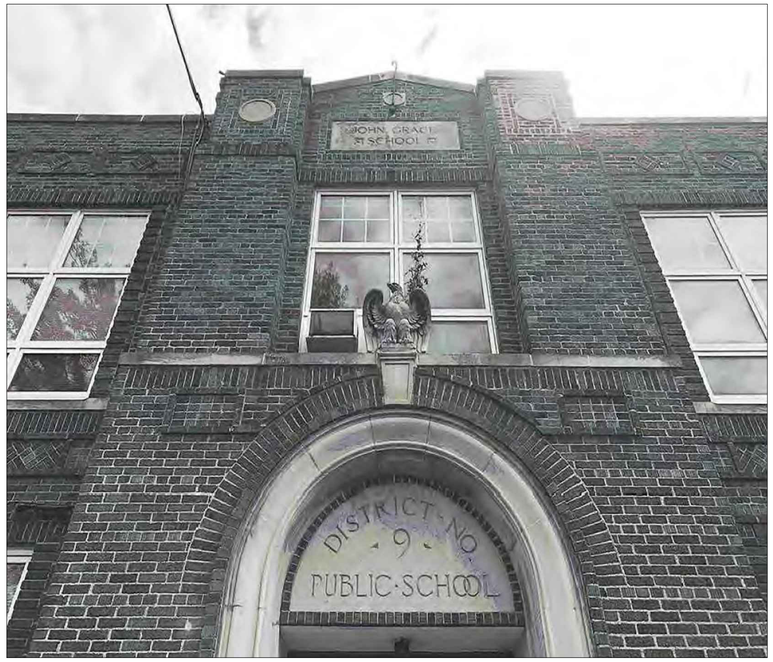
# JOHN GRACE ARMS

21030 INDIAN ST.
SOUTHFIELD, MI 48033




DEVELOPED BY

**JOHN GRACE ARMS LDHA LLC**

LOCATION MAP (NTS)




## PROJECT TEAM:


ARCHITECT:

**SDG ASSOCIATES, LLC**

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SHENNARD@AAENGINEERCO.COM

PRESERVATION CONSULTANT:

**KIDORF PRESERVATION CONSULTING**

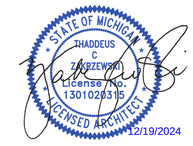
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Suite 704
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Tel: 313-961-9000
Fax:313-964-3233


REGISTRATION SEAL

KEY PLANS



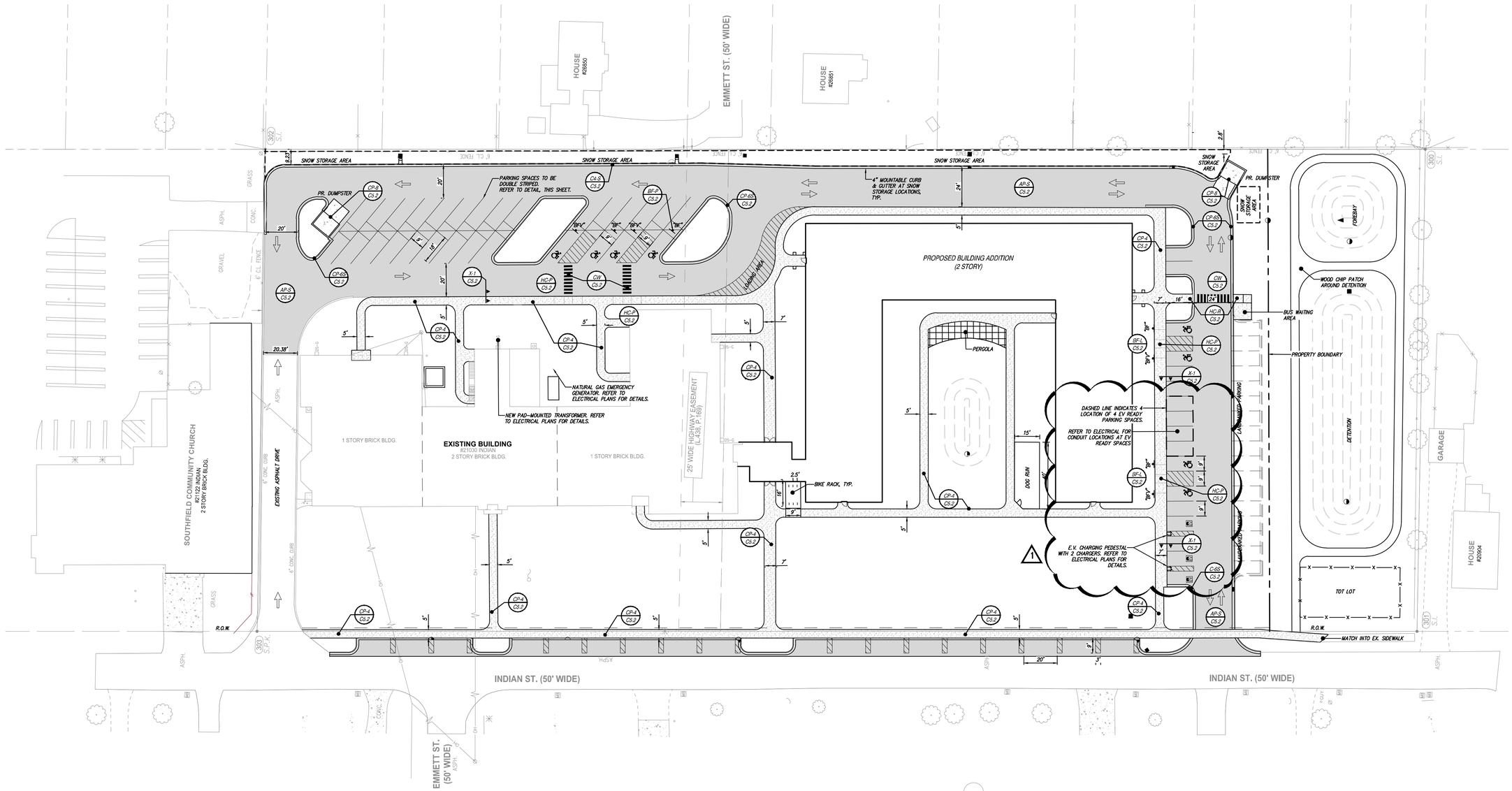

SHEET TITLE

TITLE SHEET

SCALE:

| ISSUED FOR | DATE |
|---|---|
| Review | 03.28.2024 |
| Permits | 04.12.2024 |
| For Permit | 10.25.2024 |
| Bulletin No. 1 (1) | 02.19.2025 |

DRAWN BY: EBH
CHECKED: TZ
APPROVED: JA
FILE NO.: 21026.00
SHEET NO.: COVER




## PAVING CONSTRUCTION NOTES

1. EARTHWORK AND PAVEMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS OTHERWISE NOTED IN THE FOLLOWING ITEMS.
2. REMOVE ANY EXISTING TOPSOIL, VEGETATION, TREES AND OTHER DELETERIOUS MATERIALS TO EXPOSE THE SUBGRADE SOIL. TREE ROOTS SHALL BE COMPLETELY REMOVED.
3. EXCAVATE TO THE DEPTH OF THE FINAL SUBGRADE ELEVATION TO ALLOW FOR GRADE CHANGES AND THE PLACEMENT OF THE RECOMMENDED PAVEMENT SYSTEM.
4. THE TOP 12 INCHES OF THE EXPOSED SUBGRADE SHALL BE COMPACTED TO A DENSITY NO LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR (ASTM D 1557-91).
5. THE FINAL SUBGRADE SHALL BE THOROUGHLY PROOFROLLED UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS WHICH CANNOT BE MECHANICALLY STABILIZED SHALL BE REMOVED AND REPLACED WITH ENGINEERED FILL OR AS DICTATED BY FIELD CONDITIONS.
6. THE AGGREGATE BASE SHALL BE COMPACTED TO A DENSITY NO LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR (ASTM D 1557-91). THE BASE SHALL EXTEND A MINIMUM OF 1 FOOT BEYOND THE PAVED EDGE.
7. ALL BITUMINOUS MATERIAL SHALL BE COMPACTED TO A DENSITY NO LESS THAN 97 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MARSHALL METHOD.
8. A BOND COAT OF SS-1H EMULSION IS REQUIRED BETWEEN THE LEVELING COURSE AND THE WEARING COURSE WHEN EITHER 24 HOURS HAVE ELAPSED BETWEEN PLACEMENT OF THE BITUMINOUS COURSES OR THE SURFACE OF THE PAVEMENT HAS BEEN CONTAMINATED WITH DIRT, DUST, OR FOREIGN MATERIAL. THE BOND COAT SHALL BE APPLIED IN A UNIFORM MANNER OVER THE SURFACE AT A RATE OF 0.1 GALLONS/S.Y. IN THE EVENT A BOND COAT IS NOT REQUIRED, THE LEVELING COURSE MAY REQUIRE LOCALIZED BROOM CLEANING.
9. PERFORMANCE GRADE PG64-22 ASPHALT CEMENT SHALL BE USED IN THE PRODUCTION OF ALL BITUMINOUS MIXTURES. RECLAIMED ASPHALT PAVEMENT (RAP) SHALL BE ALLOWED ONLY AS SPECIFIED BY THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, UNLESS NOTED ON THE PROJECT DETAILS.
10. CONSTRUCTION TRAFFIC SHALL BE MINIMIZED ON THE NEW PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, THE PLACEMENT OF THE FINAL LIFT SHALL BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. THIS ACTION WILL ALLOW REPAIR OF LOCALIZED FAILURE, IF ANY DOES OCCUR, AS WELL AS REDUCE LOAD DAMAGE ON THE PAVEMENT SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR TO ANY DAMAGED SECTION RESULTING FROM CONSTRUCTION ACTIVITY.
11. TAPER CURB HEIGHT DOWN TO ZERO HEIGHT IN FIVE FEET AT ALL CURB ENDINGS UNLESS OTHERWISE NOTED ON THE PLAN.
12. WHERE CURB AND GUTTER SECTION IS ADJACENT TO A HANDICAP RAMP, DROP CURB HEIGHT TO MAXIMUM 1/4" ACROSS THE RAMP OPENING.
13. RESTRIPE PARKING LOTS AS SHOWN, USING 4" PAVEMENT MARKING – BLUE FOR RESERVED SPACES, YELLOW FOR STANDARD SPACES. IF NEW PARKING LAYOUT IS NOT INDICATED, MATCH ORIGINAL STRIPING PATTERN.
14. DIRECTIONAL ARROW PAVEMENT MARKINGS AND PAVEMENT MARKING LETTERING WHERE INDICATED SHALL BE WHITE PREFORMED THERMOPLASTIC UNLESS OTHERWISE NOTED. INSTALLATION OF THESE PERMANENT PAVEMENT MARKINGS SHALL BE PERFORMED PER THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTIONS 811 AND 920.
15. CONTRACTOR SHALL PROTECT EXISTING CURB, GUTTER, SIDEWALK, WALLS, FENCES AND ALL OTHER EXISTING SITE FEATURES NOT INDICATED FOR REMOVAL OR REHABILITATION.
16. PLACE EXPANSION JOINTS WHERE NEW CONCRETE PAVEMENT OR WALKS ABUT BUILDING WALLS (PROPOSED OR EXISTING), CURB, OR EXISTING CONCRETE PAVEMENT. PLACE SILICONE JOINT SEALANT ON ALL EXPANSION JOINTS.
17. CONTRACTOR TO CONSTRUCT CONTRACTION AND EXPANSION JOINTS IN ALL NEW CONCRETE PAVEMENT. CONTRACTION JOINTS SHALL BE TOOLED WHERE SIDEWALK WIDTH IS 8' OR LESS, AND SHALL BE SPACED EQUAL TO THE WIDTH OF THE PAVEMENT (I.E. 6' SPACING FOR 6' WIDE WALK), BUT NOT MORE THAN 10' APART. PLACE EXPANSION JOINTS WITH SILICONE JOINT SEALANT AT MAXIMUM 50' SPACING. CONTRACTOR SHALL GENERALLY MATCH THE JOINT PATTERNS FOR CONCRETE PAVEMENT WHEN SHOWN ON THE PLANS.
18. WHERE THESE PLANS DIFFER FROM THE STANDARD DETAILS OR STANDARD SPECIFICATIONS OF THE COMMUNITY, THE COMMUNITY REQUIREMENTS SHALL GOVERN.
19. CONCRETE PAVEMENT SHALL MEET THE REQUIREMENTS FOR MDOT GRADE 4000 CONCRETE PER THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

## LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
- STANDARD BITUMINOUS PAVEMENT
- HEAVY-DUTY BITUMINOUS PAVEMENT
- DEEP-STRENGTH BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT
- 2 UTILITY CROSSING (SEE DATA TABLE)
- STORM SEWER STRUCTURE: CB 2 — STRUCT. TYPE / STRUCT. NO.
- SANITARY SEWER STRUCTURE: 20
- WATERMAIN STRUCTURE: 10 XXX — STRUCT. NO. / STRUCT. TYPE

## SIGN LEGEND

"RS" – RESERVED PARKING ONLY
"RSV" – RESERVED PARKING ONLY VAN ACCESSIBLE
"ST" – STOP

ALL SIGNAGE SHALL BE IN ACCORDANCE WITH THE CURRENT M.M.U.T.C.D. AND THE MDOT TRAFFIC AND SAFETY SIGN SUPPORT STANDARD PLANS.

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Phone (248) 844-6274

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Phone (616) 885-5802

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(800) 598-1600

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# JOHN GRACE ARMS

## CONSTRUCTION PLANS
Paving Plan

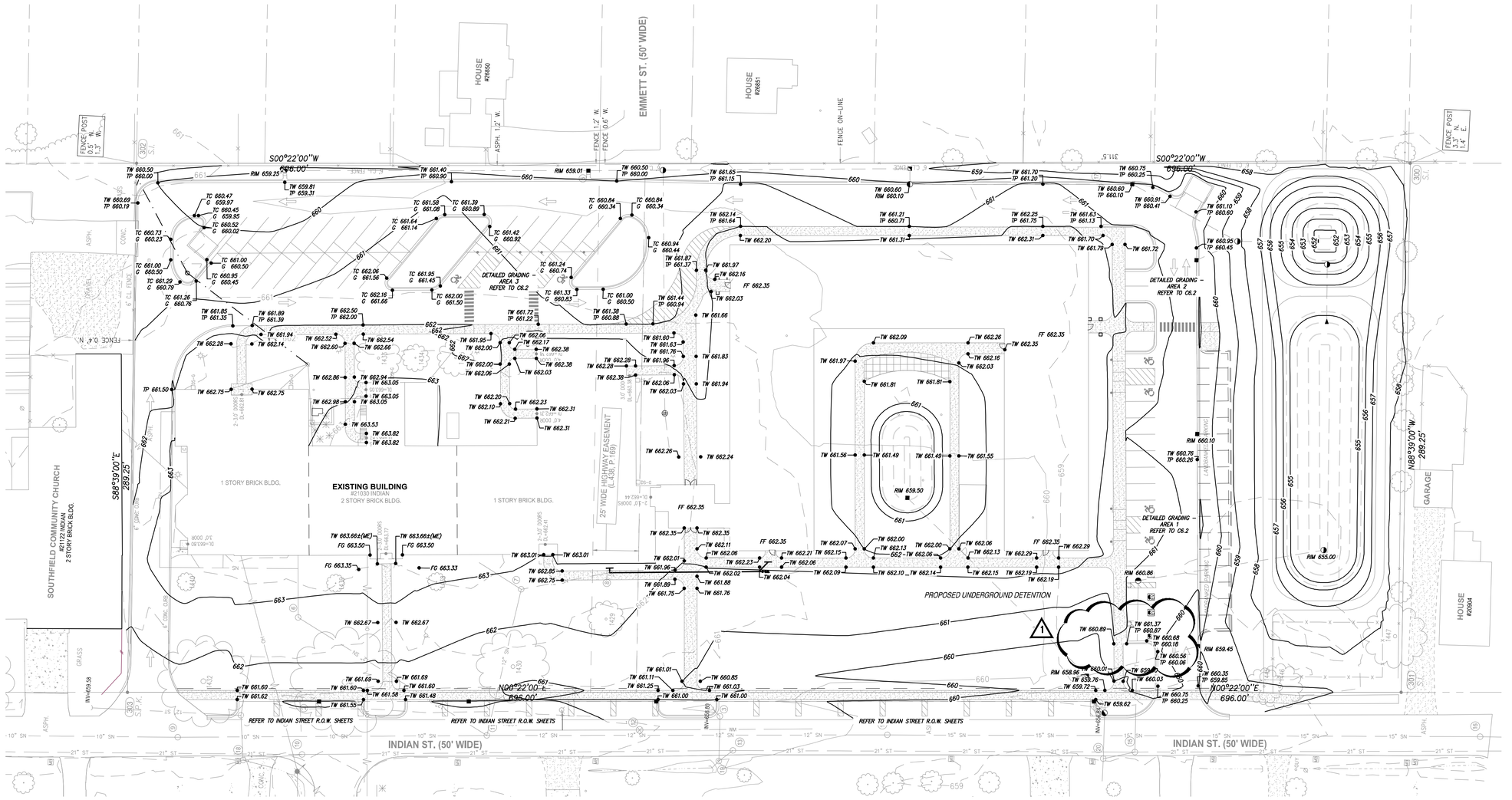
SECTION 31
TOWN 01N RANGE 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

| NO. | DATE | REVISION |
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| 1 | 03-04-2024 | OWNER REVIEW |
| 2 | 03-22-2024 | PAGE TURN |
| 3 | 03-29-2024 | REV. OWNER REVIEW |
| 4 | 10-25-2024 | PERMIT |
| 5 | 12-13-2024 | HUD SUBMISSION |
| 6 | 12-20-2024 | PERMIT |
| 7 | 02-19-2025 | 1 BULLETIN NO. 1 |

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| DRAFTER: - | DATE: - |
| DESIGNER: J. CHRISTOPHER | DATE: 24-01-26 |
| CHECKED: J. CHRISTOPHER | DATE: 24-01-26 |
| PROJECT MANAGER: T. SOVEL | BID PLAN DATE |
| DEPARTMENT MANAGER APPROVAL: - | DATE |
| JOB NO.: NP22006 | DRAWING NO.: NP2006PAV |
| SCALE: 1" = 30' | SHEET NO.: C5.1 |

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## RESTORATION NOTE

RESTORE ALL NON-PAVED AREAS WITH 3" OF CLEAN TOPSOIL AND SOD PER SPEC SECTION 2920. PEG SOD IN PLACE ON SLOPES IN EXCESS OF 10 HORIZONTAL TO 1 VERTICAL USING WOODEN PEGS A MINIMUM OF 12" LONG. WATER SOD ON A REGULAR BASIS AS INDICATED IN THE SPECIFICATIONS.

## RESTORATION NOTE

RESTORE ALL NON-PAVED AREAS WITH 3" OF CLEAN TOPSOIL AND SEED MIX (30% KENTUCKY BLUEGRASS, 20% PERENNIAL RYEGRASS, 50% CREEPING RED FESCUE). PLACE MULCH IN ALL SEEDED AREAS. ON SLOPES IN EXCESS OF 10 HORIZONTAL TO 1 VERTICAL PLACE NORTH AMERICAN GREEN DS150 MULCH BLANKET IMMEDIATELY AFTER SEEDING. USE METAL STAPLES PER MANUFACTURERS RECOMMENDATIONS TO HOLD MATTING IN PLACE.

## GRADING LEGEND

- EXISTING ELEVATION
- TC 000.00 / G 000.00 — PROPOSED TOP OF CURB ELEVATION / PROPOSED GUTTER ELEVATION
- OG 000.00 — OUTSIDE GRADE ELEVATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- TP 000.00 — TOP OF PAVEMENT ELEVATION
- TW 000.00 — TOP OF WALK ELEVATION
- FG 000.00 — FINISH GRADE ELEVATION
- T/WALL 000.00 — TOP OF WALL ELEVATION
- ME 000.00 — MATCH EXISTING ELEVATION
- FLOW ARROW

## GRADING NOTES

1. CONTRACTOR TO PLACE ALL NEW PAVEMENT TO THE GRADES INDICATED, OR MATCH ORIGINAL GRADES IF NEW GRADES ARE NOT SHOWN. CONTRACTOR SHALL CONFIRM MINIMUM 1% PAVEMENT SLOPES ARE ATTAINED IN ALL AREAS.
2. PROPOSED GRADES MAY BE BASED ON AN INTERPOLATION OF DATA SHOWN ON THE TOPOGRAPHIC SURVEY. THIS INTERPOLATED DATA IS APPROXIMATE AND COULD DIFFER SLIGHTLY BASED ON THE ACCURACY OF THE SURVEY. CONTRACTOR SHALL CONFIRM THAT THE PROPOSED GRADES SHOWN ON THIS PLAN WILL NOT CREATE A STANDING WATER CONDITION (I.E. A LOW SPOT OR PAVEMENT SLOPES LESS THAN 1%) OR AN UNSAFE CONDITION WITH SLOPES IN EXCESS OF 5%. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF THEY BELIEVE THAT ONE OF THESE SITUATIONS WILL OCCUR BASED ON THE PROPOSED GRADES.
3. ALL PAVEMENT PLACED WITHIN BARRIER FREE PARKING AREAS (STALLS AND ACCESS AISLES) SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION, INCLUDING MEASURED DIAGONALLY ACROSS THE AREAS. CONTRACTOR SHALL ADJUST SLOPES AS NECESSARY TO PROVIDE ADA COMPLIANT SLOPES AS WELL AS PROVIDING RE-GRADED TRANSITION SLOPES OUTSIDE OF THE BARRIER FREE PARKING AREAS. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF TRANSITION ZONES WILL EXCEED MAXIMUM 5% SLOPES. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE PATTERNS WITH ALL NECESSARY PAVEMENT RE-GRADING.
4. ALL BARRIER FREE RAMPS AND ADA ACCESSIBLE ROUTES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF MDOT DETAIL R-28 "SIDEWALK RAMP AND DETECTABLE WARNING DETAILS".
5. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER RUNOFF DURING CONSTRUCTION OPERATIONS. OF PARTICULAR CONCERN WILL BE THE TIME PERIOD AFTER THE SITE HAS BEEN STRIPPED AND NOT YET RESTORED, BUILT UPON, OR PAVED. CONTRACTOR MUST INSTALL OR CONSTRUCT APPROPRIATE TEMPORARY MEASURES TO PROTECT ADJACENT PROPERTIES.

## LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
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# JOHN GRACE ARMS

## CONSTRUCTION PLANS
Grading Plan

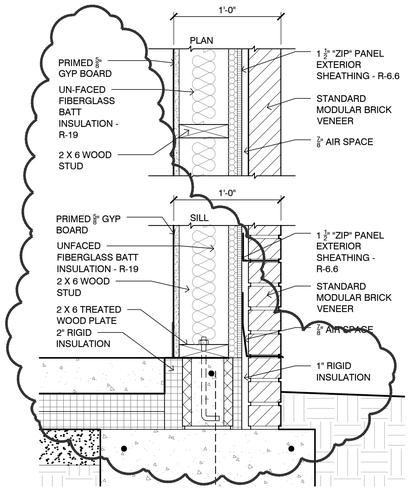
SECTION 31
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|---|---|---|
| 1 | 03-04-2024 | OWNER REVIEW |
| 2 | 03-22-2024 | PAGE TURN |
| 3 | 03-29-2024 | REV. OWNER REVIEW |
| 4 | 10-25-2024 | PERMIT |
| 5 | 12-13-2024 | HUD SUBMISSION |
| 6 | 12-20-2024 | PERMIT |
| 7 | 02-19-2025 | 1 BULLETIN NO. 1 |

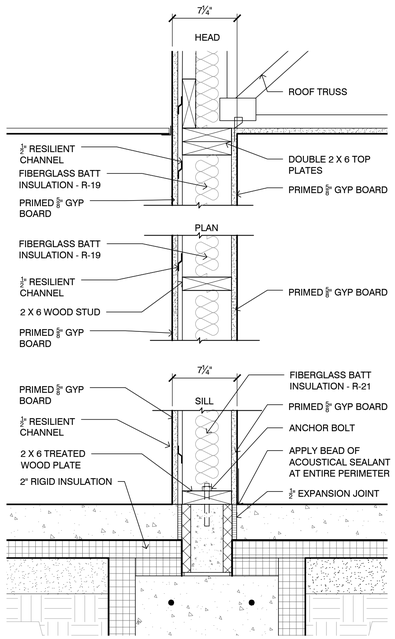
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| DRAFTER - | DATE - |
| DESIGNER J. CHRISTOPHER | DATE 24-01-26 |
| CHECKED J. CHRISTOPHER | DATE 24-01-26 |
| PROJECT MANAGER T. SOVEL | BID PLAN DATE |
| DEPARTMENT MANAGER APPROVAL - | DATE |
| JOB NO. NP22006 | DRAWING NO. NP2006PAV |
| SCALE: 1" = 30' | SHEET NO. C6.1 |


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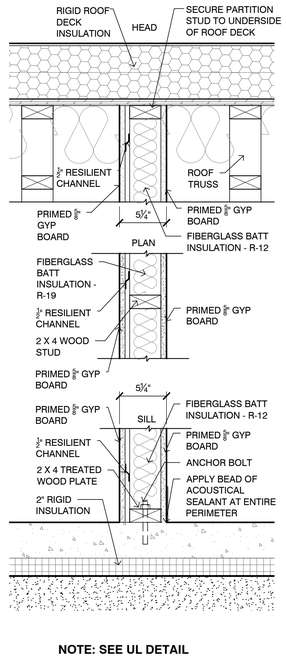

B1 G-006 **Wall Type W1/ W6 Exterior Wall - Brick / Wood Stud**
SCALE: 1 1/2" = 1'-0"




**NOTE: SEE UL DETAIL BELOW**

B-2 G-006 **Wall Type W2 - Interior Corridor Wall**
SCALE: 1 1/2" = 1'-0"

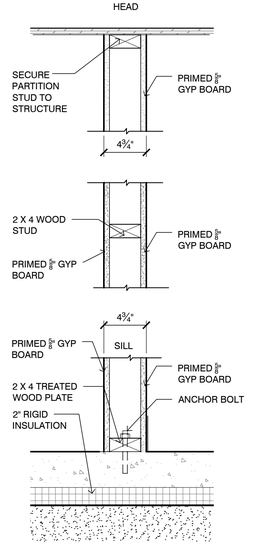
**STC 51**
**FIRE RATED - 1 HR**
**UL U305**



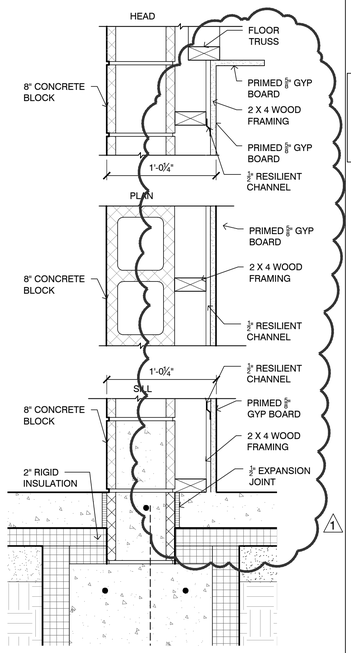

**NOTE: SEE UL DETAIL BELOW**

B3 G-006 **Wall Type W3 - Interior Units**
SCALE: 1 1/2" = 1'-0"

**STC 51**
**FIRE RATED - 1 HR**
**UL U305**




B4 G-006 **Wall Type W4 - Typ.Partition**
SCALE: 1 1/2" = 1'-0"




B5 G-005 **Wall Type W5 - Concrete Block**
SCALE: 1 1/2" = 1'-0"

**NOTE:**
WALL TYPES INDICATED FOR BUILDING ADDITION ONLY


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Developed by
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STATE OF MICHIGAN
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02/18/2025

KEY PLANS

SHEET TITLE
Addition Assemblies

SCALE:

| ISSUED FOR | DATE |
|---|---|
| HUD Submission | 12.13.2024 |
| PERMIT | 12.20.2024 |
| BULLETIN #1 | 02.19.2025 |

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G-006
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- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When UL issues a tie, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specific concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.


BXUV – Fire Resistance Ratings – ANSI/UL 263 Certified for United States
BXUV7 – Fire Resistance Ratings – CAN/ULC-S101 Certified for Canada


See General Information for Fire Resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Limits & Usages for Restraints

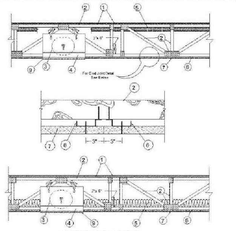
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Limits & Usages for Restraints


Design No. **L521**

December 18, 2024

**Unrestricted Assembly Rating — 1 Hr**
**Finish Rating — 25 Min (See Items 5 and 5A), 39 Min (See Items 6H and 7H)**
**This design was evaluated using a fixed design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide [BXUV](#) or [BXUV7](#)**

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**




Alternate Insulation Placement

**System No. 1**

1. **Flooring System —** The fluid-applied system shall consist of one of the following:

**Sub-Floor —** Nom 23/32 in. thick wood structural panels (roof) if sprayed side (or bottom side) and joists (sagging). Plywood or panels secured to trusses with construction adhesive and No. 8d (type) shank nails, spaced 12 in. OC along each truss. Trusses having a nominal 2 in. wide bottom chord and bottom chord spacing may be substituted for the 2x nails.

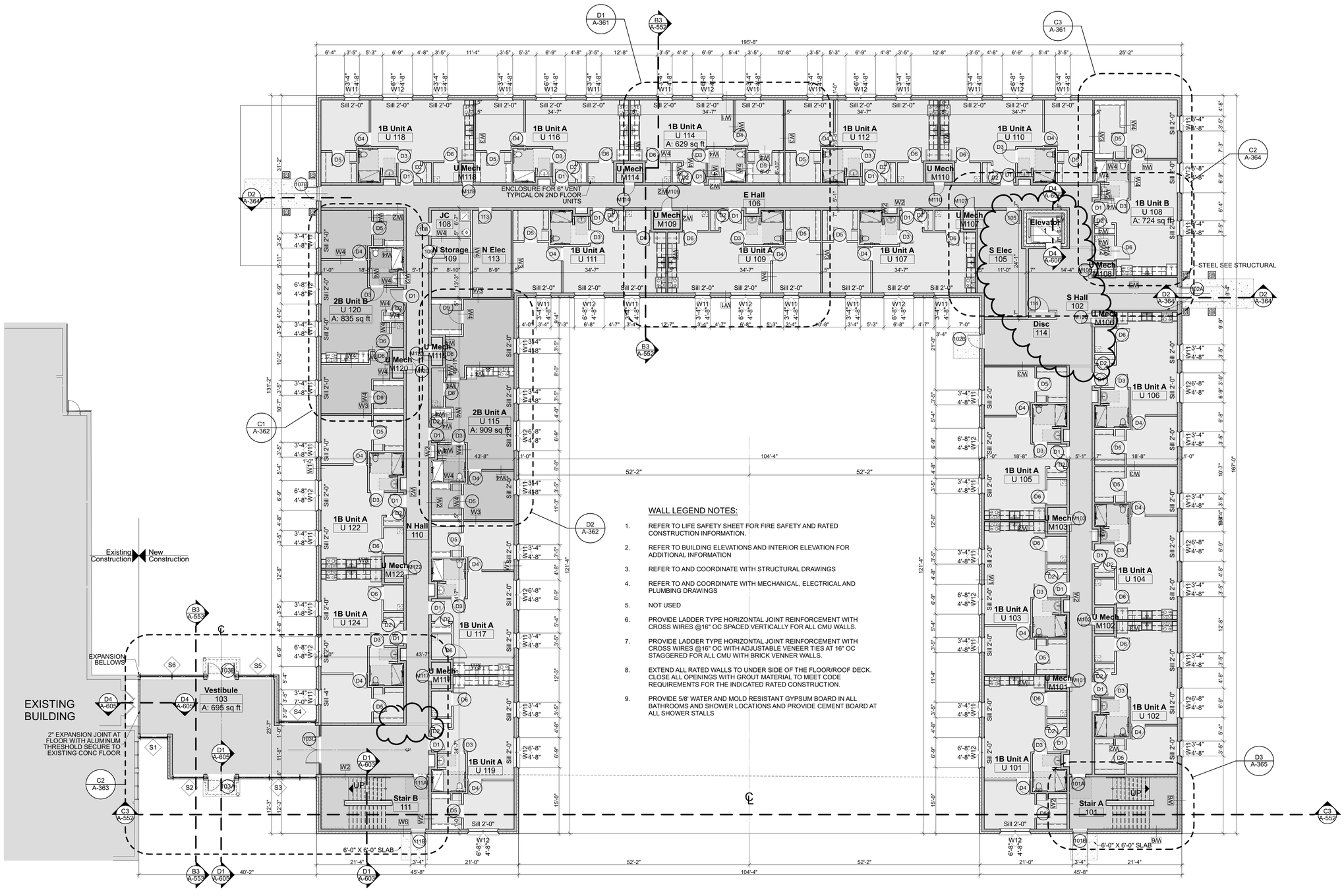
**Vapor Barrier —** (Optional) — Nom 3000 in. thick, sheeted polyethylene film, secured to sub-floor.

**Finish Floor —** Min 3 by 3 by 1/8 in. thick terrazzo units set in portland cement mortar to trusses, or min 1-1/2 in. thick wood strip or parquet, end-grain "cross-blocked" or "longitudinal" floor panels of plywood or strength axis of panels to be perpendicular to joists whichever sheathing.

2. **Trusses —** Parallel chord trusses, spaced 24 in OC. Fabricated from nom 2 by 4 lumber, with the lumber oriented vertically on the webs. Min truss depth is 12 in. when the **Ceiling Damper*** is used and 10 in. when a **Ceiling Damper*** is not used. Truss members assumed together with min 15/32 in. thick gap rated sheathing (APA Rated Sheathing, Exposure 1 or Structural I Grade) applied to the top chord of the trusses. Truss members secured together with min #10 screws at 6 in. OC. Trusses supported on 2 by 4 in. lumber with the wide face in a horizontal plane. Top chord of the trusses continuous over the supports. Bottom chord of the trusses spliced over the supports with 2 by 4 in. lumber, nailed to the bottom chord with 3 rows of 10d common wire nails spaced 6 in. OC. Bottom chord of the trusses secured to the supports with 2 by 4 in. lumber, nailed to the bottom chord with 3 rows of 10d common wire nails spaced 6 in. OC. Trusses spaced 24 in. OC.

3. **Ceiling Damper*** — For use with min 18 in. deep trusses. Max net free area shall be 104 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 162 sq in. per 144 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper. A steel clip (Item 9) shall be installed in accordance with damper instructions. **CSA AR PRODUCTS** — Issued 8/24/01.

4. **Batts and Blankets*** — (Optional) — Glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. When the resilient channels (Item 5) or furring channels (Item 5A) are spaced 24 in. OC, no insulation shall be installed in the concealed space. When the resilient channels (Item 5) or furring channels (Item 5A) are spaced 16 in. OC, the insulation shall be a max of 3-1/2 in. thick, and shall be securely agreed the cavity by




## WALL LEGEND NOTES:

1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION
3. REFER TO AND COORDINATE WITH STRUCTURAL DRAWINGS
4. REFER TO AND COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS
5. NOT USED
6. PROVIDE LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @16" OC SPACED VERTICALLY FOR ALL CMU WALLS.
7. PROVIDE LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @16" OC WITH ADJUSTABLE VENEER TIES AT 16" OC STAGGERED FOR ALL CMU WITH BRICK VENNER WALLS.
8. EXTEND ALL RATED WALLS TO UNDER SIDE OF THE FLOOR/ROOF DECK. CLOSE ALL OPENINGS WITH GROUT MATERIAL TO MEET CODE REQUIREMENTS FOR THE INDICATED RATED CONSTRUCTION.
9. PROVIDE 5/8' WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS AND SHOWER LOCATIONS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS

## Wall Types

**W1 Exterior Wall Brick and Wood Stud**
4" Brick
7/8" air space
1 1/2" Zip Sheathing R-6.6
**2x6** @16" OC with R19 (6") Batt Insulation
5/8" Type X Gyp Bd.

**W2 Interior Corridor Wall**
1 Hour STC 51
UL U305
5/8" Type X Gyp Bd on
1/2" Resilient Channel
**2x6** @16" OC with R-21 (6") Batt Insulation on
5/8" Type X Gyp Bd
A bead of acoustical sealant shall be applied around the partition perimeter for sound control.
Assembly to be continuous from the floor to the deck above. On the first floor to the 2nd floor deck, and on the 2nd floor to the roof deck.

**W3 Interior Unit to Unit Wall**
1 Hour STC 51
UL U305
5/8" Type X Gyp Bd on
1/2" Resilient Channel
**2x4** @16" OC with R-21 (6") Batt Insulation on
5/8" Type X Gyp Bd
A bead of acoustical sealant shall be applied around the partition perimeter for sound control.
Assembly to be continuous from the floor to the deck above. On the first floor to the 2nd floor deck, and on the 2nd floor to the roof deck.

**W4 Typical Interior Partition:**
5/8" Gyp Bd both sides on 2x4 @ 16" OC

**W5 Interior CMU Wall:**
5/8" Gyp Bd. on 1/2" Resilient Channels on 8" CMU

**W6 Exterior stair Wall:**
4" Brick with 7/8" air space
1 1/2" Zip Sheathing R-6.6
2x6 @16" OC with Batt Insulation R-21 with 5/8" Gyp Bd.

## 1st Floor Plan

SCALE: 3/32" = 1'-0"

0 8' 16' 24'


John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-9000
Fax: 313-964-3233


REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAWRZEWSKI
License No. 1301026315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

SHEET TITLE
1st Floor Plan

SCALE:

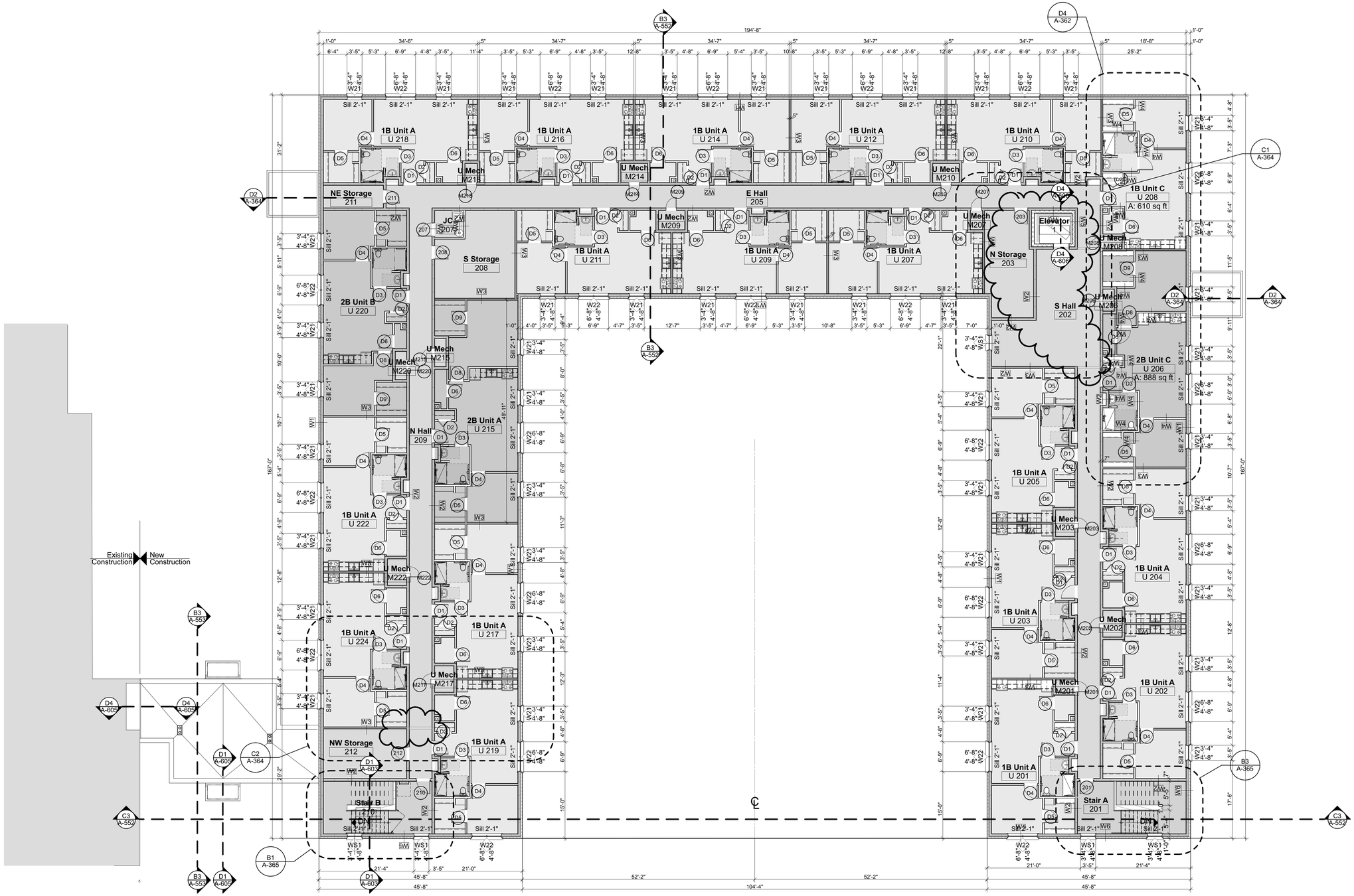
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| HUD Submission | 12.13.2024 |
| PERMIT | 12.20.2024 |
| BULLETIN #1 1 | 02.19.2025 |

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CHECKED: JA
APPROVED:

FILE NO. 21026.00

SHEET NO. A-301


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Printed: Monday, February 17, 2025




## Wall Types

**W1 Exterior Wall Brick and Wood Stud**
4" Brick
7/8" air space
1 1/2" Zip Sheathing R-6.6
**2x6** @16" OC with R19 (6") Batt Insulation
5/8" Type X Gyp Bd.

**W2 Interior Corridor Wall**
1 Hour STC 51
UL U305
5/8" Type X Gyp Bd on
1/2" Resilient Channel
**2x6** @16" OC with R-21 (6") Batt Insulation on
5/8" Type X Gyp Bd
A bead of acoustical sealant shall be applied around the partition perimeter for sound control.
Assembly to be continuous from the floor to the deck above. On the first floor to the 2nd floor deck, and on the 2nd floor to the roof deck.

**W3 Interior Unit to Unit Wall**
1 Hour STC 51
UL U305
5/8" Type X Gyp Bd on
1/2" Resilient Channel
**2x4** @16" OC with R-21 (6") Batt Insulation on
5/8" Type X Gyp Bd
A bead of acoustical sealant shall be applied around the partition perimeter for sound control.
Assembly to be continuous from the floor to the deck above. On the first floor to the 2nd floor deck, and on the 2nd floor to the roof deck.

**W4 Typical Interior Partition:**
5/8" Gyp Bd both sides on 2x4 @ 16" OC

**W5 Interior CMU Wall:**
5/8" Gyp Bd. on 1/2" Resilient Channels on 8" CMU

**W6 Exterior stair Wall:**
4" Brick with 7/8" air space
1 1/2" Zip Sheathing R-6.6
2x6 @16" OC with Batt Insulation R-21 with 5/8" Gyp Bd.

## 2nd Floor Plan

SCALE: 3/32" = 1'-0"

0 8" 16" 24"


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REGISTRATION SEAL

STATE OF MICHIGAN
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License No. 1301020315
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02/18/2025

KEY PLANS

SHEET TITLE
2nd Floor Plan

SCALE:

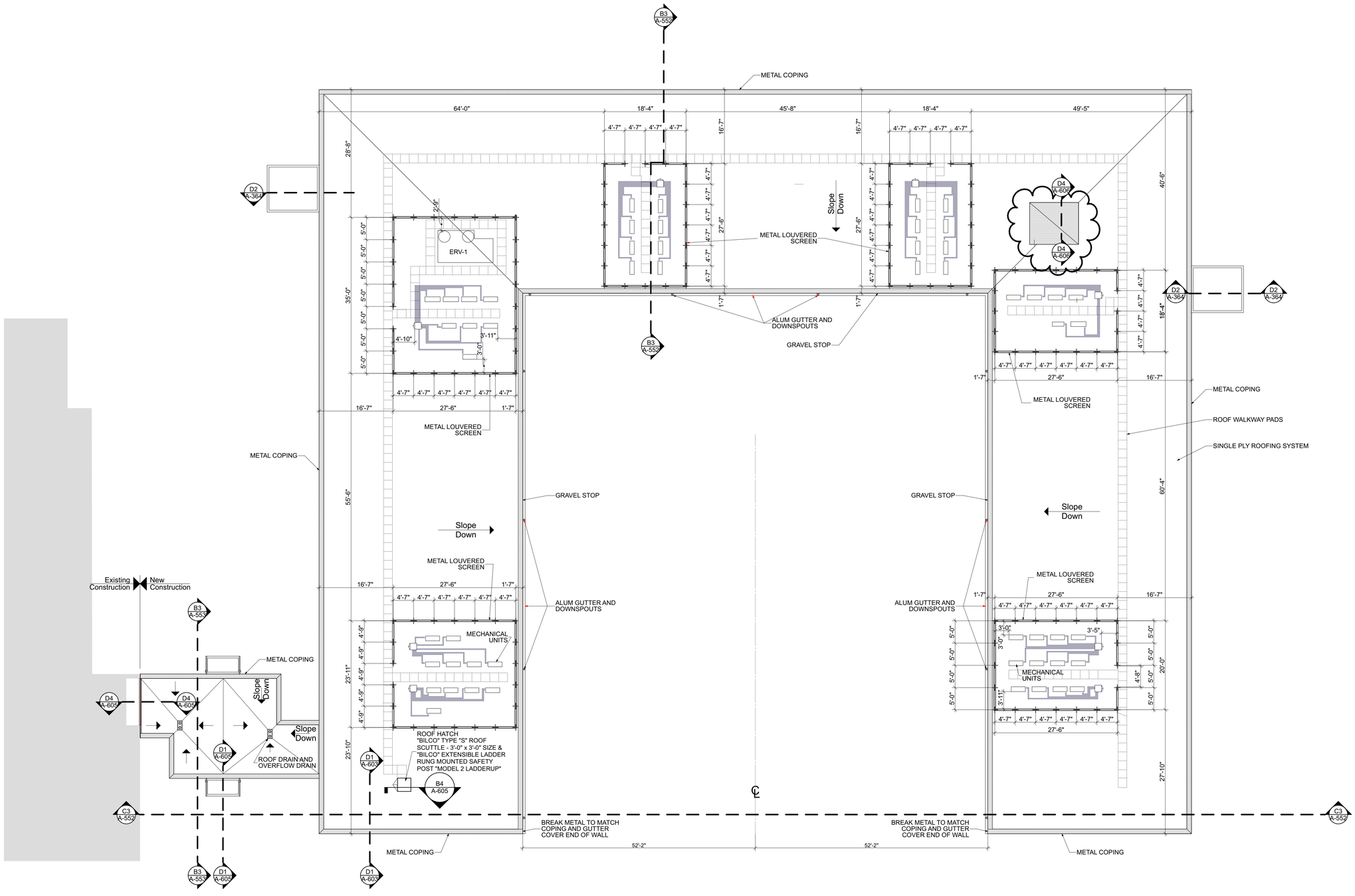
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|---|---|
| HUD Submission | 12.13.2024 |
| PERMIT | 12.20.2024 |
| BULLETIN #1 | 02.19.2025 |

DRAWN BY: DWP
CHECKED: JA
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FILE NO. 21026.00

SHEET NO. A-303


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## Roof Plan

SCALE: 3/32" = 1'-0"

0 8" 16" 24"


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KEY PLANS

SHEET TITLE

Roof Plan

SCALE:

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DWP
DRAWN BY

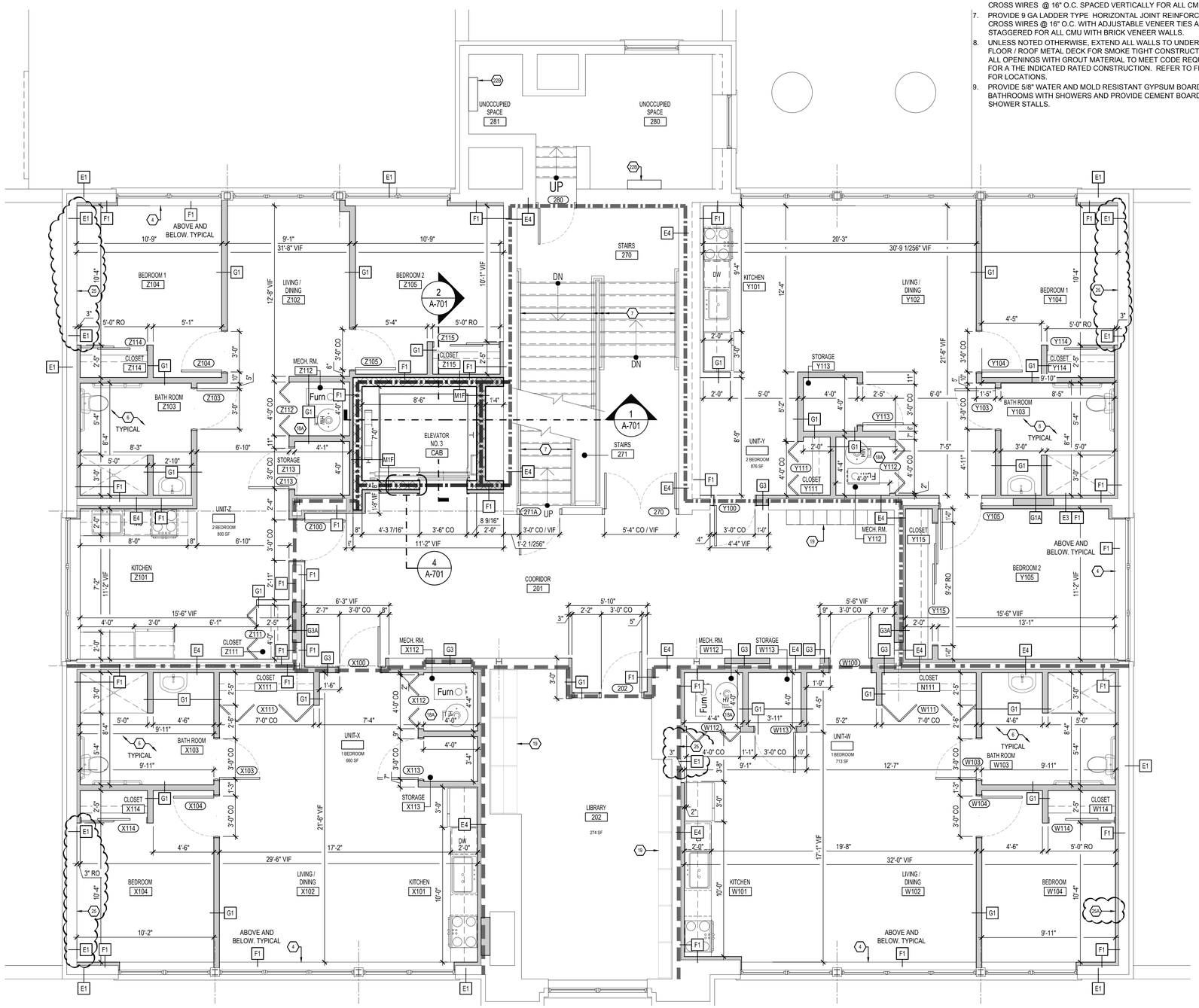
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FILE NO.

A-331
SHEET NO.


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## FLOOR PLANS NOTES:

1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. REFER TO AND COORDINATE WITH STRUCTURAL DRAWINGS
4. REFER TO AND COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
5. MATCH EXISTING BRICK AND CMU FINISH AND COLOR AND IS SUBJECT TO ARCHITECT APPROVAL OF SAMPLE SUBMITTALS. FIELD VERIFY AND MATCH MASONRY PATTERN AND COURSING. TOOTH IN ALL NEW WORK INTO EXISTING COURSING.
6. PROVIDE 9 GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. SPACED VERTICALLY FOR ALL CMU WALLS.
7. PROVIDE 9 GA LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. WITH ADJUSTABLE VENEER TIES AT 16" O.C. STAGGERED FOR ALL CMU WITH BRICK VENEER WALLS.
8. UNLESS NOTED OTHERWISE, EXTEND ALL WALLS TO UNDER SIDE OF FLOOR / ROOF METAL DECK FOR SMOKE TIGHT CONSTRUCTION. CLOSE ALL OPENINGS WITH GROUT MATERIAL TO MEET CODE REQUIREMENTS FOR A THE INDICATED RATED CONSTRUCTION. REFER TO FLOOR PLANS FOR LOCATIONS.
9. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.

## FLOOR PLANS NOTES LEGEND:

1. BARRIER FREE POWER ASSIST DOOR ACTUATOR. PROVIDE POST AS NEEDED (1A).
2. EXISTING FIRE EXTINGUISHER CABINET TO REMAIN. PROVIDE NEW EXTINGUISHER.
3. PATCH AND REPAIR WALL WITH MATCHING EXISTING MATCHING.
4. NEW SOLID SURFACE SILL AND WINDOW SHADES AT ALL WINDOW. COORDINATE SHADE SELECTION WITH OWNER. TYPICAL.
5. ELEVATOR DISCONNECT SWITCH. COORDINATE WITH ELECTRICAL AND ELEVATOR SUPPLIER
6. REFER TO SHEET A-603 FOR TYPICAL MOUNTING DIMENSIONS PER ANSI A117.1-2009
7. NEW HAND AND GUARD RAILS AT ALL STAIRS AND RAMPS. TYPICAL.
8. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS. REFER TO AND COORDINATE WITH BUILDING AND GLAZING ELEVATIONS.
9. TUNNEL AND CRAWL SPACE AREAS. ALL SLAB ON GRADE AREAS TO INSPECTED FOR POSSIBLE SUPPORTED SLAB CONDITION.
   9A = BASEMENT AREA.
   9B = EXTERIOR TUNNEL TO BE REMOVED AND BACK FILLED. CLOSE WITH CMU AT BUILDING
   9C = EXISTING TUNNEL ACCESS TO BE CLOSED SEALED WITH CONCRETE AND RELOCATED TO STORAGE ROOM 131A. COORDINATE WITH OWNER.
10. ROOF ACCESS LADDER AND HATCH. SEE DETAIL 2 ON SHEET A-601
11. ELEVATOR SUMP PUMP. COORDINATE & VERIFY LOCATION WITH ELEVATOR MANUF. AND FOOTINGS AND ELEC. / MECH.
12. COORDINATE LOCATION OF PROPOSED KNOX BOX LOCATION WITH LOCAL AUTHORITY
13. EXISTING FIRE DEPARTMENT CONNECTION (F.D.C.). COORDINATE WITH CIVIL AND MECHANICAL.
13. FIRE PROTECTION ASSEMBLY. REFER TO MECHANICAL
14. EXISTING GAS METER. COORDINATE WITH CIVIL AND MECHANICAL.
15. NEW ELECTRICAL TRANSFORMER CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
16. NEW GENERATOR CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
17. ELEVATOR SUMP PUMP CONTROL PANEL. COORDINATE LOCATION WITH ELEVATOR MANUFACTURER.
18. FLOOR DRAIN: 18A = NOT SHOWN. REFER TO MECHANICAL FOR LOCATION. TYPICAL
19. EXISTING CASEWORK. LOCKERS TO BE PROTECTED
20. REFER TO BUILDING ADDITION DRAWING. TYPICAL.
21. SOLID WOOD OR SOLID SURFACE MATERIAL WALL SILL.
22. 22A = RECESSED OR SEMI-RECESSED ELECTRIC UNIT HEATER (ECUH)
    22B = WALL SURFACE MOUNTED ELECTRIC UNIT HEATER (ECUH)
    IN FILL EXISTING WALL OPENING WITH MATCHING MATERIAL. SEE WALL TYPE V1
23. EXISTING RECESSED METAL POCKET: CLEAN AND REMOVE ANY SHARP EDGES AND PREP FOR PAINTING TO MATCH EXISTING COLOR. PROVE A 2x TREADED WOOD AT THE BASE AND COVER WITH 1/2" SOLID SURFACE MATERIAL. TYPICAL AT ALL LOCATIONS.
24. NEW SUMP PUMP AND 30" ROUND x 24" DEEP PIT. FIELD VERIFY EXIST LOCATION WITH ELEVATOR AND COORDINATE WITH AND ELEC. / MECH. REFER TO SIMILAR ELEVATOR DETAIL AND PROVIDE UNI-STRUT FROM FLOOR TO CEILING PIPE SUPPORT. SEE DETAIL 5 ON SHEET A-701
25. "HISTORIC PRESERVATION" ITEMS / AREAS (REFER TO EXISTING FLOOR PLANS SHEETS):
    25A: EXISTING BLACK CHALKBOARD TO BE PRESERVED AND INSTALLED OVER NEW FURRED WALL

## FLOOR PLANS WALL LEGEND:

- 1 HOUR FIRE BARRIER WALL CONSTRUCTION (ELEVATOR / STAIRS)
- 1 HOUR FIRE PARTITION WALL CONSTRUCTION (DWELLING SEPARATION)
- 1/2 HOUR FIRE PARTITION WALL CONSTRUCTION (CORRIDORS)

**E1** — EXISTING MULTI WYTHE EXTERIOR MASONRY WALL

**E2** — EXISTING SINGLE WYTHE INTERIOR MASONRY PARTITION WALL. EXISTING CMU WALLS VARY IN WIDTH OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS.

**E3** — EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU.

**E4** — ONE HOUR FIRE PARTITION WALL: EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU. GC/CM TO VERIFY AND CONFIRM WALL IS EXTENDED TO UNDER SIDE DECK AND EXTEND AND PATCH EXISTING WALL AS NECESSARY TO MEET A ONE HOUR FIRE RATED PARTITION WALL.
OTHERWISE PROVIDE A NEW FIRE PARTITION WALL TYPE G3

**M1** — 6" C.M.U. WALL. EXISTING CMU WALLS VARY IN WIDTHS OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS AND REFER TO PLANS FOR INTERIOR WALL FURRING.
- M1A = 8" CMU
- M1B = 4" CMU
- M1C = THICKNESS VARIES AS NOTED WITH FULL THICKNESS OF CMU.
- M1F = 8" CMU ONE HOUR RATED FIRE BARRIER WALL

**F1** — 5/8" GYPSUM BOARD ON 20 GA. 2-1/2" METAL STUDS @ 16" O.C.. EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH 2 1/2" R8 FIBER GLASS INSULATION

**F2** — 5/8" GYPSUM BOARD ON 20 GA. 4" METAL STUDS @ 16" O.C.. EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH MINIMUM 4" R13 FIBER GLASS INSULATION.

**G1** — 5/8" GYPSUM BOARD ON BOTH SIDES OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.
- G1A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS
- G1B = PARTIAL HEIGHT WALL: MINIMUM OF 3'-6" ABOVE TOP LANDING (5'-0" TOTAL HEIGHT) 4"-18 GA METAL STUD FRAMING AT 16" O.C WITH 5/8" GYPSUM BOARD ON BOTH SIDES: STUD TYPE CS3-400S200-43 (18). BRACE TO EXISTING PLATFORM OR TWO PROVIDE PONY WALL STEEL POSTS.

**G2** — 5/8" GYPSUM BOARD ON ONE SIDE OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.

**G3** — 1 HOUR FIRE PARTITION WALL: 5/8" GYPSUM BOARD ON BOTH SIDES OF TWO STAGGERED ROWS 20 GA 3 5/8". METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY. UL DESIGN U493.
G3A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS

**V1 / V2** — BRICK AND CMU INFILL AREAS: PATCH AND REPAIR ALL WALL OPENING AFTER REMOVAL OF RECESSED ITEMS. FIELD VERIFY AND MATCH BRICK, CMU, GLAZED CMU AND SUBMIT SAMPLES FOR APPROVAL. COORDINATE WITH MECHANICAL IF EXISTING OPENING IS UTILIZED FOR NEW EQUIPMENT. TYPICAL.
V2 = NEW MASONRY INFILL (BRICK AND CMU) TO MATCH EXISTING. NEW **BRICK AND CMU TO BE TOOTHED INTO EXISTING.**

PROJECT NORTH

1 / A-305 — PROPOSED ELARGED SECOND LEVEL PLAN - EXISTING BUILDING
SCALE: 1/4"=1'-0"
REF:

4' 0 2' 4'
SCALE: 1/4"= 1'-0"


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Developed by
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REGISTRATION SEAL

STATE OF MICHIGAN
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License No. 1301026315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

SHEET TITLE

# PROPOSED ENLARGED SECOND LEVEL PLAN EXISTING BUILDING

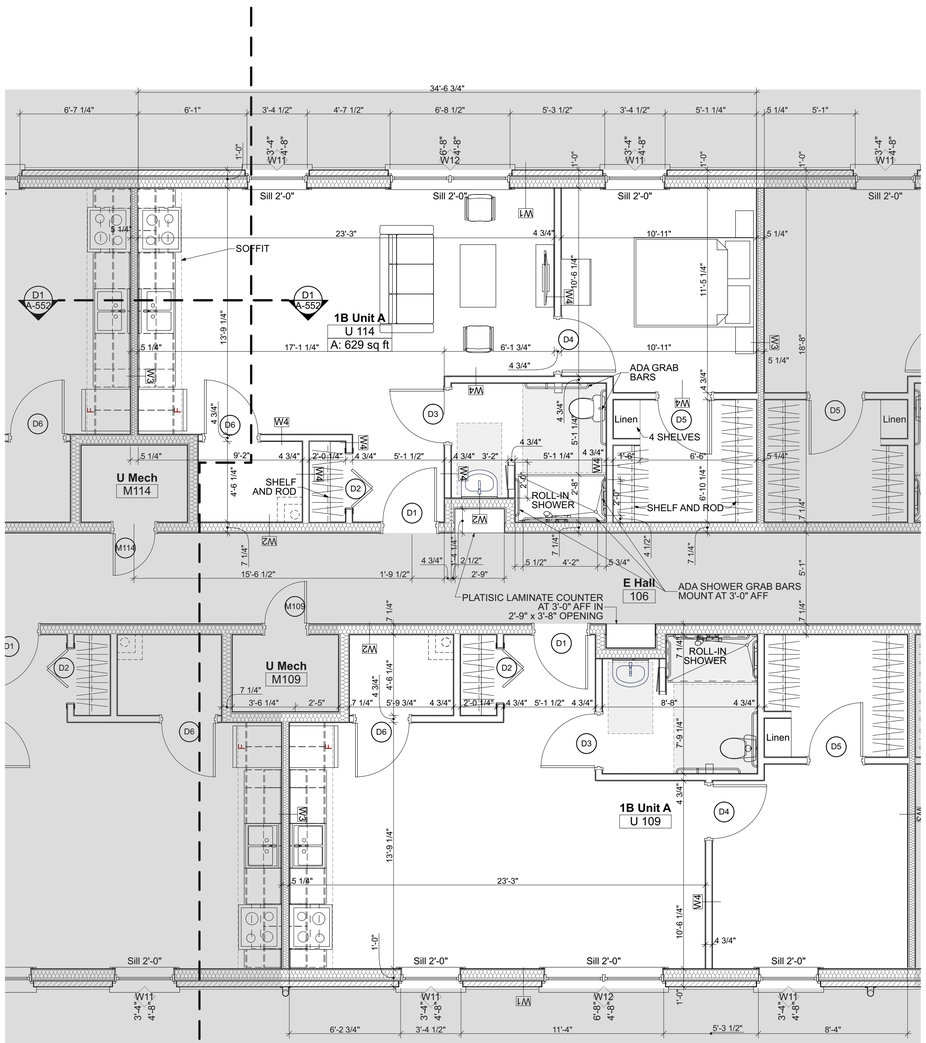
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| ISSUED FOR | DATE |
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| Review | 03.26.2024 |
| Permits | 04.12.2024 |
| Permits | 10.25.2024 |
| HUD Submission | 12.13.2024 |
| Permits | 12.20.2024 |
| Bulletin No. 1 | 02.19.2025 |

DRAWN BY: EBH
CHECKED: JA
APPROVED:

FILE NO. 21026.00

SHEET NO. A-356

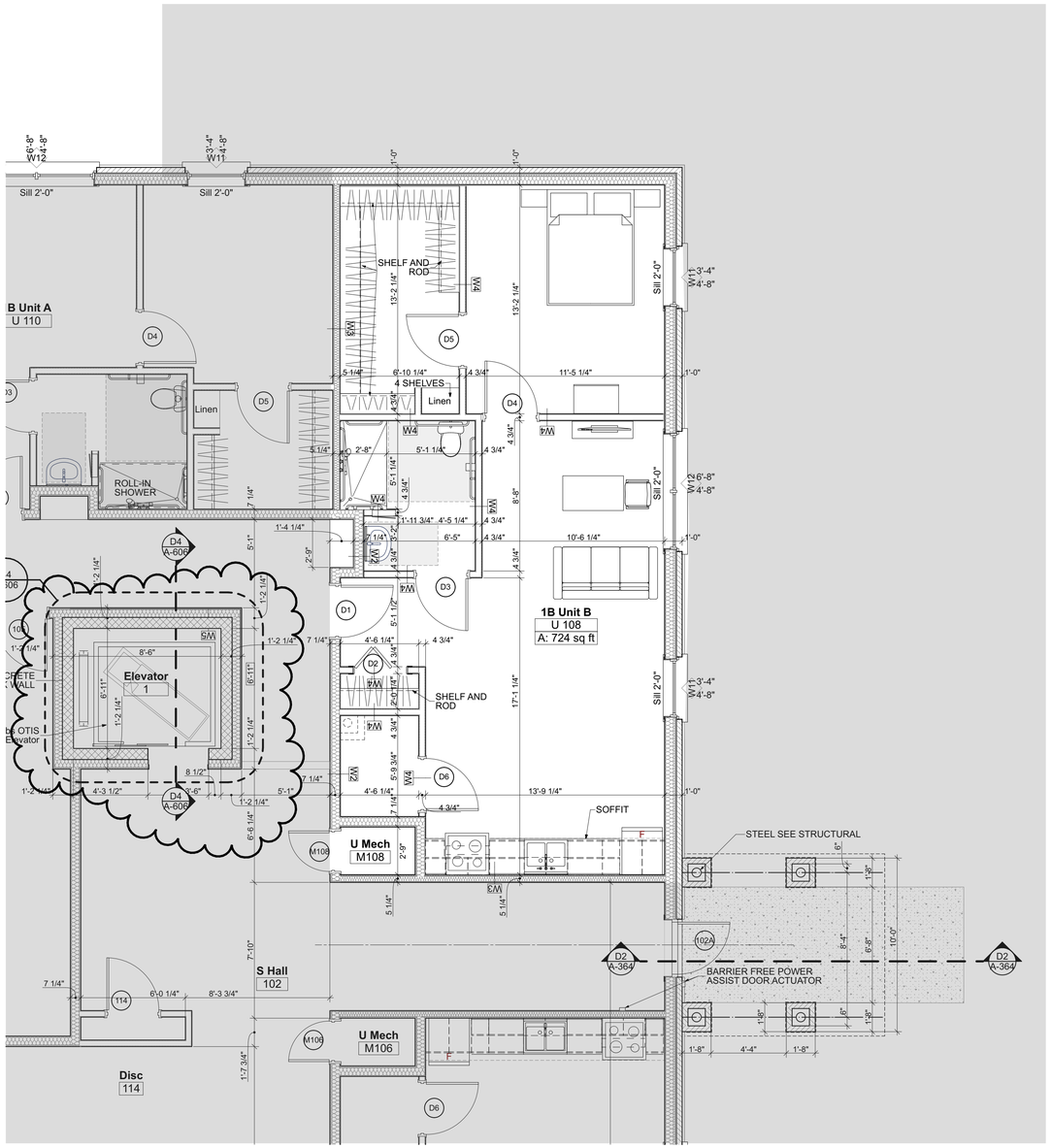



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A-552

N D1 A-361

## 1B Unit A - Typical 1 Bedroom unit

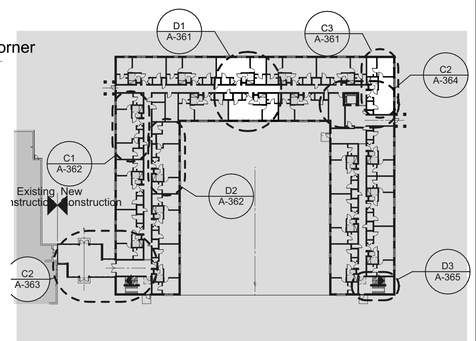
SCALE: 1/4" = 1'-0"




N C3 A-361

## 1B Unit B - 1 Bedroom Corner

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




N 1st Floor Key Plan

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KEY PLANS

SHEET TITLE
1B Unit Plans

SCALE:

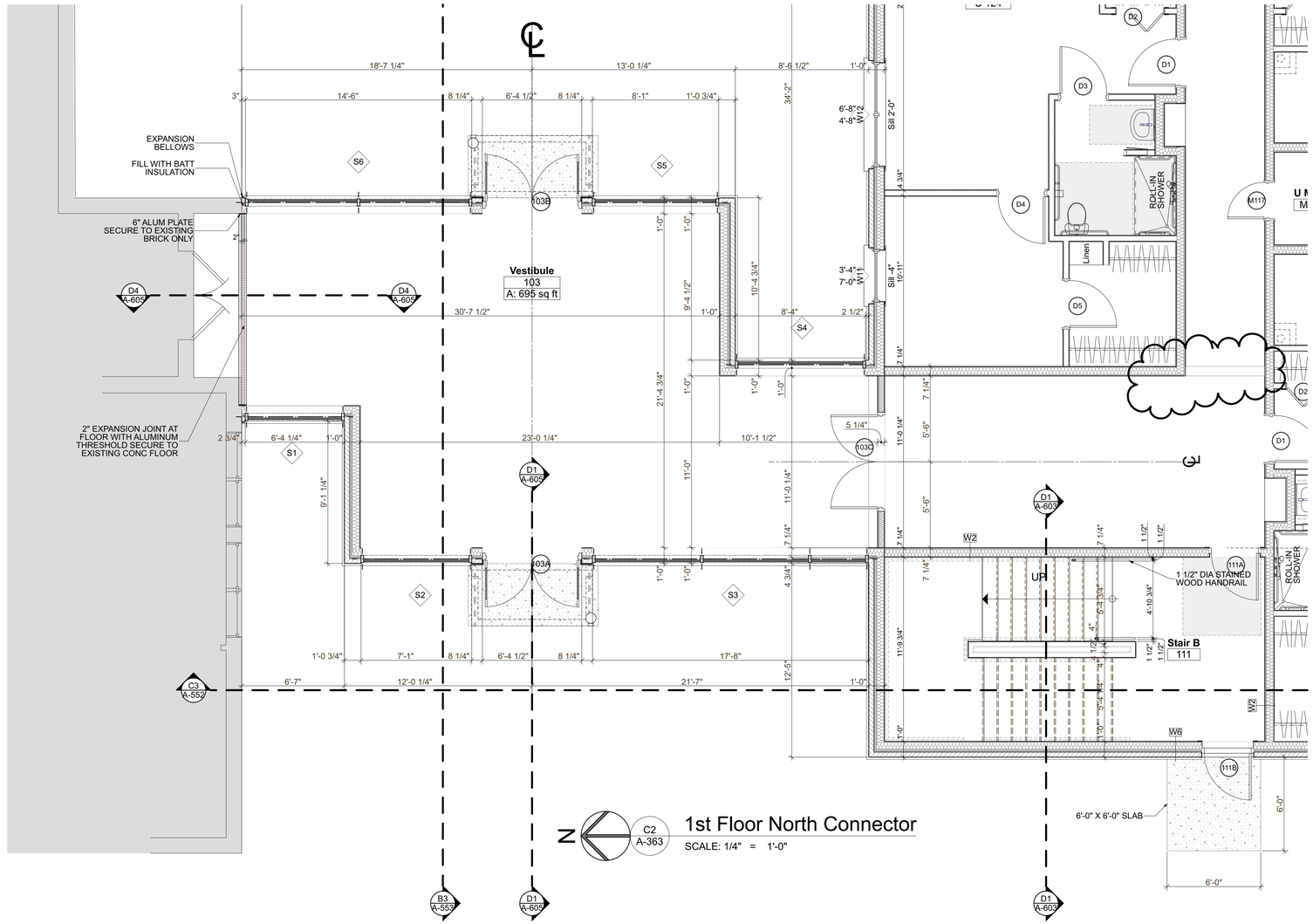
| ISSUED FOR | DATE |
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| HUD Submission | 12.13.2024 |
| PERMIT | 12.20.2024 |
| BULLETIN #1 (1) | 02.19.2025 |

DRAWN BY: DWP
CHECKED: JA
APPROVED:

FILE NO. 21026.00

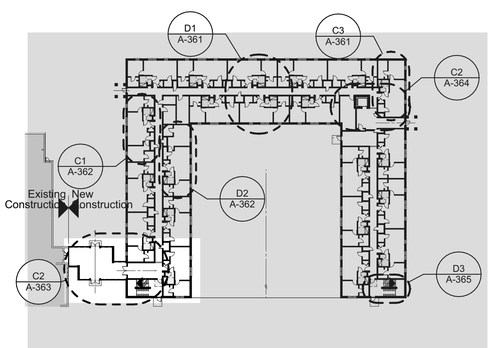
SHEET NO. A-361

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Printed: Monday, February 17, 2025




## 1st Floor North Connector

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




## 1st Floor Key Plan


John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-9000
Fax: 313-964-3233


REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAWRZEWSKI
License No. 1301026315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

SHEET TITLE

North Connector Area Plans

SCALE:

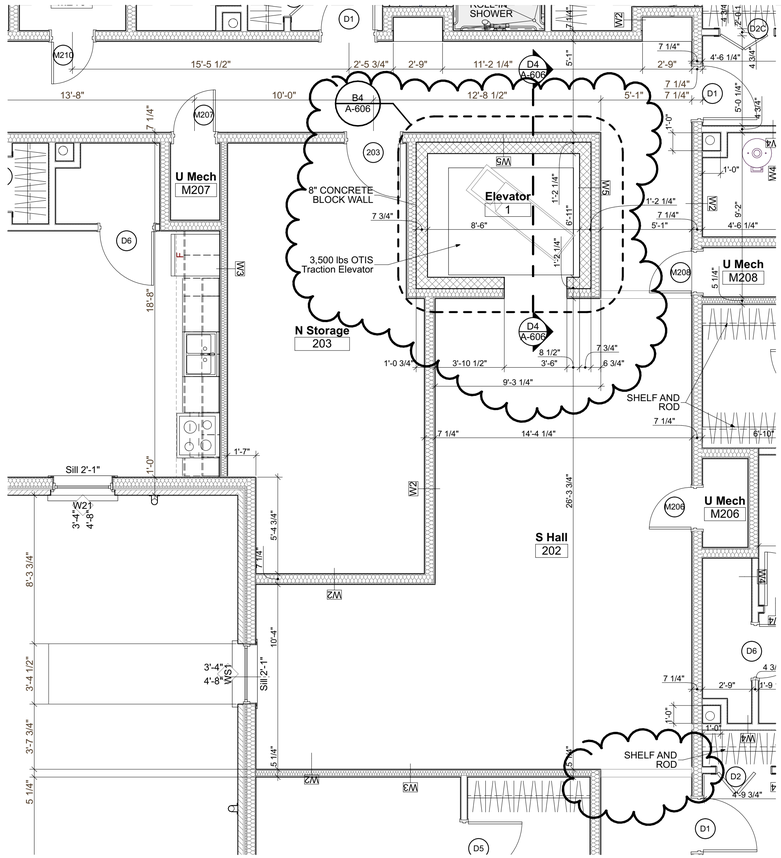
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| BULLETIN #1 (1) | 02.19.2025 |

DRAWN BY: DWP
CHECKED: JA
APPROVED:

FILE NO. 21026.00

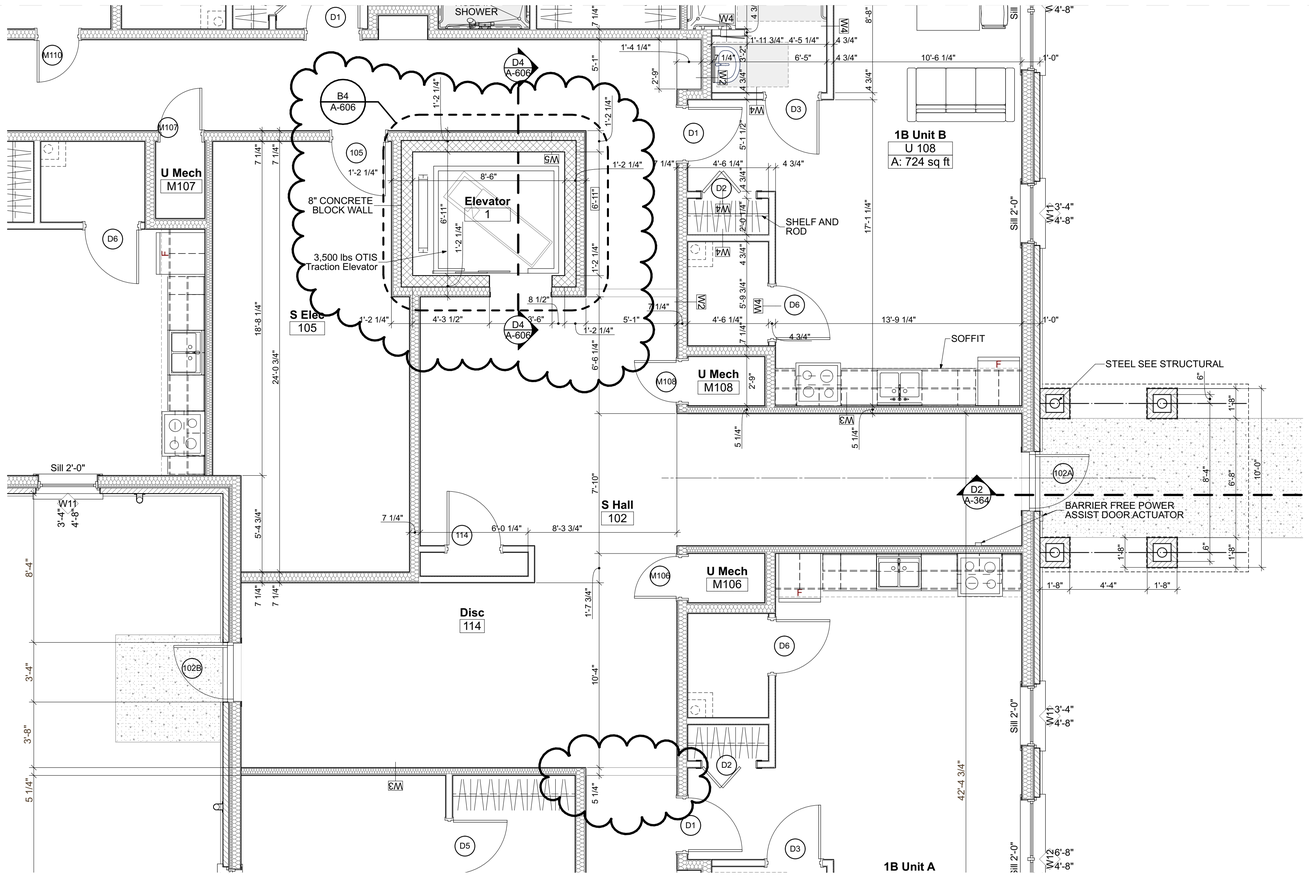
SHEET NO. A-363


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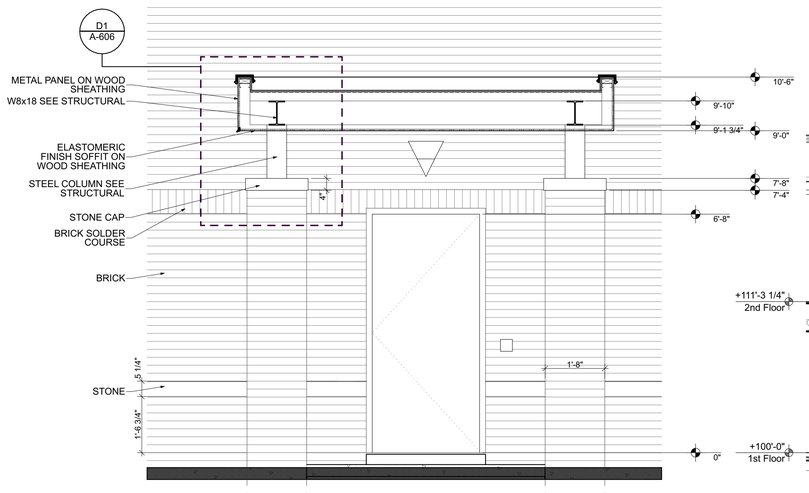

## 2nd Floor South Common

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



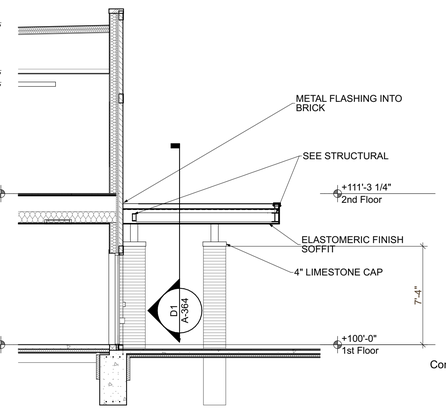

## 1st Floor South Common

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



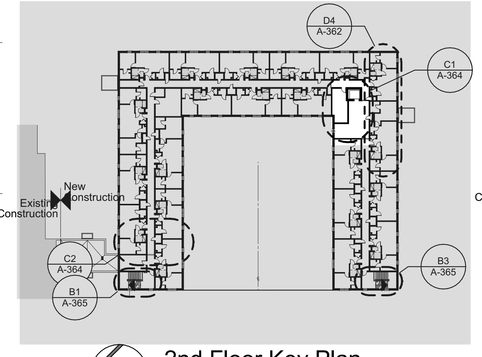

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SCALE: 1/2" = 1'-0"

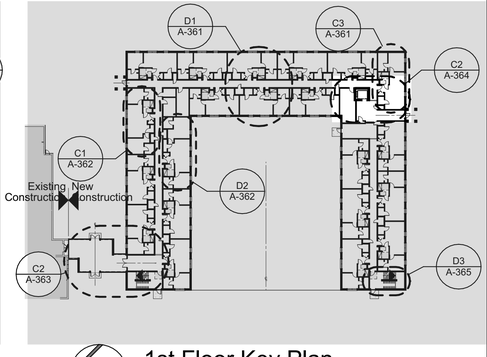



## N-S Section South Entry

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




## 2nd Floor Key Plan




## 1st Floor Key Plan

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STATE OF MICHIGAN
THADDEUS C ZAWRZEWSKI
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02/18/2025

KEY PLANS

SHEET TITLE

South Common Area Plans

SCALE:

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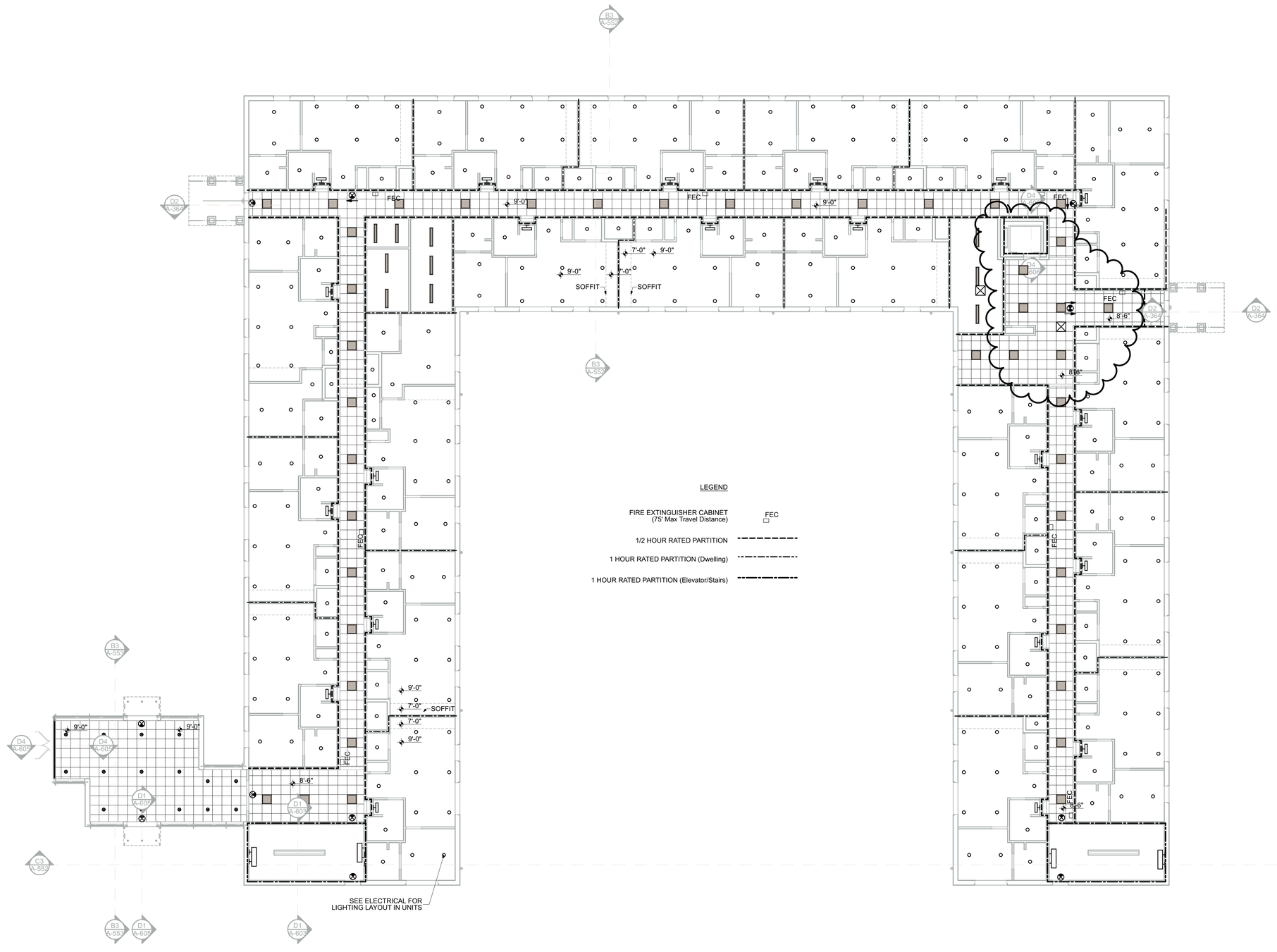
CHECKED: JA

APPROVED

FILE NO. 21026.00

SHEET NO. A-364

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Printed: Monday, February 17, 2025




1st Floor Ceiling Plan

SCALE: 3/32" = 1'-0"


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REGISTRATION SEAL

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License No.
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LICENSED ARCHITECT

02/18/2025

KEY PLANS

SHEET TITLE

1st Floor Ceiling Plan

SCALE:

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| PERMIT | 12.20.2024 |
| BULLETIN #1 (1) | 02.19.2025 |

DRAWN BY: DWP

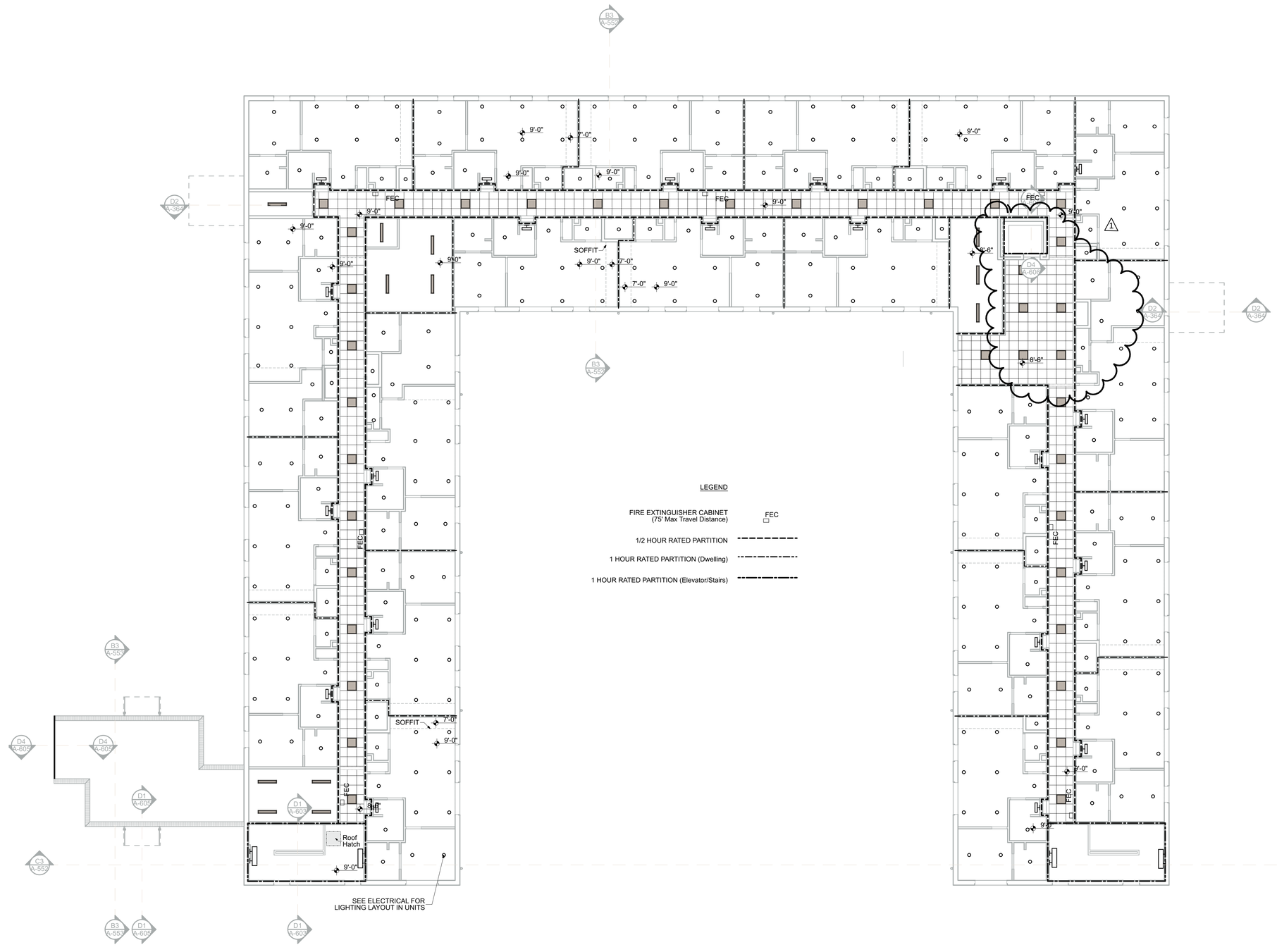
CHECKED: JA

APPROVED

FILE NO.: 21026.00

SHEET NO.: A-461


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Printed: Monday, February 17, 2025




N

## 2nd Floor Ceiling Plan

SCALE: 3/32" = 1'-0"


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License No. 1301026315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

SHEET TITLE
2nd Floor Ceiling Plan

SCALE:

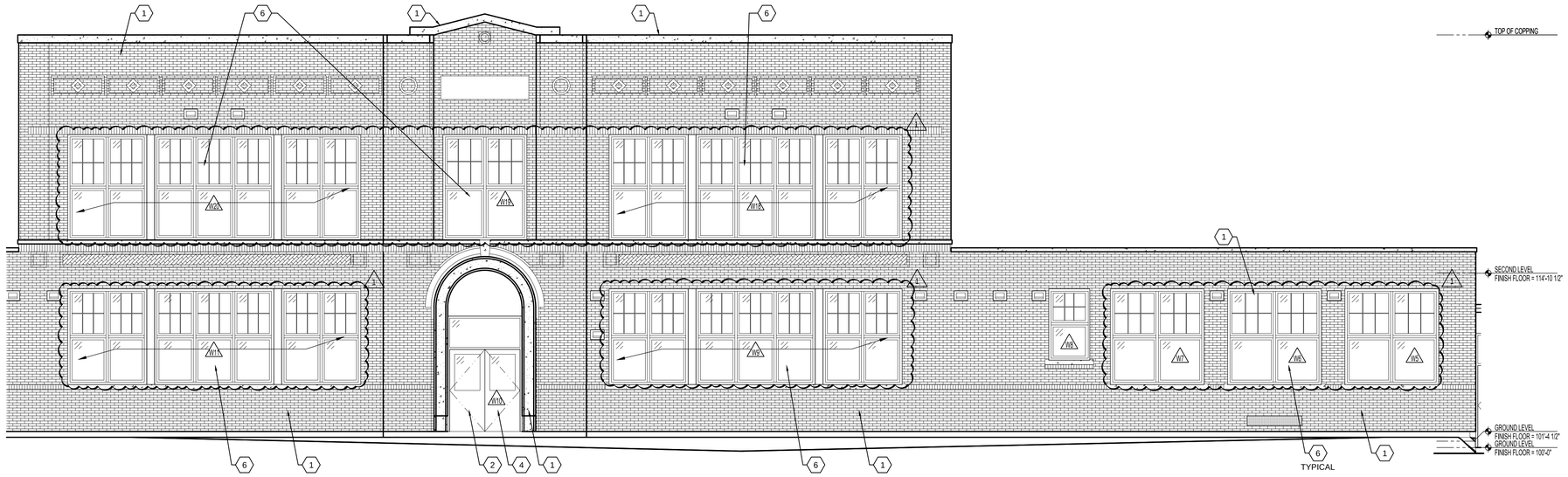
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| HUD Submission | 12.13.2024 |
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| BULLETIN #1 1 | 02.19.2025 |

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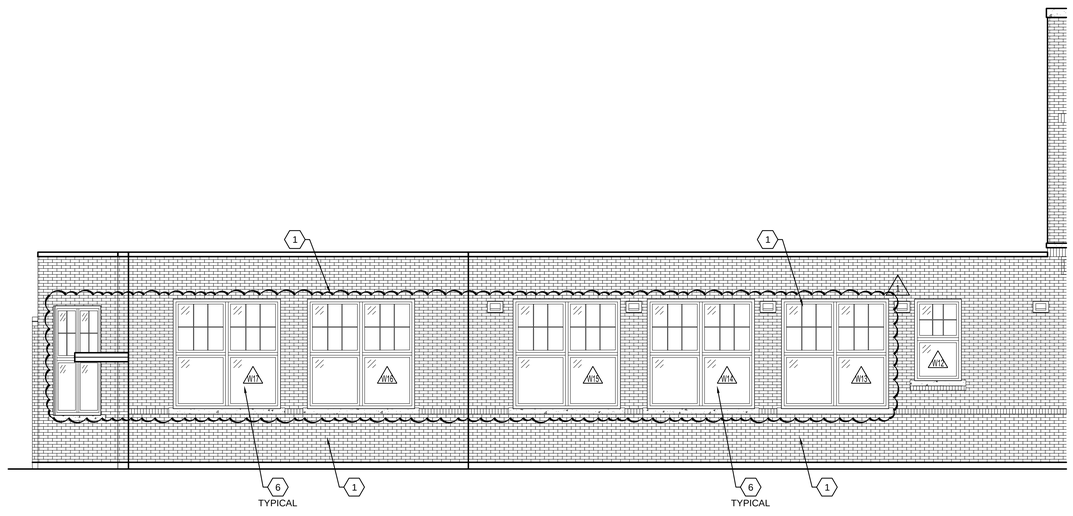
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SHEET NO. A-462

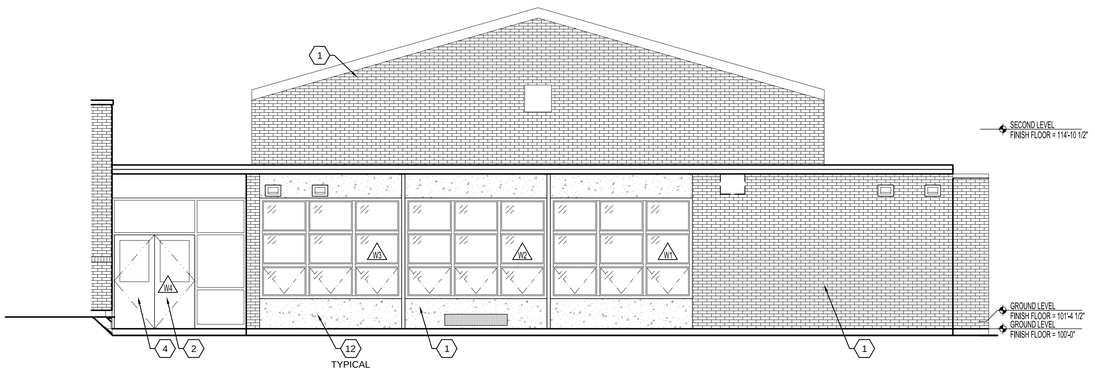

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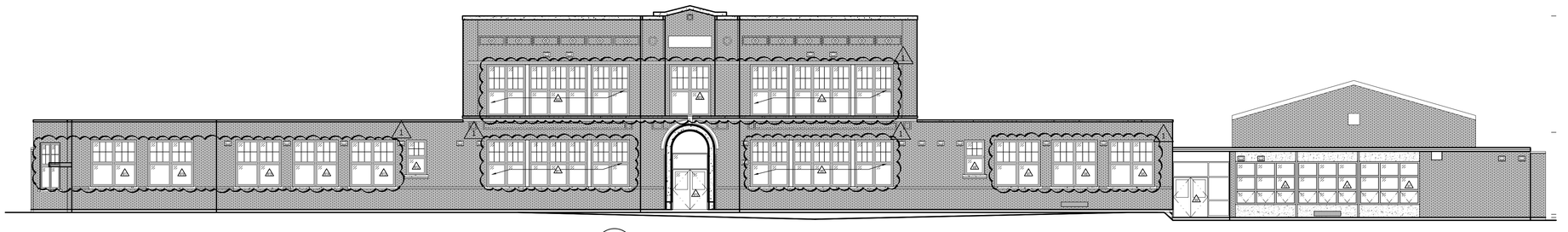

1A / A-501 PARTIAL WEST BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:




1C / A-501 PARTIAL WEST BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:




1B / A-501 PARTIAL WEST BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:



1 / A-201 WEST BUILDING ELEVATION
SCALE: 3/32"=1'-0"
REF:

## EXTERIOR ELEVATIONS NOTE LEGEND:

1. REFER TO BRICK REPORT
2. ANODIZED ALUMINUM STOREFRONT GLASS ENTRY UNIT AS SCHEDULED
3. DOOR AS SCHEDULED
4. BARRIER FREE POWER ASSIST DOOR ACTUATOR
5. FIRE DEPARTMENT CONNECTION (F.D.C.) REFER TO MECHANICAL
6. NEW GLAZING UNIT TO REPLACE EXISTING AS SCHEDULED
7. GAS METER REFER TO MECHANICAL
8. TRANSFORMER, ELECTRICAL METER, ELECTRICAL PANELS REFER TO MECHANICAL
9. NEW MASONRY INFILL TO MATCH EXISTING. NEW BRICK TO BE TOOTHED INTO EXISTING.
10. NEW STONE SILL TO MATCH EXISTING
11. REPAIR, PATCH AND REPLACE BRICK AS NECESSARY AFTER THE REMOVAL OF THE STAIRS.
12. EXISTING "AGGREGATE SURFACED SPANDRELL" PANEL PER ORIGINAL BUILDING DRWINGS. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS.
13. PRE-FINISHED METAL GUTTERS AND DOWNSPOUT MATCHING EXISTING PROFILE AND COLOR. SUBMIT SAMPLES FOR APPROVAL.

## EXTERIOR ELEVATIONS NOTES:

1. REFER TO AND COORDINATE WITH SPECIFICATIONS AND DETAILS FOR ADDITION SPECIFIC INFORMATION.
2. MATCH EXISTING BRICK COURSING AND PATTERN. TOOTH IN EACH BRICK COURSE.
3. EXTEND WINDOW FLASHING 8" BEYOND OPENING.
4. ALL ROUGH OPENINGS AROUND WINDOWS AND DOORS SHALL BE PROPERLY AND FULLY FLASHED AND AIR SEALED ALL AROUND OPENINGS AND FROM BOTH SIDES (INTERIOR AND EXTERIOR).
5. ALL DOORS AND WINDOWS SHALL MEET THE FOLLOWING THERMAL REQUIREMENTS:

| | | |
|---|---|---|
| OPAQUE: | U-0.17 | SHGC-ANY |
| ≤ 1/2 LITE: | U-0.25 | SHGC-0.25 |
| > 1/2 LITE: | U-0.25 | SHGC-0.40 |

## WINDOWS SELECTION:

TYPE 1 MANUFACTURER: QUAKER COMMERCIAL
1. CUSTOM MADE WINDOWS FROM QUAKER COMMERCIAL WINDOWS H-650 AND M-600.
2. CONFIGURATION SUCH AS 6-1-1, 1-1-1, 6-1, 1-1, ETC, SHALL MATCH EXISTING AND AS DEPICTED ON THE DESIGN DOCUMENTS.
3. COMPLETE SHOP DRAWINGS INCLUDING SCHEDULE OF EACH WINDOW SHALL BE SUBMITTED ALONG WITH FULL MOCK-UP AS REQUIRED BY HISTORIC PRESERVATION CONSULTANT FOR REVIEW WITH OWNER AND OWNER HISTORIC PRESERVATION CONSULTING PRIOR TO FABRICATION. 1
4. SEE TYPICAL DETAILS ON SHEET A-508

TYPE 2 MANUFACTURER PER SPECIFICATIONS:
1. THERMALLY SEPARATED ANODIZED ALUMINUM STOREFRONT WINDOWS WITH 2"X4 1/2" FRAME PROFILE

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

10' 0 5' 10'
SCALE: 3/32"= 1'-0"

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REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAJDZIENSKI
License No. 1301026315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

SHEET TITLE
BUILDING ELEVATIONS EXISTING

SCALE:

| ISSUED FOR | DATE |
|---|---|
| Review | 03.28.2024 |
| Permits | 04.12.2024 |
| Permits | 10.25.2024 |
| HUD Submission | 12.13.2024 |
| Permits | 12.20.2024 |
| Bulletin No. 1 (1) | 02.19.2025 |

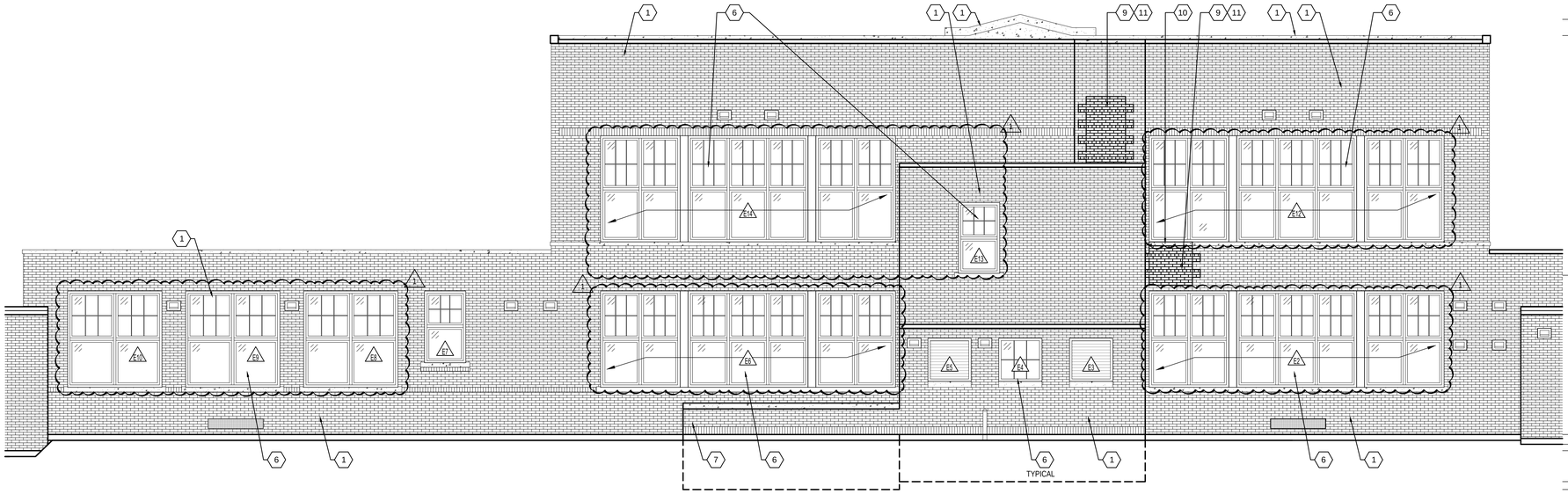
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JA
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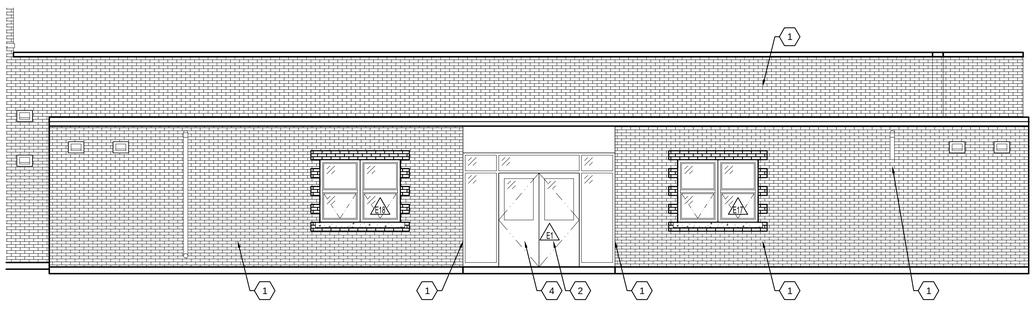
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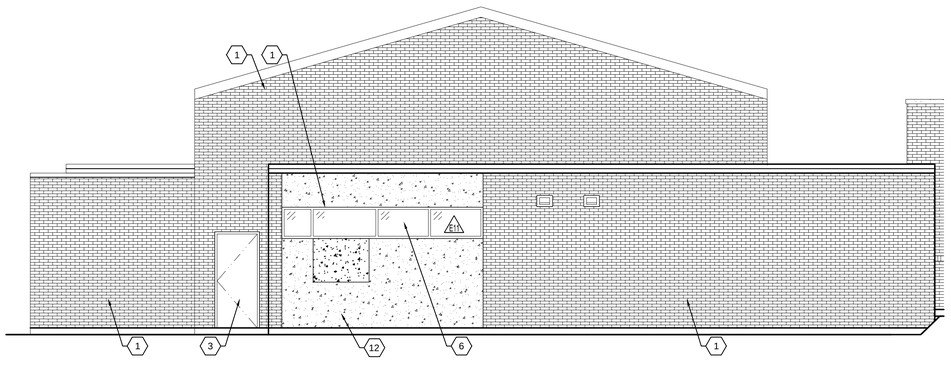
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SHEET NO.



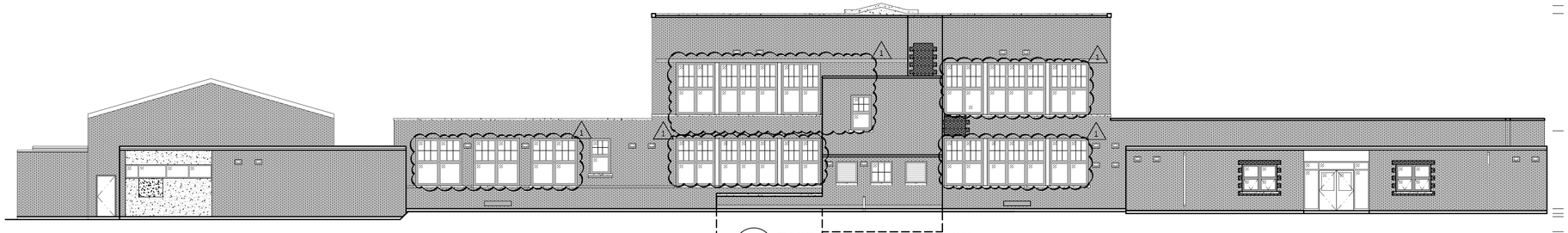

1A / A-501 PARTIAL EAST BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:




1C / A-501 PARTIAL EAST BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:



1B / A-501 PARTIAL EAST BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:



1 / A-201 EAST BUILDING ELEVATION
SCALE: 3/32"=1'-0"
REF:

## EXTERIOR ELEVATIONS NOTE LEGEND:

1. REFER TO BRICK REPORT
2. ANODIZED ALUMINUM STOREFRONT GLASS ENTRY UNIT AS SCHEDULED
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4. BARRIER FREE POWER ASSIST DOOR ACTUATOR
5. FIRE DEPARTMENT CONNECTION (F.D.C.) REFER TO MECHANICAL
6. NEW GLAZING UNIT TO REPLACE EXISTING AS SCHEDULED
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## EXTERIOR ELEVATIONS NOTES:

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| | | |
|---|---|---|
| OPAQUE: | U-0.17 | SHGC-ANY |
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### WINDOWS SELECTION:

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1. CUSTOM MADE WINDOWS FROM QUAKER COMMERCIAL WINDOWS H-650 AND M-600.
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4. SEE TYPICAL DETAILS ON SHEET A-508

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6' 0 3' 6'
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KEY PLANS

SHEET TITLE
BUILDING ELEVATIONS EXISTING

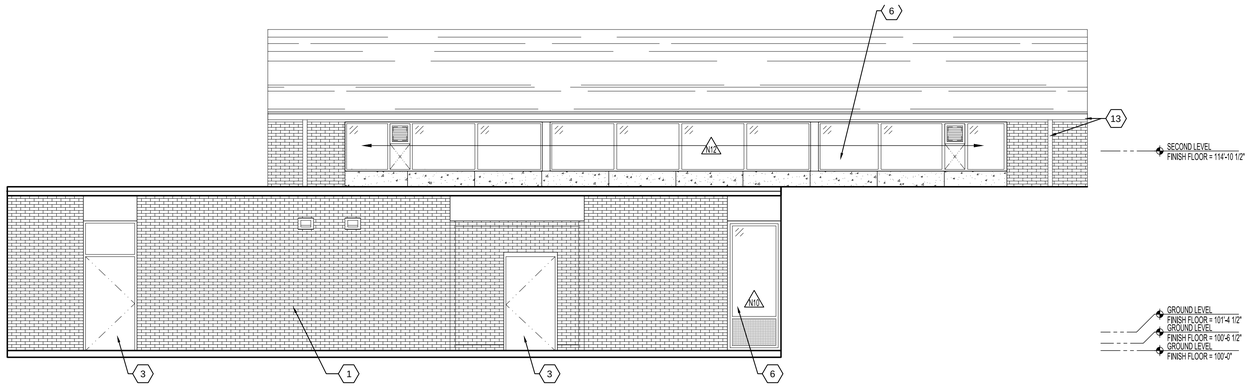
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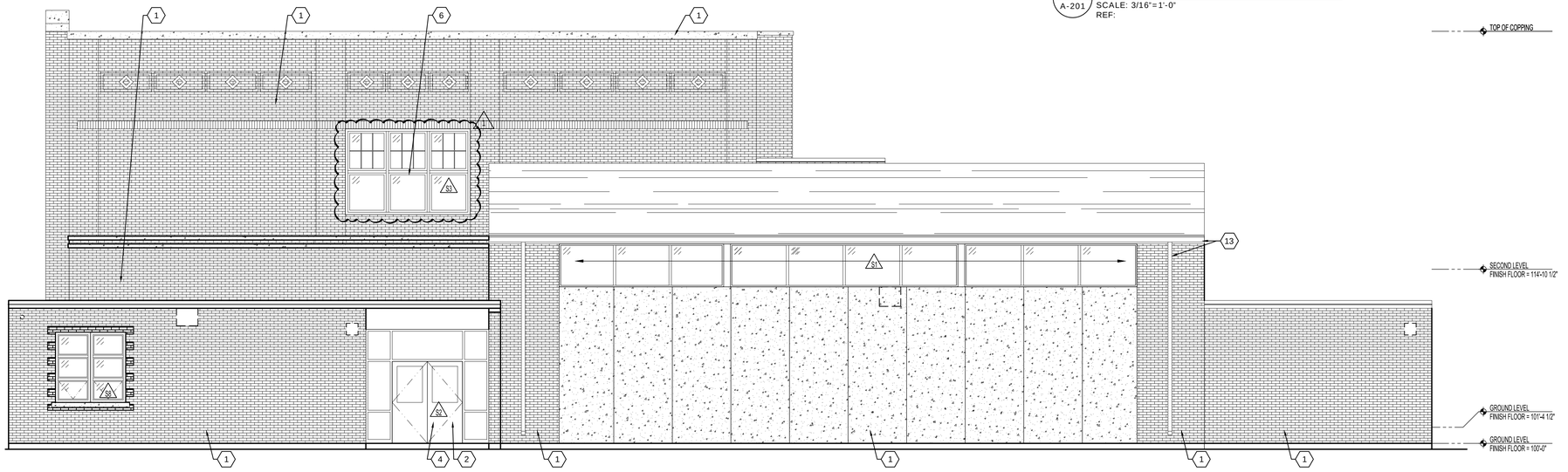
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JA
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21026.00
FILE NO.

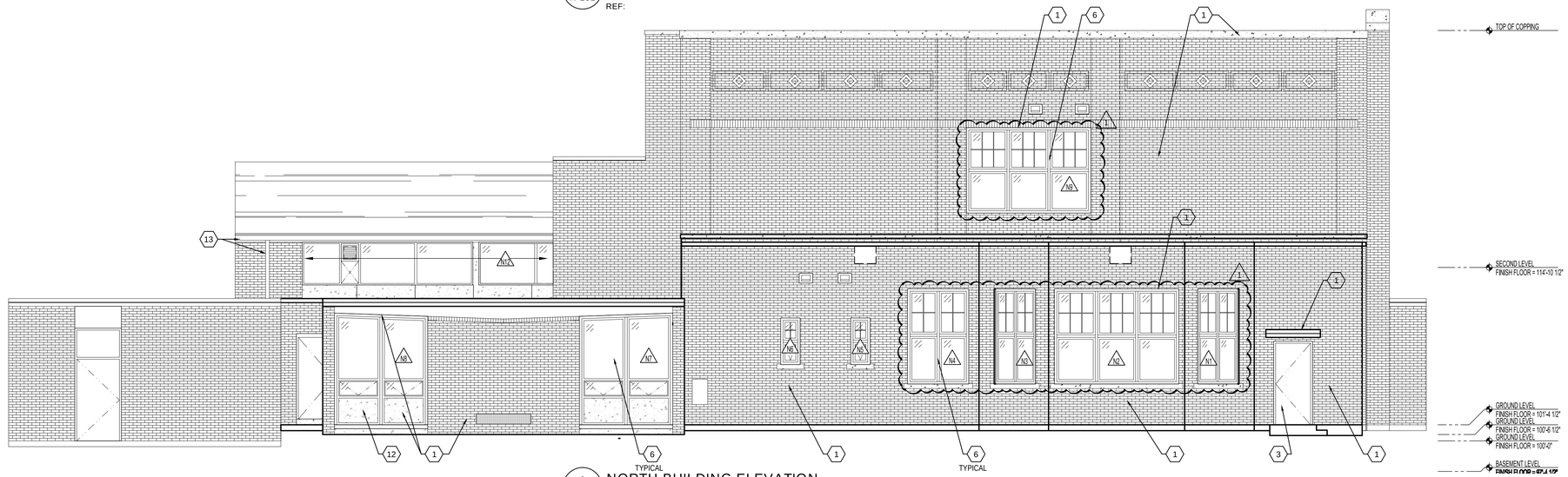
A-502
SHEET NO.




3 A-201 NORTH BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:




2 A-201 SOUTH BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:




1 A-201 NORTH BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:

## EXTERIOR ELEVATIONS NOTE LEGEND:

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| ≤ 1/2 LITE: | U-0.25 | SHGC-0.25 |
| > 1/2 LITE: | U-0.25 | SHGC-0.40 |

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4. SEE TYPICAL DETAILS ON SHEET A-508

TYPE 2 MANUFACTURER PER SPECIFICATIONS:
1. THERMALLY SEPARATED ANODIZED ALUMINUM STOREFRONT WINDOWS WITH 2"X4 1/2" FRAME PROFILE


John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-9000
Fax:313-964-3233


REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAJESKI
License No. 1301026315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

SHEET TITLE
BUILDING ELEVATIONS EXISTING

SCALE:

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| Bulletin No. 1 (1) | 02.19.2025 |

DRAWN BY: EBH
CHECKED: JA
APPROVED:

FILE NO. 21026.00

SHEET NO. A-503

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

## EXTERIOR ELEVATIONS NOTE LEGEND:

1. REFER TO BRICK REPORT
2. ANODIZED ALUMINUM STOREFRONT GLASS ENTRY UNIT AS SCHEDULED
3. DOOR AS SCHEDULED
4. BARRIER FREE POWER ASSIST DOOR ACTUATOR
5. FIRE DEPARTMENT CONNECTION (F.D.C.) REFER TO MECHANICAL
6. NEW GLAZING UNIT TO REPLACE EXISTING AS SCHEDULED
7. GAS METER REFER TO MECHANICAL
8. TRANSFORMER, ELECTRICAL METER, ELECTRICAL PANELS REFER TO MECHANICAL
9. NEW MASONRY INFILL TO MATCH EXISTING. NEW BRICK TO BE TOOTHED INTO EXISTING.
10. NEW STONE SILL TO MATCH EXISTING
11. REPAIR, PATCH AND REPLACE BRICK AS NECESSARY AFTER THE REMOVAL OF THE STAIRS.
12. EXISTING "AGGREGATE SURFACED SPANDRELL" PANEL PER ORIGINAL BUILDING DRWINGS. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS.
13. PRE-FINISHED METAL GUTTERS AND DOWNSPOUT MATCHING EXISTING PROFILE AND COLOR. SUBMIT SAMPLES FOR APPROVAL.

## EXTERIOR ELEVATIONS NOTES:

1. REFER TO AND COORDINATE WITH SPECIFICATIONS AND DETAILS FOR ADDITION SPECIFIC INFORMATION.
2. MATCH EXISTING BRICK COURSING AND PATTERN. TOOTH IN EACH BRICK COURSE.
3. EXTEND WINDOW FLASHING 8" BEYOND OPENING.
4. ALL ROUGH OPENINGS AROUND WINDOWS AND DOORS SHALL BE PROPERLY AND FULLY FLASHED AND AIR SEALED ALL AROUND OPENINGS AND FROM BOTH SIDES (INTERIOR AND EXTERIOR).
5. ALL DOORS AND WINDOWS SHALL MEET THE FOLLOWING THERMAL REQUIREMENTS:

| | | |
|---|---|---|
| OPAQUE: | U-0.17 | SHGC-ANY |
| ≤ 1/2 LITE: | U-0.25 | SHGC-0.25 |
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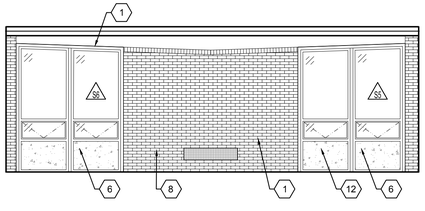
### WINDOWS SELECTION:

TYPE 1 MANUFACTURER: QUAKER COMMERCIAL

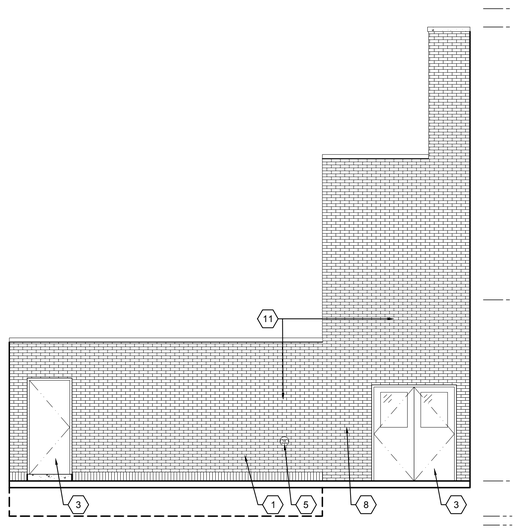
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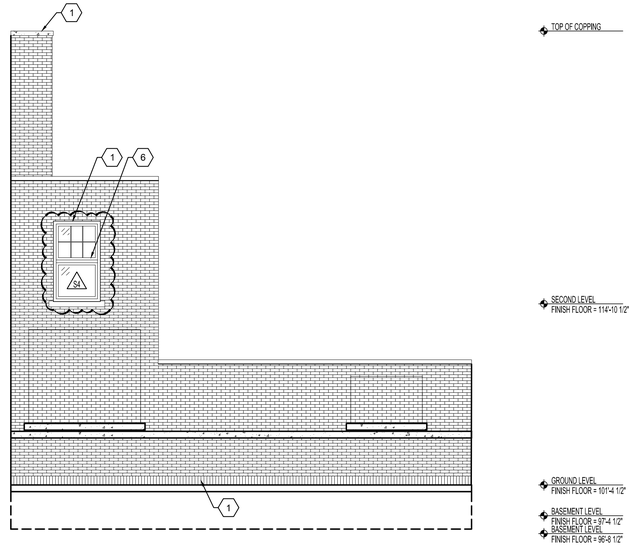
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3 A-201 SOUTH BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:




2 A-201 SOUTH BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:




1 A-201 SOUTH BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:

10' 0 5' 10'
SCALE: 3/32"= 1'-0"


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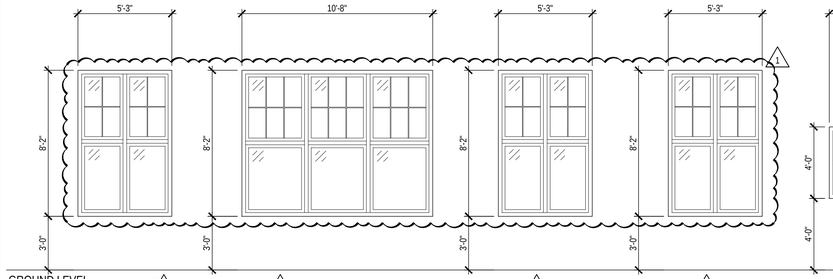
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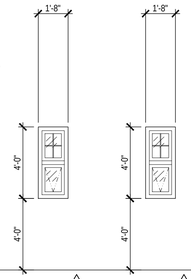
21026.00
FILE NO.

A-504
SHEET NO.




GROUND LEVEL
TYPE 1 (RESIDENTIAL)

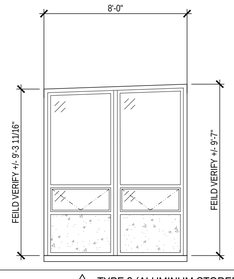
N1 N2 N3



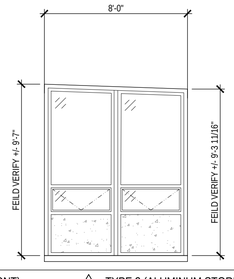

N4



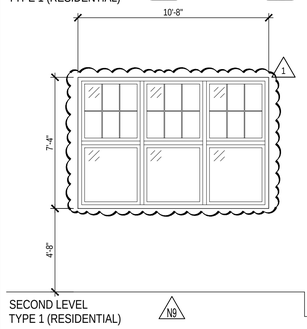

N5




N6 N7 TYPE 2 (ALUMINUM STOREFRONT)

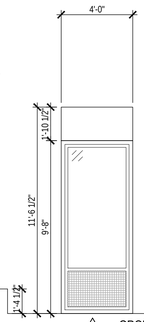



N8 TYPE 2 (ALUMINUM STOREFRONT)

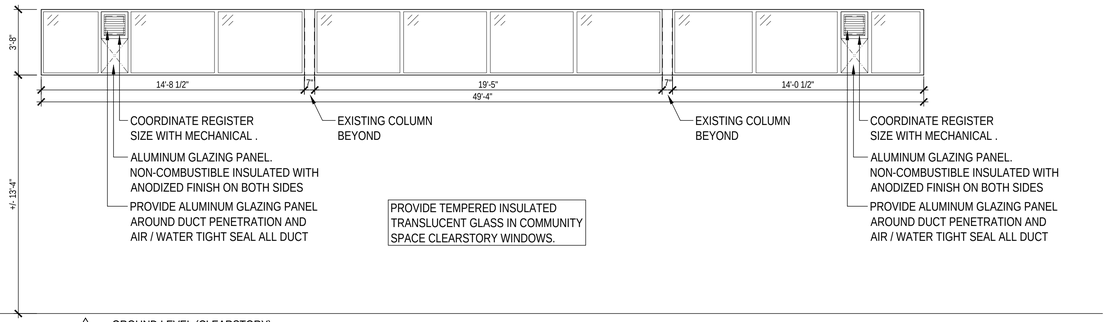



SECOND LEVEL
TYPE 1 (RESIDENTIAL)

N9

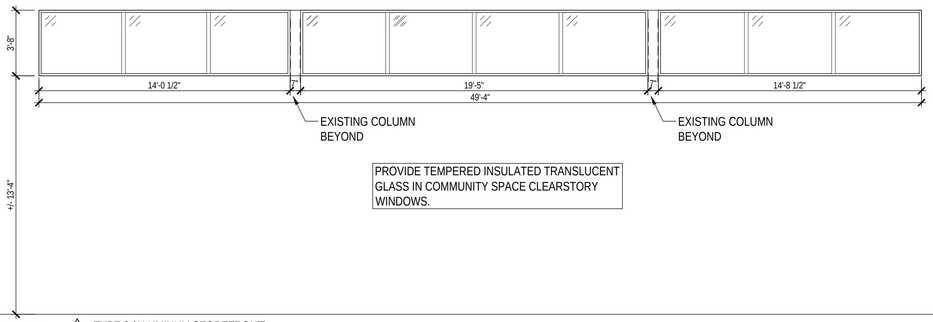



N10 GROUND LEVEL
TYPE 2 (ALUMINUM STOREFRONT)



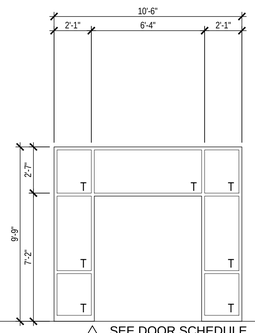

PROVIDE TEMPERED INSULATED TRANSLUCENT GLASS IN COMMUNITY SPACE CLEARSTORY WINDOWS.

N12 GROUND LEVEL (CLEARSTORY)
TYPE 2 (ALUMINUM STOREFRONT)

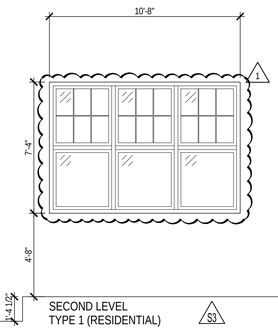



GROUND LEVEL
TYPE 2 (ALUMINUM STOREFRONT)

S1

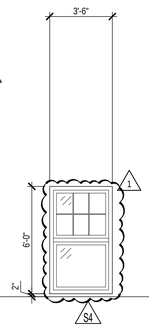



S2 SEE DOOR SCHEDULE
SHEET A.902

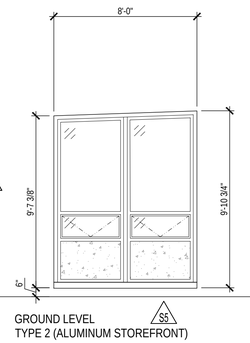



SECOND LEVEL
TYPE 1 (RESIDENTIAL)

S3

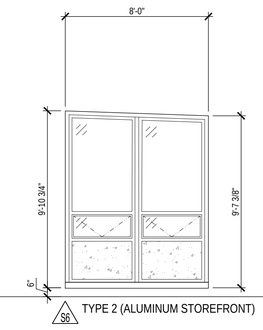



S4

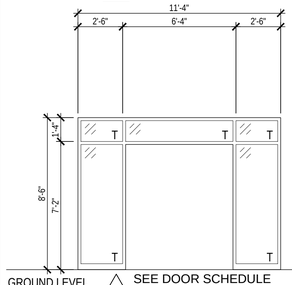



GROUND LEVEL
TYPE 2 (ALUMINUM STOREFRONT)

S5

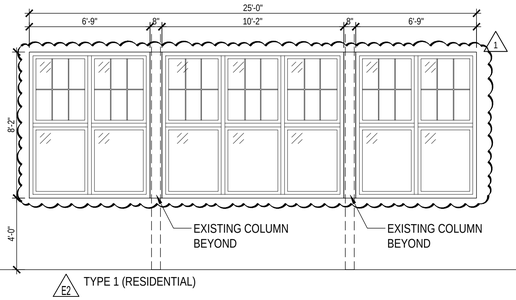



S6 TYPE 2 (ALUMINUM STOREFRONT)

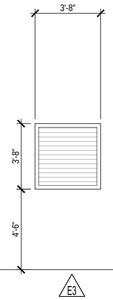



GROUND LEVEL

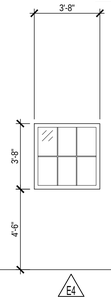
E1 SEE DOOR SCHEDULE
SHEET A.902



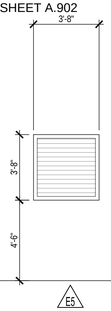

E2 TYPE 1 (RESIDENTIAL)



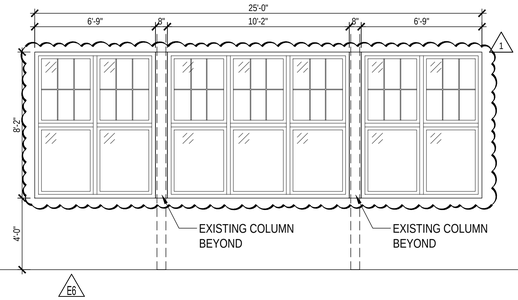

E3



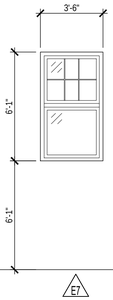

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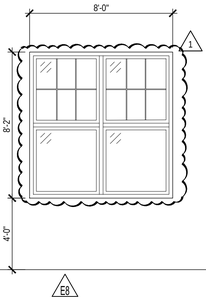

E5



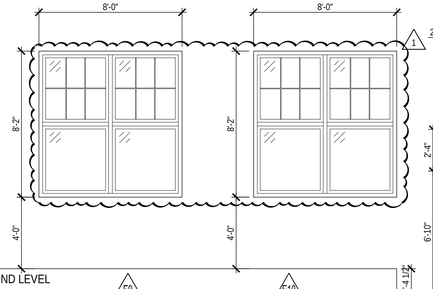

E6




E7

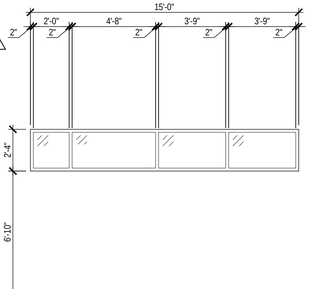



E8



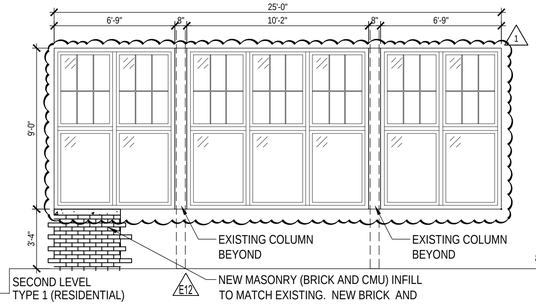

GROUND LEVEL
TYPE 1 (RESIDENTIAL)

E9 E10



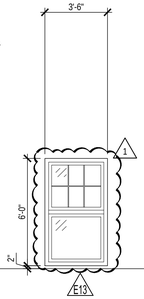

GROUND LEVEL TYPE 2 (ALUMINUM STOREFRONT)

E11

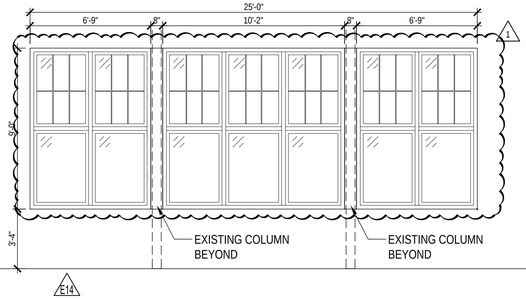



SECOND LEVEL
TYPE 1 (RESIDENTIAL)

E12




E13




E14

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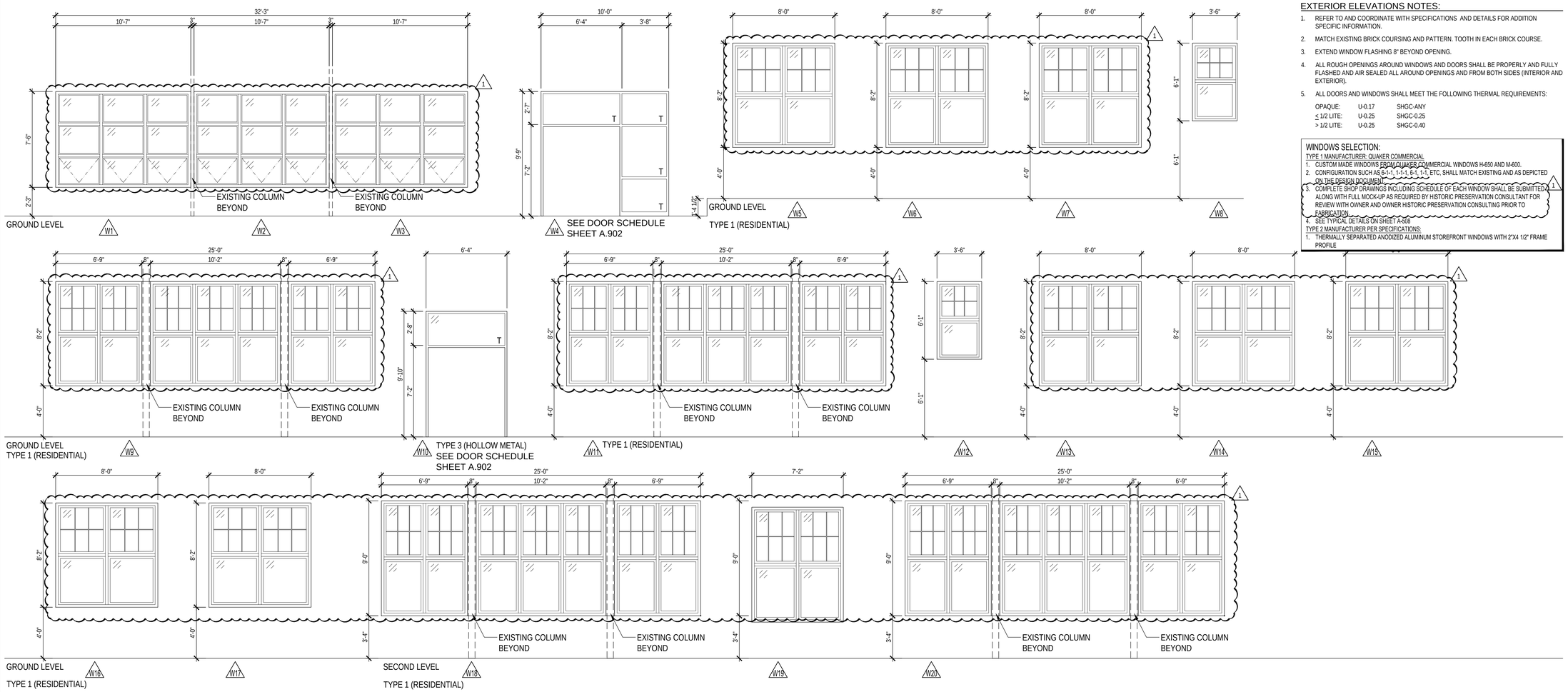
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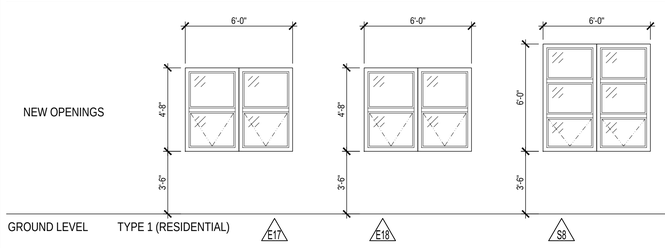
JA
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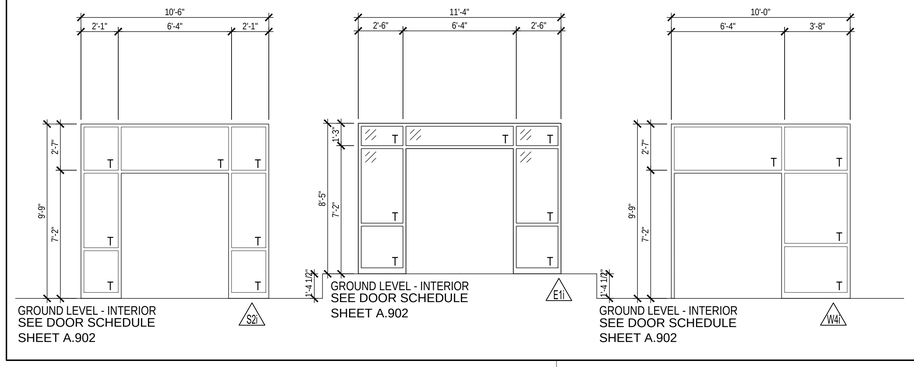
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21026.00
FILE NO.

A-506
SHEET NO.




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|---|---|
| Review | 03.28.2024 |
| Permits | 04.12.2024 |
| Permits | 10.25.2024 |
| HUD Submission | 12.13.2024 |
| Permits | 12.20.2024 |
| Bulletin No. 1 (1) | 02.19.2025 |

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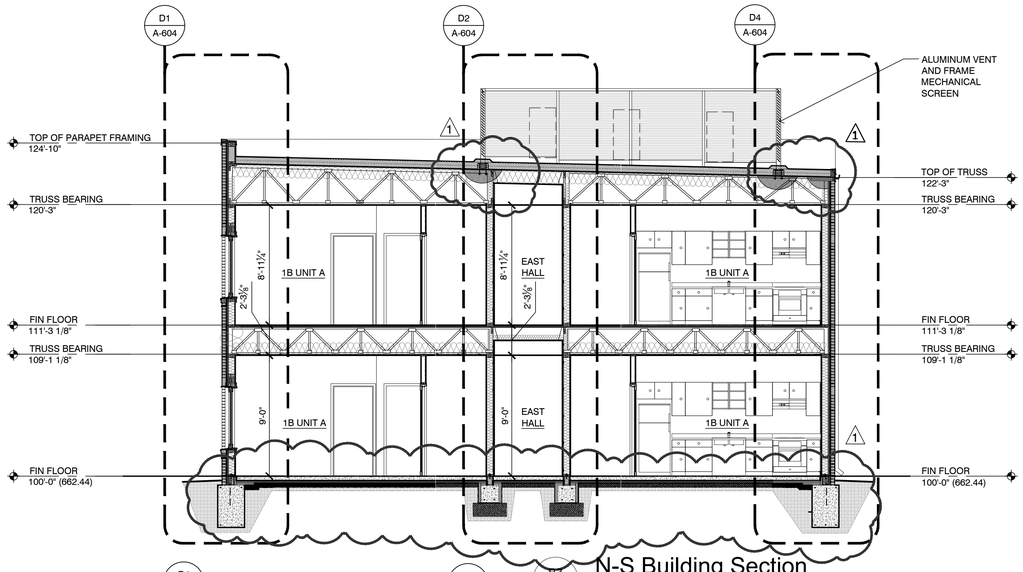
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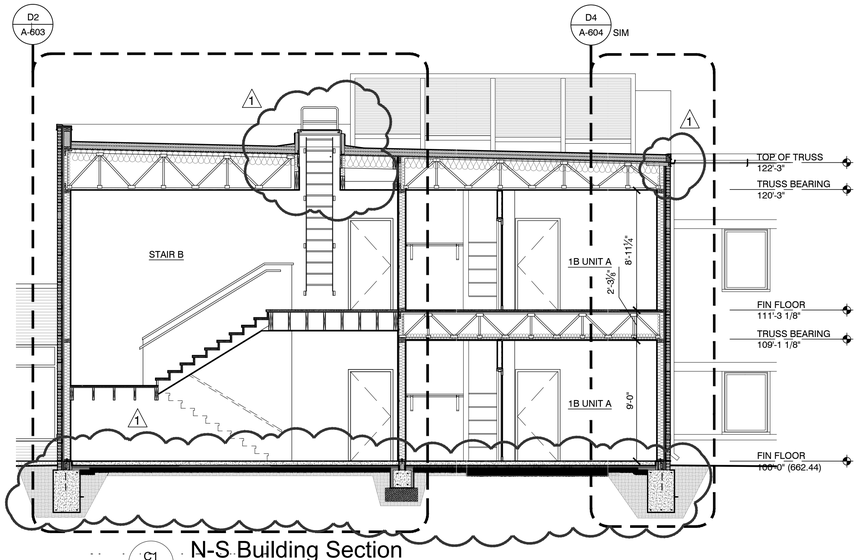
| | | | | |
|---|---|---|---|---|
| 1 | ELEVATION | EXISTING OPENINGS - REFER TO ELEVATIONS | NEW OPENINGS - REFER ELEVATIONS | TYPE |
| 1 | NORTH | EXISTING WINDOW | NEW WINDOW | TYPE 1 (RESIDENTIAL)




## N-S Building Section

B3 A-552

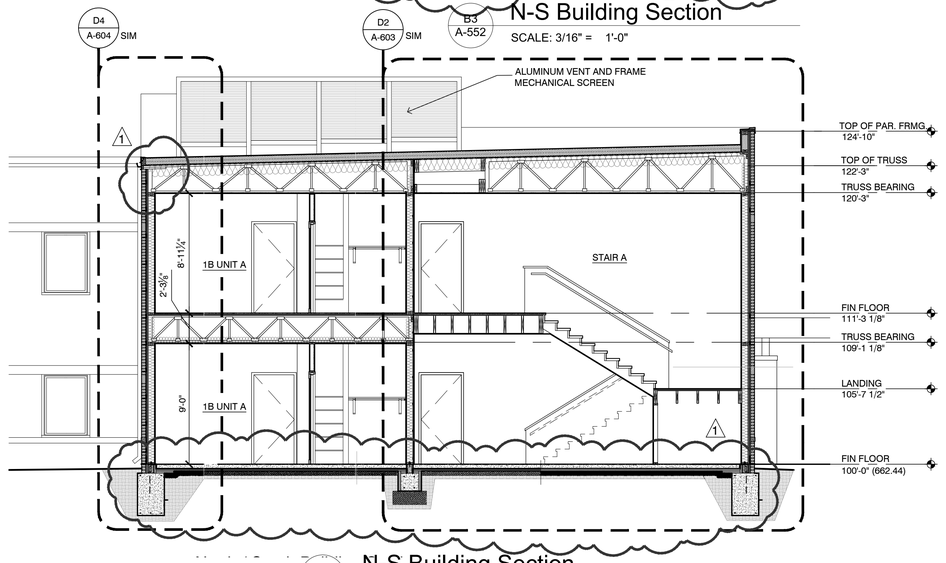
SCALE: 3/16" = 1'-0"




## N-S Building Section

C1 A-552

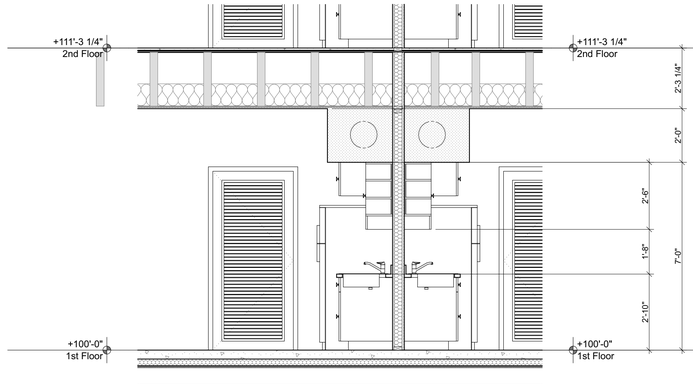
SCALE: 3/16" = 1'-0"




## N-S Building Section

C3 A-552

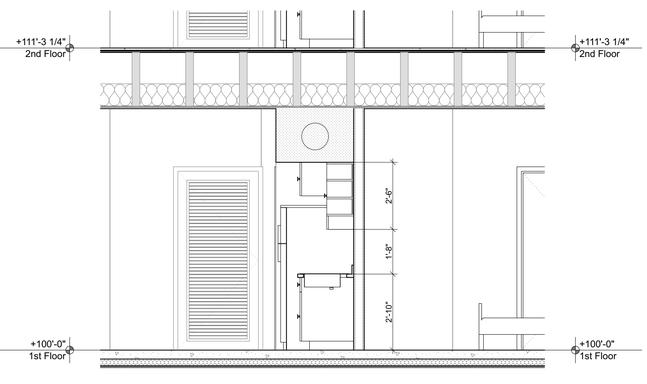
SCALE: 3/16" = 1'-0"




## Building Section at Kitchen

D1 A-552

SCALE: 3/8" = 1'-0"

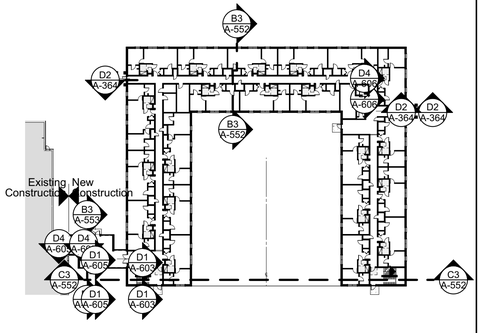



## Section at Kitchen 2B

D2 A-552

SCALE: 3/8" = 1'-0"

| MATERIALS | | |
|---|---|---|
| MARK | MATERIAL | DESCRIPTION |
| BRK-01 | FACE BRICK | BOSCO - 145-3 W GREY |
| GL-1 | WINDOW GLAZING SYSTEM | WYTHE WINDOW SYSTEM "THE WAVERLY" WITH 1 3/4" TRIPLE INSULATED LOW REFLECTIVE CLEAR GLASS SOLARBAND 60 SOLAR CONTROL LOW "E" WITH ARGON GLASS IN VINYL FRAME WINDOW SYSTEM PROVIDE TEMPERED GLASS AS REQUIRED. WHOLE WINDOW U= 2 BTU/HR/SF SHGC .38 |
| | | |
| | | |
| MC-1 | METAL COPING | DURO-LAST 2 PIECE SNAP ON METAL FASICA - KYNAR FINISH - COLOR TO BE CHOSEN |
| PS-1 | PRECAST STONE | PRE-CAST CONCRETE STONE - BUFF SUBMIT SAMPLE FOR ARCHITECT'S APPROVAL |




## 1st Floor Key Sections

SCALE: 1" = 50'

0 20' 50' 100'


John Grace Arms
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REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAWRZEWSKI
License No. 1301026315
LICENSED ARCHITECT
12/18/2025

KEY PLANS

SHEET TITLE

Sections

SCALE:

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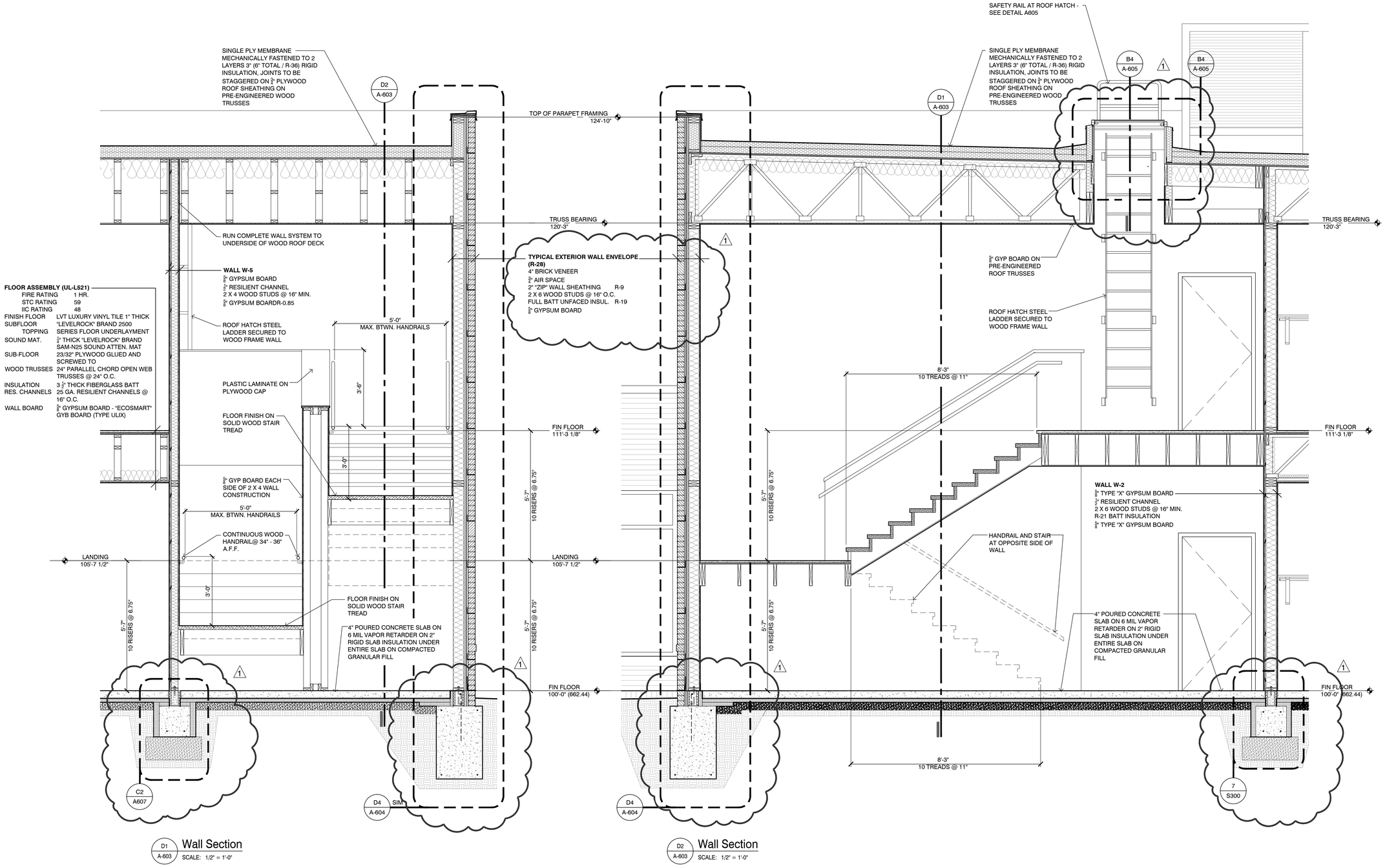
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Wall Sections

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| BULLETIN #1 1 | 02.19.2025 |

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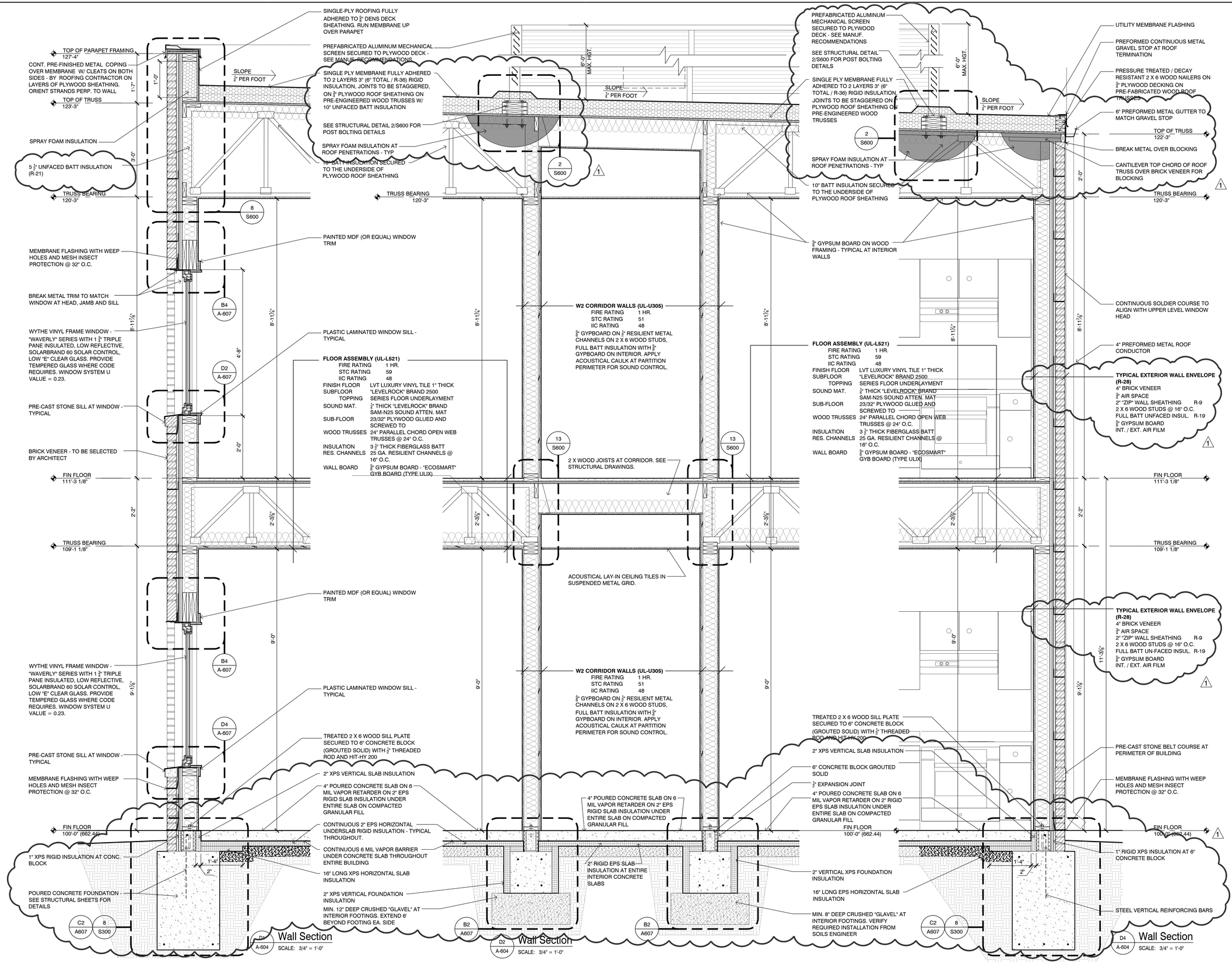
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REGISTRATION SEAL

THADDEUS C ZAWRZEWSKI License No. 1301026315 LICENSED ARCHITECT 02/18/2025

KEY PLANS

SHEET TITLE

Wall Sections

SCALE:

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| PERMIT | 12.20.2024 |
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A-604

SHEET NO.


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**TYPICAL EXTERIOR WALL ENVELOPE (R-28)**
4" BRICK VENEER
¾" AIR SPACE
2" "ZIP" WALL SHEATHING R-9
2 X 6 WOOD STUDS @ 16" O.C.
FULL BATT UNFACED INSUL. R-19
⅝" GYPSUM BOARD
INT. / EXT. AIR FILM

BRICK ANGLE - SEE STRUCTURAL SHEETS

RUN SINGLE-PLY ROOFING MATERIAL UP OVER BRICK ANGLE AND SECURE TO SHEATHING

ROOF SCUPPER AT EACH SIDE OF CANOPY

SLOPE ¼" PER FOOT

LAMINATED VENEER LUMBER (LVL) HEADERS - SEE STRUCTURAL SHEETS

1 1/2" DIAMETER ROD WITH #3 CLEVIS WITH 7/8" GRIP AND 1 1/2" DIAMETER NUT

SINGLE PLY MEMBRANE FULLY ADHERED TO SLOPED RIGID INSULATION, JOINTS TO BE STAGGERED, ON ¾" PLYWOOD ROOF SHEATHING ON WOOD FRAMING. SLOPE TO SCUPPERS

1'-7¼"

CONTINUOUS PRE-FINISHED METAL COPING OVER MEMBRANE W/ CLEATS ON BOTH SIDES - BY ROOFING CONTRACTOR ON LAYERS OF ¾" PLYWOOD

BREAK METAL ON ¾" PLYWOOD SHEATHING ON 2 X WOOD FRAMING - SEE STRUCTURAL SHEETS

4'-0"

2" CONTINUOUS STAINLESS STEEL VENT WITH INSECT SCREEN

BREAK METAL ON ¾" PLYWOOD SHEATHING ON 2 X WOOD FRAMING - SEE STRUCTURAL SHEETS

D2 / A605 **Section** SCALE: 1 1/2" = 1'-0"

SAFETY POST IN EXTENDED POSITION
NOTE: PROVIDE WELDED ANCHORS

VINYL GRIP

HOLD OPEN ARM WITH NYLON ROLLER

PINTLE HINGE

SINGLE PLY MEMBRANE FULLY ADHERED TO 2 LAYERS 3" (6" TOTAL / R-36) RIGID INSULATION, JOINTS TO BE STAGGERED ON ¾" PLYWOOD ROOF SHEATHING ON PRE-ENGINEERED WOOD TRUSSES

3" RIGID INSULATION COVER AND CURB PER MANUF. SPECIFICATIONS FOR A THERMALLY BROKEN ROOF HATCH

SINGLE PLY MEMBRANE FULLY ADHERED TO 2 LAYERS 3" (6" TOTAL / R-36) RIGID INSULATION, JOINTS TO BE STAGGERED ON ¾" PLYWOOD ROOF SHEATHING ON PRE-ENGINEERED WOOD TRUSSES

FIELD VERIFY ALL EXISTING ROOF CONSTRUCTION AND CONDITIONS INCLUDING HEIGHTS PRIOR TO BIDDING AND CONSTRUCTION.

PROVIDE TAPERED RIGID INSULATION AT A MIN. OF 1" SLOPE AWAY FROM ROOF HATCH. REFER TO ROOF PLAN

⅝" GYP BOARD ON PRE-ENGINEERED WOOD TRUSSES.

⅝" GYP BOARD ON PRE-ENGINEERED WOOD TRUSSES.

VERTICAL LADDER W/ 2"x1/4" SIDE RAILS & 3/4"Ø RUNGS. GRIND ALL WELDS SMOOTH (PAINT RED)

⅝" GYP BOARD ON PRE-ENGINEERED WOOD TRUSSES.

B4 / A-605 **Wall Section** SCALE: 1" = 1'-0"

CONTINUOUS PRE-FINISHED METAL COPING OVER MEMBRANE W/ CLEATS ON BOTH SIDES - BY ROOFING CONTRACTOR ON LAYERS OF FIRE RETARDANT PLYWOOD SHEATHING ORIENT STRANDS PERPENDICULAR TO WALL

SINGLE-PLY ROOFING FULLY ADHERED TO ⅝" DENS DECK SHEATHING. RUN MEMBRANE UP OVER PARAPET

SINGLE PLY MEMBRANE FULLY ADHERED TO 2 LAYERS 3" (6" TOTAL / R-36) RIGID INSULATION, JOINTS TO BE STAGGERED, ON ¾" PLYWOOD ROOF SHEATHING ON PRE-ENGINEERED WOOD TRUSSES W/ 10" UNFACED BATT INSULATION

SLOPE ¼" PER FOOT

TRUSS BEARING 112'-0"

SPRAY FOAM INSULATION

10" BATT INSULATION SECURED TO THE UNDERSIDE OF PLYWOOD ROOF SHEATHING

**TYPICAL EXTERIOR WALL ENVELOPE (R-28)**
4" BRICK VENEER
¾" AIR SPACE
2" "ZIP" WALL SHEATHING R-9
2 X 6 WOOD STUDS @ 16" O.C.
FULL BATT UNFACED INSUL. R-19
⅝" GYPSUM BOARD
INT. / EXT. AIR FILM

LAMINATED WOOD HEADER - SEE STRUCTURAL

LAY-IN ACOUSTICAL CEILING TILE IN SUSPENDED METAL GRID

LAY-IN ACOUSTICAL CEILING TILE IN SUSPENDED METAL GRID

1'-8" | 2' | 13'-5"

9'-0" | 5'-8"

CLEAR, INSULATED GLASS IN CLEAR ALUMINUM FRAME

PLASTIC LAMINATED SILL

PRE-CAST STONE SILL AT WINDOW - TYPICAL

MEMBRANE FLASHING WITH WEEP HOLES AND MESH INSECT PROTECTION @ 32" O.C.

4" POURED CONCRETE SLAB ON 6 MIL VAPOR RETARDER ON 2" RIGID SLAB INSULATION UNDER ENTIRE SLAB ON COMPACTED GRANULAR FILL

CONTINUOUS 6 MIL VAPOR BARRIER UNDER ENTIRE FLOOR SLAB

1'-8" | 1'-8"

FINISH FLOOR 100'-0"

2" RIGID EPS SLAB INSULATION AT ENTIRE INTERIOR CONCRETE SLABS

POURED CONCRETE FOUNDATION - SEE STRUCTURAL SHEETS FOR DETAILS

BOTTOM OF FOOTING SEE STRUCTURAL

D1 / A605 **Wall Section** SCALE: 3/4" = 1'-0"

CONTINUOUS PRE-FINISHED METAL COPING OVER MEMBRANE W/ CLEATS ON BOTH SIDES - BY ROOFING CONTRACTOR ON LAYERS OF FIRE RETARDANT PLYWOOD SHEATHING ORIENT STRANDS PERPENDICULAR TO WALL

SPRAY FOAM INSULATION

5/8" THICK HOT DIPPED GALV. PLATE

TOP OF COPING 113'-5"

TRUSS BEARING 112'-0"

3'-1" | 1'-7¼" | 12'-0" | 13'-5"

D2 / A605

4'-0"

7'-1"

CLEAR, INSULATED GLASS DOOR IN CLEAR ALUMINUM FRAME

BARRIER FREE POWER ASSIST DOOR ACTUATOR - ELEC. PLANS

¾" EXPANSION JOINT BETWEEN 4" CONC. SLAB AND 6" GROUT FILLED CONC. BLOCK

FINISH FLOOR 100'-0"

POURED CONCRETE FOUNDATION - SEE STRUCTURAL SHEETS FOR DETAILS

BOTTOM OF FOOTING SEE STRUCTURAL

D3 / A605 **Wall Section** SCALE: 3/4" = 1'-0"

SINGLE-PLY MEMBRANE ON 2" "ZIP" SHEATHING (R-6.6) ON 2 X 4 WOOD STUDS ON EXISTING BUILDING PARAPET FRAMING - CONTRACTOR TO VERIFY EXISTING CONDITIONS

EXTERIOR EXPANSION JOINT

REMOVE EXISTING COPING AND EXTERIOR FINISH. INSTALL NEW FRAMING

WELD NEW SINGLE-PLY MEMBRANE TO EXISTING ROOFING SYSTEM

NEW FRAMING AT EXTERIOR SOFFIT - VERIFY

NEW GYP BOARD FINISH

EXPANSION JOINT

NEW GYP BOARD FINISH

NEW ENTRY FRAME, GLAZING AND DOOR.

2" VERTICAL XPS RIGID INSULATION AT SLAB TERMINATION

EXISTING CONCRETE FLOOR TO REMAIN

16" DEEP, 2" THK. RIGID EPS SLAB INSULATION

EXISTING CONCRETE FOUNDATION SYSTEM TO REMAIN

3" RIGID INSULATION SECURED TO EXISTING FOUNDATION

1'-3" | 9'-8" VERIFY | 8'-10" | 9'-0" | 9'-4½"

2'-8"

2" | 1'-4"

CONTINUOUS PRE-FINISHED METAL COPING OVER MEMBRANE W/ CLEATS ON BOTH SIDES - BY ROOFING CONTRACTOR ON LAYERS OF FIRE RETARDANT PLYWOOD SHEATHING ORIENT STRANDS PERPENDICULAR TO WALL

SINGLE-PLY ROOFING FULLY ADHERED TO (2) LAYERS OF 3" RIGID INSULATION - STAGGER JOINTS (R-15) ON ¾" PLYWOOD DECK ON PRE-ENGINEERED WOOD TRUSSES (SEE STRUCTURAL DRAWINGS) W/ R-36 BATT INSULATION

ACOUSTICAL LAY-IN CEILING TILES IN SUSPENDED METAL GRID

EXPANSION JOINT AT WALL BEYOND

LINE OF EXISTING MASONRY WING WALL TO BE REMOVE. SEE EXISTING BUILDING DEMOLITION PLANS

REMOVE EXISTING EXTERIOR CONCRETE FLAT WORK INCLUDING ANY "SNOW STEP" FOOTINGS THAT MAY EXIST. CONTRACTOR TO VERIFY

2" EXPANSION JOINT WITH ALUMINUM COVER

4" POURED CONCRETE SLAB ON 2" RIGID SLAB INSULATION ON 4" COMPACTED GRANULAR FILL

D4 / A-605 **Wall Section** SCALE: 3/4" = 1'-0"


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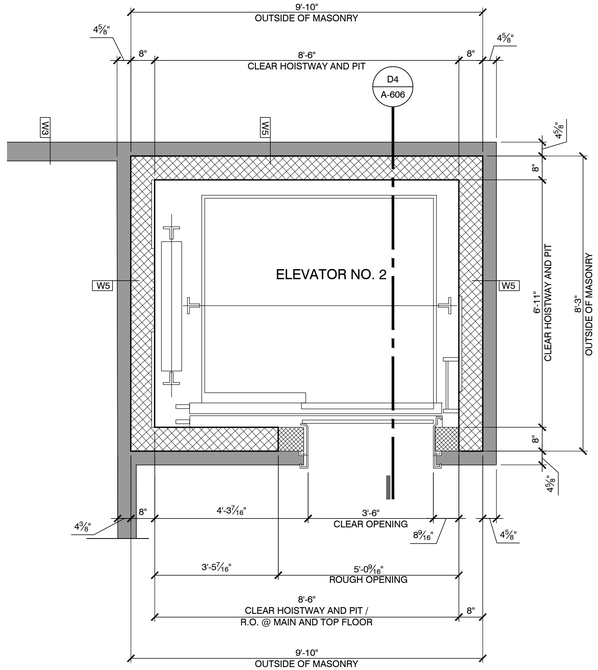
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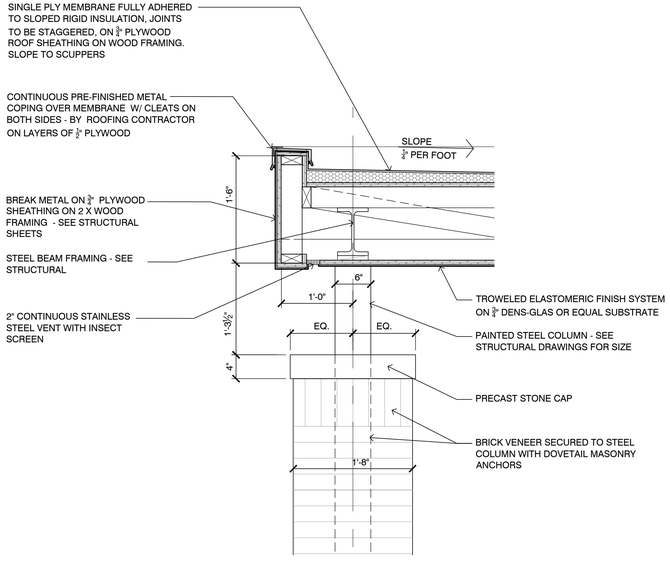
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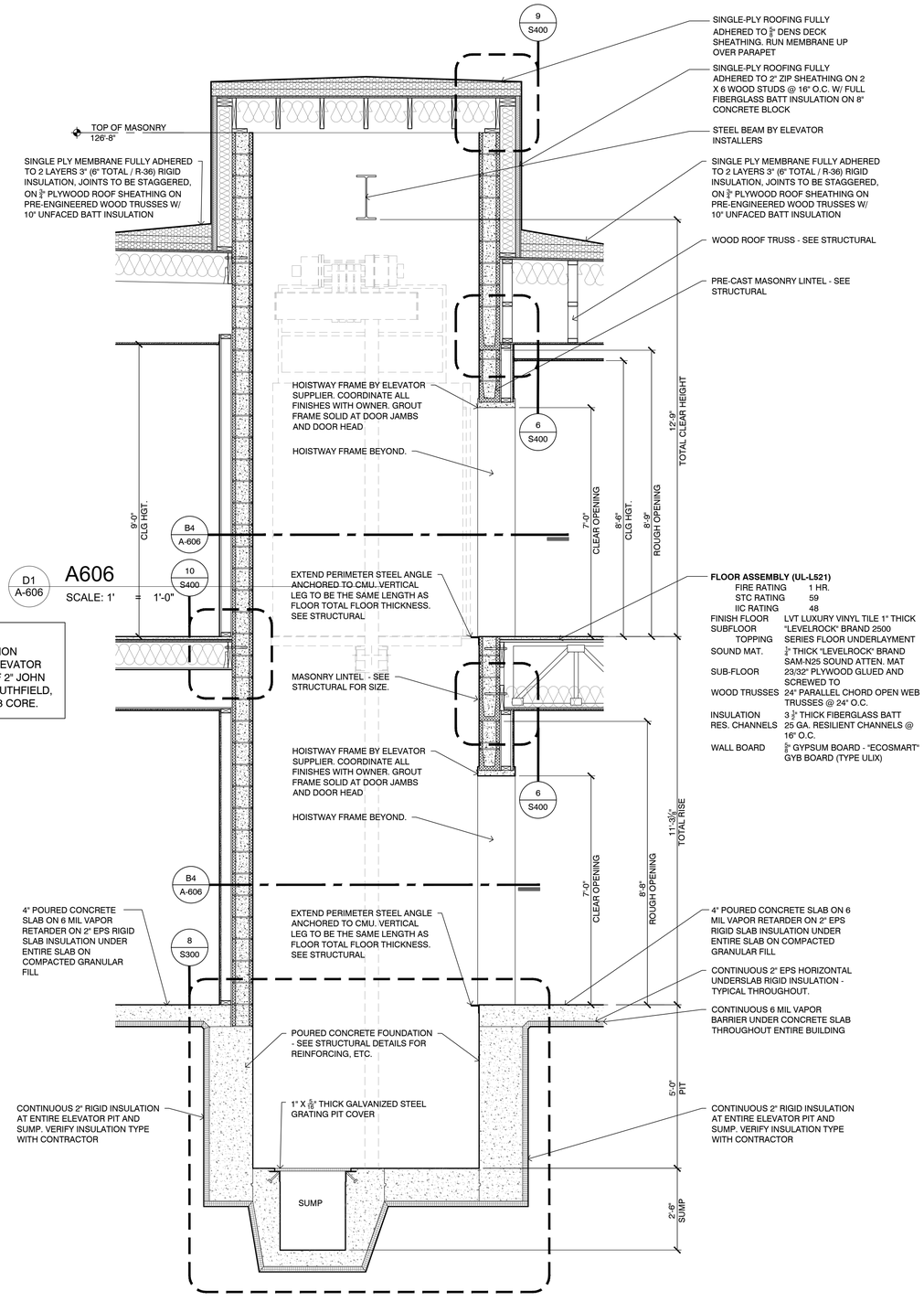

B4 A-606 **Elevator Plan**
SCALE: 1/2" = 1'-0"

NOTE:
ALL ELEVATOR INFORMATION INDICATED IS PER OTIS ELEVATOR DRAWING NO. "PWBO 1 OF 2" JOHN GRACE ARMS -NORTH, SOUTHFIELD, MI. DATED 2/29/2024. GEN3 CORE.




D1 A-606 **South Canopy Section**
SCALE: 1" = 1'-0"

D1 A-606 **A606**
SCALE: 1" = 1'-0"




D4 A-606 **Elevator Section**
SCALE: 1/2" = 1'-0"


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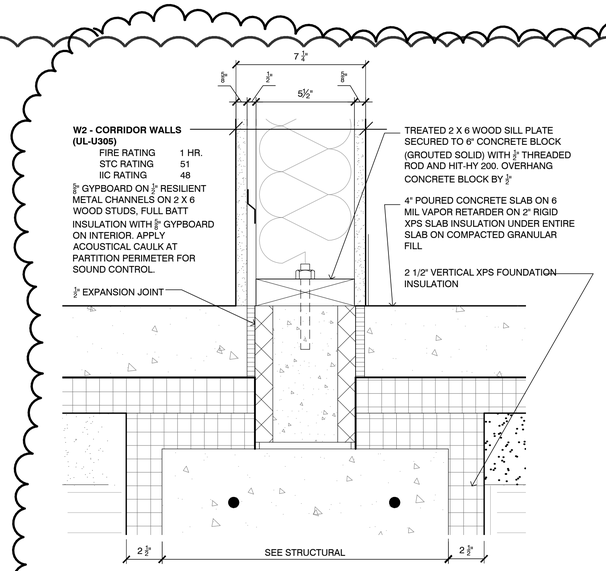
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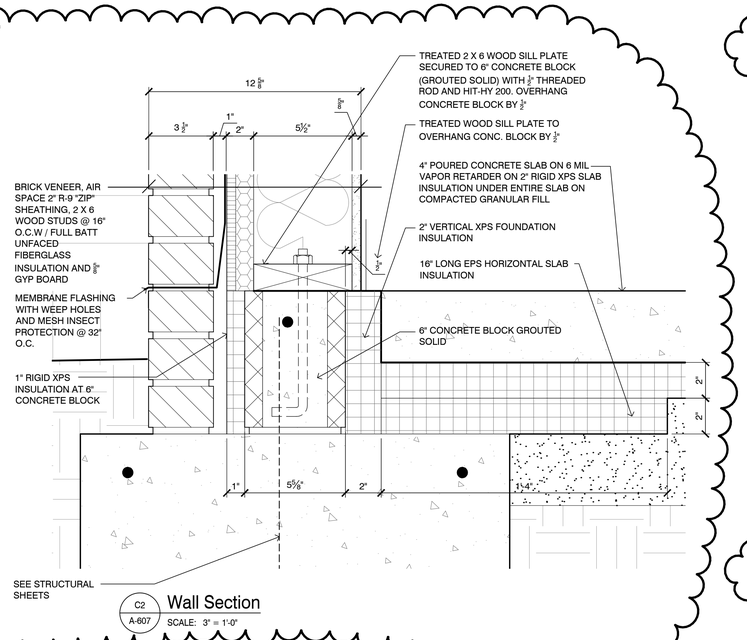
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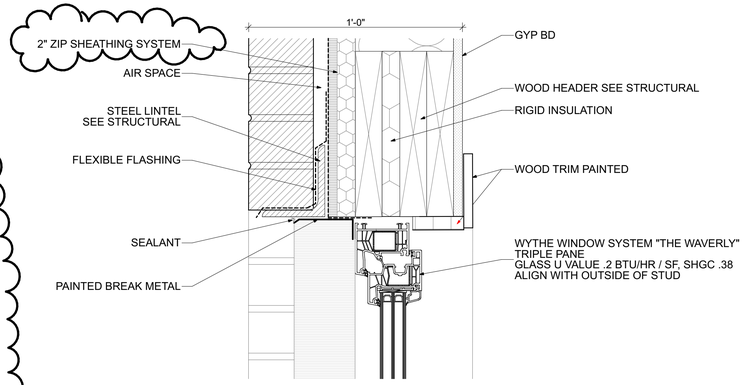

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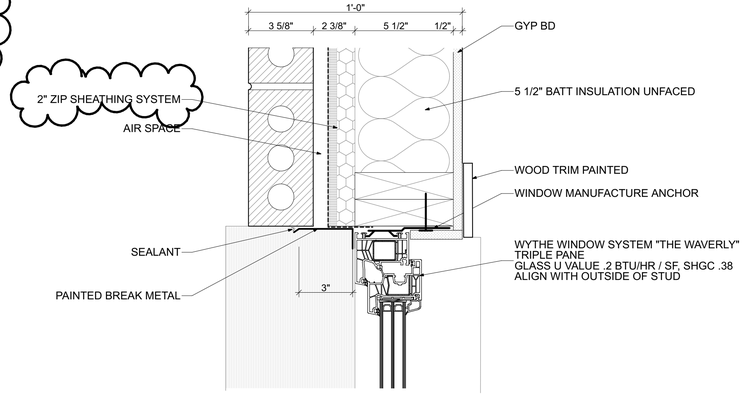

B2 / A-607 **Wall Section**
SCALE: 3" = 1'-0"



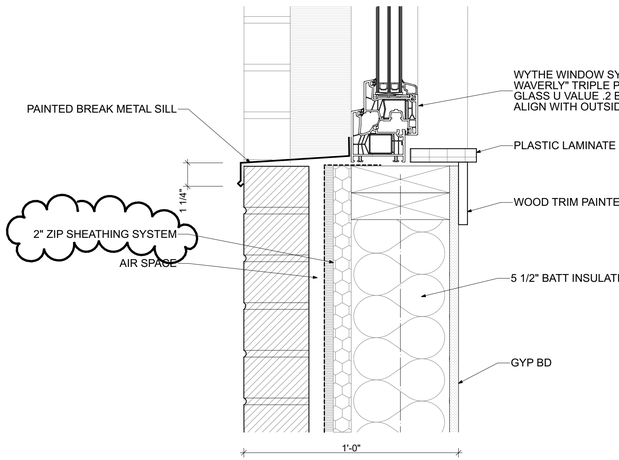

C2 / A-607 **Wall Section**
SCALE: 3" = 1'-0"



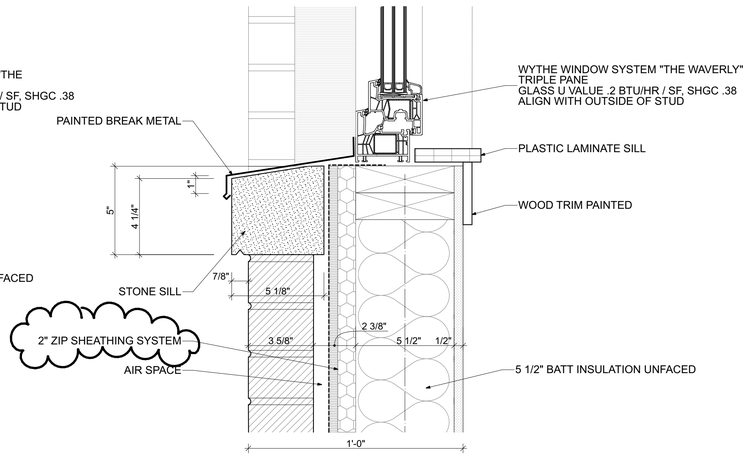

B4 / A-607 **Window Head**
SCALE: 3" = 1'-0"




C4 / A-607 **Window Jamb**
SCALE: 3" = 1'-0"




D2 / A-607 **Brick Window Sill at 2nd Floor**
SCALE: 3" = 1'-0"




D4 / A-607 **Window Sill**
SCALE: 3" = 1'-0"

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## DESIGN CRITERIA

1. STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH:
   MBC 2015
   MI RHC 2015
   ASCE 7-10
   ASCE 41-13
   ACI 318-14
   ACI 530-13
   AISC 360-10
   AISC 341-10
   AISI S100
   AWS D1.1, D1.3 AND D1.8
   NDS-15 AND SDPWS-15
2. RISK CATEGORY II
3. DEAD LOADS ARE LISTED ON PLANS.
4. LIVE LOADS: SEE S004 FOR LOADING PLANS
5. SNOW: SEE S004 FOR LOADING PLANS
6. SEISMIC: SEE S004 FOR LOADING PLANS
7. WIND LOADS: SEE S004 FOR LOADING PLANS
8. ICC 500 SHELTER WIND DESIGN LOADS: SEE S004 FOR LOADING PLANS
9. ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED BY MASONRY WALLS IN EACH ORTHOGONAL DIRECTION. SEE PLANS FOR LOCATIONS. THE DECKING SERVE AS HORIZONTAL DIAPHRAGMS DISTRIBUTING THE LATERAL FORCES TO THE VERTICAL LATERAL ELEMENTS WHICH IN TURN CARRY THE LOAD TO THE BUILDING FOUNDATIONS.

## GENERAL

1. DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
2. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
3. STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. SUPPORTING SHALL PROVIDE REVISED DESIGN CALCULATIONS OR SUITABLE PRODUCT LITERATURE FOR THE COMPONENTS.
4. ALL DIMENSIONS AND SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOBSITE PRIOR TO CONSTRUCTION, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
5. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
6. STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW ALL DETAIL DIMENSIONS TO FIT INTRICATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL SIZE/CONSTRUCT THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL AND ELECTRICAL DESIGN.
7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
8. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION WITH ARCHITECT.
9. TYPICAL DETAILS SHALL APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED, WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
10. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE.
11. SEE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILS, CONDITIONS, PITS, TRENCHES, PADS, DEPRESSIONS, ROOF/FLOOR OPENINGS, STAIRS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS.
12. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADE CONTRACTORS. OPENING SIZES AND LOCATIONS SHOWN FOR DUCTS, PIPE, INSERTS AND OTHER PENETRATIONS WHEN SHOWN ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED PRIOR TO FORMING.
13. NO HOLES, NOTCHES, BLOCK-OUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
14. PENETRATIONS SHALL BE CAST-IN-PLACE AND SHALL NOT BE PERMITTED EXCEPT AS SHOWN IN THE STRUCTURAL DRAWINGS.
15. BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, EACH PARTY SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH CONDITIONS IN FIELD, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE PROPOSAL SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK.

## SUBMITTALS

1. SUBMITTALS ARE:
   a. CONCRETE MIX DESIGNS
   b. MATERIAL PRODUCT DATA FOR STRUCTURAL MATERIALS
   c. CONCRETE AND MASONRY REINFORCING
   d. ENGINEERED LUMBER
   e. PANELIZED WALLS FOR WOOD BUILDINGS
   f. STEEL FABRICATION AND MISCELLANEOUS METALS
   g. STEEL DECK
2. SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE ARCHITECT/STRUCTURAL ENGINEER.
3. SUBMITTALS SHALL BE REVIEWED BY THE ARCHITECT/STRUCTURAL ENGINEER FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE ARCHITECT/STRUCTURAL ENGINEER ON THE SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
4. FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

## DELEGATED DESIGN

1. DELEGATED DESIGNS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
2. DELEGATED DESIGNS ARE:
   a. EXCAVATION, SHORING, AND UNDERPINNING
   b. PREMANUFACTURED WOOD JOISTS AND TRUSSES
   c. STRUCTURAL STEEL CONNECTIONS
   d. CURTAIN WALL AND STOREFRONT SYSTEMS
   e. COLD FORMED STEEL FRAMING
   f. ROOFTOP EQUIPMENT ANCHORAGE AND CURBS
   g. STAIRS, ACCESS LADDERS, HANDRAILS, GUARDRAILS, AND GRATING
3. ALL DELEGATED DESIGNS SHALL BEAR THE STAMP AND SIGNATURE OF THE QUALIFIED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED, RESPONSIBLE FOR THE PREPARATION OF THESE DOCUMENTS.

## EXISTING CONDITIONS / DEMOLITION

1. EXISTING CONDITIONS:
   a. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM EXISTING DRAWINGS:
      i. DATED 6-15-1962 BY DOLGNER, ROLLASON & ROKICKI ARCHITECTS & ENGINEERS.
      ii. DATED 12-1-1949 BY JENSEN & KEOUCH ARCHITECTS & ENGINEERS.
      iii. DATED 5-14-1927 BY VAN LEYEN, SCHILLING & KEOUCH ARCHITECTS & ENGINEERS.
   b. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM FIELD TAKE-OFF BY IMEG AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.
   c. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE. CONTRACTOR TO VERIFY EXISTING INFORMATION, DIMENSIONS AND SIZES AS REQUIRED TO COMPLETE THEIR WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ARCHITECT OR STRUCTURAL ENGINEER SO PROPER CLARIFICATION MAY BE MADE. MODIFICATION OF CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT OR STRUCTURAL ENGINEER.
2. EXISTING BUILDING MATERIAL PROPERTIES:
   a. REFER TO DRAWINGS
3. ALL DEMOLITION SHALL BE CARRIED OUT IN SUCH A WAY SO AS TO NOT DAMAGE EXISTING ELEMENTS WHICH ARE TO REMAIN.
4. ALL ELEMENTS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDED COST. EXISTING ELEMENTS ARE TO BE PROTECTED TO THE FULLEST EXTENT POSSIBLE TO REDUCE SUCH DAMAGE TO A MINIMUM.

## EARTHWORK

1. FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT DATED SEPTEMBER 26, 2023 BY McDOWEL & ASSOCIATES. REPORT IS ON FILE WITH THE ARCHITECT.
2. SOIL PROPERTIES PER THE GEOTECHNICAL REPORT:
   ALLOWABLE NET SOIL BEARING PRESSURE:
   FOOTINGS 3000 PSF
   FROST DEPTH 3.5 FT (UNHEATED)
3. ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING/BASEMENT WALLS BEFORE CONCRETE HAS ATTAINED SPECIFIED COMPRESSIVE STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL WALLS BELOW GRADE FROM LATERAL LOADS UNTIL SUPPORTING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED 7-DAY STRENGTH MINIMUM. BACKFILLING IS NOT PERMITTED FOR FOUNDATION WALLS UNTIL SUPPORTED SLAB TOP AND BOTTOM IS IN PLACE OR THE WALL IS ADEQUATELY BRACED TO RESIST LATERAL LOADS. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS, AND INSTALLATION OR SHORING AND/OR SHEETING.
4. CONTRACTOR SHALL PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER OR SEEPAGE. FREE GROUND WATER WAS NOT ENCOUNTERED IN THE BORINGS. DETAILS OF GROUND WATER INFORMATION CAN BE OBTAINED FROM THE ABOVE-MENTIONED GEOTECHNICAL REPORT. IF GROUND WATER SHOULD OCCUR DURING EXCAVATION, SPECIAL PROCEDURES SHALL BE IMPLEMENTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
5. WHERE THERE IS NOT SUFFICIENT SPACE FOR SLOPED EMBANKMENTS, SHORING WILL BE REQUIRED. SEE THE GEOTECHNICAL REPORT FOR INFORMATION REGARDING THE DESIGN AND INSTALLATION OF THE SHORING. SHORING THAT IS NOT PART OF THE PERMANENT BUILDING SUPPORT IS THE CONTRACTOR'S RESPONSIBILITY AND OUTSIDE THIS PERMIT.
6. CARE SHALL BE EXERCISED WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES OR IMPROVEMENTS TO NOT DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.
7. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILL MATERIAL OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS AND FOUNDATIONS. IF ANY SUCH MATERIAL OR STRUCTURES ARE FOUND, ARCHITECT/ENGINEER SHALL BE NOTIFIED IMMEDIATELY. ALL ABANDONED FOUNDATIONS, UTILITIES AND OTHER STRUCTURES THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
8. ALL FOOTINGS AND SLABS ON GRADE SHALL BE PLACED ONTO FIRM UNDISTURBED SOIL OR CONTROLLED COMPACTED FILL, REMOVING ANY EXISTING FILL, ORGANIC MATERIAL, OR UNSUITABLE MATERIAL AS RECOMMENDED IN GEOTECHNICAL REPORT. EXPOSED NATURAL SOIL SHALL BE PROOF ROLLED BELOW SLABS ON GRADE.
9. THE PREPARATION OF THE SUBGRADE FOR THE SLAB ON GRADE SHALL BE IN STRICT ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT REFERENCED ABOVE. THE CONTRACTOR SHALL DIRECT QUESTIONS REGARDING THE SUBGRADE PREPARATION REQUIREMENTS TO THE GEOTECHNICAL ENGINEER.
10. FOUNDATION ELEVATIONS SHOWN DESIGNATE A MINIMUM DEPTH WHERE AN ADEQUATE SOIL BEARING PRESSURE IS EXPECTED. FOOTINGS, PIERS AND/OR WALLS SHALL BE LOWERED OR EXTENDED AS REQUIRED TO REACH SOIL MEETING THE DESIGN BEARING PRESSURE.
11. ALL REQUIRED BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN 8" LAYERS TO 95% MAXIMUM DRY DENSITY PER ASTM D1557 AND TO THE APPROVAL OF THE INSPECTION AGENCY.
12. THE MOISTURE CONTENT OF ONSITE CLAYEY SOILS AT THE TIME OF COMPACTION SHALL BE BETWEEN 2-3% ABOVE OPTIMUM MOISTURE CONTENT.
13. ANY REQUIRED IMPORT FILL SOIL SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO IMPORTING.

## REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE AMERICAN CONCRETE INSTITUTE "ACI DETAILING MANUAL" (SP-066) EXCEPT AS OTHERWISE SHOWN, NOTED OR SPECIFIED.
2. CONCRETE REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO THE FOLLOWING STANDARDS:

| | | |
|---|---|---|
| DEFORMED BARS | ASTM A615, GR 60 | Fy = 60 KSI |
| DEFORMED BARS IN SFRS | ASTM A706, GR 60 | Fy = 60 KSI |
| WELDED WIRE REINFORCING | ASTM A1064 | Fy = 65 KSI |
| DEFORMED EPOXY-COATED BARS | ASTM A775 | Fy = 60 KSI |
| DEFORMED GALVANIZED-COATED BARS | ASTM A767 | Fy = 60 KSI |
| STEEL WIRE | ASTM A1064 | Fy = 60 KSI |
| DEFORMED BAR ANCHORS | ASTM A1064 | Fy = 70 KSI |
| WELDABLE BARS, DEFORMED | ASTM A706, GR 60 | Fy = 60 KSI |

3. MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:

| | |
|---|---|
| CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND | 3" |
| EXPOSED TO WEATHER OR IN CONTACT WITH GROUND | |
| #6 BARS OR LARGER | 2" |
| #5 BARS OR SMALLER | 1 1/2" |

4. ALL REINFORCING IN CONCRETE USED FOR THE CONTAINMENT OF WATER SHALL BE HOT-DIP GALVANIZED OR EPOXY-COATED.
5. DEFORMED BAR ANCHORS (DBA) SHALL BE AUTOMATICALLY END WELDED WITH SUITABLE WELDOMENT, TREATMENT IN THE SHOP OR IN THE FIELD. WELDING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER.
6. SUPPORTS FOR REINFORCEMENT SHALL HAVE CLASS 2 PROTECTION AS DEFINED IN THE CRSI MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED.
7. SUPPORTS FOR COATED REINFORCEMENT SHALL HAVE CLASS 1 PROTECTION AS DEFINED IN THE CRSI MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED.
8. ALL WELDED WIRE REINFORCING (WWR) SHALL BE LAPPED 2 PANELS AT EDGES AND ENDS.
9. CONTINUOUS HORIZONTAL REINFORCING SHALL BE LAPPED AT MIDSPAN FOR TOP BARS AND DIRECTLY OVER SUPPORTS FOR BOTTOM BARS, AT DISCONTINUOUS ENDS, THE TOP STEEL SHALL BE BENT DOWN 12 BAR DIAMETERS OR 12" MINIMUM, WHICHEVER IS GREATER.
10. FOR MAT FOUNDATIONS, REINFORCING FOR TOP BARS SHALL BE LAPPED UNDER STRUCTURAL COLUMNS AND WALLS ABOVE AND AT MIDSPAN FOR BOTTOM BARS. AT DISCONTINUOUS ENDS, THE TOP STEEL SHALL BE BENT DOWN 12 BAR DIAMETERS OR 12" MINIMUM, WHICHEVER IS GREATER.
11. WHERE REINFORCEMENT LENGTH IS SPECIFIED, NO SPLICES ARE PERMITTED WITHIN THE SPECIFIED LENGTH WITHOUT APPROVAL BY THE STRUCTURAL ENGINEER.
12. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY, UNLESS OTHERWISE NOTED. PROVIDE FOUNDATION DOWELS TO MATCH SIZE AND SPACING OF WALL OR COLUMN REINFORCEMENT. EXTEND DOWELS A LAP SPLICE LENGTH INTO WALL OR COLUMN AND TERMINATE WITH STANDARD HOOK AT BOTTOM OF FOOTING, UNLESS OTHERWISE NOTED.
13. REINFORCING IN WALL FOOTINGS AND GRADE BEAMS BETWEEN COLUMNS SHALL BE DEVELOPED (Ld) INTO COLUMN FOOTINGS.
14. CUTTING OF REINFORCING WHICH CONFLICTS WITH EMBEDDED OBJECTS OR SLEEVES IS NOT ACCEPTABLE.
15. REINFORCING BARS SHALL BE BENT COLD, AND NO METHOD OF FABRICATION SHALL BE USED WHICH WOULD BE INJURIOUS TO THE MATERIAL. HEATING OF BARS FOR BENDING IS NOT PERMITTED.
16. FIELD WELDING OR BENDING OF REINFORCING IS NOT PERMITTED EXCEPT AS INDICATED ON THE DRAWINGS OR AS APPROVED BY THE STRUCTURAL ENGINEER.
17. USE TEMPLATES TO SET ALL EMBEDDED ANCHOR BOLTS, LEVELING PLATES, AND DOWEL BARS AS REQUIRED OR INDICATED ON THE DRAWINGS.
18. SUBMIT SHOP DRAWINGS FOR FABRICATION AND PLACEMENT OF REINFORCING STEEL. INCLUDE SCHEDULES AND DIAGRAMS OF BENT BARS AND SHOW ARRANGEMENT OF REINFORCEMENT, INCLUDING CONCRETE COVER. STRUCTURAL ENGINEER'S REVIEW WILL BE FOR COMPLIANCE WITH DESIGN REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DIMENSIONS AND QUANTITIES.
19. ALL CONCRETE NOT OTHERWISE SPECIFIED SHALL BE REINFORCED TO THE MINIMUM REQUIREMENT OF ACI 318.
20. REINFORCE ALL ARCHITECTURAL CONCRETE TOPPING SLABS WITH 6x6-W1.4xW1.4 WWR UNLESS OTHERWISE NOTED.

## CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE CORRESPONDING EDITION OF THE AMERICAN CONCRETE INSTITUTE PUBLICATIONS: ACI 117, ACI 301, ACI 305.1, ACI 306.1, ACI 308.1, ACI 318 AND SP-066, UNLESS OTHERWISE NOTED.
2. CONCRETE MATERIALS SHALL CONFORM TO:

| | |
|---|---|
| CEMENT | ASTM C150, TYPE I OR II |
| FLY ASH | ASTM C618, TYPE C OR F |
| FINE AND COARSE AGGREGATE | ASTM C33 |
| LIGHTWEIGHT AGGREGATE | ASTM C330 |
| WATER | POTABLE |
| AIR-ENTRAINING ADMIXTURE | ASTM C260 |
| WATER REDUCING ADMIXTURE | ASTM C494 |

3. CONCRETE STRENGTHS SHALL CONFORM TO:

| INTENDED USE | STRENGTH (PSI) | EXPOSURE CLASS |
|---|---|---|
| FOUNDATIONS | 4000 | N/A |
| SLAB ON GRADE | 4000 | N/A |
| UNLESS OTHERWISE NOTED | 4000 | N/A |

NORMAL-WEIGHT 28-DAY STRENGTH UNLESS OTHERWISE NOTED.

4. THE MODULUS OF ELASTICITY OF ALL CONCRETE SHALL EXCEED 57,000 SQRT(f'c) FOR NORMAL-WEIGHT CONCRETE OR wc1.5 33 SQRT(f'c).
5. DRYPACK OR GROUT SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 7000 PSI.
6. SLAB-ON-GRADE CONSTRUCTION: LOCATE SAW-CUT CONTROL JOINTS ALONG COLUMN LINES WITH INTERMEDIATE JOINTS SPACED PER THE TABLE BELOW, UNLESS OTHERWISE NOTED. SLAB PANELS SHALL HAVE A MAXIMUM LENGTH TO WIDTH RATIO OF 1.5:1. PROVIDE ADDITIONAL CONTROL JOINTS AT ALL RE-ENTRANT CORNERS. SEE PLAN FOR SPECIAL CASES.

| THICKNESS (IN) | MAXIMUM JOINT SPACING EACH WAY (FT) |
|---|---|
| 4 | 12 |
| 5 | 13 |
| 6 | 15 |
| 8 | 18 |
| 10 | 20 |
| 12 | 22 |

7. CROSS REFERENCE ARCHITECTURAL AND STRUCTURAL DRAWINGS TO ENSURE PROPER DIMENSIONS AND PLACEMENT OF ALL ANCHOR BOLTS, INSERTS, NOTCHES, AND EDGES OF WALLS/FOUNDATIONS PRIOR TO PLACING CONCRETE.
8. UNLESS OTHERWISE NOTED, ALL FOOTINGS SHALL BE CENTERED UNDER WALLS, PIERS OR COLUMNS.
9. CONSTRUCTION JOINTS SHALL BE THOROUGHLY ROUGHENED TO 1/4" AMPLITUDE BY SAND BLASTING OR MECHANICAL MEANS. CLEAN BEFORE POUR. LOCATION TO BE APPROVED BY THE STRUCTURAL ENGINEER. SUBMIT LOCATION PLAN OF ALL PROPOSED JOINTS NOT INDICATED ON DRAWINGS FOR APPROVAL PRIOR TO BEGINNING WORK.
10. PRIOR TO PLACING CONCRETE, THE CONTRACTOR SHALL ENSURE ALL REINFORCING AND EMBEDMENTS, INCLUDING COLUMN ANCHOR BOLTS, ARE PROPERLY LOCATED AND SECURELY TIED IN PLACE.
11. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL PENETRATIONS THROUGH CONCRETE BEFORE PLACING. SECURE SLEEVES TO PREVENT MOVEMENT DURING PLACING OPERATIONS. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS.
12. CONFIRM WITH ARCHITECT THAT MATERIALS TO BE EMBEDDED ARE SUITABLE FOR EMBEDMENT IN CONCRETE.
13. CONDUIT, PIPES, AND SLEEVES EMBEDDED IN CONCRETE SHALL CONFORM TO REQUIREMENTS OF ACI 318, SECTIONS 20.7 AND 26.8.
14. DO NOT PLACE VERTICAL CONDUIT IN CONCRETE COLUMNS WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.
15. NO ALUMINUM SHALL BE ALLOWED IN THE CONCRETE WORK UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION.
16. WATERSTOPS SHALL BE A FLEXIBLE BENTONITE PRODUCT. ACCEPTABLE PRODUCTS INCLUDE: CETCO WATERSTOP-RX AND GREENSTREAK SWELLSTOP. WESTIC BARRIER TECHNOLOGIES TR-R WATERSTOP AND GREENSTREAK PVC WATERSTOP.
17. PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC., SHALL BE FORMED WITH A 3/4 INCH CHAMFER, UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS.
18. SLOPE SLABS TO DRAINS OR FOR POSITIVE DRAINAGE IF NO DRAINS ARE PRESENT AND PROVIDE DEPRESSIONS WHERE SHOWN ON THE STRUCTURAL AND/OR ARCHITECTURAL DRAWINGS WITHOUT REDUCING THE THICKNESS OF SLAB INDICATED. FOR SLAB-ON-GRADE DEPRESSIONS GREATER THAN 1 INCH, SEE DETAILS FOR ADDITIONAL REINFORCING. SUBMIT THIS DESIGN TO STRUCTURAL REPORT. EXPOSED NATURAL SOIL SHALL BE PROOF ROLLED BELOW SLABS ON GRADE.
19. INTERNALLY VIBRATE ALL CAST-IN-PLACE CONCRETE EXCEPT SLABS-ON-GRADE WHICH NEED ONLY BE VIBRATED AROUND UNDER FLOOR DUCTS AND OTHER EMBEDDED ITEMS. VIBRATE TOPS OF COLUMNS.
20. PROVIDE VERTICAL CONTROL JOINTS IN EXPOSED CONCRETE WALLS AT A MINIMUM UNIFORM SPACING NOT TO EXCEED 25 FEET PER ACI 224.3. COORDINATE JOINT LOCATIONS WITH ARCHITECTURAL DRAWINGS.
21. CONCRETE SHALL NOT BE PERMITTED TO DROP MORE THAN 5 FEET.
22. IF CONCRETE IS PLACED BY PUMPING, SUPPORT SHALL BE PROVIDED FOR THE HOSE. THE HOSE SHALL NOT BE ALLOWED TO RIDE ON THE REINFORCING AND OTHER EMBEDDED ITEMS.
23. CONCRETE SLABS SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR 7 DAYS. FORMS FOR CONCRETE WALLS SHALL BE LEFT IN PLACE FOR 7 DAYS OR MAY BE STRIPPED AFTER 3 DAYS AND COATED WITH AN APPROVED CURING COMPOUND.
24. NO LOADS SHALL BE PLACED ON STRUCTURAL CONCRETE SLABS WITHIN 7 DAYS AFTER CONCRETE IS PLACED. AFTER CONCRETE IS PLACED, IN NO CASE SHALL THE SUPERIMPOSED CONSTRUCTION LOADS BE GREATER THAN SPECIFIED DESIGN LIVE LOADS, UNLESS THE WORK IS SHORED.
25. NOTIFY THE ARCHITECT/STRUCTURAL ENGINEER 48 HOURS MINIMUM PRIOR TO ALL POURS.
26. CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.
27. THE DESIGN AND ENGINEERING OF FORMWORK, SHORING AND RESHORING, AS WELL AS THEIR CONSTRUCTION, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. FORMS SHALL BE DESIGNED TO HAVE SUFFICIENT STRENGTH TO SAFELY WITHSTAND THE LOADS RESULTING FROM PLACEMENT AND CURING OF CONCRETE AND ALSO BE DESIGNED FOR SUFFICIENT RIGIDITY TO MAINTAIN SPECIFIED TOLERANCES. CONTRACTOR SHALL SUBMIT DETAILED FORMWORK SHOP DRAWINGS TO THE ARCHITECT TO BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN CONCEPT ONLY.
28. SHORING OF ELEVATED CONCRETE TO REMAIN UNTIL CONCRETE TESTS, CURED UNDER JOB-SITE CONDITIONS HAVE BEEN TESTED AND INDICATE 80% OF THE DESIGN MODULUS OF ELASTICITY. GENERAL CONTRACTOR TO PROVIDE THE STRUCTURAL ENGINEER WITH MODULUS OF ELASTICITY TEST RESULTS. SHORING OF THE STRUCTURAL BAY CONTAINING CONSTRUCTION JOINTS AND/OR POUR STRIPS TO REMAIN IN PLACE UNTIL SLAB CONSTRUCTION IS COMPLETE.
29. CONCRETE FILL THICKNESS SHOWN ON FRAMING PLANS AND DETAIL SHEETS IS MINIMUM THICKNESS. NO ALLOWANCES HAVE BEEN SHOWN FOR ADDITIONAL CONCRETE FILL REQUIRED TO COMPENSATE FOR BEAM OR DECK DEFLECTIONS AND TO MAINTAIN SURFACE TOLERANCES SPECIFIED.
30. PROVIDE LIGHTWEIGHT SELF-LEVELING MATERIAL AT ELEVATED CONCRETE SLABS AND SLABS ON STEEL DECK AS REQUIRED TO MEET FLOOR FLATNESS AND LEVELNESS REQUIREMENTS. SUBMIT PROPOSED LOCATIONS AND LEVELING MATERIAL DATA FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT.
31. CORING OF CONCRETE IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
32. NO CONCRETE SHALL BE PLACED ONTO OR AGAINST SUBGRADES CONTAINING FREE WATER, FROST, ICE OR SNOW.
33. DURING WINTER CONSTRUCTION, ALL FOOTINGS SHALL BE PROTECTED FROM FROST PENETRATION UNTIL THE BUILDING IS ENCLOSED AND TEMPORARY HEAT IS PROVIDED.
34. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE TESTING AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE APPLICABLE CODE. MIX DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.
35. PROVIDE SLAB COORDINATION DRAWING SUBMITTAL INDICATING COORDINATED LOCATIONS OF: MEP PENETRATIONS, SLEEVES, OPENINGS, IN-SLAB CONDUIT/DUCT (IF ALLOWED), EMBED PLATES, CAST-IN ANCHORS, AND OTHER ITEMS EMBEDDED OR PENETRATING STRUCTURAL ELEVATED SLABS.

## MASONRY

1. CMU CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ACI 530/530.1 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES".
2. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

| | |
|---|---|
| DESIGN ASSEMBLY STRENGTH, f'm | 1500 PSI |
| INDIVIDUAL CONCRETE MASONRY UNITS | 1900 PSI |
| GROUT | 2000 PSI |

3. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

| | |
|---|---|
| DESIGN ASSEMBLY STRENGTH, f'm | 2000 PSI |
| INDIVIDUAL CONCRETE MASONRY UNITS | 2800 PSI |
| GROUT | 2000 PSI |

4. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

| | |
|---|---|
| DESIGN ASSEMBLY STRENGTH, f'm | 2500 PSI |
| INDIVIDUAL CONCRETE MASONRY UNITS | 3250 PSI |
| GROUT | 2500 PSI |

5. CMU MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:

| | |
|---|---|
| CONCRETE MASONRY UNITS | ASTM C90, NORMAL WEIGHT |
| MORTAR | ASTM C270, TYPE N |
| GROUT | ASTM C476 |
| JOINT REINFORCING | ASTM A82 

## CONTINUOUS FOOTING SCHEDULE

| MARK | WIDTH | MIN. THICKNESS | REINFORCING | |
|---|---|---|---|---|
| | | | LONG DIRECTION | SHORT DIRECTION |
| CF1.4 | 1'-4" | 3'-4" | (2)#5 T&B | #3 TIES @ 24" OC |
| CF1.5 | 1'-6" | 1'-6" | (2)#5 T&B | |
| CF2.0 | 2'-0" | 3'-4" | (3)#5 T&B | #3 TIES @ 24" OC |

NOTES:

DEEPEN THE EXTERIOR FOOTINGS AS NECESSARY TO MAINTAIN THE BOTTOM OF FOOTINGS AT LEAST 3'-6" BELOW FINISHED GRADE (TYP.)

## WOOD BEARING WALL SCHEDULE

| LOCATION | ROOF - 2ND | 2ND - 1ST | REMARKS |
|---|---|---|---|
| TYPICAL - DEMISING WALL BETWEEN UNITS | (1) 2x4 @ 16" OC, STAGGERED ABOUT EACH SIDE OF WALL | (1) 2x4 @ 16" OC, STAGGERED ABOUT EACH SIDE OF WALL | - |
| CORRIDOR | (1) 2x6 @ 16" OC | (1) 2x6 @ 16" OC | - |
| EXTERIOR / PERIMETER | (1) 2x6 @ 16" OC | (1) 2x6 @ 16" OC | |

NOTES:

1. WALLS LISTED ON SCHEDULE ARE FOR ALL WALLS SHOWN ON STRUCTURAL PLANS, UON.
2. STUDS TO ALIGN WITH FLOOR OR ROOF FRAMING MEMBERS, UON.

## CMU WALL SCHEDULE

| WALL ID | WALL THICKNESS | MAXIMUM HEIGHT | BAR SIZE AND SPACING EACH MAT | | GROUTED | REMARKS |
|---|---|---|---|---|---|---|
| | | | VERTICAL | HORIZONTAL (SEE NOTE 4) | | |
| MW1 | 8" | 25'-0" | #5 @ 16" OC | STD LADDER @ 16" OC | PARTIAL | SINGLE MAT |
| MW2 | 8" | 25'-0" | #5 @ 48" OC | STD LADDER @ 16" OC | PARTIAL | SINGLE MAT |

NOTES:

1. THE ABOVE SCHED SHALL BE MIN REINF FOR ALL BUILDING CMU WALLS.
2. SINGLE MAT REINF SHALL BE IN THE CENTER OF WALL, UON.
3. PLACE HORIZ BAR IN BOND BEAM UNIT, TYP.
4. LOCATE FIRST LAYER OF HORIZ BARS AT 8" MAX FROM BASE OF WALLS AND FROM TOP AND BOTTOM OF WALL OPENINGS.

## WOOD SHEAR WALL SCHEDULE

| MARK | APA RATED SHEATHING | | | PANEL NAIL SIZE AND SPACING | | FRAMING SIZE AT ADJOINING PANEL EDGES, MIN | JOIST/BLOCKING TO TOP PLATE CONN WITH SIMPSON A35 OR LTP4, UON | SILL PLATE CONN AT FLOOR WITH SIMPSON SCREWS | SILL PLATE ANCHORS AT CONCRETE | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | THICKNESS | GRADE | SPAN RATING | SIZE | E.N. F.N. | | | | SIZE AND SPACING | EMBEDMENT (IN) | |
| SW1 | 1/2" ZIP SYSTEM | STRUCT 1 | 32/16 | 10d | @ 3" OC, 12" OC | 2x | 12" OC EA FACE | SDS25600 @ 6" OC | 3/4"Ø @ 32" OC | 12" | 2X6 SPF STUDS @ 16" OC MAX;SEE HOLDOWN SCHEDULE |
| SW2 | 5/8" GYPSUM SHEATHING BOARD ON EACH SIDE | STRUCT 1 | - | 6d x 1 7/8" | @ 4" OC, 7" OC | 2x | 12" OC EA FACE | SDS25600 @ 6" OC | 3/4"Ø @ 32" OC | 12" | 2X6 SPF STUDS @ 16" OC MAX;SEE HOLDOWN SCHEDULE |
| SW3 | 15/32" ONE SIDE | STRUCT 1 | 32/16 | 10d | @ 4" OC, 12" OC | 2x | 12" OC EA FACE | SDS25600 @ 6" OC | 3/4"Ø @ 16" OC | 12" | 2X6 SPF STUDS @ 16" OC MAX;SEE HOLDOWN SCHEDULE |
| SW4 | 15/32" ONE SIDE | STRUCT 1 | 32/16 | 10d | @ 6" OC, 12" OC | 2x | 12" OC EA FACE | SDS25600 @ 6" OC | 3/4"Ø @ 24" OC | 12" | 2X6 SPF STUDS @ 16" OC MAX;SEE HOLDOWN SCHEDULE |

NOTES:

1. SHEATHING SHALL BE APA RATED, STRUCTURAL 1, 15/32" MIN, 5-PLY, EXPOSURE 1 OR APPROVED EXTERIOR GRADE OSB.SEE GENERAL NOTES FOR PLYWOOD INFORMATION.
2. PROVIDE BLOCKING IN SHEAR WALL PER TYP SHEAR WALL ELEVATION DETAIL. ALL PANEL EDGES ARE TO BE BLOCKED.
3. SILL PLATE ANCHORS ARE BASED UPON HILTI KWIK BOLT TZ2 OR HILTI HY-200 + HIT-Z.CONCRETE SHALL HAVE 75% OF SPECIFIED COMPRESSIVE STRENGTH AT TIME OF INSTALLATION.
4. SEE PLAN AND SCHEDULE FOR HOLDOWN ANCHOR AND POST SIZE.
5. ALL NAILS SHALL BE COMMON WIRE NAILS WITH 1 1/2" PENETRATION. SINKER OR BOX NAILS ARE NOT PERMITTED.
6. FOR TRANSFER NAILING, PREDRILL HOLES FOR NAILS WHERE NAILS TEND TO SPLIT WOOD.
7. OVERDRIVEN NAILS INTO SHEATHING ARE NOT ACCEPTABLE. ANY SHEATHING AND STUDS DAMAGED DUE TO OVERDRIVEN NAILS SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
8. WHERE PANELS ARE APPLIED TO BOTH SIDES AND NAIL SPACING IS LESS THAN 6", PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING, EACH SIDE OF WALL. CONTRACTOR OPTION TO PROVIDE NOMINAL 3" WIDE, OR GREATER, FRAMING MEMBERS WITH STAGGERED NAILS.
9. SEE S600 AND S601 FOR TYPICAL SHEAR WALL CONSTRUCTION DETAILS.
10. WHERE ROOF JOISTS ARE PERPENDICULAR TO SHEAR WALL, PROVIDE SIMPSON H8 CLIP FROM ROOF JOIST TO DOUBLE PLATE IN ADDITION TO CLIP SHOWN ON SHEAR WALL SCHED.
11. NUMBER OF ANCHOR BOLTS REQD EQUAL TO WALL LENGTH DIVIDED BY BOLT SPACING.
12. PLATE WASHERS AT SILL ANCHOR BOLTS IN SHEAR WALLS SHALL EXTEND TO WITHIN 1/2" OF THE PLATE EDGE ON THE SIDE(S) WITH SHEATHING. USE SIMPSON BPS3/4-6 OR EQUIVALENT AT 6 INCH NOMINAL WALLS. SEE S600 AND S601 FOR ADDITIONAL SILL BOLTING REQUIREMENTS.
13. 1/2" EDGE DISTANCE FROM THE PANEL EDGES AND 3/8" FROM THE EDGE OF CONNECTING MEMBERS. SEE S600 AND S601.
14. ALL WOOD STRUCTURAL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED AT ALL PANEL EDGES.
15. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. UON ON THE PLANS NAILING SHALL BE PER MARK SW4.
16. ZIP SYSTEM SHALL MEET THE REQUIREMENTS OF ICC-ES EVALUATION REPORT ESR-3373.
17. TOP AND SILL PLATES SHALL BE DOUGLAS-FIR-LARCH NO.1 UNLESS NOTED OTHERWISE.
18. PROVIDE MST48 STEEL STRAP @ 24" O.C. MAX. BETWEEN 1ST FLOOR AND 2ND FLOOR SHEAR WALL (ACCROSS THE LENGTH OF SW )
19. PROVIDE 2x STUDS OR 2x BLOCKING AT ADJOINING PANEL EDGES,
20. STAGGER VERTICAL JOINTS IN GYPSUM SHEETS WHERE SHEAR WALLS ARE SHEATHED ON BOTH SIDES.
21. HOLDOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS. HOLDOWNS SHALL BE FINGER TIGHT AND WRENCH TURNED JUST PRIOR TO COVERING THE WALL FRAMING. CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS ON THE POST ON THE OPPOSITE SIDE OF THE ANCHORAGE DEVICE. PLATE SIZE SHALL BE A MIN OF 0.299"x3" x 0'-3".
22. USE APA STRUC I WHERE FIRE TREATED PLYWOOD IS REQD. (REFER TO ARCH. DRAWINGS FOR FIRE RATING REQUIREMENTS)

## HOLDOWN SCHEDULE

| MARK | LEVEL | MODEL | THREADED ROD ANCHOR | WOOD FASTENER | END POST IN 2x4 WALL | END POST IN 2x6 WALL |
|---|---|---|---|---|---|---|
| SW-1 | GROUND | HTT5KT | 5/8"ø | (26) #10x 2 1/2 SD | - | (3) 2x6 SPF |
| | 2ND | DTT2Z | 1/2"ø | (8) 1/4 x 1 1/2 SDS | - | (3) 2x6 SPF |
| SW-2 | GROUND | DTT2Z | 1/2"ø | (8) 1/4 x 1 1/2 SDS | - | (4) 2x6 SPF |
| | 2ND | DTT1Z | 3/8"ø | (8) 0.148 x 1 1/2 | - | (4) 2x6 SPF |
| SW-3 | GROUND | HD12 | 1"ø | (4) 1" STUD BOLTS | (6) 2X4 DFL SS | - |
| | 2ND | HDU5-SDS2.5 | 5/8"ø | (14) 1/4 x 2 1/2 SDS | (6) 2X4 DFL SS | - |
| SW-4 | GROUND | HTT5 | 5/8"ø | (26) 0.162x 2 1/2 | - | (3) 2x6 SPF |
| | 2ND | DTT2Z | 1/2"ø | (8) 1/4 x 1 1/2 SDS | - | (3) 2x6 SPF |

NOTES:

1. TYPICAL POST SIZE SHOWN IN SCHEDULE, UON ON PLAN.
2. EMBEDMENT FOR HOLDOWN AT GROUND LEVEL SHALL BE 16" MINIMUM.
3. INSTALL HOLDOWNS PER SIMPSON STRONG-TIE SPECIFICATIONS.
4. NOTCHES ARE NOT ALLOWED IN SHEAR WALL END POSTS.
5. SEE TYPICAL DETAIL 'SIMPSON HOLDOWNS (NON-ATS) FOR THREADED ROD HOLDOWN ANCHOR INFORMATION.
5. HOLD-DOWNS SHALL BE INSTALLED AT THE END OF EACH WALL SEGMENT AND SHALL BE ALIGNED FLOOR-TO-FLOOR; REFER TO PLAN
6. END POST SHALL BE DFL SELECT STRUCTURAL (1900 E; 625 FC PERP) & SPF NO.1/NO.2 MIN. (SEE SCHEDULE)

## WOOD BEARING WALL SCHEDULE

| LOCATION | ROOF - 2ND | 2ND - 1ST | REMARKS |
|---|---|---|---|
| TYPICAL - DEMISING WALL BETWEEN UNITS | (1) 2x4 SPF @ 16" OC, STAGGERED ABOUT EACH SIDE OF WALL | (1) 2x4 SPF @ 16" OC, STAGGERED ABOUT EACH SIDE OF WALL | - |
| CORRIDOR | (1) 2x6 SPF @ 16" OC | (1) 2x6 SPF @ 16" OC | - |
| EXTERIOR / PERIMETER | (1) 2x6 SPF @ 16" OC | (1) 2x6 SPF @ 16" OC | |

NOTES:

1. WALLS LISTED ON SCHEDULE ARE FOR ALL WALLS SHOWN ON STRUCTURAL PLANS, UON.
2. STUDS TO ALIGN WITH FLOOR OR ROOF FRAMING MEMBERS, UON.
3. REFER TO SHEAR WALL/ HOLDOWN SCHEDULE FOR THE END POSTS.

## WOOD HEADER SCHEDULE

| MARK | SIZE | REMARKS |
|---|---|---|
| H1 | (3) 2x12 SPF | (2) 2X KING STUDS, (2) 2x TRIMMER |
| H2 | (2) 2x12 SPF | (2) 2X KING STUDS, (2) 2x TRIMMER |
| H3 | (2) 2x10 SPF | (2) 2X KING STUDS, (2) 2x TRIMMER |
| H4 | (2) 2x8 SPF | (2) 2X KING STUDS, (2) 2x TRIMMER |
| H5 | (3) 1 3/4x14 LVL | (2) 2X KING STUDS, (3) 2x TRIMMER |

NOTE:

1. PROVIDE FULL BEARING ON TRIMMER END OF HEADER.
2. LINTELS NOT SPECIFICALLY SIZED BY DRAWINGS AND DETAIL SECTIONS AT 4" NON-BEARING WALLS SHALL BE COMPLY WITH THE FOLLOWING:
   - UP TO 4'-0" WIDE OPENING: (2) 2X6 SPF
   - OVER 4'-0" UP TO 7'-0" WIDE OPENING: H-3

## LINTEL SCHEDULE

| MARK | MEMBER SIZE | REFERENCE DETAIL | REMARKS |
|---|---|---|---|
| L1 | L6x3-1/2x3/8" LLV | - | - |
| L2 | L4x3-1/2x3/8" LLV | - | - |
| L3 | 16" DEEP BOND BEAM w/ (2) #5 | 6/S400 | - |
| L4 | L6x3-1/2x3/8" LLV ANCH. TO H5 W/ (2)1/2"ø LAG SCREW @ 24" OC | - | - |

NOTE:

1. BEARING LENGTH EACH END = 8" MIN. UON.
2. WOOD HEADER U.N.O. REFER TO PLANS AND SCHEDULE.


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0 1 2 3

REF. SCALE IN INCHES PROJECT #23008275.00

REVISIONS

| No. | Date | Revision / Issue |
|---|---|---|
| 3 | 04/08/2024 | CD Set |
| 5 | 10/30/2024 | Issued for Permit |
| 6 | 12/13/2024 | HUD Submission |
| 7 | 12/20/2024 | Permit |
| 8 | 02/19/2025 | Bulletin No. 1 |

SHEET INFORMATION

Issue: **Issued for Permit**
Date: **10/30/2024**
Project #: **23008275.00**
Drawn: **GHW**
Checked: **GFM**
Approved: **-**

SHEET TITLE

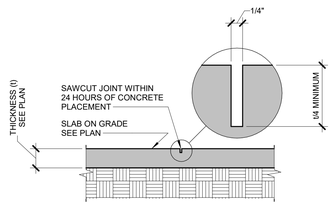
**SCHEDULES**

SCALE

Scale: **As indicated**

SHEET NUMBER

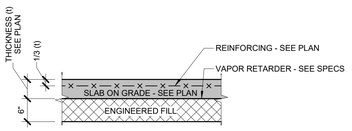
**S004**




NOTES:

1. SEE CAST-IN-PLACE CONCRETE GENERAL NOTES CONCERNING LOCATION OF JOINTS.

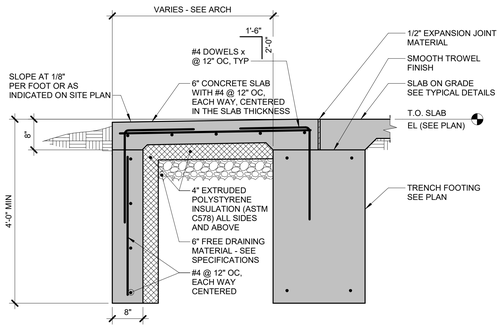
## 1 TYPICAL CONTROL JOINT
3/4" = 1'-0"




NOTES:

1. COMPACT ALL FILL MATERIAL TO 95% OF THE MAXIMUM DRY DENSITY PER ASTM D1557.
2. VAPOR RETARDER TO MEET ASTM E1745, CLASS A AND BE NOT LESS THAN 15 MILS THICK.

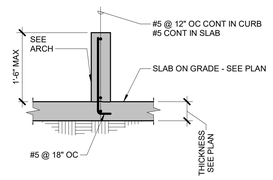
## 2 TYPICAL SLAB SECTION
3/4" = 1'-0"



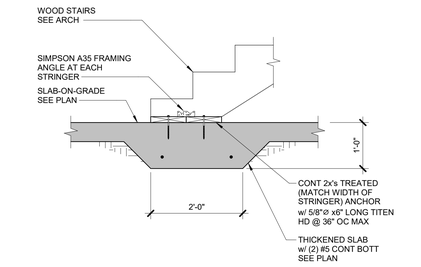

NOTE:

1. SEE ARCHITECTURAL DRAWINGS FOR EXACT STOOP LAYOUT AND LOCATIONS.

## 3 TYPICAL STOOP DETAIL
3/4" = 1'-0"

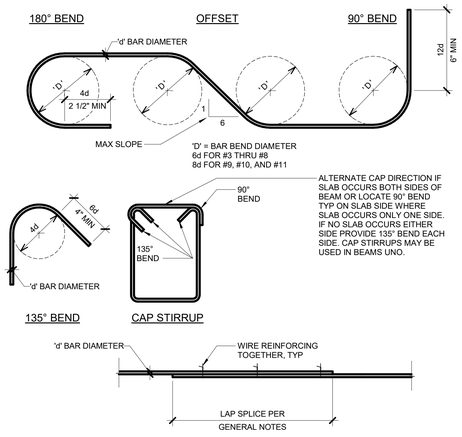



## 4 TYPICAL CURB DETAIL
3/4" = 1'-0"




NOTE: REFER TO ARCH. DRAWINGS FOR FIRE RATING REQUIREMENTS

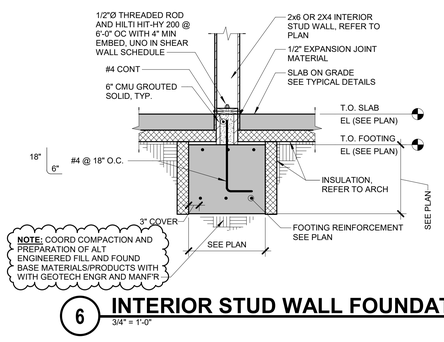
## 10 STAIR STRINGER CONNECTION TO SLAB-ON-GRADE
3/4" = 1'-0"
6611-09



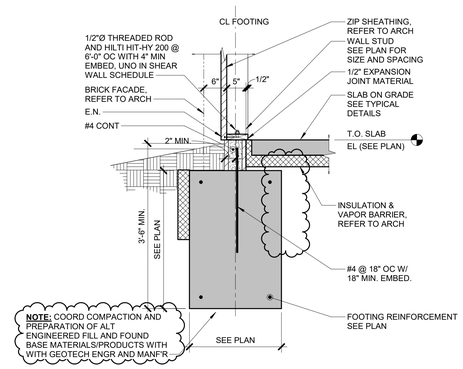

NOTE:

1. ALL HOOKS, BENDS AND LAPS SHALL BE AS INDICATED UNLESS SPECIFICALLY NOTED ON DETAIL. FOR LIGHTWEIGHT CONCRETE, MULTIPLY VALUE FROM THE GENERAL NOTES TABLE BY 1.18.

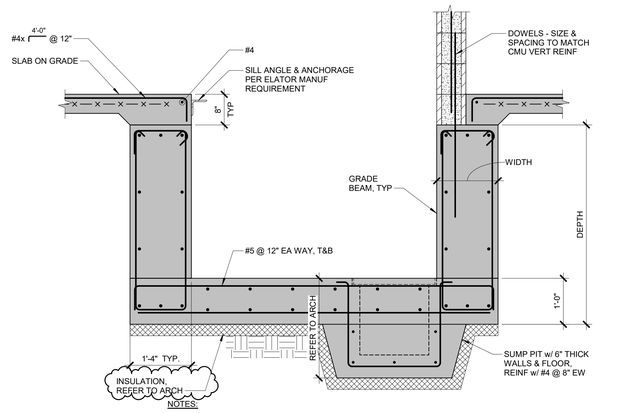
## 5 TYPICAL REINFORCING DETAILS
3/4" = 1'-0"




## 6 INTERIOR STUD WALL FOUNDATION
3/4" = 1'-0"



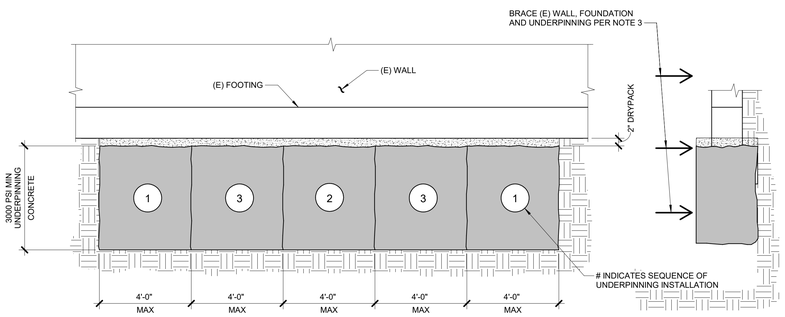

## WOOD WALL AT CONT. FOOTING DETAIL
3/4" = 1'-0"




NOTES:

1. CONTRACTOR TO VERIFY PIT DEPTH WITH ELATOR MANUF DWGS.
2. SEE ARCH AND MECH DWGS FOR LOCATION, PIT SIZE, DEPTH AND COVER DETAILS OF SUMP PIT.
3. COORDINATE SLEEVE FOR PLUNGER WHERE OCCURRING.
4. INSULATION BELOW FOOTINGS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 25 PSI.

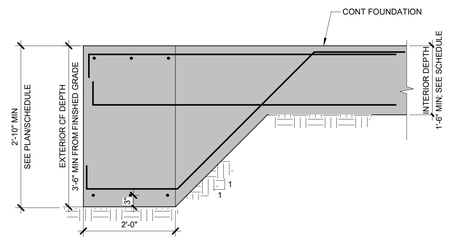
## 8 ELEVATOR PIT
3/4" = 1'-0"
2900-04



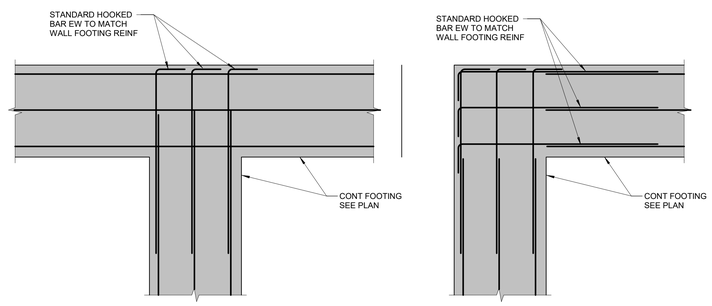

NOTES:

1. UNDERPINNING BELOW (E) FOUNDATIONS SHALL BE CONT AND SHALL BEAR ON UNDISTURBED SOIL.
2. BEARING STRATUM SHALL BE INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF UNDERPINNING CONCRETE. THE GEOTECHNICAL ENGINEER SHALL BE A LICENSED PROFESSIONAL ENGINEER IN THE PROJECT'S JURISDICTION.
3. THE (E) WALL AND FOUNDATION AND THE NEW UNDERPINNING SHALL BE BRACED TO RESIST LATERAL EARTH PRESSURE.
4. DESIGN OF THE UNDERPINNING AND DESIGN OF LATERAL BRACING REQD TO BRACE THE UNDERPINNING AND (E) FOUNDATION IS THE RESPONSIBILITY OF A PROFESSIONAL ENGINEER LICENSED IN THE PROJECT'S JURISDICTION WORKING FOR THE CONTRACTOR. DRAWINGS DOCUMENTING DESIGN OF THE UNDERPINNING AND BRACING AND DESIGN CALCULATIONS FOR THAT UNDERPINNING AND BRACING SHALL BE SUBMITTED PRIOR TO CONSTRUCTION. THOSE DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY THAT ENGINEER.
5. ALLOW UNDERPINNING CONCRETE TO CURE FOR 24 HOURS BEFORE DRYPACKING TO UNDERSIDE OF FOUNDATION.
6. DO NOT EXCAVATE BELOW (E) FOUNDATION UNTIL DRYPACK HAS BEEN INSTALLED ABOVE PREVIOUSLY INSTALLED SEGMENTS OF UNDERPINNING.
7. EXCAVATION FOR INDIVIDUAL SEGMENTS OF UNDERPINNING AND APPROACH EXCAVATION TO EACH SEGMENT SHALL BE DUG ONE SECTION AT A TIME.

## 9 UNDERPINNING BELOW EXISTING WALL FOUNDATION
3/4" = 1'-0"
2940-01




## 11 CONT FOUNDATION THICKNESS TRANSITION
3/4" = 1'-0"




## 12 FOOTING CORNER / INTERSECTION
3/4" = 1'-0"


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0 1 2 3
REF. SCALE IN INCHES PROJECT #23008275.00

REVISIONS

| No. | Date | Revision / Issue |
|---|---|---|
| 3 | 04/08/2024 | CD Set |
| 5 | 10/30/2024 | Issued for Permit |
| 6 | 12/13/2024 | HUD Submission |
| 7 | 12/20/2024 | Permit |
| 8 | 02/19/2025 | Bulletin No. 1 |

SHEET INFORMATION

| | |
|---|---|
| Issue | **Issued for Permit** |
| Date | **10/30/2024** |
| Project # | **23008275.00** |
| Drawn | **GHW** |
| Checked | **GFM** |
| Approved | **-** |

SHEET TITLE

**TYPICAL CONCRETE DETAILS**

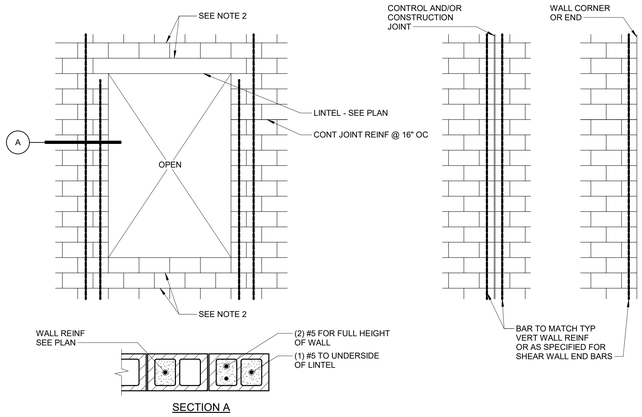
SCALE

Scale: **3/4" = 1'-0"**

SHEET NUMBER

**S300**

JOHN GRACE ARMS
2/18/2025 4:57:00 PM
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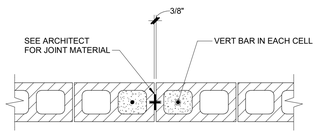

SECTION A

NOTES:

1. SEE ARCH ELEVATIONS FOR CONTROL JOINT LOCATIONS.
2. TWO COURSES OF JOINT REINF ARE REQUIRED ABOVE THE LINTEL AND BELOW THE SILL AND SHALL EXTEND A MIN OF 24 INCHES PAST THE OPENING.

## 1 TYPICAL CMU WALL OPENING DETAIL

3/4" = 1'-0"
S_M-003

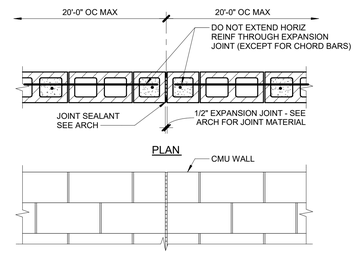



NOTES:

1. HORIZONTAL REINFORCING AND BOND BEAMS SHALL BE DISCONTINUOUS AT WALL JOINT. EXCEPT FOR CHORD REINFORCING.
2. DO NOT LOCATE JOINT OVER OPENING OR WITHIN JAMB.
3. REFERENCE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
4. COORDINATE LOCATION OF JOINTS WITH ARCHITECTURAL DRAWINGS.

## 2 WALL CONSTRUCTION JOINT

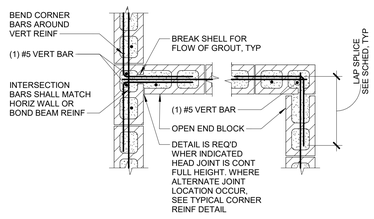
1" = 1'-0"
S_M-008




ELEVATION

## 3 CMU EXPANSION JOINT DETAIL

3/4" = 1'-0"
S_M-007

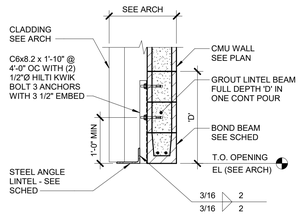



NOTES:

1. TYPICAL VERTICAL REINFORCING AND GROUT NOT SHOWN FOR CLARITY.
2. DETAIL ASSUMES CORNER IS CONSTRUCTED IN RUNNING BOND WITH UNITS INTERLOCKED.

## 4 CMU WALL INTERSECTION DETAIL

3/4" = 1'-0"
S_M-005

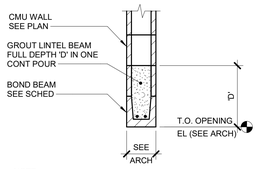



NOTES:

1. SEE ARCH DRAWINGS FOR INSULATION, THROUGH-WALL FLASHING, AND WEEP HOLES.
2. SHORE UNTIL GROUT FOR LINTEL HAS REACHED ITS SPECIFIED STRENGTH.

## 5 BOND BEAM LINTEL DETAIL

3/4" = 1'-0"
S_M-404

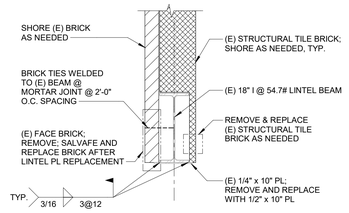



NOTE:

1. SHORE UNTIL GROUT FOR LINTEL HAS REACHED ITS SPECIFIED STRENGTH.

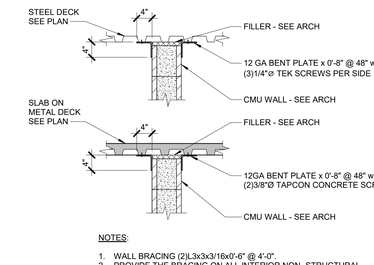
## 6 BOND BEAM LINTEL DETAIL

3/4" = 1'-0"
S_M-412




## 7 EXISTING BUILDING LINTEL PLATE REPAIR

3/4" = 1'-0"

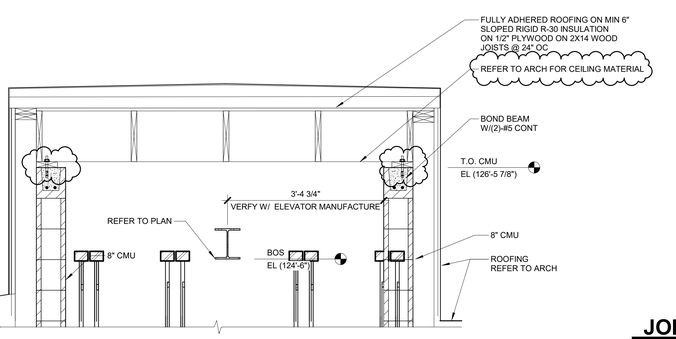



NOTES:

1. WALL BRACING (2)L3x3x3/16x0'-6" @ 4'-0".
2. PROVIDE THE BRACING ON ALL INTERIOR NON- STRUCTURAL CMU PARTITION WALLS. SEE ARCH DWGS FOR LOCATION OF ALL WALLS.

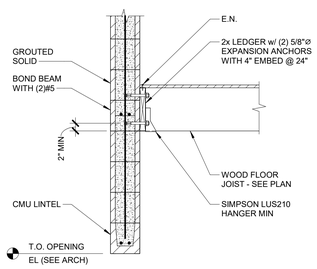
## 8 NON-STRUCTURAL CMU WALL BRACING TO DECK/SLAB

3/4" = 1'-0"
4220-01



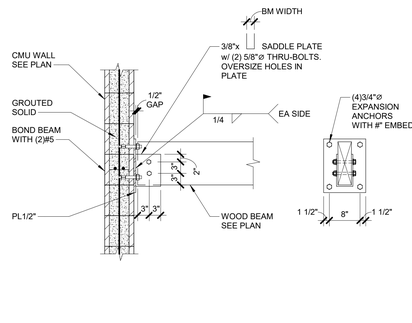

## 9 SECTION AT ELEVATOR

3/4" = 1'-0"



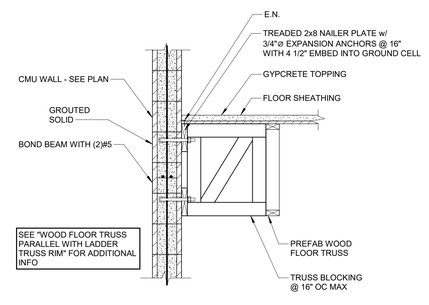

## 10 JOIST BEARING AT CMU CORE WALL

3/4" = 1'-0"
4330-07




## 11 EMBED PLATE IN CMU WALL AT WOOD BEAMS

3/4" = 1'-0"
4330-10




## 12 FLOOR TRUSS PARALLEL TO ELEVATOR WALL

3/4" = 1'-0"
4330-06


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PROJECT #23008275.00

REVISIONS

| No. | Date | Revision / Issue |
|---|---|---|
| 3 | 04/08/2024 | CD Set |
| 5 | 10/30/2024 | Issued for Permit |
| 6 | 12/13/2024 | HUD Submission |
| 7 | 12/20/2024 | Permit |
| 8 | 02/19/2025 | Bulletin No. 1 |

SHEET INFORMATION

| | |
|---|---|
| Issue | **Issued for Permit** |
| Date | **10/30/2024** |
| Project # | **23008275.00** |
| Drawn | **GHW** |
| Checked | **GFM** |
| Approved | **-** |

SHEET TITLE

**TYPICAL MASONRY DETAILS**

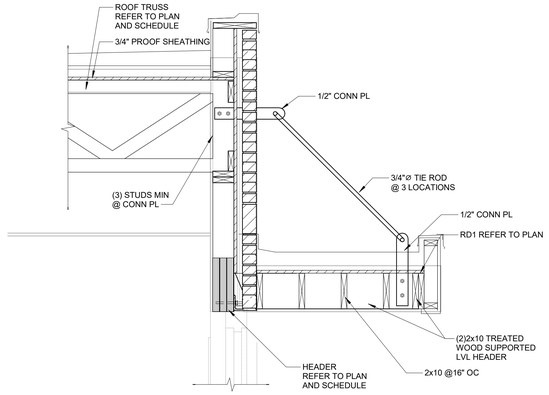
SCALE

Scale: **As indicated**

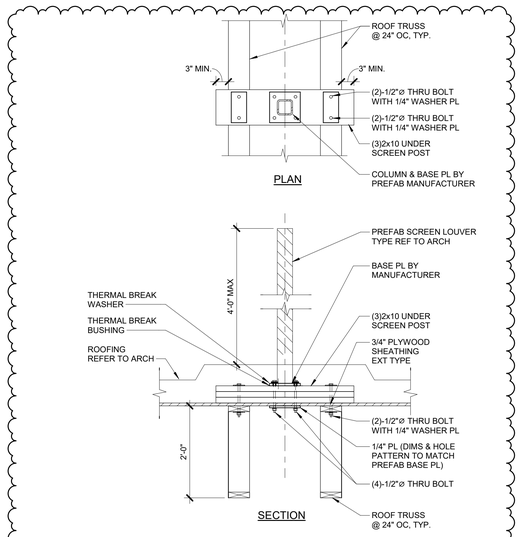
SHEET NUMBER

**S400**

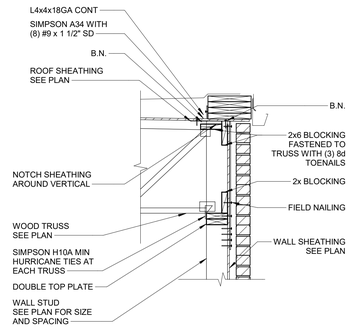
23008275.00 2/18/2025 4:57:01 PM JOHN GRACE ARMS



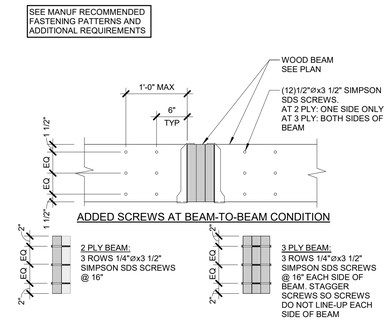

## 1 SECTION
3/4" = 1'-0"




## 2 TYP SCREEN WALL ATTACHMENT TO ROOF FRAMING
3/4" = 1'-0"




## 3 PARAPET AT TRUSS BEARING
3/4" = 1'-0"
S_W-204




## 4 BUILT-UP LVL BEAM / HEADER FASTENING
1" = 1'-0"


JOHN GRACE ARMS

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PROFESSIONAL SEAL

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| Drawn | **GHW** |
| Checked | **GFM** |
| Approved | **-** |

SHEET TITLE

**TYPICAL WOOD SECTIONS & DETAILS**

SCALE

Scale: **As indicated**

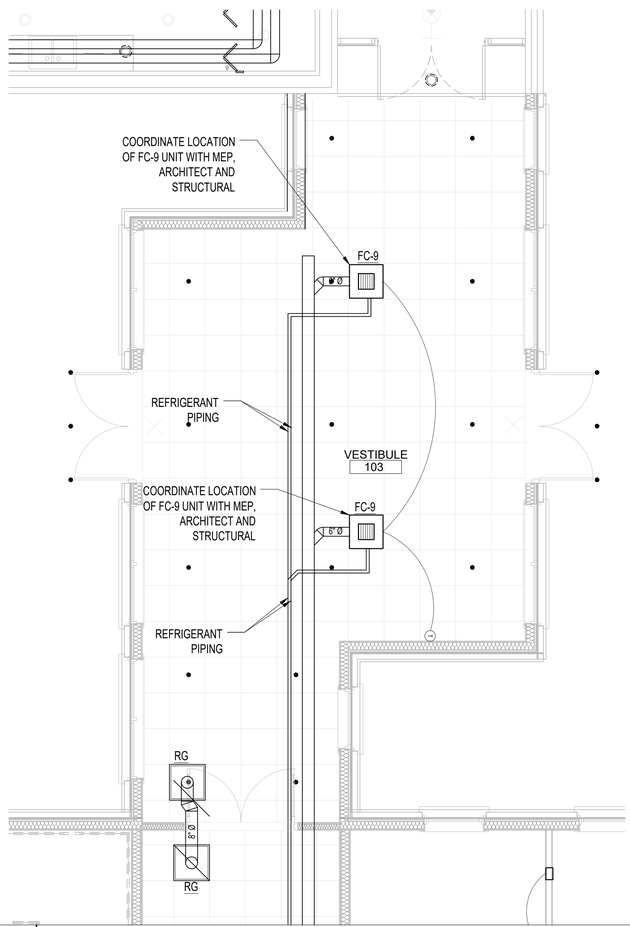
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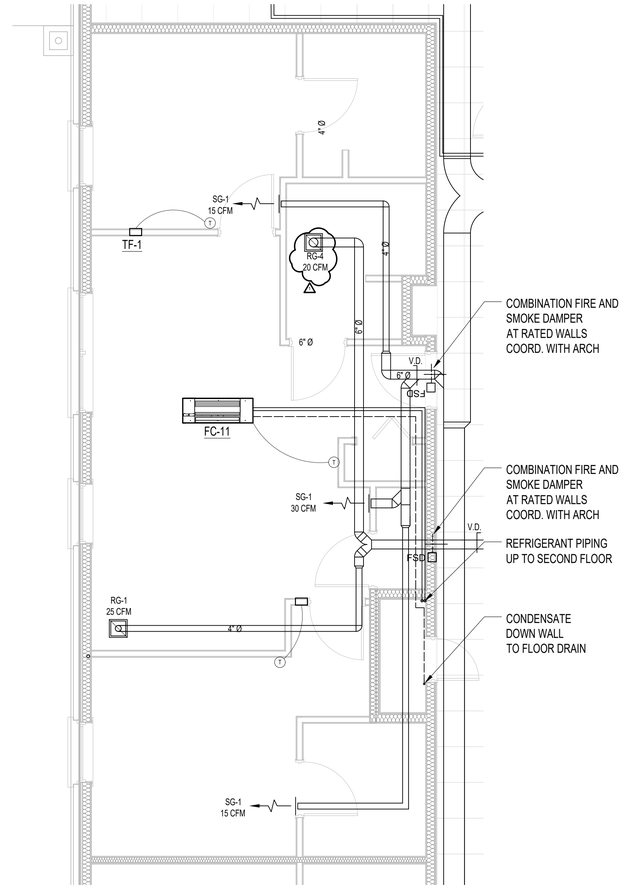
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1. SEE SHEET NOTES AND SHEET KEYED NOTES ON M-001




| | | | | | |
|---|---|---|---|---|---|
| **A6** | **1B UNIT A - HVAC PLAN** | **A6** | **ENLARGED HVAC PLAN** | **A11** | **2B UNIT B (A SIM) - HVAC PLAN** |
| M-401 | 1/4" = 1'-0" | M-401 | 1/4" = 1'-0" | M-401 | 1/4" = 1'-0" |


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STEPHEN M. HENNARD
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LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

MECHANICAL HVAC ENLARGED PLANS

SCALE: AS NOTED

| ISSUED FOR | DATE |
|---|---|
| PERMIT | 10.20.24 |
| △BULLETIN 1 | 2.19.25 |

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SHEET NO. M-401

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## ENERGY RECOVERY VENTILATOR & FAN SCHEDULE

| IDENTIFIER | SERVICE | LOCATION | DESIGN AIR FLOW (CFM) | | SUPPLY FAN | | EXHAUST FAN | | | HEAT EXCHANGER | | | | | | | | | | ELECTRICAL DATA | | DIMENSIONS (IN) | | | WEIGHT (LBS) | BASIS OF DESIGN | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | SUMMER | | | | | WINTER | | | | | | | | | | | | | |
| | | | OUTDOOR AIR | EXHAUST AIR | QTY. | ESP (IN. WC) | MOTOR (HP) | QTY. | ESP (IN. WC) | MOTOR (HP) | EAT (°F) DB | EAT (°F) WB | LAT (°F) DB | LAT (°F) WB | RA (°F) DB | RA (°F) WB | SENSIBLE EFFECTIVENESS % | LATENT EFFECTIVENESS % | EAT DB (°F) | LAT DB (°F) | RA (°F) DB WB | SENSIBLE EFFECTIVENESS % | LATENT EFFECTIVENESS % | MCA | MOCP | VOLTS/PH/HZ | L | W | H | | MANUFACTURER | MODEL | |
| ERV -1 | Addition – Floor 1 & 2 | Roof | 2180 | 1950 | 1 | 1.4 | 1.7 | 1 | 1.3 | 1.9 | 90 | | 75 | | | | 73.4% | | 0 | | 70 | 77.0% | | 56 | 70 | 240/3/60 | 156 1/4 | 65 1/4 | 69 | 3227 | Ventacity | VS3000RTe | 1, 3, 4, 6, 7 |
| ERV -2 | Residential units | Residential units | 50-100 | 50-100 | 1 | 1-.4 | | 1 | 1-.4 | | 95 | | | | | | 60% | | 32 | | | 84% | | | | 120/1/60 | 28 ½" | 23" | 8 7/8" | | Panasonic | Intelli-Balance FY-15VEC2 | 1, 3 |
| ERV -3 | Hallways & Library Room | Various | 60-200 | 60-200 | 1 | 0.4 | | 1 | 0.4 | | 95 | | | | | | 61% | | 32 | | | 86% | | | | 120/1/60 | 27 ½" | 30 ½" | 19 ½" | | Panasonic | Intelli-Balance FY-20VEC1 | 1, 3 |
| ERV -4 | Community Room (Gym) | Existing Roof | 892 | 720 | 1 | 0.85 | 0.77 | 2 | 0.85 | 0.70 | 90.7 | 73.4 | 80.3 | 68.8 | 75.0 | 62.5 | 66.2% | 44.4 | 0 | 46.3 | 51.3 | 68.2 | 66.0 | 11.3 | 15 | 208-230/1/60 | 81 7/8" | 22" | 58 ½" | 261-415 | RenewAire | HE10-JRTH-S15AA-DGFT-L | 1, 2, 3 |
| TF - 1 | Addition | Residential Units | 60 | 0 | 1 | 0.03 | | | | | | | | | | | | | | | | | | | | 120/1/60 | 3" | 15 3/4 | 7' 3/4 | | Tjernlund | AS1 | 5 |

NOTES:
1. Refer to manufacturer cut sheets for effectiveness for various cfm and temperature ranges.
2. Refer to manufacturer cut sheet for roof mounting detail and curb dimensions.
3. Provide access panel in location to access filters and units for proper maintenance and service.
4. Coordinate with architectural and electrical for placement in ceiling and routing of duct work. Refer to sadditional details and location sequence.
5. Provide 24v relay/transformer FC24 and provide necessary wiring to a 24v adjustable thermostat that meets PHIUS requirements. Coordinate location and finish with other trades and architectural plans.
6. Provide and install roof as required refer to architectural and structural drawings.
7. Unit comes pre packaged with electric pre heater at 480V 3P, MOP 30A, MCA 32.7A. Requires separate circuit

## HEAT PUMP - FCU SCHEDULE

| IDENTIFIER | SERVICE | TYPE | CONDENSING UNIT | SUPPLY FAN | | | | SOUND PRESSURE LEVEL (dBA) | COOLING | | | | HEATING | ELECTRICAL DATA | | | | DIMENSIONS (IN) | | | WEIGHT (LBS) | BASIS OF DESIGN | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | SPEED | AIR FLOW (CFM) | OUTSIDE AIR (CFM) | ESP (IN. WC) | | TON | TOTAL MBH | SENSIBLE MBH | SHR | TOTAL MBH | VOLTAGE | PHASE | MCA | MOCP | W | H | D | | MANUFACTURER | MODEL | |
| FC -1 | Residential units, library, offices, | Ducted | ACCU -1 | | 317 | | 0.2 | 30 | 0.75 | 9 | | | 12.5 | 208 | 1 | 0.74 | 15 | 31 1/8 | 7 7/8 | 27 9/16 | 42 | Mitsubishi | SEZ-KD09NA4R1.TH | 1, 2 |
| FC -2 | Residential units, Corridors, Mechanical | Ducted | ACCU -2 | | 388 | | 0.2 | 33 | 1 | 12 | | | 15 | 208 | 1 | 0.90 | 15 | 39 | 7 7/8 | 27 9/16 | 50 | Mitsubishi | SEZ-KD12NA4R1.TH | 1, 2 |
| FC -3 | Residential units, Laundry | Ducted | ACCU -3 | | 529 | | 0.2 | 33 | 1.25 | 15 | | | 18 | 208 | 1 | 1.11 | 20 | 39 | 7 7/8 | 27 9/16 | 54 | Mitsubishi | SEZ-KD15NAR1.TH | 1, 2 |
| FC -4 | Residential units, Custodial | Ducted | ACCU -4 | | 635 | | 0.2 | 38 | 1.5 | 18 | | | 21.6 | 208 | 1 | 1.13 | 20 | 46 7/8 | 7 7/8 | 27 9/16 | 62 | Mitsubishi | SEZ-KD18NA4R1.TH | 1, 2 |
| FC -5 | Prep Space | Wall Mounted | ACCU -5 | | 701 | | | 34 | 1.87 | 22.4 | | | 21.2 | 208 | 1 | 1 | 20 | 43 5/16 | 12 13/16 | 9 3/8 | 37 | Mitsubishi | MSZ-GS24NA | 1, 2 |
| FC -6 | Community Gym, Reading Room | Wall Mounted | ACCU -6 | | 775 | | | 39 | 2.5 | 30 | | | 32 | 208 | 1 | 1 | 35 | 48 1/16 | 14 3/8 | 11 5/8 | 46 | Mitsubishi | PKA-A30KA8 | 1, 2, 3 |
| FC - 7 | Offices, Hot Room | Wall Mounted | ACCU -7 | | 437 | | | 36 | 0.75 | 9 | | | 9.6 | 208 | 1 | 1 | 15 | 36 7/16 | 12 11/16 | 9 3/16 | 29 | Mitsubishi | MUZ-FS09NA | 1, 2 |
| FC - 8 | Corridors - Existing | Wall Mounted | ACCU - 8 | | 514 | | | 46 | 1.5 | 19 | | | 24 | 208 | 1 | 1 | 20 | 36 7/16 | 12 11/16 | 9 3/16 | 29 | Mitsubishi | MUZ-FS15NA | 1, 2 |
| FC – 9 | Addition - Lobby | Ceiling Mount | ACCU – 9 | | 570-880 | | | 38 | 2.5 | 30 | | | 34 | 208 | 1 | 1 | 40 | 33 1/16 | 11 3/4 | 33 1/16 | 57 | Mitsubishi | PLA-A30EA8 | 1,2,3 |
| FC – 10 | Residential Units – Living Area | Ceiling Mount | ACCU – 10 | | 325 | | | 38 | 0.75 | 9 | | | 12 | 208 | 1 | 1 | 15 | 43 3/8 | 7 5/16 | 14 3/16 | 34 | Mitsubishi | MLZ-KP09NA2 | 1,3,4,5,6 |
| FC – 11 | Residential Units – Living Area | Ceiling Mount | ACCU - 11 | | 350 | | | 40 | 0.5 | 6 | | | 7.2 | 208 | 1 | 1 | 15 | 43 3/8 | 7 5/16 | 14 3/16 | 34 | Mitsubishi | MLZ-KP12NA2 | 1,3,4,5,6 |
| FC - 12 | Corridor - Addition | Ceiling Mount | ACCU - 12 | | 530-670 | | | 35 | 2.0 | 24 | | | 28 | 208 | 1 | 1 | 27 | 50 3/8 | 9 1/16 | 26 3/4 | 31 | Mitsubishi | PCA-A24KA8 | 1,2,3 |
| FC - 13 | Mechanical & Storage Rooms | Wall Mount | Various | | 117-437 | | | 40 | 0.5 | 9 | | | 14 | 208 | 1 | 1 | 15 | 36 7/16 | 12 | 9 3/16 | 29 | Mitsubishi | MSZ-FS06NA | 1,2,3,4,5 |

NOTES:
1. Utilize Mitsubishi Touch MA Controller PAR-CT01MAU-SB, provide routing to location on mechanical drawings and associated wiring per manufacturer specifications.
2. Receive power and communication from associated ACCU on roof. Mechanical contractor to coordinate install and routing.
3. PROVIDE CONDENSATE PUMP IF REQUIRED FOR ROUTING OF CONDENSATE DRAIN TO NEAREST AVAILABLE FLOOR DRAIN, REFER TO MANUFACTURER SPECIFICATIONS.
4. INCLUDE SYSTEM CONTOL INTERFERENCE, TEMPERATURE SENSOR AND ALL CONTROLS TO ALLOW OPERATION IN MULTI-ZONE SETUP.
5. PROVIDE ALL WIRING AND PIPING NEEDED TO CONNECT TO BRANCH BOX AS SHOWN ON DRAWINGS.
6. INCLUDE GRILLE MLP-448WU AS REQUIRED.

## ELECTRIC DUCT HEATER SCHEDULE+B33:AR58B33:A33:CM62

| IDENTIFIER | MANUFACTURER | MODEL | QUANTITY | DESCRIPTION | NOTES |
|---|---|---|---|---|---|
| DH - 1 | RenewAire | EK-1212005SCCHR--21-1SV-N | 1 | Ducted electric heater | 1,2,3,4 |
| DH - 2 | RenewAire | EK-XXXX010SCCHL--21-1S-N | 1 | Ducted electric heater | 1,2,3,5 |

NOTES:
1. Voltage for heater is 208/230/1/60, coordinate with electrical contractor.
2. Provide duct thermostat sensor kit for SCR control. Install per manufacturer specifications for location and wiring. Duct temperature sensor to be in supply side of duct work.
3. Interlock duct heater with fan proof from ERV, do not run duct heater without supply fan running.
4. Protect heater and heater control panel from elements, Refer to mechanical details.
5. Match duct size on drawing to duct heater size to fit properly in duct layout, model number with xxxx designates duct work dimensions.

## OUTDOOR HEAT PUMP UNIT SCHEDULE

| IDENTIFIER | TYPE | LOCATION | SERVICE | COOLING | | HEATING | | Refrigerant Type | ELECTRICAL DATA | | | DIMENSIONS (IN.) | | | WEIGHT (LBS) | BASIS OF DESIGN | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TOTAL MBH | EER | TOTAL MBH | COP @ 47° F | | MOCP | RLA | VOLTS/PH/HZ | H | W | D | | MFGR. | MODEL | |
| ACCU -1 | Heat Pump Air Cooled Condenser | Roof | FC -1 | 9 | 13 | 12 | 4.03 | R410A | 24 | 13 | 208/230/1/60 | 34 5/8 | 38 9/16 | 13 | 129 | Mitsubishi | SUZ-KA09NAHZ | 1, 2, 3, 4 |
| ACCU -2 | Heat Pump Air Cooled Condenser | Roof | FC -2 | 12 | 13 | 15 | 3.90 | R410A | 24 | 13 | 208/230/1/60 | 34 5/8 | 38 9/16 | 13 | 129 | Mitsubishi | SUZ-KA12NAHZ | 1, 2, 3, 4 |
| ACCU -3 | Heat Pump Air Cooled Condenser | Roof | FC -3 | 15 | 12.5 | 18 | 2.70 | R410A | 31 | 16 | 208/230/1/60 | 34 5/8 | 38 9/16 | 13 | 131 | Mitsubishi | SUZ-KA15NAHZ | 1, 2, 3, 4 |
| ACCU -4 | Heat Pump Air Cooled Condenser | Roof | FC -4 | 18 | 13.1 | 21.6 | 3.40 | R410A | 31 | 16 | 208/230/1/60 | 34 5/8 | 38 9/16 | 13 | 131 | Mitsubishi | SUZ-KA18NAHZ | 1, 2, 3, 4 |
| ACCU -5 | Heat Pump Air Cooled Condenser | Roof | FC -5 | 22.4 | 12.6 | 21.2 | 4.03 | R410A | 20 | 13.6 | 208/230/1/60 | 34 5/8 | 33 1/16 | 13 | 120 | Mitsubishi | MUZ-GS24NAHZ | 1,2, 3, 4 |
| ACCU -6 | Heat Pump Air Cooled Condenser | Roof | FC -6 | 30 | 12.8 | 32 | 3.38 | R410A | 40 | 18 | 208/230/1/60 | 52 11/16 | 41 5/16 | 14 3/16 | 261 | Mitsubishi | PUZ-HA30NKA | 1,2, 3, 4 |
| ACCU -7 | Heat Pump Air Cooled Condenser | Roof | FC -7 | 09 | 16 | 9.6 | 4.54 | R410A | 15 | 10 | 208/230/1/60 | 21 5/8 | 31 1/2 | 11 1/4 | 82 | Mitsubishi | MUZ-FS09NA | 1,2, 3, 4 |
| ACCU - 8 | Heat Pump Air Cooled Condenser | Roof | FC - 8 | 15 | 14 | 16 | 4.06 | R410A | 20 | 17 | 208/230/1/60 | 34 5/8 | 33 1/16 | 13 | 117 | Mitsubishi | MUZ-FS15NA | 1,2, 3, 4 |
| ACCU – 9 | Heat Pump Air Cooled Condenser | Roof | FC – 9 | 30 | 14.1 | 24 | 4.1 | R410A | 40 | 18 | 208/230/1/60 | 52 43/64 | 41 11/32 | 12 63/64 | 261 | Mitsubishi | PUZ-HA30NKA | 1, 2, 4, 5 |
| ACCU – 10 | Heat Pump Air Cooled Condenser | Roof | FC – 10 | 9 | 12.5 | 14 | 4.1 | R410A | 24 | 10 | 208/230/1/60 | 34 5/8 | 38 1/16 | 13 | 129 | Mitsubishi | SUZ-KA09NAHZ | 1, 2, 4, 5 |
| ACCU - 11 | Heat Pump Air Cooled Condenser | Roof | FC – 11 | 12 | 12.7 | 18 | 3.8 | R410A | 24 | 10 | 208/230/1/60 | 34 5/8 | 33 1/16 | 13 | 129 | Mitsubishi | SUZ-KA12NAHZ | 1, 2, 4, 5 |
| ACCU - 12 | Heat Pump Air Cooled Condenser | Roof | FC – 12 | 24 | 12.5 | 28 | 3.71 | R410A | 27 | 9 | 208/230/1/60 | 37 1/8 | 37 13/32 | 13 | 190 | Mitsubishi | PUZ-HA24NHA1-R1 | 1, 2, 4, 5 |
| ACCU – 13 | Heat Pump Air Cooled Condenser | Roof | FC - 13 | 9 | 19 | 14 | 4.68 | R410A | 15 | 9.2 | 208/230/1/60 | 21 5/8 | 31 1/2 | 11 1/4 | 82 | Mitsubishi | MUZ-FS06NA | 1, 2, 4, 5 |
| ACCU -14 | Heat Pump Air Cooled Condenser | Roof | FC - 13 | 36 | 15 | 42 | 4.0 | R410A | 86 | | 208/230/1/60 | 52 11/16 | 41 11/32 | 13 | 278 | Mitsubishi | MXZ-SM36NAMHZ2 | 1, 2, 4, 5. 6 |

NOTES:
1. 12 IN CONDENSER STAND TO BE SUPPLIED QSMS1201M
2. UTILIZE MICROPARTICULATE FILTER PM2.5 (part number MAC-EMF615FT-E)
3. INSTALL 2-PIECE WIND BAFFLE WB-PA3
4. PROVIDE ALL NECESSARY LINE SETS AT CORRECT SIZE TO CONNECT TO INDOOR UNIT.
5. INSTALL WIND BAFFLE LOW AMBIENT KIT
6. PIPE TO BRANCH BOX (BB-1) PART NUMBER PAC-MKA52BC. SUPPORT BRANCH BOX VIA ALL THREAD AND MOUNTING APPROVED BY STRUCTURAL. POWER FOR BRANCH BOX FROM OUTDOOR UNIT, REFER TO MANUFACTURER SPECIFICATIONS FOR WIRING, PIPING PRACTICES AND MOUNTING.

## DIFFUSER AND GRILLE SCHEDULE

| IDENTIFIER | TYPE | SYSTEM | LOCATION | FRAME | DAMPER | MAX NC | MANUF | MODEL # | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| TG -1 | Wall mounted transfer grill | Wall Transfer Return | Apartments | | N | | Price | 520Z | Baked White Enamel, 2, 3 |
| SG -1 | Soffit supply air register | Supply Air | Various | | Y | | Price | 540 Series | White Finish, 2, 3, |
| SG -2 | Ceiling supply air 24x24 face | Supply Air | Various | | Y | | Price | ASCD | Baked White Enamel,1, 2, 3 |
| SG -3 | Supply air register | Supply Air | Community Space | | Y | | Price | 99-L-A-B12 | 2, 3 |
| RG -1 | Filter housed return grille | Return Air | Apartments | | N | | Price | 535FF-HL | White B12, 2, 3, 4, 8 |
| RG -2 | Ceiling return air 24x24 face | Return Air | Various | | N | | Price | PDDR Series | White finish, 2, 3, |
| RG -3 | Return air register | Return Air | Community Space | | N | | Price | 97--L-A-B12 | 2, 3 |
| RG-4 | Exhaust return grille | Return Air | Apartments | | N | | Price | 530-535 | White B12, 2, 3, 4 |
| R-1 | Intake & Exhaust Register | OA & Exhaust | Exterior | | Y | | Primex | WCX | 2, 3, 5, 6 |
| L-1 | Intake & Exhaust Register | OA & Exhaust | Exterior | | N | | Louver & Damper | ACL Series | 2, 3, 5, 7 |

1. FRONT BLADES PARALLEL TO SHORT DIMENSION
2. COORDINATE INSTALL LOCATION WITH ARCHITECTUAL PLANS. FOR LAYIN DIFFUSERS COORDINATE WITH REFLECTED CEILING PLAN FOR PROPER MOUNTING.
3. COORDINATE NECK SIZE WITH MECHANICAL DRAWING DUCT SIZING.
4. SURFACE MOUNTING (SM) FOR SOFFIT OR CEILING INSTALLATION
5. PAINT TO MATCH EXTERIOR BRICK
6. IF USED AS INTAKE REMOVE DAMPER
7. INTERGRATE BIRD SCREEN OPTION FROM MANUFACTURER
8. WHEN LOCATED IN KITCHEN PROVIDE MERV3 1 IN FILTER TO FIT. SIZE TO BE 10IN X 10IN IN KITCHEN AREA AND LOCATED WITH 6FT FROM HOOD SYSTEM.

## ELECTRIC UNIT HEATER SCHEDULE

| Tag | Location | Type | CFM | Power | Voltage | Phase | Mounting Height | Length | Width | Height | Weight (lbs) | Manufacturer | Model | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ECUH -1 | Addition Stairwells | Wall Mounted | 500 | 6.0 KW | 208 V | 1 | 6" ABOVE FF | 45 " | 9 3/4 " | 26 3/8 " | 160 | Qmark | CU945 | CU945-06-20-1-B-F-2B-2-C-S-S-P-K-O-W, 1, 2 |
| ECUH - 2 | NOT USED | | | | | | | | | | | | | |
| ECUH -3 | Vestibules - West B & East A | Wall Mounted | 250 | 6.0KW | 208 V | 1 | 6" ABOVE FF | 35 " | 9 3/4 " | 26 3/8 " | 120 | Qmark | CU935 | CU935-06-20-1-B-F-2B-2-C-S-S-P-K-O-W 1, 2 |
| ECUH -4 | East Vestibule B, Unoccupied rooms 280 & 380 | Wall Mounted | 250 | 7.0KW | 208 V | 1 | 6" ABOVE FF | 35 " | 9 3/4 " | 26 3/8 " | 120 | Qmark | CU935 | CU935-07-20-1-B-F-2B-2-C-S-S-P-K-O-W 1, 2 |
| ECUH -5 | Existing room 281 & Addition Entrance | Wall Mounted | 250 | 3.0 KW | 208 V | 1 | 6" ABOVE FF | 35 " | 9 3/4 " | 26 3/8 " | 120 | Qmark | CU935 | CU935-03-20-1-B-F-2B-2-C-S-S-P-K-O-W 1, 2 |
| CCU-1 | West Vestibule A - 120 | Ceiling Mounted | 3903 | 20 KW | 208 V | 1 | Ceiling Height | 20 1/4" | 75" | 16 ¾" | 364 | Powered Aire | CHD-E-2-72 | 3, 4, 5, 6 |

1.

1. SURFACE MOUNT ELECTRIC CABINET HEATERS TO BLOCK OR BRICK WALL WITH PROPER CLEARANCE PER MANUFACTURER SPECIFIACTIONS.
2. INTERNAL MOUNTED THERMOSTAT, VERIFY FIELD DETTING TO 60 DEGREES.
3. SUPPLY 24V LINE THERMOSTAT WITH LOCKABLE COVER
4. SUPPORT VIA MANUFACTUER SPECIFICATIONS, SUBMIT MOUNTING AND SUPPORT STRATEGY TO STRUCTUREAL ENGINEER PRIOR TO INSTALLATION FOR APPROVAL.
5. WHITE IN COLOR.
6. COORDINATE WITH ARCHITECT AND FINISH CONTRACTOR OPENING NEEDED IN CEILING TO PROVIDE PROPER REVEAL.


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REGISTRATION SEAL

STATE OF MICHIGAN
STEPHEN M. HENNARD
ENGINEER
NO. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

MECHANICAL SCHEDULES

SCALE: AS NOTED

| ISSUED FOR | DATE |
|---|---|
| PERMIT | 10.20.24 |
| △BULLETIN 1 | 2.19.25 |

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## VENTILATION AIR COMPLIANCE SCHEDULE

| Room Name | Apartment/Room Notation | Occupancy Classification | Floor Area (SF) | Quantity | Code Occupent Density / 1000SF | Calculated Occupancy | Number of Plumbing Fixtures | TABLE 403.3 2015 Michigan Mech Code & ASHRE 62.2 Requirements | | | | | | Design Air Balance | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Outdoor Air | | | Calculated Min outdoor air required (cfm) | Zone Air Dist. Eff. | Calculated Min Exhaust Air (cfm) | Minimum room supply air (cfm) | Minimum exhaust air (cfm) | Minimum unit %OA | Outdoor ventilation air (cfm) delivered to space | Supply Air Units |
| | | | | | | | | CFM / SF | CFM / PERSON | CFM / FIXTURE OF SF | | | | | | | | |
| One (1) bedroom apartment | H | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 462 | 1 | | 2 | | | 15 | | 38 | 0.8 | 0 | see plan | 50 | | 50 | FC 1 |
| One (1) bedroom apartment | G | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 469 | 1 | | 2 | | | 15 | | 38 | 0.8 | 0 | see plan | 50 | | 50 | FC 1 |
| One (1) bedroom apartment | F | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 682 | 1 | | 2 | | | 15 | | 56 | 0.8 | 0 | see plan | 50 | | 60 | FC 3 |
| One (1) bedroom apartment | M | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 678 | 1 | | 2 | | | 15 | | 56 | 0.8 | 0 | see plan | 50 | | 60 | FC 3 |
| One (1) bedroom apartment | C | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 484 | 1 | | 2 | | | 15 | | 38 | 0.8 | 0 | see plan | 50 | | 50 | FC 1 |
| One (1) bedroom apartment | D | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 487 | 1 | | 2 | | | 15 | | 38 | 0.8 | 0 | see plan | 50 | | 50 | FC 1 |
| One (1) bedroom apartment | E | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 500 | 1 | | 2 | | | 15 | | 38 | 0.8 | 0 | see plan | 50 | | 50 | FC 2 |
| One (1) bedroom apartment | B | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 607 | 1 | | 2 | | | 15 | | 56 | 0.8 | 0 | see plan | 50 | | 60 | FC 3 |
| One (1) bedroom apartment | A | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 800 | 1 | | 2 | | | 15 | | 56 | 0.8 | 0 | see plan | 50 | | 60 | FC 4 |
| One (1) bedroom apartment | J | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 495 | 1 | | 2 | | | 15 | | 38 | 0.8 | 0 | see plan | 50 | | 50 | FC 1 |
| One (1) bedroom apartment | K | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 513 | 1 | | 2 | | | 15 | | 38 | 0.8 | 0 | see plan | 50 | | 50 | FC 1 |
| One (1) bedroom apartment | L | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 714 | 1 | | 2 | | | 15 | | 56 | 0.8 | 0 | see plan | 50 | | 60 | FC 3 |
| One (1) bedroom apartment | X | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 660 | 1 | | 2 | | | 15 | | 56 | 0.8 | 0 | see plan | 50 | | 60 | FC 3 |
| One (1) bedroom apartment | W | Private Dwelling - 1 bedroom, 1 bathroom, living areas | 713 | 1 | | 2 | | | 15 | | 56 | 0.8 | 0 | see plan | 50 | | 60 | FC 3 |
| Two (2) bedroom apartment | N, O | Private Dwelling - 2 bedroom, 1 bathroom, living areas | 812 | 1 | | 3 | | | 15 | | 56 | 0.8 | 0 | see plan | 50 | | 60 | FC 4 |
| Two (2) bedroom apartment | Y | Private Dwelling - 2 bedroom, 1 bathroom, living areas | 876 | 1 | | 3 | | | 15 | | 56 | 0.8 | 0 | see plan | 50 | | 60 | FC 4 |
| Two (2) bedroom apartment | Z | Private Dwelling - 2 bedroom, 1 bathroom, living areas | 795 | 1 | | 3 | | | 15 | | 56 | 0.8 | 0 | see plan | 50 | | 60 | FC 4 |
| | | | | | | | | | | | | | | | | | | |
| Prep room | 141 | Breakroom | 487 | 1 | 25 | 13 | 1 | 0.06 | 5 | | 110 | 0.8 | | 701 | | | 100 | FC 5 |
| Laundry/Storage | 131 / 131A | Laundry | 628 | 1 | 20 | 13 | 1 | 0.06 | 7.5 | | 160 | | | 529 | 150 | | 150 | FC 3 |
| Hot Room | 133 | Storage | 178 | 1 | | | | 0.06 | | | | | | 437 | | | 50 | FC 7 |
| Reading Game Room | 132 | Breakroom | 1096 | 1 | 25 | 28 | | 0.06 | 5 | | 241 | | | 775 | 175 | | 250 | FC 6 |
| Community Space | 140 | Conference/meeting | 2377 | 1 | 50 | 119 | | 0.06 | 5 | | 886 | | | 1550 | | 100 | 900 | ERV 3, FC 6 (2) |
| Office | 130 | Office | 212 | 1 | 5 | 1 | | 0.06 | 5 | | 19 | | | 437 | | | 50 | FC 7 |
| Electrical Room | 150 | Electrical Room | 121 | 1 | | 0 | | | | | | | | | | | | FC 3 |
| Mechanical Room | 151 | Storage | 414 | 1 | | 0 | | | | | | | | | | | | FC 3 |
| Restroom | 142, 143 | Toilet | 78 | 1 | | 0 | 1 | | | 70 | | | 70 | 0 | | | | |
| Cooridor | 101 | Cooridor | 187 | 1 | | | | 0.06 | | | 11 | 0.8 | 0 | 257 | | | 25 | FC 8 |
| Cooridor | 102 | Cooridor | 109 | 1 | | | | 0.06 | | | 7 | 0.8 | 0 | 257 | | | 0 | FC 8 |
| Cooridor | 103 | Cooridor | 702 | 1 | | | | 0.06 | | | 42 | 0.8 | 0 | 514 | | | 150 | FC 8 |
| Cooridor | 104 | Cooridor | 935 | 1 | | | | 0.06 | | | 56 | 0.8 | 0 | 514 | | | 110 | FC 8 |
| Cooridor | 105 | Cooridor | 264 | 1 | | | | 0.06 | | | 16 | 0.8 | 0 | 514 | | | 40 | FC 8 |
| Cooridor | 106 | Cooridor | 270 | 1 | | | | 0.06 | | | 16 | 0.8 | 0 | 514 | | | 50 | FC 8 |
| Cooridor | 107 | Cooridor | 632 | 1 | | | | 0.06 | | | 38 | 0.8 | 0 | 514 | | | 100 | FC 8 |
| Cooridor | 108 | Cooridor | 532 | 1 | | | | 0.06 | | | 32 | 0.8 | 0 | 514 | | | 50 | FC 8 |
| Cooridor | 109 | Cooridor | 112 | 1 | | | | 0.06 | | | 7 | 0.8 | 0 | 257 | | | 50 | FC 8 |
| Cooridor | 110 | Cooridor | 88 | 1 | | | | 0.06 | | | 5 | 0.8 | 0 | 257 | | | 50 | FC 8 |
| Library | 202 | Office | 274 | 1 | 5 | 2 | | 0.06 | 5 | | 29 | | | 160 | | 16 | 40 | FC 3 |
| Cooridor - 2nd floor | 201 | Cooridor | 528 | 1 | | | | 0.06 | | | 32 | 0.8 | 0 | 260 | | 18 | 60 | FC 3 |
| | | | | | | | | | | | | | | | | | | |
| **Addition - First Floor** | | | | | | | | | | | | | | | | | | |
| One (1) bedroom apartment | 1B Unit A & C | Private Dwelling - 1 bedroom, 1 bathroom, living areas | | 19 | | 2 | | | 15 | | 38 | 0.8 | 0 | See plan | 45 | | 38 | FC 10 & FC 11 |
| Two (2) bedroom apartment | 2B Unit A,B & C | Private Dwelling - 2 bedroom, 1 bathroom, living areas | | 2 | | 3 | | | 15 | | 56 | 0.8 | 0 | See plan | 45 | | 56 | FC 10 & FC 11 |
| Floor 1 - Cooridor | Various | Cooridor | 3156 | 1 | | | | 0.06 | | | 189 | 0.8 | 0 | 900 | | | 190 | DOAS -1 |
| Electrical Room - North | 105 | Electrical room | | 1 | | | | | | | | | | | | | | FC 13 |
| Electrical Room - South | 113 | Electrical room | | 1 | | | | | | | | | | | | | | FC 13 |
| Storage room | 109 | Storage | | 1 | | | | | | | | | | | | | | FC 13 |
| S Mechanical Room | 115 | Mechanical room | | 1 | | | | | | | | | | | | | | FC 13 |
| Janitor Closet | 108 | Storage | | 1 | | | | | | | | 0.8 | 0 | 40 | | | | FC 13 |
| Connection Lobby | 103 | Lobby | 1040 | 1 | 10 | 11 | | 0.06 | 7.5 | | 166 | | | 1040 | | 18 | 175 | DOAS -1 |
| | | **Total For Floor 1** | | | | | | | | | **1180** | | | | **945** | | | |
| **Addition - Second Floor** | | | | | | | | | | | | | | | | | | |
| One (1) bedroom apartment | 1B Unit A & C | Private Dwelling - 1 bedroom, 1 bathroom, living areas | | 18 | | 2 | | | 15 | | 38 | 0.8 | 0 | See plan | 45 | | 38 | FC 10 & FC 11 |
| Two (2) bedroom apartment | 2B Unit A,B & C | Private Dwelling - 2 bedroom, 1 bathroom, living areas | | 3 | | 3 | | | 15 | | 56 | 0.8 | 0 | See plan | 45 | | 56 | FC 10 & FC 11 |
| Floor 2 - Cooridor | Various | Cooridor | 2610 | 1 | | 0 | | 0.06 | | | 157 | 0.8 | 0 | 900 | | | 160 | DOAS -1 |
| N Storage Room | 203 | Storage | | 1 | | 0 | | | | | | | | | | | | FC 13 |
| S Storage Room | 208 | Storage | | 1 | | 0 | | | | | | | | | | | | FC 13 |
| S Mechanical Room | 211 | Mechanical room | | 1 | | 0 | | | | | | | | | | | | FC 13 |
| Janitor Closet | 207 | Storage | | 1 | | 0 | | | | | | 0.8 | 0 | 40 | | | | FC 13 |
| | | **Total For Floor 2** | | | | | | | | | **1000** | | | | **945** | | | |

## VIBRATION ISOLATOR APPLICATION SCHEDULE

| EQUIPMENT TYPE | EQUIPMENT CATEGORY | HORESPOWER AND OTHER | RPM | EQUIPMENT LOCATION | | | | | | KEYED NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | SLAB ON GRADE | | | UP TO 40 FT (12M) FLOOR SPAN | | | |
| | | | | BASE TYPE | ISOLATOR TYPE | MIN. DEFL., IN. (MM) | BASE TYPE | ISOLATOR TYPE | MIN. DEFL., IN. (MM) | |
| SUSPEND HEAT PUMPS, FAN COILS, LOCATED INDOORS | ALL | ALL | ALL | | | | A OR B | 8a or 8b | 1.50 (38) | NOTES 1, 3, 4 |
| BASE MOUNTED CONDENSING UNITS | ALL<br>ALL | ≤1HP<br>>1HP | ALL<br>ALL | A OR B<br>A OR B | 2<br>2 | 0.25 (6)<br>0.25 (6) | A OR B<br>A OR B | 2<br>4 | .25 (64)<br>2.50 (64) | NOTES 3 |
| SUSPEND DUCTED ROTATING EQUIP. | SMALL FANS, FAN-POWERED BOXES | ≤600 CFM<br>>600 CFM | ALL<br>ALL | | | | A<br>A | 8a or 8b<br>8a or 8b | 0.50 (13)<br>0.75 (19) | NOTES 3, 4 |

NOTES:

1. THRUST RESTRAINTS: PROVIDE THRUST RESTRAINTS BETWEEN FAN DISCHARGE AND DUCT (IN PAIRS, LOCATED ON THE CENTER LINE OF THE DISCHARGE OUTLET OF THE FAN, BRIDGING THE FLEXIBLE DUCT CONNECTOR) FOR ALL FAN HEADS, FOR AXIAL AND CENTRIFUGAL FANS UNITS OPERATING AT 2 INCHES OR GREATER TOTAL STATIC PRESSURE AND AS SHOWN ON DRAWINGS. SPRING DEFLECTION SHALL BE SAME AS THE SUPPORT ISOLATORS.
2. PIPING RISER ISOLATION: PROVIDE PIPE RISER RESILIENT ANCHORS, SPRING MOUNTS AND RESILIENT PIPE GUIDES CAPABLE OF DISTRIBUTING THE LOADS WITHIN THE BUILDING DESIGN LIMITS AT THE SUPPORT POINTS.
3. HORIZONTAL PIPING VIBRATION ISOLATION: PROVIDE TYPE 8a OR 8b SPRING HANGERS FOR PIPING CONNECTED TO VIBRATION ISOLATED EQUIPMENT FOR ALL PIPING IN MECHANICAL ROOMS OR THE FOLLOWING MINIMUM HORIZONTAL DISTANCES FROM THE ISOLATED EQUIPMENT: UP TO 6" - 50 FEET (1 1/2" MINIMUM DEFLECTION). 8" AND LARGER - 100 FEET (2 1/2" MINIMUM DEFLECTION), WHICHEVER IS GREATER, AND AS SHOWN ON DRAWINGS. THE FIRST 4 HANGERS FROM THE ISOLATED EQUIPMENT SHALL BE TYPE 8b.
4. DUCTWORK VIBRATION ISOLATION: PROVIDE TYPE 8a OR 8b SPRING HANGERS FOR DUCTWORK WITH A CROSS SECTION OF 2 SQUARE FEET OR GREATER CONNECTED TO AIR HANDLING UNITS, RETURN OR RELIEF FANS, AND VIBRATION ISOLATED EQUIPMENT, WHICHEVER IS GREATER, AND AS SHOWN ON DRAWINGS (3/4" MINIMUM DEFLECTION)

BASE TYPES:

BASE TYPE A - NO BASE, ISOLATORS ATTACHED DIRECTLY TO EQUIPMENT
BASE TYPE B - STRUCTURAL, STEEL RAILS OR BASE
BASE TYPE C - CONCRETE INERTIA BASE
BASE TYPE D - CURB - MOUNTED ALUMINUM BASE WITH 1" DEFL. SPRING ISOLATORS
BASE TYPE E - CURB - MOUNTED STEEL BASE WITH ADJUSTABLE 1", 2" OR 3" DEFL. SPRING ISOLATORS

ISOLATOR TYPES:

ISOLATOR TYPE 1a - ELASTOMERIC ISOLATION PAD
ISOLATOR TYPE 1b - ELASTOMERIC ISOLATION PAD WITH STEEL LOAD BEARING PLATE
ISOLATOR TYPE 2 - ELASTOMERIC FLOOR ISOLATOR
ISOLATOR TYPE 3 - FREE STANDING SPRING FLOOR ISOLATOR
ISOLATOR TYPE 4 - RESTRAINED SPRING ISOLATOR
ISOLATOR TYPE 5 - THRUST RESTRAINT
ISOLATOR TYPE 6 - AIR SPRING
ISOLATOR TYPE 7 - ELASTORMERIC HANGERS
ISOLATOR TYPE 8a - SPRING HANGERS
ISOLATOR TYPE 8b - SPRING HANGERS WITH VERTICAL - LIMIT STOP

## DUCT SYSTEM INSULATION APPLICATION SCHEDULE

| | INSULATION MATERIAL & THICKNESS (INCHES) | | | | | | | FIELD APPLIED JACKET MATERIAL | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | FIBERGLASS BLANKET .75 LB/CU FT. | FIBERGLASS BLANKET 1.0 LB/CU FT. | FIBERGLASS BOARD 2.25 LB/CU FT. | FIBERGLASS BOARD 6.0 LB/CU FT. | FLEXIBLE ELASTOMERIC | ASTM E2336 2-HOUR FIRE RATED BLANKET | 2-HOUR FIRE RATED BLANKET | ALUMINUM | SELF-ADHESIVE (FOR OUTDOOR APPLICATIONS) | KEYED NOTES |
| **DUCT SYSTEMS LOCATED INDOORS** | | | | | | | | | | |
| SUPPLY AIR, EXCEPT AS NOTED BELOW | | 1.5 | | | | | | | | a |
| RECTANGULAR SUPPLY AIR IN MECHANICAL ROOMS | | | 1.5 | | | | | | | |
| OUTSIDE AIR AND MIXED AIR, EXCEPT AS NOTED BELOW | | 1.5 | | | | | | | | |

GENERAL NOTES:
1. THE FOLLOWING PLENUMS, DUCTS AND DUCT ACCESSORIES NOT REQUIRING INSULATION

a. DOUBLE WALL METAL DUCTS WITH SUFFICIENT INSULATION TO MEET ASHRAE 62.2
b. EXPOSED SUPPLY DUCT IN CONDITIONED SPACE SERVED BY THAT SYSTEM
c. FACTORY-INSULATED FLEXIBLE DUCTS
d. FLEXIBLE CONNECTORS
e. VIBRATION - CONTROL DEVICES
f. FACTORY - INSULATED ACCESS PANELS AND DOORS.


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REGISTRATION SEAL

STATE OF MICHIGAN
STEPHEN M. HENNARD
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LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE
MECHANICAL VENTILATION SCHEDULE

SCALE: AS NOTED

| ISSUED FOR | DATE |
|---|---|
| PERMIT | 10.20.24 |
| △BULLETIN 1 | 2.19.25 |

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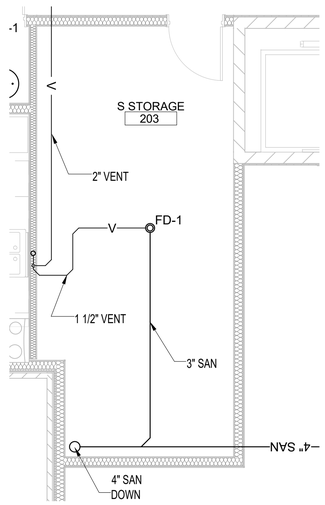
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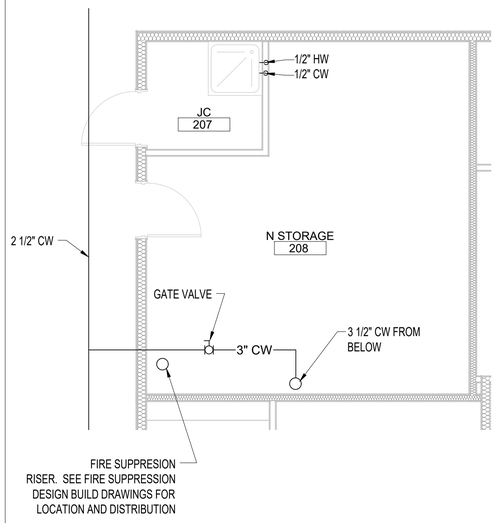
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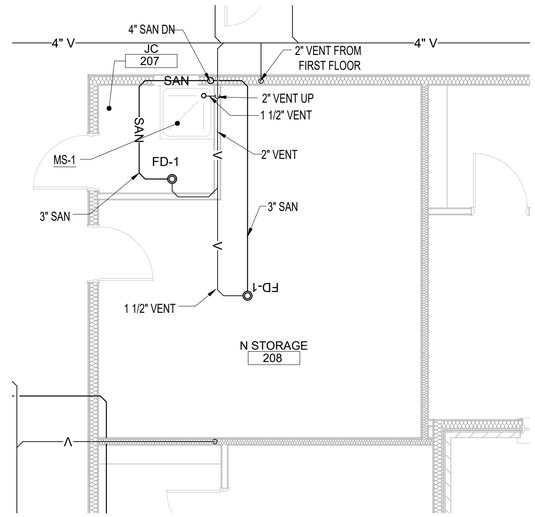
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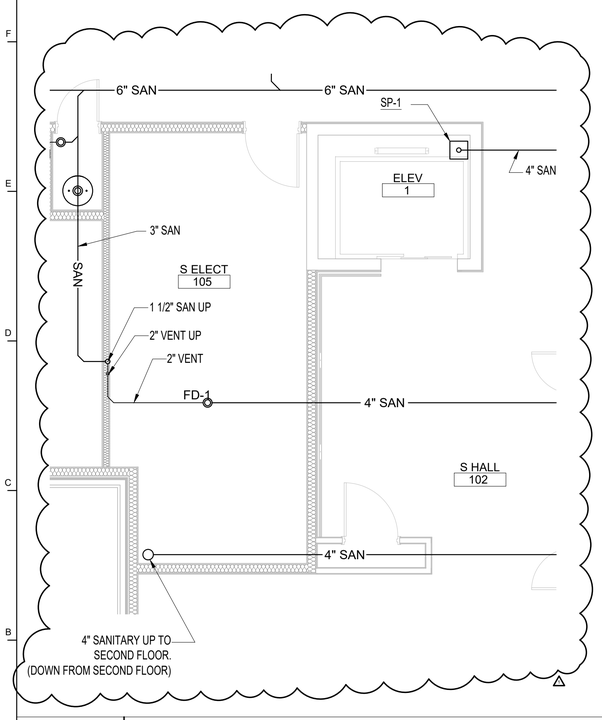

| G1 | ENLARGED PLUMBING PLANS |
|---|---|
| P-405 | 1/4" = 1'-0" |



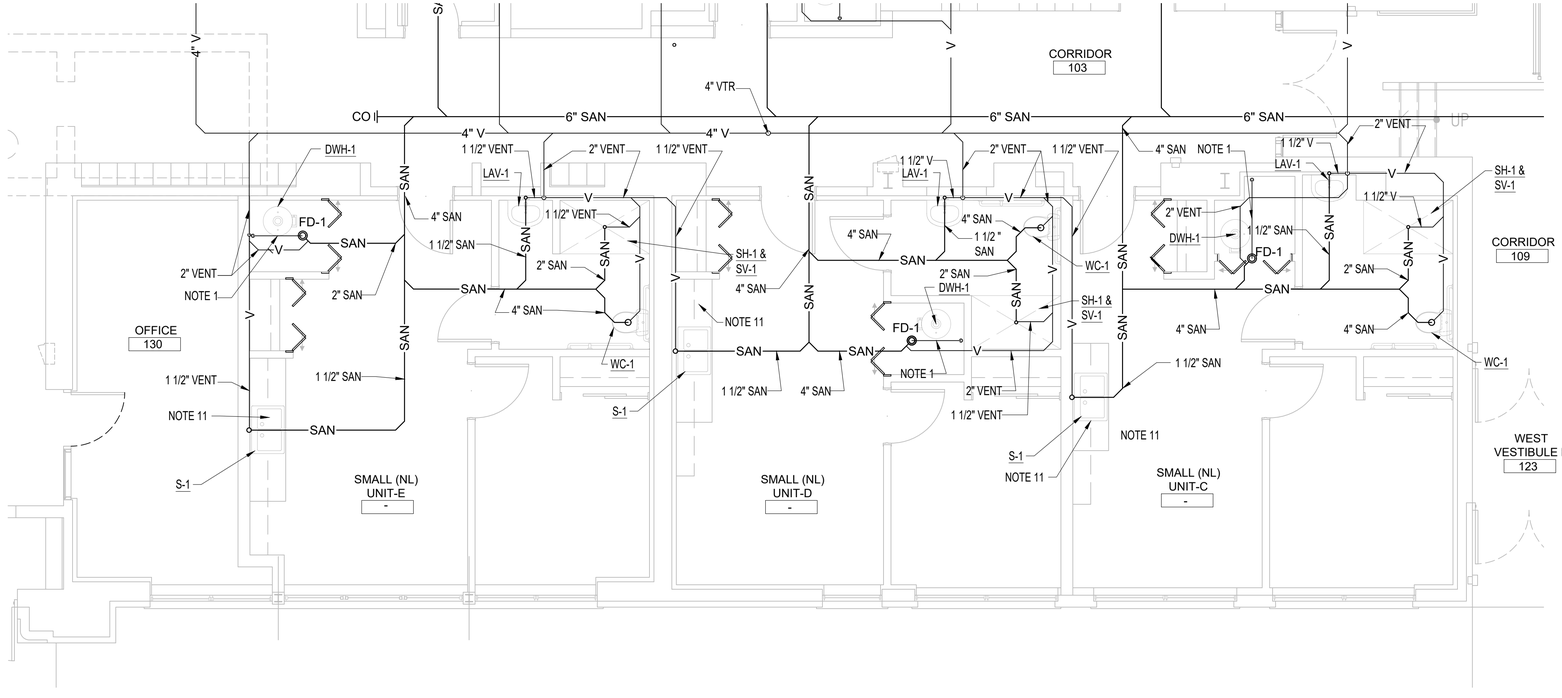

| G4 | ENLARGED PLUMBING PLANS |
|---|---|
| P-405 | 1/4" = 1'-0" |




| G9 | ENLARGED PLUMBING PLANS |
|---|---|
| P-405 | 1/4" = 1'-0" |




| A1 | ENLARGED PLUMBING PLANS |
|---|---|
| P-405 | 1/4" = 1'-0" |




| A5 | ENLARGED PLUMBING PLANS |
|---|---|
| P-405 | 1/4" = 1'-0" |

GENERAL

1. SEE SHEET P-001 FOR PLUMBING NOTES

PLUMBING SHEET KEYED NOTES:

1. EXTEND CONDENSATE DRAIN TO NEAREST FLOOR DRAIN IN WATER HEATER ROOM.
2. EXISTING NATURAL GAS METER AND REGULATOR BY UTILITY COMPANY. VERIFY EXISTING REGULATOR PRESSURE AND COORDINATE TO ENSURE PROPER PRESSURE IS PROVIDE FOR SERVICE TO NATURAL GAS GENERATOR.
3. VENT UP AND DOWN
4. SANITARY UP AND DOWN AND PROVIDE VERTICAL CLEANOUT.
5. REFER TO TYPICAL APARTMENT WATER RISER DIAGRAM FOR PIPING ARRANGEMENT AND SIZES.
6. CONTRACTOR TO CONTACT MISS DIG PRIOR TO START OF ANY UNDERGROUND WORK, COORDINATE WORK WITH CIVIL PLANS.
7. HEAT PUMP HOT WATER, REFER TO MANUFACTURER DRAWINGS FOR PROPER VENTILATION REQUIREMENTS FOR DOOR CLEARANCES AND SPACE REQUIREMENTS. REFER TO PLUMBING DETAILS FOR HEAT PUMP WATER HEATER PIPING AND EQUIPMENT REQUIRED.
8. GARBAGE DISPOSAL, SEE PLUMBING SCHEDULE FOR SPECIFICATIONS AND INSTALL FOR MANUFACTURER REQUIREMENTS. TO BE CONTROLLED BY SWITCH LOCATED ABOVE COUNTER SEE ELECTRICAL.
9. ALL SANITARY LINES ARE BELOW FLOOR ELEVATION TO ALLOW FOR PROPER PITCH AND NEEDED FLOW. EXACT LOCATION OF TUNNEL AND BASEMENT ARE UNKNOWN AND SANITARY COULD BE IN BASEMENT OR TUNNEL. ROUTE IN A WAY TO MINIMIZE CORING. ALL VENTING AND WATER DISTRIBUTION ABOVE FINISH CEILING AS HIGH AS POSSIBLE WITHOUT INTERFERING WITH OTHER TRADES.
10. IF UNIT IS CONISDERED ADA SUBSTITUTE FIXTURES TO ADA TYPE. COORDINATE WITH ARCH DRAWINGS.
11. DISHWASHER - PROVIDE HOT WATER SUPPLY AND SHUT OFF FROM SINK SUPPLY. PROVIDE SANITARY TO GARBAGE DISPOSAL. COORDINATE LOCATION WITH ARCHITECTURAL.


John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
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Fax: 313-964-3233

A & A Engineering & Consulting
28962 Vista Way, South Lyon, MI 48178


REGISTRATION SEAL

STATE OF MICHIGAN
STEPHEN M. HENNARD
ENGINEER
NO. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

ENLARGED PLUMBING PLANS

SCALE: AS NOTED

| ISSUED FOR | DATE |
|---|---|
| PERMIT | 10.20.24 |
| △BULLETIN 1 | 2.19.25 |

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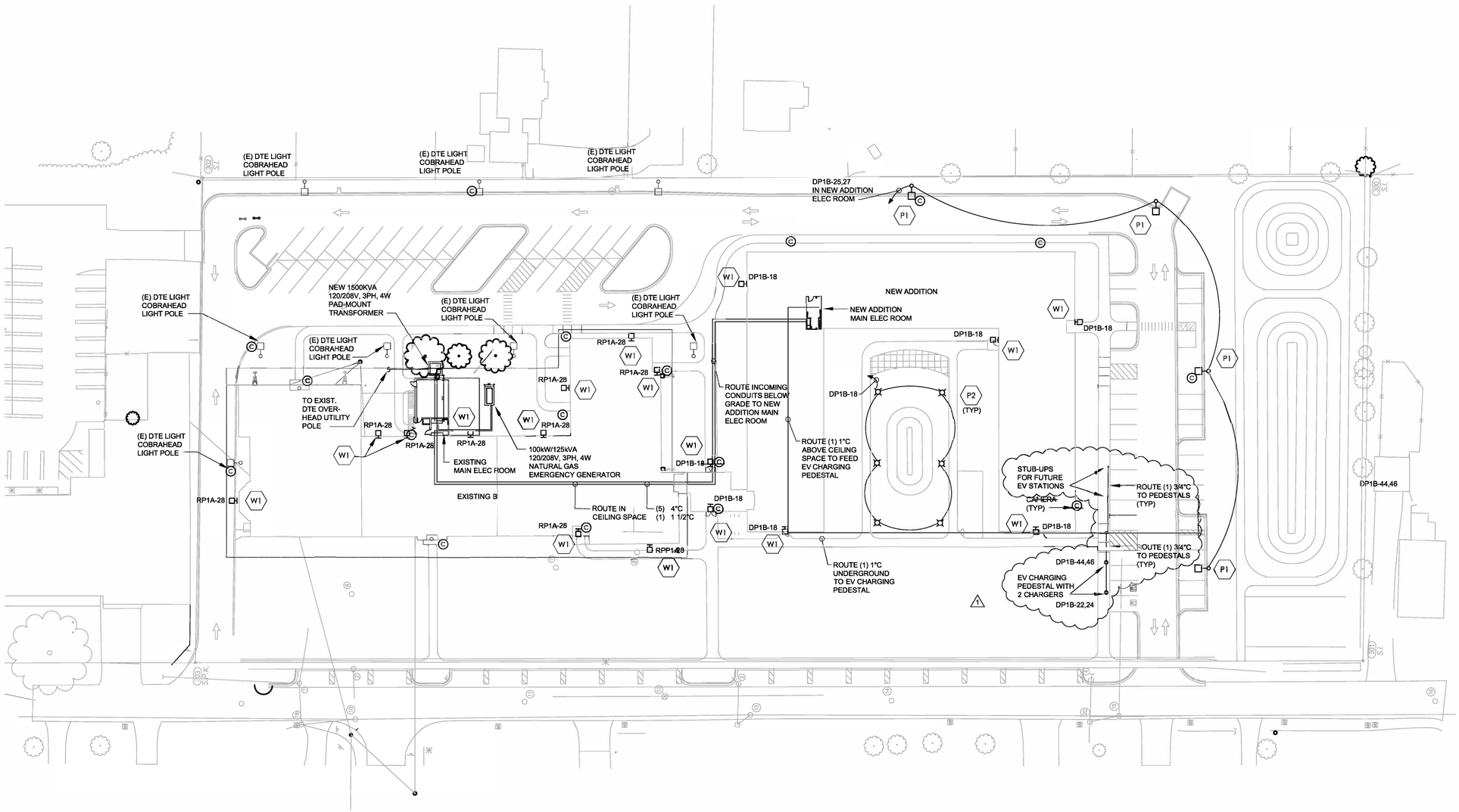
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## GENERAL NOTES

1. LAYOUT SHOWN FOR SITE UTILITIES IS FOR REFERENCE ONLY AND SHOWSDESIGN INTENT. COORDINATE ALL NEW UNDERGROUND ELECTRICAL WORK WITH NEW AND EXISTING UTILITIES ON THE SITE.
2. THE CONTRACTOR SHALL INCLUDE IN THEIR BID ALL COSTS ASSOCIATED WITH NEW UTILITY SERVICES FOR POWER, TELEPHONE, DATA, ETC. TO BE BROUGHT TO THE BUILDING.
3. UNDERGROUND SERVICE CONDUITS SHALL BE DIRECT BURIED PLASTIC CONDUIT 40 PVC OR EQUAL. PROVIDE A MINIMUM OF 48" OF COVER.
4. REFER TO CIVIL DRAWINGS FOR APPROXIMATE LOCATION OF ALL OTHER UTILITIES THAT ARE BELOW GRADE.




**1 ELECTRICAL SITE PLAN**
SCALE: 1" = 40'-0"


John Grace Arms
21030 Indian St ,Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-9000
Fax: 313-964-3233

A & A Engineering & Consulting


CITY OF _____ STAMP

CITY STAMP

DO NOT PLACE ANYTHING IN THIS AREA

REGISTRATION SEAL

STATE OF MICHIGAN
MATTHEW J. JOSEPH
PROFESSIONAL ENGINEER
No. 6201061269
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE
ELECTRICAL SITE PLAN

SCALE: AS NOTED

| ISSUED FOR | DATE |
|---|---|
| Permit s | 12.20.2024 |
| Bulletin No. 1 | 02.19.2025 |

DRAWN BY: SC
CHECKED: MT
APPROVED:
FILE NO.: 21026.00
SHEET NO.: ES-101

## 3PH PANELBOARD SB1B SCHEDULE

VOLTAGE: 208Y/120 MAINS: 1800 MCB MOUNTING: SURFACE
BUS SIZE: 2000 AMP FAULT DUTY 42k

| No. | SERVES | LOAD (KVA) LTG | RCPT | MTR | A/C | HTG | MISC | BRKR TRIP | P | PH A | B | C | P | BRKR TRIP | LOAD (KVA) MISC | HTG | A/C | MTR | RCPT | LTG | SERVES | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | 62.0 | | | X | | | | | 2.4 | 0.8 | 48.1 | 0.0 | 2.0 | 1.7 | | 2 |
| 3 | TP2B | | | | | | 62.0 | 800 | 3 | | X | | 3 | 600 | 2.4 | 0.8 | 48.1 | 0.0 | 2.0 | 1.7 | DP1B | 4 |
| 5 | | | | | | | 62.0 | | | | | X | | | 2.4 | 0.8 | 48.1 | 0.0 | 2.0 | 1.7 | | 6 |
| 7 | | | | | | | 62.0 | | | X | | | | | 0.7 | 0.0 | 0.0 | 3.0 | 0.2 | 0.3 | | 8 |
| 9 | TP1B | | | | | | 62.0 | 800 | 3 | | X | | 3 | 150 | 0.7 | 0.0 | 0.0 | 3.0 | 0.2 | 0.3 | EM1B (VIA ATS-B) | 10 |
| 11 | | | | | | | 62.0 | | | | | X | | | 0.7 | 0.0 | 0.0 | 3.0 | 0.2 | 0.3 | | 12 |
| 13 | | | | | | | | | | X | | | | | | | | | | | | 14 |
| 15 | | | | | | | | | 3 | | X | | 3 | | | | | | | | | 16 |
| 17 | | | | | | | | | | | | X | | | | | | | | | | 18 |
| | | | | | | | | | | | | | | | 381.2 | 2.4 | 144.4 | 9.0 | 6.5 | 6.0 | CONNECTED KVA 549.5 | |
| | | | | | | | | | | | | | | | 381.2 | 2.4 | 144.4 | 11.3 | 6.5 | 7.5 | DEMAND KVA 550.9 | |
| | | | | | | | | | | | | | | | | | | | | | DEMAND AMPS 1529 | |

## 3PH PANELBOARD DP1B SCHEDULE

VOLTAGE: 208Y/120 MAINS: MLO MOUNTING: SURFACE
BUS SIZE: 600 AMP FAULT DUTY 22k

| No. | SERVES | LOAD (KVA) LTG | RCPT | MTR | A/C | HTG | MISC | BRKR TRIP | P | PH A | B | C | P | BRKR TRIP | LOAD (KVA) MISC | HTG | A/C | MTR | RCPT | LTG | SERVES | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ECUH-1 - 111 | | | | 3.0 | | | 35 | 2 | X | | | 2 | 35 | | | 3.0 | | | | ECUH-1 -101 | 2 |
| 3 | | | | | 3.0 | | | | | | X | | | | | | 3.0 | | | | | 4 |
| 5 | FC-12 (VIA ACCU-12 ON ROOF) - 1FL N. | | | | 1.8 | | | 25 | 2 | | | X | 2 | 25 | | | 1.8 | | | | FC-12 (VIA ACCU-12 ON ROOF) - 1ST S. | 6 |
| 7 | CORRIDOR | | | | 1.8 | | | | | X | | | | | | | 1.8 | | | | CORRIDOR | 8 |
| 9 | FC-13 (VIA ACCU-13 ON ROOF) - 113 | | | | 1.0 | | | 15 | 2 | | X | | 2 | 20 | | | 1.6 | | | | ECUH-2 - 109 | 10 |
| 11 | | | | | 1.0 | | | | | | | X | | | | | 1.6 | | | | | 12 |
| 13 | FC-12 (VIA ACCU-12 ON ROOF) - 1FL N. | | | | 1.8 | | | 25 | 2 | X | | | 2 | 15 | | | 1.0 | | | | FC-13 (VIA ACCU-12 ON ROOF) - 105 | 14 |
| 15 | CORRIDOR | | | | 1.8 | | | | | | X | | | | | | 1.0 | | | | | 16 |
| 17 | LIGHTING - NORTH | 1.0 | | | | | | 20 | 1 | | | X | 1 | 20 | | | | | | 0.8 | EXTERIOR LIGHTING - WALL PACKS & BOLLARD | 18 |
| 19 | LIGHTING - SOUTH | 0.9 | | | | | | 20 | 1 | X | | | 1 | | | | | | | | SPARE | 20 |
| 21 | DWH-2 - 108 | | | | | 1.2 | | 20 | 2 | | X | | 2 | 40 | 3.6 | | | | | | 2-PORT EV CHARGER | 22 |
| 23 | | | | | | 1.2 | | | | | | X | | | 3.6 | | | | | | | 24 |
| 25 | EXTERIOR LIGHTING - LIGHT POLES | 0.4 | | | | | | 20 | 2 | X | | | 2 | 25 | | | 1.9 | | | | FC-9 (VIA ACCU-9 ON ROOF) - CONNECTOR | 26 |
| 27 | | 0.4 | | | | | | | | | X | | | | | | 1.9 | | | | | 28 |
| 29 | | | | | 8.8 | | | | | | | X | | | | | 21.6 | | | | | 30 |
| 31 | DOAS-1 (MOTOR/CTRL) - ROOF | | | | 8.8 | | | 80 | 3 | X | | | 3 | 225 | | | 21.6 | | | | DOAS-1 (COIL) - ROOF | 32 |
| 33 | | | | | 8.8 | | | | | | X | | | | | | 21.6 | | | | | 34 |
| 35 | RECEPTACLES - 103 | | 0.7 | | | | | 20 | 1 | | | X | 1 | 20 | | | | | | | SPARE | 36 |
| 37 | RECEPTACLES - EXTERIOR | | 1.3 | | | | | 20 | 1 | X | | | 1 | | 0.0 | 0.0 | 7.7 | 0.0 | 0.8 | 0.6 | | 38 |
| 39 | RECEPTACLES - 110,106 | | 0.7 | | | | | 20 | 1 | | X | | 3 | 250 | 0.0 | 0.0 | 7.7 | 0.0 | 0.8 | 0.6 | DP2B | 40 |
| 41 | RECEPTACLES - 108,102 | | 0.8 | | | | | 20 | 1 | | | X | | | 0.0 | 0.0 | 7.7 | 0.0 | 0.8 | 0.6 | | 42 |
| 43 | SPACE | | | | | | | | 2 | X | | | 2 | 40 | 3.6 | | | | | | 2-PORT EV CHARGER | 44 |
| 45 | | | | | | | | | | | X | | | | 3.6 | | | | | | | 46 |
| 47 | SPACE | | | | | | | | 2 | | | X | 1 | | | | | | | | SPACE | 48 |
| 49 | | | | | | | | | | X | | | 1 | | | | | | | | SPACE | 50 |
| 51 | SPACE | | | | | | | | 1 | | X | | 1 | | | | | | | | SPACE | 52 |
| 53 | SPACE | | | | | | | | 1 | | | X | 1 | | | | | | | | SPACE | 54 |
| 55 | SPACE | | | | | | | | 1 | X | | | 1 | | | | | | | | SPACE | 56 |
| 57 | SPACE | | | | | | | | 1 | | X | | 1 | | | | | | | | SPACE | 58 |
| 59 | SPACE | | | | | | | | 1 | | | X | 1 | | | | | | | | SPACE | 60 |
| | | | | | | | | | | | | | | | 14.4 | 2.4 | 148.2 | 0.0 | 5.9 | 5.1 | CONNECTED KVA 176.0 | |
| | | | | | | | | | | | | | | | 14.4 | 2.4 | 148.2 | 0.0 | 5.9 | 6.4 | DEMAND KVA 174.9 | |
| | | | | | | | | | | | | | | | | | | | | | DEMAND AMPS 485 | |

## 3PH PANELBOARD DP2B SCHEDULE

VOLTAGE: 208Y/120 MAINS: 250A MCB MOUNTING: SURFACE
BUS SIZE: 250 AMP FAULT DUTY 10k

| No. | SERVES | LOAD (KVA) LTG | RCPT | MTR | A/C | HTG | MISC | BRKR TRIP | P | PH A | B | C | P | BRKR TRIP | LOAD (KVA) MISC | HTG | A/C | MTR | RCPT | LTG | SERVES | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FC-12 (VIA ACCU-12 ON ROOF) - 2FL N. | | | | 1.8 | | | 25 | 2 | X | | | 2 | 25 | | | 1.8 | | | | FC-12 (VIA ACCU-12 ON ROOF) - 2FL S. | 2 |
| 3 | CORRIDOR | | | | 1.8 | | | | | | X | | | | | | 1.8 | | | | CORRIDOR | 4 |
| 5 | FC-13 (VIA ACCU-13 ON ROOF) - 208 | | | | 1.0 | | | 15 | 2 | | | X | 2 | 15 | | | 1.0 | | | | FC-13 (VIA ACCU-12 ON ROOF) - 203 | 6 |
| 7 | | | | | 1.0 | | | | | X | | | | | | | 1.0 | | | | | 8 |
| 9 | FC-12 (VIA ACCU-12 ON ROOF) - 211 | | | | 1.8 | | | 25 | 2 | | X | | 2 | 20 | | | | | | | SPARE | 10 |
| 11 | | | | | 1.8 | | | | | | | X | | | | | | | | | | 12 |
| 13 | SPARE | | | | | | | 20 | 2 | X | | | 2 | 20 | | | | | | | SPARE | 14 |
| 15 | | | | | | | | | | | X | | | | | | | | | | | 16 |
| 17 | SPACE | | | | | | | | 2 | | | X | 2 | | | | | | | | SPACE | 18 |
| 19 | | | | | | | | | | X | | | | | | | | | | | | 20 |
| 21 | RECEPTACLES - 203,208 | | 0.5 | | | | | 20 | 1 | | X | | 1 | 20 | | | | | 1.100 | | RECEPTACLES - ROOF | 22 |
| 23 | RECEPTACLES - NORTH | | 0.9 | | | | | 20 | 1 | | | X | 1 | 20 | | | | | 0.900 | | RECEPTACLES - SOUTH | 24 |
| 25 | LIGHTING - NORTH | 0.9 | | | | | | 20 | 1 | X | | | 1 | 20 | | | | | | 0.9 | LIGHTING - SOUTH | 26 |
| 27 | SPACE | | | | | | | | 1 | | X | | 1 | | | | | | | | SPACE | 28 |
| 29 | SPACE | | | | | | | | 1 | | | X | 1 | | | | | | | | SPACE | 30 |
| | | | | | | | | | | | | | | | 0.0 | 0.0 | 14.8 | 0.0 | 3.4 | 1.8 | CONNECTED KVA 20.0 | |
| | | | | | | | | | | | | | | | 0.0 | 0.0 | 14.8 | 0.0 | 3.4 | 2.3 | DEMAND KVA 20.5 | |
| | | | | | | | | | | | | | | | | | | | | | DEMAND AMPS 57 | |

## 3PH PANELBOARD EM1B SCHEDULE

VOLTAGE: 208Y/120 MAINS: 150A MCB MOUNTING: SURFACE REMARKS:
BUS SIZE: 225 AMP FAULT DUTY 42k

| No. | SERVES | LOAD (KVA) LTG | RCPT | MTR | A/C | HTG | MISC | BRKR TRIP | P | PH A | B | C | P | BRKR TRIP | LOAD (KVA) MISC | HTG | A/C | MTR | RCPT | LTG | SERVES | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | 3.6 | | | | | | X | | | 1 | 20 | | | | | | 0.8 | EM LIGHTS - 1ST & 2ND FLOOR | 2 |
| 3 | ELEVATOR DISC SW | | | 3.6 | | | | 40 | 3 | | X | | 1 | 20 | | | | | | 0.1 | EXIT LIGHTS - 1ST & 2ND FLOOR | 4 |
| 5 | | | | 3.6 | | | | | | | | X | 1 | 20 | | | | | | | SPARE | 6 |
| 7 | SP-1 | | | 1.7 | | | | 20 | 1 | X | | | 1 | 20 | | | | | | | SPARE | 8 |
| 9 | SPARE | | | | | | | 20 | 1 | | X | | 1 | 20 | | | | | | | SPARE | 10 |
| 11 | SPARE | | | | | | | 20 | 1 | | | X | 1 | 20 | | | | | | | SPARE | 12 |
| 13 | SPARE | | | | | | | 20 | 1 | X | | | 1 | 20 | | | | | | | SPARE | 14 |
| 15 | SPARE | | | | | | | 20 | 1 | | X | | 1 | 20 | | | | | | | SPARE | 16 |
| 17 | SPARE | | | | | | | 20 | 1 | | | X | 1 | 20 | | | | | | | SPARE | 18 |
| 19 | SPARE | | | | | | | 20 | 1 | X | | | 1 | 20 | | | | | | | SPARE | 20 |
| 21 | SPARE | | | | | | | 20 | 1 | | X | | 1 | 20 | | | | | | | SPARE | 22 |
| 23 | SPACE | | | | | | | | 1 | | | X | 1 | 20 | | | | | | | SPARE | 24 |
| 25 | SPACE | | | | | | | | 1 | X | | | 1 | 20 | | | | | | | SPARE | 26 |
| 27 | SPACE | | | | | | | | 1 | | X | | 1 | 20 | | | | | | | SPARE | 28 |
| 29 | SPACE | | | | | | | | 1 | | | X | 1 | 20 | | | | | | | SPARE | 30 |
| | | | | | | | | | | | | | | | 0.0 | 0.0 | 0.0 | 12.5 | 0.0 | 0.9 | CONNECTED KVA 13.4 | |
| | | | | | | | | | | | | | | | 0.0 | 0.0 | 0.0 | 15.6 | 0.0 | 1.1 | DEMAND KVA 16.8 | |
| | | | | | | | | | | | | | | | | | | | | | DEMAND AMPS 46 | |

**General Lighting, Small Appliance, and Laundry Loads**

| Qty | Room Type | | |
|---|---|---|---|
| 1 | All 1BR & 2BR at 14674 sqft ea x 3W/sqft | 44022 VA | 44022 |

| Qty | Load Type | | |
|---|---|---|---|
| 21 | (1) Small Appliances at 1500VA ea | 3000 VA | 63000 |
| | | **Subtotal** | **107,022 VA** |

**Appliance Load**

| Qty | Appliance Type | Load | |
|---|---|---|---|
| 21 | Dishwasher | 1200 VA | 25200 |
| 21 | Range | 10200 VA | 214200 |
| 21 | Disposal | 800 VA | 16800 |
| 21 | Hood | 300 VA | 6300 |
| 21 | Water Heater | 4600 VA | 96600 |
| | | **Subtotal** | **359,100 VA** |

**HVAC Loads**

| Qty | Appliance Type | Load | |
|---|---|---|---|
| 19 | ACCU-10 (1BR) | 2912 VA | 55328 |
| 2 | ACCU-11 (2BR) | 2912 VA | 5824 |
| | | **Subtotal** | **61,152 VA** |
| | | **Total** | **527,274 VA** |
| | | 37% Demand Factor for 21 Dwelling Units | **195,091 VA** |
| | | **Total Meter Bank Load** | **195,091 VA** |
| | | **Total Meter Bank Ampacity 120/208V, 3-Phase, 4-Wire** | **542 AMPS** |

New Addition - TP2B (2nd Floor)

**General Lighting, Small Appliance, and Laundry Loads**

| Qty | Room Type | | |
|---|---|---|---|
| 1 | All 1BR & 2BR at 14892 sqft ea x 3W/sqft | 44676 VA | 44676 |

| Qty | Load Type | | |
|---|---|---|---|
| 21 | (2) Small Appliances at 1500VA ea | 3000 VA | 63000 |
| | | **Subtotal** | **107,676 VA** |

**Appliance Load**

| Qty | Appliance Type | Load | |
|---|---|---|---|
| 21 | Dishwasher | 1200 VA | 25200 |
| 21 | Range | 10200 VA | 214200 |
| 21 | Disposal | 800 VA | 16800 |
| 21 | Hood | 300 VA | 6300 |
| 21 | Water Heater | 4600 VA | 96600 |
| | | **Subtotal** | **359,100 VA** |

**HVAC Loads**

| Qty | Appliance Type | Load | |
|---|---|---|---|
| 19 | ACCU-10 (1BR) | 2912 VA | 55328 |
| 2 | ACCU-11 (2BR) | 2912 VA | 5824 |
| | | **Subtotal** | **61,152 VA** |
| | | **Total** | **527,928 VA** |
| | | 37% Demand Factor for 21 Dwelling Units | **195,333 VA** |
| | | **Total Meter Bank Load** | **195,333 VA** |
| | | **Total Meter Bank Ampacity 120/208V, 3-Phase, 4-Wire** | **543 AMPS** |

## TYPICAL 1PH PANEL SCHEDULE (2BR/1BA)

VOLTAGE: 208Y/120 MAINS 125A MCB MOUNTING: RECESSED REMARK PROVIDE TVSS
BUS SIZE: 225 AMP FAULT DUTY: 22k

| No | SERVES | LOAD (KVA) LTG | RCPT | MTR | A/C | HTG | MISC | BRKR TRIP | P | PH A | C | P | BRKR TRIP | LOAD (KVA) MISC | HTG | A/C | MTR | RCPT | LTG | SERVES | No |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | STOVE | | 5.0 | | | | | 60 | 2 | X | | 2 | 20 | | | 1.5 | | | | ACCU-11 (ROOF) | 2 |
| 3 | | | 5.0 | | | | | | | | X | | | | | 1.5 | | | | | 4 |
| 5 | HOOD FAN | | 0.3 | | | | | 20 | 1 | X | | 2 | 30 | | 2.2 | | | | | DWH-1 (OR DWH-4) | 6 |
| 7 | REFRIGERATOR (GFCI BREAKER) | | 0.6 | | | | | 20 | 1 | | X | | | | 2.2 | | | | | | 8 |
| 9 | COUNTERTOP RECEPTACLES | | 0.4 | | | | | 20 | 1 | X | | 1 | 20 | | | | | 1.2 | | LIVING ROOM RECEPTACLES (AFCI BRKR) | 10 |
| 11 | GARBAGE DISPOSAL (GFCI BREAKER) | | 0.8 | | | | | 20 | 1 | | X | 1 | 20 | | | | | 1.4 | | BEDROOM 1 RECEPTACLES (AFCI BRKR) | 12 |
| 13 | DISHWASHER | | 1.2 | | | | | 15 | 1 | X | | 1 | 20 | | | | | 1.1 | | BEDROOM 2 RECEPTACLES (AFCI BRKR) | 14 |
| 15 | SINK GFCI | | 0.2 | | | | | 20 | 1 | | X | 1 | 20 | 0.3 | | | | | | TF-1 | 16 |
| 17 | SMOKE DETECTOR | | | | | | 0.6 | 20 | 1 | X | | 1 | 20 | 0.3 | | | | | | FIRE DAMPER | 18 |
| 19 | BIDET | | | | | | | 30 | 1 | | X | 1 | 20 | | | | | | 0.2 | LIGHTING | 20 |
| 21 | SPARE | | | | | | | 20 | 1 | X | | 1 | 20 | | | | | | | SPARE | 22 |
| 23 | SPARE | | | | | | | 20 | 1 | | X | 1 | 20 | | | | | | | SPARE | 24 |
| 25 | SPARE | | | | | | | 20 | 1 | X | | 1 | 20 | | | | | | | SPARE | 26 |
| 27 | SPACE | | | | | | | - | 1 | | X | 1 | - | | | | | | | SPACE | 28 |
| 29 | SPACE | | | | | | | - | 1 | X | | 1 | - | | | | | | | SPACE | 30 |
| | | | | | | | | | | | | | | 1.2 | 4.4 | 3.0 | 0.0 | 17.2 | 0.2 | CONNECTED KVA 26.0 | |
| | | | | | | | | | | | | | | 1.2 | 4.4 | 3.0 | 0.0 | 13.6 | 0.2 | DEMAND KVA 19.4 | |
| | | | | | | | | | | | | | | | | | | | | DEMAND AMPS 81 | |

## TYPICAL 1PH PANEL SCHEDULE (1BR/1BA)

VOLTAGE: 208Y/120 MAINS 125A MCB MOUNTING: RECESSED REMARKS: PROVIDE TVSS
BUS SIZE: 225 AMP FAULT DUTY: 22k

| No | SERVES | LOAD (KVA) LTG | RCPT | MTR | A/C | HTG | MISC | BRKR TRIP | P | PH A | C | P | BRKR TRIP | LOAD (KVA) MISC | HTG | A/C | MTR | RCPT | LTG | SERVES | No |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | STOVE | | 5.0 | | | | | 60 | 2 | X | | 2 | 20 | | | 1.5 | | | | ACCU-10 (ROOF) | 2 |
| 3 | | | 5.0 | | | | | | | | X | | | | | 1.5 | | | | | 4 |
| 5 | HOOD FAN | | 0.3 | | | | | 20 | 1 | X | | 2 | 30 | | 2.2 | | | | | DWH-1 (OR DWH-4) | 6 |
| 7 | REFRIGERATOR (GFCI BREAKER) | | 0.6 | | | | | 20 | 1 | | X | | | | 2.2 | | | | | | 8 |
| 9 | COUNTERTOP RECEPTACLES | | 0.4 | | | | | 20 | 1 | X | | 1 | 20 | | | | | 0.9 | | LIVING ROOM RECEPTACLES (AFCI BRKR) | 10 |
| 11 | GARBAGE DISPOSAL (GFCI BREAKER) | | 0.8 | | | | | 20 | 1 | | X | 1 | 20 | | | | | 1.4 | | BEDROOM 1 RECEPTACLES (AFCI BRKR) | 12 |
| 13 | DISHWASHER | | 1.2 | | | | | 15 | 1 | X | | 1 | 20 | | | | | | | SPARE | 14 |
| 15 | SINK GFCI | | 0.2 | | | | | 20 | 1 | | X | 1 | 20 | 0.3 | | | | | | TF-1 | 16 |
| 17 | SMOKE DETECTOR | | | | | | 0.4 | 20 | 1 | X | | 1 | 20 | 0.3 | | | | | | FIRE DAMPER | 18 |
| 19 | BIDET | | | | | | | 30 | 1 | | X | 1 | 20 | | | | | | 0.2 | LIGHTING | 20 |
| 21 | SPARE | | | | | | | 20 | 1 | X | | 1 | 20 | | | | | | | SPARE | 22 |
| 23 | SPARE | | | | | | | 20 | 1 | | X | 1 | 20 | | | | | | | SPARE | 24 |
| 25 | SPARE | | | | | | | 20 | 1 | X | | 1 | 20 | | | | | | | SPARE | 26 |
| 27 | SPACE | | | | | | | - | 1 | | X | 1 | - | | | | | | | SPACE | 28 |
| 29 | SPACE | | | | | | | - | 1 | X | | 1 | - | | | | | | | SPACE | 30 |
| | | | | | | | | | | | | | | 1.0 | 4.4 | 3.0 | 0.0 | 15.8 | 0.2 | CONNECTED KVA 24.4 | |
| | | | | | | | | | | | | | | 1.0 | 4.4 | 3.0 | 0.0 | 12.9 | 0.2 | DEMAND KVA 18.5 | |
| | | | | | | | | | | | | | | | | | | | | DEMAND AMPS 77 | |


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CITY OF _____ STAMP

CITY STAMP

DO NOT PLACE ANYTHING IN THIS AREA

REGISTRATION SEAL

STATE OF MICHIGAN
MATTHEW J. JOSEPH
PROFESSIONAL ENGINEER
LICENSED
No. 6201069269

KEY PLANS

SHEET TITLE
ELECTRICAL PANEL SCHEDULES - NEW ADDITION

SCALE: AS NOTED

ISSUED FOR: Permits
DATE: 12.20.2024

DRAWN BY: SC
CHECKED: MT
APPROVED:

FILE NO. 21026.00

SHEET NO. E-403