

BOE STORAGE MEZZANINE

OWNER
WAKE COUNTY FD&C
336 FAYETTEVILLE STREET WCOB, 11TH FLOOR
RALEIGH, NC 27601
(919) 856-6363
SARAH KAHR RICHTER, PE: sarahkahrrichter@wake.gov

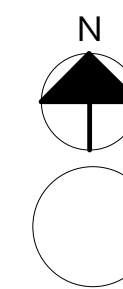
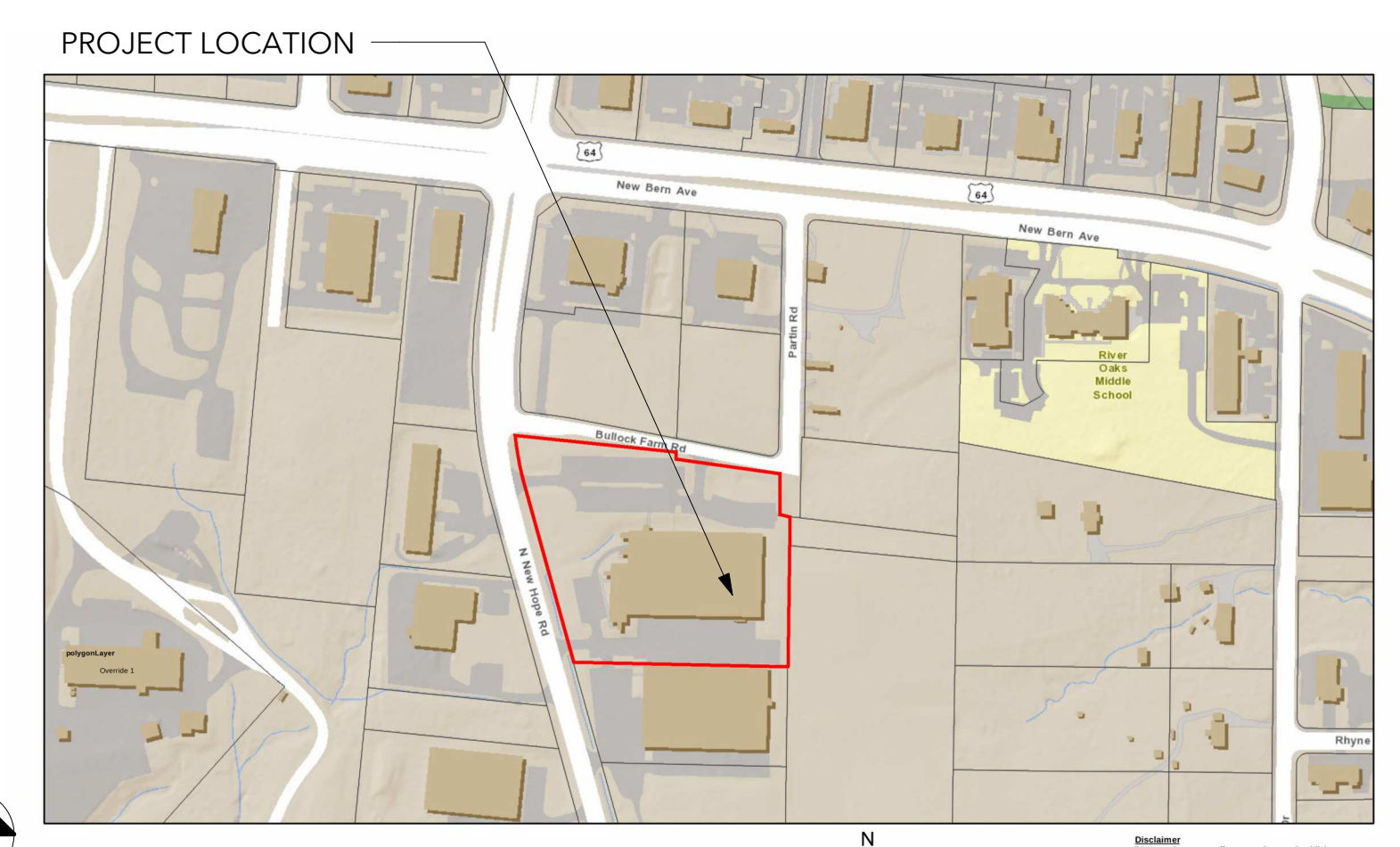
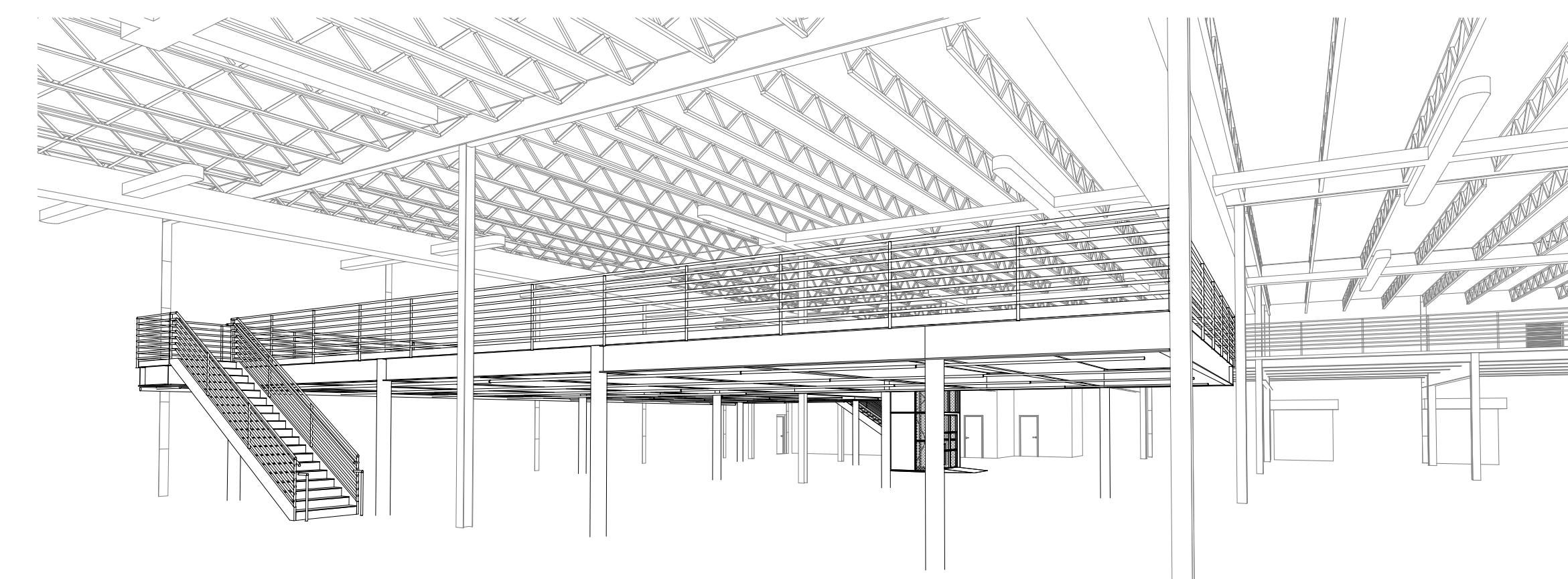
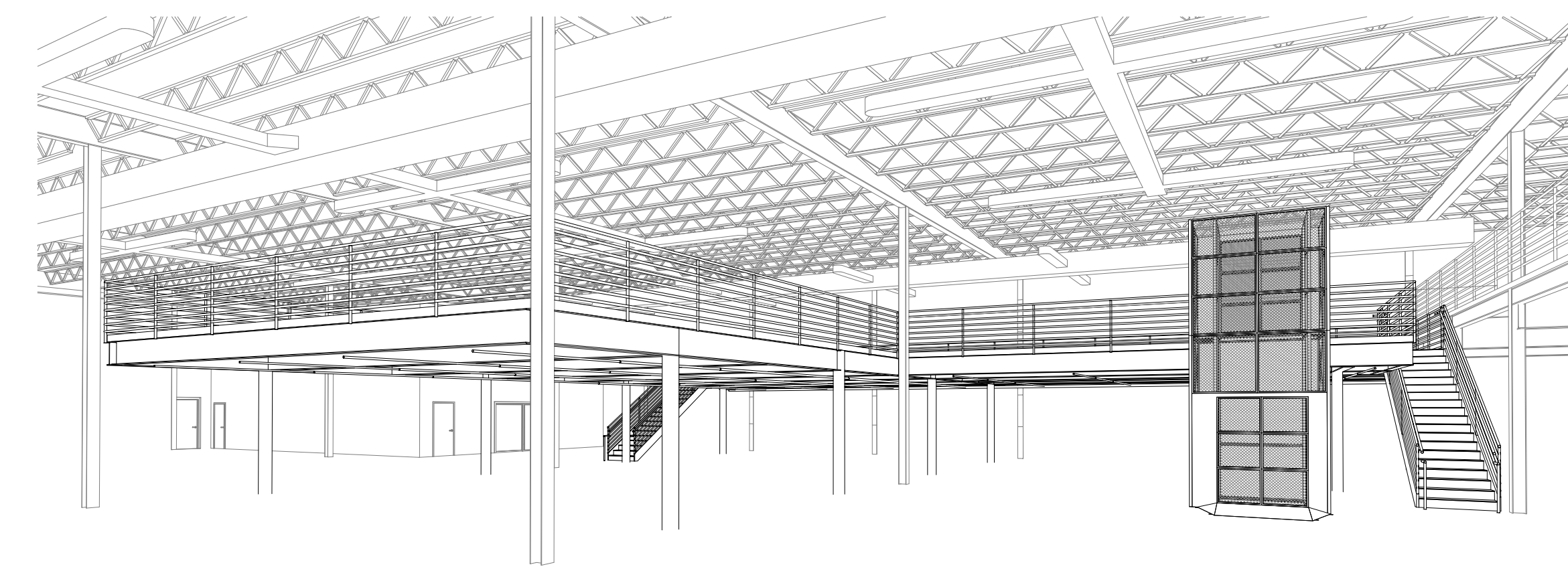
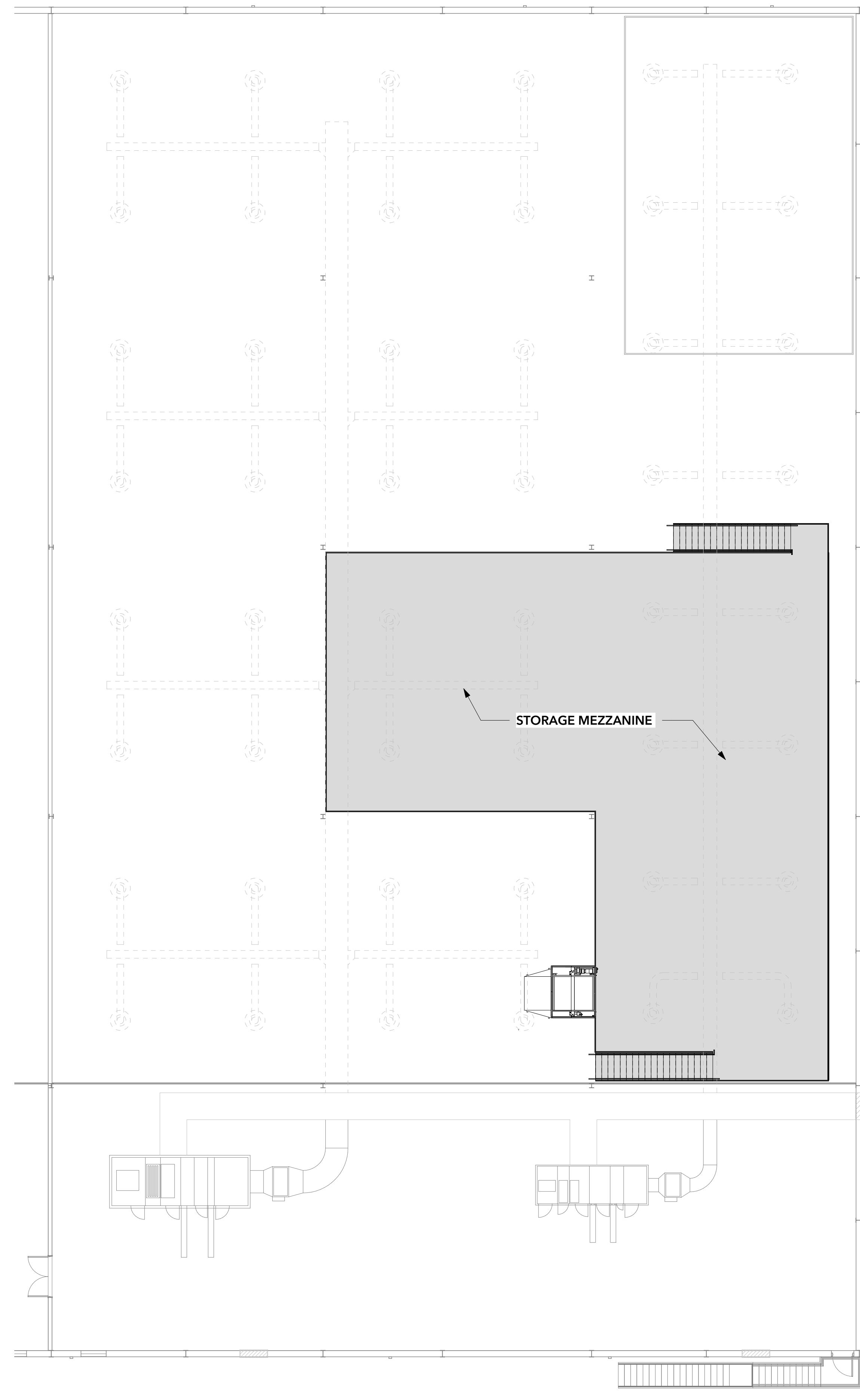
STRUCTURAL ENGINEER
LYNCH MYKINS STRUCTURAL ENGINEERS, P.C.
301 N. WEST ST., SUITE 105
RALEIGH, NC 27603
(919) 782-1833
BOWEN SHEN, PE, SE: bshen@lynchmykins.com

ARCHITECT
OSTERLUND ARCHITECTS, PLLC
5 W HARGETT STREET 310
RALEIGH, NC 27601
(919) 838-9337
KRISTEN OSTERLUND, AIA: kristen@osterlundarchitects.com
JOE KASZTELAN: joe@osterlundarchitects.com

PMEFP ENGINEER
SIGMA ENGINEERED SOLUTIONS, P.C.
5909 FALLS OF NEUSE ROAD, SUITE 101
RALEIGH, NC 27609
(919) 840-9300
REGINALD ADAMS, PE: radams@sigmaes.com
JOHN ERICKSON, PE: jerickson@sigmaes.com

DRAWING INDEX	
COVER SHEET	
G001	COVER
G002	CODE SUMMARY
G101	LIFE SAFETY PLANS
STRUCTURAL	
S001	GENERAL NOTES
S002	GENERAL NOTES
S111	FOUNDATION AND SLAB-ON-GRADE PLAN
S121	MEZZANINE FRAMING PLAN
S122	MEZZANINE SLAB PLAN
S301	SECTIONS
S501	TYPICAL DETAILS
S502	TYPICAL DETAILS
S503	TYPICAL DETAILS
ARCHITECTURAL	
A101	DEMOLITION PLANS
A102	FLOOR PLANS
A103	MEZZANINE PLANS
A104	MEZZANINE CEILING PLAN
A201	ELEVATION & 3D VIEWS
A411	ENLARGED PLANS, SECTIONS, & DETAILS
FIRE PROTECTION	
FP001	FIRE PROTECTION COVER
FP101	FIRE PROTECTION PLANS
MECHANICAL	
ME101	MECHANICAL & ELECTRICAL DEMOLITION PLANS
ELECTRICAL	
E001	ELECTRICAL COVER
E100	ELECTRICAL PLANS
E200	ELECTRICAL PLANS
E400	ELECTRICAL SINGLE LINE
E401	PANEL SCHEDULES
FIRE ALARM	
FA100	FIRE ALARM PLANS
FA200	FIRE ALARM PLANS
FA400	FIRE ALARM RISER AND MATRIX

BOE STORAGE MEZZANINE
RALEIGH, NC
WAKE COUNTY FD & C
RALEIGH, NC



LOCATION MAP
NTS

SEALS:



11/12/2024

ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: JFK
REVISIONS:

No.	Description

COVER

G001



11/12/2024 10:37:29 AM ARCH E1 (42.00 x 30.00 inches) 1:1

C:\Users\johnd\Documents\Local Files\2416 BOE Storage Mezzanine\2416 BOE Storage Mezzanine.rvt

(C) 2023 OSTERLUND ARCHITECTS, PLLC

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS (EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

Name of Project: BOARD OF ELECTIONS STORAGE MEZZANINE
Address: 1200 N. New Hope Rd Raleigh NC, 27610
Owner/Authorized Agent: Sarah Kahr Richter, PE (919) 856-6363
sarah.kahr Richter@wake.gov

Owned By: PRIVATE
Code Enforcement Jurisdiction: COUNTY Wake
CONTACT: Kristen Osterlund, AIA (919) 838-9337
kristen@osterlundarchitects.com

DESIGNER	FIRM	NAME	LICENSE	PHONE	E-MAIL
Architectural	Osterlund Architects	Kristen Osterlund	10028	(919) 838-9337	kristen@osterlundarchitects.com
Interior Designer	N/A				
Civil	N/A				
Electrical	Sigma Engineered solutions	Reginald D. Adams	19658	(919) 840-9300	radams@sigmaes.com
Fire Alarm	Sigma Engineered solutions	Reginald D. Adams	19658	(919) 840-9300	radams@sigmaes.com
Plumbing	N/A				
Mechanical	Sigma Engineered solutions	John R. Erickson	05028	(919) 840-9300	jerickson@sigmaes.com
Sprinkler/Standpipe	Sigma Engineered solutions	John R. Erickson	05028	(919) 840-9300	jerickson@sigmaes.com
Structural	Lynch Mykins Structural Engineers, P.C.	Bowen Shen	048747	(919) 222-1532	bshen@lynchmykins.com
Retaining Walls > 5' High	N/A				
Other	N/A				

2018 NC CODE FOR: RENOVATION
2018 NC EXISTING BUILDING CODE: PRESCRIPTIVE
Alteration: LEVEL 1
 Historic Property Change of Use

CONSTRUCTED: 1975 ORIGINAL OCCUPANCY(S): S-1
RENOVATED: 2019 CURRENT OCCUPANCY(S): S-1
RISK CATEGORY (table 1604.5) Current: II Proposed: II

BASIC BUILDING DATA
Construction Type: II-B
Sprinklers: YES NFPA 13
Standpipes: NO Class: -
Fire District: NO (Primary) Flood Hazard Area: NO
Special Inspections Required: NO

FLOOR	EXISTING (SF)	NEW (SF)	RENO/ALTER (SF)	SUB-TOTAL
FLOOR 1 (S-1) AREA OF WORK	23,732	N/A	N/A	23,732
FLOOR 2 (S-1) STORAGE MEZZANINE	0	4,184	N/A	N/A
FLOOR 2 (U) EXISTING EQUIPMENT PLATFORM	4,900	N/A	N/A	N/A
TOTAL	23,732	N/A	N/A	23,732

ALLOWABLE AREA
Primary Occupancy Classification: S-1
Accessory Occupancy Classification(s): NONE
Incidental Uses (Table 509): NONE
Special Uses (Chapter 4 - List Code Sections): NONE
Special Provisions: (Chapter 5 - List Code Sections): NONE
Mixed Occupancy: NO Separation: -
Exception: N/A

Non-Separated Use (508.3)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
 Separated Use (508.4) -
See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} + \dots \leq 1$$

STORY NO.	DESCRIPTION AND USE	BLDG AREA PER STORY (ACTUAL)	TABLE 506.2 AREA	AREA FOR FRONTAGE INCREASE	ALLOWABLE AREA PER STORY OR UNLIMITED
FLOOR 1 AREA OF WORK	S-1	23,732	52,500	39,375	91,875

1. Frontage area increases from Section 506.3 are computed thus:
a. Parameter which fronts a public way or open space having 20 feet minimum width = 1168 (F)

b. Total Building Perimeter = 1168 (F)
c. Ratio (F/P) = 1 (F/P)
d. W = Minimum width of public way = 30 (W)
e. Percent of frontage increase $IF = 100 [F/P - 0.25] \times W/30 = 75 (\%)$
2. Unlimited area applicable under conditions of Section 507.
3. Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
4. The maximum area of open parking garages must comply with Table 406.5.4
5. Frontage increase is based on the ungridded area value in Table 506.2.

ALLOWABLE HEIGHT	ALLOWABLE (TABLE 503)	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	75	25' - 0"	NCBC TABLE 504.3
Building Height in Stories (Table 504.4)	3	2	NCBC TABLE 504.4

1. Provide code reference if the "Show on Plans" quantity is not based on Table 504.3 or 504.4.
2. The maximum height of air traffic control towers must comply with Table 412.3.1
3. The maximum height of open parking garages must comply with Table 406.5.4

BUILDING ELEMENT	RATING REQ'D	RATING PROVIDED	DETAIL AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses	0	0				
Exterior Bearing Walls / Fire Separation Distance (ft)	0	0				
North > 30'	0	0				
East > 30'	0	0				
South > 30'	0	0				
West > 30'	0	0				
Interior Bearing Walls	0	0				
Nonbearing Walls and Partitions / Fire Separation Distance (ft)	0	0				
Exterior	0	0				
North > 30'	0	0				
East > 30'	0	0				
South > 30'	0	0				
West > 30'	0	0				
Interior walls and partitions	0	0				
Floor Construction Including supporting beams and joists	0	0				
Floor Ceiling Assembly	0	0				
Floor Ceiling Assembly EXIST	1 HR	1 HR				
Column	0	0				
Roof Construction, including supporting beams and joists	0	0				
Roof Ceiling Assembly	0	0				
Column	0	0				
Supporting Roof	1HR	1HR EXIST				
Shaft Enclosures - Exit	1HR	2HR EXIST				
Shaft Enclosures - Other	1HR	1HR EXIST				
Corridor	N/A	N/A				
Separation	1HR	1HR EXIST				
Occupancy/Fire Barrier	N/A	N/A				
Party/Fire Wall Separation	N/A	N/A				
Smoke Barrier Separation	N/A	N/A				
Smoke Partition	N/A	N/A				
Tenant/Dwelling Unit/Sleeping Unit Separation	N/A	N/A				
Incidental Use Separation	N/A	N/A				

FIRE PROTECTION REQUIREMENTS	ACCESIBLE DWELLING UNITS (SECTION 1107)	ACCESIBLE PARKING (SECTION 1106)	OCCUPANTS (TABLE 1004.1.2)	PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)	SPECIAL APPROVALS	ENERGY SUMMARY	PERCENTAGE OF WALL OPENING CALCULATIONS	LIFE SAFETY SYSTEM REQUIREMENTS	LIFE SAFETY PLAN REQUIREMENTS
	N/A	N/A - EXISTING, NO CHANGE	AREA OF WORK	EXISTING, NO CHANGE	Special approval: (Local Jurisdiction, Department of Insurance, SCO, DPI, DHHS, ICC, etc., describe below)	ENERGY REQUIREMENTS: The following data shall be considered minimum and any special attribute required to meet the North Carolina Energy Conservation Code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.		Emergency Lighting: YES Exit Signs: YES Fire Alarm: YES Smoke Detection Systems: YES Carbon Monoxide Detection: NO	Life Safety Plan Sheet #: G101 <input checked="" type="checkbox"/> Fire and/or smoke rated wall locations (Chapter 7) <input checked="" type="checkbox"/> Assumed and real property line locations (if not on the site plan) <input type="checkbox"/> Exterior wall opening area with respect to distance to assumed property lines (705.8)

Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.2)
 Occupant loads for each area
 Exit access travel distances (1017)
 Common path of travel distances (1006.2.1 & 2006.3.2(1))
 Dead end lengths (1020.4)
 Clear exit widths for each exit door
 Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
 Actual occupant load for each exit door
 A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation and supporting construction for a fire barrier/fire partition/smoke barrier.
 Location of doors with panic hardware (1010.1.10)
 Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
 Location of doors with electromagnetic egress locks (1010.1.9.9)
 Location of doors equipped with hold-open devices
 Location of emergency escape windows (1030)
 The square footage of each fire area (202)
 The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
 Note any code exceptions or table notes that may have been utilized regarding the items above

TOTAL UNITS	ACC. UNITS REQ'D	ACC. UNITS PRVD	TYPE A UNITS REQ'D	TYPE A UNITS PRVD	TYPE B UNITS REQ'D	TYPE B UNITS PRVD	TOTAL ACC. UNITS PRVD

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQ'D	# OF ACCESSIBLE SPACES PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN WITH 132" ACCESS AISLE	VAN WITH 8' ACCESS AISLE	TOTAL # ACC SPACES PRVD
TOTALS						

Description	Area (sf)	Seats	Occupant Load Factor	Occupants
FLOOR 1 S-1 AREA OF WORK EXISTING	23,732	-	1/500	48
FLOOR 2 S-1 STORAGE MEZZANINE	4,184	-	1/500	9 (NEW)
TOTALS				57

USE	WATERCLOSETS	URINALS	LAVATORIES	SHOWERS / TUBS	DRINKING FOUNTAINS
EXIST	9	14	1	4	11
NEW	0	0	0	0	0
REQ'D	7	11	0	0	3

SPECIAL APPROVALS
Special approval: (Local Jurisdiction, Department of Insurance, SCO, DPI, DHHS, ICC, etc., describe below)
NONE

ENERGY SUMMARY
ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the North Carolina Energy Conservation Code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: YES
(If Yes, the remainder of this section is not applicable)
Exempt Building: NO
(If Yes, Provide Code or Statutory reference): N/A
Climate Zone: 4A

Method of Compliance: Energy Code Prescriptive

THERMAL ENVELOPE (Prescriptive method only)
Roof/ceiling Assembly (each assembly)
Description of assembly: **EXISTING - NO CHANGE**
U-Value of total assembly:
R-Value of insulation:
Skylights in each assembly:
U-Value of skylight:
Total square footage of skylights in each assembly:

Exterior Walls (each assembly)
Description of assembly: **EXISTING - NO CHANGE**
U-Value of total assembly:
R-Value of insulation:
Openings (windows or doors with glazing)
U-Value of assembly:
Solar heat gain coefficient:
Projection factor:
Door R-Values:

Walls below grade (each assembly)
Description of assembly: **N/A**
U-Value of total assembly:
R-Value of insulation:

Floors over unconditioned space (each assembly)
Description of assembly: **N/A**
U-Value of total assembly:
R-Value of insulation:

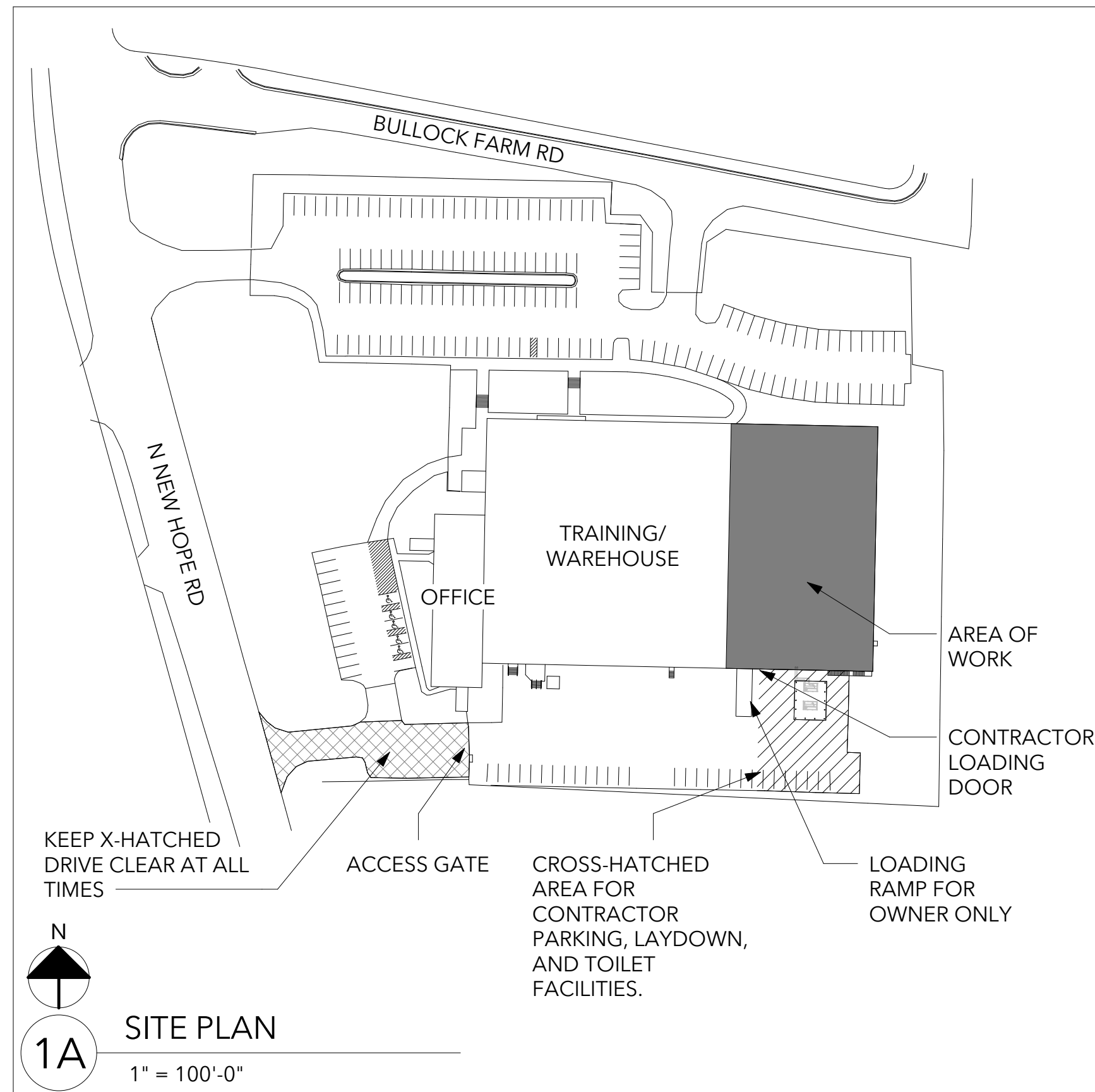
Floors slab on grade
Description of assembly: **EXISTING - NO CHANGE**
U-Value of total assembly:
R-Value of insulation:
Horizontal/Vertical requirement:
Slab Heated: NO

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

STRUCTURAL DESIGN
SEE STRUCTURAL SHEETS

MECHANICAL SUMMARY
SEE MECHANICAL SHEETS

ELECTRICAL SUMMARY
SEE ELECTRICAL SHEETS

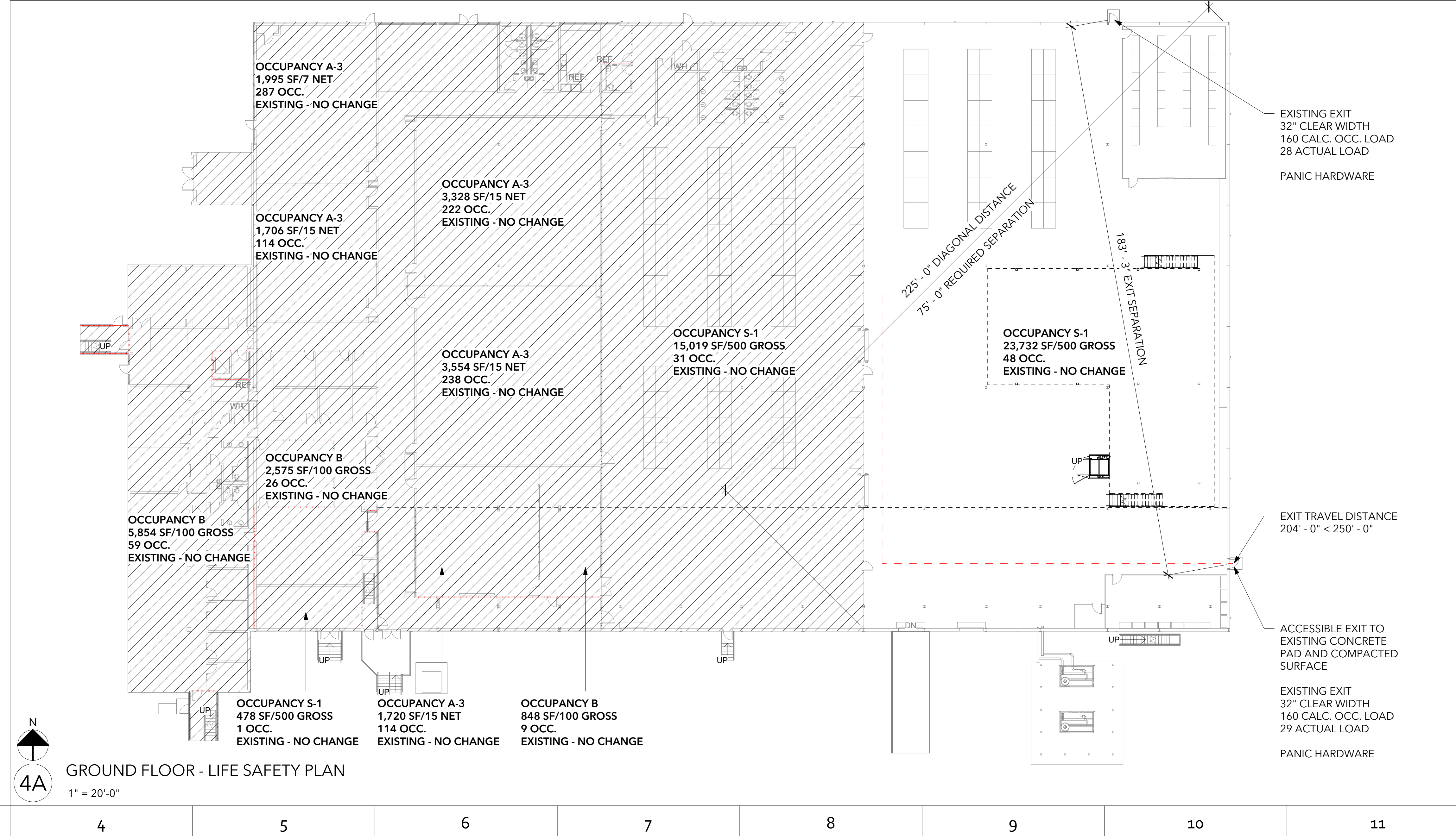
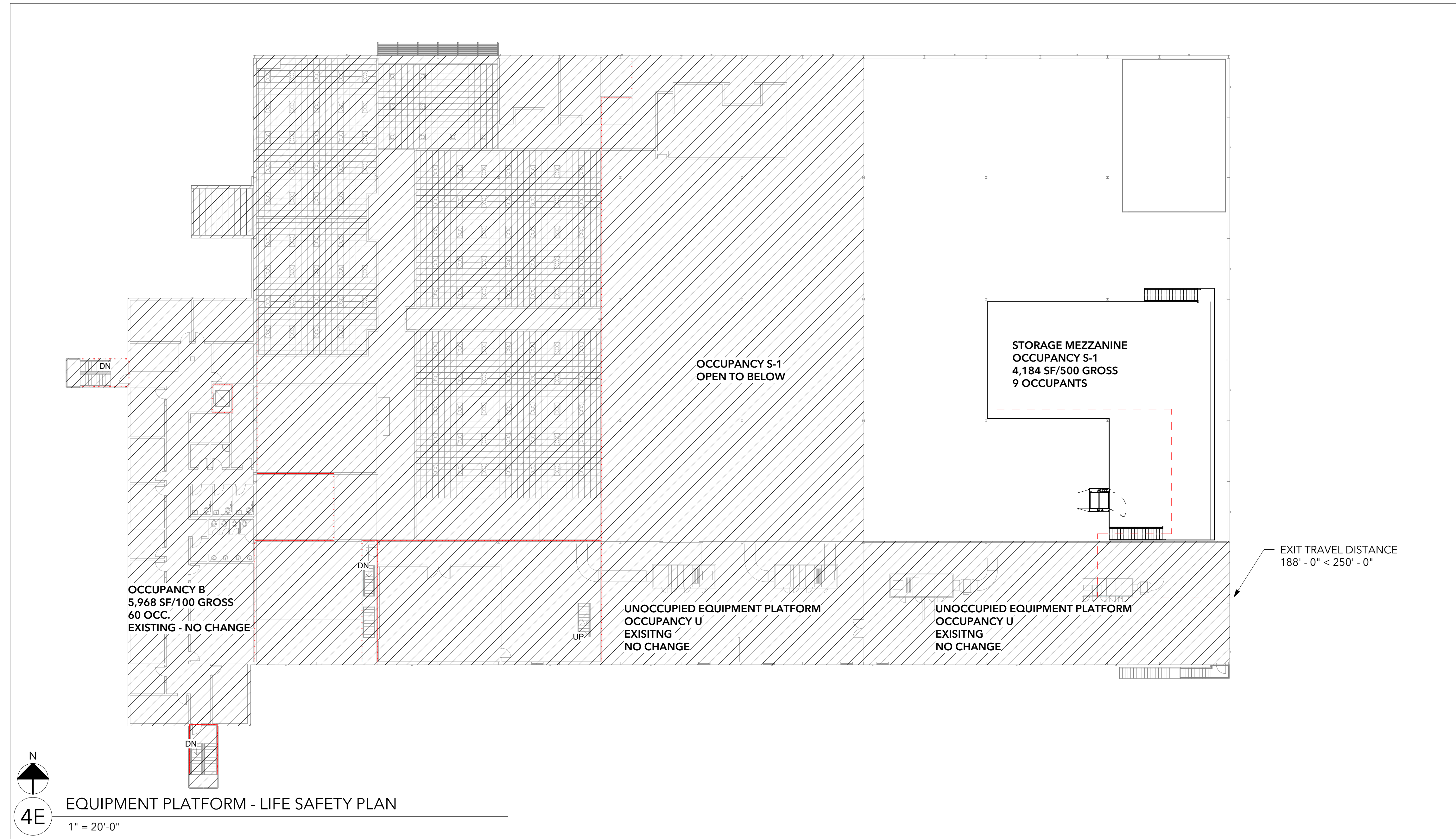


1A SITE PLAN
1" = 100'-0"



FIRE RESISTANCE RATINGS

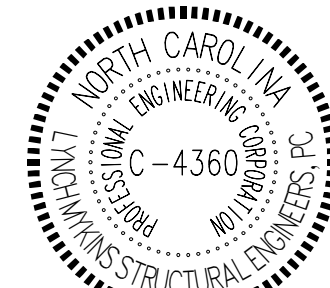
- 1-HR EXISTING
- 2-HR EXISTING



I
H
G
F
E
D
C
B
A

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

SEALS:



ISSUE: CONSTRUCTION DATE: 11/12/2024 DRAWN BY: DC REVISIONS:

GENERAL NOTES

POST-INSTALLED ANCHOR NOTES:

- 1. ANCHORS TO BE POST-INSTALLED ONLY WHERE INDICATED ON CONSTRUCTION DOCUMENTS. ANY SUBSTITUTE OF CAST-IN ANCHOR TO POST-INSTALLED ANCHORS MUST BE SUBMITTED AS A REQUEST FOR DEVIATION TO THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

STEEL DECK NOTES:

- 1. STEEL DECK MUST BE IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI), "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" AND THE STEEL DECK INSTITUTE (SDI), "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS."

STRUCTURAL DELEGATED DESIGN ELEMENT NOTES:

- 1. THE FOLLOWING BUILDING ELEMENTS REQUIRE DELEGATED DESIGN AND ENGINEERING BY A SPECIALTY STRUCTURAL ENGINEER: A. METAL STAIRS B. STRUCTURAL STEEL CONNECTIONS C. MECHANICAL, ELECTRICAL, AND PLUMBING SUPPORTS AND DISTRIBUTIONS SYSTEMS, INCLUDING BRACING AND ATTACHMENTS

STRUCTURAL STEEL NOTES:

- 1. STRUCTURAL STEEL MUST BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 360.
- 2. STRUCTURAL STEEL FABRICATOR MUST PARTICIPATE IN THE AISC QUALITY CERTIFICATION PROGRAM AND BE A DESIGNATED AISC-CERTIFIED PLANT.
- 3. STRUCTURAL STEEL INSTALLER MUST PARTICIPATE IN THE AISC QUALITY CERTIFICATION PROGRAM AND BE A DESIGNATED AISC-CERTIFIED ERECTOR.

CAST-IN-PLACE CONCRETE NOTES:

- 1. CONCRETE MUST BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301 AND 318.
- 2. CONCRETE MUST BE NORMAL WEIGHT (UNLESS OTHERWISE DENOTED AS LW (LIGHTWEIGHT)) AND MUST OBTAIN 28 DAY COMPRESSIVE STRENGTHS AS FOLLOWS:

GENERAL NOTES:

- 1. THE STRUCTURAL DRAWINGS MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS, AND THE SPECIFICATIONS, THE CONTRACTOR MUST BE RESPONSIBLE FOR THE IDENTIFICATION OF TRADES AS TO SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.
- 2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION.

CLASSIFICATION OF BUILDING RISK CATEGORY ... II

LIVE LOADS - UNIFORM: MEZZANINE 125 PSF, STAIRWAYS 100 PSF, SLAB ON GRADE 100 PSF

LIVE LOADS - CONCENTRATED: MEZZANINE 2,000#

UNLESS OTHERWISE NOTED, CONCENTRATED LOADS ARE APPLIED UNIFORMLY OVER 2'-6" x 2'-6" AREA.

SEISMIC LOADS: SITE CLASSIFICATION D (PRESUMPTIVE), SEISMIC DESIGN CATEGORY B, IMPORTANCE FACTOR (IE) 1.0, SPECTRAL RESPONSE ACCELERATIONS, etc.

LATERAL DESIGN CONTROL: CONTROLLING LATERAL LOADS SEISMIC

FOUNDATION NOTES:

- 1. FOUNDATIONS HAVE BEEN DESIGNED FOR A HISTORICAL ALLOWABLE SOIL BEARING PRESSURE OF 3000 PSF IN ACCORDANCE WITH STRUCTURAL DRAWINGS PREPARED BY JACOBS-SIRRIENGINEERS, DATED SEPTEMBER 23RD, 1996.
- 2. TOP OF FOOTING ELEVATIONS MUST BE A MINIMUM DEPTH OF 1'-0" BELOW LOWEST ADJACENT SOIL GRADE.

Legend: PRELIMINARY BUDGET PRICING, EARLY FOUNDATION PACKAGE, EARLY ORDER PACKAGE, EARLY FT/TEL PACKAGE, PRINT SET, CONSTRUCTION SET

11/12/2024 14:00:03 PM ARCHE1 (42.00 x 30.00 inches), 1, 1

C:\Users\clair.SP\Documents\LM24.144_WAKE COUNTY BOE MEZZANINE_STRUCT_R25_clear\9\W1A6.rvt

(C) 2023 OSTERLUND ARCHITECTS, PLLC

COLUMN FOOTING SCHEDULE					
MARK	SIZE			REINFORCING	
	LENGTH	WIDTH	DEPTH	BOTTOM	TOP
CF7	7' - 0"	7' - 0"	1'-6"	(8) #6 EW	(8) #6 EW
CF8	8' - 0"	8' - 0"	1'-8"	(9) #6 EW	(9) #6 EW

EXISTING WALL FOOTING SCHEDULE		
MARK	SIZE	
	WIDTH	DEPTH
EWf2	2' - 0"	1'-3"

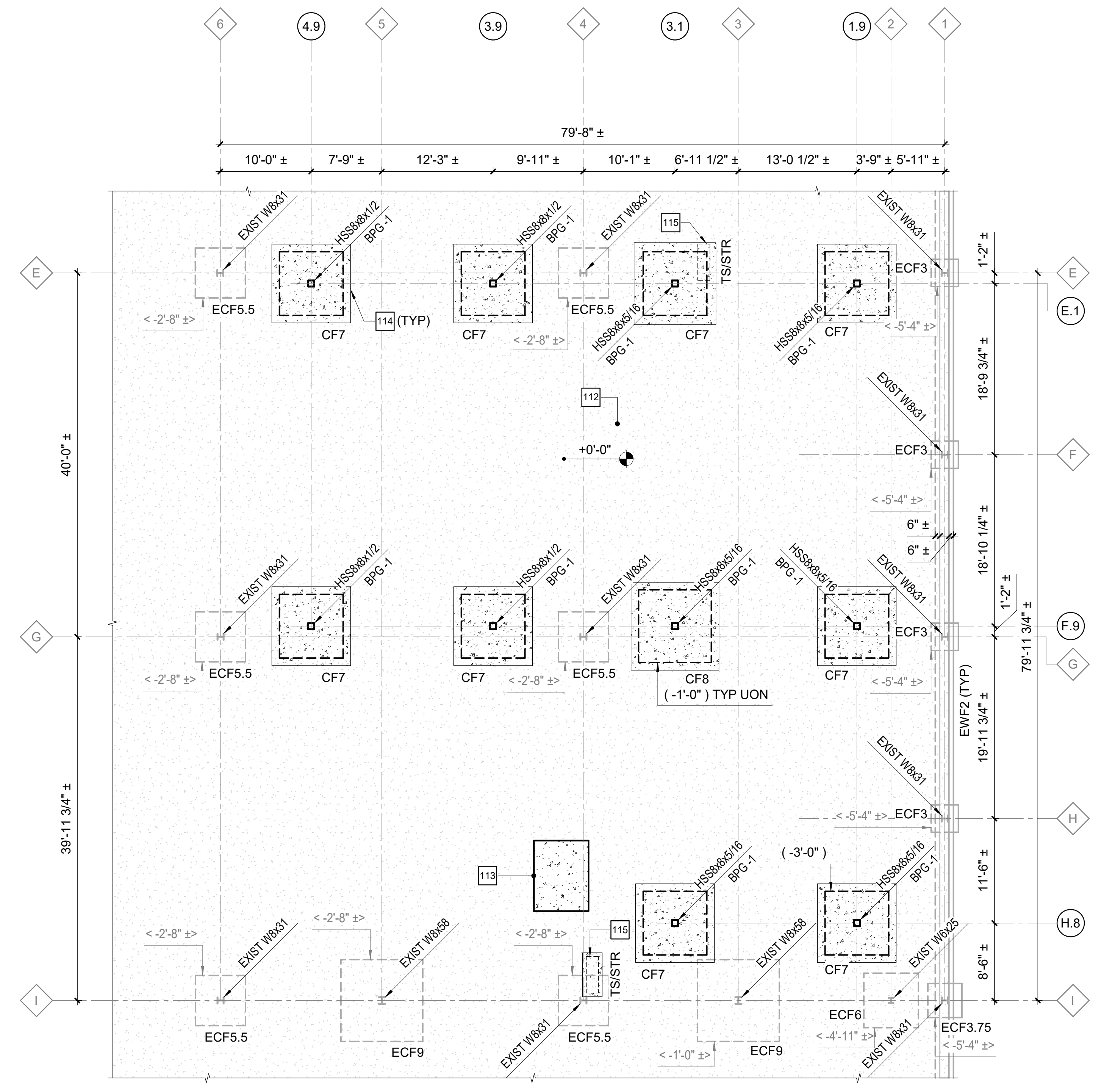
EXISTING COLUMN FOOTING SCHEDULE			
MARK	SIZE		
	LENGTH	WIDTH	DEPTH
ECF3	3' - 0"	3' - 0"	1'-3"
ECF3.75	3' - 9"	3' - 9"	1'-3"
ECF5.5	5' - 6"	5' - 6"	1'-3"
ECF6	6' - 0"	6' - 0"	1'-8"
ECF9	9' - 0"	9' - 0"	1'-8"

FOUNDATION/SLAB PLAN NOTES

- A. REFERENCE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO NONBEARING WALLS.
- B. UNLESS OTHERWISE NOTED, ALL ELEVATIONS ARE BASED ON A FINISHED FIRST FLOOR REFERENCE OF 0'-0". ACTUAL FINISHED FLOOR ELEVATION IS 295'-8". FINISHED FLOOR ELEVATIONS AT EACH LEVEL ARE INDICATED ON SLAB PLANS. REFERENCE ARCHITECTURAL DRAWINGS FOR FINISHED FLOOR MATERIALS.
- C. TOP OF ALL FOOTINGS MUST BE AT ELEVATION -1'-0" UNLESS OTHERWISE NOTED.
- D. NOT ALL UTILITY LOCATIONS ARE SHOWN ON PLAN. THE CONTRACTOR MUST COORDINATE THE LOCATIONS, SIZES, AND INVERTS OF UTILITIES. AT LOCATIONS WHERE UTILITIES PASS BELOW THE TOP OF FOOTING ELEVATION, STEP THE TOP OF FOOTING DOWN ON EACH SIDE PER THE "TYPICAL STEPPED FOOTING DETAIL" AND SLEEVE THE UTILITY THROUGH THE FOUNDATION WALL. THE CONTRACTOR MAY, AT HIS/HER OPTION, SLEEVE THE UTILITY THROUGH THE FOUNDATION PER THE "TYPICAL PIPE SLEEVE AT WALL FOOTING DETAILS."
- E. REFERENCE ARCHITECTURAL DRAWINGS FOR EXACT LIMITS OF SLAB DEPRESSIONS AND OMITTED SLABS.
- F. FLOOR SINKS AND DRAINS ARE NOT SHOWN ON PLAN. REFERENCE PME DRAWINGS FOR LOCATIONS.

KEY NOTES

- 112 EXISTING CONCRETE SLAB-ON-GRADE.
- 113 EXISTING CONCRETE SLAB-ON-GRADE TO BE REMOVED AND REPLACED WITH THICKENED CONCRETE SLAB UNDER RECIPROCATING CONVEYOR LIFT. REFERENCE TYPICAL INTERIOR EQUIPMENT PAD DETAIL. REFERENCE ARCHITECTURAL DRAWINGS FOR LOCATION AND SIZE.
- 114 EXISTING CONCRETE SLAB-ON-GRADE AROUND NEW STEEL COLUMN TO BE REMOVED FOR COLUMN AND FOOTING INSTALLATION. NEW SLAB-ON-GRADE TO BE ADDED AROUND NEW STEEL COLUMNS AFTER COLUMN ERECTION. REFERENCE TYPICAL DETAILS.
- 115 EXISTING CONCRETE SLAB-ON-GRADE TO BE REMOVED AND REPLACED WITH THICKENED CONCRETE SLAB FOR STAIR INSTALLATION. REFERENCE TYPICAL DETAILS.



A1 FOUNDATION AND SLAB-ON-GRADE PLAN
1/8" = 1'-0"

SEALS:



ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: DC
REVISIONS:

NO.	DESCRIPTION

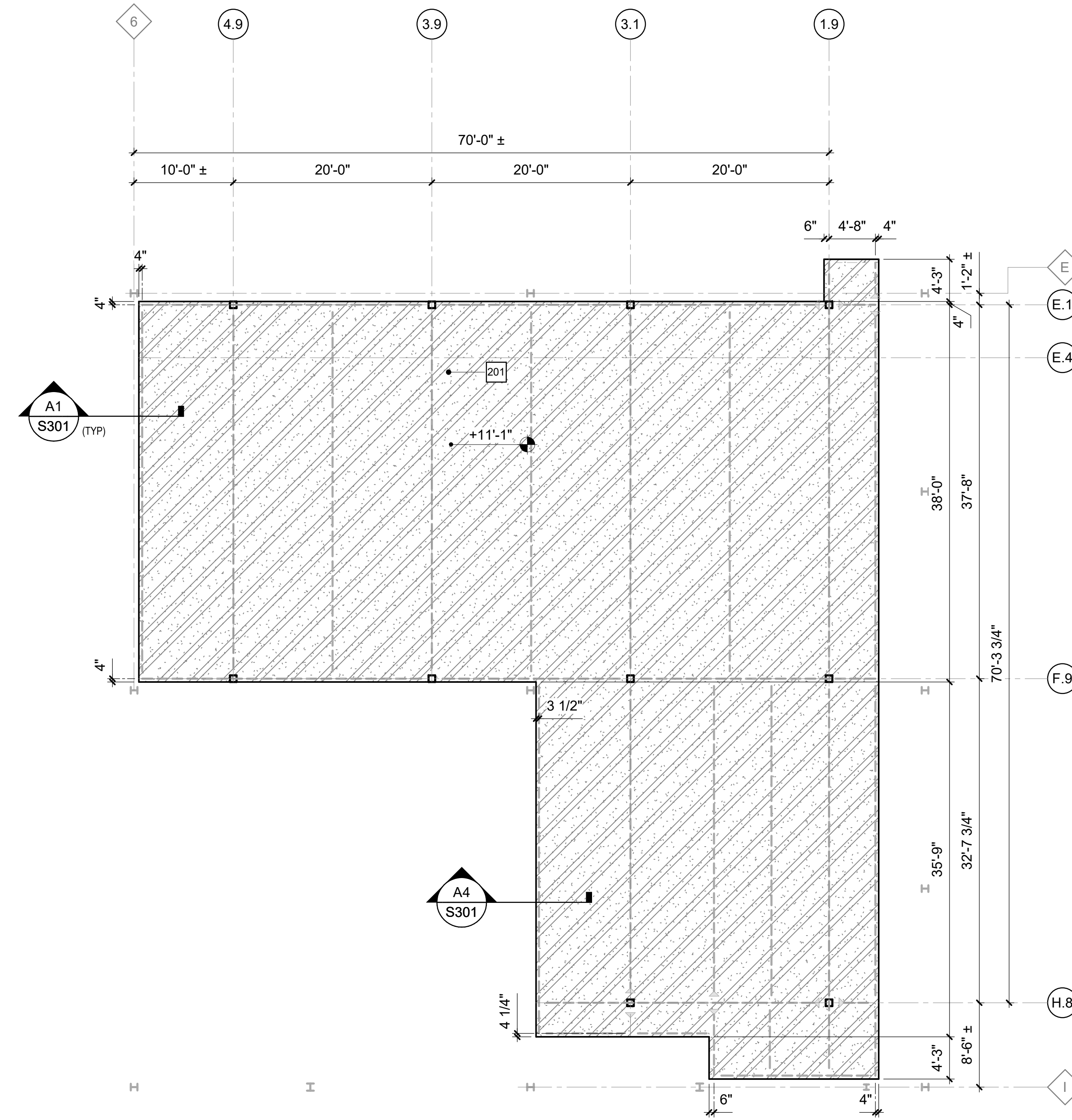
FOUNDATION AND SLAB-ON-GRADE PLAN

FRAMING PLAN NOTES

- A. REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
- B. TOP OF FINISHED FLOOR ELEVATION MUST BE AS NOTED ON SLAB PLANS.
- C. COMPOSITE STEEL BEAM FRAMING MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 10'-0" ON-CENTER).
- D. CONCRETE ON ELEVATED METAL DECKS MUST BE POURED TO THE THICKNESS INDICATED.

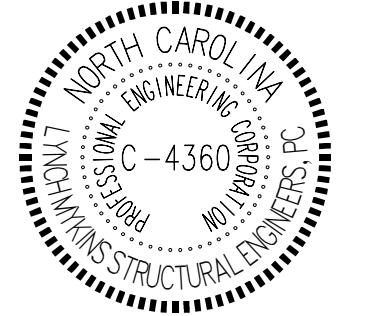
KEY NOTES

- 201 3 1/4" LIGHTWEIGHT CONCRETE SLAB ON 2" COMPOSITE FLOOR DECK, (5 1/4" TOTAL) REINFORCED WITH 6x6-W2.9xW2.9 WELDED WIRE REINFORCING LOCATED 1" CLEAR BELOW TOP OF SLAB.



A1 MEZZANINE SLAB PLAN
1/8" = 1'-0"

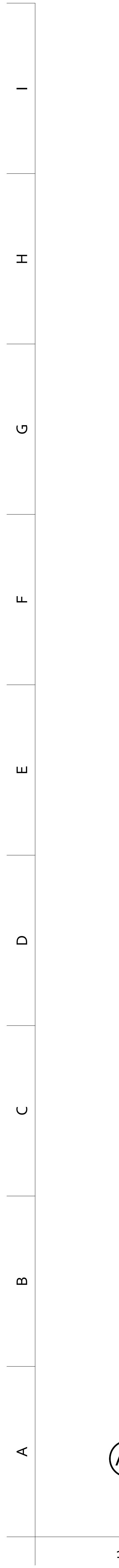
SEALS:



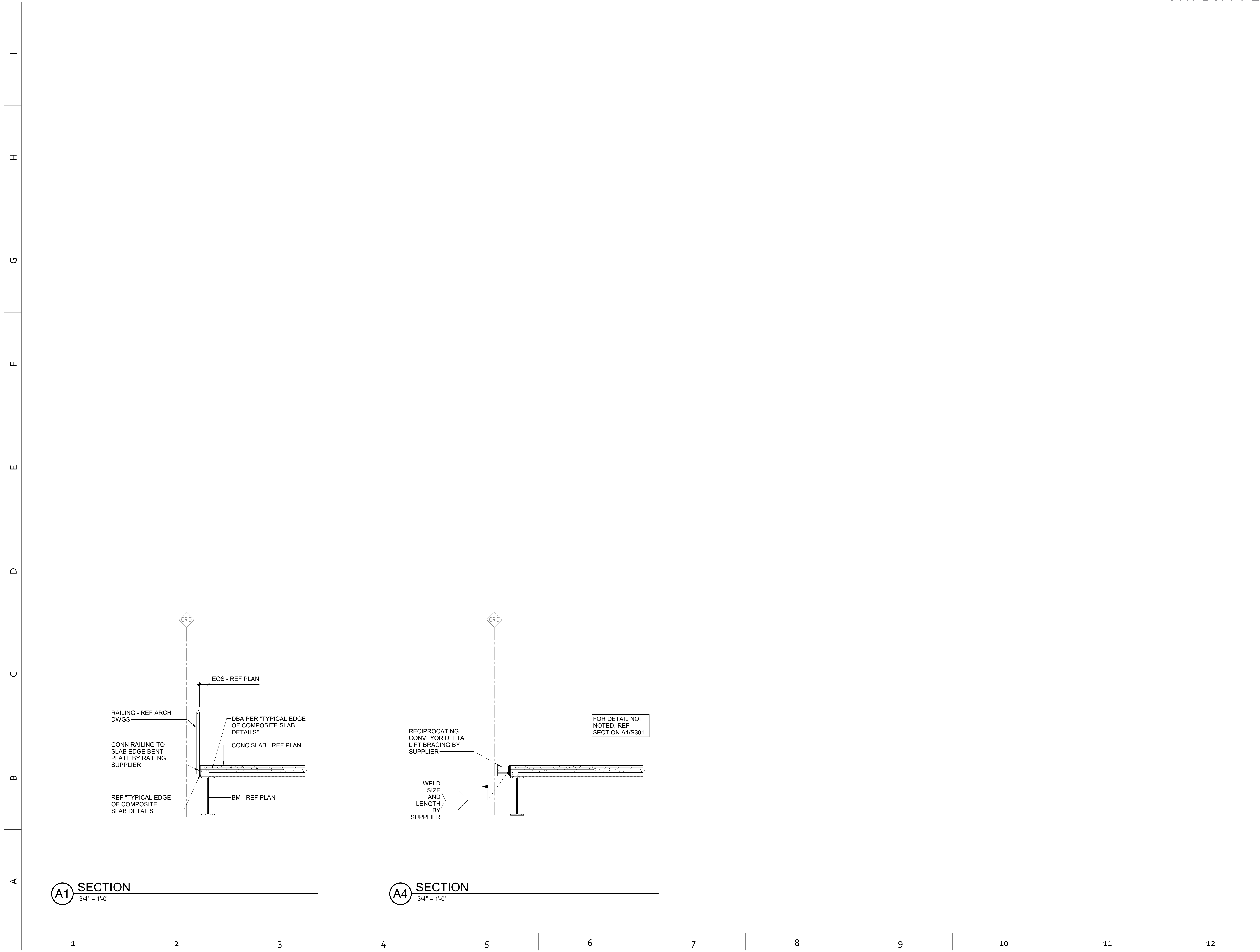
ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: DC
REVISIONS:

NO.	DESCRIPTION

MEZZANINE SLAB PLAN



C:\Users\lcar\OneDrive\Documents\LM24_144_WAKE COUNTY BOE MEZZANINE_STRUCT_R25_clear9\W6A6.rvt
11/12/2024 1:40:08 PM ARCH E1 (42.00 x 30.00 inches), 1:1
(C) 2023 OSTERLUND ARCHITECTS, PLLC



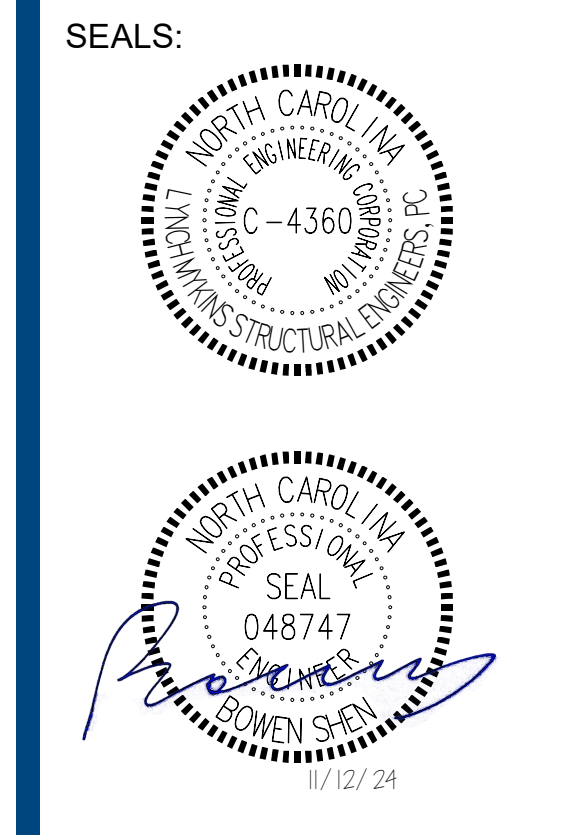
5 W Hargett Street 310
Raleigh, NC 27601
(919) 838-9337
osterlundarchitects.com



Structural Engineers
301 N. West Street, Suite 105
Raleigh, NC 27603
919.782.1833 - lynchmykins.com
L.M. Project Number: LM24.144

PROJECT No.: 2416

BOE STORAGE MEZZANINE WAKE COUNTY FD & C

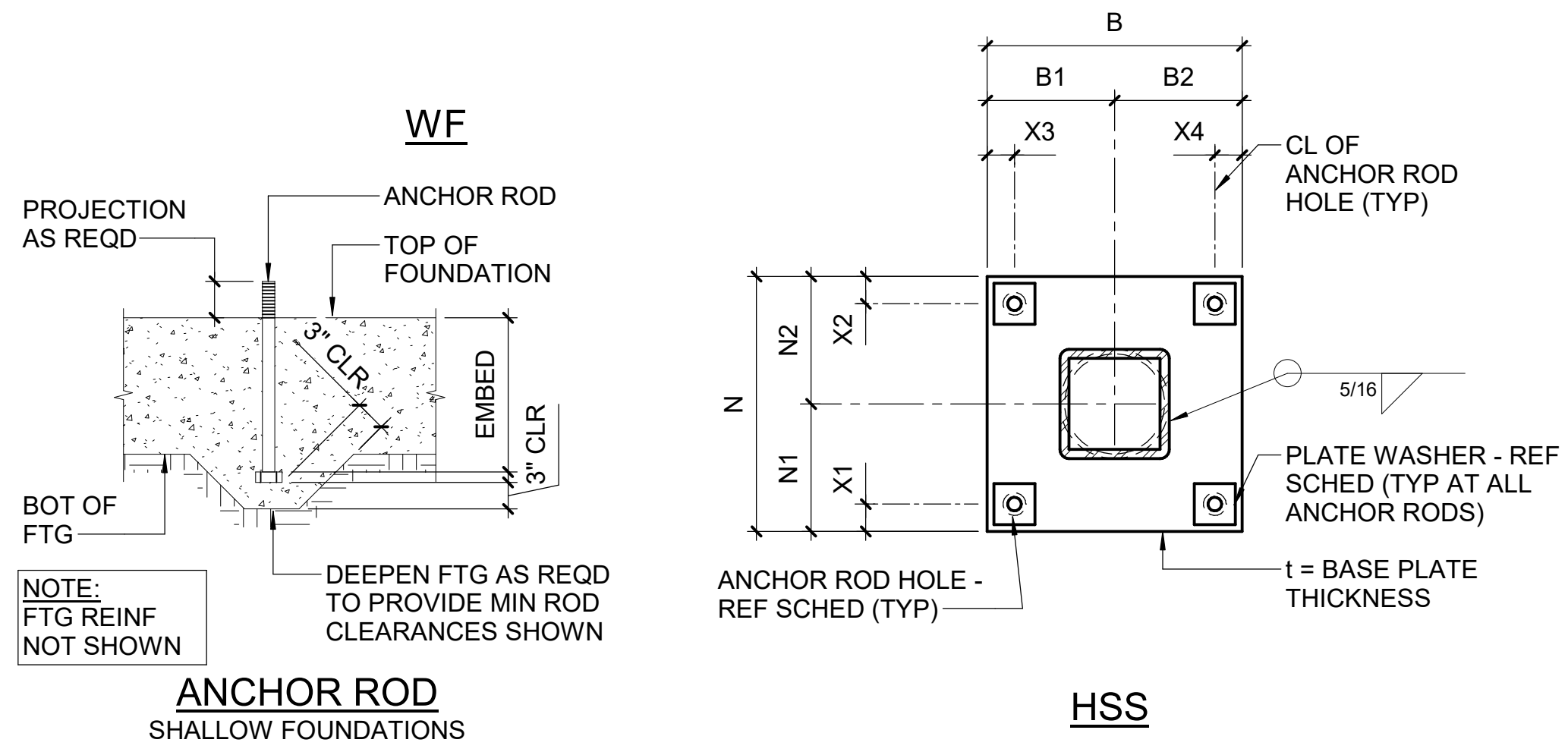


ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: DC
REVISIONS:

NO.	DESCRIPTION

COLUMN BASE PLATE SCHEDULE - GRAVITY COLUMNS

MARK	BASE PLATE DIMENSIONS								ANCHOR RODS			REMARKS		
	B	N	t	B1	B2	N1	N2	X1	X2	X3	X4		DIAMETER	QUANTITY
BPG-1	16"	16"	1 1/2"	8"	8"	8"	8"	2"	2"	2"	2"	1"	4	12"

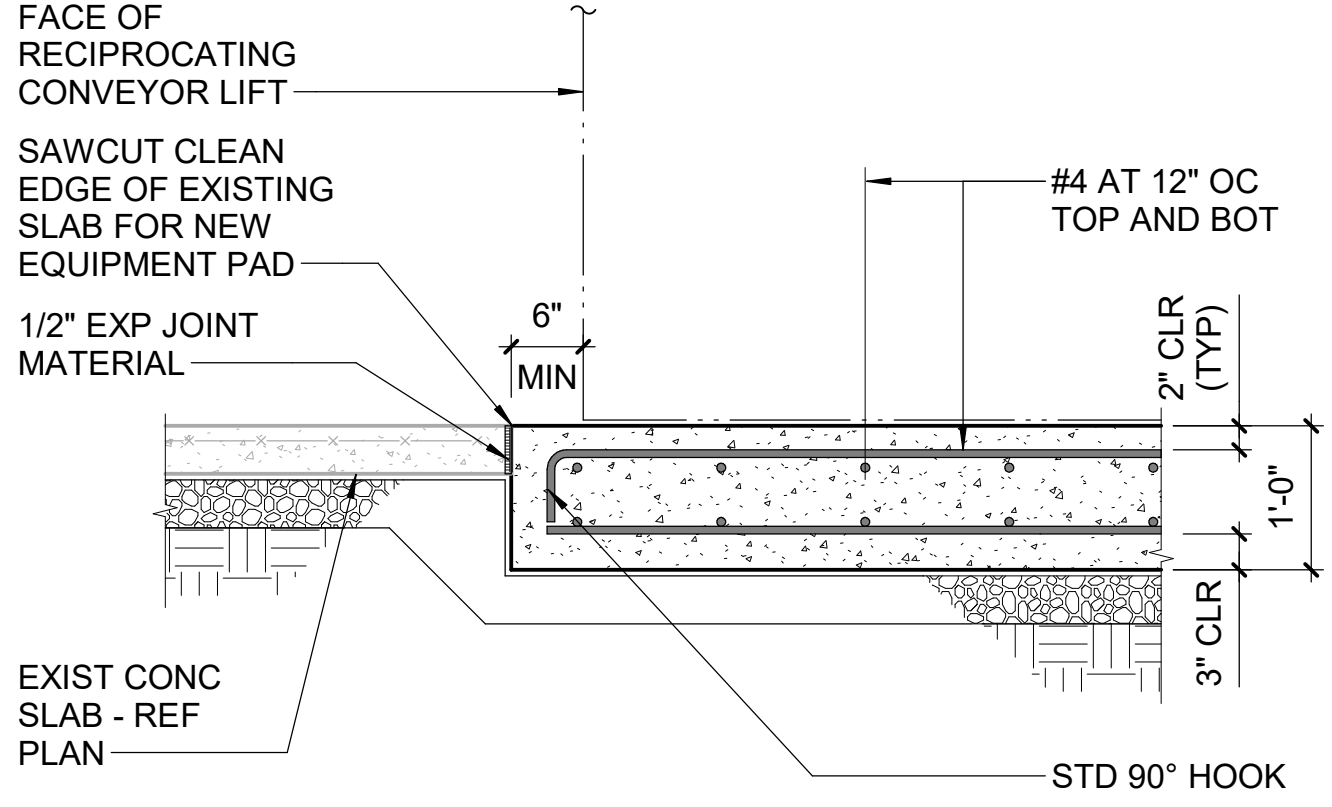


ANCHOR ROD HOLES AND WASHER SCHEDULE

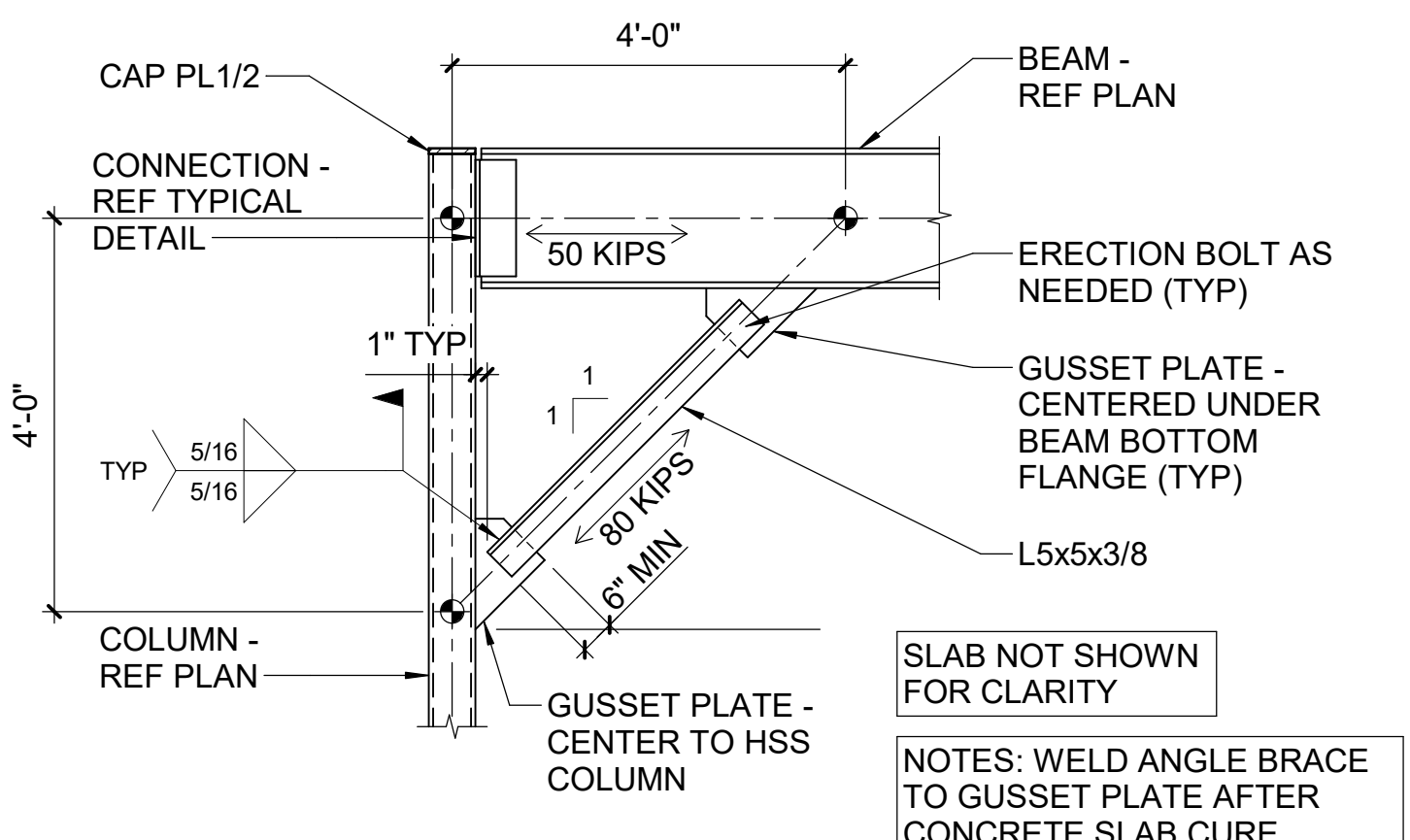
ANCHOR ROD	OVERSIZED HOLE WITH PLATE WASHER				STANDARD HOLE	
	BASE PLATE HOLE	WASHER SIZE	WASHER HOLE	WASHER THICKNESS	BASE PLATE HOLE	WASHER
3/4"Ø	1 5/16"Ø	2" SQ	13/16"Ø	1/4"	1 1/16"Ø	ASTM F844
7/8"Ø	1 9/16"Ø	2 1/2" SQ	15/16"Ø	5/16"	1 3/16"Ø	ASTM F844
1"Ø	1 13/16"Ø	3" SQ	1 1/16"Ø	3/8"	1 1/2"Ø	ASTM F844
1 1/4"Ø	2 1/16"Ø	3 1/2" SQ	1 5/16"Ø	1/2"	1 3/4"Ø	ASTM F844
1 1/2"Ø	2 5/16"Ø	4" SQ	1 9/16"Ø	1/2"	2"Ø	ASTM F844

NOTE:
A. PROVIDE MINIMUM SIZE WELD PER AISC TABLE J2.4.
B. GENERAL CONTRACTOR'S OPTION TO USE STANDARD OR OVERSIZED HOLES IN GRAVITY COLUMN BASE PLATES. NO WELDING REQUIRED AT PLATE WASHERS USED WITH OVERSIZED HOLES.

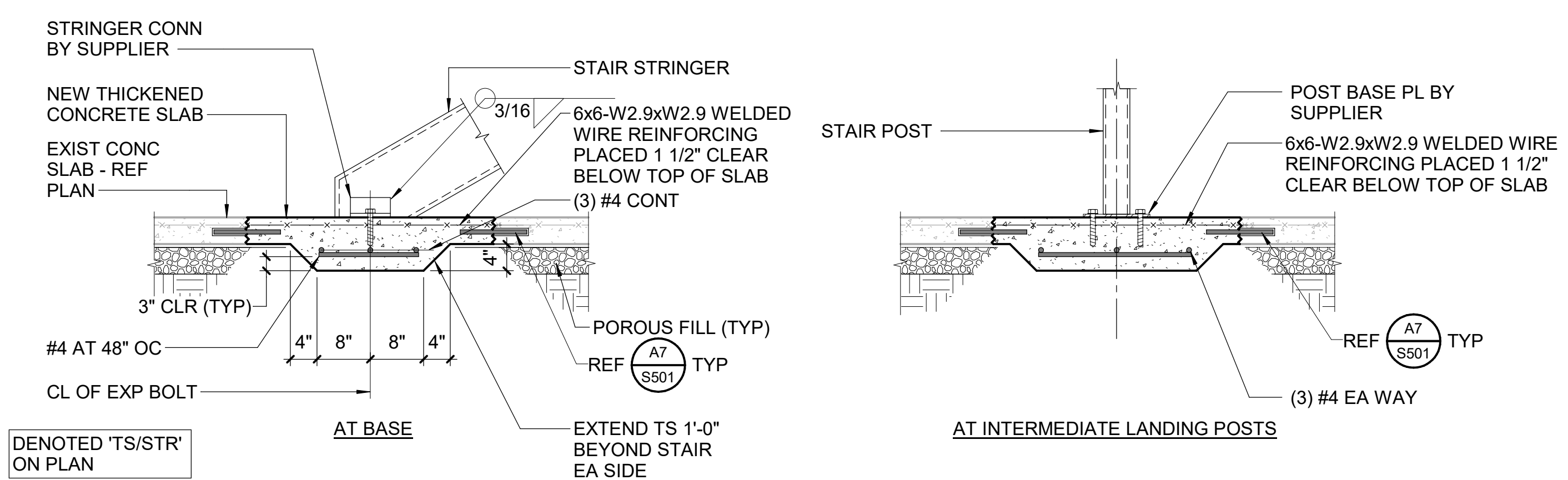
F1 COLUMN BASE PLATE AND ANCHOR ROD DETAILS
NTS



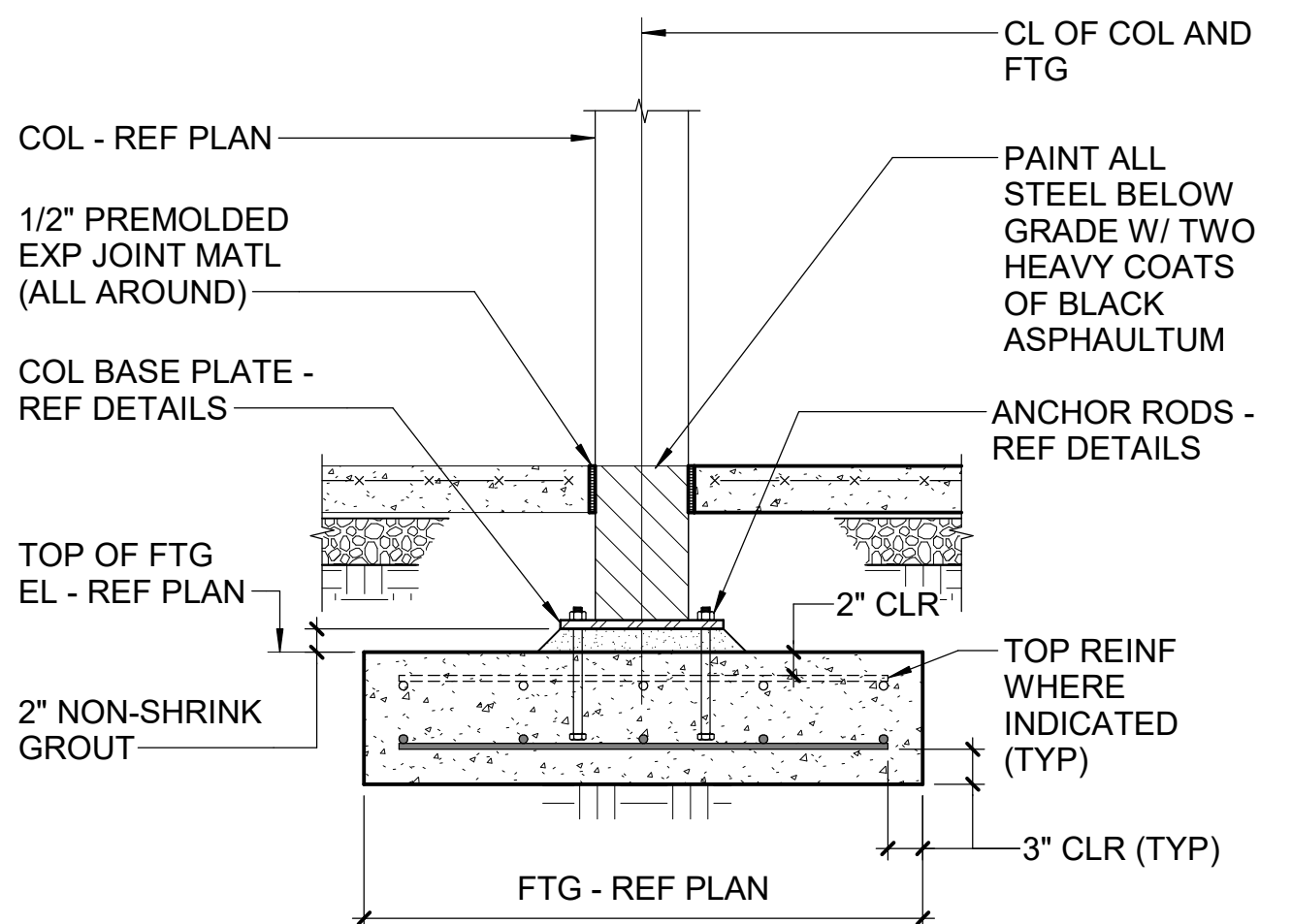
D1 TYPICAL INTERIOR EQUIPMENT PAD DETAIL
NTS



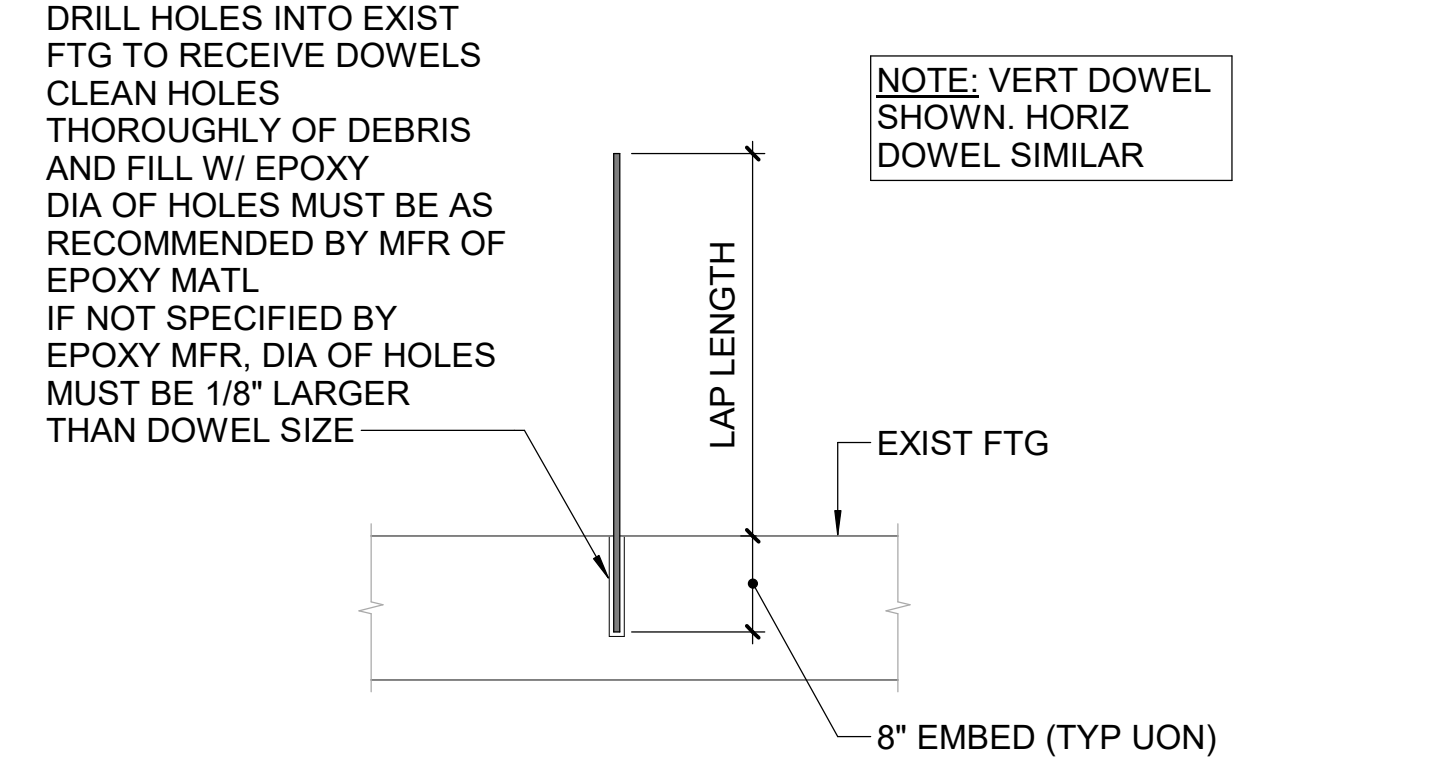
D4 TYPICAL KNEE BRACE DETAILS
NTS



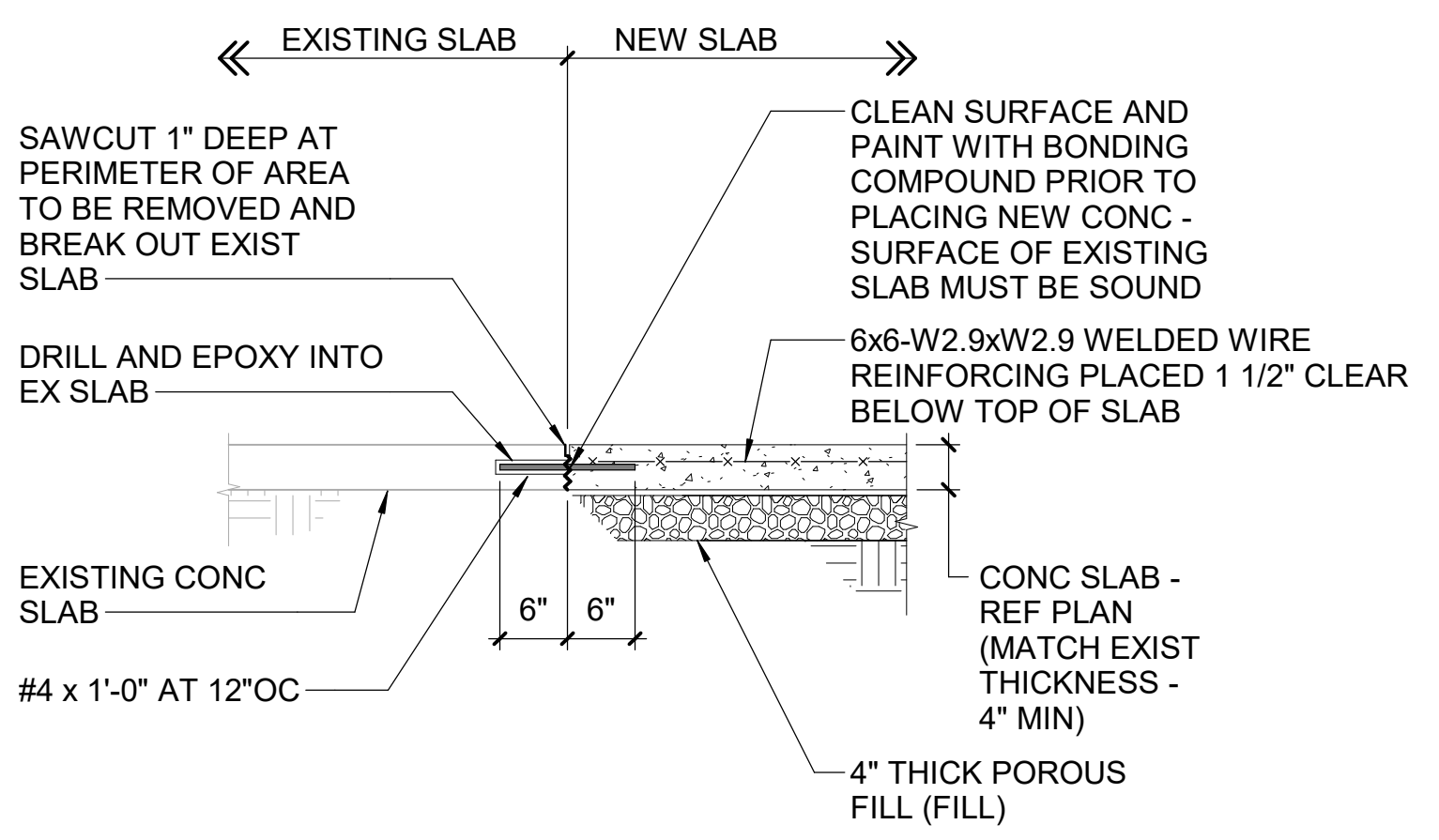
D7 TYPICAL THICKENED SLAB AT STAIR LANDING DETAIL
NTS



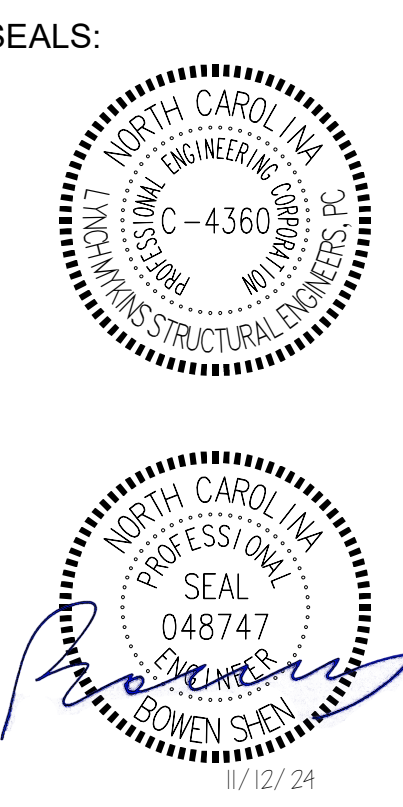
A1 TYPICAL COLUMN & FOOTING DETAIL
NTS



A4 TYPICAL EPOXY DOWEL DETAIL
NTS



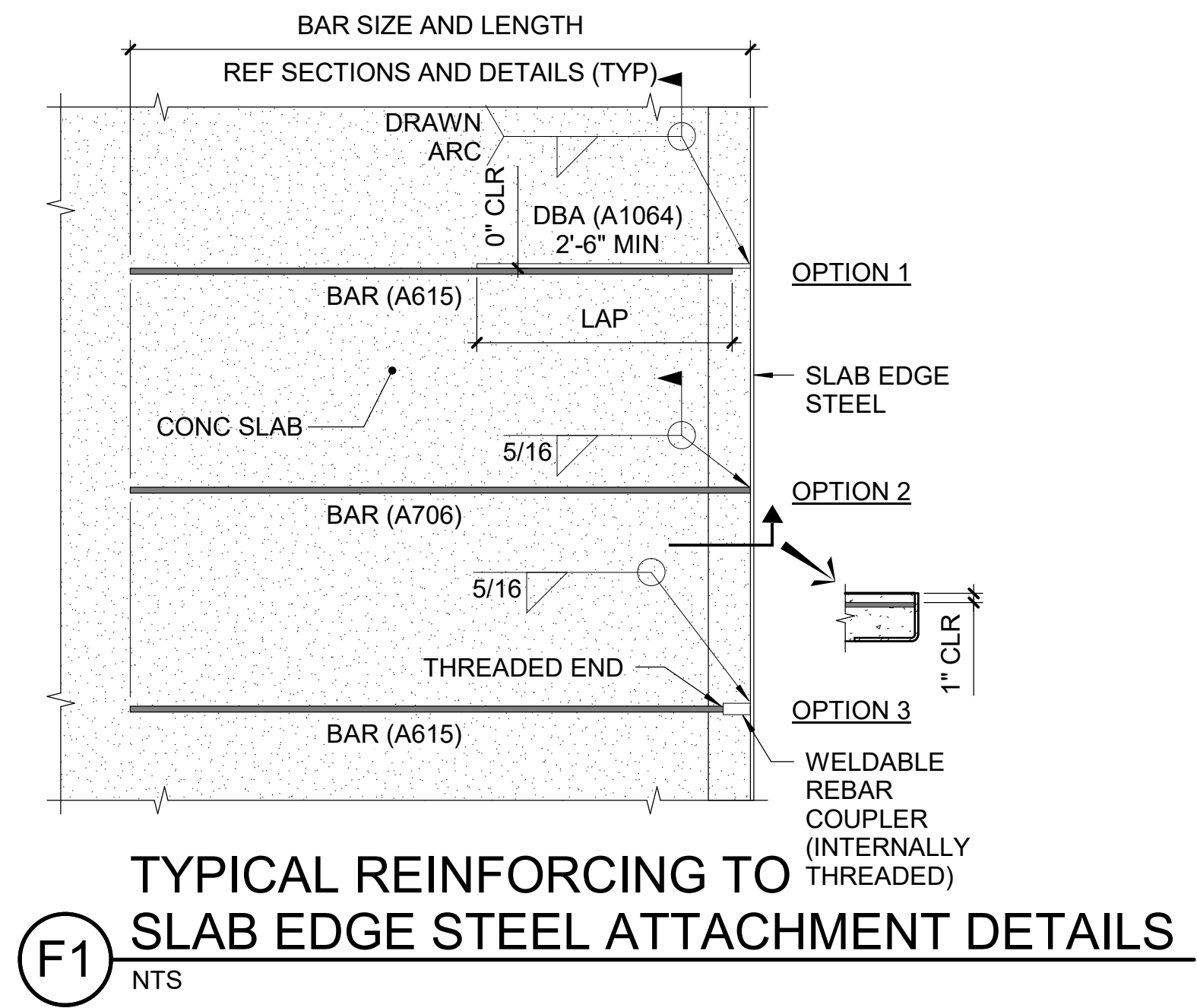
A7 TYPICAL SLAB REMOVAL AND REPLACEMENT DETAIL
NTS



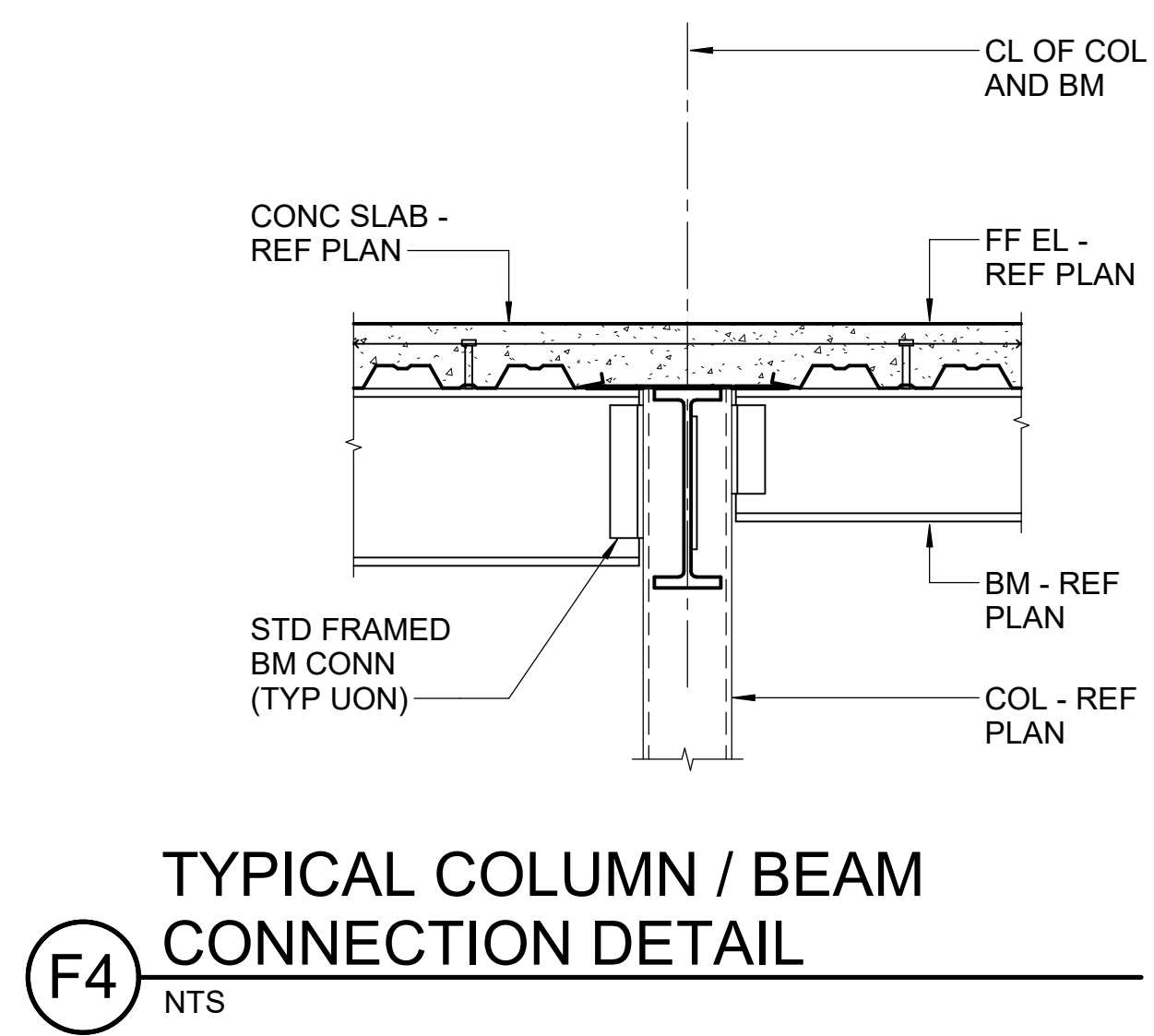
ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: DC
REVISIONS:

TYPICAL DETAILS

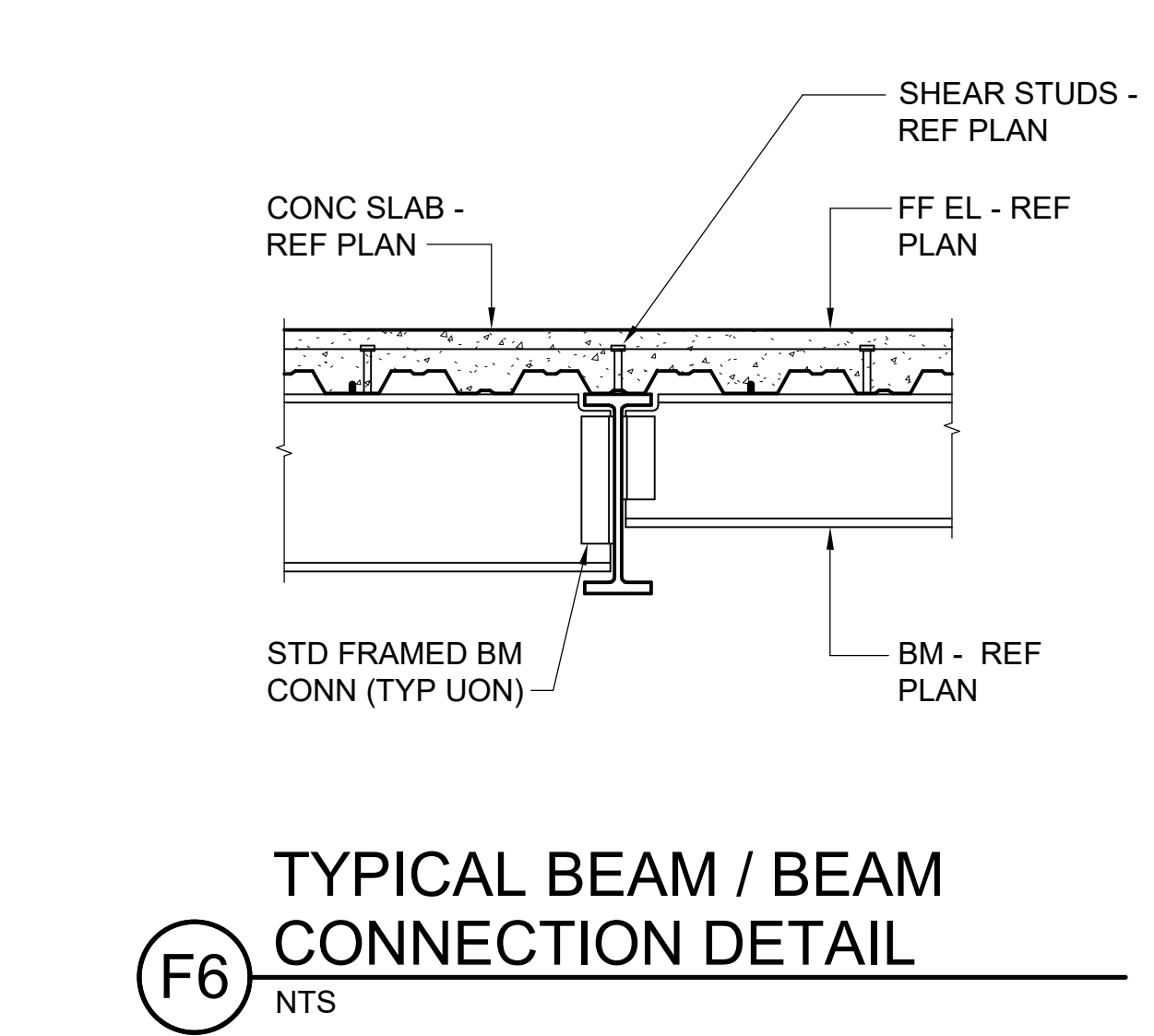
11/12/2024 1:40:09 PM ARCH E1 (42.00 x 30.00 inches), 1:1
C:\Users\clear\SPAIN\Documents\LM24.144_WAKE COUNTY BOE MEZZANINE_STRUCT_R25_clear\YMA6.rvt
C:\Users\clear\SPAIN\Documents\LM24.144_WAKE COUNTY BOE MEZZANINE_STRUCT_R25_clear\YMA6.rvt
(C) 2023 OSTERLUND ARCHITECTS, PLLC



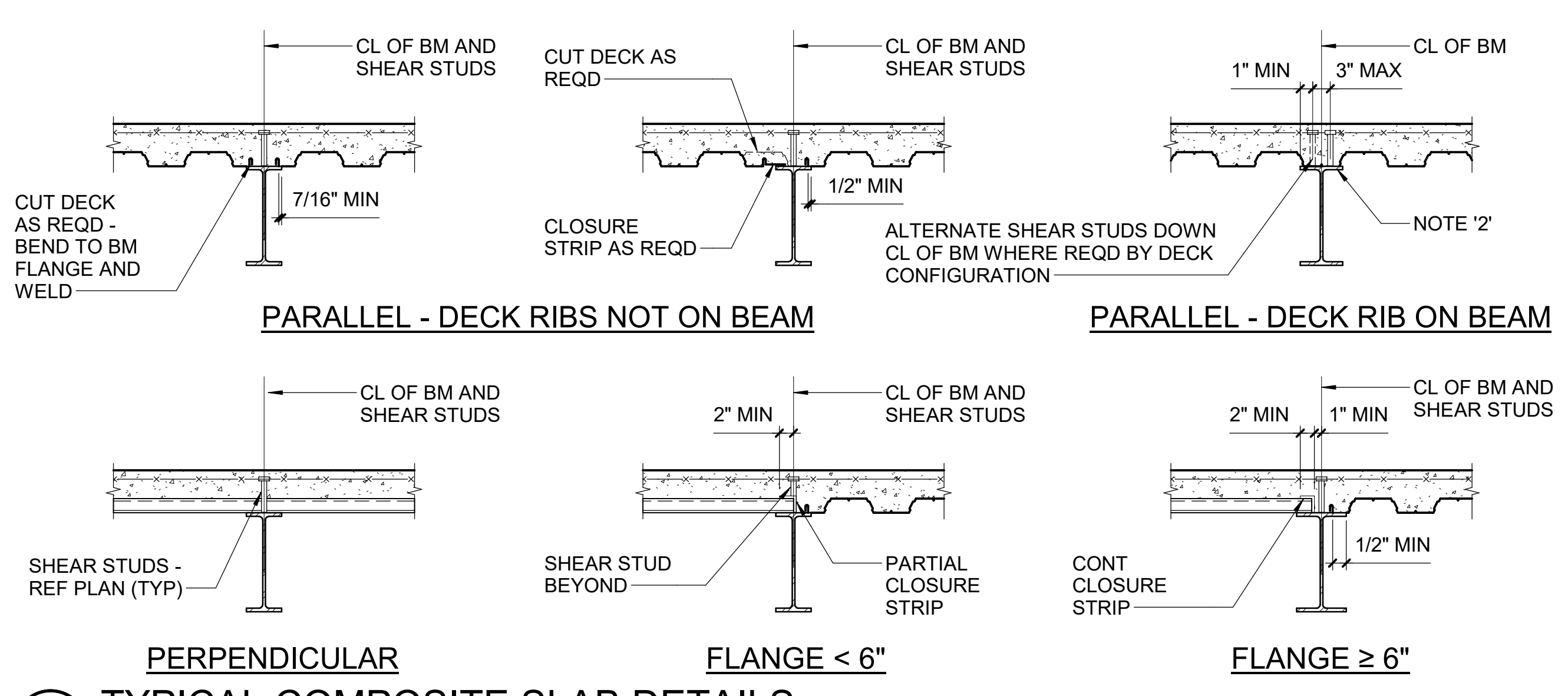
F1 TYPICAL REINFORCING TO SLAB EDGE STEEL ATTACHMENT DETAILS
NTS



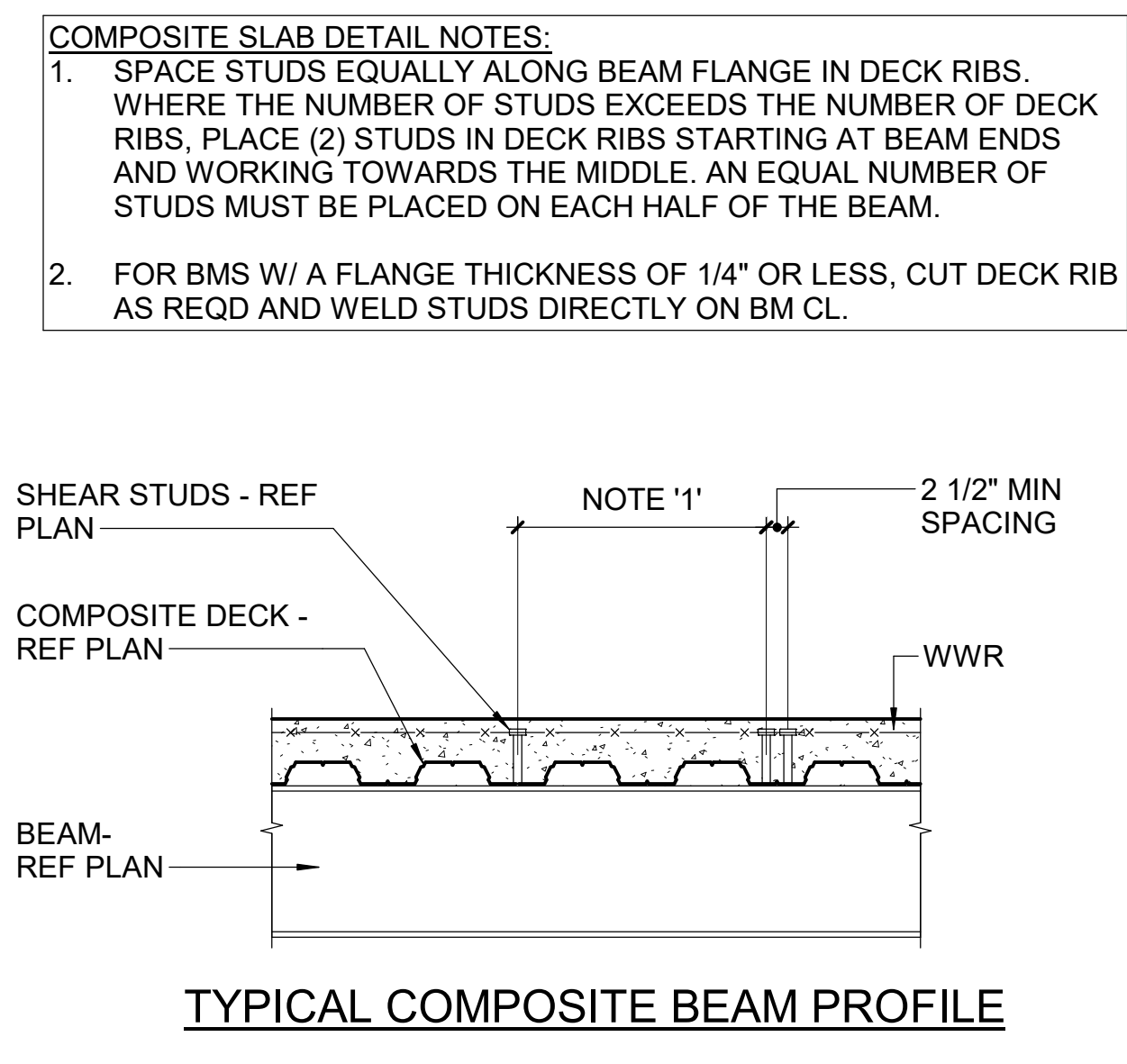
F4 TYPICAL COLUMN / BEAM CONNECTION DETAIL
NTS



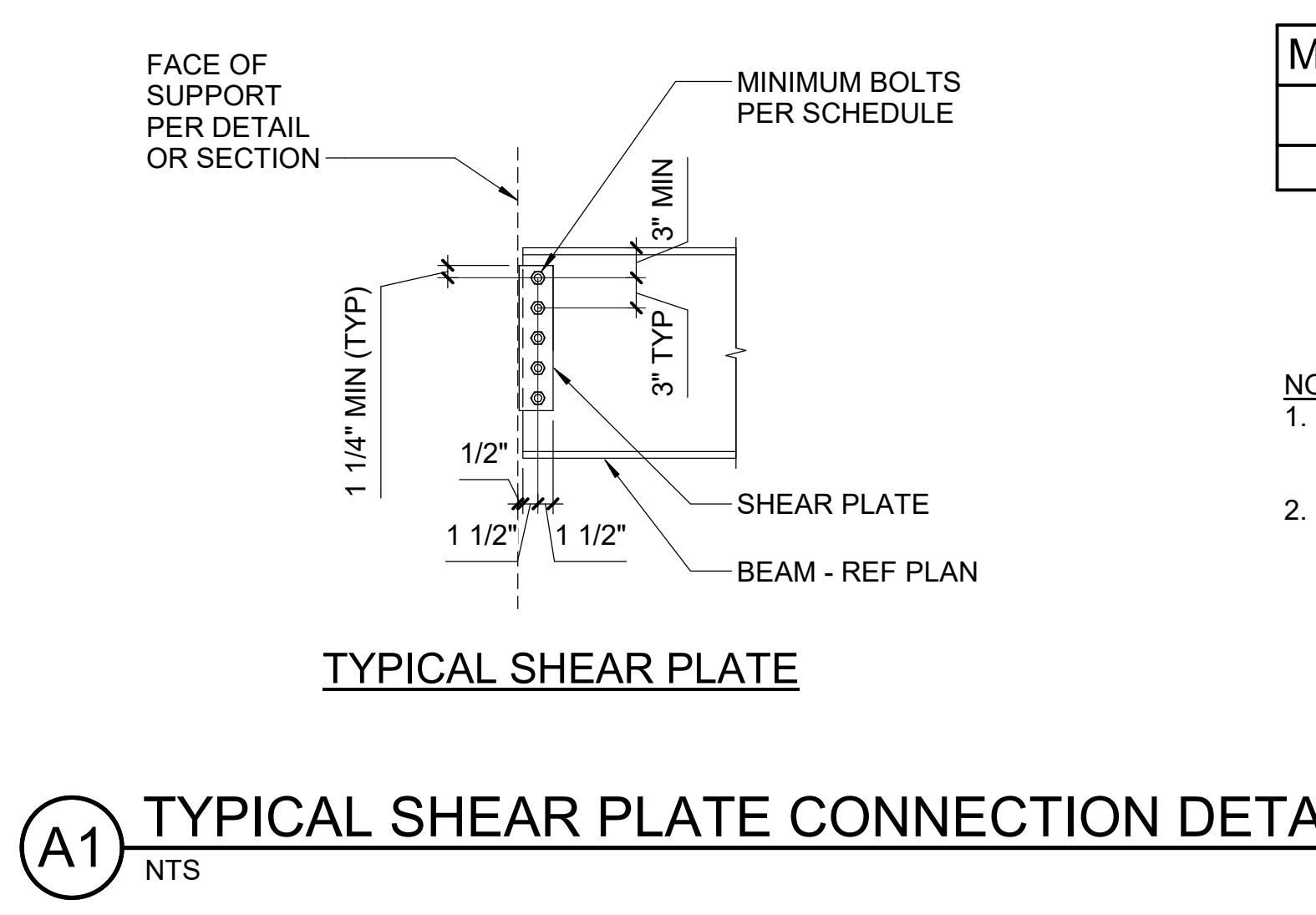
F6 TYPICAL BEAM / BEAM CONNECTION DETAIL
NTS



C1 TYPICAL COMPOSITE SLAB DETAILS
NTS



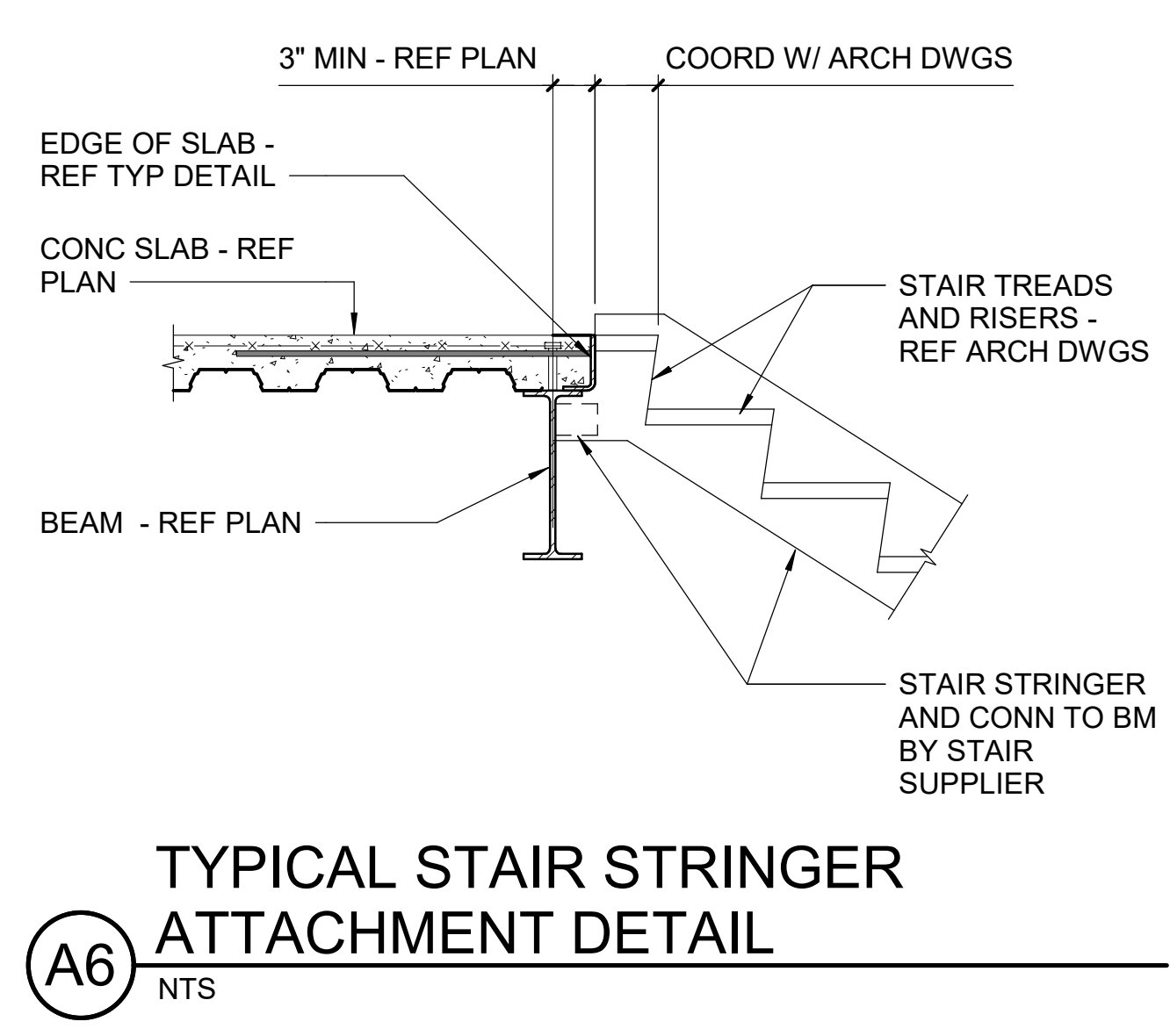
C8 TYPICAL EDGE OF COMPOSITE SLAB DETAILS
NTS



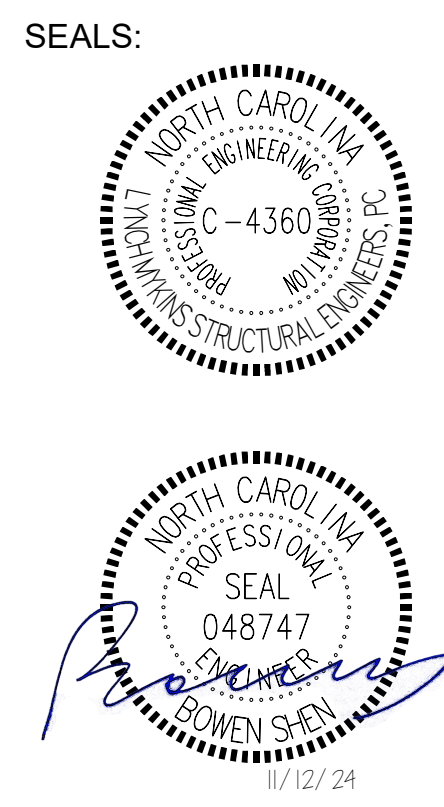
A1 TYPICAL SHEAR PLATE CONNECTION DETAIL
NTS

MINIMUM BEAM REACTION SCHEDULE		
BEAM SIZE	DESIGN REACTION (LRFD)	MIN # OF BOLTS
W18	70 KIPS	4

NOTES:
1. REFERENCE "STRUCTURAL STEEL NOTES" IN GENERAL NOTES FOR ADDITIONAL INFORMATION.
2. DESIGN CONNECTIONS FOR THE REACTIONS SHOWN ON PLAN. FOR REACTIONS NOT SHOWN ON PLAN, DESIGN CONNECTIONS FOR THE MINIMUM LOADS AND BOLTS INDICATED IN THE SCHEDULE ABOVE.



A6 TYPICAL STAIR STRINGER ATTACHMENT DETAIL
NTS



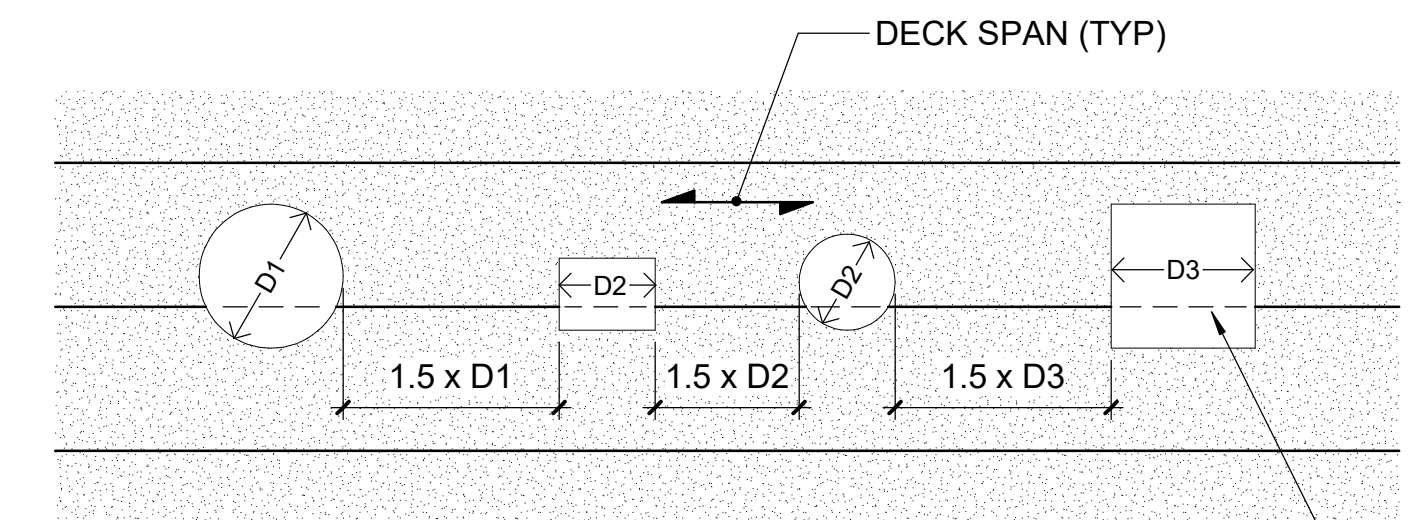
ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: DC
REVISIONS:

NO.	DESCRIPTION

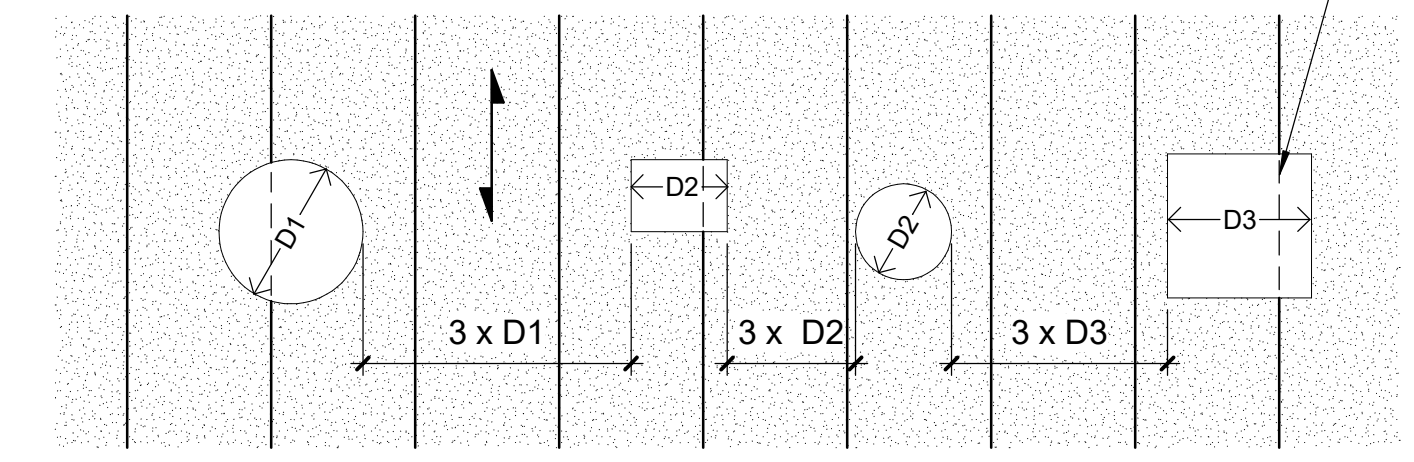
TYPICAL DETAILS

NOTES:

- SEE MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR LOCATIONS AND SIZE OF FLOOR PENETRATIONS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL FRAMING PLANS.
- PENETRATIONS, LESS THAN OR EQUAL TO 6" IN ANY DIMENSION MUST BE PERMITTED IN THE ELEVATED SLAB ON METAL DECK WITHOUT REINFORCING, PROVIDED THE SPACING BETWEEN PENETRATIONS DOES NOT EXCEED THE FOLLOWING, AS DEPICTED BELOW:
 - WHERE DECK SPAN IS PARALLEL TO THE GROUP OF PENETRATIONS: CLEAR SPACING MUST NOT BE LESS THAN 1.5 TIMES THE WIDTH / DIAMETER OF THE LARGER ADJACENT PENETRATION OR 4", WHICHEVER IS GREATER.
 - WHERE DECK SPAN IS PERPENDICULAR TO THE GROUP OF PENETRATIONS: CLEAR SPACING MUST NOT BE LESS THAN 3 TIMES THE WIDTH OF THE LARGER ADJACENT PENETRATION, OR 8", WHICHEVER IS GREATER.
- BLOCKOUTS OR DRILLED CORES ARE PERMITTED, HOWEVER, FLOOR DECK MUST REMAIN CONTINUOUS AND NOT BE CUT UNTIL CONCRETE HAS BEEN PLACED AND HAS REACHED 75% OF IT'S SPECIFIED DESIGN STRENGTH.



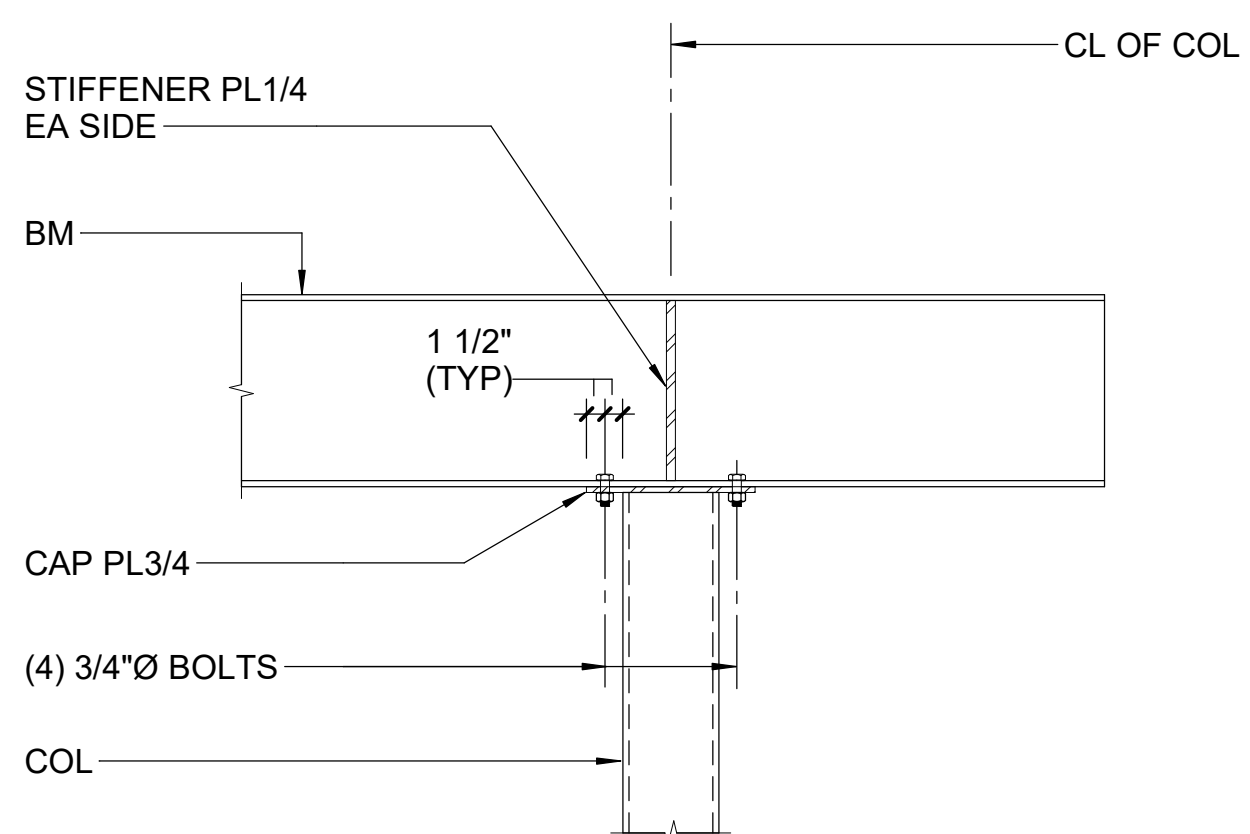
DECK SPAN PARALLEL TO OPENING GROUP



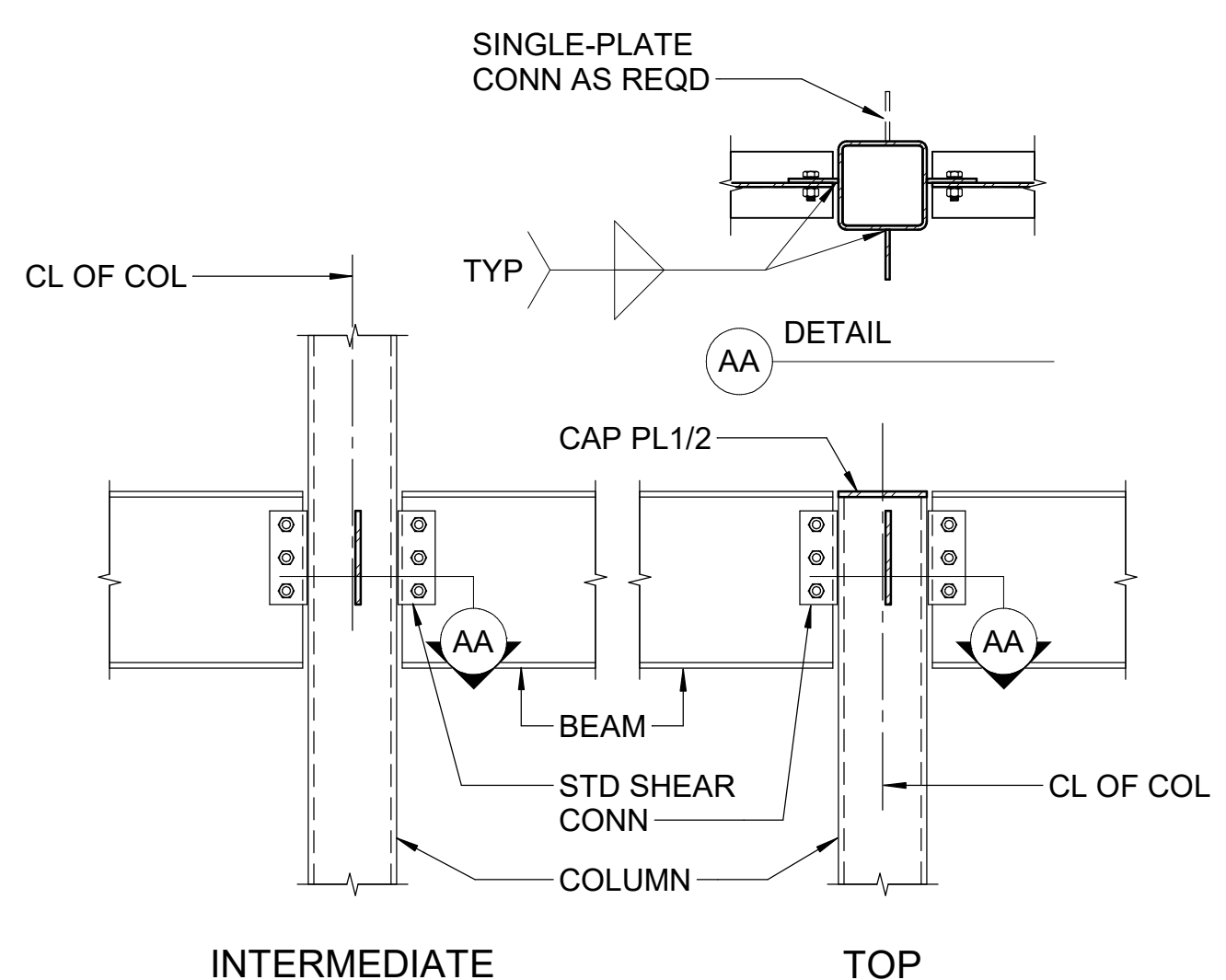
DECK SPAN PERPENDICULAR TO OPENING GROUP

DECK MUST NOT BE CUT UNTIL CONCRETE HAS BEEN PLACED AND REACHED 75% OF SPECIFIED DESIGN STRENGTH (TYP)

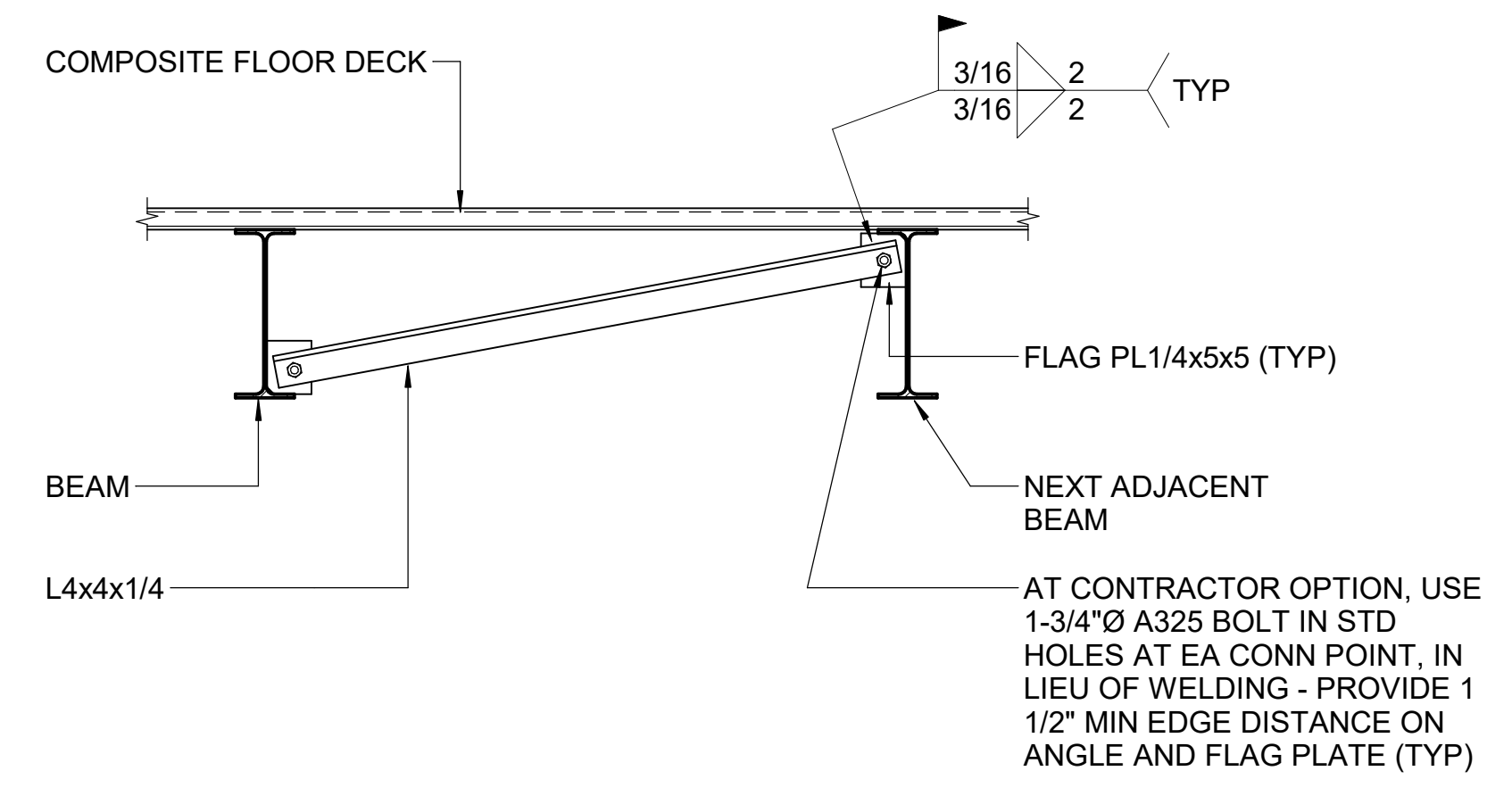
(F1) TYPICAL SPACING REQUIREMENTS FOR FLOOR PENETRATIONS 6" WIDE OR LESS
NTS



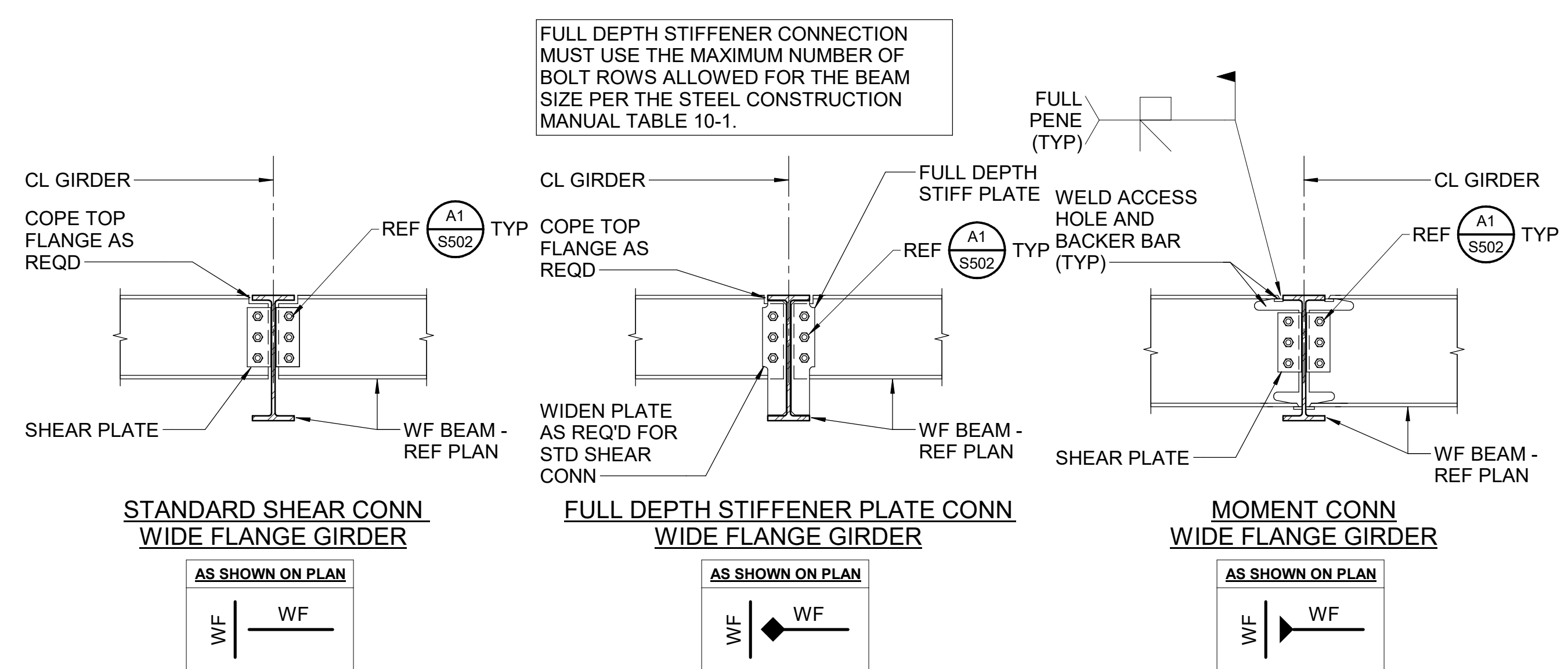
(C1) TYPICAL CANTILEVER BEAM DETAIL
NTS



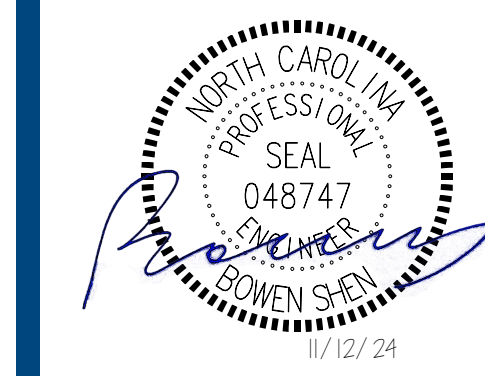
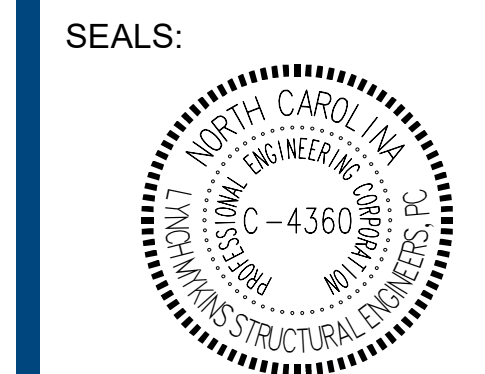
(A1) TYPICAL WIDE FLANGE BEAM TO HSS SQUARE COLUMN CONNECTION DETAILS
NTS



(C4) TYPICAL BOTTOM FLANGE BEAM BRACE DETAIL
NTS



(A4) TYPICAL WIDE FLANGE BEAM TO GIRDER CONNECTION DETAILS
NTS



ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: DC
REVISIONS:

TYPICAL DETAILS

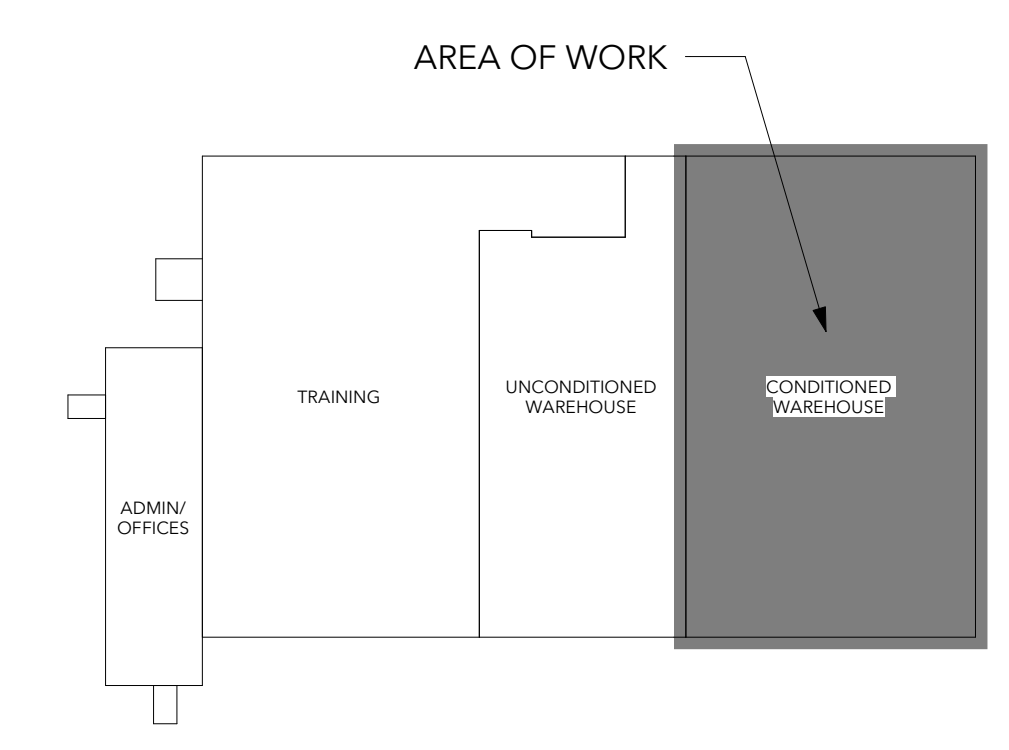
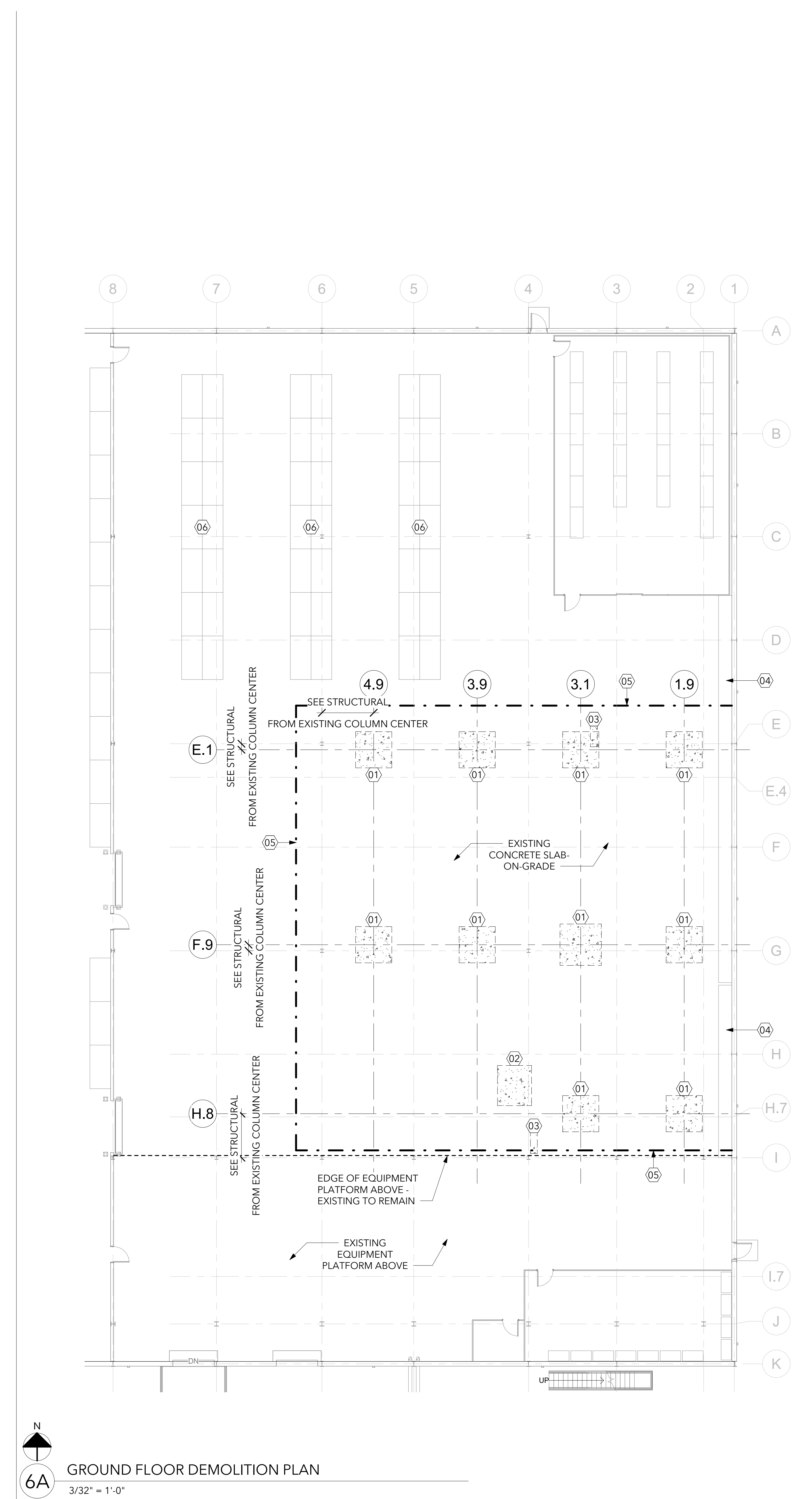
- ### GENERAL NOTES
- #### DEMOLITION PLANS
- A. FIELD VERIFY EXISTING CONDITIONS. NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO STARTING DEMOLITION.
 - B. DIMENSIONS ARE FOR REFERENCE ONLY.
 - C. DASHED LINES INDICATE DEMOLITION UNLESS OTHERWISE NOTED.
 - D. PREPARE SURFACES TO RECEIVE NEW FINISHES.

A-KEYNOTES

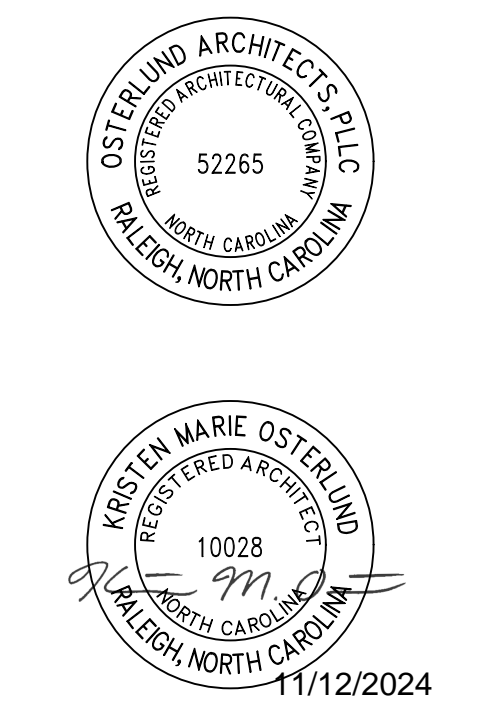
DEMOLITION

01	DEMOLISH PORTION OF EXISTING SLAB-ON-GRADE FOR NEW COLUMNS AND FOOTINGS - SEE STRUCTURAL DRAWINGS
02	DEMOLISH PORTION OF EXISTING SLAB-ON-GRADE FOR NEW RECIPROCATING CONVEYOR LIFT - SEE STRUCTURAL DRAWINGS, 1A/A102, AND 6A/A102
03	DEMOLISH PORTION OF EXISTING SLAB-ON-GRADE FOR NEW THICKENED CONCRETE SLAB AT STAIR INSTALLATION - SEE STRUCTURAL DRAWINGS
04	EXISTING SHELVING AND EQUIPMENT - OWNER WILL RELOCATE PRIOR TO DEMOLITION
05	TEMPORARY DUST PROTECTION BARRIER FROM FLOOR TO UNDERSIDE OF EXISTING ROOF DECK TO ENCLOSE WORK AREA
06	EXISTING OWNER SHELVING UNITS TO REMAIN

BOE STORAGE MEZZANINE RALEIGH, NC WAKE COUNTY FD & C RALEIGH, NC



SEALS:



ISSUE: CONSTRUCTION
 DATE: 11/12/2024
 DRAWN BY: JFK
 REVISIONS:

No.	Description

DEMOLITION PLANS

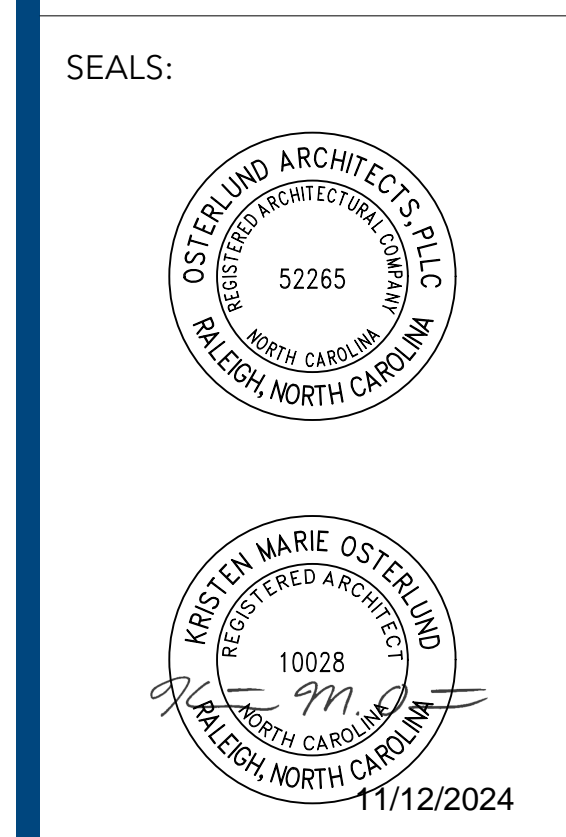
GENERAL NOTES FLOOR PLANS

- A. FIELD VERIFY EXISTING CONDITIONS. NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
- B. DIMENSIONS ARE FOR REFERENCE ONLY.
- C. PREPARE SURFACES TO RECEIVE NEW FINISHES.

A-KEYNOTES NEW CONSTR.

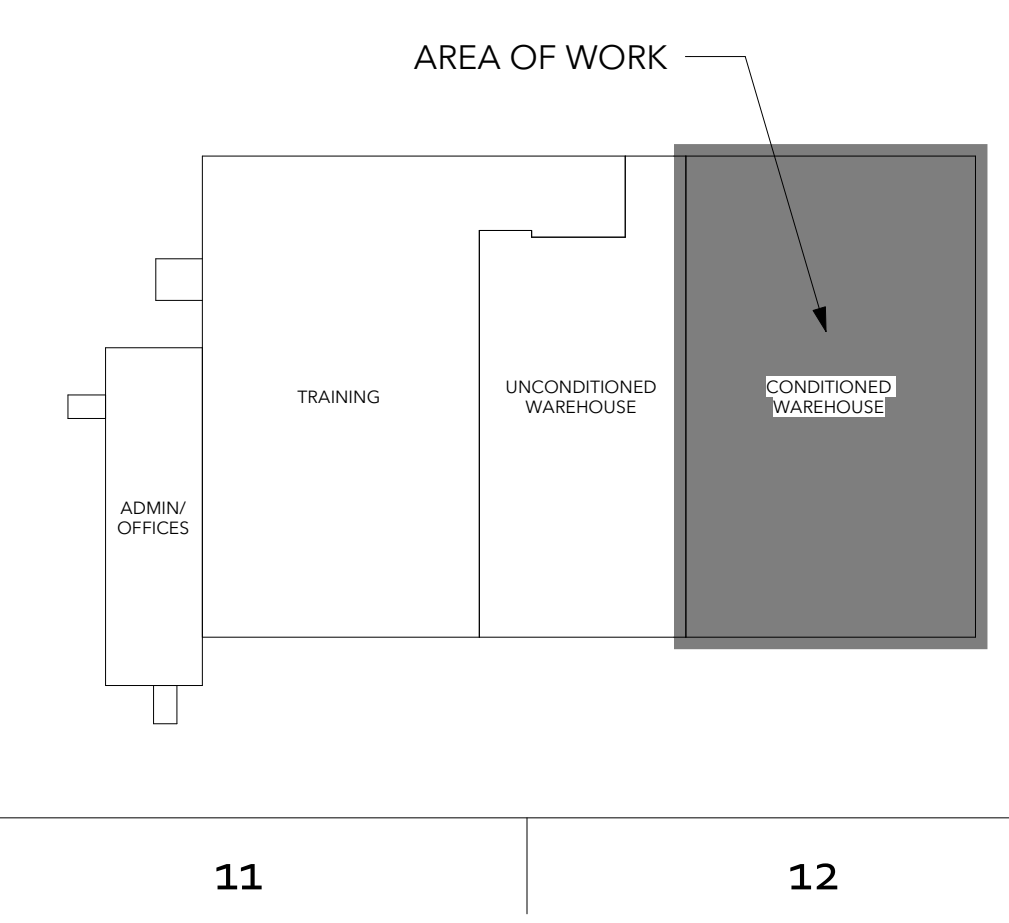
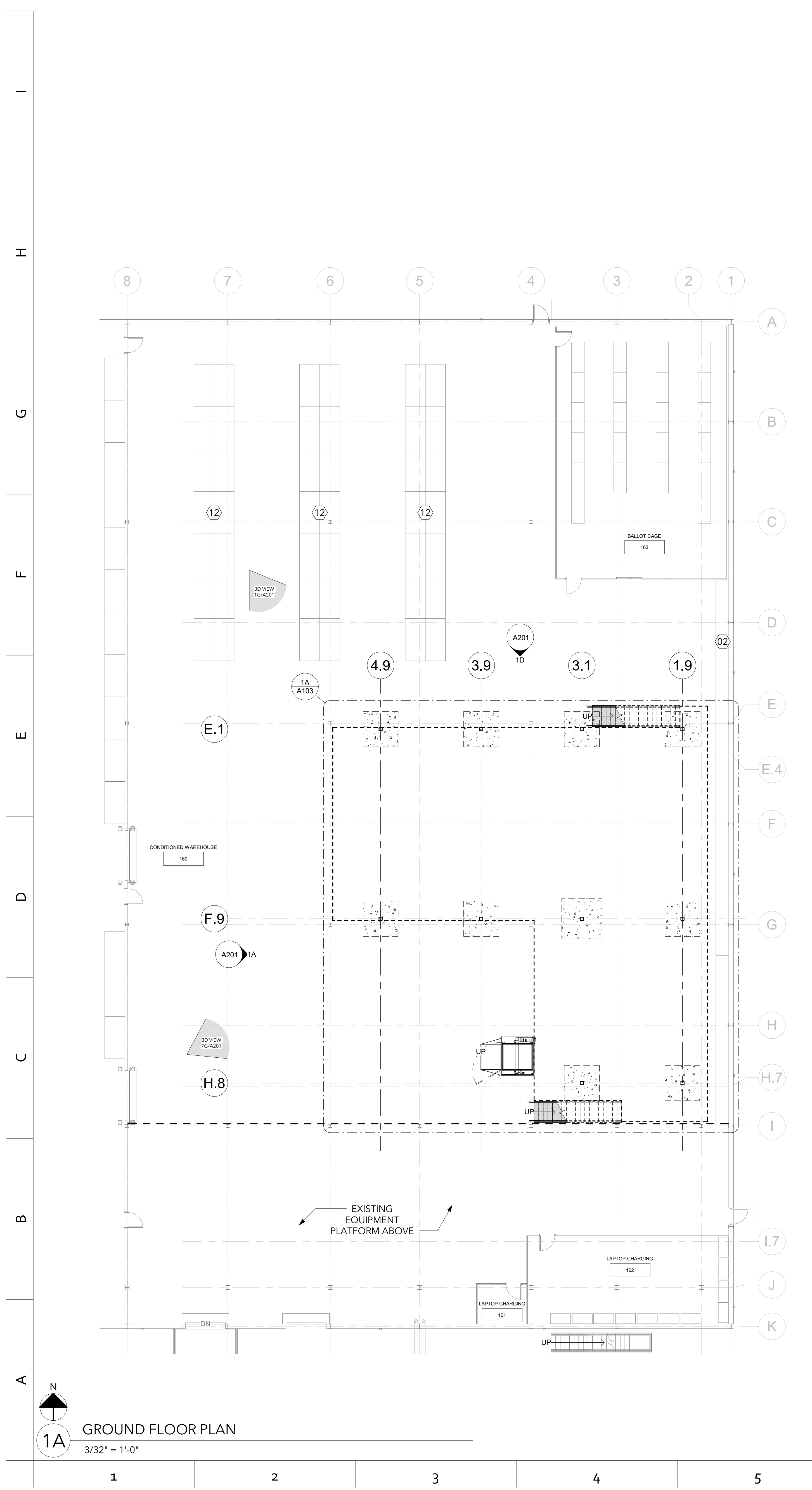
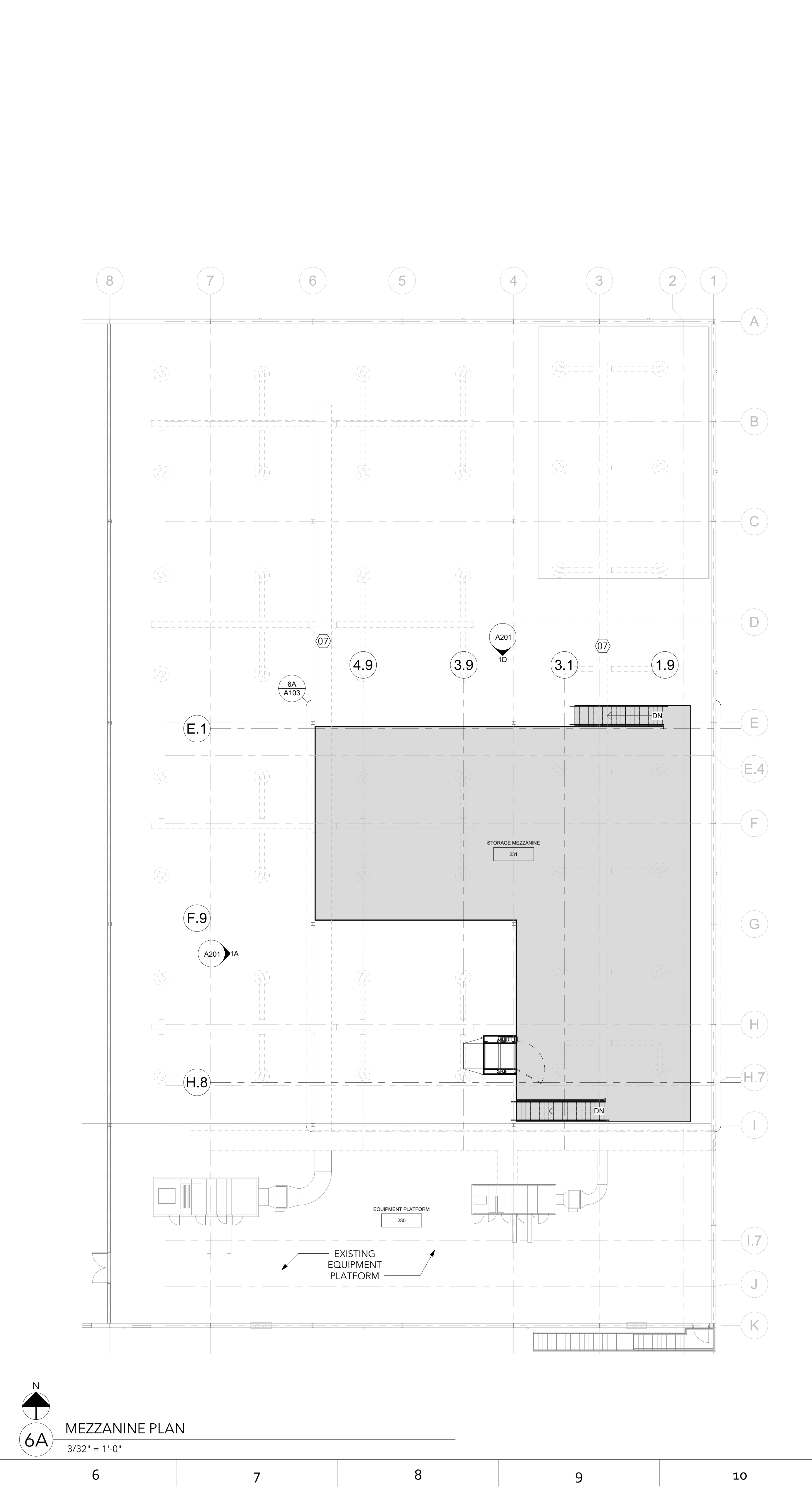
- 02 EXISTING OWNER TABULATOR SHELVING UNITS ALONG WALL TO REMAIN
- 07 EXISTING DUCTWORK ABOVE
- 12 EXISTING OWNER SHELVING UNITS TO REMAIN

BOE STORAGE MEZZANINE WAKE COUNTY FD & C



ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: JFK
REVISIONS:

NO.	DESCRIPTION



C:\Users\joh\Documents\Local Files\2416 BOE Storage Mezzanine\2416 BOE Storage Mezzanine.rvt
 11/12/2024 6:23:17 PM ARCH E1 (42.00 x 30.00 inches), 1:1
 (C) 2023 OSTERLUND ARCHITECTS, PLLC

5 W Hargett Street 310
 Raleigh, NC 27601
 (919) 838-9337
 osterlundarchitects.com

CONSULTANTS:
 LYNCH MYKINS STRUCTURAL
 ENGINEERS, P.C.
 SIGMA ENGINEERED
 SOLUTIONS, P.C.

PROJECT No.:
 2416

GENERAL NOTES

FLOOR PLANS

A. FIELD VERIFY EXISTING CONDITIONS. NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
 B. DIMENSIONS ARE FOR REFERENCE ONLY.
 C. PREPARE SURFACES TO RECEIVE NEW FINISHES.

A-KEYNOTES

NEW CONSTR.

01	CONCRETE SLAB-ON-GRADE AT NEW FOOTINGS - SEE STRUCTURAL DRAWINGS
02	EXISTING OWNER TABULATOR SHELVING UNITS ALONG WALL TO REMAIN
03	STEEL COLUMN - SEE STRUCTURAL DRAWINGS
04	VERTICAL RECIPROCATING CONVEYOR DELTA LIFT WITH RAMP
05	CONCRETE SLAB-ON-DECK - SEE STRUCTURAL DRAWINGS
07	EXISTING DUCTWORK ABOVE
08	METAL RAILING ATTACHED TO SLAB EDGE/ANGLE TYP.
09	METAL PAN STAIR
13	CAMERA ON EXISTING COLUMN - EXISTING TO REMAIN
15	FIRE EXTINGUISHER AND BRACKET. INCLUDE STEEL MOUNTING PLATE ON GUARDRAIL. COORDINATE SIZE AND SHAPE OF PLATE WITH BRACKET

BOE STORAGE MEZZANINE

RALEIGH, NC

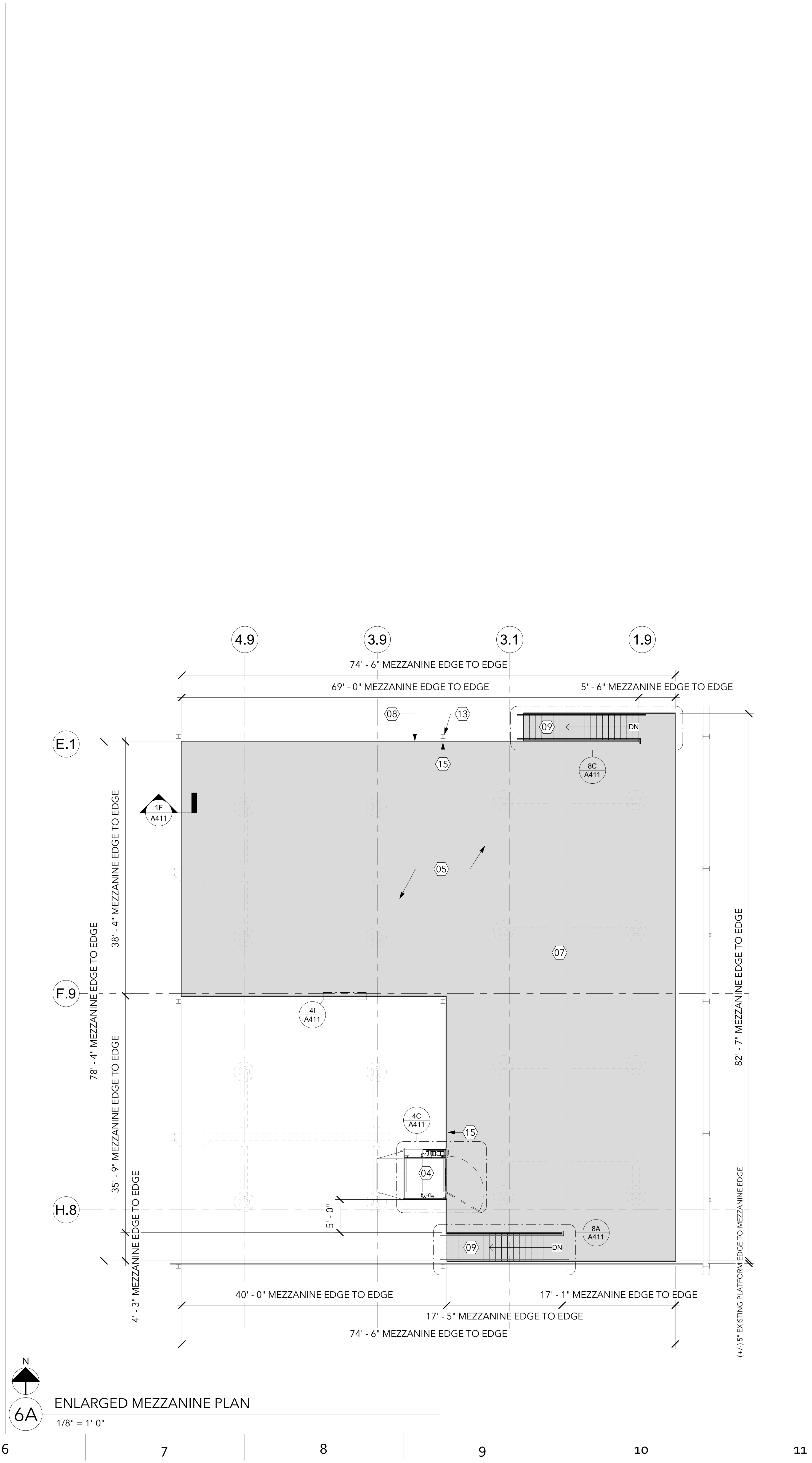
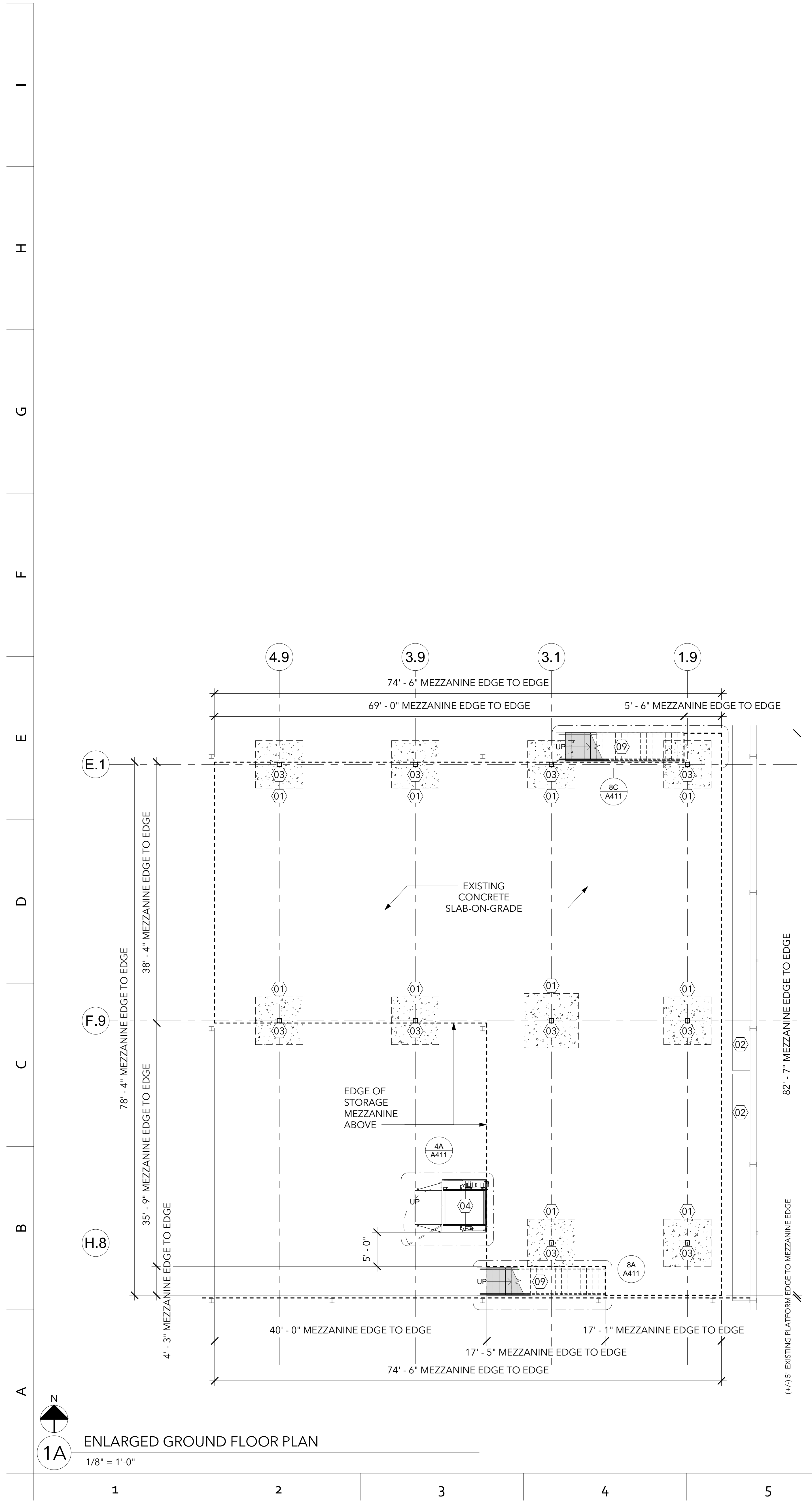
WAKE COUNTY FD & C

RALEIGH, NC

SEALS:

ISSUE: CONSTRUCTION
 DATE: 11/12/2024
 DRAWN BY: JFK
 REVISIONS:

MEZZANINE PLANS



A B C D E F G H I

GENERAL NOTES FLOOR PLANS

5 W Hargett Street 310
Raleigh, NC 27601
(919) 838-9337
osterlundarchitects.com

- A. FIELD VERIFY EXISTING CONDITIONS. NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
- B. DIMENSIONS ARE FOR REFERENCE ONLY.
- C. PREPARE SURFACES TO RECEIVE NEW FINISHES.

CONSULTANTS:
LYNCH MYKINS STRUCTURAL ENGINEERS, P.C.
SIGMA ENGINEERED SOLUTIONS, P.C.

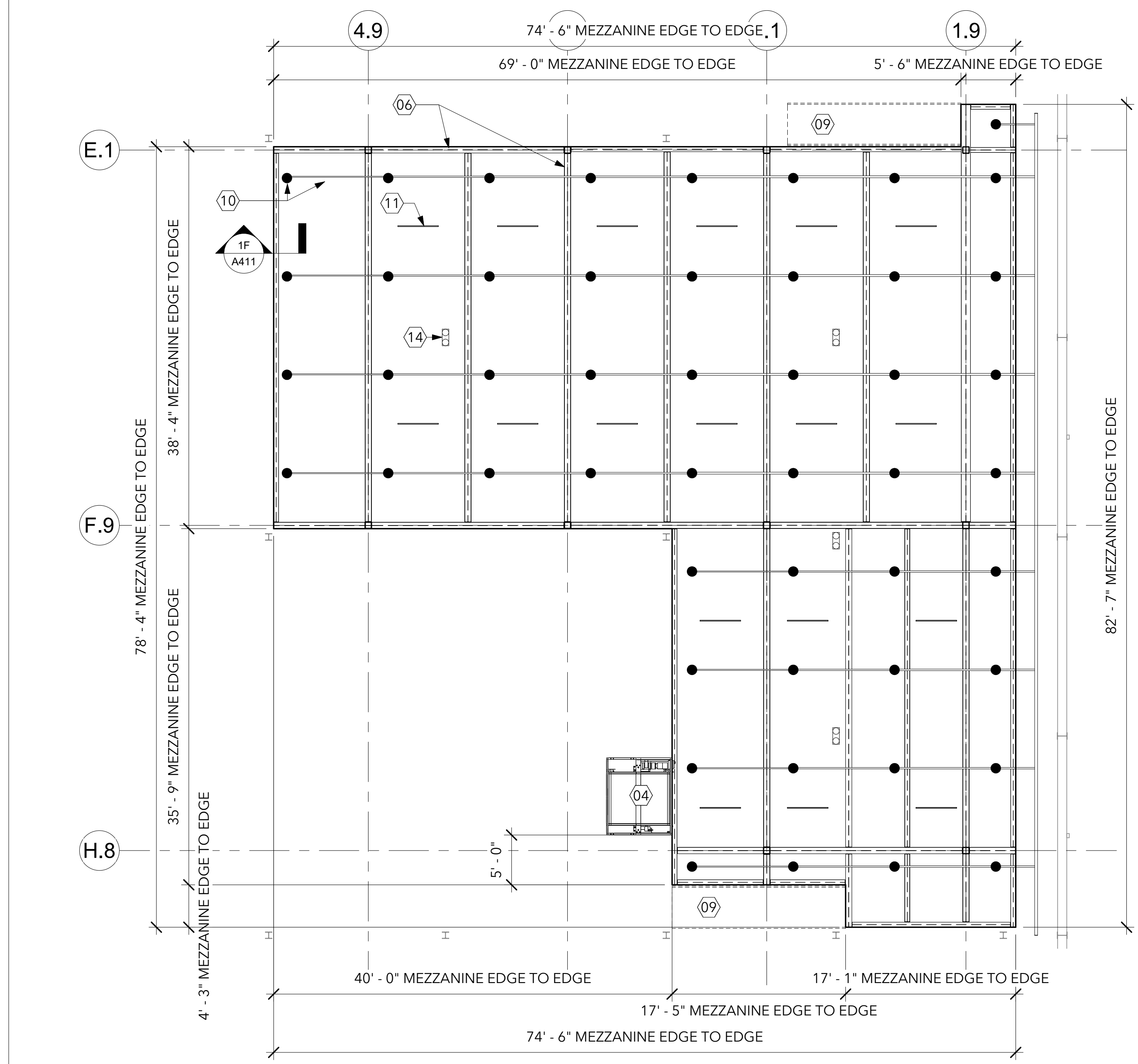
PROJECT No.: 2416

A-KEYNOTES NEW CONSTR.

04	VERTICAL RECIPROCATING CONVEYOR DELTA LIFT WITH RAMP
06	STEEL BEAMS BELOW CONCRETE DECK - SEE STRUCTURAL DRAWINGS
09	METAL PAN STAIR
10	SPRINKLER HEAD AND PIPING TYP. - SEE FIRE PROTECTION DRAWINGS
11	LED STRIP LIGHT TYP. - SEE ELECTRICAL DRAWINGS
14	EGRESS FIXTURE - SEE ELECTRICAL DRAWINGS

BOE STORAGE MEZZANINE WAKE COUNTY FD & C

RALEIGH, NC
RALEIGH, NC



6A MEZZANINE CEILING PLAN
1/8" = 1'-0"

SEALS:



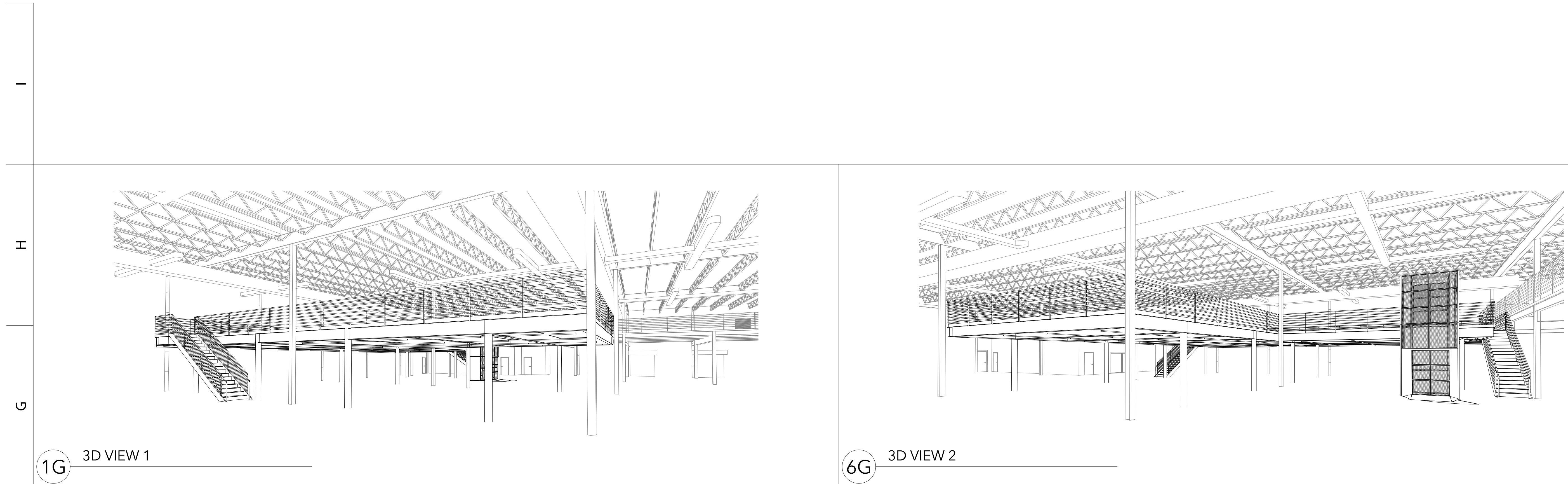
ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: JFK
REVISIONS:

NO.	DESCRIPTION	DATE

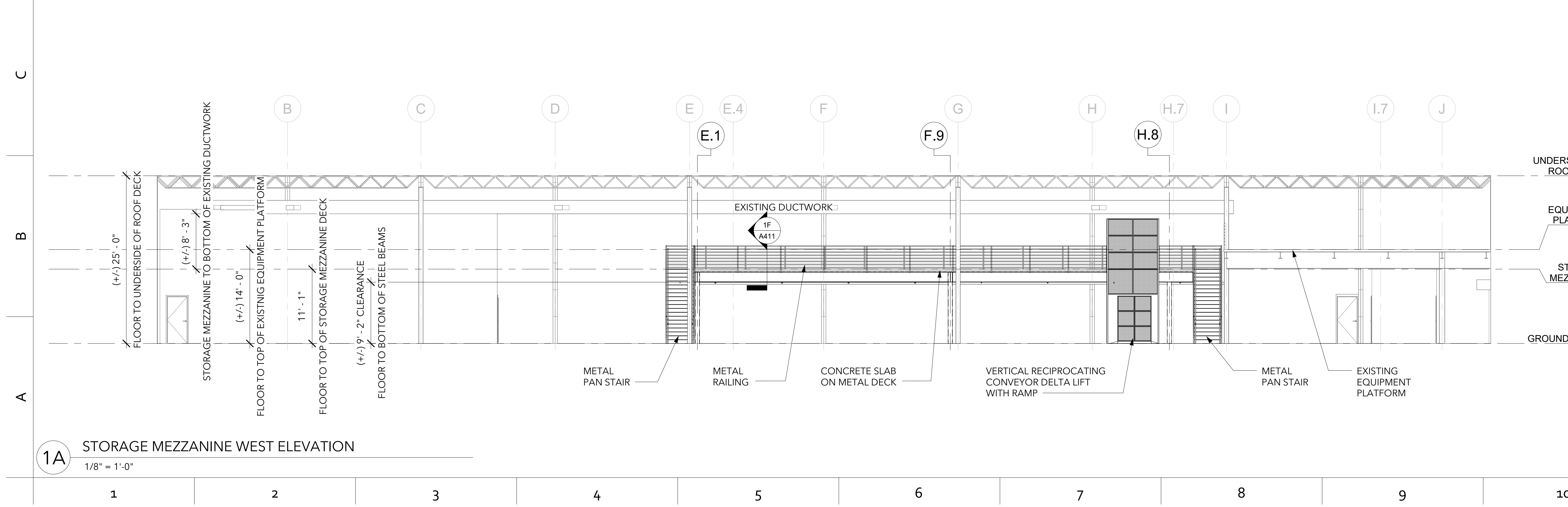
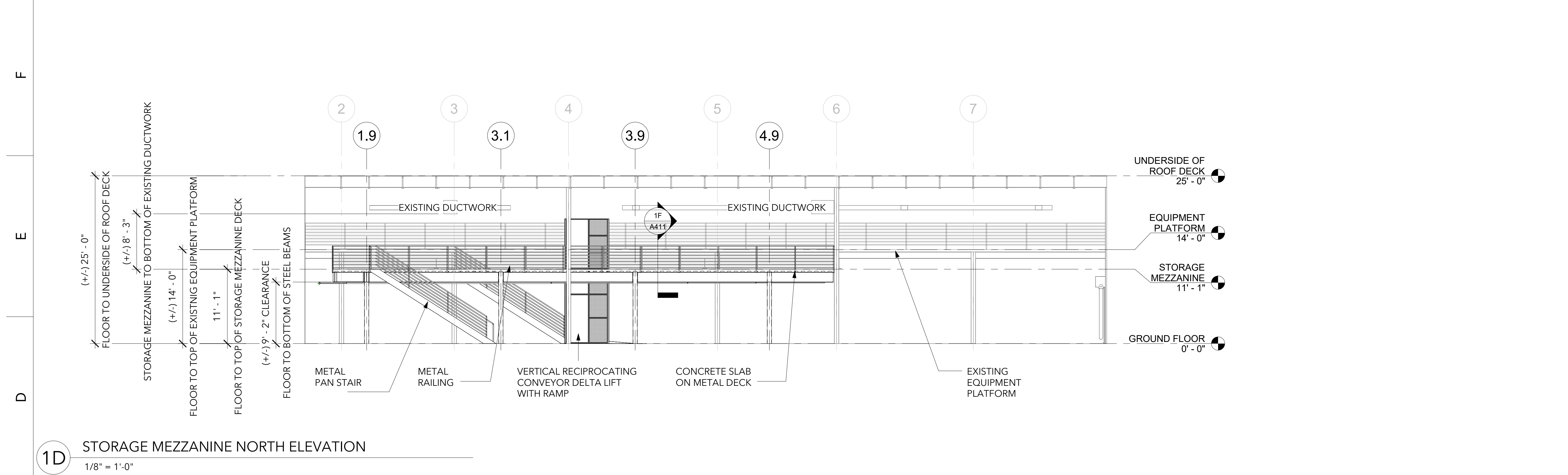
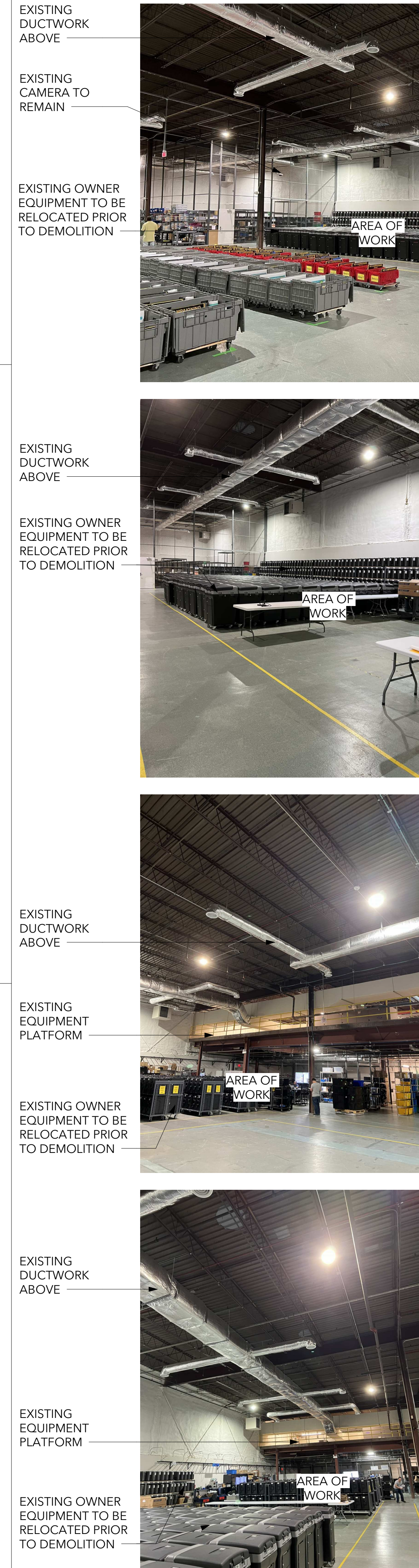
MEZZANINE CEILING PLAN

BOE STORAGE MEZZANINE
RALEIGH, NC
WAKE COUNTY FD & C
RALEIGH, NC

C:\Users\joe\Documents\Local Files\2416 BOE Storage Mezzanine\2416 BOE Storage Mezzanine.rvt (C) 2023 OSTERLUND ARCHITECTS, PLLC 11/12/2024 6:23:22 PM ARCH E1 (42.00 x 30.00 inches), 1:1



EXISTING PHOTOS:



SEALS:



ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: JFK
REVISIONS:

NO.	DESCRIPTION

ELEVATION & 3D VIEWS

SEALS:

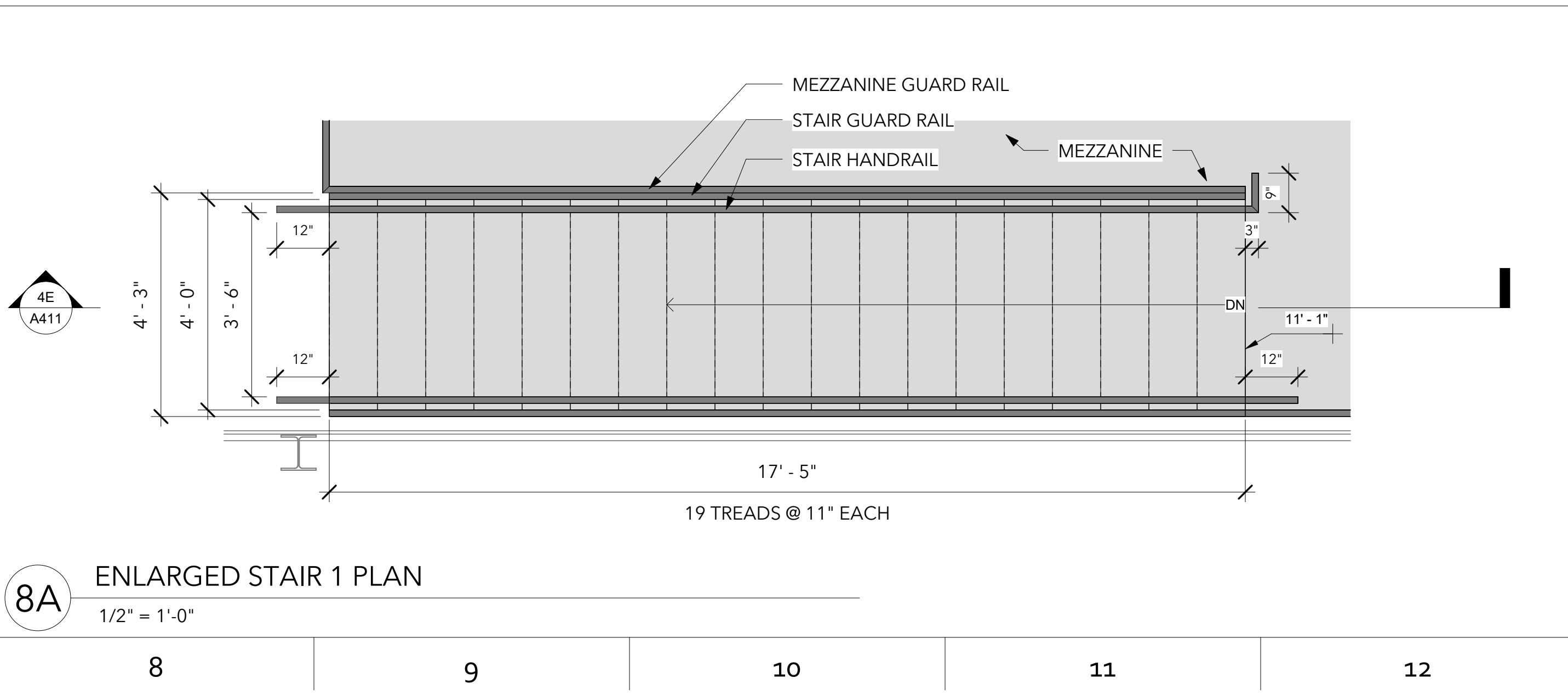
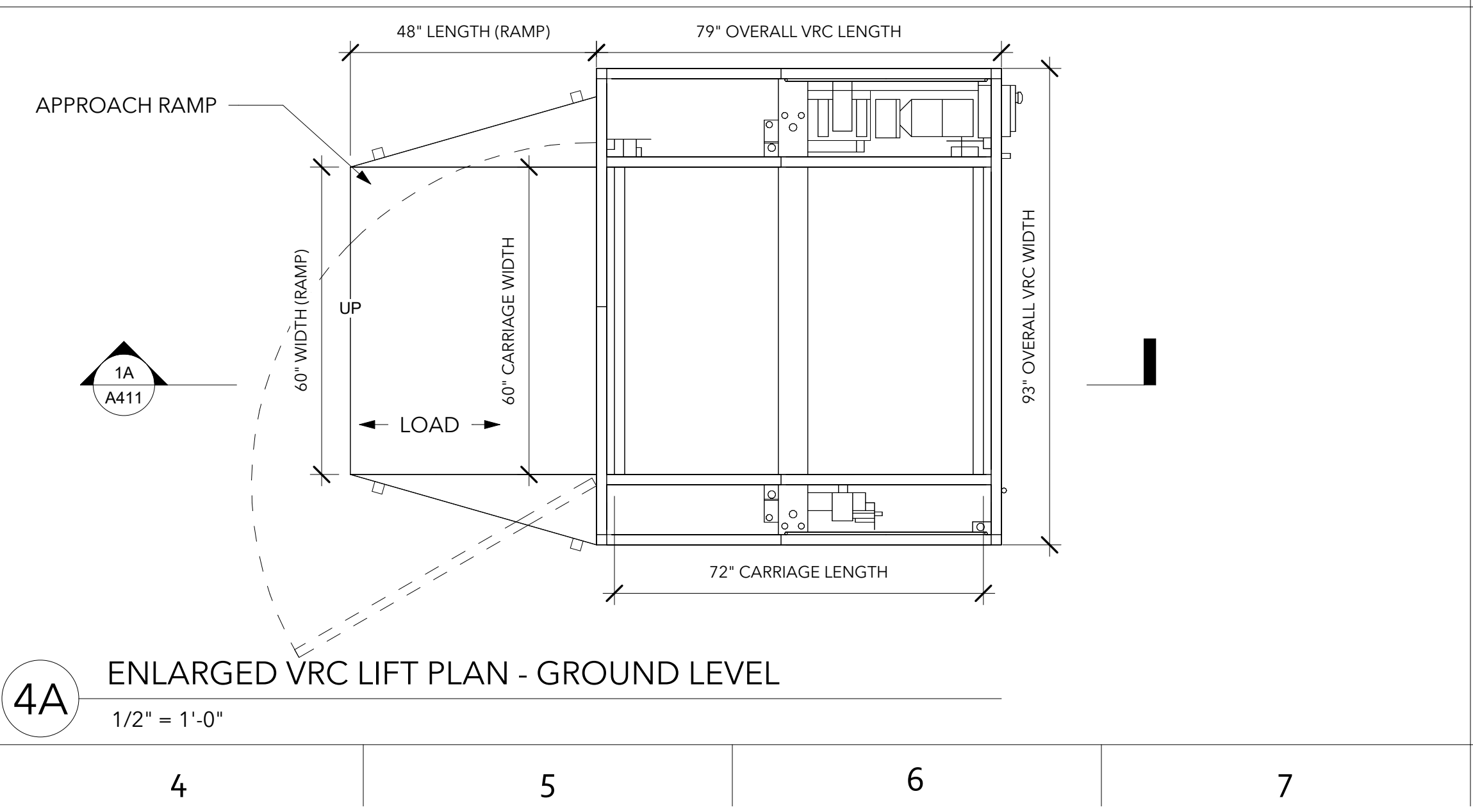
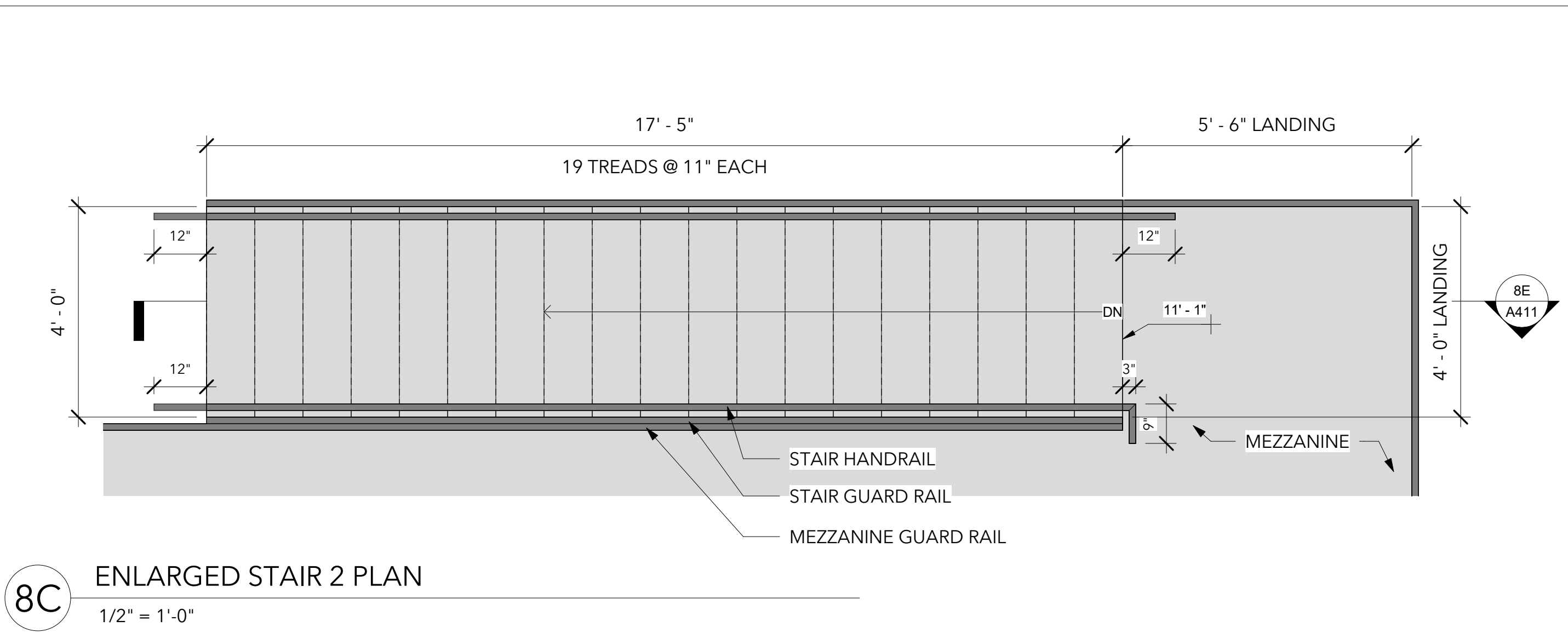
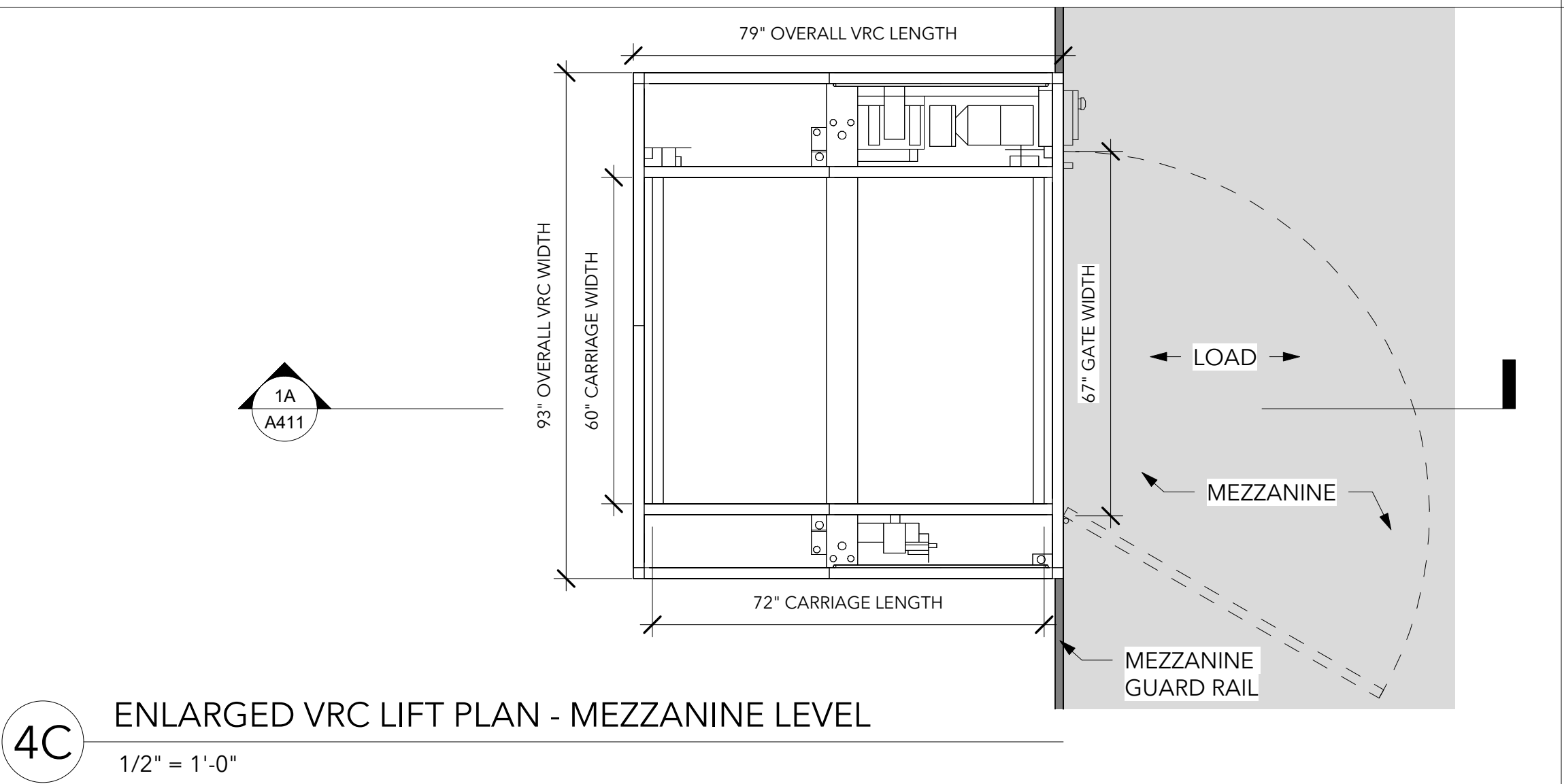
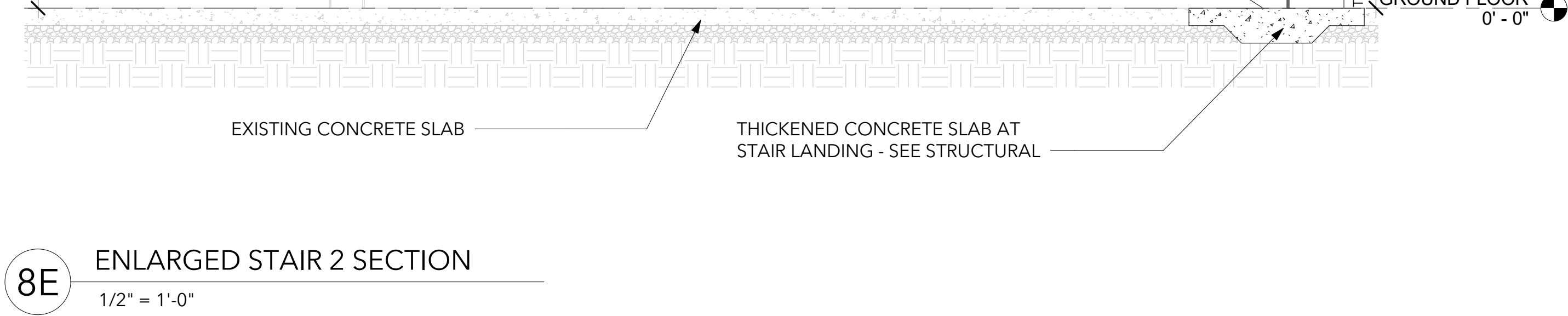
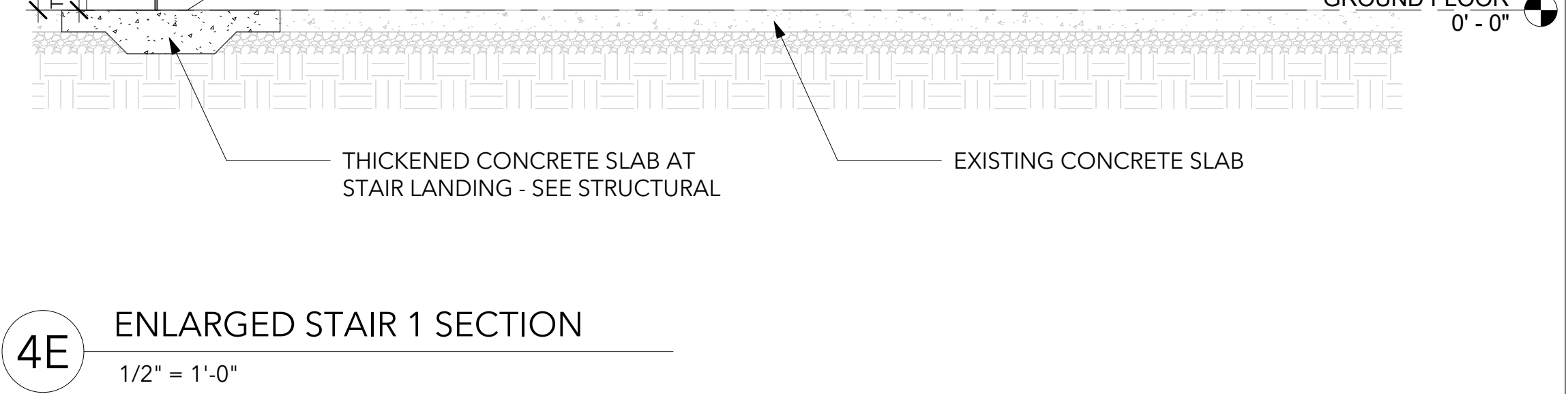
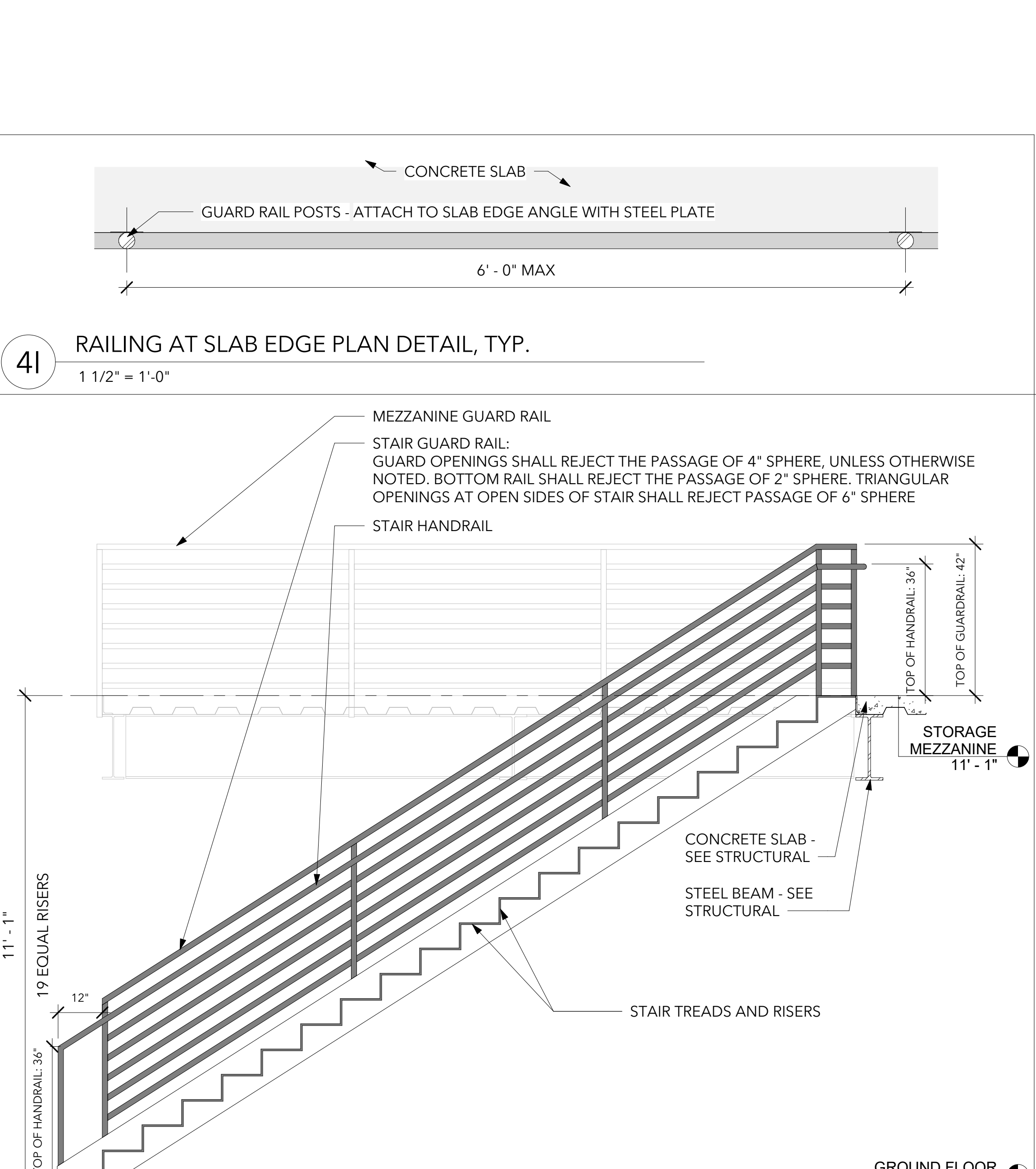
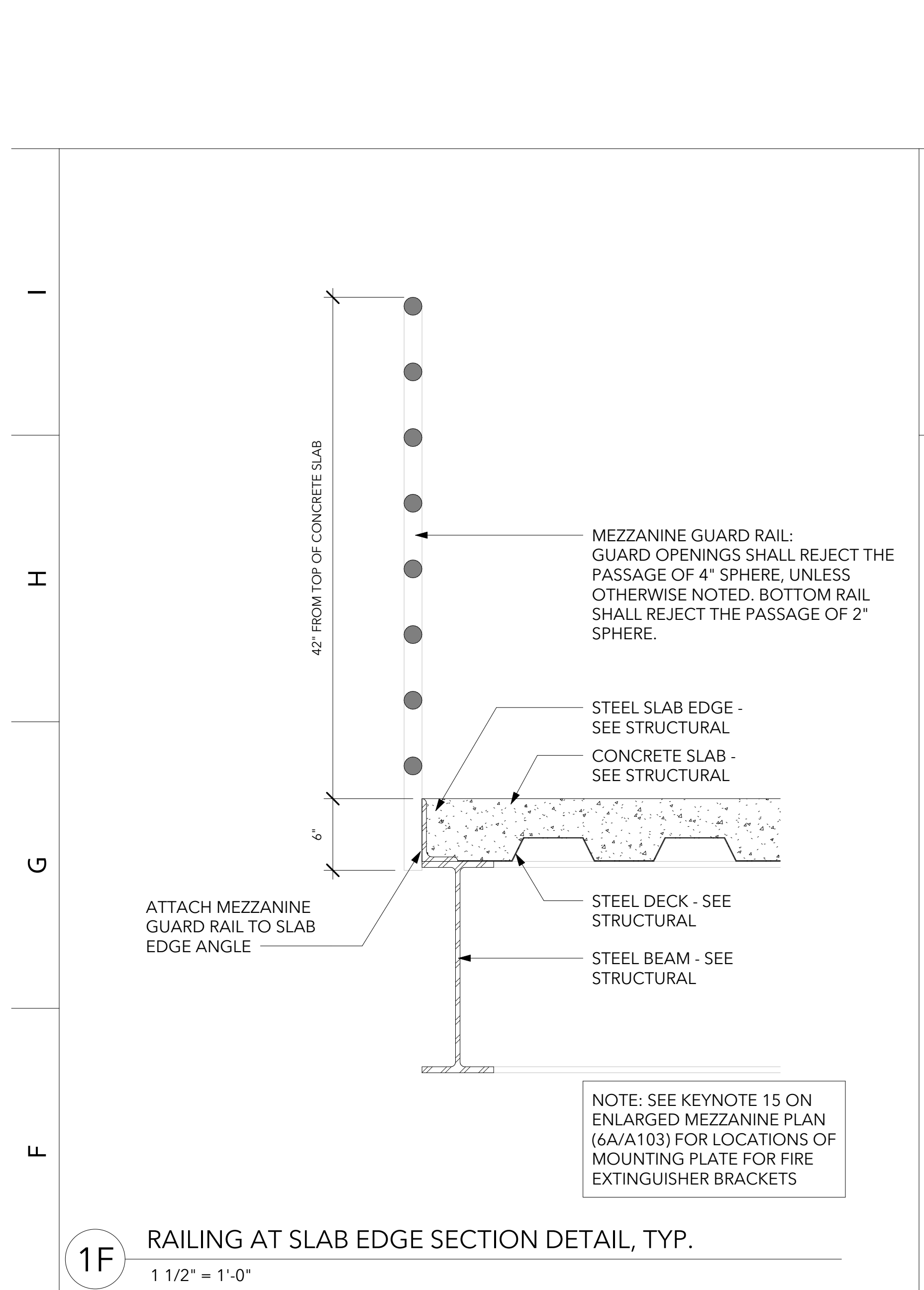
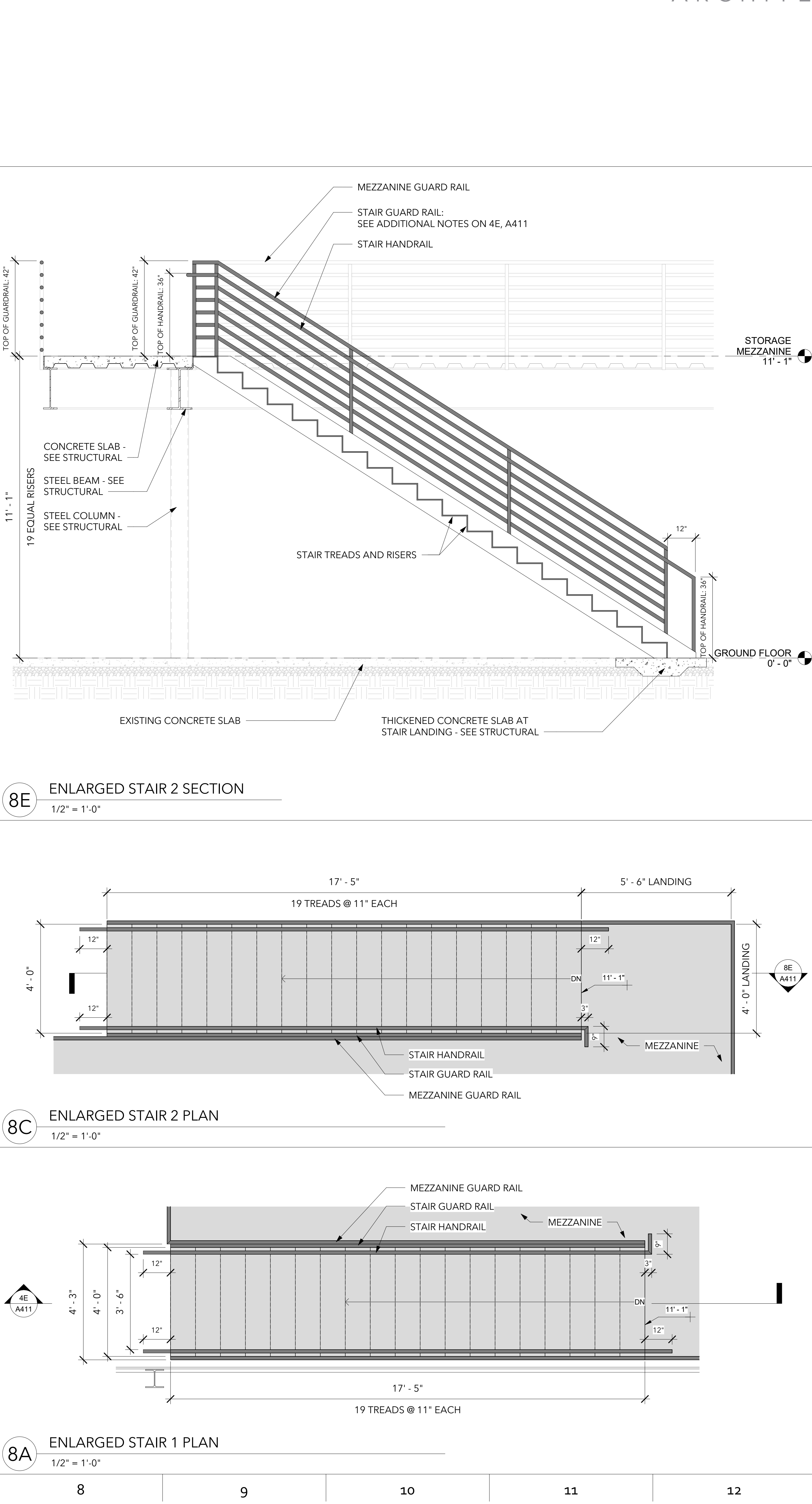
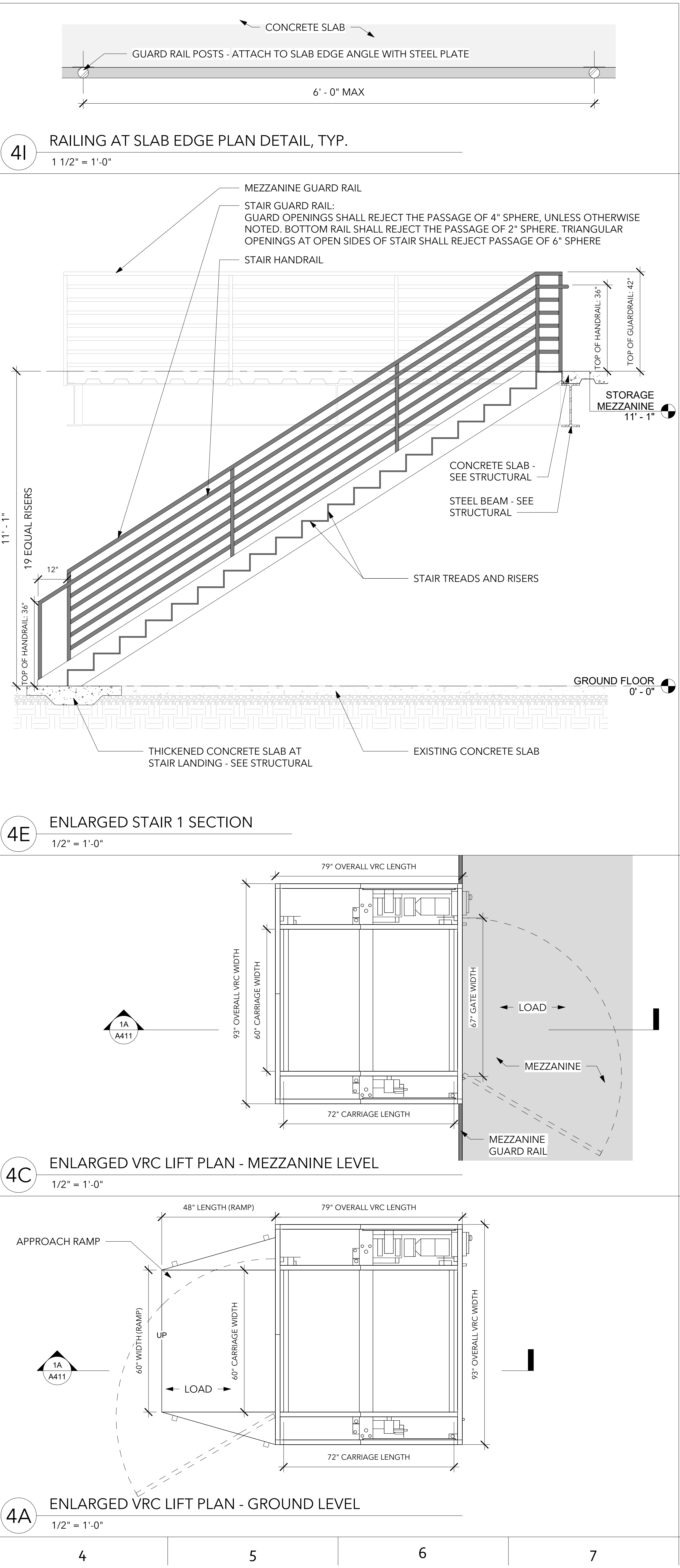
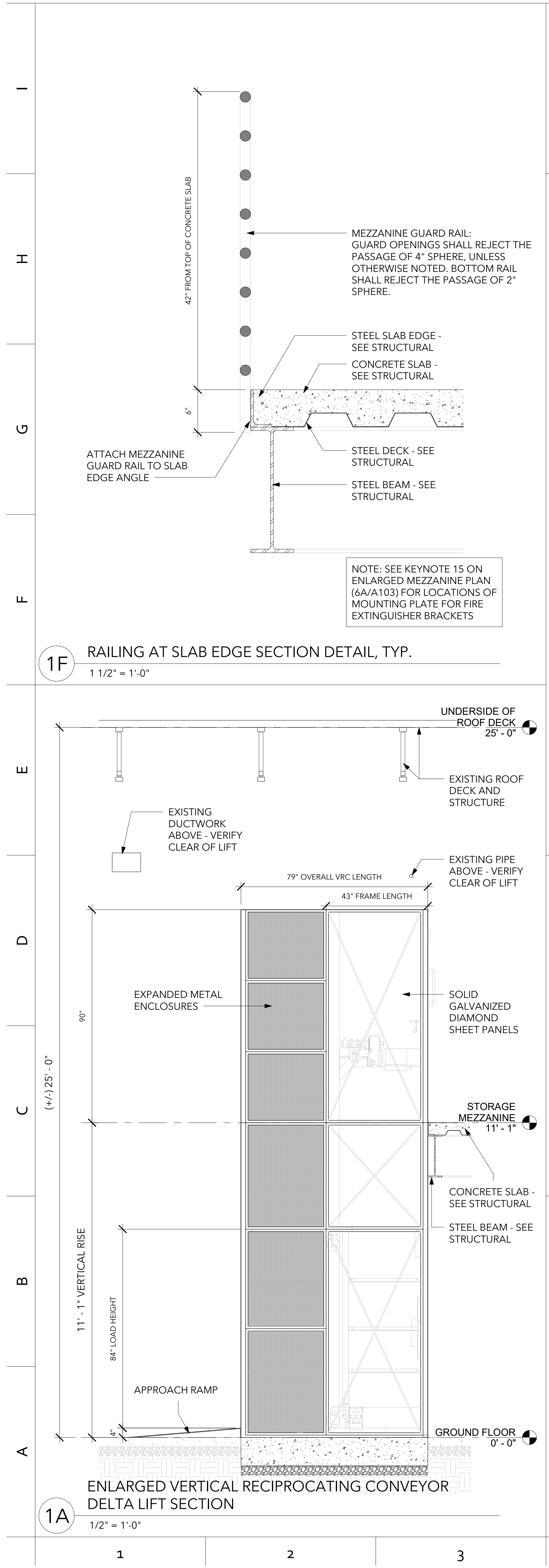


ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: JFK
REVISIONS:

ENLARGED PLANS, SECTIONS,
& DETAILS

A411

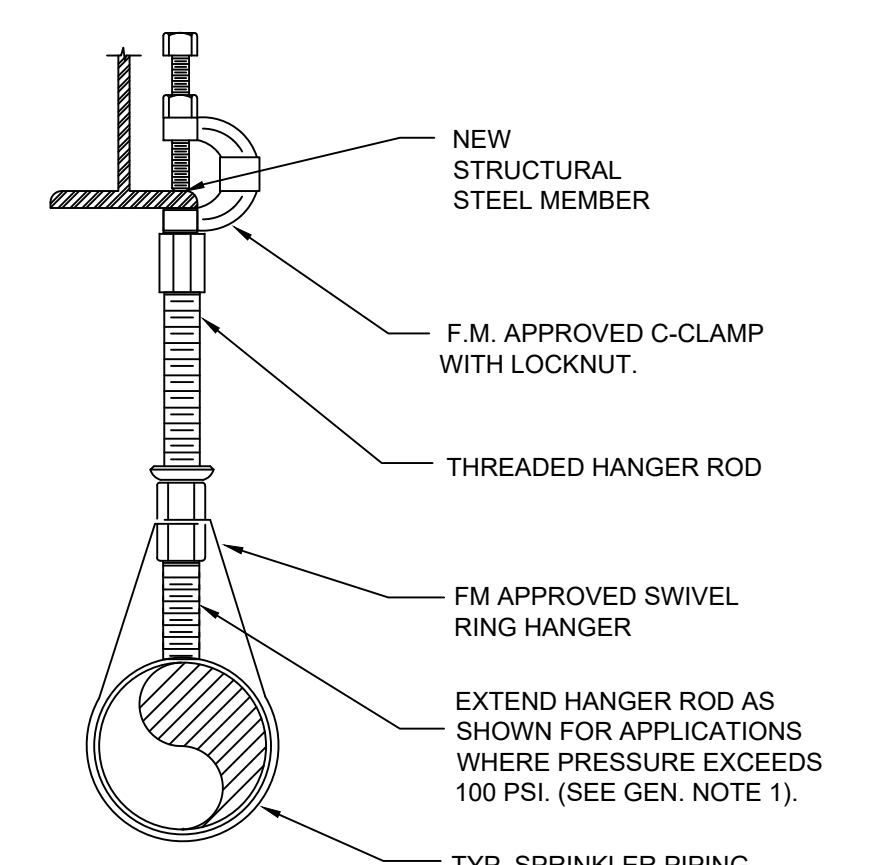
(C) 2023 OSTERLUND ARCHITECTS, PLLC
 C:\Users\johndoc\Documents\Local Files\2416 BOE Storage Mezzanine\2416 BOE Storage Mezzanine.rvt
 11/12/2024 6:23:24 PM ARCH E1 (42.00 x 30.00 inches), 1:1



7/26/2024 4:55:34 PM ARCH E1 (42.00 x 30.00 inches) 1:1

FIRE PROTECTION SYMBOLS AND ABBREVIATIONS table with columns for symbol, name, and abbreviation.

FIRE PROTECTION GENERAL NOTES 1. DIVISION 21 SHALL PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE WORKING SYSTEM WHICH SHALL COMPLY FULLY WITH NFPA #13, 2013 EDITION, STANDARD FOR INSTALLATION OF AUTOMATIC SPRINKLER SYSTEMS...



NOTE: 1. THESE METHODS SHALL BE USED WHEN PRESSURE EXCEEDS 100 PSI & SHALL BE INSTALLED WITHIN 12" OF THE LAST SPRINKLER DROP ON EACH SPRINKLER BRANCH LINE...

5C HANGER DETAIL NO SCALE

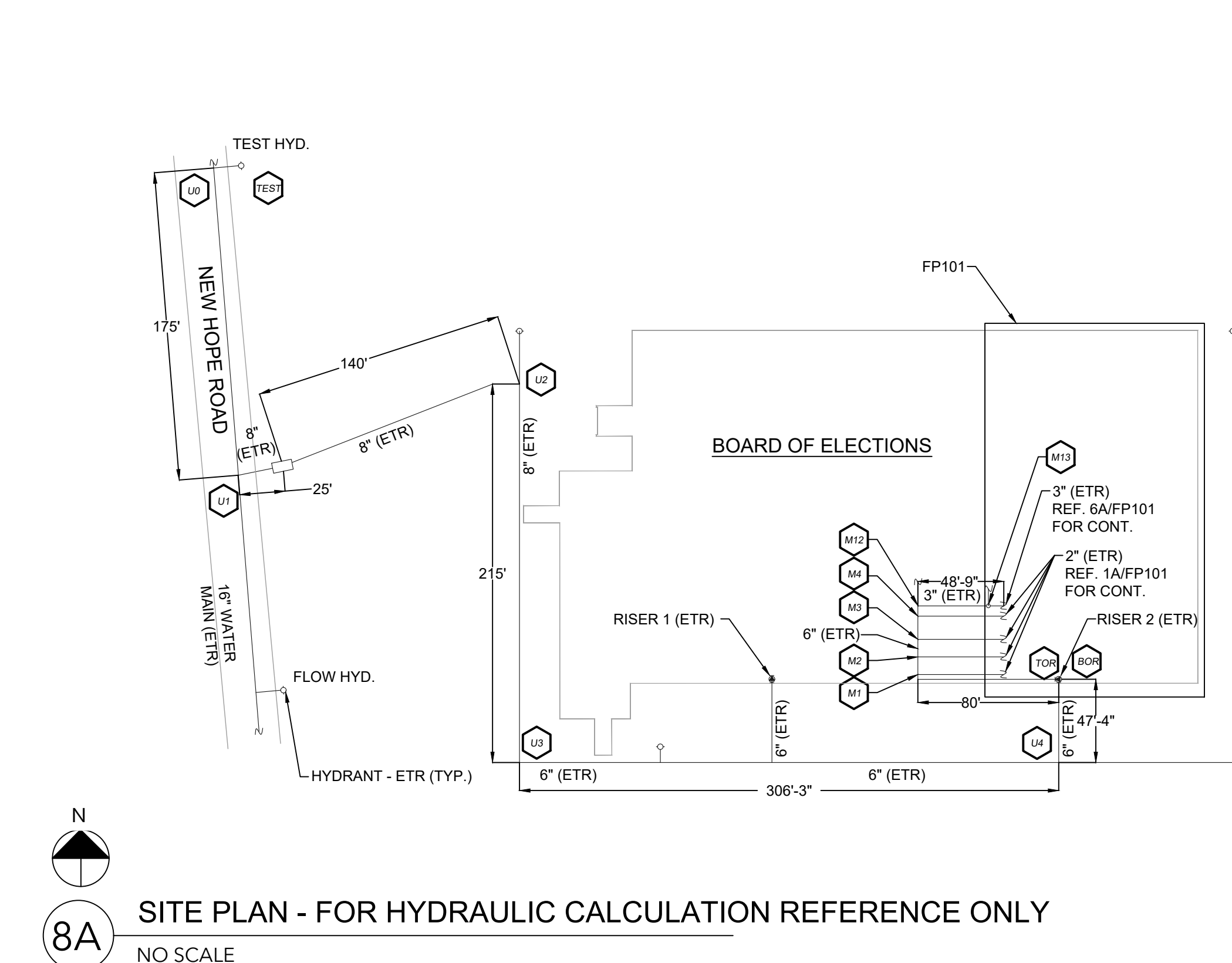
FIRE PROTECTION DESIGN DATA table with fields for Project Name, Location, Date, etc.

FIRE PROTECTION DESIGN SUMMARY table with columns for Design Method, Design Area, Location, etc.

FIRE PROTECTION WATER SUPPLY INFORMATION table with columns for Tested By, Hydrant Elev., Static (Psi), etc.

FIRE PROTECTION STORAGE INFORMATION table with columns for Commodity Description, Storage Height, etc.

SPRINKLER HEAD LEGEND table listing DRY SPRINKLER HEAD, UPRIGHT SPRINKLER HEAD, and RECESSED PENDENT SPRINKLER HEAD with their specifications.



8A NO SCALE

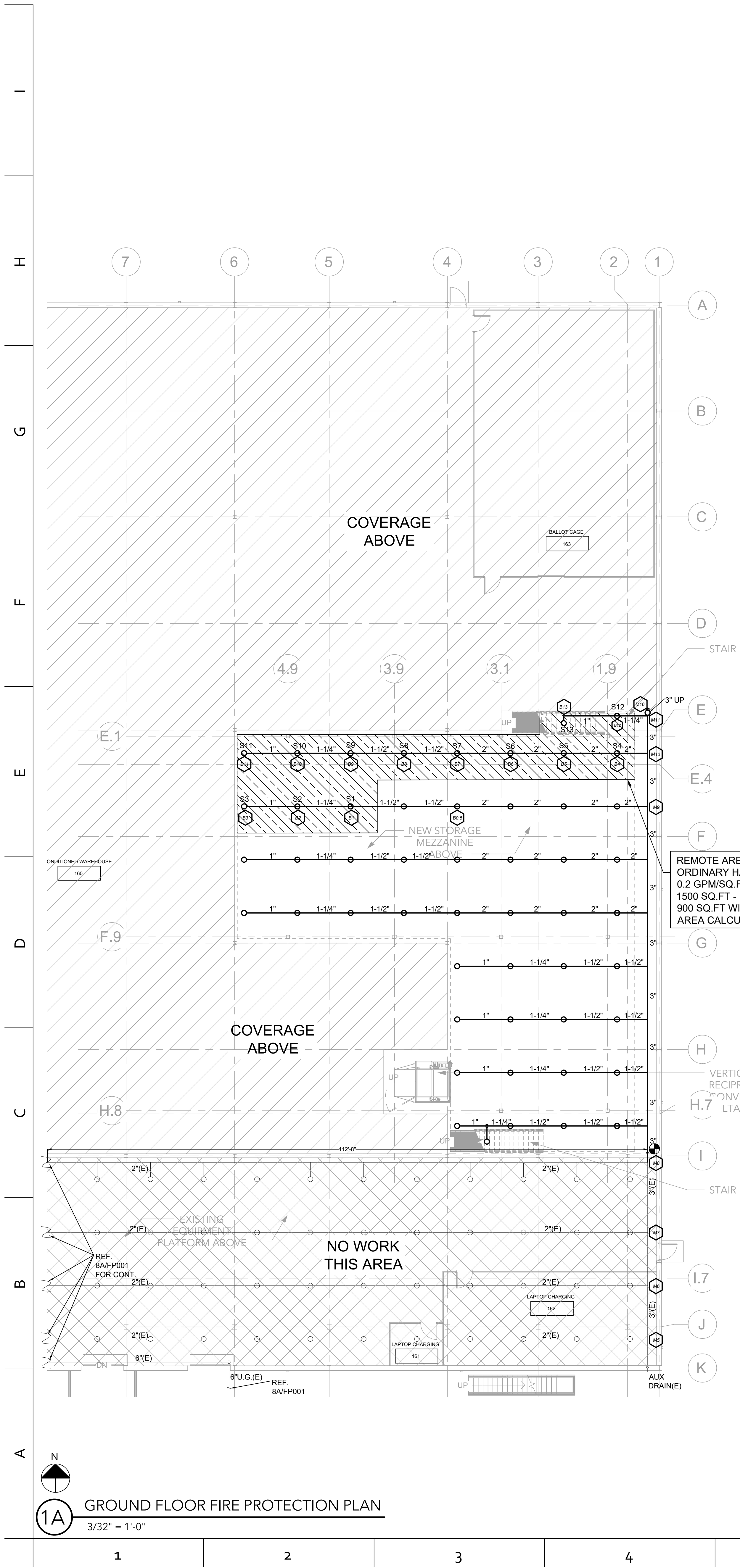
C:\Users\joe\Documents\Local Files\2416 BOE Storage Mezzanine\2416 BOE Storage Mezzanine.rvt
 7/26/2024 4:55:34 PM ARCH E1 (42.00 x 30.00 Inches), 1:1
 (C) 2023 OSTERLUND ARCHITECTS, PLLC

5 W Hargett Street 310
 Raleigh, NC 27601
 (919) 838-9337
 osterlundarchitects.com

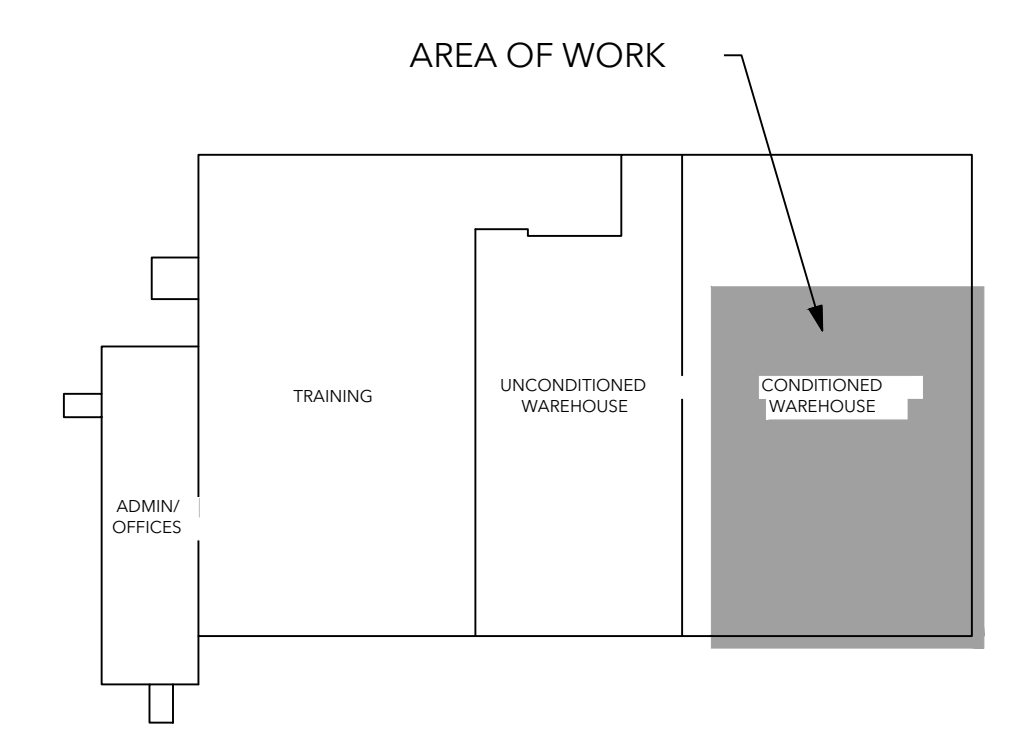
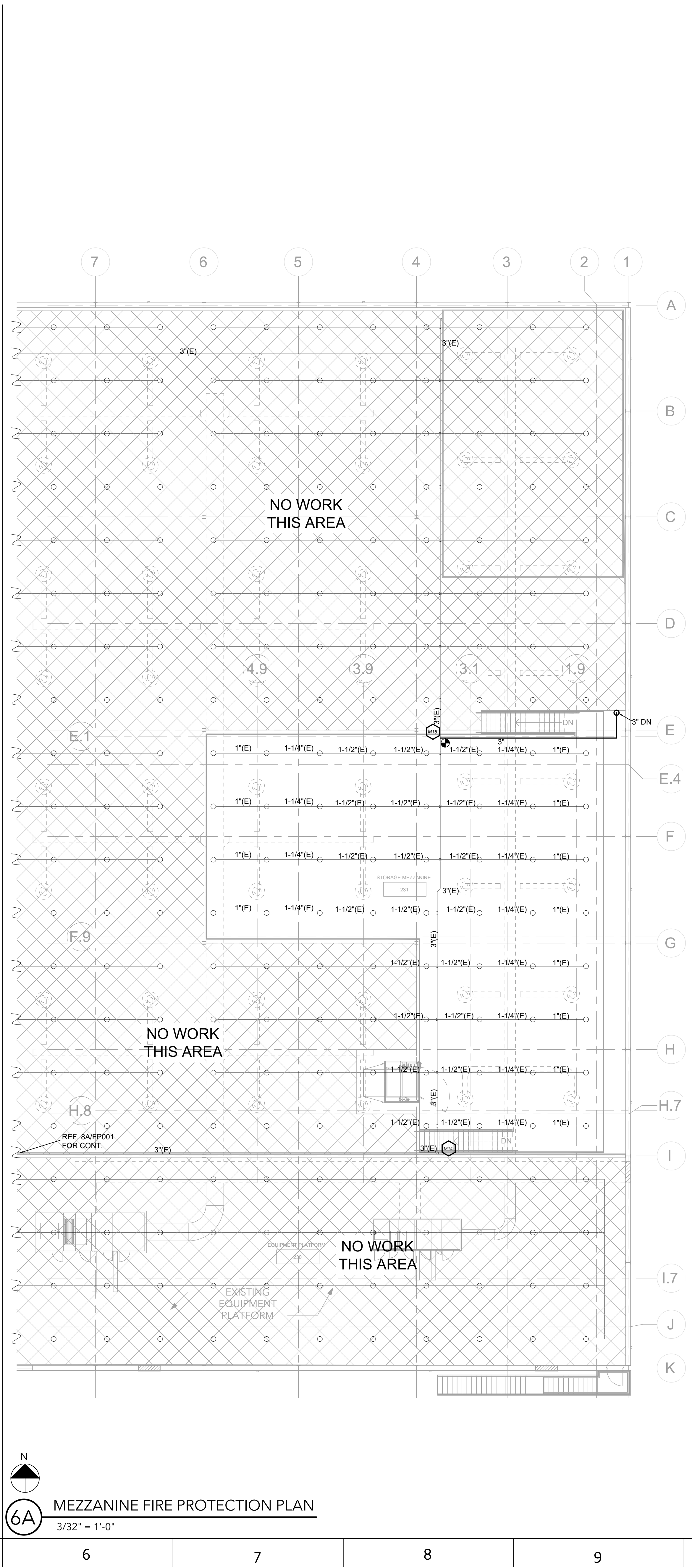
CONSULTANTS:
 Sigma Engineered Solutions, PC
 5090 Falls of Neuse Rd., Suite 101
 Raleigh, NC 27609
 Ph: 919.840.9300
 www.sigmas.com
 North Carolina License #: C-2490
 Sigma Project #: 24031

PROJECT No.: 2416

BOE STORAGE MEZZANINE RALEIGH, NC WAKE COUNTY FD & C RALEIGH, NC



REMOTE AREA R1
 ORDINARY HAZARD GROUP II
 0.2 GPM/SQ.FT OVER 900 SQ.FT
 1500 SQ.FT - 1500 * 0.4 SQ.FT =
 900 SQ.FT WITH 40% REDUCTION
 AREA CALCULATED 969 SQ. FT



SEALS:
 signed by:

 11/12/2024

ISSUE: CONSTRUCTION
 DATE: 11/12/2024
 DRAWN BY: JRE
 REVISIONS:

1	

FIRE PROTECTION PLANS

BOE STORAGE MEZZANINE
RALEIGH, NC
WAKE COUNTY FD & C
RALEIGH, NC

SEALS:

Signed by:

 MECHANICAL

Designed by:

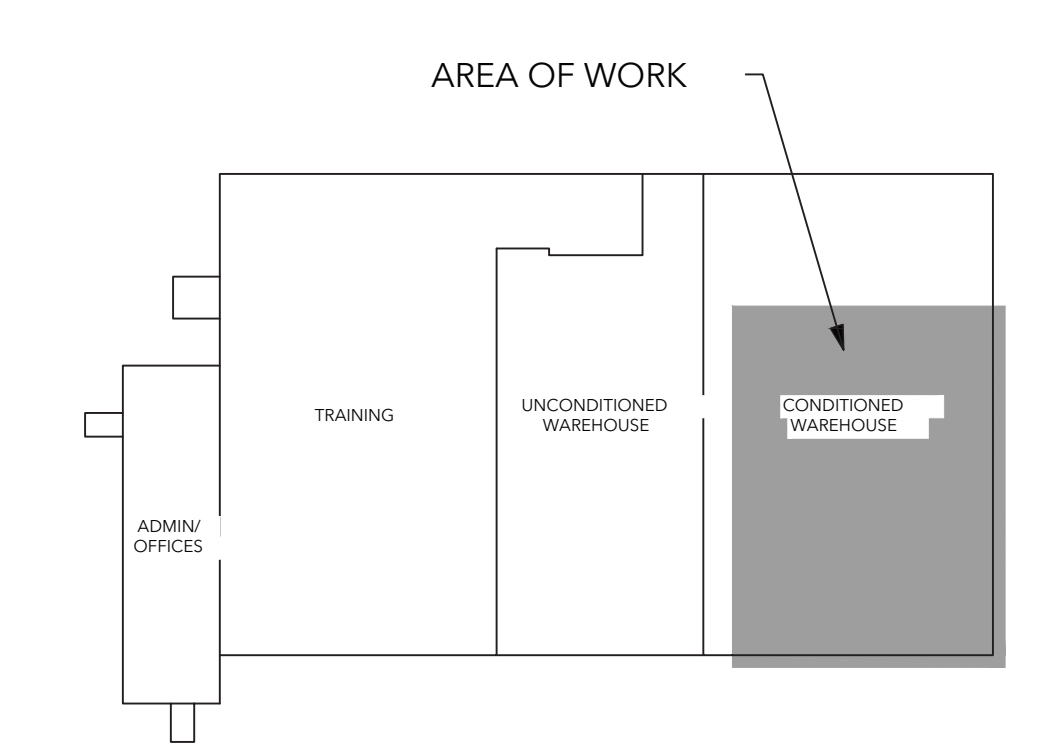
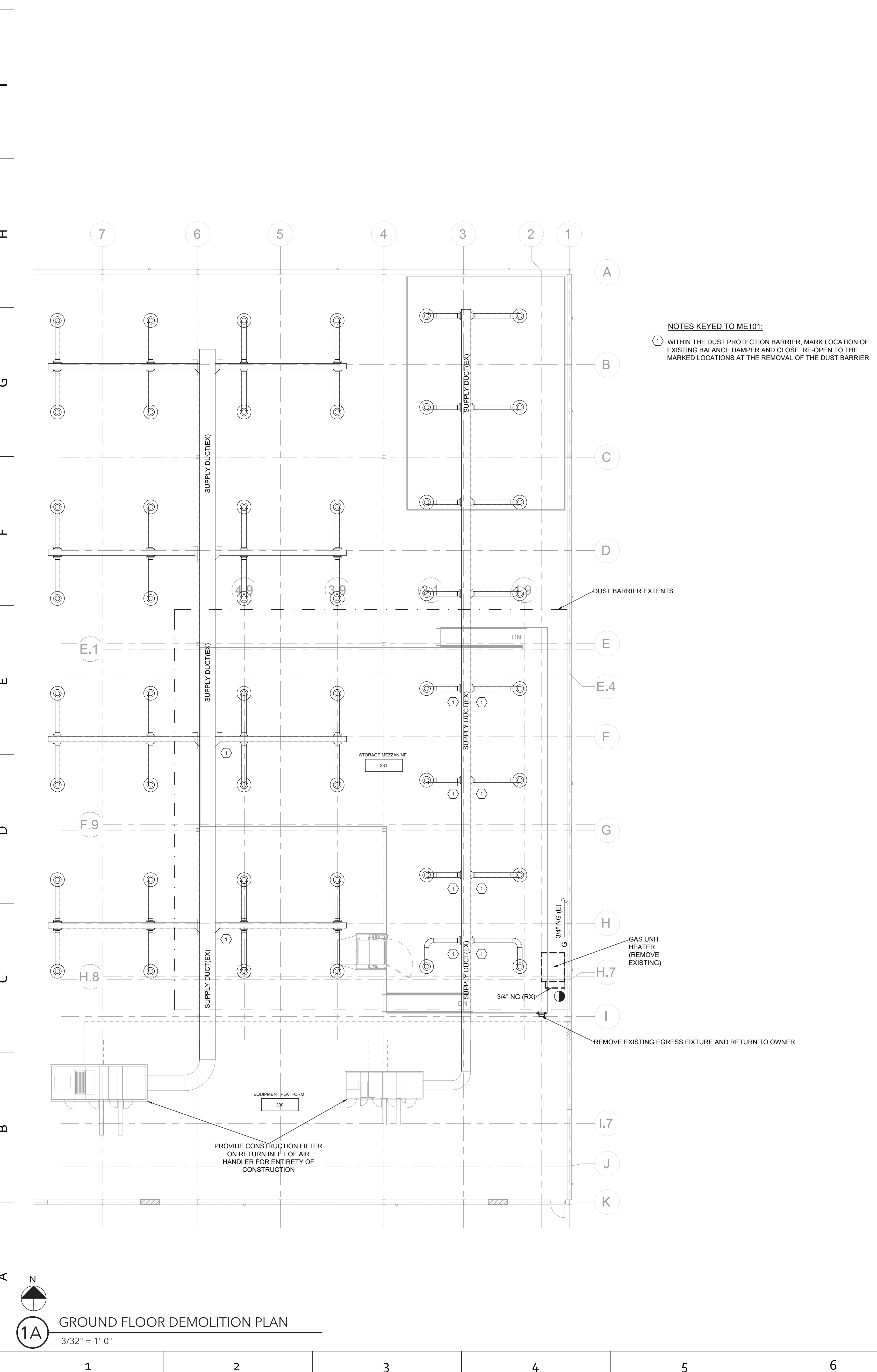
 ELECTRICIAN

ISSUE: CONSTRUCTION
 DATE: 11/12/2024
 DRAWN BY: JRE/RDA
 REVISIONS:

NO.	DESCRIPTION	DATE
1		

MECHANICAL &
 ELECTRICAL
 DEMOLITION PLANS

ME101



SEALS:

Mr. Reginald D. Adams



11/12/2024

ISSUE: CONSTRUCTION DATE: 11/12/2024 DRAWN BY: RDA REVISIONS:

Table with 2 columns: Revision number, Description. Row 1: 1, [Blank]

ELECTRICAL COVER

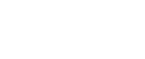
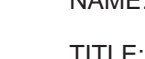
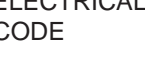
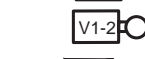
ABBREVIATIONS

Table of abbreviations including AMPERE, AMMETER (KW), ABOVE FINISHED FLOOR (LC), AMPERES INTERRUPTING CAPACITY (LTG), AIR HANDLING UNIT (LV), AUTOMATIC TRANSFER SWITCH (MB), AUDIO-VISUAL (MC), BELOW FINISHED GRADE (MCB), CONDUIT (MCC), CABLE (COMMUNITY) ANTENNA TELEVISION (MH), COPPER (MLO), DISCONNECT (NF), ELECTRICAL CONTRACTOR (NIC), ENCLOSED CIRCUIT BREAKER (NL), EQUIPMENT GROUNDING CONDUCTOR (P), ELECTRIC WATER COOLER (PB), EXISTING (PC), FIRE ALARM (FA), FIRE ALARM ANNUNCIATOR PANEL (FAAP), FIRE ALARM CONTROL PANEL (FACP), GROUNDING ELECTRODE CONDUCTOR (GEC), GROUND (G.GND), GENERAL CONTRACTOR (GC), GROUND FAULT INTERRUPTER (GF.GFI), HANDHOLE (HH), HORSEPOWER (HP), ISOLATED GROUND (IG, ISG), JUNCTION BOX (JB), KILOVOLT-AMPERES (KVA), KILOWATTS (KW), LIGHTING CONTACTOR (LC), LOW VOLTAGE (LV), MAIN BREAKER (MB), MECHANICAL CONTRACTOR (MC), MAIN CIRCUIT BREAKER (MCB), MOTOR CONTROL CENTER (MCC), MANHOLE (MH), MAIN LUGS ONLY (MLO), NON FUSED (NF), NOT IN CONTRACT (NIC), NIGHT LIGHT (NL), POLE, PHASE (P), PULL BOX (PB), PLUMBING CONTRACTOR (PC), PANELBOARD (P/BD, PNL), PAIR (PR), PHOTO-VOLTAIC (PV), SOLID NEUTRAL (SN), SWITCH (SW), SWITCHBOARD (SWBD), TELECOM (T/C), UNDERGROUND (UG), UNLESS OTHERWISE NOTED (UON), VOLT (V), WEATHER-PROOF (WP), TRANSFORMER (XFMR).

SECURITY SYSTEM SYMBOLS

REFER TO DETAILS SHEETS S8600 AND S8601 FOR ROUGH-IN DETAILS RELATED TO SEC. SYSTEMS INSTALLATION.

REFER TO S8601 FOR ROUGH-IN INFORMATION



AV SYSTEM SYMBOLS

CEILING MOUNTED PROJECTOR. PROVIDE AV CONDUIT ROUGH-IN AND RECEPTACLE AT CEILING PER DETAIL 2/SS603.

CEILING MOUNTED SCREEN AND CONTROLS. PROVIDE AV CONDUIT ROUGH-IN AND POWER AT CEILING PER DETAIL 1/SS603.

WALL MOUNTED TOUCH PANEL. PROVIDE AV CONDUIT ROUGH-IN AND ALL REQUIRED BOXES PER DETAIL 1/SS604.

WALL MOUNTED MONITOR. PROVIDE AV CONDUIT ROUGH-IN AND RECEPTACLE AT WALL PER DETAIL 3/SS603.

CEILING MOUNTED SPEAKER JUNCTION BOX. PROVIDE AV CONDUIT ROUGH-IN AT CEILING PER DETAIL 2/SS604.

CEILING MOUNTED SPEAKER.

CEILING MOUNTED PARTITION SENSOR. PROVIDE AV CONDUIT ROUGH-IN AT CEILING PER DETAIL 3/SS604.

POWER SYMBOLS

OUTLET BOX WITH BLANK COVER - LOCATE AS REQUIRED TO FOR EQUIPMENT SERVED.

FLUSH MTD DUPLEX RECEPTACLE AND OUTLET, 20A, 125V, 3W

FLUSH MTD QUADRUPLX RECEPTACLE AND OUTLET, 20A, 125V, 3W

FLUSH MOUNTED QUADRUPLX RECEPTACLE AND OUTLET 20A, 125V, 3W, INSTALLED 4" ABOVE BACKSPASH OR COUNTER IF NO BACKSPASH EXISTS.

FLUSH MOUNTED QUADRUPLX RECEPTACLE AND OUTLET 20A, 125V, 3W, INSTALLED 4" ABOVE BACKSPASH OR COUNTER IF NO BACKSPASH EXISTS.

FLOOR BOX. BOX TO BE FLUSH MOUNTED IN CONCRETE FLOORS.

- NOTE TO ALL RECEPTACLES/JUNCTION BOXES: 1. SUBSCRIPT EWC INDICATES GROUND FAULT TYPE RECEPTACLE FOR ELECTRIC WATER COOLER. 2. SUBSCRIPT WP INDICATES GROUND FAULT TYPE RECEPTACLE WITH STEEL LOCKABLE CLOSED WEATHERPROOF COVER. 3. SUBSCRIPT GFI INDICATES GROUND FAULT TYPE RECEPTACLE. 4. SUBSCRIPT VFN INDICATES GROUND FAULT TYPE RECEPTACLE FOR VENDING MACHINE. 5. SUBSCRIPT TV INDICATES RECEPTACLE FOR TV MOUNTED IN BRACKET. 6. SUBSCRIPT SL INDICATES SHORELINE INSTALLATION PER DETAILS. 7. SUBSCRIPT USB INDICATES COMBINATION 20A OUTLET AND USB PORT. 8. SUBSCRIPT HD INDICATES HAND DRYER CONNECTION. 9. SUBSCRIPT MF INDICATED GFI RECEPTACLE MOUNTED BELOW SINK FOR ELECTRIC METERED FAUCET CONNECTION. 10. SUBSCRIPT DW INDICATES DISHWASHER CONNECTION. PROVIDE WITH 120 VOLT 20 AMPERE SWITCH ABOVE COUNTER FOR DISCONNECT. 11. SUBSCRIPT CR INDICATES 120 V POWER FOR CARD READER. 12. SUBSCRIPT CO INDICATES 120 V POWER CONNECTION FOR CEILING CORD DROP CONNECTION.

TELE/COMM OUTLET 4" SQ. BOX WITH 1" PER RISER. PROVIDE CABLE AS NOTED. TELE/COMM OUTLET 4" SQ. BOX WITH 1" PER RISER. MOUNT 4" ABOVE BACKSPASH OR AS NOTED. PROVIDE CABLE AS NOTED.

CENTER HUNG CABLE TRAY PER DRAWINGS AND PROJECT MANUAL.

- NOTE TO ALL TELECOM OUTLETS: 1. SUBSCRIPT WAP DESIGNATES WIRELESS ACCESS POINT MOUNTED IN CEILING. 2. SUBSCRIPT FA DESIGNATES CONNECTION FOR FIRE ALARM DIAL OUT. 3. SUBSCRIPT EL DESIGNATES CONNECTION FOR ELEVATOR PHONES. 4. SUBSCRIPT W DESIGNATES WALL MOUNTED PHONE MOUNTED AT 48" AFF. 5. SUBSCRIPT DC DESIGNATES DOOR COUNTER CONNECTION. 6. SUBSCRIPT SEC DESIGNATES CONNECTION FROM DROP 1. 7. SUBSCRIPT ER DESIGNATES EMERGENCY RESPONSE PHONE WITH DEDICATE LINE. 8. SUBSCRIPT AV DESIGNATES 1" TO ABOVE CEILING FOR AV CONNECTION.

HANDICAPPED DOOR OPERATOR

DISCONNECT SWITCH-PROVIDE 30A, NON-FUSED U.O.N.

NON-FUSED DISCONNECT SWITCH. NUMBER OF POLES AND VOLTAGE PER CIRCUIT FED.

30 AMP FUSED DISCONNECT SWITCH, FUSED AT 20 AMP. NUMBER OF POLES AND VOLTAGE PER CIRCUIT FED.

30 AMP NON-FUSED, WEATHERPROOF NEMA 3R DISCONNECT SWITCH. NUMBER OF POLES AND VOLTAGE PER CIRCUIT FED.

30 AMP NON-FUSED, NEMA 4X SS DISCONNECT SWITCH. NUMBER OF POLES AND VOLTAGE PER CIRCUIT FED.

FVNR COMBINATION DISCONNECT SWITCH AND MAGNETIC MOTOR STARTER OR VFD (IF MARKED VFD)

MANUAL MOTOR STARTER SWITCH WITHOUT OVERLOAD HEATERS

A.C. MOTOR, NUMERAL INDICATES HP 'F' INDICATES FRACTIONAL HP

PANEL BOARD, FLUSH MOUNTED

PANEL BOARD, SURFACE MOUNTED

PANEL BOARD, SURFACE MOUNTED

CONCEALED RACEWAY. INDICATES HOMERUN TO PANEL IN 3/4" CONDUIT-WIRE PER PANEL SCHEDULES.

ELECTRICAL SYMBOL NOTES

- 1. SYMBOLS AND ABBREVIATIONS MAY NOT ALL BE UTILIZED FOR THIS PROJECT. 2. SYMBOLS NOT LISTED IN THIS ELECTRICAL SYMBOL LEGEND ARE IDENTIFIED ON THE DRAWINGS WHERE THEY OCCUR. 3. MOUNTING HEIGHT GIVEN IN THE ELECTRICAL SPECIFICATIONS IS TO THE CENTERLINE OF THE DEVICE AND SHALL BE FOLLOWED UNLESS OTHERWISE NOTED.

LIGHTING SYMBOLS

WALL OR CEILING MTD EXIT SIGN WITH SELF CONTAINED BATTERY BACK-UP, SINGLE FACE. ARROW WHEN USED INDICATES DIRECTION.

WALL OR CEILING MTD EXIT SIGN WITH SELF CONTAINED BATTERY BACK-UP, DOUBLE FACE. ARROW WHEN USED INDICATES DIRECTION.

SUSPENDED OR SURFACE MTD LED LIGHTING FIXTURE AND OUTLET. LETTER INDICATES FIXTURE TYPE; NUMBER INDICATES CIRCUIT

SUSPENDED OR SURFACE MTD LED LIGHTING FIXTURE LETTER DESIGNATES FIXTURE TYPE AND NUMBER INDICATES CIRCUIT INSTALLED WITH EMERGENCY DRIVER ON NITE-LITE CIRCUIT

CEILING MTD OR LAY-IN TYPE LED LIGHTING FIXTURE AND OUTLET, LETTER INDICATES FIXTURE TYPE; NUMBER INDICATES CIRCUIT

CEILING MTD OR LAY-IN LED LIGHTING FIXTURE LETTER DESIGNATES FIXTURE TYPE AND NUMBER INDICATES CIRCUIT INSTALLED WITH EMERGENCY DRIVER ON NITE-LITE CIRCUIT

CEILING MTD OR LAY-IN TYPE LED LIGHTING FIXTURE AND OUTLET, LETTER INDICATES FIXTURE TYPE; NUMBER INDICATES CIRCUIT

CEILING MTD OR LAY-IN LED LIGHTING FIXTURE LETTER DESIGNATES FIXTURE TYPE AND NUMBER INDICATES CIRCUIT INSTALLED WITH EMERGENCY DRIVER ON NITE-LITE CIRCUIT

CEILING/PENDENT MTD/RECESSED LIGHTING FIXTURE AND OUTLET. LETTER DESIGNATES FIXTURE TYPE AND NUMBER INDICATES CIRCUIT

CEILING/PENDENT MTD/RECESSED LIGHTING FIXTURE LETTER DESIGNATES FIXTURE TYPE AND NUMBER INDICATES CIRCUIT INSTALLED WITH EMERGENCY DRIVER ON NITE-LITE CIRCUIT

SURFACE MOUNTED WALL LUMINAIRE OUTLET, LETTER INDICATES FIXTURE TYPE; NUMBER INDICATES CIRCUIT

SURFACE MOUNTED WALL LUMINAIRE LETTER DESIGNATES FIXTURE TYPE AND NUMBER INDICATES CIRCUIT INSTALLED WITH EMERGENCY DRIVER ON NITE-LITE CIRCUIT

EMERGENCY WALL BATTERY PACK UNIT PER THE SCHEDULE. LETTER NEXT TO FIXTURE ON PLANS INDICATES FIXTURE TYPE. CONNECT UNSWITCHED TO INDICATED BRANCH CIRCUIT.

EMERGENCY CEILING BATTERY PACK UNIT PER THE SCHEDULE. LETTER NEXT TO FIXTURE ON PLANS INDICATES FIXTURE TYPE. CONNECT UNSWITCHED TO INDICATED BRANCH CIRCUIT.

NOTE TO ALL LIGHTING: XY-SUBSCRIPTS @ LIGHTING FIXTURES: 1. X-REPRESENTS OCCUPANCY SENSOR THAT CONTROLS FIXTURE. 2. Y-REPRESENTS SWITCH THAT CONTROLS FIXTURE. 3. WHEN NO SUBSCRIPT IS SHOWN, LOCAL OCC SENSOR AND SWITCH CONTROLS FIXTURE.

DIGITAL TIMER SWITCH-INTERMATIC EI235 OR EQUAL OR DIGITAL TIMER SWITCH-INTERMATIC ST01 OR EQUAL

FLUSH MTD TOGGLE SWITCH, S.P.S.T., 20A, 120/277V

FLUSH MTD 3-WAY TOGGLE SWITCH, 20A, 120/277V

FLUSH MTD 4-WAY TOGGLE SWITCH, 20A, 120/277V

FLUSH MTD 0-10V LED DIMMER SWITCH

SWITCH TYPE OCCUPANCY SENSOR WITH BUILT-IN OVERRIDE SWITCH

SURFACE MTD TOGGLE SWITCH, S.P.S.T., 20A, 120/277V W/LOCKABLE COVER PLATE

LOWER CASE SUBSCRIPT INDICATE WHICH LIGHTS THE SWITCH IS TO BE CONNECTED TO.

DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR; AV DESIGNATES SENSOR PROVIDED AS PART OF DIMMING OR AV PACKAGE UH DESIGNATES ULTRA-SONIC DEVICE RATED FOR HALLWAY INSTALL

WALL MOUNTED OCCUPANCY SENSOR

NOTE ON OCC SENSORS: SENSORS SHALL PROVIDE COVERAGE TO 1000 SF AND SWITCH LOAD OFF AFTER 20 MIN.

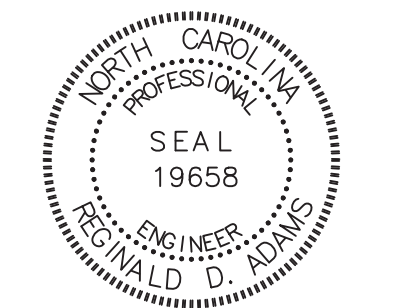
PARTITION SENSOR

LIGHTING CONTACTOR

BOE STORAGE MEZZANINE
RALEIGH, NC
WAKE COUNTY FD & C
RALEIGH, NC

SEALS:

Designed by
Mr. Ronald D. Adams
E100000000



11/12/2024

ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: RDA

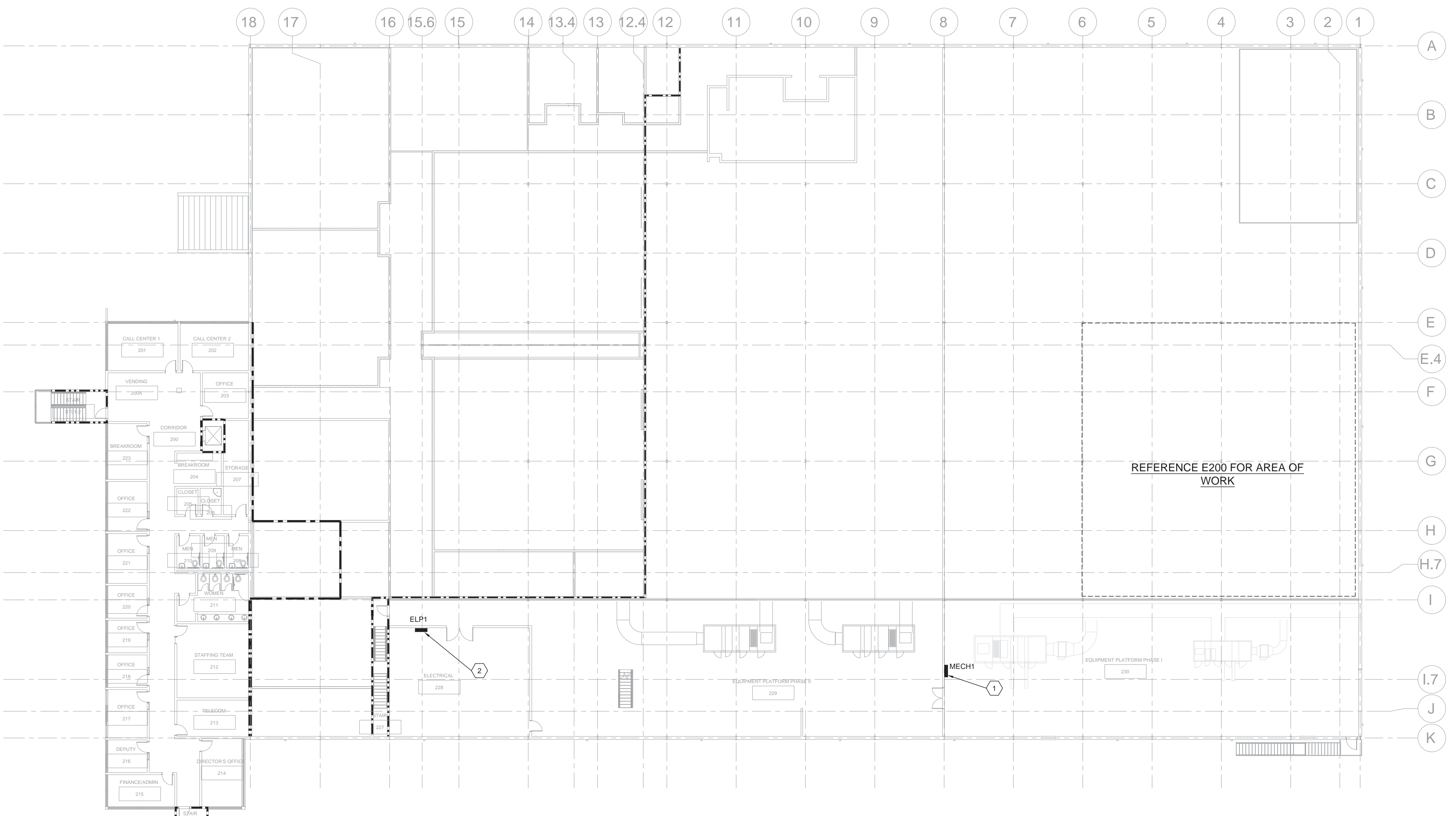
REVISIONS:

1		

ELECTRICAL PLANS

E100

- NOTES KEYED TO E100:**
- 1 PROVIDE NEW 15 AMPERE, 3-POLE BREAKER IN PANEL. REFERENCE E200 FOR WIRING.
 - 1 LOCATION OF PANEL ELP1. SHOWN FOR REFERENCE.

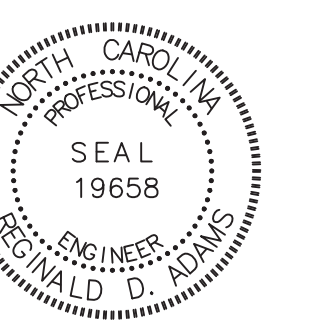


1A OVERALL PLAN SECOND LEVEL
1/16" = 1'-0"

BOE STORAGE MEZZANINE
RALEIGH, NC
WAKE COUNTY FD & C
RALEIGH, NC

SEALS:

Designed by
Mr. Reginald D. Adams
19658/19658



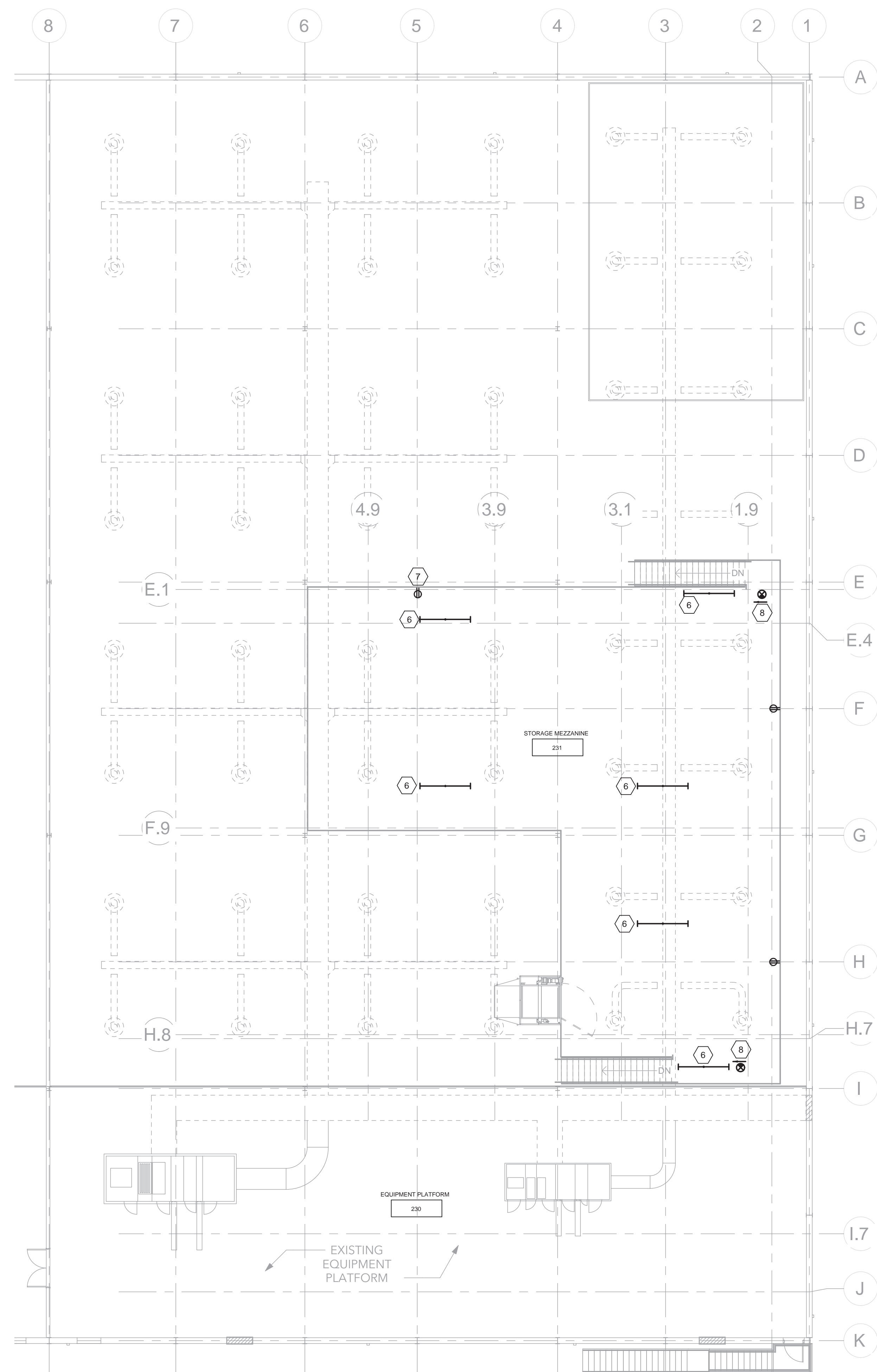
11/12/2024

ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: RDA
REVISIONS:

1	

ELECTRICAL PLANS

E200

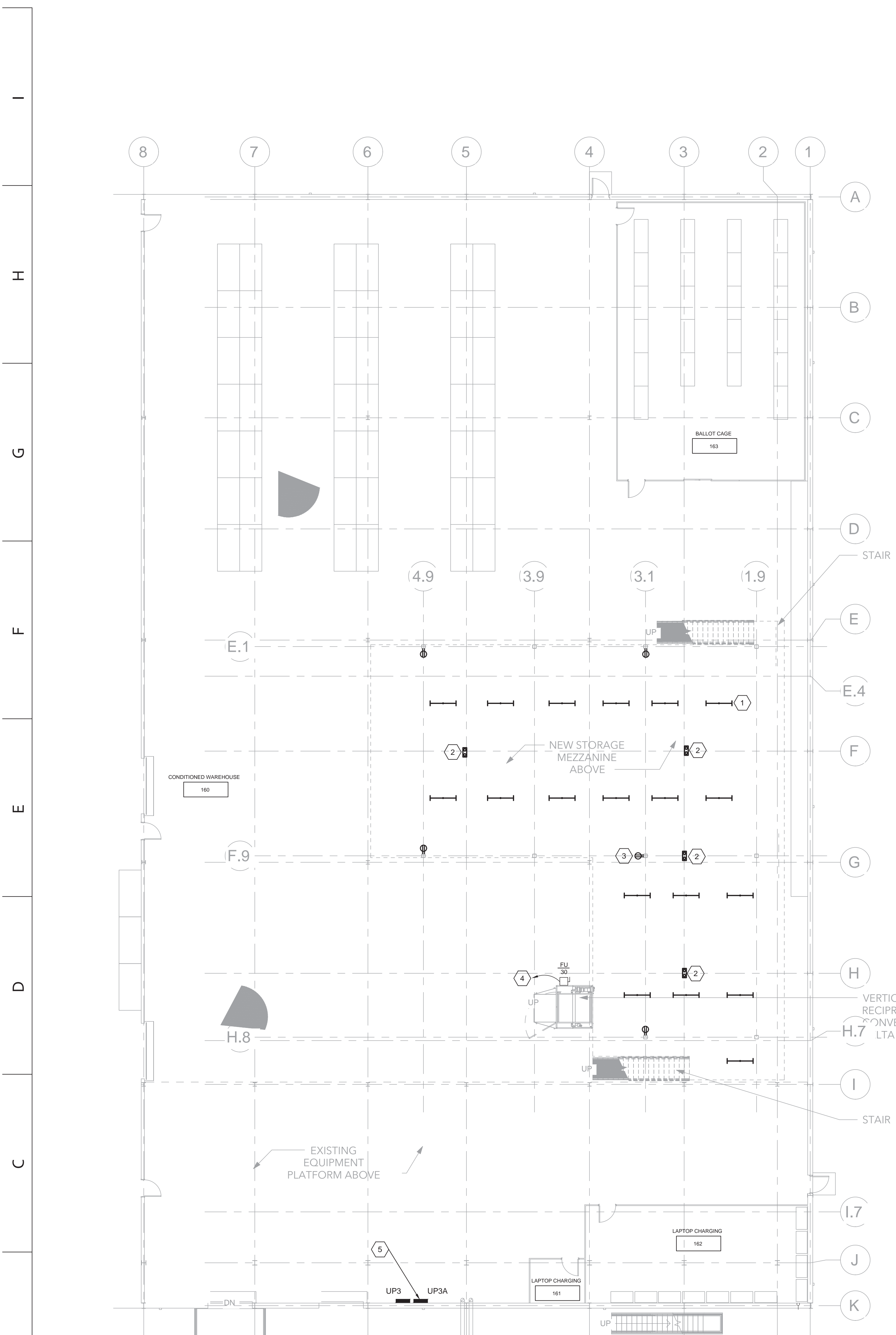


8A MEZZ. LEVEL POWER AND LIGHTING PLAN
3/32" = 1'-0"

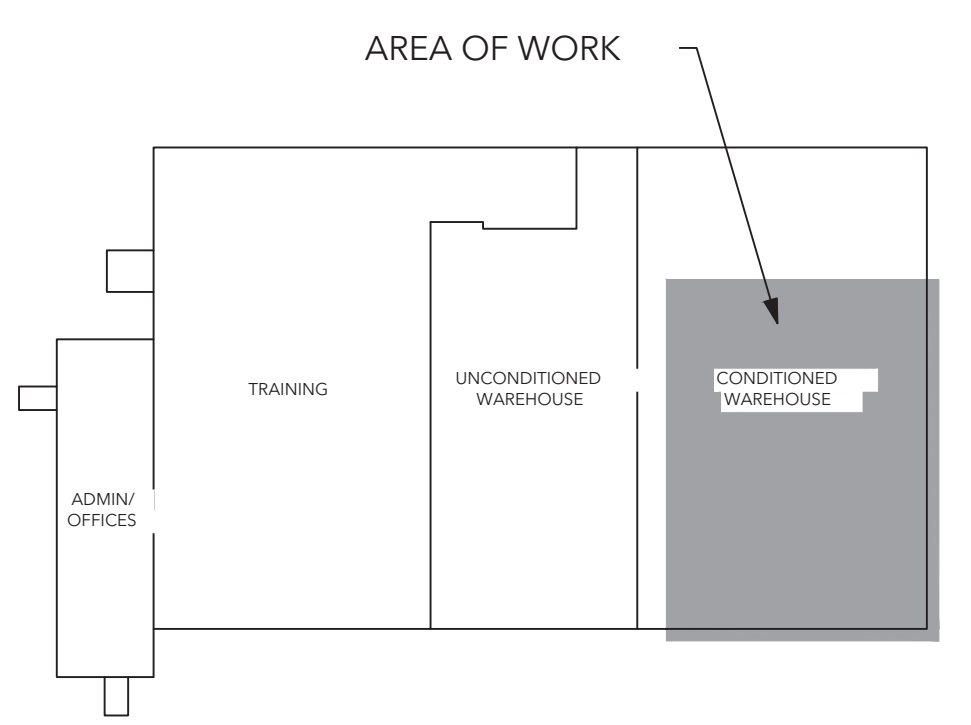
GENERAL NOTES:
1. U.O.N., REFERENCE PANEL SCHEDULES, E401 FOR WIRE SIZES.

NOTES KEYED TO E200:

- 1 PROVIDE NEW LED STRIP LIGHT WITH INTEGRAL MOTION SENSOR. INSTALL AT 10'-0" AFF. CONNECT TO NEW WIRING TO PANEL UP3A. BASIS OF DESIGN: ACUITY BRAND H2L1D-148-SMR-300LM-FST-MVOLT-35-80-LBOZU. ALL CIRCUITING TO PANEL UP3A, CIRCUIT #2. TYPICAL.
- 2 PROVIDE NEW EGRESS FIXTURE ON BOTTOM OF ABOVE STRUCTURE. BASIS OF DESIGN: ACUITY ELM6L CONNECT, UNSWITCHED, TO UPS3A-2.
- 3 PROVIDE NEW 20A GFCI RECEPTACLE AT 24" AFF. ALL CIRCUITING TO PANEL UP3A, CIRCUIT #4. TYPICAL THIS LEVEL.
- 4 PROVIDE DISCONNECT AS SHOWN AND #10 AWG IN 1" C TO PANEL MECH1, CIRCUIT #7.
- 5 EXISTING PANEL UP3A.
- 6 PROVIDE NEW LED STRIP LIGHT WITH INTEGRAL EMERGENCY DRIVER. INSTALL AT 10'-0" AFF. CONNECT TO NEW WIRING TO PANEL UP3A. BASIS OF DESIGN: ACUITY BRAND T2L1F-LNS-12000LM-MDD-2E7W-WH. ALL CIRCUITING TO PANEL UP3A, CIRCUIT #2. TYPICAL.
- 7 AS PART OF ALTERNATE #1, PROVIDE NEW 20A GFCI RECEPTACLE AT 24" AFF. ALL CIRCUITING TO PANEL UP3A, CIRCUIT #4. TYPICAL THIS LEVEL.
- 8 PROVIDE PENDANT MOUNTED LED EXIT SIGN. BASIS OF DESIGN: LITHONIA LESW1R ELN.



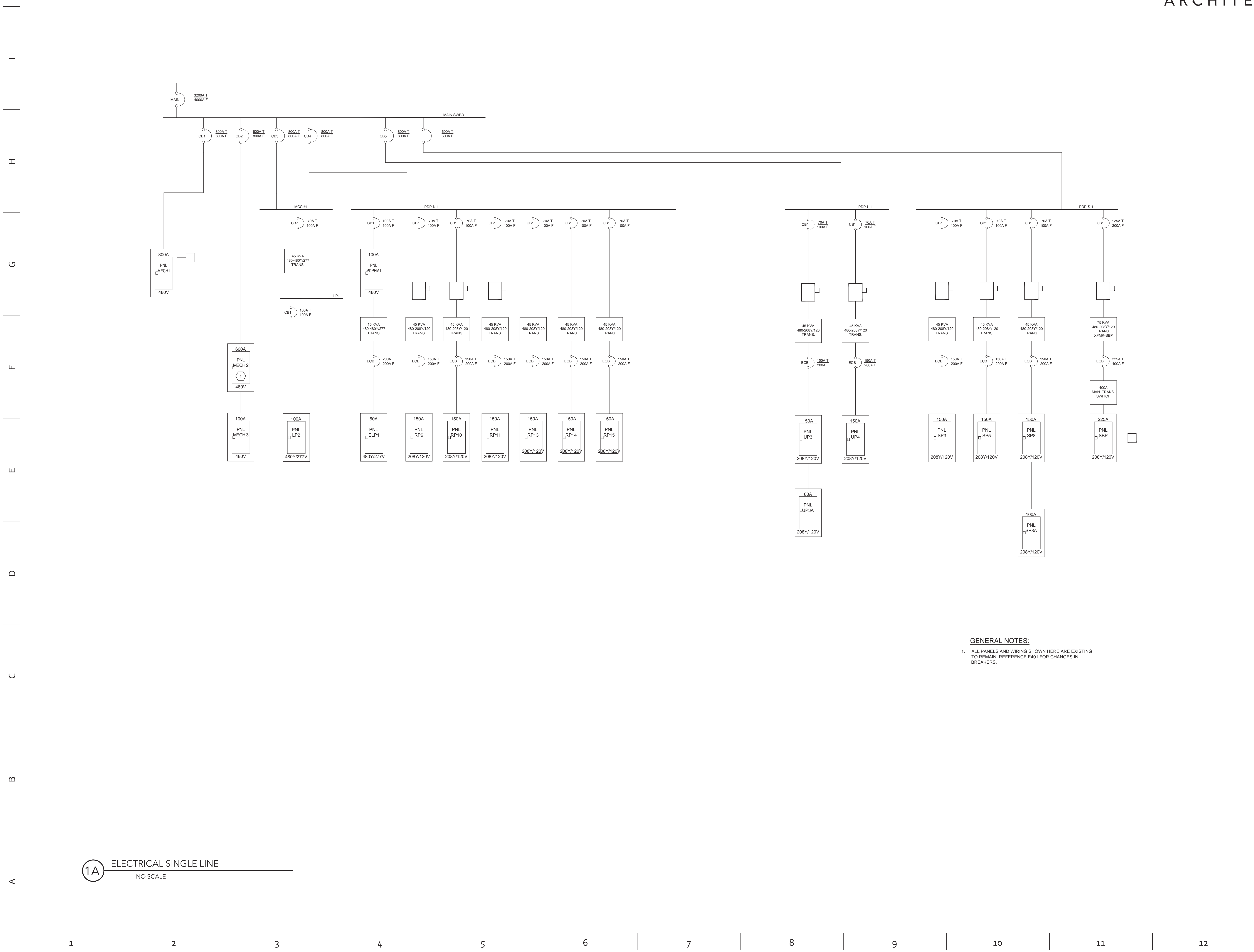
1A LOWER LEVEL POWER AND LIGHTING PLAN
3/32" = 1'-0"



BOE STORAGE MEZZANINE
RALEIGH, NC
WAKE COUNTY FD & C
RALEIGH, NC

7/26/2024 4:55:34 PM ARCH E1 (42.00 x 30.00 inches) 1:1

C:\Users\Jee\Documents\Local Files\2416 BOE Storage Mezzanine\2416 BOE Storage Mezzanine.rvt (C) 2023 OSTERLUND ARCHITECTS, PLLC



1A ELECTRICAL SINGLE LINE
NO SCALE

GENERAL NOTES:
1. ALL PANELS AND WIRING SHOWN HERE ARE EXISTING TO REMAIN. REFERENCE E401 FOR CHANGES IN BREAKERS.

SEALS:

Designed by:
Mr. Reginald D. Adams
Professional Engineer
SEAL 19658
11/12/2024

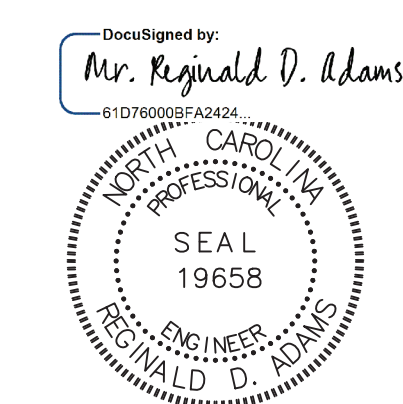
ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: RDA
REVISIONS:

1		

ELECTRICAL SINGLE LINE

E400

SEALS:



ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: RDA
REVISIONS:

1	

PANEL SCHEDULES

PANEL "UP3A"		PANEL TYPE:		NQOD			MCB or MLO:			MLO			
		BUS SIZE:		100A			MOUNTING:			SURFACE NEMA 1			
		VOLTAGE:		208Y/120			MINIMUM AIC:			10,000			
CKT	LOAD SERVED	TRIP	POLE	KVA PER PHASE			CON.	WIRE*	KVA	POLE	TRIP	LOAD SERVED	CKT
				A	B	C							
1	PALLE WRAPPER	20	1	0.50	#12	3/4"	1.77					DUPLEX REC	2
3	TOW/MOTOR	20	1	0.30	#12	3/4"		1.02				DUPLEX REC	4
5	SCALE	20	1	0.30	#12	3/4"		0.30				DUPLEX REC	6
7	SPARE	20	1									SPARE	8
9	SPARE	20	1					0.00				SPARE	10
11	SPARE	20	1					0.00				SPARE	12
13	SPARE	20	1					0.00				SPARE	14
15	SPARE	20	1					0.00				SPARE	16
17	SPARE	20	1					0.00				SPARE	18
19	SPARE	20	1					0.00				SPARE	20
21	SPARE	20	1					0.00				SPARE	22
23	SPARE	20	1					0.00				SPARE	24
25	SPARE	20	1					0.00				SPARE	26
27	SPARE	20	1					0.00				SPARE	28
29	SPARE	20	1					0.00				SPARE	30
31	SPACE	20	1					0.00				SPACE	32
33	SPACE	20	1					0.00				SPACE	34
35	SPACE	20	1					0.00				SPACE	36
37	SPACE	20	1					0.00				SPACE	38
39	SPACE	20	1					0.00				SPACE	40
41	SPACE	20	1					0.00				SPACE	42
TOTALS:				KW	1.77	1.02	0.30						
				A	6.40	3.68	1.08						

TOTAL CONNECTED KVA : 3.09 KW 8.59 A
TOTAL DEMAND KVA : 3.09 KW 8.59 A

L-DESIGNATES LOCK-OUT DEVICE ON BREAKER
*-PHASE-NEUTRAL/GND

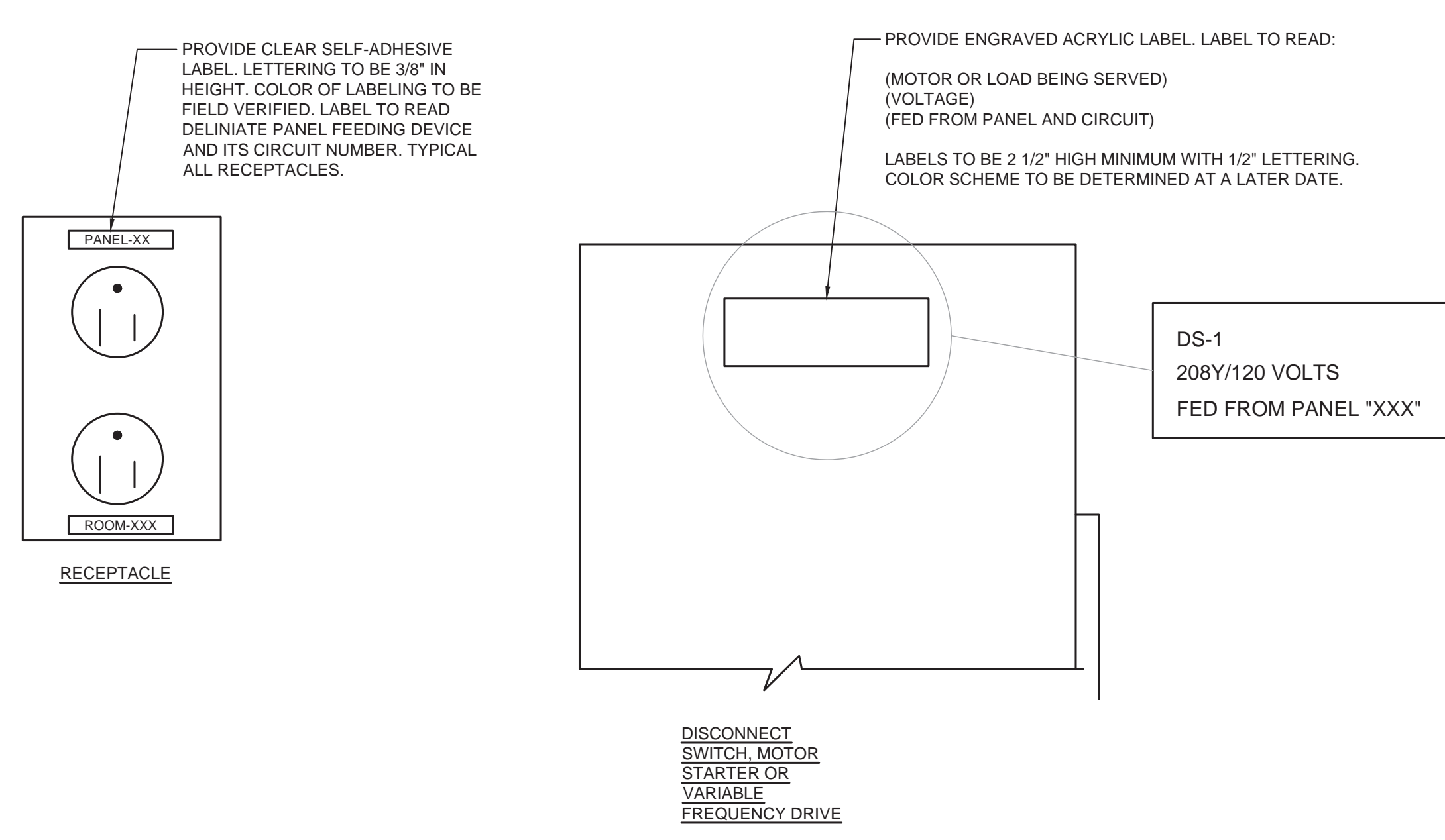
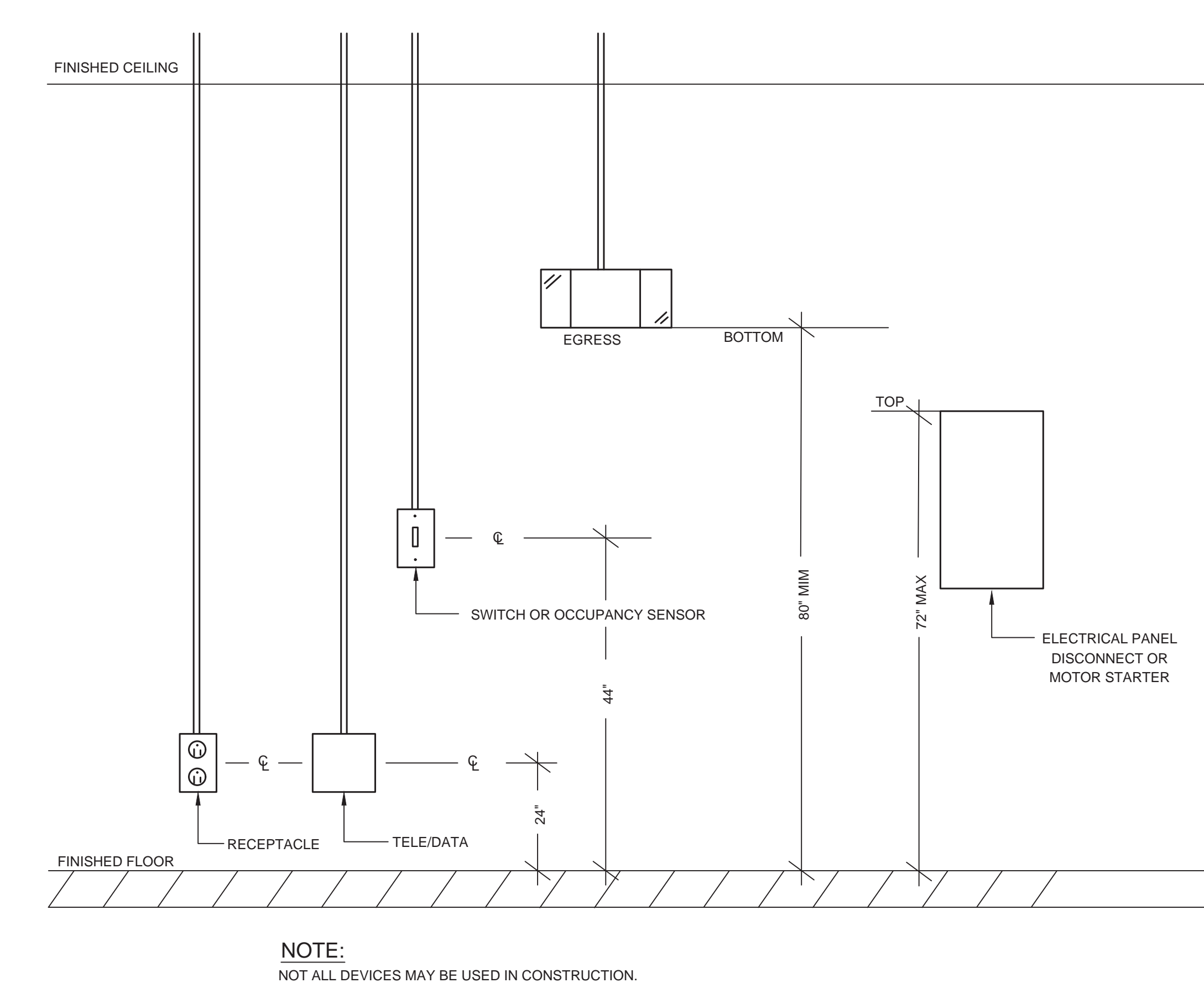
PANEL "UP3"		PANEL TYPE:		NQOD			MCB or MLO:			MLO			
		BUS SIZE:		150A			MOUNTING:			SURFACE NEMA 1			
		VOLTAGE:		208Y/120			MINIMUM AIC:			10,000			
CKT	LOAD SERVED	TRIP	POLE	KVA PER PHASE			CON.	WIRE*	KVA	POLE	TRIP	LOAD SERVED	CKT
				A	B	C							
1	DUPLEX REC	20	1	0.50	#12#12	3/4"	1.00					DUPLEX REC	2
3	DUPLEX REC	20	1	0.50	#12#12	3/4"			1.00			DUPLEX REC	4
5	SINGLE 20A REC	20	1	1.00	#12#12	3/4"			2.00			SINGLE 20A REC	6
7	DUPLEX REC	20	1	0.50	#12#12	3/4"	1.00					DUPLEX REC	8
9	DUPLEX REC	20	1	0.50	#12#12	3/4"		1.00				DUPLEX REC	10
11	SINGLE 20A REC	20	1	1.00	#12#12	3/4"			2.00			SINGLE 20A REC	12
13	DUPLEX REC	20	1	0.50	#12#12	3/4"	1.00					DUPLEX REC	14
15	DUPLEX REC	20	1	0.50	#12#12	3/4"		1.00				DUPLEX REC	16
17	SINGLE 20A REC	20	1	1.00	#12#12	3/4"			2.00			SINGLE 20A REC	18
19	DUPLEX REC	20	1	0.50	#12#12	3/4"	1.00					DUPLEX REC	20
21	DUPLEX REC	20	1	0.50	#12#12	3/4"		1.00				DUPLEX REC	22
23	SINGLE 20A REC	20	1	1.00	#12#12	3/4"			2.00			SINGLE 20A REC	24
25	DUPLEX REC	20	1	0.50	#12#12	3/4"	1.50					DUPLEX REC	26
27	DUPLEX REC	20	1	0.50	#12#12	3/4"		1.50				DUPLEX REC	28
29	SINGLE 20A REC	20	1	1.00	#12#12	3/4"			2.00			SINGLE 20A REC	30
31	DUPLEX REC	20	1	0.50	#12#12	3/4"	1.50					DUPLEX REC	32
33	DUPLEX REC	20	1	0.50	#12#12	3/4"		2.00				DUPLEX REC	34
35	SINGLE 20A REC	20	1	1.00	#12#12	3/4"			2.50			SINGLE 20A REC	36
37	DUPLEX REC	20	1	0.50	#12#12	3/4"	2.27					DUPLEX REC	38
39	DUPLEX REC	20	1	0.50	#12#12	3/4"		1.52				DUPLEX REC	40
41	SINGLE 20A REC	20	1	1.00	#12#12	3/4"			1.30			SINGLE 20A REC	42
TOTALS:				KW	9.27	9.02	12.50						
				A	33.47	32.56	45.13						

TOTAL CONNECTED KVA : 30.79 KW 85.57 A
TOTAL DEMAND KVA : 33.87 KW 94.13 A

L-DESIGNATES LOCK-OUT DEVICE ON BREAKER
*-PHASE-NEUTRAL/GND

MAIN SWBD (EXISTING)		TYPE:		CIRCUIT BOARD-SE LABELED		
		AMPERS:		4000 AMPERS		
		AIC RATING:		65,000 AMPERS		
		VOLTAGE:		480 VOLTS 3 PHASE, 3 WIRE		
POS	LOAD SERVED	TRIP	POLE	KVA PER PHASE		
				A	B	C
MAN	MAIN CIRCUIT BREAKER-100% RATED WITH LSIG FUNCTION	4000	3			
1	PANEL MECH1	800	3	176.53	176.53	
2	PANEL MECH2	800	3	62.10	62.10	62.10
3	MCC	800	3			
4	PANEL PDP-N-1	800	3	77.59	77.59	
5	PANEL PDP-U-1	800	3	27.27	27.27	27.02
6	PANEL PDP-S-1	600	3	39.08	39.08	39.72
TOTALS:				382.87	380.35	373.74

TOTAL CONNECTED KVA : 1136.7
TOTAL CONNECTED AMPERS : 1368.8
TOTAL DEMAND KVA : 1136.7
TOTAL DEMAND AMPERS : 1368.8



PDP-U-1 (EXISTING)		TYPE:		ILINE		
		AMPERS:		800 AMPERS		
		AIC RATING:		65,000 AMPERS		
		VOLTAGE:		480 VOLTS 3 PHASE, 3 WIRE		
POS	LOAD SERVED	TRIP	POLE	KVA PER PHASE		
				A	B	C
1	SPARE	100	3			
2	SPARE	100	3			
3	PANEL UP3	70	3	9.3	9.27	
4	PANEL UP4	70	3	9.0	9.02	12.50
5	PANEL UP5	70	3	12.5	8.00	8.00
TOTALS:				27.27	27.02	30.50

TOTAL CONNECTED KVA : 84.79
TOTAL CONNECTED AMPERS : 102.11
TOTAL DEMAND KVA : 106
TOTAL DEMAND AMPERS : 127.84

MECH1 (EXISTING)		TYPE:		ILINE		
		AMPERS:		800 AMPERS		
		AIC RATING:		65,000 AMPERS		
		VOLTAGE:		480 VOLTS 3 PHASE, 3 WIRE		
POS	LOAD SERVED	TRIP	POLE	KVA PER PHASE		
				A	B	C
1	AHU-2 SFRF(15HP/7.5HP), PCHWP-1 (3HP), FUTURE PCHWP (5HP)	50	3	11.63	11.63	11.63
2	AHU-1 SFRF(7.5HP/5HP), SCHWP-1 (3HP), FUTURE SCHWP (2X5HP)	40	3	8.03	8.03	8.03
3	SPARE	70	3			
4	SPD	60	3			
5	EDH-1A	45	3	9.00	9.00	9.00
6	EDH-1B	90	3	19.33	19.33	19.33
7	MEZZ LIFT	15N	3	1.11	1.11	1.11
8	SPARE					
10	CHILLER #2	300	3	69.25	69.25	69.25
11	CHILLER #1	250	3	58.17	58.17	58.17
12	SPACE	15	3			
13	SPACE	225				
14	SPACE	400				
TOTALS:				176.53	176.52	176.52

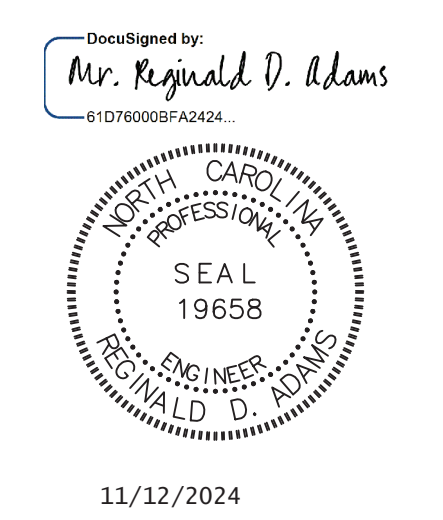
TOTAL CONNECTED KVA : 829.58
TOTAL CONNECTED AMPERS : 637.74
TOTAL DEMAND KVA : 540
TOTAL DEMAND AMPERS : 650.25

1A PANEL SCHEDULES
NO SCALE

4A LABELING AND MOUNTING DETAILS
NO SCALE

BOE STORAGE MEZZANINE RALEIGH, NC WAKE COUNTY FD & C RALEIGH, NC

SEALS:

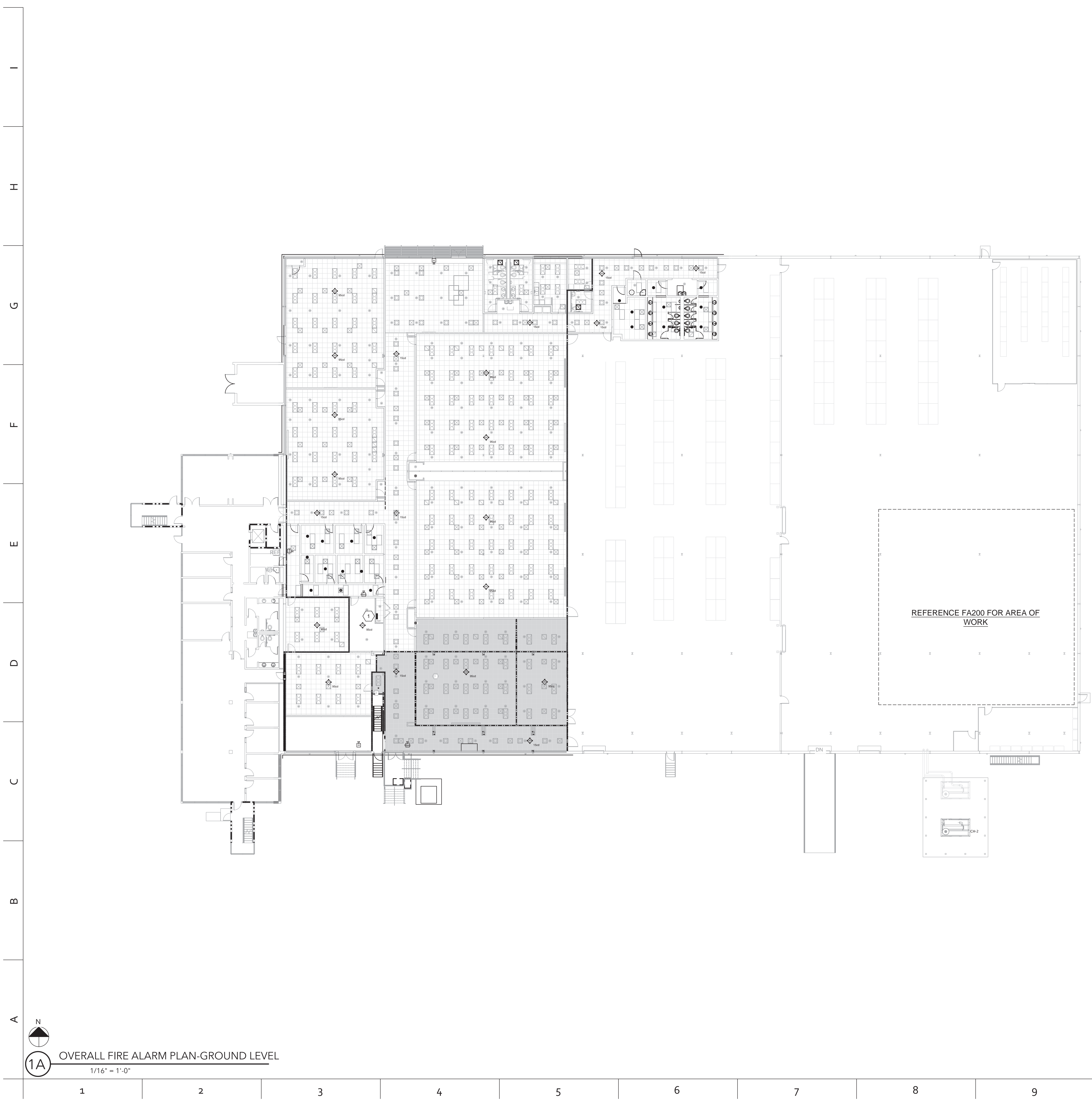


ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: RDA
REVISIONS:

NO.	DESCRIPTION
1	

FIRE ALARM PLANS

FA100



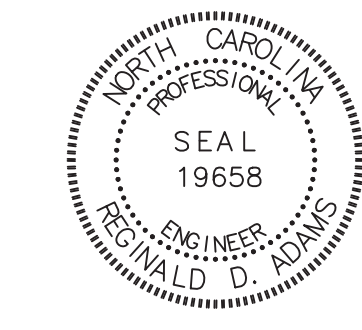
NOTES KEYED TO FA100:
① EXISTING FIRE-LITE FIRE ALARM PANEL.

REFERENCE FA200 FOR AREA OF WORK

1A OVERALL FIRE ALARM PLAN-GROUND LEVEL
1/16" = 1'-0"

SEALS:

Prepared by:
Mr. Reginald D. Adams
11/17/2024



ISSUE: CONSTRUCTION
DATE: 11/12/2024
DRAWN BY: RDA
REVISIONS:

NO.	DESCRIPTION

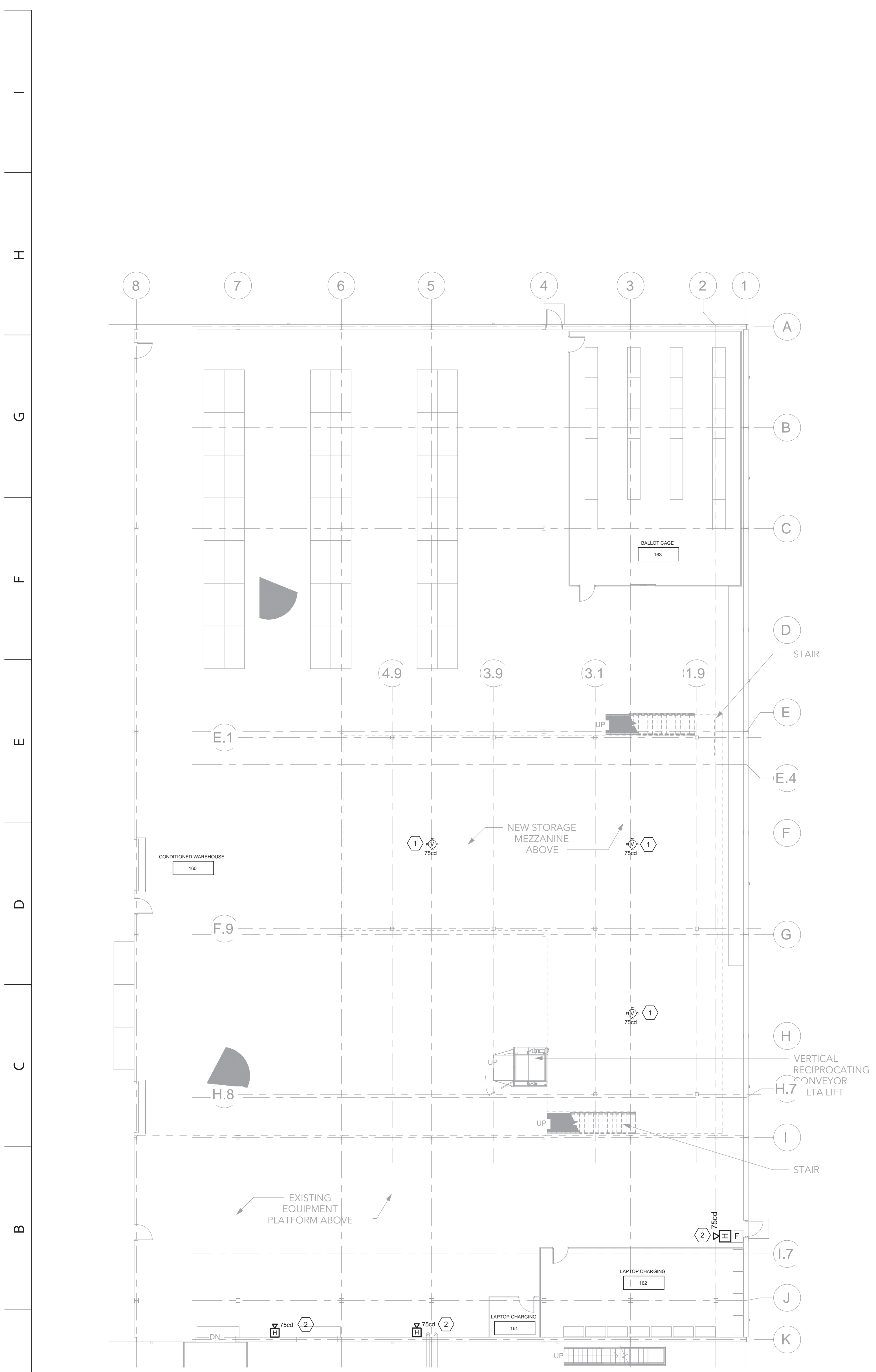
FIRE ALARM PLANS

FA200

7/26/2024 4:55:34 PM ARCH E1 (42.00 x 30.00 inches) 1:1

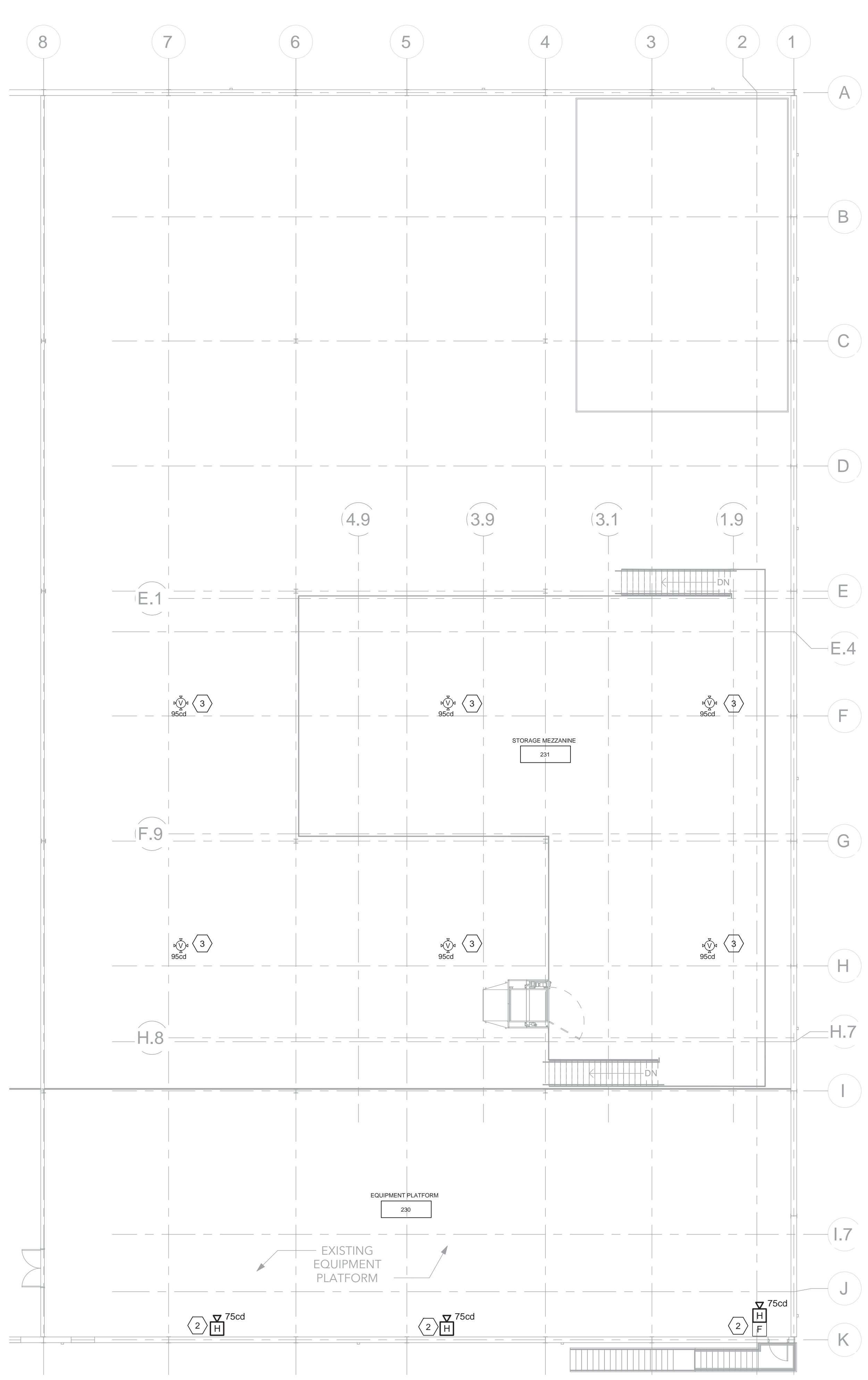
C:\Users\Jee\Documents\Local Files\2416 BOE Storage Mezzanine\2416 BOE Storage Mezzanine.rvt

(C) 2023 OSTERLUND ARCHITECTS, PLLC



GENERAL NOTES:
1. REFERENCE FA400 FOR MATRIX AND RISER.

NOTES KEYED TO FA200:
① PROVIDE NEW CEILING MOUNTED FIRE ALARM A/V DEVICE UNDER MEZZANINE STRUCTURE. COORDINATE PLACEMENT WITH LIGHTING. TYPICAL OF THREE (3) DEVICES. CONNECT TO EXISTING NAC CIRCUIT.
② EXISTING DEVICES TO REMAIN. SHOWN FOR REFERENCE ONLY.
③ EXISTING NOTIFICATION DEVICE TO REMAIN. DEVICES ARE INSTALLED AT ROOF DECK. SHOWN FOR REFERENCE ONLY.



7A MEZZ FIRE ALARM PLAN
3/32" = 1'-0"

1A GROUND FLOOR FIRE ALARM PLAN
3/32" = 1'-0"

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

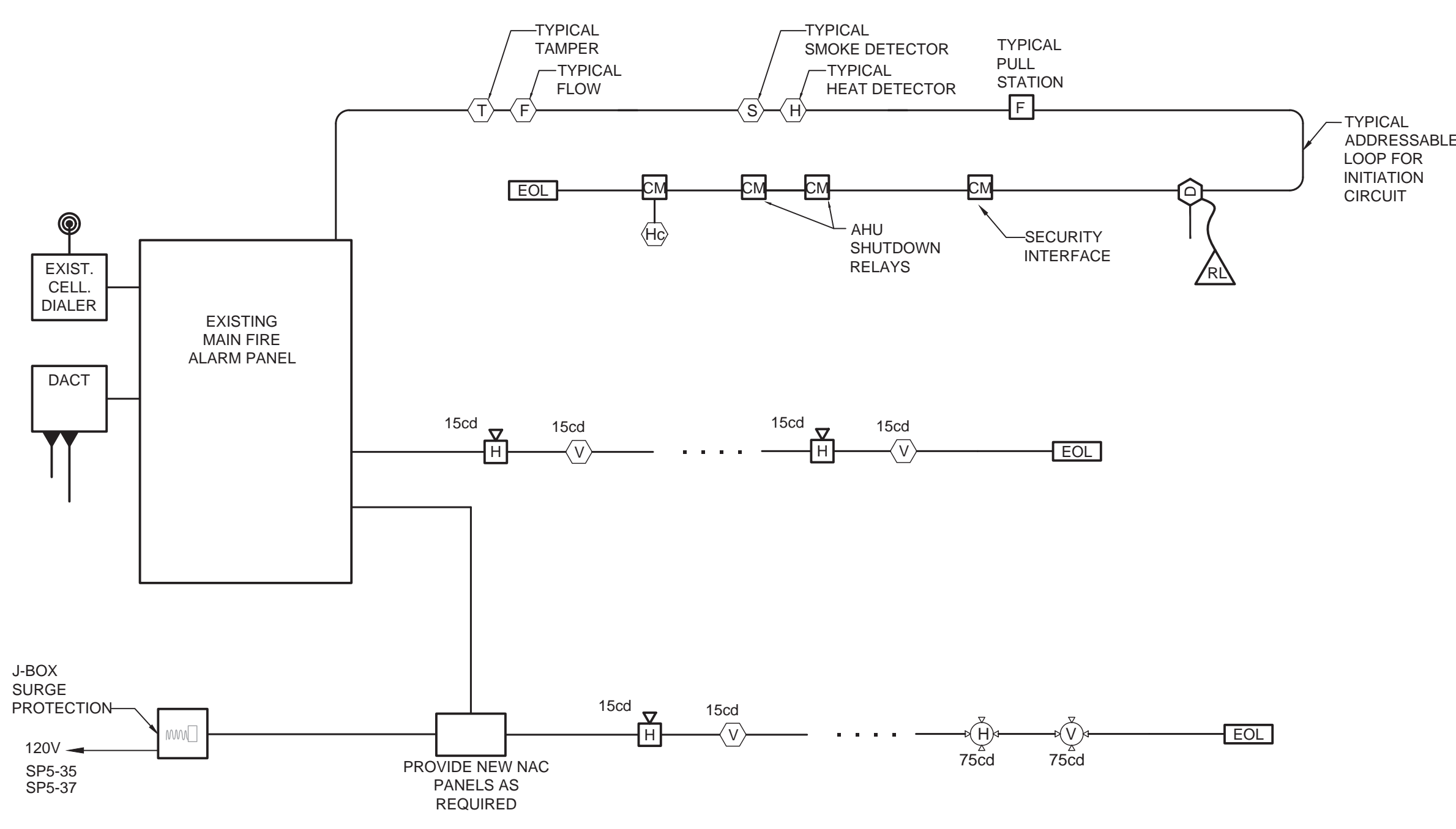
1		

FIRE ALARM SPECIFICATION AND INSTALLATION:

- CONTRACTOR SHALL PROVIDE FIRE ALARM SHOP DRAWINGS TO THE COUNTY FIRE MARSHALL FOR APPROVAL. DO NOT START ANY FIRE ALARM ROUGH-IN WORK UNTIL APPROVED SHOP DRAWINGS ARE RECEIVED FROM THE FIRE MARSHALL.
- THIS DRAWING IS INTENDED TO SHOW ONLY WHICH DEVICES ARE CONNECTED TO WHICH CIRCUIT. THIS DRAWING DOES NOT SHOW THE OPTIMUM PATH FOR THE CIRCUITS. REFER TO FLOOR PLAN FOR SPECIFIC QUANTITIES AND LOCATIONS OF FIRE ALARM DEVICES.
- ALL NEW FIRE ALARM CABLE SHALL BE IN MINIMUM 3/4" CONDUIT. RACEWAYS CONTAINING FIRE ALARM CONDUCTORS SHALL BE MARKED IN RED FOR READY IDENTIFICATION UNLESS OTHERWISE NOTED ON THIS RISER.
- ALL SMOKE DETECTORS SHALL BE PHOTOELECTRIC.
- ALL ADDRESSABLE LOOP CONTROLLER (INITIATING) CIRCUITS SHALL BE WIRED IN A CLASS 'B' CONFIGURATION WITH NO 'T' TAPS MADE. PROVIDE 20% SPARE ADDRESSES PER CIRCUIT.
- NOTIFICATION APPLIANCE CIRCUITS (NACS) SHALL BE WIRED CLASS 'B', AND ZONED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, NOT TO EXCEED 80% OF ZONE MODULE RATED OUTPUT. ALL NAC'S SHALL BE EQUIPPED WITH E.O.L. SUPERVISORY RELAYS.
- FIRE ALARM NOTIFICATION DEVICES SHALL HAVE NOMINAL MOUNTING HEIGHT OF 80" AFF TO BOTTOM OF DEVICE. COORDINATE WITH REFLECTED CEILING PLAN AND ARCHITECT PRIOR TO ROUGH-IN. UNLESS NOTED OTHERWISE ON THE FLOOR PLANS, LIGHT LEVEL AND SOUND OUTPUT LEVELS FOR NEW DEVICES SHALL BE AS FOLLOWS:
-STROBES 75 cd
-HORNS 95 db
- ADDITIONAL POWER AMPLIFICATION DEVICES THAT MAY BE NEEDED TO DRIVE NOTIFICATION DEVICES ARE COMPLETELY THE DUTY OF THE E.C./FIRE ALARM VENDOR TO PROVIDE. ANY POWER CIRCUITRY OR ADDITIONAL WIRING NEEDED FOR THIS SYSTEM SHALL BE PROVIDED AS PART OF THE BASE BID ON BID DAY.
- ALL DEVICES SHALL BE ADA COMPLIANT.
- INSTALLATION SHALL MEET REQUIREMENTS OF THE LATEST ADOPTED VERSIONS OF THE NFPA 72, NFPA 70 (NEC), AND THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- CONTRACTOR SHALL PROVIDE UPDATED FRAMED, PROTECTED ZONE MAP INDICATING LOCATION AND ADDRESS OF ALL INSTALLED DEVICES.
- AT THE CONCLUSION OF THIS PROJECT, THE FIRE ALARM SYSTEM WILL BE TESTED IN ACCORDANCE WITH THE 2013 EDITION OF THE NFPA 72 SECTION 10.4.1.2.
- REFER TO CONTRACT DOCUMENT FOR ADDITIONAL INFORMATION REQUIRED FOR SUBMITTALS.
- THE TECHNICIANS WHO MAKE THE CONNECTIONS TO (PERFORM AND PROGRAMING FOR) THE FIRE ALARM SYSTEM ARE REQUIRED TO BE TRAINED AND INDIVIDUALLY CERTIFIED BY THE MANUFACTURER, FOR THE FACP MODEL/SERIES BEING INSTALLED. THIS TRAINING AND CERTIFICATION MUST HAVE OCCURRED WITHIN THE MOST RECENT 24 MONTHS.
- AN 100% ACCEPTANCE TEST WILL BE REQUIRED. THIS MUST BE PERFORMED IN THE PRESENCE OF A WAKE COUNTY FIRE MARSHAL.
- THE FIRE ALARM CONTRACTOR SHALL SUBMIT A COPY OF THE FIRE ALARM SHOP DRAWING FOR REVIEW AND APPROVAL TO THE AUTHORITIES HAVING JURISDICTION PRIOR TO SYSTEM INSTALLATION. SHOP DRAWINGS SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL OF THE FOLLOWING:
A. A FLOOR PLAN
B. LOCATION OF ALARM-INITIATING AND NOTIFICATION APPLIANCES
C. ALARM CONTROL AND TROUBLE SIGNALING EQUIPMENT
D. ANNUNCIATION
E. POWER CONNECTION
F. BATTERY CALCULATIONS
G. CONDUCTOR TYPE AND SIZES
H. VOLTAGE DROP CALCULATIONS
I. MANUFACTURERS, MODEL NUMBERS AND LISTING INFORMATION FOR EQUIPMENT, DEVICES AND MATERIALS
J. DETAILS CO CEILING HEIGHT AND CONSTRUCTION
K. THE INTERFACE OF FIRE SAFETY CONTROL FUNCTIONS.
- REFER TO CONTRACT DOCUMENT FOR ADDITIONAL INFORMATION REQUIRED FOR SUBMITTALS.

FIRE ALARM SYMBOLS

- WALL MTD FIRE ALARM PULL STATION
- WALL MTD FIRE ALARM CONTROL PANEL
- SMOKE DETECTOR, CEILING OR WALL MTD
- HEAT DETECTOR, CEILING OR WALL MTD
- HEAT DETECTOR, CONVENTIONAL
- DUCT MOUNTED SMOKE DETECTOR
- MAGNETIC DOOR HOLD
- MONITOR MODULE
- CONTROL MODULE
- ISOLATION MODULE
- SURGE PROTECTOR
- FIRE ALARM VISUAL DEVICE
- FIRE ALARM AUDIO/VISUAL DEVICE
- REMOTE INDICATOR LAMP WITH TEST SWITCH
- CEILING MOUNTED FIRE ALARM AUDIO/VISUAL DEVICE
- CEILING MOUNTED FIRE ALARM VISUAL-ONLY DEVICE



1F EXISTING FIRE ALARM RISER
NO SCALE

	FIRE ALARM SYSTEM RESPONSE MATRIX																			
	Control Unit Annunciation			Notification				Security			Safety									
	Common Alarm Indicator	Audible Alarm Signal	Common Supervisory Signal Indicator	Audible Common Supervisory Signal	Common Trouble Signal Indicator	Audible Common Trouble Signal	Floor Alarm Indicators	Activate Floor Evacuation Signals	Activate Sprinkler Bell	Print Change of Status	Transmit Alarm Signal	Transmit Supervisory Signal	Transmit Trouble Signal	Activate Control Module #1 at Sec. Panel	Activate Control Module #2 at Sec. Panel	Unlock Door 157.1	Shut Down Elevator	Recall Elevator/Recall Floor	Recall Elevator/Non Recall Floor	AHU Shutdown
Manual Pull Stations	X	X					X	X	X	X				X	X			X	X	X
Smoke Detectors-Floor	X	X					X	X	X	X				X	X			X	X	X
Heat Detectors-Floor	X	X					X	X	X	X				X	X			X	X	X
Smoke Detectors-Elevator Non Recall Floors	X	X					X	X	X	X				X	X			X	X	X
Smoke Detectors-Elevator Recall Floors	X	X					X	X	X	X				X	X			X	X	X
Heat Detectors-Elevator	X	X					X	X	X	X				X	X		X			X
Ductmounted Smoke Detectors			X	X			X	X	X		X			X	X					X
Low Temperature-Hot Box			X	X					X		X									
Tamper Switch-Hot Box			X	X					X		X									
Tamper Switch			X	X					X		X									
Flow Switch	X	X					X	X	X	X		X		X	X			X	X	X
Fire Alarm Loss of AC Power				X	X				X		X			X	X					
Fire Alarm Low Battery				X	X				X		X			X	X					
FACP Trouble				X	X				X		X			X	X					
Shunt Trip Loss of Power									X		X			X	X					
Open Circuit				X	X				X		X			X	X					
Ground Fault				X	X				X		X			X	X					
Notification Appliance circuit short				X	X				X		X			X	X					

1B FIRE ALARM MATRIX
NO SCALE