

REFER TO ADDITIONAL NOTES ON SHEET 016.

**NORTHVILLE COMPRESSOR STATION  
2022 CONSTRUCTION**

**IT/SCADA BUILDING  
SITE PLAN**

ORIGINAL DRAWING #

| REFERENCE DRAWINGS NUMBERS | REV. | PROJECT # | DATE | DESCRIPTION | DR | CK | DES. APP. | ENG. APP. | CO | REV. | PROJECT # | DATE     | DESCRIPTION                                     | DR | CK | DES. APP. | ENG. APP. | CO |  |
|----------------------------|------|-----------|------|-------------|----|----|-----------|-----------|----|------|-----------|----------|---|----|----|-----------|-----------|----|--|
| 105A-5000-002              |      |           |      |             |    |    |           |           |    |      |           |          |   |    |    |           |           |    |  |
| 105A-5000-003              |      |           |      |             |    |    |           |           |    |      |           |          |   |    |    |           |           |    |  |
| 105A-5000-004              |      |           |      |             |    |    |           |           |    |      |           |          |   |    |    |           |           |    |  |
| 105E-5000-008              |      |           |      |             |    |    |           |           |    |      |           |          |   |    |    |           |           |    |  |
|                            |      |           |      |             |    |    |           |           |    | C    |           | 05/31/22 | ISSUED FOR 100% REVIEW - WO 39827425 NVL AP1164 | TL | KS | KS        | TL        | TL |  |
|                            |      |           |      |             |    |    |           |           |    | B    |           | 05/06/22 | ISSUED FOR 90% REVIEW - WO 39827425 NVL AP1164  | TL | KS | KS        | TL        | TL |  |
|                            |      |           |      |             |    |    |           |           |    | A    |           | 04/04/22 | ISSUED FOR 60% REVIEW - WO 39827425 NVL AP1164  | TL | KS | KS        | TL        | TL |  |

|                   |    |      |          |
|-------------------|----|------|----------|
| DRAWN             | TL | DATE | 04/20/22 |
| CHECKED           | KS | DATE | 04/20/22 |
| DESIGNED          | TL | DATE | 04/20/22 |
| DESIGN APPROVAL   |    | DATE |          |
| ENGINEER APPROVAL |    | DATE |          |

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GAS COMPRESSION

FILE: 105C-5000-015  
RASTER FILE:

SCALE: 1"=20'

|                       |                    |                       |           |       |
|-----------------------|--------------------|-----------------------|-----------|-------|
| FIELD AREA: FIELDAREA | PROJECT # 39827425 | DRAWING NO. 105C-5000 | SHEET 014 | REV C |
| STA. NO. 105          |                    |                       |           |       |

DO NOT SCALE DRAWING USE DIMENSIONS ONLY

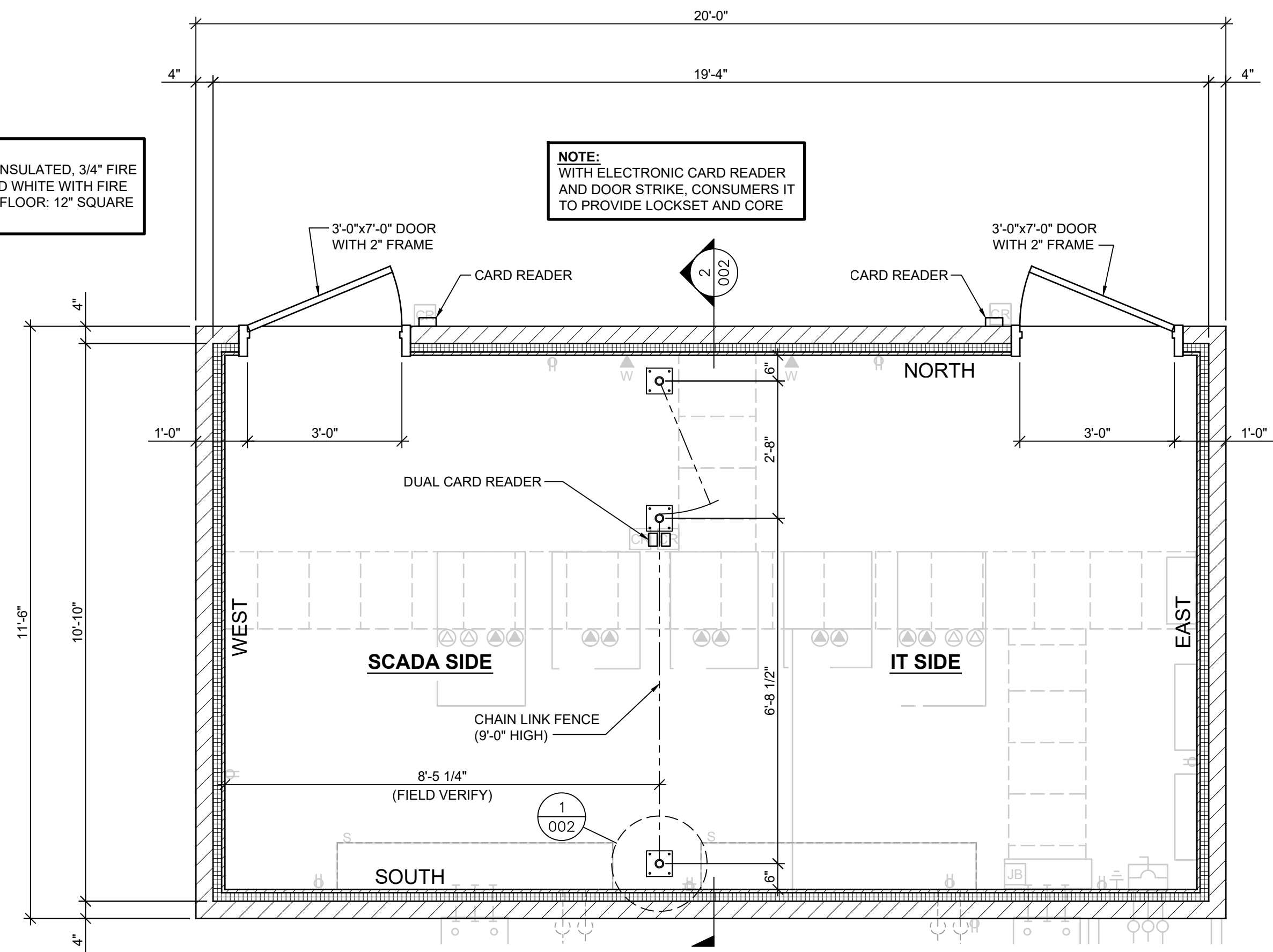




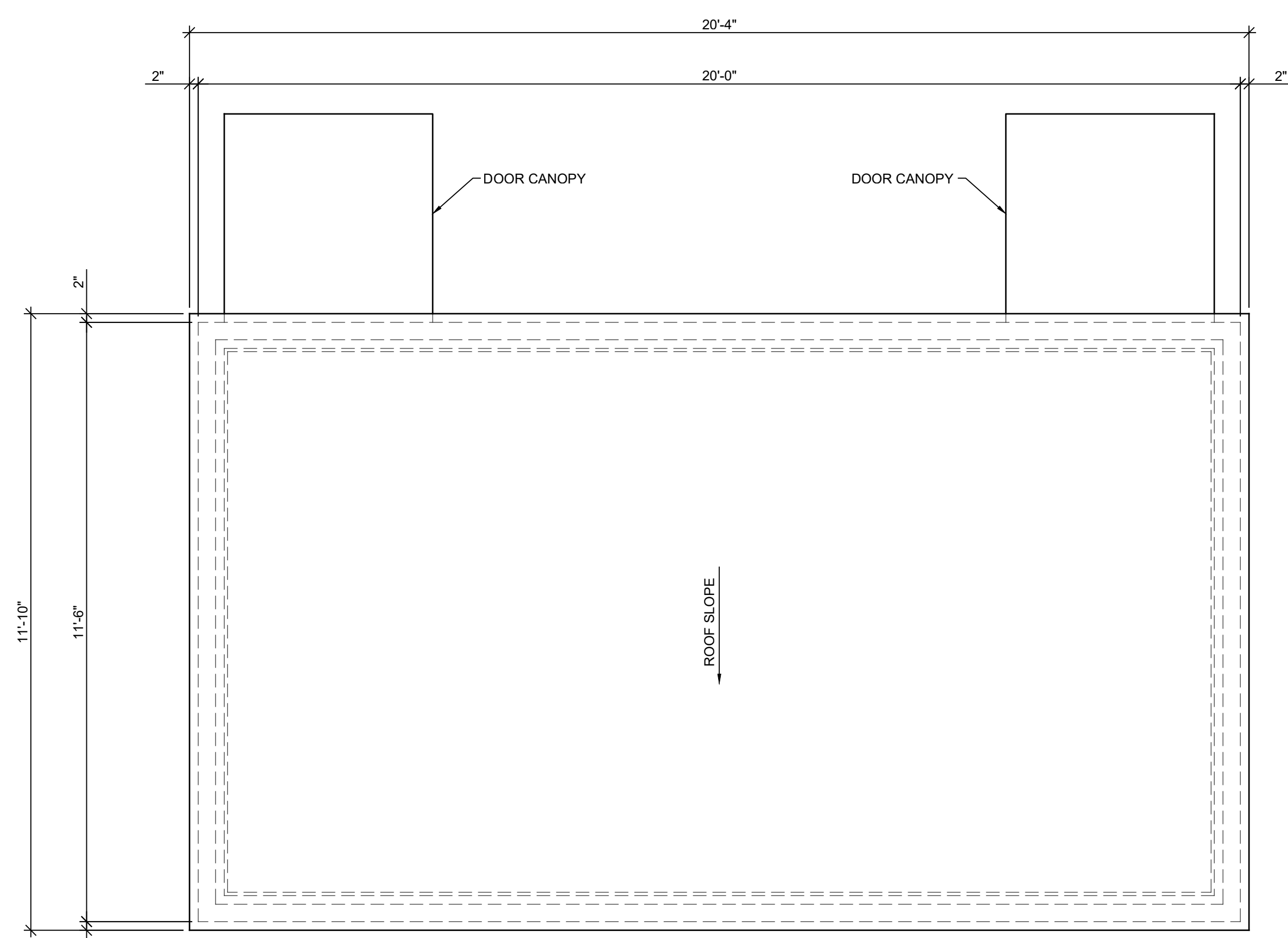


**INTERIOR FINISHES**  
 WALLS AND CEILING: R24 INSULATED, 3/4" FIRE RATED PLYWOOD, PAINTED WHITE WITH FIRE RATED STAMP EXPOSED. FLOOR: 12" SQUARE VINYL COMPOSITION TILE.

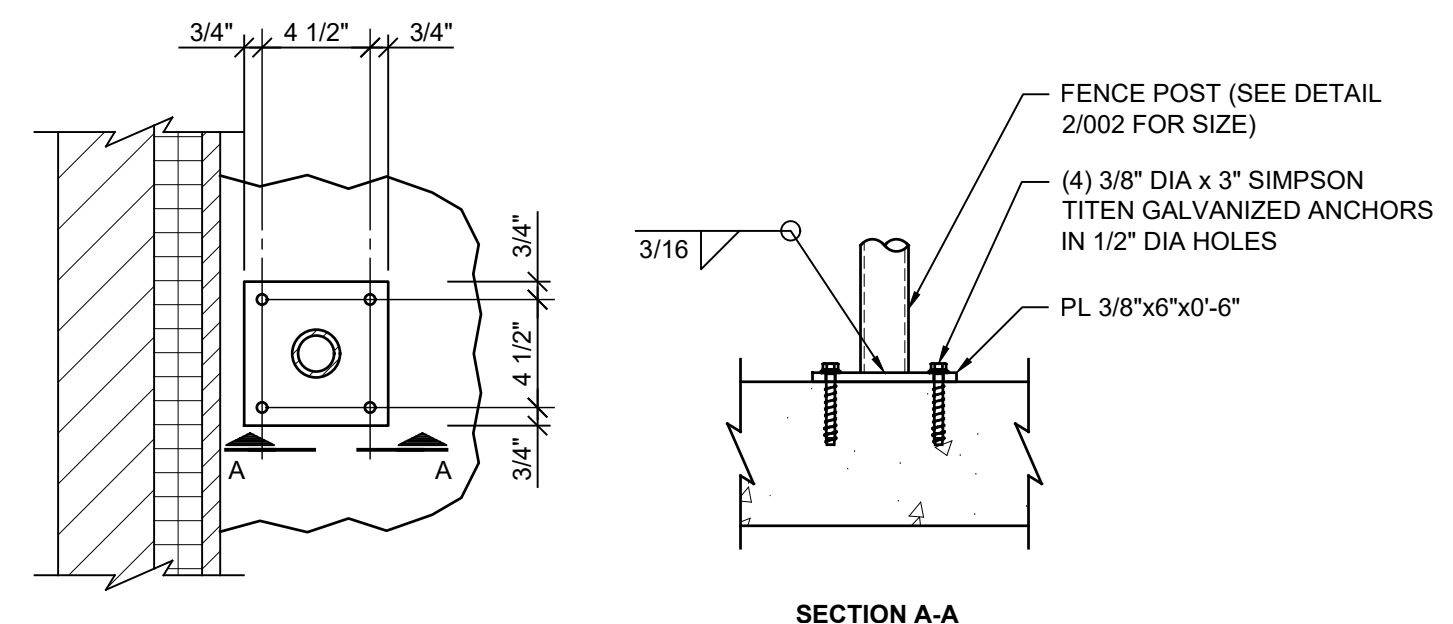
**NOTE:**  
 WITH ELECTRONIC CARD READER AND DOOR STRIKE, CONSUMERS IT TO PROVIDE LOCKSET AND CORE



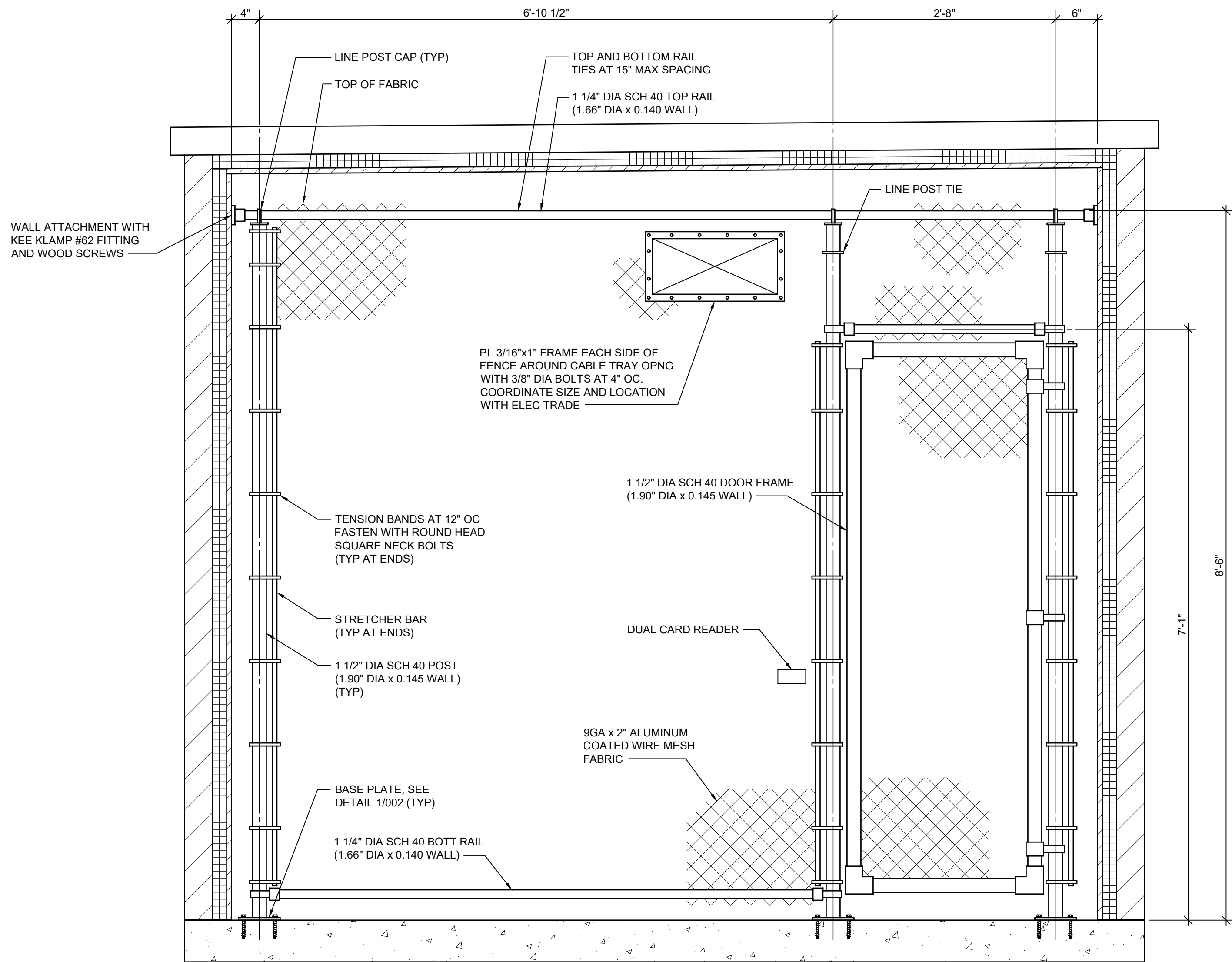
**FLOOR PLAN**  
 SCALE: 1/2" = 1'-0"  
 TRUE NORTH PLAN NORTH



**ROOF PLAN**  
 SCALE: 1/2" = 1'-0"  
 TRUE NORTH PLAN NORTH



**1 BASE PLATE DETAIL**  
 SCALE: 3" = 1'-0"



**2 FENCE ELEVATION**  
 SCALE: 1" = 1'-0"

**GENERAL**  
 DESIGNED AND ALL CONSTRUCTION TO BE IN ACCORDANCE WITH 2015 MICHIGAN BUILDING CODES.  
 SCOPE: NEW 230 SQ FT IT/DATA BUILDING.  
 THIS BUILDING WILL BE PHYSICALLY SEPARATED FROM THE ADJACENT STORAGE BUILDING (OCCUPANCY CLASSIFICATION S-1 STORAGE, MODERATE HAZARD, TYPE IIB, NON SPRINKLED, 10,325 S.F.) HOWEVER FOR BUILDING SEPARATION PURPOSES THEY WILL BE CONSIDERED AS ONE IN ACCORDANCE WITH MBC 503.1.2.  
 OCCUPANCY CLASSIFICATION: B, BUSINESS GROUP  
 TYPE OF CONSTRUCTION: TYPE IIB, UNPROTECTED (NOT SPRINKLED).  
 RISK CATEGORY = III  
 FLOOR LIVE LOAD = 150 PSF  
 ROOF LIVE LOAD = 30 PSF  
 SNOW  
 PG=25 PSF, CE=1.0, CT=1.0  
 FLAT ROOF SNOW, PF=20 PSF (DRIFTING WHERE APPLICABLE)  
 ROOF UNIFORM SNOW = 20PSF  
 I=1.10  
 WIND  
 BASIC WIND SPEED, V=120MPH  
 WIND EXPOSURE C  
 I = 1.15  
 SEISMIC  
 Sds = 0.097  
 Sd1 = 0.074  
 I = 1.25  
 DESIGN CATEGORY = B

CONTRACTOR SHALL WORK IN COMPLIANCE WITH THE MIOSHA SAFETY REGULATIONS AT ALL TIMES.  
 DRAWINGS SHALL BE USED IN CONJUNCTION WITH PROJECT SPECIFICATIONS. CONTRACTORS WORK INCLUDES ALL DETAILING, FABRICATION, INSTALLATION AND CONSTRUCTION AS SPECIFIED ON THESE DOCUMENTS.  
 ALL SECTIONS AND DETAILS SHALL BE CONSIDERED TYPICAL AND APPLY TO ALL SIMILAR CONDITIONS.  
 CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH ALL EXISTING AND PROPOSED CONDITIONS. DRAWINGS DO NOT INCLUDE ALL EQUIPMENT, PIPING OR CONDUITS IN AND AROUND WORK AREAS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS. REPORT DISCREPANCIES TO THE ENGINEER.  
 INSTALL ALL MATERIALS IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.  
 NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED OR OTHERWISE ALTERED WITHOUT PRIOR APPROVAL.  
**DEMOLITION**  
 EXISTING CONSTRUCTION NOTED FOR DEMOLITION SHALL BE DEMOLISHED IN AN ORDERLY AND CAREFUL MANNER. SHORE AND PROTECT EXISTING STRUCTURE TO REMAIN AS NECESSARY. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO INSURE THE INTEGRITY OF THE EXISTING STRUCTURE AT ALL TIMES INCLUDING TEMPORARY BRACING. THE COST FOR THIS SHALL BE INCLUDED IN THE COST OF THE WORK.  
 LEGALLY DISPOSE OF ALL DEMOLISHED DEBRIS AND MATERIALS.  
**SHOP DRAWINGS**  
 SUBMIT SHOP DRAWINGS TO ENGINEER A MINIMUM TWO WEEKS IN ADVANCE OF FABRICATION.  
 SHOP DRAWINGS PREPARED USING A COPY OR ANY PART OF THE CONTRACT DOCUMENTS WILL BE REJECTED.

**FOUNDATION NOTES**  
 FOUNDATIONS ARE DESIGNED BASED ON SOIL BEARING OF 2000 PSF. IF SOIL OF THIS CAPACITY IS NOT FOUND ON THE ELEVATION NOTED, ENLARGE OR LOWER FOOTINGS AT THE DIRECTION OF THE ARCHITECT/ENGINEER.  
 PLACE MDOT CLASS II MATERIAL AS STRUCTURAL BACKFILL IN LAYERS NOT EXCEEDING 9" LOOSE THICKNESS. COMPACT EACH LAYER TO AT LEAST 95% OF THE MAXIMUM DENSITY PER ASTM D-1557.  
 CENTER FOOTINGS UNDER WALL LOCATION AND COLUMNS UNLESS NOTED.  
 EARTH TRENCH/BANK FORMS ARE NOT PERMITTED UNLESS SPECIFICALLY NOTED. TRENCH/BANK FOOTINGS SHALL HAVE SQUARE BOTTOM AND SMOOTH VERTICAL SIDES. FORM WHERE IRREGULARITIES OCCUR, NO MUSHROOM TOPS. REINFORCING SHALL BE SECURELY INSTALLED IN THE TRENCH PRIOR TO PLACING CONCRETE, NOT BE FLOATED INTO POSITION.  
 EXISTING FOUNDATIONS OR FLOOR SLAB ENCOUNTERED DURING SITE GRADING AND EXCAVATION SHALL BE REMOVED TO A DEPTH OF TWO (2) FEET BELOW NEW CONSTRUCTION. REPLACE WITH STRUCTURAL BACKFILL.  
 PROVIDE BOND BREAK MATERIAL BETWEEN ALL GRADE SLABS AND VERTICAL SURFACES.  
 BACKFILL AND EXCAVATION PER SPECIFICATIONS.  
**CONCRETE NOTES**  
 ACI BUILDING CODE (318); MANUAL OF STANDARD PRACTICE FOR DETAILING (315) FOR THE MIXING, FABRICATION AND PLACEMENT OF CONCRETE, REINFORCING STEEL, AND ACCESSORIES.  
 CONCRETE STRENGTH - (STANDARD) WEIGHT CONCRETE:  
 FOOTINGS: F'C = 4000 PSI  
 CONCRETE SLABS: F'C = 4000 PSI  
 INTERIOR SLAB TO HAVE CONCRETE SEALER, EXTERIOR SLAB TO HAVE SEALER WITH SALT GUARD  
 REINFORCING - BARS: ASTM A-615 GRADE 60  
 WELDED WIRE FABRIC: ASTM A-1064  
 CONCRETE SLABS ON GRADE REINFORCING: 6X6 - W2.9XW2.9 WWF UNLESS NOTED. LOCATED IN THE UPPER 1/3 OF SLAB THICKNESS.  
 PROVIDE SAWCUT CONTROL JOINTS AT APPROXIMATELY 20' ON CENTER EACH WAY IN SLABS ON GRADE. SEE DETAILS. LOCATE JOINTS UNDER PARTITIONS WHENEVER POSSIBLE. CONSTRUCTION JOINTS AT CONTRACTOR'S OPTION.  
 FORM ALL CONCRETE.  
 PROVIDE CORNER BARS FOR ALL CONTIGUOUS CORNERS.  
 WATER/CEMENT RATIO LIMITS:  
 F'C = 4000 PSI NON-AIR ENTRAINED, 0.50  
 F'C = 4000 PSI AIR ENTRAINED, 0.45  
 PROVIDE AIR ENTRAINED CONCRETE FOR EXTERIOR EXPOSURES.  
 WALL FOOTING REINFORCING LAP LENGTH: MINIMUM 27", 21" IF LAPS STAGGERED.

**MacMILLAN ASSOCIATES**  
 CONSULTING ENGINEERS  
 714 EAST MIDLAND STREET - BAY CITY, MICHIGAN 48706  
 (989) 894-4300 F (989) 894-9930 www.macmillanassociates.com  
 0.0' 0.5' 1.0' 1.5' 2.0'

**NORTHVILLE COMPRESSOR STATION  
 2022 CONSTRUCTION**

**IT/SCADA BUILDING  
 BUILDING PLANS**



GEO-SPATIAL & GAS ASSET MANAGEMENT  
 GAS COMPRESSION

|                          |             |       |     |
|--------------------------|-------------|-------|-----|
| FIELD AREA: (field area) | DRAWING NO. | SHEET | REV |
| PROJECT # 39827425       | 105A-5000   | 002   | D   |

ORIGINAL DRAWING #

| REV. | PROJECT # | DATE     | DESCRIPTION   | DR | CK | DES. APP. | ENG. APP. | CO  | REV. | PROJECT # | DATE | DESCRIPTION | DR | CK | DES. APP. | ENG. APP. | CO |
|------|-----------|----------|---|----|----|-----------|-----------|-----|------|-----------|------|-------------|----|----|-----------|-----------|----|
| D    |           | 06/22/22 | SKETCH PLAN - WO 39827425 NVLAPH1164                | DG | WT | WT        | JB        | MAI |      |           |      |             |    |    |           |           |    |
| C    |           | 05/31/22 | ISSUED FOR AFC TECH REVIEW - WO 39827425 NVLAPH1164 | DG | WT | WT        | JB        | MAI |      |           |      |             |    |    |           |           |    |
| B    |           | 05/06/22 | ISSUED FOR 90% REVIEW - WO 39827425 NVL APH1164     | DG | WT | WT        | JB        | MAI |      |           |      |             |    |    |           |           |    |
| A    |           | 04/08/22 | ISSUED FOR 60% REVIEW - WO 39827425 NVL APH1164     | DG | WT | WT        | JB        | MAI |      |           |      |             |    |    |           |           |    |

|                   |    |      |          |
|-------------------|----|------|----------|
| DRAWN             | DG | DATE | 04/20/22 |
| CHECKED           | WT | DATE | 04/20/22 |
| DESIGNED          | JB | DATE | 04/20/22 |
| DESIGN APPROVAL   |    | DATE |          |
| ENGINEER APPROVAL |    | DATE |          |

FILE: 105A-5000-002  
 RASTER FILE: AS NOTED

DO NOT SCALE DRAWING USE DIMENSIONS ONLY

FIG. 124

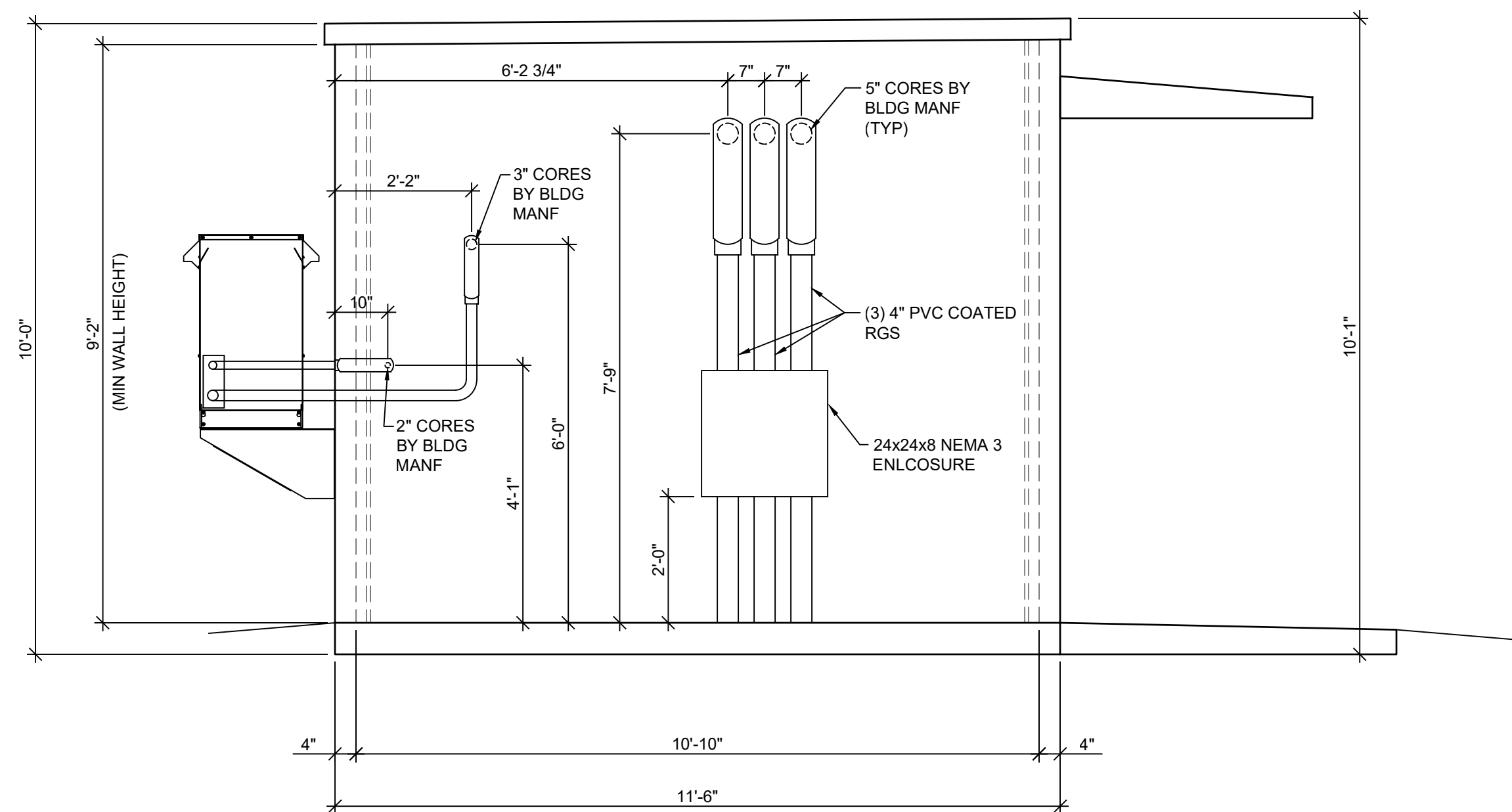
**PRECAST BUILDING**

CONTRACTOR TO SUPPLY AND INSTALL THE COMPLETE PREFABRICATED CONCRETE STRUCTURE PER THE SPECIFICATION AND DRAWINGS.

EXTERIOR FINISH TO BE EXPOSED AGGREGATE, LIGHT BROWN OR OTHER STANDARD COLOR AS SELECTED BY THE OWNER.

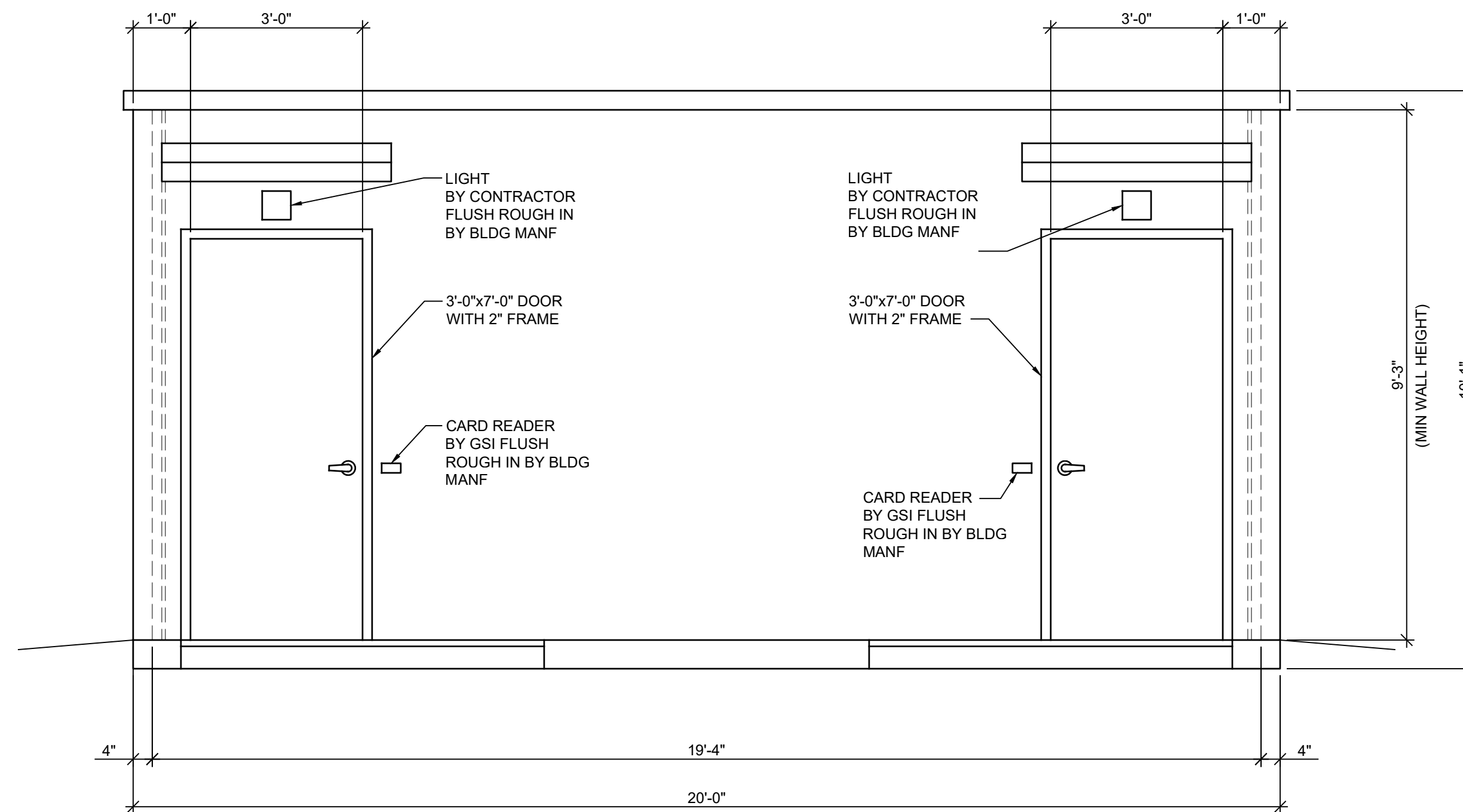
INTENT IS TO INCLUDE ALL FINISHES PREFABRICATED TO THE GREATEST EXTENT POSSIBLE. WHERE PREFAB IS NOT AVAILABLE PROVIDE FIELD INSTALLED FINISHED AS SPECIFIED.

PROVIDE DETAILED SHOP DRAWINGS FOR APPROVAL AND FINAL COORDINATION OF PENETRATIONS. FIELD SEAL AROUND ALL PENETRATIONS FOLLOWING EQUIPMENT INSTALLATION.



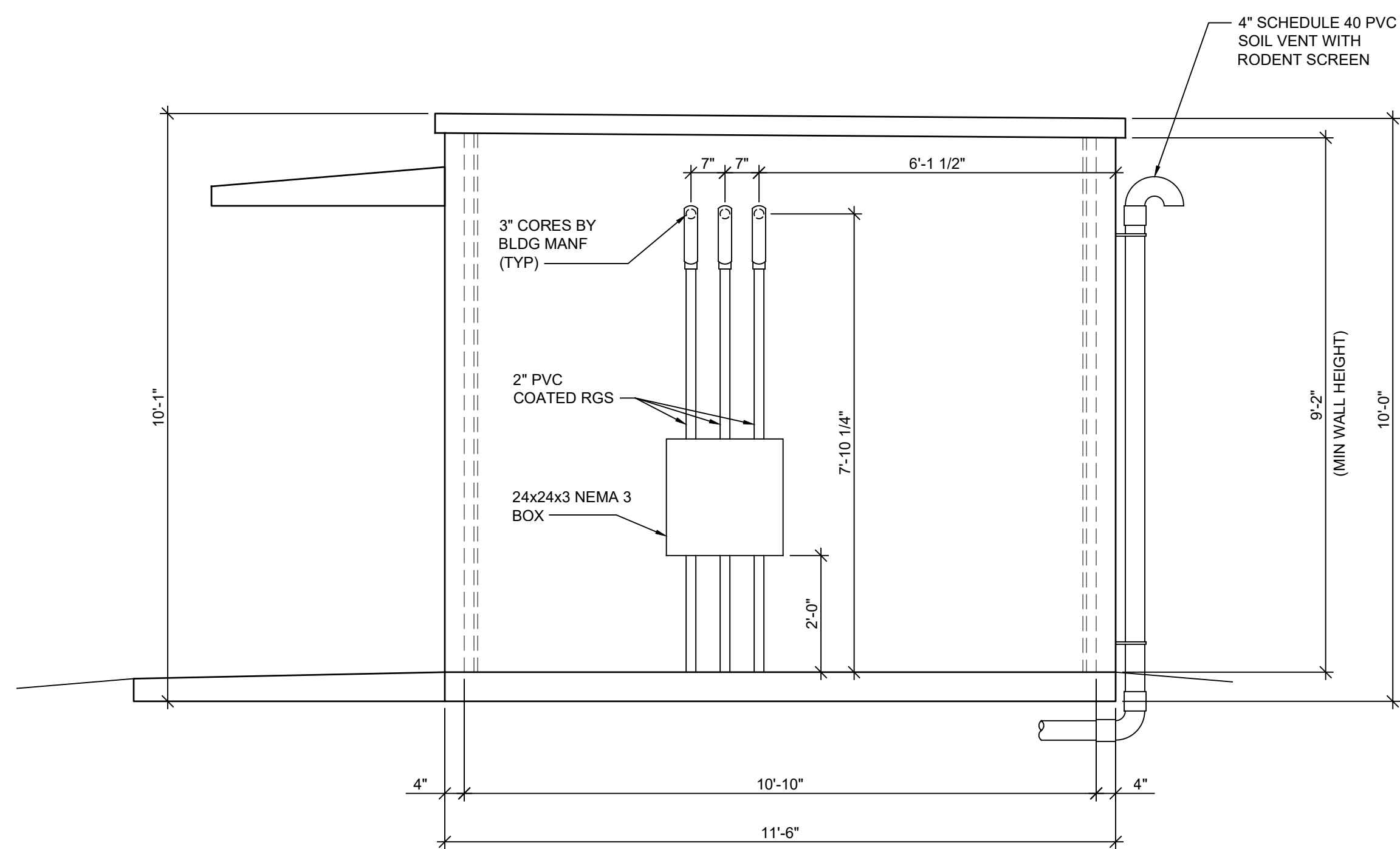
**EAST ELEVATION**

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



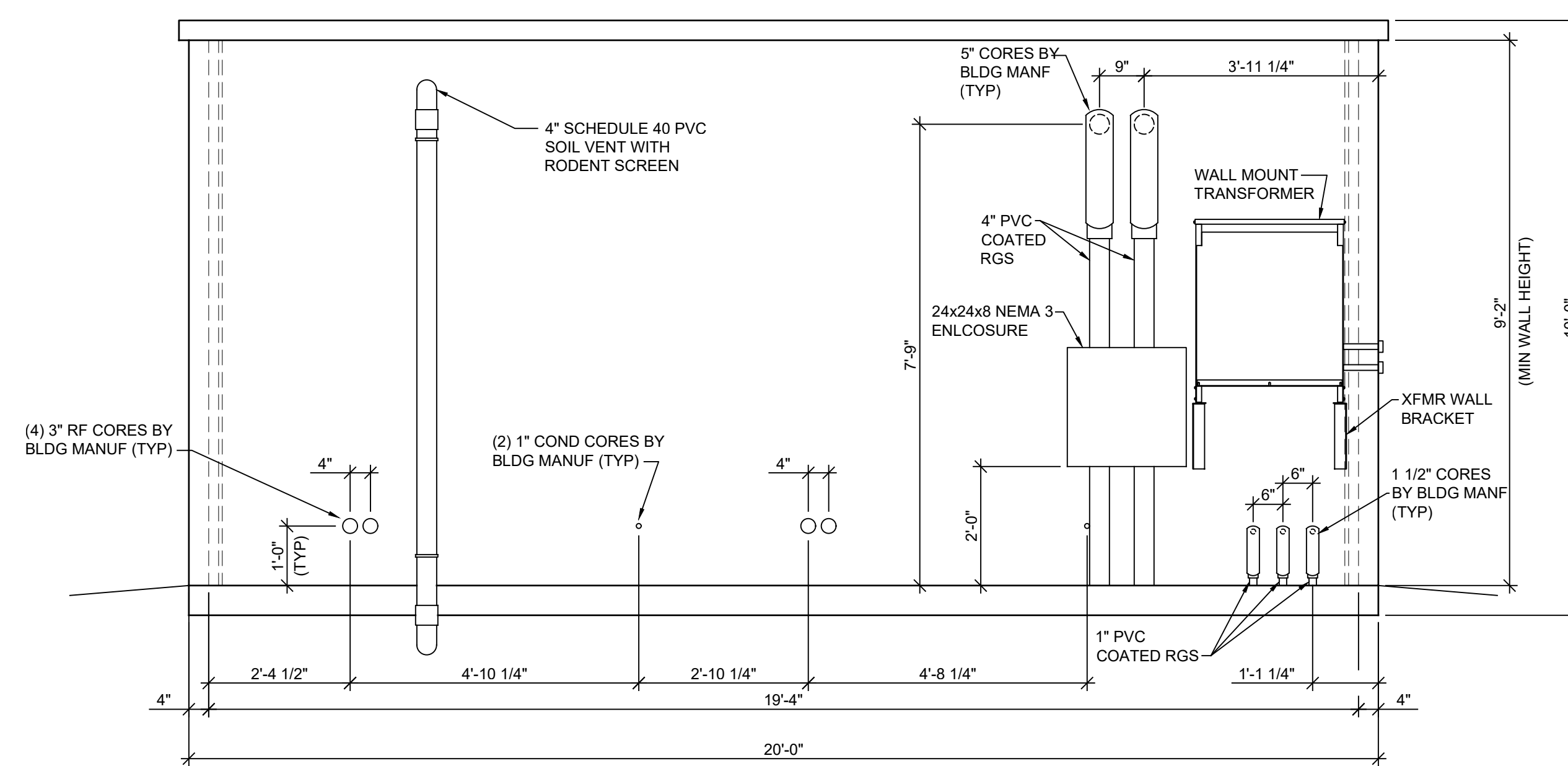
**NORTH ELEVATION**

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



**WEST ELEVATION**

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



**SOUTH ELEVATION**

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

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**NORTHVILLE COMPRESSOR STATION  
 2022 CONSTRUCTION**

**IT/SCADA BUILDING  
 BUILDING ELEVATIONS**

|                          |             |       |     |
|--------------------------|-------------|-------|-----|
| FIELD AREA: (field area) | DRAWING NO. | SHEET | REV |
| PROJECT # 39827425       | 105A-5000   | 003   | D   |
| STA. NO. 105             |             |       |     |

ORIGINAL DRAWING #

| REV. | PROJECT # | DATE     | DESCRIPTION   | DR | CK | DES. APP. | ENG. APP. | CO  | REV. | PROJECT # | DATE | DESCRIPTION | DR | CK | DES. APP. | ENG. APP. | CO |
|------|-----------|----------|---|----|----|-----------|-----------|-----|------|-----------|------|-------------|----|----|-----------|-----------|----|
| D    |           | 06/22/22 | SKETCH PLAN - WO 39827425 NVL AP1164                | DG | WT | WT        | JB        | MAI |      |           |      |             |    |    |           |           |    |
| C    |           | 05/31/22 | ISSUED FOR AFC TECH REVIEW - WO 39827425 NVL AP1164 | DG | WT | WT        | JB        | MAI |      |           |      |             |    |    |           |           |    |
| B    |           | 05/06/22 | ISSUED FOR 90% REVIEW - WO 39827425 NVL AP1164      | DG | WT | WT        | JB        | MAI |      |           |      |             |    |    |           |           |    |
| A    |           | 04/08/22 | ISSUED FOR 60% REVIEW - WO 39827425 NVL AP1164      | DG | WT | WT        | JB        | MAI |      |           |      |             |    |    |           |           |    |

|                   |    |      |         |
|-------------------|----|------|---------|
| DRAWN             | DG | DATE | 04/2022 |
| CHECKED           | WT | DATE | 04/2022 |
| DESIGNED          | JB | DATE | 04/2022 |
| DESIGN APPROVAL   |    | DATE |         |
| ENGINEER APPROVAL |    | DATE |         |

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 GAS COMPRESSION

FILE: 105A-5000-003  
 RASTER FILE:

SCALE AS NOTED

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