ADDENDUM # 3

DATE: July 18, 2022

PROJECT: RCPS Career and Technical Education Center

TO: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated June 17, 2022 as noted below. Acknowledge receipt of this addendum in the space on the Bid Proposal. Failure to do so may subject bidder to disqualification.

GENERAL:

1. **Specification sections 221113 and 221313 were inadvertently located in Division 2 – EXISTING CONDITIONS and between sections of Division 28 ELECTRONIC SAFETY & SECURITY and Division 31 – EARTH WORK of the Project Manual. The correct location for these sections is Division 22 – PLUMBING.**
2. **See attached Appendix A – Revised/Added Project Drawings and Specifications**
3. **See attached Appendix B - Hazardous Material Reports**
4. **See attached Appendix C – Site Storage Building Construction Documents for requirements associated with constructing foundation and slabs for site storage buildings as outlined in civil drawings.**

PROJECT MANUAL:

PROJECT MANUAL – TABLE OF CONTENTS

ADD:

1)	Specification Section	099114	Exterior Painting
2)	Specification Section	099124	Interior Painting
3)	Specification Section	101400	Signage
4)	Specification Section	102800	Toilet, Bath and Laundry Accessories
5)	Specification Section	323113	Chain Link Fences and Gates
6)	Specification Section	323223	Segmental Retaining Walls
7)	Specification Section	329200	Turf and Grasses

OMIT:

1)	Specification Section	123616	Metal Countertops
2)	Specification Section	271500	Horizontal Cabling
3)	Specification Section	280528	Security Pathways

REVISE:

1) Specification Section "280544 Sleeves and Sleeve Seals for Communication Pathways and Cabling" to read "270544 Sleeves and Sleeve Seals for Communication Pathways and Cabling

PROJECT MANUAL, SPECIFICATION SECTION 005000 – CONTRACTING FORMS AND SUPPLEMENTS:

OMIT:

1) Part 1 General; Section 2.03; paragraph A.

PROJECT MANUAL, SPECIFICATION SECTION 007200 GENERAL CONDITIONS:

REVISE:

1) Part 1 General; Section 1.2; paragraph A as follows:

The General Conditions applicable to this contract are included by reference as if bound herein: AIA Document A201-2017, General Conditions of the Contract for Construction.

PROJECT MANUAL, SPECIFICATION SECTION 007300 SUPPLEMENTARY CONDITIONS:

OMIT:

1) Part 1 General; Section 3.06; paragraph A.

PROJECT MANUAL, SPECIFICATION SECTION 011000 – SUMMARY:

OMIT:

1) Part 1 General; Section 1.04; paragraph A.
2) Part 1 General; Section 1.04; paragraph D.
3) Part 1 General; Section 1.04; paragraph E.
4) Part 1 General; Section 1.04; paragraph Items 2 and 3.

REVISE:

1) Part 1 General; Section 1.04; paragraph 1 as follows:

E. Owner will supply the following for installation by Contractor:

1. All toilet accessories including mirrors and soap dispensers.

OMIT:

1) Part 1 General; Section 1.04; paragraph 2, item B, Number 5.
2) Part 1 General; Section 1.04; paragraph 3, Item D.

PROJECT MANUAL, SPECIFICATION SECTION 012100 – ALLOWANCES

OMIT:

1) Part 1 General; Section 1.01; paragraph A.
2) Part 1 General; Section 1.03 – Cash Allowances

REVISE:

1) Part 1 General; Section 1.05 as follows

1.01 ALLOWANCES SCHEDULE

A. Contingency Allowance: Include the stipulated sum of $3,000,000 for use upon Owner's instructions.

B. Western Virginia Water Authority: No fee.

C. VSMP Fee: Include the stipulated sum of $ 500.00.

D. Erosion and Sediment Control Agreement: Include the stipulated sum of $150.00

E. Erosion and Sediment Control Surety: Include the calculated sum to provide a surety based on a principal amount of $102,250.00 (includes new stormwater pipes and quantity quality measures).

   a. Principal amount is subject to adjustment, pending review by City of Roanoke.

F. Storm Water Pollution Prevention Plan: No cost.

PROJECT MANUAL, SPECIFICATION SECTION 012200– UNIT PRICES

OMIT:

1) Part 1 General; Section 6; paragraph D.
2) Part 1 General; Section 6; paragraph E.
3) Part 1 General; Section 6; paragraph F.

PROJECT MANUAL, SPECIFICATION SECTION 012300 – ALTERNATES

OMIT specification section.

PROJECT MANUAL, SPECIFICATION SECTION 014000– QUALITY REQUIREMENTS

OMIT:

1) Part 1 General; Section 1.05; paragraph C; ITEMS 5, 6 and 7.

PROJECT MANUAL, SPECIFICATION SECTION 014533 – CODE-REQUIRED SPECIAL INSPECTIONS AND PROCEDURES

REVISE:

1) Part 1 General; Section 1.05; paragraph A as follows:

A. Code or Building Code: ICC (IBC), International Building Code, 2015 Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements and specifically, Chapter 17 - Special Inspections and Tests.

OMIT:

1) Part 3 Execution; Section 3.08.

PROJECT MANUAL, SPECIFICATION SECTION 015000 – TEMPORARY FACILITIES AND CONTROLS

OMIT:

2) Part 1 General; Section 1.04; paragraph D and E.

OMIT:

1) Part 1 General; Section 1.06 – Fencing.

REVISE:

1) Part 1 General; Section 1.12; paragraph A as follows:

1.12 PROJECT IDENTIFICATION

A. Provide project identification sign of size, design and construction and location as approved by Owner.
B. No other signs are allowed without Owner permission except those required by law.

PROJECT MANUAL, SPECIFICATION SECTION 017000 – EXECUTION AND CLOSEOUT REQUIREMENTS

OMIT:

1) Part 3 Execution; Section 3.06; paragraph G, Item 4.

PROJECT MANUAL, SPECIFICATION SECTION 002419 – SELECTIVE DEMOLITION

REVISE:

1) Part 1 General; Section 1.5; paragraph B; delete the following sentence:

"Comply with Section 013233 "Photographic Documentation."

REVISE:

1) Part 3 Execution; Section 3.5; paragraph A; Item 10; delete the following sentence:

"Comply with requirements in Section 017419 "Construction Waste Management and Disposal.""

REVISE:

1) Part 3 Execution; Section 3.7; paragraph A; delete the following sentence:

"[and recycle or dispose of them according to Section 017419 "Construction Waste Management and Disposal."]

OMIT:

1) Part 3 Execution; Section 3.7; paragraph A; Item 4.

PROJECT MANUAL, SPECIFICATION SECTION 033000 – CAST-IN-PLACE CONCRETE

REVISE: Part 3 Execution, Section 3.7; paragraph C; item 5; sub-item a; 1) as follows:

1) Specified overall values of flatness, F_F 45; and of levelness, F_L 35; with minimum local values of flatness, F_F 30; and of levelness, F_L 24.

ADD: to Part 2 Products:

2.4 VAPOR RETARDERS

A. Sheet Vapor Retarder, Class A: ASTM E1745, Class A not less than 10 mils (0.25 mm) thick. Include manufacturer's recommended adhesive or pressure-sensitive tape. Install vapor barrier beneath new concrete slab at all locations within buildings where existing concrete slab and floor finish are removed exposing gravel base. Do not install vapor barrier over existing concrete sub-slab remaining after removal of wood flooring within existing gymnasium.

a. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

Poly-America, L.P.
Stego Industries, LLC.
W. R. Meadows, Inc.

PROJECT MANUAL, SPECIFICATION SECTION 042000 – UNIT MASONRY

ADD: Following to Part 2 Products; Section 2.9:

D. Metal Drip Edge: Provide continuous drip edge complying with SMACNA's "Architectural Sheet Metal Manual" and as follows:

1. Fabricate metal drip edges from stainless steel. Extend at least 3 inches (76 mm) into wall and 1/2 inch (13 mm) out from wall, with outer edge bent down 30 degrees and hemmed. Install at all steel lintels in new exterior masonry wall openings. Lap through wall membrane flashing over metal drip. Embed drip edge into mortar joint at sides of opening.

PROJECT MANUAL, SPECIFICATION SECTION 053100 – STEEL DECKING

REVISE: Part 2 Products, Section 2.2; paragraph A; items 3 through 6 as follows:

3. Galvanized- and Shop-Primed Steel Sheet: ASTM A653/A653M, Structural Steel (SS)
4. Deck Profile: To match existing.
5. Profile Depth: To match existing

6. Design Uncoated-Steel Thickness: As indicated on drawings

PROJECT MANUAL, SPECIFICATION SECTION 061000 – ROUGH CARPENTRY

REVISE: Part 2 PRODUCTS, Section 2.4; paragraph A as follows:

A. Equipment Backing Panels: Plywood, DOC PS 1 fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4-inch (19-mm)] nominal thickness.

PROJECT MANUAL, SPECIFICATION SECTION 072100 – THERMAL INSULATION

REVISE: Part 2 PRODUCTS, Section 2.1; paragraph D as follows:

D. Thermal-Resistance Value (R-Value): R-value as indicated below in accordance with ASTM C518.

REVISE: Part 2 PRODUCTS, Section 2.2; paragraph A, item 1. as follows:

1. Extruded Polystyrene Board Insulation, Type VI: ASTM C578, Type VI, 40-psi (276-kPa) minimum compressive strength.

PROJECT MANUAL, SPECIFICATION SECTION 072500 – ROOF SPECIALTIES

REVISE: Part 2 PRODUCTS, Section 2.3; paragraph B; item 1. as follows:

1. Aluminum Sheet: 0.050 inch (1.27 mm) thick.

REVISE: Part 2 PRODUCTS, Section 2.3; paragraph C; item 1. as follows:

1. Formed Aluminum: 0.050 inch (1.27 mm) thick.

PROJECT MANUAL, SPECIFICATION SECTION 079200 – JOINT SEALANTS

OMIT: Part 2 PRODUCTS; Section 2.3.

OMIT: Part 2 PRODUCTS; Section 2.4; paragraphs B, D and E.

PROJECT MANUAL, SPECIFICATION SECTION 081113 – HOLLOW METAL DOORS AND FRAMES

ADD: to 1.1 SUMMARY; paragraph A:

1) Interior standard steel doors and frames.

ADD: to PART 2 – PRODUCTS; 2.3 INTERIOR STANDARD STEEL DOORS AND FRAMES:

C. Construct hollow-metal doors to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified. All astragals shall be removable.

1. Standard-Duty Doors and Frames: ANSI/SDI A250.8, Level 1; ANSI/SDI A250.4, Level C.

   a. Type: As indicated in the Door and Frame Schedule.
   b. Thickness: 1-3/4 inches
   c. Face: Uncoated steel sheet, minimum thickness of 0.032 inch.
   d. Edge Construction: Model 2, Seamless.
   e. Edge Bevel: Provide manufacturer's standard beveled or square edges.
   f. Core: Manufacturer's standard
   g. Fire-Rated Core: Manufacturer's standard core for fire-rated.
   h. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Security.

2. Exposed Finish: Prime.

REVISE: Part 2 PRODUCTS; Section 2.4; paragraph A; as follows:

A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified. All astragals shall be removable.

PROJECT MANUAL, SPECIFICATION SECTION 081416 – FLUSH WOOD DOORS

OMIT: Part 2 PRODUCTS; Section 2.2.

OMIT: Part 2 PRODUCTS; Section 2.4; paragraph A; item 7.

OMIT: Part 2 PRODUCTS; Section 2.5; paragraph B.

OMIT: Part 3 EXECUTION; Section 3.3; paragraph C.

PROJECT MANUAL, SPECIFICATION SECTION 088000 – GLAZING

ADD: to PART 2 – PRODUCTS; Section 2.4; paragraph C; the following:

4. Type GL-6 – Single Casework Shelving and Door Panels:

   a. Application: Vestibule showcase casework glazing.
   b. Type: Fully tempered float glass.
   c. Thickness: 1/4 inch at operable door panels; 3/8 inch minimum at shelving

PROJECT MANUAL, SPECIFICATION SECTION 093013 – CERAMIC TILING

REVISE: Part 2 PRODUCTS, Section 2.5; paragraph A as follows:

1. Apply to face of existing masonry walls with residual thin-set mortar or adhesive.

PROJECT MANUAL, SPECIFICATION SECTION 099114 – EXTERIOR PAINTING

ADD: Specification Section 099114 included with this Addendum.

PROJECT MANUAL, SPECIFICATION SECTION 099124 – INTERIOR PAINTING

ADD: Specification Section 099124 included with this Addendum.

PROJECT MANUAL, SPECIFICATION SECTION 101400 – SIGNAGE

ADD: Specification Section 101400 included with this Addendum.

PROJECT MANUAL, SPECIFICATION SECTION 102800 – TOILET, BATH AND LAUNDRY ACCESSORIES

ADD: Specification Section 102800 included with this Addendum.

PROJECT MANUAL, SPECIFICATION SECTION 104416 – FIRE EXTINGUISHERS

OMIT: Part 2 – PRODUCTS, Section 2.2. EQUIPMENT

ADD: IN SECTION 1.1; D. Related Requirements the following:

1. SECTION 104413 - FIRE PROTECTION CABINETS

PROJECT MANUAL, SPECIFICATION SECTION 105113 – METAL LOCKERS

ADD: to PART 2 – PRODUCTS; Section 2.4; paragraph C; the following:

B. Manufacturers and Types:

1. Manufacturers:
   a. Provide products by one of the following or equal:
      Art Metal Products.
      LockersMFG.
      Penco Products, Inc.

2. Locker Type:
   a. 15 inch wide Double Tiered metal locker unless otherwise indicated in drawings.

PROJECT MANUAL, SPECIFICATION SECTION 122413 – ROLLER WINDOW SHADES

OMIT:

1) Part 2 – PRODUCTS; paragraph 2.2; sub-paragraph G; Item "2. Recessed Shade Pocket" and Item "3. Closure Panel and Wall Clip"

PROJECT MANUAL, SPECIFICATION SECTION 211313– WET PIPE SPRINKLER SYSTEMS, FIRE PROTECTION

OMIT: ~~2. Sprinkler System Installer~~

~~a. The sprinkler system installation must be regularly engaged in the installation of the type and complexity of system specified in the contract documents, and must be certified as a Level II Technician by National Institute for Certification in Engineering Technologies (NICET) in the Water-Based Systems Layout subfield of Fire Protection Engineering Technology in accordance with NICET 1014-7.~~

REPLACE WITH: 2. Sprinkler System Installer

a. The sprinkler system installation must be regularly engaged in the installation of the type and complexity of system specified in the contract documents.

PROJECT MANUAL, SPECIFICATION SECTION 230713 – DUCT INSULATION

OMIT: Part 3 – EXECUTION; Paragraph 3.12; Items C and D

PROJECT MANUAL, SPECIFICATION SECTION 230800 – COMMISSIONING OF HVAC

OMIT: All references to "Section 019113 – General Commissioning Requirements"

PROJECT MANUAL, SPECIFICATION SECTION 233113 – METAL DUCTS

ADD: Part 3 – EXECUTION; paragraph 3.11.B.2 as follows:

THE VAV DUCTWORK BETWEEN THE ROOFTOP UNIT AND THE VAV BOXES, THE WELDING EXHAUST SYSTEM, DUST COLLECTION SYSTEM, VEHICLE EXHAUST SYSTEM AND KITCHEN HOOD EXHAUST SYSTEMS SHALL BE LEAK TESTED IN ACCORDANCE WITH SMACNA'S "AIR DUCT LEAKAGE TEST MANUAL". REPRESENTATIVE SECTIONS TOTALING NOT LESS THAT 25 PRECENT OF THE TOTAL INSTALLED DUCT AREA SHALL BE TESTED.

PROJECT MANUAL, SPECIFICATION SECTION 323113 – CHAIN LINK FENCES AND GATES

ADD Specification Section 323113 included with this Addendum.

PROJECT MANUAL, SPECIFICATION SECTION 323223 – SEGMENTAL RETAINING WALLS

ADD Specification Section 323223 included with this Addendum.

PROJECT MANUAL, SPECIFICATION SECTION 329200 – TURF AND GRASSES

ADD Specification Section 329200 included with this Addendum.

PROJECT MANUAL:

ADD: "Appendix B - Hazardous Material Survey Reports (March 2022 and May 2022) included in this addendum.

PROJECT MANUAL:

Add: "Appendix C – Site Storage Building Construction Documents" for requirements associated with constructing foundation and slabs for site storage buildings as outlined in civil drawings.

PROJECT DRAWINGS:

PROJECT DRAWINGS

REPLACE:

i. Replace following drawings with the revised drawings noted in Revision table as "Revision 1, 7/18/22, Addendum 3" included in Appendix A within this Addendum:

G1
G2

C04
C05
C06
C08
C09
C10
C11
C13
C14
C25
C26

S1.0
S1.1
S1.2
S1.3
S1.4
S1.5
S1.6
S2.1

A1.1
A1.101
A1.102
A1.103
A1.104
A1.105
A1.106
A1.107
A1.108
A1.2
A1.201
A1.202

A1.203
A1.204
A1.205
A1.206
A1.301
A1.302
A1.305
A1.306
A1.307
A1.308
A1.309
A1.310
A1.311
A1.4
A4.4
A5.101
A6.2
A7.1
A7.2
A7.3
A7.4
A8.1

ID2.2
ID2.3
ID3.5
ID4.2
ID4.3
ID4.4
ID4.5

M0.1
M2.2
M2.3
M2.4
M2.5
M2.6
M2.7
M3.2
M3.3
M3.4
M3.5
M3.6
M3.7

M4.2

P0.1
P2.1
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P2.3
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P4.1

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E200
E201
E202
E203
E204
E301
E302
E303
E304
E305
E401
E402
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E501
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G-102
FA002
FA101.4
FA101.5
FA101.7
FA101
FA102.1
FA102.4
FA102
FA103
FA301
FX001
FX101
FX102
FX201

ADD:

i. Add the following drawings included in Appendix A within this Addendum noted in Revision table as "Revision 1, 7/18/22, Addendum 3":

A1.109
A1.207
A4.5
A8.2

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APPENDIX A – REVISED/ADDED PROJECT DRAWINGS AND SPECIFICATIONS

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1	G2	INDEX OF DRAWINGS
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		CIVIL
	C01	COVER SHEET
	C02	GENERAL NOTES
	C03	E&SC NARRATIVE
1	C04	OVERALL EXISTING CONDITIONS AND E&SC PLAN NOTES
1	C05	EXISTING CONDITIONS, DEMO, & PHASE 1 E&SC PLAN
1	C06	EXISTING CONDITIONS, DEMO, & PHASE 1 E&SC PLAN
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1	C08	LAYOUT–OVERALL
1	C09	LAYOUT & DIMENSION PLAN PART I
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1	C11	LAYOUT & DIMENSION PLAN PART III
	C12	OVERALL GRADING PLAN AND E&SC PLAN NOTES
1	C13	GRADING & PHASE II E&SC PLAN
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	A6.2	WALL TYPES
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STORM SEWER TABLE

STM–01
MH TOP = 1097.29'
INVIN 18" RCP = 1090.1'
INVO 18" RCP = 1090.0'

STM–02
MH TOP = 1100.13'
INVIN 18" RCP = 1091.3'
INVO 18" RCP = 1091.2'

STM–03
POSSIBLE MANHOLE
UNDER ASPHALT

STM–04
POSSIBLE MANHOLE
UNDER ASPHALT

STM–05
GRATE TOP = 1100.8'
INVIN = 1098.8'
INVO 15" RCP = 1098.6'

STM–06
GRATE TOP = 1100.9'
INVIN 10" RCP = ????.?'
INVIN 15" RCP = 1093.0'
INVO 18" RCP = 1092.7'

STM–07
GRATE TOP = 1101.4'
INVIN 10" RCP = 1095.6'
INVO 10" RCP = ????.?'

STM–08
GRATE TOP = 1101.2'
INVIN 4" TC = 1099.2'
INVIN 4" TC = 1096.4'
INVIN 6" CONC = 1096.4'
INVIN 10" = 1097.5'
INVIN 10" RCP = 1096.1'
INVO 10" METAL = 1096.1'

STM–09
GRATE TOP = 1099.9'
INVIN 10" RCP = 1097.5'
INVO 10" RCP = 1097.3'

STM–10
GRATE TOP = 1101.2'
INVIN 8" = 1096.4'
INVIN 12" = 1094.8'
INVIN 12" = 1094.7'
INVO 15" RCP = 1094.6'

STM–11
GRATE TOP = 1101.5'
INVIN 12" RCP = 1095.1'
INVO 12" RCP = 1095.2'

STM–12
GRATE TOP = 1101.0'
INVIN 8" RCP = 1095.6'
INVIN 12" RCP = 1095.5'
INVO 12" RCP = 1095.4'

STM–13
GRATE TOP = 1100.3'
INVIN 4" TC = 1097.7'
INVO 8" CONC = 1097.5'

STM–14
GRATE TOP = 1106.6'
INVO 4" TC = 1098.2'

STM–15
MH TOP = 1105.91'
INVIN 10" PVC = 1101.4'
INVIN 18" RCP = 1099.5'
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STM–16
18" RCP
INV =1095.6'

STM–17
MH TOP = 1101.01'
INVO 15" RCP = 1096.0'

STM–18
15" RCP
INV =1094.4'

STM–19
MH TOP = 1099.41'
INVIN 36" RCP= 1091.2'
INVO 36" RCP= 1091.1'

STM–20
36" RCP
INV =1091.4'

STM–21
GRATE TOP = 1099.2'
INVO 15" RCP = 1096.7'

STM–22
GRATE TOP = 1099.4'
INVIN 15" RCP = 1095.5'
INVO 15" RCP = 1095.4'

STM–23
15" RCP
INV =1094.5'

STM–24
MH TOP = 1095.66'
INVO 18" RCP= 1091.0'

STM–25
MH TOP = 1094.79'
INVIN 15" RCP = 1088.4'
INVIN 18" RCP = 1088.3'
INVO 18" RCP= 1088.2'

STM–26
TOP = 1097.38'
INVIN 2" PVC = 1089.5'

STM–27
MH TOP = 1093.72'
INVIN 15" RCP = 1083.8'
INVIN 18" RCP = 1083.8'
INVO 24" RCP = 1083.7'

STM–28
MH TOP = 1092.92'
INVO 15" RCP = 1087.6'

STM–29
MH TOP = 1092.16'
INVIN 24" RCP = 1084.2'
INVIN 18" RCP = 1083.6'
INVO 24" RCP = 1083.4'

STM–30
MH TOP = 1091.21'
INVIN 15" RCP = 1085.6'
INVO 15" RCP = 1085.6'

STM–31
MH TOP = 1090.74'
INVIN 15" RCP = 1086.6'
INVO 15" RCP = 1086.5'

STM–32
MH TOP = 1097.52'
INVO 15" RCP = 1090.9'

SAN SEWER TABLE

SAN–01
MH TOP = 1100.58'
INVIN 8" RCP = 1089.0'
INVO 8" RCP = 1088.9'

SAN–02
MH TOP = 1100.58'
INVIN 8" RCP = 1090.9'
INVO 8" RCP = 1090.8'

SAN–03
MH TOP = 1100.40'
INVIN 8" RCP = 1093.1'
INVO 8" RCP = 1093.0'

SAN–04
MH TOP = 1101.95'
INVIN 4" TC = 1094.9'
INVIN 8" = 1094.9'
INVIN 8" = 1095.6'
INVIN 8" RCP = 1094.9'
INVO 8" RCP = 1094.9'

SAN–05
MH TOP = 1102.28'
INVIN 8" RCP = 1096.2'
INVO 8" RCP = 1096.1'

SAN–06
MH TOP = 1107.75'
INVIN 8" RCP = 1098.8'
INVO 8" RCP = 1098.7'

TOPOGRAPHY CERTIFICATION:

THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF STEVEN C. BARBA, FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FEBRUARY 02, 2022 THROUGH FEBRUARY 22, 2022, AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS THE MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

GENERAL NOTES:

1. THIS PLAT WAS PREPARED WITHOUT BENEFIT OF A TITLE REPORT AND IS SUBJECT THERETO. THEREFORE, THERE MAY EXIST ENCUMBRANCES WHICH AFFECT THE PROPERTY NOT SHOWN HEREON.
2. THE SUBJECT PROPERTY IS WITHIN THE LIMITS OF ZONE "X-UNSHADED" AS SHOWN ON THE FEMA FLOOD INSURANCE RATE MAPS 51161C0161 G, EFFECTIVE DATE OF SEPTEMBER 28, 2007. THIS DETERMINATION IS BASED ON SAID MAP AND HAS NOT BEEN VERIFIED BY ACTUAL FIELD ELEVATIONS.

UTILITY NOTE:

THE UTILITIES SHOWN HEREON BY PARKER DESIGN GROUP ARE BASED ON FIELD LOCATION OF OBSERVED EVIDENCE OF UTILITIES, MARKINGS MADE BY MISS UTILITY TICKET #A204202360. PER VIRGINIA LAW, REMARKING OF UTILITIES ARE REQUIRED BEFORE PERFORMING ANY EXCAVATION WORK.

DEMOLITION NOTES:

1. CONTRACTOR SHALL COMPLETE UTILITY DISCONNECTING AND SEALING, WITH WRITTEN VERIFICATION FROM UTILITY PROVIDERS PRIOR TO DEMOLITION AT CONNECTIONS TO BUILDINGS.
2. WATER & SEWER PIPES TO BE ABANDONED IN ACCORDANCE WITH WVWA STANDARDS AND SPECIFICATIONS. REMOVE ALL ASSOCIATED APPURTENANCES.
3. SANITARY AND STORM PIPE SHALL BE CAPPED AND THEN REMOVED TO THE NEAREST DOWNSTREAM STRUCTURE. INVERT SHALL BE SEALED PER PIPE ABANDONMENT DETAIL.
4. ELECTRICAL, CABLE, TELECOM, AND OTHER UTILITIES SHALL BE REMOVED TO THE NEAREST PULL-BOX OR MANHOLE. REMOVE ALL OVERHEAD UTILITY LINES WHERE INDICATED, REMOVE POWER POLES TO PLAN SUBGRADE ELEVATION, & REMOVE ALL ASSOCIATE POLE GUY WIRES.
5. ALL HARDSCAPE AND PRINCIPAL STRUCTURES TO BE DEMOLISHED SHALL BE EXCAVATED TO SUBGRADE AND BACKFILLED PER THE GRADING PLAN. EXCAVATE AFTER TESTING AND INSPECTION OF SUBGRADES BY GEOTECHNICAL ENGINEER.
6. IF FIRE HYDRANTS ARE TO BE REMOVED, THEY MUST BE REMOVED BY WVWA PERSONNEL. CONTRACTOR SHALL COORDINATE ASSOCIATED WATERLINE ABANDONMENT WITH WVWA.
7. CONTRACTOR TO REMOVE FENCING AS NECESSARY FOR CONSTRUCTION.

GENERAL COORDINATION NOTES:

- POWER WASH ALL SITE CONCRETE SURFACES TO REMAIN INCLUDING, BUT NOT LIMITED TO, EXISTING STAIRS, RETAINING WALLS, SIDEWALKS, AND CURBS.
- PREPARE AND PAINT ALL EXISTING GUARD AND HAND RAILS.
- REMOVE ALL EXISTING METAL STAIR NOSINGS AT ALL EXTERIOR CONCRETE STAIRS. PATCH AND REPAIR EXISTING CONCRETE AND INSTALL NEW CAST ALUMINUM STAIR NOSINGS TO MATCH EXISTING.

PHASE I SEQUENCE OF CONSTRUCTION:

CONSTRUCTION WILL BE SEQUENCED TO INSTALL INITIAL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO DEMOLITION.

- CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE AS SHOWN ON PLANS. CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION ENTRANCE PER VA ESCH STD. & SPEC 3.02.
- CONTRACTOR SHALL INSTALL ALL PERIMETER EROSION & SEDIMENT CONTROLS AS SHOWN.
- CONTRACTOR SHALL INSTALL INITIAL ESC MEASURES.
- AFTER THE INITIAL MEASURES ARE INSTALLED, THE CONTRACTOR SHALL REVIEW GENERAL CONSTRUCTION SEQUENCE AND/OR 2ND PHASE EROSION CONTROL MEASURES.
- ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS REACHED.
- THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE LOCAL AUTHORITY.
- ONCE THE PERIMETER AND PHASE I E&SC MEASURES ARE INSTALLED AND VERIFIED BY THE CITY OF ROANOKE SITE INSPECTOR; DEMOLITION, GRADING, AND OTHER SITE WORK MAY BEGIN.
- THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
- ANY EXISTING WATER OR SEWER CONNECTION SERVING THIS PROPERTY NOT UTILIZED FOR THIS DEVELOPMENT SHALL BE ABANDONED AT THE MAIN BY THE DEVELOPER.

EROSION & SEDIMENT CONTROL NOTES:

CONSTRUCTION WILL BE SEQUENCED TO INSTALL INITIAL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO DEMOLITION.

- TOPSOIL STOCKPILING MAY OCCUR IN SUITABLE LOCATIONS DETERMINED BY THE CONTRACTOR. SILT FENCE SHALL BE PLACED AROUND THE PERIMETER OF THE STOCKPILE. TEMPORARY SEEDING MEASURES APPLY TO STOCKPILES.
- THE CONTRACTOR SHALL CHECK AND VERIFY ALL EXISTING PERIMETER EROSION AND SEDIMENT CONTROL MEASURES AROUND THE SITE. ANY PERIMETER EROSION CONTROL MEASURES THAT ARE DAMAGED SHALL BE REPAIRED TO CONTROL SEDIMENT LADEN RUNOFF FROM ENTERING ADJACENT PROPERTIES AND/OR STREAMS AND SWALES.
- IN ANY AREAS WHERE SEDIMENT LADEN WATER IS BEING PUMPED FROM A LOCATION, THE PUMPED RUNOFF SHALL BE FILTERED THROUGH A "FILTER BAG" BEFORE BEING RELEASED.
- THE CONTRACTOR SHALL KEEP MATERIALS AND EQUIPMENT ON-SITE TO KEEP DUST LEVELS AT A MINIMUM.
- THE CONTRACTOR SHALL MAINTAIN THE EROSION AND SEDIMENT CONTROL MEASURES AS IDENTIFIED UNDER THE "MAINTENANCE" SECTION OF THIS DOCUMENT.
- SEDIMENT SHALL BE REMOVED FROM MEASURES PRIOR TO SEDIMENT REACHING ONE-HALF THE BARRIER FOR SILT FENCE.
- ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VA ESCH) AND 9VAC25-840-40.

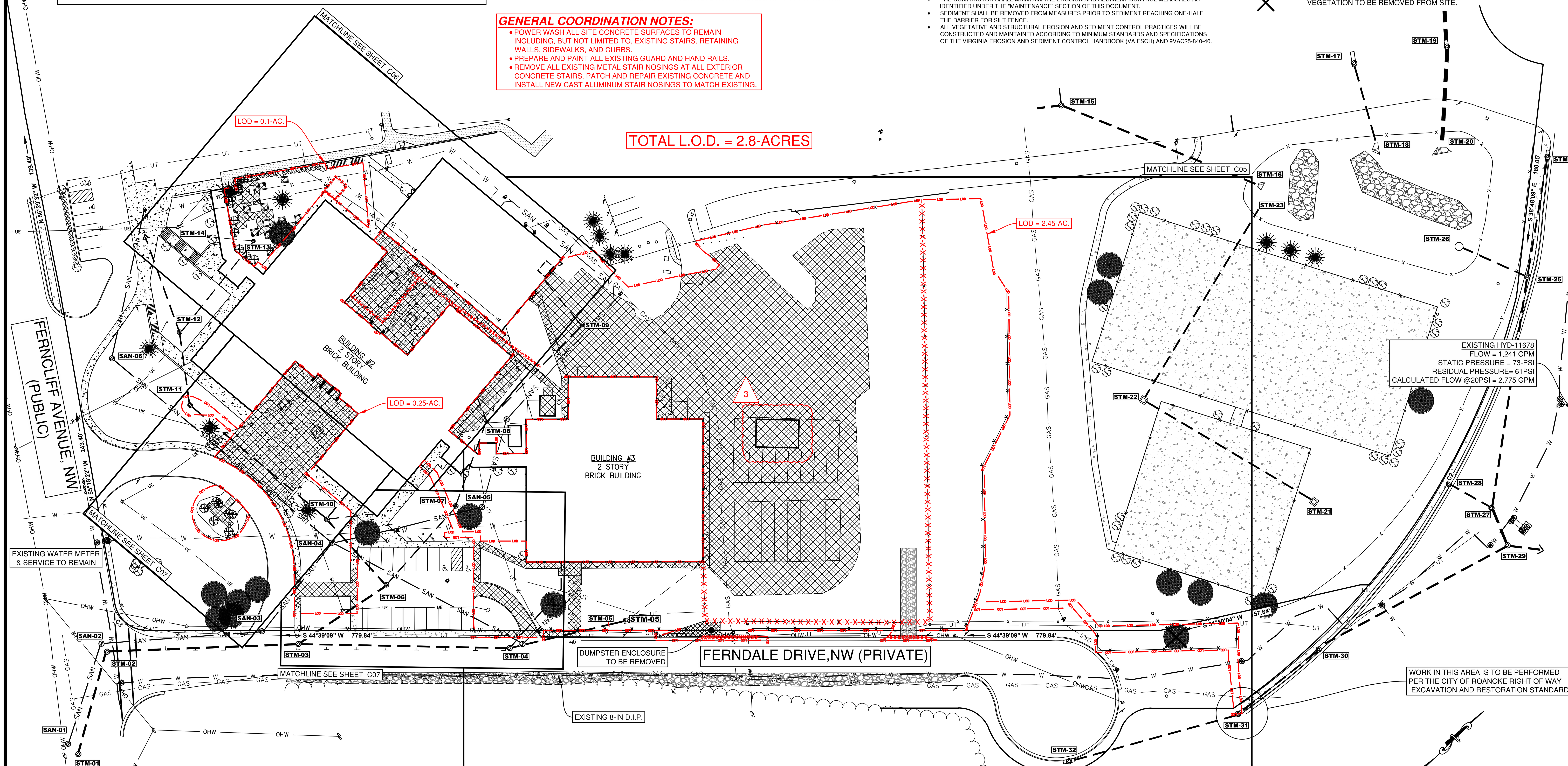
EROSION AND SEDIMENT CONTROL MEASURES:

PROVIDE THE FOLLOWING AS REQUIRED PER PHASE:

- CE — CONSTRUCTION ENTRANCE MEETING VA ESCH STD. & SPEC. 3.02
- SF — SILT FENCE MEETING VA ESCH STD. & SPEC. 3.05
- IP — INLET PROTECTION MEETING VA ESCH STD. & SPEC. 3.18
- TS — TEMPORARY SEEDING MEETING VA ESCH STD. & SPEC. 3.31
- MU — MULCHING MEETING VA ESCH STD. & SPEC. 3.35
- DC — DUST CONTROL MEETING VA ESCH STD. & SPEC. 3.39

DEMOLITION LEGEND

- ▨ HARDSCAPE (PAVING, BUILDINGS, CONCRETE, & GRAVEL) TO BE REMOVED
- –/-/-/-/– ITEM IS TO BE ABANDONED IN PLACE.
- –X-X-X-X-X-X– ITEM IS TO BE DEMOLISHED AND REMOVED FROM SITE.
- ✕ VEGETATION TO BE REMOVED FROM SITE.



CURVE TABLE						
CURVE #	LENGTH	RADIUS	TANGENT	DELTA	CHORD DIRECTION	CHORD LENGTH
C1	184.25'	60.50'	1256.59'	174°29'14"	S 38°48'09" E	120.86'
C2	251.69'	550.00'	128.09'	26°13'11"	S 18°14'24" E	249.50'
C3	35.59'	25.00'	21.57'	81°34'00"	S 85°25'50" W	32.66'

LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	S 44°39'09" W	6.67'

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

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06/17/2022
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No.	DATE	DESCRIPTION
	06/17/22	1ST CITY REVIEW
ADDENDUM #3 – 07/18/2022 ADDED DEMO HATCHING AT EXISTING STORAGE BUILDING. STORAGE BLDG. & SLAB TO BE DEMOLISHED.		

DRAWN BY:	JDE\JMD
REV'D BY:	JDE
DATE:	06/17/2022
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OVERALL EXISTING CONDITIONS AND E&SC PLAN NOTES

C04

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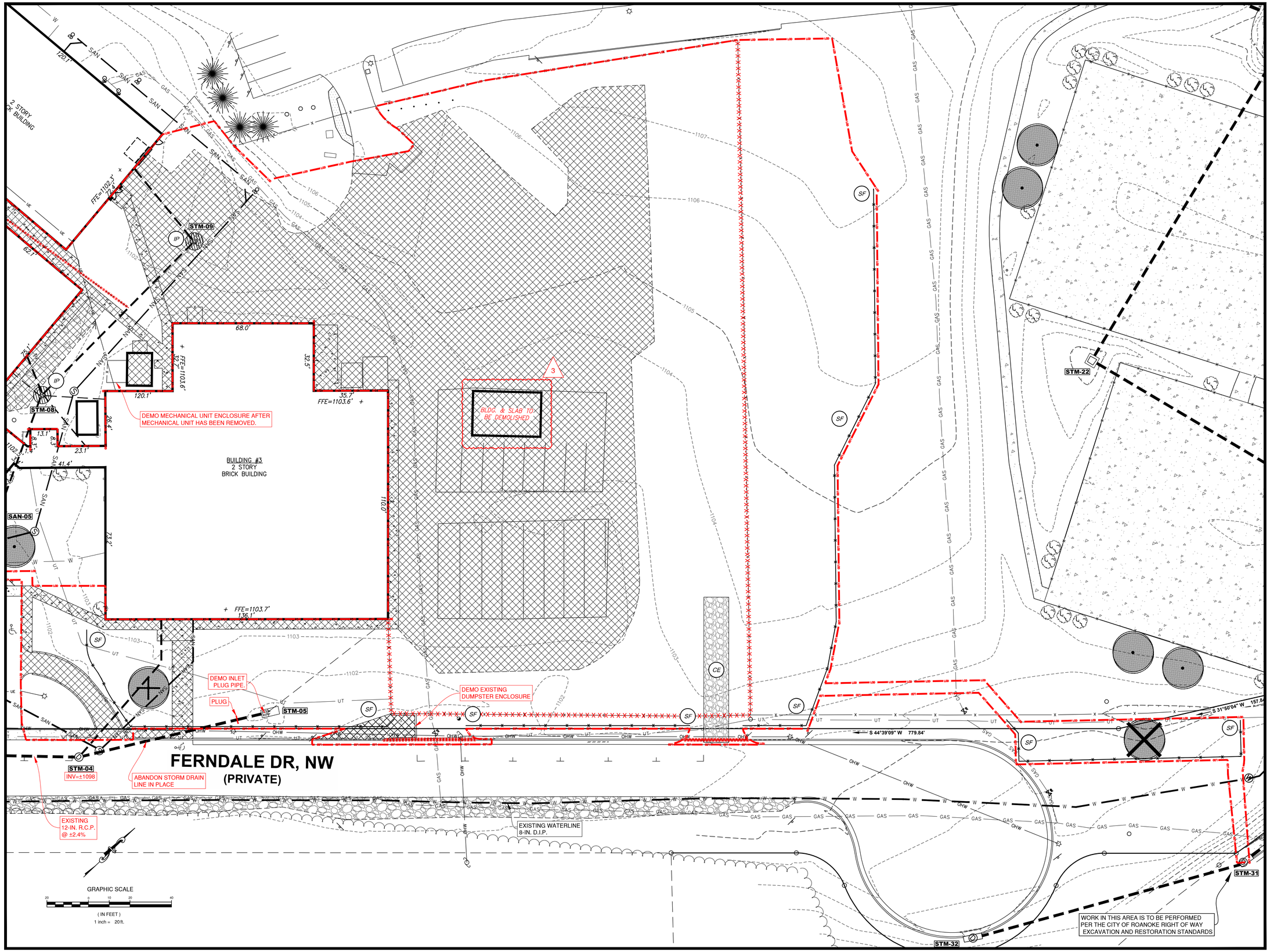

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DRAWN BY:	JDE\JMD
REV'D BY:	JDE
DATE:	06/17/2022
SCALE:	AS SHOWN

EX. CONDITIONS, DEMOLITION, & PHASE I E&SC PLAN

C05

SHEET _____ of __X__

2 STORY
BRICK ANNEX BUILDING
FFE=1102.4

TO REMAIN

EXISTING STAIRS
TO REMAIN

REMOVE EXISTING TRENCH GRATES
& ASSOCIATED SD PIPE

DEMO ENCLOSURE WITH
REMOVAL OF GENERATOR.

3

HVAC UNITS SERVING EXISTING DATA CENTER
TO REMAIN IN SERVICE UNTIL THE DATA CENTER IS MOVED
TO THE NEW LOCATION DOWNTOWN. NEW WORK WITHIN
COURTYARD SHALL NOT COMMENCE UNTIL NEW DATA
CENTER IS OPERATIONAL (ESTIMATED 01\23)

REMOVE EXISTING
BRICK RETAINING WALL

STM-13

STM-14

BUILDING #2
2 STORY
BRICK BUILDING

GRAPHIC SCALE

10 0 5 10 20

(IN FEET)
1 inch = 10ft.

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COMMONWEALTH OF VIRGINIA
JACK D. ELLINWOOD
Lic. No. 001107
06/17/2022
LANDSCAPE ARCHITECT

RUFFNER CAREER AND TECHNICAL EDUCATION CENTER

ROANOKE, VIRGINIA

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REVISIONS		
No.	DATE	DESCRIPTION
	06/17/22	1ST CITY REVIEW
ADDENDUM #3 – 07/18/2022 REVISE HVAC UNIT RELOCATION NOTE AND COURTYARD WORK SCHEDULE INFORMATION.		

DRAWN BY:	JDE\JMD
REV'D BY:	JDE
DATE:	06/17/2022
SCALE:	AS SHOWN

EX. CONDITIONS, DEMOLITION, & PHASE I E&SC PLAN

C06

SHEET _____ of ___X___

STORM SEWER STRUCTURE SCHEDULE	
STRC. NUMBER	STRC. DATA
1	DI-2A, L=2.2' TOP: 1101.80 INV. OUT: 1097.80 (TO #2, 15" HDPE,NE)
2	VDOT STD. DI-1 TOP: 1101.50 INV. IN: 1097.10 (FROM #1, 15" HDPE, SW) INV. OUT: 1097.00 (TO #3, 15" HDPE,NE)
3	VDOT STD. DI-2A (L=6-FT) TOP: 1102.50 INV. IN: 1096.30 (FROM #2, 15" HDPE, SW) INV. IN: 1096.30 (FROM #4, 15" HDPE, W) INV. OUT: 1096.20 (TO #5, 15" HDPE,NE)
4	VDOT STD. DI-2A (L=6-FT) TOP: 1104.50 INV. OUT: 1100.00 (TO #3, 15" HDPE,E)
5	ADS BARACUDA MAX STORMWATER SEPERATOR TOP: 1101.15 INV. IN: 1095.00 (FROM #3, 15" HDPE, SW) INV. OUT: 1094.90 (TO #6, 15" HDPE,E)
6	VDOT STD. MH-1 (48-IN DIA.) TOP: 1100.12 INV. IN: 1094.10 (FROM #5, 15" HDPE, W) INV. OUT: 1093.10 (TO #7, 18" HDPE,SE)
8	VDOT STD. MH-1 (48-IN DIA) TOP: 1098.60 INV. IN: 1093.00 (FROM #7, 48" HDPE, SW) INV. OUT: 1093.00 (TO #STM-31, 15" HDPE,SE)
9A	ADS N12 TEE (18"X8") TOP: 1092.73 INV. IN: 1092.00 (FROM #9, 8" HDPE, W)
9	24" DIA GRATE NYLOPLAST INLINE DRAIN TRAFFIC BEARING TOP: 1100.60 INV. OUT: 1096.00 (TO #9A, 8" HDPE,E)

STORM SEWER STRUCTURE SCHEDULE	
STRC. NUMBER	STRC. DATA
10	24" DIA GRATE NYLOPLAST INLINE DRAIN TOP: 1101.50 INV. OUT: 1099.50 (TO #11, 8" HDPE,W)
11A	ADS N12 TEE (12"X8") TOP: 1095.82 INV. IN: 1095.09 (FROM #11, 8" HDPE, N)
11	24" DIA GRATE NYLOPLAST INLINE DRAIN TOP: 1101.50 INV. IN: 1099.00 (FROM #10, 8" HDPE, E) INV. OUT: 1099.00 (TO #11A, 8" HDPE,S)
12	NYLOPLAST (2'X3') CURB INLET TOP: 1101.50 INV. OUT: 1099.50 (TO #13, 8" HDPE,E)
13	NYLOPLAST (2'X3') CURB INLET TOP: 1101.50 INV. IN: 1099.20 (FROM #12, 8" HDPE, W) INV. OUT: 1099.20 (TO #14, 8" HDPE,N)
14	BEND TOP: 1102.00 INV. IN: 1098.72 (FROM #13, 8" HDPE, S) INV. OUT: 1098.72 (TO #15, 8" HDPE,NE)
15	BEND TOP: 1102.00 INV. IN: 1098.49 (FROM #14, 8" HDPE, SW) INV. OUT: 1098.49 (TO #16, 8" HDPE,E)
16	24" DIA. NYLOPLAST INLINE DRAIN GRATE TOP: 1101.70 INV. IN: 1098.05 (FROM #15, 8" HDPE, W) INV. OUT: 1098.05 (TO #17, 8" HDPE,E)
17	ADS N-12 TEE W/ 24" DIA. DRAIN COVER TOP: 1097.48 INV. IN: 1096.75 (FROM #16, 8" HDPE, W)

STORM SEWER STRUCTURE SCHEDULE	
STRC. NUMBER	STRC. DATA
18	24" DIA. INLINE DRAIN TOP: 1101.50 INV. OUT: 1098.50 (TO #19, 8" HDPE,SW)
19	24" DIA. INLINE DRAIN TOP: 1101.50 INV. IN: 1098.15 (FROM #18, 8" HDPE, NE) INV. OUT: 1098.15 (TO #20, 8" HDPE,S)
20	24" DIA. INLINE DRAIN TOP: 1101.50 INV. IN: 1097.79 (FROM #19, 8" HDPE, N) INV. OUT: 1097.79 (TO #STM-13, 8" HDPE,S)

SAN SEWER TABLE

SAN-01
MH TOP = 1100.58'
INVIN 8" RCP = 1089.0'
INVO 8" RCP = 1088.9'

SAN-02
MH TOP = 1100.58'
INVIN 8" RCP = 1090.9'
INVO 8" RCP = 1090.8'

SAN-03
MH TOP = 1100.40'
INVIN 8" RCP = 1093.1'
INVO 8" RCP = 1093.0'

SAN-04
MH TOP = 1101.95'
INVIN 4" TC = 1094.9'
INVIN 8" = 1094.9'
INVIN 8" = 1095.6'
INVIN 8" RCP = 1094.9'
INVO 8" RCP = 1094.9'

SAN-05
MH TOP = 1102.28'
INVIN 8" RCP = 1096.2'
INVO 8" RCP = 1096.1'

SAN-06
MH TOP = 1107.75'
INVIN 8" RCP = 1098.8'
INVO 8" RCP = 1098.7'

STORM SEWER TABLE

STM-03
POSSIBLE MANHOLE
UNDER ASPHALT

STM-04
POSSIBLE MANHOLE
UNDER ASPHALT

STM-06
GRATE TOP = 1100.9'
INVIN 10" RCP = ????.?'
INVIN 15" RCP = 1093.0'
INVO 18" RCP = 1092.7'

STM-08
GRATE TOP = 1101.2'
INVIN 4" TC = 1099.2'
INVIN 4" TC = 1096.4'
INVIN 6" CONC = 1096.4'
INVIN 10" = 1097.5'
INVIN 10" RCP = 1096.1'
INVO 10" METAL = 1096.1'

STM-09
GRATE TOP = 1099.9'
INVIN 10" RCP = 1097.5'
INVO 10" RCP = 1097.3'

STM-10
GRATE TOP = 1101.2'
INVIN 8" = 1096.4'
INVIN 12" = 1094.8'
INVIN 12" = 1094.7'
INVO 15" RCP = 1094.6'

STM-11
GRATE TOP = 1101.5'
INVIN 12" RCP = 1095.1'
INVO 12" RCP = 1095.2'

STM-13
GRATE TOP = 1100.3'
INVIN 4" TC = 1097.7'
INVO 8" CONC = 1097.5'

STM-31
MH TOP = 1090.74'
INVIN 15" RCP = 1086.6'
INVO 15" RCP = 1086.5'

FIRE MARSHALL REQUIREMENTS

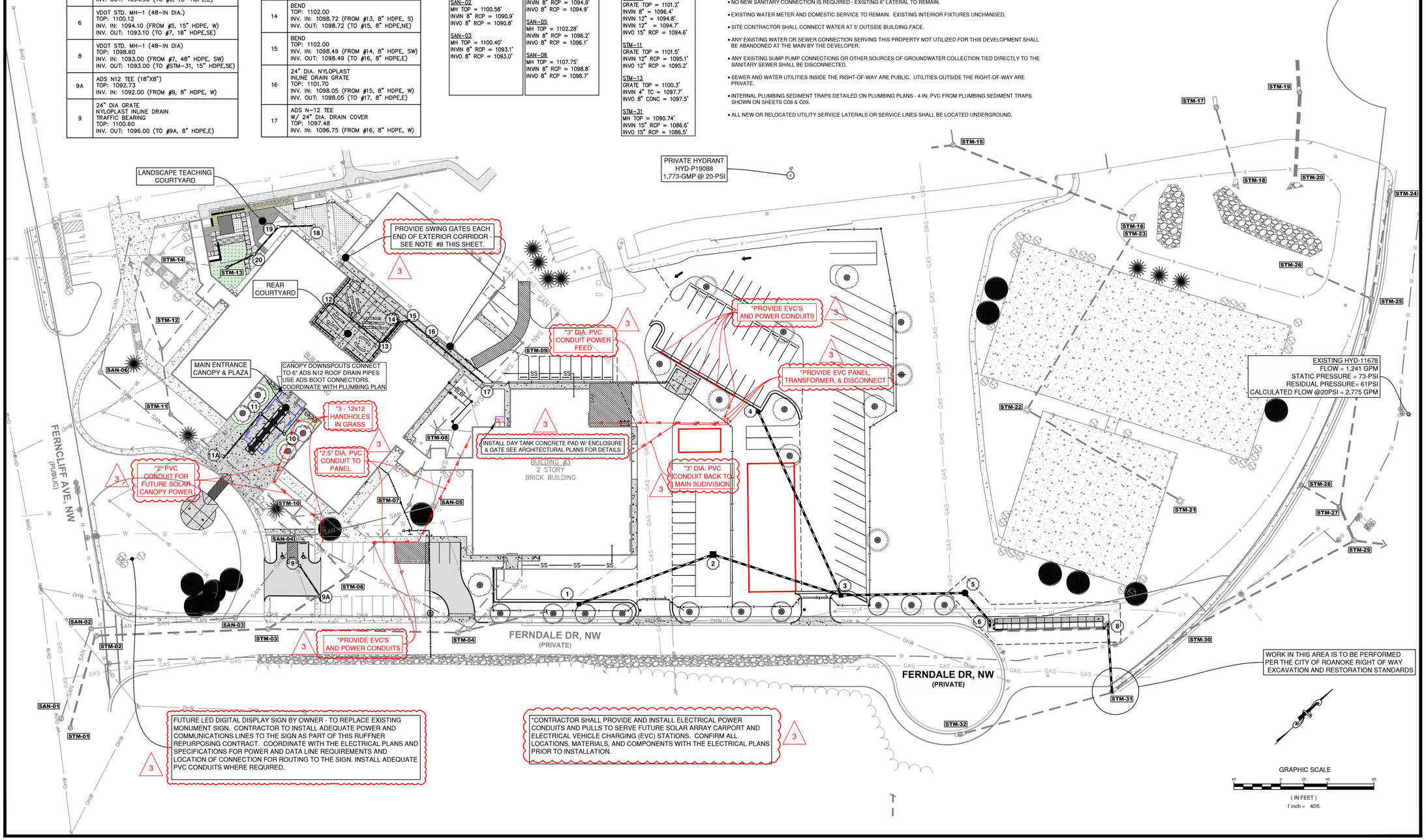
- THE EXISTING BUILDINGS FALL UNDER USE GROUP E (EDUCATIONAL).
- USE GROUP E UP TO TWO STORIES SHALL PROVIDE 2,000-GPM FIRE FLOW FOR TWO HOURS AT A MINUMUM RESIDUAL PRESSURE OF 20 PSI.
- CALCULATED FLOW AT HYDRANT #11678 = 2775 GPM @ 20 PSI (WVWA TEST CONDUCTED 02/03/2022)
  - FLOW TEST 1,244 GPM - 73 PSI STATIC - 61 PSI RESIDUAL
  - ANTICIPATED FLOW AT PROPOSED HYDRANT IS APPROXIMATELY 1,848 GPM @ 20 PSI
  - PRIVATE HYDRANT P19088 WAS CALCULATED AT 1,773 GPM @ 20 PSI
- SECURITY GATES MAY BE INSTALLED ACROSS FIRE APPARATUS ACCESS ROADS WHEN APPROVED BY THE FIRE MARSHAL OR HIS/HER DESIGNEE. SECURITY GATES MAY BE AUTOMATICALLY OR MANUALLY OPERATED IN ACCORDANCE WITH THIS SECTION.
- WHERE A SECURITY GATE SERVES AS THE ONLY MEANS OF ACCESSING A BUILDING, THE SECURITY GATE MUST BE CAPABLE OF AUTOMATIC OPERATION AND EQUIPPED WITH AN ELECTRIC KEY SWITCH THAT IS COMPATIBLE WITH THE KNOX RAPID ENTRY SYSTEM ADOPTED BY ROANOKE FIRE-EMS (SEE POLICY FP-02, KNOX RAPID ENTRY SYSTEM FOR FURTHER DETAILS AND REQUIREMENTS). WHERE A SECURITY GATE ONLY CONTROLS ACCESS TO A PORTION OF THE BUILDING AND WITH THE EXPRESS APPROVAL OF THE FIRE MARSHAL OR HIS/HER DESIGNEE, THE SECURITY GATE MAY BE MANUALLY OPERATED AND EQUIPPED WITH A PADLOCK THAT IS COMPATIBLE WITH THE KNOX RAPID ENTRY SYSTEM ADOPTED BY ROANOKE FIRE-EMS. HOWEVER, THE FIRE MARSHAL OR HIS/HER DESIGNEE MAY REQUIRE ANY SECURITY GATE UNDER THIS SECTION TO HAVE AUTOMATIC OPERATION WHERE SUCH GATE WOULD BE NECESSARY FOR LIFESAVING OR FIREFIGHTING PURPOSES.
- SECURITY GATE TO BE EQUIPPED WITH A KNOX 3501 OR 3502 SERIES ELECTRICAL KEY SWITCH THAT IS CONFIGURED TO OVERRIDE THE GATE CONTROLLER AND HOLD THE GATE OPEN FOR FIRE DEPARTMENT ACCESS. CONTRACTOR TO COORDINATE KNOX-BOX LOCATIONS WITH ARCHITECT & CITY OF ROANOKE FIRE MARSHAL'S OFFICE PRIOR TO CONSTRUCTION.
- CONTRACTOR TO ENSURE ALL ELECTRIC AND MANUAL GATES THROUGHOUT THE COMPLEX WILL INCLUDE KNOX BOX SYSTEMS AS REQUIRED PER THE FIRE MARSHALL'S OFFICE. CONTACT THE FIRE MARSHALL FOR APPROVED KNOX-BOX DEVICES BEFORE INSTALLATION.

UTILITY CONNECTION NOTES:

- NO NEW SANITARY CONNECTION IS REQUIRED - EXISTING 6" LATERAL TO REMAIN.
- EXISTING WATER METER AND DOMESTIC SERVICE TO REMAIN. EXISTING INTERIOR FIXTURES UNCHANGED.
- SITE CONTRACTOR SHALL CONNECT WATER AT 5' OUTSIDE BUILDING FACE.
- ANY EXISTING WATER OR SEWER CONNECTION SERVING THIS PROPERTY NOT UTILIZED FOR THIS DEVELOPMENT SHALL BE ABANDONED AT THE MAIN BY THE DEVELOPER.
- ANY EXISTING SUMP PUMP CONNECTIONS OR OTHER SOURCES OF GROUNDWATER COLLECTION TIED DIRECTLY TO THE SANITARY SEWER SHALL BE DISCONNECTED.
- SEWER AND WATER UTILITIES INSIDE THE RIGHT-OF-WAY ARE PUBLIC. UTILITIES OUTSIDE THE RIGHT-OF-WAY ARE PRIVATE.
- INTERNAL PLUMBING SEDIMENT TRAPS DETAILED ON PLUMBING PLANS - 4-IN. PVC FROM PLUMBING SEDIMENT TRAPS SHOWN ON SHEETS C08 & C09.
- ALL NEW OR RELOCATED UTILITY SERVICE LATERALS OR SERVICE LINES SHALL BE LOCATED UNDERGROUND.

MISCELLANEOUS SITE NOTES

1. PAVEMENT SHALL BE SAWCUT AT LIMITS SHOWN FOR DEMOLITION.
2. INSTALL CONCRETE WHEEL STOPS AT ALL PARKING SPACES WHERE THERE IS NO CURB AND GUTTER.
3. PAINT PARKING SPACE LINES AND NO PARKING ZONES PER VDOT SPECIFICATIONS.
4. COORDINATE DECORATIVE FENCE SELECTION WITH OWNER AND ARCHITECT. INSTALL ALL FENCING COMPONENTS PER MANUFACTURERS SPECIFICATIONS.
5. COORDINATE SITE FURNISHING SELECTION WITH OWNER AND ARCHITECT.
6. COORDINATE GATE REMOTE ACCESS \ CARD READER SYSTEM WITH OWNER. INSTALL POWER CONDUITS AS NEEDED TO SYSTEM COMPONENTS - COORDINATE WITH ELECTRICAL SITE PLAN.
7. NEW FENCING ALONG FERNDALE DRIVE SHALL BE DECORATIVE, EXTRUDED ALUMINUM - COLOR BLACK. MANUFACTURER - AMETCO (SATURN LOUVERED FENCE - 6' HIGH) OR APPROVED EQUAL. COORDINATE CANTILEVER ACCESS GATE COMPONENTS WITH MANUFACTURER (CARRIAGE SYSTEM AND MONORAIL TRACK SYSTEM AND HARDWARE). NEW CHAIN LINK FENCE, WHERE SPECIFIED, SHALL MATCH EXISTING.
8. PROVIDE 6.0' WIDE SWING GATES (TWO 3' PANELS) AT END OF EACH REAR EXTERIOR CORRIDOR WHERE SHOWN ON THIS DRAWING. MATCH MATERIAL TO DECORATIVE FENCE TYPE SELECTED IN #7 ABOVE. CENTER GATES BETWEEN ADJACENT WALL FACES. PROVIDE ACCESS CARD READER ON FACE OF EXTERIOR WALL (OUTSIDE CORRIDOR). COORDINATE HARDWARE WITH ARCHITECT.
9. SEE ELECTRICAL PLANS FOR BUILDING AND SITE LIGHTING INFORMATION.
10. SEE SHEET C20 FOR DETENTION SYSTEM DETAILS.



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REVISIONS		
No.	DATE	DESCRIPTION
	06/17/22	1ST CITY REVIEW
ADDENDUM #3 – 07/18/2022 MODIFY LED SIGN REQUIREMENTS AND NOTE. ADD SWING GATE ANNOTATION AND NOTE. ADDED PVC POWER CONDUITS AND EVC PEDESTALS WITH SUPPORTING PANELS.		

DRAWN BY:	JDE\JMD
REV'D BY:	JDE
DATE:	06/17/2022
SCALE:	AS SHOWN

LAYOUT - OVERALL

C08

SHEET _____ of __X__

EXISTING CHAIN LINK FENCE TYP.
EXISTING AUTO GATE & CARD READER
CONNECT NEW CHAIN LINK FENCE TO EXISTING
GRAVEL FLEET PARKING
6-SPACES - ALTERNATE CONNEX BOX LOCATION
GRASSED ISLAND TO DIVIDE PARKING BAY & TRAVEL WAYS
UTILITY SPACES (10'x60')
OPS SPACES STD. DUTY PAVEMENT
ENCLOSE PERIMETER OF DUMPSTER AREA WITH 8-FT HIGH BOARD ON BOARD FENCE. PROVIDE DOUBLE SWING GATES SEE DETAIL ON SHEET C17
GRAVEL FLEET PARKING
NEW CHAIN LINK FENCE
CONNEX SPACES ASPHALT PAVED STD. DUTY PAVEMENT
HEAVY DUTY PAVEMENT LIMIT TYP.
HEAVY DUTY PAVEMENT LIMIT
ADJUST TOP TO 1101.5
OPS SPACES ASPHALT PAVEMENT
CONCRETE WHEEL STOPS (TYP.)
STD. DUTY PAVEMENT
NEW CHAIN LINK FENCE DIVIDING OPERATIONS & CTE AREAS
DUMPSTER PAD (20'x20')
AUTO ROLLING GATE
GATE PRESSURE SENSOR FOR EXIT
MAN GATE W/ PANIC HARDWARE
24" DIA. DRAIN COVER W/ TEE SECTION INV=±1096.75
4" PVC TO PLUMBING SEDIMENT TRAP (SEE PLUMBING PLANS)
5-FT SIDEWALK (TYP.)
BUILDING TRADES LOADING/STAGING AREA 4" WIDE WHITE PAINTED STRIPES
BOLLARDS TYPICAL AT DUST COLLECTION SYSTEM LOCATION
VDOT STD. DI-2A (L=6-FT) TOP=1104.5 INV=1100.00
NEW BUILDING & TURN DOWN SLAB (20'x36') SEE NOTE THIS SHEET MATCH SLAB FFE
NEW 5-FT WIDE CONCRETE APRON - SEE HEAVY DUTY CONC. DETAIL C08.
ELECTRONIC SLIDE ACCESS GATE 12' WIDE. REMOTE OPERATION BY ADMINISTRATIVE STAFF - PROVIDE CARD READER WITH KEYPAD ENTRY PEDESTAL.
BUILDING #3 2 STORY BRICK BUILDING
GRASSED ISLAND TO DIVIDE PARKING BAYS & TRAVEL WAYS. (GRADED FOR FUTURE BUILDING)
HEAVY DUTY PAVEMENT LIMIT
ASPHALT STAGING AREA - STD. DUTY PAVEMENT
CTE SPACES ASPHALT PAVED
NEW CHAIN LINK FENCE DIVIDING OPERATIONS FROM CTE AREA
PROP. BUILDING TURN DOWN SLAB SEE NOTE ON THIS SHEET (40'x110') FFE=1103.5
AUTOMOTIVE TECHNOLOGY BAY DOORS WITH A 5-FT WIDE CONCRETE APRON - SEE HEAVY DUTY CONC. DETAIL C08
CONCRETE PAD FOR WELDING GAS STORAGE (12'x5') WITH 5-FT HIGH BOARD ON BOARD FENCE WITH FRONT ACCESS GATE
4" PVC TO PLUMBING SEDIMENT TRAP (SEE PLUMBING PLANS)
NEW 6-IN. D.I.P. FIRE SERVICE LINE SHOWN ON SHEET C11.
BOLLARDS
MAN GATE
EX 10" C.I. ROOF DRAIN
CTE STAGING AREA ASPHALT PAVED STD. DUTY PAVEMENT
VDOT CG-2
VDOT CG-6
EX 6" S.S. LATERAL
AUTO-GATE
MAN GATE W/ PANIC HARDWARE
NEW DECORATIVE FENCE
CG-9D
PLUG. EX. STORM
ABANDON STORM DRAIN LINE IN PLACE
VDOT STD. DI-2A (L=4-FT) TOP=1101.50 INV=1097.80
CARD READER & KEY PEDESTAL PROVIDE POWER.
LIMITS OF 6-FT HIGH DECORATIVE COMMERCIAL FENCE (382' +\-). ALUMINUM BLACK EXTRUDED - COORDINATE SELECTION WITH OWNER
137.18-FT - 15" ADS N-12 PIPE @ 0.51%
115.09-FT - 15" ADS N-12 PIPE @ 0.61%
106.19-FT - 15" ADS N-12 PIPE @ 1.13%
172.56-FT - 15" ADS N-12 PIPE @ 2.14%
32.21-FT - 15" ADS N-12 PIPE @ 2.48%
58-FT - 15" ADS N-12 PIPE @ 10.33%
21.10-FT - 8" ADS N-12 PIPE @ 2.10%
61.92-FT - 8" ADS N-12 PIPE @ 2.10%
VALLEY GUTTER
VDOT STD. DI-2A (L=6-FT) TOP=1102.5 INV IN=1096.30 INV OUT=1096.20
ADS BARRACUDA STORMWATER SEPARATOR TREATS ±1.9-ACRES TOP=1101.15 INV IN=1095.00 INV OUT=1094.90
ADS SC-740 STORMTECH CHANBERS 100-FT (W/ ISOLATOR ROW) @0.0% UNDERGROUND DETENTION DETAILED ON SHEETS C21-C22
UGD START INV IN=1094.1 INV OUT=1093.1
UGS END INV OUT=1093.0
STM-08
STM-09
STM-04 INV=±1098
STM-05
STM-22
STM-31
STM-32
EX. SANITARY SEWER @±1.87%
EX. SSMH 8" INV = ±1097.0
WVWA STD. W8 FIRE SERVICE VAULT
EXISTING 12-IN. R.C.P. @ ±2.4%
2 STORY BRICK BUILDING
LOADING SPACE TURNAROUND 10'x34'
LOADING SPACE 10'x34'
FFE=1102.3'
FFE=1104.6'
FFE=1103.6'
FFE=1103.7'
FFE=1106.1'
99.5'
35.7'
32.5'
136.1'
120.1'
62.1'
75'
68.0'
41.4'
36.4'
13.1'
2.8'
2.1'
1.4'
102.5'
110.0'
GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20ft.

NOTE:
- CONTRACTOR TO INSTALL NEW TURN-DOWN SLABS FOR FUTURE STORAGE BUILDINGS. BUILDING INSTALLATION N.I.C..
- REFER TO APPENDIX 'C' – ADDENDUM 3 FOR OWNER PROVIDED BUILDING RELATED INSTALLATION STANDARDS AND DETAILS.
- PROVIDE POWER AND ASSOCIATED CONDUIT TO BUILDING PADS, COORDINATE ROUTING LOCATION WITH ELECTRICAL PLANS.

FERNDALE DR, NW
(PRIVATE)

WORK IN THIS AREA IS TO BE PERFORMED PER THE CITY OF ROANOKE RIGHT OF WAY EXCAVATION AND RESTORATION STANDARDS

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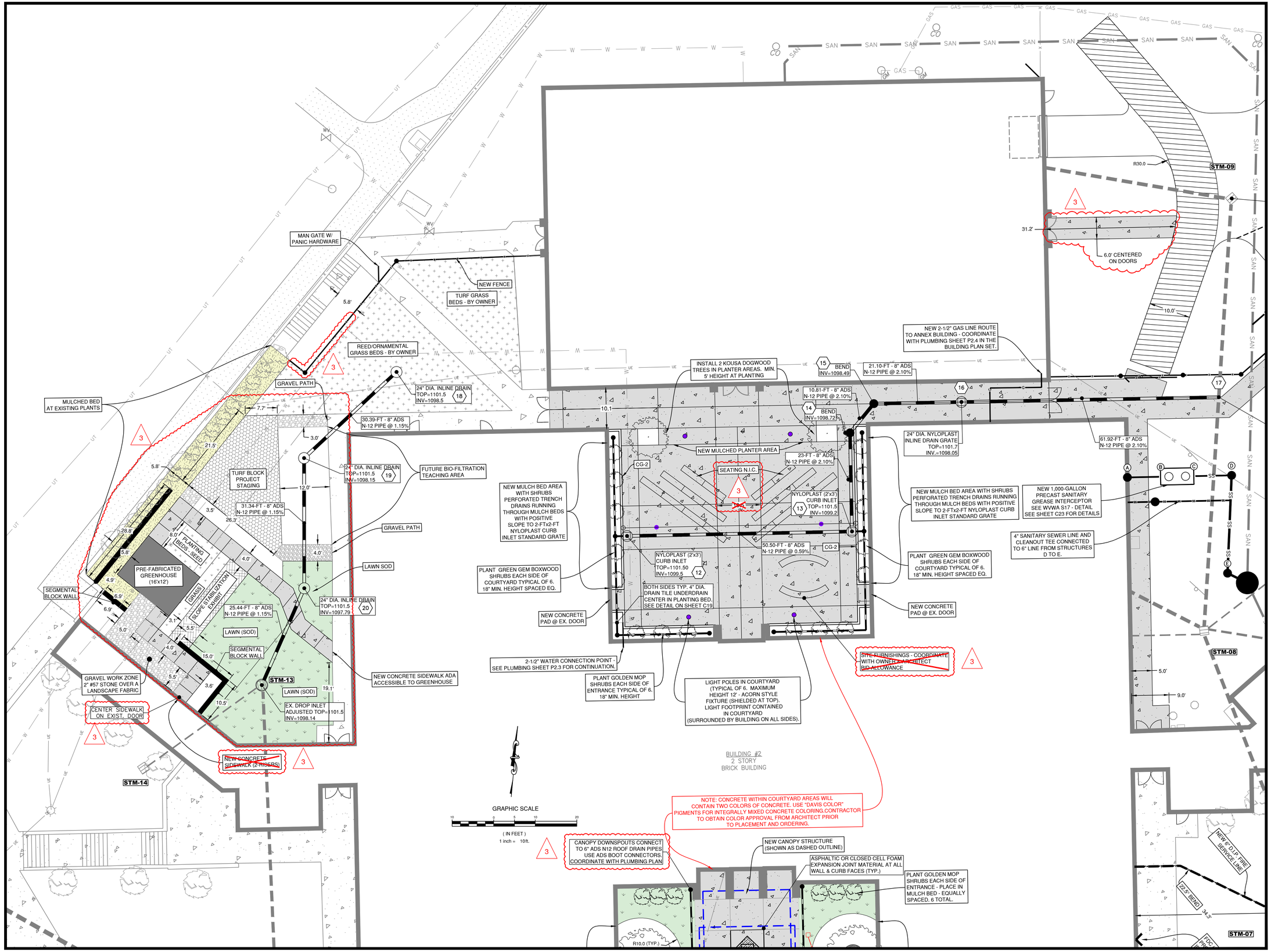
No.	DATE	DESCRIPTION
	06/17/22	1ST CITY REVIEW
ADDENDUM #3 – 07/18/2022 ADD CONC. APRON DETAIL NOTE. REMOVE WELDING GAS CONC.PAD, SCREENING FENCE. REVISED FENCE LOCATION & ADDED BUILDING/REMOVED PARKING.		

DRAWN BY:	JDE\JMD
REV'D BY:	JDE
DATE:	06/17/2022
SCALE:	AS SHOWN

LAYOUT & DIMENSIONAL PLAN PT. I

C09

SHEET _____ of __X__



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ADDENDUM #3 – 07/18/2022
REVISE SITE FURNISHINGS NIC. CHANGE LOCATION OF CHAIN LINK FENCE CONNECTION AT STAIRS. ADD LOCATION DIMENSIONS IN COURTYARD. SHOW DOWNSPOUT CONNECTION LOCATIONS AT FRONT CANOPY.

DRAWN BY:	JDE\JMD
REV'D BY:	JDE
DATE:	06/17/2022
SCALE:	AS SHOWN

LAYOUT & DIMENSIONAL PLAN PT. II

C10

SHEET _____ of __X__

NOTE: CONCRETE WITHIN COURTYARD AREAS WILL CONTAIN TWO COLORS OF CONCRETE. USE "DAVIS COLOR" PIGMENTS FOR INTEGRALLY MIXED CONCRETE COLORING.CONTRACTOR TO OBTAIN COLOR APPROVAL FROM ARCHITECT PRIOR TO PLACEMENT AND ORDERING.

3 CANOPY DOWNSPOUTS CONNECT TO 6" ADS N12 ROOF DRAIN PIPES USE ADS BOOT CONNECTORS COORDINATE WITH PLUMBING PLAN

NEW CANOPY STRUCTURE (SHOWN AS DASHED OUTLINE)

ASPHALTIC OR CLOSED CELL FOAM EXPANSION JOINT MATERIAL AT ALL WALL & CURB FACES (TYP.)

PLANT GOLDEN MOP SHRUBS EACH SIDE OF ENTRANCE - PLACE IN MULCH BED - EQUALLY SPACED. 6 TOTAL.

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 inch = 10ft.

R10.0 (TYP.)

INSTALL 1,100-SF± SOD LAWN & 2 ORNAMENTAL TREES WITH MULCH RINGS USE EASTERN REDBUDS

24" DIA. NYLOPLAST INLINE DRAIN GRATE TOP=1101.5 INV.=1099.0 (11)

26.35-FT - 8" ADS N-12 PIPE @ 1.90%

24" DIA. NYLOPLAST INLINE DRAIN GRATE TOP=1101.5 INV.=1099.5 (10)

INSTALL 1,100-SF± SOD LAWN & 2 ORNAMENTAL TREES WITH MULCH RINGS USE EASTERN REDBUDS

REMAIN

REMAIN

49.62-FT - 8" ADS N-12 PIPE @ 7.88%

SEE ARCHITECTURAL PLANS FOR SEAT WALL & CANOPY SUPPORT DETAILS

STM-11

EX. INLET STM-11 ADJUST TOP TO 1100.5 FROM 1101.5

ADJUST TOP TO 1100.7

ADS N12 TEE (12"x8") INV=1095.09±

NEW VDOT STD. CG-12

ASPHALT EXPANSION JOINT AT CURB FACE

NEW VDOT STD. CG-2

NEW VDOT STD. CG-2

PAINTED CROSS WALK 4-FT WIDE YELLOW LINES

8.0'

20.0'

5.0'

6.0'

NEW VDOT STD. CG-12

FFLED39/480 FLOODLIGHT MOUNTED IN CONCRETE OR EQUIVALENT PRODUCT

R15.0

NEW CONCRETE FLAG DISPLAY PLAZA.

NEW CONCRETE FLAG POLE PLAZA (2-3-FT DIA. POLE BASES 15-FT APART) INSTALL STANDARD COMMERCIAL GRADE, 30' TALL FLAG POLES PER MANUFACTURER'S SPECIFICATIONS

MAN GATE W/ PANIC HARDWARE

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 inch = 10ft.

R42.0

R30.0

R5.0

NEW CG-9D

STM-04

5.0'

10.0'

5.0'

21.5'

VDOT STD. CG-2 CURB

TURNED DOWN SIDEWALK

9.0'

18.0'

PROPOSED FIRE HYDRANT ±54.5-FT FROM BUILDING

R20.5

R5.0

59.2'

CURB TAPER

90° BEND

2 BOLLARDS

SAN-05

6" TEE 22.5° BEND

29.4'

NO PARKING FIRE LANE

4-IN. WIDE YELLOW STRIPING FOR EMERGENCY ACCESS SPACE WHERE EXISTING ADA WAS LOCATED

PIV

NEW 6" D.I.P. FIRE SERVICE LINE

PROPOSED HYDRANT 1,848-GPM @ 20PSI

18.0'

STM-07

22.5° BEND 34.3'

51.7'

FDC (STORZ TYPE) PROVIDE WALL MOUNTED IDENTIFICATION SIGN

STM-06

ADS N12 TEE (18"x8") INV=±1092.00

R5.0

R5.0

30-FT - 8" ADS N-12 PIPE @ 13.27%

ADA PARKING SIGNAGE

9.0'

SAN-04

18.0'

24" DIA. GRATE NYLOPLAST INLINE DRAIN TRAFFIC BEARING TOP=1100.60 INV=1196.00 (9)

DEMAIN

ADJUST TOP TO 1100.7

STM-10

4.0'

9.0'

27.5'

VDOT STD. CG-2

2 NEW ADA VAN ACCESSIBLE PARKING SPACES WITH (2) PARKING BLOCKS TYP.

9.0'

5.0'

6.0'

VDOT STD. CG-2

R6.0

R5.0

R6.0

STM-03

*SIDEWALK TRANSITION TO EXISTING. CUT AT NEAREST JOINT

ARCHITECTURAL PLANS FOR WALL & CANOPY DETAILS

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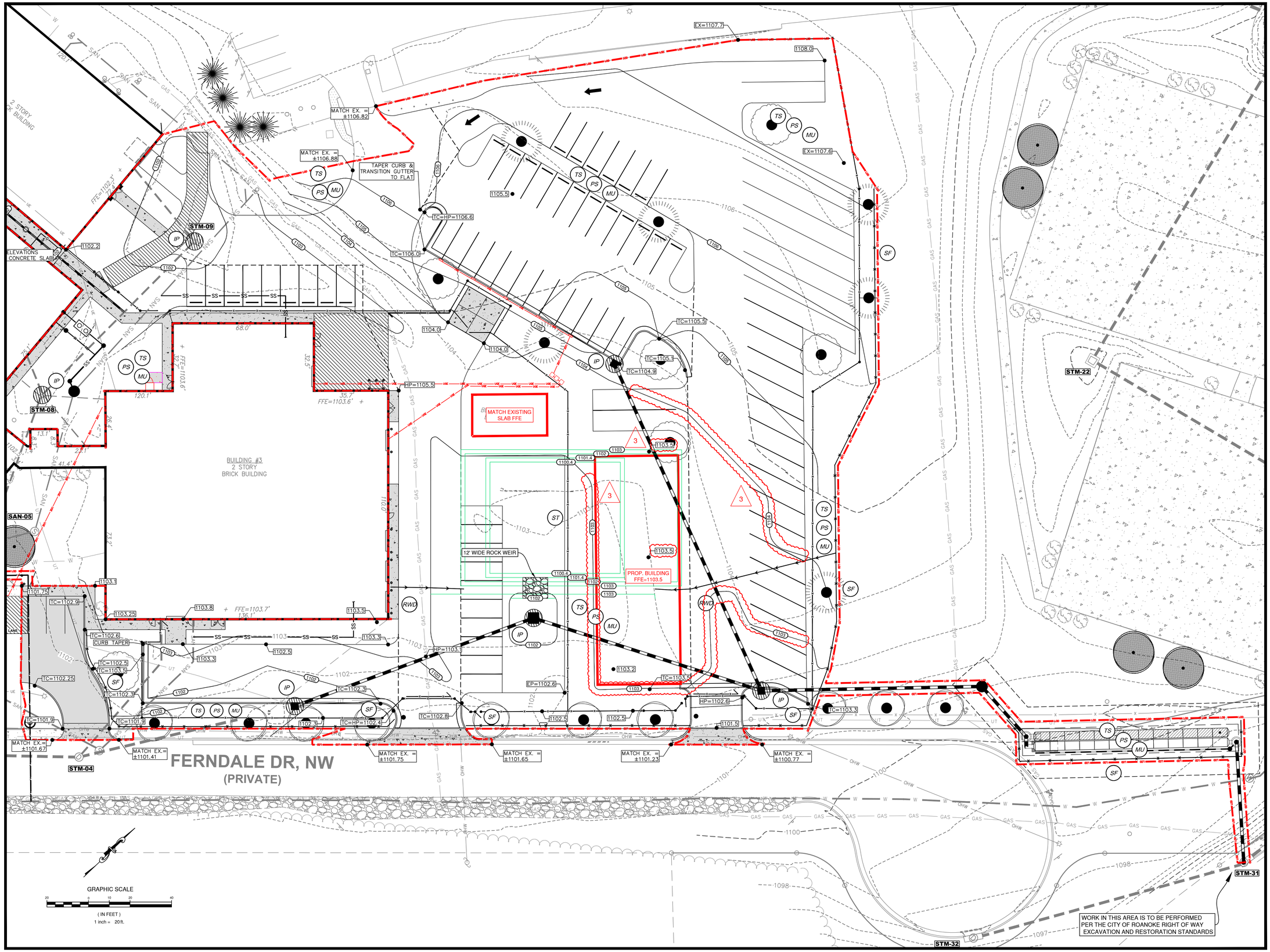
REVISIONS		
No.	DATE	DESCRIPTION
	06/17/22	1ST CITY REVIEW
ADDENDUM #3 – 07/18/2022 ADD CANOPY DOWNSPOUT NOTE AT MAIN ENTRANCE.		

DRAWN BY:	JDE\JMD
REV'D BY:	JDE
DATE:	06/17/2022
SCALE:	AS SHOWN

LAYOUT & DIMENSIONAL PLAN PT. III

C11

SHEET _____ of ___X___



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REVISIONS		
No.	DATE	DESCRIPTION
	06/17/22	1ST CITY REVIEW
ADDENDUM #3 – 07/18/2022 ADD \ REVISE SPOT ELEVTIONS AND CONTOUR LOCATIONS.		

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DATE:	06/17/2022
SCALE:	AS SHOWN

GRADING & PHASE II E&SC PLAN

C13

SHEET _____ of __X__

2 STORY
BRICK ANNEX BUILDING
FFE=1102.4

BUILDING #2
2 STORY
BRICK BUILDING

COURTYARD ELEVATIONS
ARE TOP OF CONCRETE SLAB

TW=1105.0
1105 CONTOUR
1106 CONTOUR
GREENHOUSE PAD
@ 1104.5
EX=1107.1
TW=1106.5
TW=1103.5
TW=1103.8
EX=1103.0
STM-13
STM-14

GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

BUILDING FFE
=1102.4

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	06/17/22	1ST CITY REVIEW
		ADDENDUM #3 – 07/18/2022
		ADD \ REVISE SPOT ELEVTIONS

DRAWN BY:	JDE\JMD
REV'D BY:	JDE
DATE:	06/17/2022
SCALE:	AS SHOWN

GRADING & PHASE II E&SC PLAN

C14

SHEET _____ of __X__

3

Fire Lane Signs

1. Specifications for fire lane signs are as follows:
   A. Fire lane signs shall be installed as follows:
   - A sign shall be positioned at the beginning and end of the fire lane and at 100 foot intervals throughout the fire lane or as designated by the fire official.
   - Signs shall be mounted on posts and must not exceed a setback of 6 feet from the curb or edge of the roadway.
   - The sign shall be positioned where clearly visible to traffic.
   - The sign is to be mounted not less than 7 feet from the ground to the bottom of the sign, unless otherwise directed.
   - Signs shall not be obscured from view by bushes, shrubs, etc.
   - Signs shall be installed on the side of direction of travel and shall face the traffic they are intended to serve.

   B. Sign Lettering and Construction
   - Preferred lettering on sign: **NO PARKING FIRE LANE TOWING ENFORCED** arrows to point to and indicate the area designated as fire lane. (see example sheet) Acceptable lettering on sign: **FIRE LANE NO PARKING.**
   - Red letters on white background with 3/8" red stripe around the entire outer edge of the sign.
   - Lettering size as follows:

   No Parking --- Fire Lane - 2"
   Towing Enforced - 1"
   Arrow - 1"
   - Metal construction, approximately 12" x 18".
   - All signs shall be made of reflectorized sheeting and conform to the Manual on Uniform Traffic Control Devices published by the Federal Highway Administration.

PLANTING SCHEDULE

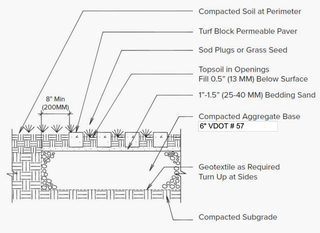
	KEY	CATEGORY	SCIENTIFIC NAME	COMMON NAME	SIZE (MIN.)	QUANTITY (Ea)	20-YR CANOPY (SF)	CANOPY (SF)	TYPE	NOTES
TREES	ER	ORNAMENTAL	Cercis canadensis	EASTERN REDBUD	2" caliper	4			DECIDUOUS	BALL & BURLAP
	KD	ORNAMENTAL	Cournus kousa	KOUSA DOGWOOD	2" caliper	4			DECIDUOUS	BALL & BURLAP
	PO	DECIDUOUS	Quercus palustris	PIN OAK	2" caliper	10	254	2540	DECIDUOUS	BALL & BURLAP
SHRUBS	RM	DECIDUOUS	Acer rubrum	RED MAPLE	2" caliper	6	314	1884	DECIDUOUS	BALL & BURLAP
	HL	DECIDUOUS	Gleditsia triacanthos "Shademaster"	HONEY LOCUST "SHADEMASTER"	2" caliper	6	314	1884	DECIDUOUS	BALL & BURLAP
							TOTAL CANOPY	6308		
	GM	SHRUB	Chamaecyparis pisifera	JAPANESE FALSECYPRESS	24" MIN.	13			EVERGREEN	5 GAL CONT.
	GG	SHRUB	Buxus 'Green Gem'	BOXWOOD	24" MIN.	12			EVERGREEN	5 GAL CONT.

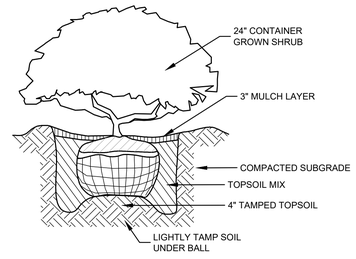
B&B - BALL AND BURLAP

ALL PLANTINGS TO BE IN SHREDDED PINE BARK MULCH BED OR RINGS AS SHOWN.

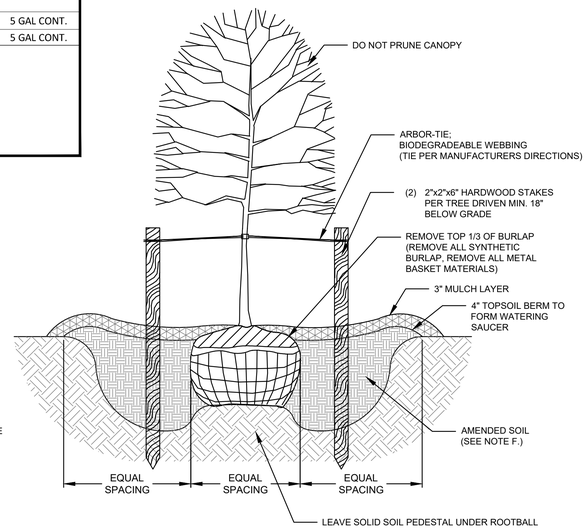
REQUIRED PARKING AREA LANDSCAPING PER 36.2 – 648 = 20% CANOPY FOR EXPANDED PARKING AREA
EXPANDED PARKING AREA = 29,500 S.F. X 0.2 = 5900 S.F. CANOPY REQUIRED
PARKING AREA CANOPY PROVIDED = 6,308 S.F.

TURF BLOCK INSTALLATION





SHRUB PLANTING DETAIL
NOT TO SCALE



TREE PLANTING DETAIL
NOT TO SCALE

SOIL REQUIREMENTS AND AMENDMENTS:

1. SOIL REQUIREMENTS
   A. SOIL FOR PLANTING BEDS SHOULD BE DOUBLE-DUG 6 TO 8 INCHES DEEP. PRIOR TO SOIL PREPARATION, A REPRESENTATIVE SAMPLE SHOULD BE TAKEN FROM EACH AREA AND ANALYZED AT A UNIVERSITY OR COMMERCIAL SOIL TESTING LABORATORY. TOP SOIL SHOULD BE DRY, LOOSE, AND FREE OF DEBRIS. WHERE HARDPAN EXISTS BENEATH THE PREPARED BED, DEEPER PREPARATION MAY BE SPECIFIED. THE LANDSCAPE CONTRACTOR SHOULD IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER IF ANY BEDS DO NOT DRAIN PROPERLY.
   B. A REPRESENTATIVE SOIL SAMPLE SHOULD BE TESTED FOR PH, ORGANIC MATTER CONTENT, POUNDS PER ACRE AVAILABLE P2O5 (PHOSPHATE) AND POUNDS PER ACRE AVAILABLE K20 (POTASH). BASED ON THE LABORATORY REPORT, THE SOIL SHOULD BE AMENDED TO THE FOLLOWING MINIMUM STANDARDS, UNLESS OTHERWISE NOTED:
   PH 5.5 TO 6.5
   ORGANIC MATTER: 5%
   PHOSPHATE: 50 LB./ACRE
   POTASH: 120 LB./ACRE
2. AMENDMENTS
   A. ORGANIC MATTER SHALL BE COMPOST, OR LOCALLY AVAILABLE ORGANIC WASTE. ORGANIC MATTER SHOULD BE FREE FROM DEBRIS, WEED SEEDS, AND INSECTS WHICH MAY BE HARMFUL TO THE INTENDED PLANTING.
   B. SYNTHETIC FERTILIZERS, IF PREFERRED BY THE CONTRACTOR, SHOULD BE SPECIFIED TO PROVIDE THE NUTRIENTS AS REQUIRED BY THE SOIL TEST. THEY SHOULD BE DELIVERED TO THE JOB SITE IN THEIR ORIGINAL PACKAGING WITH LEGIBLE, INTACT LABELS INDICATING NUTRIENT CONTENT AND SOURCE. LABELS SHOULD BE CHECKED PRIOR TO USE AND A SAMPLE MAY BE REQUESTED FOR LABORATORY ANALYSIS.
   C. NATURAL FERTILIZERS INCLUDE MINERALS, SUCH AS ROCK PHOSPHATE OR GREENS AND AS WELL AS THOSE USUALLY MARKETED AS ORGANIC . WHEN THESE SOURCES OF NUTRIENTS ARE PREFERRED, THEY SHALL BE SPECIFIED IN TYPE AND QUANTITY TO PROVIDE THE NUTRIENTS AS SHOWN NECESSARY BY THE LABORATORY SOIL TEST. STANDARDIZED, COMMERCIAL FERTILIZERS SHALL BE DELIVERED TO THE SITE IN THEIR ORIGINAL PACKAGING WITH LEGIBLE INTACT LABELS SHOWING NUTRIENT ANALYSIS. WHERE NON-COMMERCIALLY PROCESS MANURE OR OTHER ORGANIC WASTE IS SPECIFIED FOR ITS ASSUMED NUTRIENT CONTENT, SAMPLES MUST BE SUBMITTED BY THE LANDSCAPE CONTRACTOR TO A COMMERCIAL LABORATORY FOR ANALYSIS SO THE NUTRIENT LEVELS CAN BE ASSESSED PRIOR TO APPLICATION AND A PROPER APPLICATION RATE CAN BE DETERMINED.
   D. SULFUR, WHERE REQUIRED TO LOWER PH, MAY BE SPECIFIED AS EITHER GROUND SULFUR (FLOWERS OF OR IRON SULFATE WHERE TOXICITY IS NOT A PROBLEM. THE LANDSCAPE CONTRACTOR SHALL DELIVER THE SULFUR TO THE SITE IN ITS ORIGINAL CONTAINER WITH LEGIBLE LABEL INDICATING ITS QUALITY. A SAMPLE MAY BE REQUIRED FOR LABORATORY VERIFICATION.
   E. LIMESTONE SHALL BE EITHER GROUND AGRICULTURE LIMESTONE OR DOLOMITE LIMESTONE WHERE MAGNESIUM DEFICIENCIES EXIST. LIMESTONE PROVIDED AT THE SITE BY THE LANDSCAPE CONTRACTOR SHALL BE PROVIDED IN THE ORIGINAL PACKAGING, LEGIBLY LABELED WITH FINENESS AND LIMING ABILITY SHOWN. A SAMPLE MAY BE REQUESTED FOR LABORATORY ANALYSIS.
   F. STALITE PERMATILL, CU SOIL, OR APPROVED EQUAL STRUCTURAL SOIL HORTICULTURAL AMENDMENT TO BE USED TO CONDITION TREE HOLE. BACKFILL IN ACCORDANCE WITH SUPPLIER'S INSTRUCTIONS.

PLANTING AND LANDSCAPE SPECIFICATIONS:

1. ALL TREES SHALL BE PLANTED IN GOOD CONDITION AND MEET 'AMERICAN STANDARD FOR NURSERY STOCK' ANSI 260.1-1990, AS MAY BE AMENDED.
2. ALL TREES OF THE SAME SPECIES SHALL BE UNIFORM IN SIZE AND STRUCTURE AND SHALL COME FROM THE SAME SOURCE.
3. THE PLANTING OF TREES SHALL BE DONE IN ACCORDANCE WITH THE STANDARDIZED LANDSCAPE SPECIFICATION JOINTLY ADOPTED BY THE VA NURSERYMAN'S ASSOCIATION AND THE VA SOCIETY OF LANDSCAPE DESIGNERS.
4. REFER TO DRAWINGS FOR VARIETIES, LAYOUT, AND SPACING OF PLANT MATERIALS. HAVE TREE LOCATIONS STAKED AND GROUNDCOVER BEDS PREPARED AND SPRAY-PAINT OUTLINED ON THE GROUND FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO PLANT INSTALLATION. QUANTITIES SHOWN ON DRAWINGS SHALL TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT LIST. FIELD ADJUSTMENTS NECESSARY TO WORK AROUND UNKNOWN UTILITIES MAY BE REQUIRED.
5. ALL PLANT MATERIALS MUST BE APPROVED AND INSPECTED BY OWNER'S REPRESENTATIVE AND ACCEPTED PRIOR TO INSTALLATION. NOTIFY OWNER'S REPRESENTATIVE 48 HOURS PRIOR TO ARRIVAL TO SITE.
6. PLANTING TIMING: UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE OWNER'S REPRESENTATIVE, THE PLANTING SHALL BE DONE DURING THE FOLLOWING SEASONS FOR ALL TREES, SHRUBS, AND GROUNDCOVERS:
   6.1. SEPTEMBER 15 TO DECEMBER 1 OR
   6.2. MARCH 1 TO MAY 1.
   6.3. PLANTING AT OTHER DATES WILL BE SUBJECT TO APPROVAL BY THE OWNER'S REPRESENTATIVE AND MAY REQUIRE SPECIAL PROCEDURES.
7. ALL DISTURBED AREAS NOT OTHERWISE TREATED, ARE TO BE SEEDED AS SPECIFIED.
8. SEED MIX AREAS SHALL BE SEEDED WITH A SEEDING MIXTURE CONSISTING OF 90% TALL FESCUES (IMPROVED VARIETIES) AND 10% PERENNIAL RYEGRASS (IMPROVED VARIETIES) AS RECOMMENDED ON THE MOST CURRENT VIRGINIA CROP IMPROVEMENT ASSOCIATION (VCIA) TURFGRASS LIST. CERTIFIED SEED WILL BE USED FOR ALL PERMANENT SEEDING. SEEDING AREAS SHALL BE PREPARED IN ACCORDANCE WITH THE ABOVE CITED SPECIFICATION INCLUDING NECESSARY SOIL AMENDMENTS. THE RA TIE OF COVERAGE FOR BOTH SEED AND AMENDMENTS SHALL BE AS RECOMMENDED BY VCIA.
9. MOVE AND LIFT TREES, SHRUBS, AND PLANTS BY THE ROOTBALL ONLY AND NEVER BY THE TRUNK OR STALK.
10. IF SYNTHETIC OR METAL WRAPPING IS USED ON ANY ROOTBALL, REMOVE IT ENTIRELY BEFORE PLANTING. METAL CAGES MUST ALSO BE REMOVED ENTIRELY FROM THE ROOTBALL.
11. CUT, TRIM AND REMOVE THE TOP 6"-9" OF NATURAL BURLAP WRAPPING FROM ROOTBALL PRIOR TO FINAL PLANTING SOIL BACKFILLING.
12. WATERING OF PLANTS: WATERING IS TO PROVIDE V1GOROUS PLANT GROWTH AND SHALL BE SUFFICIENT TO MAINTAIN MOISTURE IN THE ENTIRE ROOT ZONE.
    12.1. WATERING OF PLANT MATERIAL SHALL OCCUR IMMEDIATELY AFTER PLANTING AND WITHIN IN 24 HOURS OF INSTALLATION. THE FIRST WATERING SHALL FLOOD THE PLANTING HOLE TO REMOVE AIR POCKETS AND SATURATE THE SOIL.
    12.2. WATERING SHALL CONTINUE EACH DAY FOR ONE WEEK FROM INSTALLATION AT A RATE OF 2 GALLONS PER INCH TREE CALIPER.
    12.3. AFTER THE FIRST WEEK OF WATERING, WATERING SHALL CONTINUE ON A WEEKLY BASIS UNTIL PLANTS ARE FULLY ESTABLISHED. WEEKLY WATERING SHALL BE AT A RATE OF 2 GALLONS PER INCH OF TREE CALIPER.
13. UNLESS OTHERWISE DIRECTED IN THE SPECIFICATIONS, ALL PLANTS SHALL BE GUARANTEED TO REMAIN ALIVE AND HEALTHY FOR A PERIOD OF ONE YEAR BEGINNING FROM THE DATE OF INSPECTION BY THE OWNER'S REPRESENTATIVE AND A WRITTEN FIELD REPORT STATING OWNER ACCEPTANCE FOR PLANTS THAT MEET QUALITY STANDARDS, PLANTING SPECIFICATIONS, PROPER LAYOUT PLACEMENT, AND EXHIBIT A HEAL THY VIGOROUS GROWTH.
    13.1. PLANTS THAT ARE EXHIBITING 25 PERCENT OR MORE DEAD GROWTH OR DO NOT MEET THE PLANT MATERIAL QUALITY SPECIFICATIONS SHALL BE REPLACED IMMEDIATELY OR UPON THE NEXT PLANTING SEASON WHICHEVER IS SOONER.
    13.2. NEW PLANTS, REQUIREMENTS, ETC. AND METHOD OF PLACING SHALL COMPLY WITH THESE SPECIFICATIONS AND DRAWINGS. PLANTS REPLACING DEAD PLANTS SHALL RECEIVE THE SAME CARE AND MEET SPECIFICATIONS.
    13.3. WARRANTY SHALL BE LIMITED TO ONE REPLACEMENT PER PLANT.
    13.4. CONFORMANCE OF PLANTING LAYOUT TO PLANTING PLAN MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. PLANTS NOT PROPERLY LOCATED AS SHOWN ON THE PLANTING PLAN SHALL BE REPLANTED TO THE PROPER LOCATION AT THE EXPENSE OF THE CONTRACTOR.
14. PLANTING HOLE SHALL BE 3 TIMES LARGER THAN THE SIZE OF THE ROOT BALL DIAMETER. SCARIFY BOTTOM AND EDGES OF PLANTING PIT SUFFICIENTLY TO ALLOW BONDING OF THE PLANTING SOIL AND EXISTING SOIL.
15. ALL PLANTS SHALL BE MULCHED WITH A 3" MULCH LAYER WITHIN 24 HOURS OF PLANTING. MULCH SHALL BE DOUBLE-SHREDDED HARDWOOD BARK MULCH AND SHALL COVER THE PLANTING BED ENTIRELY, EXCEPT FOR A ONE INCH CLEAR SPACE AROUND THE TRUNK SHALL REMAIN FREE FROM MULCH.
16. WATERING BERM: CONSTRUCT A 4" MIN. SOIL BERM AROUND EVERY TREE PLANTING, SAUCERS WILL BE ESTABLISHED AT PLANTING TO HOLD WATERING, SAUCERS ARE TO BE MAINTAINED UNTIL PLANTS ARE FULLY ESTABLISHED, 2 YEARS.
17. TREE STAKING SHALL BE REQUIRED FOR PLANTS TALLER THAN 6 FEET AND WITH A TREE CALIPER GREATER THAN 1". USE TWO 3" DIA. OR 2"X2" WOOD STAKES, 6'-0" LENGTH. STAKES SHALL BE PLACED A MIN. OF 18" INTO ADJACENT GROUND. TREE GUYS SHALL BE "ARBORTIE", A UV DEGRADABLE NYLON WEBBING AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
18. STRUCTURAL SOIL MIX, IF SHOWN, SHALL BE PREPARED AND INSTALLED IN ACCORDANCE WITH WRITTEN SPECIFICATIONS. ALL PLANTING AREAS (TREE PITS AND PLANTING BEDS) SHALL BE PROVIDED WITH STRUCTURAL SOIL MIX.

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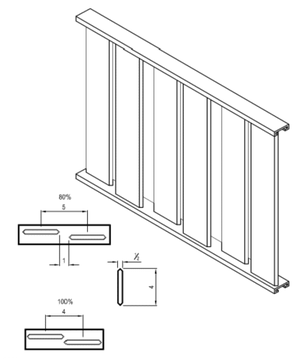

NOTES:
1. THE 4" ALUMINUM EXTRUSION CAN RUN EITHER HORIZONTALLY OR VERTICALLY.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ALL DIMENSIONS ARE CONSIDERED TRUE AND REFLECT MANUFACTURER'S SPECIFICATIONS.
4. AMETCO'S ALUMINUM FENCING SYSTEM IS 100 % MANUFACTURED IN THE UNITED STATES.
5. DO NOT SCALE DRAWINGS.
6. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 048-088

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	06/17/22	1ST CITY REVIEW
ADDENDUM #3 – 07/18/2022 ADD FIRE LANE SIGN DETAILS AND NOTES.		

DRAWN BY:	JDE\JMD
REV'D BY:	JDE
DATE:	06/17/2022
SCALE:	AS SHOWN

LANDSCAPING NOTES & DETAILS

C25

SHEET _____ of X

ACORN LIGHT POST LOCATIONS
TYPICAL OF 6.

GRAPHIC SCALE
5 0 2.5 5 10
(IN FEET)
1 inch = 5 ft.

GRAPHIC SCALE
5 0 2.5 5 10
(IN FEET)
1 inch = 5 ft.

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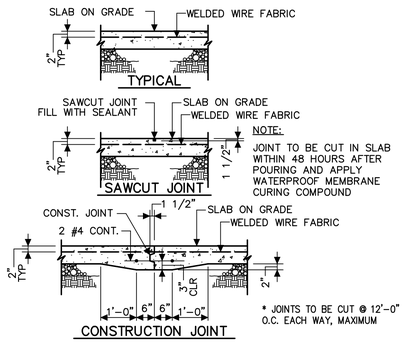
No.	DATE	DESCRIPTION
	06/17/22	1ST CITY REVIEW
		ADDENDUM #3 – 07/18/2022 ADD LIGHT POST LOCATION DIMENSIONS IN COURTYARD.

DRAWN BY:	JDE\JMD
REV'D BY:	JDE
DATE:	06/17/2022
SCALE:	AS SHOWN

COURTYARD SCORE JOINT DIMENSION PLAN

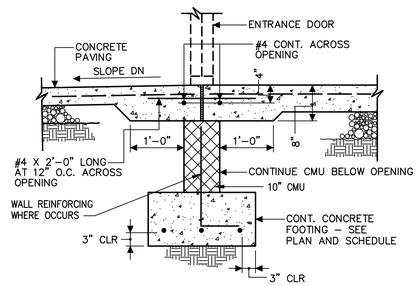
C26

SHEET _____ of __X__



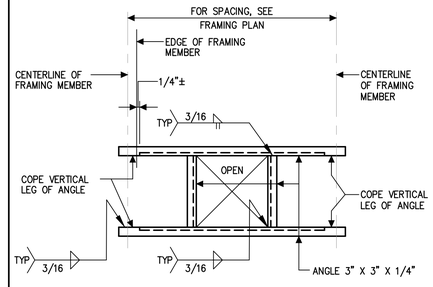
1 S1.0 TYPICAL SLAB CONSTRUCTION DETAIL

SCALE: N.T.S.



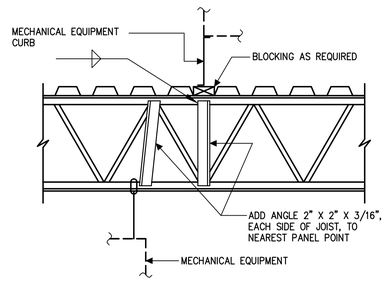
2 S1.0 TYPICAL ENTRANCE SLAB DETAIL

SCALE: N.T.S.



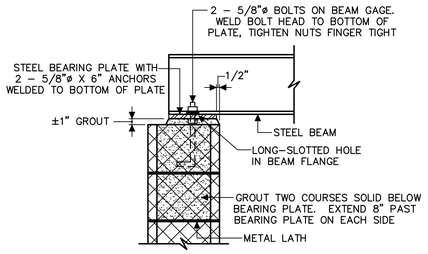
3 S1.0 TYPICAL FLOOR/ROOF OPENING FRAME

SCALE: N.T.S.



4 S1.0 TYPICAL JOIST REINFORCMENT AT MECHANICAL EQUIPMENT

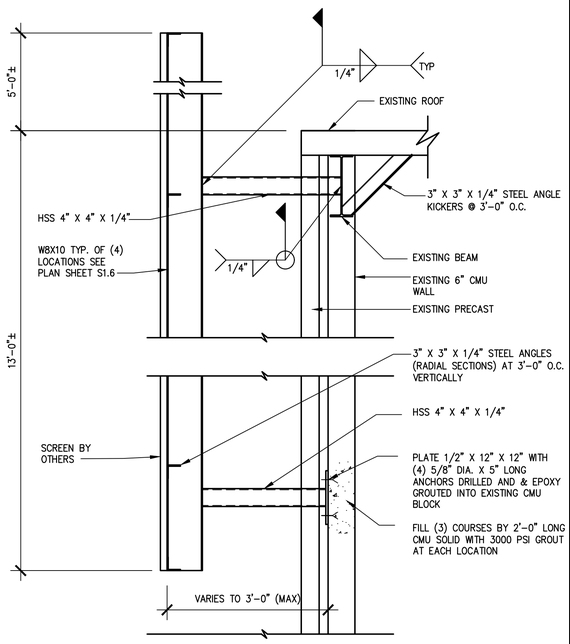
SCALE: N.T.S.



NOTE: LONG DIMENSION OF PLATE SHALL BE PARALLEL TO BEARING WALL. AT CORNERS, PLATE SHALL BE PARALLEL TO BEAM.

5 S1.0 TYPICAL BEAM BEARING

SCALE: N.T.S.



6 S1.0 SECTION

SCALE: N.T.S.

LINTEL SCHEDULE

MARK	TYPE	SIZE	REMARKS
L1		W8X24 W/ 3/8" X 1'-1" CONTINUOUS BOTTOM PLATE WITH 1/4" STIFF PLATE AT 2'-0" O.C.	-----
L2		(3) 5" X 3 1/2" X 3/8" (LLV) STEEL ANGLES	-----
L3		W16X26 W/ 3/8" X 11" CONT. BOTTOM PLATE	-----
L4		W8X24 W/ 3/8" X 11" CONTINUOUS BOTTOM PLATE WITH 1/4" STIFF PLATE AT 2'-0" O.C.	
L5		8" CMU BOND BEAM LINTEL REINFORCED WITH (2) #5'S CONTINUOUS - FILL SOLID WITH 3000 PSI GROUT	
L6		W8X24 W/ 1/4" X 7" CONT. BOTTOM PLATE	-----

LINTEL NOTES:

1. ALL LINTELS SHALL CONFORM TO ARCHITECTURAL HEAD DETAILS.
2. UNLESS OTHERWISE NOTED PROVIDE ONE ANGLE 3 1/2" X 3 1/2" X 5/16" (LLV) FOR SPANS LESS THAN 6'-0" AND ANGLE 6" X 3 1/2" X 3/8" (LLV) FOR SPANS GREATER THAN 6'-0" FOR EACH NOMINAL 4" WALL THICKNESS AS LINTELS OVER ALL OPENINGS IN BEARING AND NON-BEARING WALLS REQUIRED FOR DOORS, DUCTS, RECESSED HEATING UNITS, PANELS, GRILLES, ETC. NOT SHOWN.
3. PROVIDE MINIMUM 8" BEARING ON SOLID GROUTED MASONRY AT EACH END OF ALL LINTELS, UNLESS NOTED OTHERWISE.
4. PROVIDE BEARING PLATE BP-1 AT EACH END OF "W" SHAPED LINTELS - SEE DETAIL 5/S1.0
5. G.C. FILED VERIFY REQUIRED WIDTH OF ALL LINTELS.

SCHEDULES

FOOTING SCHEDULE

MARK	SIZE	REINFORCING	REMARKS
F1	1'-0" X 4'-0" X 8'-0"	#5'S @ 12" E.W. TOP AND BOTTOM	-----
F2	1'-0" X 5'-0" X CONT.	#5'S @ 12" E.W.	-----

COLUMN SCHEDULE

MARK	SIZE	BASEPLATE	ANCHOR BOLTS	REMARKS
C1	HSS 8" X 8" X 1/4"	3/4" X 14" X 14"	4 - 3/4"ø	NOTE 1

COLUMN NOTES:

1. PROVIDE ANCHORS BOLTS WITH 9" EMBEDMENT WITH 3" LEG.
2. PROVIDE 1/4" FILLET WELD ALL AROUND BASE PLATE.
3. ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 36 KSI.
4. PROVIDE MINIMUM 3" ANCHOR BOLTS PROJECTION ABOVE TOP OF BASE PLATE.
5. PROVIDE 1/4" COLUMN CAP PLATES FOR ALL COLUMNS.

PIER SCHEDULE

MARK	SIZE	REINFORCING	REMARKS
P1	CONCRETE - 16" X 16"	12 #5'S VERTICAL #3 TIES AT 6" O.C.	

PIER NOTES:

1. DOWEL ALL PIER REINFORCING TO FOUNDATIONS - TYPICAL.

BEARING PLATE SCHEDULE

MARK	THICKNESS	WIDTH	LENGTH	REMARKS
BP1	3/8"	8"	5"	NOTE 1

BEARING PLATE NOTES:

1. FILL (2) COURSES OF CMU SOLID WITH 3000 PSI GROUT BELOW BEARING PLATE. SEE SECTION 7/S1.0.

REBAR LAP LENGTHS

BAR SIZE	LAP LENGTH (MIN.)	REMARKS
#4	24"	-----
#5	30"	-----
#6	36"	-----
#7	42"	-----
#8	48"	-----
#9	52"	-----

NOTES:
1. ALL FOOTING DOWELS SHALL BE EMBEDDED TO WITHIN (3") OF THE BOTTOM OF FOOTING WITH A MINIMUM 3" LEG.

GENERAL STRUCTURAL NOTES

CODE: 2015 VIRGINIA CONSTRUCTION CODE
RISK CATEGORY : III

DESIGN LOADS:

ROOF LIVE LOAD = 20 PSF (SNOW DRIFT APPLIED PER CODE)
MAIN LEVEL FLOOR LIVE LOAD = 100 PSF
SECOND FLOOR OFFICE LIVE LOAD = 40 PSF CLASS ROOM
80 PSF CORRIDORS

WIND LOADS:
BASIC WIND SPEED = 115 MPH (3 SECOND GUST)
EXPOSURE 'B'
K = 1.0
Gcpi = ± 0.18
ROOF UPLIFT = 20 PSF (NET)
Kz = 34.0 PSF
COMPONENTS AND CLADDING PRESSURE = 25 PSF

GROUND SNOW LOAD = 30 PSF
I = 1.0
Ce = 1.0
Ct = 1.1
Pf = 23 PSF

SEISMIC LOADS:
Ss = 0.233g
S1 = 0.069g
SEISMIC DESIGN CATEGORY 'B'
SITE CLASSIFICATION 'D'
I = 1.25
Sds = 0.248g
SD1 = 0.111g
Cs = 0.136
R = 2.0
Cs = 0.101
EQUIVALENT LATERAL FORCE PROCEDURE

SHEETS S1.0 THRU S2.1 ARE STRUCTURAL DESIGN DRAWINGS ONLY (REQUIRED FOR THE FOUNDATION PLAN, ROOF FRAMING PLAN, DETAILS AND SCHEDULES). ANY REFERENCE TO ARCHITECTURAL MATERIALS, SYSTEMS, OR CONCEPTS IS FOR CLARITY ONLY.

ALL FILL AND UNSUITABLE FOUNDATION MATERIAL SHALL BE REMOVED AND FOOTINGS SHALL REST ON UNDISTURBED SOIL OR ENGINEERED FILL AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

FOOTINGS ARE DESIGNED FOR A MINIMUM ASSUMED SOIL BEARING CAPACITY OF 1500 PSF.

ALL EXTERIOR CONCRETE EXPOSED TO WEATHER SHALL BE 4000 PSI, AIR-ENTRAINED. ALL OTHER CONCRETE SHALL BE 4000 PSI. ALL MATERIALS AND PROCESSES TO THIS END SHALL CONFORM IN GENERAL TO ACI RECOMMENDED PRACTICE FOR THE DESIGN OF CONCRETE MIXES. (ACI-613 LAST REVISED).

PROVIDE 3/4" CHAMFER ON EXPOSED CONCRETE EDGES.

CONTRACTOR SHALL PLACE 1/2" ASPHALT IMPREGNATED FIBER BOARD IN JOINTS OF CONCRETE SLAB ON GRADE AGAINST VERTICAL SURFACES.

STEEL REINFORCING SHALL BE BILLET STEEL ASTM A-615, GRADE 60.

MESH SHALL BE WELDED WIRE FABRIC ASTM A-185.

ROUND STEEL PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-501. SQUARE AND RECTANGULAR STEEL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500, GRADE B. ALL STRUCTURAL STEEL BEAMS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A992, Fy= 50KSI. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-36. ALL STEEL SHALL RECEIVE ONE COAT OF SHOP PAINT, UNLESS NOTED OTHERWISE.

ALL BOLTS SHALL BE 3/4" DIAMETER, ASTM A-325 TYPE N, UNLESS OTHERWISE SHOWN OR NOTED.

CUTS, HOLES, COPINGS, ETC. IN STRUCTURAL STEEL MEMBERS REQUIRED BY WORK OF OTHER TRADES SHALL BE MADE IN THE SHOP AND SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OF HOLES OR CUTS IN THE FIELD WILL NOT BE PERMITTED WITHOUT SPECIFIC APPROVAL OF THE ENGINEER.

FOR OPENINGS IN THE ROOF, SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.

UNLESS NOTED OTHERWISE, ALL BEAM SHEAR CONNECTIONS SHALL BE DESIGNED FOR ONE HALF THE ALLOWABLE UNIFORMLY DISTRIBUTED LOADING IN ACCORDANCE WITH THE UNIFORM LOAD CONSTANTS AS TABULATED IN THE AISC MANUAL (FOURTEENTH EDITION) FOR THE INDICATED SPAN PLUS 2 KIPS.

ALL LIGHT GAGE BEARING WALL METAL STUDS SHALL BE FORMED OF SHEET STEEL CONFORMING TO ASTM A-446 OR A-570. ALL 14 AND 16 GAGE METAL STUDS SHALL HAVE A MINIMUM YIELD POINT OF 50,000 PSI. ALL 18 AND 20 GAGE METAL STUDS SHALL HAVE A MINIMUM YIELD POINT OF 33,000 PSI. ALL SHEAR WALL STRAPPING MATERIAL SHALL HAVE A MINIMUM YIELD POINT OF 50,000 PSI. FINISH FOR ALL LIGHT GAGE MATERIAL SHALL BE HOT-DIPPED GALVANIZED COMPLYING WITH ASTM A-525 FOR A MINIMUM G60 FINISH.

METAL STUD BEARING WALL INSTALLER SHALL PROVIDE ALL STEEL TRACKS, BLOCKING, LINTELS, CLIP ANGLES, SHOES, STIFFENERS, FASTENERS, AND ACCESSORIES AS INDICATED OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER TO PROVIDE A COMPLETE METAL FRAMING SYSTEM.

METAL STUDS SPECIFIED ON THESE DRAWNGS ARE BASED ON THE PROPERTIES OF STUDS MANUFACTURED BY DIETRICH. ALL STUDS PROVIDED FOR CONSTRUCTION SHALL MEET THOSE MINIMUM PROPERTIES.

ALL METAL STUD CONSTRUCTION SHALL COMPLY WITH THE STEEL STUD MANUFACTURER'S ASSOCIATION (SSMA).

f'm MASONRY SHALL BE 2200 PSI (MINIMUM).

ALL GROUT SHALL BE 3000 PSI (MINIMUM).

PROVIDE 9 GAUGE HORIZONTAL JOINT REINFORCEMENT IN CMU WALLS AT 1'-4" O.C.

METAL DECK ATTACHEMENT PATTERN:

ROOF:

36/7 5/8" PUDDLE WELDS AT SUPPORTS
#10 TEK SCREWS AT 1'-0" O.C. SIDELAPS

OR

36/7 #12 TEK SCREWS AT SUPPORTS
#10 TEK SCREWS AT 1'-0" O.C. SIDELAPS

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GENERAL STRUC. NOTES SCHEDULES AND TYP. SECTIONS

S1.0

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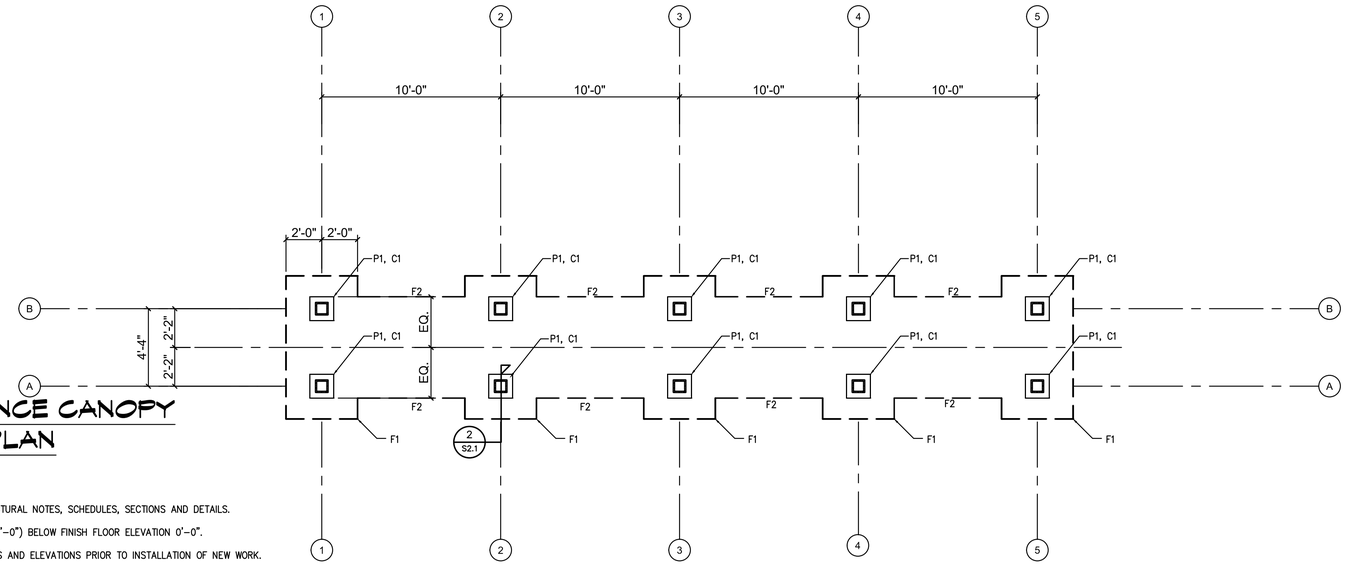
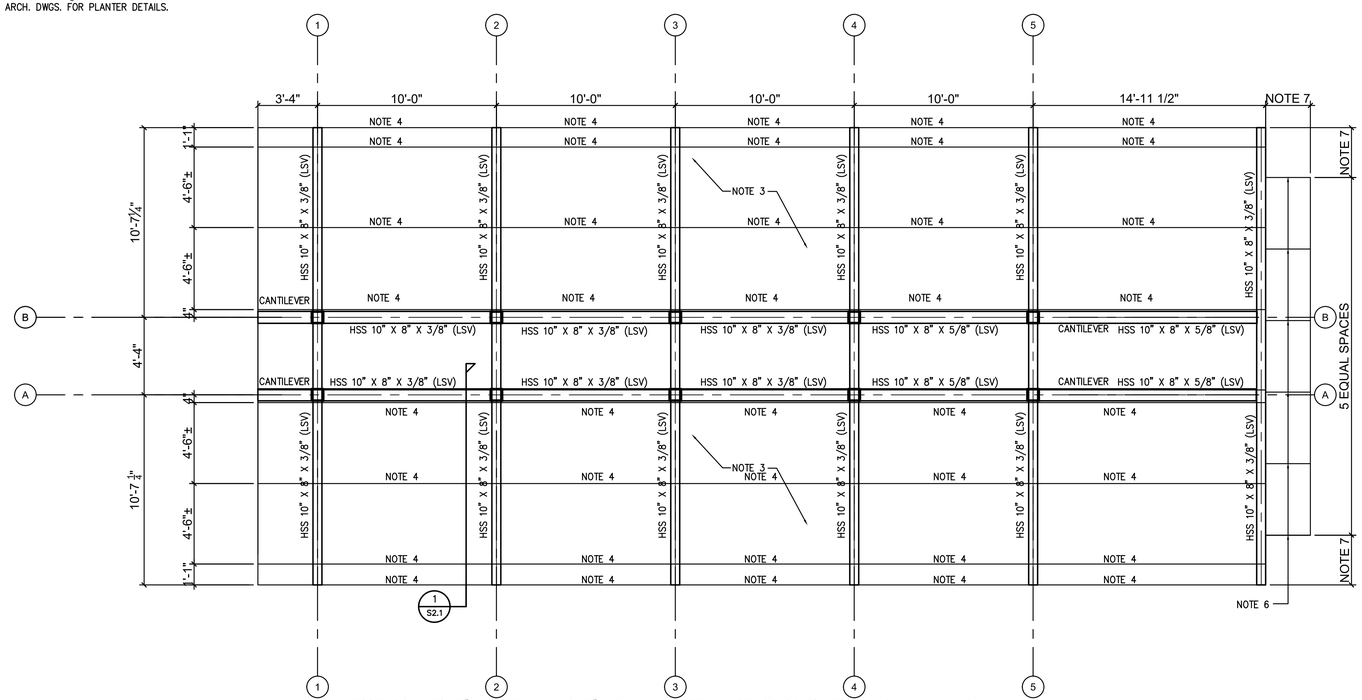


FRONT ENTRANCE CANOPY FOUNDATION PLAN

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

FOUNDATION PLAN NOTES:

1. SEE SHEET S1.0 FOR GENERAL STRUCTURAL NOTES, SCHEDULES, SECTIONS AND DETAILS.
2. TOP OF ALL FOOTINGS SHALL BE (-2'-0") BELOW FINISH FLOOR ELEVATION 0'-0".
3. G.C. TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO INSTALLATION OF NEW WORK.
4. FOR DISCREPANCIES IN DIMENSIONS, ARCHITECTURAL DIMENSIONS CONTROL.
5. TOP OF ALL PIERS SHALL BE (-0'-8") BELOW REFERENCE ELEVATION 0'-0".
6. REINFORCE ALL 8" CMU WALLS FOR PLANTERS WITH #4'S AT 2'-0" O.C. FULL HEIGHT OF WALL, IN FULLY GROUTED CELLS. SEE ARCH. DWGS. FOR PLANTER DETAILS.



FRONT ENTRANCE CANOPY ROOF FRAMING PLAN

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

ROOF FRAMING PLAN NOTES:

1. SEE SHEET S1.0 FOR GENERAL STRUCTURAL NOTES, SCHEDULES, SECTIONS AND DETAILS.
2. TOP OF STEEL TUBES (+12'-2") ABOVE REFERENCE FINISH FLOOR ELEVATION 0'-0".
3. 1 1/2" X 22 GAUGE METAL ROOF DECK.
4. C10X15.3 STEEL CHANNEL – TO OF STEEL CHANNEL (+12'-2").
5. STEEL TUBE CANOPY IS ALL WELDED CONSTRUCTION.
6. HSS 6" X 2" X 1/4" (LSV).
7. G.C. FIELD VERIFY DIMENSIONS BASED ON FIELD CONDITIONS.

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FRONT ENTRANCE CANOPY FOUND. & ROOF FRAMING PLANS

S1.1

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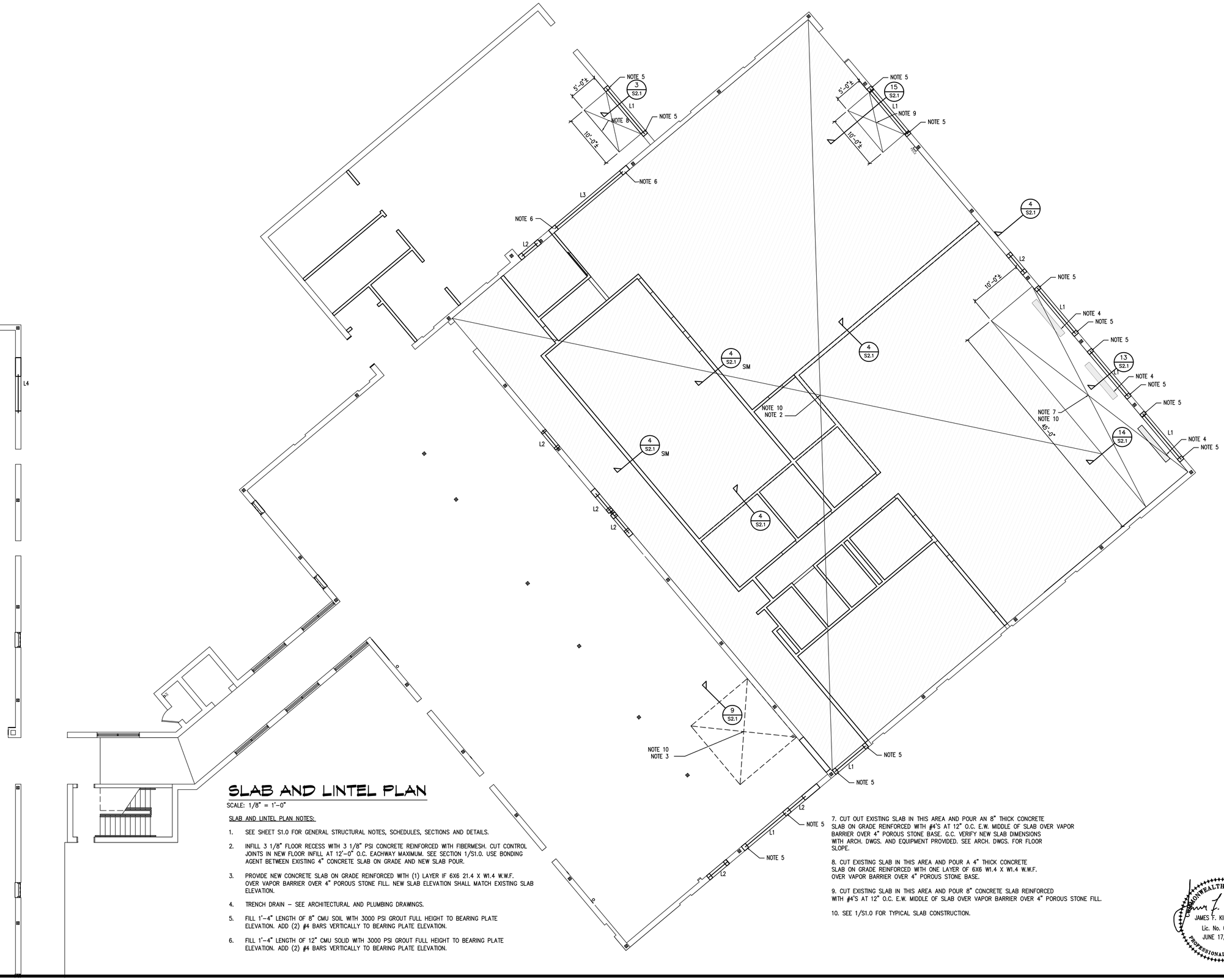

SLAB AND LINTEL PLAN

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

SLAB AND LINTEL PLAN NOTES:

1. SEE SHEET S1.0 FOR GENERAL STRUCTURAL NOTES, SCHEDULES, SECTIONS AND DETAILS.
2. INFILL 3 1/8" FLOOR RECESS WITH 3 1/8" PSI CONCRETE REINFORCED WITH FIBERMESH. CUT CONTROL JOINTS IN NEW FLOOR INFILL AT 12'-0" O.C. EACHWAY MAXIMUM. SEE SECTION 1/S1.0. USE BONDING AGENT BETWEEN EXISTING 4" CONCRETE SLAB ON GRADE AND NEW SLAB POUR.
3. PROVIDE NEW CONCRETE SLAB ON GRADE REINFORCED WITH (1) LAYER IF 6X6 21.4 X W1.4 W.W.F. OVER VAPOR BARRIER OVER 4" POROUS STONE FILL. NEW SLAB ELEVATION SHALL MATCH EXISTING SLAB ELEVATION.
4. TRENCH DRAIN – SEE ARCHITECTURAL AND PLUMBING DRAWINGS.
5. FILL 1'-4" LENGTH OF 8" CMU SOIL WITH 3000 PSI GROUT FULL HEIGHT TO BEARING PLATE ELEVATION. ADD (2) #4 BARS VERTICALLY TO BEARING PLATE ELEVATION.
6. FILL 1'-4" LENGTH OF 12" CMU SOLID WITH 3000 PSI GROUT FULL HEIGHT TO BEARING PLATE ELEVATION. ADD (2) #4 BARS VERTICALLY TO BEARING PLATE ELEVATION.
7. CUT OUT EXISTING SLAB IN THIS AREA AND POUR AN 8" THICK CONCRETE SLAB ON GRADE REINFORCED WITH #4'S AT 12" O.C. E.W. MIDDLE OF SLAB OVER VAPOR BARRIER OVER 4" POROUS STONE BASE. G.C. VERIFY NEW SLAB DIMENSIONS WITH ARCH. DWGS. AND EQUIPMENT PROVIDED. SEE ARCH. DWGS. FOR FLOOR SLOPE.
8. CUT EXISTING SLAB IN THIS AREA AND POUR A 4" THICK CONCRETE SLAB ON GRADE REINFORCED WITH ONE LAYER OF 6X6 W1.4 X W1.4 W.W.F. OVER VAPOR BARRIER OVER 4" POROUS STONE BASE.
9. CUT EXISTING SLAB IN THIS AREA AND POUR 8" CONCRETE SLAB REINFORCED WITH #4'S AT 12" O.C. E.W. MIDDLE OF SLAB OVER VAPOR BARRIER OVER 4" POROUS STONE FILL.
10. SEE 1/S1.0 FOR TYPICAL SLAB CONSTRUCTION.

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BUILDING NO. 2
SLAB AND LINTEL PLAN

S1.2

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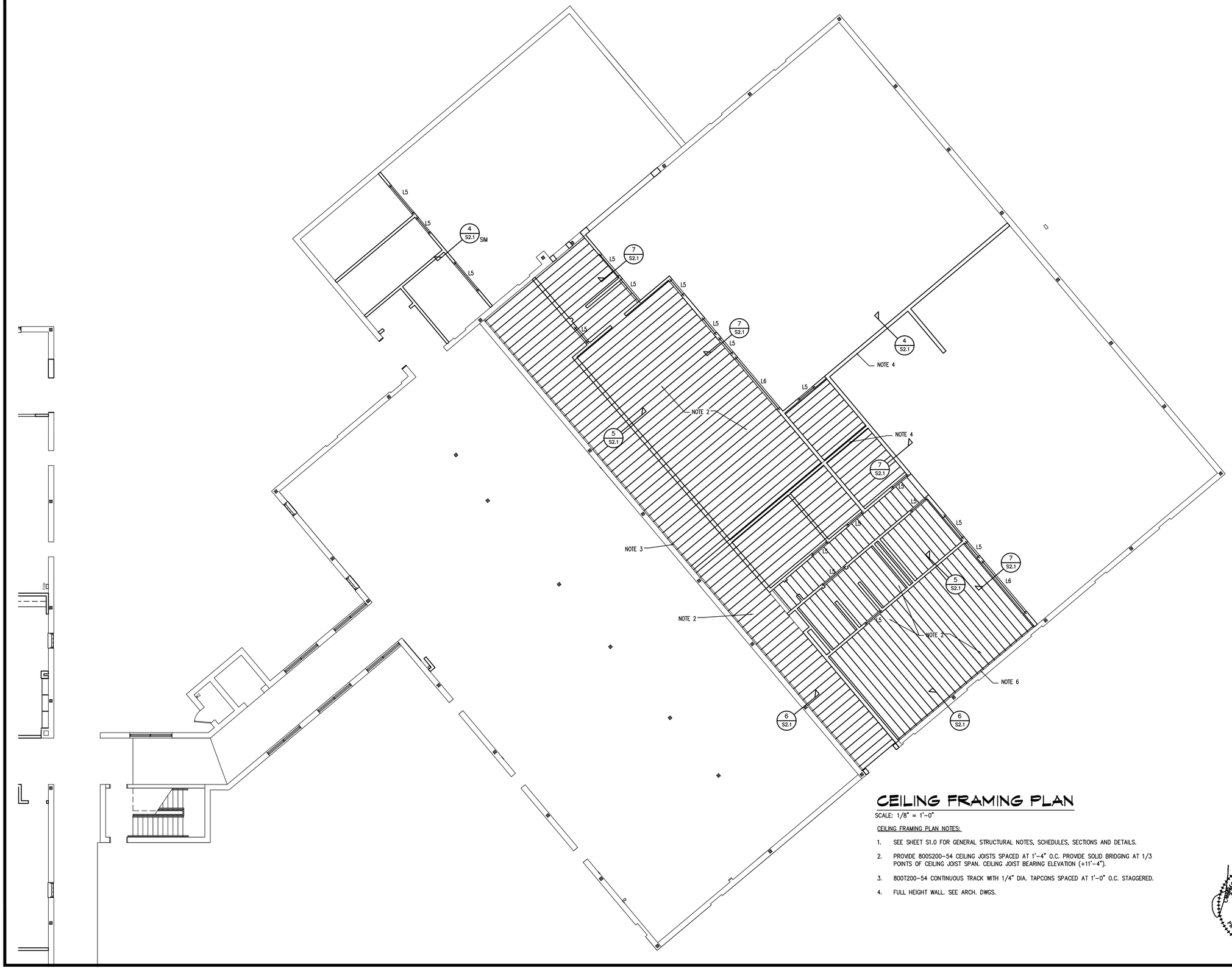

CEILING FRAMING PLAN

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

CEILING FRAMING PLAN NOTES:

1. SEE SHEET S1.0 FOR GENERAL STRUCTURAL NOTES, SCHEDULES, SECTIONS AND DETAILS.
2. PROVIDE 800S200-54 CEILING JOISTS SPACED AT 1'-4" O.C. PROVIDE SOLID BRIDGING AT 1/3 POINTS OF CEILING JOIST SPAN. CEILING JOIST BEARING ELEVATION (+11'-4").
3. 800T200-54 CONTINUOUS TRACK WITH 1/4" DIA. TAPCONS SPACED AT 1'-0" O.C. STAGGERED.
4. FULL HEIGHT WALL. SEE ARCH. DWGS.

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BUILDING NO. 2
CEILING FRAMING PLAN

S1.3

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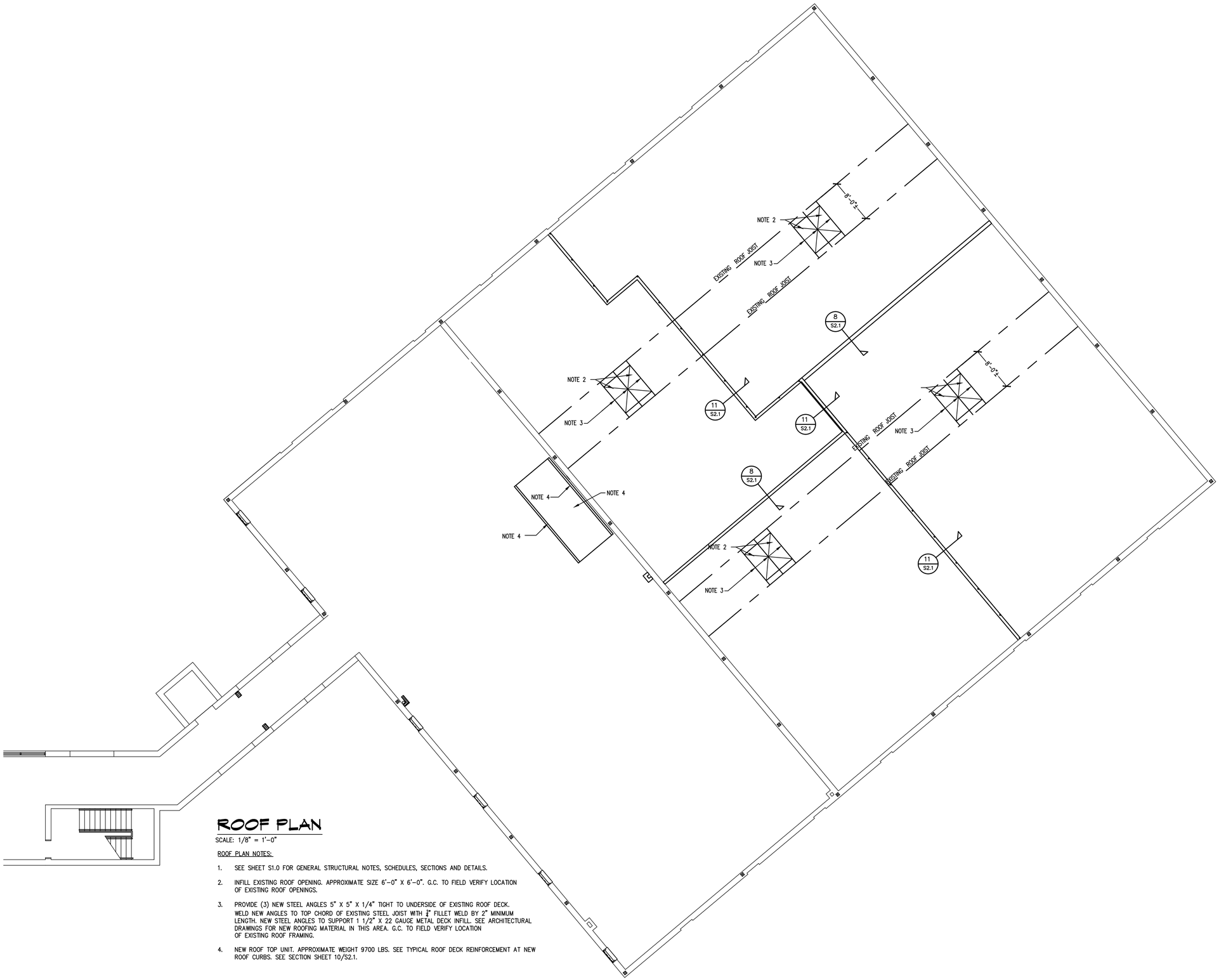

ROOF PLAN

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

ROOF PLAN NOTES:

1. SEE SHEET S1.0 FOR GENERAL STRUCTURAL NOTES, SCHEDULES, SECTIONS AND DETAILS.
2. INFILL EXISTING ROOF OPENING. APPROXIMATE SIZE 6'-0" X 6'-0". G.C. TO FIELD VERIFY LOCATION OF EXISTING ROOF OPENINGS.
3. PROVIDE (3) NEW STEEL ANGLES 5" X 5" X 1/4" TIGHT TO UNDERSIDE OF EXISTING ROOF DECK. WELD NEW ANGLES TO TOP CHORD OF EXISTING STEEL JOIST WITH ¼" FILLET WELD BY 2" MINIMUM LENGTH. NEW STEEL ANGLES TO SUPPORT 1 1/2" X 22 GAUGE METAL DECK INFILL. SEE ARCHITECTURAL DRAWINGS FOR NEW ROOFING MATERIAL IN THIS AREA. G.C. TO FIELD VERIFY LOCATION OF EXISTING ROOF FRAMING.
4. NEW ROOF TOP UNIT. APPROXIMATE WEIGHT 9700 LBS. SEE TYPICAL ROOF DECK REINFORCEMENT AT NEW ROOF CURBS. SEE SECTION SHEET 10/S2.1.

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BUILDING NO. 2
ROOF PLAN

S1.4

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SLAB AND LINTEL PLAN

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

SLAB AND LINTEL PLAN NOTES:

1. SEE SHEET S1.0 FOR GENERAL STRUCTURAL NOTES, SCHEDULES, SECTIONS AND DETAILS.
2. PROVIDE NEW CONCRETE SLAB ON GRADE REINFORCED WITH (1) LAYER IF 6X6 21.4 X W1.4 W.W.F. OVER VAPOR BARRIER OVER 4" POROUS STONE FILL. NEW SLAB ELEVATION SHALL MATCH EXISTING SLAB ELEVATION.
3. SEE SHEET S1.1 FOR CANOPY FOUNDATION AND FRAMING PLAN.
4. SEE 1/S1.0 FOR TYPICAL SLAB CONSTRUCTION DETAIL.

L4

L4

L4

L4

L4

9
S2.1

NOTE 2,
NOTE 4

NOTE 3

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BUILDING NO. 3
SLAB AND LINTEL PLAN

S1.5

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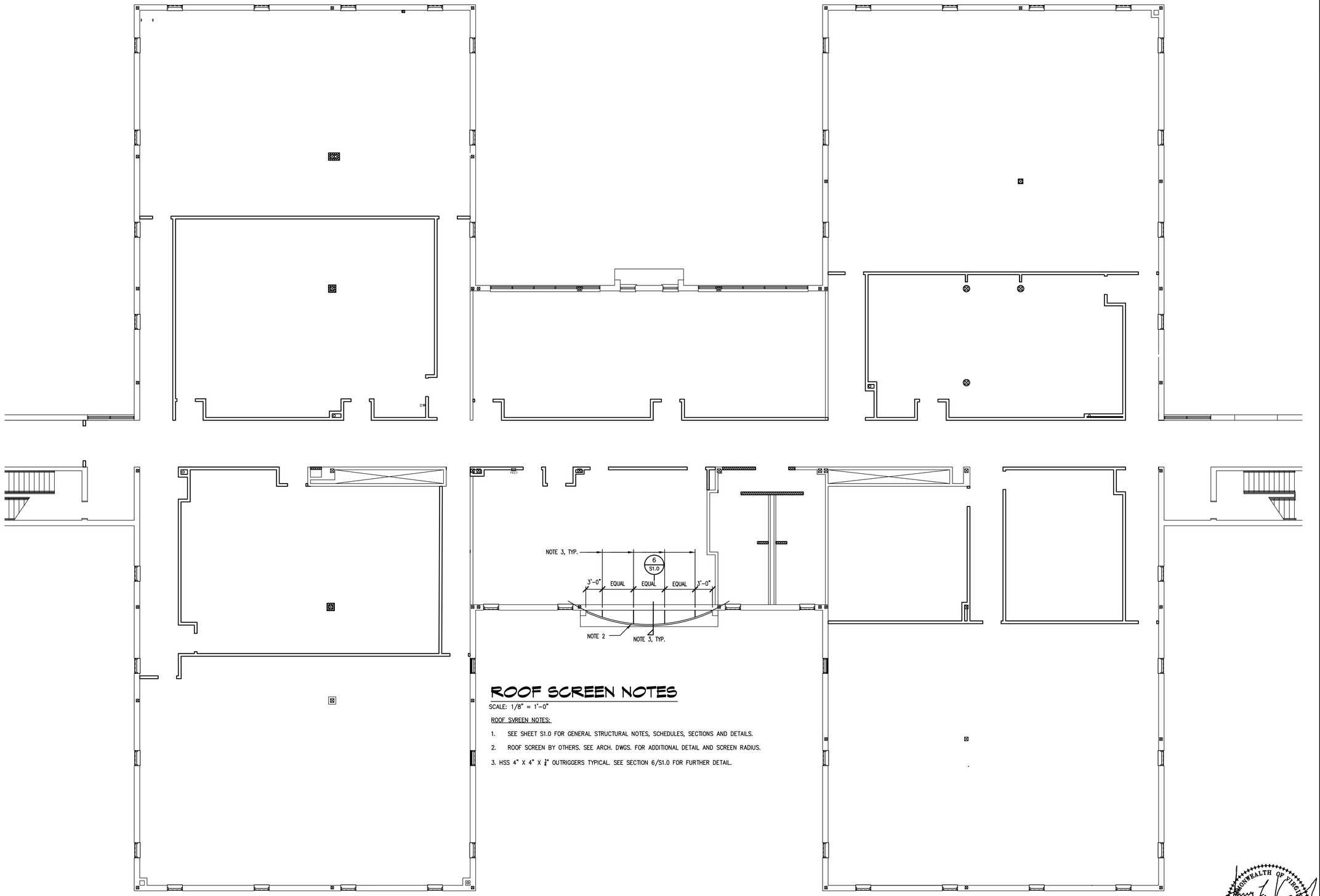

ROOF SCREEN NOTES

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

ROOF SVREEN NOTES:

1. SEE SHEET S1.0 FOR GENERAL STRUCTURAL NOTES, SCHEDULES, SECTIONS AND DETAILS.
2. ROOF SCREEN BY OTHERS. SEE ARCH. DWGS. FOR ADDITIONAL DETAIL AND SCREEN RADIUS.
3. HSS 4" X 4" X ¼" OUTRIGGERS TYPICAL. SEE SECTION 6/S1.0 FOR FURTHER DETAIL.

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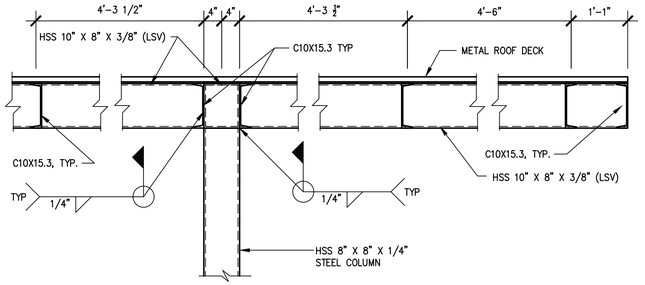
BUILDING NO. 3
ROOF SCREEN

S1.6

SHEET _____ of ___X___



1 S2.1 SECTION

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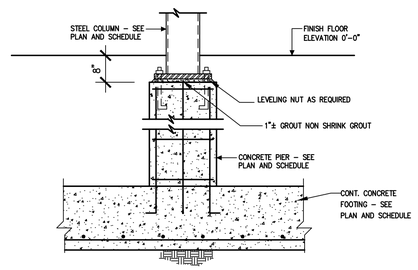

2 S2.1 SECTION

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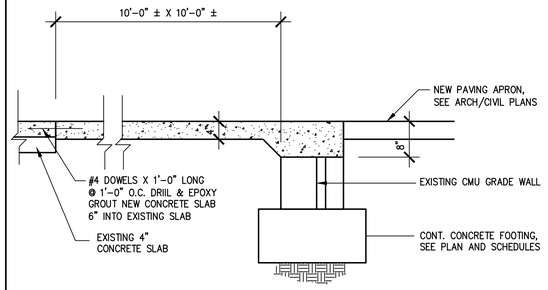

3 S2.1 SECTION

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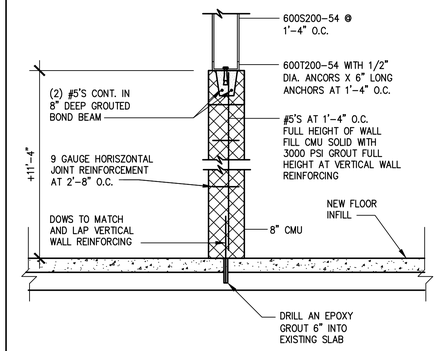

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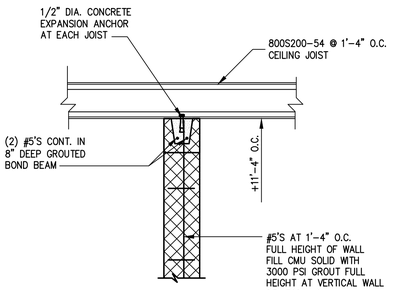

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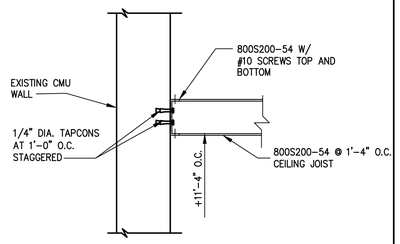

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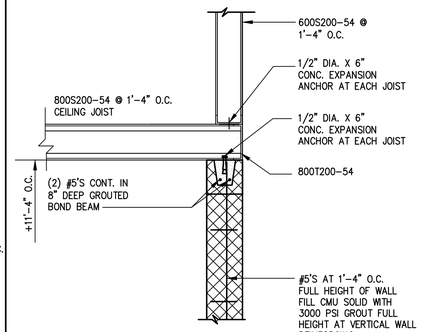

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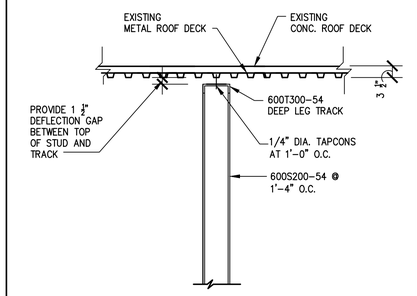

8 S2.1 SECTION

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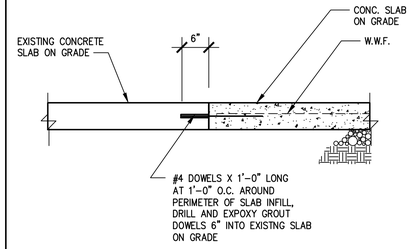

9 S2.1 SECTION

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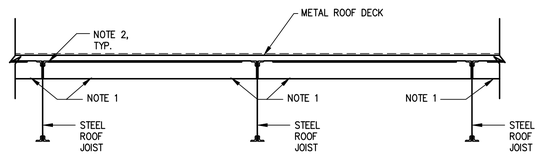


10 S2.1 TYPICAL ROOF DECK REINFORCEMENT BENEATH RTU ROOF CURB

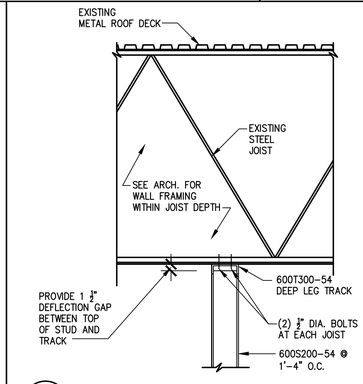
SCALE: N.T.S.

NOTE:

1. PROVIDE STEEL ANGLES 4" X 4" X 1/4" WELDED BETWEEN TOP CHORDS OF STEEL ROOF JOISTS TIGHT TO UNDERSIDE OF METAL ROOF DECK. USE 1/4" FILLET WELDS AT EACH ANGLE TO TOP FLANGE OF BEAM. MINIMUM WELD LENGTH = 1" EACH SIDE OF 4" X 4" ANGLE.

2. COPE ANGLE LEG TO ALLOW WELDING OF ANGLE TO TOP FLANGE OF BEAM.

3. STEEL ANGLES TO ALIGN TIGHT TO UNDERSIDE OF ROOF DECK BENEATH ROOF CURB.



11 S2.1 SECTION

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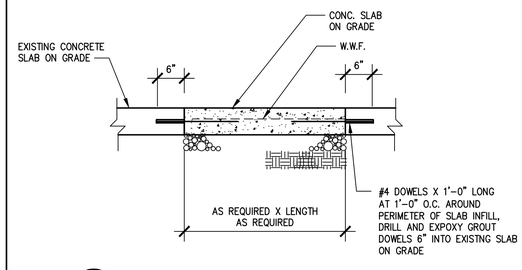
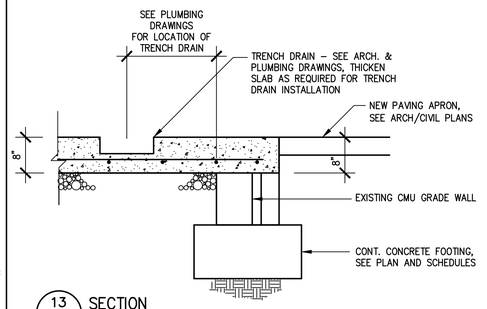


12 S2.1 TYPICAL SLAB INFILL

SCALE: N.T.S.



13 S2.1 SECTION

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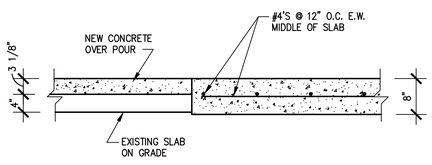

14 S2.1 SECTION

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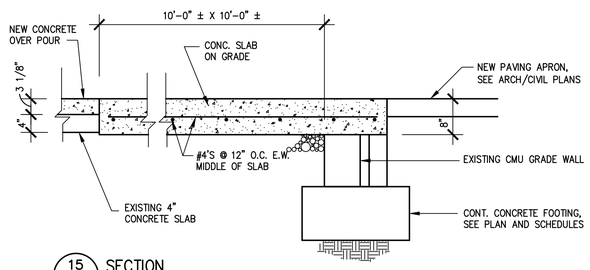

15 S2.1 SECTION

SCALE: N.T.S.

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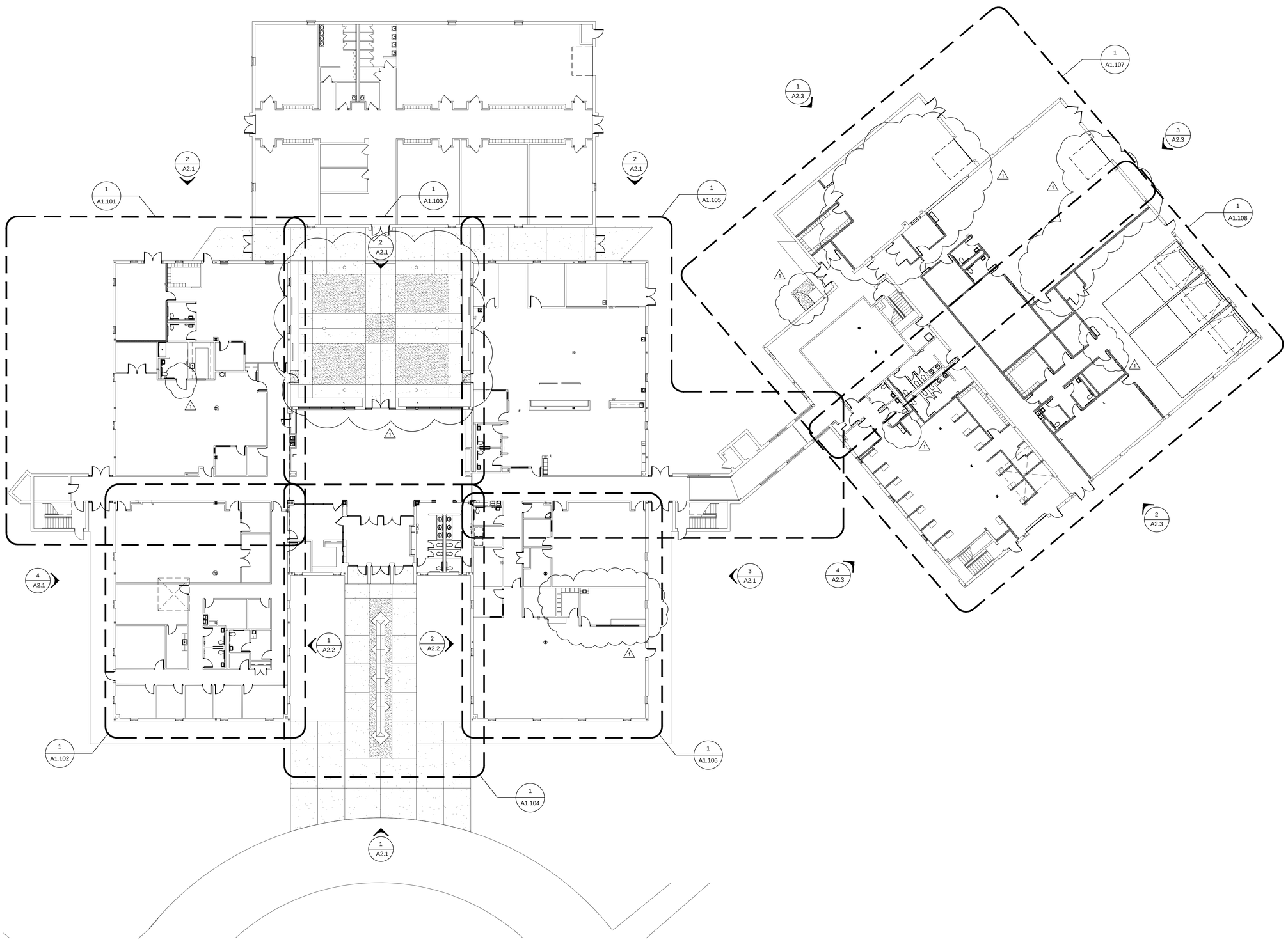
SECTIONS

S2.1

SHEET _____ of __X__



1 / A1.1 GROUND FLOOR OVERALL NEW WORK PLAN

SCALE: 3/16" = 1'-0"

NOTE: SEE DRAWING A1.103 FOR NEW WORK GENERAL AND DRAWING NOTES

0 8' 16' 32'

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1	7/18/22	ADDENDUM 3

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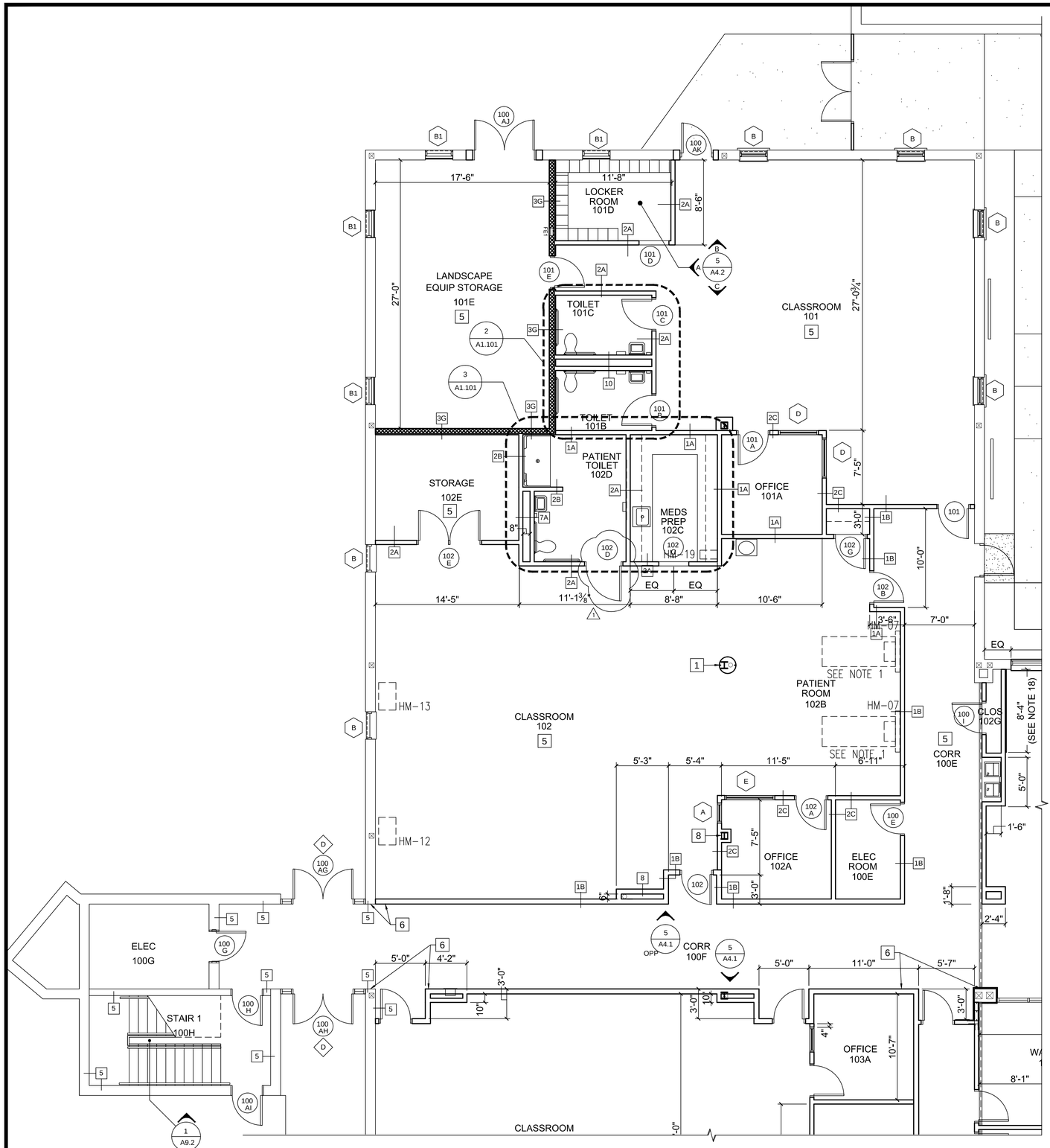
DATE:	6/17/22
SCALE:	AS SHOWN

NEW WORK OVERALL GROUND FLOOR PLAN

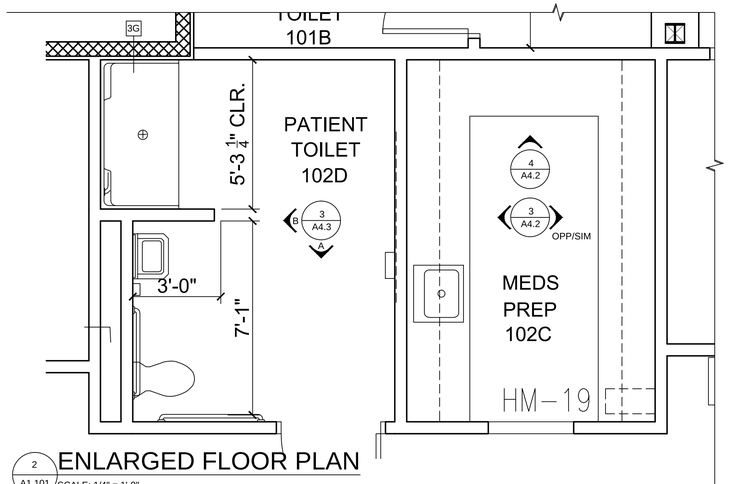
A1.1

SHEET _____ of _____



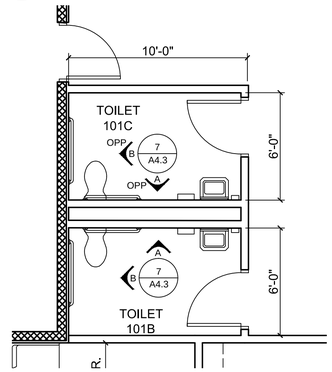
1 A1.101 GROUND FLOOR PARTIAL NEW WORK PLAN - AREA A

SCALE: 3/16" = 1'-0"



2 A1.101 ENLARGED FLOOR PLAN

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



3 A1.101 ENLARGED TOILET PLAN

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

NOTE: SEE DRAWING A1.103 FOR NEW WORK GENERAL AND DRAWING NOTES

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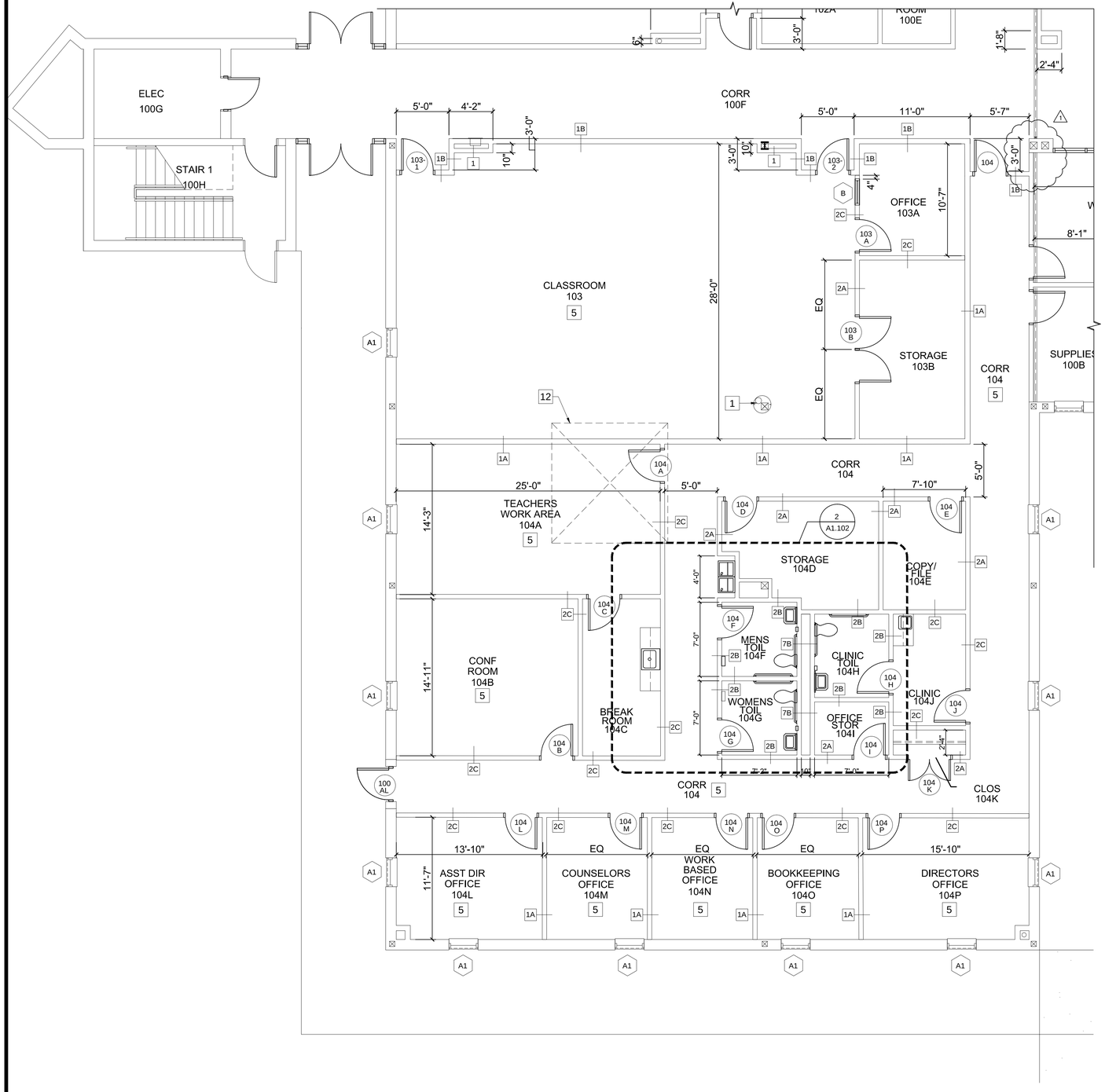
NEW WORK PARTIAL GROUND FLOOR PLAN - AREA A

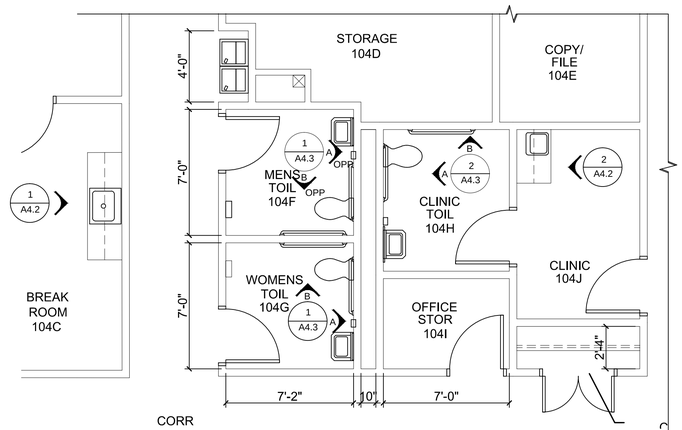
A1.101

SHEET _____ of _____



1 / A1.102 GROUND FLOOR PARTIAL NEW WORK PLAN - AREA B

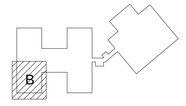
SCALE: 3/16" = 1'-0"



2 / A1.102 ENLARGED PARTIAL NEW WORK PLAN

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

NOTE: SEE DRAWING A1.103 FOR NEW WORK GENERAL AND DRAWING NOTES



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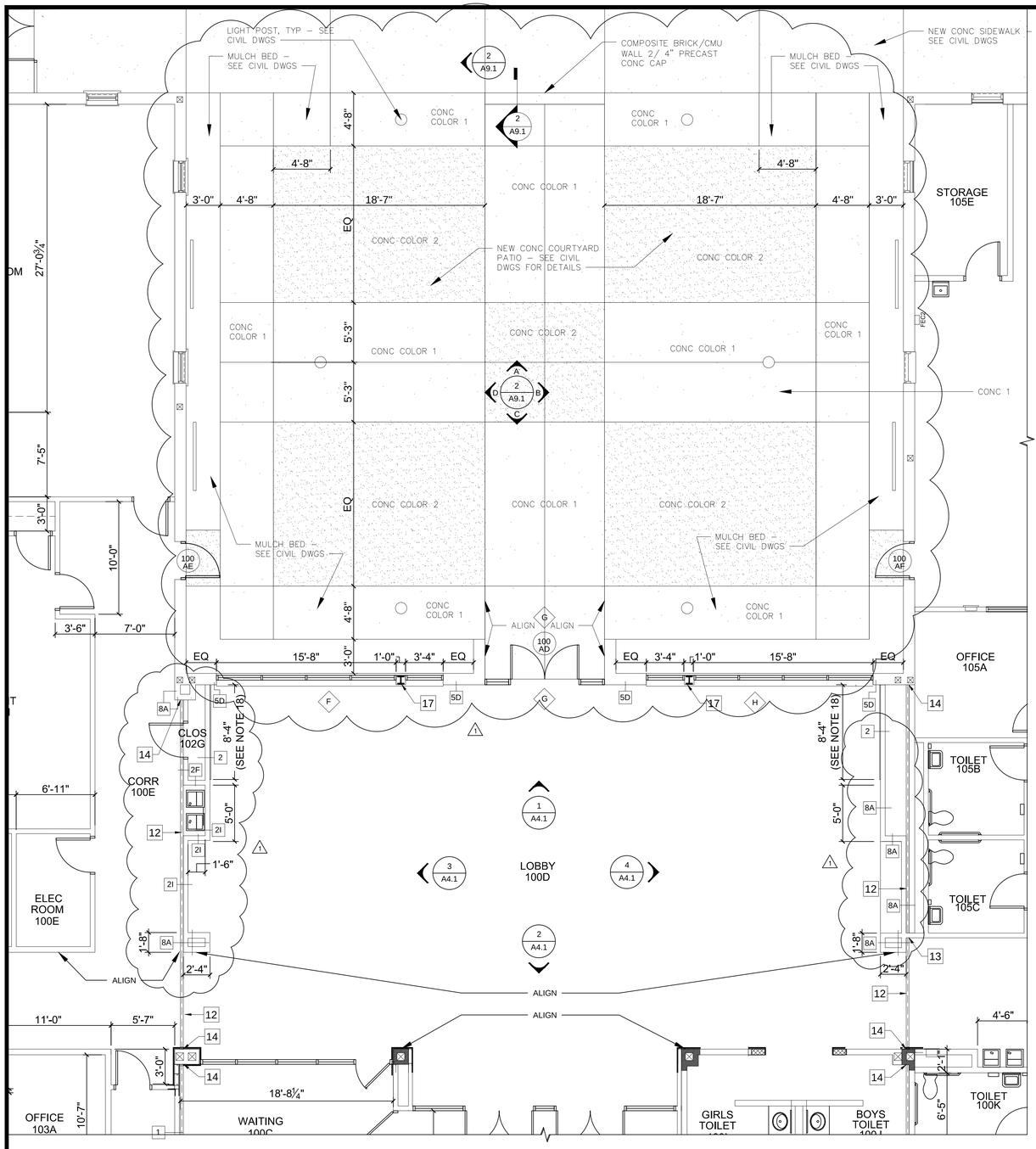
NEW WORK PARTIAL GROUND FLOOR PLAN - AREA B

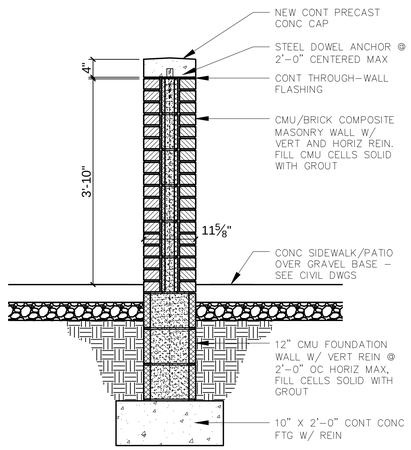
A1.102

SHEET _____ of _____



2 A1.103 SCALE: 3/4" = 1'-0"

GROUND FLOOR PARTIAL NEW WORK PLAN - AREA C

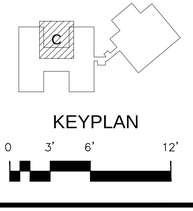


2 A1.103 SCALE: 3/4" = 1'-0"

SECTION @ SITE WALL

GENERAL NEW WORK NOTES	
1	PATCH, PREPARE AND PAINT ALL EXISTING INTERIOR WALL SURFACES UNLESS NOTED OTHERWISE.
2	ALL OUTSIDE CORNERS AT NEW CMU WALLS (INCLUDING, BUT NOT LIMITED TO, WALL STOPS, INTERSECTING WALLS, AND WINDOW JAMBS) SHALL HAVE BULLNOSE CORNERS W/ 1" RADIUS UNO.
NEW WORK DRAWING NOTES	
1	20" DIA METAL COLUMN ENCLOSURE POSITIONED AS REQUIRED TO ENCLOSE EXISTING STEEL COLUMN AND DRAINAGE PIPE. GC TO VERIFY DIA. IS ADEQUATE TO ENCLOSE COL AND PIPING AND ADJUST IF NECESSARY.
2	14" DIA METAL COLUMN ENCLOSURE CENTERED ON STEEL COLUMN
3	10" DIA METAL COLUMN ENCLOSURE CENTERED ON STEEL COLUMN
4	14" DIA HALF-ROUND METAL COLUMN ENCLOSURE CENTERED ON STEEL COLUMN
5	PATCH AND PREPARE INTERIOR FACE OF ALL EXTERIOR CMU WALLS AND PAINT, TYP UNO
6	ALIGN FACE OF NEW GWB W/ FACE OF EXISTING CMU WALL
7	INFILL EXISTING OPENING WITH 8" REIN CMU WALL AND HOLLOW METAL FRAME - SEE DETAILS
8	INSTALL MTL STUD FRAMING TIGHT TO FACE OF COLUMN
9	INFILL OPENING IN WALL W/ CMU OF THICKNESS TO MATCH EXISTING.
10	INSTALL NEW CMU TO MATCH EXISTING WHERE WALLS ARE MODIFIED FOR MEP MODIFICATIONS OR FOR NEW OPENINGS. PREPARE SURFACE AND INSTALL NEW FIN AS INDICATED.
11	METAL HANGING ROD W/ ¾" X 1'-0"D WOOD SHELF W/ PLAM FIN INSTALLED @ 36" AND 72" AFF.
12	PATCH AND PREPARE EXISTING FLOOR JOINT AND INSTALL NEW EXPANSION JOINT AND COVER. COORDINATE WITH FLOOR FIN MATERIAL.
13	INSTALL WALLTO-WALL EXPANSION JOINT AND COVER @ NEW GWB/MTL STUD WALLS. COORDINATE W/ WALL FIN MATERIAL
14	PATCH AND PREPARE EXISTING WALL JOINT AND INSTALL NEW WALL EXPANSION JOINT AND COVER. COORDINATE W/ WALL FINISH MATERIAL.
15	INSTALL NEW CEILING EXPANSION JOINT. COORDINATE W/ CEILING FIN MATERIAL.
16	NEW CONT ALUM HANDRAIL @ RAMP
17	NEW 12"W X 6"D ALUM COLUMN ENCLOSURE CENTERED ON STEEL COLUMN. VERIFY IN FIELD ACTUAL DEPTH REQUIRED TO ENCLOSE COL.
18	INSTALL LINEAR WOOD PLANK SYSTEM @ FACE OF WALL FROM CEILING TO FF
19	REPAIR DAMAGED MORTAR JOINTS, PREPARE FACE OF EXISTING BRICK VENEER @ EXTERIOR WALL AND PAINT.

NOTE: SEE DRAWING A1.103 FOR NEW WORK GENERAL AND DRAWING NOTES



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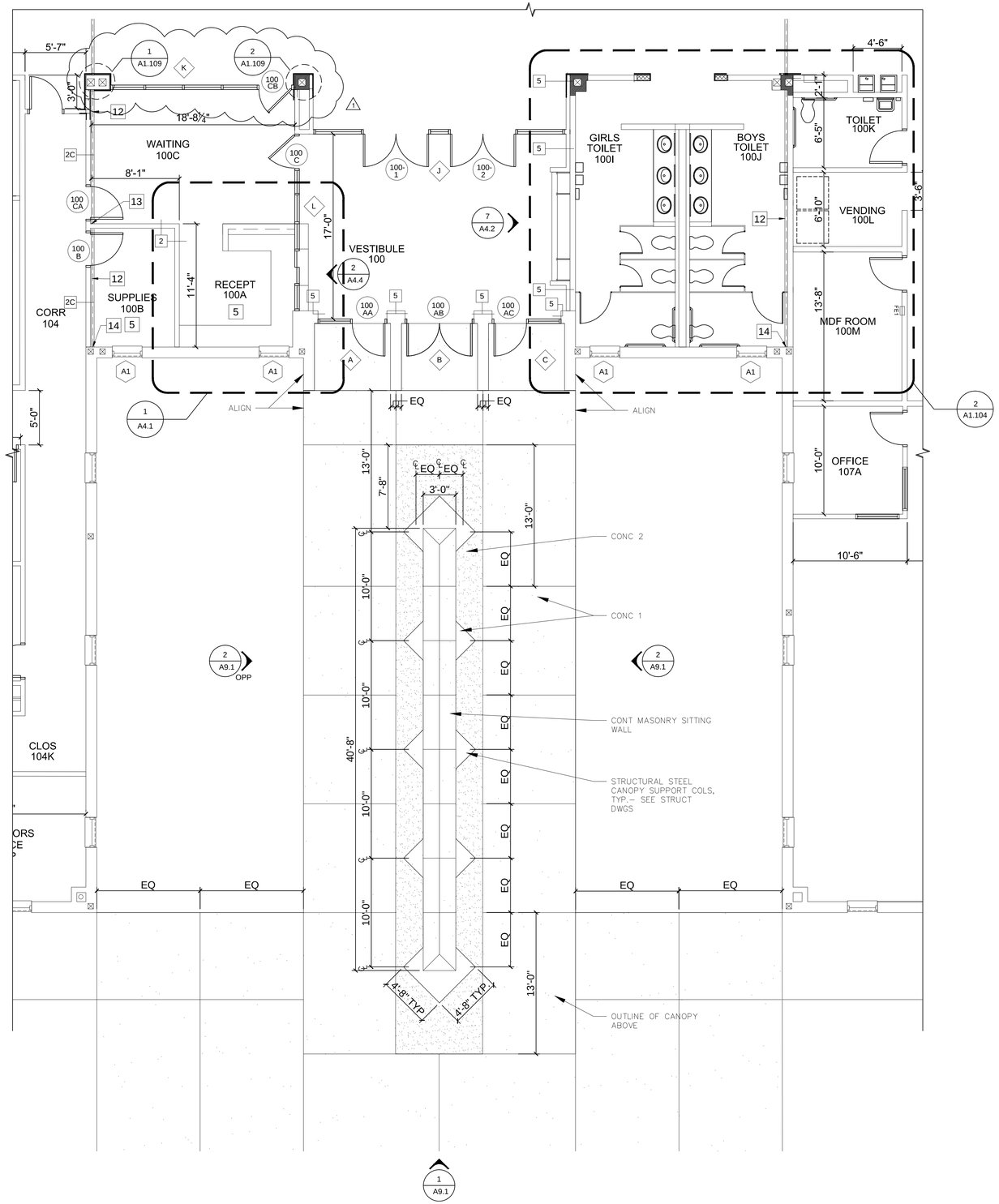
NEW WORK PARTIAL GROUND FLOOR PLAN - AREA C

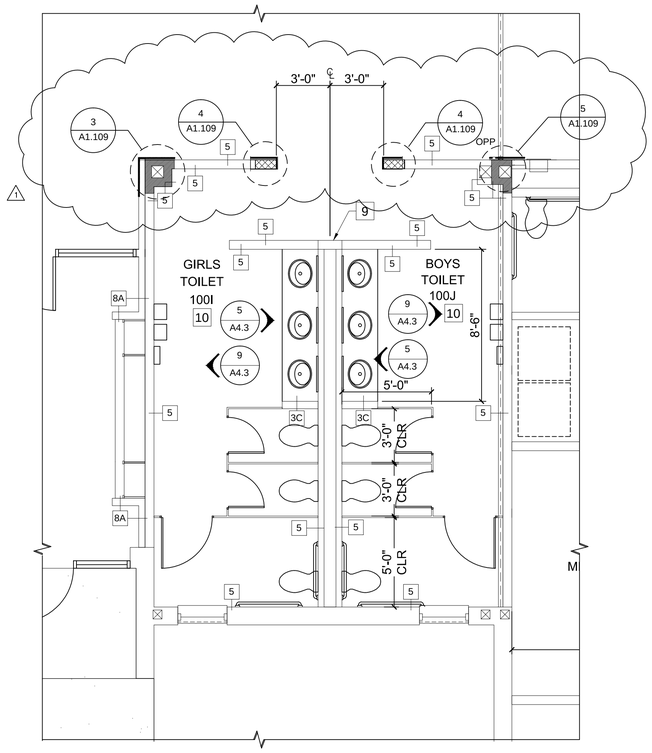
A1.103

SHEET _____ of _____



GROUND FLOOR PARTIAL NEW WORK PLAN - AREA D

1 / A1.104 SCALE: 3/16" = 1'-0"



ENLARGED TOILET PLANS

2 / A1.104 SCALE: 1/4" = 1'-0"

NOTE: SEE DRAWING A1.103 FOR NEW WORK GENERAL AND DRAWING NOTES

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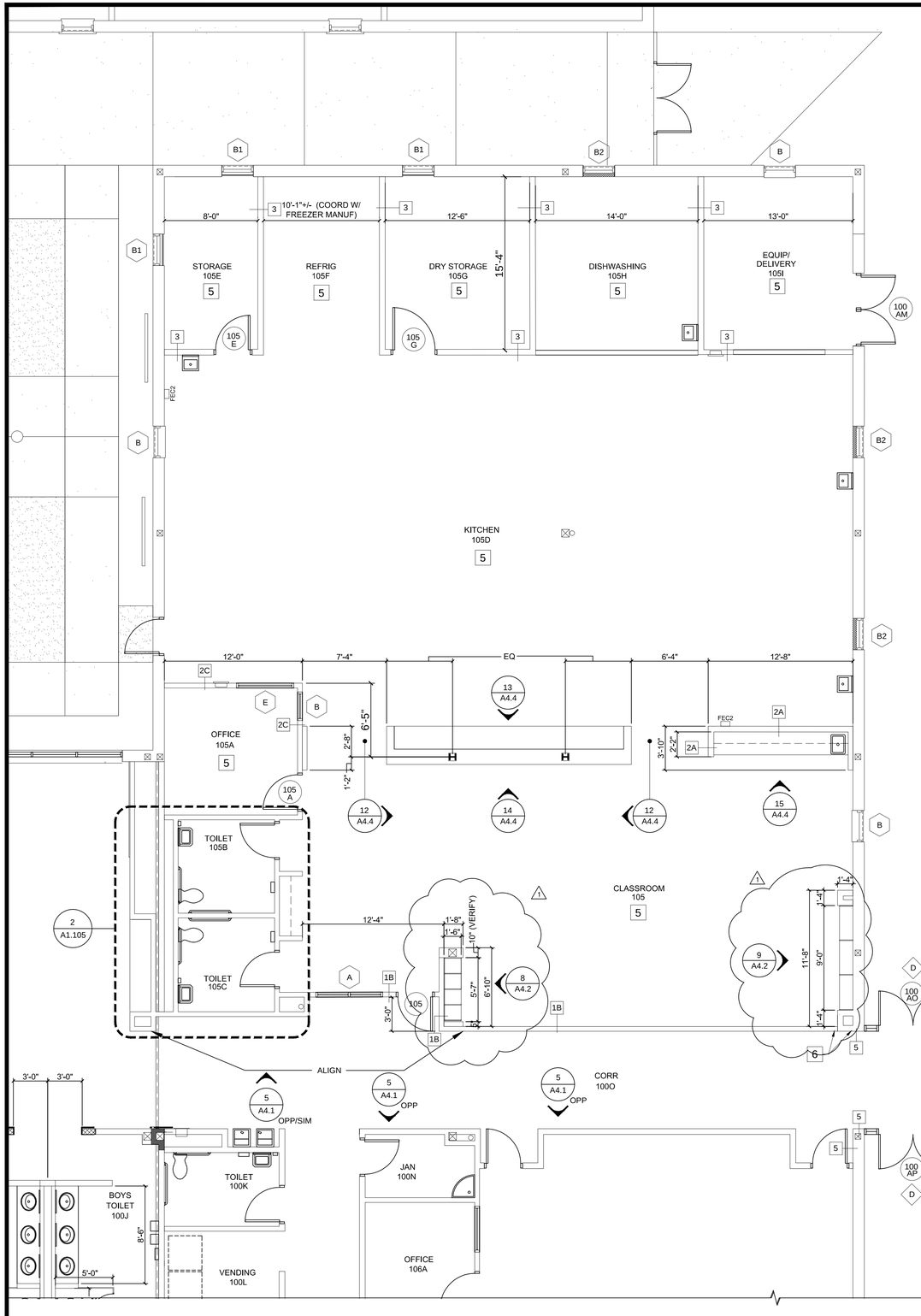
NEW WORK PARTIAL GROUND FLOOR PLAN - AREA D

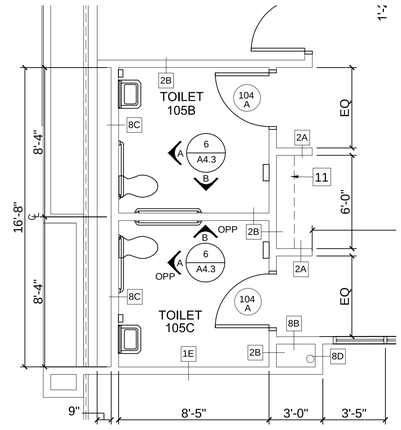
A1.104

SHEET _____ of _____



GROUND FLOOR PARTIAL NEW WORK PLAN - AREA E

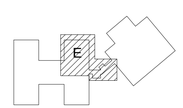
1 / A1.105 SCALE: 3/16" = 1'-0"



ENLARGED PARTIAL PLAN

2 / A1.105 SCALE: 1/4" = 1'-0"

NOTE: SEE DRAWING A1.103 FOR NEW WORK GENERAL AND DRAWING NOTES



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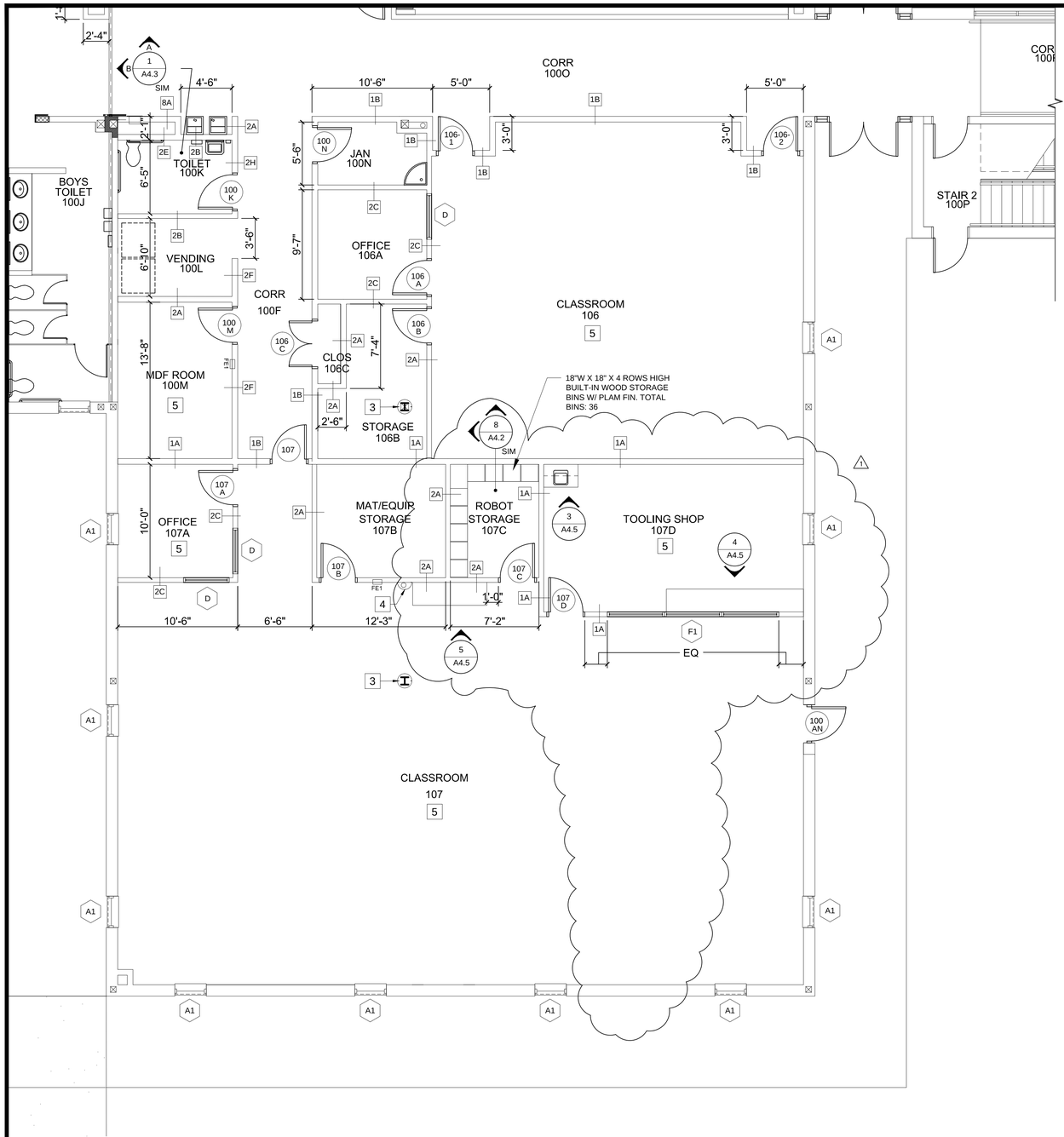
SCALE:	AS SHOWN

NEW WORK PARTIAL GROUND FLOOR PLAN - AREA E

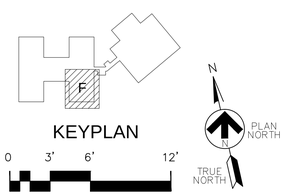
A1.105

SHEET _____ of _____



GROUND FLOOR PARTIAL NEW WORK PLAN - AREA F

1 / A1.106 SCALE: 3/16" = 1'-0"



NOTE: SEE DRAWING A1.103 FOR NEW WORK GENERAL AND DRAWING NOTES

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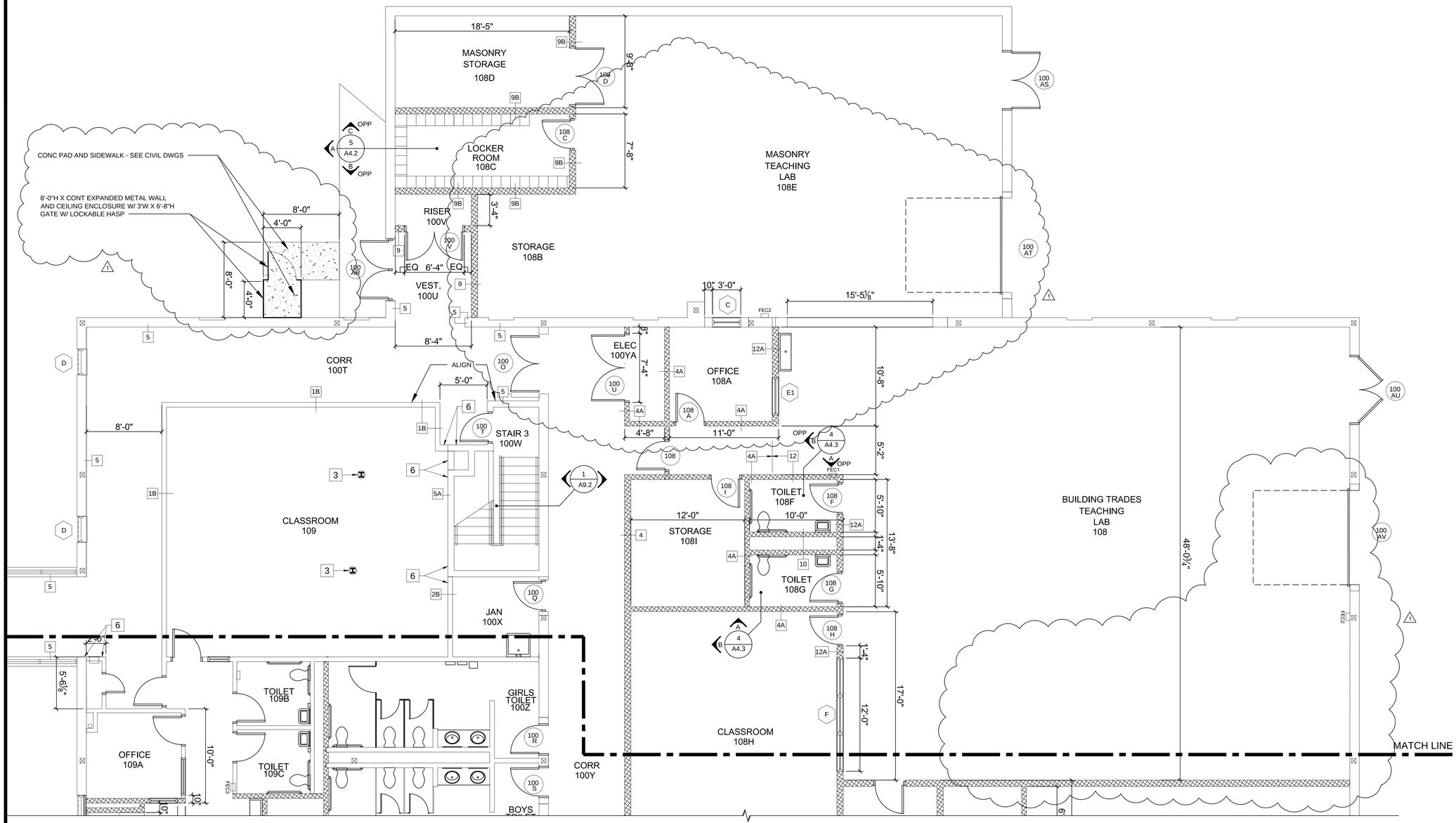
NEW WORK PARTIAL GROUND FLOOR PLAN - AREA F

A1.106

SHEET _____ of _____



1 A1.107 GROUND FLOOR PARTIAL NEW WORK PLAN - AREA H

SCALE: 3/16" = 1'-0"

NOTE: SEE DRAWING A1.103 FOR NEW WORK GENERAL AND DRAWING NOTES

KEYPLAN

0 3' 6' 12'

PLAN NORTH

TRUE NORTH

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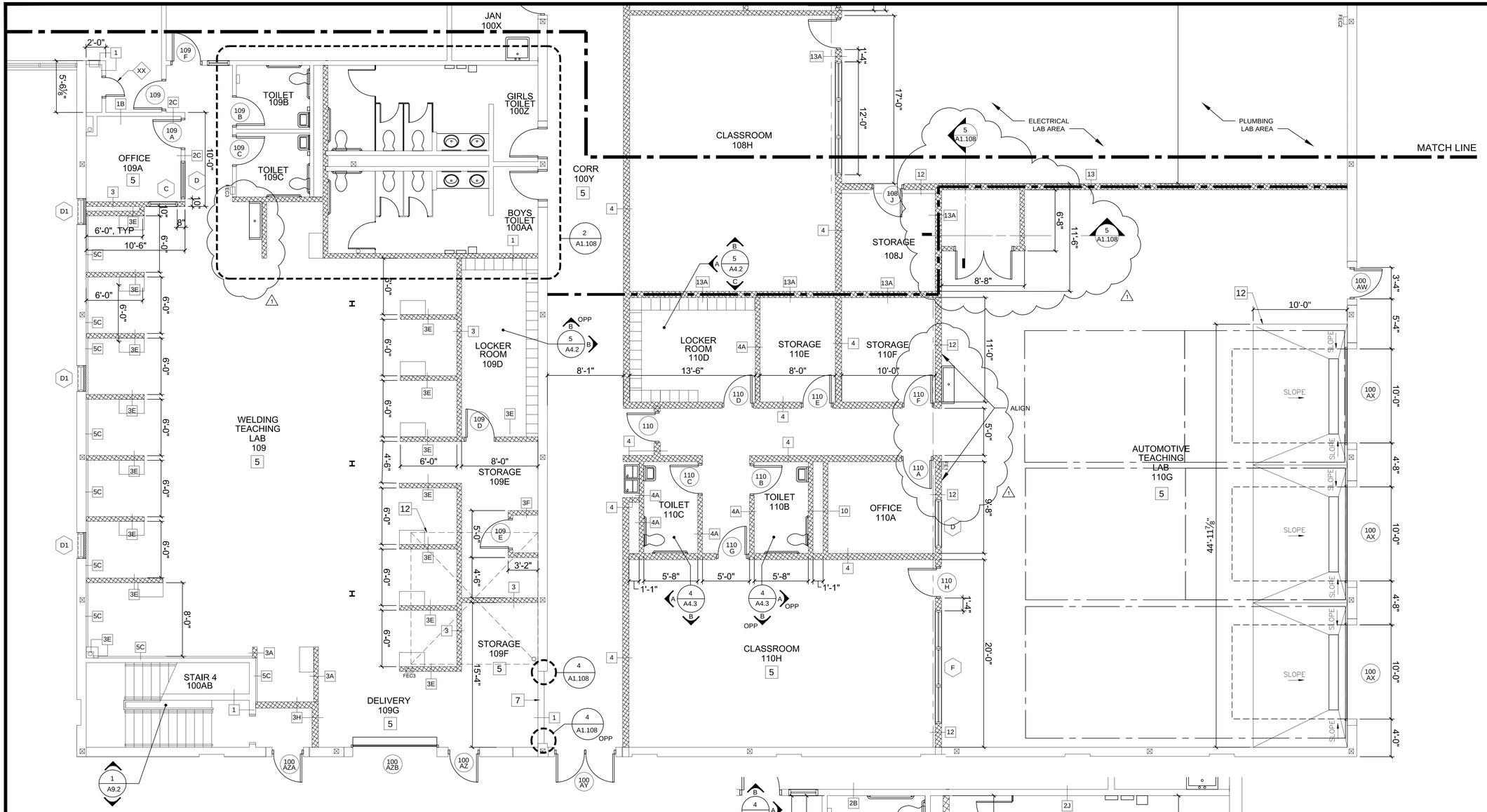
NEW WORK PARTIAL GROUND FLOOR PLAN - AREA G

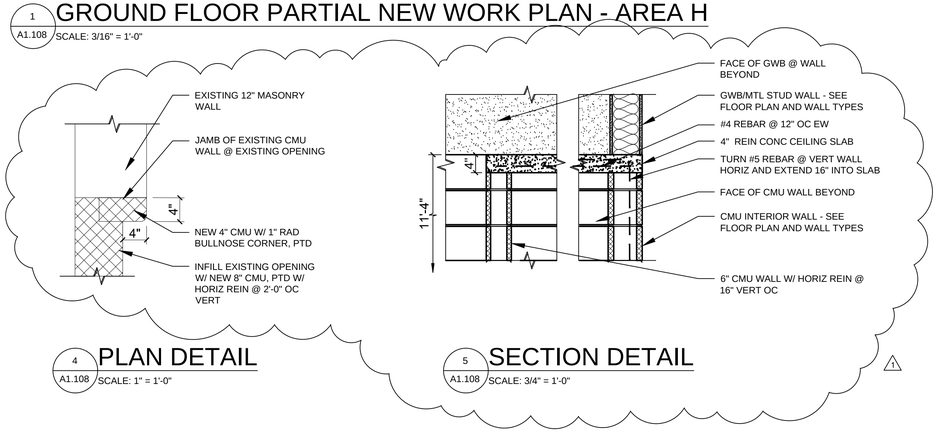
A1.107

SHEET _____ of _____



1 A1.108 GROUND FLOOR PARTIAL NEW WORK PLAN - AREA H

SCALE: 3/16" = 1'-0"

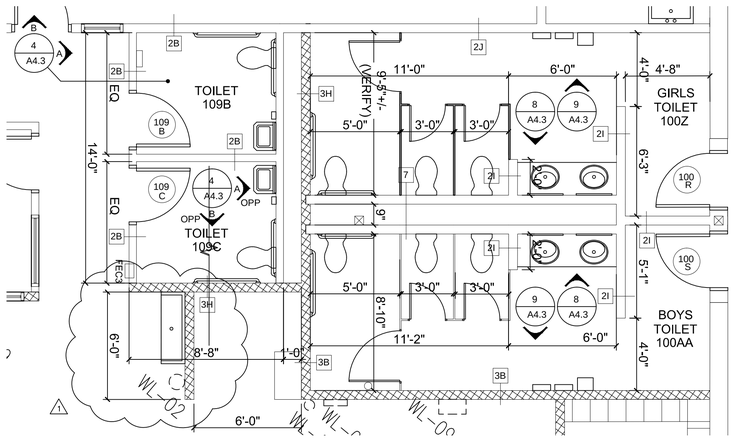


4 A1.108 PLAN DETAIL

SCALE: 1" = 1'-0"

5 A1.108 SECTION DETAIL

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



2 A1.108 ENLARGED TOILET ROOM PLAN

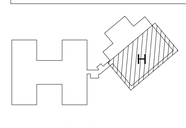
SCALE: 1/4" = 1'-0"

NOTE: SEE DRAWING A1.103 FOR NEW WORK GENERAL AND DRAWING NOTES

WALL TYPE DELINEATION

WALL TYPE 12 AND 12A

WALL TYPE 13 AND 13A



KEYPLAN

0 3' 6' 12'

N PLAN NORTH

TRUE NORTH

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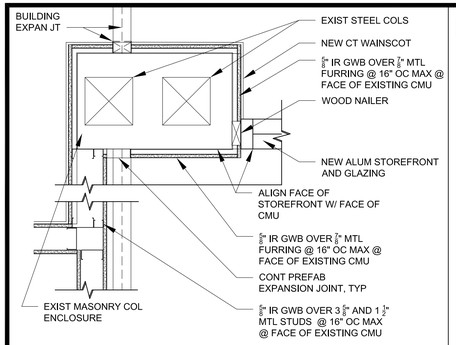
NEW WORK PARTIAL GROUND FLOOR PLAN - AREA H

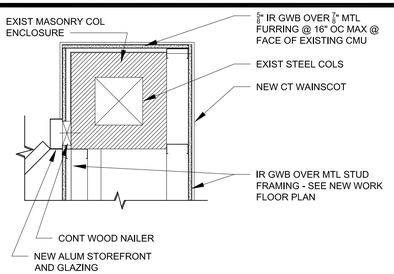
A1.108

SHEET _____ of _____



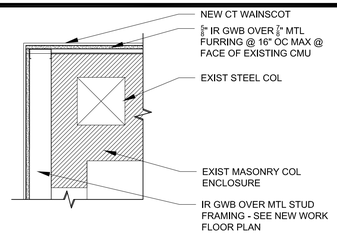
1 A1.109 **ENLARGED PLAN DETAIL**

SCALE: 1" = 1'-0"



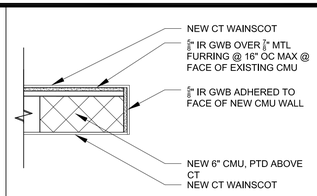
2 A1.109 **ENLARGED PLAN DETAIL**

SCALE: 1" = 1'-0"



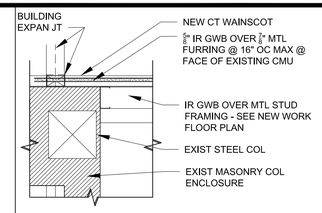
3 A1.109 **ENLARGED PLAN DETAIL**

SCALE: 1" = 1'-0"



4 A1.109 **ENLARGED PLAN DETAIL**

SCALE: 1" = 1'-0"



5 A1.109 **ENLARGED PLAN DETAIL**

SCALE: 1" = 1'-0"

1

0 6" 1' 2'

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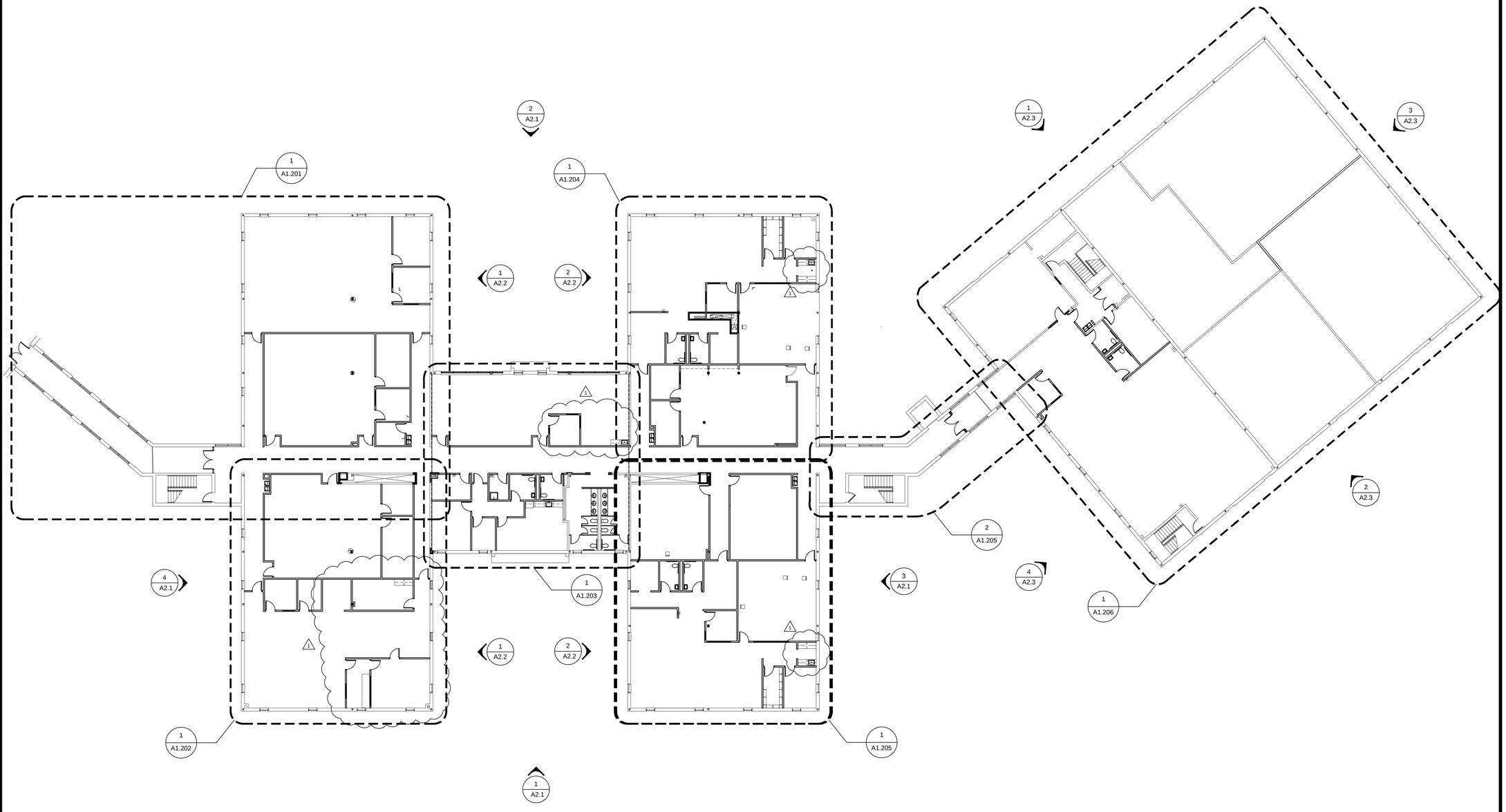
GROUND FLOOR
ENLARGED PLAN DETAILS

1 A1.109

SHEET _____ of _____



1 / A1.2 SECOND FLOOR OVERALL NEW WORK FLOOR PLAN

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

0 8' 16' 32'

N PLAN NORTH

TRUE NORTH

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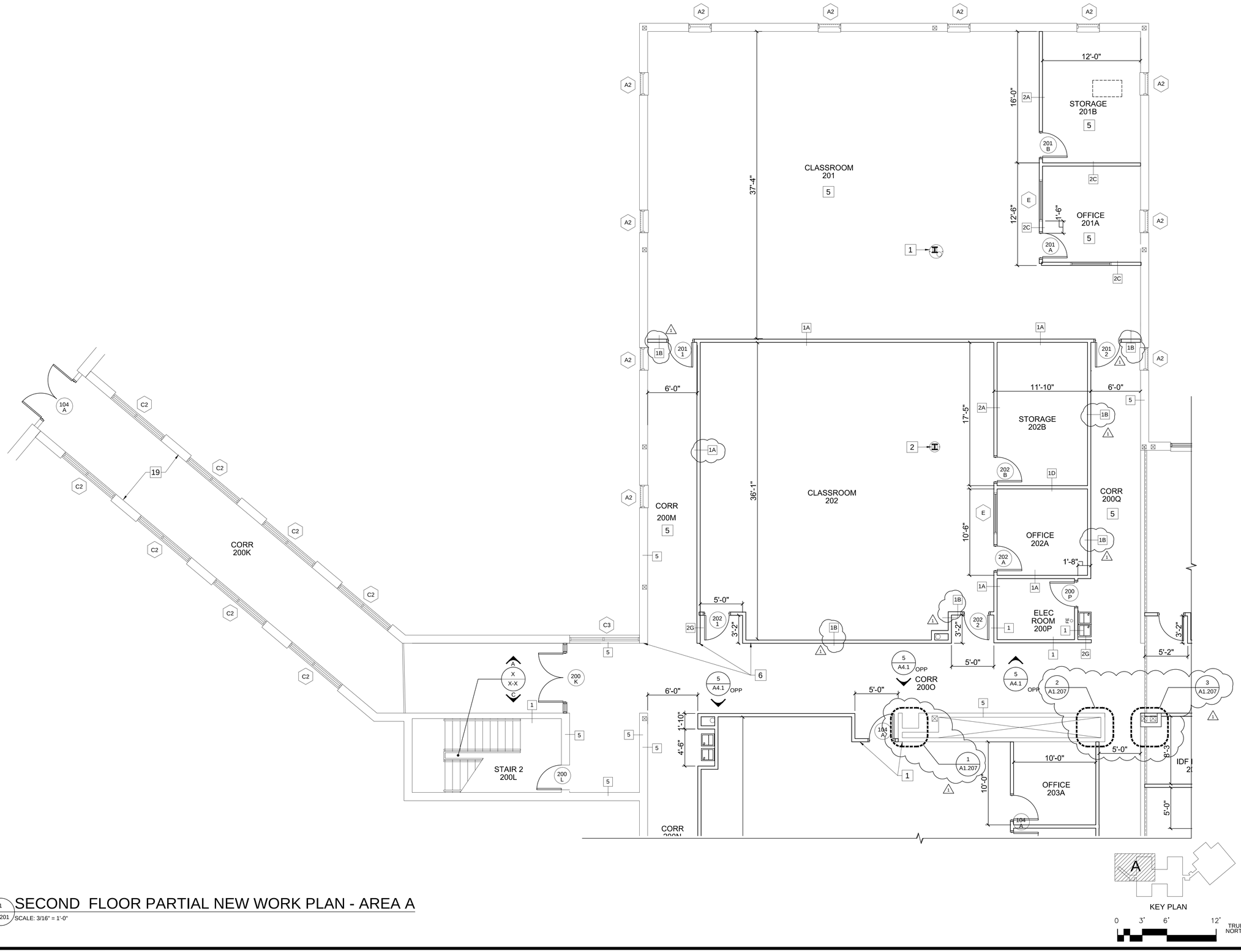
NEW WORK OVERALL SECOND FLOOR PLAN

A1.2

SHEET _____ of _____



1 / A1.201 SECOND FLOOR PARTIAL NEW WORK PLAN - AREA A

SCALE: 3/16" = 1'-0"

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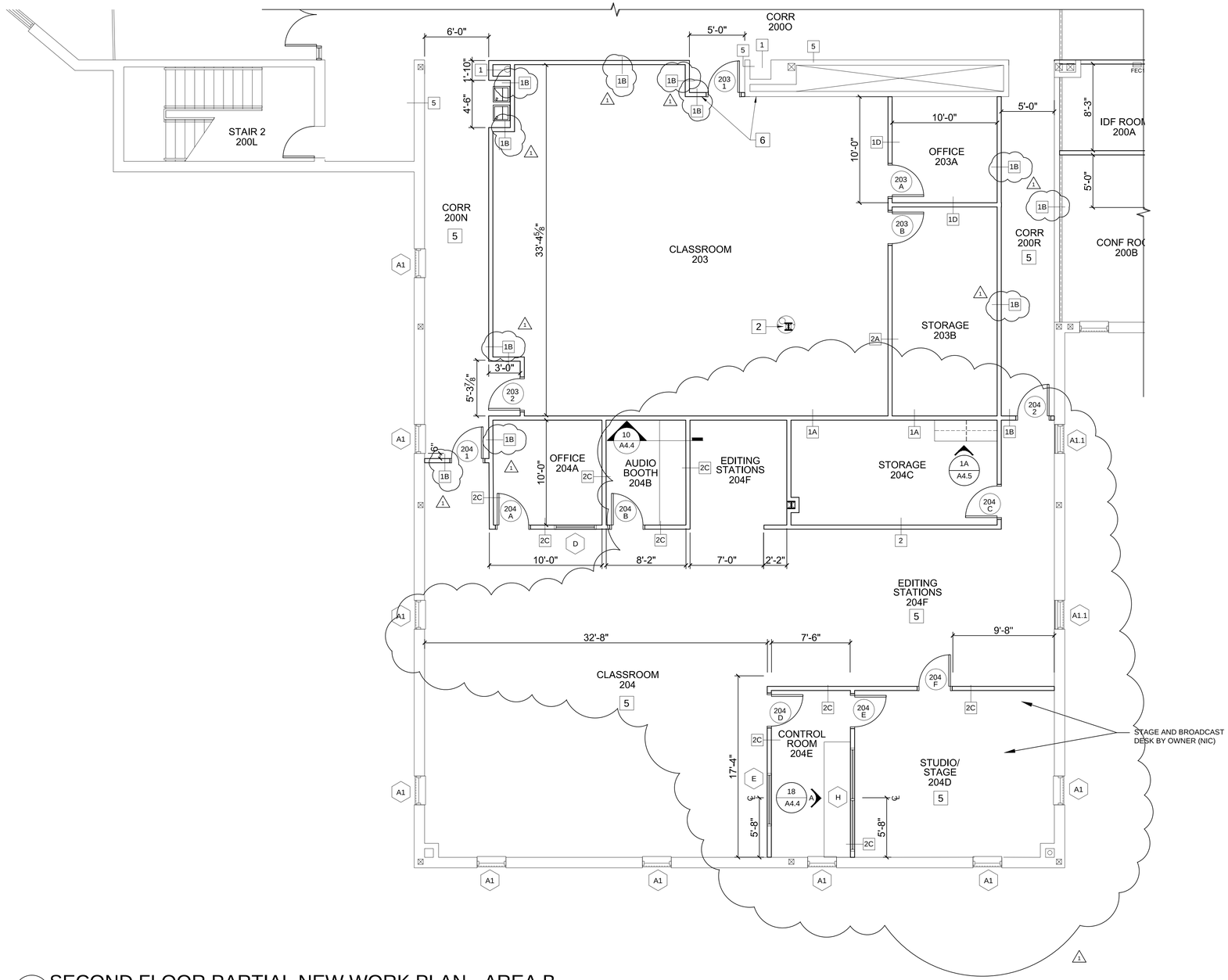
DATE:	6/17/22
SCALE:	AS SHOWN

NEW WORK SECOND FLOOR PARTIAL PLAN - AREA A

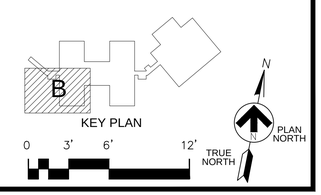
A1.201

SHEET _____ of _____



1 / A1.202 SECOND FLOOR PARTIAL NEW WORK PLAN - AREA B

SCALE: 3/16" = 1'-0"



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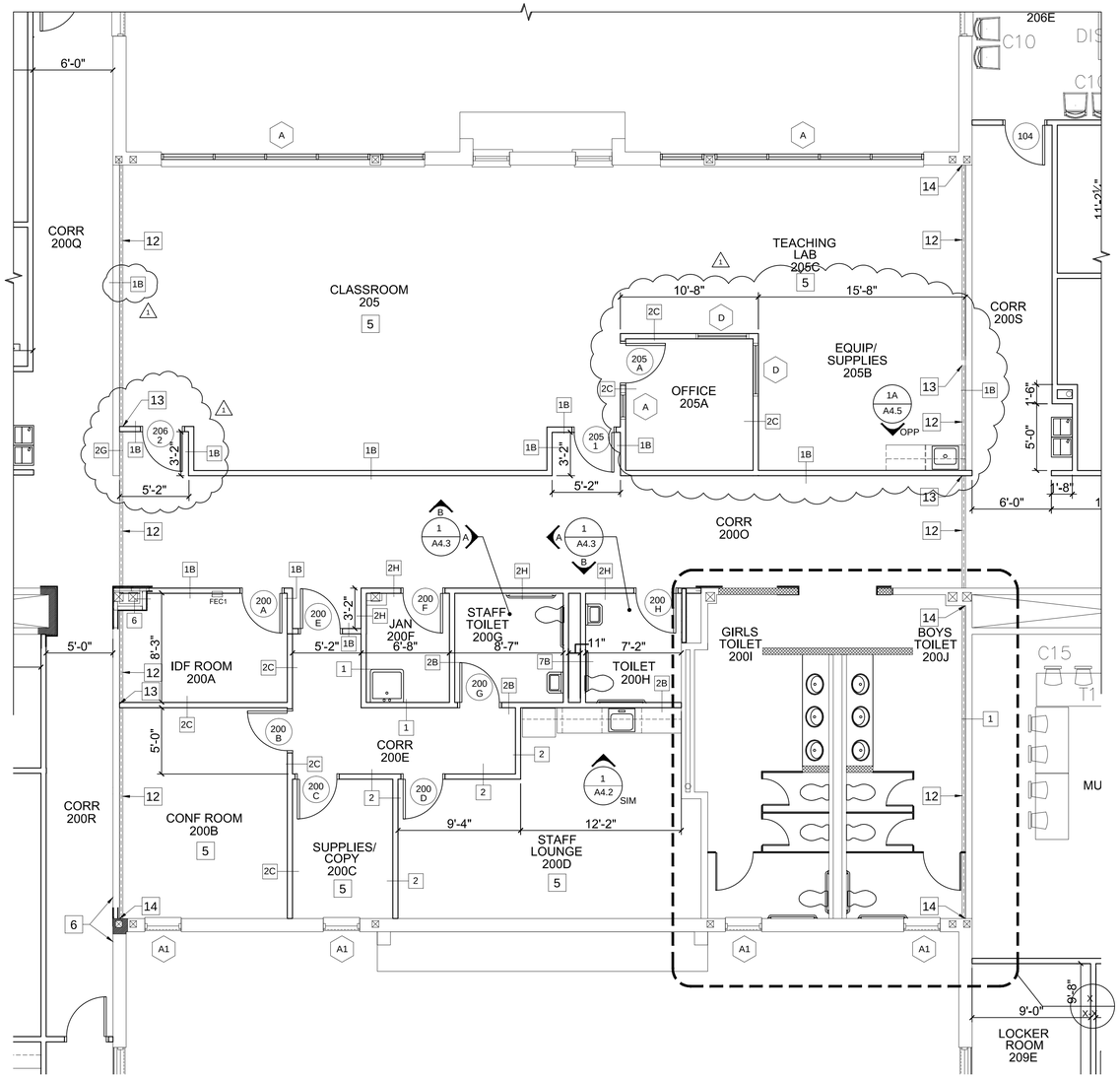
SCALE:	AS SHOWN

NEW WORK SECOND FLOOR PARTIAL PLAN - AREA B

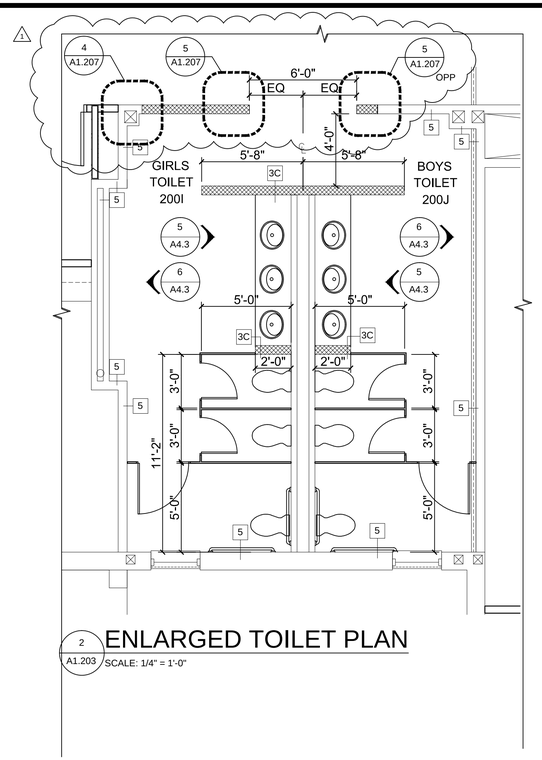
A1.202

SHEET _____ of _____



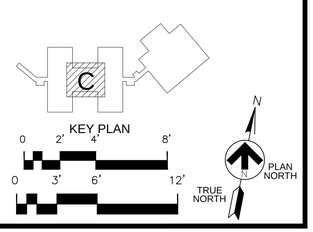
1 / A1.203 SCALE: 3/16" = 1'-0"

SECOND FLOOR PARTIAL NEW WORK PLAN - AREA C



2 / A1.203 SCALE: 1/4" = 1'-0"

ENLARGED TOILET PLAN



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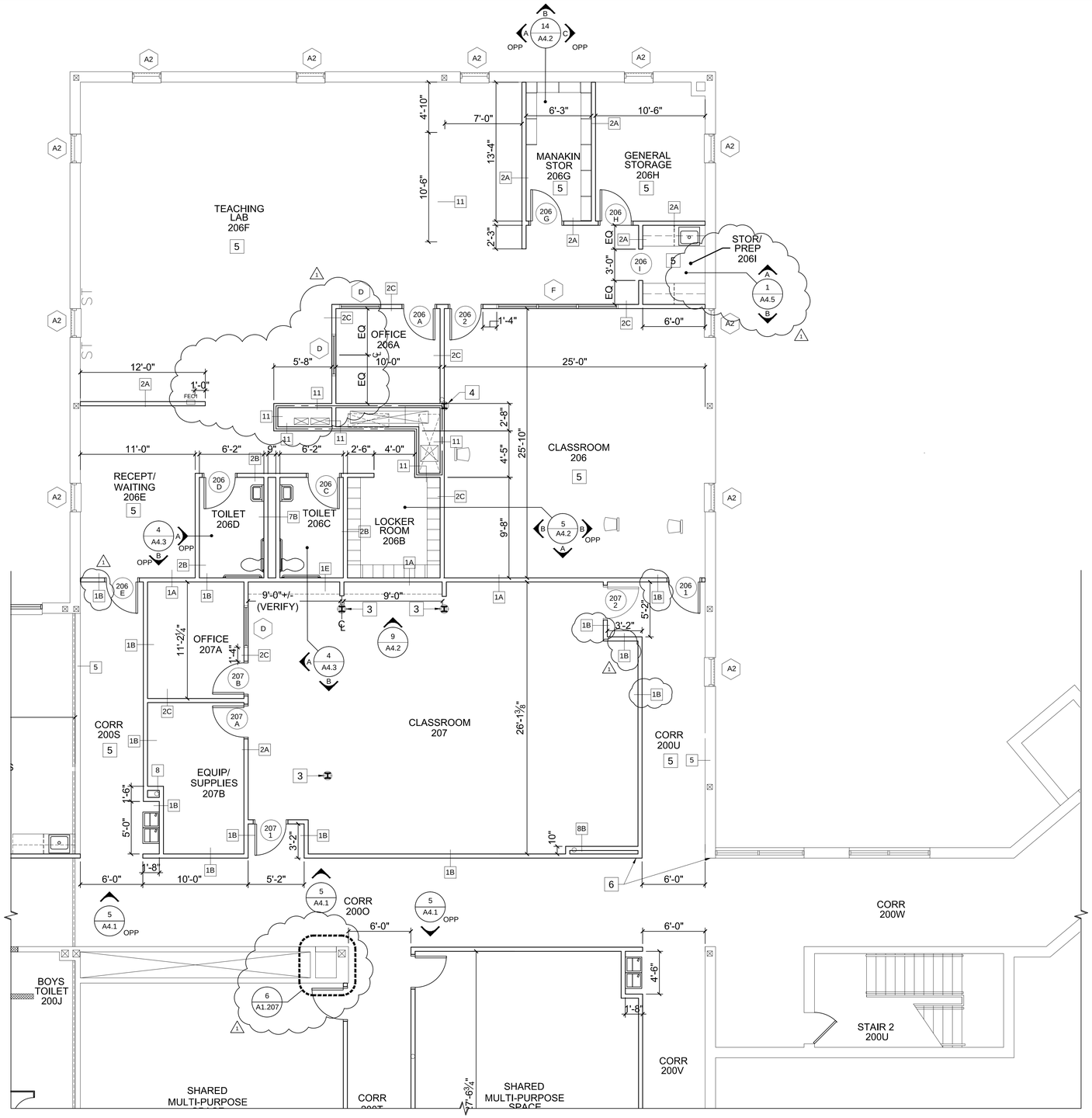
SCALE:	AS SHOWN

NEW WORK SECOND FLOOR PARTIAL PLAN - AREA C

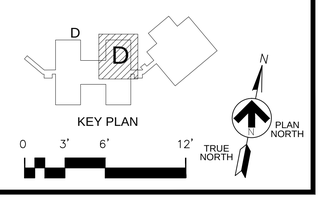
A1.203

SHEET _____ of _____



SECOND FLOOR PARTIAL NEW WORK PLAN - AREA D

1 / A1.204 SCALE: 3/16" = 1'-0"



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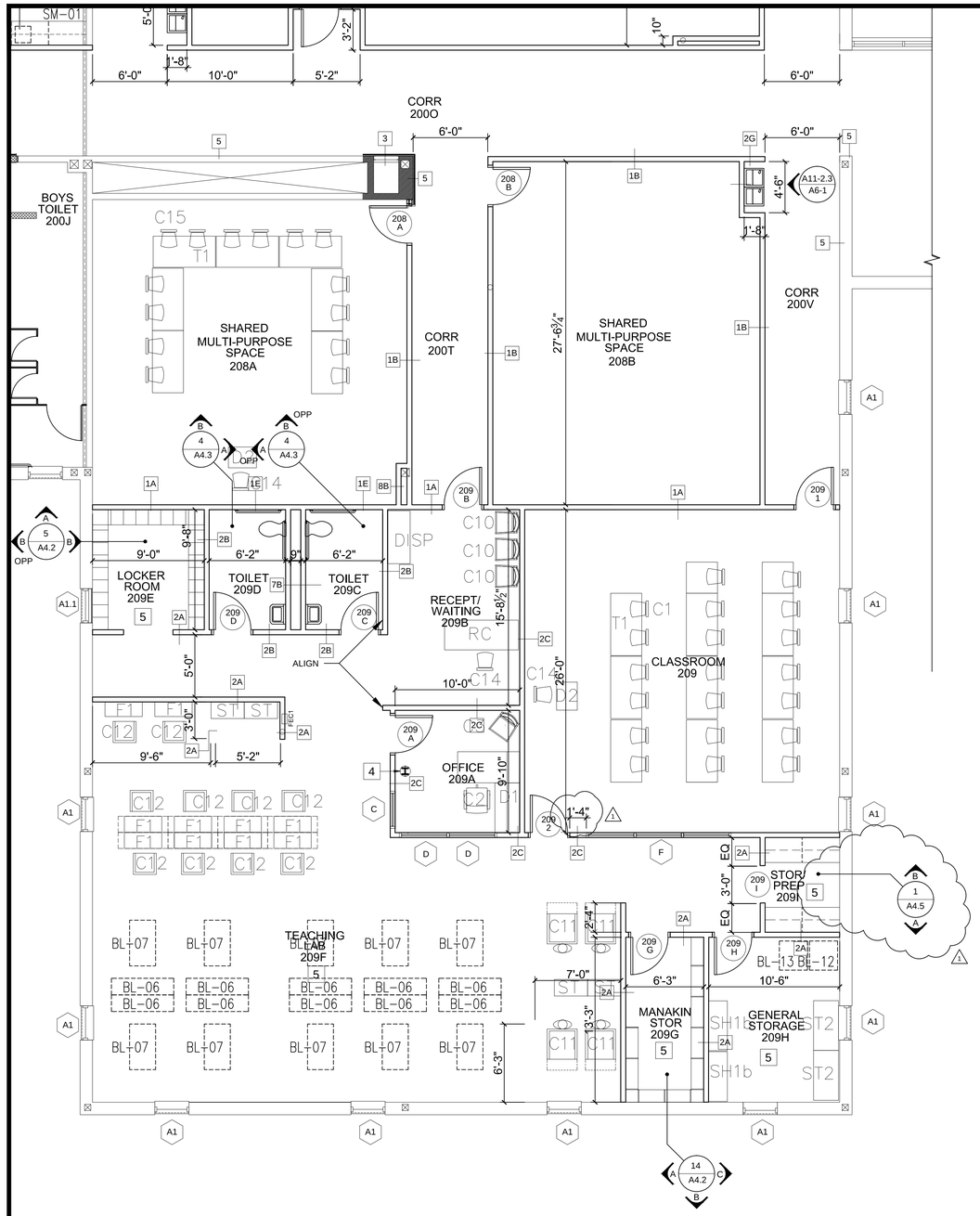
SCALE:	AS SHOWN

NEW WORK SECOND FLOOR PARTIAL PLAN - AREA D

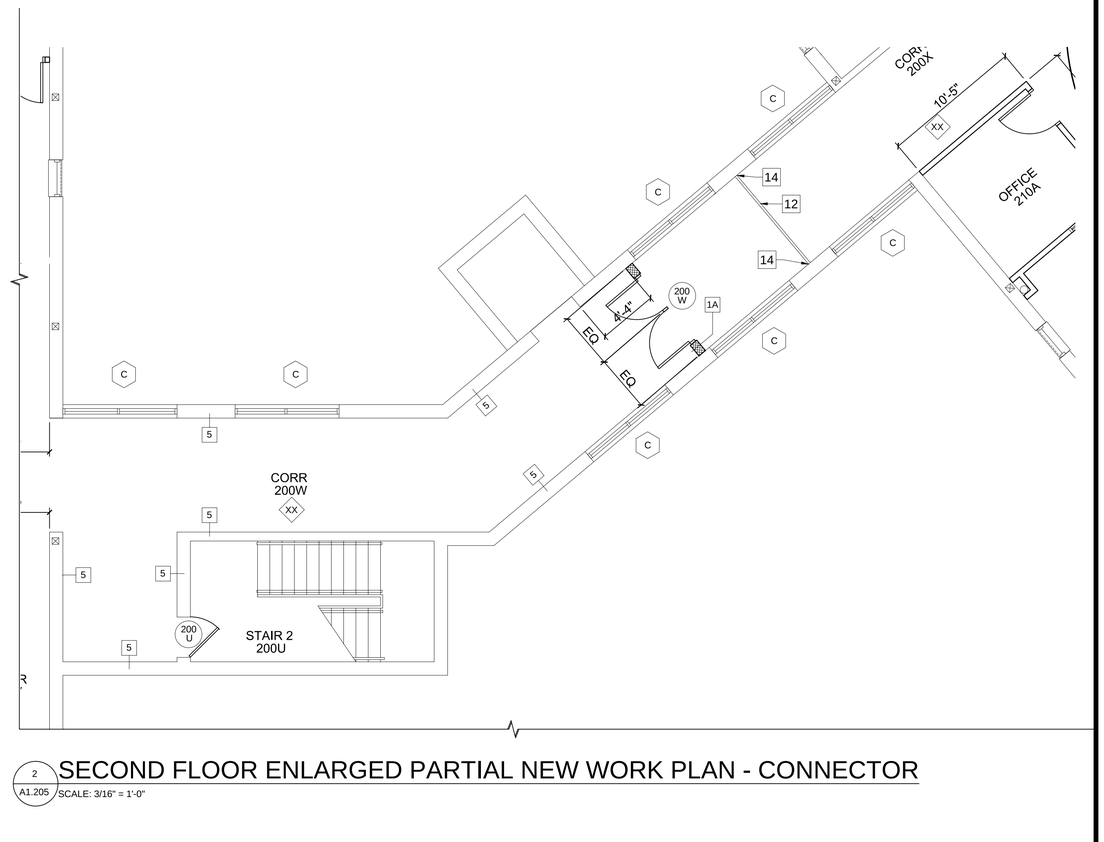
A1.204

SHEET _____ of _____



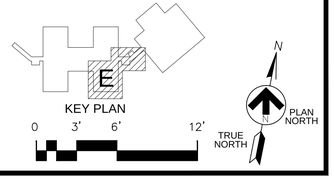
SECOND FLOOR PARTIAL NEW WORK PLAN - AREA E

1 / A1.205 SCALE: 3/16" = 1'-0"



SECOND FLOOR ENLARGED PARTIAL NEW WORK PLAN - CONNECTOR

2 / A1.205 SCALE: 3/16" = 1'-0"



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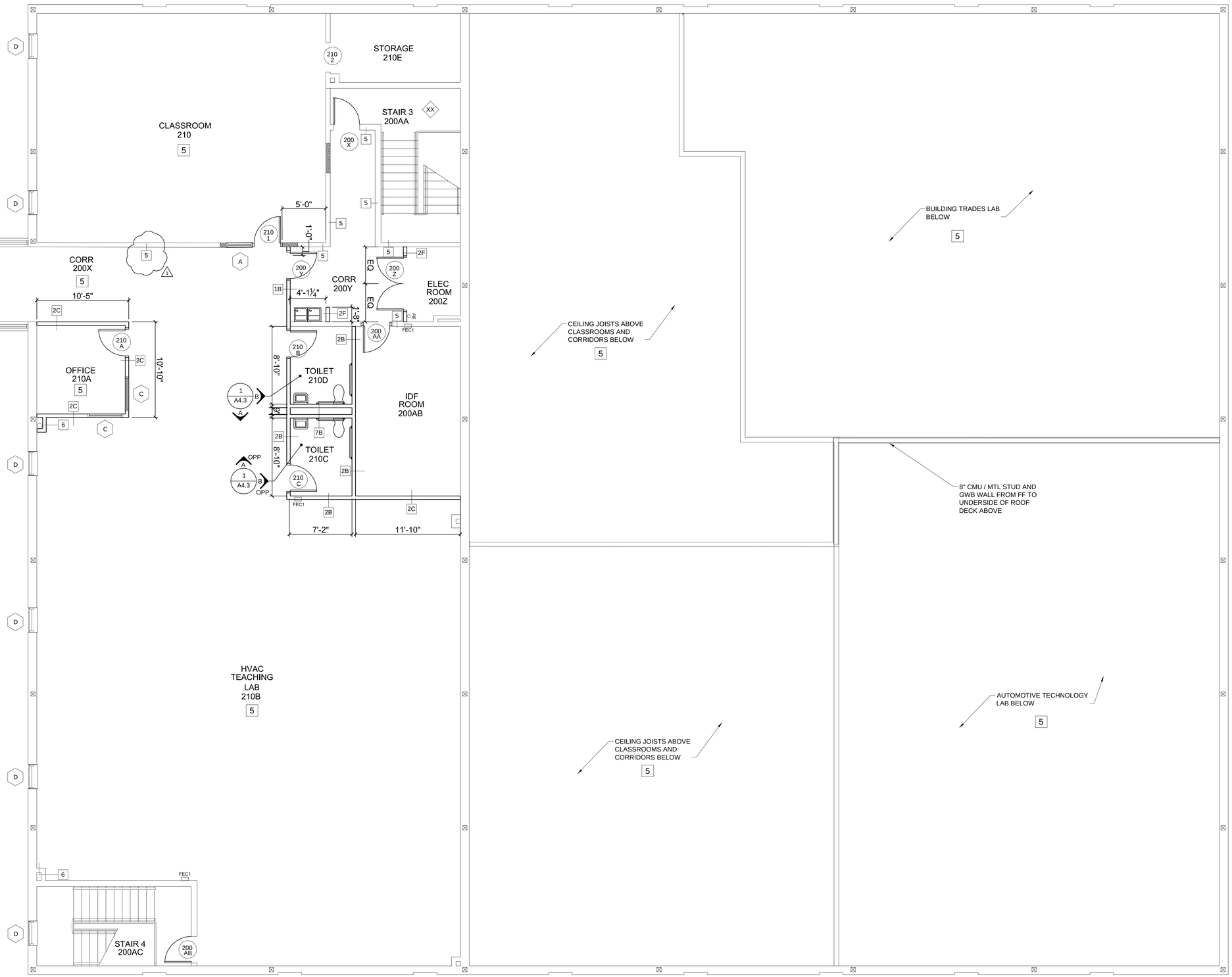
NEW WORK SECOND FLOOR PARTIAL PLAN - AREA E

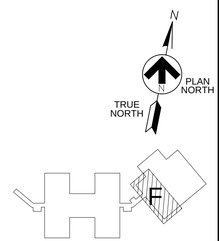
A1.205

SHEET _____ of _____



1 A1.206 SECOND FLOOR PARTIAL NEW WORK PLAN - AREA F

SCALE: 3/16" = 1'-0"



KEY PLAN

0 3' 6' 12'

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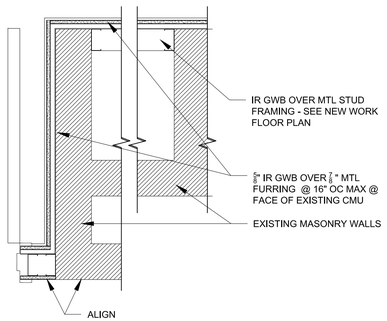
NEW WORK SECOND FLOOR PARTIAL PLAN - AREA F

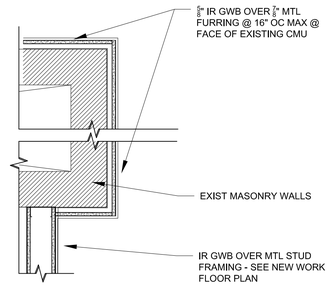
A1.206

SHEET _____ of _____



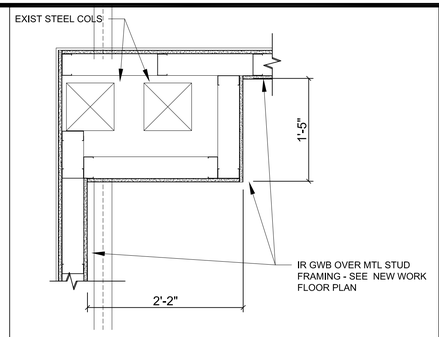
1 A1.207 ENLARGED PLAN DETAIL

SCALE: 1" = 1'-0"



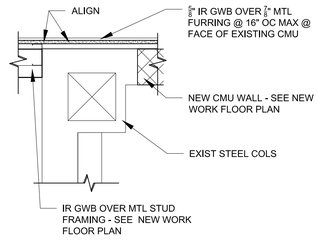
2 A1.207 ENLARGED PLAN DETAIL

SCALE: 1" = 1'-0"



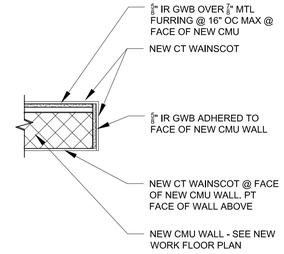
3 A1.207 ENLARGED PLAN DETAIL

SCALE: 1" = 1'-0"



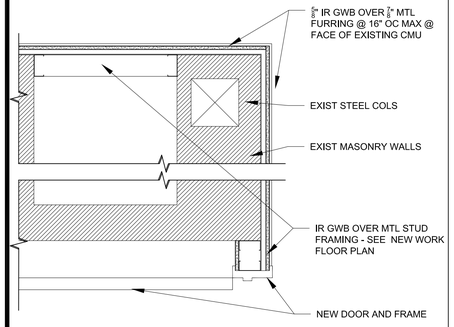
4 A1.207 ENLARGED PLAN DETAIL

SCALE: 1" = 1'-0"



5 A1.207 ENLARGED PLAN DETAIL

SCALE: 1" = 1'-0"



6 A1.207 ENLARGED PLAN DETAIL

SCALE: 1" = 1'-0"

1

0 6" 1' 2'

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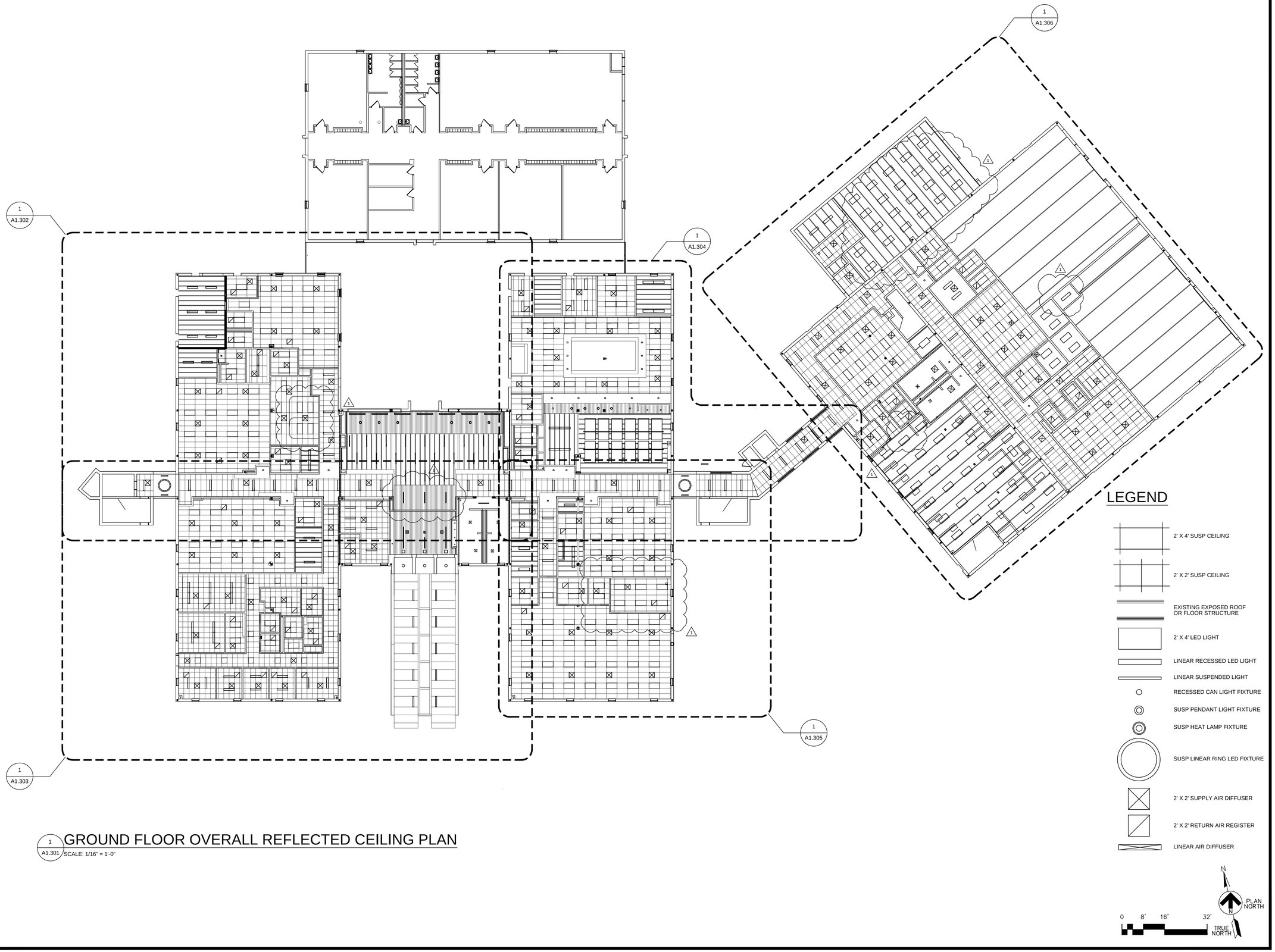
SECOND FLOOR ENLARGED PLAN DETAILS

A1.207 1

SHEET _____ of _____



LEGEND

- 2' X 4' SUSP CEILING
- 2' X 2' SUSP CEILING
- EXISTING EXPOSED ROOF OR FLOOR STRUCTURE
- 2' X 4' LED LIGHT
- LINEAR RECESSED LED LIGHT
- LINEAR SUSPENDED LIGHT
- RECESSED CAN LIGHT FIXTURE
- SUSP PENDANT LIGHT FIXTURE
- SUSP HEAT LAMP FIXTURE
- SUSP LINEAR RING LED FIXTURE
- 2' X 2' SUPPLY AIR DIFFUSER
- 2' X 2' RETURN AIR REGISTER
- LINEAR AIR DIFFUSER

N — PLAN NORTH

0 8' 16' 32' — TRUE NORTH

1 A1.301 GROUND FLOOR OVERALL REFLECTED CEILING PLAN

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

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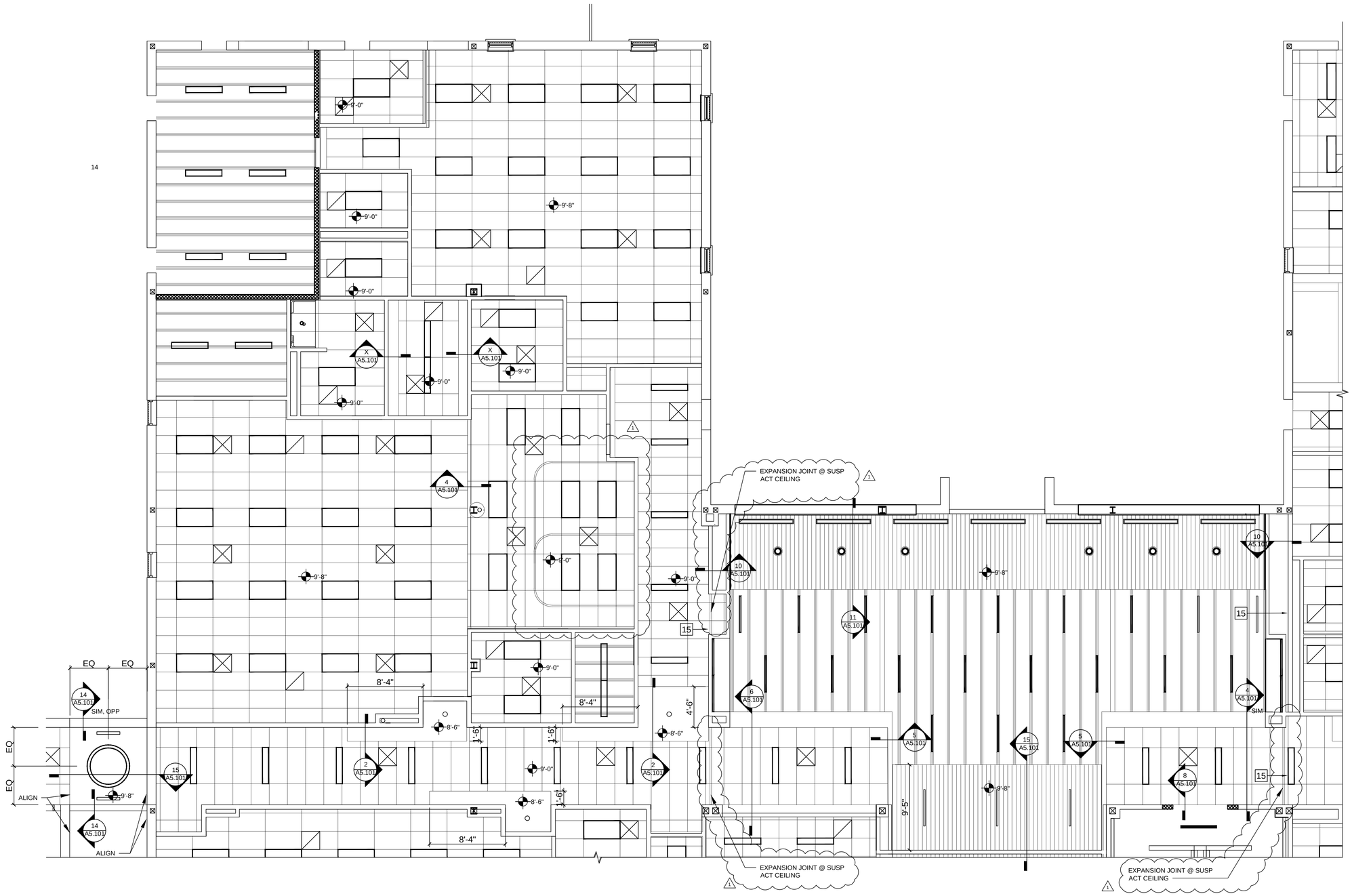
GROUND FLOOR OVERALL REFLECTED CEILING PLAN

A1.301

SHEET _____ of _____



1 A1.302 SCALE: 1/8" = 1'-0"

GROUND FLOOR PARTIAL REFLECTED CEILING PLAN - AREA A

DRAWING GENERAL NOTES:

1. SEE SHEET A2.301 FOR REFLECTED CEILING LEGEND.

KEYPLAN

0 4' 8' 16'

N PLAN NORTH

N TRUE NORTH

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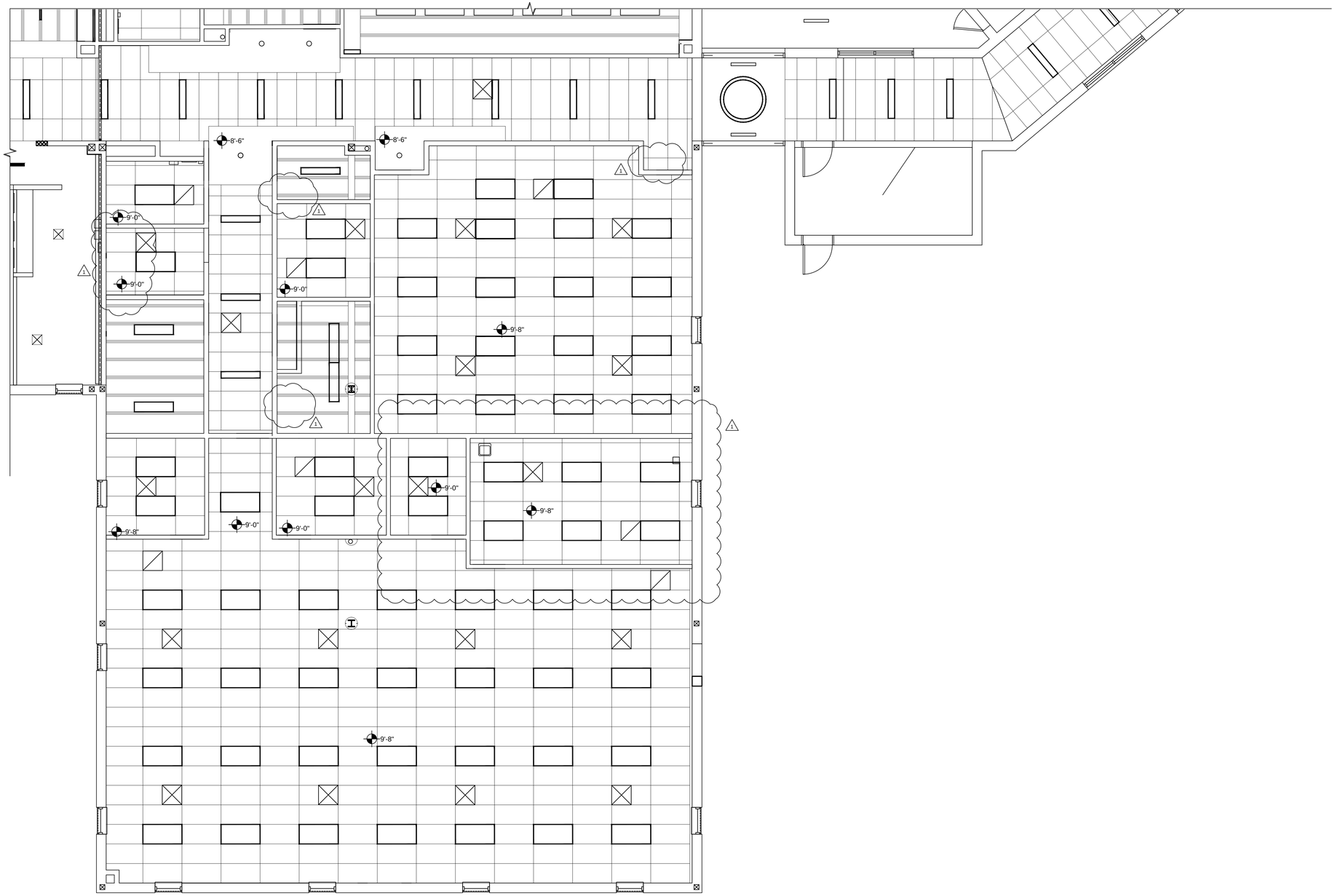
GROUND FLOOR PARTIAL REFLECTED CEILING PLAN - AREA A

A1.302

SHEET _____ of __X__

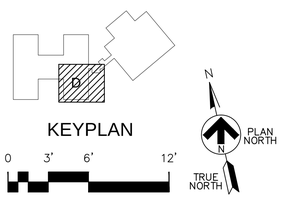


1 / A1.305 GROUND FLOOR PARTIAL REFLECTED CEILING PLAN - AREA D

SCALE: 3/16" = 1'-0"

DRAWING GENERAL NOTES:

1. SEE SHEET A2.301 FOR REFLECTED CEILING LEGEND.



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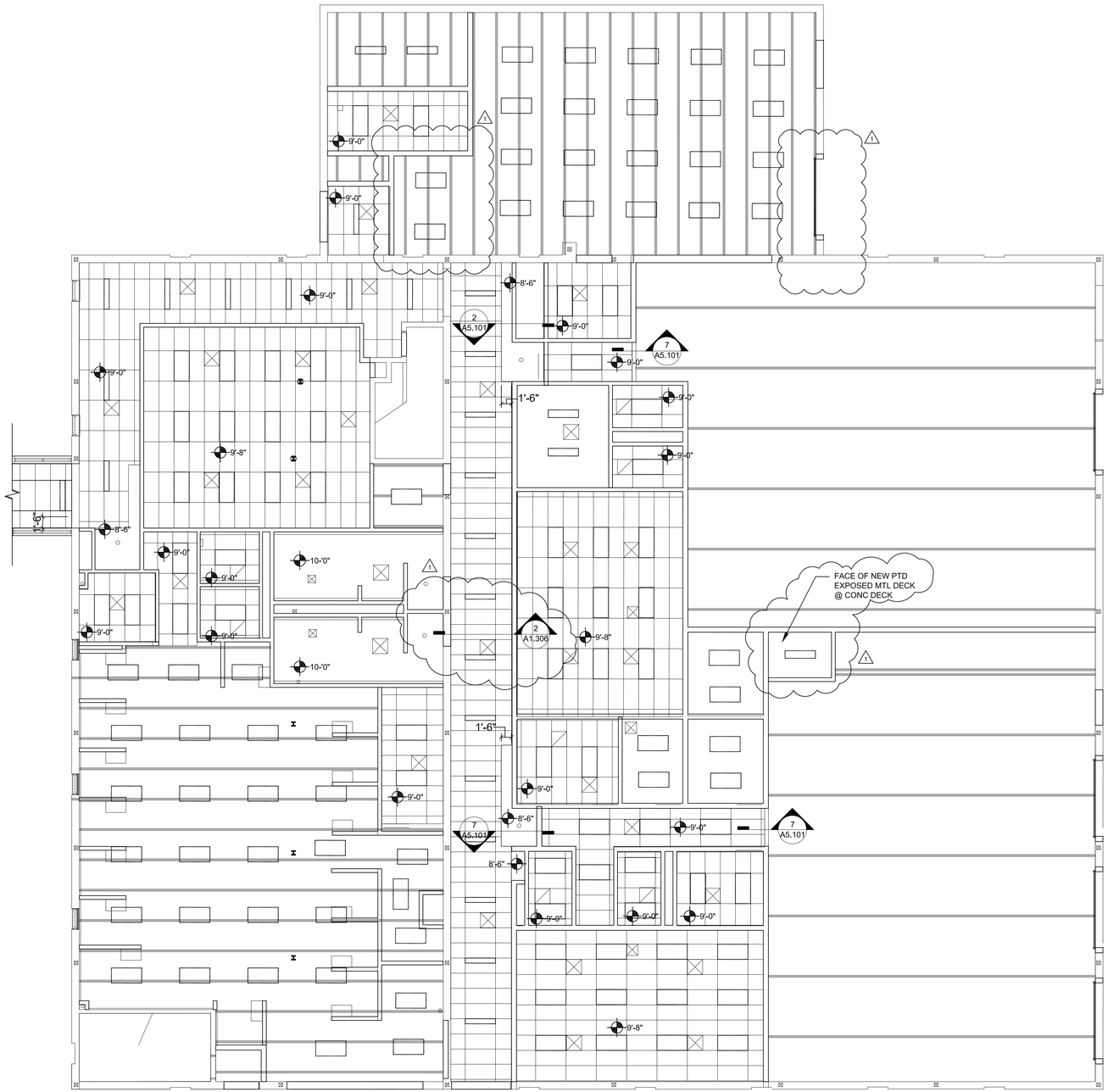
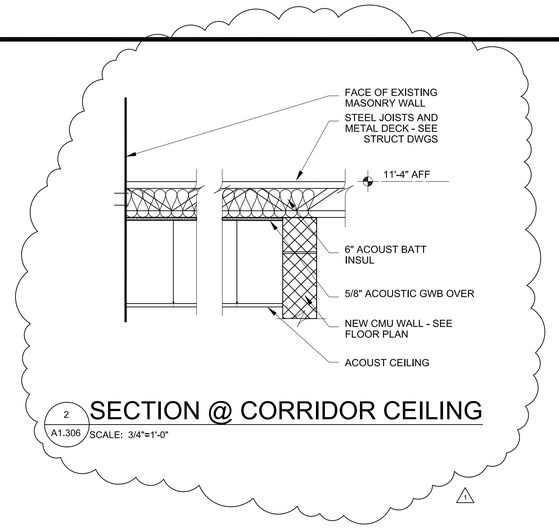
GROUND FLOOR PARTIAL NEW WORK PLAN - AREA D

A1.305

SHEET _____ of _____





2 / A1.306 SECTION @ CORRIDOR CEILING

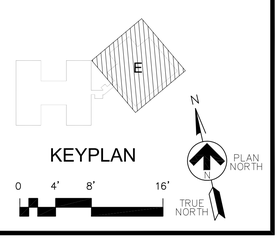
SCALE: 3/4"=1'-0"

1 / A1.306 GROUND FLOOR PARTIAL REFLECTED CEILING PLAN - AREA E

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

DRAWING GENERAL NOTES:

1. SEE SHEET A2.301 FOR REFLECTED CEILING LEGEND.



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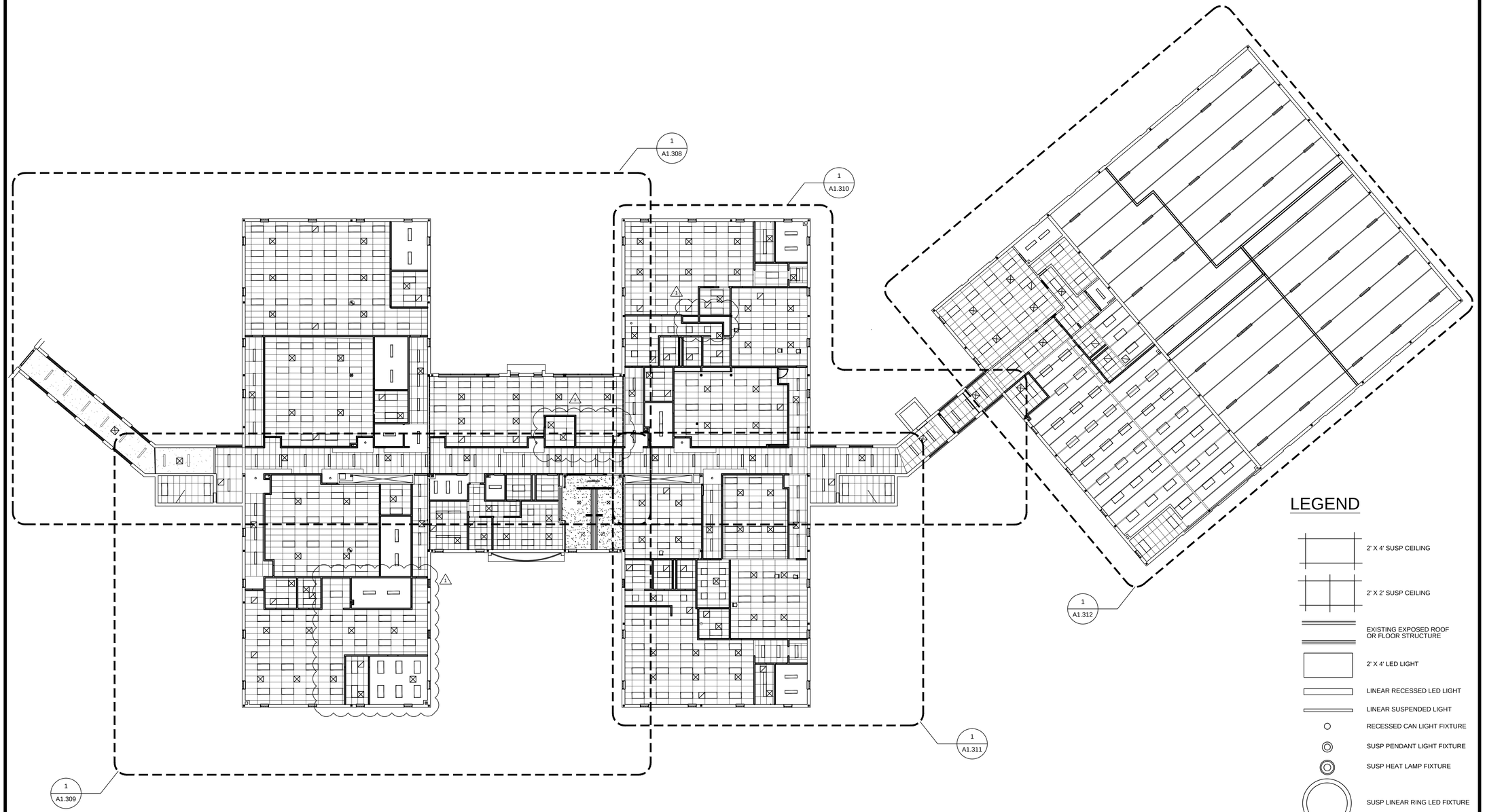
GROUND FLOOR PARTIAL NEW WORK PLAN - AREA E

A1.306

SHEET _____ of _____



SECOND FLOOR OVERALL REFLECTED CEILING PLAN

1 A1.307 SCALE: 1/16" = 1'-0"

LEGEND

- 2' X 4' SUSP CEILING
- 2' X 2' SUSP CEILING
- EXISTING EXPOSED ROOF OR FLOOR STRUCTURE
- 2' X 4' LED LIGHT
- LINEAR RECESSED LED LIGHT
- LINEAR SUSPENDED LIGHT
- RECESSED CAN LIGHT FIXTURE
- SUSP PENDANT LIGHT FIXTURE
- SUSP HEAT LAMP FIXTURE
- SUSP LINEAR RING LED FIXTURE
- 2' X 2' SUPPLY AIR DIFFUSER
- 2' X 2' RETURN AIR REGISTER
- LINEAR AIR DIFFUSER

N

N
PLAN NORTH
N
TRUE NORTH

0 8' 16' 32'

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SCALE:	AS SHOWN

SECOND FLOOR OVERALL REFLECTED CEILING PLAN

A1.307

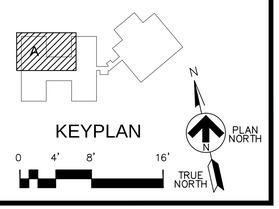
SHEET _____ of _____

1 A1.308 SCALE: 3/16" = 1'-0"

SECOND FLOOR PARTIAL REFLECTED CEILING PLAN - AREA A

DRAWING GENERAL NOTES:

1. SEE SHEET A2.301 FOR REFLECTED CEILING LEGEND.



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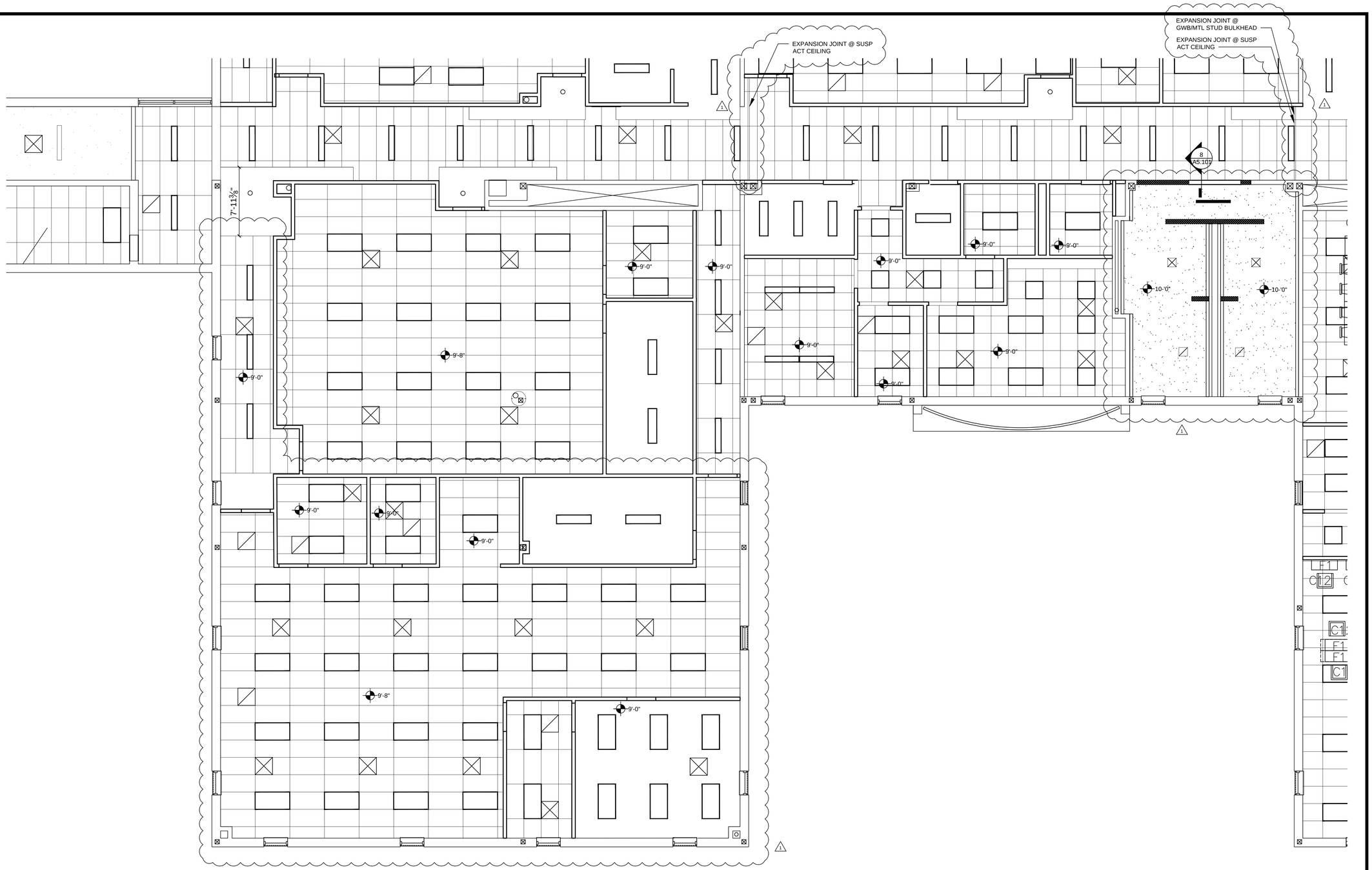
SCALE:	AS SHOWN

SECOND FLOOR PARTIAL REFL CLG PLAN - AREA A

A1.308

SHEET _____ of _____

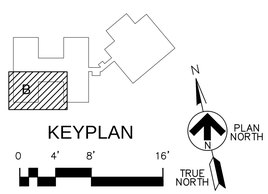


1 / A1.309 SECOND FLOOR PARTIAL REFLECTED CEILING PLAN - AREA B

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

DRAWING GENERAL NOTES:

1. SEE SHEET A2.301 FOR REFLECTED CEILING LEGEND.



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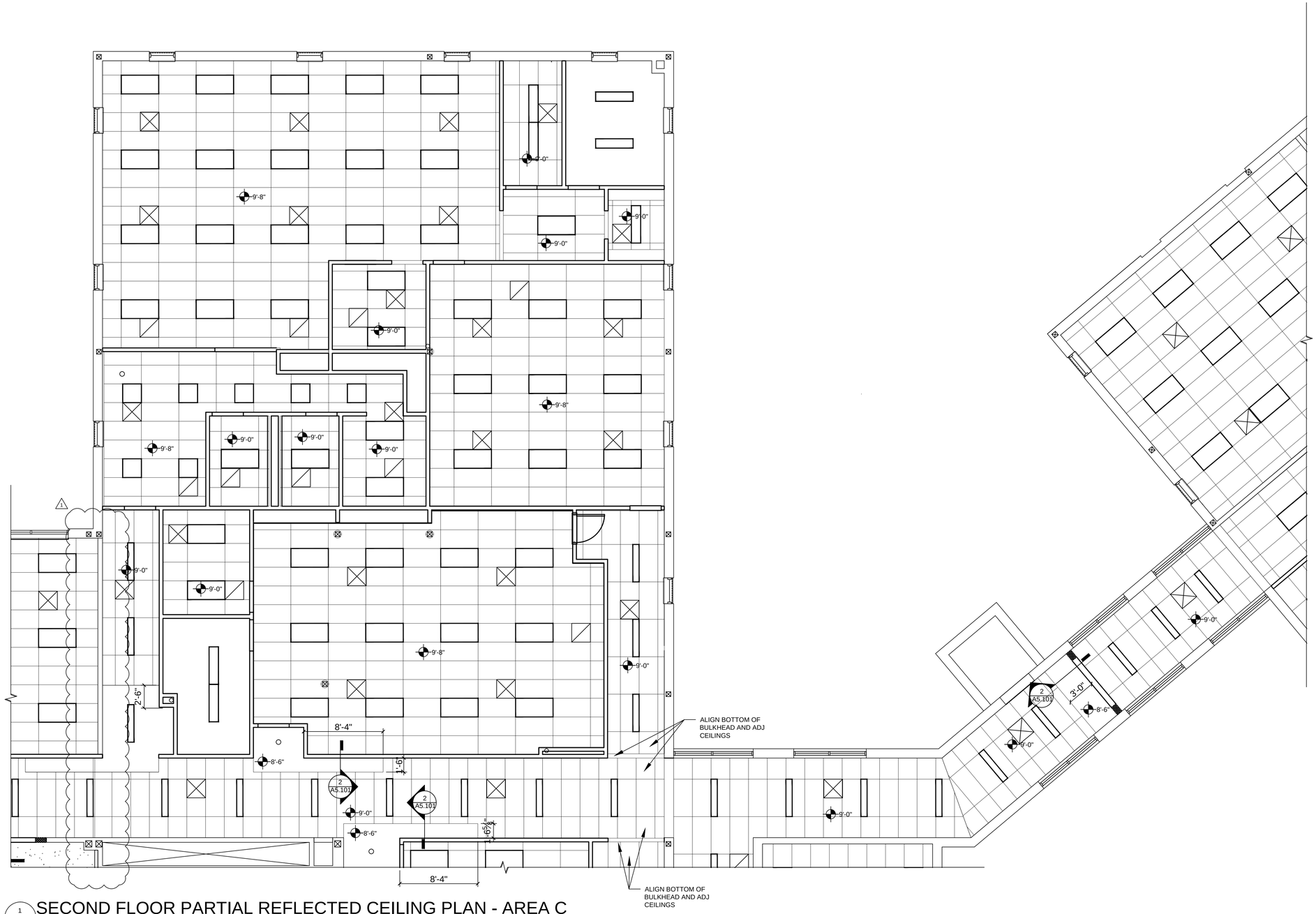
SCALE:	AS SHOWN

SECOND FLOOR PARTIAL REFL CLG PLAN - AREA B

A1.309

SHEET _____ of _____



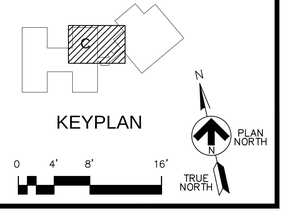
1 / A1-310 SECOND FLOOR PARTIAL REFLECTED CEILING PLAN - AREA C

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

DRAWING GENERAL NOTES:

1. SEE SHEET A2.301 FOR REFLECTED CEILING LEGEND.

KEYPLAN



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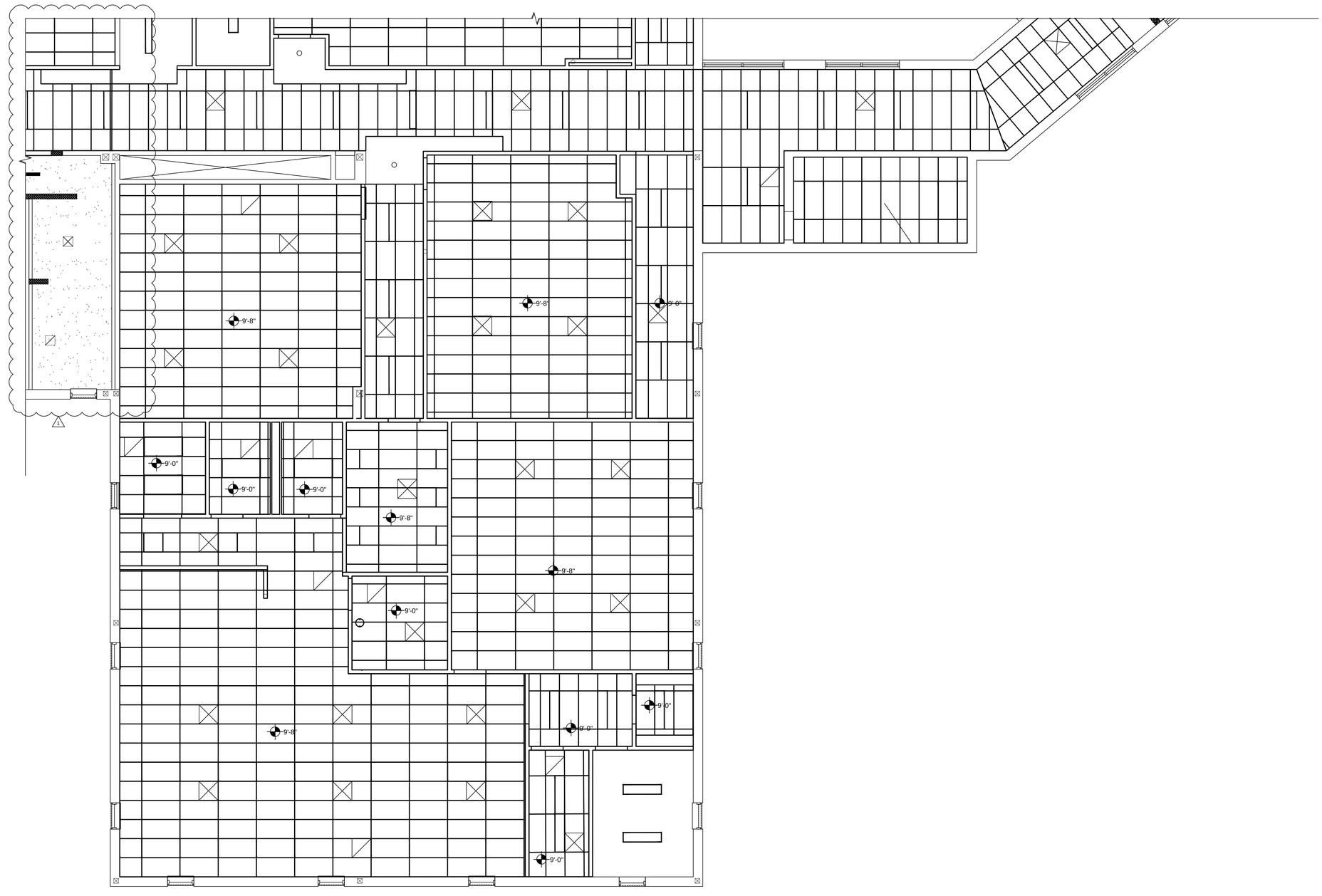
SECOND FLOOR PARTIAL REFL CLG PLAN - AREA C

A1.310

SHEET _____ of _____

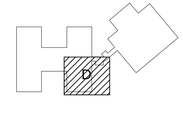


1 / A1.311 SECOND FLOOR PARTIAL REFLECTED CEILING PLAN - AREA D

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

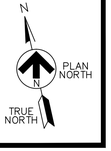
DRAWING GENERAL NOTES:

1. SEE SHEET A2.301 FOR REFLECTED CEILING LEGEND.



KEYPLAN

0 3' 6' 12'



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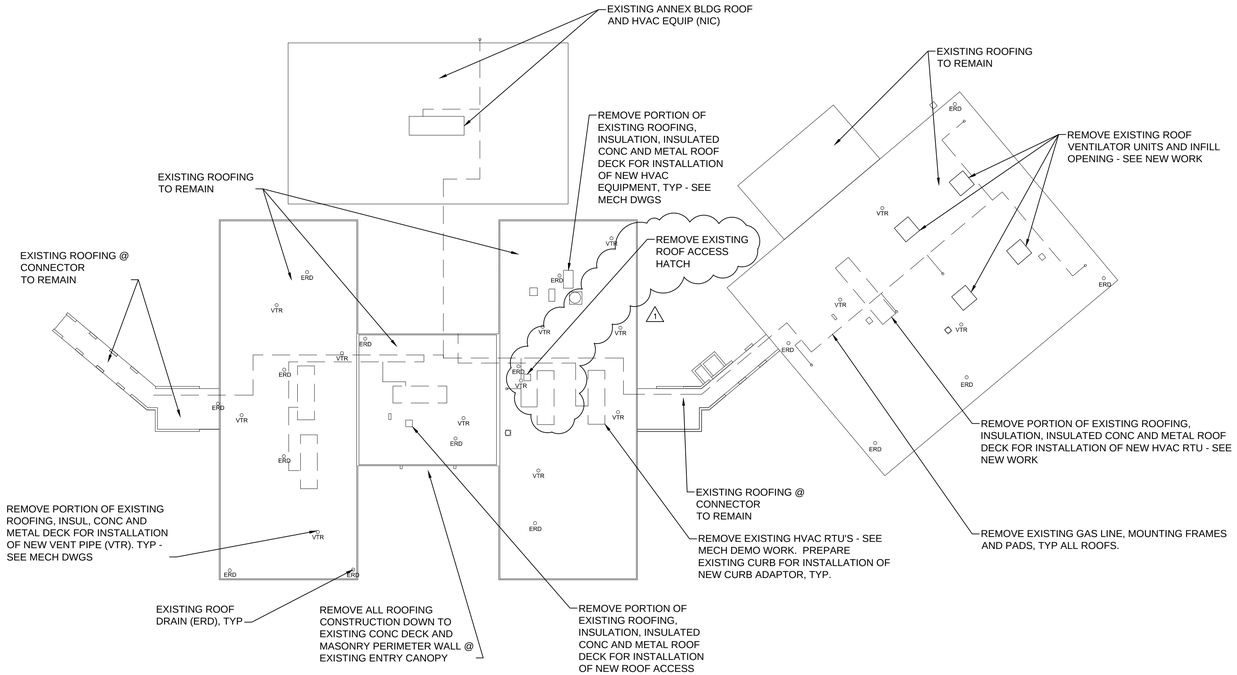
SECOND FLOOR PARTIAL NEW WORK PLAN - AREA D

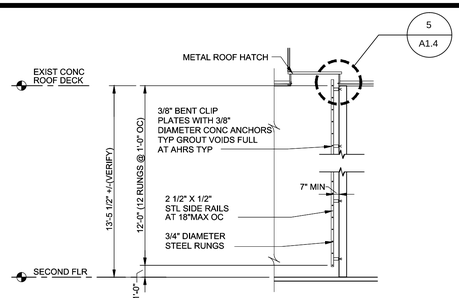
A1.311

SHEET _____ of _____



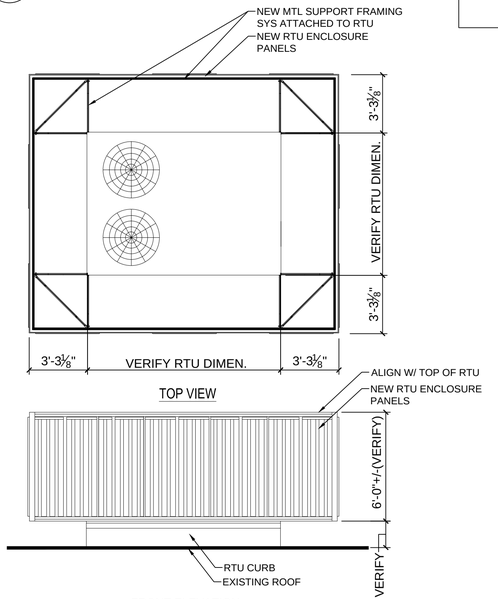
1 A1.4 **DEMOLITION ROOF PLAN**

SCALE: 1/32 = 1'-0"



3 A1.4 **ROOF HATCH & LADDER DETAIL**

SCALE: 1/4= 1'-0"

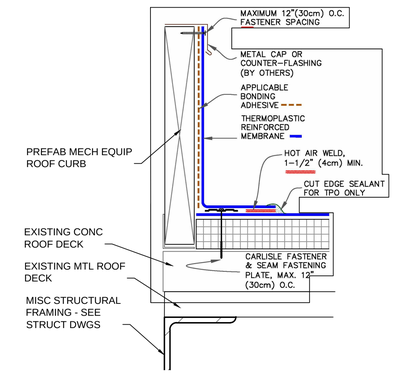


4 A1.4 **RTU SCREEN WALL DETAILS**

SCALE: 1/4= 1'-0"

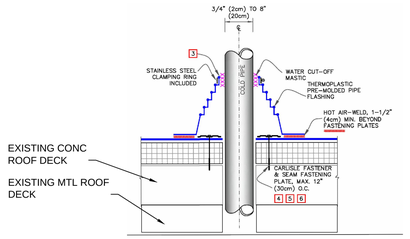
GENERAL NEW WORK ROOF PLAN NOTES

1	CONTRACTOR TO PATCH AND REPAIR ALL OPENINGS WHERE ABANDONED PLUMBING VENT PIPES, EXHAUST FANS, ETC ARE REMOVED WITH CONSTRUCTION TO MATCH EXISTING ADJACENT CONDITIONS.
2	BUILDING EXISTING ROOFING IS A VENTILATED SYSTEM. ALL ROOF-MOUNTED VENTILATION DEVICES (NOT SHOWN) TO REMAIN UNO. CONTRACTOR TO COORDINATE FINAL PLACEMENT OF ALL NEW ROOF DEVICES WITH WITH ORIGINAL ROOFING MANUF AND INSTALLER AND VERIFY THEIR WILL BE NO IMPACT TO FUNCTIONALITY OF EXISTING ROOF SYSTEM.
3	ALL NEW ROOFING AND FLASHING AND DETAILS SHALL BE APPROVED AND WORK PERFORMED BY AN INSTALLER APPROVED BY ORIGINAL ROOFING MANUFACTER (CARLISLE ROOFING).
4	WHERE EXISTING ROOFTOP EQUIPMENT OR DEVICES ARE NOTED TO BE REMOVED, INFILL OPENING WITH METAL DECK, INSULATED CONC, INSULATION BOARD AND COVER WITH MEMBRANE ROOFING TO MATCH EXISTING. SEE MECHANICAL DRAWINGS FOR LOCATION OF EXISTING EQUIPMENT IS TO BE REMOVED.



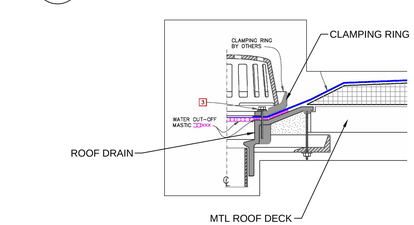
5 A1.4 **CURB FLASHING DETAIL**

SCALE: NTS



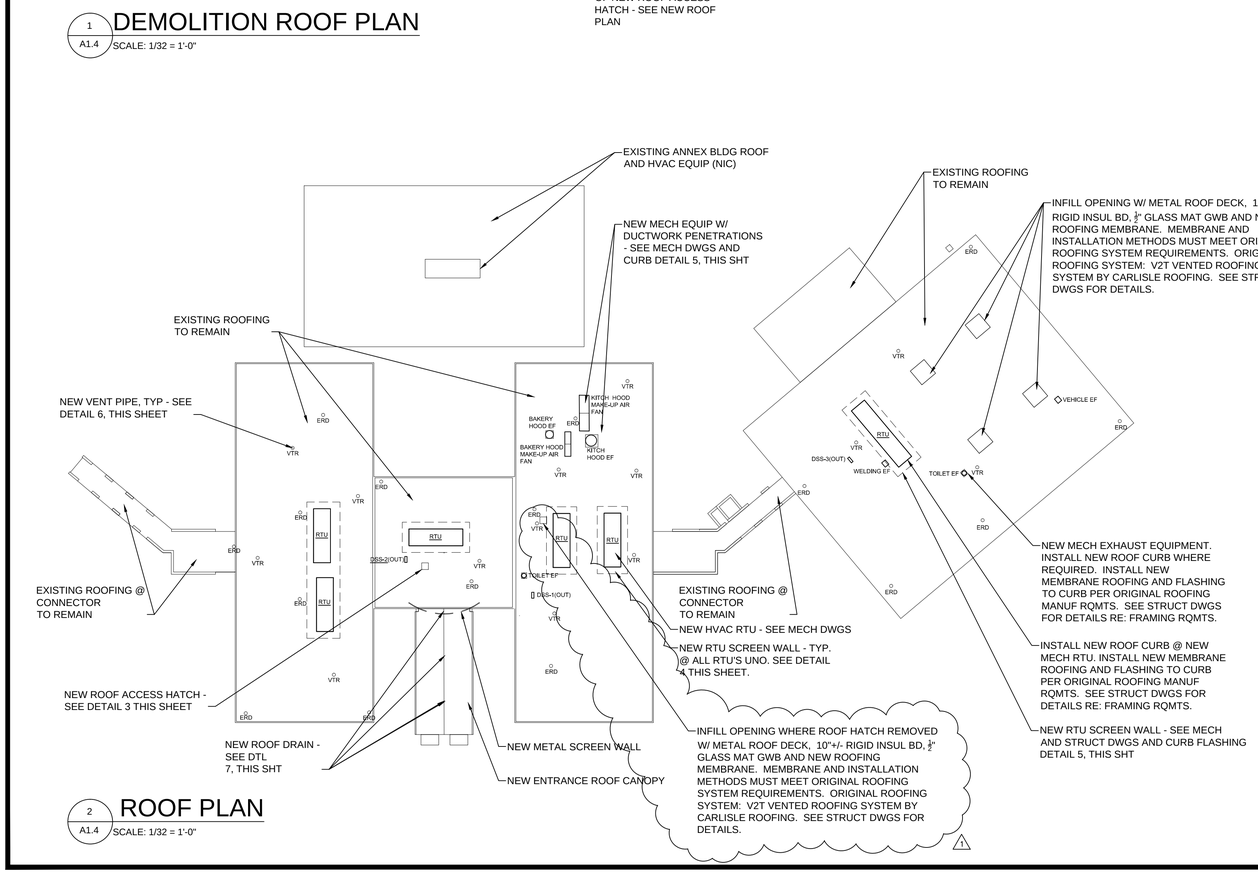
6 A1.4 **TYP PIPE FLASHING DETAIL**

SCALE: NTS



7 A1.4 **ROOF DRAIN DETAIL**

SCALE: NTS



2 A1.4 **ROOF PLAN**

SCALE: 1/32 = 1'-0"

N
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TRUE NORTH

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DEMO AND NEW WORK ROOF PLAN AND DETAILS

A1.4

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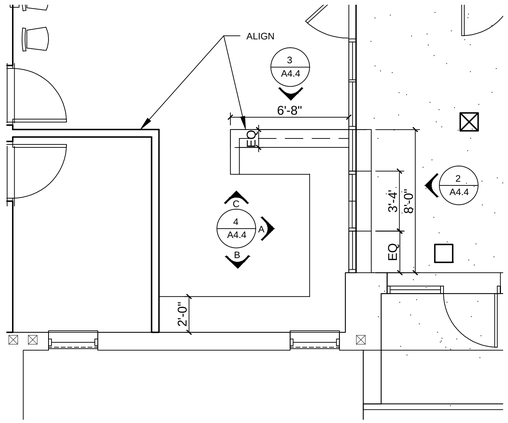
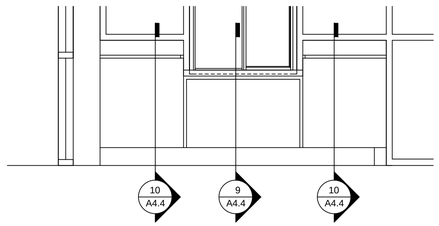
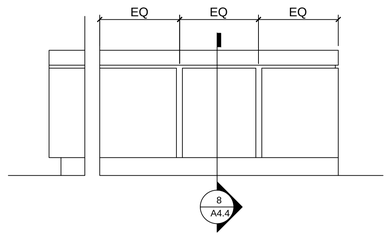


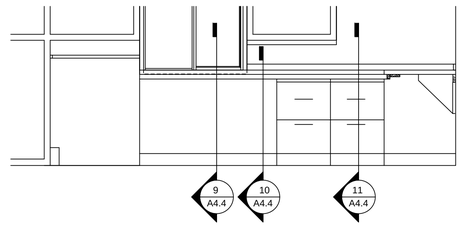
1 A4.4 ENLARGED RECEPTION DESK PLAN
SCALE: 1/4" = 1'-0"



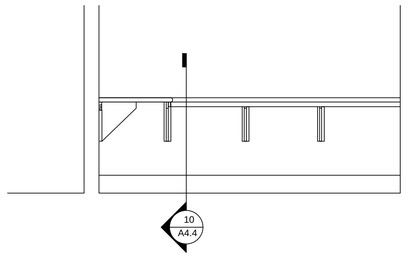
2 A4.4 ELEV @ RECEPTION DESK
SCALE: 1/2" = 1'-0"



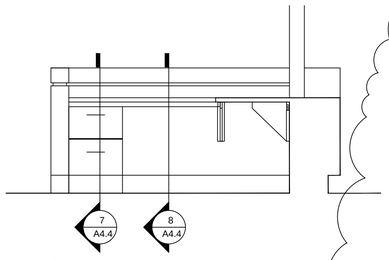
3 A4.4 ELEV @ RECEPTION DESK
SCALE: 1/2" = 1'-0"



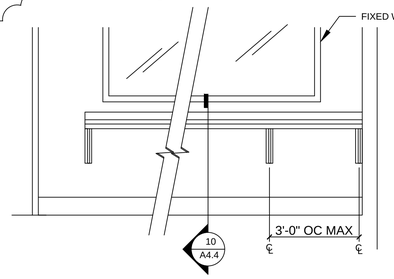
4A A4.4 ELEV @ RECEPTION DESK
SCALE: 1/2" = 1'-0"



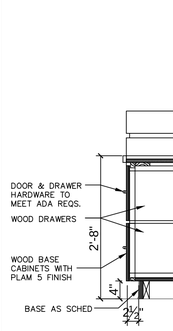
4B A4.4 ELEV @ RECEPTION DESK
SCALE: 1/2" = 1'-0"



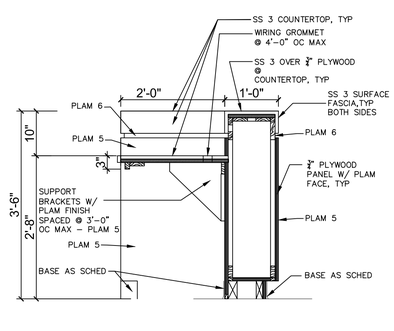
4C A4.4 ELEV @ RECEPTION DESK
SCALE: 1/2" = 1'-0"



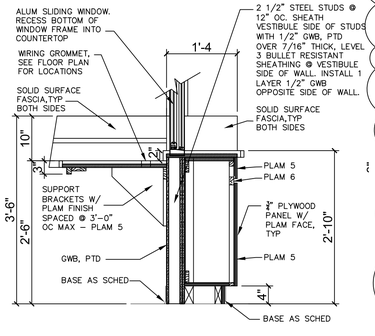
18A A4.4 ELEV @ CONTROL DESK
SCALE: 1/2" = 1'-0"



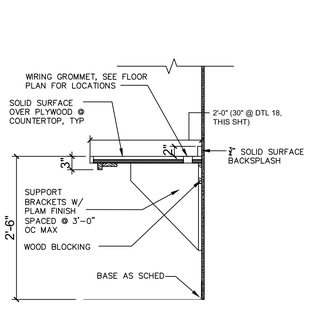
7 A4.4 SECTION @ DESK
SCALE: 3/4" = 1'-0"



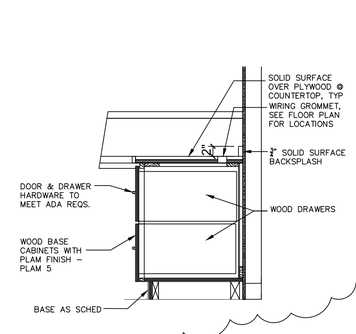
8 A4.4 SECTION @ DESK
SCALE: 3/4" = 1'-0"



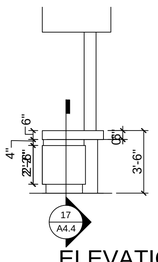
9 A4.4 SECTION @ DESK
SCALE: 3/4" = 1'-0"



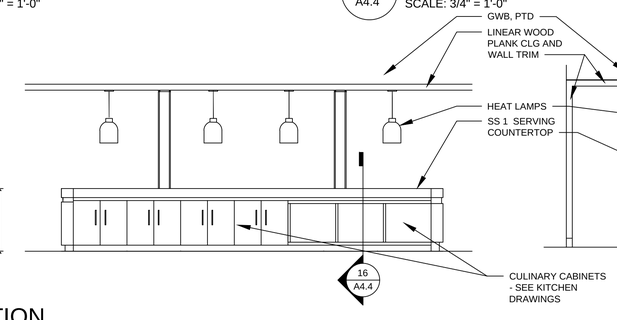
10 A4.4 SECTION @ DESK
SCALE: 3/4" = 1'-0"



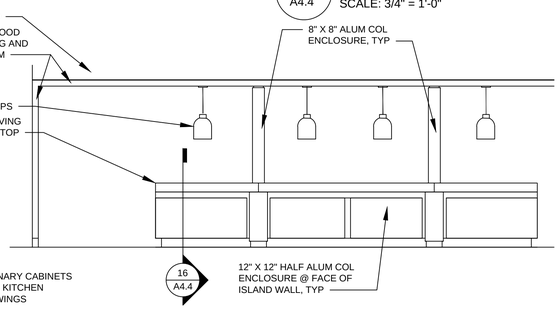
11 A4.4 SECTION @ DESK
SCALE: 3/4" = 1'-0"



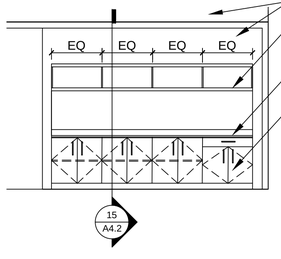
12 A4.4 ELEVATION @ BAR
SCALE: 1/4" = 1'-0"



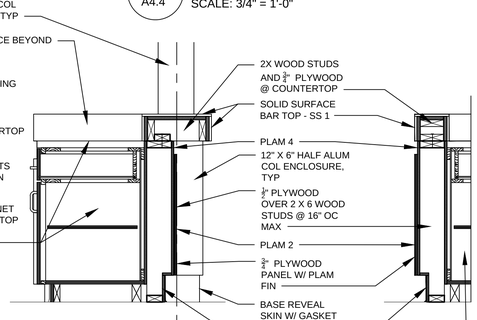
13 A4.4 ELEVATION @ SERVING COUNTER
SCALE: 1/4" = 1'-0"



14 A4.4 ELEVATION @ SERVING COUNTER
SCALE: 1/4" = 1'-0"



15 A4.2 ELEVATION @ COFFEE BAR
SCALE: 1/4" = 1'-0"



16 A4.4 SECTION @ SERVING BAR
SCALE: 3/4" = 1'-0"

17 A4.4 SECTION @ SERVING BAR
SCALE: 3/4" = 1'-0"

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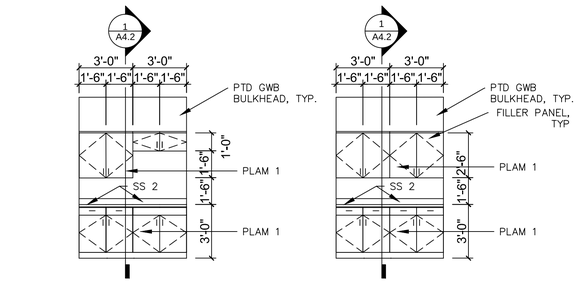
RECEPTION DESK ELEVATIONS AND DETAILS

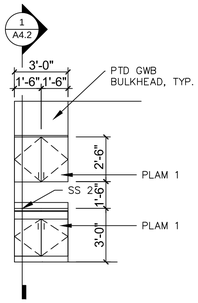
A4.4

SHEET _____ of _____

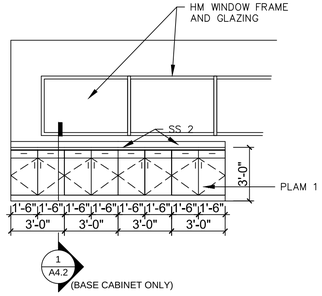


1 A4.5 CASEWORK ELEVATION
SCALE: 1/4" = 1'-0"

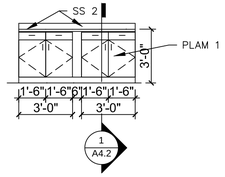
2 A4.5 CASEWORK ELEVATION
SCALE: 1/4" = 1'-0"



3 A4.5 CASEWORK ELEVATION
SCALE: 1/4" = 1'-0"



4 A4.5 CASEWORK ELEVATION
SCALE: 1/4" = 1'-0"



5 A4.5 CASEWORK ELEVATION
SCALE: 1/4" = 1'-0"

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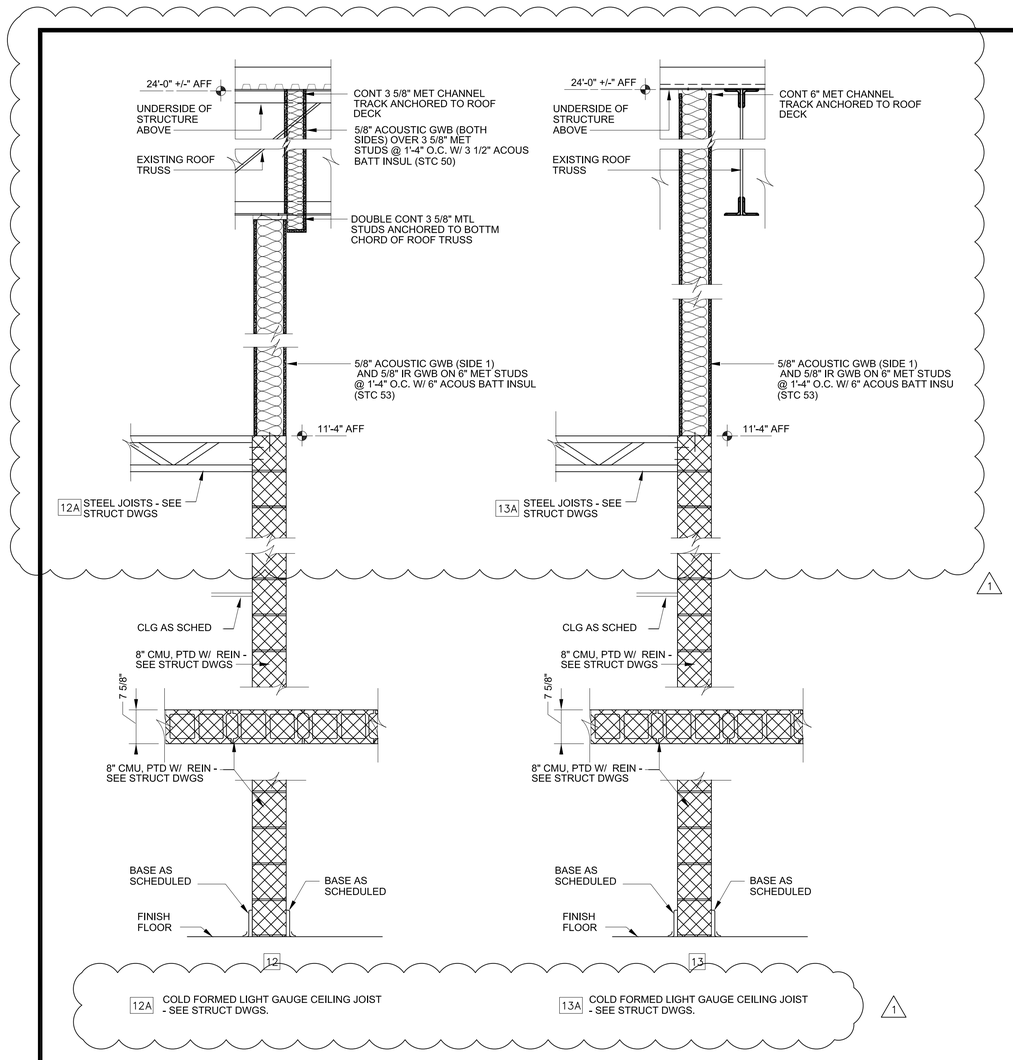
INTERIOR ELEVATIONS
AND DETAILS

A4.5 1

SHEET _____ of _____



12A COLD FORMED LIGHT GAUGE CEILING JOIST - SEE STRUCT DWGS.

13A COLD FORMED LIGHT GAUGE CEILING JOIST - SEE STRUCT DWGS.

1

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DATE:	6/17/22
SCALE:	AS SHOWN

WALL TYPES

A6.2

SHEET _____ of X

DOOR SCHEDULE

DOOR NO	TYPE	MATL	SIZE W X H	LOUVER OR UC	GLASS	FRAME TYPE	DEPTH	HEAD	JAMB	THRESH	FIRE RATING	HARD-WARE	NOTES
100AA	H	ALUM	3'-0"x7'-0"	-	GL-4	A	4 1/2"	-	-	T1	-	2	SEE ALUM STORFRT DTLS
100AB	G	ALUM	6'-0"x7'-0"	-	GL-4	B	4 1/2"	-	-	T1	-	1	SEE ALUM STORFRT DTLS
100AC	H	ALUM	3'-0"x7'-0"	-	GL-4	C	4 1/2"	-	-	T1	-	2	SEE ALUM STORFRT DTLS
100AD	H	ALUM	6'-0"x7'-0"	-	GL-4	D	4 1/2"	-	-	T1	-	1	SEE ALUM STORFRT DTLS
100AE	E	HM	3'-0"x7'-0"	-	GL-2	F3	6"	DHC2	DJC2	T1	-	9	1" INSUL GLASS TRANSOM PANEL (GL-3)
100AF	E	HM	3'-0"x7'-0"	-	GL-2	F3	6"	DHC2	DJC2	T1	-	9	1" INSUL GLASS TRANSOM PANEL (GL-3)
100AG	H	ALUM	6'-0"x7'-0"	-	GL-4	D	4 1/2"	-	-	T1	-	1	SEE ALUM STORFRT DTLS
100AH	H	ALUM	6'-0"x7'-0"	-	GL-4	D	4 1/2"	-	-	T1	-	1	SEE ALUM STORFRT DTLS
100AI	E	HM	3'-0"x7'-0"	-	GL-2	F3	6"	DHC2	DJC2	T1	-	9	1" INSUL GLASS TRANSOM PANEL (GL-3)
100AJ	D	HM	6'-0"x7'-0"	-	GL-2	F5	6"	DHC2	DJC2	T1	-	27	
100AK	E	HM	3'-0"x7'-0"	-	GL-2	F2	6"	DHC2	DJC2	T1	-	9	
100AL	E	HM	3'-0"x7'-0"	-	GL-2	F2	6"	DHC2	DJC2	T1	-	9	
100AM	D	HM	3'-0"x7'-0"	-	GL-2	F5	6"	DHC2	DJC2	T1	-	19	
100AN	E	HM	3'-0"x7'-0"	-	GL-2	F2	6"	DHC2	DJC2	T1	-	9	
100AO	H	ALUM	6'-0"x7'-0"	-	GL-4	D	4 1/2"	-	-	T1	-	1	SEE ALUM STORFRT DTLS
100AP	H	ALUM	6'-0"x7'-0"	-	GL-4	D	4 1/2"	-	-	T1		1	SEE ALUM STORFRT DTLS
100AQ	E	HM	3'-0"x7'-0"	-	GL-2	F3	-	-	-	-	-	9	1" INSUL GLASS TRANSOM PANEL (GL-3)
100AR	D	HM	3'-0"x7'-0"	-	GL-2	F6	6"	DHC2	DJC2	T1	-	19	
100AS	D	HM	6'-0"x7'-0"	-	GL-2	F5	6"	DHC2	DJC2	T1	-	19	
100AT	OH	ALUM	10'-0" X 10'-0"	-	GL-3	-	-	-	-	-	-	23	
100AU	D	HM	6'-0"x7'-0"	-	GL-2	F5	6"	DHC2	DJC2	T1	-	19	
100AV	OH	ALUM	10'-0"W X 12'-0"H	-	GL-3	-	-	-	-	-	-	23	
100AW	E	HM	3'-0"x7'-0"	-	GL-2	F2	6"	DHC2	DJC2	T1	-	9	
100AX	OH	ALUM	10'-0"W X 12'-0"H	-	GL-3	-	-	-	-	-	-	23	
100AY	D	HM	6'-0"x7'-0"	-	GL-2	F5	6"	DHC2	DJC2	T1	-	19	
100AZ	E	HM	3'-0"x7'-0"	-	GL-2	F2	6"	DHC2	DJC2	T1	-	9	
100AZA	E	HM	3'-0"x7'-0"	-	GL-2	F2	6"	DHC2	DJC2	T1	-	9	
100AZB	OH	ALUM	10'-0" X 10'-0"	-	GL-3	-	-	-	-	x	-	x	
100AB	A	WD	3'-0"x7'-0"	-	-	F1	-	-	-	x	-	x	
100AA	A	WD	3'-0"x7'-0"	-	-	F1	-	-	-	x	-	x	
100AB	A	WD	3'-0"x7'-0"	-	-	F1	-	-	-	x	-	x	
100AA	A	WD	3'-0"x7'-0"	-	-	F1	-	-	-	x	-	x	
100AB	A	WD	3'-0"x7'-0"	-	-	F1	-	-	-	x	-	x	
100AA	A	WD	3'-0"x7'-0"	-	-	F1	-	-	-	x	-	x	
100-1	H	ALUM	6'-0"x7'-0"	-	SEE NOTE	J	4 1/2"	-	-	-	-	3	SEE ALUM STORFRT DTLS; LAMINATED SECURITY GLAZING
100-2	H	ALUM	6'-0"x7'-0"	-	SEE NOTE	J	4 1/2"	-	-	-	-	3	SEE ALUM STORFRT DTLS; LAMINATED SECURITY GLAZING
100B	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	6	
100C	G	ALUM	3'-0"x7'-0"	-	SEE NOTE	-	4 1/2"	-	-	-	-	4	SEE ALUM STORFRT DTLS; LAMINATED SECURITY GLAZING
100CA	C	WD	3'-0"x7'-0"	-	GL-2	F1	5 7/8"	DHG1	DJG1	T3	-	5	
100CB	G	ALUM	3'-0"x7'-0"	-	GL-1	K	4 1/2"	-	-	-	-	4	SEE ALUM STORFRT DTLS
100D	NOT USED												
100E	A	WD	3'-0"x7'-0"	-	-	F1	6 3/8"	DHG1	DJG1	T4	-	6	
100F	NOT USED												
100G	A	WD	3'-0"x7'-0"	-	-	F1	8 5/8" (VERIFY)	DHC1	DJC1	T4	-	x	
100H	C	HM	3'-0"x7'-0"	-	GL-1	F1	8 5/8" (VERIFY)	DHC1	DJC1	-	45 MIN	20	EXISTING OPENING
100I	C	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	T4	-	x	
100J	NOT USED												
100K	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
100L	NOT USED												
100M	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	6	
100N	A	WD	3'-0"x7'-0"	-	-	F1	6 3/8"	DHG1	DJG1	T4	-	6	
100O	D	WD	6'-0"x7'-0"	-	GL-1	F4	12 5/8" (VERIFY)	DHC1	DJC1	-	90 MIN	x	EXISTING OPENING
100P	C		3'-0"x7'-0"	-	GL-1	F1	8 5/8" (VERIFY)	DHC1	DJC1	-	45 MIN	20	EXISTING OPENING
100Q	A	WD	3'-0"x7'-0"	-	-	F1	12 5/8" (VERIFY)	DHC1	DJC1	-	90 MIN	26	
100R	A	WD	3'-0"x7'-0"	-	-	F1	12 5/8" (VERIFY)	DHC1	DJC1	T2	90 MIN	22	10" X 10" 90 MIN FIRE RATED LOUVER
100S	A	WD	3'-0"x7'-0"	-	-	F1	12 5/8" (VERIFY)	DHC1	DJC1	T2	90 MIN	22	10" X 10" 90 MIN FIRE RATED LOUVER

DOOR SCHEDULE (CONT.)

DOOR NO	TYPE	MATL	SIZE W X H	LOUVER OR UC	GLASS TYPE	FRAME TYPE	DEPTH	HEAD	JAMB	THRESH	FIRE RATING	HARD-WARE	NOTES
100T	C	HM	3'-0"x7'-0"	-	GL-1	F1	8 5/8" (VERIFY)	DHC1	DJC1	T4	45 MIN	x	EXISTING OPENING
100U	B	WD	6'-0"x7'-0"	-	-	F5	6 5/8"	DHC1	DJC1	T4	-	25	
100V	B	WD	6'-0"x7'-0"	-	-	F5	8 5/8"	DHC1	DJC1	T4	-	25	
100YA	B	WD	7'-0"x7'-0"	-	-	F5	6 5/8"	DHC1	DJC1	T4	-	25	
101	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
101A	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
101B	A	WD	3'-0"x7'-0"	3/4" U/C	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
101C	A	WD	3'-0"x7'-0"	3/4" U/C	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
101D	-	-	-	-	-	F1	-	-	-	-	-		CASED OPENING
101E	C	WD	3'-0"x7'-0"	-	GL-1	F1	8 5/8"	DHC1	DJC1	T4	-	x	
102	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
102A	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
102B	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
102C		-	-	-	-	F1	-	-	-	-	-		CASED OPENING
102D	A	WD	3'-0"x7'-0"	3/4" U/C	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
102E	B	WD	6'-0"x7'-0"	-	-	F4	5 7/8"	DHG1	DJG1	-	-	14	
102F	(RESERVED FOR ELEC ROOM)												
102G	NOT USED												
103-1	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
103-2	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
103A	A	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
103B	B	WD	6'-0"x7'-0"	-	-	F4	5 7/8"	DHG1	DJG1	-	-	14	
104	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	T3	-	11	
104A	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	T3	-	5	
104B	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	10	
104C	A	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	10	
104D	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	T3	-	6	
104E	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	T3	-	5	
104F	A	WD	3'-0"x7'-0"	3/4" U/C	-	F1	5 7/8"	DHG1	DJG1	T3	-	15	
104G	A	WD	3'-0"x7'-0"	3/4" U/C	-	F1	5 7/8"	DHG1	DJG1	T3	-	15	
104H	A	WD	3'-0"x7'-0"	3/4" U/C	-	F1	5 7/8"	DHG1	DJG1	-	-	15	
104I	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	T3	-	16	
104J	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	T3		13	
104K	B	WD	4'-0"x7'-0"	-	-	F4	5 7/8"	DHG1	DJG1	-	-	17	
104L	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
104M	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
104N	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
104O	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
104P	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
105	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
105A	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
105B	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
105C	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1		-	8	
105E	A	WD	3'-0"x7'-0"	-	-	F1	8 5/8"	DHC1	DJC1	-	-	5	
105F	NOT USED												
105G	A	WD	3'-0"x7'-0"	-	-	F1	8 5/8"	DHC1	DJC1	-	-	5	
106-1	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
106-2	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
106A	C	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	13	
106B	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	16	
106C	NOT USED												
107	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
107A	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
107B	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	16	
107C	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	16	
107D	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	16	

DOOR SCHEDULE NOTES

1	ALL DOOR FRAMES ARE HOLLOW METAL, PTD UNO
2	WHERE NEW DOORS AND/OR FRAMES ARE TO BE INSTALLED IN EXISTING WALL OPENINGS, CONTRACTOR SHALL VERIFY CLEAR WIDTH AND HEIGHT OF OPENING.

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June 17, 2022
ARCHITECT

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No.	DATE	DESCRIPTION
1	7/18/22	ADDENDUM 3

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REV'D BY:	
DATE:	6/17/22
SCALE:	AS SHOWN

DOOR, FRAME AND HARDWARE SCHEDULE

A7.1

SHEET _____ of _____

DOOR SCHEDULE (CONT.)

DOOR NO	TYPE	MATL	SIZE W X H	LOUVER OR UC	GLASS TYPE	FRAME TYPE	FRAME DEPTH	FRAME HEAD	FRAME JAMB	FRAME THRESH	FIRE RATING	HARD-WARE	NOTES
108	C	WD	3'-0"x7'-0"	-	GL-1	F2	6 5/8"	DHC1	DJC1	-	-	12	
108A	C	WD	3'-0"x7'-0"	-	GL-1	F2	6 5/8"	DHC1	DJC1	-	-	12	
108B	B	HM	6'-0"x7'-0"	-	-	F5	8 5/8"	DHC1	DJC1	-	-	24	
108C	A	HM	3'-0"x7'-0"	3/4" UC	-	F2	8 5/8"	DHC1	DJC1	-	-	5	
108D	B	HM	6'-0"x7'-0"	-	-	F5	8 5/8"	DHC1	DJC1	-	-	24	
108F	A	WD	3'-0"x7'-0"	3/4" UC	-	F2	8 5/8"	DHC1	DJC1	-	-	8	
108G	A	WD	3'-0"x7'-0"	3/4" UC	-	F2	8 5/8"	DHC1	DJC1	-	-	8	
108H	C	WD	3'-0"x7'-0"	-	GL-1	F2	8 5/8"	DHC1	DJC1	-	-	21	
108I	A	WD	3'-0"x7'-0"	-	-	F2	6 5/8"	DHC1	DJC1	-	-	16	
108J	A	HM	3'-0"x7'-0"	-	-	F2	6 5/8"	DHC1	DJC1	-	-	16	
109	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
109A	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
109B	A	WD	3'-0"x7'-0"	3/4" UC	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
109C	A	WD	3'-0"x7'-0"	3/4" UC	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
109D	A	WD	3'-0"x7'-0"	-	-	F2	6 5/8"	DHC1	DJC1	-	-	5	
109E	A	HM	3'-0"x7'-0"	-	-	F2	6 5/8"	DHC1	DJC1	-	45 MIN	6	
109F	A	WD	3'-0"x7'-0"	-	GL-1	F2	6 5/8"	DHC1	DJC1	-	-	21	
110	C	WD	3'-0"x7'-0"	-	GL-1	F5	6 5/8"	DHC1	DJC1	-	-	12	
110A	C	WD	3'-0"x7'-0"	-	GL-1	F2	8 5/8"	DHC1	DJC1	-	-	13	
110B	A	WD	3'-0"x7'-0"	3/4" UC	-	F2	6 5/8"	DHC1	DJC1	-	-	8	
110C	A	WD	3'-0"x7'-0"	3/4" UC	-	F2	6 5/8"	DHC1	DJC1	-	-	8	
110D	A	WD	3'-0"x7'-0"	3/4" UC	-	F2	6 5/8"	DHC1	DJC1	-	-	16	
110E	A	WD	3'-0"x7'-0"	-	-	F2	6 5/8"	DHC1	DJC1	-	-	16	
110F	A	WD	3'-0"x7'-0"	-	-	F2	6 5/8"	DHC1	DJC1	-	-	12	
110H	C	HM	3'-0"x7'-0"	-	GL-1	F2	8 5/8"	DHC1	DJC1	-	-	21	
110H	C	HM	3'-0"x7'-0"	-	GL-1	F2	8 5/8"	DHC1	DJC1	-	-	6	
200A	A	WD	3'-0"x7'-0"	-	-	F1	6 3/8"	DHG1	DJG1	-	-	6	
200B	C	HM	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	T3	-	13	
200C	C	HM	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	6	
200D	C	HM	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
200E	C	HM	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	11	
200F	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	T4	-	6	
200G	A	WD	3'-0"x7'-0"	3/4" UC	-	F1	5 7/8"	DHG1	DJG1		-	8	
200H	A	WD	3'-0"x7'-0"	3/4" UC	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
200I	NOT USED												
200J	NOT USED												
200K	G	ALUM	6'-0"x7'-0"	-	GL-1	D	4 1/2"	-	-	T4	-	29	SEE ALUM STORFRT DTLS
200L	C	HM	3'-0"x7'-0"	-	GL-1	F1	8 5/8"	DHC1	DJC1	T4	45 MIN	20	EXISTING OPENING
200M	NOT USED												
200N	NOT USED												
200O	NOT USED												
200P	NOT USED												
200Q	NOT USED												
200S	NOT USED												
200T	NOT USED												
200U	C	HM	3'-0"x7'-0"	-	GL-1	F1	8 5/8"	DHC1	DJC1	T4	45 MIN	20	EXISTING OPENING
200V	NOT USED												
200W	B	HM	6'-0"x7'-0"	-	GL-1	F4	6 3/8"	DHG1	DJG1	-	-	32	
200X	C	HM	3'-0"x7'-0"	-	GL-1	F1	8 5/8"	DHC1	DJC1	T4	45 MIN	20	EXISTING OPENING
200Y	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	20	
200Z	B	HM	6'-0"x7'-0"	-	-	F4	5 7/8"	DHG1	DJG1	T4	-	34	
200AA	A	WD	3'-0"x7'-0"	-	-	F1	6 5/8"	DHC1	DJC1	T4	-	26	EXISTING OPENING
200AB	C	HM	3'-0"x7'-0"	-	GL-1	F1	8 5/8"	DHC1	DJC1	T4	45 MIN	20	EXISTING OPENING
201-1	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
201-2	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	

DOOR SCHEDULE (CONT.)

DOOR NO	TYPE	MATL	SIZE W X H	LOUVER QR UC	GLASS - TYPE	FRAME TYPE	FRAME DEPTH	FRAME HEAD	FRAME JAMB	FRAME THRESH	FIRE RATING	HARD-WARE	NOTES
201A	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
201B	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	16	
202-1	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
202-2	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
202A	A	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
202B	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	16	
203-1	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
203-2	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
203A	A	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
203B	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	16	
204-1	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	31	
204-2	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	31	
204A	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	13	
204B	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	30	
204C	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	16	
204D	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	30	
204E	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	30	
204F	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	30	
205-1	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-		
205-2	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-		
205A	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-		
205B	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-		
206-1	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
206-2	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	12	
206A	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
206B	NOT USED												
206C	A	WD	3'-0"x7'-0"	3/4" UC	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
206D	A	WD	3'-0"x7'-0"	3/4" UC	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
206E	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
206F	NOT USED												
206G	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	16	
206H	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	16	
206I						F1							CASED OPENING
207-1	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
207-2	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
207A	A	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	16	
207B	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	13	
208A	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	33	
208B	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	33	
209-1	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
209-2	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	16	
209A	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
209B	C	WD	3'-0"x7'-0"	-	GL-1	F1	6 3/8"	DHG1	DJG1	-	-	12	
209C	A	WD	3'-0"x7'-0"	3/4" UC	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
209D	A	WD	3'-0"x7'-0"	3/4" UC	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
209E						F1							CASED OPENING
209F	NOT USED												
209G	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	16	
209H	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	16	
209I						F1							CASED OPENING
210-1	C	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	33	
210-2	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	16	
210A	A	WD	3'-0"x7'-0"	-	GL-1	F1	5 7/8"	DHG1	DJG1	-	-	13	
210B	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	8	
210C	A	WD	3'-0"x7'-0"	-	-	F1	5 7/8"	DHG1	DJG1	-	-	8	

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June 17, 2022
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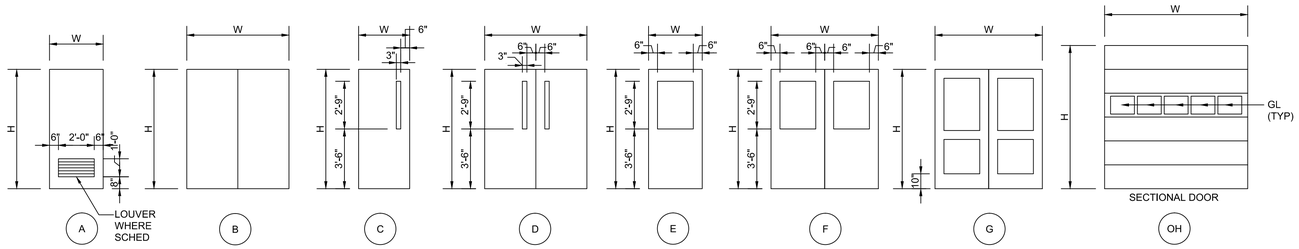
No.	DATE	DESCRIPTION
1	7/18/22	ADDENDUM 3

DRAWN BY:	
REV'D BY:	
DATE:	6/17/22
SCALE:	AS SHOWN

DOOR, FRAME AND HARDWARE SCHEDULE

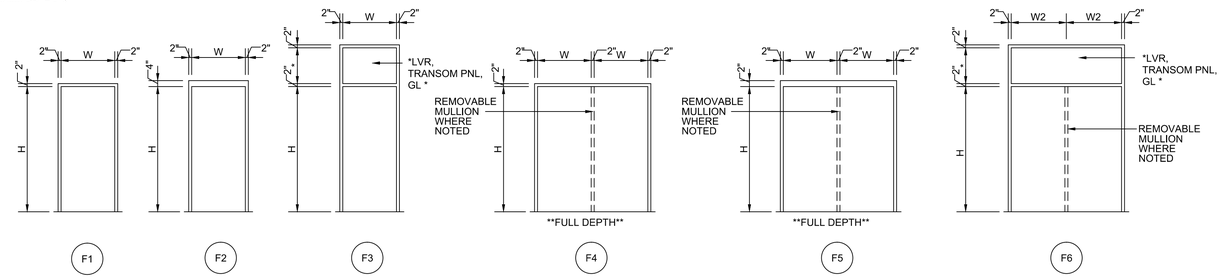
A7.2

SHEET _____ of _____



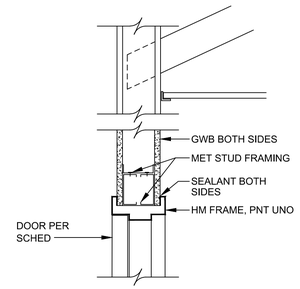
DOOR TYPES

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

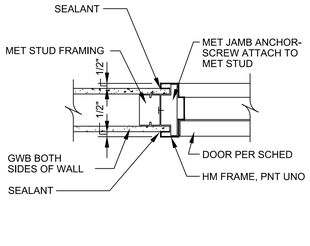


FRAME TYPES

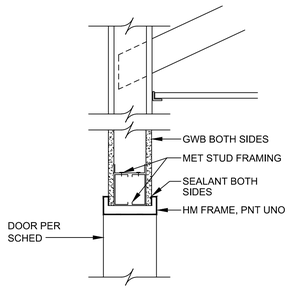
SCALE: 1/4" = 1'-0"



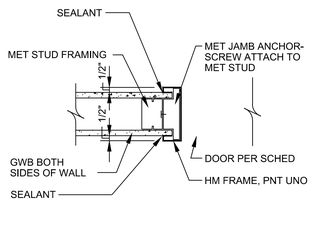
HEAD DETAIL - DHG1



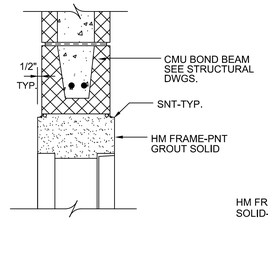
JAMB DETAIL - DJG1



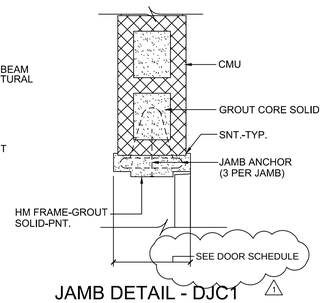
HEAD DETAIL - DHG2



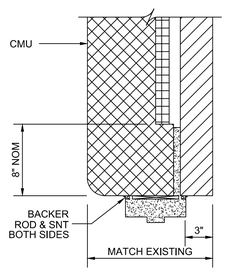
JAMB DETAIL - DJG2



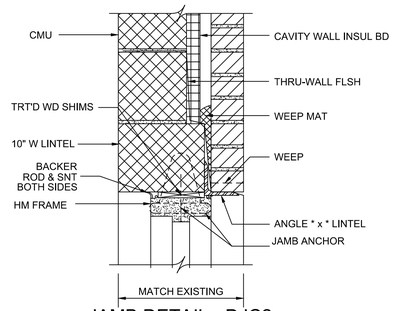
HEAD DETAIL - DHC1



JAMB DETAIL - DJC1



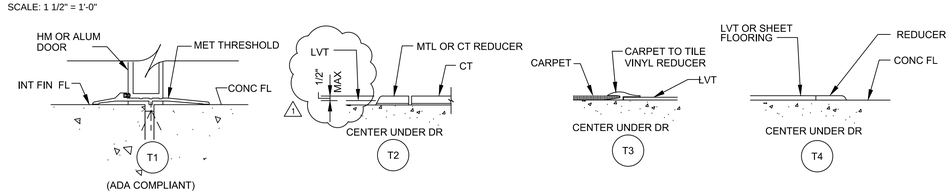
HEAD DETAIL - DHC2



JAMB DETAIL - DJC2

DOOR HEAD/JAMB/THRESHOLD DETAILS

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



THRESHOLD TYPES

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

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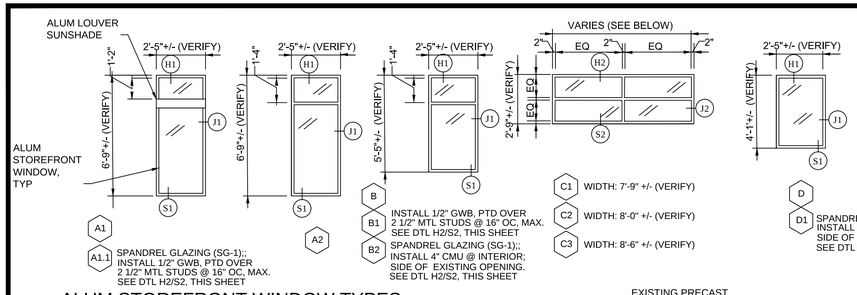
No.	DATE	DESCRIPTION
1	7/18/22	ADDENDUM 3

DRAWN BY:	
REV'D BY:	
DATE:	6/17/22
SCALE:	AS SHOWN

DOOR AND FRAME TYPES AND DETAILS

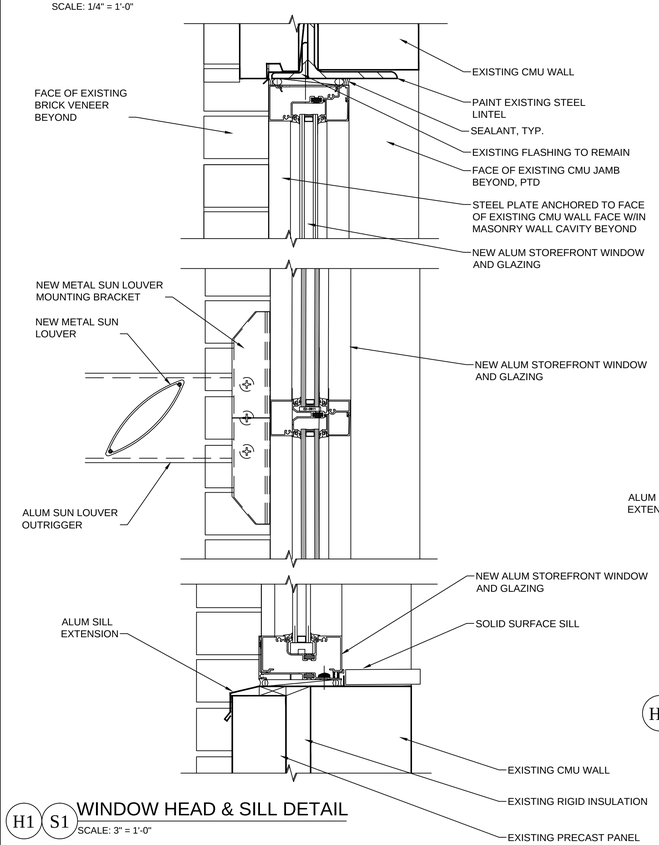
A7.3

SHEET _____ of _____

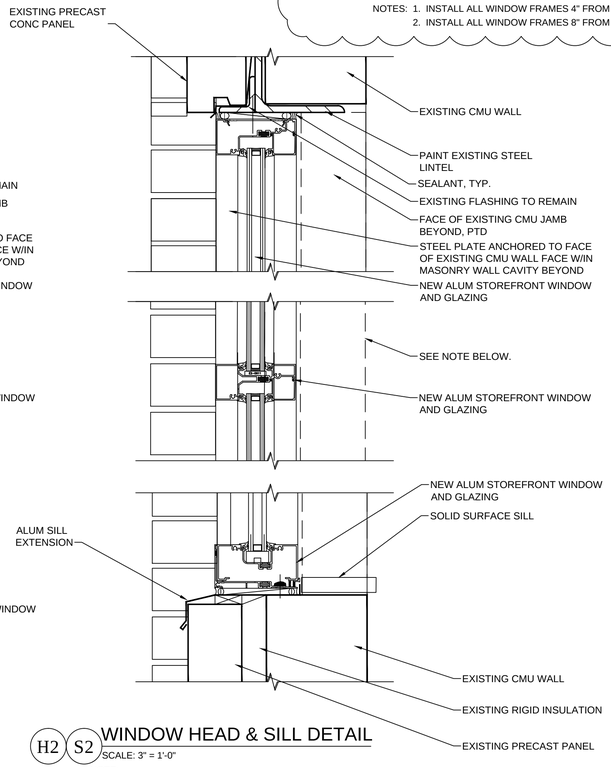


ALUM STOREFRONT WINDOW TYPES

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



H1 S1 WINDOW HEAD & SILL DETAIL
SCALE: 3" = 1'-0"



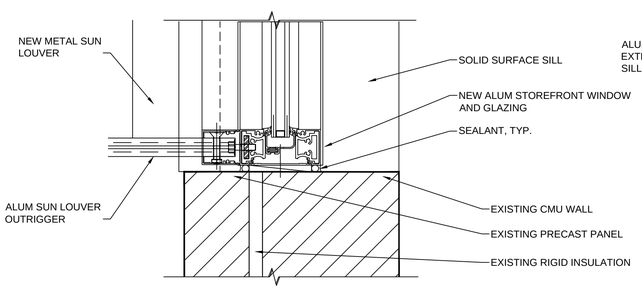
H2 S2 WINDOW HEAD & SILL DETAIL
SCALE: 3" = 1'-0"

NOTE:

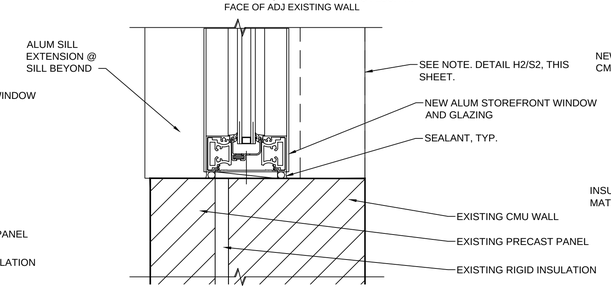
INFILL OPENING W/ CMU OR GWB/MTL STUD CONSTRUCTION AS SELECT WINDOWS AS FOLLOWS:

WINDOW TYPES B1: INSTALL 5/8" GWB, PTD OVER 2 1/2" MTL STUDS @ 16" OC MAX. INSTALL CONT J=BOLD AND SEALANT @ ALL SIDES OF OPENING. FACE OF GWB TO BE FLUSH W/ FACE OF ADJ EXISTING WALL

WINDOW TYPE B2 AND D1: INSTALL 4" CMU, PTD W/ HORIZ REIN @ 16" VERT MAX; FACE OF NEW CMU FLUSH W/ FACE OF ADJ EXISTING WALL



J1 WINDOW JAMB DETAIL
SCALE: 3" = 1'-0"

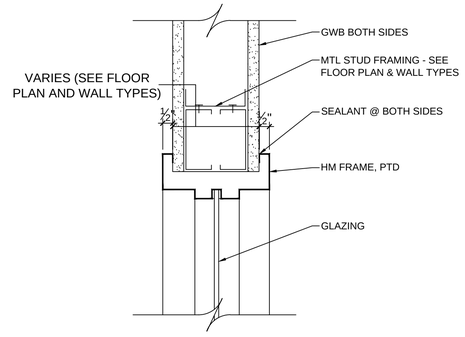


J2 WINDOW JAMB DETAIL
SCALE: 3" = 1'-0"

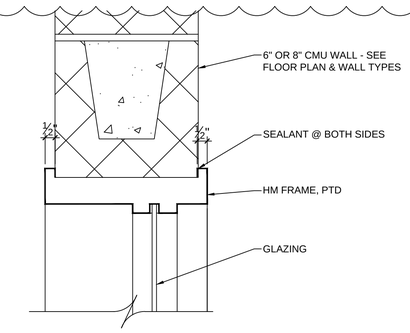
HM WINDOW TYPES

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

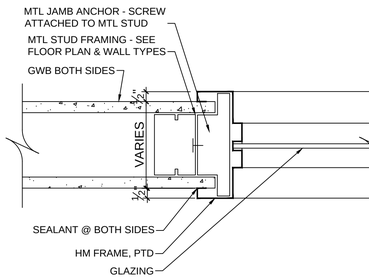
NOTES: 1. INSTALL ALL WINDOW FRAMES 4" FROM ADJACENT INSIDE CORNER @ GWB /MTL STUD WALLS UNLESS NOTED OTHERWISE.
2. INSTALL ALL WINDOW FRAMES 8" FROM ADJACENT INSIDE CORNER @ MASONRY WALLS UNLESS NOTED OTHERWISE.



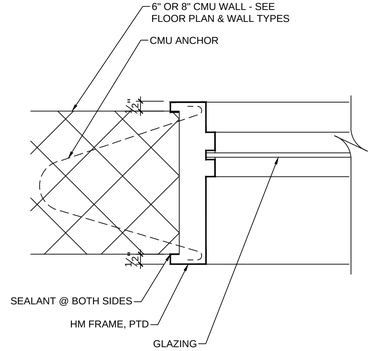
H3 S3 WINDOW HEAD DETAIL (SILL SIM)
SCALE: 3" = 1'-0"



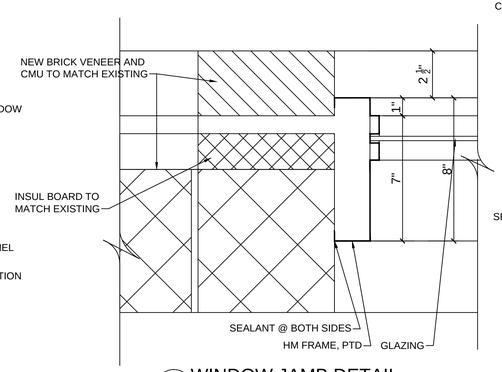
H4 S4 WINDOW HEAD DETAIL (SILL SIM)
SCALE: 3" = 1'-0"



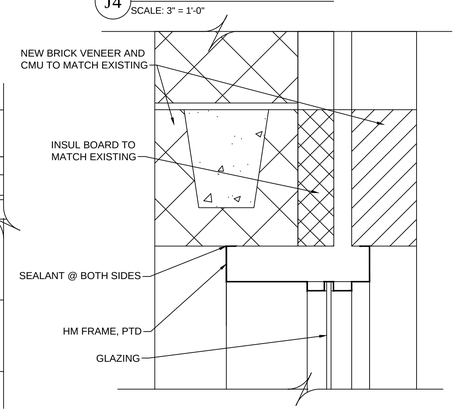
J3 WINDOW JAMB DETAIL
SCALE: 3" = 1'-0"



J4 WINDOW JAMB DETAIL
SCALE: 3" = 1'-0"



J5 WINDOW JAMB DETAIL
SCALE: 3" = 1'-0"



H5 S5 WINDOW HEAD DETAIL (SILL SIM)
SCALE: 3" = 1'-0"

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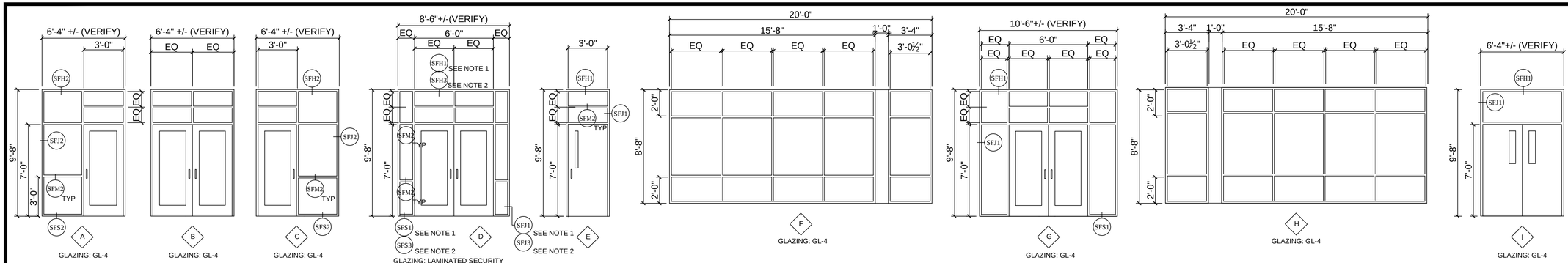
REV'D BY:	
DATE:	6/17/22
SCALE:	AS SHOWN

WINDOW TYPES AND DETAILS

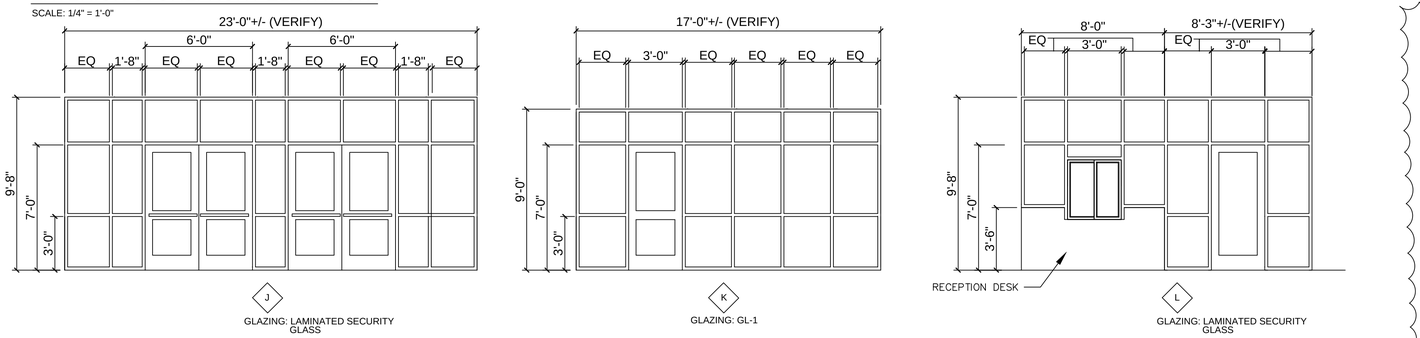
A7.4

SHEET _____ of _____



EXTERIOR STOREFRONT ELEVATIONS

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



1

INTERIOR STOREFRONT ELEVATIONS

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

NOTES:

1. DETAIL @ STOREFRONT W/ DOOR 100 AG AND 100AO.
2. DETAIL @ STOREFRONT W/ DOOR 100AH AND 100AP.

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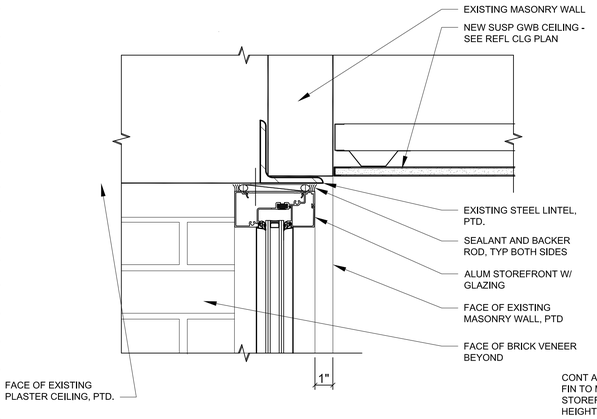
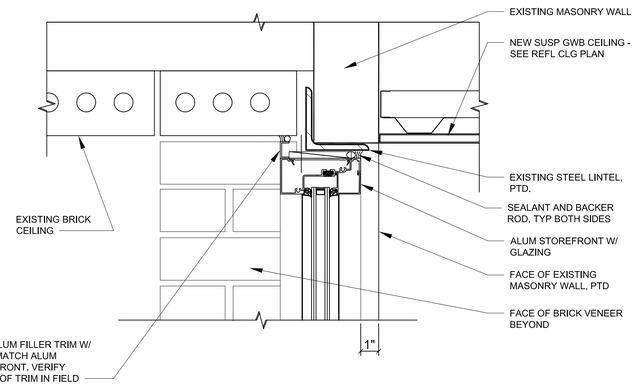
STOREFRONT ELEVS AND DETAILS

A8.1

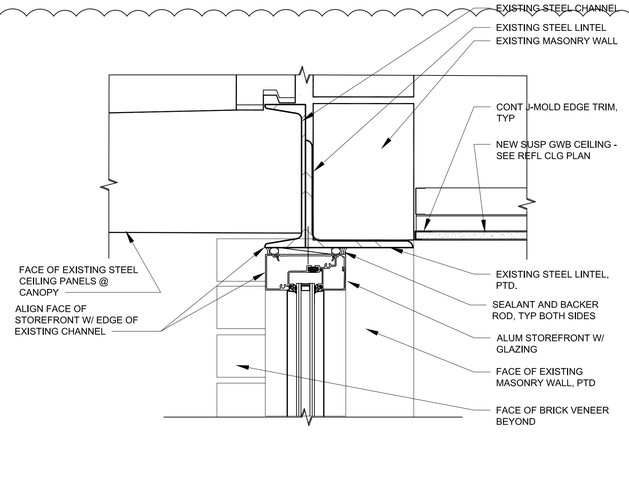
SHEET _____ of _____



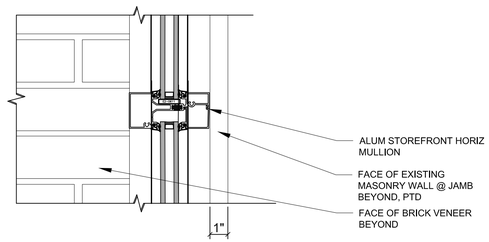
SFH1 STOREFRONT HEAD DETAIL
SCALE: 3" = 1'-0"



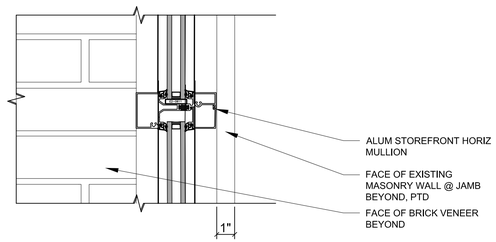
SFH2 STOREFRONT HEAD DETAIL
SCALE: 3" = 1'-0"



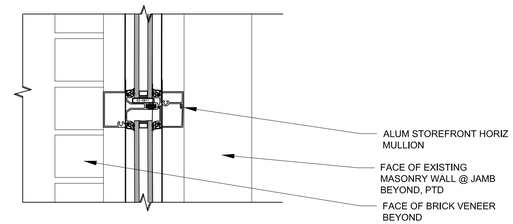
SFH3 STOREFRONT HEAD DETAIL
SCALE: 3" = 1'-0"



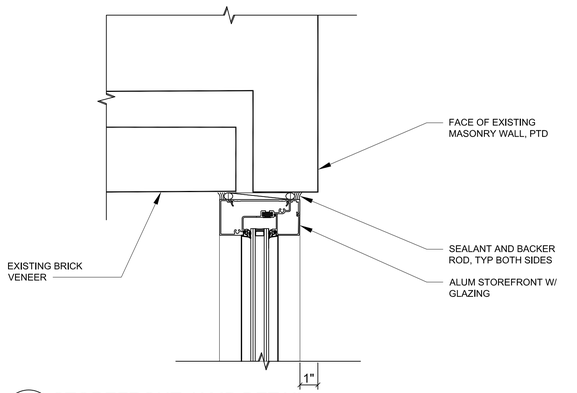
SFM1 STOREFRONT HORIZ MULLION DETAIL
SCALE: 3" = 1'-0"



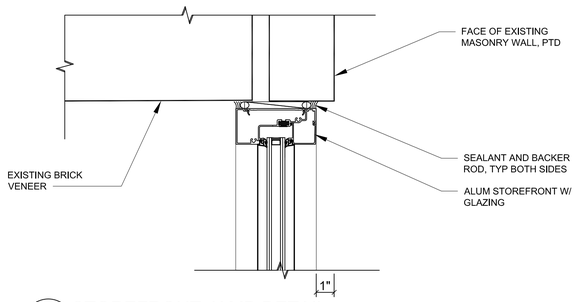
SFM2 STOREFRONT HORIZ MULLION DETAIL
SCALE: 3" = 1'-0"



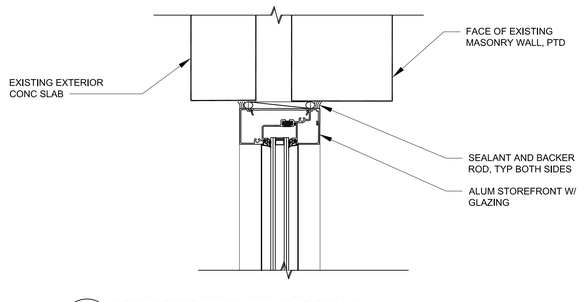
SFM3 STOREFRONT HORIZ MULLION DETAIL
SCALE: 3" = 1'-0"



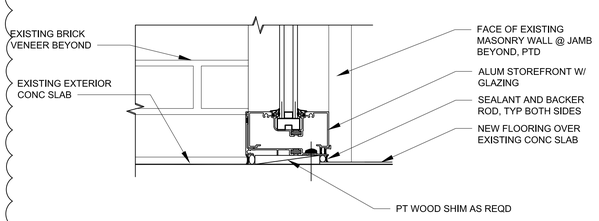
SFJ1 STOREFRONT JAMB DETAIL
SCALE: 3" = 1'-0"



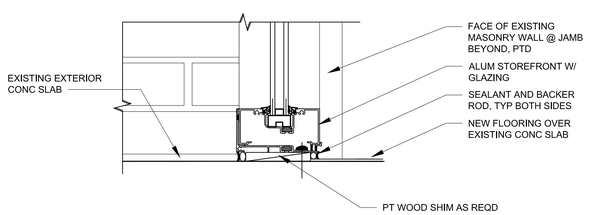
SFJ2 STOREFRONT JAMB DETAIL
SCALE: 3" = 1'-0"



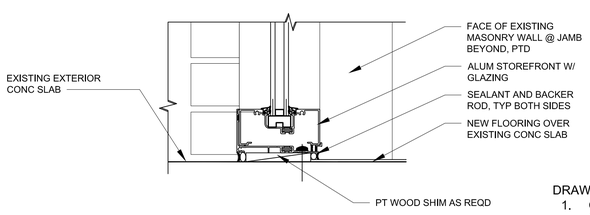
SFJ3 STOREFRONT JAMB DETAIL
SCALE: 3" = 1'-0"



SFS1 STOREFRONT SILL DETAIL
SCALE: 3" = 1'-0"



SFS2 STOREFRONT SILL DETAIL
SCALE: 3" = 1'-0"



SFS3 STOREFRONT SILL DETAIL
SCALE: 3" = 1'-0"

DRAWING NOTES:
1. CONTRACTOR TO VERIFY ALL EXISTING HEAD, JAMB AND SILL CONDITIONS PRIOR TO FABRICATING STOREFRONT AND NOTIFY ARCHITECT OF ANY CONDITIONS THAT DIFFER FROM SHOWN IN DRAWINGS.

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1	7/18/22	ADDENDUM 3

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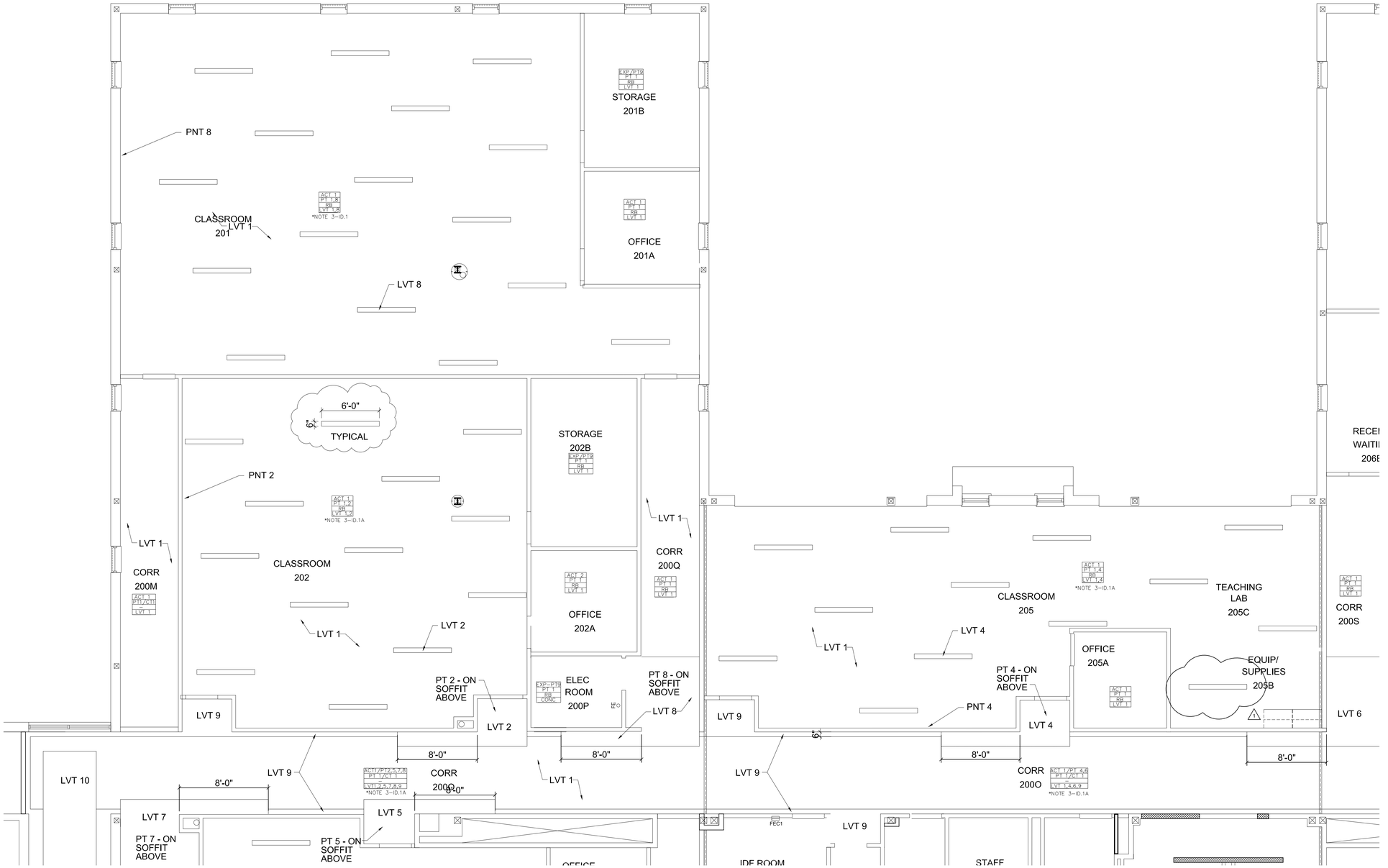
SCALE:	AS SHOWN

STOREFRONT DETAILS

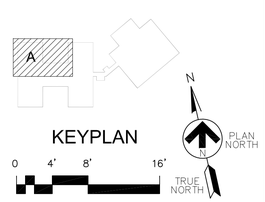
1 A8.2

SHEET _____ of _____



1 / ID4.2 SECOND FLOOR FINISHES PLAN ENLARGED PARTIAL PLAN - AREA A

SCALE: 3/16" = 1'-0"



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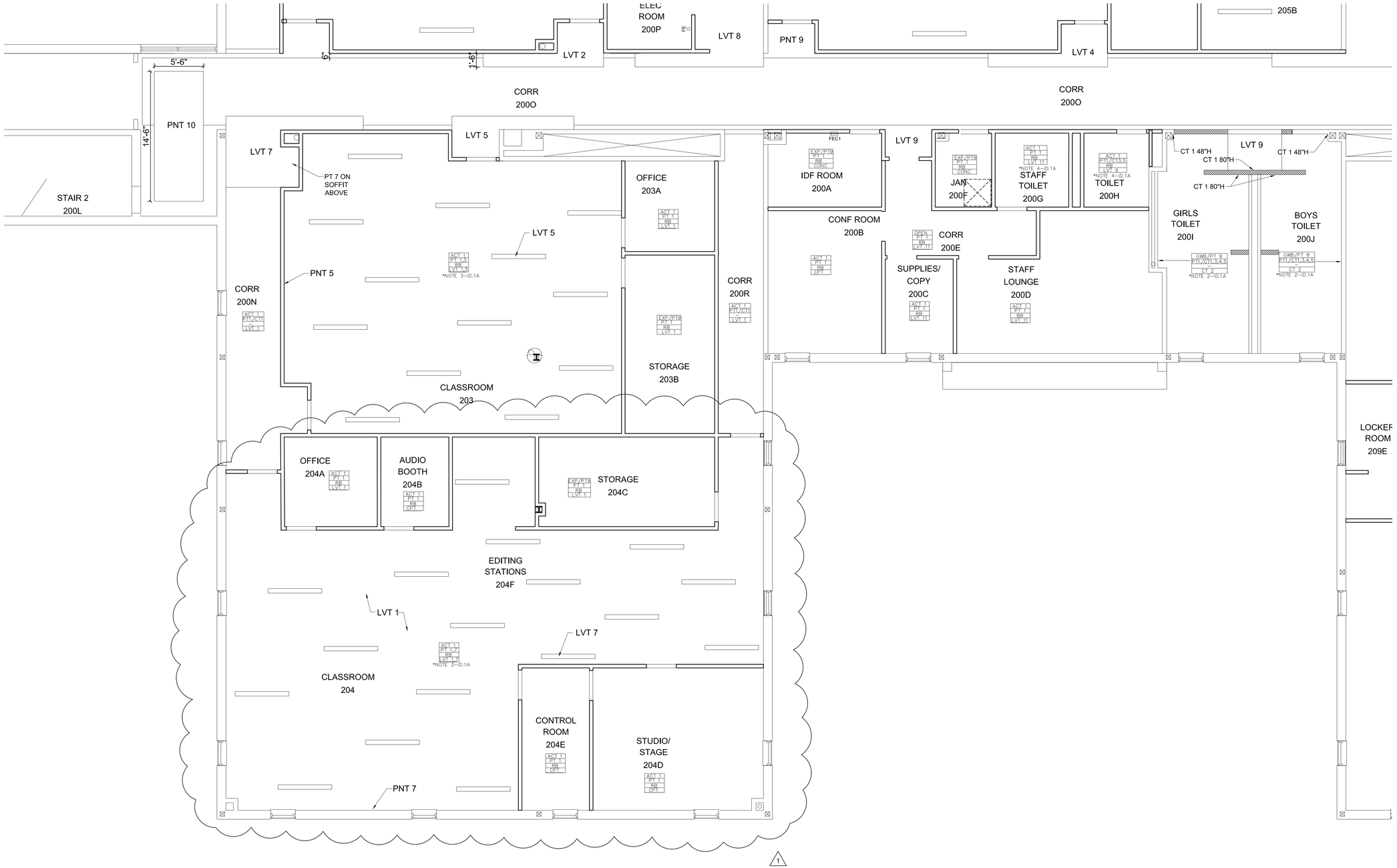
SCALE:	AS SHOWN

SECOND FLOOR FINISHES PLAN ENLARGED PARTIAL PLAN - AREA A

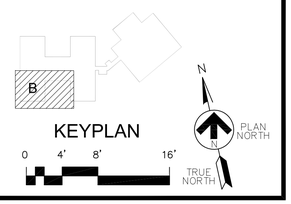
ID2.2

SHEET _____ of _____



1 AX-X SECOND FLOOR FINISHES PLAN ENLARGED PARTIAL PLAN - AREA B

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



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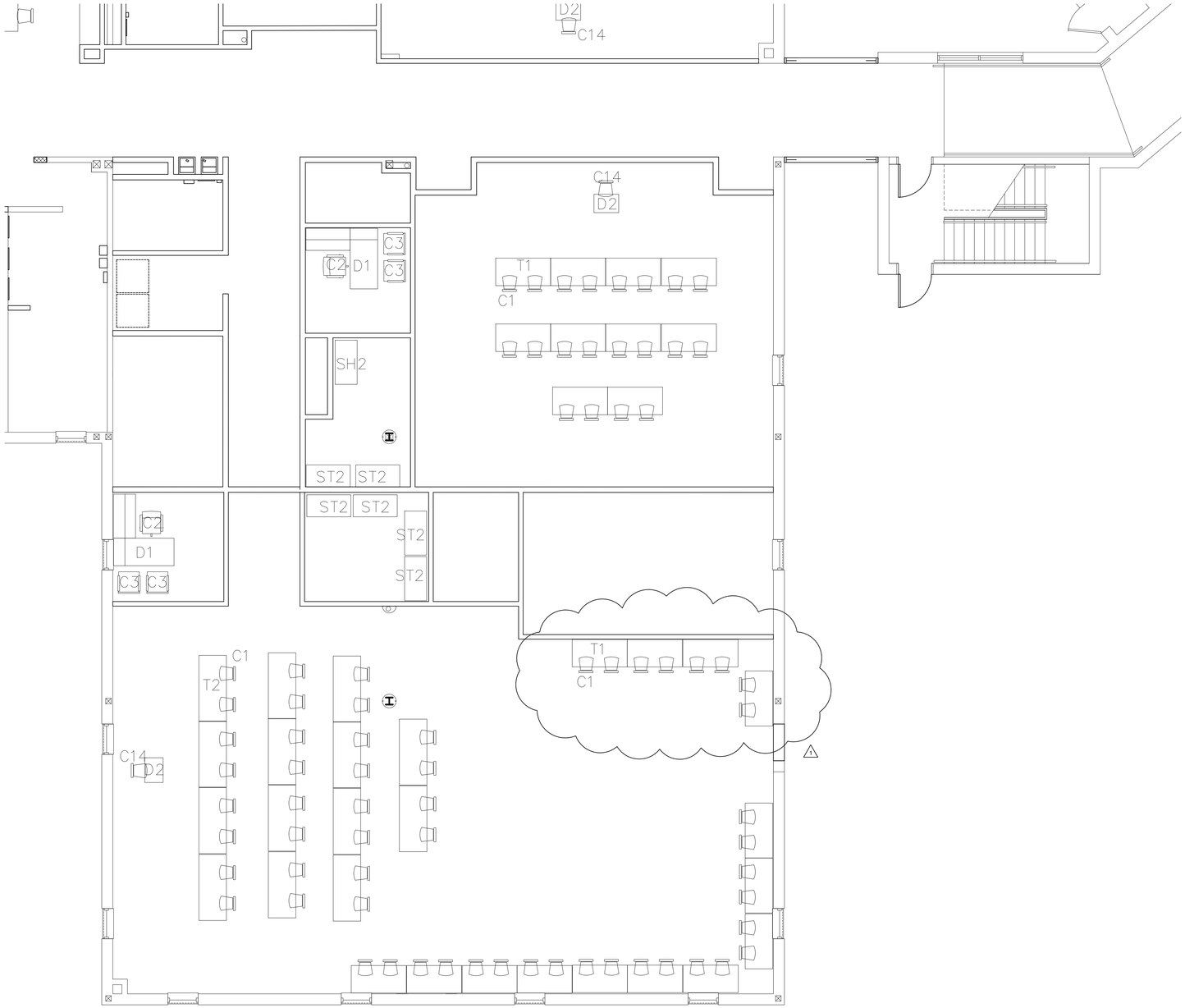
SECOND FLOOR FINISHES PLAN ENLARGED PARTIAL PLAN - AREA B

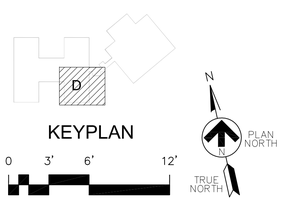
ID2.3

SHEET _____ of _____



1 / ID3.5 GROUND FLOOR FURNITURE ENLARGED PARTIAL PLAN- AREA D

SCALE: 3/16" = 1'-0"



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SCALE:	AS SHOWN

GROUND FLOOR FURNITURE ENLARGED PARTIAL PLAN - AREA D

ID3.5

SHEET _____ of _____

SECOND FLOOR FURNITURE ENLARGED PARTIAL PLAN- AREA A

1 / ID4.2 SCALE: 3/16" = 1'-0"

KEYPLAN

0 4' 8' 16'

PLAN NORTH

TRUE NORTH

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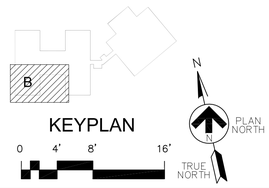
SECOND FLOOR FURNITURE ENLARGED PARTIAL PLAN - AREA A

ID4.2

SHEET _____ of _____

1 AX-X SECOND FLOOR FURNITURE ENLARGED PARTIAL PLAN - AREA B

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



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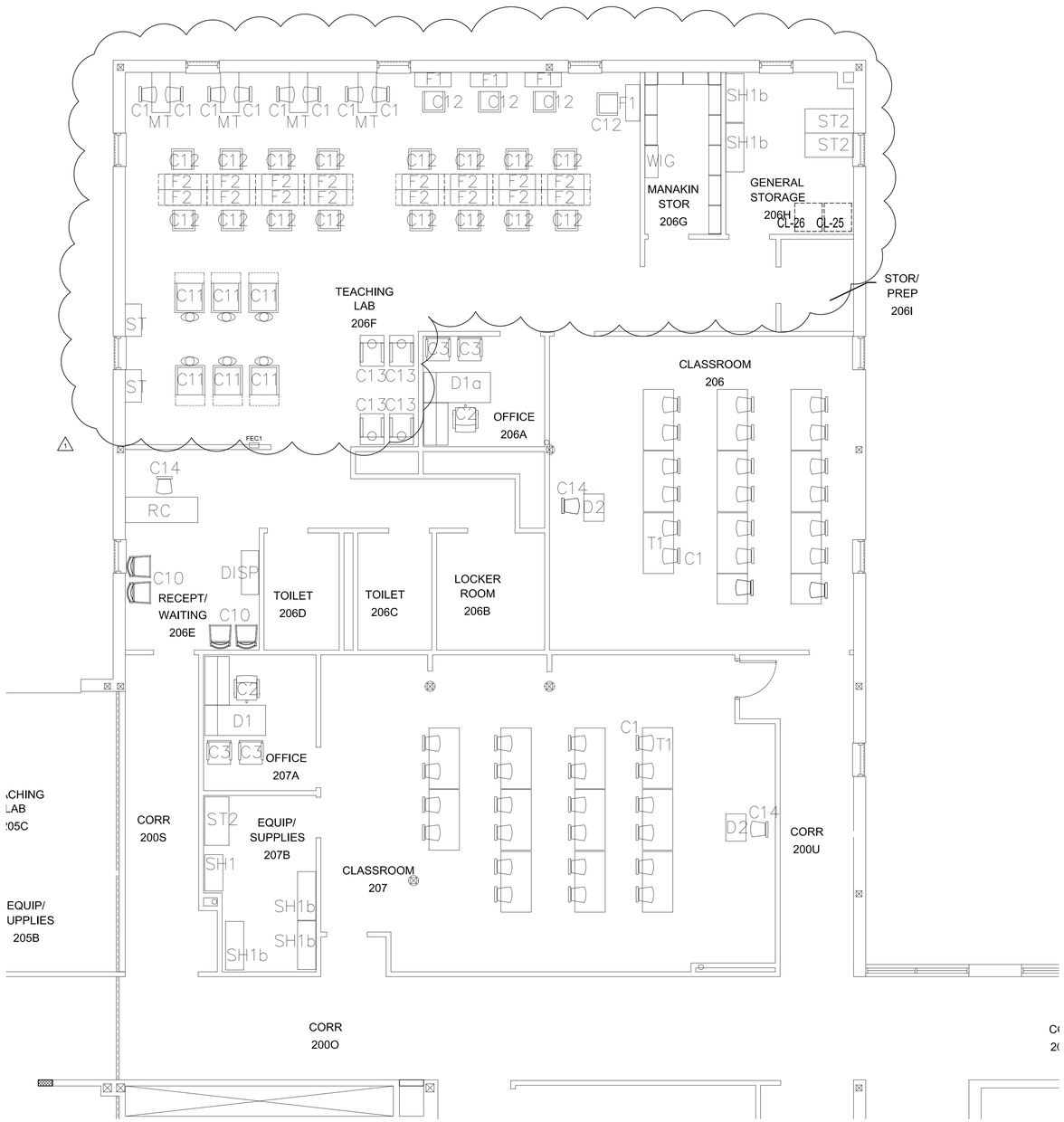
SECOND FLOOR FURNITURE ENLARGED PARTIAL PLAN - AREA B	

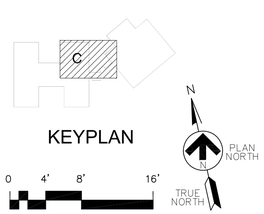
ID4.3

SHEET _____ of _____



1 / ID4.4 SECOND FLOOR FURNITURE ENLARGED PARTIAL PLAN - AREA C

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



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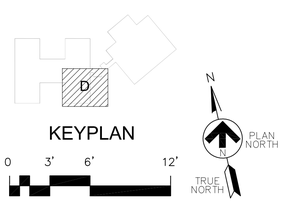
SECOND FLOOR FURNITURE ENLARGED PARTIAL PLAN - AREA C

ID4.4

SHEET _____ of _____

1 / ID4.5 SECOND FLOOR FURNITURE ENLARGED PARTIAL PLAN - AREA D

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



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SECOND FLOOR FURNITURE ENLARGED PARTIAL PLAN - AREA D

ID4.5

SHEET _____ of _____

FAN SCHEDULE

UNIT	CFM	S.P.	RPM	MOTOR			SELECTION BASED ON GREENHECK	CONTROL	NOTES
				WATTS	VOLTS	PH			
EF-1	300	0.25	1120	80	120	1	CSP-A390	RUN DURING OCCUPANCY	1
EF-2	225	0.25	830	132	120	1	CSP-A200	RUN DURING OCCUPANCY	1
EF-3	600	0.50	1288	1/4 HP	120	1	CUBE-099	INTERLOCK WITH HOOD	2
EF-4	200	0.375	989	57	120	1	CSP-A250	WALL SWITCH	1
EF-5	NOT USED	⚠							
EF-6	150	0.25	1250	33	120	1	SP-A190	RUN DURING OCCUPANCY	1
EF-7	1525	0.25	1380	1/4 HP	120	1	GB-120	RUN DURING OCCUPANCY	3
EF-8	250	0.25	1010	82	120	1	CSP-A290	RUN DURING OCCUPANCY	1
EF-9	1200	0.25	1140	1/4 HP	120	1	GB-120	RUN DURING OCCUPANCY	3
EF-10	400	0.25	1350	146	120	1	CSP-A390	WALL SWITCH	1
EF-WELD	NOT USED								
EF-VE	1200	4.0	3700	2 HP	460	3	MONOXIVENT BI-100	WALL SWITCH	4
EF-KH	10928	2.0	794	7.5 HP	460	3	CUBE-360HP-VGD	INTERLOCK WITH HOOD	3
EF-BH	2350	1.6	1349	1.5 HP	460	3	CUBE-180HP-VGD	INTERLOCK WITH HOOD	3
EF-SH	1125	0.50	1608	1/4 HP	120	1	CUBE-100	WALL SWITCH	3

⚠1

REQUIREMENTS, EQUALS SHALL BE ACCEPTEDSCHEDULE NOTES:
1. PROVIDE WITH SPEED CONTROLLER, ELECTRICAL DISCONNECT AND WALL CAP. CONTROL AS INDICATED IN SCHEDULE.
2. PROVIDE WITH DISCONNECT, MOTOR OPERATED DAMPER, CONFIGURED FOR SIDEWALL MOUNTING.
3. PROVIDE WITH DISCONNECT, MOTOR OPERATED DAMPER, ROOF CURB.
4. PROVIDE WITH DISCONNECT, NO LOSS STACK HEAD, VIBRATION ISOLATION.
5. MODEL NUMBERS ARE USED TO ESTABLISH PERFORMANCE REQUIREMENTS. EQUALS SHALL BE ACCEPTED

DUCTLESS SPLIT AIR CONDITIONING SYSTEM

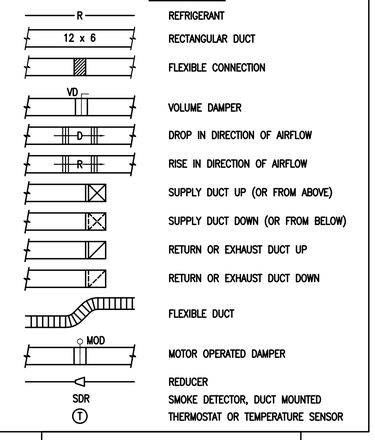
MODEL NUMBERS ARE USED TO ESTABLISH PERFORMANCE REQUIREMENTS. EQUALS SHALL BE ACCEPTED

DSS-1: INDOOR WALL MOUNTED UNIT – MITSUBISHI PKA-A36KA7,
OUTDOOR CONDENSING UNIT – MITSUBISHI PUY-A36NKA7
A. 36,000 BTU/HR COOLING, 920 CFM, 18.8 SEER, R-410A.
B. 208 VOLTS, SINGLE PHASE, 31A MOCP, FEED TO OUTDOOR UNIT.
C. DC INVERTER COMPRESSOR.
D. WALL MOUNTED, HARD WIRED CONTROLLER.
E. PROVIDE LOW AMBIENT CONTROL TO 0 DEGREES F.
F. PROVIDE CONDENSATE PUMP AS REQUIRED.
G. AUTO RESTART ON POWER FAILURE.
H. COORDINATE INDOOR UNIT LOCATION WITH EQUIPMENT.

DSS-2: INDOOR WALL MOUNTED UNIT – MITSUBISHI PKA-A18HA,
OUTDOOR CONDENSING UNIT – MITSUBISHI PUY-A18NHA3
A. 18,000 BTU/HR COOLING, 425 CFM, 15.3 SEER, R-410A.
B. 208 VOLTS, SINGLE PHASE, 15A MOCP, FEED TO OUTDOOR UNIT.
C. DC INVERTER COMPRESSOR.
D. WALL MOUNTED, HARD WIRED CONTROLLER.
E. PROVIDE LOW AMBIENT CONTROL TO 0 DEGREES F.
F. PROVIDE CONDENSATE PUMP AS REQUIRED.
G. AUTO RESTART ON POWER FAILURE.
H. COORDINATE INDOOR UNIT LOCATION WITH EQUIPMENT.

DSS-3: INDOOR WALL MOUNTED UNIT – MITSUBISHI PKA-A18HA,
OUTDOOR CONDENSING UNIT – MITSUBISHI PUY-A18NHA3
A. 18,000 BTU/HR COOLING, 425 CFM, 15.3 SEER, R-410A.
B. 208 VOLTS, SINGLE PHASE, 15A MOCP, FEED TO OUTDOOR UNIT.
C. DC INVERTER COMPRESSOR.
D. WALL MOUNTED, HARD WIRED CONTROLLER.
E. PROVIDE LOW AMBIENT CONTROL TO 0 DEGREES F.
F. PROVIDE CONDENSATE PUMP AS REQUIRED.
G. AUTO RESTART ON POWER FAILURE.
H. COORDINATE INDOOR UNIT LOCATION WITH EQUIPMENT.

LEGEND



ABBREVIATIONS

BTU	BRITISH THERMAL UNIT
CD	CEILING DIFFUSER
CFD	CEILING FIRE DAMPER
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
COP	COEFFICIENT OF PERFORMANCE
CR	CEILING REGISTER
DB	DRY BULB TEMPERATURE
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
EXT	EXTERNAL
F	DEGREES FAHRENHEIT
FPM	FEET PER MINUTE
FT	FEET
HP	HORSEPOWER
IN	INCH, INCHES
LAT	LEAVING AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
VD	VOLUME DAMPER
MH	MOUNTING HEIGHT
MIN	MINIMUM
MOD	MOTOR OPERATED DAMPER
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OA	OUTSIDE AIR
PD	PRESSURE DROP
PS	PRESSURE SENSOR
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAGE
RA	RETURN AIR
SP	STATIC PRESSURE
TEMP	TEMPERATURE
TG	TOP GRILLE
TR	TOP REGISTER
TYP	TYPICAL
WB	WET BULB TEMPERATURE
WC, WG	WATER COLUMN
AFF	ABOVE FINISHED FLOOR
ABV	ABOVE
AD	ACCESS DOOR
BEL	BELOW
BET	BETWEEN
CLG	CEILING
CONN	CONNECT, CONNECTION
CONT	CONTINUED
DN	DOWN
EA	EACH
FL	FLOOR
FLEX	FLEXIBLE
FR	FROM
GALV	GALVANIZED
REQD	REQUIRED
SH	SHEET
SDR	DUCT MOUNTED SMOKE DETECTOR

ELECTRIC WALL HEATER SCHEDULE

MARK	MANUFACTURER & MODEL NO.	MBH	CFM	KW	VOLT/PH
WH-1	MARKEL E3323TTD-RP	5.1	400	1.5	120/1

NOTES:
- PROVIDE WITH DISCONNECT SWITCH & IN-BUILT THERMOSTAT
- MODEL NUMBERS ARE USED TO ESTABLISH PERFORMANCE REQUIREMENTS. EQUALS SHALL BE ACCEPTED

DUST COLLECTOR

DONALDSON UNIMASTER UMA450, 3900 CFM, 15 HP, 460/3ø, PROVIDE WITH EXPLOSION VENTS, BIN BASE WITH QUICK RELEASE LEVEL AND NON RETURN VALVE, EASY DUCT DUCT SYSTEM AS INDICATED.
MODEL NUMBERS ARE USED TO ESTABLISH PERFORMANCE REQUIREMENTS.
EQUALS SHALL BE ACCEPTED

WELDING DUST COLLECTOR

DONALDSON POWERCORE TG12, 7840 CFM, 20 HP, 460/3ø, PROVIDE WITH LOW INLET DROP BOX, SIDE MOUNT EXPLOSION VENTS, EASY DUCT DUCT SYSTEM AS INDICATED
MODEL NUMBERS ARE USED TO ESTABLISH PERFORMANCE REQUIREMENTS.
EQUALS SHALL BE ACCEPTED

⚠1

MAKE-UP AIR UNIT SCHEDULE

MARK	MANUFACTURER & MODEL NO.	CFM	EVAP. FAN HP	VOLTS ø	S.P. IN WG	HEATING CAP		MCA/MOCP	WEIGHT
					EXT.	INPUT, MBH	OUTPUT, MBH		
MAU-KH	GREENHECK DGX-118-H32	8742	7.5	460/3	0.75	572.6	526.8	14.6/25	1840 LBS.
MAU-KH	GREENHECK DGX-109-H12	1878	1.5	460/3	0.7	123.0	113.2	4.1/15	840 LBS.

NOTES:
- INCLUDE DISCHARGE AIR TEMPERATURE CONTROL KIT
- MODEL NUMBERS ARE USED TO ESTABLISH PERFORMANCE REQUIREMENTS. EQUALS SHALL BE ACCEPTED

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE

MARK	MANUFACTURER & MODEL NO.	DESCRIPTION	MATERIAL	FINISH	ACCESSORIES & FEATURES
SUPPLY DIFFUSERS					
CD-1	METALAIRE 5700-6	24"X24" CEILING DIFFUSER WITH 6"ø NECK FOR LAY-IN CEILING	STEEL	WHITE	MODEL BDS DAMPER
CD-2	METALAIRE 5700-6	24"X24" CEILING DIFFUSER WITH 8"ø NECK FOR LAY-IN CEILING	STEEL	WHITE	MODEL BDS DAMPER
CD-3	METALAIRE 5700-6	24"X24" CEILING DIFFUSER WITH 10"ø NECK FOR LAY-IN CEILING	STEEL	WHITE	MODEL BDS DAMPER
CD-4	METALAIRE 5000-1	9"X9" DIRECTIONAL DIFFUSER FOR SURFACE MOUNTING	STEEL	WHITE	MODEL D5 DAMPER
SD-1	METALAIRE 6675-12-1	LINEAR SLOT DIFFUSER, 3'-0" LONG, 1 SLOT @ 3/4" WIDE EACH, 6"ø	ALUMINUM	WHITE	INSULATED BOOT PLENUM
SD-2	METALAIRE 6675-12-1	LINEAR SLOT DIFFUSER, 6'-0" LONG, 2 SLOTS @ 3/4" WIDE EACH, 10"ø	ALUMINUM	WHITE	INSULATED BOOT PLENUM
GRILLES & REGISTERS					
TR-1	METALAIRE V4004-1	6"X4" SIDEWALL SUPPLY REGISTER	STEEL	WHITE	MODEL OBD DAMPER
TR-2	METALAIRE V4004-1	10"X6" SIDEWALL SUPPLY REGISTER	STEEL	WHITE	MODEL OBD DAMPER
TR-3	METALAIRE V4004-1	6"X6" SIDEWALL SUPPLY REGISTER	STEEL	WHITE	MODEL OBD DAMPER
TR-4	METALAIRE V4004-1	10"X8" SIDEWALL SUPPLY REGISTER	STEEL	WHITE	MODEL OBD DAMPER
TR-5	METALAIRE V4004-1	12"X8" SIDEWALL SUPPLY REGISTER	STEEL	WHITE	MODEL OBD DAMPER
TR-6	METALAIRE V4004-1	14"X8" SIDEWALL SUPPLY REGISTER	STEEL	WHITE	MODEL OBD DAMPER
CR-1	METALAIRE 7500R-6	24"X24" CEILING GRILLE WITH 6"ø NECK FOR LAY-IN CEILING	STEEL	WHITE	--
CR-2	METALAIRE SRH-1	12"X8" CEILING EXHAUST REGISTER	STEEL	WHITE	OPPOSED BLADE DAMPER
CR-3	METALAIRE 7500R-6	24"X24" CEILING GRILLE WITH 8"ø NECK FOR LAY-IN CEILING	STEEL	WHITE	--
FCG-1	METALAIRE SRHF-6	24"X24" FILTER CLG GRILLE WITH 12"X12" NECK FOR LAY-IN CLG	STEEL	WHITE	1" MERV 13 FILTER
FCG-2	METALAIRE SRHF-6	24"X24" FILTER CLG GRILLE WITH 22"X22" NECK FOR LAY-IN CLG	STEEL	WHITE	1" MERV 13 FILTER

NOTES:
- MODEL NUMBERS ARE USED TO ESTABLISH PERFORMANCE REQUIREMENTS. EQUALS SHALL BE ACCEPTED

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1	07/18/22	ADDENDUM 3

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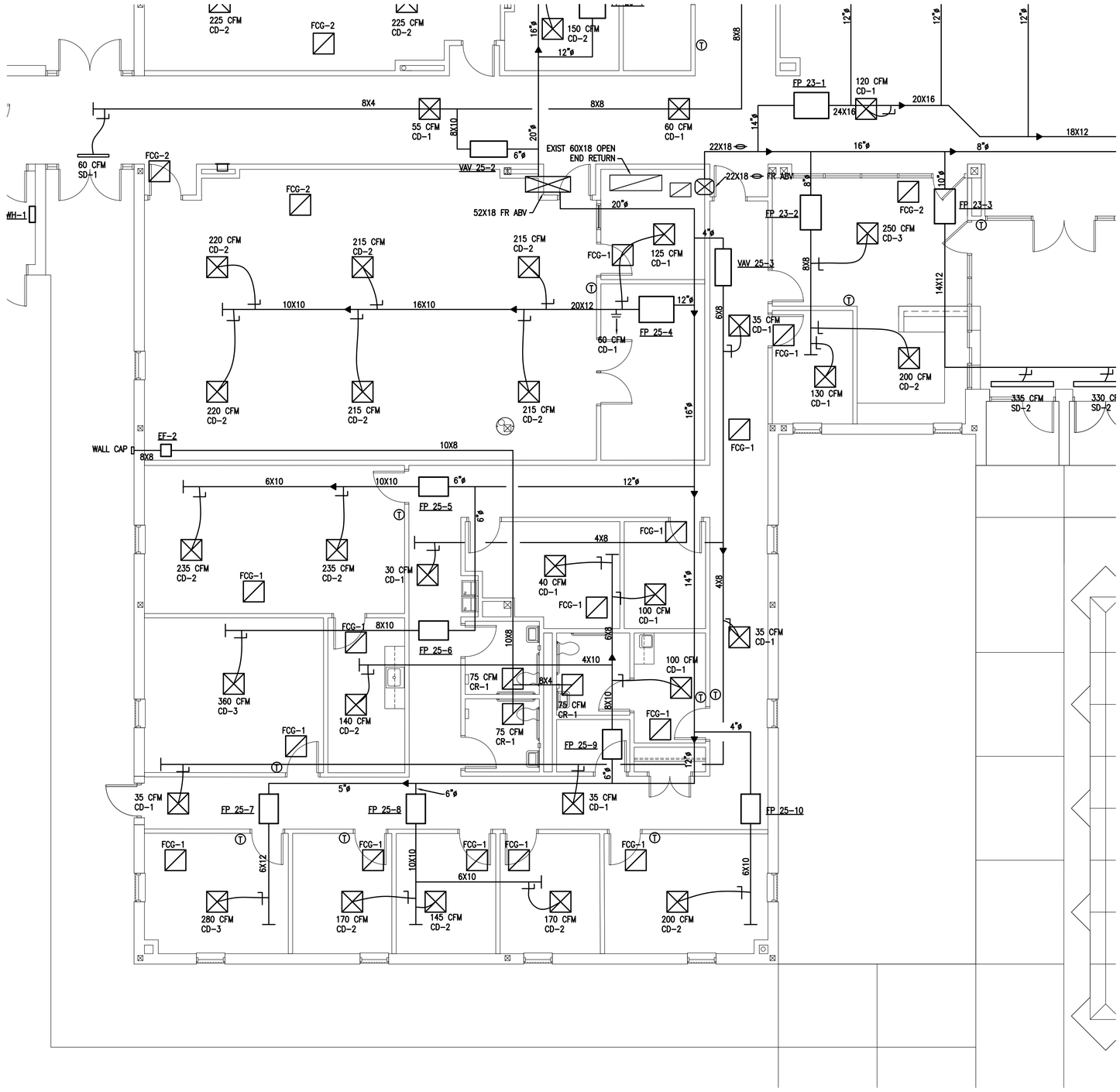
SCALE:	AS SHOWN

MECHANICAL LEGEND & SCHEDULES

M0.1

SHEET _____ of ___X___



GROUND FLOOR ENLARGED PARTIAL MECHANICAL NEW WORK PLAN

1 / M2.2 SCALE: 3/16" = 1'-0"

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⚠ NOTES:
1. RETURN CEILING GRILLE OPEN TO RETURN AIR PLENUM.

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KEYPLAN

0 3' 6' 12'

N PLAN NORTH
N TRUE NORTH

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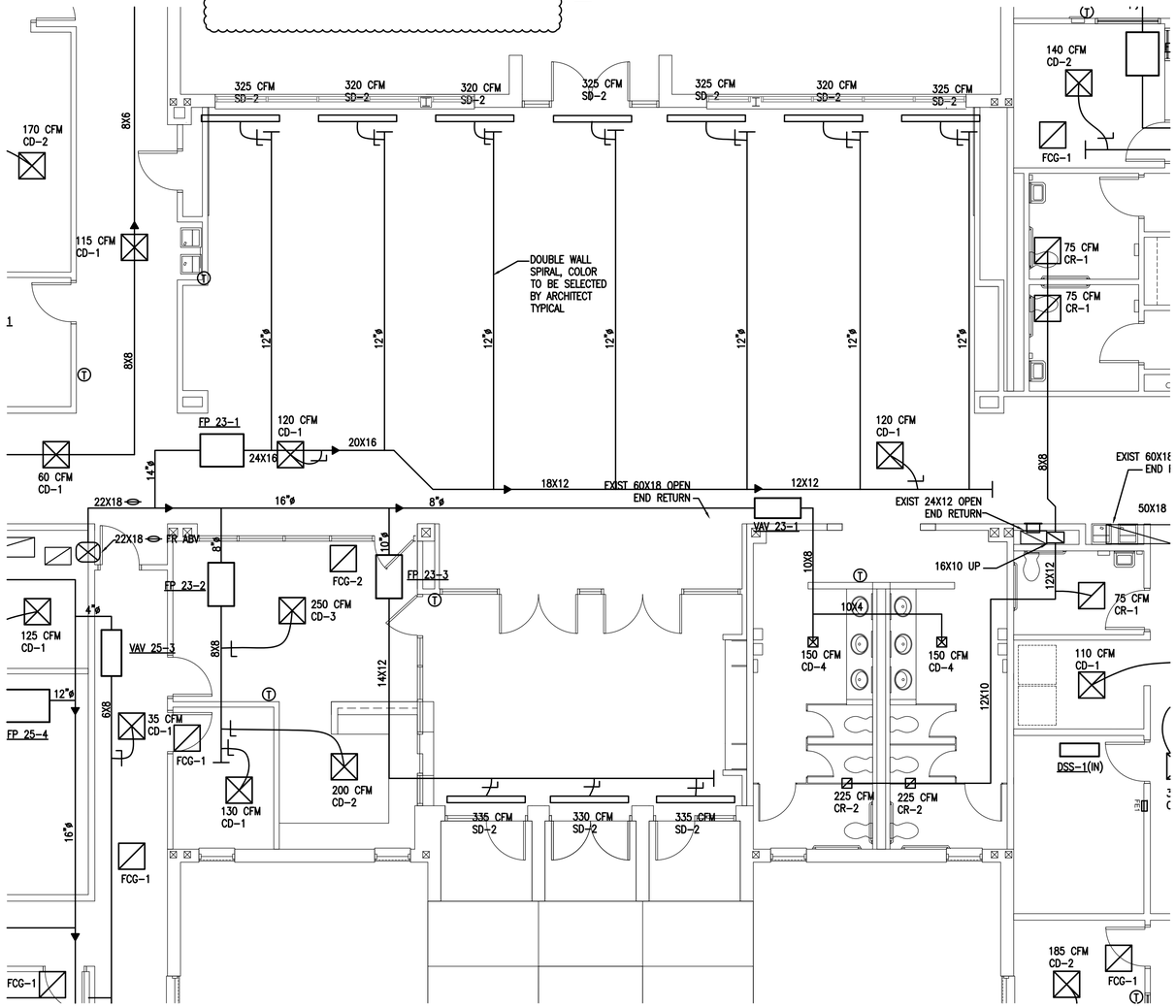
SCALE:	AS SHOWN

GROUND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA B

M2.2

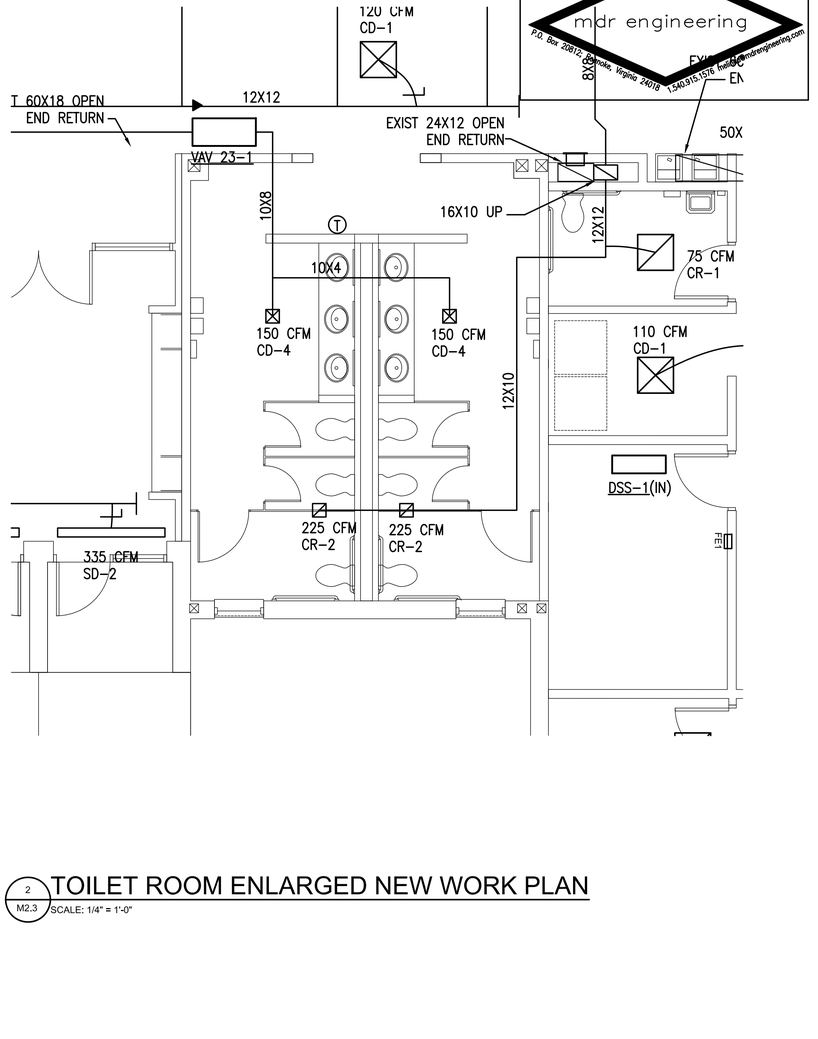
SHEET _____ of ___X___

NOTES:
1. RETURN CEILING GRILLE OPEN TO RETURN AIR PLENUM. ⚠



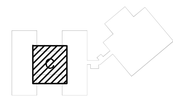
1 M2.3 GROUND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA C

SCALE: 3/16" = 1'-0"



2 M2.3 TOILET ROOM ENLARGED NEW WORK PLAN

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



KEYPLAN

0 2' 4' 8'

0 3' 6' 12'

N PLAN NORTH

N TRUE NORTH

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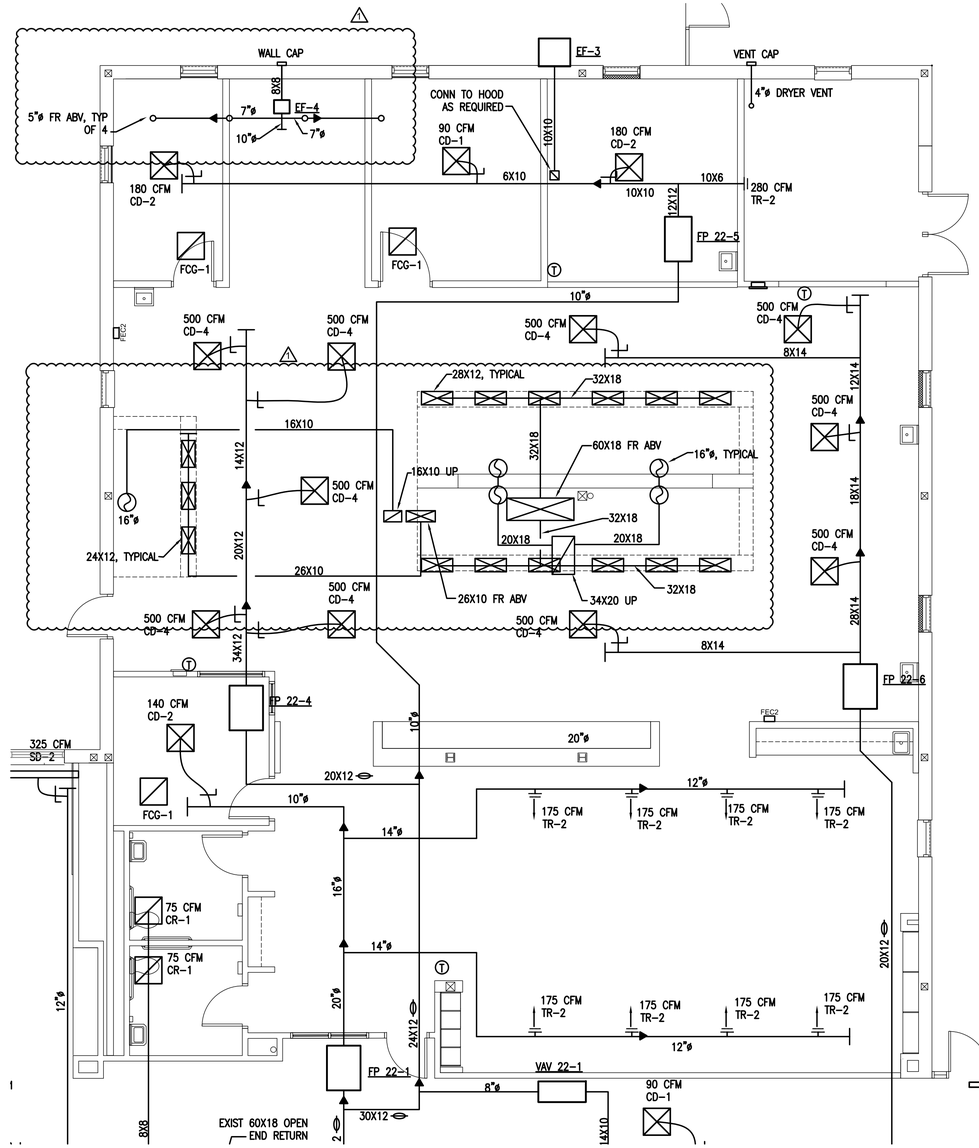
SCALE:	AS SHOWN

GROUND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA C

M2.3

SHEET _____ of X

NOTES:
1. RETURN CEILING GRILLE OPEN TO RETURN AIR PLENUM.



1 M2.4 GROUND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA D

SCALE: 3/16" = 1'-0"

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SCALE:	AS SHOWN

GROUND FLOOR PARTIAL NEW WORK PLAN - AREA D

M2.4

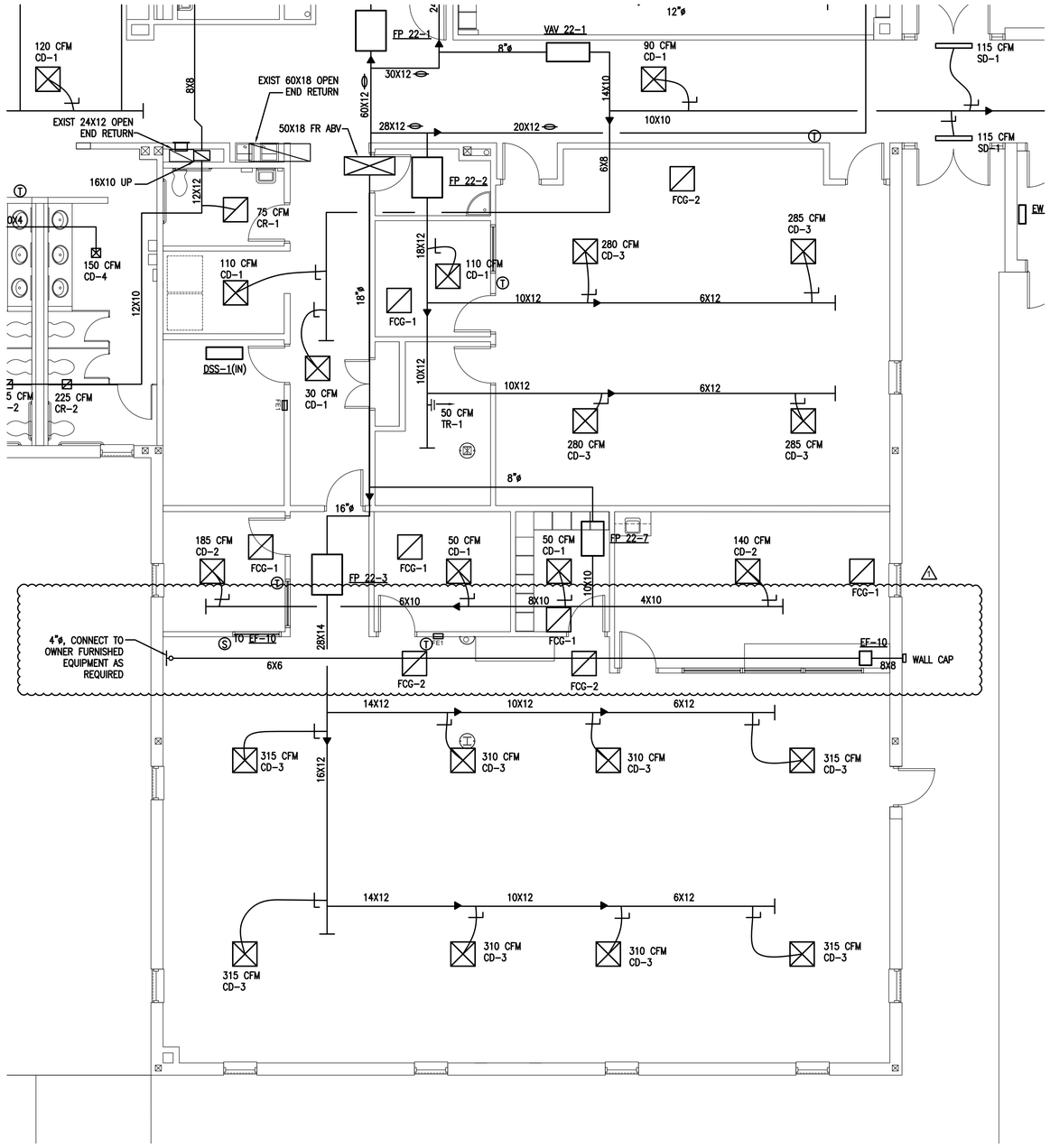
SHEET _____ of ___X___

KEYPLAN

0 3' 6' 12'

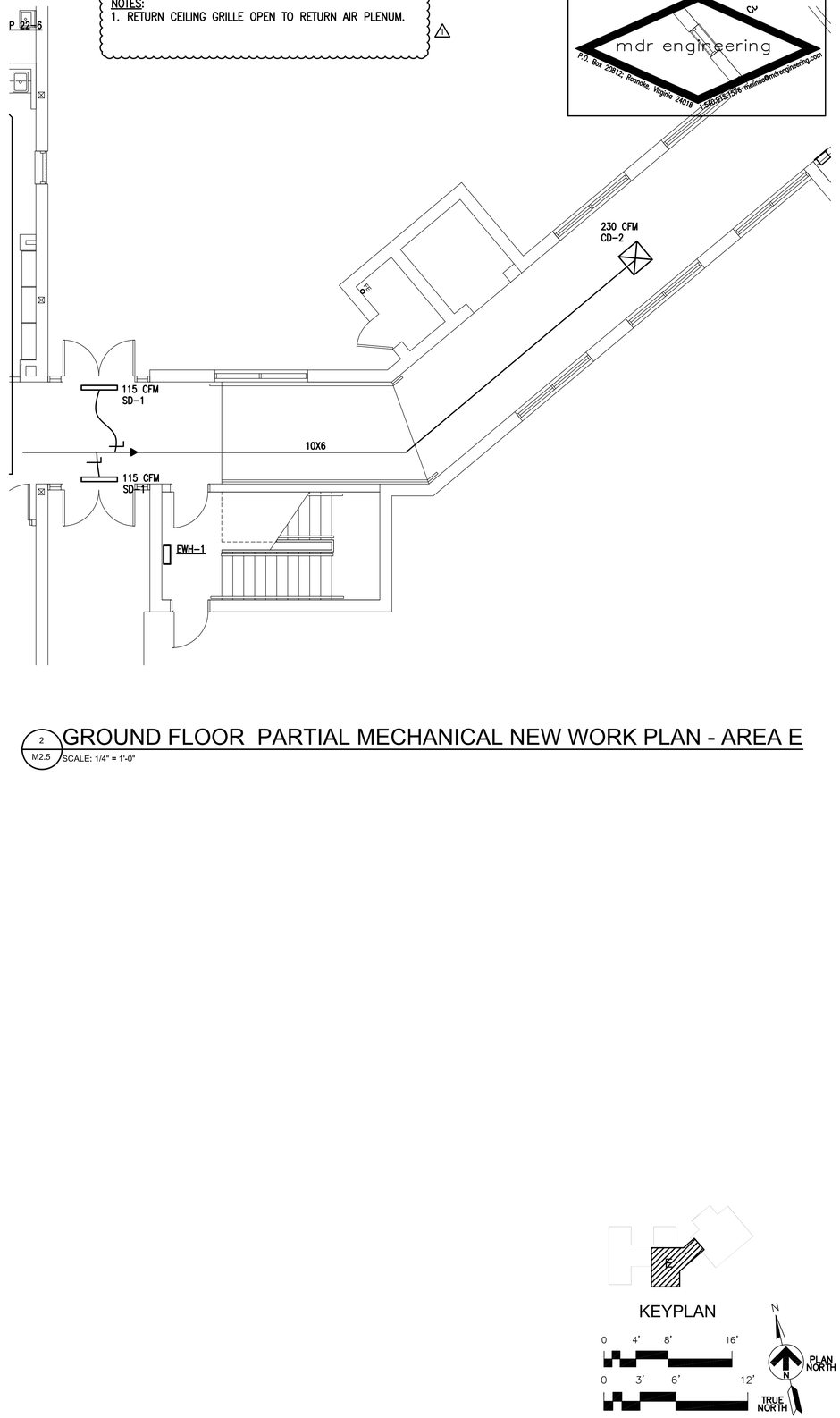
PLAN NORTH

TRUE NORTH



2 M2.5 GROUND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA E
SCALE: 3/16" = 1'-0"

NOTES:
1. RETURN CEILING GRILLE OPEN TO RETURN AIR PLENUM.



2 M2.5 GROUND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA E
SCALE: 1/4" = 1'-0"

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GROUND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA E

M2.5

SHEET _____ of ___X___

KEYPLAN

0 4' 8' 16'
0 3' 6' 12'
PLAN NORTH
TRUE NORTH

NOTES:
1. RETURN CEILING GRILLE OPEN TO RETURN AIR PLENUM. ⚠

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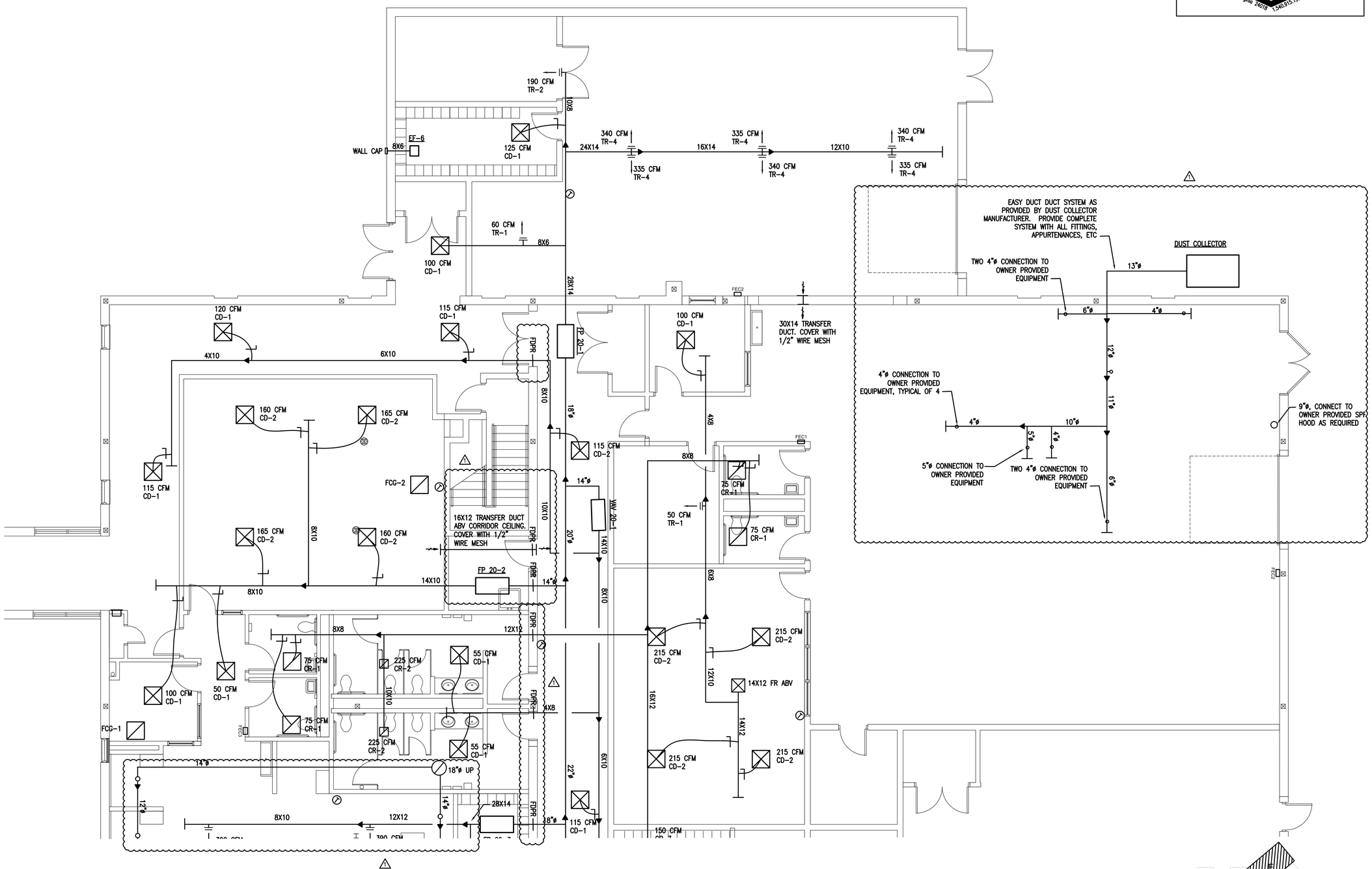

1 / M2.6 GROUND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA F

SCALE: 3/16" = 1'-0"

KEYPLAN

0 3' 6' 12'

N PLAN NORTH

N TRUE NORTH

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SCALE:	AS SHOWN

GROUND FLOOR PARTIAL NEW WORK PLAN - AREA F

M2.6

SHEET _____ of ___X___

NOTES:
1. RETURN CEILING GRILLE OPEN TO RETURN AIR PLENUM.

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SCALE:	AS SHOWN

GROUND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA G

M2.7

SHEET _____ of X

KEYPLAN

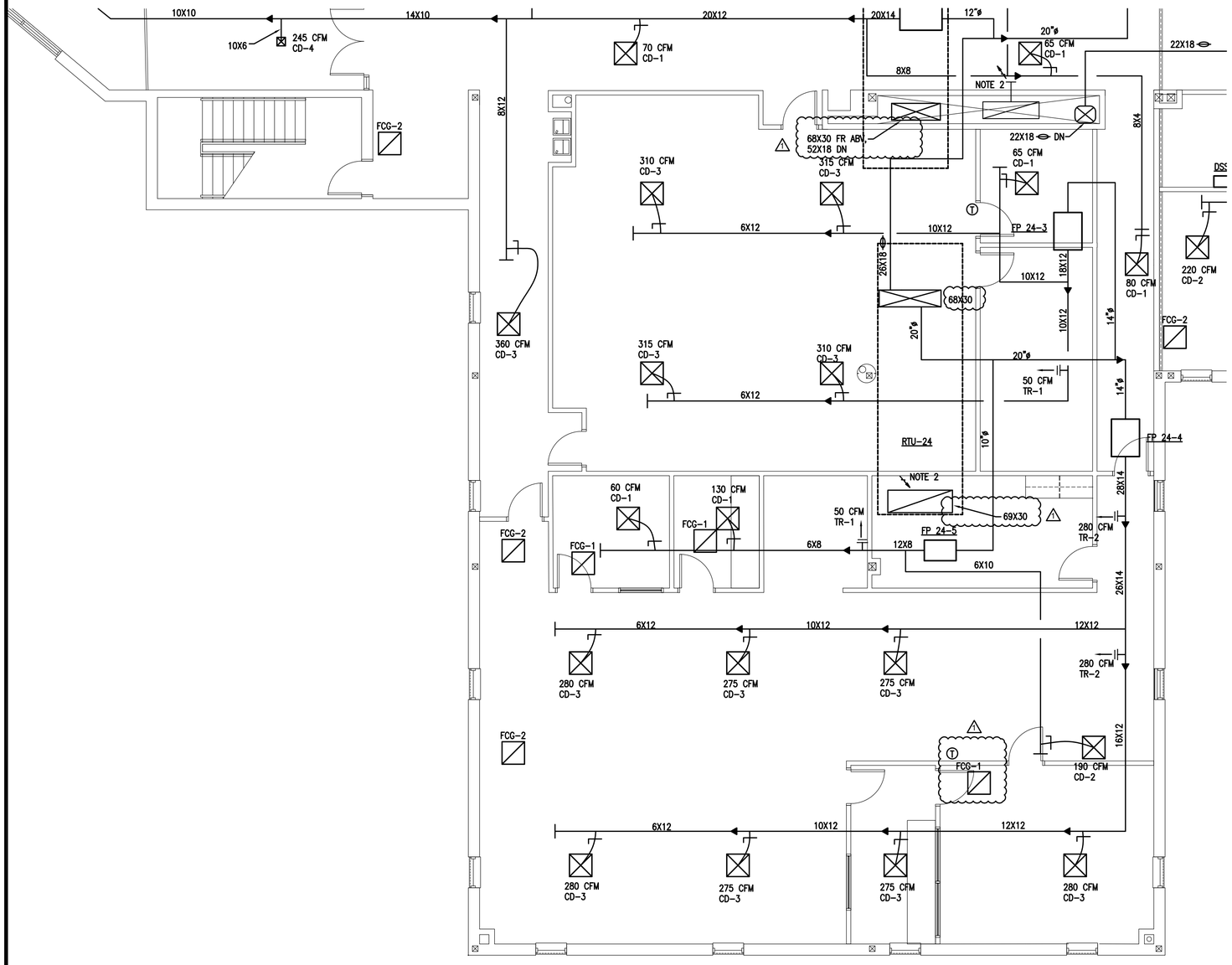
0 3' 6' 12'

N PLAN NORTH

TRUE NORTH

1 / M2.7 GROUND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA G

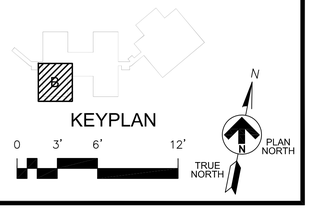
SCALE: 3/16" = 1'-0"



NOTES:
1. RETURN CEILING GRILLE OPEN TO RETURN AIR PLENUM.
2. OPEN END RETURN DUCT ABOVE CEILING. COVER WITH 1/2" WIRE MESH.

1 M3.2 SECOND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA B

SCALE: 3/16" = 1'-0"



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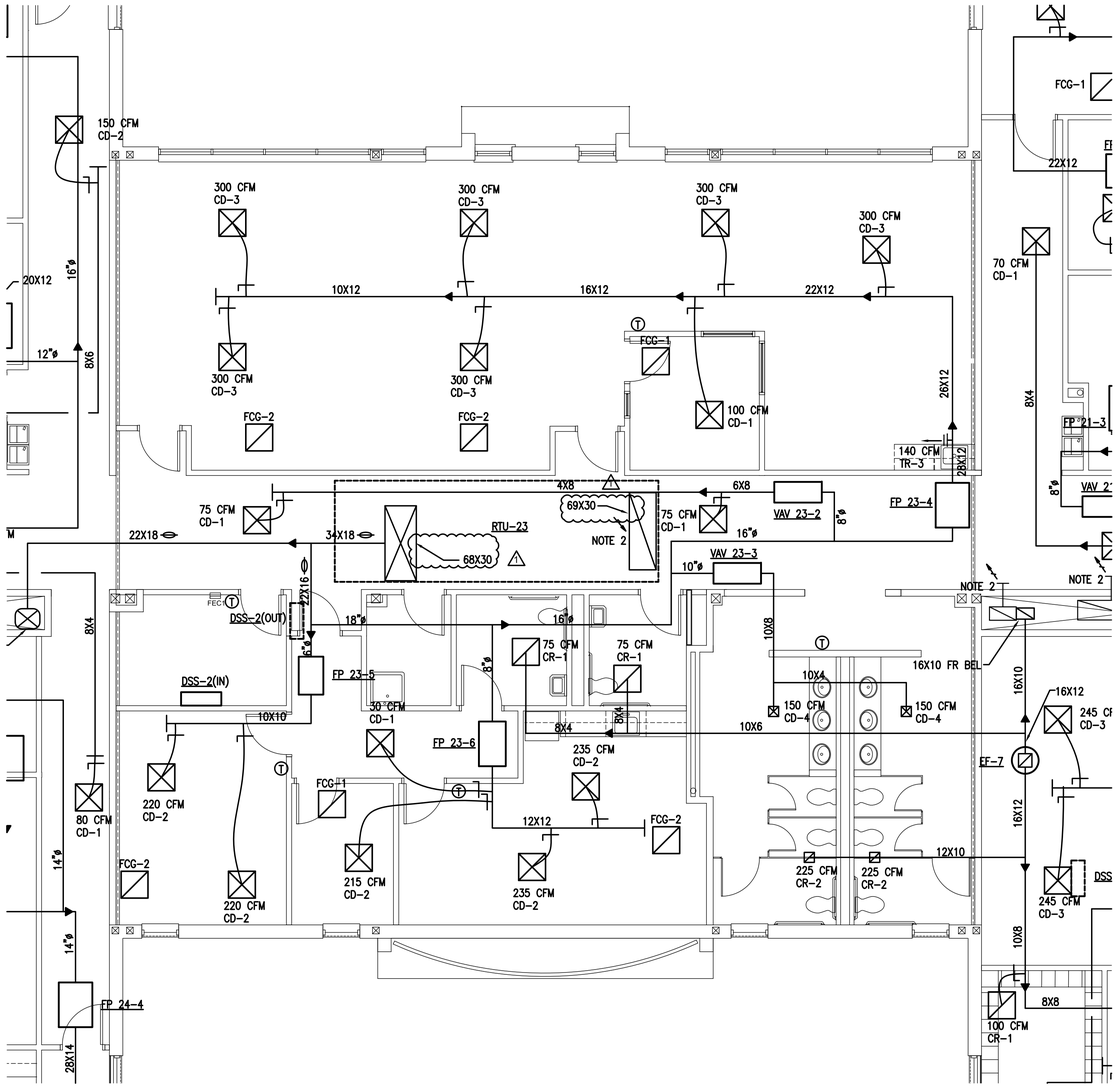
SECOND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA B

M3.2

SHEET _____ of ___X___



1 M3.3 SCALE: 3/16" = 1'-0"

SECOND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA C

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NOTES:
1. RETURN CEILING GRILLE OPEN TO RETURN AIR PLENUM.
2. OPEN END RETURN DUCT ABOVE CEILING. COVER WITH 1/2" WIRE MESH.

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SECOND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA C

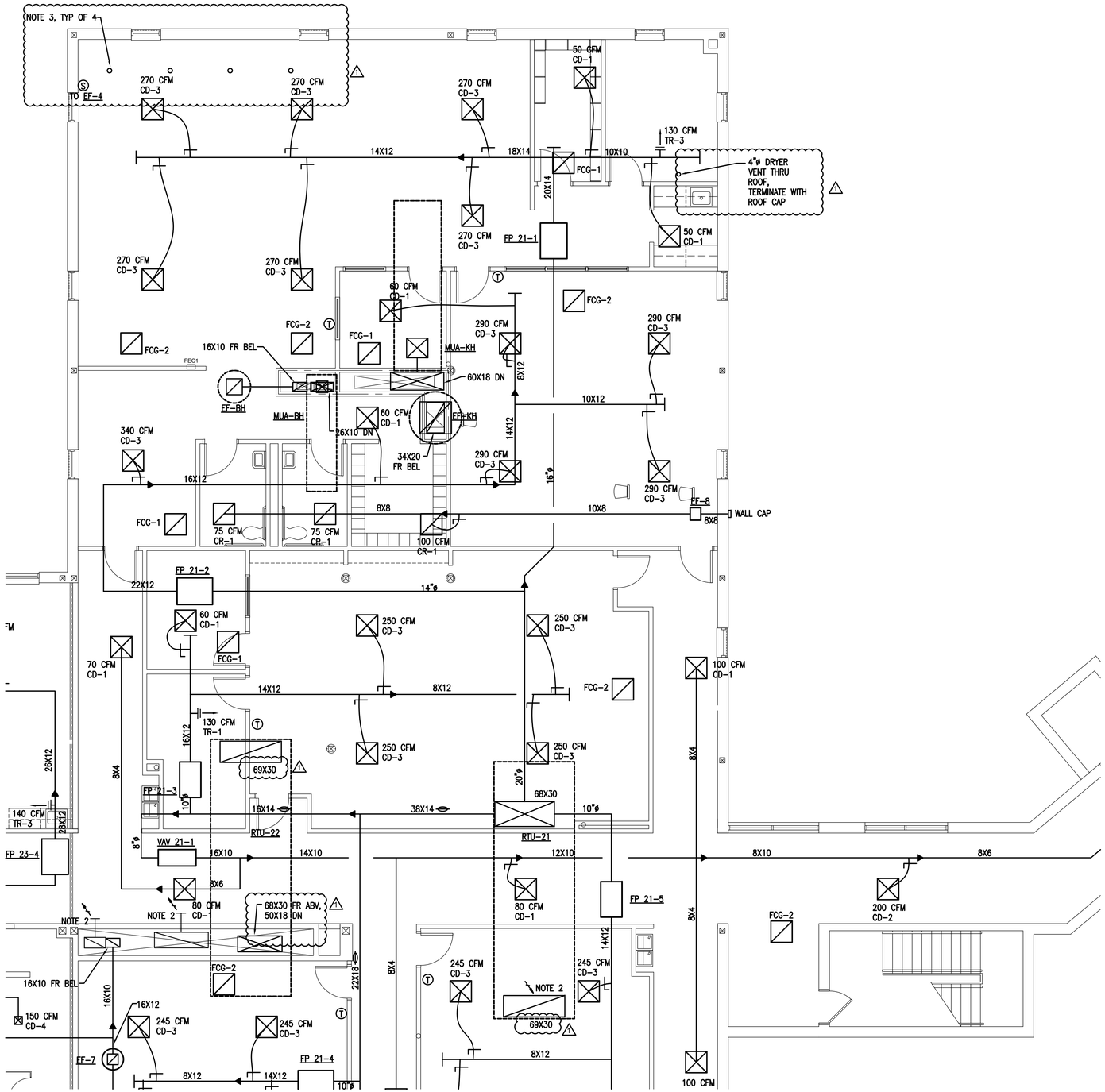
M3.3

SHEET _____ of ___X___

KEYPLAN

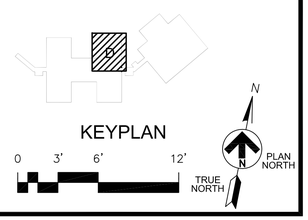
0 3' 6' 12'

N TRUE NORTH PLAN NORTH



1 M3.4 SCALE: 3/16" = 1'-0"

SECOND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA D



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NOTES:
1. RETURN CEILING GRILLE OPEN TO RETURN AIR PLENUM.
2. OPEN END RETURN DUCT ABOVE CEILING. COVER WITH 1/2" WIRE MESH.
3. CONTRACTOR TO CONNECT TO MANICURE TABLE GRILLE AS REQUIRED. EXTEND 5"ø EXHAUST DUCT DOWN TO FIRST FLOOR.

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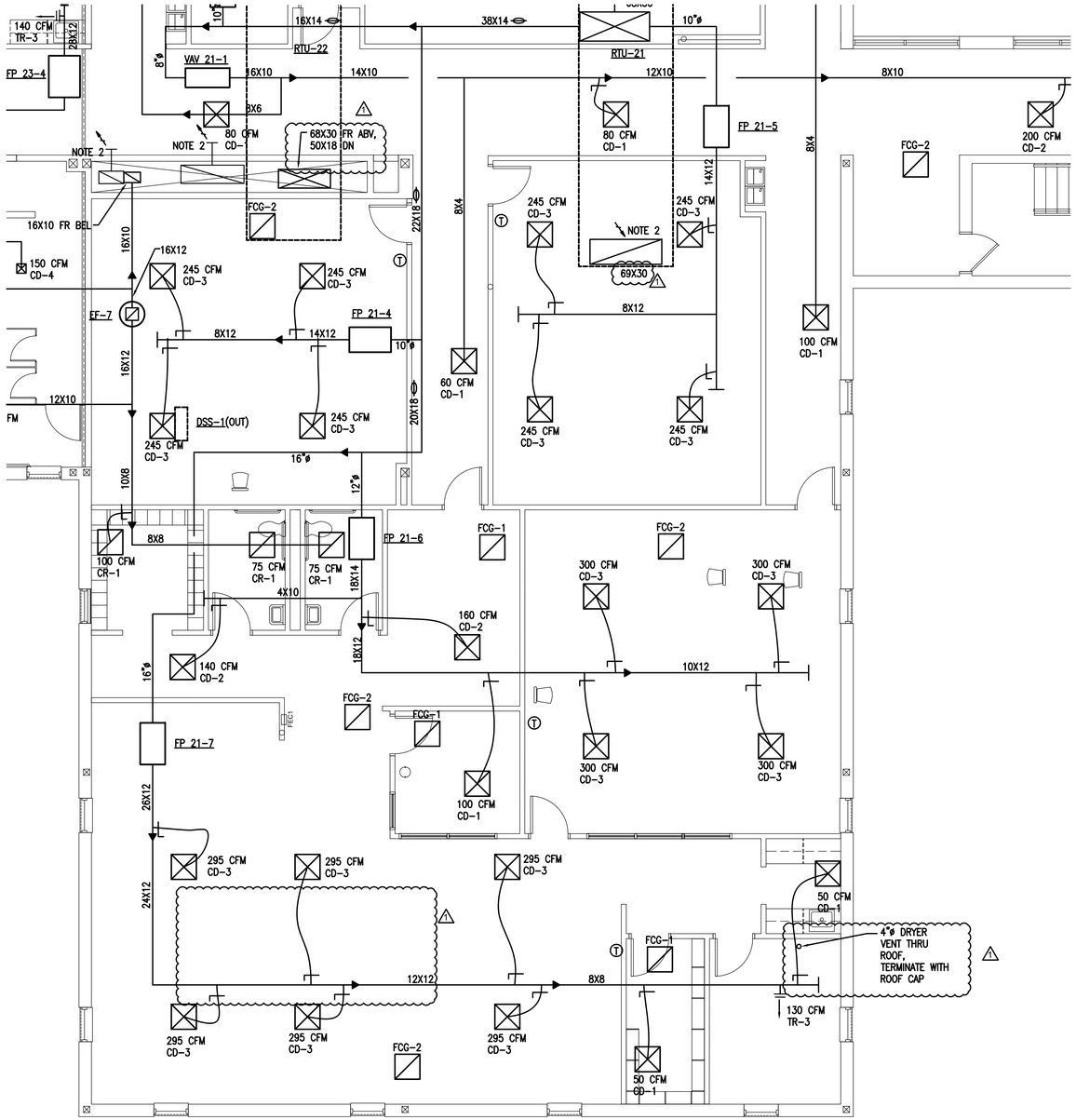
DATE:	6/17/22
SCALE:	AS SHOWN

SECOND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA D

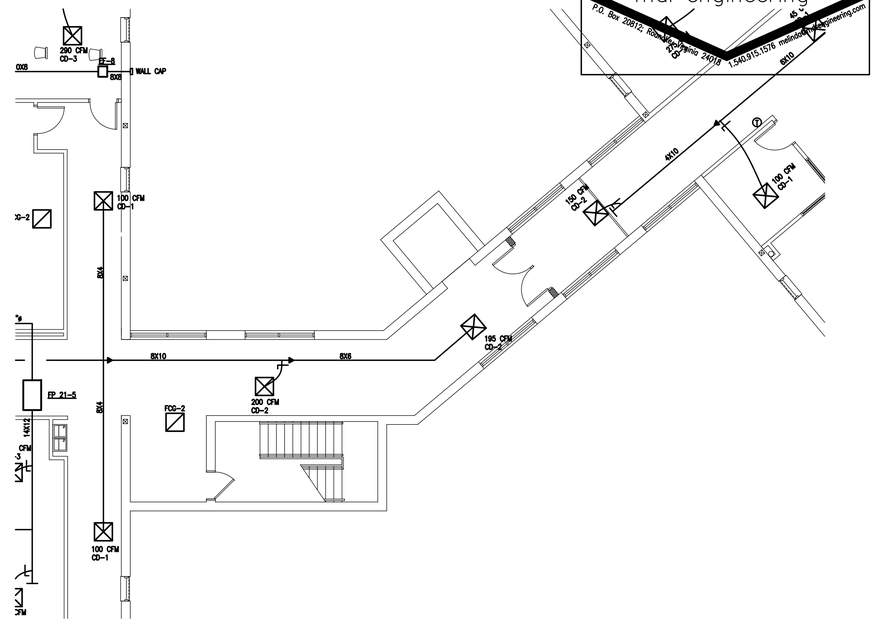
M3.4

SHEET _____ of ___X___



1 M3.5 SCALE: 3/16" = 1'-0"

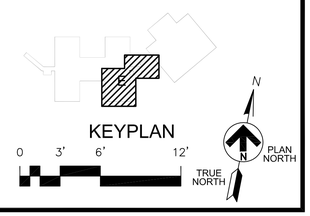
SECOND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA E



2 M3.5 SCALE: 3/16" = 1'-0"

SECOND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA E

NOTES:
1. RETURN CEILING GRILLE OPEN TO RETURN AIR PLENUM.
2. OPEN END RETURN DUCT ABOVE CEILING. COVER WITH 1/2" WIRE MESH.



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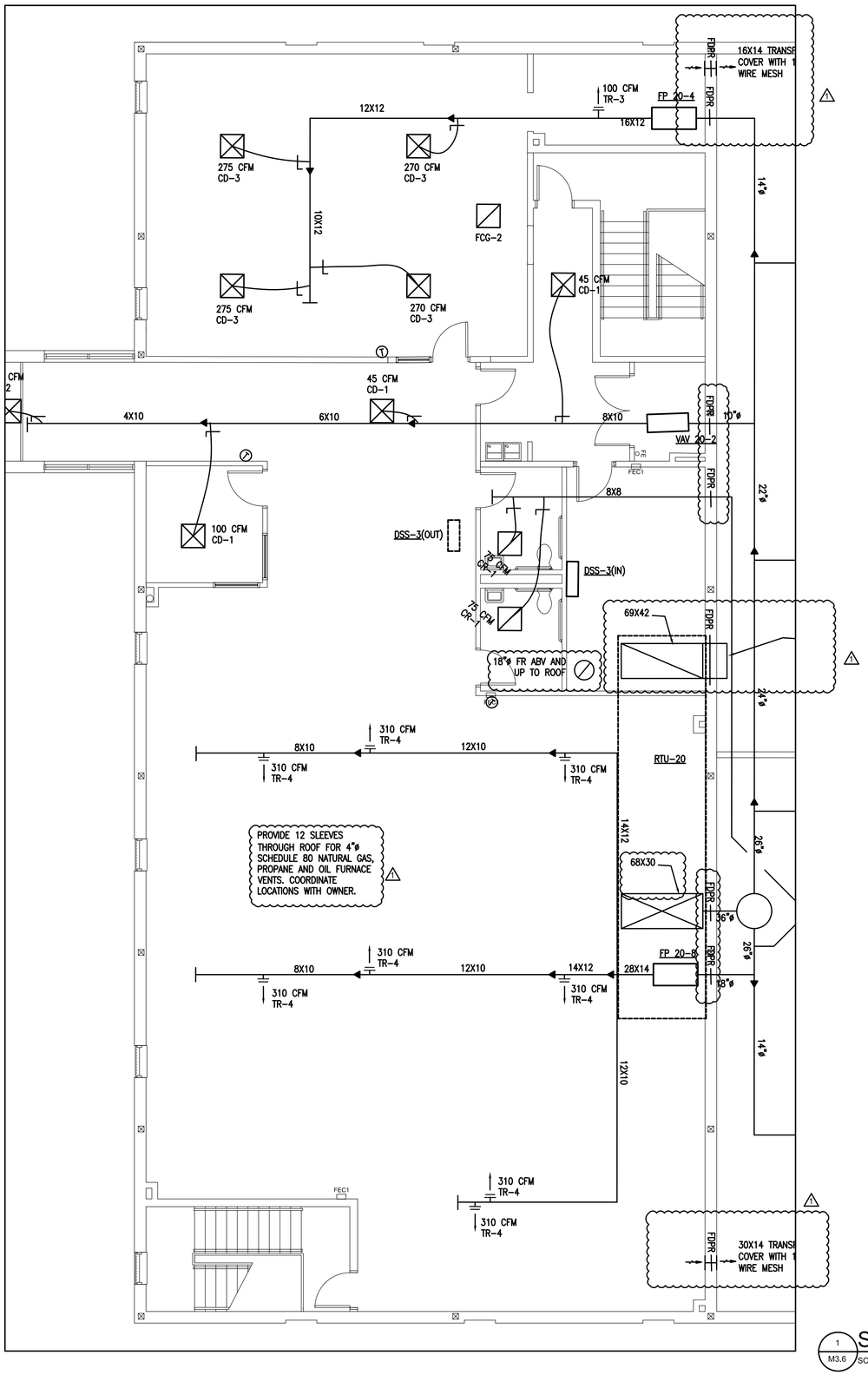
DATE:	6/17/22
SCALE:	AS SHOWN

SECOND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA E

M3.5

SHEET _____ of ___X___



NOTES:
1. RETURN CEILING GRILLE OPEN TO RETURN AIR PLENUM.
2. OPEN END RETURN DUCT ABOVE CEILING. COVER WITH 1/2" WIRE MESH.

1 M3.6 SECOND FLOOR PARTIAL NEW WORK PLAN - AREA F

SCALE: 3/16" = 1'-0"

KEYPLAN

0 3' 6' 12'

N PLAN NORTH

TRUE NORTH

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1	07/18/22	ADDENDUM 3

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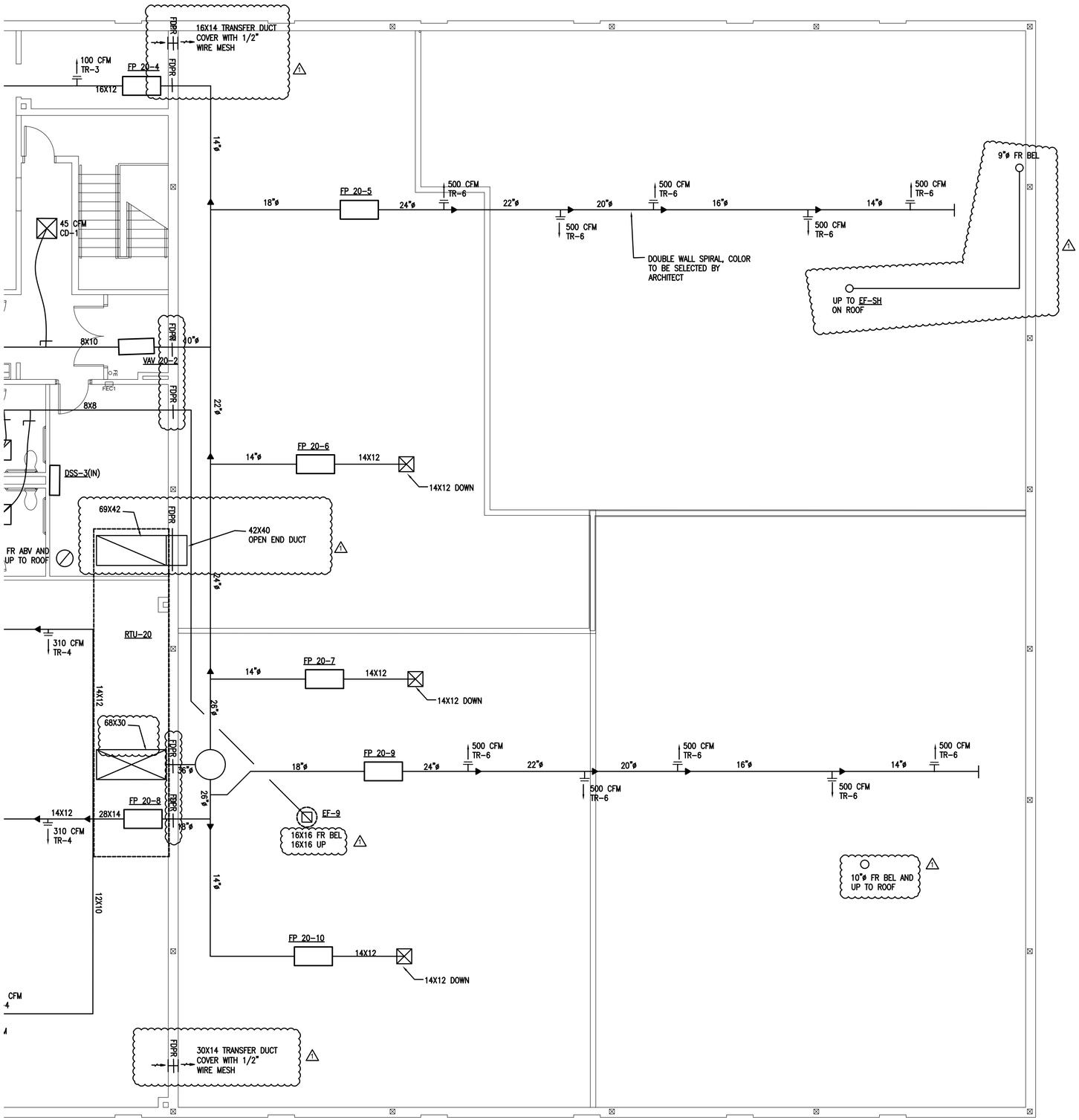
REV'D BY:	MDR
DATE:	6/17/22
SCALE:	AS SHOWN

SECOND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA F

M3.6

SHEET _____ of __X__



1 M3.7 SCALE: 3/16" = 1'-0"

SECOND FLOOR PARTIAL NEW WORK PLAN - AREA G

KEYPLAN

0 3' 6' 12'

N PLAN NORTH / TRUE NORTH

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MELINDA D. RUBLE
No. 028163
06.17.2022
PROFESSIONAL ENGINEER

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SECOND FLOOR PARTIAL NEW WORK PLAN - AREA G

M3.7

SHEET _____ of __X__

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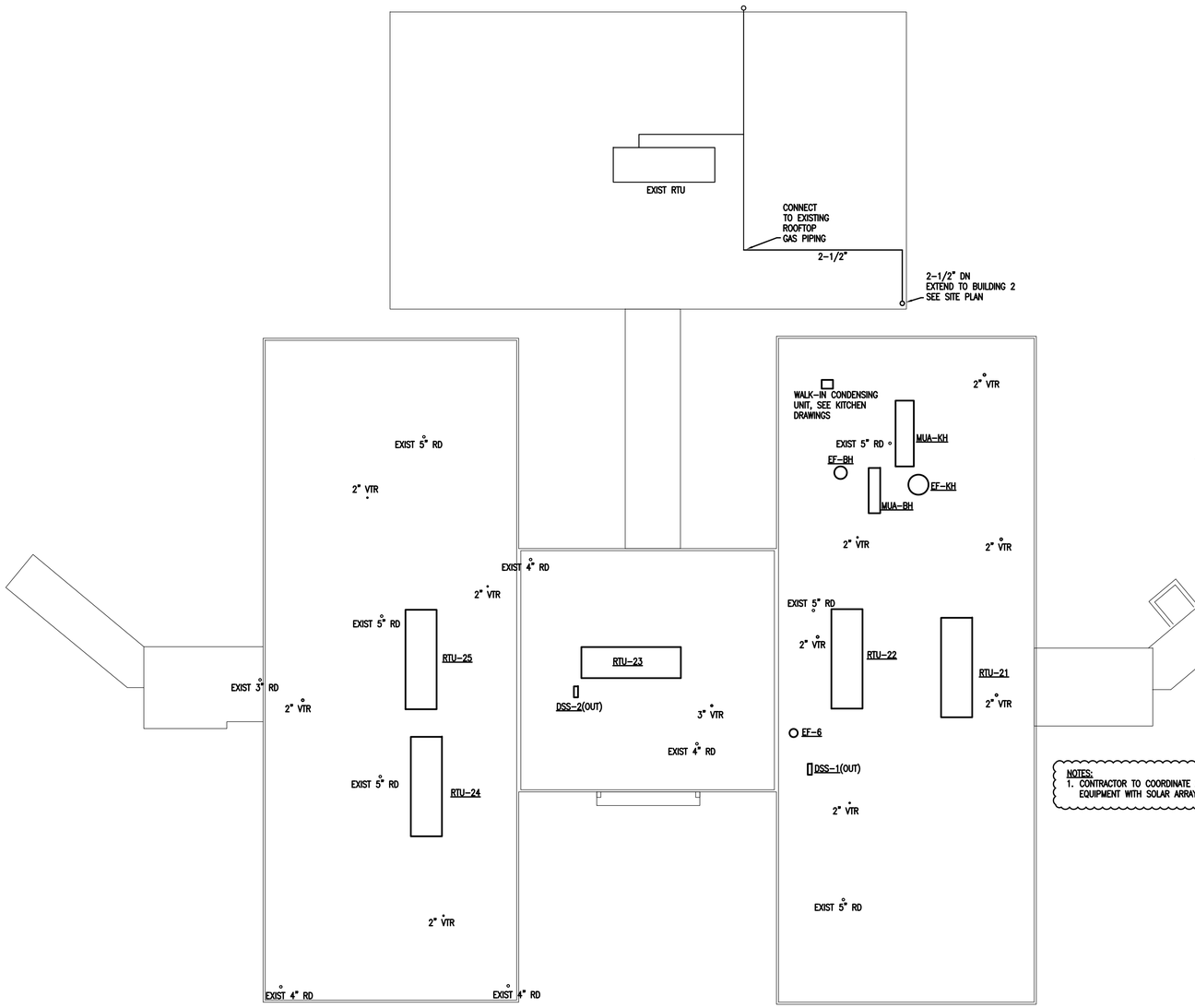

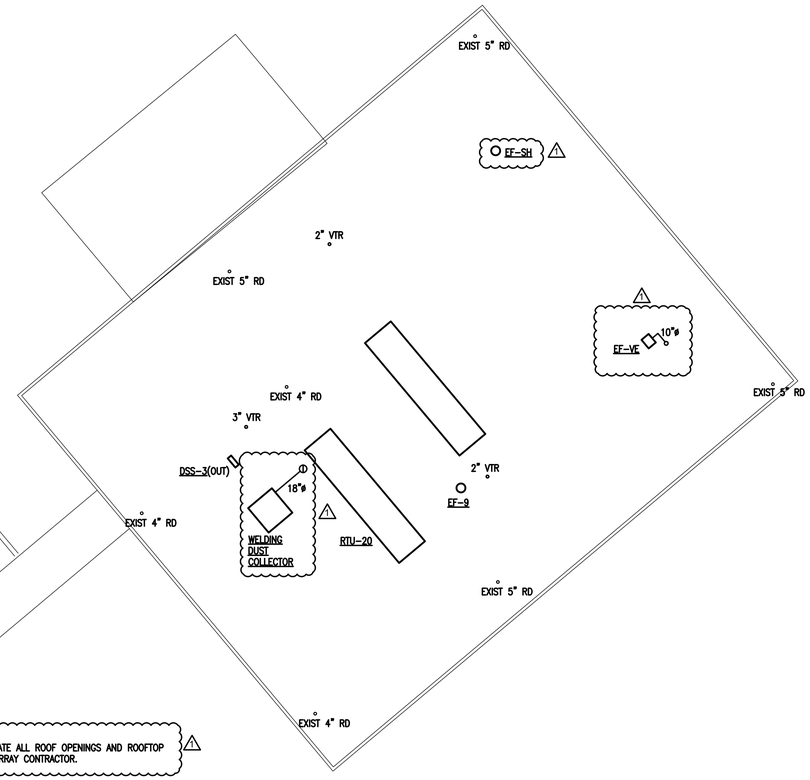

1 / M4.1 MECHANICAL NEW WORK ROOF PLAN
SCALE: 1/16" = 1'-0"

0 3' 6' 12'

N
PLAN NORTH
TRUE NORTH

REVISIONS

No.	DATE	DESCRIPTION
1	07/18/22	ADDENDUM 3

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MECHANICAL NEW WORK ROOF PLAN

M4.2

SHEET _____ of X

PLUMBING EQUIPMENT SCHEDULE

MODEL NUMBERS ARE USED TO ESTABLISH PERFORMANCE REQUIREMENTS. EQUALS SHALL BE ACCEPTED

WC-1	TOTO CT708E, ELONGATED VITREOUS CHINA WATER CLOSET (FLUSH VALVE WALL MTD., 1.28 GPF); SIPHON JET, BEMIS 1955SSCT ELONGATED SEAT, TOTO TET1LA32 SENSOR TOILET FLUSH VALVE; SIPHON JET CARRIER.
WC-2	TOTO CT708E, ELONGATED VITREOUS CHINA WATER CLOSET (FLUSH VALVE WALL MTD., 1.28 GPF); SIPHON JET, BEMIS 1955SSCT ELONGATED SEAT, TOTO TET1LA32 SENSOR TOILET FLUSH VALVE; SIPHON JET CARRIER.
L-1	AMERICAN STANDARD LUCERNE #0356.041, VITREOUS CHINA; MOEN 8210F15 FAUCET WITH WHEELCHAIR OFFSET GRID DRAIN STRAINER AND ANGLE SUPPLIES WITH LOOSE KEY STOPS; PROVIDE ZURN Z1231 CARRIER. PROVIDE THERMOSTATIC MIXING VALVE, WILKINS MODEL ZW1070 AND P-TRAP.
L-2	AMERICAN STANDARD AQUALYN 0475.020, VITREOUS CHINA; MOEN FAUCET MODEL NO. 8210F15 WITH WHEELCHAIR OFFSET; GRID DRAIN STRAINER, AND ANGLE SUPPLIES WITH LOOSE KEY STOPS. PROVIDE TRUBRO #102W PRE-MOLDED INSULATION KIT INSULATING BOTH SUPPLIES AND DRAIN. PROVIDE THERMOSTATIC MIXING VALVE, WILKINS MODEL ZW1070, ASSE 1070 COMPLIANT.
S-1	FIAT FL-1 MOLDED STONE SERV-A-SINK; FIAT A-1 DECK MOUNTED FAUCET, CHROME P-TRAP AND SUPPLIES.
S-2	ELKAY #LRAD-2522 LUSTERSTONE STAINLESS STEEL SINGLE BOWL HANDICAP KITCHEN SINK, 18 GA., TYPE 304 STAINLESS SELF RIM, 4-HOLE, 6-1/2 DEEP; #420 DELTA FAUCET WITH 8" SPOUT, SINGLE LEVER CONTROL AND SPRAY ATTACHMENT, CHROME P-TRAP AND SUPPLIES, #LK35 STRAINERS.
S-3	BUY-RITE ICON BACKWASH UNIT, BLACK BOWL; WITH DUAL FUNCTION NOZZLE, VACUUM BREAKER, #8750 JR SMITH HAIR INTERCEPTOR, CHROME P-TRAP AND SUPPLIES, PROVIDE THERMOSTATIC MIXING VALVE, WILKINS MODEL ZW1070, ASSE 1070 COMPLIANT
S-4	ELKAY #LRAD-2522 LUSTERSTONE STAINLESS STEEL SINGLE BOWL HANDICAP KITCHEN SINK, 18 GA., TYPE 304 STAINLESS SELF RIM, 4-HOLE, 6-1/2 DEEP; #420 DELTA FAUCET WITH 8" SPOUT, SINGLE LEVER CONTROL, CHROME P-TRAP AND SUPPLIES, #LK35 STRAINERS, WILKINS ZW1070 TMV, HAWS 7610 EYE WASH.
S-5	ELKAY #EWMA4820C STAINLESS STEEL MULTIPLE STATION HAND WASH SINK 14 GA., WALL MOUNT WITH LK18B DRAIN AND TWO LK940GN05T4H FAUCETS; OFFSET TAIL PIECE, CHROME P-TRAP AND SUPPLIES
SH-1	FREEDOM SHOWERS APFQ6337BF875, 63X38 SHOWER COMPLETE PACKAGE TO INCLUDE CURTAIN ROD, SEAT, GRAB BARS, DRAIN; MOEN 2352 SINGLE HANDLE SHOWER VALVE WITH SHOWER HEAD, PRESSURE BALANCED. COLOR TO BE WHITE.
JS-1	FIAT #MSB-2424 MOLDED STONE MOP SERVICE BASIN, 24"x24"x10"; #830-AA WALL MTD FAUCET W/VACUUM BREAKER & BUCKET HOOK; #832-AA HOSE & BRACKET, #E-77-AA VINYL BUMPER GUARD. #889-CC MOP HANGER & #QDC-3-2 QUICK DRAIN CONNECTOR, #MSG2424 STAINLESS STEEL WALL GUARDS.
EWC-1	OASIS #PGFBEBFSLTT TOUCHLESS TWO STATION ELECTRIC WATER COOLER, STAINLESS STEEL, LEAD FREE WORKING COMPONENTS; 8.0 GPH CAPACITY AND 4.6 AMPS.
HB-1	CHICAGO FAUCETS 293-E27CP INSIDE SILL FITTING, POLISHED CHROME PLATED FINISH SOLID BRASS BODY CONSTRUCTION, 2-1/4" TEE HANDLE, 1/2", NPT FEMALE INLET, 3/4" MALE GARDEN HOSE THREAD OUTLET, SLOW COMPRESSION RENEWABLE CARTRIDGE, VACUUM BREAKER.
FD-1	JOSAM #30000-5A-2-17 FLOOR DRAIN, SATIN FINISH BRONZE TOP, NON-CLOG STRAINER, SECURED GRATE; 4"DEEP SEAL TRAP. SET RIM FLUSH WITH FINISH FLOOR.
FD-2	JOSAM #30000-5A-2-17 FLOOR DRAIN, SATIN FINISH BRONZE TOP, NON-CLOG STRAINER, SECURED GRATE; 4"DEEP SEAL TRAP, CLAMPING RING. SET RIM FLUSH WITH FINISH FLOOR.
FS-1	JOSAM #49300 FLOOR SINK, 8" SQUARE CAST IRON WITH 5-7/8" DEEP SUMP, CLAMPING RING
CO	JOSAM CLEANOUT FLOOR ROUND, SATIN BRONZE TOP, RECESSED PLUG. WALL CHROME FLUSH WALL PLATE, RECESSED PLUG.
OIL/ SEDIMENT TRAP	ZURN Z1188 OIL INTERCEPTOR, 100 GPM. 110 GALLON
ST-1	ZURN Z1187-SI SEDIMENT INTERCEPTOR, 20 GPM FLOW RATE, 60 GALLON STATIC CAPACITY
EW-1	HAWS MODEL 7360B-7460B EMERGENCY EYE WASH OR EQUAL WITH THERMOSTATIC MIXING VALVE
WMB	ABS BOXES, ONE BOX WITH CENTER DRAIN AND ONE BOX WITH TWO WATER VALVES & WATER HAMMER ARRESTORS. PROVIDE FLANGED BOXES SUITABLE FOR DRYWALL INSTALLATION.
TD-1	ZURN Z884 4" WIDE TRENCH DRAIN SYSTEM, 3.25" THROAT; CHANNEL TO HAVE 1.04% BUILT-IN SLOPE & INVERT TO BE DETERMINED BY CONTRACTOR; PROVIDE WITH 2" END OUTLET, CAST IRON SLOTTED GRATE AND END CAP. TRENCH DRAIN TOTAL LENGTH SHALL BE 8'-0".
HWH-1	STATE PCE-6-10MSA-25 ELECTRIC WATER HEATER, SINGLE ELEMENT, 10 GAL. CAPACITY TANK, 10 GAL/HR RECOVERY AT 40 DEG. F. AND 100 DEG.F. RISE, 2500 W; 230/1; T&P RELIEF VALVE.
HWH-2	STATE PCE-6-10MSA-15 ELECTRIC WATER HEATER, SINGLE ELEMENT, 10 GAL. CAPACITY TANK, 6 GAL/HR RECOVERY AT 40 DEG. F. AND 100 DEG.F. RISE, 1500 W; 230/1; T&P RELIEF VALVE.
HWH-3	STATE PCE-20-10MSA-35 ELECTRIC WATER HEATER, SINGLE ELEMENT, 10 GAL. CAPACITY TANK, 14 GAL/HR RECOVERY AT 40 DEG. F. AND 100 DEG.F. RISE, 3500 W; 230/1; T&P RELIEF VALVE.
HWH-4	STATE SUF119-400E GAS FIRED WATER HEATER, 119 GALLON CAPACITY TANK, 460 GAL/HR RECOVERY AT 40 DEG. F. ENT. AND 100 DEG.F. RISE, 120V/1ø; 399.9 MBH; ASME RATED, T&P RELIEF VALVE.
HWH-5	STATE CSB-53-135-SFE ELECTRIC WATER HEATER, THREE ELEMENTS, 50 GAL. CAPACITY TANK, 55 GAL/HR RECOVERY AT 40 DEG. F. AND 100 DEG.F. RISE, 13500 W; 230/1; T&P RELIEF VALVE.
HWH-6	STATE PCE-20-10MSA-4 ELECTRIC WATER HEATER, SINGLE ELEMENT, 20 GAL. CAPACITY TANK, 17 GAL/HR RECOVERY AT 40 DEG. F. AND 100 DEG.F. RISE, 4000 W; 230/1; T&P RELIEF VALVE.
HWH-7	STATE PCE-40-20LSA-5 ELECTRIC WATER HEATER, SINGLE ELEMENT, 40 GAL. CAPACITY TANK, 21 GAL/HR RECOVERY AT 40 DEG. F. AND 100 DEG.F. RISE, 5000 W; 230/1; T&P RELIEF VALVE.
HWH-8	STATE PCE-40-20LSA-5 ELECTRIC WATER HEATER, SINGLE ELEMENT, 40 GAL. CAPACITY TANK, 21 GAL/HR RECOVERY AT 40 DEG. F. AND 100 DEG.F. RISE, 5000 W; 230/1; T&P RELIEF VALVE.
SP-1	ZOELLER N153 SUMP PUMP, 1/2 HP., 120/1 PHASE, 50 GPM AT 20 FT. HEAD, 1-1/2" EFFLUENT, DIAPHRAGM PRESSURE SWITCH, PROVIDE DISCONNECT. UNIT TO BE HYDRAULIC FLUID SENSING TYPE WITH ALARM PANEL.
RPZ	WATTS #909 REDUCED PRESSURE ZONE BACKFLOW PREVENTOR, BRONZE CONSTRUCTION, EPOXY COATED CAST IRON CHECK VALVE BODY WITH BRONZE SEATS, FDA APPROVED EPOXY COATED CAST IRON RELIEF VALVE WITH TRM.
HWRP-1	BELL & GOSSET #100 CIRCULATING PUMP, 1/12 HP., 120 VOLT, 15 GPM AT 7 FT. HEAD, BRONZE TOP.

LEGEND

- BRANCH CONNECTION – BOTTOM OF MAIN
- BRANCH CONNECTION – SIDE OF MAIN
- BRANCH CONNECTION – TOP OF MAIN
- PIPE DOWN OR PIPE FROM BELOW
- PIPE UP OR PIPE FROM ABOVE
- DIRECTION OF FLOW
- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- SPRINKLER HEAD
- SANITARY SEWER OR DRAIN
- SANITARY VENT
- RL — RAIN LEADER ABOVE LOWEST FLOOR
- SD — STORM SEWER OR DRAIN
- CO — CLEANOUT FLUSH WITH FLOOR
- CO — CLEANOUT BELOW FLOOR
- HOSE BIBBS (PLAN & ELEVATION)
- GATE VALVE
- BALL VALVE
- THERMOMETER
- PRESSURE REDUCING VALVE (PRV)
- RELIEF VALVE
- BACKFLOW PREVENTER (BFP)
- CONNECT TO EXISTING

ABBREVIATIONS

ABV	ABOVE
BTU	BRITISH THERMAL UNIT
BEL	BELOW
BET	BETWEEN
CLG	CEILING
CO	CLEANOUT
CONC	CONCRETE
CONN	CONNECT, CONNECTION
CW	COLD WATER
CONT	CONTINUED
DN	DOWN
EA	EACH
EWC	ELECTRIC WATER COOLER
F	DEGREES FARENHEIT
FD	FLOOR DRAIN
FL	FLOOR
FR	FROM
FT	FEET
GPM	GALLONS PER MINUTE
GV	GATE VALVE
HB	HOSE BIBB
HW	HOT WATER
IN	INCH, INCHES
MAX	MAXIMUM
MIN	MINUMUM
RD	ROOF DRAIN
REQD	REQUIRED
RL	ROOF LEADER
SH	SHEET
TEMP	TEMPERATURE
TYP	TYPICAL
V	SANITARY VENT
VTR	VENT THRU ROOF
W	SANITARY WASTE
WH	WALL HYDRANT

PLUMBING FIXTURE INSTALLATION SCHEDULE

FIXTURE	MARK	MH	CW	HW	VENT	WASTE
WATER CLOSET(HC)	WC-1	17"	1"	--	2"	4"
WATER CLOSET	WC-2	15"	1"	--	2"	4"
LAVATORY	L-1	34"	1/2"	1/2"	1-1/2"	2"
LAVATORY	L-2	COUNTER	1/2"	1/2"	1-1/2"	2"
JANITOR SINK	JS-1	FLOOR	1/2"	1/2"	1-1/2"	2"
SHOWER	SH-1	72"(A)	1/2"	1/2"	-	-
ELECTRIC WATER COOLER	EWC-1	36"(B)	1/2"	--	1-1/2"	2"
SINK	S-1	FLOOR	1/2"	1/2"	1-1/2"	2"
SINK	S-2	COUNTER	1/2"	1/2"	1-1/2"	2"
SINK	S-3	FLOOR	1/2"	1/2"	1-1/2"	2"
SINK	S-4	COUNTER	1/2"	1/2"	1-1/2"	2"
SINK	S-5	34"	1/2"(2)	1/2"(2)	1-1/2"	2"

NOTES

1. SIZE GIVEN ARE FOR FIXTURE ONLY. EXCEPTIONS, IF ANY, ARE SHOWN ON PLANS.
2. MOUNTING HEIGHT DIMENSIONS ARE TO FLOOD LEVEL RIM OF FIXTURE, UNLESS NOTED OTHERWISE.
   - (A) MOUNTING HEIGHT TO SHOWER HEAD
   - (B) MOUNTING HEIGHT TO LOWER SPOUT OUTLET.
3. ALL PUBLIC FAUCETS SHALL BE PROVIDED WITH TEMPERING VALVE, WILKINS MODEL #ZW1070 OR EQUAL AS REQUIRED.

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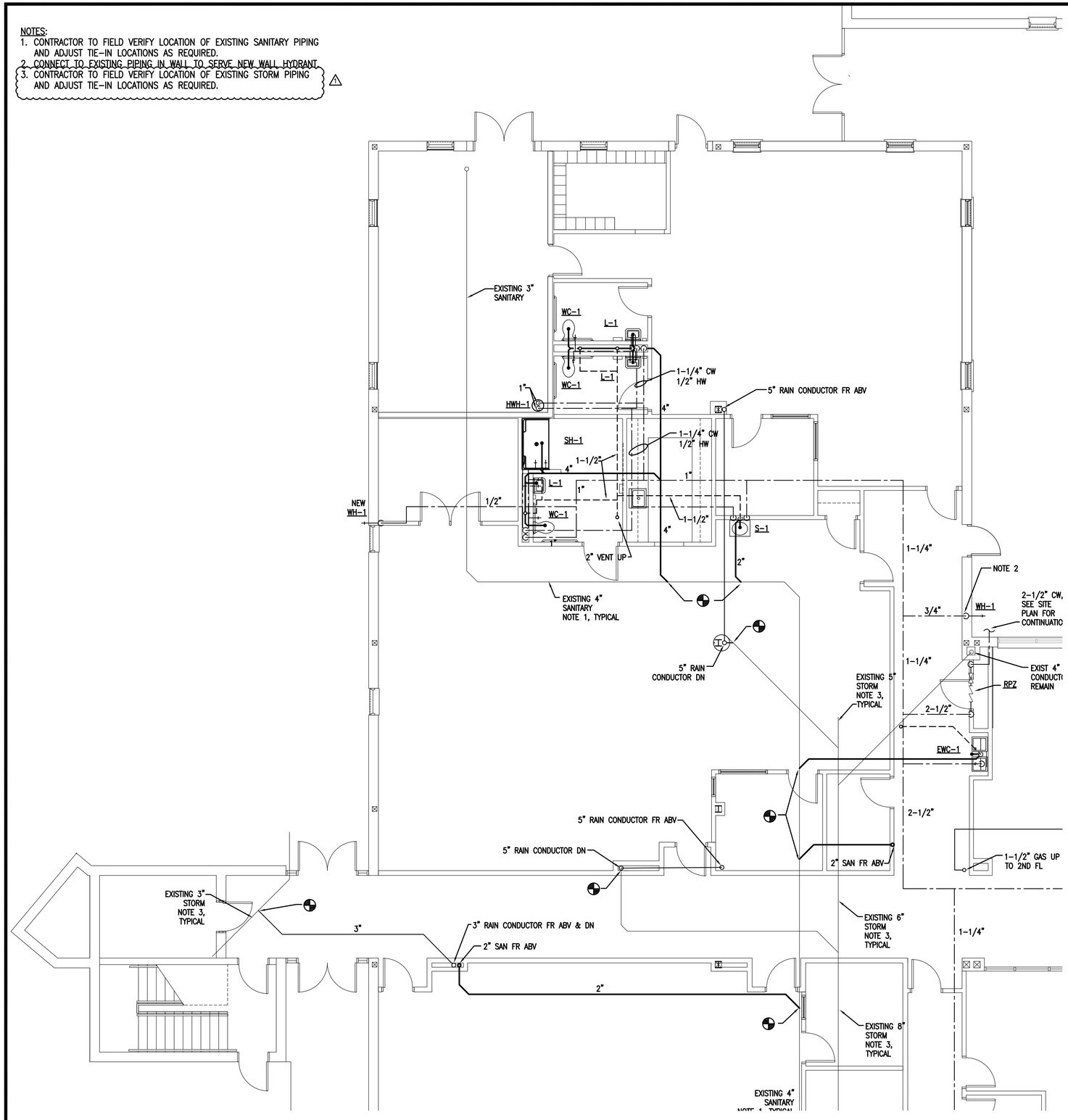
PLUMBING LEGEND & SCHEDULES

P0.1

SHEET _____ of ___X___

NOTES:
1. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING SANITARY PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.
2. CONNECT TO EXISTING PIPING IN WALL TO SERVE NEW WALL HYDRANT.
3. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING STORM PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED. ⚠



1 P2.1 GROUND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA A
SCALE: 3/16" = 1'-0"

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KEYPLAN

0 3' 6' 12'

N PLAN NORTH
N TRUE NORTH

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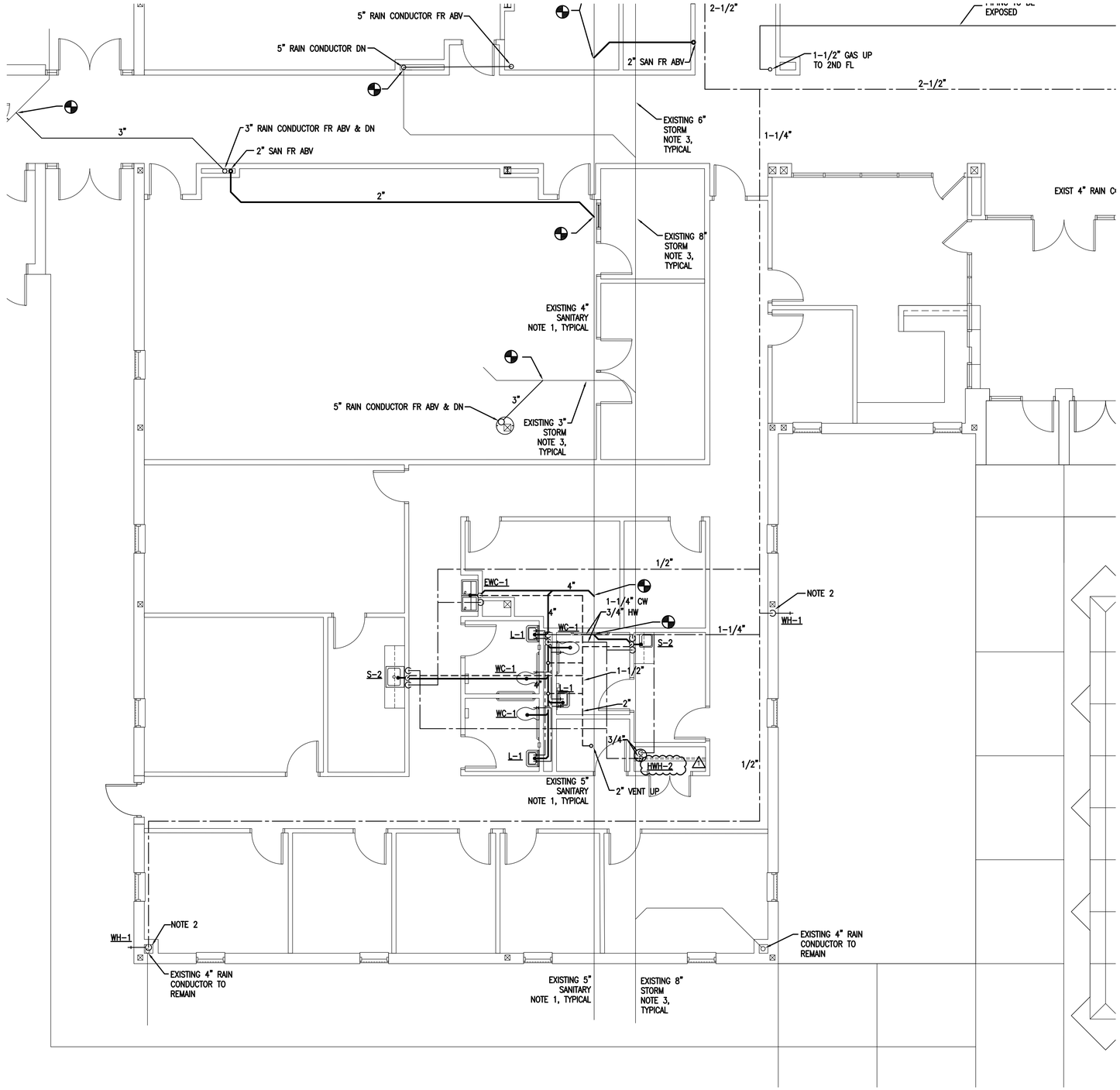
GROUND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA A

P2.1

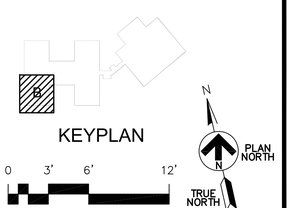
SHEET _____ of ___X___



NOTES:
1. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING SANITARY PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.
2. CONNECT TO EXISTING PIPING IN WALL TO SERVE NEW WALL HYDRANT.
3. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING STORM PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.

1 / P2.2 GROUND FLOOR ENLARGED PARTIAL PLUMBING NEW WORK PLAN

SCALE: 3/16" = 1'-0"



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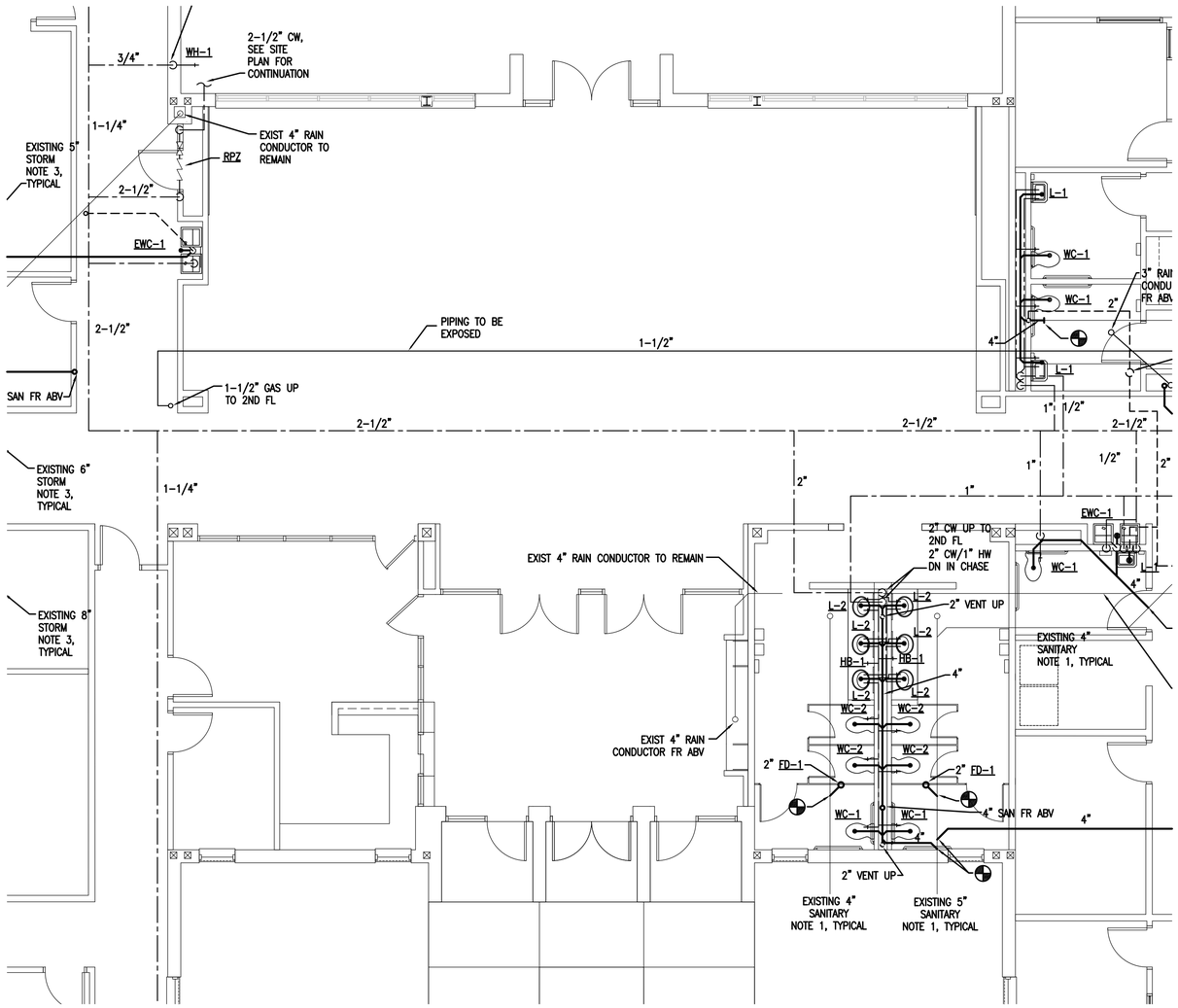
GROUND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA B

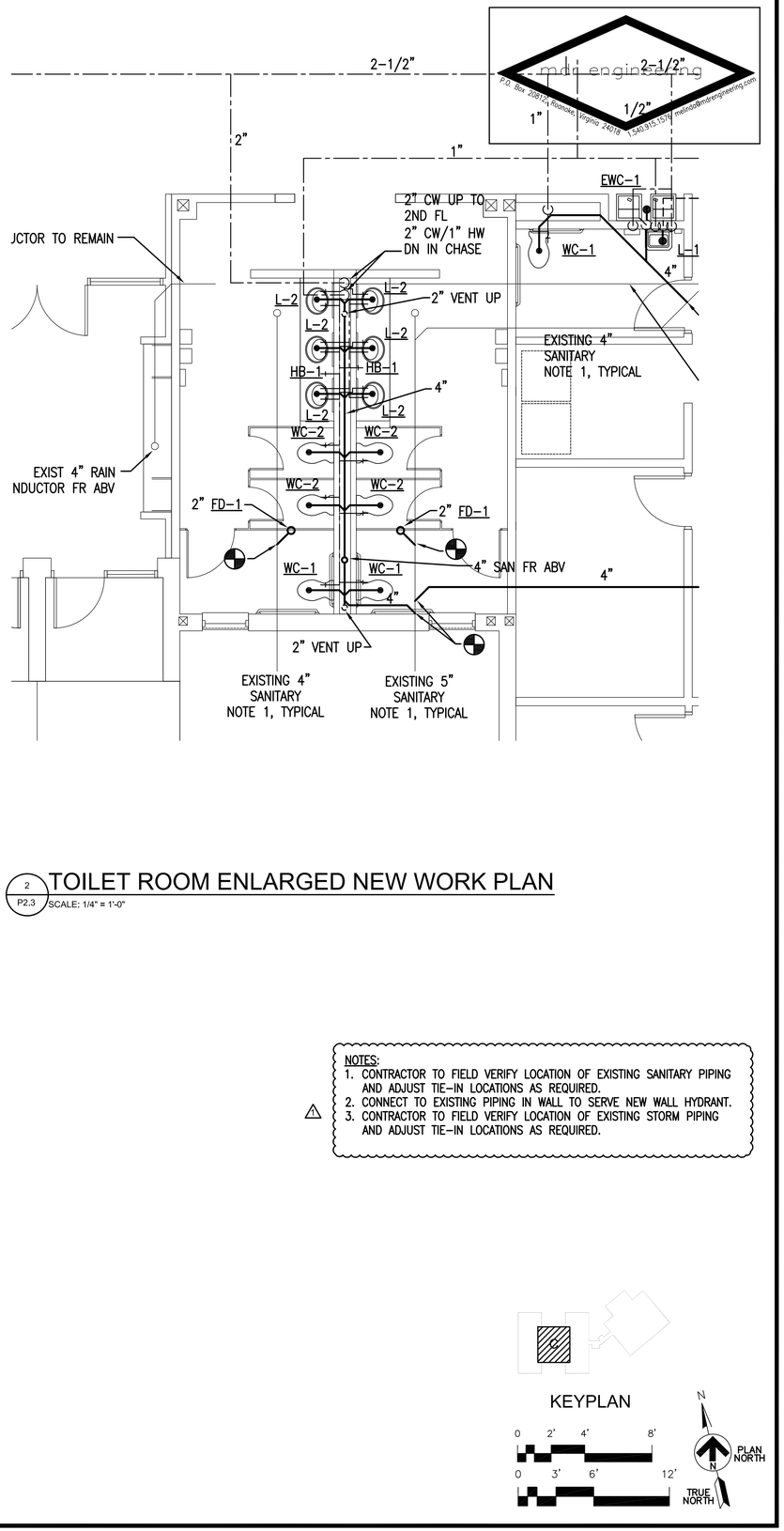
P2.2

SHEET _____ of ___X___



1 P2.3 GROUND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA C

SCALE: 3/16" = 1'-0"



2 P2.3 TOILET ROOM ENLARGED NEW WORK PLAN

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

NOTES:
1. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING SANITARY PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.
2. CONNECT TO EXISTING PIPING IN WALL TO SERVE NEW WALL HYDRANT.
3. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING STORM PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.

KEYPLAN

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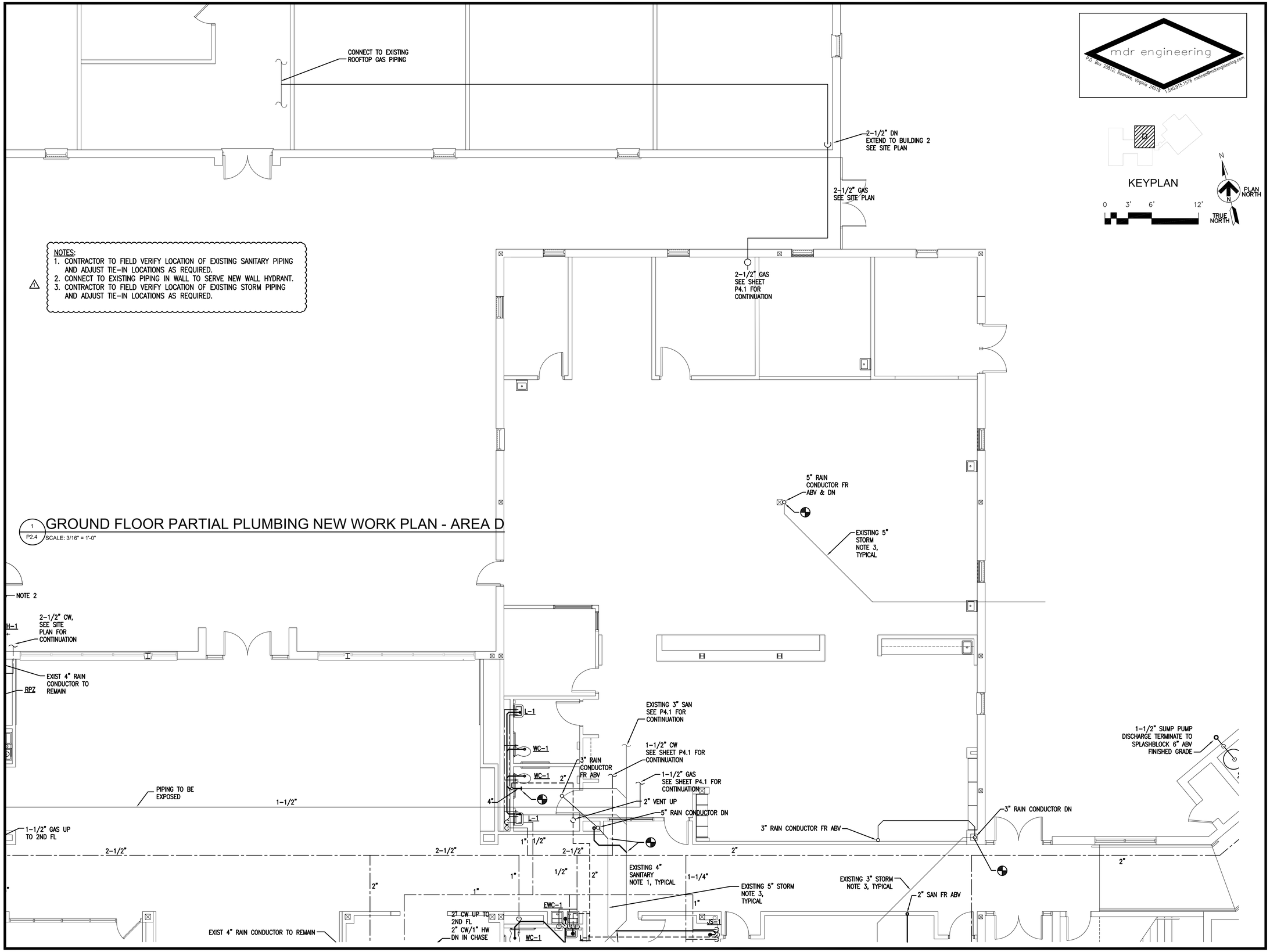
DATE:	6/17/22
SCALE:	AS SHOWN

GROUND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA C

P2.3

SHEET _____ of __X__



NOTES:
1. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING SANITARY PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.
2. CONNECT TO EXISTING PIPING IN WALL TO SERVE NEW WALL HYDRANT.
3. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING STORM PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.

1 / P2.4 GROUND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA D

SCALE: 3/16" = 1'-0"

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KEYPLAN

0 3' 6' 12'

PLAN NORTH

TRUE NORTH

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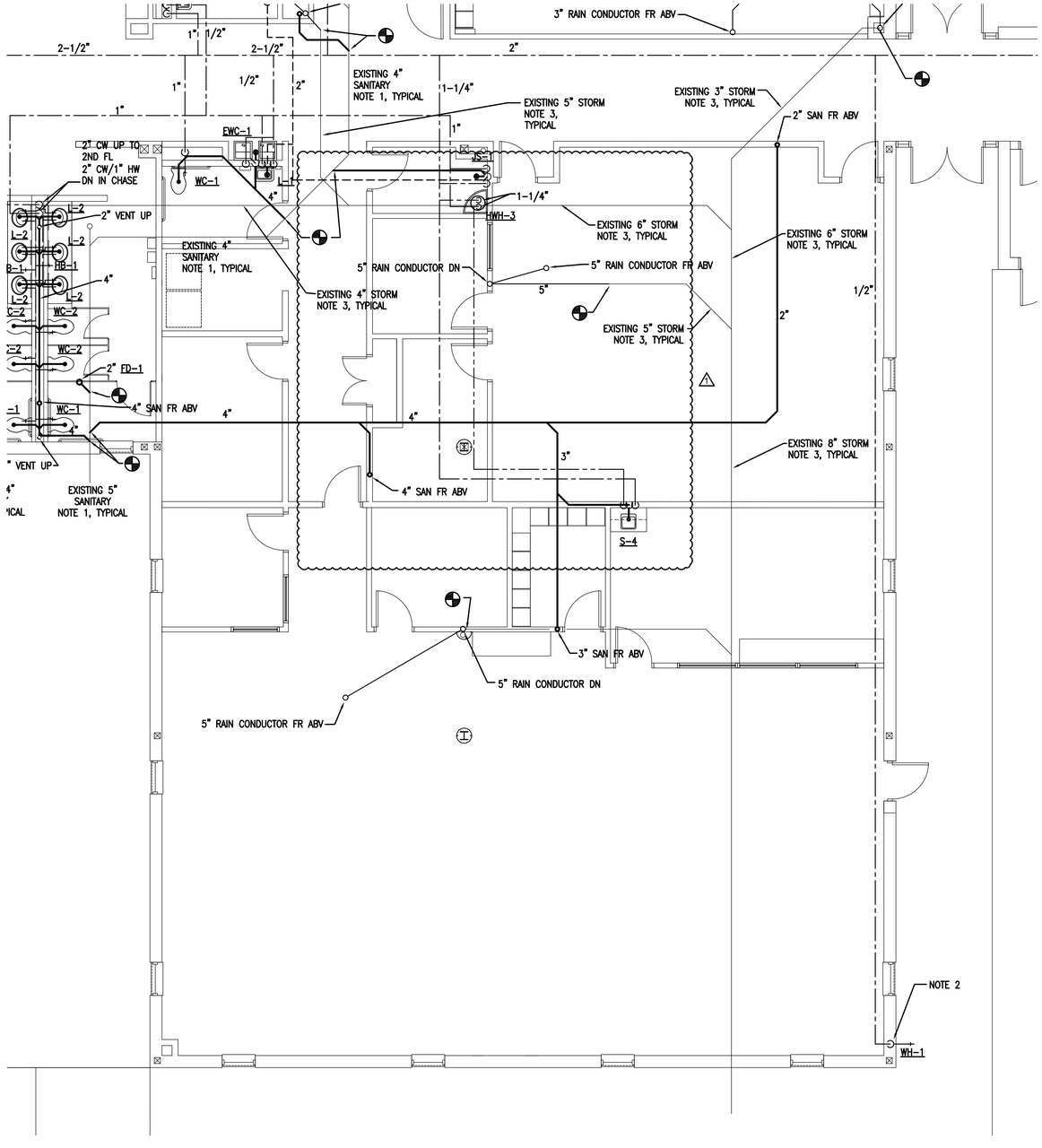
GROUND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA D

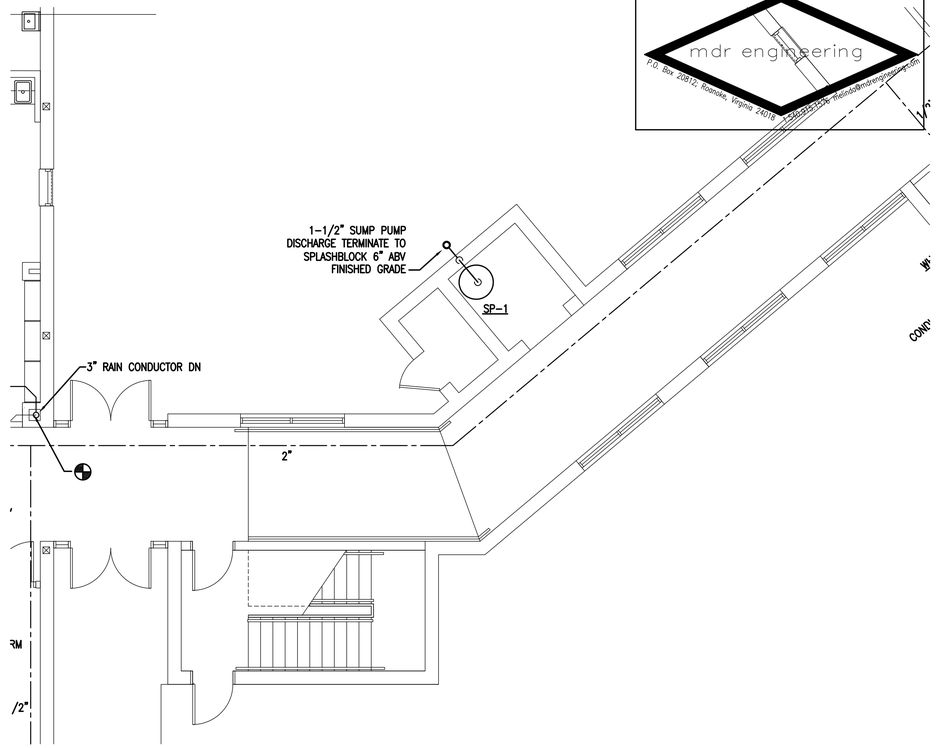
P2.4

SHEET _____ of X



1 P2.5 GROUND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA E

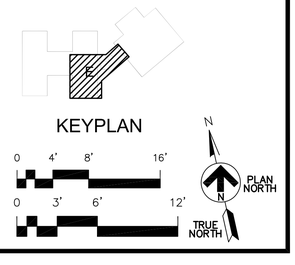
SCALE: 3/16" = 1'-0"



2 P2.5 GROUND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA E

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

NOTES:
1. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING SANITARY PIPING AND ADJUST TIE–IN LOCATIONS AS REQUIRED.
2. CONNECT TO EXISTING PIPING IN WALL TO SERVE NEW WALL HYDRANT.
3. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING STORM PIPING AND ADJUST TIE–IN LOCATIONS AS REQUIRED.



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1	07/18/22	ADDENDUM 3

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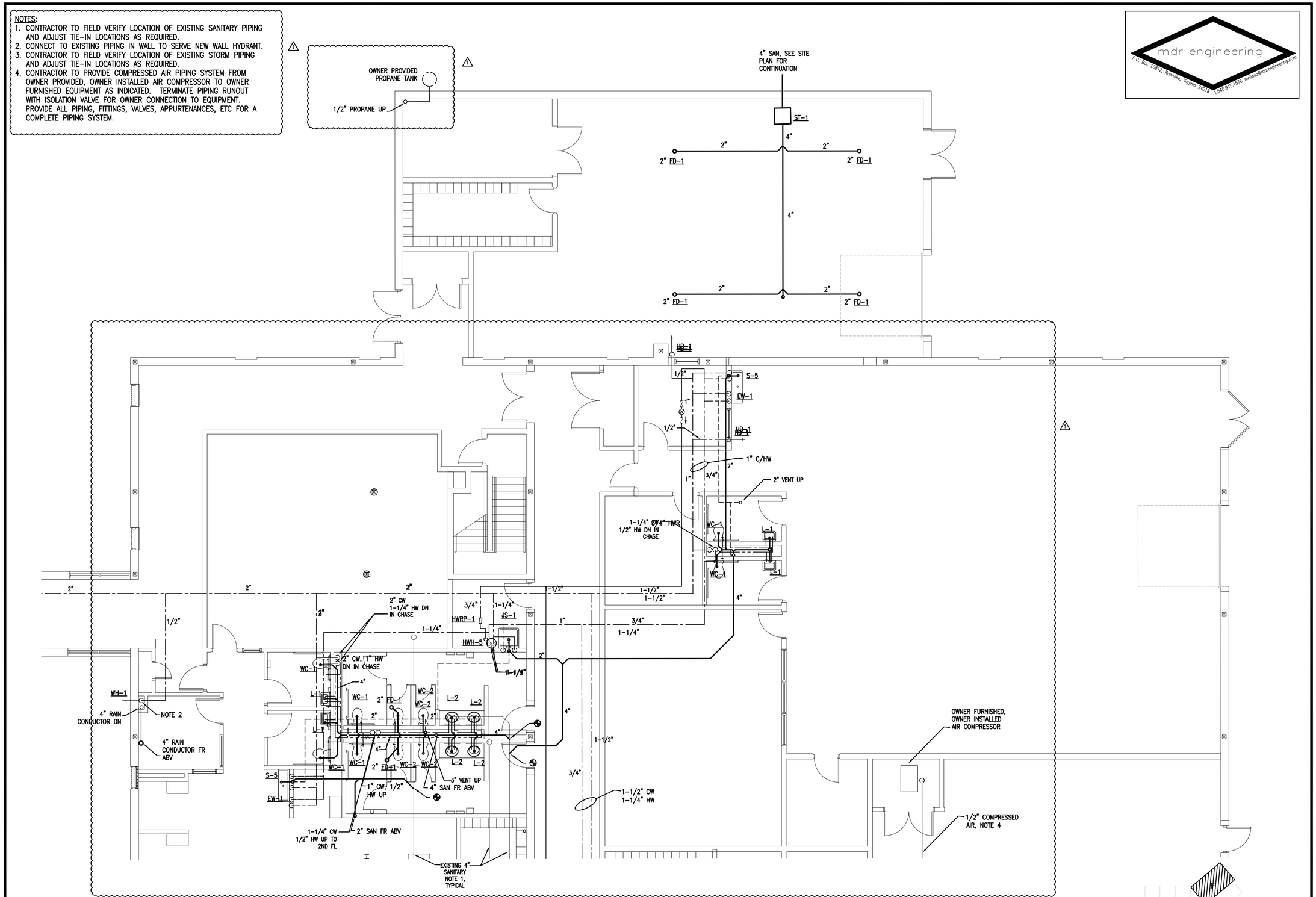
DATE:	6/17/22
SCALE:	AS SHOWN

GROUND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA E

P2.5

SHEET _____ of ___X___

NOTES:
1. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING SANITARY PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.
2. CONNECT TO EXISTING PIPING IN WALL TO SERVE NEW WALL HYDRANT.
3. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING STORM PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.
4. CONTRACTOR TO PROVIDE COMPRESSED AIR PIPING SYSTEM FROM OWNER PROVIDED, OWNER INSTALLED AIR COMPRESSOR TO OWNER FURNISHED EQUIPMENT AS INDICATED. TERMINATE PIPING RUNOUT WITH ISOLATION VALVE FOR OWNER CONNECTION TO EQUIPMENT. PROVIDE ALL PIPING, FITTINGS, VALVES, APPURTENANCES, ETC FOR A COMPLETE PIPING SYSTEM.



1 P2.6 GROUND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA F

SCALE: 3/16" = 1'-0"

KEYPLAN

0 3' 6' 12'

PLAN NORTH

TRUE NORTH

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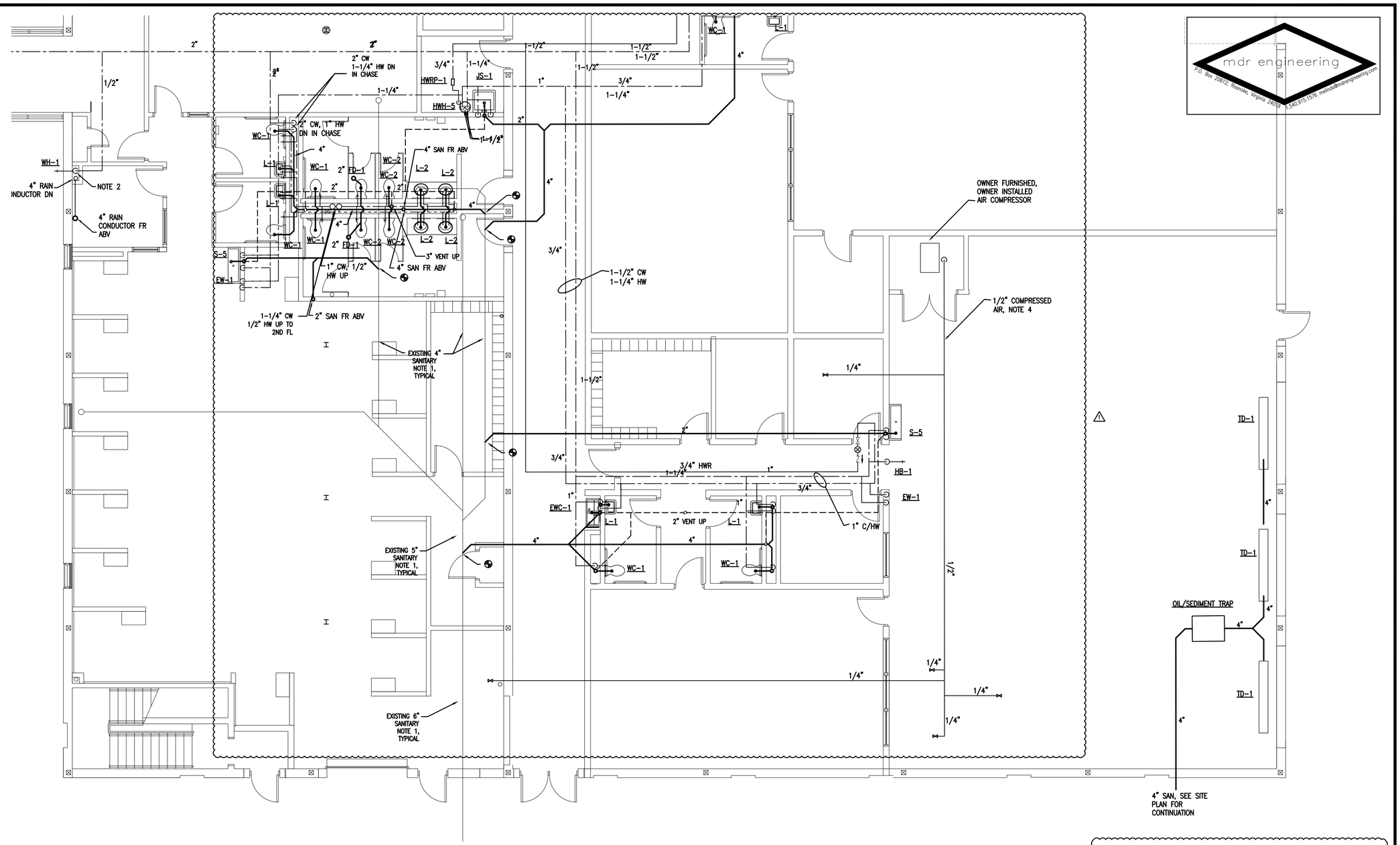
DATE:	6/17/22
SCALE:	AS SHOWN

GROUND FLOOR PARTIAL PLUMBING PLAN - AREA F

P2.6

SHEET _____ of ___X___



NOTES:
1. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING SANITARY PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.
2. CONNECT TO EXISTING PIPING IN WALL TO SERVE NEW WALL HYDRANT.
3. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING STORM PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.
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KEYPLAN

0 3' 6' 12'

PLAN NORTH / TRUE NORTH

1 P2.7 GROUND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA G

SCALE: 3/16" = 1'-0"

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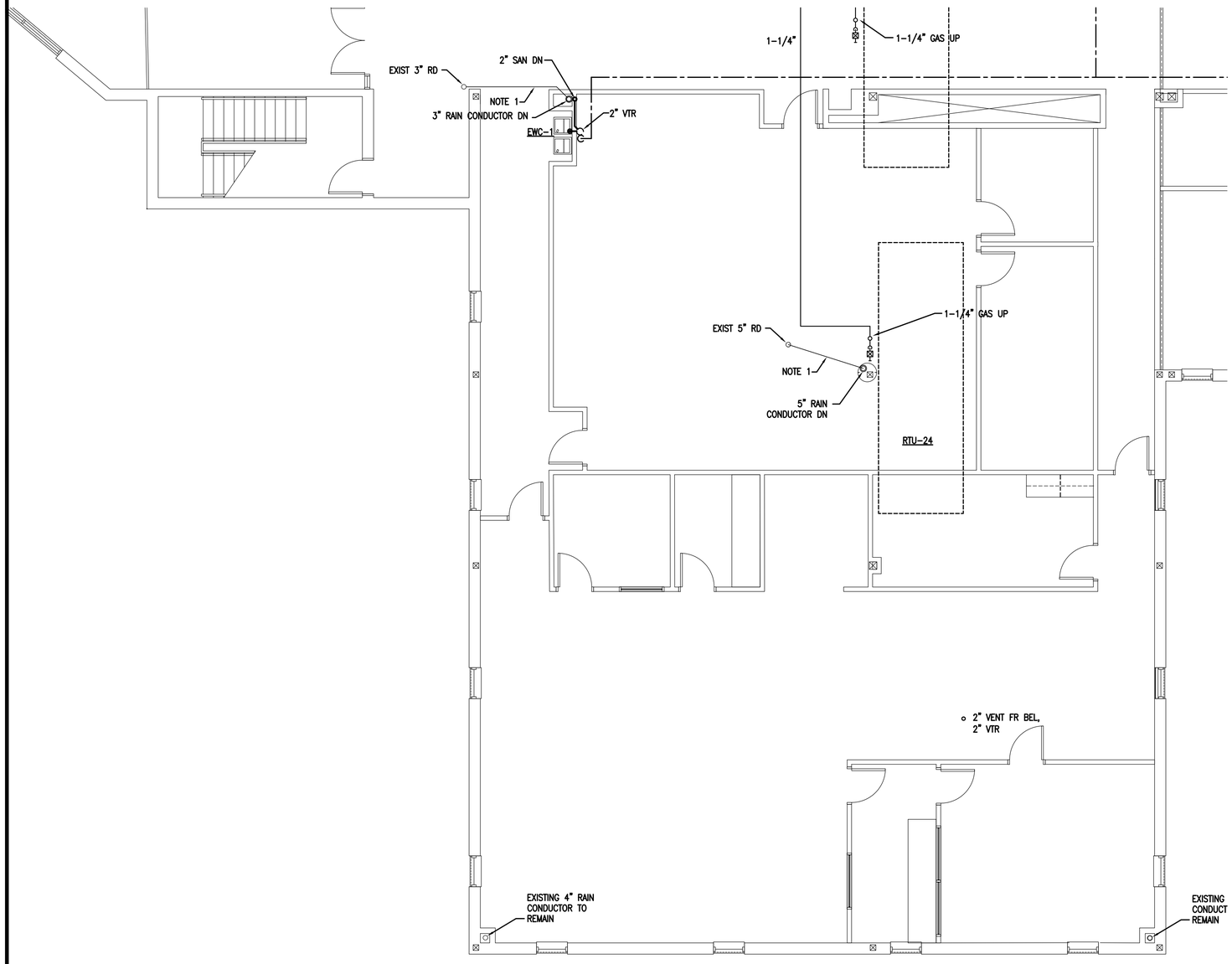
SCALE:	AS SHOWN

GROUND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA G

P2.7

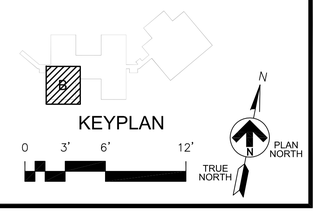
SHEET _____ of ___X___



NOTES:
1. EXTEND NEW RAIN CONDUCTOR FROM EXISTING ROOF DRAIN TO NEW RISER. RAIN CONDUCTOR TO BE SIZE OF ROOF DRAIN.

1 P3.2 SECOND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA B

SCALE: 3/16" = 1'-0"



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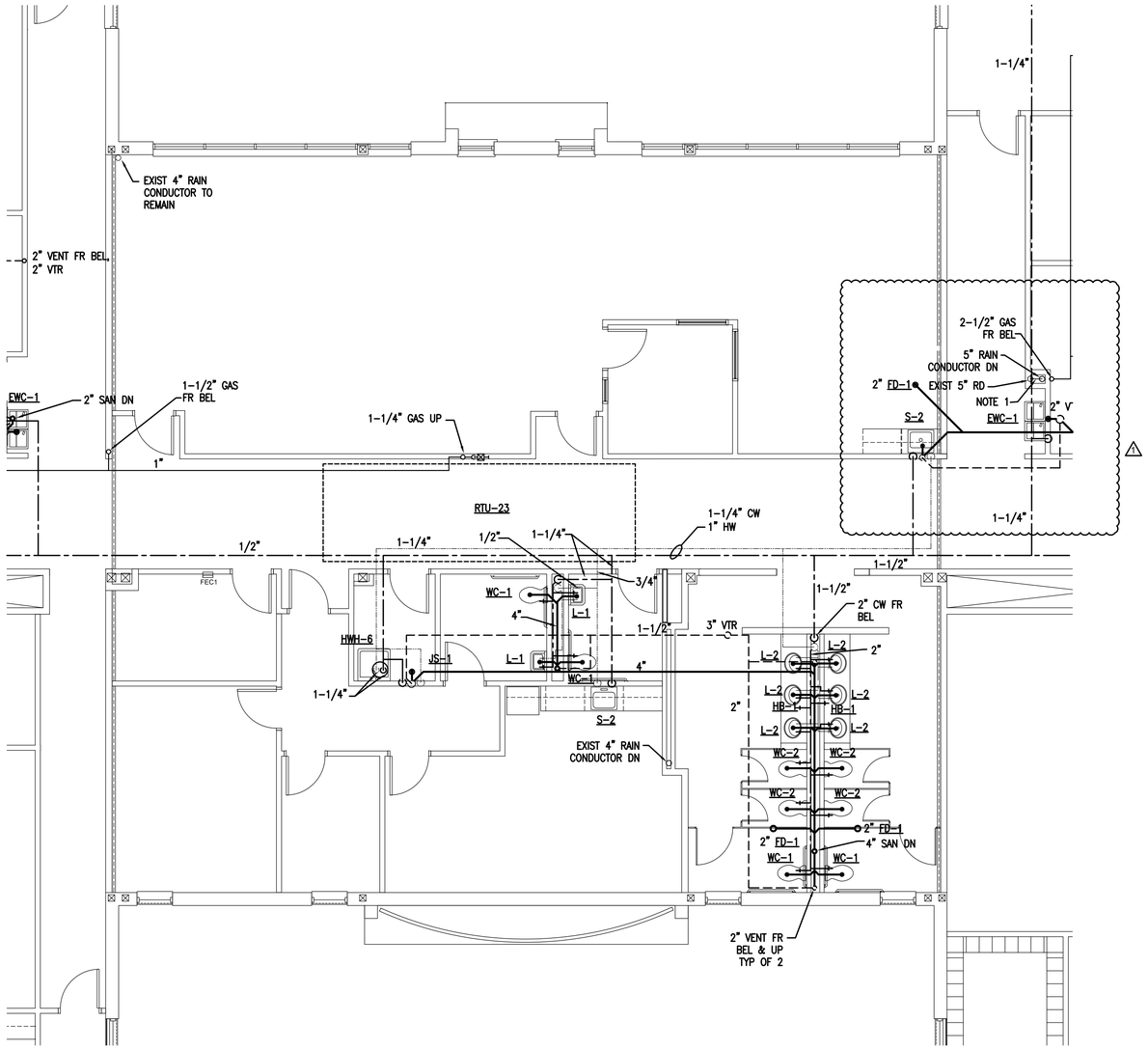
SCALE:	AS SHOWN

SECOND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA B

P3.2

SHEET _____ of ___X___



1 / P3.3 SECOND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA C

SCALE: 3/16" = 1'-0"

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NOTES:
1. EXTEND NEW RAIN CONDUCTOR FROM EXISTING ROOF DRAIN TO NEW RISER. RAIN CONDUCTOR TO BE SIZE OF ROOF DRAIN.

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SECOND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA C

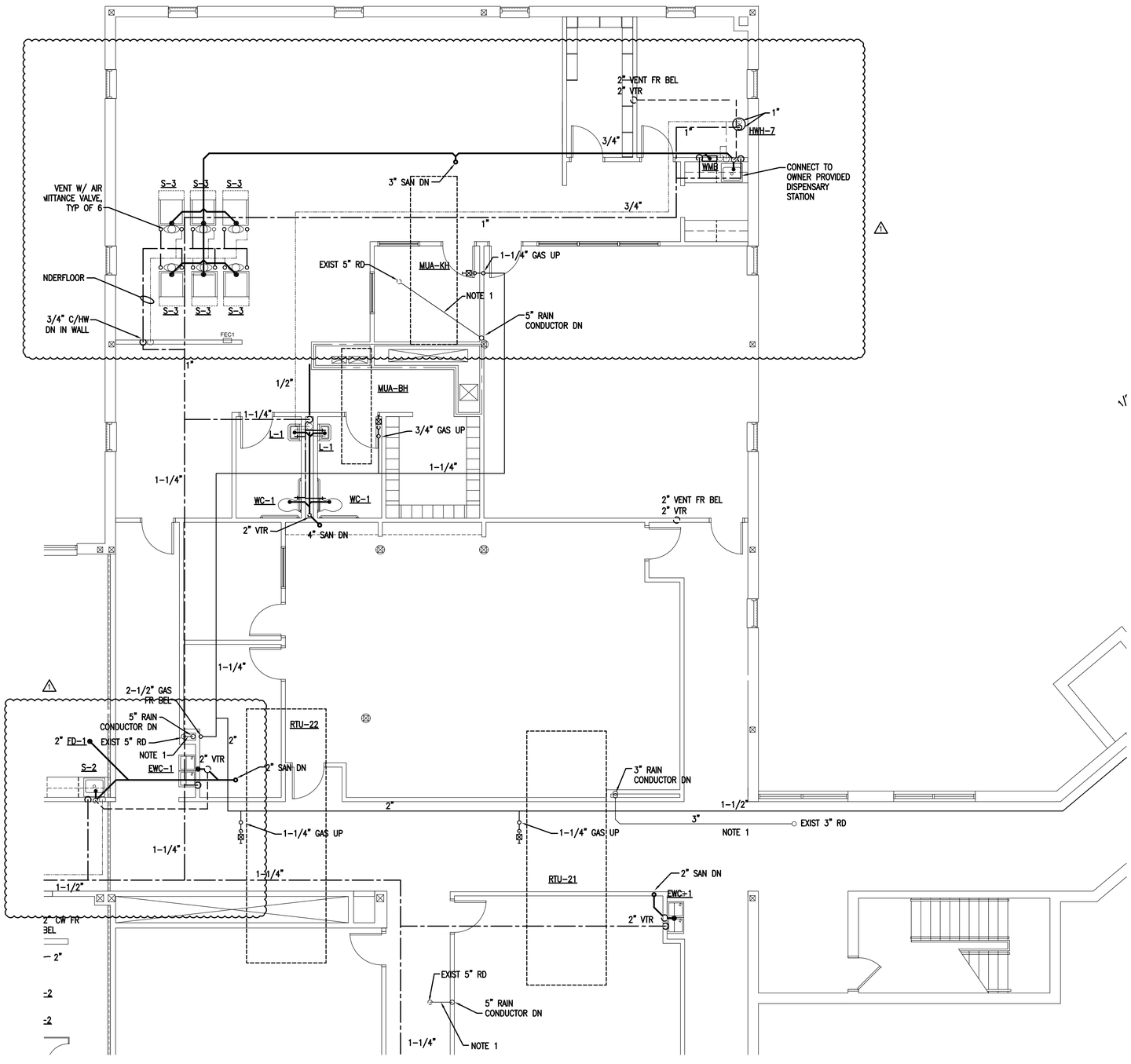
P3.3

SHEET _____ of ___X___

KEYPLAN

0 3' 6' 12'

N
TRUE NORTH
PLAN NORTH



1 P3.4 SCALE: 3/16" = 1'-0"

SECOND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA D

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⚠1 NOTES:
1. EXTEND NEW RAIN CONDUCTOR FROM EXISTING ROOF DRAIN TO NEW RISER. RAIN CONDUCTOR TO BE SIZE OF ROOF DRAIN.

KEYPLAN

0 3' 6' 12'

TRUE NORTH

N

PLAN NORTH

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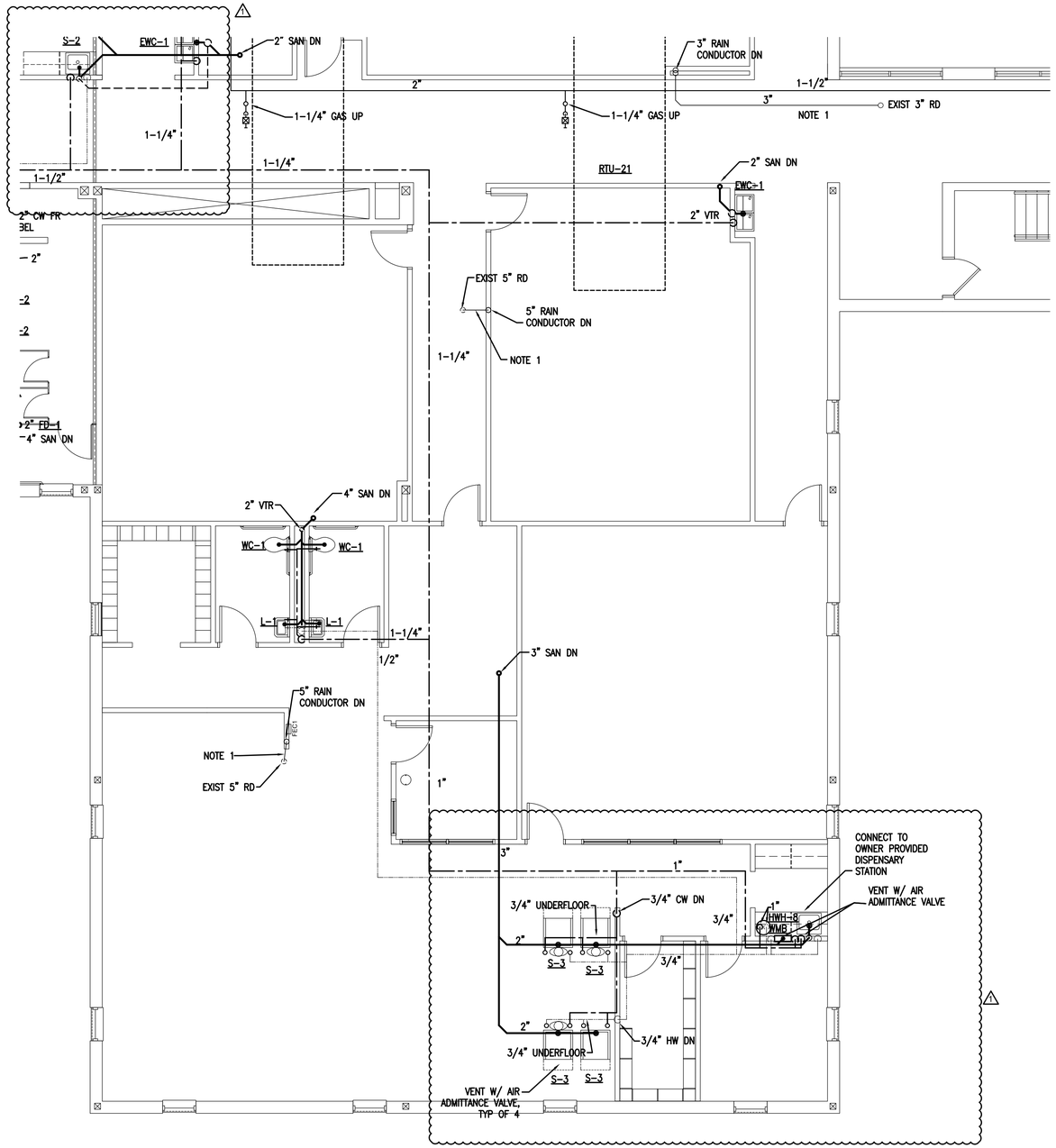
SCALE:	AS SHOWN

SECOND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA D

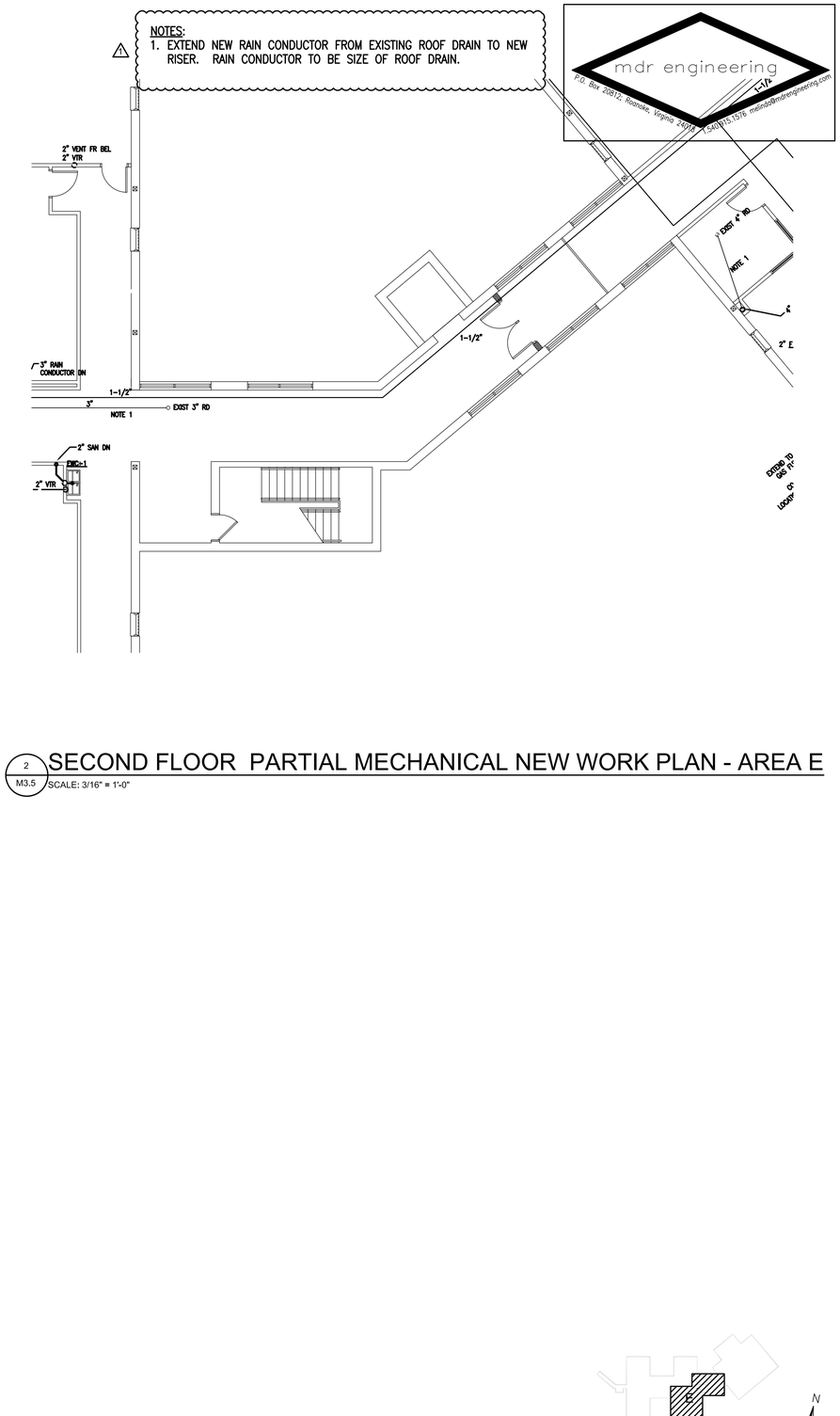
P3.4

SHEET _____ of ___X___



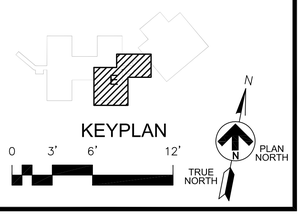
1 P3.5 SCALE: 3/16" = 1'-0"

SECOND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA E



2 M3.5 SCALE: 3/16" = 1'-0"

SECOND FLOOR PARTIAL MECHANICAL NEW WORK PLAN - AREA E



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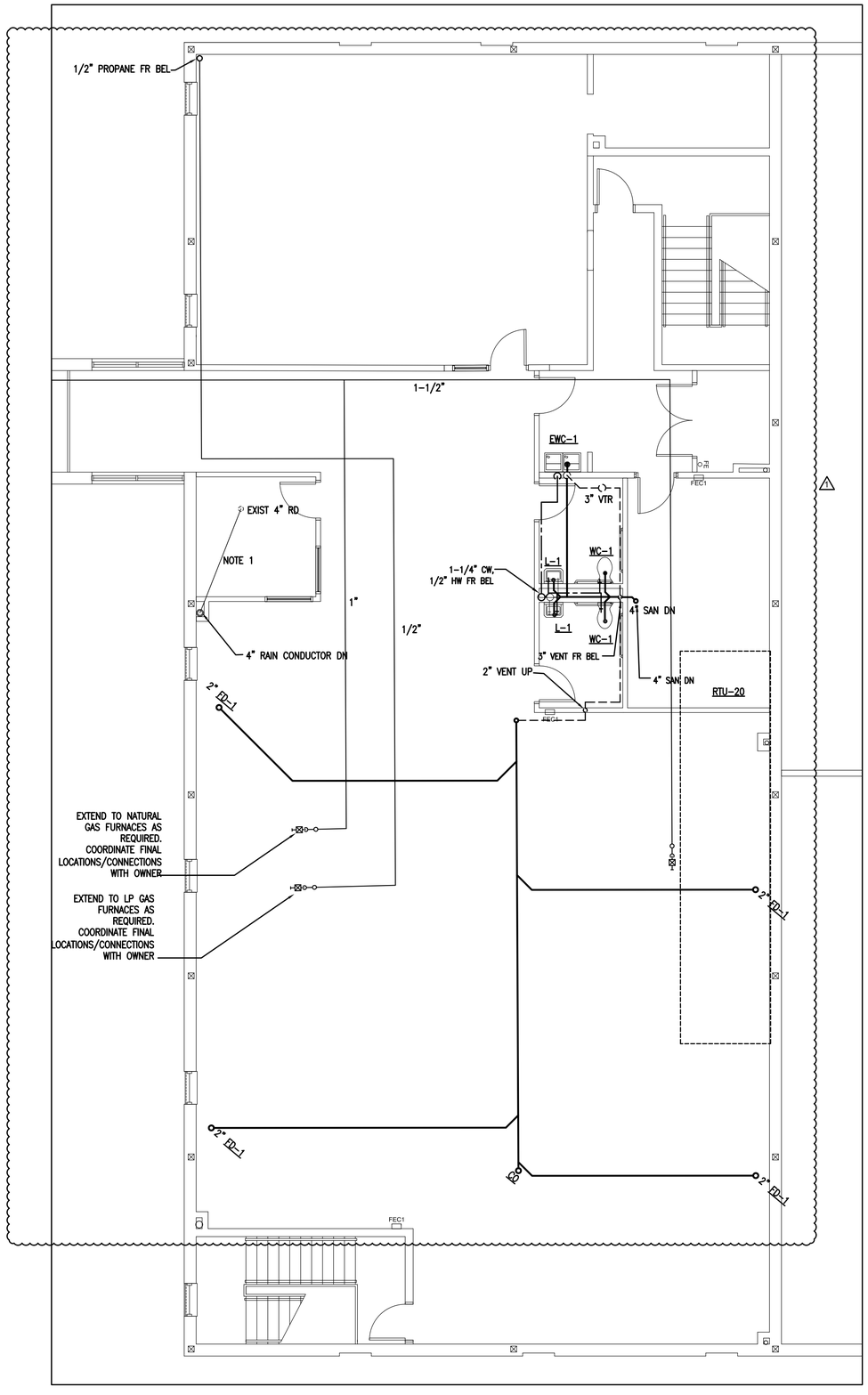
DATE:	6/17/22
SCALE:	AS SHOWN

SECOND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA E

P3.5

SHEET _____ of ___X___



1 NOTES:
1. EXTEND NEW RAIN CONDUCTOR FROM EXISTING ROOF DRAIN TO NEW RISER. RAIN CONDUCTOR TO BE SIZE OF ROOF DRAIN.

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SECOND FLOOR PARTIAL NEW WORK PLAN - AREA F

1 / P3.6 SCALE: 3/16" = 1'-0"

KEYPLAN

0 3' 6' 12'

N PLAN NORTH
N TRUE NORTH

REVISIONS

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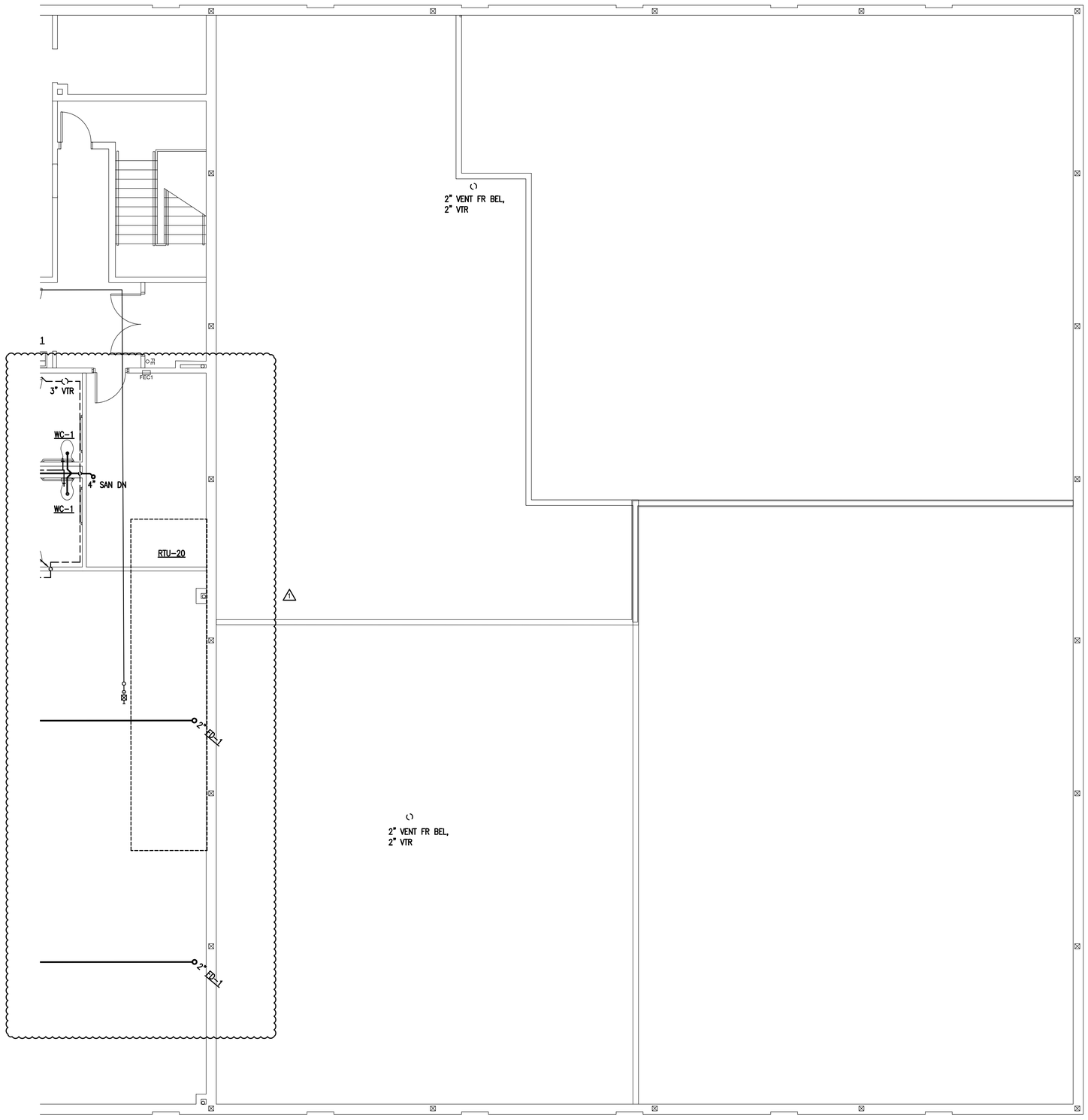
DATE:	6/17/22
SCALE:	AS SHOWN

SECOND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA F

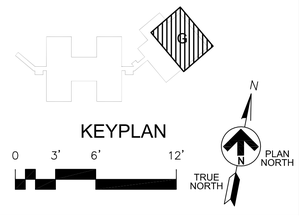
P3.6

SHEET _____ of ___X___



1 / P3.7 SECOND FLOOR PARTIAL NEW WORK PLAN - AREA G

SCALE: 3/16" = 1'-0"



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DATE:	6/17/22
SCALE:	AS SHOWN

SECOND FLOOR PARTIAL PLUMBING NEW WORK PLAN - AREA G

P3.7

SHEET _____ of ___X___

NOTES:
1. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING SANITARY PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.
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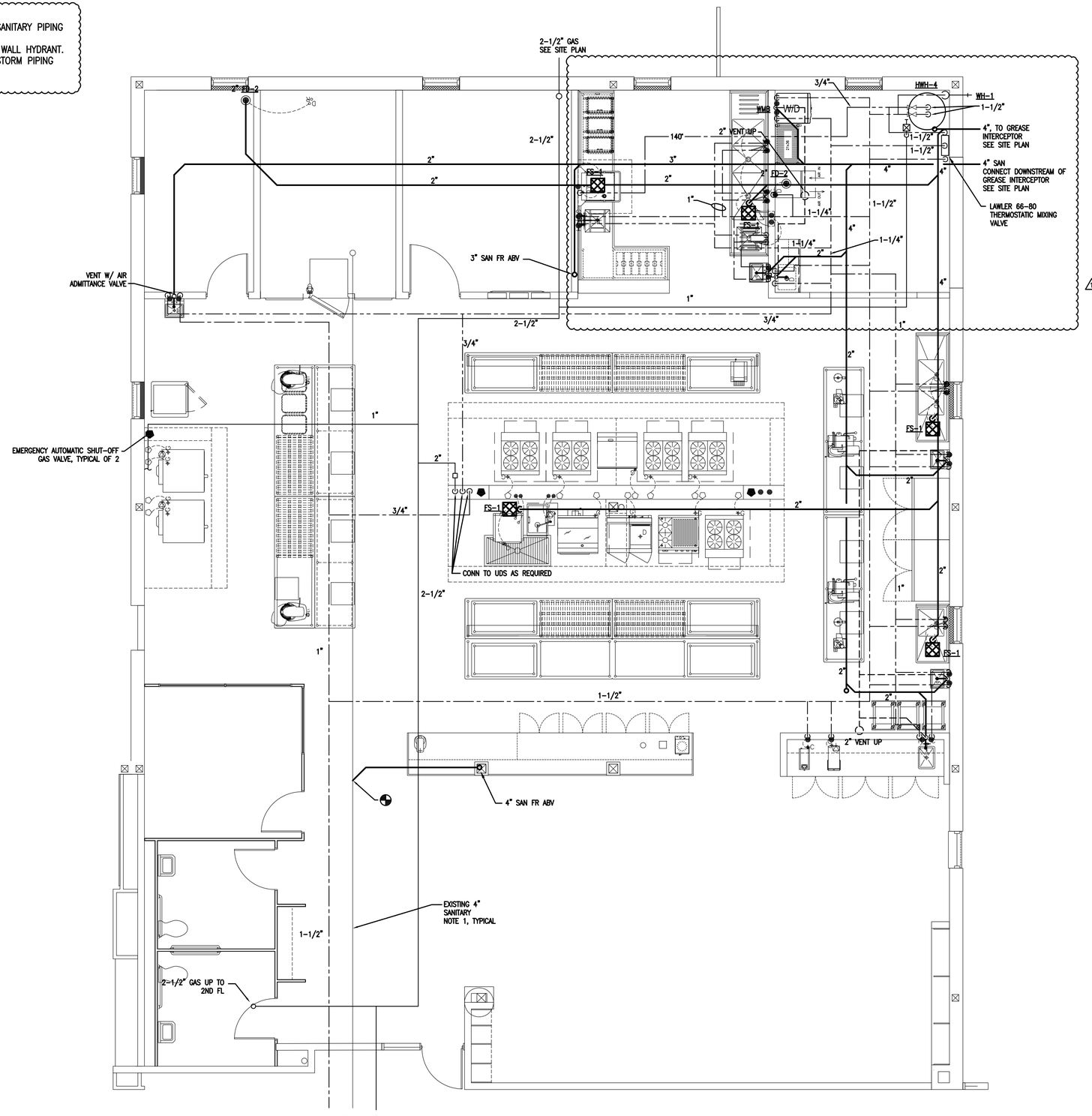
3. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING STORM PIPING AND ADJUST TIE-IN LOCATIONS AS REQUIRED.



1 / P4.1 GROUND FLOOR ENLARGED PLUMBING NEW WORK PLAN - AREA D

SCALE: 3/16" = 1'-0"

KEYPLAN

0 3' 6' 12'

PLAN NORTH / TRUE NORTH

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SCALE:	AS SHOWN

GROUND FLOOR ENLARGED PLUMBING NEW WORK PLAN - AREA D

P4.1

SHEET _____ of ___X___

ELECTRICAL LEGEND

	PANELBOARD, 208Y/120-VOLT, 3-PHASE, 4-WIRE, MOUNTING HEIGHT = 6'-0" TO TOP. SEE PANELBOARD SCHEDULES.
	DISCONNECT SWITCH, EXTERNALLY OPERATED, 250V, 3-POLE UNLESS OTHERWISE NOTED. NOTATION, WHEN USED, INDICATES NUMBER OF POLES AND AMPERAGE CAPACITY. 'NF' INDICATES NON-FUSED. COORDINATE WITH MECHANICAL CONTRACTOR FOR DISCONNECTS TO BE PROVIDED WITH EQUIPMENT.
	BRANCH CIRCUIT HOME RUN TO PANELBOARD. NOTATION INDICATES PANELBOARD & BRANCH CIRCUIT CONNECTION.
J	JUNCTION BOX. SEE NOTATION AND PANEL SCHEDULE FOR CONNECTED EQUIPMENT.
HP 1	MECHANICAL EQUIPMENT TAG. SEE MECHANICAL DRAWINGS FOR ADDITIONAL UNIT INFORMATION AND EXACT LOCATION.
	DUPLEX WALL RECEPTACLE, MOUNTING HEIGHT = 1'-6". 'GF' SUBSCRIPT INDICATES GROUND FAULT, 'WP' INDICATES GFI WEATHERPROOF, 'EWC' INDICATES GFI BEHIND ELECTRIC WATER COOLER, '*' INDICATES MOUNTED HEIGHT = 8" ABOVE COUNTER, 'USB' INDICATES DUPLEX WITH USB PORTS, 'REF' INDICATES REFRIGERATOR RECEPTACLE MOUNTED 36" AFF.
	QUAD-PLEX WALL RECEPTACLE WITH SURGE PROTECTION, MOUNTING HEIGHT = 1'-6". SEE DUPLEX OUTLET FOR SIMILAR SUBSCRIPT DESIGNATIONS.
	SPECIAL PURPOSE RECEPTACLE. COORDINATE WITH EQUIPMENT PROVIDER FOR CORRECT CORD AND PLUG COMBINATION.
	DATA SYSTEM OUTLET, MOUNTING HEIGHT = 1'-6" UNLESS INDICATED OTHERWISE. PROVIDE 1" CONDUIT FROM BOX TO ABOVE ACCESSIBLE CEILING. WITH 2 DATA DROPS WHERE MOUNTED BESIDE COUNTER RECEPTACLE, MOUNT SAME HEIGHT AS RECEPTACLE.
WAP	CEILING MOUNTED POE WIRELESS ACCESS POINT, PROVIDE 2-CAT-6A CABLE BACK TO NEAREST NETWORK CONSOLIDATION POINT. COORDINATE EXACT LOCATIONS WITH OWNER. ACCESS POINTS ARE CFCI.
TD	WALL MOUNTED INTERACTIVE DISPLAY BOARD LOCATION. 2 CAT 6A CABLES BACK TO IDF AND PROVIDE QUAD RECEPTACLE AND TYPE 'ID' DATA OUTLET MOUNTED AT 48" AFF TO CENTER.
T	WALL MOUNTED TEACH STATION, 2 CAT 6A CABLES BACK TO IDF AND PROVIDE QUAD RECEPTACLE AND TYPE 'ID' DATA OUTLET

	LED LIGHT. CEILING, SURFACE, GRID OR PENDANT MOUNTED. SEE FIXTURE SCHEDULE FOR TYPE. HATCH INDICATES INTEGRAL EMERGENCY BATTERY BALLAST.
	4' LINEAR STRIP UTILITY LIGHTING FIXTURE. SEE FIXTURE SCHEDULE FOR TYPE.
	EXTERIOR WALL MOUNTED FLOOD LIGHT, SEE FIXTURE SCHEDULE FOR TYPE.
	EXTERIOR CANOPY SURFACE MOUNTED LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR TYPE.
	GROUND BOX MOUNTED, AIMABLE FLAGPOLE LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR TYPE.
	EXIT SIGN LIGHTING FIXTURE, SURFACE WALL MOUNTED, DIRECTIONAL ARROWS AS INDICATED, TYPE 'X'.
	EXIT SIGN LIGHTING FIXTURE, SURFACE CEILING MOUNTED, DIRECTIONAL ARROWS AS INDICATED, TYPE 'X'.
OS	DUAL TECHNOLOGY, OCCUPANCY SENSOR FOR LIGHTING CONTROL.
S	SINGLE-POLE SWITCH, MOUNTING HEIGHT = 4'-0" TO TOP. LOWER CASE SUBSCRIPT, WHEN USED, INDICATES FIXTURES CONTROLLED. '3' SUBSCRIPT INDICATES THREE-WAY SWITCH, '4' INDICATES FOUR-WAY SWITCH, 'M' INDICATES MOTION CONTROLLED, 'D' INDICATES DIMMER SWITCH, 'WP' INDICATES WEATHERPROOF.
A	LIGHTING FIXTURE TYPE. SEE LIGHTING FIXTURE SCHEDULE.
PA	PUBLIC ADDRESS SYSTEM HEADEND, LOCATED IN FRONT OFFICE AREA.
S	CEILING GRID 2X2 DROP-IN TILE PUBLIC ADDRESS SPEAKER, CONNECTED TO PA HEADEND.
S	WALL MOUNTED PUBLIC ADDRESS SPEAKER, CONNECTED TO PA HEADEND.
C	WALL MOUNTED CLOCK, CONNECTED TO PA / MASTER CLOCK HEADEND. 2-FACED DIGITAL CLOCK IN ALL CORRIDORS, 'WG' SUBSCRIPT WHEN USED INDICATES WIREGUARD.
	POE SECURITY CAMERA, PROVIDE CAT-6A CABLE BACK TO NEAREST IDF OR MDF. COORDINATE EXACT LOCATIONS WITH OWNER.
M	SECURITY SYSTEM MOTION SENSOR.
K	SECURITY SYSTEM ELECTRONIC KEYPAD.
AI	ACCESS CONTROL AI PHONE / CAMERA ENTRY SYSTEM.
CR	ACCESS CONTROL CARD READER.
EL	ACCESS CONTROL ELECTRO-MAGNETIC LOCK. SEE GENERAL NOTE 29.
DC	ACCESS CONTROL DOOR CONTACT.
CP	CLASSROOM WALL MOUNTED SPEAKER, WALL CLOCK COMBO UNIT
PT	PUSH TO TALK CONNECTED TO PAGING SYSTEM.

LEGEND NOTES

1. ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE UNLESS INDICATED OTHERWISE.
2. LIGHTING FIXTURE CROSSHATCH INDICATES DUAL CONNECTION TO INTEGRAL BATTERY BALLAST
3. 'NL' SUBSCRIPT BY LIGHTING FIXTURE INDICATES NIGHTLIGHT TO REMAIN UNSWITCHED.

SPECIFICATIONS

1. PUBLIC ADDRESS SYSTEM AND CLOCKS SHALL BE VALCOM, NO EXCEPTIONS.
2. PROVIDE ALL CIRCUITS, CONDUIT, WIRING, JUNCTION BOXES REQUIRED WITH ELECTRONIC ACCESS CONTROL COMPONENTS.
3. PROVIDE ALL ELECTRICAL CONDUITS AND WIRING ASSOCIATED WITH ELECTRONIC ACCESS.
4. PROVIDE NEW CAMERAS INDICATED AND A LICENSE WITH EACH CAMERA.

GENERAL NOTES

1. MOUNTING HEIGHT OF LIGHTING FIXTURES IS TO BOTTOM OF FIXTURE AND AWAY FROM FINISHED FLOOR OR GRADE.
2. MOUNT OUTLET BOXES SO THAT NONE OCCUR BACK TO BACK IN WALLS.
3. MECHANICAL EQUIPMENT IS SHOWN IN APPROXIMATE LOCATIONS. FOR EXACT LOCATIONS OF MECHANICAL EQUIPMENT AND PIPING, SEE MECHANICAL DRAWINGS.
4. FOR 120 VOLT, 20 AMP BRANCH CIRCUITS USE 12 AWG UP TO 60 FEET, 10 AWG FOR 61-95 FEET, AND 8 AWG FOR CIRCUITS LONGER THAN 96 FEET. WHETHER INDICATED IN PANEL SCHEDULES OR NOT. CONDUCTORS SHALL BE SAME SIZE FOR ENTIRE LENGTH OF RUN.
5. REVISE PANELBOARD SCHEDULES ON AS-BUILT-DRAWING AND PANEL DIRECTORIES TO REFLECT FINAL INSTALLATION CONDITIONS.
6. SEAL PENETRATIONS THROUGH FLOORS OR FIRE WALLS TO MAINTAIN THE INTEGRITY OF THE FIRE AND ACOUSTIC RATINGS OF THE WALLS AND FLOORS.
7. LOCATE ALL RACEWAYS TO AVOID INTERFERENCE WITH DUCTS, PIPES, MECHANICAL EQUIPMENT, WITH REMOVAL OF CEILING TILES, OR WITH ACCESS TO EQUIPMENT WHICH REQUIRES PERIODIC ADJUSTMENT OR MAINTENANCE.
8. PROVIDE NAMEPLATES ON THE EXTERIOR OF ALL ELECTRICAL PANELS, DISCONNECTS AND ENCLOSURES WITH THE DEVICE ID, RATING, POWER SOURCE AND INSTALLATION DATE AND BY WHICH SWITCH OR STARTER.
9. FIRE ALARM SYSTEM TO BE INSTALLED COMPLETE AND TO ALL APPLICABLE CODES.
10. LIGHT FIXTURE TYPE IS SHOWN ONLY ONCE AS TYPICAL FOR THE ENTIRE ROOM UNLESS SPECIFICALLY INDICATED OTHERWISE.
11. UNLESS INDICATED OTHERWISE, SIZE CONDUITS IN ACCORDANCE WITH NFPA 70.
12. COORDINATE WITH THE MECHANICAL CONTRACTOR TO ENSURE ALL WORKING CLEARANCE AND DEDICATED WORKING SPACE OF PANELBOARDS.
13. ALL UNDERGROUND CONDUITS NEED PULL CORDS / ROPES SUITABLE FOR WIRE TO BE INSTALLED.
14. PROVIDE A LABEL ON ALL RECEPTACLE FACE PLATES INDICATING WHICH PANELBOARD AND CIRCUIT FEEDS THAT RECEPTACLE.
15. COORDINATE WITH ACCESS CONTROL SYSTEM AND PROVIDE ALL NECESSARY CONNECTIONS FOR CONDUIT AND WIRE.
16. GROUNDING CONDUCTORS ARE NOT INDICATED IN BRANCH CIRCUIT RACEWAYS. PROVIDE GROUND CONDUCTORS AS REQUIRED BY NEC.
17. ALL LIGHT FIXTURE MANUFACTURES ARE LISTED TO ESTABLISH STANDARD REQUIREMENTS FOR PERFORMANCE, MATERIAL AND APPEARANCE. PROVIDE SPECIFIED FIXTURE OR EQUAL. COORDINATE ALL FIXTURE FINISHES WITH ARCHITECT.
18. CEILING GRID MOUNTED DEVICES ARE TO BE CENTERED WITHIN CEILING GRID TILES. INCLUDING, BUT NOT LIMITED TO, OCCUPANCY SENSORS, ACCESS POINTS, AND FIRE ALARM DEVICES.
19. OCCUPANCY SENSORS SHOULD CONTROL ALL LIGHTING IN ROOMS, UNLESS INDICATED OTHERWISE.
20. PROVIDE PLASTIC BUSHING ON THE END OF ALL CONDUIT.
21. NO SHARING OF NEUTRAL CONDUCTORS.
24. COORDINATE WITH MECHANICAL CONTRACTOR TO PROVIDE POWER TO MOTORIZED DAMPERS WHERE REQUIRED. USE #12 WIRE FROM SPARE 20 AMP BREAKER IN NEAREST NORMAL POWER ELECTRICAL PANEL.
25. COORDINATE WITH UTILITY FOR MAXIMUM AVAILABLE FAULT CURRENT AT SERVICE ENTRANCE. PROVIDE RATING TO ENGINEER FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT. FIELD MARK SERVICE ENTRANCE EQUIPMENT WITH RATING RECEIVED FROM UTILITY AND DATE CALCULATED.
26. PROVIDE A NEW PHONE SYSTEM WITH NEW LAYOUT.
27. SURFACE RACEWAY IS TO BE USED FOR NEW DEVICES BEING INSTALL ON EXISTING WALLS. DUAL CHANNEL WIREMOLD 4000 RACEWAY IS TO BE USED WHERE BOTH NEW POWER AND DATA IS REQUIRED. SINGLE CHANNEL WIREMOLD RACEWAY IS TO BE USED FOR ALL OTHER PURPOSES, INCLUDING LIGHTING SWITCHING, COMMUNICATIONS AND POWER ONLY RUNS OR DATA ONLY RUNS.
28. SURFACE CONDUIT IS ACCEPTABLE IN LIEU OF SURFACE RACEWAYS IN MECHANICAL ROOMS, JANITOR CLOSETS AND STORAGE ROOMS.
29. PROVIDE 12O VOLT CIRCUIT FROM PANELBOARDS FOR ELECTRONIC ACCESS CONTROL OR MAGNETIC LOCK. SEE PANELBOARD SCHEDULES FOR ADDITIONAL INFORMATION. SEE PANELS E2 AND F2.
30. SEE ARCHITECTURAL PAINTING SPECIFICATIONS FOR ALL CONDUIT AND WIRING IN LOBBY AREAS AND EXPOSED CEILINGS. ALL WIRING IN EXPOSED CEILINGS MUST BE CONCEALED IN CONDUIT.

ELECTRICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	G	GROUND	OS	OCCUPANCY SENSOR
C	CONDUIT	GF / GFI	GROUND FAULT INTERRUPTER	PNL	PANEL
CB	CIRCUIT BREAKER	GTD	GENERATOR TRANSFER DEVICE	REF	REFRIGERATOR
ELEC	ELECTRICAL	JB	JUNCTION BOX	SCH	SCHEDULE
EMG	EMERGENCY	LTG	LIGHTING	SWBD	SWITCHBOARD
EQUIP	EQUIPMENT	MECH	MECHANICAL	TYP	TYPICAL
EWC	ELECTRIC WATER COOLER	MCB	MAIN CIRCUIT BREAKER	WAP	WIRELESS ACCESS POINT
FA	FIRE ALARM	MLO	MAIN LUGS ONLY	WG	WIREGUARD
FAA	FIRE ALARM ANNUNCIATOR	NF	NON-FUSED	WP	WEATHERPROOF
FACP	FIRE ALARM CONTROL PANEL	NL	NIGHTLIGHT	XFMR	TRANSFORMER

CODES & STANDARDS

NFPA 70: NATIONAL ELECTRICAL CODE	2017
NFPA 72: NATIONAL FIRE ALARM AND SIGNALING CODE	2016
VECC: VIRGINIA ENERGY CONSERVATION CODE	2018

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ELECTRICAL LEGEND, GENERAL NOTES AND ABBREVIATIONS

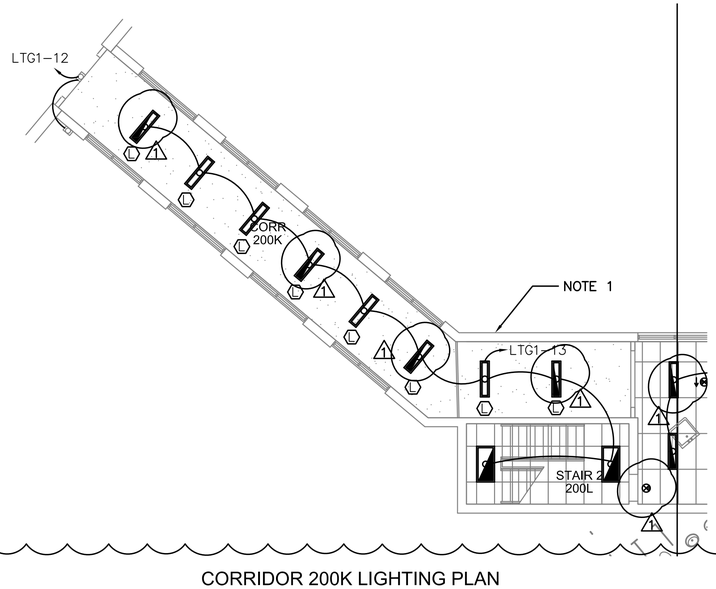
E–001

SHEET X of X

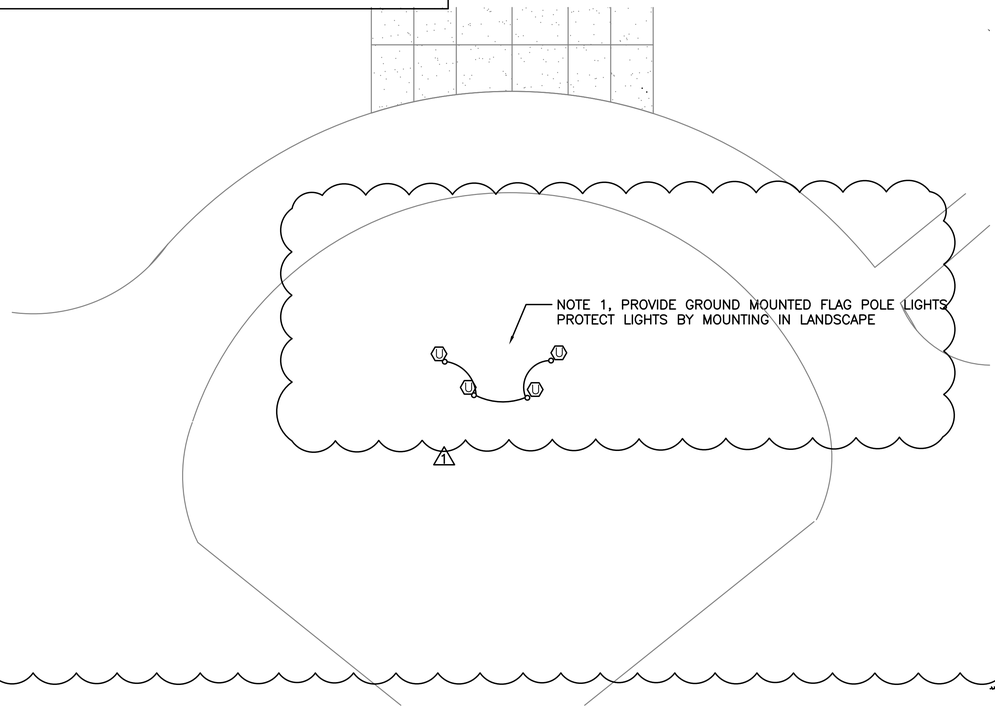
LIGHTING FIXTURE SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	INPUT VOLTAGE	LAMPS TYPE	TOTAL WATTS	MNTG.	REMARKS
A	LITHONIA	EPANL 2X4 48L 80CRI 40K MIN10 EZT (E10WCP)	MVOLT	LED	45	GRID	2X4 GRID MOUNTED, CLASSROOM/OFFICE FIXTURE
B	LITHONIA	EPANL 2X4 40L 80CRI 40K MIN10 EZT (E10WCP)	MVOLT	LED	38	GRID	2X4 GRID MOUNTED, CLASSROOM/OFFICE FIXTURE
C	LITHONIA	IBH 12000LM SD080 MD 0Z10 35K 80CRI	MVOLT	LED	112	PEND	HIGH BAY LED FIXTURE
D	LITHONIA	FMLWL 48 840 ZT MVOLT	MVOLT	LED	42	PEND/SURF	SURFACE MOUNTED, WRAP AROUND
E	LITHONIA	LDN6 35/ 15 L06AR LSS MVOLT EZ10	MVOLT	LED	17.5	REC	6" DOWN LIGHT
F	MARK LIGHTING	SL2L 4FT FLP 80CRI 40K 800LMF MIN1 MVOLT	MVOLT	LED	37.3	REC (GRID)	2" SLOT FIXTURE, RECESSED MOUNTED IN GRID. (E10WLCP)
G	LITHONIA	EPANEL 2X2 3400LM 80CRI 40K	MVOLT	LED	30	REC	2X2 GRID MOUNTED, CLASSROOM/OFFICE FIXTURE
H	LITHONIA	WL2 18L EZ1 LP840	MVOLT	LED	17.5	SURF	WALL SCONCE OVER VANITY
J	MARK LIGHTING	SL2L 4FT FLP 80CRI 40K 800LMF MIN1 MVOLT	MVOLT	LED	37.3	REC	2" SLOT FIXTURE, RECESSED MOUNTED IN HARDWOOD (E10WLCP)
K	LITHONIA	CPANL 2X4 AL06 SWW7M2	MVOLT	LED	52.7	PEND	PENDANT OR SURFACE MOUNT
L	LITHONIA	SBL4 LP840 (CI-254RK)	MVOLT	LED	32.	SURF	
M	MARK LIGHTING	SPRLED LOP 23FT6 RLP G9 80CRI 40K 800LMF MIN1 MVOLT Z	MVOLT	LED	8/FT	SURF	
N	LUMETTA	SHADOW DRUM 18" PENDANT P2092	MVOLT	LED		PEND	MOUNT FIXTURE WITH TOP OF TRANSLUMENATE DIFFUSER AT 8" BELOW FINISHED WOOD CEILING (9'0" AFF)
P	SPI LIGHTING	NOVATO RING (AIP11849 60 INCH)	MVOLT	LED		PEND	MOUNT WITH TOP OF FIXTURE AT 9'0" AFF; 3500-4000K; 4-LINE SUSPENSION; MB02; WHITE
R	LITHONIA	WF3 LED 40KMW	MVOLT	LED	7.9	REC	3" LED WAFER LIGHT
S	HATCO LIGHTING	DL-775-RTL 71 7/8 MONO MOUNT RETRACK CORD	MVOLT	LED		PEND	PENDANT MOUNTED HEAT LAMPS, BRIGHT NICKEL
T	JUNO LIGHTING	JSF 7IN 10LM 40K 90CRI MVOLT ZT BL M6	MVOLT	LED		SURF	SURFACE MOUNT W/ EMERGENCY BATTERY BACKUP, CANOPY BATTERY IN ALL LOCATIONS
U	KIM LIGHTING	LTV81FF SP 4K UV 42W 10 FIELD ANGLE 36L 4K SR	MVOLT		42	IN-GRADE	LIGHT FIXTURES AT FLAG POLE, INGRADE FLOOD
V	HOLOPHANE LIGHTING	AUCL2 P30 30K MVOLT FC5 BK SK AO 88W	MVOLT		88W	POLE MNT	POLE LIGHT FIXTURE IN COURTYARD,HOLOPHANE CPC 10FT FTN 18"DIA C04 GN GRD
W	MARK LIGHTING	SL2L 4FT FLP 80CRI 40K 800LMF MIN1 MVOLT GB	MVOLT	LED	37.3	REC	2" SLOT FIXTURE, RECESSED MOUNTED IN DRYWALL. (E10WLCP)
X	MARK LIGHTING	S2LID LLP (RUN) MS6 90CRI 40K 800LMF MIN1 I90CRI I40K I800LMF AS EGLD (E10WLCP)	MVOLT	LED	30.6	PEND	6' DIRECT/INDIRECT PENDANT
Y	MARK LIGHTING	S2LD LLP (RUN) MS8 90CRI 40K 800LMF MIN1	MVOLT	LED	30.6	PEND	PENDANT MOUNTED SLOT, 2" REVEAL, BLACK FINISH,EDGE LENS AIRCRAFT CABLE
Z	LITHONIA	EPANL 1X4 400LM 80CRI 40K SLD	MVOLT	LED	37	REC	1X4; CENTERED IN GRID
⊗	LITHONIA	LRP (1)(2)(GC)(GR)(LA,RA,LRA DA)ELN(EM)(TM)	MVOLT	LED	9.7	REC	EDGE LIT EXIT SIGN, GREEN WITH MOUTNTING/CHEVRONS AS REQ.

NOTES: ALL FIXTURES INDICATED WITH HATCH, (EMERGENCY) SHALL HAVE INTEGRAL EMERGENCY BATTERY BALLAST PROVIDED BY MANUFACTURE OR REMOTE INVERTER. ALL EMERGENCY FIXTURES SHALL BE CONTROLLED WITH LOCAL SWITCHING, WHILE HAVING ADDITIONAL WIRING FOR CHARGING BATTERIES.



CORRIDOR 200K LIGHTING PLAN
1/8" = 1'-0"



FLAG POLE LIGHTING
1/16" = 1'-0"

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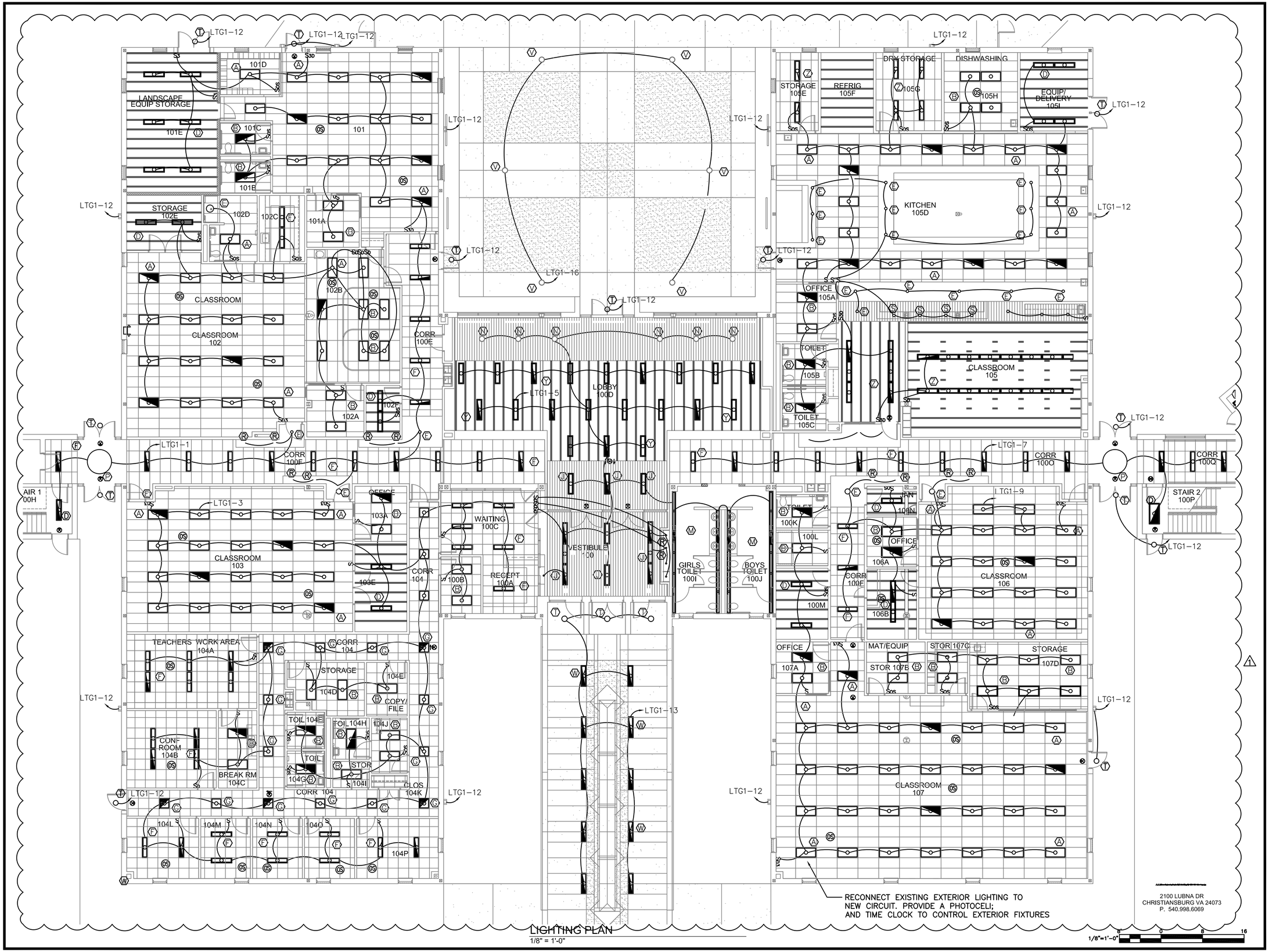
LIGHTING FIXTURE SCHEDULE

E-200

SHEET X of X

1/8"=1'-0" 8' 0 8 16



LIGHTING PLAN
1/8" = 1'-0"

1/8"=1'-0" 0 8 16

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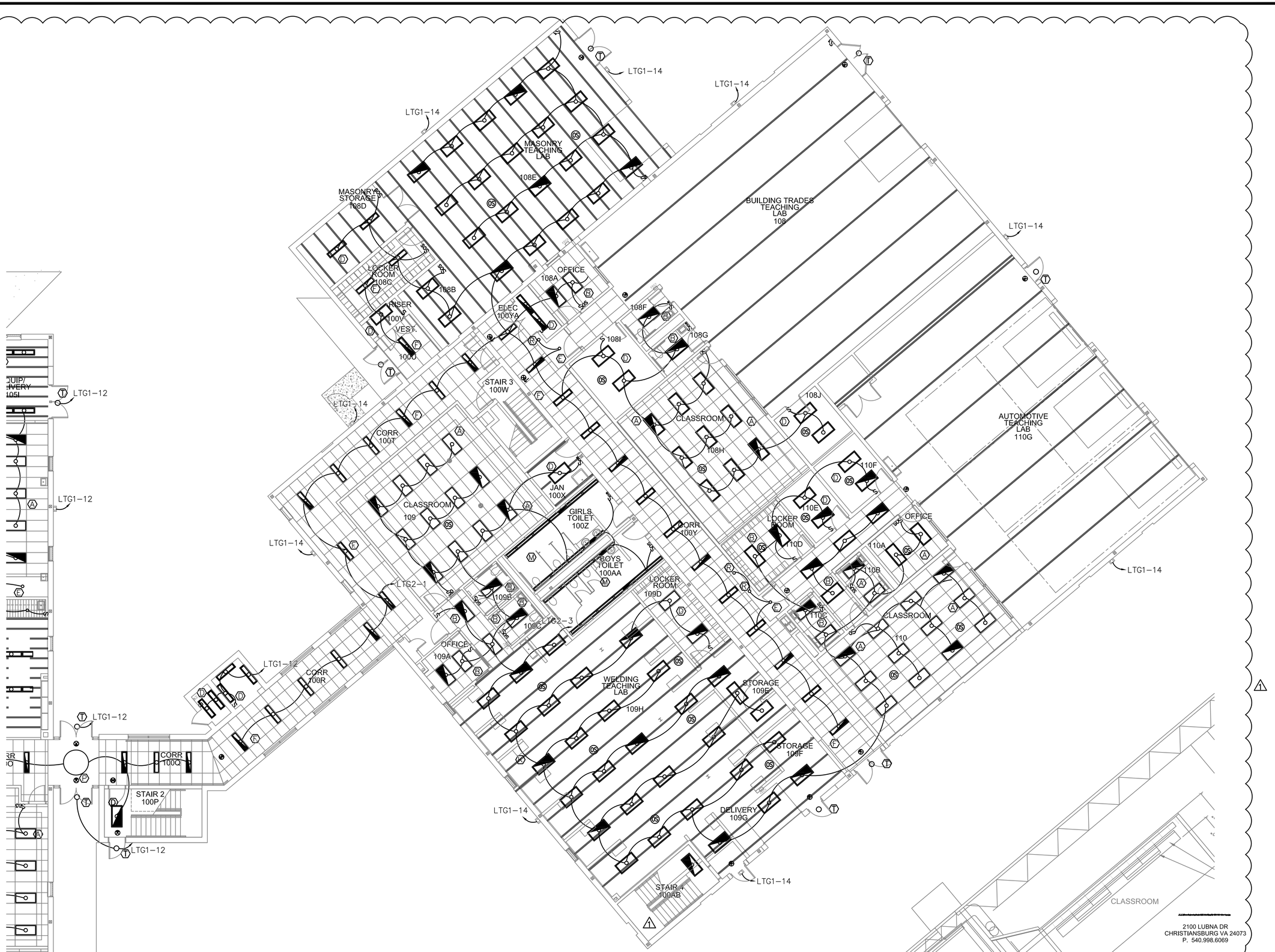
FIRST FLOOR PLAN

E-201

SHEET X of X



LIGHTING PLAN

1/8" = 1'-0"

1/8"=1'-0"

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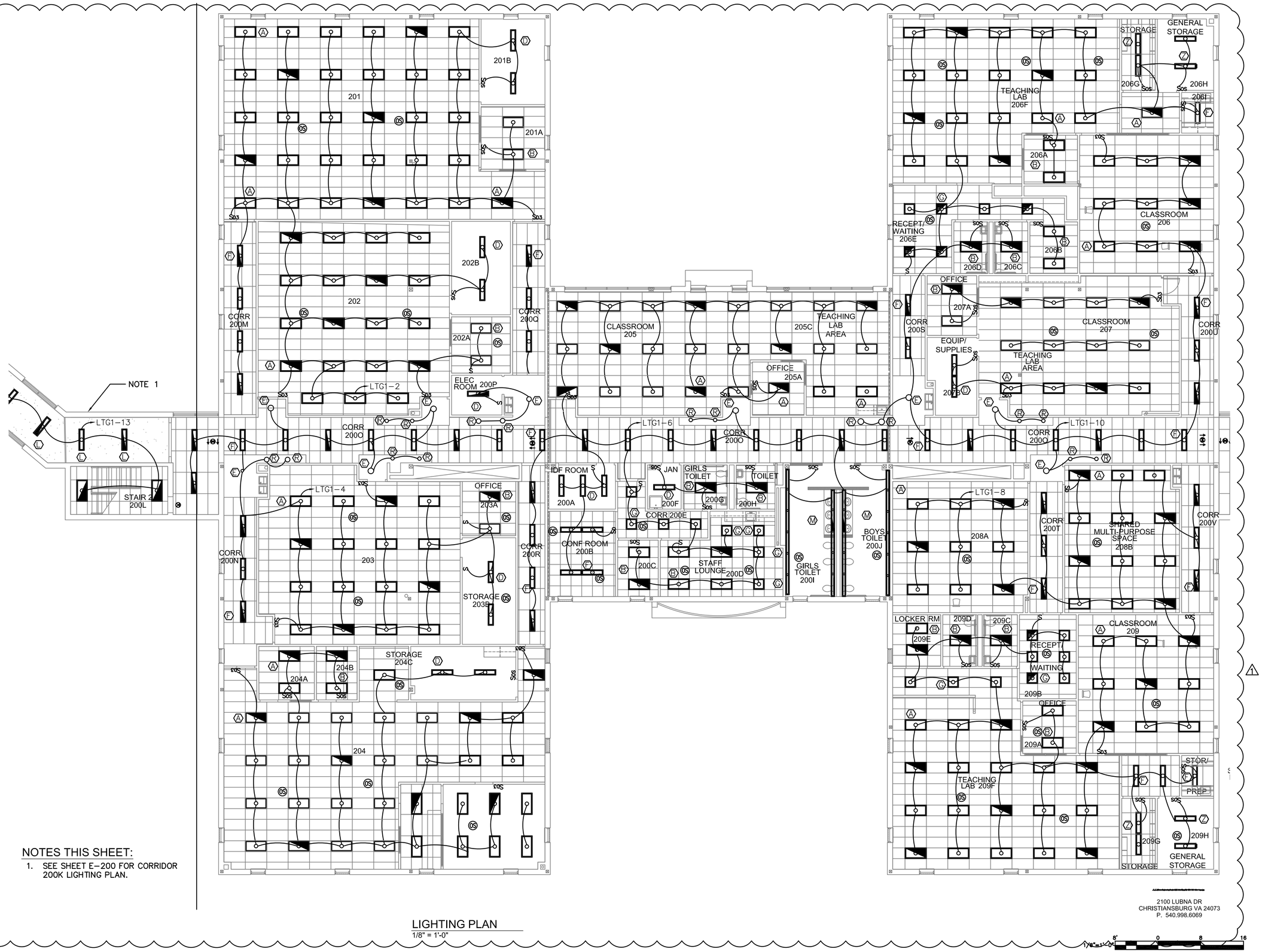
FIRST FLOOR PLAN

E–202

SHEET X of X



NOTES THIS SHEET:

1. SEE SHEET E-200 FOR CORRIDOR 200K LIGHTING PLAN.

LIGHTING PLAN

1/8" = 1'-0"

1/8" = 1'-0" 8' 0 8 16

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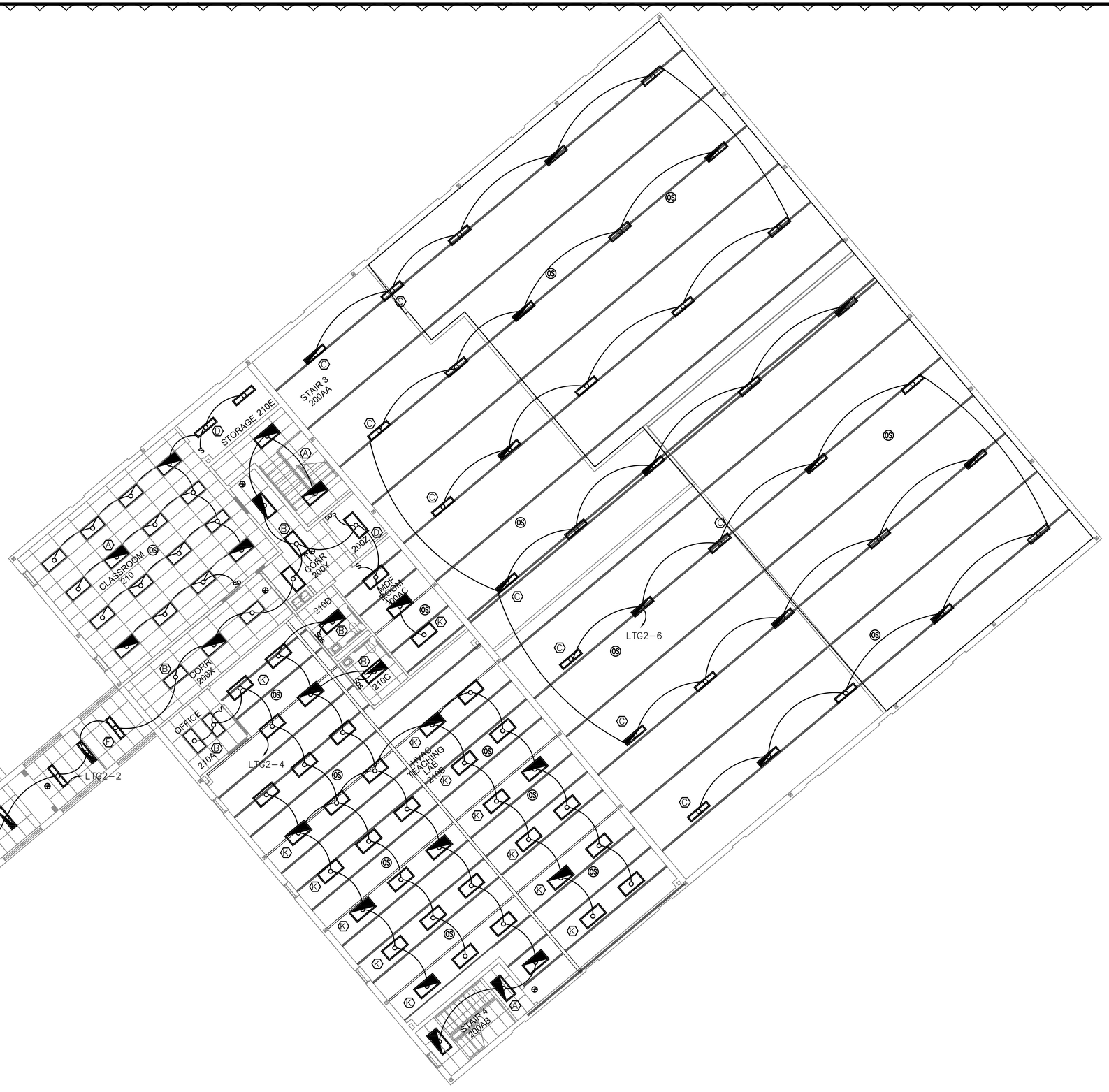
SECOND FLOOR PLAN

E-203

SHEET X of X



LIGHTING PLAN

1/8" = 1'-0"

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1/8"=1'-0" 8' 0 8 16

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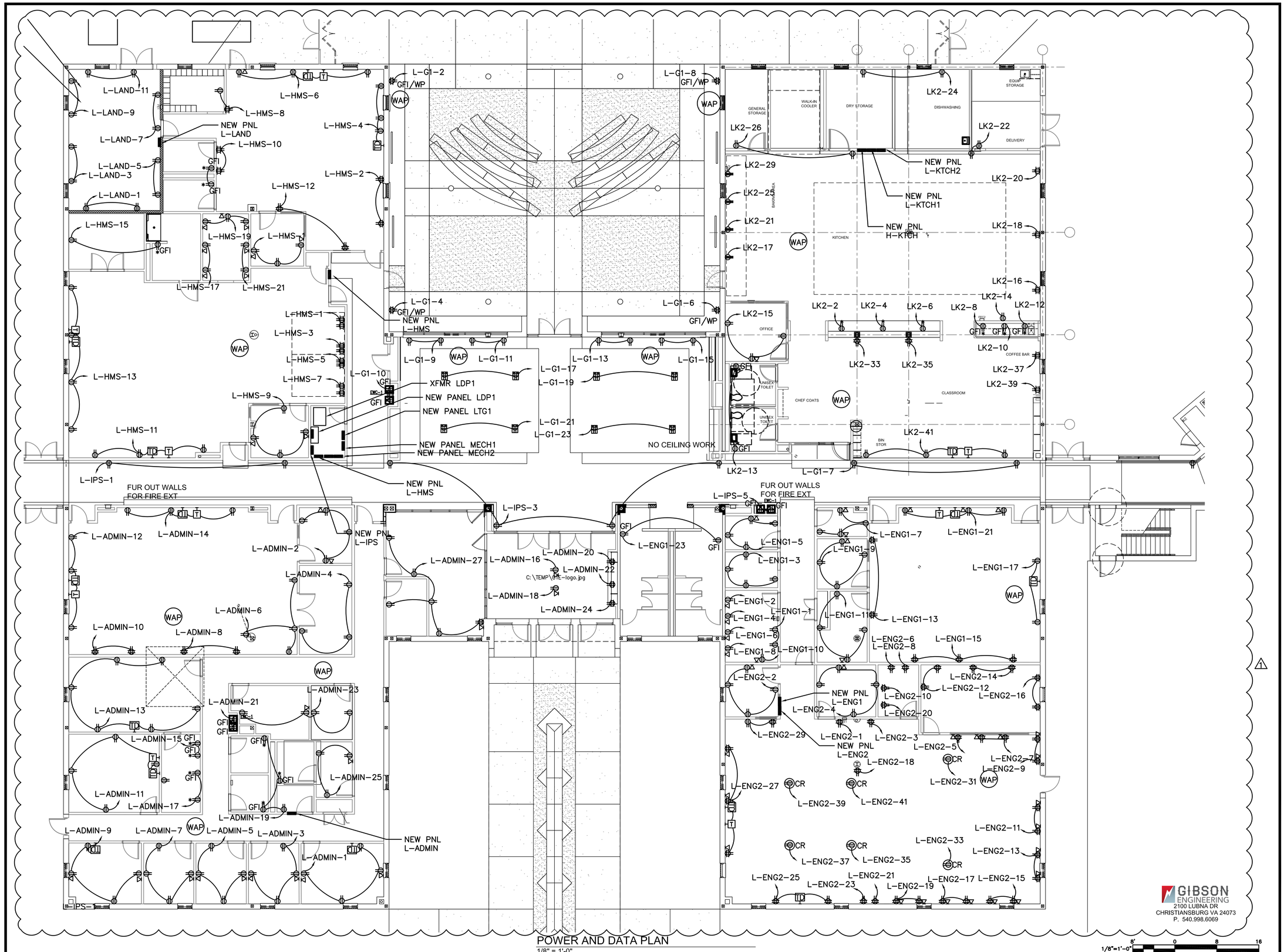
SECOND FLOOR PLAN

E-204

SHEET X of X



POWER AND DATA PLAN

1/8" = 1'-0"

1/8"=1'-0" 8' 0 8 16

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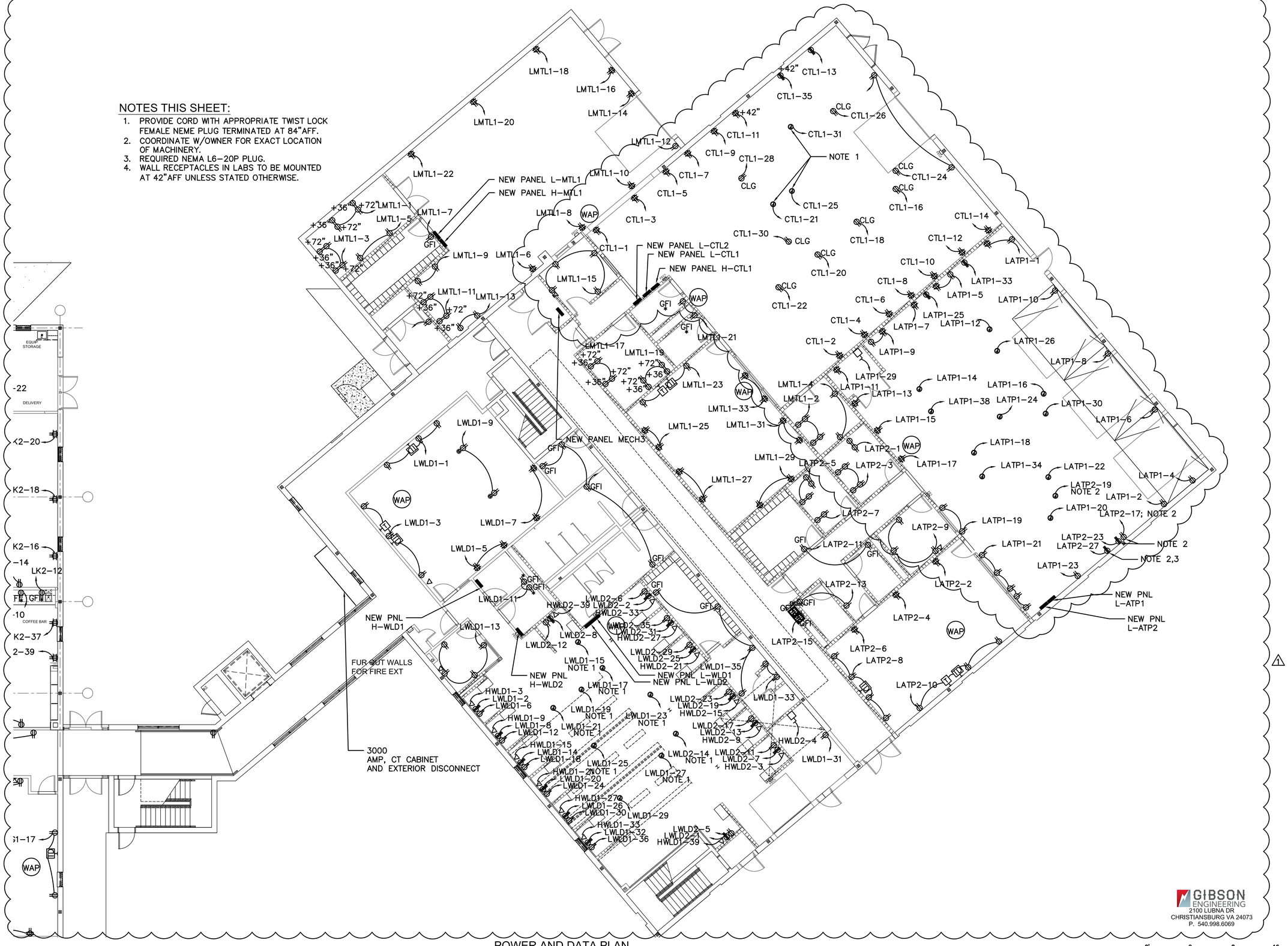
FIRST FLOOR PLAN

E–301

SHEET X of X

NOTES THIS SHEET:

1. PROVIDE CORD WITH APPROPRIATE TWIST LOCK FEMALE NEME PLUG TERMINATED AT 84"AFF.
2. COORDINATE W/OWNER FOR EXACT LOCATION OF MACHINERY.
3. REQUIRED NEMA L6-20P PLUG.
4. WALL RECEPTACLES IN LABS TO BE MOUNTED AT 42"AFF UNLESS STATED OTHERWISE.



POWER AND DATA PLAN
1/8" = 1'-0"

1/8"=1'-0" 8' 0 8 16

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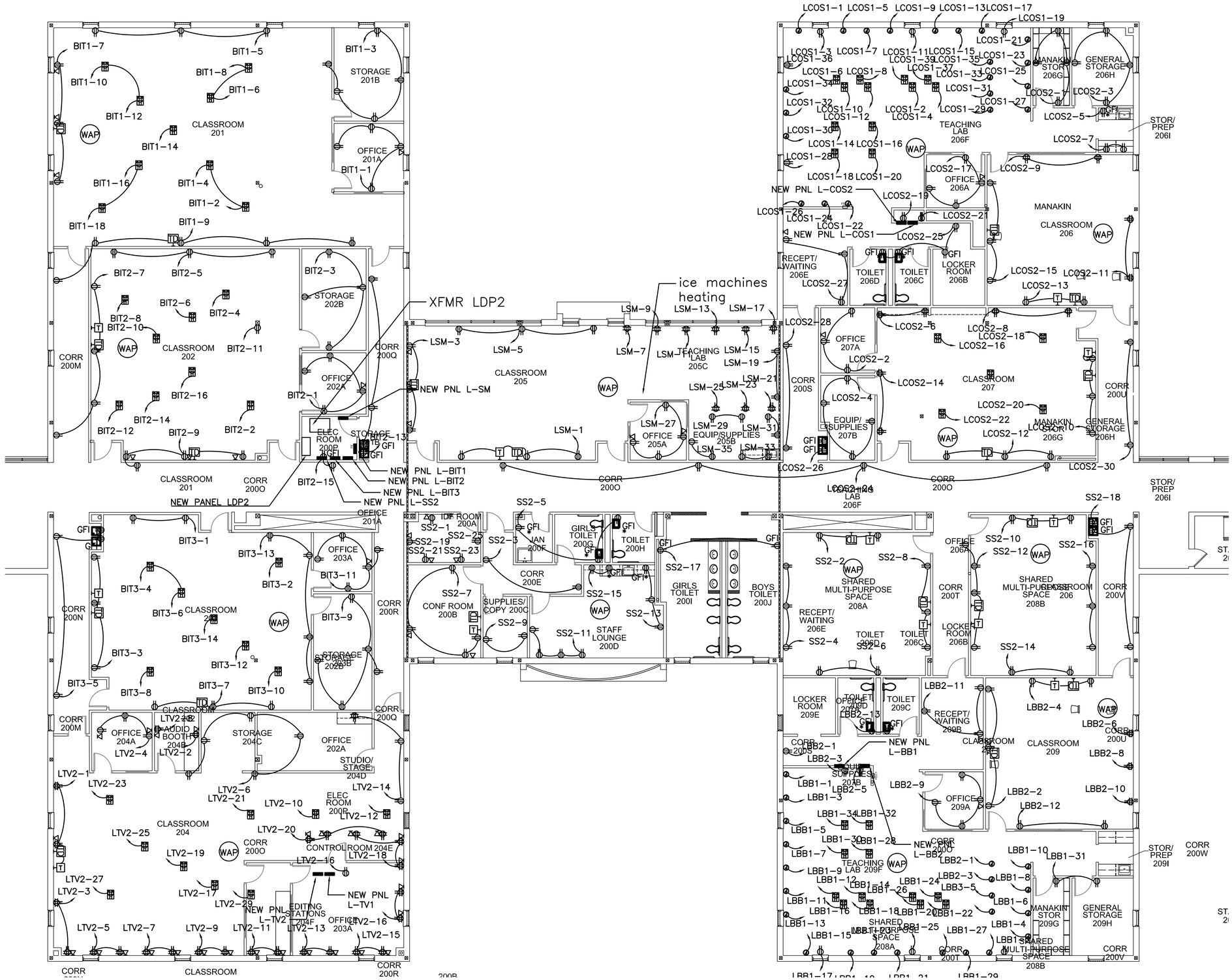
FIRST FLOOR PLAN

E-302

SHEET X of X



POWER AND DATA PLAN

1/8" = 1'-0"

1/8"=1'-0" 8' 0 8 16

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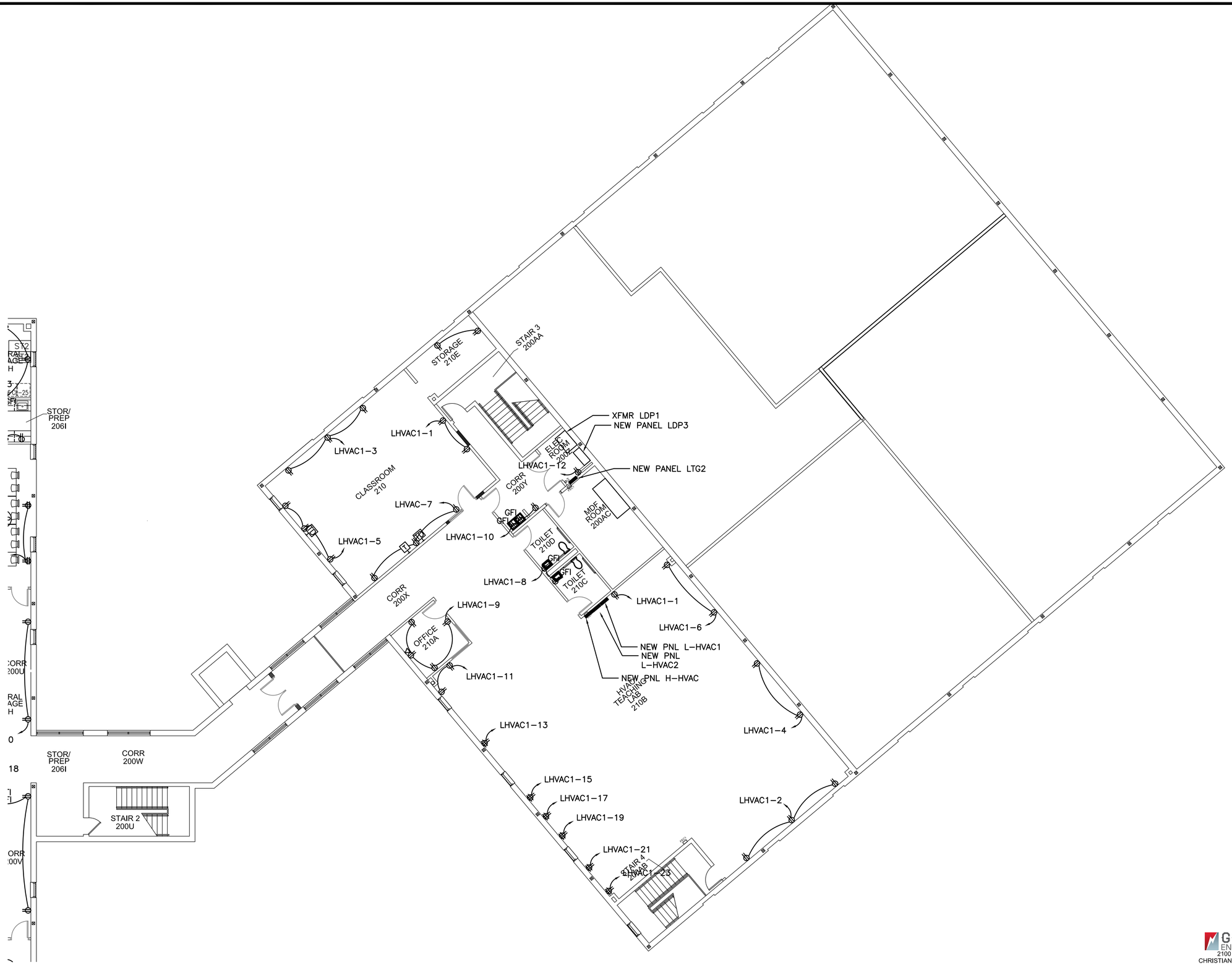
SECOND FLOOR PLAN

E–303

SHEET X of X



POWER AND DATA PLAN

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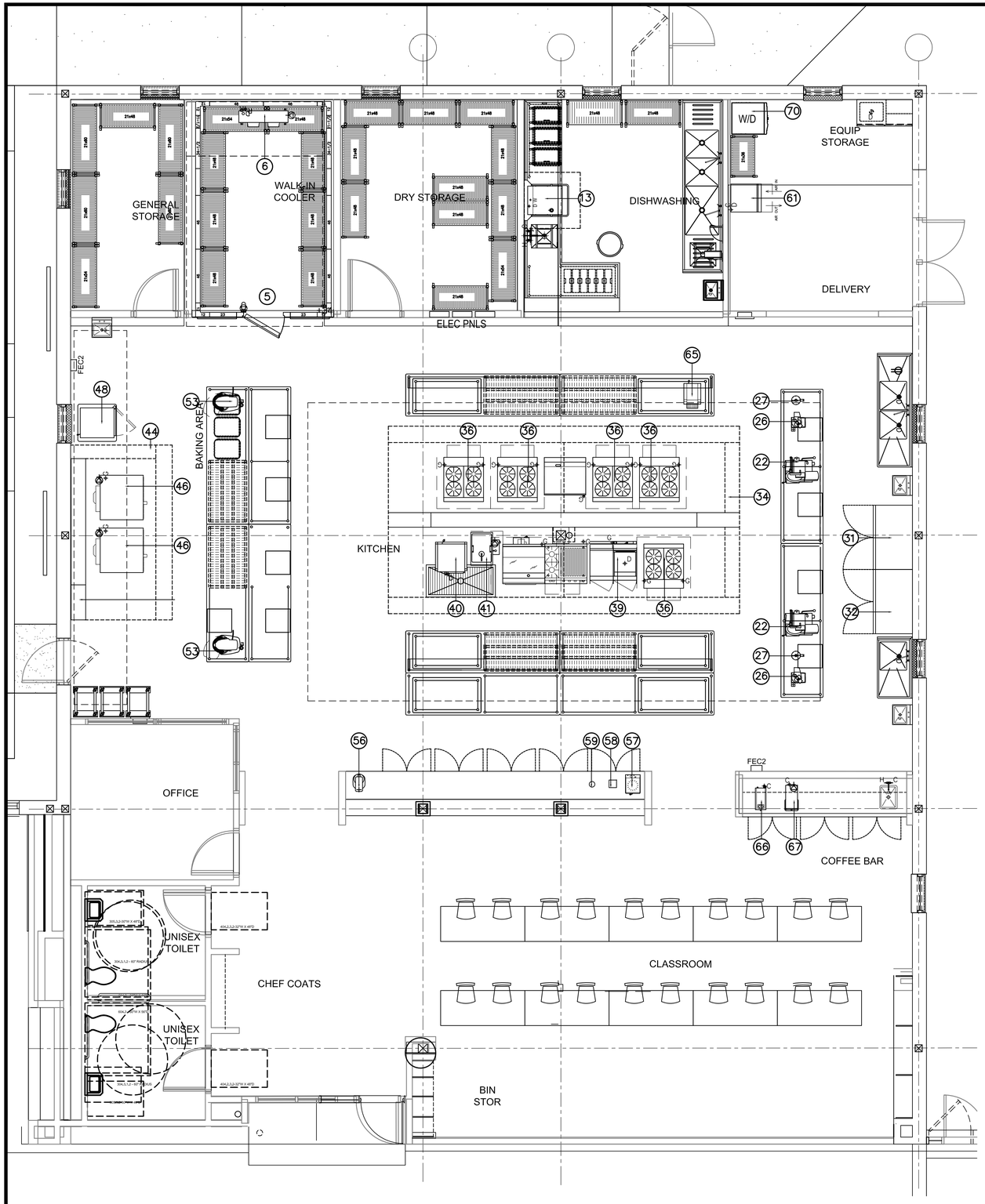
SECOND FLOOR PLAN

E–304

SHEET X of X



ENLARGED KITCHEN PLAN
1/4" = 1'-0"

ITEM	DESCRIPTION	CK #	NOTES
5	WALK-IN COOLER	LK1-1	
6	WALK-IN COOLER EVAP COIL	LK1-3	
7	WALK-IN COOLER COMPRESSOR	LK1-7	
13	DISHWASHER	LK1-13	REQUIRES ADDITIONAL 208/60/3, 54.8A CONN AT BOOSTER HTR (LK1-38)
22	SLICERS	LK1-27 LK1-29	NEMA 5-15P
26	FOOD PROCESSORS	LK1-25 LK1-31	NEMA 5-15P
27	ONE GALLON BLENDERS	LK1-23 LK1-33	NEMA 5-15P
31	2-DOOR REFRIDGERATOR	LK1-35	NEMA 5-15P
32	2-DOOR FREEZER	LK1-37	NEMA 5-15P
34	FIRE SUPPRESSION SYSTEM	LK1-20	
34		LK1-22	
36	4-BURNER RANGE		CONNECTS TO UDS
39	FRYERS W/FILTER SYSTEM		CONNECTS TO UDS
40	DOUBLE STEAMER		CONNECTS TO UDS
41	10-GALLON TILT SKILLET		CONNECTS TO UDS
44	FIRE SUPPRESSION SYSTEM	LK1-24	
46	DOUBLE CONVECTION OVENS		CONNECTS TO UDS
48	MOBILE PROOFER/WARMERS	LK1-14	NEMA 5-15P
53	20-QUART MIXERS	LK1-16 LK1-18	NEMA 5-15P
56	6-QUART MIXERS	LK1-12	NEMA 5-15P ONLY (10 ONE SHOWN, BALANCE ARE STORED IN BASE OF ENCLOSED STORAGE COUNTER
57	INDUCTION COOK TOPS	LK1-6	NEMA 5-15P ONLY (10 ONE SHOWN, BALANCE ARE STORED IN BASE OF ENCLOSED STORAGE COUNTER
58	INGREDIENT SCALES	LK1-8	NEMA 5-15P ONLY (10 ONE SHOWN, BALANCE ARE STORED IN BASE OF ENCLOSED STORAGE COUNTER; (3)C SIZE BATTERIES MAY BE USED IN LIEU OF C&P
59	IMMERSION BLENDERS	LK1-10	NEMA 5-15P ONLY (10 ONE SHOWN, BALANCE ARE STORED IN BASE OF ENCLOSED STORAGE COUNTER
61	ICE MACHINE	LK1-21	NEMA 5-15P
65	CONVEYOR TOASTER	LK1-26	NEMA 5-15P
66	ICE TEA BREWER	LK1-4	NEMA 5-15P
67	COFFEE BREWER	LK1-2	NEMA 5-15P
70	WASHER/DRYER	LK1-17	

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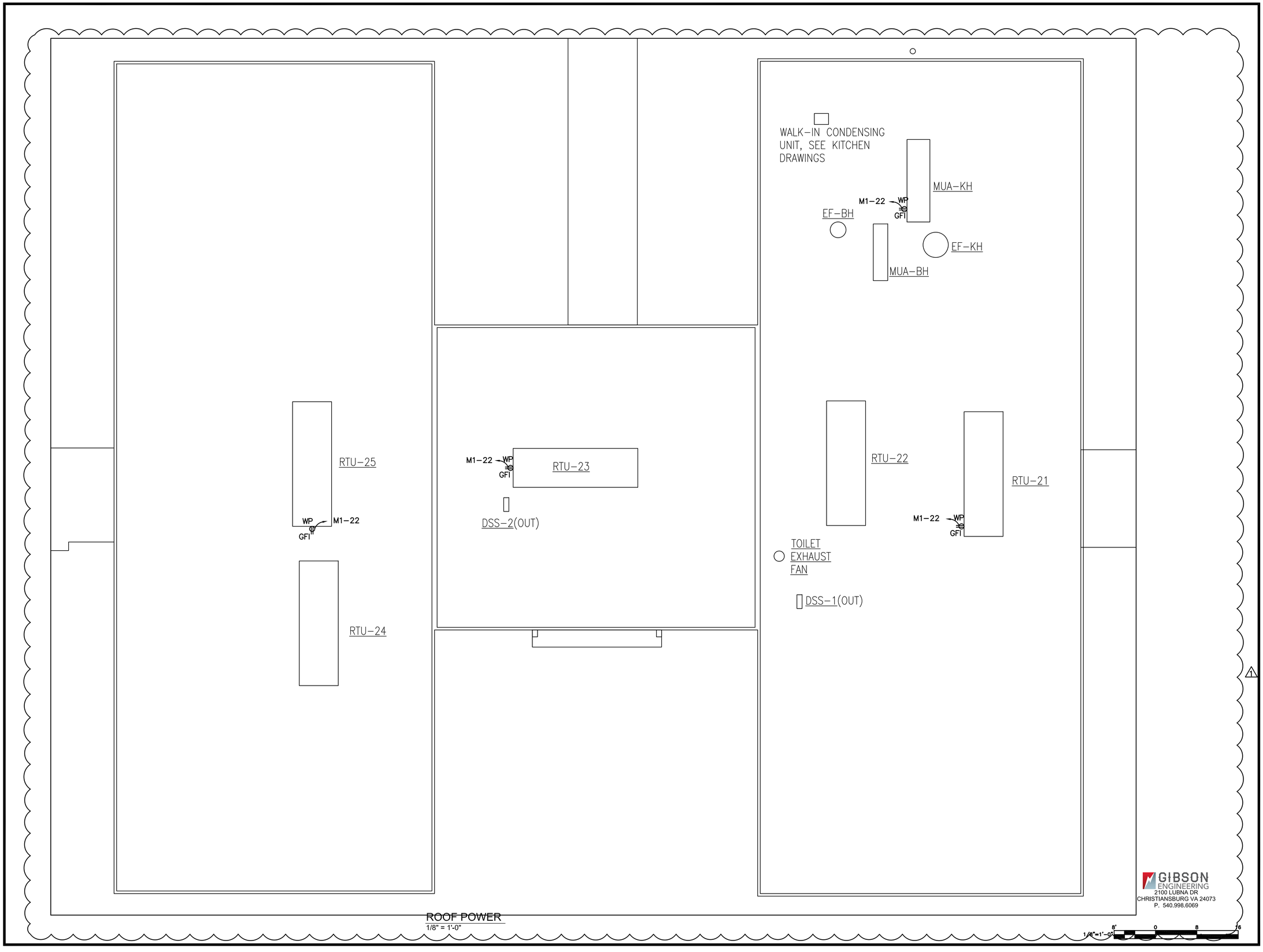
ENLARGED KITCHEN PLAN

E–305

SHEET X of X



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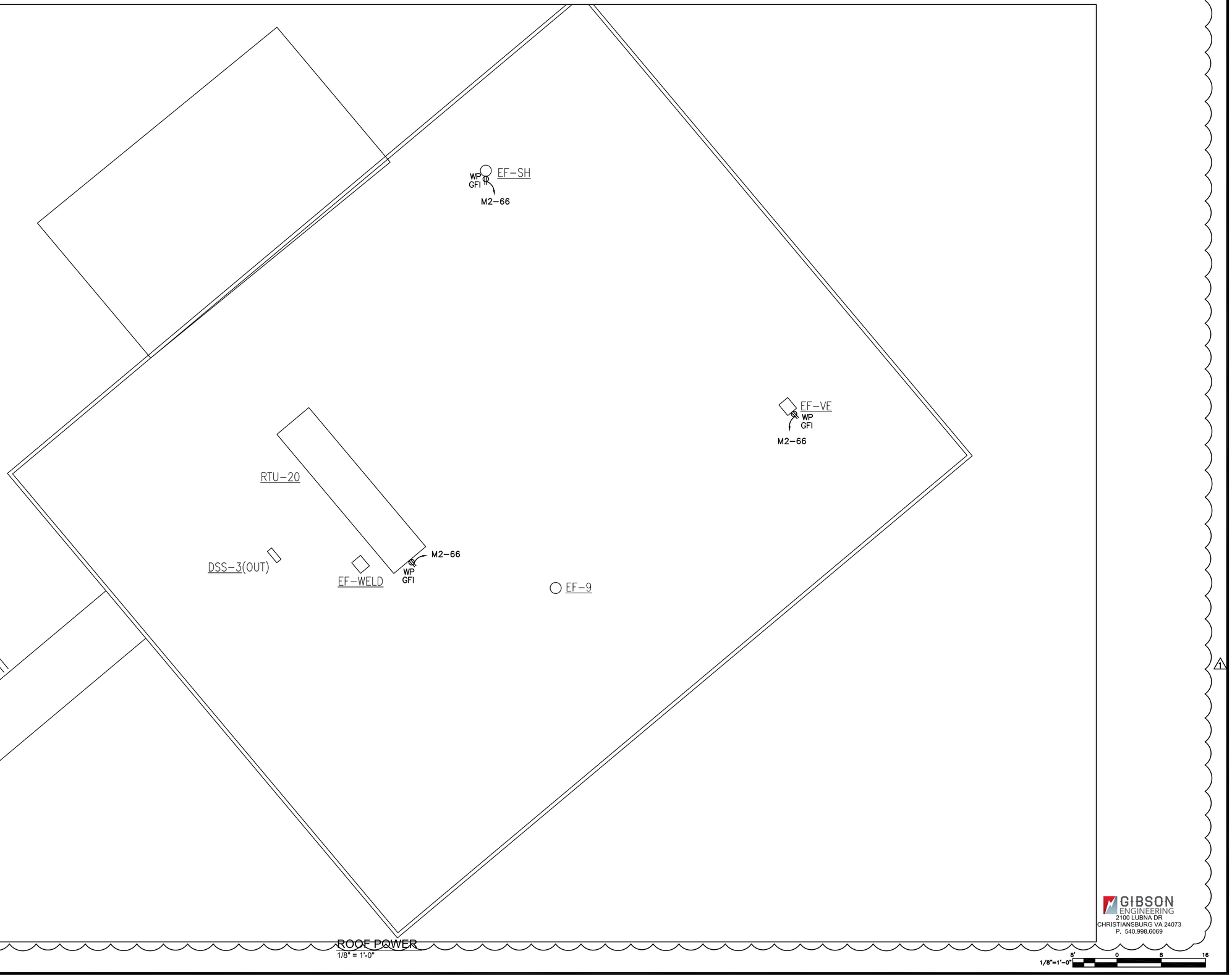
ROOF POWER PLAN

E-306

SHEET X of X



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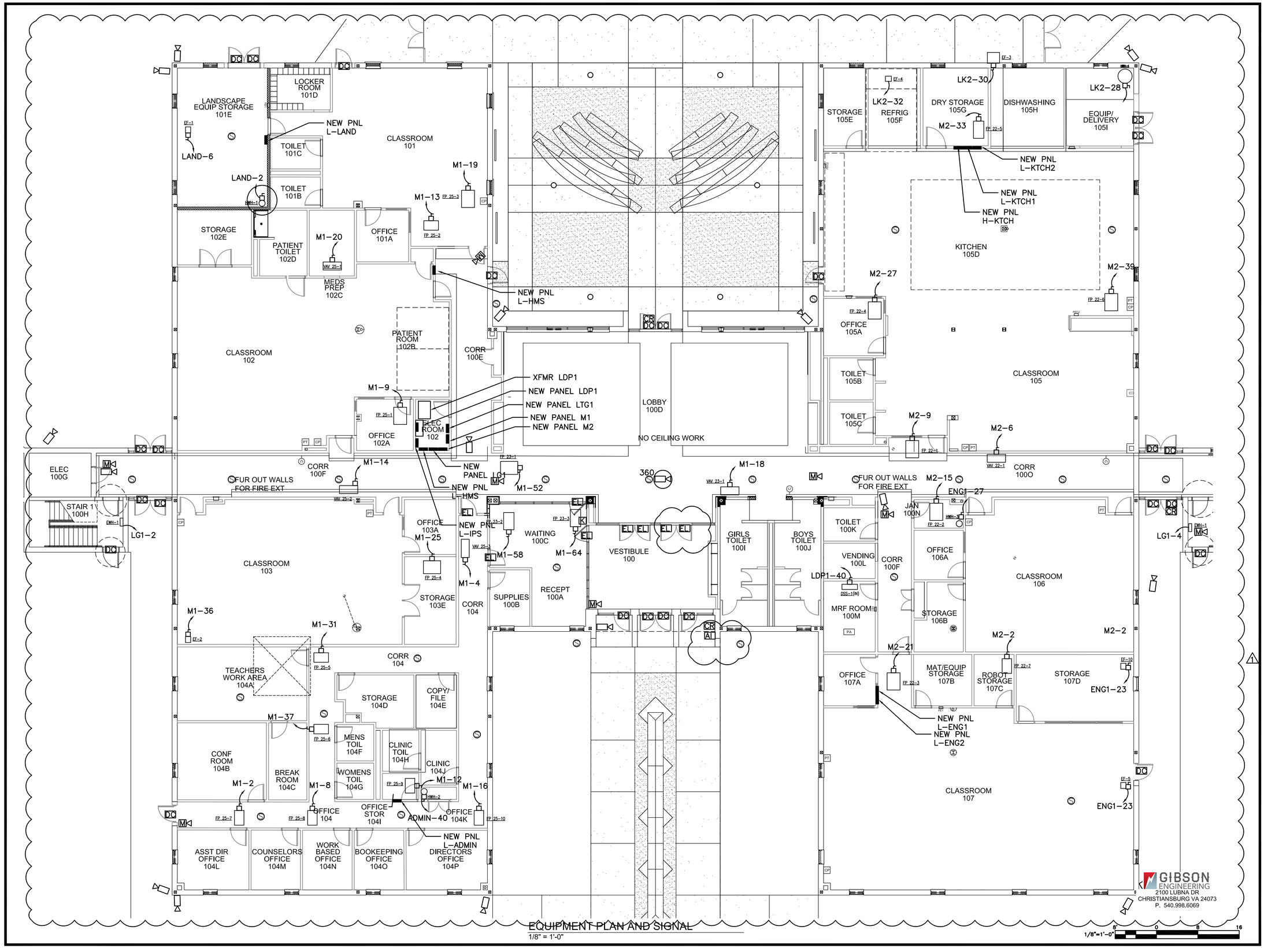
ROOF POWER PLAN

E-307

SHEET X of X



EQUIPMENT PLAN AND SIGNAL
1/8" = 1'-0"

1/8"=1'-0"

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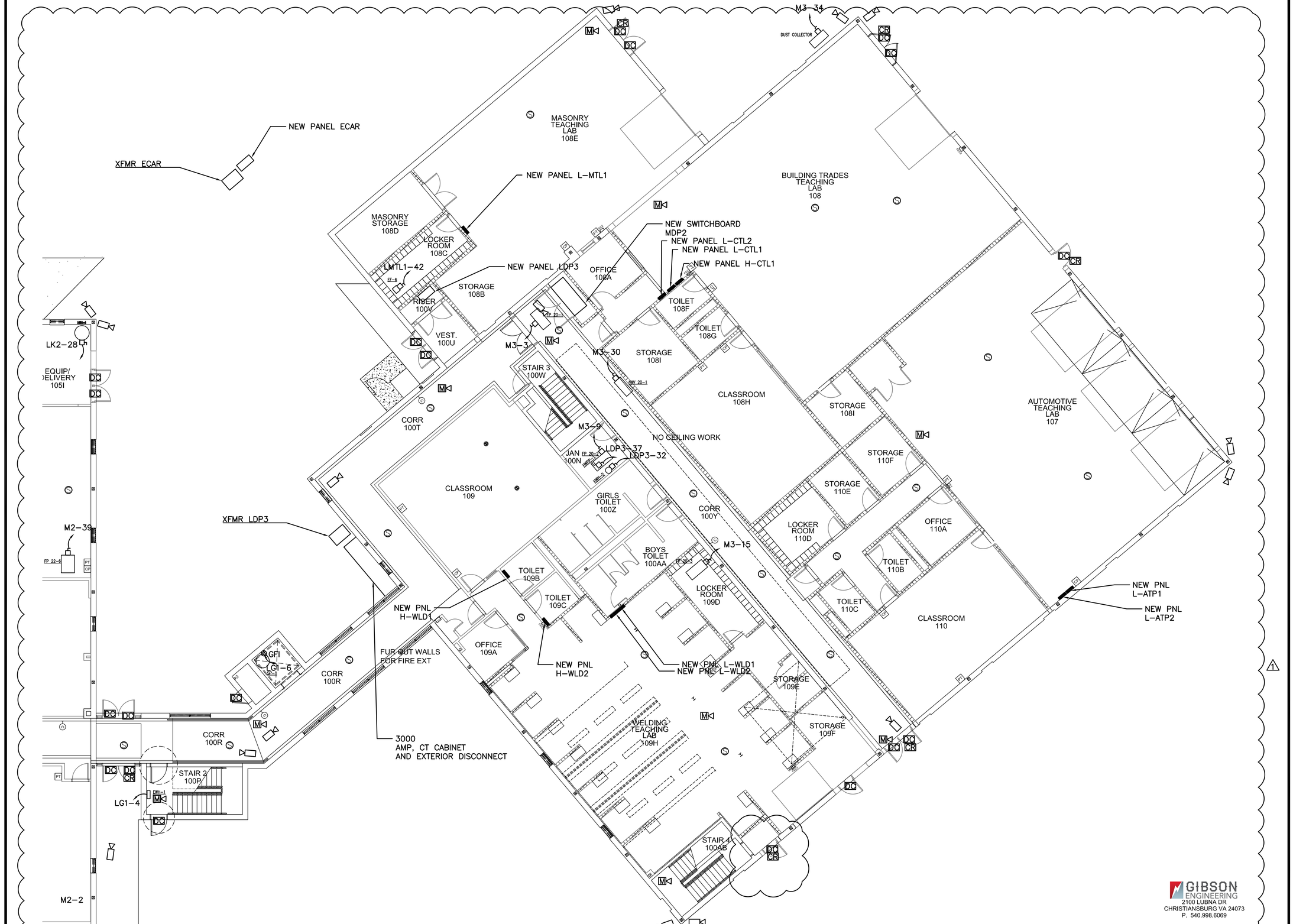
FIRST FLOOR PLAN

E-401

SHEET X of X



EQUIPMENT PLAN AND SIGNAL

1/8" = 1'-0"

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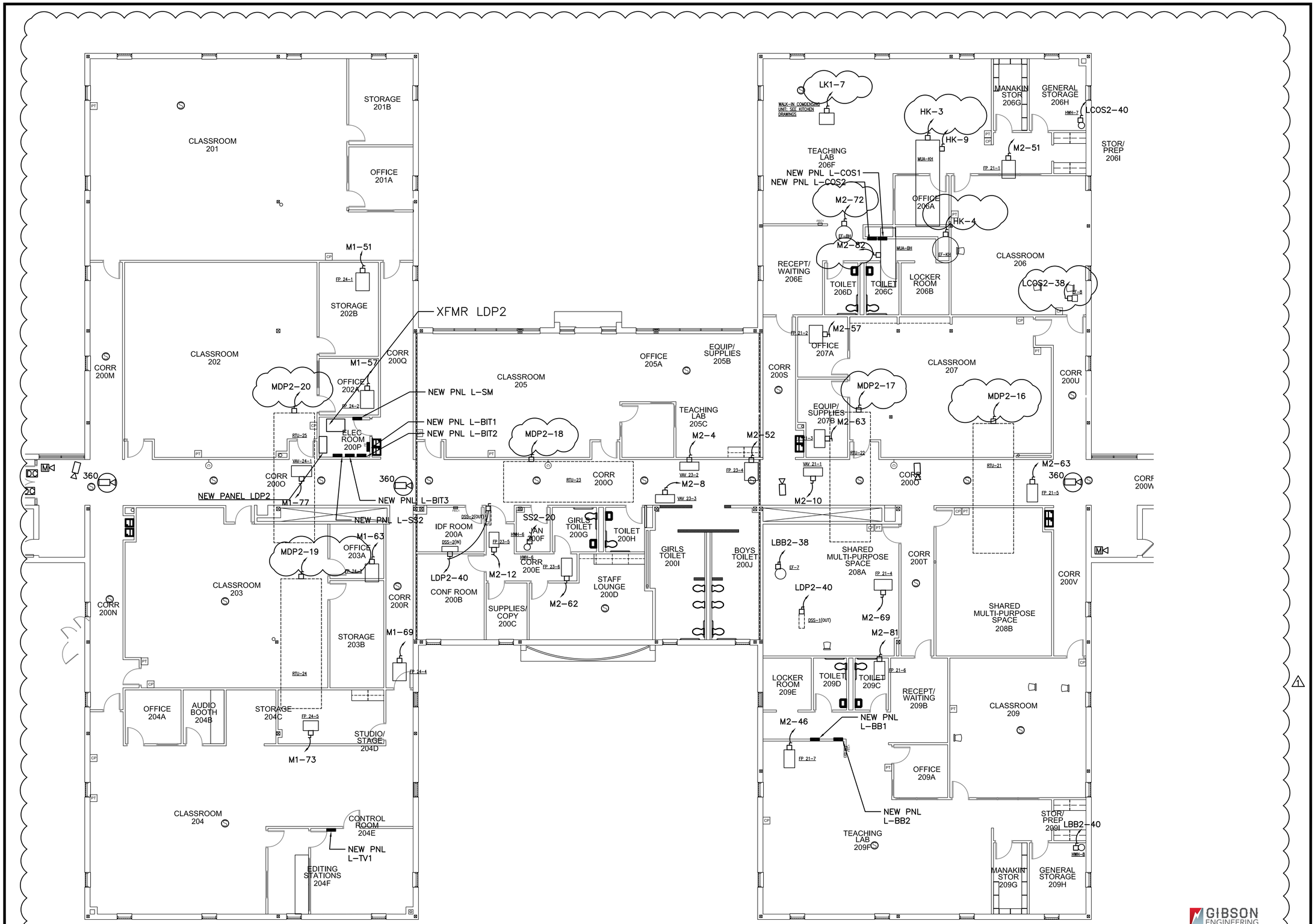
FIRST FLOOR PLAN

E-402

SHEET X of X



EQUIPMENT PLAN AND SIGNAL
1/8" = 1'-0"

1/8"=1'-0" 8' 0 8 16

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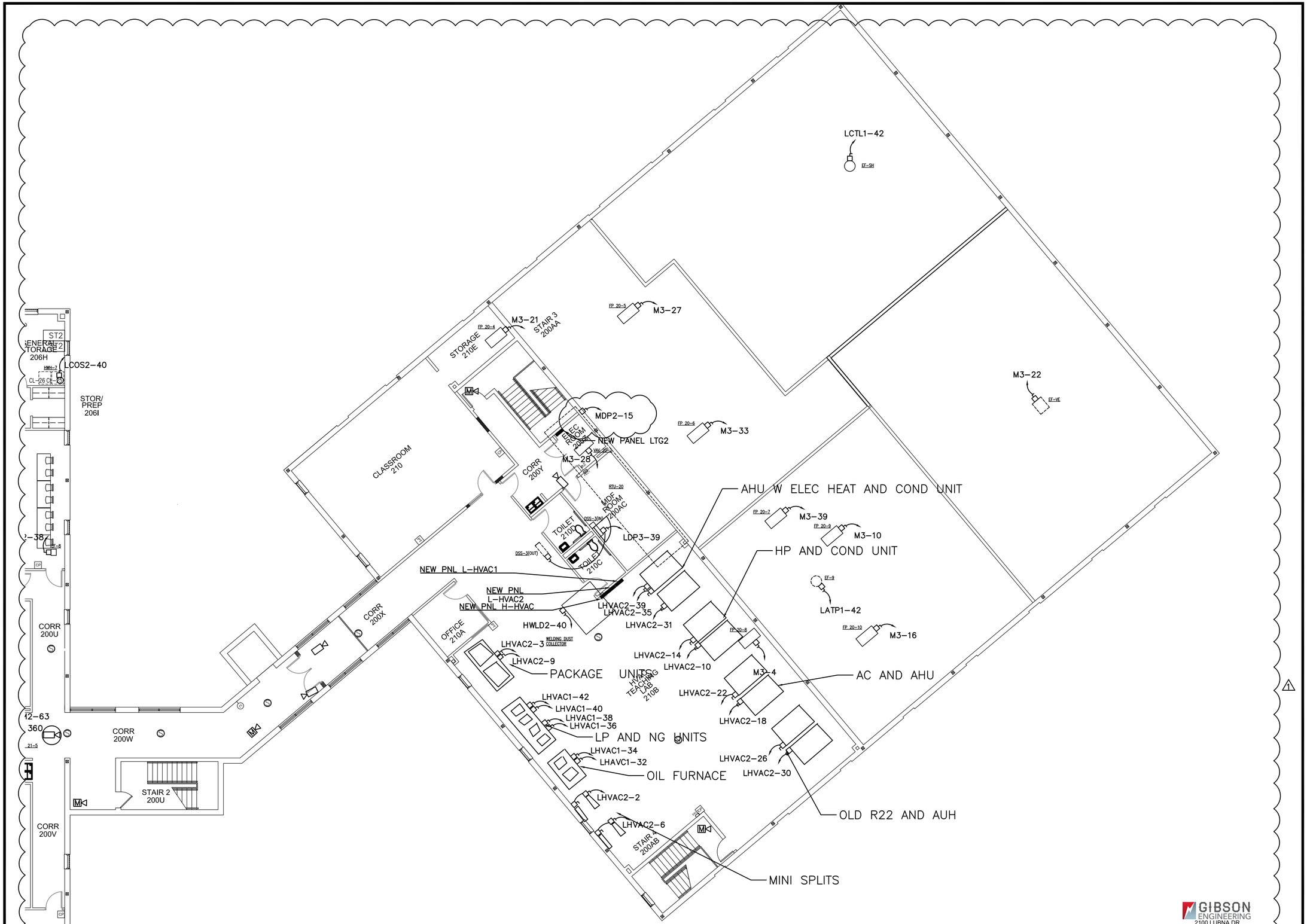
SECOND FLOOR PLAN

E-403

SHEET X of X



EQUIPMENT PLAN AND SIGNAL

1/8" = 1'-0"

1/8"=1'-0" 0 8' 16

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SECOND FLOOR PLAN

E–404

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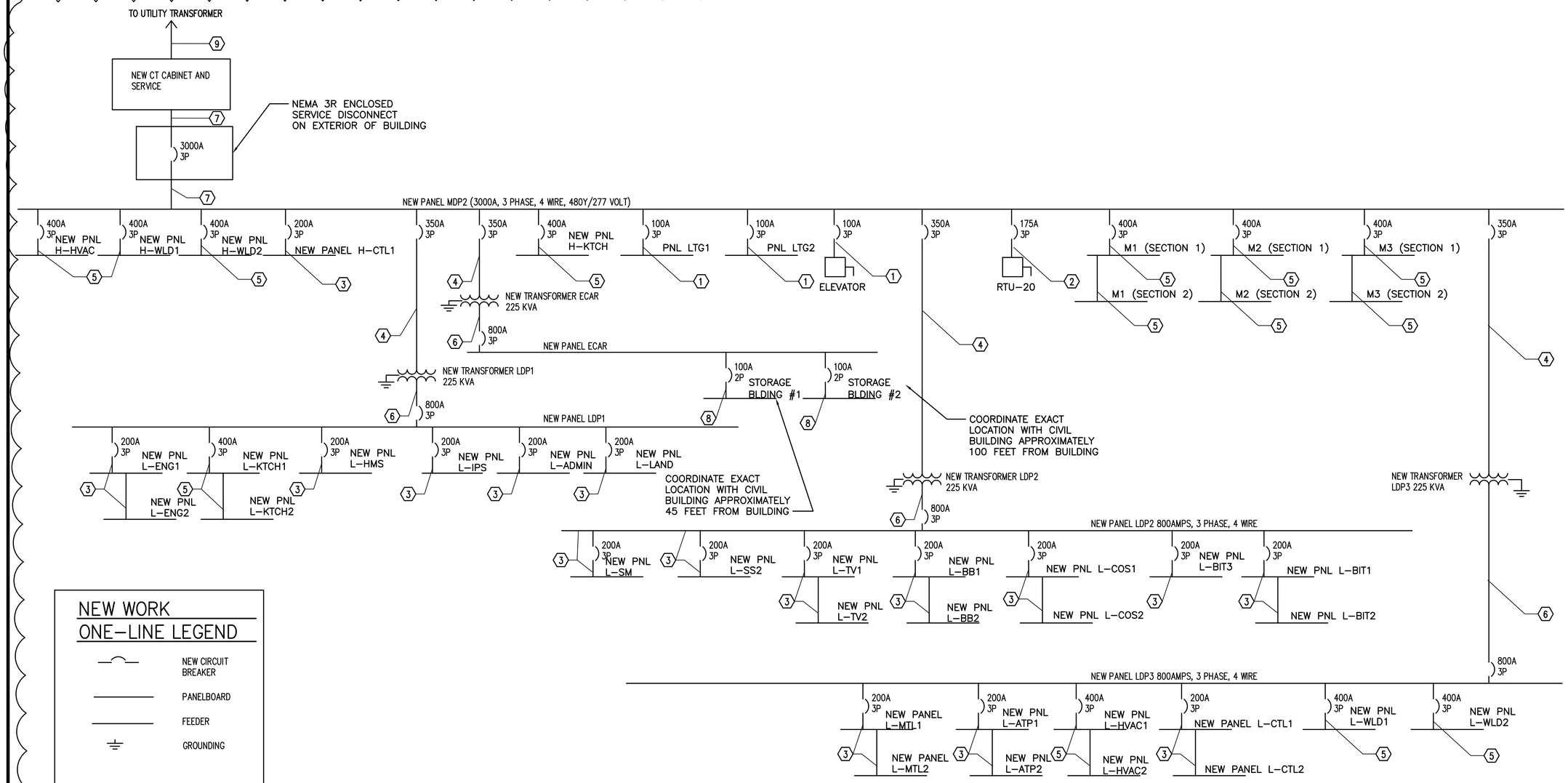
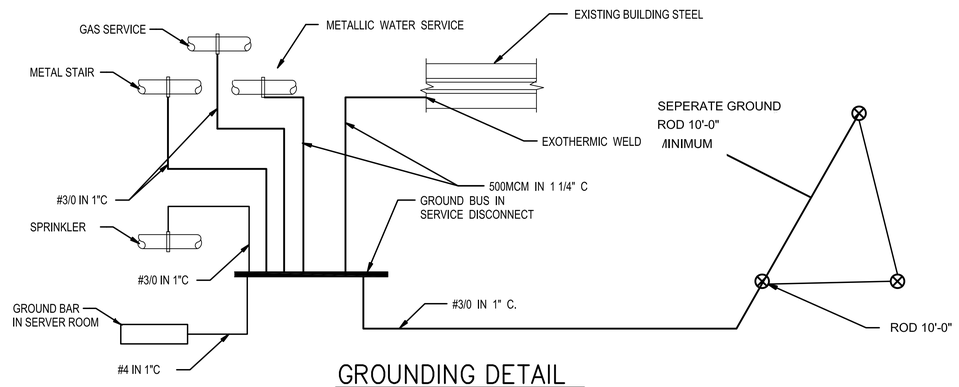


NEW WORK ONE-LINE LEGEND

- NEW CIRCUIT BREAKER
- PANELBOARD
- FEEDER
- GROUNDING



GROUNDING DETAIL

NEW ELECTRICAL SERVICE ONE LINE DIAGRAMS

TRANSFORMER SCHEDULE

NAME:	SIZE:	PRIMARY VOLT	SECONDARY VOLT
XFMR LDP1	225 KVA	480 DELTA	208Y/120
XFMR LDP2	225 KVA	480 DELTA	208Y/120
XFMR LDP3	225 KVA	480 DELTA	208Y/120
XFMR ECAR	225 KVA	480 DELTA	208Y/120

FEEDER SCHEDULE

(#)	WIRE SIZE
1	4-#3, 1-#8G,1 1/4"C
2	4-2/0, 1-#4G, 2"C
3	4-#3/0, 1-#4G, 2 1/2"C
4	3-#500MCM, 1-#3G, 3"C
5	2 SETS(4-#3/0, 1-#3G, 2 1/2"C)
6	3 SETS(4-300MCM, 1-#1/0G, 3"C)
7	8 SETS(4-500MCM, 1-400G, 4"C)
8	3-#3, 1-#8G, 1-1/4"C
9	8 SETS(4-500MCM, 4"C) 1 SPARE 4"

NEW WORK NOTES

1. PROVIDE NEW ELECTRICAL SERVICE INDICATED

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ELECTRICAL ONE LINE NEW WORK PLAN

E-501

SHEET X of X

PANEL M1 (SECTION 1)

VOLTAGE: 480Y/277 | PHASE: 3 | WIRE: 4 | BUS AMPS: 400A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
2	1	15	2	12		FP-25-7	2.8			
3	3					SPACE ONLY				
4	1	15	2	12		VAV-25-3		1.0		
8	3	15	4	12		FP-25-8				4.3
9	3	35	4	8		FP-25-1			19.0	
12	1	15	2	12		FP-25-9				1.0
13	1	15	2	12		FP-25-2	2.5			
14	1	15	2	12		VAV-25-2	1.0			
1	20					SPARE				
16	1	15	2	12		FP-25-10		1.1		
18	1	15	2	12		VAV-23-1			1.1	
19	3	20	4	12		FP-25-3			12.2	
20	1	15	2	12		VAV 25-1	1.0			
22	1	20	2	12		ROOF RCPTS		0.8		
24	1	20				SPARE				
25	3	25	4	10		FP-25-4			14.1	
26	1	20				SPARE				
28	1	20				SPAER				
30	1	20				SPARE				
31	3	15	4	12		FP-25-5			5.3	
32	1	20				SPARE				
34	1	20				SPARE				
36	1	20				SPARE				
37	1	15	2	12		FP-25-6	2.0			
38	1	20				SPARE				
39	1	20				SPARE				
40	1	20				SPARE				
41	1	20				SPARE				
42	1	20				SPARE				

	PHA	PHB	PHC	3 PH
TOTAL LEFT SIDE	4.5	0.0	0.0	50.6
TOTAL RIGHT SIDE	4.8	2.9	2.1	4.3
TOTAL	9.3	2.9	2.1	54.9
TOTAL RIGHT SIDE	4.8	2.9	2.1	4.3
TOTAL CONNECTED LOAD				69.2

* NOTES

PANEL M1 (SECTION 2)

VOLTAGE: 480Y/277 | PHASE: 3 | WIRE: 4 | BUS AMPS: 400A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
45	3					SPACE ONLY				
46	3					SPACE ONLY				
51	3	35	4	8		FP 24-1			21.8	
52	3	35	4	8		FP-23-1				21.8
57	3	25	4	10		FP-24-2			14.1	
58	3	15	4	12		FP-23-2				5.8
63	3	25	4	10		FP-24-3			13.1	
64	3	15	4	12		FP-23-3				8.3
68	1	20				SPARE				
69	3	35	4	8		FP-24-4			21.8	
70	1	20				SPARE				
72	1	20				SPARE				
73	1	20	2	12		FP-24-5	1.0			
74	1	20				SPARE				
76	1	20				SPARE				
77	3	20	4	12		VAV-24-1			7.0	
78	1	20				SPARE				
80	1	20				SPARE				
81	1	20				SPARE				
82	1	20				SPARE				
83	1	20				SPARE				
84	1	20				SPARE				

	PHA	PHB	PHC	3 PH
TOTAL LEFT SIDE	1.0	0.0	0.0	77.8
TOTAL RIGHT SIDE	0.0	0.0	0.0	36.0
TOTAL	1.0	0.0	0.0	113.8
TOTAL RIGHT SIDE	0.0	0.0	0.0	36.0
TOTAL CONNECTED LOAD				114.8

* NOTES

PANEL M3 (SECTION 1)

VOLTAGE: 480Y/277 | PHASE: 3 | WIRE: 4 | BUS AMPS: 400A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
3	3	35	4	8		FP20-1				21.8
4	3	35	4	8		FP20-8				21.8
9	3	15	4	12		FP20-2			8.3	
10	3	35	4	8		FP20-9				21.8
15	3	35	4	8		FP20-3			21.8	
16	3	15	4	12		FP20-10				8.3
21	3	20	4	12		FP20-4			11.0	
22	3	15	4	12		EF-VE				3.0
26	1	20				SPARE				
27	3	35	4	8		FP20-5			21.8	
28	1	20	2	12		VAV-20-2		1.0		
30	1	20	2	12		VAV-20-1			1.0	
33	3	20	4	12		FP20-6			9.7	
34	3	40	4	8		DUST COLLECTOR				16.4
39	3	20	4	12		FP20-7			9.7	
40	3	35	4	8		EF-WELD				5.9

	PHA	PHB	PHC	3 PH
TOTAL LEFT SIDE	0.0	0.0	0.0	104.1
TOTAL RIGHT SIDE	0.0	1.0	1.0	77.2
TOTAL	0.0	1.0	1.0	181.3
TOTAL RIGHT SIDE	0.0	1.0	1.0	77.2
TOTAL CONNECTED LOAD				183.3

* NOTES

PANEL M2 (SECTION 1)

VOLTAGE: 480Y/277 | PHASE: 3 | WIRE: 4 | BUS AMPS: 400A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1										
2	1	15	2	12		FP-22-7	3.2			
3	3					SPACE ONLY				
4	1	15	2	12		VAV-23-2		1.0		
5										
6	1	15	2	12		VAV-22-1			1.0	
7										
8	1	15	2	12		VAV-23-3	1.0			
9	3	25	4	10		FP-22-1			15.1	
10	1	20	2	12		VAV-21-1		1.0		
11										
12	1	20	2	12		FP-23-5			3.5	
13										
14	1	20				SPARE				
15	3	20	4	12		FP-22-2			12.2	
16	1	20				SPARE				
17										
18	1	20				SPARE				
19										
20	1	20				SPARE				
21	3	35	4	8		FP-22-3			21.8	
22	1	20				SPARE				
23										
24	1	20				SPARE				
25										
26	1	20				SPARE				
27	3	35	4	8		FP-22-4			19.9	
28	1	20				SPARE				
29										
30	1	20				SPARE				
31										
32	1	20				SPARE				
33	3	15	4	12		FP-22-5			6.4	
34	1	20				SPARE				
35										
36	1	20				SPARE				
37										
38	1	20				SPARE				
39	3	35	4	8		FP-22-6			19.9	
40	1	20				SPARE				
41										
42	1	20				SPARE				

	PHA	PHB	PHC	3 PH
TOTAL LEFT SIDE	0.0	0.0	0.0	95.3
TOTAL RIGHT SIDE	4.2	2.0	4.5	0.0
TOTAL	4.2	2.0	4.5	95.3
TOTAL RIGHT SIDE	4.2	2.0	4.5	0.0
TOTAL CONNECTED LOAD				106.0

* NOTES
1 - CONROL WITH WALL SWITCH; CONNECT TO LIGHT FOR THAT ROOM.

PANEL M2 (SECTION 2)

VOLTAGE: 480Y/277 | PHASE: 3 | WIRE: 4 | BUS AMPS: 400A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
43										
44										
45	3	15	4	12		EF-BH			2.5	
46	3	30	4	10		FP-21-7				18.0
47										
48										
49										
50										
51	3	30	4	10		FP-21-1			17.1	
52	3	30	4	10		FP-23-4				18.0
53										
54										
55										
56	1	20	2	12		FP-23-5	4.0			
57	3	30	4	10		FP-21-2			16.1	
58	1	20				SPARE				
59										
60										
61										
62	3	15	4	12		FP-23-6				6.4
63	3	20	4	12		FP-21-3			12.1	
64										
65										
66	1	20	2	12		ROOF RCPTS			0.5	
67										
68	1	20				SPARE				
69	3	20	4	12		FP-21-4			9.7	
70	1	20				SPARE				
71										
72	1	20				SPARE				
73										
74	1	20				SPARE				
75	3	20	4	12		FP-21-5			9.7	
76	1	20				SPARE				
77										
78	1	20				SPARE				
79										
80										
81	3	25	4	10		FP-21-6			14.1	
82	3	15	4	12		MAU-BH				2.5
83										

	PHA	PHB	PHC	3 PH
TOTAL LEFT SIDE	0.0	0.0	0.0	81.4
TOTAL RIGHT SIDE	4.0	0.0	0.5	45.0
TOTAL	4.0	0.0	0.5	126.4
TOTAL RIGHT SIDE	4.0	0.0	0.5	45.0
TOTAL CONNECTED LOAD				130.9

* NOTES

PANEL LTG1

VOLTAGE: 480Y/277 | PHASE: 3 | WIRE: 4 | BUS AMPS: 100A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		FIRST FLOOR LTG	3.9			
2	1	20	2	12		SECOND FLOOR LTG		3.5		
3	1	20	2	12		FIRST FLOOR LTG		4.0		
4	1	20	2	12		SECOND FLOOR LTG			3.6	
5	1	20	2	12		FIRST FLOOR LTG			3.1	
6	1	20	2	12		SECOND FLOOR LTG				3.9
7	1	20	2	12		FIRST FLOOR LTG	3.4			
8	1	20	2	12		SECOND FLOOR LTG	3.7			
9	1	20	2	12		FIRST FLOOR LTG		3.7		
10	1	20	2	12		SECOND FLOOR LTG			3.6	
11	1	20	2	12		EXTERIOR LTG			1.0	
12	1	20	2	12		EXT LTG				1.2
13	1	20	2	12		CANOPY LTG	1.0			
14	1	20	2	12		EXT LTG	0.9			
15	1	20	2	12		FLAG LTG		0.3		
16	1	20				SPARE				
17	1	20	2	12		COURTYARD LTG			0.6	
18	1	20				SPARE				
19	1	20				SPARE				
20	1	20				SPARE				
21	1	20				SPARE				
22	1	20				SPARE				
23	1	20				SPARE				
24	1	20				SPARE				

	PHA	PHB	PHC	3 PH
TOTAL LEFT SIDE	8.3	8.0	4.7	0.0
TOTAL RIGHT SIDE	8.1	7.2	5.1	0.0
TOTAL	16.3	15.1	9.7	0.0
TOTAL RIGHT SIDE	8.1	7.2	5.1	0.0
TOTAL CONNECTED LOAD				41.1

* NOTES

PANEL LTG2

VOLTAGE: 480Y/277 | PHASE: 3 | WIRE: 4 | BUS AMPS: 100A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		FIRST FLOOR LTG	3.7			
2	1	20	2	12		SECOND FLOOR LTG				
3	1	20	2	12		FIRST FLOOR LTG		3.8		
4	1	20	2	12		SECOND FLOOR LTG			2.6	
5	1	20				SPARE				
6	1	20	2	12		SECOND FLOOR LTG				2.6
7	1	20				SPARE				
8	1	20				SPARE				
9	1	20				SPARE				
10	1	20				SPARE				
11	1	20				SPARE				
12	1	20				SPARE				
13	1	20				SPARE				
14	1	20				SPARE				
15	1	20				SPARE				
16	1	20				SPARE				
17	1	20				SPARE				
18	1	20				SPARE				
19	1	20				SPARE				
20	1	20				SPARE				
21	1	20				SPARE				
22	1	20				SPARE				
23	1	20				SPARE				
24	1	20				SPARE				

	PHA	PHB	PHC	3 PH
TOTAL LEFT SIDE	3.7	3.8	0.0	0.0
TOTAL RIGHT SIDE	2.4	2.6	2.6	0.0
TOTAL	6.1	6.4	2.6	0.0
TOTAL RIGHT SIDE	2.4	2.6	2.6	0.0
TOTAL CONNECTED LOAD				15.1

* NOTES

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PANEL SCHEDULES

E-502

SHEET X of X

PANEL LDP1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 800A | MAIN BREAKER AMPS: 800A | X SURFACE MOUNTED | FLUSH MOUNTED | kAIC RATING: 65,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH
							8.3											4.0			
3	3	200				PANEL L-ENG1 &LENG2		7.9		0.0	4	3	200				PANEL L-HMS		3.8		0.0
									6.7											3.6	
																		2.2			
9	3	200				SPARE					10	3	200				PANEL L-IPS		3.2		0.0
																				2.4	
							20.9											6.5			
15	3	400				PANEL LK1&LK2		13.8		12.9	16	3	200				PANEL L-ADMIN		5.1		0.0
									18.0											4.9	
							7.7											0.7			
21	3	200				PANEL LM1		10.3		0.0	22	3	200				PANEL L-LAND		0.7		0.0
									10.3											0.7	
27	3					SPACE					28	3					SPACE				
33	3					SPACE					34	3					SPACE				
39	3					SPACE					40	2	20	2	12		DSS-1(IN) (OUT)		1.2		
																				1.2	

TOTAL LEFT SIDE 36.9 32.0 34.9 12.9 — TOTAL RIGHT SIDE 13.3 14.0 12.8 0.0
TOTAL RIGHT SIDE 13.3 14.0 12.8 0.0
TOTAL 50.2 46.0 47.8 12.9 — TOTAL CONNECTED LOAD 156.8

* NOTES

PANEL L-ENG1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | X SURFACE MOUNTED | FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH
1	1	20	2	12		MRF RM 100M	0.4				2	1	20	2	10		COMM EQPT				
3	1	20	2	12		VENDING 100L		0.7			4	1	20	2	10		COMM EQPT				
5	1	20	2	12		TOILET 100K			0.7		6	1	20	2	10		COMM EQPT				
7	1	20	2	12		JAN 100N	0.7				8	1	20	2	10		COMM EQPT				
9	1	20	2	12		OFFC 106A		0.7			10	1	20	2	10		FIRA ALARM				
11	1	20	2	12		STOR 106B			0.7		12	1	20				SPARE				
13	1	20	2	12		CLASSRM 106	0.7				14	1	20				SPARE				
15	1	20	2	12		CLASSRM 106		1.1			16	1	20				SPARE				
17	1	20	2	12		CLASSRM 106			0.5		18	1	20				SPARE				
19	1	20	2	12		CLASSRM 106	0.9				20	1	20				SPARE				
21	1	20	2	12		TOILETS 100 I-J		0.4			22	1	20				SPARE				
23	1	20				SPARE					24	1	20				SPARE				
25	1	20				SPARE					26	1	20				SPARE				
27	1	20				SPARE					28	1	20				SPARE				
29	1	20				SPARE					30	1	20				SPARE				
31	1	20				SPARE					32	1	20				SPARE				
33	1	20				SPARE					34	1	20				SPARE				
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				

TOTAL LEFT SIDE 2.7 2.9 2.0 0.0 — TOTAL RIGHT SIDE 0.0 0.0 0.0 0.0
TOTAL RIGHT SIDE 0.0 0.0 0.0 0.0
TOTAL 2.7 2.9 2.0 0.0 — TOTAL CONNECTED LOAD 7.6

* NOTES

PANEL L-ENG2

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | X SURFACE MOUNTED | FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH
1	1	20	2	12		CLASS RM 107	0.4				2	1	20	2	12		RM 107A	0.7			
3	1	20	2	12		CLASS RM 107		0.4			4	1	20	2	12		RM 107B		0.7		
5	1	20	2	12		CLASS RM 107			0.4		6	1	20	2	12		ROBOT STOR 107C			0.4	
7	1	20	2	12		CLASS RM 107	0.7				8	1	20	2	12		ROBOT STOR 107C	0.4			
9	1	20	2	12		CLASS RM 107		0.7			10	1	20	2	12		ROBOT STOR 107C		0.4		
11	1	20	2	12		CLASS RM 107			0.7		12	1	20	2	12		STOR 107D			0.7	
13	1	20	2	12		CLASS RM 107	0.7				14	1	20	2	12		STOR 107D	0.7			
15	1	20	2	12		CLASS RM 107		0.7			16	1	20	2	12		STOR 107D		0.7		
17	1	20	2	12		CLASS RM 107			0.7		18	1	20	2	12		RM 107 CNTR RCPT			0.4	
19	1	20	2	12		CLASS RM 107	0.7				20	1	20	2	12		ROBOT STOR 107C	0.4			
21	1	20	2	12		CLASS RM 107		0.4			22	1	20				SPARE				
23	1	20	2	12		CLASS RM 107			0.4		24	1	20				SPARE				
25	1	20	2	12		CLASS RM 107	0.5				26	1	20				SPARE				
27	1	20	2	12		CLASS RM 107		0.7			28	1	20				SPARE				
29	1	20	2	12		CLASS RM 107			0.7		30	1	20				SPARE				
31	1	20	2	12		CLASS RM 107	0.2				32	1	20				SPARE				
33	1	20	2	12		CLASS RM 107		0.2			34	1	20				SPARE				
35	1	20	2	12		CLASS RM 107			0.2		36	1	20				SPARE				
37	1	20	2	12		CLASS RM 107	0.2				38	1	20				SPARE				
39	1	20	2	12		CLASS RM 107		0.2			40	1	20				SPARE				
41	1	20	2	12		CLASS RM 107			0.2		42	1	20				SPARE				

TOTAL LEFT SIDE 3.4 3.2 3.2 0.0 — TOTAL RIGHT SIDE 2.2 1.8 1.4 0.0
TOTAL RIGHT SIDE 2.2 1.8 1.4 0.0
TOTAL 5.6 5.0 4.7 0.0 — TOTAL CONNECTED LOAD 15.3

* NOTES

NEW PANEL L-KTCH1 (LK1)

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 400A | MAIN BREAKER AMPS: MLO | X SURFACE MOUNTED | FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH
1	1	20	2	12		WALK-N CLR	1.7				2	1	20	2	10		COFFEE BREWER	1.3			
3	1	20	2	12		WALK-N CLR COIL		0.2			4	1	20	2	12		ICE TEA BREWER		1.6		
											6	1	20	2	12		INDCTN COOK TOP			1.7	
7	3	20	2	10		WALK-N CLR COMP				2.5	8	1	20	2	12		SCALES	0.2			
											10	1	20	2	12		IMMER. BLENDER		0.3		
											12	1	20	2	12		6QT MIXER			0.3	
13	3	40	2	8		DISHWASHER				10.4	14	1	20	2	12		WARMERS	1.4			
											16	1	20	2	12		20QT MIXER		0.7		
17	2	30	2	10		W/D			3.6		18	1	20	2	12		20QT MIXER			0.7	
							3.6				20	1	20	2	12		ANSUL (ITEM #34)	1.7			
21	1	20	2	12		ICE MACHINE		0.8			22	1	20	2	12		ANSUL (ITEM #34)		1.7		
23	1	20	2	12		1-GAL BLENDER			1.4		24	1	20	2	12		ANSUL (ITEM #44)			1.7	
25	1	20	2	12		FOOD PROCESSOR	1.4				26	1	20	2	12		CNVYR TOASTER	1.7			
27	1	20	2	12		SLICER		0.4			28	1	20				SPARE				
29	1	20	2	12		SLICER			0.4		30	1	20				SPARE				
31	1	20	2	12		1-GAL BLENDER	1.4				32	1	20				SPARE				
33	1	20	2	12		FOOD PROCESSOR		1.4			34	1	20				SPARE				
35	1	20	2	12		2-DR FRIDGE			0.9												
37	1	20	2	12		2-DR FREEZER	1.7				38	3					DISHWASHER				
39	1	20				SPARE					40	2	30	2	10		HWH-7		2.5		
41	1	20				SPARE					42	1	20				SPARE			2.5	

TOTAL LEFT SIDE 9.8 2.8 6.3 12.9 — TOTAL RIGHT SIDE 6.4 6.9 7.0 0.0
TOTAL RIGHT SIDE 6.4 6.9 7.0 0.0
TOTAL 16.2 9.6 13.3 12.9 — TOTAL CONNECTED LOAD 52.0

* NOTES
1. PROVIDE WITH FEED THRU LUGS TO PANEL LK2

NEW PANEL L-KTCH2 (LK2)

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 400A | MAIN BREAKER AMPS: MLO | X SURFACE MOUNTED | FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH
1	1	20	2	12		WARMERS	1.4				2	1	20	2	12		KTCHN 105D	0.2			
3	1	20	2	12		20QT MIXER		0.7			4	1	20	2	12		KTCHN 105D		0.2		
5	1	20	2	12		20QT MIXER			0.7		6	1	20	2	12		KTCHN 105D			0.2	
7	1	20	2	12		ANSUL (ITEM #34)	1.7				8	1	20	2	12		CLASSRM 105	0.2			
9	1	20	2	12		ANSUL (ITEM #34)		1.7			10	1	20	2	12		CLASSRM 105		0.2		
11	1	20	2	12		ANSUL (ITEM #44)			1.7		12	1	20	2	12		CLASSRM 105			0.2	
13	1	20	2	12		TOILET 105-B-C					14	1	20	2	12		KTCHN 105D	0.2			
15	1	20	2	12		OFFC 105A					16	1	20	2	12		KTCHN 105D		0.4		
17	2	20				105D RCPT					18	1	20	2	12		KTCHN 105D			0.4	
19											20	1	20	2	12		KTCHN 105D	0.4			
21	2	20				105D RCPT					22	1	20	2	12		RCPT 105D-I		0.4		
23											24	1	20	2	12		RCPT 105G-H			0.4	
25	2	20				105D RCPT					26	1	20	2	12		RCPT 105D-E	0.4			
27											28	1	20				SPARE				
29	2	20				105D RCPT					30	1	20				SPARE				
31											32	1	20				SPARE				
33	1	20	2	12		CLASSRM 105		0.4			34	1	20				SPARE				
35	1	20	2	12		CLASSRM 105			0.4		36	1	20				SPARE				
37	1	20	2	12		CLASSRM 105	0.4				38	1	20				SPARE				
39	1	20	2	12		CLASSRM 105		0.4			40	1	20				SPARE				
41	1	20	2	12		CLASSRM 105			0.9		42	1	20				SPARE				

TOTAL LEFT SIDE 3.5 3.1 3.7 0.0 — TOTAL RIGHT SIDE 1.3 1.1 1.1 0.0
TOTAL RIGHT SIDE 1.3 1.1 1.1 0.0
TOTAL 4.7 4.2 4.8 0.0 — TOTAL CONNECTED LOAD 13.7

* NOTES
. FED WITH FEED THRU LUGS FROM PANEL LK1

PANEL L-HMS

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | X SURFACE MOUNTED | FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH
1	1	20	2	12		RM 102B	0.7				2	1	20	2	12		CLASSRM 101	0.7			
3	1	20	2	12		RM 102B		0.7			4	1	20	2	12		CLASSRM 101		0.9		
5	1	20	2	12		RM 102B			0.7		6	1	20	2	12		CLASSRM 101			0.9	
7	1	20	2	12		RM 102B	0.7				8	1	20	2	12		CLASSRM 101	0.5			
9	1	20	2	12		OFFC 102A		0.7			10	1	20	2	12		CLASSRM 101		0.7		
11	1	20	2	12		CLASSRM 102			0.9		12	1	20	2	12		CLASSRM 101			0.7	
13	1	20	2	12		CLASSRM 102	0.9				14	1	20				SPARE				
15	1	20	2	12		RR 102D/STOR 102E		0.4			16	1	20				SPARE				
17	1	20	2	12		MED PREP 102C			0.4		18	1	20				SPARE				
19	1	20	2	12		MED PREP 102C	0.4				20	1	20				SPARE				
21	1	20	2	12		MED PREP 102C		0.4			22	1	20				SPARE				
23	1	20				SPARE					24	1	20				SPARE				
25	1	20				SPARE					26	1	20				SPARE				
27	1	20				SPARE					28	1	20				SPARE				
29	1	20				SPARE					30	1	20				SPARE				
31	1	20				SPARE					32	1	20				SPARE				
33	1	20				SPARE					34	1	20				SPARE				
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				

TOTAL LEFT SIDE 2.7 2.2 2.0 0.0 — TOTAL RIGHT SIDE 1.3 1.6 1.6 0.0
TOTAL RIGHT SIDE 1.3 1.6 1.6 0.0
TOTAL 4.0 3.8 3.6 0.0 — TOTAL CONNECTED LOAD 11.3

* NOTES

PANEL L-G1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | X SURFACE MOUNTED | FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH
1	1	20	2	12		MAIN HALL RCPT	0.4				2	1	20	2	12		EXT CRTYD RCPT	0.4			
3	1	20	2	12		MAIN HALL RCPT		0.7			4	1	20	2	12		EXT CRTYD RCPT		0.4		
5	1	20	2	10		MAIN HALL WTR FT			1.0		6	1	20	2	12		EXT CRTYD RCPT			0.4	
7	1	20	2	12		MAIN HALL RCPT	0.4				8	1	20	2	12		EXT CRTYD RCPT	0.4			
9	1	20	2	12		LOBBY RCPT		0.4			10	1	20	2	10		WATER COOLER		1.0		
11	1	20	2	12		LOBBY RCPT			0.4		12	1	20								
13	1	20	2	12		LOBBY RCPT	0.4				14	1	20								
15	1	20	2	12		LOBBY RCPT		0.4			16	1	20								
17	1	20	2	12		LOBBY FL RCPT			0.4		18	1	20								
19	1	20	2	12		LOBBY FL RCPT	0.4				20	1	20								
21	1	20	2	12		LOBBY FL RCPT		0.4			22	1	20								
23	1	20	2	12		LOBBY FL RCPT			0.4		24	1	20								
25	1	20									26	1	20								
27	1	20									28	1	20								
29	1	20									30	1	20								
31	1	20									32	1	20								
33	1	20									34	1	20								
35	1	20									36	1	20				SPARE				
37	1	20									38	1	20				SPARE				
39	1	20									40	1	20				SPARE				
41	1	20									42	1	20				SPARE				

TOTAL LEFT SIDE 1.4 1.8 2.1 0.0 — TOTAL RIGHT SIDE 0.7 1.4 0.4 0.0
TOTAL RIGHT SIDE 0.7 1.4 0.4 0.0
TOTAL 2.2 3.2 2.4 0.0 — TOTAL CONNECTED LOAD 7.8

* NOTES

PANEL L-ADMIN

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | X SURFACE MOUNTED | FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH
1	1	20	2	12		OFFC 104-P	0.7				2	1	20	2	12		OFFC 103A	0.7			
3	1	20	2	12		OFFC 104-O		0.7			4	1	20	2	12		STOR 103-E		0.5		
5	1	20	2	12		OFFC 104-N			0.7		6	1	20	2	12		CLASSRM 103			0.7	
7	1	20	2	12		OFFC 104-M	0.7				8	1	20	2	12		CLASSRM 103	0.7			
9	1	20	2	12		OFFC 104-L		0.7			10	1	20	2	12		CLASSRM 103		0.7		
11	1	20	2	12		CONF 104-B			0.9		12	1	20	2	12		CLASSRM 103			0.9	
13	1	20	2	12		WRK AREA 104-A	1.1				14	1	20	2	12		CLASSRM 103	0.9			
15	1	20	2	12		BRKRM 104-C		0.4			16	1	20	2	12		VESTIBULE 100		0.2		
17	1	20	2	12		BRKRM 104-C			0.4		18	1	20	2	12		VESTIBULE 100			0.2	
19	1	20	2	12		RM 104-F-G-H-I	0.7				20	1	20	2	12		VESTIBULE 100	0.4			
21	1	20	2	12		WATER COOLER		0.4			22	1	20	2	12		VESTIBULE 100		0.4		
23	1	20	2	12		STOR/FILE			0.7		24	1	20	2	12		VESTIBULE 100			0.4	
25	1	20	2	12		CLINIC 104-J	0.5				26	1	20				SPARE				
27	1	20	2	12		RM 100-A-B-C		1.2			28	1	20				SPARE				
29	1	20				SPARE					30	1	20				SPARE				
31	1	20				SPARE					32	1	20				SPARE				
33	1	20				SPARE					34	1	20				SPARE				
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				

TOTAL LEFT SIDE 3.8 3.3 2.7 0.0 — TOTAL RIGHT SIDE 2.7 1.8 2.2 0.0
TOTAL RIGHT SIDE 2.7 1.8 2.2 0.0
TOTAL 6.5 5.1 4.9 0.0 — TOTAL CONNECTED LOAD 16.5

* NOTES

PANEL L-LAND

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | X SURFACE MOUNTED | FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	PHA	PHB	PHC	3 PH
1	1	20	2	12		STOR 101E	0.4				2	1	20				SPARE				
3	1	20	2	12		STOR 101E		0.4			4	1	20				SPARE				
5	1	20	2	12		STOR 101E			0.4		6	1	20				SPARE				
7	1	20	2	12		STOR 101E	0.4				8	1	20				SPARE				
9	1	20	2	12		STOR 101E		0.4			10	1	20				SPARE				
11	1	20	2	12		STOR 101E			0.4		12	1	20				SPARE				
13	1	20				SPARE					14	1	20				SPARE				
15	1	20				SPARE					16	1	20				SPARE				
17	1	20				SPARE					18	1	20				SPARE				
19	1	20				SPARE					20	1	20				SPARE				
21	1	20				SPARE					22	1	20				SPARE				
23	1	20				SPARE					24	1	20				SPARE				
25	1	20				SPARE					26	1	20				SPARE				
27	1	20				SPARE					28	1	20				SPARE				
29	1	20									30	1	20				SPARE				

TOTAL LEFT SIDE 0.7 0.7 0.7 0.0 — TOTAL RIGHT SIDE 0.0 0.0 0.0 0.0
TOTAL RIGHT SIDE 0.0 0.0 0.0 0.0
TOTAL 0.7 0.7 0.7 0.0 — TOTAL CONNECTED LOAD 2.2

* NOTES

GIBSON ENGINEERING
2100 LUBNA DR
CHRISTIANSBURG VA 24073
P. 540.998.6069

1/8"=1'-0" 8' 0 8 16

CA2 Architecture
ARCHITECTURE INTERIORS PLANNING

COMMONWEALTH OF VIRGINIA
DANIEL W. GIBSON
Lic. No. 44271
6-17-22
PROFESSIONAL ENGINEER

RUFFNER CAREER AND TECHNICAL EDUCATION CENTER
ROANOKE, VIRGINIA

ROANOKE CITY PUBLIC SCHOOLS
Strong Students. Strong Schools. Strong City.

REVISIONS

No.	DATE	DESCRIPTION
1	07/18/22	ADDENDUM 3

DRAWN BY:	DWG
REV'D BY:	DWG
DATE:	06/17/2022
SCALE:	AS SHOWN

PANEL SCHEDULES

E-503

SHEET X of X

PANEL LDP2

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 800A | MAIN BREAKER AMPS: 800A | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 65,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
							2.7											9.7			
3	3	200				PANEL LSM		3.1		0.0	4	3	200				PANEL LCOS1&LCOS2		12.0		
									2.3											10.1	0.0
							6.2											6.5			
9	3	200				PANEL L-SS2		3.7		0.0	10	3	200				PANEL BIT 1 & BIT 2		6.3		0.0
									4.6											3.1	
							5.6											2.0			
15	3	200				PANEL LTV1		3.8		0.0	16	3	200				PANEL BIT 3		2.7		0.0
									4.9											2.5	
							6.8														
21	3	200				PANEL LBB1&LBB2		5.6		0.0	22	3					SPACE				
									5.7												
27	3					SPACE					28	3					SPACE				
33	3					SPACE					34	3					SPACE				
39	3					SPACE					40	2	40	2	8		DSS0-1 (IN) (OUT)		1.6		
																				1.6	
						TOTAL LEFT SIDE	21.3	16.1	17.5	0.0							TOTAL RIGHT SIDE	18.1	22.6	17.2	0.0
						TOTAL RIGHT SIDE	18.1	22.6	17.2	0.0											
						TOTAL	39.4	38.8	34.7	0.0							TOTAL CONNECTED LOAD				112.9

* NOTES

PANEL L-SM

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		CLASSRM 205	0.9				2	1	20				SPARE				
3	1	20	2	12		CLASSRM 205		0.9			4	1	20				SPARE				
5	1	20	2	12		CLASSRM 205			0.5		6	1	20				SPARE				
7	1	20	2	12		LAB 205C	0.4				8	1	20				SPARE				
9	1	20	2	12		LAB 205C		0.4			10	1	20				SPARE				
11	1	20	2	12		LAB 205C			0.4		12	1	20				SPARE				
13	1	20	2	12		LAB 205C	0.4				14	1	20				SPARE				
15	1	20	2	12		LAB 205C		0.4			16	1	20				SPARE				
17	1	20	2	12		LAB 205C			0.4		18	1	20				SPARE				
19	1	20	2	12		LAB 205C	0.4				20	1	20				SPARE				
21	1	20	2	12		LAB 205C		0.4			22	1	20				SPARE				
23	1	20	2	12		LAB 205C			0.4		24	1	20				SPARE				
25	1	20	2	12		LAB 205C	0.4				26	1	20				SPARE				
27	1	20	2	12		OFFC 205A		0.7			28	1	20				SPARE				
29	1	20	2	12		EQPT/SUPPL 205B			0.4		30	1	20				SPARE				
31	1	20	2	12		EQPT/SUPPL 205B	0.4				32	1	20				SPARE				
33	1	20	2	12		EQPT/SUPPL 205B		0.4			34	1	20				SPARE				
35	1	20	2	12		EQPT/SUPPL 205B			0.4		36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	2.7	3.1	2.3	0.0							TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0
						TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0											
						TOTAL	2.7	3.1	2.3	0.0							TOTAL CONNECTED LOAD				8.1

* NOTES

PANEL L-SS2

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		ROOM 200A	1.0				2	1	20	2	12		RM 208A	0.5			
3	1	20	2	12		CORR 200E		0.4			4	1	20	2	12		RM 208A		0.5		
5	1	20	2	12		RM 200 F-G-H			0.5		6	1	20	2	12		RM 208A			0.4	
7	1	20	2	12		RM 200B	0.9				8	1	20	2	12		RM 208A	0.9			
9	1	20	2	12		RM 200C		0.4			10	1	20	2	12		RM 208B		0.5		
11	1	20	2	12		RM 200 D			0.7		12	1	20	2	12		RM 208B			0.9	
13	1	20	2	12		RM 200D	0.5				14	1	20	2	12		RM 208B	0.4			
15	1	20	2	12		RM 200D		0.4			16	1	20	2	12		RM 208B		0.5		
17	1	20	2	12		RM 200 I-J			0.4		18	1	20	2	12		VORR 200V			0.7	
19	1	20	2	12		ROOM 200A	1.0				20	1	20				SPARE				
21	1	20	2	12		ROOM 200A		1.0			22	1	20				SPARE				
23	1	20	2	12		ROOM 200A			1.0		24	1	20				SPARE				
25	1	20	2	12		ROOM 200A	1.0				26	1	20				SPARE				
27	1	20				SPARE					28	1	20				SPARE				
29	1	20				SPARE					30	1	20				SPARE				
31	1	20				SPARE					32	1	20				SPARE				
33	1	20				SPARE					34	1	20				SPARE				
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	4.4	2.1	2.6	0.0							TOTAL RIGHT SIDE	1.8	1.6	2.0	0.0
						TOTAL RIGHT SIDE	1.8	1.6	2.0	0.0											
						TOTAL	6.2	3.7	4.6	0.0							TOTAL CONNECTED LOAD				14.5

* NOTES

PANEL L-TV1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: 200A | [ ] SURFACE MOUNTED | [X] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20				SPARE					2	1	20				SPARE				
3	1	20				SPARE					4	1	20				SPARE				
5	1	20				SPARE					6	1	20				SPARE				
7	1	20				SPARE					8	1	20				SPARE				
9	1	20				SPARE					10	1	20				SPARE				
11	1	20				SPARE					12	1	20				SPARE				
13	1	20				SPARE					14	1	20				SPARE				
15	1	20				SPARE					16	1	20				SPARE				
17	1	20				SPARE					18	1	20				SPARE				
19	1	20				SPARE					20	1	20				SPARE				
21	1	20				SPARE					22	1	20				SPARE				
23	1	20				SPARE					24	1	20				SPARE				
25	1	20				SPARE					26	1	20				SPARE				
27	1	20				SPARE					28	1	20				SPARE				
29	1	20				SPARE					30	1	20				SPARE				
31	1	20				SPARE					32	1	20				SPARE				
33	1	20				SPARE					34	1	20				SPARE				
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	0.0	0.0	0.0	0.0							TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0
						TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0											
						TOTAL	0.0	0.0	0.0	0.0							TOTAL CONNECTED LOAD				0.0

* NOTES

PANEL L-TV1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		CLASSRM 204	0.9				2	1	20	2	12		RM 204B	0.4			
3	1	20	2	12		EDITING STATION		0.7			4	1	20	2	12		RM 204A		0.4		
5	1	20	2	12		EDITING STATION			0.7		6	1	20	2	12		RM 204C			0.9	
7	1	20	2	12		EDITING STATION	0.7				8	1	20	2	12		RM 204B	0.4			
9	1	20	2	12		EDITING STATION		0.7			10	1	20	2	12		RM 204D FLOOR BOX		0.4		
11	1	20	2	12		EDITING STATION			0.7		12	1	20	2	12		RM 204D FLOOR BOX			0.4	
13	1	20	2	12		EDITING STATION	0.7				14	1	20	2	12		RM 204D	0.7			
15	1	20	2	12		EDITING STATION		0.7			16	1	20	2	12		CNTRL RM 204E		0.2		
17	1	20	2	12		RM 204 FLOOR BOX			0.4		18	1	20	2	12		CNTRL RM 204E			1.1	
19	1	20	2	12		RM 204 FLOOR BOX	0.4				20	1	20	2	12		CNTRL RM 204E	1.1			
21	1	20	2	12		RM 204 FLOOR BOX		0.4			22	1	20				SPARE				
23	1	20	2	12		RM 204 FLOOR BOX			0.4		24	1	20				SPARE				
25	1	20	2	12		RM 204 FLOOR BOX	0.4				26	1	20				SPARE				
27	1	20	2	12		RM 204 FLOOR BOX		0.4			28	1	20				SPARE				
29	1	20	2	12		RM 204 FLOOR BOX			0.4		30	1	20				SPARE				
31	1	20				SPARE					32	1	20				SPARE				
33	1	20				SPARE					34	1	20				SPARE				
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	3.1	2.9	2.5	0.0							TOTAL RIGHT SIDE	2.5	0.9	2.3	0.0
						TOTAL RIGHT SIDE	2.5	0.9	2.3	0.0											
						TOTAL	5.6	3.8	4.9	0.0							TOTAL CONNECTED LOAD				14.2

* NOTES

PANEL L-BB1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		LAB 209F	0.4				2	1	20	2	12		LAB 209F	0.2			
3	1	20	2	12		LAB 209F		0.4			4	1	20	2	12		LAB 209F		0.4		
5	1	20	2	12		LAB 209F			0.4		6	1	20	2	12		LAB 209F			0.4	
7	1	20	2	12		LAB 209F	0.4				8	1	20	2	12		LAB 209F	0.4			
9	1	20	2	12		LAB 209F		0.4			10	1	20	2	12		LAB 209F		0.4		
11	1	20	2	12		LAB 209F			0.4		12	1	20	2	12		LAB 209F FLOOR BOX			0.4	
13	1	20	2	12		LAB 209F	0.4				14	1	20	2	12		LAB 209F FLOOR BOX	0.4			
15	1	20	2	12		LAB 209F		0.4			16	1	20	2	12		LAB 209F FLOOR BOX		0.4		
17	1	20	2	12		LAB 209F			0.2		18	1	20	2	12		LAB 209F FLOOR BOX			0.4	
19	1	20	2	12		LAB 209F	0.4				20	1	20	2	12		LAB 209F FLOOR BOX	0.4			
21	1	20	2	12		LAB 209F		0.2			22	1	20	2	12		LAB 209F FLOOR BOX		0.4		
23	1	20	2	12		LAB 209F			0.4		24	1	20	2	12		LAB 209F FLOOR BOX			0.4	
25	1	20	2	12		LAB 209F	0.4				26	1	20	2	12		LAB 209F FLOOR BOX	0.4			
27	1	20	2	12		LAB 209F		0.4			28	1	20	2	12		LAB 209F FLOOR BOX		0.4		
29	1	20	2	12		LAB 209F			0.4		30	1	20	2	12		LAB 209F FLOOR BOX			0.4	
31	1	20	2	12		RM 209 G-H	0.4				32	1	20	2	12		LAB 209F FLOOR BOX	0.4			
33	1	20				SPARE					34	1	20	2	12		LAB 209F FLOOR BOX		0.4		
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	2.2	1.6	1.6	0.0							TOTAL RIGHT SIDE	2.0	2.2	1.8	0.0
						TOTAL RIGHT SIDE	2.0	2.2	1.8	0.0											
						TOTAL	4.1	3.8	3.4	0.0							TOTAL CONNECTED LOAD				11.3

* NOTES

PANEL L-BB2

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		LAB 209F	0.2				2	1	20	2	12		CLASSRM 209	0.7			
3	1	20	2	12		LAB 209F		0.2			4	1	20	2	12		CLASSRM 209		0.5		
5	2	30	2	10		LAB 209F			1.0		6	1	20	2	12		CLASSRM 209			0.4	
							1.0				8	1	20	2	12		CLASSRM 209	0.4			
9	1	20	2	12		OFFC 209A		0.7			10	1	20	2	12		CLASSRM 209		0.4		
11	1	20	2	12		WAITING 209B			0.5		12	1	20	2	12		CLASSRM 209			0.4	
13	1	20	2	12		TOILET 209 C-D	0.4				14	1	20				SPARE				
15	1	20				SPARE					16	1	20				SPARE				
17	1	20				SPARE					18	1	20				SPARE				
19	1	20				SPARE					20	1	20				SPARE				
21	1	20				SPARE					22	1	20				SPARE				
23	1	20				SPARE					24	1	20				SPARE				
25	1	20				SPARE					26	1	20				SPARE				
27	1	20				SPARE					28	1	20				SPARE				
29	1	20				SPARE					30	1	20				SPARE				
31	1	20				SPARE					32	1	20				SPARE				
33	1	20				SPARE					34	1	20				SPARE				
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	1.5	0.9	1.5	0.0							TOTAL RIGHT SIDE	1.1	0.9	0.7	0.0
						TOTAL RIGHT SIDE	1.1	0.9	0.7	0.0											
						TOTAL	2.6	1.8	2.3	0.0							TOTAL CONNECTED LOAD				6.7

* NOTES

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1/8"=1'-0"

GA Architecture
ARCHITECTURE INTERIORS PLANNING

COMMONWEALTH OF VIRGINIA
DANIEL W. GIBSON
Lic. No. 44271
6·17·22
PROFESSIONAL ENGINEER

RUFFNER CAREER AND TECHNICAL EDUCATION CENTER

ROANOKE, VIRGINIA

ROANOKE CITY PUBLIC SCHOOLS
Strong Students, Strong Schools, Strong City.

1

REVISIONS

No.	DATE	DESCRIPTION
1	07/18/22	ADDENDUM 3

DRAWN BY:	DWG
REV'D BY:	DWG
DATE:	06/17/2022
SCALE:	AS SHOWN

PANEL SCHEDULES

E-504

SHEET X of X

PANEL L-COS1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		WRK STATION	0.4			
3	1	20	2	12		WALL RCPT		0.2		
5	1	20	2	12		WRK STATION			0.4	
7	1	20	2	12		WRK STATION	0.4			
9	1	20	2	12		WRK STATION		0.4		
11	1	20	2	12		WALL RCPT			0.2	
13	1	20	2	12		WRK STATION	0.4			
15	1	20	2	12		WRK STATION		0.4		
17	1	20	2	12		WRK STATION			0.4	
19	1	20	2	12		WALL RCPT	0.2			
21	1	20	2	12		WRK STATION		0.4		
23	1	20	2	12		WRK STATION			0.4	
25	1	20	2	12		WRK STATION	0.4			
27	1	20	2	12		WRK STATION		0.4		
29	1	20	2	12		CHAIR				
31	1	20	2	12		CHAIR				
33	1	20	2	12		CHAIR				
35	1	20	2	12		CHAIR				
37	1	20	2	12		FLOOR BOX	0.4			
39	1	20	2	12		FLOOR BOX		0.4		
41	1	20								
2	1	20	2	12		FLOOR BOX	0.4			
4	1	20	2	12		FLOOR BOX		0.4		
6	1	20	2	12		FLOOR BOX			0.4	
8	1	20	2	12		FLOOR BOX	0.4			
10	1	20	2	12		FLOOR BOX		0.4		
12	1	20	2	12		FLOOR BOX			0.4	
14	1	20	2	12		FLOOR BOX	0.4			
16	1	20	2	12		FLOOR BOX		0.4		
18	1	20	2	12		FLOOR BOX			0.4	
20	1	20	2	12		FLOOR BOX	0.4			
22	1	20	2	12		WRK STATION		0.4		
24	1	20	2	12		WRK STATION			0.4	
26	1	20	2	12		WRK STATION	0.4			
28	1	20	2	12		WALL RCPT		0.2		
30	1	20	2	12		WRK STATION			0.4	
32	1	20	2	12		WRK STATION	0.4			
34	1	20	2	12		WRK STATION		0.4		
36	1	20	2	12		WALL RCPT			0.2	
38	1	20				SPARE				
40	1	20				SPARE				
42	1	20				SPARE				
						TOTAL LEFT SIDE	2.0	2.0	1.3	0.0
						TOTAL RIGHT SIDE	2.2	2.0	2.0	0.0
						TOTAL	4.1	4.0	3.2	0.0
						TOTAL RIGHT SIDE	2.2	2.0	2.0	0.0
						TOTAL CONNECTED LOAD				11.3

* NOTES

PANEL L-COS2

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		STORAGE 206G	0.7			
3	1	20	2	12		STORAGE 206H		0.7		
5	1	20	2	12		STOR/PREP 2061			0.2	
7	1	20	2	12		STOR/PREP 2061	0.4			
9	1	20	2	12		CLASSRM 206		0.7		
11	1	20	2	12		CLASSRM 206			0.7	
13	1	20	2	12		CLASSRM 206	0.9			
15	1	20	2	12		CLASSRM 206		0.9		
17	1	20	2	12		OFFC 206A			0.7	
19	1	20	2	12		HALL RCPT	0.2			
21	2	20	2	12		HALL RCPT				
23										
25	1	20	2	12		206B-C-D	0.5			
27	1	20	2	12		RECEP/WTNG 206E		0.5		
29	1	20				SPARE			0.4	
31	1	20				SPARE				
33	1	20				SPARE				
35	1	20				SPARE				
37	1	20				SPARE				
39	1	20				SPARE				
41	1	20				SPARE				
2	1	20	2	12		OFFC 207A	0.5			
4	1	20	2	12		EQP/SUPPL 207B		0.7		
6	1	20	2	12		CLASSRM 207			0.7	
8	1	20	2	12		CLASSRM 207	0.7			
10	1	20	2	12		CLASSRM 207		0.9		
12	1	20	2	12		CLASSRM 207			0.9	
14	1	20	2	12		CLASSRM 207	0.7			
16	1	20	2	12		FLOOR BOX		0.4		
18	1	20	2	12		FLOOR BOX			0.4	
20	1	20	2	12		FLOOR BOX	0.4			
22	1	20	2	12		CORR 200Q		0.4		
24	1	20	2	12		CORR 200Q			.72	
26	1	30	2	10		WTR CLR	0.5			
28	1	20	2	12		CORR 200S		0.4		
30	1	20	2	12		CORR 200U			0.4	
32	1	20				SPARE				
34	1	20				SPARE				
36	1	20				SPARE				
38	1	20				SPARE				
40	2	30	2	10		HWH-7		2.5		
42									2.5	
						TOTAL LEFT SIDE	2.7	2.9	2.0	0.0
						TOTAL RIGHT SIDE	2.8	5.2	4.8	0.0
						TOTAL	5.5	8.1	6.8	0.0
						TOTAL RIGHT SIDE	2.8	5.2	4.8	0.0
						TOTAL CONNECTED LOAD				20.4

* NOTES

PANEL L-BIT1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		OFFC 201A	0.7			
3	1	20	2	12		STOR 201B		0.9		
5	1	20	2	12		CLASSRM 201			0.5	
7	1	20	2	12		CLASSRM 201	0.7			
9	1	20	2	12		CLASSRM 201		0.9		
11	1	20				SPARE				
13	1	20				SPARE				
15	1	20				SPARE				
17	1	20				SPARE				
19	1	20				SPARE				
21	1	20				SPARE				
23	1	20				SPARE				
25	1	20				SPARE				
27	1	20				SPARE				
29	1	20				SPARE				
31	1	20				SPARE				
33	1	20				SPARE				
35	1	20				SPARE				
37	1	20				SPARE				
39	1	20				SPARE				
41	1	20				SPARE				
2	1	20	2	12		RM 201 FLOOR BOX	0.4			
4	1	20	2	12		RM 201 FLOOR BOX		0.4		
6	1	20	2	12		RM 201 FLOOR BOX			0.4	
8	1	20	2	12		RM 201 FLOOR BOX	0.4			
10	1	20	2	12		RM 201 FLOOR BOX		0.4		
12	1	20	2	12		RM 201 FLOOR BOX			0.4	
14	1	20	2	12		RM 201 FLOOR BOX	0.4			
16	1	20	2	12		RM 201 FLOOR BOX		0.4		
18	1	20	2	12		RM 201 FLOOR BOX			0.4	
20	1	20				SPARE				
22	1	20				SPARE				
24	1	20				SPARE				
26	1	20				SPARE				
28	1	20				SPARE				
30	1	20				SPARE				
32	1	20				SPARE				
34	1	20				SPARE				
36	1	20				SPARE				
38	1	20				SPARE				
40	1	20				SPARE				
42	1	20				SPARE				
						TOTAL LEFT SIDE	1.4	1.8	0.5	0.0
						TOTAL RIGHT SIDE	1.1	1.1	1.1	0.0
						TOTAL	2.5	2.9	1.6	0.0
						TOTAL RIGHT SIDE	1.1	1.1	1.1	0.0
						TOTAL CONNECTED LOAD				7.0

* NOTES

BASE PANEL L-BIT2

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		OFFC 202A	1.1			
3	1	20	2	12		STOR 202B		1.1		
5	1	20	2	12		CLASSRM 202			0.5	
7	1	20	2	12		CLASSRM 202	1.1			
9	1	20	2	12		CLASSRM 202		0.9		
11	1	20	2	12		CLASSRM 202			0.2	
13	1	20	2	12		CORR 200Q	0.7			
15	1	20	2	12		PNL RCPT		0.4		
17	1	20				SPARE				
19	1	20				SPARE				
21	1	20				SPARE				
23	1	20				SPARE				
25	1	20				SPARE				
27	1	20				SPARE				
29	1	20				SPARE				
31	1	20				SPARE				
33	1	20				SPARE				
35	1	20				SPARE				
37	1	20				SPARE				
39	1	20				SPARE				
41	1	20				SPARE				
2	1	20	2	12		RM 202 FLOOR BOX	0.4			
4	1	20	2	12		RM 202 FLOOR BOX		0.4		
6	1	20	2	12		RM 202 FLOOR BOX			0.4	
8	1	20	2	12		RM 202 FLOOR BOX	0.4			
10	1	20	2	12		RM 202 FLOOR BOX		0.4		
12	1	20	2	12		RM 202 FLOOR BOX			0.4	
14	1	20	2	12		RM 202 FLOOR BOX	0.4			
16	1	20	2	12		RM 202 FLOOR BOX		0.4		
18	1					SPARE				
20	1	20				SPARE				
22	1	20				SPARE				
24	1	20				SPARE				
26	1	20				SPARE				
28	1	20				SPARE				
30	1	20				SPARE				
32	1	20				SPARE				
34	1	20				SPARE				
36	1	20				SPARE				
38	1	20				SPARE				
40	1	20				SPARE				
42	1	20				SPARE				
						TOTAL LEFT SIDE	2.9	2.3	0.7	0.0
						TOTAL RIGHT SIDE	1.1	1.1	0.7	0.0
						TOTAL	4.0	3.4	1.4	0.0
						TOTAL RIGHT SIDE	1.1	1.1	0.7	0.0
						TOTAL CONNECTED LOAD				8.8

* NOTES

PANEL L-BIT3

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		CLASSRM 203	0.4			
3	1	20	2	12		CLASSRM 203		0.9		
5	1	20	2	12		CORR 200N			0.7	
7	1	20	2	12		CLASSRM 203	0.9			
9	1	20	2	12		STOR 203B		1.1		
11	1	20	2	12		OFFC 203A			1.1	
13	1	20				SPARE				
15	1	20				SPARE				
17	1	20				SPARE				
19	1	20				SPARE				
21	1	20				SPARE				
23	1	20				SPARE				
25	1	20				SPARE				
27	1	20				SPARE				
29	1	20				SPARE				
31	1	20				SPARE				
33	1	20				SPARE				
35	1	20				SPARE				
37	1	20				SPARE				
39	1	20				SPARE				
41	1	20				SPARE				
2	1	20	2	12		FLOOR BOX	0.4			
4	1	20	2	12		FLOOR BOX		0.4		
6	1	20	2	12		FLOOR BOX			0.4	
8	1	20	2	12		FLOOR BOX	0.4			
10	1	20	2	12		FLOOR BOX		0.4		
12	1	20	2	12		FLOOR BOX			0.4	
14	1	20				SPARE				
16	1	20				SPARE				
18	1	20				SPARE				
20	1	20				SPARE				
22	1	20				SPARE				
24	1	20				SPARE				
26	1	20				SPARE				
28	1	20				SPARE				
30	1	20				SPARE				
32	1	20				SPARE				
34	1	20				SPARE				
36	1	20				SPARE				
38	1	20				SPARE				
40	1	20				SPARE				
42	1	20				SPARE				
						TOTAL LEFT SIDE	1.3	2.0	1.8	0.0
						TOTAL RIGHT SIDE	0.7	0.7	0.7	0.0
						TOTAL	2.0	2.7	2.5	0.0
						TOTAL RIGHT SIDE	0.7	0.7	0.7	0.0
						TOTAL CONNECTED LOAD				4.2

* NOTES

1

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No.	DATE	DESCRIPTION
1	07/18/22	ADDENDUM 3

DRAWN BY:	DWG
REV'D BY:	DWG
DATE:	06/17/2022
SCALE:	AS SHOWN

PANEL SCHEDULES

E-505

SHEET X of X

PANEL LDP3

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 800A | MAIN BREAKER AMPS: 800A | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 65,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
							5.2											4.9			
3	3	200				PANEL LMTL1		5.0		0.0	4	3	200				PANEL LCTL1		2.5		12.9
									4.1											5.7	
							9.5											62.9			
9	3	200				PANEL LATP1&LATP2		9.5		7.1	10	3	400				PANEL L-WLD1		62.2		0.0
									6.9											8.3	
							2.9											80.7			
15	3	200				PANEL LHVAC1*LHVAC2		2.9		0.0	16	3	400				PANEL L-WLD2		80.7		0.0
									2.7											8.0	
21	3					SPACE					22	3					SPACE				
27	3					SPACE					28	3					SPACE				
											32	1					BLANK				
33	3					SPACE					34	1					BLANK				
											36	2	100				ST ORG BLD #2			5.0	
																		5.0			
39	2	15	2	12		DSS-3(IN) & (OUT S)		1.0			40	2	100				ST ORG BLD #1		5.0		
									1.0											5.0	
						TOTAL LEFT SIDE	17.6	18.4	14.8	7.1							TOTAL RIGHT SIDE	153.5	150.4	32.0	12.9
						TOTAL RIGHT SIDE	153.5	150.4	32.0	12.9											
						TOTAL	171.1	168.8	46.8	20.0							TOTAL CONNECTED LOAD				406.7

* NOTES

PANEL L-MTL1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		STOR 108D	0.7				2	1	20	2	12		STOR 108J	0.7			
3	1	20	2	12		STOR 108D		0.7			4	1	20	2	12		STOR 108J		0.4		
5	1	20	2	12		STOR 108D			0.4		6	1	20	2	12		LAB 108E			0.4	
7	1	20	2	12		LOCKER RM 108C	0.2				8	1	20	2	12		LAB 108E	0.4			
9	1	20	2	12		STOR 108B		0.4			10	1	20	2	12		LAB 108E		0.4		
11	1	20	2	12		STOR 108B			0.7		12	1	20	2	12		LAB 108E			0.4	
13	1	20	2	12		STOR 108B	0.4				14	1	20	2	12		LAB 108E	0.4			
15	1	20	2	12		OFFC 108A		0.7			16	1	20	2	12		LAB 108E		0.4		
17	1	20	2	12		STOR 108I			0.7		18	1	20	2	12		LAB 108E			0.4	
19	1	20	2	12		STOR 108I	0.7				20	1	20	2	12		LAB 108E	0.4			
21	1	20	2	12		TOILET 108F-G		0.4			22	1	20	2	12		LAB 108E		0.4		
23	1	20	2	12		CLASSRM 108H			0.5		24	1	20				SPARE				
25	1	20	2	12		CLASSRM 108H	0.7				26	1	20				SPARE				
27	1	20	2	12		CLASSRM 108H		0.7			28	1	20				SPARE				
29	1	20	2	12		CLASSRM 108H			0.7		30	1	20				SPARE				
31	1	20	2	12		CLASSRM 108H	0.7				32	1	20				SPARE				
33	1	20	2	12		CLASSRM 108H		0.7			34	1	20				SPARE				
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	3.4	3.6	3.1	0.0							TOTAL RIGHT SIDE	1.8	1.4	1.1	0.0
						TOTAL RIGHT SIDE	1.8	1.4	1.1	0.0											
						TOTAL	5.2	5.0	4.1	0.0							TOTAL CONNECTED LOAD				14.4

* NOTES

PANEL L-HVAC1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		CLASSRM 210	0.4				2	1	20	2	12		LAB 210B	0.5			
3	1	20	2	12		CLASSRM 210		0.5			4	1	20	2	12		LAB 210B		0.4		
5	1	20	2	12		CLASSRM 210			0.9		6	1	20	2	12		LAB 210B			0.4	
7	1	20	2	12		CLASSRM 210	0.9				8	1	20	2	12		TOILET 210 C-D	0.4			
9	1	20	2	12		OFFC 210A		0.7			10	1	20	2	12		CORR 200Y WTR CLR		0.5		
11	1	20	2	12		LAB 210B			0.5		12	1	20	2	12		PNL RCPT			0.2	
13	1	20	2	12		LAB 210B	0.4				14	1	20				SPARE				
15	1	20	2	12		LAB 210B		0.4			16	1	20				SPARE				
17	1	20	2	12		LAB 210B			0.4		18	1	20				SPARE				
19	1	20	2	12		LAB 210B	0.4				20	1	20				SPARE				
21	1	20	2	12		LAB 210B		0.4			22	1	20				SPARE				
23	1	20	2	12		LAB 210B			0.4		24	1	20				SPARE				
25	1	20				SPARE					26	1	20				SPARE				
27	1	20				SPARE					28	1	20				SPARE				
29	1	20				SPARE					30	1	20				SPARE				
31	1	20				SPARE					32	1	20				SPARE				
33	1	20				SPARE					34	1	20				SPARE				
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	2.0	2.0	2.2	0.0							TOTAL RIGHT SIDE	0.9	0.9	0.5	0.0
						TOTAL RIGHT SIDE	0.9	0.9	0.5	0.0											
						TOTAL	2.9	2.9	2.7	0.0							TOTAL CONNECTED LOAD				8.5

* NOTES

PANEL L-ATP1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		LAB 110G	0.5				2	1	20	2	12		LAB 110G	0.2			
3	1	20	2	12		LAB 110G		0.5			4	1	20	2	12		LAB 110G		0.2		
5	1	20	2	12		LAB 110G			0.5		6	1	20	2	12		LAB 110G			0.2	
7	1	20	2	12		LAB 110G	0.5				8	1	20	2	12		LAB 110G	0.2			
9	1	20	2	12		ENG TRNR ECHO BNCH		0.5			10	1	20	2	12		LAB 110G		0.2		
11	1	20	2	12		LAB 110G			0.5		12	1	20	2	12		LAB 110G J-BOX			0.2	
13	1	20	2	12		ENGINE TRAINER	0.7				14	1	20	2	12		LAB 110G J-BOX	0.2			
15	1	20	2	12		ON CAR BRAKE LAT HE		0.4			16	1	20	2	12		LAB 110G J-BOX		0.2		
17	1	20	2	12		LAB 110G			0.4		18	1	20	2	12		LAB 110G J-BOX			0.2	
19	1	20	2	12		LAB 110G	0.4				20	1	20	2	12		LAB 110G J-BOX	0.2			
21	1	20	2	12		LAB 110G					22	1	20	2	12		OVRHD EX HOSE REEL		0.2		
23	1	20	2	12		LAB 110G					24	1	20	2	12		OVRHD EX HOSE REEL			0.2	
25	2	30	2	10		HOT WTR PRESS WSHR					26	2	20				CAR LIFT	1.8			
																				1.8	
29	2	20				AIR COMPRESSOR				7.1	30	2	20				CAR LIFT				1.8
																		1.8			
33	2	20				LARGE PARTS WASHER					34	2	20				CAR LIFT		1.8		
						SPARE															1.8
37	1	20				SPARE					38	2	20				CAR LIFT	1.8			
39	1	20				SPARE													1.8		
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	2.2	1.4	1.4	7.1							TOTAL RIGHT SIDE	6.2	6.2	4.4	0.0
						TOTAL RIGHT SIDE	6.2	6.2	4.4	0.0											
						TOTAL	8.4	7.7	5.8	7.1							TOTAL CONNECTED LOAD				29.0

* NOTES

PANEL L-ATP2

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		STOR 110F	0.4				2	1	20	2	12		CLASSRM 110				
3	1	20	2	12		STOR 110F		0.7			4	1	20	2	12		CLASSRM 110				
5	1	20	2	12		STOR 110E			0.7		6	1	20	2	12		CLASSRM 110				
7	1	20	2	12		STOR 110E	0.4				8	1	20	2	12		CLASSRM 110				
9	1	20	2	12		OFFC 110A		0.7			10	1	20	2	12		CLASSRM 110				
11	1	20	2	12		TLT 110B/110D			0.4		12	1	20				SPARE				
13	1	20	2	12		TLT 110C/HALL	0.4				14	1	20				SPARE				
15	1	20	2	12		WTR CLR		0.4			16	1	20				SPARE				
17	1	20				ALIGNMENT MACH					18	1	20				SPARE				
19	2	20				ALIGNMENT LIFT					20	1	20				SPARE				
											22	1	20				SPARE				
23	2	20				RIM CLMP TIRE MACH					24	1	20				SPARE				
											26	1	20				SPARE				
27	2	20				TIRE BALANCER					28	1	20				SPARE				
											30	1	20				SPARE				
31	1	20				SPARE					32	1	20				SPARE				
33	1	20				SPARE					34	1	20				SPARE				
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	1.1	1.8	1.1	0.0							TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0
						TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0											
						TOTAL	1.1	1.8	1.1	0.0							TOTAL CONNECTED LOAD				4.0

* NOTES

PANEL L-HVAC2

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20				SPARE					2	1	20				SPARE				
3	1	20				SPARE					4	1	20				SPARE				
5	1	20				SPARE					6	1	20				SPARE				
7	1	20				SPARE					8	1	20				SPARE				
9	1	20				SPARE					10	1	20				SPARE				
11	1	20				SPARE					12	1	20				SPARE				
13	1	20				SPARE					14	1	20				SPARE				
15	1	20				SPARE					16	1	20				SPARE				
17	1	20				SPARE					18	1	20				SPARE				
19	1	20				SPARE					20	1	20				SPARE				
21	1	20				SPARE					22	1	20				SPARE				
23	1	20				SPARE					24	1	20				SPARE				
25	1	20				SPARE					26	1	20				SPARE				
27	1	20				SPARE					28	1	20				SPARE				
29	1	20				SPARE					30	1	20				SPARE				
31	1	20				SPARE					32	1	20				SPARE				
33	1	20				SPARE					34	1	20				SPARE				
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	0.0	0.0	0.0	0.0							TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0
						TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0											
						TOTAL	0.0	0.0	0.0	0.0							TOTAL CONNECTED LOAD				0.0

* NOTES

PANEL L-CTL1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		LAB 108	0.4				2	1	20	2	12		LAB 108	0.4			
3	1	20	2	12		LAB 108		0.4			4	1	20	2	12		LAB 108		0.4		
5	1	20	2	12		LAB 108			0.4		6	1	20	2	12		LAB 108			0.4	
7	1	20	2	12		LAB 108	0.4				8	1	20	2	12		LAB 108	0.4			
9	1	20	2	12		LAB 108		0.4			10	1	20	2	12		LAB 108		0.4		
11	1	20	2	12		VERT PANEL SAW			1.6		12	1	20	2	12		LAB 108			0.4	
							0.4				14	1	20	2	12		LAB 108	0.4			
15	3	20				TILT SAW				4.7	16	1	20	2	12		RETRACT CORD REEL		0.2		
											18	1	20	2	12		RETRACT CORD REEL			0.2	
											20	1	20	2	12		RETRACT CORD REEL	0.2			
21	3	20				20" PLANER				5.5	22	1	20	2	12		RETRACT CORD REEL		0.2		
											24	1	20	2	12		AMBNT AIR FILTRATN			0.5	
25	2	20				8" JOINTER	0.2				26	1	20	2	12		AMBNT AIR FILTRATN	0.5			
								0.2			28	1	20	2	12		AMBNT AIR FILTRATN		0.5		
											30	1	20	2	12		AMBNT AIR FILTRATN			0.5	
31	3	20				BELT/DISC SANDER				2.7	32	1	20				SPARE				
											34	1	20				SPARE				
35	2	20				BAND SAW			1.8		36	1	20				SPARE				
							1.8				38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	3.2	1.0	3.8	12.9							TOTAL RIGHT SIDE	1.8	1.6	1.9	0.0
						TOTAL RIGHT SIDE	1.8	1.6	1.9	0.0											
						TOTAL	4.9	2.5	5.7	12.9							TOTAL CONNECTED LOAD				26.1

* NOTES

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No.	DATE	DESCRIPTION
1	07/18/22	ADDENDUM 3

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SCALE:	AS SHOWN

PANEL SCHEDULES

E-506

SHEET X of X

PANEL L-WLD1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 400A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		CLASSRM 109	0.7			
3	1	20	2	12		CLASSRM 109		0.9		
5	1	20	2	12		CLASSRM 109			0.7	
7	1	20	2	12		CLASSRM 109	0.7			
9	1	20	2	12		CLASSRM 109		0.4		
11	1	20	2	12		TOILET 109B-C			0.4	
13	1	20	2	12		OFFC 109A	0.7			
15	1	20	2	12		LAB 109H J-BOX		0.2		
17	1	20	2	12		IRON WORKER			0.2	
19	1	20	2	12		LAB 109H J-BOX	0.2			
21	1	20	2	12		BAND SAW		0.2		
23	1	20	2	12		GRINDER			0.2	
25	1	20	2	12		DUST COLLECTOR	0.2			
27	1	20	2	12		DUST COLLECTOR		0.2		
29	1	20	2	12		LAB 109H J-BOX			0.2	
31	1	20	2	12		STOR 109F	0.4			
33	1	20	2	12		STOR 109E		0.4		
35	1	20	2	12		LOCKERRM 109D			0.7	
37	1	20				SPARE				
39	1	20				SPARE				
41	1	20				SPARE				
						TOTAL LEFT SIDE	2.9	2.2	2.3	0.0
						TOTAL RIGHT SIDE	60.0	60.0	6.0	0.0
						TOTAL	62.9	62.2	8.3	0.0

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
2	2	50				BOOTH 1	10.0			
4								10.0		
6	1	20				BOOTH 1			1.0	
8	2	50				BOOTH 2	10.0			
10								10.0		
12	1	20				BOOTH 2			1.0	
14	2	50				BOOTH 3	10.0			
16								10.0		
18	1	20				BOOTH 3			1.0	
20	2	50				BOOTH 4	10.0			
22								10.0		
24	1	20				BOOTH 4			1.0	
26	2	50				BOOTH 5	10.0			
28								10.0		
30	1	20				BOOTH 5			1.0	
32	2	50				BOOTH 6	10.0			
34								10.0		
36	1	20				BOOTH 6			1.0	
38	1	20				SPARE				
40	1	20				SPARE				
42	1	20				SPARE				
						TOTAL RIGHT SIDE	60.0	60.0	6.0	0.0
						TOTAL CONNECTED LOAD				133.4

* NOTES

PANEL L-WLD2

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 400A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	2	50				BOOTH 7	10.0			
3								10.0		
5	1	20				BOOTH 7			1.0	
7	2	50				BOOTH 8	10.0			
9								10.0		
11	1	20				BOOTH 8			1.0	
13	2	50				BOOTH 9	10.0			
15								10.0		
17	1	20				BOOTH 9			1.0	
19	2	50				BOOTH 10	10.0			
21								10.0		
23	1	20				BOOTH 10			1.0	
25	2	50				BOOTH 11	10.0			
27								10.0		
29	1	20				BOOTH 11			1.0	
31	2	50				BOOTH 12	10.0			
33								10.0		
35	1	20				BOOTH 12			1.0	
37	1	20				SPARE				
39	1	20				SPARE				
41	1	20				SPARE				
						TOTAL LEFT SIDE	60.0	60.0	6.0	0.0
						TOTAL RIGHT SIDE	20.7	20.7	2.0	0.0
						TOTAL	80.7	80.7	8.0	0.0

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
2	2	20				BOOTH 13	10.0			
4								10.0		
6	1	20				BOOTH 13			1.0	
8	2	20				BOOTH 14	10.0			
10								10.0		
12	1	20				BOOTH 14			1.0	
14	2	20				BELT/DISC SANDER	0.7			
								0.7		
18	1	20				SPARE				
20	1	20				SPARE				
22	1	20				SPARE				
24	1	20				SPARE				
26	1	20				SPARE				
28	1	20				SPARE				
30	1	20				SPARE				
32	1	20				SPARE				
34	1	20				SPARE				
36	1	20				SPARE				
38	1	20				SPARE				
40	1	20				SPARE				
42	1	20				SPARE				
						TOTAL RIGHT SIDE	20.7	20.7	2.0	0.0
						TOTAL CONNECTED LOAD				169.4

* NOTES

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1	07/18/22	ADDENDUM 3

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DATE:	06/17/2022
SCALE:	AS SHOWN

PANEL SCHEDULES

E-507

SHEET X of X

PANEL H-WLD2

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 400A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1																					
3	3	50				BOOTH 8 WELDER				30.0	4	3	60				PLASMA CUTTER				21.2
5																					
7											8	1	20				SPARE				
9	3	50				BOOTH 9 WELDER				30.0	10	1	20				SPARE				
11											12	1	20				SPARE				
13											14	1	20				SPARE				
15	3	50				BOOTH 10 WELDER				30.0	16	1	20				SPARE				
17											18	1	20				SPARE				
19											20	1	20				SPARE				
21	3	50				BOOTH 11 WELDER				30.0	22	1	20				SPARE				
23											24	1	20				SPARE				
25											26	1	20				SPARE				
27	3	50				BOOTH 12 WELDER				30.0	28	1	20				SPARE				
29											30	1	20				SPARE				
31											32	1	20				SPARE				
33	3	50				BOOTH 13 WELDER				30.0	34	1	20				SPARE				
35											36	1	20				SPARE				
37											38	1	20				SPARE				
39	3	50				BOOTH 14 WELDER				30.0	40	1	20				SPARE				
41											42	1	20				SPARE				
						TOTAL LEFT SIDE	0.0	0.0	0.0	210.0							TOTAL RIGHT SIDE	0.0	0.0	0.0	21.2
						TOTAL RIGHT SIDE	0.0	0.0	0.0	21.2											
						TOTAL	0.0	0.0	0.0	231.2							TOTAL CONNECTED LOAD				231.2

* NOTES

PANEL H-WLD1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 400A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1											2	1	20				SPARE				
3	3	50				BOOTH 1 WELDER				30.0	4	1	20				SPARE				
5											6	1	20				SPARE				
7											8	1	20				SPARE				
9	3	50				BOOTH 2 WELDER				30.0	10	1	20				SPARE				
11											12	1	20				SPARE				
13											14	1	20				SPARE				
15	3	50				BOOTH 3 WELDER				30.0	16	1	20				SPARE				
17											18	1	20				SPARE				
19											20	1	20				SPARE				
21	3	50				BOOTH 4 WELDER				30.0	22	1	20				SPARE				
23											24	1	20				SPARE				
25											26	1	20				SPARE				
27	3	50				BOOTH 5 WELDER				30.0	28	1	20				SPARE				
29											30	1	20				SPARE				
31											32	1	20				SPARE				
33	3	50				BOOTH 6 WELDER				30.0	34	1	20				SPARE				
35											36	1	20				SPARE				
37											38	1	20				SPARE				
39	3	50				BOOTH 7 WELDER				30.0	40	1	20				SPARE				
41											42	1	20				SPARE				
						TOTAL LEFT SIDE	0.0	0.0	0.0	210.0							TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0
						TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0											
						TOTAL	0.0	0.0	0.0	210.0							TOTAL CONNECTED LOAD				210.0

* NOTES

NEW PANEL ECAR

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 800A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED [ ] FLUSH MOUNTED | kAIC RATING: 65,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH	CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	2	100	3	3		CAR CHARGER	8.3				2	3	100	3	3		CAR CHARGER	8.3			
3								8.3			4								8.3		
5	2	100	3	3		CAR CHARGER			8.3		6	3	100	3	3		CAR CHARGER			8.3	
7							8.3				8							8.3			
9	2	100	3	3		CAR CHARGER		8.3			10	3	100	3	3		CAR CHARGER		8.3		
11									8.3		12									8.3	
13	2	100	3	3		CAR CHARGER	8.3				14	3	100	3	3		CAR CHARGER	8.3			
15								8.3			16								8.3		
17	2	100	3	3		CAR CHARGER			8.3		18	3	100	3	3		CAR CHARGER			8.3	
19							8.3				20							8.3			
21	2	100	3	3		CAR CHARGER		8.3			22	3	100	3	3		CAR CHARGER		8.3		
23									8.3		24									8.3	
25	2	100				CAR CHARGER (F)					26	2	100				CAR CHARGER (F)				
27											28										
29	1	20									30	1	20				SPARE				
31	1	20				SPARE					32	1	20				SPARE				
33	1	20				SPARE					34	1	20				SPARE				
35	1	20				SPARE					36	1	20				SPARE				
37	1	20				SPARE					38	1	20				SPARE				
39	1	20				SPARE					40	1	20				SPARE				
41	1	20				SPARE					42	1	20				SPARE				
						TOTAL LEFT SIDE	33.3	33.3	33.3	0.0							TOTAL RIGHT SIDE	33.3	33.3	33.3	0.0
						TOTAL RIGHT SIDE	33.3	33.3	33.3	0.0											
						TOTAL	66.6	66.6	66.6	0.0							TOTAL CONNECTED LOAD				199.7

* NOTES

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REVISIONS		
No.	DATE	DESCRIPTION
1	07/18/22	ADDENDUM 3

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DATE:	06/17/2022
SCALE:	AS SHOWN

PANEL SCHEDULES

E-508

SHEET X of X

APPLICABLE BUILDING CODES:

- [x] 2015 VIRGINIA CONSTRUCTION CODE (USBC PART 1, IBC 2015 W/ AMENDMENTS)
- [ ] 2015 VIRGINIA RESIDENTIAL CODE
- [x] 2015 VIRGINIA EXISTING BUILDING CODE (USBC PART 2, IEBC 2015 W/ AMENDMENTS)
- [x] 2015 VIRGINIA STATEWIDE FIRE PREVENTION CODE (SFPC, IFC 2015 W/ AMENDMENTS; IFC IS IBC REFERENCE ALSO)
- [x] 2015 VIRGINIA ENERGY CONSERVATION CODE
- [x] 2009 ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

GENERAL BUILDING INFORMATION

BUILDING ADDRESS:	3601 FERNCLIFF AVE. NW
JURISDICTION:	CITY OF ROANOKE, VA
TAX MAP OR PARCEL NO:	6460102
ZONING:	INPUD

BUILDING LOCATED IN HISTORIC DISTRICT — NO [x] YES [ ]

BUILDING IS LOCATED IN A FLOOD PLAIN — NO [x] YES [ ]

BUILDING WAS BUILT PRIOR TO 1977 — NO [ ] YES [x]

(ASBESTOS AND/OR LEAD-BASED PAINT REPORT SUBMITTED) — NO [ ] YES [x] N/A

BUILDING CURRENTLY ACCESSIBLE PER CHAPTER 11 — NO [ ] YES [x] N/A

NOTE: AS RENOVATIONS HAVE OCCURRED OVER THE LIFE OF THE BUILDING, THERE HAVE BEEN ACCESSIBILITY UPGRADES. EXISTING BUILDING WOULD NOT BE CONSIDERED FULLY ACCESSIBLE WITH CURRENT CODE HOWEVER.

ADDITIONAL DRAWINGS TO BE SUBMITTED AT A LATER DATE: [x] FIRE SPRINKLER SYS. [x] FIRE ALARM SYS.
(WORKING/SHOP DRAWINGS)

AUTOMATIC FIRE SPRINKLER SYSTEM WILL BE A DELEGATED DESIGN FOR WORKING (SHOP) DRAWINGS. SYSTEM TO BE IN ACCORDANCE WITH NFPA 13, 2013 AND THE VIRGINIA CONSTRUCTION CODE (VCC) - REFER TO FX SHEETS FOR ADDITIONAL INFORMATION. AUTOMATIC FIRE ALARM SYSTEM WILL BE A DELEGATED DESIGN FOR WORKING (SHOP) DRAWINGS. SYSTEM TO BE IN ACCORDANCE WITH NFPA 72, 2013 AND THE VIRGINIA CONSTRUCTION CODE (VCC) - REFER TO FA SHEETS FOR ADDITIONAL INFORMATION..

BUILDING RE-USE ANALYSIS - VEBC

NOTE: CODE DATA AND LIFE SAFETY DRAWINGS ARE FOR INFORMATION AND ANALYSIS PURPOSES ONLY. REFER TO DISCIPLINE DRAWINGS FOR COMPLIANCE WITH APPLICABLE REQUIREMENTS INDICATED IN THIS INFORMATIONAL SHEET.

CODE CONSIDERATIONS

CHANGE OF OCCUPANCY (VEBC 301.2, 701.1)
THE CURRENT BUILDING OCCUPANCY CLASSIFICATION IS CLASSIFIED AS MIXED OCCUPANCY, SEPARATED GROUP B, BUSINESS AND GROUP A-4, ASSEMBLY IN ACCORDANCE WITH THE CHANGE OF OCCUPANCY DRAWINGS (CLARK NEXSEN 02/02/2010 DRAWINGS, SHEET SP101). UNDER THE CURRENT EDITION OF THE VCC THESE EXISTING OCCUPANCIES WOULD ALSO BE CLASSIFIED CURRENTLY AS B/A-4, AS PRESCRIBED BY VEBC SECTION 301.2. THE MAJORITY OF THE EXISTING FACILITY WILL BE RE-CLASSIFIED AS EDUCATIONAL FOR STUDENTS UP TO THE TWELFTH GRADE, INCLUDING ALL VOCATIONAL SHOPS. ASSEMBLY SPACES (I.E., DISPLAY AREA, CONFERENCE, ADULT TRAINING AREAS, ETC.) ASSOCIATED WITH GROUP E USE ARE CONSIDERED PART OF THIS OCCUPANCY, PER VCC SECTION 303.1.3 OFFICE SPACES, MAINTENANCE STAFF AREAS AND THE LIKE ARE ANCILLARY TO TECHNICAL SCHOOL.
IN ACCORDANCE WITH VEBC SECTION 701.1, A CHANGE IN OCCUPANCY REQUIRES FURTHER ANALYSIS OF BUILDING HEIGHT/AREA, FIRE PROTECTION AND SAFETY, MEANS OF EGRESS, ACCESSIBILITY, MECHANICAL, ELECTRICAL, PLUMBING AND STRUCTURAL CONSIDERATIONS TO THE EXTENT PRESCRIBED IN CHAPTER 7 AND IN ALL CASES DOWS NOT REQUIRE FULL COMPLIANCE WITH THE CURRENT VCC REQUIREMENTS. FURTHER CONSIDERATIONS ARE PROVIDED IN VARIOUS SECTIONS OF THIS SHEET THAT DISCUSS EACH SECTION OF CHAPTER 7.

ALTERATIONS (VEBC 601.2, 603)
ALTERATIONS TO EXISTING OFFICE SPACES WOULD BE CONSIDERED A LEVEL 3 ALTERATION UNDER THE VEBC SECTION 601.2.3. ALL NEW CONSTRUCTION ELEMENTS WILL COMPLY WITH APPLICABLE PROVISIONS OF THE VCC, PER VEBC SECTION 603.2 AND 603.3.
AUTOMATIC FIRE SPRINKLER.
BUILDING WILL BE FULLY SPRINKLERED. THE REQUIREMENTS OF VEBC SECTION 603.5 ARE DEEMED TO BE MET. NEW SYSTEM INSTALLATION WILL BE MADE IN ACCORDANCE WITH VCC AND NFPA 13. REFER TO FX SHEETS FOR COMPLIANCE WITH THE VCC.
FIRE ALARM.
THE FIRE ALARM SYSTEM WILL BE REPLACED THROUGHOUT THE BUILDING TO MEET CURRENT VCC AND NFPA 72 REQUIREMENTS. VEBC SECTION 603.5.4 WILL BE MET. REFER TO FA SHEETS FOR COMPLIANCE. WITH THE VCC.
MEANS OF EGRESS
VEBC SECTION 705 REQUIRES MEANS OF EGRESS DESIGN TO MEET VCC CHAPTER 10, WHERE THERE IS AN INCREASE IN THE 'RELATIVE HAZARD' OF THE OCCUPANCY CLASSIFICATION. SINCE GROUP E IS A GREATER HAZARD PER VEBC TABLE 705.2, FULL COMPLIANCE MUST BE MET WITH THE VCC FOR THIS OCCUPANCY, EXCEPT AS INDICATED BELOW:
1. EXISTING HANDRAILS ARE PERMISSIBLE TO MEET VEBC 603.6.8 (MIN. OF 1 HANDRAIL ON STAIRS). NEW HANDRAILS TO MEET VCC.
2. EXISTING GUARDS ARE PERMISSIBLE TO REMAIN AS-IS (VEBC 603.6.9). NEW GUARDS TO MEET VCC.
3. EXISTING STAIRS ARE NOT REQUIRED TO MEET CURRENT TREAD AND RISER HEIGHT REQUIREMENTS OF THE VCC. NEW STAIRS TO MEET VCC.
DUE TO CHANGE OF OCCUPANCY PROVISIONS, MEANS OF EGRESS WILL BE RECONFIGURED IN VARIOUS PLACES THROUGHOUT THE BUILDING TO MEET CURRENT VCC REQUIREMENTS - REFER TO G-101 THRU G-103 FOR ADDITIONAL INFORMATION. VEBC SECTION 603.6 WILL BE MET.
ADDITIONAL BUILDING CONSIDERATIONS
REFER TO A-SHEETS FOR COMPLIANCE WITH VEBC SECTION 712.
REFER TO E-SHEETS FOR COMPLIANCE WITH VEBC SECTION 708.
REFER TO M-SHEETS FOR COMPLIANCE WITH VEBC SECTION 709.
REFER TO P-SHEETS FOR COMPLIANCE WITH VEBC SECTION 710.
REFER TO S-SHEETS FOR COMPLIANCE WITH VEBC SECTION 711.
WORK PERFORMED TO CONFORM WITH CHAPTER 7 IS CATEGORIZED SEPARATELY FROM THE WORK AREA METHOD ALTERATIONS.

ALLOWABLE HEIGHTS & AREAS (VEBC 706; VCC 504, 506)
VEBC SECTION 706 REQUIRES BUILDING AREA AND HEIGHT LIMITATIONS TO MEET VCC CHAPTER 5, WHERE THERE IS AN INCREASE IN THE 'RELATIVE HAZARD' OF THE OCCUPANCY CLASSIFICATION. SINCE E OCCUPANCY IS A GREATER HAZARD PER VEBC TABLE 706.2, COMPLIANCE MUST BE MET WITH THE VCC. SEPARATED MIXED USES MUST COMPLY WITH VCC FIRE RESISTANCE REQUIREMENTS, PER VEBC SECTION 706.5.
BUILDING SEPARATION AND EXPOSURE PROTECTION (VEBC 707; VCC TABLE 602)
VEBC SECTION 707 REQUIRES EXTERIOR WALL FIRE-RESISTANCE TO MEET VCC CHAPTER 6 AND 7 FOR EXTERIOR WALL PROTECTION, WHERE THERE IS AN INCREASE IN THE "RELATIVE HAZARD" OF THE OCCUPANCY CLASSIFICATION. SINCE GROUP E OCCUPANCY IS NOT A GREATER HAZARDS PER VEBC TABLE 707.1, COMPLIANCE IS NOT REQUIRED TO BE MET WITH THE VCC.

TYPE OF WORK

- [ ] NEW BUILDING
- [ ] PRE-ENG. BUILDING
- [x] CHANGE OF OCCUPANCY
- [x] EXISTING BUILDING
- [x] ALTERATION
- [ ] LEVEL 1
- [ ] LEVEL 2
- [x] LEVEL 3

OCCUPANCY INFORMATION (CH. 3)
PRIMARY OCCUPANCIES:
ASSEMBLY — A-1 [ ] A-2 [ ] A-3 [ ] A-4 [ ] A-5 [ ]
B - BUSINESS [ ]
E - EDUCATION [x]
FACTORY — F-1 [ ] F-2 [ ]
HIGH-HAZARD — H-1 [ ] H-2 [ ] H-3 [ ] H-4 [ ] H-5 [ ]
INSTITUTIONAL — I-1 [ ] I-2 [ ] I-3 [ ] I-4 [ ] I-2 COND. 1 [ ] I-2 COND. 2 [ ]
MERCANTILE [ ]
RESIDENTIAL — R-1 [ ] R-2 [ ] R-3 [ ] R-4 [ ]
STORAGE — S-1 [ ] S-2 [ ]
U - UTILITY [ ]

OTHER USES:
ACCESSORY USES: ACCESSORY ASSEMBLY AREAS ARE CLASSIFIED AS PART OF EDUCATIONAL OCCUPANCY (VCC 303.1.3)
ACCESSORY BUSINESS USE AREA PERCENTAGE OF OVERALL AREA: <10%. BUSINESS OFFICES ARE CONSIDERED ACCESSORY TO EDUCATIONAL USE (VCC 508.2)

INCIDENTAL USES: N/A
SPECIAL OCCUPANCIES (CH 4)

- [ ] 402 COVERED OR OPEN MALL
- [ ] 403 HIGH RISE
- [ ] 404 ATRIUM
- [ ] 405 UNDERGROUND
- [x] 406 MOTOR VEHICLE
- [ ] PRIVATE GARAGE
- [x] PUBLIC GARAGE
- [ ] 407 GROUP I-2
- [ ] 408 GROUP I-3
- [ ] 409 PROJECTION
- [ ] 410 STAGE/PLATFORM
- [ ] 413 COMBUSTIBLE STORAGE
- [ ] 414 HIGH-HAZARD
- [ ] 419 LIVE/WORK
- [ ] 422 AMBULATORY CARE

MIXED OCCUPANCY (508) [ ] SEPARATED (508.4) [ ] NON-SEPARATED (508.3)

REFER TO MAXIMUM ALLOWABLE QUANTITIES ANALYSIS PROVIDED ON THIS SHEET FOR ADDITIONAL INFORMATION RELATED TO ANTICIPATED HAZARDOUS MATERIAL THRESHOLDS.

BUILDING DATA - CH. 5 & 6
CONSTRUCTION TYPE (CH 6)
I-A [ ] I-B [ ] II-A [ ] II-B [x] III-A [ ] III-B [ ] IV HT [ ] V-A [ ] V-B [ ]
MIXED CONSTRUCTION — NO [x] YES [ ]
AUTO SPRINKLER SYSTEM — NO [ ] YES [x] NFPA 13, 2013 [ ] NFPA 13R, 2013 [ ] NFPA 13D, 2013
BUILDING HEIGHT (CH 5)
ALLOWABLE: 75 FT; 3 STORIES (TABLES 504.3; 504.4)
ACTUAL: EXISTING - 28 FT.; 2 STORY (BASED ON ORIGINAL DRAWINGS)
BASEMENT — NO [x] YES [ ]
MEZZANINE — NO [x] YES [ ]
HIGH RISE — NO [x] YES [ ]

HAZARDOUS MATERIALS ANALYSIS - MAXIMUM ALLOWABLE QUANTITIES (MAQ) - CH. 3 FURTHER OCCUPANCY CONSIDERATIONS

VCC/IBC/IFC CLASSIFICATION	CONTROL AREA NUMBER	MAXIMUM ALLOWABLE QUANTITIES (MAQ*) PER CONTROL AREA	EXCEEDING MAQ*	H-USE CLASSIFICATION IF EXCEEDING MAQ
FLAMMABLE GAS**	2 (WELDING STORAGE ROOM)	2,000 CU. FT. – STORAGE/CLOSED	NO	H-2
FLAMMABLE LIQUID COMBINATION (IA, IB, IC)	1	240 GAL - STORAGE/CLOSED	NO	H-2
COMBUSTIBLE LIQUIDS (II)	1	240 GAL – STORAGE/CLOSED	NO	NA
COMBUSTIBLE LIQUIDS (IIIA)	1	660 GAL – STORAGE/ CLOSED	NO	NA
COMBUSTIBLE LIQUIDS (IIIB)	1	26,400 GAL – STORAGE/CLOSED	NO	NA
OXIDIZER, CLASS 1	1	8,000 LBS – STORAGE/CLOSED	NO	NA
WATER REACTIVES, CLASS 1	1	NL	NL	NA
CORROSIVES	1	1,000 GAL – STORAGE/CLOSED	NO	H-4

*MAQ INCREASES ARE INCLUDED FOR SPRINKLER SYSTEM. CABINET ENCLOSURE (FOR LIQUIDS/GASES WHERE APPLICABLE) WOULD INCREASE AGGREGATE.
**CONTROL AREA 2 (WELDING TANK STORAGE ROOM) IS SEPARATED AS INDIVIDUAL CONTROL AREA. STORAGE ROOM IS SEPARATED BY 1-HOUR CONSTRUCTION TO MEET VCC 414.2 WITH MASONRY WALLS TO FLOOR-CEILING DECK ABOVE.

BUILDING AREA CALCULATIONS - CH. 5

BUILDING	STORY NO.	USE GROUP	BLDG AREA PER STORY (ACTUAL)	TABLE 506.2 ALLOWABLE AREA	% FRONTAGE INCREASE	INCREASED ALLOWABLE AREA	RATIO OF ACTUAL TO ALLOWABLE	REQUIRED SEPARATION RATING (T.508.4)
BUILDINGS 2&3	1	E	51,164 SF	43,500	75	54,375	N/A	0 HR.
BUILDING 1	1	B	8,267 SF	69,000	75	86,250	N/A	0 HR.

BUILDINGS 2 & 3 ARE PHYSICALLY ATTACHED AND ARE NOT SEPARATED BY FIRE WALL - THESE BUILDINGS ARE ANALYZED AS SINGLE BUILDING. BUILDING 1 IS PHYSICALLY SEPARATED FROM BUILDINGS 2&3 AND WILL NOT BE SPRINKLERED - IT IS ANALYZED SEPARATELY AND IS NOT PART OF THE SCOPE OF THIS PROJECT.
AREA PER FLOOR IS CALCULATED IN ACCORDANCE WITH VCC SECTIONS 506.2.3 (SINGLE OCCUPANCY, MULTI-STORY BUILDINGS), AND 506.3.3 – AREA INCREASES ARE PERMISSIBLE BASED ON FRONTAGE INCREASES WHERE:

If = [F/P – 0.25]*W/30
If = (1.0 - 0.25)*1 = 0.75

AND,
Aa = [AT + (NS X IF)]x Sa

BUILDING INFO:	FULLY SPRINKLERED (903.3.1.1) - BUILDING 2 &3
ALLOWABLE:	**54,375 SF/STORY; 108,750 SF AGGREGATE**
ACTUAL:	**51,164 SF (FIRST FLOOR) - LARGEST FLOOR (BUILDING 2&3)**

TYPES OF CONSTRUCTION - CH. 6
TABLE 602. FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE

FIRE SEPARATION DISTANCE = X (FEET)	CONST TYPE	OCCUPANCY GROUP E	OCCUPANCY GROUP B
X < 5	ALL	1 HR	1 HR
5 < X < 10	I A	1 HR	1 HR
10 < X < 20	I A	0 HR	0 HR
X > 20	ALL	0 HR	0 HR

NOTE: AS PART OF CHANGE OF OCCUPANCY, VEBC TABLE 707.1 AND SECTION 707.3 DO NOT REQUIRE COMPLIANCE WITH VCC TABLE 602.

FIRE RESISTANCE RATING REQUIREMENTS - CH. 7

BUILDING ELEMENT	REQUIRED RATING	RATING PROVIDED	DETAIL AND SHEET NO.	DESIGN NO. OF RATED ASSEMBLY
PRIMARY STRUCTURAL FRAME	0 HR	0 HR	NA	NA
EXTERIOR BEARING WALLS	0 HR	0 HR	NA	NA
INTERIOR BEARING WALLS	0 HR	0 HR	NA	NA
NON-BEARING WALLS & PARTITIONS (EXTERIOR)	0 HR	0 HR	NA	NA
NON-BEARING WALLS & PARTITIONS (INTERIOR)	0 HR	0 HR	NA	NA
FLOOR-CEILING ASSEMBLY (HORIZONTAL ASSEMBLY)	NA	NA	NA	NA
COLUMNS SUPPORTING FLOORS	NA	NA	NA	NA
ROOF CONSTRUCTION, INCLUDING BEAMS & JOISTS	0 HR	0 HR	NA	NA
ROOF/CEILING ASSEMBLY (HORIZONTAL ASSEMBLY)	0 HR	0 HR	NA	NA
SHAFTS -VERTICAL EXIT ENCLOSURES (FIRE BARRIER)	1 HR	1 HR	NA*	NA*
SHAFT - GREASE DUCT ENCLOSURE (FIRE BARRIER)	1 HR	1 HR	A6.1	UL U415
ELEVATOR HOISTWAY & ELEVATOR MACHINE ROOM	1 HR	1 HR	NA*	NA*
OTHER VERTICAL OPENINGS (FIRE BARRIER)	1 HR	2 HR	NA*	NA*
CORRIDOR SEPARATION (H-USE > 30 OCCUPANTS) - FIRE PARTITION	0 HR	0 HR	NA	NA
CORRIDOR SEPARATION (F-1/B-USE) - FIRE PARTITION	0 HR	0 HR	NA	NA
OCCUPANCY SEPARATION (FIRE BARRIER)	0 HR	0 HR	NA	NA
OCCUPANCY SEPARATION (HORIZONTAL ASSEMBLY)	0 HR	0 HR	NA	NA
OCCUPANCY SEPARATION (FLOOR SUPP. STRUCTURAL MEMBERS)	0 HR	0 HR	NA	NA
PARTY/FIRE WALL SEPARATION	NA	NA	NA	NA
INCIDENTAL USE SEPARATION (FIRE BARRIER)	NA	NA	NA	NA
DWELLING/SLEEPING UNIT SEPARATION (FIRE PARTITION)	NA	NA	NA	NA
TENANT SEPARATION (FIRE PARTITION)	NA	NA	NA	NA
CONTROL AREA (FIRE BARRIER)	1 HR	1 HR	A6.1	UL U906
CONTROL AREA (HORIZONTAL ASSEMBLY)	0 HR	0 HR	NA	NA
SMOKE COMPARTMENT SEPARATION (SMOKE BARRIER)	NA	NA	NA	NA
SMOKE PARTITION (INCIDENTAL USES)	0 HR	0 HR	A6.1	NA

*EXISTING CONSTRUCTION - EXISTING FIRE RESISTANCE RATED ELEMENTS TO BE REPAIRED AS NECESSARY (PENETRATIONS, ETC.)

INTERIOR FINISHES - CH. 8
TABLE 803.11 - INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY

SPRINKLERED			
USE GROUP	EXIT ENCLOSURES AND EXIT PASSAGEWAYS	CORRIDORS	ROOMS AND ENCLOSED SPACES
E	B	C	C

FIRE PROTECTION AND LIFE SAFETY SYSTEM REQUIREMENTS - CH. 9 & 10

	REQUIRED		PROVIDED	
FIRE SUPPRESSION SYS. (903, 904)	NO [ ]	YES [x]	NO [ ]	YES [x]
STANDPIPE SYS. (905)	NO [x]	YES [ ]	NO [x]	YES [ ]
PORTABLE EXTINGUISHERS (906)*	NO [ ]	YES [x]	NO [ ]	YES [x]
FIRE ALARM SYS. (907.2)	NO [ ]	YES [x]	NO [ ]	YES [x]
FULL SMOKE DETECTION (907.2, 907.3)	NO [x]	YES [ ]	NO [x]	YES [ ]
VOICE EVACUATION SYS. (907.5.2.2)	NO [x]	YES [ ]	NO [ ]	YES [x]
SMOKE CONTROL SYS. (909)	NO [x]	YES [ ]	NO [x]	YES [ ]
SMOKE/HEAT VENTS (910)	NO [x]	YES [ ]	NO [x]	YES [ ]
CARBON MONOXIDE DETECTION (915)**	NO [ ]	YES [x]	NO [ ]	YES [x]
EMERGENCY LIGHTING (1008.3)	NO [ ]	YES [x]	NO [ ]	YES [x]
PANIC/FIRE EXIT HDW (1010.1.10). E -USE	NO [ ]	YES [x]	NO [ ]	YES [x]
EXIT SIGNS (1013)	NO [ ]	YES [x]	NO [ ]	YES [x]

*VCC SECTION 906.1 , EXCEPTION 1 EXEMPTS PORTABLE FIRE EXTINGUISHERS FROM BEING INSTALLED THROUGHOUT THE BUILDING WHERE FULLY SPRINKLERED WITH QUICK RESPONSE SPRINKLERS, AND ARE ONLY REQUIRED IN SPECIFIC HAZARDOUS AREAS AS PRESCRIBED IN SUB-ITEMS 2 - 6. THE FOLLOWING LOCATIONS ARE PROVIDED WITH PORTABLE EXTINGUISHERS TO MEET THIS REQUIREMENT (REFER TO FX SHEETS FOR ADDITIONAL INFORMATION):
AUTOMOTIVE TEACHING LAB, PER IFC 2311.6; BUILDING TRADES TEACHING LAB, PER IFC SECTION 2804.3 ; COSMETOLOGY, PER IFC 5703.2.1; CULINARY TEACHING LAB, PER IFC 904.12.5.; IDF/MDF, ELECTRICAL ROOMS ; ELEVATOR MACHINE ROOM, PER ASME A17.1; HVAC TEACHING LAB, WELDING TEACHING LAB, PER IFC SECTION 3504.2.6.

**CARBON MONOXIDE DETECTORS, AS PART OF FIRE ALARM/MASS NOTIFICATION SYSTEM, ARE INSTALLED IN CLASSROOMS (HVAC LAB, CULINARY TEACHING LAB) AND AREAS WITH FUEL-BURNING EQUIPMENT AND GARAGE (AUTOMOTIVE TEACHING LAB), PER VCC SECTIONS 915.3.2. 1

PLUMBING FIXTURE REQUIREMENTS - CH. 29 & VPC CH. 4

OCCUPANCY	WATER CLOSETS (MALE)	WATER CLOSETS (FEMALE)	URINALS	LAVS. (MALE)	LAVS. (FEMALE)	SHOWER/ TUBS	DRINKING FOUNTAIN (REG.)	SERVICE SINK
EDUCATIONAL (E) - MAIN (BLDG. 2 & 3)	1/50	1/50	50% SUB.	1/50	1/50	-	1/100; 1 ACCESS.	1
TOTAL REQUIRED (E)	17	17	-	17	17	-	18/ 9 ACCESS.	1
TOTAL PROVIDED (E)	19	19	-	19	19	-	18/ 9 ACCESS.	2

MEANS OF EGRESS - CH. 10
VCC 1004.1 - OCCUPANT LOAD FACTORS PER TABLE 1004.1.2 (SF/PERSON) ARE INDICATED ON THE LIFE SAFETY DRAWINGS.
VCC 1005 - CAPACITY OF MEANS OF EGRESS
CAPACITY FACTORS – MEANS OF EGRESS COMPONENTS WILL BE SIZED USING CALCULATED OCCUPANT LOADS MULTIPLIED BY THE FOLLOWING CAPACITY FACTORS FOR FULLY SPRINKLERED E OCCUPANCY CLASSIFICATION: 0.2 (STAIRWAYS 44" MINIMUM), AND 0.15 (LEVEL COMPONENTS AND RAMPS), BUT MUST BE A MINIMAL SIZE AS STATED BELOW:
1. AISLES, CORRIDORS, AND RAMPS – MIN. 72 IN. FOR GROUP E, EXCEPT WHERE SERVING OCCUPANT LOADS LESS THAN 50 (36 IN. MINIMUM) OR SPECIFICALLY SERVING MECHANICAL, ELECTRICAL AND/OR PLUMBING EQUIPMENT (24 IN.), PER VCC 1020.2.
2. DOORS –MINIMUM 32 IN. CLEAR WIDTH FOR DOORS, PER VCC 1010. PANIC/FIRE EXIT HARDWARE (WHERE APPLICABLE) IS REQUIRED ON ALL EGRESS DOORS SERVING E OCCUPANCY SERVING AN OCCUPANT LOAD GREATER THAN 50, PER VCC SECTION 1010.1.10.
3. STAIRS – MINIMUM OF 44 IN. PER VCC SECTION 1011.2.

VCC 1006 - NUMBER OF EXITS
REQUIRED: MINIMUM 2 EXITS. OCCUPANT LOADS IN EXCESS OF 500 OCCUPANTS ARE TO BE PROVIDED WITH THE MINIMUM NUMBER SPECIFIED IN VCC TABLE 1006.3.2
PROVIDED: PLEASE REFER TO THE LIFE SAFETY DRAWINGS FOR THE LOCATIONS OF EXITS.

VCC 1007 - ARRANGEMENT OF MEANS OF EGRESS
REMOTENESS OF EXITS (VCC 1007.1): MINIMUM 1/4 OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE BUILDING OR AREA TO BE SERVED INCLUDING EXITS, EXIT ACCESS, AND EXIT DISCHARGE.
TRAVEL DISTANCE (VCC 1017) – FULLY SPRINKLERED BUILDING (REFER TO TABLE BELOW).
COMMON PATH OF TRAVEL (VCC 1006 - REFER TO TABLE BELOW).
DEAD-END CORRIDORS (VCC 1020 - REFER TO TABLE BELOW).
NOTE: EXISTING DEAD-END CORRIDORS IN GROUPS E/B: 70 FT MAXIMUM (VEBC 705.3.2, EXCEPTION 2).
CORRIDOR PROVISIONS (VCC 1020 - REFER TO TABLE BELOW).

MEANS OF EGRESS - ARRANGEMENT OF MEANS OF EGRESS - CH. 10

USE GROUP	COMMON PATH OF EGRESS TRAVEL (FT) SECTION 1006.2.1	SPACE WITH ONE MEANS OF EGRESS (MAX OCCUP LOAD) TABLE 1006.2.1	EXIT ACCESS TRAVEL DISTANCE (FT) TABLE 1017.2	DEAD END PERMITTED (FT) SECTION 1020.4
E	75	50	250	50 MAX - EXCEPTION 2

TABLE 1020.1 - CORRIDOR FIRE RESISTENCE RATING AND SECTION 1020.2 - CORRIDOR WIDTH AND CAPACITY

USE GROUP	OCCUPANT LOAD SERVED BY CORRIDORS	REQUIRED FIRE RESISTANCE RATING (HOURS) W/SPRINKLER SYSTEM	CORRIDOR WIDTH REQUIRED	CORRIDOR WIDTH PROVIDED
E	> 30	0	72" MIN	72"

VCC – 1006 - ILLUMINATION OF MEANS OF EGRESS (VCC 1008)
VEBC SECTION 708.4 REQUIRES ELECTRICAL SYSTEM MEET THE VCC NEW OCCUPANCY LIGHTING REQUIREMENTS. ILLUMINATION OF MEANS OF

EGRESS IS REQUIRED AND WILL BE PROVIDED – REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
VEBC SECTION 708.4 REQUIRES ELECTRICAL SYSTEM MEET THE VCC NEW OCCUPANCY LIGHTING REQUIREMENTS. EMERGENCY LIGHTING IS REQUIRED FOR ALL PORTIONS OF THE MEANS OF EGRESS AND WILL BE PROVIDED – REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

VCC 1009 - ACCESSIBLE MEANS OF EGRESS
BUILDING WILL BE FULLY SPRINKLERED, STAIRWAYS OR AREAS OF REFUGE ARE NOT REQUIRED TO MEET ACCESSIBLE MEANS OF EGRESS REQUIREMENTS, PER EXCEPTIONS IN VCC SECTIONS 1009.3 OR 1009.6. TWOWAY COMMUNICATION SYSTEM IS REQUIRED TO MEET THIS SECTION, PER VCC 1009.8. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

VCC 1013 - MARKING OF MEANS OF EGRESS
VEBC SECTION 705 REQUIRES MEANS OF EGRESS DESIGN TO MEET VCC CHAPTER 10, WHERE THERE IS AN INCREASE IN THE 'RELATIVE HAZARD' OF THE OCCUPANCY CLASSIFICATION. SINCE E IS A GREATER HAZARD PER VEBC TABLE 705.2, FULL COMPLIANCE MUST BE MET WITH THE VCC FOR THIS OCCUPANCY AT A MINIMUM. MARKING OF ALL MEANS OF EGRESS IS REQUIRED AND WILL BE PROVIDED – REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

VCC 1016 - EGRESS THROUGH INTERVENING SPACES (VCC 1016.2, 1020.6)
CORRIDORS WILL NOT PROVIDE EXIT ACCESS THROUGH INTERVENING ROOMS OTHER THAN CORRIDORS, LOBBIES, AND OTHER SPACES PERMITTED TO BE OPEN TO THE CORRIDOR. INTERVENING ROOMS ARE PERMISSIBLE FOR EXIT ACCESS FROM ONE ROOM TO ADJACENT SPACE, BUT WILL BE FURTHER LIMITED BY COMMON PATH OF TRAVEL AND OVERALL TRAVEL DISTANCE LIMITATIONS. REFER TO SECTION 1.4.5 OF THIS REPORT ABOVE FOR ADDITIONAL INFORMATION.

VCC 1028 - DISCHARGE FROM EXITS
EXITS ARE REQUIRED TO DISCHARGE TO THE EXTERIOR OF THE BUILDING, EXCEPT THAT A MAXIMUM OF 50 PERCENT OF EXIT STAIRS ARE PERMITTED TO BE ON LEVEL OF EXIT DISCHARGE IN FULLY SPRINKLERED BUILDINGS, PER VCC SECTION 1028.1 EXCEPTION 1. REFER TO LIFE SAFETY DRAWINGS, G-101 AND G-102 FOR ADDITIONAL INFORMATION.
A PORTION OF EXIT DISCHARGE IS THROUGH FENCED-IN AREAS ARE DESIGNED TO MEET THE SAFE DISPERSAL AREA PROVISIONS OF 1028.5. REFER TO G-103 FOR ADDITIONAL INFORMATION.

ACCESSIBILITY - CH. 11
COMPLIANCE WITH VEBC SECTION 402 IS REQUIRED FOR CHANGE OF OCCUPANCY (VEBC 712.1).

NEW CONSTRUCTION ELEMENTS TO BE FULLY ACCESSIBLE AS REQUIRED BY THE VCC (VEBC 404.2). ALTERATIONS TO EXISTING ELEMENTS IN AN AREA CONTAINING A PRIMARY FUNCTION TO COMPLY WITH VEBC 404.3.

ENERGY EFFICIENCY - CH. 13
COMPLIANCE WITH THE VECC IS NOT REQUIRED FOR A CHANGE OF OCCUPANCY CLASSIFICATION, (VEBC CH. 7).

LEVEL 3 ALTERATIONS ARE PERMITTED WITHOUT REQUIRING ENTIRE BUILDING TO MEET THE VECC (VEBC 601.4). ALTERATIONS TO MEET APPLICABLE SECTIONS OF VECC - REFER TO MECHANICAL AND ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION.

ELEVATORS AND CONVEYING SYSTEMS - CH. 30
SECTION 3003.2 - FIREFIGHTER'S EMERGENCY OPERATIONS:
PHASE I AND PHASE II IMPLEMENTED FOR ELEVATOR CAR REPLACEMENT.

SECTION 3005 - MACHINE ROOM VENTING PROVIDED. SHUNT TRIP TO BE PROVIDED TO MEET NFPA 72 AND A17.1 REQUIREMENTS.

3007 & 3008 - FIRE SERVICE ACCESS ELEVATOR AND OCCUPANT EVACUATION ELEVATOR REQUIREMENTS ARE NOT APPLICABLE TO THIS PROJECT.

DRAWING INDEX

GA Architecture — ARCHITECTURE INTERIORS PLANNING
G+A CONSULTING — Fire + Life Safety Engineering
EMERSON GRAHAM + ASSOCIATES

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REVISIONS

No.	DATE	DESCRIPTION
3	7-18-22	DRAWING UPDATES AND CLARIFICATIONS

DRAWN BY:	KNS
REV'D BY:	JBB
DATE:	7/18/22
SCALE:	AS SHOWN

CODE DATA SHEET

G-001

SHEET 1 of 4

LIFE SAFETY GENERAL NOTES

1. DRAWING IS FOR INFORMATION AND ANALYSIS PURPOSES ONLY.

   REFER TO A-SHEETS FOR FLOOR LAYOUTS, FIRE AND SMOKE RESISTIVE FEATURES AND CONSTRUCTION.
   REFER TO E-SHEETS FOR ELECTRICAL WORK INCLUDING EXIT SIGNAGE, EGRESS LIGHTING AND ANY ELECTRICAL HAZARDOUS LOCATIONS.
   REFER TO FA-SHEETS FOR FIRE ALARM AND EMERGENCY ALARM WORK.
   REFER TO M-SHEETS FOR LOCATIONS OF FIRE AND/OR SMOKE DAMPER LOCATIONS AND ANY EXHAUST SYSTEMS FOR FIRE AND LIFE SAFETY PURPOSES AS APPLICABLE.

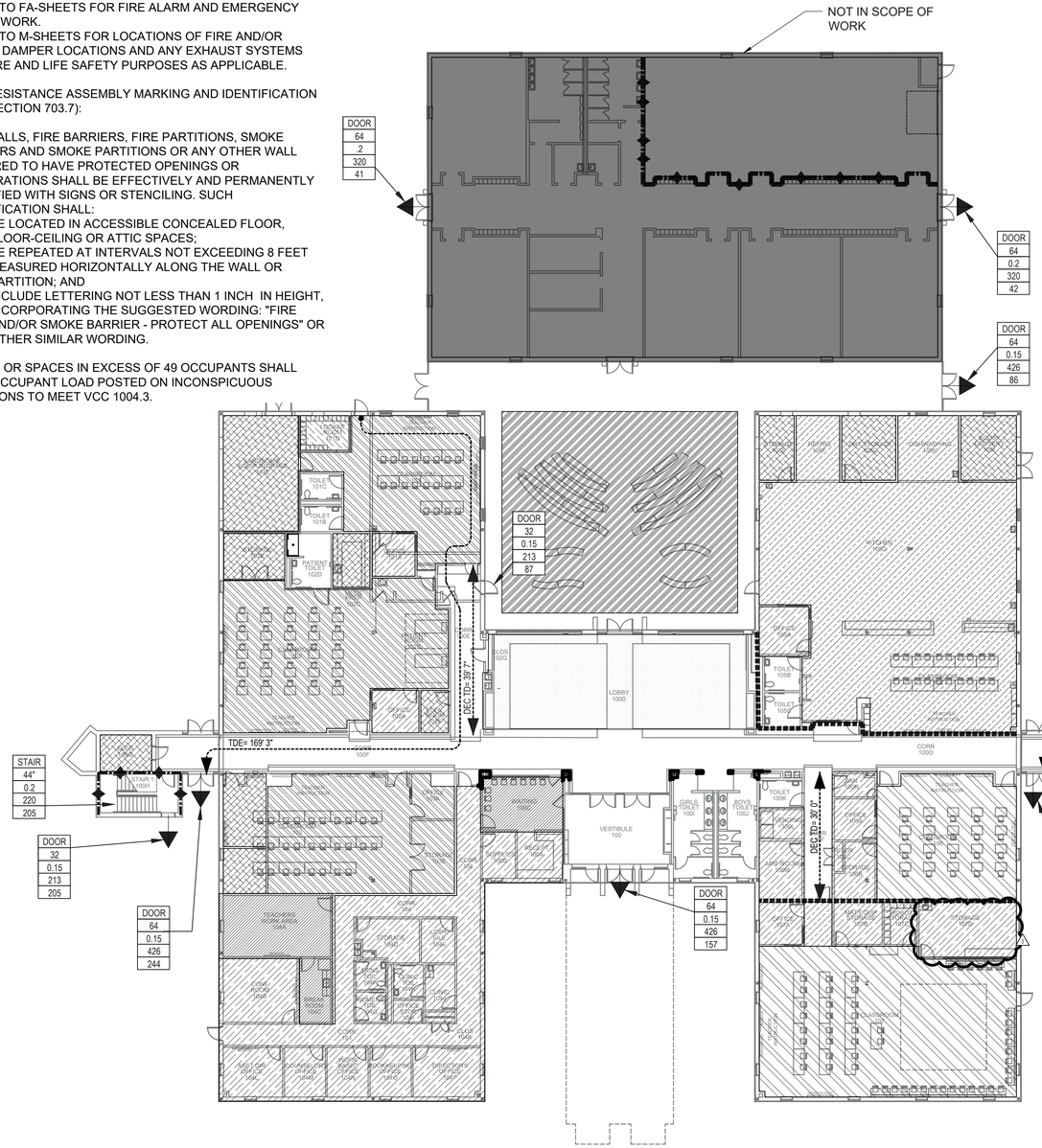
2. FIRE-RESISTANCE ASSEMBLY MARKING AND IDENTIFICATION (VCC SECTION 703.7):

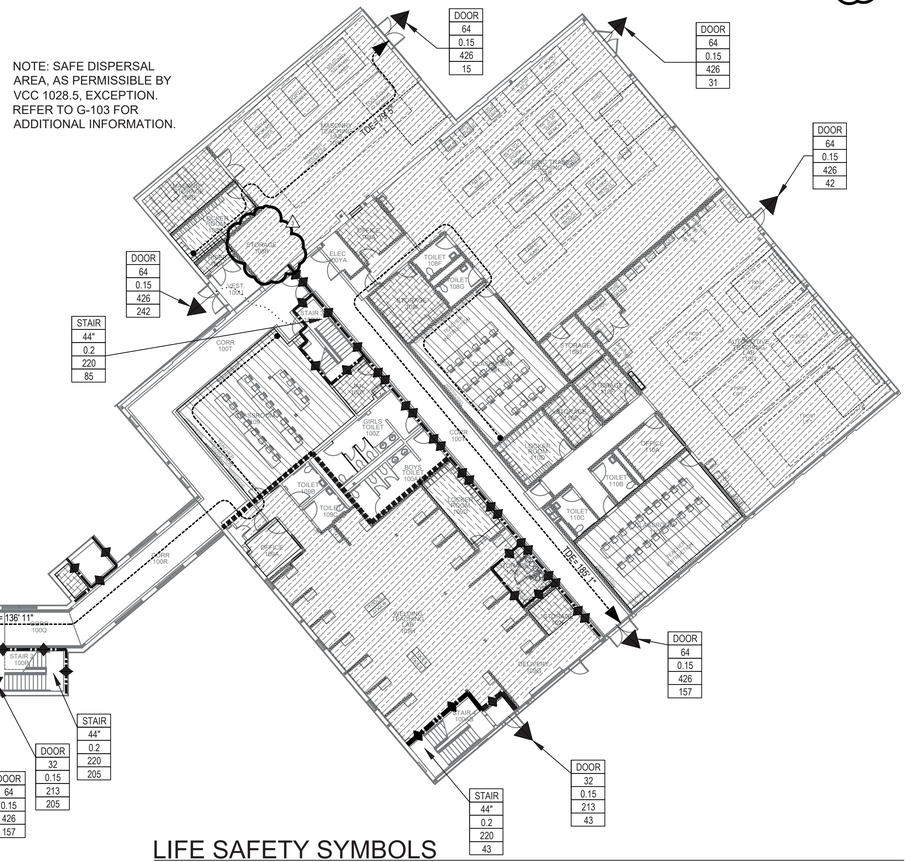
   FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING. SUCH IDENTIFICATION SHALL:
   A. BE LOCATED IN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING OR ATTIC SPACES;
   B. BE REPEATED AT INTERVALS NOT EXCEEDING 8 FEET MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION; AND
   C. INCLUDE LETTERING NOT LESS THAN 1 INCH IN HEIGHT, INCORPORATING THE SUGGESTED WORDING: "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS" OR OTHER SIMILAR WORDING.

3. ROOMS OR SPACES IN EXCESS OF 49 OCCUPANTS SHALL HAVE OCCUPANT LOAD POSTED ON INCONSPICUOUS LOCATIONS TO MEET VCC 1004.3.

OCCUPANT LOAD CALCULATIONS BASED ON VCC TABLE 1004.1.2 UNLESS OTHERWISE STATED - BUILDING 2 & 3

USE GROUP AND/OR SPACEDESIGNATION	AREA (S.F.)	AREA PER OCCUPANT (S.F./PERSON)	LOAD FACTOR TYPE (GROSS/NET SF)	NUMBER OF OCCUPANTS
ASSEMBLY USE, LESS-CONCENTRATED	782	15	NET S.F.	52
ASSEMBLY USE, EXHIBIT GALLERY	1,394	30	NET S.F.	46
EDUCATIONAL USE - CLASSROOMS	6,667	20	NET S.F.	333
EDUCATIONAL USE - SHOPS/VOCATIONAL ROOMS	17,322	50	NET S.F.	346
OUTDOOR AREA - VCC 1004.5	2,586	15	NET S.F.	172
BUSINESS/OFFICE USE	4,790	100	GROSS S.F.	48
LOCKER ROOMS	530	50	GROSS S.F.	11
INDUSTRIAL USE		100	GROSS S.F.	0
ACCESSORY STORAGE & MECHANICAL USE	2,597	300	GROSS S.F.	9
TOTAL				1018





LIFE SAFETY SYMBOLS

DOOR 32/64 0.2 160/320 — EGRESS ELEMENT (DOOR, STAIR, ETC.); EGRESS WIDTH (CLEAR); EXIT WIDTH PER PERSON (IN.); CAPACITY (PEOPLE); ACTUAL (PEOPLE)

TD= XX' — TRAVEL PATH

EXIT DISCHARGE

CPT — COMMON PATH OF TRAVEL

DEC — DEAD END CORRIDOR

TDE — TOTAL DISTANCE TO EXIT

1-HOUR FIRE BARRIER

2-HOUR FIRE BARRIER

SMOKE PARTITION

REQUIRED EXIT

NOT IN SCOPE

ASSEMBLY USE - UNCONCENTRATED (TABLES/CHAIRS): 15 NET SF/PERSON

ASSEMBLY, EXHIBIT GALLERY: 30 NET SF/PERSON

EDUCATIONAL USE - CLASSROOMS: 20 NET SF/PERSON

EDUCATIONAL USE - SHOPS/VOCATIONAL ROOMS: 50 NET SF/PERSON

OUTDOOR AREA (VCC 1004.5): 100 GROSS SF/PERSON

BUSINESS: 100 GROSS SF/PERSON

LOCKER ROOMS: 50 GROSS SF/PERSON

INDUSTRIAL AREAS: 100 GROSS SF/PERSON

ACCESSORY STORAGE/MECHANICAL AREAS: 300 GROSS SF/PERSON

COMMON CIRCULATION SPACE: NO CALCULATED OCCUPANT LOAD FOR SERVING NET SF EDUCATION SPACES

BUILDING 2 & 3
GROUND FLOOR LIFE SAFETY PLAN

1

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

GA Architecture — Architecture, Interiors, Planning

G+A Consulting — Fire + Life Safety Engineering — Emerson Graham + Associates

COMMONWEALTH OF VIRGINIA
JUSTIN B. BILLER
Lic. No. 047170
PROFESSIONAL ENGINEER
07/18/22

RUFFNER CAREER AND TECHNICAL EDUCATION CENTER

ROANOKE, VIRGINIA

ROANOKE CITY PUBLIC SCHOOLS
Strong Students. Strong Schools. Strong City.

REVISIONS		
No.	DATE	DESCRIPTION
3	7-18-22	DRAWING UPDATES AND CLARIFICATIONS

DRAWN BY:	KNS
REV'D BY:	JBB
DATE:	7/18/22
SCALE:	AS SHOWN

BUILDING 2 & 3 GROUND FLOOR LIFE SAFETY PLAN

G-101

SHEET 1 of 4

LIFE SAFETY SYMBOLS

1. DRAWING IS FOR INFORMATION AND ANALYSIS PURPOSES ONLY.

   REFER TO A-SHEETS FOR FLOOR LAYOUTS, FIRE AND SMOKE RESISTIVE FEATURES AND CONSTRUCTION.
   REFER TO E-SHEETS FOR ELECTRICAL WORK INCLUDING EXIT SIGNAGE, EGRESS LIGHTING AND ANY ELECTRICAL HAZARDOUS LOCATIONS.
   REFER TO FA-SHEETS FOR FIRE ALARM AND EMERGENCY ALARM WORK.
   REFER TO M-SHEETS FOR LOCATIONS OF FIRE AND/OR SMOKE DAMPER LOCATIONS AND ANY EXHAUST SYSTEMS FOR FIRE AND LIFE SAFETY PURPOSES AS APPLICABLE.

2. FIRE-RESISTANCE ASSEMBLY MARKING AND IDENTIFICATION (VCC SECTION 703.7):

   FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING. SUCH IDENTIFICATION SHALL:
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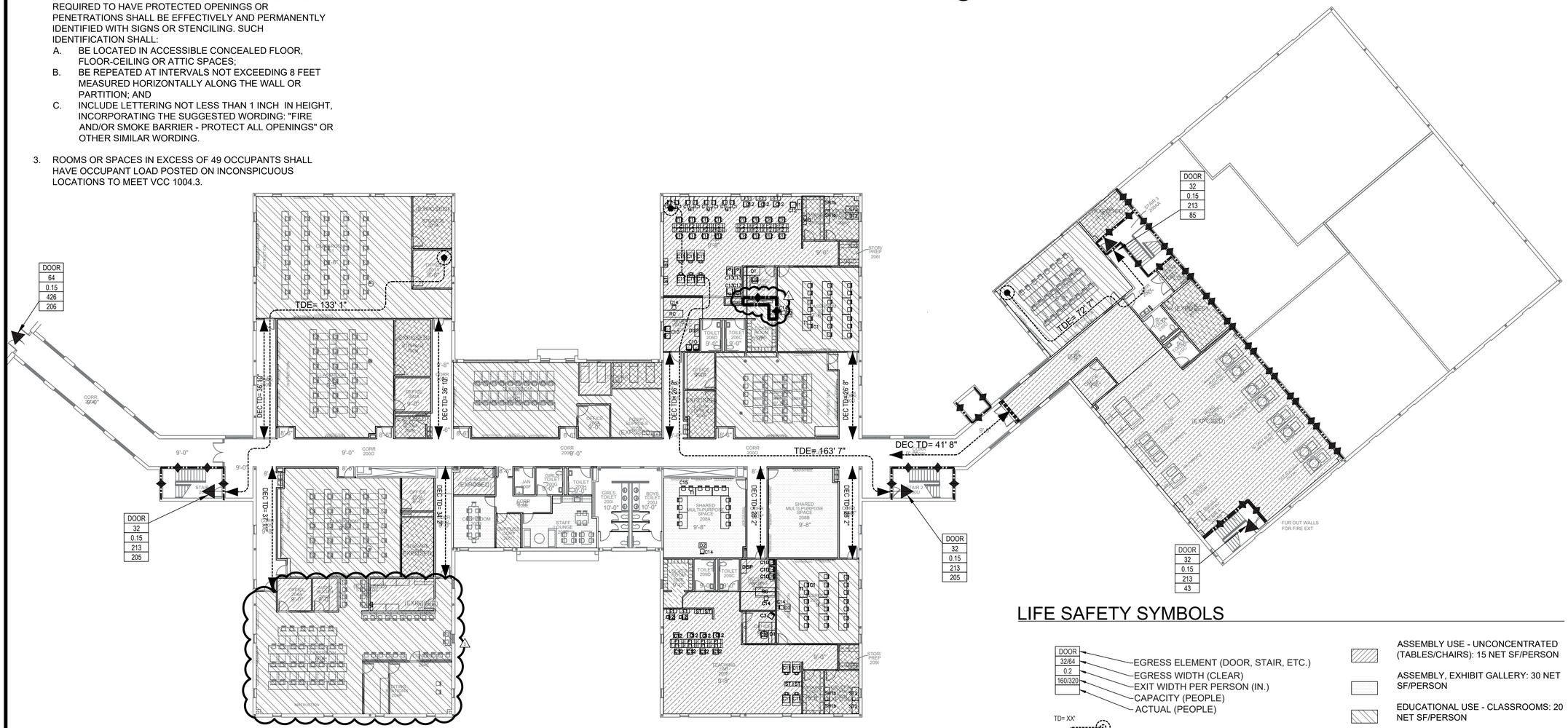
OCCUPANT LOAD CALCULATIONS BASED ON VCC TABLE 1004.1.2 UNLESS OTHERWISE STATED - BUILDING 2 & 3

USE GROUP AND/OR SPACEDESIGNATION	AREA (S.F.)	AREA PER OCCUPANT (S.F./PERSON)	LOAD FACTOR TYPE (GROSS/NET SF)	NUMBER OF OCCUPANTS
ASSEMBLY USE, LESS-CONCENTRATED	1,410	15	NET S.F.	94
ASSEMBLY USE, EXHIBIT GALLERY	180	30	NET S.F.	14
EDUCATIONAL USE - CLASSROOMS	10,015	20	NET S.F.	501
EDUCATIONAL USE - SHOPS/VOCATIONAL ROOMS	6,029	50	NET S.F.	121
BUSINESS/OFFICE USE - UNCONCENTRATED	1,411	150	GROSS S.F.	9
LOCKER ROOMS	258	50	GROSS S.F.	5
INDUSTRIAL USE		100	GROSS S.F.	0
ACCESSORY STORAGE & MECHANICAL USE	1,811	300	GROSS S.F.	6
TOTAL				750



LIFE SAFETY SYMBOLS

DOOR 32/64 0.2 160/320 — EGRESS ELEMENT (DOOR, STAIR, ETC.); EGRESS WIDTH (CLEAR); EXIT WIDTH PER PERSON (IN.); CAPACITY (PEOPLE); ACTUAL (PEOPLE)

TD= XX' — TRAVEL PATH

EXIT DISCHARGE

CPT — COMMON PATH OF TRAVEL

DEC — DEAD END CORRIDOR

TDE — TOTAL DISTANCE TO EXIT

1-HOUR FIRE BARRIER

2-HOUR FIRE BARRIER

SMOKE PARTITION

REQUIRED EXIT

NOT IN SCOPE

ASSEMBLY USE - UNCONCENTRATED (TABLES/CHAIRS): 15 NET SF/PERSON

ASSEMBLY, EXHIBIT GALLERY: 30 NET SF/PERSON

EDUCATIONAL USE - CLASSROOMS: 20 NET SF/PERSON

EDUCATIONAL USE - SHOPS/VOCATIONAL ROOMS: 50 NET SF/PERSON

OUTDOOR AREA (VCC 1004.5): 100 GROSS SF/PERSON

BUSINESS: 100 GROSS SF/PERSON

LOCKER ROOMS: 50 GROSS SF/PERSON

INDUSTRIAL AREAS: 100 GROSS SF/PERSON

ACCESSORY STORAGE/MECHANICAL AREAS: 300 GROSS SF/PERSON

COMMON CIRCULATION SPACE: NO CALCULATED OCCUPANT LOAD FOR SERVING NET SF EDUCATION SPACES

BUILDING 2 & 3
SECOND FLOOR LIFE SAFETY PLAN

1

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

GA Architecture — ARCHITECTURE INTERIORS PLANNING
E+A CONSULTING — Fire + Life Safety Engineering — EMERSON GRAHAM + ASSOCIATES

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ROANOKE, VIRGINIA

ROANOKE CITY PUBLIC SCHOOLS
Strong Students, Strong Schools, Strong City

REVISIONS		
No.	DATE	DESCRIPTION
3	7-18-22	DRAWING UPDATES AND CLARIFICATIONS

DRAWN BY:	KNS
REV'D BY:	JBB
DATE:	7/18/22
SCALE:	AS SHOWN

BUILDING 2 & 3 SECOND FLOOR LIFE SAFETY PLAN

G-102

SHEET 1 of 4 X

ACOUSTICALLY DISTINGUISHABLE SPACES (ADS) GROUND FLOOR

SPACE	CEILING HEIGHT (FT)	CEILING TYPE (SEE KEY)	ADS (Y/N - NOTIFICATION TYPE)#	PUBLIC OR PRIVATE MODE	AMBIENT SOUND PRESSURE (dBA)*	MIN. DESIGN SOUND PRESSURE (dB)	REMARKS
LANDSCAPE EQUIPMENT AND SUPPLIES STORAGE 101E		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
LOCKER ROOM 101D	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
TOILET ROOM 101C	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
TOILET ROOM 101B	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
CLASSROOM 101	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
STORAGE 102E		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
PATIENT TOILET 102D	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
MEDS PREP 102C	9' 0"	ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
OFFICE 101A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
CLASSROOM 102 / PATIENT ROOM 102B	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
OFFICE 102A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
ELECTRICAL ROOM 102		OPN	Y - SPEAKER	PUBLIC	80	95	
CORR 100E	9' 8"	ACT					
CORR 100F	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
ELEC 100G		OPN					
STAIR 1 100H		OPN	N	-	-	-	NOTIFICATION NOT REQUIRED - NFPA 72:23.8.6.2
STORAGE 103E		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
OFFICE 103A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
CLASSROOM 103	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
TEACHERS WORK AREA 104A	10' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
CONF. ROOM 104B	10' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
BREAK ROOM 104C	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
STORAGE 104D	9' 0"	ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
COPY / FILE 104E	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
WOMENS TOILET 104G	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
MENS TOILET 104F	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
CLINIC TOILET 104H	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
CLINIC 104J	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
OFFICE STORAGE 104I	9' 0"	ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
CLOSET 104K		ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
ASST. DIR OFFICE 104L	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
COUNSELOR OFFICE 104M	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
WORK BASED OFFICE 104N	9' 8:	ACT	Y - SPEAKER	PUBLIC	55	70	
BOOKING OFFICE 104O	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
DIRECTORS OFFICE 104P	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
CORRIDOR 104	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
WAITING ROOM 100C	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
RECEPT 100A	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
SUPPLIES 100B	9' 8"	ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
VESTIBULE 100	9' 8"	WPC	Y - SPEAKER	PUBLIC	55	70	
GIRLS TOILET 100I	10' 0"	GCB	Y - SPEAKER	PUBLIC	55	70	
BOYS TOILET 100J	10' 0"	GCB	Y - SPEAKER	PUBLIC	55	70	
LOBBY 100D	9' 8"	WPC	Y - SPEAKER	PUBLIC	55	70	
STORAGE 105E	9' 8"	ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
REFRIG 105F		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
DRY STORAGE 105G	9' 8"	ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
DISHWASHING 105H	9' 8"	ACT	Y - SPEAKER	PUBLIC	80	95	
EQUIP/DELIVERY 105I		OPN	Y - SPEAKER	PUBLIC	80	95	
KITCHEN 105D	9' 8"	ACT	Y - SPEAKER	PUBLIC	80	95	
OFFICE 105A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
TOILET 105B	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
TOILET 105C	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
CLASSROOM 105	9' 0"	GCB	Y - SPEAKER	PUBLIC	45	60	
CORR 100O	9' 0"	ACT					
TOILET 100K	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
JAN 100N		OPN	Y - SPEAKER	PUBLIC	55	70	
CORR 100F	9' 0"	ACT					
MRF ROOM 100M		OPN	Y - SPEAKER	PUBLIC	55	70	
OFFICE 106A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
VENDING 100L	9' 0"	GCB		PUBLIC			
STORAGE 106B		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
CLASSROOM 106	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
OFFICE 107A	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
MATERIAL / EQUIP. STORAGE 107B	9' 0"	ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
ROBOT STORAGE 107C	9' 0"	ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
STORAGE 107D	9' 8"	ACT	Y - SPEAKER	PUBLIC	80	95	
CLASSROOM 107	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
CORR 100Q	9' 8"	ACT					
CORR 100R	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
STAIR 2 100P		OPN	N	-	-	-	
ELEVATOR			N	-	-	-	NOTIFICATION NOT REQUIRED - NFPA 72:23.8.6.2
CORR 100T	9' 0"	ACT					
CLASSROOM 109	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
STAIR 3 100W		OPN	N	-	-	-	NOTIFICATION NOT REQUIRED - NFPA 72:23.8.6.2
JAN 100X		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
OFFICE 109A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
TOILET 109B	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
TOILET 109C	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
BOYS TOILET 100AA	10' 0"	GCB	Y - SPEAKER	PUBLIC	55	70	
GIRLS TOILET 100BB	10' 0"	GCB	Y - SPEAKER	PUBLIC	55	70	
WELDING TEACHING LAB 109H		OPN	Y - SPEAKER	PUBLIC	80	95	
STAIR 4 100AB		OPN	N	-	-	-	NOTIFICATION NOT REQUIRED - NFPA 72:23.8.6.2
STORAGE 109F		OPN					
STORAGE 109E		OPN					
LOCKER ROOM 109D	9' 0"	ACT					
MASONRY STORAGE 108D		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
LOCKER ROOM 108C	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
VEST. 100U	9' 0"	ACT					
MASONRY TEACHING LAB 108E		OPN	Y - SPEAKER	PUBLIC	55	70	
OFFICE 108A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
BUILDING TRADES TEACHING LAB 108		OPN	Y - SPEAKER	PUBLIC			
STORAGE 108I		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
STORAGE 108J		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.2
TOILET 108F	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
TOILET 108G	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
CLASSROOM 108H	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
LOCKER ROOM 110D	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
STORAGE 110E		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
STORAGE 110F		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
AUTOMOTIVE TEACHING LAB 107		OPN	Y	PUBLIC	80	95	
TOILET 110B	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
TOILET 110C	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
OFFICE 110A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
CLASSROOM 110	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	

ACOUSTICALLY DISTINGUISHABLE SPACE (ADS) DESIGNATION IS A FUNCTION OF THE INTELLIGIBILITY REQUIREMENTS FOR VOICE EVACUTION AND EMERGENCY COMMUNICATION SYSTEMS. REFER TO NFPA 72:18.4.10 FOR ADDITIONAL INFORMATION.

* TYPICAL AVERAGE AMBIENT SOUND LEVELS FOR ALARM TONES BASED ON NFPA 72 TABLE A.18.4.3. THIS SERVES AS A BASIS OF DESIGN, BUT SHOULD NOT BE USED IN LIEU OF SOUND LEVEL MEASUREMENTS WHERE OTHERWISE REQUIRED.

MINIMUM SOUND LEVELS ARE DESIGNATED IN ACCORDANCE WITH NFPA 72:18.4.3.1, OR 5 DB ABOVE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS AND MEASURED 5 FT ABOVE THE FLOOR. AT NO TIME SHALL SOUND LEVELS EXCEED 110 DBA AT THE MINIMUM HEARING DISTACE, PER NFPA 72:18.4.1.2.

ACOUSTICALLY DISTINGUISHABLE SPACES (ADS) SECOND FLOOR

SPACE	CEILING HEIGHT (FT)	CEILING TYPE (SEE KEY)	ADS (Y/N - NOTIFICATION TYPE)#	PUBLIC OR PRIVATE MODE	AMBIENT SOUND PRESSURE (dBA)*	MIN. DESIGN SOUND PRESSURE (dB)	REMARKS
CLASSROOM 201	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
STORAGE 201B		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
OFFICE 201A	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
CORR 200M	9' 8"	ACT					
CLASSROOM 202	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
STORAGE 202B		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
OFFICE 202A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
ELEC ROOM 200P		OPN	Y - SPEAKER	PUBLIC	80	95	
CORR 200Q	9' 8"	ACT					
CORR 200K	9' 0"	GCB	Y - SPEAKER	PUBLIC	55	70	
STAIR 2 200L		ACT	N	-	-	-	NOTIFICATION NOT REQUIRED - NFPA 72:23.8.6.2
CORR 200N	9' 8"	ACT					
CLASSROOM 203	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
OFFICE 203A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
STORAGE 203B		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
CORR 200R	9' 0"	ACT					
OFFICE 204A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
AUDIO BOOTH 204B	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
STORAGE 204C		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
CLASSROOM 204	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
STUDIO STAGE 204D		OPN	Y - SPEAKER	PUBLIC	45	60	
CONTROL ROOM 204E	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
EDITING STATIONS 204F	9' 8"	ACT					
CORR 200O	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
IDF ROOM 200A		OPN	Y - SPEAKER	PUBLIC	55	70	
CONFERENCE ROOM 200B	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
SUPPLIES / COPY 200C	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
CORR 200E	9' 0"	ACT					
JAN 200F		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
GIRLS TOILET 200G	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
TOILET 200H	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
STAFF LOUNGE 200D	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
GIRLS TOILET 200I	10' 0"	GCB	Y - SPEAKER	PUBLIC	55	70	
BOYS TOILET 200J	10' 0"	GCB	Y - SPEAKER	PUBLIC	55	70	
CORR 200O	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
CLASSROOM 205	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
OFFICE 205A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
EQUIP/ SUPPLIES 205B		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
TEACHING LAB 205C	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
CORRIDOR 200S	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
TEACHING LAB 206F	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
MANAKIN STORAGE 206G	9' 0"	ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
GENERAL STORAGE 206H		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
STOR/PREP ROOM 206I	9' 0"	ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
RECEPTION / WAITING ROOM 206E	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
TOILET 206D	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
TOILET 206C	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
LOCKER ROOM	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
OFFICE 206A	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
CLASSROOM 206	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
OFFICE 207A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
EQUIP/ SUPPLIES 207B		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
CLASSROOM 207	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
CORRIDOR 200U	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
SHARED MULTI-PURPOSE SPACE 208A	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
CORR 200T	9' 0"	ACT					
SHARED MULTI-PURPOSE SPACE 208B	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
CORR 200V	9' 8"	ACT					
LOCKER ROOM 209E	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
TOILET 209D	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
TOILET 209C	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
RECEPT/WAITING 209B	9' 8"	ACT	Y - SPEAKER	PUBLIC	55	70	
CLASSROOM 209	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
TEACHING LAB 209F	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
OFFICE 209A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
STOR/PREP ROOM 209I	9' 0"	ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
MANAKIN STORAGE 209G	9' 0"	ACT	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
GENERAL STORAGE 209H		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
CORRIDOR 200W	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
STAIR 2 200U		ACT	N	-	-	-	NOTIFICATION NOT REQUIRED - NFPA 72:23.8.6.2
ELEVATOR			N	-	-	-	NOTIFICATION NOT REQUIRED - NFPA 72:23.8.6.2
CORR 200X	9' 0"	ACT					
CLASSROOM 210	9' 8"	ACT	Y - SPEAKER	PUBLIC	45	60	
STORAGE 210E		OPN	N	-	-	-	NON-OCCUPIABLE SPACE - VCC 907.5.2.1.1
STAIR 3 200AA		ACT	N	-	-	-	NOTIFICATION NOT REQUIRED - NFPA 72:23.8.6.2
CORRIDOR 200Y	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
ELECTICAL ROOM 200Z		OPN	Y - SPEAKER	PUBLIC	80	95	
OFFICE 210A	9' 0"	ACT	Y - SPEAKER	PUBLIC	55	70	
TOILET 210D	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
TOILET 210C	9' 0"	ACT	Y - SPEAKER	PUBLIC	45	60	
MDF ROOM 200AC		OPN	Y - SPEAKER	PUBLIC	55	70	
STAIR 4 200AB		ACT	N	-	-	-	NOTIFICATION NOT REQUIRED - NFPA 72:23.8.6.2
HVAC TEACHING LAB 210B		OPN	Y - SPEAKER	PUBLIC	80	95	

ACOUSTICALLY DISTINGUISHABLE SPACE (ADS) DESIGNATION IS A FUNCTION OF THE INTELLIGIBILITY REQUIREMENTS FOR VOICE EVACUTION AND EMERGENCY COMMUNICATION SYSTEMS. REFER TO NFPA 72:18.4.10 FOR ADDITIONAL INFORMATION.

* TYPICAL AVERAGE AMBIENT SOUND LEVELS FOR ALARM TONES BASED ON NFPA 72 TABLE A.18.4.3. THIS SERVES AS A BASIS OF DESIGN, BUT SHOULD NOT BE USED IN LIEU OF SOUND LEVEL MEASUREMENTS WHERE OTHERWISE REQUIRED.

MINIMUM SOUND LEVELS ARE DESIGNATED IN ACCORDANCE WITH NFPA 72:18.4.3.1, OR 5 DB ABOVE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS AND MEASURED 5 FT ABOVE THE FLOOR. AT NO TIME SHALL SOUND LEVELS EXCEED 110 DBA AT THE MINIMUM HEARING DISTACE, PER NFPA 72:18.4.1.2.

ABBREVIATIONS LEGEND KEY:

ADS	ACOUSTICALLY DISTINGUISHABLE SPACE
ACT	ACOUSTICAL CEILING TILE
DB	DECIBEL SOUND LEVEL
DBA	AVERAGE DECIBEL SOUND LEVEL
GCB	GYPSUM CEILING BOARD
OPN	OPEN TO ROOF DECK

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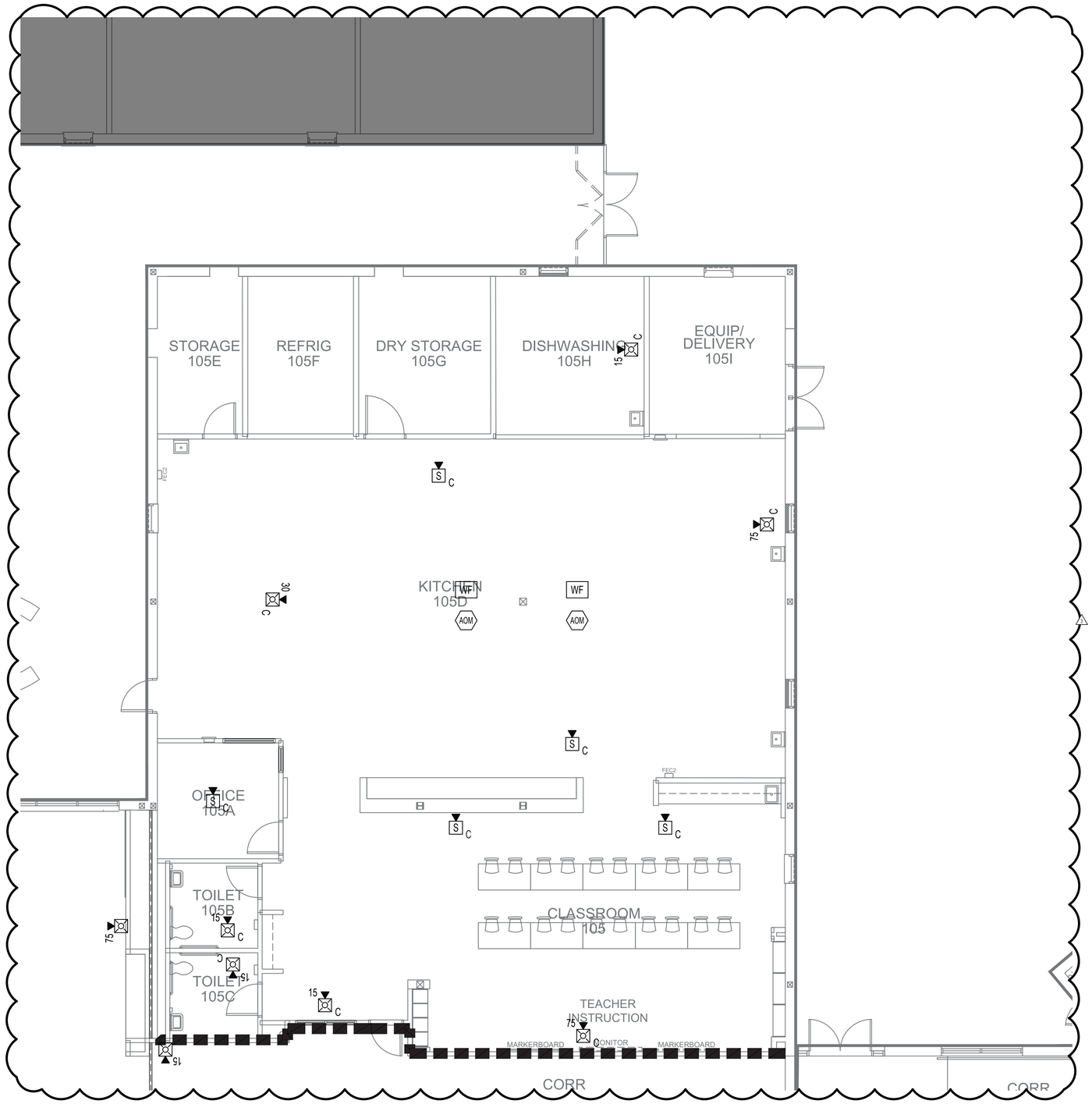
FIRE ALARM ROOM DESIGN DATA

FA002

SHEET 2 of 22



LEGEND

F	PULL STATION/FIRE ALARM BOX
S	SMOKE DETECTOR
S D	IN-DUCT SMOKE DETECTOR
H RF	HEAT DETECTOR 'R' DENOTES RATE-OF-RISE. 'F' DENOTES FIXED TEMPERATURE.
S C	SPEAKER ONLY. 'C' DENOTES CEILING MOUNTED (WALL MOUNTED OTHERWISE)
CD	COMBINATION SPEAKER/VISIBLE - WALL MOUNT CD = CANDELA RATING/SETTING
CD C	COMBINATION SPEAKER/VISIBLE - CEILING MOUNT CD = CANDELA RATING/SETTING
CD WP	WEATHERPROOF HORN/VISIBLE - WALL MOUNT CD = CANDELA RATING/SETTING
CD	VISIBLE ONLY (STROBE) - WALL MOUNT CD = CANDELA RATING / SETTING
E	ELECTRIC BELL
CO	CARBON MONOXIDE DETECTOR
WF	FLOW SWITCH
DH	DOOR HOLDER
TS	TAMPER SWITCH
LOC	LOCAL OPERATING CONSOLE
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR
NAC	NOTIFICATION CIRCUIT POWER BOOSTER, EXTENDER PANEL
BATT	BATTERY CABINET
FADC	FIRE ALARM DOCUMENTATION CABINET
FATC	FIRE ALARM TERMINAL CABINET
	1-HOUR FIRE BARRIER
	2-HOUR FIRE BARRIER
	SMOKE BARRIER
	NOT IN SCOPE

KEYNOTES:

1. HEAT DETECTION SENSOR IN THE HOISTWAY AND ELEVATOR MACHINE ROOM TO BE ORDINARY TEMPERATURE (135 F) AND SHALL BE COMBINATION RATE OF RISE/FIXED TEMPERATURE SENSOR TO PROVIDE ELEVATOR SHUNT. SENSOR TO HAVE A HIGHER RTI (THERMAL SENSITIVITY) THAN THE SPRINKLERS IN THE HOISTWAY AND MACHINE ROOM WITH A LISTED SPACE RATING OF 25 FT. OR MORE. HEAT SENSORS TO BE PLACED WITHIN 2 FT. OF SPRINKLERS IN HOISTWAY AND MACHINE ROOM.
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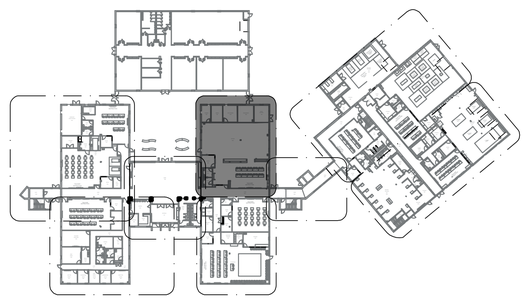
4. PROVIDE TAMPER SWITCH FOR EXTERIOR LOCATED PIV.



BUILDING 2 & 3 GROUND FLOOR FIRE ALARM ENLARGED PARTIAL PLAN - AREA 4

1

SCALE: 3/16" = 1'-0"

KEY PLAN

GA Architecture — ARCHITECTURE INTERIORS PLANNING

G+A CONSULTING — Fire • Life Safety Engineering

EMERSON GRAHAM + ASSOCIATES, P.C.

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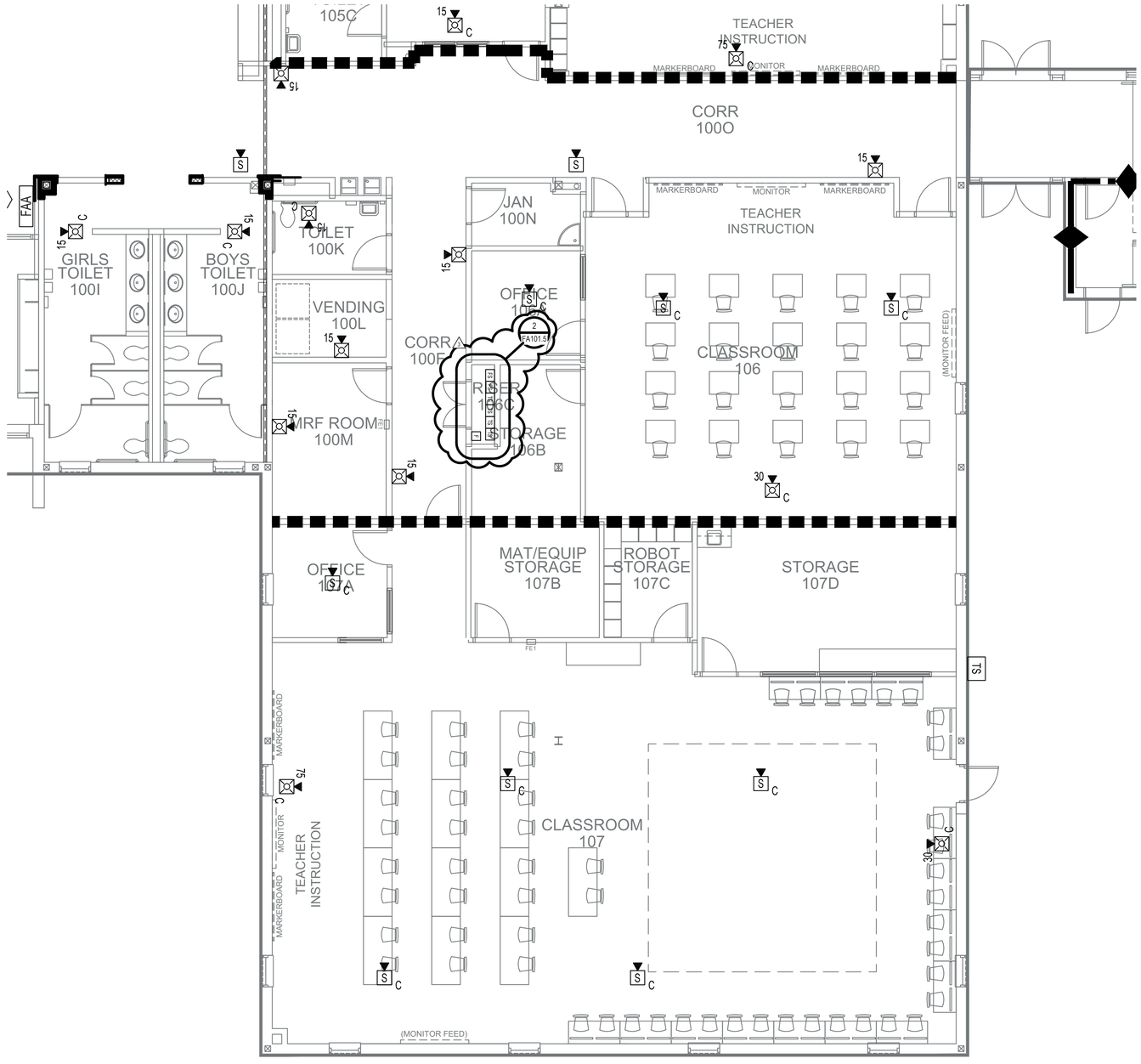
BUILDING 2 & 3 GROUND FLOOR FIRE ALARM ENLARGED PARTIAL PLAN - AREA 4

FA101.4

SHEET 7 of 22



BUILDING 2 & 3 GROUND FLOOR FIRE ALARM ENLARGED PARTIAL PLAN - AREA 5

1

SCALE: 3/16" = 1'-0"

KEYNOTES:

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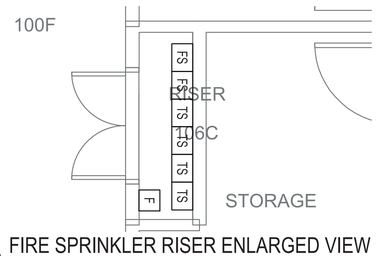
4. PROVIDE TAMPER SWITCH FOR EXTERIOR LOCATED PIV.

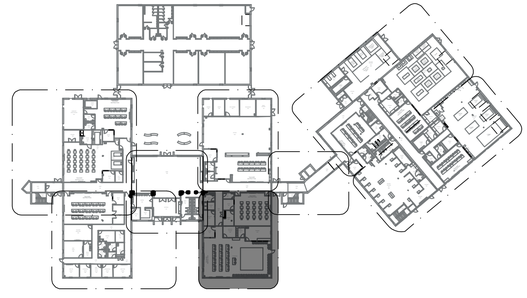
LEGEND

F	PULL STATION/FIRE ALARM BOX
S	SMOKE DETECTOR
S D	IN-DUCT SMOKE DETECTOR
HF R	HEAT DETECTOR 'R' DENOTES RATE-OF-RISE. 'F' DENOTES FIXED TEMPERATURE.
S C	SPEAKER ONLY. 'C' DENOTES CEILING MOUNTED (WALL MOUNTED OTHERWISE)
CD	COMBINATION SPEAKER/VISIBLE - WALL MOUNT CD = CANDELA RATING/SETTING
CD C	COMBINATION SPEAKER/VISIBLE - CEILING MOUNT CD = CANDELA RATING/SETTING
CD WP	WEATHERPROOF HORN/VISIBLE - WALL MOUNT CD = CANDELA RATING/SETTING
CD	VISIBLE ONLY (STROBE) - WALL MOUNT CD = CANDELA RATING / SETTING
E	ELECTRIC BELL
CO	CARBON MONOXIDE DETECTOR
WF	FLOW SWITCH
DH	DOOR HOLDER
TS	TAMPER SWITCH
LOC	LOCAL OPERATING CONSOLE
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR
NAC	NOTIFICATION CIRCUIT POWER BOOSTER, EXTENDER PANEL
BATT	BATTERY CABINET
FADC	FIRE ALARM DOCUMENTATION CABINET
FATC	FIRE ALARM TERMINAL CABINET
	1-HOUR FIRE BARRIER
	2-HOUR FIRE BARRIER
	SMOKE BARRIER
	NOT IN SCOPE



2 FIRE SPRINKLER RISER ENLARGED VIEW

SCALE: NTS



KEY PLAN

GA Architecture — Architecture, Interiors, Planning

G+A Consulting — Fire • Life Safety Engineering — Emerson Graham + Associates

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BUILDING 2 & 3 GROUND FLOOR FIRE ALARM ENLARGED PARTIAL PLAN - AREA 5

FA101.5

SHEET 8 of 22

KEYNOTES:

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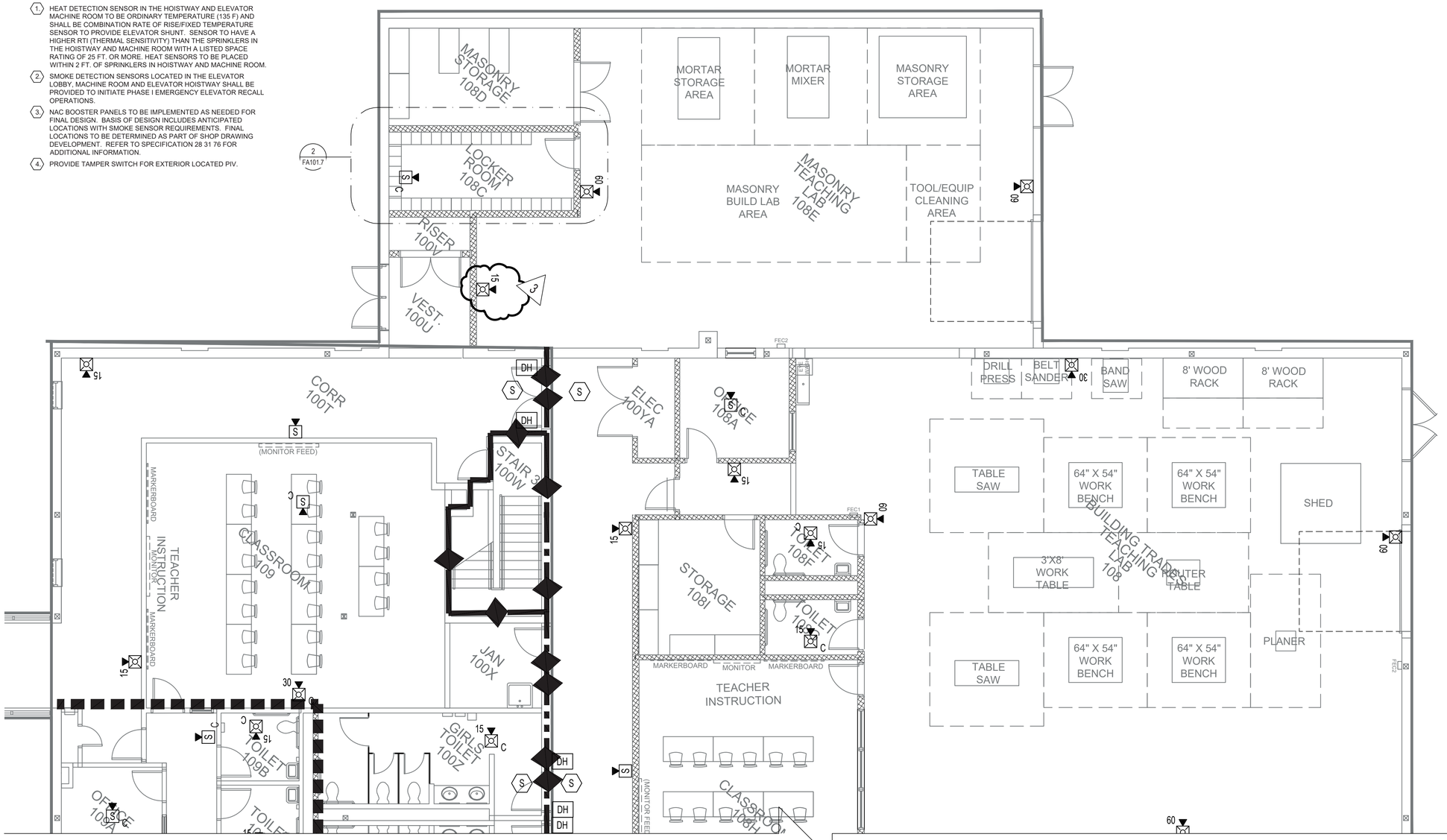

LEGEND

F	PULL STATION/FIRE ALARM BOX
S	SMOKE DETECTOR
S D	IN-DUCT SMOKE DETECTOR
H/RF	HEAT DETECTOR 'R' DENOTES RATE-OF-RISE. 'F' DENOTES FIXED TEMPERATURE.
S C	SPEAKER ONLY. 'C' DENOTES CEILING MOUNTED (WALL MOUNTED OTHERWISE)
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CD	VISIBLE ONLY (STROBE) - WALL MOUNT CD = CANDELA RATING / SETTING
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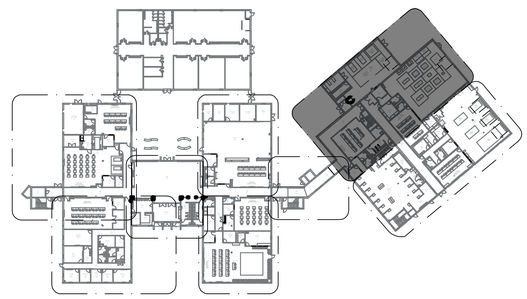
CO	CARBON MONOXIDE DETECTOR
WF	FLOW SWITCH
DH	DOOR HOLDER
TS	TAMPER SWITCH
LOC	LOCAL OPERATING CONSOLE
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR
NAC	NOTIFICATION CIRCUIT POWER BOOSTER, EXTENDER PANEL
BATT	BATTERY CABINET
FADC	FIRE ALARM DOCUMENTATION CABINET
FATC	FIRE ALARM TERMINAL CABINET
	1-HOUR FIRE BARRIER
	2-HOUR FIRE BARRIER
	SMOKE BARRIER
	NOT IN SCOPE

BUILDING 2 & 3 GROUND FLOOR FIRE ALARM ENLARGED PARTIAL PLAN - AREA 7

1

SCALE: 3/16" = 1'-0"

KEY PLAN



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BUILDING 2 & 3 GROUND FLOOR FIRE ALARM ENLARGED PARTIAL PLAN - AREA 7

FA101.7

SHEET 10 of 22

LEGEND

F	PULL STATION/FIRE ALARM BOX
S	SMOKE DETECTOR
S D	IN-DUCT SMOKE DETECTOR
H RF	HEAT DETECTOR 'R' DENOTES RATE-OF-RISE. 'F' DENOTES FIXED TEMPERATURE.
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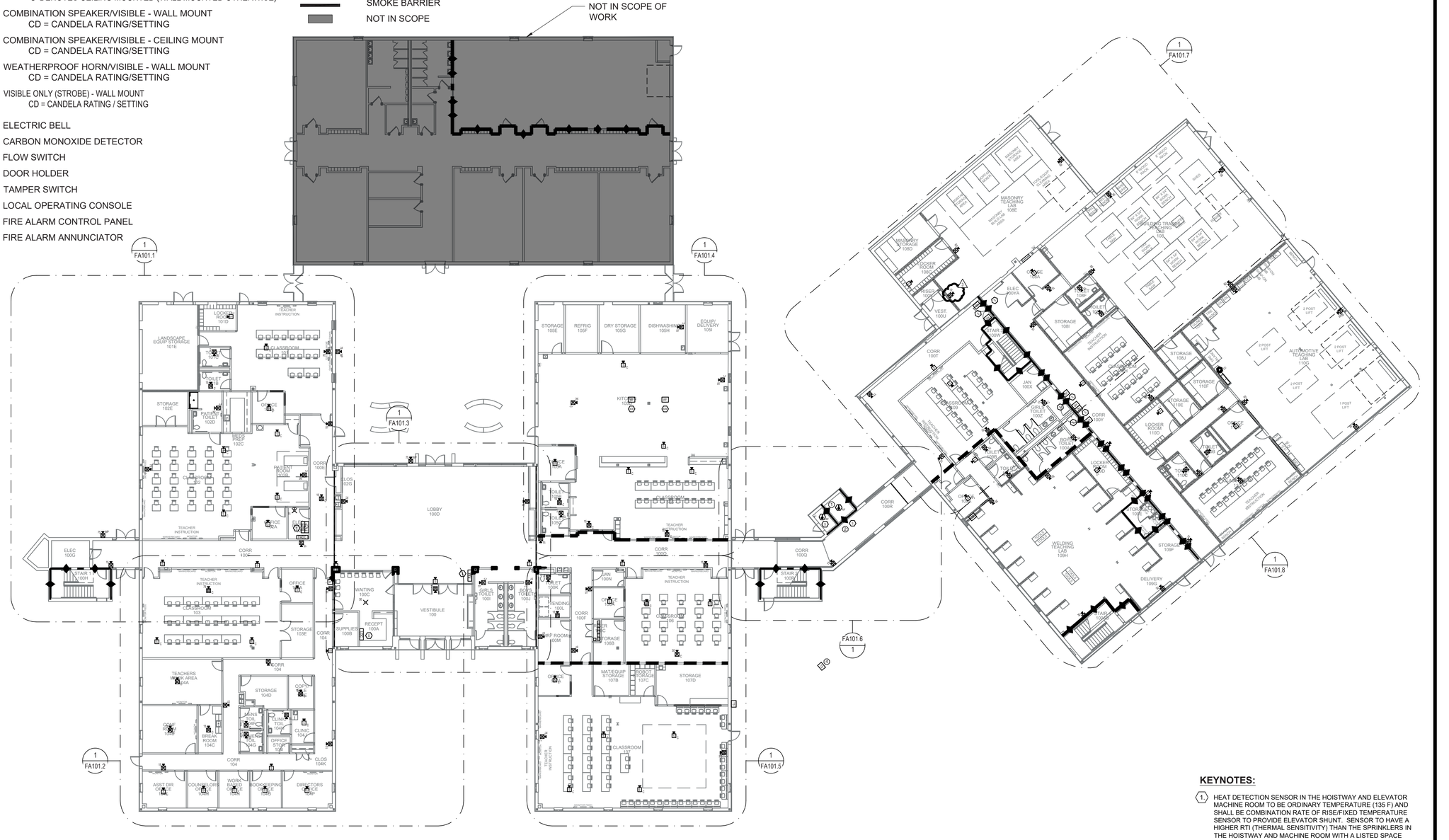
	SMOKE BARRIER
	NOT IN SCOPE



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BUILDING 2 & 3
GROUND FLOOR FIRE ALARM OVERALL PLAN

1

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

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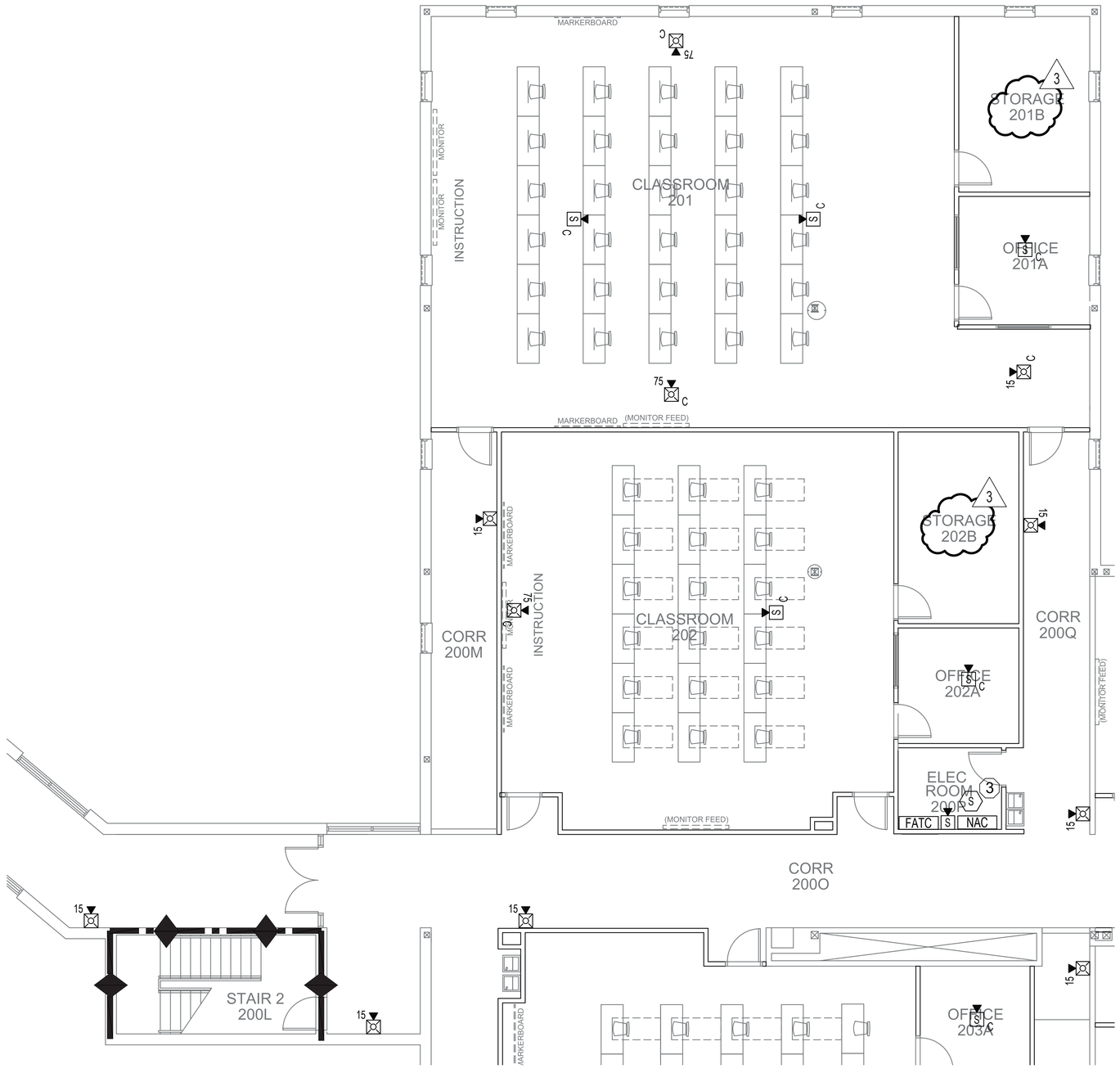
BUILDING 2 & 3 GROUND FLOOR OVERALL FIRE ALARM PLAN

FA101

SHEET 3 of 22



LEGEND

- PULL STATION/FIRE ALARM BOX
- SMOKE DETECTOR
- IN-DUCT SMOKE DETECTOR
- HEAT DETECTOR
  'R' DENOTES RATE-OF-RISE. 'F' DENOTES FIXED TEMPERATURE.
- SPEAKER ONLY.
  'C' DENOTES CEILING MOUNTED (WALL MOUNTED OTHERWISE)
- COMBINATION SPEAKER/VISIBLE - WALL MOUNT
  CD = CANDELA RATING/SETTING
- COMBINATION SPEAKER/VISIBLE - CEILING MOUNT
  CD = CANDELA RATING/SETTING
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  CD = CANDELA RATING/SETTING
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  CD = CANDELA RATING / SETTING
- ELECTRIC BELL
- CARBON MONOXIDE DETECTOR
- FLOW SWITCH
- DOOR HOLDER
- TAMPER SWITCH
- LOCAL OPERATING CONSOLE
- FIRE ALARM CONTROL PANEL
- FIRE ALARM ANNUNCIATOR
- NOTIFICATION CIRCUIT POWER BOOSTER, EXTENDER PANEL
- BATTERY CABINET
- FIRE ALARM DOCUMENTATION CABINET
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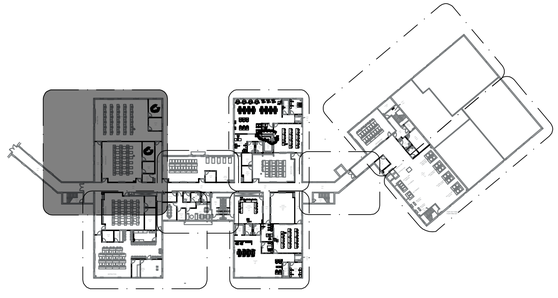

BUILDING 2 & 3 SECOND FLOOR FIRE ALARM ENLARGED PARTIAL PLAN - AREA 1

1

SCALE: 3/16" = 1'-0"

KEY PLAN

GA Architecture — Architecture, Interiors, Planning
E+A Consulting — Fire • Life Safety Engineering
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PROFESSIONAL ENGINEER
07/18/22

RUFFNER CAREER AND TECHNICAL EDUCATION CENTER

ROANOKE, VIRGINIA

ROANOKE CITY PUBLIC SCHOOLS
Strong Students. Strong Schools. Strong City.

REVISIONS

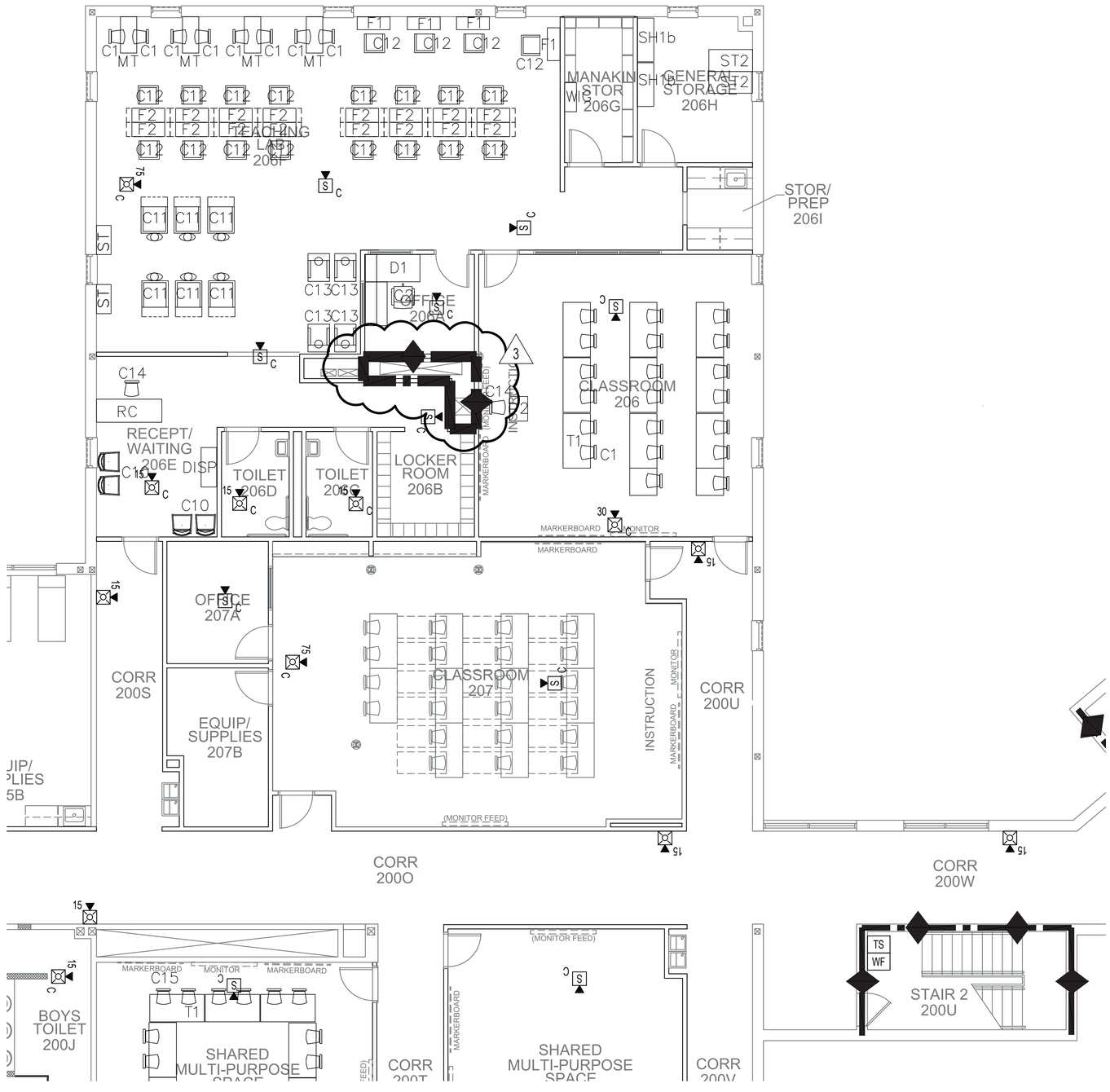
No.	DATE	DESCRIPTION
3	7-18-22	DRAWING UPDATES AND CLARIFICATIONS

DRAWN BY:	KNS
REV'D BY:	JBB
DATE:	7/18/22
SCALE:	AS SHOWN

BUILDING 2 & 3 SECOND FLOOR FIRE ALARM ENLARGED PARTIAL PLAN - AREA 1

FA102.1

SHEET 13 of 22



BUILDING 2 & 3 SECOND FLOOR FIRE ALARM ENLARGED PARTIAL PLAN - AREA 4

1

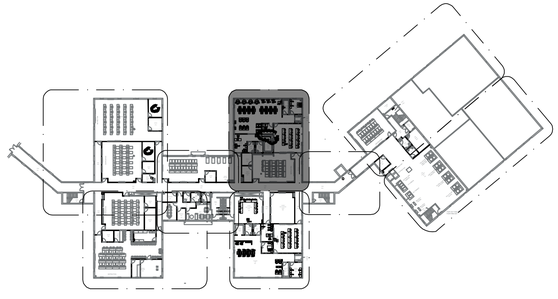
SCALE: 3/16" = 1'-0"

LEGEND

F	PULL STATION/FIRE ALARM BOX
S	SMOKE DETECTOR
S D	IN-DUCT SMOKE DETECTOR
HF/RF	HEAT DETECTOR 'R' DENOTES RATE-OF-RISE. 'F' DENOTES FIXED TEMPERATURE.
S C	SPEAKER ONLY. 'C' DENOTES CEILING MOUNTED (WALL MOUNTED OTHERWISE)
CD	COMBINATION SPEAKER/VISIBLE - WALL MOUNT CD = CANDELA RATING/SETTING
CD C	COMBINATION SPEAKER/VISIBLE - CEILING MOUNT CD = CANDELA RATING/SETTING
CD WP	WEATHERPROOF HORN/VISIBLE - WALL MOUNT CD = CANDELA RATING/SETTING
CD	VISIBLE ONLY (STROBE) - WALL MOUNT CD = CANDELA RATING / SETTING
E	ELECTRIC BELL
CO	CARBON MONOXIDE DETECTOR
WF	FLOW SWITCH
DH	DOOR HOLDER
TS	TAMPER SWITCH
LOC	LOCAL OPERATING CONSOLE
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR
NAC	NOTIFICATION CIRCUIT POWER BOOSTER, EXTENDER PANEL
BATT	BATTERY CABINET
FADC	FIRE ALARM DOCUMENTATION CABINET
FATC	FIRE ALARM TERMINAL CABINET
	1-HOUR FIRE BARRIER
	2-HOUR FIRE BARRIER
	SMOKE BARRIER
	NOT IN SCOPE

KEYNOTES:

1. HEAT DETECTION SENSOR IN THE HOISTWAY AND ELEVATOR MACHINE ROOM TO BE ORDINARY TEMPERATURE (135 F) AND SHALL BE COMBINATION RATE OF RISE/FIXED TEMPERATURE SENSOR TO PROVIDE ELEVATOR SHUNT. SENSOR TO HAVE A HIGHER RTI (THERMAL SENSITIVITY) THAN THE SPRINKLERS IN THE HOISTWAY AND MACHINE ROOM WITH A LISTED SPACE RATING OF 25 FT. OR MORE. HEAT SENSORS TO BE PLACED WITHIN 2 FT. OF SPRINKLERS IN HOISTWAY AND MACHINE ROOM.
2. SMOKE DETECTION SENSORS LOCATED IN THE ELEVATOR LOBBY, MACHINE ROOM AND ELEVATOR HOISTWAY SHALL BE PROVIDED TO INITIATE PHASE I EMERGENCY ELEVATOR RECALL OPERATIONS.
3. NAC BOOSTER PANELS TO BE IMPLEMENTED AS NEEDED FOR FINAL DESIGN. BASIS OF DESIGN INCLUDES ANTICIPATED LOCATIONS WITH SMOKE SENSOR REQUIREMENTS. FINAL LOCATIONS TO BE DETERMINED AS PART OF SHOP DRAWING DEVELOPMENT. REFER TO SPECIFICATION 28 31 76 FOR ADDITIONAL INFORMATION.
4. PROVIDE TAMPER SWITCH FOR EXTERIOR LOCATED PIV.



KEY PLAN

GA Architecture — ARCHITECTURE INTERIORS PLANNING

E+A CONSULTING — Fire • Life Safety Engineering — EMERSON GRAHAM + ASSOCIATES

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FA102.4

SHEET 16 of 22

LEGEND

F	PULL STATION/FIRE ALARM BOX
S	SMOKE DETECTOR
S D	IN-DUCT SMOKE DETECTOR
H RF	HEAT DETECTOR 'R' DENOTES RATE-OF-RISE. 'F' DENOTES FIXED TEMPERATURE.
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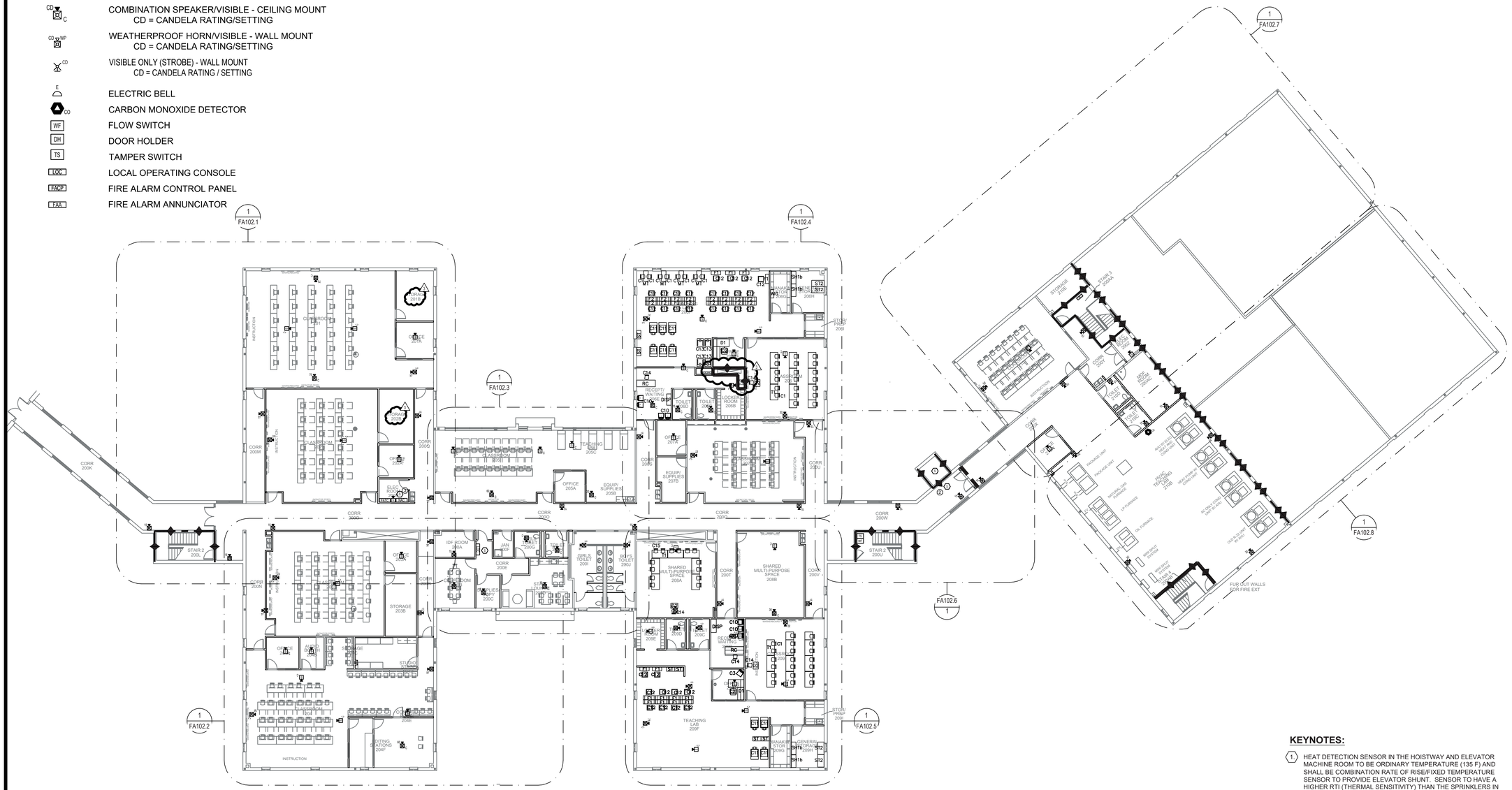

BUILDING 2 & 3
SECOND FLOOR FIRE ALARM OVERALL PLAN

1

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

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BUILDING 2 & 3 SECOND FLOOR FIRE ALARM OVERALL PLAN

FA102

SHEET 12 of 22

LEGEND

F	PULL STATION/FIRE ALARM BOX
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S D	IN-DUCT SMOKE DETECTOR
H RF	HEAT DETECTOR 'R' DENOTES RATE-OF-RISE. 'F' DENOTES FIXED TEMPERATURE.
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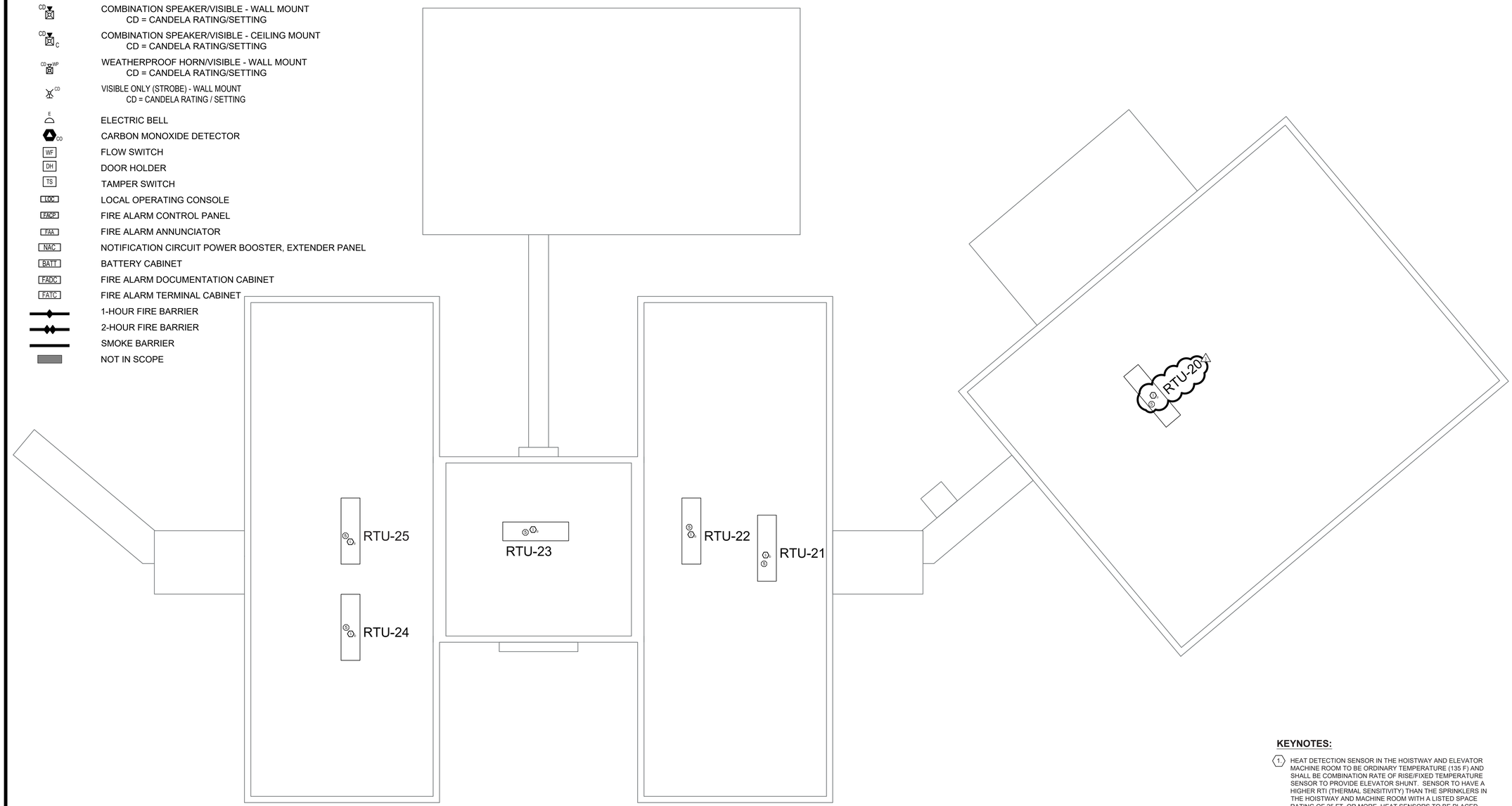

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4. PROVIDE TAMPER SWITCH FOR EXTERIOR LOCATED PIV.
5. PROVIDE NEW DUCT SMOKE DETECTOR. ACTIVATION OF DUCT SMOKE DETECTOR SHALL SHUT UNIT DOWN AND INITIATE SUPERVISORY SIGNAL. PROVIDE ALL REQUIRED HARDWARE, PROGRAMMING AND INTERFACE WITH HVAC CONTROLS. REFER TO FA301 AND PROJECT MANUAL SPECIFICATION SECTION 28 31 76 FOR ADDITIONAL INFORMATION.

BUILDING 2 & 3
FIRE ALARM ROOF PLAN

1

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

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FIRE ALARM ROOF PLAN

FA103

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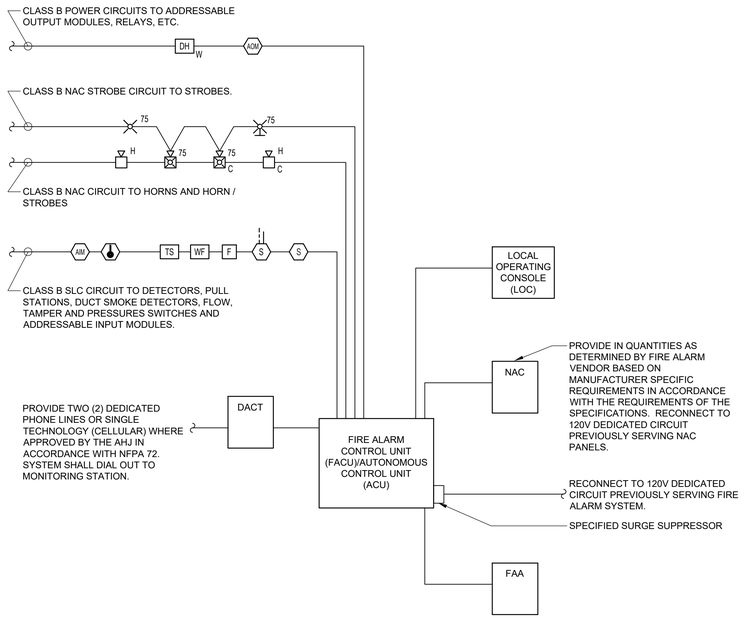
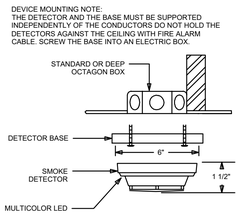
BUILDING FIRE ALARM



1 COMBINED BUILDING FIRE ALARM & EMERGENCY ALARM RISER DIAGRAM

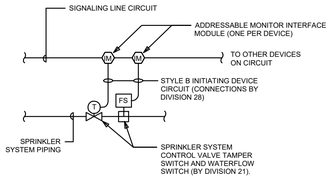
NTS

NOTE: THIS DETAIL IS DIAGRAMMATIC ONLY - FINAL LAYOUT TO BE COMPLETED DURING SHOP (WORKING) DRAWING PREPARATION.



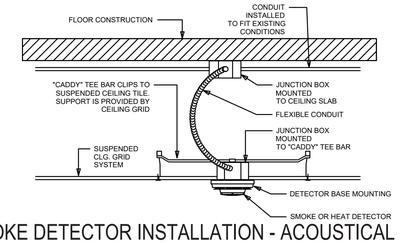
2 SMOKE DETECTOR INSTALLATION - DRYWALL CEILING

NTS



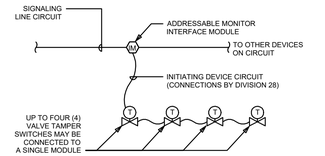
3 SPRINKLER SYSTEM INTERFACE

NTS



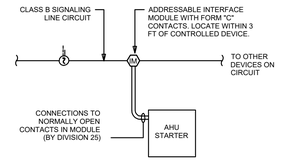
4 SMOKE DETECTOR INSTALLATION - ACOUSTICAL CEILING

NTS



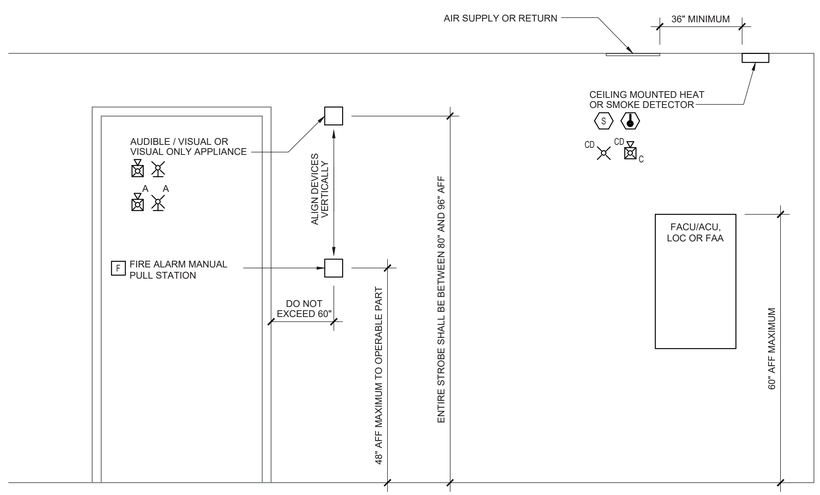
5 TAMPER SWITCH INTERFACE

NTS



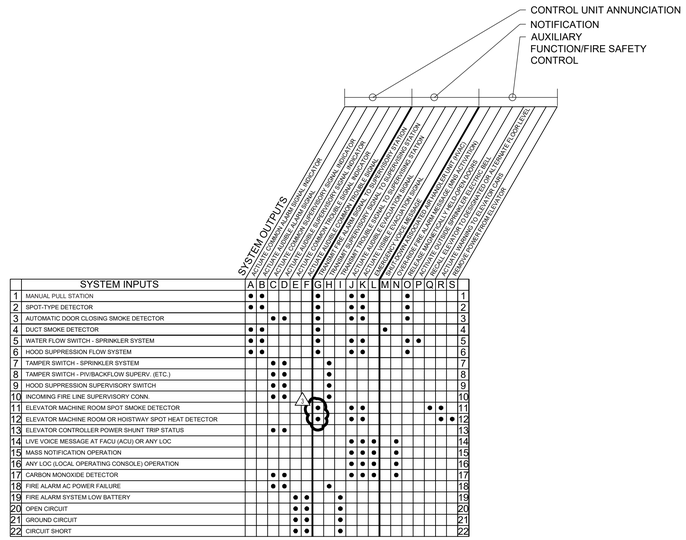
6 AHU SHUTDOWN INTERFACE

NTS



7 TYPICAL DEVICE MOUNTING ELEVATION

NTS



	SYSTEM INPUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	
1	MANUAL PULL STATION	●	●					●			●	●				●					1
2	SPOT-TYPE DETECTOR	●	●					●			●	●				●					2
3	AUTOMATIC DOOR CLOSING SMOKE DETECTOR			●	●			●			●	●				●					3
4	DUCT SMOKE DETECTOR	●	●					●					●								4
5	WATER FLOW SWITCH - SPRINKLER SYSTEM	●	●					●			●	●				●	●				5
6	HOOD SUPPRESSION FLOW SYSTEM	●	●					●			●	●				●					6
7	TAMPER SWITCH - SPRINKLER SYSTEM			●	●				●												7
8	TAMPER SWITCH - PIV/BACKFLOW SUPERV. (ETC.)			●	●				●												8
9	HOOD SUPPRESSION SUPERVISORY SWITCH			●	●				●												9
10	INCOMING FIRE LINE SUPERVISORY COMN.			●	●				●												10
11	ELEVATOR MACHINE ROOM SPOT SMOKE DETECTOR							●			●	●						●	●		11
12	ELEVATOR MACHINE ROOM OR HOISTWAY SPOT HEAT DETECTOR							●			●	●							●	●	12
13	ELEVATOR CONTROLLER POWER SHUNT TRIP STATUS			●	●																13
14	LIVE VOICE MESSAGE AT FACU (ACU) OR ANY LOC										●	●	●		●						14
15	MASS NOTIFICATION OPERATION										●	●	●		●						15
16	ANY LOC (LOCAL OPERATING CONSOLE) OPERATION										●	●	●		●						16
17	CARBON MONOXIDE DETECTOR			●	●						●	●	●		●						17
18	FIRE ALARM AC POWER FAILURE			●	●				●												18
19	FIRE ALARM SYSTEM LOW BATTERY					●	●			●											19
20	OPEN CIRCUIT					●	●			●											20
21	GROUND CIRCUIT					●	●			●											21
22	CIRCUIT SHORT					●	●			●											22

8 COMBINED BUILDING FIRE ALARM & EMERGENCY COMMUNICATION SYSTEM (MASS NOTIFICATION SYSTEM-MNS) SEQUENCE OF OPERATIONS MATRIX

NTS

GA Architecture — Architecture, Interiors, Planning

E G+A Consulting — Fire • Life-Safety Engineering — Emerson Graham + Associates, P.C.

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FIRE ALARM DETAILS

FA301

SHEET 22 of 22

GENERAL NOTES:

1. DESIGN AND INSTALL WET-PIPE AUTOMATIC FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH (IAW) THE CODE REQUIREMENTS LISTED BELOW IN ADDITION TO ANY SPECIFIC SYSTEM COMPONENT PRODUCT LISTING. THIS DESIGN SHALL INCLUDE INCLUSION OF THE APPLICABLE PROVISIONS OF THE FOLLOWING DOCUMENTS:
   A. VIRGINIA CONSTRUCTION CODE, 2015
   B. VIRGINIA STATEWIDE FIRE PREVENTION CODE, 2015
   C. INTERNATIONAL BUILDING CODE (IBC), 2015 WITH VIRGINIA AMENDMENTS
   D. INTERNATIONAL FIRE CODE (IFC), 2015 WITH STATE AMENDMENTS
   E. NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, 2013 EDITION - AS REF. BY 2015 VCC.
2. COORDINATE ALL WORK WITH OTHER BUILDING TRADES AND DESIGN DISCIPLINES. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE AREA OR WORK PRIOR TO THE COMMENCEMENT OF WORK. REFER TO HVAC DRAWINGS FOR LAYOUT OF DUCTWORK AND PROVIDE SPRINKLER COVERAGE AS REQUIRED IN NFPA 13 FOR OBSTRUCTIONS 4 FT. AND WIDER.
3. DRAWINGS REPRESENT OVERALL DESIGN INTENT. PROVIDE FINAL DESIGN AND INSTALLATION OF AUTOMATIC FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13.
4. SEAL ALL PENETRATIONS WITH APPROVED THROUGH-PENETRATION FIRESTOPPING SYSTEMS THROUGH FIRE BARRIER WALLS OR FIRE RESISTANCE CONSTRUCTION TO MAINTAIN THE INTEGRITY OF THE SEPARATION IN ACCORDANCE WITH IBC AND PRODUCT LISTINGS.
5. ALL SPRINKLER PIPING TO BE CONCEALED ABOVE CEILINGS, UNLESS OTHERWISE SPECIFICALLY INDICATED.
6. SPRINKLERS SHALL BE COORDINATED WITH ALL DIFFUSERS, LIGHTING FIXTURES AND CEILING SYSTEMS/SOFFITS AND ANY OTHER FIXED OBSTRUCTIONS AS REGULATED BY NFPA 13.
7. DESIGN AND PROVIDE THE SPRINKLER SYSTEM USING QUICK-RESPONSE SPRINKLERS MEETING DESIGN CRITERIA OF NFPA 13, UNLESS OTHERWISE SPECIFICALLY INDICATED. AUTOMATIC SPRINKLER TEMPERATURE RATINGS OF FUSIBLE ELEMENTS TO BE IN ACCORDANCE WITH NFPA 13 SECTIONS 6.1, 6.2 AND PRODUCT LISTING. REFER TO FX101 FOR ADDITIONAL DESIGN CRITERION INFORMATION.
8. NO PIPE PENETRATIONS OF STRUCTURAL MEMBERS, EXCEPT AS NOTED, ARE PERMITTED WITHOUT APPROVAL OF ARCHITECT AND/OR ENGINEER.
9. AVOID RUNNING PIPING ABOVE ELECTRICAL PANELS, SWITCHGEAR, AND SIMILAR EQUIPMENT INCLUDING TELECOMMUNICATION WHERE PRACTICAL, UNLESS THEY SERVE THE RESPECTIVE ROOMS.
10. ALL SPRINKLER PIPING AND EQUIPMENT SHALL BE SUPPORTED FROM INDEPENDENT STRUCTURAL SUPPORT SYSTEMS. HANGERS AND OTHER APPROVED PIPING SUPPORTS SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 13 CHAPTER 9 AND PRODUCT LISTINGS.
11. PROVIDE ACCESS PANELS TO ALL VALVES ABOVE NON-ACCESSIBLE CEILING AND CHASES.
12. SYSTEM TO BE MONITORED WITH THE BUILDING FIRE ALARM SYSTEM FOR WATERFLOW ALARM AND CONTROL VALVE TAMPER SUPERVISORY SWITCHES IN ACCORDANCE WITH IBC SECTIONS 901.6.1 AND 903.4.1, NFPA 13 SECTION 8.17.1 AND 6.9. REFER TO FIRE ALARM DRAWINGS FOR COORDINATION.
13. SPRINKLER DESIGN SHALL FOLLOW HYDRAULIC CALCULATION PROCEDURES OF NFPA 13 CHAPTER 23 AND PROVIDE SUMMARY SHEET FOR HYDRAULIC CALCULATIONS MEETING NFPA 13. INCLUDE PLANS, ELEVATIONS, SECTIONS, DETAILS AND ATTACHMENTS EQUIVALENT TO "WORKING DRAWINGS" DEFINED BY NFPA 13. DESIGN AND HYDRAULIC CALCULATIONS SHALL BE PREPARED BY A QUALIFIED NICET LEVEL III OR IV CERTIFIED DESIGNER (WATER BASED SYSTEMS) OR EQUIVALENT, USING PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA INDICATED. HYDRAULIC CALCULATIONS SHALL ACCOUNT FOR BOTH NORMAL AND VELOCITY PRESSURES. REFER TO NFPA 13, CH. 23 FOR ADDITIONAL INFORMATION.
14. ALL SPRINKLERS IN AREAS WITH FINISHED CEILINGS SHALL BE INSTALLED CENTER OF TILE AND ON RETURN BENDS.
15. PROVIDE A DRAIN ON THE SYSTEM SIDE OF CONTROL VALVE AND INSTALL VALVE FOR OPERATION OF DRAIN IN ACCORDANCE WITH NFPA 13. ARRANGE PIPING TO DRAIN TO SYSTEM RISER TO THE MAXIMUM EXTENT PRACTICABLE. PROVIDE INSPECTOR'S TEST CONNECTION IN ACCORDANCE WITH NFPA 13.
16. ALL CONTROL VALVES AND FLOW ALARM SWITCHES LOCATED ABOVE FINISHED CEILING SHALL BE ACCESSIBLE AND HAVE NOTIFICATION MARKING TAG FOR THE INSPECTOR.
17. IN AREAS WHERE SPRINKLER LOCATIONS ARE SHOWN (AS APPLICABLE) ON THESE DRAWINGS PROVIDE NUMBER OF SPRINKLERS SHOWN AS A MINIMUM. PROVIDE ADDITIONAL SPRINKLERS AS REQUIRED FOR A COMPLETE SPRINKLER SYSTEM INSTALLATION IN COMPLIANCE WITH NFPA 13. ADDITIONAL SPRINKLERS IN EXCESS OF QUANTITIES INDICATED ON DRAWINGS SHALL BE PROVIDED AT NO ADDITIONAL COST WHEN REQUIRED TO COMPLY WITH NFPA 13 OBSTRUCTION, LOCATION AND SPACING REQUIREMENTS.
18. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF WALLS, CEILING LAYOUT, LIGHTING AND HVAC DIFFUSER LOCATIONS.
19. SPRINKLER PIPING MATERIAL SHALL BE STEEL PIPING TO COMPLY WITH NFPA 13.
20. STANDARD-PRESSURE PIPING SYSTEM COMPONENTS SHALL BE USED UNLESS OTHERWISE SPECIFICIED, CONSISTING OF COMPONENTS LISTED FOR 175 PSIG MINIMUM WORKING PRESSURE. UNDERGROUND PIPING TO MEET WESTERN VIRGINIA WATER AUTHORITY (WVWA) REQUIREMENTS FOR INSTALLATION AND NFPA 13.
22. SYSTEM TO BE PROVIDED WITH FIRE DEPARTMENT CONNECTION AND OUTSIDE EXTERIOR ELECTRIC BELL TO MEET REQUIREMENTS OF THE AHJ, IBC SECTION 903.4.2. REFER TO FIRE ALARM DRAWINGS FOR COORDINATION.
23. BACKFLOW PREVENTER TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 AND THE VIRGINIA PLUMBING CODE, 2015. PROVISIONS TO BE MADE IN PIPING TO ACCOMMODATE FORWARD FLOW TESTING, IN ACCORDANCE WITH NFPA 13.
24. ALL EQUIPMENT SHALL BE FM APPROVED AND/OR UL LISTED, UNLESS SPECIFICALLY IDENTIFIED OR AS ALLOWED BY NFPA 13.
25. WHERE SPRINKLERS ARE INSTALLED SUBJECT TO MECHANICAL INJURY, LISTED GUARDS SHALL BE PROVIDED IAW NFPA 13.

CODE ANALYSIS:

FIRE PROTECTION SYSTEMS (VEBC 704; VCC CH. 9)
E OCCUPANCY IS CONSIDERED A HIGHER RELATIVE HAZARD RATING THAN GROUP B, PER VEBC SECTION 704, VCC CHAPTER 9 MUST BE CONSIDERED FOR PROPOSED USE GROUPS. SPECIFIC REQUIREMENTS FOR AUTOMATIC FIRE SPRINKLER SYSTEM (VEBC SECTION 704.2) AND FIRE ALARM SYSTEM (VEBC SECTION 704.3) ARE CONSIDERED BELOW IN CONNECTION WITH THE EXISTING SYSTEMS.

WATER-BASED FIRE SUPPRESSION SYSTEMS (903.2.3, 903.3.1.1)

FIRE SPRINKLER REQUIREMENTS: AUTOMATIC SPRINKLER PROTECTION WILL BE RETROFITTED THROUGHOUT THE EXISTING BUILDING TO MEET GROUP E REQUIREMENTS WHERE GROUP E FIRE AREA IS ON A FLOOR OTHER THAN A LEVEL OF EXIT DISCHARGE. THE AUTOMATIC FIRE SPRINKLER SYSTEM WILL BE DESIGNED TO MEET HAZARD CRITERION OF NFPA 13. FIRE SPRINKLER HAZARD CLASSIFICATION: HAZARD CLASSIFICATIONS INCLUDE AREAS CONSIDERED AS LIGHT HAZARD, ORDINARY HAZARD IN ACCORDANCE WITH NFPA 13 SECTIONS 5.2 AND 5.3. THE DESIGN CRITERIA ARE PROVIDED ON FX101.

BACKFLOW PREVENTION: A NEW DOUBLE CHECK BACKFLOW PREVENTER SHALL BE PROVIDED FOR BUILDING SPRINKLER RISER.

FIRE SPRINKLERS: SPACING SHALL MEET NFPA 13 FOR HAZARD CLASSIFICATIONS.

FIRE SPRINKLER PIPING: FIRE SPRINKLER PIPING TO BE BLACK STEEL PIPE.

STANDPIPE SYSTEM (MANUAL OR AUTOMATIC) IS NOT REQUIRED FOR THIS BUILDING TYPE AND OCCUPANCY IN ACCORDANCE WITH THE IBC SECTION 905.3.1.

ALTERNATIVE FIRE SUPPRESSION SYSTEMS
KITCHEN HOOD SUPPRESSION SYSTEM (VCC 904.2.2, 904.5)
WET-CHEMICAL FIRE SUPPRESSION SYSTEM TO BE PROVIDED FOR ALL TYPE I HOODS (GREASE CONVECTION) IN ACCORDANCE WITH THE VMC CHAPTER 5 AND NFPA 17A. DESIGN BY OTHERS.

WATER FLOW TEST DATA:

DATE:	03/02/22
STATIC PRESSURE:	73 PSI
RESIDUAL PRESSURE:	61 PSI
FLOW:	1,244 GPM
TEST CONDUCTED BY:	WVWA
TEST HYDRANT:	WVWA #11678 - LOCATED AT ORDWAY DR.
FLOW HYDRANT:	WVWA #13433 - LOCATED AT FRONTAGE RD.

POC - ADJUSTED HYDRAULIC DATA AT FIRE SERVICE LINE / CITY WATER SERVICE POINT OF CONNECTION:

STATIC PRESSURE:	73 PSI
RESIDUAL PRESSURE:	52 PSI
FLOW	1,244 GPM

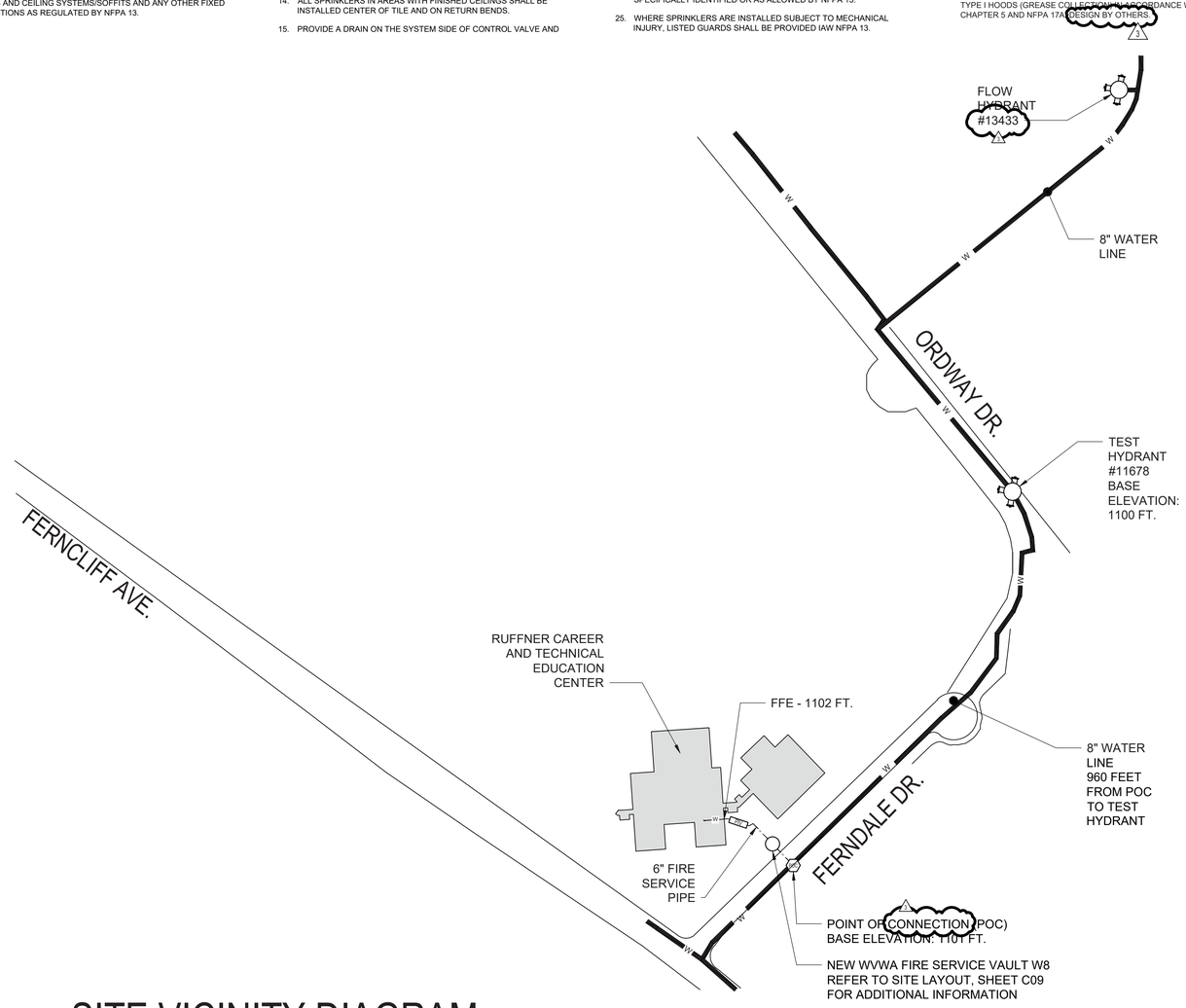
BASIS OF CALCULATION: DUCTILE IRON WATER SUPPLY PIPE (C 140)

FOR BIDDING PURPOSES UTILIZE THE FLOW TEST INFORMATION PROVIDED ON SHEET FX001. CONTRACTOR SHALL PERFORM A CONFIRMING WATER FLOW TEST PRIOR TO SYSTEM DESIGN WITHIN THE TIMEFRAMES PERMISSIBLE BY NFPA 13.

DRAWING INDEX

GENERAL PLAN SYMBOLS:

- W — STANDPIPE PIPING
- F — WET SPRINKLER PIPING
- D — DRAIN LINE
- W — WATER SERVICE UTILITY PIPING
- NEW SIDEWALL SPRINKLER HEAD
- NEW UPRIGHT SPRINKLER HEAD
- NEW CONCEALED SPRINKLER HEAD
- NEW SEMI-RECESSED SPRINKLER HEAD
- ELECTRIC BELL
- CHECK VALVE
- SPRINKLER FLOOR CONTROL STATION
- FIRE DEPARTMENT VALVE
- VALVE IN DROP
- SHUT-OFF VALVE
- O.S.&Y. VALVE WITH TAMPER SWITCH
- MONITORED FIRE VALVE
- FLOW SWITCH
- BACKFLOW PREVENTER
- PRESSURE GAGE & CLOCK
- DIRECTION OF FLOW
- DIRECTION OF DRAINAGE
- SIAMESE DIRE DEPARTMENT CONNECTION
- STORZ FIRE DEPARTMENT CONNECTION
- SERVICE RISER UP/DOWN
- ELBOW DOWN
- UNION OR FLANGED CONNECTION
- PIPE CAP
- POC — POINT OF CONNECTION NEW TO EXISTING
- TERMINATION OF DEMOLITION REMOVAL
- STANDPIPE RISER DESIGNATION
- STANDPIPE RISER DESIGNATION
- FIRE HYDRANT
- PIV — POST INDICATOR VALVE
- 8'-6" — CEILING HEIGHT
- PORTABLE FIRE EXTINGUISHER 2-A (2.5 GAL.) WATER
- K-TYPE (6 L.) WET CHEMICAL
- 20-B (5 LB.) DRY CHEMICAL
- 2-A:20-BC (15 LB.) MULT-PURPOSE DRY CHEMICAL ABC
- 2-C (5 LB.) CLEAN AGENT



1 SITE VICINITY DIAGRAM

SCALE: NTS

NOTE: ALL DIMENSIONS ON THIS DIAGRAM ARE APPROXIMATE. REFER TO CIVIL DRAWINGS FOR PRECISE MEASUREMENTS.

ABBREVIATIONS:

A.F.C.	ABOVE FINISHED CEILING
A.F.F.	ABOVE FINISHED FLOOR
A.F.G.	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
ARCH.	ARCHITECT
BFP	BACK FLOR PREVENTER
BLK	BLACK
CL	CENTERLINE
CLG.	CEILING
CO	CLEANOUT
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONTR.	CONTRACTOR
DEMO.	DEMOLITION
DIA.	DIAMETER
DN	DOWN
DW	DOMESTIC WATER
DWG.	DRAWING
DSP	DRY STANDPIPE
(E)	EXISTING
E.C.	ELECTRICAL CONTRACTOR
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
(R)	EXISTING RELOCATED
EQUIP.	EQUIPMENT
EXP	EXPOSED
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDV	FIRE DEPARTMENT VALVE
FDVC	FIRE DEPARTMENT VALVE CABINET
FEC	FIRE EXTINGUISHER CABINET
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FL.	FLOOR
FP	FIRE PUMP
FS	FLOW SWITCH
FUT.	FUTURE
GA.	GAUGE
G.C.	GENERAL CONTRACTOR
GPM	GALLON PER MINUTE
GWB	GYPSUM WALL BOARD
HP	HORSEPOWER
HT.	HEIGHT
HVAC	HEATING, VENTILATING, AIR CONDITIONING
I.A.	INSIDE DIMENSION
ITC	INSPECTORS TEST CONNECTION
KW	KILOWATT
LT.	LIGHT
MAX.	MAXIMUM
MFR.	MANUFACTURER
MIN.	MINIMUM
MTD.	MOUNTED
(N)	NEW
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
N.T.S.	NOT TO SCALE
O.D.	OUTSIDE DIMENSION
OS&Y	OUTSIDE SCREW & YOKE
P.C.	PLUMBING CONTRACTOR
PIV	POST INDICATOR VALVE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PT	PAINT
REQ.	REQUIRED
RPZ	REDUCED PRESSURE ZONE
SF	SQUARE FEET
SLV.	SLEEVE
SP	STANDPIPE
SPEC.	SPECIFICATION
SPR	SPRINKLER
STD.	STANDARD
SYS.	SYSTEM
TEMP.	TEMPERATURE
TS	TAMPER SWITCH
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
V	VOLT
WHT	WHITE
WP	WEATHERPROOF
WSP	WET STANDPIPE
*	DISTANCE DOWN FROM CEILING
+	DISTANCE ABOVE FINISHED FLOOR

GA Architecture — Architecture, Interiors, Planning
G+A Consulting — Fire • Life Safety Engineering
EMERSON GRAHAM + ASSOCIATES

COMMONWEALTH OF VIRGINIA
JUSTIN B. BILLER
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PROFESSIONAL ENGINEER
07/18/22

RUFFNER CAREER AND TECHNICAL EDUCATION CENTER

ROANOKE, VIRGINIA

ROANOKE CITY PUBLIC SCHOOLS — Strong Students, Strong Schools, Strong City

REVISIONS

No.	DATE	DESCRIPTION
3	7-18-22	DRAWING UPDATES AND CLARIFICATIONS

DRAWN BY:	KNS
REV'D BY:	JBB
DATE:	7/18/22
SCALE:	AS SHOWN

FIRE SUPPRESSION CODE DATA

FX001

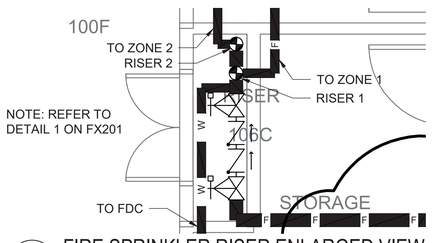
SHEET 1 of 4

GENERAL NOTES:

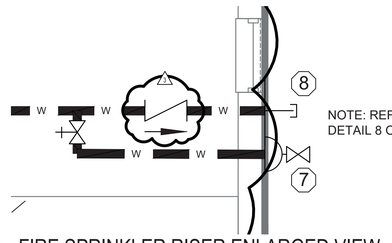
1. THIS IS A STANDARD SYMBOL LIST. ALL DEVICE SYMBOLS, SPRINKLER CONSTRUCTION NOTES AND ABBREVIATIONS MAY NOT NECESSARILY APPEAR ON THE FLOOR PLAN OR DETAIL SHEETS. ONLY THOSE SYMBOLS INDICATED ON THE FLOOR PLANS ARE USED FOR THIS PROJECT. ALL OTHERS ARE TO BE CONSIDERED NOT USED AND SHOULD BE DISREGARDED.
2. THE BUILDING SHALL BE FULLY SPRINKLERED.
3. THE FIRE SPRINKLER SYSTEM LAYOUT PRESENTED IN DRAWINGS IS FOR GENERAL PURPOSES ONLY. CONTRACTOR SHALL DETERMINE THE BEST LAYOUT BASED ON HYDRAULIC CALCULATIONS, NFPA 13, AND SPECIFICATIONS.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF SPRINKLER LAYOUT, DETAILS AND HYDRAULIC CALCULATIONS FOR AHJ REVIEW AND APPROVAL ONCE APPROVED BY ARCHITECT/ENGINEER.
5. PROVIDE COMPLETE DRAINAGE FACILITIES AND INSPECTORS TEST CONNECTIONS AND ELECTRIC BELL IN ACCORDANCE WITH NFPA 13.
6. PIPE SUPPORTS SHALL CONFORM TO NFPA 13.
7. ALL FIRE PROTECTION EQUIPMENT, I.E. PIPING, VALVES, FITTINGS AND ACCESSORIES ETC., SHALL BE RATED FOR A MAXIMUM WORKING PRESSURE OF 175 P.S.I. UON.
8. ALL FIRE EQUIPMENT AND FIRE EQUIPMENT THREADS SHALL CONFORM TO LOCAL STANDARDS.
9. INSTALLATIONS OF SPRINKLER SYSTEMS SHALL BE COORDINATED WITH ALL MECHANICAL AND ELECTRICAL TRADES.
10. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING SECTIONS AND FRAMING.
11. PROVIDE PIPE SLEEVES AT ALL WALL AND FLOOR PENETRATIONS.
12. FIRE AND SMOKE RESISTIVE CONSTRUCTION, ALONG WITH DOORS ARE RATED AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
13. SPRINKLER SYSTEMS SHALL BE WIRED TO BUILDING FIRE ALARM CONTROL PANEL. COORDINATE WITH BUILDING FIRE ALARM SYSTEM.
14. TYPE OF BUILDING CONSTRUCTION: NON-COMBUSTIBLE AS PER INTERNATIONAL BUILDING CODE AND NFPA 13.
15. FOR BIDDING PURPOSES UTILIZE THE FLOW TEST INFORMATION PROVIDED ON SHEET FX001.
16. CONTRACTOR SHALL PERFORM A CONFIRMING WATER FLOW TEST PRIOR TO SYSTEM DESIGN WITHIN THE TIMEFRAMES PERMISSIBLE BY NFPA 13.
17. SPRINKLERS SHALL BE THE FOLLOWING TYPE:
    - 17.1. PUBLIC LOBBIES, WAITING, OFFICES, HALLWAYS PROVIDE QUICK RESPONSE, CONCEALED IN CENTER OF TILES.
    - 17.2. ALL OTHER OCCUPIED AREAS PROVIDE SEMI RECESSED CHROME FINISHED QUICK RESPONSE SPRINKLERS IN CENTER OF TILES.
    - 17.3. AREAS WITHOUT CEILINGS AND EXPOSED TO WEATHER: INSTALL UPRIGHT, CHROME PLATED, QUICK RESPONSE SPRINKLERS.
    - 17.4. AREAS SUBJECT TO FREEZING: PROVIDE DRY PENDENT SPRINKLERS WITH ATTACHED HEAT SOURCES, SKYLIGHTS, UNINSULATED ROOFS, ETC TO BE PER NFPA 13 AND FM GLOBAL.

KEYNOTES:

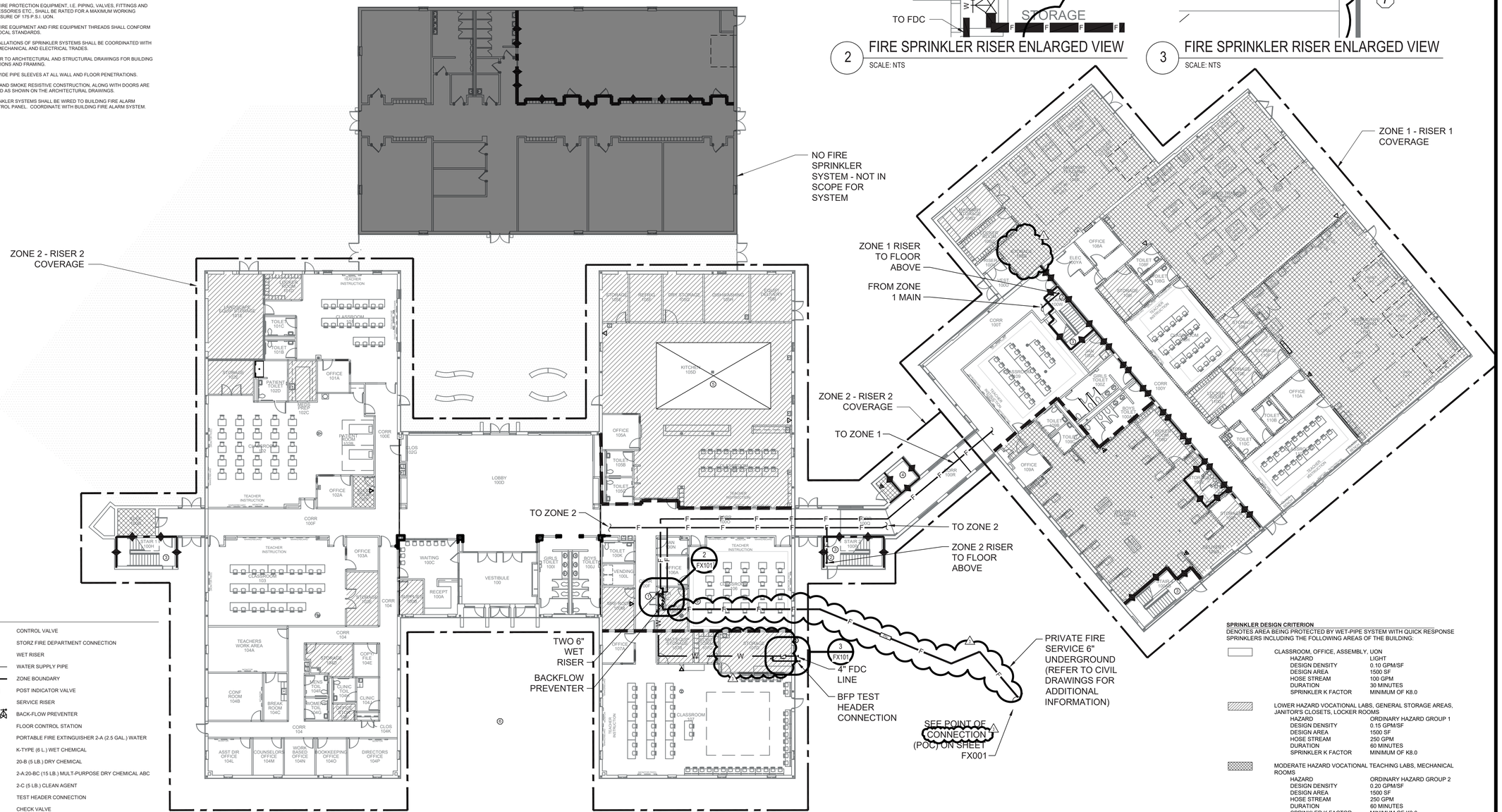
1. TWO SEPARATE SPRINKLER ZONES SHALL BE PROVIDED FOR UP TO 52,000 SF SERVING LIGHT AND ORDINARY HAZARD WET-PIPE SYSTEMS, IAW NFPA 13:8.2.1.
2. SECOND FLOOR SHALL BE SEPARATELY ZONED WITH FLOOR VALVE CONTROL ASSEMBLY.
3. SPRINKLERS SHALL BE PROVIDED AT TOP OF STAIR RISER AND UNDER SECOND FLOOR LANDING AND STAIR FLIGHT. COVERAGE SHALL BE IAW NFPA 13 TABLE 8.6.2.2.1(A) FOR LIGHT HAZARD.
4. ELEVATOR PIT TO BE EQUIPPED WITH SIDEWALL SPRINKLER WITHIN 2 FEET MAXIMUM ABOVE THE BOTTOM OF THE FLOOR. SPRINKLERS IN HOISTWAY AND MACHINE ROOM TO BE STANDARD RESPONSE SPRINKLERS OF INTERMEDIATE TEMPERATURE RATING TYPE WITH A MINIMUM OF 175 F. SPRINKLER TO BE PROVIDED WITH LISTED GUARD TO PREVENT MECHANICAL DAMAGE.
5. HOOD SUPPRESSION SYSTEM DESIGNED BY OTHERS TO PROTECT TYPE I GREASE HOOD. NO SPRINKLER PROVIDED UNDER HOOD CANOPY.
6. EXTERIOR PORTE–COCHERE IS OF NON-COMBUSTIBLE CONSTRUCTION. NO SPRINKLER PROTECTION REQUIRED, WHERE NO COMBUSTIBLE MATERIAL IS STORED, PER NFPA 13 SECTIONS 8.15.7.2 AND 8.15.7.5.
7. 2-1/2 IN. HOSE VALVES TO ACCOMIDATE FORWARD FLOW BFP TEST - 1 VALVE FOR EACH250 GPM DEMAND FLOW.
8. 3 FOOT WORKING CLEARANCE TO BE PROVIDED FOR FIRE DEPARTMENT CONNECTION (FDC).
9. 6 IN. WATER SUPPLY UNDERFLOOR TRENCHING REQUIRED.
10. PROVIDE PERMANENT SIGN TO INDICATE THE FOLLOWING - "FIRESPRINKLER RISER ROOM." THE SIZE AND LOCATION ON DOOR TO BE APPROVED BY ROANOKE CITY FIRE MARSHAL'S OFFICE AND SFPC SECTION 509.



2 FIRE SPRINKLER RISER ENLARGED VIEW
SCALE: NTS



3 FIRE SPRINKLER RISER ENLARGED VIEW
SCALE: NTS



LEGEND

- CONTROL VALVE
- STORZ FIRE DEPARTMENT CONNECTION
- WET RISER
- WATER SUPPLY PIPE
- ZONE BOUNDARY
- POST INDICATOR VALVE
- SERVICE RISER
- BACK-FLOW PREVENTER
- FLOOR CONTROL STATION
- PORTABLE FIRE EXTINGUISHER 2-A (2.5 GAL.) WATER
- K-TYPE (6 L.) WET CHEMICAL
- 20-B (5 LB.) DRY CHEMICAL
- 2-A:20-BC (15 LB.) MULT-PURPOSE DRY CHEMICAL ABC
- 2-C (5 LB.) CLEAN AGENT
- TEST HEADER CONNECTION
- CHECK VALVE

SPRINKLER DESIGN CRITERION
DENOTES AREA BEING PROTECTED BY WET-PIPE SYSTEM WITH QUICK RESPONSE SPRINKLERS INCLUDING THE FOLLOWING AREAS OF THE BUILDING:

CLASSROOM, OFFICE, ASSEMBLY, UON

HAZARD	LIGHT
DESIGN DENSITY	0.10 GPM/SF
DESIGN AREA	1500 SF
HOSE STREAM	100 GPM
DURATION	30 MINUTES
SPRINKLER K FACTOR	MINIMUM OF K8.0

LOWER HAZARD VOCATIONAL LABS, GENERAL STORAGE AREAS, JANITOR'S CLOSETS, LOCKER ROOMS

HAZARD	ORDINARY HAZARD GROUP 1
DESIGN DENSITY	0.15 GPM/SF
DESIGN AREA	1500 SF
HOSE STREAM	250 GPM
DURATION	60 MINUTES
SPRINKLER K FACTOR	MINIMUM OF K8.0

MODERATE HAZARD VOCATIONAL TEACHING LABS, MECHANICAL ROOMS

HAZARD	ORDINARY HAZARD GROUP 2
DESIGN DENSITY	0.20 GPM/SF
DESIGN AREA	1500 SF
HOSE STREAM	250 GPM
DURATION	60 MINUTES
SPRINKLER K FACTOR	MINIMUM OF K8.0

WELDING LAB TANK STORAGE AREA

HAZARD	SPECIAL OCCUPANCY HAZARD - 13:22.9
DESIGN DENSITY	0.25 GPM/SF
DESIGN AREA	3000 SF OR THE ROOM DESIGN METHOD IAW 13:11.2.3.3
HOSE STREAM	250 GPM
DURATION	60 MINUTES
SPRINKLER K FACTOR	MINIMUM OF K8.0

UNSPRINKLERED AREA
AREA IS UNCOVERED AND IS OPEN TO AMBIENT. NO SPRINKLER COVERAGE

NOT IN SCOPE

NOTE:
1. IT IS PERMISSIBLE TO REDUCE DESIGN AREA SIZE FOR QUICK RESPONSE SPRINKLERS IAW NFPA 13 SECTION 11.2.3.2.3.
2. WHERE ADJACENT HAZARDS ARE NOT PHYSICALLY SEPARATED BY BARRIERS OR PARTITIONS, THE MORE DEMANDING HAZARD DESIGN AREA SHALL EXTEND 15 FT. BEYOND ITS PERIMETER IAW 13:11.1.2.
3. HOSE STREAM AND DURATION FOR MULTIPLE HAZARD CLASSIFICATIONS SHALL BE IAW 13:11.1.6.

BUILDING 2 & 3
GROUND FLOOR FIRE SUPPRESSION OVERALL PLAN

1

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

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REVISIONS		
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3	7-18-22	DRAWING UPDATES AND CLARIFICATIONS

DRAWN BY:	KNS
REV'D BY:	JBB
DATE:	7/18/22
SCALE:	AS SHOWN

BUILDING 2 & 3 GROUND FLOOR OVERALL FIRE SUPPRESSION PLAN

FX101

SHEET 2 of 4

GENERAL NOTES:

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    - 17.3. AREAS WITHOUT FINISHED CEILINGS: PROVIDE AND INSTALL BRASS, UPRIGHT, OR PENDANT QUICK RESPONSE AUTOMATIC SPRINKLERS.
    - 17.4. TEMPERATURE RATINGS AND LOCATION OF SPRINKLERS NEAR HEAT SOURCES, SKYLIGHTS, UNINSULATED ROOFS, ETC TO BE PER NFPA 13 AND FM GLOBAL.

KEYNOTES:

1. TWO SEPARATE SPRINKLER ZONES SHALL BE PROVIDED FOR UP TO 52,000 SF SERVING LIGHT AND ORDINARY HAZARD WET-PIPE SYSTEMS, IAW NFPA 13:8.2.1.
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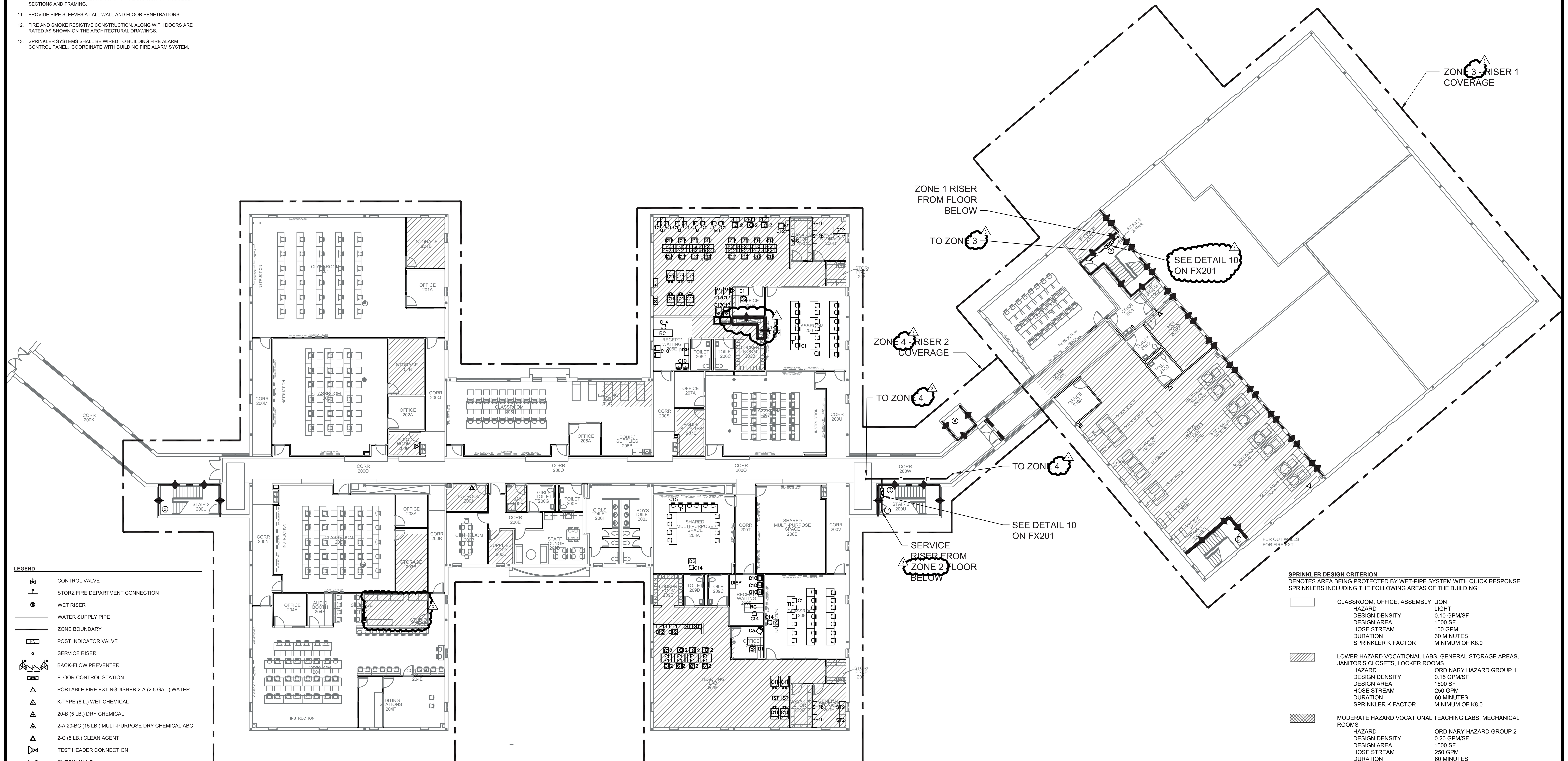

LEGEND

Symbol	Description
	CONTROL VALVE
	STORZ FIRE DEPARTMENT CONNECTION
	WET RISER
	WATER SUPPLY PIPE
	ZONE BOUNDARY
PIV	POST INDICATOR VALVE
	SERVICE RISER
	BACK-FLOW PREVENTER
	FLOOR CONTROL STATION
	PORTABLE FIRE EXTINGUISHER 2-A (2.5 GAL.) WATER
	K-TYPE (6 L.) WET CHEMICAL
	20-B (5 LB.) DRY CHEMICAL
	2-A:20-BC (15 LB.) MULT-PURPOSE DRY CHEMICAL ABC
	2-C (5 LB.) CLEAN AGENT
	TEST HEADER CONNECTION
	CHECK VALVE

BUILDING 2 & 3
SECOND FLOOR FIRE SUPPRESSION OVERALL PLAN

1

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

SPRINKLER DESIGN CRITERION

DENOTES AREA BEING PROTECTED BY WET-PIPE SYSTEM WITH QUICK RESPONSE SPRINKLERS INCLUDING THE FOLLOWING AREAS OF THE BUILDING:

CLASSROOM, OFFICE, ASSEMBLY, UON

HAZARD	LIGHT
DESIGN DENSITY	0.10 GPM/SF
DESIGN AREA	1500 SF
HOSE STREAM	100 GPM
DURATION	30 MINUTES
SPRINKLER K FACTOR	MINIMUM OF K8.0

LOWER HAZARD VOCATIONAL LABS, GENERAL STORAGE AREAS, JANITOR'S CLOSETS, LOCKER ROOMS

HAZARD	ORDINARY HAZARD GROUP 1
DESIGN DENSITY	0.15 GPM/SF
DESIGN AREA	1500 SF
HOSE STREAM	250 GPM
DURATION	60 MINUTES
SPRINKLER K FACTOR	MINIMUM OF K8.0

MODERATE HAZARD VOCATIONAL TEACHING LABS, MECHANICAL ROOMS

HAZARD	ORDINARY HAZARD GROUP 2
DESIGN DENSITY	0.20 GPM/SF
DESIGN AREA	1500 SF
HOSE STREAM	250 GPM
DURATION	60 MINUTES
SPRINKLER K FACTOR	MINIMUM OF K8.0

WELDING LAB TANK STORAGE AREA

HAZARD	SPECIAL OCCUPANCY HAZARD - 13:22.9
DESIGN DENSITY	0.25 GPM/SF
DESIGN AREA	3000 SF OR THE ROOM DESIGN METHOD IAW 13:11.2.3.3
HOSE STREAM	250 GPM
DURATION	60 MINUTES
SPRINKLER K FACTOR	MINIMUM OF K8.0

UNSPRINKLERED AREA
AREA IS UNCOVERED AND IS OPEN TO AMBIENT. NO SPRINKLER COVERAGE

NOT IN SCOPE

NOTE:
1. IT IS PERMISSIBLE TO REDUCE DESIGN AREA SIZE FOR QUICK RESPONSE SPRINKLERS IAW NFPA 13 SECTION 11.2.3.2.3.
2. WHERE ADJACENT HAZARDS ARE NOT PHYSICALLY SEPARATED BY BARRIERS/PARTITIONS, THE MORE DEMANDING HAZARD DESIGN AREA SHALL EXTEND 15 FT. BEYOND ITS PERIMETER IAW 13:11.1.2.
3. HOSE STREAM AND DURATION FOR MULTIPLE HAZARD CLASSIFICATIONS SHALL BE IAW 13:11.1.6.

C2A Architecture
ARCHITECTURE INTERIORS PLANNING

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COMMONWEALTH OF VIRGINIA
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07/18/22

RUFFNER CAREER AND TECHNICAL EDUCATION CENTER
ROANOKE, VIRGINIA

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REVISIONS

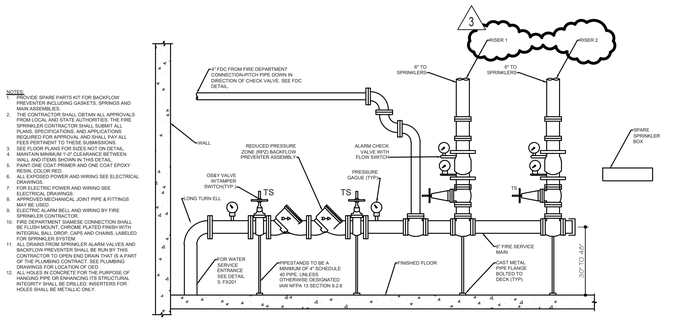
No.	DATE	DESCRIPTION
3	7-18-22	DRAWING UPDATES AND CLARIFICATIONS

DRAWN BY:	KNS
REV'D BY:	JBB
DATE:	7/18/22
SCALE:	AS SHOWN

BUILDING 2 & 3 SECOND FLOOR OVERALL FIRE SUPPRESSION PLAN

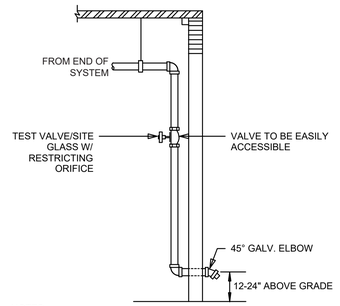
FX102

SHEET 3 of 4



1 SPRINKLER RISER DIAGRAM

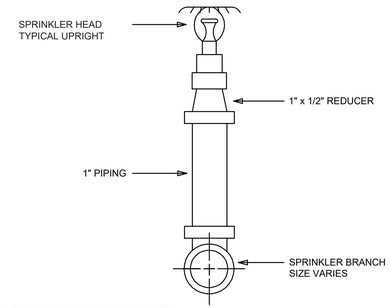
SCALE: NTS



NOTES:
1. NOT LESS THAN 4-FT OF EXPOSED TEST PIPING IN WARM ROOM BEYOND VALVE WHEN PIPE EXTENDS THROUGH EXTERIOR WALL.

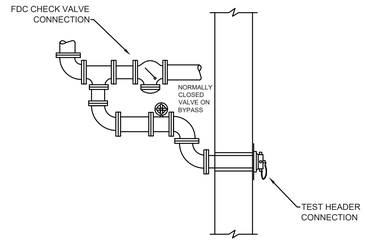
2 INSPECTOR'S TEST CONNECTION

SCALE: NTS



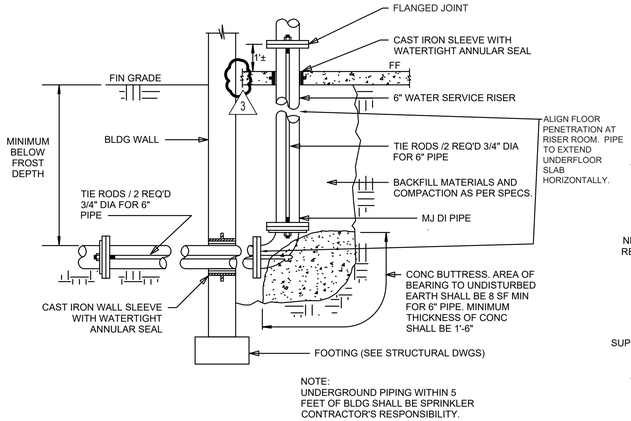
3 UPRIGHT SPRINKLER

SCALE: NTS



4 BACKFLOW PREVENTER FORWARD FLOW TEST MECHANISM

SCALE: NTS

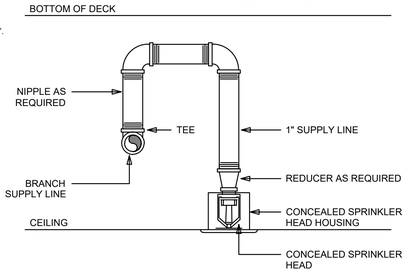


NOTE:
UNDERGROUND PIPING WITHIN 5 FEET OF BLDG SHALL BE SPRINKLER CONTRACTOR'S RESPONSIBILITY.

5 THRUST BLOCK FOR WATER MAIN INSIDE OF BUILDING

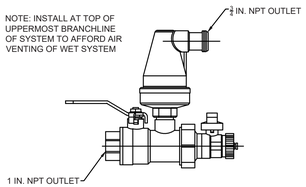
SCALE: NTS

NOTES:
1. WHEN ARM OVER IS MORE THEN 24" INCHES IN LENGTH, THE ARM OVER MUST BE SUPPORTED WITH A PIPE HANGER.
2. CONNECT ALL ARM-OVERS TO THE TOP THE BRANCH LINE PIPING.



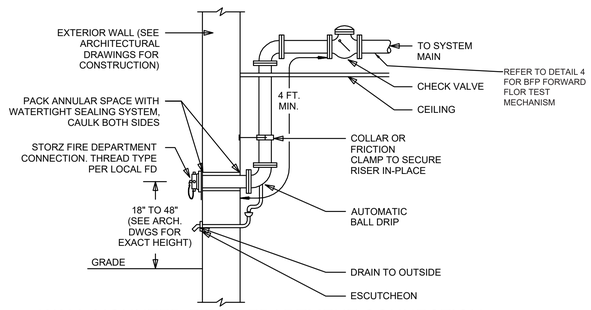
6 CONCEALED SPRINKLER

SCALE: NTS



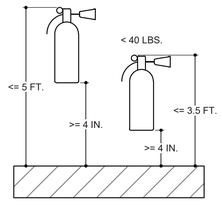
7 TYPICAL AUTOMATIC AIR VENT ASSEMBLY

SCALE: NTS



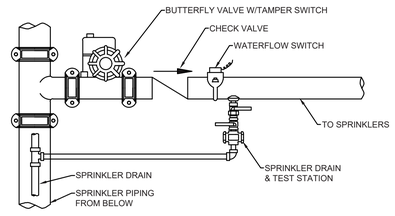
8 WALL MOUNTED FIRE DEPARTMENT CONNECTION

SCALE: NTS



9 TYPICAL MOUNTING FIRE EXTINGUISHER HEIGHTS

SCALE: NTS



10 FLOOR CONTROL VALVE ASSEMBLY

SCALE: NTS

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FIRE SUPPRESSION DETAILS

FX201

SHEET 4 of 4

SECTION 099114 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Surface preparation and application of paint systems on the following exterior substrates:

a. Concrete.
b. Steel.
c. Galvanized metal.

B. Related Requirements:

1. Section 051200 "Structural Steel Framing" for shop priming of metal substrates.
2. Section 055000 "Metal Fabrications" for shop priming metal fabrications.

1.3 DEFINITIONS

A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D523.

B. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D523.

C. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D523.

D. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D523.

E. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D523.

F. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include preparation requirements and application instructions.
2. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
3. Indicate VOC content.

B. Samples: For each type of topcoat product.

1. Submit Samples on rigid backing, 8 inches (200 mm) square.
2. Apply coats on Samples in steps to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

C. Product List: Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings to cross-reference paint systems specified in this Section. Include color designations.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Paint: 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).

B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

1. Behr Paint Company; Behr Process Corporation.
2. Benjamin Moore & Co.
3. Valspar; a brand of The Sherwin-Williams Company.

B. Source Limitations: Obtain paint from single source from single manufacturer.

2.2 PAINT PRODUCTS

A. MPI Standards: Provide products complying with MPI standards indicated and listed in its "MPI Approved Products List."

B. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

C. Colors: As indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.

C. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

D. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer but not less than the following:
1. SSPC-SP 3.

E. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

G. Aluminum Substrates: Remove loose surface oxidation.

3.3 INSTALLATION

A. Apply paints in accordance with manufacturer's written instructions and recommendations in "MPI Manual."

1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
3. Paint both sides and edges of exterior doors and entire exposed surface of exterior door frames.
4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
5. Primers specified in the Exterior Painting Schedule may be omitted on items that are factory primed or factory finished if compatible with intermediate and topcoat coatings and acceptable to intermediate and topcoat paint manufacturers.

B. Tint undercoats same color as topcoat but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:

1. Paint the following work where exposed to view:
   a. Uninsulated metal piping.
   b. Uninsulated plastic piping.
   c. Pipe hangers and supports.
   d. Metal conduit.
   e. Plastic conduit.
   f. Tanks that do not have factory-applied final finishes.
   g. Exterior steel bollards.
   h. Exterior metal security gates (where not prefinished prior to installation).

3.4 FIELD QUALITY CONTROL

A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.

1. Contractor shall touch up and restore painted surfaces damaged by testing.
2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written instructions, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written instructions.

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

1. Do not clean equipment with free-draining water and prevent solvents, thinners, cleaners, and other contaminants from entering into waterways, sanitary and storm drain systems, and ground.
2. Dispose of contaminants in accordance with requirements of authorities having jurisdiction.
3. Allow empty paint cans to dry before disposal.

4. Collect waste paint by type and deliver to recycling or collection facility.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 EXTERIOR PAINTING SCHEDULE

A. Steel Substrates:

1. Water-Based Light Industrial Coating System MPI EXT 5.1M:

a. Prime Coat: Primer, rust inhibitive, as recommended by top coat manufacturer.
b. Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
c. Low-Sheen Topcoat: Light industrial coating, exterior, water based (MPI Gloss Level 3), MPI #161.

B. Galvanized-Metal Substrates:

1. Alkyd System MPI EXT 5.3B:

a. Prime Coat: Primer, galvanized

b. Intermediate Coat: Exterior, alkyd enamel, matching topcoat.

c. Semigloss Topcoat: Alkyd, exterior, semigloss (MPI Gloss Level 5)[, MPI #94].

C. Aluminum Substrates:

1. Latex System MPI EXT 5.4H:

a. Prime Coat: Primer, quick dry, for aluminum, MPI #95.

b. Intermediate Coat: Latex, exterior, matching topcoat.

c. Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15.

END OF SECTION 099114

SECTION 099124 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes surface preparation and the application of paint systems on the following interior substrates:

1. Concrete masonry units (CMUs).
2. Steel.
3. Galvanized metal.
4. Aluminum (not anodized or otherwise coated).
5. Wood.
6. Gypsum board.
7. Acoustic panels and tiles.

B. Related Requirements:

1. Section 051200 "Structural Steel Framing" for shop priming structural steel.
2. Section 055000 "Metal Fabrications" for shop priming metal fabrications.
3. Section 099300 "Staining and Transparent Finishing" for surface preparation and the application of wood stains and transparent finishes on interior wood substrates.

1.3 DEFINITIONS

A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D523.

B. MPI Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D523.

C. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D523.

D. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D523.

E. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D523.

F. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D523.

G. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

1. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
2. Indicate VOC content.

B. Samples for Initial Selection: For each type of topcoat product.

C. Product List: Use same designations indicated on Drawings and in the Interior Painting Schedule to cross-reference paint systems specified in this Section. Include color designations.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Paint: 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).

B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures of less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

1. Behr Paint Company; Behr Process Corporation.
2. Benjamin Moore & Co.
3. Valspar; a brand of The Sherwin-Williams Company.

2.2 PAINT, GENERAL

A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products List."

B. Material Compatibility:

1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

C. Colors: As indicated in a color schedule.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Masonry (Clay and CMUs): 12 percent.
2. Wood: 15 percent.
3. Gypsum Board: 12 percent.

C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

D. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.

E. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

D. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceeds that permitted in manufacturer's written instructions.

E. Steel Substrates: Remove rust, loose mill scale, and shop primer, if any. Clean using methods recommended in writing by paint manufacturer but not less than the following:
1. SSPC-SP 3.
2. SSPC-SP 7/NACE No. 4.

F. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

G. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

H. Aluminum Substrates: Remove loose surface oxidation.

3.3 INSTALLATION

A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."

1. Use applicators and techniques suited for paint and substrate indicated.

2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.

B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat but provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

E. Painting Fire-Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:

1. Paint the following work where exposed in storage and equipment rooms unless noted otherwise:
   a. Uninsulated metal piping.
   b. Uninsulated plastic piping.
   c. Pipe hangers and supports.
   d. Metal conduit.
   e. Plastic conduit.
   f. Tanks that do not have factory-applied final finishes.
   g. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
   h. Exposed new and existing structure and metal deck.

2. Paint the following work where exposed in occupied spaces:

   a. Equipment, including panelboards.
   b. Uninsulated metal piping.
   c. Uninsulated plastic piping.
   d. Pipe hangers and supports.
   e. Metal conduit.
   f. Plastic conduit.
   g. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
   h. Other items as directed by Architect.

3. Paint the following work of color noted at exposed ceiling in the ground floor Lobby (100D):
   a.
   b. Cold Water piping: BLUE
   c. Hot water utility piping: RED
   d. Communication Raceway/Conduit: ORANGE
   e. Metal Electrical Conduit: GREEN
   f. Fire Suppression piping: RED (if not prefinished RED prior to installation)
   g. Radial Ductwork: Exposed (not painted)
   h. Natural Gas: YELLOW
   i. Uninsulated HVAC piping: WHITE.
   j. Other utility service piping or conduit as directed by Architect.

4. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied spaces.

3.4 FIELD QUALITY CONTROL

A. Dry-Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry-film thickness.

1. Contractor shall touch up and restore painted surfaces damaged by testing.
2. If test results show that dry-film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry-film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 INTERIOR PAINTING SCHEDULE

A. Clay Masonry Substrates:

1. Location: Existing exposed brick veneer and precast concrete panels in Masonry Teaching Lab (108E).

2. Latex System, MPI INT 4.1A:

   a. Prime Coat: Primer, alkali resistant, water based.

   b. Intermediate Coat: Latex, interior, matching topcoat.

   c. Topcoat: Latex, interior, semigloss (MPI Gloss Level 5).

B. CMU Substrates:

1. Latex System, MPI INT 4.2A:

   a. Block Filler: Block filler, latex, interior/exterior.

   b. Intermediate Coat: Latex, interior, matching topcoat.

   c. Topcoat: Latex, interior, semigloss (MPI Gloss Level 5).

2. Water-Based Light-Industrial Coating System:

   a. Location: All industrial program spaces (Masonry, Building Trades, Automotive Technology, Welding)

   b. Block Filler: Latex, interior/exterior.

   c. Intermediate Coat: Light-industrial coating, interior, water based, matching topcoat.

   d. Topcoat: Light-industrial coating, interior, water based, semigloss (MPI Gloss Level 5).

C. Steel Substrates:

1. Latex System, Alkyd Primer, MPI INT 5.1Q:

   a. Location: All interior exposed steel structure and metal deck surfaces unless noted otherwise.

   b. Prime Coat: Primer, alkyd, quick dry, for metal, MPI #76.

   c. Intermediate Coat: Latex, interior, matching topcoat.

   d. Topcoat: Latex, interior, flat (MPI Gloss Level 1), MPI #53.

2. Water-Based Light-Industrial Coating System, MPI INT 5.1B:

    a. Use: All ferrous metals at existing building structural columns and overhead door steel within industrial program spaces (Masonry, Building Trades, Automotive Technology, Welding) and Kitchen program spaces.

    b. Prime Coat: Primer, rust inhibitive, water based MPI #107.

    c. Intermediate Coat: Light-industrial coating, interior, water based, matching topcoat.

    d. Topcoat: Light-industrial coating, interior, water based, semigloss (MPI Gloss Level 5), MPI #153.

D. Galvanized-Metal Substrates:

1. Alkyd over Cementitious Primer System, MPI INT 5.3C:

    a. Prime Coat: Primer, galvanized.

    b. Intermediate Coat: Alkyd, interior, matching topcoat.

    c. Topcoat: Alkyd, interior, semigloss (MPI Gloss Level 5), MPI #47.

E. Gypsum Board Substrates:

1. Latex over Latex Sealer System, MPI INT 9.2A:

    a. Prime Coat: Primer sealer, latex, interior, MPI #50.

    b. Intermediate Coat: Latex, interior, matching topcoat.

    c. Topcoat: Latex, interior (MPI Gloss Level 4), MPI #43.

F. Acoustic Panels:

1. Latex, Flat System, MPI INT 9.3A:

    a. Prime Coat: Latex, interior, matching topcoat.

    b. Topcoat: Latex, interior, flat (MPI Gloss Level 1), MPI #53.

END OF SECTION 099124

SECTION 101400 - SIGNAGE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Dimensional characters.

a. Room and Door Signs
b. Interior directional and informational signs
c. Building Identification Signs

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product. Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.

B. Shop Drawings: For signs.

1. Include fabrication and installation details and attachments to other work.
2. Show sign mounting heights, locations of supplementary supports to be provided by other installers, and accessories.
3. Show message list, typestyles, graphic elements, and layout for each sign at least quarter size.

C. Samples for Initial Selection: For each type of sign assembly, exposed component, and exposed finish.

1. Include representative Samples of available typestyles and graphic symbols.

D. Samples for Verification: For each type of sign assembly showing all components and with the required finish(es), in manufacturer's standard size unless otherwise indicated and as follows:

1. Dimensional Characters: Full-size Sample of each type of dimensional character.
2. Exposed Accessories: Full-size Sample of each accessory type.
3. Full-size Samples, if approved, will be returned to Contractor for use in the Project.

E. Product Schedule: For dimensional letter signs. Use same designations indicated on Drawings or specified.

1. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.

a. When room numbers to appear on signs differ from those on drawings, include the drawing room number on schedule.

b. When content of signs is indicated to be determined later, request such information from Owner through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.

c. Submit for approval by Owner through Architect prior to fabrication.

d. Approximately 170 room signs will be required.

1.3 CLOSEOUT SUBMITTALS

A. Maintenance Data: For signs to include in maintenance manuals.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.5 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Deterioration of finishes beyond normal weathering.
b. Separation or delamination of sheet materials and components.

2. Warranty Period: Minimum five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SIGNAGE MANUFACTURERS:

A. Flat Signs:
1. Basis of Design: Inpro Aspen Collection: www.inprocorp.com
2. Best Sign Systems, Inc: www.bestsigns.com.
3. Mohawk Sign Systems, Inc: www.mohawksign.com.
4. Substitutions: See Section 01 6000 - Product Requirements.

B. Dimensional Letter Signs:
1. Basis of Design: Cosco Industries; Cast Aluminum: www.coscoarchitecturalsigns.com.
2. ASI Sign Systems, Inc.

3. Metal Arts.
4. Substitutions: See Section 01 6000 - Product Requirements.

2.2 SIGNAGE APPLICATIONS:

A. Room and Door Signs: Provide a sign for every doorway, whether it has a door or not, not including corridors, lobbies, and similar open areas.
   1. Sign Type: Flat signs with engraved panel media as specified.
   2. Provide "tactile" signage, with letters raised minimum 1/32 inch and Grade II braille.
   3. Character Height: 5/8 inch.
   4. Sign Dimensions: 6 x 6 inches.
   5. Classroom Doors: Identify with room numbers to be identified by owner, not the numbers shown on the drawings.
   6. Conference and Meeting Rooms: Identify with room numbers to be identified by owner, not the numbers indicated on drawings; provide "window" section with sliding "In Use/Vacant" indicator.
   7. Service Rooms: Identify with room names and numbers to be identified by owner, not those indicated on drawings.
   8. Single Use Rest Rooms: Identify with gender-specific pictograms, the names "MEN" and "WOMEN", room numbers to be identified by owner, ADA pictogram, and braille.
   9. Gang Student Toilet Rooms: Identify with gender-specific pictograms, the names "BOYS" and "GIRLS", room numbers to be identified by owner, ADA pictogram, and braille.
   10. Exit Signs: Identify exterior egress with the word "EXIT", the ADA pictogram, and braille.
   11. Elevator Signs: Warning signs in each elevator lobby with the words "IN CASE OF FIRE DO NOT USE ELEVATOR USE STAIRS", the fire and stair pictograms, and braille.

B. Interior Directional and Informational Signs:
   1. Sign Type: Same as room and door signs.
   2. Sizes: Up to 20 lines of information including room numbers, program name and directional information per each sign
   3. Locations:
      a. Each side of entrance lobby as directed by Architect
      b. Entrances from corridors to all stair enclosures; both floors as directed by Architect
      c. Entrance to connecting corridor from Building 2; both floors as directed by Architect

C. Building Identification Signs:
   1. Use individual dimensional cast aluminum letters
   2. Use individual metal letters with the words WILLIAM RUFFNER CAREER AND TECHNICAL EDUCATION CENTER, in format as shown on drawings.
   3. Character Height: 14 inches or of minimum height required by authority having jurisdiction (AHJ), whichever is greater.
   4. Character Depth: 2 inches
   5. Mount on face of exterior wall location indicated on drawings

D. Building Entrance Sign:
1. Use individual dimensional plastic numbers.
2. Number Height: 12 inches or of minimum height required by authority having jurisdiction (AHJ), whichever is greater.
3. Mount on face of exterior wall location indicated on drawings.

2.3 SIGNAGE MATERIAL AND FABRICATION

A. Flat Signs: Signage media without frame.
1. Edges: Square.
2. Corners: Square.
3. Wall Mounting of One-Sided Signs: Tape adhesive.

B. Color and Font: All signage unless otherwise indicated:
1. Character Font: Helvetica, Arial, or other sans serif font.
2. Character Case: Upper case only.
3. Background Color: As selected by Architect from manufacturer's standard colors.
4. Character Color: Contrasting color.

2.4 TACTILE SIGNAGE MEDIA

1. Engraved Panels: Laminated colored plastic; engraved through face to expose core as background color:
2. Total Thickness: 1/8 inch.

2.5 DIMENSIONAL LETTERS

1. Metal Letters:
   a. Metal: Aluminum casting.
   b. Finish: Brushed, satin.
   c. Mounting: Concealed screws.

2. Plastic Letters:
   a. Material: Injection molded plastic.
   b. Color: As selected.
   c. Mounting: Concealed screws or adhered to glazing as indicated.

2.6 ACCESSORIES

1. Concealed Screws: Stainless steel, galvanized steel, chrome plated, or other non-corroding metal.
2. Tape Adhesive: Double sided tape, permanent adhesive.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.

B. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF DIMENSIONAL CHARACTERS

A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.

1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
2. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.
3. Corrosion Protection: Coat concealed surfaces of exterior aluminum in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

B. Mounting Methods:

1. Dimensional Letters:
   a. Through Fasteners: Drill holes in substrate using predrilled holes in sign as template. Countersink holes in sign if required. Place sign in position and flush to surface. Install through fasteners and tighten.
   b. Back Bar and Brackets: Remove loose debris from substrate surface and install backbar or bracket supports in position, so that signage is correctly located and aligned.
2. Adhered Signage:
   a. Adhesive: Clean bond-breaking materials from substrate surface and remove loose debris. Apply linear beads or spots of adhesive symmetrically to back of sign and of suitable quantity to support weight of sign after cure without slippage. Keep adhesive away from edges to prevent adhesive extrusion as sign is applied and to prevent visibility of cured adhesive at sign edges. Place sign in position, and push to engage adhesive. Temporarily support sign in position until adhesive fully sets.
   b. Two-Face Tape: Clean bond-breaking materials from substrate surface and remove loose debris. Apply tape strips symmetrically to back of sign and of suitable quantity to support weight of sign without slippage. Keep strips away from edges to prevent visibility at sign edges. Place sign in position, and push to engage tape adhesive.

3.3 ADJUSTING AND CLEANING

A. Remove and replace damaged or deformed characters and signs that do not comply with specified requirements. Replace characters with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.

B. Remove temporary protective coverings and strippable films as signs are installed.

C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

END OF SECTION 101419

SECTION 102800 - TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Public-use toilet room accessories.
2. Private-use toilet room accessories.
3. Under-lavatory guards.

B. Related Requirements:
1. Section 093013 "Ceramic Tiling" for ceramic toilet and bath accessories.

1.2 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.

B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
2. Include anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.

B. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.

1. Identify locations using room designations indicated.

1.4 INFORMATIONAL SUBMITTALS

A. Sample Warranty: For manufacturer's special warranties.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For accessories to include in maintenance manuals.

PART 2 - PRODUCTS

2.1 OWNER-FURNISHED AND INSTALLED ACCESSORIES

A. Owner-Furnished Materials:

1. Soap dispensers
2. Paper towel dispensers
3. Sanitary napkin dispensers.

2.2 PUBLIC-USE TOILET ROOM ACCESSORIES

A. Toilet accessories in quantities noted for each accessory are to be provided in the following rooms:
1. 100I Girls Toilet
2. 100J Boys Toilet
3. 100Z Girls Toilet
4. 100AA Boys Toilet
5. 200I Girls Toilet
6. 200J Boys Toilet

B. Source Limitations: Obtain each type of public-use washroom accessory from single source from single manufacturer.

C. Toilet Tissue (Roll) Dispenser

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

a. ASI-American Specialties, Inc.
b. Bobrick Washroom Equipment, Inc.
c. Bradley Corporation.

2. Description: Double-roll dispenser
3. Mounting: Partition and wall mounted.
4. Quantity per room: 3
5. Operation: Spindle less with tension-spring controlled delivery and self-locking device extending through core that prevents core removal until roll is empty
6. Capacity: 5-inch- (127-mm-) diameter tissue rolls.
7. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin)

D. Waste Receptacle

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

    a. ASI-American Specialties, Inc.
    b. Bobrick Washroom Equipment, Inc.
    c. Bradley Corporation.

2. Mounting: Surface mounted.
3. Quantity per room: 1
4. Designed for nominal 6-inch (150-mm) masonry wall depth.
5. Minimum Waste-Receptacle Capacity: 4 gal. (15 L).
6. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin)
7. Liner: Removable seamless stainless steel receptacle.
8. Lockset: Tumbler type for and waste receptacle.
9. Seamless lower door for access to container. reinforced panel full height of door, continuously welded bottom pan and seamless exposed flanges.

E. Grab Bars

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

    a. ASI-American Specialties, Inc.
    b. Bobrick Washroom Equipment, Inc.
    c. Bradley Corporation.

2. Mounting: Flanges with concealed fasteners.
3. Material: Stainless steel, 0.05 inch (1.3 mm) thick.

    a. Finish: Smooth, ASTM A480/A480M No. 4 finish (satin) on ends and slip-resistant texture in grip area.

4. Outside Diameter: 1-1/4 inches (32 mm).
5. Configuration and Length: As indicated on Drawings
6. Quantity per room: 2; length as indicated

F. Sanitary-Napkin Disposal Unit

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

    a. ASI-American Specialties, Inc.
    b. Bobrick Washroom Equipment, Inc.
    c. Bradley Corporation.

2. Mounting: Recessed.

3. Door or Cover: Self-closing, disposal-opening cover and hinged face panel with tumbler lockset.
4. Receptacle: Removable.
5. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin)
6. Quantity per room: 3

G. Purse Shelf

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

   a. ASI-American Specialties, Inc.
   b. Bobrick Washroom Equipment, Inc.
   c. Bradley Corporation.

2. Description: Fixed rectangular unit
3. Nominal Size: 36 inches (381 mm) long by 5-1/2 inches (140 mm) wide
4. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin)
5. Quantity per room: 1

H. Mirror Unit

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. ASI-American Specialties, Inc.
   b. Bobrick Washroom Equipment, Inc.
   c. Bradley Corporation.

In "Frame" Subparagraph below, options for tilted and adjustable tilting mirrors are for use by people with disabilities. Adjustable tilting mirrors are prone to vandalism. In lieu of tilted mirrors, standard flat mirrors can be mounted at heights to accommodate users in wheelchairs.

2. Frame: Stainless steel angle, 0.05 inch (1.3 mm) thick; Stainless steel, adjustable tilt at one sink per toilet room.

   a. Corners: Welded and ground smooth.
3. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.
4. Size: 24 inches wide x 40 inches high
5. Quantity per room: 3
6. Hangers: Manufacturer's standard rigid, tamper and theft resistant

2.3 PRIVATE-USE TOILET ROOM ACCESSORIES

A. Toilet accessories in quantities noted for each accessory are to be provided in the following rooms:
   1. 101B Toilet

2. 101C Toilet
3. 102D Patient Toilet
4. 104F Mens Toilet
5. 104G Womens Toilet
6. 104H Clinic Toilet
7. 100K Toilet
8. 105B Toilet
9. 105C Toilet
10. 108F Toilet
11. 108G Toilet
12. 109B Toilet
13. 108C Toilet
14. 110B Toilet
15. 110C Toilet
16. 200G Staff Toilet
17. 200H Toilet
18. 206C Toilet
19. 206D Toilet
20. 209C Toilet
21. 209D Toilet
22. 210C Toilet
23. 210D Toilet

B. Source Limitations: Obtain each type of private-use bathroom accessory from single source from single manufacturer.

C. Private-Use Toilet Tissue (Roll) Dispenser

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

   a. ASI-American Specialties, Inc.
   b. Bobrick Washroom Equipment, Inc.
   c. Bradley Corporation.

2. Description: Double-roll dispenser
3. Mounting: Wall surface mounted.
4. Quantity per room: 1
5. Operation: Spindle less with tension-spring controlled delivery and self-locking device extending through core that prevents core removal until roll is empty
6. Capacity: 5-inch- (127-mm-) diameter tissue rolls.
7. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin)

D. Private-Use Sanitary-Napkin Disposal Unit

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

a. ASI-American Specialties, Inc.
b. Bobrick Washroom Equipment, Inc.
c. Bradley Corporation.

2. Mounting: Surface.
3. Door or Cover: Self-closing, disposal-opening cover and hinged face panel with tumbler lockset.
4. Receptacle: Removable.
5. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin)
6. Quantity per room: 1

E. Private-Use Mirror Unit

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. ASI-American Specialties, Inc.
b. Bobrick Washroom Equipment, Inc.
c. Bradley Corporation.

2. Frame: Stainless steel angle, 0.05 inch (1.3 mm) thick; Stainless steel, adjustable tilt.

a. Corners: Welded and ground smooth.
3. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.
4. Size: 24 inches wide x 40 inches high
5. Hangers: Manufacturer's standard rigid, tamper and theft resistant
6. Quantity per room: 1

F. Grab Bars

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

a. ASI-American Specialties, Inc.
b. Bobrick Washroom Equipment, Inc.
c. Bradley Corporation.

2. Mounting: Flanges with concealed fasteners.
3. Material: Stainless steel, 0.05 inch (1.3 mm) thick.

a. Finish: Smooth, ASTM A480/A480M No. 4 finish (satin) on ends and slip-resistant texture in grip area.

4. Outside Diameter: 1-1/4 inches (32 mm).
5. Configuration and Length: As indicated on Drawings
6. Quantity per room: 2; length as indicated

G. Waste Receptacle

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

   a. ASI-American Specialties, Inc.
   b. Bobrick Washroom Equipment, Inc.
   c. Bradley Corporation.

2. Mounting: Semi-recessed.
3. Quantity per room: 1
4. Coordinate receptacle depth with wall depth and type.
5. Minimum Waste-Receptacle Capacity: 4 gal. (15 L).
6. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin)
7. Liner: Removable seamless stainless steel receptacle.
8. Lockset: Tumbler type for and waste receptacle.
9. Seamless lower door for access to container; reinforced panel full height of door; continuously welded bottom pan and seamless exposed flanges.

H. Underlavatory Guard

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

   a. Buckaroos, Inc.
   b. Plumberex Specialty Products, Inc.
   c. Truebro; IPS Corporation.

2. Description: Insulating pipe covering for supply and drain piping assemblies that prevents direct contact with and burns from piping; allow service access without removing coverings.
3. Material and Finish: Antimicrobial, molded plastic, white.

2.4 CUSTODIAL ACCESSORIES

A. Toilet accessories in quantities noted for each accessory are to be provided in the following rooms:
   1. 100N Janitors
   2. 100X Janitors
   3. 200F Janitors

B. Source Limitations: Obtain custodial accessories from single source from single manufacturer.

C. Custodial Mop and Broom Holder:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

a. ASI-American Specialties, Inc.
b. Bobrick Washroom Equipment, Inc.
c. Bradley Corporation.

2. Description: Unit with shelf, hooks, holders, and rod suspended beneath shelf <Insert
3. Length: 36 inches (914 mm).
4. Hooks: Two
5. Mop/Broom Holders: Three spring-loaded, rubber hat, cam type.
6. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin).

a. Shelf: Not less than nominal 0.05-inch- (1.3-mm-) thick stainless steel.
b. Rod: Approximately 1/4-inch- (6-mm-) diameter stainless steel.

2.5 MATERIALS

A. Stainless Steel: ASTM A240/A240M or ASTM A666, Type 304, 0.031-inch- (0.8-mm-) minimum nominal thickness unless otherwise indicated.

B. Steel Sheet: ASTM A1008/A1008M, Designation CS (cold rolled, commercial steel), 0.036-inch- (0.9-mm-) minimum nominal thickness.

C. Galvanized-Steel Sheet: ASTM A653/A653M, with G60 (Z180) hot-dip zinc coating.

D. Galvanized-Steel Mounting Devices: ASTM A153/A153M, hot-dip galvanized after fabrication.

E. Fasteners: Screws, bolts, and other devices of same material as accessory unit, unless otherwise recommended by manufacturer or specified in this Section, and tamper and theft resistant where exposed, and of stainless or galvanized steel where concealed.

2.6 FABRICATION

A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.

B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install accessories in accordance with manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

1. Remove temporary labels and protective coatings.

B. Grab Bars: Install to comply with specified structural-performance requirements.

3.2 ADJUSTING AND CLEANING

A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.

B. Clean and polish exposed surfaces in accordance with manufacturer's written instructions.

END OF SECTION 102800

SECTION 323113 - CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Chain-Link Fences: I ndustrial.
2. Gates: Motor operated, horizontal slide & swing.

B. Related Sections include the following:

1. Division 03 Section "Concrete Paving" for concrete equipment bases/pads for gate operators, drives, and controls.
2. Division 26 Sections for electrical service and connections for motor operators, controls, limit and disconnect switches, and safety features and for system disconnect switches.
3. Division 31 Section "Earth Moving" for site excavation, fill, and backfill where chain-link fences and gates are located.

1.3 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide chain-link fences and gates capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Minimum Post Size and Maximum Spacing for Wind Velocity Pressure: Determine based on mesh size and pattern specified, and on the following minimum design wind pressures and according to CLFMI WLG 2445:

a. Wind Speed: 80 mph.
b. Fence Height: Match existing height of existing fence to remain on site
c. Line Post Group: IA, ASTM F 1043, Schedule 40 steel pipe.
d. Wind Exposure Category: B.

2. Determine minimum post size, group, and section according to ASTM F 1043 for framework up to 12 feet (3.66 m) high, and post spacing not to exceed 10 feet (3 m).

B. Lightning Protection System: Maximum grounding-resistance value of 25 ohms under normal dry conditions.

1.4 SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for chain-link fences and gates.

1. Fence and gate posts, rails, and fittings.
2. Chain-link fabric, reinforcements, and attachments.
3. Gates and hardware. Including panic hardware where noted.
4. Gate operators, including operating instructions.
5. Motors: Show nameplate data, ratings, characteristics, and mounting arrangements.

B. Shop Drawings: Show locations of fences, gates, posts, rails, tension wires, details of extended posts, extension arms, gate swing, or other operation, hardware, and accessories. Indicate materials, dimensions, sizes, weights, and finishes of components. Include plans, gate elevations, sections, details of post anchorage, attachment, bracing, and other required installation and operational clearances.

1. Gate Operator: Show locations and details for installing operator components, switches, and controls. Indicate motor size, electrical characteristics, drive arrangement, mounting, and grounding provisions.
2. Wiring Diagrams: Power and control wiring and communication and access-control features.
3. For installed products indicated to comply with design loads, include structural analysis data.

C. Product Certificates: For each type of chain-link fence, operator, and gate, signed by product manufacturer.

1. Strength test results for framing according to ASTM F 1043.

D. Qualification Data: For Installer.

E. Field quality-control test reports.

F. Maintenance Data: For the following to include in maintenance manuals:

1. Polymer finishes.
2. Gate operator.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed chain-link fences and gates similar in material, design, and extent to those indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

1. Engineering Responsibility: Preparation of data for chain-link fences and gates, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

B. Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the International Electrical Testing

Association or is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.

1. Testing Agency's Field Supervisor: Person currently certified according to NETA ETT, or the National Institute for Certification in Engineering Technologies, to supervise on-site testing specified in Part 3.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

D. UL Standard: Provide gate operators that comply with UL 325.

E. Emergency Access Requirements: Comply with requirements of authorities having jurisdiction for automatic gate operators serving as a required means of access.

F. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

B. Interruption of Existing Utility Service: Do not interrupt utility services to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Architect no fewer than two days in advance of proposed interruption of utility services.
2. Do not proceed with interruption of utility services without Architect's written permission.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Chain-Link Fences and Gates:

a. Master Halco - www.masterhalco.com
b. Allied Tube and Conduit - www.atcfence.com
c. Richards Fence - www.richardsfence.com

2. Gate Operator:

    a. Viking Access Systems - https://www.vikingaccess.com/
    b. Liftmaster - https://www.liftmaster.com/for-businesses/gate-operators
    c. U.S. Automatic - https://www.usautomatic.com/

2.2 CHAIN-LINK FENCE FABRIC

A. General: Height to match existing fence to remain onsite, limited to 12 feet. Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage.

2.3 INDUSTRIAL FENCE FRAMING

A. Posts and Rails: Comply with ASTM F 1043 for framing, ASTM F 1083 for Group IC round pipe, and the following:

1. Group: IA, round steel pipe, Schedule 40.
2. Fence Height: Match existing fence to remain.
3. Strength Requirement: Heavy industrial according to ASTM F 1043.
4. Post Diameter and Thickness: According to ASTM F 1043
5. Post Size and Thickness: According to ASTM F 1043.

    a. Top Rail: 1.66 inches.
    b. Line Post: 2.375 inches.
    c. End, Corner and Pull Post: 2.875 inches.
    d. Swing Gate Post: 2.375-inch diameter, 3.11-lb/ft. weight.
    e. Horizontal-Slide Gate Post: [According to ASTM F 1184.]

        1) Openings up to 12 Feet (3.7 m): Steel post, 2.875-inch (73-mm) diameter, and 4.64-lb/ft. (6.91-kg/m) weight.
        2) Openings wider than 12 Feet (3.7 m): Steel post, 4-inch (102-mm) diameter, and 8.65-lb/ft. (12.88-kg/m) weight.
        3) Guide posts for Class 1 horizontal-slide gates equal the gate post height, 1 size smaller, but weight is not less than 3.11 lb/ft. (4.63 kg/m); installed adjacent to gate post to permit gate to slide in space between.

6. Coating for Steel Framing:

    a. Metallic Coating:

        1) Type A, consisting of not less than minimum 2.0-oz./sq. ft. (0.61-kg/sq. m) average zinc coating per ASTM A 123/A 123M or 4.0-oz./sq. ft. (1.22-kg/sq. m) zinc coating per ASTM A 653/A 653M.

2.4 TENSION WIRE

A. General: Provide horizontal tension wire at the following locations:

1. Location: Extended along top and bottom of fence fabric.

B. Metallic-Coated Steel Wire: 0.177-inch- diameter, marcelled tension wire complying with ASTM A 817, ASTM A 824, and the following:

1. Metallic Coating: Type II, zinc coated (galvanized) by hot-dip process, with the following minimum coating weight:

a. Class 2: Not less than 1.2 oz./sq. ft. (366 g/sq. m) of uncoated wire surface.

C. Aluminum Wire: 0.192-inch- (4.88-mm-) diameter tension wire, mill finished, complying with ASTM B 211, Alloy 6061-T94 with 50,000-psi (344-MPa) minimum tensile strength.

2.5 INDUSTRIAL SWING GATES

A. General: Comply with ASTM F 900 for single & double swing gate types.

1. Metal Pipe and Tubing: Galvanized steel. Comply with ASTM F 1043 and ASTM F 1083 for materials and protective coatings.

B. Frames and Bracing: Fabricate members from round, galvanized steel tubing with outside dimension and weight according to ASTM F 900 and the following:

1. Gate Fabric Height: 2 inches less than adjacent fence height.
2. Leaf Width: 36 inches.
3. Frame Members:

a. Tubular Steel: 1.90 inches round.

C. Frame Corner Construction:

1. Welded and 5/16-inch- diameter, adjustable truss rods for panels 5 feet wide or wider.

Hardware: Latches permitting operation from both sides of gate, hinges, and keepers for each gate leaf more than 5 feet wide. Provide panic hardware on interior side of fence gates that provide exit from interior courtyards and enclosed areas.

2.6 INDUSTRIAL HORIZONTAL-SLIDE GATES

A. General: Comply with ASTM F 1184 for single slide gate types.

1. Classification: Type II Cantilever Slide, Class 1 with external roller assemblies.
2. Metal Pipe and Tubing: Galvanized steel. Comply with ASTM F 1184 for materials and protective coatings.

B. Frames and Bracing: Fabricate members from round, galvanized steel tubing with outside dimension and weight according to ASTM F 1184 and the following:

1. Gate Fabric Height: 6 feet.
2. Gate Opening Width: As indicated.
3. Frame Members:

a. Tubular Steel 1.90 inches round.

4. Bracing Members:

a. Tubular 1.9 inches Steel round.

C. Frame Corner Construction:

1. Welded frame with panels assembled with bolted or riveted corner fittings and 5/16-inch-diameter, adjustable truss rods for panels 5 feet wide or wider.

D. Overhead Track Assembly: Manufacturer's standard track, with overhead framing supports, bracing, and accessories, engineered to support size, weight, width, operation, and design of gate and roller assemblies.

E. Roller Guards: As required per ASTM F 1184 for Type II, Class 1 gates.

F. Hardware: Latches permitting operation from both sides of gate, locking devices, hangers, roller assemblies, and stops fabricated from galvanized steel. Fabricate latches with integral eye openings for padlocking; padlock accessible from both sides of gate.]

2.7 FITTINGS

A. General: Comply with ASTM F 626.

B. Post and Line Caps: Provide for each post.

1. Line post caps with loop to receive tension wire or top rail.

C. Rail and Brace Ends: Attach rails securely to each gate, corner, pull, and end post.

D. Rail Fittings: Provide the following:

1. Top Rail Sleeves: R ound-steel tubing not less than 6 inches long.
2. Rail Clamps: Line and corner boulevard clamps for connecting intermediate and bottom rails in the fence line-to-line posts.

E. Tension and Brace Bands: Pressed steel.

F. Tension Bars: Steel, length not less than 2 inches shorter than full height of chain-link fabric. Provide one bar for each gate and end post, and two for each corner and pull post, unless fabric is integrally woven into post.

G. Truss Rod Assemblies: Steel, hot-dip galvanized after threading rod and turnbuckle or other means of adjustment.

H. Tie Wires, Clips, and Fasteners: According to ASTM F 626.

1. Standard Round Wire Ties: For attaching chain-link fabric to posts, rails, and frames, complying with the following:

a. Hot-Dip Galvanized Steel: 0.148-inch- diameter wire; galvanized coating thickness matching coating thickness of chain-link fence fabric.

2.8 GATE OPERATORS

A. General: Provide factory-assembled automatic operating system designed for gate size, type, weight, and operation frequency. Provide operation control system with characteristics suitable for Project conditions, with remote-control stations, safety devices, and weatherproof enclosures; coordinate electrical requirements with building electrical system.

1. Provide operator designed so motor may be removed without disturbing limit-switch adjustment and without affecting auxiliary emergency operator.
2. Provide operator with UL approved components.
3. Provide electronic components with built-in troubleshooting diagnostic feature.
4. Provide unit designed and wired for both right-hand/left-hand opening, permitting universal installation.

B. Comply with NFPA 70.

C. Motor Characteristics: Sufficient to start, accelerate, and operate connected loads at designated speeds, within installed environment, with indicated operating sequence, and without exceeding nameplate rating or considering service factor. Comply with NEMA MG-1 and the following:

1. Voltage: NEMA standard voltage selected to operate on nominal circuit voltage to which motor is connected.
2. Horsepower: ½ - 1 depending on manufacturer’s standard.
3. Enclosure: Manufacturer's standard.
4. Duty: Continuous duty at ambient temperature of 105 deg F (40 deg C) and at altitude of 3300 feet (1005 m) above sea level.
5. Service Factor: 1.15 for open dripproof motors; 1.0 for totally enclosed motors.
6. Phase: One.

D. Gate Operators: Concrete base/pad mounted and as follows:

1. Mechanical Slide Gate Operators:

a. Duty: Medium duty, commercial/industrial].
b. Gate Speed: Minimum 45 feet per minute.
c. Maximum Gate Weight: 600 lb.
d. Frequency of Use: Continuous duty.
e. Operating Type: Wheel and rail drive, with manual release.
f. Drive Type: Enclosed worm gear and chain-and-sprocket reducers, roller-chain drive.

E. Remote Controls: Electric controls separated from gate and motor and drive mechanism, per manufacturer’s standards based on selected unit.

1. Control Station: Momentary-contact, single three-button-operated; located remotely from gate. Key switch to lock out open and close buttons.

a. Function: Open and close.

2. Card Reader: Functions only when authorized card is presented. Programmable, magnetic multiple-code system, permitting four different access time periods; face-lighted unit fully visible at night.

a. Reader Type: Touch plate or Proximity.
b. Features: Timed anti-passback, Limited-time usage, and capable of monitoring and auditing gate activity.

3. Telephone Entry System: Hands-free voice-communication system for connection to building telephone system with digital-entry code activation of gate operator and auxiliary keypad entry.
   a. Multiunit System: Designed to be wired to a dedicated telephone line, with capacity to access [20] [100] <Insert number> telephones[, and with electronic directory].

4. Vehicle Loop Detector: System including automatic closing timer with adjustable time delay before closing, timer cut-off switch, and loop detector designed to hold gate open until traffic clears. Provide electronic detector with adjustable detection patterns, adjustable sensitivity and frequency settings, and panel indicator light designed to detect presence or transit of a vehicle over an embedded loop of wire and to emit a signal activating the gate operator. Provide number of loops consisting of multiple strands of wire, number of turns, loop size, and method of placement at location shown on Drawings, as recommended in writing by detection system manufacturer for function indicated.

   a. Loop: Wire, in size indicated for field assembly, for pave-over installation.

F. Obstruction Detection Devices: Provide each motorized gate with automatic safety sensor(s). Activation of sensor(s) causes operator to immediately function as follows:

1. Action: Reverse gate in both opening and closing cycles and hold until clear of obstruction.

G. Limit Switches: Adjustable switches, interlocked with motor controls and set to automatically stop gate at fully retracted and fully extended positions.

H. Emergency Release Mechanism: Quick-disconnect release of operator drive system of the following type of mechanism, permitting manual operation if operator fails. Design system so control circuit power is disconnected during manual operation.
1. Type: Integral fail-safe release, allowing gate to be pushed open without mechanical devices, keys, cranks, or special knowledge.
2. Type: Mechanical device, key, or crank-activated release.

I. Operating Features:

1. Digital Microprocessor Control: Electronic programmable means for setting, changing, and adjusting control features[with capability for monitoring and auditing gate activity. Provide unit that is isolated from voltage spikes and surges.
2. System Integration: With controlling circuit board capable of accepting any type of input from external devices.
3. Master/Slave Capability: Control stations designed and wired for gate pair operation.
4. Automatic Closing Timer: With adjustable time delay before closing.
5. Open Override Circuit: Designed to override closing commands.
6. Reversal Time Delay: Designed to protect gate system from shock load on reversal in

both directions.

7. Maximum Run Timer: Designed to prevent damage to gate system by shutting down system if normal time to open gate is exceeded.
8. Clock Timer: 24-hour, Seven-day programmable for regular events.

J. Accessories:

1. Warning Module: Audio, ADA-compliant, strobe-light alarm sounding three to five seconds in advance of gate operation and continuing until gate stops moving.
2. Battery Backup System: Battery-powered drive and access control system, independent of primary drive system:

    a. Fail Safe: Gate opens and remains open until power is restored.
    b. Fail Secure: Gate cycles on battery power, then fail safe when battery is discharged.
3. External electric-powered solenoid lock with delay timer allowing time for lock to release before gate operates.
4. Fire box.
5. Fire strobe alarm.
6. Intercom System: per system manufacturer's standards.
7. Instructional, Safety, and Warning Labels and Signs: According to Manufacturer's standard for components and features specified.

2.9 CAST-IN-PLACE CONCRETE

A. Materials: Portland cement complying with ASTM C 150, Type I aggregates complying with ASTM C 33, and potable water. Measure, batch, and mix Project-site-mixed concrete according to ASTM C 94/C 94M.

1. Concrete Mixes: Normal-weight concrete[air entrained] with not less than 3000-psi (20.7- MPa) compressive strength (28 days), 3-inch (75-mm) slump, and 1-inch (25-mm) maximum size aggregate.

B. Materials: Dry-packaged concrete mix complying with ASTM C 387 for normal-weight concrete mixed with potable water according to manufacturer's written instructions.

2.10 GROUT AND ANCHORING CEMENT

A. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout, recommended in writing by manufacturer, for exterior applications.

B. Erosion-Resistant Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended in writing by manufacturer, for exterior applications.

2.11 FENCE GROUNDING

A. Conductors: Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.

1. Material above Finished Grade: [Copper] [Aluminum].
2. Material on or below Finished Grade: Copper.
3. Bonding Jumpers: Braided copper tape, 1 inch (25 mm) wide, woven of No. 30 AWG bare copper wire, terminated with copper ferrules.

B. Connectors and Grounding Rods: Comply with UL 467.

1. Connectors for Below-Grade Use: Exothermic welded type.
2. Grounding Rods: Copper-clad steel.

a. Size: 5/8 by 96 inches (16 by 2440 mm).

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, and other conditions affecting performance.

1. Do not begin installation before final grading is completed, unless otherwise permitted by Architect.
2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet (152.5 m) or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.3 INSTALLATION, GENERAL

A. Install chain-link fencing to comply with ASTM F 567 and more stringent requirements specified.

1. Install fencing on established boundary lines inside property line.

3.4 CHAIN-LINK FENCE INSTALLATION

A. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.

B. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.

1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.

2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
    a. Exposed Concrete: Extend 2 inches (50 mm) above grade; shape and smooth to shed water.

C. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment 30 degrees or more.

D. Line Posts: Space line posts uniformly at 8 feet o.c.

E. Post Bracing and Intermediate Rails: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Install braces at end and gate posts and at both sides of corner and pull posts.

1. Locate horizontal braces at midheight of fabric 6 feet (1.83 m) or higher, on fences with top rail and at 2/3 fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.

F. Tension Wire: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Pull wire taut, without sags. Fasten fabric to tension wire with 0.120-inch- (3.05-mm-) diameter hog rings of same material and finish as fabric wire, spaced a maximum of 24 inches (610 mm) o.c. Install tension wire in locations indicated before stretching fabric.

1. Top Tension Wire: Install tension wire through post cap loops.
2. Bottom Tension Wire: Install tension wire within 6 inches (150 mm) of bottom of fabric and tie to each post with not less than same diameter and type of wire.

G. Top Rail: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended in writing by fencing manufacturer.

H. Bottom Rails: Install, spanning between posts.

I. Chain-Link Fabric: Apply fabric to [outside] [inside] of enclosing framework. Leave 1 inch between finish grade or surface and bottom selvage, unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.

J. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches o.c.

K. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at 1 end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric per ASTM F 626. Bend ends of wire to minimize hazard to individuals and clothing.

1. Maximum Spacing: Tie fabric to line posts at 12 inches o.c. and to braces at 24 inches o.c.

L. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side

3.5 GATE INSTALLATION

A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.6 GATE OPERATOR INSTALLATION

A. General: Install gate operators according to manufacturer's written instructions, aligned and true to fence line and grade.

B. Excavation for Concrete Bases/Pads: Hand-excavate holes for bases/pads, in firm, undisturbed soil to dimensions and depths and at locations as required by gate-operator component manufacturer's written instructions and as indicated.

C. Concrete Bases/Pads: Cast-in-place or precast concrete, depth not less than 6 to 12 inches below frost line, dimensioned and reinforced according to gate-operator component manufacturer's written instructions and as indicated on Drawings.

D. Vehicle Loop Detector System: B ury and seal wire loop according to manufacturer's written instructions. Connect to equipment operated by detector.

E. Comply with NFPA 70 and manufacturer's written instructions for grounding of electric-powered motors, controls, and other devices.

3.7 GROUNDING AND BONDING

A. Fence Grounding: Install at maximum intervals of 1500 feet except as follows:

1. Fences within 100 Feet of Buildings, Structures, Walkways, and Roadways: Ground at maximum intervals of 750 feet .

a. Gates and Other Fence Openings: Ground fence on each side of opening.

1) Bond metal gates to gate posts.
2) Bond across openings, with and without gates, except openings indicated as intentional fence discontinuities. Use No. 2 AWG wire and bury it at least 18 inches below finished grade.

B. Protection at Crossings of Overhead Electrical Power Lines: Ground fence at location of crossing and at a maximum distance of 150 feet on each side of crossing.

C. Fences Enclosing Electrical Power Distribution Equipment: Ground as required by IEEE C2, unless otherwise indicated.

D. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at the grounding location, including the following:

1. Each Barbed Wire Strand. Make grounding connections to barbed wire with wire-to-wire

connectors designed for this purpose.

2. Each Barbed Tape Coil: Make grounding connections to barbed tape with connectors designed for this purpose.

E. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.

F. Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.

1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
2. Make connections with clean, bare metal at points of contact.
3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

G. Bonding to Lightning Protection System: If fence terminates at lightning-protected building or structure, ground the fence and bond the fence grounding conductor to lightning protection down conductor or lightning protection grounding conductor complying with NFPA 780.

3.8 FIELD QUALITY CONTROL

A. Grounding-Resistance Testing: Engage a qualified independent testing and inspecting agency to perform field quality-control testing.

1. Grounding-Resistance Tests: Subject completed grounding system to a megger test at each grounding location. Measure grounding resistance not less than two full days after last trace of precipitation, without soil having been moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural grounding resistance. Perform tests by two-point method according to IEEE 81.
2. Excessive Grounding Resistance: If resistance to grounding exceeds specified value, notify Architect promptly. Include recommendations for reducing grounding resistance and a proposal to accomplish recommended work.
3. Report: Prepare test reports certified by a testing agency of grounding resistance at each test location. Include observations of weather and other phenomena that may affect test results.

3.9 ADJUSTING

A. Gate: Adjust gate to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

B. Automatic Gate Operator: Energize circuits to electrical equipment and devices. Adjust

operators, controls, safety devices, alarms, and limit switches.

1. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
2. Test and adjust control, alarms, and safeties. Replace damaged and malfunctioning controls and equipment.

C. Lubricate hardware, gate operator, and other moving parts.

3.10 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain gates. Refer to Division 01 Section "Demonstration and Training."

END OF SECTION 323113

SECTION 323223 - SEGMENTAL RETAINING WALLS (SRW)

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals:

1. Product Data

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: If SRW is over allowable height for standard gravity wall, a comprehensive engineering analysis by a qualified professional engineer will be required.

B. Structural Performance: Engineering design shall be based on NCMA's "Design Manual for Segmental Retaining Walls."

C. Seismic Performance: Engineering design shall be based on NCMA's "Segmental Retaining Walls - Seismic Design Manual."

2.2 RETAINING WALL MATERIALS

A. Concrete Units: ASTM C 1372, Normal Weight, complying with requirements for freeze-thaw durability.

1. Manufacturers:
2. Basis-of-Design Product: Product indicated on Drawings by Redi-Rock (Gravity Wall) or a comparable product of one of the following:

    a. Allan Block Corporation.
    b. Anchor Wall Systems, Inc.
    c. Rockwood Retaining Walls, Inc.
    d. Versa-Lok Retaining Wall Systems; a division of Kiltie Corporation.

3. Provide units that interlock with courses above and below by means of integral shear knobs or pins.
4. Exposed Faces: Machine-split textured.
5. Shape and Dimensions: Shape and dimensions that will produce segmental retaining walls of heights indicated.
6. Cap units and other special shapes to provide textures on exposed surfaces matching faces.

B. Leveling Base: Base material per Section 312000 "Earth Moving."

C. Drainage Fill: Drainage course per Section 312000 "Earth Moving."

D. Soil Fill: Satisfactory soils per Section 312000 "Earth Moving."

E. Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters.

F. Soil Reinforcement: NOT ANTICIPATED FOR THIS SITE – GRAVITY WALL STANDARD DETAIL.

PART 3 - EXECUTION

3.1 RETAINING WALL INSTALLATION

A. Place and compact base material to not less than 95 percent maximum dry unit weight according to ASTM D 698.

B. Place retaining wall units according to NCMA's "Segmental Retaining Wall Installation Guide."

1. Place fills on both sides of wall at same time, where both sides are indicated to be filled.
2. Fill voids with drainage fill.

C. Cap Units: Place cap units and secure with cap adhesive.

3.2 FILL PLACEMENT

A. Place, spread, and compact fill in uniform lifts for full width and length of embankment as wall is laid. Begin at back of wall and place and spread fill toward embankment.

1. Compact drainage fill and reinforced soil fill to 95 percent maximum dry unit weight according to ASTM D 698, except within 48 inches (1200 mm) of wall.
2. Use only hand-operated compaction equipment within 48 inches (1200 mm) of wall and compact to not less than 90 percent maximum dry unit weight according to ASTM D 698.
3. Compact nonreinforced soil fill per Section 312000 "Earth Moving."

B. Field Quality Control: Comply with requirements in Section 312000 "Earth Moving."

1. In each compacted backfill layer, perform at least one field in-place compaction test for each 150 feet (50 m) or less of segmental retaining wall length.

END OF SECTION 323223

SECTION 329200 - TURF AND GRASSES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data.

B. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in TPI's "Guideline Specifications to Turfgrass Sodding."

C. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from the date of substantial competition.

1. Spring planting: March 15-June15.

2. Summer planting: June 16-August 31

3. Fall: September 1- November 15

D. Spring or Fall plantings are the preferred, if Summer plantings are used then additional watering shall be used to guarantee the survival of the plantings.

1.2 PRODUCTS

GRASSES

A. Seed Species: State-certified seed of grass species, as follows:

B. Seed Species: Seed of grass species as follows, with not less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed:

1. Seed Mixture: Sothern Lawn Extreme

C. Grass Seed Mix: Proprietary seed mix as follows:

1. Products:

a. Southern Lawn Extreme – Landscape Supply Company

1.3 SOILS AND AMENDMENTS

A. Topsoil: ASTM D 5268, with pH range of 5.5 to 7, free of stones 1 inch (25 mm) or larger and other extraneous materials harmful to plant growth.

B. Lime: ASTM C 602, Class T, agricultural limestone.

C. Compost: Well-composted, stable, and weed-free organic matter; pH range of 5.5 to 8.

D. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.

E. Commercial Fertilizer: Commercial-grade complete fertilizer, consisting of 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.

F. Slow-Release Fertilizer: Granular fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium; 20 percent nitrogen; 10 percent phosphorous; and 10 percent potassium; by weight.

G. Straw Mulch: Clean, mildew- and seed-free salt hay or threshed straw of wheat, rye, oats, or barley.

H. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic; free of plant-growth or germination inhibitors; with maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.

PART 2 - EXECUTION

2.1 PREPARATION

A. Loosen subgrade to a minimum depth of 4 inches; remove stones, sticks, existing grass, vegetation, and other extraneous materials.

B. Grade lawn areas to a smooth, even surface with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades. Moisten before planting.

2.2 PLANTING

A. Seeding: Evenly distribute seed by sowing with a spreader or a seeding machine. Rake seed lightly into top 1/8 inch (3 mm) of topsoil, roll lightly, and water with fine spray. Protect seeded areas by spreading straw mulch 1-1/2 inches (38 mm) in loose depth.

1. Seeding Rate: 5 to 8 lb/1000 sq. ft.

B. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Uniformly blended into a homogeneous slurry.

1. Apply slurry uniformly at a rate so that mulch component is deposited at no less than 1500-lb/acre dry weight, and seed component is deposited at no less than the specified seed-sowing rate.
2. Seeding Rate: 5 to 8 lb/1000 sq. ft.

C. Sodding: Lay sod within 24 hours of harvesting. Lay sod with tightly fitted joints, offsetting joints in adjacent courses. Tamp and roll lightly. Fill minor cracks between pieces of sod with soil or sand. Anchor sod on slopes exceeding 1:6 with wood pegs or steel staples. Saturate sod with fine water spray within two hours of planting. During first week, water daily.

2.3 MAINTENANCE

A. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth lawn. Provide materials and installation the same as those used in the original installation.

B. Maintain turf until established, but for not less than 60 days.

C. Mow lawn as soon as top growth is tall enough to cut. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet.

END OF SECTION 329200

APPENDIX B – HAZARDOUS MATERIAL REPORTS

22 South Main Street, Suite BO1
Lexington, VA 24450

Phone: 540-463-3336
Fax: 540-463-3546

ROCKBRIDGE ENVIRONMENTAL
CONSULTING, INC.

Mr. Jeff Shawver
Chief of Physical Plants
Roanoke City Schools
3601 Ferncliff Avenue
Roanoke, VA 24017

February 9, 2022

Mr. Shawver,

This letter shall serve as the Certification of Completion for the Asbestos Bulk Sampling at William Ruffner located at 3601 Ferncliff Avenue in Roanoke, Virginia. Mr. Chance Famuliner, a Virginia-Licensed Asbestos and Lead Inspector and Asbestos Management Planner completed the inspections on January 26, 2022. Documentation attached herein is provided as supplemental to the original AHERA Management Plan.

A thorough review of the school included a site visit and visual inspection of the building, plus a review of historical documentation available including past inspections and the existing AHERA Management Plan. Documentation attached herein is provided as supplemental to the original AHERA Management Plan.

Previously identified materials tested positive for more than 1% asbestos:

- Nonfriable black mastic used to adhere non-asbestos vinyl floor tiles.
- Friable incandescent lighting heat shields in restroom - 1 identified.

If these materials are to be disturbed during the upcoming renovation, they should be abated prior, along with Project Monitoring and Clearance sampling. The AHERA Management Plan should be updated per 40 CFR Part 763 to reflect any response actions prior to the location coming back online as a school building.

This testing identified ACM that was generally accessible through non-destructive methods, therefore, ACM's could remain inside walls, above hard ceilings, below floors or encased in concrete. If any additional materials not identified in this report are discovered during any renovation, they should be assumed to contain asbestos until sampling proves otherwise. Roofing and Exterior areas were not included in this evaluation.

Please refer to the Laboratory Chain of Custody for a detailed description of materials and locations. Please retain these documents for your permanent records and insert all into the Asbestos Management Plan for the school.

Thank you.

Respectfully,

Kristin Famuliner
Senior Biologist
VA Asbestos Inspector # 3303 002602
VA Asbestos Project Designer # 3305 000989
VA Asbestos Project Monitor # 3309 001040
VA Asbestos Management Planner # 3304 001422

William Ruffner Middle School

Asbestos Materials Inspection

Sample Location, Description, Assessments & Results

Date: 6/29/2021

Client: Roanoke City Schools

Location: William Ruffner Middle School

INSPECTOR: Peter Palmer

SA # = Sample Number \ HA# = Homogeneous Area Number

ACM = Asbestos Containing Material \ NAD= No Asbestos Detected

SA #	HA #	LOCATION	DESCRIPTION	COLOR	AMOUNT	SSESSMEN	ACM	RESULTS
R-1	1	East covered walkway	2' x 2' CT 1 Cross fissure Ran hole	White	Throughout	good	no	NAD
R-2	12	Stage in Cafeteria	12" x 12" VFT Type 3 random speckle	Beige	300 SF	good	no	Building demolished
R-3	4	Scuttle in boys locker Rm beside Gym	TSI elbow on Fiberglass 1" line	Gray	Throughout	good	no	NAD
R-4	14	Band room West Bldg	Black Mastic NO Floor tile	Black	1200 SF	good	no	Building demolished
R-5	6	Technology Lab @ column	2' x 2' CT Type 3 Fis & Rand Hole	White	Throughout	good	no	NAD
R-6	2	East covered walkway @ diffuser	2' x 2' CT Type 2 Deep Cross Fis Ran Hole	White	Throughout	good	no	NAD
R-7	7	Technology Lab in East Bldg	Bottom Layer of Floor tile Type 1 w/ blk mast	Beige	1600 SF	good	no	NAD
R-8	15	Computer Lab West Bldg @ door	12" x 12" VFT Type 5 Border Tile	Black	250 SF	good	no	NAD
R-9	16	Computer Lab West Bldg tile	12" x 12" VFT Type 7 w/ yellow mastic	Mauve	500 SF	good	no	NAD
R-10	**10**	**Rm 209 East Bldg in Closet**	**Light fixture Asbestos Heat Shield**	**Gray**	**1 SF**	**good**	***yes***	**65% chrys**
R-11	4	Janitor Closet in Cateteria	At roof access Lader	Gray	12 LF	poor	no	NAD
R-12	5	East Bldg in hallway @ concrete inset	Rubberized caulk around Exp Aggregate	Off White	Throughout	12	no	NAD
R-13	3	Hallway @ Rm 102	Tile Grout	White	Throughout	good	no	NAD
R-14	8	Technology Lab in East Bldg	12" x 12" VFT Type 2	Red	1600 SF	good	no	NAD
R-15	4	Custodial office East Bldg	TSI Elbow on Fiberglass 3 inch line	Gray	Throughout	poor	no	NAD
R-16	11	Band room West Bldg	2' x 2' CT Type 4 Rand Pin Hole/Deep fis	White	Throughout	good	no	Building demolished
R-17	13	Stage in Cafeteria	12" x 12" VFT Type 4 speckle w/ mastic	Brown	300 SF	good	no	NAD
R-18	17	Computer Lab West Bldg tile	12" x 12" VFT Type 6 w/ yellow mastic	Beige	300 SF	good	no	NAD
R-19	4	Laundry Rm in East Bldg @ washer	TSI elbow on Fiberglass 1" line	Gray	60 LF	good	no	NAD
R-20	9	Rm 105 Back wall	Joint Compound	White	20 SF	good	no	NAD
R-21	18	Lounge in West Bldg @ Cafeteria	12" x 12" VFT Type 8 streak w/ tan mastic	Off White	200 SF	good	no	Building demolished
R-22	19	Bldg 4 above ceiling tiles	Ductwork Mastic	White	300 SF	good	no	NAD
R-23	20	Bldg 4 Rm 401 @ door way	12" x 12" VFT Type 9 smear	Lt Green	2500 SF	good	no	NAD
R-24	21	Bldg 4 Janitors Closet	TSI Elbow at Roof Ladder	Gray	12 LF	fair	no	NAD
R-25	22	Bldg 4 Janitors Closet	Lightweight concrete @ roof deck	Gray	8000 SF	good	no	NAD
R-26	23	Bldg 4 2x2 Ceiling Tiles	2' x 2' CT Type 5 wide cross fis wide hole	White	Throughout	good	no	NAD
R-27	**24**	**Main Bldg Art room @ Doorway**	**12" x 12" VFT Type 10 smear**	**Off White**	**425 SF**	**good**	***yes***	Building demolished
R-28	25	Nurse's Bathroom Main Office	12" x 12" VFT Type 11 w/ yellow mastic	Gold	25 SF	good	noo	NAD

chrys=chrysotile asbestos, ASSUMED=assumed to contain asbestos, VFT=Vinyl floor tile

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation
9960 Mayland Drive, Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
05-31-2022

NUMBER
3303002229

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS
ASBESTOS INSPECTOR LICENSE

CHARLES CHANCE FAMULINER
493 UNEXPECTED ROAD
LEXINGTON, VA 24450-0000

DPOR

Status can be verified at http://www.dpor.virginia.gov

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)

DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS
ASBESTOS INSPECTOR LICENSE
NUMBER: 3303002229 EXPIRES: 05-31-2022

CHARLES CHANCE FAMULINER
493 UNEXPECTED ROAD
LEXINGTON, VA 24450-0000

(FOLD)

Status can be verified at http://www.dpor.virginia.gov

DPOR-PC (02/2017)

22 South Main Street, Suite BO1
Lexington, VA 24450

Phone: 540-463-3336
Fax: 540-463-3546

ROCKBRIDGE ENVIRONMENTAL CONSULTING, INC.

Mr. Jeff Shawver
Chief of Physical Plants
Roanoke City Schools
3601 Ferncliff Avenue
Roanoke, VA 24017

March 18, 2022

Mr. Shawver,

This letter shall serve as the Certification of Completion for the Supplemental Sampling performed prior to the renovation at Ruffner Middle located at 3601 Ferncliff Avenue, located in Roanoke, Virginia. Mr. Chance Famuliner, a VA-licensed Asbestos Inspector completed the evaluation on March 8, 2022.

The building has largely been used to house staff but will now be converted back into a student occupied building. Sample areas are now updated using 2022 renovation nomenclature from the Architectural Design services provided.

Bulk samples were forwarded to SanAir Technologies in Powhatan, Virginia, and were further divided to meet laboratory regulatory compliance and analyzed via Polarized Light Microscopy using the EPA Interim Method for the Determination of Asbestos in Bulk Samples (EPA-600/R-93/116).

A field sketch has been included with locations of known asbestos flooring/ remaining mastics. If any additional materials not identified in this report are discovered during any renovation, they should be assumed to contain asbestos until sampling proves otherwise. Roofing was excluded as it had been completed prior. The interior portion of Building 2 (formerly the Annex) was not included as it won't be disturbed during the upcoming renovation. This testing identified ACM that was generally accessible through non-destructive methods, therefore, ACM's could remain inside walls, above hard ceilings, below floors or encased in concrete.

Please note that VA DPOR defines Asbestos-Containing Materials (ACM) as materials containing more than 1% asbestos. OSHA Regulations apply to material containing any percentage of asbestos.

The following materials tested greater than 1% positive for asbestos:

- Gray nonfriable exterior door caulking sampled at the double doors in the Courtyard tested positive for 2% chrysotile. This material is also located at the storefront assembly and exterior doors.

- Further sampling confirmed the nonfriable black mastic used to adhere the tan 12" x 12" vinyl composition floor tile which is located below carpet at the 1st Floor Maintenance & Op Storage (Incidental use) tested positive for 3% chrysotile.
- Black/brown adhesive located below blue carpeting sampled at the 1st Floor Storage Health Services tested positive for 3% chrysotile.
- Gray, nonfriable interior door caulking sampled at the 1F Stairwell door casing and at the 1F Jan/Mech both tested positive for 5% chrysotile.
- Exterior, nonfriable window glazing compound (painted black) sampled Building #2 tested positive for 2% chrysotile.
- One friable incandescent lighting heat shield tested positive for 65% chrysotile asbestos during a previous inspection from 2F Office Storage.

The following materials tested positive for <1% trace amount of asbestos:

- Black Adhesive/mastic sampled below 2 layers of carpeting in 2F Conference/adjacent Office tested positive for <1% (trace) amount of chrysotile.

Assumed asbestos-containing materials:

- 9" x 9" vinyl composition floor tile and mastic was observed located below carpeting in the 2F Conference area.
- Friable roof drain insulations were observed in the Gym. Roof drains presumed throughout the building should be assumed to contain asbestos until sampling proves otherwise.

We recommend removal of these materials prior to renovation in order to prevent them from releasing asbestos fibers when disturbed. Qualified personnel should complete all removal, decontamination, and transportation of asbestos containing materials and asbestos contaminated materials. We recommend Asbestos Project Monitoring be performed during abatement.

Please retain these documents for your permanent records and insert all into the Asbestos Management Plan for the school. Please refer to the attached Laboratory Results for any additional details. Please retain these documents for your permanent records.

Thank you. Please feel free to contact our office with any questions.

Respectfully,

Kristin Famuliner

Senior Biologist

VA Asbestos Inspector # 3303 002602
VA Asbestos Project Designer # 3305 000989
VA Asbestos Project Monitor # 3309 001040
VA Asbestos Management Planner # 3304 001422

SanAir Technologies Laboratory

The Identification Specialists

Analysis Report
prepared for
Rockbridge Environmental Consulting, Inc.

Report Date: 3/11/2022

Project Name: Ruffner, Reno

Project #: RCPS

SanAir ID#: 22011722

NVLAP® TESTING

NVLAP LAB CODE 200870-0

10501 Trade Court I North Chesterfield, Virginia 23236
888.895.1177I 804.897.1177 I fax: 804.897.0070 I IAQ@SanAir.com I SanAir.com

SanAir
Technologies Laboratory

SanAir ID Number
22011722
FINAL REPORT
3/11/2022 3:23:21 PM

Name: Rockbridge Environmental Consulting, Inc.
Address: 22 S Main St
Suite B01
Lexington, VA 24450
Phone: 540-463-3336

Project Number: RCPS
P.O. Number:
Project Name: Ruffner, Reno
Collected Date: Not Provided on COC
Received Date: 3/10/2022 12:20:00 PM

Dear Chance Famuliner,

We at SanAir would like to thank you for the work you recently submitted. The 20 sample(s) were received on Thursday, March 10, 2022 via UPS. The final report(s) is enclosed for the following sample(s): SA-1, SA-2, SA-3, SA-4, SA-5, SA-6, SA-7, SA-8, SA-9, SA-10, SA-11, SA-12, SA-13, SA-14, SA-15, SA-16, SA-17, SA-18, SA-19, SA-20.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobrino

Sandra Sobrino
Asbestos & Materials Laboratory Manager
SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions:
- 20 samples in Good condition.

SanAir Technologies Laboratory

SanAir ID Number
22011722
FINAL REPORT
3/11/2022 3:23:21 PM

Name: Rockbridge Environmental Consulting, Inc.
Address: 22 S Main St
Suite B01
Lexington, VA 24450
Phone: 540-463-3336

Project Number: RCPS
P.O. Number:
Project Name: Ruffner, Reno
Collected Date: Not Provided on COC
Received Date: 3/10/2022 12:20:00 PM

Analyst: Moore, Brandi

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	% Non-fibrous	Asbestos Fibers
SA-1 / 22011722-001 Exterior Door Caulk, Double Doors Courtyard	Grey Non-Fibrous Homogeneous		98% Other	2% Chrysotile
SA-2 / 22011722-002 Exterior Door Caulk, Double Doors Courtyard	Grey Non-Fibrous Homogeneous		98% Other	2% Chrysotile
SA-3 / 22011722-003 Exterior Window Glazing Compound	White Non-Fibrous Homogeneous		100% Other	None Detected
SA-4 / 22011722-004 Exterior Window Glazing Compound	White Non-Fibrous Homogeneous		100% Other	None Detected
SA-5 / 22011722-005 12x12 VCT, Shop Work Room, Floor Tile	Brown Non-Fibrous Homogeneous		100% Other	None Detected
SA-5 / 22011722-005 12x12 VCT, Shop Work Room, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
SA-6 / 22011722-006 12x12 VCT, Shop Work Room, Floor Tile	Brown Non-Fibrous Homogeneous		100% Other	None Detected
SA-6 / 22011722-006 12x12 VCT, Shop Work Room, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
SA-7 / 22011722-007 Exterior Window Caulk, Court Yard	Grey Non-Fibrous Homogeneous		100% Other	None Detected
SA-8 / 22011722-008 Interior Window Glazing Compound, Corridor At Gym	Grey Non-Fibrous Homogeneous		100% Other	None Detected

Analyst: Brandi Moore Approved Signatory:

Analysis Date: 3/11/2022 Date: 3/11/2022

SanAir
Technologies Laboratory

SanAir ID Number
22011722
FINAL REPORT
3/11/2022 3:23:21 PM

Name: Rockbridge Environmental Consulting, Inc.
Address: 22 S Main St
Suite B01
Lexington, VA 24450
Phone: 540-463-3336

Project Number: RCPS
P.O. Number:
Project Name: Ruffner, Reno
Collected Date: Not Provided on COC
Received Date: 3/10/2022 12:20:00 PM

Analyst: Moore, Brandi

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	% Non-fibrous	Asbestos Fibers
SA-9 / 22011722-009 MJP, 3" Hot, 2F Locker Area, HVAC Closet	Grey Non-Fibrous Homogeneous	20% Glass	80% Other	None Detected
SA-10 / 22011722-010 MJP, 2" Cold, 2F Locker Area, HVAC Closet	Grey Non-Fibrous Homogeneous	20% Glass	80% Other	None Detected
SA-11 / 22011722-011 12x12 VCT, Office 2F, Former Elect Area, Floor Tile	White Non-Fibrous Homogeneous		100% Other	None Detected
SA-11 / 22011722-011 12x12 VCT, Office 2F, Former Elect Area, Mastic/Leveler	Various Non-Fibrous Heterogeneous		100% Other	None Detected
SA-12 / 22011722-012 12x12 VCT, Mastic, Below Carpet, 1F Mainten And Operations, Floor Tile	Tan Non-Fibrous Homogeneous		100% Other	None Detected
SA-12 / 22011722-012 12x12 VCT, Mastic, Below Carpet, 1F Mainten And Operations, Mastic	Black Non-Fibrous Homogeneous		97% Other	3% Chrysotile
SA-13 / 22011722-013 Adhesive Below Carpet, 1F Storage, Health Services	Brown Non-Fibrous Heterogeneous		97% Other	3% Chrysotile
SA-14 / 22011722-014 12x12 VCT, IT Tech Break Area	Brown Non-Fibrous Homogeneous		100% Other	None Detected
SA-15 / 22011722-015 Interior Door Caulk, 1F Stairwell Door Case	Grey Non-Fibrous Heterogeneous		95% Other	5% Chrysotile
SA-16 / 22011722-016 Interior Door Caulk, 1F Room 162, Elec Equip Rm	Grey Non-Fibrous Heterogeneous		95% Other	5% Chrysotile

Analyst: Brandi Moore Approved Signatory:

Analysis Date: 3/11/2022 Date: 3/11/2022

SanAir Technologies Laboratory

SanAir ID Number
22011722
FINAL REPORT
3/11/2022 3:23:21 PM

Name: Rockbridge Environmental Consulting, Inc.
Address: 22 S Main St
Suite B01
Lexington, VA 24450
Phone: 540-463-3336

Project Number: RCPS
P.O. Number:
Project Name: Ruffner, Reno
Collected Date: Not Provided on COC
Received Date: 3/10/2022 12:20:00 PM

Analyst: Moore, Brandi

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	% Non-fibrous	Asbestos Fibers
SA-17 / 22011722-017 Adhesive/Mastic Below 2 Layers Of Carpet, Rm 216	Black Non-Fibrous Heterogeneous		100% Other	< 1% Chrysotile
SA-18 / 22011722-018 Mastic, Below Carpet 2F Office, Former Elec Shop Super	Brown Non-Fibrous Homogeneous		100% Other	None Detected
SA-19 / 22011722-019 Annex Exterior Window Caulk	White Non-Fibrous Homogeneous		100% Other	None Detected
SA-20 / 22011722-020 Annex Exterior Window Glazing Compound	Grey Non-Fibrous Homogeneous		98% Other	2% Chrysotile

Analyst: Brandi Moore
Approved Signatory:

Analysis Date: 3/11/2022
Date: 3/11/2022

Disclaimer

This report is the sole property of the client named on the SanAir Technologies Laboratory chain-of-custody (COC). Results in the report are confidential information intended only for the use by the customer listed on the COC. Neither results nor reports will be discussed with or released to any third party without our client's written permission. The final report shall not be reproduced except in full without written approval of the laboratory to assure that parts of the report are not taken out of context. The information provided in this report applies only to the samples submitted and is relevant only for the date, time, and location of sampling. The accuracy of the results is dependent upon the client's sampling procedure and information provided to the laboratory by the client. SanAir assumes no responsibility for the sampling procedure and will provide evaluation reports based solely on the sample(s) in the condition in which they arrived at the laboratory and information provided by the client on the COC, such as: project number, project name, collection dates, po number, special instructions, samples collected by, sample numbers, sample identifications, sample type, selected analysis type, flow rate, total volume or area, and start stop times that may affect the validity of the results in this report. Samples were received in good condition unless otherwise noted on the report. SanAir assumes no responsibility or liability for the manner in which the results are used or interpreted. This report does not constitute and shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any other U.S. governmental agencies and may not be certified by every local, state, and federal regulatory agencies.

Samples are held for a period of 60 days. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations.

For NY state samples, method EPA 600/M4-82-020 is performed.

NYELAP Disclaimer:
Polarized- light microscopy is not consistently reliable in detecting asbestos in floor covering and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

Asbestos Certifications
NVLAP lab code 200870-0
City of Philadelphia: ALL-460
PA Department of Environmental Protection Number: 68-05397
California License Number: 2915
Colorado License Number: AL-23143
Connecticut License Number: PH-0105
Massachusetts License Number: AA000222
Maine License Number: LB-0075, LA-0084
New York ELAP lab ID: 11983
Rhode Island License Number: PCM00126, PLM00126, TEM00126
Texas Department of State Health Services License Number: 300440
Commonwealth of Virginia 3333000323
Washington State License Number: C989
West Virginia License Number: LT000616
Vermont License: AL166318
Louisiana Department of Environmental Quality: 212253, Cert 05088

Revision Date: 8/14/2020

SanAir Technologies Laboratory

10501 Trade Ct., Suite 100
N. Chesterfield, VA 23236
804.897.1177 / 888.895.1177
Fax 804.897.0070
sanair.com

Asbestos
Chain of Custody
Form 140, Rev 6, 1/26/2022

SanAir ID Number: 2201722

Company: REC, INC	Project #: RCPS	Collected by: CeF
Address: 22.5 Main St Suite B01	Project Name: Ruffner, ~~Rent~~ Rent	Phone #:
City, St., Zip: Lexington, VA 24450	Date Collected: March 2022	Fax #:
State of Collection: Account#:	P.O. Number:	Email: KRISTIA, CHANCE, & Judy

Bulk

ABB	PLM EPA 600/R-93/116	X
	Positive Stop	
ABEPA	PLM EPA 400 Point Count	
ABB1K	PLM EPA 1000 Point Count	
ABBEN	PLM EPA NOB**	
ABBCH	TEM Chatfield**	
ABBTM	TEM EPA NOB**	
ABQ	PLM Qualitative	

** Available on 24-hr. to 5-day TAT

Water

ABHE	EPA 100.2	

Air

ABA	PCM NIOSH 7400	
ABA-2	OSHA w/ TWA*	
ABTEM	TEM AHERA	
ABATN	TEM NIOSH 7402	
ABT2	TEM Level II	
Other:		

New York ELAP

ABEPA2	NY ELAP 198.1	
ABENY	NY ELAP 198.6 PLM NOB	
ABBNY	NY ELAP 198.4 TEM NOB	

Soil

ABSE	PLM EPA 600/R-93/116 (Qual.)	

Soil

ABSP	PLM CARB 435 (LOD <1%)	
ABSP1	PLM CARB 435 (LOD 0.25%)	
ABSP2	PLM CARB 435 (LOD 0.1%)	

Dust

ABWA	TEM Wipe ASTM D-6480	
ABDMV	TEM Microvac ASTM D-5755	

Matrix	Other	

Turn Around Times				
	3 HR (4 HR TEM) ☐	6 HR (8HR TEM) ☐	12 HR ☐	1 Day ☒
	☐ 2 Days	☐ 3 Days	☐ 4 Days	☐ 5 Days

Special Instructions

Sample #	Sample Identification/Location	Volume or Area	Sample Date	Flow Rate*	Start – Stop Time*
Sa-1	Exterior door Caulk, grey, double doors courtyard				
Sa-2	Exterior door Caulk, grey, double doors, courtyard				
Sa-3	Exterior window glazing Compound				
Sa-4	Exterior window glazing Compound				
Sa-5	12x12 VCT BROWN, Shopwork Room				
Sa-6	12x12 VCT BROWN, Shop work Room				
Sa-7	Exterior window Caulk, grey, Court yard				
Sa-8	Interior window glazing Compound, grey, Corridor at gym				
Sa-9	MJP, 3" Hot, 2F Locker area, HVAC closet				
Sa-10	MJP, 2" Cold, 2F Locker area, HVAC Closet				
Sa-11	12x12 vct White, Office 2F, former E ect Area				
Sa-12	12x12 vct tan, Black mastic, below carpet, 1F Maintenance operations, former ART				

Relinquished by	Date	Time	Received by	Date	Time
C. Fa h			DTB	3/10/22	11:20

If no technician is provided, then the primary contact for your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm EST will be logged in the next business day. Weekend or holiday work must be scheduled ahead of time and is charged at 150% of the 3hr TAT or a minimum charge of $150. A courier charge will be applied for same day and one-day turnaround times for offsite work. SanAir covers Ground and Next Day Air shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

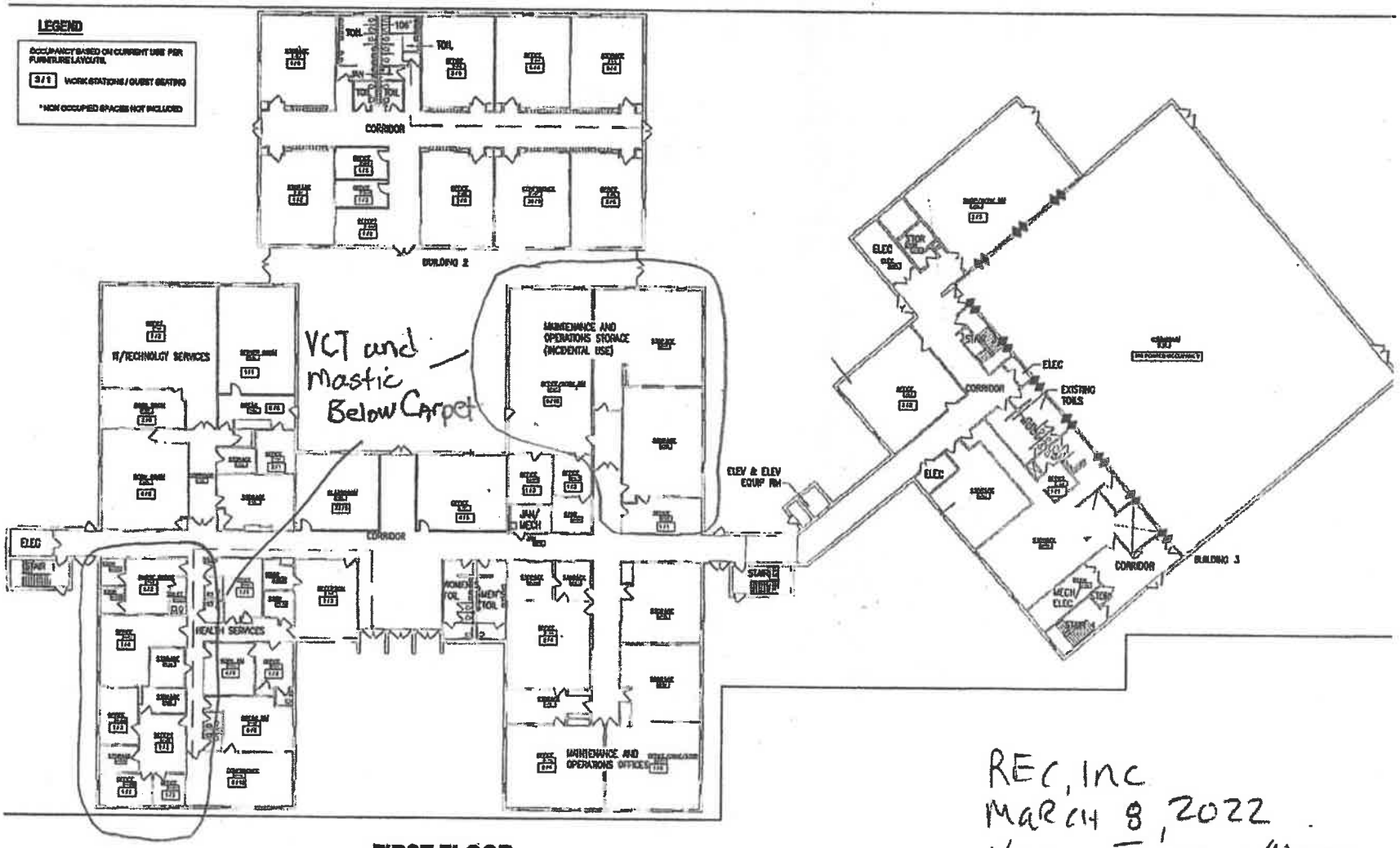
220172 Form 140, Revision 1, 1/20/2017

Sample #	Sample Identification/Location	Volume or Area	Sample Date	Flow Rate*	Start – Stop Time*	
Sa-13	Adhesive below blue carpet, 1F Storage, Health Services					
Sa-14	12x12 VCT Brown, IT Tech break area					
Sa-15	Interior door Caulk, grey, 1F Stair well door case					
Sa-16	Interior door Caulk, grey, 1F Room 162, Elec equip Rm.					
Sa-17	Adhesive/Mastic below 2 layers of Blue Carpet, Rm 216					
	(#) 9x9 observed and assumed positive adjacent					
	former Conferencence & Library					
Sa-18	Brown Mastic, below Carpet 2F office, former Elec. Shop					Sypes
Sa-19	Annex Exterior Window Caulk					
Sa-20	Annex Exterior Window glazing Compound					
	(#) HEAT SHIELD IN LIGHT FIXTURE STILL					
	PRESENT & LOCATED IN 2F STORAGE, ELECTRICAL					
	DEPT, FORMER DARK ROOM					

Special Instructions	

Relinquished by	Date	Time	Received by	Date	Time
				3/10/22	12:20

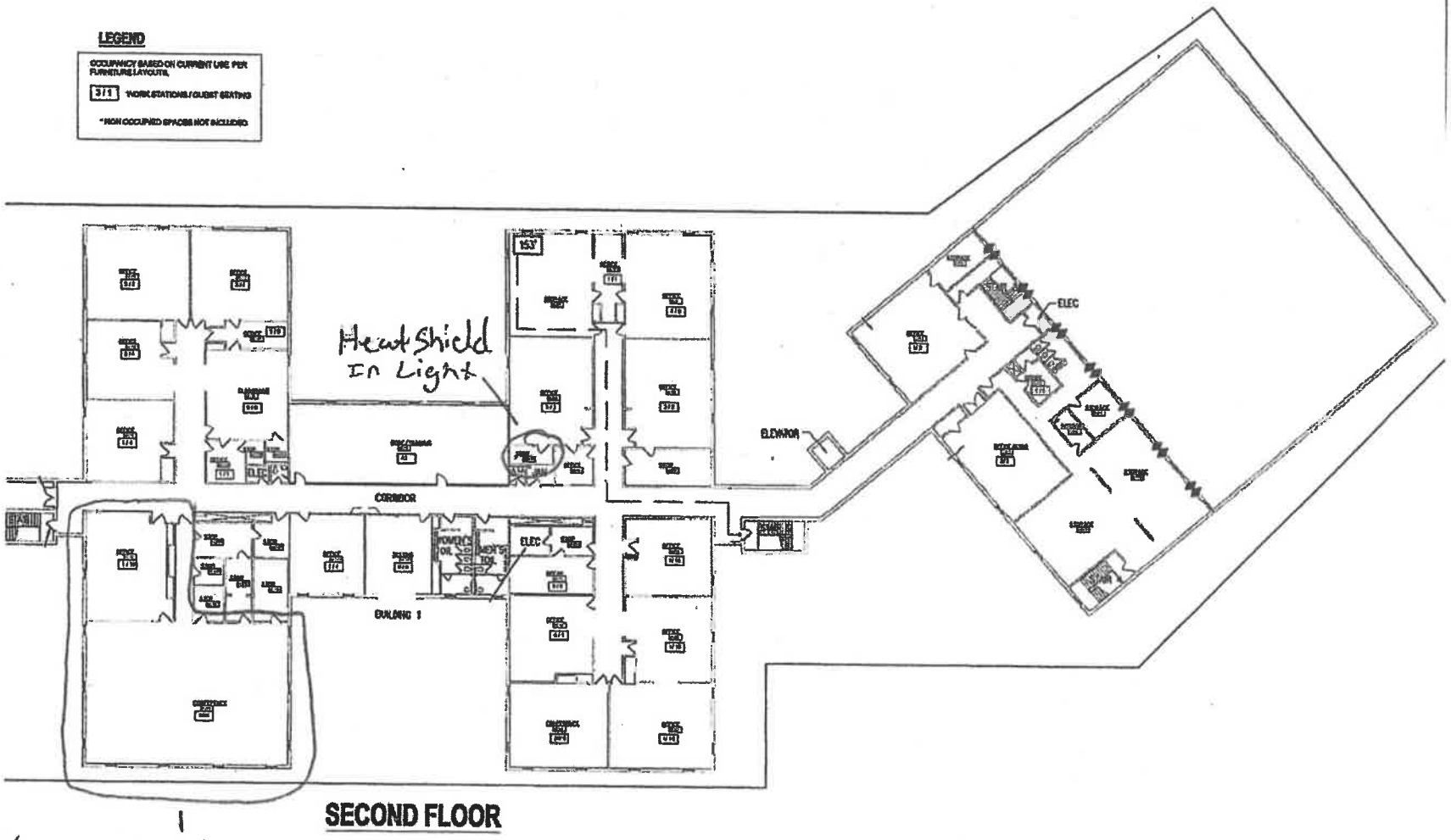
If no technician is provided, then the primary contact for your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm EST will be logged in the next business day. Weekend or holiday work must be scheduled ahead of time and is charged at 150% of the 3hr TAT or a minimum charge of $150. A courier charge will be applied for same day and one-day turnaround times for offsite work. SanAir covers Ground and Next Day Air shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges. Page 2 of 2



FIRST FLOOR

REC, Inc
March 8, 2022
Known Flooring/Mastic Locations

BACKGROUNDS WERE CREATED FROM RCPS SCANS OF EXISTING DRAWINGS WITH NO DIMENSIONS OF BUILDING. DRAWINGS WERE SCALED TO CREATE ROUGH GENERAL BASE DRAWING FOR SQUARE FOOTAGES UTILIZED IN VENTILATION STUDY. SITE VISITS TO MEASURE AREAS ALTERED FROM DRAWINGS PROVIDED WERE CONDUCTED IN MODIFIED AREAS ONLY. DRAWING ACCURACY SHALL BE REVIEWED FOR FIELD VERIFICATION PRIOR TO ANY WORK.



SECOND FLOOR

VCT and Mastic Below Carpet

BACKGROUNDS WERE CREATED FROM HOPE SCANS OF EXISTING DRAWINGS WITH NO DIMENSIONS OF BUILDING. DRAWINGS WERE SCALED TO CREATE ROUGH GENERAL BASE DRAWING FOR SQUARE FOOTAGES UTILIZED IN VENTILATION STUDY. SITE VISITS TO MEASURE AREAS ALTERED FROM DRAWINGS PROVIDED WERE CONDUCTED IN MODIFIED AREAS ONLY. DRAWING ACCURACY SHALL BE REVIEWED FOR FIELD VERIFICATION PRIOR TO ANY WORK.

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation
9960 Mayland Drive, Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
05-31-2022

NUMBER
3303002229

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS
ASBESTOS INSPECTOR LICENSE

CHARLES CHANCE FAMULINER
493 UNEXPECTED ROAD
LEXINGTON, VA 24450-0000

DPOR

Status can be verified at http://www.dpor.virginia.gov

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

DETACH HERE

COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS
ASBESTOS INSPECTOR LICENSE
NUMBER: 3303002229 EXPIRES: 05-31-2022

CHARLES CHANCE FAMULINER
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FACE

Status can be verified at http://www.dpor.virginia.gov

DPOR-PC (02/2017)

APPENDIX C – SITE STORAGE BUILDING CONSTRUCTION DOCUMENTS

STRUCTURAL DESIGN
ENCLOSED BUILDING

MAXIMUM 31'-0" - 40'-0" WIDE X 16'-0" EAVE HEIGHT-BOX EAVE FRAME

6 July 2021
Revision 0
M&A Project No. 21138S

Prepared for:

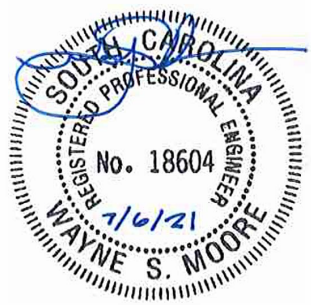
JR Buildings and Garages
316 Nelson Street
Pilot Mountain, NC 27041

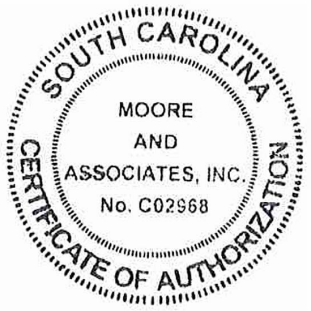
Prepared by:

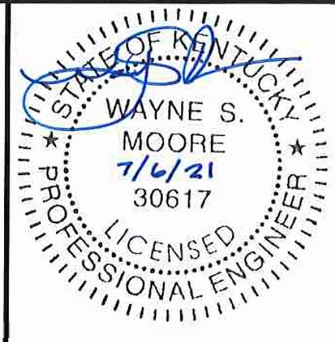
Moore and Associates Engineering and Consulting, Inc.

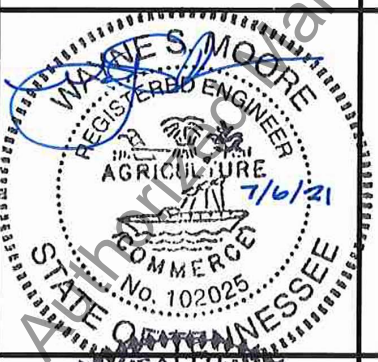
1009 East Avenue
North Augusta, SC 29841

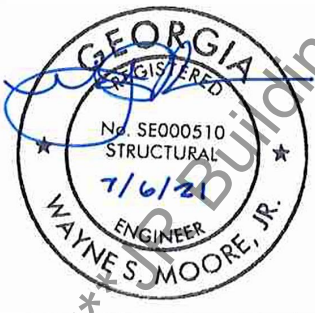
401 S. Main St., Suite 200
Mount Airy, NC 27030

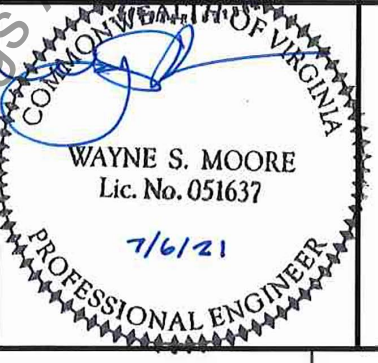












MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: LT	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041 31'-0"-40'-0"x16'-0" ENCLOSED STRUCTURE		
CHECKED BY: PH			
PROJECT MGR: WSM	DATE: 7-6-21	SCALE: NTS	JOB NO: 21138S
CLIENT: JR BUILDINGS	SHT. 1	DWG. NO: SK-3	REV.: 0

DRAWING INDEX

MOORE AND ASSOCIATES
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DRAWN BY: LT	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041 31'-0"-40'-0"x16'-0" ENCLOSED STRUCTURE			
CHECKED BY: PH				
PROJECT MGR: WSM	DATE: 7-6-21	SCALE: NTS	JOB NO: 21138S	
CLIENT: JR BUILDINGS	SHT. 2	DWG. NO: SK-3	REV.: 0	

INSTALLATION NOTES AND SPECIFICATIONS

1. DESIGN IS FOR 31'-0"-40'-0" MAXIMUM WIDE x 16'-0" MAXIMUM EAVE HEIGHT ENCLOSED STRUCTURES.
2. DESIGN WAS DONE IN ACCORDANCE WITH ALL THE APPLICABLE BUILDING CODES LISTED ON SHEET 3A.
3. DESIGN LOADS ARE AS FOLLOWS:
   A) DEAD LOAD = 11.5 PSF
   B) LIVE LOAD = 20 PSF
   C) GROUND SNOW LOAD = 35 PSF
   NOTE: UNBALANCED LOADING DUE TO SNOW DRIFTING FROM AN ADJACENT TALLER STRUCTURE HAS NOT BEEN EVALUATED.
4. ULTIMATE 3-SECOND GUST WIND SPEED (V_{ULT}) = ≤ 145 MPH (NOMINAL WIND SPEED = ≤ 112 MPH).
5. MAXIMUM RAFTER/COLUMN AND END COLUMN SPACING = 4.0 FEET (UNLESS NOTED OTHERWISE).
6. END WALL COLUMNS/POSTS AND SIDEWALL COLUMNS/POSTS AND ARE SIMILAR IN SIZE AND SPACING (UNLESS NOTED OTHERWISE).
7. RISK CATEGORY I/II.
8. WIND EXPOSURE CATEGORY B/C.
9. SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2" x 2 1/2" - 14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS (UNLESS NOTED OTHERWISE). TS 2 1/4" x 2 1/4" - 12 GAUGE MAY BE USED AS AN OPTION.
10. PANEL FASTENER SPACING ON-CENTERS = 8 INCHES (MAX.)
11. FASTENERS CONSIST OF #12-14x3/4" SELF-DRILLING FASTENER (SDF). USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 16 FEET OR LESS, AND ROOF SLOPES OF 14° (3:12 PITCH) OR LESS SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY. ROOF SLOPES LESS THAN 3:12 REQUIRE USE OF LAP JOINT SEALANT.
12. ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL AT OR WITHIN 6" OF EVERY COLUMN.
13. STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBAR W/ WELDED NUT x 30" LONG AND MAY BE USED IN SUITABLE SOILS. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USED IN UNSUITABLE SOILS, AS NOTED. COORDINATE WITH LOCAL CODES/ORDINANCES REGARDING MINIMUM LENGTH FOR FROST DEPTH PROTECTION.
14. WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:
    SOIL SITE CLASS = D
    RISK CATEGORY I/II
    R = 3.25 I_E = 1.0
    S_{DS} = 1.522 g $V = C_SW$
    S_{D1} = 0.839 g
15. FOR RISK CATEGORY II STRUCTURES, MAXIMUM THRESHOLD HEIGHT IS 1/2" FOR PERSONNEL DOORS UTILIZED AS MEANS OF EGRESS.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: LT
CHECKED BY: PH
PROJECT MGR: WSM
CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES
316 NELSON STREET
PILOT MOUNTAIN, NC 27041
31'-0"-40'-0"x16'-0" ENCLOSED STRUCTURE

DATE: 7-6-21 | SCALE: NTS | JOB NO: 21138S
SHT. 3 | DWG. NO: SK-3 | REV.: 0

LIST OF APPLICABLE BUILDING CODES

2018 INTERNATIONAL BUILDING CODE (IBC 2018)

2015 INTERNATIONAL BUILDING CODE (IBC 2015)

2012 INTERNATIONAL BUILDING CODE (IBC 2012)

BUILDING CODE 2015 OF ALABAMA
(ADOPTS THE IBC 2015 WITH AMENDMENTS)

GEORGIA STATE MINIMUM STANDARD BUILDING CODE
(ADOPTS THE IBC 2018 WITH AMENDMENTS)

2018 KENTUCKY BUILDING CODE
(ADOPTS THE IBC 2015 WITH AMENDMENTS)

MISSISSIPPI BUILDING CODE
(IBC 2018)

2018 NORTH CAROLINA BUILDING CODE
(ADOPTS THE IBC 2015 WITH AMENDMENTS)

2018 SOUTH CAROLINA BUILDING CODE
(ADOPTS THE IBC 2018 WITH AMENDMENTS)

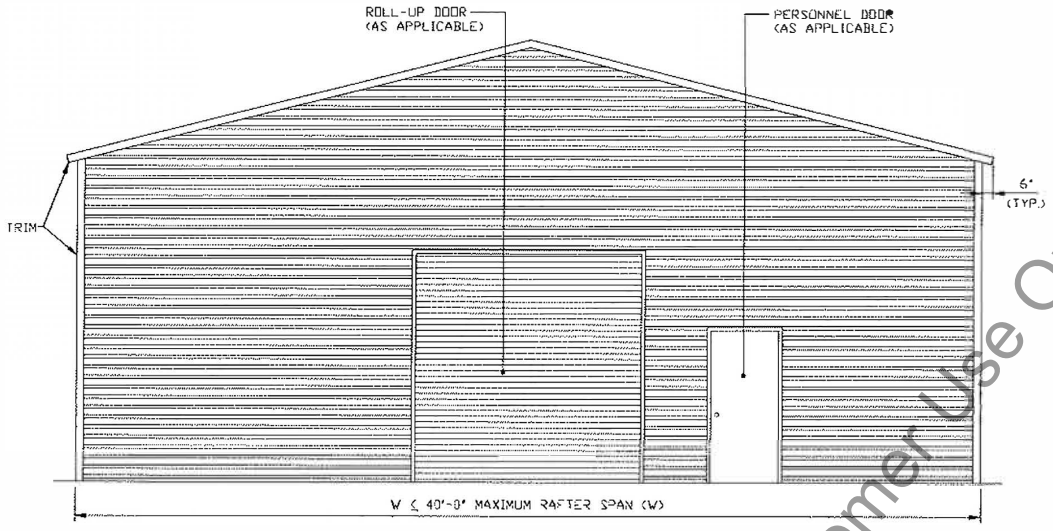
BUILDING CODE 2012 OF TENNESSEE
(ADOPTS THE IBC 2012 WITH AMENDMENTS)

2015 VIRGINIA CONSTRUCTION CODE
(ADOPTS THE IBC 2015 WITH AMENDMENTS)

BUILDING CODE 2015 OF WEST VIRGINIA
(ADOPTS THE IBC 2015 WITH AMENDMENTS)

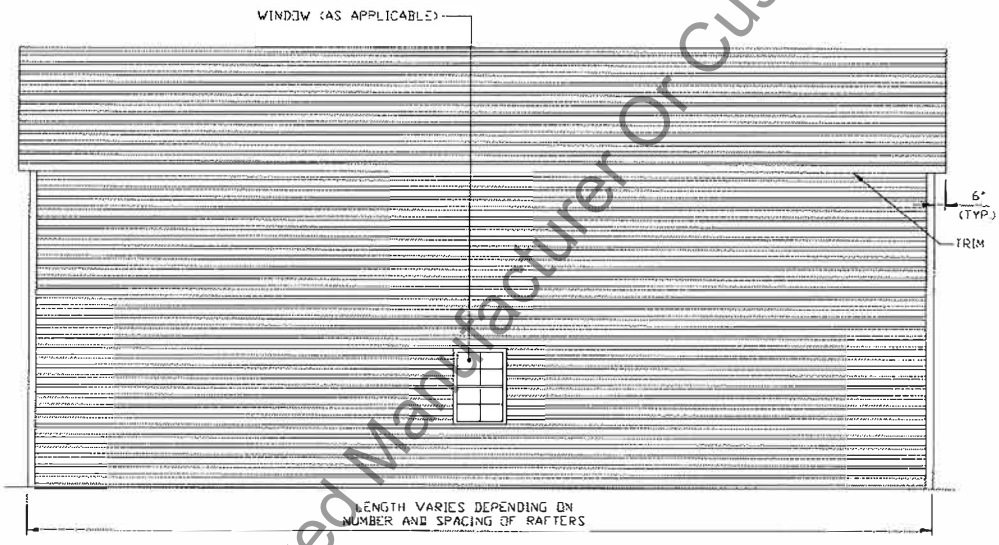
MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: LT	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041 31'-0"-40'-0"x16'-0" ENCLOSED STRUCTURE			
CHECKED BY: PH				
PROJECT MGR: WSM	DATE: 7-6-21	SCALE: NTS	JOB NO: 21138S	
CLIENT: JR BUILDINGS	SHT. 3A	DWG. NO: SK-3	REV: 0	



TYPICAL END ELEVATION

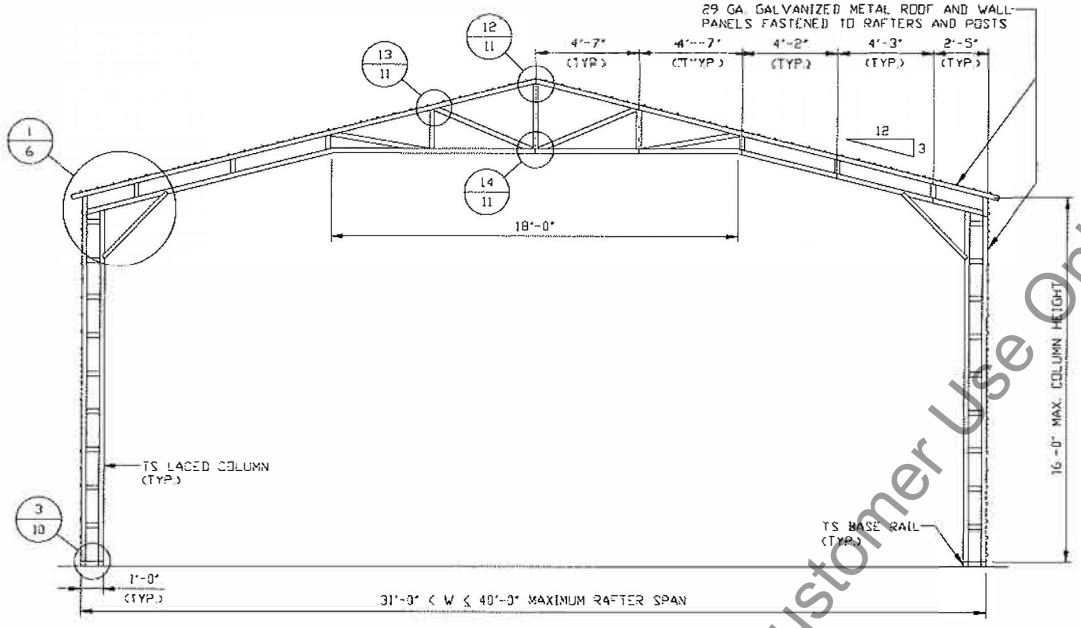
SCALE: NTS



TYPICAL SIDE ELEVATION

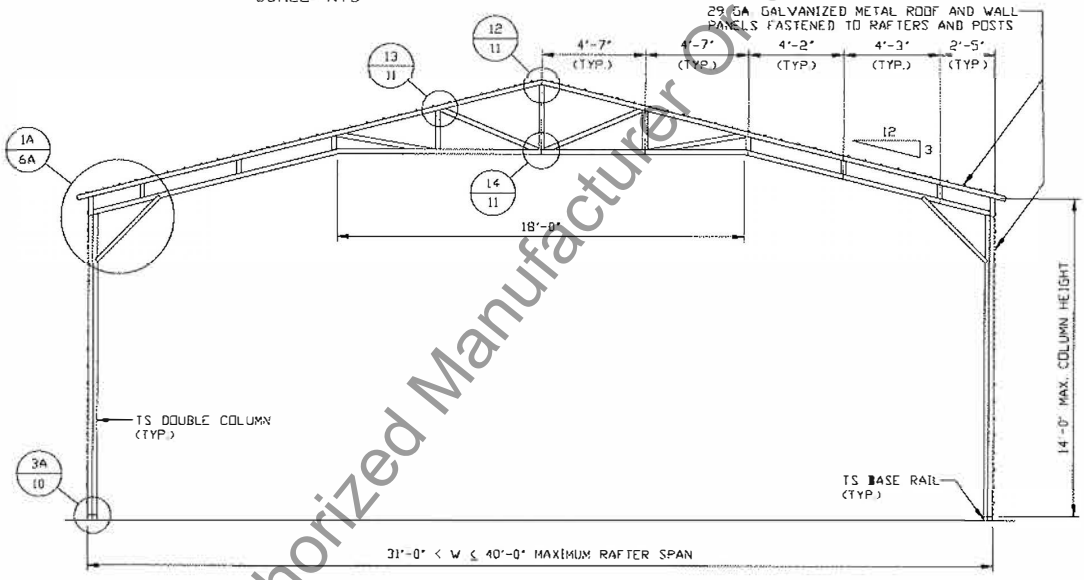
SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: LT CHECKED BY: PH	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041 31'-0"-40'-0"x16'-0" ENCLOSED STRUCTURE
	PROJECT MGR: WSM	DATE: 7-6-21 / SCALE: NTS / JOB NO: 21138S
	CLIENT: JR BUILDINGS	SHT. 4 / DWG. NO: SK-3 / REV.: 0



TYPICAL RAFTER/COLUMN FRAME SECTION

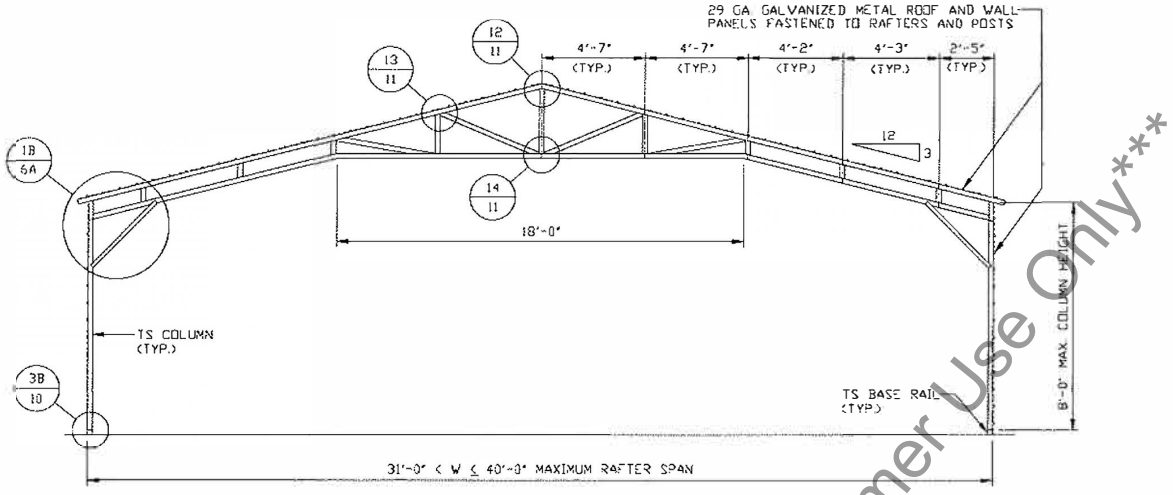
SCALE: NTS



TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: LT	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041 31'-0"-40'-0"x16'-0" ENCLOSED STRUCTURE
	CHECKED BY: PH	
	PROJECT MGR: WSM	DATE: 7-6-21 / SCALE: NTS / JOB NO: 21138S
	CLIENT: JR BUILDINGS	SHT. 5 / DWG. NO: SK-3 / REV.: 0



TYPICAL RAFTER/COLUMN FRAME SECTION

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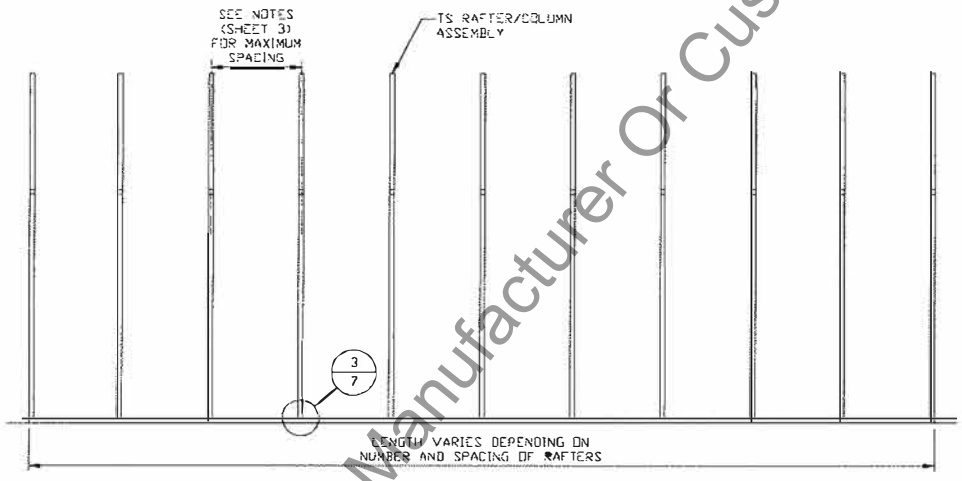

TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: LT	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041 31'-0"-40'-0"x16'-0" ENCLOSED STRUCTURE		
	CHECKED BY: PH			
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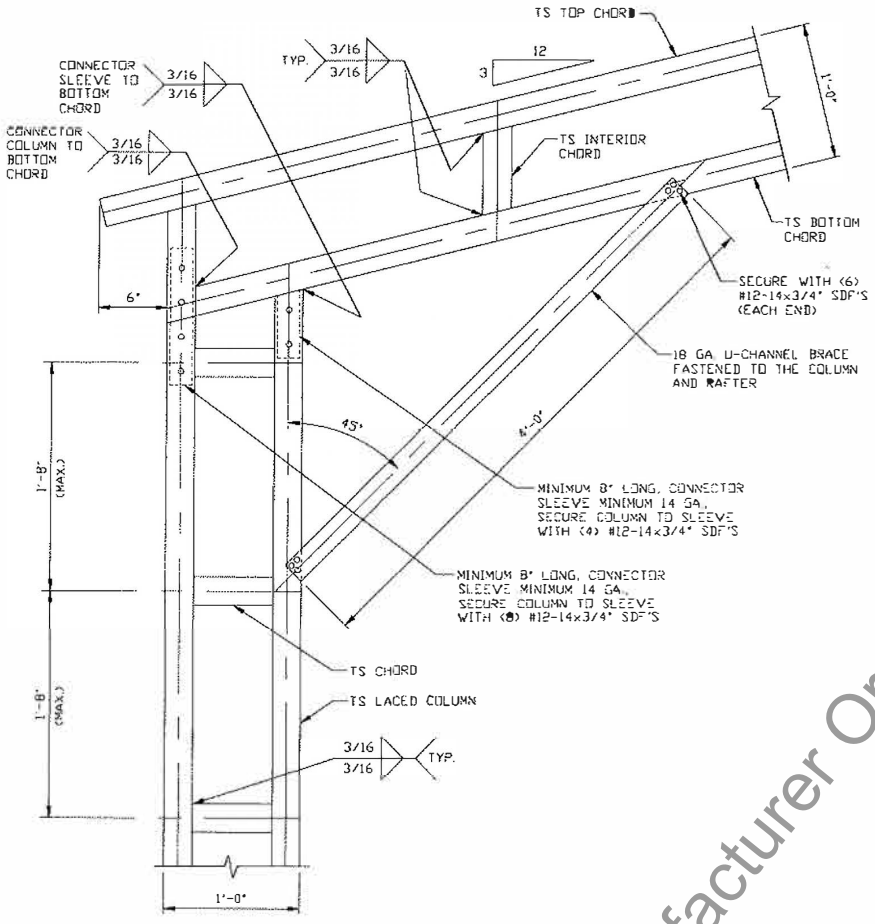
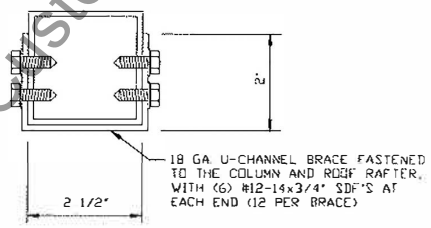
	CLIENT: JR BUILDINGS	SHT. 5A	DWG. NO: SK-3	REV.: 0



BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL
FOR HEIGHTS 14'-0" < TO ≤ 16'-0"

1

SCALE: NTS



BRACE SECTION

SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: LT	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041 31'-0"-40'-0"x16'-0" ENCLOSED STRUCTURE		
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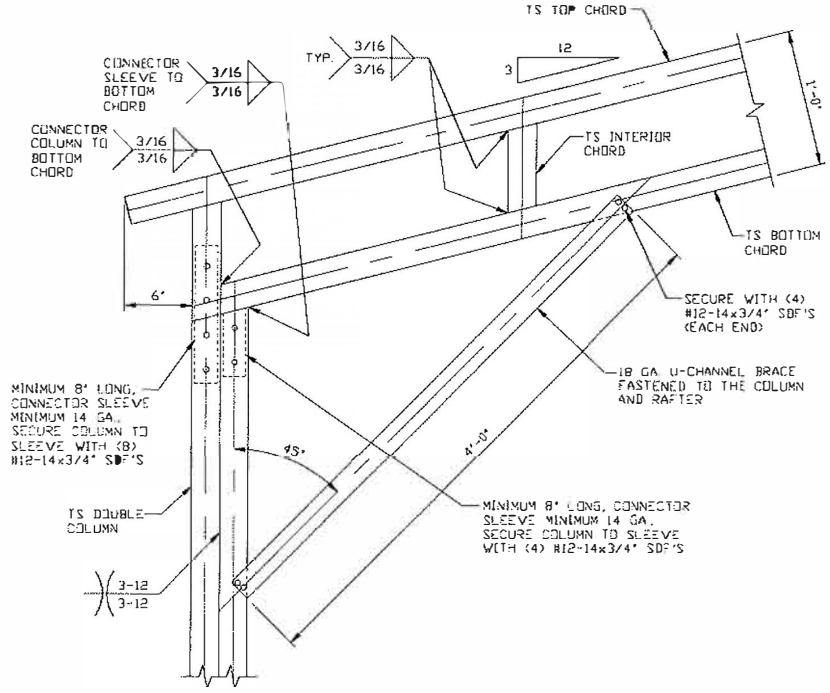
	CLIENT: JR BUILDINGS	SHT. 6	DWG. NO: SK-3	REV.: 0



BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS 8'-0" < TO ≤ 14'-0"

1A

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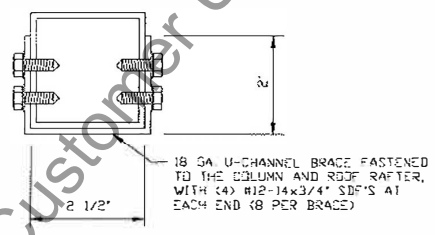

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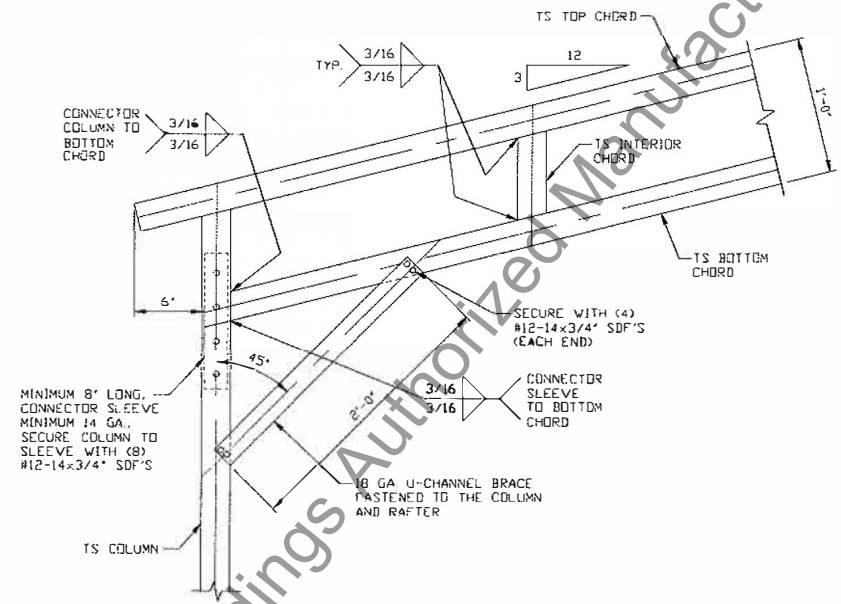

BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS ≤ 8'-0"

1B

SCALE: NTS

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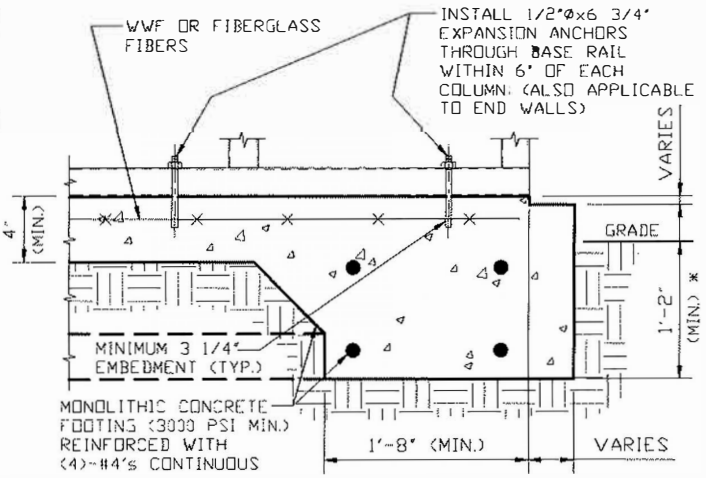
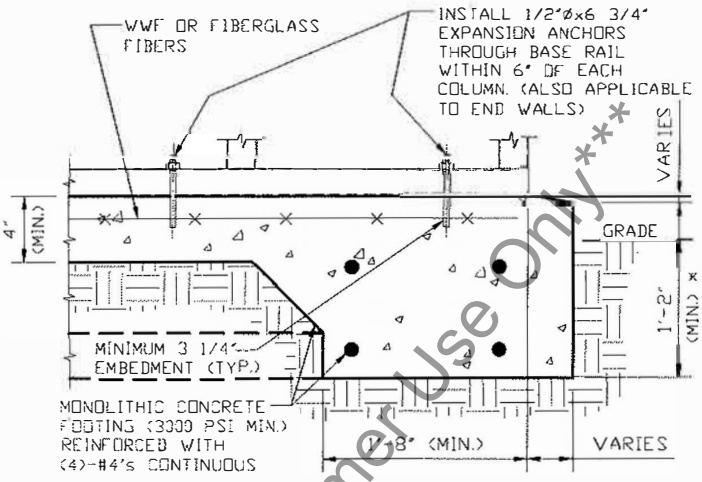
	CLIENT: JR BUILDINGS	SHT. 6A	DWG. NO: SK-3	REV.: 0

BASE RAIL ANCHORAGE OPTIONS



2 CONCRETE MONOLITHIC BASE RAIL ANCHORAGE

SCALE: NTS
MINIMUM ANCHOR EDGE DISTANCE IS 4".
* COORDINATE WITH LOCAL BUILDING CODES/ORD. REGARDING REQUIRED FOOTING DEPTH.



2A CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

SCALE: NTS
MINIMUM ANCHOR EDGE DISTANCE IS 4".
* COORDINATE WITH LOCAL BUILDING CODES/ORD. REGARDING REQUIRED FOOTING DEPTH.

GENERAL NOTES

NOTE: CONCRETE MONOLITHIC SLAB DESIGN BASED ON MINIMUM SOIL BEARING CAPACITY OF 1,500 PSF.

CONCRETE:

CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.

COVER OVER REINFORCING STEEL:

FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACI-318:
3" IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND 1 1/2" ELSEWHERE.

REINFORCING STEEL:

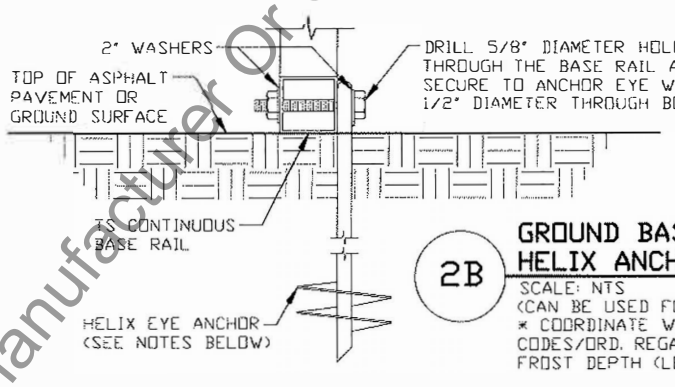
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED:

1. REINFORCEMENT IS BENT COLD.
2. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS.
3. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.

HELIX ANCHOR NOTES:

1. FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILTS AND CLAYS, USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH MINIMUM 50" EMBEDMENT
2. FOR CORAL USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH MINIMUM 50" EMBEDMENT.
3. FOR MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILTS, AND CLAYS USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT OR SINGLE 6" HELIX WITH MINIMUM 50" EMBEDMENT.
4. FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS ALLUVIAL FILL, USE MINIMUM (2) 6" HELICES WITH MINIMUM 50" EMBEDMENT.
5. FOR VERY LOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 8" HELICES WITH MINIMUM 60" EMBEDMENT.



2B GROUND BASE HELIX ANCHORAGE

SCALE: NTS
(CAN BE USED FOR ASPHALT)
* COORDINATE WITH LOCAL CODES/ORD. REGARDING MIN. FROST DEPTH (LENGTH).

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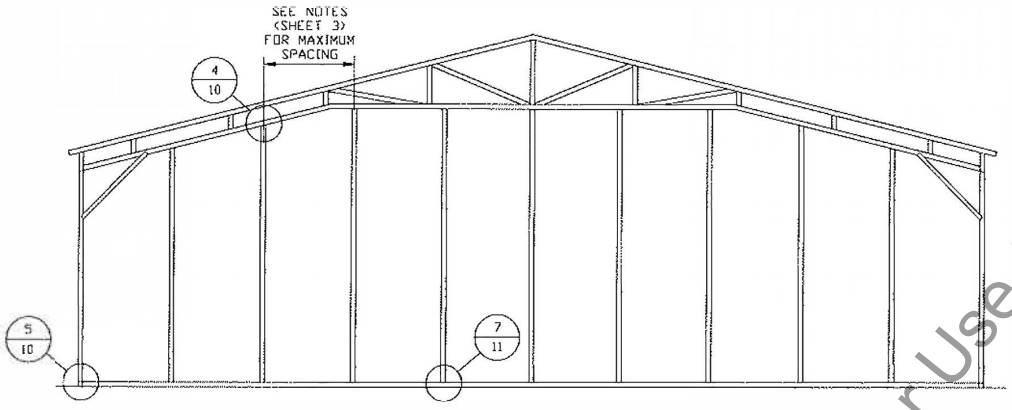
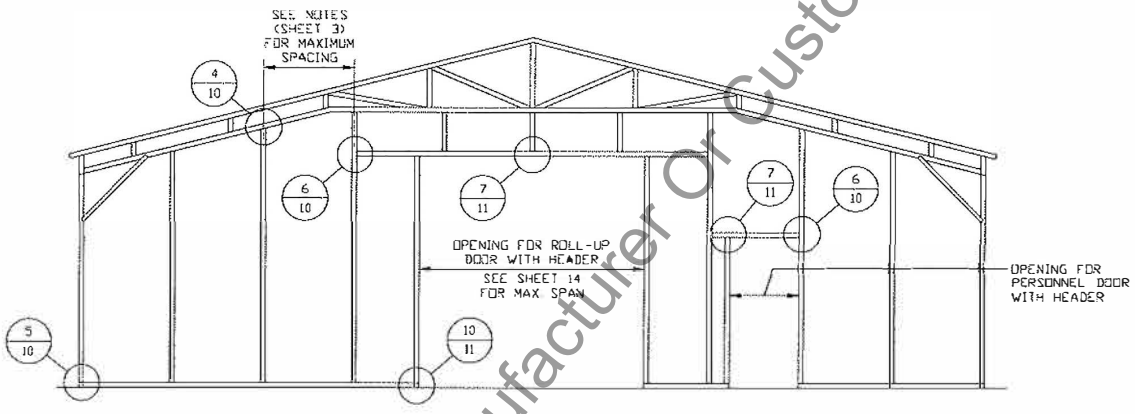
	PROJECT MGR: WSM	DATE: 7-6-21 / SCALE: NTS / JOB NO: 21138S
	CLIENT: JR BUILDINGS	SHT. 7 / DWG. NO: SK-3 / REV.: 0

END WALL AND END WALL OPENINGS



TYPICAL BOX EAVE RAFTER
END WALL FRAMING SECTION

SCALE: NTS



TYPICAL BOX EAVE RAFTER END
WALL OPENINGS FRAMING SECTION

SCALE: NTS

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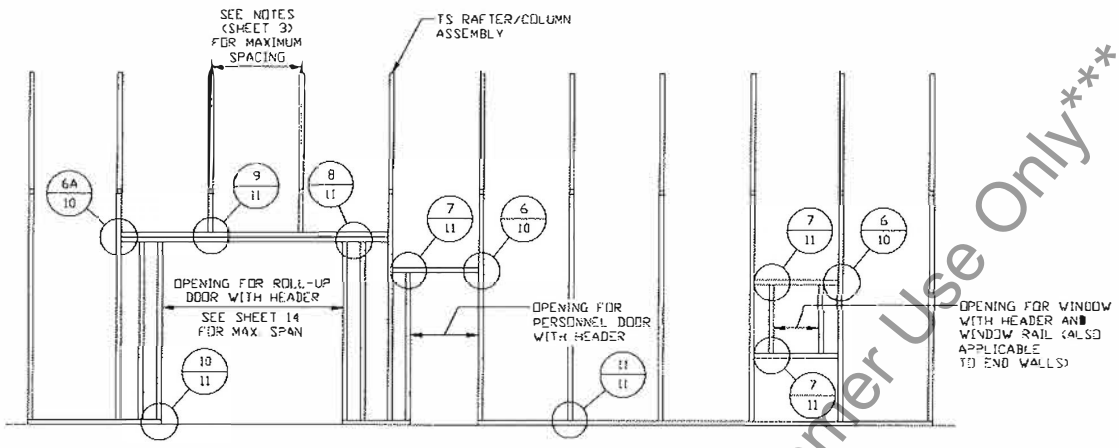
	CLIENT: JR BUILDINGS	SHT. 8	DWG. NO: SK-3	REV.: 0

SIDE WALL OPENINGS



TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION

SCALE: NTS

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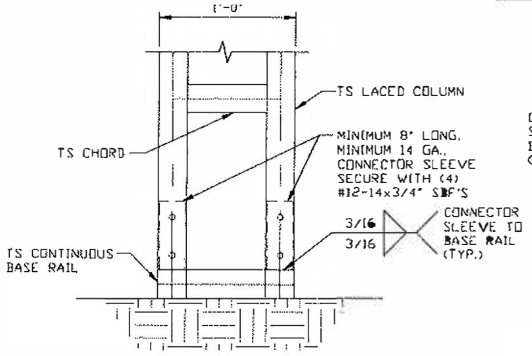
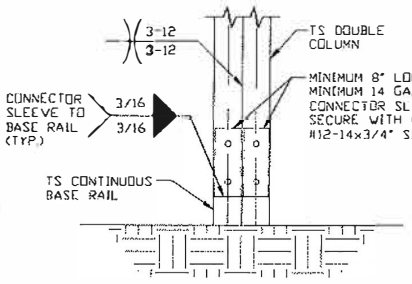
	CLIENT: JR BUILDINGS	SHT. 9	DWG. NO: SK-3	REV.: 0

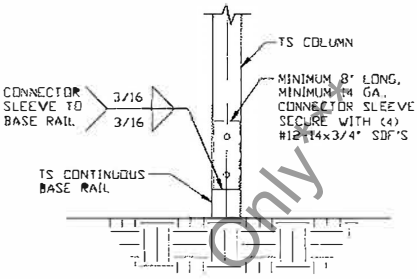
CONNECTION DETAILS



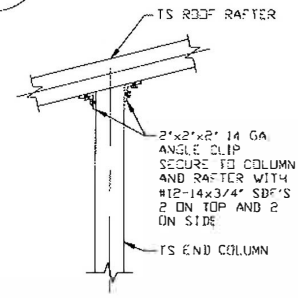
3 COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS



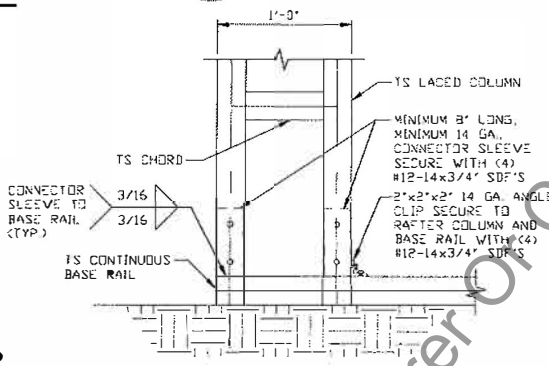
3A COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS



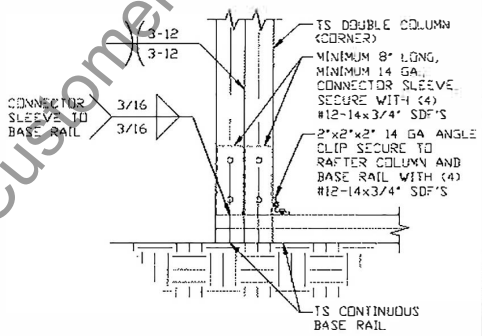
3B COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS



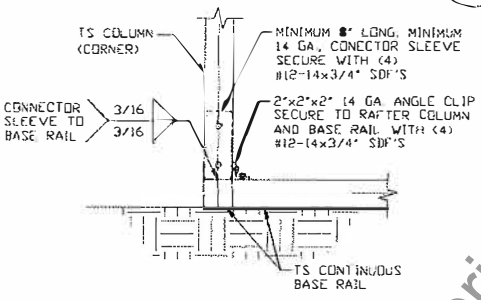
4 END COLUMN/RAFTER CONNECTION DETAIL
SCALE: NTS



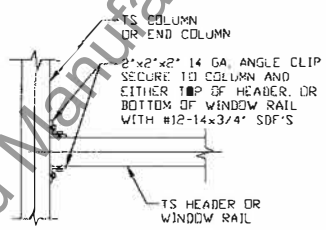
5 END COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS



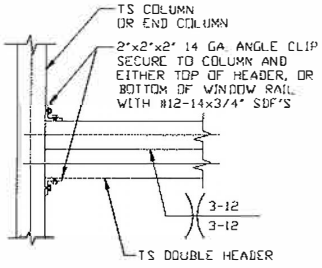
5A END COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS



5B END COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS



6 COLUMN OR WINDOW RAIL/WALL GIRT TO POST CONNECTION DETAIL
SCALE: NTS



6A DOUBLE HEADER TO POST CONNECTION DETAIL
SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: LT	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041 31'-0"x40'-0"x16'-0" ENCLOSED STRUCTURE		
	CHECKED BY: PH			
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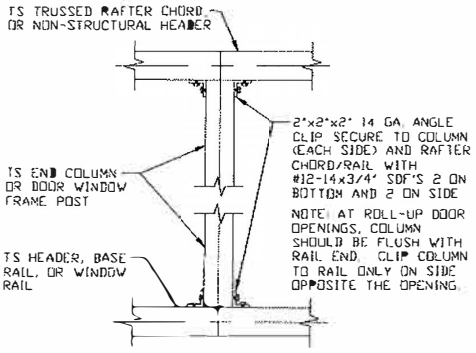
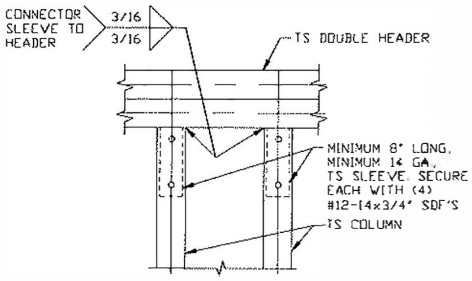
	CLIENT: JR BUILDINGS	SHT. 10	DWG. NO: SK-3	REV.: 0

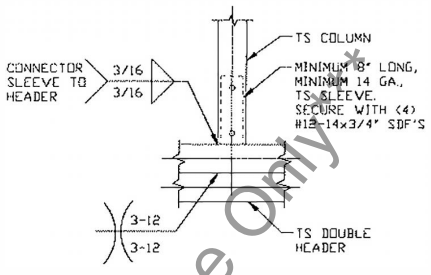
CONNECTION DETAILS



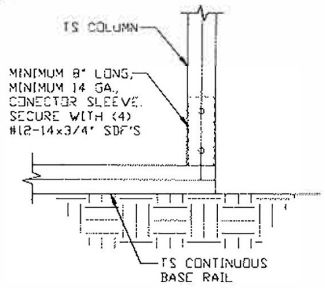
7 COLUMN TO HEADER, BASE RAIL, OR WINDOW RAIL CONNECTION DETAIL
SCALE: NTS



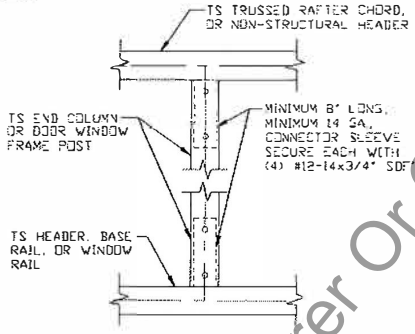
8 DOUBLE HEADER/COLUMN CONNECTION DETAIL
SCALE: NTS



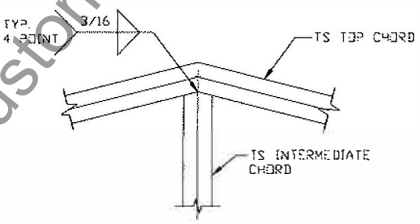
9 COLUMN/DOUBLE HEADER CONNECTION DETAIL
SCALE: NTS



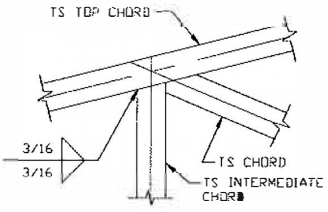
10 COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS



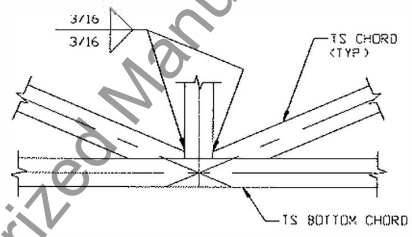
11 COLUMN TO HEADER OR BASE RAIL CONNECTION DETAIL
SCALE: NTS



12 CENTER COLUMN TO RAFTER CONNECTION DETAIL
SCALE: NTS



13 INTERMEDIATE CHORD TO TOP CHORD CONNECTION DETAIL
SCALE: NTS



14 CENTER POST TO BOTTOM CHORD CONNECTION DETAIL
SCALE: NTS

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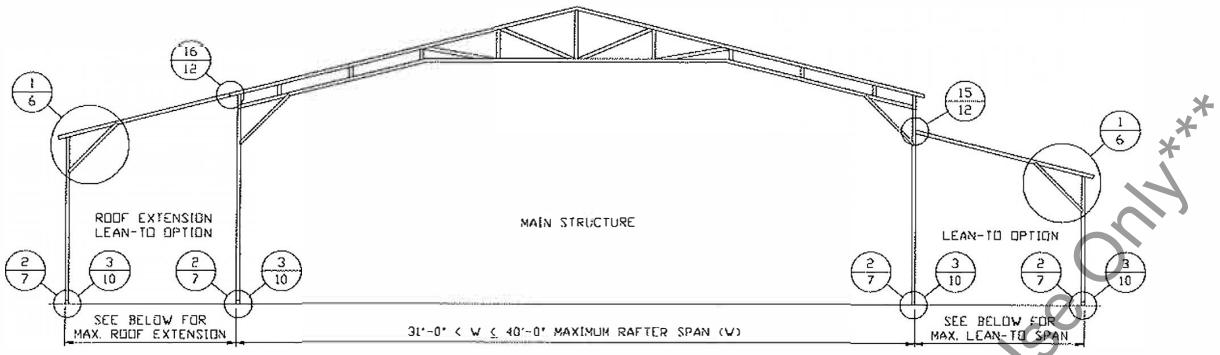
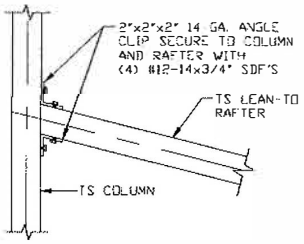
CHECKED BY: PH				
PROJECT MGR: WSM	DATE: 7-6-21	SCALE: NTS	JOB NO: 21138S	
CLIENT: JR BUILDINGS	SHT. 11	DWG. NO: SK-3	REV: 0	

LEAN-TO OPTIONS

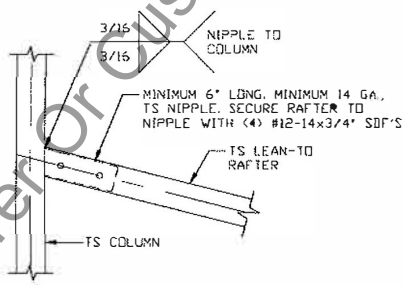


TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

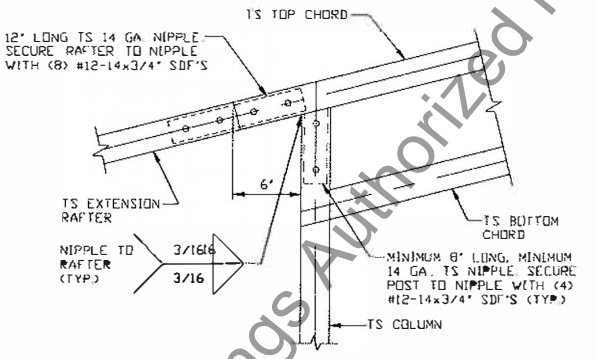
SCALE: NTS
MAXIMUM WIDTH OF ROOF EXTENSION AND LEAN-TO OPTION IS 12'-0".
MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE LACED COLUMNS FOR EAVE HEIGHTS 14'-0" < TO ≤ 15'-0".
MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE DOUBLE COLUMNS FOR EAVE HEIGHTS 8'-0" < TO ≤ 14'-0".
MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS ≤ 8'-0".



15 LEAN-TO RAFTER TO RAFTER POST CONNECTION DETAIL FOR WIDTHS ≤ 12'-0"
SCALE: NTS



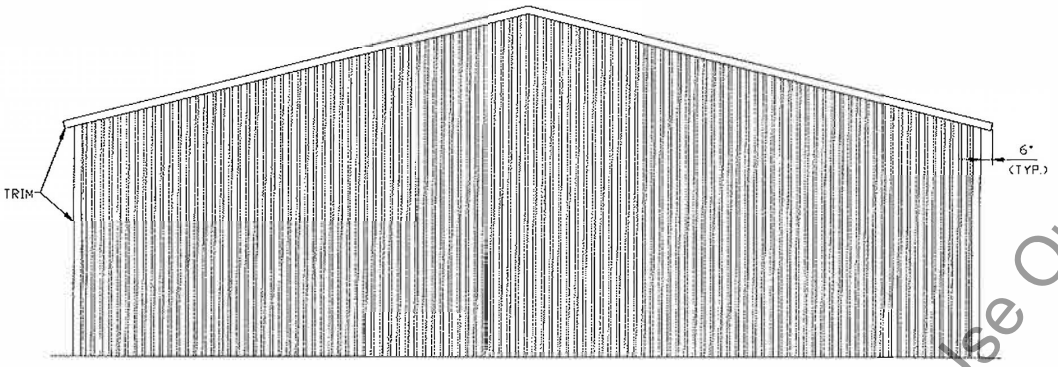
15A OPTIONAL LEAN-TO RAFTER TO RAFTER POST CONNECTION DETAIL FOR WIDTHS ≤ 12'-0"
SCALE: NTS



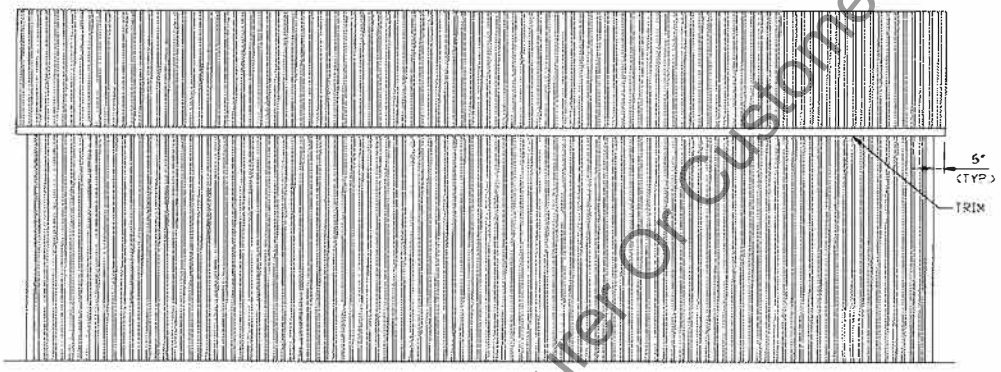
16 SIDE EXTENSION RAFTER/COLUMN DETAIL FOR HEIGHTS ≤ 12'-0"
SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: LT CHECKED BY: PH	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041 31'-0"-40'-0"x16'-0" ENCLOSED STRUCTURE
	PROJECT MGR: WSM	DATE: 7-6-21 / SCALE: NTS / JOB NO: 21138S
	CLIENT: JR BUILDINGS	SHT. 12 / DWG. NO: SK-3 / REV.: 0

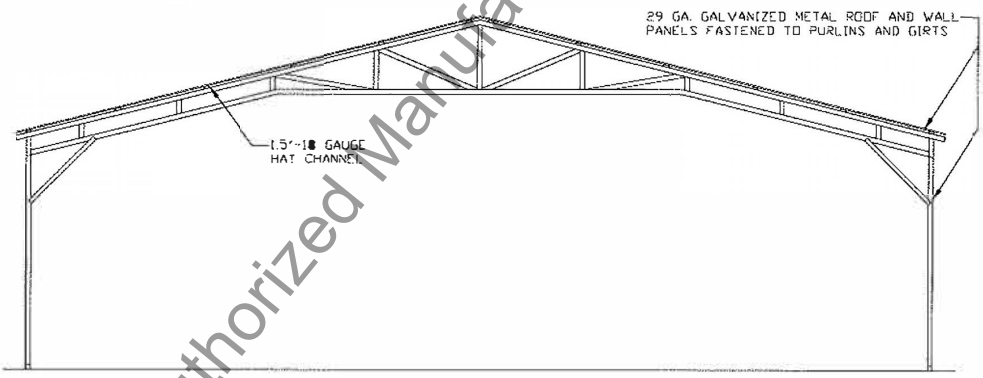
VERTICAL ROOF/SIDING OPTION



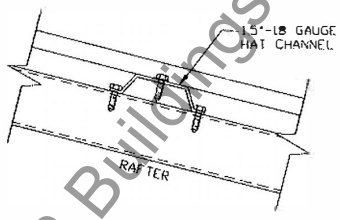
TYPICAL END ELEVATION VERTICAL ROOF/SIDING
SCALE: NTS



TYPICAL SIDE ELEVATION VERTICAL ROOF/SIDING
SCALE: NTS



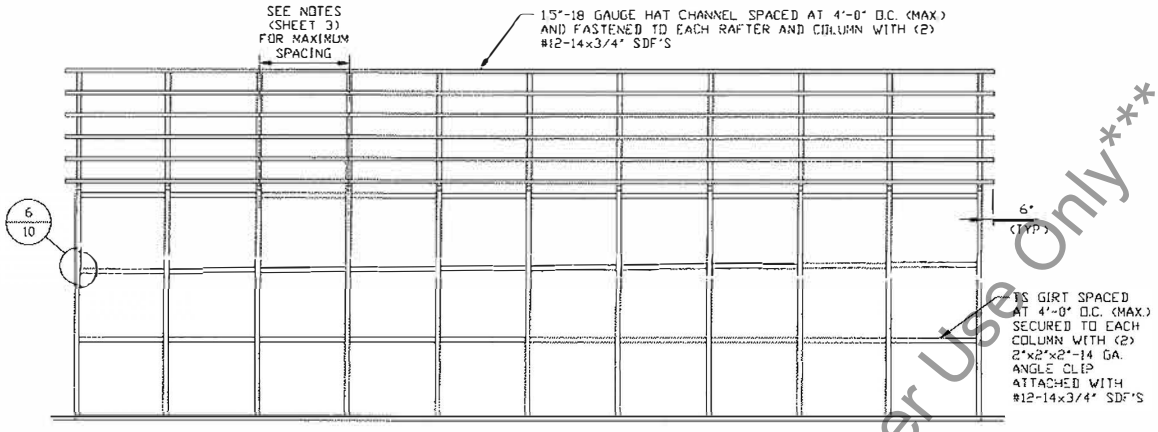
TYPICAL SECTION VERTICAL ROOF/SIDING OPTION
SCALE: NTS



PANEL ATTACHMENT
(ALTERNATE FOR VERTICAL ROOF PANELS)
SCALE: NTS

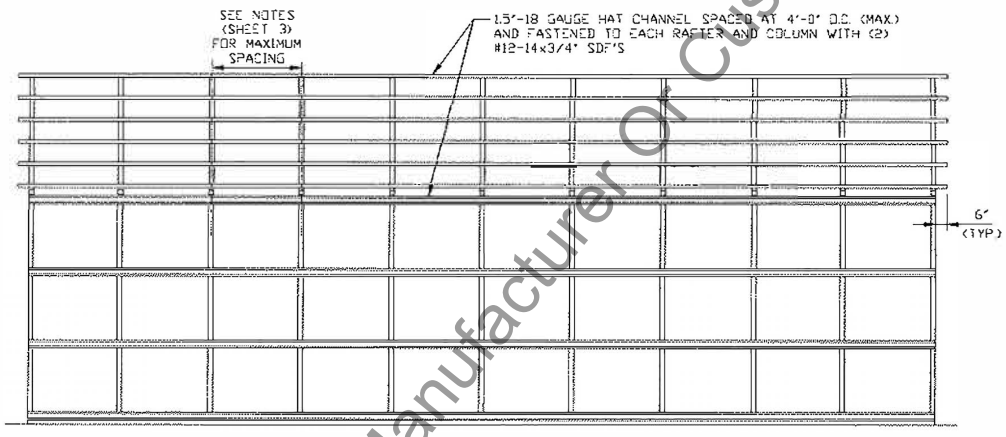
MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: LT CHECKED BY: PH	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041 31'-0"-40'-0"x16'-0" ENCLOSED STRUCTURE
	PROJECT MGR: WSM	DATE: 7-6-21 / SCALE: NTS / JOB NO: 21138S
	CLIENT: JR BUILDINGS	SHT. 13 / DWG. NO: SK-3 / REV.: 0

VERTICAL ROOF/SIDING OPTION



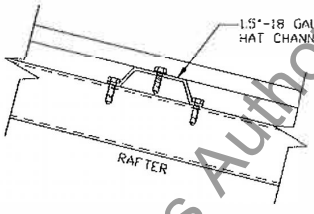
TYPICAL FRAMING SECTION VERTICAL ROOF/SIDING WITH TS GIRTS

SCALE: NTS



TYPICAL FRAMING SECTION VERTICAL ROOF/ SIDING OPTION WITH HAT CHANNEL GIRTS

SCALE: NTS



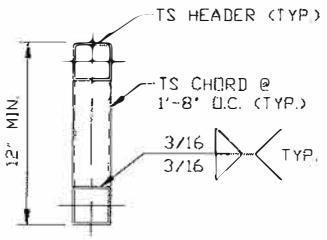
PANEL ATTACHMENT

(ALTERNATE FOR VERTICAL ROOF PANELS)

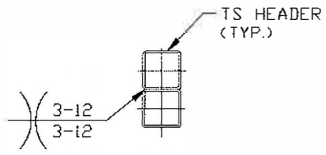
SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: LT	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041 31'-0"-40'-0"x16'-0" ENCLOSED STRUCTURE
	CHECKED BY: PH	
	PROJECT MGR: WSM	DATE: 7-6-21 / SCALE: NTS / JOB NO: 21138S
	CLIENT: JR BUILDINGS	SHT. 13A / DWG. NO: SK-3 / REV.: 0

SIDE WALL HEADER OPTIONS

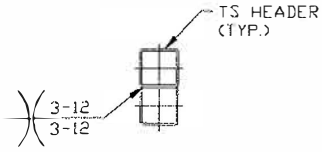


HEADER DETAIL FOR
8'-0" < LENGTH ≤ 12'-0"
SCALE: NTS

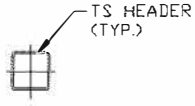


HEADER DETAIL FOR
DOOR OPENINGS ≤ 8'-0"
SCALE: NTS

END WALL HEADER OPTIONS



HEADER DETAIL FOR
8'-0" < LENGTH ≤ 12'-0"
SCALE: NTS



HEADER DETAIL FOR
DOOR OPENINGS ≤ 8'-0"
SCALE: NTS

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: LT	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041 31'-0"x40'-0"x16'-0" ENCLOSED STRUCTURE		
CHECKED BY: PH			
PROJECT MGR: WSM	DATE: 7-6-21	SCALE: NTS	JOB NO: 21.136S
CLIENT: JR BUILDINGS	SHT. 14	DWG. NO: SK-3	REV.: 0

END OF ADDENDUM #3