

1.	CONTRACTOR SHALL REPLACE ALL RETURN AIR FILTERS INSIDE ALL HVAC UNITS W/CLEAN NEW AIR FILTERS.	DS -	NON-FUSED DISCONNECT EQUIPMENT DISCONNECT
2.	CONTRACTOR SHALL SUPPLY AN ADDITIONAL CLEAN SET OF FILTERS TO THE OWNER AT JOB COMPLETION.		
3.	CONTRACTOR SHALL SHOW THE STORE MANAGER THE LOCATION OF & INSTRUCT HIM/HER HOW TO CHANGE ALL AIR FILTERS.		
4.	CONTRACTOR TO COORDINATE WITH CORPORATE/OWNER AND PROVIDE ALL NECESSARY ACCESSORIES AS PER CORPORATE REQUIREMENTS AND INSTALL PER MANUFACTURER INSTRUCTIONS.		
5.	THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WIRING AND CONNECTIONS REQUIRED BETWEEN THE SMOKE DETECTOR AND THE UNIT, AND SHALL PROVIDE SMOKE TESTING TO VERIFY PROPER OPERATION AND UNIT SHUT DOWN PRIOR TO OCCUPANCY.		
6.	CONTRACTOR TO FIELD VERIFY IF RTU IS WORKING AT 100% RATED CAPACITIES/LOADS. INFORM TO DESIGN ENGINEER IF ANY DISCREPANCIES ARE FOUND IN PERFORMANCE PRIOR TO CONSTRUCTION.		
	* VERIFY IN FILED FOR THE EXACT CAPACITY		

GRILLE AND ACCESSORIES				
MARK	DESCRIPTION	MFR.	CATALOG NUMBER	SIZE
(G1)	SUPPLY GRILLE	ANEMOSTAT	S2H0	14"
(S1)	SUPPLY DIFFUSER	ANEMOSTAT	EPL	24"
(E1)	SUPPLY DIFFUSER	S.A.E.	S.A.E.	S.A.E.
(E2)	RETURN GRILLE	S.A.E.	S.A.E.	S.A.E.
(R1)	RETURN GRILLE	TITUS	350RL	24"
ACCESSORIES				
OB	-	OPPOSED BLADE DAMPER		
DT	-	DIRECTIONAL TABS		
APPROVED ALTERNATE MANUFACTURER'S				
GRILLES, DIFFUSERS & DAMPERS:				
*TUTTLE & BAILEY	*NAILOR	*ARROW	*CARNE	
*PRICE INDUSTRIES	*TITUS	*KRUEGER		

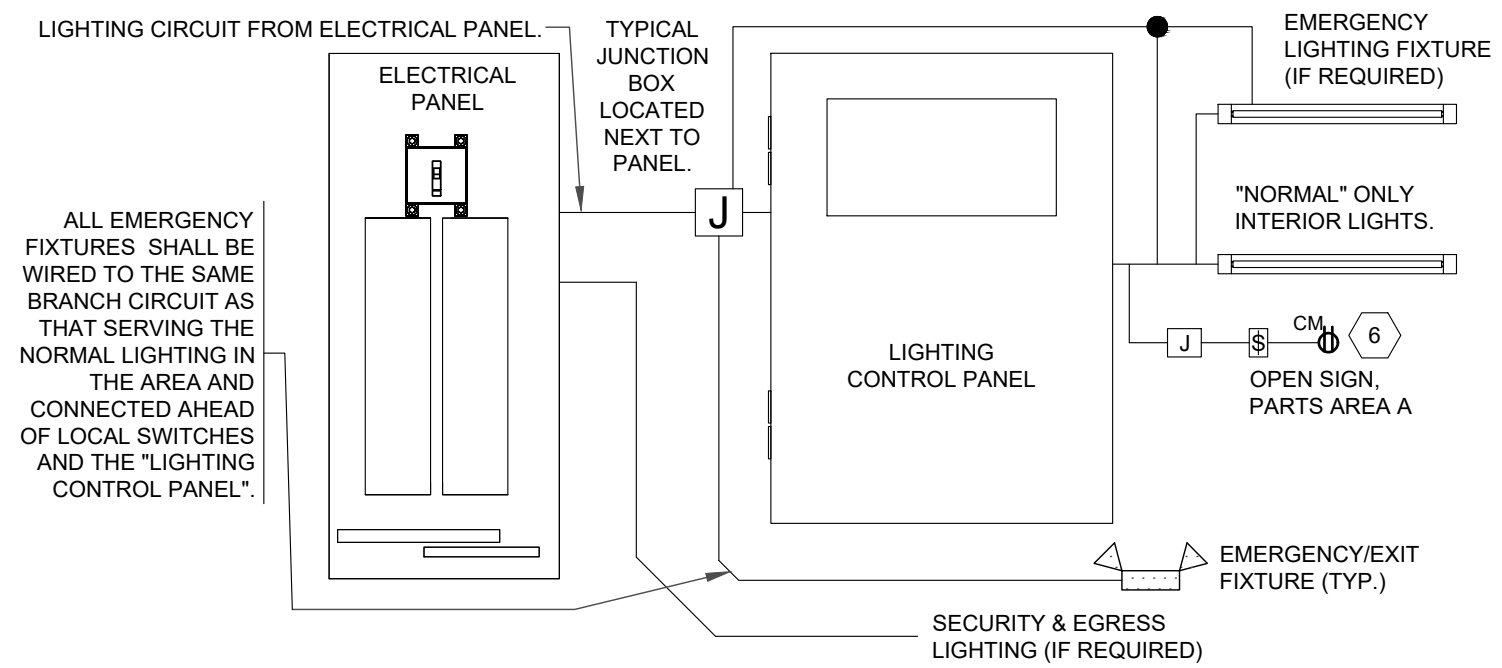
VENTILATION CALCULATION									
SL NO	ROOM NAME	AREA	OCCUPANCY AS PER IMC 2021/1000SQ.FT.	OCCUPANCY AS PER IMC 2021	FINAL OCCUPANCY	CFM/SQ.FT	CFM/PERSON	CALCULATED (CFM)	
1	101A PARTS AREA "A"	4035	15	61	61	0.12	7.5	942	
1	101B PARTS AREA "B"	3391	0	0	0	0.12	0	407	
2	101C PARTS AREA "C"	925	0	0	0	0.12	0	111	
3	102 OFFICE	97	5	0	1	0.06	5	11	
4	105 BREAK ROOM	86	5	0	1	0.06	5	10	
5	103 GENDER NEUTRAL	66	0	0	0	0	0	0	
6	104 GENDER NEUTRAL	69	0	0	0	0	0	0	
	TOTAL	8669	-	-	63	-	-	-	

VENTILATION CALCULATION												
SL NO	ROOM NAME	AREA	OCCUPANCY AS PER IMC 2021/1000SQ.FT.	OCCUPANCY AS PER IMC 2021	FINAL OCCUPANCY	CFM/SQ.FT	CFM/PERSON	CALCULATED OA (CFM)	EFFECTIVENESS 0.8	REQUIRED OA (CFM)	PROVIDED OA (CFM)	EXHAUST CFM
1	101A PARTS AREA "A"	4035	15	61	61	0.12	7.5	942	0.8	1177	1180	0
2	101B PARTS AREA "B"	3391	0	0	0	0.12	0	407	0.8	509	510	0
3	101C PARTS AREA "C"	925	0	0	0	0.12	0	111	0.8	139	140	0
4	102 OFFICE	97	5	0	1	0.06	5	11	0.8	14	15	0
5	105 BREAK ROOM	86	5	0	1	0.06	5	10	0.8	13	15	0
6	103 GENDER NEUTRAL	66	0	0	0	0	0	0	0.0	0	0	75
6	104 GENDER NEUTRAL	69	0	0	0	0	0	0	0.0	0	0	75
TOTAL		8669	-	-	63	-	-	-	-	1851	1860	150

M2.0

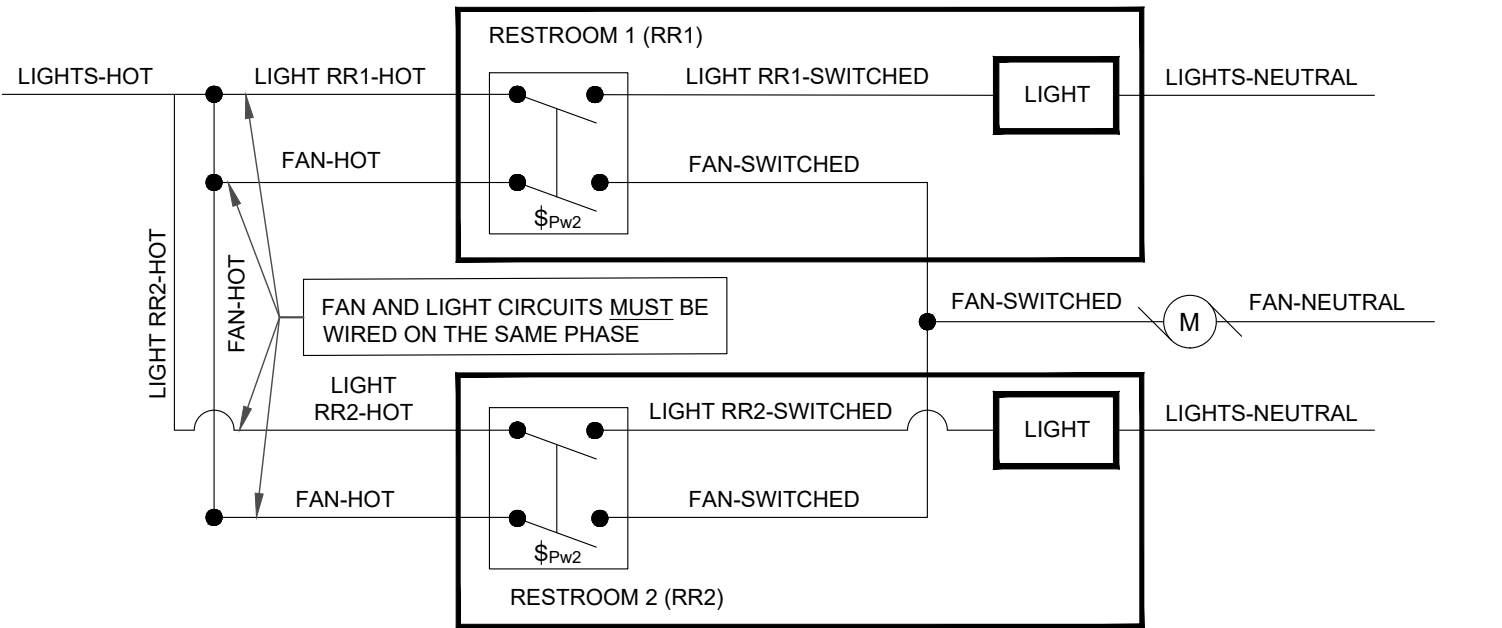
LIGHT FIXTURE SCHEDULE

SYMBOL	TYPE	MFR.	SPECIFICATION	DESCRIPTION	VOLTAGE	QUANTITY
	EX1	-	-	EXISTING LIGHT FIXTURE	120V	10
	EX2	-	-	EXISTING LIGHT FIXTURE	120V	4
	EX3	-	-	EXISTING EXTERIOR LIGHT FIXTURE	120V	20
	A1	TBD	TBD	NEW 1'X8' LIGHT FIXTURE	120V	36
	B1	TBD	TBD	NEW 1'X8' LIGHT FIXTURE	120V	41
	B2	TBD	TBD	NEW 1'X4' LIGHT FIXTURE	120V	8
	D	TBD	TBD	LED EXIT SIGN WITH BUGEYE WITH MINIMUM 90 MINUTES BATTERY BACKUP	120V	PER CODE
	C	TBD	TBD	LED EXIT SIGN WITH MINIMUM 90 MINUTES BATTERY BACKUP	120V	PER CODE
	L	TBD	TBD	WET LOCATION EMERGENCY LIGHT WITH MINIMUM 90 MINUTES BATTERY BACKUP	120V	PER CODE
	EM	-	-	NEW EMERGENCY LIGHT WITH MINIMUM 90 MINUTES BATTERY BACKUP	120V	PER CODE
	WP1	TBD	TBD	WALL PACK LIGHT	120V	1



EMERGENCY/EXIT LIGHTING CONNECTION DIAGRAM

1
E1.0



RESTROOM EXHAUST FAN WIRING

2
E1.0

AUTOMATIC LIGHTING CONTROL

COMPLIANCE WITH ENERGY CODE IS ACHIEVED BY:

- ONCE THE EMS HAS BEEN PROGRAMMED, THE INTERIOR AND EXTERIOR LIGHTS WILL TURN ON AND OFF USING THE FOLLOWING LOGIC:

INTERIOR WORK LIGHTS WILL TURN ON WITH FIRST MOTION IN THE STORE AND WILL TURN OFF 15 MINUTES AFTER LAST MOTION ONCE THE STORE IS CLOSED

INTERIOR SALES LIGHTS WILL TURN ON AT STORE OPENING AND TURN OFF 15 MINUTES AFTER STORE CLOSING. EXTERIOR SIGN LIGHTS WILL TURN ON WHEN ITS DARK ENOUGH OUTSIDE ANYTIME DURING STORE HOURS, AND WILL TURN OFF AT STORE CLOSING.

EXTERIOR SITE LIGHTS WILL TURN ON WHEN IT IS DARK ENOUGH OUTSIDE AND IT IS WITHIN STORE HOURS OR THERE IS MOTION IN THE STORE. THEY WILL TURN OFF 30 MINUTES AFTER LAST MOTION ONCE THE STORE IS CLOSED.

FOR NEW CONSTRUCTION LOCATIONS ONLY, THERE IS A TEMPORARY PROGRAM TO KEEP SIGN AND SITE LIGHTS ON UNTIL MIDNIGHT RATHER THAN THE TIMES INDICATED ABOVE. O'REILLY WILL DISABLE THIS PROGRAM ONE YEAR AFTER STORE OPENING.
- RESTROOMS AND OFFICES: ALL LIGHTING IN THESE AREAS ARE CONTROLLED BY OCCUPANT-SENSING DEVICES.

EXIT SIGNS

- REFER TO ARCHITECTURAL SET FOR MINIMUM MOUNTING HEIGHT FOR EXIT SIGNS. ALL EXIT SIGNS MUST BE CLEARLY VISIBLE, NOT OBSCURED BY SHELVING AND/OR MERCHANDISE AND COORDINATED WITH INTERIOR PAINT SCHEME. CONFIRM SHELVING HEIGHT(S) AND PAINT SCHEME WITH O'REILLY REPRESENTATIVE PRIOR TO INSTALLATION.
- THE MAXIMUM HEIGHT FOR AN EXIT LIGHT ASSOCIATED WITH A SPECIFIC OPENING (I.E. MOUNTED OVER A DOOR OR OPENING) SHALL BE NO GREATER THAN THE CODE ALLOWED 6'-8" ABOVE THE TOP EDGE OF THE DOOR OR OPENING.

CONDUIT REQUIREMENTS

ALL WIRING SHALL BE IN CONDUIT, EXCEPT THAT MC-CABLE MAY BE SUBSTITUTED ONLY AS FOLLOWS:

- MC-CABLE (MAXIMUM CABLE LENGTH OF 10'-0") MAY BE INSTALLED ONLY FOR BRANCH CIRCUIT WIRING TO LIGHT FIXTURES.
- *MC-CABLE (MAXIMUM CABLE LENGTHS SHOWN ON DETAIL 2/E2.0) MAY BE INSTALLED ONLY ABOVE SLAB AND ONLY AT LOCATIONS INDICATED ON E2.0 SHEET.*

INTERIOR LIGHTING ZONES

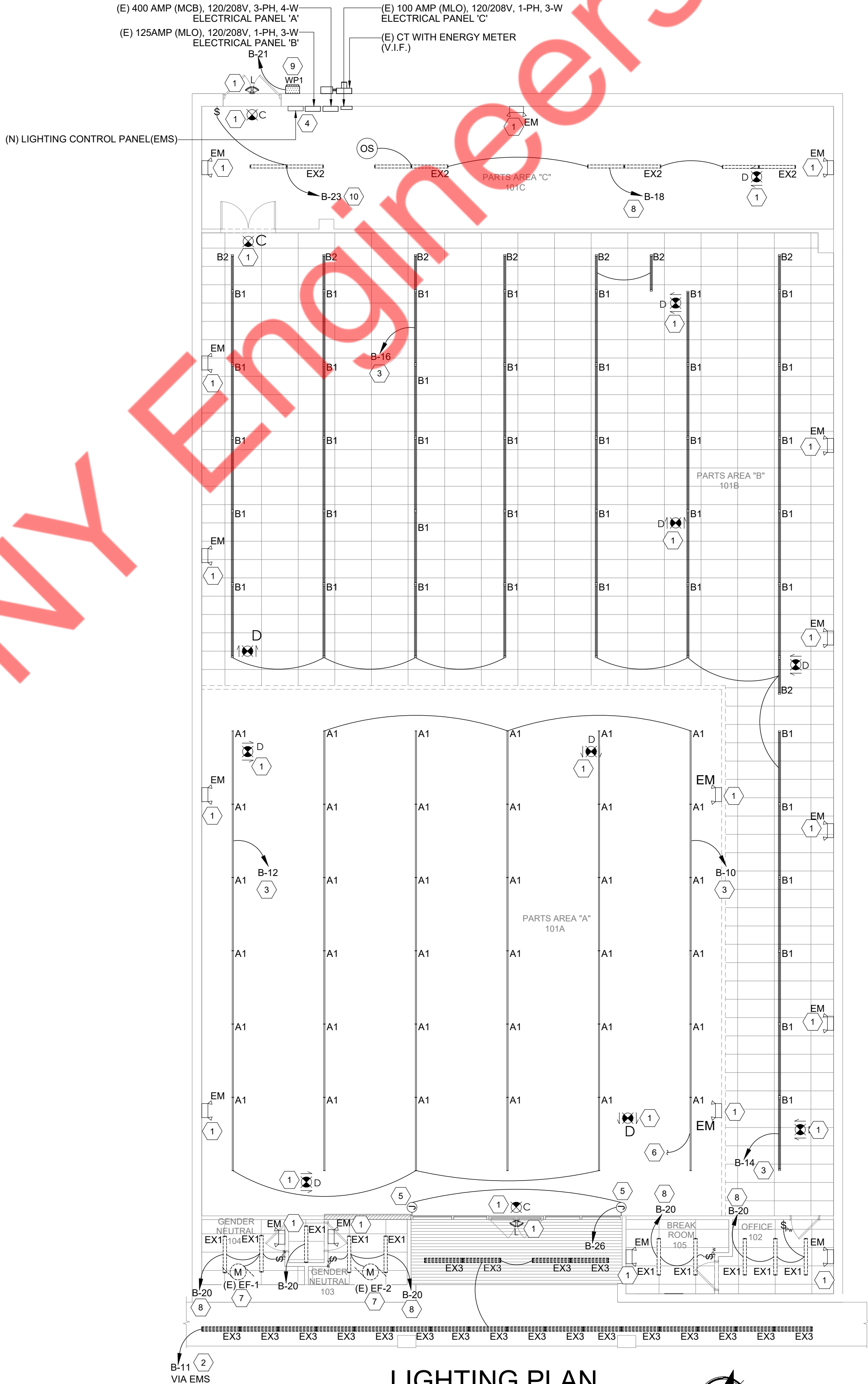
- ALL INTERIOR LIGHTING WITHIN PARTS AREA "A" SHALL BE CONSIDERED "SALES" ZONE (ON ONLY WHEN STORE IS OPEN FOR BUSINESS).
- ALL INTERIOR LIGHTING WITH PARTS AREA "B", RESTROOMS, OFFICE, AND BREAK AREA SHALL BE CONSIDERED "WORK" ZONES (ON WHENEVER THERE IS MOTION OR THE STORE IS OPEN).

ELECTRICAL KEYNOTES:

- TIE ALL EMERGENCY LIGHT, EXIT SIGN WITH MINIMUM 90-MINUTES BATTERY BACK-UP TO AREA NEAREST LIGHTING BRANCH CIRCUIT AHEAD OF CONTROL AS SHOWN ON PLAN. WIRE THE LIGHTS TO THE EXISTING EMERGENCY LIGHT CIRCUIT IF POSSIBLE. OTHERWISE PROVIDE NEW. BASE BID ACCORDINGLY.
- EXISTING LIGHT FIXTURES, ITS CIRCUITS AND THEIR CONTROLS SHALL REMAIN. ELECTRICAL CONTRACTOR TO VERIFY THE OPERABLE CONDITION WITH ARCHITECT/OWNER IN FIELD. PROVIDE NEW AS SHOWN IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- CONNECT VIA LIGHTING CONTROL PANEL (EMS PANEL). CONTRACTOR SHALL INSTALL 0-10V CONTROL WIRING TO ALL FIXTURES.
- ELECTRICAL CONTRACTOR TO VERIFY THE OPERABLE CONDITION OF EXISTING LIGHTING CONTROL PANEL. REUSE IF POSSIBLE OTHERWISE PROVIDE NEW SIEMENS EMS PANEL AS SHOWN AS PER O'REILLY REQUIREMENT. BASE BID ACCORDINGLY.
- MOUNT J-BOX INSIDE BUILDING & FLEX CONDUIT THRU WALL FOR POWER SUPPLY TO ILLUMINATED SIGN. EXACT LOCATIONS OF PENETRATIONS SHALL BE COORDINATED WITH SIGN COMPANY. PENETRATIONS SHALL BE BEHIND SIGNAGE. WATERPROOF W/ ELASTOMERIC POLYURETHANE (NO EXCEPTIONS) EQUAL TO "VULKEM" 116. WIRE TO SIGN WITH 15' OF WIRING "WHIP" (SHALL BE FLEX OR TYPE MC CABLE) & MAKE FINAL ELECTRICAL CONNECTIONS TO THE SIGN CABINETS. REUSE EXISTING CIRCUITS IF POSSIBLE. EITHER PROVIDE NEW AS SHOWN. BASE BID ACCORDINGLY.
- TO OPEN SIGN. SEE SHEET E2.0.
- EXISTING EXHAUST FANS SHALL REMAIN. ELECTRICAL CONTRACTOR SHALL VERIFY EXACT OPERABLE CONDITION IN FIELD. PROVIDE NEW IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- VERIFY EXISTING CIRCUITS AND CONTROLS REUSE IF POSSIBLE. OTHERWISE PROVIDE NEW CIRCUITS AND CONTROLS AS SHOWN. BASE BID ACCORDINGLY. ROUTE THE LIGHTING CIRCUIT THRU THE LOCAL OCCUPANCY SENSORS AND DIRECTLY TO THE CIRCUIT BREAKER. THESE FIXTURES SHALL NOT BE SWITCHED BY THE LIGHTING CONTROL PANEL. CONTRACTOR SHALL VERIFY EXACT REQUIREMENTS IN FIELD.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT REQUIREMENTS. LOCATION OF WALL PACK LIGHTS AND SHALL PROVIDE POWER AND CONTROLS ACCORDINGLY. BASE BID PRIOR TO ROUGH-IN.
- LIGHTING NEAR ELECTRICAL PANELS SHALL NOT BE CONTROLLED BY ANY AUTOMATIC MEANS AND SHALL BE COMPILED AS PER NEC 110.26(D).

NOTE:

ALL EXISTING EMERGENCY/EXIT LIGHTS FIXTURES WITHIN THE O'REILLY SPACE SHALL BE REPLACED WITH NEW EMERGENCY/EXIT LIGHT FIXTURES.



LIGHTING PLAN

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

LEGEND:
----- NEW
----- EXISTING

PROFESSIONAL SEAL:

CONSULTANT (ENGINEER):

NY ENGINEERS

NEARBY ENGINEERS
382 NE 191ST STREET SUITE
49674, MIAMI, FL 33179
PH-914.257.3455
WWW.NY-ENGINEERS.COM

CONTRACTOR'S NOTES:

WRITTEN DIMENSIONS HOLD PREFERENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS. THE CONTRACTORS MUST VISIT JOB SITE TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE SUBMITTING BIDS. REPORT ANY DISCREPANCIES OF ANY CONDITIONS WHICH MAY INTERFERE WITH THE PROPER EXECUTION OF THE CONTRACT TO THE TENANTS REPRESENTATIVE. REPORT DISCREPANCIES DURING BIDDING PROCESS AND BEFORE START OF CONSTRUCTION. CHANGE ORDERS WILL NOT BE APPROVED FOR ISSUES ARISING FROM THE FIELD CONDITIONS OR CONFLICTS BETWEEN THE PLANS AND THE EXISTING CONDITIONS.

DATE REVISION

11/24/2025 FOR CLIENT REVIEW

O'Reilly

LOCATION:

PROJECT INFORMATION:

DATE: 11/24/2025

PROJECT NUMBER:13775-25

AREA: 9,095 SF

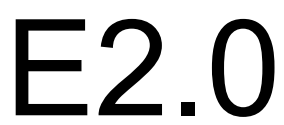
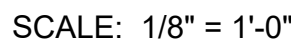
DRAWN BY: NYE CHECKED BY:NYE

TITLE:

LIGHTING PLAN

SHEET NUMBER:

E1.0



ALL PANELBOARDS, TRANSFORMERS, TRANSFER SWITCH KIT, ENERGY MANAGEMENT SYSTEM AND DISCONNECTS WILL BE SUPPLIED BY THE OWNER (O'REILLY). IF EXISTING FOUND INOPERABLE, ELECTRICAL GEAR SHALL BE DIRECT ORDERED AND/OR RELEASED FROM THE LISTED ELECTRICAL EQUIPMENT DISTRIBUTOR. SEE 'ELECTRIC SERVICE RESPONSIBILITIES' FOR ADDITIONAL CLARIFICATION:

SOURCEONE SOLUTIONS
4341 GREEN ASH DRIVE
EARTH CITY, MO 63045

SOURCEONE SOLUTIONS O'REILLY TEAM
EMAIL: noreilly@sourceone.com
PHONE: 314-499-6400

ELECTRICAL PANEL SCHEDULE

PANELBOARD		A		VOLTAGE		120 / 208 V		PHASE		3		WIRE		4				
PANEL TYPE		MCB		MOUNTING		400A		BUS RATING		400A		AIC RATING		V.I.F.				
NEMA TYPE ENCLOSURE		1				SURFACE		OPTIONS				EXISTING PANEL						
CKT. NO.	EQT TAG	CKT TAG	DESCRIPTION		POLE	WIRE SIZE	BKR. SIZE	TOTAL WATTS	PHASE	TOTAL WATTS	BKR. SIZE	WIRE SIZE	POLE	DESCRIPTION		CKT TAG	EQT TAG	CKT. NO.
1	(E)		EXISTING PANEL B		2	3	100	8,020	A	6,485								2
3								6,770	B	6,485	70	4	3	EXISTING RTU-1		(E)	(F)	4
5								6,485	C	6,485								6
7	(F)		EXISTING RTU-2		3	4	70	6,485	A	0	50	8	2	EXISTING PANEL C		(E)	(E)	8
9								6,485	B	0								10
11	(N)		LATHE		1	10	20	1,700	C	500	20	12	1	CHECK IN RECEIPT		(N)		12
13	(N)		CUTOFF SAW		1	10	20	1,730	A	180	20	12	1	BATTERY RACK RECEIPT		(N)		14
15	(N)		CRIMPER		1	12	20	1,770	B	180	20	12	1	BATTERY RACK RECEIPT		(N)		16
17	(N)		RECEPTACLES (LATHE)		1	12	20	540	C	360	20	12	1	BREAK AREA RECEIPT		(N)		18
19	(N)		STARTER/ALT. TESTER		1	12	20	1,680	A	360	20	12	1	RECEPTACLES (INSTALLER)		(N)		20
21	(N)		STARTER/ALT. TESTER		1	12	20	1,680	B	1,750	20	12	1	COKE MACHINE (ONLY)		(N)	GFCI	22
23	(N)		STARTER/ALT. TESTER		1	12	20	1,640	C	720	20	12	1	ISOLATED GRD. RECEPTACLES		(N)		24
25	(N)		RECEPTACLES (TEST)		1	12	20	360	A	720	20	12	1	ISOLATED GRD. RECEPTACLES		(N)		26
27	(N)		ISOLATED GRD. RECEPTACLES (OFFICE)		1	12	20	360	B	360	20	12	1	ISOLATED GRD. RECEPTACLES		(N)		28
29	(N)		RECEPTACLES (OFFICE)		1	12	20	720	C	360	20	12	1	ISOLATED GRD. RECEPTACLES		(N)		30
31	(N)		BATTERY BACKUP (I.G.)		1	10	30	3,000	A	720	20	12	1	ISOLATED GRD. RECEPTACLES		(N)		32
33	GFCI	(N)	WATER COOLER RECEIPT		1	12	20	900	B	360	20	12	1	ISOLATED GRD. RECEPTACLES		(N)		34
35	(N)		RECEPTS./IRRIGATION		1	12	20	1,000	C	720	20	12	1	ISOLATED GRD. REC. (INSTALLER)		(N)		36
37	(N)		ISOLATED GRD. RECEPTACLES (OFFICE)		1	12	20	360	A	500	20	12	1	PRINTER RECEPTACLE		(N)		38
39	C	(N)	FIRE ALARM (IF REQ'D)		1	12	20	300	B	360	20	12	1	ROOF GFI RECEPTACLE		(N)		40
41			SPACE						C					SPACE				42

ALL PHASES TO BE BALANCED TO WITHIN 7%
A= 30,600 WATTS
B= 27,760 WATTS
C= 21,230 WATTS

(E) EXISTING TO REMAIN
(N) NEW CIRCUIT
GFCI GROUND FAULT CURRENT INTERRUPTER
IG CIRCUITS WITH ISOLATED GROUND
TC CIRCUITS ON TIMECLOCK
EMS ROUTING TO THE EMS PANEL
C BREAKER LOCK
a,b,c SWITCHES CONTROLLING LIGHTS

TOTAL CONNECTED LOAD	79,590	WATTS	222	AMPS
TOTAL DEMAND LOAD	81,520	WATTS	227	AMPS

ELECTRICAL PANEL SCHEDULE

PANELBOARD		B		VOLTAGE		208 / 120 V		PHASE		1		WIRE		3				
PANEL TYPE		MLO		MOUNTING		NA		BUS RATING		125A		AIC RATING		V.I.F.				
NEMA TYPE ENCLOSURE		1				SURFACE		OPTIONS				EXISTING PANEL						
CKT. NO.	EQT TAG	CKT TAG	DESCRIPTION		POLE	WIRE SIZE	BKR. SIZE	TOTAL WATTS	PHASE	TOTAL WATTS	BKR. SIZE	WIRE SIZE	POLE	DESCRIPTION		CKT TAG	EQT TAG	CKT. NO.
1			SPACE						A					SPACE				2
3			SPACE						B					SPACE				4
5			SPACE						A					SPACE				6
7			SPARE		1		20		B	540	20	12	1	GENERAL OUTLETS BREAK AREA		(N)		8
9	(N)		RESTROOM REC		1	12	20	360	A	1,200	20	12	1	SALES AREA LIGHTS		(N)	EMS	10
11	(N)		EXTERIOR LIGHTS		1	12	20	1,000	B	1,200	20	12	1	SALES AREA LIGHTS		(N)	EMS	12
13	(N)		DIMMING CONTROL PANEL		1	12	20	30	A	1,200	20	12	1	PARTS AREA B LIGHTS		(N)	EMS	14
15	(N)		LIGHTING CONTROL PANEL		1	12	20	30	B	1,200	20	12	1	PARTS AREA B LIGHTS		(N)	EMS	16
17	(N)		TOUCHSCREEN PANEL		1	12	20	30	A	500	20	12	1	PARTS AREA C LIGHTS		(N)		18
19	(N)		SCREAM LOGIC PANEL		1	12	20	600	B	800	20	12	1	OFFICE, BREAK AREA, RR LIGHTS		(N)		20
21	(N)		EXTERIOR WALL PACK		1	12	20	500	A	2,500	30	10	1	WATER HEATER (WH-1)		(N)		22
23	(N)		LIGHTS		1	12	20	500	B	900	20	12	1	PHONE EQUIP./SECURITY		(N)		24
25	(N)		RCP		1	12	20	200	A	1,500	20	12	1	LED SIGN BUILDING		(N)	C	26
27			SPARE		1		20		B					SPARE				28
29			SPARE		1		20		A		20		1	SPARE				30

ALL PHASES TO BE BALANCED TO WITHIN 7%
A= 8,020 WATTS
B= 6,770 WATTS

(E) EXISTING TO REMAIN
(N) NEW CIRCUIT
GFCI GROUND FAULT CURRENT INTERRUPTER
IG CIRCUITS WITH ISOLATED GROUND
TC CIRCUITS ON TIMECLOCK
EMS ROUTING TO THE EMS PANEL
C BREAKER LOCK
a,b,c SWITCHES CONTROLLING LIGHTS

TOTAL CONNECTED LOAD	14,790	WATTS	72	AMPS
TOTAL DEMAND LOAD	17,190	WATTS	83	AMPS

ELECTRICAL PANEL SCHEDULE

PANELBOARD		C		VOLTAGE		208 / 120 V		PHASE		1		WIRE		3				
PANEL TYPE		MLO		MOUNTING		NA		BUS RATING		100A		AIC RATING		V.I.F.				
NEMA TYPE ENCLOSURE		1				SURFACE		OPTIONS				EXISTING PANEL						
CKT. NO.	EQT TAG	CKT TAG	DESCRIPTION		POLE	WIRE SIZE	BKR. SIZE	TOTAL WATTS	PHASE	TOTAL WATTS	BKR. SIZE	WIRE SIZE	POLE	DESCRIPTION		CKT TAG	EQT TAG	CKT. NO.
1			SPARE		2	8	40		A		40	2		SPARE				2
3			SPARE		1		20		B		20	1		SPARE				4
5			SPACE						A					SPACE				6
7			SPACE						B					SPACE				8
9			SPACE						A					SPACE				10
11			SPACE						B					SPACE				12

ALL PHASES TO BE BALANCED TO WITHIN 7%
A= 0 WATTS
B= 0 WATTS

(E) EXISTING TO REMAIN
(N) NEW CIRCUIT
GFCI GROUND FAULT CURRENT INTERRUPTER
IG CIRCUITS WITH ISOLATED GROUND
TC CIRCUITS ON TIMECLOCK
EMS ROUTING TO THE EMS PANEL
C BREAKER LOCK
a,b,c SWITCHES CONTROLLING LIGHTS

TOTAL CONNECTED LOAD	0	WATTS	0	AMPS
TOTAL DEMAND LOAD	0	WATTS	0	AMPS

ELECTRICAL LOAD SUMMARY

DESCRIPTION	NEC CONNECTED KW	VOLT	PHASE	NEC DEMAND FACTOR	NEC DEMAND KW
LIGHTING- 120V	8.1	120	1	1.25	10.1
RECEPTACLES	13.6	120	1	>10kW=10+[0.5*(kW-10)]	11.8
STOREFRONT SIGN	1.5	120	1	1.25	1.9
EQUIPMENT	15.0	120	1	1.00	15.0
ROOFTOP UNITS	38.9	208	3	1.00	38.9
HOT WATER HEATER	2.5	120	1	1.00	2.5
TOTALS	79.6				80.2

NOTES:
* USE GREATER VALUE OF THE TWO CATEGORIES.
** 125% OF THE LARGEST MOTOR OR COMPRESSOR IN SYSTEM APPLIED ONLY ON ONE UNIT.
*** N.E.C. ARTICLE 220-12 REQUIREMENT (200 VA PER FOOT OF SHOW WINDOW)
MINUS ACTUAL SHOW WINDOW LIGHTING KVA.

N.E.C. DEMAND kVA x 1,000
SYSTEM VOLTAGE x 1.732

MINIMUM FEEDER AMPERAGE

80.2 x 1000 = 80,175
208 x 1.732 = 360

222.6 AMPS USE (EXISTING) 400AMP SERVICE FROM UTILITY TRANSFORMER

PANEL SCHEDULE - KEYNOTES:

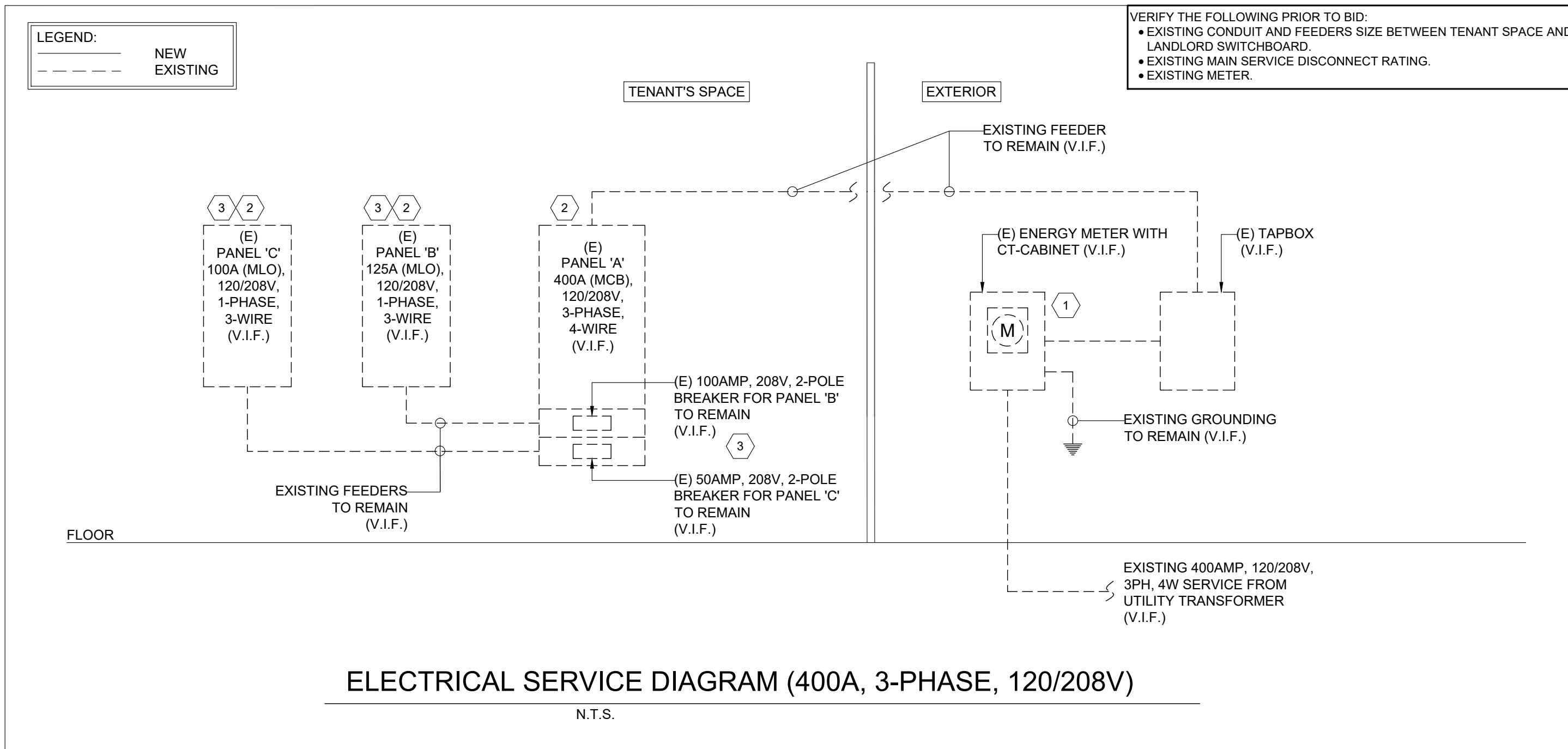
- NEW BREAKERS MAY BE REQUIRED FOR USE IN THE EXISTING PANELBOARD TO MATCH RATING INDICATED IN THE PANEL SCHEDULE. PRIOR TO BIDDING, THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL EXISTING TO REMAIN PANELBOARD MANUFACTURER AND MODEL NUMBER TO ENSURE THAT REPLACEMENT BREAKERS ARE AVAILABLE. WHERE BREAKER AVAILABILITY ISSUES ARISE, NOTIFY THE PROJECT MANAGER PRIOR TO BIDDING.
- DESIGNATED CIRCUIT NUMBER SHOWN ON THE PANEL SCHEDULE FOR A CERTAIN LOAD, MAY BE DIFFERENT THAN THE ACTUAL CIRCUIT NUMBER IN THE EXISTING PANELBOARD. ALL EXISTING TO REMAIN ELECTRICAL LOADS SHALL REMAIN CONNECTED TO THE SAME BREAKER AND CIRCUIT DESIGNATION. AVAILABLE SPARES AND SPACES SHALL BE UTILIZED TO FEED THE NEW LOADS.
- ELECTRICAL CONTRACTOR SHALL VERIFY THE CIRCUITS OF EACH PANEL. REUSE THE CIRCUITS THOSE ARE REQUIRED & MAKE OTHER AS SPARES WHICH ARE NOT IN USE IN COORDINATION WITH ARCHITECT/OWNER. COORDINATE EXACT USE/REQUIREMENTS WITH ARCHITECT/OWNER.
- EXISTING ELECTRICAL PANEL 'B' & 'C' SHALL REMAIN. THE ELECTRICAL CONTRACTOR SHALL VERIFY WITH THE ARCHITECT/OWNER THAT THE PANEL IS RATED AS INDICATED AND IS SUITABLE TO SERVE THE ELECTRICAL LOAD AS SHOWN. IF THE EXISTING PANEL IS FOUND TO BE INADEQUATE OR INCOMPATIBLE, PROVIDE A NEW ELECTRICAL PANEL AND RECONNECT ALL ASSOCIATED LOADS ACCORDINGLY. BASE BID ACCORDINGLY.
- ELECTRICAL CONTRACTOR TO VERIFY IF ANY BREAKER PROVISIONS EXIST IN THE PANEL MADE FOR THE EXISTING PANELS 'B' & 'C'. CHECK & CONFIRM THE CIRCUIT BREAKER RATINGS AND MATCH IT WITH THE RATINGS AS SHOWN. IF NO BREAKER IS PROVIDED, PROVIDE A NEW BREAKER AS SHOWN. COORDINATE THE EXACT REQUIREMENTS WITH OWNER/ARCHITECT PRIOR TO ROUGH-IN. BASE BID ACCORDINGLY.
- ELECTRICAL CONTRACTOR TO FIELD VERIFY THE POWER SOURCE FEEDING TO THE EXISTING RTU'S. REUSE THE EXISTING FEEDER CONNECTION IF POSSIBLE. OTHERWISE PROVIDE NEW FEEDER CONNECTION TO THE RTU'S FROM THE PANEL.

RISER - KEYNOTES:

- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH BASE BUILDING, LANDLORD, AND OWNER FOR EXACT POWER DISTRIBUTION AND LOCATION PRIOR TO COMMENCING ANY WORK. INFORM ENGINEER OF RECORD OF ANY DISCREPANCIES. BASE BID ACCORDINGLY.
- EXISTING ELECTRICAL PANELS & EQUIPMENTS SHALL REMAIN. ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATION, RATING, AND OPERABLE CONDITION IN THE FIELD. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- CONTRACTOR SHALL FIELD-VERIFY THE EXISTING PANEL AND BREAKER RATINGS FOR PANELS "B" AND "C." REUSE THE EXISTING BREAKERS AND CONNECTIONS; PROVIDE NEW ONES IF ANY ARE FOUND TO BE INOPERABLE. BASE BID ACCORDINGLY.

GENERAL NOTES:

- SEE SITE UTILITIES PLAN FOR METER & TRANSFORMER POLE OR PAD MOUNT LOCATIONS.
- BOND ALL NONCURRENT CARRYING METAL PARTS OF SERVICE EQUIPMENT (INCLUDING METER ENCLOSURE) TO GROUNDING ELECTRODE AS REQUIRED PER NEC 250-92.
- ALL ELECTRIC SERVICE EQUIPMENT, PANELBOARDS, CIRCUIT BREAKERS, & FUSED SWITCHES SHALL HAVE A MINIMUM 20K AIC INTERRUPTING RATING.
- THE GROUNDING NEUTRAL CONDUCTOR SHALL BE RUN TO & BONDED TO EACH SERVICE DISCONNECTING MEANS ENCLOSURE IN ACCORDANCE WITH NEC 250-24.
- BONDING OF OTHER ENCLOSURES SHALL BE IN ACCORDANCE WITH NEC 250-96.



PROFESSIONAL SEAL:

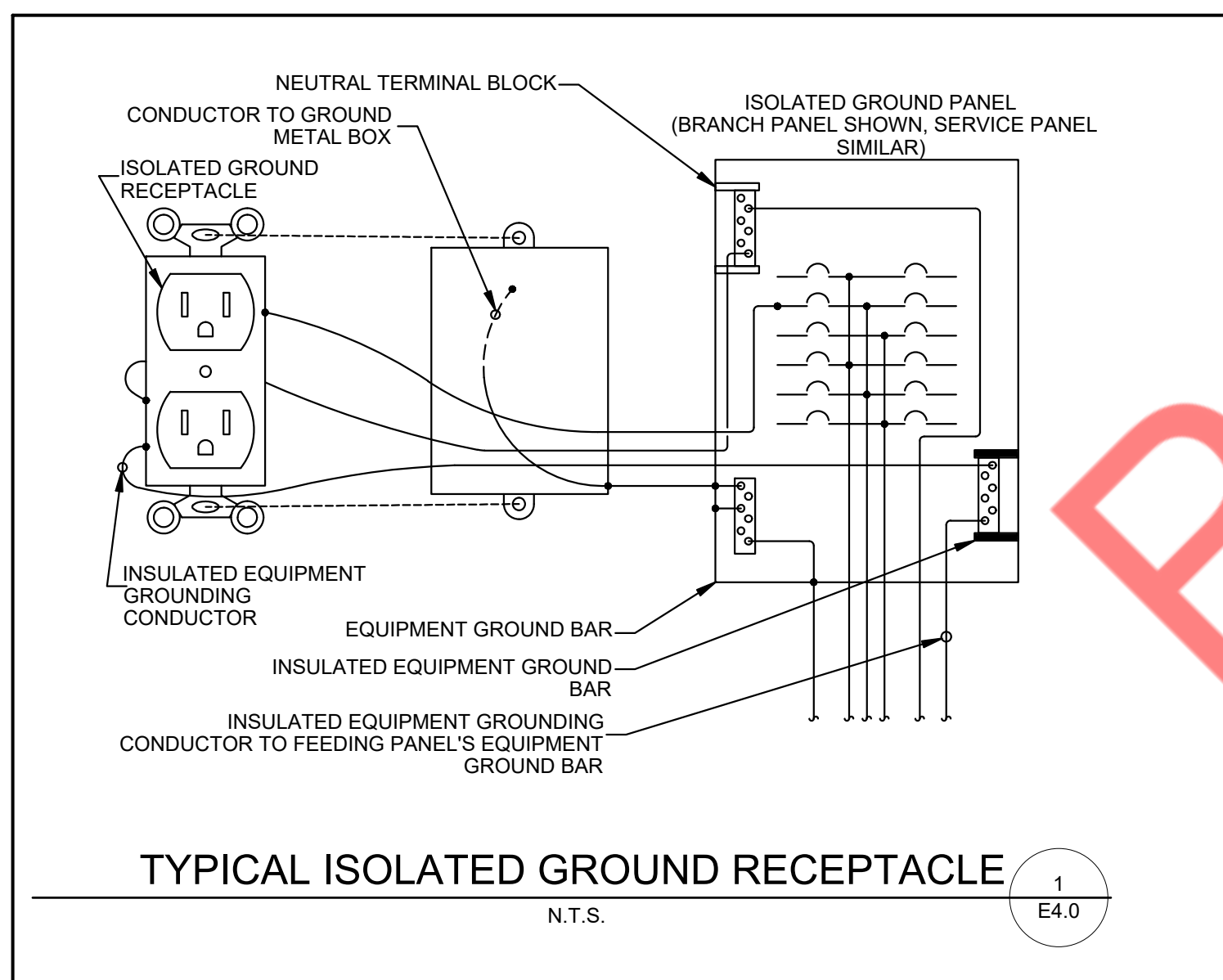
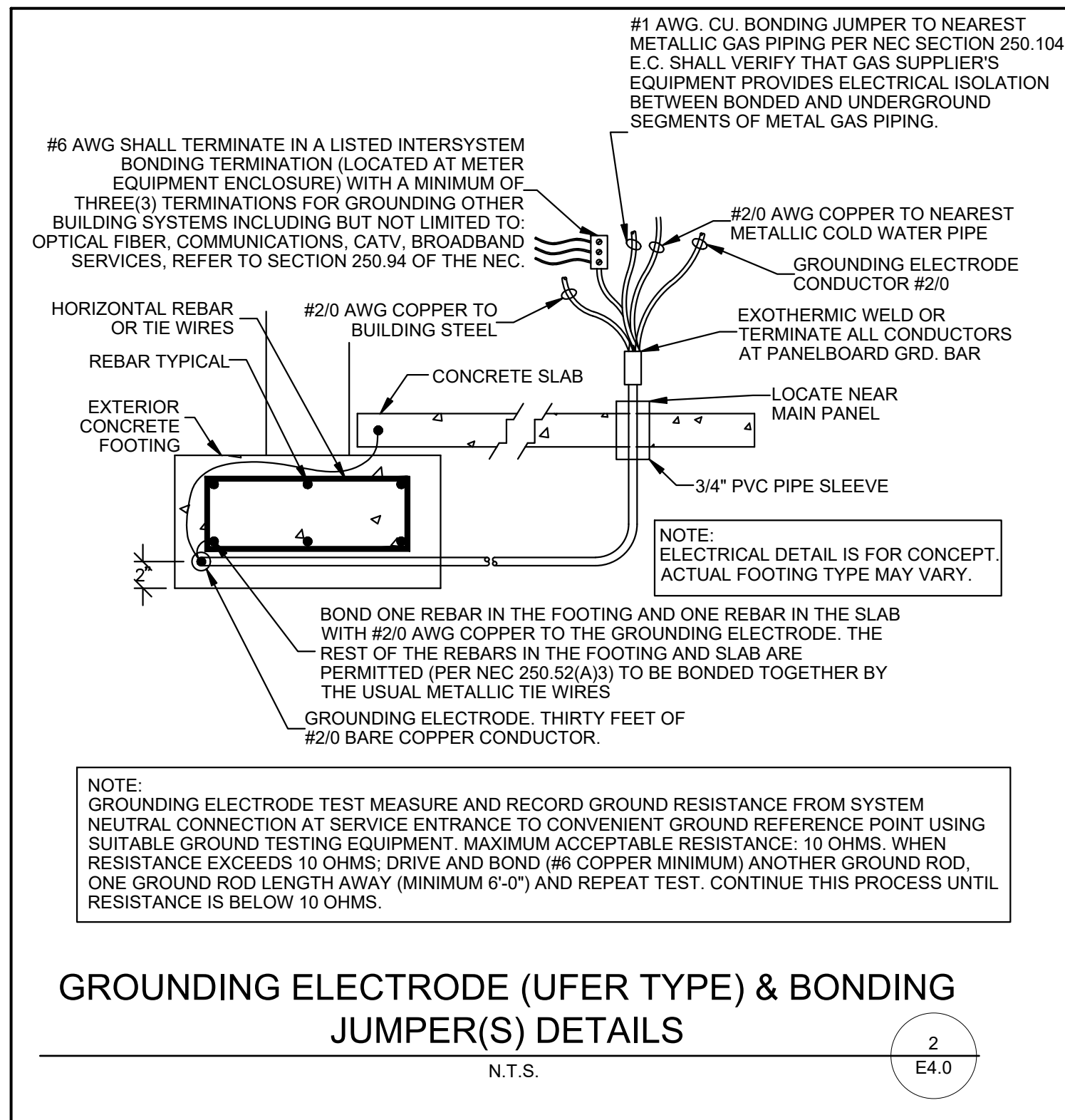
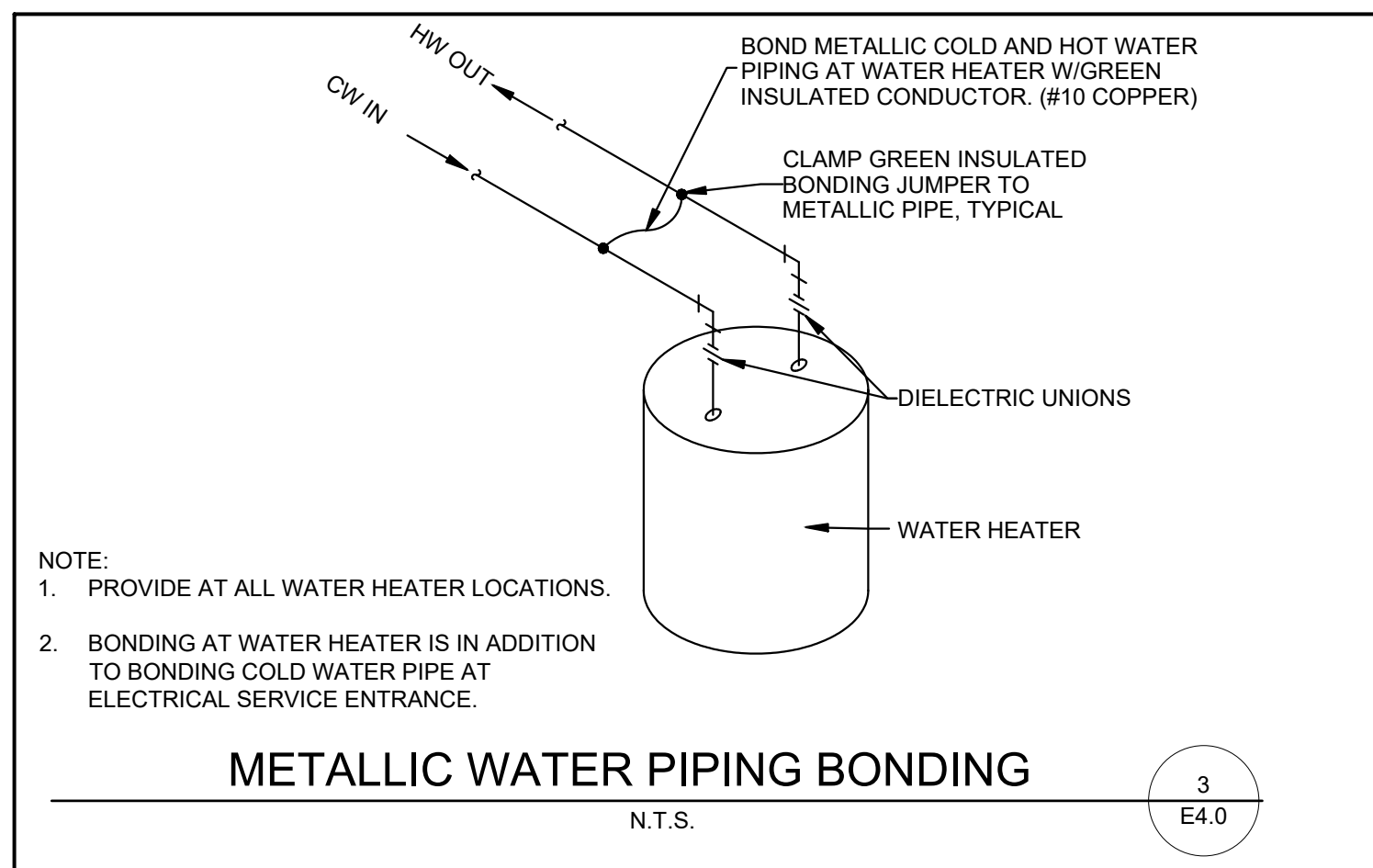
CONSULTANT (ENGINEER):

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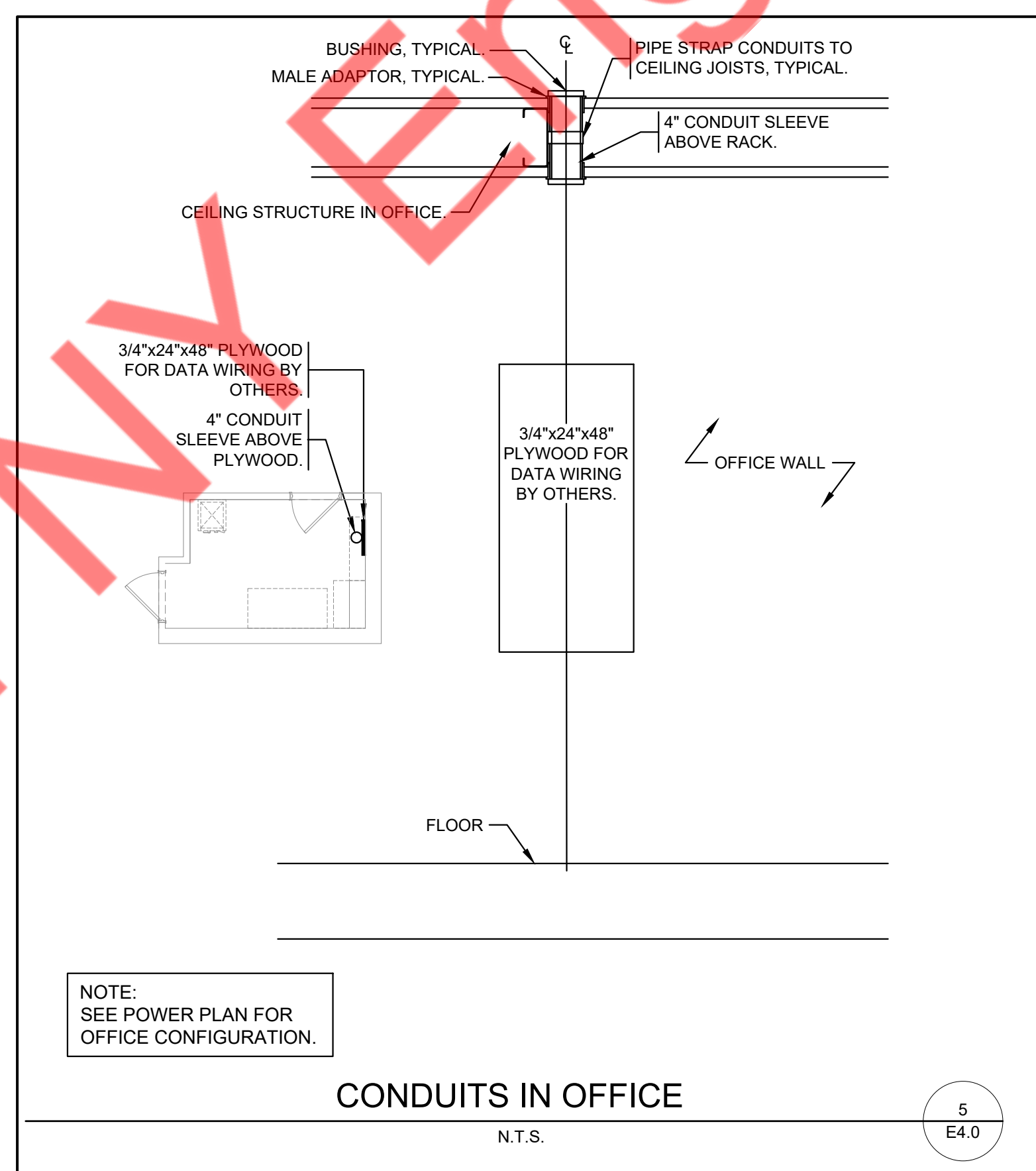
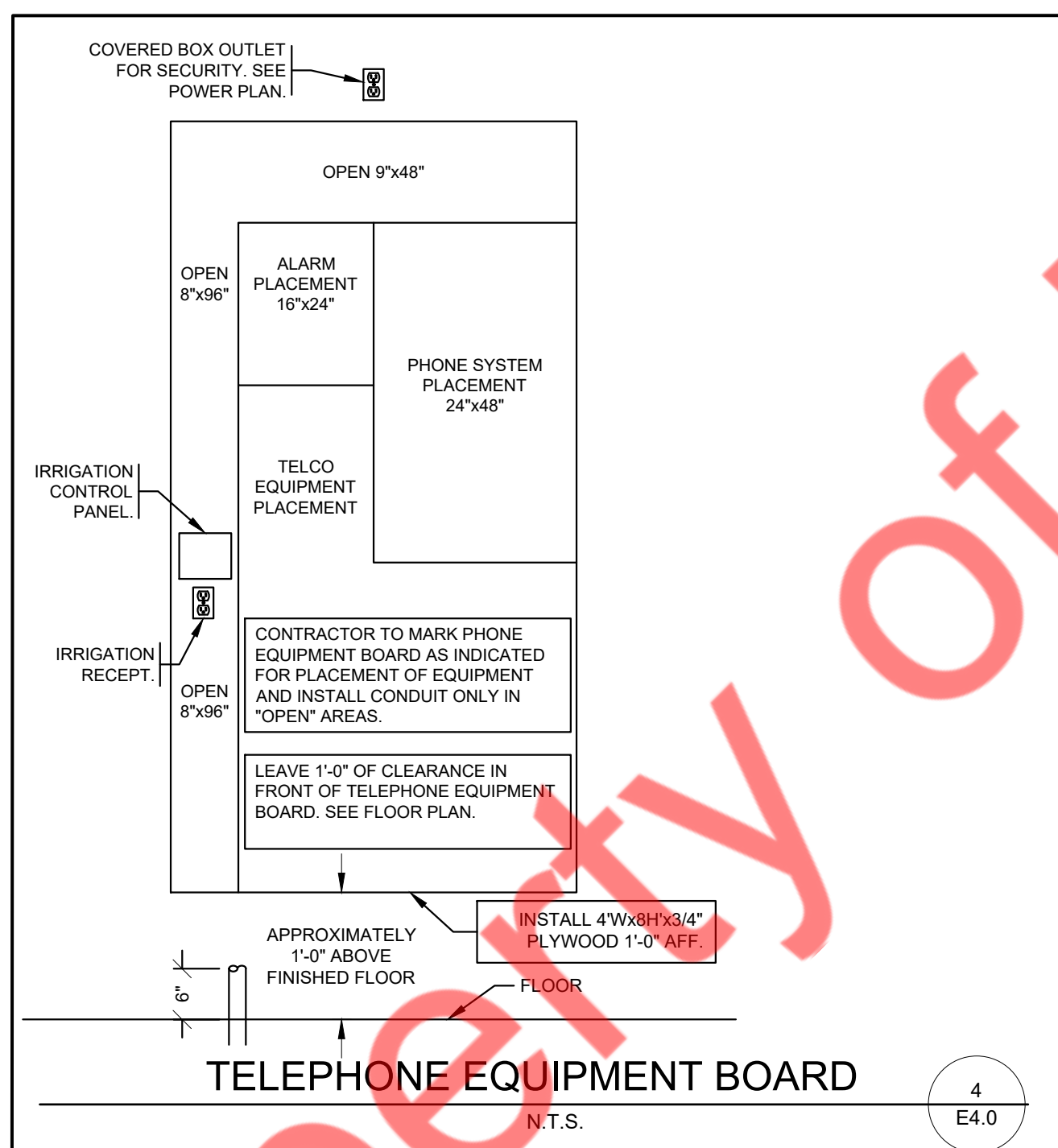


SCOPE OF WORK

- REUSE EXISTING 400 AMP, 120/208V, 3-PH, 4-WIRE SERVICE FOR THE PROJECT SPACE.
- REUSE EXISTING ELECTRICAL PANELS
 PANEL 'A' 400 AMP (MCB), 120/208V, 3PH, 4W (V.I.F.)
 PANEL 'B' 125 AMP (MLO), 120/208V, 3PH, 4W (V.I.F.)
 PANEL 'C' 100 AMP (MLO), 120/208V, 3PH, 4W (V.I.F.)
- PROVIDE ALL REQUIRED RECEPTACLES FOR GENERAL AND EQUIPMENT USE, ALONG WITH ALL ASSOCIATED WIRING AND NEW LIGHTING PROPOSED FOR THE TENANT SPACE.

TELEPHONE & COMPUTER DATA SYSTEMS:

- | |
|--|
| A. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL TELEPHONE AND DATA CONDUITS |
| B. ELECTRICAL CONTRACTOR SHALL VACUUM OUT ALL CONDUITS TO REMOVE WATER. |
| C. ELECTRICAL CONTRACTOR SHALL PROVIDE PULL-STRING IN EACH CONDUIT. |
| D. OWNER SHALL PROVIDE AND INSTALL ALL TELEPHONE AND DATA WIRING. |



GENERAL ELECTRICAL NOTES

1. DRAWINGS ARE DIAGRAMMATIC & ARE NOT TO BE SCALED. SEE THE ARCHITECTURAL PLANS & FIELD VERIFY CONDITIONS FOR DIMENSIONS.

2. ALL ELECTRICAL WORK SHALL COMPLY WITH THE EDITION OF 2019 MISSOURI ELECTRICAL ENERGY, EMERGENCY AND STAFFING CODES (NECA 111 & 2019 NOT AMENDED).

3. ALL WIRING SHALL BE IN CONDUIT, EXCEPT THAT MC-CABLE MAY BE SUBSTITUTED ONLY AS FOLLOWS:

 - MC-CABLE (MAXIMUM CABLE LENGTH OF 10'-0") MAY BE INSTALLED ONLY FOR BRANCH CIRCUIT WIRING TO LIGHT FIXTURES.
 - MC-CABLE (MAXIMUM CABLE LENGTHS SHOWN ON DETAIL 2/E2.0) MAY BE INSTALLED ONLY ABOVE SLAB AND ONLY AT LOCATIONS INDICATED ON SHEET E2.0.

4. FEEDER CONDUIT SHALL BE IMC OR RGS ABOVE GRADE & PVC BELOW GRADE WITH IMC OR RGS ELLS & RISERS. INTERIOR BRANCH CIRCUIT CONDUIT SHALL BE ELECTRICAL METALLIC TUBING. EXTERIOR BRANCH CIRCUIT CONDUIT SHALL BE PVC BELOW GRADE WITH IMC OR RIGID GALVANIZED STEEL CONDUIT CONTINUING ABOVE GRADE. (SPEC 26 05 33)

5. COORDINATE ALL WORK WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATION DOES NOT MEAN "I WAS HERE FIRST." ALL WIRING IN FINISHED SPACES SHALL BE CONCEALED, UNLESS NOTED OTHERWISE.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE & FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE INTENT OF THE PLANS, WHETHER OR NOT EVERY ELEMENT THEREOF IS SPECIFICALLY CALLED OUT.

7. COORDINATE ALL EQUIPMENT ROUGH-IN CONNECTIONS TO REQUIREMENTS.

8. ALL OUTLET BOXES SHALL BE METALLIC. (SPEC 26 05 34)

9. ALL CULKING ON BUILDING PENETRATIONS SHALL BE ELASTOMERIC POLYURETHANE (NO EXCEPTIONS), EQUAL TO "VULKEM" 116. ANY CONTRACTOR WHO USES SILICONE OR ANY OTHER CULKING WILL BE REQUIRED TO REMOVE & REPLACE EQUIPMENT WITH ELASTOMERIC POLYURETHANE.

11. RECEPTACLES INSTALLED IN RESTROOMS SHALL BE GFCI TYPE OR SHALL BE PROTECTED BY A GFI DEVICE.

12. ALL DEVICES SHALL BE IVORY & SHALL BE EQUAL TO THE FOLLOWING:

 - SINGLE POLE SWITCHES –
 - THREE-WAY SWITCHES –
 - DUPLEX RECEPTACLES (SPEC 26 27 26)
 - GFCI DUPLEX RECEPTACLE –
 - ISO. GRD. RECEPTACLES –

13. USE DEVICE PLATES MANUFACTURED BY THE DEVICE MANUFACTURER. (SPEC 26 27 26)

14. FEEDER & BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER, STRANDED, 600V THINWALL INSULATION. EXCEPTION: WIRE SIZES #10 AWG & SMALLER SHALL BE SOLID. (SPEC 26 05 19)

15. CONTRACTOR SHALL PROVIDE A TYPED CIRCUIT DIRECTORY FOR ALL PANELS. (SPEC 26 05 53)

16. CONTRACTOR SHALL PROVIDE A ONE (1) YEAR WARRANTY ON ALL WORK PERFORMED.

17. CONTRACTOR SHALL PROVIDE NEW WORKING LAMPS IN ALL LIGHT FIXTURES AT JOB COMPLETION.

18. CONTRACTOR SHALL COORDINATE WITH & SHALL INCLUDE ALL FEES FOR THE SERVING "ELECTRIC UTILITY CO." TO PROVIDE A SERVICE CONNECTION. CONTRACTOR SHALL ALSO INCLUDE ALL FEES FOR THE "SERVING" PHONE COMPANY* TO INSTALL NO LESS THAN 10' PAIR CABLE TO BUILDING.

19. CONTRACTOR SHALL ARRANGE FOR & INCLUDE ALL PERMITS & FEES FOR HIS SCOPE OF WORK.

20. CONTROL WIRING BY HVAC CONTRACTOR. FINAL CONNECTIONS BY HVAC CONTRACTOR. SEE SHEET F.01.







































21. APPROVED MANUFACTURERS:

A. PANELBOARDS & SAFETY	B. DEVICES:	C. FLOOR BOXES:
SWITCHES (DISCONNECTS):		
SQUARE D	--"HUBBELL"	--"STEEL CITY"
--"GE."	--"LEVITON"	--"APPLETON"
--"SIEMENS"	--"PASS & SEYMOUR"	--"HUBBELL"
--"CUTLER-HAMMER"		

(SPEC 26 24 00) (SPEC 26 27 26) (SPEC 26 05 34)

22. MULTIWIRE BRANCH CIRCUITS WITH A "SHARED NEUTRAL" ARE NOT ALLOWED FOR SINGLE PHASE CIRCUITS. ALL BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUND OR EQUIPPED WITH THE CIRCUIT CONDUCTORS. THIS MEANS THAT ALL CONDUITS MUST HAVE A "GREEN" WIRE INSTALLED IN THEM AND SIZED IN ACCORDANCE WITH NEC TABLE 250.122.

ELECTRICAL SYMBOL LEGEND & ABBREVIATIONS

	SINGLE POLE SWITCH
	TWO POLE SWITCH
	THREE POLE SWITCH
	MOTOR STARTING SWITCH WITH PILOT LIGHT
	WALL MOUNTED OCCUPANCY SENSOR EQUAL TO "PASS & SEYMOUR, PW-301-W"
	WALL MOUNTED OCCUPANCY SENSOR EQUAL TO "PASS & SEYMOUR, PW-302-W" "CONTRACTOR SHALL DISABLE MANUAL SWITCHES PER MANUFACTURERS INSTRUCTIONS. SWITCH SHALL BE FULLY AUTOMATIC."
	FAN SPEED SWITCH (SUPPLIED BY HVAC CONTRACTOR / INSTALLED BY ELECTRICAL CONTRACTOR)
	CIRCUIT HOMERUN TO PANEL
	SINGLE RECEPTACLE OUTLET - WALL MOUNTED
	DUPLEX RECEPTACLE OUTLET - WALL MOUNTED
	AC
	G.F.C.I. DUPLEX RECEPTACLE OUTLET - WALL MOUNTED
	AC/GFI
	WALL MOUNTED QUAD RECEPTACLE OUTLET
	SPECIAL PURPOSE RECEPTACLE - WALL MOUNTED (SEE EQUIPMENT SCHEDULE OR NOTES)
	DUPLEX RECEPTACLE - FLOOR MOUNTED
	ISOLATED GROUND DUPLEX RECEPTABLES: DEVICES AND COVERPLATE SHALL BE ORANGE
	R
	R
	QUADPLEX RECEPTACLE (TWO DUPLEX RECEPTABLES IN ONE 2-GANG BOX UNDER A SINGLE COVERPLATE)
	R
	JUNCTION BOX
	TELEPHONE OUTLET - WALL MOUNTED
	DATA OUTLET - WALL MOUNTED
	TELEPHONE OUTLET FLOOR BOX.
	4" SQUARE STEEL BOX MOUNTED FLUSH ON FLOOR W/QUADPLEX RECEPTACLE (SEE ABOVE RECEPTACLE DESCRIPTION).
	4" SQUARE STEEL BOX MOUNTED FLUSH ON FLOOR W/QUADPLEX ISOLATED GROUND RECEPTACLE (SEE ABOVE ISOLATED GROUND RECEPTACLE DESCRIPTION).
	R
	2" x 4" RECTANGULAR STEEL BOX MOUNTED FLUSH ON FLOOR W/DUPLEX RECEPTACLE (SEE ABOVE RECEPTACLE DESCRIPTION).
	M
	DISCONNECT SWITCH (FRAME/POLES/FUSE-IF REQUIRED)
	D
	D
	EM
	C
	OS
	RO
	L

AC	LOCATED ABOVE COUNTER	RTU	PACKAGED ROOFTOP UNIT	UPO	UN-POWERED OUTLET
AF	ABOVE FINISHED FLOOR	IMC	INTERMEDIATE METALLIC TUBING	TS	TIME SWITCH
BCU	BLOWER COIL UNIT	LC	LIGHTING CONTRACTOR	W	WALL OUTLET (46" AFF SEE MOUNTING HEIGHTS)
CDU	CONDENSING UNIT	M	MOTOR STARTING	WIP	WALL PIERCE (SEE ENCLOSURE)
EX	EXHAUST	RED	RED IN COLOR DEVICES & COVERPLATE	X	EXPLOSION PROOF ASSEMBLY
FURN	ELECTRIC FURNACE	MP	MOTOR STARTING W/PILOT LIGHT	G	GRD./FAULT CIRCUIT INTERRUPT
GA	GA FURNACE	NL	NIGHT LIGHT	EMT	ELECTRICAL MOUNTING
AHU	AIR HANDLER	PH	PHOTOELECTRIC	CM	CILING MOUNTED
PP	PLAT PLUMBING UNIT	RES	RESISTOR GALVANIZED STEEL		
RF	ROOF/RAMP				

PROFESSIONAL SEAL:

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CONTRACTOR'S NOTES:

WRITTEN DIMENSIONS HOLD PREFERENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS. THE CONTRACTORS MUST VISIT JOB SITE TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE SUBMITTING BIDS. REPORT DISCREPANCIES OF ANY CONDITIONS WHICH MAY INTERFERE WITH THE PROPER EXECUTION OF THE CONTRACT TO THE TENANT'S REPRESENTATIVE. REPORT DISCREPANCIES DURING BIDDING PROCESS AND BEFORE START OF CONSTRUCTION. CHANGE ORDERS WILL BE REQUIRED FOR ANY CHANGES ARISING FROM THE FIELD CONDITIONS OR CONFLICTS BETWEEN THE PLANS AND THE EXISTING CONDITIONS.

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LOCATION:

PROJECT INFORMATION

DATE: 11/24/2025

PROJECT NUMBER:13775-25

AREA: 9,095 SF

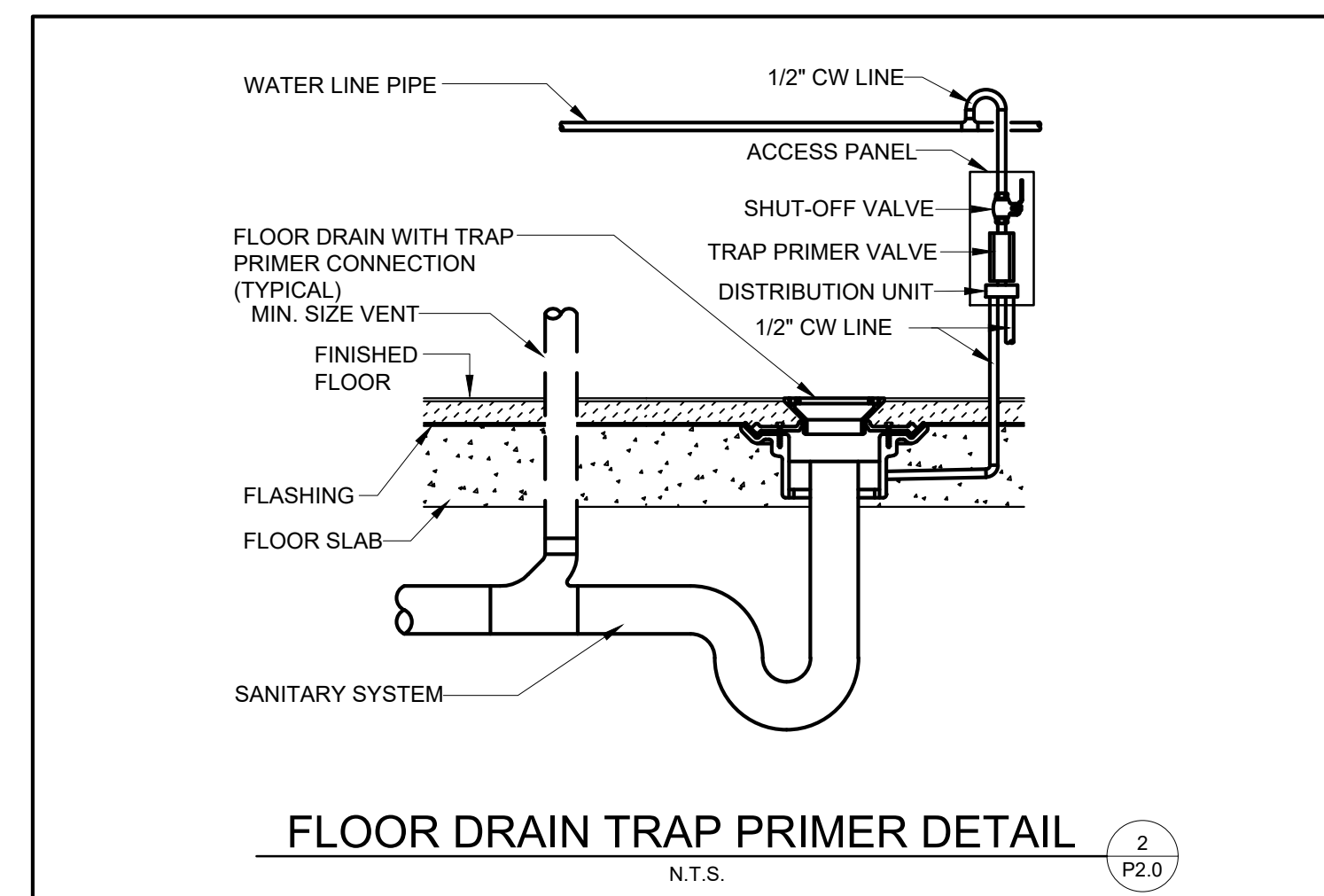
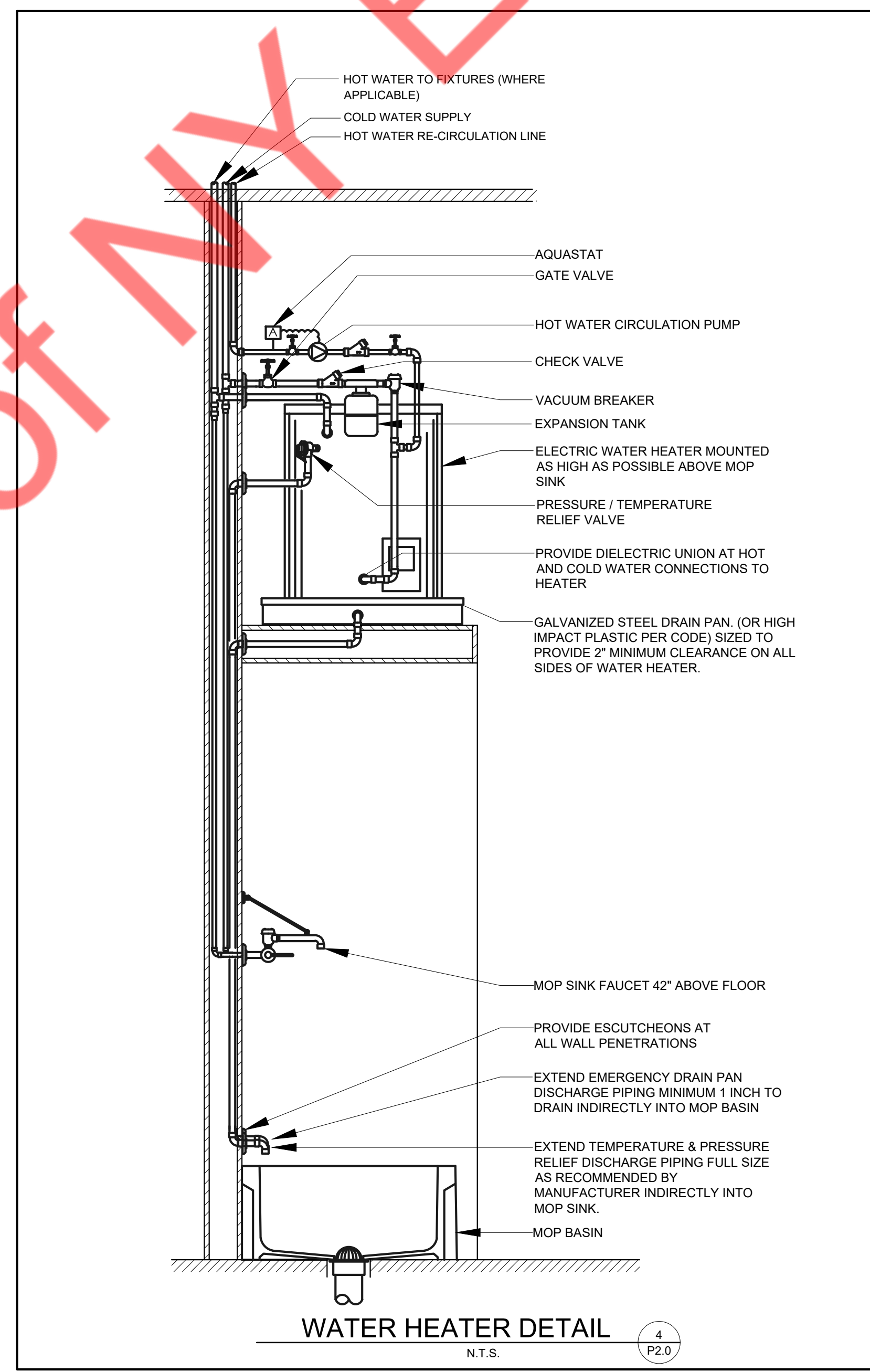
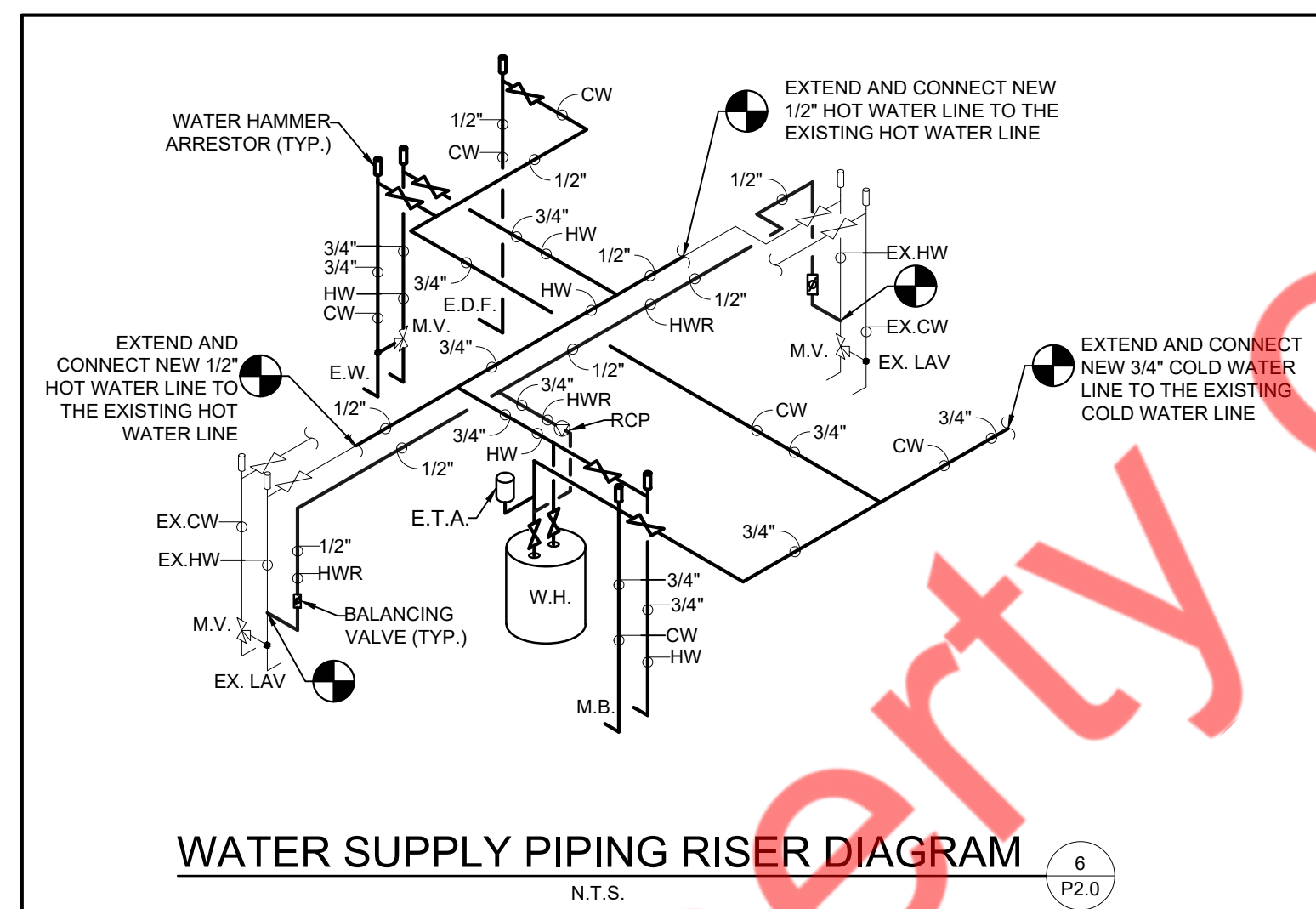
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