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C&S COMPANIES®

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CONTRACT DRAWINGS FOR THE CONSTRUCTION OF

NEW ARFF/SRE BUILDING

ITHACA TOMPKINS INTERNATIONAL AIRPORT

72 BROWN ROAD ITHACA, NY 14850

MARCH 2026

C&S PROJECT NUMBER: 158.095.001

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THE PLANS AND SPECIFICATIONS FOR THIS PROJECT ARE IN COMPLIANCE WITH THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE AND THE BUILDING CODE OF NEW YORK STATE

NO ALTERATION PERMITTED HEREON

G-001

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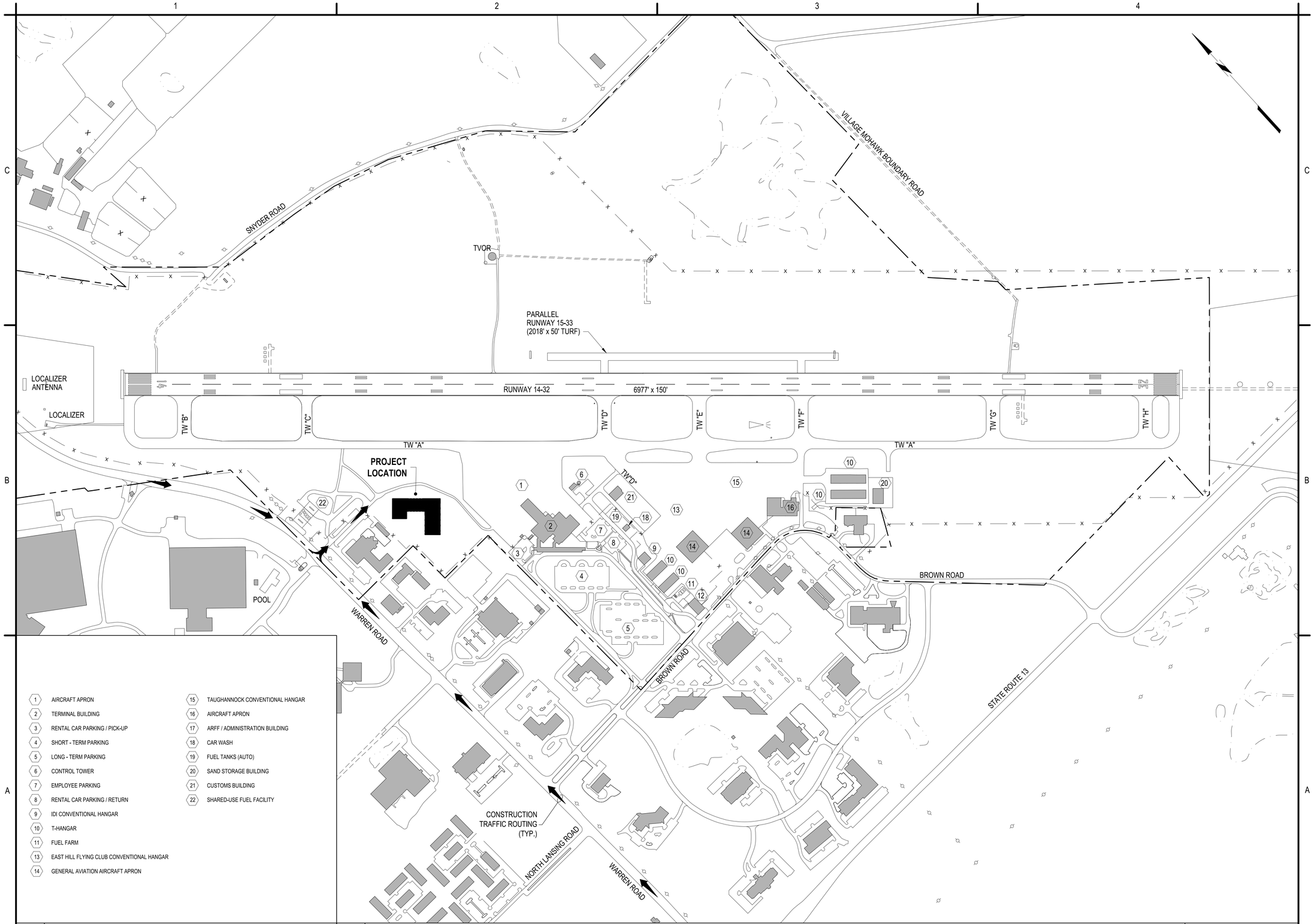

A1 FACILITY LOCATIONS
SCALE: NOT TO SCALE

A2 GENERAL PLAN
SCALE: 1" = 300'-0"

0 300' 600'

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CERTIFICATE OF AUTHORIZATION # 0021365

STATE OF NEW YORK · THOMAS T. HORST · LICENSED PROFESSIONAL ENGINEER · NO. 082037

REGISTRATION EXPIRES: 06/30/2027

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	M. ZINGARO
DESIGNED BY:	M. ZINGARO
CHECKED BY:	W.G. PERRINE, P.E.

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

GENERAL PLAN

G-101

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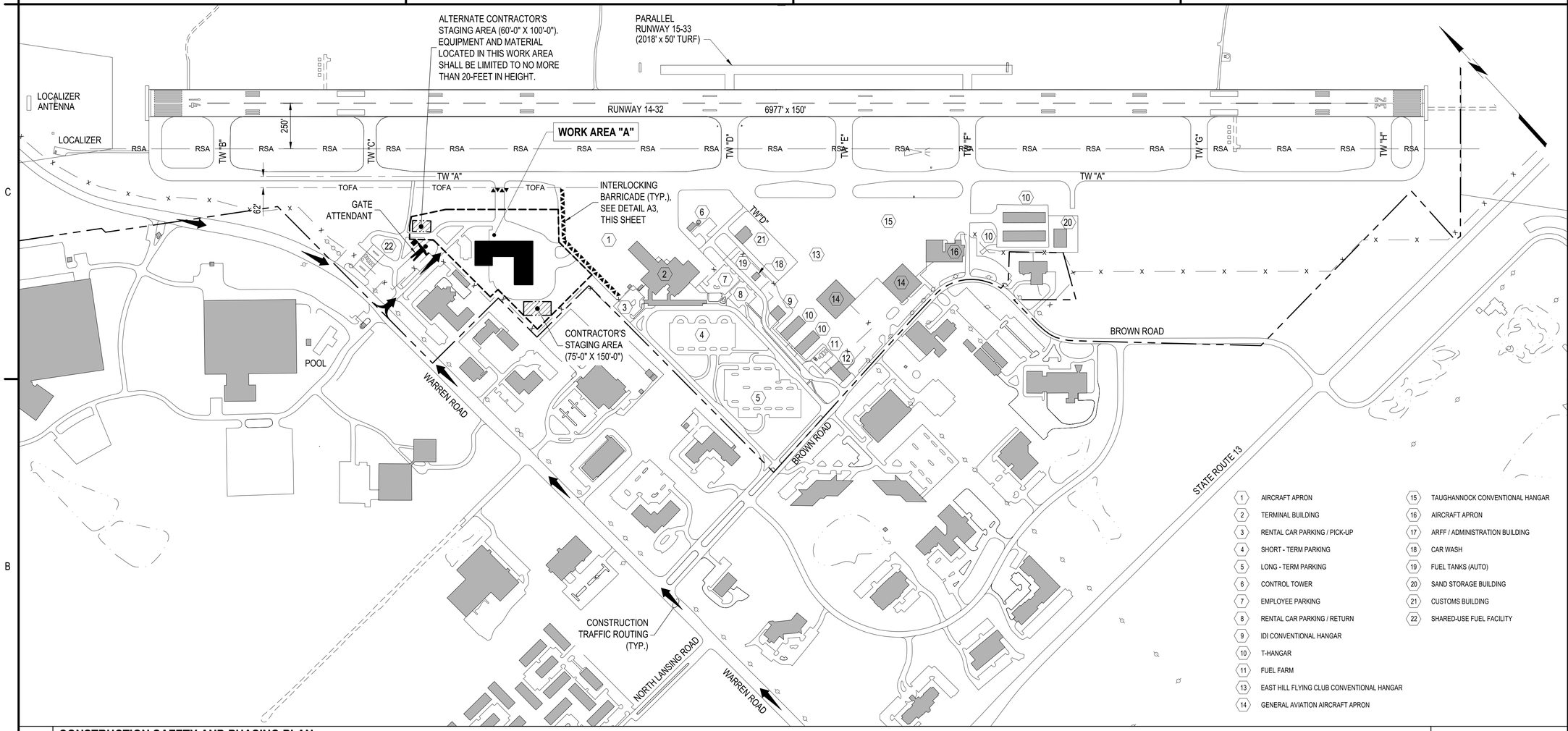


B1 CONSTRUCTION SAFETY AND PHASING PLAN

SCALE: 1" = 300'-0"

0 300' 600'

GENERAL CONSTRUCTION SAFETY PHASING NOTES

1. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE RPR PRIOR TO BEGINNING ANY WORK IN ALL AREAS OF THE AIRPORT.
2. AT NO TIME SHALL ANY PERIMETER SECURITY GATE USED FOR ACCESS INTO THE AOA OR THE PROJECT SITE BE LEFT UNATTENDED. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A GATE ATTENDANT WHOSE RESPONSIBILITY IS TO MONITOR FOR UNAUTHORIZED ACCESS INTO THE AOA.
3. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 70-08, ATTACHMENT A -CONSTRUCTION SAFETY AND PHASING PLAN (CSPP) OF THE GENERAL PROVISIONS.
4. EXISTING UTILITIES WERE TAKEN FROM PLANS OF RECORD. THEY HAVE BEEN SHOWN TO THE EXTENT KNOWN AND ARE OFFERED IN GOOD FAITH SOLELY FOR INFORMATIONAL PURPOSES. THEY MAY NOT REFLECT ACTUAL LOCATIONS AND MAY NOT BE INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
5. THE ACTUAL LOCATION AND ELEVATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
6. IN THE EVENT OF DAMAGE TO EXISTING UTILITIES OR CABLES, THE ENGINEER AND OWNER SHALL BE NOTIFIED IMMEDIATELY.
7. THE CONTRACTOR SHALL REPAIR ALL DAMAGE TO UTILITIES OR CABLES, AS DIRECTED BY THE ENGINEER, IMMEDIATELY AND AT THE CONTRACTOR'S EXPENSE.
8. ALL AREAS DISTURBED AS A RESULT OF THE CONTRACTOR'S STAGING AND CONSTRUCTION OPERATIONS SHALL BE RESTORED EQUAL TO OR BETTER THAN ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
9. CONSTRUCTION OPERATIONS SHALL BE CONFINED TO THE CONTRACT WORK AREA AND DESIGNATED HAUL ROUTES.
10. ALL DIRT, DUST, STONES AND LOOSE DEBRIS SHALL BE CONTINUOUSLY REMOVED FROM ALL PAVED SURFACES DURING THIS CONTRACT.

A1 GENERAL CONSTRUCTION SAFETY PHASING NOTES

SCALE: NOT TO SCALE

WORK AREA "A":

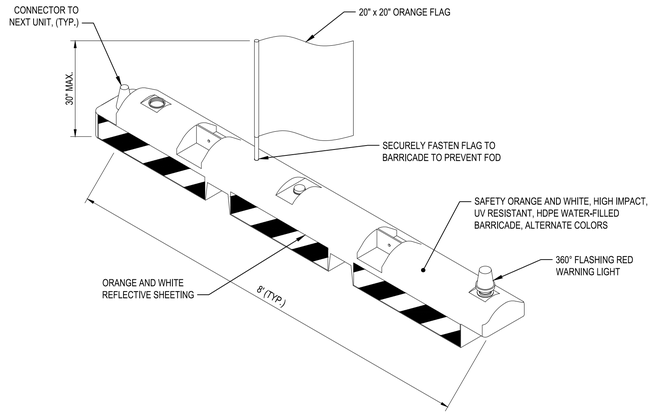
DESCRIPTION:
- PORTION OF SITEWORK AND BUILDING CONSTRUCTION LOCATED OUTSIDE OF TAXIWAY OBJECT FREE AREA (TOFA).

AOA OPERATIONAL IMPACTS:
- NONE

WORK AREA REQUIREMENTS:
- ALL WORK TO REMAIN OUTSIDE OF TOFA, AT LEAST 50-FEET SOUTH OF TAXIWAY "A".
- COORDINATE ALL CONSTRUCTION ACTIVITY WITH AIRPORT OPERATIONS.

A2 WORK PHASING NOTES

SCALE: NOT TO SCALE



BARRICADE NOTES:

1. BARRICADES SHALL BE 6' X 8' AIRPORT LOW PROFILE BARRICADE AS MANUFACTURED BY NEUBERT AERO CORP., OR 10' X 8' RRM LOW PROFILE AIRPORT BARRIER AS MANUFACTURED BY SHERWIN INDUSTRIES, INC., OR APPROVED EQUAL.
2. BARRICADES SHALL EXTEND TO EDGES OF PAVEMENT UNLESS OTHERWISE SHOWN. EXACT LOCATIONS SHALL BE DETERMINED DURING CONSTRUCTION.
3. BARRICADES SHALL BE FILLED WITH WATER AND INTERLOCKED WITH EACH OTHER. BARRICADES WHICH HAVE TO BE MOVED DAILY MAY BE ANCHORED TO THE PAVEMENT BY AN ALTERNATE METHOD.
4. ONE FLAG AND ONE WARNING LIGHT SHALL BE ATTACHED TO EACH BARRICADE.
5. IN AREAS OF JET BLAST, USE METAL STRAPS AND EXPANSION ANCHORS TO SECURE BARRICADES TO THE PAVEMENT.

A3 INTERLOCKING BARRICADE DETAIL

SCALE: NOT TO SCALE

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ITHACA TOMPKINS INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	S. DAVIS
DESIGNED BY:	S. DAVIS
CHECKED BY:	W.G. PERRINE, P.E.

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

CONSTRUCTION SAFETY AND PHASING PLAN

G-102

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&	AND	DH	DEEP HOLE	LF	LINEAR FEET	PVC	POLYVINYL CHLORIDE
@	AT	DMH	DRAINAGE MANHOLE	MAX	MAXIMUM	S	SLOPE
BLDG.	BUILDING	DW	DRY WELL	MC	MECHANICAL CONTRACT(OR)	SA, SAN	SANITARY SEWER
BRL	BUILDING RESTRICTION LINE	EA	EACH	MH	MANHOLE	SH	SIGNAL HAND HOLE
℄	CENTERLINE	EL, ELEV	ELEVATION	MIN	MINIMUM	SF	SILT FENCE
CATV	CABLE TELEVISION	EC	ELECTRICAL CONTRACT(OR)	MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES	S.F., SQ. FT.	SQUARE FEET
CB	CATCH BASIN	ELEC	ELECTRICAL	N	NORTH	ST	STORM SEWER, SEPTIC TANK
CHH	COMMUNICATION HAND HOLE	ES	END SECTION	NTS	NOT TO SCALE	STD	STANDARD
CMH	COMMUNICATION MANHOLE	EX, EXIST	EXISTING	O.F.	ON CENTER	T	TELEPHONE
CLR	CLEAR	F.F.E.	FINISH FLOOR ELEVATION	OS	OUTLET STRUCTURE	TCF	TEMPORARY CONSTRUCTION FENCE
C.O.	CLEAN OUT	FT	FOOT, FEET	OWS	OIL / WATER SEPARATOR	TYP	TYPICAL
CONC	CONCRETE	GC	GENERAL CONTRACTOR	ℙ	PROPERTY LINE	UD	UNDERDRAIN
Ø, DIA	DIAMETER	HDPE	HIGH DENSITY POLYETHYLENE	PC	PLUMBING CONTRACT(OR)	V	VENT
DB	DISTRIBUTION BOX	HH	HAND HOLE	PT	PERCOLATION TEST	W	WATER
		INV	INVERT				

NOTE: NOT ALL ABBREVIATIONS ARE USED.

C3 ABBREVIATIONS

SCALE: NOT TO SCALE

1. UTILITIES SHOWN ON THESE PLANS ARE BASED UPON CONDITIONS AS PROPOSED IN THE CONTRACT DRAWINGS TITLED "ARFF - SRE BUILDING SITE WORK PACKAGE (PHASE 1)", DATED MARCH 2025, AS PREPARED BY C&S ENGINEERS. CONSTRUCTION OF PHASE 1 IS TENTATIVELY SCHEDULED TO BE COMPLETED IN 2026. THE CONTRACTOR SHALL VERIFY THE TRUE LOCATION BEFORE COMMENCING WORK. BEFORE ANY PIPE IS PLACED THE CONTRACTOR SHALL UNCOVER ALL UTILITIES AT PIPE CROSSINGS TO ENABLE THE ENGINEER TO VERIFY THAT THE PROPOSED PIPE WITH GRADES SHOWN ON THE PLANS IS NOT OBSTRUCTED BY EXISTING UTILITIES. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS IN THIS CONTRACT.
2. ONE WEEK PRIOR TO EXCAVATING IN ANY AREA, THE CONTRACTOR SHALL HAVE AN APPROVED UTILITY LOCATING SERVICE LOCATE AND MARK OUT ALL UTILITIES. THE CONTRACTOR SHALL MEET WITH AIRPORT OPERATIONS AND THE RPR TO DETERMINE TAXIWAY OR RUNWAY CLOSURE TIMES AND DURATIONS FOR THE LOCATING TASKS. CONTRACTOR SHALL PERFORM SITE INVESTIGATIONS TO VERIFY LOCATION AND DEPTH OF ALL UTILITIES AS NECESSARY. INVESTIGATION TECHNIQUES MAY INCLUDE RF TRACING, GROUND PENETRATING RADAR, VACUUM OR AIR PRESSURE POT-HOLING OR BY OTHER MEANS APPROVED BY THE RPR. CONTRACTOR SHALL ACCURATELY RECORD AND MARK THE LOCATION OF ALL UTILITIES. ALL MARKERS SHALL BE APPROVED BY AIRPORT OPERATIONS AND CANNOT PRESENT A HEIGHT OBSTRUCTION OR FOREIGN OBJECT DEBRIS HAZARD TO AIRCRAFT (DISLODGE DUE TO WIND). THE CONTRACTOR SHALL VERIFY THE ROUTING OF ALL EXISTING CABLES AND NOTIFY THE RPR IF DISCREPANCIES EXIST TO THE ROUTING SHOWN ON THE CONTRACT DRAWINGS. ADVANCE NOTICE WILL ALLOW THE RPR TO MODIFY THE DESIGN PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY COMPANIES.
4. IN THE EVENT THAT THE CONTRACTOR DAMAGES ANY EXISTING UTILITIES, HE SHALL IMMEDIATELY NOTIFY THE OWNER AND THE AFFECTED UTILITIES REPRESENTATIVE OF SUCH DAMAGE. ANY DAMAGE SHALL PROMPTLY AND SATISFACTORILY BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES ENCOUNTERED IN THIS WORK. WHERE NECESSARY, THE CONTRACTOR SHALL PROVIDE TIMBER , PLANK OR OTHER APPROVED MATERIALS AND SECURELY BRACE AND PROTECT THESE UTILITIES. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS IN THE CONTRACT.
6. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SUPPORTS, BRACING AND OTHER DEVICES AS MAY BE REQUIRED OR AS DIRECTED BY THE ENGINEER TO PROTECT THE SAFETY OF THE ADJACENT STRUCTURES, ROADWAY AND UTILITIES. ALL COSTS SHALL BE INCLUDED IN VARIOUS ITEMS IN THE CONTRACT.
7. CONTRACTOR SHALL SAWCUT EXISTING PAVEMENT PRIOR TO PAVEMENT REMOVAL.
8. ALL FOUNDATIONS, FOR STRUCTURES MARKED FOR DEMOLITION, SHALL BE REMOVED THE FULL DEPTH.
9. ALL FOUNDATION, CONCRETE SLAB AND PAVEMENT VOIDS, CREATED AFTER REMOVAL, SHALL BE FILLED TO MATCH EXISTING GRADE (GRADE TO DRAIN) WITH COMPACTED RUN A BANK OR APPROVED EQUAL.
10. ALL UNSUITABLE SPOIL MATERIAL, SUCH AS CONCRETE AND ASPHALT AND EXCAVATED MATERIAL, SHALL BE DISPOSED OF OFF-SITE AT A PERMITTED FACILITY AS DETERMINED BY THE CONTRACTOR.
11. CONTRACTOR MAY BE REQUIRED TO IMPORT MATERIAL TO THE SITE TO COMPLETE ALL GRADING WORK.
12. ALL DISTURBED AREAS SHALL BE GRADED TO PROVIDE A SMOOTH MAINTAINABLE SURFACE AND ALLOW FOR POSITIVE DRAINAGE.
13. CONTRACTOR SHALL TOPSOIL (4" MIN.), SEED, FERTILIZE AND MULCH ALL DISTURBED GRASS AREAS.
14. IT WILL BE THE CONTRACTORS OBLIGATION AND RESPONSIBILITY TO USE METHODS AND EQUIPMENT WHICH WILL INSURE THE SATISFACTORY COMPLETION OF THE REQUIRED WORK WITHIN THE CONTRACT TIME ALLOWED.
15. THE CONTRACTOR MUST BE ACQUAINTED WITH THE DRAINAGE CHARACTERISTICS OF THE AREA SO THAT HE WILL PROGRESS HIS WORK EFFICIENTLY WITH FULLKNOWLEDGE OF THE POTENTIAL DRAINAGE PROBLEMS.
16. ALL EXISTING DRAINAGE SYSTEMS, INCLUDING DITCHES AND CULVERTS, WITHIN THE CONTRACT LIMITS SHALL BE CLEANED AND KEPT CLEAN AND FREE FLOWING FOR THE DURATION OF THE CONTRACT. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THIS CONTRACT.
17. THE CONTRACTOR SHALL BE REQUIRED TO PROTECT HIS WORKERS AT ALL TIMES IN CONFORMANCE WITH APPLICABLE OSHA REGULATIONS.
18. THE CONTRACTOR'S STAGING AREA SHALL BE COORDINATED WITH THE OWNER PRIOR TO THE START OF WORK.
19. CONTRACTOR SHALL UTILIZE THE PROPOSED STABILIZED CONSTRUCTION ENTRANCE FOR ACCESS TO THE SITE (SEE SHEET C-104).
20. ALL DIRT, DUST, STONES AND LOOSE DEBRIS SHALL BE CONTINUOUSLY REMOVED FROM ALL PAVED SURFACES DURING THIS CONTRACT.
21. GENERAL CONTRACTOR WILL BE REQUIRED TO PERFORM THEIR OWN SURVEY TO STAKE-OUT THE PROPOSED WORK.
22. THIS CONTRACT DOES NOT ALLOW FOR PRICE INCREASES DUE TO ESCALATION IN THE COST OF UNIT PRICED BID ITEMS. THE CONTRACTOR SHALL TAKE THIS INTO CONSIDERATION WHEN PREPARING UNIT PRICED ITEMS FOR BID AND MAKE CONSIDERATIONS FOR MARKET VOLATILITY.
23. IN THE EVENT ANY OBSTRUCTIONS AND/OR UTILITIES NOT SHOWN ON THE PLANS ARE ENCOUNTERED DURING CONSTRUCTION, AND ARE DEEMED TO BE CONFLICTS TO THE NEW WORK, ALL WORK SHALL STOP (ON THAT ITEM) & THE RPR NOTIFIED PRIOR TO PROCEEDING WITH WORK. WORK MAY PROCEED ON OTHER WORK TASKS TO MAINTAIN SCHEDULE.

B2 GENERAL NOTES

SCALE: NOT TO SCALE

Existing Building	EXISTING BUILDING
P.I.V. HYD. W WV	EXISTING WATER LINE, VALVE, P.I.V. & HYDRANT
ST D	EXISTING STORM SEWER, CATCH BASIN & MANHOLE
UD	EXISTING UNDER DRAIN PIPE
SA S	EXISTING SANITARY SEWER & MANHOLE
E E	EXISTING UNDERGROUND ELECTRIC & MANHOLE
Comm	EXISTING OVERHEAD COMMUNICATION
Gas	EXISTING NATURAL GAS LINE
OHE	EXISTING OVERHEAD POWER & UTILITY POLE
X X X X X	EXISTING FENCE & GATES
PROPERTY LINE	EXISTING PROPERTY LINE
460	EXISTING CONTOURS
W	EXISTING WELL
SIGN	EXISTING SIGN
	EXISTING PIPE BOLLARD
	PROPOSED STONE BUILDING PAD (PHASE 1)
	PROPOSED HEAVY DUTY ASPHALT PAVEMENT (PHASE 1)
ST	PROPOSED STORM SEWER PIPE (PHASE 1)
SA	PROPOSED SANITARY SEWER PIPE (PHASE 1)
W	PROPOSED WATER LINE (PHASE 1)
E	PROPOSED UNDERGROUND ELECTRIC (PHASE 1)
C	PROPOSED UNDERGROUND COMMUNICATION (PHASE 1)
EDB	PROPOSED ELECTRICAL DUCTBANK (PHASE 1)
S&R	PROPOSED GEOTHERM SUPPLY & RETURN (PHASE 1)
	PROPOSED SILT FENCE (PHASE 1)
	PROPOSED OIL / WATER SEPARATOR (PHASE 1)
CB-1	PROPOSED CATCH BASIN (PHASE 1)
CB-1	PROPOSED CATCH BASIN (PHASE 1)
S SMH-1	PROPOSED SANITARY SEWER MANHOLE (PHASE 1)
WV	PROPOSED CURB STOP AND BOX (PHASE 1)
	PROPOSED FIRE HYDRANT (PHASE 1)
PIV	PROPOSED POST INDICATOR VALVE (PHASE 1)
	PROPOSED PIPE BOLLARD (PHASE 1)
472.50'	PROPOSED SPOT ELEVATION (PHASE 1)
	PROPOSED TEMPORARY STONE CHECK DAM (PHASE 1)
	PROPOSED INLET PROTECTION (PHASE 1)
	PROPOSED BUILDING
	PROPOSED HEAVY DUTY ASPHALT PAVEMENT (SURFACE COURSE ONLY)
	PROPOSED HEAVY DUTY ASPHALT PAVEMENT (FULL DEPTH)
	PROPOSED CONCRETE PAVEMENT
	EXISTING ASPHALT / CONCRETE PAVEMENT TO BE REMOVED
E	PROPOSED UNDERGROUND ELECTRIC
C	PROPOSED UNDERGROUND COMMUNICATION
	PROPOSED ELECTRICAL DUCTBANK
470	PROPOSED CONTOUR LINE
	PROPOSED PIPE BOLLARD
472.50'	PROPOSED SPOT ELEVATION

A1 LEGEND

SCALE: NOT TO SCALE

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REGISTRATION EXPIRES: 06/30/2027

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ITHACA TOMPKINS INTERNATIONAL AIRPORT
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ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	M. ZINGARO
DESIGNED BY:	M. ZINGARO
CHECKED BY:	W.G. PERRINE, P.E.

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GENERAL NOTES, ABBREVIATIONS, AND LEGEND

C-001

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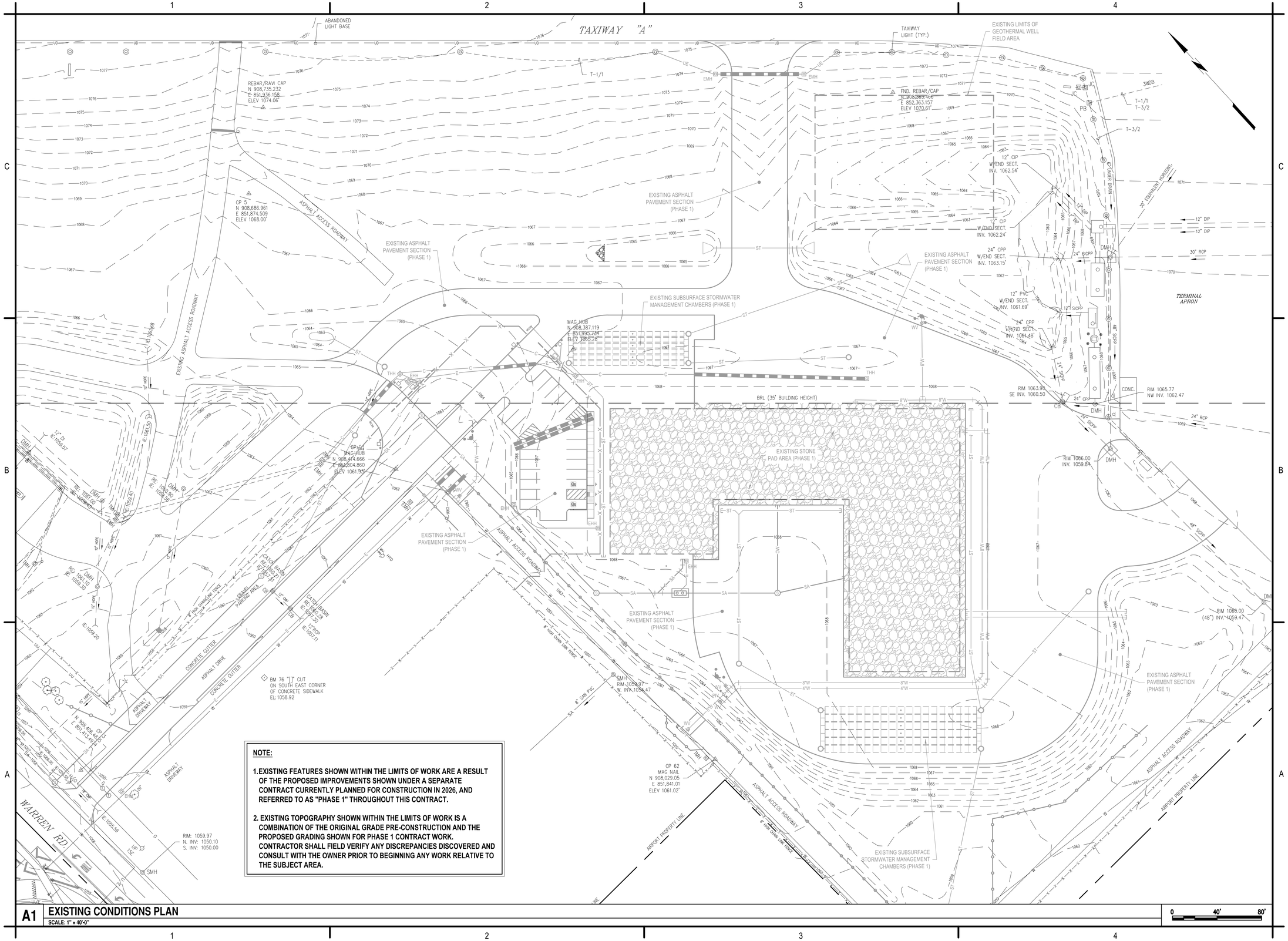

NOTE:

1. EXISTING FEATURES SHOWN WITHIN THE LIMITS OF WORK ARE A RESULT OF THE PROPOSED IMPROVEMENTS SHOWN UNDER A SEPARATE CONTRACT CURRENTLY PLANNED FOR CONSTRUCTION IN 2026, AND REFERRED TO AS "PHASE 1" THROUGHOUT THIS CONTRACT.

2. EXISTING TOPOGRAPHY SHOWN WITHIN THE LIMITS OF WORK IS A COMBINATION OF THE ORIGINAL GRADE PRE-CONSTRUCTION AND THE PROPOSED GRADING SHOWN FOR PHASE 1 CONTRACT WORK. CONTRACTOR SHALL FIELD VERIFY ANY DISCREPANCIES DISCOVERED AND CONSULT WITH THE OWNER PRIOR TO BEGINNING ANY WORK RELATIVE TO THE SUBJECT AREA.

A1 EXISTING CONDITIONS PLAN
SCALE: 1" = 40'-0"

0 40' 80'

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CERTIFICATE OF AUTHORIZATION # 0021365

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REGISTRATION EXPIRES: 06/30/2027

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ITHACA TOMPKINS INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	M. ZINGARO
DESIGNED BY:	M. ZINGARO
CHECKED BY:	W.G. PERRINE, P.E.

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EXISTING CONDITIONS PLAN

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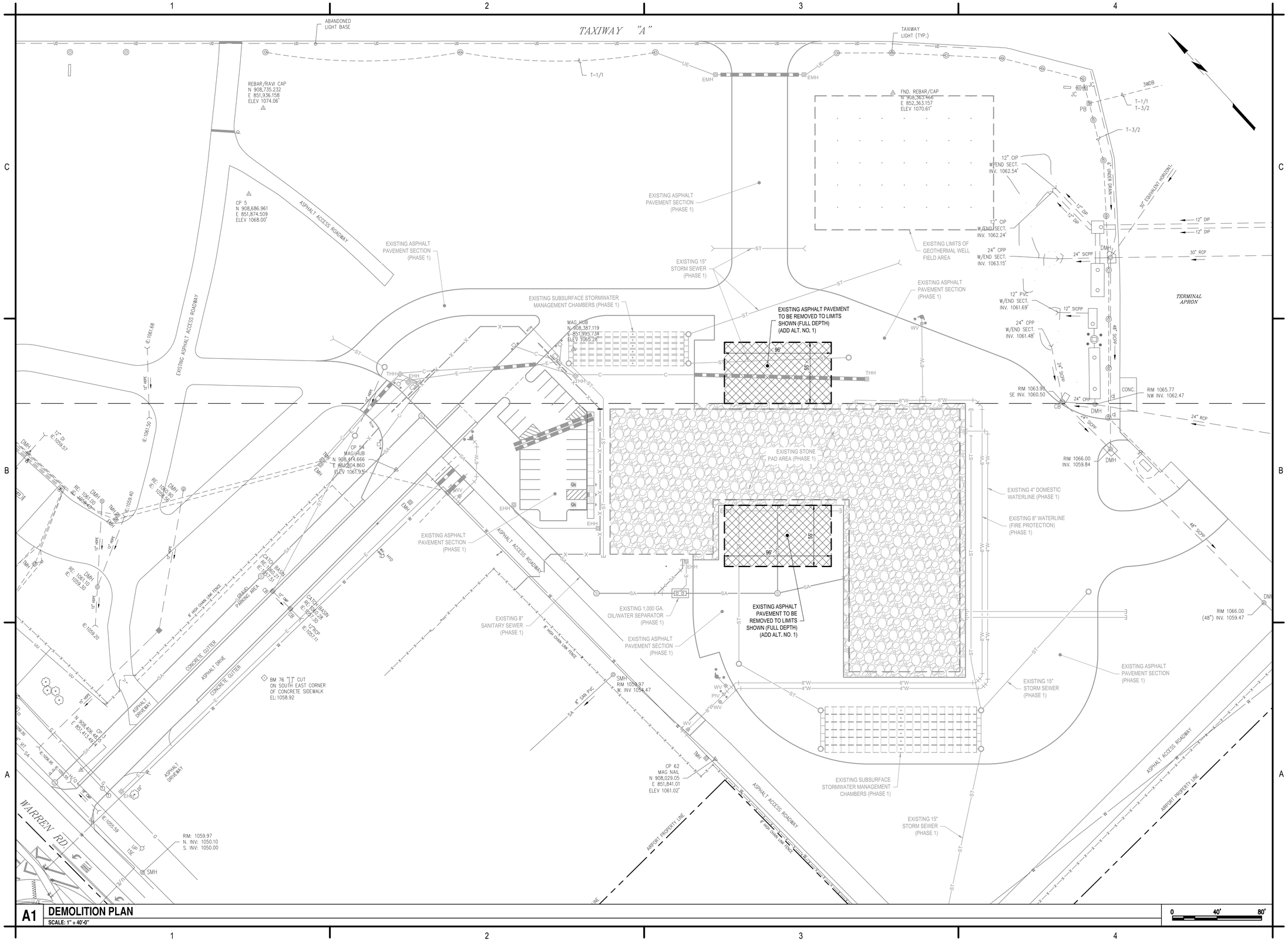

A1 DEMOLITION PLAN
SCALE: 1" = 40'-0"

0 40' 80'

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DEMOLITION PLAN

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POINT TABLE		
POINT NO.	NORTHING	EASTING
1	908325.19	851983.72
2	908113.04	852215.77
3	907938.68	852056.36
4	908005.87	851982.86
5	908120.02	852087.23
6	908202.52	851996.99
7	908166.35	851963.91
8	908228.80	851895.60
9	908195.62	852004.54
10	908151.34	851964.05
11	908086.56	852034.90
12	908130.84	852075.39

POINT TABLE		
POINT NO.	NORTHING	EASTING
13	908103.53	852065.38
14	908013.37	851982.95
15	907939.43	852063.82
16	908088.14	852199.79
17	908191.06	852130.44
18	908235.34	852170.92
19	908300.11	852100.07
20	908255.83	852059.59

HORIZONTAL / VERTICAL DATUM NOTE:

HORIZONTAL DATUM IS BASED ON THE N.Y.S. PLANE COORDINATE SYSTEM NAD 83, CENTRAL ZONE.

VERTICAL DATUM IS TIED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

REBAR/RAVI CAP
N 908,735.232
E 851,936.158
ELEV 1074.06'

CP 5
N 908,686.961
E 851,874.509
ELEV 1068.00'

TAXIWAY "A"

FND. REBAR/CAP
N 908,363.466
E 852,363.157
ELEV 1070.61'

EXISTING LIMITS OF GEOTHERMAL WELL FIELD AREA

751'-0" TO CENTERLINE OF RUNWAY

TERMINAL APRON

ASPHALT ACCESS ROADWAY

EXISTING ASPHALT ACCESS ROADWAY

MAG NAIL
N 908,387.119
E 851,995.734
ELEV 1065.28'

ARFF BUILDING
(±9,963 S.F.)
(ADD ALT. NO. 1)

OFFICE BUILDING
(±12,090 S.F.)
(NOT IN CONTRACT)

SRE BUILDING
(±23,442 S.F.)

OUTLINE OF PROPOSED BUILDING FOOTPRINT (TYP.)

BRL (35' BUILDING HEIGHT)

CP 54
MAG NAIL
N 908,974.666
E 852,504.860
ELEV 1061.93'

CP 1
N 908,406.495
E 851,413.974

CP 62
MAG NAIL
N 908,029.05
E 851,841.01
ELEV 1061.02'

BM 76 "T" CUT
ON SOUTH EAST CORNER
OF CONCRETE SIDEWALK
EL: 1058.92

SMH
RIM 1059.97
W. INV 1054.47

WARREN RD.

AIRPORT PROPERTY LINE

8' HIGH CHAIN LINK FENCE

GRAVEL PARKING AREA

CONCRETE GUTTER

ASPHALT DRIVE

ASPHALT DRIVEWAY

8" CMP PVC

8" HYD

CB-1 CB-2 CB-3 CB-4 CB-5 CB-6 CB-7 CB-8 CB-9 CB-10 CB-11 CB-12 CB-14

SMH-1 SMH-2 SMH-3 SMH-4 SMH-5

OWS-1

DMH EMH THH EHH TMH JC PB WV PIV CONC.

P-1 P-2 P-3 P-4 P-5 P-6 P-7 P-8 P-9 P-10 P-11 P-12 P-13 P-14 P-15 P-16 P-17 P-18 P-19 P-20

R=30' R=25' R=145' R=124' R=100' R=50' R=5' R=10' R=60' R=20' R=75' R=125' R=30' R=140' R=100'

50' 24' 18' 9' TYP. 96' 60' 122'-6" 99'-4" 16' 81'-4" 124' 235'-0" 83'

0 40' 80'

A1	GEOMETRY AND LAYOUT PLAN
	SCALE: 1" = 40'-0"

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GEOMETRY AND LAYOUT PLAN

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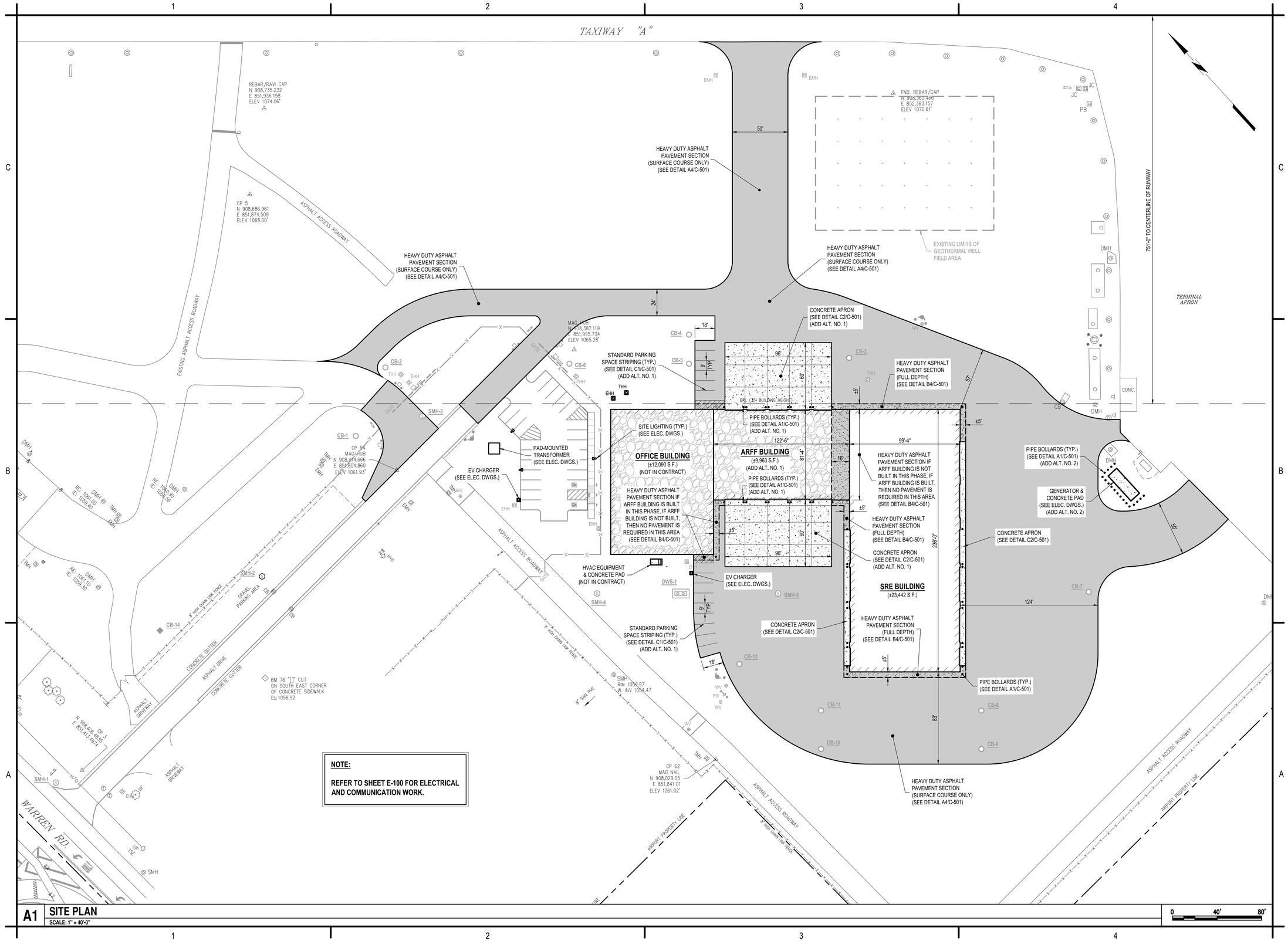

A1 SITE PLAN
SCALE: 1" = 40'-0"

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SITE PLAN

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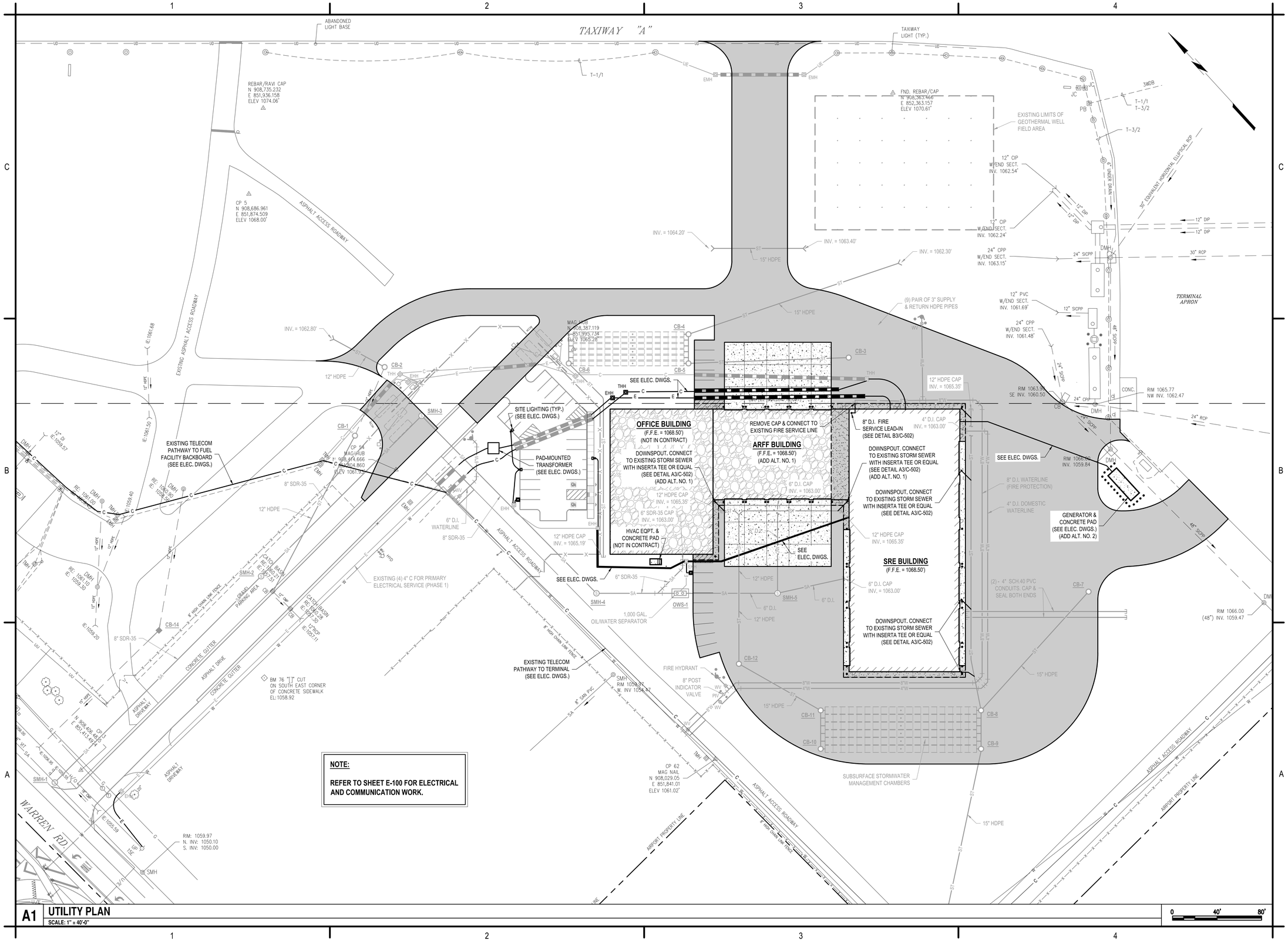

A1 UTILITY PLAN
SCALE: 1" = 40'-0"

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UTILITY PLAN

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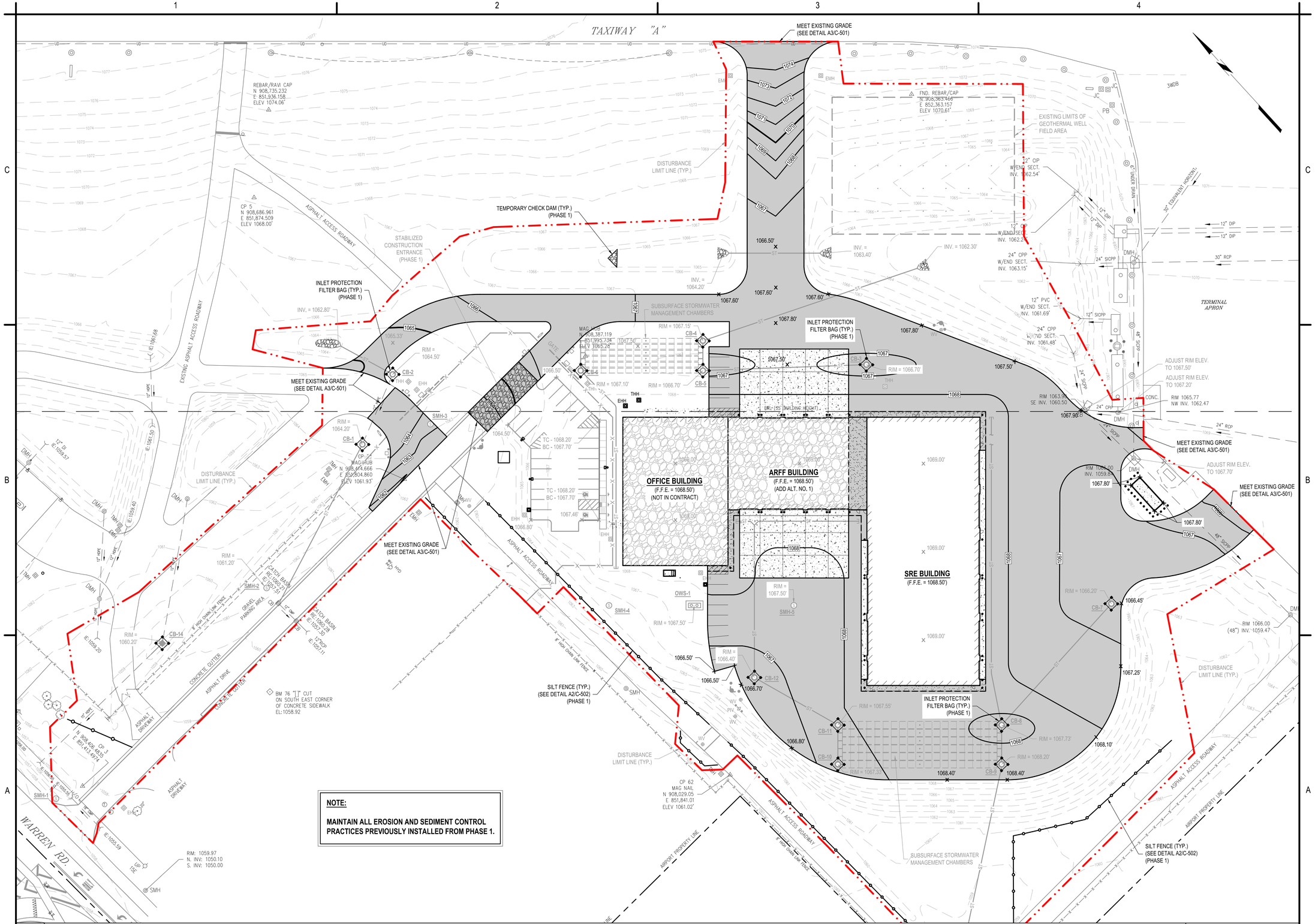

A1 GRADING AND EROSION CONTROL PLAN
SCALE: 1" = 40'-0"

0 40' 80'

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GRADING AND EROSION CONTROL PLAN

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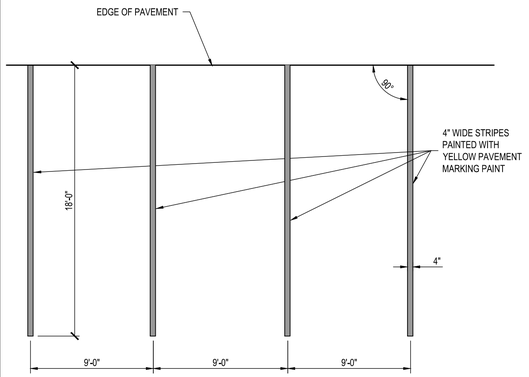
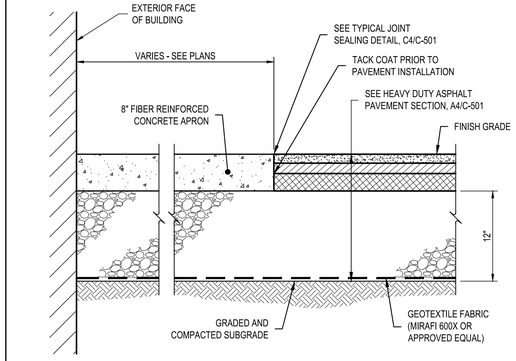


C1 STANDARD PARKING STALL STRIPING DETAIL (ADD ALT. NO. 1)

SCALE: NOT TO SCALE

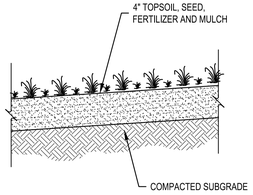


NOTE:

THIS DETAIL APPLIES TO BASE BID AND ADD ALT. NO. 1

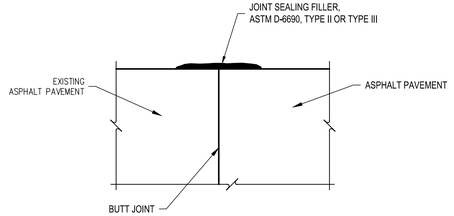
C2 CONCRETE APRON @ OVERHEAD DOORS

SCALE: NOT TO SCALE



C3 TYPICAL GRASS RESTORATION DETAIL

SCALE: NOT TO SCALE

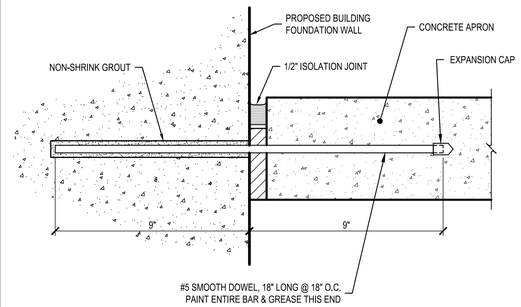


NOTE:

THIS DETAIL APPLIES TO BASE BID AND ADD ALT. NO. 1

C4 JOINT SEALING DETAIL

SCALE: NOT TO SCALE

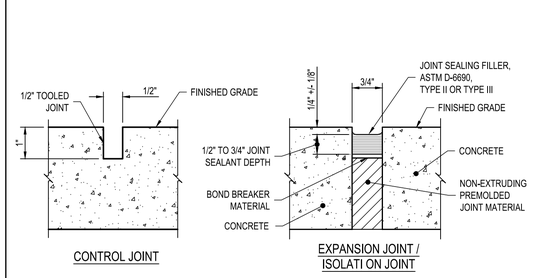


NOTE:

THIS DETAIL APPLIES TO BASE BID AND ADD ALT. NO. 1

B1 DOWEL DETAIL @ CONCRETE APRON & BUILDING FACE

SCALE: NOT TO SCALE

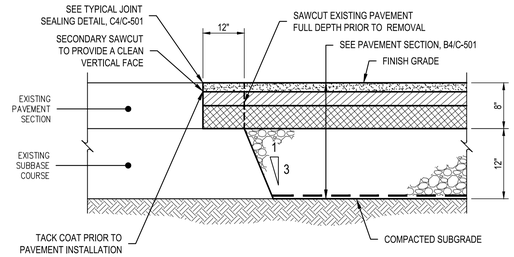


NOTE:

THIS DETAIL APPLIES TO BASE BID AND ADD ALT. NO. 1

B2 TYPICAL CONCRETE JOINT DETAILS

SCALE: NOT TO SCALE

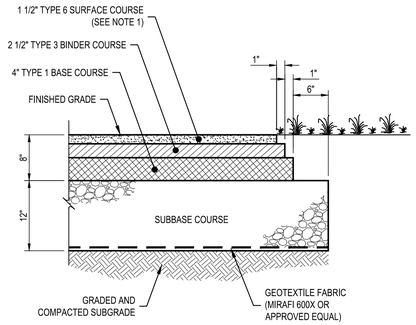


NOTE:

THIS DETAIL APPLIES TO BASE BID AND ADD ALT. NO. 1

B3 HEAVY DUTY ASPHALT KEYING DETAIL (FULL DEPTH)

SCALE: NOT TO SCALE

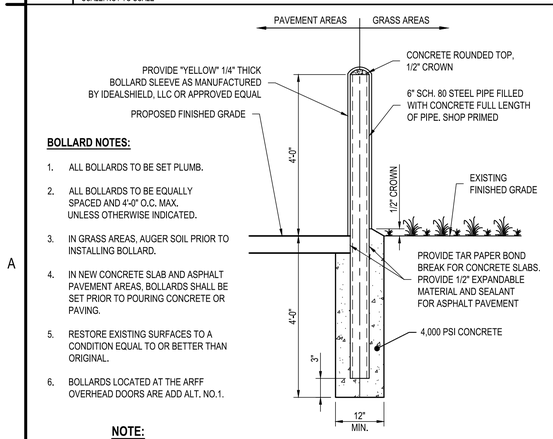


NOTE:

THIS DETAIL APPLIES TO BASE BID AND ADD ALT. NO. 1

B4 HEAVY DUTY ASPHALT PAVEMENT SECTION (FULL DEPTH)

SCALE: NOT TO SCALE



BOLLARD NOTES:

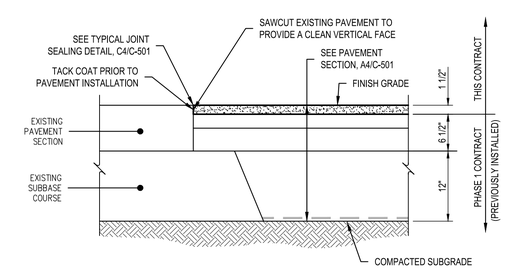
1. ALL BOLLARDS TO BE SET PLUMB.
2. ALL BOLLARDS TO BE EQUALLY SPACED AND 4'-0" O.C. MAX. UNLESS OTHERWISE INDICATED.
3. IN GRASS AREAS, AUGER SOIL PRIOR TO INSTALLING BOLLARD.
4. IN NEW CONCRETE SLAB AND ASPHALT PAVEMENT AREAS, BOLLARDS SHALL BE SET PRIOR TO POURING CONCRETE OR PAVING.
5. RESTORE EXISTING SURFACES TO A CONDITION EQUAL TO OR BETTER THAN ORIGINAL.
6. BOLLARDS LOCATED AT THE ARFF OVERHEAD DOORS ARE ADD ALT. NO.1.

NOTE:

THIS DETAIL APPLIES TO BASE BID, ADD ALT. NO. 1 AND ADD ALT. NO. 2

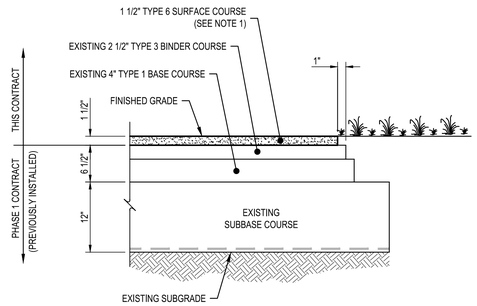
A1 TYPICAL STEEL PIPE BOLLARD DETAIL

SCALE: NOT TO SCALE



A3 HEAVY DUTY ASPHALT KEYING DETAIL (SURFACE COURSE ONLY)

SCALE: NOT TO SCALE



A4 HEAVY DUTY ASPHALT PAVEMENT SECTION (SURFACE COURSE ONLY)

SCALE: NOT TO SCALE

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DETAILS

C-501

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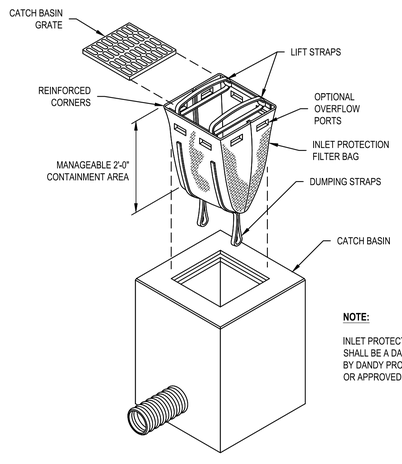
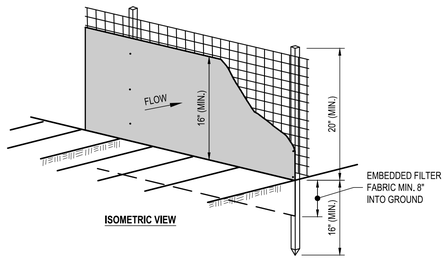


NOTE:

INLET PROTECTION FILTER BAG SHALL BE A DANDY SACK ™ BY DANDY PRODUCTS, INC. OR APPROVED EQUAL.

A1 INLET PROTECTION FILTER BAG

SCALE: NOT TO SCALE



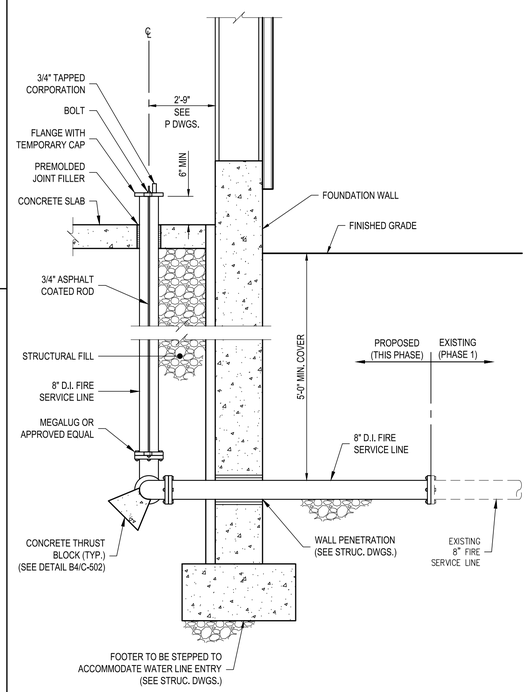
ISOMETRIC VIEW

SILT FENCE NOTES:

1. WOVEN WIRE FENCE SHALL BE SECURELY FASTENED TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. SILT FENCE FABRIC SHALL BE SECURELY FASTENED TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION. WHEN TWO SECTIONS OF SILT FENCE FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
3. MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR AS DIRECTED BY ENGINEER AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
4. CONTRACTOR SHALL REMOVE THE SILT FENCE AT THE APPROPRIATE TIME, DRESS THE DISTURBED AREAS, AND DISPOSE OF THE SILT FENCE.

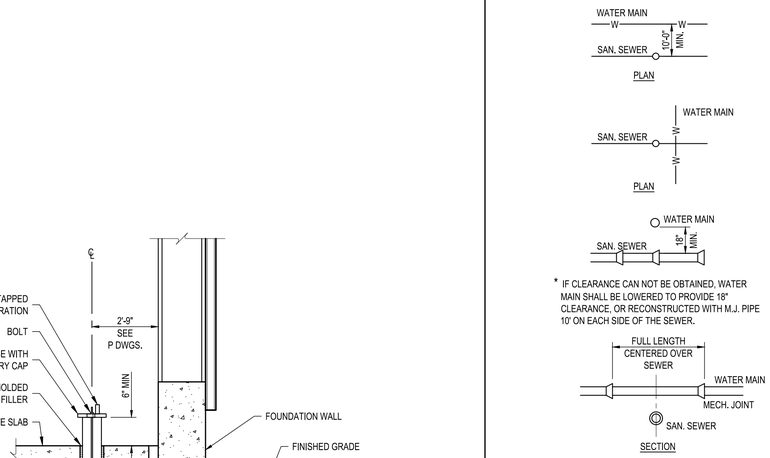
A2 SILT FENCE DETAIL

SCALE: NOT TO SCALE



B3 FIRE SERVICE LEAD-IN DETAIL

SCALE: NOT TO SCALE



NOTE:

WHEREVER REQUIRED VERTICAL CLEARANCE CAN NOT BE OBTAINED, THE SANITARY SEWER SHALL BE ENCASED IN NYSDOT CLASS "A" CONCRETE FOR A DISTANCE OF 10' EITHER SIDE OF THE INTERSECTION WITH THE WATER MAIN AS INSTRUCTED BY THE ENGINEER. CLEARANCE REQUIREMENTS SHALL BE AS OUTLINED IN PART 8.8 IN THE "RECOMMENDED STANDARDS FOR WATER WORKS." ALSO REQUIRED IS A 10' MINIMUM HORIZONTAL SEPARATION BETWEEN STORM SEWERS & WATER MAINS.

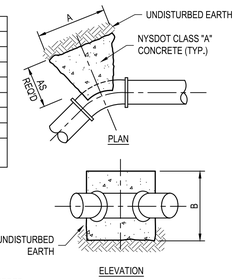
C4 SEWER MAIN & WATER MAIN SEPARATION DETAIL

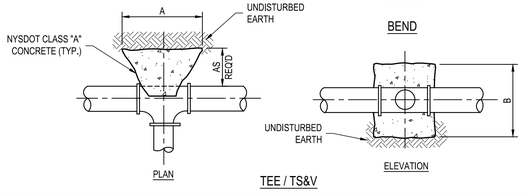
SCALE: NOT TO SCALE

CONCRETE THRUST BLOCK DIMENSIONS						
SIZE	8"			4"		
DIMENSIONS	A	B	C	A	B	C
BEND 90°	2'-10"	2'-10"	----	1'-6"	1'-6"	----
BEND 45°	2'-3"	2'-3"	----	1'-6"	1'-6"	----
BEND 22 1/2°	1'-8"	1'-8"	----	1'-6"	1'-6"	----
BEND 11 1/4°	1'-2"	1'-2"	----	1'-6"	1'-6"	----
D.I. ANCHOR	6'-0"	3'-0"	1'-0"	4'-6"	2'-0"	1'-0"
TS&V, TEE BRANCH SIZE	2'-6"	2'-6"	----	1'-6"	1'-6"	----

THRUST BLOCK NOTES:

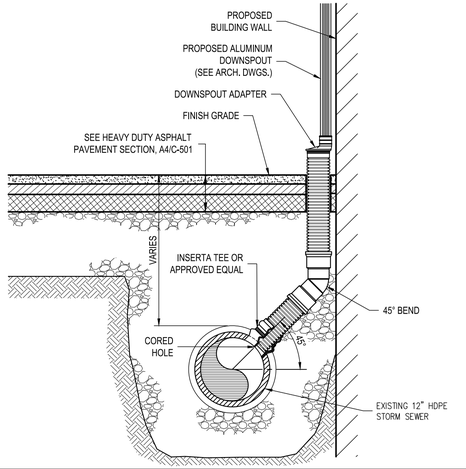
1. CONCRETE NOT TO OVERLAP ANY JOINT.
2. CONCRETE TO BE PLACED SO AS NOT TO INTERFERE WITH REMOVING OR INSTALLING ANY OF THE JOINTING HARDWARE.





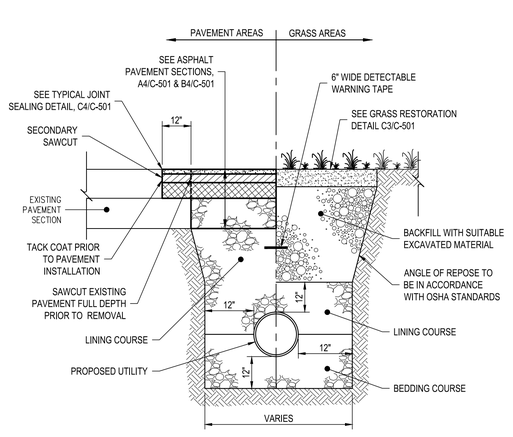
B4 TYPICAL THRUST BLOCK DETAIL

SCALE: NOT TO SCALE



A3 DOWNSPOUT CONNECTION DETAIL

SCALE: NOT TO SCALE



A4 UTILITY TRENCH AND RESTORATION DETAIL

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CERTIFICATE OF AUTHORIZATION # 0021365

STATE OF NEW YORK · THOMAS T. HOPF · LICENSED PROFESSIONAL ENGINEER · NO. 082037

REGISTRATION EXPIRES: 06/30/2027

ITH
flyithaca.com

NEW ARFF/SRE BUILDING
ITHACA TOMPKINS INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	M. ZINGARO
DESIGNED BY:	M. ZINGARO
CHECKED BY:	W.G. PERRINE, P.E.

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

DETAILS

C-502

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@	AT
DIA	DIAMETER
# OR LB	POUND
A.B.	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
ADD'L	ADDITIONAL
ADJUST	ADJUSTMENT
AESS	ARCHITECTURALLY-EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISH FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING OF MATERIALS
AWS	AMERICAN WELDING SOCIETY
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
B/	BOTTOM OF
BAL	BALANCE
BCX	BOTTOM CHORD EXTENSION
BSMT	BASEMENT
C	CHANNEL
C/C	CENTER-TO-CENTER
CFMF	COLD-FORMED METAL FRAMING
CJ	CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLR	CLEAR
CMA	COLUMN MASONRY ANCHOR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
d	PENNYWEIGHT
DEMO	DEMOLISH
DFT	DRY FILM THICKNESS
DWG	DRAWING
E-W	EAST-WEST
EA	EACH
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EL OR ELEV	ELEVATION
EMBED	EMBEDMENT
EOD	EDGE OF DECK
EOS	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
EX OR EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
F/S	FAR SIDE
FF	FINISH FLOOR
FD	FLOOR DRAIN
FDN	FOUNDATION
FLR	FLOOR
FOW	FACE OF WALL
FS	FOOTING STEP
FT OR '	FOOT
FTG	FOOTING
HCP	HOLLOW CORE PLANK
GA	GAGE
GALV	GALVANIZED
GLULAM	GLUED-LAMINATED
HP	HIGH POINT
HSS	HOLLOW STRUCTURAL SECTION
IN OR "	INCH
INFO	INFORMATION
INT	INTERIOR
K	KIP (1000 LBS)
KB	KNEE BRACE
KSI	KIPS PER SQUARE INCH
L	ANGLE
LLBB	LONG LEGS BACK-TO-BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LW	LIGHTWEIGHT
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MO	MASONRY OPENING
N/S	NEAR SIDE
N-S	NORTH-SOUTH
NTS	NOT TO SCALE
NW	NORMAL WEIGHT
OC	ON CENTER
OH	OVERHEAD
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
PAF	POWDER-ACTUATED FASTENER
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PEMB	PRE-ENGINEERED METAL BUILDING
PREFAB	PREFABRICATED
PROJ	PROJECTION
PT	PRESSURE-TREATED
R	RADIUS
RD	ROOF DRAIN
REQ'D	REQUIRED
RET	RETURN
RTU	ROOFTOP UNIT
SCHED	SCHEDULE
SECT	SECTION
SF	SHALLOW FOOTING
SFRM	SPRAYED FIRE-RESISTIVE MATERIAL
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SLBB	SHORT LEGS BACK-TO-BACK
SQ	SQUARE
SSMA	STEEL STUD MANUFACTURER'S ASSOCIATION
SSPC	STEEL STRUCTURES PAINTING COUNCIL
STD	STANDARD
SOG	SLAB ON GRADE
T/ OR TO	TOP OF
TCE	TOP OF CAISSON ELEVATION
TFE	TOP OF FOOTING ELEVATION
TGBE	TOP OF GRADE BEAM ELEVATION
TSE	TOP OF SLAB ELEVATION
TWE	TOP OF WALL ELEVATION
TYP	TYPICAL
U/S	UNDERSIDE
U.N.O.	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	WIDE-FLANGE SECTION
W/	WITH
W/O	WITHOUT
WP	WORK POINT
WS	WALL STEP
WT	TEE SECTION
WWR	WELDED WIRE REINFORCEMENT
XS	EXTRA-STRONG (STEEL PIPE)

SYMBOL:

AREA NOT IN CONTRACT (NIC)

A1 ABBREVIATIONS
SCALE: NOT TO SCALE

DESIGN CRITERIA

1. REFERENCED CODES AND DESIGN STANDARDS:
   - A. 2025 BUILDING CODE OF NEW YORK STATE (BCNYS)
   - B. ASCE/SEI 7-22 MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-22)
2. STRUCTURAL LOADING DESIGN DATA:
   - A. RISK CATEGORY: IV
   - B. DEAD LOADS:
     - a. ROOF: BY PEMB MANUFACTURER
     - b. MEZZANINE: 55 PSF
   - C. LIVE LOADS:
     - a. ROOF LIVE LOAD: 20 PSF
     - b. MEZZANINE LIVE LOAD: 125 PSF (LIGHT STORAGE)
   - D. COLLATERAL ROOF LOADS (APPLIED TO ROOF AND UNDERSIDE OF MEZZANINE):
     - a. MECHANICAL, ELECTRICAL, PIPING: 10 PSF
   - E. WIND LOAD (3-SEC. GUST):
     - a. ULTIMATE WIND SPEED: 122 MPH
     - b. RISK CATEGORY: IV
     - c. EXPOSURE CATEGORY: C
     - d. ENCLOSURE CLASSIFICATION: ENCLOSED
     - e. INTERNAL PRESSURE COEFFICIENT: ±0.18
     - f. WIND-BORNE DEBRIS REGION: NA
   - F. SNOW LOAD:
     - a. GROUND SNOW LOAD, Pg (ULTIMATE): 100 PSF
     - b. SNOW EXPOSURE FACTOR (Ce): 1.0
     - c. THERMAL FACTOR (Ct): 1.0
     - d. WINTER WIND PARAMETER, W2: 0.5
     - e. DRIFT LOADS CALCULATED PER ASCE 7-22
   - G. RAIN LOAD:
     - a. 15-MIN PRECIPITATION INTENSITY: 7.58 IN/HR
     - b. 60-MIN PRECIPITATION INTENSITY: 3.26 IN/HR
   - H. SEISMIC LOAD:
     - a. RISK CATEGORY: IV
     - b. SEISMIC IMPORTANCE FACTOR: 1.0
     - c. SS: .14
     - d. S1: .042
     - e. SITE CLASS: C
     - f. Sds: .099
     - g. Sd1: .036
     - h. SEISMIC DESIGN CATEGORY: A
     - i. ANALYSIS PROCEDURE USED: BY PEMB MANUFACTURER
     - j. BASIC SEISMIC FORCE-RESISTING SYSTEM: BY PEMB MANUFACTURER
     - k. RESPONSE MODIFICATION COEFFICIENT, R: BY PEMB MANUFACTURER
3. HANDRAIL ASSEMBLIES AND GUARDS SHALL BE DESIGNED FOR 50 PLF OR A CONCENTRATED LOAD OF 200 LBS LOCATED AT ANY POINT APPLIED IN ANY DIRECTION AT THE TOP AND MID RAIL AND TRANSFER THE LOAD TO THE SUPPORT STRUCTURE. THE LOADS NEED NOT TO ACT CONCURRENTLY

GENERAL: (THE FOLLOWING REQUIREMENTS TOGETHER WITH THE PROJECT PLANS AND SPECIFICATIONS SHALL APPLY TO THE STRUCTURES IN THIS CONTRACT.)

1. THE CONTRACTOR IS RESPONSIBLE FOR THE SURVEY AND FIELD VERIFYING ALL EXISTING CONDITIONS.
2. WORK ON STRUCTURAL DRAWINGS REPRESENTS FINAL CONDITIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRUCTURAL STABILITY OF ALL INTERMEDIATE CONDITIONS DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL COORDINATE THE ARCHITECTURAL, PLUMBING, HVAC, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION NOT INDICATED ON THE STRUCTURAL DRAWINGS. SUCH INFORMATION INCLUDES, AS A MINIMUM, EMBEDDED SLEEVES AND INSERTS, MISCELLANEOUS DETAILS, SPECIAL FLOOR FINISHES, DOOR THRESHOLDS, SLOPES TO DRAINS, NAILERS, OPENINGS IN STRUCTURAL ELEMENTS, ETC.
4. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE STABILITY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS, TIE-DOWNS, AND/OR SHORING MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
5. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROCEDURES. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION OR FOR RELATED SAFETY PROCEDURES.
6. TYPICAL NOTES AND DETAILS SHOWN ON STRUCTURAL TYPICAL DETAILS SHALL BE APPLICABLE TO ALL PARTS OF THE STRUCTURAL WORK EXCEPT WHERE SPECIFICALLY REQUIRED OTHERWISE ON THE CONTRACT DOCUMENTS. DETAILS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO THOSE SHOWN FOR THE MOST NEARLY SIMILAR CONDITION ON THE DRAWINGS AS DETERMINED BY THE ENGINEER.
7. DO NOT SCALE DRAWING DIMENSIONS. IN THE EVENT OF A GRID LINE DIMENSION CONFLICT, THE ARCHITECTURAL DRAWINGS SHALL GOVERN.
8. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR ALL PARTS OF THE WORK INCLUDING DESCRIPTION OF DEMOLITION, TEMPORARY BRACING, CONSTRUCTION METHODS AND SEQUENCING, WHERE APPLICABLE NO PERFORMANCE OF WORK SHALL COMMENCE WITHOUT REVIEW OF THE SHOP DRAWINGS BY THE ENGINEER.
9. FABRICATION PRIOR TO THE RECEPT OF AN APPROVED SHOP DRAWINGS SHALL BE AT THE CONTRACTOR'S OWN RISK AND THAT INSTALLATION OF ANY WORK PRIOR TO RECEIPT OF AN APPROVED SHOP DRAWING SHALL BE STRICTLY PROHIBITED.
10. FOR ELEVATIONS REFER TO THE PLAN SHEETS.
11. DRILLING, CORING, SAW CUTTING AND ETC. INTO CONCRETE SHALL MEET THE LATEST OSHA REGULATIONS FOR SILICA DUST EXPOSURE.

GROUNDWORK AND EXCAVATIONS

1. DEWATER, EXCAVATE, FILL AND COMPACT SOIL IN PREPARATION FOR SLAB ON GRADE, WALLS, AND FOUNDATION IN ACCORDANCE WITH THE RECOMMENDATIONS PRESENTED IN THE GEOTECHNICAL REPORT PREPARED BY CME ASSOCIATES, INC. DATED 11/05/2024.
2. ALL EXCAVATIONS SHALL BE DEWATERED TO MAINTAIN GROUNDWATER AT LEAST 24" BELOW FOOTING BEFORE PLACING OF CONCRETE.
3. SLOPE THE EXTERIOR GRADE AWAY FROM THE STRUCTURE. REFER TO CIVIL PLANS FOR DETAILS.
4. PROVIDE TEMPORARY OR PERMANENT SUPPORTS, SHORING, SHEETING OR BRACING SO THAT NO HORIZONTAL MOVEMENT OR VERTICAL SETTLEMENT OCCURS TO ADJACENT STRUCTURES, STREETS, SOILS OR UTILITIES ADJACENT TO OR WITHIN THE PROJECT SITE.
5. BACKFILL SHALL BE PLACED IN COMPACTED LIFTS PER THE EARTHWORK SPECIFICATIONS.
6. NO FOUNDATION CONCRETE SHALL BE PLACED IN WATER.
7. DO NOT BACKFILL BEHIND FOUNDATION WALLS UNTIL THE PERMANENT LATERAL SUPPORT SYSTEM IS IN PLACE AND OF FULL STRENGTH.
8. COMPONENTS OF ANY SUPPORT OF EXCAVATION SYSTEM SHALL REMAIN IN PLACE UNTIL ALL PERMANENT STRUCTURAL SYSTEMS AT AND BELOW GROUND ARE IN PLACE.

FOUNDATIONS

1. THE FOUNDATION HAS BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT PREPARED BY CME ASSOCIATES DATED 11/05/2024.
2. THE GEOTECHNICAL REPORT NAMED ABOVE IS AVAILABLE TO THE CONTRACTOR UPON REQUEST TO THE OWNER. THE ARCHITECT AND ENGINEER WILL NOT BE RESPONSIBLE FOR THE ACCURACY OR APPLICABILITY OF SUCH DATA THEREIN.
3. NO RESPONSIBILITY IS ASSUMED BY THE ENGINEER FOR THE VALIDITY OF THE SUBSURFACE CONDITIONS DESCRIBED ON THE DRAWINGS, SPECIFICATIONS, TEST BORINGS, OR TEST PITS. THESE DATA ARE INCLUDED ONLY TO ASSIST THE CONTRACTOR DURING BIDDING AND SUBSEQUENT CONSTRUCTION. THEY REPRESENT CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AT THE TIME DATA WAS COLLECTED.
4. MAXIMUM ALLOWABLE SOIL BEARING PRESSURE = 3000 PSF
5. ALL SOIL DESIGNATED AS MISCELLANEOUS FILL LOCATED WITHIN THE BUILDING PAD SHALL BE REMOVED AND REPLACED WITH CONTROLLED ENGINEERED FILL TO PROVIDE A STABLE AND BEARING SURFACE FOR PROPOSED BUILDING FOUNDATIONS.
6. FOOTINGS TO BEAR ON PROOF ROLLED NATIVE SOILS AND/OR COMPACTED STRUCTURAL FILL PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. STRUCTURAL FILL TO EXHIBIT A DENSITY OF AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 (MODIFIED PROCTOR). COMPACTED STRUCTURAL FILL SHALL CONSIST OF CLEAN, WELL GRADED SAND AND GRAVEL OR CRUSHED ROCK CONFORMING TO THE GRADATION REQUIREMENTS SET FORTH BELOW.

STANDARD SEIVE SIZE	% PASSING BY DRY WEIGHT
2-INCH	100
1/4 INCH	25 TO 65
NO. 40	5 TO 40
NO. 200	0 TO 10

7. PERFORM SOIL COMPACTION TESTING, AT LEAST ONE TEST EVERY 30 FEET OF WALL FOOTING. PROVIDE A MINIMUM OF 4 SOIL COMPACTION TESTS AT EVERY BUILDING.

CONCRETE

1. CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 301 - SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
2. STANDARDS:
   - A. DESIGN: ACI 318 - 2019
   - B. DETAILS: ACI 315 - 2018
   - C. MATERIALS: ACI 301 - 2016
3. DESIGN STRENGTH:
   - A. FOUNDATIONS: 4500 PSI COMPRESSIVE STRENGTH @ 28 DAYS, NORMAL WEIGHT CONCRETE
4. SUBMIT PROPOSED CONCRETE MIX DESIGN TO THE OWNER'S REPRESENTATIVE AND TESTING LABORATORY CONCURRENTLY FOR REVIEW AND APPROVAL.
5. CONCRETE COVER OVER BARS:
   - A. CONCRETE DEPOSITED ON GROUND 3".
   - B. FORMED CONCRETE EXPOSED TO GROUND, WEATHER OR WATER 2".
   - C. WALLS & SLABS NOT DIRECTLY EXPOSED TO GROUND, WATER, OR WEATHER 1-1/2".
6. CLEAN AND APPLY BONDING AGENT TO ALL EXISTING CONCRETE SURFACES TO RECEIVE NEW CONCRETE. ALL CONCRETE TO CONFORM WITH THE LATEST ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE. (ACI - 301)
7. SECTIONS AND DETAILS MAY NOT SHOW ALL REQUIRED CONCRETE REINFORCEMENT. ADDITIONAL REINFORCEMENT MAY BE DESCRIBED IN SCHEDULES (IF APPLICABLE) AND NOTES.
8. PROVIDE BAR SUPPORTS AND SPACERS IN ACCORDANCE WITH REQUIREMENTS OF ACI 315 UNLESS NOTED OTHERWISE.
9. NOT ALL ITEMS EMBEDDED IN THE CONCRETE ARE SHOWN ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF ALL OPENINGS AND EMBEDDED ITEMS IN THE CONCRETE PERTAINING TO THE DIFFERENT TRADES AS SHOWN ON THEIR RESPECTIVE DRAWINGS. SLEEVES, MECHANICAL OPENINGS, CONDUITS, PIPES, RECESSES, DEPRESSIONS, CURBS, AND ALL EMBEDDED ITEMS SHALL BE PROVIDED AS SHOWN ON THE ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS AND AS REQUIRED BY THE EQUIPMENT MANUFACTURERS.
10. EMBEDDED CONDUITS, PIPES, OR OTHER UTILITIES NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE ENGINEER. WHERE EMBEDDED ITEMS ARE ALLOWED, THEY SHALL BE SPACED NOT LESS THAN THREE DIAMETERS ON CENTER EACH WAY BUT WITH NOT LESS THAN TWO INCHES CLEAR SPACE BETWEEN EMBEDDED ITEMS. THE TOTAL DEPTH OF ALL EMBEDDED ITEMS AND THE CLEAR SPACE BETWEEN THEM SHALL NOT EXCEED 1/3 OF THE TOTAL CONCRETE DEPTH AND SHALL BE CONFINED TO THE MIDDLE THIRD OF THE CONCRETE DEPTH.
11. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE SIZE OF CONCRETE PLACEMENTS SHALL BE LIMITED AS FOLLOWS:
    - A. STRIP FOOTINGS AND WALLS: 60 FT (UNLESS INTERMEDIATE CONTROL JOINTS ARE PROVIDED
12. PROVIDE 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES U.N.O
13. THROUGH PENETRATIONS FOR CONCRETE WALLS OR SLABS SHALL CONFORM TO STANDARD DETAIL DRAWINGS.
14. MULTIPLE PENETRATIONS SHALL NOT BE SPACED CLOSER THAN THREE TIMES THE DIAMETER OR THREE TIMES THE WIDTH OF THE LARGER OPENING WITHOUT APPROVAL OF THE ENGINEER.

SLAB ON GRADE:

1. ALL SLABS SHALL BE PLACED ON 8" OF FREE DRAINING COMPACTED GRANULAR MATERIAL WITH LESS THAN 5% FINES PASSING THE #200 SIEVE, CONFORMING TO GRADATION FOR NYSDOT TYPE 2 SUBBASE, ITEM 703-04.
2. THE DESIGN OF CONCRETE MIXES, LOCATING OF CONSTRUCTION JOINTS IN SLABS, STAGGERING OF POUR PLACEMENTS, LOCATION OF POUR STRIPS, AND PLACEMENT AND CURING PROCEDURES ARE TO BE PERFORMED BY THE CONTRACTOR IN A MANNER THAT WILL MINIMIZE SHRINKAGE CRACKING OF THE SLABS.
3. PLACE INTERIOR SLABS ON VAPOR RETARDER (10 MIL. MIN UNO) WITH SOILS PREPARED PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

CONCRETE REINFORCING

1. REINFORCING:
   - A. MESH: ASTM A-185 (FLAT SHEETS)
   - B. BARS: ASTM A-615 GRADE 60 - DEFORMED.
   - C. BARS: WELDABLE REINFORCING BARS TO CONFORM TO ASTM A-706 GRADE 60.
2. SPLICES IN REINFORCEMENT: UNLESS OTHERWISE NOTED, ALL SPLICES AND ANCHORAGES SHALL BE PER ACI. STAGGER SPLICES WHEREVER POSSIBLE AND LOCATE SO AS NOT TO IMPAIR STRENGTH OF MEMBERS.
3. REINFORCEMENT WORK OF DETAILING, FABRICATION ,AND ERECTION SHALL CONFORM TO THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318, ACI DETAILING MANUAL-2004 (SP 66) CRSI MANUAL OF STANDARD PRACTICE (MSP 2009), AND THE STRUCTURAL WELDING CODE- REINFORCING STEEL (AWS D1.1).
4. PROVIDE AND SCHEDULE ON SHOP DRAWINGS THE NECESSARY ACCESSORIES TO HOLD ALL REINFORCEMENT SECURELY IN POSITION.
5. WHERE CONTINUOUS REINFORCEMENT IS CALLED FOR , IT SHALL BE EXTENDED CONTINUOUSLY AROUND CORNERS AND LAPPED AT SPLICES OR AT DISCONTINUOUS ENDS. LAPS SHALL BE CLASS B TENSION LAP SPLICES UNLESS OTHERWISE NOTED.
6. WHERE REINFORCEMENT IS NOT SHOWN ON DRAWINGS, PROVIDE REINFORCEMENT IN ACCORDANCE WITH APPLICABLE DETAILS AS DETERMINED BY THE ENGINEER. IN NO CASE SHALL THE REINFORCEMENT BE LESS THAN THE MINIMUM PERMITTED BY THE APPLICABLE CODES.
7. WHERE REINFORCEMENT IS REQUIRED IN SECTION, REINFORCEMENT IS CONSIDERED TYPICAL WHEREVER THE SECTION APPLIES.
8. WHERE THERE IS A CONFLICT BETWEEN COLUMN VERTICAL BARS AND SLAB OR BEAM HORIZONTAL BARS THE COLUMN BARS SHALL REMAIN IN THEIR DESIGNATED POSITIONS AND THE HORIZONTAL BARS SHALL BE ADJUSTED.
9. REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS.
10. COLUMN DOWELS SHALL BE SET WITH A TEMPLATE SO AS TO BE ENCLOSED BY THE COLUMN TIES.
11. DOWELS SHALL MATCH BAR SIZES UNLESS OTHERWISE NOTED.
12. WELDED WIRE FABRIC SHALL BE LAPPED 8 INCHES OR 1 1/2 SQUARES WHICHEVER IS LARGER AND SHALL BE WIRED TOGETHER.
13. REINFORCEMENT SHALL NOT BE TACK WELDED. REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706 FY=60KSI.
14. REINFORCEMENT INSTALLATION SHALL BE COMPLETED AT LEAST 24 HOURS BEFORE A CONCRETE PLACEMENT OR SHALL BE COORDINATED WITH THE OAR TO ENSURE PROPER TIME IS ALLOWED FOR THE INSPECTION OF THE REINFORCING. NOTIFY THE ENGINEER OF COMPLETION.
15. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE AT THE POSITIONS SHOWN ON THE DRAWINGS BEFORE PLACING CONCRETE.
16. UNLESS NOTED OTHERWISE, ALL BARS SHALL BE EMBEDDED TO A MINIMUM DEPTH (Ld OR Ldh)

POST INSTALLED ANCHORS

1. ALL POST INSTALLED ANCHORS INTO EXISTING CONCRETE USE DEWALT POWERS AC200+ VINYLESTER ADHESIVE SYSTEM OR APPROVED EQUAL.
2. ALL POST-INSTALLED ANCHOR PRODUCTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION PROCEDURES.
3. DRILLING, CORING, SAW CUTTING AND ETC. INTO CONCRETE SHALL MEET THE LATEST OSHA REGULATIONS FOR SILICA DUST EXPOSURE.

PRE-ENGINEERED METAL BUILDINGS

1. PRE-ENGINEERED METAL BUILDINGS SHALL BE DESIGNED TO SUPPORT THEIR OWN WEIGHT PLUS SUPERIMPOSED DEAD, LIVE, WIND, OR SEISMIC LOADINGS, WHICHEVER COMBINATION PRODUCES THE MOST SEVERE CONDITION IN ACCORDANCE WITH THE LATEST RECOMMENDATIONS OF THE METAL BUILDING MANUFACTURERS ASSOCIATION. CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS PRIOR TO MANUFACTURE. SHOP DRAWINGS SHALL SHOW ALL INFORMATION INCLUDING, BUT NOT LIMITED TO, DIMENSIONS, MEMBER SIZES AND PROPERTIES, FRAMING PLANS, COLUMN REACTIONS, SECTIONS, BRACED FRAME ELEVATIONS, AND ALL PERTINENT DETAILS.
2. UPDATED FINAL REACTIONS FOR BUILDING EXPECTED UPON PROCUREMENT FOR ENGINEER REVIEW UPON WHICH FOUNDATION DESIGN SHOWN HEREIN WILL BE REVISED AS REQUIRED. CONTRACTOR SHALL NOT COMMENCE FOUNDATION WORK WITHOUT RECEIVING ENGINEER APPROVAL AND/OR ANY NEW OR REVISED FOUNDATION DRAWINGS ISSUED FOR CONSTRUCTION RESULTING FROM ANY REQUIRED DESIGN CHANGES FOLLOWING REVIEW OF UPDATED BUILDING REACTIONS. CONTRACTOR DECISION TO PROCEED FIRST WITHOUT ENGINEER APPROVAL AND/OR WITHOUT UPDATED OR REVISED CONSTRUCTION DOCUMENTS DOES AT THEIR OWN RISK.
3. GENERAL CONTRACTOR SHALL REVIEW FOUNDATION DRAWINGS FOR CONFORMANCE WITH ANCHOR ROD LAYOUT AND FRAMING DRAWINGS PROVIDED BY METAL BUILDING MANUFACTURER PRIOR TO COMMENCING WORK. NOTIFY FOUNDATION ENGINEER OF ANY DISCREPANCIES.
4. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND PIPING, CLEANOUT LOCATIONS, FLOOR DRAINS, SLEEVES AND EMBEDMENTS NOT SHOWN ON STRUCTURAL DRAWINGS WITH ARCHITECTURAL, ELECTRICAL, PLUMBING, AND SITE/CIVIL DRAWINGS.

A2 GENERAL NOTES
SCALE: NOT TO SCALE

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REGISTRATION EXPIRES: 05/31/2028

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS
INTERNATIONAL AIRPORT
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ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO: 158.095.001
DATE: MARCH 2026
DRAWN BY: S.J. WEEKS, E.I.T.
DESIGNED BY: M.S. ROLFE, P.E.
CHECKED BY: J. OBLEMAN, P.E.

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GENERAL NOTES AND ABBREVIATIONS

S-001

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STRUCTURAL STEEL

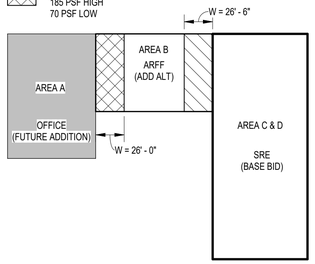
1. STANDARDS:
   - A. DESIGN - AISC 360 - 2016
   - B. CONSTRUCTION - AISC 303, LATEST EDITION
   - C. BOLTED CONNECTIONS - LATEST EDITION OF AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING
   - D. ASTM A325 OR A490 BOLTS.
   - E. WELDED CONNECTIONS - AMERICAN WELDING SOCIETY (AWS) D1.1, LATEST EDITION
2. WIDE FLANGE SECTIONS AND TEES - ASTM A992 (Fy = 50 KSI)
3. SQUARE, RECTANGULAR & ROUND HOLLOW STRUCTURAL SECTIONS (HSS) - ASTM A500 GRADE C.
4. ANGLES, PLATES AND BARS - ASTM A572-50, (EXCEPT WHERE NOTED TO BE ASTM A36)
5. BEAM/COLUMN CONTINUITY PLATES AND DOUBLER PLATES - ASTM A572-50
6. PIPE SECTIONS - ASTM A53 GRADE B.
7. ALL STRUCTURAL BOLTS SHALL BE ASTM A-325 TYPE N UNLESS OTHERWISE NOTED.
8. ALL EMBEDDED STEEL ANCHOR BOLTS SHALL BE FABRICATED IN ACCORDANCE WITH THE LATEST A.I.S.C. STANDARD SPECIFICATIONS AND SHALL BE ASTM F1554, GRADE 55, U.N.O.
9. USE WELDED OR BOLTED SHOP CONNECTIONS AND BOLTED FIELD CONNECTIONS WHERE POSSIBLE.
10. ALL EMBEDDED STEEL SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
11. ALL WELDING SHALL CONFORM WITH THE LATEST EDITION OF AWS CODE. ALL WELDERS (SHOP & FIELD) SHALL BE AWS D1.1 CERTIFIED FOR THE TYPE OF WELDING BEING PERFORMED.
12. TO OBTAIN SPECIFIED ALIGNMENT AND FIT-UP U.N.O. FIELD WELDING MUST BE PERFORMED WHERE SPECIFICALLY NOTED. EDGE OF SLAB AND ROOF BENT PLATES, ANGLES AND OTHER MISC EXTERIOR, OR INTERIOR WALL ALIGNMENT ITEMS SHALL BE FIELD WELDED TO BEAMS. PROVIDE FABRICATION AND ERECTION TOLERANCES MORE STRINGENT THAN SPECIFIED BY AISC WHERE REQUIRED TO ACHIEVE THE DETAILS INDICATED.
13. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES, U.N.O.
14. WHERE A GROOVE WELD IS SHOWN WITHOUT AN INDICATED DEPTH OF PENETRATION THE JOINT SHALL BE A COMPLETE JOINT PENETRATION WELD (CJP).
15. WELDED HEADED STUD ANCHORS FOR EMBEDDED PLATES AND SHEAR REINFORCEMENT SHALL CONFORM TO AWS D1.1, ASTM A29, Fu=65KSI
16. ANCHOR BOLTS OR RODS SHALL BE BUILT INTO CONNECTING WORK PRESET BY TEMPLATES OR SIMILAR METHODS.
17. MINIMUM CONNECTION BOLT DIAMETER IS 3/4 INCH. BEAM CONNECTIONS MUST HAVE AT LEAST TWO BOLTS.
18. PROVIDE FRICTION TYPE BOLT CONNECTIONS IN ALL MOMENT CONNECTIONS.
19. SIMPLE SHEAR CONNECTIONS SHALL BE CAPABLE OF END ROTATION PER AISC REQUIREMENTS FOR UNRESTRAINED MEMBERS.
20. MINIMUM SIZE OF FILLET WELDS SHALL BE 1/4 INCH UNO.
21. PROVIDE FRAMED OR SEATED BEAM CONNECTIONS IN ACCORDANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION. UNLESS OTHERWISE NOTED, BEAM CONNECTIONS SHALL BE DETAILED TO HAVE A CAPACITY OF NOT LESS THAN ONE-HALF THE TOTAL ALLOWABLE UNIFORM LOAD DETERMINED IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION TABLE (ASD) FOR "UNIFORM LOAD CONSTRAINTS FOR BEAMS LATERALLY SUPPORTED", FOR BEAMS AND SPANS IN QUESTION.
22. MINIMUM BEAM END REACTION SHALL BE 10 KIPS (ASD).
23. ENDS OF COLUMNS AT SPLICES OR LOOSE BASE PLATES SHALL BE "FINISHED TO FULL CONTACT".
24. PROVIDE STIFFENERS "FINISHED TO CONTACT" UNDER ALL LOAD CONCENTRATIONS ON SUPPORTING MEMBERS, OVER COLUMNS, AND WHERE SHOWN ON THE DRAWINGS.
25. PROVIDE TEMPORARY ERECTION BRACING AND SUPPORTS TO HOLD THE STRUCTURAL STEEL FRAME SECURELY IN POSITION. BRACING SHALL NOT BE REMOVED UNTIL THE PERMANENT LATERAL LOAD RESISTING SYSTEM IS IN PLACE AND CONCRETE FOR FLOORS AND ROOFS HAVE ACHIEVED AT LEAST 75% OF THEIR DESIGN STRENGTH. THE STEEL FRAME SHALL BE CONSIDERED A NON SELF-SUPPORTING FRAME UNTIL ALL SLAB DIAPHRAGMS ARE IN PLACE
26. FIELD CUTTING OF STRUCTURAL STEEL OR ANY FIELD MODIFICATIONS SHALL NOT BE MADE WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER FOR EACH INDIVIDUAL CASE.
27. STRUCTURAL STEEL EXPOSED TO THE WEATHER OR LOCATED IN A NONCONDITIONED SPACE, SHALL BE HOT DIPPED GALVANIZED.

A1 GENERAL NOTES
SCALE: NOT TO SCALE

LEGEND

DRIFT SNOW LOAD
190 PSF HIGH
70 PSF LOW

FUTURE DRIFT SNOW LOAD
185 PSF HIGH
70 PSF LOW



NOTE:

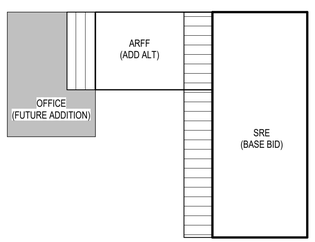
1. THE SRE SHALL BE BASE BID AS A STAND ALONE BUILDING.

B2 SNOW LOADING PLAN
SCALE: NOT TO SCALE

LEGEND

FULL EXTERIOR WIND LOAD

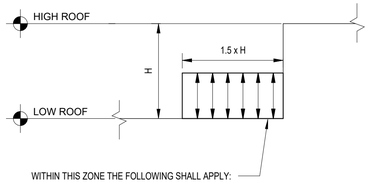
FULL EXTERIOR WIND LOAD



A2 WIND LOADING PLAN
SCALE: NOT TO SCALE

COMPONENTS AND CLADDING WIND PRESSURE NOTES:

1. THE SRE SHALL BE BASE BID AS A STAND ALONE BUILDING. THIS INCLUDES APPLICATION OF THE COMPONENT AND CLADDING LOADS.
2. THE COMPONENTS AND CLADDING WIND LOAD PRESSURES IN THE TABLES ABOVE ARE BASED ON ASCE 7. THE WIND PRESSURES ARE ULTIMATE LOAD PRESSURES. REFER TO THE GENERAL NOTES AND DESIGN DATA NOTES FOR WIND LOAD INFORMATION AND PARAMETERS.
3. THE PRESSURES IN THE TABLES BELOW ARE GROSS PRESSURES TO BE USED FOR WIND LOAD CONTRIBUTION TO THE TOTAL LOAD APPLIED TO ANY COMPONENTS AND CLADDING MEMBER OR MATERIAL WHICH IS PART OF A ROOF OR EXTERIOR WALL ASSEMBLY.
4. REFER TO CHAPTER 16 OF THE FLORIDA BUILDING CODE AND ASCE 7 FOR DEFINITION OF TERMS.
5. CONFIGURATION OF END ZONES, EDGE STRIPS AND CORNERS SHALL BE PER ASCE 7.
6. INTERPOLATION FOR EFFECTIVE WIND AREA BETWEEN 10 SF AND 100 SF FOR ROOFS, AND 10 SF AND 500 SF FOR WALLS IS PERMITTED.
7. PRESSURES ARE APPLIED NORMAL TO THE SURFACE OF THE COMPONENT OR CLADDING ELEMENT.
8. POSITIVE AND NEGATIVE PRESSURES ACT SIMULTANEOUSLY AT PARAPETS.
9. THE WIDTH OF EDGE STRIP (a) SHALL BE 10 PERCENT OF THE LEAST HORIZONTAL, OR 40 PERCENT OF THE EAVE HEIGHT, WHICHEVER IS LESS, BUT NOT LESS THAN EITHER 4 PERCENT OF THE LEAST HORIZONTAL DIMENSION OR 3 FEET.

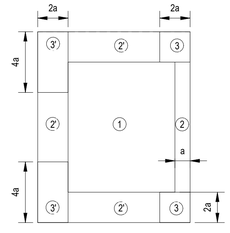


WITHIN THIS ZONE THE FOLLOWING SHALL APPLY:

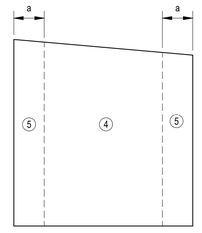
1. FOR PRESSURE TOWARDS SURFACE USE SAME AS WALL PRESSURE ZONES 4 AND 5.
2. FOR PRESSURE AWAY FROM SURFACE USE SAME AS ROOF PRESSURES EXCEPT ZONE 2 SHALL BE TREATED AS ZONE 1, AND ZONE 3 SHALL BE TREATED AS ZONE 2.

SECTION

ROOF STEP - COMPONENTS AND CLADDING
ROOF WIND PRESSURE ZONE DESIGNATIONS



ROOF PLAN



WALL ELEVATION

SRE BUILDING (BASE BID)
ENCLOSED BUILDING WIND PRESSURE FOR EXTERIOR COMPONENTS AND CLADDING MATERIALS

ROOF SLOPE	SURFACE	EFFECTIVE WIND AREA (SF)	WIND PRESSURE TOWARD SURFACE (+ PSF)	WIND PRESSURE AWAY FROM SURFACE (- PSF)
3° TO 10°	ZONE 1 ROOF	10 20 50 100	14.3 13.4 12.2 11.3	38.1 38.1 38.1 38.1
	ZONE 2 ROOF EDGES	10 20 50 100	14.3 13.4 12.2 11.3	44.1 43.2 42.0 41.1
	ZONE 2' ROOF EDGES	10 20 50 100	14.3 13.4 12.2 11.3	53.0 52.1 50.9 50.0
	ZONE 3 ROOF CORNERS	10 20 50 100	14.3 13.4 12.2 11.3	59.0 53.6 46.5 41.1
	ZONE 3' ROOF CORNERS	10 20 50 100	14.3 13.4 12.2 11.3	82.8 73.8 62.0 53.0
NA	ZONE 4 WALL	10 50 200 500	32.2 28.9 26.0 24.1	34.8 31.5 28.7 26.8
NA	ZONE 5 WALL CORNERS	10 50 200 500	32.2 28.9 26.0 24.1	42.9 36.3 30.6 26.8

ARFF BUILDING (ADD ALT)
ENCLOSED BUILDING WIND PRESSURE FOR EXTERIOR COMPONENTS AND CLADDING MATERIALS

ROOF SLOPE	SURFACE	EFFECTIVE WIND AREA (SF)	WIND PRESSURE TOWARD SURFACE (+ PSF)	WIND PRESSURE AWAY FROM SURFACE (- PSF)
3° TO 10°	ZONE 1 ROOF	10 20 50 100	13.7 12.8 11.7 10.8	36.5 36.5 36.5 36.5
	ZONE 2 ROOF EDGES	10 20 50 100	13.7 12.8 11.7 10.8	42.2 41.3 40.2 39.3
	ZONE 2' ROOF EDGES	10 20 50 100	13.7 12.8 11.7 10.8	50.8 49.9 48.8 47.9
	ZONE 3 ROOF CORNERS	10 20 50 100	13.7 12.8 11.7 10.8	56.5 51.3 44.5 39.3
	ZONE 3' ROOF CORNERS	10 20 50 100	13.7 12.8 11.7 10.8	79.3 70.7 59.3 50.8
NA	ZONE 4 WALL	10 50 200 500	30.8 27.6 24.9 23.1	33.4 30.2 27.5 25.7
NA	ZONE 5 WALL CORNERS	10 50 200 500	30.8 27.6 24.9 23.1	41.1 34.7 29.3 25.7

A3 COMPONENTS AND CLADDING WIND PRESSURES
SCALE: NOT TO SCALE

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REGISTRATION EXPIRES: 05/31/2028

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	S.J. WEEKS, E.I.T.
DESIGNED BY:	M.S. ROLFE, P.E.
CHECKED BY:	J. OBLEMAN, P.E.

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GENERAL NOTES

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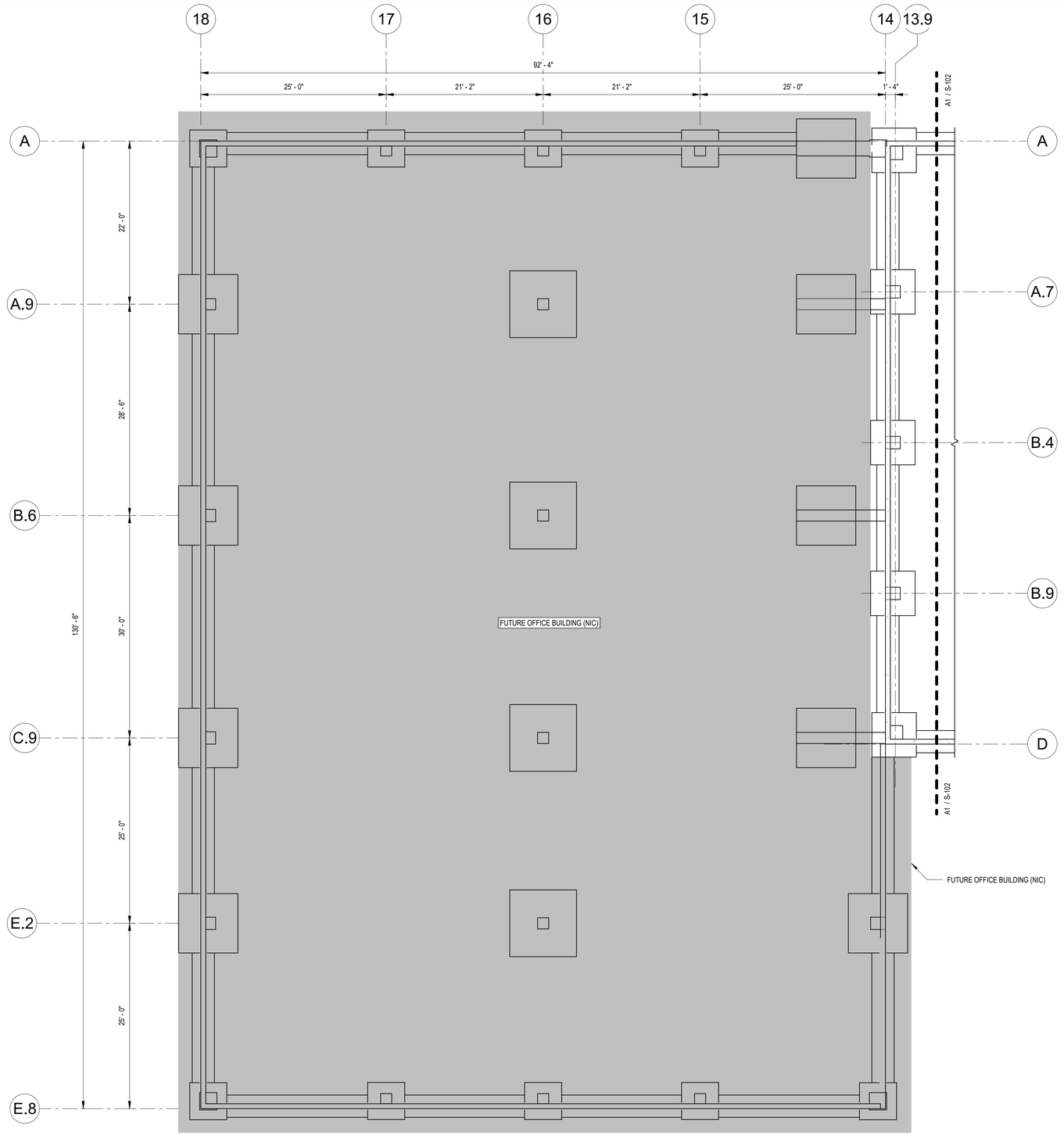

A1 FOUNDATION PLAN - AREA A
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FOUNDATION PLAN - AREA A (NOT IN CONTRACT)

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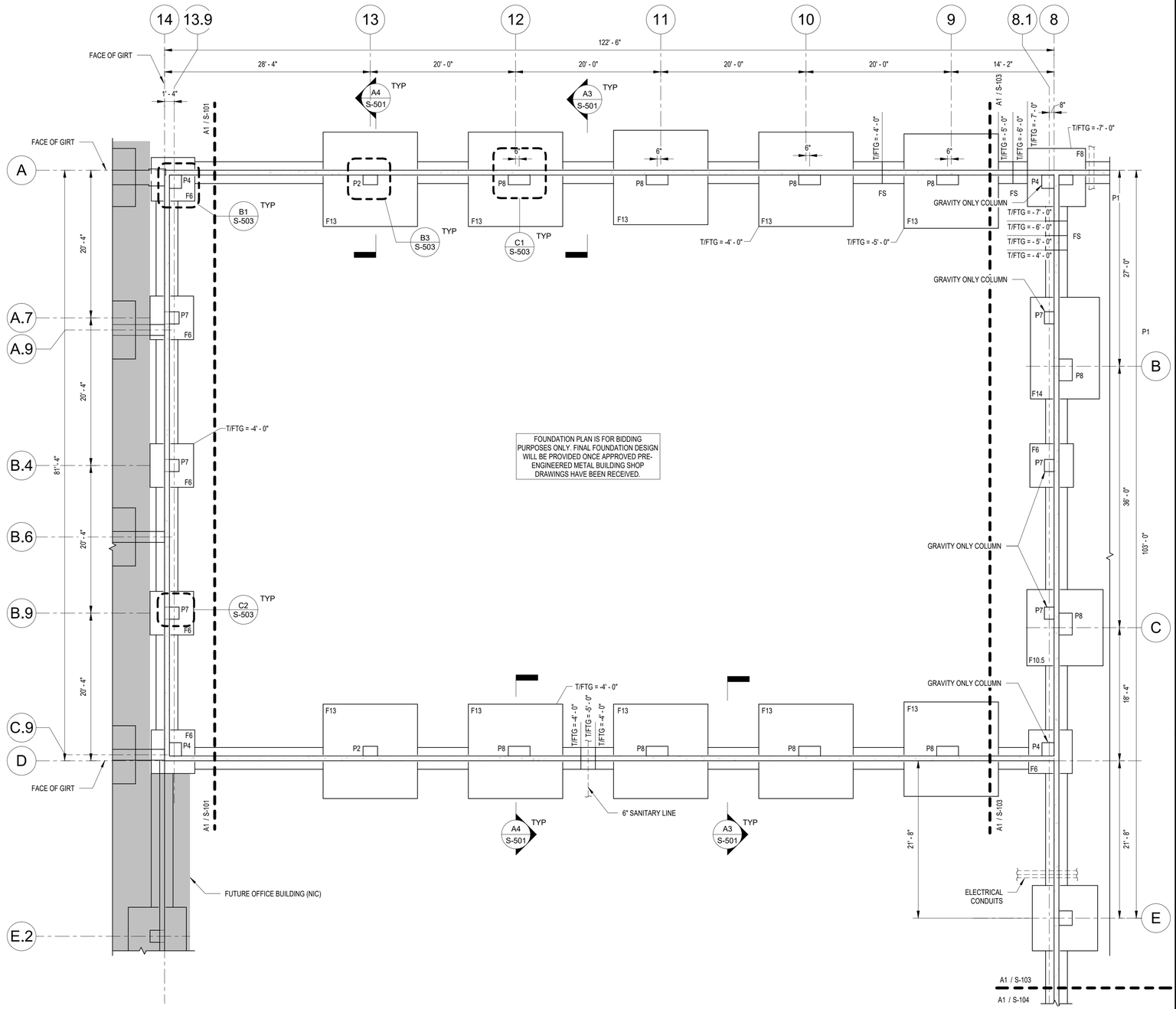
FOOTING SCHEDULE

MARK	DIMENSIONS			REINFORCING
	"W"	"L"	"H"	
F3	3' - 0"	3' - 0"	1' - 0"	(3) #5 EACH WAY BOTTOM
F3.5	5' - 0"	3' - 0"	1' - 0"	(3) #5 BOTTOM LW & (5) #5 BOTTOM SW
F4	4' - 0"	4' - 0"	1' - 0"	(4) #5 EACH WAY BOTTOM
F5	5' - 0"	5' - 0"	1' - 4"	(5) #5 EACH WAY TOP AND BOTTOM
F5.5	3' - 6"	5' - 6"	1' - 0"	(3) #5BOTTOM LW & (6) #5 BOTTOM SW
F6	6' - 0"	6' - 0"	1' - 4"	(7) #6 EACH WAY TOP AND BOTTOM
F7	7' - 0"	7' - 0"	1' - 0"	(8) #6 EACH WAY TOP & BOTTOM
F8	8' - 0"	8' - 0"	1' - 4"	(9) #6 EACH WAY TOP & BOTTOM
F9	9' - 0"	9' - 0"	1' - 4"	(10) #6 EACH WAY TOP AND BOTTOM
F9.5	9' - 6"	9' - 6"	1' - 4"	(10) #5 EACH WAY TOP AND BOTTOM
F10.5	10' - 6"	10' - 6"	1' - 4"	(11) #5 EACH WAY TOP AND BOTTOM
F13	13' - 0"	13' - 0"	1' - 4"	(14) #6 EACH WAY TOP AND BOTTOM
F14	9' - 6"	14' - 0"	1' - 4"	(15) #6 LW T&B, (10) #6 SW T&B

PIER SCHEDULE

MARK	WIDTH X LENGTH	VERT. REINF.	ANCHOR REINF.	T/PIER EL.	REF. DETAIL
P1	1' 6" x 1' 6"	(8) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	B4/S-503
P2	2' 0" x 2' 0"	(12) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	B3/S-503
P3	2' 7" x 2' 0"	(10) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	B2/S-503
P4	2' 4" x 2' 6"	(12) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	B1/S-503
P5	1' 6" x 2' 0"	(10) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	C4/S-503
P6	2' 4" x 2' 4"	(12) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	C3/S-503
P7	1' 8" x 2' 0"	(8) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	C2/S-503
P8	2'-6" x 3'-0"	(24) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	C1/S-503



FOUNDATION PLAN IS FOR BIDDING PURPOSES ONLY. FINAL FOUNDATION DESIGN WILL BE PROVIDED ONCE APPROVED PRE-ENGINEERED METAL BUILDING SHOP DRAWINGS HAVE BEEN RECEIVED.

PLAN NOTES:

1. T/CONC ELEVATION = 0' - 0". T/CONC ELEVATION IS EQUAL TO FINISH FLOOR ELEVATION 1068.50'.
2. T/PIER ELEV = -0' - 8" UNLESS NOTED OTHERWISE ON PLAN.
3. T/WALL ELEV = 0' - 6" UNLESS NOTED OTHERWISE ON PLAN.
4. PENETRATIONS FOR UTILITIES THROUGH FOUNDATION WALLS AND SLABS ARE NOT SHOWN. CONTRACTOR TO COORDINATE WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE SAFETY, AND SITE DRAWINGS FOR LOCATION AND ELEVATION OF REQUIRED SLEEVES, OPENINGS, AND OTHER ITEMS NOT SHOWN.
5. ALL CONTINUOUS WALL FOUNDATIONS SHALL BE CENTERED ON FOUNDATION WALLS UNLESS NOTED OTHERWISE.
6. ALL FOUNDATIONS ALONG COLUMN 8 ARE TO BE INCLUDED IN BASE BID. PIERS ALONG COLUMN LINE 8.1 ARE TO BE GRAVITY ONLY AND INCLUDED IN ADD-ALT.NO.1.
7. ALL FOUNDATIONS ALONG GRID 14 ARE INCLUDED IN ADD ALT.NO.1.

A1 FOUNDATION PLAN - AREA B
SCALE: 1/8" = 1'-0"

T/FND = - 4' - 0" UNO

0 4' 8' 16'

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FOUNDATION PLAN - AREA B (ADD ALT.NO.1)

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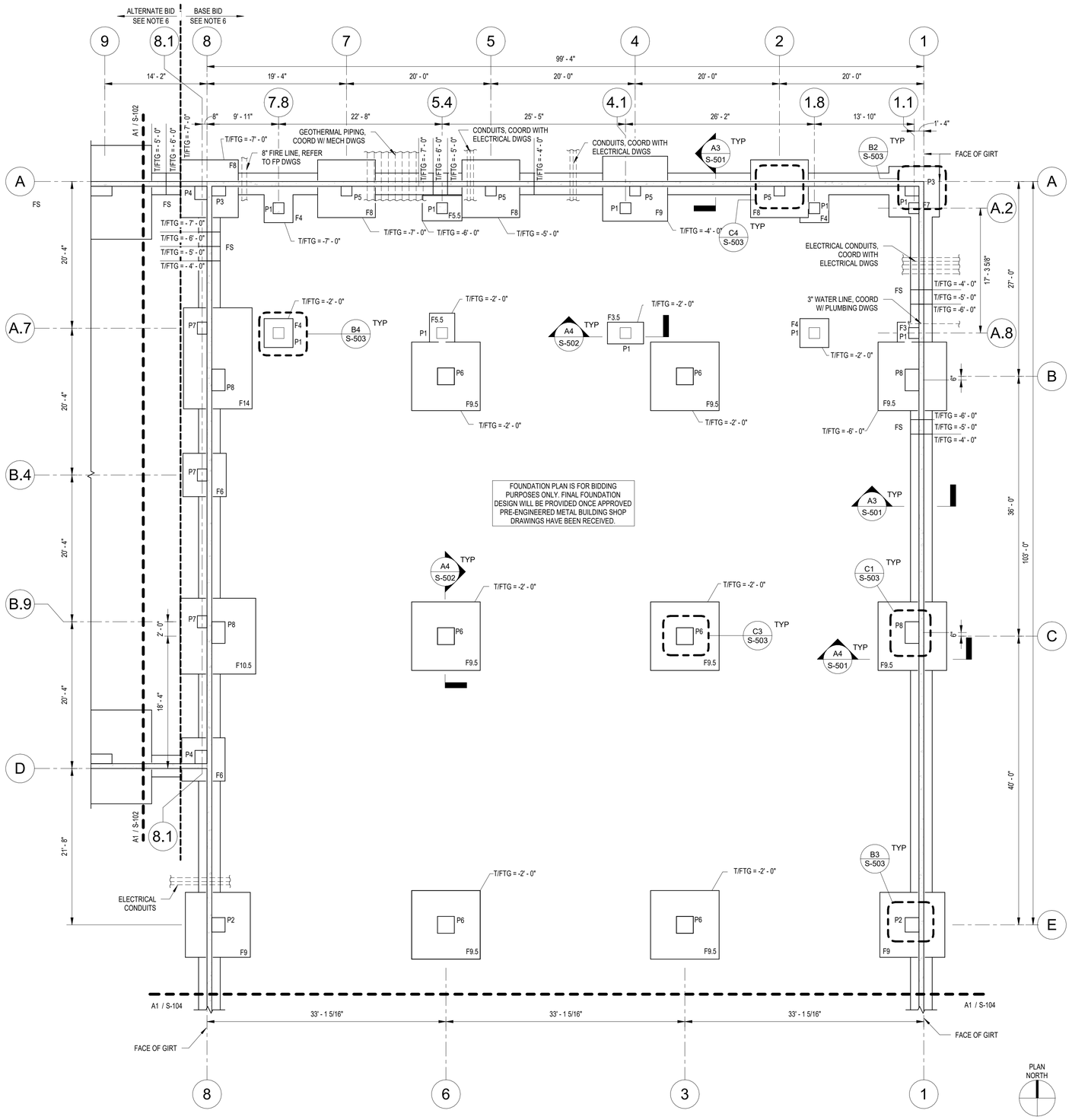
FOOTING SCHEDULE

MARK	DIMENSIONS			REINFORCING
	"W"	"L"	"H"	
F3	3' - 0"	3' - 0"	1' - 0"	(3) #5 EACH WAY BOTTOM
F3.5	5' - 0"	3' - 0"	1' - 0"	(3) #5 BOTTOM LW & (5) #5 BOTTOM SW
F4	4' - 0"	4' - 0"	1' - 0"	(4) #5 EACH WAY BOTTOM
F5	5' - 0"	5' - 0"	1' - 4"	(5) #5 EACH WAY TOP AND BOTTOM
F5.5	3' - 6"	5' - 6"	1' - 0"	(3) #5BOTTOM LW & (6) #5 BOTTOM SW
F6	6' - 0"	6' - 0"	1' - 4"	(7) #6 EACH WAY TOP AND BOTTOM
F7	7' - 0"	7' - 0"	1' - 0"	(8) #6 EACH WAY TOP & BOTTOM
F8	8' - 0"	8' - 0"	1' - 4"	(9) #6 EACH WAY TOP & BOTTOM
F9	9' - 0"	9' - 0"	1' - 4"	(10) #6 EACH WAY TOP AND BOTTOM
F9.5	9' - 6"	9' - 6"	1' - 4"	(10) #5 EACH WAY TOP AND BOTTOM
F10.5	10' - 6"	10' - 6"	1' - 4"	(11) #5 EACH WAY TOP AND BOTTOM
F13	13' - 0"	13' - 0"	1' - 4"	(14) #6 EACH WAY TOP AND BOTTOM
F14	9' - 6"	14' - 0"	1' - 4"	(15) #6 LW T&B, (10) #6 SW T&B

PIER SCHEDULE

MARK	WIDTH X LENGTH	VERT. REINF.	ANCHOR REINF.	T/PIER EL.	REF. DETAIL
P1	1' 6" x 1' 6"	(8) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	B4/S-503
P2	2' 0" x 2' 0"	(12) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	B3/S-503
P3	2' 7" x 2' 0"	(10) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	B2/S-503
P4	2' 4" x 2' 6"	(12) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	B1/S-503
P5	1' 6" x 2' 0"	(10) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	C4/S-503
P6	2' 4" x 2' 4"	(12) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	C3/S-503
P7	1' 8" x 2' 0"	(8) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	C2/S-503
P8	2'-6" x 3'-0"	(24) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	C1/S-503



PLAN NOTES:

1. T/CONC ELEVATION = 0' - 0". T/CONC ELEVATION IS EQUAL TO FINISH FLOOR ELEVATION 1068.50'.
2. T/PIER ELEV = -0' - 8" UNLESS NOTED OTHERWISE ON PLAN.
3. T/WALL ELEV = 0' - 6" UNLESS NOTED OTHERWISE ON PLAN.
4. PENETRATIONS FOR UTILITIES THROUGH FOUNDATION WALLS AND SLABS ARE NOT SHOWN. CONTRACTOR TO COORDINATE WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE SAFETY, AND SITE DRAWINGS FOR LOCATION AND ELEVATION OF REQUIRED SLEEVES, OPENINGS, AND OTHER ITEMS NOT SHOWN.
5. ALL CONTINUOUS WALL FOUNDATIONS SHALL BE CENTERED ON FOUNDATION WALLS UNLESS NOTED OTHERWISE.
6. ALL SPREAD AND STRIP FOUNDATIONS AND FOUNDATION WALLS ALONG COLUMN LINE 8 ARE TO BE INCLUDED IN BASE BID. PIERS ALONG COLUMN LINE 8.1 ARE TO BE INCLUDED IN ADD ALT.NO.1.

A1 FOUNDATION PLAN - AREA C
SCALE: 1/8" = 1'-0"

T/FND = - 4' - 0" UNO

0 4' 8' 16'

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STATE OF NEW YORK JOHN W. OBLEMAN 082000 LICENSED PROFESSIONAL ENGINEER

REGISTRATION EXPIRES: 05/31/2028

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NEW ARFF/SRE BUILDING
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INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION
		REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	S.J. WEEKS, E.I.T.
DESIGNED BY:	M.S. ROLFE, P.E.
CHECKED BY:	J. OBLEMAN, P.E.

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FOUNDATION PLAN - AREA C

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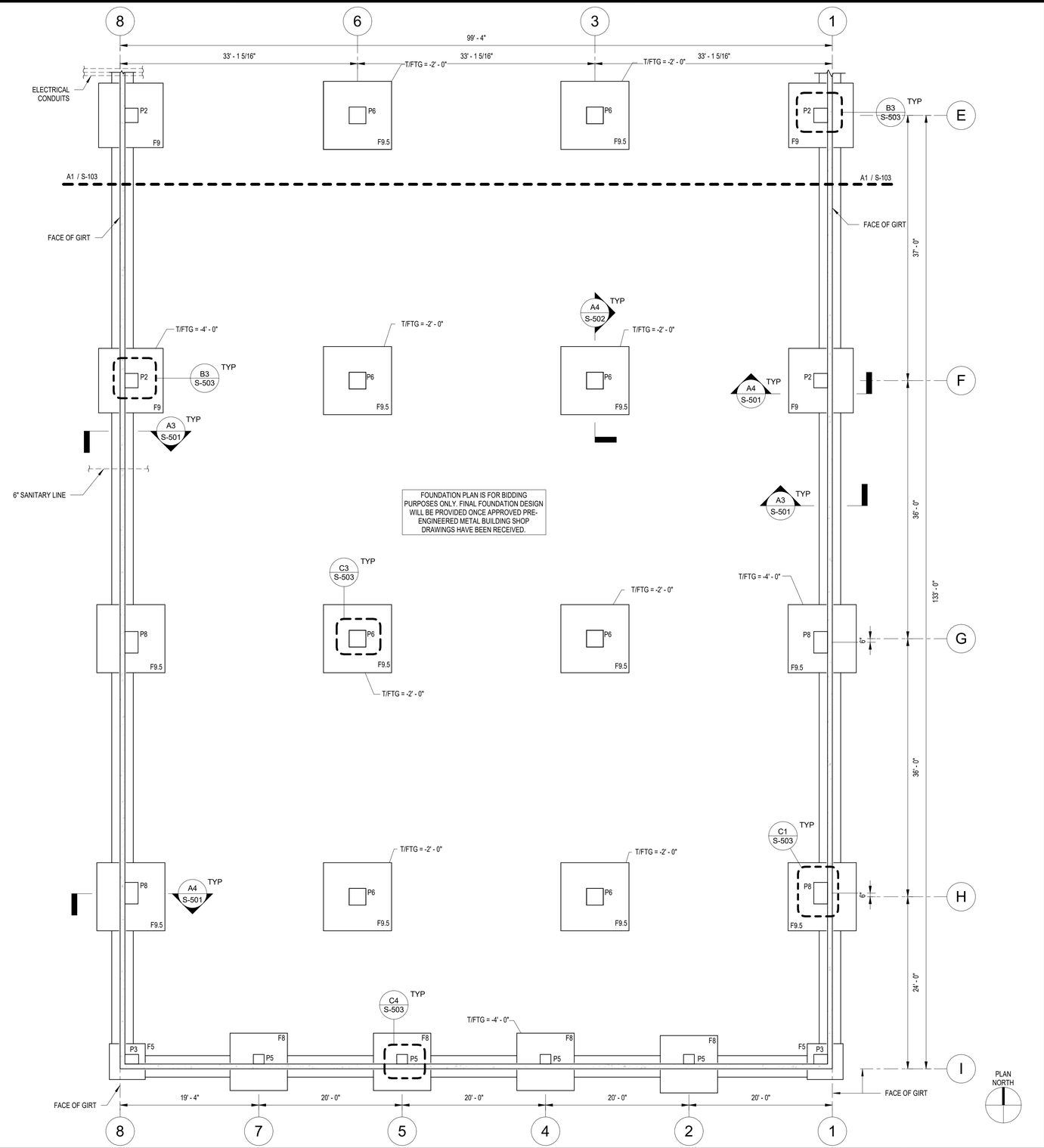
FOOTING SCHEDULE

MARK	DIMENSIONS			REINFORCING
	"W"	"L"	"H"	
F3	3' - 0"	3' - 0"	1' - 0"	(3) #5 EACH WAY BOTTOM
F3.5	5' - 0"	3' - 0"	1' - 0"	(3) #5 BOTTOM LW & (5) #5 BOTTOM SW
F4	4' - 0"	4' - 0"	1' - 0"	(4) #5 EACH WAY BOTTOM
F5	5' - 0"	5' - 0"	1' - 4"	(5) #5 EACH WAY TOP AND BOTTOM
F5.5	3' - 6"	5' - 6"	1' - 0"	(3) #5BOTTOM LW & (6) #5 BOTTOM SW
F6	6' - 0"	6' - 0"	1' - 4"	(7) #6 EACH WAY TOP AND BOTTOM
F7	7' - 0"	7' - 0"	1' - 0"	(8) #6 EACH WAY TOP & BOTTOM
F8	8' - 0"	8' - 0"	1' - 4"	(9) #6 EACH WAY TOP & BOTTOM
F9	9' - 0"	9' - 0"	1' - 4"	(10) #6 EACH WAY TOP AND BOTTOM
F9.5	9' - 6"	9' - 6"	1' - 4"	(10) #5 EACH WAY TOP AND BOTTOM
F10.5	10' - 6"	10' - 6"	1' - 4"	(11) #5 EACH WAY TOP AND BOTTOM
F13	13' - 0"	13' - 0"	1' - 4"	(14) #6 EACH WAY TOP AND BOTTOM
F14	9' - 6"	14' - 0"	1' - 4"	(15) #6 LW T&B, (10) #6 SW T&B

PIER SCHEDULE

MARK	WIDTH X LENGTH	VERT. REINF.	ANCHOR REINF.	T/PIER EL.	REF. DETAIL
P1	1' 6" x 1' 6"	(8) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	B4/S-503
P2	2' 0" x 2' 0"	(12) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	B3/S-503
P3	2' 7" x 2' 0"	(10) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	B2/S-503
P4	2' 4" x 2' 6"	(12) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	B1/S-503
P5	1' 6" x 2' 0"	(10) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	C4/S-503
P6	2' 4" x 2' 4"	(12) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	C3/S-503
P7	1' 8" x 2' 0"	(8) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	C2/S-503
P8	2'-6" x 3'-0"	(24) #6 EQ. SPC.	3 LAYERS OF # 4 TIES WITHIN TOP 6" OF PIER	-8"	C1/S-503



PLAN NOTES:

1. T/CONC ELEVATION = 0' - 0". T/CONC ELEVATION IS EQUAL TO FINISH FLOOR ELEVATION 1068.50'.
2. T/PIER ELEV = -0' - 8" UNLESS NOTED OTHERWISE ON PLAN.
3. T/WALL ELEV = 0' - 6" UNLESS NOTED OTHERWISE ON PLAN.
4. PENETRATIONS FOR UTILITIES THROUGH FOUNDATION WALLS AND SLABS ARE NOT SHOWN. CONTRACTOR TO COORDINATE WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE SAFETY, AND SITE DRAWINGS FOR LOCATION AND ELEVATION OF REQUIRED SLEEVES, OPENINGS, AND OTHER ITEMS NOT SHOWN.
5. ALL CONTINUOUS WALL FOUNDATIONS SHALL BE CENTERED ON FOUNDATION WALLS UNLESS NOTED OTHERWISE.

A1 FOUNDATION PLAN - AREA D
SCALE: 1/8" = 1'-0"

T/FND = -4' - 0" UNO

0 4' 8' 16'

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REGISTRATION EXPIRES: 05/31/2028

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ITHACA TOMPKINS
INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850**

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FOUNDATION PLAN - AREA D

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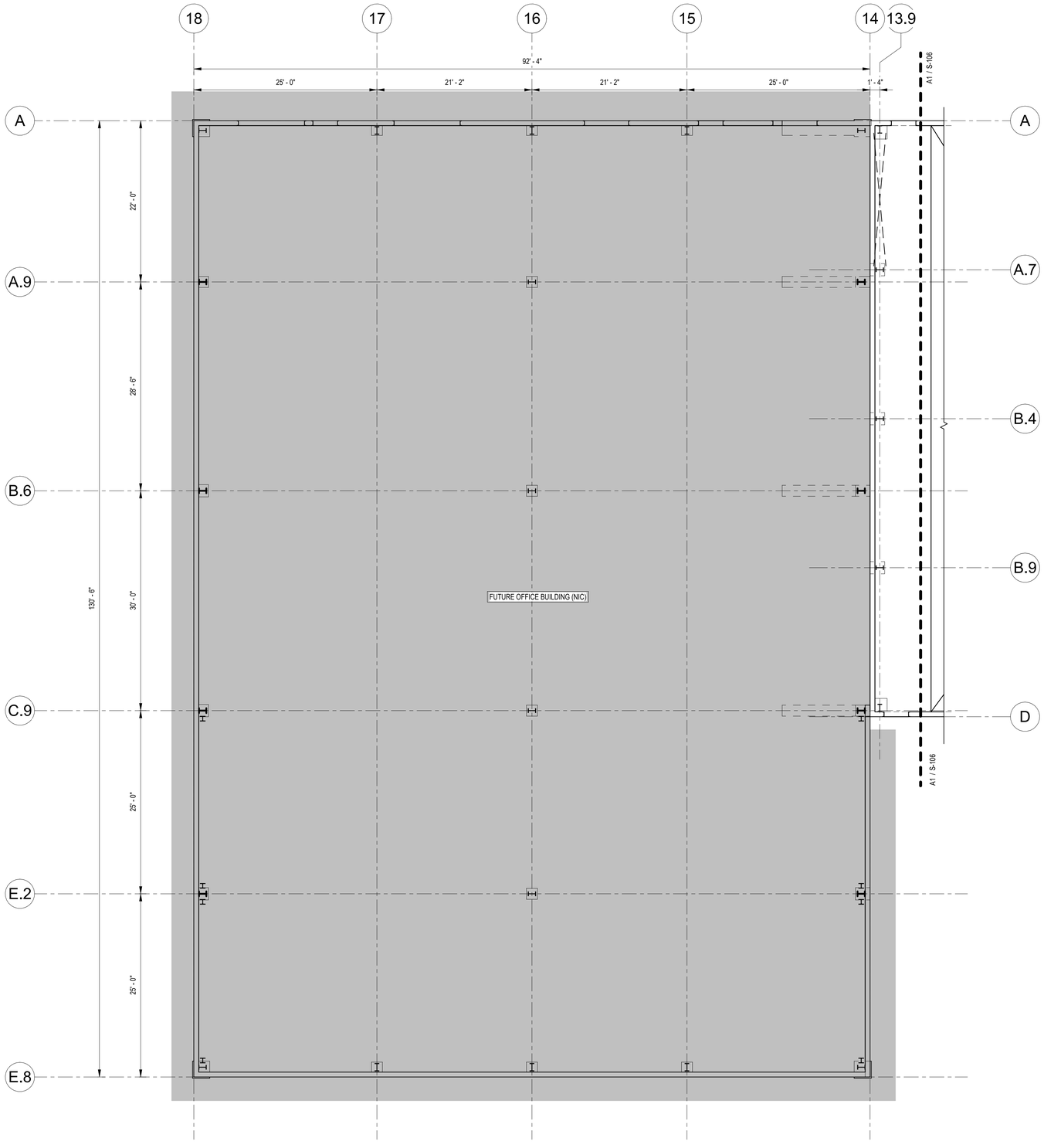

A1 SLAB PLAN - AREA A
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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SLAB PLAN - AREA A (NOT IN CONTRACT)

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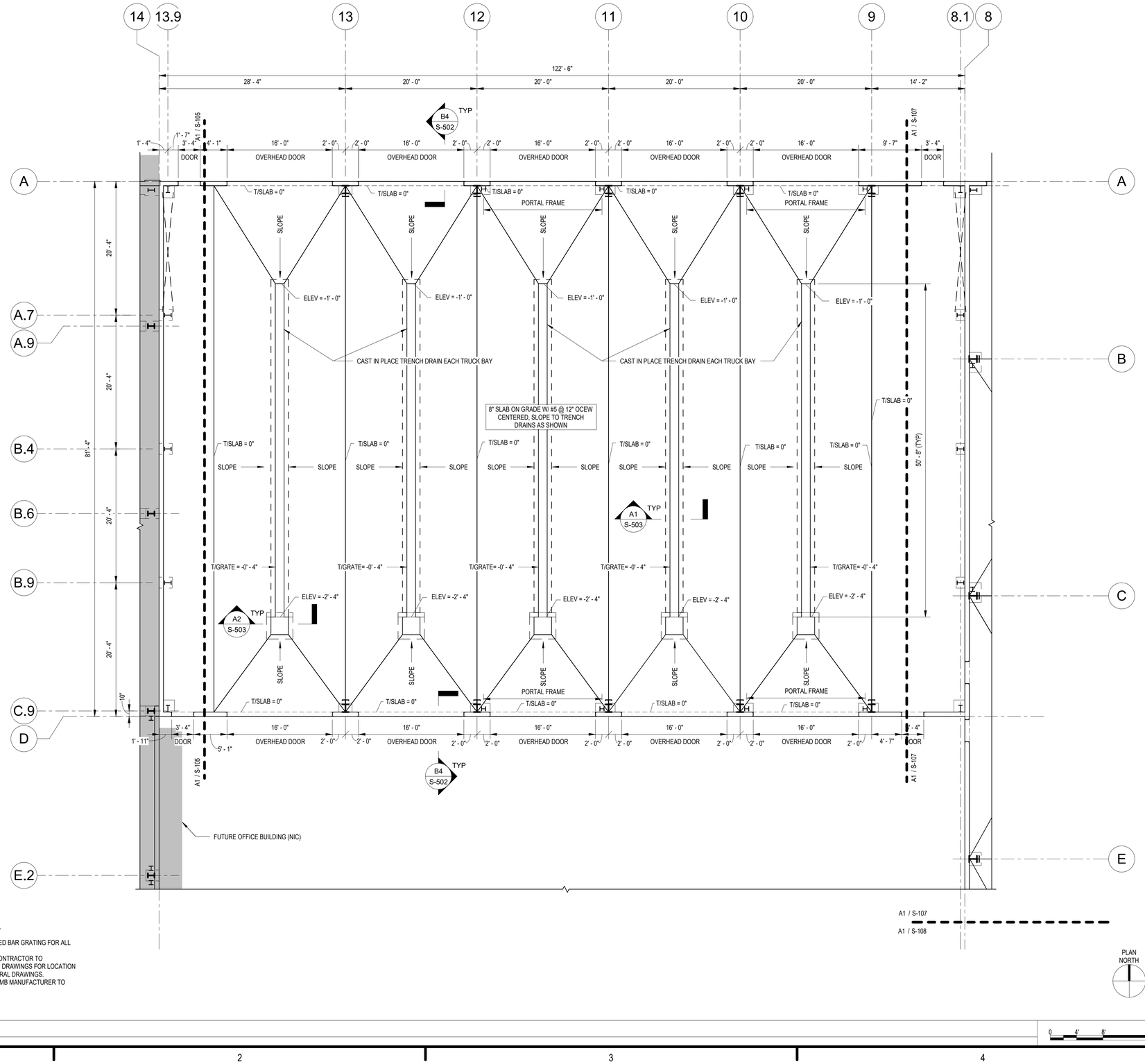

PLAN NOTES:

1. ELEVATIONS REFERENCED FROM T/CONC = 0' - 0" WHICH EQUALS FINISH FLOOR ELEVATION 1068.50'.
2. CONTROL JOINTS SHALL BE PLACED NO MORE THAN 12' - 0" OC. REFER TO DETAIL C4/S-501.
3. SLOPE SLAB TO TRENCH DRAINS AS INDICATED ON PLANS. PROVIDE 2"X1/4" HEAVY DUTY GALVANIZED BAR GRATING FOR ALL TRENCH DRAINS. ALL TRENCH DRAINS ARE CENTERED ON OVERHEAD DOOR UNO.
4. NOT ALL PENETRATIONS FOR UTILITIES THROUGH FOUNDATIONS WALLS AND SLABS ARE SHOWN CONTRACTOR TO COORDINATE WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR LOCATION AND ELEVATIONS OF REQUIRED SLEEVES, OPENINGS, AND OTHER ITEMS NOT SHOWN ON STRUCTURAL DRAWINGS.
5. COORDINATE LOCATION OF ALL MAN AND OVERHEAD DOORS WITH ARCHITECTURAL DRAWINGS. PEMB MANUFACTURER TO PROVIDE FRAMED OPENINGS FOR ALL DOORS.
6. SLABS SHALL BE OVERPOURED AT ALL DOOR OPENINGS, REFER TO DETAIL B4/S-502.

A1 SLAB PLAN - AREA B
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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SLAB PLAN - AREA B (ADD ALT.NO.1)

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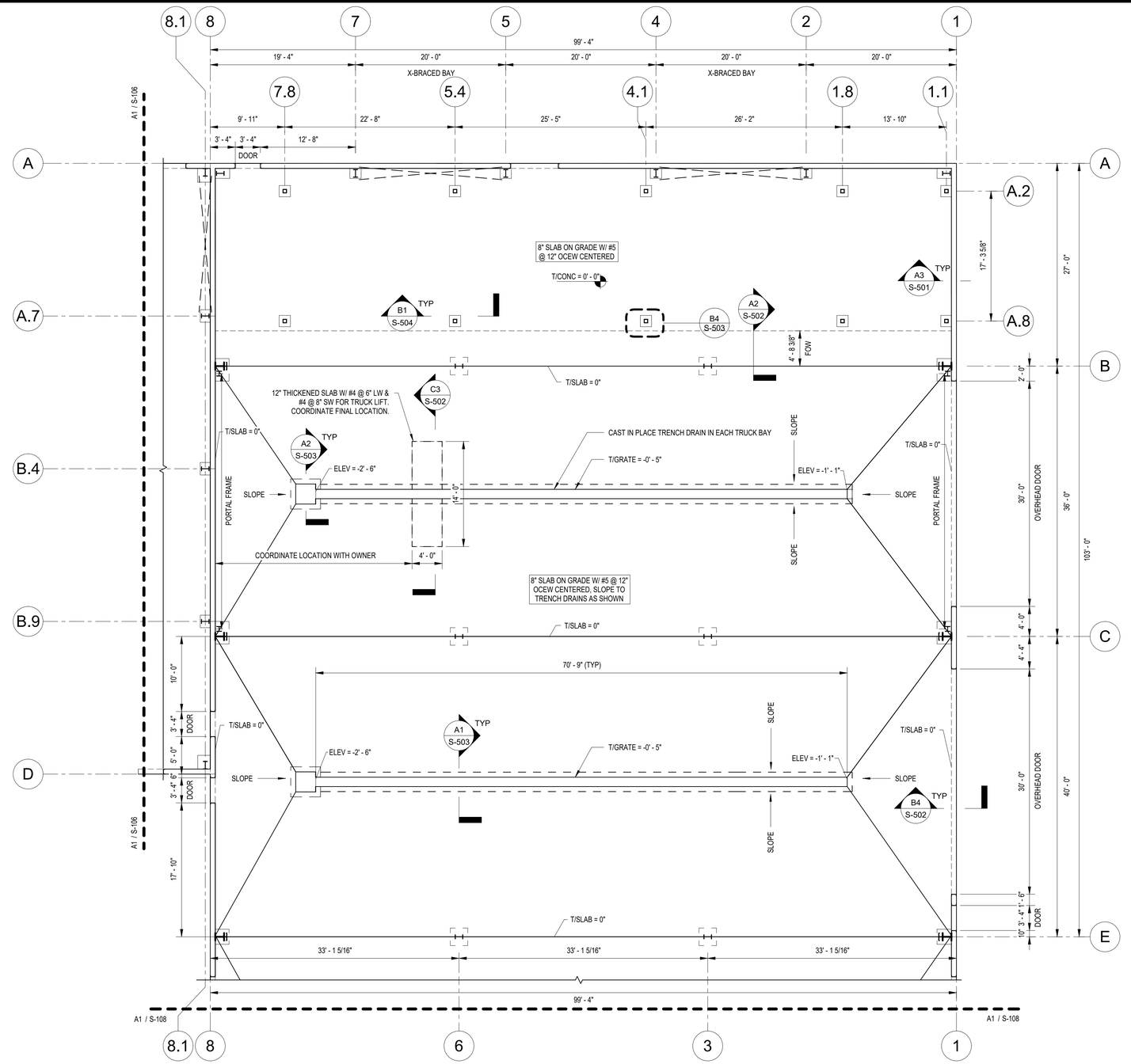

PLAN NOTES:

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2. CONTROL JOINTS SHALL BE PLACED NO MORE THAN 12' - 0" OC. REFER TO DETAIL C4/S-501.
3. SLOPE SLAB TO TRENCH DRAINS AS INDICATED ON PLANS. PROVIDE 2"X1/4" HEAVY DUTY GALVANIZED BAR GRATING FOR ALL TRENCH DRAINS. ALL TRENCH DRAINS ARE CENTERED ON OVERHEAD DOOR UNO.
4. NOT ALL PENETRATIONS FOR UTILITIES THROUGH FOUNDATIONS WALLS AND SLABS ARE SHOWN CONTRACTOR TO COORDINATE WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR LOCATION AND ELEVATIONS OF REQUIRED SLEEVES, OPENINGS, AND OTHER ITEMS NOT SHOWN ON STRUCTURAL DRAWINGS.
5. COORDINATE LOCATION OF ALL MAN AND OVERHEAD DOORS WITH ARCHITECTURAL DRAWINGS. PEMB MANUFACTURER TO PROVIDE FRAMED OPENINGS FOR ALL DOORS.
6. SLABS SHALL BE OVERPOURED AT ALL DOOR OPENINGS, REFER TO DETAIL B4/S-502.

PLAN NORTH

A1 SLAB PLAN - AREA C
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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SLAB PLAN - AREA C

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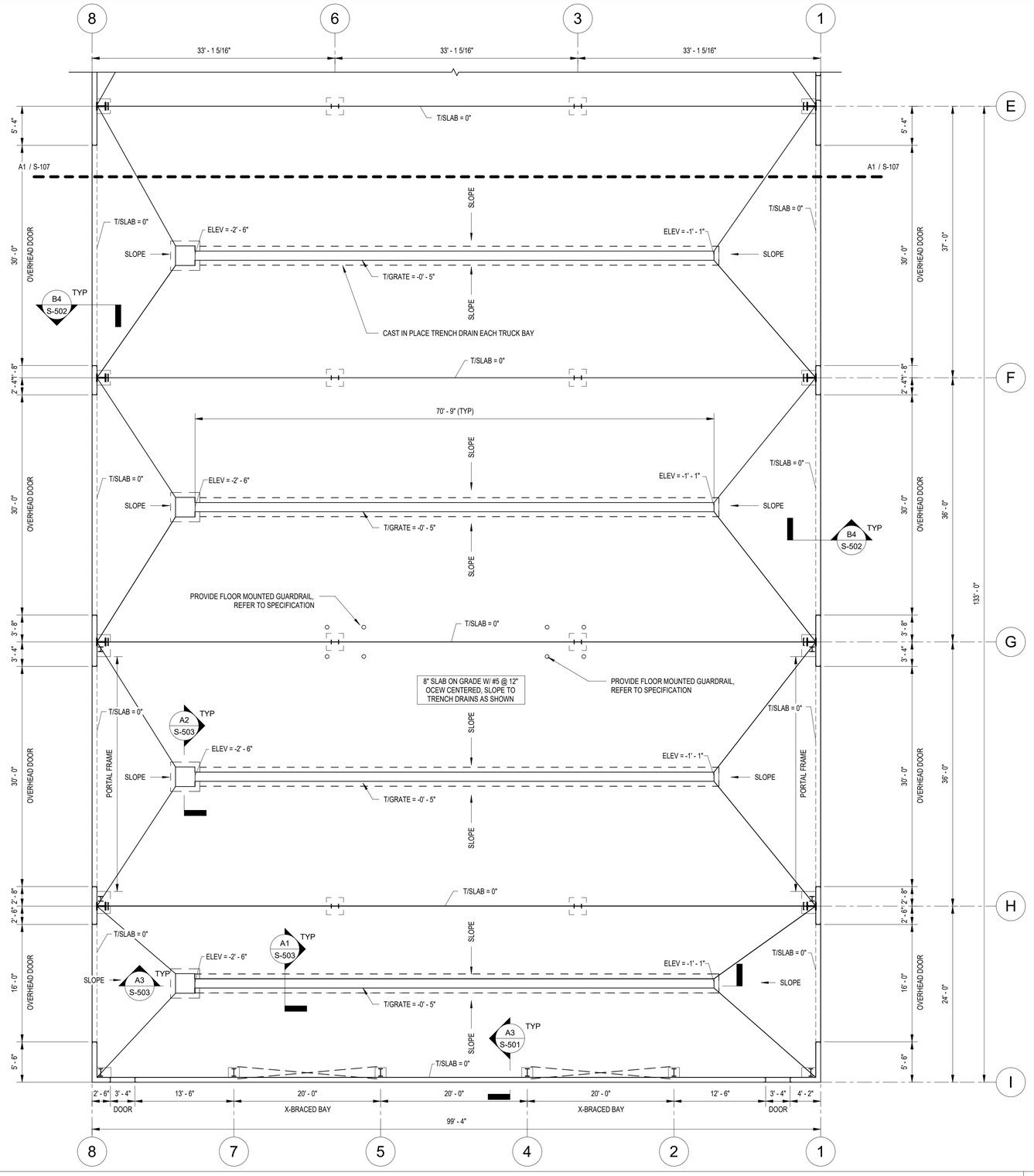

PLAN NOTES:

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2. CONTROL JOINTS SHALL BE PLACED NO MORE THAN 12' - 0" OC. REFER TO DETAIL C4/S-501.
3. SLOPE SLAB TO TRENCH DRAINS AS INDICATED ON PLANS. PROVIDE 2"X1/4" HEAVY DUTY GALVANIZED BAR GRATING FOR ALL TRENCH DRAINS. ALL TRENCH DRAINS ARE CENTERED ON OVERHEAD DOOR UNO.
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6. SLABS SHALL BE OVERPOURED AT ALL DOOR OPENINGS, REFER TO DETAIL B4/S-502.

A1 SLAB PLAN - AREA D
SCALE: 1/8" = 1'-0"

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SLAB PLAN - AREA D

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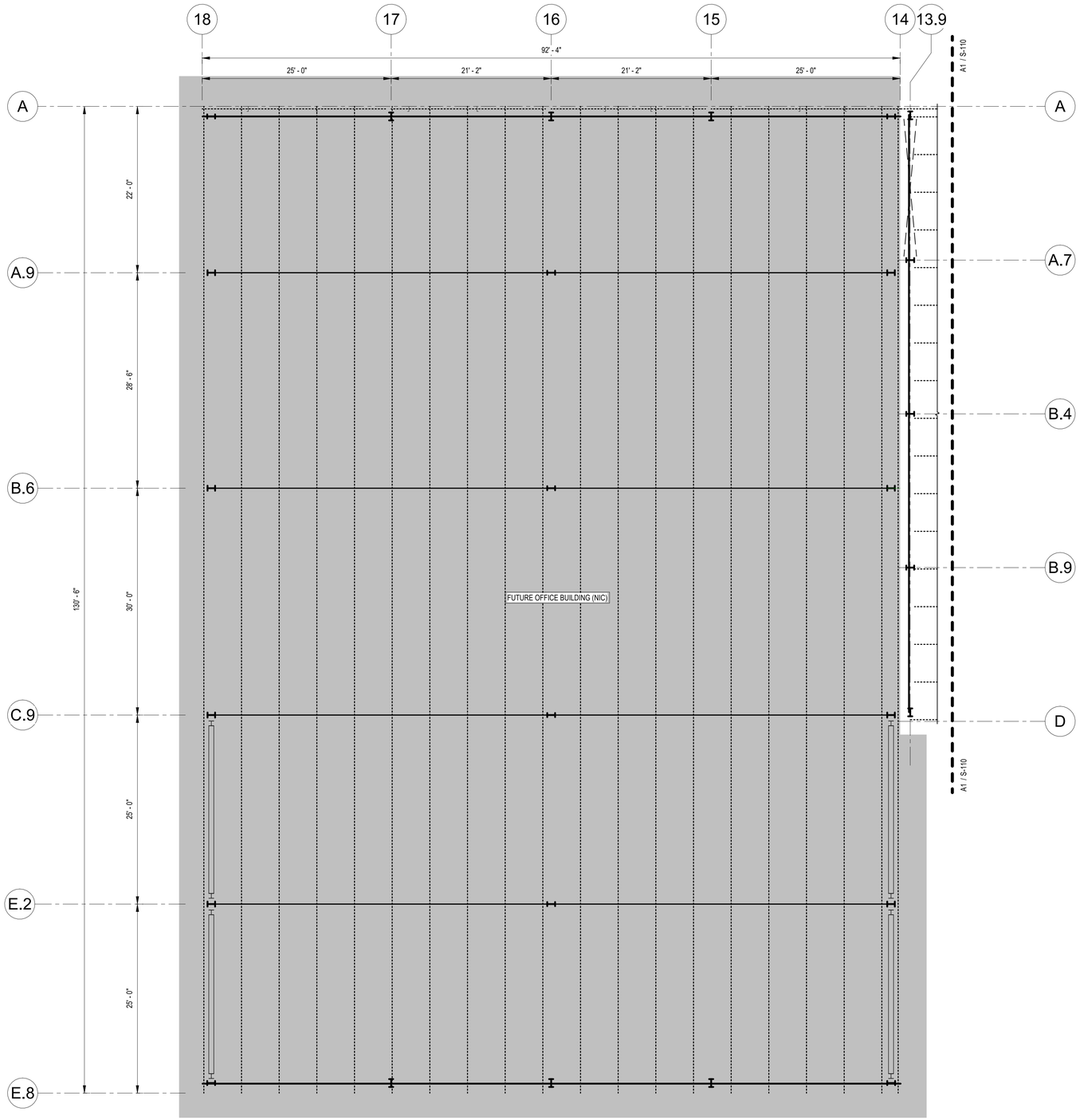

A1 ROOF FRAMING PLAN - AREA A
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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PEMB ROOF LOADING PLAN - AREA A (NOT IN CONTRACT)

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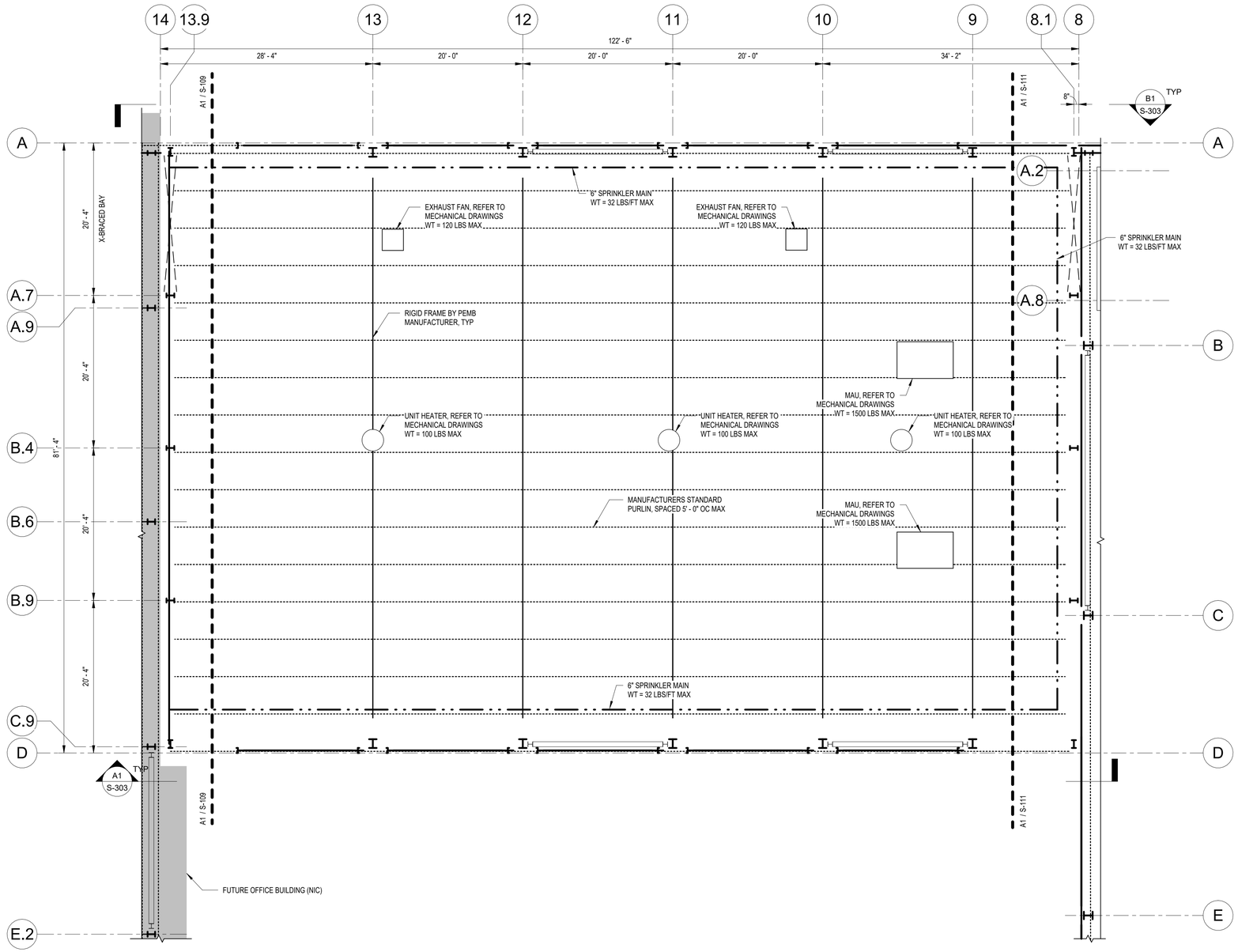

PLAN NOTES:

1. COORDINATE WEIGHT AND LOCATION OF MECHANICAL UNITS WITH MECHANICAL DRAWINGS. LOADS ARE APPROXIMATE.
2. REFER TO ARCHITECTURAL FOR ADDITIONAL ROOFING DETAILS INCLUDING EAVE EXTENSIONS, ROOFING MATERIAL DETAILS, ETC.
3. COORDINATE LOCATION OF RIDGE VENTS WITH ARCHITECTURAL DRAWINGS. PROVIDE ADDITIONAL PURLINS AS REQUESTED BETWEEN UNITS.
4. DUCTWORK, SPRINKLER PIPING, CONDUIT, LIGHTING, AND OTHER ROOF HUNG EQUIPMENT NOT SHOWN ARE COVERED IN DESIGN COLLATERAL LOADING PROVIDED IN GENERAL NOTES.
5. SIZE AND LOCATION OF FRAMING WHICH IS TO BE PROVIDED BY PEMB MANUFACTURER IS APPROXIMATE.

PLAN NORTH

A1 PEMB ROOF LOADING PLAN - AREA B

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

0 4' 8' 16'

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PEMB ROOF LOADING PLAN - AREA B (ADD ALT.NO.1)

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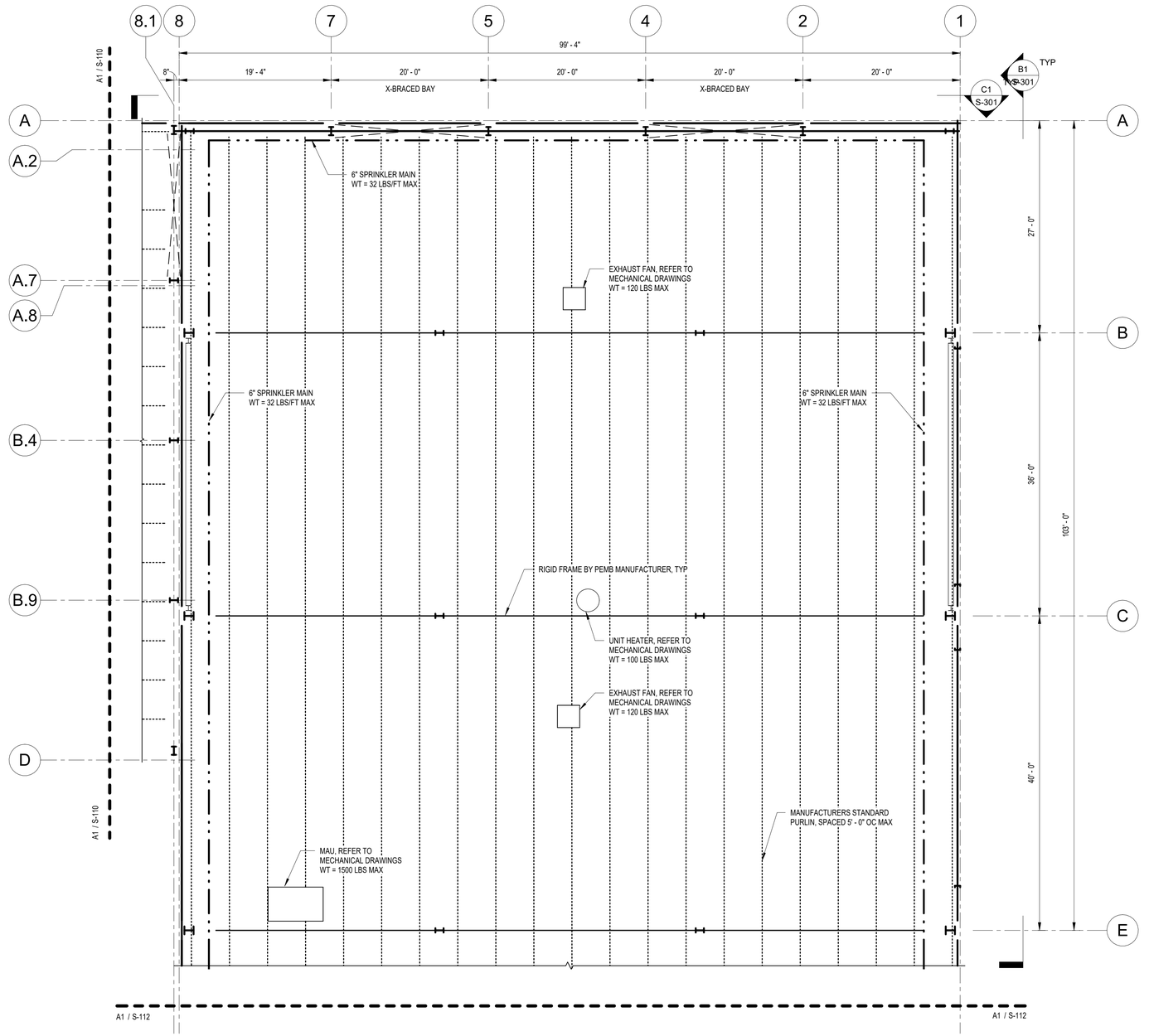

PLAN NOTES:

1. COORDINATE WEIGHT AND LOCATION OF MECHANICAL UNITS WITH MECHANICAL DRAWINGS. LOADS ARE APPROXIMATE.
2. REFER TO ARCHITECTURAL FOR ADDITIONAL ROOFING DETAILS INCLUDING EAVE EXTENSIONS, ROOFING MATERIAL DETAILS, ETC.
3. COORDINATE LOCATION OF RIDGE VENTS WITH ARCHITECTURAL DRAWINGS. PROVIDE ADDITIONAL PURLINS AS REQUESTED BETWEEN UNITS.
4. DUCTWORK, SPRINKLER PIPING, CONDUIT, LIGHTING, AND OTHER ROOF HUNG EQUIPMENT NOT SHOWN ARE COVERED IN DESIGN COLLATERAL LOADING PROVIDED IN GENERAL NOTES.
5. SIZE AND LOCATION OF FRAMING WHICH IS TO BE PROVIDED BY PEMB MANUFACTURER IS APPROXIMATE.

PLAN NORTH

A1 PEMB ROOF LOADING PLAN - AREA C
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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PEMB ROOF LOADING PLAN - AREA C

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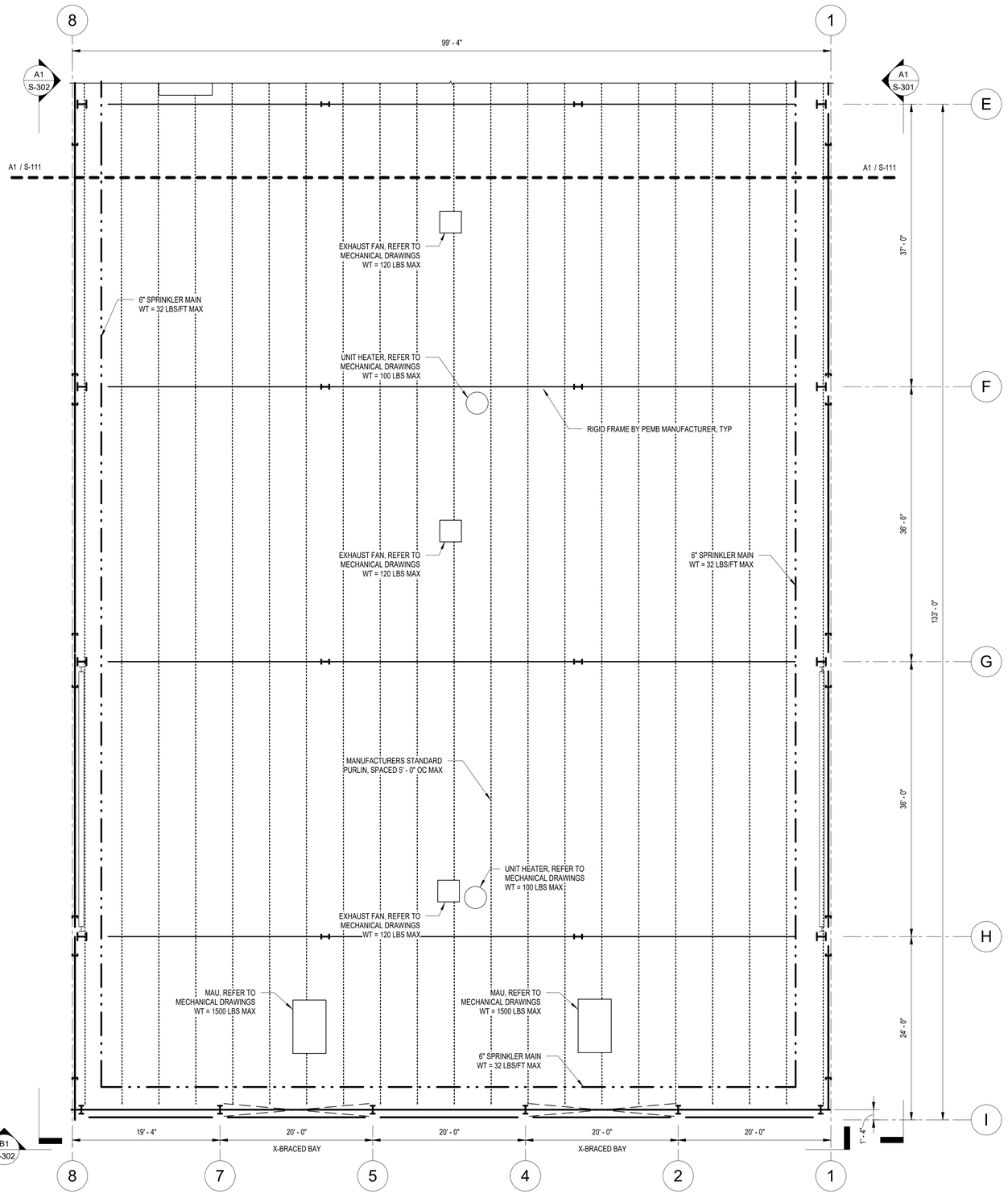

PLAN NOTES:

1. COORDINATE WEIGHT AND LOCATION OF MECHANICAL UNITS WITH MECHANICAL DRAWINGS. LOADS ARE APPROXIMATE.
2. REFER TO ARCHITECTURAL FOR ADDITIONAL ROOFING DETAILS INCLUDING EAVE EXTENSIONS, ROOFING MATERIAL DETAILS, ETC.
3. COORDINATE LOCATION OF RIDGE VENTS WITH ARCHITECTURAL DRAWINGS. PROVIDE ADDITIONAL PURLINS AS REQUESTED BETWEEN UNITS.
4. DUCTWORK, SPRINKLER PIPING, CONDUIT, LIGHTING, AND OTHER ROOF HUNG EQUIPMENT NOT SHOWN ARE COVERED IN DESIGN COLLATERAL LOADING PROVIDED IN GENERAL NOTES.
5. SIZE AND LOCATION OF FRAMING WHICH IS TO BE PROVIDED BY PEMB MANUFACTURER IS APPROXIMATE.

A1 PEMB ROOF LOADING PLAN - AREA D

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

0 4' 8' 16'

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PEMB ROOF LOADING PLAN - AREA D

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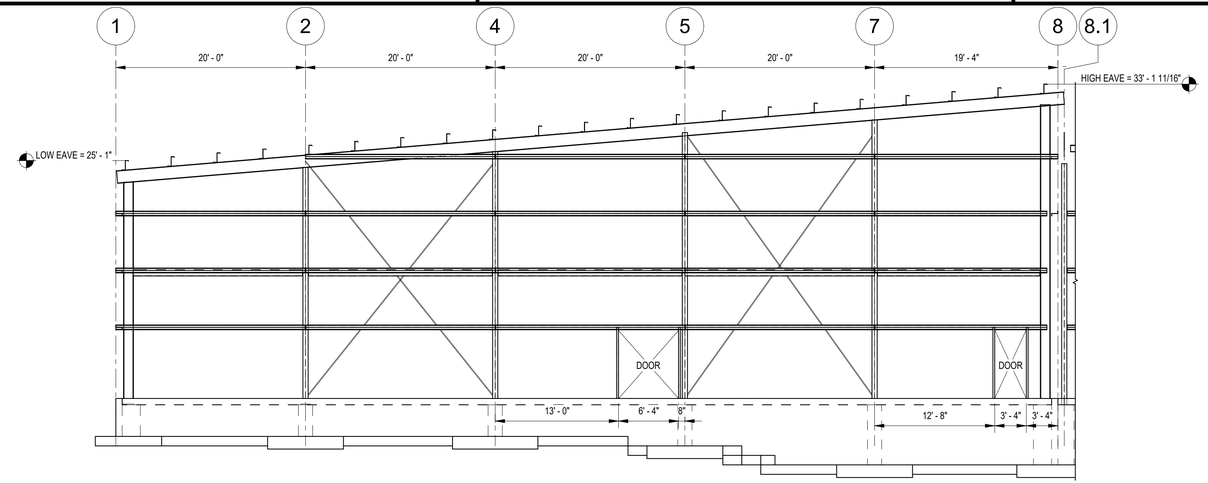
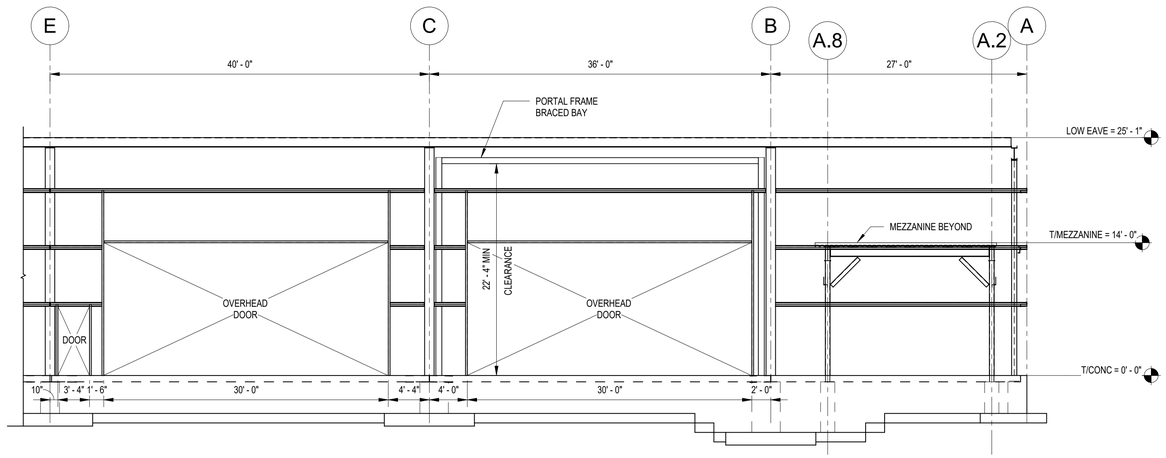


NOTES:

1. SHIP ALL FRAMED OPENING MEMBERS LOOSE SO FINAL LOCATION CAN BE ADJUSTED IN FIELD AS REQUIRED.
2. ADDITIONAL WALL PENETRATIONS, FRAMED OPENINGS, AND MISCELLANEOUS SUPPORTS NOT SHOWN ON DRAWINGS SHALL BE COORDINATED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, AND TELECOM DRAWINGS AS REQUIRED.
3. LOCATION OF WINDOW FRAMING IS NOT SHOWN FOR CLARITY. COORDINATE LOCATION WITH ARCHITECTURAL FOR REQUIRED SIZE AND LOCATIONS.

C1 NORTH SRE - AREA C

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

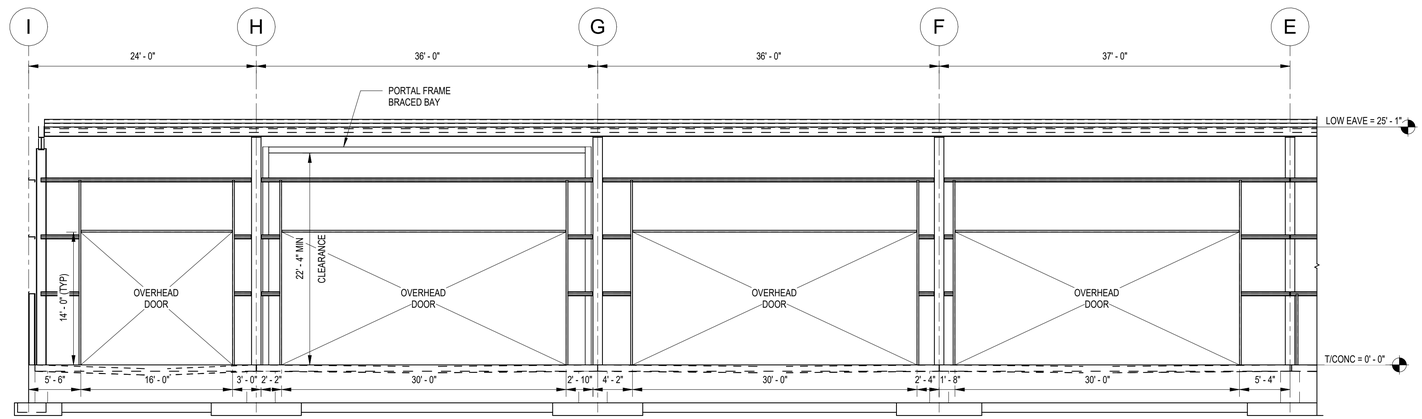


NOTES:

1. SHIP ALL FRAMED OPENING MEMBERS LOOSE SO FINAL LOCATION CAN BE ADJUSTED IN FIELD AS REQUIRED.
2. ADDITIONAL WALL PENETRATIONS, FRAMED OPENINGS, AND MISCELLANEOUS SUPPORTS NOT SHOWN ON DRAWINGS SHALL BE COORDINATED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, AND TELECOM DRAWINGS AS REQUIRED.
3. LOCATION OF WINDOW FRAMING IS NOT SHOWN FOR CLARITY. COORDINATE LOCATION WITH ARCHITECTURAL FOR REQUIRED SIZE AND LOCATIONS.

B1 EAST SRE - AREA C

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



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3. LOCATION OF WINDOW FRAMING IS NOT SHOWN FOR CLARITY. COORDINATE LOCATION WITH ARCHITECTURAL FOR REQUIRED SIZE AND LOCATIONS.

A1 EAST SRE - AREA D

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

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REGISTRATION EXPIRES: 05/31/2028

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ITHACA TOMPKINS INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	S.J. WEEKS, E.I.T.
DESIGNED BY:	M.S. ROLFE, P.E.
CHECKED BY:	J. OBLEMAN, P.E.

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SRE BUILDING ELEVATIONS

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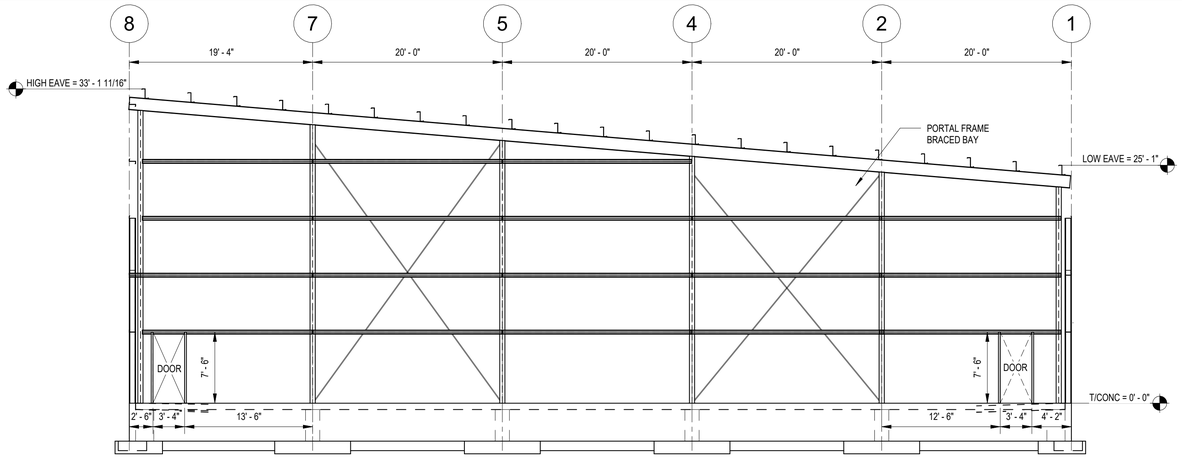

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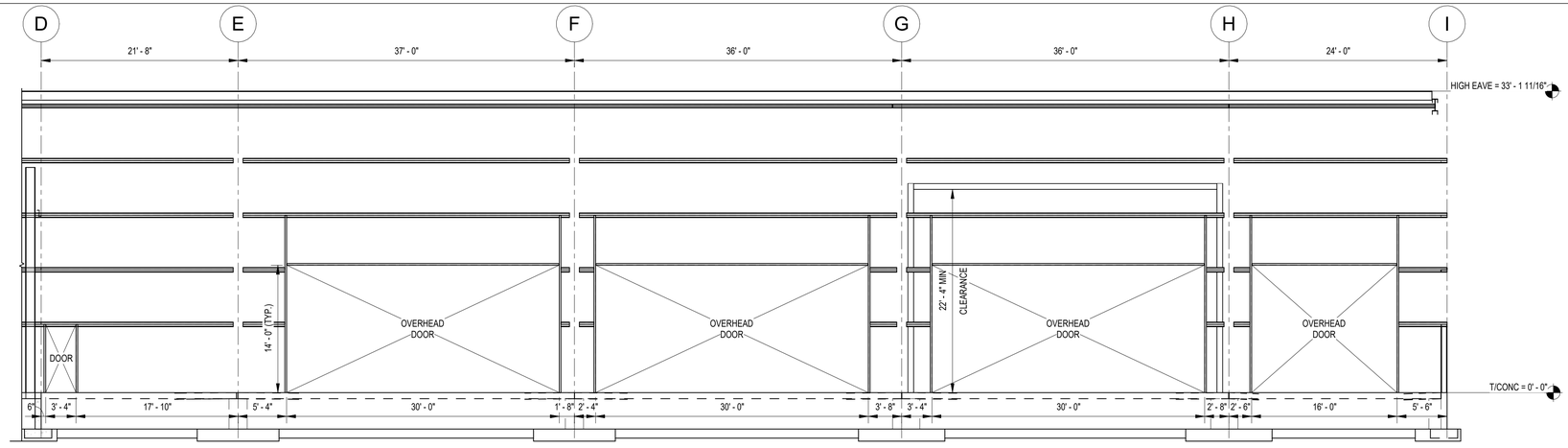
3. LOCATION OF WINDOW FRAMING IS NOT SHOWN FOR CLARITY. COORDINATE LOCATION WITH ARCHITECTURAL FOR REQUIRED SIZE AND LOCATIONS.

B1 SOUTH SRE - AREA D

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



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3. LOCATION OF WINDOW FRAMING IS NOT SHOWN FOR CLARITY. COORDINATE LOCATION WITH ARCHITECTURAL FOR REQUIRED SIZE AND LOCATIONS.

A1 WEST SRE AREA D

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

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SRE BUILDING ELEVATIONS

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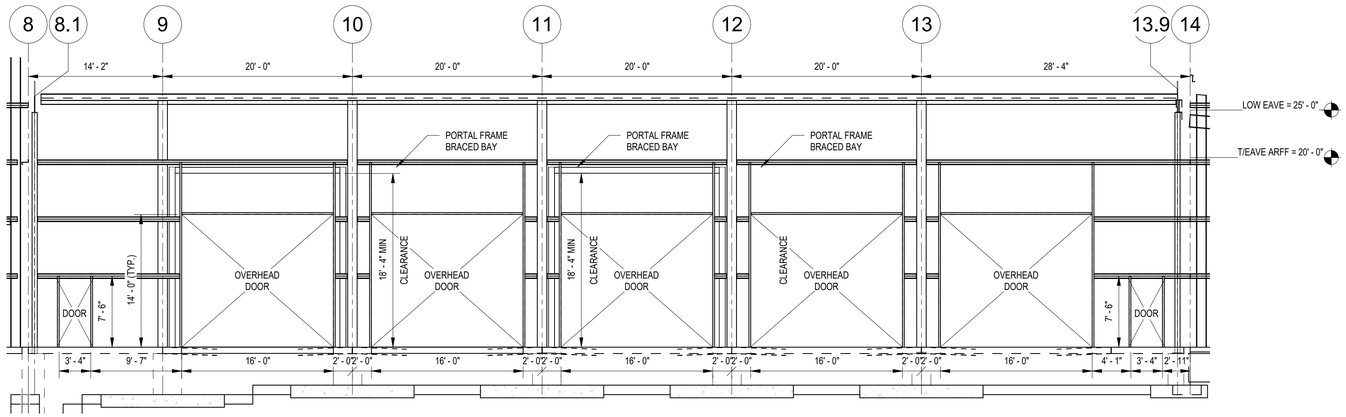

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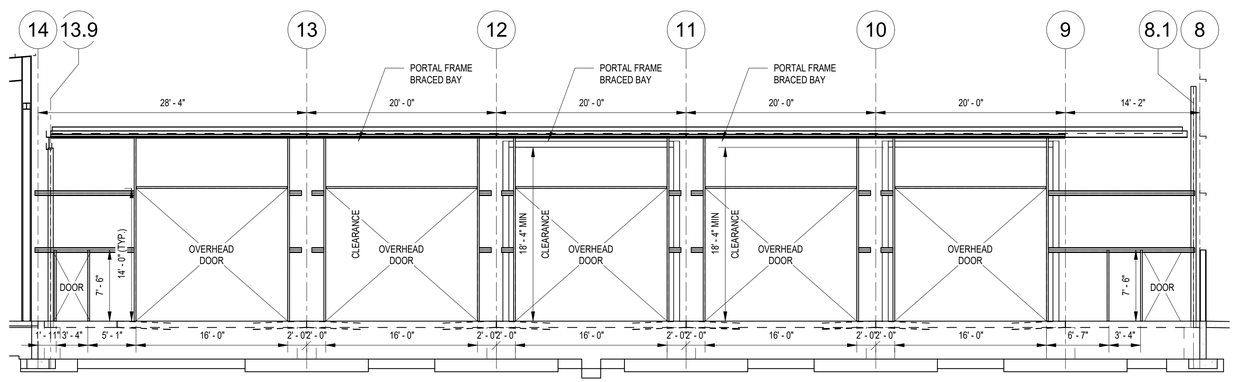
B1 NORTH ARFF - AREA B
SCALE: 1/8" = 1'-0"



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A1 SOUTH ARFF - AREA B
SCALE: 1/8" = 1'-0"

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ARFF BUILDING ELEVATIONS

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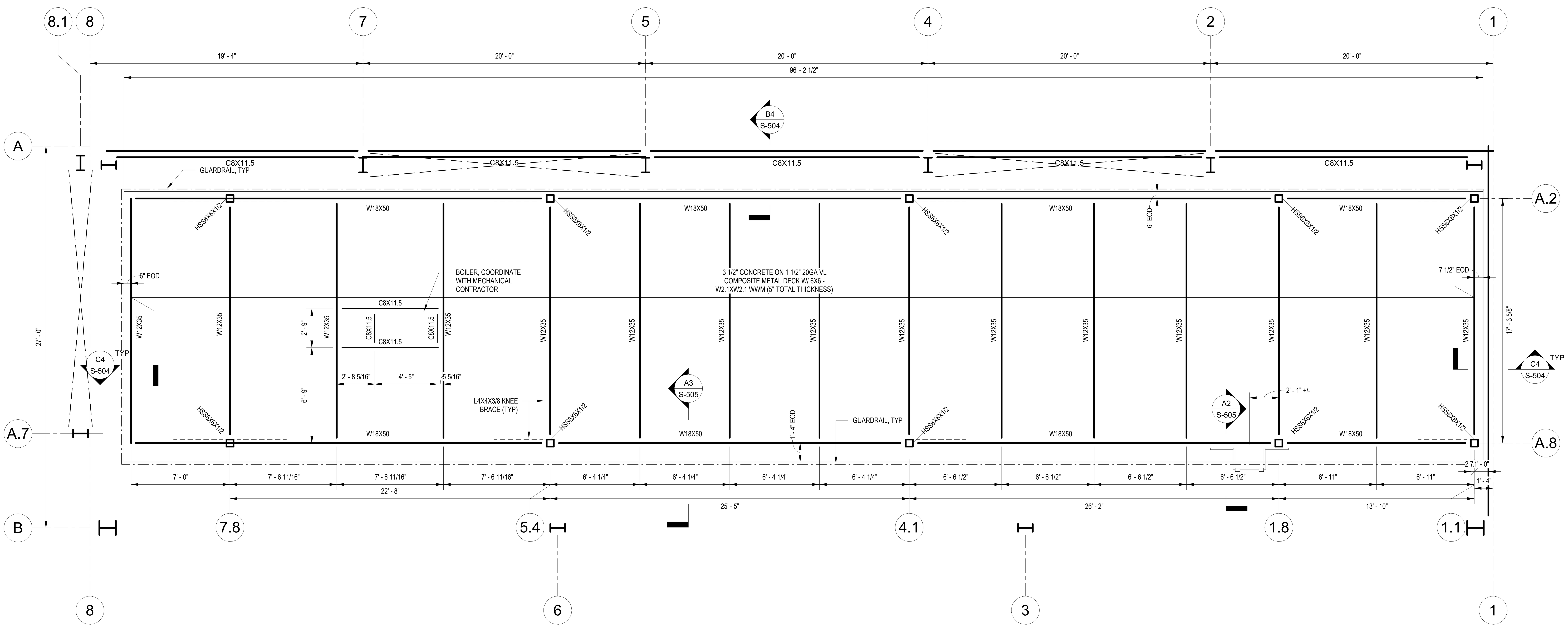

PLAN NOTES:

1. T/MEZZANINE ELEVATION = 14' - 0" AND T/S ELEVATION = 13' - 7", REFERENCED FROM T/CONC = -0' - 0".
2. REFER TO MECHANICAL, ELECTRICAL, FIRE PROTECTION, AND PLUMBING DRAWINGS FOR THE LOCATION OF ANY PENETRATIONS, EMBEDDED ITEMS, AND LOCATION AND SIZE OF EQUIPMENT PADS.
3. GUARDRAILS TO BE PROVIDED ALONG GRID LINE A.2, A.8, AND AT LOCATIONS INDICATED ON PLAN. POSTS SHALL BE SPACED AT 4' - 0" OC MAXIMUM, COORDINATE WITH DUCTWORK AND OTHER EQUIPMENT.

PLAN NORTH

A1 MEZZANINE FRAMING PLAN

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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ENLARGED PLANS

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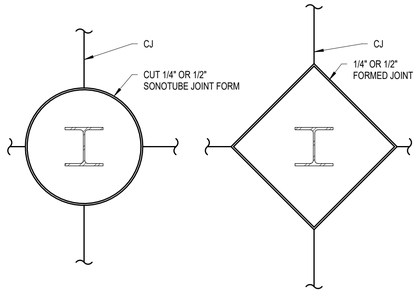
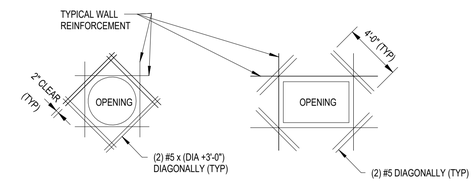


NOTES:

1. INSTALL JOINT FILLER AND SEALANT IN EXPOSED JOINTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

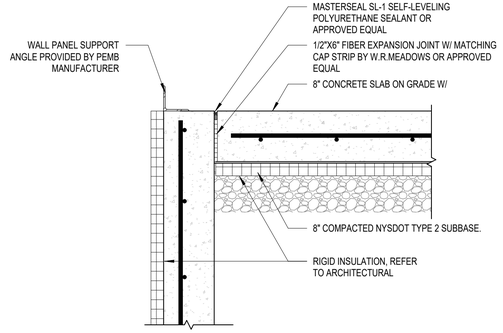
C1 TYPICAL ISOLATION JOINT AT COLUMNS
SCALE: NOT TO SCALE



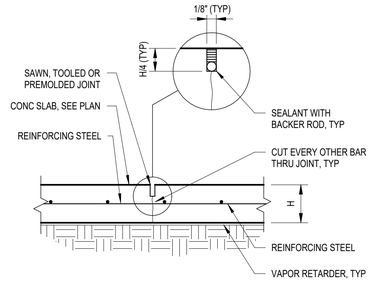
NOTES:

1. FOR WALLS WITH OPENINGS GREATER THAN 6" IN ANY DIRECTION. PLACE BARS AT EACH FACE FOR WALLS WITH (2) LAYERS OF REINFORCING.
2. FOR WALLS WITH REINFORCEMENT LARGER THAN #5 BARS, MATCH WALL REINFORCEMENT BAR SIZE.

C2 WALL OPENING REINFORCING DETAIL
SCALE: NOT TO SCALE



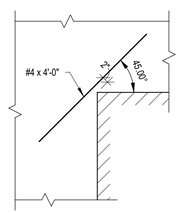
C3 TYPICAL SLAB EDGE DETAIL
SCALE: NOT TO SCALE

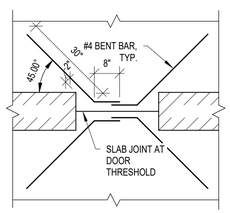


NOTES:

1. JOINT TO BE SAWN WITHIN 12 HOURS AFTER PLACING CONCRETE.

C4 SLAB ON GRADE CONTROL JOINT DETAIL
SCALE: NOT TO SCALE

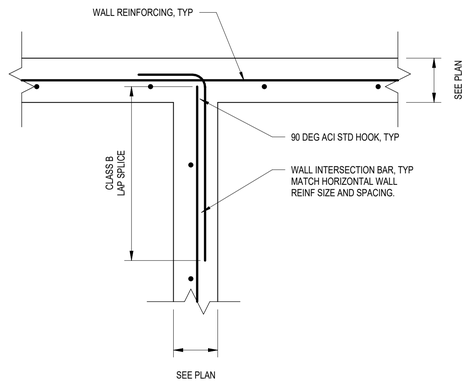




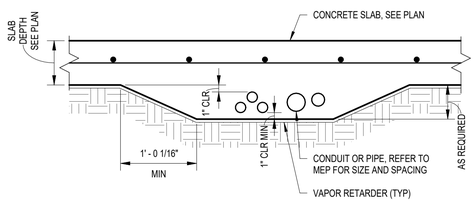
TYP. RE-ENTRANT CORNER

RE-ENTRANT CORNERS AT DOORS

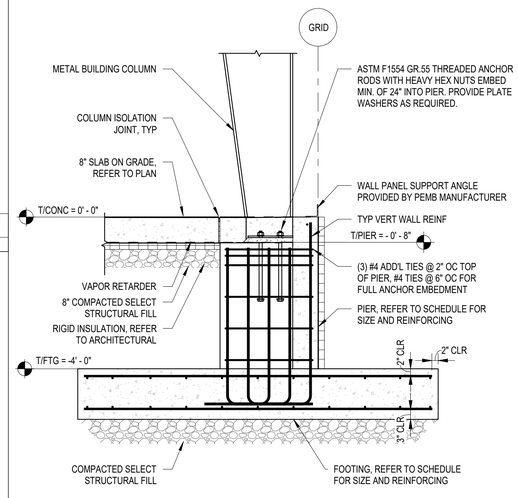
B1 SOG RE-ENTRANT CORNER REINF
SCALE: NOT TO SCALE



B2 CONC WALL T-INTERSECTION - SINGLE REINF
SCALE: NOT TO SCALE



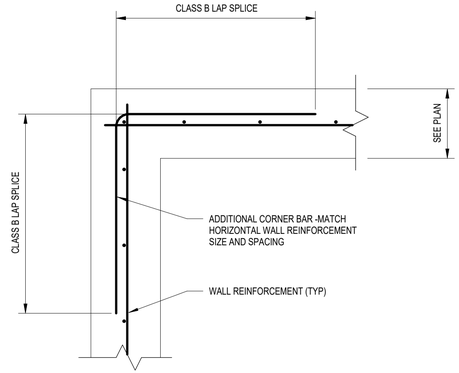
B3 TYPICAL SLAB ON GRADE AT CONDUIT
SCALE: NOT TO SCALE



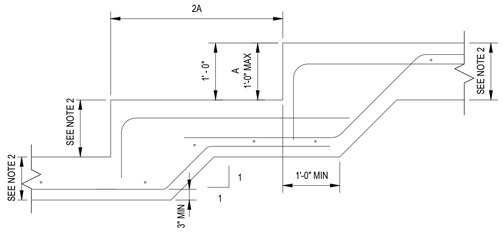
NOTES:

1. ANCHOR BOLT SIZE AND EMBEDMENT IS PRELIMINARY ADN PROVIDED FOR BIDDIGN PURPOSES ONLY. FINAL ANCHOR BOLT SIZE AND EMBEDMENT WILL BE PROVIDED UPON REVIEW OF PEMB REACTIONS BY THE ENGINEER.
2. COORDINATE REQUIRED ANCHOR BOLT LOCATION, SPACING, AND PROJECTION WITH PEMB DRAWINGS.
3. WALL REINFORCEMENT NOT SHOWN FOR CLARITY. WALL REINFORCEMENT TO BE CONTINUOUS THRIUGH PIER REINFORCING.

B4 TYPICAL FOUNDATIONW ALL SECTION AT PIER
SCALE: 1/2" = 1'-0"



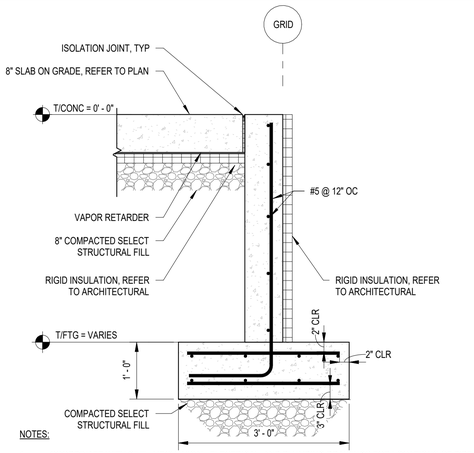
A1 TYPICAL CONCRETE WALL CORNER DETAIL
SCALE: NOT TO SCALE



NOTES:

1. REINFORCING SIZE AND SPACING TO MATCH FOOTING REINFORCEMENT.
2. THICKNESS TO MATCH CONTINUOUS FOUNDATION. SEE PLAN.

A2 FOUNDATION STEP DETAIL
SCALE: NOT TO SCALE



NOTES:

1. COORDINATE WITH CIVIL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR LOCATIONS OF PIPE.
2. WALL FOOTING TO BE CENTERED ON FOUNDATION WALL UNLESS NOTED OTHERWISE.

A3 TYPICAL FOUNDATION WALL SECTION
SCALE: 3/4" = 1'-0"

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TYPICAL FOUNDATION DETAILS

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STEEL LOOSE LINTEL SCHEDULE

WITHIN NON-BEARING WALLS

WALL THICKNESS	MASONRY OPENING	
	UP TO 4'-0" 4" BEARING EACH END	4'-0" TO 8'-0" 8" BEARING EACH END
4"	L4 X 3 1/2" X 5/16" LLV OR WT4 X 6.5 *	L6 X 3 1/2 X 5/16" LLV OR WT6 X 8 *
6"	WT4 X 6.5	WT6 X 8
8"	2 - L'S 4 X 3 1/2 X 5/16" LLV OR WT4 X 12 *	2 - L'S 6 X 3 1/2 X 5/16" LLV OR WT7 X 15 *
10"	L5 X 5 X 5/16" + L4 X 3 1/2 X 5/16" LLV OR WT4 X 15.5	L5 X 5 X 5/16" + L5 X 3 1/2 X 5/16" LLV OR WT6 X 20
12"	3 - L'S 4 X 3 1/2 X 5/16" LLV OR 2 X WT5 X 11	3 - L'S 6 X 3 1/2" X 5/16" LLV OR 2 WT5 X 11

* CUT FLANGES TO 3 1/2" WIDTH

INTERIOR LINTEL NOTES:

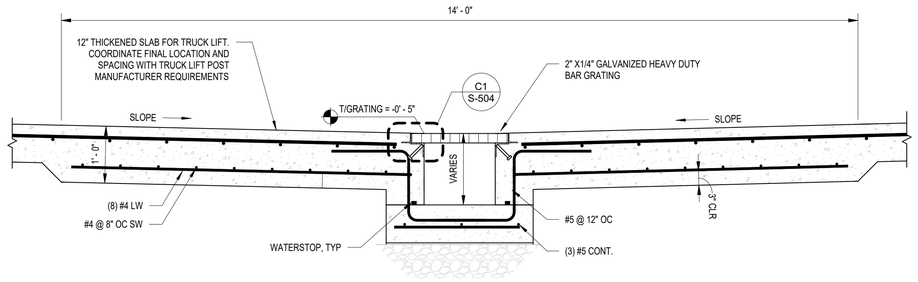
1. FOR LINTELS NOT SHOWN ON PLANS, SEE SCHEDULE ABOVE.
2. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR OPENING LOCATION.
3. FOR SPECIAL CONDITIONS SEE ARCHITECTURAL SCHEDULES OR SECTIONS.
4. FOR OPENINGS OVER 8'-0" REFER TO DETAILS OR SCHEDULE THIS SHEET.
5. TACK WELD BACK-TO-BACK VERTICAL LEGS OF MULTIPLE ANGLE LINTELS.

EXTERIOR AND BEARING WALL LINTEL NOTES:

1. HUNG AND CLIPPED LINTELS TO EXTEND 4" INTO MASONRY EACH END. LOOSE LINTELS UP TO 4'-0" TO HAVE 4" MIN. BEARING AND LOOSE LINTELS FROM 4'-0" TO 8'-0" TO HAVE 8" MIN. BEARING.
2. PROVIDE FOR VERTICAL AND HORIZONTAL ADJUSTMENT OR 1/2" ON ALL HUNG AND CLIPPED LINTELS TACK WELD ALL SLOTTED HOLES IN LINTELS AND CLIPS AFTER FINAL ADJUSTMENT.
3. FOR INCIDENTAL OPENINGS NOT SHOW ON STRUCTURAL PLANS PROVIDE ONE L4 X 3 1/2 X 5/16" LLV FOR EACH 4" OF WALL THICKNESS UP TO 4'-0" OPENING; OR ONE L6 X 3 1/2 X 5/16" LLV FOR EACH 4" OF WALL THICKNESS FOR OPENINGS U 4'-0" UP TO 8'-0".
4. TACK WELD BACK-TO-BACK VERTICAL LEGS OF MULTIPLE ANGLE LINTELS.
5. USE HOT-DIP GALVANIZED STEEL LINTELS FOR ALL EXTERIOR OPENINGS.

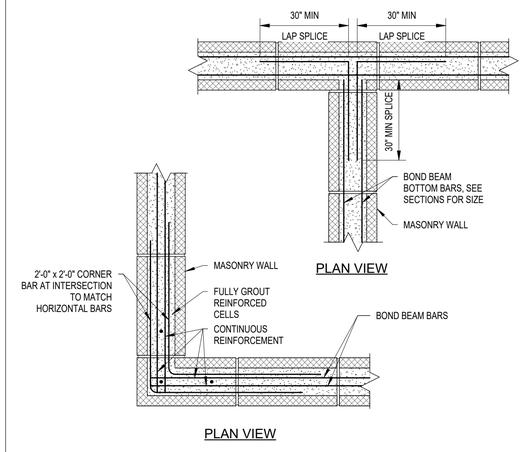
B1 LOOSE LINTEL SCHEDULE

SCALE: NOT TO SCALE



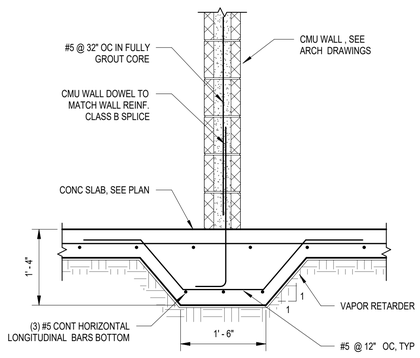
C3 TRUCK LIFT DETAIL

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



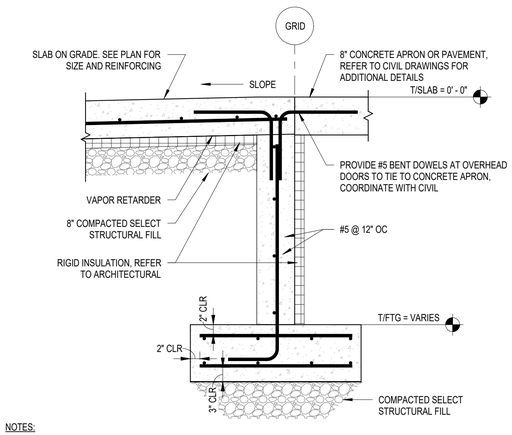
B2 CMU BOND BEAM T & CORNER REINF

SCALE: NOT TO SCALE



B3 TYP CMU PARTITION BASE DETAIL (HAUNCHED SLAB)

SCALE: NOT TO SCALE



NOTES:

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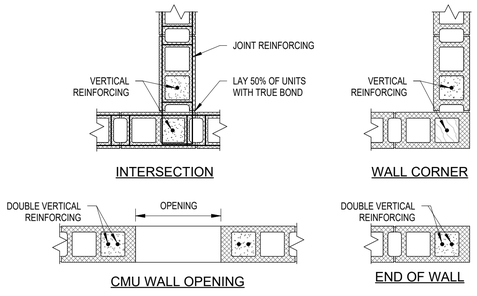
B4 SLAB OVERPOUR AT DOORS

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

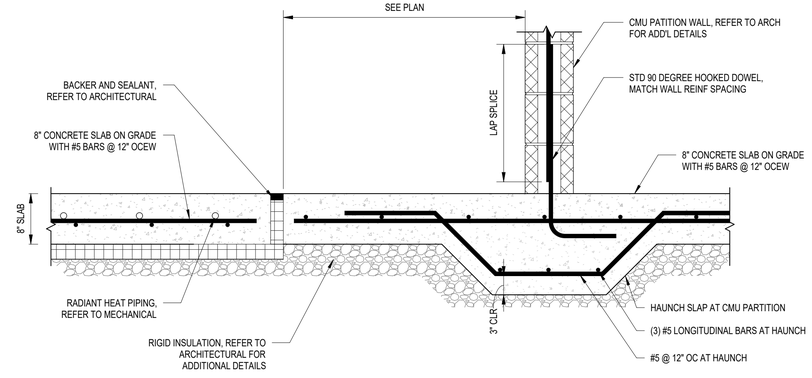


NOTES:

1. TYPICAL CMU WALL REINFORCEMENT TO BE AS SHOWN ON PLAN OR WITHIN REINFORCED MASONRY NOTES IN ADDITION TO THE CONDITIONS SHOWN ABOVE.

A1 TYPICAL MASONRY REINFORCED WALL INTERSECTION

SCALE: NOT TO SCALE

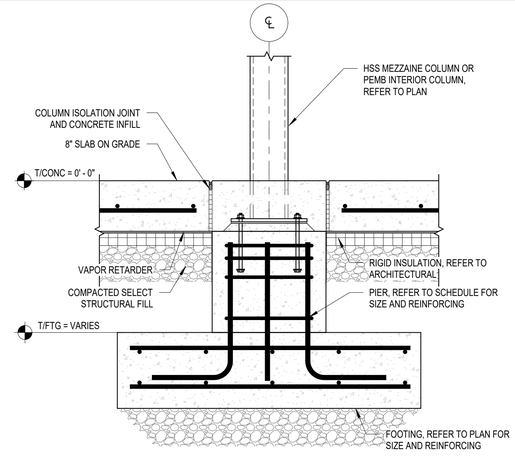


NOTES:

1. COORDINATE BAR PLACEMENT TO AVOID CONFLICT WITH RADIANT HEAT PIPING.
2. REFER TO ARCHITECTURAL AND MECHANICAL FOR RADIANT HEAT INSULATION REQUIREMENTS.

A2 TYP HEATED SLAB JOINT DETAIL

SCALE: NOT TO SCALE



A4 TYPICAL INTERIOR COLUMN ELEVATION

SCALE: 1" = 1'-0"

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Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
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CERTIFICATE OF AUTHORIZATION# 0021365

REGISTRATION EXPIRES: 05/31/2028

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS
INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	S.J. WEEKS, E.I.T.
DESIGNED BY:	M.S. ROLFE, P.E.
CHECKED BY:	J. OBLEMAN, P.E.

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TYPICAL DETAILS

S-502

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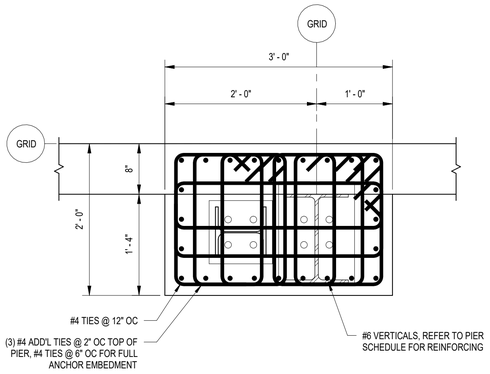
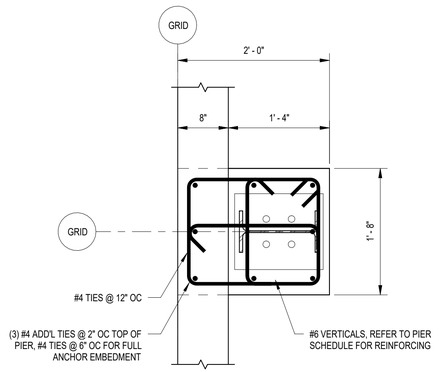


NOTE:

1. TYPICAL WALL REINFORCEMENT NOT SHOWN FOR CLARITY.

C1 TYPICAL PIER - P8

SCALE: 1" = 1'-0"

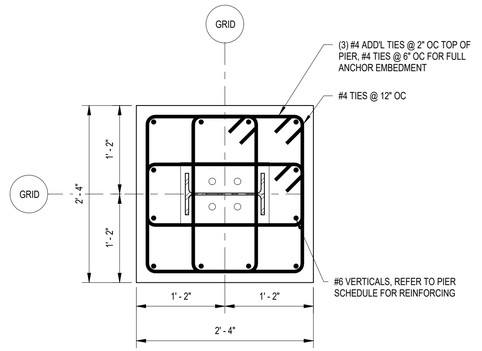


NOTE:

1. TYPICAL WALL REINFORCEMENT NOT SHOWN FOR CLARITY.

C2 TYPICAL PIER - P7

SCALE: 1" = 1'-0"

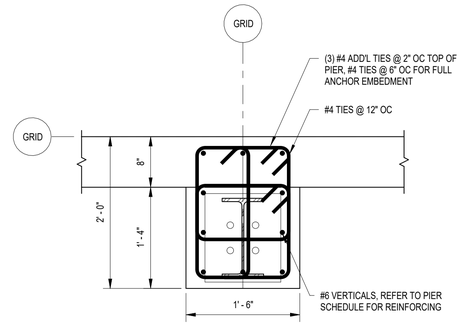


NOTE:

1. TYPICAL WALL REINFORCEMENT NOT SHOWN FOR CLARITY.

C3 TYPICAL PIER - P6

SCALE: 1" = 1'-0"

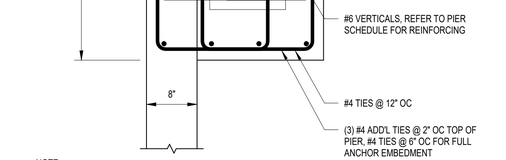


NOTE:

1. TYPICAL WALL REINFORCEMENT NOT SHOWN FOR CLARITY.

C4 TYPICAL PIER - P5

SCALE: 1" = 1'-0"

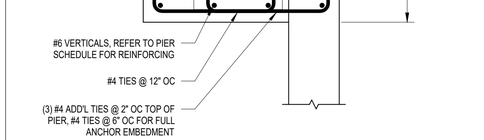


NOTE:

1. TYPICAL WALL REINFORCEMENT NOT SHOWN FOR CLARITY.

B1 TYPICAL PIER - P4

SCALE: 1" = 1'-0"

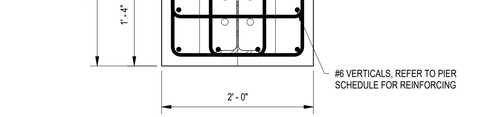


NOTE:

1. TYPICAL WALL REINFORCEMENT NOT SHOWN FOR CLARITY.

B2 TYPICAL PIER - P3

SCALE: 1" = 1'-0"

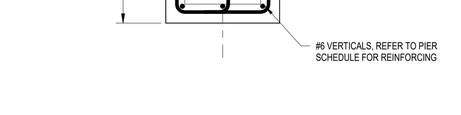


NOTE:

1. TYPICAL WALL REINFORCEMENT NOT SHOWN FOR CLARITY.

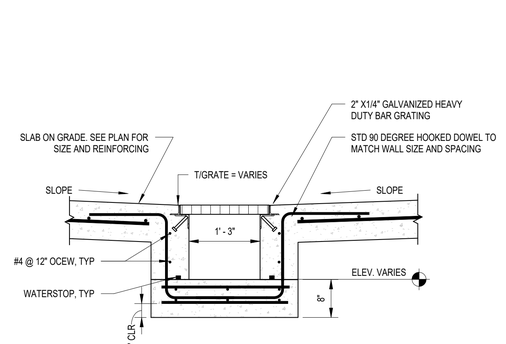
B3 TYPICAL PIER - P2

SCALE: 1" = 1'-0"



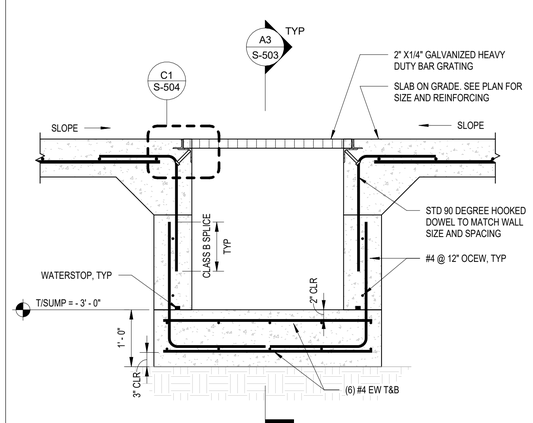
B4 TYPICAL PIER - P1

SCALE: 1" = 1'-0"



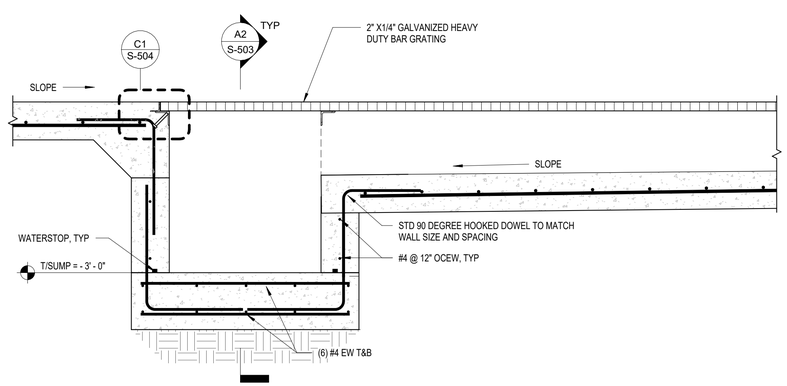
A1 TYPICAL TRENCH SECTION

SCALE: NOT TO SCALE



A2 SUMP PIT SECTION

SCALE: NOT TO SCALE



A3 SUMP PIT ELEVATION

SCALE: NOT TO SCALE

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CERTIFICATE OF AUTHORIZATION# 0021365

STATE OF NEW YORK JOHN W. OBLEMAN 082000 LICENSED PROFESSIONAL ENGINEER

REGISTRATION EXPIRES: 05/31/2028

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ITHACA TOMPKINS INTERNATIONAL AIRPORT
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MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	S.J. WEEKS, E.I.T.
DESIGNED BY:	M.S. ROLFE, P.E.
CHECKED BY:	J. OBLEMAN, P.E.

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FOUNDATION DETAILS

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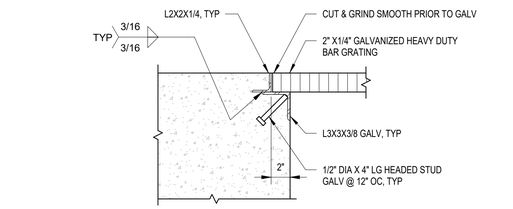
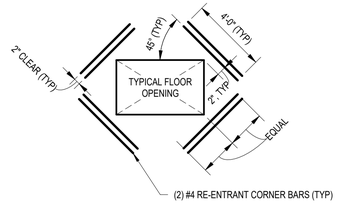


C1 TRENCH DRAIN GRATING SUPPORT DETAIL

SCALE: NOT TO SCALE



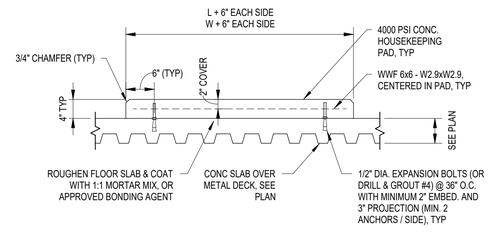
PLAN VIEW AT FLOOR SLAB

NOTES:

1. LOCATE CORNER BARS 1" CLEAR FROM TOP OF SLAB (TYP).
2. COORDINATE WITH MEZZANINE FRAMING PLAN AND MEP DRAWINGS FOR LOCATIONS OF ANY REQUIRED DECK OPENINGS.

C2 TYP REINF AT FLOOR OPENING

SCALE: NOT TO SCALE

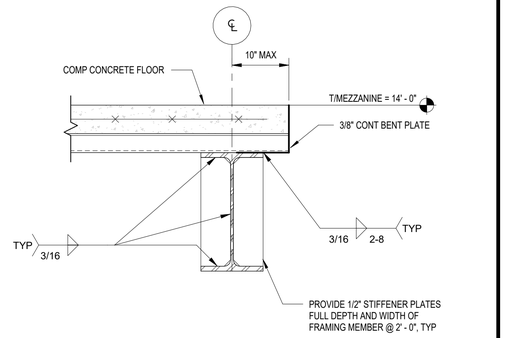


NOTES:

1. L = LENGTH OF EQUIPMENT BASE. W = WIDTH OF EQUIPMENT BASE.
2. COORDINATE ANY EMBEDDED ITEMS WITH EQUIPMENT MANUFACTURER.
3. COORDINATE SIZE, LOCATION AND QUANTITY WITH MEP DOCUMENTS.

C3 TYP ELEVATED SLAB EQUIPMENT PAD DETAIL

SCALE: NOT TO SCALE



C4 TYPICAL DECK EDGE

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

B1 TYP HSS6X6 BASEPLATE SECTION

SCALE: 1" = 1'-0"

NOTES:

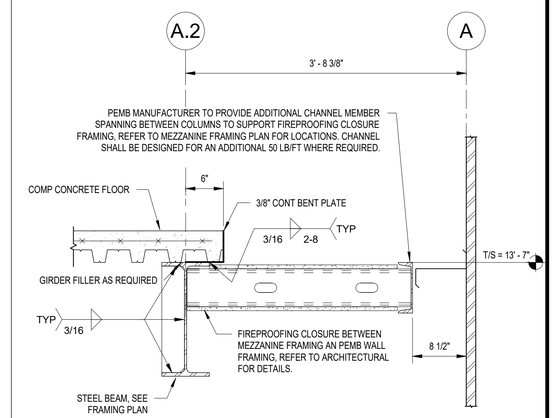
1. SEE PLAN FOR METAL DECK SLAB REINFORCEMENT (WWF).
2. PROVIDE HIGH CHAIR SUPPORT AT EACH INTERSECTION OF #4 BARS. CHAIRS SHALL BE MANUFACTURED FOR SUPPORT ON METAL DECK (CRSI TYPE HCM). TIE METAL DECK SLAB REINFORCEMENT (WWF) TO SUPPORT BARS @ 48" ON CENTER IN EACH DIRECTION.

B2 TYP REINF AT ELEVATED SLAB

SCALE: NOT TO SCALE

B3 TYP ELEVATED SLAB WWF LAP

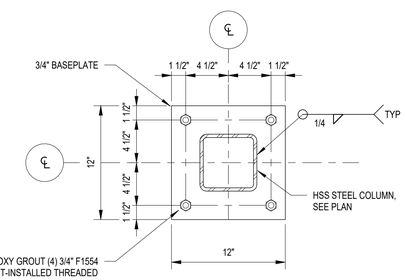
SCALE: NOT TO SCALE



NOTE:
1. GUARDRAIL NOT SHOWN FOR CLARITY, REFER TO A3/S-505

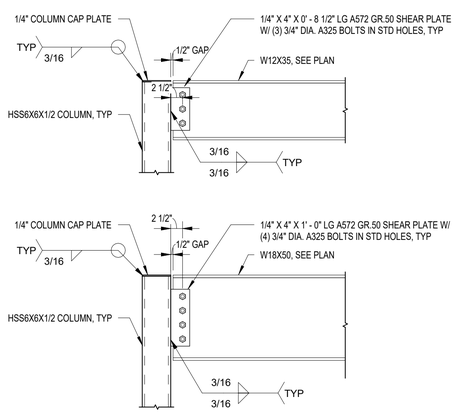
B4 TYPICAL SLAB EDGE AT PEMB WALL

SCALE: 1" = 1'-0"



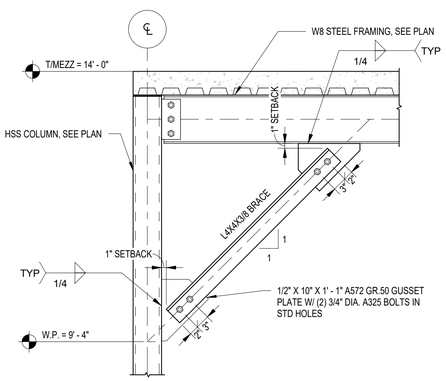
A1 TYP HSS6X6 BASE PLATE DETAIL

SCALE: NOT TO SCALE



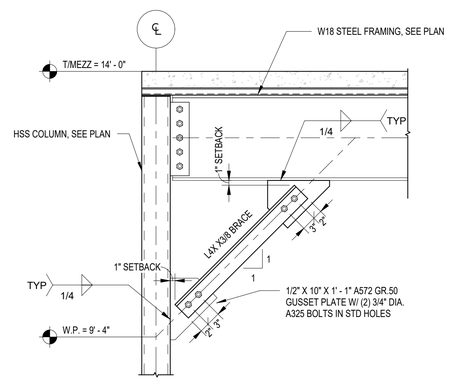
A2 TYPICAL BEAM TO COLUMN CONNECTION DETAIL

SCALE: NOT TO SCALE



A3 TYPICAL BRACE DETAIL

SCALE: NOT TO SCALE



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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	S.J. WEEKS, E.I.T.
DESIGNED BY:	M.S. ROLFE, P.E.
CHECKED BY:	J. OBLEMAN, P.E.

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TYPICAL STEEL DETAILS

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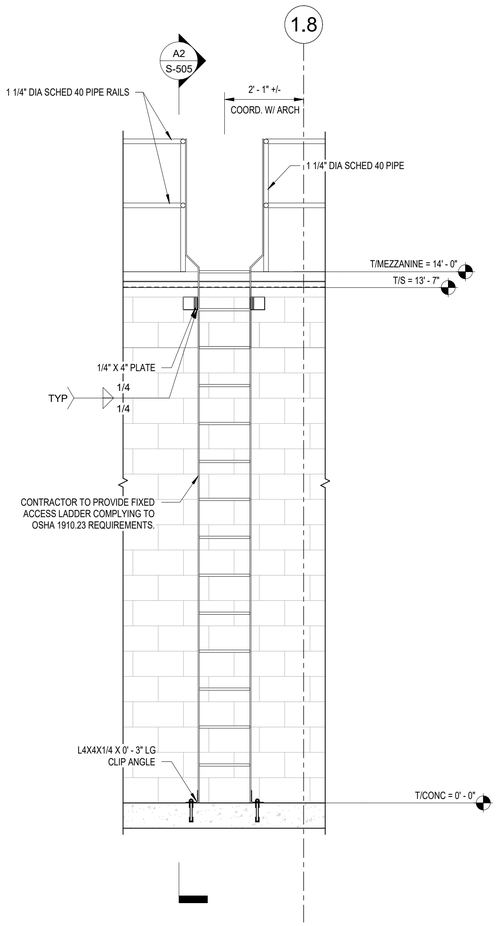
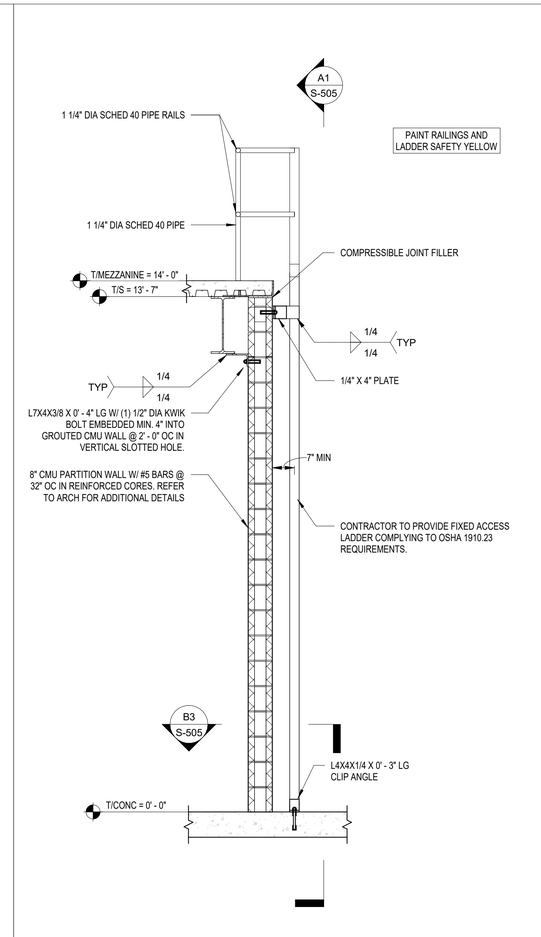


NOTE:

1. COORDINATE LOCATION OF FIXED LADDER WITH ARCHITECTURAL DRAWINGS.

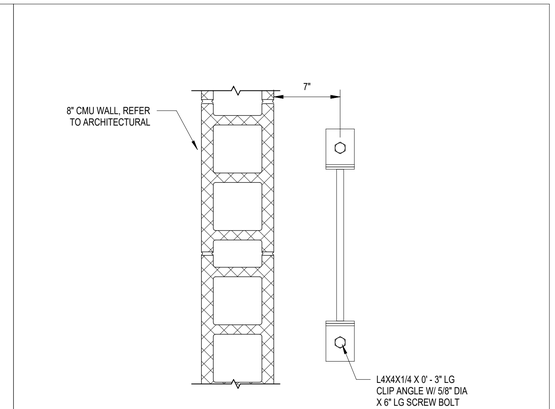
A1 FIXED LADDER ELEVATION

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



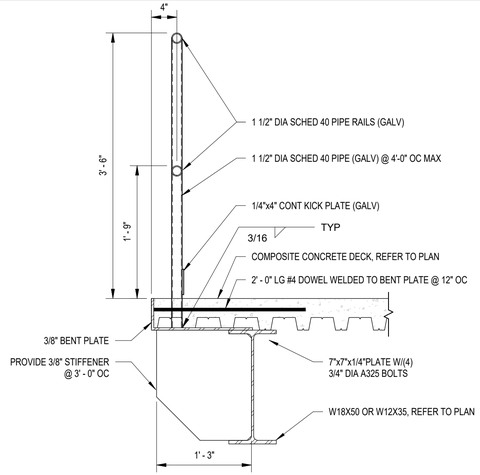
A2 FIXED LADDER SECTION

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



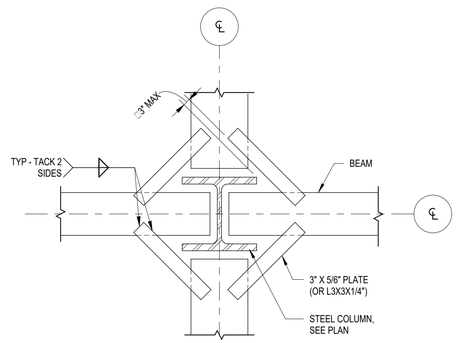
B3 LADDER ANCHORAGE DETAIL

SCALE: NOT TO SCALE



A3 TYPICAL GUARDRAIL DETAIL

SCALE: 1" = 1'-0"



A4 TYPICAL DECK SUPPORT AT COLUMN

SCALE: NOT TO SCALE

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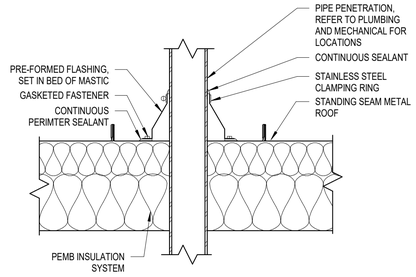
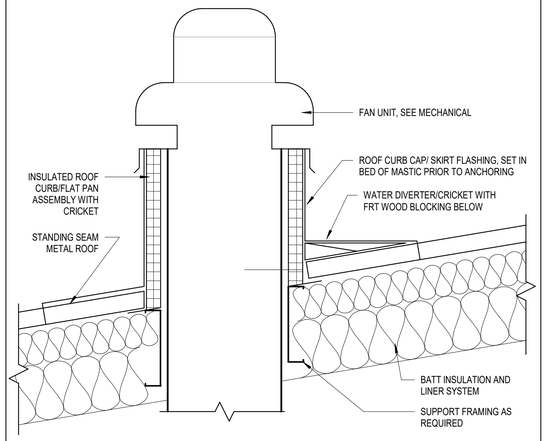
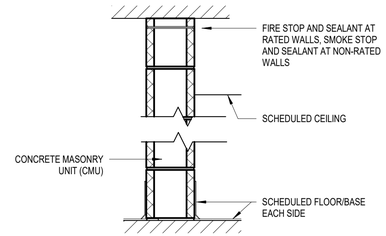


C1 ROOF PENETRATION FLASHING DETAIL
SCALE: 1 1/2" = 1'-0"



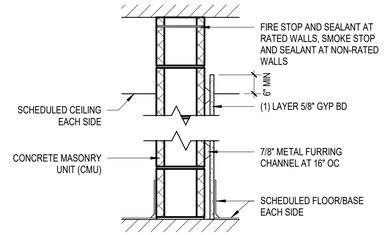
C2 ROOF CURB DETAIL
SCALE: 1 1/2" = 1'-0"



CA

TYPE	MATERIAL	DEPTH	FIRE RATING	UNBRACED HEIGHT	DESCRIPTION
CA-8	CMU	7-5/8"	-	-	-

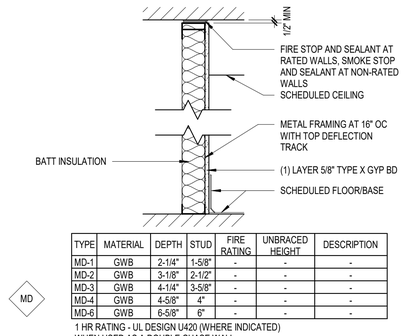
C3 CA PARTITION TYPE
SCALE: NOT TO SCALE



CD

TYPE	MATERIAL	DEPTH	FIRE RATING	UNBRACED HEIGHT	DESCRIPTION
CD-8	CMU/GWB	9-1/8"	-	-	-

C4 CD PARTITION TYPE
SCALE: NOT TO SCALE

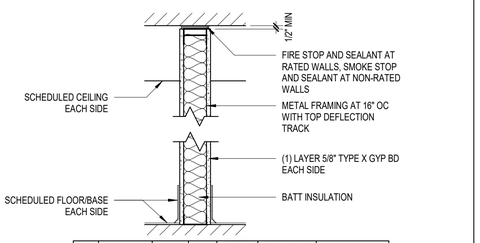


MD

TYPE	MATERIAL	DEPTH	STUD	FIRE RATING	UNBRACED HEIGHT	DESCRIPTION
MD-1	GWB	2-1/4"	1-5/8"	-	-	-
MD-2	GWB	3-1/8"	2-1/2"	-	-	-
MD-3	GWB	4-1/4"	3-5/8"	-	-	-
MD-4	GWB	4-5/8"	4"	-	-	-
MD-6	GWB	6-5/8"	6"	-	-	-

1 HR RATING - UL DESIGN U420 (WHERE INDICATED)
WHEN USED AS A DOUBLE CHASE WALL

B1 MD PARTITION TYPE
SCALE: NOT TO SCALE



MA

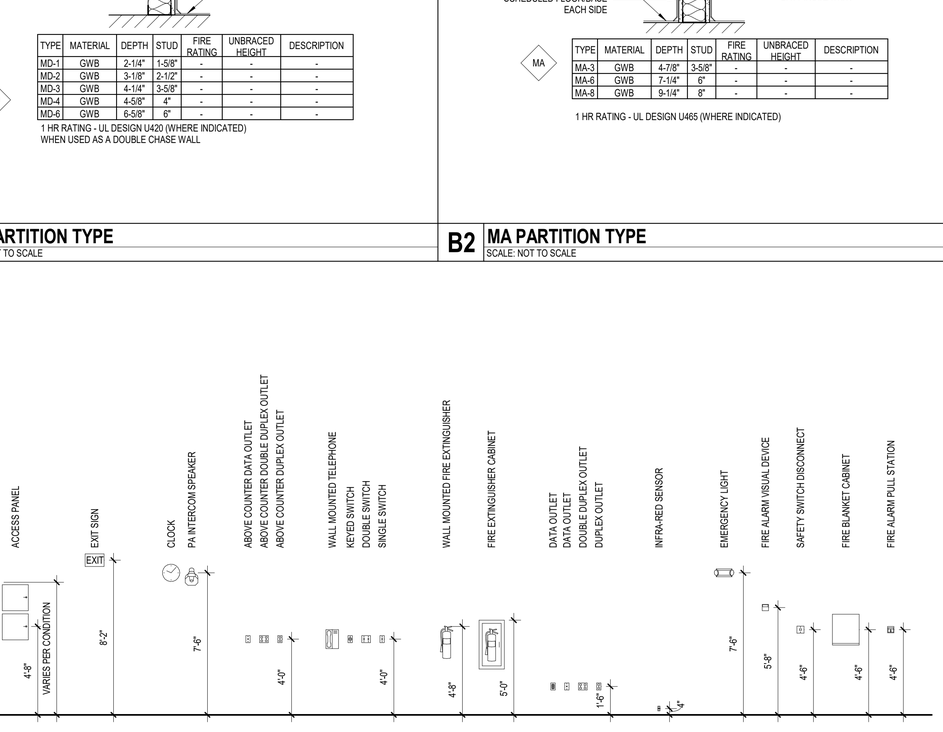
TYPE	MATERIAL	DEPTH	STUD	FIRE RATING	UNBRACED HEIGHT	DESCRIPTION
MA-3	GWB	4-7/8"	3-5/8"	-	-	-
MA-6	GWB	7-1/4"	6"	-	-	-
MA-8	GWB	9-1/4"	8"	-	-	-

1 HR RATING - UL DESIGN U465 (WHERE INDICATED)

B2 MA PARTITION TYPE
SCALE: NOT TO SCALE

EARTH		WOOD (FINISHED)	
GRANULAR FILL		WOOD (CONTINUOUS)	
CONCRETE		WOOD (BLOCKING)	
BRICK		INSULATION (LOOSE OR BATT)	
CONCRETE MASONRY UNIT		INSULATION (RIGID BOARD)	
STEEL SECTION		GLASS	
STRUCTURAL STEEL		ACOUSTIC/CERAMIC TILE	
PLYWOOD		GYPSUM WALL BOARD, SAND, PLASTER, CEMENT, GROUT	
		TERRAZZO	
		CARPET	

B3 MATERIAL LEGEND
SCALE: NOT TO SCALE



A1 TYPICAL ELECTRICAL FIXTURE MOUNTING HEIGHT
SCALE: 1/4" = 1'-0"

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
0	STRUCTURAL GRID		LEVEL REFERENCE
SIM A1 A-101	EXTERIOR ELEVATION	A1 / A-101	VIEW REFERENCE
SIM A1 A-101	INTERIOR ELEVATION	ROOM NAME 101 150 SF	ROOM TAG
SIM A1 A-101	BUILDING SECTION	1A	WALL TAG
SIM A1 A-101	WALL SECTION	101	DOOR TAG
SIM A1 A-101	DETAIL CALLOUT	A	WINDOW TAG
		1	REVISION TAG
			STRUCTURAL GRID LINE
			FINISHED SURFACE LINE
			DEMOLITION LINE
			OVERHEAD/HIDDEN LINE

A3 SYMBOLS
SCALE: NOT TO SCALE

A		**L**			
AFF	ABOVE FINISHED FLOOR	LF	LINEAL FEET		
ACT	ACOUSTICAL CEILING TILE				
ALUM	ALUMINUM	**M**			
L	ANGLE	MATL	MATERIAL		
		MAX	MAXIMUM		
B		MECH	MECHANICAL		
BLDG	BUILDING	MTL	METAL		
		MIN	MINIMUM		
C					
CPT	CARPET TILE	**N**			
CTR	CENTER	NA	NOT APPLICABLE		
COL	COLUMN	NIC	NOT IN CONTRACT		
CONC	CONCRETE	NO	NUMBER		
CMU	CONCRETE MASONRY UNIT	NTS	NOT TO SCALE		
D		**O**			
DEMO	DEMOLISH / DEMOLITION	OC	ON CENTER		
DET	DETAIL	OH	OVERHEAD		
DIA	DIAMETER				
DIM	DIMENSION	**P**			
		PT	PAINT		
E					
EA	EACH	**Q**			
ELEC	ELECTRIC	-	-		
ELEV	ELEVATOR				
EXIST	EXISTING	**R**			
		RD	ROOF DRAIN		
F		RBR	RUBBER		
FT	FEET/FOOT				
FRP	FIBER REINFORCED POLYESTER	**S**			
FA	FIRE ALARM	SECT	SECTION		
FEC	FIRE EXTINGUISHER CABINET	SIM	SIMILAR		
FHC	FIRE HOSE CABINET	SPEC	SPECIFICATION		
FP	FIRE PROTECTION	SF	SQUARE FEET		
FRT	FIRE RETARDANT	STRUCT	STRUCTURAL		
FP	FIREPROOF				
		T			
G		TOS	TOP OF STEEL		
GA	GAGE / GAUGE	TYP	TYPICAL		
GC	GENERAL CONTRACTOR				
		U			
H		UON	UNLESS OTHERWISE NOTED		
HM	HOLLOW METAL				
		V			
I		VTR	VENT THROUGH ROOF		
		VIF	VERIFY IN FIELD		
INSUL	INSULATION / INSULATED	VEST	VESTIBULE		
J		**W**			
JAN CL	JANITOR'S CLOSET	W/	WITH		
K					
KD	KNOCKDOWN				

A4 ABBREVIATION LIST
SCALE: NOT TO SCALE

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DESIGNED BY:	S. M. ROGERS
CHECKED BY:	M. W. LAMONTAGNE, AIA

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SYMBOLS, ABBREVIATIONS, LEGENDS & DETAILS

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CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION

A. CLASSIFICATION & USE

- 304.1, (B) BUSINESS GROUP - OFFICE
- 311.2 (S-1) MODERATE-HAZARD STORAGE - SRE GARAGE AND ARFF GARAGE

CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS

A. GENERAL HEIGHT AND AREA LIMITATIONS
GROUP B AND S OCCUPANCIES, TYPE IIB CONSTRUCTION (SPRINKLERED)

1. BUILDING HEIGHT
   A. TABLE 504.3 - ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE
      MAXIMUM HEIGHT: 75 FT (41 FT ACTUAL)

2. NUMBER OF STORIES
   A. TABLE 504.4 MAXIMUM STORIES ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE
      B: 4 (1 ACTUAL)
      S-1: 3 (1 ACTUAL)

3. BUILDING AREA (GROSS)
   A. TABLE 506.2 MAXIMUM ALLOWABLE AREA
      B: 92,000 SF PER STORY (12,170 ACTUAL)
      S-1: 70,000 SF PER STORY (33,235 ACTUAL)

CHAPTER 6 - TYPES OF CONSTRUCTION

1. TABLE 601 - FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS, TYPE IIB

- STRUCTURAL FRAME: 0 HOUR
- BEARING WALLS 0 HOUR
- NON-BEARING WALLS: 0 HOUR
- FLOOR CONSTRUCTION: 0 HOUR
- ROOF CONSTRUCTION: 0 HOUR
- GROUP B, SPRINKLERED (MOST STRINGENT)
  1. EXIT ENCLOSURES AND PASSAGEWAYS: B
  2. CORRIDORS: C
  3. ROOMS AND ENCLOSED SPACES: C
- NO SEPARATION REQUIRED BETWEEN ARFF GARAGE AND SRE GARAGE

CHAPTER 9 - FIRE PROTECTION SYSTEMS

A. AUTOMATIC SPRINKLER SYSTEMS
   a. 903.2 - AUTOMATIC SPRINKLER SYSTEM US REQUIRED FOR FIRE AREAS > 12,000 SF AND REPAIR/ PARKING GARAGES > 5,000 SF - OCCUPANCY

CHAPTER 10 - MEANS OF EGRESS

A. AREA OCCUPANCY
   a. TABLE 1004.1.2: MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT
      - ASSEMBLY UNCONCENTRATED: 15 SF NET
      - BUSINESS AREAS: 100 SF GROSS
      - S-1 AREAS: 200 SF GROSS

B. NUMBER OF OCCUPANTS

- BUSINESS AREAS: 12,000/ 150 = 80
- S-1 AREAS: 10,000/ 200 = 50
  24,000/ 200 = 120

C. MEANS OF EGRESS

1. 1005.3.2 OTHER EGRESS COMPONENTS
   A. SPRINKLERED: 0.15 IN PER OCCUPANT

D. NUMBER OF EXITS AND EXIT ACCESS DOORWAYS

1. TABLE 1017.2
- B OCCUPANCY: 250' MAXIMUM TRAVEL WITH SPRINKLER SYSTEM
- S-1 OCCUPANCY: 250' MAXIMUM TRAVEL WITH SPRINKLER SYSTEM

E. CORRIDORS

1. TABLE 1020.1 CORRIDOR FIRE-RESISTANCE RATING - CORRIDOR OCCUPANCY > 30, SPRINKLERED BUILDING THEREFORE NO RATING IS REQUIRED.
2. TABLE 1020.2 CORRIDOR WIDTH
- 44" MINIMUM WIDTH (54" MINIMUM ACTUAL PROVIDED)

3. 1020.4 DEAD ENDS
- LENGTH NOT TO EXCEED 50 FT.

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A. **TOMPKINS COUNTY - CLIMATE ZONE 5**

1. TABLE C402.1.3 OPAQUE THERMAL ENVLOPE INSULATION COMPONENT MINIMUM REQUIREMENTS:

- SLAB ON GRADE FLOOR (UNHEATED): R-15 FOR 24 INCHES BELOW
- SLAB ON GRADE FLOOR (HEATED): R-20 FOR 48 INCHES BELOW + R-5 FULL-SLAB
- METAL BUILDING WALLS ABOVE GRADE: R-13 + R-14.9 ls
- METAL BUILDING ROOF: R-25 + R-11 ls
- OPAQUE UNINSULATED METAL DOOR: U-1.20 SINGLE
- OPAQUE INSULATED COILING OH DOOR: U-0.90
- METAL GLAZED WINDOW/ GLASS DOOR: U-1.20 SINGLE & U-0.80 DOUBLE

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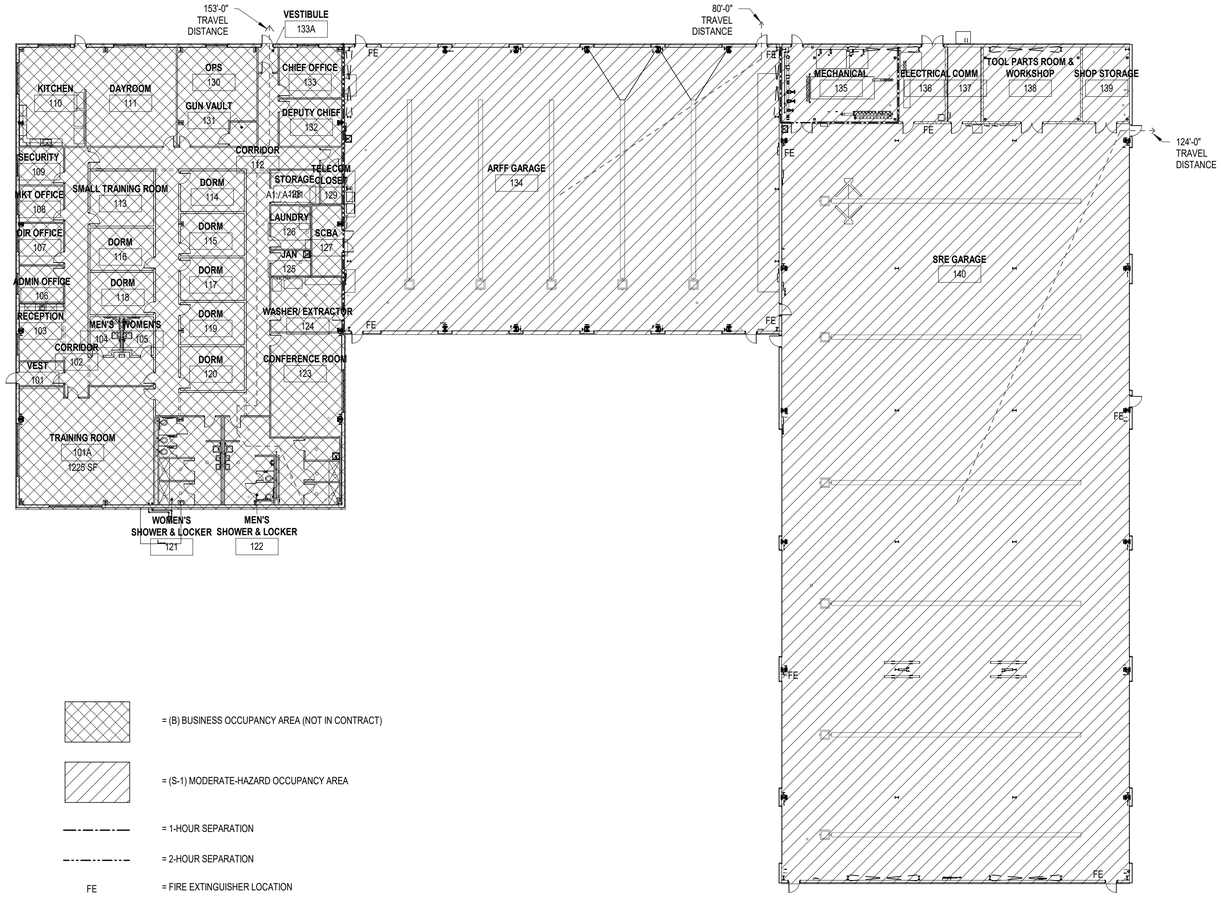
A. FIXTURES, FAUCETS, AND FIXTURE FITTINGS (CHAPTER 4)

WATER CLOSETS:
MALE
(B) BUSINESS: (1) PER 25 (FIRST 50), (1) PER 50 (50+) = 2
(S-1) STORAGE: (1) PER 100= 1

FEMALE
(B) BUSINESS: (1) PER 25, (FIRST 50), (1) PER 50 (50+) = 2
(S-1) STORAGE: (1) PER 100= 1

LAVATORIES
MALE
(B) BUSINES: (1) PER 40 (FIRST 50), (1) PER 80 (80+) = 1
(S-1) STORAGE: (1) PER 100 = 1

FEMALE
(B) BUSINESS: (1) PER 40, (FIRST 50), (1) PER 80 (80+) = 1
(S-1) STORAGE: (1) PER 100 = 1



= (B) BUSINESS OCCUPANCY AREA (NOT IN CONTRACT)

= (S-1) MODERATE-HAZARD OCCUPANCY AREA

= 1-HOUR SEPARATION

= 2-HOUR SEPARATION

FE = FIRE EXTINGUISHER LOCATION

= PATH OF TRAVEL

PLAN NORTH

0 10' 20' 40'

A1 CODE COMPLIANCE REVIEW
SCALE: NOT TO SCALE

A2 CODE COMPLIANCE PLAN
SCALE: 3/64" = 1'-0"

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CODE COMPLIANCE

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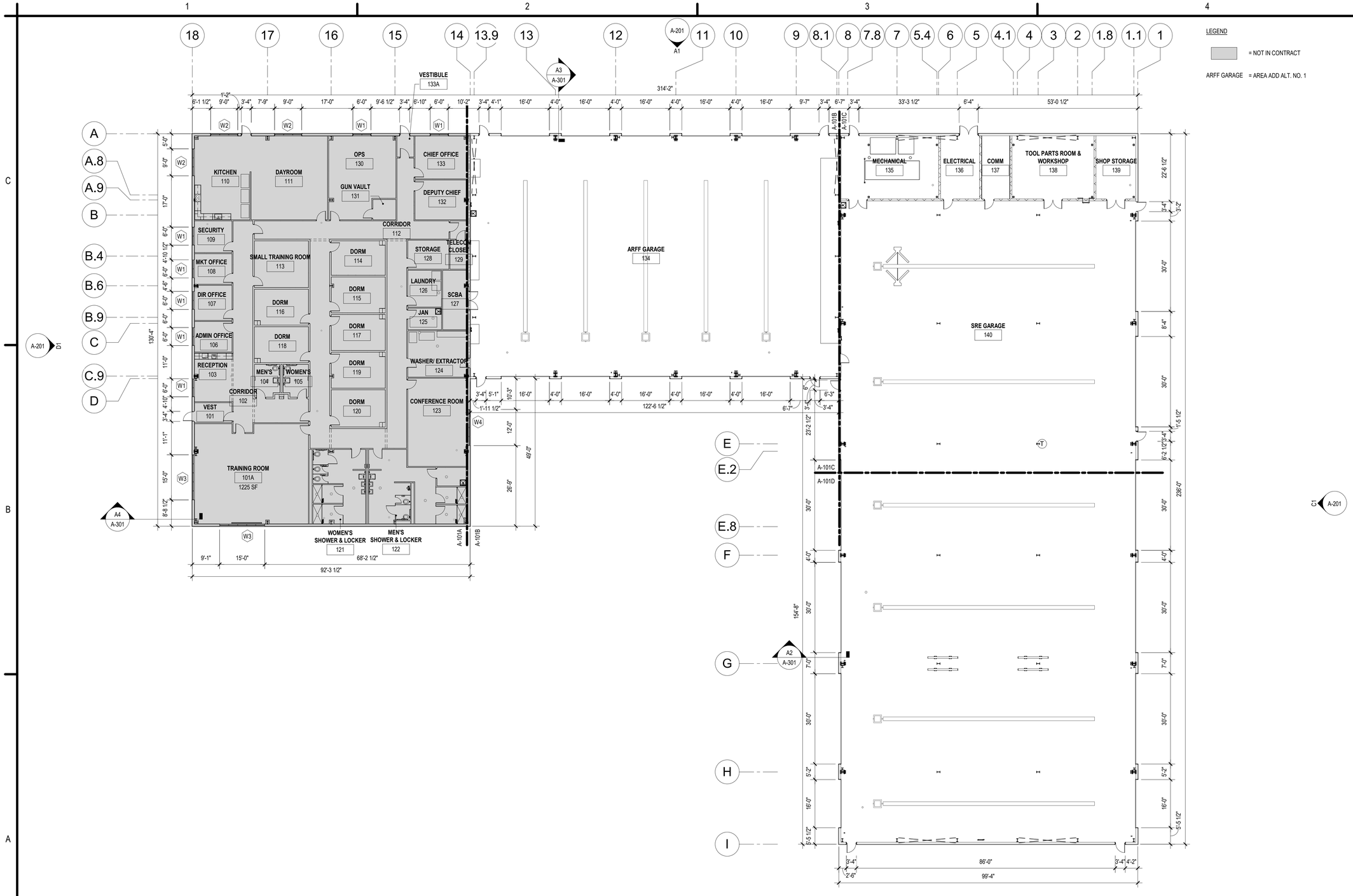

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OVERALL FIRST FLOOR PLAN

A-101

A1 OVERALL FIRST FLOOR PLAN
SCALE: 1/16" = 1'-0"

0 8' 16' 32'

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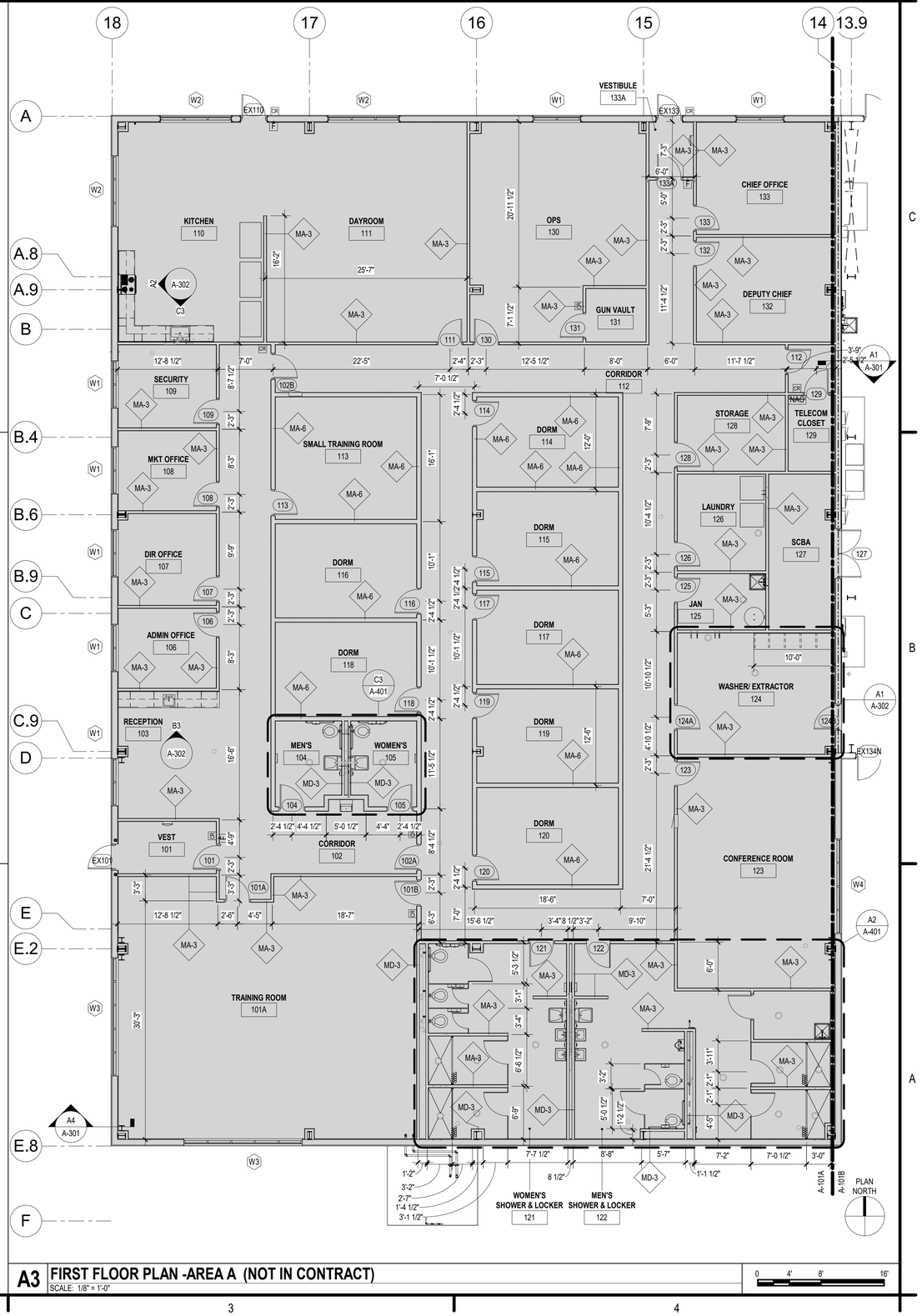

A3 FIRST FLOOR PLAN -AREA A (NOT IN CONTRACT)

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

0 4' 8' 16'

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FIRST FLOOR PLAN - AREA A

A-101A

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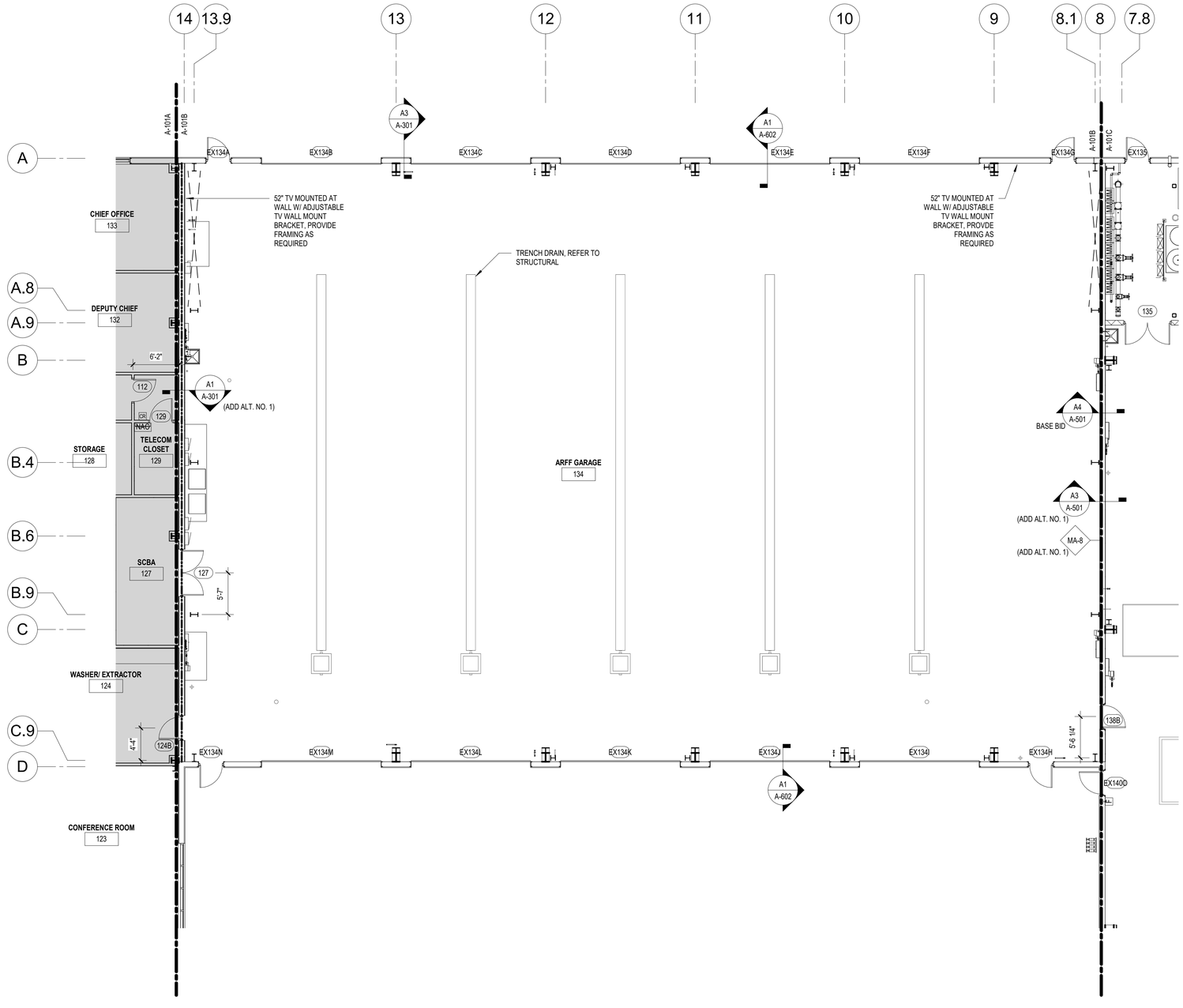

A1 FIRST FLOOR PLAN -AREA B (ADD ALT. NO. 1)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR PLAN - AREA B

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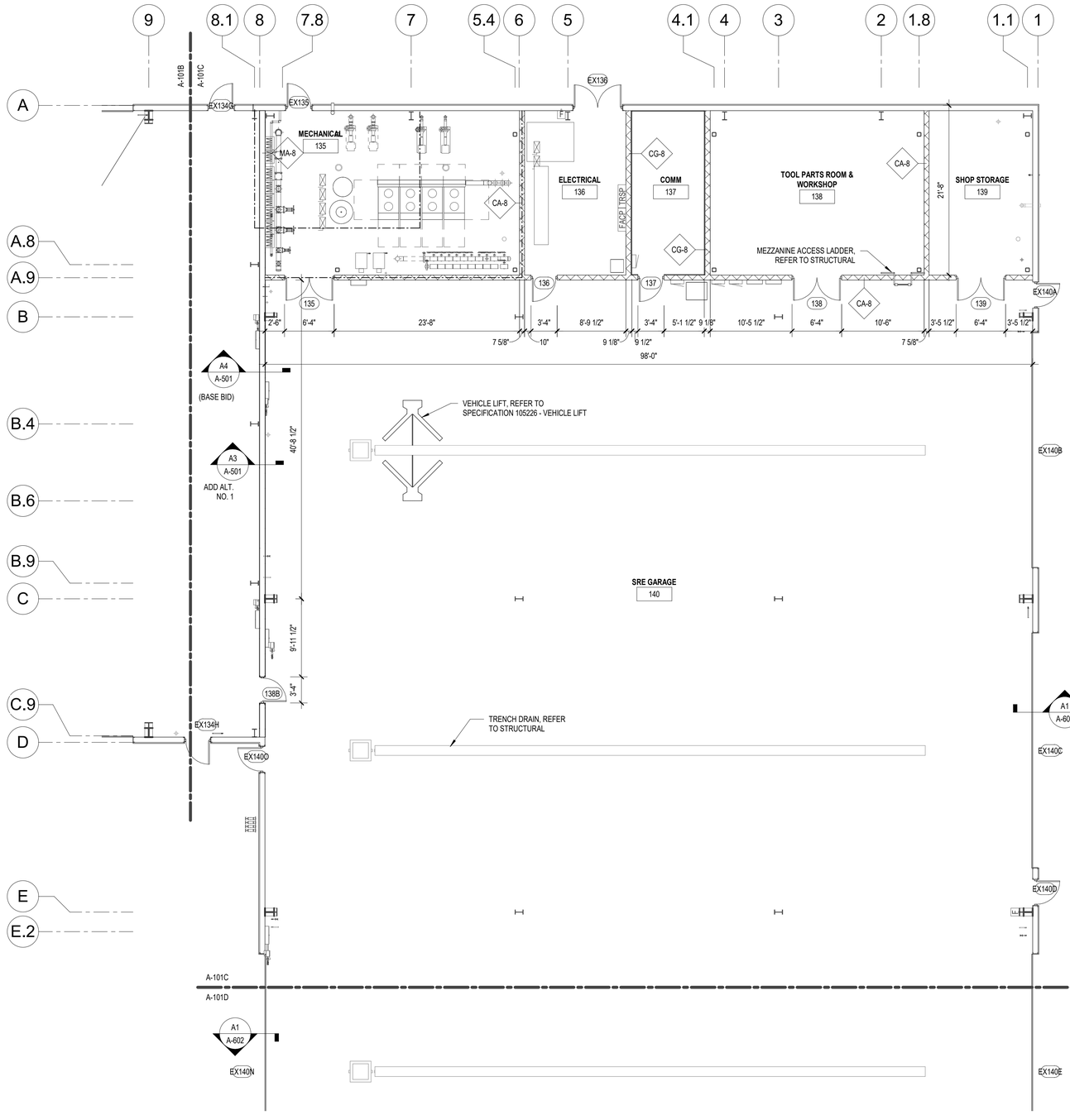

A1 FIRST FLOOR PLAN -AREA C (BASE BID)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR PLAN - AREA C

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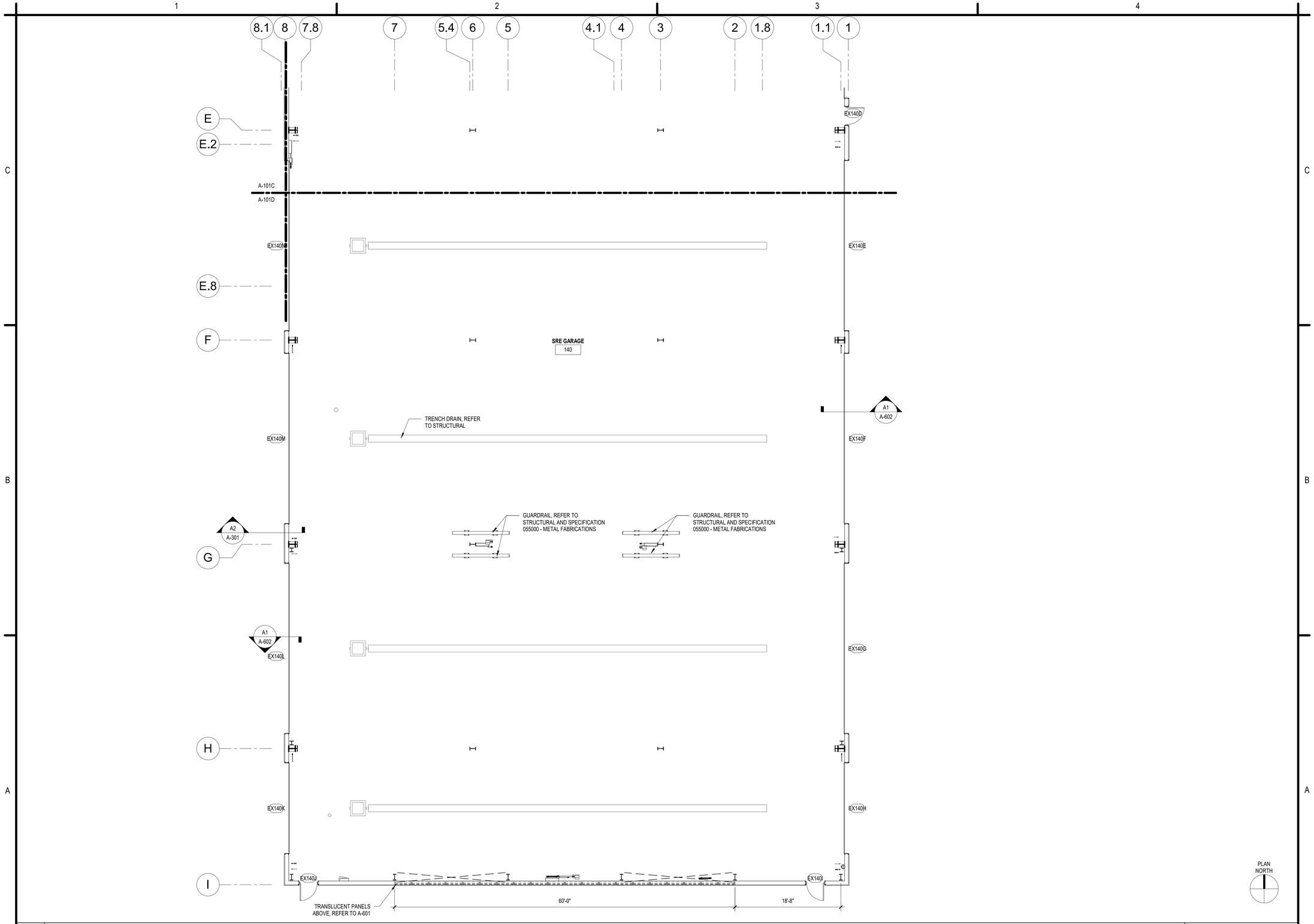

A1 FIRST FLOOR PLAN -AREA D (BASE BID)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR PLAN - AREA D

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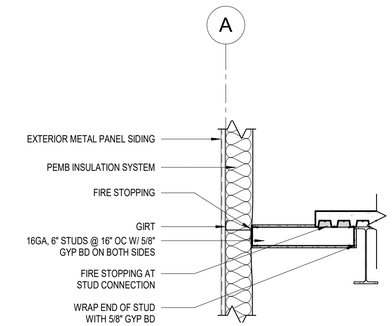
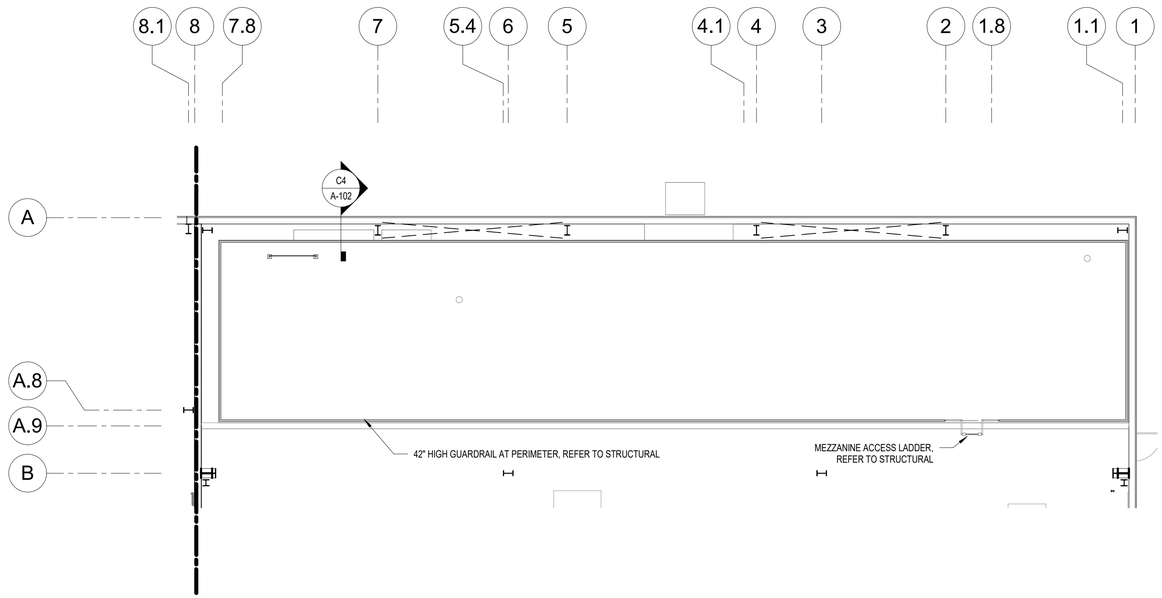


C4 FIRE RATED CLOSURE DETAIL
SCALE: 1/2" = 1'-0"



A2 MEZZANINE FLOOR PLAN (BASE BID)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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MEZZANINE FLOOR PLAN

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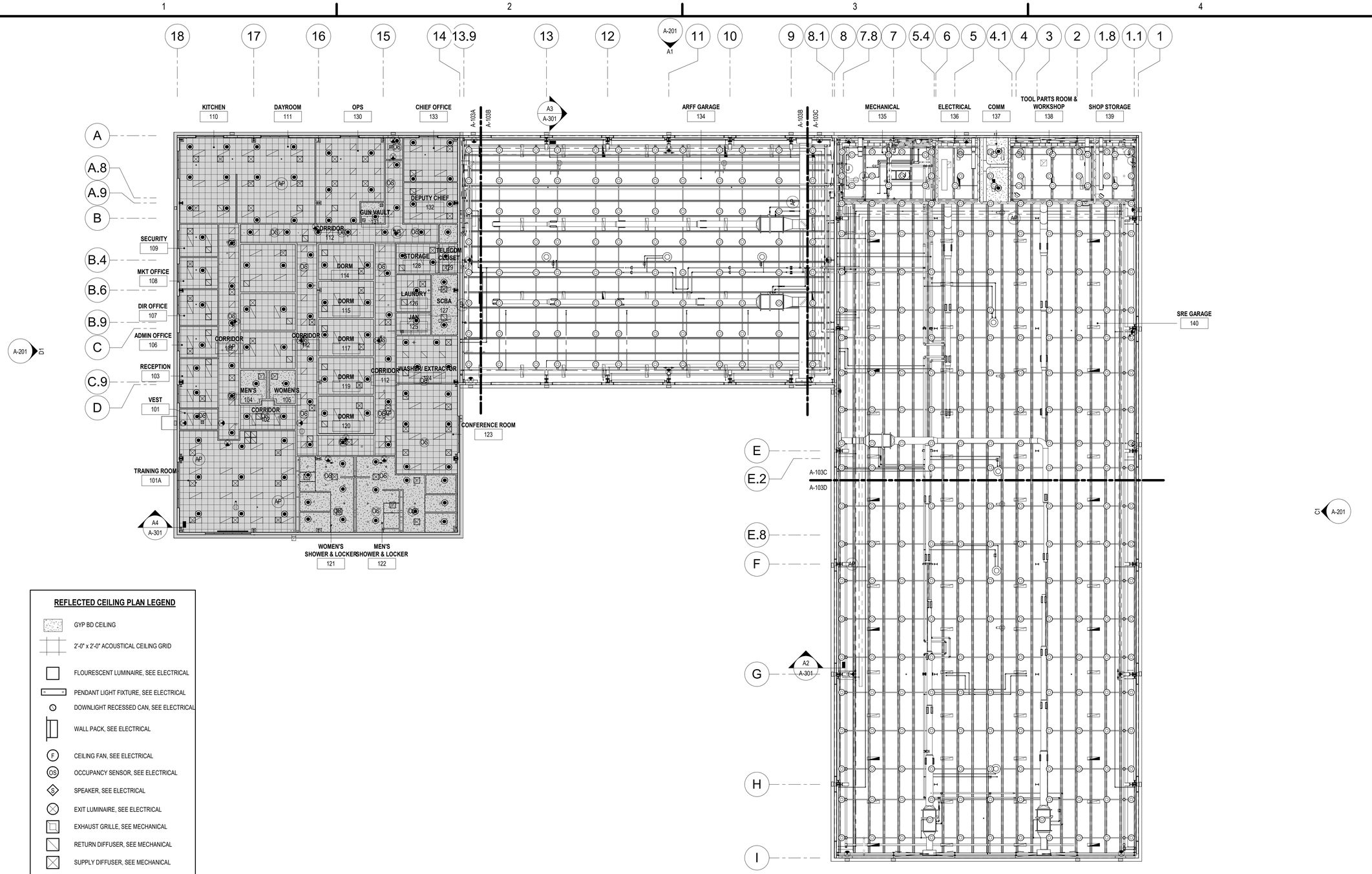

REFLECTED CEILING PLAN LEGEND

- GYP BD CEILING
- 2'-0" x 2'-0" ACOUSTICAL CEILING GRID
- FLOURESCENT LUMINAIRE, SEE ELECTRICAL
- PENDANT LIGHT FIXTURE, SEE ELECTRICAL
- DOWNLIGHT RECESSED CAN, SEE ELECTRICAL
- WALL PACK, SEE ELECTRICAL
- (F) CEILING FAN, SEE ELECTRICAL
- (OS) OCCUPANCY SENSOR, SEE ELECTRICAL
- (S) SPEAKER, SEE ELECTRICAL
- EXIT LUMINAIRE, SEE ELECTRICAL
- EXHAUST GRILLE, SEE MECHANICAL
- RETURN DIFFUSER, SEE MECHANICAL
- SUPPLY DIFFUSER, SEE MECHANICAL
- LINEAR DIFFUSER, SEE MECHANICAL
- SPRINKLER HEAD, SEE FIRE PROTECTION
- (S) SMOKE DETECTOR, SEE FIRE PROTECTION
- (H) HEAT DETECTOR, SEE FIRE PROTECTION
- FIRE ALARM NOTIFICATION HORN/STROBE, SEE FIRE PROTECTION
- AREA NOT IN CONTRACT

A1 OVERALL FIRST FLOOR REFLECTED CEILING PLAN
SCALE: 1/16" = 1'-0"

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OVERALL REFLECTED CEILING PLAN

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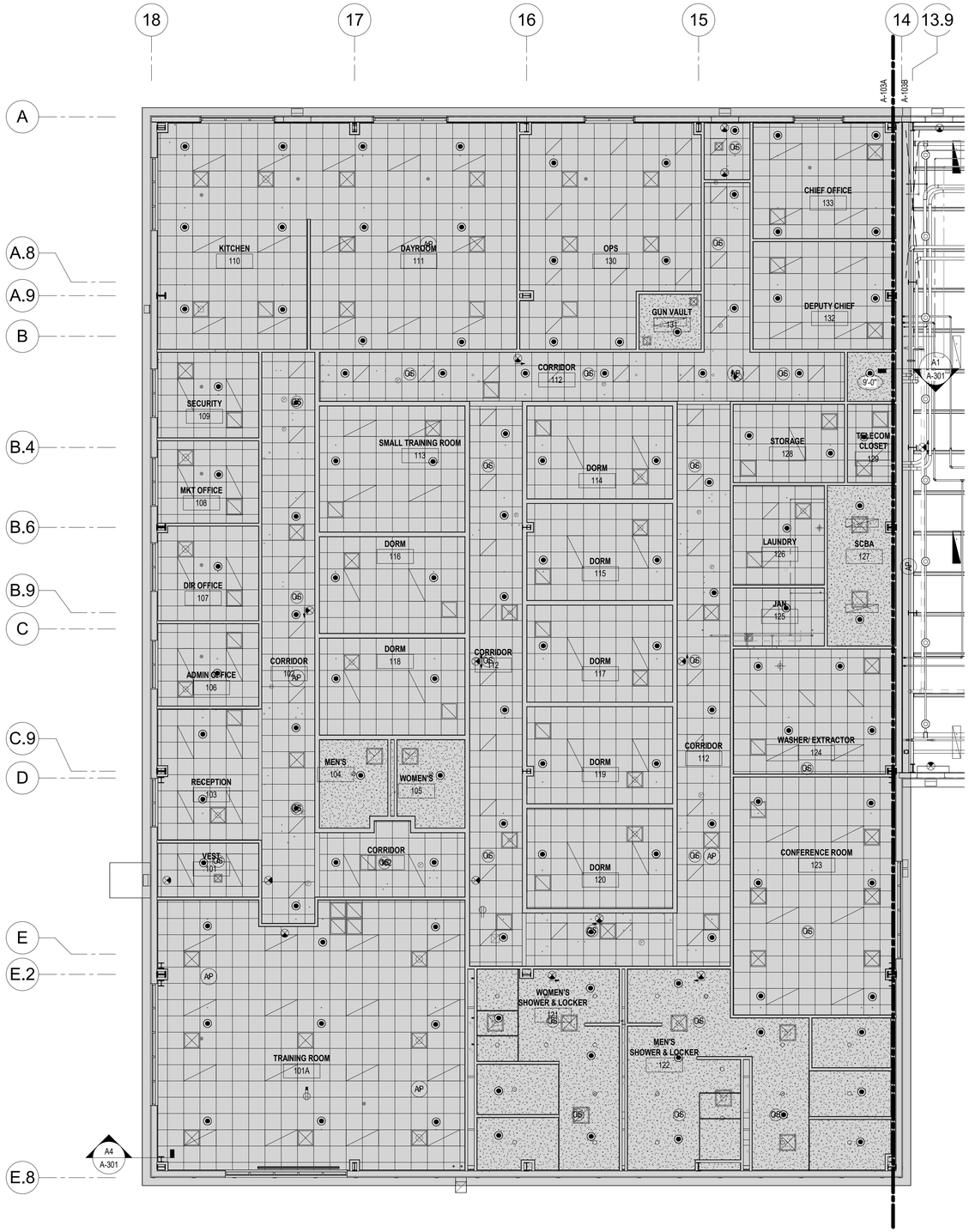

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- FLOURESCENT LUMINAIRE, SEE ELECTRICAL
- PENDANT LIGHT FIXTURE, SEE ELECTRICAL
- DOWNLIGHT RECESSED CAN, SEE ELECTRICAL
- WALL PACK, SEE ELECTRICAL
- (F) CEILING FAN, SEE ELECTRICAL
- (OS) OCCUPANCY SENSOR, SEE ELECTRICAL
- (S) SPEAKER, SEE ELECTRICAL
- EXIT LUMINAIRE, SEE ELECTRICAL
- EXHAUST GRILLE, SEE MECHANICAL
- RETURN DIFFUSER, SEE MECHANICAL
- SUPPLY DIFFUSER, SEE MECHANICAL
- LINEAR DIFFUSER, SEE MECHANICAL
- SPRINKLER HEAD, SEE FIRE PROTECTION
- (S) SMOKE DETECTOR, SEE FIRE PROTECTION
- (H) HEAT DETECTOR, SEE FIRE PROTECTION
- FIRE ALARM NOTIFICATION HORN/STROBE, SEE FIRE PROTECTION
- AREA NOT IN CONTRACT

PLAN NORTH

A1 REFLECTED CEILING PLAN - AREA A (NOT IN CONTRACT)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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REFLECTED CEILING PLAN - AREA A

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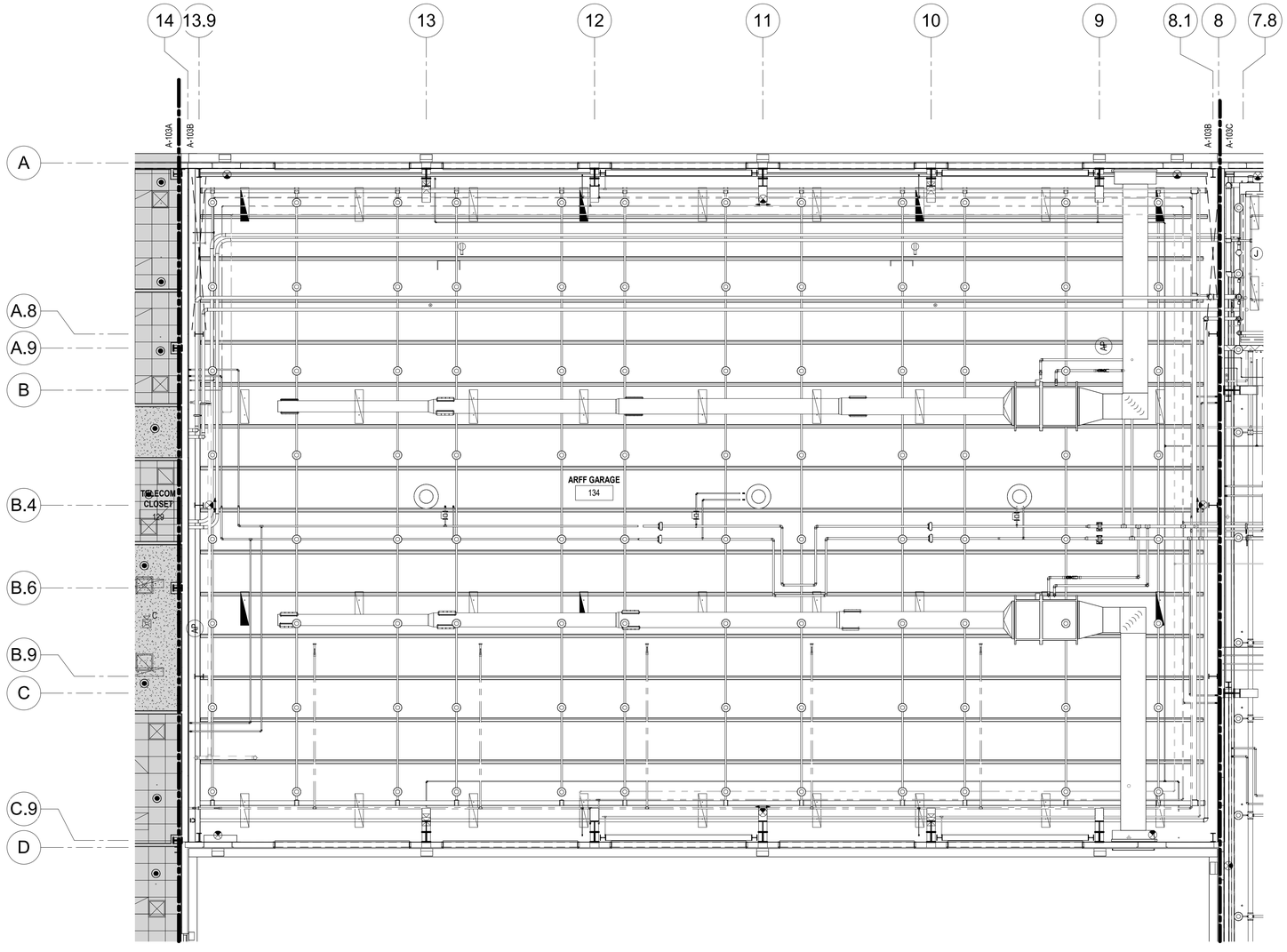

REFLECTED CEILING PLAN LEGEND

- GYP BD CEILING
- 2'-0" x 2'-0" ACOUSTICAL CEILING GRID
- FLOURESCENT LUMINAIRE, SEE ELECTRICAL
- PENDANT LIGHT FIXTURE, SEE ELECTRICAL
- DOWNLIGHT RECESSED CAN, SEE ELECTRICAL
- WALL PACK, SEE ELECTRICAL
- (F) CEILING FAN, SEE ELECTRICAL
- (OS) OCCUPANCY SENSOR, SEE ELECTRICAL
- (S) SPEAKER, SEE ELECTRICAL
- EXIT LUMINAIRE, SEE ELECTRICAL
- EXHAUST GRILLE, SEE MECHANICAL
- RETURN DIFFUSER, SEE MECHANICAL
- SUPPLY DIFFUSER, SEE MECHANICAL
- LINEAR DIFFUSER, SEE MECHANICAL
- SPRINKLER HEAD, SEE FIRE PROTECTION
- (S) SMOKE DETECTOR, SEE FIRE PROTECTION
- (H) HEAT DETECTOR, SEE FIRE PROTECTION
- FIRE ALARM NOTIFICATION HORN/STROBE, SEE FIRE PROTECTION
- AREA NOT IN CONTRACT

PLAN NORTH

A1 REFLECTED CEILING PLAN - AREA B (ADD ALT. NO.1)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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REGISTERED ARCHITECT MICHAEL W. LAMONTAGNE STATE OF NEW YORK 031950

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	S. M. ROGERS
DESIGNED BY:	S. M. ROGERS
CHECKED BY:	M. W. LAMONTAGNE, AIA

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REFLECTED CEILING PLAN -AREA B

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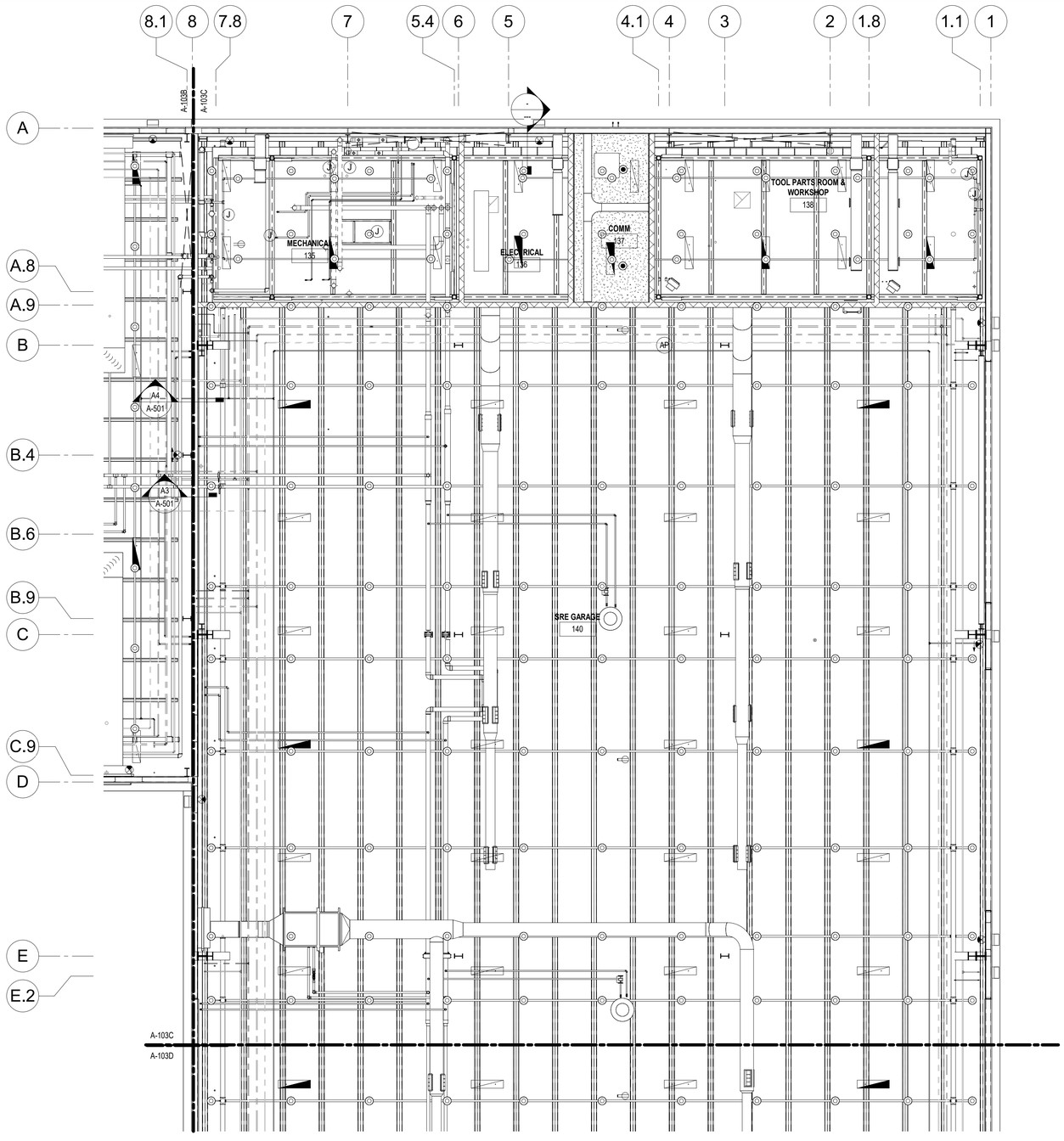

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- AREA NOT IN CONTRACT

PLAN NORTH

A1 REFLECTED CEILING PLAN - AREA C (BASE BID)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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REFLECTED CEILING PLAN - AREA C

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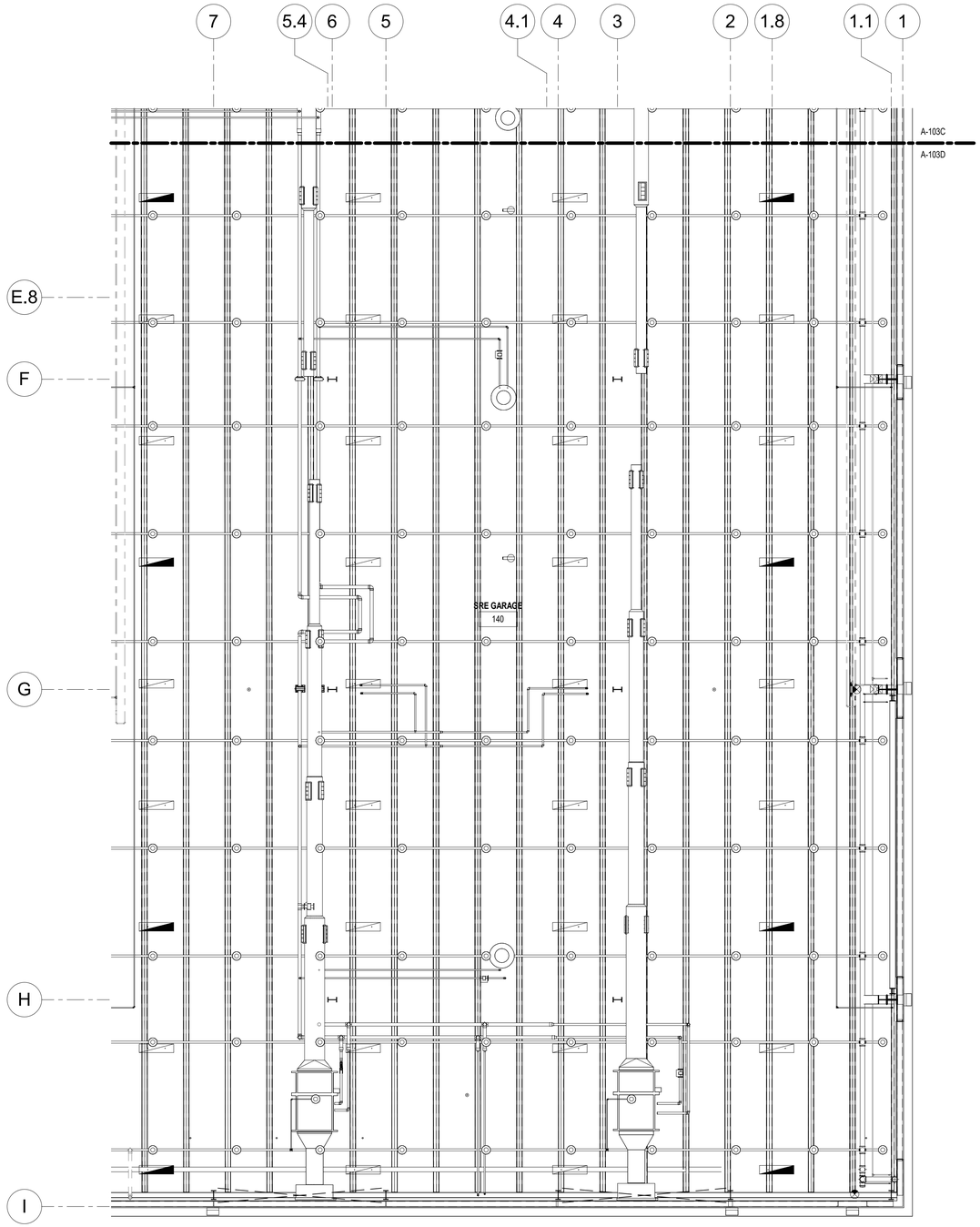

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- (H) HEAT DETECTOR, SEE FIRE PROTECTION
- FIRE ALARM NOTIFICATION HORN/STROBE, SEE FIRE PROTECTION
- AREA NOT IN CONTRACT

PLAN NORTH

A1 REFLECTED CEILING PLAN - AREA D (BASE BID)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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REFLECTED CEILING PLAN - AREA D

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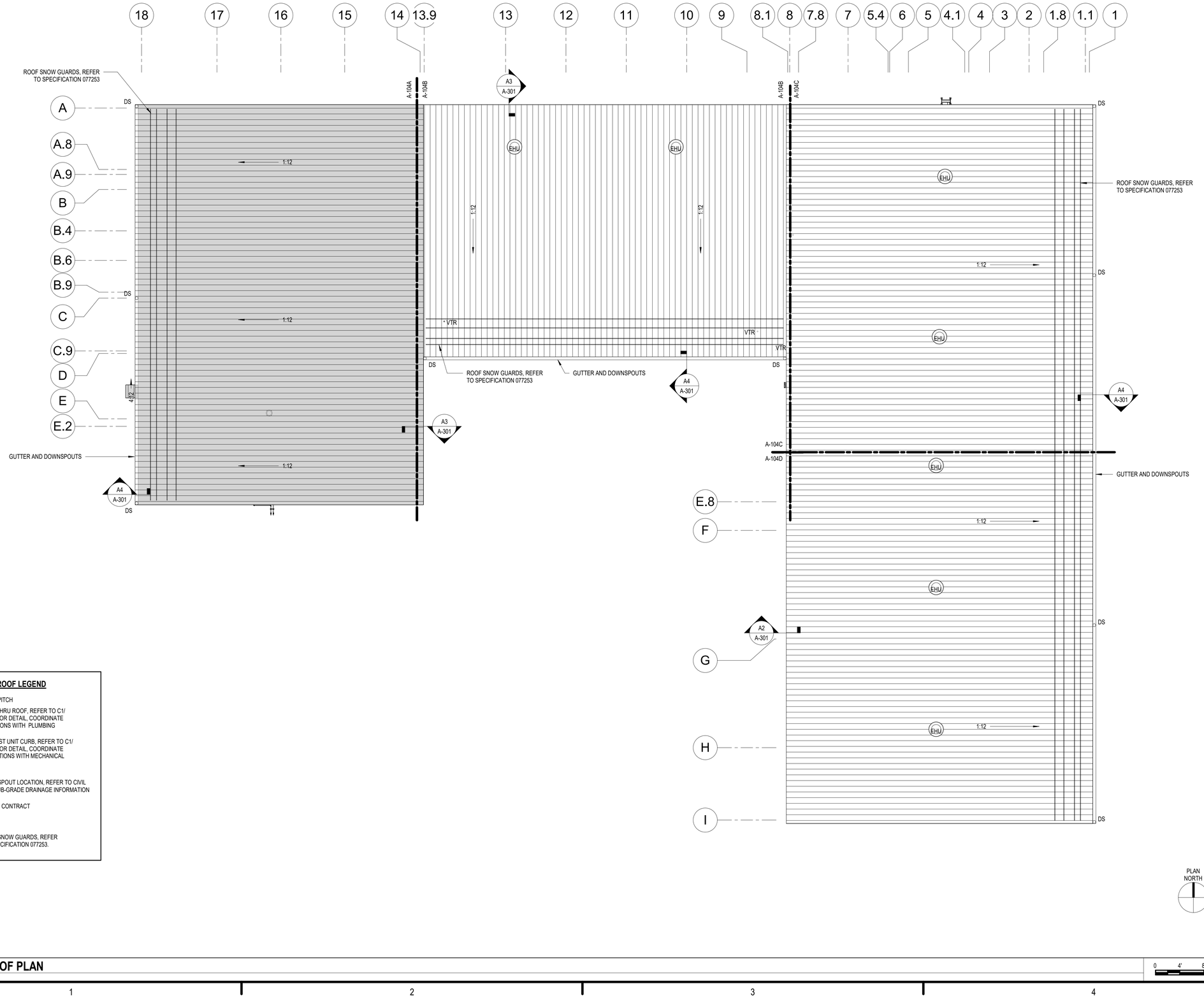

ROOF LEGEND

- ROOF PITCH
- VTR — VENT THRU ROOF, REFER TO C1/ A-001 FOR DETAIL, COORDINATE LOCATIONS WITH PLUMBING
- EHU — EXHAUST UNIT CURB, REFER TO C1/ A-001 FOR DETAIL, COORDINATE LOCARTIONS WITH MECHANICAL
- DS — DOWNSPOUT LOCATION, REFER TO CIVIL FOR SUB-GRADE DRAINAGE INFORMATION
- NOT IN CONTRACT
- ROOF SNOW GUARDS, REFER TO SPECIFICATION 077253.

PLAN NORTH

A1 OVERALL ROOF PLAN
SCALE: 1/16" = 1'-0"

0 4' 8' 16'

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OVERALL ROOF PLAN

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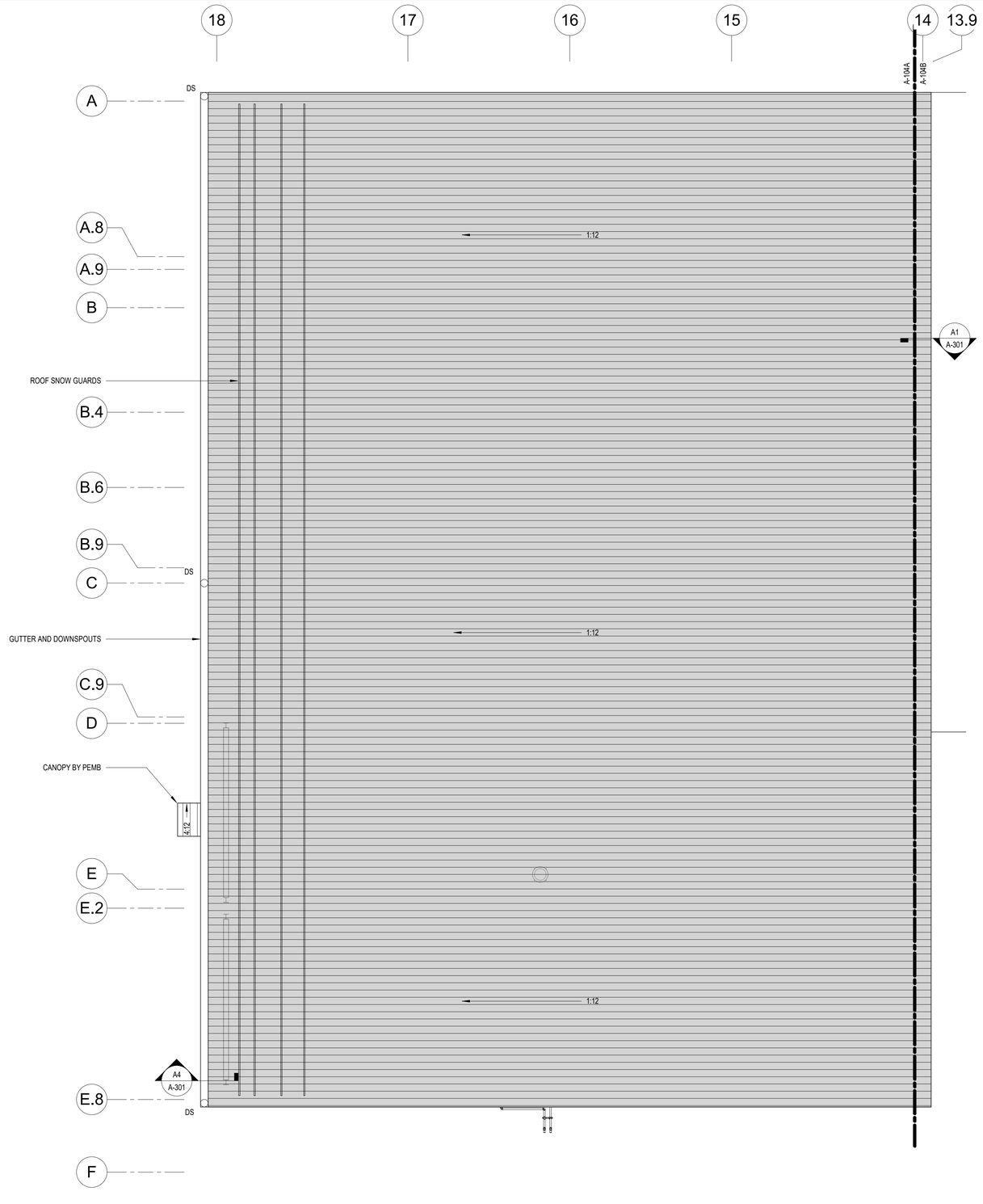

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PLAN NORTH

A1 ROOF PLAN - AREA A (NOT IN CONTRACT)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ROOF PLAN - AREA A

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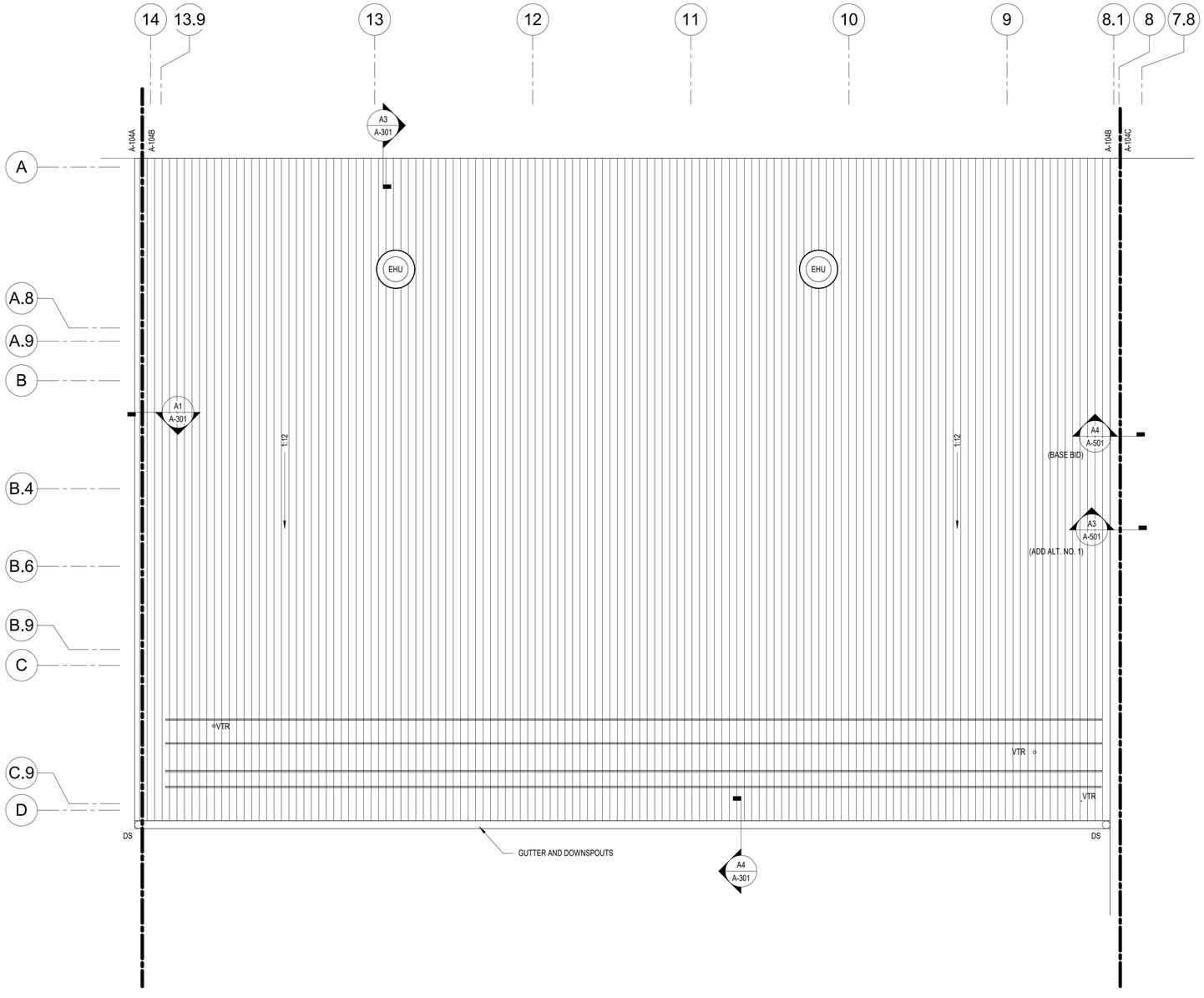

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PLAN NORTH

A1 ROOF PLAN - AREA B (ADD ALT. NO. 1)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ROOF PLAN - AREA B

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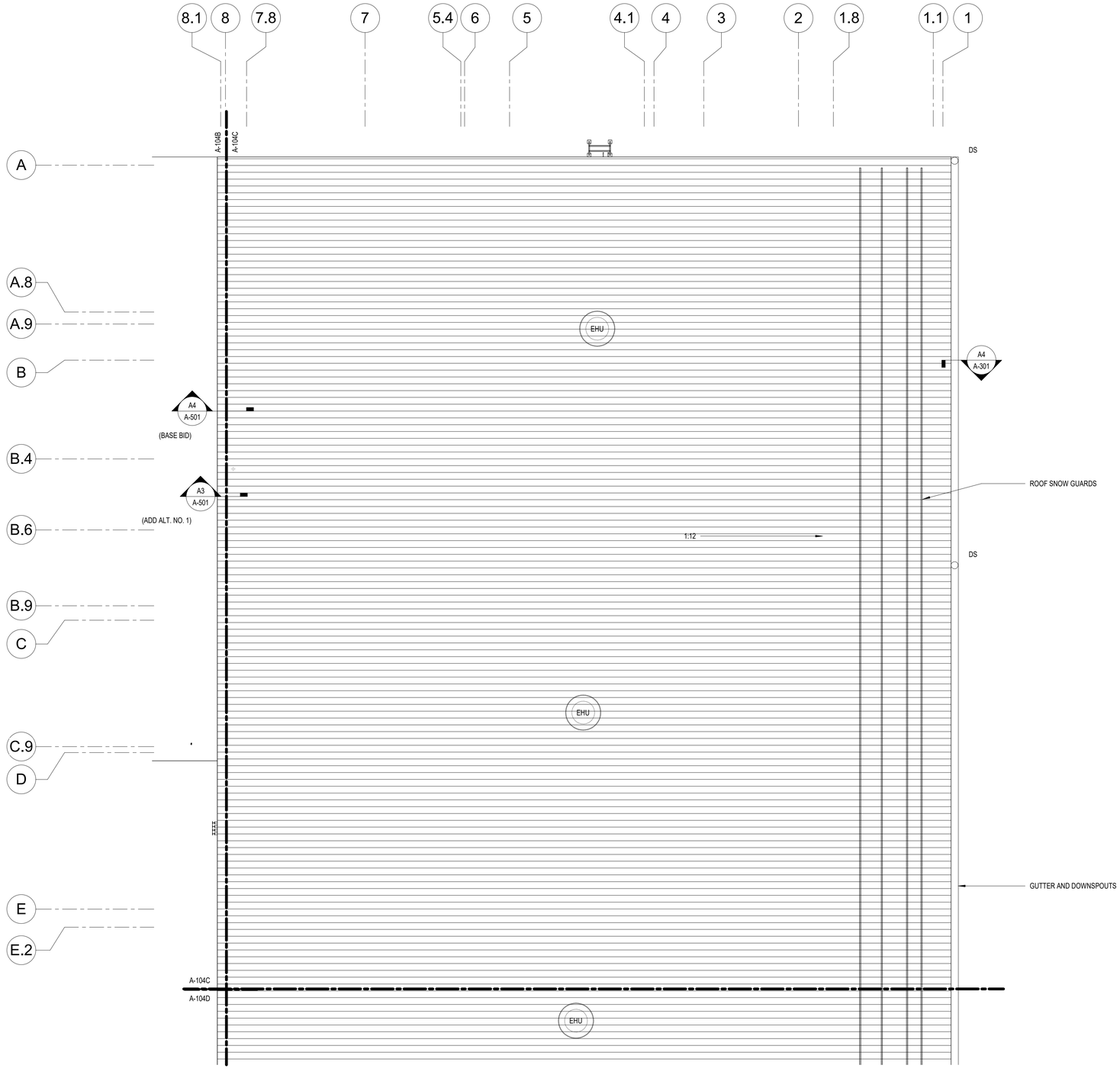

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A1 ROOF PLAN - AREA C (BASE BID)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ROOF PLAN - AREA C

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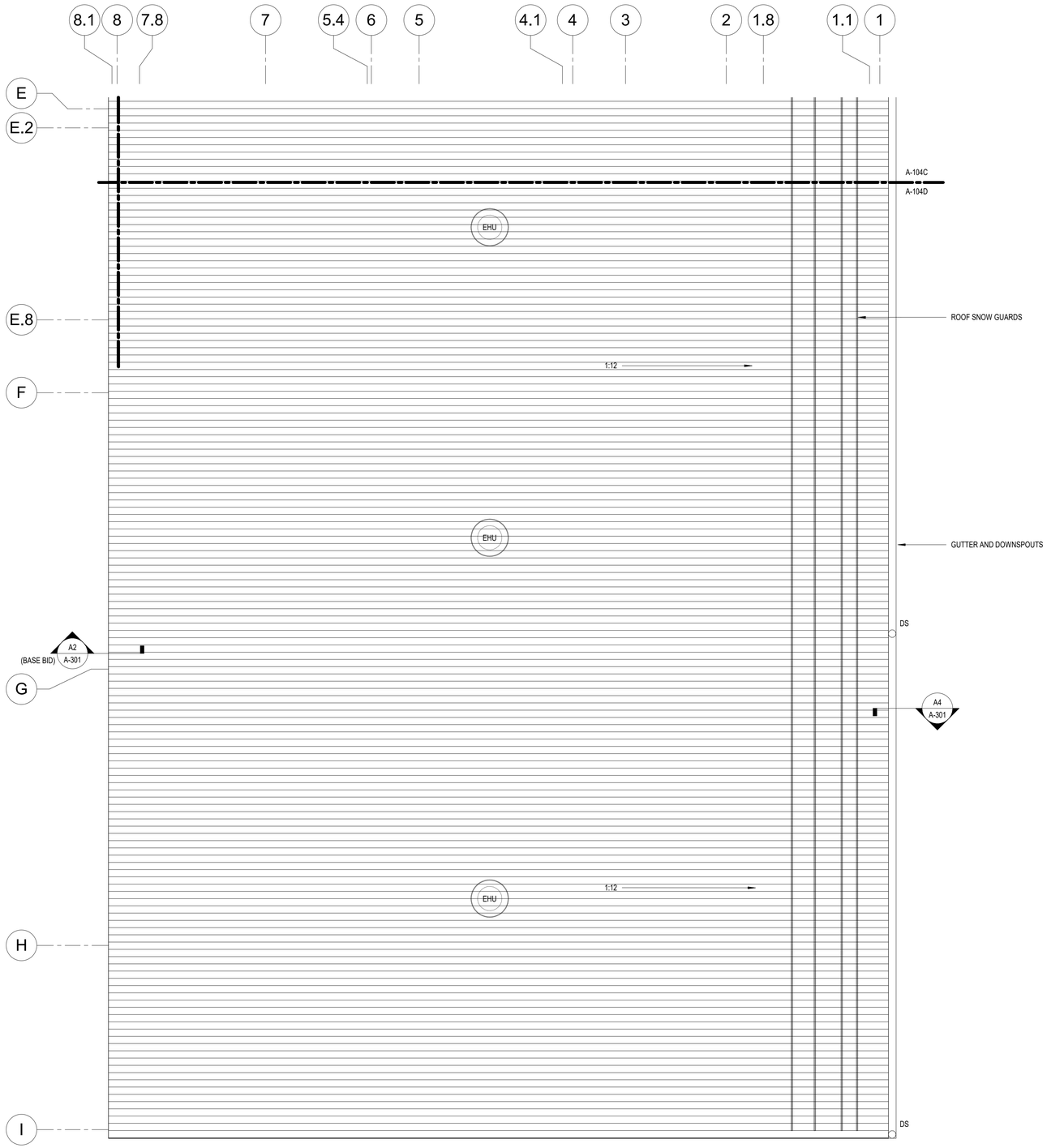

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PLAN NORTH

A1 ROOF PLAN - AREA D (BASE BID)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ROOF PLAN - AREA D

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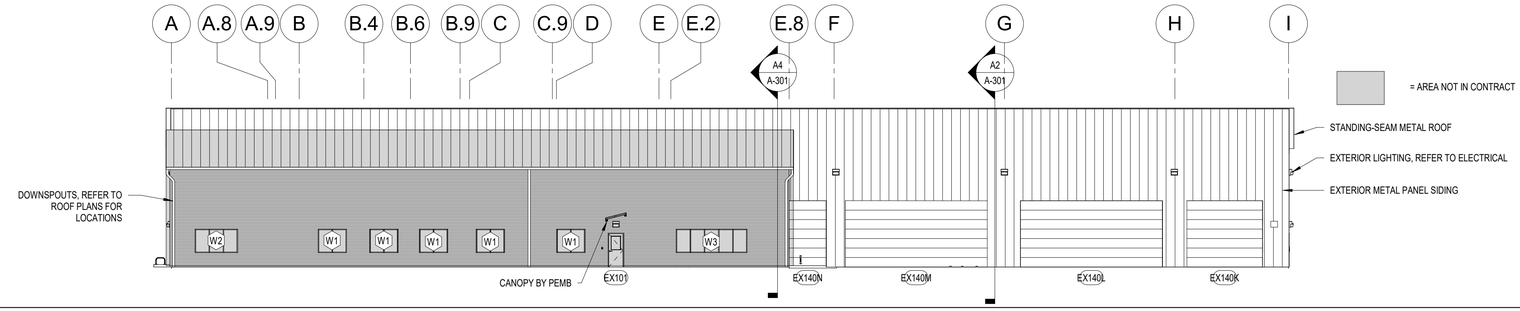
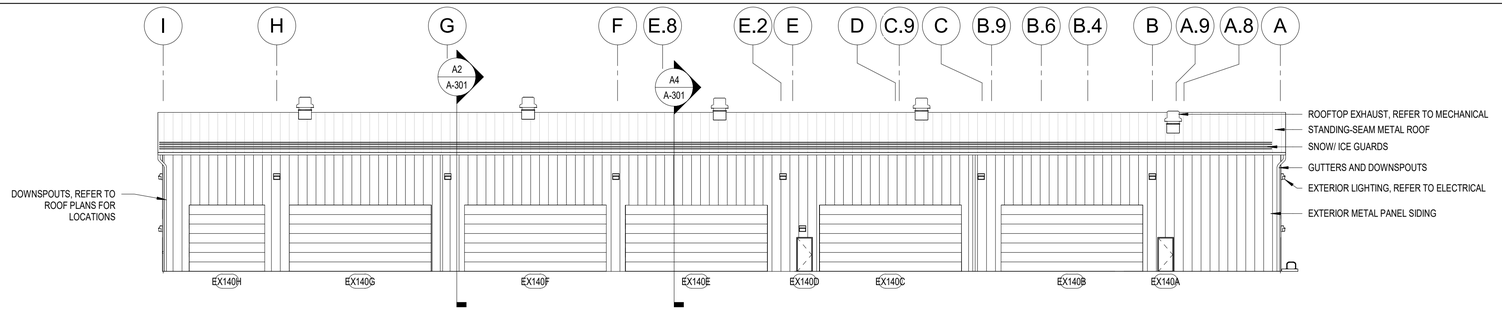


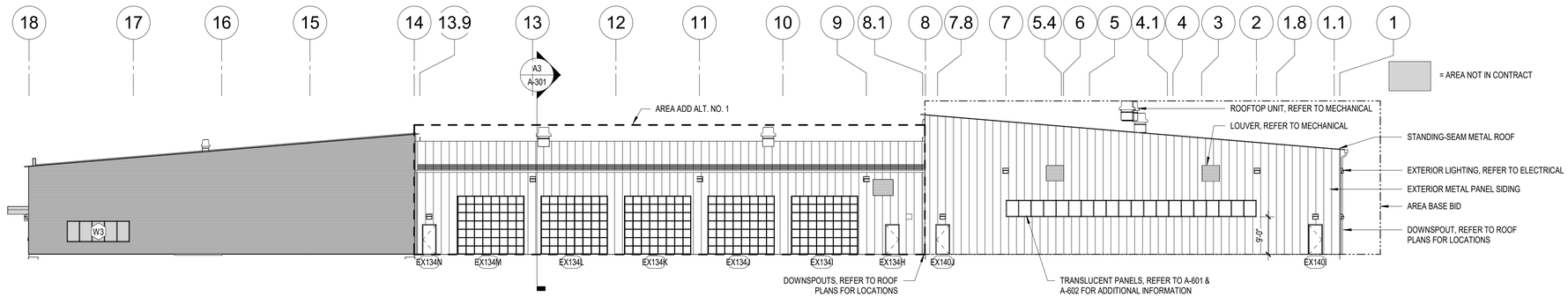
D1 WEST EXTERIOR ELEVATION

SCALE: 1/16" = 1'-0"



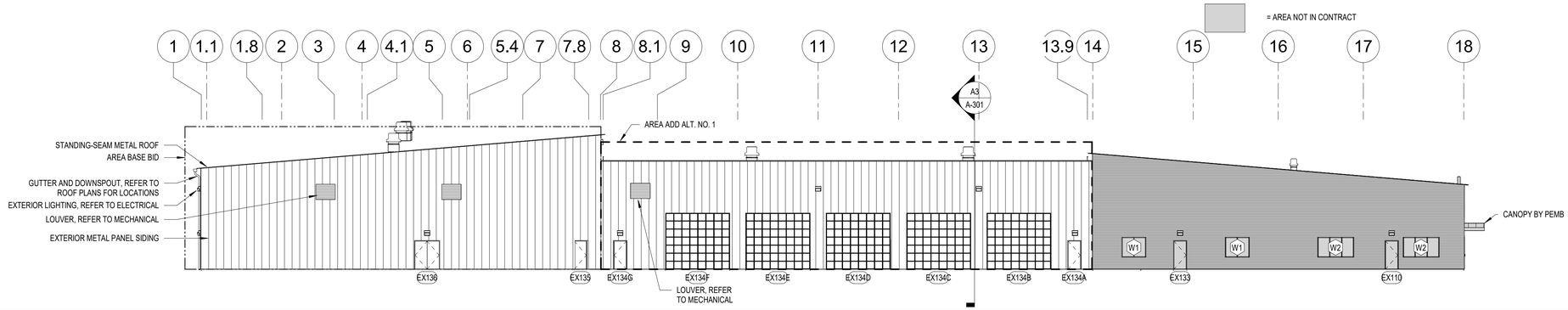
C1 EAST EXTERIOR ELEVATION (BASE BID)

SCALE: 1/16" = 1'-0"



B1 SOUTH EXTERIOR ELEVATION

SCALE: 1/16" = 1'-0"



A1 NORTH EXTERIOR ELEVATION

SCALE: 1/16" = 1'-0"

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EXTERIOR ELEVATIONS

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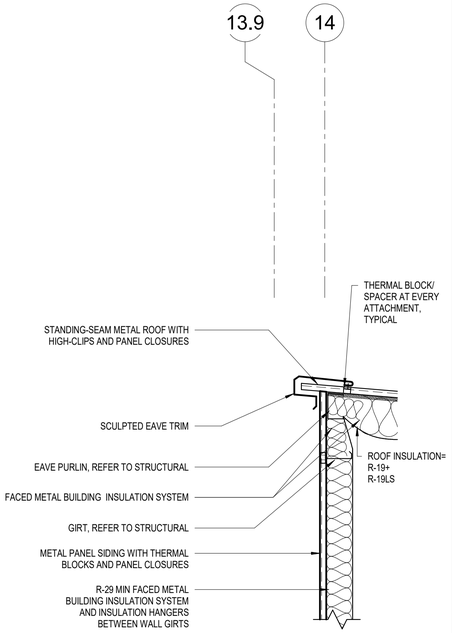
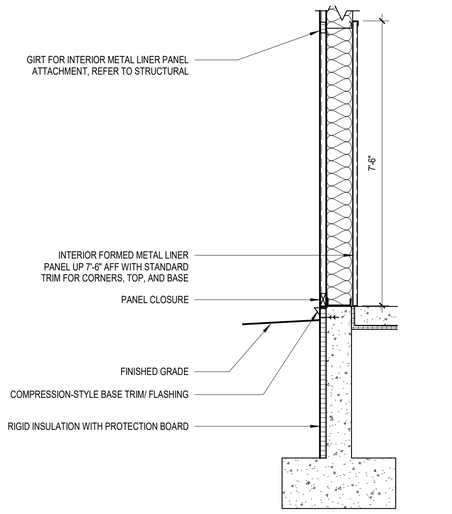
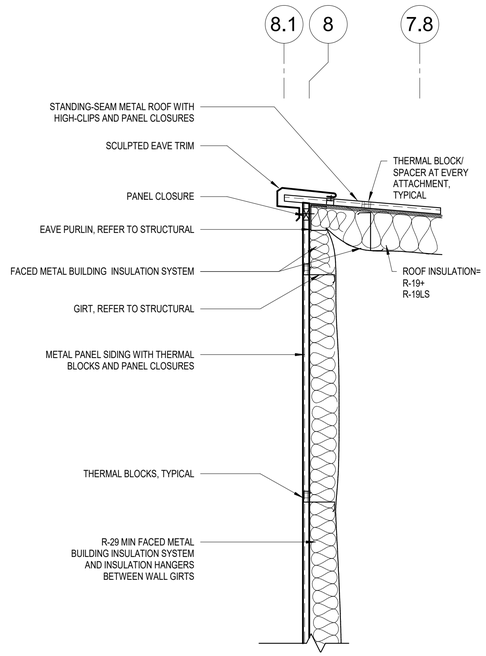
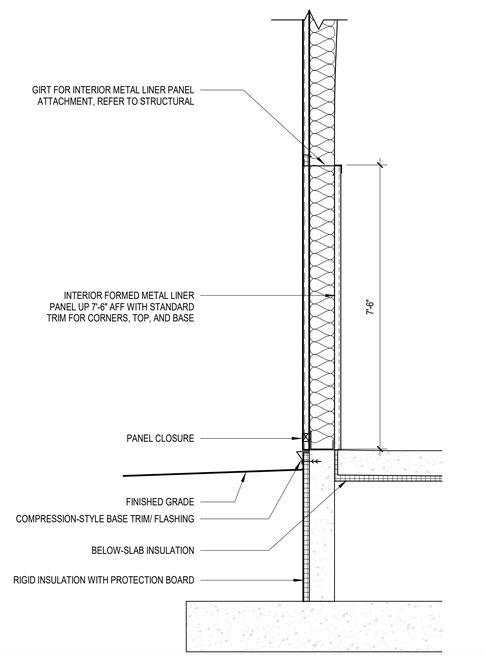


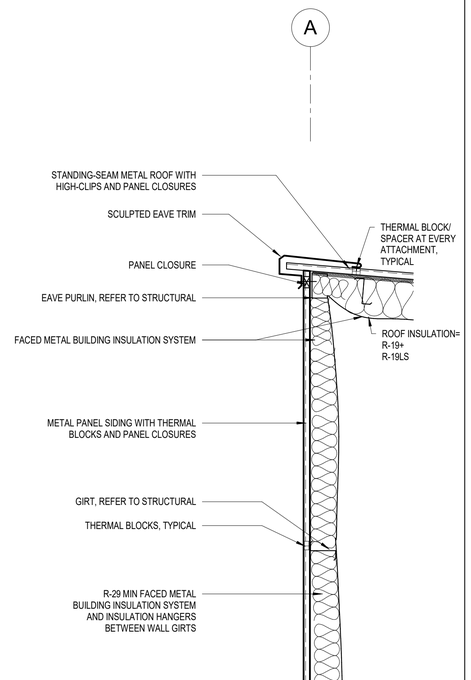


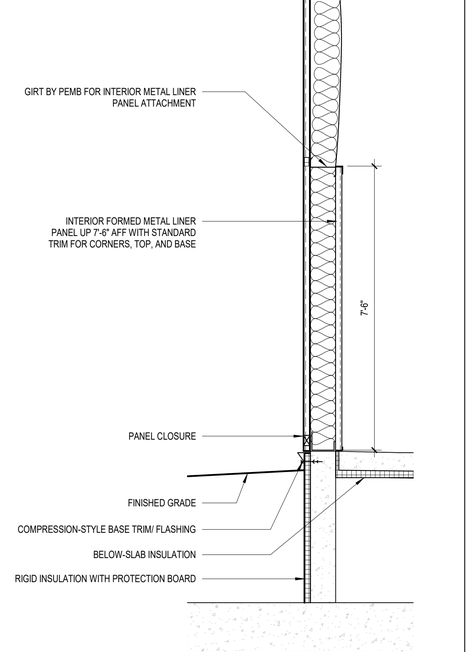
A1 WALL SECTION @ OFFICE & ARFF (ADD ALT. NO. 1)
SCALE: 1/2" = 1'-0"



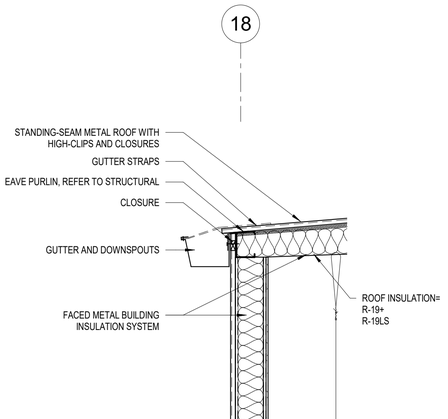


A2 TYPICAL WALL SECTION AT SRE AREA (BASE BID)
SCALE: 1/2" = 1'-0"





A3 TYPICAL WALL SECTION AT ARFF AREA (ADD ALT. NO. 1)
SCALE: 1/2" = 1'-0"



A4 TYPICAL WALL SECTION AT OFFICE (NOT IN CONTRACT)
SCALE: 1/2" = 1'-0"

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WALL SECTIONS

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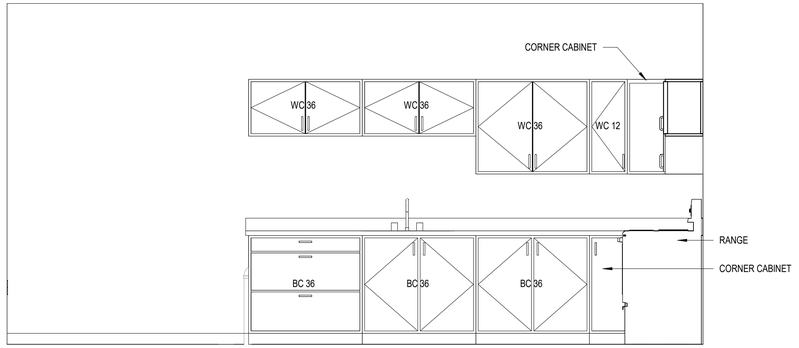
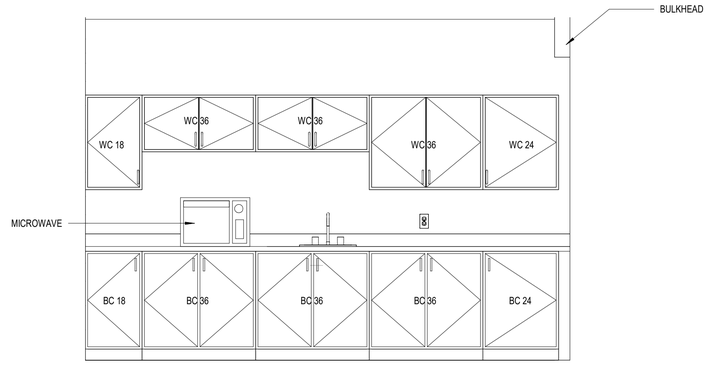
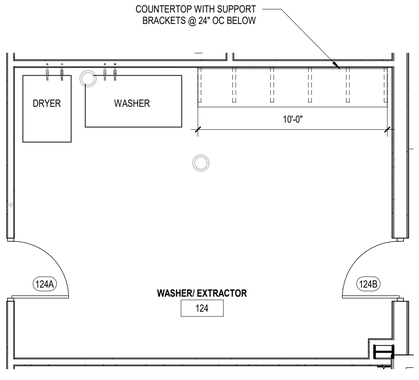


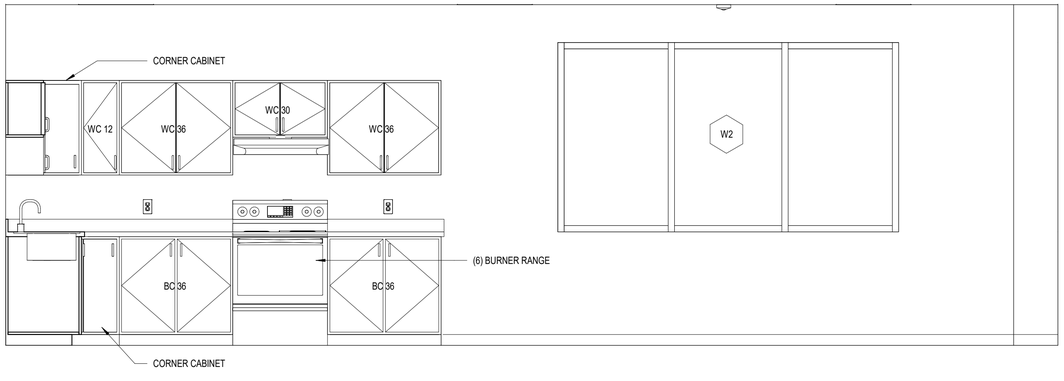
C3 SOUTH ELEVATION AT KITCHEN 110 (NOT IN CONTRACT)
SCALE: 1/2" = 1'-0"



B3 NORTH ELEVATION AT RECEPTION 103 (NOT IN CONTRACT)
SCALE: 1/2" = 1'-0"



A1 ENLARGED PLAN AT ROOM 124 (NOT IN CONTRACT)
SCALE: 1/4" = 1'-0"



A2 WEST ELEVATION AT KITCHEN 110 (NOT IN CONTRACT)
SCALE: 1/2" = 1'-0"

C&S COMPANIES®
C&S Architects, Engineers & Landscape Architect, LLC
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
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www.cscos.com

CERTIFICATE OF AUTHORIZATION# 0023741

REGISTERED ARCHITECT MICHAEL W LAMONTAGNE STATE OF NEW YORK 031950

REGISTRATION EXPIRES: 5/31/2028

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS
INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION
	REVISIONS	

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	S. M. ROGERS
DESIGNED BY:	S. M. ROGERS
CHECKED BY:	M. W. LAMONTAGNE, AIA

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CASEWORK PLANS AND ELEVATIONS

A-302

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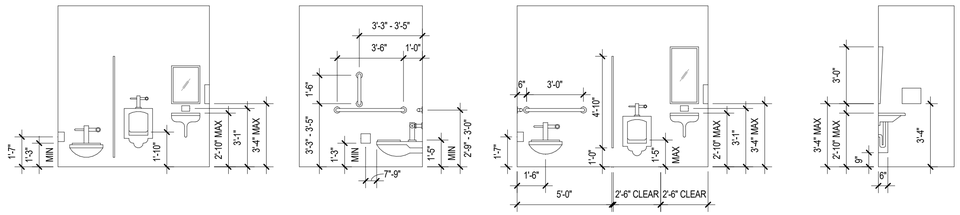


TYPICAL TOILET ROOM ELEVATION FOR STANDARD TOILET ROOMS

TYPICAL ADA TOILET ROOM

INSULATE ALL EXPOSED PIPING TO MEET ADA ACCESSIBILITY REQUIREMENTS

TYPICAL ADA TOILET ROOM ELEVATION

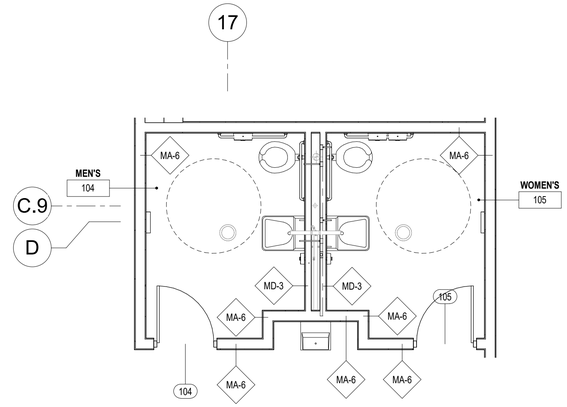
INSULATE ALL EXPOSED PIPING TO MEET ADA ACCESSIBILITY REQUIREMENTS

TYPICAL ADA TOILET ROOM ELEVATION

INSULATE ALL EXPOSED PIPING TO MEET ADA ACCESSIBILITY REQUIREMENTS

C1 TYPICAL PLUMBING FIXTURE MOUNTING HEIGHTS (NOT IN CONTRACT)

SCALE: NOT TO SCALE



C3 FIRST ENLARGED MEN'S AND WOMEN'S FLOOR PLAN (NOT IN CONTRACT)

SCALE: 1/4" = 1'-0"

WORKING HEIGHTS			
ITEM	COMMON FIXTURE	PHYSICALLY HANDICAPPED (ADA)	REMARKS
DRINKING FOUNTAIN (SPOUT)	42	36 MAX	
GRAB BAR (WALL MOUNTED)	33	33 - 36	
LAV AND SINK (TO RIM)	34	34 MAX	
LAV AND SINK (BOT OF APRON)	---	29 MIN	
LIGHT SWITCH (CL)	42	48 MAX	ADA REACH STANDARDS
HAND DRYER	40	48 MAX	
SOAP DISPENSER (CL & TOP)	37	48 MAX	ADA REACH STANDARDS
TOILET PAPER HOLDER (CL)	19 MIN	29 MIN	ADA REACH STANDARDS
URINAL (RIM)	22	17 MAX	
URINAL (CL OF FLUSH VALVE)	---	44 MAX	
WATER CLOSET (SEAT)	15	17 - 19	
WATER CLOSET (CL OF FLUSH VALVE)	---	44 MAX	18 (TYP)

NOTE:

1. HEIGHTS OF ITEMS NOT INDICATED ON THIS CHART SHALL BE AS DETAILED, SPECIFIED, OR AS DIRECTED BY THE PRODUCT MANUFACTURER'S INSTALLATION REQUIREMENTS.
2. ALL HEIGHTS ARE SHOWN IN INCHES ABOVE THE FINISHED FLOOR LINE.

B1 WORKING HEIGHTS OF FIXTURES, HARDWARE, & EQUIPMENT

SCALE: NOT TO SCALE

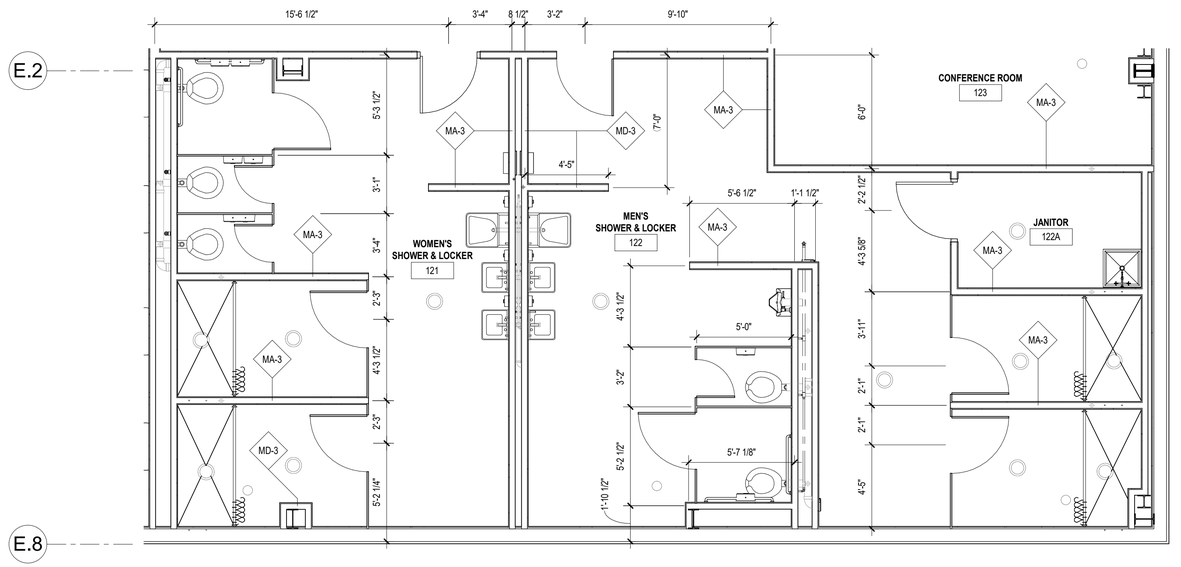
ACCESSORIES SCHEDULE		ROOM NUMBER			
⊖	ITEM	104	105	121	122
1	42" GRAB BAR	1	1	1	1
2	36" GRAB BAR	1	1	1	1
3	18" GRAB BAR	1	1	1	1
4	SURFACE MOUNTED BABY CHANGING STATION	1	1	0	0
5	PAPER TOWEL DISPENSER AND WASTE RECEPTACLE	1	1	1	1
6	SOAP DISPENSER	1	1	3	3
7	TOILET PAPER HOLDER	1	1	3	2
8	SANITARY NAPKIN WASTE RECEPTACLE	0	1	3	0
9	MIRROR (CONTINUOUS, 3' H X 1'-10" W)	1	1	4	4

BASIS-OF-DESIGN PRODUCTS:

1. RESTROOM PARTITIONS: DESIGNER SERIES BY BOBRICK OR APPROVED EQUAL.
2. BABY CHANGING STATION: MODEL KB300 BY KOALA OR APPROVED EQUAL.
3. ADA SHOWER SEAT: WHITE FOLDING PHENOLIC SEAT BY BOBRICK OR APPROVED EQUAL.
4. SHOWER UNITS: BARRIER-FREE ONE-PIECE SHOWER UNIT IN WHITE.
5. GRAB BARS: CONCEALED MOUNTING 1-1/4" DIAMETER BY BOBRICK OR APPROVED EQUAL.
6. MIRRORS: SERIES CHANNEL-FRAME MIRROR BY BOBRICK OR APPROVED EQUAL.
7. TOILET TISSUE DISPENSER: CLASSIC SERIES SURFACE-MOUNTED DISPENSER BY BOBRICK OR APPROVED EQUAL.
8. PAPER TOWEL DISPENSER AND TRASH RECEPTACLE: CLASSIC SERIES SEMI-RECESSED PAPER TOWEL/ ASTE RECEPTACLE WITH TOWELMATE ACCESSORY AND LINERMATE ACCESSORY BY BOBRICK OR APPROVED EQUAL.
9. SOAP DISPENSER: CLASSIC SERIES SURFACE-MOUNTED SOAP DISPENSER BY BOBRICK OR APPROVED EQUAL.
10. SANITARY NAPKIN WASTE RECEPTACLE: CLASSIC SERIES SURFACE-MOUNTED WASTE RECEPTACLE BY BOBRICK OR APPROVED EQUAL.

A1 ACCESSORY SCHEDULE (NOT IN CONTRACT)

SCALE: NOT TO SCALE



A2 ENLARGED RESTROOM AND LOCKER FLOOR PLAN (NOT IN CONTRACT)

SCALE: 1/4" = 1'-0"

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REGISTRATION EXPIRES: 5/31/2028

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REVISIONS		

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DESIGNED BY:	S. M. ROGERS
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ENLARGED FLOOR PLANS

A-401

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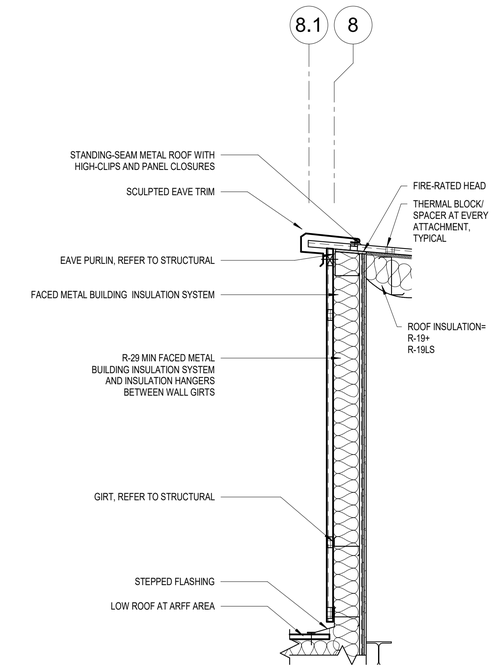
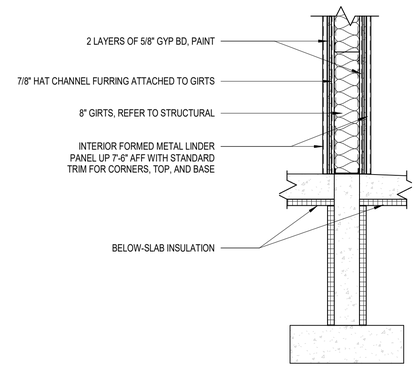
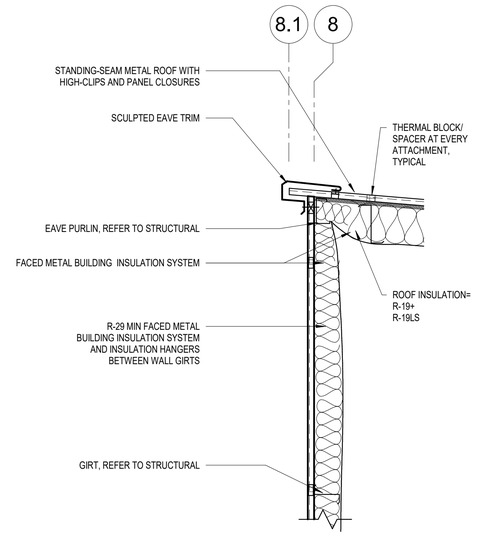
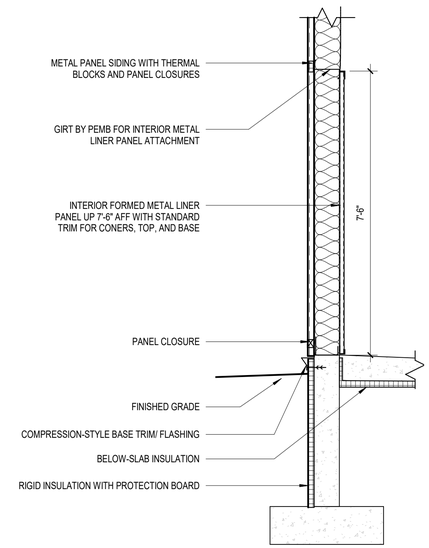




A3 WALL SECTION @ ARFF & SRE - ADD ALT. NO. 1
SCALE: 1/2" = 1'-0"





A4 WALL SECTION @ ARFF & SRE - BASE BID
SCALE: 1/2" = 1'-0"

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REGISTRATION EXPIRES: 5/31/2028

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NEW ARFF/SRE BUILDING
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72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	S. M. ROGERS
DESIGNED BY:	S. M. ROGERS
CHECKED BY:	M. W. LAMONTAGNE, AIA

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TYPICAL DETAILS

A-501

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A1 DOOR SCHEDULE

SCALE: NOT TO SCALE

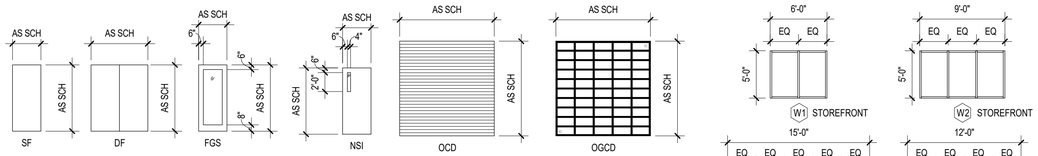
DOOR SCHEDULE

DOOR NO.	ROOM NO.	DOOR TYPE	DOOR WIDTH	DOOR HEIGHT	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	HARDWARE SET	FIRE RATING	NOTES
101	101	FGS	3'-0"	7'-0"	HM	PT	1	HM	PT	1		NOT IN CONTRACT
101A	102	NSI	3'-0"	7'-0"	HM	PT	1	HM	PT	2	-	NOT IN CONTRACT
101B	101A	NSI	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	NOT IN CONTRACT
102A	112	NSI	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	NOT IN CONTRACT
102B	112	NSI	3'-0"	7'-0"	HM	PT	1	HM	PT	2	-	NOT IN CONTRACT
104	104	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	4	-	NOT IN CONTRACT
105	105	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	4	-	NOT IN CONTRACT
106	106	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	NOT IN CONTRACT
107	107	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	NOT IN CONTRACT
108	108	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	NOT IN CONTRACT
109	109	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	NOT IN CONTRACT
111	111	NSI	3'-0"	7'-0"	HM	PT	1	HM	PT	5	-	NOT IN CONTRACT
112	112	NSI	3'-0"	7'-0"	HM	PT	1	HM	PT	2	2	NOT IN CONTRACT
113	113	NSI	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	NOT IN CONTRACT
114	114	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	4	-	NOT IN CONTRACT
115	115	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	4	-	NOT IN CONTRACT
116	116	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	4	-	NOT IN CONTRACT
117	117	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	4	-	NOT IN CONTRACT
118	118	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	4	-	NOT IN CONTRACT
119	119	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	4	-	NOT IN CONTRACT
120	120	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	4	-	NOT IN CONTRACT
121	121	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	5	-	NOT IN CONTRACT
123	123	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	5	-	NOT IN CONTRACT
124A	124	NSI	3'-0"	7'-0"	HM	PT	1	HM	PT	5	-	NOT IN CONTRACT
124B	134	NSI	3'-0"	7'-0"	HM	PT	1	HM	PT	5	2	NOT IN CONTRACT
125	125	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	NOT IN CONTRACT
126	126	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	5	-	NOT IN CONTRACT
127	134	DF	6'-0"	7'-0"	HM	PT	1	HM	PT	6	2	NOT IN CONTRACT
128	128	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	NOT IN CONTRACT
129	129	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	2	-	NOT IN CONTRACT
130	130	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	NOT IN CONTRACT
131	130	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	NOT IN CONTRACT
132	132	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	NOT IN CONTRACT
133	133	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	NOT IN CONTRACT
133A	133A	NSI	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	NOT IN CONTRACT
135	140	DF	6'-0"	7'-0"	HM	PT	1	HM	PT	2	1	BASE BID
136	140	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	2	-	BASE BID
137	140	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	6	-	BASE BID
138	140	DF	6'-0"	7'-0"	HM	PT	1	HM	PT	3	-	BASE BID
138B	140	DF	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	ADD ALT. NO. 1
139	140	DF	6'-0"	7'-0"	HM	PT	1	HM	PT	3	-	BASE BID
140	122A	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	3	-	NOT IN CONTRACT
EX101		FGS	3'-0"	7'-0"	HM	PT	1	HM	PT	1		NOT IN CONTRACT
EX110		NSI	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	NOT IN CONTRACT
EX133		NSI	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	NOT IN CONTRACT
EX134A	134	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	ADD ALT. NO. 1
EX134B		OGCD	16'-0"	14'-0"	STL	PT	1	STL	PT	-		ADD ALT. NO. 1
EX134C		OGCD	16'-0"	14'-0"	STL	PT	1	STL	PT	-		ADD ALT. NO. 1
EX134D		OGCD	16'-0"	14'-0"	STL	PT	1	STL	PT	-		ADD ALT. NO. 1
EX134E		OGCD	16'-0"	14'-0"	STL	PT	1	STL	PT	-		ADD ALT. NO. 1
EX134F		OGCD	16'-0"	14'-0"	STL	PT	1	STL	PT	-		ADD ALT. NO. 1
EX134G		SF	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	ADD ALT. NO. 1
EX134H	134	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	ADD ALT. NO. 1
EX134I	134	OGCD	16'-0"	14'-0"	STL	PT	1	STL	PT	-		ADD ALT. NO. 1
EX134J	134	OGCD	16'-0"	14'-0"	STL	PT	1	STL	PT	-		ADD ALT. NO. 1
EX134K	134	OGCD	16'-0"	14'-0"	STL	PT	1	STL	PT	-		ADD ALT. NO. 1
EX134L	134	OGCD	16'-0"	14'-0"	STL	PT	1	STL	PT	-		ADD ALT. NO. 1
EX134M	134	OGCD	16'-0"	14'-0"	STL	PT	1	STL	PT	-		ADD ALT. NO. 1
EX134N		SF	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	ADD ALT. NO. 1
EX135		SF	3'-0"	7'-0"	HM	PT	1	HM	PT	6	-	BASE BID
EX136		DF	6'-0"	7'-0"	HM	PT	1	HM	PT	1	-	BASE BID
EX140A		SF	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	BASE BID
EX140B		OCD	30'-0"	14'-0"	STL	PT	1	STL	PT	-		BASE BID
EX140C		OCD	30'-0"	14'-0"	STL	PT	1	STL	PT	-		BASE BID
EX140D		SF	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	BASE BID
EX140E		OCD	30'-0"	14'-0"	STL	PT	1	STL	PT	-		BASE BID
EX140F		OCD	30'-0"	14'-0"	STL	PT	1	STL	PT	-		BASE BID
EX140G		OCD	30'-0"	14'-0"	STL	PT	1	STL	PT	-		BASE BID
EX140H		OCD	16'-0"	14'-0"	STL	PT	1	STL	PT	-		BASE BID
EX140I		SF	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	BASE BID
EX140J	140	SF	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	BASE BID
EX140K	140	OCD	16'-0"	14'-0"	STL	PT	1	STL	PT	-		BASE BID
EX140L	140	OCD	30'-0"	14'-0"	STL	PT	1	STL	PT	-		BASE BID
EX140M	140	OCD	30'-0"	14'-0"	STL	PT	1	STL	PT	-		BASE BID
EX140N	140	OCD	30'-0"	14'-0"	STL	PT	1	STL	PT	-		BASE BID
EX140O		SF	3'-0"	7'-0"	HM	PT	1	HM	PT	1	-	BASE BID

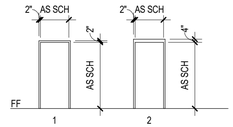
ABBREVIATIONS:

ALUM - ALUMINUM
DF - DOUBLE FLUSH
FGS - FULLY GLAZED (SINGLE)
HM - HOLLOW METAL
NSI - NARROW LITE (SINGLE) INSULATED GLASS
OCD - OVERHEAD COILING DOOR
PT - PAINT
SF - SINGLE FLUSH
STL - STEEL

NOTES:
1. REFER TO DOOR HARDWARE SPECIFICATION FOR ADDITIONAL DOOR HARDWARE INFORMATION.
2. ALL OVERHEAD DOORS TO BE INDUSTRIAL-GRADE STEEL OVERHEAD COILINGS DOORS WITH INDUSTRIAL-GRADE MOTORIZED LIFTS WITH EMERGENCY MANUAL CHAIN LIFTS.

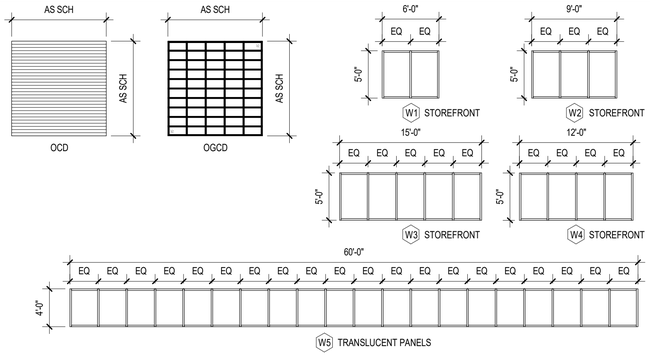


DOOR TYPES



FRAME TYPES

TYPES:
SF - SINGLE FLUSH
DF - DOUBLE FLUSH
FGS - FULL GLASS (SINGLE)
NSI - NARROW LIGHT (SINGLE) INSULATED GLAZING
NDI - NARROW LIGHT (DOUBLE) INSULATED GLAZING
OCD - OVERHEAD COILING DOOR



WINDOW TYPES

C2 DOORS, FRAMES, AND WINDOW TYPES

SCALE: NOT TO SCALE

A3 ROOM FINISH SCHEDULE

SCALE: NOT TO SCALE

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS (SUBSTRATE/FINISH) NORTH	WALLS SOUTH	WALLS EAST	WALLS WEST	CEILING SUBSTRATE/FINISH	CEILING HEIGHT	NOTES
101	VEST	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
101A	TRAINING ROOM	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
102	CORRIDOR	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
103	RECEPTION	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
104	MEN'S	LVT	RBR	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ FRP	ACT	9'-0"	NOT IN CONTRACT
105	WOMEN'S	LVT	RBR	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ FRP	ACT	9'-0"	NOT IN CONTRACT
106	ADMIN OFFICE	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
107	DIR OFFICE	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
108	MKT OFFICE	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
109	SECURITY	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
110	KITCHEN	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
111	DAYROOM	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
112	CORRIDOR	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
113	SMALL TRAINING ROOM	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
114	DORM	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
115	DORM	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
116	DORM	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
117	DORM	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
118	DORM	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
119	DORM	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
120	DORM	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
121	WOMEN'S SHOWER & LOCKER	LVT	RBR	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ PT	9'-0"	NOT IN CONTRACT
122	MEN'S SHOWER & LOCKER	LVT	RBR	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ PT	9'-0"	NOT IN CONTRACT
122A	JANITOR	LVT	RBR	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ FRP	GYP BD/ PT	9'-0"	NOT IN CONTRACT
123	CONFERENCE ROOM	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
124	WASHER/ EXTRACTOR	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
125	JAN	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
126	LAUNDRY	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
127	SCBA	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	9'-0"	NOT IN CONTRACT
128	STORAGE	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
129	TELECOM CLOSET	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	9'-0"	NOT IN CONTRACT
130	OPS	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
131	GUN VAULT	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	9'-0"	NOT IN CONTRACT
132	DEPUTY CHIEF	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
133	CHIEF OFFICE	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
133A	VESTIBULE	LVT	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	ACT	9'-0"	NOT IN CONTRACT
134	ARFF GARAGE	CONC	-	EXP	EXP	GYP BD/ PT	CMU/ PT	EXP	VARIES	LINER PANEL UP 7'-6" AT ALL WALLS. SEE DETAIL A3/ A-501, ADD ALT. NO. 1
135	MECHANICAL	CONC	-	CONC/ PT	CONC/ PT	CONC/ PT	CONC/ PT	EXP	VARIES	BASE BID
136	ELECTRICAL	CONC	-	CONC/ PT	CONC/ PT	CONC/ PT	CMU/ PT	EXP	VARIES	BASE BID
137	COMM	CONC	RBR	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	GYP BD/ PT	9'-0"	AT NORTH WALL: 7/8" HAT CHANNELS ATTACHED TO WALL GIRTS WITH 2 LAYERS OF 5/8" GYP BD, BASE BID
138	TOOL PARTS ROOM & WORKSHOP									BASE BID
139	SHOP STORAGE									BASE BID
140	SRE GARAGE	CONC	-	EXP	EXP	EXP	GYP BD/ PT	EXP	VARIES	LINER PANEL UP 7'-6" AT ALL WALLS. SEE DETAIL A3/ A-501, BASE BID

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CERTIFICATE OF AUTHORIZATION# 0023741

REGISTERED ARCHITECT MICHAEL W. LAMONTAGNE STATE OF NEW YORK 031950

REGISTRATION EXPIRES: 5/31/2028

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO: 158.095.001
DATE: MARCH 2026
DRAWN BY: S. M. ROGERS
DESIGNED BY: S. M. ROGERS
CHECKED BY: M. W. LAMONTAGNE, AIA

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DOOR TYPES, WINDOW TYPES, AND SCHEDULES

A-601

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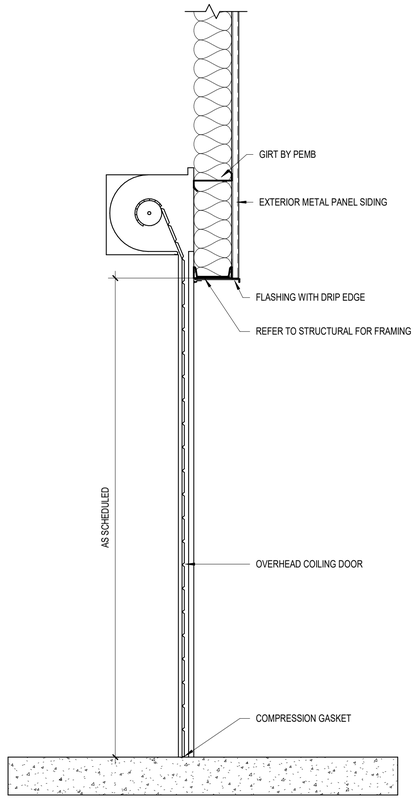
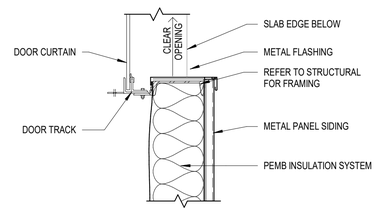
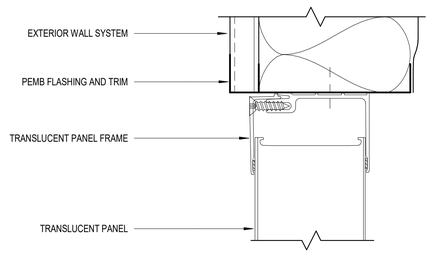
NOTE: REFER TO C2/ A-602 FOR OVERHEAD DOOR JAMB DETAIL.

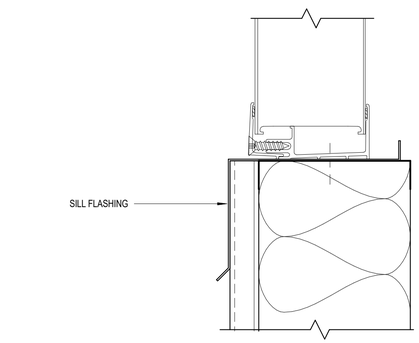


A1 TYPICAL OVERHEAD DOOR SECTION
SCALE: 3/4" = 1'-0"

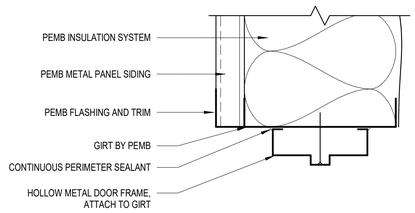


C2 TYPICAL OVERHEAD DOOR JAMB DETAIL
SCALE: 1" = 1'-0"

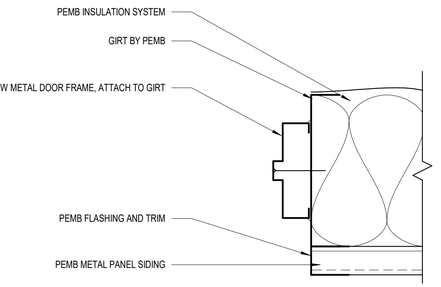




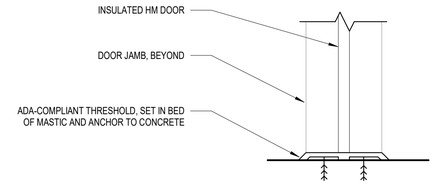
A2 TRANSLUCENT PANEL SECTION DETAIL
SCALE: 3" = 1'-0"



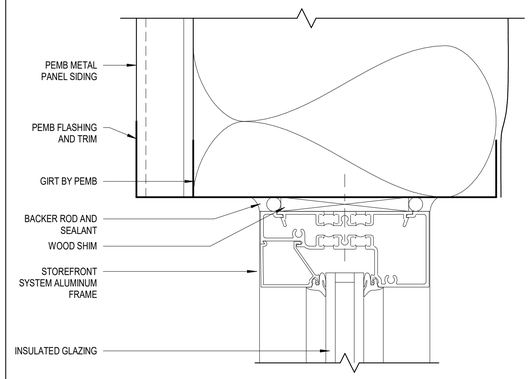
C3 TYPICAL MAN DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



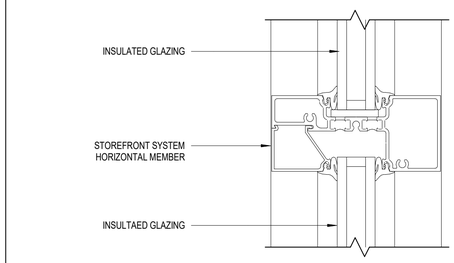
B3 TYPICAL MAN DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



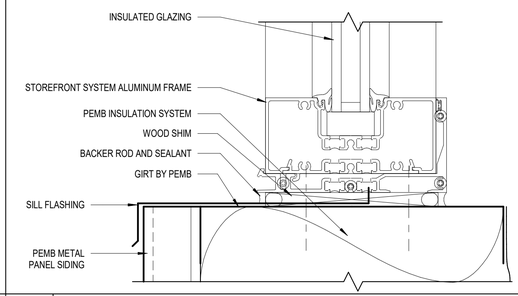
A3 TYPICAL MAN DOOR THRESHOLD DETAIL
SCALE: 3" = 1'-0"



C4 STOREFRONT HEAD DETAIL
SCALE: 6" = 1'-0"



B4 STOREFRONT HORIZONTAL DETAIL
SCALE: 6" = 1'-0"



A4 STOREFRONT SILL DETAIL
SCALE: 6" = 1'-0"

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CERTIFICATE OF AUTHORIZATION# 0023741

REGISTERED ARCHITECT MICHAEL W. LAMONTAGNE STATE OF NEW YORK 031950

REGISTRATION EXPIRES: 5/31/2028

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS
INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	S. M. ROGERS
DESIGNED BY:	S. M. ROGERS
CHECKED BY:	M. W. LAMONTAGNE, AIA

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TYPICAL DOOR AND WINDOW DETAILS

A-602

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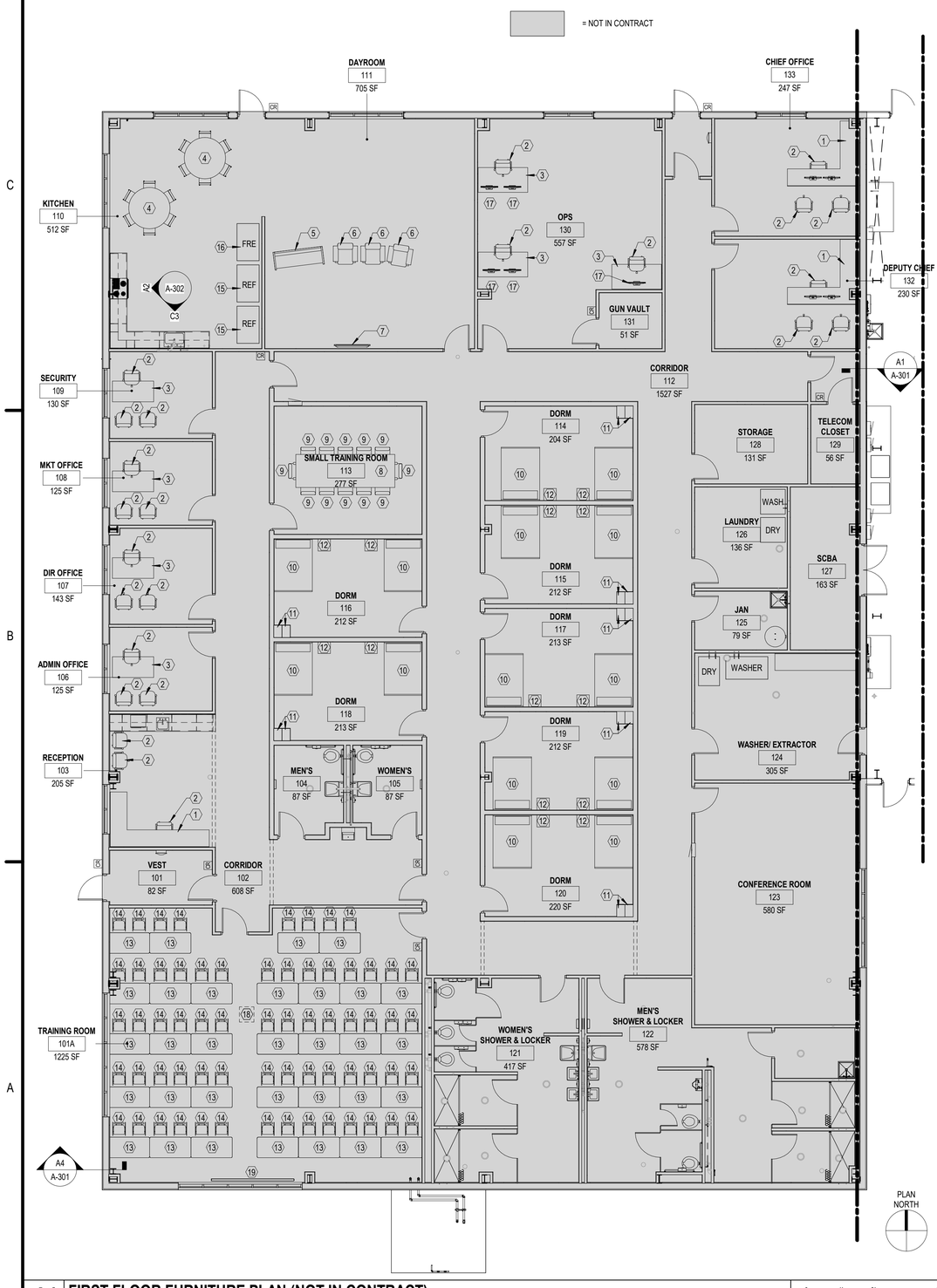

A1 FIRST FLOOR FURNITURE PLAN (NOT IN CONTRACT)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

FURNITURE

KEYNOTE #	ITEM	BASIS-OF-DESIGN PRODUCT
1	L-SHAPED WORK STATION	DOWNTOWN EXECUTIVE L-DESK, 66" X 78", (MODEL: H-11248), BY ULINE OR APPROVED EQUAL
2	CHAIR	DELUXE ALL-MESH CHAIR, (MODEL: H-9764), BY ULINE OR APPROVED EQUAL
3	DESK	DOWNTOWN EXECUTIVE OFFICE DESK, 66" X 30", (MODEL: H-11242), BY ULINE OR APPROVED EQUAL
4	KITCHEN TABLE & CHAIRS	60" ROUND ACTIVITY TABLE & CHAIRS, (MODEL: MG307), BY MARCO GROUP OR APPROVED EQUAL
5	COUCH	OFFICE WAITING ROOM COUCH, (STYLE: HAGEN), BY PERFORMANCE FURNISHINGS OR APPROVED EQUAL
6	LOUNGE CHAIR	CONTEMPORARY CLUB CHAIR, (STYLE: HAGEN), BY PERFORMANCE FURNISHINGS OR APPROVED EQUAL
7	TV W/ WALL MOUNT KIT	DIGITAL TV DISPLAY WITH SUPERSIGN CMS, (SIZE: 75"), BY LG OR APPROVED EQUAL
8	CONFERENCE TABLE	BOAT-SHAPED CONFERENCE TABLE, POTENZA SERIES, 138" X 42/48", 2-LEAF, (MODEL:CD-12048CT, CD-4848CTE), BY CORP DESIGN OR APPROVED EQUAL
9	CONFERENCE CHAIRS	ZETTI HIGH-BACK CHAIR, (STYLE: POTENZA SERIES, ZETTI HIGH-BACK CHAIR), BY CORP DESIGN OR APPROVED EQUAL
10	DORM BED	METAL BED FRAME (SIZE: FULL) WITH BOX SPRING AND PILLOWTOP MATTRESS, COMMERCIAL GRADE
11	DORM LOCKER	12" WIDE PREMIER WOOD LOCKER, SINGLE TIER, 1 WIDE - 6 FEET HIGH - 15" DEEP (MODEL: 41165RO-R), BY SALSBURY INDUSTRIES OR APPROVED EQUAL
12	NIGHT STAND	DOWNTOWN MOBILE 3-DRAWER PEDESTAL (MODEL: H-8953), BY ULINE OR APPROVED EQUAL
13	FOLDING TABLES	LAMINATE FOLDING TABLE, 60" X 30", (MODEL: H-2231), BY ULINE OR APPROVED EQUAL
14	STACKING CHAIRS	PLASTIC FOLDING CHAIR, DELUXE, (MODEL: H-3016), BY ULINE OR APPROVED EQUAL
15	COMMERCIAL FRIDGE	MOTAK MSD-1DR-BAL-12 24 3/4" ONE SECTION REACH IN FRIDGE, (MODEL: MSD-1 DR BAL-12-X), BY MOTAK OR APPROVED EQUAL
16	COMMERCIAL FREEZER	MOTAK MSD-1DR-BAL-19 29" ONE SECTION REACH IN FREEZER, (MODEL: MSD-1 DR BAL-19-X), BY MOTAK OR APPROVED EQUAL
17	OVERHEAD MONITOR	OVERHEAD COMPUTER MONITOR WITH OVERHEAD MONITOR MOUNT, 22" MONITORS
18	OVERHEAD PROJECTOR	POWERLITE L530U-3LCD PROJECTOR (MODEL: V11HA27020), BY EPSOM OR APPROVED EQUAL
19	PROJECTOR SCREEN	EVANESCE B SERIES 92" IN-CEILING ELECTRIC PROJECTION SCREEN (MODEL: ELT-EB92HW2-E12), BY ELITE SCREENS OR APPROVED EQUAL

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ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO: 158.095.001
DATE: MARCH 2026
DRAWN BY: S. M. ROGERS
DESIGNED BY: S. M. ROGERS
CHECKED BY: M. W. LAMONTAGNE, AIA

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FURNITURE PLAN

A-901

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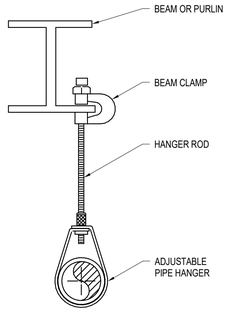
HANGER SPACING CHART	
PIPE SIZE	MAXIMUM HANGER SPACING
1 1/4" OR SMALLER	8'-0"
1 1/2" TO 3"	10'-0"
4" TO 5"	12'-0"
6" OR LARGER	15'-0"

ROD SIZE CHART	
PIPE SIZE	ROD SIZE
4" OR SMALLER	3/8"
5", 6" OR 8"	1/2"
10" & 12"	5/8"



C2 BEAM CLAMP PIPE HANGER DETAIL
SCALE: NOT TO SCALE

HYDRANT FLOW TEST CULLIGAN DRIVE JUNE 26, 2018
STATIC: 57 PSI RESIDUAL: 50 PSI FLOW: 883 GPM

C3 WATER SUPPLY INFORMATION
SCALE: NOT TO SCALE

PENDENT SPRINKLER

UPRIGHT SPRINKLER

DROP CONNECTION, RISE CONNECTION

CAP OR PLUG

DP — INDICATES DRY PENDENT SPRINKLER

AREA NOT IN CONTRACT (NIC)

C4 FIRE PROTECTION SYMBOL LIST
SCALE: NOT TO SCALE

B2 FIRE DEPARTMENT CONNECTION DETAIL
SCALE: NOT TO SCALE

SPRINKLER BRANCH PIPE SIZING TABLE FOR USE IN HYDRAULIC CALCULATIONS (UNLESS NOTED OTHERWISE)	
1"	FEEDS 1 SPRINKLER
1 1/4"	FEEDS 3 SPRINKLERS
1 1/2"	FEEDS 5 SPRINKLERS
2"	FEEDS 10 SPRINKLERS

B3 PIPE SIZE SCHEDULE
SCALE: NOT TO SCALE

SCOPE OF WORK:

THE SCOPE OF WORK SHALL INCLUDE THE FOLLOWING:

1. THE LAYOUT, INSTALLATION, AND TESTING OF NEW FIRE PROTECTION, AUTOMATIC WET-PIPE SPRINKLER SYSTEMS THROUGHOUT THE RENOVATION AREA.
2. SUBMISSION OF DOCUMENTATION AS REQUIRED.

APPLICABLE CODES:

1. 2025 BUILDING CODE OF NEW YORK STATE
2. 2025 FIRE CODE OF NEW YORK STATE
3. NFPA 13 - 2022, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS

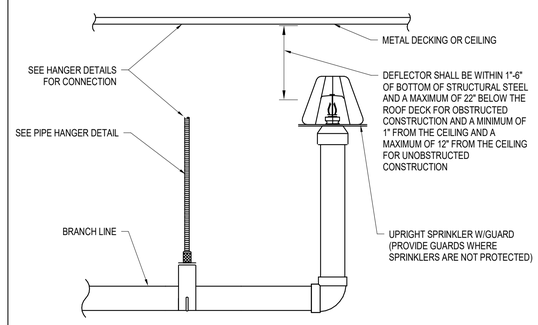
DESIGN CRITERIA:

1. THE DESIGN DOCUMENTS PROVIDED HEREIN IDENTIFY THE MINIMUM SYSTEM REQUIREMENTS, IN ACCORDANCE WITH THE ABOVE REFERENCED CODES AND REGULATIONS.
2. PROVIDE A COMPLETE AUTOMATIC WET-PIPE SPRINKLER SYSTEM FOR AREAS INDICATED. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH NFPA 13. REFER TO DIVISION 21 SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
   - A. CORRIDORS, OFFICES, LOUNGES, AND SIMILAR SPACES: LIGHT HAZARD, QUICK RESPONSE SPRINKLERS, 0.10 GPM/SQ.FT. OVER 1,500 SQ.FT., 100 GPM HOSE STREAM.
   - B. STORAGE, MECHANICAL/ELECTRICAL, AND SIMILAR SPACES: ORDINARY HAZARD GROUP I, QUICK RESPONSE SPRINKLERS, 0.15 GPM/SQ.FT. OVER 1,500 SQ.FT., 250 GPM HOSE STREAM.
   - C. ARFF GARAGE AND SRE GARAGE: ORDINARY HAZARD GROUP 2, QUICK RESPONSE SPRINKLERS, 0.20 GPM/SQ.FT. OVER 1,500 SQ.FT., 250 GPM HOSE STREAM.
3. PERFORM AND DOCUMENT WATER FLOW TEST IN ACCORDANCE WITH NFPA 291. SEE CIVIL DRAWINGS FOR LOCATION OF WATER MAIN AND INFORMATION ON PUBLIC WATER SUPPLY CHARACTERISTICS.
4. PIPING SHOWN IS DIAGRAMMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR FINAL SPRINKLER SYSTEM PIPE LAYOUT AND SIZING HYDRAULIC CALCULATIONS, AND COORDINATION WITH OTHER TRADES.
5. PROVIDE MINIMUM 10 PSI HYDRAULIC SAFETY FACTOR.
6. CONTRACTOR SHALL SUBMIT FOR REVIEW TO THE ENGINEER OF RECORD (THROUGH THE APPROPRIATE PARTIES) COMPLETE SHOP DRAWINGS OF THE FIRE SPRINKLER SYSTEMS, MATERIAL DATA, AND CALCULATIONS AT THE SAME TIME. INCOMPLETE SUBMITTALS WILL BE RETURNED WITHOUT REVIEW. SHOP DRAWINGS SHALL INCLUDE, AT MINIMUM, WORKING PLANS WITH HYDRAULIC CALCULATIONS, AND COORDINATION WITH OTHER TRADES.

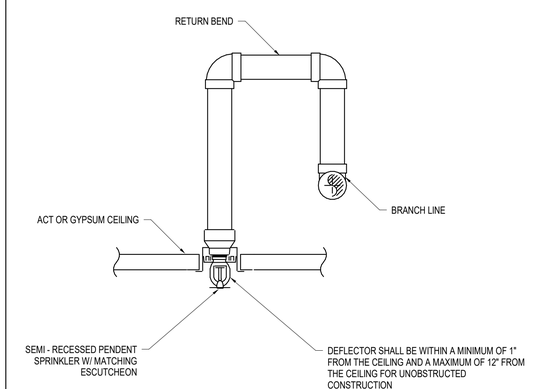
GENERAL NOTES:

1. ALL SPRINKLER AND SYSTEM COMPONENTS SHALL COMPLY WITH THE LISTING AND/OR PERFORMANCE REQUIREMENTS OF NFPA 13.
2. INSTALLATION PERSONNEL SHALL BE SUPERVISED BY PERSONS WHO ARE QUALIFIED AND EXPERIENCED IN THE INSTALLATION, INSPECTION, AND TESTING OF FIRE SPRINKLER SYSTEMS.
3. COORDINATE SPRINKLERS WITH ALL OTHER TRADES TO AVOID CONFLICTS. (SUCH AS LIGHTS, CEILING FANS, HVAC DUCTS AND GRILLS, ETC.) IN CEILINGS WITH ACT, CENTER SPRINKLERS IN TILES.
4. ALL PIPING SHALL BE BLACK STEEL.
5. PIPING SHALL BE INSTALLED CONCEALED ABOVE FINISHED CEILINGS UNLESS NOTED OTHERWISE.
6. PIPING SHALL BE INSTALLED EXPOSED IN UNFINISHED CEILING AREAS UNLESS NOTED OTHERWISE. LOCATE PIPING TIGHT TO STRUCTURE AND ABOVE OTHER SYSTEMS WHERE POSSIBLE. ALL EXPOSED PIPING IN FINISHED ROOM AREAS ARE SUBJECT TO OWNER'S REPRESENTATIVE'S REVIEW.
7. SPRINKLER VALVE TAMPER SWITCHES AND WATER FLOW SWITCHES SHALL BE PROVIDED BY FIRE SUPPRESSION CONTRACTOR. FIRE ALARM CONTRACTOR SHALL PROVIDE, INSTALL, WIRE, AND PROGRAM MONITOR MODULES.
8. ALL PENETRATIONS THROUGH FIRE/SMOKE RATED ASSEMBLIES SHALL BE FIRE STOPPED. FIRE STOPPING SHALL BE OF U.L. LISTED ASSEMBLY.

C4 FIRE PROTECTION GENERAL NOTES
SCALE: NOT TO SCALE



A2 UPRIGHT SPRINKLER DETAIL
SCALE: NOT TO SCALE



A3 SEMI RECESSED PENDENT SPRINKLER DETAIL
SCALE: NOT TO SCALE

A4
SCALE: NOT TO SCALE

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NEW ARFF/SRE BUILDING
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ITHACA, NY 14850

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO: 158.095.001
DATE: MARCH 2026
DRAWN BY: S.P. ZAFERAKIS
DESIGNED BY:S.P. ZAFERAKIS
CHECKED BY: B.R. DONNER

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DETAILS, NOTES, AND SYMBOLS

FP-001

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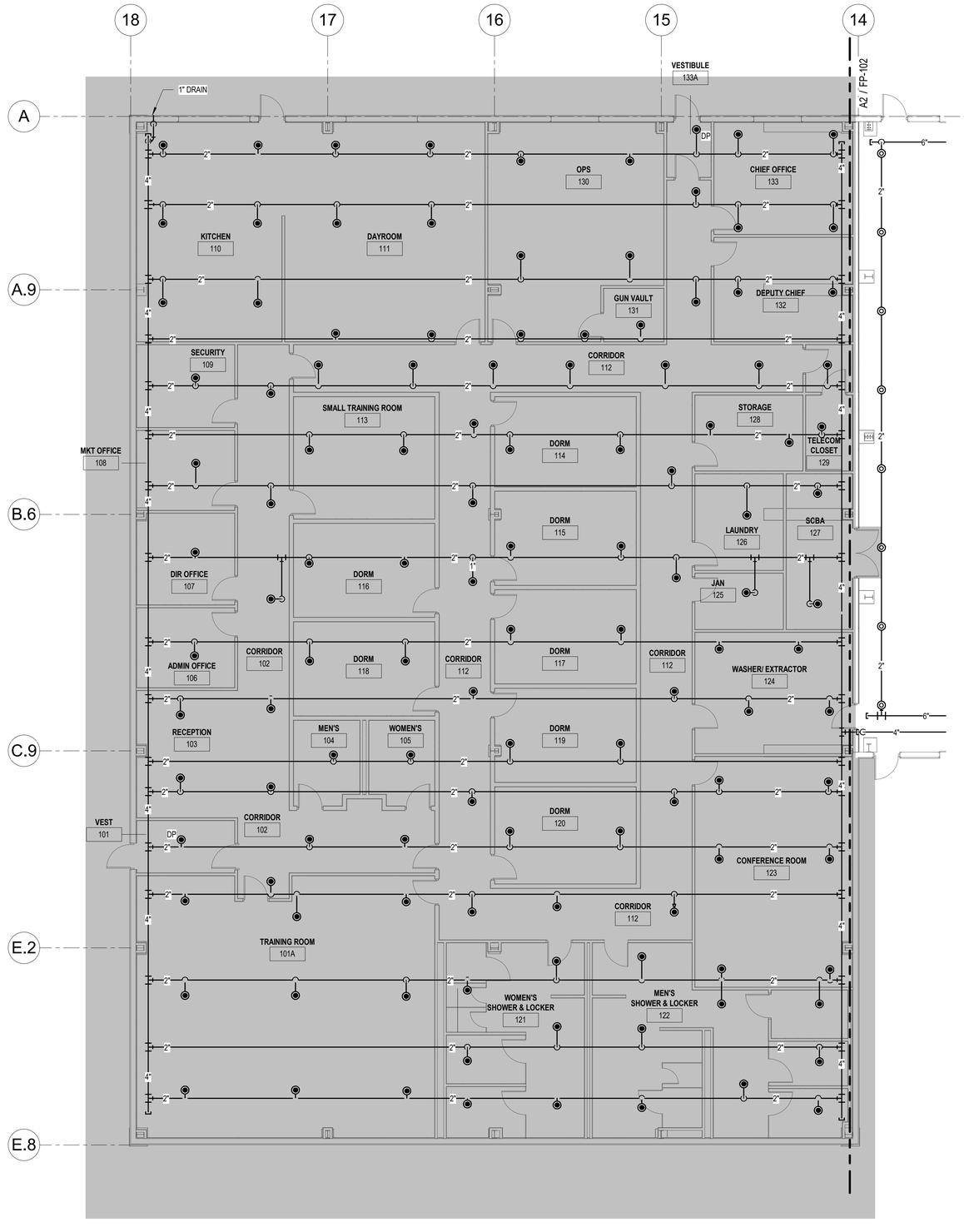

A2 FIRST FLOOR SPRINKLER - AREA A (NOT IN CONTRACT)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ITHACA, NY 14850

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	S.P. ZAFERAKIS
DESIGNED BY:	S.P. ZAFERAKIS
CHECKED BY:	B.R. DONNER

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SPRINKLER PLAN - AREA A (NOT IN CONTRACT)

FP-101

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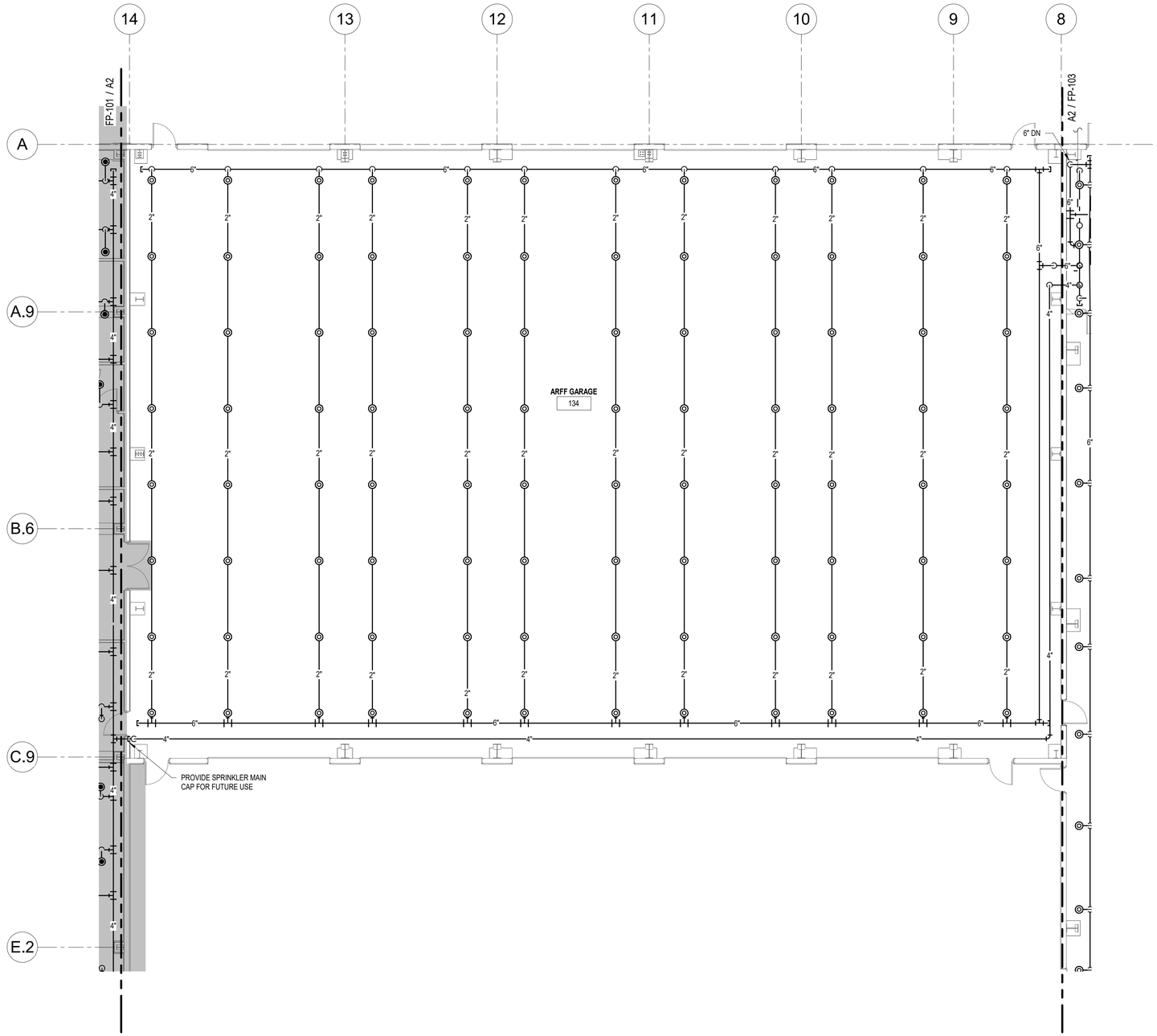

A2 FIRST FLOOR SPRINKLER - AREA B
SCALE: 1/8" = 1'-0"

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SPRINKLER PLAN - AREA B (ADD ALT. NO.1)

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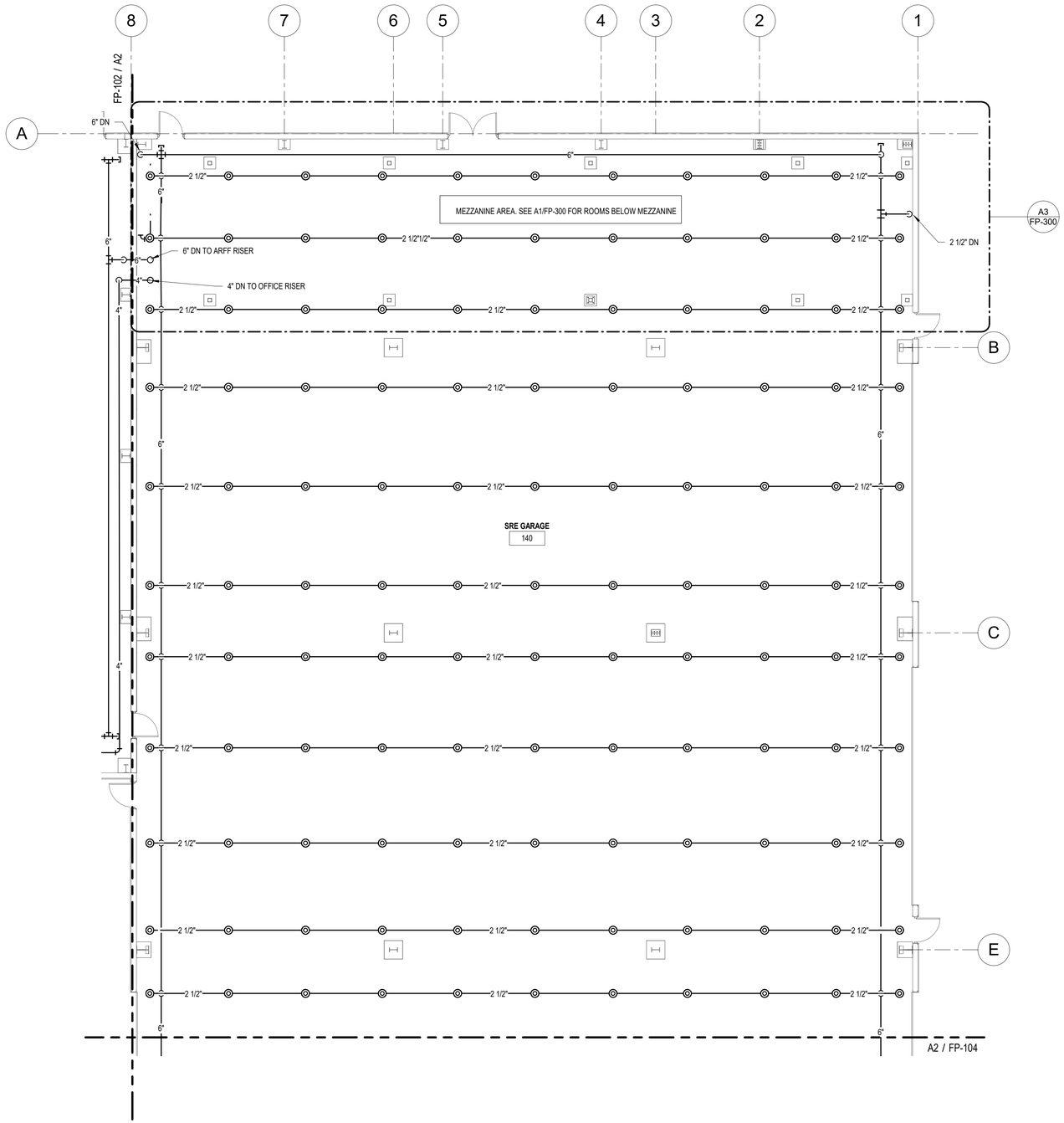

PLAN NORTH

A2 FIRST FLOOR SPRINKLER - AREA C
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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SPRINKLER PLAN - AREA C

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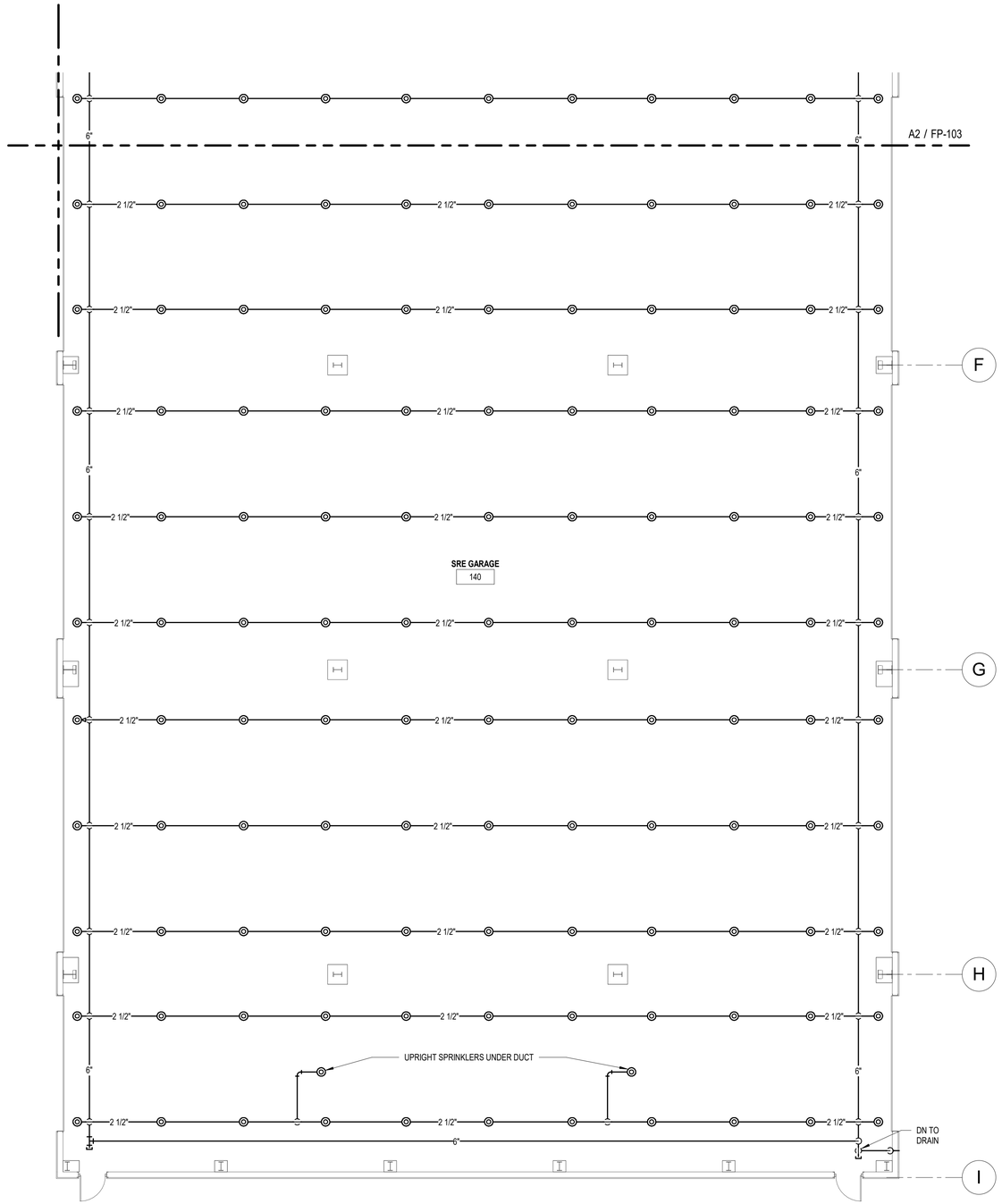

PLAN NORTH

A2 FIRST FLOOR SPRINKLER - AREA D
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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SPRINKLER PLAN - AREA D

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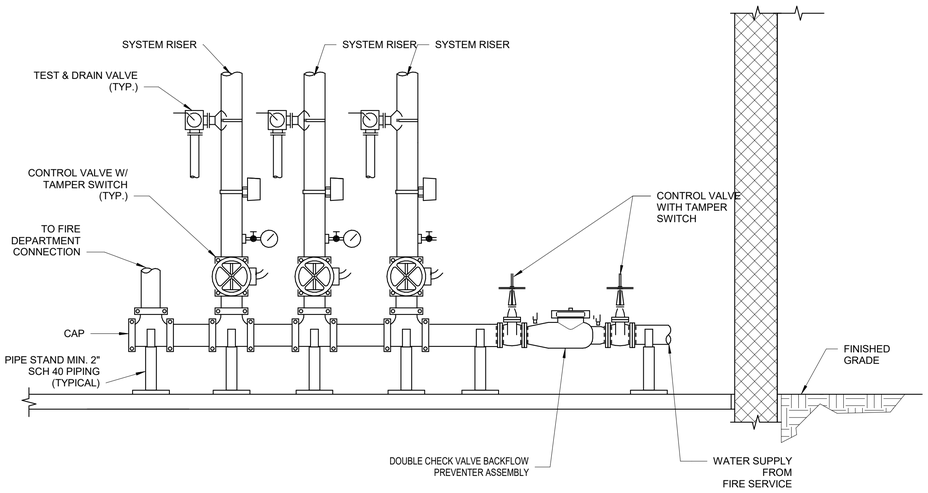
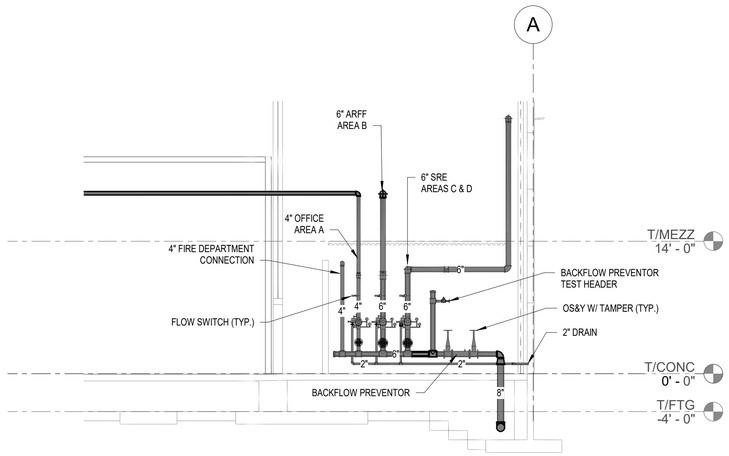


GENERAL NOTES:

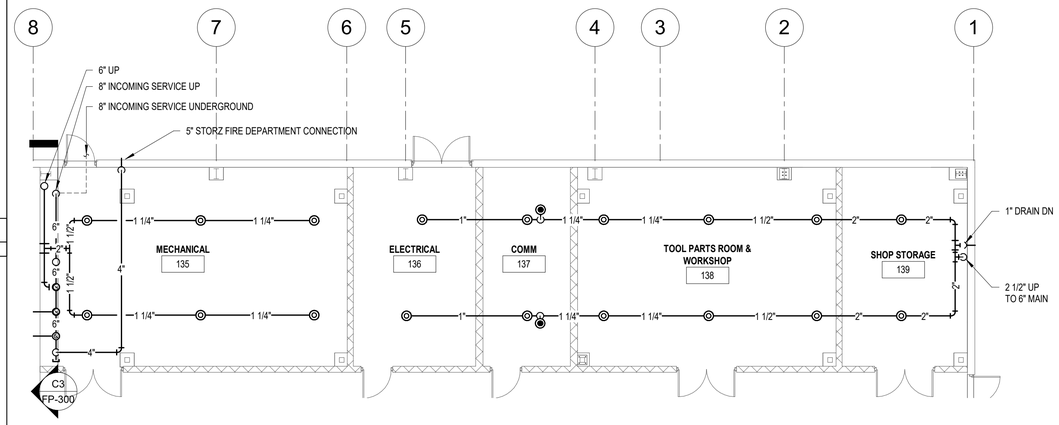
A. ALL POWER SUPPLIES, WIRING, AND CONNECTIONS FOR TAMPER SWITCHES, FLOW SWITCHES AND ELECTRIC ALARM BELLS TO FIRE ALARM SYSTEM SHALL BE BY ELECTRICAL CONTRACTOR.

B DETAIL IS FOR INFORMATIONAL PURPOSES ONLY. REFER TO FLOOR PLANS AND DETAILS FOR ADDITIONAL INFORMATION

B1 TYPICAL RISER DETAIL
SCALE: NOT TO SCALE



C3 RISER DETAIL
SCALE: 1/8" = 1'-0"



PLAN NORTH

A3 FIRST FLOOR SPRINKLER - AREA C ROOMS
SCALE: 1/8" = 1'-0"

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ENLARGED FLOOR PLANS

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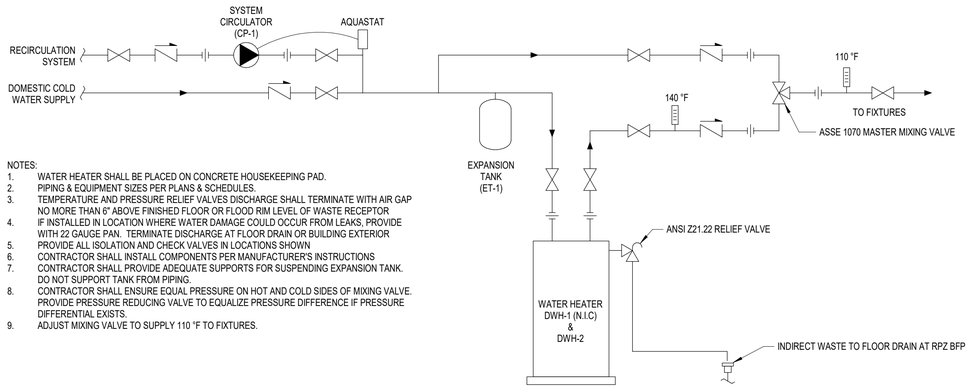


NOTES:
1. WATER HEATER SHALL BE PLACED ON CONCRETE HOUSEKEEPING PAD.
2. PIPING & EQUIPMENT SIZES PER PLANS & SCHEDULES.
3. TEMPERATURE AND PRESSURE RELIEF VALVES DISCHARGE SHALL TERMINATE WITH AIR GAP NO MORE THAN 6" ABOVE FINISHED FLOOR OR FLOOD RIM LEVEL OF WASTE RECEPTOR
4. IF INSTALLED IN LOCATION WHERE WATER DAMAGE COULD OCCUR FROM LEAKS, PROVIDE WITH 22 GAUGE PAN. TERMINATE DISCHARGE AT FLOOR DRAIN OR BUILDING EXTERIOR
5. PROVIDE ALL ISOLATION AND CHECK VALVES IN LOCATIONS SHOWN
6. CONTRACTOR SHALL INSTALL COMPONENTS PER MANUFACTURER'S INSTRUCTIONS
7. CONTRACTOR SHALL PROVIDE ADEQUATE SUPPORTS FOR SUSPENDING EXPANSION TANK. DO NOT SUPPORT TANK FROM PIPING.
8. CONTRACTOR SHALL ENSURE EQUAL PRESSURE ON HOT AND COLD SIDES OF MIXING VALVE. PROVIDE PRESSURE REDUCING VALVE TO EQUALIZE PRESSURE DIFFERENCE IF PRESSURE DIFFERENTIAL EXISTS.
9. ADJUST MIXING VALVE TO SUPPLY 110 °F TO FIXTURES.

C1 TANK-STYLE WATER HEATER INSTALLATION
SCALE: NOT TO SCALE

AFF	ABOVE FINISHED FLOOR	LAV	LAVATORY
BFF	BELOW FINISHED FLOOR	RPZ	REDUCED PRESSURE ZONE BACKFLOW
CLG	CEILING	SF	SQUARE FEET
DF	DRINKING FOUNTAIN	SH	SHOWER
DN	DOWN	SK	SINK
DPCO	DECK PLATE CLEANOUT	TYP	TYPICAL
DWH	DOMESTIC WATER HEATER	UR	URINAL
FD	FLOOR DRAIN	WC	WATERCLOSET
HB	HOSE BIBB	WPCO	WALL CLEAN OUT
INV	INVERT (ELEVATION)	VTR	VENT THRU ROOF
SA	SHOCK ABSORBER	OVTR	OIL VENT THRU ROOF
N.I.C	NOT IN CONTRACT	WH	WALL HYDRANT
TMV	THERMOSTATIC MIXING VALVE	ESEW	EMERGENCY SHOWER/EYEWASH

NOT ALL ABBREVIATIONS MAY BE UTILIZED IN DRAWINGS. CONTRACTOR SHALL REFER TO EQUIPMENT & FIXTURE SCHEDULES FOR SPECIFIC TAGS

C3 ABBREVIATIONS
SCALE: NOT TO SCALE

APPLICABLE CODES & STANDARDS

A. ALL WORK OF THIS CONTRACT SHALL COMPLY WITH THE FOLLOWING CODES & STANDARDS. WHERE CONFLICTING DIRECTION AND/OR INFORMATION EXISTS, CONTRACTOR SHALL FOLLOW THE MOST STRINGENT
   1. 2025 NEW YORK STATE PLUMBING CODE, 8TH EDITION
   2. 2025 ENERGY CONSERVATION CODE OF NEW YORK STATE
   3. AMERICAN SOCIETY OF PLUMBING ENGINEERS STANDARD PRACTICES

GENERAL PLUMBING NOTES

A. ALL PIPE DIMENSIONS SHOWN ARE NOMINAL

B. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS AND PIPE LOCATIONS PRIOR TO START OF THIS WORK. CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD WITH ANY DISCREPANCIES FOUND IN THE FIELD

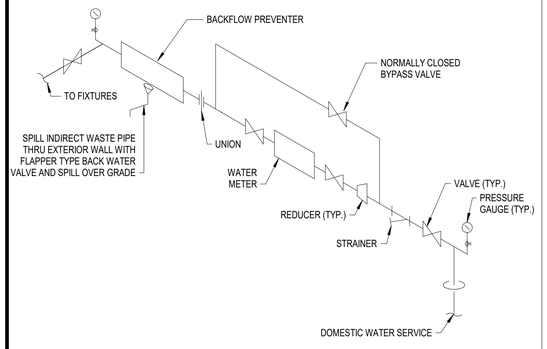
C. CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING REQUIRED TO INCORPORATE THE SCOPE HEREIN, UNLESS NOTED OR SHOWN OTHERWISE

D. ALL ITEMS WHETHER SCHEDULED OR NOT, SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS IN CONJUNCTION WITH INDUSTRY STANDARD PRACTICES, CONSISTENT WITH THE CODES REFERENCED ABOVE

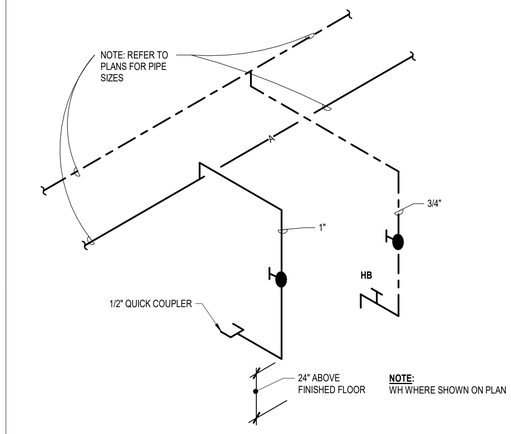
E. CONTRACTOR SHALL PROVIDE AND INSTALL ALL SUPPORTS, HANGERS, BRACES, STRUTS, ETC WHETHER SHOWN OR NOT TO PROVIDE A COMPLETE, SAFE, AND DURABLE SYSTEM

F. PIPE ROUTING & SPECIALTIES ARE DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO SHOW EVERY RISE, DROP, TRANSITION, OR FITTING. THESE DRAWINGS ARE PROVIDED TO CONVEY DESIGN INTENT AND THE CONTRACTOR SHALL COORDINATE ALL FITTINGS, ELEVATION CHANGES, TRANSITIONS, ETC TO AVOID CONFLICT WITH THE WORK OF OTHER TRADES AND EXISTING CONDITIONS ENCOUNTERED ONSITE

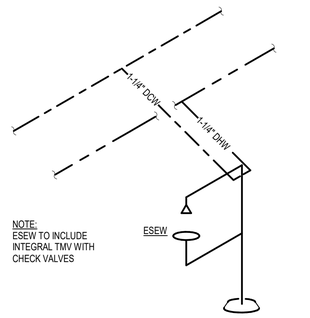
C4 PLUMBING GENERAL NOTES
SCALE: NOT TO SCALE



B1 DOMESTIC WATER SERVICE
SCALE: NOT TO SCALE



B2 TYPICAL AIR & WATER CONNECTION DETAIL
SCALE: NOT TO SCALE



B3 EMERGENCY EYEWASH DETAIL
SCALE: N.T.S

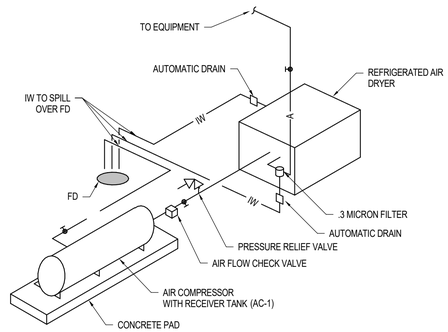
- CHECK VALVE
- FLOOR CLEAN OUT
- FLOOR DRAIN
- FLOOR SINK
- HOSE BIB
- ISOLATION VALVE
- PIPE BREAK/CONTINUATION
- PIPE DOWN
- PIPE UP
- PUMP
- BACKFLOW PREVENTER
- THREE WAY VALVE
- TEE DOWN
- TEE UP

B4 PLUMBING SYMBOL LEGEND
SCALE: NOT TO SCALE

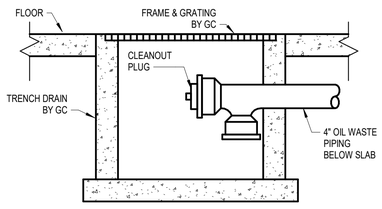
PLUMBING EQUIPMENT SCHEDULE

Key Name	Location	HP	KW	V	PH	Model
WATER HEATER (DWH-1)	JAN ROOM 125 (NOT IN CONTRACT)	-	24	480	3	A.O SMITH DSE-100A
WATER HEATER (DWH-2)	MEZZANINE	-	30	480	3	A.O SMITH DSE-120A
AIR COMPRESSOR (AC-1)	MEZZANINE	15	-	480	3	SULLAIR ST1109RD
EXPANSION TANK (ET-1)	JAN ROOM 125, MEZZANINE (NOT IN CONTRACT)	-	-	-	-	AMTROL ST-12C-DD
CIRC PUMP (CP-1)	JAN ROOM 125, MEZZANINE (NOT IN CONTRACT)	1/25	-	115	1	BELL & GOSSETT NBF-22
LINT TRAP	LAUNDRY 126 & ROOM 124 (NOT IN CONTRACT)	-	-	-	-	ZURN Z1185
GREASE TRAP (GT-1)	KITCHEN 110 & RECEPTION 103 (NOT IN CONTRACT)					ROCKFORD G.1012
BOOSTER PUMP	MEZZANINE	1-1/2		208	1	GOULDS 3642/3742

A1 PLUMBING EQUIPMENT SCHEDULE
SCALE: NOT TO SCALE



A2 AIR COMPRESSOR AND AIR DRYER DETAIL
SCALE: NOT TO SCALE



A3 SAND TRAP TRENCH DRAIN DETAIL
SCALE: NOT TO SCALE

- PW — PRESSURE WASHER (PW)
- A — COMPRESSED AIR (A)
- DOMESTIC COLD WATER (DCW)
- DOMESTIC HOT WATER 110 °F (DHW)
- DOMESTIC HOT WATER RECIRCULATION 110 °F (DHWR)
- G — GAS (NATURAL - G, LIQUID PROPANE - LP)
- OW — OIL WASTE (OW)
- GW — GREASE WASTE (GW)
- IW — INDIRECT WASTE (IW)
- SAN — SANITARY (SAN, W)
- VENT (V)
- OV — OIL VENT (OV)
- PIPING BELOW SLAB (ALL SYSTEMS)

A4 PIPE LEGEND
SCALE: NOT TO SCALE

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MARK	DATE	DESCRIPTION
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DESIGNED BY:	J. DELEO
CHECKED BY:	B. LAWSON

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PLUMBING GENERAL NOTES, LEGENDS & DETAILS

P-001

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A1 **BELOW SLAB PLUMBING PLAN - AREA A (NOT IN CONTRACT)**
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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BELOW SLAB PLUMBING PLAN - AREA A

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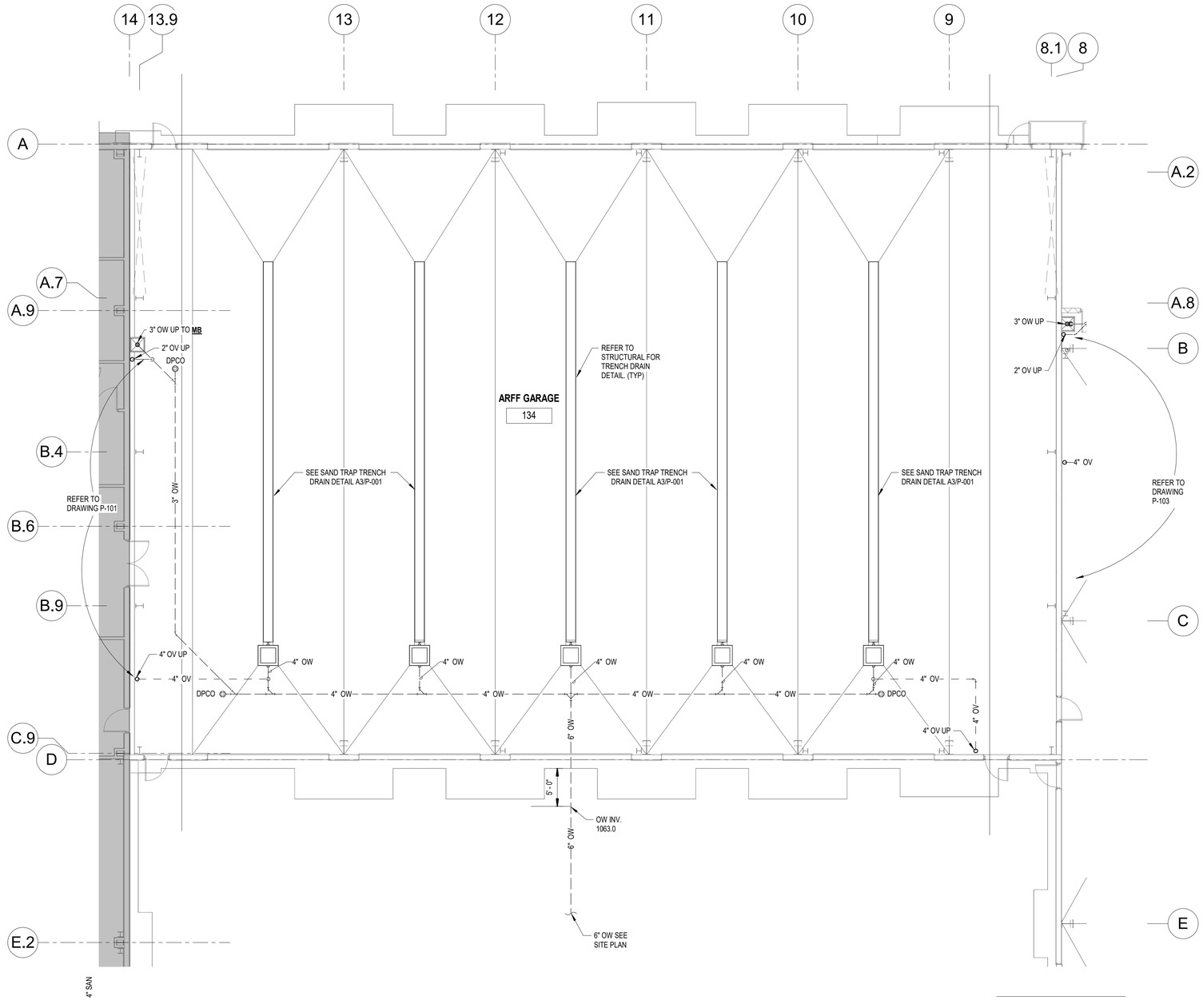

A1 BELOW SLAB PLUMBING PLAN - AREA B
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0 4' 8' 16'

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BELOW SLAB PLUMBING PLAN - AREA B (ADD ALT. NO. 1)

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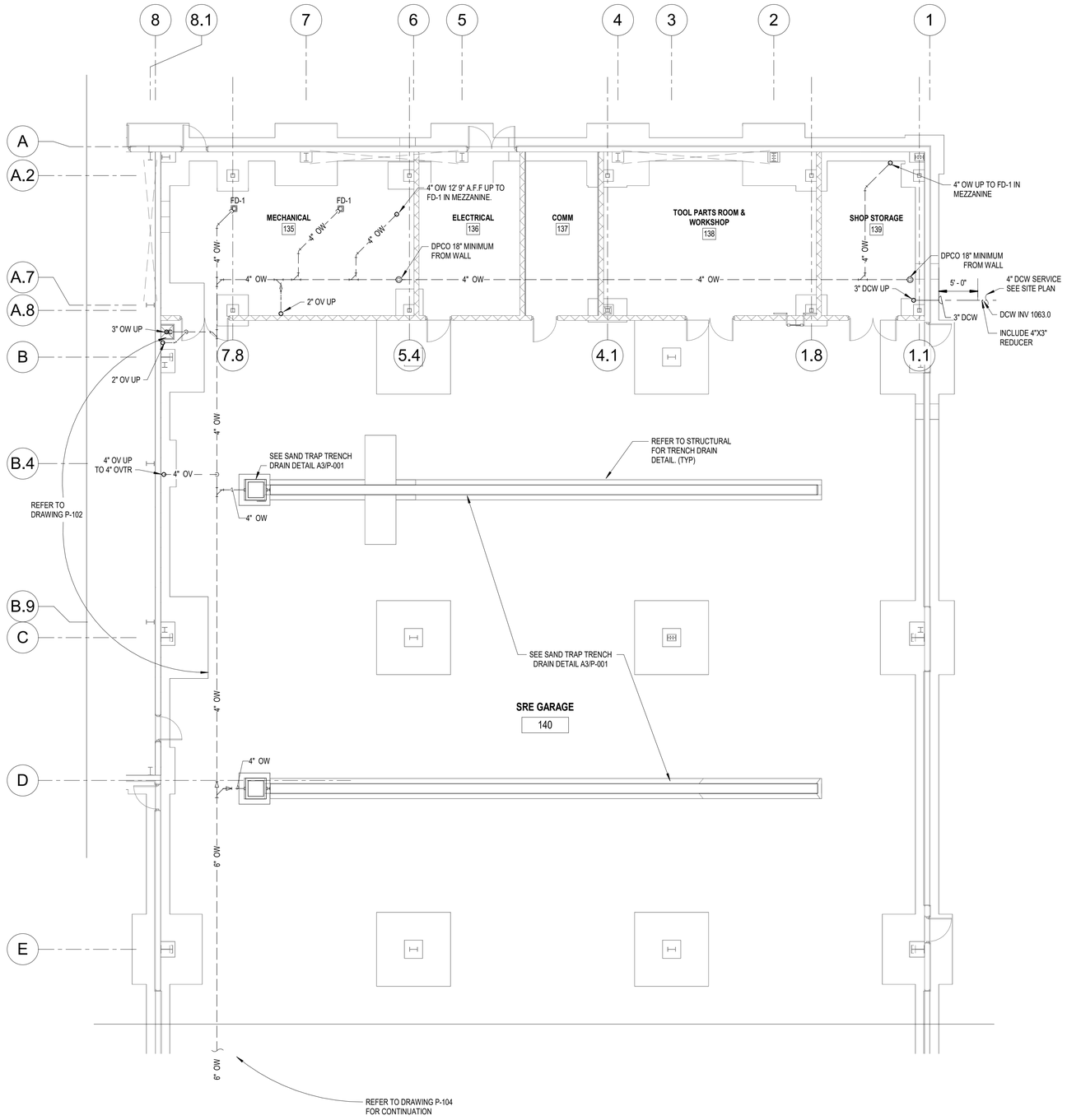

A1 BELOW SLAB PLUMBING PLAN - AREA C

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

0 4' 8' 16'

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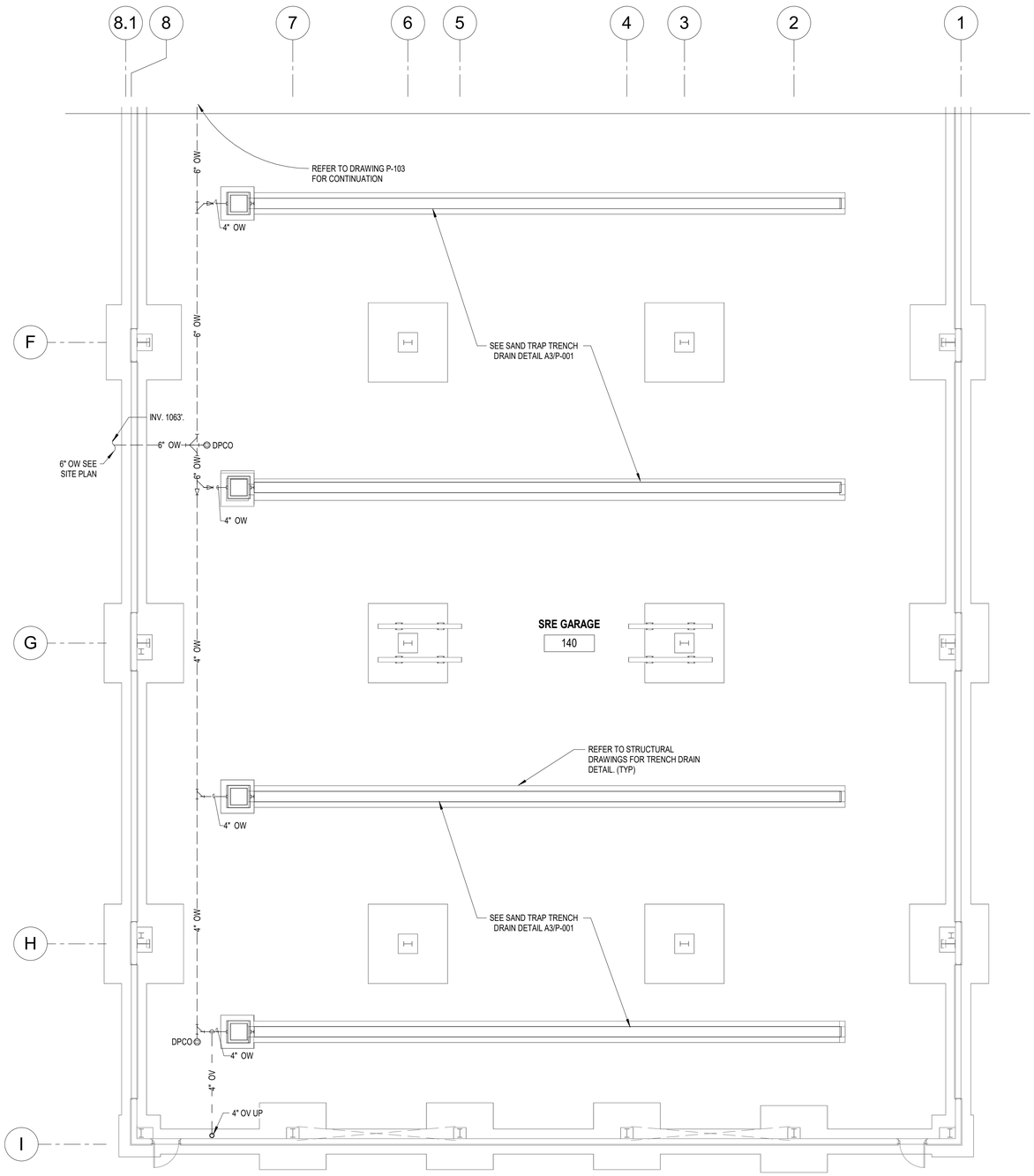

PLAN NORTH

A1 BELOW SLAB PLUMBING PLAN - AREA D
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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BELOW SLAB PLUMBING PLAN - AREA D

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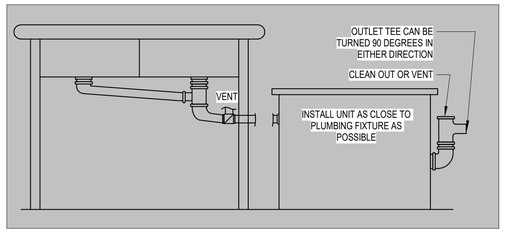
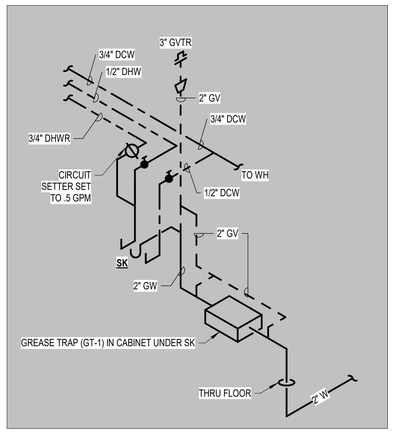


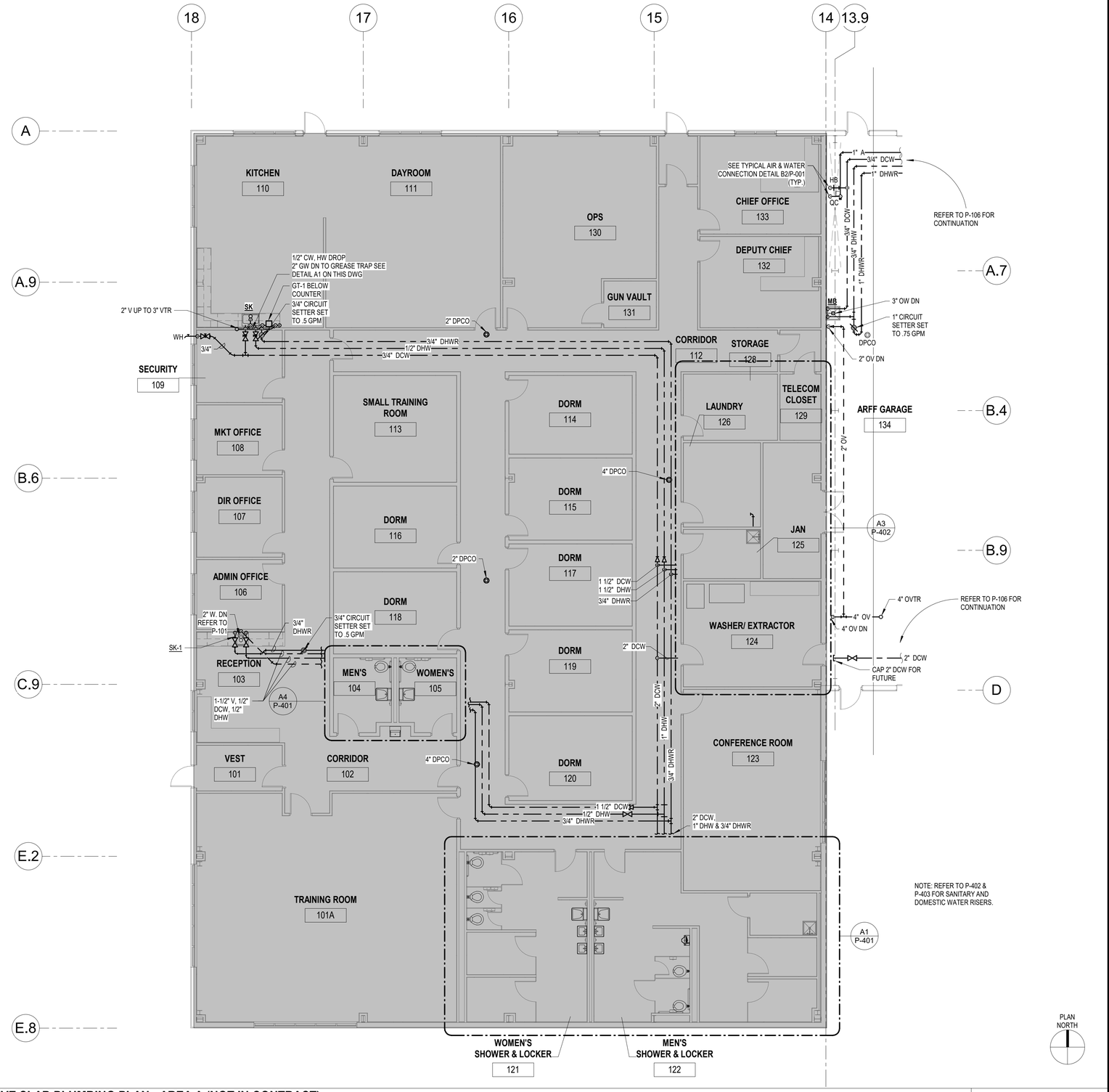
C1 GREASE SEPARATOR PIPING DETAIL (NOT IN CONTRACT)

SCALE: NOT TO SCALE



A1 KITCHEN PLUMBING RISER DIAGRAM (NOT IN CONTRACT)

SCALE: NOT TO SCALE



A2 ABOVE SLAB PLUMBING PLAN - AREA A (NOT IN CONTRACT)

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

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No. 096512
LICENSED PROFESSIONAL ENGINEER
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72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	N. HLUDZENSKI
DESIGNED BY:	J. DELEO
CHECKED BY:	B. LAWSON

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ABOVE SLAB PLUMBING PLAN - AREA A

P-105

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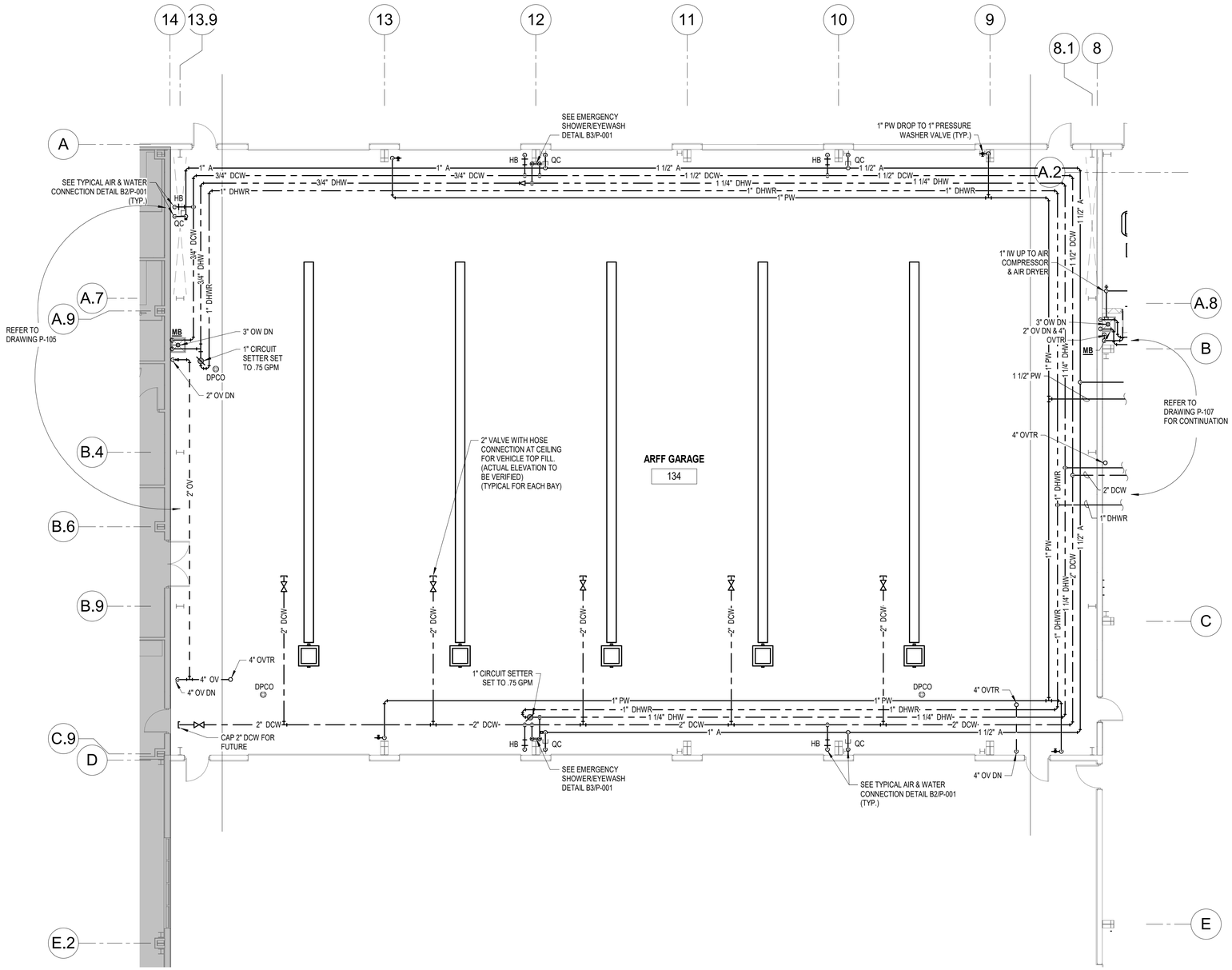

A1 ABOVE SLAB PLUMBING PLAN - AREA B
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ABOVE SLAB PLUMBING PLAN - AREA B (ADD ALT. NO. 1)

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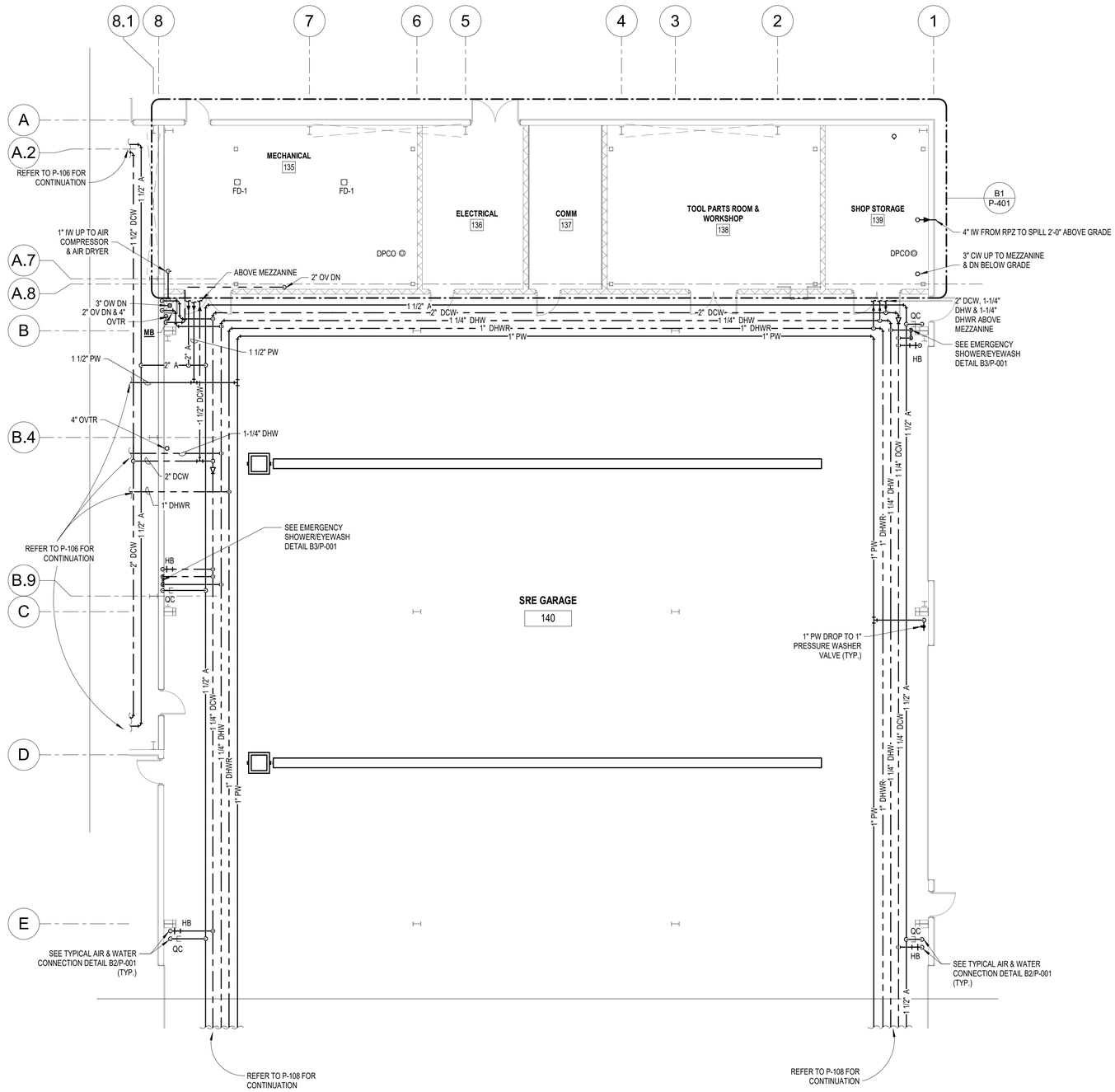

A1 **ABOVE SLAB PLUMBING PLAN - AREA C**

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

0 4' 8' 16'

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ABOVE SLAB PLUMBING PLAN - AREA C

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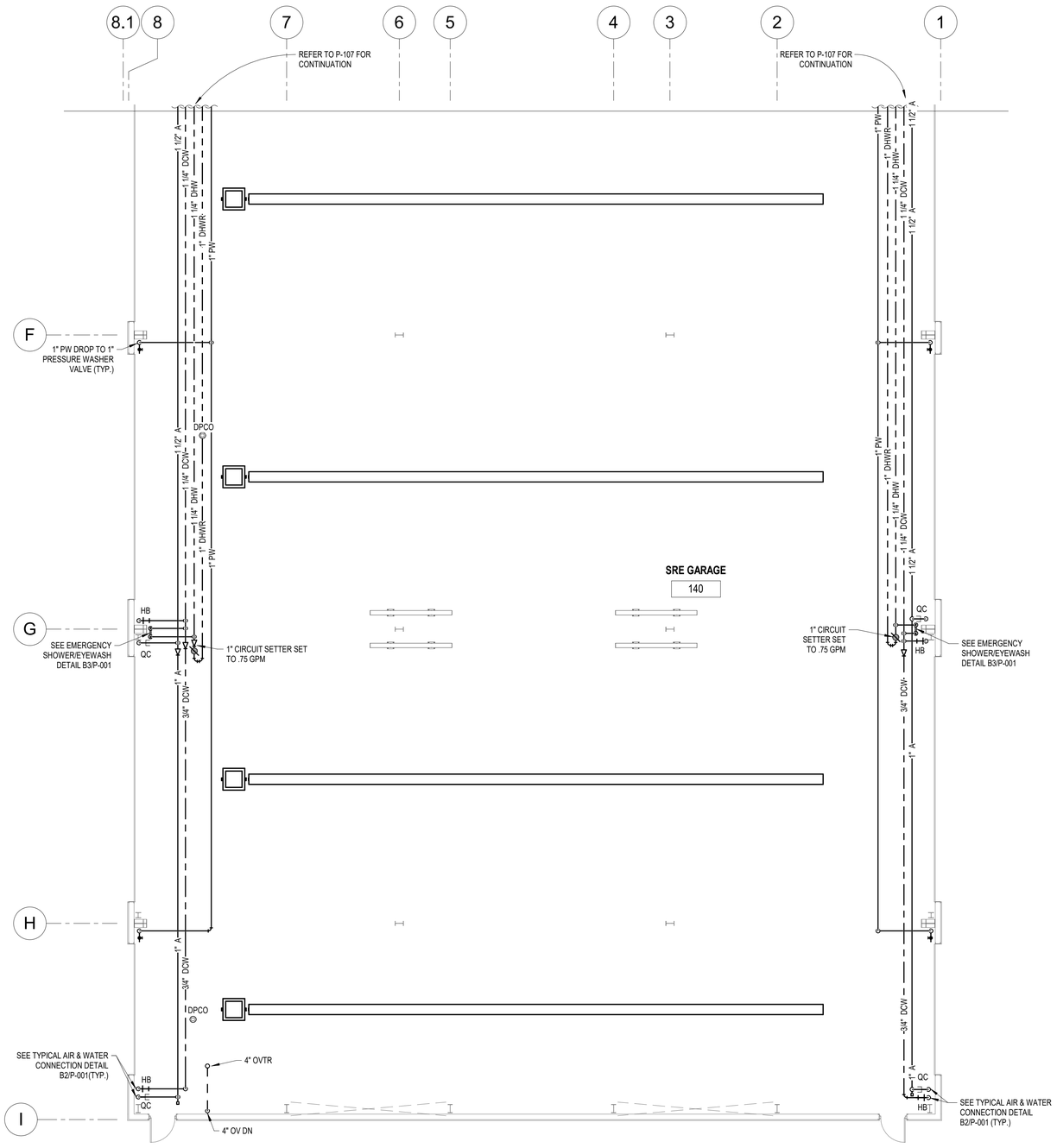

PLAN NORTH

0 4' 8' 16'

A1 ABOVE SLAB PLUMBING PLAN - AREA D

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

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ABOVE SLAB PLUMBING PLAN - AREA D

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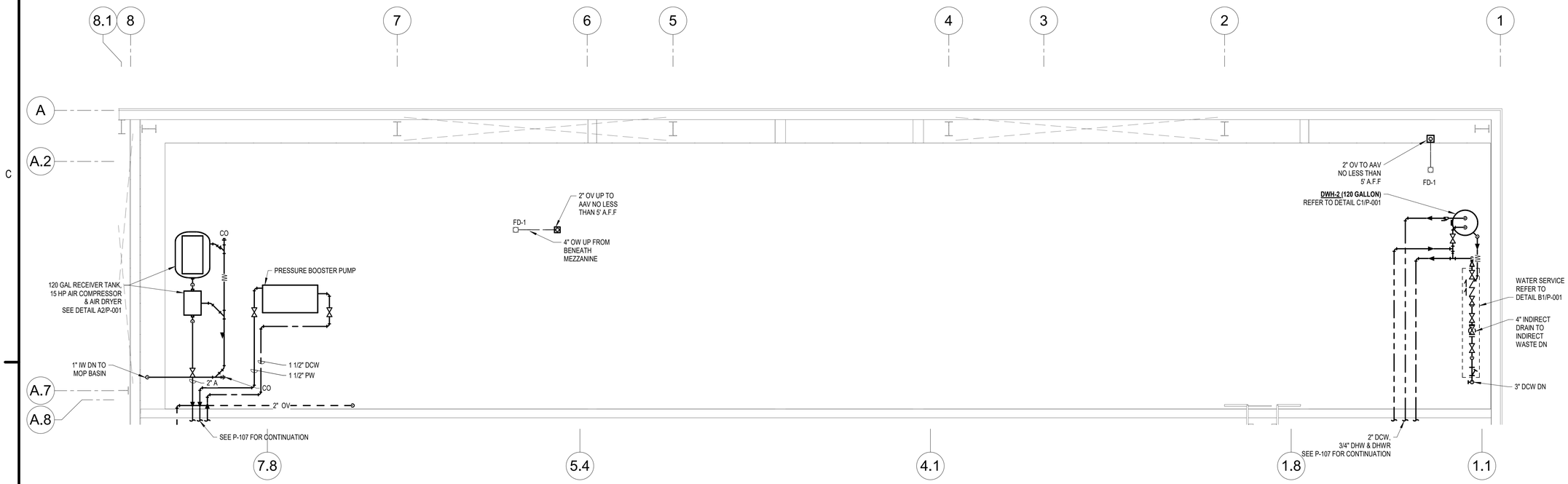
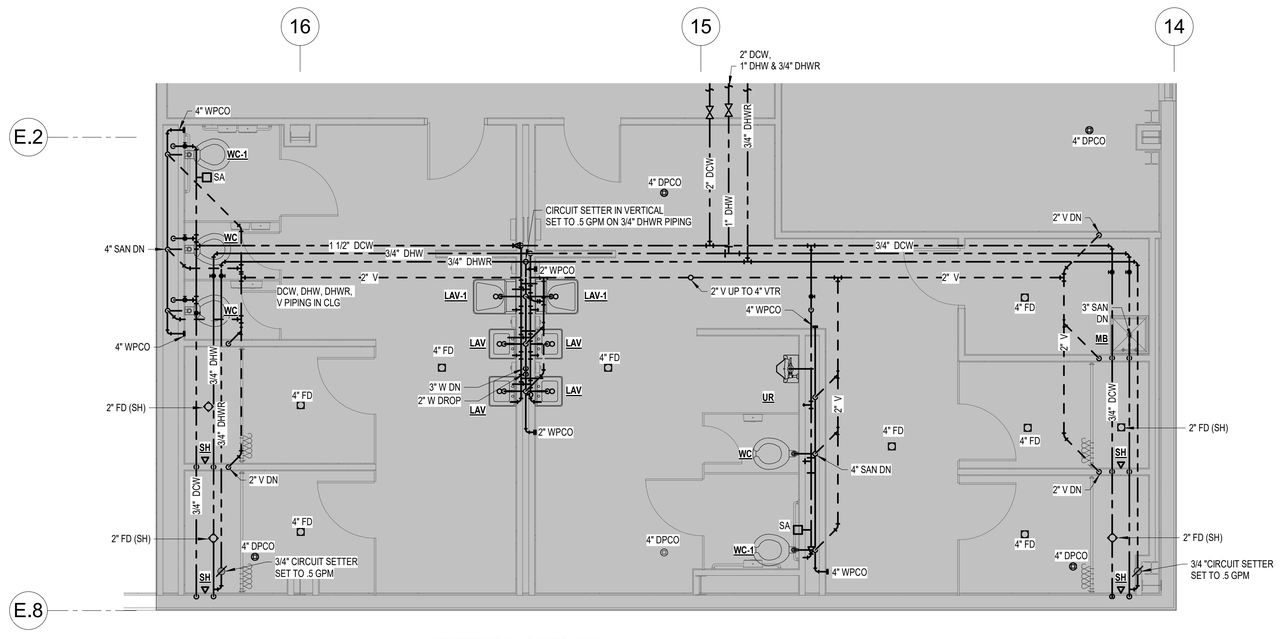
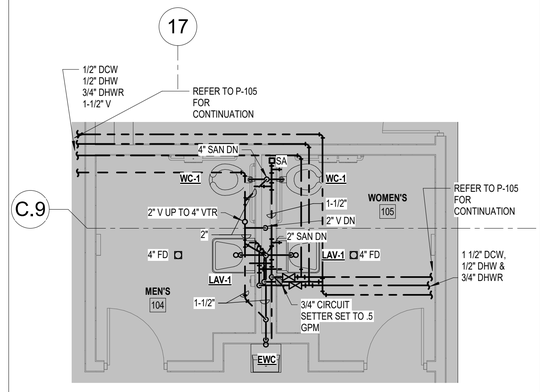


B1 MEZZANINE ENLARGED PLAN
SCALE: 1/4" = 1'-0"



NOTE: REFER TO P-901 & P-902 FOR ADDITIONAL PIPE SIZES.

A1 SHOWER AND LOCKER ROOM - PARTIAL PLAN (NOT IN CONTRACT)
SCALE: 1/4" = 1'-0"



A4 BATHROOM 104 & 105 - PARTIAL PLAN (NOT IN CONTRACT)
SCALE: 1/4" = 1'-0"

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ENLARGED PLANS

P-401

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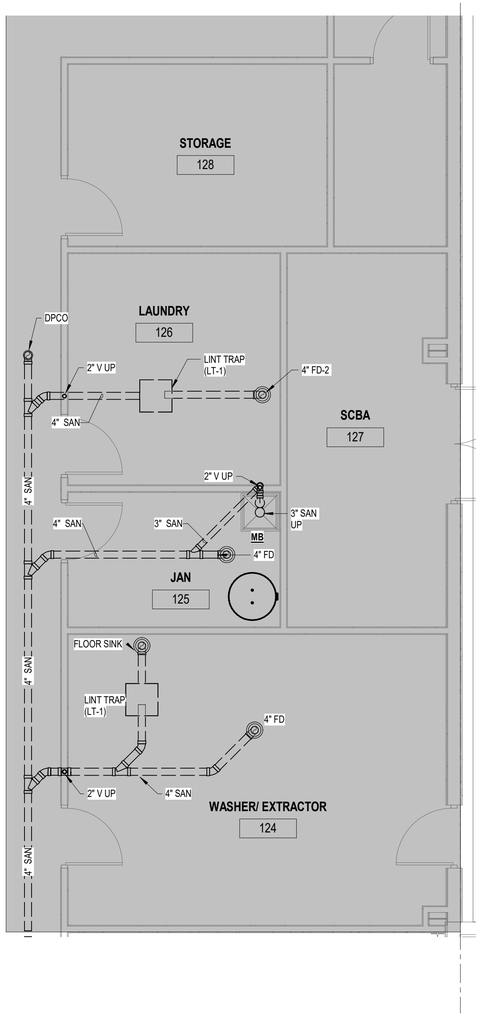

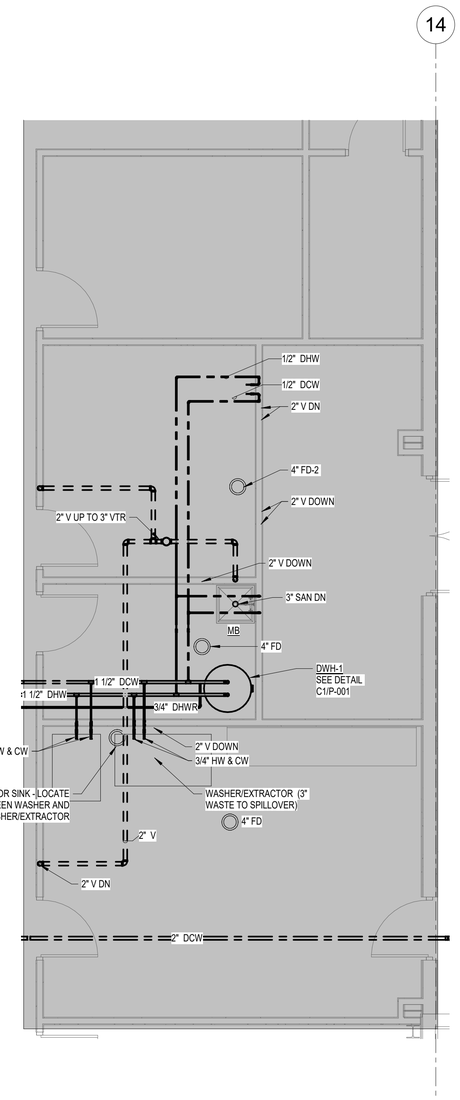

A1 BELOW SLAB PLUMBING PLAN - AREA A - ENLARGED VIEW (NOT IN CONTRACT)
SCALE: 1/4" = 1'-0"

A3 ABOVE SLAB PLUMBING PLAN - AREA A - ENLARGED VIEW (NOT IN CONTRACT)
SCALE: 1/4" = 1'-0"

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ENLARGED PLANS (NOT IN CONTRACT)

P-402

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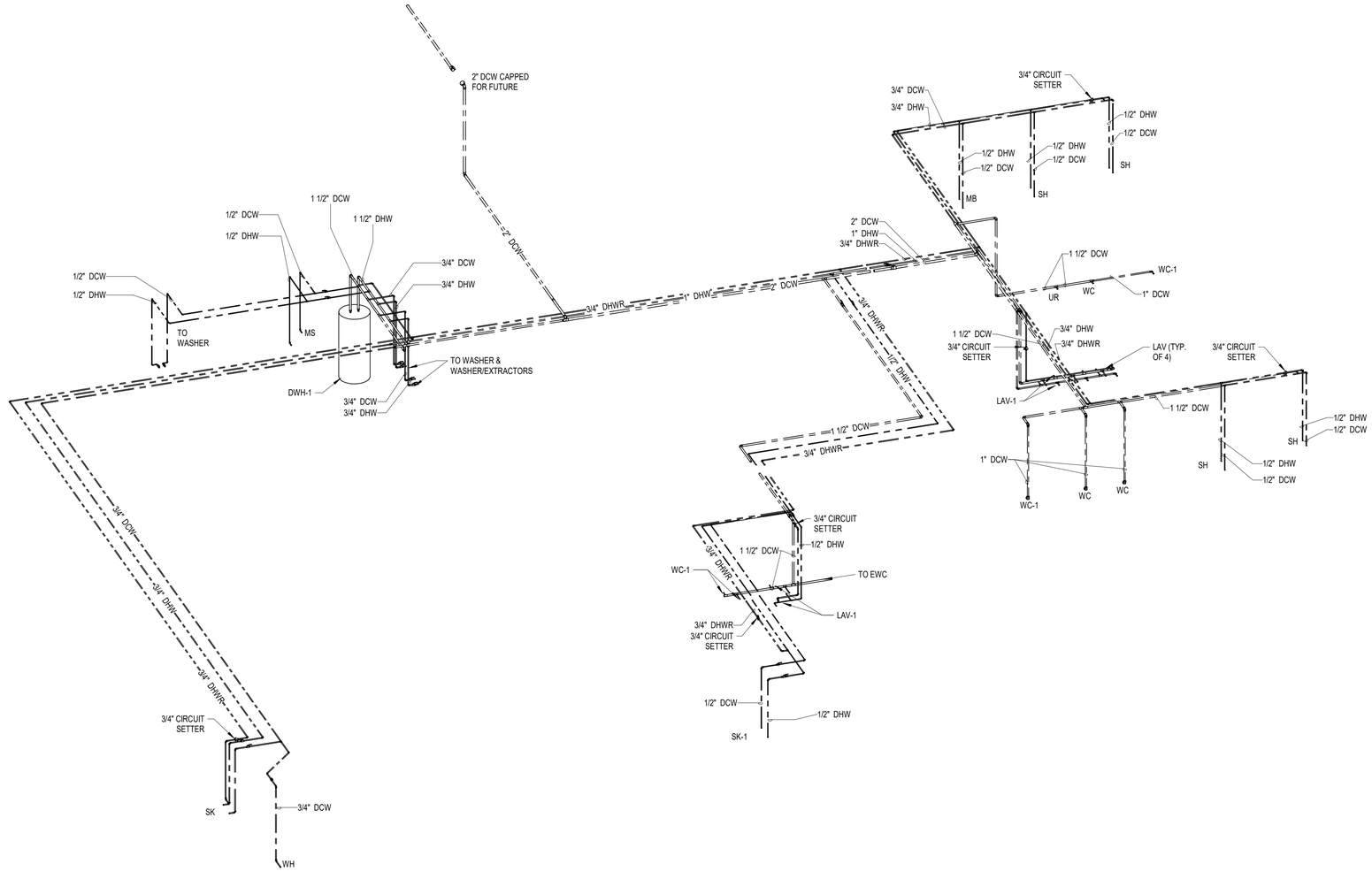

A1 DOMESTIC RISER (NOT IN CONTRACT)
SCALE: NOT TO SCALE

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DOMESTIC RISER (NOT IN CONTRACT)

P-901

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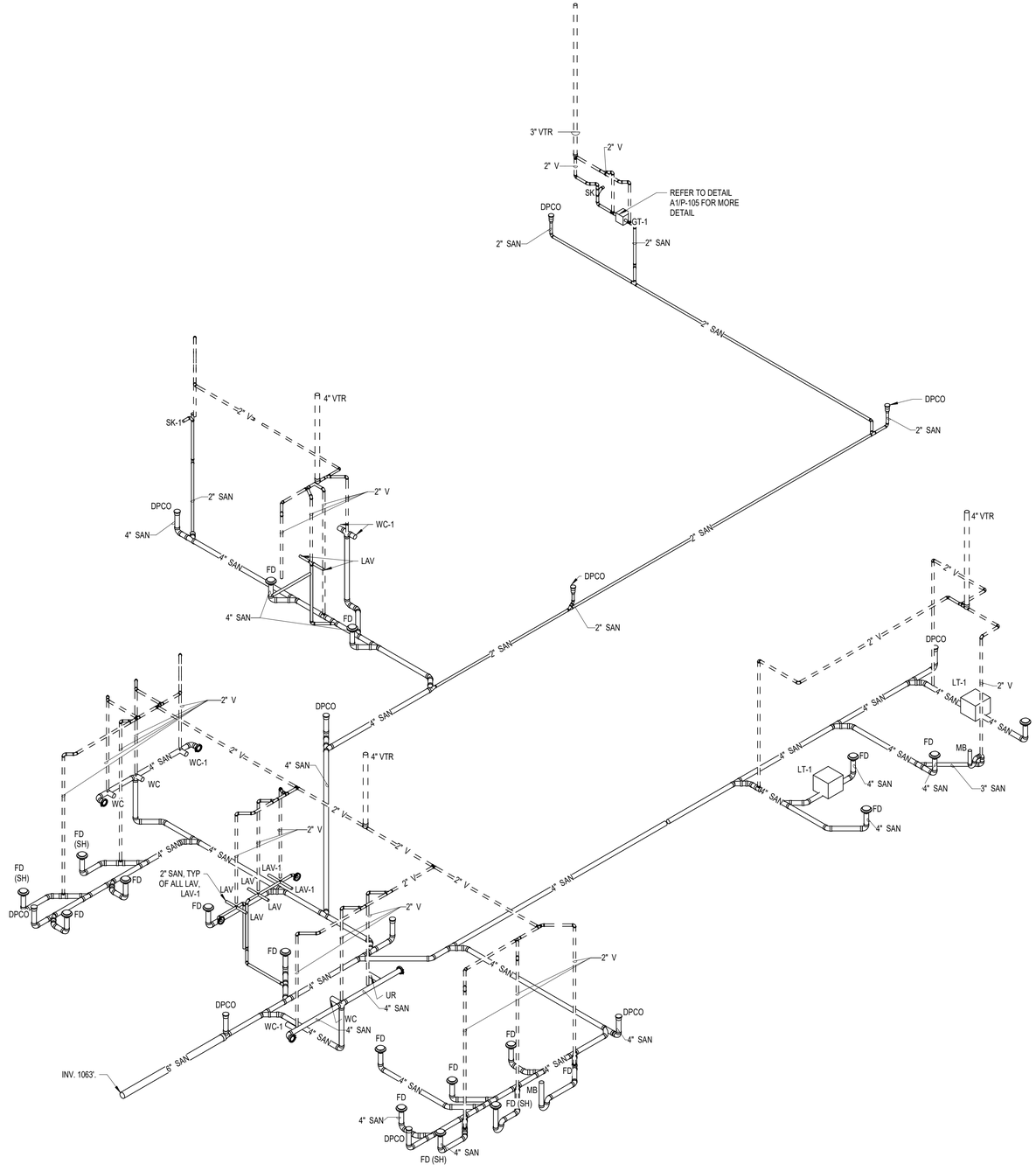

A1 SANITARY RISER (NOT IN CONTRACT)
SCALE: NOT TO SCALE

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SAN RISER (NOT IN CONTRACT)

P-902

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ABBREVIATIONS

AMP	AMPERES	DTR	DUAL TEMPERATURE WATER RETURN	HPC	HIGH PRESSURE CONDENSATE	PTAC	PACKAGED TERMINAL AIR CONDITIONER
AAD	AUTOMATIC AIR DAMPER	DTS	DUAL TEMPERATURE WATER SUPPLY	HPS	HIGH PRESSURE STEAM	RA	RETURN AIR
ACCU	AIR COOLED CONDENSING UNIT	DWH	DOMESTIC WATER HEATER	HR	HUMIDITY RATIO, HOUR	RAD	RADIATOR, RADIANT PANEL
ACU	AIR CONDITIONING UNIT	DX	DIRECT EXPANSION	HRU	HEAT RECOVERY UNIT	RCP	RADIANT CEILING PANEL
ACV	AIR CONTROL VALVE	EAT	ENTERING AIR TEMPERATURE	HUM	HUMIDIFIER	RH	RELATIVE HUMIDITY
AFF	ABOVE FINISHED FLOOR	EBB	ELECTRIC BASE BOARD	HWC	HOT WATER COIL	RHC	REHEAT COIL
AHU	AIR HANDLING UNIT	EC	EXPANSION COMPENSATOR	HWS	HOT WATER SUPPLY	RPM	REVOLUTION PER MINUTE
APD	AIR PRESSURE DROP	EDB	ENTERING DRY BULB TEMPERATURE	HWR	HOT WATER RETURN	RTH	RADIANT TUBE HEATER
AS	AIR SEPARATOR	EFF	EFFICIENCY	HX	HEAT EXCHANGER	RTU	ROOF TOP UNIT
B	BOILER	ENC	ENCLOSURE	HZ	HERTZ	SA	SUPPLY AIR
BD	BYPASS DAMPER	ERU	ENERGY RECOVERY UNIT	IN	INCH	SS	SOLIDS SEPARATOR
BDD	BACK DRAFT DAMPER	ESP	EXTERNAL STATIC PRESSURE	IND	INDUCTION UNIT	SD	SMOKE DAMPER
BHP	BRAKE HORSE POWER	ET	EXPANSION TANK	KH	KILN HOOD	SHC	SENSIBLE HEAT CAPACITY
BOD	BOTTOM OF DUCT	EWB	ENTERING WET BULB TEMPERATURE	KW	KILOWATT	SOO	SEQUENCE OF OPERATIONS
BTU	BRITISH THERMAL UNIT	EWT	ENTERING WATER TEMPERATURE	LAT	LEAVING AIR TEMPERATURE	SP	STATIC PRESSURE
BTUH	BRITISH THERMAL UNIT PER HOUR	EXH	EXHAUST AIR	LB	POUND	SQ	SQUARE
C	COMMON	EXIST	EXISTING	LDB	LEAVING DRY BULB TEMPERATURE	SRV	STATIONARY ROOF VENT
CCU	CEILING CASSETTE UNIT	F	FAN	LPC	LOW PRESSURE CONDENSATE	TD	TRIPLE DUTY VALVE
CD	COLD CONDENSATE DRAIN	°F	FAHRENHEIT	LPS	LOW PRESSURE STEAM	TDH	TOTAL DYNAMIC HEAD
CDWS	CONDENSER WATER SUPPLY	F&T	FLOAT AND THERMOSTATIC TRAP	LV	LOUVER	TG	TRANSFER GRILLE
CDWR	CONDENSER WATER RETURN	FC	FLEXIBLE CONNECTION	LWB	LEAVING WET BULB	THC	TOTAL HEAT CAPACITY
CFM	CUBIC FEET PER MINUTE	FCU	FAN COIL UNIT	LWT	LEAVING WATER TEMPERATURE	TSP	TOTAL STATIC PRESSURE
CH	CHILLER	FD	FIRE DAMPER	MAX	MAXIMUM	TYP	TYPICAL
CGR	CHILLED GLYCOL RETURN	FIL	FILTER	MAU	MAKEUP AIR UNIT	UV	UNIT VENTILATOR
CGS	CHILLED GLYCOL SUPPLY	FSD	COMBINATION FIRE/SMOKE DAMPER	MBH	1000 BTUH	V	VOLT
CWS	CHILLED WATER SUPPLY	FMS	FLOW MEASURING STATION	MCA	MINIMUM CIRCUIT AMPACITY	VAL	VALANCE UNIT
CWR	CHILLED WATER RETURN	FPM	FEET PER MINUTE	MIN	MINIMUM	VAV	VARIABLE AIR VOLUME
CO	CLEANOUT	FR	FURNACE	MOP	MAXIMUM OVERCURRENT PROTECTION	VD	VOLUME DAMPER
CONV	CONVECTOR	FT	FEET	MV	MANUAL VENT	VIF	VERIFY IN FIELD
CP	CONDENSATE PUMP	FTR	FIN TUBE RADIATION	NC	NORMALLY CLOSED	VP	VACUUM PUMP
CT	COOLING TOWER	GAL	GALLONS	NIC	NOT IN CONTRACT	VSD	VARIABLE SPEED DRIVE
CUH	CABINET UNIT HEATER	GC	GENERAL CONTRACTOR	NO	NORMALLY OPEN, NUMBER	VUV	VERTICAL UNIT VENTILATOR
dB	DECIBELS	GPM	GALLONS PER MINUTE	OA	OUTSIDE AIR	WH	UNIT HEATER
DB	DRY BULB TEMPERATURE	GR	GRAINS	P	PUMP	WB	WET BULB TEMPERATURE
DC	DUST COLLECTOR	HD	HEAD	PD	PRESSURE DROP	WCU	WALL CASSETTE UNIT
DIA	DIAMETER	HGR	HOT GLYCOL RETURN	PG	PROPYLENE GLYCOL	WFS	WATER FLOW SWITCH
DN	DOWN	HGS	HOT GLYCOL SUPPLY	PH	PHASE	WG	WATER GAUGE
DP	DEWPOINT TEMPERATURE	HP	HORSEPOWER	PSI	POUNDS PER SQUARE INCH	WH	WALL HEATER
DSD	DUCT SMOKE DETECTOR					WPD	WATER PRESSURE DROP
						WWM	WELDED WIRE MESH

A1 ABBREVIATIONS
SCALE: NOT TO SCALE

1. ALL WORK SHALL CONFORM TO ALL APPLICABLE RULES, REGULATIONS AND CODES, INCLUDING, BUT NOT LIMITED TO THE APPLICABLE ENERGY CONSERVATION CODE OF NEW YORK STATE, AND BUILDING CODES OF NEW YORK STATE.
2. ALL EQUIPMENT SHALL COMPLY WITH THE PROVISIONS OF THE APPLICABLE ENERGY CONSERVATION CODE OF NEW YORK STATE. ALL SUBMITTALS FOR EQUIPMENT COVERED BY THE CODE SHALL INCLUDE THE MANUFACTURER'S STATEMENT OF CONFORMANCE TO THE CODE.
3. FIELD VERIFY ALL DIMENSIONS PRIOR TO DUCTWORK FABRICATION OR ANY OTHER MECHANICAL WORK. MECHANICAL CONTRACTOR SHALL COORDINATE INSTALLATION OF EQUIPMENT, PIPING, DUCTWORK, AND PADS WITH OTHER CONTRACTORS. PROVIDE FITTINGS, ELEVATION CHANGES, TRANSITIONS, AND OFFSETS REQUIRED, WHETHER SHOWN OR NOT, TO AVOID CONFLICTS WITH WORK OF OTHER CONTRACTS.
4. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING ALL HVAC PENETRATIONS (PIPING, DUCTWORK, ETC) IN ACCORDANCE WITH THE BUILDING CODE OF NEW YORK STATE, AND WHERE SHOWN OR SPECIFIED.
5. ITEMS OF SPECIFIC MANUFACTURER'S SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE PRINTED INSTRUCTIONS AND/OR MANUFACTURER'S REPRESENTATIVES DIRECTIONS.
6. MECHANICAL CONTRACTOR TO INSTALL ALL NECESSARY STIFFENERS, BRACES, STRUTS, ETC, WHETHER SHOWN OR NOT, TO PROVIDE A COMPLETE, SAFE, AND DURABLE SYSTEM.
7. DIMENSIONS SHOWN "AFF" INDICATE THE ACTUAL CLEAR DIMENSIONS FROM THE BOTTOM OF THE ITEM TO THE FINISHED FLOOR ELEVATION; UNLESS INDICATED OTHERWISE.
8. SUPPORT AND EQUIPMENT DETAILS MAY VARY TO SUIT EQUIPMENT AND PARTS SUPPLIED.
9. WELD ALL STEEL ANGLE JOINTS UNLESS OTHERWISE SHOWN.
10. PROVIDE NECESSARY BY-PASSES AND BALANCING MEANS AS REQUIRED TO ASSURE PROPER SYSTEM OPERATION.
11. ALL DUCT DIMENSIONS SHOWN ARE "SIDE SEEN" BY "SIDE NOT SEEN" AND ARE THE CLEAR INSIDE DIMENSIONS UNLESS OTHERWISE NOTED.
12. PROVIDE ACCESS DOORS AND CLEARANCES FOR EASY ACCESS TO ALL FIRE DAMPERS, CONTROL DAMPERS, LOUVERS, FILTERS, COILS, AND FANS.
13. BRANCH DUCTS TO GRILLES, DIFFUSERS OR REGISTERS SHALL BE THE SAME SIZE AS GRILLE, DIFFUSER OR REGISTER NECK SIZE UNLESS INDICATED OTHERWISE.
14. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR PRECISE LOCATION OF DIFFUSERS AND REGISTERS.
15. PROVIDE MANUAL VOLUME DAMPERS IN ALL BRANCH TAKE-OFFS AND WHERE SHOWN.
16. PROVIDE ALL CONTROL AND INTERLOCK WIRING REQUIRED OR SPECIFIED THAT IS NOT PROVIDED BY THE ELECTRICAL CONTRACTOR.
17. COORDINATE WITH ELECTRICAL CONTRACTOR AND FIRE PROTECTION CONTRACTOR REGARDING THE RESPONSIBILITIES FOR SUPPLYING, INSTALLING AND WIRING OF HVAC-RELATED DISCONNECT SWITCHES, STARTERS, SAFETY INTERLOCKS, EMERGENCY SHUTDOWN AND WIRING.
18. WORK ON M-SERIES DRAWINGS IS BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
19. VERIFY ALL LOCATIONS, DIMENSIONS, EQUIPMENT ARRANGEMENTS, CLEARANCES AND ELECTRICAL CHARACTERISTICS IN THE FIELD PRIOR TO BID. PROMPTLY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
20. PRIOR TO CUTTING THROUGH FLOORS AND WALLS, THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL STRUCTURAL MEMBERS, JOISTS, AND OR COLUMNS. PROMPTLY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. DO NOT CUT ANY STRUCTURAL MEMBERS UNLESS SPECIFICALLY DIRECTED TO DO SO.
21. THE MECHANICAL CONTRACTOR SHALL REMOVE DUCTWORK BACK TO A POINT WHICH WILL ALLOW THE INSTALLATION OF SUPPORT STEEL THAT IS REQUIRED / RELATED TO THE HVAC EQUIPMENT. THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR IN THE LOCATIONS WHICH WILL REQUIRE MECHANICAL SUPPORT STEEL.
22. INSTALL ALL NEW DUCT AND PIPE WITHIN EXISTING OPENINGS SUCH THAT IT ALLOWS AS MUCH SPACE AS POSSIBLE TO ONE SIDE WHICH MAY ALLOW PASSAGE.
23. ALL EXISTING-TO-REMAIN DIFFUSERS AND DUCT SYSTEMS TO BE REBALANCED TO CFM INDICATED.
24. PATCH AND SEAL DUCT WHERE BRANCHES / TAKEOFFS HAVE BEEN REMOVED AND NO NEW CONNECTION IS NEEDED.
25. CAP AND SEAL PIPING WHERE BRANCHES / TAKEOFFS HAVE BEEN REMOVED AND NO NEW CONNECTION IS NEEDED.
26. DASHED PIPING AND EQUIPMENT SHOWN ON FLOOR PLANS AND ENLARGED VIEWS IS WORK THAT IS TO BE DONE "BY OTHERS" SIMULTANEOUSLY. REFER TO C3/M-401 AS AN EXAMPLE. COORDINATION WITH NOT IN CONTRACT SCOPE WILL BE NECESSARY WHEN LAYING OUT EACH CONTRACTOR'S RESPECTIVE WORK.

A3 GENERAL NOTES
SCALE: NOT TO SCALE

PIPING

BALL VALVE
BUTTERFLY VALVE
CHECK VALVE
NEEDLE VALVE
PRESSURE RELIEF VALVE
MANUAL AIR VENT
AUTOMATIC AIR VENT
PRESSURE GAUGE
THERMOMETER
FLEXIBLE PIPE CONNECTOR
UNION
REDUCER
STRAINER

TRIPLE DUTY VALVE
TWO-WAY CONTROL VALVE
THREE-WAY CONTROL VALVE
PIPE DROP
PIPE RISER
PIPE ANCHOR
PIPE GUIDE
OR PIPE CAP
OR CALIBRATED FLOW BALANCING VALVE
OR INLINE PUMP
AIR SEPARATOR
BASE MOUNTED PUMP
PIPE CONNECTION OFF BOTTOM
PIPE CONNECTION OFF TOP

DUCTWORK

RETURN GRILLE
SUPPLY DIFFUSER
EXHAUST GRILLE
LINEAR SLOT DIFFUSER
SQUARE TO ROUND DUCT TRANSITION
SQUARE MAIN TO ROUND BRANCH TAKE-OFF
FC FLEXIBLE DUCT CONNECTOR
POSITIVELY PRESSURIZED SUPPLY DUCT OUT OF THE PLANE
POSITIVELY PRESSURIZED SUPPLY DUCT INTO THE PLANE
NEGATIVELY PRESSURIZED RETURN DUCT OUT OF THE PLANE
NEGATIVELY PRESSURIZED RETURN DUCT INTO THE PLANE
NEGATIVELY PRESSURIZED EXHAUST DUCT OUT OF THE PLANE
NEGATIVELY PRESSURIZED EXHAUST DUCT INTO THE PLANE
SQUARE ELBOW WITH TURNING VANES
MANUAL VOLUME DAMPER
AAD OR AAD AUTOMATIC AIR DAMPER
TYPE / CFM NECK SIZE (TYPICAL OF) DIFFUSER/GRILLE/REGISTER DESIGNATION
UNIT GENERAL EQUIPMENT DESIGNATION
UNIT / GPM GPM UNIT WITH HEATING AND COOLING (HEATING, COOLING)
UNIT / MAX. CFM UNIT WITH AIR FLOW
UNIT / GPM UNIT WITH HEATING OR COOLING
TYPE NO. FTR-X FIN-TUBE RADIATION DESIGNATION
ACTIVE LENGTH X'-X"
BALANCED FLOW X.X GPM

GENERAL

NEW PIPING
EXISTING PIPING
REMOVALS
DISCONNECT FROM EXISTING
CONNECT TO EXISTING
TS TEMPERATURE SENSOR
T THERMOSTAT
T G THERMOSTAT W/ GUARD
T D THERMOSTAT W/ DIGITAL DISPLAY
P PRESSURE SENSOR
S SENSOR (CO & NO2)
CO_2 CARBON DIOXIDE SENSOR (DEMAND CONTROL VENTILATION)
CO CARBON MONOXIDE SENSOR
DP DIFFERENTIAL PRESSURE SENSOR
M DAMPER ACTUATOR
S SOLENOID ACTUATOR
DIRECTION OF AIRFLOW
X KEYNOTE
VIEW / SHEET ENLARGED PLAN & DETAIL CALL OUT
FD FIRE DAMPER
VOLUME DAMPER

NOTE: NOT ALL SYMBOLS ARE USED.

A4 SYMBOLS
SCALE: NOT TO SCALE

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REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	A.M. CALABRESE
DESIGNED BY:	A.M. CALABRESE
CHECKED BY:	A.J. MILNE, P.E.

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SYMBOLS, NOTES AND ABBREVIATIONS

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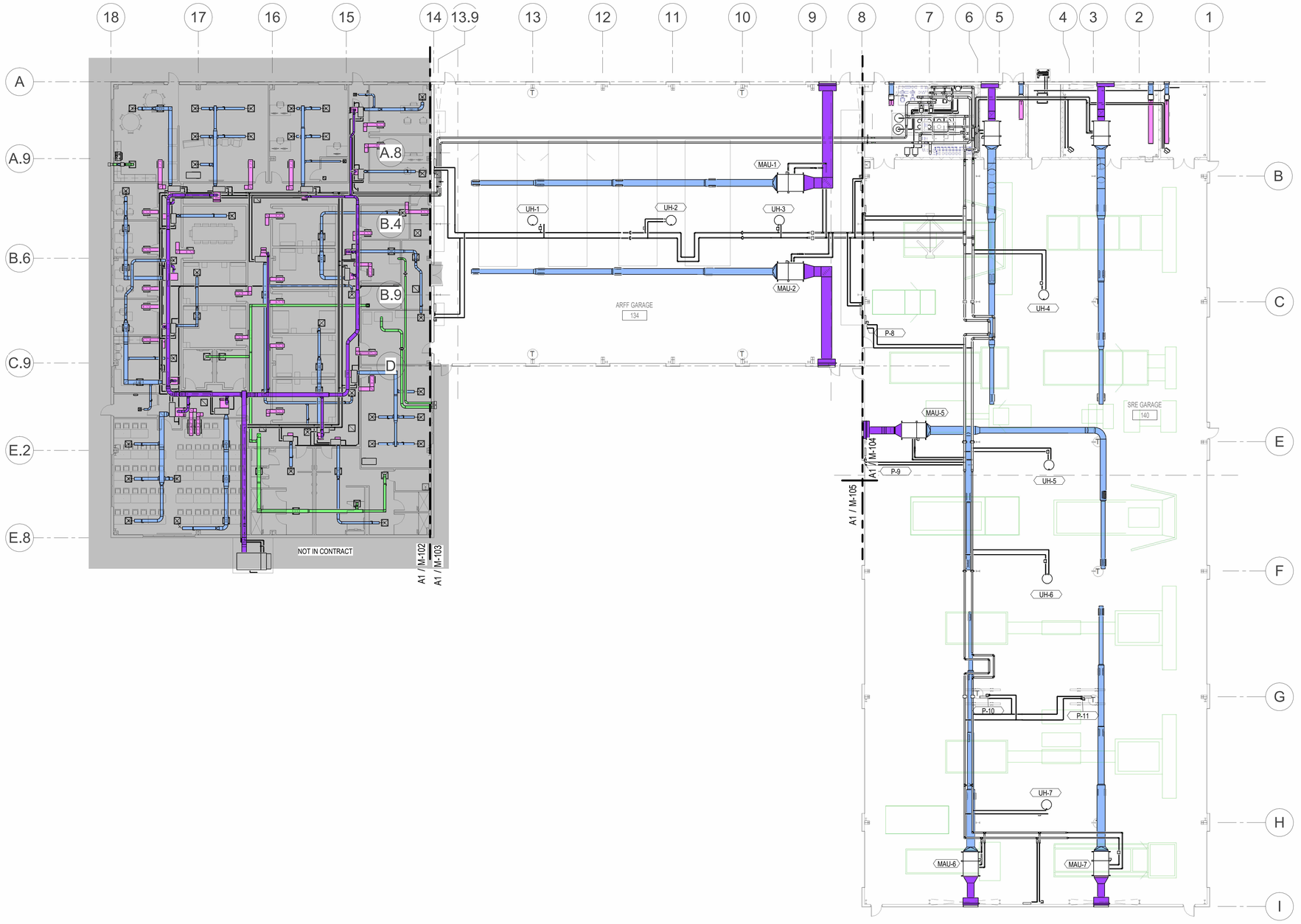

PLAN NORTH

A1 FIRST FLOOR HVAC
SCALE: 1/16" = 1'-0"

0 8' 16' 32'

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FIRST FLOOR HVAC PLAN - OVERALL

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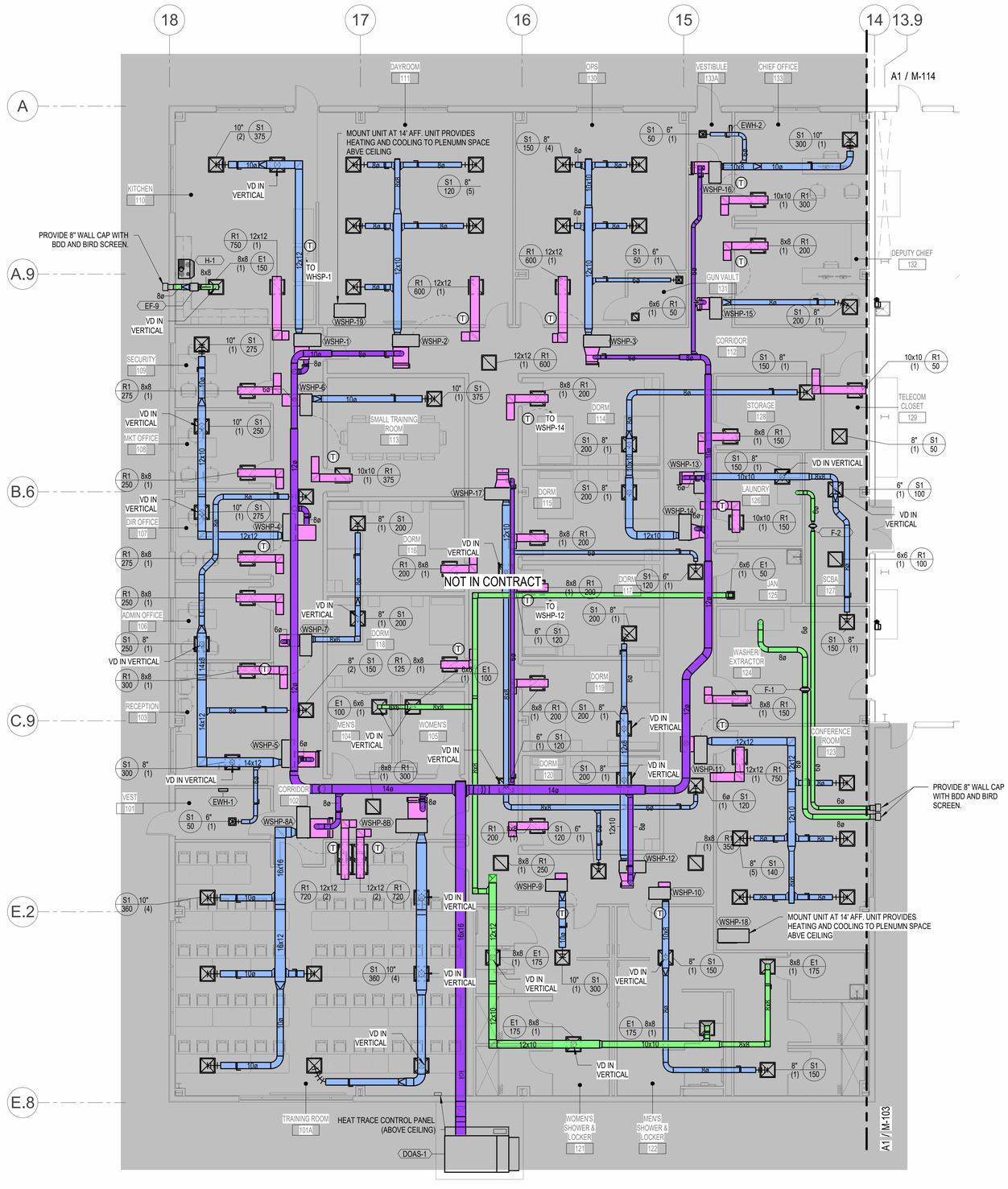

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FIRST FLOOR HVAC PLAN - AREA A (NOT IN CONTRACT)

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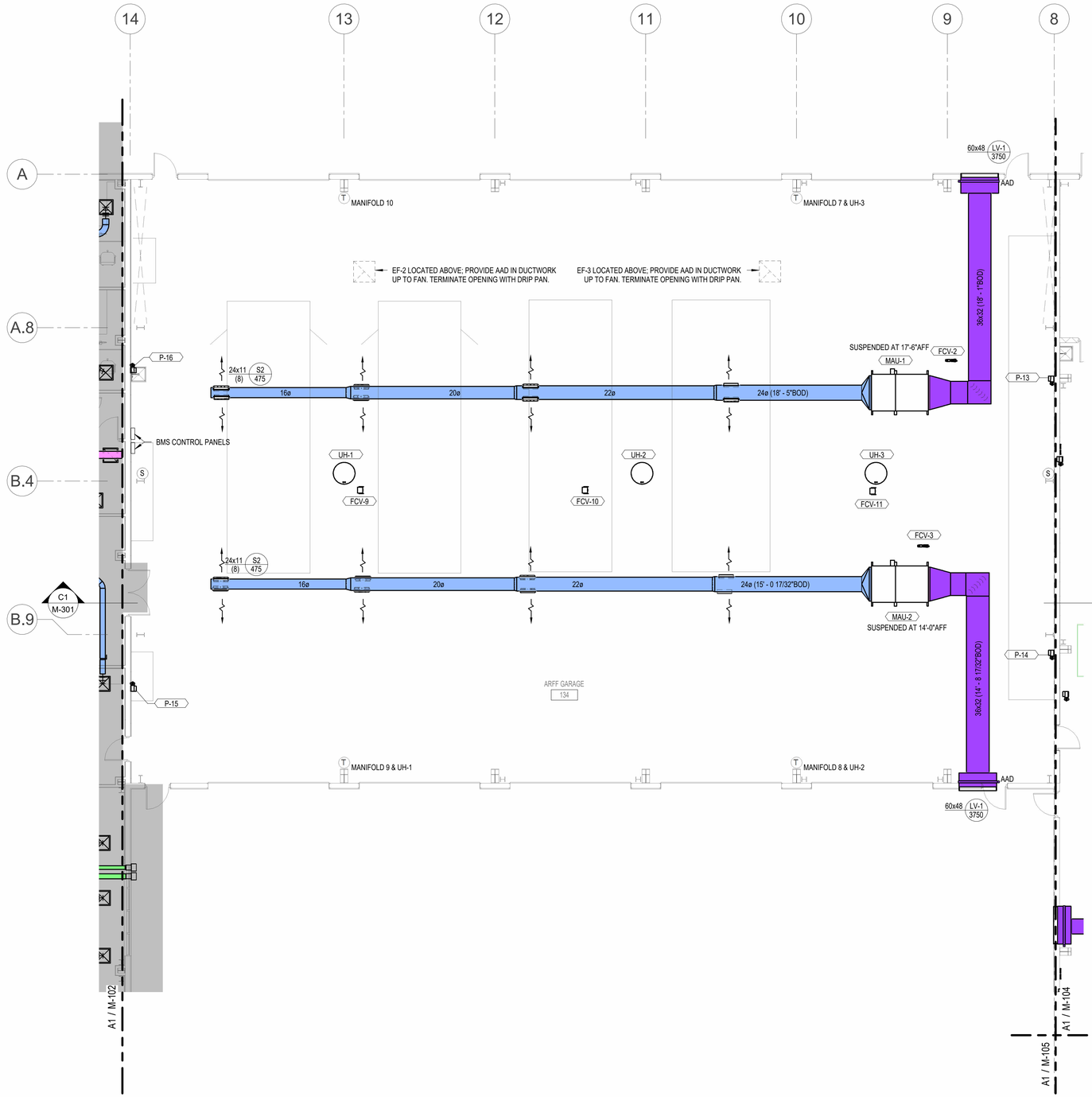

A1 HVAC FLOOR PLAN - AREA B (ADD ALT. NO. 1)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR HVAC PLAN - AREA B (ADD ALT. NO. 1)

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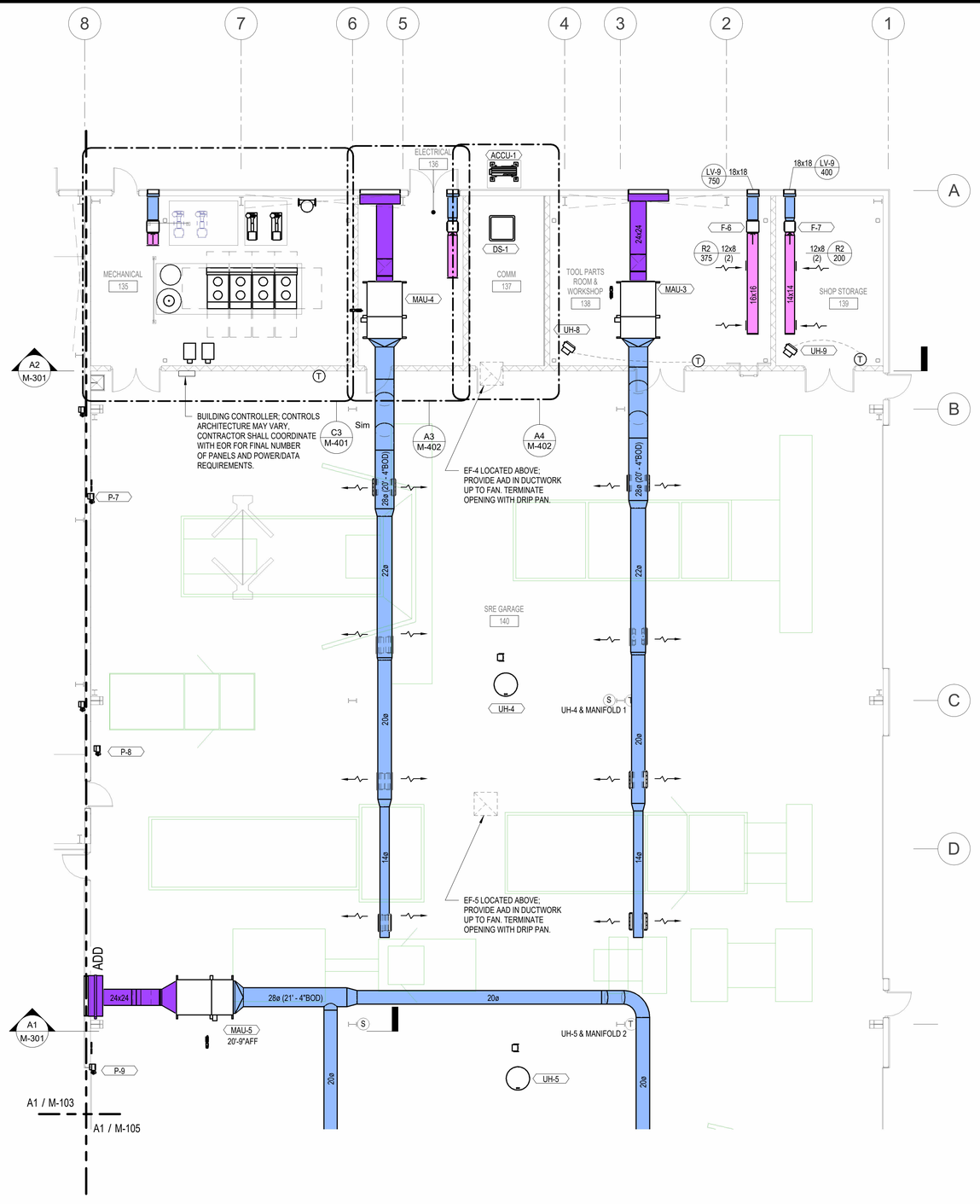

PLAN NORTH

A1 HVAC FLOOR PLAN - AREA C
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR HVAC PLAN - AREA C

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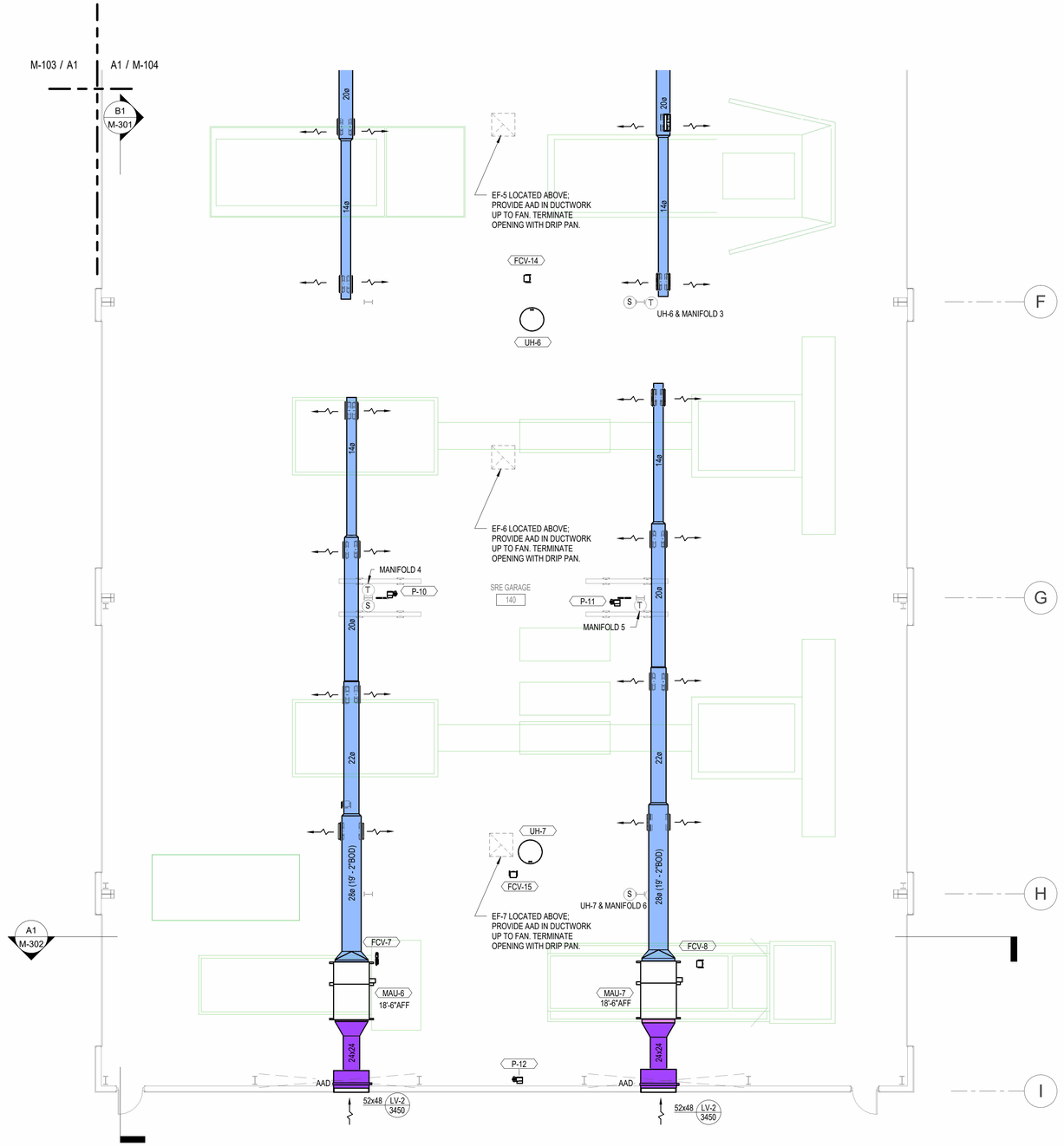

PLAN NORTH

A1 HVAC FLOOR PLAN - AREA D
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR HVAC PLAN - AREA D

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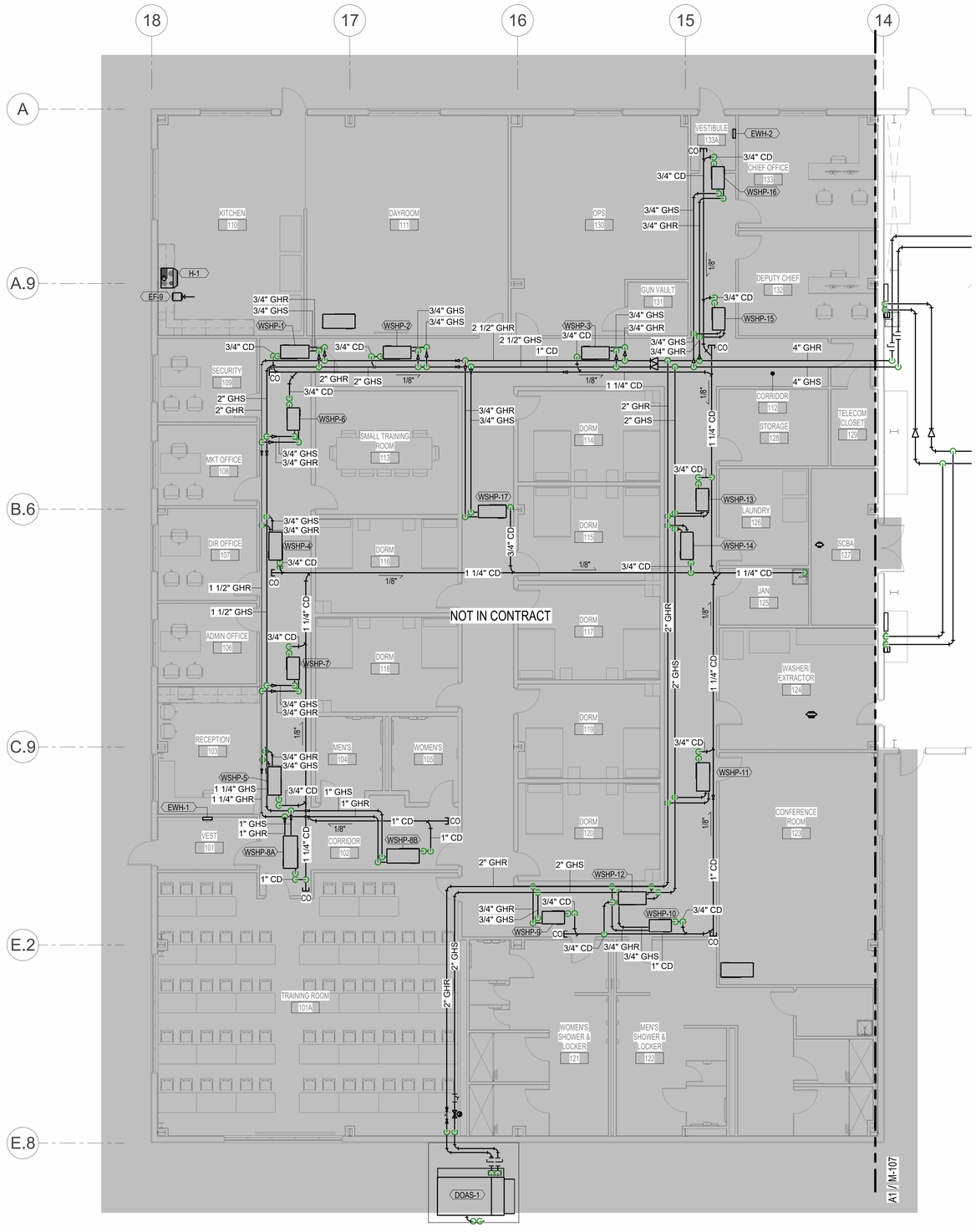

PLAN NORTH

A1 PIPING FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR PIPING PLAN - AREA A (NOT IN CONTRACT)

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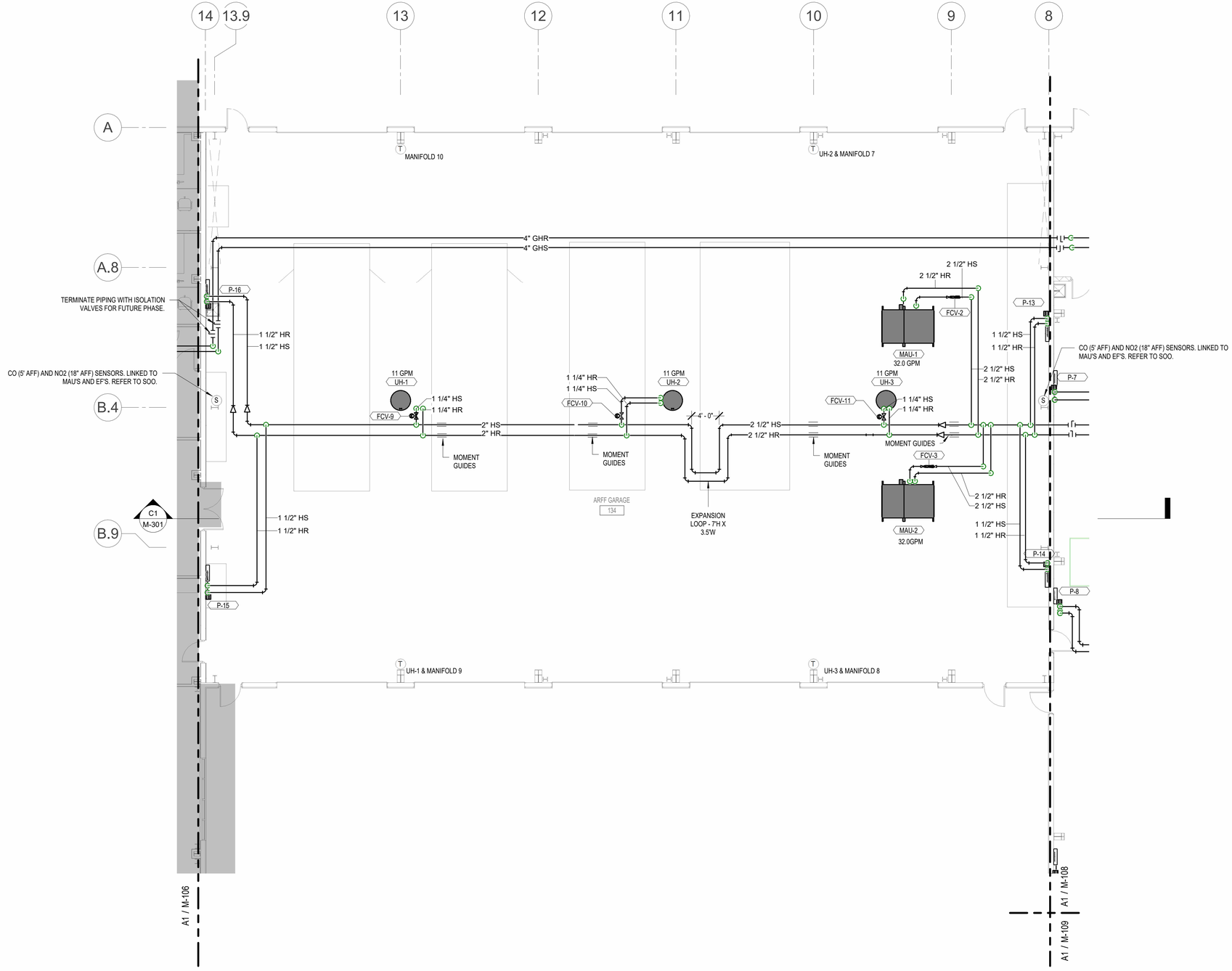

PLAN NORTH

A1 PIPING FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR PIPING PLAN - AREA B (ADD ALT. NO. 1)

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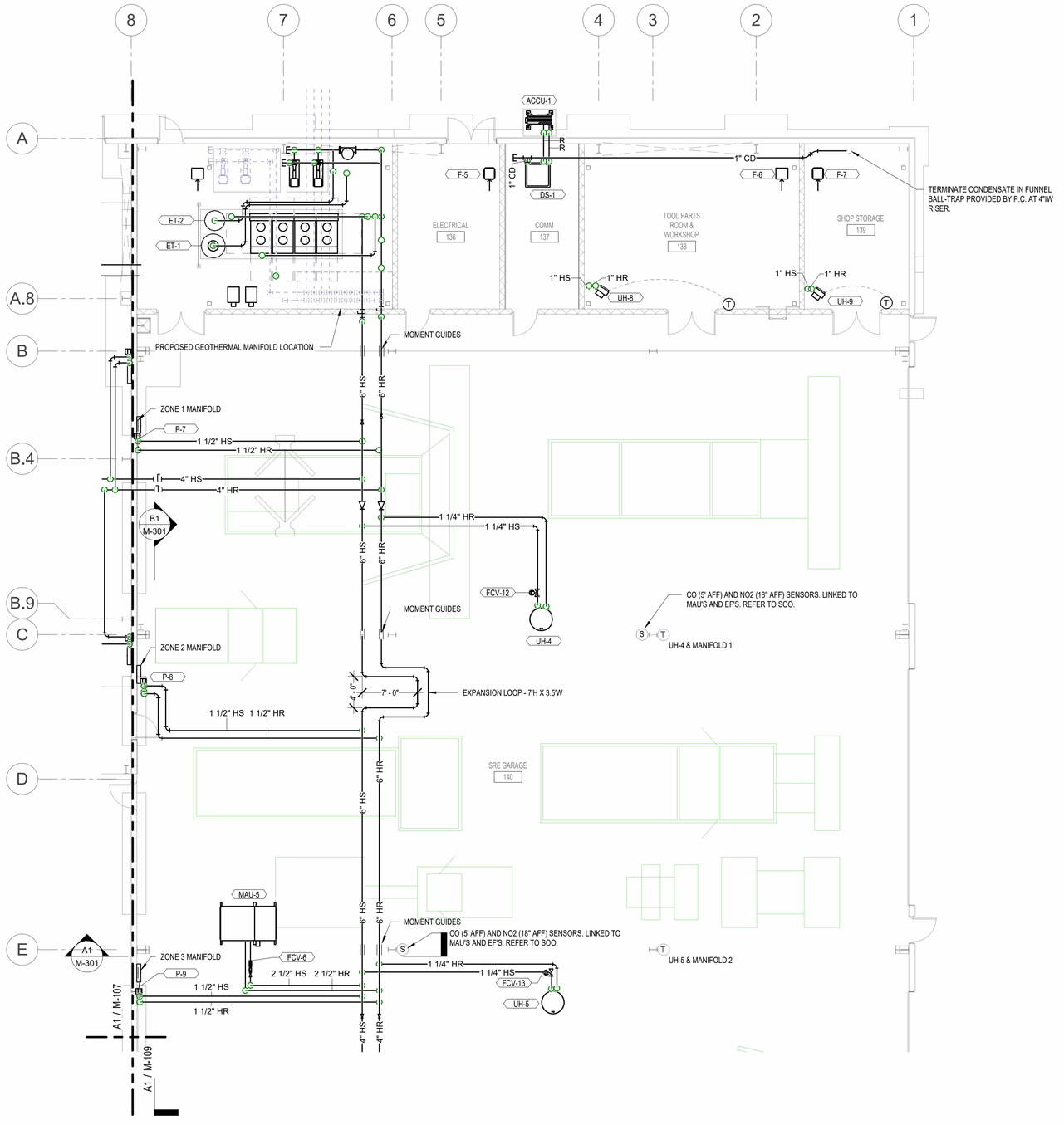

A1 PIPING FLOOR PLAN - AREA C
SCALE: 1/8" = 1'-0"

0 4" 8" 16"

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FIRST FLOOR PIPING PLAN - AREA C

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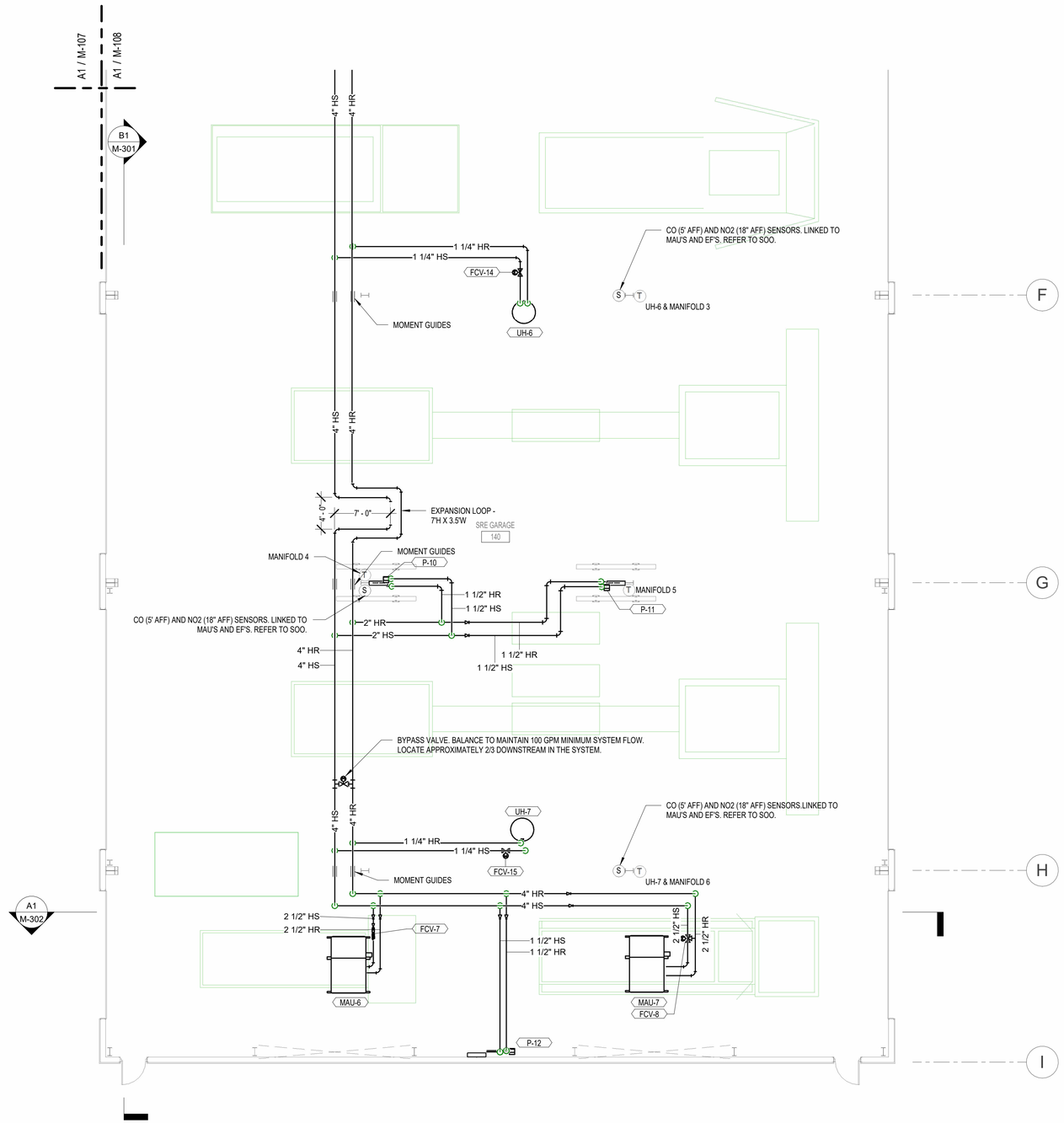

PLAN NORTH

A1 PIPING FLOOR PLAN - AREA D
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR PIPING PLAN - AREA D

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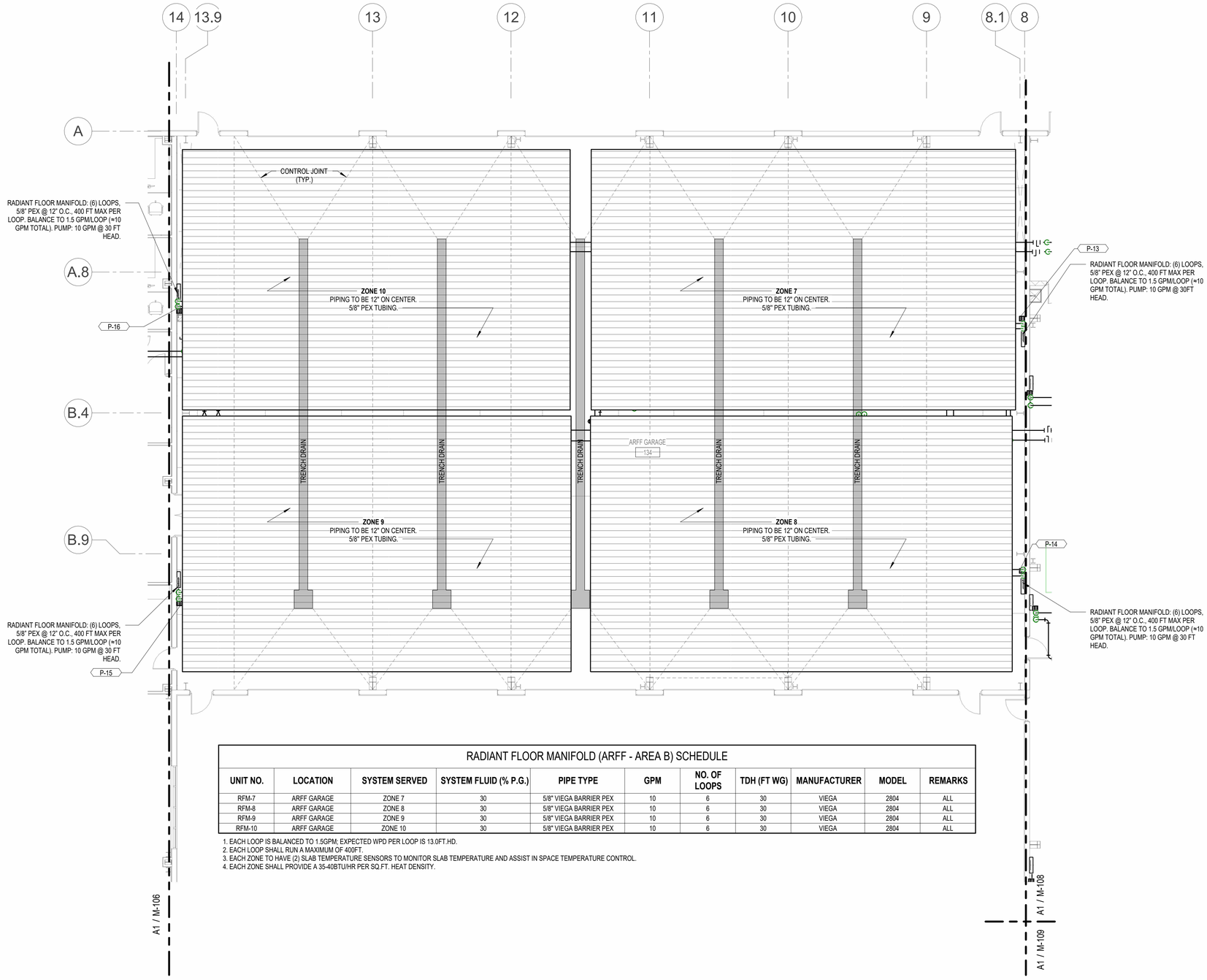

RADIANT FLOOR MANIFOLD (ARFF - AREA B) SCHEDULE

UNIT NO.	LOCATION	SYSTEM SERVED	SYSTEM FLUID (% P.G.)	PIPE TYPE	GPM	NO. OF LOOPS	TDH (FT WG)	MANUFACTURER	MODEL	REMARKS
RFM-7	ARFF GARAGE	ZONE 7	30	5/8" VIEGA BARRIER PEX	10	6	30	VIEGA	2804	ALL
RFM-8	ARFF GARAGE	ZONE 8	30	5/8" VIEGA BARRIER PEX	10	6	30	VIEGA	2804	ALL
RFM-9	ARFF GARAGE	ZONE 9	30	5/8" VIEGA BARRIER PEX	10	6	30	VIEGA	2804	ALL
RFM-10	ARFF GARAGE	ZONE 10	30	5/8" VIEGA BARRIER PEX	10	6	30	VIEGA	2804	ALL

1. EACH LOOP IS BALANCED TO 1.5GPM; EXPECTED WPD PER LOOP IS 13.0FT.HD.
2. EACH LOOP SHALL RUN A MAXIMUM OF 400FT.
3. EACH ZONE TO HAVE (2) SLAB TEMPERATURE SENSORS TO MONITOR SLAB TEMPERATURE AND ASSIST IN SPACE TEMPERATURE CONTROL.
4. EACH ZONE SHALL PROVIDE A 35-40BTU/HR PER SQ.FT. HEAT DENSITY.

PLAN NORTH

A1 RADIANT FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR IN FLOOR HEATING - AREA B (ADD ALT. NO. 1)

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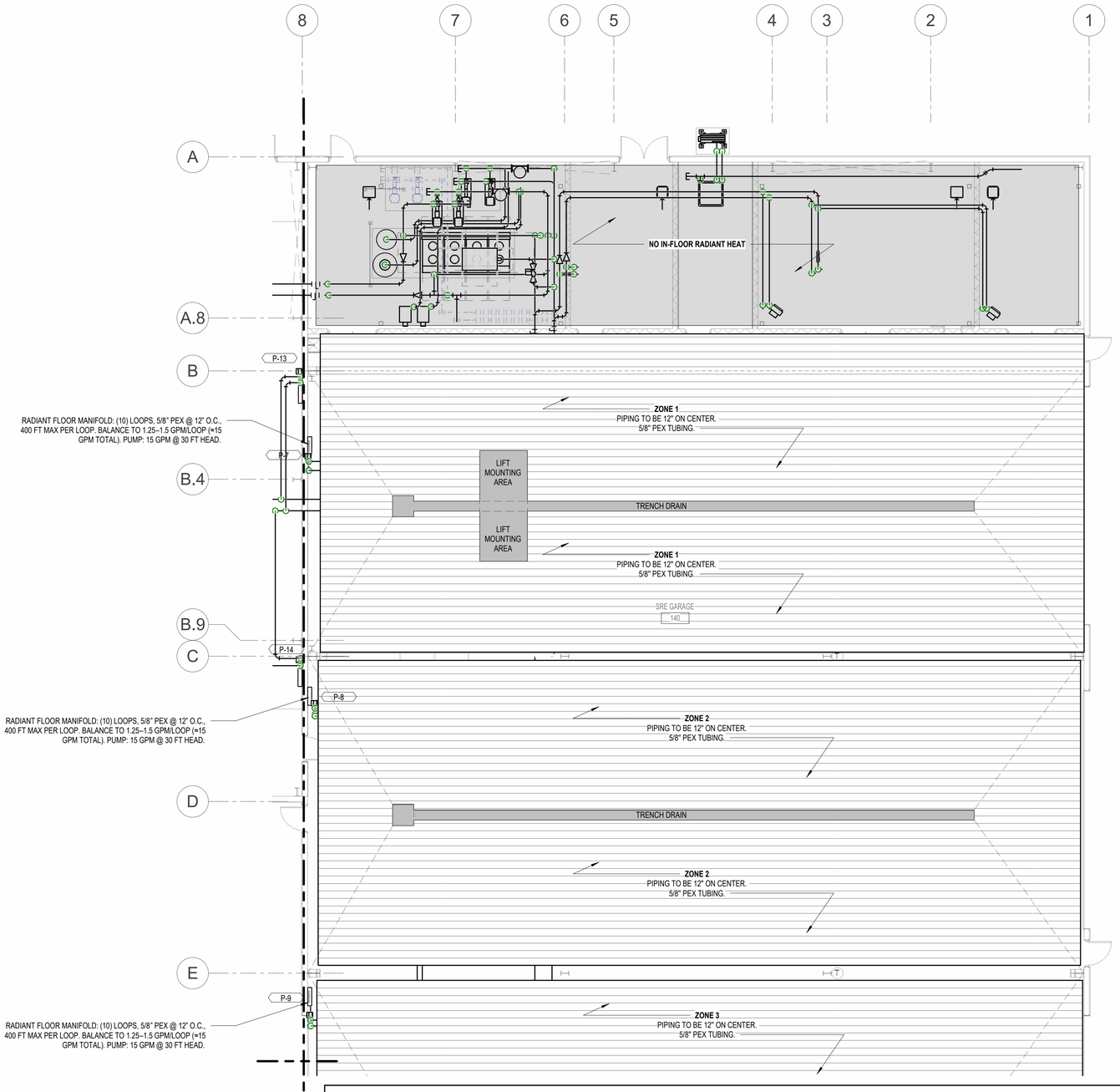

RADIANT FLOOR MANIFOLD (SRE - AREA C) SCHEDULE

UNIT NO.	LOCATION	SYSTEM SERVED	SYSTEM FLUID (% P.G.)	PIPE TYPE	GPM	NO. OF LOOPS	TDH (FT WG)	MANUFACTURER	MODEL	REMARKS
RFM-1	SRE GARAGE	ZONE 1	30	5/8" VIEGA BARRIER PEX	15	10	30	VIEGA	2804	ALL
RFM-2	SRE GARAGE	ZONE 2	30	5/8" VIEGA BARRIER PEX	15	10	30	VIEGA	2804	ALL
RFM-3	SRE GARAGE	ZONE 3	30	5/8" VIEGA BARRIER PEX	15	10	30	VIEGA	2804	ALL

1. EACH LOOP IS BALANCED TO 1.5GPM; EXPECTED WPD PER LOOP IS 13.0FT.HD.
2. EACH LOOP SHALL RUN A MAXIMUM OF 400FT.
3. EACH ZONE TO HAVE (2) SLAB TEMPERATURE SENSORS TO MONITOR SLAB TEMPERATURE AND ASSIST IN SPACE TEMPERATURE CONTROL.
4. EACH ZONE SHALL PROVIDE A 35-40BTU/HR PER SQ.FT. HEAT DENSITY.

PLAN NORTH

A1 RADIANT FLOOR PLAN - AREA C
SCALE: 1/8" = 1'-0"

0 4" 8" 16"

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FIRST FLOOR IN FLOOR HEATING - AREA C

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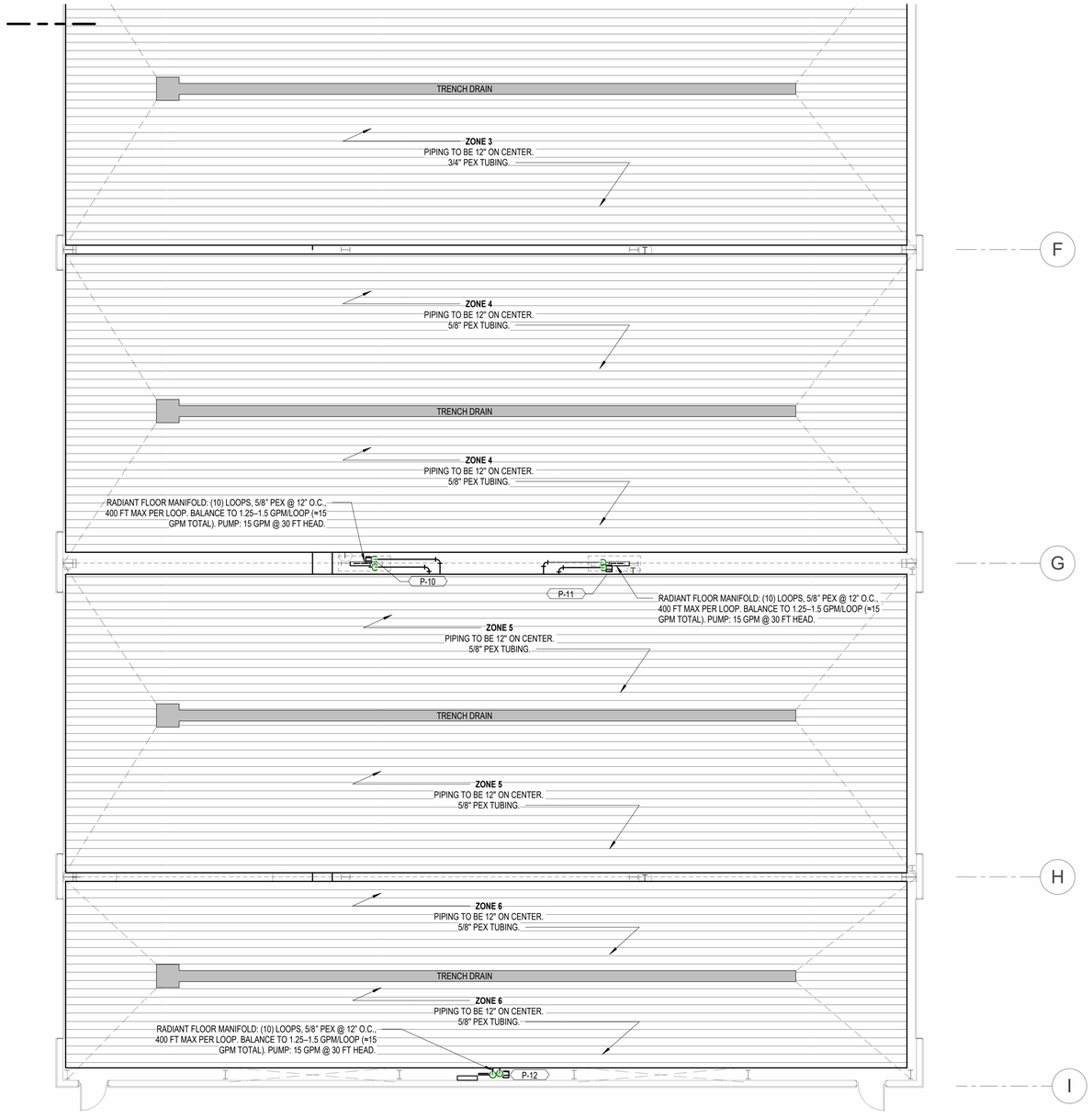

RADIANT FLOOR MANIFOLD (SRE - AREA D) SCHEDULE

UNIT NO.	LOCATION	SYSTEM SERVED	SYSTEM FLUID (% P.G.)	PIPE TYPE	GPM	NO. OF LOOPS	TDH (FT WG)	MANUFACTURER	MODEL	REMARKS
RFM-4	SRE GARAGE	ZONE 4	30	5/8" VIEGA BARRIER PEX	15	10	30	VIEGA	2804	ALL
RFM-5	SRE GARAGE	ZONE 5	30	5/8" VIEGA BARRIER PEX	15	10	30	VIEGA	2804	ALL
RFM-6	SRE GARAGE	ZONE 6	30	5/8" VIEGA BARRIER PEX	15	10	30	VIEGA	2804	ALL

1. EACH LOOP IS BALANCED TO 1.5GPM; EXPECTED WPD PER LOOP IS 13.0FT.HD.
2. EACH LOOP SHALL RUN A MAXIMUM OF 400FT.
3. EACH ZONE TO HAVE (2) SLAB TEMPERATURE SENSORS TO MONITOR SLAB TEMPERATURE AND ASSIST IN SPACE TEMPERATURE CONTROL.
4. EACH ZONE SHALL PROVIDE A 35-40BTU/HR PER SQ.FT. HEAT DENSITY.

PLAN NORTH

A1 RADIANT FLOOR PLAN - AREA D
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR IN FLOOR HEATING - AREA D

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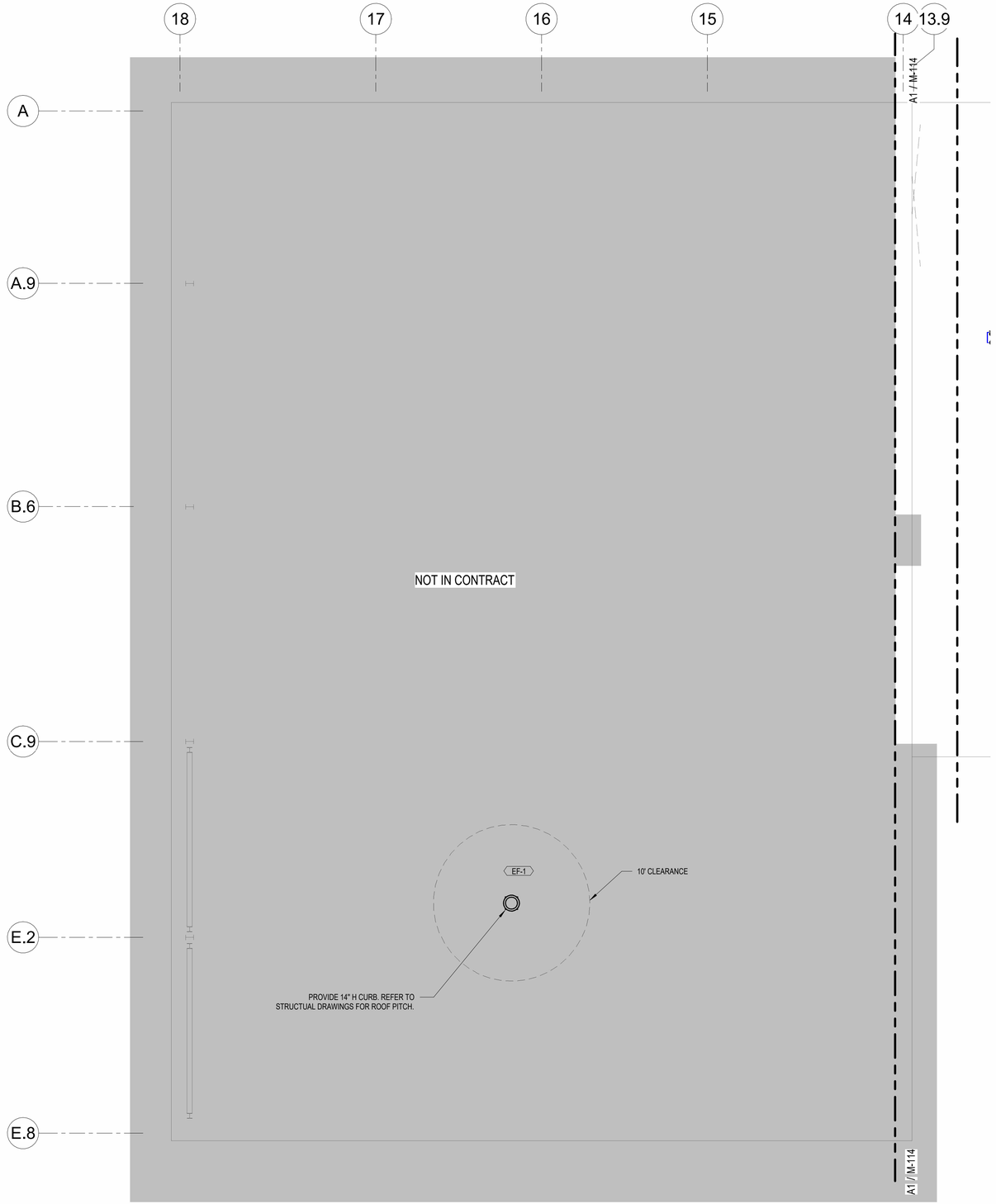

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A1 ROOF HVAC PLAN - AREA A (NOT IN CONTRACT)
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ROOF HVAC PLAN - AREA A (NOT IN CONTRACT)

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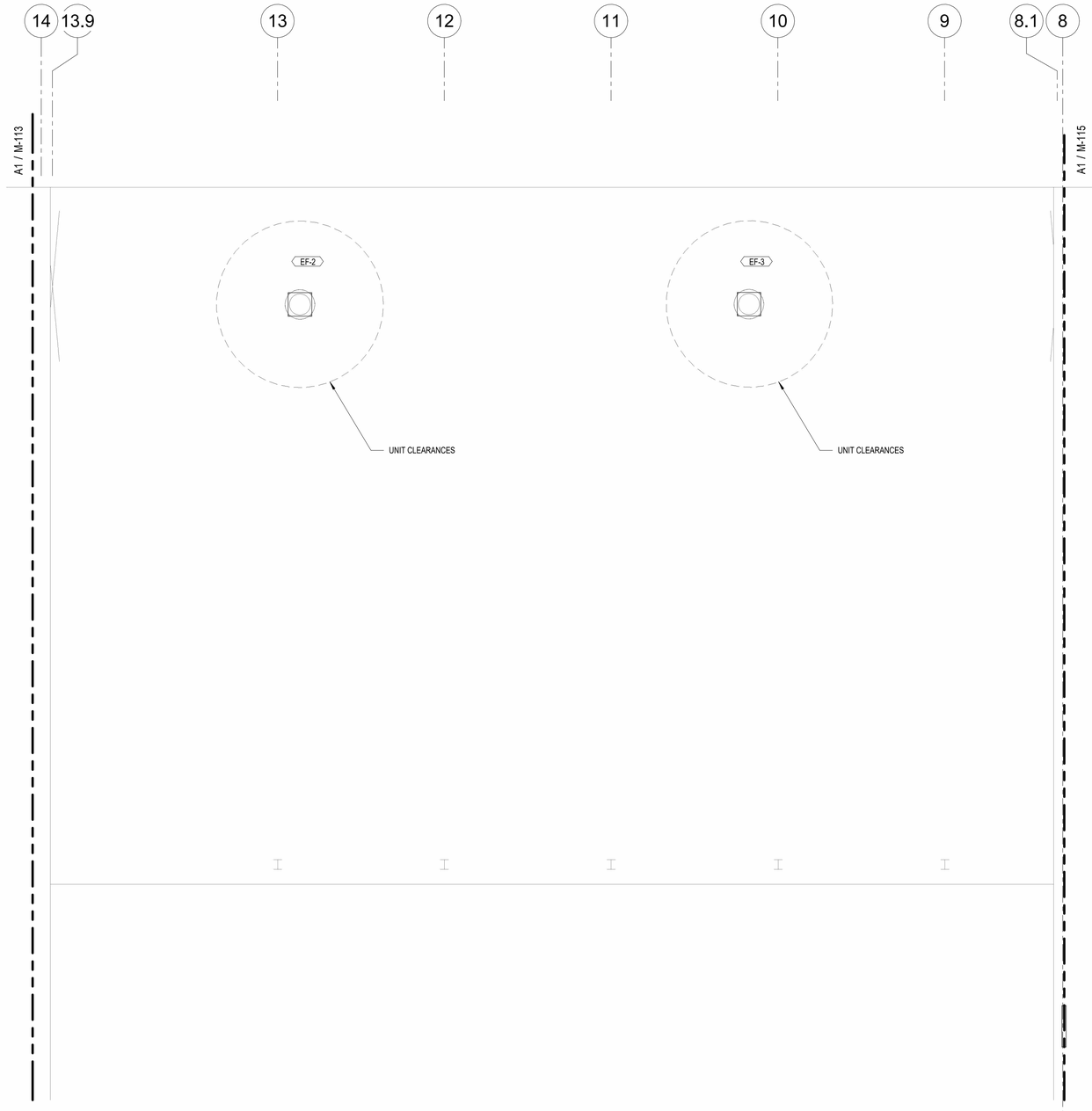

PLAN NORTH

A1 ROOF HVAC PLAN - AREA B
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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3/6/2026
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MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	A.M. CALABRESE
DESIGNED BY:	A.M. CALABRESE
CHECKED BY:	A.J. MILNE, P.E.

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ROOF HVAC PLAN - AREA B (ADD ALT. NO.1)

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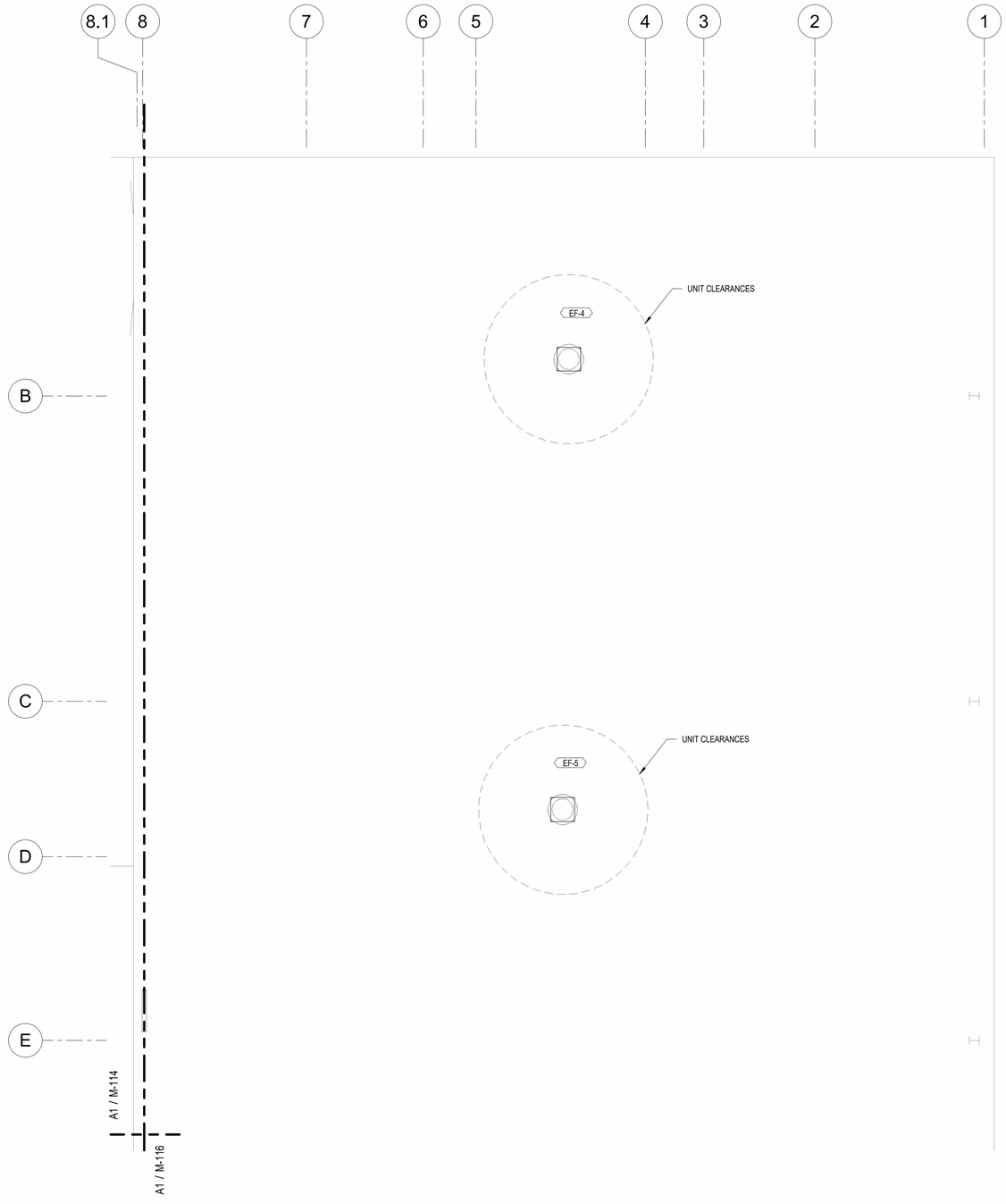

PLAN NORTH

A1 ROOF HVAC PLAN - AREA C
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ROOF HVAC PLAN - AREA C

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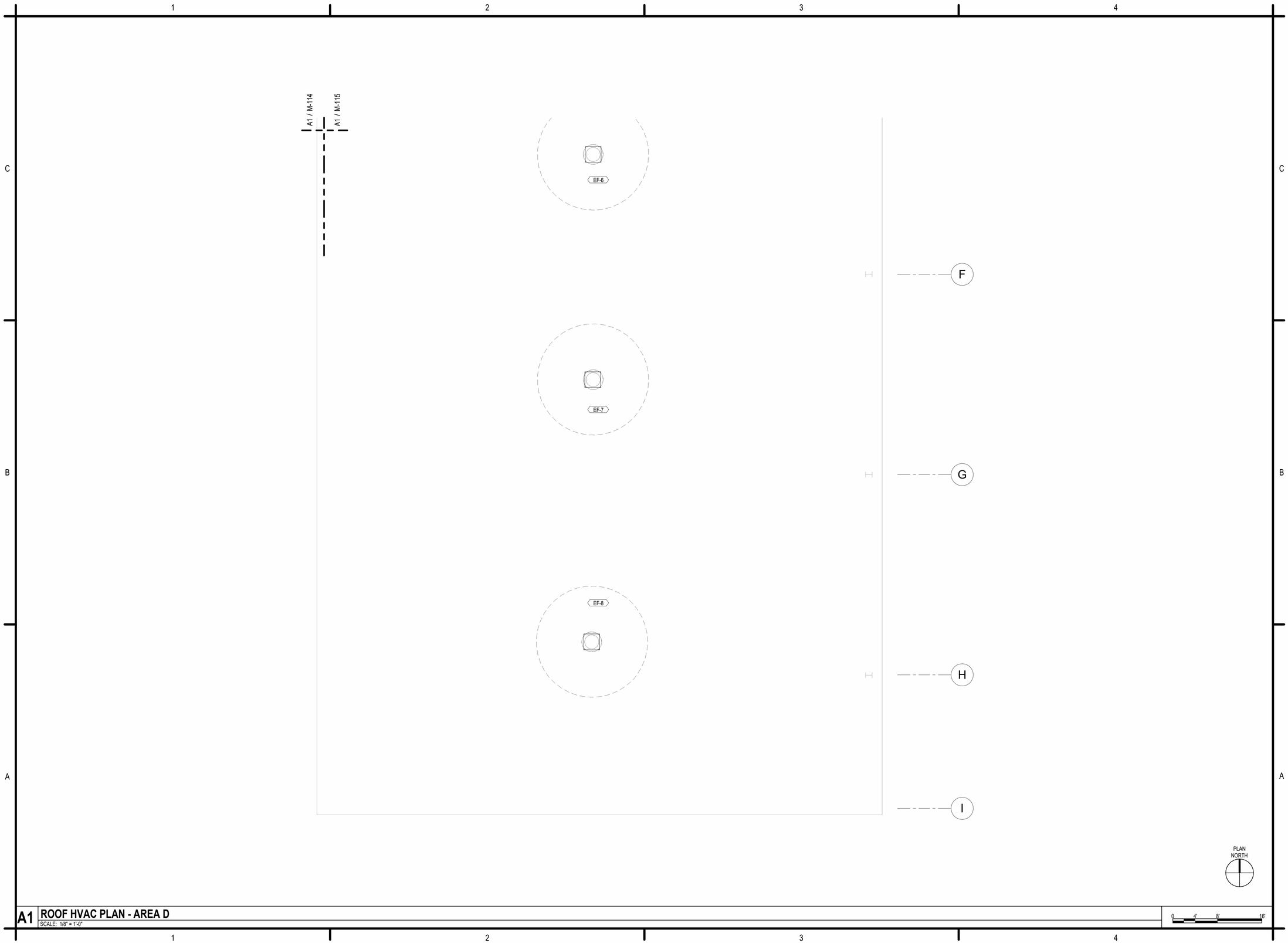

A1 ROOF HVAC PLAN - AREA D
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ROOF HVAC PLAN - AREA D

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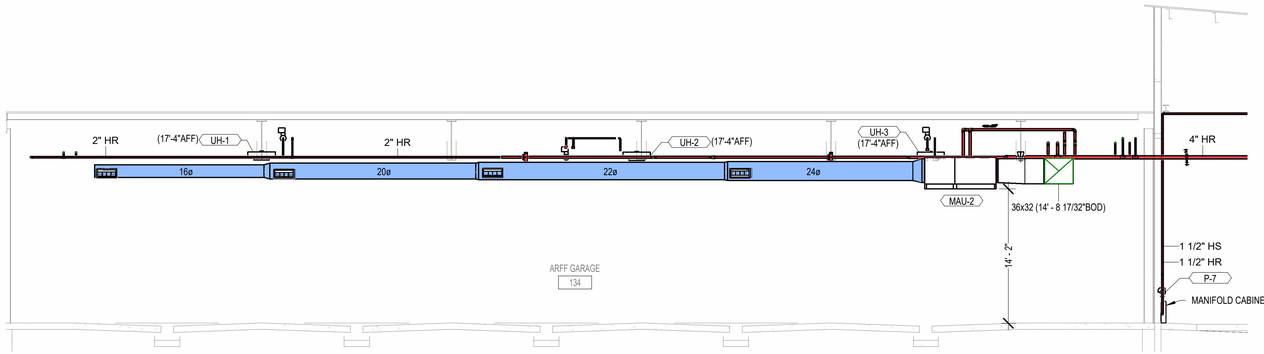
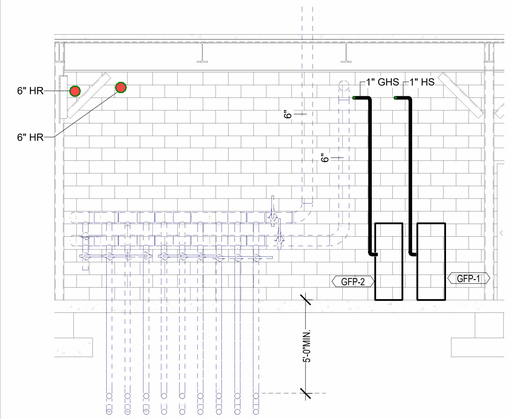
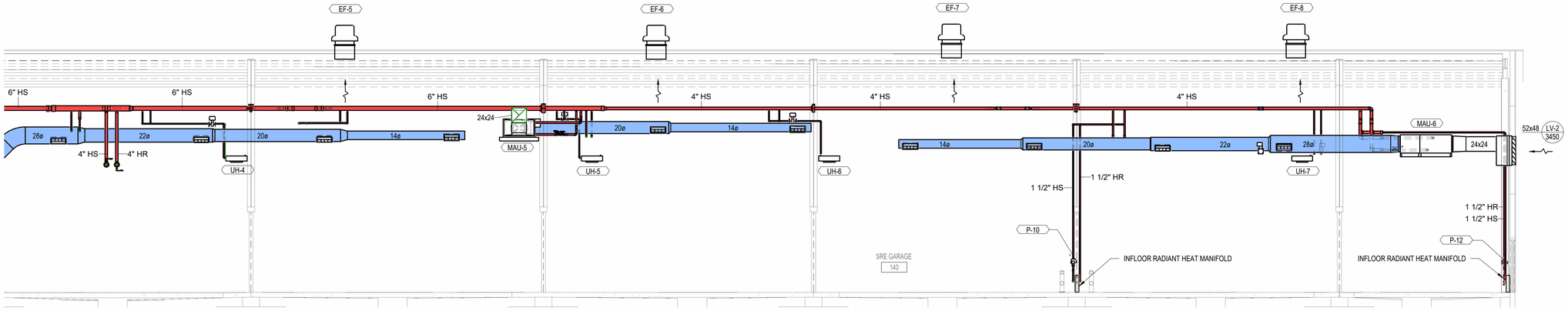


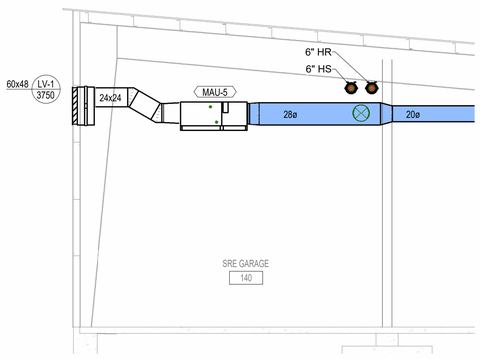
C1 ARFF GARAGE - SECTION 1
SCALE: 1/8" = 1'-0"



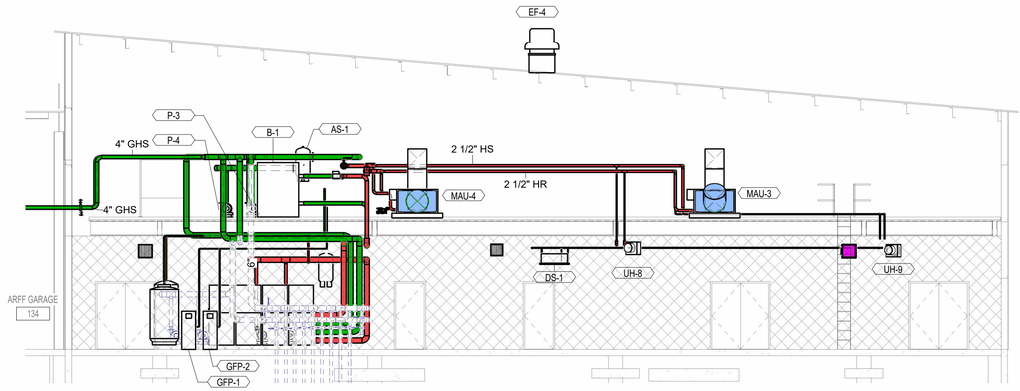
A4 MANIFOLD PIPING DETAIL
SCALE: 1/4" = 1'-0"



B1 SRE GARAGE - SECTION 1
SCALE: 1/8" = 1'-0"



A1 MAU-5 ELEVATION
SCALE: 1/8" = 1'-0"



A2 MECHANICAL ELEVATION
SCALE: 1/8" = 1'-0"

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ELEVATIONS

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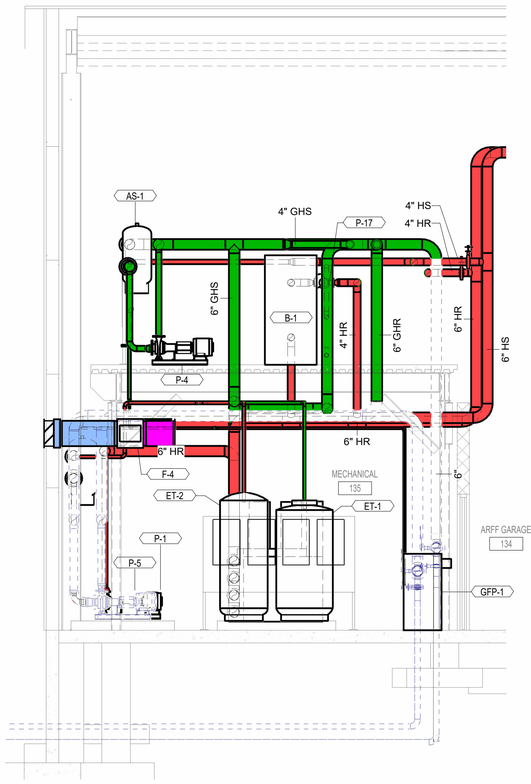
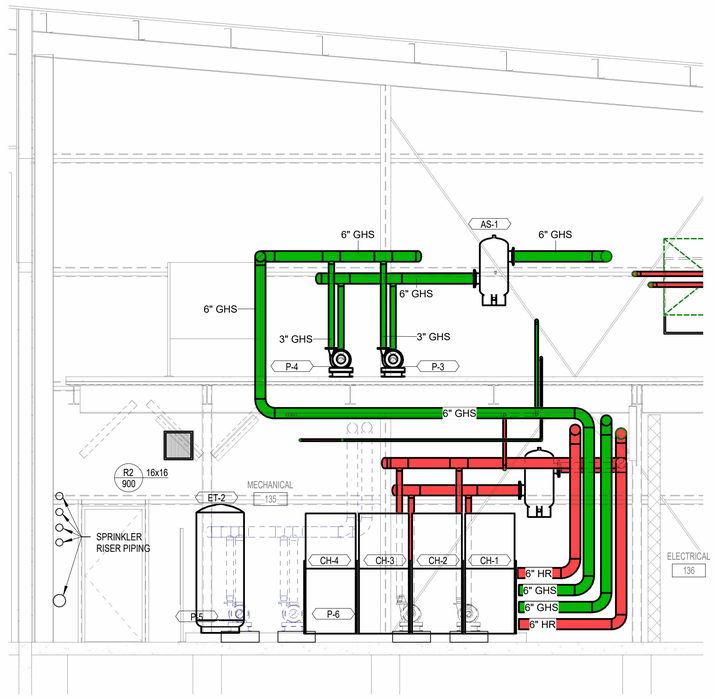


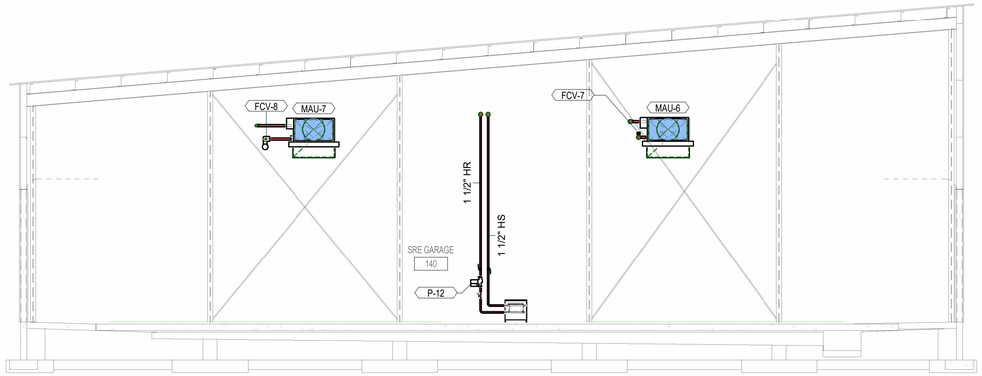
B1 MECHANICAL ROOM - SECTION 1
SCALE: 1/4" = 1'-0"

0 2' 4' 8'



B3 MECHANICAL ROOM - SECTION 2
SCALE: 1/4" = 1'-0"

0 2' 4' 8'



A1 SRE GARAGE - SECTION 2
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ELEVATIONS

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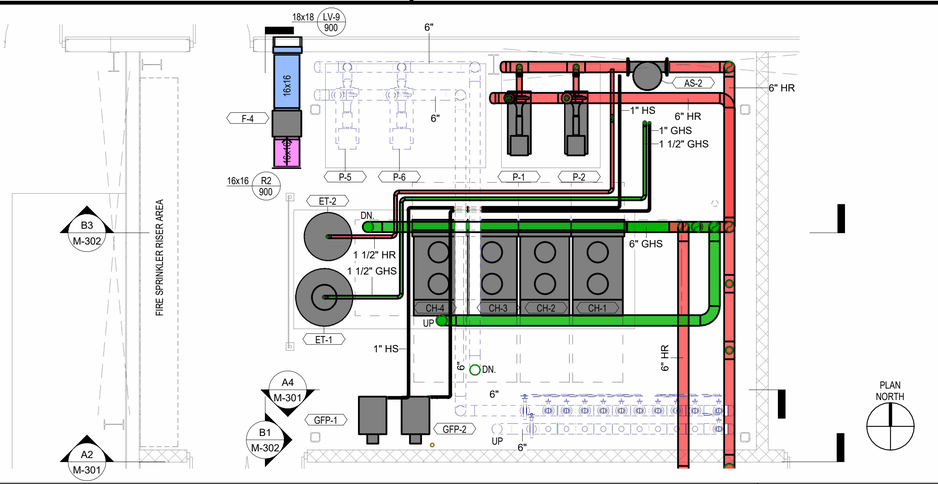
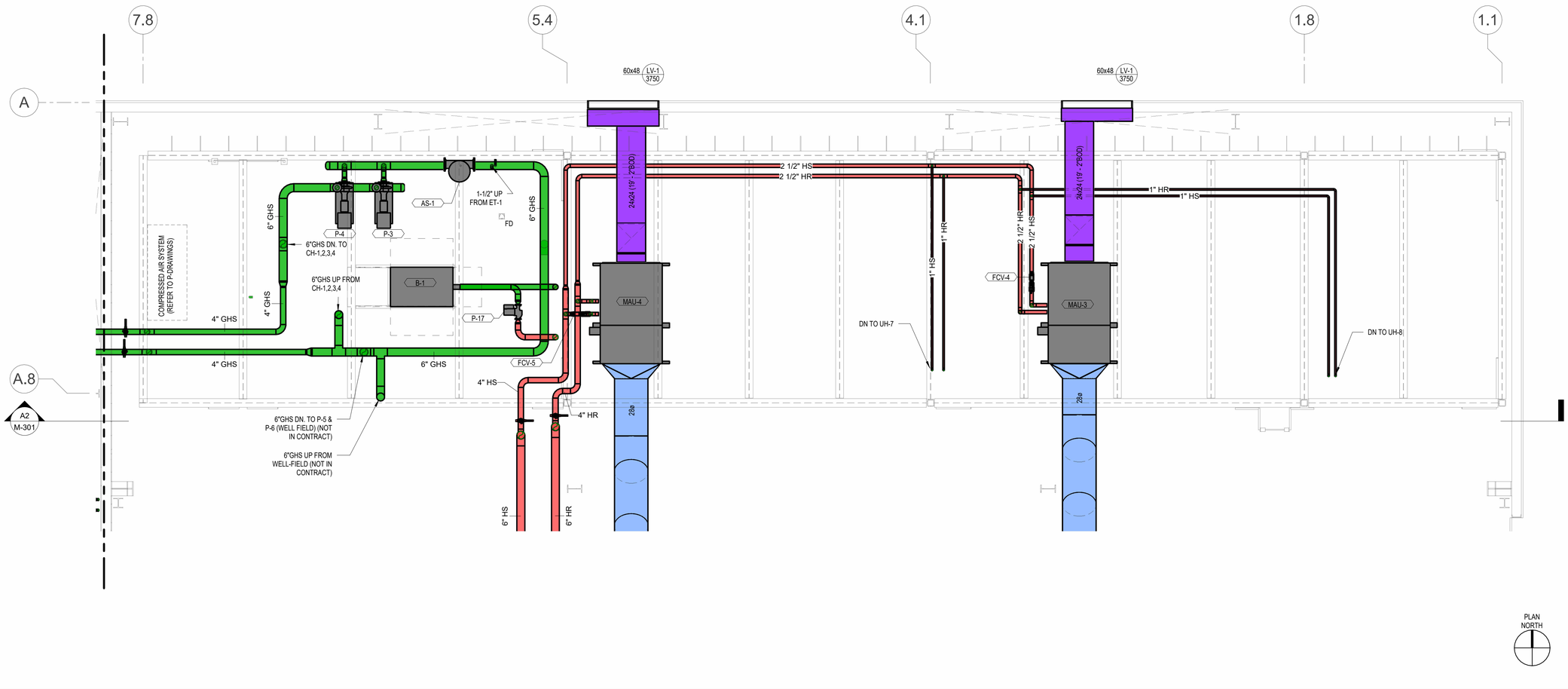


C3 MECHANICAL ROOM ENLARGED VIEW
SCALE: 1/4" = 1'-0"



A1 MEZZIANE ENLARGED PLAN
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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ENLARGED PLANS

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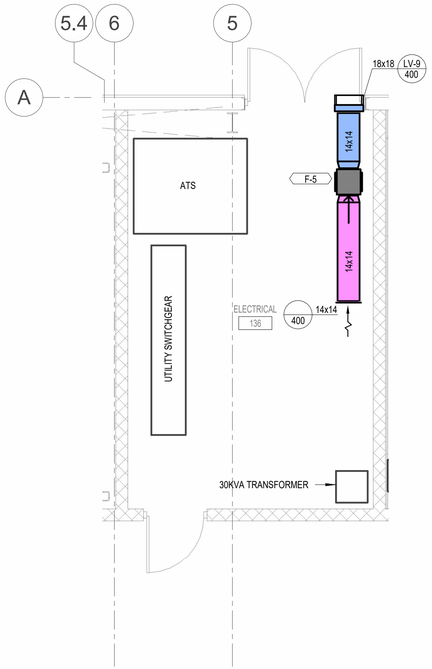

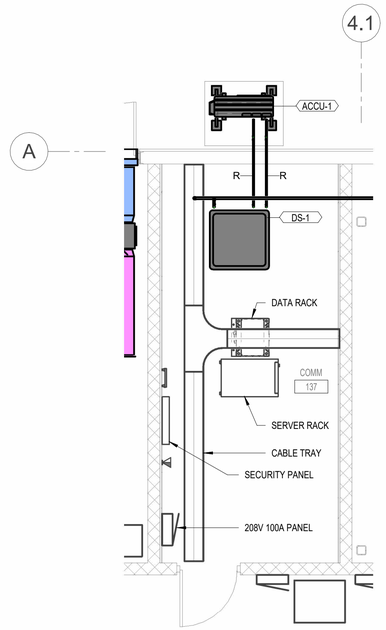

COMM 137 HEAT LOAD SUMMARY

EQUIPMENT/HEAT SOURCE	QTY.	BTU/HR	TOTAL BTU/HR	
208V - 100A PANEL	1	1,774.76	1,774.76	
SECURITY CARE KEY ACCESS PANEL	1	500.00	500.00	
DATA RACK	1	13,652.00	13,652.00	
SERVER RACK	1	13652	13,652.00	
ENVELOPE HEAT GAIN	1	2,955.00	2,955.00	
		TOTAL	**32,533.76**	**BTU/HR**

PLAN NORTH

PLAN NORTH

A3 ELECTRICAL 136 ENLARGED VIEW
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

A4 COMM 137 HVAC ENLARGED VIEW
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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ENLARGED PLANS

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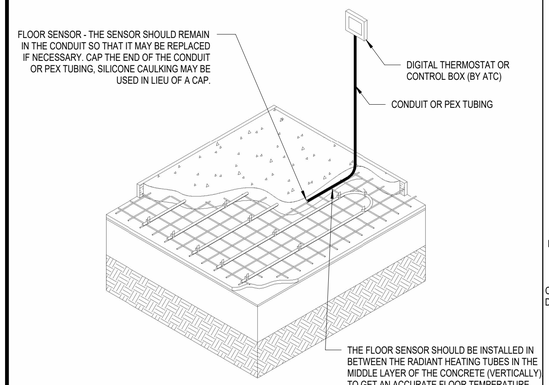
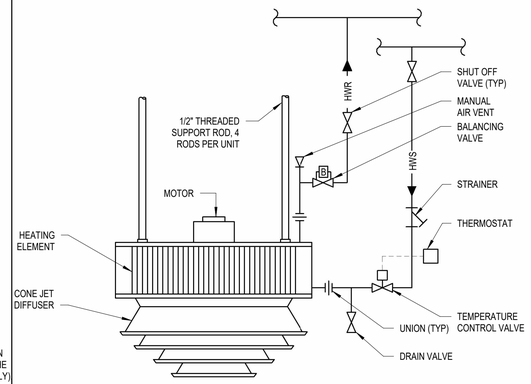


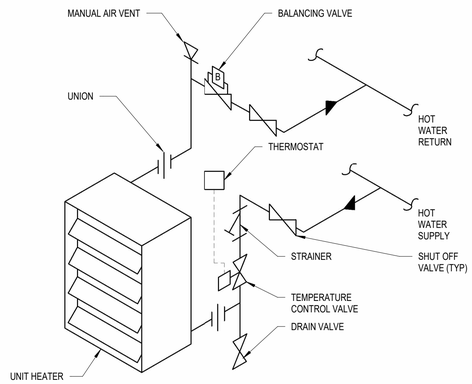
C1 RADIANT FLOOR SENSOR INSTALLATION

SCALE: NOT TO SCALE



C2 UNIT HEATER PIPING DETAIL (VERTICAL)

SCALE: NOT TO SCALE

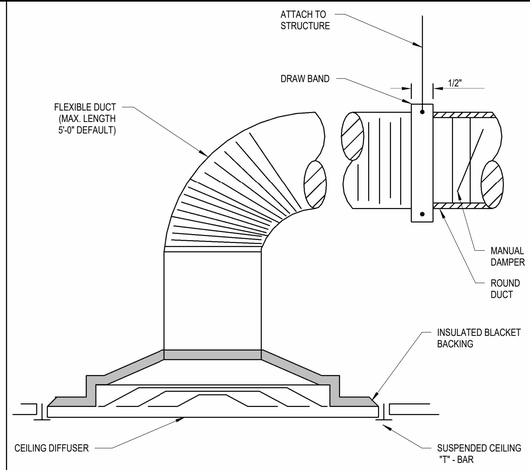


NOTES

1. SEE DIVISION 23 SPECIFICATIONS FOR VALVE INFORMATION AND REQUIREMENTS.

C3 UNIT HEATER PIPING DETAIL (HORIZONTAL)

SCALE: NOT TO SCALE

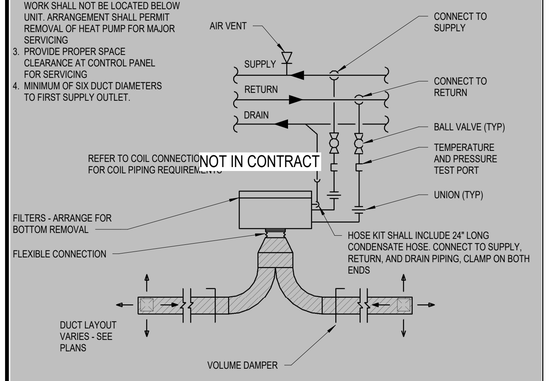


C4 CEILING DIFFUSER DETAIL

SCALE: NOT TO SCALE

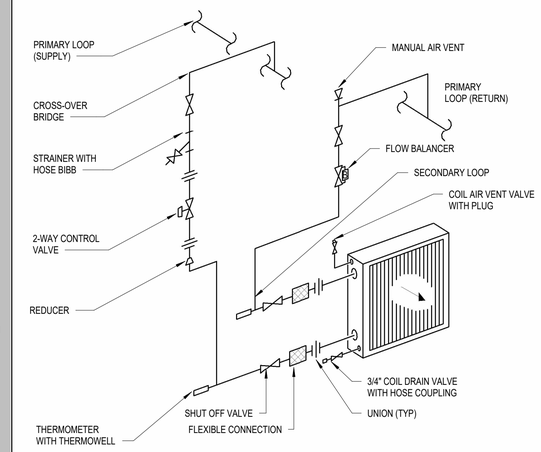
NOTES:

1. HANG UNIT FROM STRUCTURE. PROVIDE RODS, SUPPORTS AND VIBRATION ISOLATORS.
2. PROVIDE ACCESSIBILITY FROM BELOW UNIT. MECHANICAL/ELECTRICAL WORK SHALL NOT BE LOCATED BELOW UNIT. ARRANGEMENT SHALL PERMIT REMOVAL OF HEAT PUMP FOR MAJOR SERVICING
3. PROVIDE PROPER SPACE CLEARANCE AT CONTROL PANEL FOR SERVICING
4. MINIMUM OF SIX DUCT DIAMETERS TO FIRST SUPPLY OUTLET.



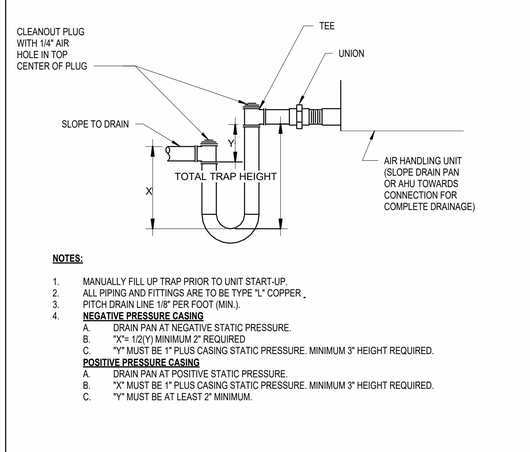
B1 HEAT PUMP PIPING DETAIL (NOT IN CONTRACT)

SCALE: NOT TO SCALE



B2 MAKE UP AIR UNIT DETAIL

SCALE: NOT TO SCALE



NOTES:

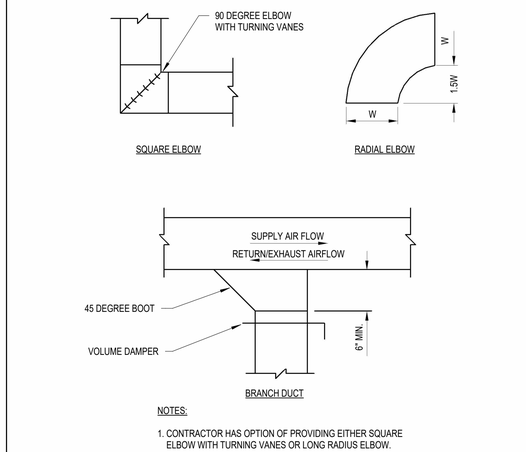
1. MANUALLY FILL UP TRAP PRIOR TO UNIT START-UP.
2. ALL PIPING AND FITTINGS ARE TO BE TYPE "L" COPPER .
3. PITCH DRAIN LINE 1/8" PER FOOT (MIN.).
4. **NEGATIVE PRESSURE CASING**
   - A. DRAIN PAN AT NEGATIVE STATIC PRESSURE.
   - B. "X"= 1/2(Y) MINIMUM 2" REQUIRED
   - C. "Y" MUST BE 1" PLUS CASING STATIC PRESSURE. MINIMUM 3" HEIGHT REQUIRED.

POSITIVE PRESSURE CASING

- A. DRAIN PAN AT POSITIVE STATIC PRESSURE.
- B. "X" MUST BE 1" PLUS CASING STATIC PRESSURE. MINIMUM 3" HEIGHT REQUIRED.
- C. "Y" MUST BE AT LEAST 2" MINIMUM.

B3 AC UNIT CONDENSATE DRAIN DETAIL

SCALE: NOT TO SCALE

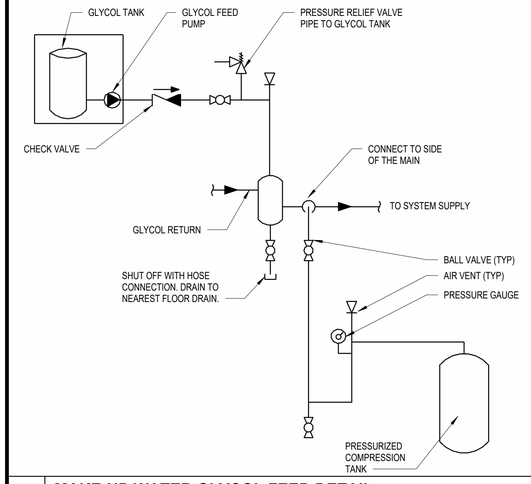


NOTES:

1. CONTRACTOR HAS OPTION OF PROVIDING EITHER SQUARE ELBOW WITH TURNING VANES OR LONG RADIUS ELBOW.

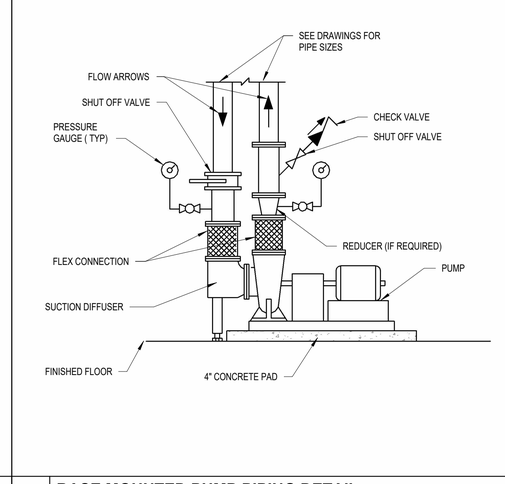
B4 DUCT DETAIL

SCALE: NOT TO SCALE



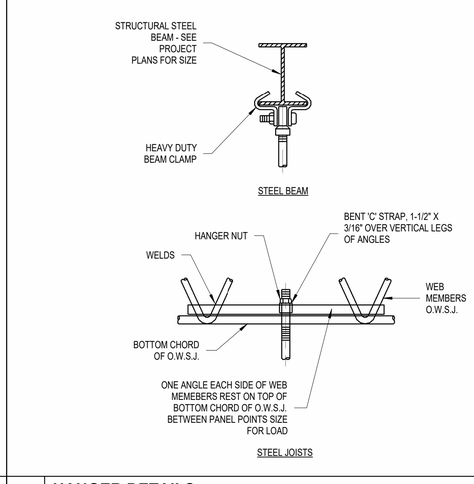
A1 MAKE-UP WATER GLYCOL FEED DETAIL

SCALE: NOT TO SCALE



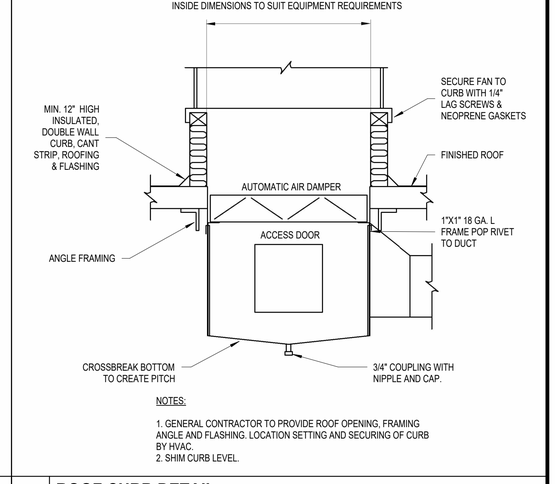
A2 BASE MOUNTED PUMP PIPING DETAIL

SCALE: NOT TO SCALE



A3 HANGER DETAILS

SCALE: NOT TO SCALE



NOTES:

1. GENERAL CONTRACTOR TO PROVIDE ROOF OPENING, FRAMING ANGLE AND FLASHING. LOCATION SETTING AND SECURING OF CURB BY HVAC.
2. SHIM CURB LEVEL.

A4 ROOF CURB DETAIL

SCALE: NOT TO SCALE

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DETAILS

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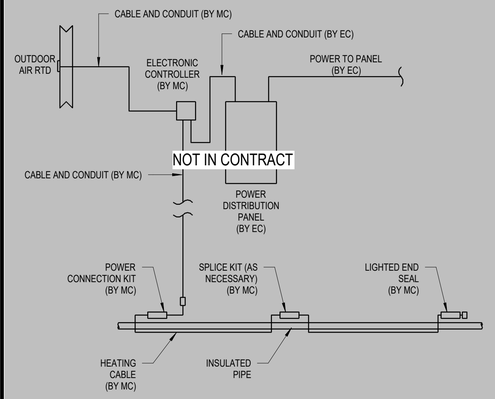
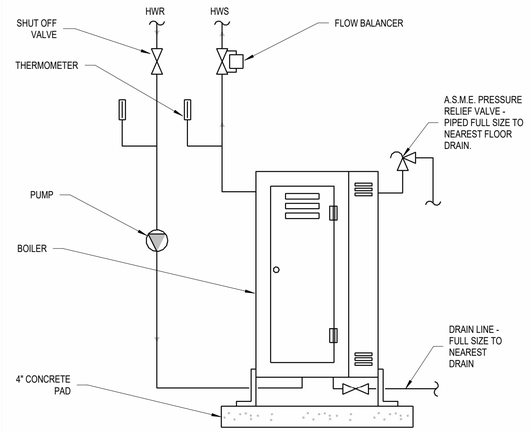
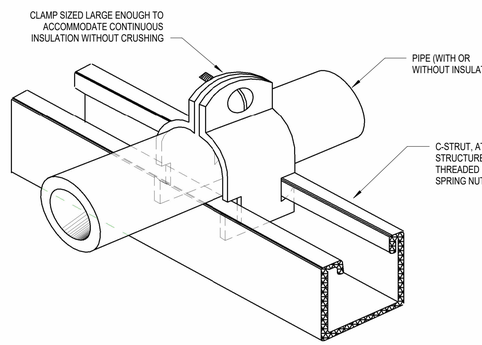


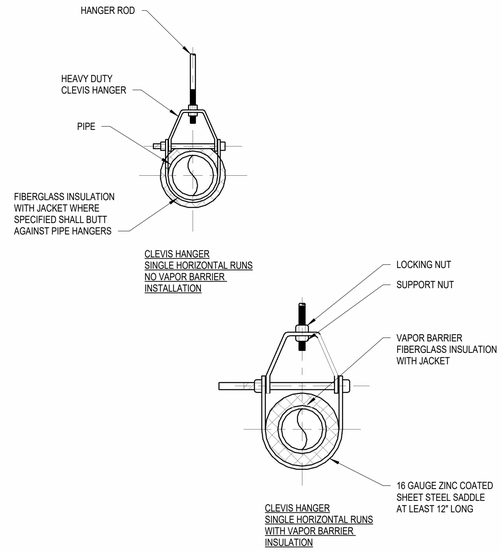
C1 HEAT TRACE SYSTEM LAYOUT (NOT IN CONTRACT)
SCALE: NOT TO SCALE

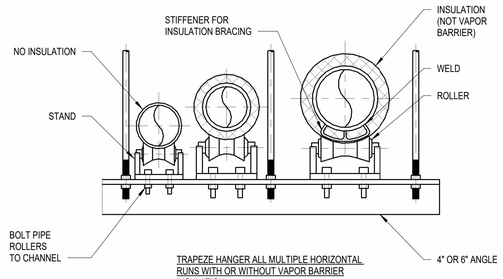


C2 ELECTRIC HOT WATER BOILER PIPING DETAIL
SCALE: NOT TO SCALE

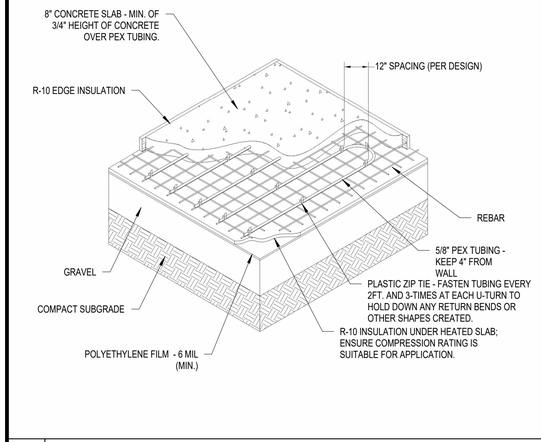


C3 WALL PIPE SUPPORT
SCALE: NOT TO SCALE

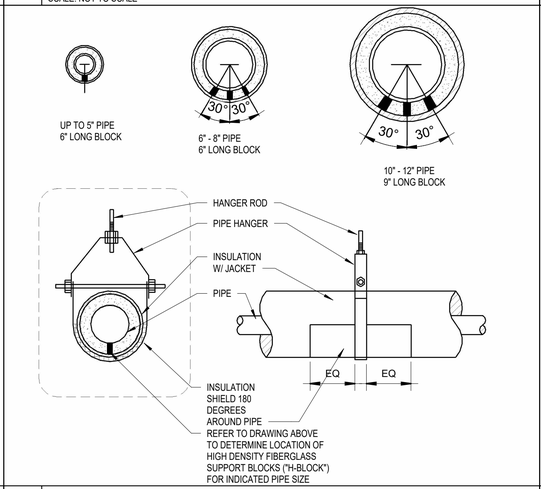




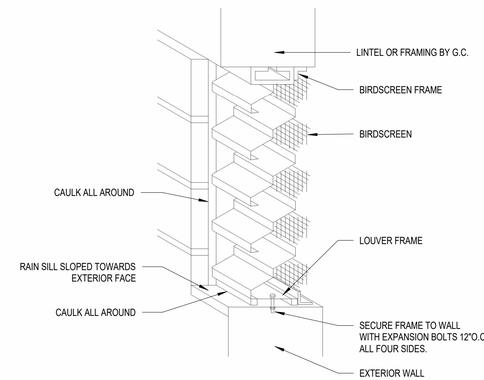
B4 PIPE SUPPORT WITH ROLLER DETAILS
SCALE: NOT TO SCALE



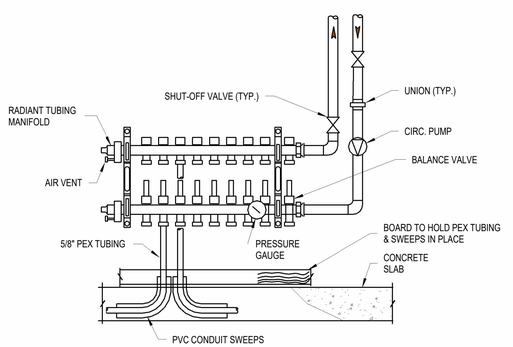
B1 SLAB ON GRADE INSTALLATION OF RADIANT FLOOR PIPING
SCALE: NOT TO SCALE



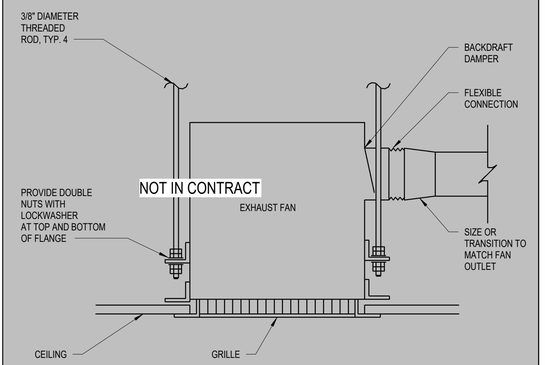
B2 INSULATION SHIELD & BLOCKING DETAIL
SCALE: NOT TO SCALE



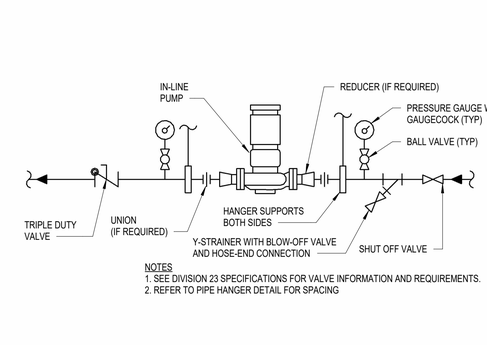
B3 TYPICAL OUTSIDE LOUVER DETAIL
SCALE: NOT TO SCALE



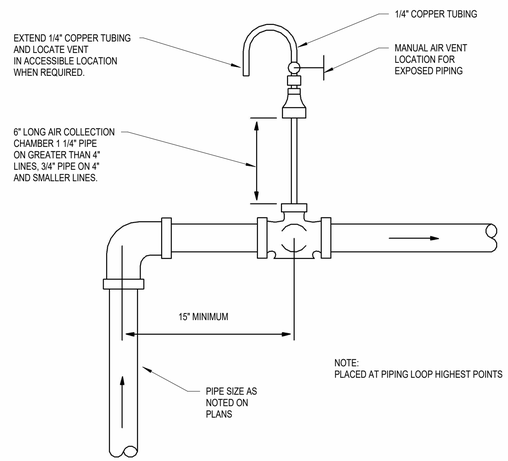
A1 MANIFOLD DETAIL
SCALE: NOT TO SCALE



A2 CEILING EXHAUST FAN DETAIL (NOT IN CONTRACT)
SCALE: NOT TO SCALE



A3 IN-LINE PUMP DETAIL
SCALE: NOT TO SCALE



A4 MANUAL AIR VENT DETAIL
SCALE: NOT TO SCALE

C&S COMPANIES®
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CERTIFICATE OF AUTHORIZATION# 0021365

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3/6/2026

REGISTRATION EXPIRES: 10/31/2026

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	A.M. CALABRESE
DESIGNED BY:	A.M. CALABRESE
CHECKED BY:	A.J. MILNE, P.E.

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

DETAILS

M-502

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HEAT PUMP DOAS UNIT SCHEDULE-(DOAS)(NOT IN CONTRACT)

UNIT NO.	LOC.	AREA SERVED	AIR FLOW (CFM)	HEAT PUMP - HEATING PERFORMANCE		HEAT PUMP - COOLING PERFORMANCE						COMPRESSORS		ELECTRIC PREHEAT				WATER-SIDE PERFORMANCE (25%P.G.)								SUPPLY AIR FAN			EER (SEER)	ELECTRICAL DATA				WEIGHT (LBS)	BASIS OF DESIGN		REMARKS
				INPUT MBH	EAT (°F)	LAT (°F)	TOTAL MBH	SENSIBLE MBH	EDB (°F)	EWB (°F)	LDB (°F)	LWB (°F)	QUANTITY	# OF STAGES	KW	MBH	EAT(°F)	LAT(°F)	APD	COOLING				HEATING PERFORMANCE				ESP (IN WG)	RPM	HP		VOLTS	PHASE	MCA	MOCP		MANUFACTURER	MODEL	
																				EWT (°F)	LWT (°F)	GPM	WPD (FT.HD.)	EWT (°F)	LWT (°F)	GPM	WPD (FT.HD.)											
DOAS-1	EXTERIOR	OFFICE AREA	1680	95.1	35	87.2	92.4	60.4	88.0	71.0	52.1	52.1	1	--	30	102.4	-5.0	35.0	0.02	85.0	95.0	24.0	15.4	35.0	28.2	24.0	15.4	1.50	1760	2	13.1	480	3	65	70	1365	AAON	RNA-008-A-A-3-GL B0A-00000	ALL

1. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION.
2. PROVIDE MERV 13 PLEATED FILTERS.
3. PROVIDE UNIT WITH R-454B REFRIGERANT.
4. PROVIDE UNIT WITH VARIABLE CAPACITY COMPRESSOR
5. PROVIDE SCR CONTROL ON ELECTRIC PREHEAT HEATER
6. PROVIDE UNIT WITH 115V CONVENIENCE OUTLET
7. PROVIDE UNIT WITH DOUBLE WALL CONSTRUCTION WITH R-16 FOAM INSULATION
8. PROVIDE UNIT WITH SIDE DISCHARGE DUCT CONFIGURATION

LOUVER SCHEDULE (L)

UNIT NO.	SERVICE	TYPE	DEPTH (IN.)	WIDTH (IN.)	HEIGHT (IN.)	FREE AREA (SQ FT)	% FREE AREA	CFM	APD (IN WG)	FACE VELOCITY(FPM)	MATERIAL	FINISH	BIRD SCREEN	BASIS OF DESIGN		REMARKS
														MANUFACTURER	MODEL	
LV-1	MAU-1	FIXED, DRAINABLE	6	60	48	9.60	48	3750	0.10	391	ALUMINUM	2-COAT KYNAR	Yes	GREENHECK	ESD	1,3
LV-2	MAU-2	FIXED, DRAINABLE	6	60	48	9.60	48	3750	0.10	391	ALUMINUM	2-COAT KYNAR	Yes	GREENHECK	ESD	1,3
LV-3	MAU-3	FIXED, DRAINABLE	6	60	48	9.60	48	3750	0.10	391	ALUMINUM	2-COAT KYNAR	Yes	GREENHECK	ESD	1,3
LV-4	MAU-4	FIXED, DRAINABLE	6	60	48	9.60	48	3750	0.10	391	ALUMINUM	2-COAT KYNAR	Yes	GREENHECK	ESD	1,3
LV-5	MAU-5	FIXED, DRAINABLE	6	60	48	9.60	48	3750	0.10	391	ALUMINUM	2-COAT KYNAR	Yes	GREENHECK	ESD	1,3
LV-6	MAU-6	FIXED, DRAINABLE	6	52	48	8.32	48	3450	0.10	415	ALUMINUM	2-COAT KYNAR	Yes	GREENHECK	ESD	1,3
LV-7	MAU-7	FIXED, DRAINABLE	6	52	48	8.32	48	3450	0.10	415	ALUMINUM	2-COAT KYNAR	Yes	GREENHECK	ESD	1,3
LV-8	F-4	FIXED, DRAINABLE	6	18	18	1.13	50	900	0.10	800	ALUMINUM	2-COAT KYNAR	Yes	GREENHECK	ESD	2,3
LV-9	F-5	FIXED, DRAINABLE	6	18	18	1.13	50	400	0.10	356	ALUMINUM	2-COAT KYNAR	Yes	GREENHECK	ESD	2,3
LV-10	F-4	FIXED, DRAINABLE	6	18	18	1.13	50	750	0.10	667	ALUMINUM	2-COAT KYNAR	Yes	GREENHECK	ESD	2,3
LV-11	F-4	FIXED, DRAINABLE	6	18	18	1.13	50	400	0.10	356	ALUMINUM	2-COAT KYNAR	Yes	GREENHECK	ESD	2,3

1. PROVIDE 24 VAC AUTOMATIC AIR DAMPER INTERLOCK DAMPER TO OPEN WHEN SUPPLY FAN IS ON.
2. PROVIDE BACKDRAFT DAMPER
3. COORDINATE FINAL COLOR/FINISH WITH ARCHITECT.

MAKE UP AIR SCHEDULE (MAU) - HYDRONIC

UNIT NO.	LOCATION	AREA SERVED	SUPPLY (CFM)	MIN OA (CFM)	HOT WATER HEATER							SUPPLY FAN					ELECTRICAL			WEIGHT (LBS)	BASIS OF DESIGN		REMARKS
					CAPACITY (MBH)	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	APD (IN WG)	GPM	TYPE	FAN BHP	RPM	TSP (IN WG)	ESP (IN WG)	VOLTS	PHASE	HP		MANUFACTURER	MODEL	
MAU-1	ARFF GARAGE	ARFF GARAGE	3750	0	310.0	-5.0	70.4	130	110	0.4	32	DIRECT	3.18	2519	3.4	2.0	480	3	5	1450	DAIKIN	CAH008GHGC	ALL
MAU-2	ARFF GARAGE	ARFF GARAGE	3750	0	310.0	-5.0	70.4	130	110	0.4	32	DIRECT	3.18	2519	3.4	2.0	480	3	5	1450	DAIKIN	CAH008GHGC	ALL
MAU-3	SRE GARAGE	SRE GARAGE	3450	0	281.0	-5.0	70.0	130	110	0.6	29.4	DIRECT	3.59	3422	3.7	2.0	480	3	3	1425	DAIKIN	CAH006GHGC	ALL
MAU-4	SRE GARAGE	SRE GARAGE	3450	0	281.0	-5.0	70.0	130	110	0.6	29.4	DIRECT	3.59	3422	3.7	2.0	480	3	3	1425	DAIKIN	CAH006GHGC	ALL
MAU-5	SRE GARAGE	SRE GARAGE	3450	0	281.0	-5.0	70.0	130	110	0.6	29.4	DIRECT	3.59	3422	3.7	2.0	480	3	3	1425	DAIKIN	CAH006GHGC	ALL
MAU-6	SRE GARAGE	SRE GARAGE	3450	0	281.0	-5.0	70.0	130	110	0.6	29.4	DIRECT	3.59	3422	3.7	2.0	480	3	3	1425	DAIKIN	CAH006GHGC	ALL
MAU-7	SRE GARAGE	SRE GARAGE	3450	0	281.0	-5.0	70.0	130	110	0.6	29.4	DIRECT	3.59	3422	3.7	2.0	480	3	3	1425	DAIKIN	CAH006GHGC	ALL

1. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION.
2. PROVIDE MERV 13 PLEATED FILTERS.
3. PROVIDE UNIT WITH R-13 INJECTED FOAM INSULATION.
4. PROVIDE UNIT WITH HORIZONTAL (END TO END) DUCT CONFIGURATION.
5. PROVIDE UNIT WITH FREEZE PROTECTION
6. PROVIDE UNIT WITH FACE AND BYPASS OPTION.

FAN SCHEDULE (EF & F)

MARK	SERVICE	LOCATION	TYPE	ARRANGEMENT	CFM	MIN AIRFLOW (CFM)	ESP (IN WG)	BHP	RPM	MAX. SONES	ELECTRICAL DATA			BASIS OF DESIGN		REMARKS
											VOLTS	PHASE	HP(WATTS)	MANUFACTURER	MODEL	
EF-1	BATHROOM	ROOF	BELT	DOWNBLAST	975	975	.5	.19	1389	8.2	480	3	1/4	GREENHECK	GB-100	8
EF-2	GARAGE EXHUAST	ARFF GARAGE	BELT	DOWNBLAST	3700	500	.25	.41	559	9.8	480	3	1/2	GREENHECK	GB-220	1,3,4,5
EF-3	GARAGE EXHUAST	ARFF GARAGE	BELT	DOWNBLAST	3700	0	.25	.41	559	9.8	480	3	1/2	GREENHECK	GB-220	1,3,4,5
EF-4	GARAGE EXHUAST	SRE GARAGE	BELT	DOWNBLAST	3450	1050	.25	.36	532	8.9	480	3	1/2	GREENHECK	GB-220	1,3,4,5
EF-5	GARAGE EXHUAST	SRE GARAGE	BELT	DOWNBLAST	3450	0	.25	.36	532	8.9	480	3	1/2	GREENHECK	GB-220	1,3,4,5
EF-6	GARAGE EXHUAST	SRE GARAGE	BELT	DOWNBLAST	3450	0	.25	.36	532	8.9	480	3	1/2	GREENHECK	GB-220	1,3,4,5
EF-7	GARAGE EXHUAST	SRE GARAGE	BELT	DOWNBLAST	3450	0	.25	.36	532	8.9	480	3	1/2	GREENHECK	GB-220	1,3,4,5
EF-8	GARAGE EXHUAST	SRE GARAGE	BELT	DOWNBLAST	3450	0	.25	.36	532	8.9	480	3	1/2	GREENHECK	GB-220	1,3,4,5
EF-9	KITCHEN	KITCHEN	DIRECT	IN-LINE	150	150	.375	.04	1692	5.6	120	1	- -	GREENHECK	SQ-70-VG	8
F-1	EXTRACTOR	WASHER/EXTRACTOR	DIRECT	INLINE	300	300	1.5	--	1560	--	120	1	1/2	TJERNLUND	CDB8	8
F-2	DRYER	CBAS	DIRECT	INLINE	160	160	--	--	3000	--	120	1	(50)	TJERNLUND	LB2	8
F-4	MECHANICAL	MECHANICAL	DIRECT	INLINE	900	450	.5	.14	1579	7.8	120	1	1/4	GREENHECK	SQ-9-M1-VG	2,5,6
F-5	ELECTRICAL	ELECTRICAL	DIRECT	INLINE	400	0	.5	.08	1634	8.1	120	1	1/6	GREENHECK	SQ-90	2,5,6
F-6	TOOL PARTS &WORKSHOP	MECHANICAL	DIRECT	INLINE	750	0	.5	.11	1448	7.6	120	1	1/6	GREENHECK	SQ-9-M1-VG	2,5,6
F-7	SHOP STORAGE	MECHANICAL	DIRECT	INLINE	400	0	.5	.08	1634	7.1	120	1	1/6	GREENHECK	SQ-90	2,5,6

1. PROVIDE 14" H ROOF CURB.
2. PROVIDE BACKDRAFT DAMPER.
3. PROVIDE 24VAC AUTOMATIC AIR DAMPER AT OPENING.
4. FAN SHALL BE INTERLOCKED WITH MAU'S. REFER TO SOO.
5. FAN SHALL BE TIED INTO A THERMOSTAT AND OPERATE WHEN THE SPACE TEMPERATURE EXCEEDS SETPOINT.
6. PROVIDE NEOPRENE VIBRATION ISOLATORS.
7. PROVIDE POSITIVE AIR FLOW PRESSURE SWITCH
8. NOT IN CONTRACT

UNIT HEATER SCHEDULE- HOT-GLYCOL (UH)

UNIT NO.	LOCATION	MOUNTING HEIGHT	SUPPLY CFM	HEATING PERFORMANCE - 30%P.G.						ELECTRICAL			WEIGHT (LBS)	BASIS OF DESIGN		REMARKS
				CAPACITY (MBH)	EAT(°F)	LAT(°F)	EWT(°F)	LWT(°F)	GPM	VOLTS	PHASE	HP		MANUFACTURER	MODEL	
UH-1	ARFF GARAGE	18'-0"	2660	60	60.0	80.8	130.0	110.0	11	480	3	1/3	70	MODINE	V 139	ALL
UH-2	ARFF GARAGE	18'-0"	2660	60	60.0	80.8	130.0	110.0	11	480	3	1/3	70	MODINE	V 139	ALL
UH-3	ARFF GARAGE	18'-0"	2660	60	60.0	80.8	130.0	110.0	11	480	3	1/3	70	MODINE	V 139	ALL
UH-4	SRE GARAGE	18'-0"	2660	60	60.0	80.8	130.0	110.0	11	480	3	1/3	70	MODINE	V 139	ALL
UH-5	SRE GARAGE	18'-0"	2660	60	60.0	80.8	130.0	110.0	11	480	3	1/3	70	MODINE	V 139	ALL
UH-6	SRE GARAGE	18'-0"	2660	60	60.0	80.8	130.0	110.0	11	480	3	1/3	70	MODINE	V 139	ALL
UH-7	SRE GARAGE	18'-0"	2660	60	60.0	80.8	130.0	110.0	11	480	3	1/3	70	MODINE	V 139	ALL
UH-8	STORAGE	10'	695	19	60.0	82.0	130.0	110.0	2	120	1	1/25	50	MODINE	HC 33	1
UH-9	STORAGE	10'	695	19	60.0	82.0	130.0	110.0	2	120	1	1/25	50	MODINE	HC 33	1

1. UNIT HEATERS SHALL BE TIED INTO A WALL MOUNTED THERMOSTAT AND OPERATE WHEN SPACE TEMPERATURE EXCEEDS SETPOINT.
2. PROVIDE UNIT WITH THE TRUNCONE ACCESSORY
3. COORDINATE WITH ELECTRICAL LIGHTING LAYOUT FOR FINAL LOCATIONS OF UNIT HEATER. PROPOSED TO BE LOCATED BETWEEN TRUCK BAYS.

AIR COOLED CONDENSING UNIT SCHEDULE (ACCU)

UNIT NO.	LOCATION	UNIT SERVED	REFRIGERANT TYPE	TOTAL HEAT REJECTION (MBH)	AMBIENT (F)	COMPRESSORS			FANS			EER (SEER)	ELECTRICAL				BASIS OF DESIGN		REMARKS
						QTY	TYPE	# OF STAGES	QTY	CFM (EA)	HP (EA)		VOLTS	PHASE	MCA	MOP	MANUFACTURER	MODEL	
ACCU-1	EXTERIOR	DS-1	R454b	36	90	1	INVERTER	VARIABLE	1	3413	0.185	10.5	208	1	25	45	HITACHI	RAS-4.0PNNBDH1	ALL

1. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION.
2. PROVIDE 18"H QUICKSLING EQUIPMENT STAND.
3. ACCU-1 SHALL POWER INDOOR UNIT (DS-1)

DUCTLESS INDOOR SPLIT SYSTEM SCHEDULE (DS)

UNIT NO.	CONDENSING UNIT LOCATION	AREA SERVED	NOMINAL CAPACITY (TONS)	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	NOMINAL CFM	MINIMUM SEER	ELECTRIC		BASIS OF DESIGN		REMARKS
								VOLTS	PHASE	MANUFACTURER	MODEL	
DS-1	IT ROOM	TELECOM ROOM	3.0	36.8	36.8	940	14	208	1	HITACHI	RCI-4.0PNN1DH	ALL

1. UNIT SHALL BE POWERED FROM ACCU-1.
2. PROVIDE DIGITAL WALL MOUNTED THERMOSTAT
3. PROVIDE CONDENSATE PUMP AND ROUTE TO NEAREST DRAIN.

DIFFUSER AND GRILLE SCHEDULE (S&R)

TYPE	DESCRIPTION	FACE SIZE	MAX. N.C.	APD	MATERIAL	FINISH	CEILING TYPE	BASIS OF DESIGN		REMARKS
								MANUFACTURER	MODEL	
E1	PERFORATED EXHAUST REGISTER	SEE PLANS	25	0.08	STEEL	WHITE	LAY-IN	PRICE	PDR	1,2,4
R1	PERFORATED RETURN REGISTER	SEE PLANS	25	0.08	STEEL	WHITE	LAY-IN	PRICE	PDR	1,2,4
R2	RETURN GRILLE	SEE PLANS	25	0.08	STEEL	WHITE	N/A	PRICE	535	1,2,4
S1	SQUARE CONE DIFFUSER	SEE PLANS	25	0.08	STEEL	WHITE	LAY-IN	PRICE	SCD	1,2,4
S2	HIGH CAPACITY DRUM LOUVERS	SEE PLANS	30	0.10	STEEL	WHITE	N/A	PRICE	HCD	1,2,3

1. COORDINATE FINAL COLOR/FINISH SELECTION WITH ARCHITECT.
2. PROVIDE OPPOSED BLADE DAMPER.
3. PROVIDE SPIRAL DUCT MOUNTING FRAME WITH INTEGRAL DAMPER.
4. PROVIDE INSULATED BACKING BLANKET.

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
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STATE OF NEW YORK ANDREW J. MILNE LICENSED PROFESSIONAL ENGINEER 108861
REGISTRATION EXPIRES: 10/31/2026

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NEW ARFF/SRE BUILDING
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ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO: 158.095.001
DATE: MARCH 2026
DRAWN BY: A.M. CALABRESE
DESIGNED BY: A.M. CALABRESE
CHECKED BY: A.J. MILNE, P.E.

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SCHEDULES

M-601

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MODULAR CHILLER SCHEDULE (CH)

UNIT NO.	LOCATION	SYSTEM SERVED	HEATING CAPACITY (MBH)	EER	HOT WATER - 30% GLYCOL				SOURCE LOOP - 25% GLYCOL				REFRIGERANT	ELECTRICAL				BASIS OF DESIGN		REMARKS
					EWT-HTG (°F)	LWT-HTG (°F)	GPM	WPD (FT HD)	EWT-HTG (°F)	LWT-HTG (°F)	GPM	WPD (FT HD)		VOLTS	PHASE	MCA	MOCP	MANUFACTURER	MODEL	
CH-1	MECHANICAL ROOM	HOT WATER LOOP	739.6	7.14	110.0	130.0	76.7	1.43	35.0	25.0	104.9	5.29	R-454B	480	3	136	200	JETSON	FWD-075	ALL
CH-2	MECHANICAL ROOM	HOT WATER LOOP	739.6	7.14	110.0	130.0	76.7	1.43	35.0	25.0	104.9	5.29	R-454B	480	3	136	200	JETSON	FWD-075	ALL
CH-3	MECHANICAL ROOM	HOT WATER LOOP	739.6	7.14	110.0	130.0	76.7	1.43	35.0	25.0	104.9	5.29	R-454B	480	3	136	200	JETSON	FWD-075	ALL
CH-4	MECHANICAL ROOM	HOT WATER LOOP	739.6	7.14	110.0	130.0	76.7	1.43	35.0	25.0	104.9	5.29	R-454B	480	3	136	200	JETSON	FWD-075	ALL

1. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION.
2. PROVIDE UNIT WITH INTERNAL NONFUSED DISCONNECT.
3. PROVIDE UNITS IN AN ARRAY CONFIGURATION WITH HEADER ACCESSORY.
4. PROVIDE ACTIVE FREEZE PROTECTION
5. PROVIDE UNIT WITH BACNET MSTP CAPABILITIES
6. PROVIDE BRAZED PLATE EVAPORATOR

FLOW CONTROL VALVE SCHEDULE (FCV)

MARK	SERVICE	VALVE TYPE	FLUID TYPE	FLOW RATE (GPM)	WPD (PSI)	CV VALUE	BASIS OF DESIGN		REMARKS
							MANUFACTURER	MODEL	
FCV-1	DOAS-1	3-WAY MODULAT.	25%P.G.	30.0	5.8	10	BELIMO-US	B332L	
FCV-2	MAU-1	2-WAY MODULAT.	30%P.G.	64.0	10	34.6	BELIMO-US	EP200H+AKRX-E	
FCV-3	MAU-2	2-WAY MODULAT.	30%P.G.	64.0	10	34.6	BELIMO-US	EP200H+AKRX-E	
FCV-4	MAU-3	2-WAY MODULAT.	30%P.G.	59.0	15	32.2	BELIMO-US	EP200H+AKRX-E	
FCV-5	MAU-4	2-WAY MODULAT.	30%P.G.	59.0	15	32.2	BELIMO-US	EP200H+AKRX-E	
FCV-6	MAU-5	2-WAY MODULAT.	30%P.G.	59.0	15	32.2	BELIMO-US	EP200H+AKRX-E	
FCV-7	MAU-6	2-WAY MODULAT.	30%P.G.	59.0	15	32.2	BELIMO-US	EP200H+AKRX-E	
FCV-8	MAU-7	3-WAY MODULAT.	30%P.G.	59.0	15	34	BELIMO-US	B332L	
FCV-9	UH-1	2-WAY MODULAT.	30%P.G.	11.0	5.4	4.7	BELIMO-US	B222+LF24 US	
FCV-10	UH-2	2-WAY MODULAT.	30%P.G.	11.0	5.4	4.7	BELIMO-US	B222+LF24 US	
FCV-11	UH-3	2-WAY MODULAT.	30%P.G.	11.0	5.4	4.7	BELIMO-US	B222+LF24 US	
FCV-12	UH-4	2-WAY MODULAT.	30%P.G.	11.0	5.4	4.7	BELIMO-US	B222+LF24 US	
FCV-13	UH-5	2-WAY MODULAT.	30%P.G.	11.0	5.4	4.7	BELIMO-US	B222+LF24 US	
FCV-14	UH-6	2-WAY MODULAT.	30%P.G.	11.0	5.4	4.7	BELIMO-US	B222+LF24 US	
FCV-15	UH-7	2-WAY MODULAT.	30%P.G.	11.0	5.4	4.7	BELIMO-US	B222+LF24 US	

PUMP SCHEDULE (P)

UNIT NO.	LOCATION	ARRANGEMENT	SYSTEM SERVED	SYSTEM FLUID (% GLCOL)	GPM	TDH (FT WG)	% EFF.	RPM	ELECTRICAL			MANUFACTURER	MODEL	REMARKS
									VOLTS	PHASE	HP			
P-1	MECHANICAL ROOM	END SUCTION	HOT WATER LOOP	25	300	60	75	1691	480 V	3	7.5	BELL AND GOSSET	E-1510-2.5BB	ALL
P-2	MECHANICAL ROOM	END SUCTION	HOT WATER LOOP	25	300	60	75	1691	480 V	3	7.5	BELL AND GOSSET	E-1510-2.5BB	ALL
P-3	MEZZINANE	END SUCTION	GEOTHERMAL LOOP	25	400	55	82	1646	480 V	3	10	BELL AND GOSSET	E-1510-3BD	ALL
P-4	MEZZINANE	END SUCTION	GEOTHERMAL LOOP	25	400	55	82	1646	480 V	3	10	BELL AND GOSSET	E-1510-3BD	ALL
P-5	MECHANICAL ROOM	END SUCTION	GEOTHERMAL WELL	25	400	60	82	1707	480 V	3	10	BELL AND GOSSET	E-1510-3BD	ALL
P-6	MECHANICAL ROOM	END SUCTION	GEOTHERMAL WELL	25	400	60	82	1707	480 V	3	10	BELL AND GOSSET	E-1510-3BD	ALL
P-7	SRE	CIRC PUMP	MANIFOLD 1 - SRE	30	15	30	31	2596	208 V	1	1	BELL AND GOSSET	ECOCIRC XL 65-130	4
P-8	SRE	CIRC PUMP	MANIFOLD 2 -SRE	30	15	30	31	2596	208 V	1	1	BELL AND GOSSET	ECOCIRC XL 65-130	4
P-9	SRE	CIRC PUMP	MANIFOLD 3 - SRE	30	15	30	31	2596	208 V	1	1	BELL AND GOSSET	ECOCIRC XL 65-130	4
P-10	SRE	CIRC PUMP	MANIFOLD 4 - SRE	30	15	30	31	2596	208 V	1	1	BELL AND GOSSET	ECOCIRC XL 65-130	4
P-11	SRE	CIRC PUMP	MANIFOLD 5 - SRE	30	15	30	31	2596	208 V	1	1	BELL AND GOSSET	ECOCIRC XL 65-130	4
P-12	SRE	CIRC PUMP	MANIFOLD 5 - SRE	30	15	30	31	2596	208 V	1	1	BELL AND GOSSET	ECOCIRC XL 65-130	4
P-13	ARFF	CIRC PUMP	MANIFOLD 1 - ARFF	30	10	30	31	2596	208 V	1	1	BELL AND GOSSET	ECOCIRC XL 65-130	4
P-14	ARFF	CIRC PUMP	MANIFOLD 2 - ARFF	30	10	30	31	2596	208 V	1	1	BELL AND GOSSET	ECOCIRC XL 65-130	4
P-15	ARFF	CIRC PUMP	MANIFOLD 3 - ARFF	30	10	30	31	2596	208 V	1	1	BELL AND GOSSET	ECOCIRC XL 65-130	4
P-16	ARFF	CIRC PUMP	MANIFOLD 4 - ARFF	30	10	30	31	2596	208 V	1	1	BELL AND GOSSET	ECOCIRC XL 65-130	4
P-17	SRE	CIRC PUMP	B-1	30	121	15	53.8	2602	208 V	1	1	BELL AND GOSSET	ECOCIRC XL 40-200	4

1. PROVIDE SUCTION DIFFUSER, TRIPLE DUTY VALVE AND FLEX CONNECTORS.
2. PUMPS SHALL BE SPLIT COUPLED.
3. PUMPS SHALL BE TEFC MOTOR
4. PROVIDE WITH EC MOTOR

HEAT PUMP - WATER TO AIR SCHEDULE (WSHP) - NOT IN CONTRACT

UNIT NO.	LOCATION	ARRANGEMENT	% OF GLYCOL	CFM	OA AIRFLOW (CFM)	ESP (IN WG)	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	GPM	EWT (°F)	LWT (°F)	WPD (FT HD)	HEAT OF REJECTION (MBH)	HEATING CAPACITY (MBH)	WPD(FT HD)	EWT (°F)	LWT (°F)	HEAT OF ABSORBTION (MBH)	EFFICIENCY AHRI		ELECTRICAL				WEIGHT (LBS)	BASIS OF DESIGN		REMARKS
																			EER	COP cs	VOLTS	PHASE	MCA	MOCP		MANUFACTURER	MODEL	
WSHP-1	CORRIDOR 102	HORIZONTAL	25	750	130	0.30	21.6	17.6	6.0	85.0	94.3		26775	18.2		35.0	30.6	12717	17.9	3.3	208	1	15.7	25		DAIKIN	WGCH024	
WSHP-2	CORRIDOR 112	HORIZONTAL	25	600	135	0.30	13.4	11.6	3.8	85.0	94.6		17252	12.8		35.0	29.4	10131	19	3.6	208	1	9.7	15		DAIKIN	WGCH015	
WSHP-3	CORRIDOR 112	HORIZONTAL	25	650	60	0.30	14.3	12.7	3.8	85.0	94.8		17714	11.3		35.0	29.1	10703	19	3.6	208	1	9.7	15		DAIKIN	WGCH015	
WSHP-4	CORRIDOR 102	HORIZONTAL	25	800	70	0.30	21.6	18.4	6.0	85.0	94.4		27215	18.2		35.0	30.4	13236	17.9	3.3	208	1	15.7	25		DAIKIN	WGCH024	
WSHP-5	CORRIDOR 102	HORIZONTAL	25	900	90	0.30	21.6	19.0	6.0	85.0	94.5		27541	18.2		35.0	30.3	13621	17.9	3.3	208	1	15.7	25		DAIKIN	WGCH024	
WSHP-6	CORRIDOR 102	HORIZONTAL	25	375	80	0.30	11.8	9.3	3.0	85.0	95.5		15182	8.3		35.0	29.4	8089	15.6	3.2	208	1	7.9	15		DAIKIN	WGCH012	
WSHP-7	CORRIDOR 102	HORIZONTAL	25	400	75	0.30	11.8	9.5	3.0	85.0	95.6		15319	8.3		35.0	29.8	8288	15.6	3.2	208	1	7.9	15		DAIKIN	WGCH012	
WSHP-8A	CORRIDOR 102	HORIZONTAL	25	1440	200	0.30	32.9	27.4	9.0	85.0	94.6		NOT IN CONTRACT	29.4		35.0	29.8	22610	17.6	3.3	208	3	17.3	25		DAIKIN	WGCH036	
WSHP-8B	CORRIDOR 102	HORIZONTAL	25	1440	200	0.30	32.9	27.4	9.0	85.0	94.6		41467	29.4		35.0	29.8	22610	17.6	3.3	208	3	17.3	25		DAIKIN	WGCH036	
WSHP-9	CORRIDOR 112	HORIZONTAL	25	300	0	0.30	8.6	6.2	2.3	85.0	95.3		11157	8.3		35.0	29.6	5860	15.7	3.4	208	1	6.3	15		DAIKIN	WGCH009	
WSHP-10	CORRIDOR 112	HORIZONTAL	25	300	0	0.30	8.6	6.2	2.3	85.0	95.3		11157	8.3		35.0	29.6	5860	15.7	3.4	208	1	6.3	15		DAIKIN	WGCH009	
WSHP-11	CORRIDOR 112	HORIZONTAL	25	700	185	0.30	21.6	17.6	6.0	85.0	94.3		26775	18.2		35.0	30.6	12717	17.9	3.3	208	1	15.7	25		DAIKIN	WGCH024	
WSHP-12	CORRIDOR 112	HORIZONTAL	25	600	110	0.30	13.8	11.6	3.8	85.0	94.6		17252	8.3		35.0	29.4	1031	19	3.6	208	1	9.7	15		DAIKIN	WGCH015	
WSHP-13	CORRIDOR 112	HORIZONTAL	25	400	90	0.30	11.9	9.5	3.0	85.0	95.6		15319	8.3		35.0	29.3	8288	15.6	3.2	208	1	7.9	15		DAIKIN	WGCH012	
WSHP-14	CORRIDOR 112	HORIZONTAL	25	550	85	0.30	13.8	11.6	3.8	85.0	94.6		17252	8.3		35.0	29.4	10131	19	3.6	208	1	9.4	15		DAIKIN	WGCH015	
WSHP-15	CORRIDOR 112	HORIZONTAL	25	200	30	0.30	8.6	5.2	2.3	85.0	94.7		10516	8.3		35.0	30.2	5197	15.7	3.4	208	1	6.3	15		DAIKIN	WGCH009	
WSHP-16	CORRIDOR 112	HORIZONTAL	25	350	30	0.30	8.6	6.4	2.3	85.0	95.6		11445	8.3		35.0	29.3	6159	15.7	3.4	208	1	6.3	15		DAIKIN	WGCH009	
WSHP-17	CORRIDOR 112	HORIZONTAL	25	480	60	0.30	13.4	10.4	3.8	85.0	94.3		16742	8.3		35.0	29.7	9498	19	3.6	208	1	6.3	15		DAIKIN	WGCH015	
WSHP-18	CONFRENECE ROOM 123	HORIZONTAL	25	1440	0	0.30	32.1	25.6	9.0	85.0	94.4		40535	29.4		35.0	30.0	21592	17.8	3.3	208	3	24.7	40		DAIKIN	WGCH036	
WSHP-19	DAYROOM 111	HORIZONTAL	25	1440	0	0.30	32.1	25.6	9.0	85.0	94.4		40535	29.4		35.0	30.0	21592	17.8	3.3	208	3	24.7	40		DAIKIN	WGCH036	

1. ENTERING WATER TEMPERATURE FOR HEATING IS 35°F
2. ENTERING WATER TEMPERATURE FOR COOLING IS 85°F
3. PROVIDE WALL MOUNTED THERMOSTAT
4. DISCONNECT SWITCH PROVIDED BY ELECTRICAL CONTRACTOR
5. PROVIDE HOSE KIT TO INCLUDE ISOLATION VALVES, BALANCE VALVE AND FLEXIBLE CONNECTIONS.
6. COORDINATE LOCATION ABOVE ACT CEILING FOR EASE OF MAINTENANCE.

EXPANSION TANK SCHEDULE (ET)

UNIT NO.	SYSTEM				PRESSURE			DIMENSIONS			BASIS OF DESIGN		REMARKS
	PUMP SYSTEM	APPROX. VOLUME.	MAX. TEMP.	DELTA T	INIT. FILL	FILL	SERVICE	DIA	HGT	ACCEPT. VOLUME	MANUFACTURER	MODEL	
ET-1	GEOTHERMAL	8000	110	70		30	42	36	76	264	BELL AND GOSSETT	B1000	1
ET-2	HOT-WATER	1500	130	90		30	42	30	81	171	BELL AND GOSSETT	D280	1

1. PROVIDE WITH BLADDER STYLE WITH HEAVY DUTY BUTYL BLADDER. REMOVAL FOR INSPECTION AND REPLACEMENT

PROPYLENE GLYCOL FILL PUMP SCHEDULE (GFP)

UNIT NO.	LOCATION	SYSTEM SERVED	GPM	DIFFERENTIAL RANGE (PSI)	TANK SIZE (GAL)	ELECTRICAL			BASIS OF DESIGN		REMARKS
						VOLTS	PHASE	HP	MANUFACTURER	MODEL	
GFP-1	MECHANICAL ROOM	GEOTHERMAL LOOP	6	10-30	55	120 V	1	1/3	BELL AND GOSSETT	GMU560S	ALL
GFP-2	MECHANICAL ROOM	HOT WATER LOOP	6	10-30	55	120 V	1	1/3	BELL AND GOSSETT	GMU560S	ALL

1. PROVIDE WITH 55 GALLON HDPE TANK
2. PROVIDE WITH LOW WATER CUT OFF SENSOR
3. PROVIDE WITH PRESSURE REDUCING VALVE AND PRESSURE RELIEF VALVE

KITCHEN HOOD SCHEDULE (H) (NOT IN CONTRACT)

UNIT NO.	LOCATION	HOOD WIDTH (INCHES)	MIN FACE VELOCITY (FPM)	MAX AIRFLOW (CFM)	NOT IN CONTRACT					BASIS OF DESIGN		REMARKS
					APD	(DIA)	VOLTS	PHASE	HP	MANUFACTURER	MODEL	
H-1	KITCHEN	2' - 6"	150	900	0.10	8	115	1		PROLINE	PLJW 121	1

1. UNIT SHALL BE A VENTLESS KITCHEN HOOD AND RECIRULATE IN THE SPACE.

AIR SEPARATOR SCHEDULE (AS)

UNIT NO.	LOCATION	SYSTEM SERVED	MAX PRESSURE (PSI)	MAX. TEMP. (°F)	GPM	WPD (FT WG)	CONNECTION SIZE (IN)	WEIGHT (LBS)	BASIS OF DESIGN		REMARKS
									MANUFACTURER	MODEL	
AS-1	MEZZANINE	GEOTHERMAL LOOP	125.00	350	630	2	6	579	Bell & Gossett	R-6F	ALL
AS-2	MECHANICAL ROOM	HOT-GLYCOL LOOP	125.00	350	550	2	6	579	Bell & Gossett	R-6F	ALL

1. PROVIDE WITH AUTOMATIC AIR VENT.
2. PROVIDE WITH DRAIN PORT AT THE BASE WITH BALL VALVE AND HOSE BIBB CONNECTION.
3. INSULATE WITH 1" ELASTOMERTIC INSULATION.

ELECTRIC WALL HEATER SCHEDULE (EWH) (NOT IN CONTRACT)

UNIT NO.	CAPACITY MBH	CAPACITY KW	CFM	ENCLOSURE		NOT IN CONTRACT	MOUNTING	ELECTRICAL				BASIS OF DESIGN		REMARKS
				HEIGHT	WIDTH			VOLTS	PHASE	MCA	MANUFACTURER	MODEL		
EWH-1	5.2	1.5	100	1' - 7 1/4"	1' - 3 13/16"	0' - 3 3/4"	4'-0"	120	1	12.5	QMARK	SSAR1802	ALL	
EWH-2	5.2	1.5	100	1' - 7 1/4"	1' - 3 13/16"	0' - 3 3/4"	4'-0"	120	1	12.5	QMARK	SSAR1802	ALL	

1. PROVIDE WITH INTERNAL THERMOSTAT

BOILER - HOT WATER - FOR STEEL (B)

UNIT NO.	LOCATION	GLYCOL %	INPUT CAPACITY (MBH)	HP	% EFF.	SAFETY VALVE SETTING (PSIG)	ELECTRICAL			MCA	FLA	BASIS OF DESIGN		REMARKS
							KW	VOLTS	PHASE			MANUFACTURER	MODEL	
B-1	MEZZANINE	25	1225	36	100	60	360	480	3	548	438	FULTON	EZE-360	ALL

1. PROVIDE WITH SINGLE POINT POWER CONNECTION.
2. PROVIDE UNIT WITH BACNET MSTP COMPATIBILITIES.
3. PROVIDE WITH LOW WATER CUT OFF KIT
4. PROVIDE DEDICATE BOILER CIRCULATOR PUMP FOR 20F DELTA T
5. PROVIDE UNIT WITH TWO STAGE FREEZE PROTECTION
6. PROVIDE UNIT WITH SCR ELECTRIC HEAT.

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CERTIFICATE OF AUTHORIZATION# 0021365
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3/6/2026
REGISTRATION EXPIRES: 10/31/2026

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ITHACA TOMPKINS
INTERNATIONAL AIRPORT
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ITHACA, NY 14850

MARK	DATE	DESCRIPTION
		REVISIONS

PROJECT NO: 158.095.001
DATE: MARCH 2026
DRAWN BY: A.M. CALABRESE
DESIGNED BY: A.M. CALABRESE
CHECKED BY: A.J. MILNE, P.E.

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

SCHEDULES

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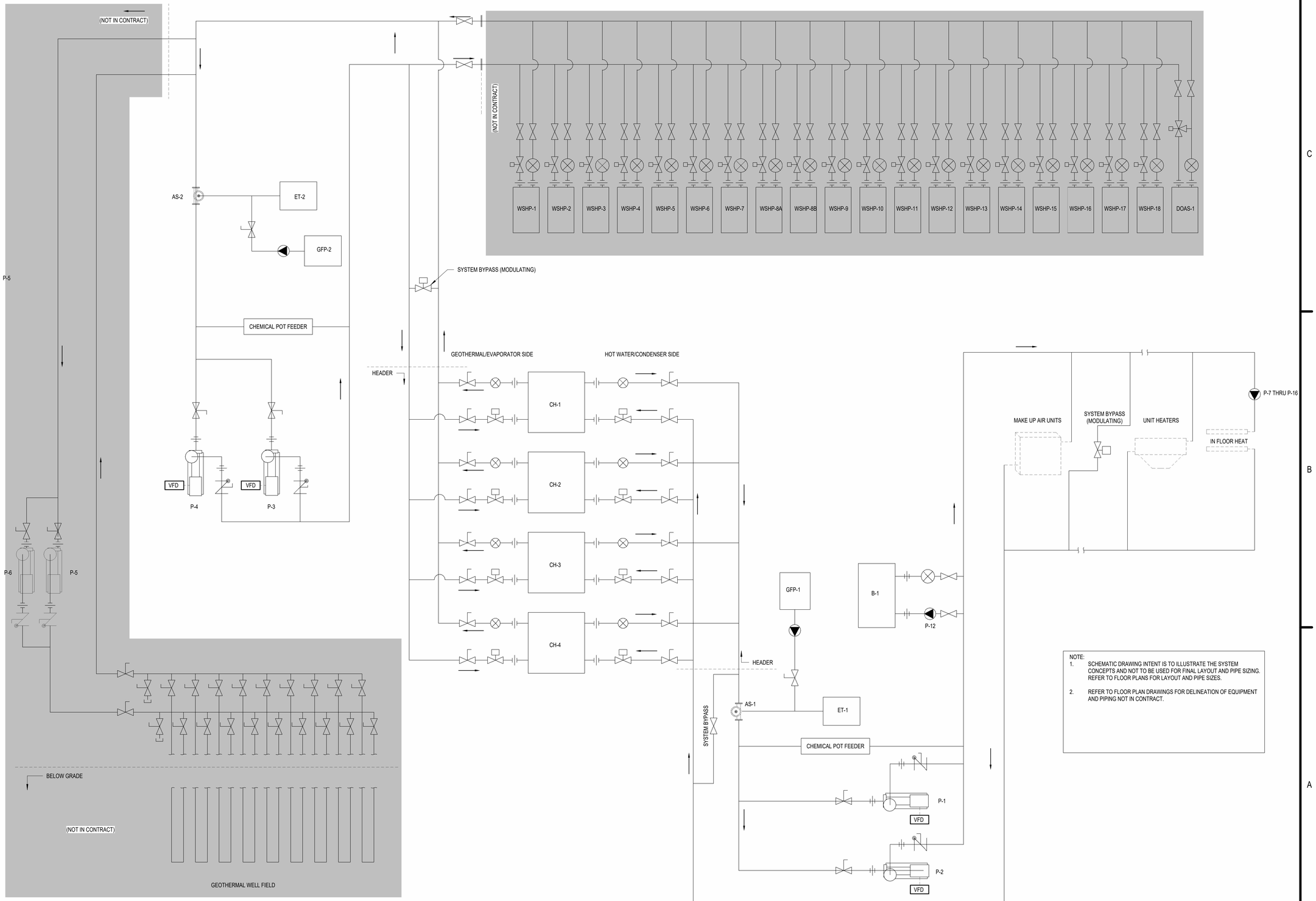

NOTE:
1. SCHEMATIC DRAWING INTENT IS TO ILLUSTRATE THE SYSTEM CONCEPTS AND NOT TO BE USED FOR FINAL LAYOUT AND PIPE SIZING. REFER TO FLOOR PLANS FOR LAYOUT AND PIPE SIZES.
2. REFER TO FLOOR PLAN DRAWINGS FOR DELINEATION OF EQUIPMENT AND PIPING NOT IN CONTRACT.

A1 WATER-TO-WATER SOURCE HEAT PUMP SYSTEM SCHEMATIC
SCALE: NOT TO SCALE

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SCHEMATICS

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SEQUENCE OF OPERATIONS

WATER SOURCE HEAT PUMP (WSHP) – GEOTHERMAL SYSTEM (NOT IN CONTRACT):

1. BUILDING AUTOMATION SYSTEM (BAS) INTERFACE
   THE WSHP UNIT CONTROLLER SHALL RECEIVE COMMANDS FROM THE BAS INCLUDING OCCUPIED/UNOCCUPIED MODE, HEAT/COOL MODE, MORNING WARM-UP, AND DEHUMIDIFICATION (IF APPLICABLE). IF BAS COMMUNICATION IS LOST OR NOT PRESENT, THE UNIT SHALL OPERATE USING FACTORY DEFAULT MODES AND SETPOINTS.
2. OCCUPIED MODE
   DURING OCCUPIED OPERATION THE SUPPLY FAN SHALL OPERATE CONTINUOUSLY. DX HEATING AND COOLING SHALL MODULATE TO MAINTAIN ACTIVE SPACE TEMPERATURE SETPOINT (72°F, ADJ).
3. UNOCCUPIED MODE
   THE UNIT SHALL CYCLE TO MAINTAIN SETBACK TEMPERATURES. WHEN SPACE TEMPERATURE FALLS BELOW 60.0°F (ADJ.), THE SUPPLY FAN SHALL START AND DX HEATING SHALL ENABLE. WHEN SPACE TEMPERATURE RISES ABOVE 64.0°F (ADJ.), THE FAN SHALL STOP AND HEATING SHALL DISABLE. WHEN SPACE TEMPERATURE RISES ABOVE 85.0°F (ADJ.), THE SUPPLY FAN SHALL START AND DX COOLING SHALL ENABLE. WHEN SPACE TEMPERATURE FALLS BELOW 80.0°F (ADJ.), THE FAN SHALL STOP AND COOLING SHALL DISABLE.
4. COOLING CONTROL
   DX COOLING SHALL STAGE BASED ON DEVIATION FROM SPACE AIR TEMPERATURE SETPOINT AND SHALL DISABLE WHEN TEMPERATURE FALLS BELOW SETPOINT. DURING LOW SENSIBLE LOAD CONDITIONS THE SUPPLY FAN MAY MODULATE TO ENHANCE DEHUMIDIFICATION PERFORMANCE.
5. HEATING CONTROL
   DX HEATING SHALL ENABLE WHEN SPACE TEMPERATURE FALLS BELOW SETPOINT AND DISABLE WHEN ABOVE SETPOINT.
6. SUPPLY FAN OPERATION
   SUPPLY FAN SHALL OPERATE CONTINUOUSLY IN OCCUPIED MODE AND CYCLE AS REQUIRED IN UNOCCUPIED MODE. IF FAN STATUS IS NOT PROVEN WITHIN 30 SECONDS (ADJ.) THE FAN SHALL BE COMMANDED OFF AND AN ALARM SHALL ANNUNCIATE AT THE BAS, AND MANUAL RESET SHALL BE REQUIRED.
7. FILTER STATUS
   DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR PRESSURE ACROSS FAN/FILTER. IF FAULT PERSISTS FOR 40 SECONDS AFTER FAN COMMAND A FAN FAILURE ALARM SHALL ANNUNCIATE AT THE BAS, THE FAN SHALL STOP, AND MANUAL RESET SHALL BE REQUIRED.
8. REFRIGERANT LEAK MITIGATION
   UNIT SHALL MONITOR REFRIGERANT LEAK DETECTION EVERY 5 SECONDS. UPON DETECTION MITIGATION SHALL ACTIVATE. SUPPLY FAN SHALL REMAIN OPERATIONAL AND ALL COMPRESSORS SHALL BE DISABLED FOR DURATION OF MITIGATION PLUS 5 MINUTES.
9. CONTROL VALVE.
   ISOLATION VALVE SHALL OPEN WHEN ANY COMPRESSOR IS ACTIVE AND SHALL CLOSE WHEN ALL CALLS ARE DISABLED.

NOT IN CONTRACT

SRE / ARFF EXHAUST FANS (EF)

1. BUILDING AUTOMATION SYSTEM (BAS) INTERFACE
   THE SRE / ARFF EXHAUST FANS SHALL BE CONTROLLED AUTOMATICALLY BY THE BAS BASED ON CARBON MONOXIDE (CO) AND NITROGEN DIOXIDE (NO2) SENSOR INPUTS.
2. NORMAL AND MINIMUM OPERATION
   DURING NORMAL CONDITIONS WHEN CO AND NO2 LEVELS ARE BELOW ALARM SETPOINTS, THE BAS SHALL MAINTAIN THE MINIMUM REQUIRED EXHAUST AIRFLOW FOR THE SPACE. ONE (1) EXHAUST FAN SHALL OPERATE CONTINUOUSLY AS THE LEAD FAN AND MAINTAIN AN EXHAUST AIRFLOW SETPOINT OF 0.05 CFM/SQFT (ADJ) IF CO OR NO2 LEVELS BEGIN TO RISE ABOVE THEIR RESPECTIVE SETPOINTS, ADDITIONAL EXHAUST FANS SHALL BE ENABLED AND MODULATED AS REQUIRED TO MAINTAIN GAS CONCENTRATIONS BELOW SETPOINT. THE LEAD FAN SHALL ROTATE AUTOMATICALLY BASED ON RUN TIME.
3. LEAD FAN SELECTION
   THE LEAD EXHAUST FAN SHALL BE SELECTED BY THE BAS AND SHALL ROTATE AUTOMATICALLY BASED ON RUN TIME TO EQUALIZE WEAR. UPON FAILURE OF THE LEAD FAN THE BAS SHALL ENABLE THE NEXT AVAILABLE FAN AND ANNUNCIATE AN ALARM.
4. HIGH GAS MITIGATION OPERATION
   UPON DETECTION OF CARBON MONOXIDE (CO) OR NITROGEN DIOXIDE (NO2) ABOVE THE HIGH LIMIT SETPOINT, ALL EXHAUST FANS SERVING THE SPACE SHALL BE ENABLED. WHEN IN HIGH CONTAMINANT MODE, ALL ENABLED EXHAUST FANS SHALL MODULATE TOGETHER AND RAMP UP IN UNISON TO MAINTAIN GAS CONCENTRATIONS BELOW SETPOINT. FAN SPEED SHALL INCREASE AS REQUIRED UP TO MAXIMUM AIRFLOW WHEN GAS CONCENTRATIONS CONTINUE TO RISE.
5. RETURN TO MINIMUM OPERATION
   WHEN CO AND NO2 LEVELS HAVE REMAINED BELOW SETPOINT FOR 15 MINUTES (ADJUSTABLE) THE BAS SHALL COMMAND ALL NON LEAD EXHAUST FANS OFF AND RETURN THE LEAD EXHAUST FAN TO MINIMUM AIRFLOW OPERATION. ALL NON-LEAD EXHAUST FANS SHALL BE COMMANDED OFF, AND THE LEAD EXHAUST FAN SHALL RESUME MODULATION TO MAINTAIN MINIMUM EXHAUST AIRFLOW.
6. EXHAUST AIR DAMPERS
   THE EXHAUST AIR DAMPER ASSOCIATED WITH EACH FAN SHALL OPEN PRIOR TO FAN START AND SHALL PROVE FULLY OPEN. WHEN A FAN IS COMMANDED OFF ITS ASSOCIATED DAMPER SHALL CLOSE.
7. FAN STATUS
   IF ANY EXHAUST FAN FAILS TO PROVE STATUS WITHIN 30 SECONDS ADJUSTABLE THE FAN SHALL BE COMMANDED OFF AND AN ALARM SHALL ANNUNCIATE AT THE BAS. MANUAL RESET SHALL BE REQUIRED.

MAKE-UP AIR UNITS (MAU) – SRE AND ARFF

1. BUILDING AUTOMATION SYSTEM (BAS) INTERFACE
   THE MAKE-UP AIR UNITS SHALL BE CONTROLLED BY THE BAS AND SHALL OPERATE IN DIRECT COORDINATION WITH THE ASSOCIATED EXHAUST FANS.
2. NORMAL AND MINIMUM OPERATION
   DURING NORMAL CONDITIONS WHEN CO AND NO$_2$ LEVELS ARE BELOW ALARM SETPOINTS, THE BAS SHALL MAINTAIN THE MINIMUM REQUIRED MAKE-UP AIRFLOW FOR THE SPACE. ONE (1) MAKE-UP AIR UNIT SHALL OPERATE CONTINUOUSLY AS THE LEAD UNIT AND SHALL MODULATE TO MAINTAIN A MAKE-UP AIRFLOW SETPOINT MATCHING THE MINIMUM EXHAUST AIRFLOW OF 0.05 CFM/SQFT (ADJ.). IF CO OR NO2 LEVELS BEGIN TO RISE ABOVE THEIR RESPECTIVE SETPOINTS, ADDITIONAL MAKE-UP AIR UNITS SHALL BE ENABLED AND MODULATED IN COORDINATION WITH THE EXHAUST FANS TO MAINTAIN SPACE PRESSURE AND GAS CONCENTRATIONS BELOW SETPOINT. THE LEAD MAKE-UP AIR UNIT SHALL ROTATE AUTOMATICALLY BASED ON RUN TIME.
3. LEAD UNIT SELECTION
   THE LEAD MAKE-UP AIR UNIT SHALL BE SELECTED BY THE BAS AND SHALL ROTATE AUTOMATICALLY BASED ON RUN TIME. UPON FAILURE OF THE LEAD UNIT THE BAS SHALL ENABLE THE NEXT AVAILABLE UNIT AND ANNUNCIATE AN ALARM.
4. HIGH GAS MITIGATION OPERATION
   UPON DETECTION OF CO CONCENTRATION OF 50 PPM OR GREATER OR NO2 CONCENTRATION OF 3 PPM OR GREATER ALL MAKE-UP AIR UNITS SERVING THE AREA SHALL BE ENABLED. EACH UNIT SHALL MODULATE UP TO FULL DESIGN AIRFLOW TO TRACK EXHAUST AIRFLOW AND MAINTAIN SPACE PRESSURE AS SPECIFIED BY THE ENGINEER OF RECORD.
5. RETURN TO MINIMUM OPERATION
   WHEN CO AND NO2 LEVELS HAVE REMAINED BELOW SETPOINT FOR 15 MINUTES ADJUSTABLE THE BAS SHALL COMMAND ALL NON LEAD MAKE-UP AIR UNITS OFF AND RETURN THE LEAD MAKE-UP AIR UNIT TO MINIMUM AIRFLOW OPERATION.
6. SUPPLY AIR TEMPERATURE CONTROL
   THE HEATING COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN A LEAVING AIR TEMPERATURE SETPOINT MEASURED BY A SUPPLY AIR TEMPERATURE SENSOR LOCATED DOWNSTREAM OF THE UNIT. THE LEAVING AIR TEMPERATURE SETPOINT SHALL BE ADJUSTABLE THROUGH THE BAS (70 DEGREES ADJ).
7. OUTDOOR AIR DAMPERS
   THE OUTDOOR AIR DAMPER ASSOCIATED WITH EACH MAKE-UP AIR UNIT SHALL OPEN PRIOR TO SUPPLY FAN START AND SHALL PROVE FULLY OPEN. WHEN A UNIT IS COMMANDED OFF ITS ASSOCIATED DAMPER SHALL CLOSE.
8. SUPPLY FAN STATUS
   IF A MAKE-UP AIR UNIT SUPPLY FAN FAILS TO PROVE STATUS WITHIN 30 SECONDS ADJUSTABLE THE FAN SHALL BE COMMANDED OFF AND AN ALARM SHALL ANNUNCIATE AT THE BAS. MANUAL RESET SHALL BE REQUIRED.
9. INTERLOCK WITH EXHAUST SYSTEM
   LOSS OF ASSOCIATED EXHAUST FAN OPERATION SHALL COMMAND THE MAKE-UP AIR UNIT TO A SAFE STATE AS DETERMINED BY THE BAS SEQUENCE OR ENGINEER OF RECORD.

HOT WATER PUMPS – P-1 & P-2 (MODULAR CHILLERS, UHS, AND MAU COILS)

1. GENERAL
   HOT WATER PUMPS SHALL SERVE MODULAR CHILLERS, UNIT HEATERS, AND MAU HEATING COILS. PUMPS SHALL BE ENABLED ONLY WHEN THERE IS A CALL FOR HEATING FROM ANY CONNECTED COIL.
2. ENABLE AND DISABLE
   PUMPS SHALL START WHEN ANY CALL FOR HEATING IS ACTIVE AND SHALL STOP WHEN NO HEATING CALLS EXIST.
3. VARIABLE SPEED OPERATION
   PUMPS SHALL MODULATE SPEED BASED ON A DIFFERENTIAL PRESSURE (DP) SENSOR LOCATED IN THE DISTRIBUTION PIPING TO MAINTAIN SYSTEM DP. PUMP SPEED SHALL INCREASE AS VALVE OPENING INCREASES AND DECREASE AS VALVES CLOSE.
4. MINIMUM FLOW PROTECTION
   THE HOT WATER PUMP SHALL MAINTAIN A MINIMUM SPEED TO ENSURE REQUIRED MINIMUM FLOW. THE REMOTE COIL SHALL HAVE A THREE WAY BYPASS VALVE TO ALLOW PUMP MINIMUM FLOW UNDER LOW LOAD CONDITIONS.
5. MULTIPLE PUMP LEAD/LAG OPERATION
   IF MULTIPLE HOT WATER PUMPS ARE PROVIDED, THEY SHALL OPERATE IN A LEAD/LAG CONFIGURATION WITH AUTOMATIC ROTATION BASED ON ACCUMULATED RUN TIME. PUMPS SHALL BE STAGED TO OPERATE CONCURRENTLY AS REQUIRED TO SATISFY SYSTEM FLOW OR DIFFERENTIAL PRESSURE DEMAND. UPON FAILURE OF THE LEAD PUMP, THE LAG PUMP SHALL AUTOMATICALLY START, AND AN ALARM SHALL BE ANNUNCIATED AT THE BAS.
6. PUMP STATUS AND ALARMS
   IF A HOT WATER PUMP FAILS TO PROVE STATUS WITHIN 30 SECONDS ADJUSTABLE THE PUMP SHALL BE COMMANDED OFF AND AN ALARM SHALL ANNUNCIATE AT THE BAS. MANUAL RESET SHALL BE REQUIRED.

MODULAR HEAT PUMP UNITS (HOT WATER MODE) – 4 UNIT ARRAY

1. GENERAL
   THE FOUR (4) FWCD SERIES MODULAR HEAT PUMP UNITS SHALL BE HEADERED TO PROVIDE HOT WATER TO THE DISTRIBUTION SYSTEM FROM THE GEOTHERMAL LOOP. EACH UNIT SHALL HAVE FACTORY CONTROLS AND SHALL COMMUNICATE WITH THE BAS OVER BACNET OR MODBUS.
2. BAS INTERFACE
   THE BAS SHALL SEND ENABLE/DISABLE COMMANDS AND HOT WATER TEMPERATURE SETPOINTS. EACH UNIT SHALL PROVIDE STATUS, ALARMS, AND OPERATING DATA TO THE BAS.
3. ENABLE / DISABLE
   UNITS SHALL ENABLE ON A CALL FOR HEATING WHEN DISTRIBUTION HOT WATER TEMPERATURE FALLS BELOW SETPOINT (130°F, ADJ.) MINUS DIFFERENTIAL. UNITS SHALL DISABLE WHEN DISTRIBUTION HOT WATER TEMPERATURE IS ABOVE SETPOINT PLUS DIFFERENTIAL AND NO LOAD EXISTS.
4. STAGING / ARRAY CONTROL
   UNITS SHALL STAGE BASED ON SYSTEM LOAD. ADDITIONAL UNITS SHALL ENABLE IN SEQUENCE AS HOT WATER DEMAND INCREASES. UNITS SHALL DISABLE IN REVERSE SEQUENCE AS LOAD DECREASES. LEAD UNIT SHALL BE ROTATED PERIODICALLY TO BALANCE RUN TIME.
5. CAPACITY CONTROL
   EACH UNIT SHALL MODULATE CAPACITY TO MAINTAIN HOT WATER TEMPERATURE SETPOINT WITHIN MANUFACTURER `S CONTROL BAND. PART-LOAD OPERATION SHALL BE HANDLED INTERNALLY BY THE UNIT CONTROLLER.
6. FLOW INTERLOCKS
   THE UNITS SHALL MONITOR GEOTHERMAL LOOP FLOW VIA PUMPS AND FLOW SWITCHES. UNITS SHALL NOT ENABLE IF LOOP FLOW IS BELOW MINIMUM. THE DISTRIBUTION LOOP SHALL PROVIDE THREE-WAY BYPASS AT REMOTE COILS TO MAINTAIN MINIMUM HOT WATER FLOW.
7. PROTECTIONS
   EACH UNIT SHALL PROVIDE HIGH AND LOW PRESSURE PROTECTION, COMPRESSOR/HEAT PUMP OVERLOAD PROTECTION, AND INTERNAL SAFETY SHUTDOWNS. DISCRETE ALARMS SHALL ANNUNCIATE TO THE BAS.
8. COMMUNICATION FAILSAFE
   IF COMMUNICATION WITH THE BAS IS LOST, EACH UNIT SHALL CONTINUE TO OPERATE USING FACTORY DEFAULT CONTROL LOGIC TO PROVIDE HOT WATER LOAD AS BEST AS POSSIBLE.
9. ALARMS AND STATUS
   THE FOLLOWING CONDITIONS SHALL ANNUNCIATE AT THE BAS:
   - UNIT ENABLE/DISABLE
   - COMPRESSOR FAULTS
   - LOW OR HIGH PRESSURE
   - COMMUNICATION LOSS
   - LOW FLOW
   - OTHER MANUFACTURER DETECTED ALERTS

BOILER OPERATION (B-1)

1. GENERAL
   THE BOILER SHALL ACT AS SUPPLEMENTAL HEAT-SOURCE FOR THE BUILDING HEATING DISTRIBUTION SYSTEM. IF ALL MODULAR CHILLERS ARE RUNNING AND CANNOT MEET THE HOT-WATER LOOP TEMPERATURE SETPOINT (130°F), THE BOILER CIRCULATION PUMP (P-17) SHALL ENABLE AND THE BOILER SHALL STAGE ON ACCORDINGLY TO HELP SATISFY THE SUPPLY TEMPERATURE SETPOINT.
2. ENABLE AND DISABLE
   THE BOILER SHALL ENABLE UPON A CALL FOR HEATING FROM THE BUILDING AUTOMATION SYSTEM (BAS) WHEN HOT WATER SUPPLY TEMPERATURE FALLS BELOW SETPOINT. THE BOILER SHALL DISABLE WHEN HOT WATER SUPPLY TEMPERATURE RISES ABOVE SETPOINT AND NO HEATING LOAD EXISTS.
3. TEMPERATURE CONTROL
   THE BOILER SHALL MODULATE FIRING RATE TO MAINTAIN HOT WATER SUPPLY TEMPERATURE SETPOINT AS PROVIDED BY THE BAS IN THE HOT WATER LOOP (BUILDING LOOP).
4. SAFETIES
   THE BOILER SHALL SHUT DOWN UPON HIGH LIMIT TEMPERATURE, LOW WATER CUTOUT, ELEMENT FAILURE, OR OTHER FACTORY SAFETY CONDITIONS. ALARMS SHALL ANNUNCIATE AT THE BAS.

MECHANICAL ROOM VENTILATION (F-7)

1. TEMPERATURE CONTROL
   THE MECHANICAL ROOM EXHAUST FAN SHALL ENABLE WHEN SPACE TEMPERATURE EXCEEDS 80°F (ADJ.). THE FAN SHALL DISABLE WHEN SPACE TEMPERATURE FALLS BELOW 75°F (ADJ.).
2. REFRIGERANT LEAK DETECTION
   UPON DETECTION OF A REFRIGERANT LEAK BY THE LEAK DETECTION SYSTEM, THE MECHANICAL ROOM EXHAUST FAN SHALL ENABLE AND OPERATE CONTINUOUSLY UNTIL THE ALARM CONDITION IS CLEARED. IF THE REFRIGERANT LEAK DETECTION SYSTEM FAILS, LOSES COMMUNICATION, OR SIGNAL IS NOT PRESENT, THE EXHAUST FAN SHALL DEFAULT TO CONTINUOUS OPERATION. AN ALARM SHALL ANNUNCIATE AT THE BAS.

ELECTRICAL ROOM AND TOOL STORAGE VENTILATION (F-8 & F-9)

1. TEMPERATURE CONTROL
   THE EXHAUST FAN SHALL ENABLE WHEN SPACE TEMPERATURE EXCEEDS 80°F (ADJ.). THE FAN SHALL DISABLE WHEN SPACE TEMPERATURE FALLS BELOW 75°F (ADJ.).
2. FAILSAFE
   IF SPACE TEMPERATURE SENSOR FAILS THE FAN SHALL OPERATE CONTINUOUSLY UNTIL THE SENSOR IS RESTORED.

IN-FLOOR HEATING

1. GENERAL
   THE IN-FLOOR HEATING SYSTEM SHALL PROVIDE RADIANT HEATING TO MAINTAIN SPACE TEMPERATURE. THE SYSTEM SHALL UTILIZE HOT WATER CIRCULATING THROUGH EMBEDDED FLOOR PIPING.
2. HEATING ENABLE
   THE BAS SHALL ENABLE THE IN-FLOOR HEATING SYSTEM WHEN SPACE TEMPERATURE FALLS BELOW THE HEATING SETPOINT (60°F. ADJ.).
3. CIRCULATION PUMP OPERATION
   THE IN-FLOOR HEATING CIRCULATION PUMP SHALL ENABLE WHEN THERE IS A CALL FOR HEATING FROM THE ASSOCIATED SPACE TEMPERATURE SENSOR. THE PUMP SHALL DISABLE WHEN THE HEATING CALL IS SATISFIED.
4. TEMPERATURE CONTROL
   THE BAS SHALL MONITOR BOTH SPACE TEMPERATURE AND FLOOR TEMPERATURE SENSORS. THE HOT WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN THE SPACE HEATING SETPOINT WHILE LIMITING FLOOR SURFACE TEMPERATURE.
5. FLOOR TEMPERATURE LIMITING
   THE FLOOR TEMPERATURE SENSOR SHALL PROVIDE MAXIMUM FLOOR TEMPERATURE LIMIT CONTROL TO PREVENT OVERHEATING OF THE FLOOR SURFACE. IF FLOOR TEMPERATURE EXCEEDS THE MAXIMUM FLOOR SETPOINT 85 (ADJ.), THE HOT WATER VALVE SHALL MODULATE CLOSED UNTIL FLOOR TEMPERATURE RETURNS BELOW THE LIMIT.
6. SYSTEM DISABLE
   WHEN SPACE TEMPERATURE RISES ABOVE THE HEATING SETPOINT AND FLOOR TEMPERATURE IS SATISFIED, THE HOT WATER VALVE SHALL CLOSE AND THE CIRCULATION PUMP SHALL STOP.
7. FAILSAFE OPERATION
   IF A FLOOR TEMPERATURE SENSOR FAILS, THE SYSTEM SHALL CONTINUE TO OPERATE BASED ON SPACE TEMPERATURE CONTROL ONLY AND AN ALARM SHALL ANNUNCIATE AT THE BAS.

UNIT HEATERS (UH-1 THRU UH-7)

1. GENERAL
   UNIT HEATERS SHALL PROVIDE SUPPLEMENTAL HEATING TO MAINTAIN SPACE TEMPERATURE. REFER TO PLANS TO SEE WHAT UNIT HEATERS ARE PAIRED WITH WHAT IN-FLOOR HEATING MANIFOLDS.
2. ENABLE
   WHEN SPACE TEMPERATURE FALLS BELOW HEATING SETPOINT THE HOT WATER VALVE SHALL OPEN AND THE UNIT HEATER FAN SHALL ENABLE.
3. DISABLE
   WHEN SPACE TEMPERATURE RISES ABOVE HEATING SETPOINT THE HOT WATER VALVE SHALL CLOSE AND THE FAN SHALL DISABLE.

GLYCOL FEED PUMPS

1. GENERAL
   THE GLYCOL FEED PUMP SHALL MAINTAIN PROPER GLYCOL CONCENTRATION AND SYSTEM PRESSURE IN THE CLOSED LOOP SYSTEM.
2. OPERATION
   THE PUMP SHALL ENABLE WHEN SYSTEM PRESSURE FALLS BELOW THE LOW PRESSURE SETPOINT.
3. DISABLE
   THE PUMP SHALL STOP WHEN SYSTEM PRESSURE IS RESTORED ABOVE THE HIGH PRESSURE SETPOINT.
4. ALARMS
   LOW GLYCOL LEVEL OR PUMP FAILURE SHALL ANNUNCIATE AT THE BAS.

COMMUNICATION ROOM AIR CONDITIONING

1. GENERAL
   THE COMMUNICATION ROOM AIR CONDITIONER SHALL MAINTAIN SPACE TEMPERATURE FOR SENSITIVE ELECTRONIC EQUIPMENT.
2. TEMPERATURE CONTROL
   THE UNIT SHALL ENABLE WHEN SPACE TEMPERATURE RISES ABOVE 75°F (ADJ.).THE UNIT SHALL DISABLE WHEN SPACE TEMPERATURE FALLS BELOW 70°F (ADJ.). CONTINUOUS OPERATION
   THE SUPPLY FAN SHALL OPERATE CONTINUOUSLY WHILE THE UNIT IS ENABLED.
3. ALARMS
   HIGH SPACE TEMPERATURE OR UNIT FAILURE SHALL ANNUNCIATE AT THE BAS.

DRYER EXHAUST FANS (NOT IN CONTRACT)

1. GENERAL
   DRYER EXHAUST FANS SHALL REMOVE MOIST AIR FROM DRYER EQUIPMENT.
2. OPERATION
   THE DRYER EXHAUST FAN SHALL ENABLE WHEN THE ASSOCIATED DRYER IS ENERGIZED OR BY A POSITIVE AIR FLOW PRESSURE SWITCH.
3. SHUTDOWN
   THE FAN SHALL DISABLE WHEN THE DRYER IS SHUT DOWN.
4. FAILSAFE
   IF FAN STATUS IS NOT PROVEN AN ALARM SHALL ANNUNCIATE AT THE BAS.

OFFICE RESTROOM EXHAUST FAN (NOT IN CONTRACT)

1. ENABLE/DISABLE CONTROL
   THE RESTROOM EXHAUST FAN SHALL BE ENABLED CONTINUOUSLY

DOAS-1(NOT IN CONTRACT)

1. GENERAL
   THE DOAS SHALL PROVIDE VENTILATION AIR TO THE BUILDING.
2. OCCUPIED MODE
   DURING OCCUPIED MODE THE SUPPLY FAN SHALL OPERATE CONTINUOUSLY AND PROVIDE DESIGN OUTDOOR AIRFLOW.
3. TEMPERATURE CONTROL
   THE HEATING AND COOLING COILS SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT 70 DEGREES (ADJ.).
4. UNOCCUPIED MODE
   THE UNIT SHALL SHUT DOWN DURING UNOCCUPIED MODE UNLESS REQUIRED FOR FREEZE PROTECTION OR MORNING WARM-UP.
5. SAFETIES
   IF SUPPLY FAN STATUS IS NOT PROVEN WITHIN 30 SECONDS THE UNIT SHALL SHUT DOWN AND ANNUNCIATE AN ALARM AT THE BAS

NOT IN CONTRACT

GEOTHERMAL WELL SYSTEM – BASE-MOUNTED END-SUCTION PUMPS P-5 AND P-6 (GEOTHERMAL PACKAGE - NOT IN CONTRACT)

1. GENERAL
   THE GEOTHERMAL LOOP SHALL BE SERVED BY TWO BASE-MOUNTED END-SUCTION VARIABLE SPEED PUMPS OPERATING IN A LEAD/LAG CONFIGURATION.
2. ENABLE AND DISABLE
   THE PUMPS SHALL BE ENABLED UPON A CALL FOR HEATING OR COOLING FROM ANY WSHP OR MODULAR CHILLER UNIT AND SHALL BE DISABLED WHEN NO WSHP OR MODULAR CHILLER UNIT REQUIRE OPERATION.
3. TEMPERATURE CONTROL
   THE BAS SHALL MONITOR GEOTHERMAL SUPPLY AND RETURN WATER TEMPERATURES. PUMP SPEEDS SHALL MODULATE TO MAINTAIN A 20°F DIFFERENTIAL TEMPERATURE ACROSS THE GEOTHERMAL LOOP. GEOTHERMAL LOOP OPERATING TEMPERATURE SHALL BE MAINTAINED BETWEEN 35°F MINIMUM AND 100°F MAXIMUM (ADJUSTABLE).
4. HOT WATER SUPPLY TEMPERATURE RESET
   THE MODULAR HEAT PUMP UNITS SHALL PROVIDE HOT WATER TO THE LOAD SIDE DISTRIBUTION LOOP. THE BAS SHALL RESET THE HOT WATER SUPPLY TEMPERATURE SETPOINT BASED ON OUTDOOR AIR TEMPERATURE. WHEN OUTDOOR AIR TEMPERATURE IS LESS THAN 60°F BUT GREATER THAN 30°F THE HOT WATER SUPPLY TEMPERATURE SETPOINT SHALL BE 100°F. WHEN OUTDOOR AIR TEMPERATURE IS LESS THAN 30°F BUT GREATER THAN 15°F THE HOT WATER SUPPLY TEMPERATURE SETPOINT SHALL BE 115°F. WHEN OUTDOOR AIR TEMPERATURE IS LESS THAN 15°F THE HOT WATER SUPPLY TEMPERATURE SETPOINT SHALL BE 130°F.THE RESET SCHEDULE SHALL BE ADJUSTABLE THROUGH THE BAS.
5. LEAD AND LAG OPERATION
   ONE PUMP SHALL OPERATE AS LEAD AND THE SECOND PUMP SHALL OPERATE AS LAG. LEAD/LAG ASSIGNMENT SHALL ROTATE AUTOMATICALLY BASED ON RUN TIME. UPON LEAD PUMP FAILURE THE LAG PUMP SHALL START AUTOMATICALLY AND AN ALARM SHALL ANNUNCIATE AT THE BAS.
6. ALARMS
   THE FOLLOWING CONDITIONS SHALL ANNUNCIATE AT THE BAS:
   A. PUMP FAILURE
   B. LOSS OF DELTA T CONTROL
   C. HIGH LOOP TEMPERATURE (110°F)
   D. LOW LOOP TEMPERATURE (30°F)
   E. VFD FAULT.

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STATE OF NEW YORK · ANDREW J. MILNE · LICENSED PROFESSIONAL ENGINEER · 108861

REGISTRATION EXPIRES: 10/31/2026

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	A.M. CALABRESE
DESIGNED BY:	A.M. CALABRESE
CHECKED BY:	A.J. MILNE, P.E.

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SEQUENCE OF OPERATION

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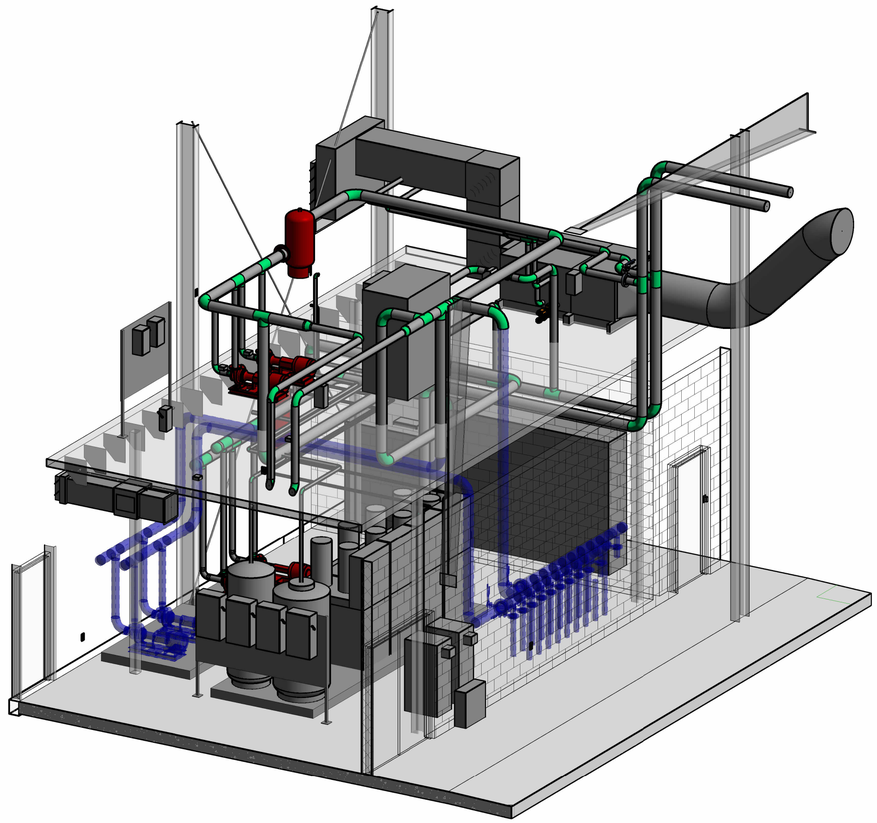
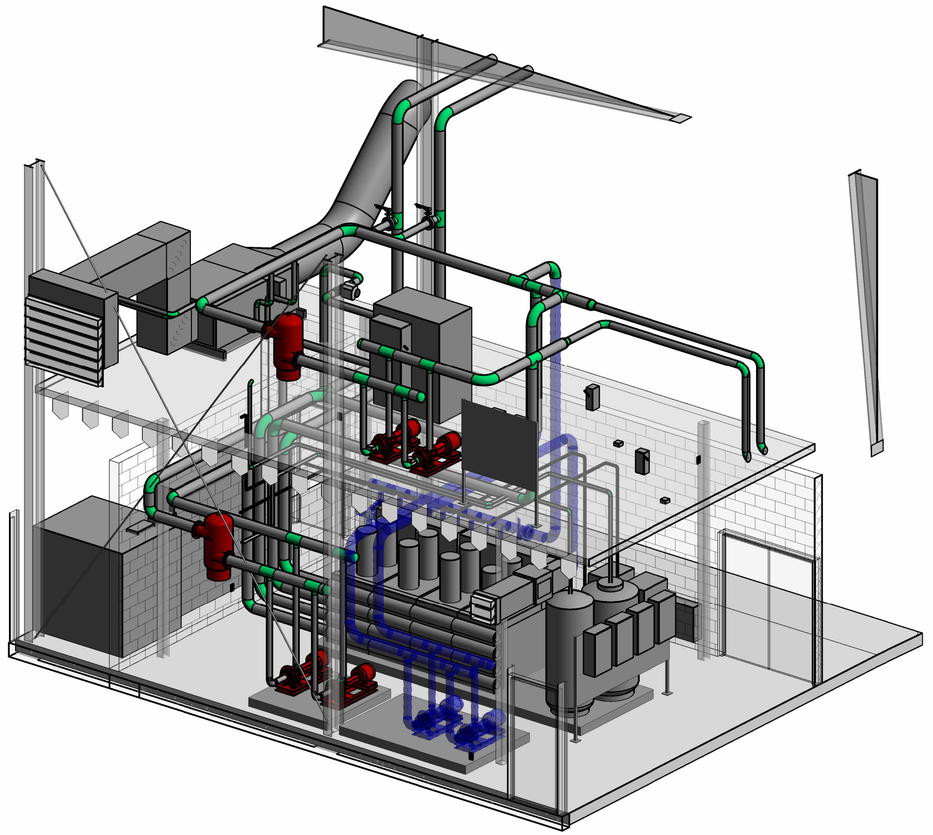


A1 MECHANICAL ROOM ISO - VIEW 1
SCALE: NOT TO SCALE



A3 MECHANICAL ROOM ISO - VIEW 2
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3/6/2026

REGISTRATION EXPIRES: 10/31/2026

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ISOMETRICS

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1. ALL ELECTRICAL WORK SHALL CONFORM TO ALL STATE, LOCAL, AND NATIONAL ELECTRICAL CODES.
2. ELECTRICAL CHARACTERISTICS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER.
3. ITEMS OF SPECIFIC MANUFACTURERS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND/OR MANUFACTURER'S REPRESENTATIVE'S DIRECTIONS.
4. THE CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS AND DIMENSIONS SHOWN ON DRAWINGS
5. ALL CONDUIT AND WIRING SCHEDULES SHALL BE VERIFIED BEFORE INSTALLATION.
6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL EQUIPMENT WITH OTHER CONTRACTORS.
7. ALL AREAS DISTURBED BY WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN ORIGINAL AS DETERMINED BY THE ENGINEER.
8. THE CONTRACTOR SHALL PROVIDE RACEWAYS, WIRING, AND CONNECTIONS FOR ALL CONTROL CIRCUITS AND INTERLOCK.
9. ALL ELECTRICAL CONDUIT AND CONDUCTORS DISCONNECTED AND NOT TO BE REUSED SHALL BE REMOVED.
10. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS BEFORE STARTING WORK. IF ONLY A PORTION OF AN EXISTING CIRCUIT IS BEING REMOVED FOR DEMOLITION, CONTINUITY SHALL BE MAINTAINED TO THE REST OF THE REMAINING CIRCUIT.
11. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE #12AWG UNLESS OTHERWISE SHOWN.
12. ALL BRANCH CIRCUITS SHALL CONSIST OF 2 CONDUCTORS PLUS GROUND, UNLESS OTHERWISE SHOWN.
13. NOT ALL STARTERS AND/OR DISCONNECTS SHOWN. SEE EQUIPMENT CONNECTION SCHEDULE FOR EQUIPMENT REQUIREMENTS.

C1 ELECTRICAL GENERAL NOTES
SCALE: NOT TO SCALE

A	AMPERE
A/C	AIR CONDITIONING
AC	ALTERNATE CURRENT
ACCU	AIR COOLED CONDENSING UNIT
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
A/H	AIR HANDLER
AIC	AMPERE INTERRUPTING CAPACITY
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AU	AT UNIT
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BFG	BELOW FINISHED GRADE
BRK	BREAKER
BOH	BACK OF HOUSE
C	CONDUIT
CA	CABLE
CAB	CABINET
CAT5E	CATEGORY-5E
CC	CABLED CONDUCTORS
CH	CHILLER
CKT	CIRCUIT
CLL	CONTRACT LIMIT LINE
CMH	COMMUNICATION MANHOLE
CO	CONDUIT ONLY
COMM	COMMUNICATION
CPB	COMMUNICATION PULLBOX
CT	CURRENT TRANSFORMER
CTR	ABOVE COUNTER
CUC	COMMON USER CABLE
CUTC	COMMON USER TERMINAL CABINET
D	DEEP
DC	DIRECT CURRENT
DISC	DISCONNECT
DN	DOWN
DP	DISTRIBUTION PANEL
DPST	DOUBLE POLE SINGLE THROW
DPDT	DOUBLE POLE DOUBLE THROW
EER	ELECTRICAL EQUIPMENT ROOM
ELECT	ELECTRICAL
ELEV	ELEVATION
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
EXIST	EXISTING
F	FUSE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAT	FIRE ALARM TERMINATION
FBO	FURNISHED BY OWNER
FD/SD	FIRE DAMPER / SMOKE DETECTOR
FDR	FEEDER
FLA	FULL LOAD AMPERES
GFI	GROUND FAULT INTERRUPT
GND	GROUND
H	HIGH
HP	HORSEPOWER
HZ	HERTZ
I/C	INTERCOM
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KA	KILOAMP
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
KWH	KILOWATT HOUR
KWHD	KILOWATT HOUR DEMAND METER
L	LENGTH, LONG
LGT	LIGHTING
MA	MILLIAMPERES
MBB	MONITOR BREAKOUT BOX
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCM	1000 CIRCULAR MILLS
MECH	MECHANICAL
MIC	MICROPHONE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MM	MULTI MODE
MTD	MOUNTED
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASS.
NF	NON-FUSED
NFPA	NATIONAL FIRE PROTECTION ASS.
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OLS	OVERLOADS
OC	ON CENTER
P	POLE
PB	PULLBOX
PNL	PANEL
PR	PAIR
PVC	POLYVINYL CHLORIDE
PWR	POWER
POC	POINT OF CONNECTION
POS	POINT OF SALES
PT	POTENTIAL TRANSFORMER
REF	REFERENCE
REM	REMARKS
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RMS	ROOT-MEAN-SQUARE
RCPT	RECEPTACLE
SBB	SOUND BREAKOUT BOX
SDB	SOUND DISTRIBUTION BOX
SLC	SIGNALING LINE CIRCUIT
SM	SINGLE MODE
SPECS	SPECIFICATIONS
SPKR	SPEAKER
SPST	SINGLE POLE SINGLE THROW
SPDT	SINGLE POLE DOUBLE THROW
SR	SOUND RACK
SST	STAINLESS STEEL
ST	SHUNT TRIP
SW	SWITCH
SWBD	SWITCHBOARD
TEL	TELEPHONE
TP	TWISTED PAIR CABLE
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
W	WATT, WIRE, WIDE
WP	WEATHERPROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF

B2 ABBREVIATIONS
SCALE: NOT TO SCALE

PLAN SYMBOLS

	EXISTING WORK LINETYPE DEMOLITION WORK LINETYPES NEW WORK LINETYPE	A	2'X4' LUMINAIRE, LETTER DENOTES TYPE, SEE LUMINAIRE SCHEDULE NL = NIGHT LIGHT
	AREA NOT IN CONTRACT (NIC)	A	1'X4' LUMINAIRE, LETTER DENOTES TYPE, SEE LUMINAIRE SCHEDULE NL = NIGHT LIGHT
Φ^{XX}	DUPLEX RECEPTACLE, MOUNT AT 18" AFF UNLESS NOTATION INDICATES OTHERWISE. CTR = ABOVE COUNTER GFI = GROUND FAULT CIRCUIT INTERRUPTER, MOUNT AT 48" AFF UNLESS OTHERWISE NOTED WP = GFI WITH WEATHERPROOF COVER, MOUNT AT 42" AFF UNLESS OTHERWISE NOTED	A	2'X2' LUMINAIRE, LETTER DENOTES TYPE, SEE LUMINAIRE SCHEDULE NL = NIGHT LIGHT
		A	RECESSED DOWN LIGHT, LETTER DENOTES TYPE, SEE LUMINAIRE SCHEDULE NL = NIGHT LIGHT
	QUAD RECEPTACLE, MOUNT 18" AFF UNLESS OTHERWISE NOTED	A	POLE MOUNTED LUMINAIRE LETTER DENOTES TYPE, SEE LUMINAIRE SCHEDULE
(CR)	CORD REEL	A	INDICATES WALL MOUNTED LUMINAIRE, LETTER DENOTES TYPE, SEE LUMINAIRE SCHEDULE
	SPECIAL RECEPTACLE	A NL	INDICATES EMERGENCY LUMINAIRE, LETTER DENOTES TYPE, SEE LUMINAIRE SCHEDULE NL = NIGHT LIGHT
S^{XX}	SINGLE POLE SWITCH, UNLESS NOTATION INDICATES OTHERWISE. OS = OCCUPANCY SENSOR OSD = OCCUPANCY SENSOR WITH DIMMER 2 = DOUBLE POLE SWITCH 3 = THREE-WAY SWITCH 4 = FOUR-WAY SWITCH D = DIMMER SWITCH K = KEYED SWITCH M = MANUAL MOTOR STARTER T = TIMER SWITCH LV = LOW VOLTAGE SWITCH ES = EMERGENCY STOP PUSH BUTTON		EMERGENCY LIGHT WITH BATTERY PACK
		(OS)	CEILING MOUNTED OCCUPANCY SENSOR
		*DS	CEILING MOUNTED DAYLIGHT HARVESTING SENSOR
(PC)	PHOTO CELL FOR EXTERIOR LIGHTING CONTROL	MH	MANHOLE
VFD	COMBINATION MOTOR STARTER/CIRCUIT BREAKER DISCONNECT SWITCH VFD = VARIABLE FREQUENCY DRIVE	HH	HANDHOLE
	FUSED DISCONNECT SWITCH	UE	UNDERGROUND ELECTRIC
	NON FUSED DISCONNECT SWITCH		UNDERGROUND ELECTRIC DUCTBANK
(J)	JUNCTION BOX	A A A	EXIT LUMINAIRE, SHADED AREA DENOTES FACE, LETTER DENOTES TYPE
	ELECTRICAL MOTOR (SEE EQUIPMENT CONNECTION SCHEDULE)		
	PANEL BOARD, REFER TO PANEL BOARD SCHEDULE		COPPER CLAD GROUND ROD, 3/4" X 10'
XXX	BRANCH CIRCUIT HOME RUN WITH CIRCUIT NUMBER SEE PANEL SCHEDULES FOR DETAILS	FB	RECESSED FLOOR BOX

B3 PLAN SYMBOLS
SCALE: NOT TO SCALE

ONE-LINE SYMBOLS

	DISCONNECT SWITCH (TICKS INDICATE NUMBER OF POLES)		UTILITY POLE
	CIRCUIT BREAKER (TICKS INDICATE NUMBER OF POLES)	M	METER
	FUSED DISCONNECT SWITCH (TICKS INDICATE NUMBER OF POLES)	C	CONTACTOR ("M" DENOTES MOTOR CONTACTOR)
BPS	BOLTED PRESSURE SWITCH w/FUSE		CONTACTS (NORMALLY OPEN)
	TRANSFORMER		CONTACTS (NORMALLY CLOSED)
	GROUND		INDICATOR LIGHT LETTER INDICANTS COLOR. R=RED, G=GREEN, Y=YELLOW, B=BLUE, NO LETTER=CLEAR
	CONNECTION POINT OR CABLE SPLICE		FUSE
	GENERATOR		PANELBOARD
	TRANSFER SWITCH		

A3 ONE-LINE SYMBOLS
SCALE: NOT TO SCALE

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DESIGNED BY:	F.K. NEILEY, P.E.
CHECKED BY:	S.H. SHOVA

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ELECTRICAL NOTES, SYMBOLS, AND ABBREVIATIONS

E-001

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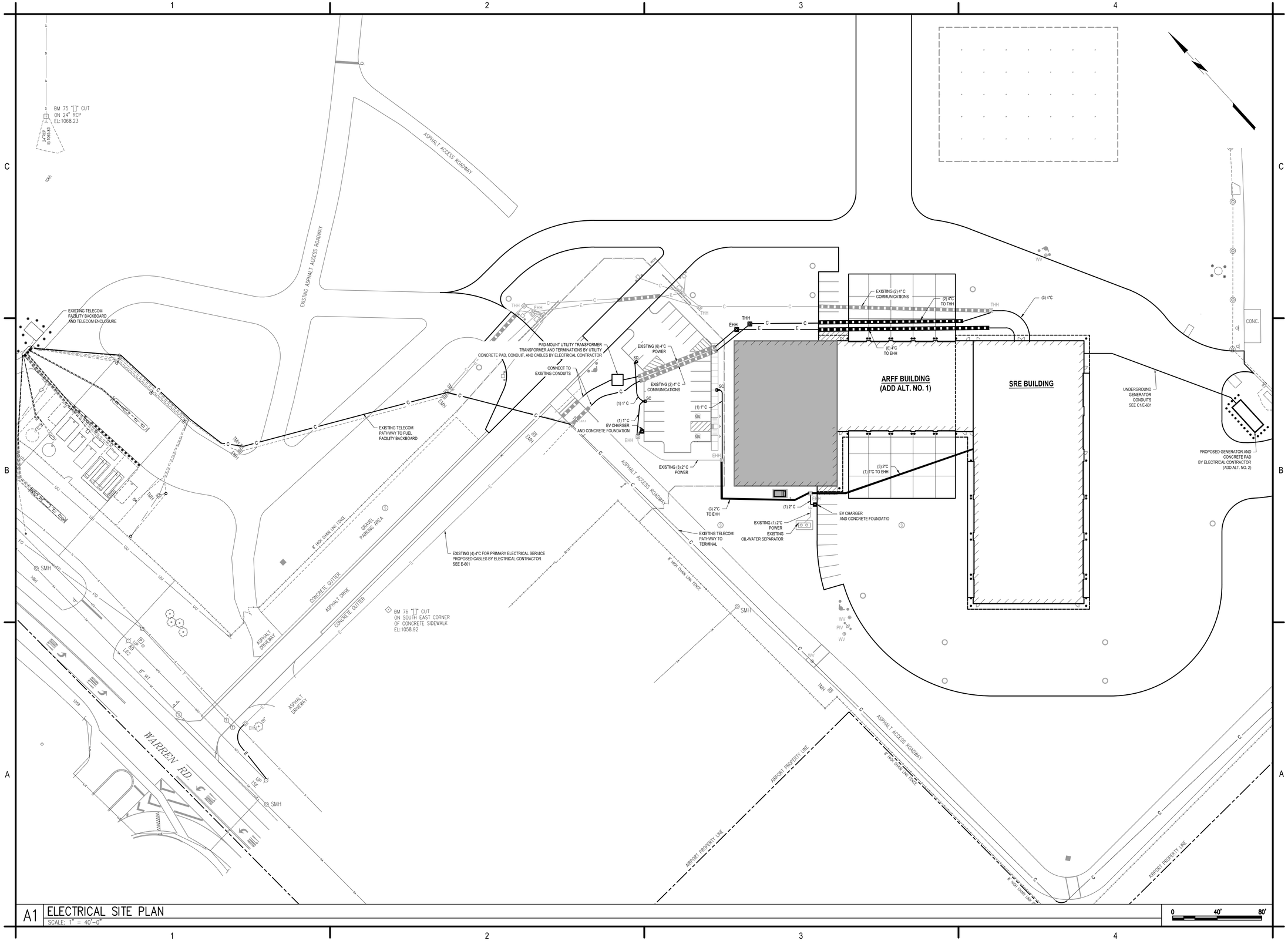

A1 ELECTRICAL SITE PLAN

SCALE: 1" = 40'-0"

0 40' 80'

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ELECTRICAL SITE PLAN

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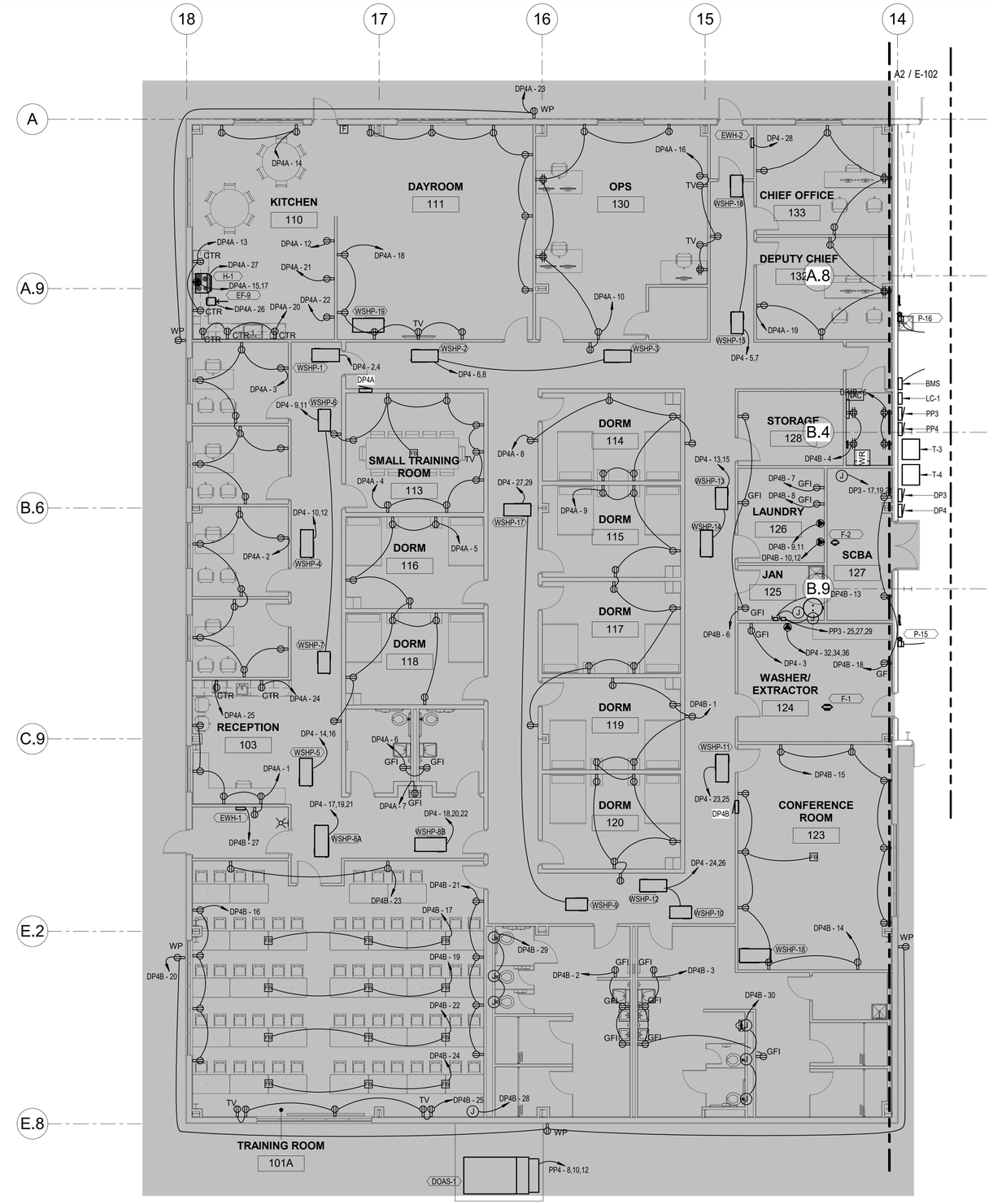

A2 FIRST FLOOR - AREA A (NOT IN CONTRACT)
SCALE: 1/8" = 1'-0"

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ELECTRICAL POWER PLAN - AREA A (NOT IN CONTRACT)

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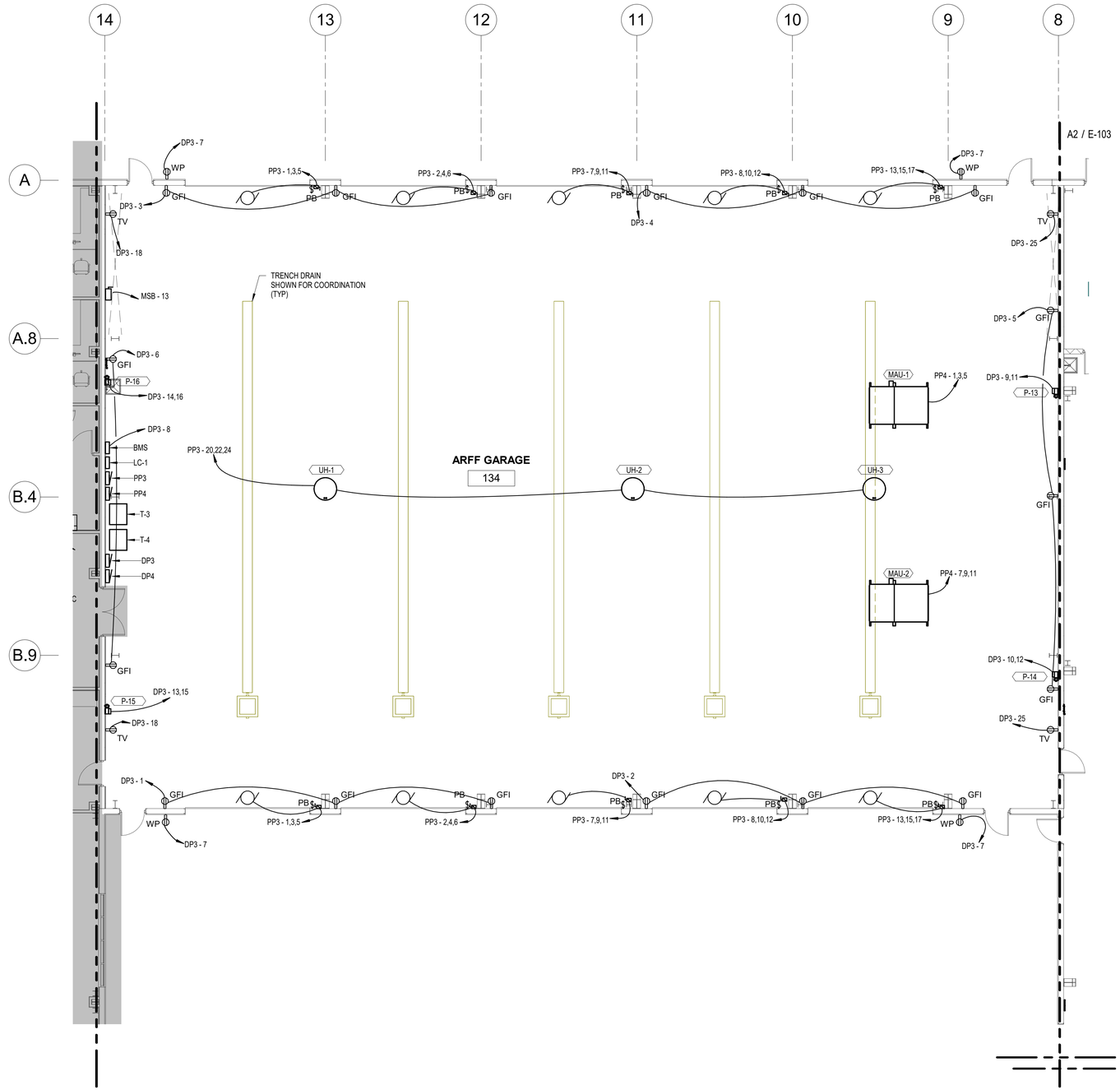

A2 FIRST FLOOR - AREA B (ADD ALT. NO. 1)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ELECTRICAL POWER PLAN - AREA B (ADD ALT. NO. 1)

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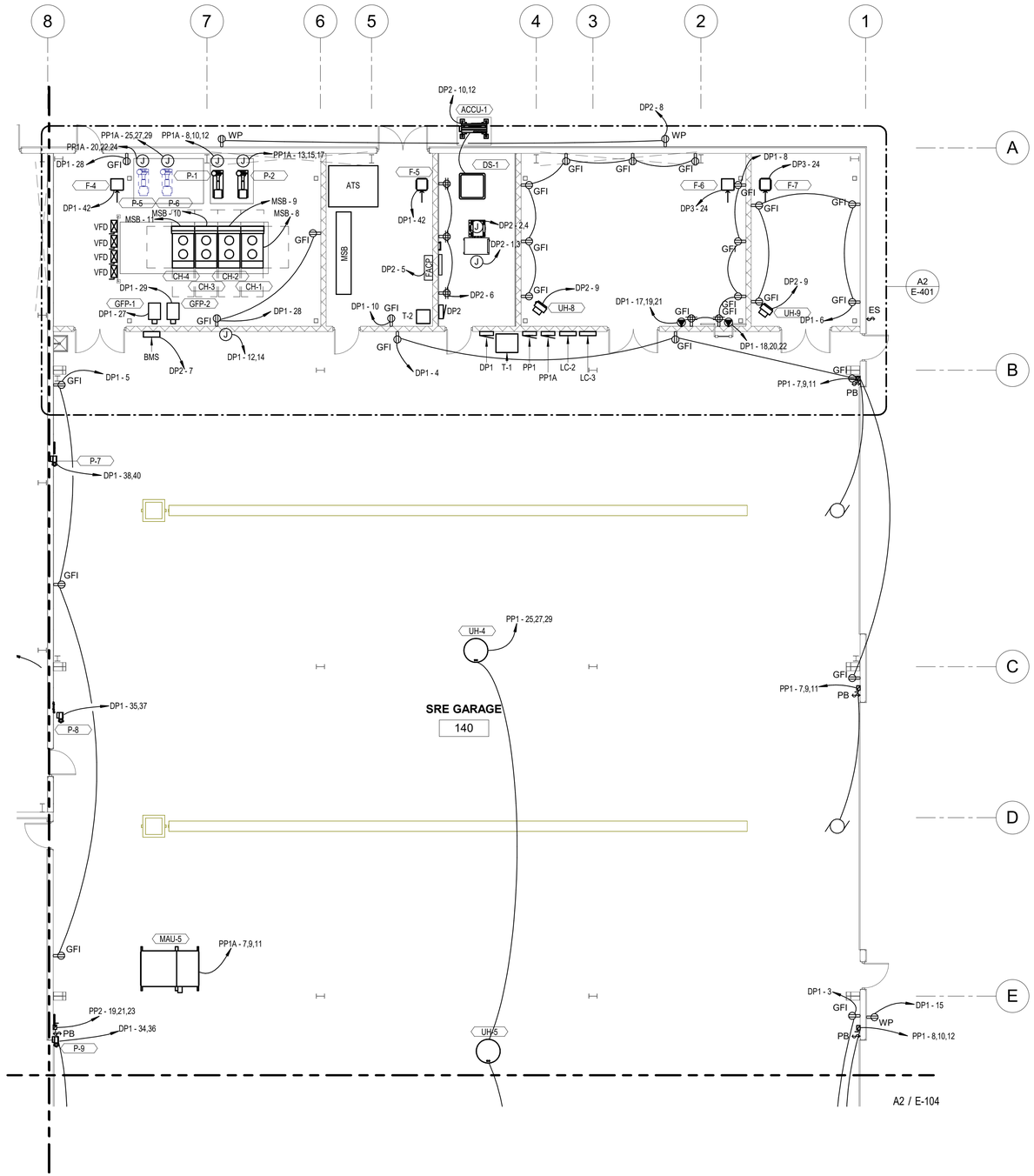

A2 FIRST FLOOR - AREA C

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

0 4' 8' 16'

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ELECTRICAL POWER PLAN - AREA C

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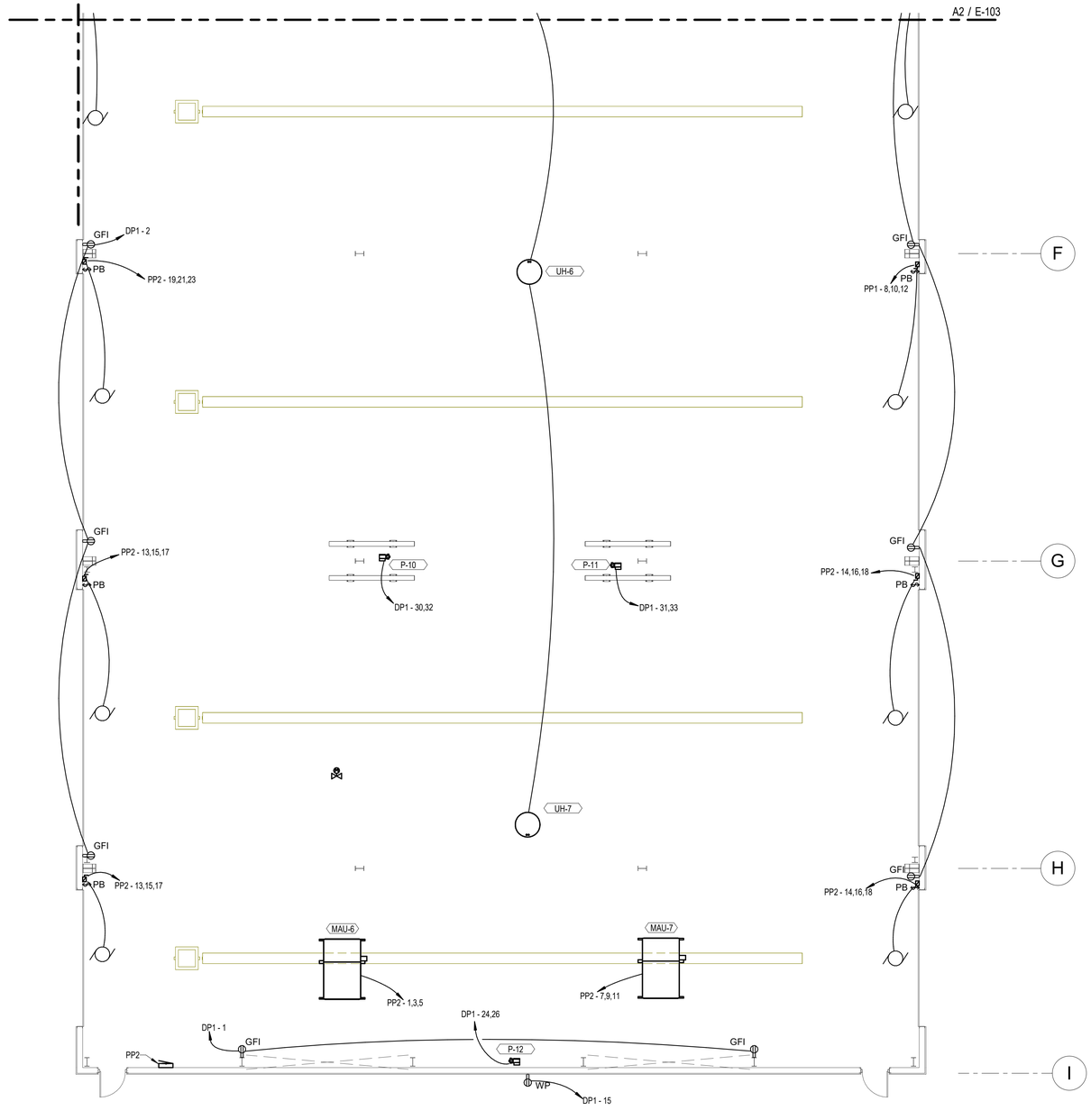

PLAN NORTH

A2 FIRST FLOOR - AREA D
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ELECTRICAL POWER PLAN - AREA D

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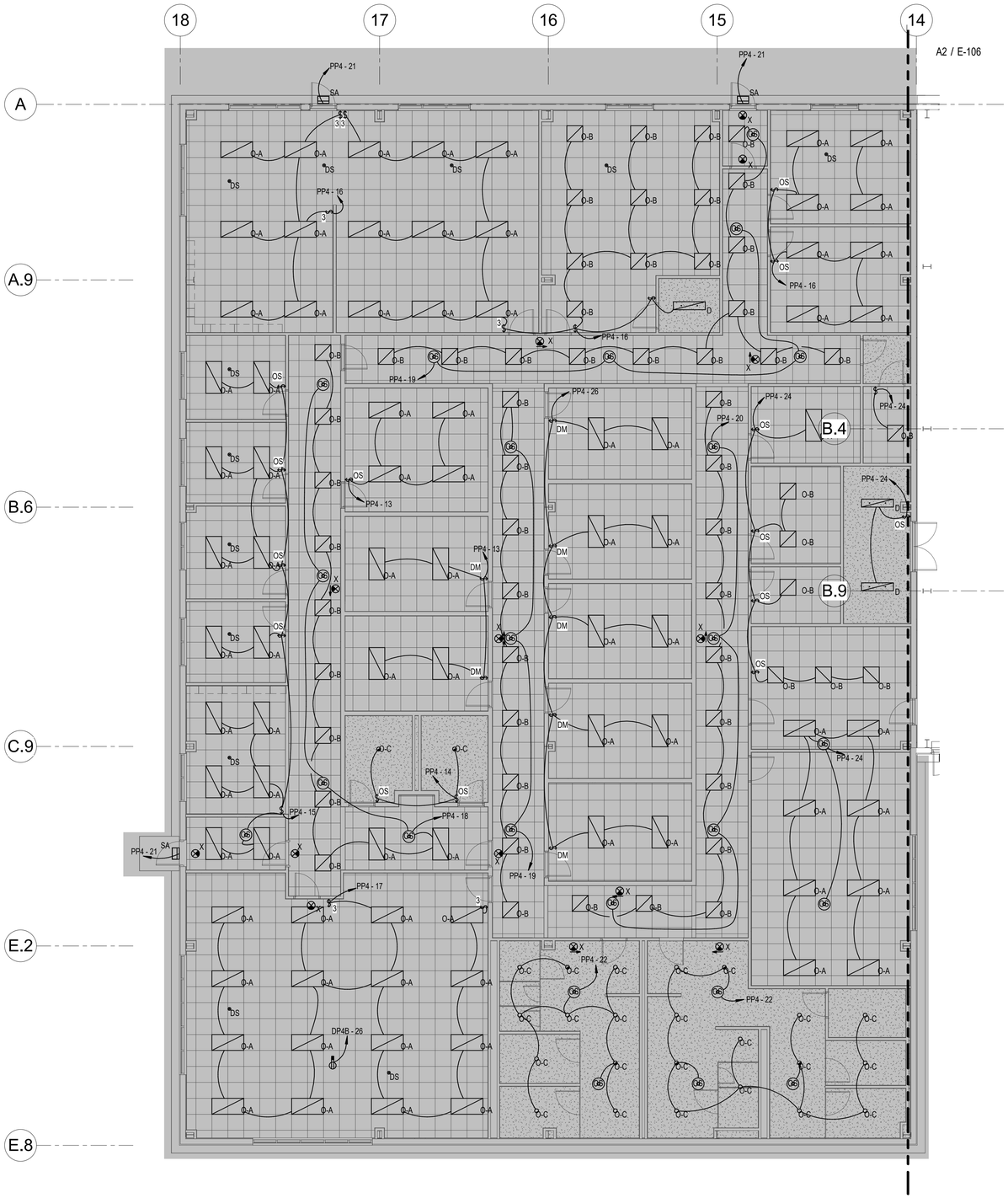

A2 FIRST FLOOR - AREA A (NOT IN CONTRACT)
SCALE: 1/8" = 1'-0"

0 4" 8" 16"

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ELECTRICAL LIGHTING PLAN - AREA A (NOT IN CONTRACT)

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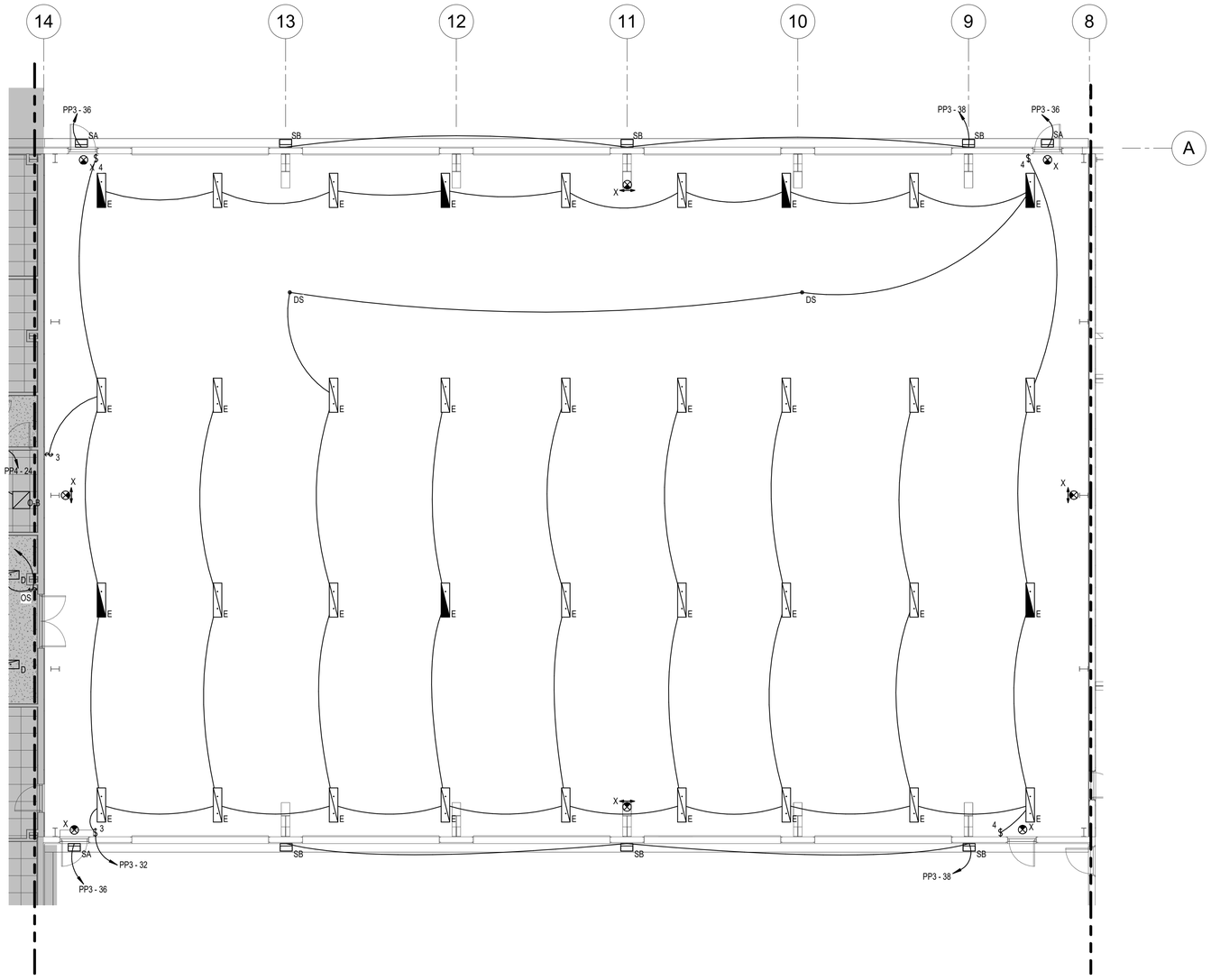

PLAN NORTH

A2 FIRST FLOOR - AREA B (ADD ALT. NO. 1)
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ELECTRICAL LIGHTING PLAN - AREA B (ADD ALT. NO. 1)

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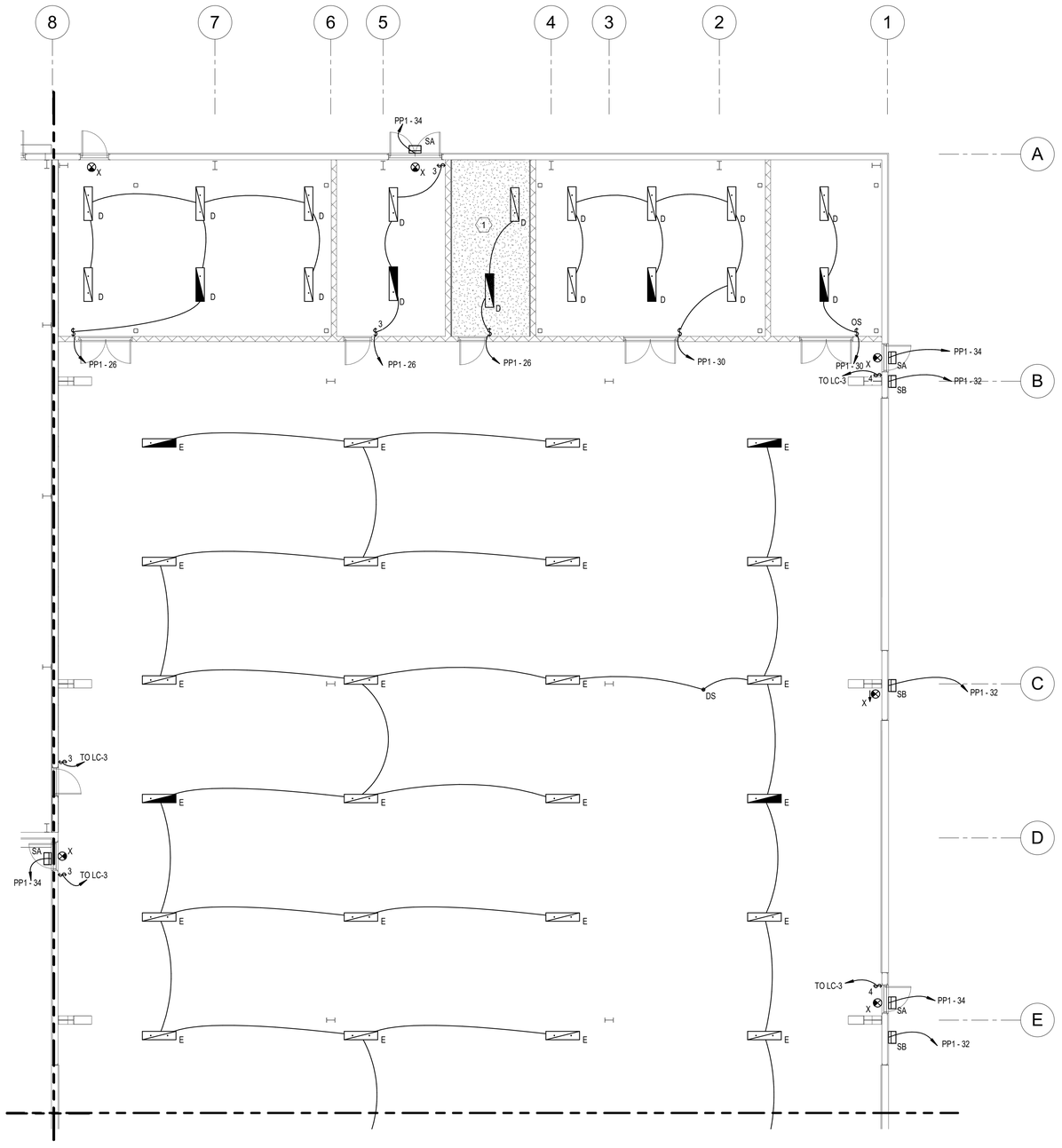
1	COORDINATE LUMINAIRE PLACEMENT WITH OTHER CEILING-MOUNTED EQUIPMENT/DEVICES.



A2 FIRST FLOOR - AREA C

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

0 4' 8' 16'

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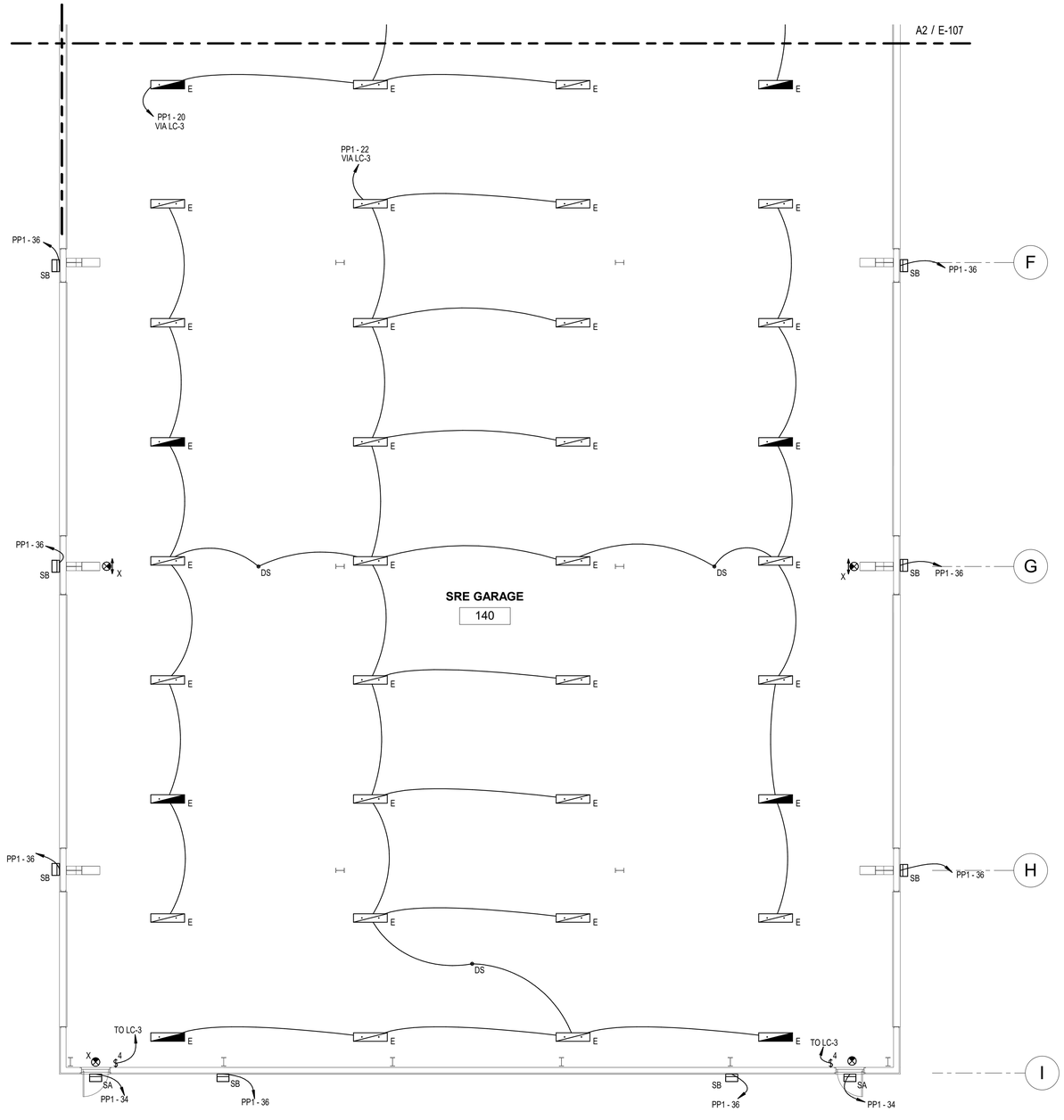

PLAN NORTH

A2 FIRST FLOOR - AREA D
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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ELECTRICAL LIGHTING PLAN - AREA D

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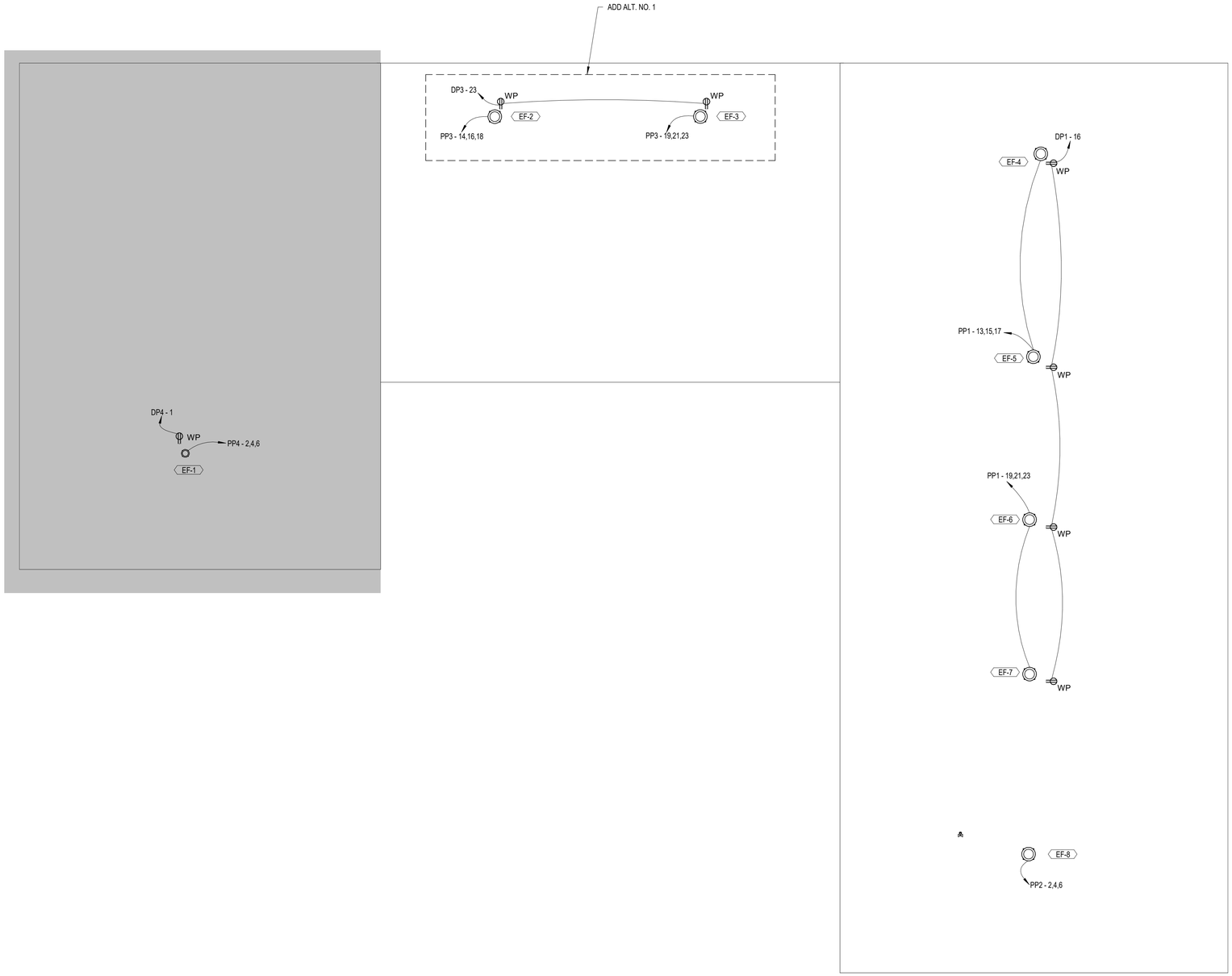

PLAN NORTH

0 8' 16' 32'

A1 **ROOF PLAN**
SCALE: 1/16" = 1'-0"

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ELECTRICAL ROOF PLAN

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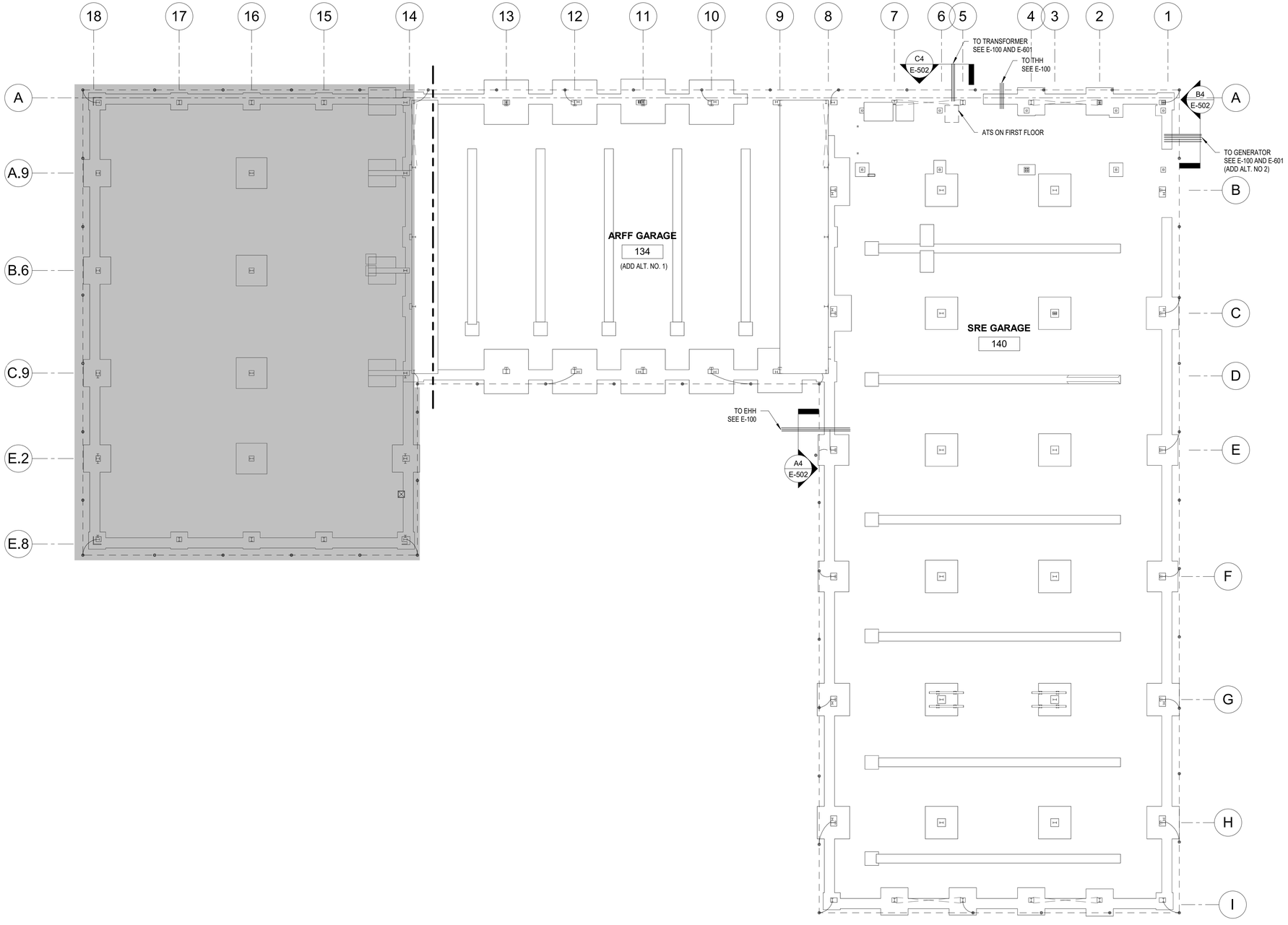

A1 FIRST FLOOR - BELOW SLAB
SCALE: 1/16" = 1'-0"

0 8' 16' 32'

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ELECTRICAL UNDER SLAB PLAN

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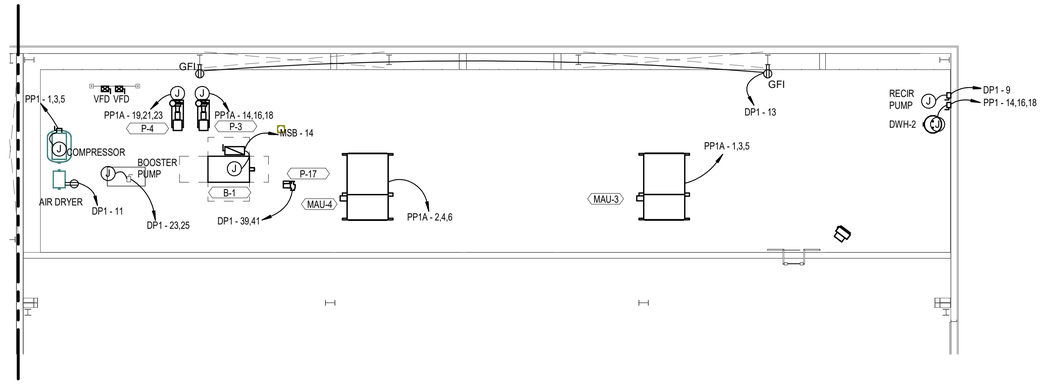

PLAN NORTH

A2 FIRST FLOOR - AREA C - MEZZANINE

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

0 4' 8' 16'

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ELECTRICAL POWER PLAN - MEZZANINE

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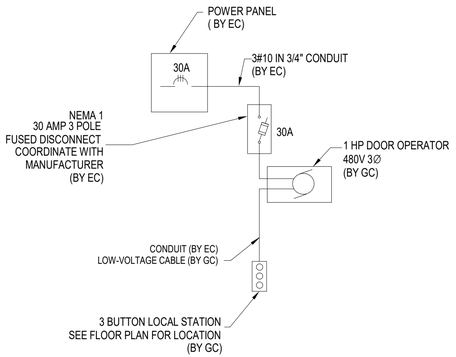
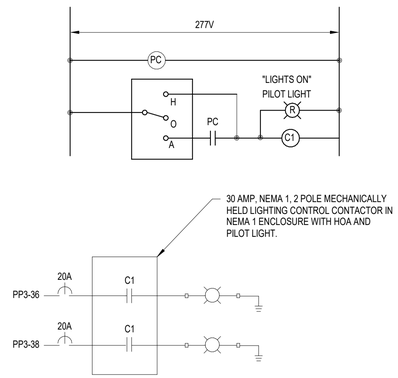


NOTE: PROVIDE CONDUIT FOR ALL DOOR CONTROL AND SAFETY DEVICES, COORDINATE WITH DOOR MANUFACTURER.

C1 INDIVIDUAL OVERHEAD DOOR WIRING DETAIL

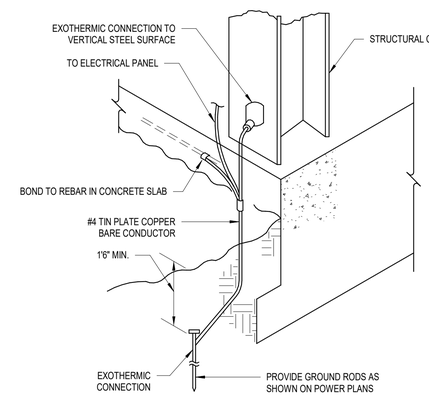
SCALE: NOT TO SCALE



NOTE:
1. INSTALL CONTACTOR ADAJCENT TO PANEL.
2. PROVIDE PLASTIC ENGRAVEDLABEL.
3. MOUNT PHOTO CELL ON EXTERIOR OF NORTH WALL.
4. COIL CLEARING CONTACTS AND UNLATCH COIL NOT SHOWN.

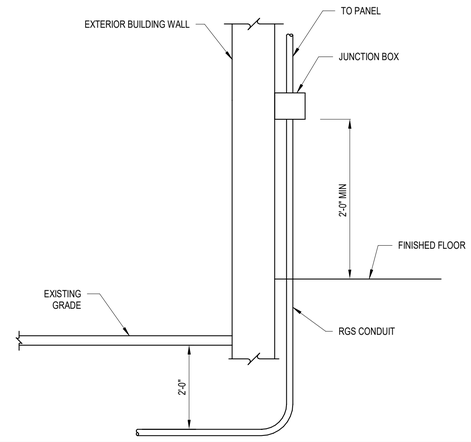
C2 EXTERIOR LIGHTING CONTROL DETAIL - LC-1 (ADD ALT. NO. 1)

SCALE: NOT TO SCALE



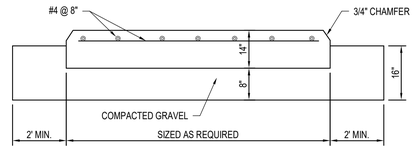
C3 GROUND BOND DETAIL

SCALE: NOT TO SCALE



C4 CONDUIT ENTRANCE DETAIL

SCALE: NOT TO SCALE

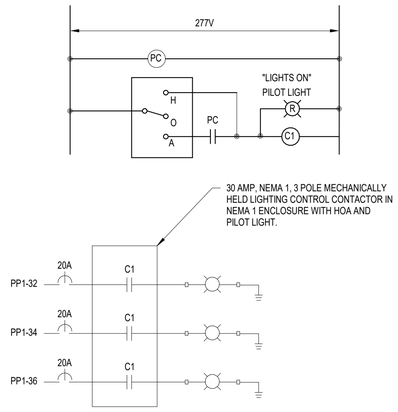


GENERAL NOTES:

1 CONCRETE STRENGTH: 4000PSI @ 28 DAY, TYPE 1 CEMENT.
2 REINFORCING STEEL: ATEM A615, GRADE 60.
3 CONCRETE WORK SHALL MEET ALL (ACI) CODES REQUIREMENTS.
4 REMOVE TOP SOIL FROM THE AREA INDICATED IN PLAN.
5 COMPACT SOIL SUBGRADE.
6 PLACE GRAVEL FILL AND COMPACT TO 95% STANDARD PROCTOR
7 INSTALL GENERATOR ANCHOR BOLTS AS RECOMMENDED BY THE GENERATOR MANUFACTURER.
8 CONTRACTOR TO SUBMIT CONCRETE DESIGN.

B1 GENERATOR CONCRETE PAD DETAIL (ADD ALT. NO. 2)

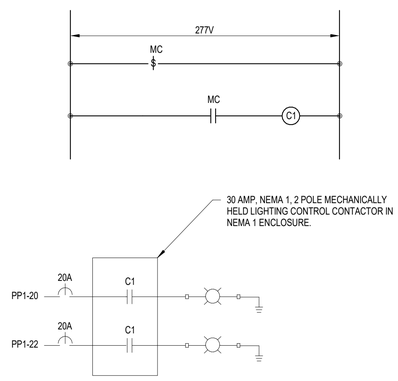
SCALE: NOT TO SCALE



NOTE:
1. INSTALL CONTACTOR ADJACENT TO PANEL.
2. PROVIDE PLASTIC ENGRAVEDLABEL.
3. MOUNT PHOTO CELL ON EXTERIOR OF NORTH WALL.
4. COIL CLEARING CONTACTS AND UNLATCH COIL NOT SHOWN.

B2 EXTERIOR LIGHTING CONTROL DETAIL - LC-2

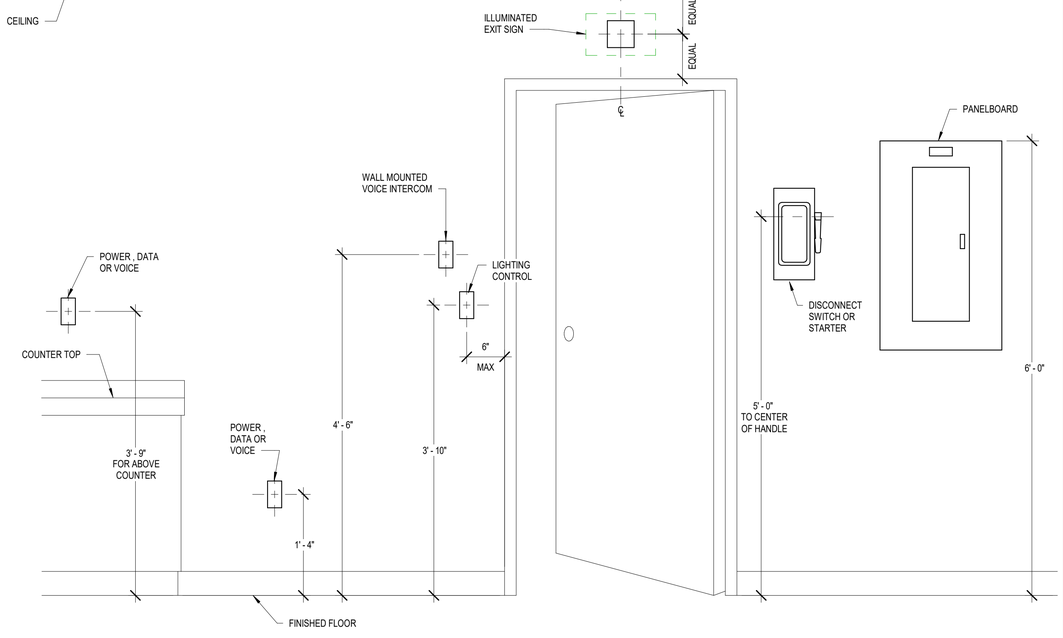
SCALE: NOT TO SCALE



NOTE:
1. INSTALL CONTACTOR ADJACENT TO PANEL.
2. PROVIDE PLASTIC ENGRAVED LABEL.
3. COIL CLEARING CONTACTS AND UNLATCH COIL NOT SHOWN.

A2 INTERIOR LIGHTING CONTROL DETAIL - LC-3

SCALE: NOT TO SCALE



A3 DEVICE ELEVATION DETAIL

SCALE: NOT TO SCALE

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

CERTIFICATE OF AUTHORIZATION# 0021365

STATE OF NEW YORK FRANCESCA K. NEILEY 03/17/2026 LICENSED PROFESSIONAL ENGINEER

REGISTRATION EXPIRES: 02/28/2027

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flyithaca.com

NEW ARFF/SRE BUILDING
ITHACA TOMPKINS
INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	F.K. NEILEY, P.E.
DESIGNED BY:	F.K. NEILEY, P.E.
CHECKED BY:	S.H. SHOVA

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ELECTRICAL DETAILS

E-501

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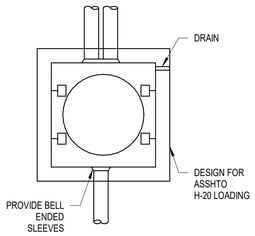
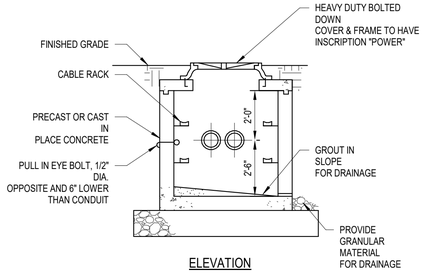


PLAN



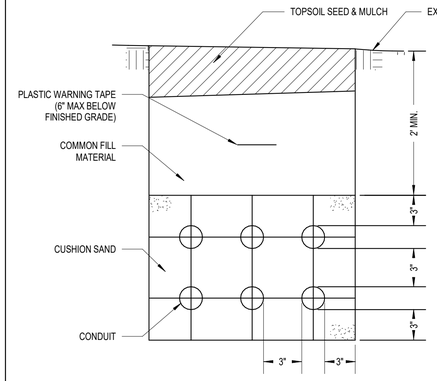
ELEVATION

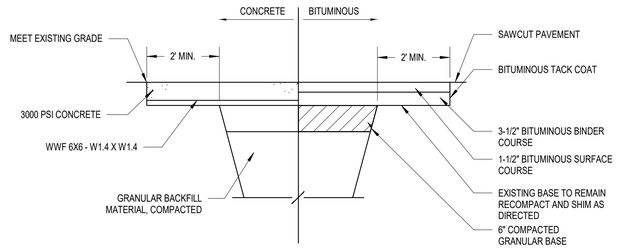
NOTES:

1. PULL BOX AND COVER TO BE DESIGNED TO H-20 LOADING UNLESS OTHERWISE NOTED.
2. SIZED AS SHOWN ON ELECTRICAL SITE PLAN.

B1 HAND HOLE DETAIL

SCALE: NOT TO SCALE





NOTES:

1. TO BE USED IN TURFED ARES AND UNDER SIDEWALKS UNLESS OTHERWISE SHOWN.
2. NUMBER OF CONDUITS AS PER PLANS.

C2 TRENCH SECTION AND RESTORATION DETAIL

SCALE: NOT TO SCALE

PLAN

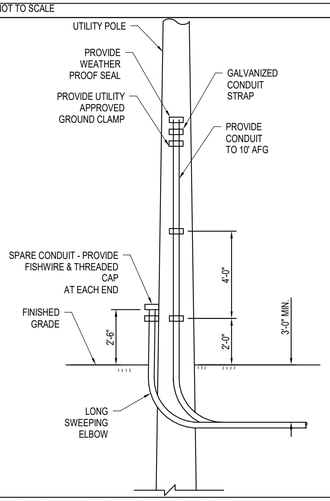
FRONT ELEVATION

NOTES:

1. NUMBER OF PRIMARY AND SECONDARY CONDUITS PER PLANS.

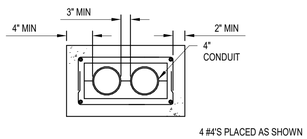
B2 UTILITY TRANSFORMER PAD DETAIL

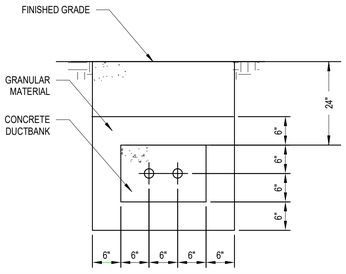
SCALE: NOT TO SCALE



A1 CONDUIT SERVICE CONNECTION DETAIL

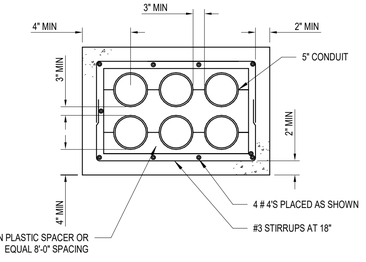
SCALE: NOT TO SCALE





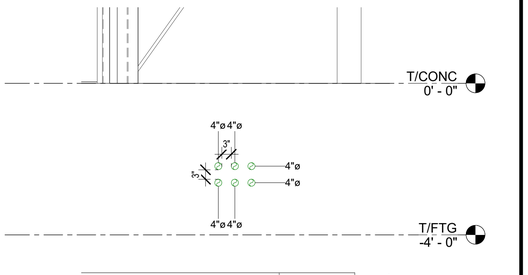
A2 2-WAY DUCTBANK DETAIL

SCALE: NOT TO SCALE



A3 6-WAY DUCTBANK DETAIL

SCALE: NOT TO SCALE

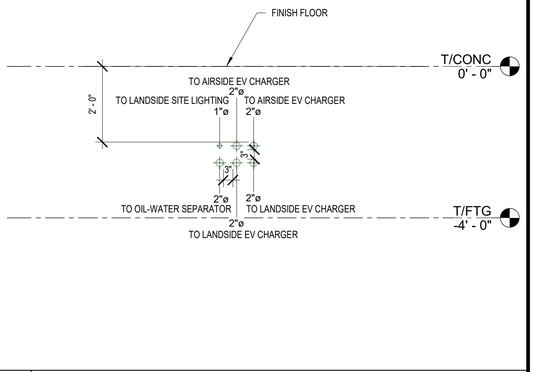


C4 SERVICE CONDUIT SECTION

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

B4 GENERATOR CONDUIT SECTION (ADD ALT. NO. 2)

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



A4 SOUTH CONDUIT SECTION

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

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

CERTIFICATE OF AUTHORIZATION# 0021365

STATE OF NEW YORK FRANCESCA K. TIMPANO 095904 LICENSED PROFESSIONAL ENGINEER

03/17/2026

REGISTRATION EXPIRES: 02/28/2027

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	F.K. NEILEY, P.E.
DESIGNED BY:	F.K. NEILEY, P.E.
CHECKED BY:	S.H. SHOVA

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ELECTRICAL DETAILS

E-502

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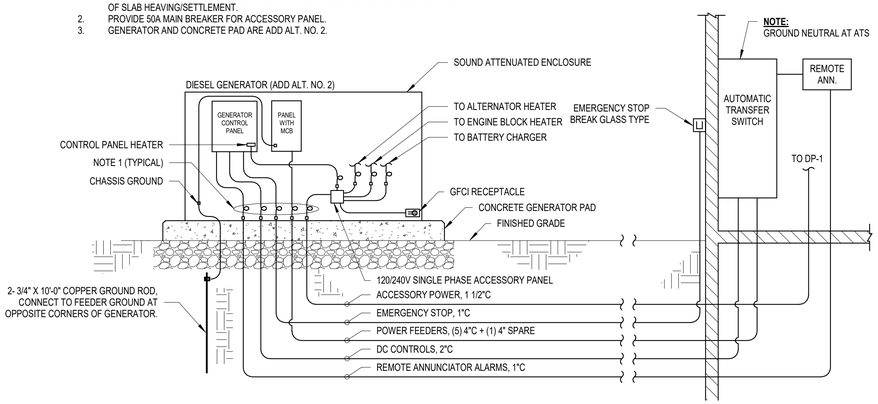
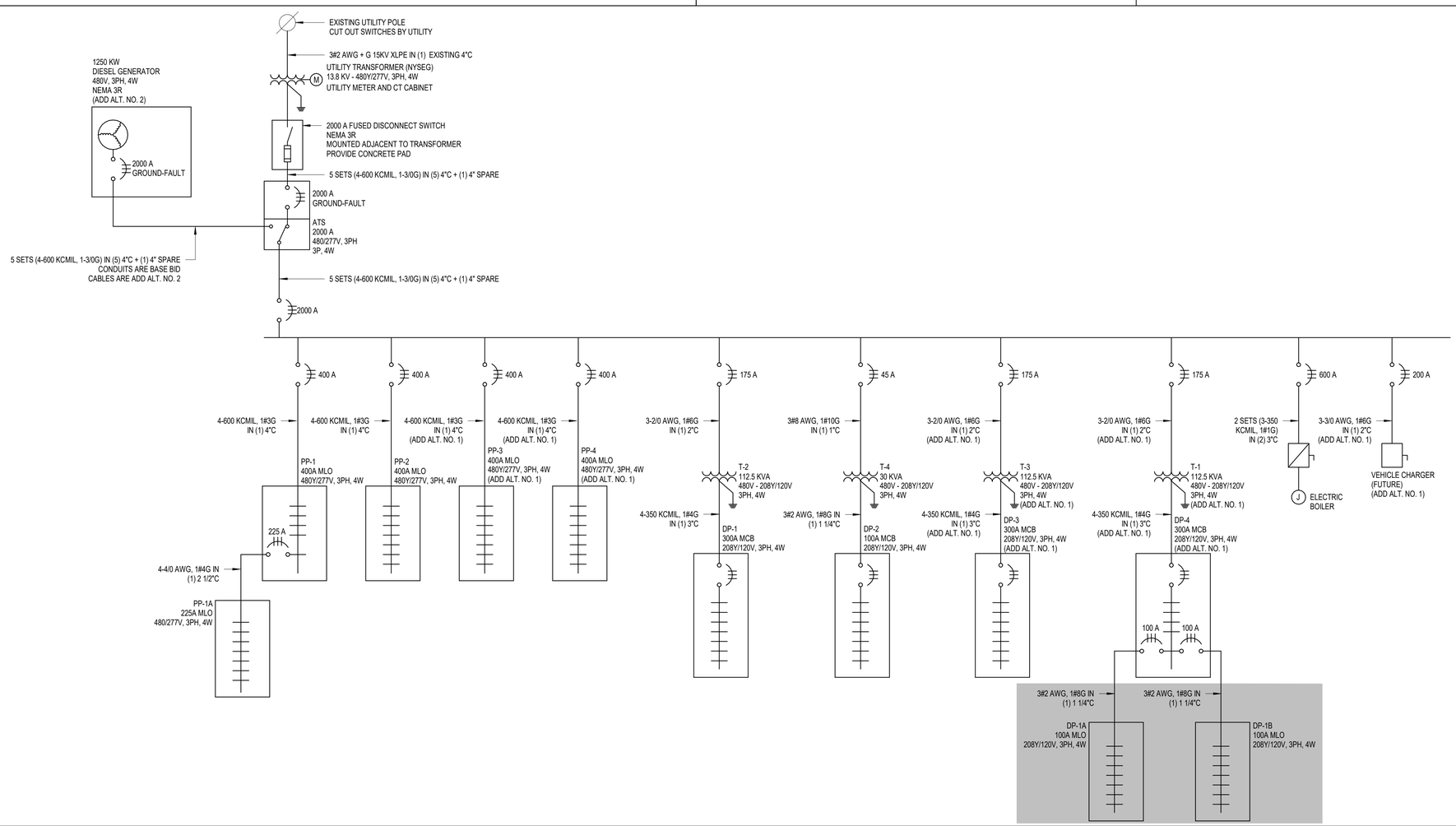
NOTES:
1. PROVIDE FLEXIBLE CONDUIT/CONDUCTOR WITH SUFFICIENT SLACK TO ALLOW UP TO 2" OF SLAB HEAVING/SETTLEMENT.
2. PROVIDE 50A MAIN BREAKER FOR ACCESSORY PANEL.
3. GENERATOR AND CONCRETE PAD ARE ADD ALT. NO. 2.



C1 GENERATOR CONNECTION DETAIL
SCALE: NOT TO SCALE



A1 ONE-LINE DIAGRAM
SCALE: NOT TO SCALE

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
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Fax: 315-455-9667
www.cscos.com

CERTIFICATE OF AUTHORIZATION# 0021365

STATE OF NEW YORK FRANCESCA K. NEILEY 099615 PROFESSIONAL ENGINEER
03/17/2026

REGISTRATION EXPIRES: 02/28/2027

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS
INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION
		REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	F.K. NEILEY, P.E.
DESIGNED BY:	F.K. NEILEY, P.E.
CHECKED BY:	S.H. SHOVA

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ELECTRICAL ONE-LINE DIAGRAM

E-601

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Switchboard: MSB

Location: ELECTRICAL 136 | **Volts:** 480/277 Wye | **A.I.C. Rating:**
Supply From: | **Phases:** 3 | **Mains Type:** SWITCH
Mounting: FLOOR | **Wires:** 4 | **Mains Rating:**
Enclosure: NEMA 1 | **MCB Rating:** 2000 A

Notes:

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	PP4	3	400 A	400 A	38476 VA	
2	PP3	3	400 A	400 A	46523 VA	
3	PP1	3	400 A	400 A	141432 VA	
4	PP2	3	400 A	400 A	19349 VA	
5	T-4	3	200 A	175 A	86262 VA	
6	T-3	3	200 A	175 A	28932 VA	
7	T-1	3	200 A	175 A	80652 VA	
8	CH-1	3	200 A	200 A	112934 VA	
9	CH-2	3	200 A	200 A	112934 VA	
10	CH-3	3	200 A	200 A	112934 VA	
11	CH-4	3	200 A	200 A	112934 VA	
12	T-2	3	100 A	50 A	8540 VA	
13	ARFF VEHICLE CHARGING	3	200 A	200 A	125000 VA	
14	ELECTRIC BOILER	3	600 A	600 A	360000 VA	
15						
16						
17						
18						
19						
20						
				Total Conn. Load:	1386826 VA	
				Total Amps:	1668 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	34866 VA	100.00%	34866 VA		
Lighting	13261 VA	100.00%	13261 VA	**Total Conn. Load:**	1386826 VA
Motor	1920 VA	100.00%	1920 VA	**Total Est. Demand:**	1353366 VA
Other	665826 VA	100.00%	665826 VA	**Total Conn. Current:**	1668 A
Power	594310 VA	100.00%	594310 VA	**Total Est. Demand Current:**	1628 A
RECEPTACLE	76920 VA	56.50%	43460 VA		

Notes:

PANEL SCHEDULE PP1

BUS SIZE: 400 A | **MAIN TYPE:** MLO | **INSTALLATION:** SURFACE
VOLTS: 480/277 Wye | **GND. BAR TYPE:** COPPER | **LOCATION:**
PHASE: 3 | **SC RATING:**
WIRE: 4 | **ENCLOSURE:** TYPE 1 | **NOTES:**
POLES: 42

CIRCUIT DESCRIPTION	WIRE SIZE	CONDUIT	CB. AMPS	Poles	CKT	A	B	C	CKT	Poles	CB. AMPS	CONDUIT	WIRE SIZE	CIRCUIT DESCRIPTION
					1				2					
COMPRESSOR	3-#8, 1-#10	1"	40 A	3	3				4	3	225 A	2 1/2"	3-#4/0, 1-#4/0, 1-#4	PP1A
					5				6					
OVERHEAD DOORS	3-#12, 1-#12	3/4"	20 A	3	7				8					
					9				10	3	20 A	3/4"	3-#12, 1-#12	OVERHEAD DOORS
					11				12					
					13				14					
EF-4,5	3-#12, 1-#12	3/4"	15 A	3	15				16	3	50 A	1"	3-#6, 1-#10	DWH-2
					17				18					
					19				20	1	20 A	3/4"	1-#12, 1-#12, 1-#12	SRE LIGHTING
EF-6,7	3-#12, 1-#12	3/4"	20 A	3	21				22	1	20 A	3/4"	1-#12, 1-#12, 1-#12	SRE LIGHTING
					23				24	1	20 A	3/4"	1-#12, 1-#12, 1-#12	LC-2
					25				26	1	20 A	3/4"	1-#12, 1-#12, 1-#12	ELEC RM, COMM RM, MECH RM LIGHTING
UH-4,5,6,7	3-#12, 1-#12	3/4"	20 A	3	27				28	1	20 A	3/4"	1-#12, 1-#12, 1-#12	LC-3
					29				30	1	20 A	3/4"	1-#12, 1-#12, 1-#12	LIGHTING - OFFICE, TOOL RM
PARKING LOT LIGHTING	1-#12, 1-#12, 1-#12	1"	20 A	1	31				32	1	20 A	3/4"	1-#12, 1-#12, 1-#12	LIGHTING - EXTERIOR
					33				34	1	20 A	3/4"	1-#12, 1-#12, 1-#12	LIGHTING - EXTERIOR PERSONNEL DOORS
					35				36	1	20 A	3/4"	1-#12, 1-#12, 1-#12	LIGHTING - EXTERIOR
					37				38					
					39				40	3	--	--	--	SPACE
					41				42					

PANEL SCHEDULE PP1A

BUS SIZE: 225 A | **MAIN TYPE:** MLO | **INSTALLATION:** SURFACE
VOLTS: 480/277 Wye | **GND. BAR TYPE:** COPPER | **LOCATION:**
PHASE: 3 | **SC RATING:**
WIRE: 4 | **ENCLOSURE:** TYPE 1 | **NOTES:**
POLES: 42

CIRCUIT DESCRIPTION	WIRE SIZE	CONDUIT	CB. AMPS	Poles	CKT	A	B	C	CKT	Poles	CB. AMPS	CONDUIT	WIRE SIZE	CIRCUIT DESCRIPTION
					1				2					
MAU-3	3-#12, 1-#12	3/4"	15 A	3	3				4	3	15 A	3/4"	3-#12, 1-#12	MAU-4
					5				6					
					7				8					
MAU-5	3-#12, 1-#12	3/4"	15 A	3	9				10	3	20 A	1"	3-#12, 1-#12	P-1
					11				12					
					13				14					
P-2	3-#12, 1-#12	1"	20 A	3	15				16	3	25 A	1"	3-#10, 1-#10	P-3
					17				18					
					19				20					
P-4	3-#10, 1-#10	1"	25 A	3	21				22	3	25 A	1"	3-#10, 1-#10	P-5
					23				24					
					25				26					
P-6	3-#10, 1-#10	1"	25 A	3	27				28					
					29				30					
					31				32					
					33				34					
					35				36					
					37				38					
					39				40					
					41				42					

PANEL SCHEDULE PP2

BUS SIZE: 400 A | **MAIN TYPE:** MCB | **INSTALLATION:** SURFACE
VOLTS: 480/277 Wye | **MAIN BREAKER:** 400 A | **LOCATION:**
PHASE: 3 | **GND. BAR TYPE:** COPPER
WIRE: 4 | **SC RATING:** | **NOTES:**
POLES: 42 | **ENCLOSURE:** TYPE 1

CIRCUIT DESCRIPTION	WIRE SIZE	CONDUIT	CB. AM...	Poles	CK T	A	B	C	CK T	Poles	CB. AM...	CONDUIT	WIRE SIZE	CIRCUIT DESCRIPTION
					1				2					
MAU-6	3-#12, 1-#12	3/4"	15 A	3	3				4	3	20 A	3/4"	3-#12, 1-#12	EF-8
					5				6					
MAU-7	3-#12, 1-#12	3/4"	15 A	3	7				8					
					9				10					
					11				12					
					13				14					
OVERHEAD DOORS	3-#12, 1-#12	3/4"	20 A	3	15				16	3	20 A	3/4"	3-#12, 1-#12	OVERHEAD DOORS
					17				18					
					19				20					
OVERHEAD DOORS	3-#12, 1-#12	3/4"	20 A	3	21				22					
					23				24					
					25				26					
					27				28					
					29				30					
					31				32					
					33				34					
					35				36					
					37				38					
					39				40					
					41				42					

PANEL SCHEDULE DP1

BUS SIZE: 400 A | **MAIN TYPE:** MCB | **INSTALLATION:** SURFACE
VOLTS: 120/208 Wye | **MAIN BREAKER:** 400 A | **LOCATION:**
PHASE: 3 | **GND. BAR TYPE:** COPPER
WIRE: 4 | **SC RATING:** | **NOTES:**
POLES: 54 | **ENCLOSURE:** TYPE 1

CIRCUIT DESCRIPTION	WIRE SIZE	CONDUIT	CB. AM...	Poles	CK T	A	B	C	CK T	Poles	CB. AM...	CONDUIT	WIRE SIZE	CIRCUIT DESCRIPTION
SRE GARAGE RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	1				2	1	20 A	3/4"	1-#12, 1-#12, 1-#12	SRE GARAGE RECEPTACLES
SRE GARAGE RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	3				4	1	20 A	3/4"	1-#12, 1-#12, 1-#12	SRE GARAGE RECEPTACLES
SRE GARAGE RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	5				6	1	20 A	3/4"	1-#12, 1-#12, 1-#12	SHOP OFFICE RECEPTACLES
TOOL PARTS RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	7				8	1	20 A	3/4"	1-#12, 1-#12, 1-#12	TOOL PARTS RECEPTACLES
RECIRC PUMP	1-#12, 1-#12, 1-#12	3/4"	20 A	1	9				10	1	20 A	3/4"	1-#12, 1-#12, 1-#12	UTILITY ROOMS RECEPTACLES
DRYER	1-#12, 1-#12, 1-#12	3/4"	20 A	1	11				12	2	25 A	3/4"	2-#10, 1-#10	LIFT POWER
MEZZANINE RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	13				14					
EXTERIOR RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	15				16	1	20 A	3/4"	1-#12, 1-#12, 1-#12	SRE ROOF RECEPTACLES
					17				18					
WELDING RECEPTACLE	3-#6, 1-#10	1"	50 A	3	19				20	3	50 A	1"	3-#6, 1-#10	WELDING RECEPTACLE
					21				22					
					23				24					
BOOSTER PUMP	2-#10, 1-#10	3/4"	25 A	2	25				26	2	20 A	3/4"	2-#12, 1-#12	P-12
GFP-1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	27				28	1	20 A	3/4"	1-#12, 1-#12, 1-#12	MECHANICAL ROOM RECEPTACLES
GFP-2	1-#12, 1-#12, 1-#12	3/4"	20 A	1	29				30					
					31				32	2	20 A	3/4"	2-#12, 1-#12	P-10
P-11	2-#12, 1-#12	3/4"	20 A	2	33				34					
					35				36	2	20 A	3/4"	2-#12, 1-#12	P-9
P-8	2-#12, 1-#12	3/4"	20 A	2	37				38					
					39				40	2	20 A	3/4"	2-#12, 1-#12	P-7
P-12	2-#12, 1-#12	3/4"	20 A	2	41				42	1	20 A	1 1/2"	1-#12, 1-#12, 1-#12	F-4, F-5
LANDSIDE EV CHARGER (FUTURE)		2"	20 A	2	43	...			44	2	50 A	2"	2-#3, 1-#6	LANDSIDE EV CHARGER
					45		...		46					
OIL-WATER SEPARATOR	2-#10, 1-#10	1"	30 A	2	47			...	48	2	20 A	2"		AIRSIDE EV CHARGER (FUTURE)
					49	...			50					
AIRSIDE EV CHARGER (FUTURE)	2-#4, 1-#6	2"	50 A	2	51		...		52	2	50 A	2"	2-#6, 1-#10	GENERATOR PANEL
					53			...	54					

PANEL SCHEDULE DP2

BUS SIZE: 100 A | **MAIN TYPE:** MCB | **INSTALLATION:** SURFACE
VOLTS: 120/208 Wye | **MAIN BREAKER:** 100 A | **LOCATION:**
PHASE: 3 | **GND. BAR TYPE:** COPPER
WIRE: 4 | **SC RATING:** | **NOTES:**
POLES: 30 | **ENCLOSURE:** TYPE 1

CIRCUIT DESCRIPTION	WIRE SIZE	CONDUIT	CB. AM...	Poles	CK T	A	B	C	CK T	Poles	CB. AM...	CONDUIT	WIRE SIZE	CIRCUIT DESCRIPTION
DATA RACK	2-#10, 1-#10	3/4"	30 A	2	1				2	2	30 A	3/4"	2-#10, 1-#10	DATA RACK
					3				4					
FACP	1-#12, 1-#12, 1-#12	3/4"	20 A	1	5				6	1	20 A	3/4"	1-#12, 1-#12, 1-#12	COMM QUAD RECEPTACLES
BMS	1-#12, 1-#12, 1-#12	3/4"	20 A	1	7				8	1	20 A	3/4"	1-#12, 1-#12, 1-#12	EXTERIOR RECEPTACLES
Other	1-#12, 1-#12,...		20 A	1	9				10	2	45 A	1"	2-#6, 1-#10	ACCU-1, DS-1
					11				12					
					13				14					
					15				16					
					17				18					
					19				20					
					21				22					
					23				24					
					25				26					
					27				28					
					29				30					

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CERTIFICATE OF AUTHORIZATION# 0021365
FRANCESCA K. TIMPANARO — STATE OF NEW YORK — 030946 — LICENSED PROFESSIONAL ENGINEER
03/17/2026
REGISTRATION EXPIRES: 02/28/2027

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS
INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO: 158.095.001
DATE: MARCH 2026
DRAWN BY: F.K. NEILEY, P.E.
DESIGNED BY: F.K. NEILEY, P.E.
CHECKED BY: S.H. SHOVA

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ELECTRICAL SCHEDULES

E-602

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PANEL SCHEDULE PP3

BUS SIZE: 400 A
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
POLES: 42

MAIN TYPE: MLO
GND. BAR TYPE: COPPER
SC RATING:
ENCLOSURE: TYPE 1

INSTALLATION: SURFACE
LOCATION:

NOTES: ADD ALT. NO. 1

CIRCUIT DESCRIPTION	WIRE SIZE	CONDUIT	CB. AMPS	Poles	CKT	A	B	C	CKT	Poles	CB. AMPS	CONDUIT	WIRE SIZE	CIRCUIT DESCRIPTION
					1				2					
ARFF GARAGE OVERHEAD DOOR	3-#12, 1-#12	3/4"	20 A	3	3				4	3	20 A	3/4"	3-#12, 1-#12	ARFF GARAGE OVERHEAD DOOR
					5				6					
					7				8					
ARFF GARAGE OVERHEAD DOOR	3-#12, 1-#12	3/4"	20 A	3	9				10	3	20 A	3/4"	3-#12, 1-#12	ARFF GARAGE OVERHEAD DOOR
					11				12					
					13				14					
ARFF GARAGE OVERHEAD DOOR	3-#12, 1-#12	3/4"	20 A	3	15				16	3	15 A	3/4"	3-#12, 1-#12	EF-2
					17				18					
					19				20					
EF-3	3-#12, 1-#12	3/4"	15 A	3	21				22	3	20 A	3/4"	3-#12, 1-#12	UH-1,2,3
					23				24					
					25				26					
SPARE			20 A	3	27				28					
					29				30					
					31				32	1	20 A	3/4"	1-#12, 1-#12, 1-#12	ARFF GARAGE LIGHTING
					33				34	1	20 A	3/4"	1-#12, 1-#12, 1-#12	LC-1
					35				36	1	20 A	3/4"	1-#12, 1-#12, 1-#12	LIGHTING - EXTERIOR PERSONNEL DOORS
					37				38	1	20 A	3/4"	1-#12, 1-#12, 1-#12	LIGHTING - EXTERIOR
					39				40					
					41				42					

PANEL SCHEDULE DP3

BUS SIZE: 400 A
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
POLES: 42

MAIN TYPE: MCB
MAIN BREAKER: 400 A
GND. BAR TYPE: COPPER
SC RATING:
ENCLOSURE: TYPE 1

INSTALLATION: SURFACE
LOCATION:

NOTES: ADD ALT. NO. 1

CIRCUIT DESCRIPTION	WIRE SIZE	CONDUIT	CB. AM...	Poles	CKT	A	B	C	CKT	Poles	CB. AM...	CONDUIT	WIRE SIZE	CIRCUIT DESCRIPTION
ARFF GARAGE RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	1				2	1	20 A	3/4"	1-#12, 1-#12, 1-#12	ARFF GARAGE RECEPTACLES
ARFF GARAGE RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	3				4	1	20 A	3/4"	1-#12, 1-#12, 1-#12	ARFF GARAGE RECEPTACLES
ARFF GARAGE RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	5				6	1	20 A	3/4"	1-#12, 1-#12, 1-#12	ARFF GARAGE RECEPTACLES
ARFF EXTERIOR RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	7				8	1	20 A	3/4"	1-#12, 1-#12, 1-#12	BMS
P-13	2-#12, 1-#12	3/4"	20 A	2	9				10	2	20 A	3/4"	2-#12, 1-#12	P-14
					11				12					
P-15	2-#12, 1-#12		20 A	2	13				14	2	20 A	3/4"	2-#12, 1-#12	P-16
					15				16					
AIR SYSTEM (FUTURE)		1"	60 A	3	17				18	1	20 A	3/4"	1-#12, 1-#12, 1-#12	ARFF TV RECEPTACLES
					19				20	2	50 A	--	--	ARFF BAY EV CHARGER (FUTURE)
					21				22					
ARFF ROOF RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	23				24	1	20 A		1-#8, 1-#8, 1-#8	HVAC
ARFF TV RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	25				26					
					27				28					
					29				30					
					31				32					
					33				34					
					35				36					
					37				38					
					39				40					
					41				42					

PANEL SCHEDULE PP4

BUS SIZE: 400 A
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
POLES: 42

MAIN TYPE: MLO
GND. BAR TYPE: COPPER
SC RATING:
ENCLOSURE: TYPE 1

INSTALLATION: SURFACE
LOCATION:

NOTES: ADD ALT. NO. 1

CIRCUIT DESCRIPTION	WIRE SIZE	CONDUIT	CB. AMPS	Poles	CKT	A	B	C	CKT	Poles	CB. AMPS	CONDUIT	WIRE SIZE	CIRCUIT DESCRIPTION
					1				2					
MAU-1	3-#12, 1-#12	3/4"	20 A	3	3				4	3	15 A	3/4"		EF-1
					5				6					
					7				8					
MAU-2	3-#12, 1-#12	3/4"	20 A	3	9				10	3	50 A	1"		DOAS-1 (FUTURE)
					11				12					
LIGHTING - DORMS, CONFERENCE (FUTURE)		3/4"	20 A	1	13				14	1	20 A	3/4"		LIGHTING - RESTROOMS (FUTURE)
LIGHTING - ENTRANCE, RECPT, OFFICES (FUTURE)		3/4"	20 A	1	15				16	1	20 A	3/4"		LIGHTING - KITCHEN, DAY RM, OFFICES (FUTURE)
LIGHTING - TRAINING (FUTURE)		3/4"	20 A	1	17				18	1	20 A	3/4"		LIGHTING - CORRIDOR (FUTURE)
LIGHTING - CORRIDOR (FUTURE)		3/4"	20 A	1	19				20	1	20 A	3/4"		LIGHTING - CORRIDOR (FUTURE)
LIGTING - EXTERIOR (FUTURE)		3/4"	20 A	1	21				22	1	20 A	3/4"		LIGHTING - RESTROOMS (FUTURE)
					23				24	1	20 A	3/4"		LIGHTING - EXCER, EXTRACTOR, LAUNDRY, COMM, STORAGE (FUTURE)
					25				26	1	20 A	3/4"		LIGHTING - DORMS (FUTURE)
					27				28					
					29				30					
					31				32					
					33				34					
					35				36					
					37				38					
					39				40					
					41				42					

PANEL SCHEDULE DP4

BUS SIZE: 400 A
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
POLES: 42

MAIN TYPE: MCB
MAIN BREAKER: 300 A
GND. BAR TYPE: COPPER
SC RATING:
ENCLOSURE: TYPE 1

INSTALLATION: SURFACE
LOCATION:

NOTES: ADD ALT. NO. 1

CIRCUIT DESCRIPTION	WIRE SIZE	CONDUIT	CB. AM...	Poles	CKT	A	B	C	CKT	Poles	CB. AM...	CONDUIT	WIRE SIZE	CIRCUIT DESCRIPTION
RECEPTACLE - ROOF (FUTURE)		3/4"	20 A	1	1				2	2	30 A	3/4"		WSHP-1 (FUTURE)
WASHER (FUTURE)		3/4"	20 A	1	3				4					
WSHP-15,16 (FUTURE)		3/4"	20 A	2	5				6	2	20 A	3/4"		WSH-2,3 (FUTURE)
					7				8					
WSHP-6,7 (FUTURE)		3/4"	20 A	2	9				10	2	30 A	3/4"		WSHP-4 (FUTURE)
					11				12					
WSHP-13,14 (FUTURE)		3/4"	20 A	2	13				14	2	30 A	3/4"		WSHP-5 (FUTURE)
					15				16					
WSHP-8A (FUTURE)		3/4"	30 A	3	17				18	3	30 A	3/4"		WSHP-8B (FUTURE)
					19				20					
					21				22					
WSHP-11 (FUTURE)		3/4"	30 A	2	23				24	2	20 A	3/4"		WSHP-10,12 (FUTURE)
					25				26					
WSHP-9,18 (FUTURE)		3/4"	20 A	2	27				28	1	20 A	3/4"		EWH-2 (FUTURE)
					29				30					
					31				32					
					33				34	3	35 A	3/4"		EXTRACTOR (FUTURE)
					35				36					
					37				38					
DP4A (FUTURE)		1 1/2"	100 A	3	39				40	3	100 A	1 1/2"		DP4B (FUTURE)
					41				42					

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS
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72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO: 158.095.001
DATE: MARCH 2026
DRAWN BY: F.K. NEILEY, P.E.
DESIGNED BY: F.K. NEILEY, P.E.
CHECKED BY: S.H. SHOVA

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ELECTRICAL SCHEDULES (ADD ALT. NO. 1)

E-603

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MASTER LUMINAIRE SCHEDULE

FIXTURE DESCRIPTION	MANUFACTURER AND MODEL NUMBER	NUMBER AND TYPE OF LAMP	VOLTS	MOUNTING	DRIVER	REMARKS
D	H.E. WILLIAMS #17-4-L55/840-AF-DRV-UNV OR APPROVED EQUAL	42.3W LED	UNV	SUSPENDED 10'-3" A.F.F.	NON-DIMMING	PROVIDE EM/10W OPTION AS NOTED. SURFACE MOUNT LUMINAIRE IN IT ROOM.
E	H.E. WILLIAMS #97-4-L95/840-FR-DIM-UNV OR APPROVED EQUAL	64.8W LED	UNV	SUSPENDED 18'-6" A.F.F.	DIM	PROVIDE EM/10W OPTION AS NOTED.
SA	H.E. WILLIAMS #VWPV-L30/840-T3-DBZ-CGL-EM4W-DIM-UNV OR APPROVED EQUAL	27W LED	UNV	WALL MOUNT 6" ABOVE DOOR	DIM	
SB	NLS LIGHTING #NV-1-T3-16L-1-40K8-UNV-WM-BRZ OR APPROVED EQUAL	56W LED	UNV	WALL MOUNT 20' A.F.F.	NON-DIMMING	
SC	NLS LIGHTING #NV-1-T3-16L-1-40K8-UNV-DPS3-BRZ OR APPROVED EQUAL	56W LED	UNV	POLE, 20' MOUNTING HEIGHT	NON-DIMMING	
SD	NLS LIGHTING #NV-1-T4-16L-1-40K8-UNV-DPS3-BRZ OR APPROVED EQUAL	56W LED	UNV	POLE, 20' MOUNTING HEIGHT	NON-DIMMING	
X	H.E WILLIAMS #EXIT-R-EM-WHT-D OR APPROVED EQUAL	2.5W LED	UNV	SURFACE	NON-DIMMING	

CONTRACT RESPONSIBLE		ENCLOSURE		DISCONNECT TYPE		STARTER TYPE		CONTROLS		LOCATION	
G	GENERAL	1	NEMA 1 - INDOOR GENERAL	1	NON-FUSED SAFETY SWITCH	1	MAGNETIC X-LINE	1	START/STOP PB W/PILOT LIGHT IN COVER	A	AT EQUIPMENT
M	MECHANICAL	3R	NEMA 3R - EXTERIOR RAINPROOF	2	FUSED SAFETY SWITCH	2	COMBINATION X-LINE	2	H-O-A SWITCH W/PILOT LIGHT ON COVER	B	REMOTE
H	HVAC	4	NEMA 4 - OUTDOOR WATERTIGHT	3	TOGGLE SWITCH	3	MANUAL	3	AUXILIARY CONTACTS	C	IN MOTOR CONTROL CENTER
E	ELECTRICAL	4X	NEMA 4X - CORROSION RESISTANT	4	INTEGRAL TO STARTER	4	REDUCED VOLTAGE	4	CONTROL TRANSFORMER	D	IN MECHANICAL ROOM
P	PLUMBING	7	NEMA 7 - INDOOR EXPLOSION PROOF	5	CORD & PLUG	5	VFD	5	PROVIDED BY EQUIPMENT MANUFACTURER	E	IN ELECTRICAL ROOM
FP	FIRE PROTECTION	12	NEMA 12 - INDOOR DUST-TIGHT	6	PART OF CONTROL PANEL	6	SOFT START	6	REMOTE PUSHBUTTON STATIONS	F	OTHER (SEE REMARKS)
C	COMMUNICATIONS	13	NEMA 13 - INDOOR OIL TIGHT	7	BY EQUP. MANF.	7	TWO-SPEED	7	PART OF DIRECT DIGITAL CONTROL SYSTEM (DDC)		
O	OWNER			8	OTHER (SEE REMARKS)	8	BY EQUP. MANF.	8	CONTROL PANEL		
						9	OTHER (SEE REMARKS)	9	OTHER (SEE REMARKS)		

EQUIPMENT CONNECTION SCHEDULE

EQUIPMENT			ELECTRICAL SUPPLY							WIRING	DISCONNECT						WIRING	STARTER						
UNIT NO.	FURN. BY	LOCATION	HP	KW	MCA	FLA	MOCP	VOLT	PHASE	BETWEEN	FURNISHED BY	INSTALLED BY	TYPE	SIZE	ENCL	LOCATION	BETWEEN	FURNISHED BY	INSTALLED BY	TYPE	SIZE	ENCL	LOCATION	REMARKS
ACCU-1	M	EXTERIOR			25		45	208 V	1	E	E	E	1	60	3R	A	E	M	M	-	-	3R	A	
B-1	M	MEZZANINE		360			600	480 V	3	E	E	E	2	600	1	A	M	M	M	-	-	1	A	
CH-1	M	MECHANICAL ROOM			136		200	480 V	3	E	M	M	-	200	1	A	M	M	M	-	-	1	A	
CH-2	M	MECHANICAL ROOM			136		200	480 V	3	E	M	M	-	200	1	A	M	M	M	-	-	1	A	
CH-3	M	MECHANICAL ROOM			136		200	480 V	3	E	M	M	-	200	1	A	M	M	M	-	-	1	A	
CH-4	M	MECHANICAL ROOM			136		200	480 V	3	E	M	M	-	20	1	A	M	M	M	-	-	1	A	
DS-1	M	IT ROOM						208 V	1	E	E	E	-	-	1	A	E	M	M	-	-	-	B	POWERED FROM ACCU-1.
EF-2	M - ADD ALT. NO. 1	ARFF ROOF	1/2				15	480 V	3	E	E	E	2	2	3R	A	E	E	E	2	2	3R	A	
EF-3	M - ADD ALT. NO. 1	ARFF ROOF	1/2				15	480 V	3	E	E	E	2	2	3R	A	E	E	E	2	2	3R	A	
EF-4	M	SRE ROOF	1/2				15	480 V	3	E	E	E	2	2	3R	A	E	E	E	2	2	3R	A	
EF-5	M	SRE ROOF	1/2				15	480 V	3	E	E	E	2	2	3R	A	E	E	E	2	2	3R	A	
EF-6	M	SRE ROOF	1/2				15	480 V	3	E	E	E	2	2	3R	A	E	E	E	2	2	3R	A	
EF-7	M	SRE ROOF	1/2				15	480 V	3	E	E	E	2	2	3R	A	E	E	E	2	2	3R	A	
EF-8	M	SRE ROOF	1/2				15	480 V	3	E	E	E	2	2	3R	A	E	E	E	2	2	3R	A	
F-4	M	MECHANICAL ROOM	1/4					120 V	1	E	E	E	3	-	1	A	E	M	M	-	-	1	A	
F-5	M	ELECTRICAL ROOM	1/6					120 V	1	E	E	E	3	-	1	A	E	M	M	-	-	1	A	
F-6	M	MECHANICAL ROOM	1/4					120 V	1	E	E	E	3	-	1	A	E	M	M	-	-	1	A	
F-7	M	MECHANICAL ROOM	1/4					120 V	1	E	E	E	3	-	1	A	E	M	M	-	-	1	A	
GFP-1	M	MECHANICAL ROOM	1					120 V	1	E	E	E	3	-	1	A	E	E	E	1	-	1	A	
GFP-2	M	MECHANICAL ROOM	1					120 V	1	E	E	E	3	-	1	A	E	E	E	1	-	1	A	
MAU-1	M - ADD ALT. NO. 1	ARFF GARAGE	5					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
MAU-2	M - ADD ALT. NO. 1	ARFF GARAGE	5					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
MAU-3	M	SRE GARAGE	3					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
MAU-4	M	SRE GARAGE	3					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
MAU-5	M	SRE GARAGE	3					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
MAU-6	M	SRE GARAGE	3					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
MAU-7	M	SRE GARAGE	3					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
P-1	M	MEZZANINE	7.5					480 V	3	E	E	E	2	40	1	A	E	E	E	5	-	1	A	
P-2	M	MEZZANINE	7.5					480 V	3	E	E	E	2	40	1	A	E	E	E	5	-	1	A	
P-3	M	MEZZANINE	10					480 V	3	E	E	E	2	20	1	A	E	E	E	5	-	1	A	
P-4	M	MEZZANINE	10					480 V	3	E	E	E	2	20	1	A	E	E	E	5	-	1	A	
P-5	NOTE 1	MECHANICAL ROOM	10					480 V	3	E	E	E	2	30	1	A	E	E	E	5	-	1	A	
P-6	NOTE 1	MECHANICAL ROOM	10					480 V	3	E	E	E	2	30	1	A	E	E	E	5	-	1	A	
P-7	M	SRE GARAGE	1					208 V	1	E	E	E	2	10	1	A	M	M	M	-	-	1	A	
P-8	M	SRE GARAGE	1					208 V	1	E	E	E	2	10	1	A	M	M	M	-	-	1	A	
P-9	M	SRE GARAGE	1					208 V	1	E	E	E	2	10	1	A	M	M	M	-	-	1	A	
P-10	M	SRE GARAGE	1					208 V	1	E	E	E	2	10	1	A	M	M	M	-	-	1	A	
P-11	M	SRE GARAGE	1					208 V	1	E	E	E	2	10	1	A	M	M	M	-	-	1	A	
P-12	M	SRE GARAGE	1					208 V	1	E	E	E	2	10	1	A	M	M	M	-	-	1	A	
P-13	M - ADD ALT. NO. 1	ARFF GARAGE	1					208 V	1	E	E	E	2	10	1	A	M	M	M	-	-	1	A	
P-14	M - ADD ALT. NO. 1	ARFF GARAGE	1					208 V	1	E	E	E	2	10	1	A	M	M	M	-	-	1	A	
P-15	M - ADD ALT. NO. 1	ARFF GARAGE	1					208 V	1	E	E	E	2	10	1	A	M	M	M	-	-	1	A	
P-16	M - ADD ALT. NO. 1	ARFF GARAGE	1					208 V	1	E	E	E	2	10	1	A	M	M	M	-	-	1	A	
P-17	M	MEZZANINE	1					208 V	1	E	E	E	2	10	1	A	M	M	M	-	-	1	A	
UH-1	M - ADD ALT. NO. 1	ARFF GARAGE	1/3					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
UH-2	M - ADD ALT. NO. 1	ARFF GARAGE	1/3					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
UH-3	M - ADD ALT. NO. 1	ARFF GARAGE	1/3					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
UH-4	M	SRE GARAGE	1/3					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
UH-5	M	SRE GARAGE	1/3					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
UH-6	M	SRE GARAGE	1/3					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
UH-7	M	SRE GARAGE	1/3					480 V	3	E	E	E	1	30	1	A	M	M	M	-	-	1	A	
UH-8	M	STORAGE	1/25					120 V	1	E	E	E	3	30	1	A	M	M	M	-	-	1	A	
UH-9	M	STORAGE	1/25					120 V	1	E	E	E	3	30	1	A	M	M	M	-	-	1	A	

NOTES:

1. EQUIPMENT IS BY OTHERS. PROVIDE POWER CONNECTION TO LOCATION OF EQUIPMENT AS SHOWN ON DRAWINGS. PROVIDE DISCONNECTS AND STARTERS AS SHOWN.

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MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO: 158.095.001
DATE: MARCH 2026
DRAWN BY: F.K. NEILEY, P.E.
DESIGNED BY: F.K. NEILEY, P.E.
CHECKED BY: S.H. SHOVA

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ELECTRICAL SCHEDULES

E-604

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AC	ABOVE COUNTER
ACCU	AIR COOLED CONDENSING UNIT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AP	WIRELESS ACCESS POINT
AU	AT UNIT
BFG	BELOW FINISHED GRADE
CTR	MOUNT COUNTER HEIGHT
DPS	DOOR POSITION SWITCH
EMT	ELECTRIC METALLIC TUBING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
GB	GROUND BAR
GFI	GROUND FAULT INTERRUPTER TYPE
GND	GROUND
JB	JUNCTION BOX
MTR	MAIN TELECOMMUNICATIONS ROOM
NC	NORMALLY CLOSED
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NO	NORMALLY OPEN
PA	PUBLIC ADDRESS SYSTEM
PB	PULL BOX
PBB	PRIMARY BONDING BUSBAR
REM	REMARKS
REX	REQUEST TO EXIT
RGS	RIGID GALVANIZED STEEL CONDUIT
SC	SECURITY DEVICE
SMR	SURFACE MOUNT RACEWAY
TGB	TELECOMMUNICATIONS GROUND BAR
TR	TELECOMMUNICATIONS ROOM (CLOSET)
W	WALL MOUNT 48" AFF UNLESS OTHERWISE NOTED
WAN	WIDE AREA NETWORK
WAP	WIRELESS ACCESS POINT
WP	WEATHERPROOF

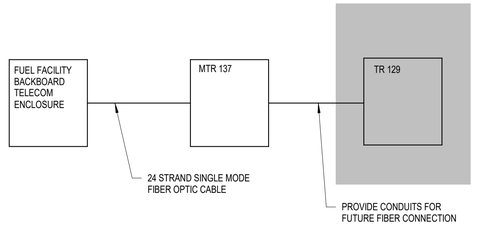
C4 ABBREVIATIONS
SCALE: NOT TO SCALE

X	DATA OUTLET, (2) TWO CAT6A CABLES, "X" INDICATES NUMBER OF CABLES IF DIFFERENT "R" INDICATES RED JACK
TV	MONITOR LOCATION, TWO (2) CAT6 CABLES, MOUNT 60" AFF IN RECESSED BOX WITH POWER
AV	AV OUTLET, PROVIDE 2" CONDUIT TO CEILING SPACE. PROVIDE FACEPLATE 2" GROMMETED OPENING FOR AV AND CONTROL WIRING
AP	WIRELESS ACCESS POINT, (1) ONE CAT6A CABLE
DR	FLOOR MOUNT DATA RACK/CABINET
WR	WALL MOUNT DATA RACK
PPB	PRIMARY BONDING BUSBAR
ACP	ACCESS CONTROL PANEL
CR	CARD READER
PB	REMOTE DOOR/GATE RELEASE PUSH BUTTON
C#	CAMERA LOCATION, ONE (1) CAT6A CABLE AND CAMERA LABEL "M" DENOTES MULTIMAGER
###	ACCESS CONTROL LOCATION
FB	FLOOR BOX, FOUR (4) CAT 6A CABLES
S	IP WALL MOUNT SPEAKER HORN (1) CAT 6A CABLE
S	IP CEILING SPEAKER (1) CAT 6A CABLE
ST	STROBE, ONE (1) CAT 6A CABLE
	AREA NOT IN CONTRACT (NIC)

A3 TELECOMMUNICATIONS SYMBOLS
SCALE: NOT TO SCALE

1. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL (AS NECESSARY) AND RE-INSTALLATION OF THE BUILDING EXISTING ARCHITECTURAL CEILING SYSTEM(S). IF THE CONTRACTOR DAMAGES THE EXISTING ARCHITECTURAL CEILING OR SUPPORT SYSTEM, THE CONTRACTOR IS RESPONSIBLE FOR ITS REPAIR TO ITS ORIGINAL CONDITION. THE CONTRACTOR SHALL ENSURE THAT ALL WORK AREAS ARE CLEAN AT THE END OF WORK EACH DAY AND THAT CEILING SYSTEMS ARE BACK IN PLACE.
2. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, PATCHING AND RESTORING EXISTING FINISHES TO A CONDITION EQUAL TO OR GREATER THAN THE CONDITION THE SURFACES WERE FOUND IN. THIS INCLUDES MATCHING EXISTING PAINTED SURFACES, PAINTING BREAK TO BREAK, PROVIDING BLANK COVER PLATES FOR ABANDONED JUNCTION BOXES ETC.
3. ALL SYSTEM TESTING AND TRAINING SHALL BE IN CONFORMANCE WITH MANUFACTURER RECOMMENDATIONS AND AS OUTLINED IN THE PROJECT SPECIFICATIONS.
4. ALL DATA/VOICE CATEGORY 6 CABLING SHALL BE ENCLOSED IN 1" EMT CONDUIT OR SUFACE RACEWAY, (UNLESS CABLING IS BEING FISHED IN EXISTING GYPSUM WALL BOARD WALLS, AND WHERE THE EXPOSED CABLING IS IMMEDIATELY TRANSITIONED TO CONDUIT WHERE IT EXITS THE TOP OF THE WALL ASSEMBLY). THEN TRANSITIONED TO CABLE TRAY IN THE CORRIDOR, COORDINATE WITH ELECTRICAL DRAWINGS FOR COMMON USE OF SURFACE RACEWAY.
5. NO SPLICES SHALL BE MADE IN WIRING BETWEEN TERMINATION POINTS. LOW VOLTAGE CABLING SHALL BE INSTALLED IN SEPERATE RACEWAY THAN ANY CIRCUITRY CARRYING A VOLTAGE OF 120VAC OR GREATER.
6. PROVIDE PLASTIC BUSHINGS ON THE ENDS OF ALL CONDUITS.
7. LEAVE A MINIMUM OF 8" EXCESS CABLE AT EACH TERMINATION LOACTION. LEAVE A MINIMUM OF 6' OF EXCESS CABLE AT PATCH PANEL END.
8. GROUND AND BOND ALL TELECOMMUNICATION EQUIPMENT IN ACCORDANCE WITH DIVISION 26 SPECIFICATIONS.
9. TELECOM SYSTEMS SHALL INCLUDE FULL IDENTIFICATION. ALL JUNCTION, TERMINAL AND PULLING BOXES AND COVERS SHALL BE LABELED TELECOM ONLY. ALL COVERS LOCATED IN EXPOSED LOCATIONS SHALL BE PAINTED TO MATCH SURROUNDING FINISHES AND SHALL BE TELECOM ONLY.
10. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND HAVING ALL NECESSARY ELECTRICAL INSPECTIONS CONDUCTED IN CONFORMANCE WITH STATE AND LOCAL REGULATIONS, ALL ELECTRICAL WORK SHALL BE INSPECTED BY A QUALIFIED THIRD PARTY INSPECTION FIRM.
11. ALL WALL AND FLOOR PENETRATIONS LOCATED WITHIN BUILDINGS FOR TELECOM RACEWAY SHALL BE FULLY SLEEVED AND SEALED. SLEEVED SHALL BE A MINIMUM OF SCHEDULE 40 STEEL AND PROTRUDE A MINIMUM OF 4" ON EITHER SIDE OF THE WALL OF FLOOR SURFACE WITH A TRIM RING. CABLE TRAY WALL PENETRATIONS SHALL BE IN THE FORM OF 4" SLEEVES WITH THE SAME CABLE CAPACITY AS THE CABLE TRAY. ALL WALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE APPROPRIATELY FIRESTOPPED WITH A U.L. RATED SYSTEM. ALL FIRE STOPPING MATERIALS/SEALANT SHALL BE OF THE LOW VOC TYPE. SUBMIT INFORMATION FROM THE FIRE STOPPING MATERIAL MANUFACTURER ENSURING THEIR MATERIALS HAVE LOW EMITTING VOC CHARACTERISTICS. THE CONTRACTOR APPLYING FIRE STOPPING IMPLEMENTS/MATERIALS SHALL BE FM 4991 APPROVED, U.L. QUALIFIED, OR PROVIDE SUFFICIENT PROOF OF TRAINING AND EXPERIENCE IN THE APPLICATION OF FIRE STOPPING MATERIALS TO THE OWNER'S REPRESENTATIVE.
12. THE TELECOM EQUIPMENT AND DEVICE LOCATIONS AND RISERS SHOWN ARE GENERAL AND ARE NOT INTENDED TO SHOW A DETAILED NETWORK TOPOLOGY. THE ACTUAL NETWORK CONNECTIONS MAY DIFFER REQUIRING CHANGES OF PERHAPS ADDITIONAL NETWORK EQUIPMENT TO ACCOMMODATE THE SYSTEMS AS ILLUSTRATED. CLOSELY COORDINATE NETWORK INTERFACE REQUIREMENTS AND PROGRAMMING OF IP ADDRESSES WITH THE EQUIPMENT MANUFACTURERS AND THE OWNER.
13. EACH CABLE SHALL BE LABELED AT THE JACK END AND PATCH PANEL END WITH PERMANENT PREPRINTED WRAP AROUND LABELS INDICATING CABLE NUMBER. EACH FACEPLATE SHALL BE LABELED WITH PREPRINTED LABEL INDICATING CABLE NUMBER. EACH PATCH PANEL SHALL BE LABELELED WITH PREPRINTED ADHESIVE LABEL INDICATING OWNER LABELING REQUIREMENTS. CABLE NUMBER SHALL CONSIST OF CLOSET NUMBER, RACK PATCH PANEL NUMBER, PATCH PANEL PORT NUMBER.

A4 TELECOM GENERAL NOTES
SCALE: NOT TO SCALE



A2 FIBER ONE LINE
SCALE: NOT TO SCALE

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MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	W. BARLEY, RCDD
DESIGNED BY:	W. BARLEY, RCDD
CHECKED BY:	F.K. NEILEY, P.E.

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NOTES, SYMBOLS AND ABBREVIATIONS

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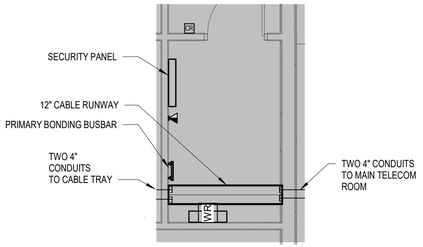


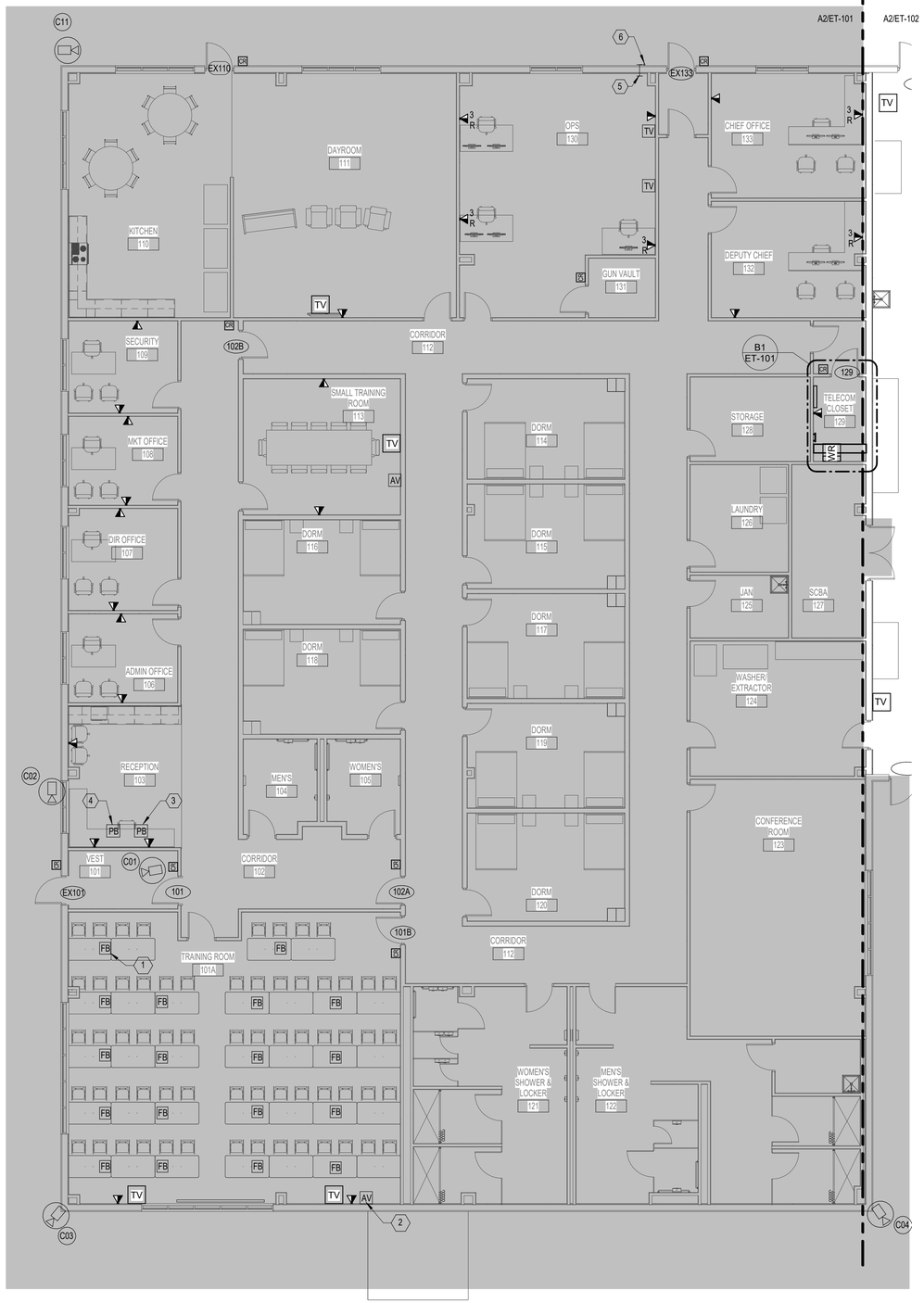
B1 OFFICE TELECOM ROOM 129

SCALE: 1/4" = 1'-0"

1. REFER TO E-101 FOR FLOOR BOX LOCATIONS.(TYP)
2. PROVIDE AV OUTLET FOR ALL AV AND CONTROL CABLING IN THE CLASSROOM. PROVIDE 2" CONDUIT TO CEILING SPACE. PROVIDE FACEPLATE WITH 2" GROMMETED HOLE . PROVIDE HDMI CABLE TO TV.
3. REMOTE PUSH BUTTON FOR VEHICLE GATE.
4. REMOTE PUSH BUTTON FOR DOOR 101.
5. PROVIDE 2" SLEEVE FOR RADIO CABLE THROUGH EXTERIOR WALL.
6. PROVIDE 2" MAST ON WALL TO 2' ABOVE ROOF LINE FOR RADIO ANTENNA. PROVIDE RADIO ANTENNA AND LMR-400 COAX CABLE. COORDINATE WITH OWNER FOR ANTENNA TYPE AND FREQUENCY.

A1 KEYED NOTES

SCALE: NOT TO SCALE



A2 FIRST FLOOR COMMUNICATIONS PLAN - AREA A (NOT IN CONTRACT)

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

0 4" 8" 16"

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DESIGNED BY:	W. BARLEY, RCDD
CHECKED BY:	F.K. NEILEY, P.E.

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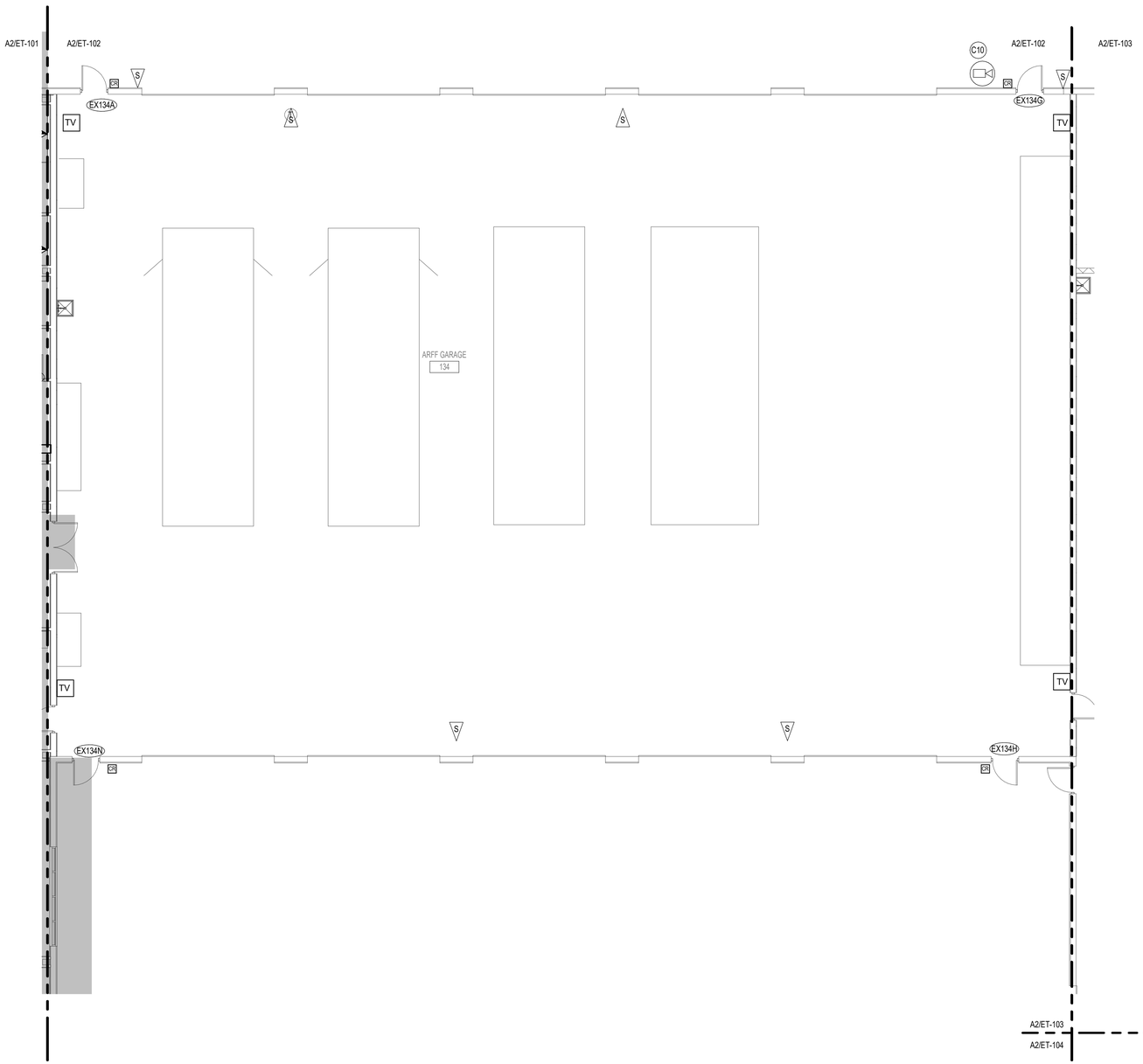

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DESIGNED BY:	W. BARLEY, RCDD
CHECKED BY:	F.K. NEILEY, P.E.

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FIRST FLOOR COMMUNICATIONS PLAN - AREA B (ADD ALT NO.1)

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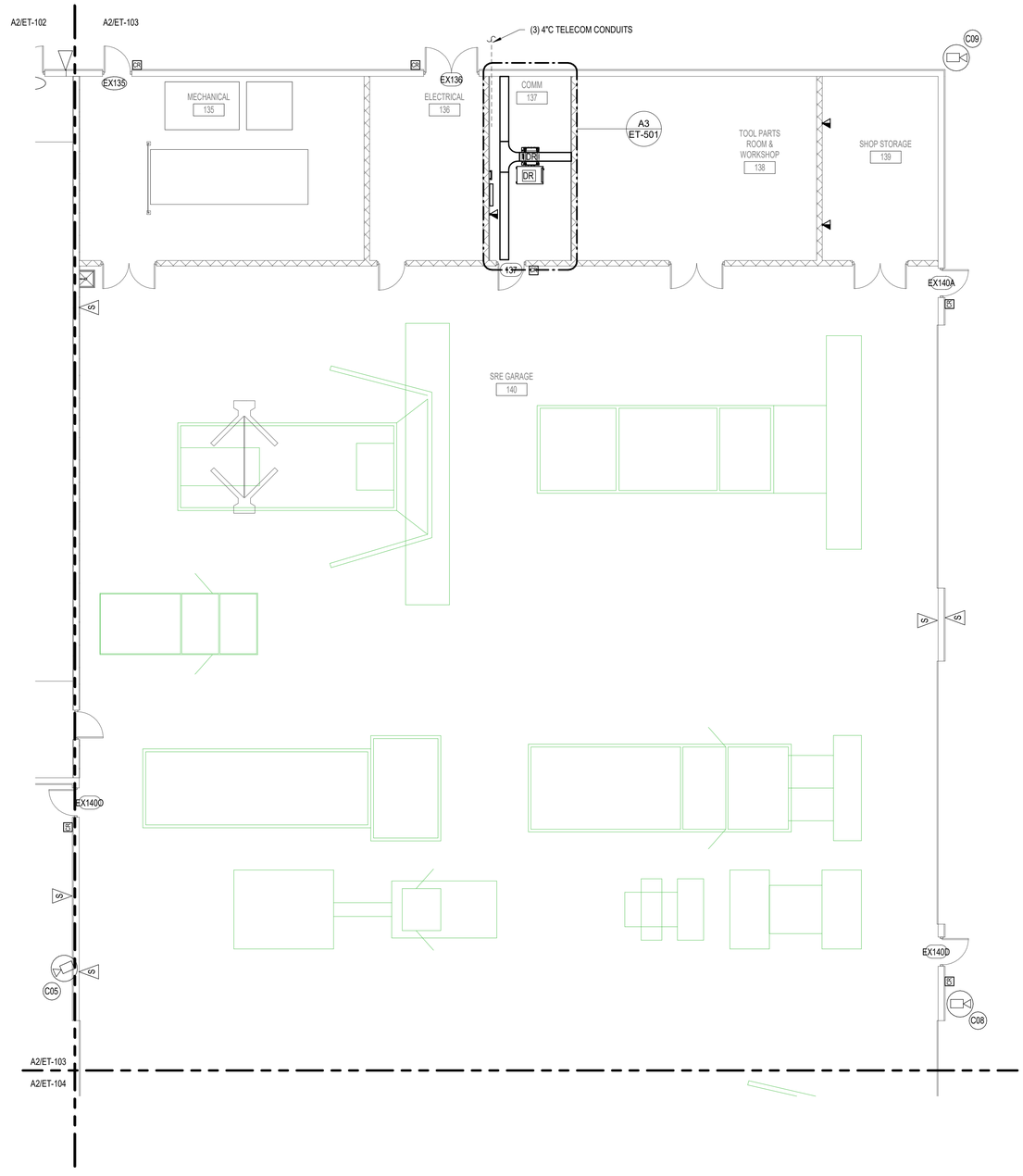

PLAN NORTH

A2 FIRST FLOOR COMMUNICATIONS PLAN - AREA C
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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DATE:	MARCH 2026
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DESIGNED BY:	W. BARLEY, RCDD
CHECKED BY:	F.K. NEILEY, P.E.

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FIRST FLOOR COMMUNICATIONS PLAN - AREA C

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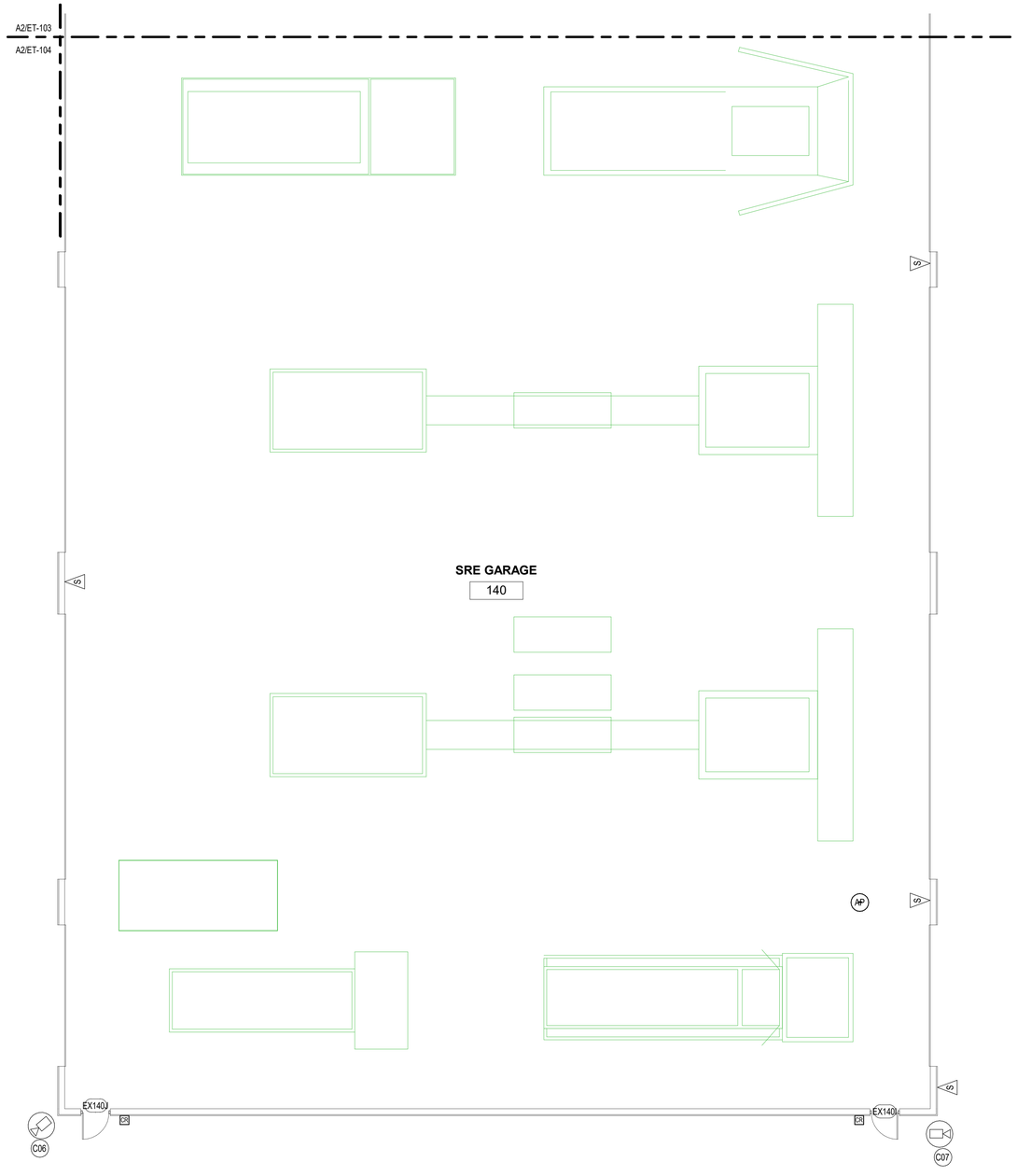

A2 FIRST FLOOR COMMUNICATIONS PLAN - AREA D
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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DESIGNED BY:	W. BARLEY, RCDD
CHECKED BY:	F.K. NEILEY, P.E.

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FIRST FLOOR COMMUNICATIONS PLAN - AREA D

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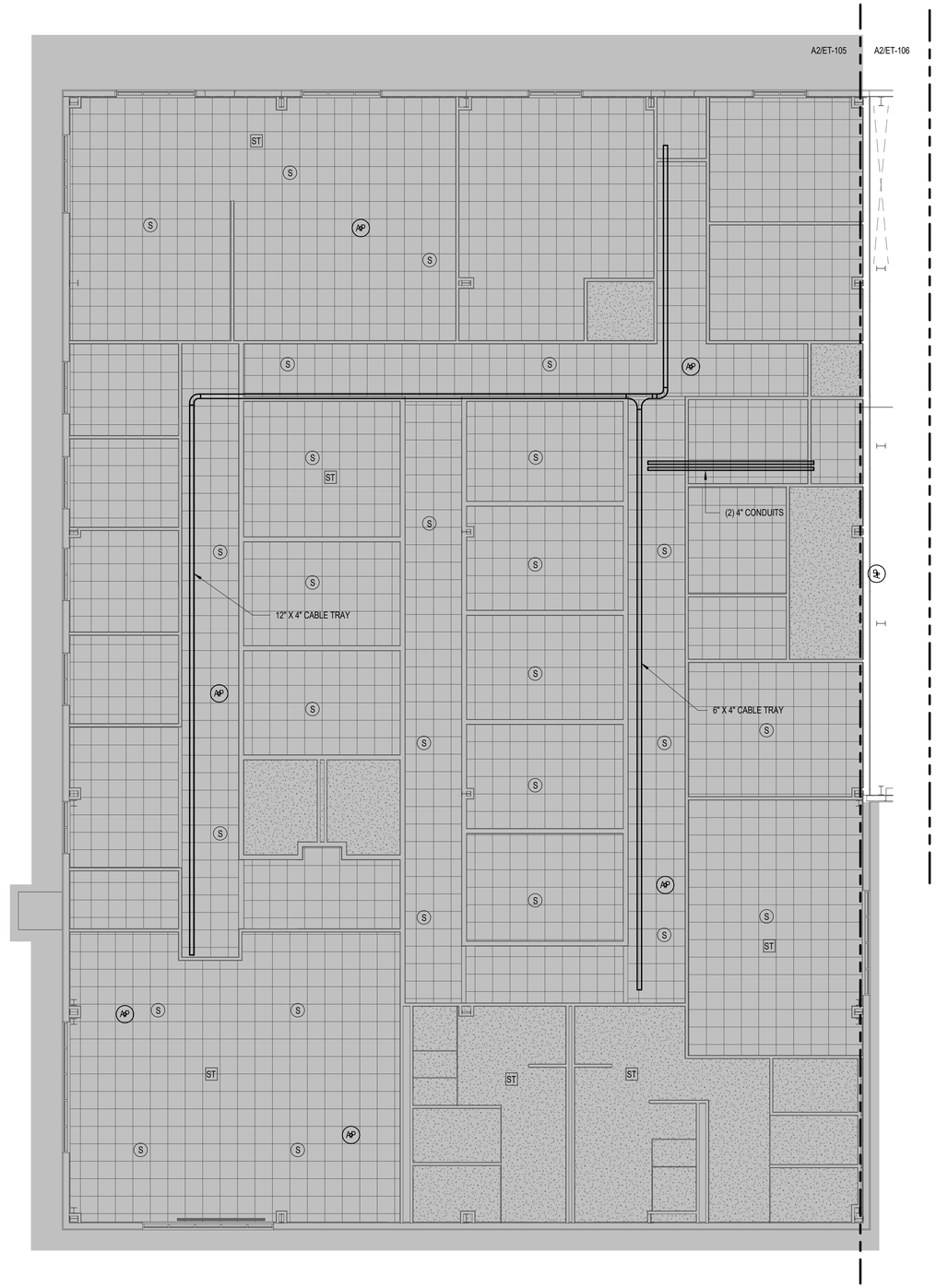

PLAN NORTH

0 4" 8" 16"

A2 FIRST FLOOR COMMUNICATIONS CEILING PLAN - AREA A (NOT IN CONTRACT)
SCALE: 1/8" = 1'-0"

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CHECKED BY:	F.K. NEILEY, P.E.

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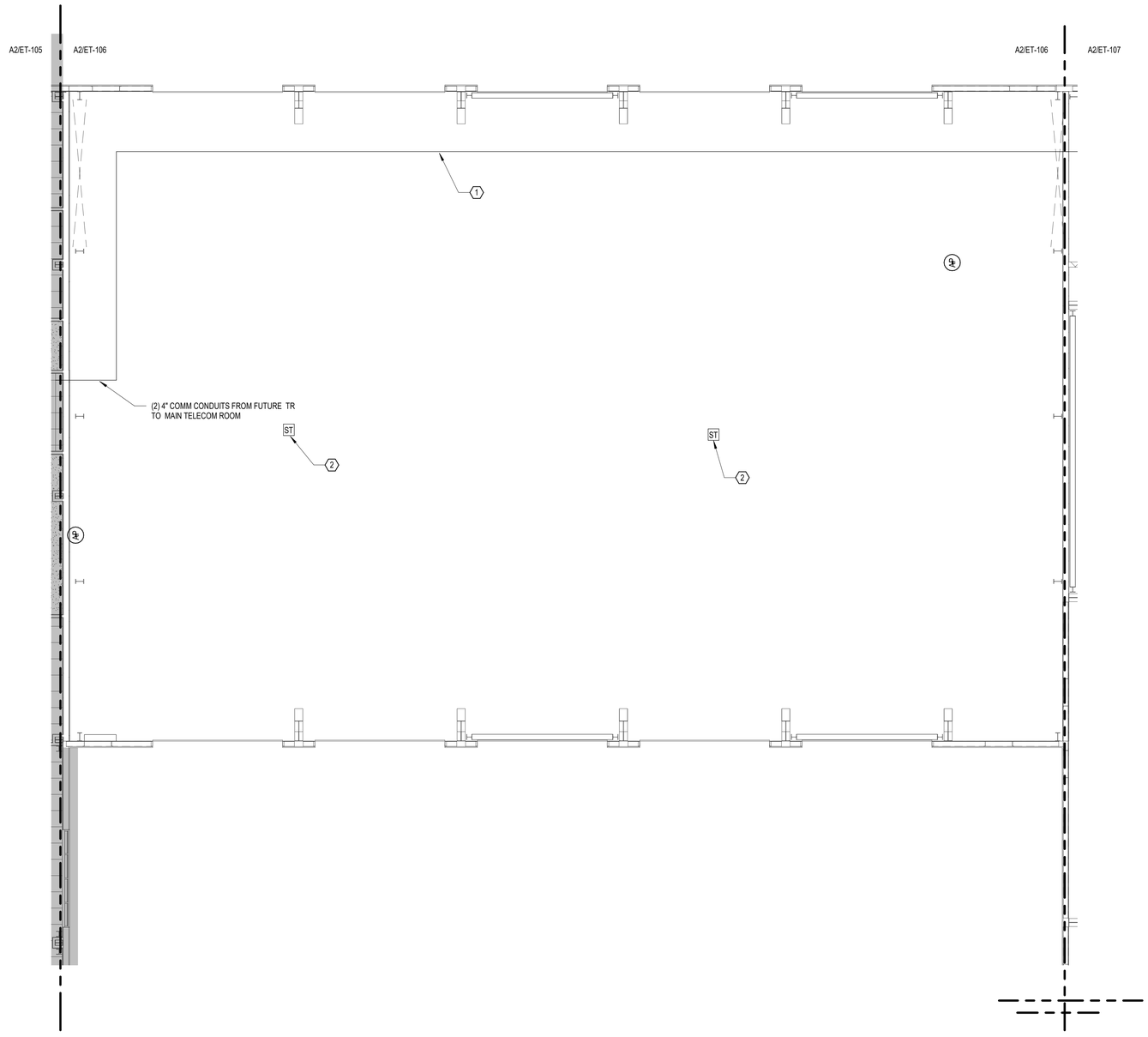

1 MOUNT CONDUITS AS HIGH ALONG CEILING AS POSSIBLE, COORDINATE WITH OTHER TRADES FOR SPACE.

2 PROVIDE CONDUIT AND CAT 6 CABLE FOR FUTURE DEVICE.

PLAN NORTH

0 4' 8' 16'

A1 KEYED NOTES
SCALE: NOT TO SCALE

A2 FIRST FLOOR COMMUNICATIONS CEILING PLAN - AREA B (ADD ALT. NO. 1)
SCALE: 1/8" = 1'-0"

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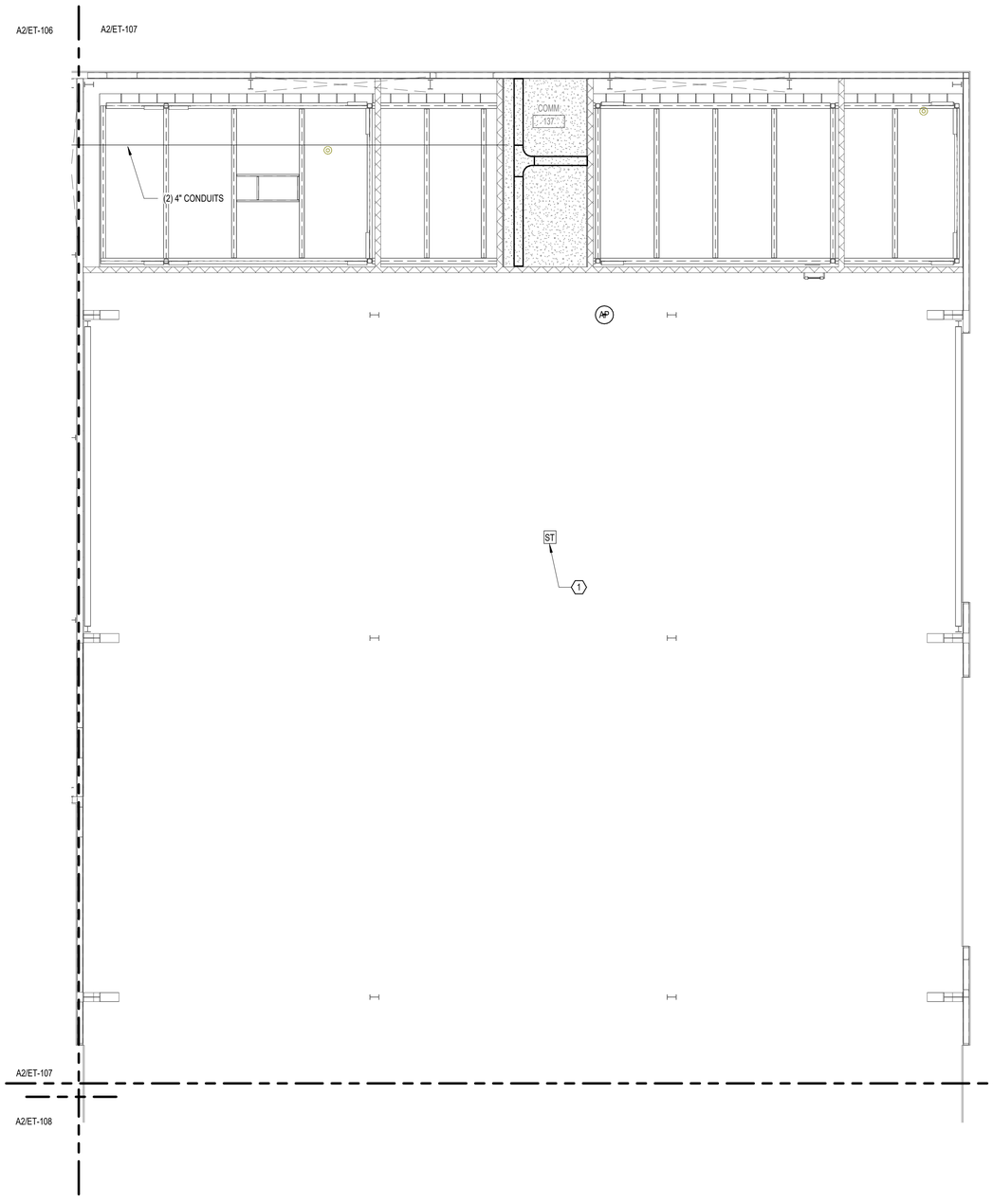

1 PROVIDE CONDUIT AND CAT 6 CABLE FOR FUTURE DEVICE.

A1 KEYED NOTES
SCALE: NOT TO SCALE

A2 FIRST FLOOR COMMUNICATIONS CEILING PLAN - AREA C
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

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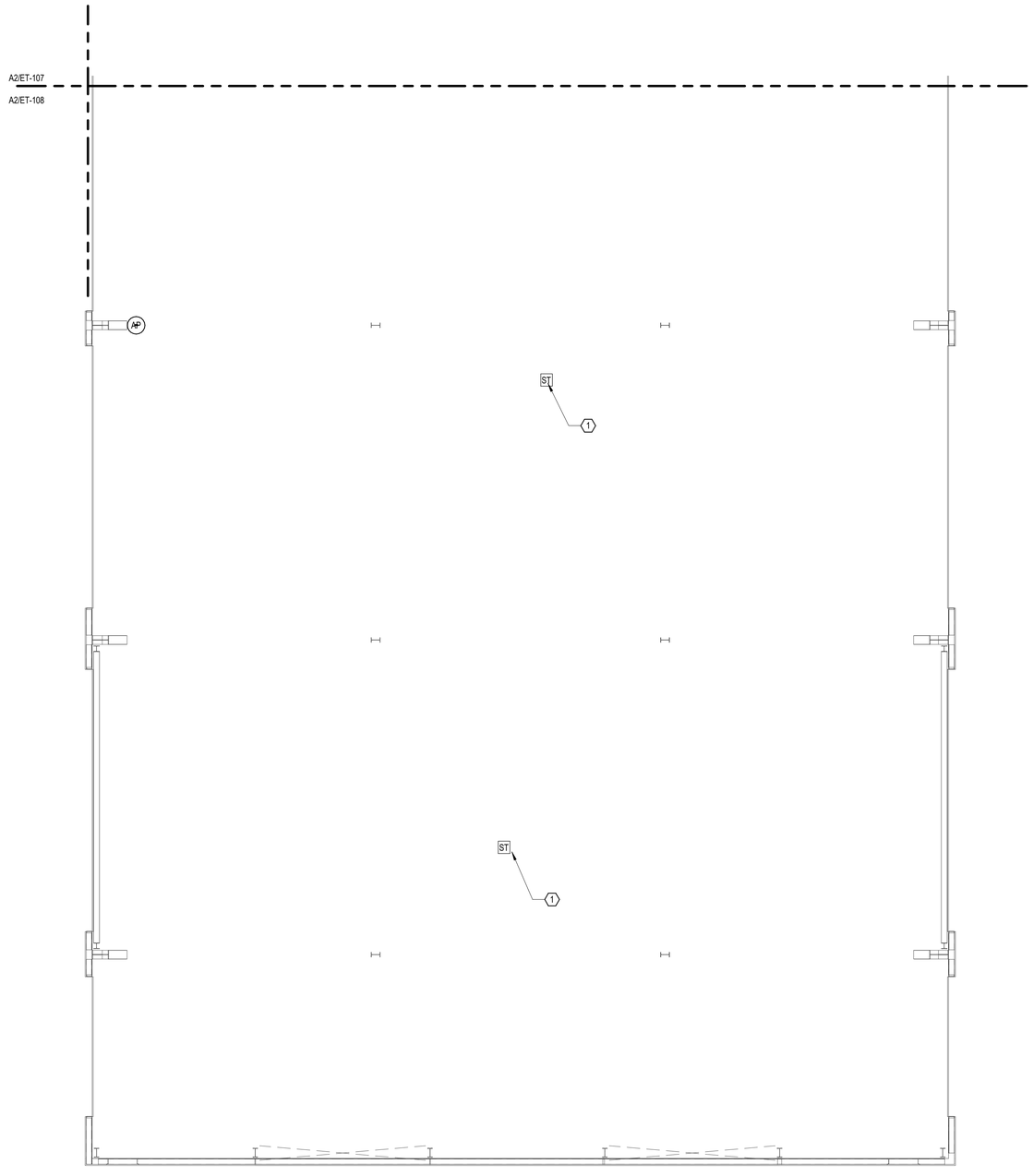

1 PROVIDE CONDUIT AND CAT 6 CABLE FOR FUTURE DEVICE.

PLAN NORTH

A1 KEYED NOTES
SCALE: NOT TO SCALE

A2 FIRST FLOOR COMMUNICATIONS CEILING PLAN - AREA D
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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CERTIFICATE OF AUTHORIZATION# 0021365

STATE OF NEW YORK FRANCESCA K. NEILEY 099161 PROFESSIONAL ENGINEER

03/17/2026

REGISTRATION EXPIRES: 02/28/2027

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NEW ARFF/SRE BUILDING
ITHACA TOMPKINS
INTERNATIONAL AIRPORT
72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	158.095.001
DATE:	MARCH 2026
DRAWN BY:	W. BARLEY, RCDD
DESIGNED BY:	W. BARLEY, RCDD
CHECKED BY:	F.K. NEILEY, P.E.

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COMMUNICATIONS ABOVE CEILING PLAN - AREA D

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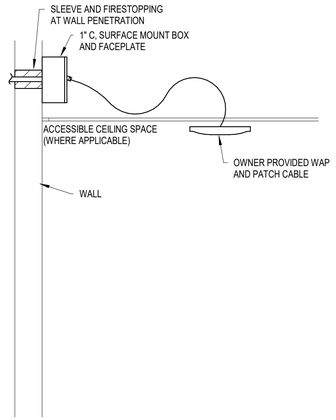
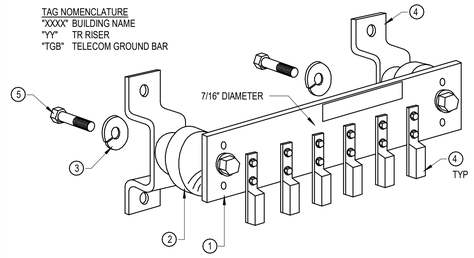


C1 WIRELESS ACCESS POINT (WAP) INSTALLATION DETAIL

SCALE: NOT TO SCALE

TAG NOMENCLATURE
"XXXX" BUILDING NAME
"YY" TR RISER
"TGB" TELECOM GROUND BAR



1. INSULATED COPPER GROUND BAR, 1/4"x4"x10" OR 1/4"x4"x20" NEWTON INSTRUMENT COMPANY #00305 SERIES OR EQUAL. HOLE CENTERS TO MATCH NEMA LUG CONFIGURATION.
2. INSULATORS, NEWTON INSTRUMENT COMPANY CATEGORY NUMBER 3061-4 OR EQUAL.
3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT COMPANY CATEGORY NUMBER 3015-8 OR EQUAL.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT COMPANY CATEGORY NUMBER A-6056 OR EQUAL.
5. 5/8"x11"x1" H.H.C.S. BOLTS, NEWTON INSTRUMENT COMPANY CATEGORY NUMBER 3012-1 OR EQUAL.
6. LONG BARREL COMPRESSION LUG. PROVIDE A MINIMUM OF 6 LUGS PER TGB. DRILL AND TAP AS REQUIRED.

C2 PRIMARY BONDING BUSBAR

SCALE: NOT TO SCALE

DOOR TYPES:

A. SINGLE DOOR: PROVIDE CARD READER.

B. DOUBLE DOOR: PROVIDE CARD READER .

C. ALUMINUM STORE FRONT: PROVIDE CARD READER

REFER TO ARCH DRAWINGS FOR HARDWARE TYPE, GC TO PROVIDE ELECTRIFIED DOOR HARDWARE WITH INTEGRAL REX AND DOOR POSITION SWITCH.

DOOR NUMBER	DOOR TYPE	DOOR LOCATION	PANEL LOCATION
EX101	A	VESTIBULE	ROOM 129
101	A	VESTIBULE	ROOM 129
101B	A	TRAINING 101A	ROOM 129
102A	A	CORRIDOR 102	ROOM 129
102B	A	CORRIDOR 102	ROOM 129
129	A	TELECOM ROOM	ROOM 129
131	A	ROOM 131	ROOM 129
EX110	A	NORTH ENT	ROOM 129
EX133	A	NORTH ENT	ROOM 129
EX134A	A	ARFF GAR	ROOM 137
EX134G	A	ARFF GAR	ROOM 137
EX134H	A	ARFF GAR	ROOM 137
EX134N	A	ARFF GAR	ROOM 137
EX135	B	MECH ROOM	ROOM 137
EX136	B	ELECTRIC ROOM	ROOM 137
137	A	MAIN TELECOM ROOM	ROOM 137
EX140A	A	SRE GAR	ROOM 137
EX140D	A	SRE GAR	ROOM 137
EX140I	A	SRE GAR	ROOM 137
EX140J	A	SRE GAR	ROOM 137
EX140O	A	SRE GAR	ROOM 137

B3 ACCESS CONTROL SCHEDULE

SCALE: NOT TO SCALE

CAMERA TYPES:

A. OUTDOOR MULTI IMAGER 20MP

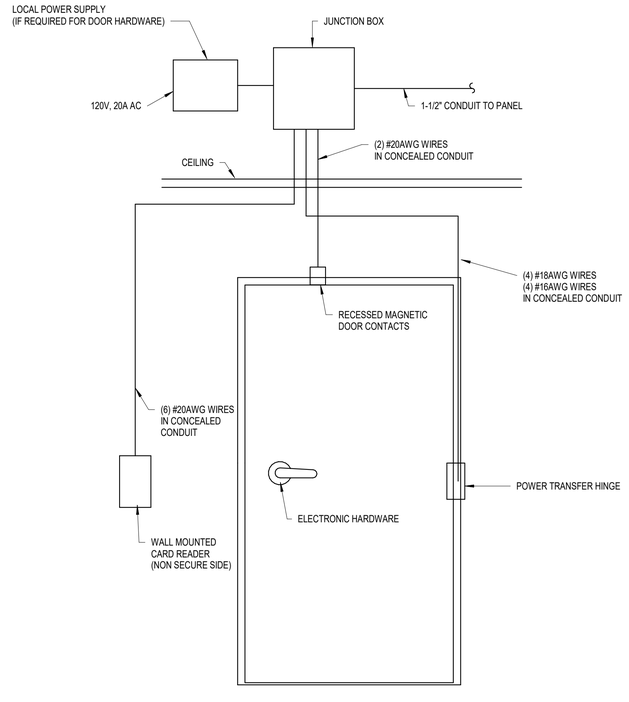
B. OUTDOOR VARIFOCAL 5 MP

C. INDOOR/OUTDOOR VARIFIOCAL 5MP

CAMERA NUMBER	CAMERA TYPE	CAMERA LOCATION	TERMINATION LOCATION	MOUNTING TYPE
C01	C	VESTIBULE	ROOM 129	WALL PENDANT
C02	B	VESTIBULE	ROOM 129	CEILING
C03	A	SOUTH WEST WALL	ROOM 129	CORNER PENDANT
C04	A	SOUTH WALL	ROOM 129	CORNER PENDANT
C05	A	SOUTH WALL	ROOM 136	CORNER PENDANT
C06	A	SOUTH WEST SRE WALL	ROOM 136	CORNER PENDANT
C07	A	SOUTH EAST WALL	ROOM 136	CORNER PENDANT
C08	A	EAST WALL	ROOM 136	WALL PENDANT
C09	A	NORTH EAST WALL	ROOM 136	CORNER PENDANT
C10	A	NORTH WALL	ROOM 136	WALL PENDANT
C11	A	SOUTH WALL	ROOM 129	CORNER PENDANT

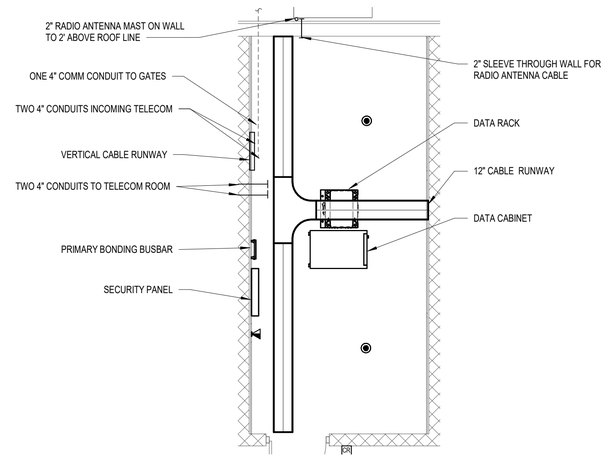
C4 CAMERA SCHEDULE

SCALE: NOT TO SCALE



A1 TYPICAL ACCESS CONTROL DOOR

SCALE: NOT TO SCALE



A3 MAIN TELECOM ROOM

SCALE: 1/4" = 1'-0"

0 4' 8' 16'

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REGISTRATION EXPIRES: 02/28/2027

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DETAILS

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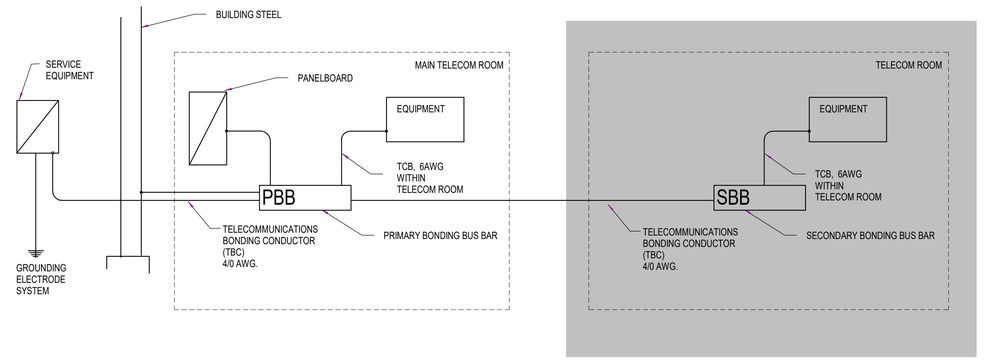
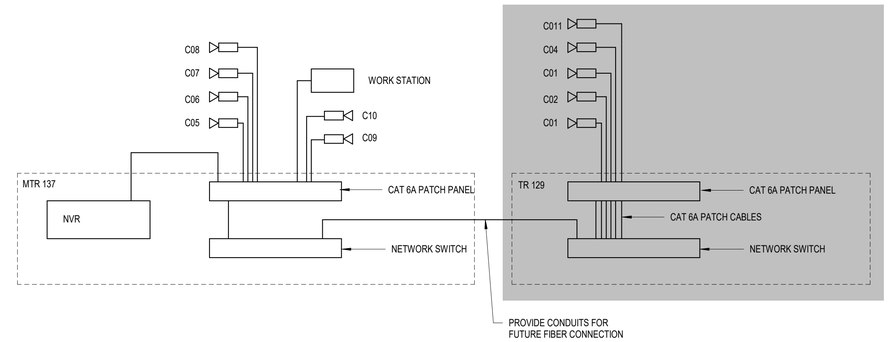
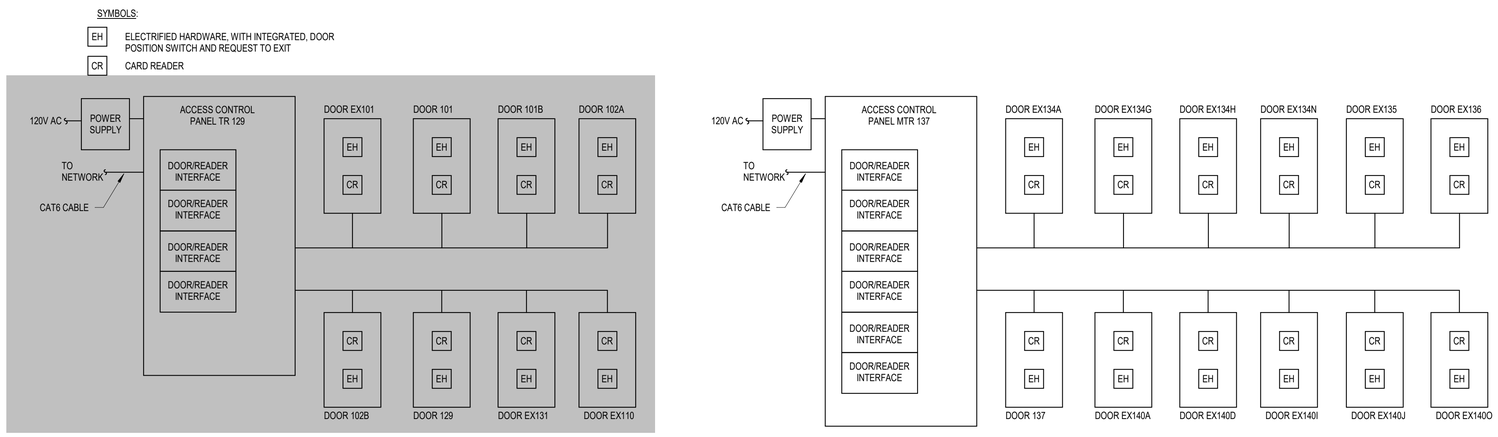


C3 BONDING ONE LINE
SCALE: NOT TO SCALE



B3 CAMERA ONE LINE
SCALE: NOT TO SCALE



A2 ACCESS CONTROL ONELINE
SCALE: NOT TO SCALE

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03/17/2026

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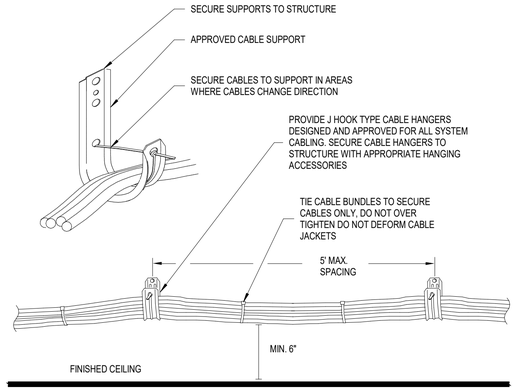


INSTALLATION NOTES:
1). LOCATE CABLE BUNDLES A MIN. OF 6" ABOVE REMOVABLE CEILINGS TO MAINTAIN CLEARANCE (ALONG WALLS WHERE POSSIBLE). LOCATE IN AREA THAT ARE ACCESSIBLE.
2). USE 2 OR MORE CABLE HANGERS AT ALL TURNS TO MAINTAIN MANUFACTURERS BEND RADIUS REQUIREMENTS.
3). REFER TO SPECIFICATIONS FOR ADDITIONAL CABLE INSTALLATION REQUIREMENTS.

C2 PLENUM CABLE SUPPORT DETAIL
SCALE: NOT TO SCALE

SYMBOL	DESCRIPTION
FACP	FIRE ALARM CONTROL PANEL
DIALER	FIRE ALARM CELLULAR DIALER
ISO	FIRE ALARM ISOLATION MODULE
RM	ADDRESSABLE INTERFACE MODULE W/ RELAY
WP XXX / C	FIRE ALARM HORN/STROBE (XXX INDICATES CANDELA RATING), "C" DENOTES CEILING MOUNTED DEVICE, "WP" DENOTES WATERPROOF DEVICE
XXX	FIRE ALARM STROBE (XXX INDICATES CANDELA RATING)
F	FIRE ALARM MANUAL PULL STATION
B	ELECTRONIC WATER FLOW ALARM BELL (PROVIDED BY SPRINKLER CONTRACTOR)
	PHOTOELECTRIC SMOKE DETECTOR
CO	PHOTOELECTRIC SMOKE DETECTOR W/ COMBINATION CARBON MONOXIDE SOUNDER BASE
MM FS	MONITOR MODULE FOR FLOW SWITCH
MM TS	MONITOR MODULE FOR TAMPER SWITCH
	AREA NOT IN CONTRACT (NIC)

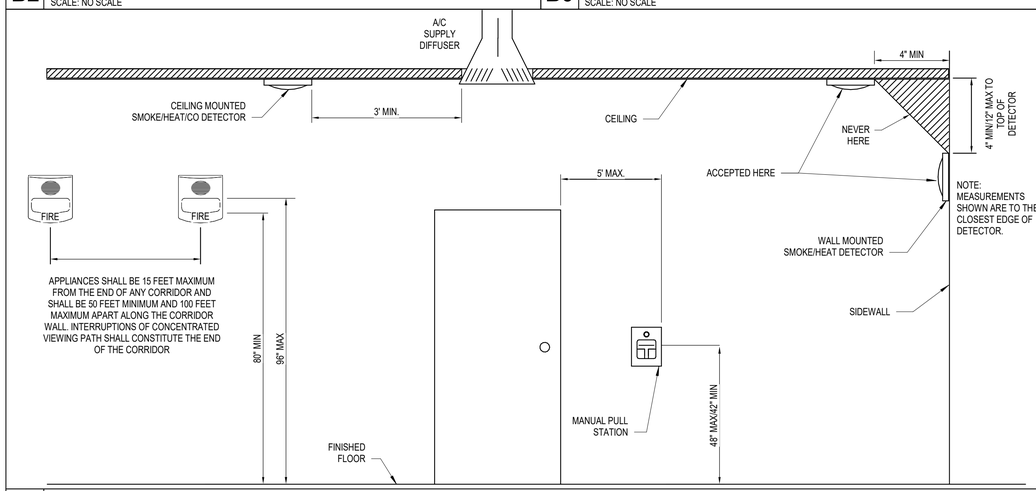
C3 FIRE ALARM SYMBOLS
SCALE: NOT TO SCALE

INSTALLATION NOTES:
1. PROVIDE LARGER BOXES AND CONDUIT SIZES WHEN REQUIRED TO ACCOMMODATE DEVICES AND WIRING.
2. COORDINATE CONDUIT LOCATIONS WITH OTHER TRADES PRIOR TO INSTALLATION.

B2 SURFACE MOUNTED FIRE ALARM DEVICE RACEWAY
SCALE: NO SCALE

INSTALLATION NOTES:
1. PROVIDE LARGER BOXES AND CONDUIT SIZES WHEN REQUIRED TO ACCOMMODATE DEVICES AND WIRING.
2. COORDINATE CONDUIT LOCATIONS WITH OTHER TRADES PRIOR TO INSTALLATION.

B3 RECESS MOUNTED FIRE ALARM DEVICE RACEWAY
SCALE: NO SCALE



A2 FIRE ALARM DEVICE MOUNTING DETAIL
SCALE: NOT TO SCALE

SCOPE OF WORK:

THE SCOPE OF WORK SHALL INCLUDE THE FOLLOWING:

1. THE LAYOUT, INSTALLATION, AND TESTING OF NEW FIRE ALARM SYSTEM THROUGHOUT THE NEW BUILDING.
2. FURNISH, WIRE, INSTALL, PROGRAM, AND TEST NEW DEVICES, WIRING, AND RACEWAYS.
3. ACCEPTANCE TESTING OF SYSTEM PER NFPA 72.
4. SUBMISSION OF DOCUMENTATION AS REQUIRED.

APPLICABLE CODES:

1. 2025 BUILDING CODE OF NEW YORK STATE
2. 2025 FIRE CODE OF NEW YORK STATE
3. NFPA 72 - 2022, NATIONAL FIRE ALARM AND SIGNALING CODE
4. NFPA 70 - 2023, NATIONAL ELECTRIC CODE

DESIGN CRITERIA:

1. THE DESIGN DOCUMENTS PROVIDED HEREIN IDENTIFY THE MINIMUM SYSTEM REQUIREMENTS, IN ACCORDANCE WITH THE ABOVE REFERENCED CODES AND REGULATIONS.
2. INSTALLATION PERSONNEL SHALL BE SUPERVISED BY PERSONS WHO ARE QUALIFIED AND EXPERIENCED IN THE INSTALLATION OF, INSPECTION, AND TESTING OF FIRE ALARM SYSTEMS. EXAMPLES OF QUALIFIED PERSONNEL SHALL INCLUDE BUT NOT BE LIMITED TO:
   A. FACTORY TRAINED AND CERTIFIED PERSONNEL
   B. NICET LEVEL III OR HIGHER CERTIFIED PERSONNEL LICENSED OR CERTIFIED BY THE STATE OR LOCAL AUTHORITY, PER NFPA 72
3. THE FIRE ALARM SYSTEM SHALL BE FULLY ADDRESSABLE, PROVIDE GENERAL EVACUATION SIGNAL FOR THE BUILDING, AND REPORT TO AN APPROVED CENTRAL STATION IN ACCORDANCE WITH NFPA 72.
4. THE FIRE ALARM SYSTEM WIRING SUPERVISION SHALL BE IN ACCORDANCE WITH NFPA 72.
   A. SIGNALING LINE CIRCUITS: CLASS B
   B. NOTIFICATION APPLIANCE CIRCUITS: CLASS B
5. THE FIRE ALARM SYSTEM SHALL FUNCTION IN ACCORDANCE WITH THE SEQUENCE OF OPERATIONS MATRIX AND NFPA 72.
6. ALL FIRE ALARM CIRCUITS ENTERING OR LEAVING BUILDINGS SHALL BE PROVIDED WITH APPROVED SURGE PROTECTION DEVICE(S). ALL CONDUCTORS UNDERGROUND SHALL BE RATED FOR WET LOCATIONS. ALL DEVICES AND EQUIPMENT INSTALLED OUTSIDE SHALL BE WEATHERPROOF AND LISTED FOR OUTDOOR USE.
7. PLENUM RATED FIRE ALARM CONDUCTORS SHALL BE PERMITTED TO BE INSTALLED IN PLENUM SPACES. ALL CONDUCTORS IN EXPOSED AREAS OR CONCEALED IN WALLS SHALL BE INSTALLED IN RED EMT CONDUIT. ALL CONDUCTORS INSTALLED BELOW GRADE SHALL BE IN RACEWAY SUITABLE FOR BURIAL UNDERGROUND. CONDUIT HANGER AND MATERIAL, SPACING, AND METHOD OF ATTACHMENT SHALL BE PER NFPA 70, NFPA 72, AND MANUFACTURER'S RECOMMENDATIONS. MINIMUM BURIAL COVER DEPTH SHALL BE NOT LESS THAN 24" WHERE UNDER VEHICLE TRAFFIC AND 6" IN AREAS NOT EXPOSED TO VEHICLE TRAFFIC PER NFPA 70.
8. NOTIFICATION APPLIANCE CIRCUITS SHALL BE 14 GAUGE OR LARGER 2-CONDUCTOR THHN CABLE. FIRE ALARM CONTRACTOR SHALL PERFORM AND SUBMIT BATTERY BACKUP AND VOLTAGE DROP CALCULATIONS TO ENSURE VOLTAGE AT FINAL DEVICE IS ACCEPTABLE PER THE FIRE ALARM MANUFACTURER AND SUFFICIENT STANDBY POWER IS AVAILABLE FOR 24 HOURS OF STANDBY OPERATION FOLLOWED BY 15 MINUTES OF ALARM.
9. SIGNALING LINE CIRCUITS SHALL BE 18 GAUGE OR LARGER 2-CONDUCTOR FPLR CABLE. FIRE ALARM CONTRACTOR SHALL DETERMINE CABLE BASED ON FIRE ALARM MANUFACTURER REQUIREMENTS AND CABLE LENGTH LIMITATIONS.
10. USE SUITABLE CABLE FITTINGS AND CONNECTORS WHERE CABLE ENTERS/EXITS ALL JUNCTION AND DEVICE BACK BOXES. LEAVE 18" EXCESS CABLE AT EACH TERMINATION AT A DEVICE AND OTHER SYSTEM OUTLET. LEAVE 6' EXCESS CABLE AT EACH TERMINATION AT SYSTEM CONTROL PANELS OR POWER SUPPLIES.
11. SPLICE CABLE ONLY IN ACCESSIBLE JUNCTION BOXES OR AT TERMINAL BLOCK UNITS. THERE SHALL BE NO T-TAPPING OF SLC CIRCUITS BETWEEN TERMINAL CABINETS AND THE LAST INITIATING DEVICE ON THE SLC CIRCUIT. THE ONLY T-TAPPING IN THE SYSTEM SHALL TAKE PLACE AT THE TERMINAL CABINETS. MAKE CABLE SHIELDS CONTINUOUS AT ALL SPLICES AND CONNECT CIRCUIT SHIELD TO EQUIPMENT GROUND ONLY AT SOURCE END.
12. SPRINKLER VALVE TAMPER SWITCHES AND WATER FLOW SWITCHES SHALL BE PROVIDED BY FIRE SPRINKLER CONTRACTOR. FIRE ALARM CONTRACTOR SHALL PROVIDE, INSTALL, WIRE, AND PROGRAM MONITOR MODULES. MONITOR MODULES SHALL BE MOUNTED NOT MORE THAN 3' FROM DEVICE/EQUIPMENT BEING MONITORED. FIRE ALARM CONTRACTOR SHALL SUPERVISE ALL VALVES AND OTHER SUPERVISORY POINTS INDICATING OFF-NORMAL CONDITION OF OR NEED FOR ACTION FOR THE FIRE PROTECTION SYSTEMS WITHIN THE BUILDINGS.
13. FIRE ALARM SYSTEM SHALL INCLUDE FULL IDENTIFICATION. ALL SYSTEM CONDUIT, JUNCTION BOXES, TERMINAL BOXES, PULL BOXES, AND COVERS SHALL BE RED IN CONCEALED SPACES AND SHALL BE IDENTIFIED WITH ENGRAVED LABELS BY THE ZONE AND CIRCUIT IT CONTAINS. ALL LB'S AND SIMILAR UNITS SHALL BE THE COLOR RED IN CONCEALED SPACES. ALL CONDUIT, BOXES, AND COVERS LOCATED IN EXPOSED AREAS SHALL BE THE COLOR RED AND PROVIDED WITH ENGRAVED LABELS. LABEL ALL FIRE ALARM DEVICES WITH ADDRESSES. ONLY PRINTED STICK ON TYPE LABELS SHALL BE USED. LABELING DEVICE WITH MARKERS IS NOT ACCEPTABLE. THE PRINTED STICK ON TYPE LABELS MUST BE VISIBLE UPON APPROACH TO THE DEVICE AND BE MADE OF SUCH A MATERIAL TO RESIST FADING OR EASY REMOVAL.
14. ALL PENETRATIONS THROUGH FIRE/SMOKE RATED ASSEMBLIES SHALL BE FIRE STOPPED. FIRE STOPPING SHALL BE OF U.L. LISTED ASSEMBLY.
15. CONTRACTOR SHALL SUBMIT FOR REVIEW TO THE ENGINEER OF RECORD (THROUGH THE APPROPRIATE PARTIES) COMPLETE SHOP DRAWINGS OF THE FIRE ALARM SYSTEMS, MATERIAL DATA, AND CALCULATIONS AT THE SAME TIME. INCOMPLETE SUBMITTALS WILL BE RETURNED WITHOUT REVIEW. SHOP DRAWINGS SHALL INCLUDE AT MINIMUM: WORKING PLANS WITH ALL APPLIANCES, DEVICES, INTERCONNECTIONS, AND POINT TO POINT WIRING SHOWN, BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, AND ALL REQUIRED MATERIAL DATA. SHOP DRAWINGS SHALL INDICATE ALL ITEMS IDENTIFIED IN NFPA 72 AND THE FOLLOWING: ADDRESSABLE APPLIANCE ADDRESS, CONDUCTOR SIZE, NON-TYPICAL RISER DIAGRAM, AND NAME AND MAKE OF EACH DEVICE/APPLIANCE.

A4 FIRE ALARM GENERAL NOTES
SCALE: NOT TO SCALE

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REGISTRATION EXPIRES 05/31/2028

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72 BROWN ROAD
ITHACA, NY 14850

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO: 158.095.001
DATE: MARCH 2026
DRAWN BY: S.P. ZAFERAKIS
DESIGNED BY:S.P. ZAFERAKIS
CHECKED BY: M.A. OSTROFF, PE

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DETAILS, NOTES & SYMBOLS

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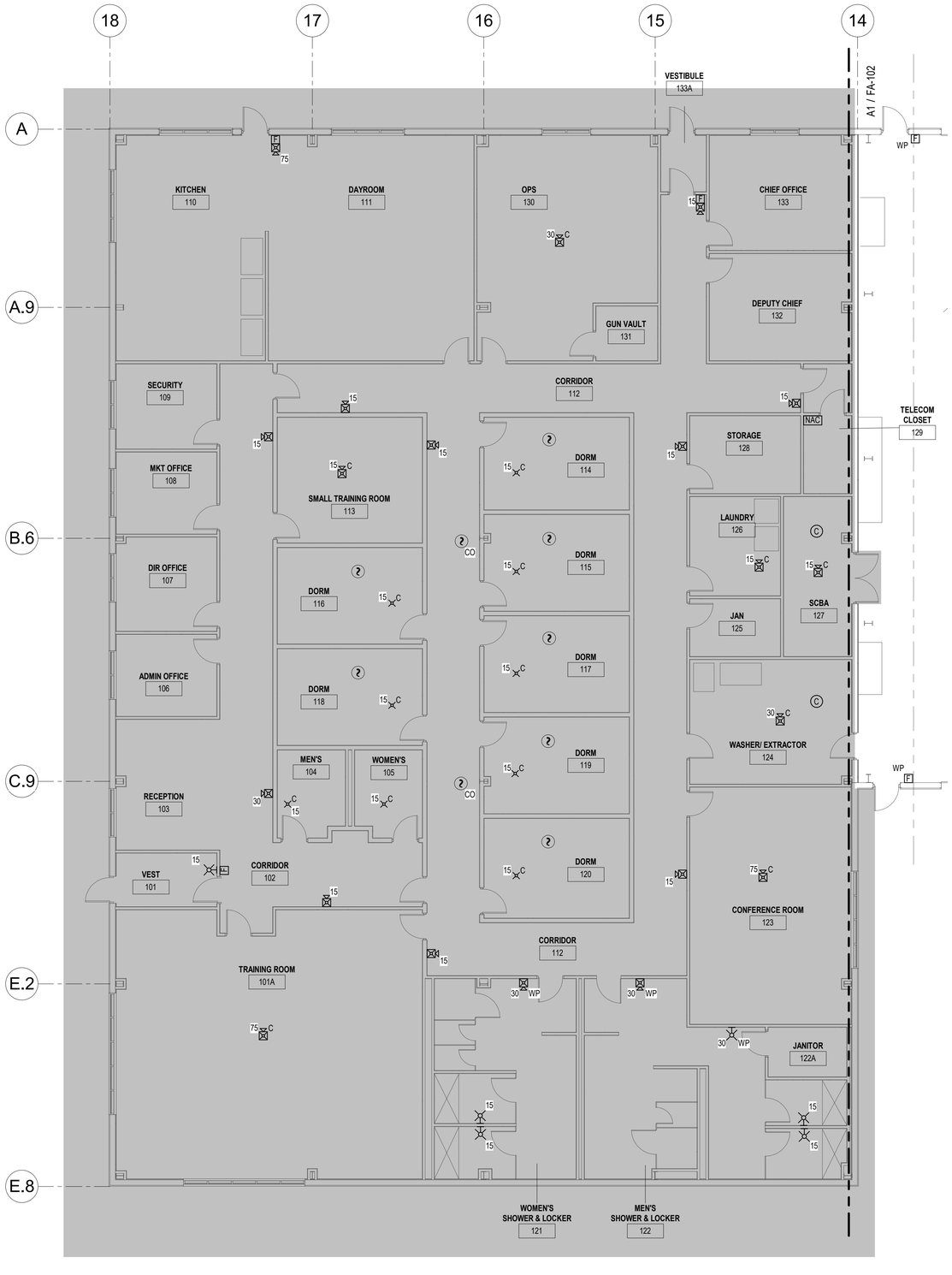

A1 FIRST FLOOR FIRE ALARM - AREA A (NOT IN CONTRACT)
SCALE: 1/8" = 1'-0"

0 5' 10' 20'

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FIRST FLOOR FIRE ALARM PLAN - AREA A (NOT IN CONTRACT)

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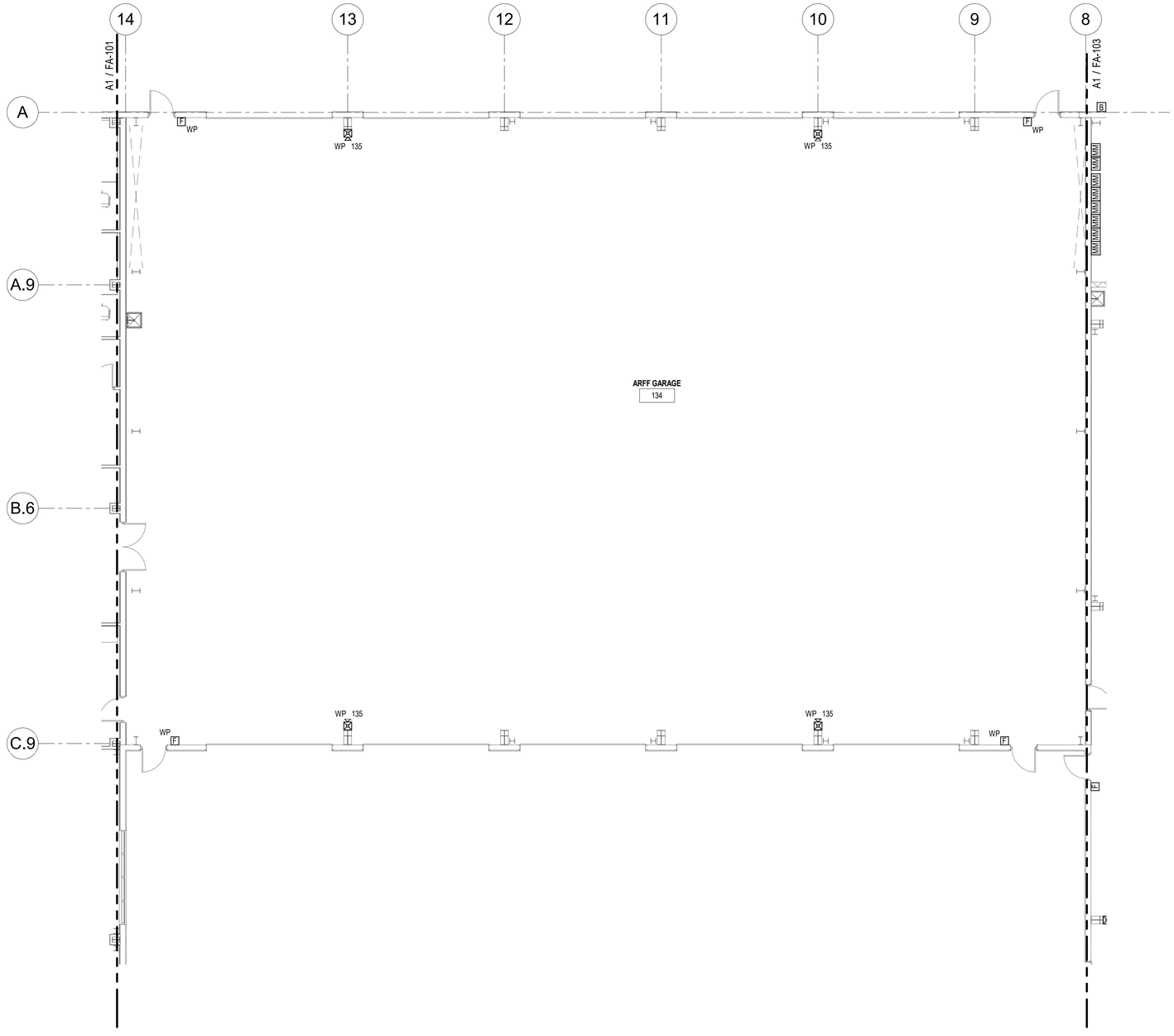

PLAN NORTH

A1 FIRST FLOOR FIRE ALARM - AREA B
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR FIRE ALARM PLAN - AREA B (ADD ALT. NO.1)

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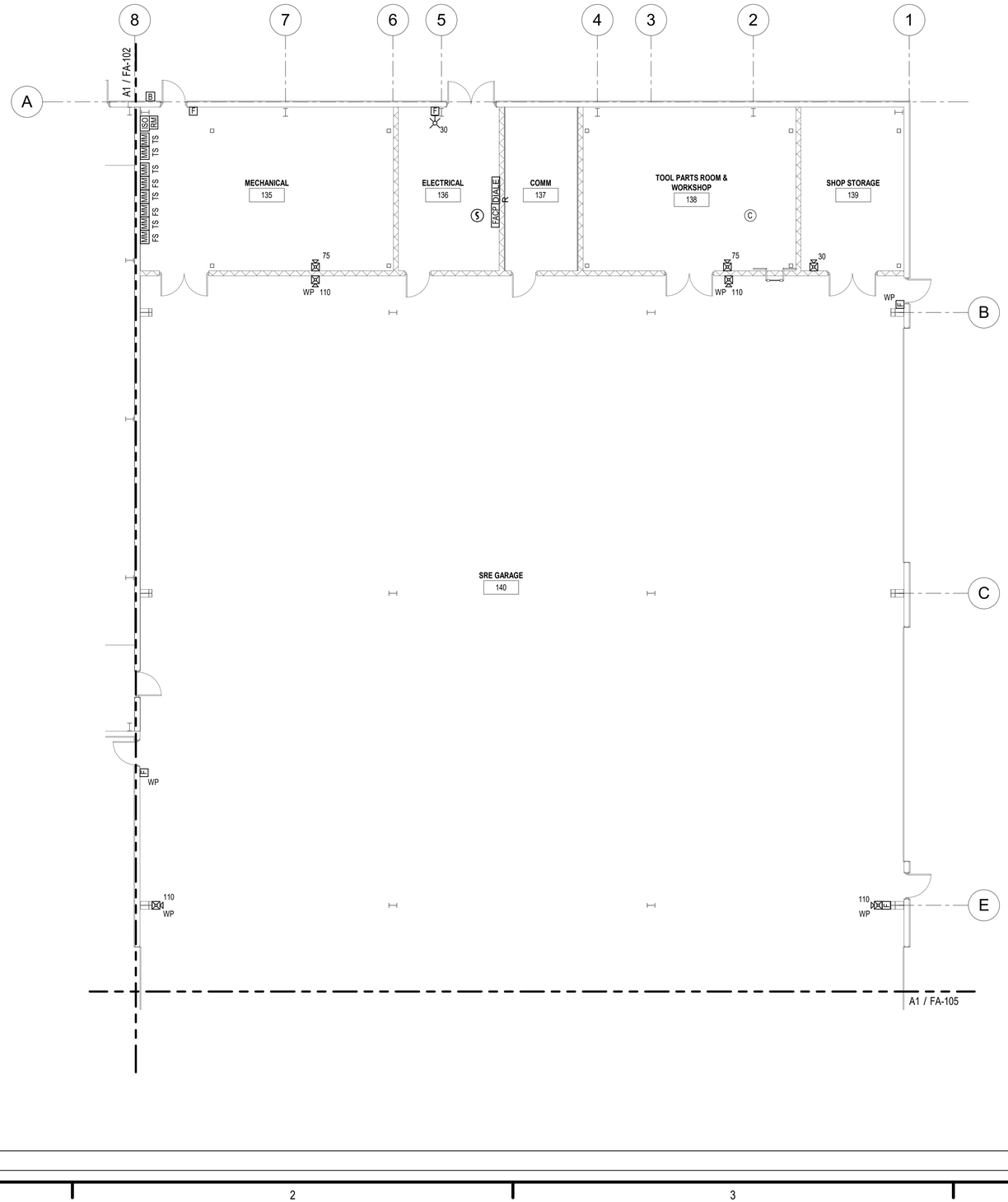

PLAN NORTH

0 4' 8' 16'

A1 FIRST FLOOR FIRE ALARM - AREA C
SCALE: 1/8" = 1'-0"

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FIRST FLOOR FIRE ALARM PLAN - AREA C

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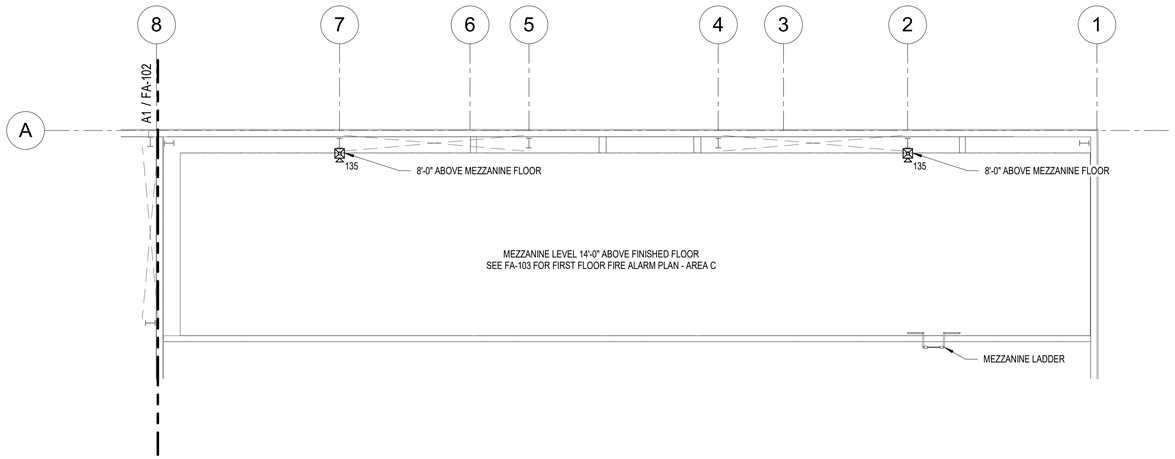

PLAN NORTH

A2 **FIRST FLOOR FIRE ALARM - AREA C MEZZANINE**
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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REVISIONS

PROJECT NO: 158.095.001
DATE: MARCH 2026
DRAWN BY: S.P. ZAFERAKIS
DESIGNED BY:S.P. ZAFERAKIS
CHECKED BY: M.A. OSTROFF, PE

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FIRST FLOOR FIRE ALARM PLAN - AREA C MEZZANINE

FA-104

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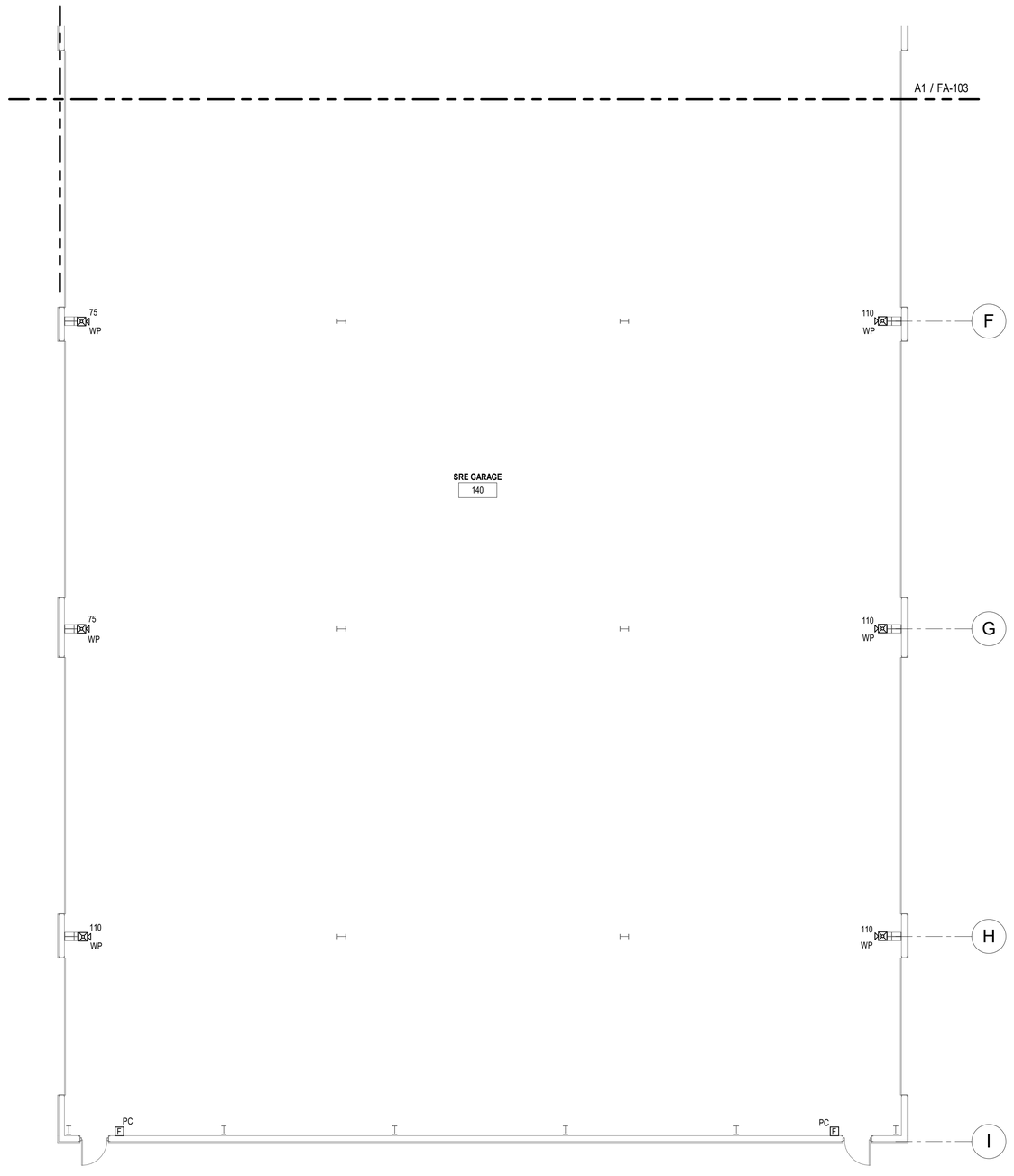

PLAN NORTH

A1 FIRST FLOOR FIRE ALARM - AREA D
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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FIRST FLOOR FIRE ALARM PLAN - AREA D

FA-105

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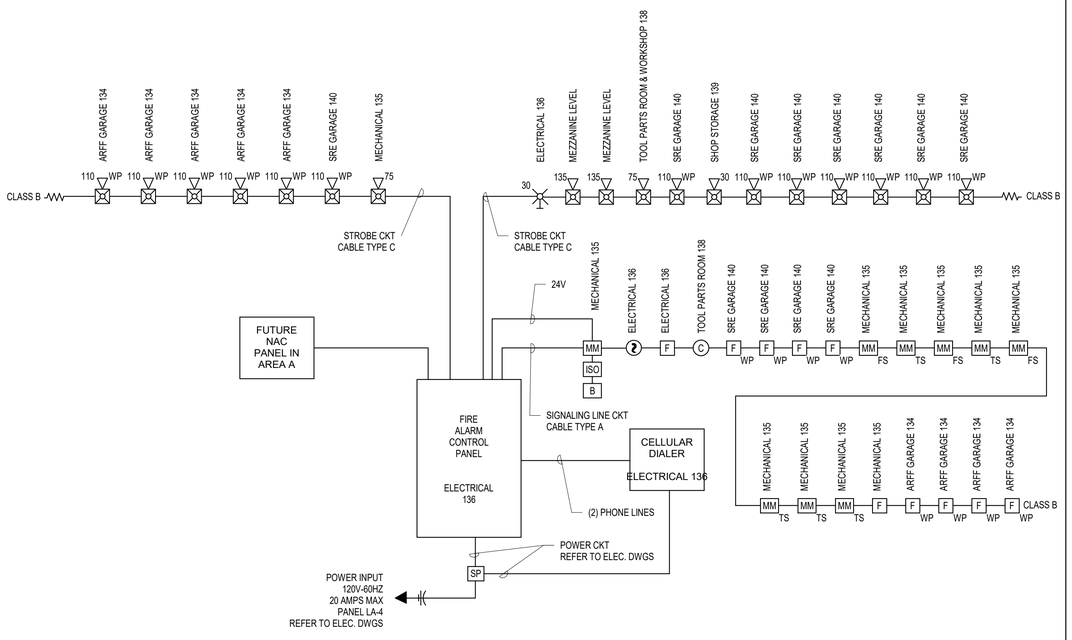

B1 FIRE ALARM RISER DIAGRAM

SCALE: NOT TO SCALE

		SYSTEM OUTPUTS												
		FACP ANNUNCIATION					NOTIFICATION				FIRE SAFETY CONTROL			
	SYSTEM INPUTS	ACTUATE AUDIBLE ALARM SIGNAL AT FACP	ACTUATE COMMON ALARM SIGNAL INDICATOR AT FACP	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR AT FACP	ACTUATE COMMON TROUBLE SIGNAL INDICATOR AT FACP	ANNUNCIATE ORIGIN AND DESCRIPTION OF SIGNAL ON DISPLAY	ACTUATE AUDIO/VISUAL NOTIFICATION APPLIANCES	TRANSMIT FIRE ALARM SIGNAL TO MONITORING STATION	TRANSMIT SUPERVISORY SIGNAL TO MONITORING STATION	TRANSMIT TROUBLE SIGNAL TO MONITORING STATION	ACTUATE TEMPORAL FOUR SOUNDER BASE	ACTUATE ELECTRIC WATER FLOW ALARM BELL	NOT USED	NOT USED	
		A	B	C	D	E	F	G	H	I	J	K	L	M	
1	SMOKE DETECTOR ACTIVATION	X	X			X	X	X	X						1
2	MANUAL PULL STATION ACTIVATION	X	X			X	X	X							2
3	ANY 2ND DEVICES IN ALARM BEFORE RESET	A		A			A	A	A						3
4	WATER FLOW SWITCH / PRESSURE SWITCH ACTIVATION	X	X			X	X	X				X			4
5	VALVE TAMPER SWITCH	X		X		X			X						5
6	AC POWER FAILURE	X			X	X				X					6
7	LOW BATTERY	X			X	X				X					7
8	OPEN CIRCUIT	X			X	X				X					8
9	GROUND FAULT	X			X	X				X					9
10	CIRCUIT SHORT	X			X	X				X					10
11	OPEN														
		A	B	C	D	E	F	G	H	I	J	K	L	M	

NOTES		SYMBOL LEGEND	
REF	DESCRIPTION	SYMBOL	DESCRIPTION
1	THIS MATRIX IS TO BE USED AS A BASIC PROGRAMMING GUIDE. ALL PROGRAMMING FEATURES SHALL COMPLY WITH NFPA 72 AND MANUFACTURER'S INSTRUCTIONS.	X	SYSTEM INPUT CAUSES SYSTEM OUTPUT FUNCTION
		A	OUTPUT IS "ON" FROM PREVIOUS ALARM THAT IS NOT RESET

B3 FIRE ALARM SEQUENCE OF OPERATIONS MATRIX

SCALE: NOT TO SCALE

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FIRE ALARM DETAILS

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