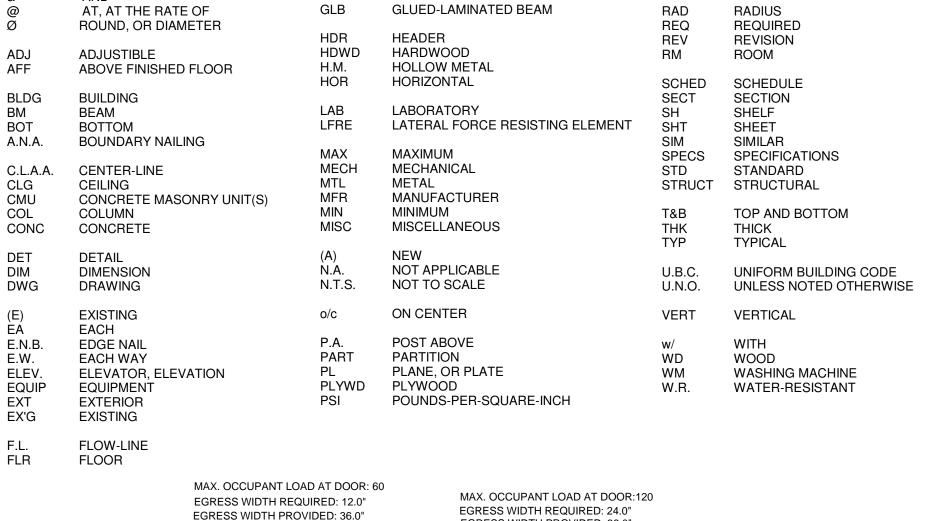
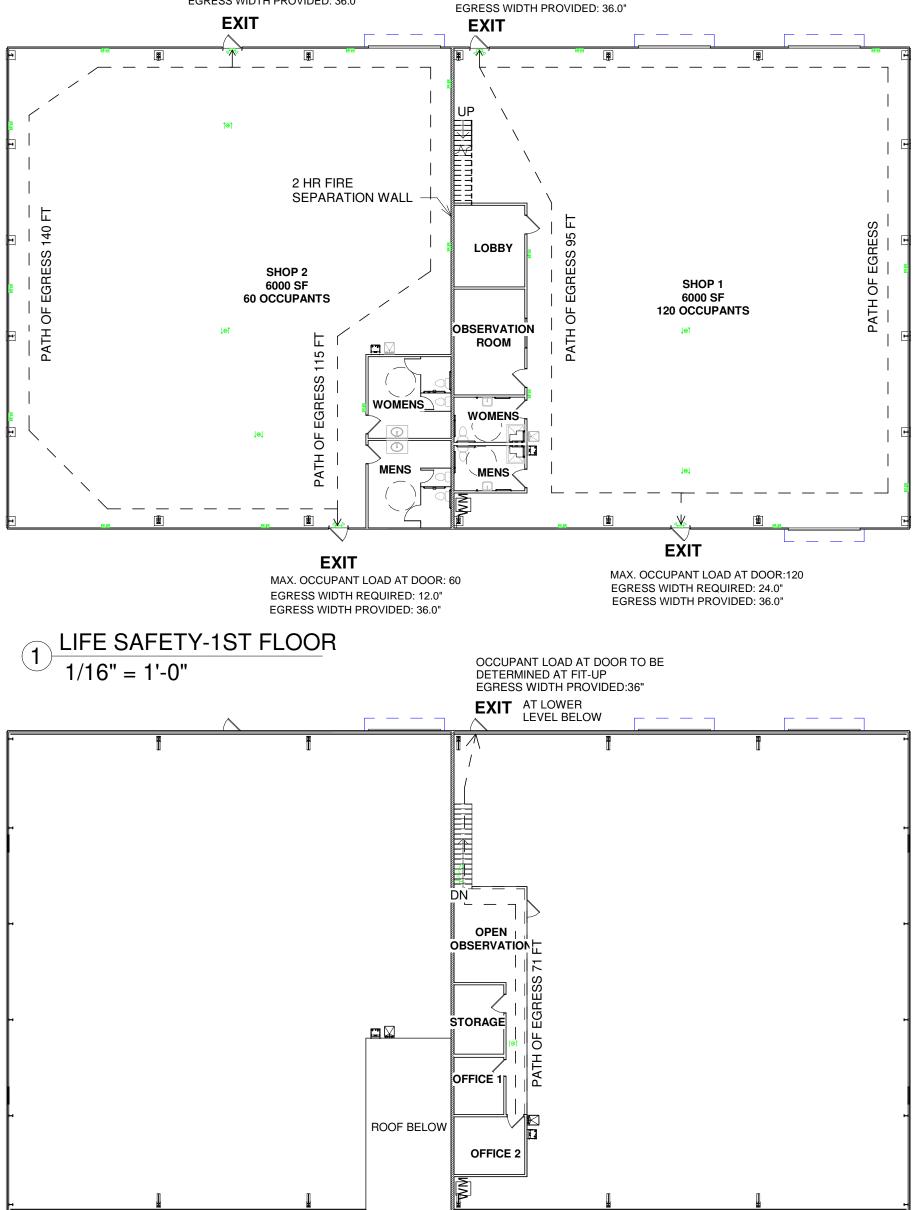
# **ABBREVIATIONS**



GLASS

GL



2 LIFE SAFETY-2ND FLOOR <sup>/</sup> 1/16" = 1'-0"

## OCCUPANT LOAD CALCULATION:

OCCUPANCY	AREA(IN SQ. FT.)
A-3	6000
В	6000

OCCUPANT LOAD FACTOR (PER TABLE 1004.1.2) 50 GROSS (EXERCISE ROOMS WITH EQUIPMENT) 100 GROSS (BUSINESS AREAS) TOTAL DESIGN OCCUPANT LOAD:

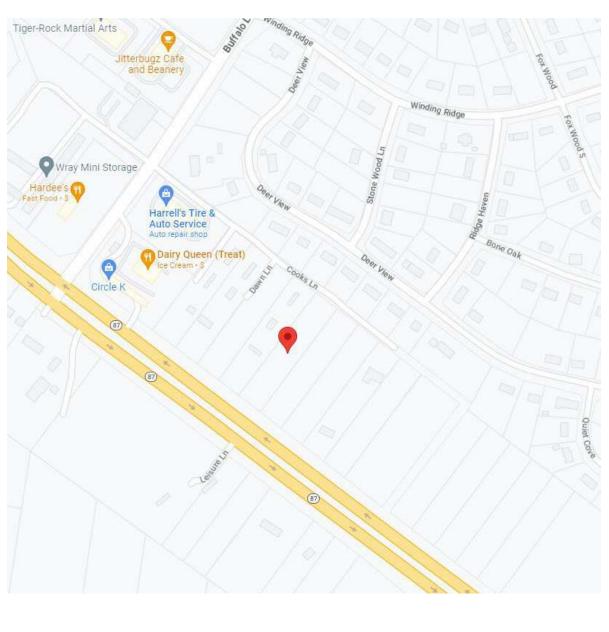
OCCUPANT LOAD 120 180

### LIFE SAFETY LEGEND

EXIT TRAVEL DISTANCE & TIME	Length Time sec
EMERGENCY EXIT LED LIGHT c/w BATTERY PACK	
EMERGENCY LIGHT	9 19
2 HR RATED WALL	(//////////////////////////////////////
PATH OF EGRESS -	>

# PHALANX CROSSFIT

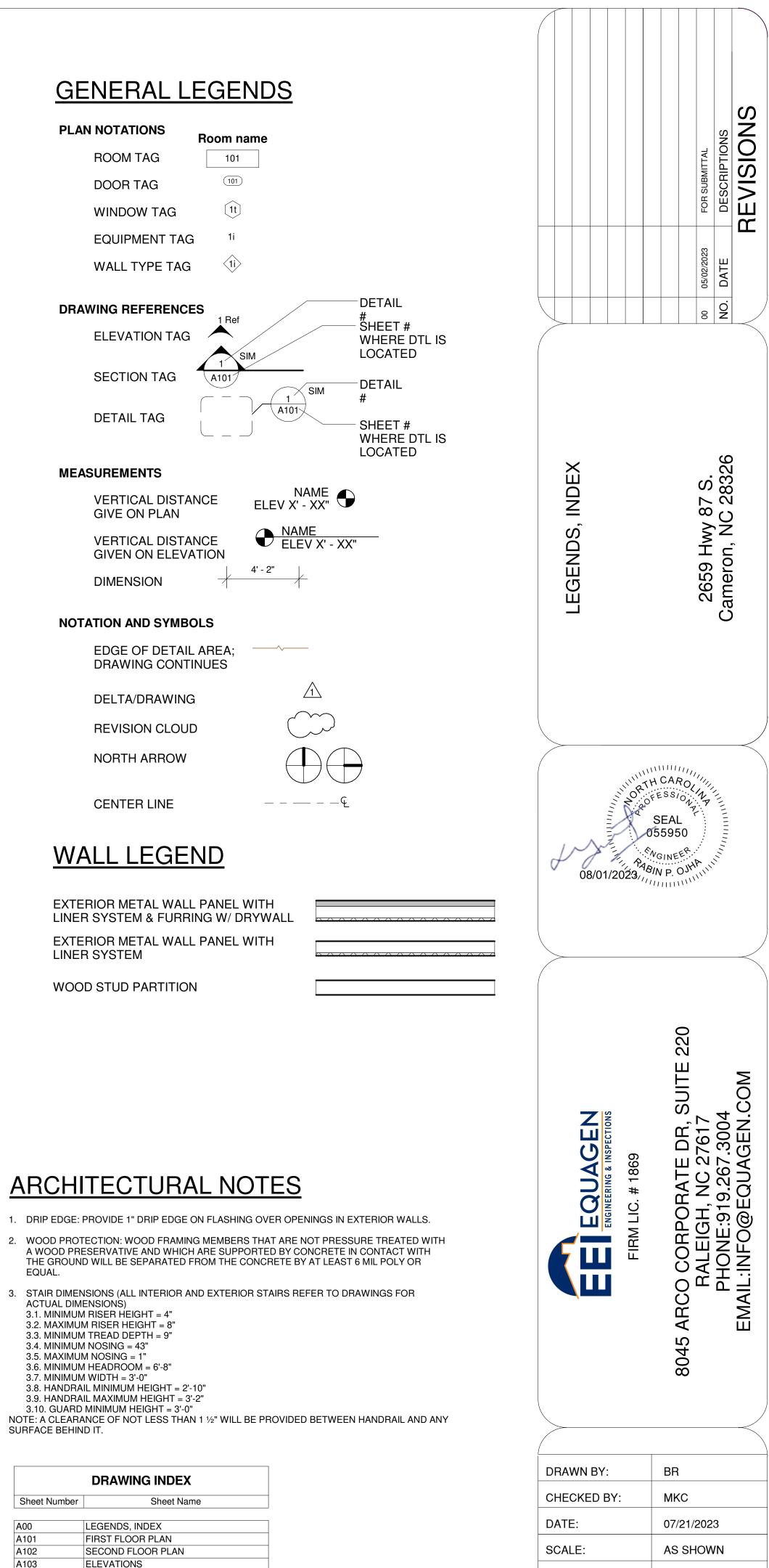
# 2659 Hwy 87 S. Cameron, NC 28326

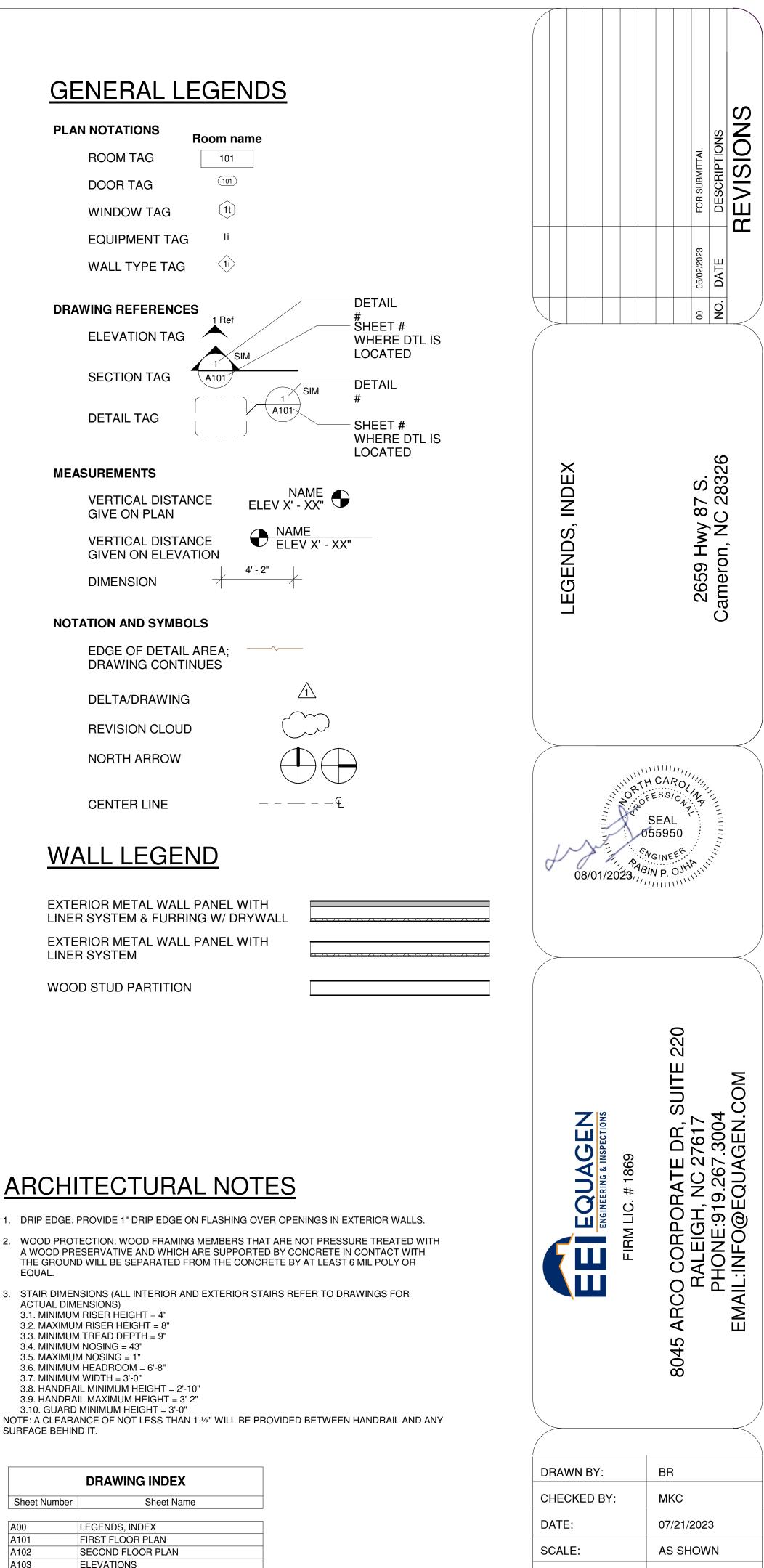


# VICINITY MAP

# **GENERAL NOTES**

- PERMIT DRAWINGS DO NOT INDICATE OR DESCRIBE THE COMPLETE WORK REQUIRED FOR PERFORMANCE AND COMPLETION OF THE REQUIREMENTS OF CONSTRUCTION.
- 2. FACTORY AND CONTRACTOR TO VERIFY AND BECOME FAMILIAR WITH ALL SITE CONDITIONS AND DIMENSIONS. ANY DISCREPANCIES THAT CONFLICT WITH DESIGN DOCUMENTS, AND WOULD REQUIRE DESIGN MODIFICATIONS, WILL BE COORDINATED WITH THE ARCHITECT, IF NECESSARY.
- 3. ALL CONSTRUCTION WILL COMPLY WITH ALL CURRENT APPLICABLE BUILDING CODE(S) FOR THE AGENCY HAVING JURISDICTION, INCLUDING ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
- 4. THE CONTRACTOR AND FACTORY WILL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES REQUIRED FOR SAFE EXECUTION AND COMPLETION OF WORK, INCLUDING INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
- 5. THE CONTRACTOR WILL COORDINATE AND COOPERATE WITH THE WORK OF ALL TRADES INVOLVED, INCLUDING ANY REQUIRED INSPECTIONS BY AGENCIES HAVING JURISDICTION.
- 6. THE CONTRACTOR WILL MAINTAIN THE SITE IN A CLEAN CONDITION AT ALL TIMES, AND REMOVE CONSTRUCTION DEBRIS AS OFTEN AS NECESSARY OR AS DIRECTED BY LOCAL AUTHORITIES.
- 7. THE CONTRACTOR WILL PROVIDE NECESSARY PROTECTION OF HIS WORK AND ADJACENT AREA. THIS INCLUDES NOISE AND DUST CONTROL.
- 8. THE BUILDING PERMIT AND ANY APPLICABLE IMPACT FEES WILL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.
- 9. TYPICAL INTERIOR WALL CONSTRUCTION TO BE 2 X 4 WOOD STUDS WITH 1/2" GYP BD ON EACH SIDE OF STUD. PROVIDE SOUND ATTENUATION BATTS IN ALL INTERIOR RESTROOM WALLS, AND OTHER LOCATIONS IF REQUIRED BY OWNER.
- 10. PROVIDE BLOCKING IN WALLS AND CEILINGS FOR ANTICIPATED LOCATIONS OF HEAVY LIGHT FIXTURES, HOOKS, TOWEL BARS, ETC.
- 11. CONTRACTOR WILL PROVIDE LOCATION AND TAP INTO ALL UTILITIES PER CITY REQUIREMENTS.
- 12. CONVENTIONAL DETAILS WILL APPLY WHERE NO SPECIAL DETAIL IS PROVIDED.
- 13. PRODUCT SUPPLIERS WILL FIELD MEASURE AREA OF WORK, AND SUBMIT SHOP DRAWINGS TO CONTRACTOR PRIOR TO CONSTRUCTION AND INSTALLATION. CONTRACTOR TO PROVIDE SHOP DRAWINGS TO ARCHITECT FOR REVIEW, IF NECESSARY.
- 14. ALL PLUMBING SUPPLY LINES IN EXTERIOR WALLS TO BE FULLY INSULATED.
- 15. PROVIDE SMOKE DETECTORS PER LOCAL CODE.
- 16. PROVIDE CLOSED CELL INSULATION WITHIN STUDS ALONG EXTERIOR WALLS.
- 17. PROVIDE A 1/2" GAP ON GYP BD BORDER (TOP, BOTTOM AND SIDES) AND FILL WITH ACOUSTICAL SEALANT TO PREVENT TRANSFER OF SOUND AND VIBRATION TO ADJACENT SUITES.
- 18. ANY PENETRATIONS OF FIRE RATED ASSEMBLIES WILL BE FIRE-BLOCKED AND SEALED PER APPROVED UL ASSEMBLIES.
- 19. THE CONTRACTOR WILL COORDINATE ALL MILLWORK WITH FURNITURE, EQUIPMENT, LIGHTING. AN, ELECTRICAL, AND OTHER SURROUNDINGS.
- 20. ANY DAMAGE TO THE BUILDING DURING THE CONSTRUCTION IS TO BE REPORTED TO THE OWNER IMMEDIATELY.
- 21. ALL SHIPPING CONTAINERS USED WILL MEET THE CRITERIA FOR STRUCTURAL BUILDING MATERIALS DESCRIBED IN AC462 FROM ICC-ES



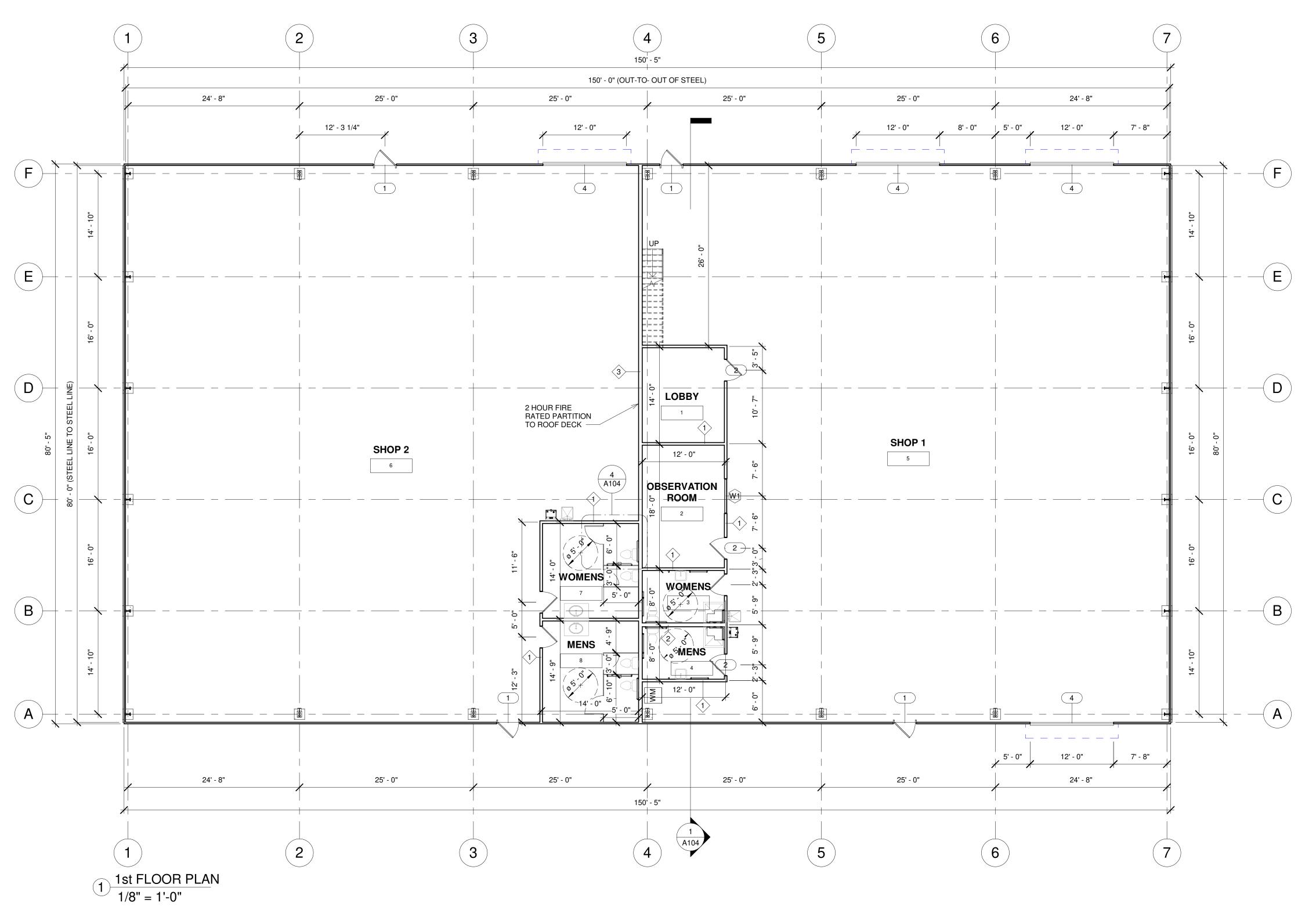


SECTIONS AND TOILET DETAILS

A104

A00

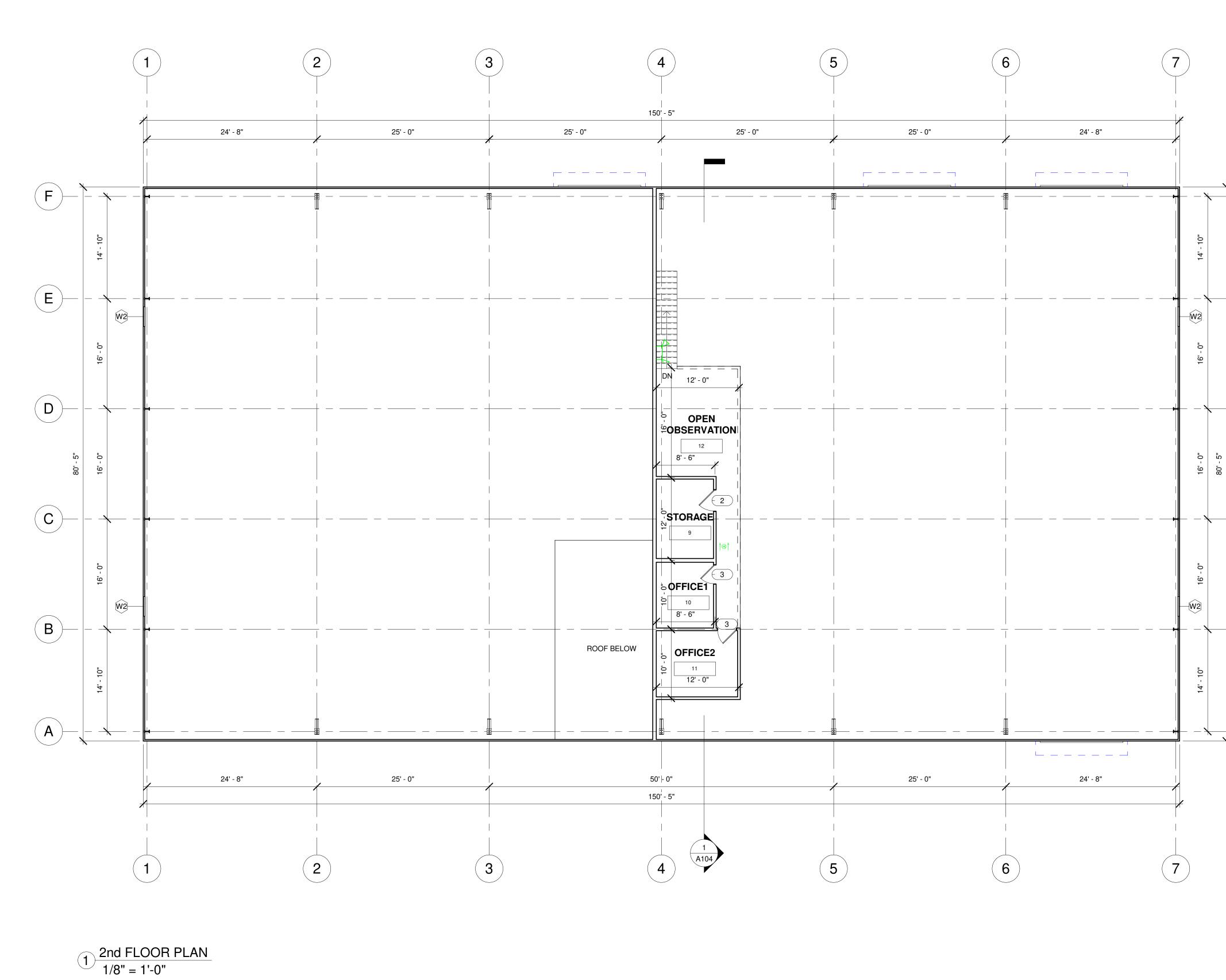
22-4006



I NOTES: ALE DRAWINGS, DIMENSIONS GOVERN. LARGE SCALE OVERN OVER SMALL SCALE DETAILS. OR SHALL VERIFY AND COORDINATE ALL OPENINGS FLOORS, CEILINGS, AND WALLS WITH ALL URAL, STRUCTURAL, MECHANICAL, PLUMBING, AND L DRAWINGS. S TO INTERIOR WALLS ARE FROM INSIDE OF VALL, INSIDE OF FIRE PARTITION AND CENTER OF ERIOR WALLS . S TO DOORS AND WINDOWS ARE TO FACE OR TO E OF FINISHED OPENING.		00 05/02/2023 FOR SUBMITTAL NO. DATE DESCRIPTIONS REVISIONS
	FIRST FLOOR PLAN	2659 Hwy 87 S. Cameron, NC 28326
	08/01/2023, , ,	SEAL SEAL SIN P. OJHA
	FIRM LIC. # 1869	8045 ARCO CORPORATE DR, SUITE 220 RALEIGH, NC 27617 PHONE:919.267.3004 EMAIL:INFO@EQUAGEN.COM
	DRAWN BY: CHECKED BY: DATE: SCALE:	BR MKC 07/21/2023 AS SHOWN
*PAPER SIZE: ARCH D	A101	22-4006

GENERAL PLA

- 1. DO NOT SO DETAILS G
- 2. CONTRACT THROUGH ARCHITECT ELECTRICAL
- 3. DIMENSION EXTERIOR OTHER INT
- 4. DIMENSION CENTERLIN



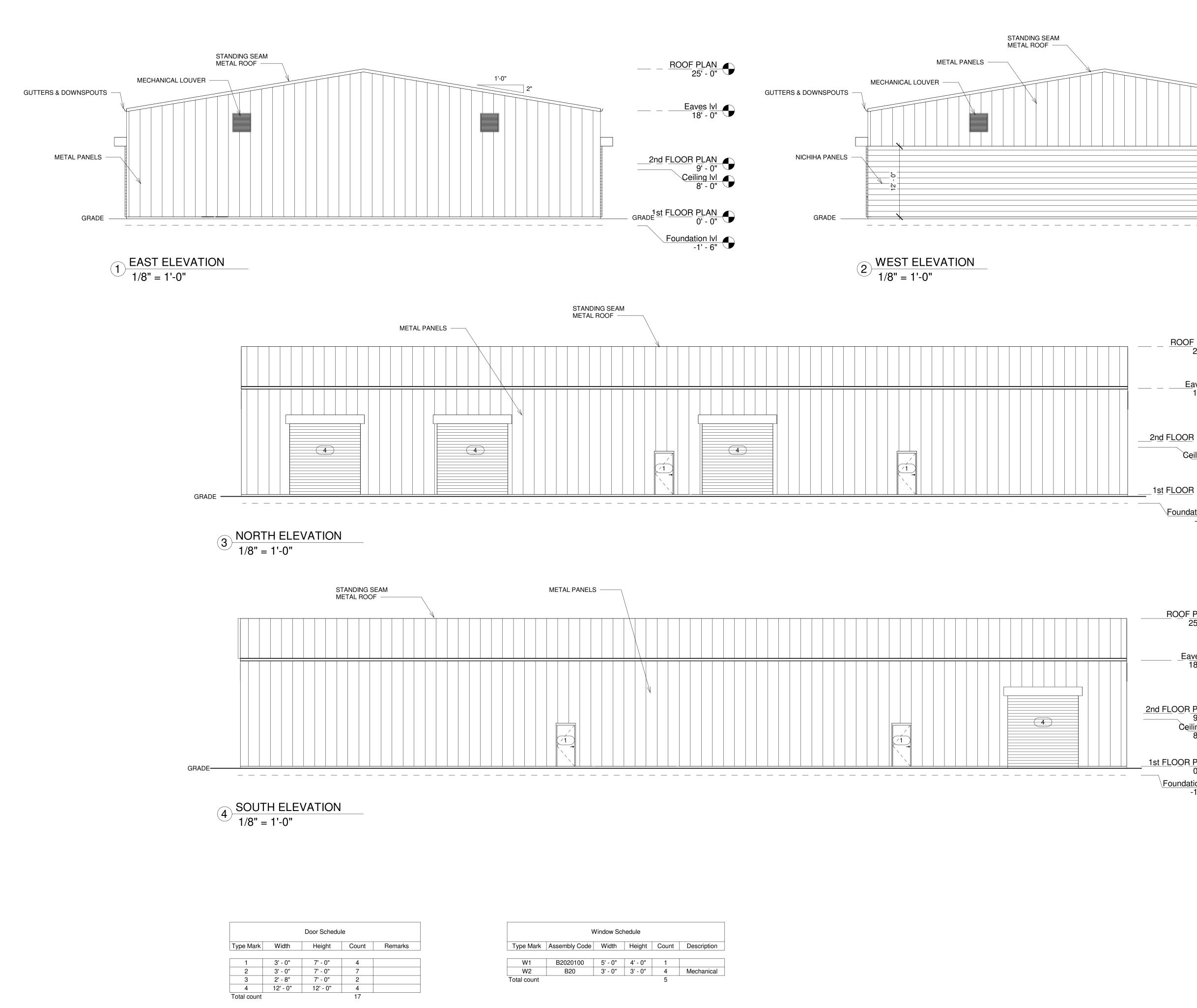
	00 05/02/2023 FOR SUBMITTAL NO. DATE DESCRIPTIONS REVISIONS
SECOND FLOOR PLAN	2659 Hwy 87 S. Cameron, NC 28326
08/01/2023, , ,	SEAL SEAL SVGINEER S/N P. OJHA
FIRM LIC. # 1869	8045 ARCO CORPORATE DR, SUITE 220 RALEIGH, NC 27617 PHONE:919.267.3004 EMAIL:INFO@EQUAGEN.COM
DRAWN BY: CHECKED BY: DATE: SCALE:	BR MKC 07/21/2023 AS SHOWN
	DRAWN BY: CHECKED BY: DATE:

F

E

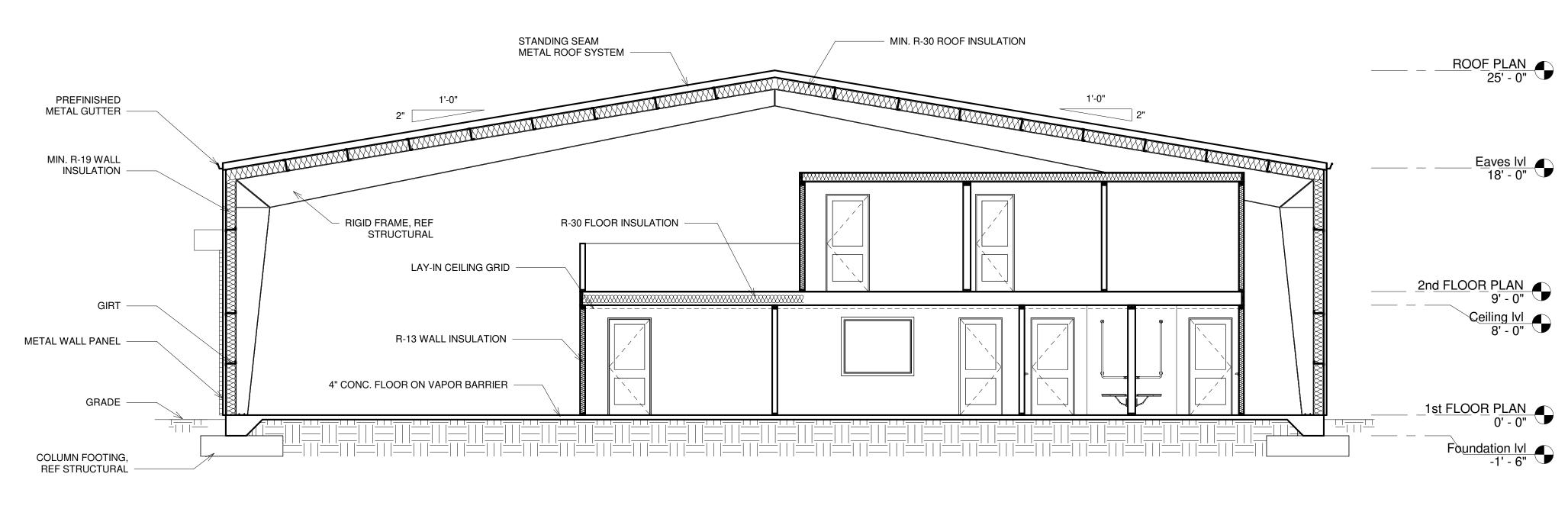
- **D** 

-**C** 

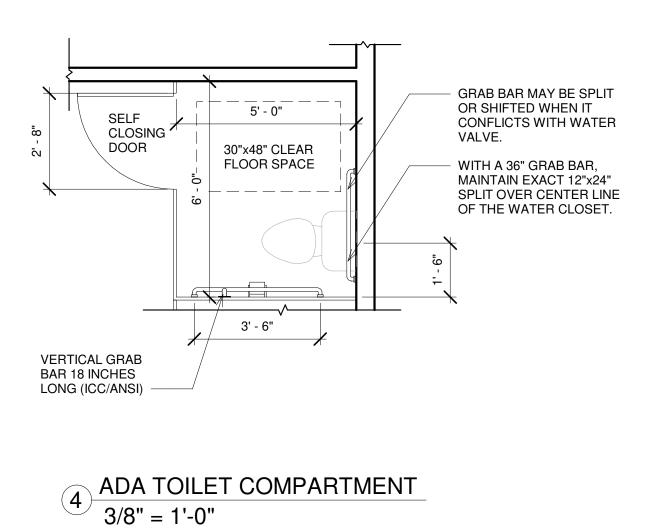


v	Vindow Sch	nedule		
Assembly Code	Width	Height	Count	Description
				-
B2020100	5' - 0"	4' - 0"	1	
B20	3' - 0"	3' - 0"	4	Mechanical
			5	

	$\frac{\text{ROOF PLAN}}{25' - 0"} \bullet$ $\frac{\text{Eaves Ivl}}{18' - 0"} \bullet$ $\frac{2\text{nd FLOOR PLAN}}{9' - 0"} \bullet$ $\frac{1 \text{st FLOOR PLAN}}{0' - 0"} \bullet$		00 05/02/2023 FOR SUBMITTAL NO. DATE DESCRIPTIONS REVISIONS
$-\frac{ROOF PLAN}{25' - 0''}  \textcircled$	0' - 0" Foundation Ivl -1' - 6"	ELEVATIONS	2659 Hwy 87 S. Cameron, NC 28326
2nd FLOOR PLAN 9' - 0" Ceiling IVI 8' - 0" 1st FLOOR PLAN 0' - 0" Foundation IVI -1' - 6"		08/01/2023,,,	SEAL SEAL SSION P. SVGINEER S/N P. OJHA
Eaves IVI			
$ \begin{array}{c}                                     $		FIRM LIC. # 1869	8045 ARCO CORPORATE DR, SUITE 220 RALEIGH, NC 27617 PHONE:919.267.3004 EMAIL:INFO@EQUAGEN.COM
		DRAWN BY: CHECKED BY: DATE: SCALE:	BR MKC 07/21/2023 AS SHOWN
	*PAPER SIZE: ARCH D	A103	22-4006



1 SECTION AT 1-1 3/16" = 1'-0"



PAPER TOWEL DISPENSER FIRE EXTINGUISHERS \* A.F.F. = ABOVE FINISH FLOOR

SOAP DISPENSERS

HAND DRYERS

BOTTOM OF APRON KNEE CLEARANCE TOE CLEARANCE TO WALL

BOTTOM OF REFLECTIVE SURFACE

CONTROLS FOR FLUSH VALVES

GRAB BARS FOR WATER CLOSETS

LAVATORY MIRRORS

COUNTERTOP OR RIM

<u>FIXTURES</u>

WATER CLOSETS

LAVATORIES

TOP OF SEAT

ACCESSORIES

TOILET PAPER HOLDER

DISPENSERS, RECEPTACLES

TOP OF REFLECTING SURFACE

AND CONTROLS

74" MIN. A.F.F.

40" MAX. A.F.F.

15" MIN. A.F.F.

38"- 48" A.F.F.

5'-0" MAX. TO TOP

19" A.F.F. TO CENTER LINE

38"- 48" A.F.F. TO TOWEL

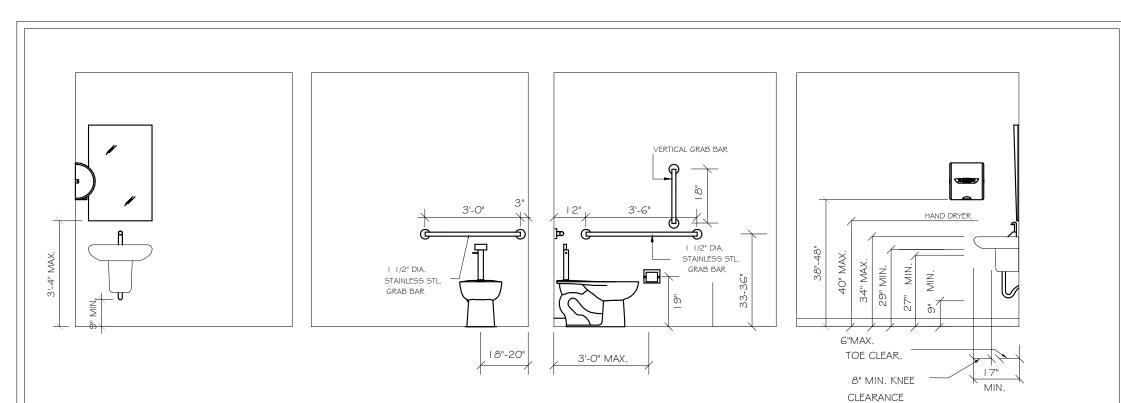
38"- 48" A.F.F. TO CONTROL SWITCH

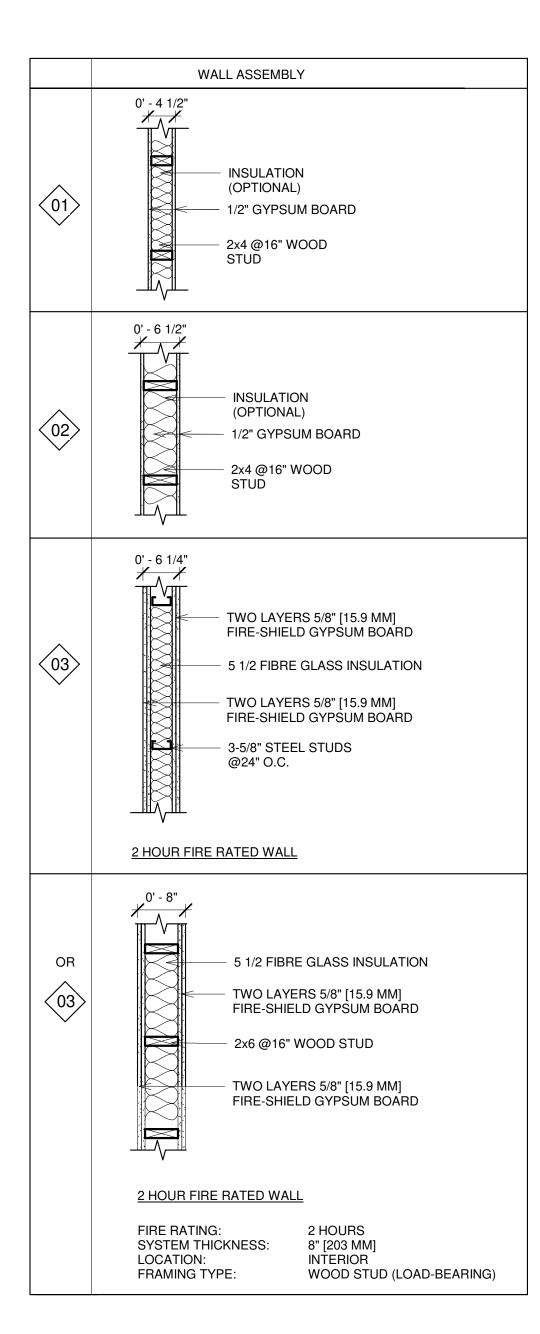
8" MIN. TO ANY OBSTRUCTION 9" H X 6" D

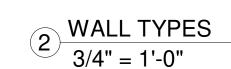
34" MAX. A.F.F. 29" MIN. A.F.F.

17" - 19" A.F.F. 44" MAX. A.F.F. 33" - 36" A.F.F. TO CENTER LINE

ADA MOUNTING HEIGHT REQUIREMENTS FOR TOILET ROOMS









# GENERAL NOTES

#### **DESIGN DATA:** APPLICABLE CODE: NCBC 2018, ACI 318-19

DESIGN LOADS: PER BUILDING SUPPLIER

SCOPE OF WORK STATEMENT: DESIGN OF CONCRETE FOUNDATIONS ONLY. STEEL DESIGN INCLUDING STEEL ANCHORS BY OTHERS.

#### GENERAL NOTES:

- 1. CONTRACTOR TO ASSUME FULL RESPONSIBILITY FOR ABIDING TO ALL APPLICABLE BUILDING CODES, LOCAL CITY ORDINANCES, ZONING REQUIREMENTS, AND LICENSING/PERMIT REQUIREMENTS. CONTRACTOR IS FULLY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES INCLUDING WITHOUT LIMITATION TO DEMOLITION, EXCAVATION AND ERECTION PROCEDURES.
- 2. THE CONTRACTOR SHALL EXAMINE THE CONSTRICTION DOCUMENTS AND NOTIFY THE PROJECT ENGINEER & ARCHITECT OF ANY DISCREPANCIES, ERRORS, OR OMISSIONS SHE/HE MAY FIND BEFORE PROCEEDING WITH THE WORK.
- 3. NOTIFY THE PROJECT ENGINEER OF ANY DESIGN CHANGES PROPOSED BY OWNER OR THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION. SUCH CHANGES AFFECTING ROOM ADDITION DESIGN MAY ALSO AFFECT STRUCTURAL DESIGN.
- 4. ANY SUBCONTRACTOR WHICH AGREES TO CONSTRUCT THE PROJECT PURSUANT TO THESE PLANS FULLY ASSUMES THE RISK OF ALL ERRORS AND OMISSIONS WHICH SHOULD HAVE BEEN DETECTED BY A CAREFUL REVIEW BY A KNOWLEDGEABLE LICENSED CONTRACTOR, THAT WHICH FOR ANY REASON WERE NOT RESOLVED DURING THE BIDDING OR NEGOTIATION PROCESS. FURTHER, THE CONTRACTOR SHALL CAREFULLY REVIEW THESE PLANS AS THE WORK PROGRESSES IN ORDER TO IDENTIFY ANY SIGNIFICANT ERRORS AND OMISSIONS AND TO ASCERTAIN ALL NECESSARY INFORMATION BEFORE PROCEEDING WITH THE AFFECTED WORK, AND ASSUMES THE RISK OF ANY AND ALL LOSS. INCLUDING DELAY, WHICH MAY BE CAUSED OR CONTRIBUTED TO BY THE FAILURE TO ASCERTAIN CORRECT OR NECESSARY INFORMATION IN A TIMELY MANNER.
- 5. ALL TRADES SHALL, AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY THEIR WORK, AND AT THE COMPLETION OF THE WORK SHALL REMOVE ALL RUBBISH FROM AND ABOUT THE JOBSITE AND ALL THEIR TOOLS, SCAFFOLDING AND SURPLUS MATERIALS, AND SHALL LEAVE THE JOB BROOM CLEAN, INCLUDING REMOVING ALL LABELS, STICKERS, PAINT SMEARS, ETC.., FROM LIGHTING FIXTURES, PLUMBING FIXTURES, GLASS SURFACES, FINISH HARDWARE, CABINETS, COUNTER TOPS, ETC.
- 6. EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE NOTED OR SHOWN ON THE PLANS, WORKMANSHIP & MATERIALS SHALL CONFORM, TO THE LATEST EDITION OF THE IBC OR LOCAL CODE.
- 7. THE PLANS SHALL BE REVIEWED FOR DIMENSIONAL & EXISTING SITE CONFORMANCE WITH THE PLANS BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE ARCHITECT & ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
- 8. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD IN CONFORMANCE WITH METAL BUILDING FRAMING DIMENSIONS ; AND ALL QUESTIONS AS TO DIMENSIONS AND FIELD CONDITIONS SHALL BE RESOLVED BEFORE THE AFFECTED WORK PROCEEDS. NO DIMENSIONS SHALL BE OBTAINED BY SCALING THESE PLANS.
- 9. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR DIMENSIONS AND CONDITIONS OF THE JOB.
- 10. THE PRECISE DIMENSIONS AND LOCATIONS OF ALL DOOR, WINDOW AND ROOF OPENINGS SHALL BE DETERMINED FROM DRAWINGS AND OTHER FLOOR, WALL OPENING REQUIRED BY MECHANICAL OR ELECTRICAL SHALL BE VERIFIED FROM SHOP DRAWINGS, EQUIPMENT DATA SHEETS, ETC. AS REQUIRED.
- 11. ITEMS IDENTIFIED BY TRADE NAMES MAY BE SUBSTITUTED BY APPROVED EQUALS.
- 12. NOTES & DETAILS ON DRAWINGS SHALL PRECEDE THESE GENERAL NOTES.

#### FOUNDATION NOTES

#### <u>GENERAL</u>

- 1. SOIL BENEATH FOOTINGS AND SLABS SHALL BE COMPACTED TO RELATIVE COMPACTION MINIMUM. 2. CONTINUOUS FOOTINGS AND GRADE BEAMS SHALL BE EXCAVATED TO THE DEPTH SHOWN ON THE
- DRAWINGS BELOW UNDISTURBED SOIL OR COMPACTED EARTH. 3. SLAB ON GRADE: "THE SLABS SHOULD BE STRUCTURALLY DESIGNED OR THE WEAK AND EXPANSIVE SOILS
- SHOULD BE REMOVED AND REPLACED WITH AT LEAST 24 INCHES OF NON- EXPANSIVE ENGINEERED FILL".
- 4. NO TRENCHES OR EXCAVATIONS FIVE FEET IN DEPTH OR GREATER INTO WHICH A PERSON SHALL BE REQUIRED TO DESCEND SHALL BE MADE WITHOUT PROPER PERMIT.
- 5. THE ANCHOR BOLT DESIGN IS BY THE BUILDING SUPPLIER.
- 6. PROVIDE 3/4" CAMBERS AT ALL EXPOSED CORNERS.

#### <u>CONCRETE</u>

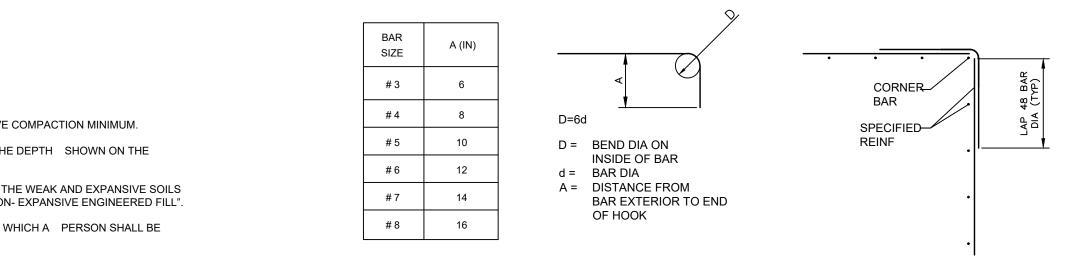
- 1. UNLESS OTHERWISE NOTED ON PLANS, CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.
- 2. FINE & COURSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33, USE 3000 P.S.I. CONC. @ GRADE BEAMS. CEMENT SHALL CONFORM TO A.S.T.M. C-150 (STANDARD BRAND PORTLAND CEMENT) TYPE II (USE TYPE V CEMENT IF NOTED IN SOILS REPORT)
- 3. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN TO STRUCTURAL ENGINEER FOR REVIEW. 5. ADDING CALCIUM CHLORIDE TO CONCRETE OR GROUT IS NOT PERMITTED.
- 6. CONC. SHALL BE KEPT MOIST FOR 10 DAYS FOR PROPER CURING.
- 7. FLOOR FINISHES SHALL BE AS DEFINED IN ACI 302.1R.
- 8. FOR END TO END UNIT DIMENSIONS, REFER TO BUILDING SUPPLIER'S DRAWINGS.
- REINFORCING STEEL

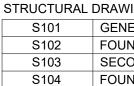
TO PLACEMENT.

- 1. REINFORCING STEEL, #3 AND #4 GRADE 40, #5 AND LARGER GRADE 60 PER A.S.T.M. A615.
- 2. LOW HYDROGEN WELDING RODS SHALL BE USED FOR ALL WELDING OF REINFORCING BARS.
- 3. BARS NOTED AS "CONT" TYPICAL WALL REINFORCING AND VERTICAL COLUMN REINFORCING SHALL HAVE A MINIMUM SPLICE OF 50 BAR DIAMETERS LAP IN MASONRY OR 40 BAR DIAMETERS MINIMUM IN CONCRETE.
- 4. REINFORCING SHALL BE SPLICED ONLY AS SHOWN OR NOTED. OTHER SPLICES SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
- 5. SPLICES IN ADJACENT HORIZONTAL WALL REINFORCING BARS SHALL BE STAGGERED 4 FEET UNLESS
- OTHERWISE NOTED.
- 6. PROVIDE DOWELS IN FOOTINGS AND/OR GRADE BEAMS THE SAME SIZE AND NUMBER AS VERTICAL WALL OR COLUMN REINFORCING. DOWELS SHALL HAVE A MINIMUM PROJECTION EQUAL TO STANDARD LAP SPLICE UNLESS OTHERWISE NOTED.
- 7. ALL REINFORCING, ANCHOR BOLTS, AND OTHER INSERTS SHALL BE SECURED IN PLACE PRIOR TO PLACEMENT OF CONCRETE OR GROUTING OF MASONRY.
- 8. THE CONTRACTOR SHALL SUBMIT REINFORCING SHOP DRAWING TO STRUCTURAL ENGINEER FOR REVIEW PRIOR
- 9. PROVIDE THE FOLLOWING MINIMUM PROTECTIVE COVERING OF CONCRETE, PER ACI 318:

BELOW GRADE (UNFORMED)	3" CLEAR
BELOW GRADE (FORMED)	2" CLEAR
WALLS	1" CLEAR
COLUMNS	1.5" CLEAR
BEAMS AND GIRDERS	1.5" CLEAR
STRUCTURAL SLAB	
(ABOVE GRADE)	1" CLEAR

9. #5 OR LARGER REINFORCING BARS SHALL NOT BE RE-BENT WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.





#### SPECIAL INSPECTION (PER IBC SECTION 1704,1706 & 1707)

1. SPECIAL INSPECTION SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK. SEE PROJECT SPECIFICATIONS FOR SPECIFIC REQUIREMENTS, SPECIAL INSPECTIONS SHALL NOT BE REQUIRED WHEN THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.

ITEMS REQUIRE SPECIAL INSPECTION AS MARKED:

VERIFICATION & INSPECTION	CONTINUOUS	PERIODIC
1. WELDING.		
1a: STRUCTURAL STEEL OR REINFORCING		
2. CONCRETE WHERE CONCRETE STRENGTH OF 3000 PSI		X
OR GREATER IS SPECIFIED.		
3. COMPACTED FILL		X
4. FOUNDATION ANCHOR BOLT		X

#### "CONTRACTOR RESPONSIBILITY:

- EACH CONTRACTOR OR SUB-CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE WIND AND/OR SEISMIC RESISTING SYSTEM THAT IS LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK REQUIRING SPECIAL INSPECTION.
- THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING: 1) ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS; 2) ACKNOWLEDGMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE
- WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL; 3) PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, AND THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS; 4) IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION."

#### STRUCTURAL OBSERVATION NOTES:

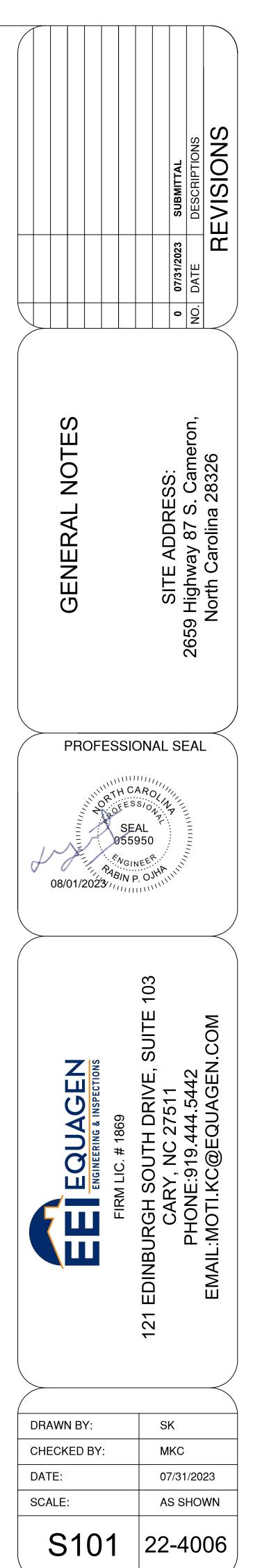
- 1. ALL OBSERVATIONS SHALL BE PERFORMED BY THE ENGINEER OF RECORD (EOR) OR A DESIGNATED REGISTERED DESIGN PROFESSIONAL BY THE EOR. 2. OWNER/CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE EOR'S DESIGNEE IN ADVANCE.
- 3. STRUCTURAL OBSERVATIONS ARE FOR THE GENERAL CONFORMANCE OF THE DRAWINGS. SPECIAL INSPECTION IS STILL REQUIRED.

#### STRUCTURAL OBSERVATIONS

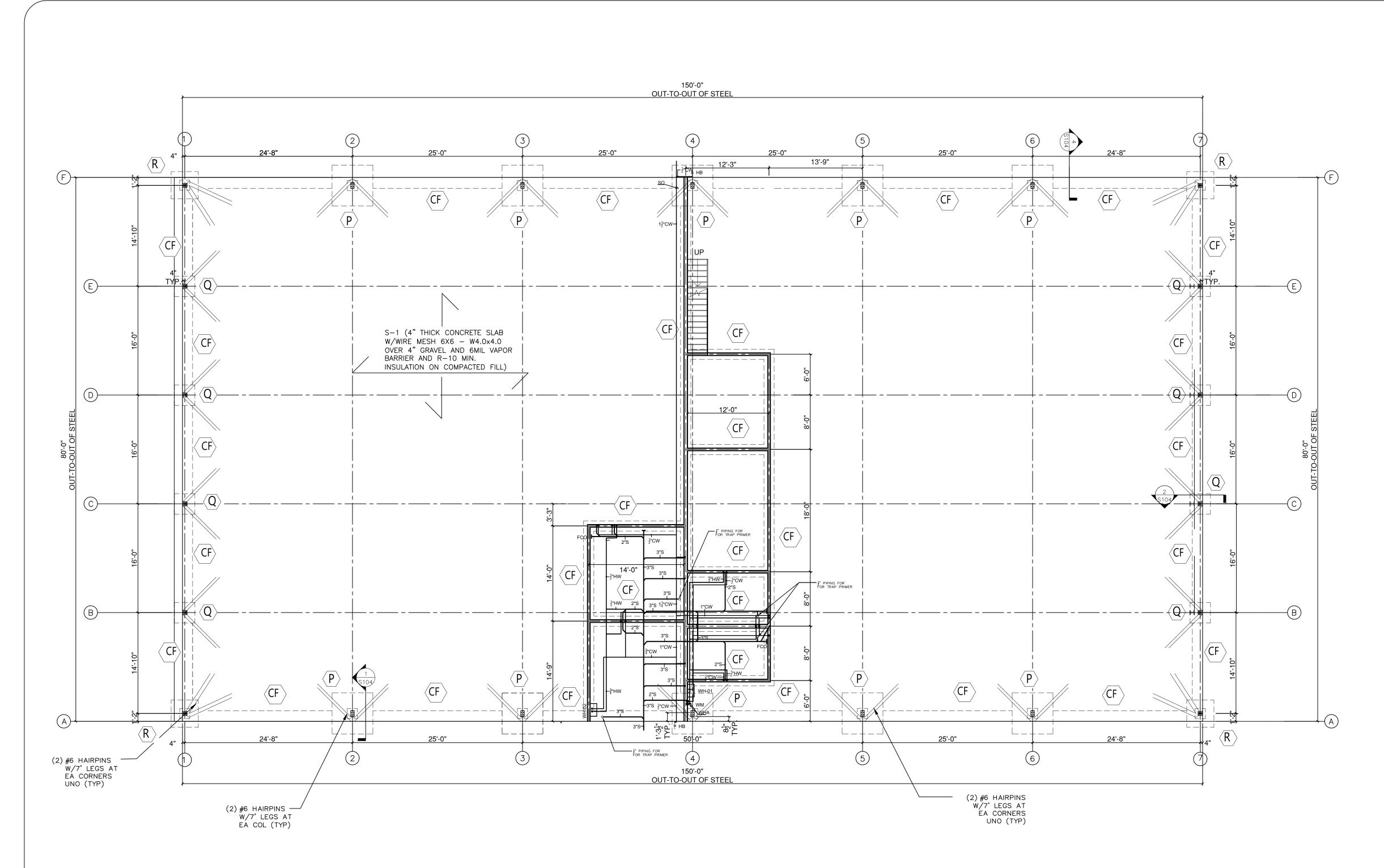
INSPECTORS.

THE ENGINEER OF RECORD, OR ANOTHER ENGINEER DESIGNATED BY THE ENGINEER OF RECORD SHALL PERFORM STRUCTURAL OBSERVATIONS AS DEFINED IN CHAPTER 17 OF THE 2015 INTERNATIONAL BUILDING CODE. OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER'S REPRESENTATIVE, SPECIAL INSPECTOR, AND CONTRACTOR. THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE OWNER A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED. STRUCTURAL OBSERVATIONS ARE IN ADDITION TO, AND NOT A SUBSTITUTE FOR. THE SPECIAL INSPECTIONS INDICATED ON THE STRUCTURAL DRAWINGS AND THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY THE CONTRACTOR. STRUCTURAL OBSERVATIONS WILL BE CONDUCTED AFTER THE ERECTION OF THE STEEL. THE 2015 IBC SECTION 1704.2.1 ALLOWS THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS SPECIAL INSPECTORS FOR THE WORK DESIGNED BY THEM, PROVIDED THEY QUALIFY AS SPECIAL

HESE DRAWINGS AND SPECIFICATIONS
S INSTRUMENT OF SERVICE ARE
ROVIDED FOR THE OWNER OR THE
JILDER, WHEN COMBINED WITH OTHER
ANS AND SPECIFICATIONS TO OBTAIN
JILDING PERMIT ONLY FOR THIS
ROJECT. THEY ARE NOT INTENDED TO,
OR DO THEY, DETAIL ALL CONDITIONS,
ENTIFY ALL MATERIALS REQUIRED TO
OMPLETE THE PROJECT.
E BUILDER ASSUMES RESPONSIBILITY
D SELECT ALL MATERIAL AND ALL
JB-CONTRACTORS AND INSTALLERS
ND TO PROVIDE ENOUGH
FORMATION ABOVE AND BEYOND
IESE DRAWINGS, TO COMPLETE THE
ROJECT IN CONFORMANCE WITH ALL
OVERNING AGENCIES.



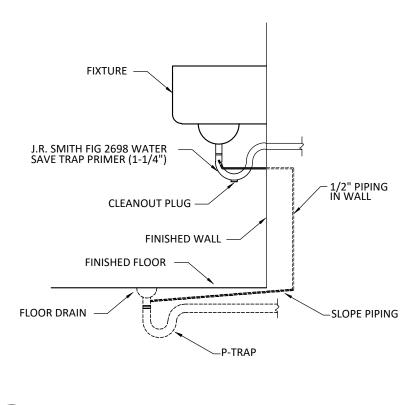
ING INDEX
ERAL NOTES
IDATION AND SLAB PLAN AND SCHEDULE
OND FLOOR PLAN
IDATION SECTIONS & DETAILS



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

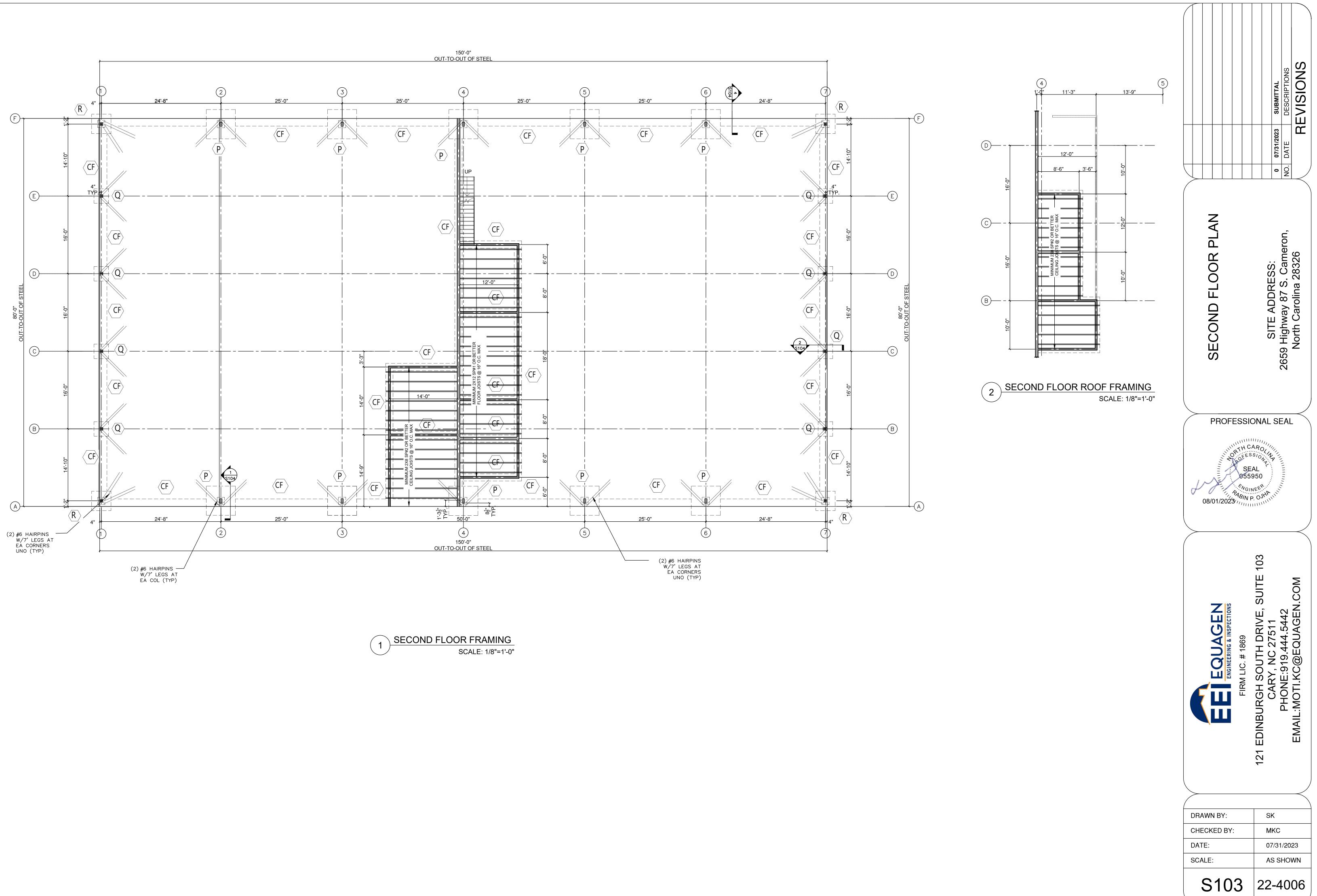
	FOOTING SCHEDULE				
TYPE	LENGTH	WIDTH	DEPTH	REBAR	
Р	6'-0"	6'-0"	1'-6"	(8) #5 EW T&B (SEE S103 FOR PIER DET)	
Q	3'-0"	3'-0"	2'-0"	(4) #5 EW T&B	
R	4'-0"	4'-0"	1'-6"	(5) #5 EW T&B (SEE S103 FOR PIER DET)	
CF	CONT.	1'-6"	1'-6"	(2) #5 BOT LONGITUDINAL, #5 @ 24" O.C. BOT TRANSV.	

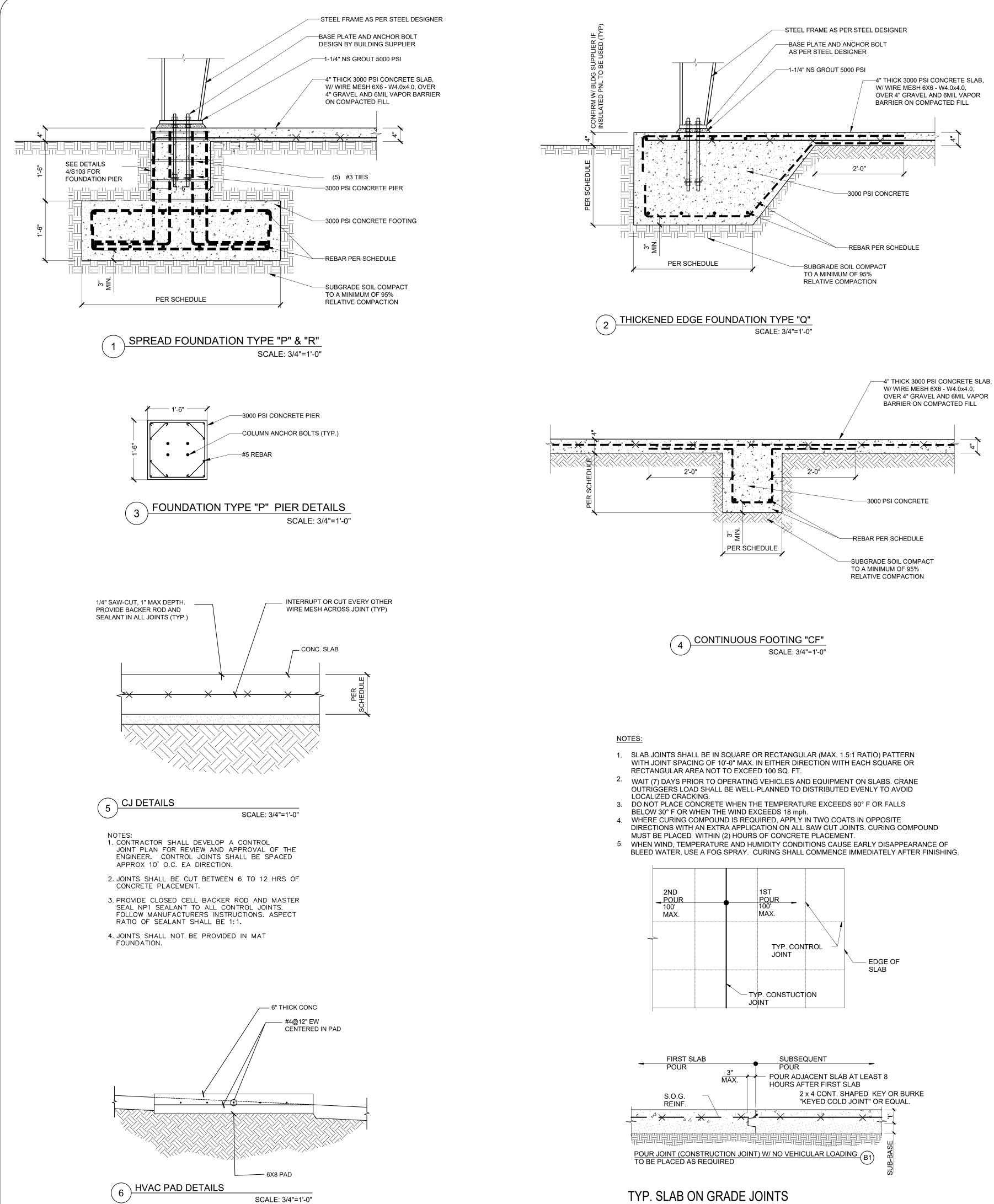
		MAT SCHEDULE	
TYPE	тнк.	REINFORCEMENT	OTHER
S-1	0'-4"	WIRE MESH 6X6 - W4.0x4.0	



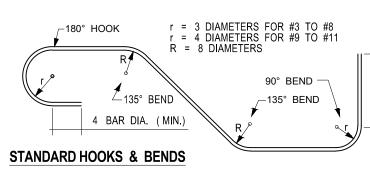








TYP. SLAB ON GRADE JOINTS NOT TO SCALE



TYPICAL REINFORCING DETAILS

VISIONS Ш С 00 S TION Ο SECT Ð  $(\mathbf{O})$ N Са 283. () UNDATION AND DET ADDRE ay 87 S. arolina ay × S O SITE Highv North 2659 Ο PROFESSIONAL SEAL HCARO FSSI SEAL 055950 GINEE 18IN P. OJ 08/01/2023/1/ 03  $\overline{}$ SUITE COM 444.5442 QUAGEN Ш RIV QU, Ш # 0  $\bigcirc$ တ ш MOTI.K S DINBURGH ם Ш EMAIL Ш - $\sim$  $\overline{}$ DRAWN BY: SK CHECKED BY: MKC DATE: 07/31/2023 SCALE: AS SHOWN S104 22-4006

COLUMN BAR OFFSET " MIN  $\mathbb{N}$ BEND AROUND PIN (2 Ø MIN.) UP TO #4 BARS **STIRRUPS & TIES** 

BAR

2 MIN FOR STEP FTG. **BENT BARS** 

WIRE TOGETHER —— @ EA. END LAP SPLICE

### GENERAL NOTES

### CONTRACTORS JOB RESPONSIBILITY

- 1. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE INSTALLED IN ACCORDANCE WITH LATEST EDITION OF THE LOCAL CODE ENFORCING **AUTHORITIES**
- 2. PROVIDE A COMPLETE OPERABLE SYSTEM IN A WORKMANLIKE MANNER OUTLINE DESCRIPTION AND EQUIPMENT. DO NOT LIMIT CONTRACTOR'S LIABILITY FOR THE INSTALLATION OF A COMPLETE OPERABLE SYSTEM.
- 3. ALL ELECTRICAL EQUIPMENT SHALL BE THE LATEST OF THE CURRENT YEAR IN DESIGN, MATERIAL AND WORKMANSHIP, AND SHALL BE THE TYPE OR MODEL CALLED FOR IN THESE DRAWINGS AND SPECIFICATIONS
- CONTRACTOR TO BE RESPONSIBLE FOR REVIEWING THE FULL SET OF BID DOCUMENTS TO BE AWARE OF THE TOTAL SCOPE PRIOR TO SUBMITTING BID ALL WORK SHOWN ON THE DRAWINGS NOT SPECIFICALLY CALLED OUT AS EXISTING SHALL BE CONSIDERED WORK TO BE PERFORMED UNDER THIS CONTRACT
- 5. BIDDERS, BEFORE SUBMITTING A PROPOSAL, SHALL VISIT AND CAREFULLY EXAMINE THE SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND WITH THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK.SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED NO ALLOWANCE WILL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY REASON OF ANY ERROR DUE TO THE CONTRACTOR'S NEGLECT TO COMPLY WITH THIS REQUIREMENT REPORT ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS TO THE ENGINEER.
- 6. BEFORE COMMENCING WORK, THE CONTRACTOR SHALL FILE ALL REQUIRED CERTIFICATES OF INSURANCE WITH THE BUILDING DEPARTMENT. FIRE DEPARTMENT AND ALL OTHER GOVERNMENTAL AGENCIES OBTAIN ALL REQUIRED PERMITS, TEST REPORTS CERTIFICATIONS FOR T.C.O. AND C.O. AND PAY ALL FEES REQUIRED
- 7. ALL NOTATIONS OF "SCALE" ARE INTENDED AS APPROXIMATIONS THE CONTRACTOR SHALL BE RESPONSIBLE TO ASCERTAIN THE EXACT DIMENSIONS IN FIELD.
- 8. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC, SIZES AND LOCATION OF EQUIPMENT AND WIRING ARE SHOWN TO SCALE WHERE POSSIBLE, BUT MAY BE DISTORTED FOR CLARITY ON THE DRAWINGS
- 9. ELECTRICAL CONTRACTOR SHALL TAKE DELIVERY AND RESPONSIBILITY FOR ALL EQUIPMENT PRE-PURCHASED BY THE OWNER FOR THIS PROJECT WORK SHALL INCLUDE RECEIVING EQUIPMENT AT STREET-SIDE, MOVING IT TO INTERIM ONSITE, SECURE STORAGE LOCATION, PROTECTING EQUIPMENT FROM DAMAGE, MOVING THE EQUIPMENT FROM STORAGE TO ITS FINAL POSITION, SETTING IN PLACE, AND COMPLETION OF ALL INSTALLATION, TESTING AND COMMISSIONING PROCEDURES REQUIRED FOR APPLICABLE EQUIPMENT.
- 10. UPON COMPLETION OF ALL ELECTRICAL WORK, ELECTRICAL CONTRACTOR SHALL ADJUST AND TEST ALL CIRCUITS, WIRING DEVICES, LIGHTING FIXTURES, MOTORS, EV AND ANY OTHER ELECTRICAL ITEMS INSTALLED. ANY DEFECTIVE ITEMS SHALL BE IMMEDIATELY REPAIRED OR REPLACED WITH NEW EQUIPMENT OR MATERIALS AND THAT PORTION OF THE SYSTEM SHALL BE RE-TESTED. ALL SUCH REMEDIAL WORK SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- 11. UPON COMPLETION OF WORK, ELECTRICAL CONTRACTOR SHALL BALANCE ALL PANEL BOARDS AFFECTED TO WITHIN 10% DEVIATION BETWEEN PHASES
- 12. REMOVE ALL DEBRIS RESULTING FROM REMOVAL AND/OR INSTALLATION OF ELECTRICAL WORK FROM THE PREMISES REMOVAL OF DEBRIS SHALL BE COORDINATED WITH BUILDING MANAGEMENT. DISPOSAL WORK SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE BUILDING CODE AND WITH ALL STATE AND FEDERAL REGULATIONS.
- 13. UNLESS OTHERWISE NOTED, ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO PULL BOXES, JUNCTION BOXES, WIRING DEVICES, PANEL BOARDS, LOW VOLTAGE SYSTEMS DEVICES ETC., WHERE INDICATED ON DRAWINGS, SHALL BE CONSIDERED SHOWN AT THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL LOCATE THESE ITEMS AS FIELD CONDITIONS DICTATE AND AS APPROVED BY THE ARCHITECT AND/OR ENGINEER.
- 14. ALL CONDUIT RUNS, WHEN SHOWN ON THE DRAWINGS, ARE SHOWN DIAGRAMMATICALLY TO OUTLINE THE GENERAL ROUTING OF MAJOR FEEDERS AND BRANCH WIRING.IT IS NOT WITHIN THE SCOPE OF THESE DRAWINGS TO SHOW ALL NECESSARY BENDS, OFFSETS, PULL BOXES, JUNCTION BOXES AND OBSTRUCTIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THIS WORK TO CONFORM TO THE REQUIREMENTS OF THE ELECTRICAL CODE AND TO PRESERVE **HEADROOM**
- 15. ADDITIONAL PULL BOXES, JUNCTION BOXES AND WIRE TROUGHS NOT SHOWN ON DRAWINGS SHALL BE PROVIDED WHERE REQUIRED BY APPLICABLE CODE REQUIREMENTS OR WHERE CALLED FOR BY FIELD CONDITIONS.PULL AND JUNCTION BOXES SHALL BE SURFACE TYPE IN UNFINISHED SPACES AND FLUSH TYPE IN FINISHED SPACES. PROVIDE COVERS FOR ALL JUNCTION BOXES, PULL BOXES AND WIRE TROUGHS. COVERS SHALL BE ACCESSIBLE.
- 16. CONDUIT RUNS SHALL CLEAR ALL ARCHITECTURAL FEATURES (DOORS, WINDOWS, ETC ) AND STRUCTURAL MEMBERS. CONDUIT INSTALLATION SHALL ALSO BE MADE TO AVOID INTERFERENCE WITH PIPES, DUCTS OR OTHER EQUIPMENT CORRESPONDING TO OTHER TRADES, INCLUDING BUT NOT LIMITED TO MECHANICAL, PLUMBING AND FIRE PROTECTION. ANY OF THIS ELEMENTS PREVENT THE INSTALLATION OF RACEWAY AS DELINEATED ON THE CONTRACT DOCUMENTS, DEVIATION MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION ANY VARIATION DUE TO FIELD CONDITIONS SHALL NOT REPRESENT AN ADDITIONAL COST TO OWNER.
- 17. ALL CONDUIT RUNS SHALL BE CONCEALED WITHIN WALLS OR CEILING EXPOSED CONDUITS AND BOXES, WHEN REQUIRED, SHALL BE PAINTED PAINTING SHALL CONSIST OF A PRIME COAT AND A FINISHED COAT COLOR AS SELECTED BY ARCHITECT OR TO MATCH SURROUNDING SURFACES. FACTORY PAINTING WILL BE ACCEPTED AS A PRIME COAT.
- 18. MINIMUM SIZE OF CONDUITS SHALL BE 3/4" UNLESS OTHERWISE NOTED. 19. INSTALL PULL WIRES IN EMPTY RACEWAYS. USE POLYPROPYLENE OR MONOFILAMENT PLASTIC LINE WITH NOT LESS THAN 200-LB (90-KG) TENSILE STRENGTH. LEAVE AT LEAST 12 INCHES (300 MM) OF SLACK AT EACH END OF PULL WIRE.

- 20. PROVIDE PIPE SLEEVES WHERE CONDUITS ARE ROUTE THROUGH FOUNDATION WALLS, SLABS AND FIRE RATED PARTITIONS. PIPE SLEEVES SHALL BE GROUTED. SEALANT SHALL BE APPLIED AROUND THE CONDUIT IN THE SLEEVE IN ORDER TO PREVENT INGRESS OF MOISTURE. WALL AND SLAB PENETRATIONS SHALL BE COMPLETELY WATERPROOF AND/OR FIRE PROOFED.
- 21. ALL OPENINGS BETWEEN FLOORS, THROUGH RATED FIRE AND SMOKE WALLS. CREATED BY THE CONTRACTOR FOR CABLE OR CONDUIT PASS THROUGH SHALL BE SEALED WITH A FIRE STOPPING MATERIAL. FIRE STOPPING MATERIAL AND ITS APPLICATION SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT IS ACCEPTABLE TO THE LOCAL FIRE AND BUILDING AUTHORITIES HAVING JURISDICTION OVER THIS WORK. ANY OPENINGS CREATED BY OR FOR THE CONTRACTOR AND LEFT UNUSED SHALL ALSO BE SEALED AS PART OF THIS WORK. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATING OF WALLS AND SLABS
- 22. IN UNFINISHED SPACES OF THE BUILDING SUCH AS FAN ROOMS, PIPE SPACES, ETC., LOCATIONS OF CONDUIT AND OUTLETS ARE APPROXIMATE AND SHALL CLEAR PIPING AND ALL OTHER CONSTRUCTION. ALL THE OUTLETS MUST BE UNOBSTRUCTED AND EXTENDED AS DIRECTED TO CLEAR ANY INTERFERENCE WITH FIXTURES, PIPING EQUIPMENT ETC.
- 23. SUPPORT ALL THE ELECTRICAL EQUIPMENT AND CONDUIT FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING. ALL ELECTRICAL EQUIPMENT AND RACEWAY SHALL BE SUSPENDED FROM SUPPLEMENTAL SLOTTED CHANNEL FRAME. ALL SUCH MOUNTS, DEVICES, FASTENERS SHALL BE OF SUFFICIENT THICKNESS TO CARRY THE LOAD SUSPENDED. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY ADDITIONAL SUPPLEMENTAL STEEL REQUIRED TO SUPPORT THE EQUIPMENT OR DEVICES.
- 24. PROVIDE OUTLET BOXES AND ENCLOSURES APPROPRIATE FOR THE PURPOSE AT ALL LOCATIONS WHERE THE DRAWINGS REQUIRE THE INSTALLATION OF ELECTRICAL DEVICES OR ELECTRICAL EQUIPMENT.
- 25. ALL EXPOSED NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT AND RACEWAYS SHALL BE GROUNDED FOR FEEDERS AND/OR BRANCH CIRCUITS WHERE GROUNDING CONDUCTOR IS NOT PROVIDED. METAL RACEWAYS AND METAL ENCLOSURES FOR CONDUCTORS SHALL BE TIGHTLY JOINED TO CREATE A CONTINUOUS ELECTRIC CIRCUIT AND SO. ASSURE A PROPERLY GROUNDED SYSTEM FITTINGS FOR JOINTS AND TERMINATIONS SHALL BE LISTED FOR GROUNDING INSTALLATION. PROVIDE BONDING JUMPERS WITH APPROVED FITTINGS OF SIZE REQUIRED FOR EQUIPMENT GROUNDING. THE CONTRACTOR SHALL ENSURE CONTINUITY OF THE GROUNDING CIRCUIT FROM THE SUPPLYING PANEL BOARD GROUNDING BUS TO THE LOAD GROUND TERMINAL
- 26. UNLESS OTHERWISE NOTED, CONDUCTORS FOR POWER AND LIGHTING CIRCUITS SHALL BE OF TYPE THHN/THWN AND MINIMUM SIZE SHALL BE #12 AWG. CONDUCTORS #10 AWG AND SMALLER SHALL BE COPPER, SOLID OR
- 27. ALL CIRCUITS SHALL BE PROVIDED WITH DEDICATED NEUTRALS. IF CONTRACTOR ELECTS TO SHARE NEUTRALS, IT IS HIS RESPONSIBILITY TO PROVIDE A MEANS TO DISCONNECT ALL CIRCUITS SIMULTANEOUSLY. FOR EXISTING PANEL BOARDS THE CONTRACTOR SHALL UPGRADE, PROVIDE NEUTRAL BAR TERMINATION EXTENSION KITS OR REPLACE NEUTRAL TERMINATION BARS AS REQUIRED FOR THE DEDICATED NEUTRALS. 28. LOW VOLTAGE WIRING SHALL NOT BE PERMITTED IN THE SAME RACEWAY
- AS POWER WIRING. 29. ALL GROUND WIRES SHALL BE INSTALLED IN CONDUIT 30. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF WIRING
- DATA/TELEPHONE OUTLETS, ETC. 31. ELECTRICAL DRAWING INDICATE CIRCUIT NUMBERS (#) FOR RECEPTACLES, LIGHTING FIXTURES AND OTHER EQUIPMENT FEEDS. UNLESS OTHERWISE NOTED 3/4" CONDUIT TO 15A OR 20A CIRCUIT BREAKERS IN PROVIDE 2#12, 1#12G IN PANELS INDICATED. CIRCUIT NUMBERS (#) NOTED ON PLANS ARE INTENDED AS A GUIDE. FINAL NUMBERING SYSTEM TO BE NOTED ON
- 32. FURNISH AND INSTALL WIRING FOR EQUIPMENT FURNISHED BY OTHERS, AS SHOWN ON ARCHITECTURAL, HVAC, PLUMBING AND/OR ELECTRICAL DRAWINGS. COORDINATE WITH OTHER TRADES FOR DETAILS OF INSTALLATION AND WIRING REQUIREMENTS. THE TERM "WIRING" AS USED HEREIN SHALL INCLUDE FURNISHING AND INSTALLING CONDUIT, WIRES, JUNCTION/OUTLET BOXES, DISCONNECTS, OVER CURRENT PROTECTION DEVICES AND FINAL CONNECTIONS. COORDINATE FINAL CONDUCTOR SIZES, QUANTITIES, VOLTAGE REQUIREMENTS, AND OVER CURRENT DEVICE AND OUTLET RATINGS WITH ACTUAL EQUIPMENT TO BE FURNISHED TO THE SITE PRIOR TO FINALIZING WIRING INSTALLATION. MINOR ADJUSTMENTS TO WIRING REQUIREMENTS NECESSARY TO ACCOMMODATE ACTUAL FURNISHED EQUIPMENT SHALL BE PROVIDED AT NO ADDITIONAL COST TO OWNER.
- 33. FURNISH AND INSTALL ALL COPPER MATERIALS INCLUDING BUT NOT LIMITED TO LUGS, COPPER BUS DETAILS/LUGS KITS, BUS BAR EXTENSIONS, MULTI-TAPS, ETC REQUIRED FOR OVER SIZED FEEDERS AND/OR REQUIRED TO ACCEPT INCOMING AND OUTGOING CABLES TO COMPLETE CONTRACT WORK. ALSO PROVIDE LABOR AND MATERIAL REQUIRED TO MODIFY EXISTING OR NEW EQUIPMENT INCLUDING ENCLOSURE MODIFICATIONS. CONTRACTOR TO PROVIDE ALL REQUIRED ELECTRICAL FINAL CONNECTIONS.
- 34. VERIFY LOCATIONS OF ALL ELECTRICAL EQUIPMENT WITH ARCHITECTURAL DRAWINGS OR INTERIOR DETAILS IN CENTERING OUTLETS AND LOCATING BOXES OR OUTLETS ALLOW FOR OVERHEAD PIPES, DUCTS, MECHANICAL EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILING, ETC, AND CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
- 35. VERIFY SWITCHES, DIMMERS, RECEPTACLES AND COVER PLATES FINISHES WITH THE ARCHITECT AND/OR OWNER REPRESENTATIVE BEFORE PURCHASING AND INSTALLATION OF SUCH DEVICES.
- 36. WHERE MULTIPLE SWITCHES AND RECEPTACLES ARE INDICATED AT THE SAME LOCATION, THEY SHALL BE GANGED TOGETHER AND MOUNTED BEHIND A COMMON FACE PLATE UNLESS POWERED FROM AN EMERGENCY POWER SOURCE. PROVIDE SEPARATE OUTLET BOXES FOR NORMAL AND EMERGENCY CIRCUITS.
- 37. PROVIDE GROUND FAULT CIRCUIT INTERRUPTER FOR EACH RECEPTACLE LOCATED WITHIN 6'-0" OF WATER OR LIQUIDS AND FOR OUTDOORS RECEPTACLES WHETHER INDICATED ON DRAWINGS OR NOT.

STRANDED; #8 AWG AND LARGER SHALL BE COPPER, STRANDED TYPE.

DEVICES SUCH AS RECEPTACLES, LIGHTING SWITCHES, DIMMERS.

AS-BUILD DRAWINGS AND ON TYPED PANEL BOARD DIRECTORY CARD.

38. MOUNTING HEIGHTS OF EQUIPMENT AND DEVICES SHALL BE

COORDINATED WITH ARCHITECT UTILIZE THE FOLLOWING MOUNTING HEIGHTS UNLESS OTHERWISE NOTED (ALL DIMENSIONS TO CENTERLINE OF BOX U.O.N.):

- A. RECEPTACLES (WALL MOUNTED) 18" AFF
- B. RECEPTACLES (COUNTERTOPS) NO MORE THAN 20" ABOVE THE COUNTERTOP
- C. VOICE/DATA OUTLETS 18" AFF
- D. WALL MOUNTED TELEPHONES 48" AFF
- E. LIGHTING SWITCHES AND CONTROLS 48" AFF F. PANEL BOARDS AND CABINETS - 78" TO TOP OF ENCLOSURE
- G. MANUAL PULL STATIONS 48" AFF
- H. FIRE ALARM AUDIO/VISUAL AND STROBE UNITS 80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER
- 39. ALL ELECTRICAL EQUIPMENT AND ACCESSORIES INSTALLED OUTSIDE OR EXPOSED TO WEATHER SHALL HAVE NEMA 3R ENCLOSURES AND SHALL BE TIGHTLY CASKETED. FOR A COMPLETE RAIN TIGHT INSTALLATION ALL BUILDING EXTERIOR MOUNTED RECEPTACLES SHALL BE GFI RATED AND MOUNTED IN WEATHERPROOF ENCLOSURE.
- 40. THE AREA ABOVE THE ELECTRICAL EQUIPMENT SUCH AS DISTRIBUTION BOARDS, PANEL BOARDS, TRANSFORMERS, ETC, SHALL BE DEDICATED FOR ELECTRICAL INSTALLATION AND SHALL BE CLEAR FROM WORK OF OTHER TRADES (PIPING, DUCTS, ETC).
- 41. FOR ALL RECESSED PANELS A TROUGH SHALL BE PROVIDED IN THE NEAREST ACCESSIBLE CEILING WITH TWO (2) SPARE 2" CONDUITS AND TWO (2) SPARE 1" CONDUITS UNLESS OTHERWISE NOTED TO BE INTERCONNECTED BETWEEN THE TROUGH AND THE RECESSED PANEL FOR FUTURE USE
- 42. PROVIDE AND/OR REVISE THE PANEL DIRECTORY OF EACH AND EVERY NEW AND/OR EXISTING PANEL BOARD AFFECTED BY ELECTRICAL WORK.
- 43. PROVIDE BLANK COVERS PLATES OVER ALL UNUSED OPENINGS IN NEW AND/OR EXISTING PANEL BOARDS.
- 44. SHORT CIRCUIT RATING OF ELECTRICAL EQUIPMENT (CIRCUIT BREAKERS, FUSES, DISCONNECT SWITCHES, PANEL BOARDS, ETC ) SHALL MEET OR EXCEED THE AVAILABLE FAULT CURRENT AT THEIR POINT OF CONNECTION AS REQUIRED FOR A FULLY RATED SYSTEM
- 45. PROVIDE UN-FUSED DISCONNECT SWITCHES FOR ALL MECHANICAL EQUIPMENT UNLESS OTHERWISE NOTED ON CONSTRUCTION DOCUMENTS 46. THE MINIMUM RATING OF DISCONNECT SWITCHES SHALL BE EQUAL TO OR
- GREATER THAN THE RATING OF THE PROTECTIVE DEVICES ON THE SUPPLY SIDE OF THE DISCONNECT SWITCH. MINIMUM DISCONNECT SWITCH SIZE IS 30 AMPERES
- 47. ALL EQUIPMENT SHALL HAVE COPPER CURRENT CARRYING PARTS INCLUDING GROUND BUS AND TERMINALS. ALUMINUM SHALL NOT BE PERMITTED.
- 48. FOR CIRCUITS RATED AT 120V, 20A THAT RUN OVER 100'-0", USE NO. 10 AWG WIRE SIZE. FOR CIRCUITS RATED AT 277V,20A THAT RUN OVER 200'-0", USE NO. 10 AWG WIRE SIZE.
- 49. BRACH CIRCUIT CONDUCTORS SHALL BE INCREASED IN SIZE TO COMPENSATE FOR VOLTAGE DROP.
- 50. ARCHITECTURAL FEATURES AS WELL AS OTHER TRADES EQUIPMENT SHOWN ON ELECTRICAL DRAWINGS ARE FOR BACKGROUND INFORMATION ONLY. COORDINATE WITH OTHER TRADES TO DETERMINE THE EXACT LOCATION OF FANS, A/C UNITS, MOTORS, PUMPS, EQUIPMENT TERMINAL BOXES, AND OTHER EQUIPMENT TO BE INSTALLED BY OTHER TRADES BEFORE CONDUIT WORK IS STARTED.
- 51. PROVIDE 4-INCH HIGH CONCRETE HOUSING PADS FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT. COORDINATE WITH GENERAL CONTRACTOR.
- 52. FOR EXACT LOCATION OF LIGHT FIXTURES, LIGHTING FIXTURE SCHEDULE AND LIGHTING SYMBOLS REFER TO ARCHITECTURAL AND/OR LIGHTING CONSULTANT DRAWINGS. INFORMATION SHOWN IN ELECTRICAL DRAWINGS IS FOR REFERENCE ONLY. FINAL LIGHTING APPROVAL BY ARCHITECT.
- 53. MOUNTING ACCESSORIES FOR RECESSED LIGHTING FIXTURES SHALL BE APPROPRIATE TO MEET THE REQUIREMENTS OF THE CEILING CONSTRUCTION. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPE SCHEDULE.
- 54. PENDANT MOUNTED FIXTURES IN AREAS WITH NO HUNG CEILING SHOULD BE INSTALLED AFTER DUCTWORK AND PIPING HAVE BEEN INSTALLED. COORDINATE MOUNTING HEIGHT AND LOCATION OF LIGHTING FIXTURES TO CLEAR MECHANICAL, ELECTRICAL, FIRE PROTECTION AND PLUMBING EQUIPMENT AND PIPING.
- 55. CONTRACTOR TO BE RESPONSIBLE FOR ALL PENETRATIONS, CORE DRILLING SEALING, WATERPROOFING, CUTTING, PATCHING, PAINTING AND RESTORATION FOR THE COMPLETE CONTRACT WORK INDICATED. ALL **RESTORATION WORK PERFORMED BY THIS CONTRACTOR SHALL RESTORE** DISTURBED SURFACES TO ACCURATELY MATCH ALL SURROUNDING CONSTRUCTION USING THE SAME MATERIAL, WORKMANSHIP AND FINISH AS EXISTING SURFACES.
- 56. CONTRACTOR TO PROVIDE LABOR AND MATERIALS REQUIRED FOR THE INSTALLATION AND MAINTENANCE OF TEMPORARY LIGHTING AND REQUIRED POWER SOURCES.
- 57. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED WHERE NECESSARY. EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN ART.S OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES ASCERTAIN FROM BUILDING OWNER AND TENANT AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH THE AREAS.
- 58. FOR PROJECTS RATED 1,000 KVA OR LARGER, THE CONTRACTOR SHALL BE RESPONSIBLE TO CREATE AND FILE RELATED ADVISORY BOARD FILING DRAWINGS AND PAY ALL NECESSARY FEES NO CONSTRUCTION SHALL BE STARTED UNTIL AN APPROVAL HAVE BEEN GRANTED.
- 59. MAINTAIN CONTINUOUS SERVICE ON FEEDERS SERVING THE AREAS AFFECTED DURING ALL THE PERIOD THE AREA IS UNDER CONSTRUCTION. NO OUTAGES WILL BE PERMITTED IN THESE AREAS DUE TO THE CONSTRUCTION PHASE. ALL WORK REQUIRING TEMPORARY SHUTDOWN SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. ANY REQUEST FOR SHUTDOWNS SHOULD BE BROUGHT TO THE ATTENTION OF OWNER'S REPRESENTATIVE AND BUILDING OPERATING PERSONNEL AND IT MUST BE NOTIFIED 72 (SEVENTY-TWO) HOURS IN ADVANCE WORK SHALL NOT BE PERFORMED WITHOUT WRITTEN APPROVAL
- ALL WORK REQUIRING ELECTRICAL SHUTDOWN WHICH WILL AFFECT 60. OTHER FLOORS OF THE BUILDING OR EVEN AFFECT THE NORMAL CONTINUATION OF CONSTRUCTION WORK ON THESE & OTHER FLOORS,

SHALL BE DONE ON OVERTIME HOURS, AND SHALL NOT DISTURB CONTINUITY OF ELECTRICAL SERVICE TO EXISTING TENANTS ON THE AFFECTED FLOORS AND SHALL BE COORDINATED WITH THE BUILDING ENGINEER.

- SYSTEM OF THE BUILDING

- MODIFICATIONS.

- OWNER'S REPRESENTATIVE.
- ELECTRICAL CONTRACTOR.
- CONTRACTOR.
- ELECTRICAL INSTALLATION.
- CHARGED.

DRAWING SHEET NO. SHE GEN E001 ELE E002 TYP E003 E004 PAN E101 LIG LIGH E102 E201 POV POV E202

61. ALL ELECTRICAL WORK IN ADJOINING AREAS WHICH IS REQUIRED TO FUNCTION BUT IS AFFECTED BY THIS WORK SHALL BE RECONNECTED AND RESTORED TO ITS PRESENT FUNCTION AS PART OF THE ELECTRICAL

62. ALL PENETRATIONS THROUGH OR CHOPPING OF FLOOR SLAB FOR ELECTRICAL INSTALLATION SHALL BE COORDINATED WITH BUILDING MANAGER. ALL WORK SHALL BE PERFORMED AFTER NORMAL BUSINESS HOURS LOCATIONS SHALL BE LAID OUT AND CONFIRMED BY ARCHITECT PRIOR TO START OF PHYSICAL WORK.

63. BRANCH CIRCUITS SERVING DIMMING BALLASTS SHALL HAVE A DEDICATED NEUTRAL: SHARING OF NEUTRALS SHALL NOT BE PERMITTED PROVIDE NEUTRAL BARS WITH SUFFICIENT TERMINALS AS REQUIRED. 64. WHENEVER ELECTRONIC OR ADJUSTABLE CIRCUIT BREAKERS ARE PROVIDED. THE CONTRACTOR SHALL SUBCONTRACT THE SERVICES OF A QUALIFIED SWITCHBOARD MANUFACTURER TO CALCULATE THE REQUIRED TRIP COORDINATION SETTINGS INCLUDING BUT NOT LIMITED TO, THE LONG DELAY, SHORT DELAY, GROUND FAULT, PICKUP, TRIP TIMES AND SHORT CIRCUIT CURRENT, ETC. THE CONTRACTOR SHALL ALSO INCLUDE THE SERVICES OF THE MANUFACTURER'S FIELD SERVICE TECHNICIAN TO INSTALL, PROGRAM AND ADJUST THE CIRCUIT BREAKERS PROVIDE ALL NECESSARY JUMPER CONNECTIONS. CONTROL WIRES AND

65. WHENEVER EXCAVATION, CORE DRILLING OR CUTTING OF SLABS, CONCRETE OR PAVEMENT ARE PERFORMED, THE CONTRACTOR SHALL HIRE AN EXPERT TO PERFORM SUBSURFACE SCANS TO IDENTIFY AND FLAG UTILITIES, REBAR, ETC SO THEY ARE ° NOT DAMAGED. ANY DEVIATIONS FROM THE PENETRATIONS INDICATED ON THE CONTRACT DOCUMENTS MUST BE APPROVED BY THE EOR AND/OR OWNER 66. CONTRACTOR SHALL PREPARE FIELD ERECTION DRAWINGS AS REQUIRED FOR THE USE OF ITS MECHANICS TO INSURE PROPER INSTALLATION. 67. CONTRACTOR SHALL GUARANTEE ALL WORK FOR WHICH MATERIALS ARE FURNISHED, FABRICATED OR FIELD ERECTED, ALL FACTORY ASSEMBLED EQUIPMENT FOR WHICH NO SPECIFIC MANUFACTURER'S GUARANTEE IS FURNISHED, AND ALL WORK IN CONNECTION WITH INSTALLING MANUFACTURER'S GUARANTEED EQUIPMENT. THIS PERSONAL

GUARANTEE SHALL EXIST FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK AND SHALL APPLY TO DEFECTS IN MATERIAL AND TO DEFECTIVE WORKMANSHIP OF ANY KIND 68. CONTRACTOR TO STORE MATERIALS AND EQUIPMENT DURING THE

PROGRESS OF THE WORK AT PROPER STORAGE PLACE. 69. BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIAL AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE OWNER PROTECT SAME FROM ANY CAUSE WHATSOEVER. 70. BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT.

71. DO NOT INSTALL SENSITIVE OR DELICATE EQUIPMENT UNTIL MAJOR CONSTRUCTION WORK IS COMPLETED. OBSERVE AND CONFORM TO APPLICABLE SAFETY REGULATIONS, INCLUDING THOSE REQUIRED BY THE

72. ERECT AND MAINTAIN SUITABLE BARRIERS, PROTECTIVE DEVICES, LIGHTS AND WARNING SIGNS FOR THE PROTECTION OF OCCUPANTS, TRANSIENTS AND WORKMEN FROM DANGER DUE TO WORK PERFORMED BY THE

73. MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS ACCIDENTS, ACTS OF GOD, ACTS OF NEGLIGENCE, STRIKES, VIOLENCE OR THEFT UP TO THE TIME OF FINAL ACCEPTANCE BY THE OWNER BE **RESPONSIBLE FOR ANY LOSS OR INJURY TO PERSONS OR PROPERTY** RESULTING FROM NEGLECT OR ANY OTHER CAUSES ON THE PART OF THE

74. DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE

75. DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL FROM THE OWNER'S REPRESENTATIVE AND THE OWNER. A WRITTEN REQUEST FOR EXTRA WORK SHALL STATE THE NATURE OF THE WORK, BY WHOM REQUESTED, AND THE PRICE TO BE

GLIST
EET NAME
NERAL NOTES
ECTRICAL NOTES AND LEGENDS
PICAL DETAILS
NEL SCHEDULING, SLD AND LOAD CALCULATION
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WER PLAN



### WIRING DEVICE NOTES

WIRING DEVICES SHALL BE SPECIFICATION GRADE, IVORY WITH NYLON FACE AS FOLLOWS:

20 AMP DUPLEX GROUND FAULT RECEPTACLE	HUBBELL 5352I GF5262I	P&S 5352I 1591SIWL	ARROW HART 5362I GF8200I
SINGLE RECEPTACLE, 20A, 250V SINGLE POLE SWITCH THREE WAY SWITCH	1221I 20AC3I	20AC1I 1223I	1991I 1993I

COVER PLATES ON WALLS SHALL BE RIGID NON-METALLIC, SMOOTH FINISH, IVORY IN COLOR, AND SHALL BE STANDARD SIZE OVERSIZE PLATES ARE NOT ACCEPTABLE

ENGRAVED PLATES SHALL HAVE 3/16" LETTERS PHOTOELECTRIC CONTROL: TORK #2101, FACING NORTH

FLOOR BOXES: HUBBELL B-2436, B-4233, B-4333; STEEL CITY 640 SERIES

### GENERAL ELECTRICAL NOTES

- 1. INSTALL LIGHT CONTROL ON STRIKE SIDE OF DOOR (UNLESS OTHERWISE NOTED).
- COMBINE NO MORE THAN 6 CURRENT CARRYING CONDUCTORS IN ANY SINGLE HOME RUN FROM A PANEL
- 3. PROVIDE CIRCUIT BREAKER FILLER, BLANK COVER PLATE, FOR ALL THE EMPTY SPACES WITHIN THE PANELBOARD.
- 4. PROVIDE BLANK COVER PLATE FOR ALL THE UNUSED JUNCTION OR **DEVICE BOXES**
- EACH SINGLE PHASE BRANCH CIRCUIT SHALL BE PROVIDED WITH PHASE, DEDICATED NEUTRAL AND GROUND CONDUCTOR.
- ALL MOUNTING HEIGHTS INDICATED ARE TO BE CENTERLINE OF THE DEVICE BOX UNLESS OTHERWISE INDICATED.
- 7. COORDINATE WITH ARCHITECTURAL ELEVATION FOR EXACT MOUNTING HEIGHT
- ADJUST CIRCUITING AS NECESSARY TO BALANCE PANELBOARD CONNECTED LOADS WITHIN ± %10.
- FINAL CONNECTION TO ALL MOTORS OR VIBRATING EQUIPMENT SHALL **BE WITH FLEXIBLE CONDUIT**
- 10. CONSULT LIGHTING FIXTURE TYPE WITH ARCHITECT OR THE INTERIOR DESIGNER BEFORE ANY INSTALLATION. 11. ALL SWITCHING TO BE CONVENTIONAL UNLESS OTHERWISE IS NOTED.
- 12. ANY EXTERIOR OUTLET LOCATION TO BE CONFIRMED WITH ARCHITECT OR LANDSCAPE CONTRACTOR.
- 13. DIMENSIONS ARE TAKEN FROM THE CENTER OF THE OUTLET UNLESS OTHERWISE IS NOTED.
- 14. CONTRACTOR TO PROVIDE INDIVIDUAL METERING FOR EACH DWELLING UNITS PER 2015 IECC ART. 405.7.
- 15. CONTRACTOR TO COORDINATE WITH ARCHITECT TO PROVIDE CLOSED (LOCKABLE DOOR) UTILITY ROOM FOR ELECTRICAL PANELS PER NEC 2017 ART. 240.24(B). ALSO VERIFY REQUIRED ELECTRICAL CLEARANCE FOR MDP PER NEC 2017 ART. 110.26.
- 16. PROVIDE ALL DEVICES MOUNTED ABOVE COUNTERS SHALL BE AT 44" A.F.F TO CENTER-LINE OF DEVICE (TYPICAL) OR 42" A.F.F TO CENTER-LINE OF DEVICE (ADA UNITS), U.N.O., ALL WALL MOUNTED DEVICES SHALL BE MAXIMUM OF 48" AND MINIMUM OF 18" A.F.F., U.N.O.,
- 17. PROVIDE FIRE CAULKING AT TOP AND BOTTOM PLATES. 18. DO NOT PENETRATE ANY 2-HOUR PARTITION WALLS BETWEEN
- BUILDINGS, ARCHITECT TO PROVIDE '2' FUR-OUT FOR ELECTRICAL WIRING INSIDE UNITS. 19. WHERE A FIRE ALARM SYSTEM IS INSTALLED, ACTUATION OF THE
- AUTOMATIC SPRINKLER SYSTEM SHALL ACTUATE THE BUILDING FIRE ALARM SYSTEM.
- 20. LIGHTING FIXTURE LAYOUTS INDICATED ON PLAN ARE FOR CONVENIENCE ONLY. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT THE LIGHTING FIXTURE LAYOUT AND INSTALL ACCORDINGLY
- 21. GENERAL CONTRACTOR SHALL COORDINATE CEILING INSTALLATION AS REQUIRED TO ALLOW ELECTRICAL CONTRACTOR TO INSTALL LIGHTING FIXTURES AS INDICATED.
- 22. ALL DOWN LIGHTS SHALL BE ALIGNED IN CEILING UNLESS OTHERWISE NOTED.
- 23. EXTEND TO DUAL LEVEL LIGHTING SWITCHES AT SWITCH BANK. 24. PROVIDE BLDG MOUNTED PHOTOCELL TO CONTROL FIXTURE AT **ENTRANCE**
- 25. PROVIDE AFCI BREAKERS ON BRANCH CIRCUITS SUPPLYING OUTLETS AND DEVICES PER 2017 NEC ART. 210-12.
- 26. BATHROOMS TO BE CIRCUITED INDEPENDENTLY OF REST OF UNIT PER 2017 NEC ART. 210-11. 27. PROVIDE ARC-FAULT CIRCUIT INTERRUPTING (AFCI) BREAKER TO ALL
- BRANCH CIRCUIT SERVING ALL OUTLETS AND DEVICES AS PER NEC 2017 ART. 210.52(A)
- 28. ALL SMOKE DETECTORS ARE HARD WIRED, INTERCONNECTED AND BATTERY BACKED.
- 29. AT LEAST ONE GFCI/WP RECEPTACLE IS REQUIRED AT THE FRONT AND BACK 1 FEET ABOVE OF THE HOUSE. SUCH RECEPTACLES CANNOT BE MORE THAN  $6\frac{1}{2}$  THE GROUND PER NEC 2017 ART. 210.52E(1). 30. ALL UNITS TO HAVE CONTROL OF OWN MCB.
- 31. BALCONIES, DECKS AND PORCHES THAT ARE ACCESSIBLE FROM INSIDE SHALL HAVE AT LEAST ONE RECEPTACLE OUTLET INSTALLED PER NEC 2017 ART. 210.52E(3).
- 32. ALL ELECTRICAL WIRING, BOXES, CONDUITS AND RACEWAYS PENETRATING FIRE-RESISTANCE RATED MEMBRANES MUST BE PROPERLY SEALED TO ASSURE THAT THE REQUIRED FIRE-RESISTANCE RATING IS NOT REDUCED. [2017 DCBC 703.2].
- 33. ALL LIGHTING THROUGH OUT PROJECT ARE OF HIGH EFFICIENCY LIGHTING TO INCLUDE EXTERIOR LIGHTING.
- 34. ALL EXTERIOR OUTLETS AND RECEPTACLES ARE WEATHER RESISTANT PER NEC 2017 ART. 406.9(A) & (B). TYPICAL
- 35. EACH UNIT SHALL BE EQUIPPED WITH OCCUPANCY SENSOR SWITCH(S) TO MEET DCRA GREEN CODE REGULATIONS (APPLICABLE IN MULTI-FAMILY DWELLING).
- 36. ALL TELEPHONE LINES ARE TO BE CONCEALED AND OUTLETS RECESSED. ALL TELEPHONE SERVICE TO BE CAPABLE OF CARRYING LINES IN EACH FLOOR AS DETERMINED BY THE ARCHITECT OR OWNER 37. ALL OUTLETS PLATES ARE TO BE STAINLESS STEEL OR AS DETERMINED

BY THE ARCHITECT

- 38. ALL SWITCHES DIMMERS ARE TO BE TOGGLE TYPE. ALL OUTLETS ARE TO BE RECESSED. ALL WIRING IS TO BE CONCEALED. ALL SMOKE DETECTORS TO BE NEW HARDWIRED
- 39. VERIFY FIXTURE AND OUTLET LOCATIONS WITH OWNER PRIOR TO
- RUNNING ELECTRICAL FEEDS. 40. ALL EMERGENCY WHITE LIGHTS/BATTERY PACKS ARE TO BE FED BY
- EMERGENCY PANEL 41. FLEXIBLE CABLE SHOULD BE USED FOR THE CONNECTION OF POWER
- CIRCUIT OF ELEVATOR
- LIGHTING IN ALL AREAS OF THE BUILDING MEETING ART. C405.2.2.1 OF ADOPTED IECC.
- 43. EACH AREA ENCLOSED BY WALLS OR FLOOR-TO-CEILING PARTITIONS SHALL HAVE AT LEAST ONE MANUAL CONTROL FOR THE LIGHTING SERVING THAT AREA. THE REQUIRED CONTROLS SHALL BE LOCATED WITHIN THE AREA SERVED BY THE CONTROLS OR BE A REMOTE SWITCH THAT IDENTIFIES THE LIGHTS SERVED AND INDICATES THEIR STATUS.
- 44. AREA WITHIN THE SIDE LIGHTED DAYLIGHT ZONES HAVE DAY LIGHTING CONTROLS
- 45. FLUORESCENT LUMINARIES EQUIPPED WITH ONE, THREE OR ODD-NUMBERED LAMP CONFIGURATIONS, THAT ARE RECESS-MOUNTED WITHIN 10 FEET (3048 MM) CENTER-TO-CENTER OF EACH OTHER AND PENDANT- OR SURFACE-MOUNTED WITHIN 1 FOOT (305 MM) EDGE-TO-EDGE OF EACH OTHER SHALL BE TANDEM WIRED

### GENERAL LIGHTING COORDINATION NOTES:

- REFER TO SCHEDULES, LEGENDS AND TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
- REFER TO LIGHTING PLANS FOR LIGHT FIXTURE AND LIGHT SWITCH LOCATIONS
- PAINT EXISTING AND NEW DRYWALL CEILING, UNO. SWITCH HEIGHT TO BE 38" AFF, UNO. WHEN SWITCHES AND DIMMERS ARE ADJACENT, ALIGN THE HORIZONTAL CENTERLINES. PROVIDE 1" BETWEEN EACH DEVICE FACE PLATE.
- EXISTING LIFE SAFETY DEVICES TO REMAIN DURING CONSTRUCTION
- DIMENSIONS ARE INDICATED FROM FACE OF SCHEDULED EXISTING 6
- PARTITION TO CENTER OF LIGHT FIXTURE LIGHTS, FIXTURES, EXIT SIGNS AND OTHER DEVICES SHOWN FOR
- FIXTURE LOCATION AND TYPE ONLY GYP BOARD IN THE BATHROOM CEILING TO BE MOISTURE RESISTANT.
- REPAIR DRYWALL CEILING AS NECESSARY IN LOCATIONS OF LIGHT FIXTURE DEMOLITION AND INSTALLATION FOR ALL LIGHT FIXTURES, REFER TO MANUFACTURER'S
- RECOMMENDATION FOR FRAMING AND SUPPORT OF CEILING SYSTEM. 10. LIGHTING FIXTURE LOCATIONS, AS SHOWN ON LIGHTING PLANS, SHALL
- TAKE PRECEDENCE OVER ALL OTHER SYSTEMS. OBTAIN WRITTEN APPROVAL FROM ARCHITECT PRIOR TO EXECUTING ANY CHANGES IN LOCATION.
- 11. CONFIRM THAT ALL FIXTURES ARE U.L. OR E.T.L. LISTED AS A SYSTEM
- AND COMPLY WITH ALL NATIONAL, STATE, AND LOCAL CODES 12. CONFIRM THE FINAL CEILING MATERIAL AND INSTALLATION IN ALL LOCATIONS AND PROVIDE THE NECESSARY TRIMS, HANGERS AND
- HARDWARE AS REQUIRED. 13. PROVIDE SELF-FLANGED, OVERLAP TRIMS OF THE SAME MATERIAL AND FINISH AS THE REFLECTOR FOR ALL RECESSED FIXTURES.
- 14. ASSURE THAT ALL OPEN REFLECTOR AND ALZAK CONE APERTURE TYPE FIXTURES MATCH IN COLOR AND APPEARANCE REGARDLESS OF TYPES AND SOURCE
- 15. ASSURE THAT ALL OPEN REFLECTOR AND ALZAK CONE APERTURE TYPE FIXTURES ARE FREE OF SCRATCHES. DENTS. DUST. FINGERPRINTS. ETC., AT CLOSE OF JOB.
- 16. ALL INTEGRAL BALLAST AND/OR TRANSFORMER TYPE FIXTURES HAVE BEEN SPECIFIED WITH 120-VOLT PRIMARY. CONFIRM ACTUAL VOLTAGE REQUIREMENTS AND SUPPLY.
- 17. CONFIRM ALL FINISHES NOT SPECIFIED WITH ARCHITECT PRIOR TO ORDERING.
- 18. CONSTRUCT ALL ARCHITECTURAL COVE TYPE FIXTURES AS DETAILED AND DIMENSIONED. OBTAIN WRITTEN APPROVAL FROM ARCHITECT PRIOR TO UNDERTAKING ANY CHANGES TO DIMENSIONS OR CONFIGURATION.
- 19. CONFIRM WITH ARCHITECT THE LOCATION. PENDANT LENGTH. AND EXACT FINAL A.F.F. MOUNTING HEIGHT FOR ALL SUSPENDED FIXTURE TYPES
- 20. CONFIRM AND SUPPLY THE EXACT TYPE, SIZE AND QUANTITY OF ALL LAMPS REQUIRED FOR EACH FIXTURE AND TYPE.
- 21. AT CLOSE OF JOB, RE-LAMP ALL FIXTURES WITH NEW LAMPS AND PROVIDE OWNER WITH 2% SPARE (NEW) LAMPS OF ALL LAMP TYPES.
- 22. PROVIDE 3000 KELVIN LAMPS FOR ALL FLUORESCENT FIXTURES. 23. SIZE ALL TRANSFORMERS PER NATIONAL ELECTRIC CODES.
- 24. FOR LIGHT SWITCHING AND LIGHT SWITCH LOCATIONS REFER TO ARCHITECTURAL DRAWINGS. COORDINATE ALL SWITCHES WITH MILLWORK/CABINETS.
- 25. SUBMIT PRODUCT DATA FOR ARCHITECT'S APPROVAL.
- 26. GANG ALL ADJACENT SWITCHES UNDER ONE COVER PLATE.
- 27. ALL DEVICE PLATES TO BE WHITE. 28. ALL SWITCHES TO BE DECORATED BY LEVITON
- 29. ALL LIGHTING FIXTURES TO BE APPROVED BY THE ARCH./ OWNER PRIOR TO ORDERING AND INSTALLING.
- 30. ARCHITECT TO SELECT COLOR OF LIGHTING FIXTURES. 31. REFER TO ARCHITECTURAL REFLECTED CEILING AND ELEVATION PLANS
- FOR EXACT LOCATION AND MONITORING HEIGHTS. 32. A MINIMUM OF 85% OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICIENCY LAMPS OR A MINIMUM OF 85% OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH EFFICIENCY LAMPS.
- 33. EXTERIOR LIGHTING SHALL COMPLY WITH THE REQUIREMENTS OF TABLE 409.2 FOR THE EXTERIOR LIGHTING ZONES(LZ) APPROPRIATE TO THE BUILDING SITE.
- 34. STRAIGHT, DOUBLE-ENDED FLUORESCENT LAMPS LESS THAN 6 FEET IN NOMINAL LENGTH AND WITH BI-PIN BASES SHALL CONTAIN NOT MORE
- THAN 5 MILLIGRAMS OF MERCURY PER LAMP. 35. INTERNALLY ILLUMINATED EXIT SIGNS SHALL NOT EXCEED 5 WATTS PER SIDE.
- 36. IC-RATED RECESSED LIGHTING FIXTURES SEALED AT HOUSING/INTERIOR FINISH AND LABELED TO INDICATE EQUAL OR LESS THAN 2.0 CFM LEAKAGE AT 75 PA

42. AUTOMATIC TIME SWITCH CONTROLS SHALL BE INSTALLED TO CONTROL

37. ALL LIGHTING SHALL BE AUTOMATICALLY SHUT OFF WITHIN 20 MINUTES OF ALL OCCUPANTS LEAVING THE SPACE, EXCEPT FOR RESTROOMS, WHICH SHALL BE SET TO A MAXIMUM OF 30 MINUTES FOR COMMERCIAL AREA.

### GENERAL POWER COORDINATION NOTES

- 1. SEE ARCHITECTURAL DRAWING FOR LOCATION OF POWER AND COMMUNICATION OUTLETS.
- 2. REFER TO POWER AND COMMUNICATION LEGEND FOR ADDITIONAL INFORMATION
- DIMENSIONS AND ALIGNMENT INDICATORS FROM OUTLET LOCATIONS ARE INDICATED FROM FACE OF SCHEDULED/EXISTING PARTITION TO CENTER OF DEVICE OUTLET GROUPING.
- WHEREVER POSSIBLE, OUTLETS SHALL BE GANGED TO REQUIRE A SINGLE PLATE.
- VERIFY MILLWORK ELEVATIONS FOR PROPER COORDINATION OF NEW WORK.
- COORDINATE LOCATIONS OF RECEPTACLES AND SWITCHES MOUNTED ON MILLWORK/BACKSLASH MILLWORK/CABINET SUPPLIER. POSITION JUNCTION BOXES TO FINISH FLUSH WITH MILLWORK/BACKSLASH FACE. MOUNT ALL NEW OUTLETS AT +18" A.F.F. ON CENTER, UNO
- OUTLETS ABOVE COUNTERTOPS TO BE MOUNTED HORIZONTALLY. 6" ABOVE COUNTERTOP O.C.
- 9. OUTLETS LOCATED ADJACENT TO SINKS AND IN BATHROOM TO BE GROUND FAULT INTERRUPT PROTECTED.
- 10. ITEMS INDICATED AS EXISTING WILL BE TERMED "EXISTING" OR "E", UNO. 11. ALL ELECTRICAL DEVICES SUCH AS OUTLETS & SWITCHES SHALL BE
- DECORATED BY LEVITON. 12. PROVIDE TAMPER RESISTANCE RECEPTACLE AS PER NEC 2017 ART. 406.12(A) AND ART. 210.52.

~		[		1
(VS)	VACANCY SENSOR SWITCH	SYMBOL	VOLTAGE	
\$ .3	1 WAY SWITCH		120V	L
3 ∯ Ms	2 WAY SWITCH MOTION SENSOR WALL SWITCH		120V	L
			1200	
\$	3 WAY SWITCH DUPLEX WALL OUTLET		120V	L
	SINGLE RECEPTACLE OUTLET			
$\bigcirc$			120V	
<u></u>			1200	
	240V OUTLET	EX1		
₽₩₽	DUAL DATA AND TELEPHONE,TV WALL OUTLET		120V/9.6V	L
10V. D CM	CO AND SMOKE COMBINATION DETECTOR			
	EXHAUST FAN		120V	LI
$\bigcirc$	ELECTRIC MOTOR			
	SURFACE TYPE PANEL BOARD		120V	LI
M	ELECTRIC METER			
F	HORN			. –
$[\mathbf{X}]$	SPEAKER/HORN WITH STROBE LIGHT		HTING	LE
	WASTE DISPOSAL OUTLET			
₽₩₽	TV,DATA,VOICE AND OUTLET		BUILDING	
ф Т	GROUND FAULT INTERRUPTING DUPLEX RECEPTACLE			(PF
	DISCONNECTING SWITCH		ELECTRICAL SY	
	CONTINUITY LINE		Lighting la	sched amp typ
	SWITCHING LINE			umber allast f
$\Phi \mathbf{\Lambda}$	DATA, VOICE AND OUTLET		to	umber otal wa
OS)	OCCUPANCY SENSOR SWITCH		to	otal int otal ex
GFI	URE SUBSCRIPT LEGEND: GROUND FAULT WEATHER PROOF		Addition (When us ⊠ ⊠	C40 C40 C40 C40 C40 C40
EC	QUIPMENT LEGENDS			

ABBREVIATIO D/W DISHWASHE WM WASHING M WP WEATHER F GFI GROUND FA CONN. CONNECTIO PNL PANEL AFF ABOVE FINI EMT ELECTRICA NEC NATIONAL NEMA | NATIONAL I NTS NOT TO SCA C.

CONDUIT

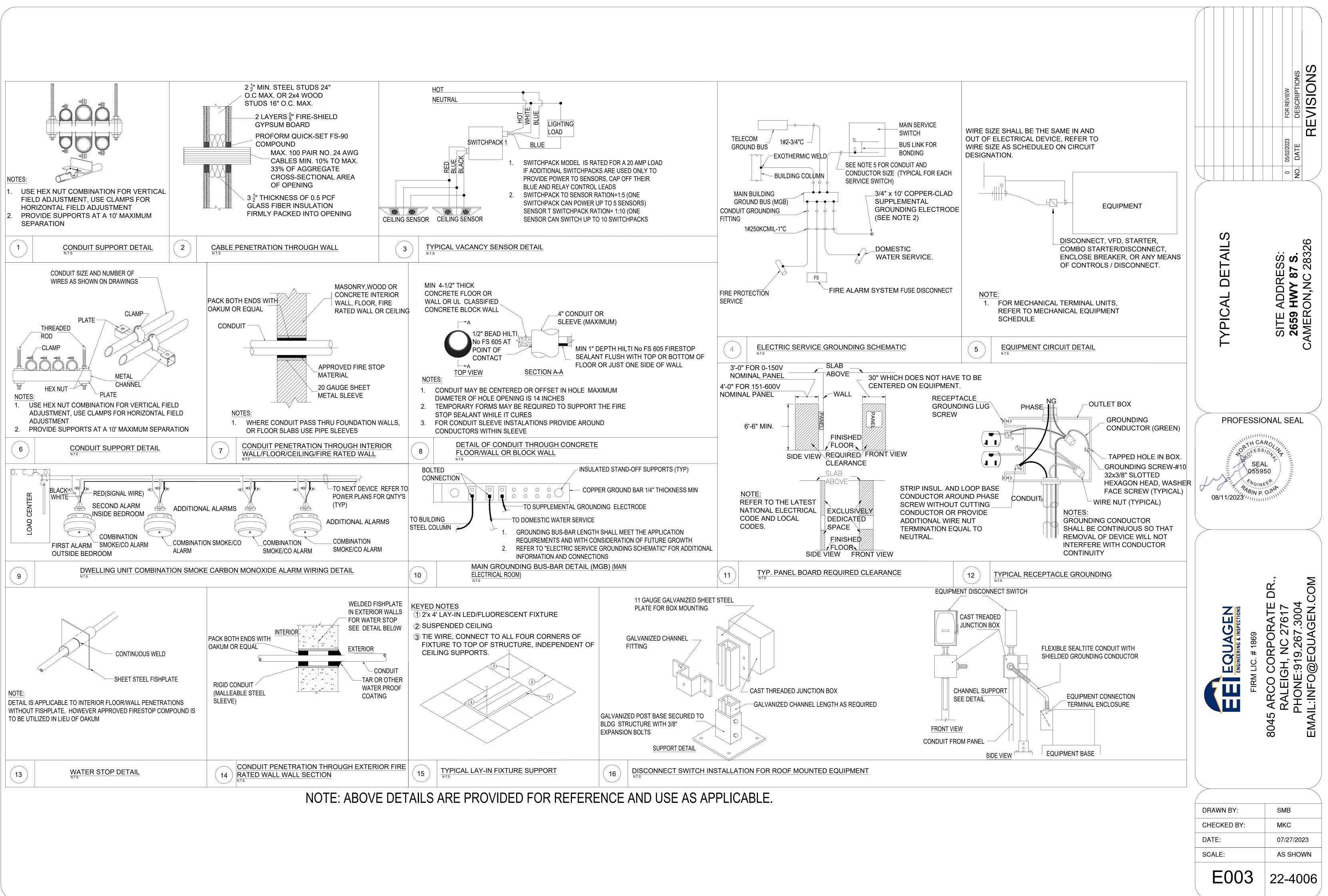
DNS
R
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ELECTRICAL MFG ASSOC
ALE

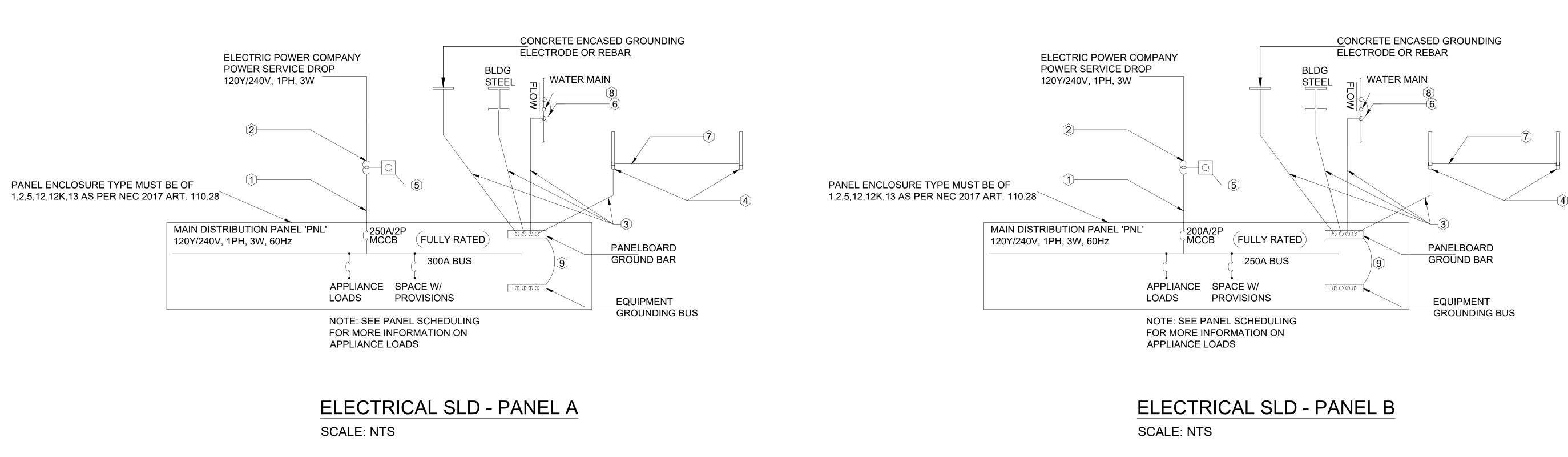
AMP	MOUNTING	REMARKS
LED	CEILING HANGING	HANGING STRIP LIGHT
LED	CEILING	EXHAUST FAN AND LIGHT COMBO
LED	WALL/SURFACE	COSMO WALL SCONCE (PHOTO SENSOR AND ASTRONOMICAL TIME CLOCK TYPE)
LED	WALL/SURFACE	2FT VANITY LIGHT FIXTURE/BATHROOM WET ZONE LIGHT
LED	CEILING/SURFACE	EMERGENCY EXIT LED LIGHT c/w BATTERY PACK
LED	CEILING/RECESSED	PANEL LIGHT (2'*2')
LED	WALL	EMERGENCY LIGHT

# GENDS

2018 APPENDIX B DDE SUMMARY FOR ALL COMMERCIAL PROJECTS ELECTRICAL DESIGN PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)								
ELECTRICAL SUMMARY								
M AND EQUIPMENT								
mpliance: Energy CodePerformancePrescriptiveASHRAE 90.1PerformancePrescriptive								
strip       STRIP LIGHT         gr of lamps in fixture:       SINGLE LAMP IN ONE FIXTURE         it type used in the fixture:       OUTDOOR SCONCE FLOOD WALL LIGHT         er of ballasts in fixture:       ONE BALLAST IN ONE FIXTURE         vattage per fixture:       90 W PER FIXTURE         otterior wattage specified vs. allowed (whole building or space by space)         xterior wattage specified vs. allowed								
ficiency Package Options the 2018 NCECC; not required for ASHRAE 90.1) 06.2 More Efficient HVAC Equipment Performance 06.3 Reduced Lighting Power Density 06.4 Enhanced Digital Lighting Controls 06.5 On-Site Renewable Energy 06.6 Dedicated Outdoor Air System 06.7 Reduced Energy Use in Service Water Heating								







### **KEY NOTES:**

- (1) RUN 2#4/0 , 1#4/0 (N) & 1#4 CU GROUND IN (1) 2 1/2" PVC-40 CONDUIT UNDERGROUND, AND (1) 2 1/2" RGS CONDUIT (WHERE EXPOSED. ALL CONDUCTORS TO HAVE TYPE (THHN/THWN-2) 90° C INSULATION
- (2) ELECTRIC POWER COMPANY CURRENT TRANSFORMER(S)
- 3 #4 AWG (CU) GROUNDING ELECTRODE CONDUCTOR
- GROUND RODS: 3/4" Ø x 10'-0"L COPPER CLAD STEEL w/ HIGH-STRENGTH STEEL CORE & ELECTROLYTIC-FRADE COPPER OUTER SHEATH, MOLTEN WELDED TO CORE
- (5) ELECTRIC POWER COMPANY METER
- 6 #4 AWG JUMPER
- (7) #4 AWG GROUNDING ELECTRODE CONDUCTOR NO SPLICES FROM PANEL TO LAST ROD
- (8) WATER METER

					250A PA	NEL					
PANEL SCHEDU	LE "PANE				1 PHASE 3	WIRE			1		
				CIRCUIT	PHA	ASE	CIRCUIT				
LOAD DESCRIPTION	POLES /AMPS	Wire	LOAD, VA	#	Α	В	#	LOAD, VA	Wire	POLES /AMPS	LOAD DESCRIP
LIGHTS	1/20	#12	2070	1	2970		2	900	#12	1/20	OBSERVATION REC
GENERAL RECEPTACLE	1/20	#12	1440	3		2160	4	720	#12	1/20	STORAGE RECEP
EMERGENCY/EXIT LIGHTS	1/20	#12	400	5	1840		6	1440	#12	1/20	OFFICE RECEPT
GENERAL RECEPTACLE	1/20	#12	1260	7		2700	8	1440	#12	1/20	OFFICE RECEPT
WALL MOUNT AC-TYPE1	1/20	#12	1000	9	6000		10	5000	#8	1/35	WH-01
GENERAL RECEPTACLE	1/20	#12	1080	11		6080	12	5000	#8	1/35	WH-01
WALL MOUNT AC-TYPE 2	1/20	#12	1500	13	3500		14	2000	#10	1/25	ODU-1
OUTSIDE RECEPTACLE	1/20	#12	180	15		2180	16	2000	#10	1/25	ODU-1
SMOKE DETECTOR	1/20	#12	800	17	1100		18	300	#12	1/20	AHU-1
LOBBY RECEPTACLE	1/20	#12	900	19		1200	20	300	#12	1/20	AHU-1
LIGHTS	1/20	#12	500	21	1100		22	600	#12	1/20	SHUTTER RECEPT
LIGHTS	1/20	#12	300	23		900	24	600	#12	1/20	SHUTTER RECEPT
SPACE				25	600		26	600	#12	1/20	SHUTTER RECEPT
OUTSIDE RECEPTACLE	1/20	#12	180	27		1680	28	1500	#10	1/25	ODU-3
PEN OBSERVATION RECEPTACLE	1/20	#12	900	29	2400		30	1500	#10	1/25	ODU-3
WALL MOUNT AC-TYPE 3	1/20	#12	750	31		3250	32	2500	#12	1/25	DRYER
SPACE					2500		34	2500	#12	1/25	DRYER
WALL MOUNT AC-TYPE 3	1/20	#12	750	35		1750	36	1000	#12	1/20	WALL MOUNT AC-
SPACE				37	1000		38	1000	#12	1/20	WALL MOUNT AC-
BATHROOM RECEPTACLE	1/20	#12	360	39		1360	40	1000	#12	1/20	WALL MOUNT AC-
SPACE				41	0		42				SPACE
TOTALS					23010	23260					
DUADE			(0070							SURFACE	
PHASE	VA		46270	TOTAL LOAD(VA)	_			MOUNTED:			
<u>A</u>	23010	-	240	SUPPLY VOLTAGE	_			VOLTS:		120/240	
В	23260	-	1	SUPPLY PHASE	_			PHASE/WIRE:		1/3	
			192.79					MAIN SIZE: MAIN TYPE:	м	250 AIN BREAKER	
TOTAL:	46270.00	1									

PNL SHORT CIRCUIT RATING SHALL MATCH OR EXCEED AVAILABLE SHORT CIRCUIT CURRENT FROM UTILITY CO

### **KEY NOTES:**

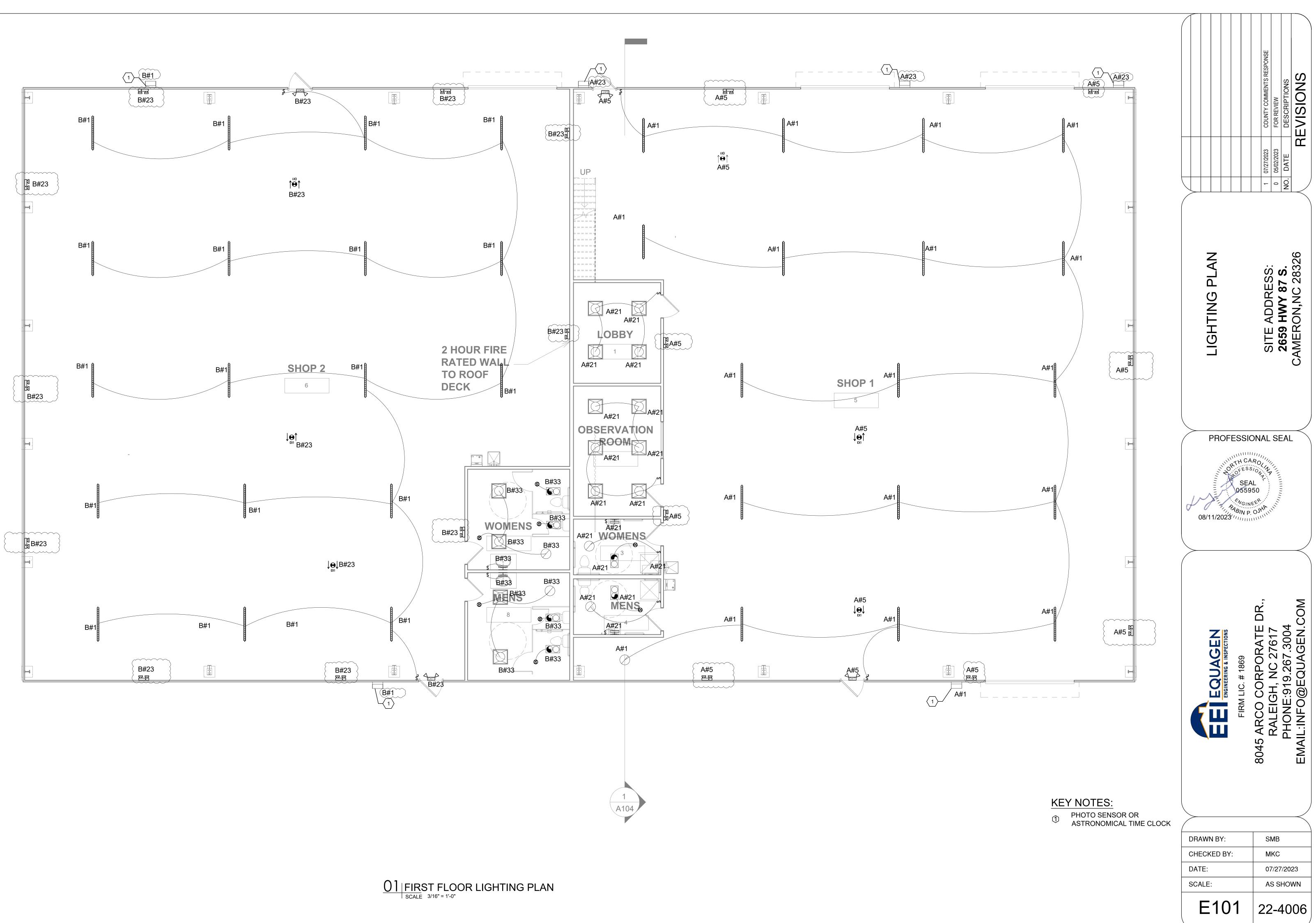
- (1) RUN 2#3/0 , 1#3/0 (N) & 1#6 CU GROUND IN (1) 2" PVC-40 CONDUIT UNDERGROUND, AND (1) 2" RGS CONDUIT (WHERE EXPOSED. ALL CONDUCTORS TO HAVE TYPE (THHN/THWN-2) 90° C INSULATION
- ELECTRIC POWER COMPANY CURRENT TRANSFORMER(S) (2)
- #6 AWG (CU) GROUNDING ELECTRODE CONDUCTOR 3
- GROUND RODS: 3/4" Ø x 10'-0"L COPPER CLAD STEEL w/ HIGH-STRENGTH STEEL CORE & ELECTROLYTIC-FRADE COPPER OUTER SHEATH, MOLTEN WELDED TO CORE
- (5) ELECTRIC POWER COMPANY METER
- (6) #6 AWG JUMPER
- (7) #6 AWG GROUNDING ELECTRODE CONDUCTOR NO SPLICES FROM PANEL TO LAST ROD
- (8) WATER METER

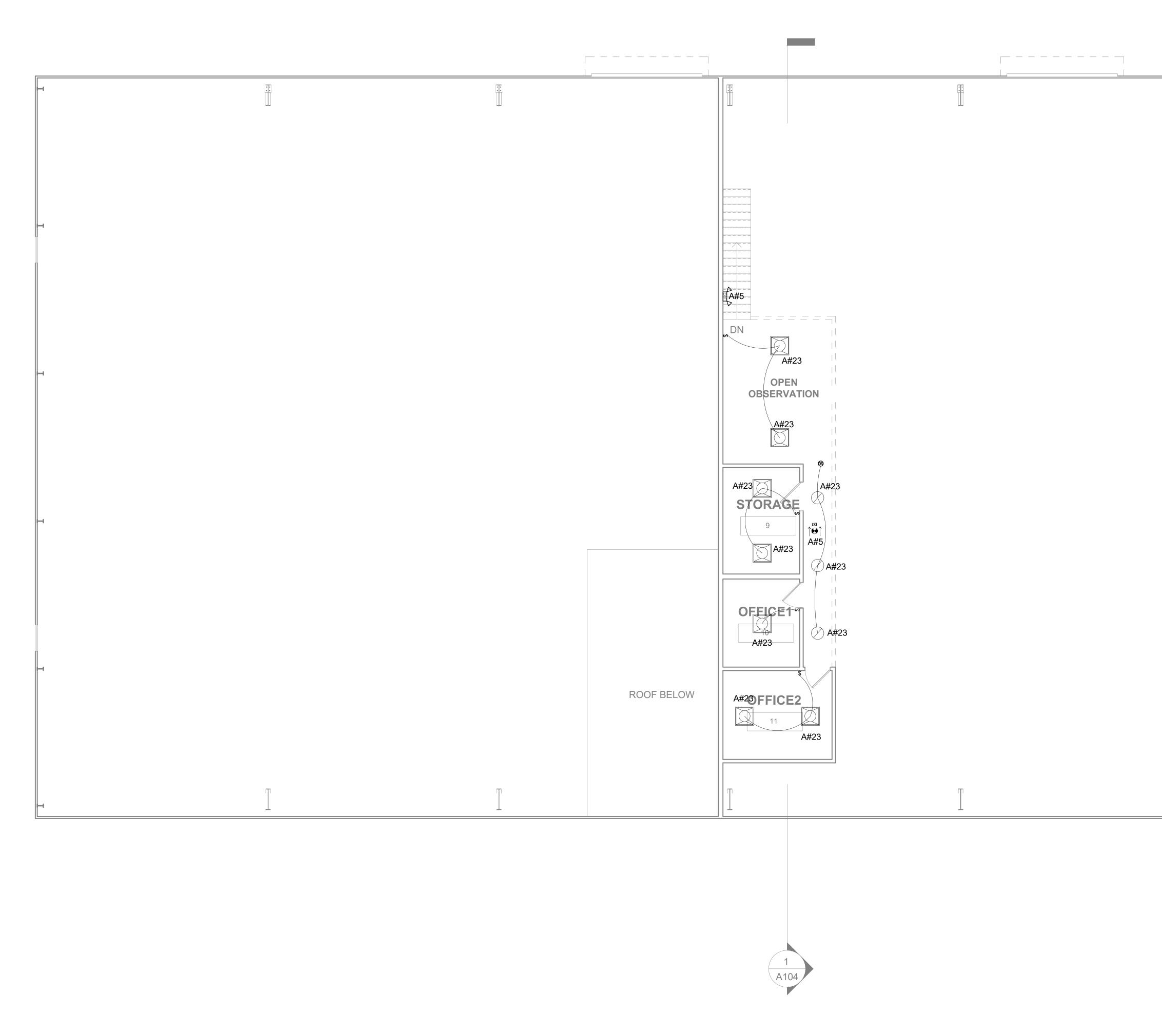
	PANEL SCHEDULE "PANEL B"				200A PANEL 1 PHASE 3 WIRE							
LOAD DESCRIPTION	LOAD DESCRIPTION	POLES /AMPS	Wire	LOAD, VA		PHA		CIRCUIT #	LOAD, VA	Wire	POLES /AMPS	LOAD DESCRIPTION
					#	A	В	"				
SERVATION RECEPTACLE	LIGHTS	1/20	#12	2320	1	2320		2				SPACE
STORAGE RECEPTACLE	SPACE				3		5000	4	5000	#8	1/35	WH-02
OFFICE RECEPTACLE	SPACE				5	5000		6	5000	#8	1/35	WH-02
OFFICE RECEPTACLE	GENERAL RECEPTACLE	1/20	#12	900	7		1900	8	1000	#10	1/25	ODU-2
WH-01	SPACE				9	1000		10	1000	#10	1/25	ODU-2
WH-01	GENERAL RECEPTACLE	1/20	#12	1080	11		1830	12	750	#12	1/20	WALL MOUNT AC-TYPE
ODU-1	GENERAL RECEPTACLE	1/20	#12	720	13	1470		14	750	#12	1/20	WALL MOUNT AC-TYPE:
ODU-1	OUTSIDE RECEPTACLE	1/20	#12	180	15		180	16				SPACE
	SMOKE DETECTOR	1/20	#12	500	17	500		18				"
AHU-1	GENERAL RECEPTACLE	1/20	#12	1260	19		1260	20				"
AHU-1	SPACE				21	0		22				"
	EMERGENCY/EXIT LIGHTS	1/20	#12	150	23		150	24				"
	SPACE		1			0		26				"
HUTTER RECEPTACLE	OUTSIDE RECEPTACLE	1/20	#12	180	27	-	180	28				"
ODU-3	SPACE				29	0		30				"
ODU-3	BATHROOM RECEPTACLE	1/20	#12	720	31	-	720	32				
DRYER	LIGHTS	1/20	#12	800	33	800	720	34				
DRYER	SPACE	1/20	#12	800	35	000	0	36				
ALL MOUNT AC-TYPE1	SPACE						0					
ALL MOUNT AC-TYPE1		4/00			37	0		38				
ALL MOUNT AC-TYPE 1	SHUTTER RECEPTACLE	1/20	#12	600	39		600	40				
SPACE	SPACE		_		41	0		42				"
	TOTALS					11090	11820					
	PHASE	VA		22910	TOTAL LOAD(VA)				MOUNTED:		SURFACE	
	Α	11090	1	240	SUPPLY VOLTAGE				VOLTS:		120/240	
	В	11820	1	1	SUPPLY PHASE				PHASE/WIRE:		1/3	
			1	95.46					MAIN SIZE:		200	
			1	L I					MAIN TYPE:	l N	IAIN BREAKER	
	TOTAL:	22910.00	1						L	1		

### NOTES:

- 1. ALL PANELBOARDS SUPPLIED BY A FEEDER CONDUCTOR SHALL BE MARKED (LABELED) TO INDICATE WHERE THE POWER SUPPLY FOR THE PANELBOARD ORIGINATES FROM IN ACCORDANCE WITH THE NEC 2017 ART. 408.4(B).
- 2. POST AVAILABLE FAULT CURRENT RATINGS SHALL BE FIELD MARKED ON THE ELECTRICAL SERVICE EQUIPMENT IN THE FIELD PER NEC 2017 ART 110.24(A).

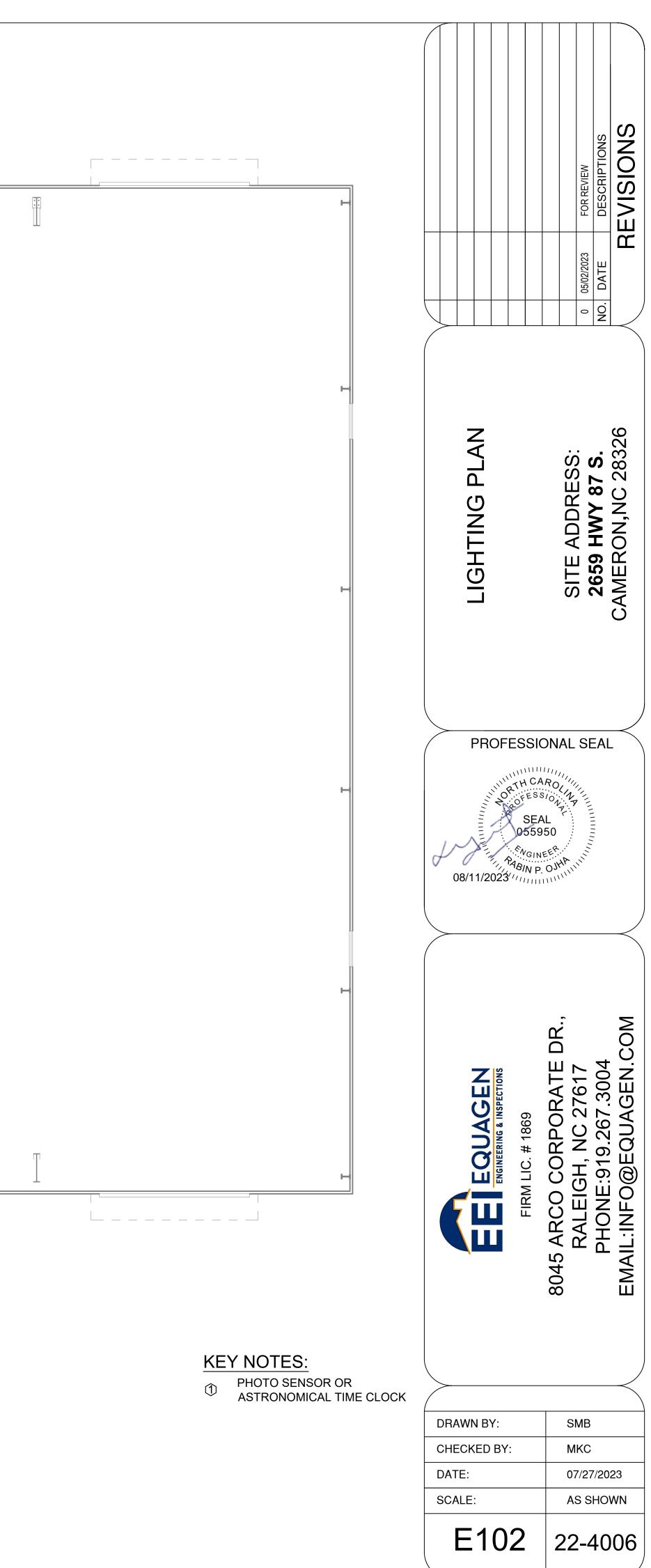


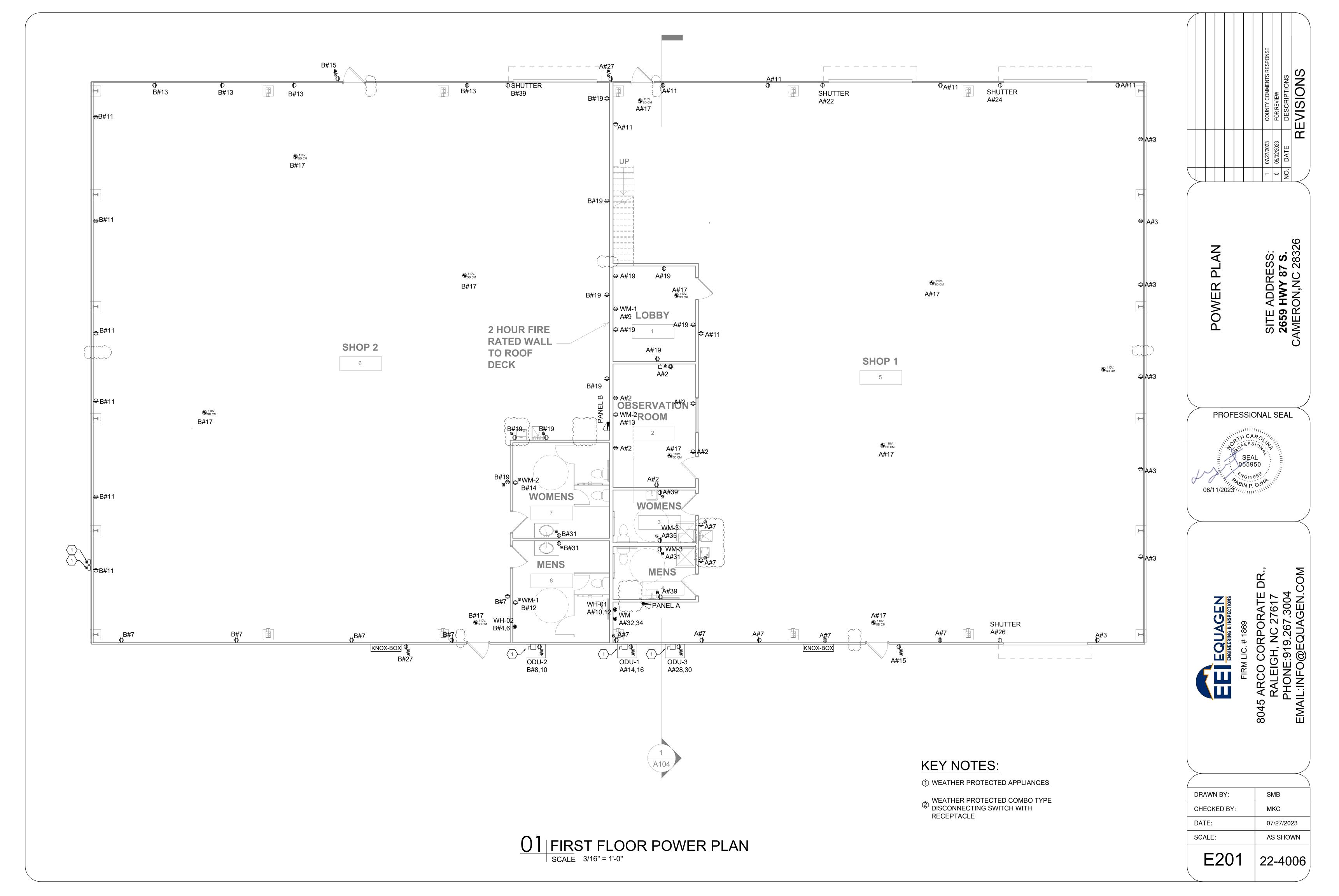


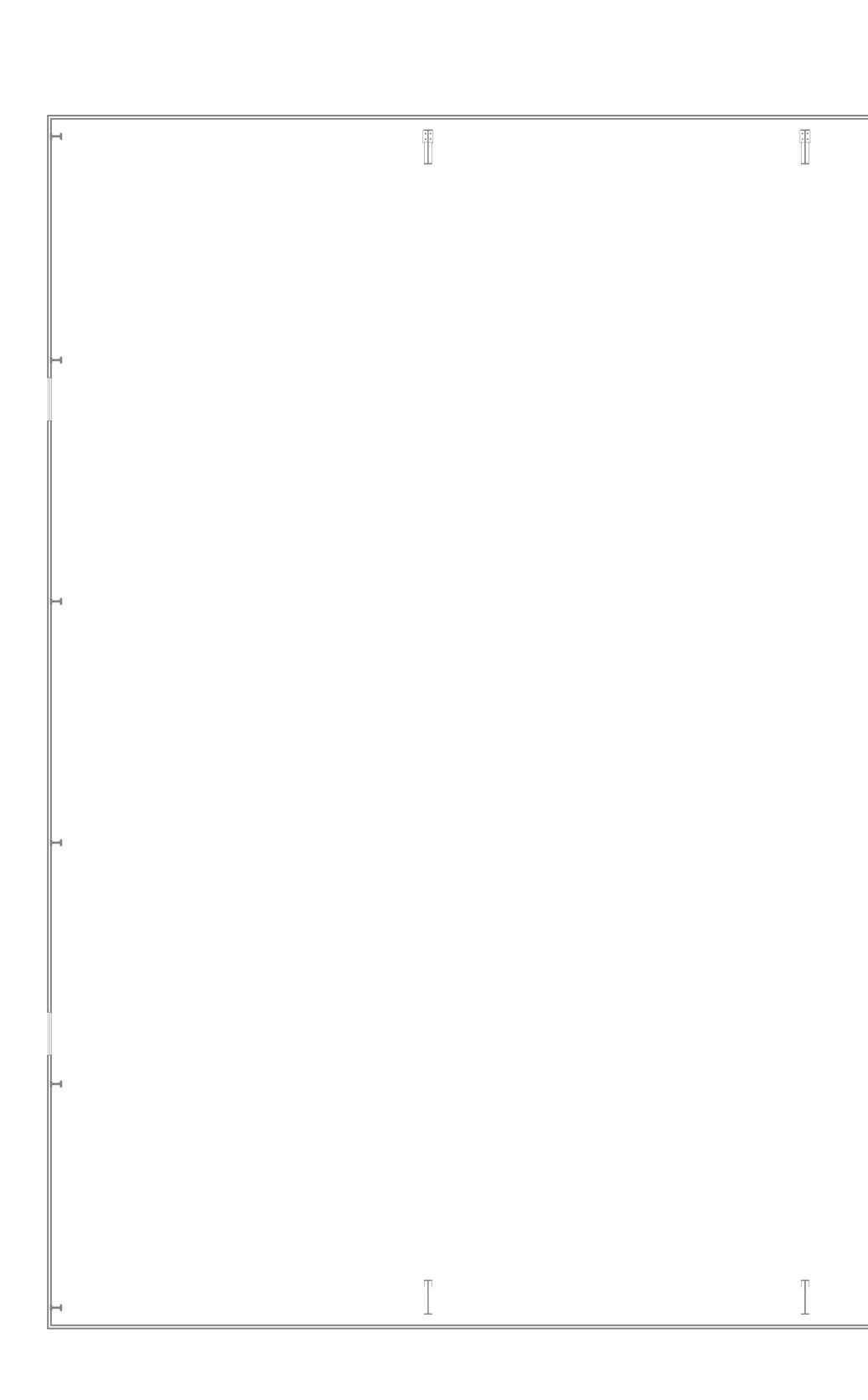


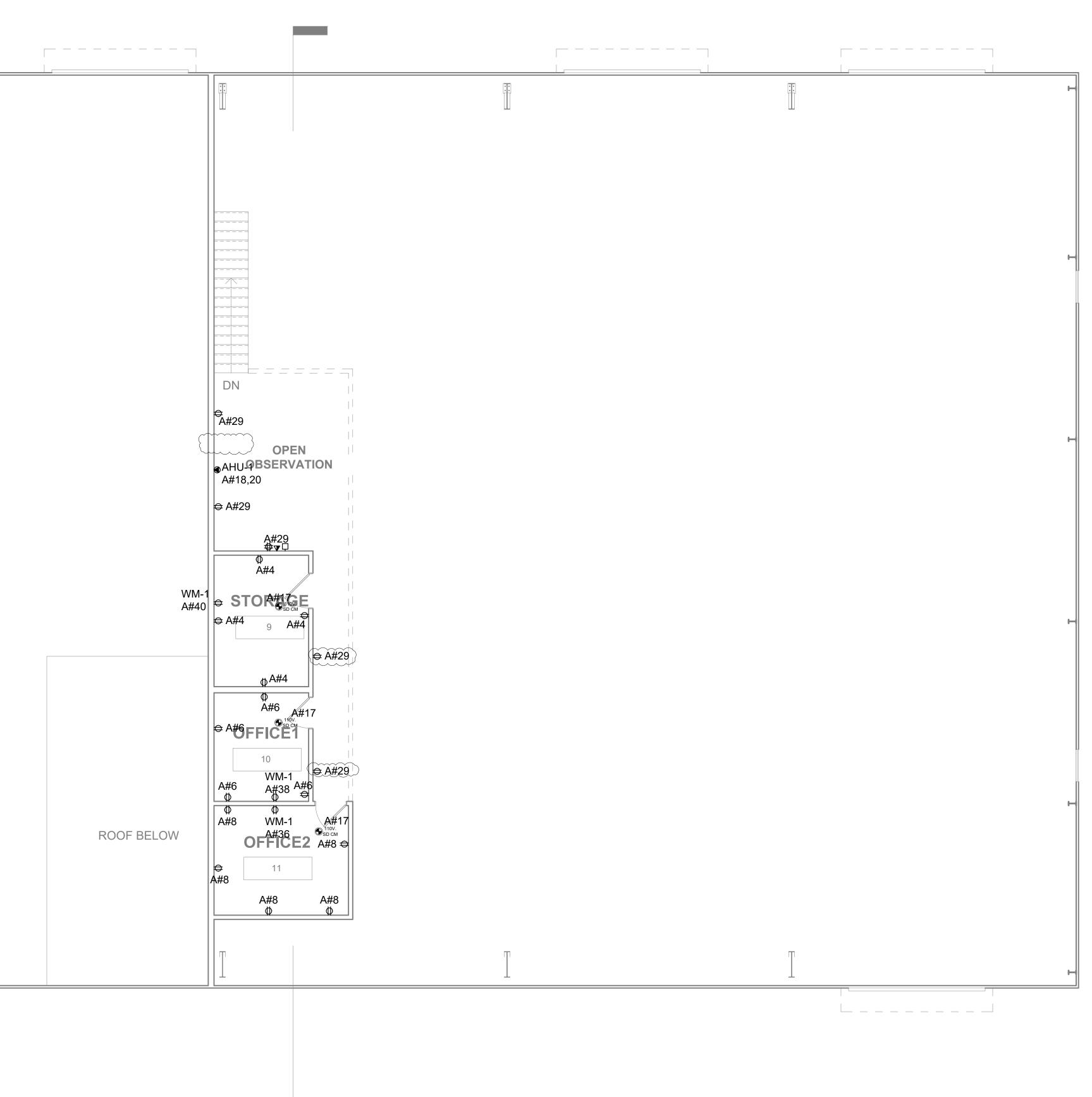


02 SECOND FLOOR LIGHTING PLAN











1





# KEY NOTES:

(1) WEATHER PROTECTED APPLIANCES

WEATHER PROTECTED COMBO TYPE DISCONNECTING SWITCH WITH RECEPTACLE

#### GENERAL NOTES

- 1. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS TO PROVIDE COMPLETE AND PROPERLY FUNCTIONING BUILDING SYSTEMS. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY TO ACHIEVE SUCH ENDS.
- 2. ALL MECHANICAL AND PLUMBING WORK SHALL COMPLY WITH IMC 2015 IPC 2015 AND IRC 2015 PER 2017 DC BUILDING CODE.
- THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE INTENDED TO 3. SHOW EQUIPMENT AND SYSTEMS AS ACCURATELY AS THE SCALE WILL PERMIT. ALL CRITICAL LOCATIONS AND DIMENSIONS SHALL BE DETERMINED IN THE FIELD.
- 4. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, STANDARDS ORDINANCES. RULES AND REGULATIONS OF ALL LOCAL AND STATE GOVERNMENTAL AUTHORITIES, THE RULES OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), THE NATIONAL ELECTRICAL CODE (NEC), THE AMERICANS WITH DISABILITIES ACT, ASHRAE AS INTERPRETED BY THE GOVERNMENTAL AUTHORITY AND PUBLIC UTILITIES HAVING JURISDICTION OVER ANY OF THE SYSTEMS HEREIN SPECIFIED. DEFINITIONS: "PROVIDE" - FURNISH AND INSTALL "FURNISH" - SUPPLY AND DELIVER TO PROJECT SITE "INSTALL" -ERECT IN PLACE "CONCEALED" -HIDDEN BY ARCHITECTURAL WALLS AND CEILINGS "EXPOSED" - VISIBLE TO VIEW "INDICATED" - SHOWN IN CONTRACT DRAWINGS
- 5. WHERE SITE CONDITIONS REQUIRE MINOR DEVIATIONS FROM THE CONTRACT DOCUMENTS, MAKE SUCH DEVIATIONS WITHOUT COST TO THE CONTRACT. MAJOR DEVIATIONS SHALL NOT BE MADE WITHOUT FIRST OBTAINING WRITTEN PERMISSION FROM THE OWNER.
- 6. COORDINATE WITH ALL TRADES TO AVOID INTERFERENCE AMONG MECHANICAL, PLUMBING, ELECTRICAL, ARCHITECTURAL AND STRUCTURAL ITEMS. PROVIDE ALL NECESSARY OFFSETS AND FITTINGS IN PIPING, DUCTWORK, CIRCUITRY AND OTHER ITEMS REQUIRED TO INSTALL THE WORK WITHOUT INTERFERENCES.
- 7. THE CONTRACTOR SHALL COORDINATE SPRINKLER PIPING AS REQUIRED FOR THE INSTALLATION OF THE MECHANICAL AND ELECTRICAL SYSTEMS WHILE MAINTAINING THE ARCHITECTURAL INTENT. ALL FIRE PROTECTION WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), INTERNATIONAL FIRE CODE (IFC), THE INTERNATIONAL BUILDING CODE (IBC).
- THE CONTRACTOR SHALL KEEP A RECORD OF ALL CHANGES TO THE 8. DRAWINGS AND SHALL SUBMIT AS BUILT DRAWINGS TO THE OWNER AT THE CONCLUSION OF THE PROJECT
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THE QUIET OPERATION OF ANY NEW SYSTEM UPON COMPLETION OF INSTALLATION. THE TRANSMISSION OF VIBRATION OR SOUND TO THE STRUCTURE OR OCCUPIED SPACES SHALL NOT BE PERMITTED.
- 10. ALL EQUIPMENT SHALL BE NEW (UNLESS INDICATED OTHERWISE) AND THE CURRENT MODEL FOR WHICH REPLACEMENT PARTS ARE AVAILABLE. SUBSTITUTIONS SHALL ONLY BE ALLOWED AT THE DISCRETION OF THE OWNER.
- 11. ALL EQUIPMENT SHALL BE SUITABLE FOR THE PURPOSE INTENDED. ALL MANUFACTURERS SHALL HAVE SIMILAR PRODUCTS IN SERVICE FOR A MINIMUM OF 5 YEARS. ALL NEW EQUIPMENT SHALL BE PROVIDED PER MANUFACTURER'S RECOMMENDATIONS.
- 12. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE BEST ENGINEERING PRACTICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. THIS SHALL INCLUDE PROVIDING CLEARANCES AS DEFINED IN THE INSTALLATION INSTRUCTIONS AND IN ACCORDANCE WITH NEC REQUIREMENTS. NEW EQUIPMENT SHALL ALSO BE COORDINATED AROUND SPRINKLER AND FIRE ALARM SYSTEMS. MODIFY SYSTEMS AS NECESSARY. PROVIDE ALL REQUIRED AUXILIARY ITEMS REQUIRED TO PERFORM FUNCTION INTENDED.
- 13. THE CONTRACTOR SHALL VERIFY PROPER OPERATION OF ALL EXISTING ITEMS AND EQUIPMENT INDICATED TO BE REUSED. THE CONTRACTOR SHALL REPORT ANY DEFICIENCIES TO THE OWNER DURING THE CONSTRUCTION PHASE OF THE PROJECT. THOROUGHLY CLEAN ALL ITEMS AND EQUIPMENT INDICATED TO BE REUSED. REPLACE ALL FILTERS WITH SIZE AND TYPE TO MATCH EXISTING.
- 14. PROVIDE ALL SUPPORT STEEL, HANGERS, VIBRATION ISOLATIONS AND ACCESSORIES NECESSARY FOR EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. DO NOT SUPPORT ANY CEILING OR OTHER BUILDING STRUCTURE FROM PIPING OR CONDUITS. DO NOT ALLOW PIPING OR CONDUITS TO COME INTO DIRECT CONTACT WITH BUILDING WALLS OR FLOORS. COORDINATE INSTALLATION AMONG ALL TRADES. PROVIDE ALL NECESSARY TRANSITIONS AND OFFSETS TO INSURE COMPLETE COORDINATED INSTALLATION.
- 15. PROVIDE APPROVED AIR FILTERS AS PER SECTION 605 DC MECHANICAL CODE. MEDIA-TYPE AND ELECTROSTATIC-TYPE AIR FILTERS SHALL BE LISTED AND LABELED. MEDIA-TYPE AIR FILTERS SHALL COMPLY WITH UL 900. HIGH EFFICIENCY PARTICULATE AIR FILTERS SHALL COMPLY WITH UL 586. ELECTROSTATIC-TYPE AIR FILTERS SHALL COMPLY WITH UL 867. AIR FILTERS UTILIZED WITHIN DWELLING UNITS SHALL BE DESIGNED FOR THE INTENDED APPLICATION AND SHALL NOT BE REQUIRED TO BE LISTED AND LABELED.

### GENERAL NOTES CONTINUED

- CONDITION
- PROPER SPRINKLER SYSTEM.
- ON THIS PROJECT
- NOTED OTHERWISE

#### COMMISSIONING OF GENERAL NOTES

- DUCT.
- VAPOR BARRIER
- WALLS AND FLOOR SLABS.

### DUCT LEAKAGE TEST

- OFFICIAL.
- PROVIDED TO THE CODE OFFICIAL.

### DURING TESTING

- INFILTRATION CONTROL MEASURES:

- SHALL BE TURNED OFF; AND
- SHALL BE FULLY OPEN.

	DRAWING LIST	
SHEET NO.	SHEET NAME	
M001	GENERAL NOTES, LEGENDS & ABBREVIATIONS	
M002	EQUIPMENT SCHEDULES & DETAILS	
M101	HVAC FLOOR PLANS	
M102	HVAC FLOOR PLANS	

1. PROVIDE OPENINGS IN BUILDING CONSTRUCTION FOR PASSAGE OF PIPING AND CONDUIT. REPAIR ALL WALLS, CEILINGS AND FLOORS, PENETRATED. THE REPAIRS SHALL BE WITH MATERIALS AND FINISHES THAT MATCH EXISTING CONSTRUCTION. ALL PENETRATIONS IN FIRE WALLS SHALL BE SEALED WITH SUITABLE MATERIALS TO PRESERVE FIREWALL INTEGRITY CORE DRILLING AND OTHER SLAB PENETRATIONS ARE NOT PERMITTED UNLESS SPECIFICALLY NOTED ON PLANS. RESTORE, PATCH AND PAINT ALL DAMAGED BUILDING COMPONENTS TO RESTORE TO SIMILAR OR BETTER

2. THE CONTRACTOR SHALL TEST ALL EQUIPMENT PROVIDED UNDER THIS CONTRACT AND DEMONSTRATE TO THE OWNER ITS PROPER OPERATION. SPRINKLER SYSTEM PLAN IS SHOWN AS SCHEMATIC. IT IS CONTRACTOR'S RESPONSIBILITY TO COORDINATE IT WITH FIRE MARSHALL AND DESIGN

4. ALL EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED IN FULL FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK. 5. PRODUCTS CONTAINING ASBESTOS OR PCB'S ARE NOT PERMITTED FOR USE

6. ALL NEW DUCTWORK SHALL BE GALVANIZED STEEL G90, 2 IN. W.G. UNLESS

7. EVALUATING EXISTING ROOF SYSTEM STRUCTURALLY DUE TO HVAC EQUIPMENT ADDITION IS OUT OF ENGINEER'S RESPONSIBILITY. 8. ADD A NOTE IN MECHANICAL GENERAL NOTES SHEET " ALL APPLIANCES IN

THE ROOF SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF 2012 MECHANICAL CODE. SECTION 306.5"

1. ALL DUCTWORK AND CEILING PENETRATIONS SHALL BE COORDINATED WITH EXISTING STRUCTURAL JOISTS AND BEAMS. PROVIDE OFFSETS IN PIPES AND DUCTS TO AVOID CUTTING OF BEAMS AND JOISTS.

2. CONTRACTOR SHALL SUBMIT DUCTWORK SHOP DRAWING TO ENGINEER FOR APPROVAL INCLUDING DUCTWORK SIZE. 3. ALL DUCTWORK AND FITTINGS SHALL BE CONSTRUCTED TO THE LATEST

"SMACNA" STANDARDS. THE DUCT SIZES INDICATED ON THE DRAWINGS ARE IN INCHES AND REPRESENT THE FREE, NET INSIDE DIMENSIONS OF THE

4. ALL FLEXIBLE DUCT BRANCH LINES AND BRANCH TAKEOFFS SHALL BE THE SAME SIZE AS THE INLET OF THE DIFFUSER TO WHICH THEY CONNECT. THE MAXIMUM LENGTH OF FLEXIBLE DUCT BETWEEN BRANCH DUCTS AND DIFFUSERS IS FIVE FEET. FLEXIBLE DUCTWORK SHALL BE RUN WITH SMOOTH BENDS SO AS TO NOT RESTRICT AIR FLOW.

5. PROVIDE INSULATION FOR SUPPLY, AND RETURN, EXHAUST, DUCTS LOCATED IN CEILING PLENUMS AND OTHER CONCEALED, NON-CONDITIONED SPACES. THE INSULATION SHALL BE 1 1/2" THICK GLASS FIBER WITH FOIL

6. PROVIDE 3M FIRE BARRIER CP 25WB CAULK AROUND ALL PIPE, ENVIRONMENTAL AIR AND DUCT PENETRATIONS THROUGH FIRE RATED

7. INTAKE AND EXHAUST CONNECTIONS SHALL BE A MINIMUM 10 FEET APART UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL HAVE ALL AIR SYSTEMS BALANCED TO INDICATED FLOW RATES BY A CERTIFIED "AABC" BALANCING CONTRACTOR.

1. CONTRACTOR SHALL PERFORM THE PRESSURE TEST FOR DUCT TO DETERMINE AIR LEAKAGE BY THE METHODS INDICATED IN R403.3.3 IECC 2015 AND A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE

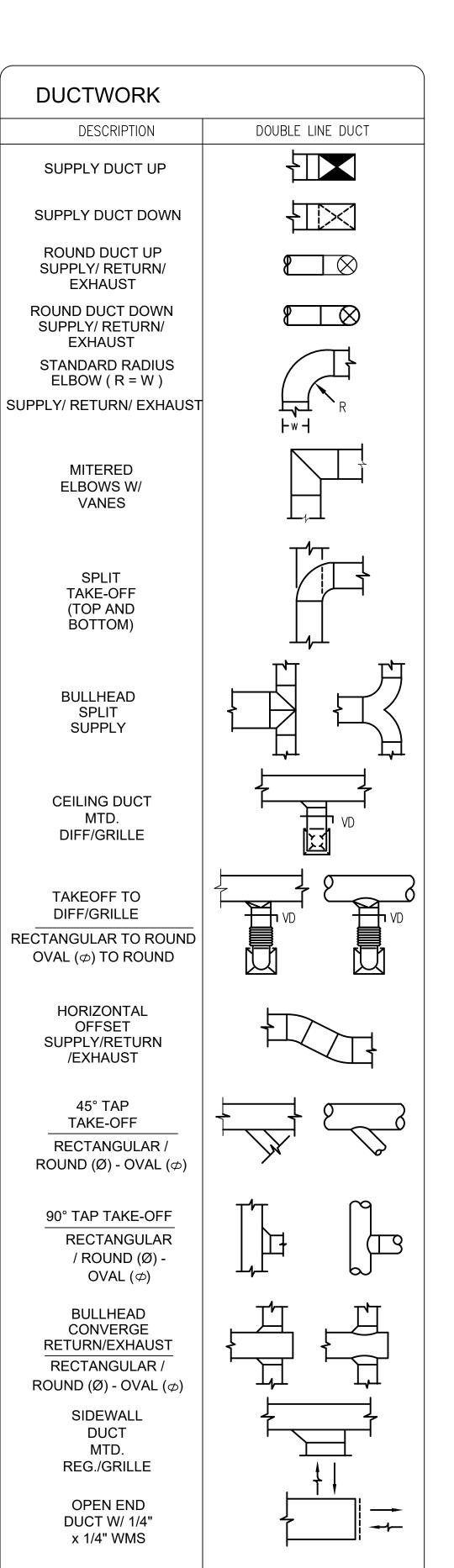
2. THE TOTAL DUCT LEAKAGE SHALL BE < 4 CFM/100FT^2 WITH AIR HALDLER INSTALLED. PER 2015 IECC R403.3.4. A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND

1. EXTERIOR WINDOWS AND DOORS, FIREPLACE AND STDVE DOORS SHALL BE CLOSED, BUT NOT SEALED, BEYOND THE INTENDED WEATHER STRIPPING OR OTHER INFILTRATION CONTROL MEASURES

2. DAMPERS INCLUDING EXHAUST, INTAKE, MAKEUP AIR, BACKDRAFT AND FLUE DAMPERS SHALL BE CLOSED, BUT NOT SEALED BEYOND INTENDED

3. INTERIOR DOORS. IF INSTALLED AT THE TIME OF THE TEST, SHALL BE OPEN; 4. EXTERIOR DOORS FOR CONTINUOUS VENTILATION SYSTEMS AND HEAT RECOVERY VENTILATORS SHALL BE CLOSED AND SEALED; 5. HEATING AND COOLING SYSTEMS, IF INSTALLED AT THE TIME OF THE TEST,

6. SUPPLY AND RETURN REGISTERS, IF INSTALLED AT THE TIME OF THE TEST,



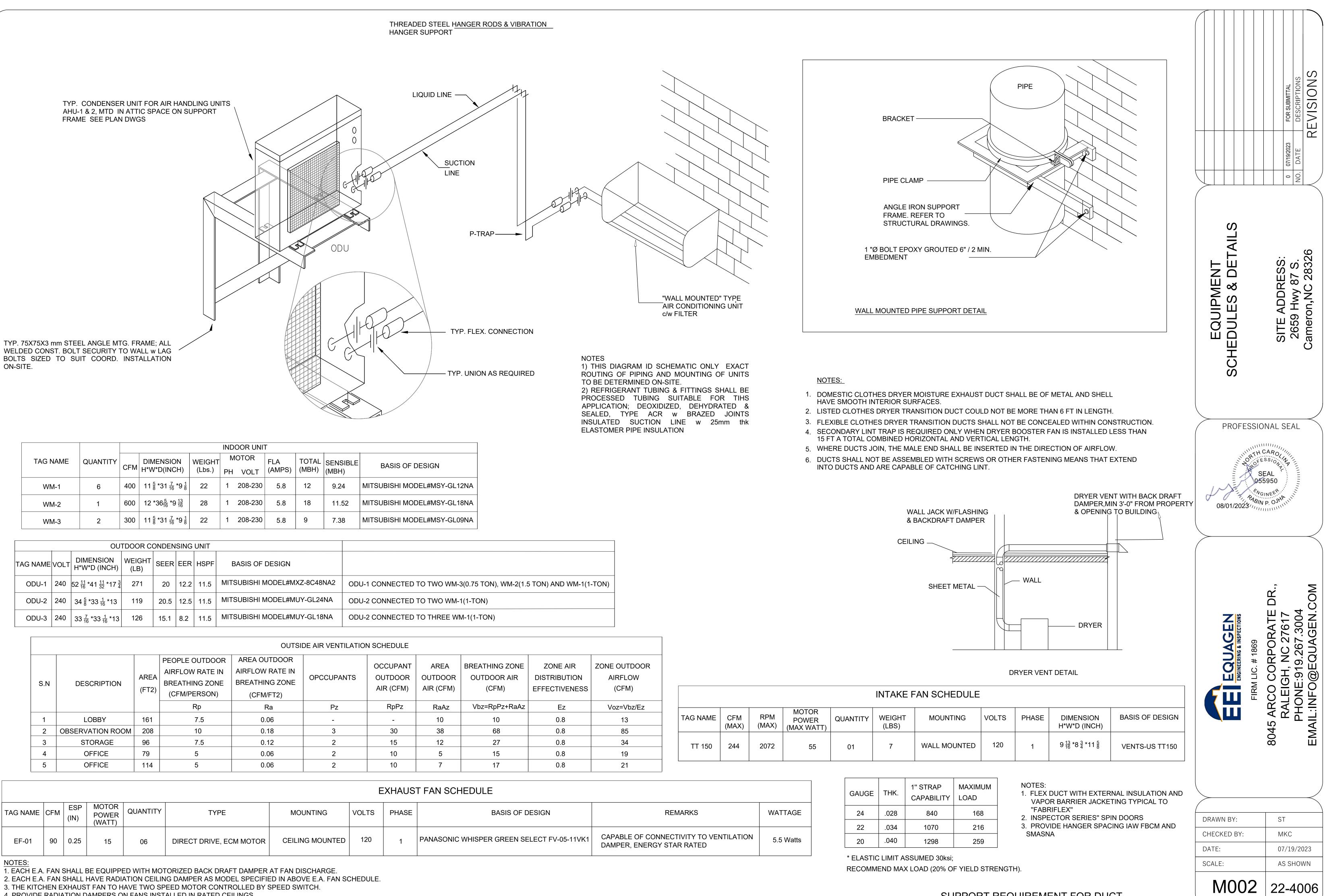
ARCH AHU BD CFM CR DP DIA EF ELEV EΧ FD FPM FR FT GAL HP ΗZ IN KW MECH MIN

EQUIPMENT SYMB	OLS AND CALL OUTS
	VOLUME DAMPER
	AIR HANDLING UNIT (AHU)
	SIDE WALL GRILL
	SUPPLY AIR DIFFUSER
	FLOOR SUPPLY AIR DIFFUSER
	RETURN AIR DIFFUSER
	RETURN AIR GRILLE
	RETURN SIDE WALL GRILLE
	SUPPLY SIDE WALL GRILLE
	EXHAUST FAN
	SUPPLY DUCT
	EXHAUST DUCT
C===3	RETURN AIR DUCT
	OUTDOOR UNIT (ODU)

### GENERAL ABBREVIATIONS

ARCHITECT AIR HANDLING UNIT	N/A NO.	NOT APPLICABLE NUMBER
BACKDRAFT DAMPER	NTS	NOT TO SCALE
CUBIC FEET PER MINUTE CEILING REGISTER	OA ODU	OUTSIDE AIR OUT DOOR UNIT
DRAIN PIPE DIAMETER	RA RD	RETURN AIR RETURN DUCT
EXHAUST FAN	RG	REFRIGERANT GAS
ELEVATION	RL	REFRIGERANT LIQUID
EXHAUST	RPM	REVOLUTIONS PER MINUTE
FIRE DAMPER	SD	SUPPLY DIFFUSER
FEET PER MINUTE FLOOR REGISTER	SQFT	SQUARE FEET
FEET	Т	TEMPERATURE
GALLONS		
HORSEPOWER HERTZ	VD	VOLUME DAMPER
INCHES	W	WIDTH
KILOWATT	WB	WET BULB TEMPERATURE
MECHANICAL MINIMUM	WR	WALL REGISTER





[			INDOOR UNIT											
	TAG NAME	QUANTITY		DIMENSION H*W*D(INCH)	WEIGHT (Lbs.)	M PH	IOTOR VOLT	FLA (AMPS)	TOTAL (MBH)	SENSIBLE (MBH)	BASIS OF DESIGN			
	WM-1	6	400	11 <sup>5</sup> / <sub>8</sub> *31 <sup>7</sup> / <sub>16</sub> *9 <sup>1</sup> / <sub>8</sub>	22	1	208-230	5.8	12	9.24	MITSUBISHI MODEL#MSY-GL			
	WM-2	1	600	12 *36 <u>5</u> *9 13	28	1	208-230	5.8	18	11.52	MITSUBISHI MODEL#MSY-GI			
	WM-3	2	300	11 <sup>5</sup> / <sub>8</sub> *31 <sup>7</sup> / <sub>16</sub> *9 <sup>1</sup> / <sub>8</sub>	22	1	208-230	5.8	9	7.38	MITSUBISHI MODEL#MSY-GL			

		OU						
TAG NAME	VOLT	DIMENSION H*W*D (INCH) WEIGHT (LB) SEER EER HSPF BASIS OF DESIGN		BASIS OF DESIGN				
ODU-1	240	52	271	20	12.2	11.5	MITSUBISHI MODEL#MXZ-8C48NA2	ODU-1 CONNECTED TO TWO WM
ODU-2	240	$34\frac{5}{8}*33\frac{1}{16}*13$	119	20.5	12.5	11.5	MITSUBISHI MODEL#MUY-GL24NA	ODU-2 CONNECTED TO TWO WI
ODU-3	240	33 <del>7</del> /16 *33 <del>1</del> /16 *13	126	15.1	8.2	11.5	MITSUBISHI MODEL#MUY-GL18NA	ODU-2 CONNECTED TO THREE V

					OUTSI	DE AIR VENTILATIO	N SCHEDULE	
				PEOPLE OUTDOOR	AREA OUTDOOR		OCCUPANT	AREA
	<b>.</b>	DESCRIPTION	AREA		AIRFLOW RATE IN	OPCCUPANTS	OUTDOOR	OUTDOOF
	S.N		(FT2)	BREATHING ZONE (CFM/PERSON)	BREATHING ZONE		AIR (CFM)	AIR (CFM)
				Rp	(CFM/FT2) Ra	Pz	RpPz	RaAz
						FZ		
	1	LOBBY	161	7.5	0.06	-	-	10
	2	OBSERVATION ROOM	208	10	0.18	3	30	38
	3	STORAGE	96	7.5	0.12	2	15	12
	4	OFFICE	79	5	0.06	2	10	5
	5	OFFICE	114	5	0.06	2	10	7

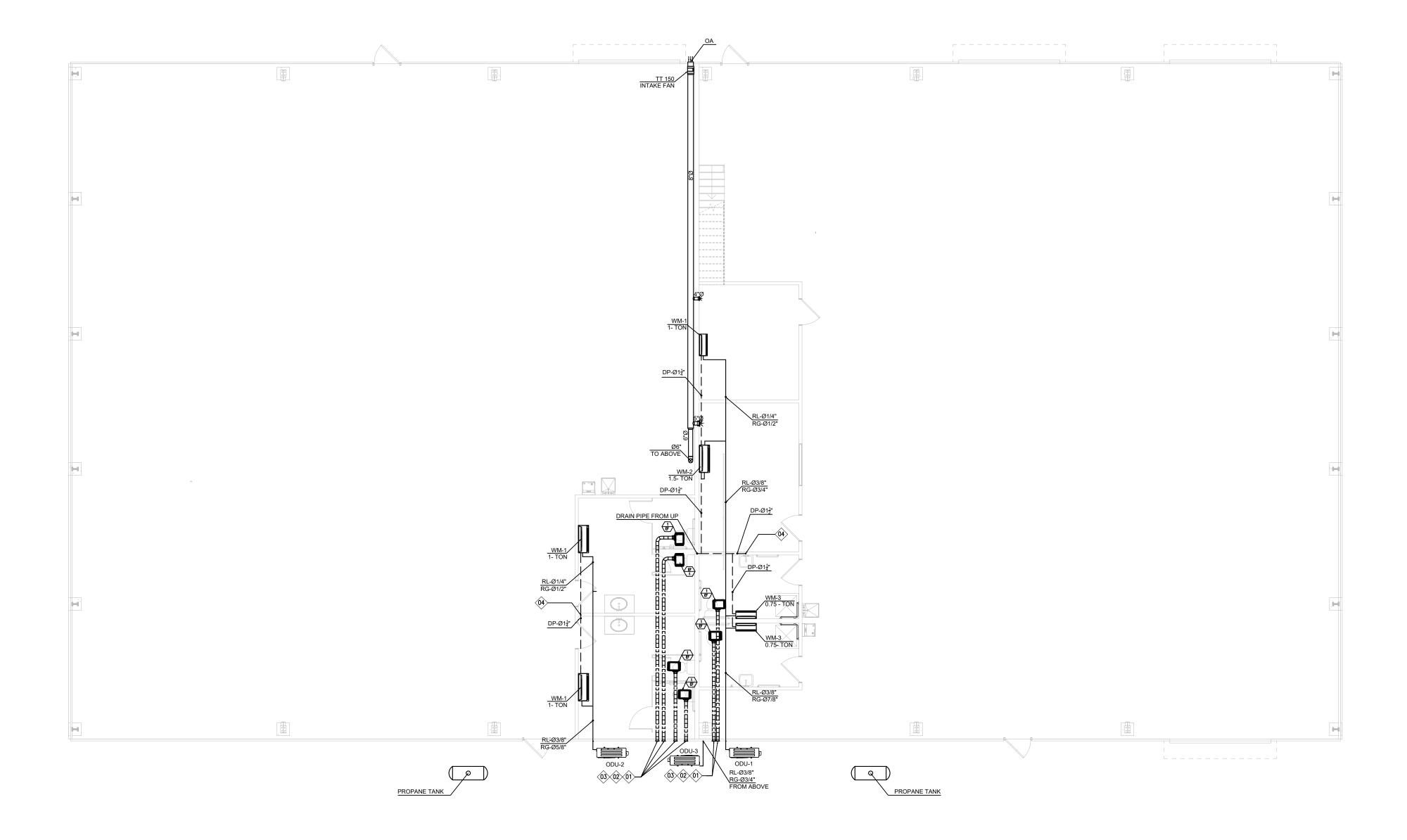
TAG NAME	CFM	ESP (IN)	MOTOR POWER (WATT)	QUANTITY	TYPE	MOUNTING	VOLTS	PHASE	BASIS OF DESIGN	REMARKS	WATTAGE
EF-01	90	0.25	15	06	DIRECT DRIVE, ECM MOTOR	CEILING MOUNTED	120	1	PANASONIC WHISPER GREEN SELECT FV-05-11VK1	CAPABLE OF CONNECTIVITY TO VENTILATION DAMPER, ENERGY STAR RATED	5.5 Watts

NOTES:

1. EACH E.A. FAN SHALL BE EQUIPPED WITH MOTORIZED BACK DRAFT DAMPER AT FAN DISCHARGE.

4. PROVIDE RADIATION DAMPERS ON FANS INSTALLED IN RATED CEILINGS

SUPPORT REQUIREMENT FOR DUCT



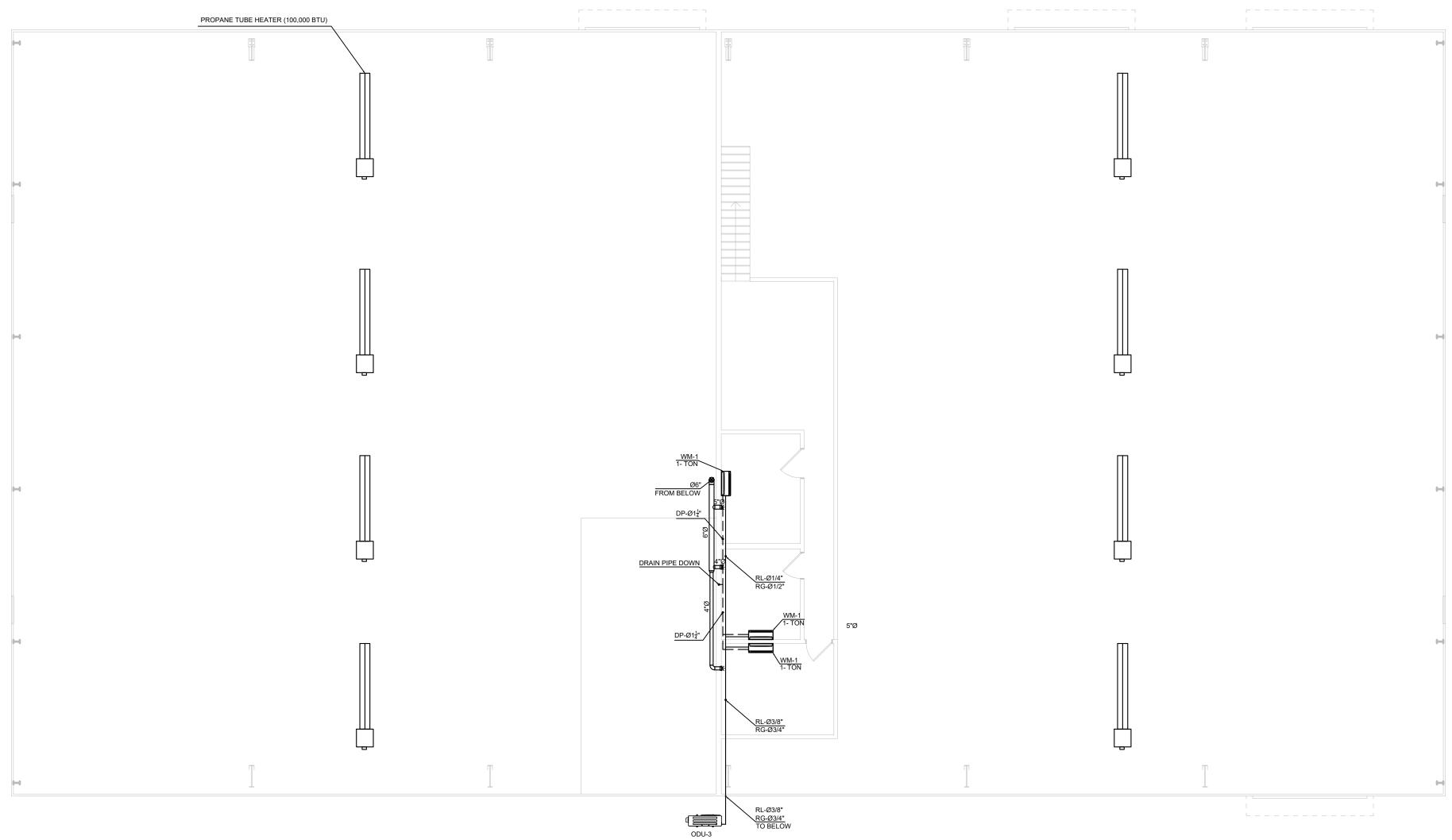
011FIRST FLOOR HVAC PLAN

NOTE: FOR SHOP-1 & SHOP-2 HEATER, CONTRACTOR TO PROVIDE CALCULATION FOR PROPANE TUBE HEATER AND PROPANE TANK



### DRAWING NOTES

- 1. TOILET/DRYER EXHAUST TERMINATION POINT SHOULD BE AT LEAST 3 FT AWAY FROM PROPERTY LINE.
- PROVIDE WALL CAP TO MATCH DUCT SIZE W/ A CORROSION RESISTANT BIRDS SCREEN.(FOR ALL EXHAUST DUCT SEIHO #SFZ OR #SFZC MODEL ALUMINUM VENT ARE USED AS APPLICABLE).
- PROVIDE MOTORIZED DAMPER FOR OUTDOOR AIR INTAKES AND BACKDRAFT DAMPER FOR BATHROOM EXHAUST FANS.
- 4. CONDENSATE DRAIN PIPE CONNECTED TO LAVATORY.



0212ND FLOOR HVAC PLAN SCALE 1/8" = 1'-0"

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### PLUMBING GENERAL NOTES:

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE GOVERNING CODES AND REGULATIONS. WHERE ANY PORTION OF THE SYSTEM SHOWN IS NOT IN ACCORDANCE WITH ALL APPLICABLE LAWS. ORDINANCES. REGULATIONS OR CODES. THIS CONTRACTOR SHALL MAKE ALL CHANGES REQUIRED BY THE ENFORCING AUTHORITIES IN A MANNER APPROVED BY THE ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER.
- 2. THIS CONTRACTOR SHALL ORDER AND OBTAIN ALL NECESSARY TESTS. PERMITS AND CERTIFICATES OF APPROVAL AND PAY ANY REQUIRED FEES FOR IT
- 3. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.4. ALL EQUIPMENT. FIXTURES AND MATERIALS SHALL BE NEW AND SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 4. EQUIPMENT CAPACITIES AND MANUFACTURER'S MODEL NUMBERS ARE INDICATED ON THE DRAWINGS.
- 5. ALL EQUIPMENT REQUIRING ELECTRIC POWER SHALL BE SUITED FOR USE WITH THE POWER TO BE SUPPLIED, SEE ELECTRICAL DRAWINGS. ALL ELECTRICAL REQUIREMENTS SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR.
- THIS CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH THE GENERAL CONTRACTOR FOR THE EXACT LOCATION OF CHASES, FURRING SPACES, DROPPED CEILINGS, STRUCTURE PENETRATIONS, PAINTING, ETC
- THIS CONTRACTOR SHALL INSTRUCT THE OWNER IN THE OPERATION AND MAINTENANCE OF ALL 7. COMPONENTS OF THE INSTALLATION. A ONE YEAR SERVICE CONTRACT SHALL BE INCLUDED AS PART OF THIS WORK.
- CORE DRILLING SHALL NOT BE DONE UNTIL THE AREA TO BE DRILLED IS X-RAYED AND WRITTEN APPROVAL IS OBTAINED FROM THE PROJECT STRUCTURAL ENGINEER AND OWNER.
- 9 THE CONTRACTOR SHALL PROVIDE THE EVIDENCE THAT SHOWS DISINFECTION OF POTABLE WATER AS REQUIRE PER SECTION 610 OF 2017 VA PLUMBING CODE
- 10. NO HOT WATER OR COLD WATER IS PERMITTED THROUGH EXTERIOR WALL(S)
- 11. WHERE THE PUMP DISCHARGE LINE CONNECTS INTO HORIZONTAL DRAINAGE PIPING, THE CONNECTION SHALL BE MADE THROUGH A WYE FITTING INTO THE TOP OF THE DRAINAGE PIPING AND SUCH WYE FITTING SHALL BE LOCATED NOT LESS THAN 10 PIPE DIAMETERS FROM THE BASE OF ANY SOIL STACK, WASTE STACK OR FIXTURE DRAIN. [2017 VA PLUMBING CODE, SECTION 712.3.5]

BASIC MATERIALS AND METHODS:

ALL PIPING CONNECTIONS TO EQUIPMENT SHALL BE MADE WITH GROUND JOINT UNIONS.

- 2. PIPE HANGER AND SUPPORTS: CLEVIS OR SPILT RING TYPE SPACING AND ROD SIZE AS RECOMMENDED IN MSSSP-69, MECHANICAL CODE AND IN ACCORDANCE WITH INDUSTRY PRACTICE. SELECT TO FIT AROUND BARE PIPE OR AROUND INSULATION WITH INSULATION SADDLE/SHIELD FOR INSULATED PIPING, HANGERS FOR COPPER PIPE SHALL BE COPPER OR COPPER PLATED. BAND IRON HANGERS SHALL NOT BE USED. HANGERS AND ACCESSORIES SHALL BE F&M CORPORATION OR APPROVED EQUAL.
- 3. PIPE SUPPORTS: SUPPORTS TO BE PROVIDED IN ACCORDANCE WITH APPLICABLE CODES AND IN ACCORDANCE WITH INDUSTRY PRACTICE. STEEL RISER CLAMPS WITH PLASTIC COATING OR COPPER PLATED OR COOPER PIPES. F & M CORPORATION OR EQUAL.

#### PIPING

- 1. INSTALL PIPE TUBE AND FITTINGS IN ACCORDANCE WITH INDUSTRY PRACTICE WHICH WILL ACHIEVE PERMANENTLY LEAKPROOF PIPING SYSTEMS. CAPABLE OF PERFORMING EACH INDICATED SERVICE WITHOUT PIPING FAILURE. TEST PIPING FOR LEAKAGE. REPIAR PIPING SYSTEMS SECTIONS WHICH FAIL TEST BY DISASSEMBLY AND RE-INSTALLATION, USING NEW MATERIALS TO THE EXTENT REQUIRED TO OVERCOME LEAKAGE, UNDER NO CIRCUMSTANCES USE CHEMICALS. STOP-LEAK COMPOUNDS. MASTICS. TAPES OR OTHER TEMPORARY REPAIR METHODS.
- 2. ALL SANITARY PIPING SHALL BE SLOPED AS NOTED ON PLANS. WHERE NOT NOTED, SLOPE PIPING AT MINIMUM REQUIRED BY CODE
- 3. ALL PIPING SHOWN ON THE FLOOR PLANS SHALL BE LOCATED ABOVE THE CEILING OR INSIDE CHASES UNLESS OTHERWISE NOTED.
- 4. STORM, WASTE AND VENT PIPING SHALL BE SERVICE WEIGHT NO-HUB CAST IRON PIPE AND FITTINGS CISPI 301, HUB & SPIGOT SOIL PIPE AND FITTINGS ASTM A-74, GALVANIZED CAST IRON FITTINGS ANSI/ASTM A-74 OR DWV COPPER WITH WROUGHT COPPER FITTINGS, ASTM B306. OR SCHEDULE 40 PVC
- DOMESTIC WATER PIPING SHALL BE CROSS-LINKED POLYETHYLENE (PEX) OR TYPE "L" HARD-DRAWN TEMPER, WROUGHT COPPER FITTINGS, NON-LEAD SOLDERED JOINTS WITH NON-CORROSIVE FLUX, ANSI B-88.

PLUMBING FIXTURE SCHEDULE												
FIXTURE NAME	WSFU	CWFU	J HWFU DFU MIN PIPE SIZE OF CW/HW			MAX FLOW	REMARKS					
WATER CLOSET	2.2	2.2	-	3	1/2"	≤1.28 GALLONS PER FLUSHING CYCLE	WaterSense Certified					
LAVORATARY	0.7	0.5	0.5	1	1/2"	≤1 GPM AT <=60 PSI	WaterSense Certified					
SHOWER HEAD	1.4	1.0	1.0	-	1/2"	≤1.5 GPM AT <=60 PSI	WaterSense Certified					
ATTACHED CLOTHES WASHER	4	4.0	-	-	1/2"	4239 gallons per year	Energy Star Rated					

#### INSULATION

- G. BURIED PIPING.

#### VALVES

GATE VALVES. 2-INCH AND SMALLER: MSS SP-80; CLASS 125.

#### CLEANOUTS

- STONE FINISH.

- EQUIVALENT.

	ELECTRIC WATER HEATER WITH TANK SPECIFICATION												
		QUANTITY	NOMINAL (gallon)	VOLTAGE UEF.		DIAMETER	WEIGHT	WATER CONNECTION SIZE (INCH)	BASIS OF DESIGN				
WH-(01-02)	AS SHOWN	2	50	240	0.92	20.5"	120 lbs	3/4	AO SMITH #ENT50				
NOTES	<ol> <li>DRAIN PAN WITH DRAIN LINE TO FLOOR DRAIN WITH EACH WATER HEATER.</li> <li>TEMP AND PRESSURE RELIEF VALVE WITH DRAIN LINE TO FLOOR DRAIN WITH EACH WATER HEATER.</li> </ol>												

1. PROVIDE INSULATION FOR PIPING, AND EQUIPMENT OF TYPES AND THICKNESS SPECIFIED HEREIN. INSULATION SHALL HAVE A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50. INSTALL INSULATION IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTINUOUS VAPOR BARRIER SHALL BE PROVIDE ON ALL COLD WATER PIPING AND COLD AIR DUCTWORK. INSULATION SHALL BE ARMSTRONG, CERTAINTEED, OWENS-CORNING OR JOHNS-MANVILLE. PIPING INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, INCLUDING THAT DUE TO SUNLIGHT, MOISTURE EQUIPMENT MAINTENANCE AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR INSULATION FOR HOT WATER PIPE WITH A MINIMUM THERMAL RESISTANCE (R-VALUE) OF R-3 SHALL BE APPLIED TO THE FOLLOWINGS:

A. PIPING LARGER THAN 3/4 INCH NOMINAL DIAMETER. B. PIPING SERVING MORE THAN ONE DWELLING UNIT. C. PIPING FROM WATER HEATER TO KITCHEN OUTLETS. D. PIPING LOCATED OUTSIDE THE CONDITIONED SPACE. E. PIPING FROM THE WATER TO A DISTRIBUTION MANIFOLD.

PIPING LOCATED UNDER A FLOOR SLAB.

H. SUPPLY AND RETURN PIPING IN RECALCULATION SYSTEMS OTHER THAN DEMAND RECALCULATION SYSTEMS.

I. PIPING WITH RUN LENGTHS GREATER THAN THE MAXIMUM RUN LENGTHS FOR THE NOMINAL PIPE DIAMETER GIVEN IN TABLE R403.4.2. ALL REMAINING PIPING SHALL BE INSULATED TO AT LEAST R-3 OR MEET THE RUN LENGTH **REQUIREMENTS OF TABLE R403.4.2.** 

BODY AND BONNET OF ASTM B 62 CAST BRONZE: WITH THREADED OR SOLDER ENDS. SOLID DISC, COPPER-SILICON ALLOY STEM, BRASS PACKING GLAND, "TEFLON" IMPREGNATED PACKING, AND MALLEABLE IRON HANDWHEEL. PROVIDE CLASS 150 VALVES MEETING THE ABOVE WHERE SYSTEM PRESSURE REQUIRES. DO NOT USE SOLDER END VALVES FOR HOT WATER HEATING OR STEAM PIPING APPLICATIONS. BALL VALVES:2-PIECE, BRONZE BODY, BLOW-OUT PROOF STEM, METAL BALL, TEFLON SEAL RING, SCREWED OR SOLDERED ENDS, 400 LB. WOG. NIBCO OR STOCKHAM.

PROVIDE "ANTI- SCALD" VALVES FOR SHOWERS AND SHOWERS/BATH.

4. PROVIDE VALVES FOR THE FOLLOWING SERVICES:

DOMESTIC WATER 1"AND LARGER - GATE VALVE

B. DOMESTIC WATER SMALLER THAN 1" - BALL VALVE LOCATE VALVES IN ACCESSIBLE LOCATIONS WHEREVER POSSIBLE, ABOVE SUSPENDED CEILINGS OR WALLS. PROVIDE STEEL ACCESS PANELS DIRECTLY IN FRONT OF VALVES LOCATION MUST BE COORDINATED AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION OF PIPING SYSTEM.

CLEANOUTS SHALL BE INSTALLED NOT MORE THAN 50 FT. APART IN HORIZONTAL DRAINAGE LINES, A CLEAN OUT SHALL BE PROVIDE AT THE BASE OF EACH VERTICAL WASTE, SOIL STACK, OF THE SANITARY BUILDING DRAINS AND BUILDING SEWERS, AND THE STORM AND BUILDING SEWERS.

CLEANOUTS ON CONCEALED PIPING SHALL BE EXTENDED THROUGH AND TERMINATE FLUSH WITH THE FINISHED WALL OR FLOOR WITH ACCESS COVER OF SUFFICIENT SIZE TO PERMIT REMOVAL OF THE CLEANOUT PLUG. CLEANOUTS SHALL NOT BE INSTALLED IN AREAS OF FLOORS TO RECEIVE TERRAZOO, CERAMIC TILE OR

CLEANOUTS SHALL BE INSTALLED SO THAT THE CLEANOUT OPENS IN THE DIRECTION OF THE DRAINAGE LINE OR AT RIGHT ANGLES THERETO

4. CLEANOUTS SHALL BE OF THE SAME NOMINAL SIZE AS THE PIPES THEY SERVE UP TO 4" AND NOT LESS THAN ONE NOMINAL PIPE SIZE SMALLER FOR LARGER PIPE.

5. A FIXTURE TRAP OR A FIXTURE WITH INTEGRAL TRAP, READILY REMOVABLE WITHOUT DISTURBING CONCEALED PIPING, MAY BE ACCEPTED AS A CLEANOUT

6. LOCATE CLEANOUTS IN ACCESSIBLE LOCATIONS WHEREVER POSSIBLE, ABOVE SUSPENDED CEILINGS ETC. IF LOCATED ABOVE OR BEHIND DRYWALL CEILINGS, PROVIDE STEEL ACCESS PANELS DIRECTLY IN FRONT OF VALVES. PROVIDE CHROME PLATED BRASS COVER PLATES FOR CLEANOUTS LOCATED WITHIN DRYWALL PARTITIONS. LOCATIONS MUST BE COORDINATED AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION OFPIPING SYSTEM

FIXTURES

FIXTURES, FITTINGS, TRIM AND ACCESSORIES SHALL BE SAME MANUFACTURERS TO THE EXTENT POSSIBLE.

- BARRIER FREE STANDARDS: COMPLY WITH APPLICABLE ANSI STANDARDS PERTAINING TO PLUMBING FIXTURES AND SYSTEMS INCLUDING ANSI A 117.1 STANDARD PERTAINING TO PLUMBING FIXTURES FOR THE HANDICAPPED COMPLY WITH THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT". FIXTURES DESIGNATED BARRIER FREE ARE INTENDED TO BE "USABLE BY PHYSICALLY HANDICAPPED PEOPLE". FIXTURES FOR USE BY HANDICAPPED PEOPLE SHALL BE INSTALLED IN ACCORDANCE WITH ANSI A 117.1.
- ENERGY CONSERVATION CODE COMPLIANCE: COMPLY WITH LOCAL AUTHORITY STANDARDS FOR PLUMBING FIXTURE FLOW CONTROLS. WHERE NO CODE OR STANDARD IS IN USE. USE THE CURRENT 2017 IECC. WHEN A SPECIFIED DEVICE IS MORE RESTRICTIVE THAN THE LOCAL STANDARDS. THE SPECIFIED DEVICE SHALL BE INSTALLED EXCEPT WHERE PROHIBITED.
- 4. ALL THE PLUMBING FIXTURES MUST BE ENERGY STAR CERTIFIED/LABELED.
- SUBMIT MANUFACTURER'S SPECIFICATIONS FOR PLUMBING FIXTURES AND TRIM, INCLUDING CATALOG LITERATURE AND MANUFACTURER'S NAME OF EACH FIXTURE TYPE AND TRIM ITEM CARRIERS, AND INSTALLATION INSTRUCTIONS. PROPOSED SUBSTITUTIONS SHALL BE INDICATED AND DRAWINGS, CATALOG LITERATURE, OR OTHER DATA SHALL BE FURNISHED FOR COMPARISON.
- FIXTURES SHALL BE WHITE EXCEPT WHERE INDICATED OTHERWISE OR WHERE FIXTURE IS PROVIDED IN A MANUFACTURED FINISH.
- 7. EXPOSED METAL FITTINGS, TRIM, AND ACCESSORIES SHALL HAVE POLISHED CHROME PLATED FINISH
- SUPPLIES: PROVIDE A STOP ON EACH WATER SUPPLY TO EACI FIXTURE PROVIDE ACCESS PANELS FOR CONCEALED STOPS.
- TRAPS: PROVIDE A TRAP ON EACH FIXTURE, EXCEPT WHERE FIXTURE SPILLS OVER A PROPERLY TRAPPED DRAIN OR OTHER RECEPTOR. ALL SINK AND LAVATORY TRAPS SHALL BE CHROME PLATED CAST BRASS SWIVEL PATTERN WITH CLEANOUT. ALL TUBING DRAINS SHALL BE MINIMUM 17 GAUGE THICKNESS CHROME PLATED METAL
- 10. ESCUTCHEONS: PROVIDE DEEP PATTERN ESCUTCHEONS FOR SUPPLIES AND TRAPS WHERE ROUGH-IN PIPING WOULD BE VISIBLE USING STANDARD ESCUTCHEONS.

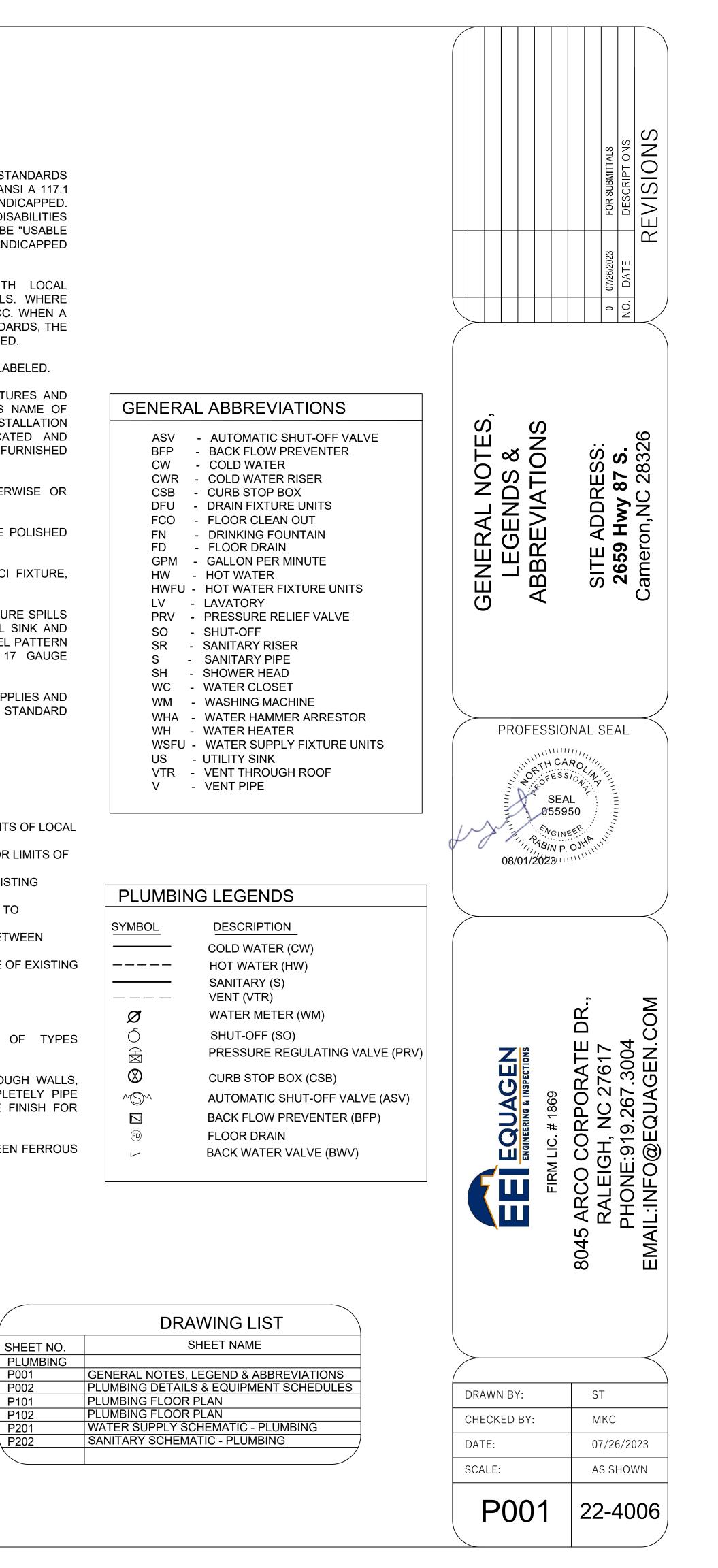
PLUMBING AND SPRINKLER SYSTEM GENERAL NOTES

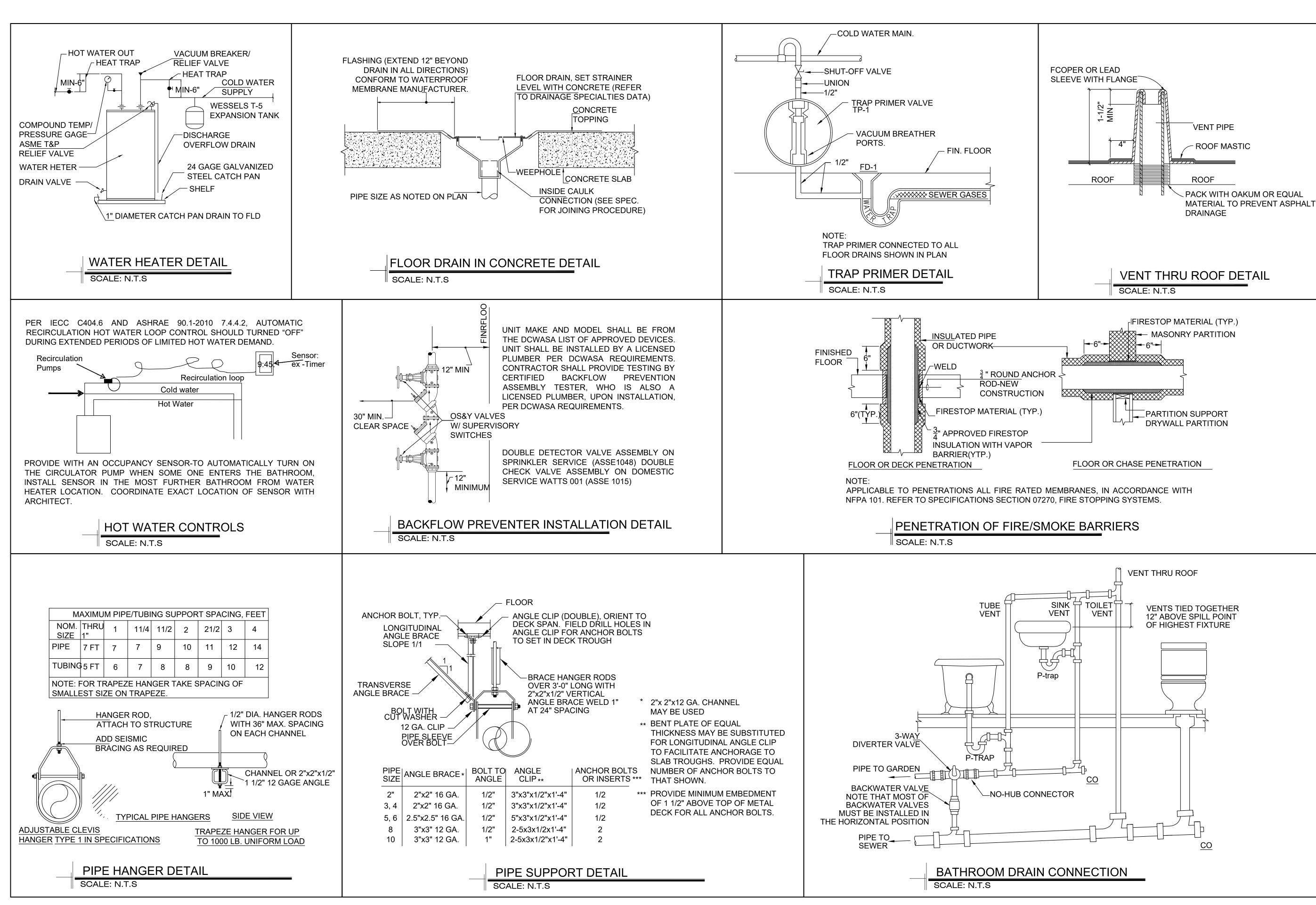
1. PLUMBING SYSTEM

- A. ALL PLUMBING WORK SHALL BE PERFORMED PER REQUIREMENTS OF LOCAL CODES AND REGULATIONS.
- B. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LIMITS OF WORK AND BUILDING STANDARDS
- C. COORDINATE WORK WITH ALL OTHER TRADES AND INSPECT EXISTING CONDITIONS PRIOR TO BEGINNING INSTALLATION. D. SCHEDULE WITH THE OWNER TEMPORARY SHUT-OFF SERVICES TO
- PUBLIC/OTHER AREAS. F
- INSTALL AND CONCEAL ALL WASTE, VENT AND WATER PIPING BETWEEN FLOOR AND CEILING OR WITHIN PARTITIONS AND/OR WALLS. F. CONTRACTOR SHALL IDENTIFY THE EXACT LOCATION, AND SIZE OF EXISTING
- PLUMBING PIPING AND STACKS. BEFORE THE START OF WORK.

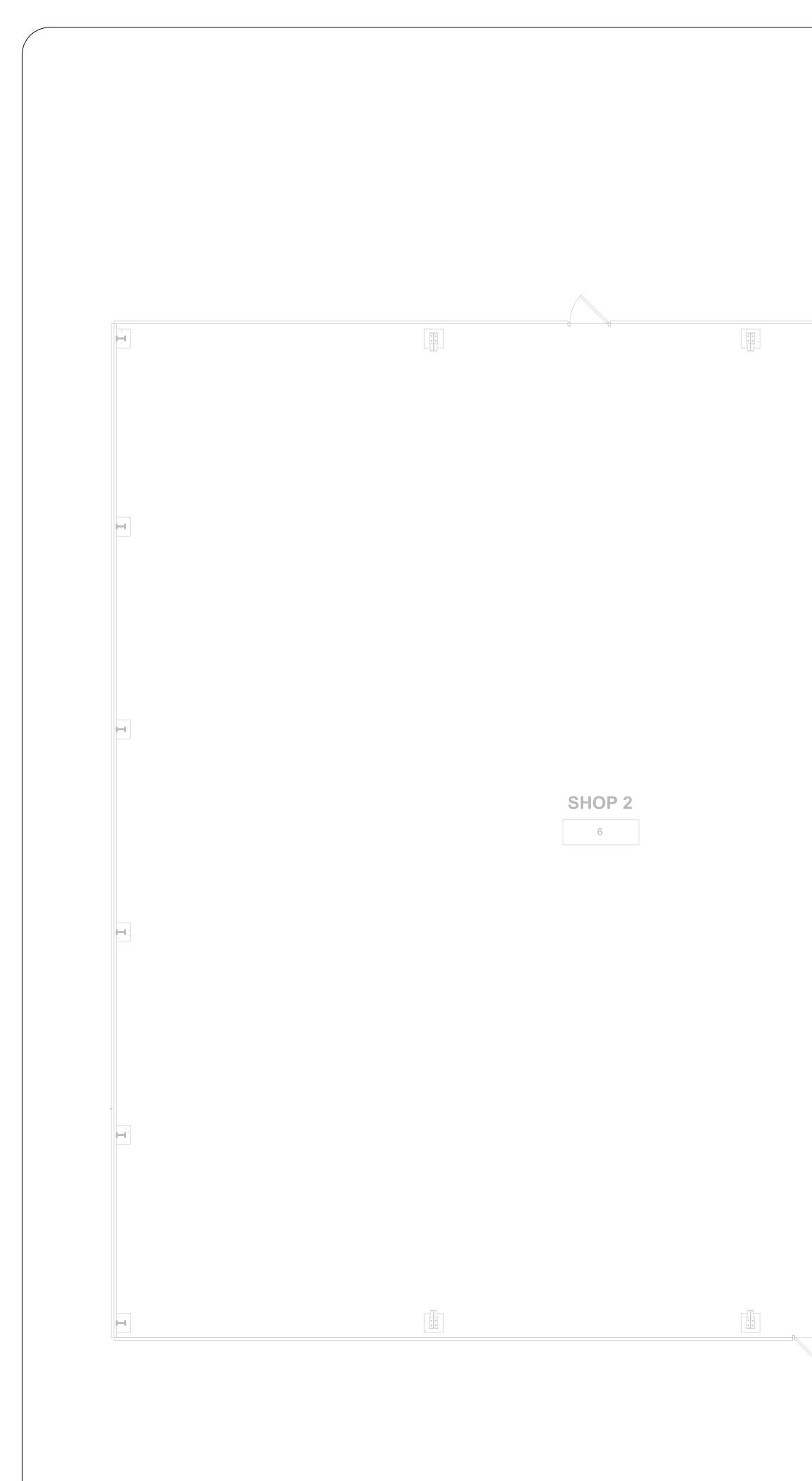
PIPING SPECIALTIES

- 1. PROVIDE FACTORY FABRICATED PIPING SPECIAL TIES OF TYPES RECOMMENDED BY MANUFACTURERS FOR SERVICES INDICATED.
- 2. PROVIDE ESCUTCHEON PLATES WHEREVER PIPES PASS THROUGH WALLS, FLOORS OR CEILINGS, OUTSIDE DIAMETER TO COVER COMPLETELY PIPE PENETRATION HOLE OR PIPING SLEEVE, NICKEL OR CHROME FINISH FOR EXPOSED AREAS. PRIME PAINT FINISH FOR CONCEALED AREAS.
- 3. UNIONS: PROVIDE DIELECTRIC UNIONS AT CONNECTIONS BETWEEN FERROUS AND NON-FERROUS PIPING. EPCO, STOCKHAM OR EQUAL

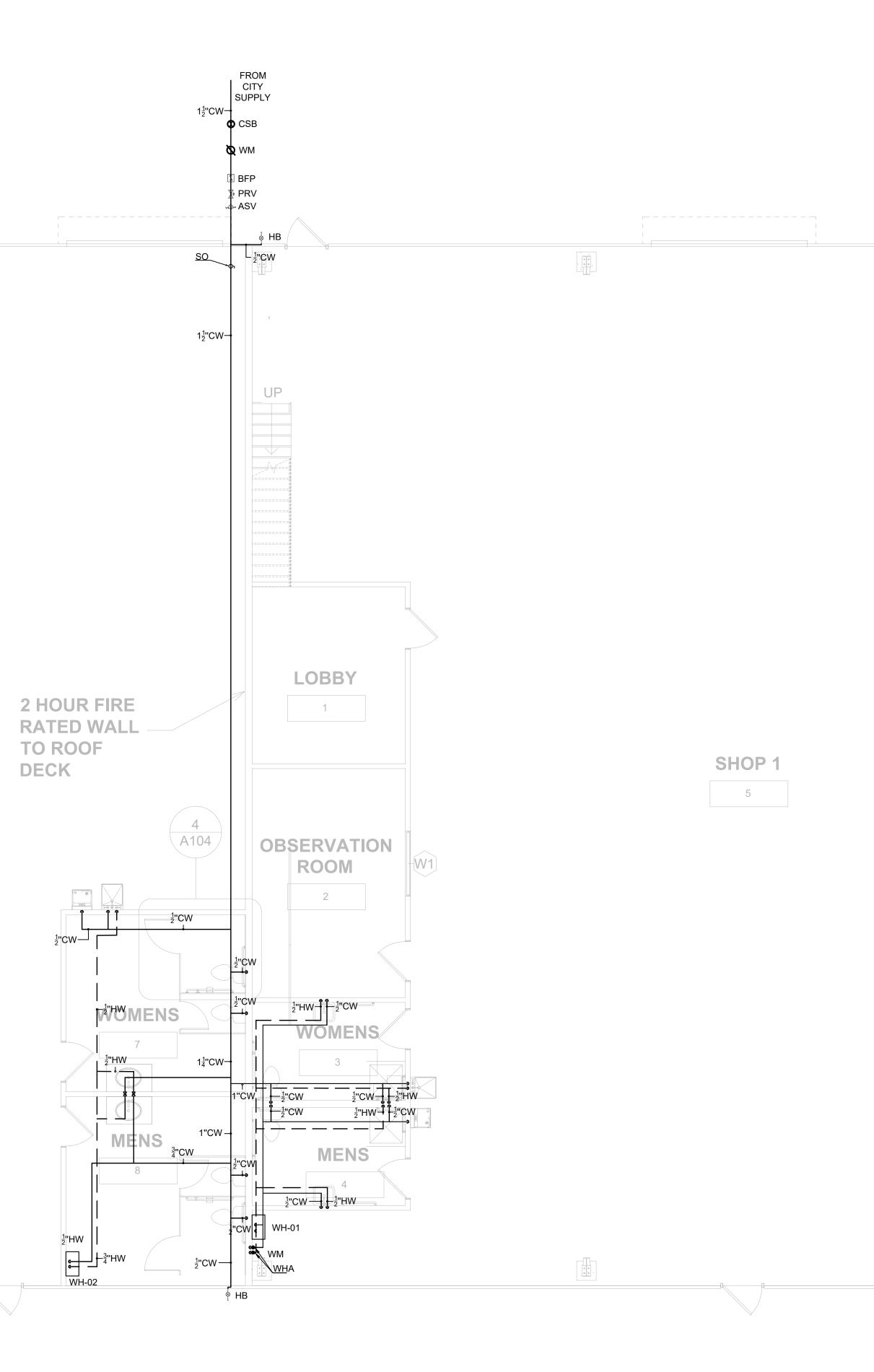


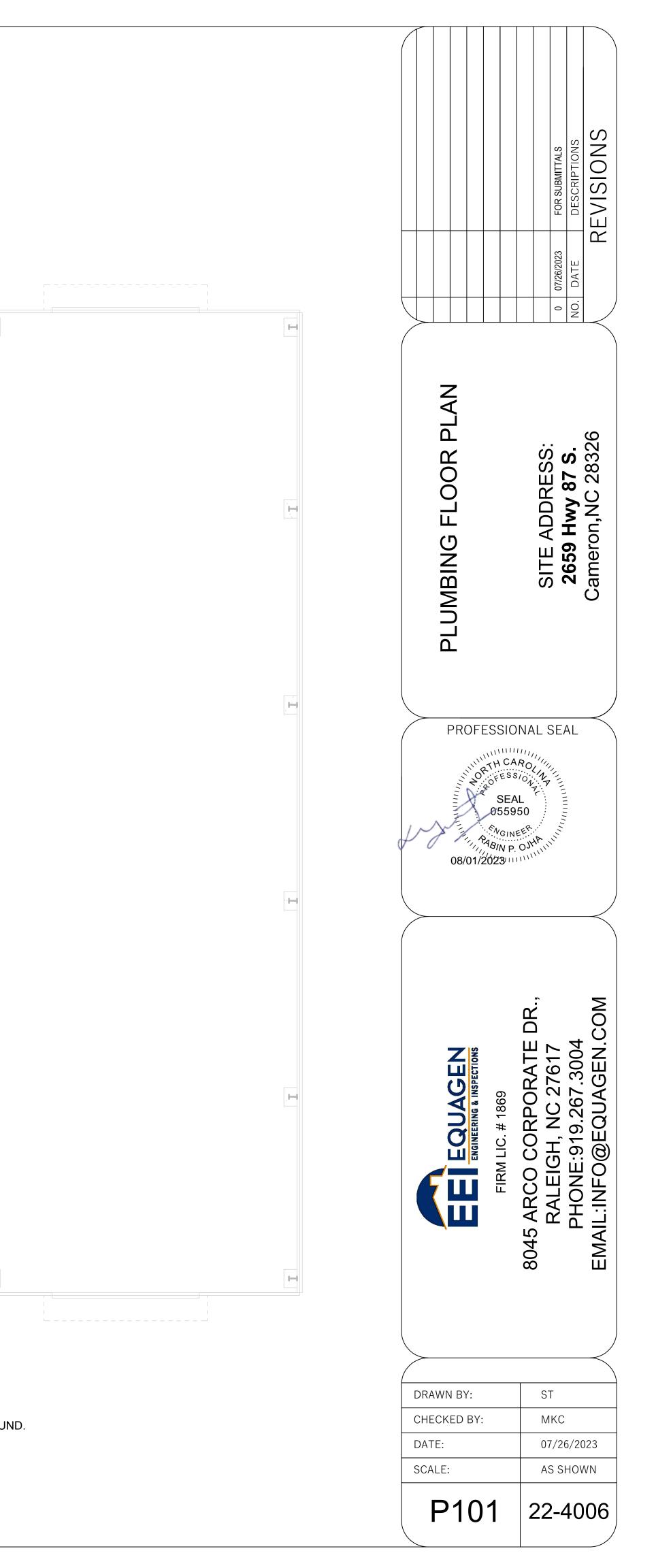


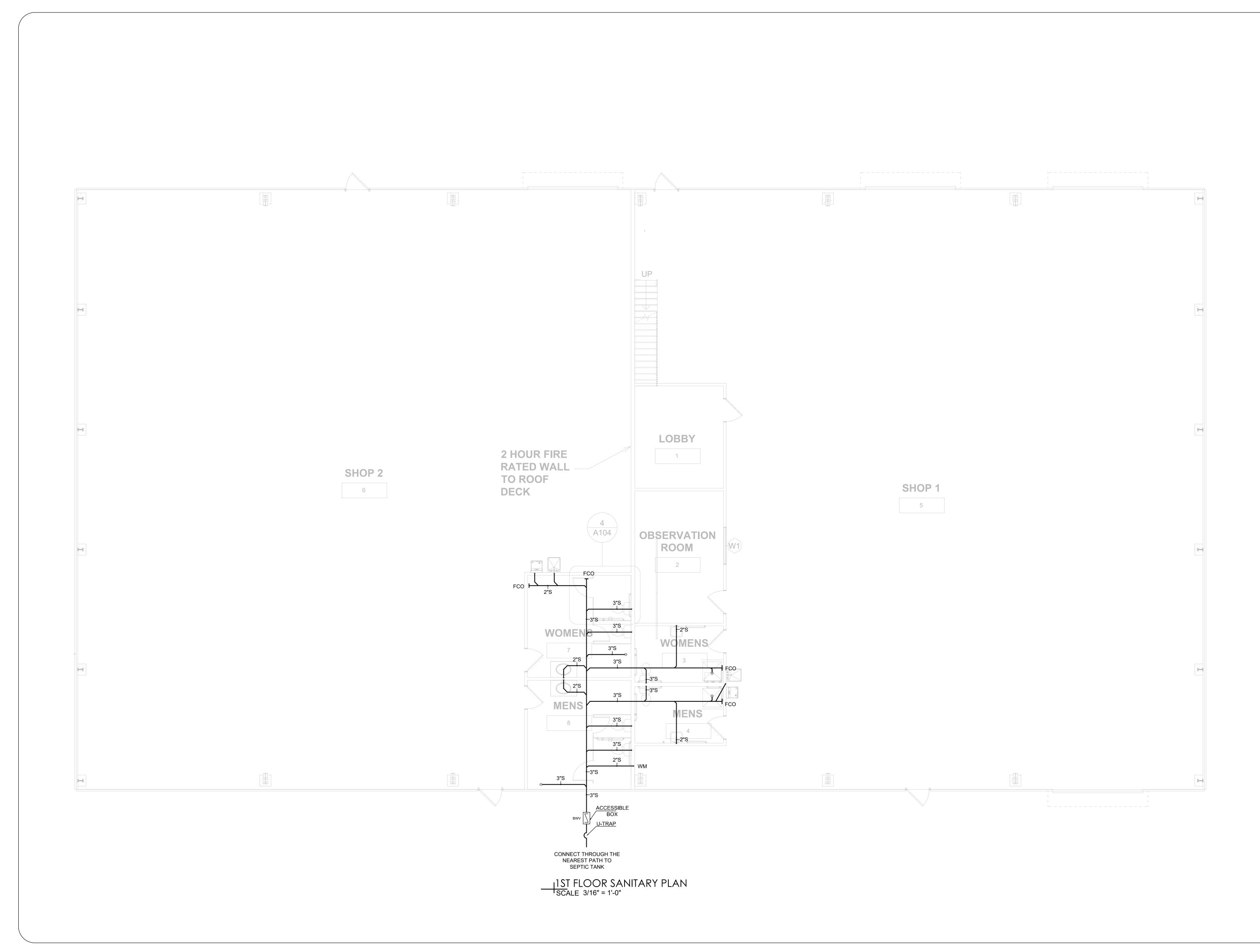




NOTE: 1. ALL WATER SUPPLY PIPES ARE TO BE RUN UNDERGROUND.









								<sup>1</sup> / <sub>2</sub> "H∨
12" FROM CITY SUPPLY	CURB STOP BOX	wм <b>Ю</b>	BFP PRV SV	·	HB SO SO	· ·	1 <sup>1</sup> "CW	· ·

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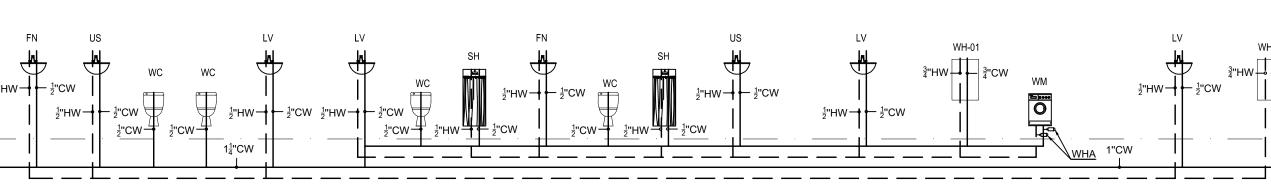
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- <u>1</u><sup>1</sup>/<sub>2</sub>" 2" METER SETTER REQUIRED A METER VALVE ON EACH SIDE (NOT SHOWN IN DETAIL).
   IF THE BUILDING OR APPROVED PROJECTION IS AT OR EXTENDS BEYOND THE PROPERTY LINE, THE CURD STOP SHALL BE PLACED 18 INCHES FROM FACE OF BUILDING OR APPROVED PROJECTION.
   <u>FOR NEW BUILDING CONSTRUCTION ONLY</u>: THE FIRE SERVICE LINE SHALL INCLUDE A SHUT-OFF VALVE INSTALLED INSIDE THE BUILDING.
   <u>FOR NEW BUILDING CONSTRUCTION ONLY</u>: THE DOMESTIC SERVICE LINE SHALL INCLUDE A PRESSURE REDUCING VALVE AND SHUT-OFF VALVE INSTALLED THE BUILDING.
   SEE PLUMBING FLOOR PLANS FOR THE PIPE SIZE DETAILS.

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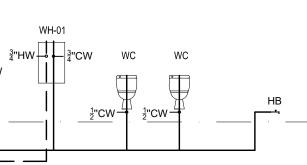
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ROOF

2ND FLOOR

1ST FLOOR

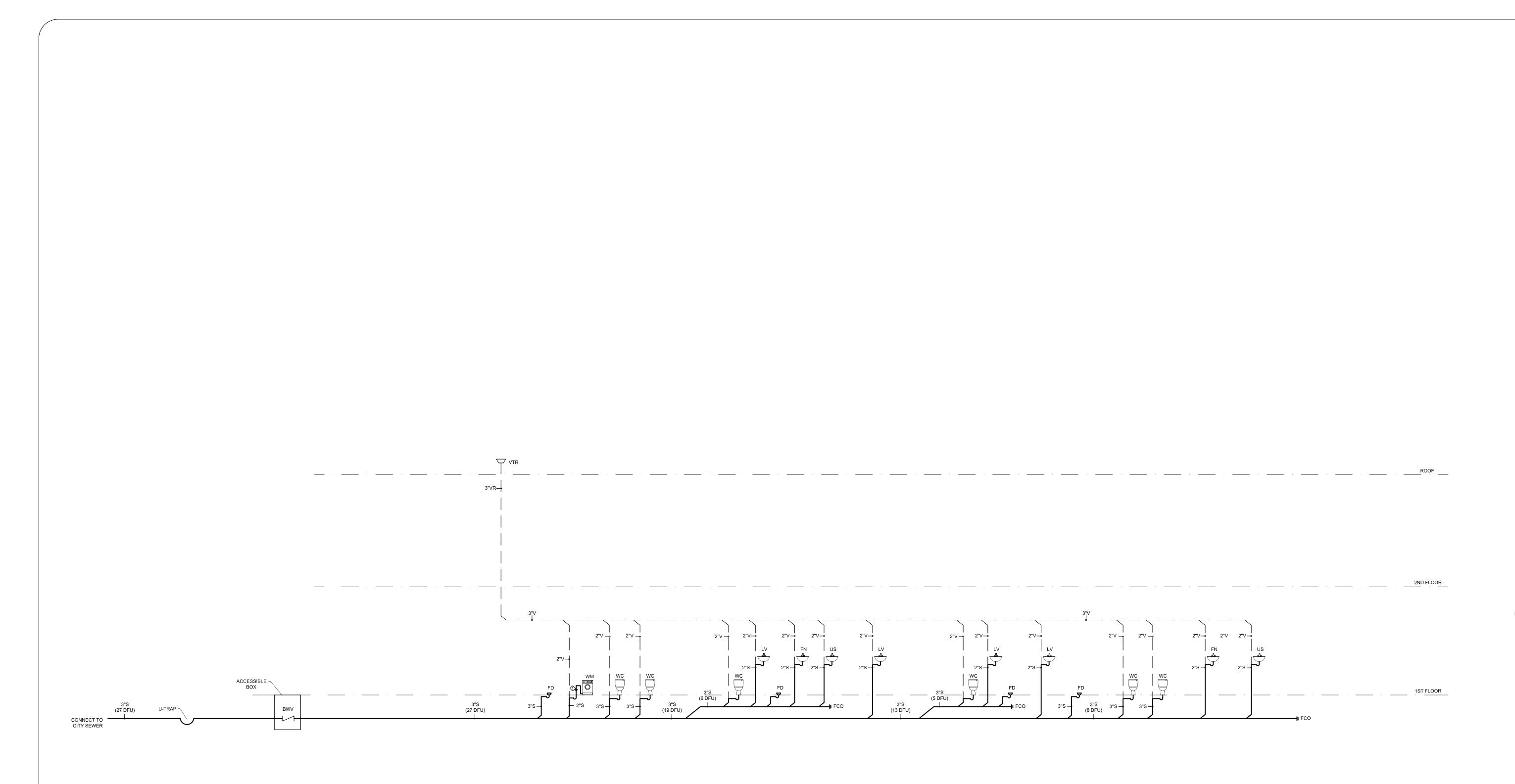


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DRAWING NOTES:
 WASHING MACHINES DISCHARGING THROUGH AN AIR BREAK.

NOTES 1. CLEAN OUTS SHALL BE ACCESSIBLE COORDINATE AT THE FIELD AND COORDINATE WITH ARCHITECTURAL PLANS PROVIDE REQUIRED ACCESS PANELS WHERE APPLICABLE.

