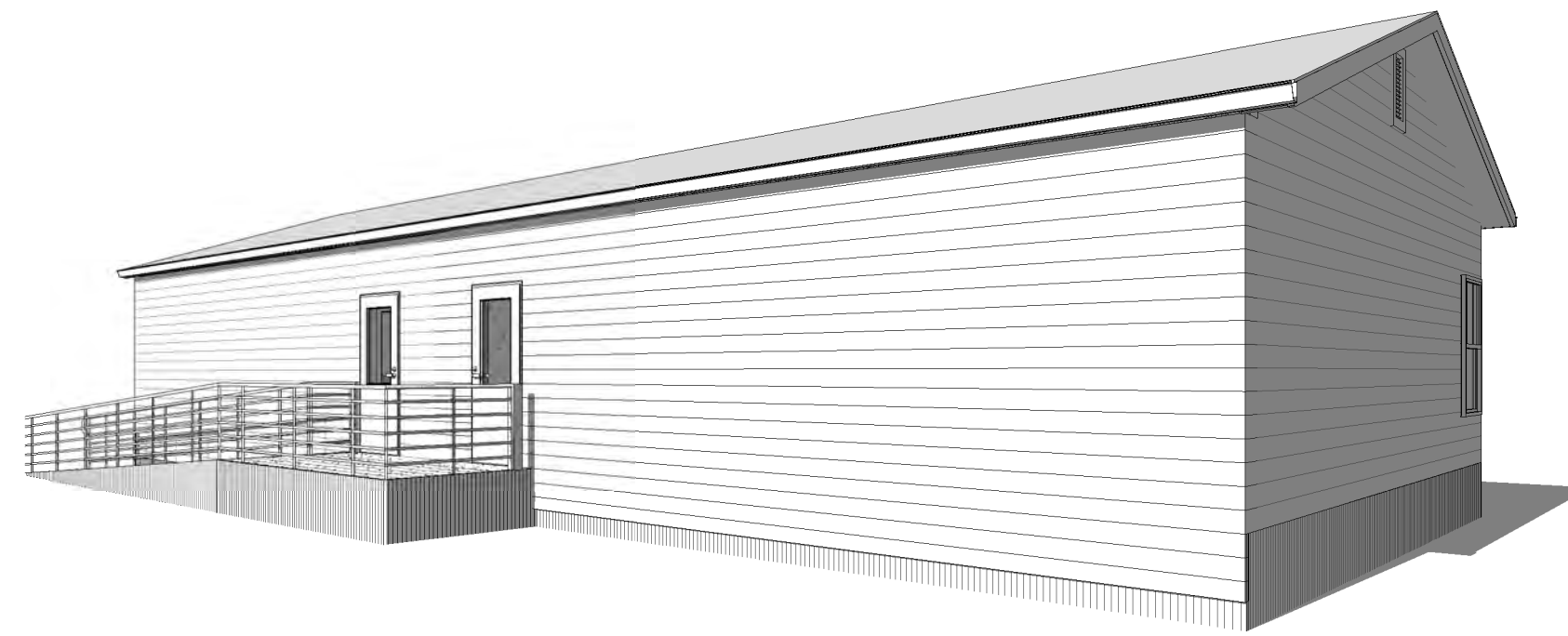


# Fast Forward Portable Double Classroom

## 875 East 1400 North



Mechanical Engineer

156 North Twelfth Avenue  
Pocatello, Idaho 83201  
(208) 23-2577  
nel@nielseneng.com



Structural Engineer

150 East 200 North Suite P  
Logan, Utah 84321  
(435) 755-5121  
alliancecolgan@yahoo.com



General Contractor

76 West 2400 North  
North Logan, Utah 84341  
(435) 890-2557  
jen@dwaconstruct.com



Architect

445 East 275 North  
Hyde Park, Utah 84318  
(435) 512-5243  
steven.mansfield@usu.edu



Electrical Engineer

525 East 3700 South  
Logan, Utah 84321  
(435) 133-1250  
david@beazer-engineering.com

### CODE ANALYSIS

**PROJECT NAME:** Fast Forward Portable Classroom  
**ADDRESS:** 875 East 1400 North Logan, Utah 84321 Classroom  
**PROPOSED USE:** Classroom  
**OWNER/CONTACT PERSON:** Jen Anderson 435-890-2557  
**JURISDICTION:** LOGAN, UTAH  
**CODE:** 2021 INTERNATIONAL BUILDING CODE 2021 INTERNATIONAL MECHANICAL CODE  
 2021 INTERNATIONAL PLUMBING CODE 2020 NATIONAL ELECTRICAL CODE  
 2021 INTERNATIONAL FIRE CODE 2021 NATIONAL FUEL GAS CODE  
 2021 INTERNATIONAL ENERGY CODE COUNCIL AMERICANS W/ DISABILITIES ACT ACCESSIBILITY GUIDELINES  
 A117.1 AMERICANS NATIONAL STANDARDS INSTITUTE A17.1 AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
 PROJECT TO COMPLY W/ ICC A117.1-2017

**GENERAL:**  
 OCCUPANCY E - Education  
 REQUIRED FIRE SEPARATION 0 hour - TABLE 705.5

#### FIRE RESISTIVE REQUIREMENTS (TABLE 601):

|                    |             |
|--------------------|-------------|
| CONSTRUCTION TYPE  | VB          |
| STRUCTURAL FRAME   | 0 HR RATING |
| BEARING WALLS      | 0 HR RATING |
| EXTERIOR           | 0 HR RATING |
| INTERIOR           | 0 HR RATING |
| NON BEARING WALLS  | 0 HR RATING |
| FLOOR CONSTRUCTION | 0 HR RATING |
| ROOF CONSTRUCTION  | 0 HR RATING |

#### BUILDING HEIGHT (TABLE 504.3):

|                  |         |
|------------------|---------|
| ALLOWABLE HEIGHT | 40 FEET |
| ACTUAL HEIGHT    | 16 FEET |

#### NUMBER OF STORIES (TABLE 504.4):

|                   |   |
|-------------------|---|
| ALLOWABLE STORIES | 1 |
| ACTUAL STORIES    | 1 |

#### ALLOWABLE AREA (506.2):

|                          |            |
|--------------------------|------------|
| ALLOWABLE AREA           | 9,500 S.F. |
| ACTUAL AREA (MAIN FLOOR) | 785 S.F.   |

#### FIRE PROTECTION SYSTEMS:

|                                 |   |
|---------------------------------|---|
| FIRE EXTINGUISHING SYSTEM:      | N |
| STANDPIPE SYSTEM:               | N |
| FIRE DETECTION SYSTEM REQUIRED: | N |
| SMOKE AND HEAT REMOVAL:         | N |

#### OCCUPANT LOAD CALCULATION (TABLE 1004.1.1):

OCCUPANT LOAD AS PER IBC TABLE 1004.5 (20 net) TOTAL = 785/20 = 40 PEOPLE

#### EGRESS WIDTH (TABLE 1005.1):

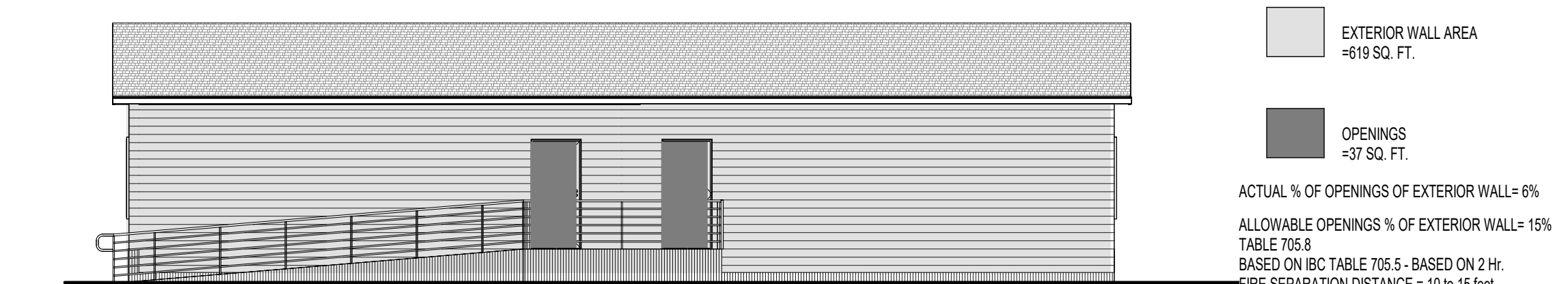
|           |                    |         |
|-----------|--------------------|---------|
| CORRIDORS | OCCUPANT < OR = 30 | 36" MIN |
|           | OCCUPANT > OR = 30 | 44" MIN |

CORRIDOR DOORS 2 INCHES PER OCCUPANT = 40x 2" = 8" OF EXIT REQUIRED  
36" OF EXIT PROVIDED

#### EXIT TRAVEL DISTANCE (TABLE 1017.2):

|  |                      |                       |
|--|----------------------|-----------------------|
|  | MAX. TRAVEL DISTANCE | WITH SPRINKLER SYSTEM |
|  | 200 FEET             | 300 FEET              |

FOR MAX. TRAVEL DISTANCE REFER TO SHEET G101. NO TRAVEL DISTANCE EXCEEDS 100 FEET.



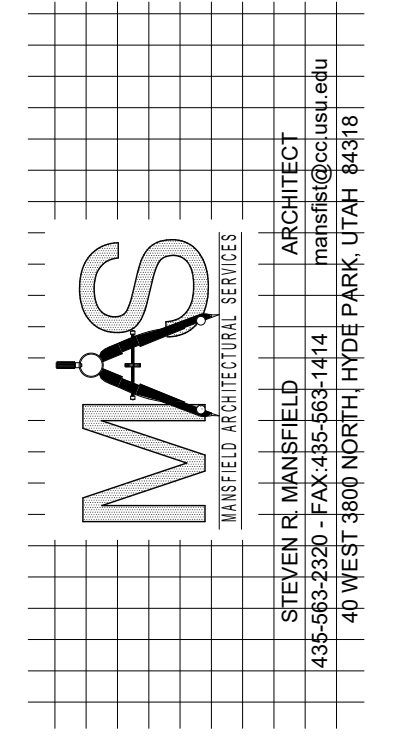
- East Elevation For 2hr Fire rated wall**
1. Framing - 2x6 Wood Studs @ 24" O.C. with double top plate, single bottom plate.
  2. Sheathing
    - Base layer - 5/8" Type X Gypsum wallboard, 4 ft. wide, applied horizontally, joints staggered on opposite sides of the wall.
    - Face layer - 5/8" Type X Gypsum wallboard, 4 ft. wide, applied horizontally, joints staggered on opposite sides of the wall.
 Horizontal joints are unblocked. Horizontal application of wallboard represents the direction of least fire resistance as opposed to vertical application.
  3. Insulation - 5 1/2" mineral rock wool.
  4. Gypsum Fasteners: Base layer - 2 1/4" #6 Type S Drywall screws spaced 24" O.C.
  5. Gypsum Fasteners: Face layer - 2 1/4" #6 Type S Drywall screws spaced 8" O.C.
  6. Joints & Fastener Heads - Wallboard joints covered with paper tape & Joint Compound. Fastener heads covered with joint compound.

| Index of Drawings |   |
|-------------------|---|
| Sheet Number      | Sheet Name                              |
| G100              | Title Sheet & Code Information          |
| A100              | Plans                                   |
| A101              | Elevations                              |
| A102              | Building Sections                       |
| A103              | Wall Sections                           |
| A104              | Schedules, Details & Fire Rated Wall    |
| A105              | Interior Elevations & Millwork Sections |
| S0.1              | Structural Cover Sheet                  |
| S1.1              | Structural Framing Plans                |
| S2.1              | Structural Details                      |
| E2.1              | Electrical Plans                        |
| E2.2              | Electrical Diagrams & Schedules         |
| M-1               | Mechanical                              |

| ABBR.   | DESCRIPTION               | ABBR.  | DESCRIPTION                      |
|---------|---------------------------|--------|----------------------------------|
| ACC STA | ACCESSIBLE STATION        | MECH   | MECHANICAL                       |
| AC      | ACOUSTIC, ACOUSTICAL      | MTL    | METAL                            |
| ADJ     | ADJUSTABLE                | MIN    | MINIMUM                          |
| ALT     | ALTERNATE                 | MISC   | MISCELLANEOUS                    |
| ALUM    | ALUMINUM                  | MT     | MOUNT                            |
| AB      | ANCHOR BOLT               | (N)    | NEW                              |
| ANG     | ANGLE                     | NIC    | NOT IN CONTRACT                  |
| ASPH    | ASPHALT                   | NTS    | NOT TO SCALE                     |
| BSMT    | BASEMENT                  | O/C    | ON CENTER                        |
| BRG     | BEARING                   | OPNG   | OPENING                          |
| BM      | BENCH MARK                | OPP    | OPPOSITE                         |
| BLKG    | BLOCKING                  | OD     | OUTSIDE DIAMETER                 |
| BD      | BOARD                     | OH     | OVERHEAD                         |
| B.O.    | BOTTOM OF                 | OF/CI  | OWNER FURNISHED/ OWNER INSTALLED |
| BLDG    | BUILDING                  | OF/CI  | OWNER FURNISHED/ OWNER INSTALLED |
| B.U.R.  | BUILT UP ROOF             | PARTN  | PARTITION                        |
| CLG     | CENTERLINE                | P-LAM  | PLASTIC LAMINATE                 |
| CL      | CERAMIC TILE              | PL     | PLYWOOD                          |
| CB      | CHALK BOARD               | PREFAB | PREFABRICATED                    |
| C       | CHANNEL                   | PROJ   | PROJECTION                       |
| CO      | CLEAN OUT                 | QUARRY | QUARRY TILE                      |
| COL     | COLUMN                    | RAD    | RADIUS                           |
| CONC    | CONCRETE                  | REF    | REFRIGERATOR                     |
| CONN    | CONNECTION                | REINF  | REINFORCED                       |
| CONT    | CONTINUOUS                | REV    | REVISION                         |
| CONTR   | CONTRACTOR                | RD     | ROUND                            |
| DIM     | DIMENSION                 | SCHED  | SCHEDULE                         |
| DWG     | DRAWING                   | SIM    | SIMILAR                          |
| EA      | EACH                      | SHT    | SHEET                            |
| ELECT   | ELECTRICAL                | SPEC   | SPECIFICATION                    |
| EW/C    | ELECTRIC WATER COOLER     | SQ     | SQUARE                           |
| ELEV    | ELEVATION                 | SS     | STAINLESS STEEL                  |
| EQ      | EQUAL                     | STD    | STANDARD                         |
| EQUIP   | EQUIPMENT                 | STL    | STEEL                            |
| EXIST   | EXISTING                  | STOR   | STORAGE                          |
| (E)     | EXISTING                  | STRUCT | STRUCTURAL                       |
| EXP     | EXPANSION                 | SUSP   | SUSPENDED, SUSPENSION            |
| EXT     | EXTERIOR                  | SYS    | SYSTEM                           |
| FIN     | FINISH                    | T&B    | T&B BOARD                        |
| FEC     | FIRE EXTINGUISHER CABINET | TEL    | TELEPHONE                        |
| FLR     | FLOOR                     | TV     | TELEVISION                       |
| FD      | FLOOR DRAIN               | TEMP   | TEMPORARY                        |
| GALV    | GALVANIZED                | TS     | TUBE STEEL                       |
| GI      | GALVANIZED IRON           | THRES  | THRESHOLD                        |
| GA      | GYP BOARD                 | TOIL   | TOILET                           |
| GYP BD  | GYP BOARD                 | T.O.   | TOP OF                           |
| HDWD    | HARD WOOD                 | T & B  | TOP AND BOTTOM                   |
| HT      | HEIGHT                    | TYP    | TYPICAL                          |
| HORIZ   | HOLLOW METAL              | VERT   | VERTICAL                         |
| ID      | INSIDE DIAMETER           | UNLESS | UNLESS NOTED OTHERWISE           |
| INSUL   | INSULATION                | WC     | WATER CLOSET                     |
| INT     | INTERIOR                  | WM     | WATER METER                      |
| JT      | JOINT                     | WWF    | WELDED WIRE FABRIC               |
| MFR     | MANUFACTURER              | W      | WIDE FLANGE                      |
| MB      | MARKER BOARD              | WID    | WINDOW                           |
| MAX     | MAXIMUM                   | W/O    | WITHOUT                          |
|         |                           | WD     | WOOD                             |

| SYMBOL | DESCRIPTION        |
|--------|--------------------|
|        | BUILDING SECTION   |
|        | SECTION CUT        |
|        | DETAIL BUBBLE      |
|        | INTERIOR ELEVATION |
|        | EXTERIOR ELEVATION |
|        | REVISIONS          |
|        | ELEVATION          |
|        | DOOR NUMBER        |
|        | WINDOW TYPES       |
|        | WALL TYPE          |
|        | ROOM TAGS          |
|        | SLOPE              |
|        | GRID BUBBLE        |
|        | KEY NOTES          |

| SYMBOL | DESCRIPTION                  |
|--------|------------------------------|
|        | EARTH                        |
|        | COMPACTED GRANULAR FILL      |
|        | FINISHED WOOD                |
|        | EXISTING STRUCTURE TO REMAIN |
|        | GYP BOARD                    |
|        | CONCRETE                     |
|        | PLYWOOD/OSB                  |
|        | SHINGLES                     |
|        | WOOD STUD WALL               |
|        | RIDGED INSULATION            |
|        | BATT INSULATION              |
|        | BRICK/MASONRY                |
|        | CONCRETE MASONRY UNIT (CMU)  |
|        | PARTICLE BOARD               |
|        | CONTINUOUS WOOD              |
|        | STEEL                        |

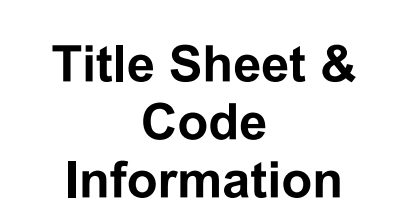


**Fast Forward Portable Double Classroom**

OWNERS NAME State of Utah  
 PROJECT ADDRESS 875 east 1400 North

| MARK: | DATE:  | DESCRIPTION: |
|-------|--------|--------------|
| 1     | Date 1 | Revision 1   |

PROJECT # 331  
 DESIGNED BY: srm  
 DRAWN BY: srm  
 CHECKED BY: srm  
 ISSUED: 4/30/2024



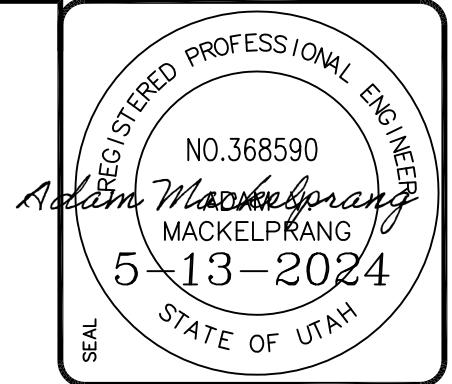
**Title Sheet & Code Information**

**G100**

# FAST FORWARD PORTABLE CLASSROOMS

875 WEST 1400 NORTH, LOGAN UT

## INDEX SHEET



**ALLIANCE CONSULTING ENGINEERS**

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(435)735-5111  
alliance@alliance-engineers.com

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PROJECT NO. : \_\_\_\_\_  
REVIEWED : \_\_\_\_\_  
CAD FILE : \_\_\_\_\_

**FAST FORWARD PORTABLE CLASSROOMS**  
875 WEST 1400 NORTH, LOGAN UT

INDEX SHEET

DATE : DEC, 2023  
DRAWING No. 1

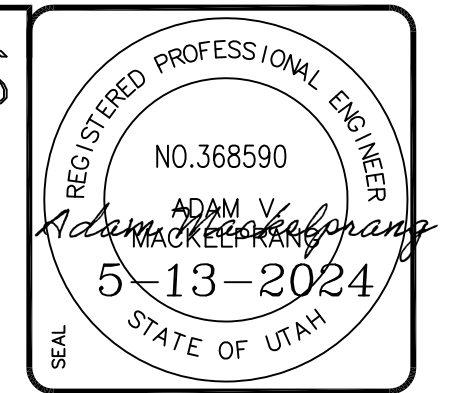


PROJECT  
VICINITY MAP

| SHEET INDEX |                   |
|-------------|-------------------|
| SHEET NO.   | SHEET DESCRIPTION |
| 1           | INDEX SHEET       |
| 2           | DEMO/SITE PLAN    |
| 3           | GRADING PLAN      |
|             |                   |
|             |                   |
|             |                   |

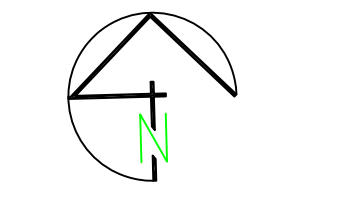
- GENERAL NOTES (APPLICABLE TO ALL CIVIL SHEETS):
1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, CITY OF LOGAN, STATE OF UTAH AND ANY OTHER APPLICABLE STANDARDS ISSUED BY THE CONTROLLING AGENCY.
  2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE CONSTRUCTION. ANY DISCREPANCIES BETWEEN CONSTRUCTION DOCUMENTS AND FIELD CONDITIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE OWNER.
  3. CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY AREAS AND/OR MATERIALS DAMAGED DURING CONSTRUCTION.
  4. CONTRACTOR SHALL MAINTAIN ALL ADJACENT PROPERTY (PUBLIC & PRIVATE) FROM ALL CONSTRUCTION DEBRIS.
  5. CONTRACTOR SHALL PROVIDE SMOOTH TRANSITION FROM ALL NEW CONSTRUCTION TO EXISTING CONDITIONS.
  6. CONTRACTOR SHALL PROVIDE ALL NECESSARY AUTOMOBILE AND PEDESTRIAN TRAFFIC CONTROL DEVICES REQUIRED BY LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES.
  7. CONTRACTOR SHALL REPLACE SURVEY MONUMENTS DAMAGED DURING CONSTRUCTION. SURVEY MONUMENTS TO BE REPLACED BY A REGISTERED, LICENSED LAND SURVEYOR.
  8. CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, INCLUDING FIBER OPTIC. ANY DAMAGES TO EXISTING UTILITIES WILL BE REPAIRED AT CONTRACTORS EXPENSE.
  9. DIMENSIONS SHOWN ARE TO THE CENTER OF THE PIPELINE UNLESS OTHERWISE NOTED.
  10. DISTANCES SHOWN ALONG PIPELINES ARE HORIZONTAL DISTANCES AND NOT ACTUAL PIPE LENGTHS. MORE PIPE MAY BE REQUIRED TO COMPLETE CONSTRUCTION THAN IS DIMENSIONED IN THE PLANS.
  11. THRUST BLOCKS SHALL BE PLACED ON WATERLINES AT ALL DIRECTION CHANGES, FITTINGS, BENDS, ELBOWS, FIRE HYDRANTS AND GATES VALVES AS SHOWN IN THE PROJECT PLANS.
  12. CONTRACTOR IS REQUIRED TO HAVE A SET OF PLANS ON THE SITE AT ALL TIMES. ANY WORK COMPLETED WITHOUT A SET PRESENT IS DONE SO AT THE CONTRACTORS RISK AND EXPENSE IF ERRORS OCCUR.
  13. CONTRACTOR IS RESPONSIBLE FOR PROVIDING WATER NECESSARY FOR DUST ABATEMENT, COMPACTION, ETC.
  14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING SOURCES FOR GRANULAR MATERIALS, WATER, WASTE SITES, AND ANY OTHER MATERIALS SOURCES AS REQUIRED FOR PROJECT COMPLETION.
  15. ANY WORK DONE WITHIN A PUBLIC RIGHT-OF-WAY SHALL BE COORDINATED WITH THE APPROPRIATE TRANSPORTATION AGENCY AND SHALL MEET THE REQUIREMENTS OF THAT AGENCY AND THE REQUIREMENTS OF ANY RIGHT-OF-WAY OR SPECIAL USE PERMITS.
  16. THE CONTRACTOR SHALL COORDINATE ALL LIVE TAPS AND ANY OTHER WORK OR MANIPULATION OF THE EXISTING WATER SYSTEM WITH THE CITY.
  17. ON SLOPING AREAS THE CONTRACTOR SHALL TAKE PRECAUTIONS TO MITIGATE ANY POSSIBLE EROSION PROBLEMS IN THE TRENCHES DUE TO STORM WATER THAT MIGHT OCCUR DURING OR AFTER CONSTRUCTION AS DIRECTED OR APPROVED BY ENGINEER.
  18. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL MEASURES AS DETAILED IN THE PROJECT PLANS UNTILL FINAL ACCEPTANCE OF THIS PROJECT.
  19. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONS NECESSARY TO INSURE THAT NO STORM WATER/SEDIMENT AND/OR CONSTRUCTION DEBRIS ARE RELEASED FROM THE SITE. ANY RELEASES SHALL BE CLEANED AND MITIGATED AT THE CONTRACTOR'S EXPENSE.
  20. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACCESS AND RELATED TRAFFIC CONTROL WITH THE COUNTY, CITY, AND STATE ROADWAY DEPARTMENTS. THE ENGINEER SHALL REVIEW ALL TRAFFIC CONTROL PLANS.
  22. ALL GATE VALVES SHALL BE LOCATED NEAR TO TEES OR CROSSES AND THEIR ASSOCIATED REDUCERS AS SHOWN ON THE PROJECT PLANS.
  23. CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS, HARDWARE, LABOR, ETC. TO CONSTRUCT VERTICAL AND HORIZONTAL BENDS IN PIPE AS NEEDED TO MEET THE REQUIRED GRADES, ALIGNMENTS AND COVER REQUIREMENTS.
  24. ALL AIR RELEASE VALVES SHALL BE INSTALLED AT THE CREST OF THE VERTICAL CURVATURE OF THE WATER LINE. CONTRACTOR SHALL RECORD ACTUAL LOCATION OF VALVES ON FIELD RECORD DRAWINGS.
  25. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF LOGAN FOR ALL UTILITY INSPECTIONS PRIOR TO BACKFILLING.
  26. ALL WATER SYSTEM COMPONENTS SHALL BE INSTALLED, PRESSURE TESTED, AND CHLORINATED PRIOR TO COMPLETING ANY ROADWAY CONSTRUCTION.

# FAST FORWARD PORTABLE CLASSROOMS DEMO/SITE PLAN

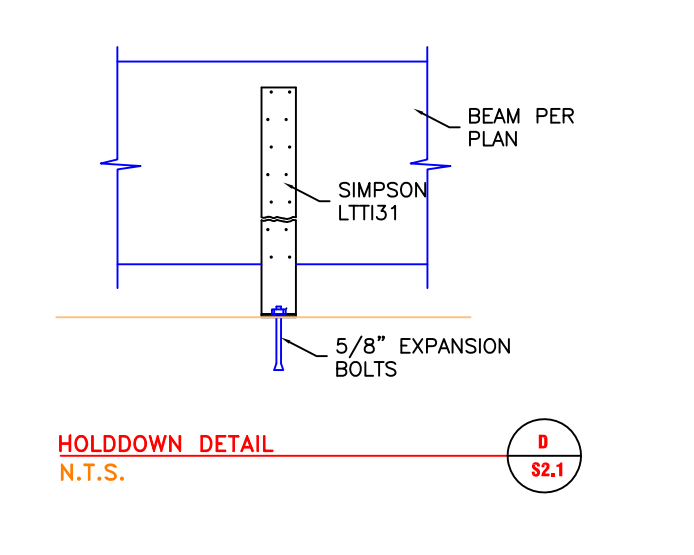
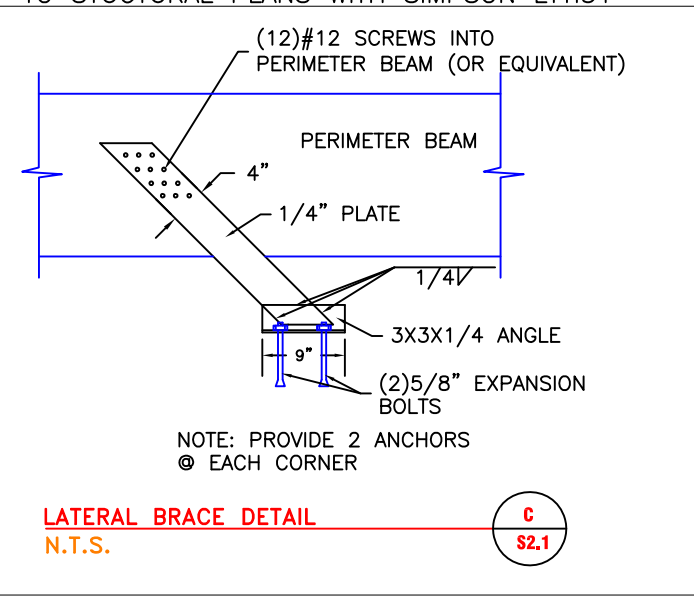


### NOTES

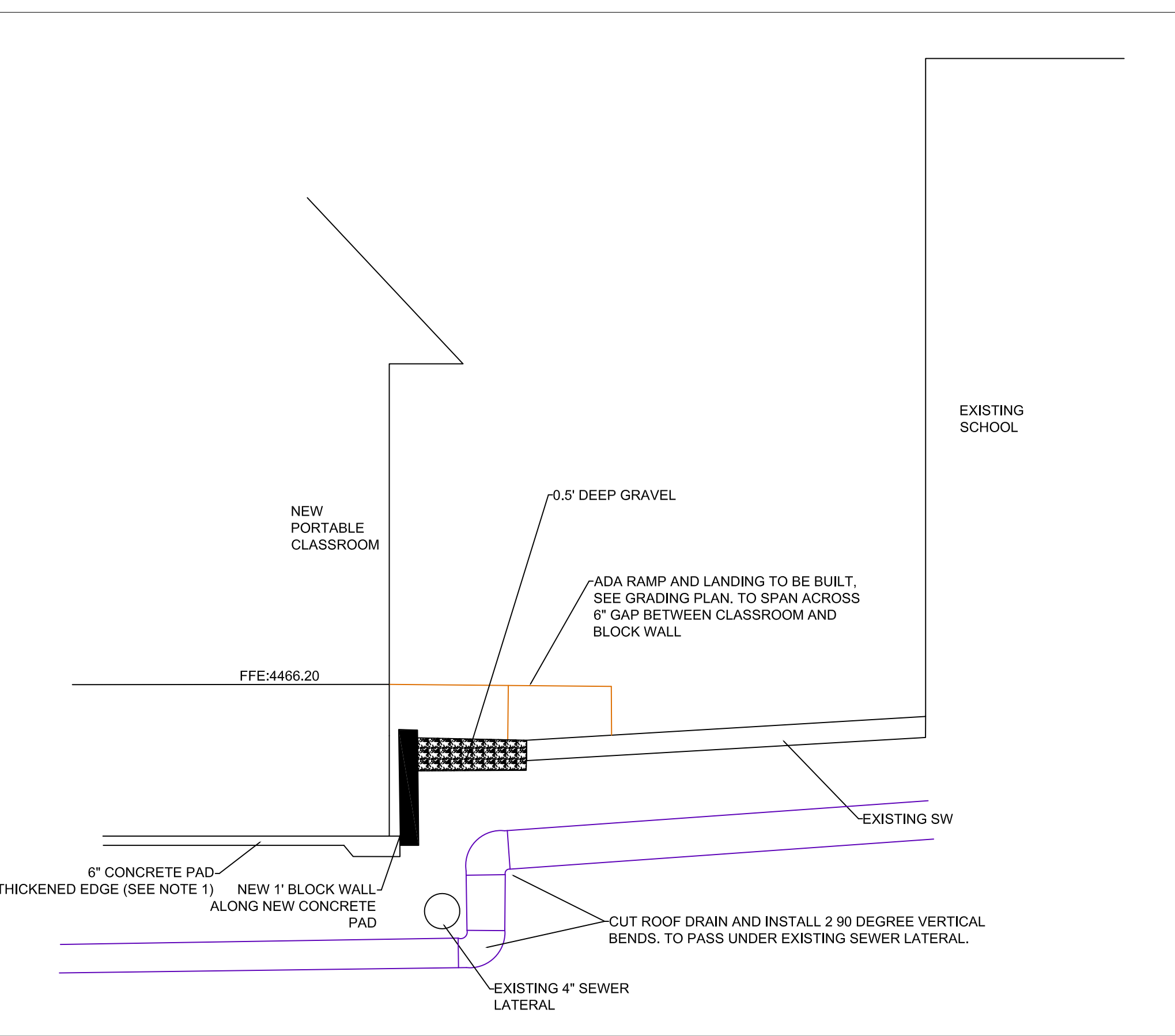
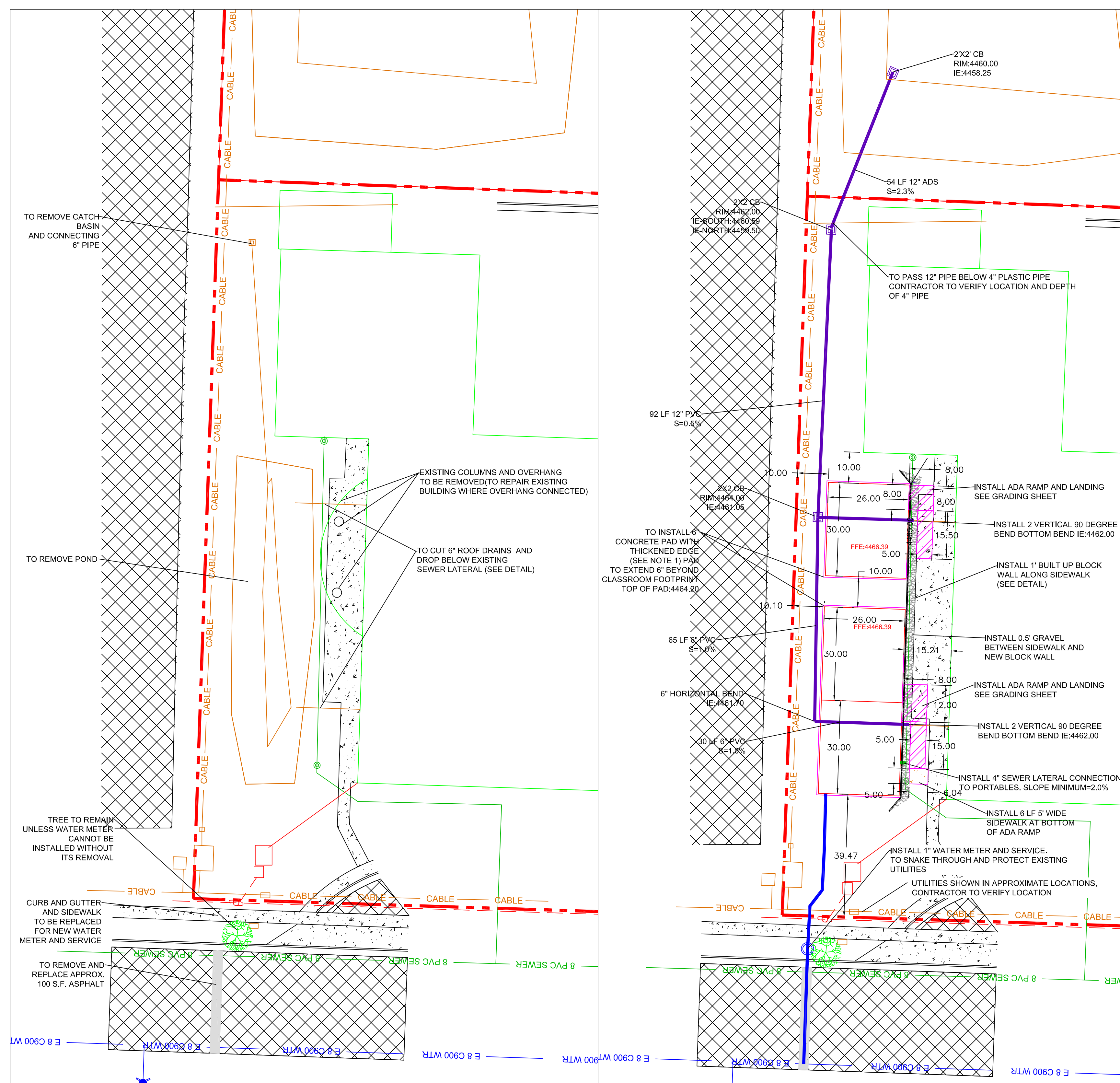
- 1.6" CONCRETE PAD TO HAVE A 12"X18" THICKENED EDGE WITH TWO #4 REBAR HORIZONTAL
- PORTABLE CLASSROOMS TO BE TIED DOWN ACCORDING TO STRUCTURAL PLANS WITH SIMPSON LTI131



0 10 20 40  
SCALE: 1"=20' (24x36 PLAN SET)



| LEGEND |                             |
|--------|-----------------------------|
|        | LOT LINE                    |
|        | EXISTING BUILDING           |
|        | EXISTING SEWER              |
|        | PROPOSED SEWER              |
|        | EXISTING WATER              |
|        | PROPOSED WATER              |
|        | EXISTING STORM              |
|        | PROPOSED STORM              |
|        | EXISTING POWER              |
|        | EXISTING COMMUNICATIONS     |
|        | EXISTING CONTOUR MNR (1.0') |
|        | EXISTING CONTOUR MJR (5.0') |
|        | PROPOSED CONTOUR MNR (1.0') |
|        | PROPOSED CONTOUR MJR (5.0') |
|        | EXISTING ASPHALT            |
|        | PROPOSED ASPHALT            |
|        | EXISTING CONCRETE           |
|        | PROPOSED CONCRETE           |



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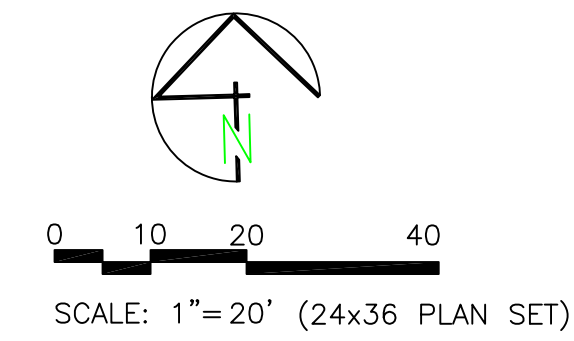
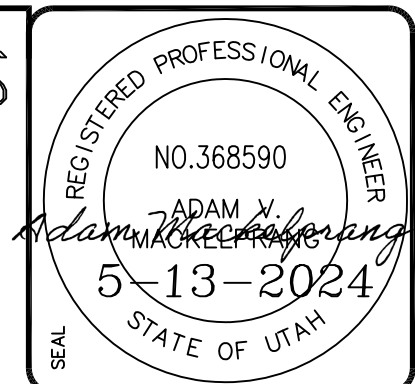
| No. | REVISIONS/ SUBMISSIONS | DATE | DRAWN | PROJECT NO. |
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|     |                        |      |       |             |
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|     |                        |      |       |             |

**FAST FORWARD PORTABLE CLASSROOMS**

**DEMO/SITE PLAN**

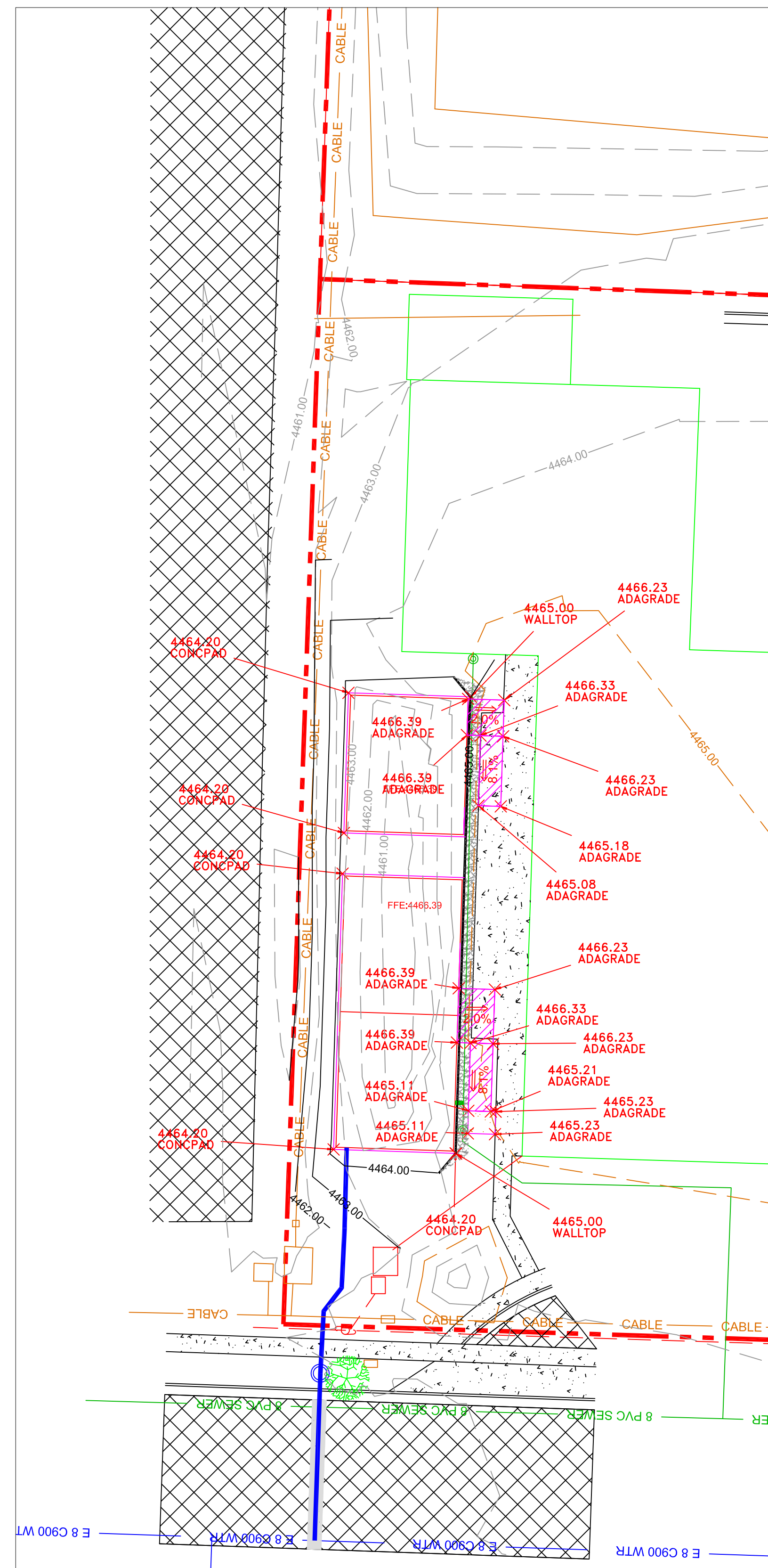
DATE : MAY, 2021  
DRAWING No. 2

# FAST FORWARD PORTABLE CLASSROOMS GRADING PLAN



## LEGEND

|  |                             |
|--|-----------------------------|
|  | LOT LINE                    |
|  | EXISTING BUILDING           |
|  | EXISTING SEWER              |
|  | PROPOSED SEWER              |
|  | EXISTING WATER              |
|  | PROPOSED WATER              |
|  | EXISTING STORM              |
|  | PROPOSED STORM              |
|  | EXISTING POWER              |
|  | EXISTING COMMUNICATIONS     |
|  | EXISTING CONTOUR MNR (1.0') |
|  | EXISTING CONTOUR MJR (5.0') |
|  | PROPOSED CONTOUR MNR (1.0') |
|  | PROPOSED CONTOUR MJR (5.0') |
|  | EXISTING ASPHALT            |
|  | PROPOSED ASPHALT            |
|  | EXISTING CONCRETE           |
|  | PROPOSED CONCRETE           |



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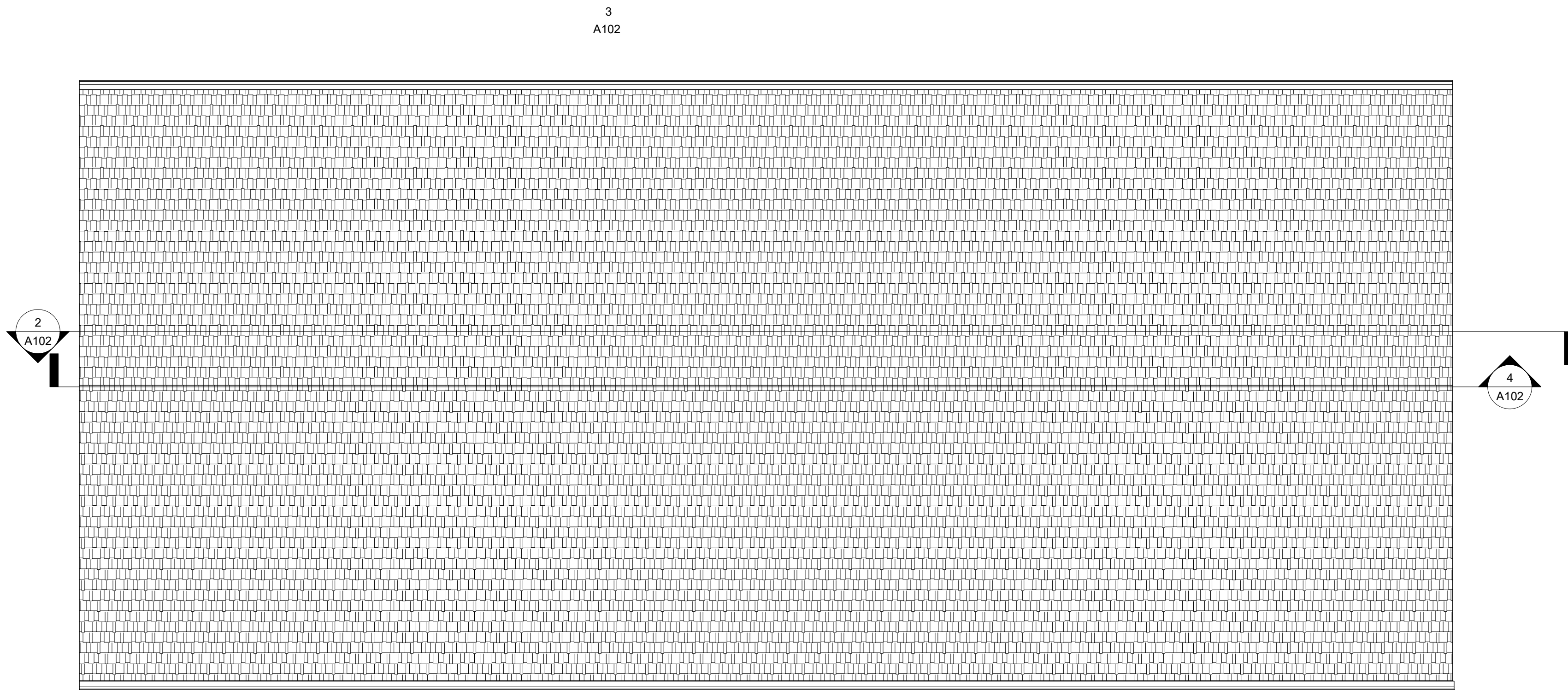
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|              |                        |      |
|--------------|------------------------|------|
| No.          | REVISIONS/ SUBMISSIONS | DATE |
|              |                        |      |
| REVIEWED:    |                        |      |
| DRAWN:       |                        |      |
| CAD FILE:    |                        |      |
| PROJECT NO.: |                        |      |

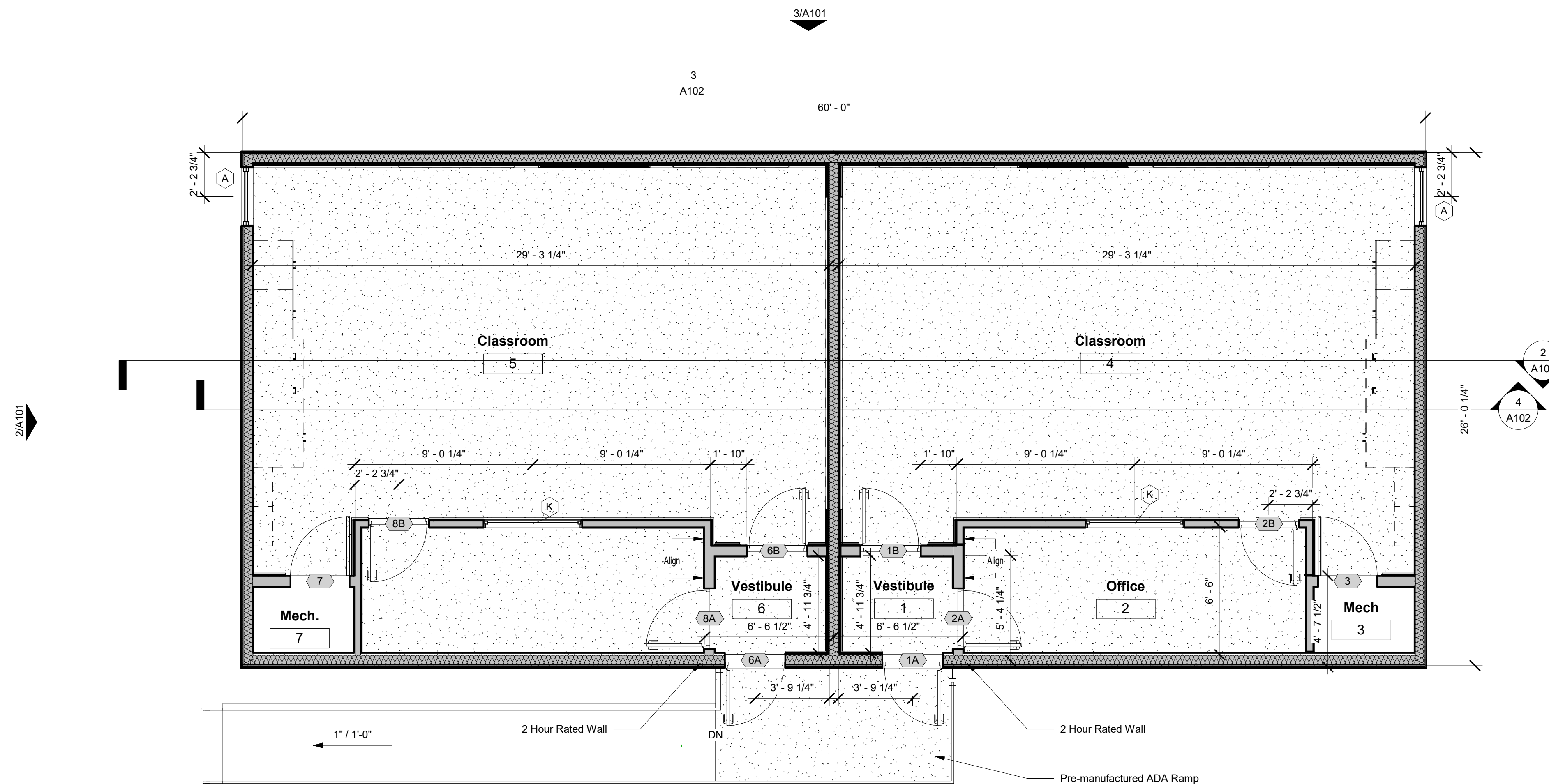
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**FAST FORWARD PORTABLE CLASSROOMS**

DRAWING TITLE  
**DEMO/SITE PLAN**

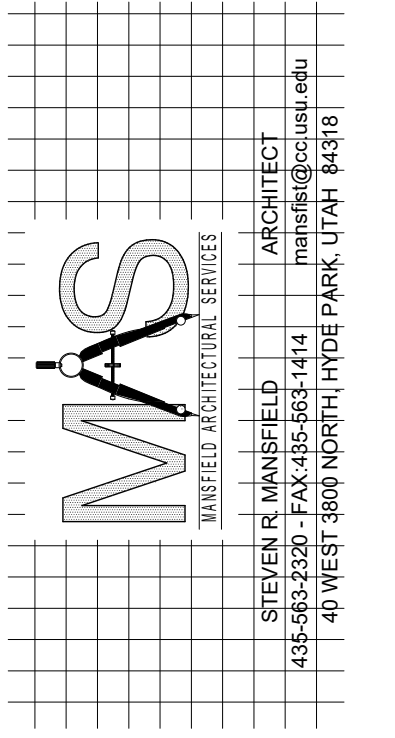
DATE: MAY, 2021  
DRAWING No. **3**



**3 Roof Plan**  
A100 1/4" = 1'-0"



**1 Main Floor**  
A100 1/4" = 1'-0"



**Fast Forward Portable Double Classroom**

OWNERS NAME State of Utah  
PROJECT ADDRESS 875 east 1400 North

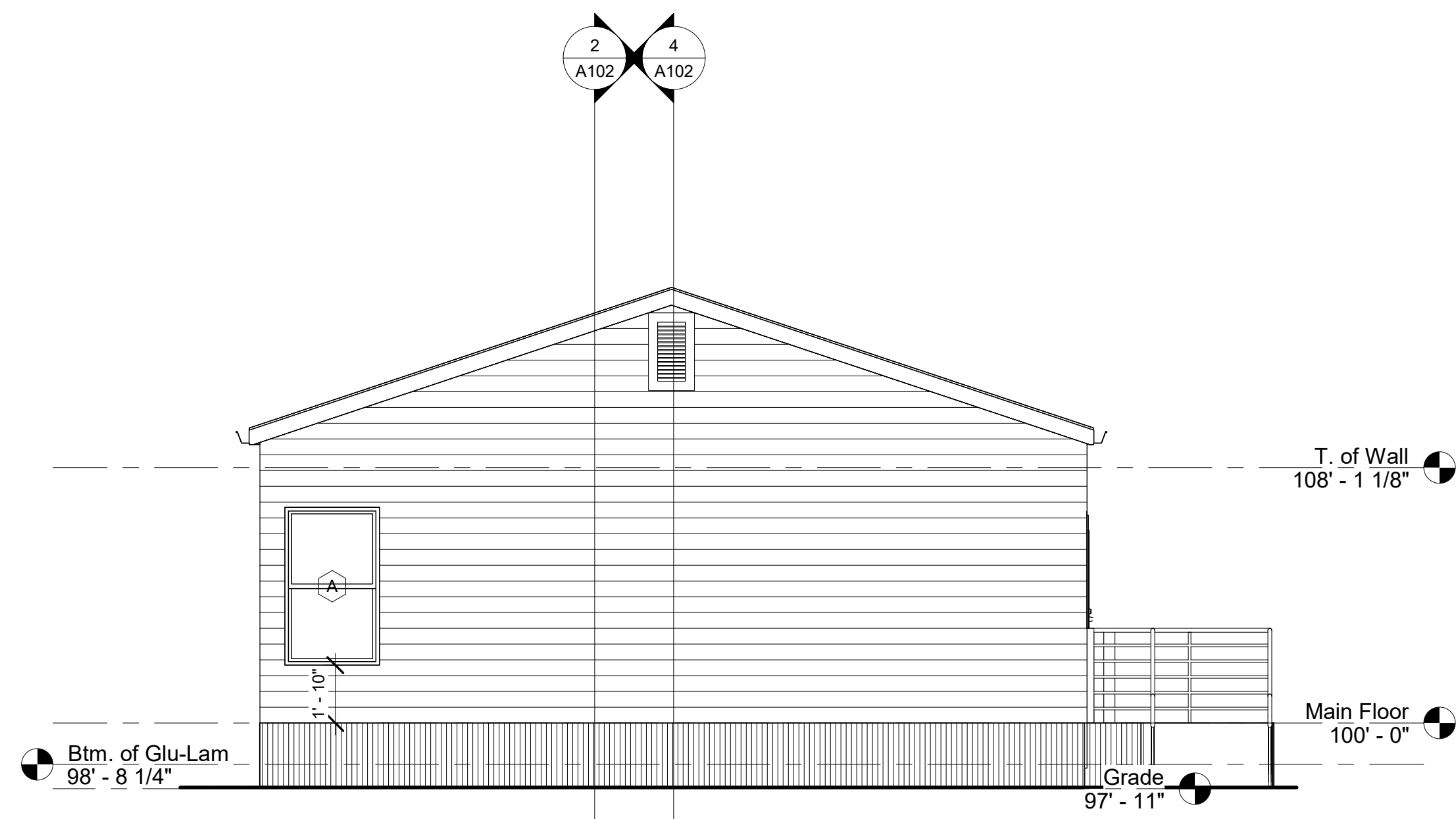
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PROJECT # 331  
DESIGNED BY srm  
DRAWN BY srm  
CHECKED BY srm  
ISSUED 4/30/2024

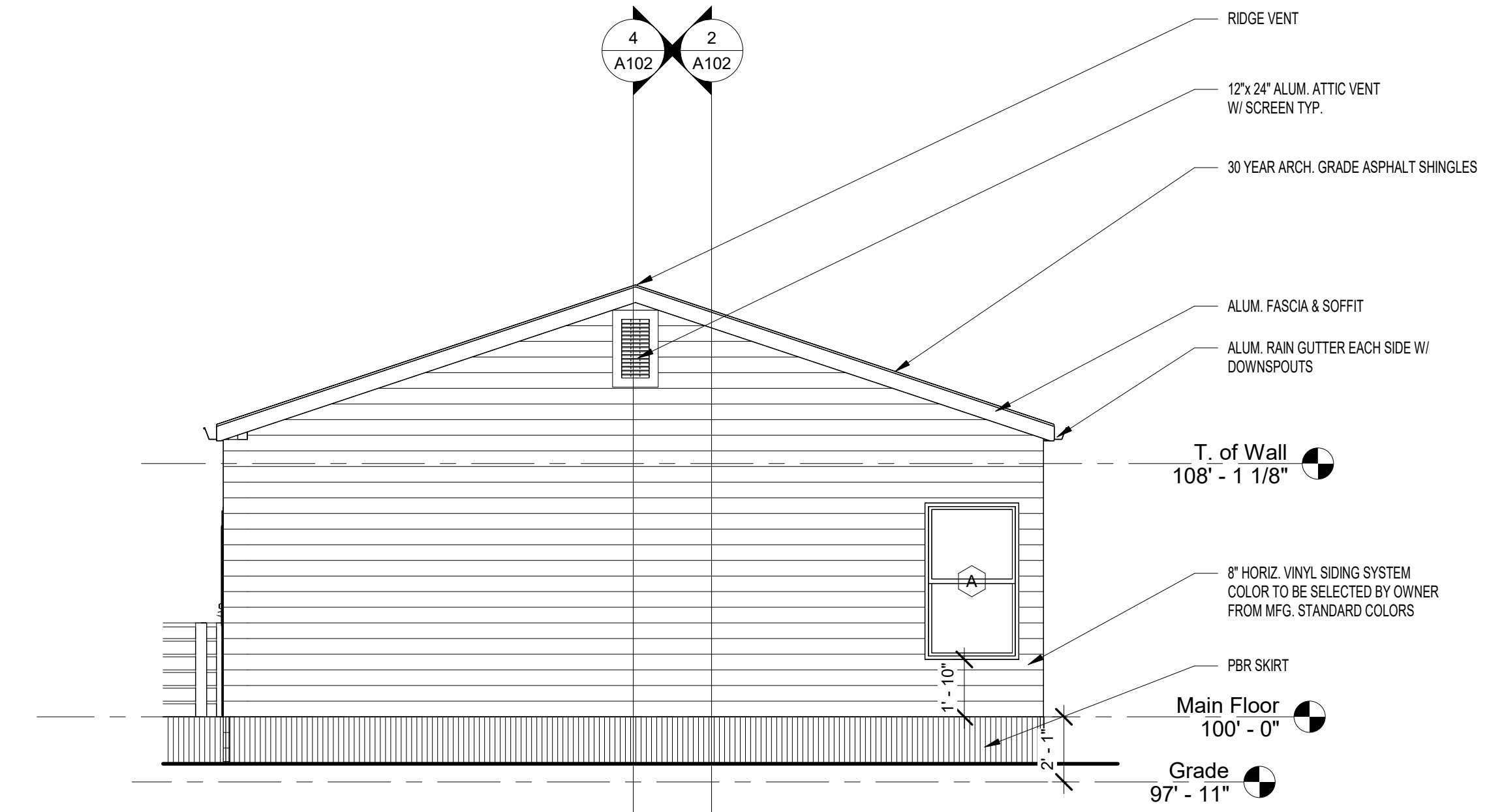




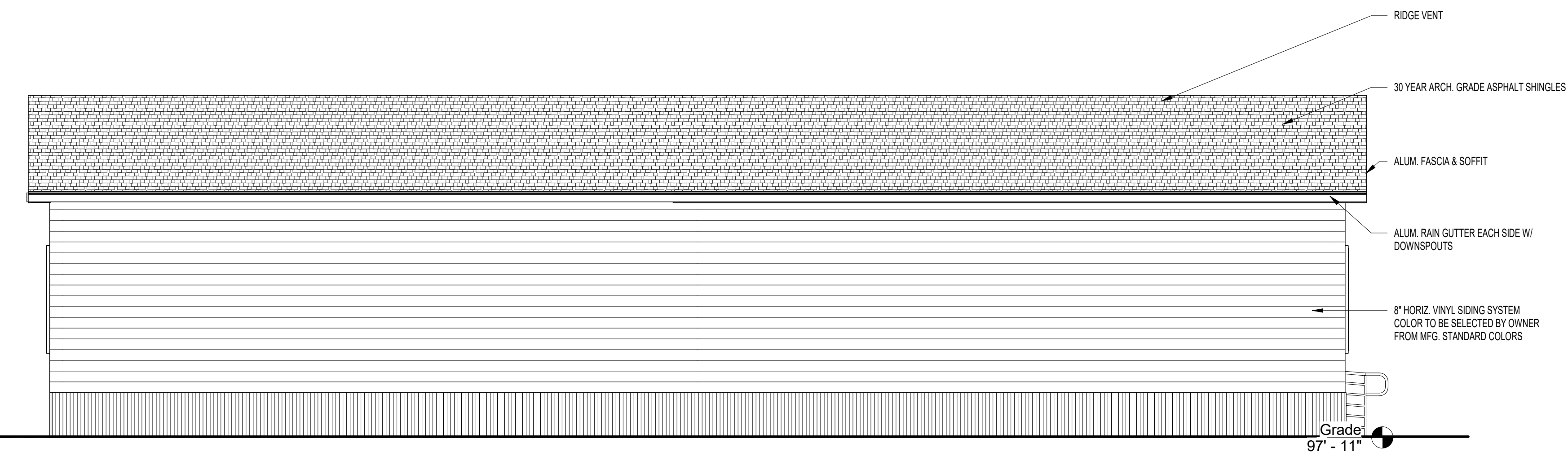
**1 East Elevation**  
A101 1/4" = 1'-0"



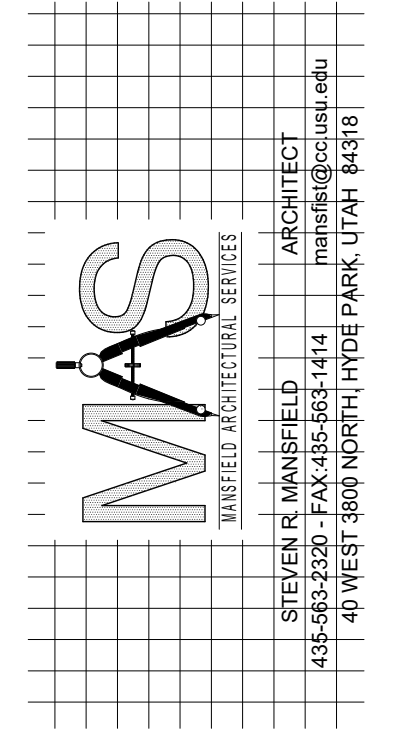
**2 South Elevation**  
A101 1/4" = 1'-0"



**4 North Elevation**  
A101 1/4" = 1'-0"



**3 West Elevation**  
A101 1/4" = 1'-0"

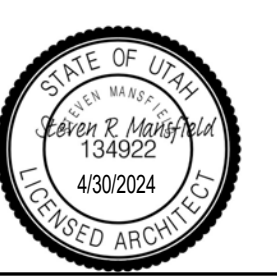


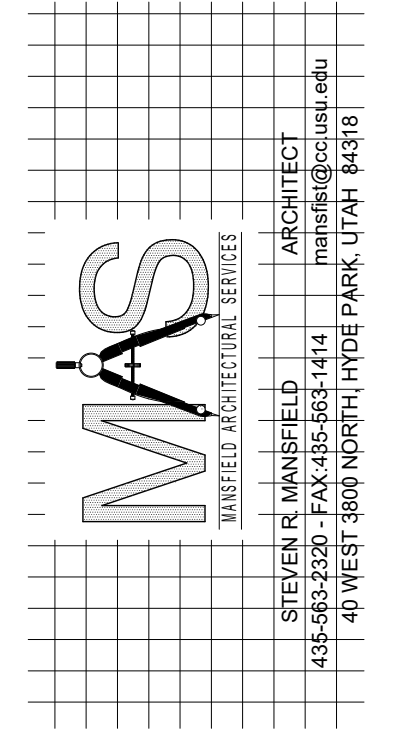
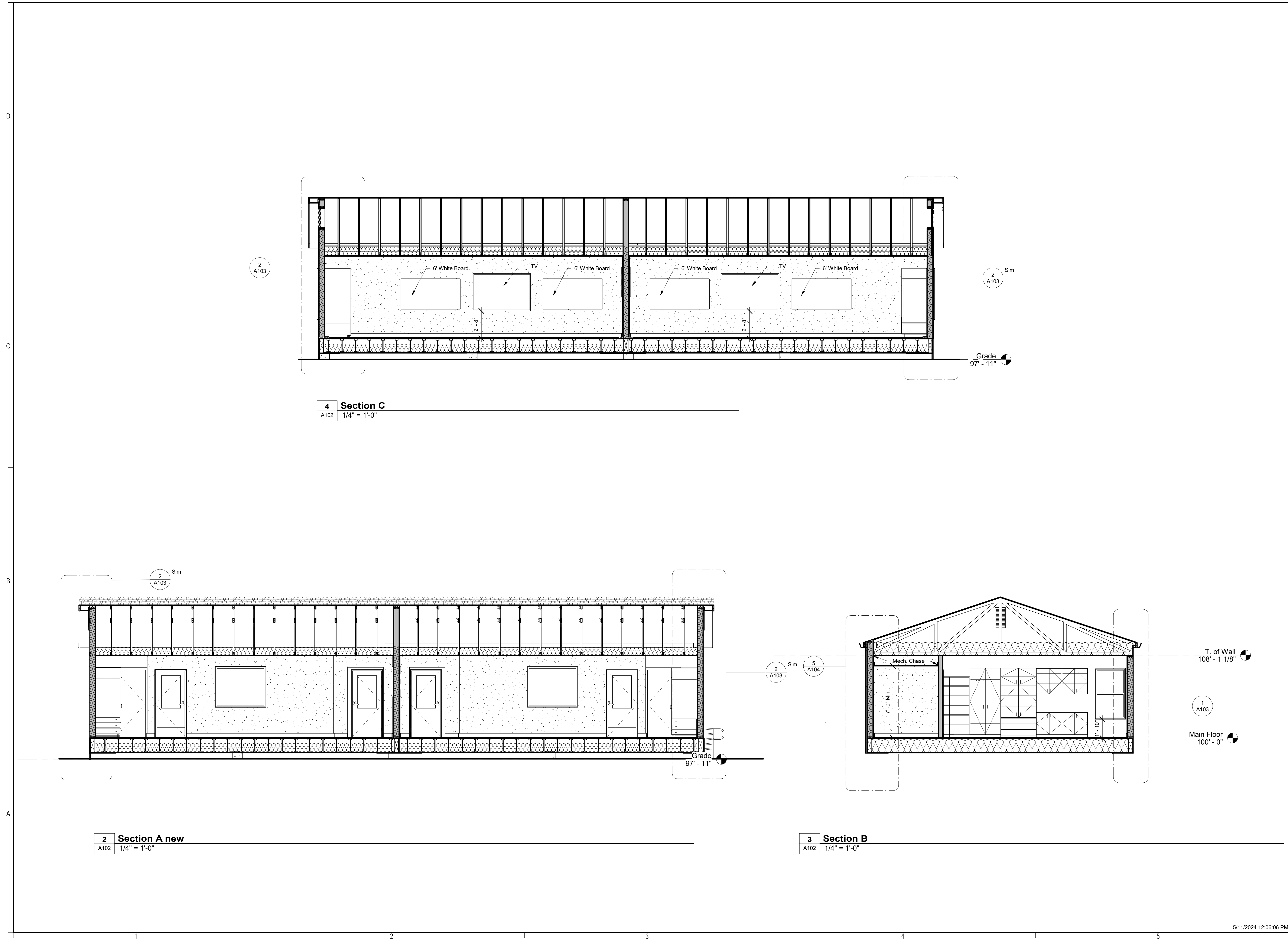
**Fast Forward Portable Double Classroom**

OWNERS NAME State of Utah  
PROJECT ADDRESS 875 east 1400 North

| MARK: | DATE: | DESCRIPTION: |
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PROJECT # 331  
DESIGNED BY srm  
DRAWN BY srm  
CHECKED BY srm  
ISSUED : 4/30/2024



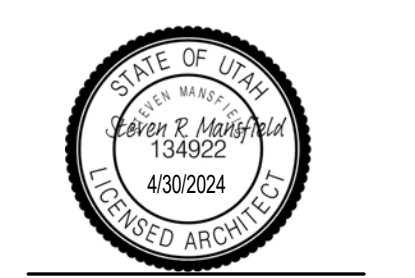


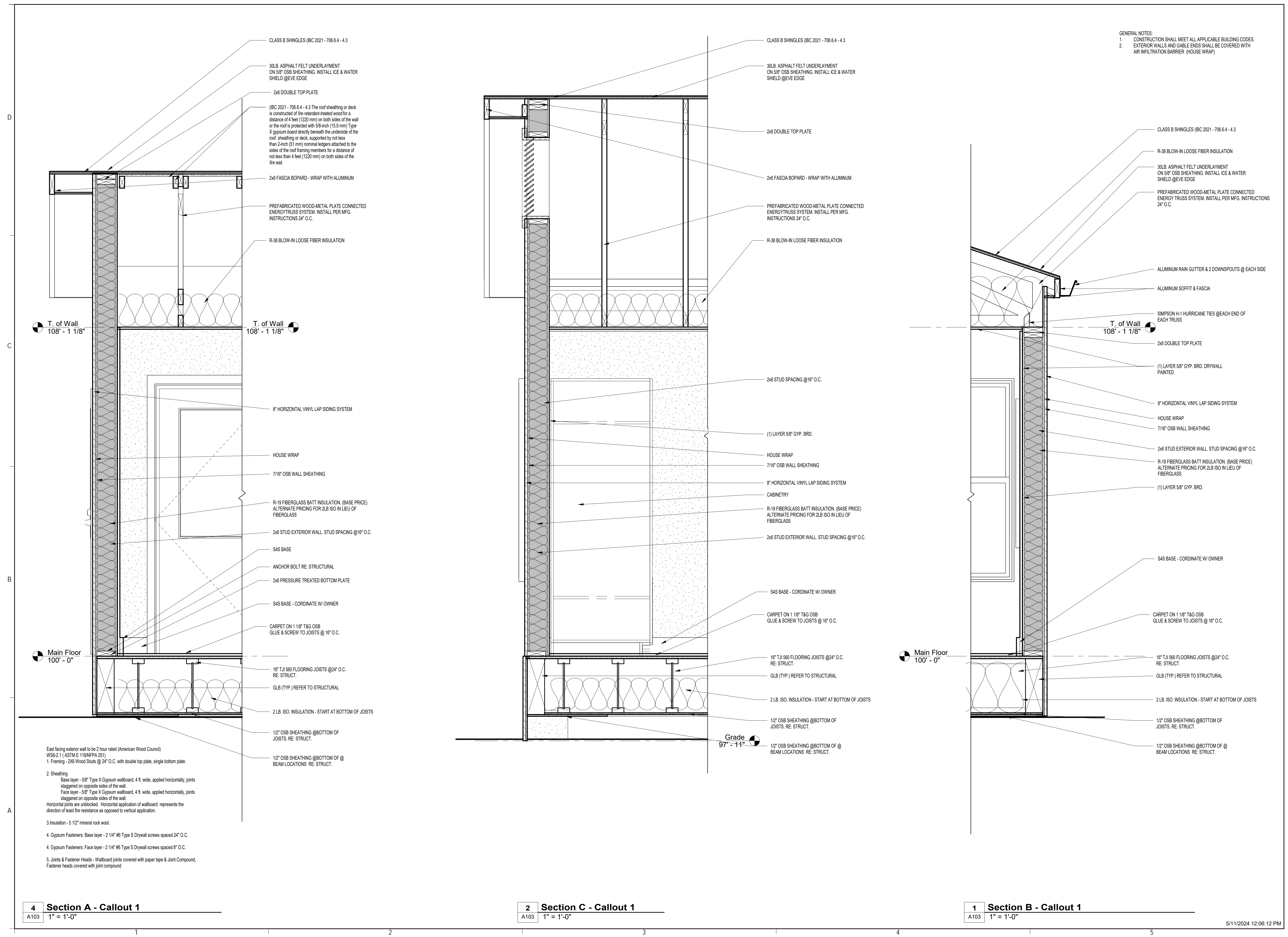
# Fast Forward Portable Double Classroom

OWNERS NAME State of Utah  
 PROJECT ADDRESS 875 east 1400 North

| MARK: | DATE: | DESCRIPTION: |
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PROJECT # 331  
 DESIGNED BY srm  
 DRAWN BY srm  
 CHECKED BY srm  
 ISSUED 4/30/2024





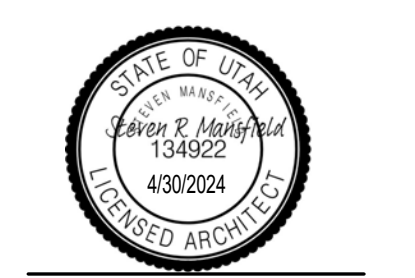
GENERAL NOTES:  
 1. CONSTRUCTION SHALL MEET ALL APPLICABLE BUILDING CODES.  
 2. EXTERIOR WALLS AND GABLE ENDS SHALL BE COVERED WITH AIR INFILTRATION BARRIER. (HOUSE WRAP)

**MAS**  
 ARCHITECT  
 STEVEN A. MANSFIELD  
 435-562-2320 - FAX: 435-563-1414  
 40 WEST 3800 NORTH, HYDRE PARK, UTAH 84318

**Fast Forward Portable Double Classroom**  
 OWNERS NAME: State of Utah  
 PROJECT ADDRESS: 875 east 1400 North

| MARK: | DATE: | DESCRIPTION: |
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PROJECT #:  
 331  
 DESIGNED BY:  
 srm  
 DRAWN BY:  
 srm  
 CHECKED BY: srm  
 ISSUED:  
 4/30/2024



East facing exterior wall to be 2 hour rated (American Wood Council) WS6-2.1 (ASTM E 119/NFPA 251)  
 1. Framing - 2x6 Wood Studs @ 24" O.C. with double top plate, single bottom plate.  
 2. Sheathing  
 Base layer - 5/8" Type X Gypsum wallboard, 4 ft. wide, applied horizontally, joints staggered on opposite sides of the wall.  
 Face layer - 5/8" Type X Gypsum wallboard, 4 ft. wide, applied horizontally, joints staggered on opposite sides of the wall.  
 Horizontal joints are unblocked. Horizontal application of wallboard represents the direction of least fire resistance as opposed to vertical application.  
 3. Insulation - 5 1/2" mineral rock wool.  
 4. Gypsum Fasteners: Base layer - 2 1/4" #6 Type S Drywall screws spaced 24" O.C.  
 4. Gypsum Fasteners: Face layer - 2 1/4" #6 Type S Drywall screws spaced 8" O.C.  
 5. Joints & Fastener Heads - Wallboard joints covered with paper tape & Joint Compound, Fastener heads covered with joint compound

**4 Section A - Callout 1**  
 A103 1" = 1'-0"

**2 Section C - Callout 1**  
 A103 1" = 1'-0"

**1 Section B - Callout 1**  
 A103 1" = 1'-0"



| ROOM NUMBER | ROOM NAME  | FLOOR BASE | WALLS |      |       |      | CEILING | CEILING HEIGHT | REMARKS |
|-------------|------------|------------|-------|------|-------|------|---------|----------------|---------|
|             |            |            | NORTH | EAST | SOUTH | WEST |         |                |         |
| 1           | CLASSROOM  | 1          | A     | A    | A     | A    | 1       | 8'-0"          | -       |
| 2           | VESTIBULE  | 3          | B     | B    | B     | B    | 1       | 8'-0"          | -       |
| 3           | MECHANICAL | 2          | B     | B    | B     | A    | 1       | 8'-0"          | -       |

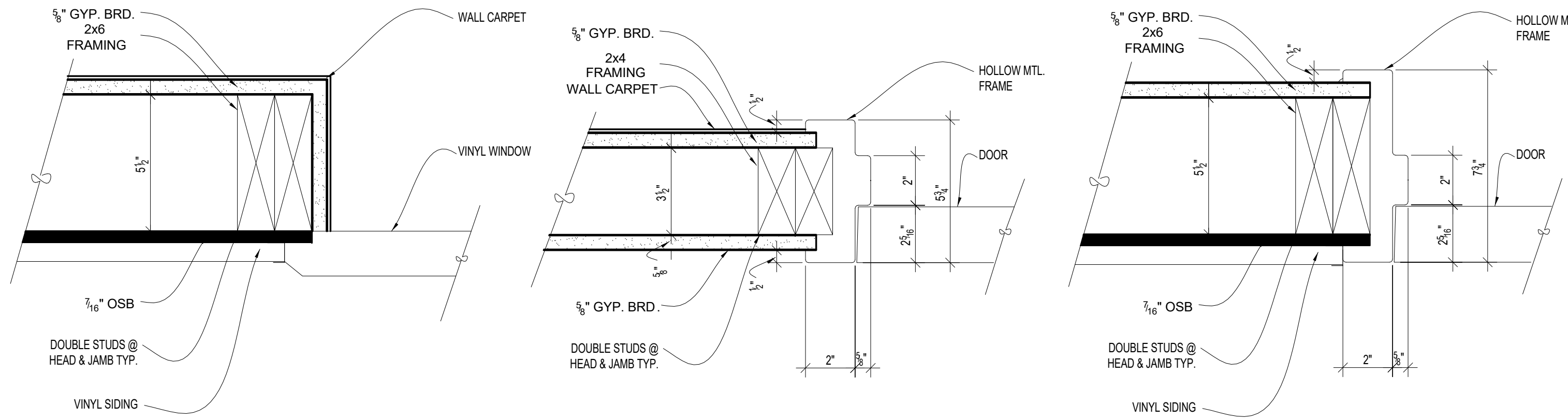
NOTE: \* = OPEN TO STRUCTURE ABOVE

### NOTES:

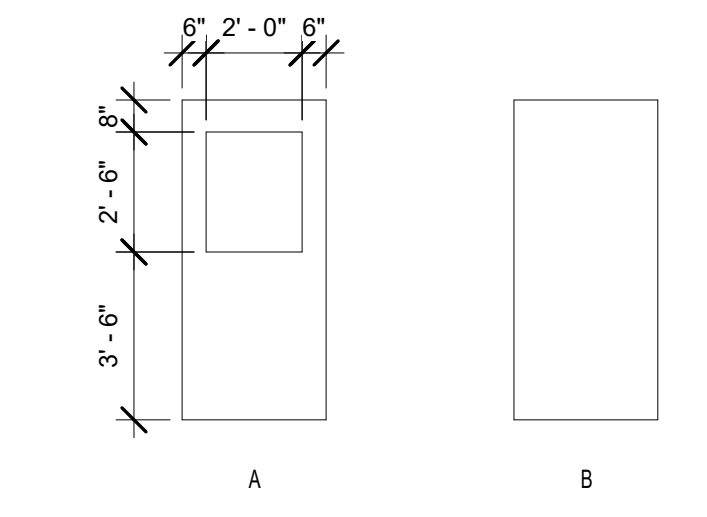
- IF (-) IS IN SLOT THERE ARE NO ITEMS APPLICABLE
- DOOR TYPES: SEE BELOW
- THICKNESS: THICKNESS INDICATES IS NOMINAL SIZE  
MFR= MANUFACTURED  
CONSTRUCTION/FINISH:  
AL = ALUMINUM STORE FRONT  
SCT = SOLID CORE, TRANSPARENT FINISH  
HCT = HOLLOW CORE, TRANSPARENT FINISH  
HMP = HOLLOW METAL, PAINTED  
HMP = HOLLOW METAL, INSULATED, PAINTED
- GLASS
- GLASS
- RATING: 20, 34, 1, ETC INDICATES FIRE RATING
- NUMBER INDICATES FRAME TYPE SHOWN ON SHEET A601
- NUMBER INDICATES DETAIL(S) SHOWN ON SHEETS A501-A505
- HARDWARE GROUP #. SEE SPECIFICATIONS FOR HARDWARE GROUPS
- KEYNOTES:
  - WITH SIDELIGHTS
  - UNDERCUT DOOR 1" FOR MECH SYS RETURN AIR
  - TRANSOM LIGHT ABOVE
  - MECHANICAL LOUVERS ABOVE

| FLOOR/BASE   | WALLS/WAINSCOT                    | CEILING                                  |
|--|-----------------------------------|--|
| 1 CARPET/TANDUS FORWARD MOTION 4" CARPET BASE        | A WALL CARPET OVER PRIMED GYP.BD. | 1 GLUE ON ACOUSTICAL TILE OVER GYP. BRD. |
| 2 EXPOSED CONCRETE                                   | B PAINTED GYP.BD.                 | 2 PAINTED GYP. BRD.                      |
| 3 INTERFACE SR799 MODULAR CARPET TILE 4" RUBBER BASE | -                                 | -  |

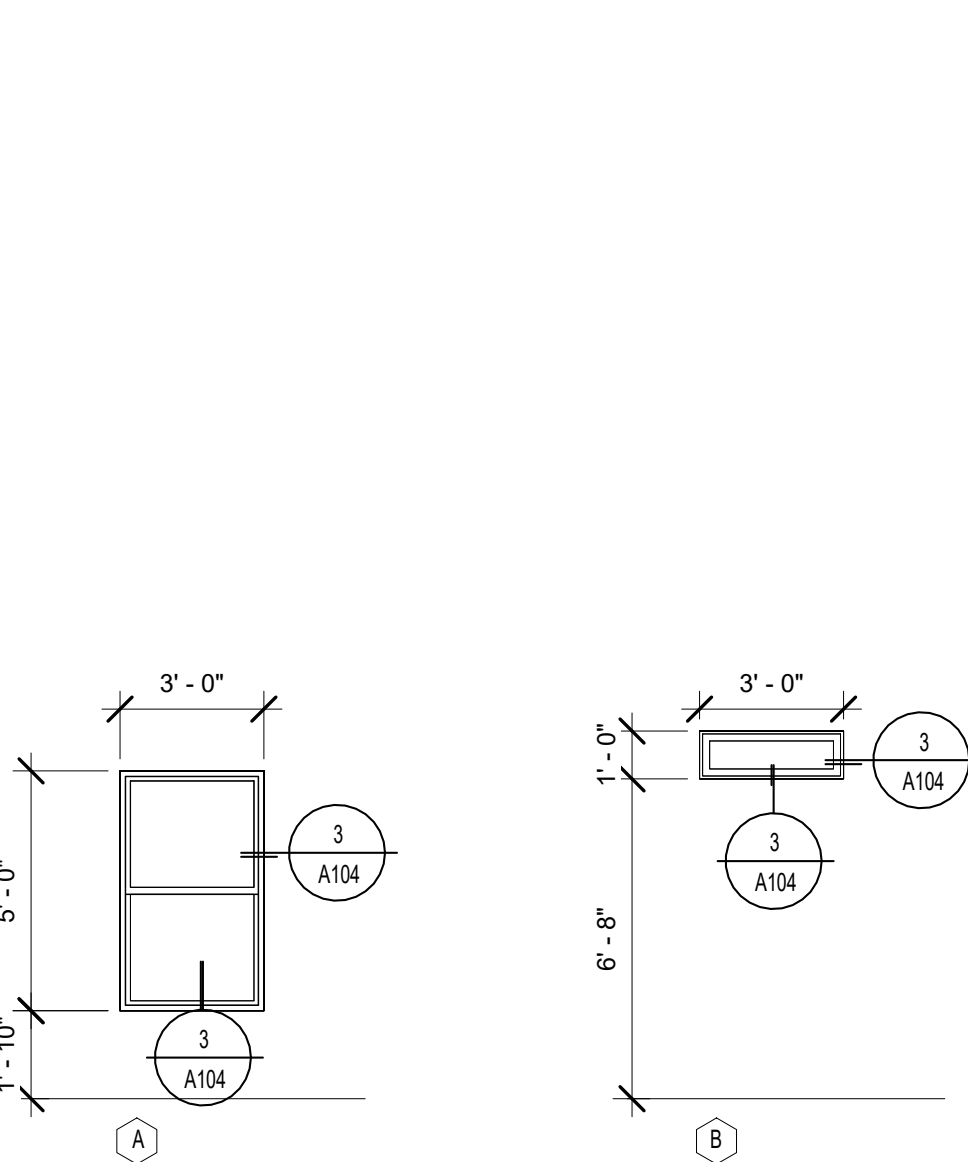
| Door Number | Width | Height | DOOR TYPE | Size Thickness | Construction Type | Glass | Frame Type | Head Detail | Jamb Detail | Hardware Group | Keynote             |
|-------------|-------|--------|-----------|----------------|-------------------|-------|------------|-------------|-------------|----------------|---------------------|
| 1A          | 3'-0" | 6'-8"  | A         | 0'-1 3/4"      | HMG               | YES   | A          | 1/A104      | 1/A104      | 1              | 90 Min. Fire Rating |
| 1B          | 3'-0" | 6'-8"  | A         | 0'-1 3/4"      | HMG               | YES   | A          | 2/A104      | 2/A104      | 2              |                     |
| 2A          | 3'-0" | 6'-8"  | A         | 0'-1 3/4"      | HMG               | NO    | A          | 2/A104      | 2/A104      | 3              |                     |
| 2B          | 3'-0" | 6'-8"  | B         | 0'-1 3/4"      | HMG               | NO    | A          | 1/A104      | 1/A104      | 1              | 90 Min. Fire Rating |
| 3           | 3'-0" | 6'-8"  | B         | 0'-1 3/4"      | HM                | NO    | A          | 2/A104      | 2/A104      | 3              |                     |
| 6A          | 3'-0" | 6'-8"  | A         | 0'-1 3/4"      | HM                | YES   | A          | 1/A104      | 1/A104      | 1              | 90 Min. Fire Rating |
| 6B          | 3'-0" | 6'-8"  | A         | 0'-1 3/4"      | HMG               | YES   | A          | 2/A104      | 2/A104      | 2              |                     |
| 7           | 3'-0" | 6'-8"  | B         | 0'-1 3/4"      | HM                | NO    | A          | 2/A104      | 2/A104      | 3              |                     |
| 8A          | 3'-0" | 6'-8"  | B         | 0'-1 3/4"      | HMG               | NO    | A          | 2/A104      | 2/A104      | 3              |                     |
| 8B          | 3'-0" | 6'-8"  | B         | 0'-1 3/4"      | HMG               | NO    | A          | 2/A104      | 2/A104      | 3              |                     |



**3 Window Jamb**  
A104 3" = 1'-0"

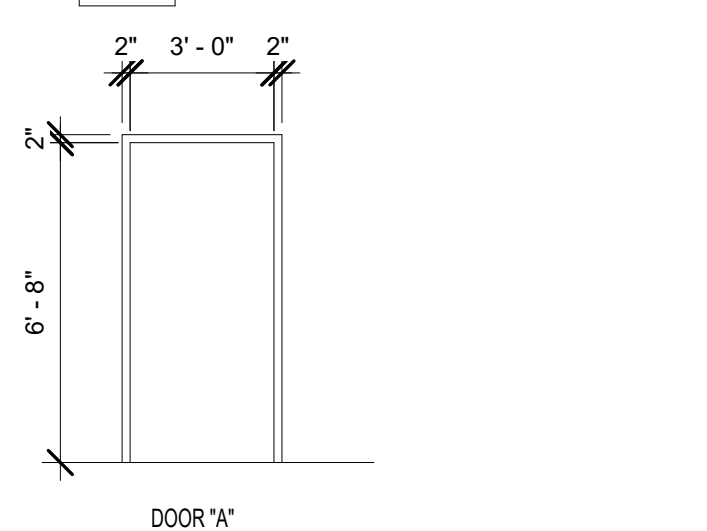


**2 Door Jamb #2 Type**  
A104 3" = 1'-0"



**1 Door Jamb #1 Type**  
A104 3" = 1'-0"

**DOOR LEGEND**  
1/4" = 1'-0"

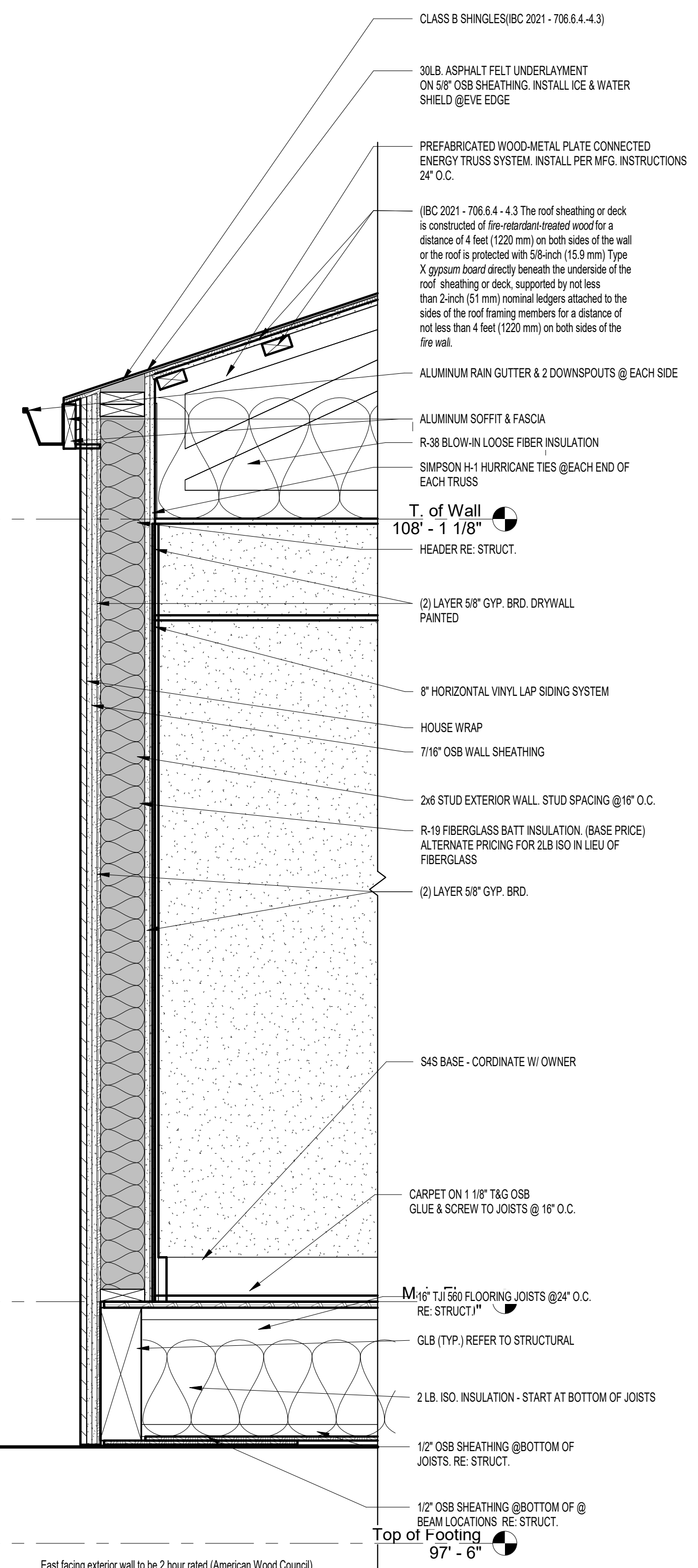


**Frame Types**  
1/4" = 1'-0"

**Window Schedule**  
1/4" = 1'-0"

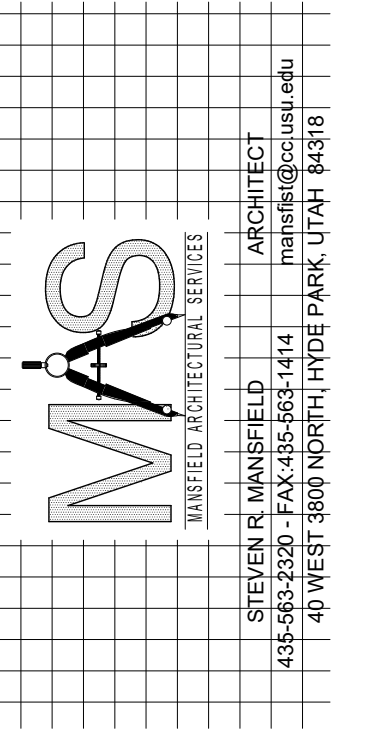
DOOR HARDWARE - HW SET NO. 01

| DOOR   | QTY    | DESCRIPTION       | ITEM NO.                       | QTY | UNIT |
|--------|--------|-------------------|--------------------------------|-----|------|
| DOOR 1 | 3-EACH | HINGE             | 5881HW 4.5 X 4.5 NRP           | 630 | IVE  |
|        | 1-EACH | PANIC HARDWARE    | 98-NL                          | 626 | VON  |
|        | 1-EACH | PRIMUS RMI        | 20-757                         | 626 | SCH  |
| DOOR 2 | 1-EACH | CYLINDER          | 23-030-ICX                     |     | SCH  |
|        | 1-EACH | SURFACE CLOSER    | 4040XP SCUSH MC TBWMS          | 689 | LCN  |
|        | 1-EACH | CUSH SHOE SUPPORT | 4040-30                        | 689 | LCN  |
|        | 1-EACH | KICK PLATE        | 8400 10" X 2" LDW              | 630 | IVE  |
|        | 1-EACH | SEAL SET          | 429A                           | A   | ZER  |
|        | 1-EACH | DOOR SWEEP        | 39A                            | AL  | ZER  |
|        | 1-EACH | THRESHOLD         | 655A MSLA-10                   | AL  | ZER  |
|        | 1-EACH | RAIN DRIP         | 142A                           | A   | ZER  |
| DOOR 3 | 3-EACH | HINGE             | 5881 4.5 X 4.5 NRP             | 652 | IVE  |
|        | 1-EACH | PUSH PLATE        | 8200 4" X 16"                  | 630 | IVE  |
|        | 1-EACH | PULL PLATE        | 8305 8" 4" X 16"               | 630 | IVE  |
| DOOR 3 | 1-EACH | SURFACE CLOSER    | 4040XP EDA (TBWMS WD DRS ONLY) | 689 | LCN  |
|        | 1-EACH | KICK PLATE        | 8400 10" X 2" LDW              | 630 | IVE  |
|        | 1-EACH | WALL STOP         | WS408407CCV                    | 630 | IVE  |
|        | 1-EACH | SILENCER          | SR84                           | GY  | IVE  |



- East facing exterior wall to be 2 hour rated (American Wood Council) WS5-2.1 (ASTM E 119/NEPPA 251)
- Framing - 2X6 Wood Studs @ 24" O.C. with double top plate, single bottom plate.
  - Sheathing
    - Base layer - 5/8" Type X Gypsum wallboard, 4 ft. wide, applied horizontally, joints staggered on opposite sides of the wall.
    - Face layer - 5/8" Type X Gypsum wallboard, 4 ft. wide, applied horizontally, joints staggered on opposite sides of the wall.
    - Horizontal joints are unblocked. Horizontal application of wallboard represents the direction of least fire resistance as opposed to vertical application.
  - Insulation - 5 1/2" mineral rock wool.
  - Gypsum Fasteners: Base layer - 2 1/4" #6 Type S Drywall screws spaced 24" O.C.
  - Gypsum Fasteners: Face layer - 2 1/4" #6 Type S Drywall screws spaced 8" O.C.
  - Joints & Fastener Heads - Wallboard joints covered with paper tape & Joint Compound, Fastener heads covered with joint compound

**Section B - Callout 2 2**  
**Hour East Side Only**  
A104 1" = 1'-0"



# Fast Forward Portable Double Classroom

OWNERS NAME: State of Utah  
PROJECT ADDRESS: 875 east 1400 North

| MARK: | DATE: | DESCRIPTION: |
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PROJECT #:  
DESIGNED BY: srm  
DRAWN BY: srm  
CHECKED BY: srm  
ISSUED: 4/30/2024

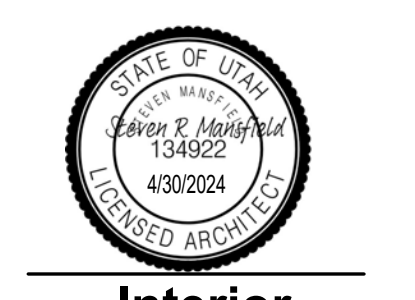


## Schedules, Details & Fire Rated Wall

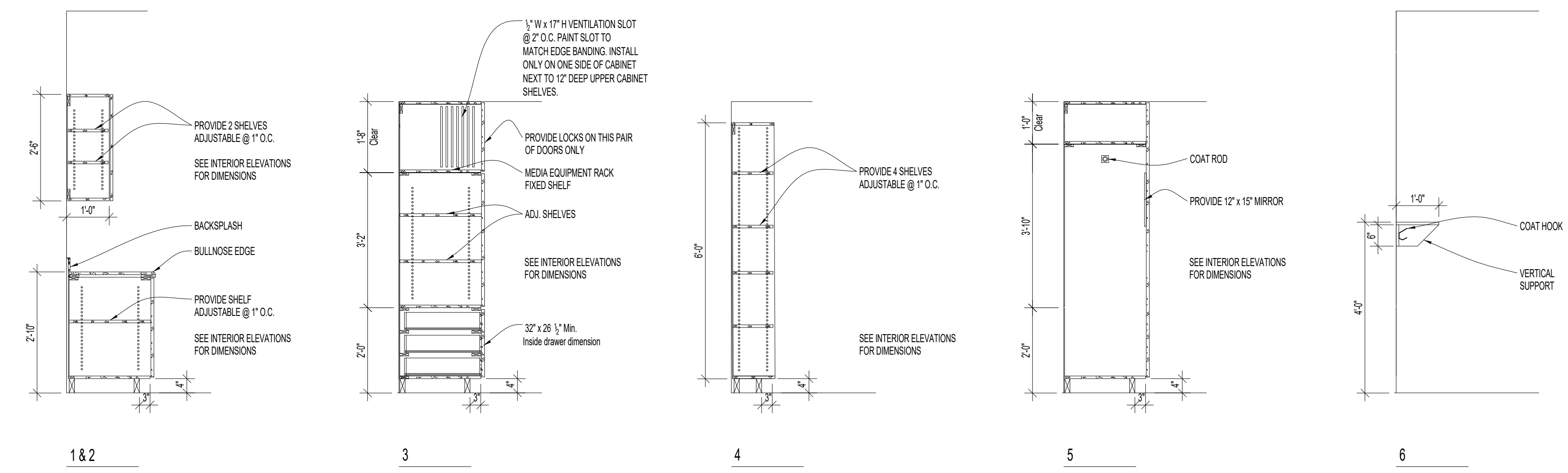
A104

| MARK: | DATE: | DESCRIPTION: |
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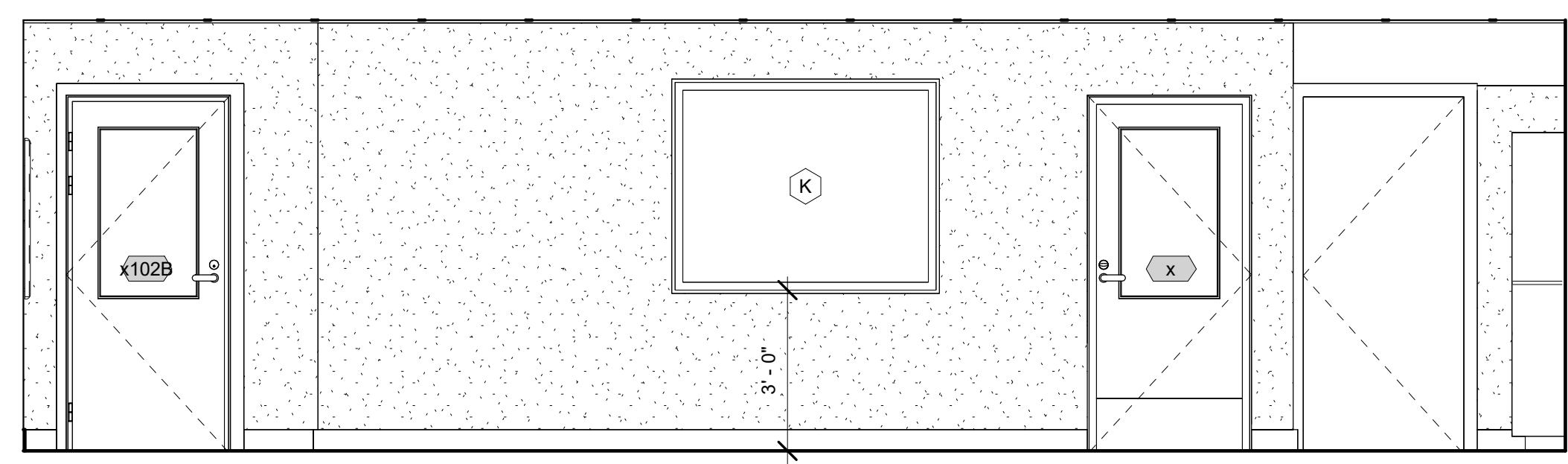
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| PROJECT #:   | 331       |
| DESIGNED BY: | srm       |
| DRAWN BY:    | srm       |
| CHECKED BY:  | srm       |
| ISSUED:      | 4/30/2024 |



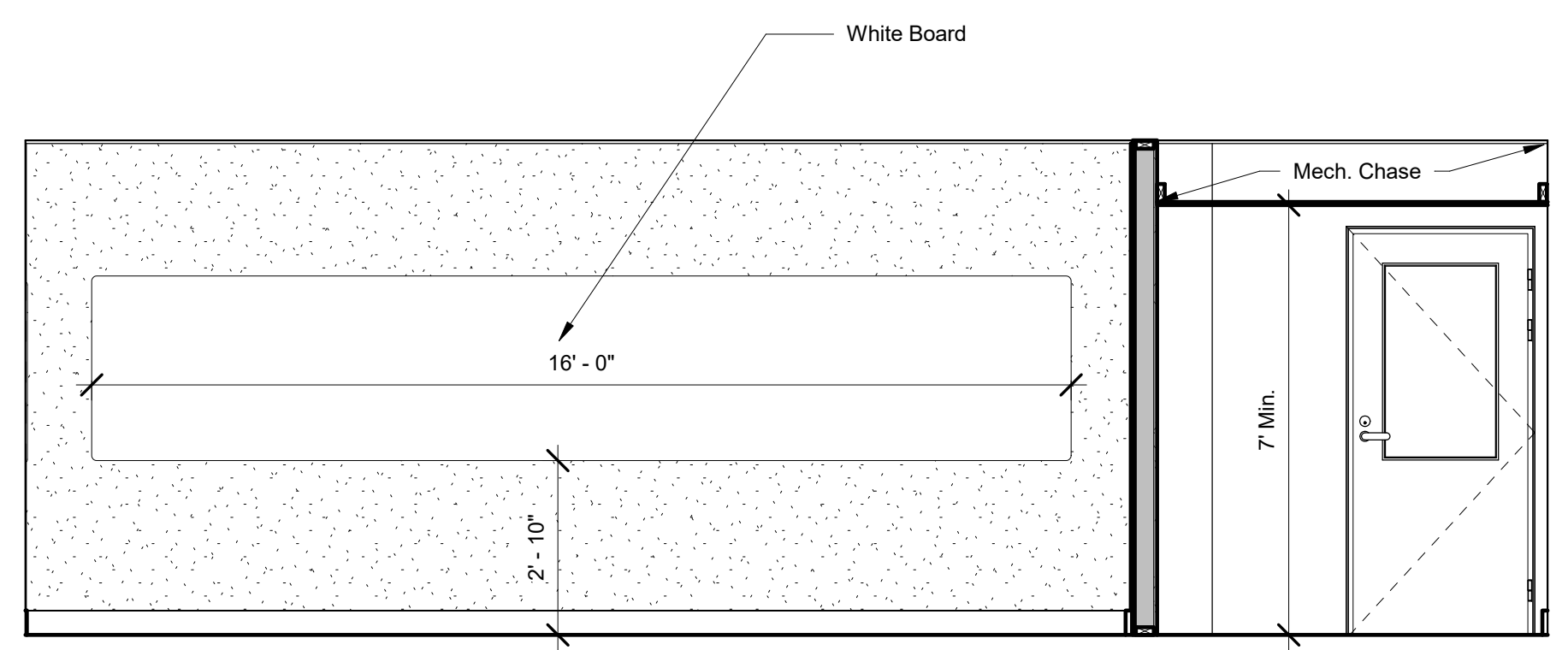
**Interior Elevations & Millwork Sections**



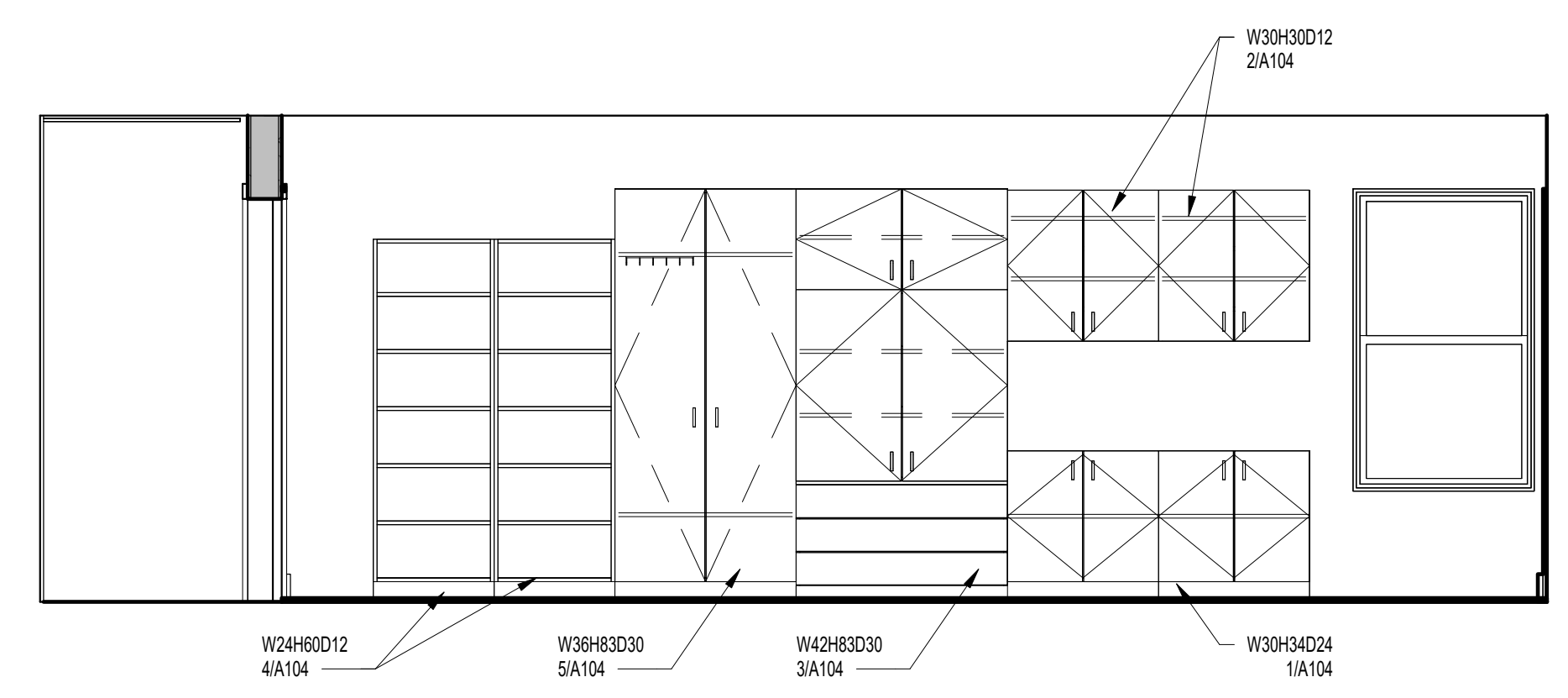
**5 Millwork Sections**  
 A105 1/2" = 1'-0"



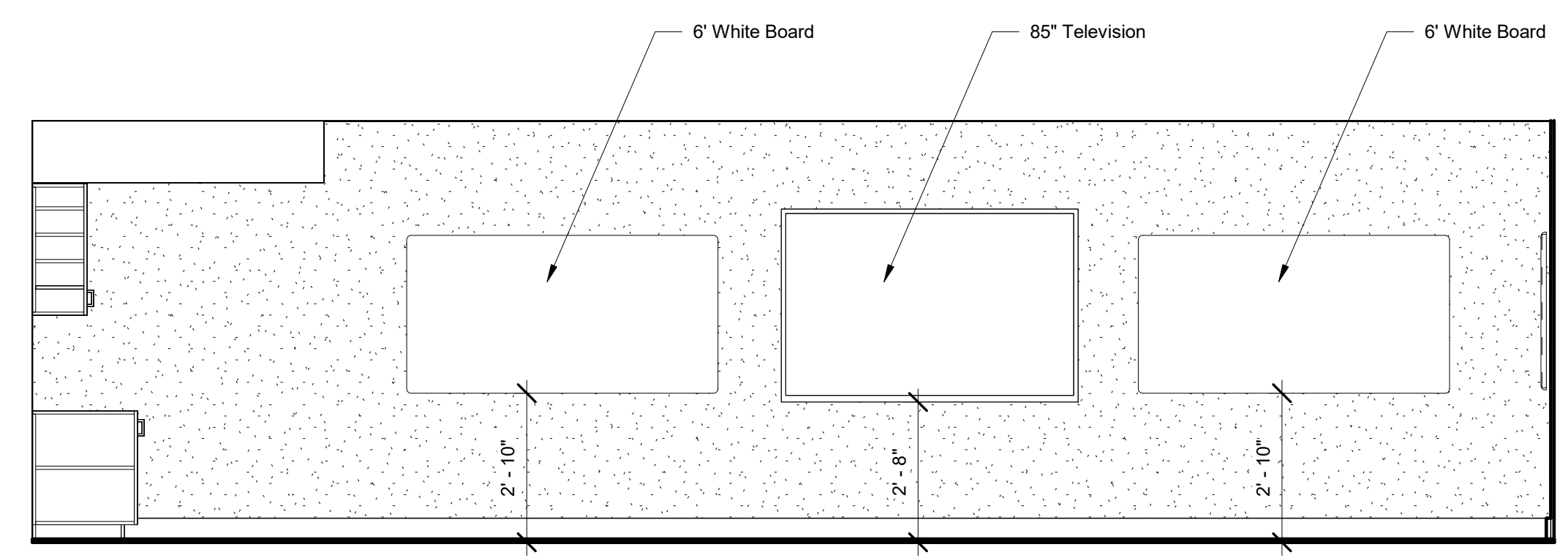
**4 Interior Elevation 4**  
 A105 3/8" = 1'-0"



**3 Interior Elevation 3**  
 A105 3/8" = 1'-0"

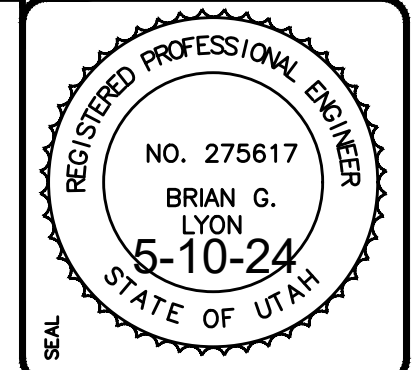


**2 Interior Elevation 2**  
 A105 3/8" = 1'-0"

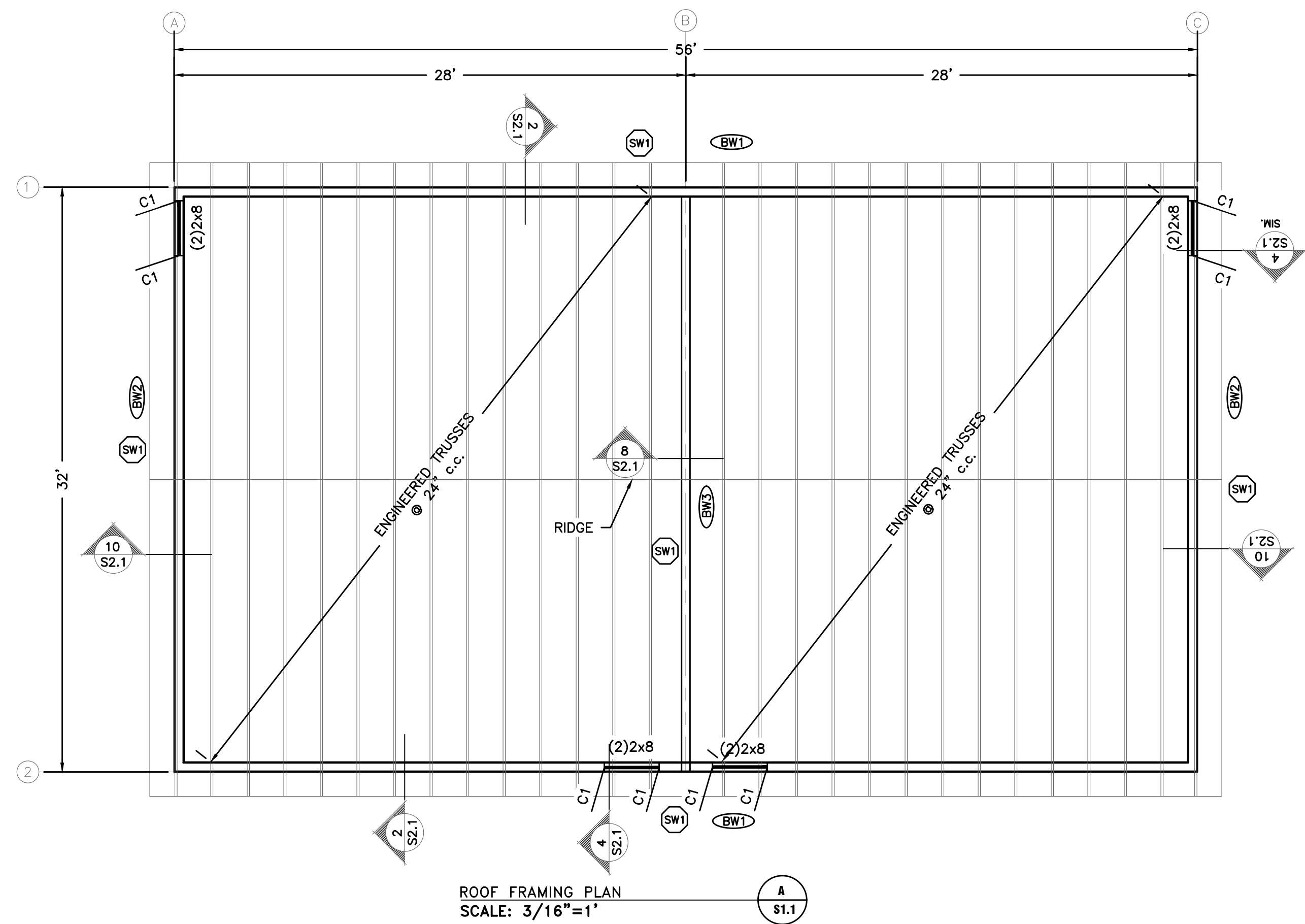


**1 Interior Elevation 1**  
 A105 3/8" = 1'-0"





ALLIANCE CONSULTING ENGINEERS  
150 EAST 200 NORTH SUITE P  
CANYON VIEW, UT 84301  
(435)755-5191  
allianceg@allianceg.com



**HOLDDOWNS**  
HT SIMPSON LTTI31 STRAP TIE  
(SEE DETAIL 2/S0.1)

**NOTE:**  
BUILDING TO BE SUPPORTED WITH A 6" THICK CONCRETE SLAB WITH A 12"x18" THICKENED EDGE WITH TWO #4 REBAR HORIZONTAL.

**SHEARWALL SCHEDULE**

SW1 OSB SHEATHING ONE SIDE WITH 10d NAILS AT 4" o.c. (PERIMETER), 12 o.c. (FIELD)

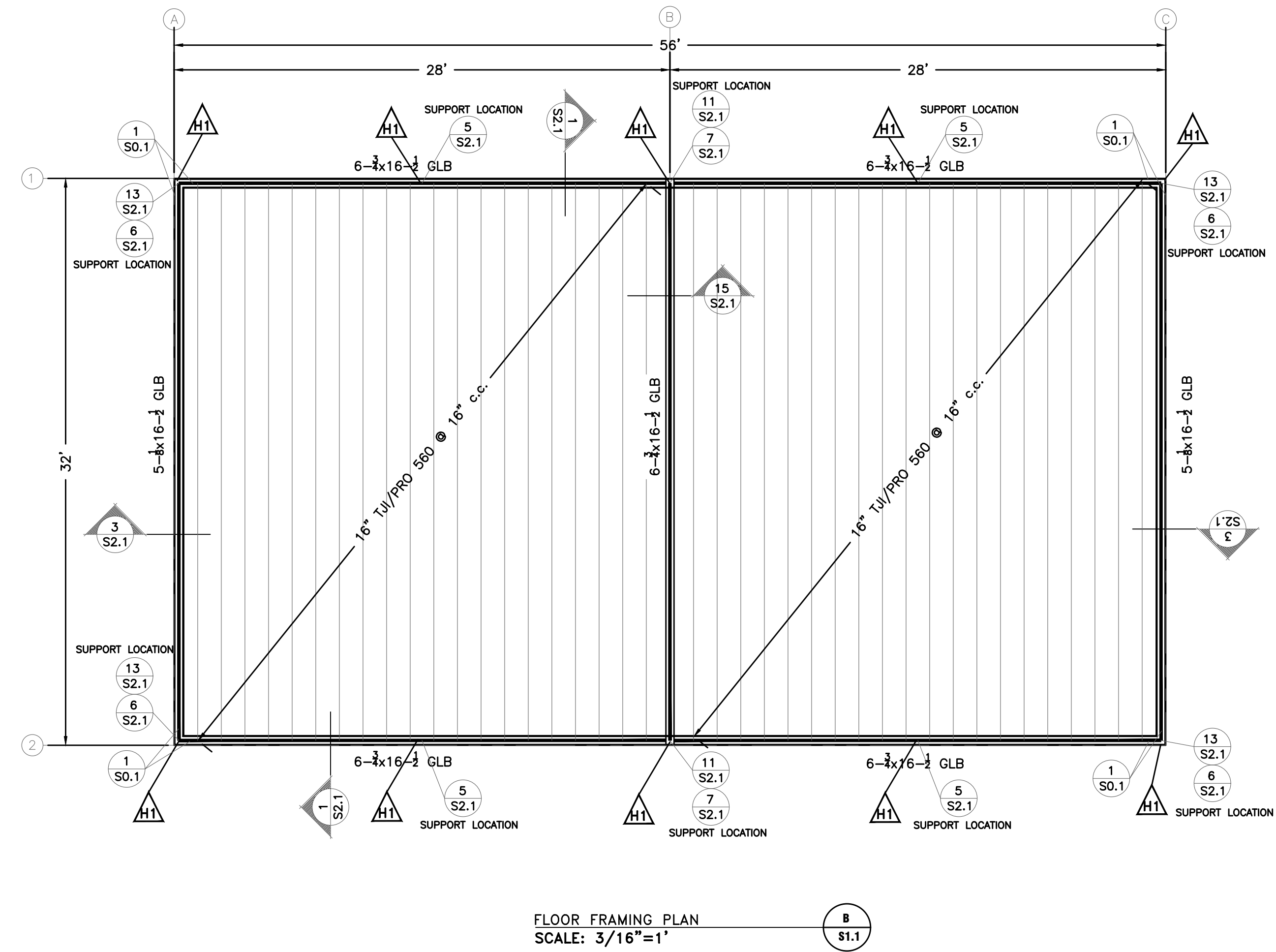
**SHEARWALL NOTES**

- 1. ALL SHEATHING PANEL EDGES SHALL BE BLOCKED UNLESS NOTED OTHERWISE.
- 2. PROVIDE SAME NAILING PATTERN ABOVE AND BELOW OPENINGS AS ADJACENT SHEAR PANEL.
- 3. ALL EXTERIOR WALLS SHALL BE SHEARWALL "SW1" UNLESS NOTED OTHERWISE.

| COLUMN SCHEDULE |         |                                      |                   |
|-----------------|---------|--------------------------------------|-------------------|
| MARK            | TYPE    | SIZE                                 | NOTES             |
| C1              | DF-L #2 | (1)2x6 TRIMMERS<br>(1)2x6 KING STUDS | SEE DETAIL 9/S2.1 |

NOTE: PROVIDE TRIMMERS/STUDS UNDER BEARING ENDS OF GIRDER TRUSSES & BEAMS EQUIVALENT TO THE WIDTH OF THE MEMBER SUPPORTED, OR AS SPECIFIED ON FRAMING PLANS.

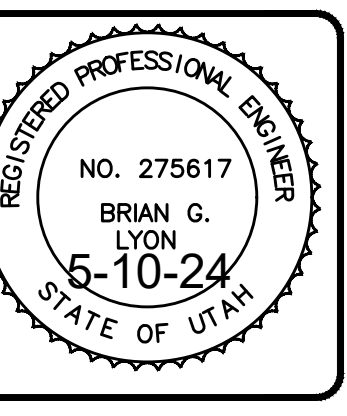
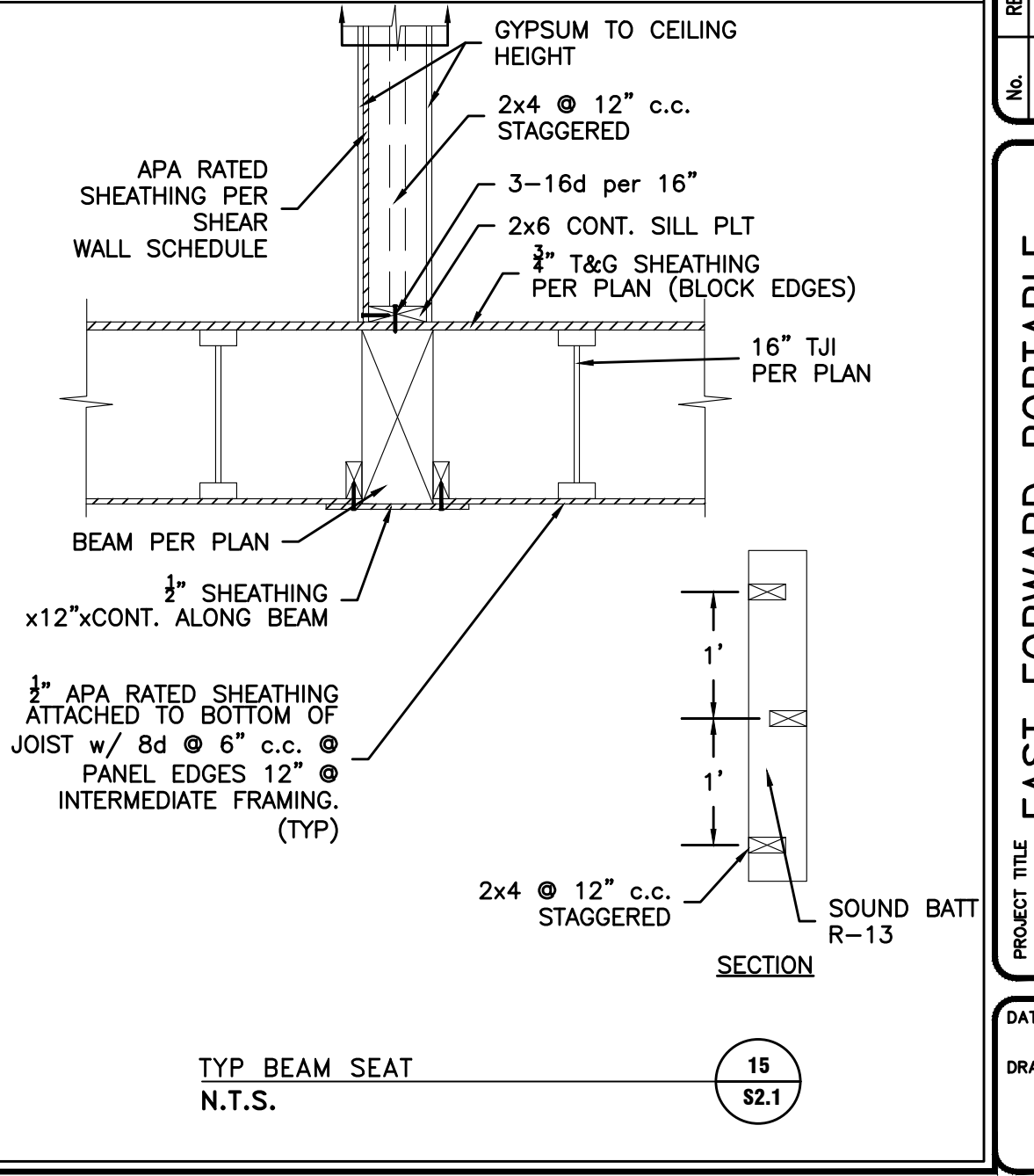
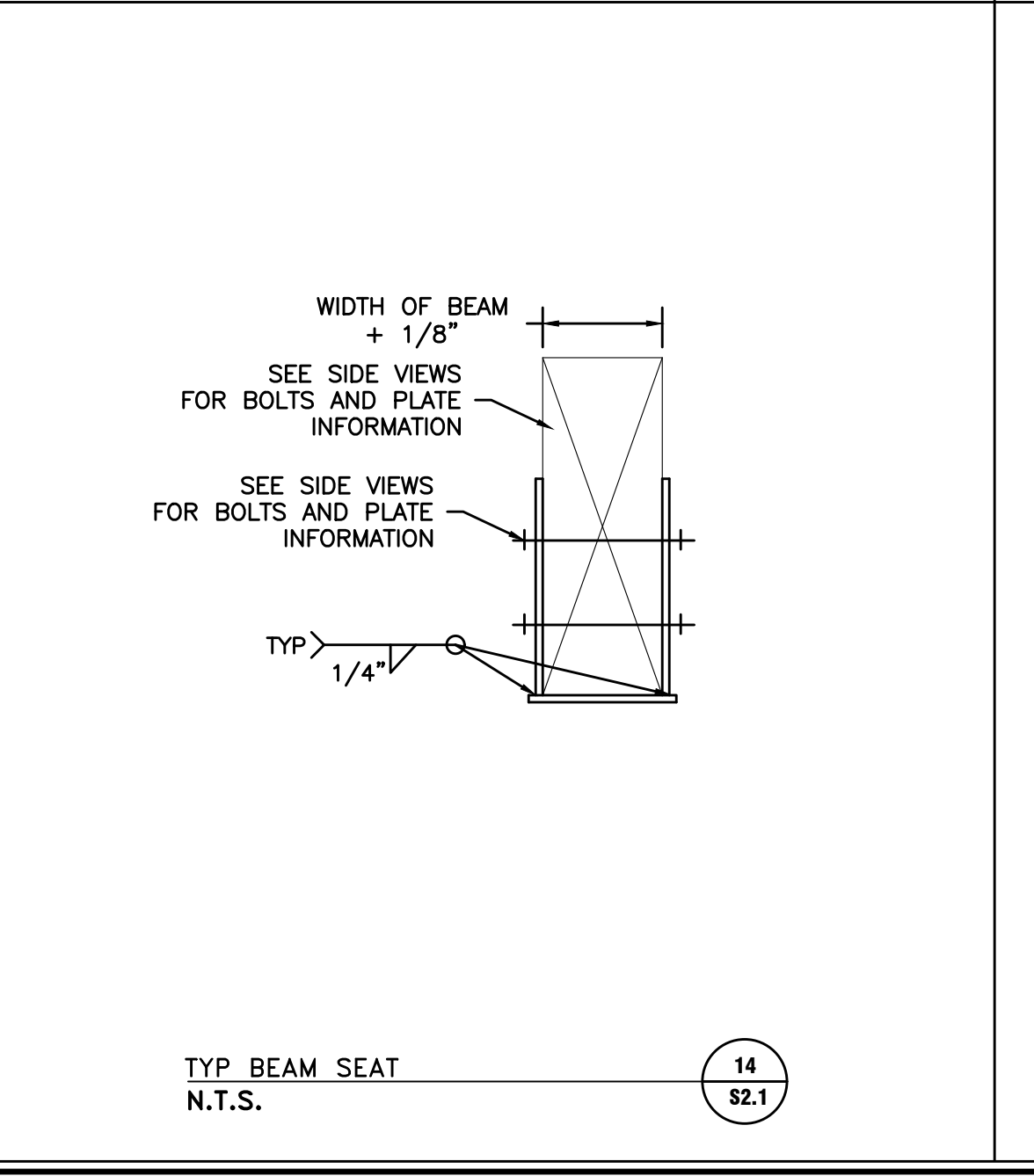
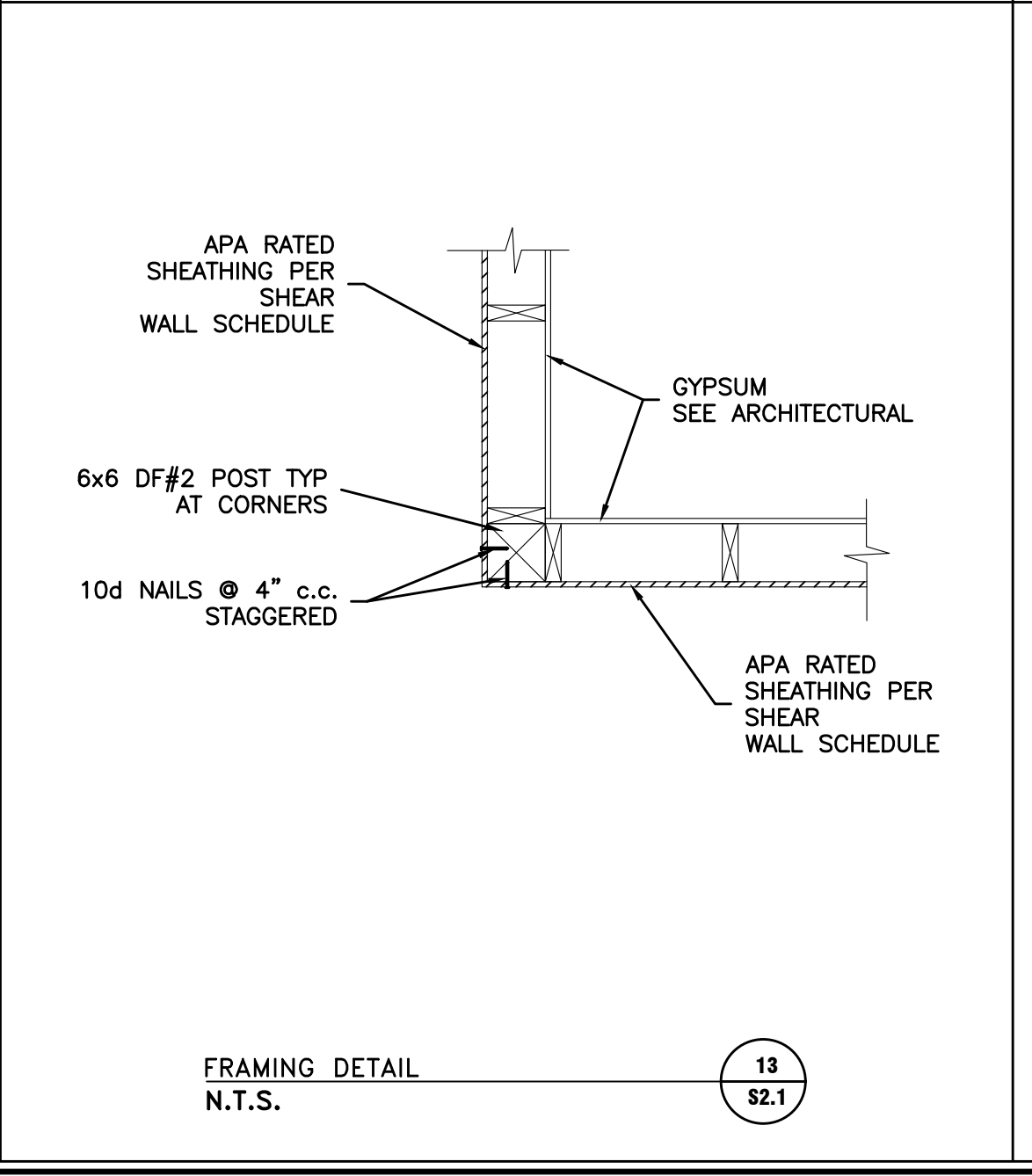
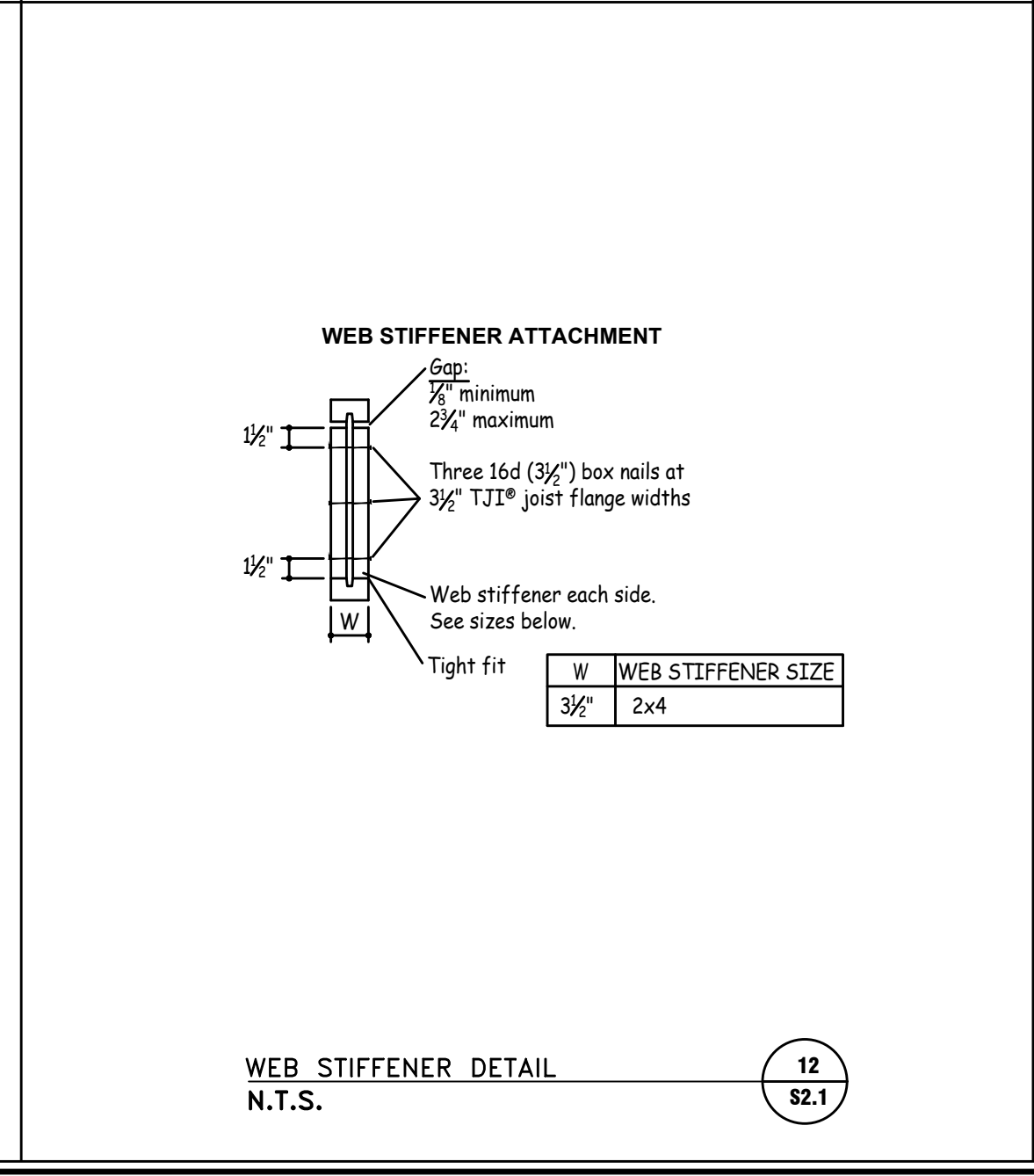
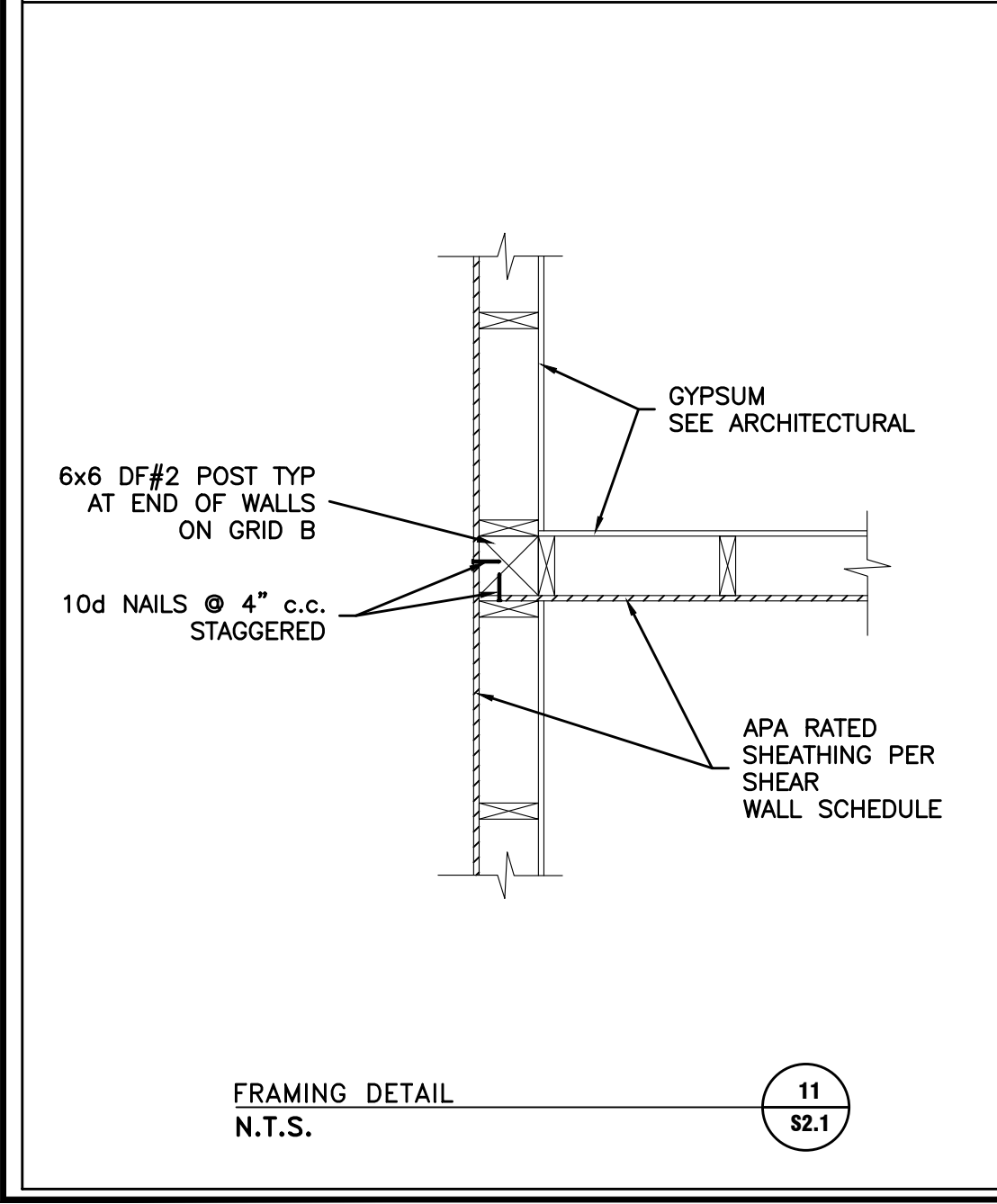
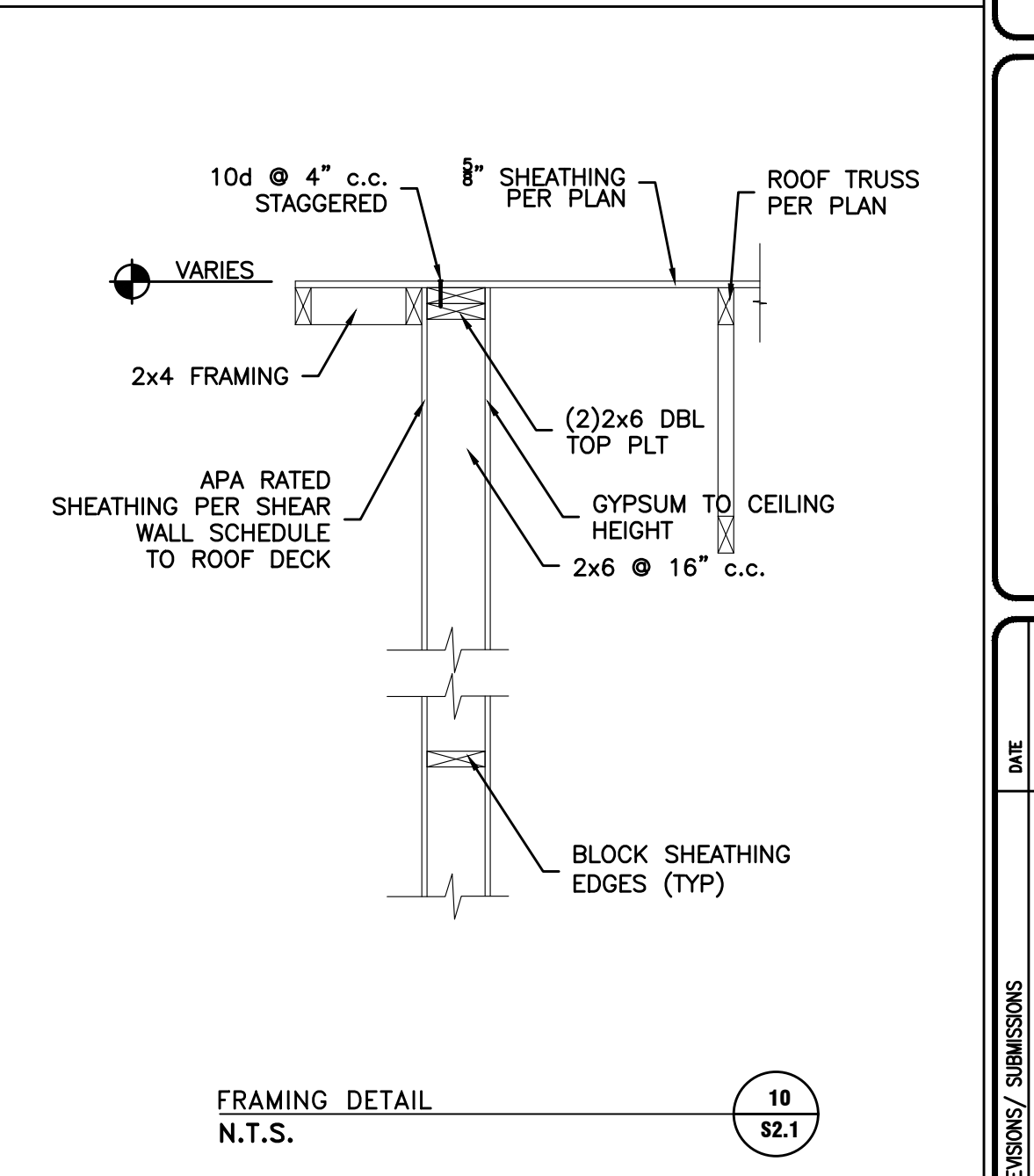
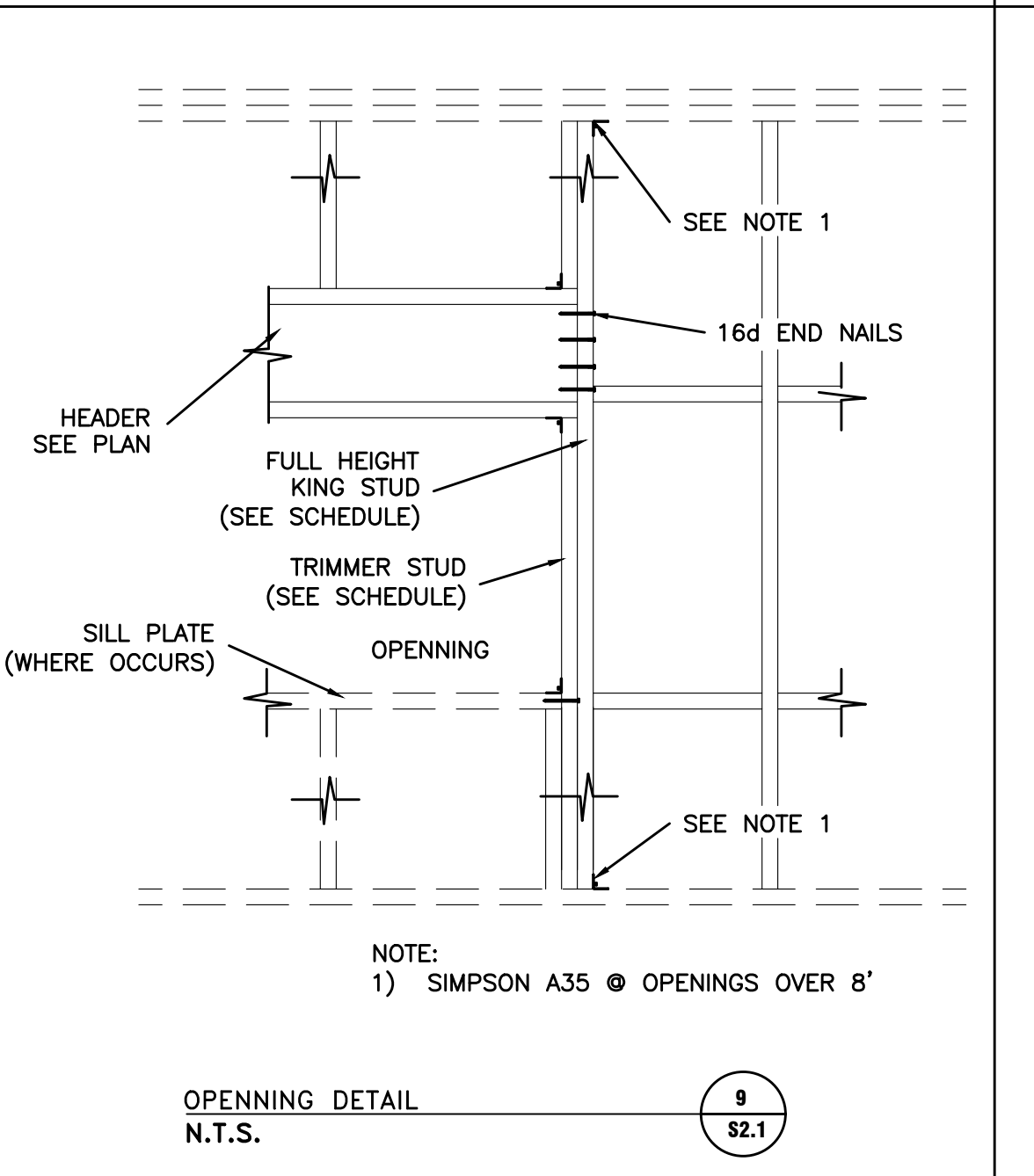
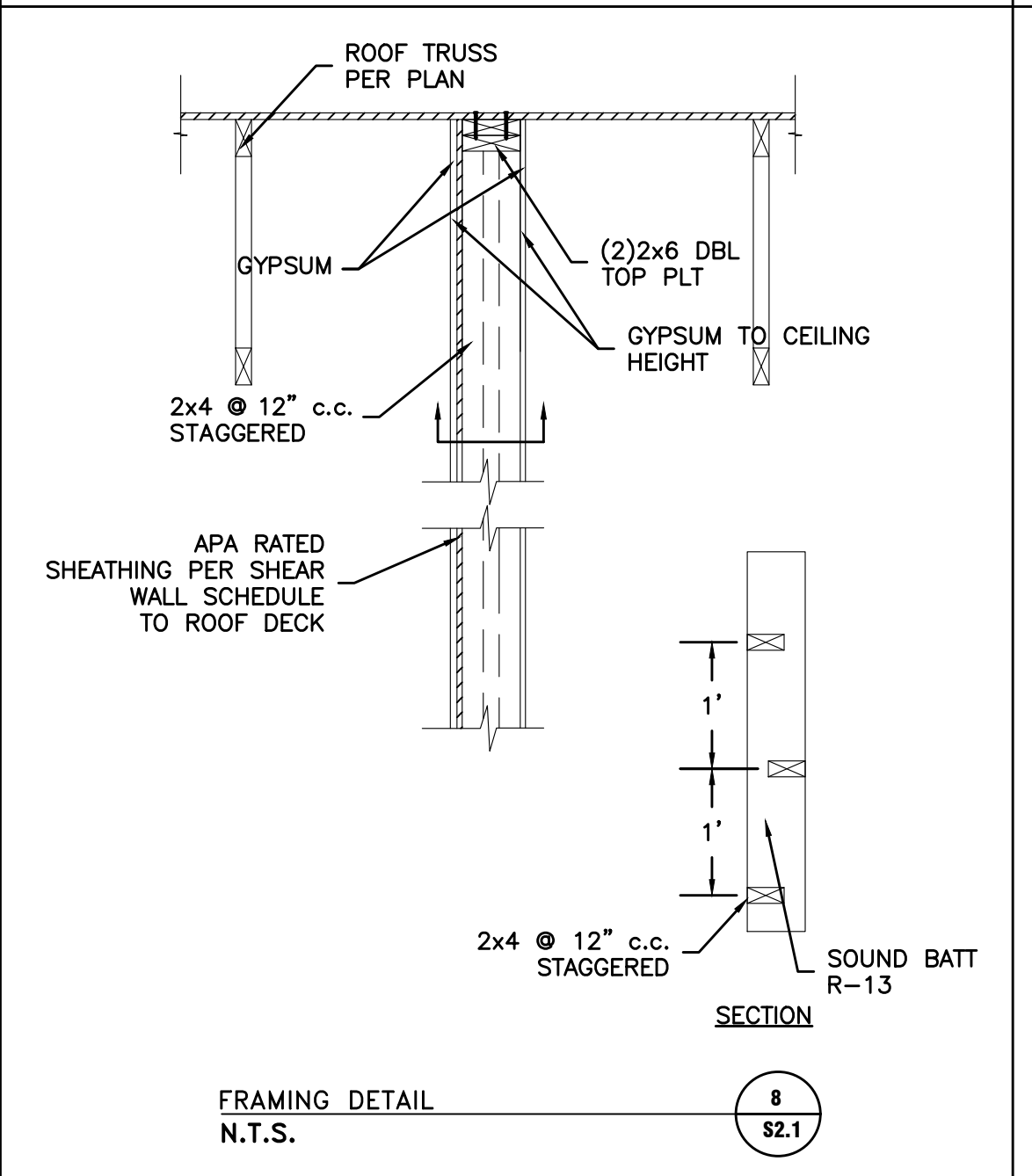
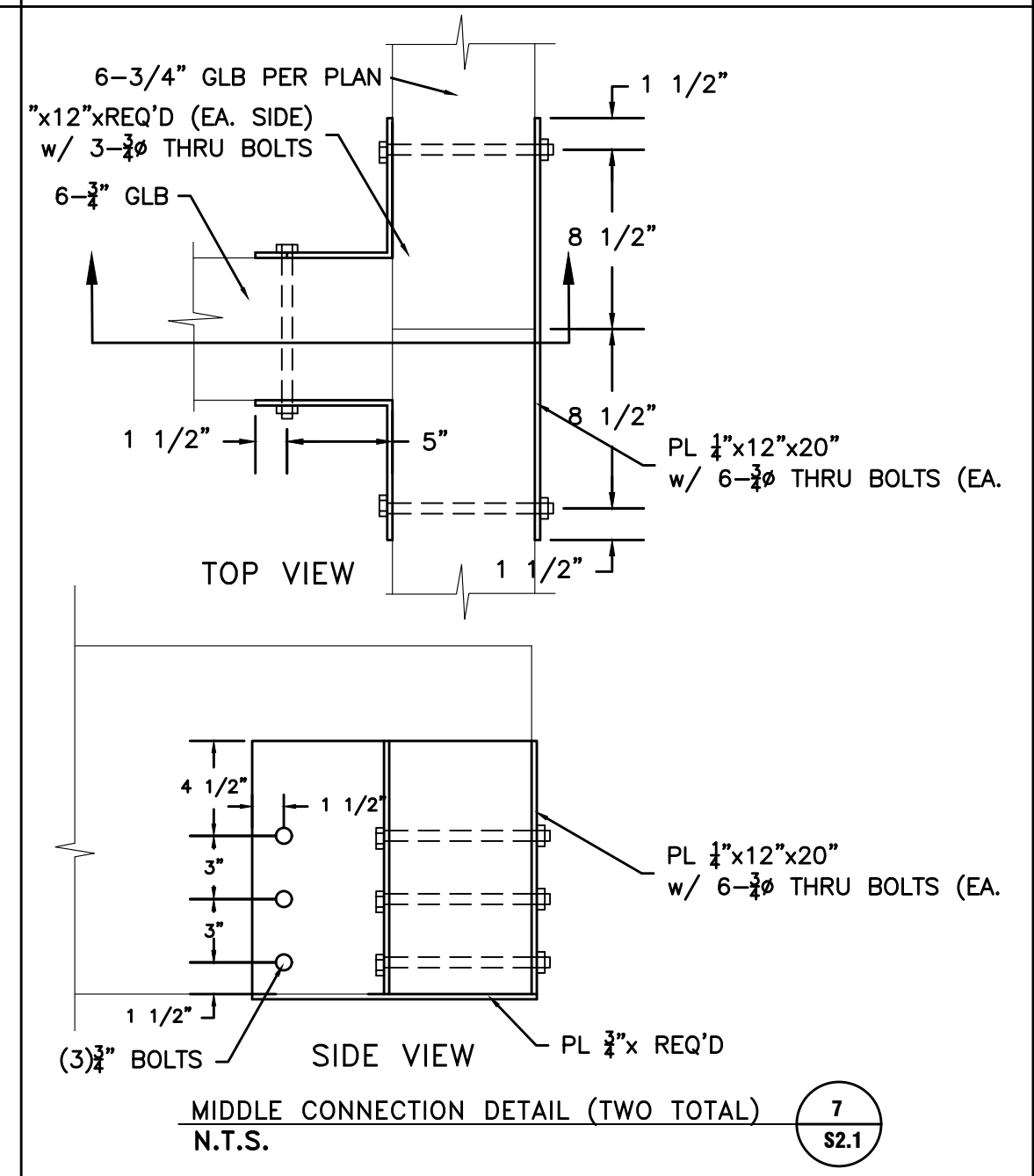
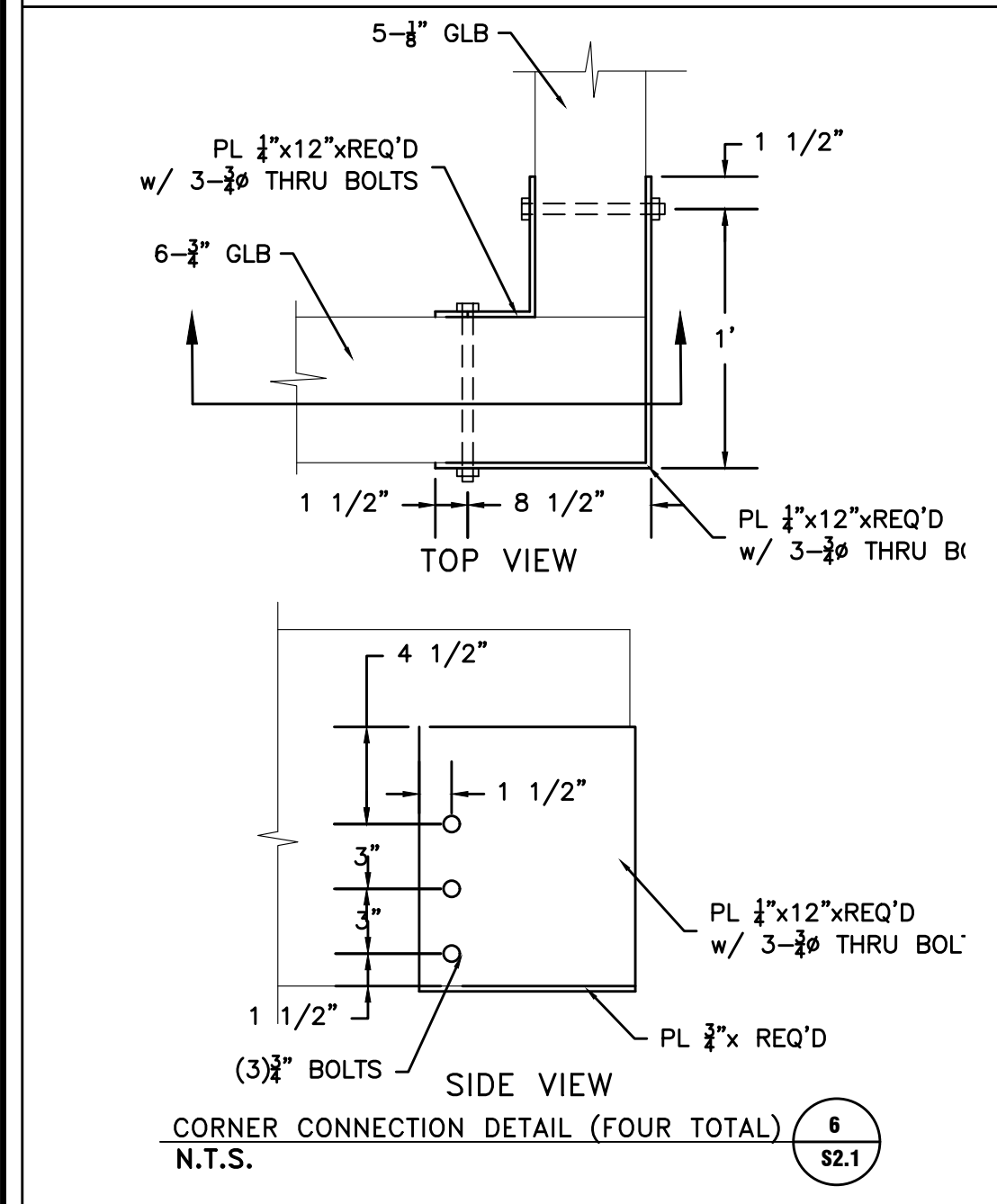
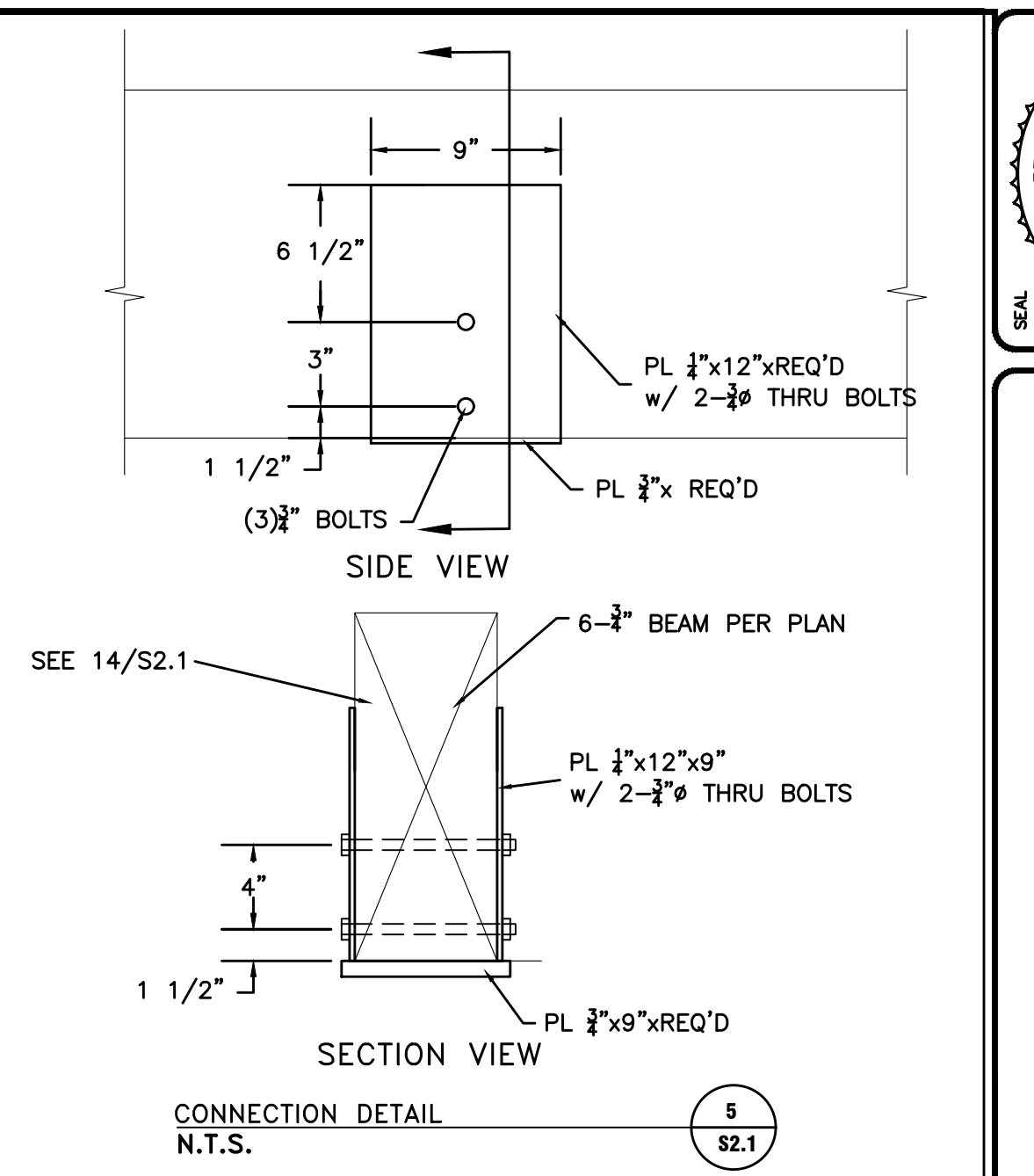
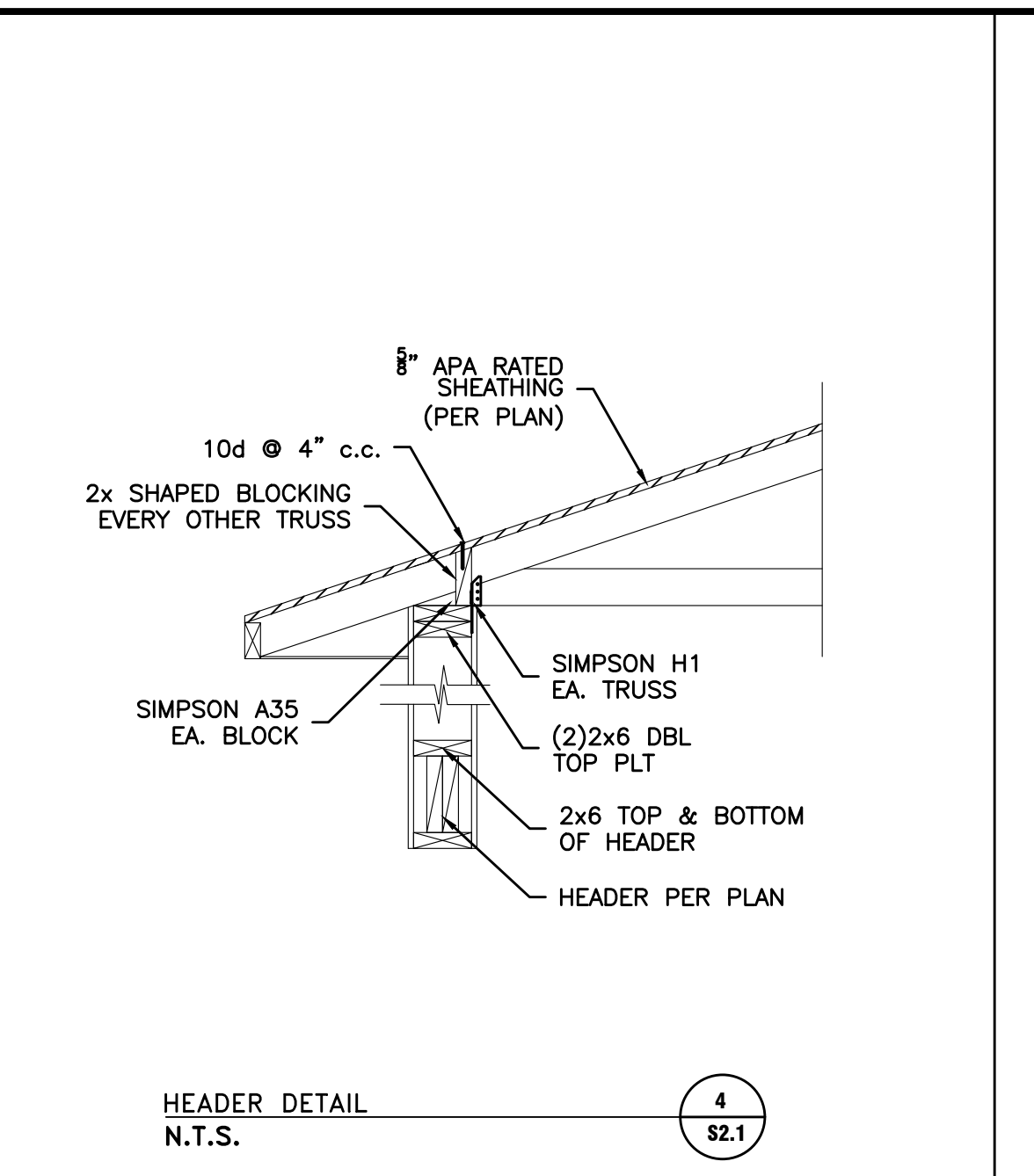
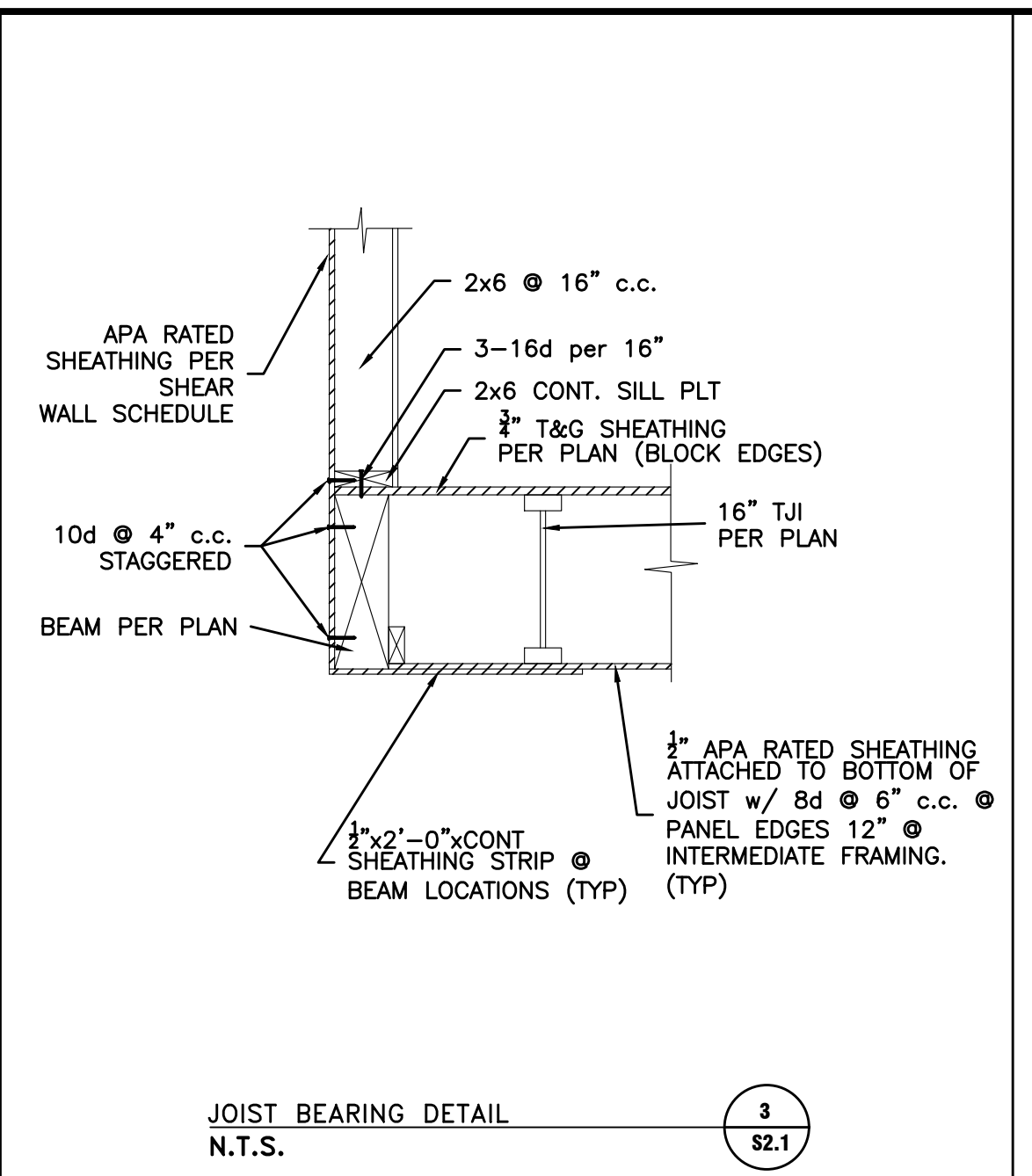
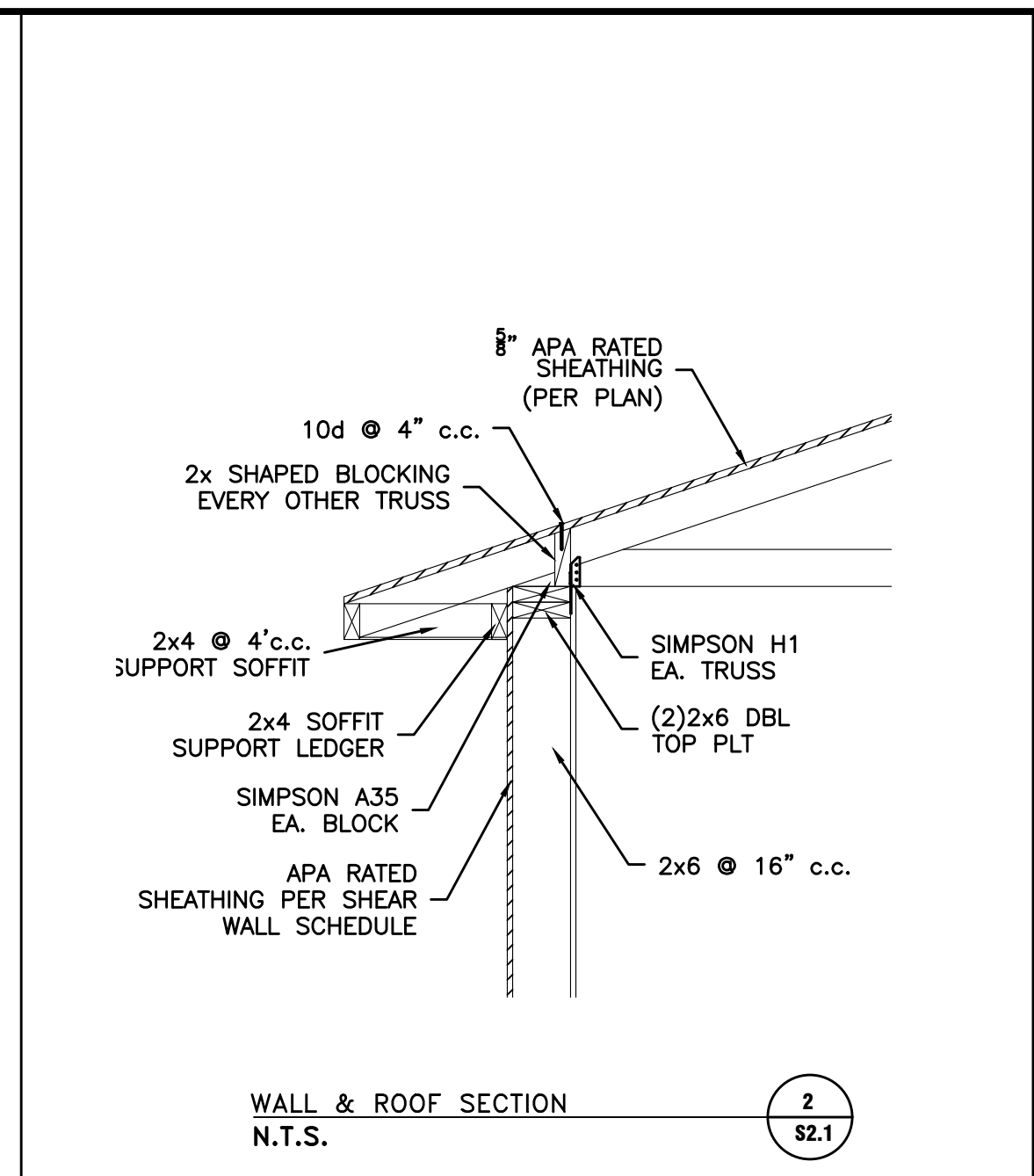
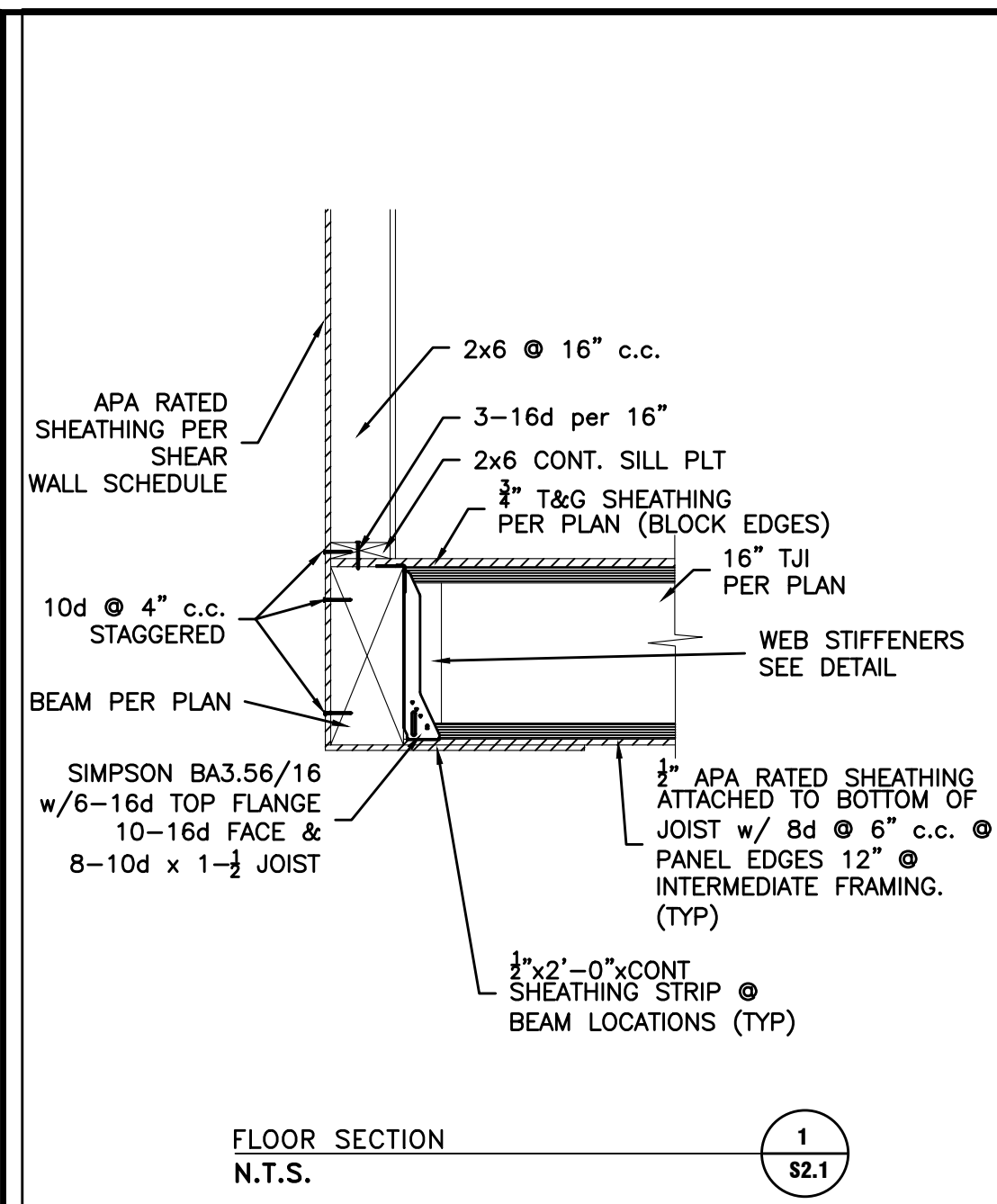
| BEARING WALL SCHEDULE |         |   |       |
|-----------------------|---------|---|-------|
| MARK                  | TYPE    | SIZE  | NOTES |
| BW1                   | DF-L #2 | 2x6 @ 16" c.c.  |       |
| BW2                   | DF-L #2 | 2x6 @ 12" c.c.  |       |
| BW3                   | DF-L #2 | 2x4 @ 12" c.c. STAGGERED<br>w/ 2x6 TOP AND BOTTOM PLT |       |



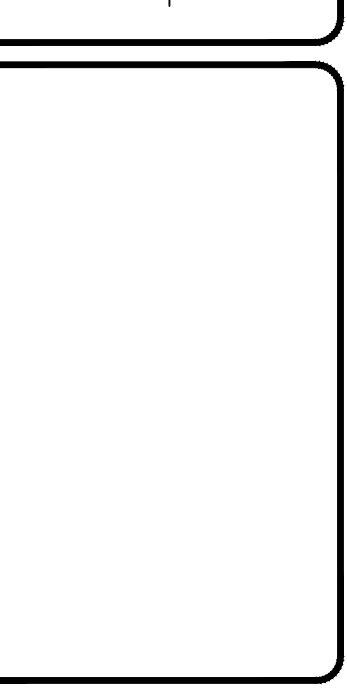
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REVIEWED: \_\_\_\_\_  
DRAWN: \_\_\_\_\_  
PROJECT NO.: \_\_\_\_\_  
CADD FILE: \_\_\_\_\_

PROJECT TITLE: FAST FORWARD PORTABLE CLASSROOM 2024  
DRAWING TITLE: FRAMING PLAN



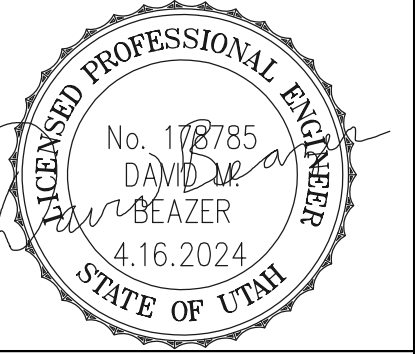
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150 EAST 200 NORTH SUITE P  
LOGAN, UTAH 84321  
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| PROJECT NO.             |  |
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FAST FORWARD PORTABLE CLASSROOM 2024  
DRAWING TITLE

DATE: May 2024  
DRAWING No. **\$2.1**



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**DATE**  
April 16, 2024

**PROJECT TITLE**  
FAST FORWARD  
Double Classroom  
875 West 1400 North  
Logan, Utah

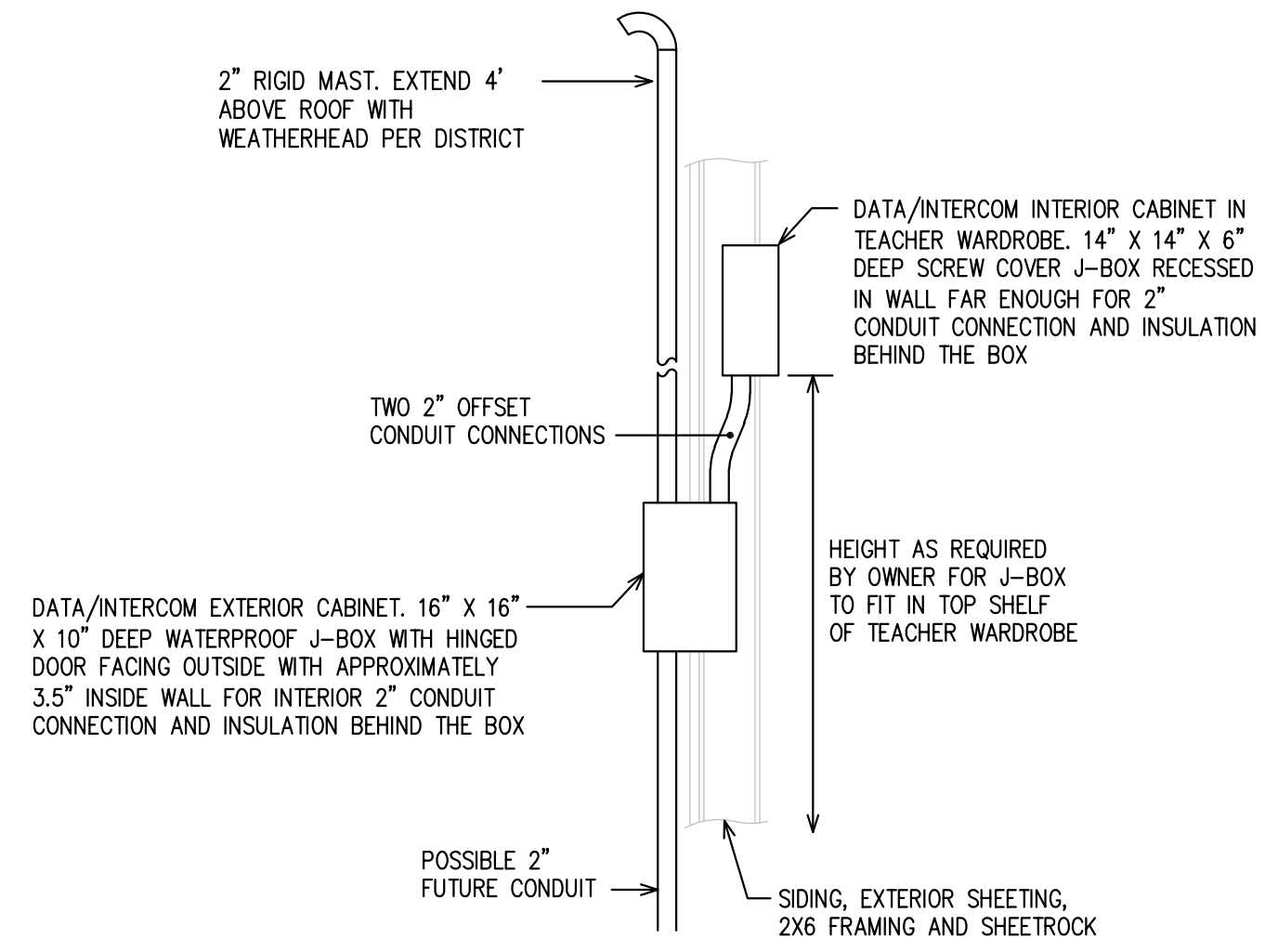
**SHEET TITLE**  
ELECTRICAL  
PLANS  
SCALE: 1/4"=1'-0"

**PROJECT NUMBER**

**REVISIONS**

**SHEET NUMBER**

E2.1



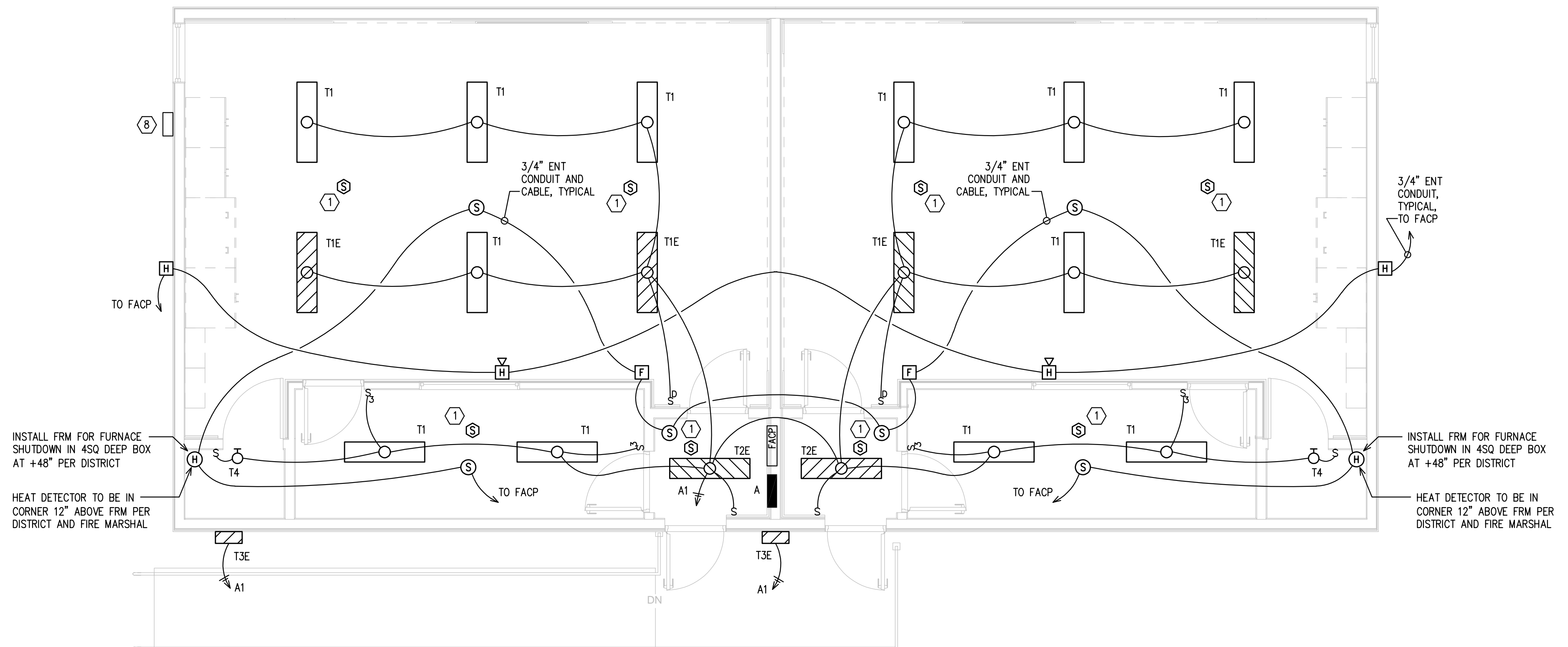
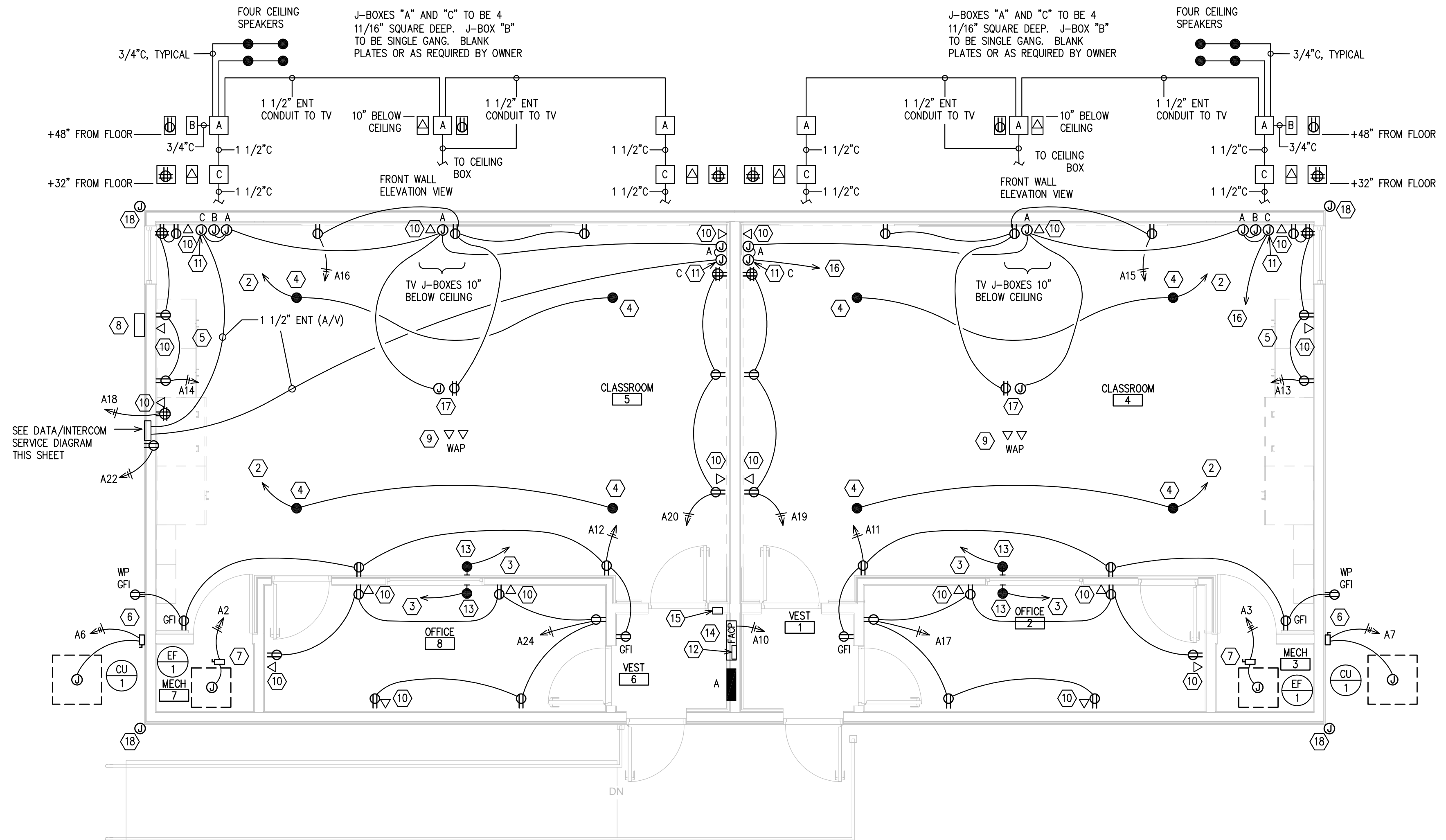
DATA/INTERCOM SERVICE DIAGRAM

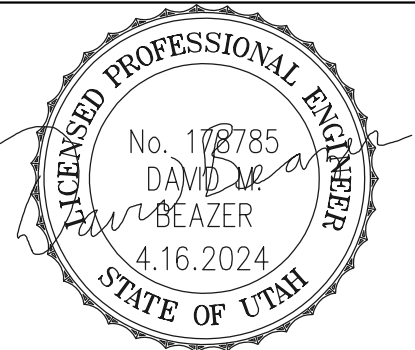
| LIGHT FIXTURE SCHEDULE |   |                            |                               |
|------------------------|---|----------------------------|-------------------------------|
| TYPE                   | MANUFACTURER/CATALOG NO.  | MOUNTING                   | LAMPS                         |
| T1                     | LITHONIA STL4 48L E21 LP840   | SURFACE                    | LED (45W)                     |
| T1E                    | LITHONIA STL4 48L E21 LP840 EL14L   | SURFACE                    | LED (45W)                     |
| T2E                    | LITHONIA STL4 30L E21 LP840 EL14L   | SURFACE                    | LED (27W)                     |
| T3E                    | LITHONIA WST LED P1 40K VF MVOLT PE E7WHR (REMOTE BATTERY INSIDE HEATED SPACE) VG COLOR PER OWNER | WALL, HEIGHT PER ARCHITECT | LED (12W)                     |
| T4                     | PORCELAIN LAMPHOLDER, WIRE CAGE   | WALL ABOVE DOOR            | LED A19 LAMP ~8.5W, 800 LUMEN |

**KEYED NOTES**

1. CEILING MOUNT OCCUPANCY SENSOR. AUTO ON, AUTO OFF. WATTSTOPPER DT300 WITH BZ-150 POWER PACK SET TO OCCUPANCY SETTING. INSTALL PER MANUFACTURER WIRING DIAGRAMS. PROVIDE BZ-150 POWER PACK TO PROVIDE POWER TO DIMMER SWITCHES TO CONTROL CLASSROOM LIGHTS.
2. 3/4" CONDUIT TO TEACHER J-BOX "A" AS SHOWN.
3. 3/4" CONDUIT AND CABLE TO DATA J-BOX PER OWNER.
4. CEILING SPEAKER AND CABLING PER OWNER. DAISY CHAIN WITH ONE HOMERUN AS SHOWN. 3/4" ENT CONDUIT BETWEEN SPEAKERS.
5. LOCATE OUTLETS ABOVE WORK SURFACE, SEE ARCHITECTURAL.
6. SURFACE MOUNT FUSED DISCONNECT WITH SEALTITE FLEX TO CONDENSING UNIT. FUSES SIZED AS REQUIRED BY CONDENSER MANUFACTURER.
7. FUSED DISCONNECT FOR ELECTRIC FURNACE, FUSES SIZED PER MANUFACTURER.
8. SURFACE MOUNT 200A METER MAIN. INSTALL 2 1/2" MAST AND WEATHERHEAD FOR POWER FEED. STUB 2 1/2" CONDUIT DOWN TO SKIRTED AREA BELOW PORTABLE FOR FUTURE CONNECTION. GROUND SERVICE PER N.E.C. PROVIDE #2 GROUND TO ANY BUILDING STEEL IF PRESENT PLUS #6 TO TWO GROUND RODS DRIVEN 15FT. APART. RUN 2 1/2" FEED TO PANEL "A" SURFACE UP OUTSIDE WALL AND THROUGH ATTIC. DO NOT RUN BELOW PORTABLE.
9. WIRELESS ACCESS POINT. 4SD BOX WITH SINGLE GANG RING FLUSH IN CEILING. TWO JACK OUTLET AND CABLES PER SPECIFICATION. PROVIDE 3/4" ENT CONDUIT TO DATA J-BOX.
10. DATA OUTLET. 4 11/16" SQUARE DEEP BOX WITH SINGLE GANG RING. 2 DATA JACKS. STUB 3/4" ENT CONDUIT TO DATA J-BOX WITH TWO CAT 5 CABLES.
11. TEACHER INPUT. 4 11/16" SQUARE DEEP BOX WITH 2 GANG RING. MOUNT AT +32", TO BOTTOM, JUST OVER CABINET.
12. RELAY MODULE, MONITOR MODULE AND UDACT LOCATED INSIDE FACP CAN.
13. SPEAKER OUTLET. 4 11/16 SQ. DEEP BOX WITH SINGLE GANG RING. MOUNT ABOVE MARKER BOARD PER OWNER.
14. STUB 3/4" CONDUIT WITH TELEPHONE CABLE FROM "FACP" TO TELEPHONE J-BOX.
15. DRIP LOOP FACP J-BOX.
16. 1 1/2" CONDUIT TO DATA/INTERCOM J-BOX IN TEACHER WARDROBE.
17. CEILING MOUNT OUTLET AND J-BOX FOR PROJECTION.
18. J-BOX FOR CAMERA AS REQUIRED. STUB 3/4" CONDUIT IN TO ACCESSIBLE CEILING SPACE OR AS REQUIRED BY OWNER.

ALL FIRE ALARM DEVICES (H/S, SMOKE, HEAT, AND PULL STATION ETC.) NEED TO BE 4 SQ. DEEP WITH SINGLE GANG RING UNLESS NOTED OTHERWISE





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**DATE**  
April 16, 2024

**PROJECT TITLE**  
FAST FORWARD  
Double Classroom  
875 West 1400 North  
Logan, Utah

**SHEET TITLE**  
DIAGRAMS AND SCHEDULES

**PROJECT NUMBER**

**REVISIONS**

**SHEET NUMBER**

**E2.2**

**GENERAL NOTES**

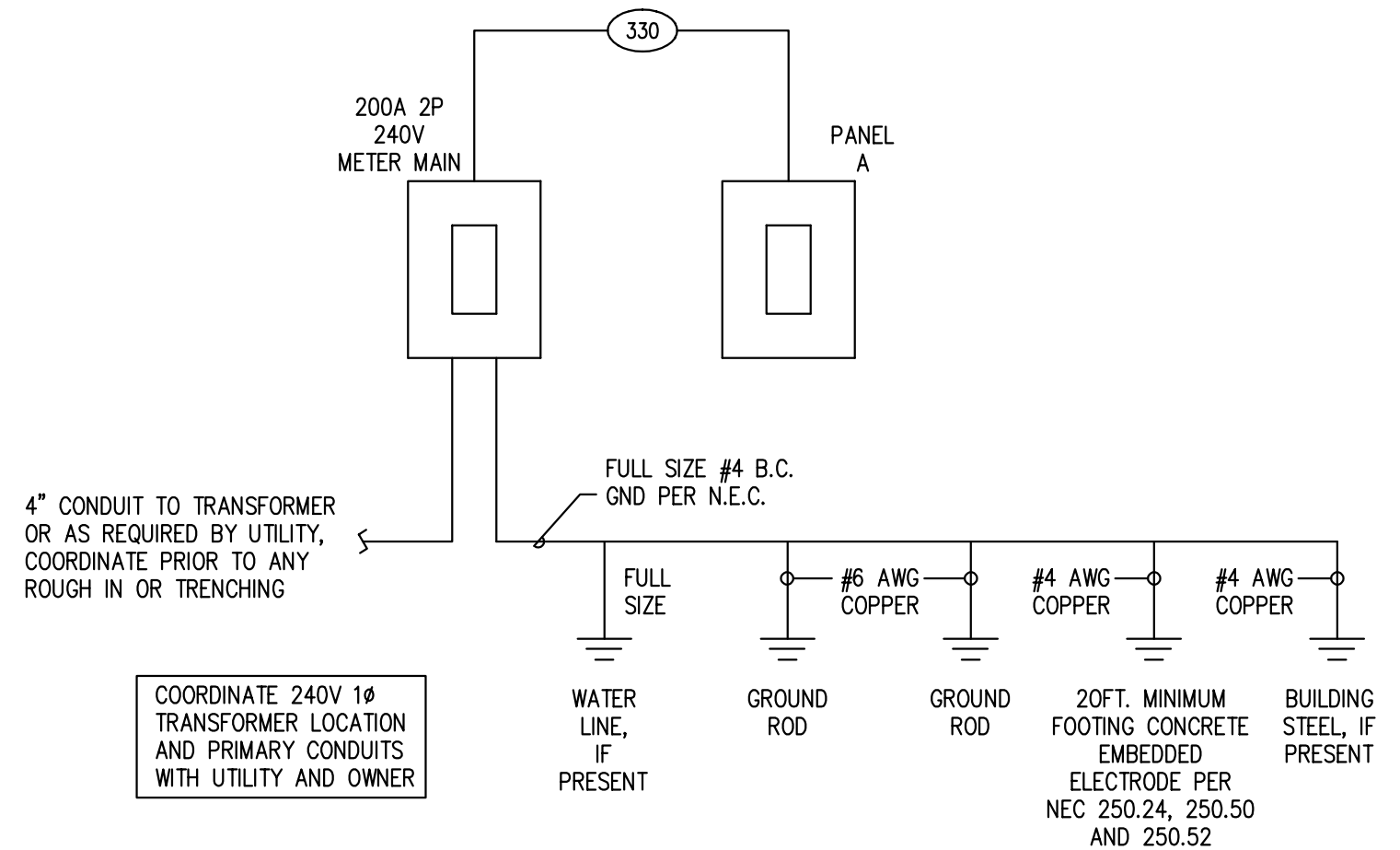
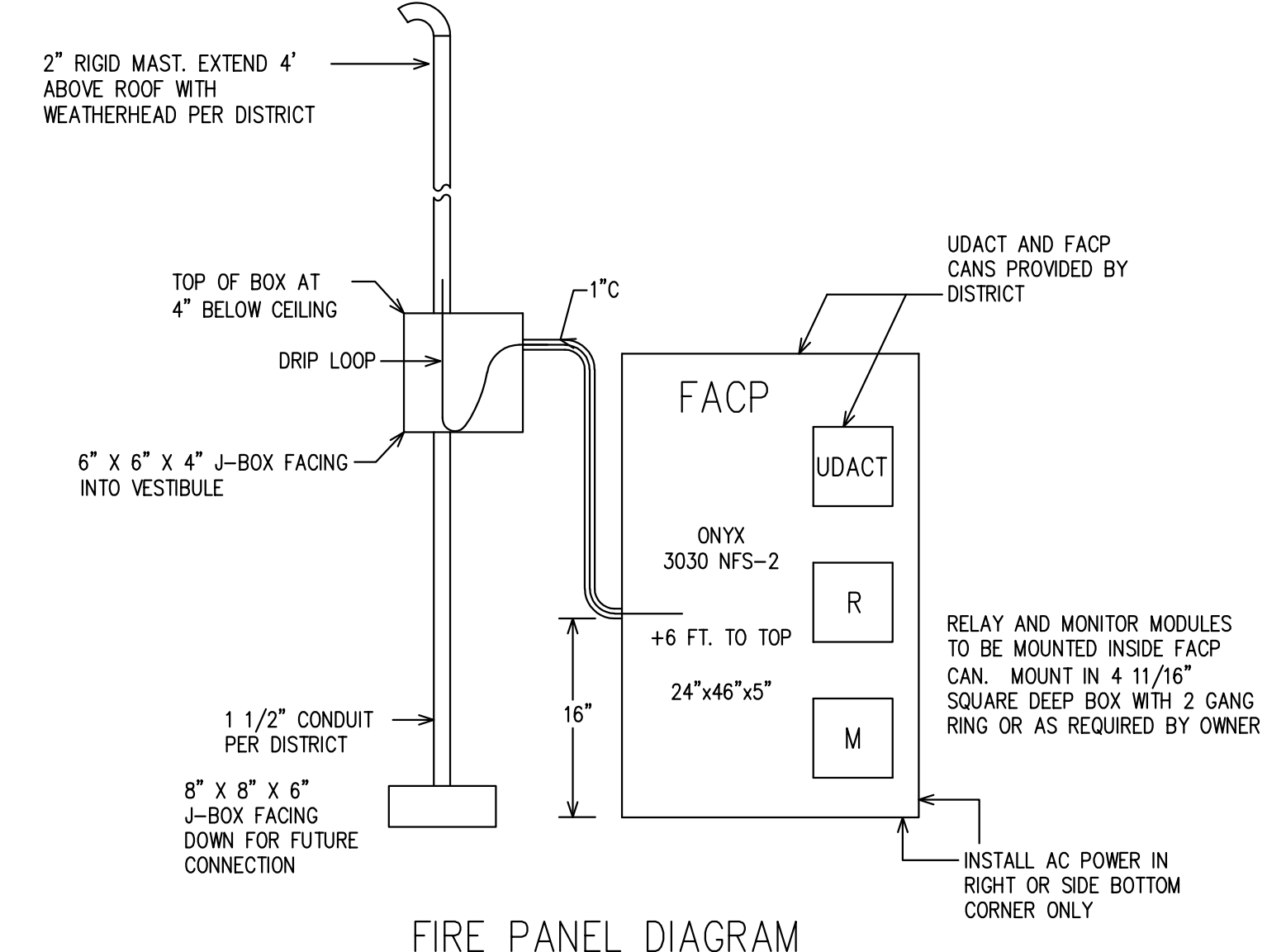
1. THE ELECTRICAL CONTRACTOR SHALL HAVE A COORDINATION MEETING WITH THE MECHANICAL CONTRACTOR, CONSTRUCTION SUPERINTENDENT AND ANY OTHER TRADES AS REQUIRED WITHIN SEVEN DAYS OF THE START OF THE JOB TO REVIEW CODE CLEARANCE REQUIREMENTS FOR PANELS, SWITCHES AND OTHER ELECTRICAL GEAR SPECIFICALLY FOR THIS JOB. RECORD THE MEETING IN THE SUPERINTENDENT'S LOG. REPORT UNRESOLVED CONFLICTS TO THE ARCHITECT IMMEDIATELY.
2. REFER TO MECHANICAL PLANS FOR EXACT LOCATION OF MECHANICAL EQUIPMENT.
3. ALL ELECTRICAL INSTALLATIONS TO CONFORM TO THE LATEST N.E.C. AND LOCAL CODES.
4. CONTRACTOR SHALL VERIFY ALL SURFACE MOUNT FLUORESCENT FIXTURES CONFORM TO N.E.C. 410-76.
5. ELECTRICAL CONTRACTOR SHALL FURNISH ALL MOTOR DISCONNECTS, STARTERS, AND CONTROL STATIONS FOR MECHANICAL EQUIPMENT UNLESS THE SAME IS FURNISHED AS AN INTEGRAL PART OF THE EQUIPMENT. VERIFY WITH MECHANICAL CONTRACTOR.
6. EMT CONDUIT IS NOT ALLOWED OUT OF DOORS, SEE SPECIFICATION SECTION ON RACEWAYS.
7. MOUNTING HEIGHT OF GENERAL PURPOSE OUTLETS AND SWITCHES SHALL BE 16" TO BOTTOM AND 48" TO TOP RESPECTIVELY UNLESS OTHERWISE NOTED.
8. COORDINATE MOUNTING HEIGHT AND LOCATION OF "ALL" OUTLETS, SWITCHES, AUXILIARY EQUIPMENT, AND OTHER DEVICES WITH THE ARCHITECTURAL DRAWINGS. PRIOR TO INSTALLATION, REVIEW WITH THE GENERAL CONTRACTOR THE LOCATION OF MILLWORK AS A FINAL CHECK TO PREVENT COVERING OF ELECTRICAL ITEMS.
9. CONTRACTOR COORDINATE WITH MECHANICAL ROUTING OF CONDENSATE LINES ON MECHANICAL PADS. WIREWAYS AND DISCONNECTS REQUIRE 3FT. FRONTAL CLEARANCE AND MINIMUM 30" WIDTH CLEARANCE, OR WIDTH OF UNIT, WHICHEVER IS GREATER.
10. OUTLETS, SWITCHES AND COVER PLATES TO BE COLOR CODED TO THE WALL MOUNTED ON PER ARCHITECT, BROWN, IVORY, WHITE, OR GRAY.
11. PROVIDE SAFETY DISCONNECTS AS REQUIRED AT ALL CONNECTIONS TO MECHANICAL EQUIPMENT. FUSED PER MECHANICAL EQUIPMENT MANUFACTURERS RECOMMENDATIONS.
12. DISCONNECT SWITCHES SHOWN IN APPROXIMATE LOCATION ONLY. CONTRACTOR FIELD VERIFY LOCATION OF ALL ELECTRICAL SWITCHES AND MOTOR CONTROL FOR PROPER CODE CLEARANCE. NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS WITH OTHER TRADES REGARDING PROPER EQUIPMENT CLEARANCES.
13. ALL DISCONNECT SWITCHES FOR MOTORS SHALL BE FUSED AND RATED A MINIMUM OF 10000 AIC UNLESS SHOWN OTHERWISE.
14. PANEL INDEXES SHALL INCLUDE ALL PERTINENT INFORMATION ON THE PANEL SCHEDULES INCLUDING INFORMATION ON LIGHTS AND OUTLETS. DO NOT SIMPLY COPY THE CIRCUIT DESCRIPTION COLUMN. INDEXES TO BE TYPEWRITTEN.
15. BEFORE RUNNING CONDUITS OR PLACING OUTLETS AND EQUIPMENT, THE CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS OF THE OTHER TRADES SERVED BY THE CONDUIT OR OUTLETS.
16. THE ELECTRICAL CONTRACTOR SHALL FIELD VERIFY WITH THE GENERAL CONTRACTOR ADEQUATE WALL DEPTH FOR MOUNTING FLUSH CIRCUIT BREAKER PANELS.
17. COORDINATE LOCATION OF EXIT LIGHTS WITH ARCHITECT.
18. THE ELECTRICAL CONTRACTOR SHALL RUN BRANCH CIRCUIT CONDUITS IN ATTIC SPACES IN A NEAT AND WORKMANLIKE MANNER SO AS TO CONSERVE OPEN SPACES AS MUCH AS POSSIBLE IN DEFERENCE TO HVAC DUCTWORK RUNS. HVAC DUCTWORK SHALL HAVE LOCATION PRIORITY OVER BRANCH CIRCUIT CONDUIT RUNS.
19. ALL CONVENIENCE OUTLETS MUST BE MOUNTED FLUSH WITH THE COVER PLATE AND SECURED FIRMLY TO THE OUTLET BOX. LOOSE OR SPONGY MOUNTED OUTLETS WILL NOT BE ACCEPTED.
20. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW ALL SWITCH LOCATIONS WITH THE GENERAL CONTRACTOR PRIOR TO ROUGH IN IN ORDER TO PREVENT ANY SWITCHES FROM BEING LOCATED ON THE WRONG SIDE OF THE DOOR.

| SERVICE ENTRANCE & FEEDER CONDUIT-CONDUCTOR SCHEDULE |                 |                |           |     |
|--|-----------------|----------------|-----------|-----|
| TYPE   | CONDUCTOR QUAN. | CONDUCTOR SIZE | COND SIZE | AMP |
| 20   | 2               | 10             | 3/4       | 30  |
| 30   | 3               |                |           |     |
| 40   | 4               |                |           |     |
| 28   | 2               | 8              |           | 40  |
| 38   | 3               |                | 1         |     |
| 48   | 4               |                |           |     |
| 26   | 2               | 6              |           | 55  |
| 36   | 3               |                |           |     |
| 46   | 4               |                | 1 1/4     |     |
| 34   | 3               | 4              |           | 70  |
| 44   | 4               |                |           |     |
| 33   | 3               | 3              |           | 85  |
| 43   | 4               |                |           |     |
| 311  | 3               | 1              | 1 1/2     | 110 |
| 411  | 4               |                | 2         |     |
| 310  | 3               | 1/0            |           | 150 |
| 410  | 4               |                |           |     |
| 320  | 3               | 2/0            |           | 175 |
| 420  | 4               |                |           |     |
| 330  | 3               | 3/0            |           | 200 |
| 430  | 4               |                | 2 1/2     |     |
| 340  | 3               | 4/0            |           | 230 |
| 440  | 4               |                |           |     |
| 325  | 3               | 250            |           | 255 |
| 425  | 4               |                | 3         |     |
| 335  | 3               | 350            |           | 310 |
| 435  | 4               |                |           |     |
| 350  | 3               | 500            | 3 1/2     | 380 |
| 450  | 4               |                |           |     |

INSULATION: THHN, THWN, XHHW

PROVIDE GROUND IN ALL CONDUITS PER N.E.C. SIZE ACCORDING TO SERVICE OR EQUIPMENT GROUNDING TABLES, DEPENDING ON USE. EACH PARALLEL CONDUIT TO INCLUDED FULL SIZE GROUND.

| PANEL A                     |      | TYPE                |    | WIRE |   | VOLTS      |            | LOCATION |            | MOUNTING      |    |       |   |                     |      |     |
|-----------------------------|------|---------------------|----|------|---|------------|------------|----------|------------|---------------|----|-------|---|---------------------|------|-----|
| NEW                         |      | EXISTING            |    | Ø 3  |   | 120/240    |            |          |            | flush surface |    |       |   |                     |      |     |
| Bolt on breakers            |      | Isolated ground bus |    |      |   |            |            |          |            | 225 amp. main |    |       |   |                     |      |     |
|                             |      |                     |    |      |   |            |            |          |            | lugs breaker  |    |       |   |                     |      |     |
| No.                         | BRKR | CIRCUIT DESCRIPTION | L  | O    | M | WIRE       | CIRC. LOAD | PHASE    | CIRC. LOAD | WIRE          | L  | O     | M | CIRCUIT DESCRIPTION | BRKR | No. |
| 1                           | 20   | 1 LIGHTS            | 29 |      |   | 12         | 1399       | 8227     | 6828       | 4             |    |       |   | ELECTRIC FURNACE    | 80   | 2   |
| 3                           | 80   | 2 ELECTRIC FURNACE  |    |      |   | 4          | 6828       | 13656    | 6828       | 4             |    |       |   |                     |      | 4   |
| 5                           |      |                     |    |      |   | 4          | 6828       | 8568     | 1740       | 8             |    |       |   | CONDENSER           | 40   | 2   |
| 7                           | 40   | 2 CONDENSER         |    |      |   | 1          | 8          | 1740     | 3480       | 1740          | 8  |       |   |                     |      | 8   |
| 9                           |      |                     |    |      |   | 4          | 12         | 720      | 500        | 12            |    |       |   | 1 FACP              | 20   | 1   |
| 11                          | 20   | 1 OUTLETS           |    |      |   | 12         | 1740       | 2240     | 1440       | 720           | 12 | 4     |   | OUTLETS             |      | 10  |
| 13                          |      |                     |    |      |   | 5          | 12         | 900      | 1800       | 900           | 12 | 5     |   |                     |      | 12  |
| 15                          |      |                     |    |      |   | 3          | 12         | 540      | 1080       | 540           | 12 | 3     |   |                     |      | 14  |
| 17                          |      | OFFICE OUTLETS      |    |      |   | 6          | 12         | 1080     | 1440       | 360           | 12 | 2     |   | WARDROBE OUTLETS    |      | 16  |
| 19                          |      | OUTLETS             |    |      |   | 4          | 12         | 720      | 1440       | 720           | 12 | 4     |   | OUTLETS             |      | 18  |
| 21                          |      | SPARE               |    |      |   |            |            | 180      | 180        | 12            | 1  |       |   | DATA J-BOX          |      | 20  |
| 23                          |      |                     |    |      |   |            |            | 1080     | 1080       | 12            | 6  |       |   | OFFICE OUTLETS      |      | 22  |
| 25                          |      |                     |    |      |   |            |            |          |            |               |    |       |   | SPACE               |      | 24  |
| 27                          |      |                     |    |      |   |            |            |          |            |               |    |       |   |                     |      | 26  |
| 29                          |      |                     |    |      |   |            |            |          |            |               |    |       |   |                     |      | 28  |
| 31                          |      |                     |    |      |   |            |            |          |            |               |    |       |   |                     |      | 30  |
| 33                          |      |                     |    |      |   |            |            |          |            |               |    |       |   |                     |      | 32  |
| 35                          |      |                     |    |      |   |            |            |          |            |               |    |       |   |                     |      | 34  |
| 37                          |      |                     |    |      |   |            |            |          |            |               |    |       |   |                     |      | 36  |
| 39                          |      |                     |    |      |   |            |            |          |            |               |    |       |   |                     |      | 38  |
| 41                          |      |                     |    |      |   |            |            |          |            |               |    |       |   |                     |      | 40  |
| 2 1/2" CONDUIT, 3 #3/0 WIRE |      |                     |    |      |   | TOTALS     |            | 22455    | 22176      | AIC           |    | 22000 |   |                     |      | 42  |
| FEEDER PLUS #2 GROUND       |      |                     |    |      |   | AMPS/PHASE |            | 187      | 185        | parallel runs |    | 1     |   |                     |      |     |

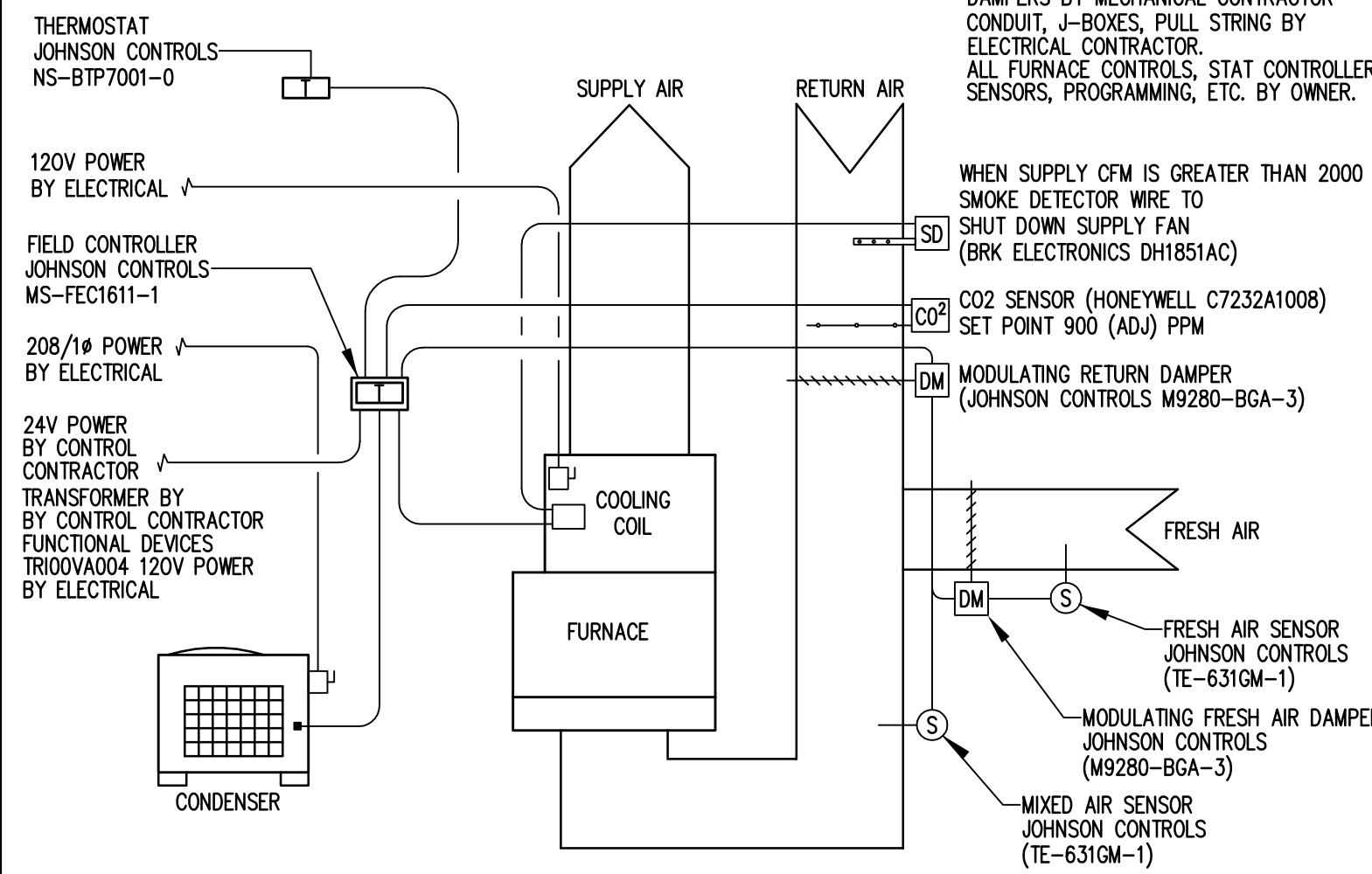


- ELECTRICAL SYMBOLS**
- WALL FIXTURE OUTLET
  - FLUORESCENT FIXTURE WITH OUTLET BOX ABOVE (OR REMOTE), SEE FIXTURE SCHEDULE
  - EXIT LIGHT, WALL - FACE(S) AS SHOWN
  - S SINGLE POLE SWITCH
  - ⊂ DIMMER SWITCH TO MATCH LIGHT SOURCE SERVED
  - ⊕ DUPLEX OUTLET
  - ⊙ JUNCTION BOX
  - ◀ TELEPHONE OUTLET, WALL
  - ⊓ FUSED DISCONNECT (FUSED UNLESS NOTED), 10K AIC MINIMUM
  - ▭ PANELBOARD
  - ◁ DATA OUTLET
  - ◻ FACP FIRE ALARM CONTROL PANEL
  - ⊠ FULL STATION
  - ⊠ HORN STROBE
  - ⊠ HORN
  - ⊠ HEAT DETECTOR
  - ⊠ SMOKE DETECTOR

| MECHANICAL EQUIPMENT SCHEDULE |                  |       |       |       |                     |                    |              |                      |         |
|-------------------------------|------------------|-------|-------|-------|---------------------|--------------------|--------------|----------------------|---------|
| SYM                           | DESCRIPTION      | LOAD  | VOLTS | PHASE | FIRE ALARM SHUTDOWN | CONTROL CIRCUIT BY | * STARTER BY | SAFETY DISCONNECT BY | REMARKS |
| EF/1                          | ELECTRIC FURNACE | 56.9A | 240   | 1     | NO                  | MECH               | MECH         | ELEC                 |         |
| C/1                           | CONDENSER        | 14.5A | 240   | 1     | NO                  | MECH               | MECH         | ELEC                 |         |

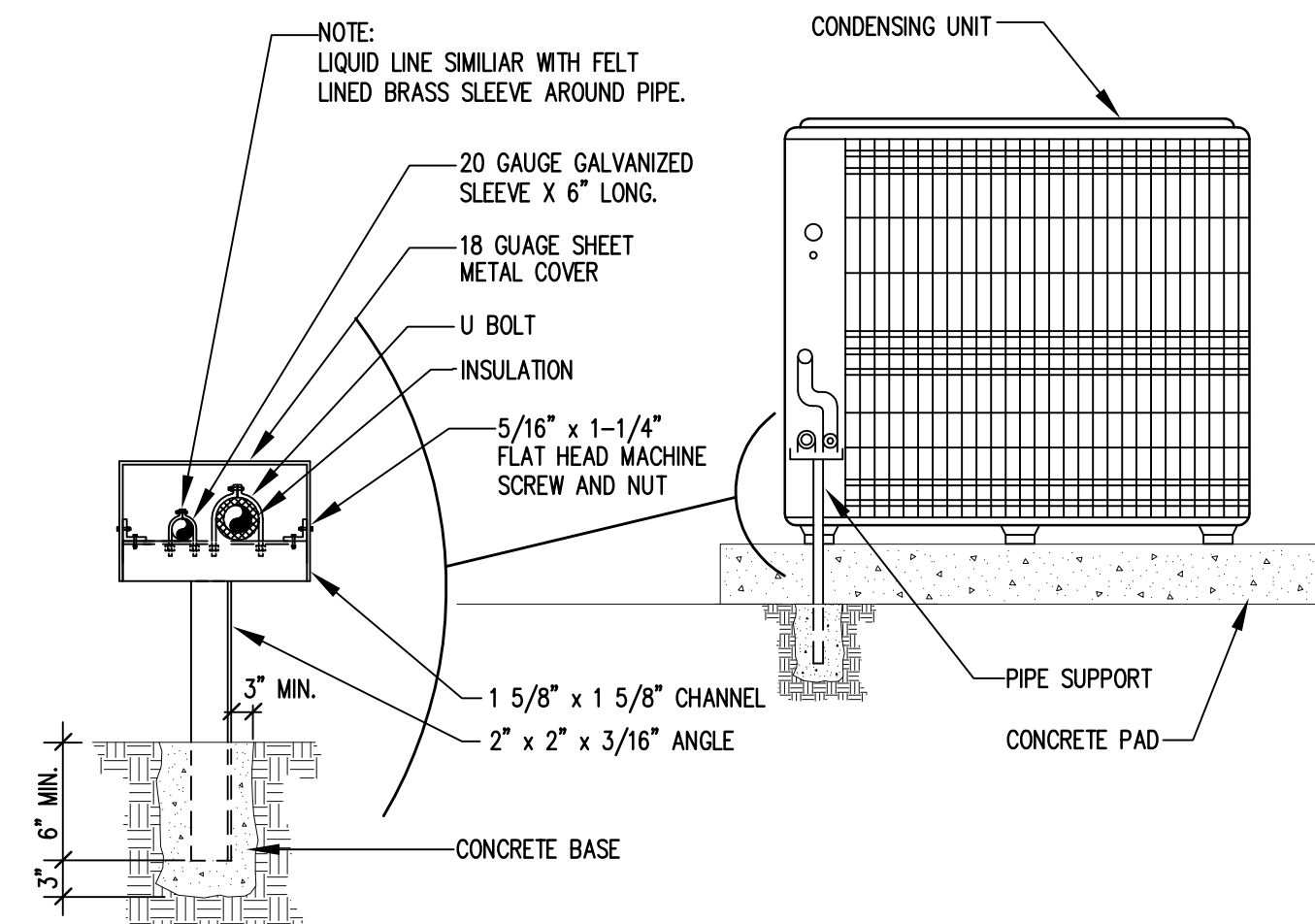
FINAL BREAKER OR FUSE SIZE PER MANUFACTURER.  
\* ELECTRICAL CONTRACTOR VERIFY SINGLE SPEED OR TWO SPEED STARTERS WITH MECHANICAL DRAWINGS.

NOTE: CONTROL MODEL NUMBERS MAY CHANGE. CONTRACTOR SHALL VERIFY MANUFACTURER MODEL NUMBERS ARE CORRECT AND SHALL CONSTRUCT A COMPLETE OPERATING SYSTEM.



CONTROLS WIRING DIAGRAM

NO SCALE 3 M-1



CONDENSER PAD MOUNTING DETAIL

NO SCALE 1 M-1

KEY NOTES

- INSTALL ELECTRIC FURNACE WITH COOLING COIL ON A RETURN PLENUM. ROUTE RETURN DUCTWORK FROM WALL RETURN GRILLE TO FURNACE RETURN PLENUM. INSTALL 3/4" COIL CONDENSATE PVC PIPING TO FLOOR DRAIN.
- INSTALL AIR COOLED CONDENSER ON 4" CONCRETE PAD. LOCATE CONDENSER ON CONCRETE PAD WITH ISOLATORS. CONNECT REFRIGERATION PIPING BETWEEN CONDENSER & COOLING COIL. PULL VACUUM & CHARGE REFRIGERATE SYSTEM.
- INSTALL OFFICE RETURN GRILLE AT 6" ABOVE FINISHED FLOOR AND ROUTE 14x3-1/2 RETURN DUCTWORK UP STUD GAVITY OVERHEAD TO 12x30 RETURN PLENUM WITH DAMPER.
- INSTALL 12x12 FRESH AIR WALL LOUVER RUSKIN ELF AND ROUTE FRESH AIR DUCT 8x10 TO 12x30 RETURN PLENUM WITH DAMPER, ACCESS DOOR AND ACTUATOR TO CONTROL F.A.
- INSTALL SUPPLY DUCTWORK ABOVE CEILING AND BELOW ROOF TRUSS.

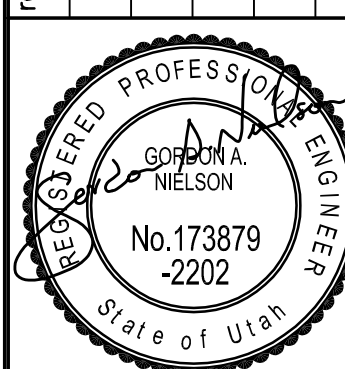
GENERAL NOTES

- THE ARCHITECTURAL, STRUCTURAL, PLUMBING AND ELECTRICAL DRAWINGS AND OTHER RELATED DOCUMENTS SHALL BE CONSIDERED A PART OF THE MECHANICAL CONTRACT, AS FAR AS THEY APPLY TO THE MECHANICAL SYSTEMS, AS IF REFERRED TO IN FULL.
- ALL FIELD CONDITIONS AND JOBSITE DIMENSIONS ARE TO BE VERIFIED PRIOR TO COMMENCEMENT OF WORK.
- ALL CONSTRUCTION WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL APPLICABLE BUILDING CODES.
- ALL DUCTWORK SHALL CONFORM TO SMACNA STANDARDS. MAXIMUM FLEX DUCT IS 4 FEET.
- HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF ANY WALLS, ROOF, OR FLOOR DURING CONSTRUCTION OF PROJECT FOR MECHANICAL EQUIPMENT.
- COORDINATE ALL SUPPLY AIR DIFFUSERS, EXHAUST GRILLES, AND RETURN AIR GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLAN AND WITH ELECTRICAL LIGHT FIXTURES.
- ALL TRANSVERSE JOINTS SHALL BE SEALED WITH TAPE OR MASTIC.
- ALL SUPPLY AND RETURN AIR DUCTWORK TO BE INSULATED WITH 5.2 R-VALUE FIBERGLASS. THE SUPPLY AND RETURN DUCTWORK SHALL BE LINED. DUCT LINER SHALL BE COATED & SEALED TO MEET ASTM C1071 AND EQUAL TO KNAUF DUCT LINER E.M.
- ALL DIMENSIONS ARE NET INTERNAL.
- MANUAL VOLUME DAMPERS ARE TO BE PROVIDED IN ALL BRANCH LINES. DAMPERS SHALL HAVE LOCKING QUADRANTS, TYPICAL OF DURODYNE MODEL SPEC SEAL/QUAD SEAL.
- THE LOCATION OF ALL PENETRATIONS SHALL BE COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- MECHANICAL CONTRACTOR SHALL PROVIDE LEVELING PLATFORM AND CURBS FOR ALL EQUIPMENT.
- SEE THE PLAN FOR ALL STAT LOCATIONS AND MOUNT CENTER OF THE THERMOSTATS AT 48".
- MECHANICAL CONTRACTOR TO PROVIDE CONDENSATE DRAINS TO CODE APPROVED RECEPTACLES.
- ALL FIELD CONDITIONS AND DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED PRIOR TO SUBMITTING BIDS. NO ALLOWANCE WILL BE MADE FOR NOT COMPLYING WITH THIS REQUIREMENT.
- RIGID CONTACT BETWEEN CONDUIT, PIPES, CEILING WIRES, AND DUCTWORK WILL NOT BE ALLOWED.
- THERMOSTATS AND SENSORS SHALL BE SUPPLIED BY MECHANICAL CONTRACTOR. INSTALLED BY MECHANICAL CONTRACTOR AND FINAL CONNECTIONS BY MECHANICAL CONTRACTOR.
- ALL MECHANICAL EQUIPMENT SHALL BE FURNISHED WITH MAINTENANCE MANUALS, SCHEDULES, TAGS AND LETTER OF GUARANTEE IN A BINDER (THREE) WITH TABS, AS PER SPECIFICATION BOOK SECTION 01700.
- PROVIDE AIR BALANCE REPORT, BALANCER SHALL BE NEBB CERTIFIED.
- ALL ROOF EQUIPMENT SHALL BE NO CLOSER THEN 10 FEET TO THE ROOF EDGE.

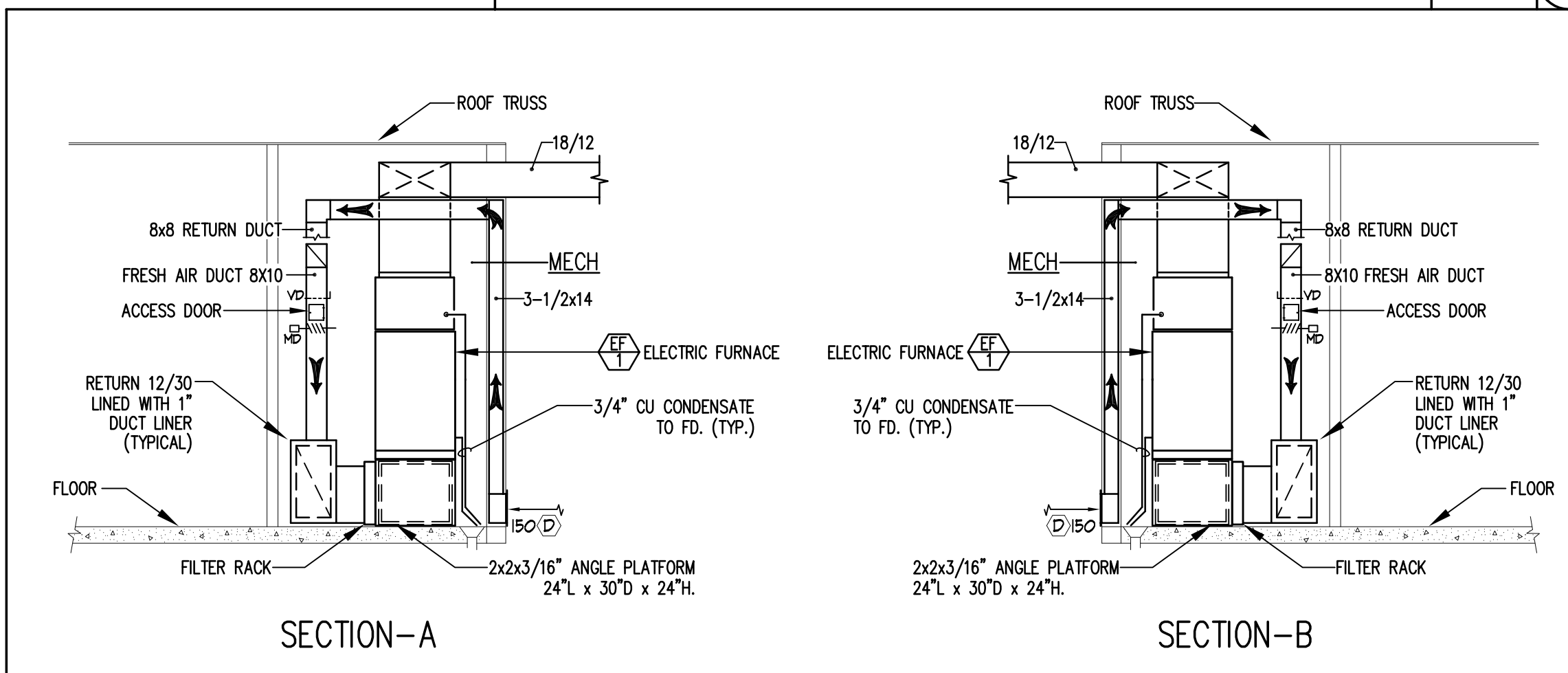
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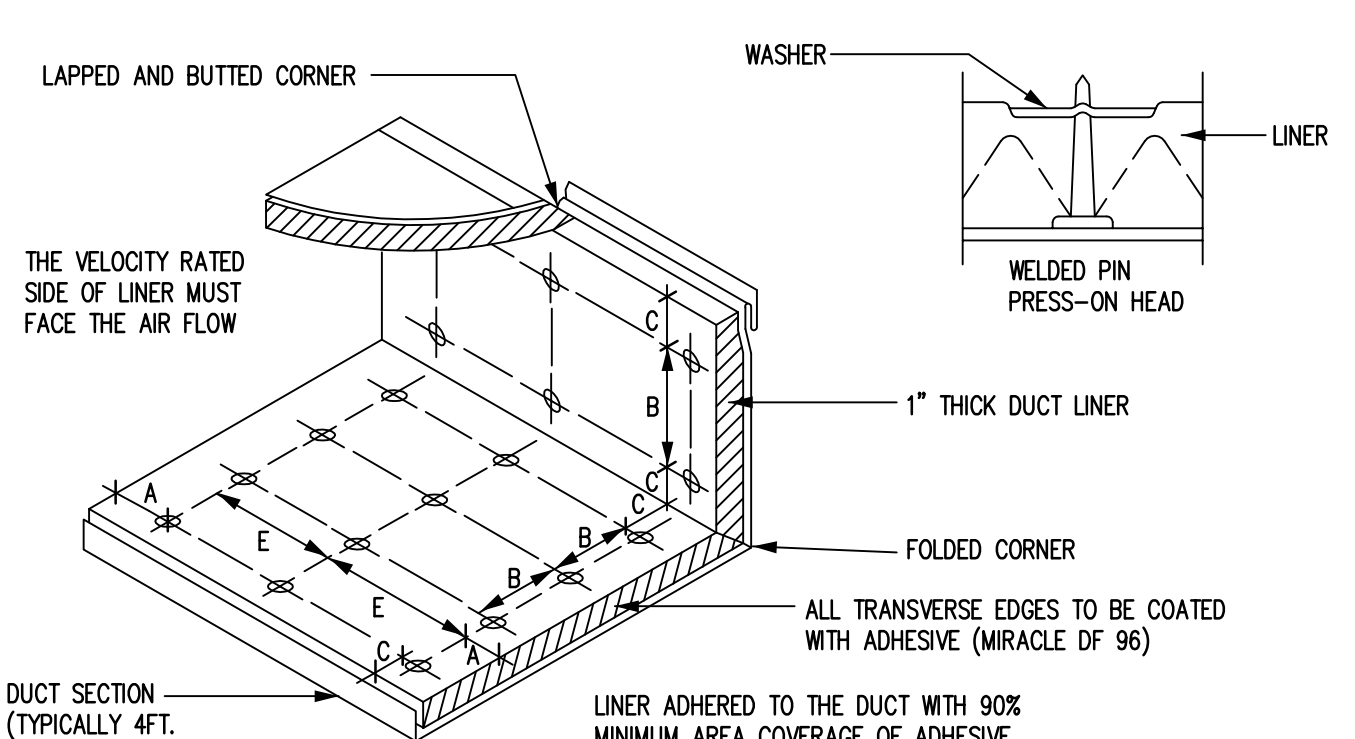


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GAS FURNACE W/COOLING COIL SECTION-A & B

NO SCALE 4 M-1



CONDENSER PAD MOUNTING DETAIL

NO SCALE 2 M-1

MECHANICAL EQUIPMENT SCHEDULE ②

| SYMBOL | DISCRPTION            | MFG'R & CAT. NO.          | HEAT |    | COOL |      | FAN |      | POWER |     | DIMENSIONS |    |    | WT | NOTES |     |                  |
|--------|-----------------------|---------------------------|------|----|------|------|-----|------|-------|-----|------------|----|----|----|-------|-----|------------------|
|        |                       |                           | BTU  | KW | TONS | CFM  | ESP | RPM  | HP    | V   | FLA        | PH | L  |    |       | H   | W                |
| EF     | ELECTRIC FURNACE      | BRYANT FV4B036            |      |    | 3    | 1200 | .4  | HIGH | 1/3   | 230 | 2.7        | 1  | 22 | 50 | 18    | 118 | FILTER KIT (1) ③ |
| EH     | SMART ELECTRIC HEATER | BRYANT KFCEH3101C15       |      | 15 |      |      |     |      |       | 230 | 54.2       | 1  |    |    |       |     | 4 STAGES (1)     |
| CF     | CONDENSER             | BRYANT 105ANA036          |      |    | 3    |      |     |      |       | 208 | 14.5       | 1  | 31 | 36 | 31    | 151 | 14 SEER (1) ④    |
| T      | THERMOSTAT            | JOHNSON CONTROLS OR EQUAL |      |    |      |      |     |      | 24    |     |            |    |    |    |       |     | PROGRAMMABLE     |

NOTES: 1. APPROVED EQUALS: CARRIER AND DAY & NIGHT.  
2. COOLING LOADS ARE SIZED AT 96F DB AMBIENT 75F DB/61F WB.  
3. PROVIDE AND INSTALL DIVERSITECH SOS-1 SAFETY OVERFLOW SWITCH, WIRE TO SHUT DOWN COOLING.  
4. PROVIDE CYCLE PROTECTOR, LOW AMBIENT CONTROLLER, CRANKCASE HEATER, LOW PRESSURE SWITCH HIGH PRESSURE SWITCH & STARTER ASSIST & VIBRATION ISOLATORS.

GRILLES AND DIFFUSERS SCHEDULE

| SYMBOL | TYPE        | FINISH | SIZE    | MFG'R & CATALOG NO. |
|--------|-------------|--------|---------|---------------------|
| A      | SUPPLY      | WHITE  | 12 X 6  | TITUS 272 RS        |
| B      | SUPPLY      | WHITE  | 6 X 6   | TITUS TDCA          |
| C      | WALL RETURN | WHITE  | 12 X 30 | TITUS 33 RL         |
| D      | WALL RETURN | WHITE  | 14 X 4  | TITUS 33 RL         |

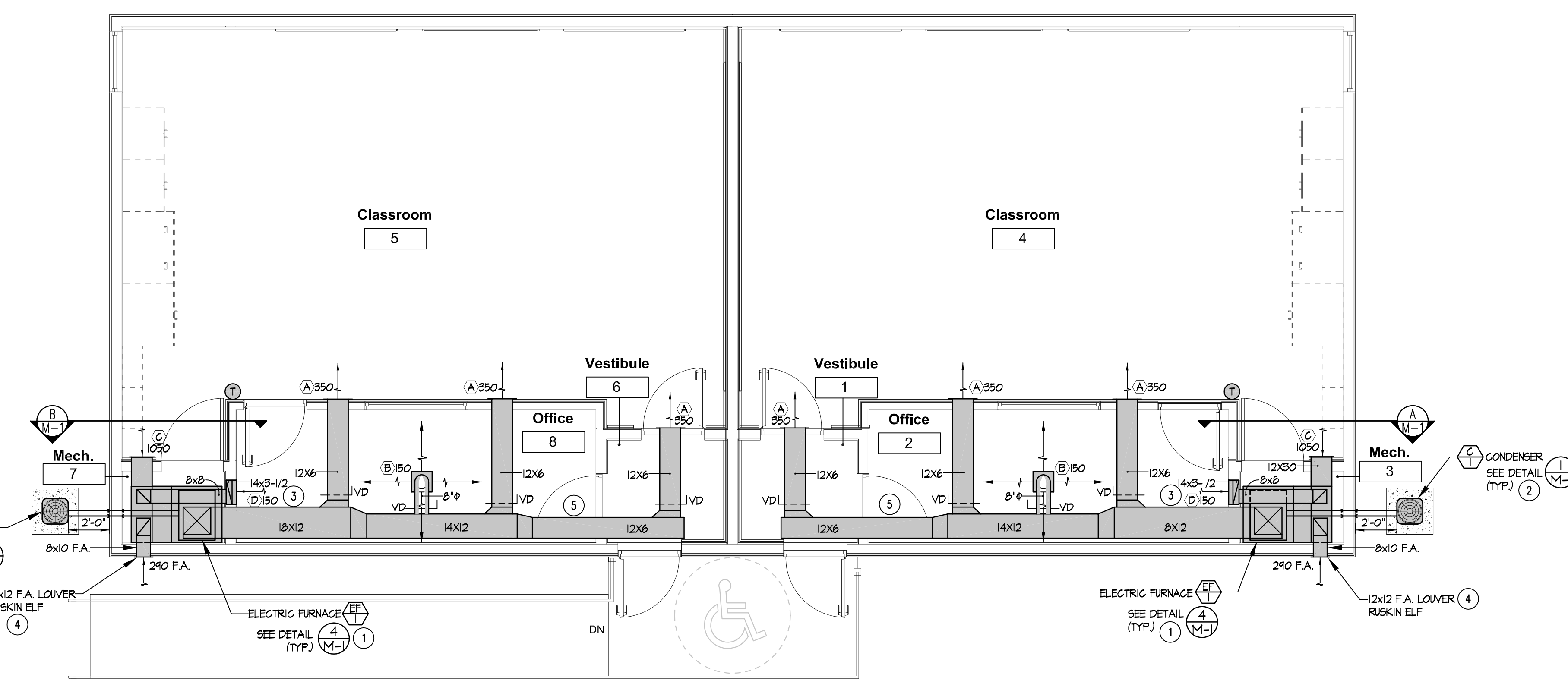
NOTE: VERIFY CEILING TYPE.

AIR BALANCE SCHEDULE

| MARK   | SUPPLY AIR | RETURN AIR | OUTSIDE AIR | EXHAUST AIR | RESULTING PRESSURE |
|--------|------------|------------|-------------|-------------|--------------------|
| EF-1   | 1200       | 910        | +290        |             | +290               |
| TOTALS |            |            |             |             | +290               |

OUTDOOR AIR VENTILATION SCHEDULE

| ZONE IDENTIFICATION | AREA NAME | OCCUPANCY CLASSIFICATION | AREA (sq.ft.) (Az) | STANDARD CASE: IMC 2018 SECTION 403 VERIFICATION RATE PROCEDURE |                          |  |  |                                | DESIGN CASE                                  |  |                               |                  |                       |                          |      |
|---------------------|-----------|--------------------------|--------------------|---|--------------------------|--|--|--------------------------------|--|--|-------------------------------|------------------|-----------------------|--------------------------|------|
|                     |           |                          |                    | AREA OUTDOOR AIR RATE (Ra)                                      | AREA OUTDOOR AIR (Ro*Az) | OCCUPANT LOAD RATE (PEOPLE/1000 sq.ft.) (Pz) | OCCUPANCY (Az*PEOPLE/1000 sq.ft.) (Pz) | OCCUPANT OUTDOOR AIR RATE (Rp) | BREATHING ZONE OUTDOOR AIR (Vbz=Rp*Pz+Ra*Az) | ZONE AIR DISTRIBUTION EFFECTIVENESS (Ez) | ZONE OUTDOOR AIR (Voz=Vbz/Ez) | SUPPLY AIR (CFM) | OUTDOOR AIR RATIO (%) | OUTDOOR AIR DESIGN (CFM) | UNIT |
| CLASSROOM           | CLASSROOM | 529                      | .12                | 63  | 35                       | 19   | 10                                     | 190                            | 253  | 1.0                                      | 253                           | 1050             | 24.3                  | 255                      | EF-1 |
| OFFICE              | OFFICE    | 102                      | .06                | 6   | 5                        | 1  | 5                                      | 5                              | 253  | 1.0                                      | 11                            | 150              | 24.3                  | 35                       | EF-1 |



PORTABLE DOUBLE CLASSROOM - MECHANICAL  
SCALE: 1/4" = 1'-0"

sheet title: PORTABLE CLASSROOM MECHANICAL  
project: FAST FORWARD PORTABLE CLASSROOM 875 EAST 1400 NORTH UTAH  
file name: FAST FORWARD  
job no.: 2418  
date: APRIL, 2024  
drawn by: SVB  
sheet: M-1  
1 of 2