

PROJECT TEAM

PROJECT TITLE



GEDEON L. TRIAS  
LICENSED ARCHITECT  
08/16/2024  
DATE

ARCHITECTURAL

LARSON & DARBY GROUP  
4949 HARRISON AVENUE SUITE 100  
ROCKFORD, ILLINOIS 61108  
IL DESIGN FIRM NO.: 184.000280-0007

PHONE: 815 484-0739

FIRE PROTECTION

LEGACY DESIGNS, INC.  
6116 MULFORD VILLAGE DR  
ROCKFORD, ILLINOIS 61107

PHONE: 815 484-4708

HEATING, VENTILATING, & AIR CONDITIONING

LEGACY DESIGNS, INC.  
6116 MULFORD VILLAGE DR  
ROCKFORD, ILLINOIS 61107

PHONE: 815 484-4708

ELECTRICAL

LEGACY DESIGNS, INC.  
6116 MULFORD VILLAGE DR  
ROCKFORD, ILLINOIS 61107

PHONE: 815 484-4708



BASEMENT REPAIRS FOR  
**WINNEBAGO  
COUNTY  
COURTHOUSE**

400 WEST STATE STREET  
ROCKFORD, ILLINOIS  
WINNEBAGO COUNTY  
BID # 24B-2334



**Larson & Darby Group**  
Architecture Engineering Interiors

**ISSUED FOR BIDDING  
JANUARY 22, 2024**

SHEET INDEX

| GENERAL       |   | HVAC            |                                    |
|---------------|---|-----------------|------------------------------------|
| G0.1          | COVER SHEET, PROJECT TEAM & SHEET INDEX                     | ME-1            | HVAC/ELECTRICAL FLOOR PLANS        |
| G0.2          | ABBREVIATIONS & SYMBOLS                                     |                 |                                    |
| DEMOLITION    |   | FIRE PROTECTION |                                    |
| D1.1          | BASEMENT DEMOLITION PLAN<br>CODE SUMMARY & CODE REVIEW PLAN | ME-2            | FIRE PROTECTION FLOOR PLAN         |
| ARCHITECTURAL |   | MEP GENERAL     |                                    |
| A1.1          | BASEMENT FLOOR PLAN   | ME-3            | GENERAL NOTES, SYMBOLS & SCHEDULES |
| A1.2          | BASEMENT FLOOR PLAN   |                 |                                    |
| A1.3          | EXTERIOR STAIR PLAN   |                 |                                    |
| A2.1          | SCHEDULES & PLAN DETAILS                                    |                 |                                    |
| A8.1          | THROUGH PENETRATION FIRESTOP DETAILS                        |                 |                                    |
| A8.2          | FIRE-RESISTIVE JOINT SYSTEM DETAILS                         |                 |                                    |

LOCATION MAP

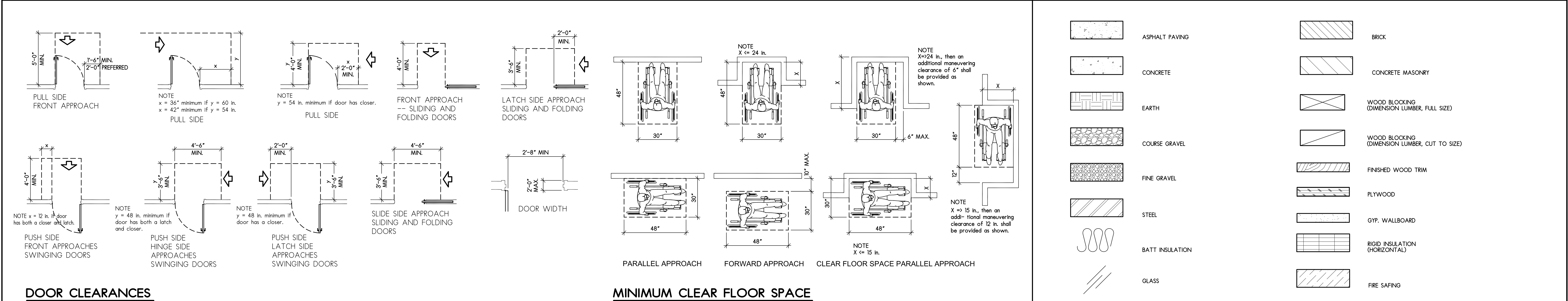




| ABBREVIATIONS |  |
|---------------|--|
|---------------|--|

[illegible]

| ACCESSIBILITY CLEARANCES | MATERIAL SYMBOLS |
|--------------------------|------------------|
|--------------------------|------------------|

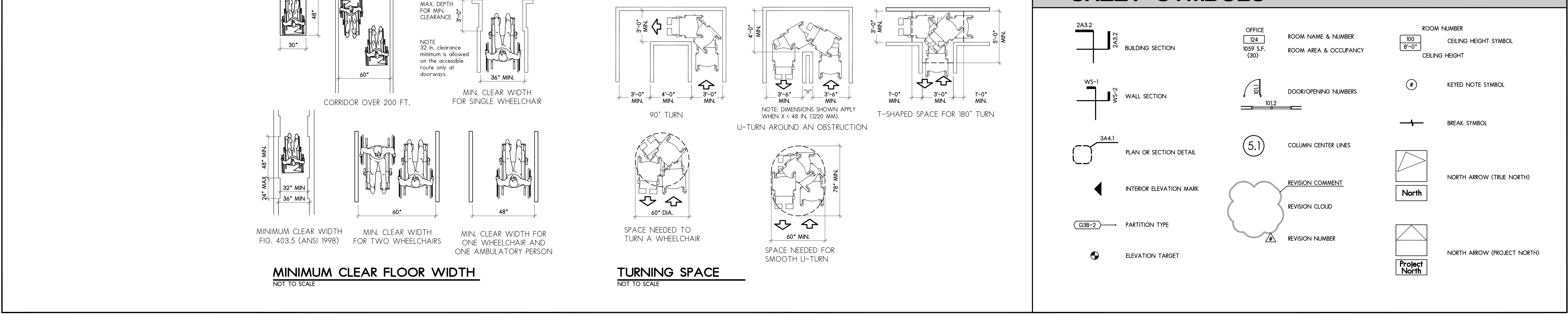


NOT TO SCALE

32" MIN.

NOT TO SCALE

**SHEET SYMBOLS**

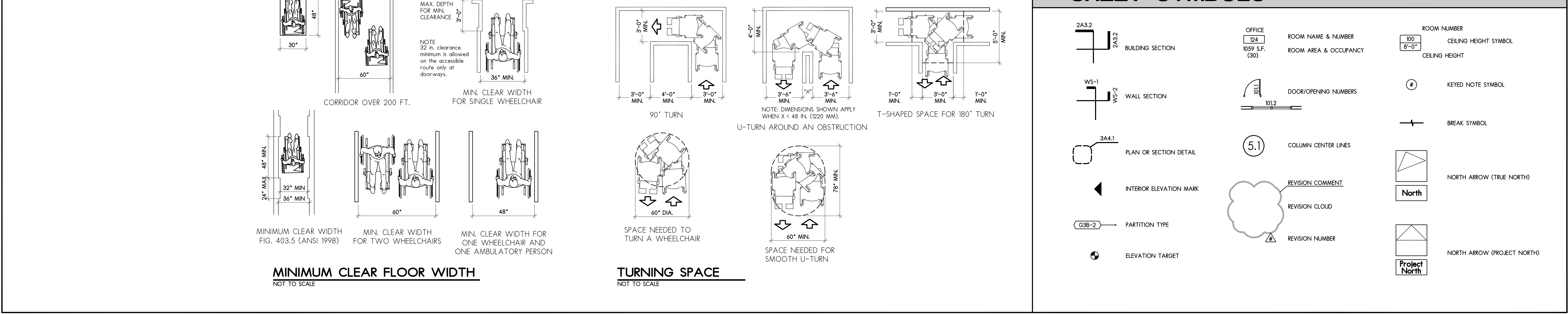


NOT TO SCALE

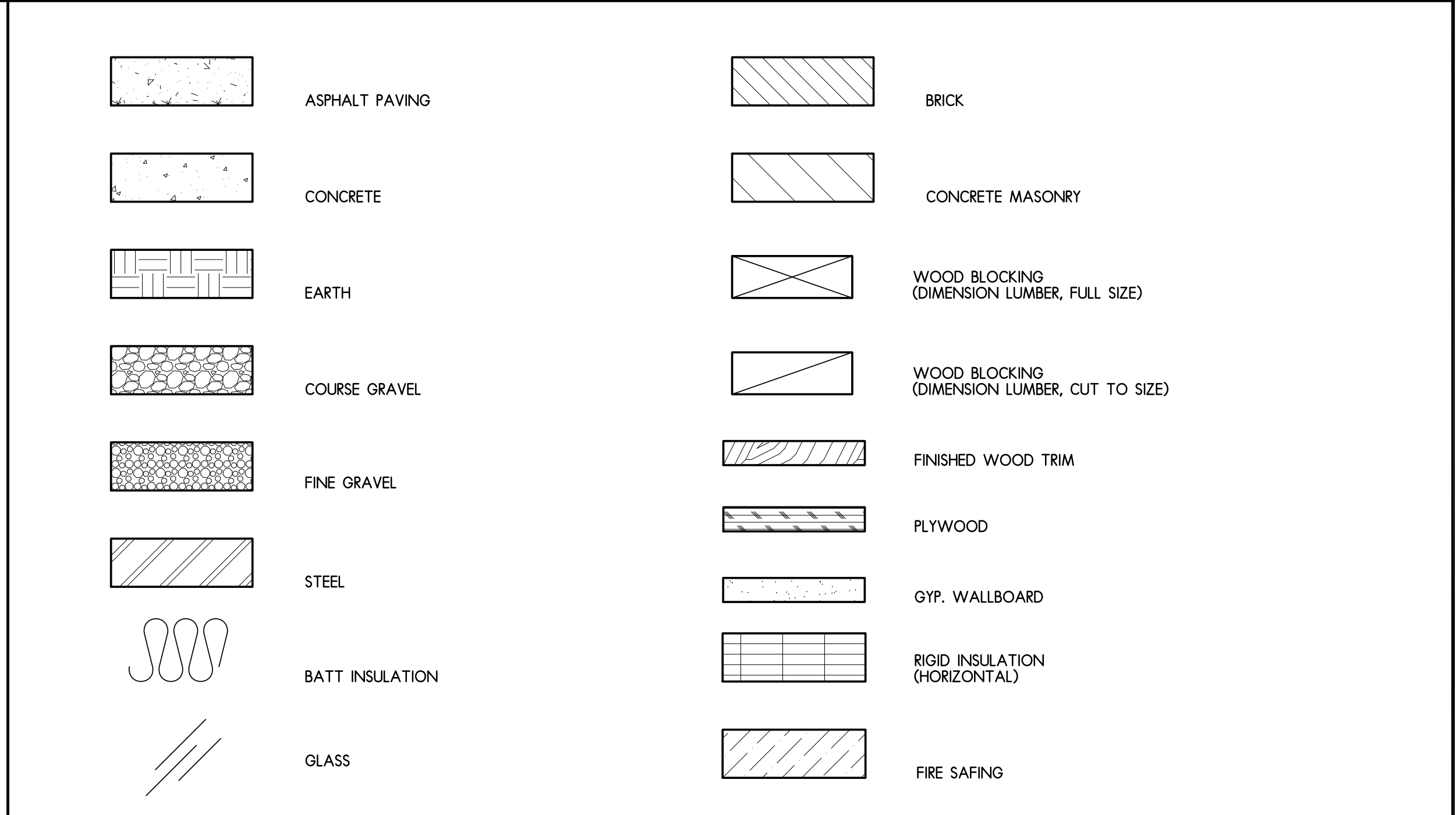
32" MIN.

NOT TO SCALE

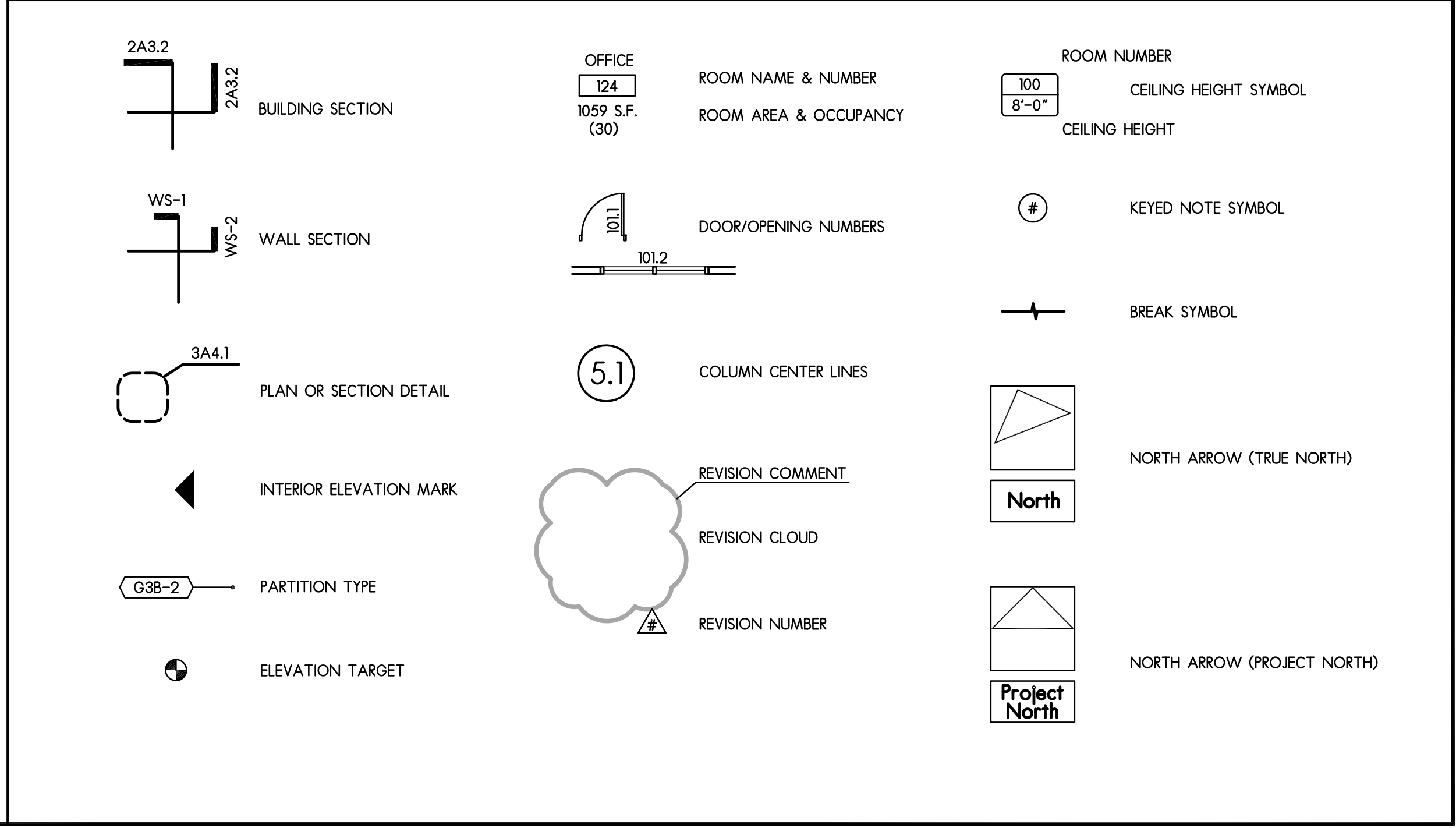
**SHEET SYMBOLS**



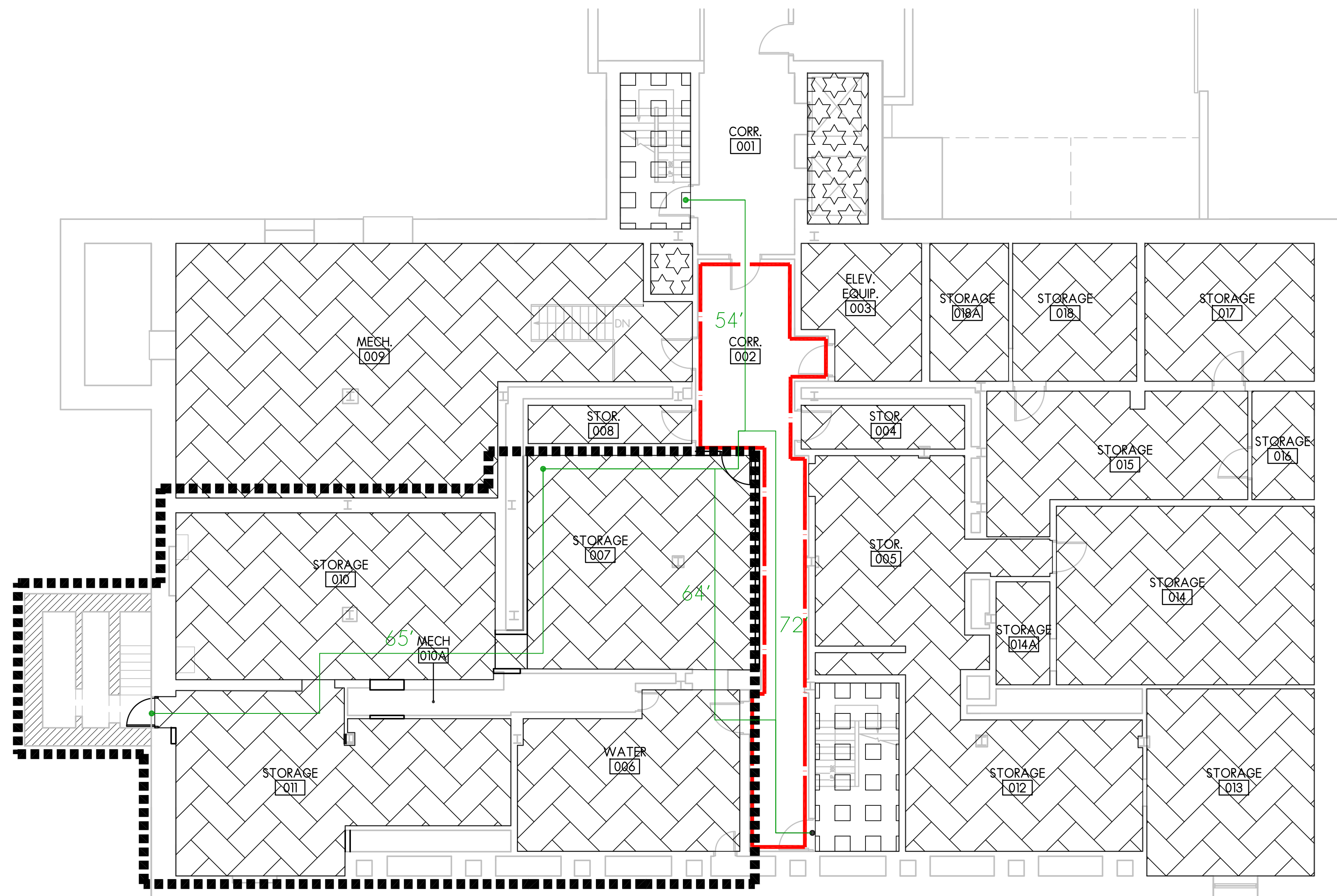
| MATERIAL SYMBOLS |     |
|------------------|-----|
| 1                | 2   |
| 3                | 4   |
| 5                | 6   |
| 7                | 8   |
| 9                | 10  |
| 11               | 12  |
| 13               | 14  |
| 15               | 16  |
| 17               | 18  |
| 19               | 20  |
| 21               | 22  |
| 23               | 24  |
| 25               | 26  |
| 27               | 28  |
| 29               | 30  |
| 31               | 32  |
| 33               | 34  |
| 35               | 36  |
| 37               | 38  |
| 39               | 40  |
| 41               | 42  |
| 43               | 44  |
| 45               | 46  |
| 47               | 48  |
| 49               | 50  |
| 51               | 52  |
| 53               | 54  |
| 55               | 56  |
| 57               | 58  |
| 59               | 60  |
| 61               | 62  |
| 63               | 64  |
| 65               | 66  |
| 67               | 68  |
| 69               | 70  |
| 71               | 72  |
| 73               | 74  |
| 75               | 76  |
| 77               | 78  |
| 79               | 80  |
| 81               | 82  |
| 83               | 84  |
| 85               | 86  |
| 87               | 88  |
| 89               | 90  |
| 91               | 92  |
| 93               | 94  |
| 95               | 96  |
| 97               | 98  |
| 99               | 100 |



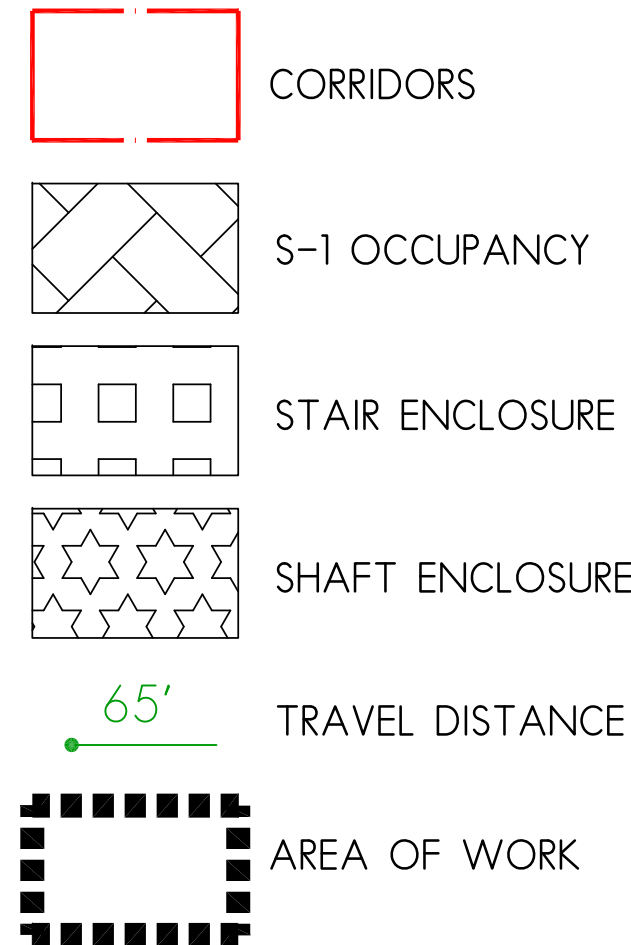
## SHEET SYMBOLS







1 PARTIAL BASEMENT CODE FLOOR PLAN  
SCALE: 1/8" = 1'-0"



CODE SUMMARY

CONSTRUCTION:  
TYPE 1B CONSTRUCTION  
PARTIALLY SPRINKLERED (THIS FLOOR)

REQUIRED SEPARATION OF  
OCCUPANCIES (NON SPRINKLERED)

S-1 & S-1 = NO SEPARATION REQ'D  
(PER TABLE 508.4 2015 IBC)

BEARING INTERIOR & EXTERIOR WALLS  
AND PARTITIONS  
TYPE 1B = 2 HOURS

NON BEARING INTERIOR WALLS  
AND PARTITIONS  
TYPE 1B = 0 HOURS

FLOOR CONST.  
TYPE 1B = 2 HOURS  
(PER TABLE 601 2015 IBC)

FIRE RESISTANCE RATING  
AT CORRIDORS = 1 HOUR  
(TABLE 1020.1 2015 IBC)

SHAFT ENCLOSURES = 2 HOURS  
(CONNECTING 4+ STORIES 713.4 2015 IBC)

REQUIRED FIRE OR SMOKE DAMPER  
LOCATIONS:

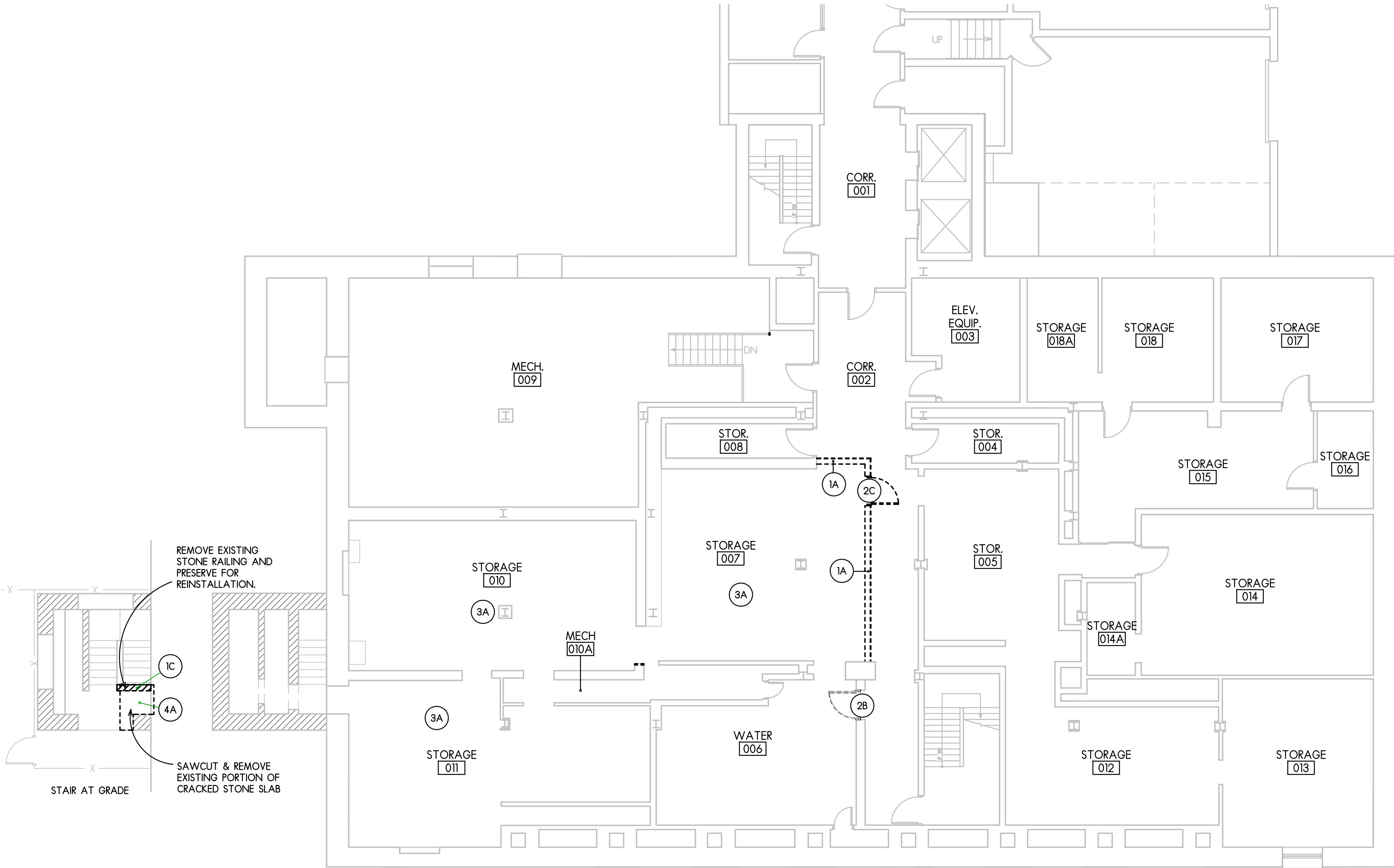
FIRE DAMPERS TO BE PROVIDED IN  
DUCTS AND AIR TRANSFER OPENINGS  
THAT PENETRATE FIRE BARRIERS. FIRE  
DAMPER TO MATCH RATING OF FIRE  
BARRIER.  
(PER 717.5.2 2015 IBC)

SMOKE DAMPERS TO BE PROVIDED IN  
DUCTS AND AIR TRANSFER OPENINGS  
THAT PENETRATE FIRE BARRIERS USED  
AS A HORIZONTAL EXIT.  
(PER 717.5.2.1 2015 IBC)

NOTE: DUCTS AND AIR TRANSFER  
ENCLOSURES FOR INTERIOR EXIT  
STAIRWAYS UNLESS THEY ARE  
DIRECTLY SERVING THAT EXIT  
STAIRWAY (PER 1023.5 2015 IBC)

FIRE AND SMOKE DAMPERS TO BE  
PROVIDED IN DUCT AND AIR  
TRANSFER OPENINGS IN NON EXIT  
RELATED SHAFT ENCLOSURES  
(MECHANICAL & ELEVATOR)  
(PER 717.5.3 2015 IBC)

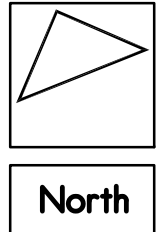
NOTE: SOME EXCEPTIONS MAY  
APPLY UNDER SPECIFIC  
CIRCUMSTANCES.



1 PARTIAL BASEMENT DEMO FLOOR PLAN  
SCALE: 1/8" = 1'-0"

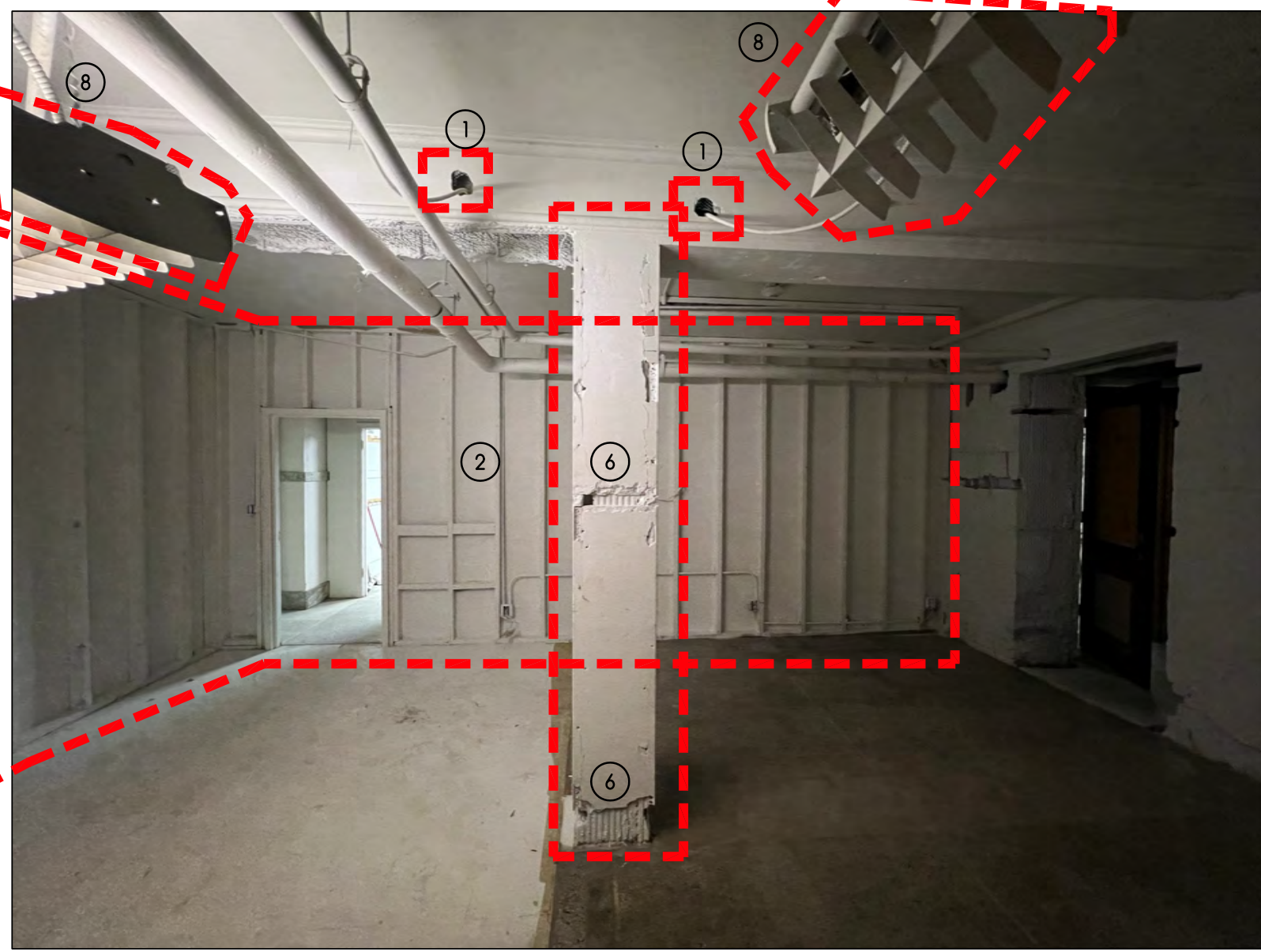
| DEMOLITION KEYNOTES  |                                    |
|--|------------------------------------|
| ITEM:  |                                    |
| 1  | WALL CONSTRUCTION                  |
| 2  | EXISTING DOOR, FRAME & HARDWARE    |
| 3  | EXISTING LIGHT FIXTURES & CONDUITS |
| 4  | EXISTING EXTERIOR SLAB             |
| ACTION:  |                                    |
| A  | REMOVE AND DISCARD                 |
| B  | REMOVE AND SALVAGE                 |
| C  | REMOVE AND REINSTALL               |
| D  | EXISTING TO REMAIN                 |
| REFER TO "SELECTIVE DEMOLITION" SECTION OF THE PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS  |                                    |
| GENERAL NOTES: FOR DEMOLITION  |                                    |
| 1. ITEMS TO BE REMOVED AND SALVAGED SHALL BE TRANSPORTED TO A ROOM OR AREA ONSITE DESIGNATED BY THE OWNER.   |                                    |
| 2. WHERE ITEMS ARE REMOVED, THE SUBSTRATE SHALL BE REPAIRED, PATCHED, CLEANED, ETC. TO A CONDITION SUITABLE TO RECEIVE NEW WORK AND/OR FINISHES.   |                                    |
| 3. ITEMS TO BE DISPOSED, SHALL BE REMOVED FROM THE SITE PROMPTLY.  |                                    |
| INFORMATION SHOWN ON THESE DRAWINGS HAS BEEN OBTAINED FROM EXISTING DOCUMENTATION AND FROM ON-SITE REVIEWS OF EXISTING CONDITIONS. CONTRACTOR SHALL VERIFY ALL INFORMATION SHOWN AND USE CAUTION DURING DEMOLITION IN CASE ADDITIONAL CONCEALED FEATURES NOT REFERENCED HEREIN ARE IDENTIFIED. IN THE EVENT ADDITIONAL FEATURES, PIPING, STRUCTURE, ETC. ARE IDENTIFIED, CONTRACTOR SHALL NOTIFY OWNER AND ARCHITECT/ENGINEER BEFORE CONTINUING WITH DEMOLITION. |                                    |

BASEMENT PARTIAL DEMOLITION PLAN

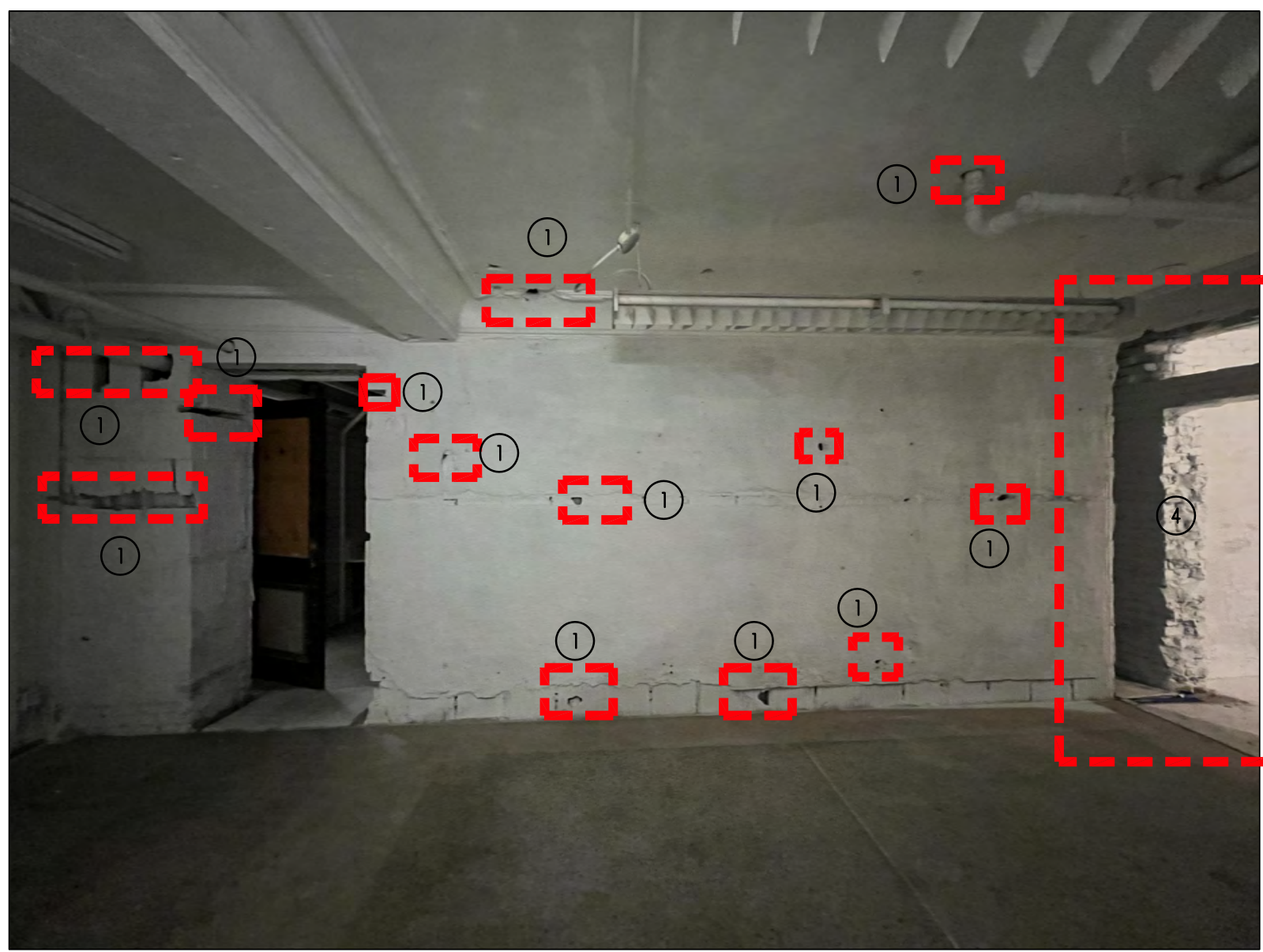


|                      |                  |                 |      |
|----------------------|------------------|-----------------|------|
| DATE: 8/15/2023      | ISSUED FOR:      | DATE            | DATE |
| PROJECT NUMBER 32315 | DATE ISSUED FOR: |                 |      |
| SHEET NUMBER D1.1    | CHECKED BY: PAW  | APPROVED BY: GT |      |
|                      | DRAWN BY: GT     |                 |      |

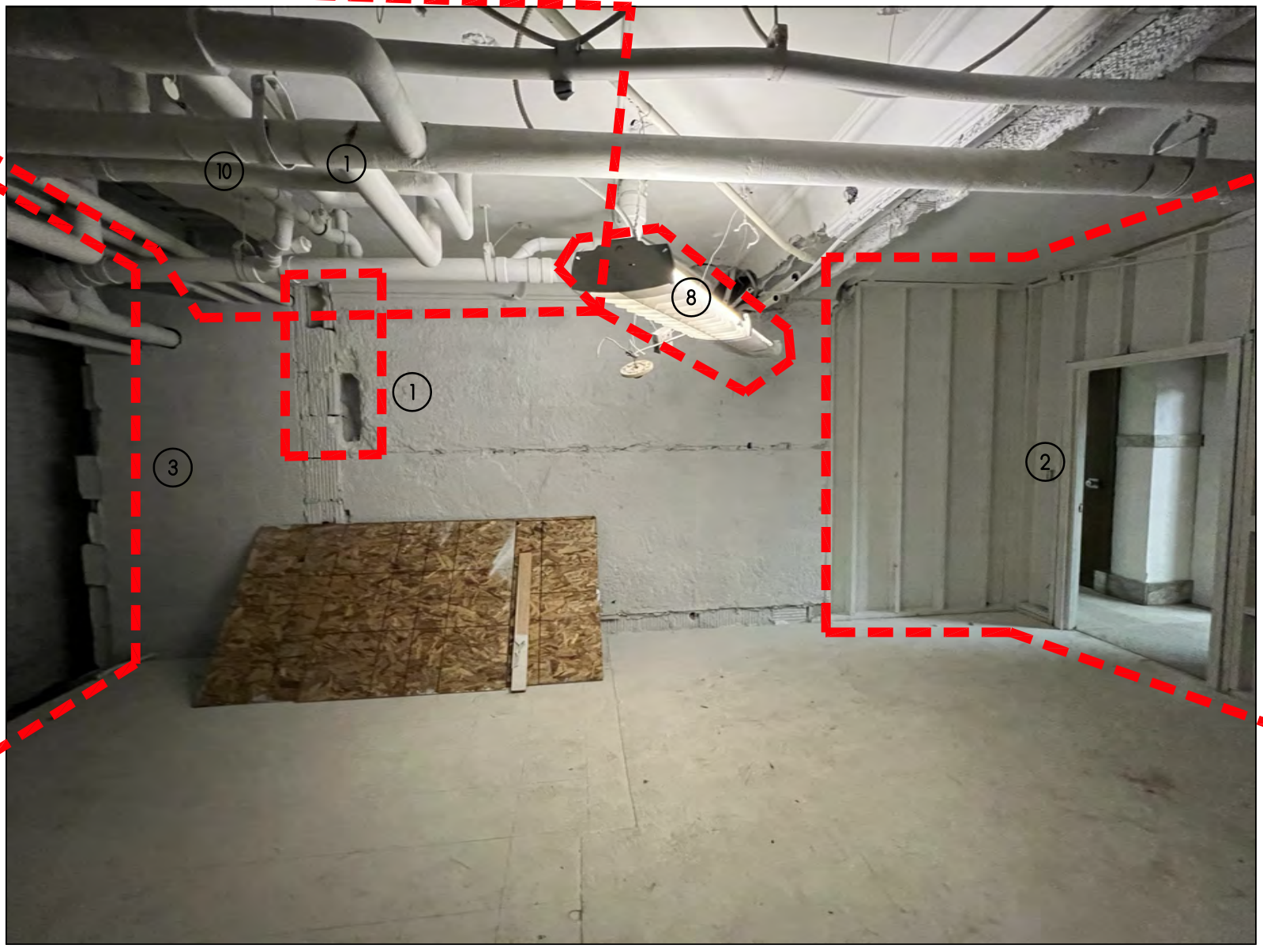




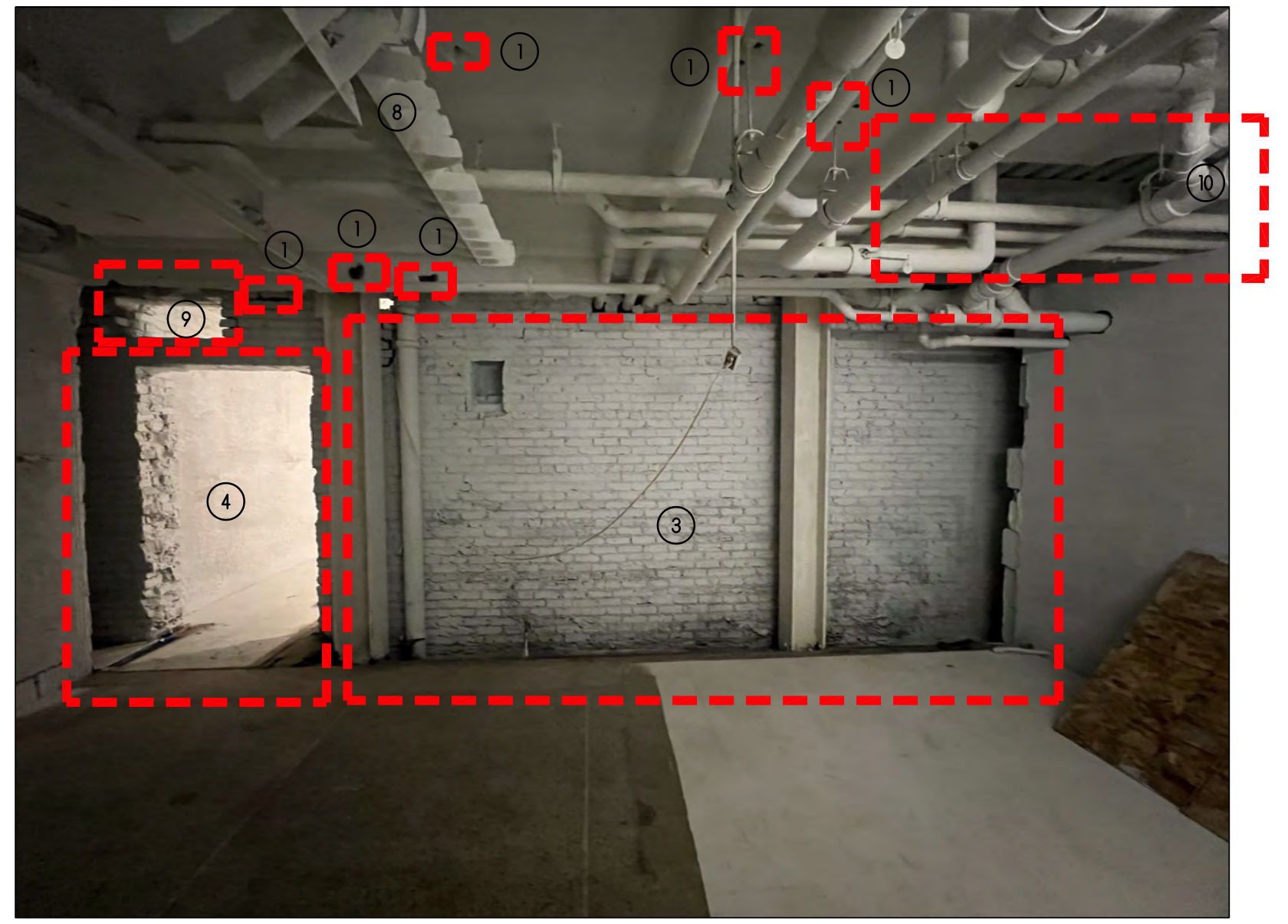
2 STORAGE 007 LOOKING EAST  
SCALE: NONE



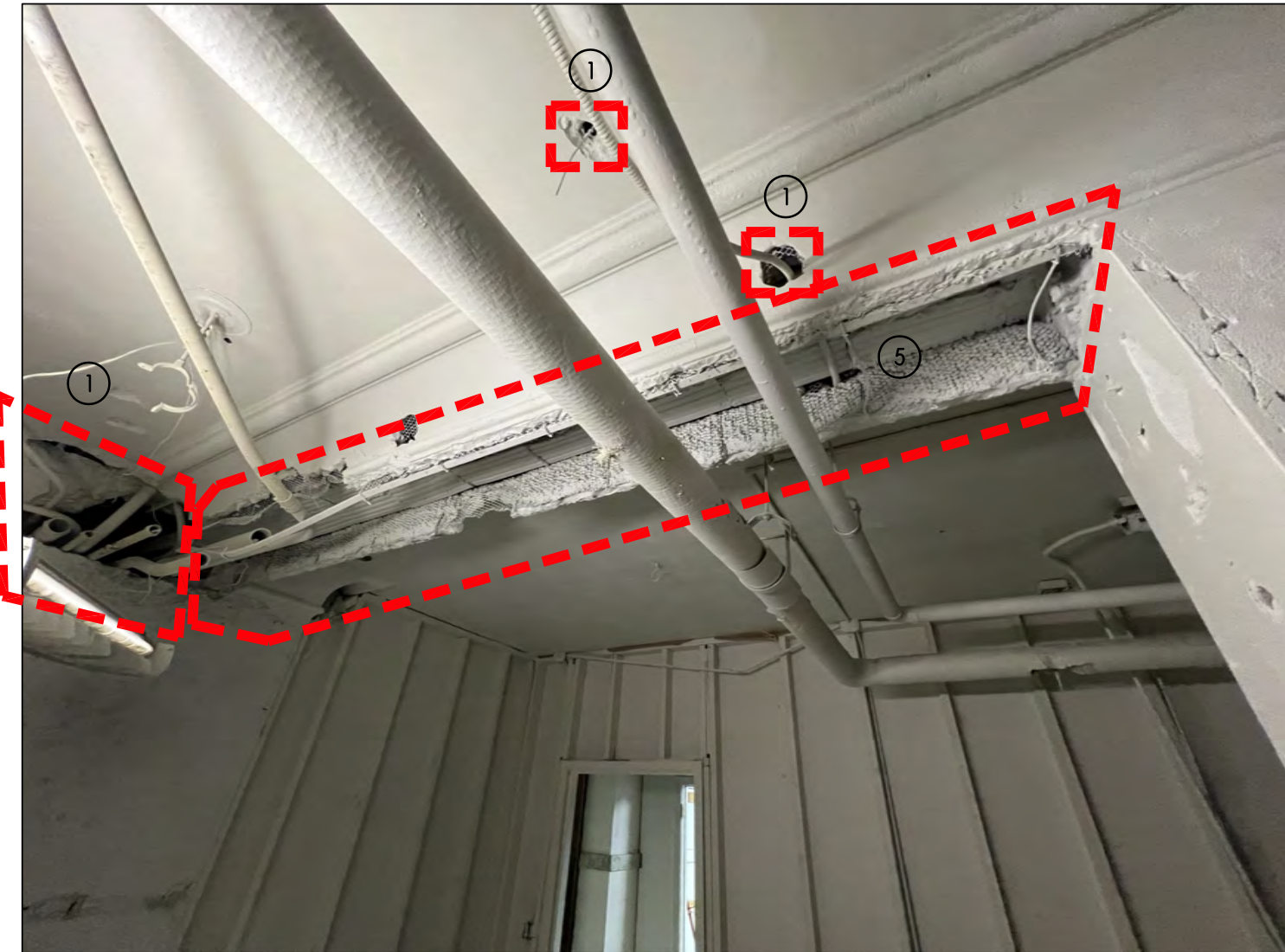
3 STORAGE 007 LOOKING SOUTH  
SCALE: NONE



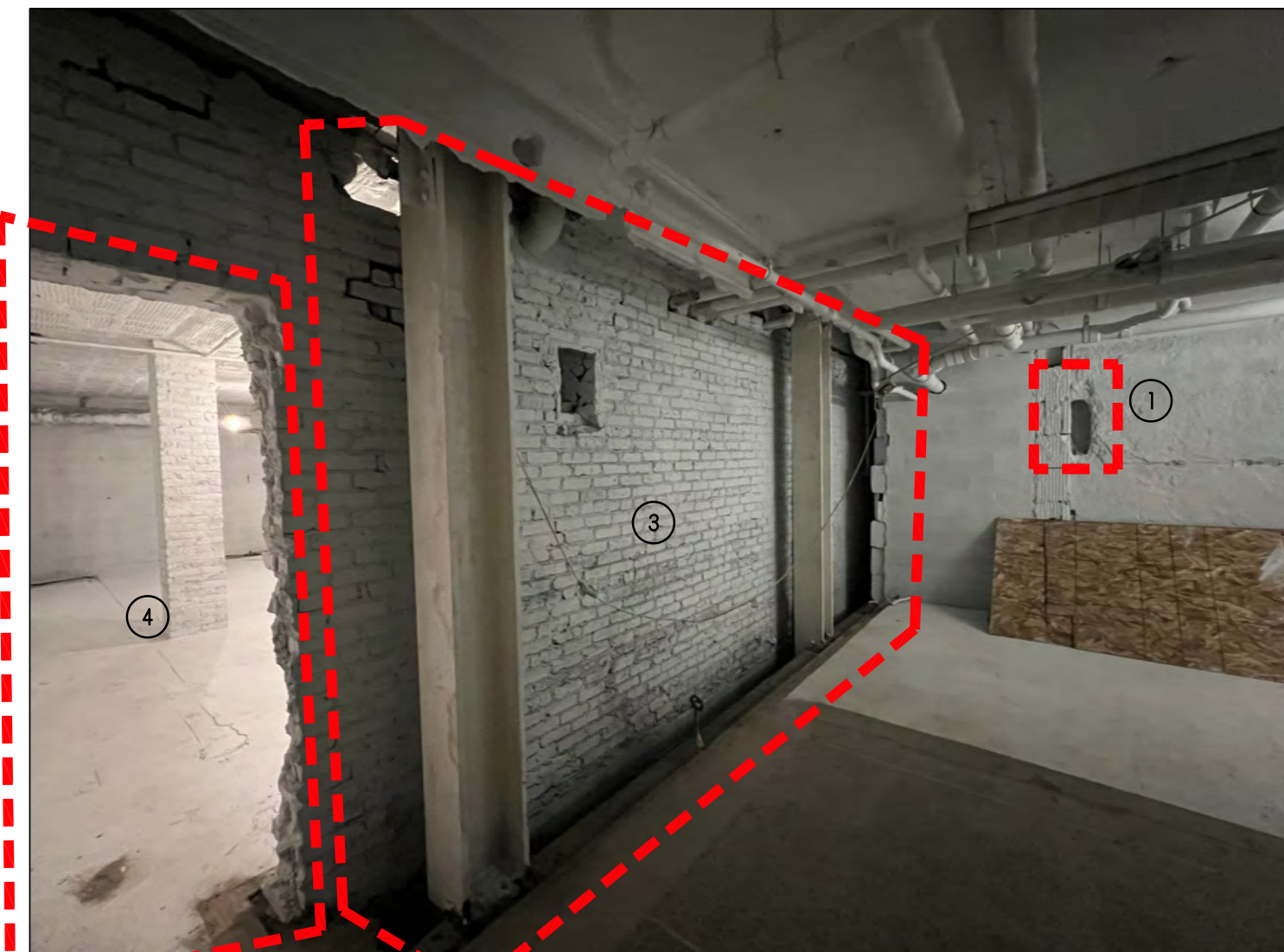
4 STORAGE 007 LOOKING NORTH  
SCALE: NONE



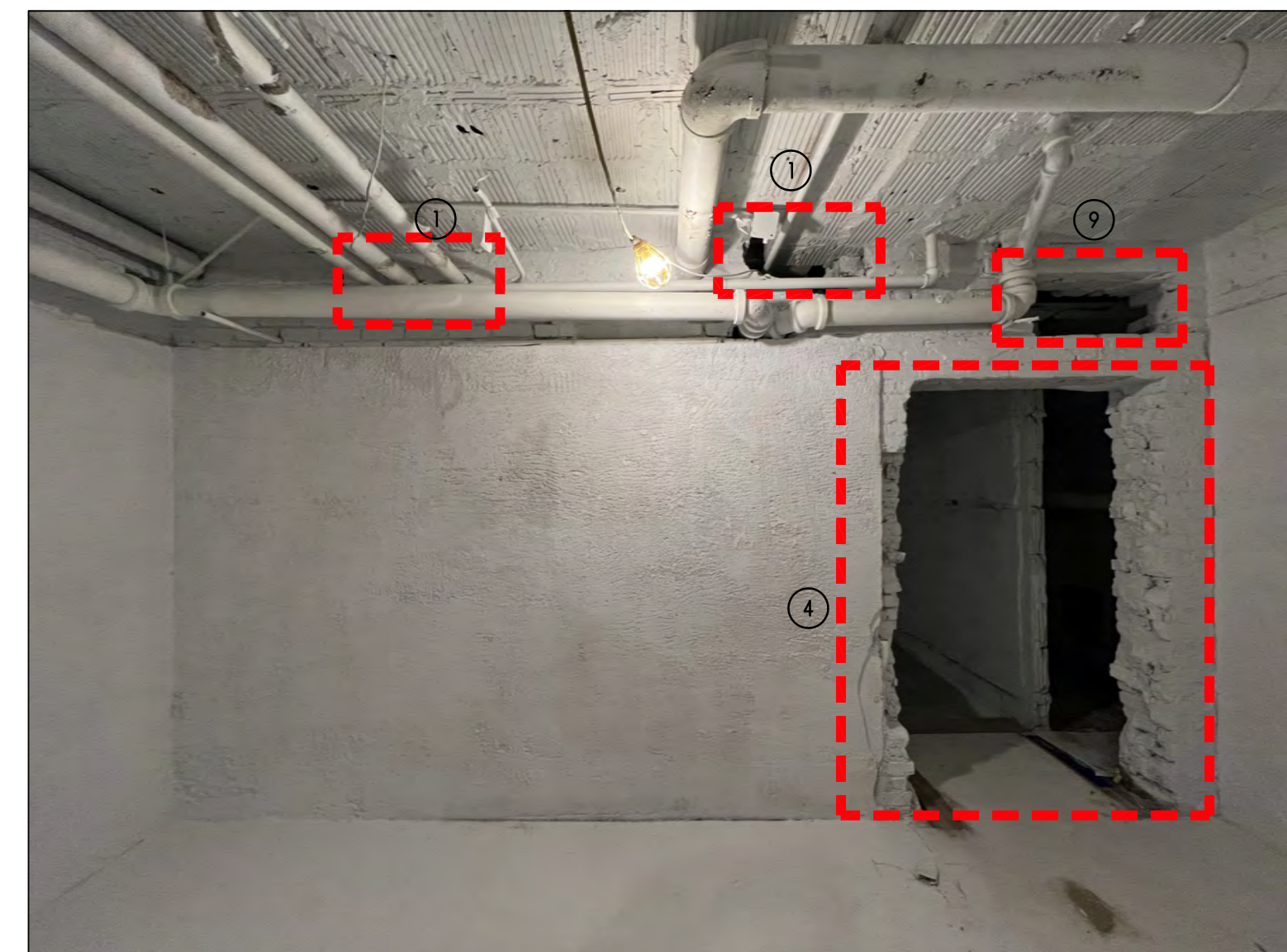
5 STORAGE 007 LOOKING WEST  
SCALE: NONE



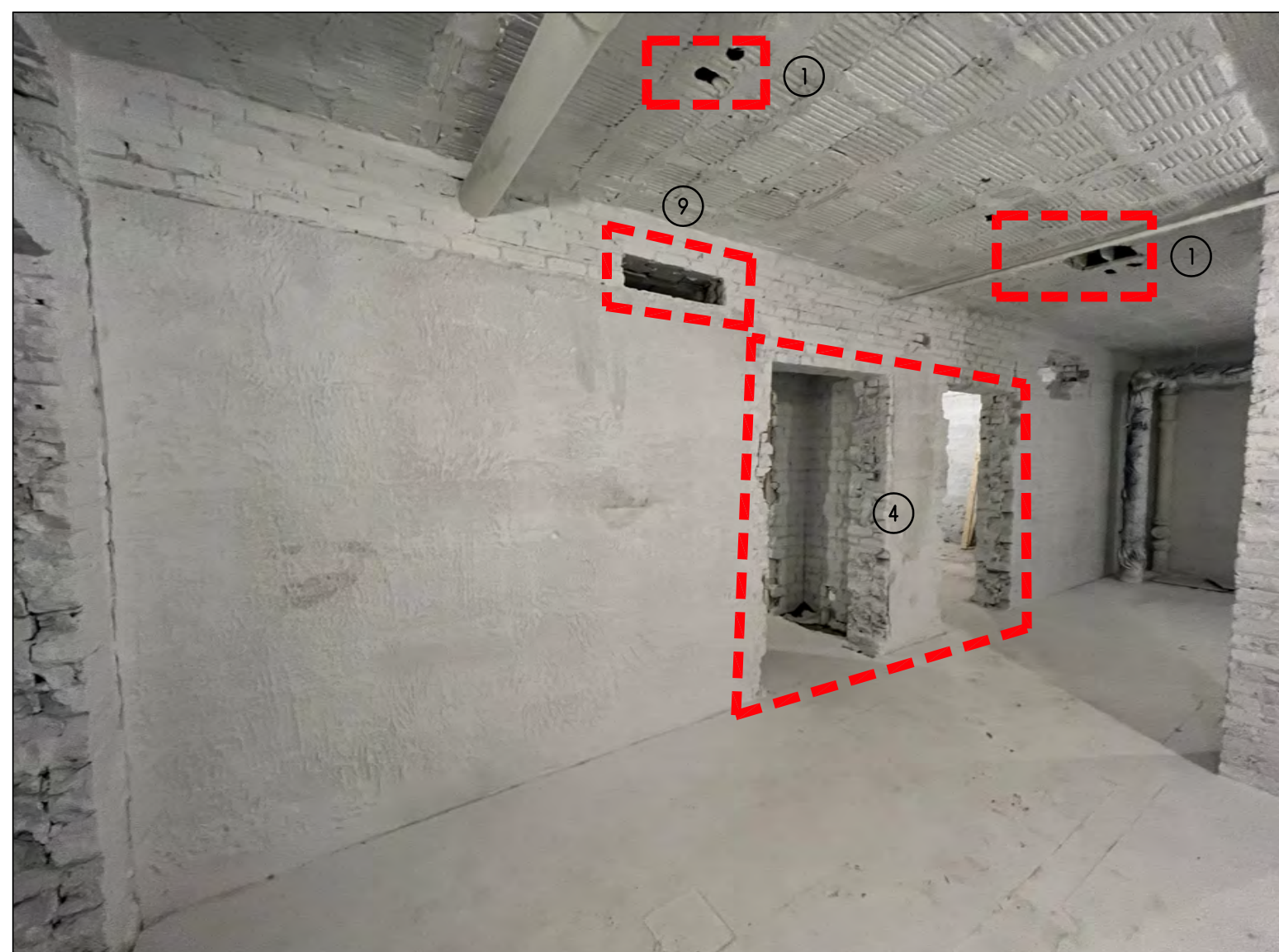
6 STORAGE 007 CEILING AT COLUMN  
SCALE: NONE



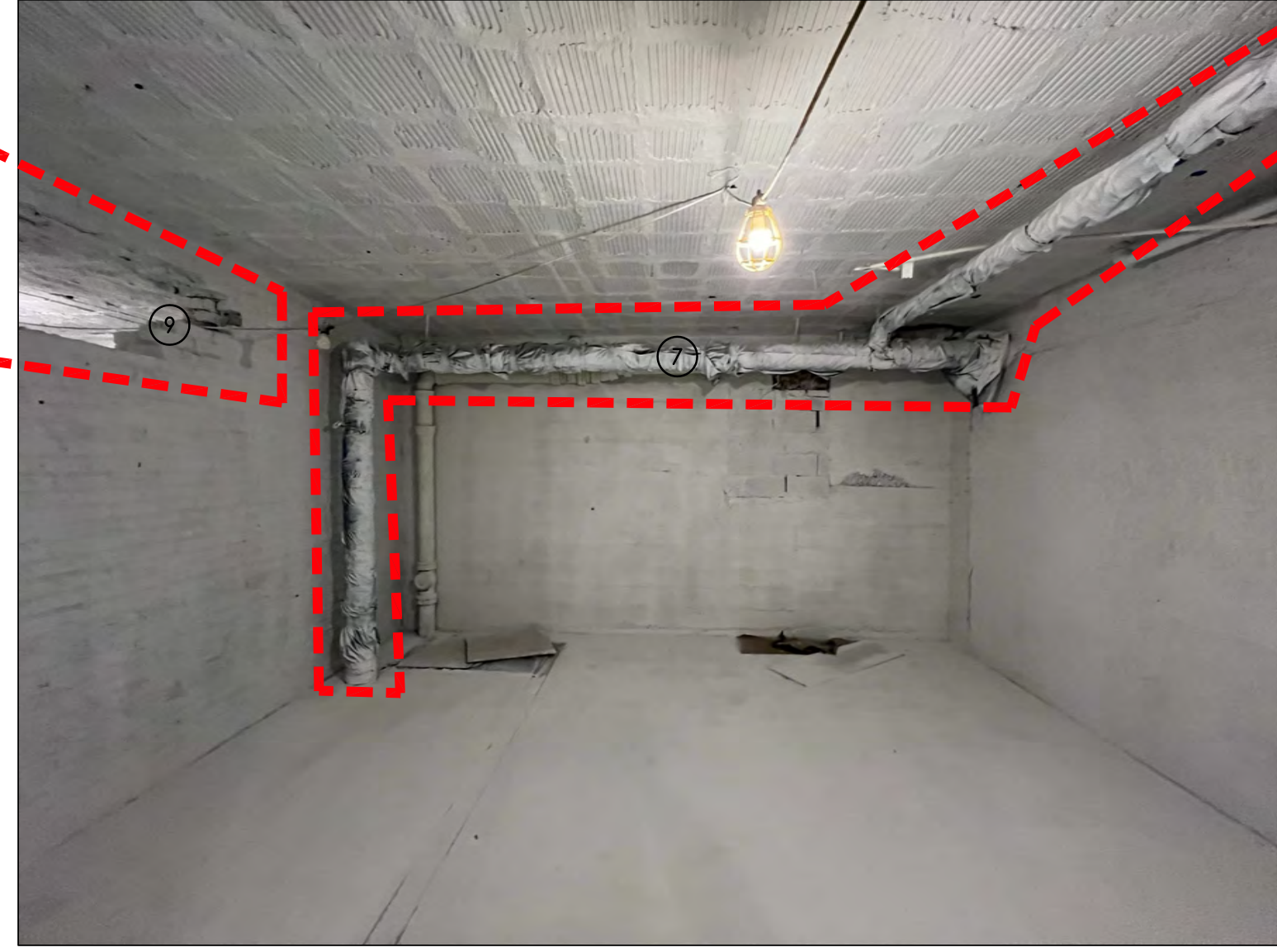
7 STORAGE 007 CEILING AT NORTHWEST  
SCALE: NONE



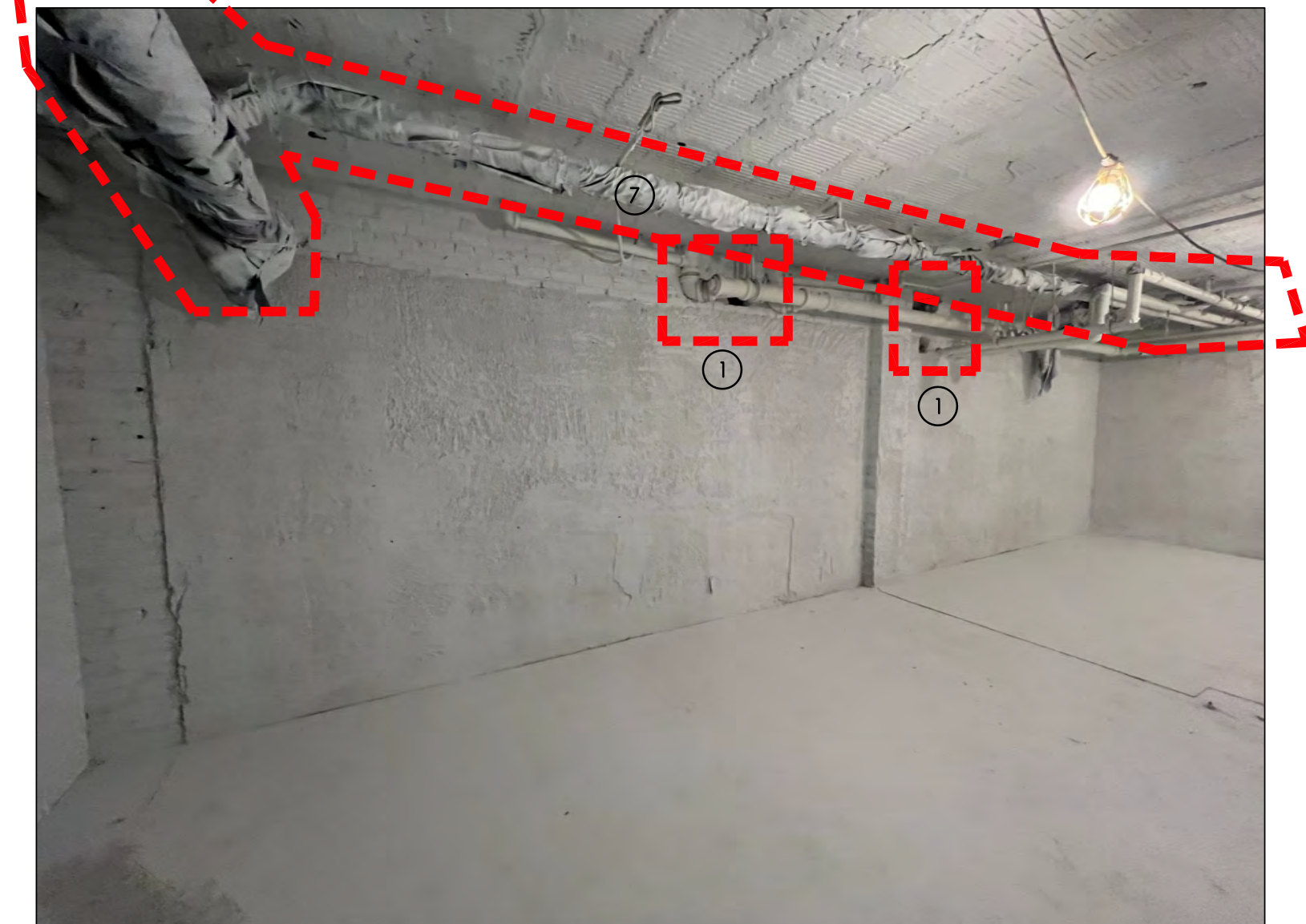
9 STORAGE 010 LOOKING EAST  
SCALE: NONE



10 STORAGE 010 LOOKING SOUTHWEST  
SCALE: NONE

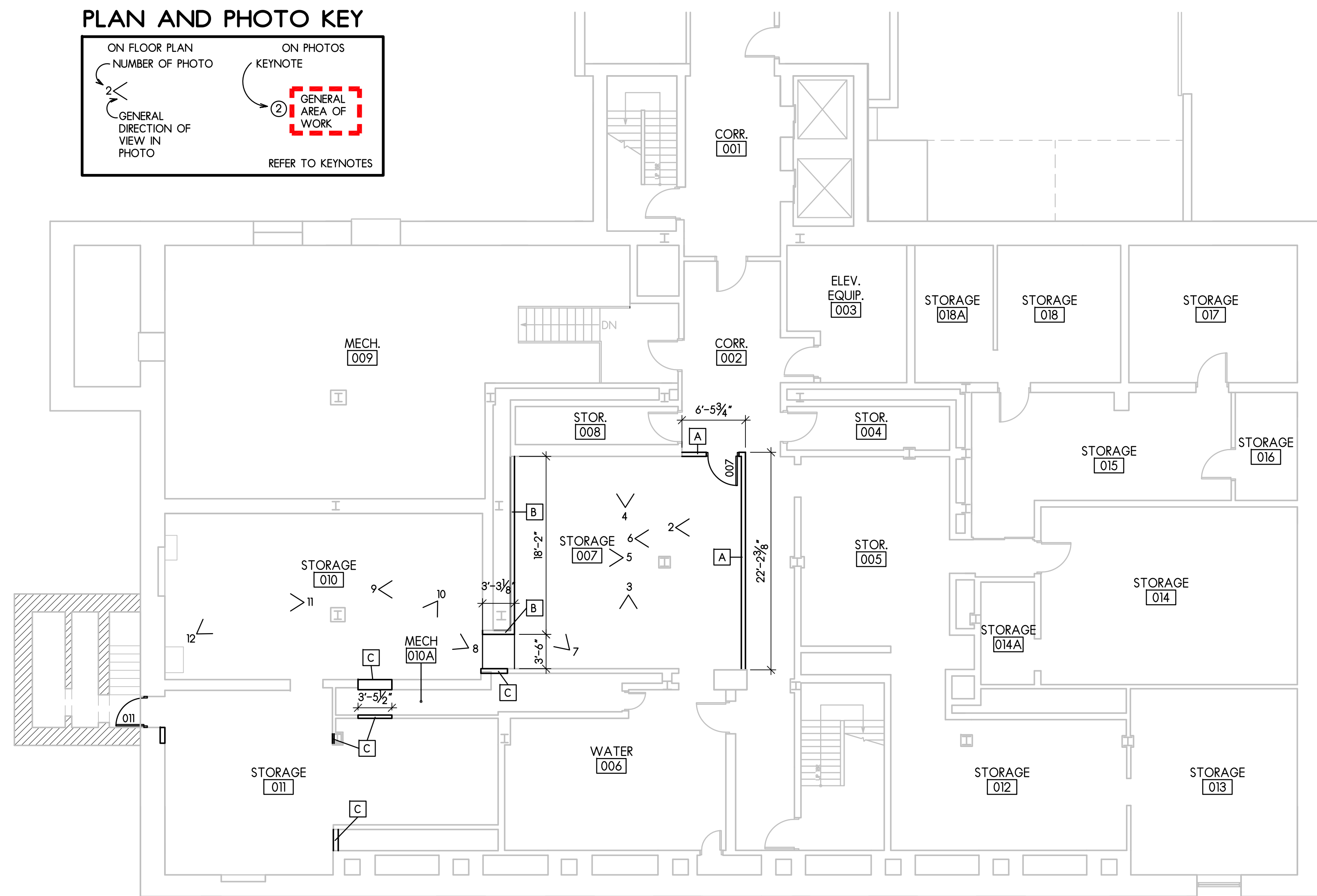
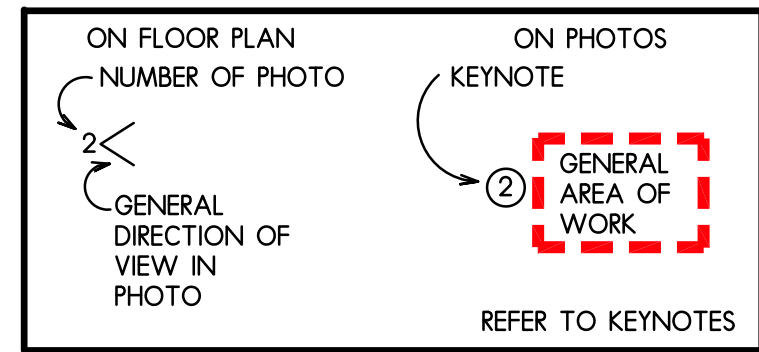


11 STORAGE 010 LOOKING WEST  
SCALE: NONE



12 STORAGE 010 LOOKING NORTH  
SCALE: NONE

#### PLAN AND PHOTO KEY



PARTIAL BASEMENT  
FLOOR PLAN  
SCALE: 1/8" = 1'-0"

#### KEYNOTES

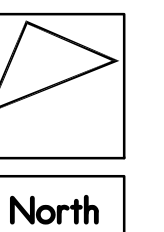
1. SEAL THRU PIPE PENETRATIONS IN ACCORDANCE WITH DETAILS ON SHEET A8.1
2. INFILL SMALL DAMAGED BLOCK AREAS WITH ROCK WOOL AND SEAL OPENINGS WITH MORTAR - FINISH SURFACE SMOOTH, PAINT TO MATCH ADJACENT.
3. NEW WALL CONSTRUCTION - WALL TYPE [A] - REFER TO SHEET A2.1
4. NEW WALL CONSTRUCTION TO ENCLOSE EXPOSED CHASE - WALL TYPE [B] REFER TO SHEET A2.1
5. NEW MASONRY WALL CONSTRUCTION - WALL TYPE [C] REFER TO SHEET A2.1
6. NEW METAL STUD AND DRYWALL ENCLOSURE TO FINISH SOFFIT ENCLOSURE - PAINT AND FINISH TO MATCH EXISTING
7. PATCH & PAINT PLASTER SURFACES OF COLUMN
8. PATCH AND REPAIR EXISTING PIPE INSULATION
9. REMOVED DAMAGED LIGHT FIXTURE. SEE ELECTRICAL FOR LIGHTING REPLACEMENT CONFIGURATION.
10. INFILL EXISTING MASONRY PENETRATION WITH CMU, PAINT TO MATCH ADJACENT FINISH
11. REPAIR EXPOSED CEILING WITH NEW METAL STUD AND DRYWALL PATCH TO FINISH SOFFIT ENCLOSURE - SEAL PIPING & CONDUIT PENETRATIONS, PAINT AND FINISH TO MATCH EXISTING
12. NEW JAMB AND HEAD FINISH W/ NEW DOOR AND FRAME. REFER TO SHEET A2.1



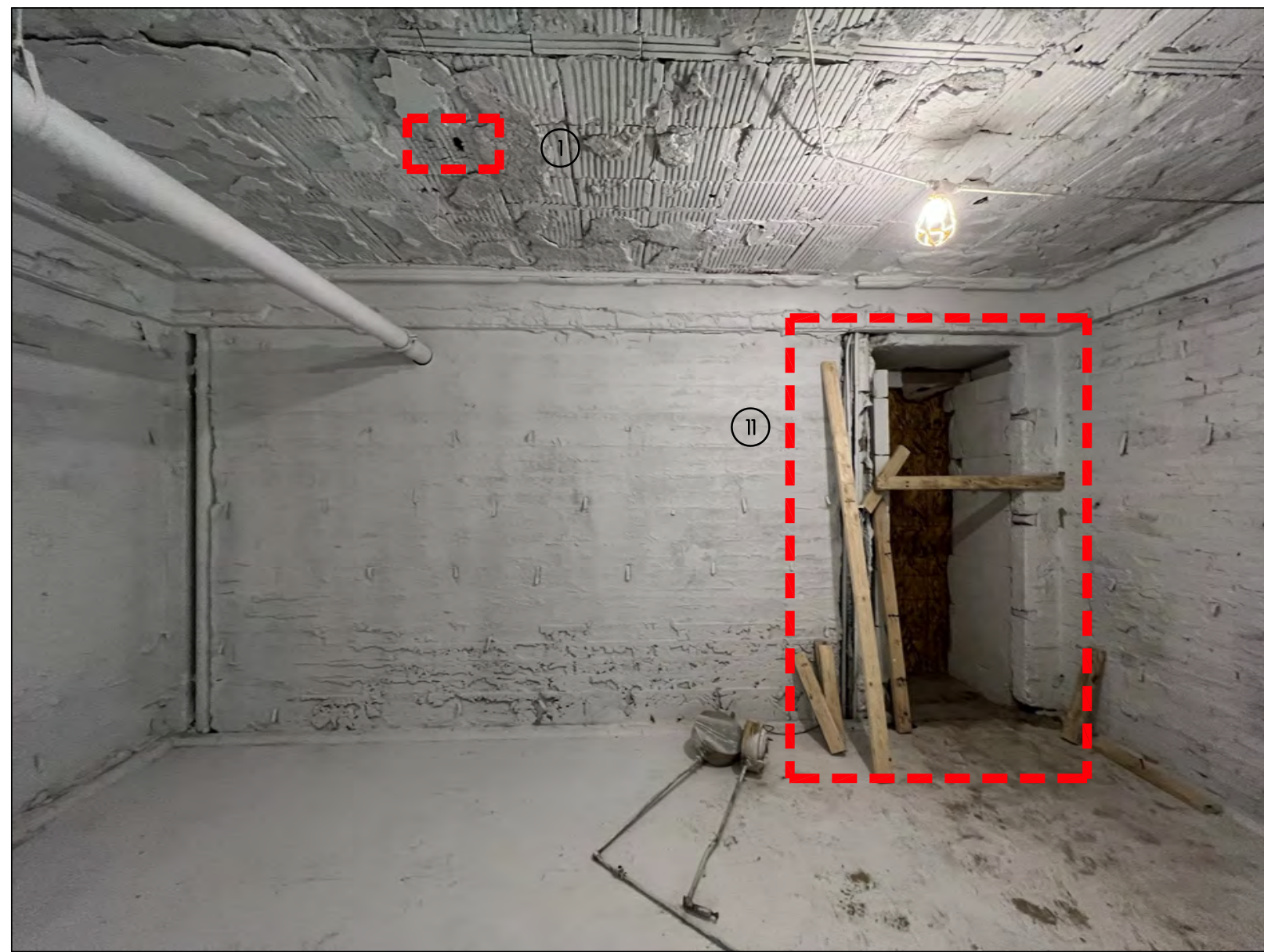
8 STORAGE 010 LOOKING NORTHWEST  
SCALE: NONE

#### BASEMENT PARTIAL FLOOR PLAN

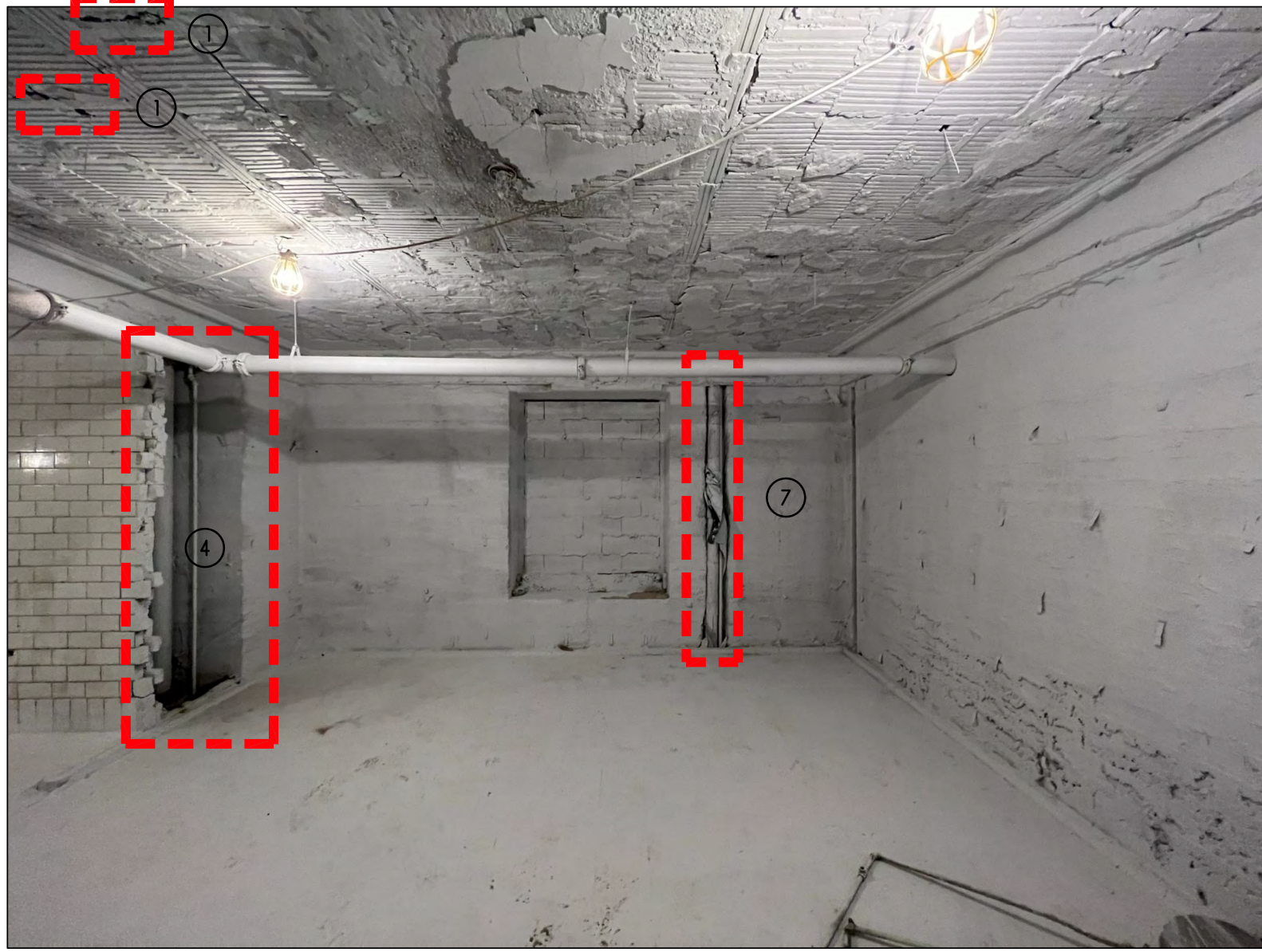
SCALE: 1/8" = 1'-0"



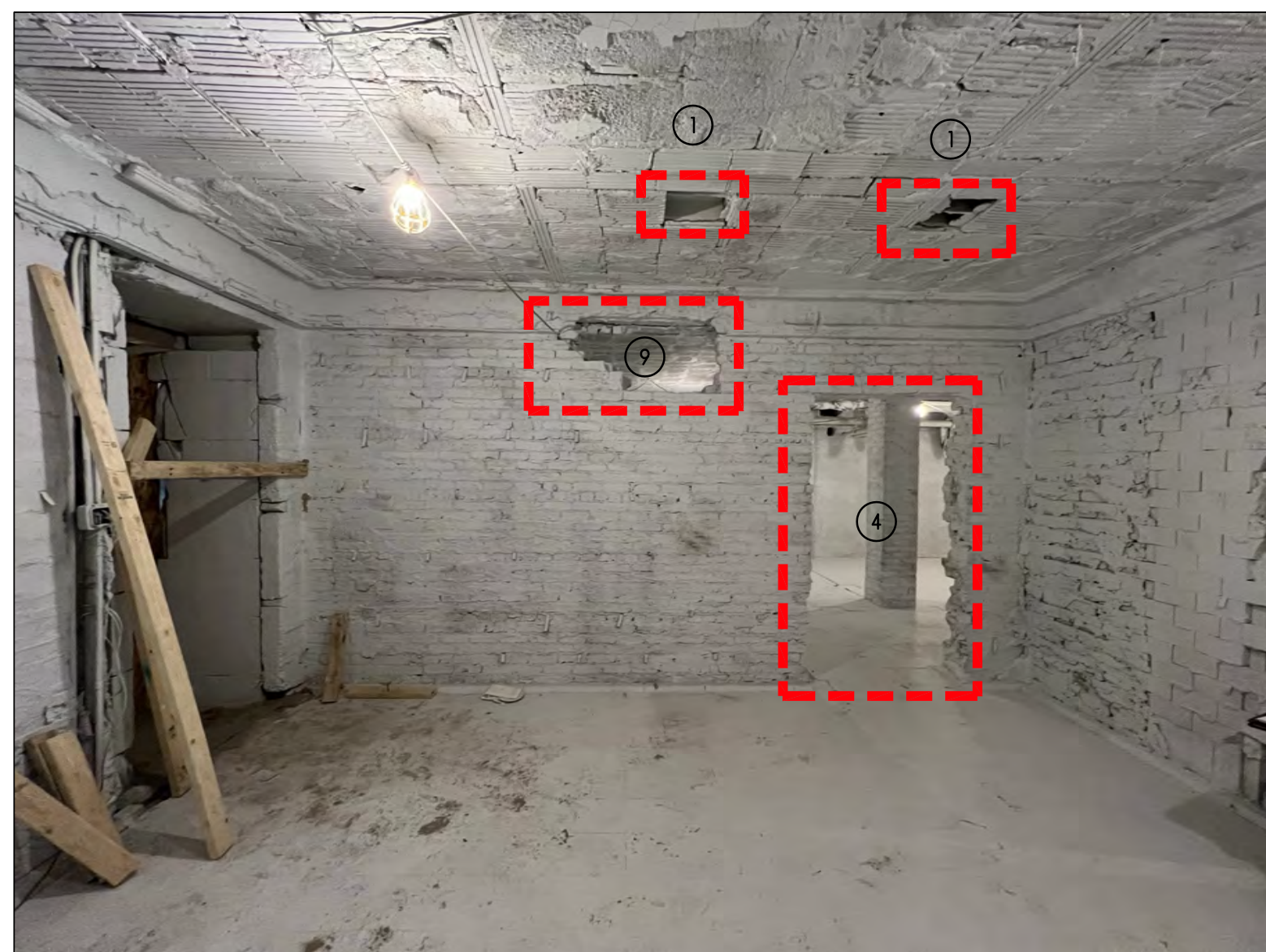




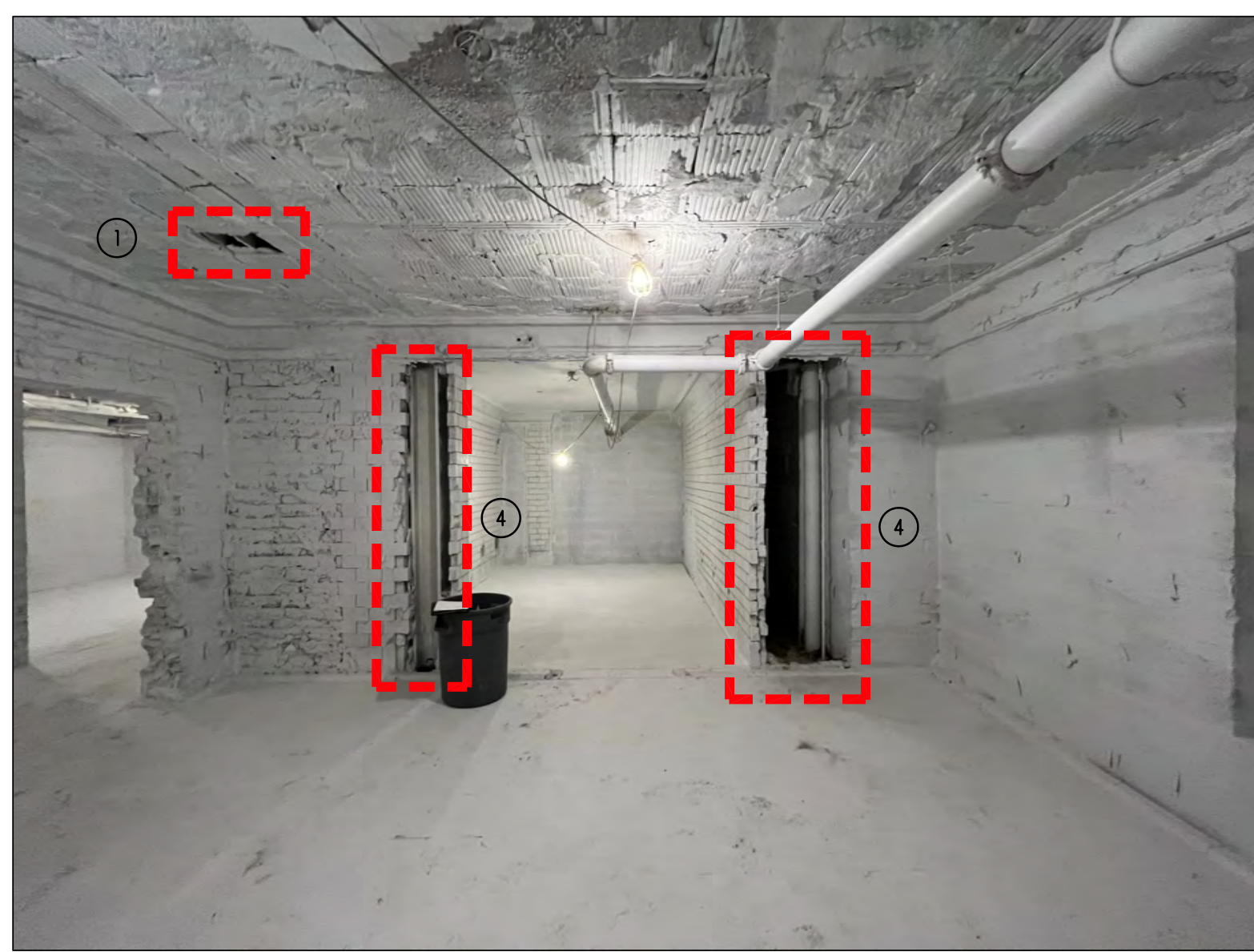
2 STORAGE 011 LOOKING WEST  
SCALE: NONE



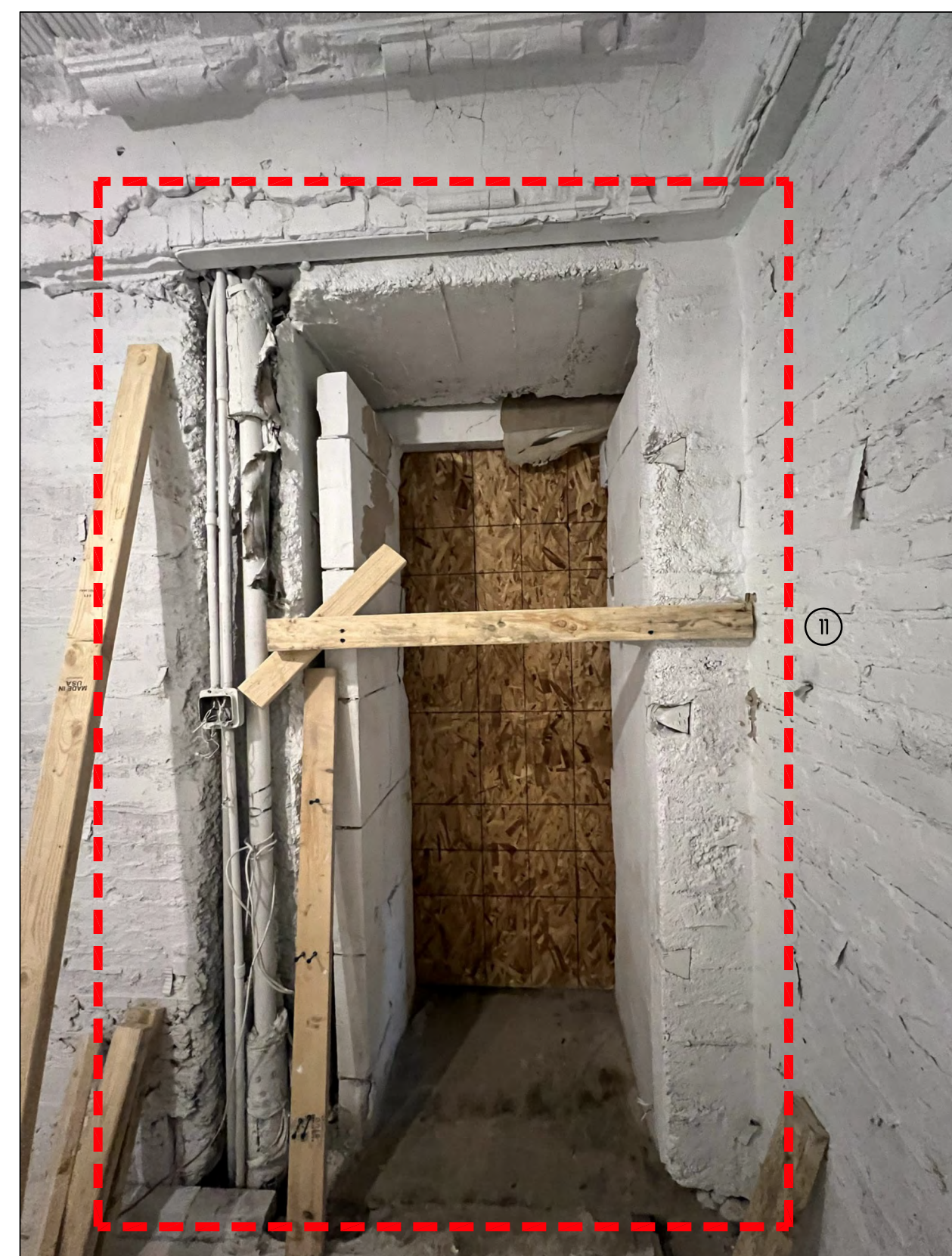
3 STORAGE 011 LOOKING WEST  
SCALE: NONE



4 STORAGE 011 LOOKING NORTH  
SCALE: NONE

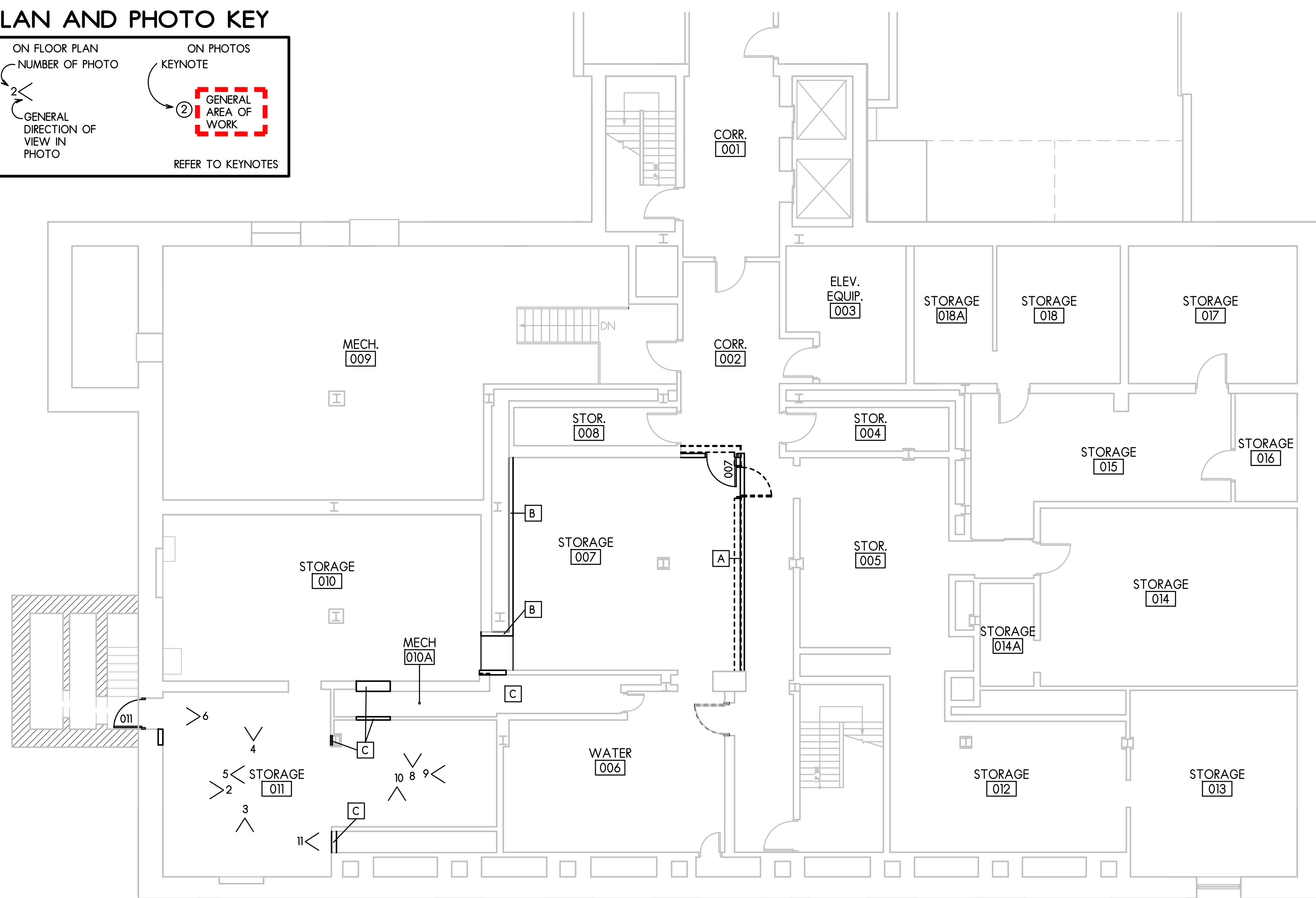
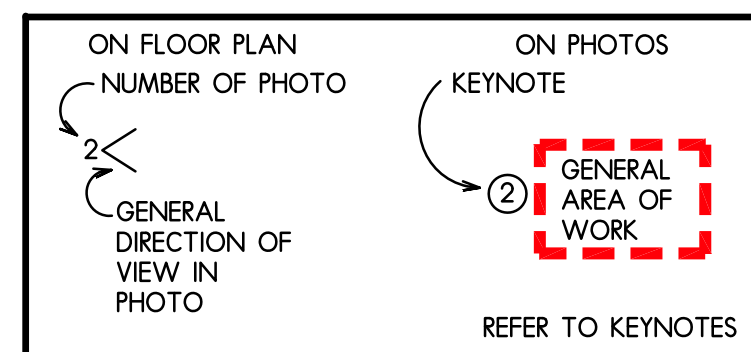


5 STORAGE 011 LOOKING EAST  
SCALE: NONE



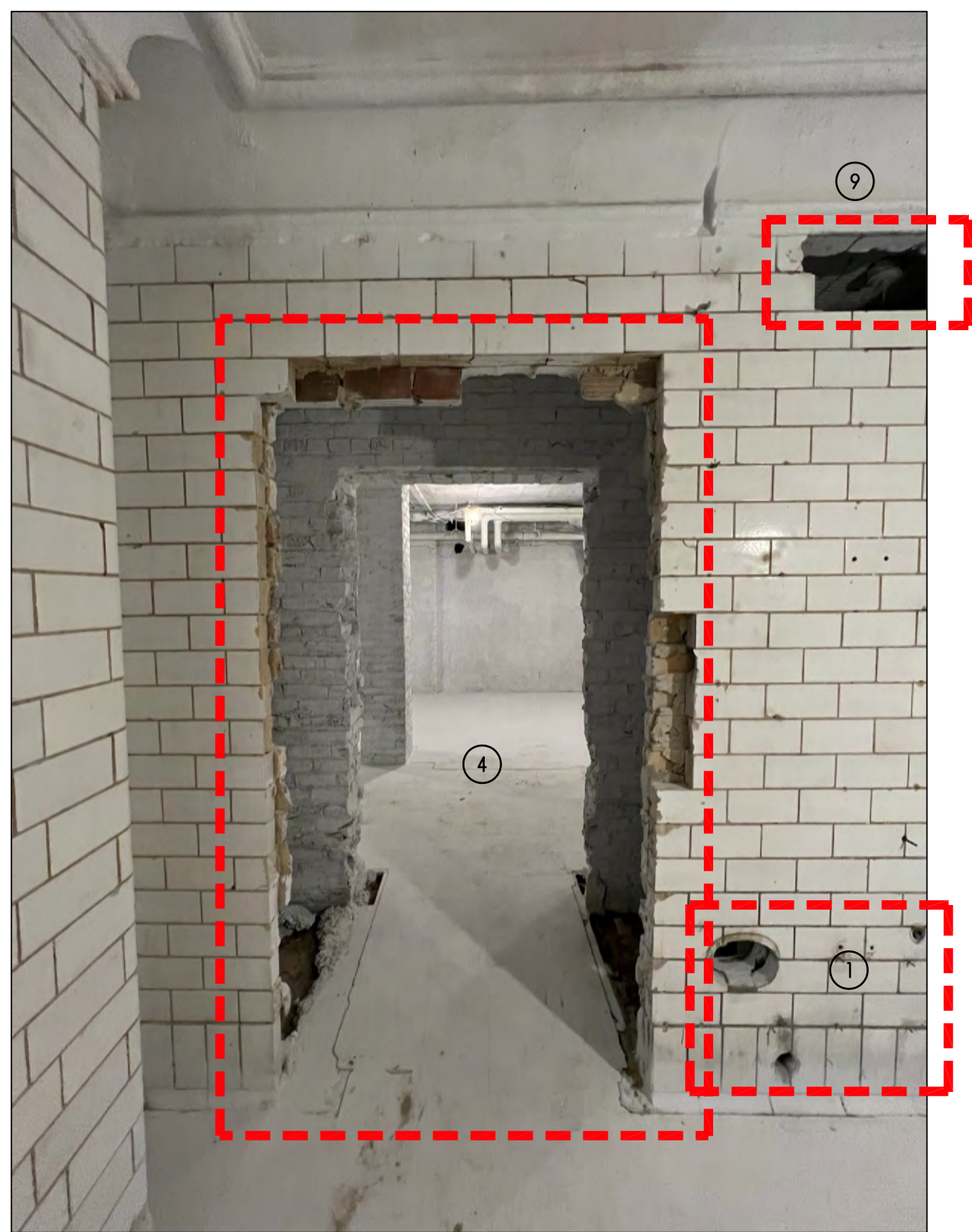
6 STORAGE 011 LOOKING AT DOOR 011  
SCALE: NONE

#### PLAN AND PHOTO KEY

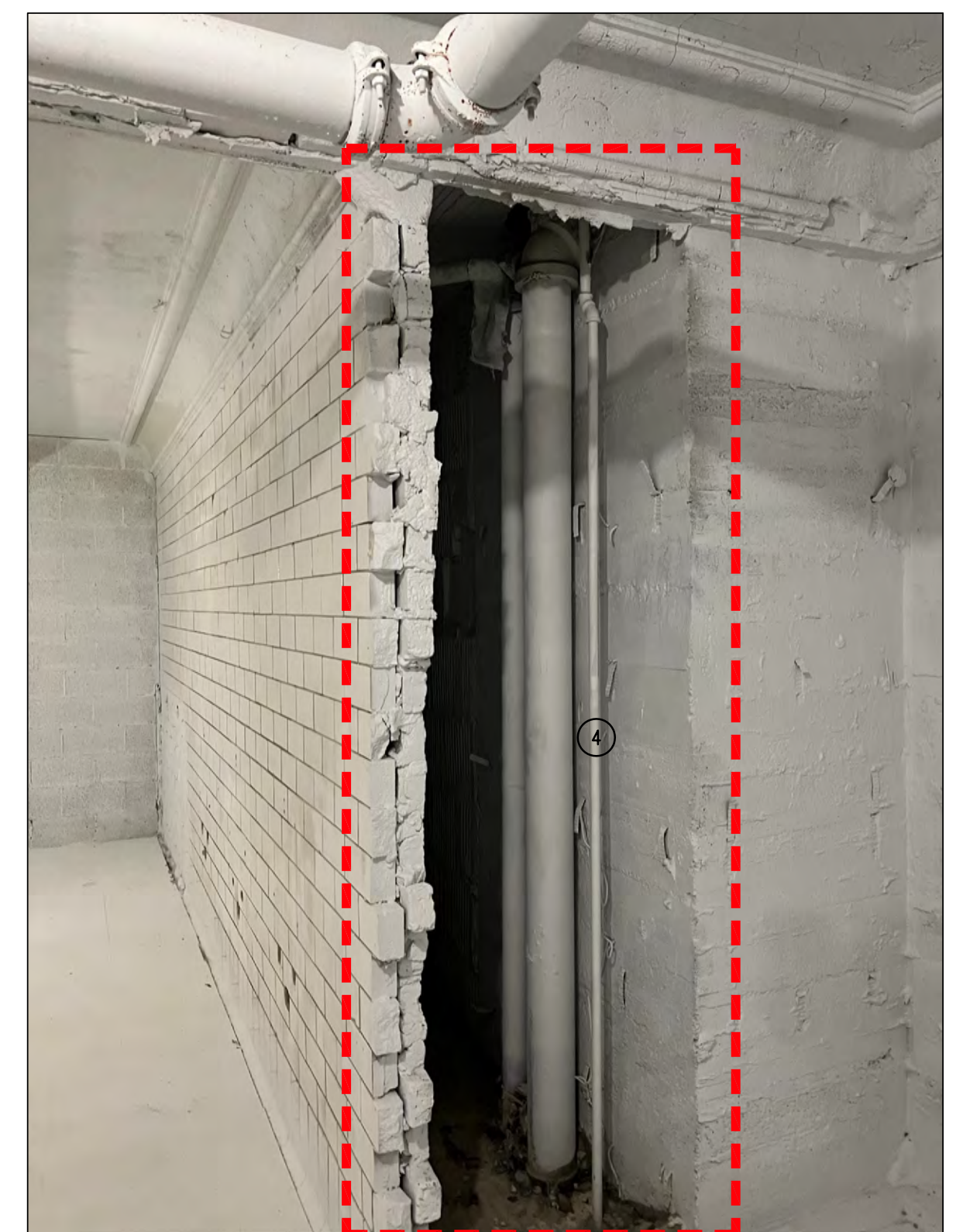


#### PARTIAL BASEMENT FLOOR PLAN

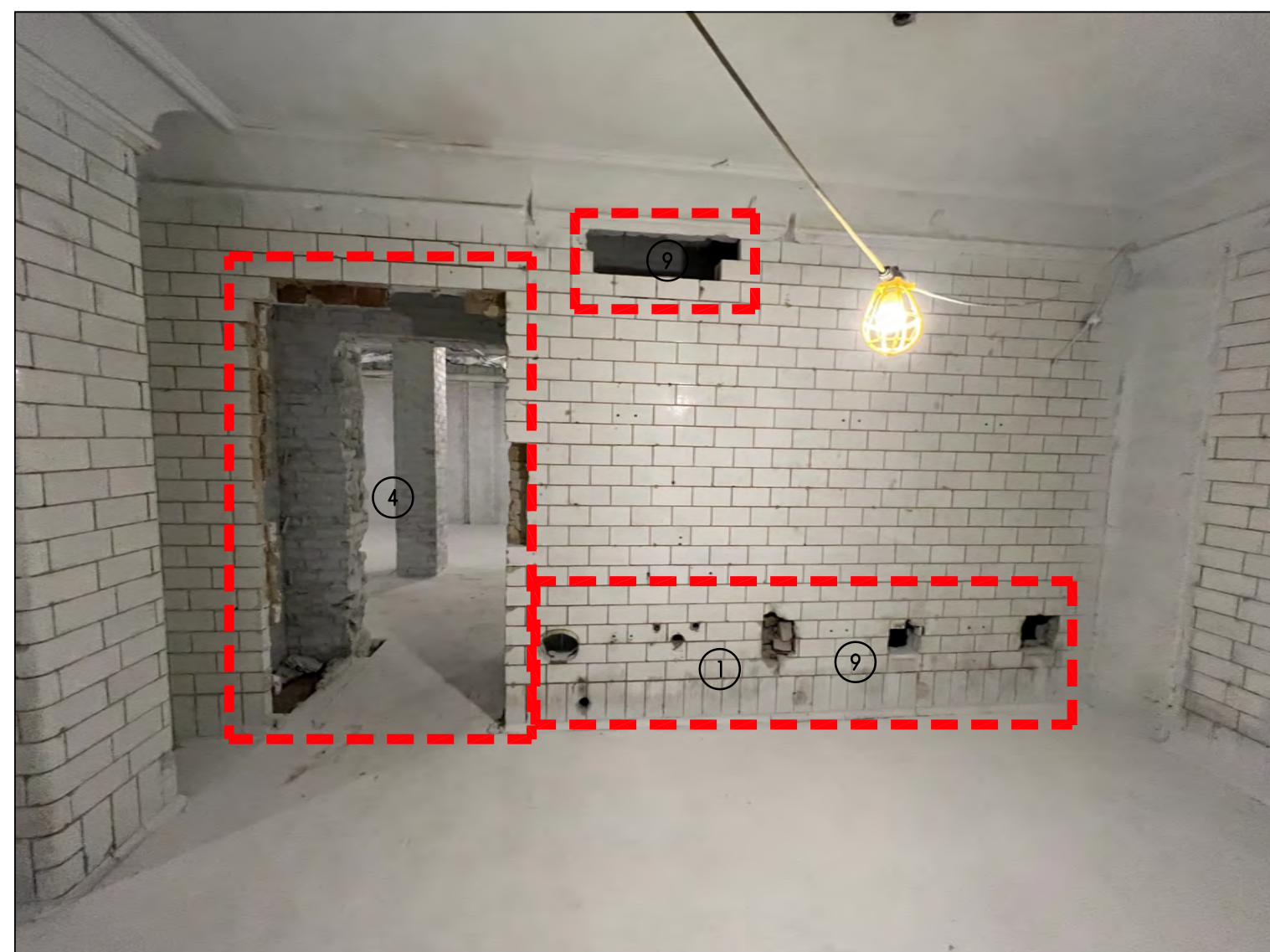
SCALE: 1/8" = 1'-0"



7 STORAGE 011 LOOKING NORTH  
SCALE: NONE



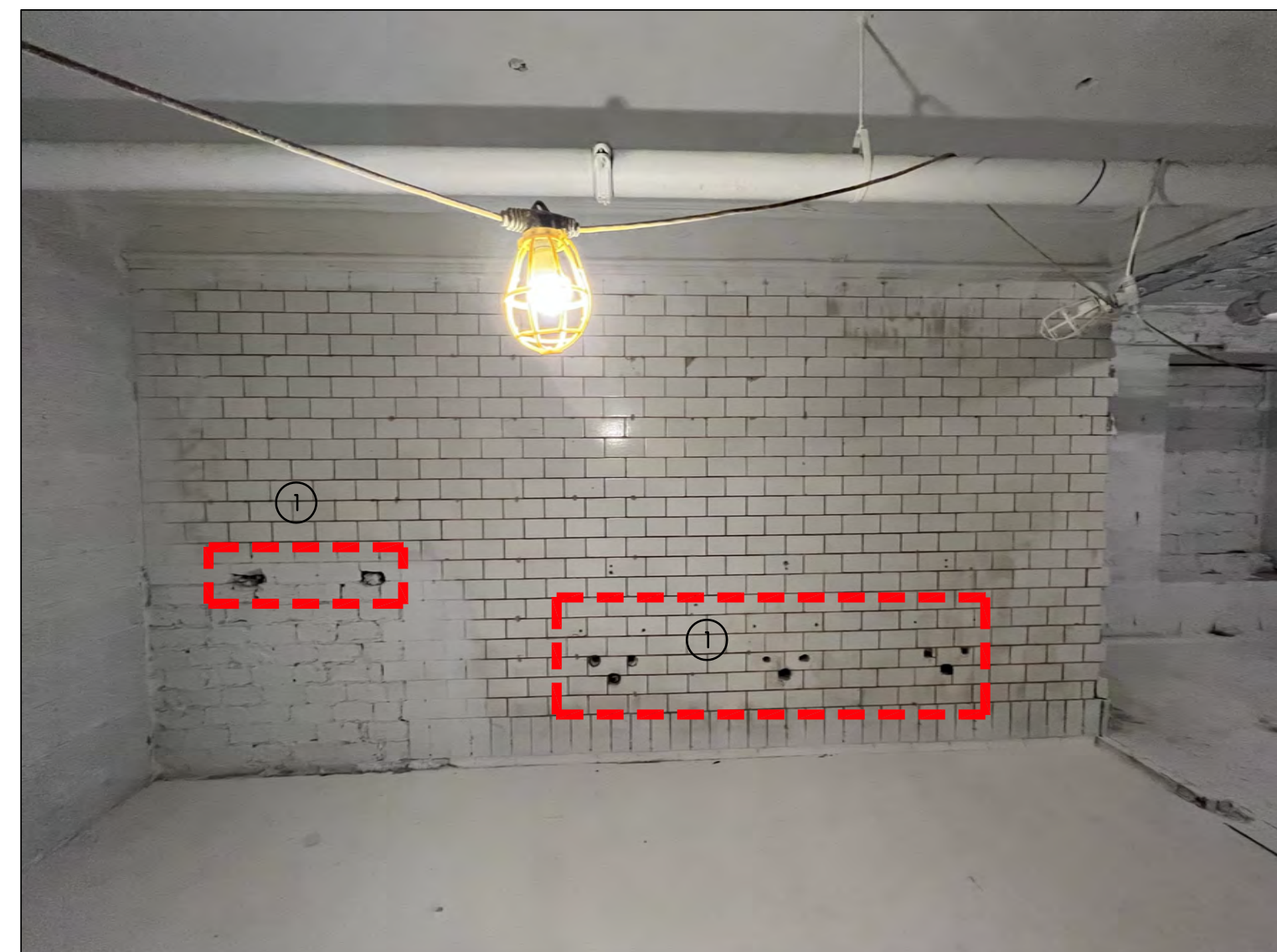
11 STORAGE 011 LOOKING EAST  
SCALE: NONE



8 STORAGE 011 LOOKING NORTH  
SCALE: NONE



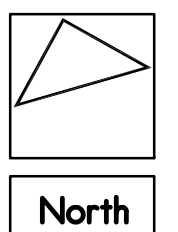
9 STORAGE 011 LOOKING EAST  
SCALE: NONE



10 STORAGE 011 LOOKING SOUTH  
SCALE: NONE

#### BASEMENT PARTIAL FLOOR PLAN

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

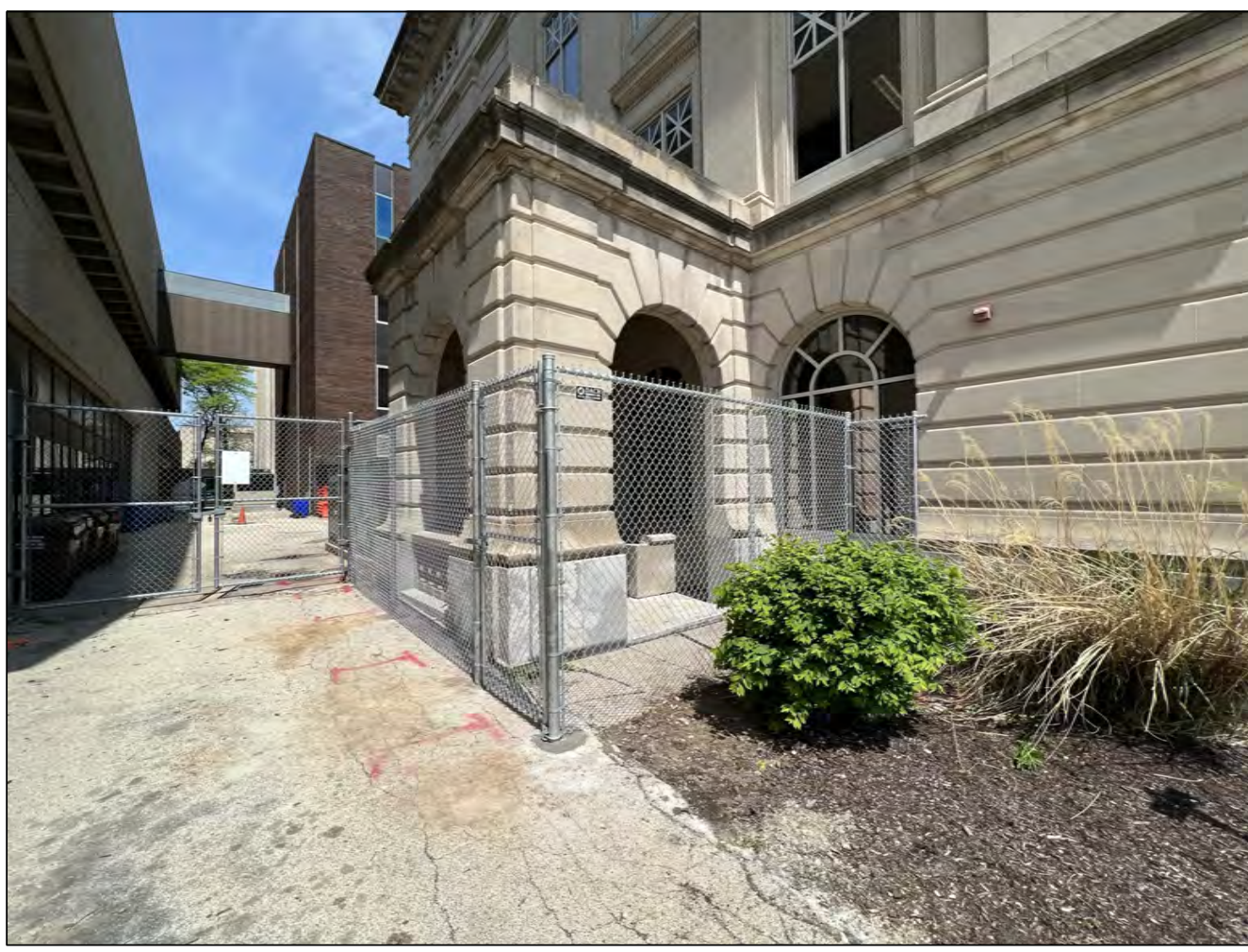


#### KEYNOTES

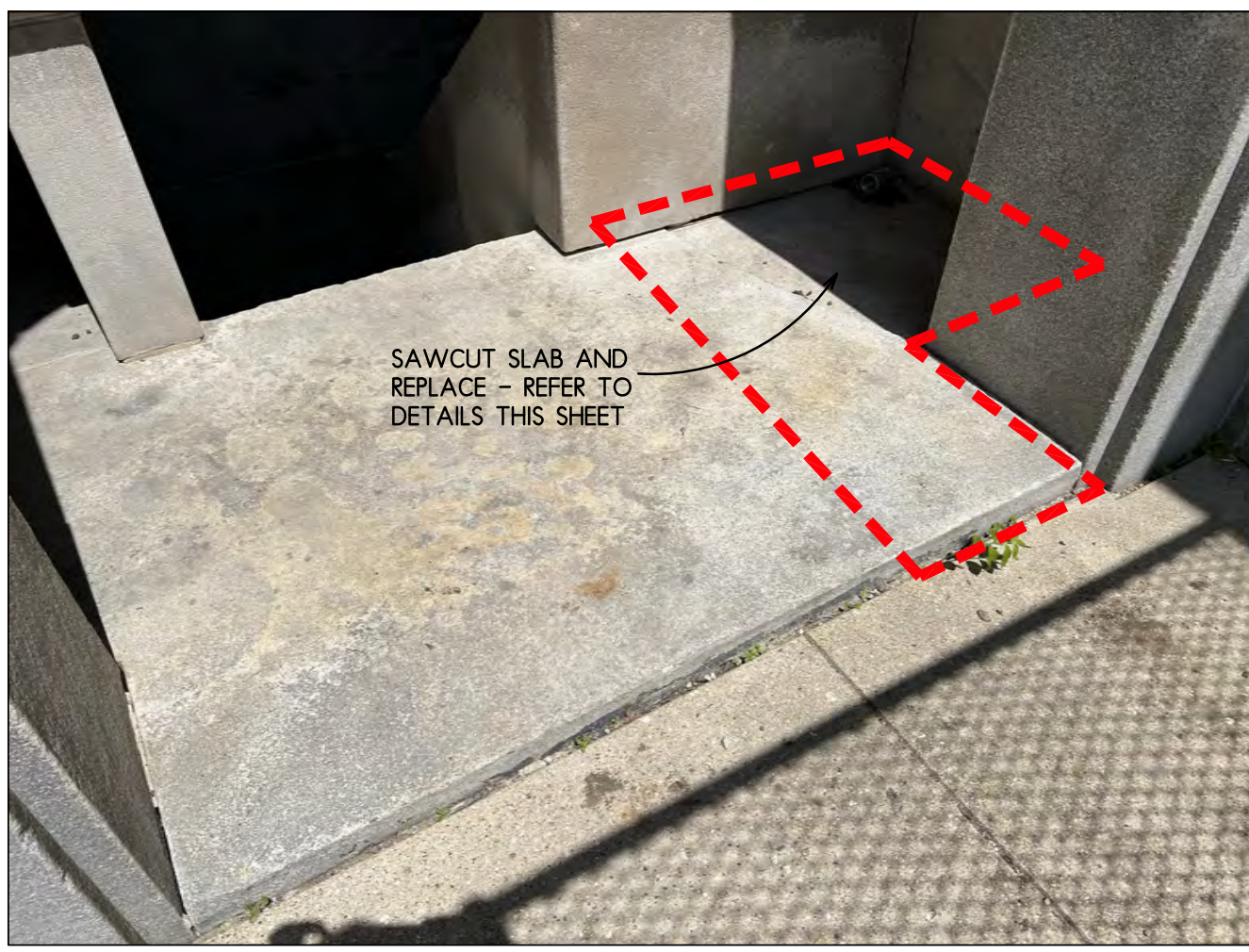
1. SEAL THRU PIPE PENETRATIONS IN ACCORDANCE WITH DETAILS ON SHEET A8.1
2. INFILL SMALL DAMAGED BLOCK AREAS WITH ROCK WOOL AND SEAL OPENINGS WITH MORTAR - FINISH SURFACE SMOOTH, PAINT TO MATCH ADJACENT.
3. NEW WALL CONSTRUCTION - WALL TYPE [A] - REFER TO SHEET A2.1
4. NEW WALL CONSTRUCTION TO ENCLOSE EXPOSED CHASE - WALL TYPE [B] REFER TO SHEET A2.1
5. NEW MASONRY WALL CONSTRUCTION - WALL TYPE [C] REFER TO SHEET A2.1
6. NEW METAL STUD AND DRYWALL ENCLOSURE TO FINISH SOFFIT ENCLOSURE - PAINT AND FINISH TO MATCH EXISTING
7. PATCH & PAINT PLASTER SURFACES OF COLUMN
8. PATCH AND REPAIR EXISTING PIPE INSULATION
9. REMOVED DAMAGED LIGHT FIXTURE. SEE ELECTRICAL FOR LIGHTING REPLACEMENT CONFIGURATION.
10. INFILL EXISTING MASONRY PENETRATION WITH CMU, PAINT TO MATCH ADJACENT FINISH
11. REPAIR EXPOSED CEILING WITH NEW METAL STUD AND DRYWALL PATCH TO FINISH SOFFIT ENCLOSURE - SEAL PIPING & CONDUIT PENETRATIONS. PAINT AND FINISH TO MATCH EXISTING
12. NEW JAMB AND HEAD FINISH W/ NEW DOOR AND FRAME. REFER TO SHEET A2.1



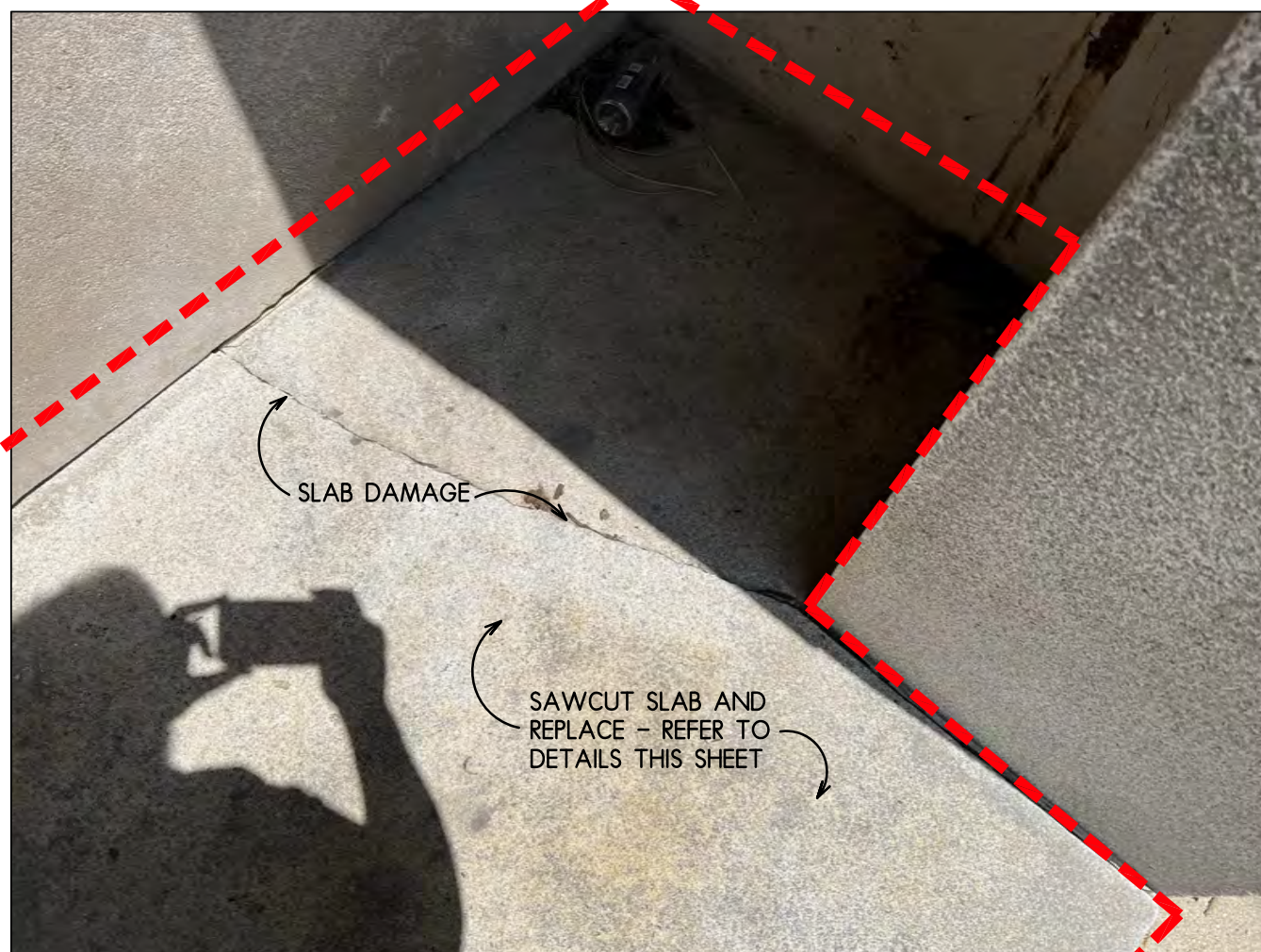




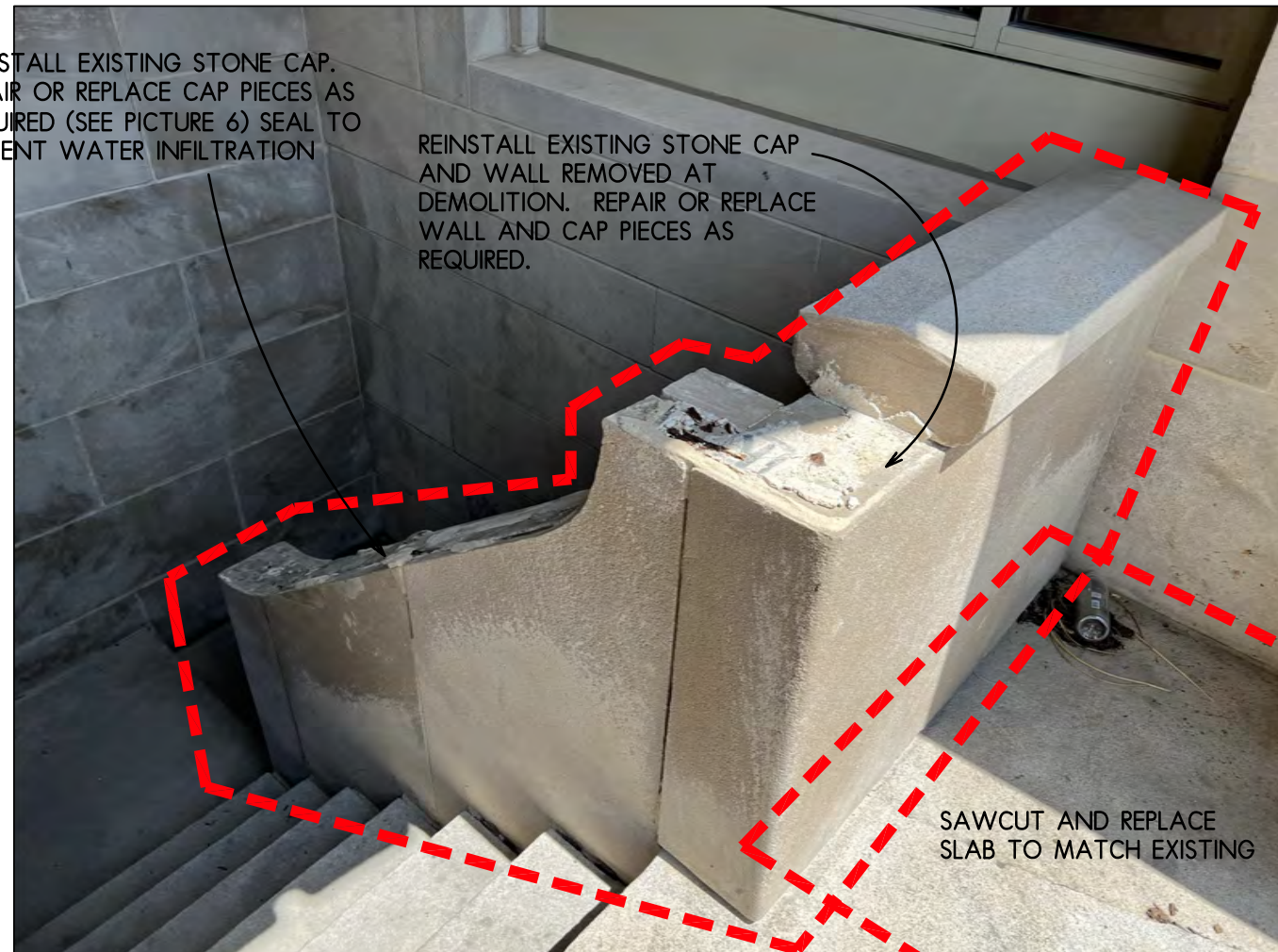
1 VIEW AT STAIR LOOKING NORTHEAST  
SCALE: NONE



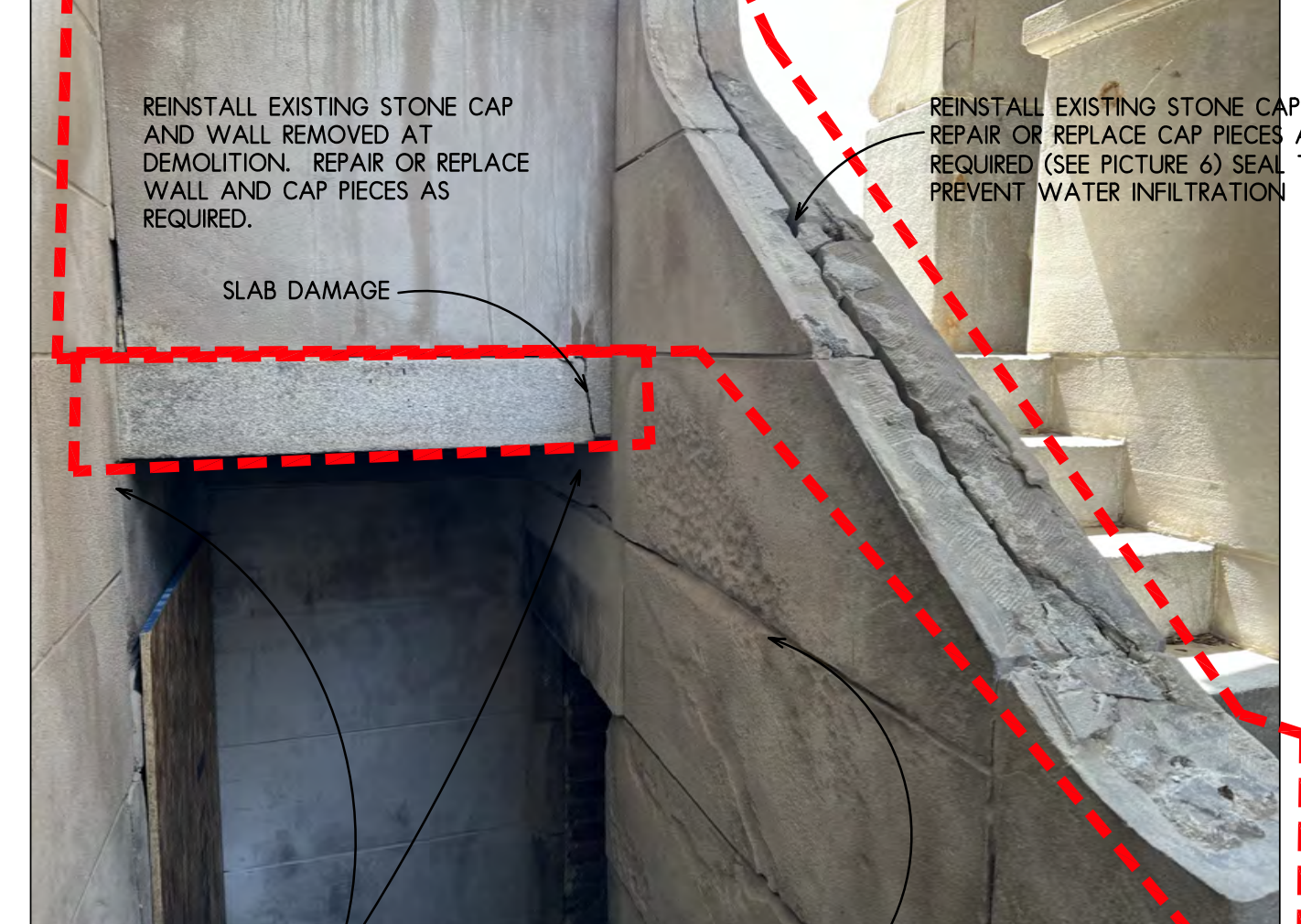
2 VIEW AT STAIR ENTRY  
SCALE: NONE



3 VIEW OF DAMAGED SLAB  
SCALE: NONE



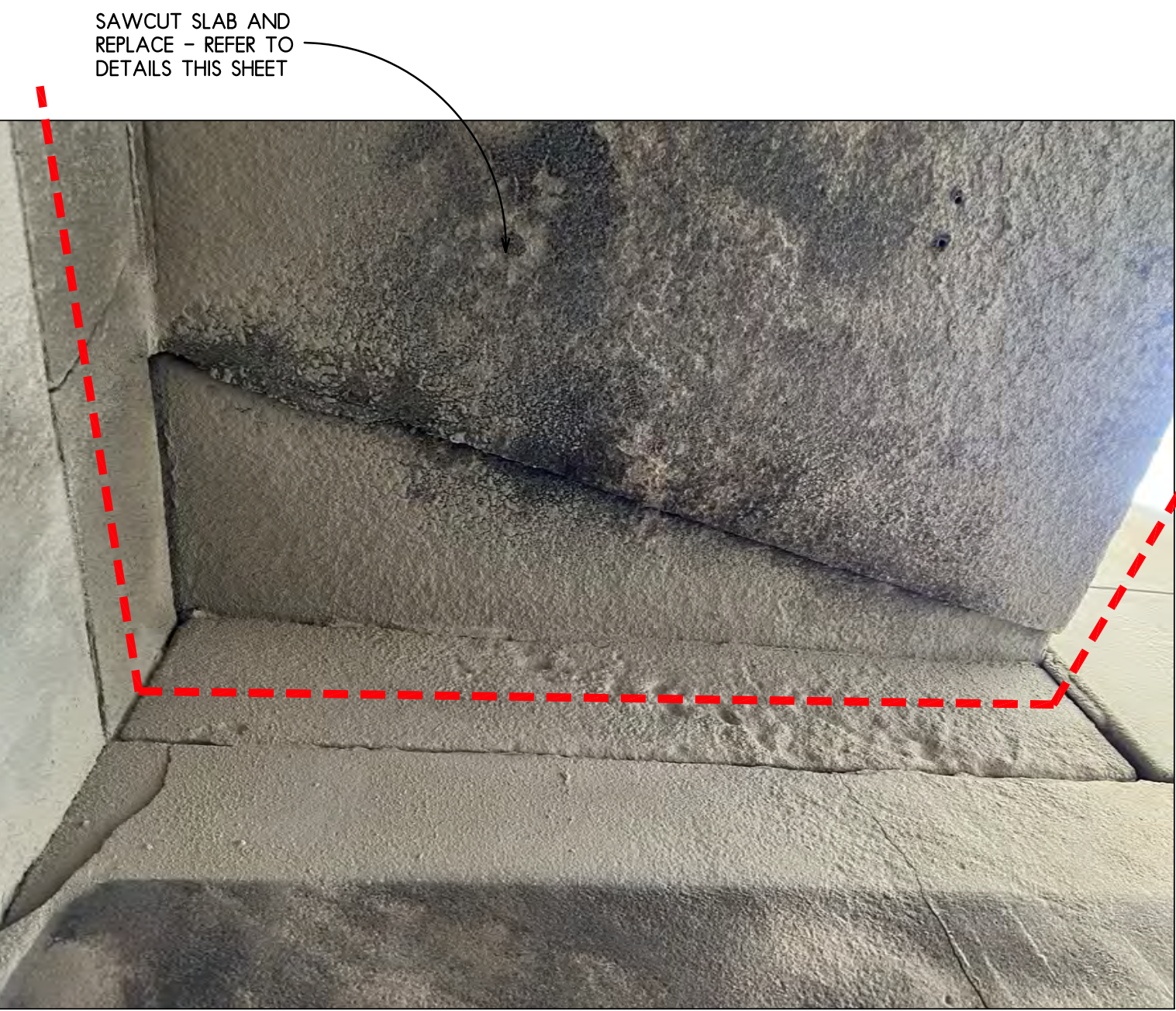
4 VIEW AT STAIR RAILING  
SCALE: NONE



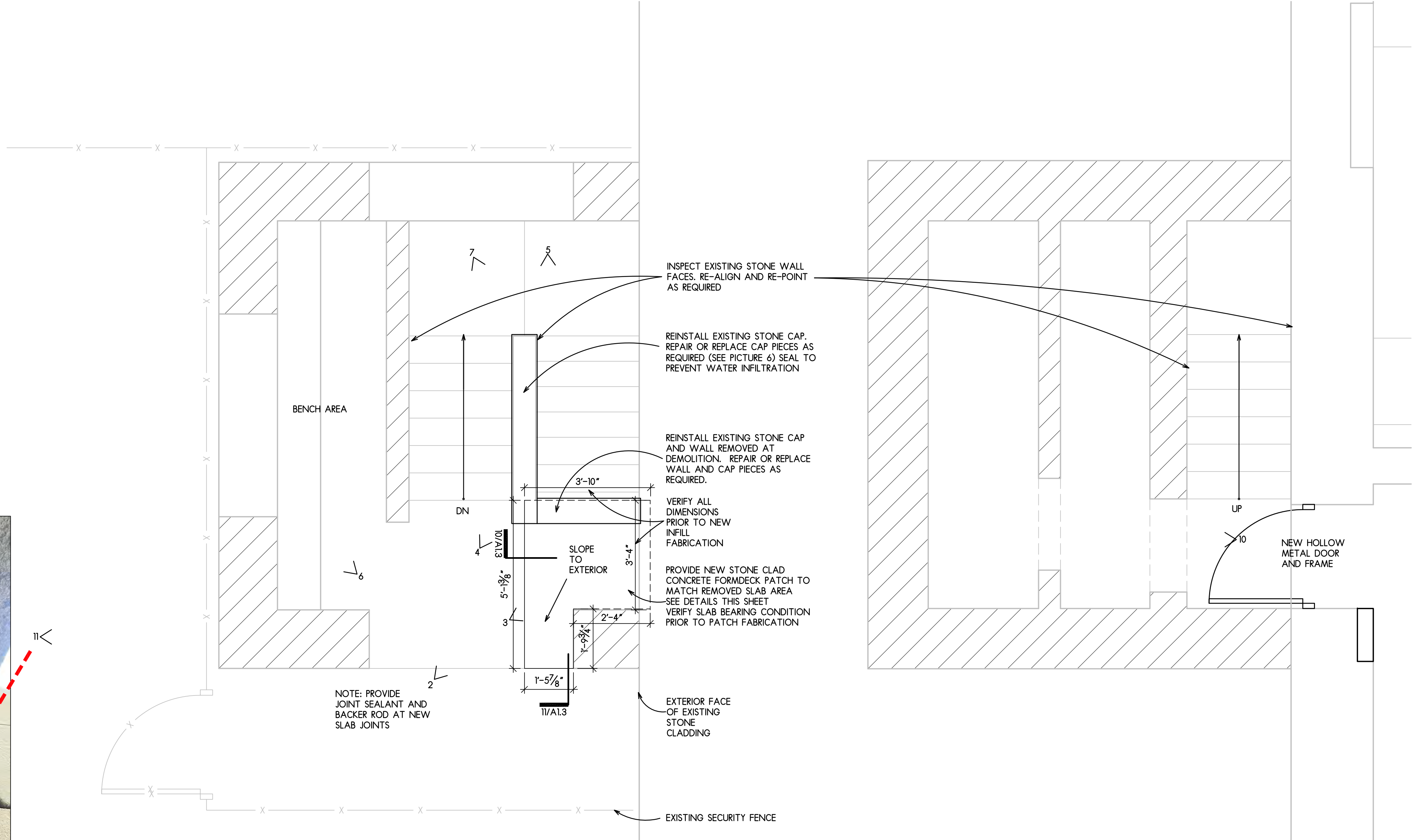
5 VIEW OF RAILING AND DAMAGED SLAB  
SCALE: NONE



11 VIEW AT STAIR LOOKING EAST  
SCALE: NONE



10 VIEW AT UNDERSIDE OF DAMAGED SLAB  
SCALE: NONE



9 EXTERIOR STAIR AT GRADE  
SCALE: 1/2" = 1'-0"

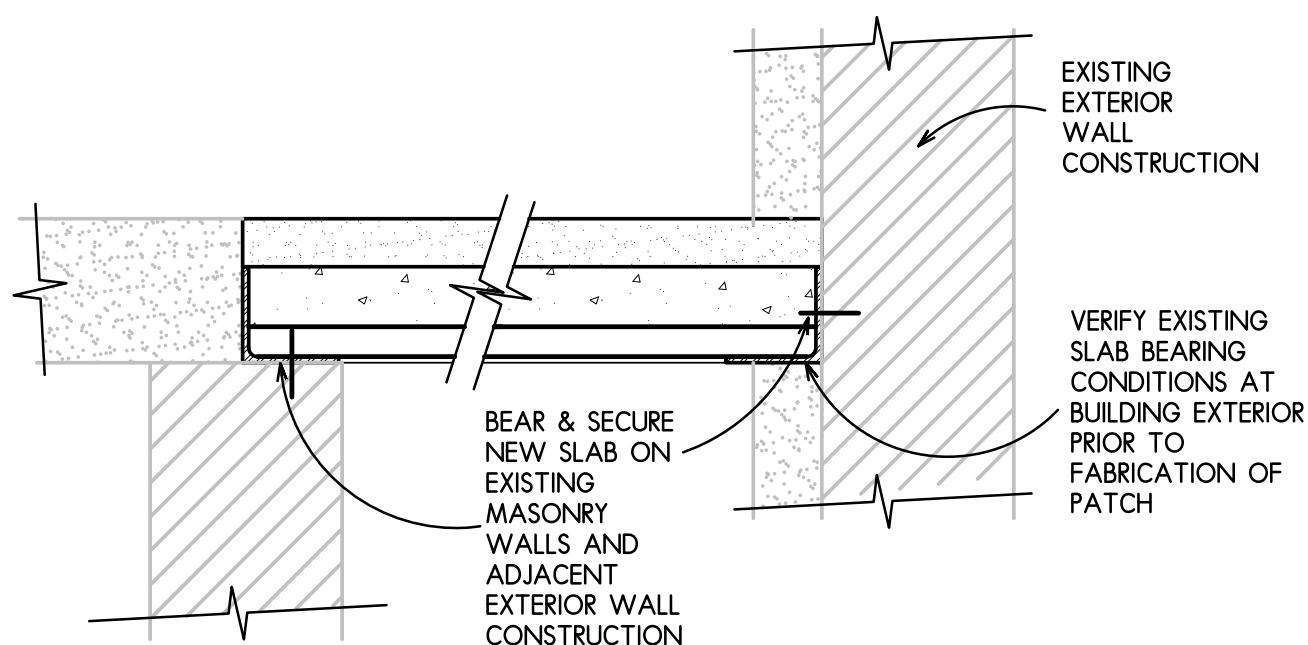
8 EXTERIOR STAIR BELOW GRADE  
SCALE: 1/2" = 1'-0"



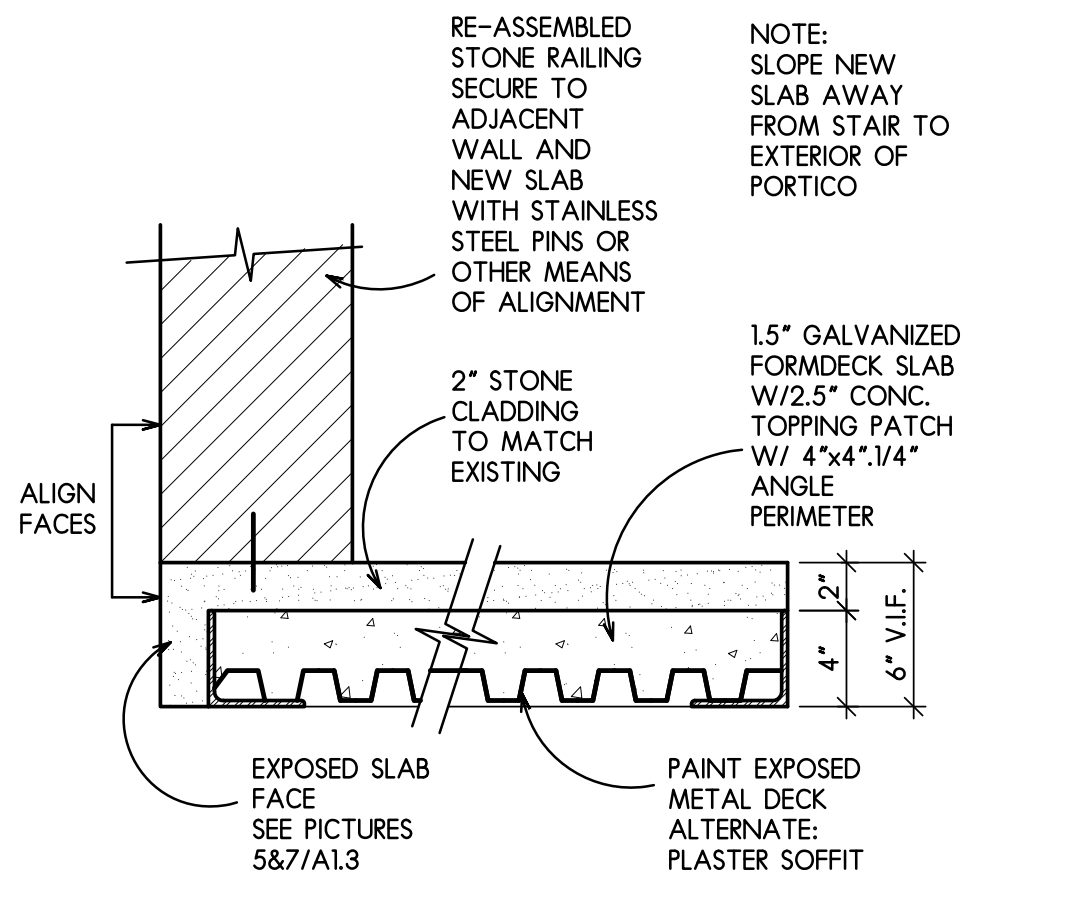
6 RAILING CAPS  
SCALE: NONE



7 VIEW AT RAILING LOOKING SOUTH  
SCALE: NONE



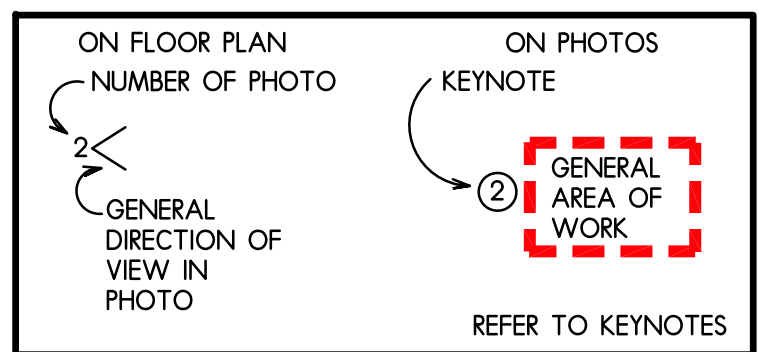
10 SECTION AT SLAB PATCH  
SCALE: 1-1/2" = 1'-0"



11 SECTION AT SLAB PATCH  
SCALE: 1-1/2" = 1'-0"

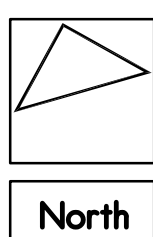
REINSTALL EXISTING STONE CAP, REPAIR OR REPLACE CAP PIECES AS REQUIRED (SEE PICTURE 6) SEAL TO PREVENT WATER INFILTRATION

PLAN AND PHOTO KEY

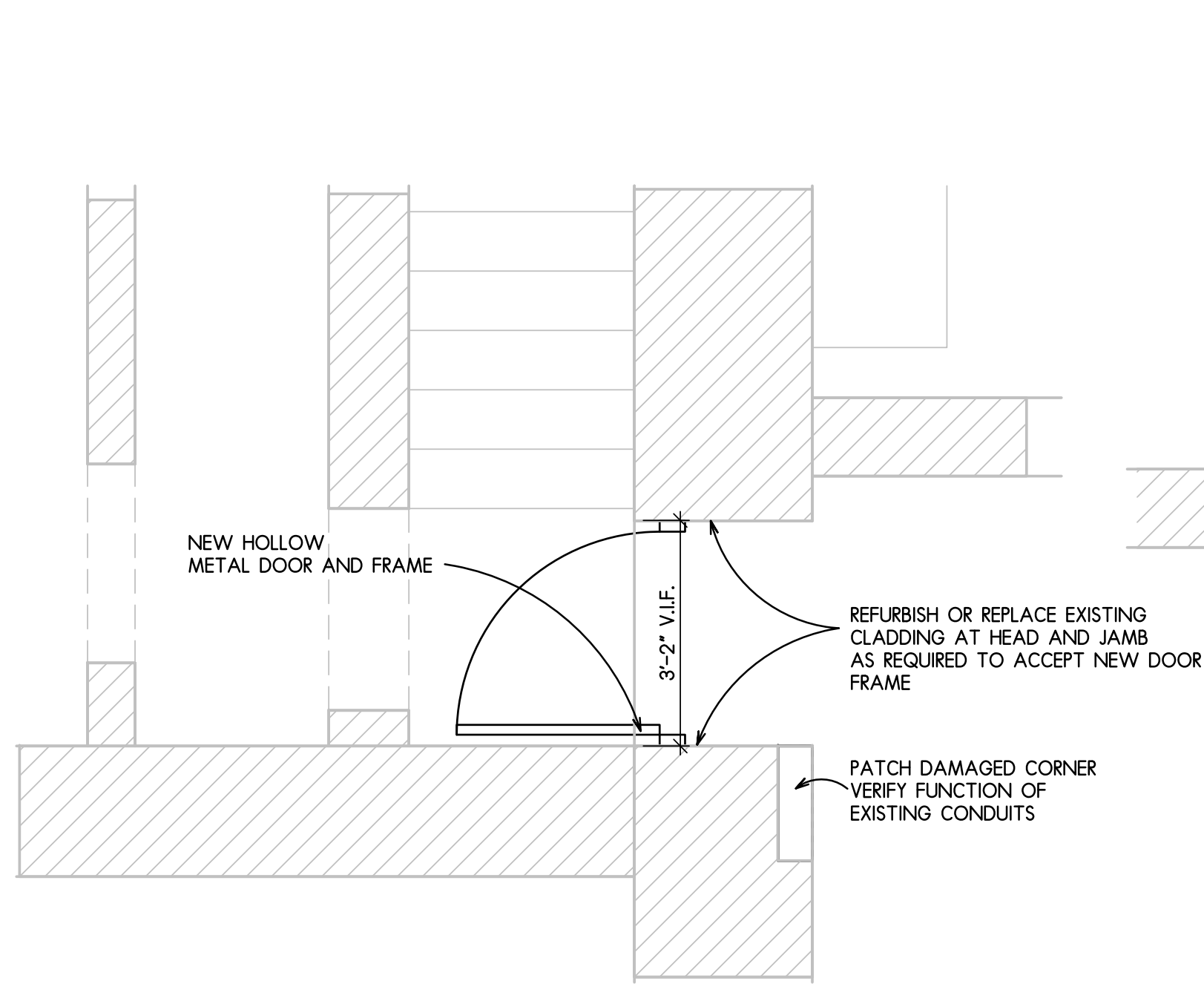


EXTERIOR STAIR PLANS

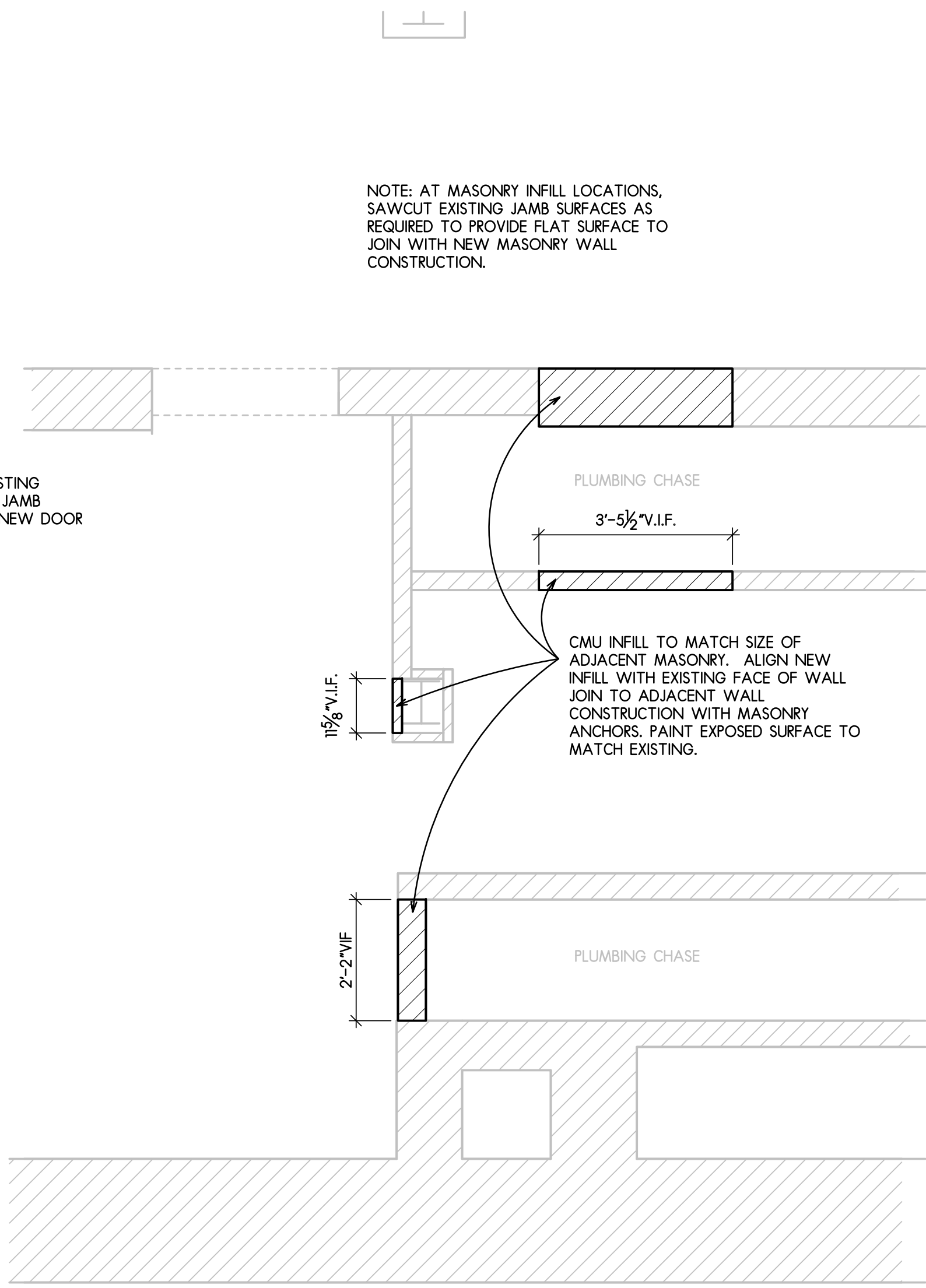
SCALE: 1/8" = 1'-0"



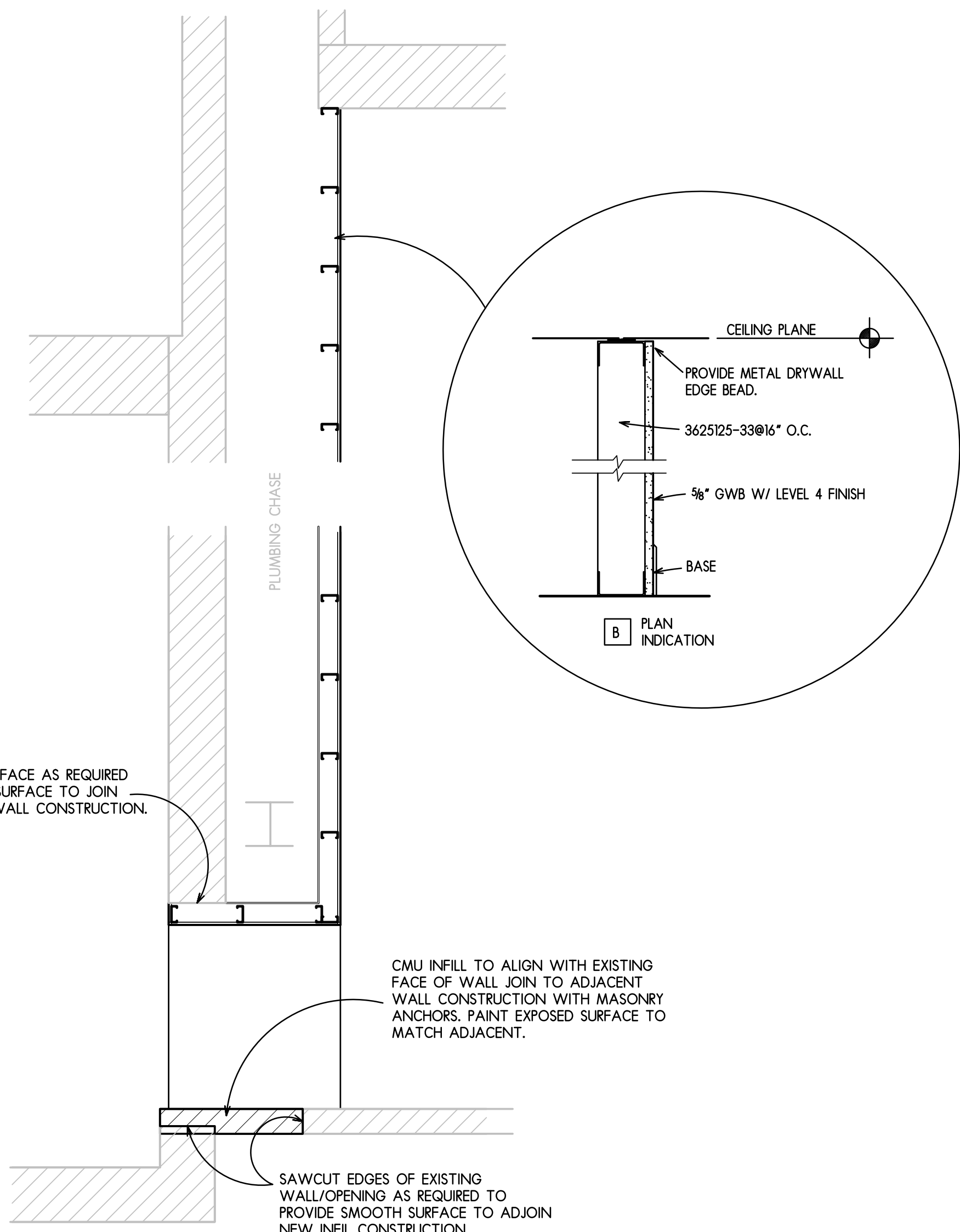




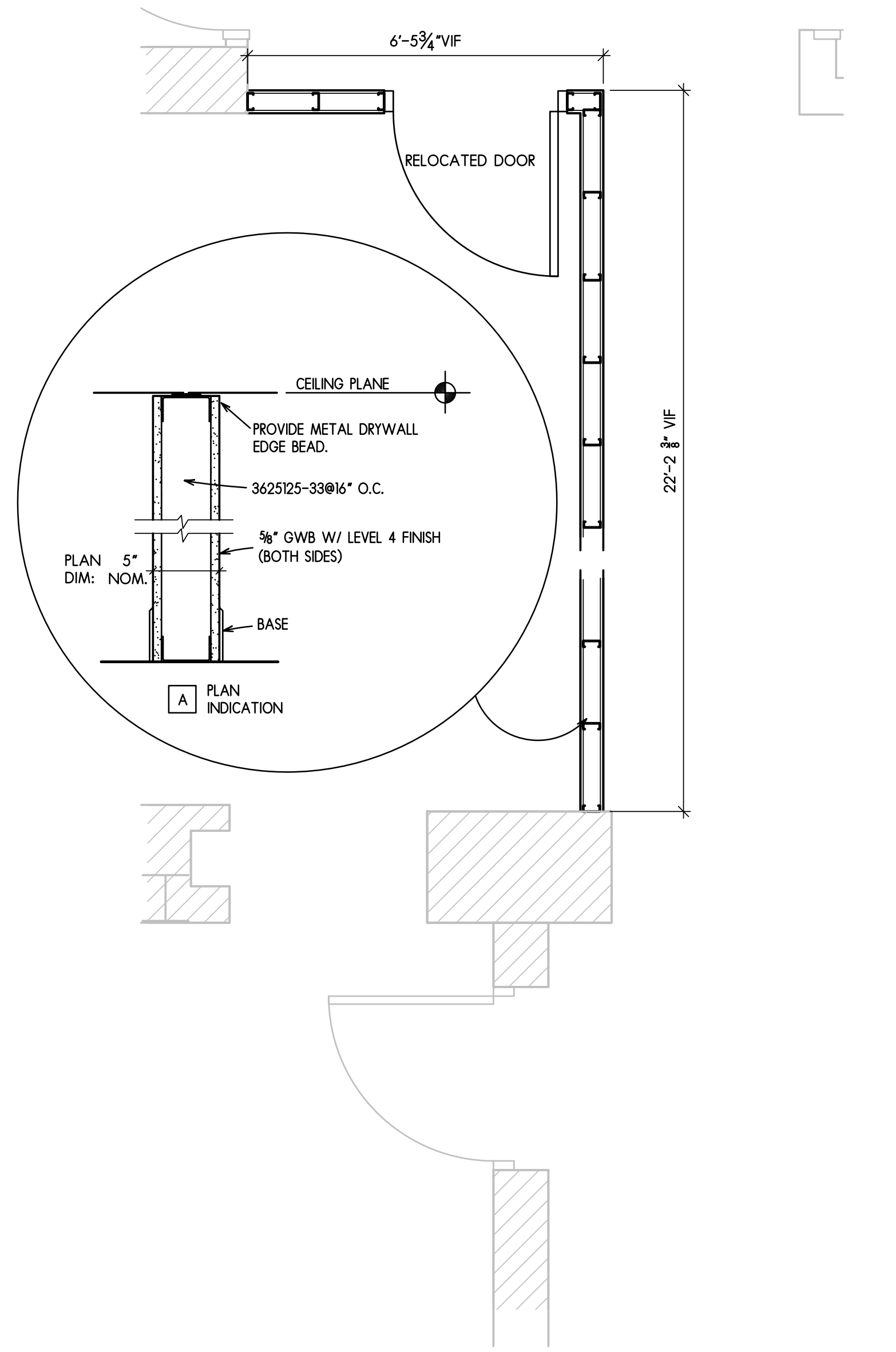
11 STORAGE 011 WEST WALL @ EXTERIOR DOOR  
SCALE: 1/2"=1'-0"



11 STORAGE 011 NORTH WALL  
SCALE: 1/2"=1'-0"



11 STORAGE 007 WEST WALL  
SCALE: 1/2"=1'-0"



11 STORAGE 007 NORTH & EAST WALL  
SCALE: 1/2"=1'-0"

#### OPENING SCHEDULE

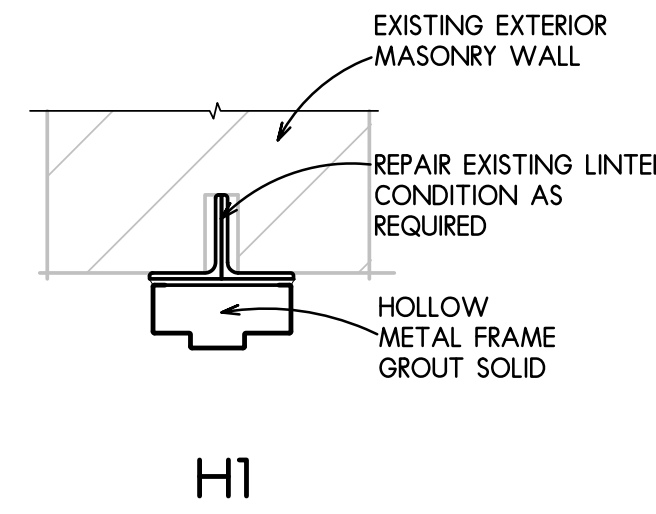
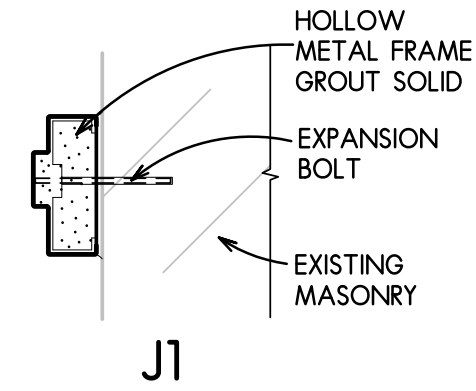
| DOOR     |      |      |               |               |    |                 | FRAME |      |               |               |         | FIRE RTG | NOTES           | HARDWARE    |               |             |              |                  |
|----------|------|------|---------------|---------------|----|-----------------|-------|------|---------------|---------------|---------|----------|-----------------|-------------|---------------|-------------|--------------|------------------|
| OPNG NO  | TYPE | MATL | FINISH SIDE 1 | FINISH SIDE 2 | PR | SIZE            | TYPE  | MATL | FINISH SIDE 1 | FINISH SIDE 2 | DETAILS | DR.& FR. | REFERENCE NOTES | HANG DEVICE | SECURE DEVICE | EXIT DEVICE | CLOSE DEVICE | MISC             |
| BASEMENT |      |      |               |               |    |                 |       |      |               |               |         |          |                 |             |               |             |              |                  |
| 007      |      |      |               |               |    |                 |       |      |               |               |         |          |                 |             |               |             |              | RELOCATED EXIST. |
| 011      | F    | MTL  | PT            | PT            | -  | VERIFY IN FIELD | 1     | HM   | P             | P             | J1 H1   | -        | -               | HH          | EN            | EVRP        | CL           | KP PSP W PLL     |

#### OPENING SCHEDULE KEYNOTES

|       |              |      |               |
|-------|--------------|------|---------------|
| CD    | COILING DOOR | M    | MINUTES       |
| EXIST | EXISTING     | MATL | MATERIAL      |
| FR    | FRAME        | MIN  | MINIMUM       |
| GL    | GLASS        | MTL  | METAL         |
| HDWR  | HARDWARE     | OH   | OVERHEAD DOOR |
| HM    | HOLLOW METAL | PR   | PAR           |
| HR    | HOLE         | RTG  | RATING        |

#### HARDWARE GENERAL NOTES

- ALL DOORS SHALL BE HUNG ON FULL MORTISE BUTT HINGES UNLESS NOTED OTHERWISE.
- ALL DOORS SHALL HAVE SILENCERS, EXCEPT DOORS WHICH HAVE WEATHERSTRIPPING OR SOUND SEALS.
- HARDWARE PRODUCT TYPES AND OPTIONS ARE SPECIFIED IN SPECIFICATION SECTION 0871 - DOOR HARDWARE.



H1 HEAD & JAMB DETAILS  
SCALE: 1/2"=1'-0"

#### ROOM FINISH SCHEDULE

| ROOM NO. | NAME    | FLOOR MATL | BASE | WALL FINISH N | S  | E  | W  | CEILINGS MATL | FIN | HT | NOTES |
|----------|---------|------------|------|---------------|----|----|----|---------------|-----|----|-------|
| BASEMENT |         |            |      |               |    |    |    |               |     |    |       |
| 002      | CORR    | EXIST      | -    | PT            | PT | PT | PT | EXP           | PT  | -  | 1     |
| 007      | STORAGE | EXIST      | -    | PT            | PT | PT | PT | EXP           | PT  | -  | 1     |
| 010      | STORAGE | EXIST      | -    | PT            | PT | PT | PT | EXP           | PT  | -  |       |
| 011      | STORAGE | EXIST      | -    | PT            | PT | PT | PT | EXP           | PT  | -  |       |

#### HARDWARE LEGEND

##### HANGING DEVICES:

|    |                                |
|----|--------------------------------|
| HE | HINGE - ELECTRIFIED            |
| HG | HINGE - GEAR (CONTINUOUS) TYPE |
| HH | HINGE - HEAVY WEIGHT BALL BRG. |
| HR | HINGE - REGULAR NON-BALL BRG.  |
| HS | HINGE - SPRING TYPE            |
| FV | PIVOT                          |

##### SECURING DEVICES:

|     |  |
|-----|--|
| AFB | AUTOMATIC FLUSH BOLTS WITH COORDINATOR & DUST PROOF STRIKE |
| CL  | LOCKSET, CLASSROOM FUNCTION                                |
| DL  | DEADLOCK   |
| DUN | NARROW STYLE DEADLOCK                                      |
| DT  | DUMMY TRIM   |
| EM  | LOCKSET, ELECTROMECHANICAL                                 |
| EN  | LOCKSET, ENTRANCE FUNCTION                                 |
| ES  | ELECTRIC STRIKE  |
| FB  | FLUSH BOLTS WITH DUST PROOF STRIKE                         |
| LOK | LOCK, ELECTROMAGNETIC                                      |
| OF  | LOCKSET, OFFICE FUNCTION                                   |
| PR  | LOCKSET, PRIVACY FUNCTION                                  |
| PA  | LATCHSET, PASSAGE FUNCTION                                 |
| ST  | LOCKSET, STOREROOM FUNCTION                                |

##### EXIT DEVICES:

|        |   |
|--------|---|
| ECVREN | CONCEALED VERTICAL ROD, ENTRANCE FUNCTION                             |
| ECVROE | CONCEALED VERTICAL ROD, EXIT ONLY FUNCTION (ETC. FOR OTHER FUNCTIONS) |
| ECVRP  | CONCEALED VERTICAL ROD, PASSAGE FUNCTION                              |
| ERE    | RIM, ENTRANCE FUNCTION  |
| ERO    | RIM, EXIT ONLY FUNCTION (ETC. FOR OTHER FUNCTIONS)                    |
| EVRP   | EXPOSED VERTICAL ROD, PASSAGE FUNCTION                                |

##### CLOSING DEVICES:

|     |                    |
|-----|--------------------|
| ACL | AUTOMATIC RELEASED |
| COL | OVERHEAD CONCEALED |
| CL  | OVERHEAD EXPOSED   |
| FCL | FLOOR, RECESSED    |

##### MISCELLANEOUS HARDWARE ITEMS:

|       |  |
|-------|--|
| AP    | ARMOR PLATES                             |
| BF    | BI-FOLD DOOR HARDWARE SET                |
| CATCH | OVERHEAD MAGNETIC CATCHES                |
| DC    | DRIP CAP                                 |
| DV    | DOOR VIEWER                              |
| EG    | EDGE GUARDS                              |
| F     | FLOOR STOP                               |
| FH    | FLOOR HOLDER                             |
| KP    | KICK PLATES                              |
| MAG   | MAGNETIC DOOR HOLDER                     |
| O     | OVERHEAD SURFACE-MOUNTED SLIDE STOP      |
| PLL   | PULL BAR                                 |
| PSB   | PUSH BAR                                 |
| PSP   | PUSH PLATE                               |
| SL    | SLIDING DOOR HARDWARE SET                |
| SND   | SOUND SEALS, INCL. AUTOMATIC DOOR BOTTOM |
| THR   | THRESHOLD                                |
| W     | WALL-MOUNTED BUMPER-STOP                 |
| WTHR  | WEATHERSTRIPPING, INCLUDING BOTTOM SWEEP |

#### GENERAL NOTES: FINISH SCHEDULE

- PROVIDE RESIL. BASE AT ALL NEW PAINTED GWB WALL CONSTRUCTION IN COORIDR 102 AND STORAGE 007
- REFER TO SPECIFICATIONS FOR PAINT TYPES AND SYSTEMS.

#### FINISH SCHEDULE KEYNOTES

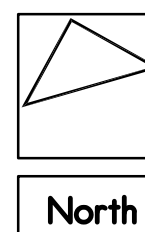
|       |                                   |       |                        |
|-------|-----------------------------------|-------|------------------------|
| ACP1  | ACOUSTICAL CEILING PANEL (TYPE 1) | PT    | PAINT                  |
| ACP2  | ACOUSTICAL CEILING PANEL (TYPE 2) | PAT   | PAVER TILE             |
| ACT   | ACOUSTIC CEILING TILE (12"x12")   | PL    | PLASTIC LAMINATE       |
| AL    | ALUMINUM                          | PORC  | PORCELAIN TILE         |
| AWP   | AC WALL PANEL                     | QT    | QUARRY TILE            |
| CC    | CUBICLE CURTAIN                   | RB    | RUBBER BASE            |
| CPT   | CARPET                            | RESIL | RESILIENT BASE         |
| CT    | CERAMIC TILE                      | RFM   | RECESSED FLOOR MAT     |
| EP    | EPOXY                             | SCONC | SEALED CONCRETE        |
| EXIST | EXISTING - NO WORK                | TB    | TACK BOARD             |
| EXP   | EXPOSED                           | TERR  | TERRAZZO               |
| FWC   | FABRIC WALL COVERING              | VB    | VINYL BASE             |
| GL    | GLASS                             | VCT   | VINYL COMPOSITION TILE |
| MTL   | METAL                             | VWC   | VINYL WALL COVERING    |
| MIN   | MINIMUM                           | WD    | WOOD                   |

#### GENERAL NOTE:

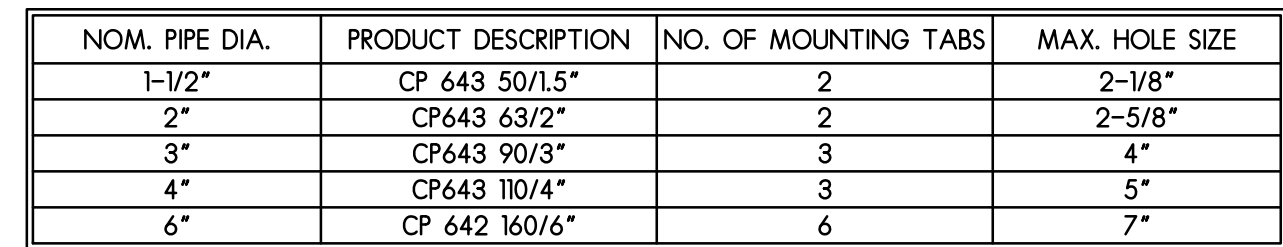
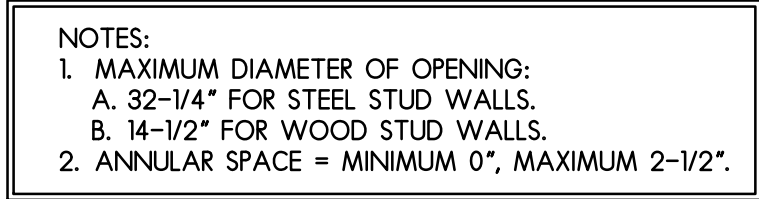
- EXISTING APPLIED FIREPROOFING TO BE PATCHED IF DISTURBED DURING CONSTRUCTION.

#### SCHEDULES & PLAN DETAILS

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

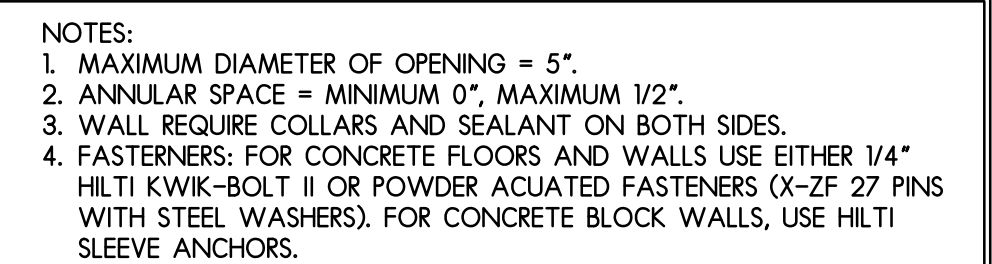
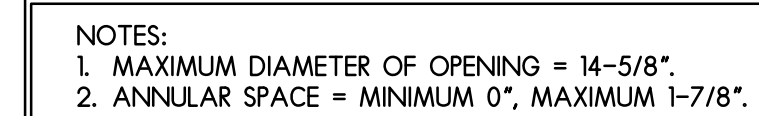
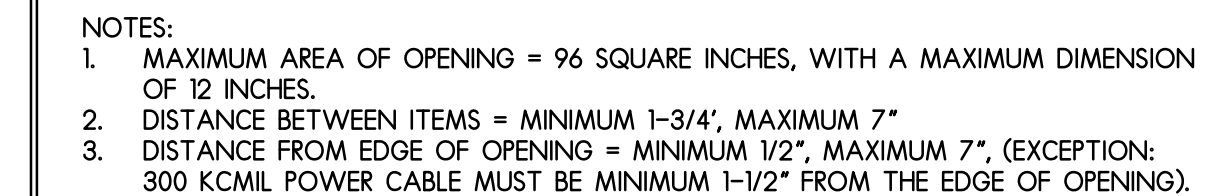
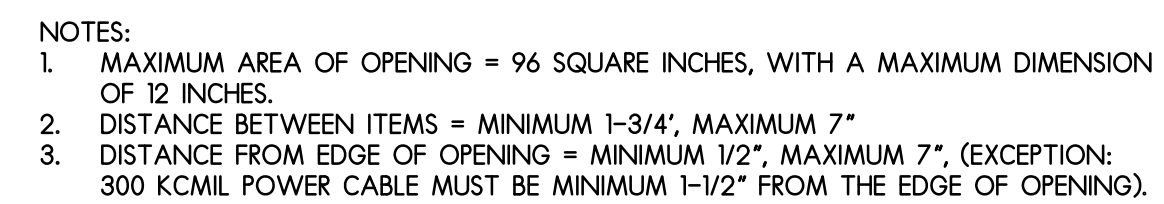
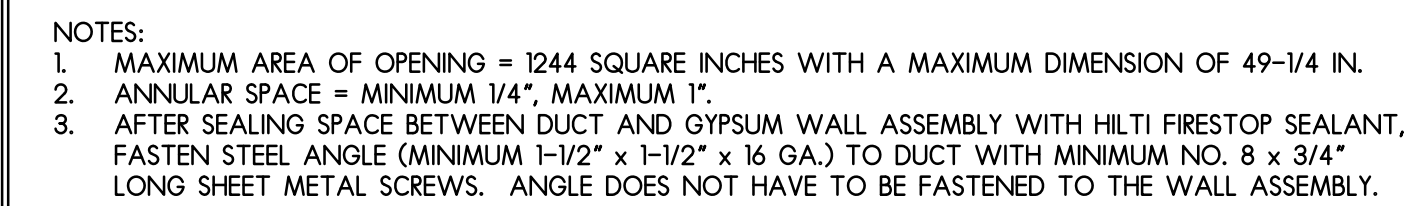
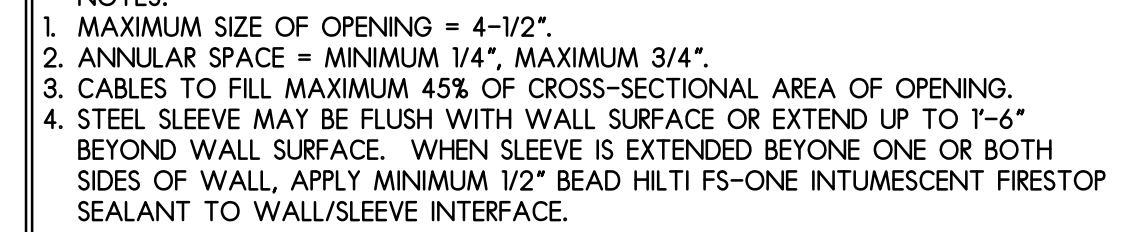






NOTES:

1. TO IMPEDE COLD SMOKE, PROVIDE 1/4" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT IN ANNULAR SPACE AROUND PLASTIC PIPE.
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1/2"
3. CLOSED OR VENTED PIPING SYSTEMS. (PVC, ABS, FRPP - SCH. 40, CPVC = SDR 17).

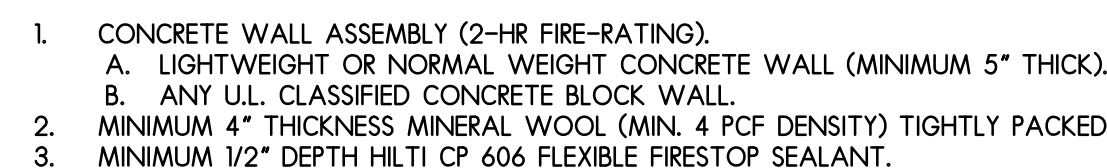
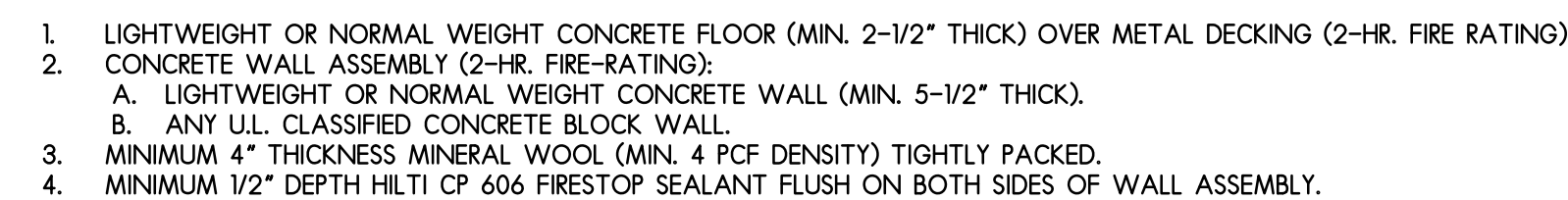
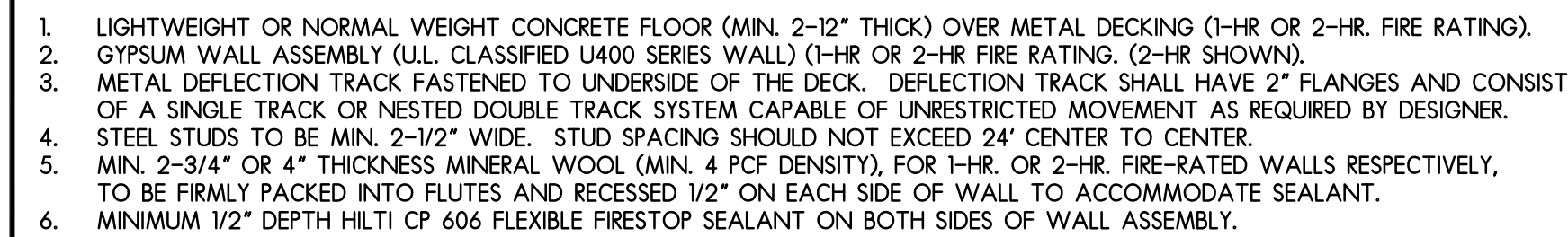


GENERAL FIRE-STOP SYSTEM NOTES:

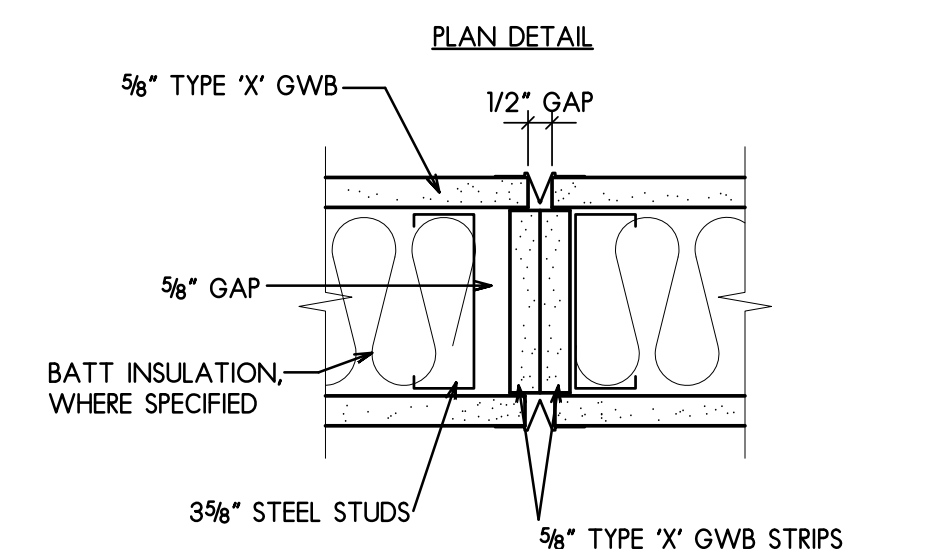
1. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL FIRE-STOP DETAILS AND RESPONSIBILITIES AND CONFIRMING THAT EACH TRADE HAS INCLUDED APPROPRIATE COSTS FOR SUCH FIRE-STOP WORK IN THEIR BID OR THAT THE G.C. WILL ASSUME THE RESPONSIBILITY FOR THIS WORK HIMSELF.
2. THESE DETAILS & NOTES ARE INTENDED TO BE A GENERAL GUIDE AS TO TYPICAL EXPECTED CONDITIONS. ACTUAL CONDITIONS AND DETAILS SHALL BE REVIEWED BY EACH TRADE WITH THE GENERAL CONTRACTOR. ALTERNATIVE L1 APPROVED FIRE-STOP SYSTEMS OR DETAILS MAY BE USED WHICH SATISFY THE FIRE RATING REQUIREMENTS.
3. FOR LARGER OPENINGS, ADDITIONAL ITEMS PENETRATING OPENINGS, ETC. SECURE "ENGINEERING JUDGEMENT" SHEETS FROM FIRE-STOP SYSTEM MANUFACTURER'S TECHNICAL SUPPORT DEPARTMENTS (SUCH AS HILTI OR TREMCO).
4. IN LIEU OF SECURING SPECIAL "ENGINEERING JUDGEMENTS" FOR LARGER OPENINGS WITH MULTIPLE PENETRATING ITEMS OF VARIOUS SIZES AND MATERIALS PENETRATING AN OPENING, THE CONTRACTOR MAY POUR A MINIMUM 6" THICK CONCRETE AROUND ALL SUCH ITEMS TO FILL THE BULK OF THE OPENING AND THEN FIRE-STOP/EACH ITEM AS AN INDIVIDUAL PENETRATION AS PER TYPICAL L1 APPROVED DETAILS. ASSUME A MINIMUM 5# RE-BAR DOWELS OR 1/2" x STUDS 12" O.C. TO THE THICK CONCRETE REINFORCING. ADJUST REBAR OR STUDS TO ACCOMMODATE REBAR DOWELS TO LARGE OPENING. INLETS OR SEAL FRAMES AS REQUIRED. COORDINATE EXACT DETAILS OF THIS INFILL CONCRETE WITH THE STRUCTURAL ENGINEER/ ARCHITECT PRIOR TO PROCEEDING.)
5. SUBMIT A DETAILED SCHEDULE OF PENETRATION LOCATIONS, INTENDED FIRE-STOP DETAILS, MATERIALS/ CURING, ETC. TO THE ARCHITECT FOR REVIEW AND CITY APPROVAL PRIOR TO PROCEEDING TO ORDER MATERIAL AND INSTALL THE WORK.
6. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

SCALE: NONE





NOTES:  
MAXIMUM WIDTH OF JOINT = 3-3/4"



GENERAL FIRE-STOP SYSTEM NOTES:

1. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL FIRE-STOP DETAILS AND RESPONSIBILITIES AND CONFIRMING THAT EACH TRADE HAS INCLUDED APPROPRIATE COSTS FOR SUCH FIRE-STOP WORK IN THEIR BID OR THAT THE G.C. WILL ASSUME THE RESPONSIBILITY FOR THIS WORK HIMSELF.
2. THESE DETAILS & NOTES ARE INTENDED TO BE A GENERAL GUIDE AS TO TYPICAL EXPECTED CONDITIONS. ACTUAL CONDITIONS AND DETAILS SHALL BE REVIEWED BY EACH TRADE WITH THE GENERAL CONTRACTOR. ALTERNATIVE LUL APPROVED FIRE-STOP SYSTEMS OR DETAILS MAY BE USED WHICH Satisfy THE FIRE-STOPPING REQUIREMENTS.
3. FOR LARGER OPENINGS, ADDITIONAL ITEMS PENETRATING OPENINGS, ETC. SECURE "ENGINEERING JUDGEMENT" SHEETS FROM FIRE-STOP SYSTEM MANUFACTURERS' TECHNICAL SUPPORT DEPARTMENTS (SUCH AS ILIUL OR TREMCO).
4. IN CASE OF SECURING SPECIAL "ENGINEERING JUDGEMENTS" FOR LARGER OPENINGS WITH MULTIPLE ITEMS, THE CONTRACTOR SHALL PROVIDE VARIOUS SIZES AND MATERIALS PENETRATING THE OPENING. THE CONTRACTOR MAY POUR A MINIMUM 6" THICK CONCRETE AROUND ALL SUCH ITEMS TO FILL THE BULK OF THE OPENING AND THEN FIRE-STOP/EACH ITEM AS AN INDIVIDUAL PENETRATION AS PER TYPICAL LUL APPROVED DETAILS. ASSUME A MINIMUM 5/8 RE-BAR DOWELS OR 1/2" x STUDS 12" O.C. TO THE THIS CONCRETE. CUT SHEETS INTO 2' SQUARES OR 2' x 4' RECTANGLES. PROVIDE 1/2" REBAR OR 1/2" STUDS IN STEEL FRAMES AS REQUIRED. COORDINATE EXACT DETAILS OF THIS INFILL CONCRETE WITH THE STRUCTURAL ENGINEER/ ARCHITECT PRIOR TO PROCEEDING.)
5. SUBMIT A DETAILED SCHEDULE OF PENETRATION LOCATIONS, INTENDED FIRE-STOP DETAILS, MATERIALS, CUT SHEETS, ETC. TO THE ARCHITECT FOR ARCHITECT REVIEW AND CITY APPROVAL PRIOR TO PROCEEDING TO ORDER MATERIAL AND INSTALL THE WORK.
6. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

## FIRE-RESISTIVE JOINT SYSTEM DETAILS

**SCALE:**

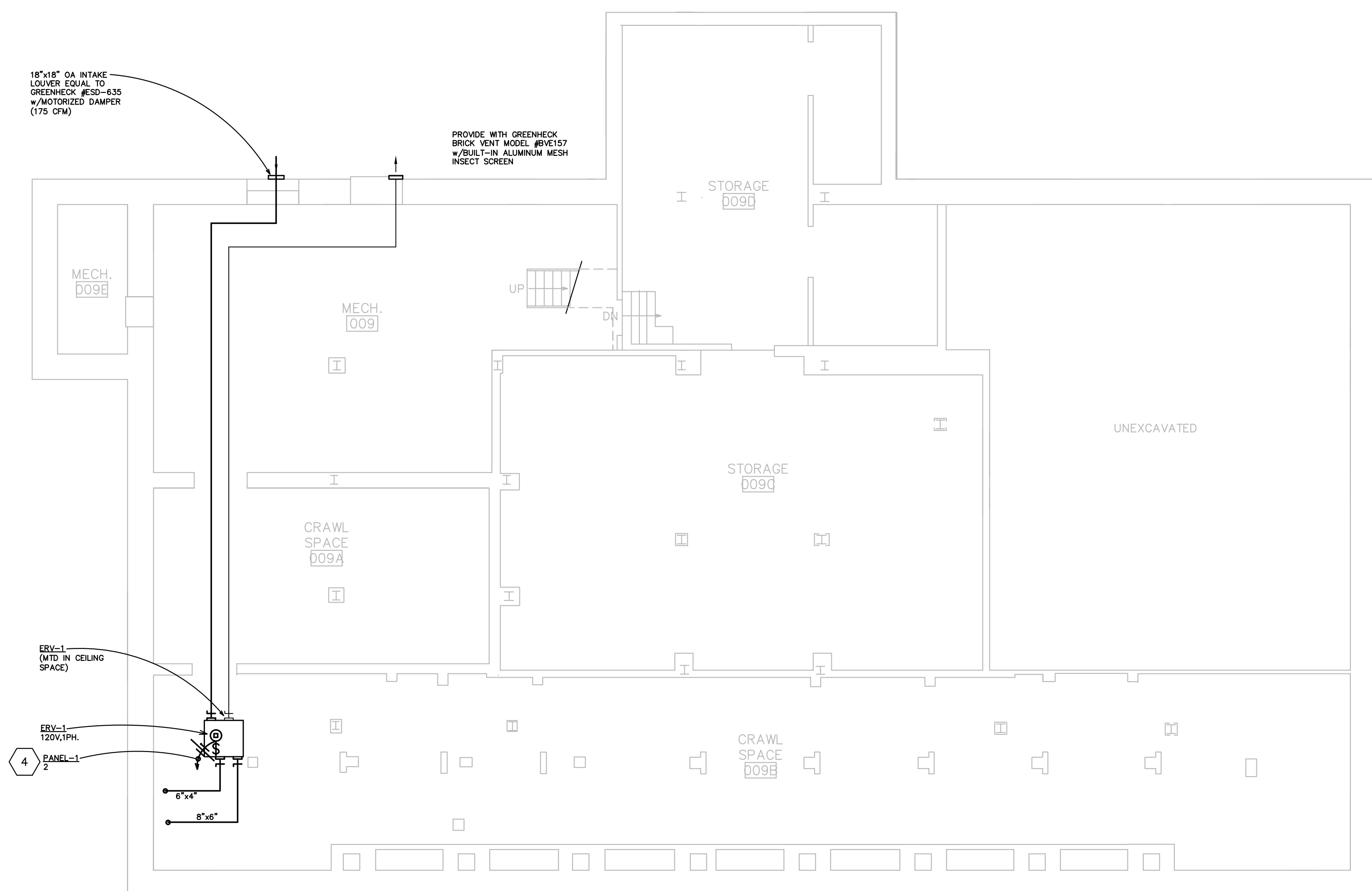
NONE



| VENTILATION SCHEDULE                        |          |                        |                |                       |                 |               |                             |           |         |       |
|---|----------|------------------------|----------------|-----------------------|-----------------|---------------|-----------------------------|-----------|---------|-------|
| 2018 IMC -- TABLE 403.3.1.1<br>REQUIREMENTS |          |                        |                |                       |                 |               | REQ'D. SPACE<br>VENTILATION | SERVED BY |         |       |
| RM #  | ROOMNAME | PLR. AREA<br>(SQ. FT.) | # OF<br>PEOPLE | O.A. REQ'D.<br>PERSON | CFM/<br>Sq. Ft. | O.A.<br>CFM   | REQ'D.<br>CFM               | SUPPLY    | EXHAUST | NOTES |
|   |          | At                     | Rp             | Rp                    | Rp              | O.A.<br>(CFM) | O.A.<br>(CFM)               |           |         |       |
| 007   | STORAGE  | 503                    | --             | --                    | 1.12            | 65            | --                          | ERV-1     | --      | 1     |
| 010   | STORAGE  | 540                    | --             | --                    | 0.12            | 70            | --                          | ERV-1     | --      | 1     |
| 011   | STORAGE  | 325                    | --             | --                    | 0.12            | 40            | --                          | ERV-1     | --      | 1     |

NOTES:

1. ERV SHALL OPERATE CONTINUOUSLY WHEN BUILDING IS OCCUPIED TO SUPPLY CODE REQUIRED OUTSIDE AIR.



REFERENCE NOTES:

- 1 MECHANICAL CONTRACTOR SHALL INSULATE DUCTWORK.  
ALL DUCTWORK SHALL COMPLY WITH 2018 IMC SECTION 604.  
AND 2018 IECC SECTION C403.11.1 FOR COMMERCIAL BUILDINGS.
- 2 MECHANICAL CONTRACTOR SHALL INSTALL FIRE DAMPERS WHERE  
REQUIRED AND IN ACCORDANCE WITH INTERNATIONAL FIRE CODE.

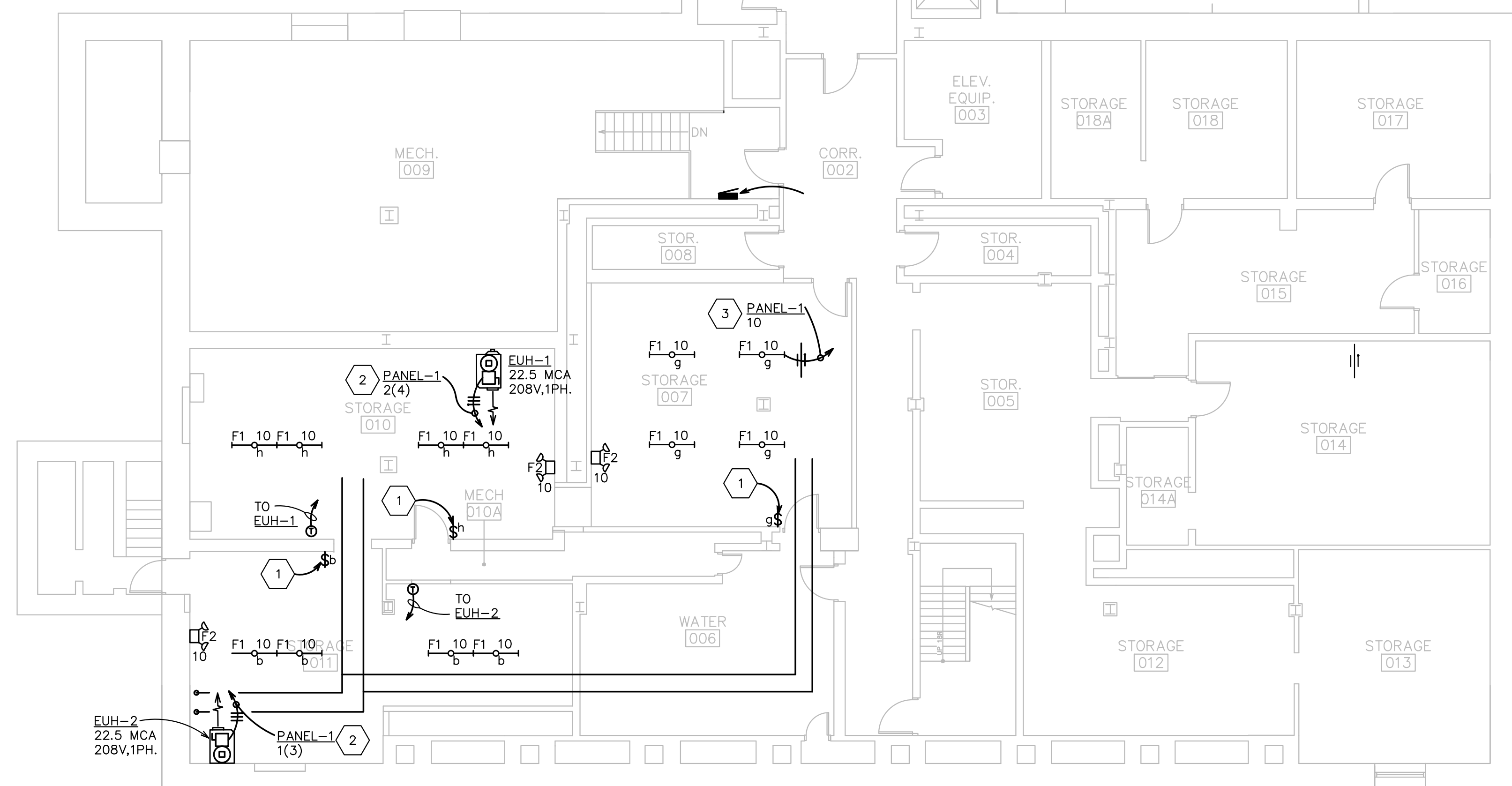


HVAC/ELECTRICAL  
SUB LEVEL  
FLOOR PLAN  
SCALE: 1/4" = 1'-0"

| ELECTRIC UNIT HEATER SCHEDULE |        |           |               |            |      |        |     |               |        |       |       |      |        |       |
|-------------------------------|--------|-----------|---------------|------------|------|--------|-----|---------------|--------|-------|-------|------|--------|-------|
| UNIT MARK                     | MTR    | MODEL     | SERVING       | CAP. WATTS | AMPS | BTU/HR | CFM | MOUNTING TYPE | THROW  | VOLTS | PHASE | WCA  | WEIGHT | NOTES |
| ELH-1                         | Q-MARK | MMH-05004 | STORAGE ROOMS | 1,874      | 9    | 6366   | 270 | COLDING       | 16'-0" | 208   | 1     | 22.5 | 24g    | 1-9   |
| ELH-2                         | Q-MARK | MMH-05004 | STORAGE ROOMS | 1,874      | 9    | 6366   | 270 | COLDING       | 16'-0" | 208   | 1     | 22.5 | 24g    | 1-9   |

ALTERNATE MANUFACTURER'S ACCEPTED PROVIDED THEY ARE EQUAL TO SPECIFIED EQUIPMENT INCLUDING ALL OPTIONS/ACCESSORIES LISTED BELOW. NOTES:

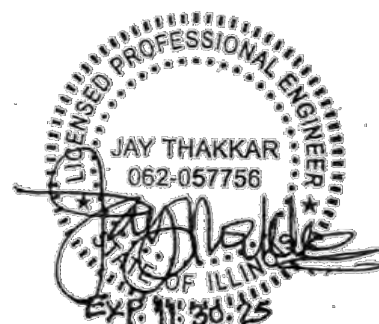
1. FURNISH AND INSTALL WITH MPT'S DISCONNECT SWITCH (DIS30).
2. PROVIDE WITH THERMAL OVERLOAD PROTECTION.
3. PROVIDE WITH INTEGRAL THERMOSTAT RANGE 45-85°F.
4. SUBMIT MANUFACTURER'S SHOP DRAWINGS FOR APPROVAL PRIOR TO ORDERING.
5. HEATER CORDS EQUIPPED WITH CULING-MOUNT BRACKET FOR HORIZONTAL OR VERTICAL, FLOW MOUNTING OR ANY POSITION IN-BETWEEN.
6. MPT'S RECOMMENDED CLEARANCES MUST BE MAINTAINED FOR HORIZONTAL AIRFLOW: BOTTOM OF HEATER TO FLOOR 6" ± MIN/6" MAX/6" MIN.
7. MOUNTING LOCATION TO ADJACENT WALL 13" MIN. MAXIMUM TO ANY OBJECTS 13" MIN.
8. BUILT-IN SINGLE-POLE THERMOSTAT.
9. ADJUSTABLE LEVERS CONTROL AIR THROW DIRECTION.
10. ANCHORING OF THE CEILING MOUNTING MUST BE SUFFICIENT STRENGTH TO SUPPORT THE TOTAL WEIGHT OF THE HEATER PLUS THE WEIGHT OF THE MOUNTING PROVISIONS.



REFERENCE NOTES:

- |   |   |
|---|---|
| 1 | PROVIDE MOTION SENSOR SWITCH. UNIT TO BE EQUIVALENT TO WATTSTOPPER NO. PW-100W  |
| 2 | PROVIDE NEW 30 AMP 2 POLE BREAKER IN SPACE AVAILABLE. CIRCUIT NUMBER IS FOR REFERENCE ONLY. FOR NEW ELECTRIC UNIT HEATER. VERIFY PRIOR TO INSTALLATION. |
| 3 | PROVIDE NEW 20 AMP 1 POLE BREAKER IN SPACE AVAILABLE. CIRCUIT NUMBER IS FOR REFERENCE ONLY. FOR NEW LIGHTING. VERIFY PRIOR TO INSTALLATION.             |
| 4 | PROVIDE NEW 20 AMP 1 POLE BREAKER IN SPACE AVAILABLE. CIRCUIT NUMBER IS FOR REFERENCE ONLY. FOR NEW ERV-1. VERIFY PRIOR TO INSTALLATION.                |

HVAC/ELECTRICAL  
MAIN LEVEL  
FLOOR PLAN  
SCALE: 1/4" = 1'-0"



Legacy Designs, Inc.

555 S. Perryville Road  
ROCKFORD, ILLINOIS 61108  
Professional Design Firm No. 184-003483  
815-484-4708 Phone 815-484-4710 Fax  
e-mail [legacy@legacysdesigns.net](mailto:legacy@legacysdesigns.net)  
web site [www.legacysdesigns.net](http://www.legacysdesigns.net)



**Larson & Darby Group**  
Architecture Engineering Interiors

LOWER LEVEL STORAGE ROOM WORK  
WINNEBAGO COUNTY COURTHOUSE  
400 West State Street Rockford, Illinois 61101

**COPYRIGHT 2024**  
All drawn and written information  
appearing herein shall not be  
duplicated, disclosed, or otherwise  
used without the written consent of  
**Larson & Darby Group**

|             |      |             |              |
|-------------|------|-------------|--------------|
| ISSUED FOR: | DATE | ISSUED FOR: | DATE         |
|             |      |             |              |
|             |      |             |              |
|             |      |             |              |
| DRAWN BY:   |      | CHECKED BY: | APPROVED BY: |
| LEGACY      |      | J.T.        |              |

|                |
|----------------|
| DATE: 07-25-23 |
| PROJECT NUMBER |
| 222321         |
| SHEET NUMBER   |
| ME-1           |



SECTION 15300 – FIRE PROTECTION

- 1 General

1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 Provide complete systems as called for, and/or shown, and/or specified. Fire Protection Contractor shall furnish and completely install the system, service, equipment, or material named, together with other associated devices, equipment, materials, wiring, piping, etc., as required for a complete satisfactory operating installation. Other subcontractors, as required to perform work called for, shall be responsible to the Fire Protection Contractor. Secure all permits for work and inspections as required.

1.3 Coordination: Before submitting his bid, Contractor and manufacturer shall carefully check all plans and specifications for every trade and shall include in bid all work to be provided by him. All trades shall coordinate their work with that of other trades so as to avoid interferences and conflicts of work indicated. Work must be completed as scheduled by the Architect. Determine at time of bidding to avoid misunderstanding. Any discrepancies noticed at time of pre-bid meeting and/or inspection of site by those inspecting for bidding the project, shall be brought to the Architect's attention immediately, so that corrections can be made by Addendum prior to bid date.

1.4 Work Priority Over the Other Trades:

A. All contractors for the Mechanical–Electrical trades are to be governed as follows and work in cooperation with one another to fit piping and ductwork into the structure as job conditions may demand. All final decisions as to right of way and run of pipe, ducts, etc., to be made by Architect.

B. In general, priority is to be arranged as follows:

1. Sprinkler heads.

2. Recessed lighting fixtures.

3. Sheet metal duct work/AVAC units.

4. Plumbing waste lines, down spouts and vents.

5. Refrigeration lines.

6. Sprinkler lines.

7. Heating lines.

8. Plumbing water lines.

9. Electrical conduits.

10. Control air lines or conduits.

1.5 Qualifications: The system shall be designed and installed by a firm regularly engaged in the design and installation of Fire Protection systems in accordance with the requirements of the National Fire Protection Association. The firm shall have a minimum of five (5) years experience in fire protection system design and installation for projects of similar nature to this project. Engineer/Architect may require evidence to support the above qualifications and may reject any proposed installer who cannot show suitable experience.

1.6 Workmanship: All work shall be performed in a workmanlike manner following the best practice for the construction indicated.

1.7 Correlation of Work: All trades shall correlate their work with that of other trades so as to prevent interference and delays.

1.8 Codes and Standards:

A. Work performed under this contract shall be governed by the latest AIA General Conditions.

B. The Fire Protection Contractor's work shall conform to all prevailing codes and regulations pertaining to their work including all requirements of inspection agency, of Owner's insurance company, to all local and state government requirements, of local water utility and fire marshal.

C. All materials shall conform to applicable standards of such devices, including NFPA and UL, and shall be USA make.

D. Materials and workmanship shall comply with applicable local, state and federal codes and local utility company regulations.

1. In case of differences between building codes, local, state and federal laws, and utility company regulations and contract documents, most stringent shall apply. Promptly notify Architect/Engineer in writing of any such difference prior to submitting bid.

2. Applicable codes shall include, but not necessarily be limited to the following:

a. 2015 International Fire Code (IFC) with local amendments

b. Owner's Insurance Company Requirements

c. OSHA

d. Local code amendments to local ordinances or codes.

e. ASTM, AWWA, WWP, etc. and other similar codes, standards, specifications

f. Where reference is made in these or other specifications, it shall be the latest revision at the time of call for bids unless specifically noted on plans or in specifications.

g. Should work be performed which does not comply with requirements of applicable building codes, state and federal laws, industry standards and utility company regulations, changes for compliance shall be done at contractor's expense.

h. Each trade shall cooperate with and assist other trades on project in conformance with trade jurisdictional rulings and shall perform work which is within its jurisdiction.

i. Notify Architect/Engineer of any materials or apparatus believed to be inadequate, unsuitable, in violation of laws, ordinances, rules or regulations of authorities having jurisdiction prior to submitting bid.

E. Electrical equipment, wiring, etc., shall comply with requirements of NFPA, NEC, UL, OSHA, BOCA, state and federal safety codes; for a particular type installation and shall be so labeled where applicable.
- 1.9 Permits and Fees: The Fire Protection Contractor is to be responsible for the obtaining of his respective permits, and their cost, as well as other fees necessary to the project.
- 1.10 Materials: All materials are to meet or exceed the minimum standards of A.S.T.M. and the approval of state and local codes responsible for such approvals. In no case shall used or reconditioned material be used. All shall be in new and working order.
- 1.11 Scope: The Fire Protection work shall be furnished and installed as stated under systems.
- 1.12 Submittals

A. Submit signed shop drawings for all required equipment and material items.

B. Provide maintenance manuals.
- 1.13 Openings, Sleeves and Chases:

A. Contractor shall set sleeves and inserts required for piping, hangers, intakes, louvers, ventilators, ductwork, curbs, etc., in construction. Contractor to furnish General Contractor with complete information as to size and location of openings through walls, floors, roofs, etc., for installing this work. If this information is not supplied before new walls, floors, roofs, etc., are built, respective Contractor shall furnish, cut and patch all required openings for installation of equipment, material, devices, etc., as required and approved by the Architect.

1.14 Examination of Work:

A. Contractor shall carefully examine the site for the work to eliminate misconceptions of fact, to verify dimensions, elevations, location of existing equipment, services, piping and to observe features affecting working conditions, transportation and storage facilities. Contractor shall give due consideration to same in preparing proposals/bids as exceptions will not be considered after awarding of contract, nor will Contractor be entitled to any extra compensation for his failure to determine conditions or connections at the site.

B. The run of all lines shown on drawings is to be regarded as diagrammatic and tentative. Contractor shall carefully verify location, depth, and size of line service, etc., to which connection is proposed. Before installing any service, line connections, etc., Contractor shall assure that they can be run/made as contemplated without trapping or interfering with footing, other piping, fixtures, etc. Any necessary deviation shall be referred to Architect/Engineer for approval/authorization before any line or service are run.

1.15 Warranty: All systems, materials, equipment items, etc. shall be guaranteed in writing for a period of one year after systems have been accepted by the Owner.

2 PRODUCTS

2.1 Acceptable Manufacturers:

A. Sprinkler Heads, Sprinkler Head Guards, Spare Sprinkler Head Cabinets: Central, Reliable, Viking

2.2 Systems:

A. Fire Protection: Furnish and install a Fire Protection System of first quality in every and all respects, together with the necessary pipe, fittings, and other apparatus as hereinafter enumerated.

B. Piping Installation:

1. Pipe sizes given on plans are minimums. Pipe sizes not given shall be determined by contractor, as required to conform with these specifications.

2. All sprinkler piping shall be concealed in finished spaces. Pipe in unfinished spaces may be exposed as indicated on drawings.

3. Neither the ceiling nor the ceiling suspension system is to be erected until all piping has been installed, tested, and if specification hereinafter, painted. The pendant sprinklers shall be aligned within normal fabrication installation tolerances and shall be centered or be 1"–0" from tile end and centered in ceiling tile modules.

4. All pipe penetrations through walls and floors shall have sleeves. Sleeves shall be caulked in a fireproof and waterproof manner.

C. Drains:

1. Provide drains and drain valves as required to properly drain system. Necessary drains connections shall be to the storm sewer.

D. Hangers:

1. Provide hangers as required by applicable codes.

2.3 Pipe Materials: All pipe materials shall be as approved by code and as follows:

A. Interior Systems:

1. Interior above ground piping shall be:

a. 1"– 2": Schedule 40 black steel with threaded, grooved or flanged fittings.

b. 2 1/2" – 4": Schedule 10 minimum black steel with roll grooved, welded or mechanical tee or welded outlet fittings.

c. 6": 0.134 minimum wall thickness black steel with roll grooved, welded or mechanical tee fittings.

d. No threadable light wall sprinkler pipe nor "crimp-on" nor "plain end" pipe fittings will be permitted.

2.4 Sprinkler Equipment:

A. Sprinkler Heads (SH):

1. See Sprinkler Head schedule on drawings.

B. Sprinkler Guards:

1. Standard sprinkler guard of welded steel wire with baked red enamel or standard brass finish in unfinished areas, or bright chrome in finished areas, to fit 1/2" and 3/4" NPT male pipe threads.

C. Spare Sprinkler Head Cabinets:

1. To house spare sprinklers of all types installed and associated sprinkler wrenches as required to accommodate spare sprinkler requirements per NFPA 13.

3 EXECUTION

3.1 General

A. The Fire Protection Contractor shall include all requirements as noted herein and as required to provide a complete, safe operating building fire protection system.

B. Identification

1. Identification signs shall be provided for system piping, auxiliary drains, inspector's tests connections, alarms, control valves, cabinets, etc., as required by NFPA 13, NFPA 14, BOCA and local Fire Department requirements.

C. System and equipment installations shall include, but not be limited to the following:

D. Interior Sprinkler System:

1. Interior system shall be complete with all required sprinklers, all associated piping, hangers, valves, drains, inspector's test stations, etc. of the wet or dry type as required.

2. Sprinkler piping shall be concealed above ceilings in finished areas, other areas may be exposed, unless indicated otherwise on drawings. Exposed sprinkler pipe and fittings shall be suitable for painting. In general, sprinkler piping shall be installed at maximum height throughout the building. Offset piping as required to clear mechanical ductwork, piping, building structure, etc. If necessary, provide appropriate supporting members for piping, which shall be attached to the building structure so that the load imposed by the piping will not exceed the limitations of the structure. The piping installation shall be consistent with fire codes, relative to provisions for drainage and obstruction to spray pattern. Provide necessary deflectors so that heads will not spray onto electrical equipment.

3.2 Sprinklers located 7"–0" or less above finished floor elevation shall be provided with approved guards. Sprinklers located near heat producing equipment shall conform to NFPA Section 23, relative to temperature ratings. Where ceiling tiles occur, sprinklers shall be located in center of tile. Coordinate with interior design drawings.

3.3 Piping shall be pitched so the entire system can be drained. Drains shall be piped to discharge at safe points outside the building or to sight cone attached to drains of adequate size to readily care for the full flow from each sprinkler drain under maximum pressure. Auxiliary drains shall be provided as required by NFPA Standards.

3.2 Working Drawings:

A. Complete system shall be drawn to scale, with all parts, sprinklers, piping, risers, mains, branches, valves, alarms, wiring, etc. fully coordinated with all construction such as beams, joists, columns, unit heaters, ducts, fans, diffusers, grilles, lighting fixtures, special electrical equipment and systems, etc. and shall be approved in writing by inspection agency, Fire Department and Engineer.

B. All interferences shall be avoided, with sprinkler installation varied as required and as approved by Engineer and inspection agency.

3.3 Inspector's Test Station:

A. Provide a 1" inspector's test station terminating in a smooth bore corrosion resistant orifice. The orifice shall have a flow equivalent to one sprinkler head. Each sprinkler system shall be provided with an inspector's test station from the most remote sprinkler in the system. Each test station shall be complete with a globe valve. Where possible, the globe valve shall be located a maximum of 7'–0" above floor. Test station and location of valve shall be identified by applicable signage.

3.4 Testing and Flushing:

A. Test connections shall be provided for each sprinkler system or portion of each sprinkler system and shall be located at the hydraulically most remote part of each system. Test connection shall be piped to a location where the discharge will be readily visible and where water may be discharged without damage.

B. All piping shall be thoroughly flushed and tested in accordance with NFPA requirements, and left in good working order. Repair or replace piping to eliminate leakage, in accordance with NFPA requirements. Certificate of tests shall be forwarded to the Architect. All tests shall be made in the presence of a representative of the Authority having jurisdiction. All necessary equipment, materials and labor for tests shall be provided by the installing contractor.

C. Prior to connecting to overhead sprinkler piping, the underground main shall be flushed and tested by installer in the presence of a representative of the Authority having jurisdiction and the Architect and meet with their approval. Certificate of test shall be forwarded to the Architect.

D. Attention is especially called to the fact that the Contractor shall be responsible for damage to any part of the premises caused by leaks or breaks in the pipe installed under this Section, for a period of one (1) year from the date of acceptance of the work by the Owner.

3.5 Cutting and Patching:

A. Contractor shall be responsible for all cutting and patching as required for his work.

3.6 Cleaning:

A. Contractor shall be responsible for cleaning of his equipment, systems, and shall remove all debris created by him from the premises. Entire work area shall also be broom cleaned.

3.7 Painting:

A. No painting shall be in the fire protection contract.

3.8 Completion and Certification:

A. After completion of the installation, the Fire Protection Contractor shall furnish a written statement to the effect that work has been completed and tested in accordance with the working drawings and specifications. Letter and Contractor's material and test certificate shall be prepared in triplicate and given to the Architect for distribution. Contractor shall furnish owner with copy of NFPA 25 – Inspection, Testing and Maintenance of Water Based Fire Protection Systems.

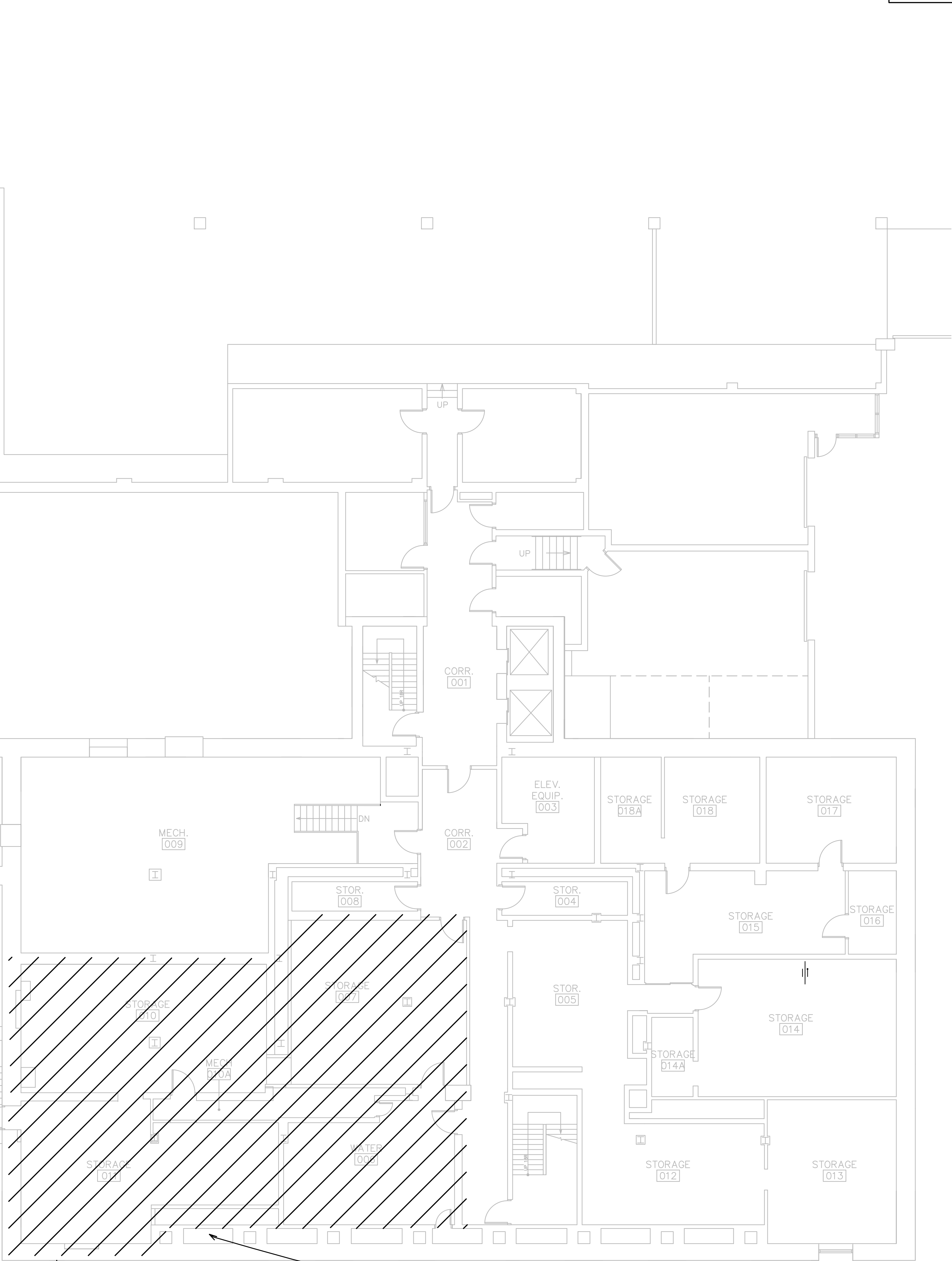
B. Guarantee:

1. Contractor shall guarantee all equipment, apparatus, materials and workmanship entering into this contract and shall replace all parts at his own expense which have proven defective within one (1) year from formal acceptance. Individual items shall be guaranteed as called for in addition to the above.

C. Record Documents:

1. Contractor to retain on site one (1) complete marked up set of "As-Built" project prints to be turned over to the Owner at completion of project. Contractor shall retain copy of project for his records.

End of Section 15300 – Fire Protection





|  |       |  |
|--|-------|--|
|  | 24x12 | NEW RECTANGULAR METAL DUCT:<br>1) FIRST DIMENSION IS SIDE SHOWN<br>2) ALL DUCTWORK SIZES SHOWN ARE<br>NET FREE INSIDE DIMENSIONS |
|  | 6\"/> | 3) GALVANIZED SHEET METAL<br>NEW ROUND DUCT (SEE NOTES ABOVE)  |
|  | 24x12 | NEW OVAL DUCT (SEE NOTES ABOVE)  |
|  |       | ROUND DUCT ELBOW TURNED UP   |
|  |       | RECTANGULAR ELBOW TURNED UP, SUPPLY<br>OR OUTSIDE AIR DUCT   |
|  |       | RECTANGULAR ELBOW TURNED UP, EXHAUST<br>OR RETURN AIR DUCT   |
|  |       | ROUND DUCT ELBOW TURNED DOWN   |
|  |       | RECTANGULAR ELBOW TURNED DOWN,<br>SUPPLY OR OUTSIDE AIR DUCT   |
|  |       | RECTANGULAR ELBOW TURNED DOWN,<br>EXHAUST OR RETURN AIR DUCT   |
|  |       | RADIUS ELBOW OR<br>RECTANGULAR ELBOW WITH TURNING VANES  |
|  |       | RECTANGULAR ELBOW OR<br>TRANSFER DUCT WITHOUT TURNING VANES  |
|  |       | RADIUS TEE DUCT JUNCTION   |
|  |       | MITERED TEE DUCT JUNCTION<br>WITH TURNING VANES  |
|  |       | DUCT RISE IN DIRECTION OF ARROW  |
|  |       | DUCT DROP IN DIRECTION OF ARROW  |
|  |       | DUCT SIZE TRANSITION   |
|  |       | FOB = FLAT ON BOTTOM   |
|  |       | FOT = FLAT ON TOP  |
|  |       | STANDARD LOW VELOCITY BRANCH,<br>NO SPLITTER WITH 45° FLARE  |
|  |       | ACCESS DOOR/PANEL (SIDE OR BOTTOM)   |
|  |       | FLEXIBLE DUCT  |
|  |       | ACOUSTICALLY LINED DUCT  |
|  |       | FLEXIBLE CONNECTION  |
|  |       | EXHAUST, RETURN OR TRANSFER AIR<br>REGISTER OR GRILLE  |
|  |       | SUPPLY AIR REGISTER OR GRILLE  |
|  |       | CEILING SUPPLY DIFFUSERS<br>(AIR FLOW DIRECTION BY ARROWS)   |
|  |       | ROUND  |
|  |       | CEILING RETURN OR EXHAUST<br>REGISTER OR GRILLE  |
|  |       | SQUARE RECTANGULAR   |
|  |       | (DG) DOOR GRILLE<br>(UC) UNDER CUT   |
|  |       | AIR LOUVER, (BOTTOM OF DUCT TO<br>DRAIN TOWARD LOUVER)   |
|  |       | MOTOR OPERATED DAMPER<br>PROVIDE CEILING & DUCT ACCESS   |

|     |                                      |
|-----|--------------------------------------|
| (S) | TEMPERATURE SENSOR                   |
| (T) | THERMOSTAT OR DDC TEMPERATURE SENSOR |

1. DRAWINGS ARE GENERALLY DIAGRAMMATIC. EACH CONTRACTOR SHALL MAKE REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS SUCH AS OFF SETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND THE BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. FOR PRESENT CONSTRUCTION, VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING TO AVOID CONFLICT. IT IS INTENDED THAT ALL EQUIPMENT, MATERIAL, DEVICES AND SHALL BE LOCATED SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS, NOTWITHSTANDING THE FACT THAT LOCATIONS INDICATED BY THESE DRAWINGS MAY BE DISTORTED FOR CLARITY OF PRESENTATION.
2. EACH CONTRACTOR SHALL CHECK DRAWINGS OF THE OTHER TRADES TO VERIFY THEIR WORK WILL BE INSTALLED CLEAR OF OBSTRUCTIONS. MAINTAIN MAXIMUM HEADROOM AT ALL POINTS IN THE BUILDING, WHETHER ABOVE OR SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY ARCHITECT BEFORE PROCEEDING WITH THE INSTALLATION.
3. FURNISH ALL TRADES ADVANCE INFORMATION ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, EQUIPMENT, FRAMES, BOXES, SLEEVE AND OPENINGS NEEDED FOR WORK. FURNISH INFORMATION AND SHOP DRAWINGS TO PERMIT OTHER TRADES TO COORDINATE THEIR WORK.
4. WHERE WORK OF ONE TRADE WILL INTERFERE WITH WORK OF ANOTHER TRADE, ALL TRADES SHALL ASSIST TO WORK COORDINATE THEIR WORK.
5. PRIOR TO BIDDING THE HVAC CONTRACTOR SHALL REVIEW ALL DRAWINGS AND COORDINATE WORK. CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ARCHITECT ANY INCONSISTENCIES OR INTERFERENCE WITH HIS WORK.
6. CONTRACTOR SHALL COORDINATE ALL CEILING DIFFUSERS, REGISTERS, AND/OR GRILLES WITH SUSPENDED CEILING AND LIGHT PATTERNS. OPENINGS SHALL BE IN CENTER OF TILES.
7. SHEETMETAL DUCT SIZES MAY BE ALTERED TO FIT JOB CONDITIONS, BUT NET FREE AREA MUST BE MAINTAINED. INCREASE SHEETMETAL DUCT SIZE TO ALLOW FOR DUCT LINING WHERE USED. WRAP ALL DUCTWORK EXCEPT AS NOTED. MAXIMUM DUCT ASPECT RATIO 1:5.
8. ALL DUCTWORK TO BE HELD TIGHT TO STRUCTURAL ROOF JOISTS, BEAMS, ETC, AS CLEARANCE IS MINIMAL. COORDINATE WITH OTHER CONTRACTORS TO AVOID CONFLICT.
9. CONTRACTOR SHALL INCLUDE IN HIS WORK THE RELOCATION OF ALL CROSS BRACING, AS REQUIRED TO FIT DUCTS BETWEEN WALLS. THIS WORK SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR WITH ARCHITECTURAL APPROVAL.
10. CONTRACTOR SHALL PROVIDE ALL DUCT DROPS AND OFFSETS TO AVOID INTERFERENCES WITH JOISTS, OTHER DUCTS, LIGHTS, PIPES, ETC.
11. ALL THERMOSTATS LOCATED UP 4'-6" TO 5'-0" TO MATCH ADJACENT LIGHT SWITCHES AND WITH PLASTIC OR CAST GARDAS AS SPECIFIED. ALL THERMOSTATS LOCATED ON EXTERIOR WALLS OR COLUMNS MUST BE MOUNTED ON THERMAL INSULATING BLOCKS.
12. CONTRACTOR SHALL PROVIDE COULING COIL CONDENSATE DRAIN LINES FROM AIR HANDLING UNIT TO DRAIN.
13. HEATING, VENTILATING, AIR CONDITIONING AND ELECTRICAL DESIGNS ARE BASED ON THE REQUIREMENTS FOR THE SPECIFIED EQUIPMENT MANUFACTURER, CONDUITS, DISCONNECTS, BREAKERS, FUSES AND WIRE SIZES ARE SELECTED ON THE BASIS OF SPECIFIED EQUIPMENT MANUFACTURER, INCREASED CURRENT REQUIREMENTS FOR THE SPECIFIED LIGHT FIXTURES, AND THE SWITCHING REQUIREMENTS OF THE SPECIFIED TERMINATE OR SUBSTITUTION MANUFACTURER'S EQUIPMENT OTHER THAN AS SHOWN ON DRAWINGS OR SCHEDULES SHALL BE PROVIDED WITHOUT INCREASE IN CONTRACT PRICE BY THE CONTRACTOR FURNISHING EQUIPMENT.
14. INSTALL 1" OF NON-SHRINK GROUT AROUND DUCTWORK AND PIPING ON EACH WALL FACE TO SEAL OPENINGS AND ELIMINATE SOUND TRANSFER WITH AIR-TIGHT CONNECTIONS.
15. EXTEND RT EXHAUST TO MAINTAIN 10 FT SEPARATION TO ANY AIR INTAKES. VERIFY LOCATION. CONFIRM WITH LOCAL INSPECTORS AS TO REQUIREMENTS.
16. GUARDS SHALL BE PROVIDED WHERE APPLIANCES EQUIPMENT, FANS OR OTHER COMPONENTS THAT REQUIRE SERVICE ARE LOCATED WITHIN 10 FT OF ROOF EDGE OR OPEN SIDE OF A WALKING SURFACE AND SUCH EDGE OR OPEN SIDE IS MORE THAN 30 INCHES ABOVE THE FLOOR, ROOF OR GRADE BELOW. THE GUARD SHALL BE EXTEND NOT LESS THAN 30 INCHES BEYOND EACH END OF EQUIPMENT AND THE TOP OF THE GUARD SHALL BE LOCATED NOT LESS THAN 42 INCHES ABOVE ELEVATED SURFACE.
7. INSULATION  
DUCT INSULATION SHALL CONFORM TO THE REQUIREMENTS OF 405.3 MC SECTION 604 AND 2015 IECC SECTION C403.2.9 FOR COMMERCIAL BUILDINGS AND R403.31 FOR RESIDENTIAL BUILDINGS.

SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHERE LOCATED IN UNCONDITIONED SPACES AND WHERE LOCATED OUTSIDE THE BUILDING WITH A MINIMUM OF R-8 INSULATION IN CLIMATE ZONES 1-4 AND A MINIMUM OF R-12 INSULATION IN CLIMATE ZONES 5-8. WHERE LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY A MINIMUM OF R-6 INSULATION IN CLIMATE ZONES 1-4 AND A MINIMUM OF R-12 INSULATION IN CLIMATE ZONES 5-8. EXCEPTION: WHERE LOCATED WITHIN EQUIPMENT.

EXCEPTION: WHERE THE DESIGN TEMPERATURE DIFFERENCE BETWEEN THE INTERIOR AND EXTERIOR OF THE DUCT OR PLENUM IS NOT GREATER THAN 15 DEG. F.

3. SUPPORTS AND ANCHORS

- A. MANUFACTURERS: GRINNELL, B-LINE, O.Z. GENDEY, MICHIGAN HANGER, BERKOW/CARPENTER AND PATERSON.
- B. USE MATERIALS COMPATIBLE WITH PIPING SYSTEMS AVOIDING ELECTROLYTIC ACTION AND CONFORM TO ANSI/ASME B31, NFPA, MSS SP-58, 69, 89.
- C. WIRE ARE NOT ALLOWED TO BE USED AS A HANGER SUPPORT.

9. TESTING AND BALANCING

- A. AIR BALANCING SHALL BE ACCOMPLISHED BY ADJUSTMENT OF ADJUSTABLE FAN SHEAVES. BRANCH DAMPERS ARE TO BE USED FOR ANY REQUIRED TRIM ADJUSTMENT.
- B. THE CONTRACTOR SHALL PROVIDE LABOR AND MATERIAL INCLUDING SHEAVES AS REQUIRED TO BALANCE ALL AIR SYSTEMS IN ACCORDANCE WITH QUANTITIES SHOWN.
- C. BALANCING SHALL BE PERFORMED UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER AND REPORT SHALL BE PROVIDED ON AABC TYPE FORMS.

10. AIR DISTRIBUTION SYSTEMS

- A. AIR TERMINALS
  - 1. PROVIDE SUPPLY AND RETURN AIR DIFFUSERS/REGISTERS AS SHOWN ON SCHEDULES.
- B. SHEET METAL WORK
  - 1. EXCEPT AS OTHERWISE SHOWN OR NOTED, ALL DUCTWORK AND OTHER SHEET METAL WORK SHALL BE GALVANIZED STEEL SHEET AND SHALL BE INSTALLED IN ACCORDANCE WITH SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. (SMACNA) DUCT CONSTRUCTION STANDARDS. DUCT SYSTEMS TO BE 2" PRESSURE CLASS.
  - 2. ALL DUCT DIMENSIONS INDICATED ON THE PLANS ARE INSIDE CLEAR DIMENSIONS.
  - 3. SUPPLY DUCTWORK TO BE RECTANGULAR WITH HEMMED "S" LONGITUDINAL SEAMS AND DUCTWATE TRANSVERSE JOINTS.
  - 4. MANUAL VOLUME DAMPERS: GALVANIZED STEEL, PER SMACNA EXCEPT SEAMS PROVIDE BEARING AT ONE END OF DAMPER. DAMPERS TO BE USED WITH INSULATION AND WIREWORK AT THE APPROPRIATE OR INSULATED DUCTS, QUADRANTS MOUNTED ON COLLAR TO CLEAR INSULATION. LEVERS MUST BE ACCESSIBLE.
- C. EXHAUST DUCTWORK ELBOWS TO BE LONG RADIAL TYPE.
- D. ACCESS DOORS SHALL BE PROVIDED IN DUCTWORK WHEREVER CONTROLS, CONTROL DAMPERS, COILS, INSTRUMENTS ARE INSTALLED.
- E. THE PLENUM CHAMBER THAT IS USED FOR RECIRCULATION OF AIR SHALL BE OF TIGHT CONSTRUCTION AND ALL SOURCES OF AIR CONTAMINATION FROM TRAPS, SOIL STACKS, DOWNSPOUTS, VENTS, EXHAUST DISCHARGE AND OTHER SOURCES WILL BE ENCLOSED SO THAT CONTAMINATED AIR WILL BE RECAPITULATED.

11. CONTROL SYSTEM WIRING

- A. HVAC CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL CONTROL WIRING FOR HVAC EQUIPMENT.

## 1500 BASIC MECHANICAL MATERIALS AND METHODS

Provide complete systems as called for, and/or shown, and/or specified, including, but not limited to, furnish and completely install the system, service, equipment, or material named, together with all other associated devices, equipment, materials, wiring, piping, etc., as required to perform work as specified. The Contractor shall be responsible to the HVAC Contractor. Secure all permits for work as required.

Where "furnish and install", "provide", "furnish", "install" or similar words are used, they may mean that the Contractor shall furnish and completely install the system, service, equipment or material named, together with all other associated devices, equipment, materials, wiring, piping, etc., as required for a complete operating installation.

### STANDARDS, CODES AND REGULATIONS

Equipment, devices, apparatus and installations to be in full compliance with applicable standards, requirements, rules, regulations, codes, statutes, ordinances, etc., local, city, county, state government, Federal Government, and the Owner's insurance company, local gas and electric utilities, labor regulations. Changes required to conform to requirements shall be made without increase in contract price as approved by the Architect.

Electrical equipment, wiring, gas burning equipment, handling and storage equipment, all hydronic piping, refrigeration piping, insulating materials, etc., shall comply with requirements of NFPA, NEC, UL, AIA, OSHA, EIA, BOCA, local and all applicable state and federal safety codes; for a particular type installation and shall be so labeled where applicable.

### MATERIALS

Materials to be of new grade, U.S. make and quality specified.

### WIRING

Wiring to be in compliance with latest N.E.C. and all applicable codes. Line wires, of proper size, shall be completely installed by the Contractor, with final power connections made by Electrical Contractor. Heating Contractor, within his contract, shall be responsible for all satisfactory equipment, provide devices, wires, disconnect switches, starters, interlocks, controls, etc., to give a complete/satisfactory operating system.

### COORDINATION

Before any work is installed and before any equipment is purchased, the Contractor shall carefully check specifications and drawings for every trade and job conditions and any lack of coordination between his work and the specifications and drawings or job conditions shall be immediately reported to the Architect in writing. The Architect will work out conflicts and adjustments in contract prices. Changes in equipment shall be incorporated in the shop drawings.

If the contractor fails to call such lack of coordination between specifications, drawings and job conditions to the Architect's attention, in writing, before any work is done or before equipment is purchased, it will be considered that the Contractor has accepted the conflict and any conflict arising during the construction period, they shall be immediately reported to the Architect in writing and they will be corrected, but by the Architect, but the complete contract price will be allowed. The Architect's decisions shall be final.

When heating and cooling equipment is operated by the Heating Contractor, the Heating Contractor shall be solely responsible for the operation and safety of such equipment. When heating and cooling equipment is operated by the owner (or other contractors), the owner (or other contractors) shall be solely responsible for the operation and safety of such equipment.

HVAC Contractor shall guarantee all equipment, apparatus, materials and workmanship entering into this contract and shall replace all parts at his own expense which have proven defective within one (1) year from formal acceptance. Individual items shall be guaranteed as called for in addition to the above.

Each respective contractor shall submit to the Architect for approval, before construction is started, seven (7) copies of shop drawings for equipment, devices, material, controls, accessories, wiring diagrams, etc., for respective installation.

Each specialized installation shall be made under the supervision of a factory trained engineer or contractor's superintendent who shall (a) submit a written report that the installation has been installed in keeping with the specific requirements of the manufacturer's standards; (b) instruct the Owner's operating personnel before final acceptance; (c) prepare permanent form operating instructions, parts lists, wiring diagrams and control diagrams, in booklet form, in triplicate, turned over to Owner and (d) certify that the installation is operating satisfactorily under the Owner's personnel and certify that the Owner's personnel are trained on systems and equipment per manufacturer's guidelines.

Contractor shall set sleeves and inserts required for inlets, openings, conduits, louvers, doors, and windows. Contractor shall coordinate with the Architect and the General Contractor to determine the location of openings. Supply General Contractor with complete information as to size and location of openings, through walls, floors, roofs, and ceilings for installation of openings. Contractor shall be supplied before new walls or floors are built, HVAC contractor shall cut all openings as approved by the Architect. Patching and rebuilding shall be the responsibility of the contractor. Contractor shall be responsible for patching and rebuilding of openings, and to restore construction to its original condition before cutting, using skilled craftsmen, as approved by the Architect. Shall be performed by others. Contractor shall ensure that all openings shall be accurately located, as small as possible, and neatly and cleanly cut. Contractor shall install and grout in place all openings shall be neatly cemented and wall frames grouted in place by Heating Contractor.

The Mechanical Contractor shall be responsible to cut and patch necessary wall or floor openings and provide materials and hardware for complete installation.

THIS PROJECT HAS BEEN DESIGNED TO MEET ALL THE APPLICABLE  
CODES PERTAINING TO HEATING, VENTILATING AND AIR CONDITIONING.  
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL THE SYSTEMS  
AS DESIGNED AND IN A MANNER THAT MEETS THE APPROPRIATE CODE  
REQUIREMENTS AND MANUFACTURER RECOMMENDATIONS.

Sheet metal ductwork to be installed, constructed, fabricated, etc., in accordance with the latest SMACNA manual, all local codes; galvanized sheet steel or 2s or 3s aluminum sheets. Furnish volume dampers with external locking quadrants. Provide sealed hinged-removable access doors where called for and/or required for access to controls, operators, sensors, filters, dampers, etc..

Flexible ducts shall be of Wiremold, Flexmaster, Thermaflex, Genflex or approved make, Wiremold type WG constructed of high temperature, vinyl coated coated glass fabric; 14 oz. and cold rolled corrosion-resistant galvanized steel spiral. Duct shall be fire-insulated with a minimum of 1" of 3/4 lb. density glass fiber blanket, sheathed with an exterior flame-resistant vinyl vapor barrier. Stop clamps shall be plastic tap or stainless steel draw-up clamps for securing flexible air duct. Prior to clamping, duct shall be sealed as per manufacturer's recommendations. Flexible duct to suit with system. Pressure rating and design. FLEXIBLE DUCT RUNS SHALL NOT EXCEED MAXIMUM LENGTH DICTATED BY LOCAL CODE.

Flexible connections, as called for on drawings, to be fire-water-weather-resistant fabric as manufactured by Ventfab or approved make.

GENERAL  
Submittals: Product Data for each model indicated.

Diffusers, registers, and grilles are scheduled on Drawings.

Install diffusers, registers, and grilles level and plumb, according to manufacturer's written instructions, Coordination Drawings, original design, and referenced standards.

**Ceiling-Mounted Outlets and Inlets:** Drawings indicate general arrangement of ducts, fittings, and accessories. Air outlet and inlet locations have been indicated to achieve design requirements for air volume, noise criteria, airflow pattern, throw, and pressure drop. Make final locations where indicated, as much as practicable. For units installed in tray-in ceiling panels, locate units in the center of the panel. Where architectural features or other items conflict with installation, notify Architect for a determination of final location.

Install diffusers, registers, and grilles with airtight connection to ducts and to allow service and maintenance of dampers, air extractors, and fire dampers.

Install diffusers, registers, and grilles according to NFPA 90A, "Standard for the Installation of Air-Conditioning and Ventilating Systems."

After installation of diffusers, registers, and grilles, inspect exposed finish. Clean exposed surfaces to remove burrs, dirt, and smudges. Replace diffusers, registers, and grilles that have damaged finishes.

OPENINGS, SLEEVES AND CHASES

Contractor shall set sleeves and inserts required for piping, hangers, intakes, louvers, ventilators, ductwork, curbs, etc., in construction. Contractor shall be responsible to furnish and install complete information as to size and location of openings through walls, floors, roofs, etc., for installing this work. If this information is not supplied before new walls, floors, roofs, etc., are built, respective Contractor shall furnish, cut and install all required openings for installation of equipment, material, devices, etc., as required and approved by the Architect. For new construction, General Contractor shall cut holes through roof and Roofing Contractor will do all work on roof patching, etc., and other alterations noted. Roof openings 18" and larger shall be framed with headers connected to roof joists with steel members framed between. All roofing equipment to meet requirements of National Association of Roofing Contractors.

|      |                            |      |                          |
|------|----------------------------|------|--------------------------|
| ACCU | AIR COOLED CONDENSING UNIT | KWB  | KILOWATT                 |
| AF   | AFTER FINISH FLOOR         | MBH  | THOUSAND BTU'S PER HOUR  |
| BD   | BACKDRIFT DAMPER           | MCA  | MINIMUM CIRCUIT AMPACITY |
| BSU  | BRIQUETTES UNIT            | MCM  | MECHANICAL               |
| CB   | COMBUSTION AIR             | MIN  | MINIMUM                  |
| CFM  | CUBIC FEET PER MINUTE      | MNT  | MOUNTED                  |
| CE   | CEILING                    | NTS  | NOT TO SCALE             |
| DB   | DRY BULB                   | OUT  | OUTSIDE AIR              |
| DE   | DEWING, DRAWINGS           | RET  | RETURN                   |
| EA   | EXHAUST AIR                | RFM  | RETURN AIR FAN           |
| EH   | EXHUST FAN                 | RFLA | RUNNING LOAD AMPS        |
| EL   | ELECTRIC HEATER            | RPM  | REVOLUTIONS PER MINUTE   |
| ELC  | ELECTRIC RELEAD COIL       | S    | SECOND                   |
| FLA  | FIRE DANGER                | ST   | AIR TRANSFER DUCT        |
| FRC  | FULL RELOAD AMPS           | TUP  | TURNING VANE             |
| FRT  | FIRE FURNACE               | TYP  | TYPICAL                  |
| HP   | HORSEPOWER, HEAT PUMP      | VOL  | AIR VOLUME               |
| HVC  | HEATING VENTILATING AIR    | VTR  | VENT THRU ROOF           |
|      | CONDITIONING               |      |                          |

| UNIT<br>MARK | MFR   | MODEL    | OA<br>SUPPLY<br>CFM | EA<br>CFM | E.S.P. | POWER<br>INPUT<br>WATTS | AMPS | FAN        |     |              | ELECTRICAL | TEMPERATURE<br>EXCHANGE<br>EFFICIENCY | DAMPER | WEIGHT | NOTES |
|--------------|-------|----------|---------------------|-----------|--------|-------------------------|------|------------|-----|--------------|------------|---------------------------------------|--------|--------|-------|
|              |       |          |                     |           |        |                         |      | TYPE       | QTY | DRIVE        | VOLT/PH    |                                       |        |        |       |
| ERV-1        | ALDES | H190-TRG | 175                 | —         | 0.40"  | 155                     | 1.95 | CROSS FLOW | 1   | DIRECT-DRIVE | 120/1      | 78%                                   | BDD    | 51#    | 1-7   |

ALTERNATE MANUFACTURER'S ACCEPTED PROVIDED THEY ARE EQUAL TO SPECIFIED EQUIPMENT INCLUDING ALL OPTIONS/ACCESSORIES LISTED BELOW.

NOTES:

1. FURNISH AND INSTALL WITH MFR'S DISCONNECT.
2. SUBMIT MANUFACTURER'S SHOP DRAWINGS FOR APPROVAL, PRIOR TO ORDERING.
3. FURNISH AND INSTALL WITH FILTERS.
4. INTEGRATED PROGRAMMABLE CONTROLS.
5. FURNISH AND INSTALL WITH BACKDRAFT DAMPER.
6. 3-- SPEEDS: LOW, HIGH, SUPER HIGH.
7. PROVIDE WITH TWO (2) MANUFACTURER'S CLEANABLE FIBROUS FLEECES FILTERS.



ELECTRICAL SPECIFICATIONS:

- 1.01. WORK INCLUDES

A. Raceways

B. Wires and cables

C. Boxes

D. Supporting devices
- 1.02. REGULATORY REQUIREMENTS

A. National Electrical Code, NEC (2014)

1. Comply with NEC/NFPA No. 70, for construction and installation of basic materials

2. NEC 300-21: Wiring Methods; Spread of Fire or Products of Combustion

3. Building code for the city of Rockford

B. Underwriter's Laboratories, UL

1. All basic materials listed and labeled by UL
- 1.03. REFERENCED

A. American National Standards Institute, ANSI

1. C80.3: Specification for Electrical Metallic Tubing, Zinc Coated

B. National Electrical Manufacturer's Association, NEMA:

1. Enclosures: Publication 250

a. Type 1: Indoor use, atmospheric conditions normal

C. Underwriter's Laboratories, UL
- 1.04. SUBMITTALS

A. Shop Drawings:

1. Submit drawings for:

a. Lighting fixtures

b. Electrical Panel

c. Receptacles
- 1.05. PROJECT RECORD DOCUMENTS

A. Accurately record on mylar sepia copy of actual locations and wiring methods and "As-built" record documents

B. Submit for Architect's review
- 1.06. DRAWINGS AND SPECIFICATIONS

A. With the exception of systems and equipment furnished by Owner, it is intended that work covered by Specifications and Drawings includes systems complete and operative, irrespective of whether or not every item is specifically shown on plans and/or specified. Any omission of direct reference herein to any error, omission or inconsistency shall not excuse contractor from complying with above intent

B. In case of error or inconsistency, between Specifications and Drawings or within either document itself the item or arrangement of better quality, greater quantity or highest cost shall take precedence over drawings as directed by Owner. Figured dimensions supersede scaled dimensions. Contractor shall take no advantage of, and shall promptly call Owner's attention to any error, omission or inconsistency in Specifications and Drawings prior to submitting bid.

C. Material shall be new. Seconds or damaged materials will be rejected by Owner, who reserves the right to disapprove and reject any materials, proposed or installed which, in their opinion, fail to meet quality standards specified. Contractor shall, at his expense, remove any rejected materials and replace with approved materials
2. PRODUCTS

2.01. RACEWAYS

A. Conduit Materials, Components:

1. Conduit:

a. Electrical Metallic Tubing: ANSI C80.3

2. Couplings:

a. EMT Conduit: Set screw

2.02. WIRES AND CABLES

A. Building Wiring: 98% conductivity copper, 600 volt insulation, THWN or THHN

B. Branch Circuit Wiring: Conductors smaller than #12 AWG not permitted

C. Provide permanent plastic name tag indicating load fed

2.03. WIRING SYSTEM IDENTIFICATION

A. Wire Insulation Color:

120/208 v., 3 phase, 4 wire

1. Phase A Black

2. Phase B Red

3. Phase C Blue

4. Neutral White

5. Ground Green

2.04. BOXES

A. Outlet Boxes: Hot dipped galvanized, 1.25 oz./sq. ft. or cadmium plated

1. Interior Boxes: Pressed sheet steel, with knockouts for conduit, attached tags for labeling

2. Ceiling Boxes: 4 inch octagon boxes for 1 fixture; including fixture studs and maximum 2 connecting conduits

3. Flush Mounted in Walls:

a. Boxes with matching plaster cover for single or two gang outlets

b. Two gang box or larger for conductors, conductor joints, conduit terminations and wiring devices

B. Pull Boxes and Junction Boxes: NEC metal construction; with screw-on or hinged cover

1. Flush Mounted Pull Boxes: Overlapping covers with flush-head cover retaining screws; prime coated

2.05. SUPPORTING DEVICES

A. Conduit Supports:

1. Single Runs: Galvanized conduit straps or ring bolt type hangers with specially spring clips

2. Vertical Runs: Channel support with conduit fittings

B. Anchors

1. Hollow Masonry: Toggle bolts or spider type expansion anchors

2. Solid Masonry: Lead expansion anchors or preset inserts

3. Metal Surfaces: Machine screws, bolts, or welded studs

4. Wood Surfaces: Wood screws

5. Concrete Surfaces: Self-drilling anchors or power-driven studs

2.06. FIRE AND SMOKE PENETRATION SEALANT

A. NEC 300-21; UL rated flexible sealant

2.07. CORROSION PREVENTION

A. Protect all metallic materials against corrosion

1. All equipment enclosures given rust-inhibiting treatment and standard finish by manufacturer

2. Ferrous Metal Parts: Hot dip galvanized, ASTM A123 or ASTM A153

a. Includes anchors, bolts, braces, boxes, bodies, clamps, fittings, guards, nuts, pins, rods, shims, thimbles, washers, and miscellaneous parts, other than stainless steel or non-ferrous materials

B. Isolation of Dissimilar Metals: Separate dissimilar metals with NEC approved material

2.08. PANELBOARD

A. ACCEPTABLE MANUFACTURERS

1. Square D

2. Cutler, Hammer

3. TE-Siemens

4. G.E.

B. FABRICATION

1. Panels: Flush or Surface mounted complete with panel trim having concealed hinges and trim mounting screws. Provide locking door with flush catch

3. Tub: Galvanized

3. Keys: Provide two keys for each panel. Make keys interchangeable for panels of same voltage

4. Branch circuit panelboards shall be of size and capacity as indicated on the drawings

5. Branch non-interchangeable trip thermal magnetic circuits for lighting and small motors shall consist of molded case, bolt-on circuit breakers

6. Branch circuits for feeders and power loads over 100 amperes shall consist of thermal magnetic non-interchangeable trip molded case bolt-on type circuit breakers of rating, type and capacity indicated

7. Breakers shall have thermal ratings as indicated on the drawings. Breakers shall be rated for local switching duty

8. Each conductor terminal shall be provided with a bolted clamp type solderless lug

9. Breakers shall be back connected to bus bars with studs. All spaces for future breakers in all panels shall be equipped with proper bus connecting links to facilitate the installation of future breakers. Breakers shall have trip elements calibrated in accordance with the drawings. The trip element shall insure constant calibration and be capable of withstanding excessive short current conditions without injury to the breaker

10. Breakers shall have inverse time limit characteristics so that tripping will be prevented on momentary overloads, but will clear before dangerous values are reached and shall have quick-make and quick-break toggle mechanism and a position between manual "on" and "off" positions when breaker is tripped

11. Each breaker shall be provided with a numerical designation strip to properly identify the circuit served. Bus bars for all panels shall be hard-drawn electrolytic copper of 80% conductivity rated 1000 amperes per square inch and shall be of size in strict accordance with NEMA requirements

12. Multi-pole breakers shall have common trip with single handle. Tying single pole breaker handles together is not acceptable

13. Neutrals shall be grouped on a common bar and each terminal on the neutral bar shall be stamped with the number of the circuit with which it is associated

14. Panel cabinets shall not be less than 20" wide, 5-3/4" deep and shall have gutters at each side and at top and bottom of ample width to accommodate branch circuit feeder conductors. All gutters shall be covered with 4" wide galvanized sheet metal where cables are connected to panelboard main lugs and gutters used for through feed of feeder conductors shall be sized in accordance with the following schedule:

Up to #1/0

4" minimum

15. Enclosure shall be of code gauge steel with ample wiring space on all sides. Trim and door shall be of #12 gauge steel fastened to the tub with adjustable clamps. Door shall be provided with flush type hinges and chrome plated flush type combination catch and cylinder lock masterkeyed. Panel shall be provided with a circuit directory under glass in a metal frame. Panel tub shall be galvanized. Trim and door shall be painted standard factory finish for final painting on job by General Contractor

16. Cabinets for panels shall comply with all NEMA standards and shall be of the dead front type suitable for surface or recessed mounting as indicated on drawings

17. All panelboard equipment shall include a ground bus. Provide isolated ground bus where called for under panel schedules

2.09. LUMINAIRES

A. Manufacturer: See lighting fixture schedule on floor plans

2.10. EXIT SIGNS

A. Manufacturers: See lighting fixture schedule on floor plans

2.11. BALLASTS

A. Fluorescent Ballast – Rapid Start Electronic:

1. Magna Tak

2. Description: ANSI C82.1A, high power factor type (above .95) electronic ballast, Class P, sound rating A

3. FCC Regulation – RFI and EMI, CFR 47 Part 18 NEMA

4. Transient Protection – ANSI C82.41, CAT A

5. Voltage: 108 to 132 for 120 volt circuit; 249 to 305 for 277 volt circuit at input frequency of 60 Hz light output to remain constant for voltage fluctuation of plus or minus 5%

6. Frequency – 25 KHz or higher with less than 2% lamp flicker

7. Lamp current crest factor – maximum 1.5

8. Total harmonic distortion – 10% or less

9. Ballast efficiency – above 91% (power out/power in)

10. Ballast shall not contain PCBs

3. EXECUTION

3.01. INSTALLATION

A. Drawings are diagrammatic and are intended to convey scope of work and indicate general arrangement of conduit, boxes, equipment, fixtures and other work included in contract

3.02. RACEWAYS

A. Locations:

1. Above-Grade Interior Locations: Electrical metallic tubing. Install liquid-tight flexible conduit where subjected to one or more of the following conditions:

a. Moist or humid atmosphere where condensate can be expected or accumulate

b. Corrosive atmosphere

c. Subjected to water spray

d. Subjected to dripping oil, grease, or water

3. Size raceways in accordance with NEC for TW wire regardless of wire type used

B. Installation of Conduit:

1. Install conduit and tubing products indicated, in accordance with manufacturer's written instructions and requirements of NEC and NECA, Standard of Installation

2. Conceal conduit in all areas excluding mechanical, electrical and other unfinished rooms, connections to motors, and connections to surface cabinets

3. Attach conduit with clamps

4. Coordinate installation of conduit in partition work

5. Install conduit free from dents and bruises

6. Plug conduit ends to prevent entry of dirt or moisture

7. Clean out conduit before installation of conductor(s)

8. After conduit routing to avoid structural obstructions, minimize cross-overs; and where possible, install raceways above water and steam piping

9. Allow minimum 6 inch clearance at flues, steam pipes, and heat sources

10. Route all exposed conduits parallel or perpendicular to building lines

11. Fire rated walls, partitions, floors, ceiling penetrations: Sealed in accordance with NEC 300-21

a. Flexible conduit sufficient length to avoid vibration transmission

12. Building Expansion Joints: Install UL listed expansion fittings complete with grounding jumpers where conduits cross building expansion joints

a. Provide bends or offsets in conduit adjacent to building expansion joints where conduit is installed above suspended ceiling

3.03. RACEWAY SYSTEM IDENTIFICATION

A. Identify all exposed conduits and boxes as follows:

1. Boxes, on face of coverplate:

a. Power – Show panel, voltage and circuit number, painted stenciled letters. (Black letters, yellow background)

b. Systems – Indicate systems, such as sound, clock, telephone, etc., (black letters, yellow background)

B. Identify all conduit and boxes above accessible ceilings

1. Follow steps A.1. above

C. Lettering to be as large as possible for each conduit size

3.04. WIRE AND CABLES

A. Installation:

1. Make conductor length for parallel feeders identical

2. Lace or clip groups of feeder conductors at distribution center, pull boxes and wireways

3. Conductor size indicated on drawings indicates ampacity requirements using copper conductors

3.05. BOXES

A. Installation:

1. Provide knockout closures to cap unused knockout holes where blanks have been removed

2. Support all boxes independently of conduit

3. Outlet Boxes:

a. Flush mount outlet boxes in areas other than mechanical rooms, electrical rooms, and above removable ceilings

b. Masonry Walls:

1) Adjust position of outlets in finished masonry walls to suit masonry course lines

2) Coordinate cutting of masonry walls to achieve neat openings for boxes

3) Locate boxes in masonry walls so that only corner need be cut from masonry units

c. Do not use sectional boxes unless approved by Architect/Engineer

d. Adjust outlet mounting height to grade with specified location for equipment served

4. Pull Boxes and Junction Boxes: Locate pull boxes and junction boxes above removable ceilings or in electrical rooms, utility rooms, or storage areas

3.06. SUPPORTING DEVICES

A. Installation:

1. Maintain headroom, neat mechanical appearance, and support equipment loads specified

3.07. INSTALLATION PANELBOARDS

A. Provide mounting brackets, busbar drillings, and filler pieces for unused spaces

B. Prepare and affix typewritten directory to inside cover of panelboard including:

1. Circuit number/breaker number and use

C. Install all panels dead front, coordinated with adjoining electrical, heating and plumbing equipment, architectural details and wall pattern

D. Work of every division shall be coordinated with all other work and with present conditions, so that:

1. Electrical services to be present buildings or portions of buildings will not be interrupted during periods when those services are needed

K. New conduit serving new and/or present electrical devices in finished rooms or spaces shall be concealed in finished rooms, where possible, or shall be run in adjoining unfinished rooms, shafts, chambers, cloak rooms, etc., where exposed conduit is permitted in finished present rooms by Architect in writing. It shall be wiremold, with matching boxes, run as inconspicuously as possible, in straight lines, parallel to walls and ceilings, with neat bends. Unneeded boxes, switches and wiring shall be completely removed and openings patched. In present rooms or locations where new lighting equipment is shown, present fixtures, boxes, wiring, switches, etc., shall be removed as per note "PX", unless another symbol is shown on drawings. Where specifically approved by Architect in writing, boxes may be permitted to remain and be provided with new flush covers, extending over entire wall opening

L. Lighting fixtures which are reused shall have lens and reflectors cleaned. All fixtures shall be provided with new lamps

M. Work shall be coordinated so that heating, plumbing, electrical and telephone services to the present building will not be interrupted, except as approved by the Architect

3.09. CLEANING

A. Clean systems internally before placing in operation. Clean externally and restore damaged surfaces

B. Lubricate equipment per manufacturer's instructions. Where – lubricating points are not easily accessible, provide extensions

ELECTRICAL SYMBOLS

TYPICAL: ALL MOUNTING HEIGHTS ARE TO DEVICE CENTERLINE U.N.O.

LIGHTING

SURFACE OR PENDANT CEILING FIXTURE

RECESSED FLUORESCENT FIXTURE (SHADING INDICATES EMER.)

SURFACE OR PENDANT FLUORESCENT FIXTURE

EXIT LIGHT WALL MOUNTED (SHADING INDICATES FACE)

EXIT LIGHT CEILING MOUNTED (SHADING INDICATES FACE)

BATTERY EMERGENCY FIXTURE

DOUBLE HEAD EMERGENCY REMOTE FIXTURE

NUMBER= CIRCUIT  
LETTER = SWITCH  
IF 17.2.1.3 IS FIXTURE  
SEE SPECIFICATIONS  
AND FIXTURE SCHEDULE

SWITCHES

SINGLE POLE SWITCH

THREE WAY SWITCH

FOUR WAY SWITCH

4"-0" A.F.F.  
UNLESS NOTED  
OTHERWISE

RECEPTACLES

DUPLEX RECEPTACLE 48" AFF UNO

DUPLEX RECEPTACLE

DUPLEX RECEPTACLE, GROUND FAULT TYPE

AC = ABOVE COUNTER

18" AFF UNLESS  
NOTED OTHERWISE

MISCELLANEOUS

MOTOR OUTLET BOX (\* HP, KW OR KVA). VERIFY EXACT LOCATION AND HEIGHT OF ALL MOTORS BEFORE ROUGH-IN.

OUTLET WITH FINAL CONNECTIONS TO EQUIPMENT, WHICH IS FBO. VERIFY EXACT LOCATION AND HEIGHT BEFORE ROUGH-IN.

CEILING SURFACE JUNCTION BOX

WALL SURFACE JUNCTION BOX MOUNTING HEIGHT AS NOTED

SAFETY SWITCH (F = FUSED) 4"-6" AFF

TRANSFORMER

SURFACE ELECTRICAL PANEL 36" AFF TO BOTTOM UNO

WRING IN CONDUIT CONCEALED, ABOVE CEILINGS OR IN WALLS

WRING IN CONDUIT CONCEALED IN OR UNDER FLOORS (UNO)

WRING HOMERUN TO PANEL

GROUND CONDUCTOR

REFERENCE NOTE

CHARACTER MARKS= NUMBER OF WIRES, IF NONE, ARE SHOWN PROVIDE TWO EXCEPT IF A GROUND CONDUCTOR IS REQUIRED PROVIDE THREE

TELEPHONE SYSTEM

TELEPHONE CONDUIT CONCEALED ABOVE CEILINGS OR IN WALLS

TELEPHONE CONDUIT CONCEALED IN OR UNDER FLOORS

WALL DATA/TELEPHONE OUTLET BOX 18" AFF

WALL TELEPHONE OUTLET BOX 44" AFF UNO

PROVIDE 1/2" EMPTY CONDUIT TO ABOVE ACCESSIBLE CEILING U.N.O.

ELECTRICAL ABBREVIATIONS

|      |   |       |   |
|------|---|-------|---|
| AC   | ABOVE COUNTER   | NEC   | NATIONAL ELECTRICAL CODE  |
| AFF  | ABOVE FINISHED FLOOR  | NPC   | NOT IN CONTRACT   |
| AMP  | AMPERES   | NL    | NIGHT LIGHT   |
| ASC  | ABOVE SUSPENDED CEILING   | P     | TO REMAIN UNCHANGED, IF CHANGE CANNOT BE AVOIDED, CHANGE "P" TO "PX", AT NO INCREASE IN CONTRACT PRICE.   |
| C    | CONDUIT   |       | VERIFY LOCATION.  |
| DP   | DISTRIBUTION PANEL  | PX    | TO BE COMPLETELY REMOVED, INCLUDING UNNEEDED CONNECTIONS, CONDUITS, RACEWAYS, PIPING, DUCTS, BOXES, WRING, BASES, ETC., OF EVERY KIND. UNUSED OPENINGS PLUGGED OR CAPPED, TESTED, COVERED, PAINTED SAME AS NEW WORK.                    |
| DISC | DISCONNECT  |       | OTHER DISTURBED WORK OF EVERY KIND RESTORED, PATCHED, TESTED, COVERED, PAINTED, ETC., EQUAL TO ORIGINAL CONDITION.  |
| EC   | ELECTRICAL CONTRACTOR   |       | REMOVED MATERIALS MUST NOT BE REUSED UNLESS OTHERWISE SPECIFIED OR DIRECTED BY ENGINEER.  |
| E    | EMERGENCY   |       | FIXTURES, EQUIPMENT, DEVICES, ETC., REMOVED INTACT, AS FAR AS PRACTICAL, IDENTIFIED AS REQUIRED, AND DELIVERED TO OWNER OUTSIDE OF BUILDING AS DIRECTED BY ARCHITECT/ENGINEER.  |
| FBO  | FURNISHED BY OTHER THAT ELECTRICAL CONTRACTOR. COMPLETELY WIRED, WITH FINAL CONNECTIONS TO EQUIPMENT AND DEVICES, BY ELECTRICAL CONTRACTOR. | PX-DO | ASSOCIATED BOXES, WRING, CONDUITS, ETC., TO BE "PX".  |
| FL   | FLUORESCENT   |       | REMOVED, CLEANED AND RESTORED TO GOOD OPERATING CONDITION AS REINSTALLED, SAME AS NEW, IN ORIGINAL POSITION. IF RECONDITIONING IS IMPRACTICAL, PROVIDE NEW DEVICE/EQUIPMENT, AS APPROVED BY ENGINEER, AT NO INCREASE TO CONTRACT PRICE. |
| FLA  | FULL LOAD AMPS  |       | IF ADJACENT WALLS, FLOORS, CEILING, ETC., ARE DAMAGED, THEY SHALL BE REPAIRED BY ELECTRICAL CONTRACTOR AS DIRECTED BY ARCHITECT.  |
| GFI  | GROUND FAULT INTERRUPTER  | PXN   | REMOVED, CLEANED AND RESTORED TO GOOD OPERATING CONDITION AND REINSTALLED AT POINT/LOCATION MARKED "PX". BOXES, WRING CONDUIT, ETC., TO BE "PX".  |
| HP   | HORSEPOWER  |       | COMPLETELY REINSTALL DEVICE, LINE, EQUIPMENT, ETC., REMOVED, AT NEW LOCATION, SAME AS NEW WORK. RECONNECT TO PRESENT CIRCUIT/SWITCH LEG/SYSTEMS WIRING, ETC., UNLESS NOTED OTHERWISE ON DRAWINGS.                                       |
| HT   | HEIGHT  |       | PHASE (?)   |
| JB   | JUNCTION BOX  |       | PANEL   |
| KW   | KILOWATTS   |       | SW  |
| LTG  | LIGHTING  |       | UNO   |
| MAG  | MAGNETIC  |       | V   |
| MAX  | MAXIMUM   |       | VM  |
| MDP  | MAIN DISTRIBUTION PANEL   |       | W   |
| MFR  | MANUFACTURER  |       | WP  |
| MN   | MINIMUM   |       |   |
| MTD  | MOUNTED   |       |   |
| MTG  | MOUNTING  |       |   |
| NC   | NEW CONNECTIONS TO PRESENT RACEWAY, DEVICE, WRING, EQUIPMENT, ETC. INSTALL, TEST, COVER, PAINT, ETC., SAME AS NEW WORK                      |       |   |

Legacy Designs, Inc.  
555 S. Perryville Road  
Rockford, IL 61108  
815-484-4708 Phone 815-484-4710 Fax  
e-mail: legacy@legacydesigns.net  
web site: www.legacydesigns.net

Larson & Darby Group  
Architecture Engineering Interiors

LOWER LEVEL STORAGE ROOM WORK  
WINNEBAGO COUNTY COURTHOUSE  
400 West State Street  
Rockford, Illinois 61101

COPYRIGHT 2024  
All drawn and written information appearing herein shall not be duplicated, disclosed, or otherwise used without the written consent of Larson & Darby Group

|             |             |              |      |
|-------------|-------------|--------------|------|
| ISSUED FOR: | DATE        | ISSUED FOR:  | DATE |
| DRAWN BY:   | CHECKED BY: | APPROVED BY: | J.T. |
| LEGACY      |             |              |      |

|                |                |
|----------------|----------------|
| DATE: 07-25-23 | PROJECT NUMBER |
| 222321         |                |
| SHEET NUMBER   |                |
| ME-4           |                |