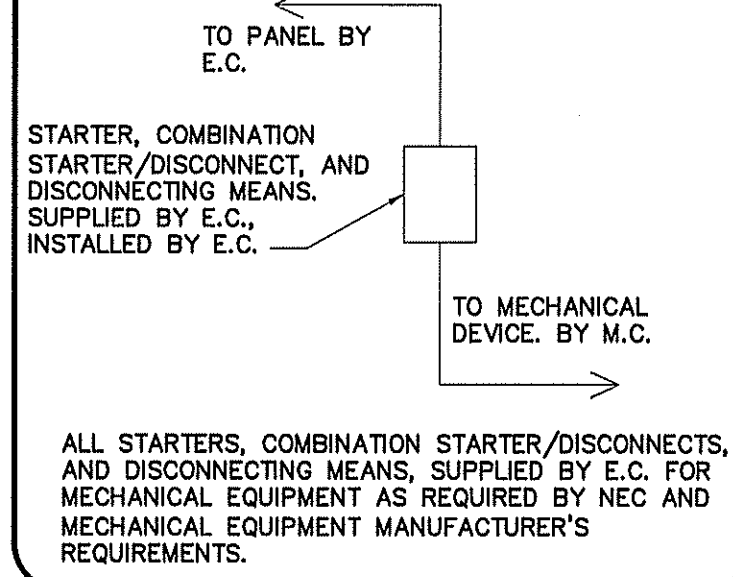
NO.	DESCRIPTION

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DATE 02/13/26  
 DRAWN BY BAM  
 JOB NO. 26-02  
 SHEET NO. LS-1 OF 1

**CONNECTION SCHEDULE**



**GENERAL NOTES:**

- 1 RUN ALL DUCTWORK TIGHT TO CEILING INSULATION.
- 2 FASTEN ALL CONDENSATE LINES TO WALLS OR CEILINGS WHERE APPLICABLE.
- 3 7-DAY PROGRAMMABLE T'STAT WITH LOCKING COVER.
- 4 PROVIDE & INSTALL PROTECTIVE 6" CONCRETE-FILLED PIPE BOLLARDS, TWO PER HEAT PUMP OR AS SHOWN ON PLAN.
- 5 PROVIDE AND INSTALL CONCRETE SPLASH BLOCK, ONE PER 3 HEAT PUMPS MIN.
- 6 INSTALL FLOAT SWITCH IN AUXILIARY PAN TO STOP UNIT IN EVENT OF CONDENSATE OVERFLOW.

**MECHANICAL SYMBOL LEGEND**

SINGLE LINE	DOUBLE LINE	DESCRIPTION	SINGLE LINE	DOUBLE LINE	DESCRIPTION	SINGLE LINE	DOUBLE LINE	DESCRIPTION
		TAKE OFF TO SUPPLY AIR REGISTER WITH EXT. INSUL. DUCTWORK			VOLUME CONTROL DAMPER (TYP) CEILING DIFFUSER FLEXIBLE DUCTWORK (14' MAX.)			SUPPLY AIR CEILING DIFFUSER, ARROW INDICATES DIRECTION OF BLOW & ACTIVE DIFFUSER SIDES
		BRANCH TAKEOFF FROM MAIN TRUNK DUCT WITH EXT. INSUL. DUCTWORK			ONE SIDED REDUCING TRANSITION			(1) CUSHION HEAD @ BRANCH OR DIFFUSER RUNOUT (2) CUSHION HEAD IS EQUAL TO 1-1/2 WIDTH OF THE BRANCH DUCT OR DIFFUSER RUNOUT
		END CAP			F.D.=FIRE DAMPER (1-1/2)=RATED FOR 1-1/2 HRS.			R.A. OR EXHAUST DUCT TURNS DOWN @ 90 DEGS.
		DUCT SMOKE DETECTOR			RETURN AIR OR EXHAUST GRILLE			MANUAL VOLUME CONTROL DAMPER W/ QUADRANT LOCKING DEVICE
		A.D. ACCESS DOOR DOOR SIZE DUCT HEIGHT 8X8 10" 10X10 12" 12X12 14" & LARGER			TWO SIDED TRANSITION			TWO SIDED TRANSITION
								ELECT. DUCT INSERT HEATER WITH CONTROL PANEL
								AHU W/FLEXIBLE CONNECTION AT SUPPLY AND RETURN DUCT
								KEY NOTE
								MARK CFM-DIFFUSER, REGISTER OR GRILLE (SEE SCHEDULE)
								EXHAUST FAN

**KEY NOTES:**

- 1 16" x 16" TRANSFER GRILL INSTALLED IN DOOR (TYPICAL)
- 2 1-1/2" CONDENSATE LINE FROM EACH AHU TO SPLASH BLOCK, ONE 1-1/2" CONDENSATE LINE & ONE SPLASH BLOCK PER AHU (TYP.)

**NOTE:**

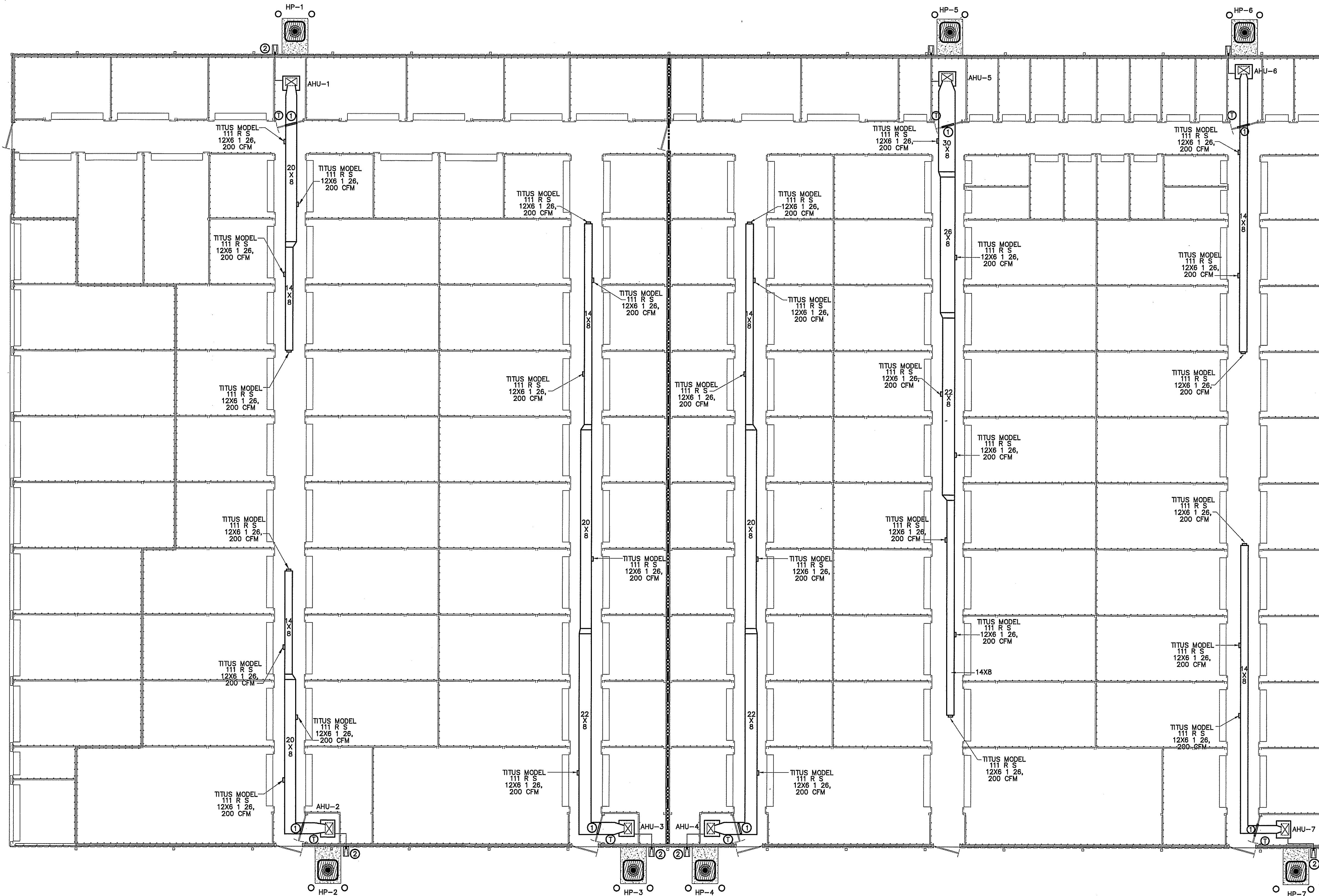
HVAC CONTRACTOR TO VERIFY EXACT LOCATION (THAT CORRESPONDS TO APPROVED SITE PLAN) OF HEAT PUMPS WITH GENERAL CONTRACTOR BEFORE BEGINNING CONSTRUCTION. THEN COORDINATE LOCATION WITH ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL REQUIREMENTS.

**NOTE:**

VERIFY THERMOSTAT LOCATION WITH OWNER PRIOR TO INSTALLING.

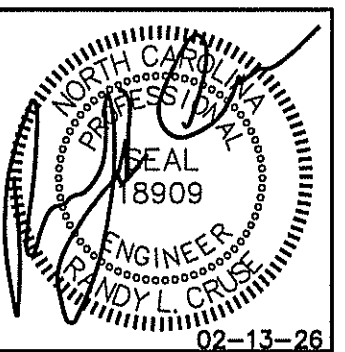
**GENERAL NOTE:**

MAINTAIN MANUFACTURER'S REQUIRED CLEARANCES FOR ALL HVAC EQUIPMENT.



**LEGEND**  
 3 HOUR RATED WALL  
 U419

**MECHANICAL HVAC PLAN BUILDING "H"**  
 SCALE: 1/8" = 1'-0"



PLANS FOR:  
 AMPLE STORAGE  
 BUILDING "H"  
 ERWIN, NORTH CAROLINA 28339

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 DRAWN BY BAM  
 JOB NO. 26-02

SHEET NO.  
**M-1 OF 2**



MARK	DESCRIPTION
⊕	QUAD RECEPTACLE
⊕	DUPLEX RECEPTACLE
⊕	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
⊕	HIGH WALL MOUNTED DUPLEX RECEPTACLE APPROXIMATELY 12" BELOW CEILING
⊕	FLUORESCENT FIXTURE
⊕	SWITCHED BRANCH CIRCUIT
⊕	UNSWITCHED BRANCH CIRCUIT
⊕	120/208 VOLT CIRCUIT
⊕	MOTION DETECTING SINGLE-POLE SWITCH ON TIMER
⊕	'EXIT' LIGHT FIXTURE, TYPE 'EX'
⊕	BATTERY OPERATED EMERG. LT. (2-HEAD, WALL MTD.)
⊕	MOTION DETECTING 3-WAY SWITCH (4-WAY SWITCH) WITH TIMER
⊕	FUSED DISCONNECT SWITCH
⊕	CEILING MOUNTED FUSED DISCONNECT SWITCH
⊕	TELEPHONE
⊕	JUNCTION BOX
⊕	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
⊕	UNSWITCHED FIXTURE
⊕	OCCUPANCY SENSING SINGLE-POLE SWITCH NOT ON TIMER
⊕	280V RECEPTACLE
⊕	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)

**NOTE:**

1. VERIFY LOCATION OF LIGHTS & RECEPTACLES WITH OWNER BEFORE CONSTRUCTION.
2. COORDINATE LOCATION OF 8' STRIP LIGHTS IN CORRIDOR WITH DUCT WORK WHERE APPLICABLE.
3. ALL FLUORESCENT LIGHTS IN CORRIDORS TO BE MOUNTED ON THE WALLS WHERE APPLICABLE.
4. ALL HALLWAYS SWITCHES TO BE ON MOTION SENSORS OR SWITCHED AS INDICATED AND ON TIMERS OF 30 MINUTES. ALL UNIT SWITCHES & UNIT RECEPTACLES TO BE ON TIMER OF 30 MINUTES WITH NO HOLD MECHANISMS.
5. RECEPTACLES IN EACH UNIT ARE TO BE SWITCHED. TIE TO SWITCH/TIMER IN EACH UNIT.
6. VERIFY NIGHT LIGHTS AND PERMANENT BURN FIXTURES WITH OWNER BEFORE WIRING.

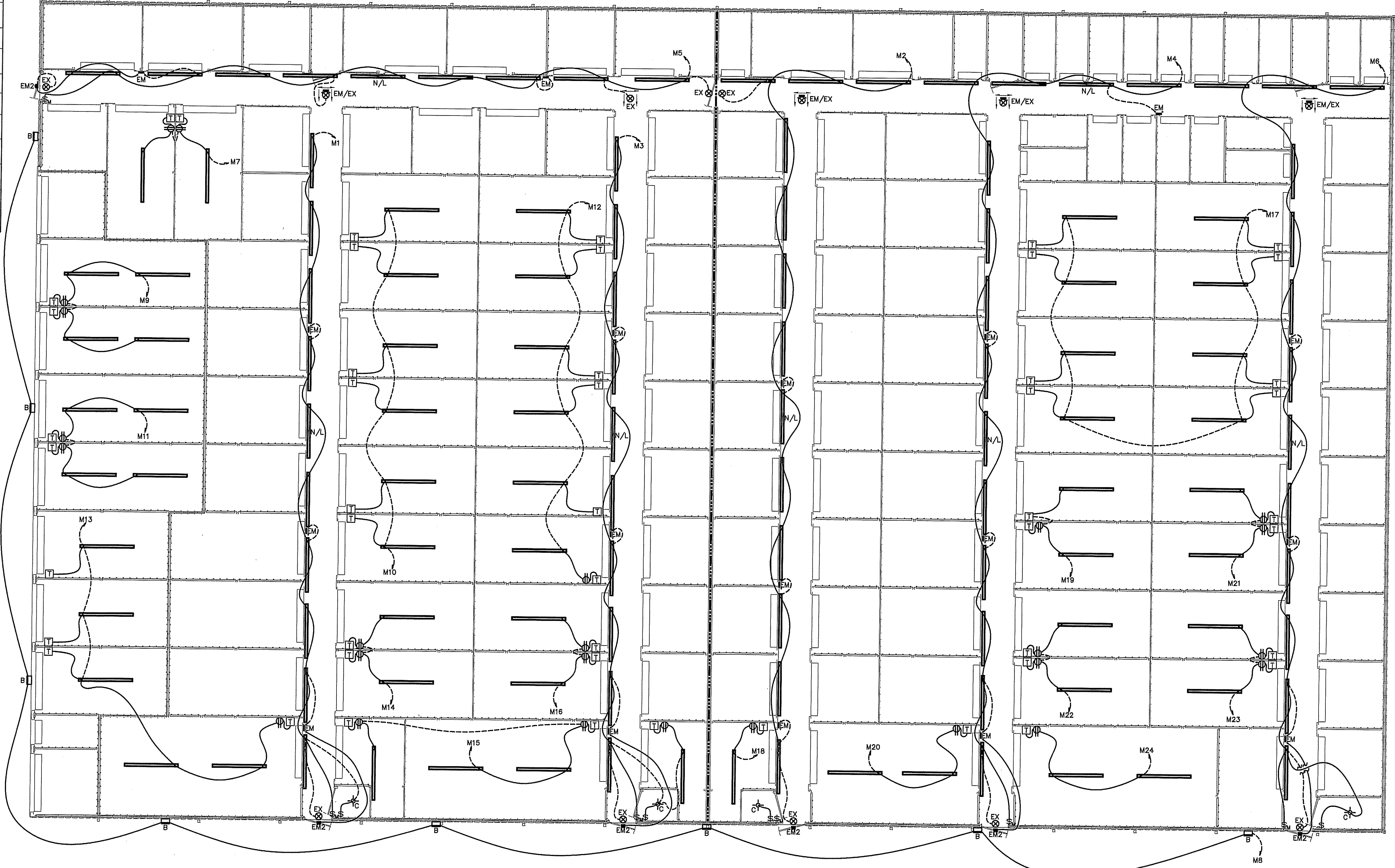
**GENERAL NOTE:**

1. VERIFY LOCATION OF WALL PACKS WITH OWNER & SITE LIGHTING PLAN BEFORE INSTALLATION.

LIGHTING DATA FOR N.C. ENERGY CODE BUILDING "H"					
AREA USE	AREA FT <sup>2</sup>	WATTS PER FT <sup>2</sup> ALLOWED	TOTAL WATTS ALLOWED	TOTAL WATTS USED	TOTAL WATTS LEFT OVER
STORAGE	24,000	1.2	28,800	8,798	20,002
TOTAL	24,000		28,800	8,798	20,002

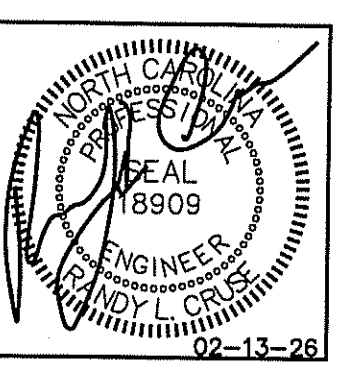
LIGHT FIXTURE SCHEDULE							
MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMPS	BALLASTS	WATTAGE	REMARKS
A	8' LED STRIP W/WIRE GUARD	DAYBRITE	CLX L96 10000LM SEF WD MVOLT 40K 80 CRI WH	LED		71.0	WITH (2) 48" WIRE GUARDS WGLX48
B	OUTDOOR LED WALL LIGHT	LSI	TWR1 LED 3 50K MVOLT	LED	LED	58.4	VERIFY MOUNTING HEIGHT, OPTIONS BEFORE INSTALLATION
C	KEYLESS FIXTURE WITH WIREGUARD AND LED BULB	-	-	LED A19	-	13	WITH WIRE GUARD
EM	EMERGENCY LIGHT WITH BATTERY BACKUP	MCPHILBEN	CAXR6L24W6				
EX	LED TYPE EXIT LIGHT WITH BATTERY BACKUP	MCPHILBEN	CXXL3RW				
EM2	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)	MCPHILBEN	CR2CSWA				

1. ALL FIXTURE SELECTIONS TO BE VERIFIED BY OWNER BEFORE PURCHASE. \*
2. SIGN LETTERING TO BE ON TIMELOCK OR PHOTOCELL.
3. LED WALLPACKS ON PHOTOCELL.



**ELECTRICAL LIGHTING PLAN BUILDING "H"**  
SCALE: 1/8" = 1'-0"

**LEGEND**  
3 HOUR RATED WALL  
U419



PLANS FOR:  
AMPLE STORAGE  
BUILDING "H"  
ERWIN, NORTH CAROLINA 28339

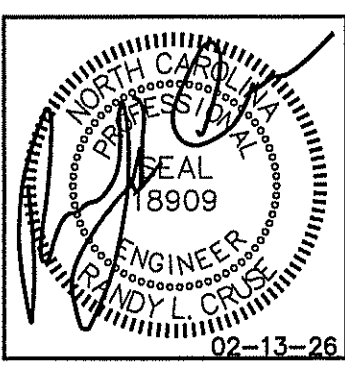
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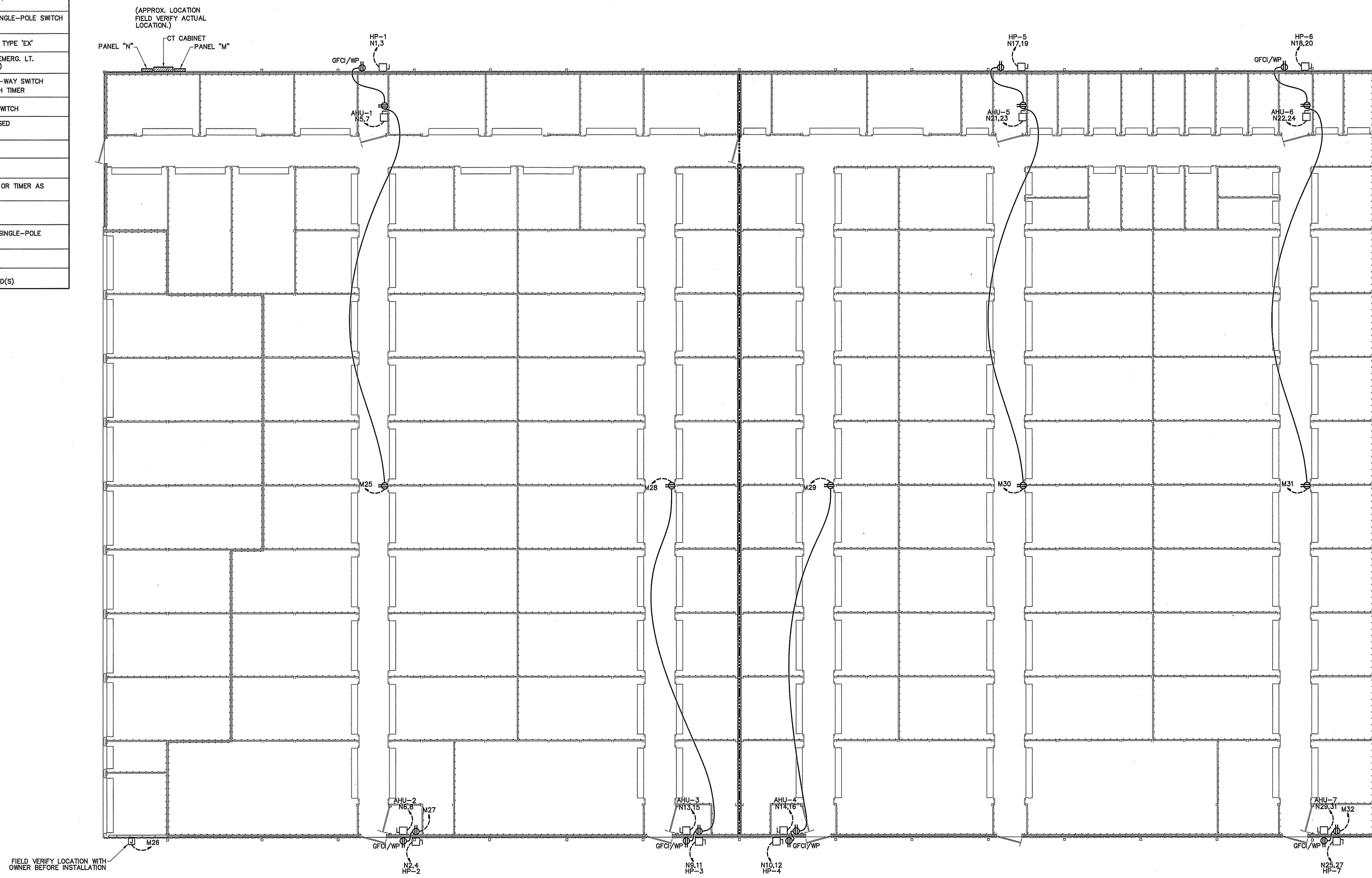
SHEET NO.  
**E-1 OF 3**



MARK	DESCRIPTION
⊕	QUAD RECEPTACLE
⊕	DUPLEX RECEPTACLE
⊕	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
⊕	HIGH WALL MOUNTED DUPLEX RECEPTACLE APPROXIMATELY 12" BELOW CEILING
▭	FLUORESCENT FIXTURE
↗	SWITCHED BRANCH CIRCUIT
↘	UNSWITCHED BRANCH CIRCUIT
↗↘	120/208 VOLT CIRCUIT
⊕ <sub>M</sub>	MOTION DETECTING SINGLE-POLE SWITCH ON TIMER
⊕	'EXIT' LIGHT FIXTURE, TYPE 'EX'
⊕	BATTERY OPERATED EMERG. LT. (2-HEAD, WALL MTD.)
⊕ <sub>3(4)</sub>	MOTION DETECTING 3-WAY SWITCH (4-WAY SWITCH) WITH TIMER
⊕	FUSED DISCONNECT SWITCH
⊕	CEILING MOUNTED FUSED DISCONNECT SWITCH
△	TELEPHONE
⊕	JUNCTION BOX
⊕	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
▭	UNSWITCHED FIXTURE
N/L	UNSWITCHED FIXTURE
⊕	OCCUPANCY SENSING SINGLE-POLE SWITCH NOT ON TIMER
⊕	280V RECEPTACLE
⊕	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)

**NOTE:**

1. VERIFY LOCATION OF LIGHTS & RECEPTACLES WITH OWNER BEFORE CONSTRUCTION.
2. COORDINATE LOCATION OF 8' STRIP LIGHTS IN CORRIDOR WITH DUCT WORK WHERE APPLICABLE.
3. ALL FLUORESCENT LIGHTS IN CORRIDORS TO BE MOUNTED ON THE WALLS WHERE APPLICABLE.
4. ALL HALLWAYS SWITCHES TO BE ON MOTION SENSORS OR SWITCHED AS INDICATED AND ON TIMERS OF 30 MINUTES. ALL UNIT SWITCHES & UNIT RECEPTACLES TO BE ON TIMER OF 30 MINUTES WITH NO HOLD MECHANISMS.
5. RECEPTACLES IN EACH UNIT ARE TO BE SWITCHED. TIE TO SWITCH/TIMER IN EACH UNIT.
6. VERIFY NIGHT LIGHTS AND PERMANENT BURN FIXTURES WITH OWNER BEFORE WIRING.



PLANS FOR:  
 AMPLE STORAGE  
 BUILDING "H"  
 ERWIN, NORTH CAROLINA 28339

REVISIONS	
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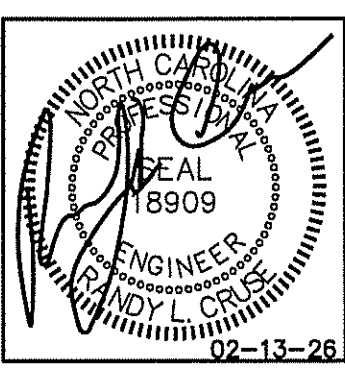
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SHEET NO.  
**E-2 OF 3**

**ELECTRICAL POWER PLAN BUILDING "H"**  
 SCALE: 1/8" = 1'-0"

**LEGEND**  
 3 HOUR RATED WALL  
 U419



PLANS FOR:  
 AMPLE STORAGE  
 BUILDING "H"  
 ERWIN, NORTH CAROLINA 28339

**BUILDING "H"**

PANEL: M SCHEDULE: \_\_\_\_\_ MANUFACTURER: SO, D NO. OF SPACES: 42  
 VOLTS: 120/240 AMPS: 200 TYPE: "NODD" MOUNTING: SURFACE  
 ENCLOSURE: NEMA 3R  $\phi$ : 1 SHORT CIRCUIT RATING: 22K

NOTE:  
NEMA 3R PANELS ARE LOCATED ON THE EXTERIOR OF THE BUILDING.

NOTE:  
VERIFY AIC RATING WITH UTILITY COMPANY BEFORE ORDERING PANELS.

L1	L2	CIRCUIT	POLES	TRIP	ASSIGNMENT	PHASE	ASSIGNMENT	TRIP	POLES	CIRCUIT	L1	L2
6.0		1	1	20	CORRIDOR #1 LIGHTS	o	CORRIDOR #3 LIGHTS	20	1	2	7.8	
	8.1	3	1	20	CORRIDOR #2 LIGHTS	o	CORRIDOR #4 LIGHTS	20	1	4		9.9
5.3		5	1	20	LEFT REAR CORRIDOR LIGHTS	o	CORRIDOR #5 LIGHTS	20	1	6	7.8	
	4.2	7	1	20	LEFT REAR 10X20 LTS./RECS.	o	WALLPACKS	20	1	8		3.9
5.4		9	1	20	LEFT REAR 10X25 LTS./RECS.	o	LEFT CENTER 10X20 LIGHTS	20	1	10	3.6	
	5.4	11	1	20	LEFT GEN. 10X25 LTS./RECS.	o	CENTER 10X20 LIGHTS & REC.	20	1	12		5.1
4.5		13	1	20	LEFT 30X15/10X15 LTS./RECS.	o	LEFT CENTER 10X20 LTS./RECS.	20	1	14	4.2	
	4.8	15	1	20	CEN. 10X15/30X15 LTS./RECS.	o	CENTER 10X20 LIGHTS & RECS.	20	1	16		4.2
4.7		17	1	20	RIGHT SIDE 10X20 UNIT LIGHTS	o	RT. CEN. 10X15 LIGHT & REC.	20	1	18	2.1	
	2.7	19	1	20	RT. SIDE 10X20 UNIT LTS./REC.	o	RT. CEN. 15X25 LIGHTS & REC.	20	1	20		2.7
4.2		21	1	20	RT. SIDE 10X20 UNIT LTS./RECS.	o	RT. SIDE 15X30 UNIT LTS./RECS.	20	1	22	4.2	
	4.2	23	1	20	RT. SIDE 10X20 UNIT LTS./RECS.	o	RT. SIDE 15X30 UNIT LTS./RECS.	20	1	24		2.7
4.5		25	1	20	HVAC/CORR. UNIT #1 RECEPTS.	o	BUILDING SIGN	20	1	26	5.0	
	3.0	27	1	20	HVAC/CORR. UNIT #2 RECEPTS.	o	HVAC/CORR. UNIT #3 RECEPTS.	20	1	28		4.5
4.5		29	1	20	HVAC/CORR. UNIT #4 RECEPTS.	o	HVAC/CORR. UNIT #5 RECEPTS.	20	1	30	4.5	
	4.5	31	1	20	HVAC/CORR. UNIT #6 RECEPTS.	o	HVAC/CORR. UNIT #7 RECEPTS.	20	1	32		3.0
X		33	1	20	SPARE	o	SPARE	20	1	34	X	
X		35	1	20	SPARE	o	SPARE	20	1	36	X	
X		37	1	20	SPARE	o	SPARE	20	1	38	X	
X		39	1	20	SPARE	o	SPARE	20	1	40	X	
X		41	1	20	SPARE	o	SPARE	20	1	42	X	

L1 = 78.3 A  
L2 = 72.9 A

**BUILDING "H"**

PANEL: N SCHEDULE: \_\_\_\_\_ MANUFACTURER: SO, D NO. OF SPACES: 42  
 VOLTS: 120/240 AMPS: 400 TYPE: "NODD" MOUNTING: SURFACE  
 ENCLOSURE: NEMA 3R  $\phi$ : 1 SHORT CIRCUIT RATING: 22K

L1	L2	CIRCUIT	POLES	TRIP	ASSIGNMENT	PHASE	ASSIGNMENT	TRIP	POLES	CIRCUIT	L1	L2
12.3		1	2	25	HEAT PUMP UNIT #1	o	HEAT PUMP UNIT #2	25	2	2	12.3	
	12.3	3				o				4		12.3
16.0		5	2	25	AIR HANDLING UNIT #1	o	AIR HANDLING UNIT #2	25	2	6	16.0	
	16.0	7				o				8		16.0
13.6		9	2	25	HEAT PUMP UNIT #3	o	HEAT PUMP UNIT #4	25	2	10	13.6	
	13.6	11				o				12		13.6
16.0		13	2	25	AIR HANDLING UNIT #3	o	AIR HANDLING UNIT #4	25	2	14	16.0	
	16.0	15				o				16		16.0
17.7		17	2	40	HEAT PUMP UNIT #5	o	HEAT PUMP UNIT #6	25	2	18	12.3	
	17.7	19				o				20		12.3
16.0		21	2	30	AIR HANDLING UNIT #5	o	AIR HANDLING UNIT #6	25	2	22	16.0	
	16.0	23				o				24		16.0
12.3		25	2	25	HEAT PUMP UNIT #7	o	SPARE	20	1	26	X	
	12.3	27				o	SPARE	20	1	28	X	
16.0		29	2	25	AIR HANDLING UNIT #7	o	SPARE	20	1	30	X	
	16.0	31				o	SPARE	20	1	32	X	
X		33	1	20	SPARE	o	SPARE	20	1	34	X	
X		35	1	20	SPARE	o	SPARE	20	1	36	X	
X		37	1	20	SPARE	o	SPARE	20	1	38	X	
X		39	1	20	SPARE	o	SPARE	20	1	40	X	
X		41	1	20	SPARE	o	SPARE	20	1	42	X	

L1 = 206.1 A  
L2 = 206.1 A

**ELECTRICAL NOTES (GENERAL)**

- THE ELECTRICAL INSTALLATION, EQUIPMENT, MATERIALS, AND WORKMANSHIP SHALL, AS A MINIMUM, BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC), OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA), ALL APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL CODES, LAWS, AND ORDINANCES, AND RULINGS OF THE INSPECTION AUTHORITIES HAVING JURISDICTION. ALL FEES, PERMITS, ETC., ASSOCIATED WITH THE ELECTRICAL WORK SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- THE DRAWINGS GENERALLY INDICATE THE WORK TO BE INSTALLED, BUT DO NOT SHOW ALL BENDS, BOXES, FITTINGS, AND SPECIALTIES WHICH MAY BE REQUIRED FOR A COMPLETE INSTALLATION. ALL SUCH ITEMS REQUIRED TO COMPLETE THE INSTALLATION ACCORDING TO INDUSTRY ACCEPTED PRACTICES SHALL BE INCLUDED IN THE BID.
- ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND LISTED AND LABELED BY UNDERWRITERS LABORATORIES, INC.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES TO AVOID INTERFERENCES AND CONFLICTS. APPARENT INTERFERENCES OR CONFLICTS SHALL BE REPORTED TO THE PRIME CONTRACTOR AND RESOLVED PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
- THE ELECTRICAL CONTRACTOR SHALL CONNECT BRANCH CIRCUITS TO THE MAIN LINE TERMINALS OF EQUIPMENT FURNISHED BY OTHER CONTRACTORS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY NECESSARY SWITCHES, DISCONNECTS, OR OVERCURRENT PROTECTION AHEAD OF SUCH EQUIPMENT.
- RACEWAYS ARE SHOWN SCHEMATICALLY AND MAY BE REROUTED IN THE FIELD. THEY SHALL BE INSTALLED AT RIGHT ANGLES TO OR PARALLEL WITH BUILDING LINES. THEY SHALL BE RUN CONCEALED WITHIN WALLS OR BUILDING STRUCTURES WHEREVER POSSIBLE.
- THE MINIMUM ALLOWABLE SIZE FOR ANY CONDUIT, IMC, OR EMT SHALL BE 3/4"; 1/2" MAY BE USED FOR SWITCH LEGS.
- FULL WEIGHT GALVANIZED RIGID STEEL CONDUIT SHALL BE USED IN THE FOLLOWING AREAS:
  - ON THE EXTERIOR OF THE BUILDING OR ROOF,
  - VERTICAL DROPS WHERE THE CONDUIT CANNOT BE ANCHORED TO WALLS OR OTHER SUPPORT STRUCTURES,
  - WHERE SUBJECT TO MECHANICAL DAMAGE.
  - UNDER FLOOR INSTALLATIONS
- ALL WIRE AND CABLE SHALL BE ALUMINUM OR COPPER AND HAVE 600 VOLT THHN-THWN INSULATION.
- THE MINIMUM WIRE SIZE SHALL BE #12 AWG EXCEPT FOR CONTROL WIRING, WHICH MAY BE #16 AWG. CONTROL WIRING SHALL USE STRANDED CONDUCTORS UNLESS OTHERWISE NOTED.
- ALL METAL RACEWAY SYSTEMS SHALL BE MADE ELECTRICALLY CONTINUOUS. THE RACEWAY SYSTEM SHALL NOT BE THE SOLE GROUNDING METHOD. AN INSULATED COPPER GROUNDING CONDUCTOR SHALL BE INSTALLED FOR ALL FEEDERS AND BRANCH CIRCUITS. AT RECEPTACLES, A GREEN GROUND CONDUCTOR SHALL BE CONNECTED TO THE GROUND TERMINAL OF THE RECEPTACLE.
- ALL CONDUCTORS TO BE INSTALLED IN CONDUIT.
- ALL PENETRATIONS OF FIRE WALLS SHALL BE SEALED WITH APPROVED SEALING MATERIALS TO MAINTAIN THE FIRE RATING OF THE WALLS IN ACCORDANCE WITH UL PENETRATION DETAIL W-J-1042.
- NO. CU 10 AWG CONDUCTORS SHALL BE USED FOR 20 AMP BRANCH CIRCUIT HOMERUNS EXCEEDING 50 FT. TO THE JUNCTION POINT. 20 AMP BRANCH CIRCUIT WIRING SHALL BE NO. 10 CU AWG THROUGHOUT IF THE CIRCUIT IS LONGER THAN 100 FEET TOTAL LENGTH. 20 AMP BRANCH CIRCUIT WIRING SHALL BE NO. 8 CU AWG THROUGHOUT IF THE CIRCUIT IS LONGER THAN 200 FEET TOTAL LENGTH. 20 AMP BRANCH CIRCUIT WIRING SHALL BE NO. 6 CU AWG THROUGHOUT IF THE CIRCUIT IS LONGER THAN 400 FEET TOTAL LENGTH. 20 AMP BRANCH CIRCUIT SHALL NOT EXCEED 500' FEET IN TOTAL LENGTH.

**BUILDING "H"**

**ELECTRICAL LOAD CALCULATIONS**

24,000 SQUARE FEET VA.

**NONCONTINUOUS LOADS:**

44 RECEPTACLES @ 180 VA EA. 7920 7920  
 1ST 10000  
 REMAINDER @ 50%

**TOTAL** 7920

**CONTINUOUS LOADS:**

GENERAL LIGHTING LOAD VA/SQ. FT.  
 (STORAGE) 24,000 SQ. FT. 1.2 28800  
 28800 X 1.25 36000

AIR HANDLER UNIT 26880  
 HEAT PUMPS 22584  
 EQUIPMENT 600

25% OF LARGEST MOTOR 1134

**GRAND TOTAL** 95,118

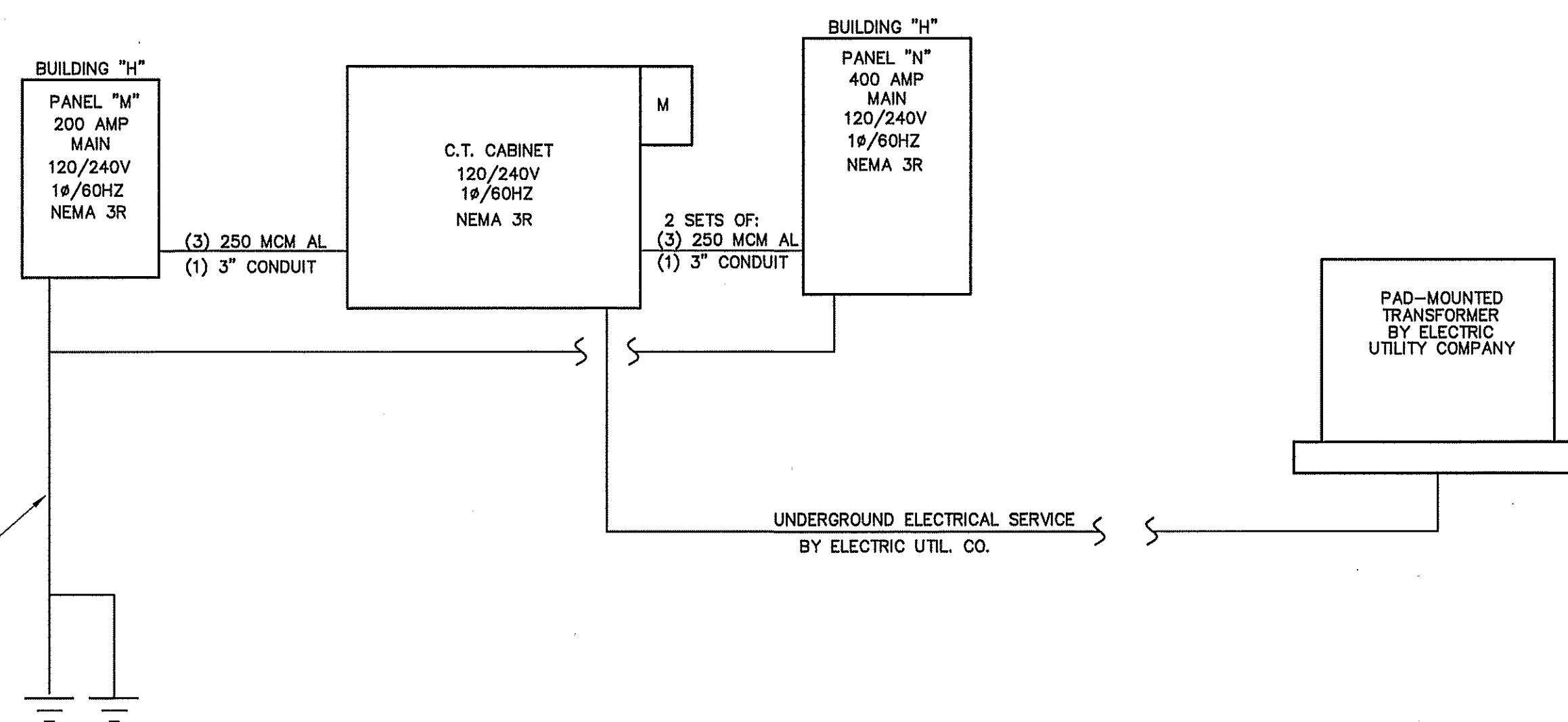
396 AMPS @ 120/240V, 1 $\phi$ , 60HZ

**FEEDER SCHEDULE**

UNIT	FEEDERS	FUSED DISCONNECT	CONDUIT
AHU-1,2,5	2#10CU, 1#10CU GD	30	3/4"
AHU-3,4,6	2#8CU, 1#10CU GD	30	3/4"
AHU-7	2#6CU, 1#8CU GD	30	3/4"
HP-1	2#12CU, 1#12CU GD	30	3/4"
HP-2,6	2#10CU, 1#10CU GD	30	3/4"
HP-3,4,7	2#8CU, 1#8CU GD	30	3/4"
HP-5	2#10CU, 1#10CU GD	60	3/4"

**REVISIONS**

NO.	



GROUNDING PER NEC 250. #2/0 CU TO COLD WATER MAIN, BUILDING STEEL, SPRINKLER MAIN AND CONCRETE ENCASED ELECTRODE. #6 CU AWG TO (2) DRIVEN GROUND RODS, MINIMUM OF 6' APART. BOND ALL SERVICE GROUNDING ELECTRODES PER NEC 250 WITH (1) #2/0 CU GND

**ELECTRICAL RISER DIAGRAM BUILDING "H"**  
NOT TO SCALE

**ELECTRICAL SYSTEM AND EQUIPMENT METHOD OF COMPLIANCE:**

ENERGY CODE: PRESCRIPTIVE  PERFORMANCE   
 ASHRAE 90.1: PRESCRIPTIVE  PERFORMANCE

REFER TO DRAWINGS FOR RISER DIAGRAM AND PANEL SCHEDULES

**LIGHTING SCHEDULE**

LAMP TYPE REQUIRED IN FIXTURE: SEE SCHEDULE  
 NUMBER OF LAMPS IN FIXTURE:  
 BALLASTS TYPE USED IN FIXTURE:  
 NUMBER OF BALLASTS IN FIXTURE:  
 TOTAL WATTAGE PER FIXTURE:  
 TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED:  
 TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED:

**ADDITIONAL PRESCRIPTIVE COMPLIANCE**

- 506.2.1 MORE EFFICIENT MECHANICAL EQUIPMENT
- 506.2.2 REDUCED LIGHTING POWER DENSITY
- 506.2.3 ENERGY RECOVERY VENTILATION SYSTEMS
- 506.2.4 HIGHER EFFICIENCY SERVICE WATER HEATING
- 506.2.5 ON-SITE SUPPLY OF RENEWABLE ENERGY
- 506.2.6 AUTOMATIC DAYLIGHTING CONTROL SYSTEMS

**Cruse And Associates, P.A.**

414 EAST BOGERTON STREET  
 Durham, North Carolina 28834  
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 FAX: (919) 882-5182

LICENSE NO.: C-1721

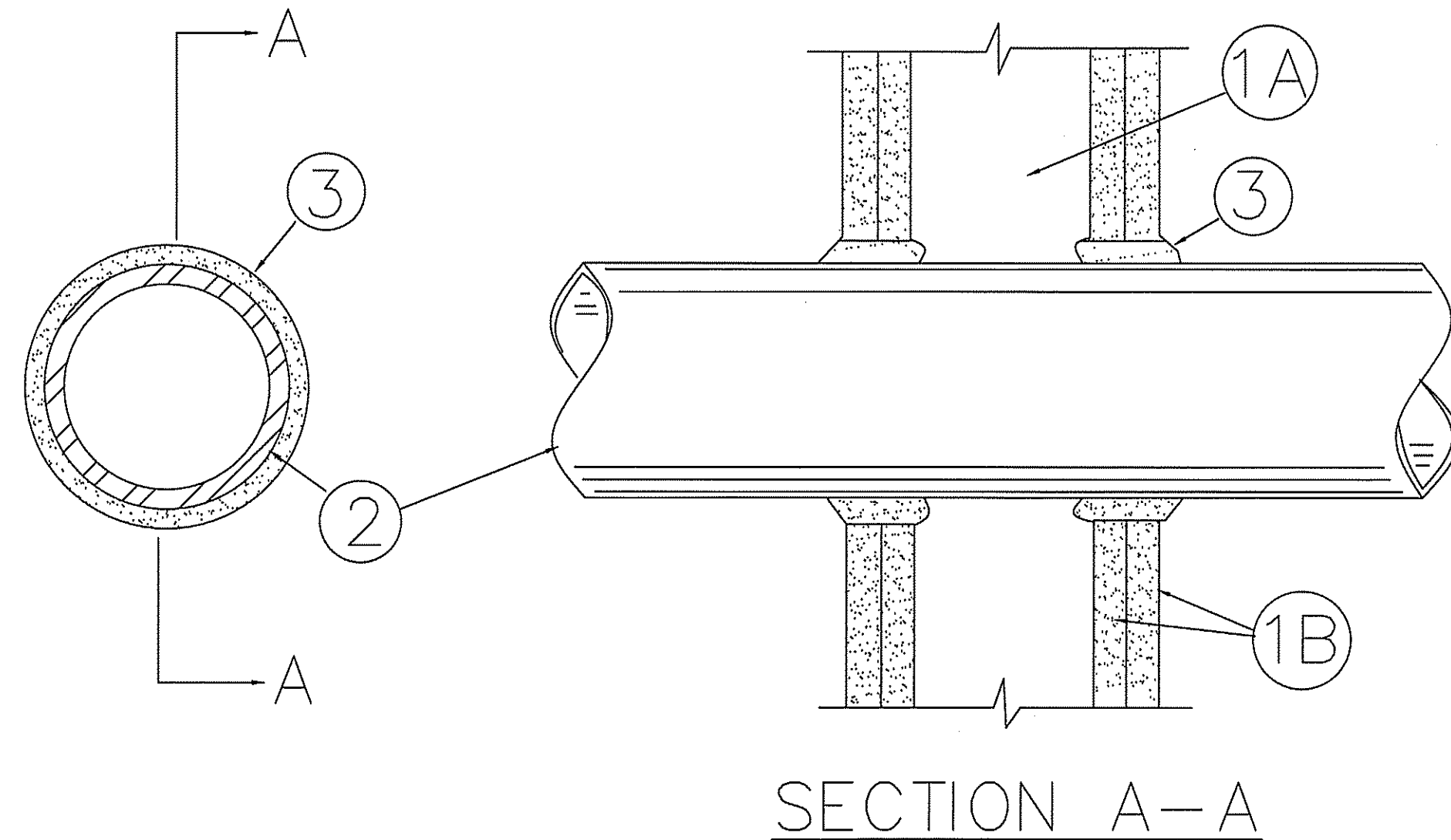
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DATE 02/13/26  
 DRAWN BY BAM  
 JOB NO. 26-02  
 SHEET NO. E-3 OF 3

System No. W-L-1001

June 15, 2005

F Ratings — 1, 2, 3 and 4 Hr (See Items 2 and 3)  
 T Ratings — 0, 1, 2, 3, and 4 Hr (See Item 3)  
 L Rating At Ambient — less than 1 CFM/sq ft  
 L Rating At 400 F — less than 1 CFM/sq ft



1. Wall Assembly — The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the Individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs (max 2 hr fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. Gypsum Board\* — Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the Individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 26 in. (660 mm).

2. Through-Penetrant — One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in. / (0 mm). (point contact) to max 2 in. (51 mm) Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

- A. Steel Pipe — Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. Iron Pipe — Nom 24 in. (610 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.
- C. Conduit — Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in (102 mm) diam (or smaller) steel electrical metallic tubing
- D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing
- E. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
- F. Through Penetrating Product\* — Flexible Metal Piping The following types of steel flexible metal gas piping may be used:

1. Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

OMEGA FLEX INC

2. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

GASTITE, DIV OF TITFLEX

3. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

WARD MFG L L C

3. Fill, Void or Cavity Material\* — Caulk or Sealant — Min 5/8, 1-1/4, 1-7/8 and 2-1/2 in. (16, 32, 48 and 64 mm) thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam In (mm)	F Rating Hr	T Rating Rating Hr
1 (25)	1 or 2	0+, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

+When copper pipe is used, T Rating is 0 h.

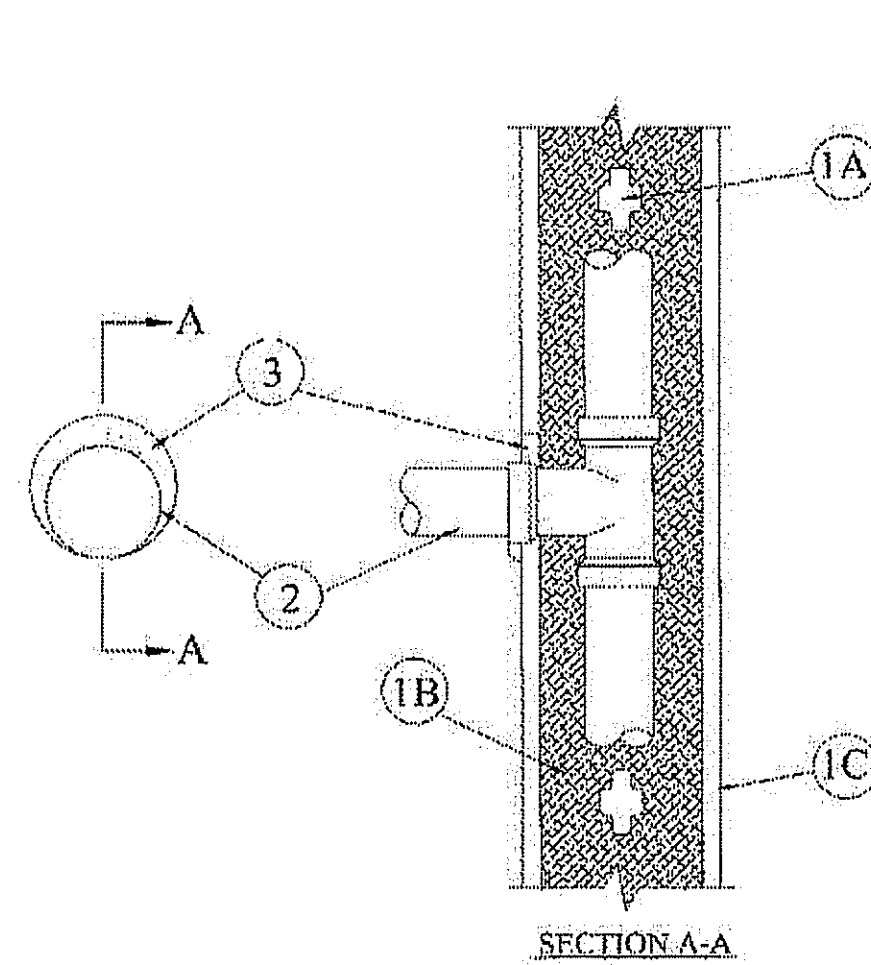
3M COMPANY ? CP 25WB+ or FB-3000 WT.

\*Bearing the UL Classification Mark

System No. W-L-2179

September 17, 2001

F Rating — 1 Hr  
 T Rating — 1 Hr



1. Wall Assembly — The fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the Individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced max 16 in. OC. The steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.

B. Insulation, Glass Fiber\* — R-13 fiber glass insulation installed entirely within single stud cavity of nonmetallic pipe (Item 2).

C. Gypsum Board\* — One layer of nom 5/8 in. thick gypsum wallboard, as specified in the Individual Wall and Partition Design. Max diam of opening is 3-3/4 in.

2. Nonmetallic Pipe — Nonmetallic pipe, installed within stud cavity and connected to nonmetallic tee. Nonmetallic pipe penetrating wall assembly on one side of wall to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe and periphery of opening shall be min 0 in. (point contact) to max 1 in. Pipe to be rigidly supported on penetrating side of wall assembly. The following types and sizes of nonmetallic pipes and tees may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 2 in. diam (or smaller) Schedule 40 cellular core or solid core PVC pipe and tee for use in vented (drain, waste or vent) or closed (process and supply) piping systems.

B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in. diam (or smaller) SDR17 CPVC pipe and tee for use in vented (drain, waste or vent) or closed (process and supply) piping systems.

C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 2 in. diam (or smaller) Schedule 40 cellular or solid core ABS pipe and tee for use in vented (drain, waste or vent) or closed (process and supply) piping systems.

3. Fill, Void or Cavity Material\* — Sealant — Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall. At point contact locations between wallboard and pipe, a min 1/2 in. diam bead of fill material shall be applied at the pipe/wallboard interface.

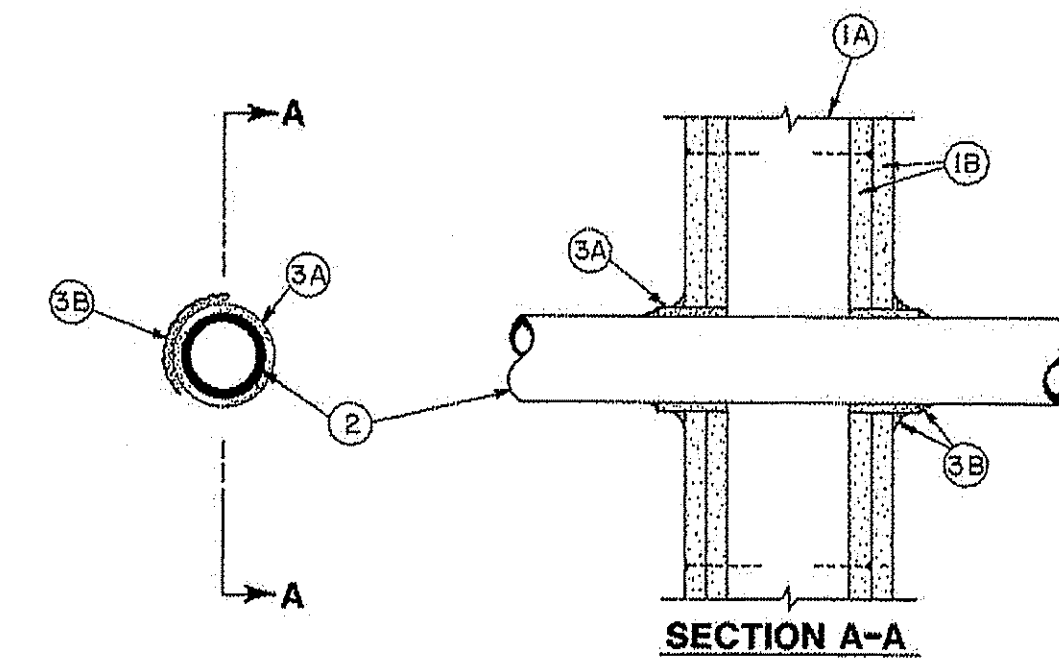
JOHNS MANVILLE INTERNATIONAL INC — FireTemp™ CI, FireTemp™ CE

\*Bearing the UL Classification Mark

System No. W-L-2003

November 20, 2009

F Ratings — 1 and 2 Hr (See Item 3)  
 T Ratings — 1 and 2 Hr (See Item 3)  
 L Rating At Ambient — 7 CFM/sq ft (See Item 3B)  
 L Rating At 400 F — less than 1 CFM/sq ft (See Item 3B)



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the Individual U300, U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. Gypsum Board\* — 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the Individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 3-1/8 in. (79 mm).

2. Through Penetrants — One nonmetallic pipe or conduit to be centered in the through opening. The annular space between pipe or conduit and periphery of opening shall be min 1/4 in. (6 mm) and max 3/8 in. (10 mm). Pipe or conduit to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

B. Rigid Nonmetallic Conduit++ — Nom 2 in. (51 mm) diam (or smaller) (Schedule 40 or 80) PVC conduit installed in accordance with the National Electric Code (NFPA No. 70).

C. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.

D. Cellular Core Polyvinyl Chloride (ccPVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

E. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

F. Cellular Core Acrylonitrile Butadiene Styrene (ccABS) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

3. Firestop System — Installed symmetrically on both sides of wall assembly. The hourly F and T Ratings for the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed. The details of the firestop system shall be as follows.

A. Fill, Void or Cavity Materials\* — Wrap Strip — Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly wrapped around nonmetallic pipe (fall side out) with seam butted. Wrap strip layer securely bound with steel wire or aluminum foil tape and slid into annular space approx 1-1/4 in. (32 mm) such that approx 3/4 in. (19 mm) of the wrap strip protrudes from the wall surface.

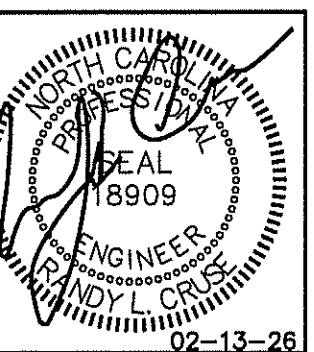
3M COMPANY — FS-195+

B. Fill, Void or Cavity Materials\* — Caulk, Sealant or Putty — Min 5/8 in. (16 mm) thickness of caulk or putty applied into annular space between wrap strip and periphery of opening. A nom 1/4 in. (6 mm) diam bead of caulk or putty to be applied to the wrap strip/wall interface and to the exposed edge of the wrap strip layers approx 3/4 in. (19 mm) from the wall surface.

3M COMPANY — CP 25WB+ caulk or MP+ Stix putty, IC 15WB+ caulk, FireDam 150+ caulk or FB-3000 WT sealant. (Note: L Ratings apply only when Type CP 25WB+ caulk or FB-3000 WT sealant is used. CP 25WB+ and FireDam 150+ not suitable for use with CPVC pipes.)

C. Foil Tape — (not shown) — Nom 4 in. (102 mm) wide, 3 mil thick aluminum tape wrapped around pipe prior to the installation of the wrap strip (Item 3A). Min of one wrap, flush with both sides of wall and proceeding outward. Tape is not required for pipes shown in Items 2A, 2B and 2C.

\*Bearing the UL Classification Mark



PLANS FOR:  
 AMPLE STORAGE  
 BUILDING "H"  
 ERWIN, NORTH CAROLINA 28339

REVISIONS	
NO.	

Cruse  
 And  
 Associates, P.A.

B. A. M. HARRISON, ENGINEER  
 Durham, North Carolina 28334  
 P.E. No. 6101 062-4182  
 FAX: (919) 252-4182

LICENSE NO.: C-1724

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DATE 02/13/26

DRAWN BY BAM

JOB NO. 26-02

SHEET NO.

PME-1 OF 1

PENETRATION DETAILS  
 NOT TO SCALE