



PLAN SNAPSHOT REPORT BBA25-0007 FOR THE CITY OF ANN ARBOR

Plan Type: Building Board of Appeals	Project:	App Date: 01/29/2025
Work Class: Administrative Appeal	District: Ward 4	Exp Date: NOT AVAILABLE
Status: Fees Paid	Square Feet: 0.00	Completed: NOT COMPLETED
Valuation: \$0.00	Assigned To: Lemieux, Michael	Approval Expire Date:

Description: We request a variance for the stair geometry related to removing a current non-conforming stair system and installing a new stair system.

Parcel: 09-09-29-422-002	Main	Address: 620 S State St Ann Arbor, MI 48104	Main	Zone: R2B(R2B)
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Applicant Alpha Design Build Allan Lutes 6921 Jackson Rd. Suite 100 Ann Arbor, MI 48103 Business: (734) 769-1900 Mobile: (734) 216-3466	Owner Brad Plymale Business: (734) 997-9777 Mobile: (248) 974-8506	Architect Dwight M Herdrich Architecture + Design Dwight M Herdrich 2801 Washtenaw Ave Ann Arbor, MI 48104 Business: (207) 274-1919 Mobile: (207) 274-1919
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Plan Custom Fields

Type of Building	Commercial	New Building	No	Addition	No
Building Use	Fraternity	Alteration	Yes	No. of Floors	3
Repair	No	Construction Type	3A	Area/Floor	14230
No. of Occupants	35	BBAStatements of Facts and Reasoning Memo	The property owners desire to install a new stair system from the first floor to the lower level of the fraternity. The current stair system has 9" treads, 8 1/2" riser heights, and a width of 36". A new stairway is proposed with 10 3/4" treads, 7 1/4" riser heights, and a width of 49 inches. Section 1011.5.2 requires a minimum tread depth of 11" and a maximum riser height of 7 inches. This building has concrete and steel structural floor and wall components. Given the structural components and the space available within the existing building envelope, insufficient space exists to allow for the code-required stair geometry.	BBADesiredReliefMemo	We request a variance from Section 1011.5.2 to allow a stair tread depth of 10 3/4 inches (10" with a 3/4" nosing) and a riser height of 7 1/4 inches.
BBABasis of Appeal Memo	This stair system receives high use by the fraternity members and guests. The current stair system is steep, narrow, and open to the lower-level common areas, which does not provide a fire-protected means of egress. The property owners propose a new stair system that will be wider (49 inches instead of 36 inches); improved tread widths (10 3/4 inches instead of 9 inches), less steep (7 1/4 inch riser height instead of 8 1/2 inch risers), and with fire doors at the top and bottom of the stairs. We believe that the improved safety of this design is a benefit that justifies the variance from the stated code.				

PLAN SNAPSHOT REPORT (BBA25-0007)

Basis of Appeal	An equal/better form of construction is proposed	Historic District	None	Floodplain	No
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Attachment File Name	Added On	Added By	Attachment Group	Notes
620-State-St-Chi Psi Lodge-STAIR SET 7-29-24_v1.pdf	01/29/2025 14:51	Lutes, Allan		
620-State-St-Chi Psi Stair Set Structural Drawings_v1.pdf	01/29/2025 14:51	Lutes, Allan		
Signature_Allan_Lutes_1/29/2025.jpg	01/29/2025 14:51	Lutes, Allan		Uploaded via CSS
BBA25-0001 200 N. State .docx	03/26/2025 9:17	Lemieux, Michael	Internal Only (Back Office)	BBA25-0007 staff report

Invoice No.	Fee	Fee Amount	Amount Paid
INV-00138217	BBA - Single Family Appeal	\$250.00	\$250.00
		Total for Invoice INV-00138217	\$250.00
INV-00139158	BBA - Commercial Appeal	\$250.00	\$250.00
		Total for Invoice INV-00139158	\$250.00
Grand Total for Plan		\$500.00	\$500.00

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Application Completeness - BBA Board of Appeals v.1	Approved	01/29/2025	01/30/2025	02/05/2025	No	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Application Completeness Check - BBA Board of Appeals	Community Services	Harvey, Juliet	Not Required	01/29/2025	01/29/2025	02/05/2025

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Application Completeness Check - Board of Appeals	Community Services	Williams, Debra	Approved	01/29/2025	01/30/2025	02/05/2025

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Plan Review [Building Board of Appeals] v.1	Approved	01/29/2025	02/12/2025	03/25/2025	No	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Building Board of Appeal Review	Building	Lemieux, Michael	Approved	01/29/2025	02/12/2025	03/25/2025

Workflow Step / Action Name	Action Type	Start Date	End Date
Application Completeness Check v.1			02/05/2025 13:21
Application Completeness - BBA Board of Appeals v.1	Receive Submittal	01/29/2025 0:00	02/05/2025 13:21
Plan Review v.1			03/25/2025 13:20
Plan Review [Building Board of Appeals] v.1	Receive Submittal	01/29/2025 0:00	03/25/2025 13:21
Appeals Approval Process v.1			03/26/2025 10:49
Board of Appeals Case for Processing v.1	Task		
Staff Report Created and Attached v.1	Generic Action		03/26/2025 10:49
Notification to Tenants v.1	Generic Action		
Staff Report Submitted to Legistar v.1	Generic Action		
Building Board of Appeals Decision v.1	Generic Action		
Decision Letter Created and Attached v.1	Generic Action		
Minutes Created and Published v.1	Generic Action		

CHI PSI LODGE BASEMENT STAIR RENOVATION

620 S. STATE ST., ANN ARBOR, MI 48104

No new sleeping rooms/units to be created in basement; Max. occupancy level is 35 and must not be increased

State the compliance method.

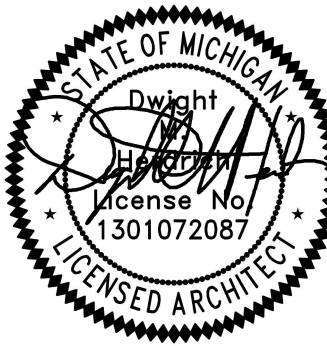
GENERAL NOTES:

PROJECT DESIGNED FOR 2015 MRCEB CODE
~~BUILDING HAS NO FIRE SUPPRESSION SYSTEM~~ - ORIGINALLY BUILT IN 1915
 BUILDING USE GROUP CLASSIFICATION IS R-2: RESIDENTIAL 2 (310.1)
 BUILDING IS TYPE III A CONSTRUCTION
 BUILDING IS DESIGNED FOR MINIMUM 20 LB GROUND SNOW LOAD - NOT SPECIFICALLY DESIGNED FOR WIND LOAD SINCE DESIGNED IN 1915, BUT ALL EXTERIOR WALLS ARE MINIMUM 13" SOLD BRICK AND CONCRETE
 ALL NEW HVAC SOFFITS HAVE A MINIMUM 7'-0" HEADROOM CLEARANCE
 ORIGINAL 1919 BUILDING WAS CONSTRUCTED TO BE FIREPROOF - ALL EXTERIOR WALLS ARE MINIMUM 13" POURED CONCRETE WITH BRICK VENEER AND PLASTER INTERIOR, ALL INTERIOR WALLS ARE CONCRETE OR CMU WITH MIN. 1/2" PLASTER, ALL FLOORS ARE MINIMUM 4" CONCRETE, ALL CEILINGS ARE PLASTER. ROOF IS SLATE AND COPPER OVER WOOD TRUSSES. CEILING BELOW WOOD TRUSSES IS 3/4" PLASTER. 1954 ADDITION BUILT SIMILARLY, EXCEPT ROOF IS FLAT WITH STEEL TRUSSES.
 ALL CONSTRUCTION SHALL COMPLY WITH THE CODES REFERENCED HEREIN, AND ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS HAVING JURISDICTION.
 PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY REGULATORY AUTHORITIES.
 ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES, LAWS, AND ORDINANCES APPLICABLE TO THIS PROJECT.
 THE CONTRACTOR SHALL VERIFY ALL SETBACKS, EASEMENTS, UTILITIES, AND MEASUREMENTS PRIOR TO THE START OF CONSTRUCTION.
 THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, THE EXACT LOCATION OF UTILITY TAPS, THE CONNECTION OF UTILITY LINES FROM THE BUILDING TO SERVICE LINES, AND ALL FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 ALL WORK DONE OUTSIDE THE PROPERTY LINES SHALL BE DONE IN ACCORDANCE WITH THE REGULATORY AUTHORITIES.
 ALL LANDSCAPE DESIGN, MECHANICAL, ELECTRICAL, AND PLUMBING ENGINEERING REQUIRED FOR THIS PROJECT IS BY OTHERS.
 CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS FROM SITE AS REQUIRED.
 ALL INTERIOR FINISHES SUCH AS CARPET, PAINT, TILE, HARDWOOD, ETC SHALL BE SELECTED BY THE OWNER WITH THE CONTRACTOR COORDINATING ALL SELECTIONS. CONTRACTOR SHALL SUBMIT SAMPLES TO THE OWNER FOR THESE SELECTIONS.
 ALL CABINETS, BUILT-INS, SHELVING, ETC. SHALL BE COORDINATED BY THE CONTRACTOR WITH THE OWNER DIRECTLY.
 THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION METHODS, TYP.
 ALL DRAWINGS INCLUDED IN THIS SET ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT AND ARE FULLY PROTECTED BY FEDERAL AND STATE COPYRIGHT LAWS. REPRODUCTIONS ARE ONLY ALLOWED WITH THE WRITTEN PERMISSION FROM THE DESIGNER. AUTHORIZED REPRODUCTIONS MUST BEAR THE NAME OF THE ARCHITECT AND INCLUDE THE ARCHITECT'S STATEMENT OF UNPUBLISHED WORK. ANY INFRINGEMENT ON THIS PROPERTY WILL BE VIGOROUSLY PROSECUTED.
 CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BARRIERS, LIGHTING, COVERING AND FIRE PREVENTION NECESSARY FOR THE SAFETY OF ALL PERSONNEL AND THE PROPERTY THROUGHOUT THE DURATION OF THE CONSTRUCTION CONTRACT.
 CONTRACTOR SHALL PROTECT ALL IN PLACE CONSTRUCTION, LANDSCAPING, PAVING, UTILITIES, ETC. FROM DAMAGE DURING CONSTRUCTION. ALL DAMAGED PAVING, CONSTRUCTION, LANDSCAPING, ETC. TO BE RESTORED TO ORIGINAL CONDITION BY CONTRACTOR DAMAGING SAME.
 CONTRACTOR TO VERIFY ALL DIMENSIONS AND STRUCTURAL MEMBER SIZES PRIOR TO CONSTRUCTION.
 CONTRACTOR TO VERIFY EXACT LOCATION OF ALL UTILITY LINES AND INTERCEPT AS REQUIRED TO KEEP ALL PIPING AS CLOSE TO WALLS AND AS HIGH TO UNDERSIDE OF STRUCTURE AS POSSIBLE.
 CONTRACTOR SHALL COORDINATE ALL ELECTRICAL FLOOR AND WALL SLEEVES WITH ARCHITECTURAL DRAWINGS.
 CONTRACTOR TO COORDINATE PLACEMENT OF ALL CEILING ELEMENTS WITH ELECTRICAL INSTALLER.
 ALL EQUIPMENT, FIXTURES, AND MATERIALS SHALL BE LISTED BY UNDERWRITERS LABORATORIES.
 ALL DISSIMILAR METALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO AVOID MOLECULAR BREAKDOWN.
 A FINISH OR FIRE RATING INDICATION ON A WALL SHALL MEAN THE ENTIRE LENGTH OF WALL IS TO BE FINISHED OR FIRE-RATED AS INDICATED.
 NOTES APPEAR ON VARIOUS SHEETS FOR DIFFERENT SYSTEMS AND CONSTRUCTION MATERIALS. ALL SHEETS ARE TO BE REVIEWED AND NOTES ON ANY ONE SHEET ARE TO BE APPLIED TO ALL RELATED DRAWINGS AND SYSTEMS.
 DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO THOSE DETAILED.
 PROVIDE BLOCKING AS REQUIRED FOR CEILING AND WALL-MOUNTED ITEMS.
 DO NOT SCALE DRAWINGS.
 MANUFACTURER'S NAMEPLATES, TRADEMARKS, LOGOS, OR THEIR IDENTIFICATION SHALL NOT BE VISIBLE IN PUBLIC AREAS.
 ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS.

SHEET INDEX:

- T1.0 TITLE SHEET
- D1.0 BASEMENT DEMOLITION PLAN
- D2.0 BASEMENT DEMOLITION RCP
- D1.1 FIRST FLOOR DEMOLITION PLAN
- A1.0 BASEMENT FLOOR PLAN
- A1.1 FIRST FLOOR PLAN
- A5.0 SECTIONS/INTERIOR ELEVATIONS

T1.0



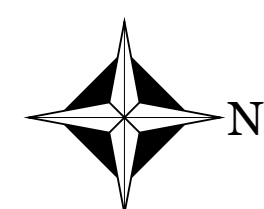
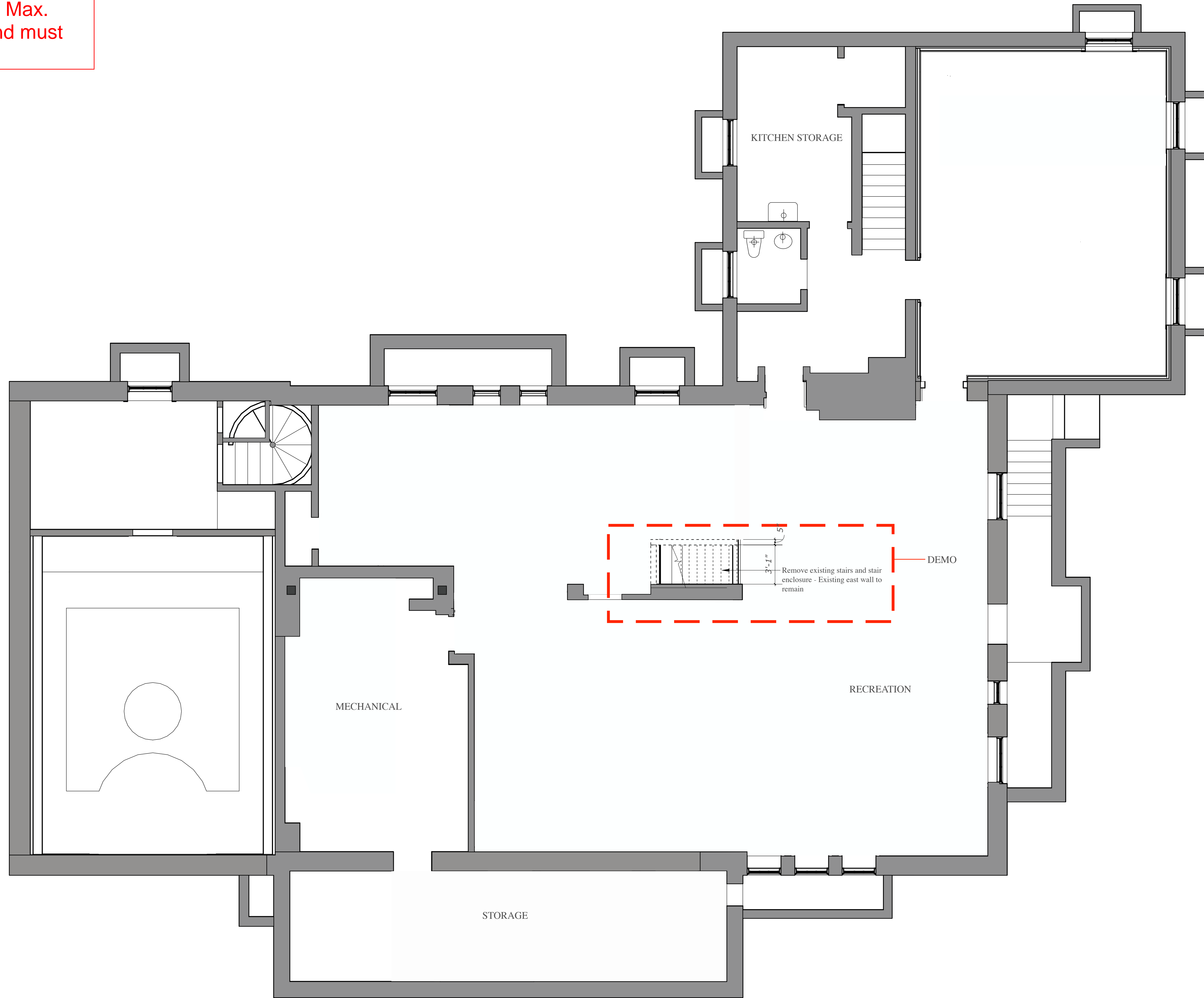
TITLE PAGE

DATE	7/24/2024
SET/VERSION	3/31
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REMARKS	

CHI PSI LODGE RENOVATION

620 S. STATE ST., ANN ARBOR, MI 48104

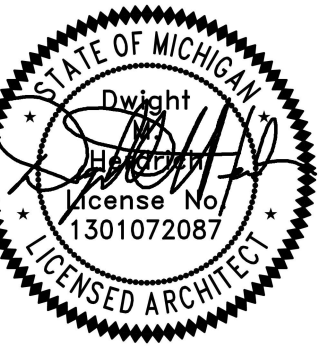
No new sleeping rooms/units to be created in basement; Max. occupancy level is 35 and must not be increased



BASEMENT DEMOLITION PLAN

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

D1.0



BASEMENT DEMOLITION PLAN

DATE: 7/24/2024
 SET/VERSION: 3/31

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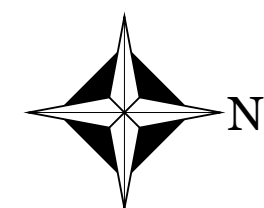
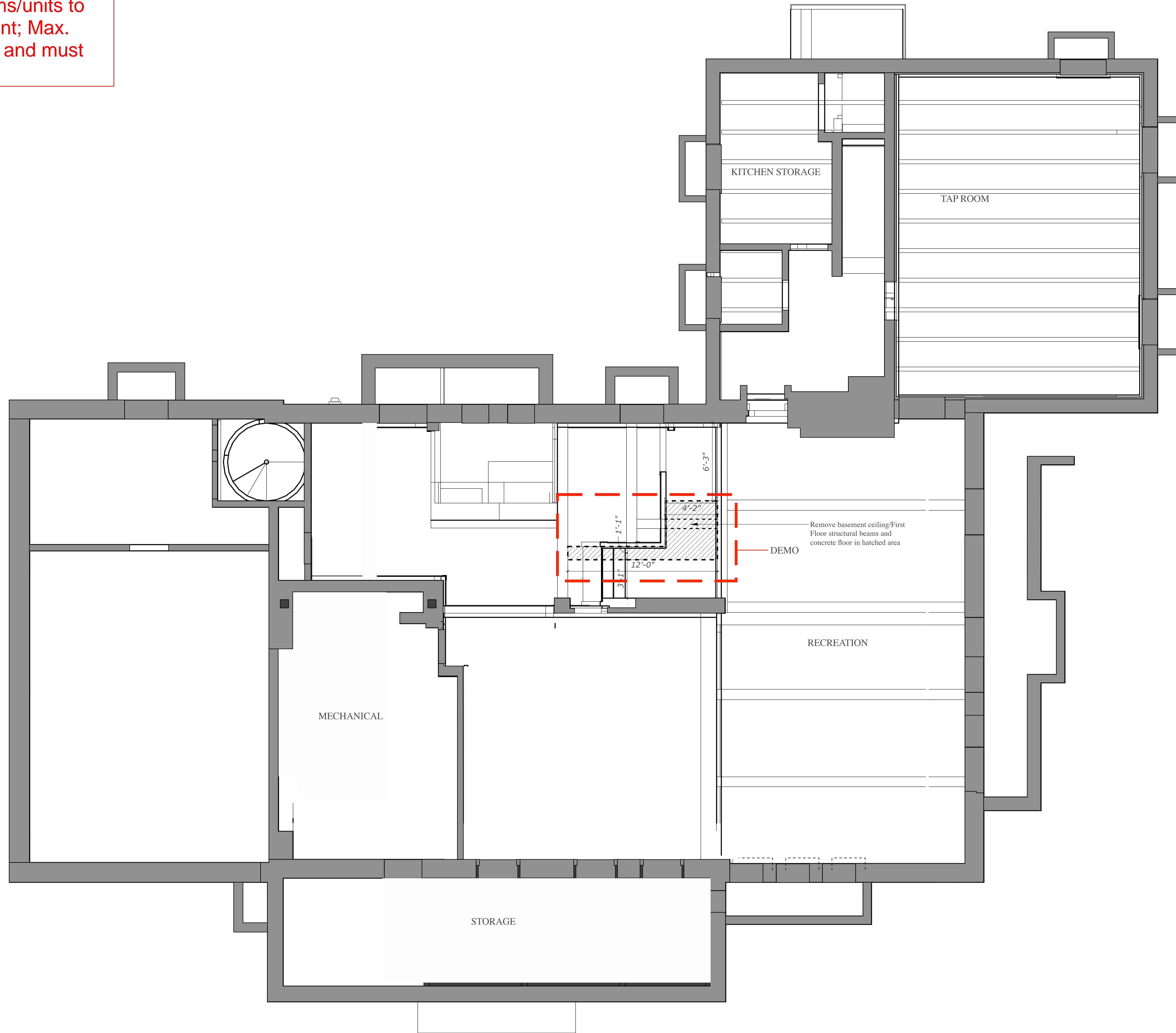
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REMARKS:

CHI PSI LODGE RENOVATION

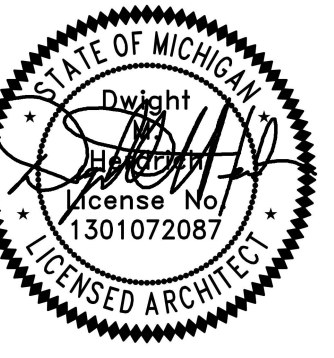
620 S. STATE ST., ANN ARBOR, MI 48104

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BASEMENT DEMOLITION REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

D2.0



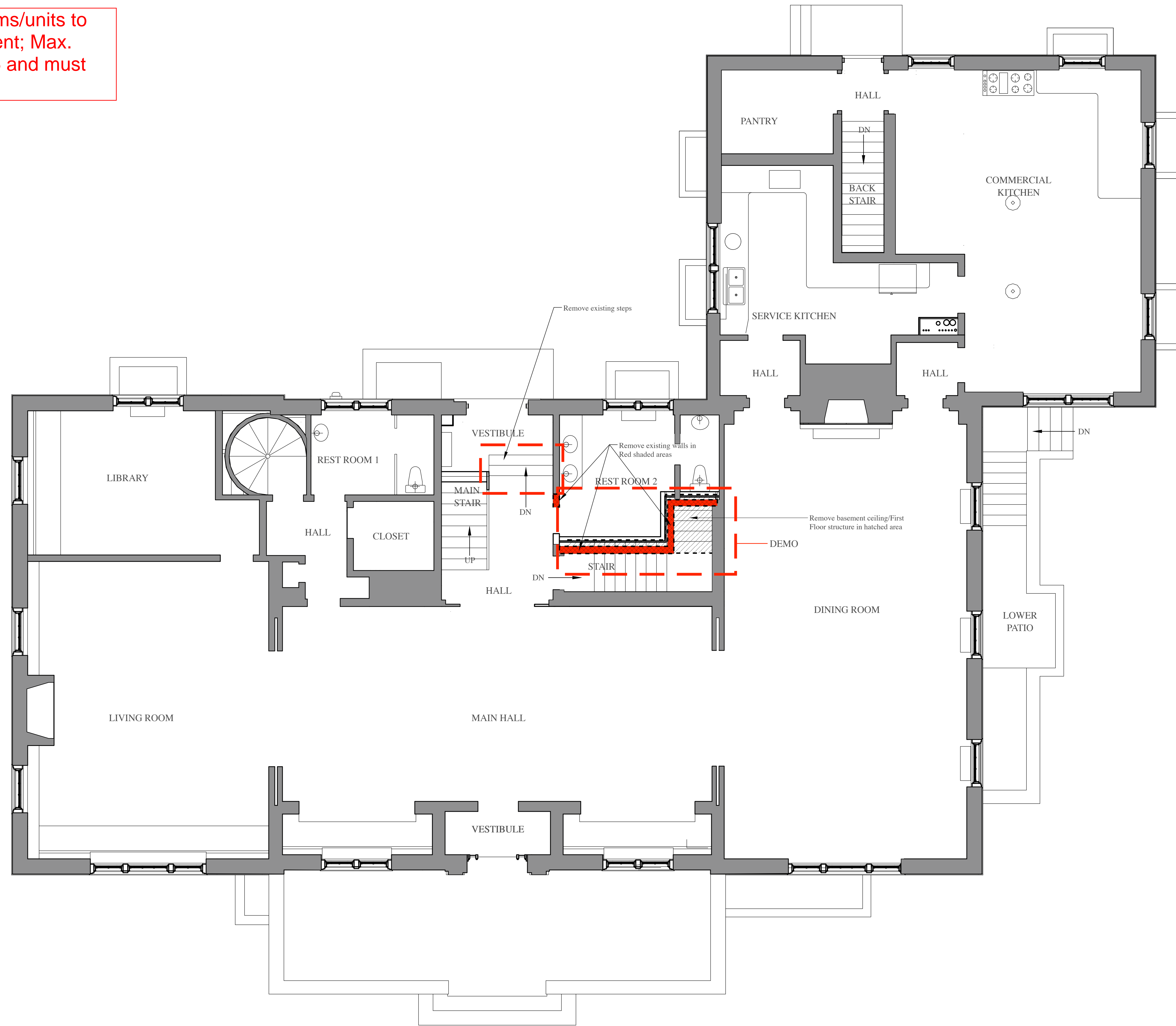
BASEMENT DEMOLITION REFLECTED CEILING PLAN

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REMARKS	

CHI PSI LODGE
RENOVATION

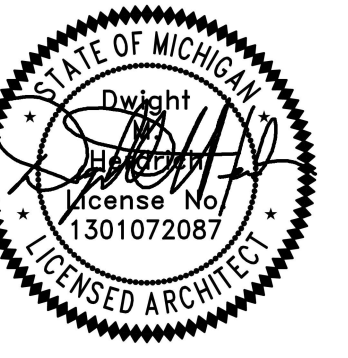
620 S. STATE ST., ANN ARBOR, MI 48104

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 **FIRST FLOOR DEMOLITION PLAN**
SCALE: 1/4" = 1'-0"

D1.1



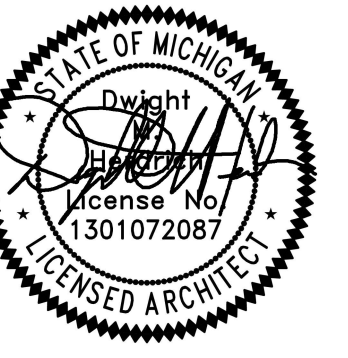
FLOOR PLANS

DATE	7/24/2024
SET VERSION	331
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CHECKED BY	
REMARKS	

CHI PSI LODGE
RENOVATION

620 S. STATE ST., ANN ARBOR, MI 48104

DMH
DWIGHT M. HERDRICH • ARCHITECTURE + DESIGN
2801 Washtenaw Ave., Ann Arbor, MI 48104 207-274-1919 DMHarchitect.com



BASEMENT FLOOR PLAN

DATE	7/24/2024
REVISION	3-31
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REMARKS	

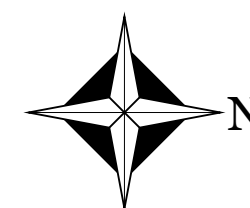
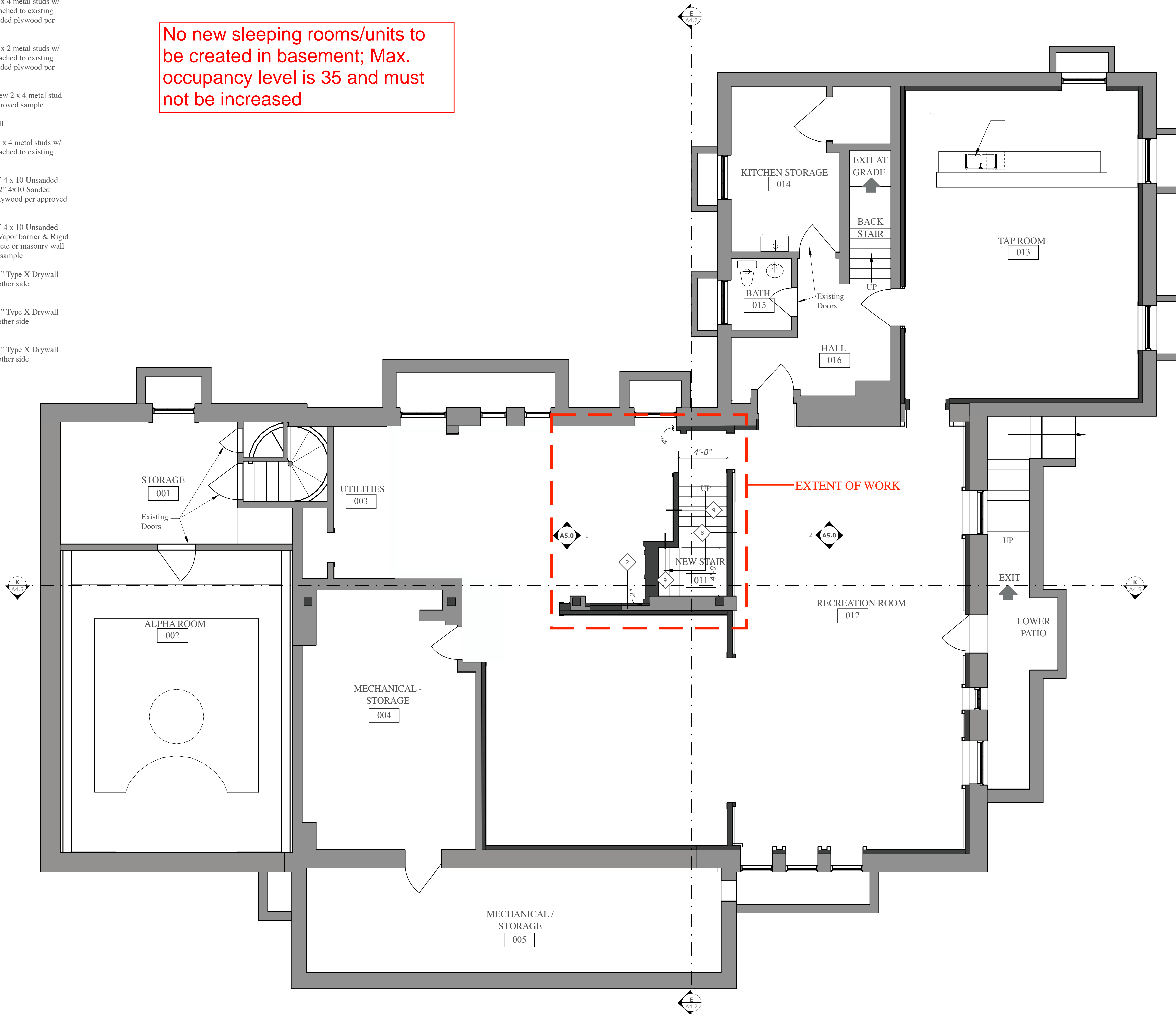
CHI PSI LODGE RENOVATION

620 S. STATE ST., ANN ARBOR, MI 48104

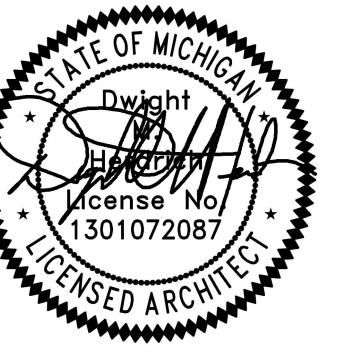
NEW WALL TYPES

- 1 1/2" 4 x 10 Sanded Plywood over 2 x 4 metal studs w/ Vapor barrier & Rigid insulation attached to existing concrete or masonry wall - stain sanded plywood per approved sample
 - 2 1/2" 4 x 10 Sanded Plywood over 2 x 2 metal studs w/ Vapor barrier & Rigid insulation attached to existing concrete or masonry wall - stain sanded plywood per approved sample
 - 3 1/2" 4 x 10 Sanded Plywood over new 2 x 4 metal stud wall - stain sanded plywood per approved sample
 - 4 Ceramic Tile over new 4" CMU wall
 - 5 Ceramic Tile over 1/2" Durock on 2 x 4 metal studs w/ Vapor barrier & Rigid insulation attached to existing concrete or masonry wall
 - 6 3 x 10 Smooth Log Siding over 1/2" 4 x 10 Unsanded Plywood over 2 x 4 metal studs - 1/2" 4x10 Sanded Plywood other side - stain sanded plywood per approved sample
 - 7 3 x 10 Smooth Log Siding over 1/2" 4 x 10 Unsanded Plywood over 2 x 4 metal studs w/ Vapor barrier & Rigid insulation attached to existing concrete or masonry wall - stain sanded plywood per approved sample
 - 8 1 HOUR ASSEMBLY - 2 layers 5/8" Type X Drywall over 2x4 wood studs, 1/2" drywall other side
 - 9 1 HOUR ASSEMBLY - 2 layers 5/8" Type X Drywall over 2x4 wood studs, 1/2" drywall other side
 - 10 1 HOUR ASSEMBLY - 2 layers 5/8" Type X Drywall over 2x4 wood studs, 1/2" drywall other side
- New Wall Designation

No new sleeping rooms/units to be created in basement; Max. occupancy level is 35 and must not be increased



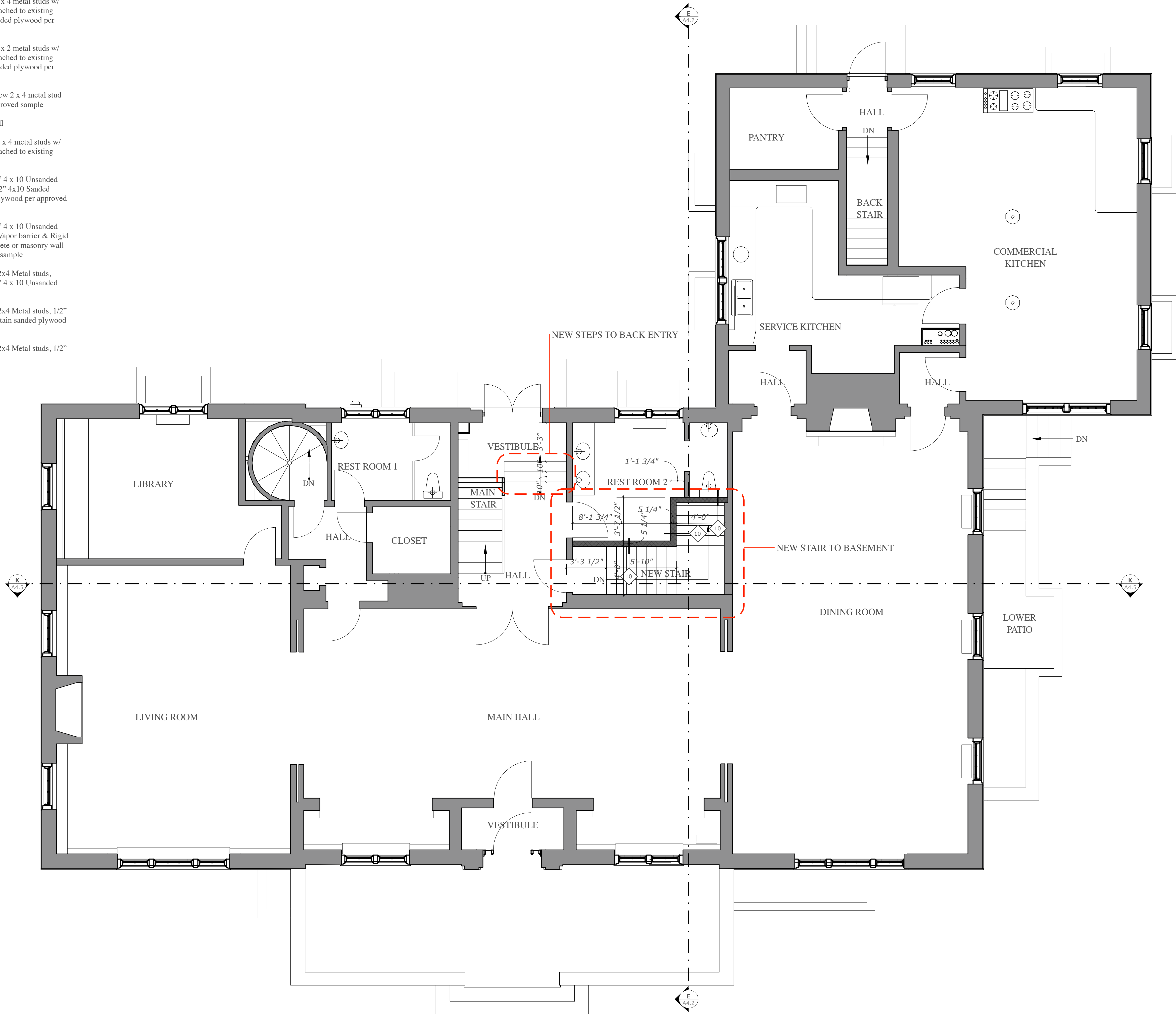
PROPOSED BASEMENT FLOOR PLAN
 SCALE: 1/4" = 1'-0"



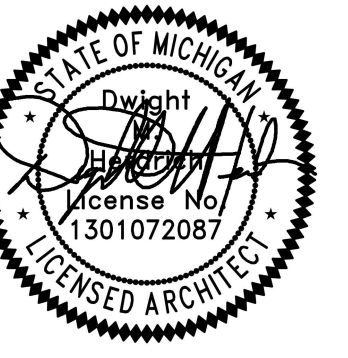
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REMARKS	

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 - 7 3 x 10 Smooth Log Siding over 1/2" 4 x 10 Unsanded Plywood over 2 x 4 metal studs w/ Vapor barrier & Rigid insulation attached to existing concrete or masonry wall - stain sanded plywood per approved sample
 - 8 2 layers 5/8" Type X Drywall over 2x4 Metal studs, 3 x 10 Smooth Log Siding over 1/2" 4 x 10 Unsanded Plywood other side
 - 9 2 layers 5/8" Type X Drywall over 2x4 Metal studs, 1/2" 4x10 Sanded Plywood other side - stain sanded plywood per approved sample
 - 10 2 layers 5/8" Type X Drywall over 2x4 Metal studs, 1/2" Drywall other side
- New Wall Designation



 **PROPOSED FIRST FLOOR PLAN**
 SCALE: 1/4" = 1'-0"

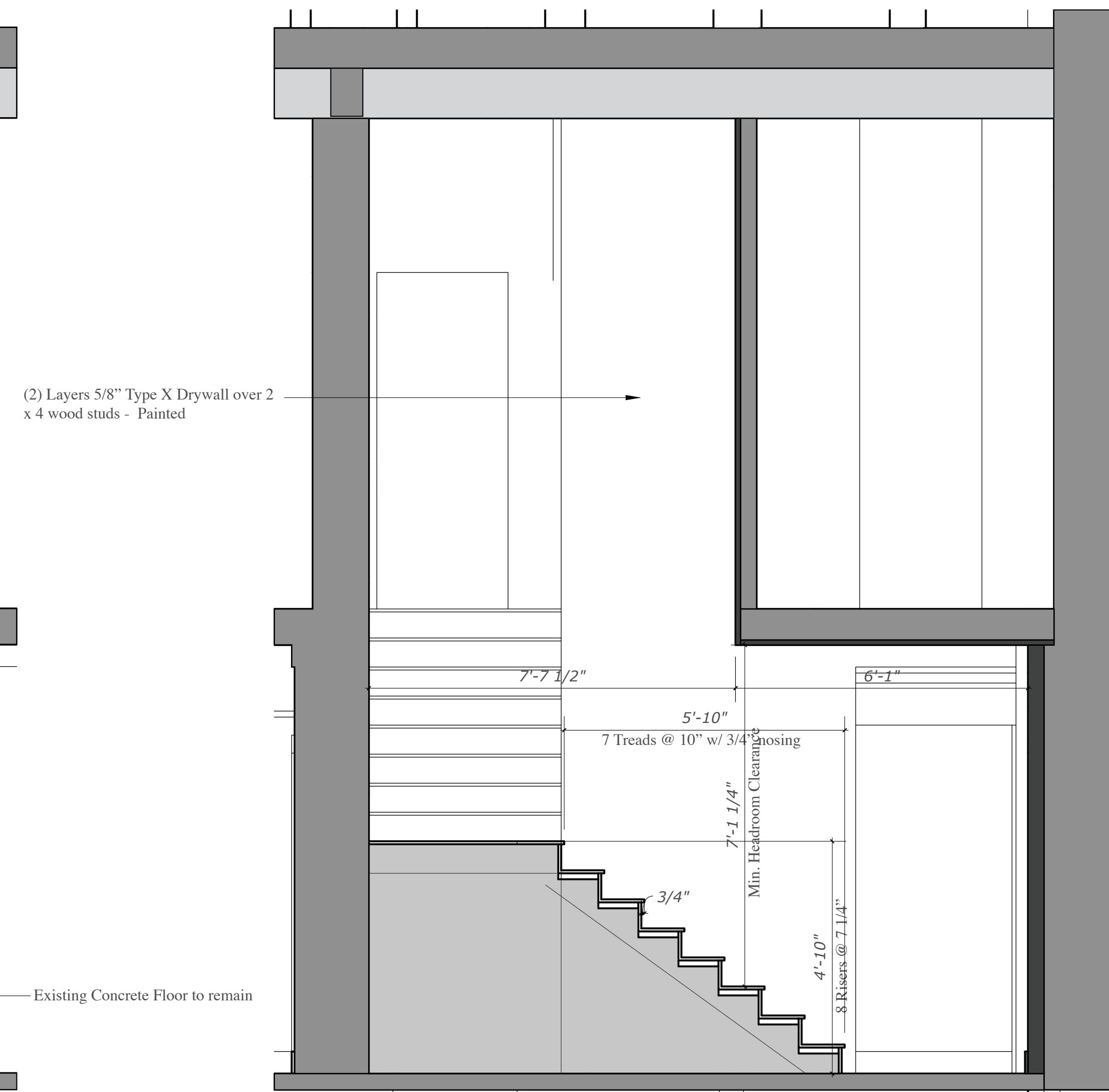
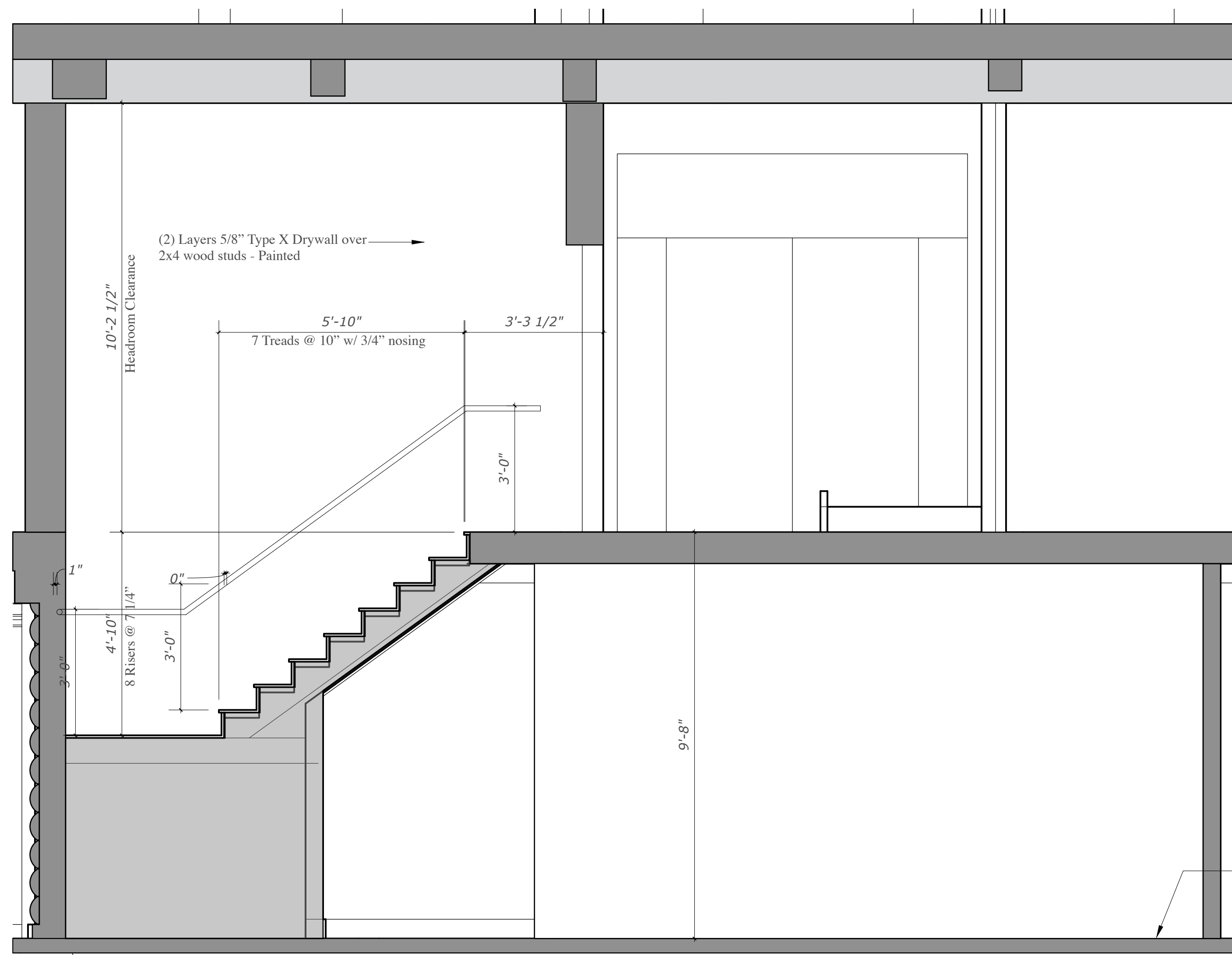


7" max riser and 11" min tread depth per 1011.5.2. This stair is not within a dwelling unit.

STAIR NOTES:
 Stair shall also be enclosed with 1Hr fire rated assemblies.
 Min. stair and corridor width 36"; Max. solid Riser Height 7" , Min. solid Tread Depth 10" with 3/4" nosing

Basement floor to First floor: 9'-8" (16R @ 7 1/4" ; 14T @ 10" = 11'-8")

Handrails on both sides of stair shall meet requirements for height(34"-38" to top), size, shape and graspability. Both guards and handrails shall also meet requirements for structural strength. Handrails shall extend beyond top riser not less than 12" along landing and not less than one tread depth beyond the bottom riser, and shall be continuous around Center wall. Both shall return to wall at top & bottom of stair runs.
 Min. clear headroom shall be 80" (6'-8")
 Nosing and riser profiles shall conform to IBC Section 1011 and confirm any specific requirements with City.

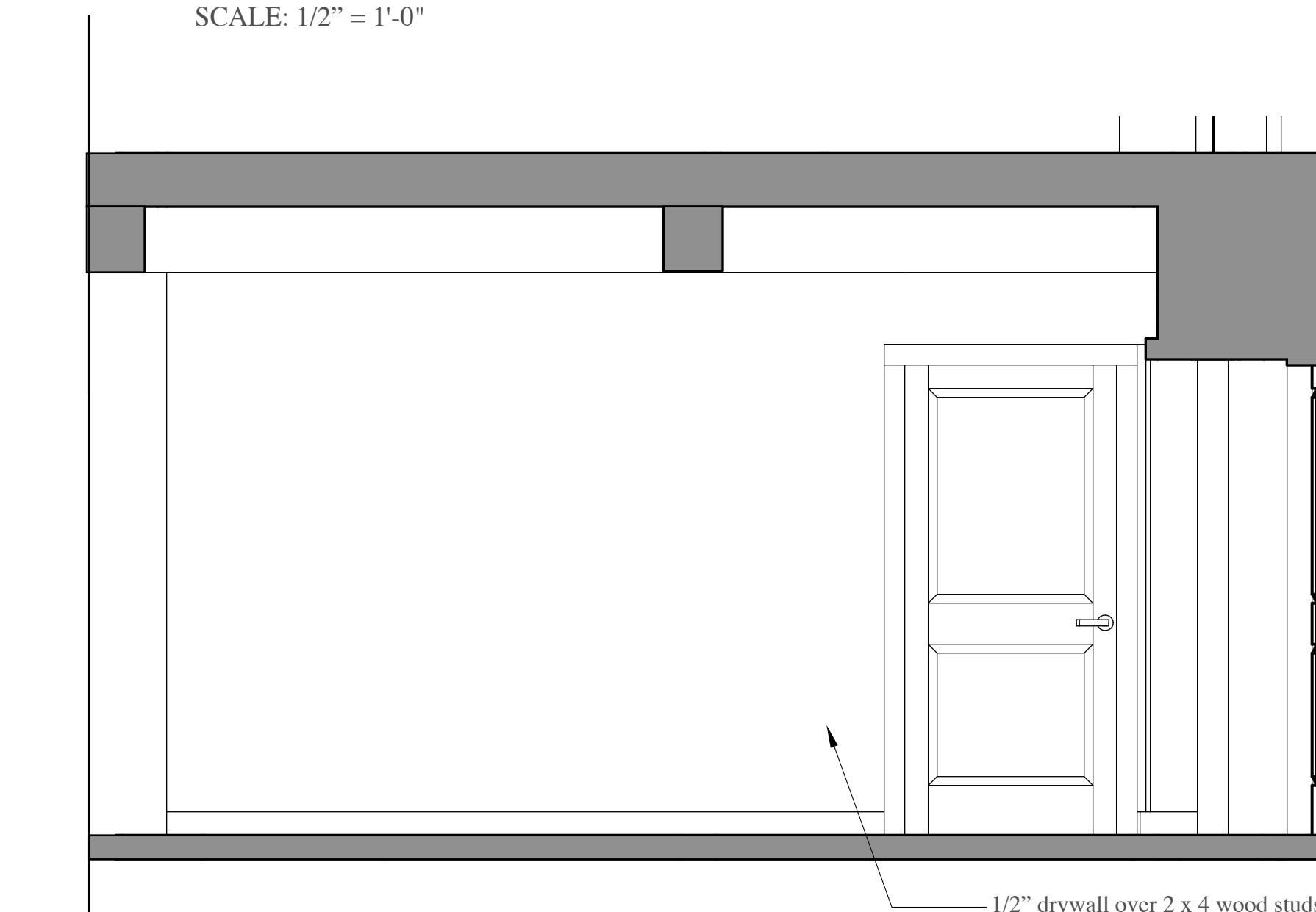
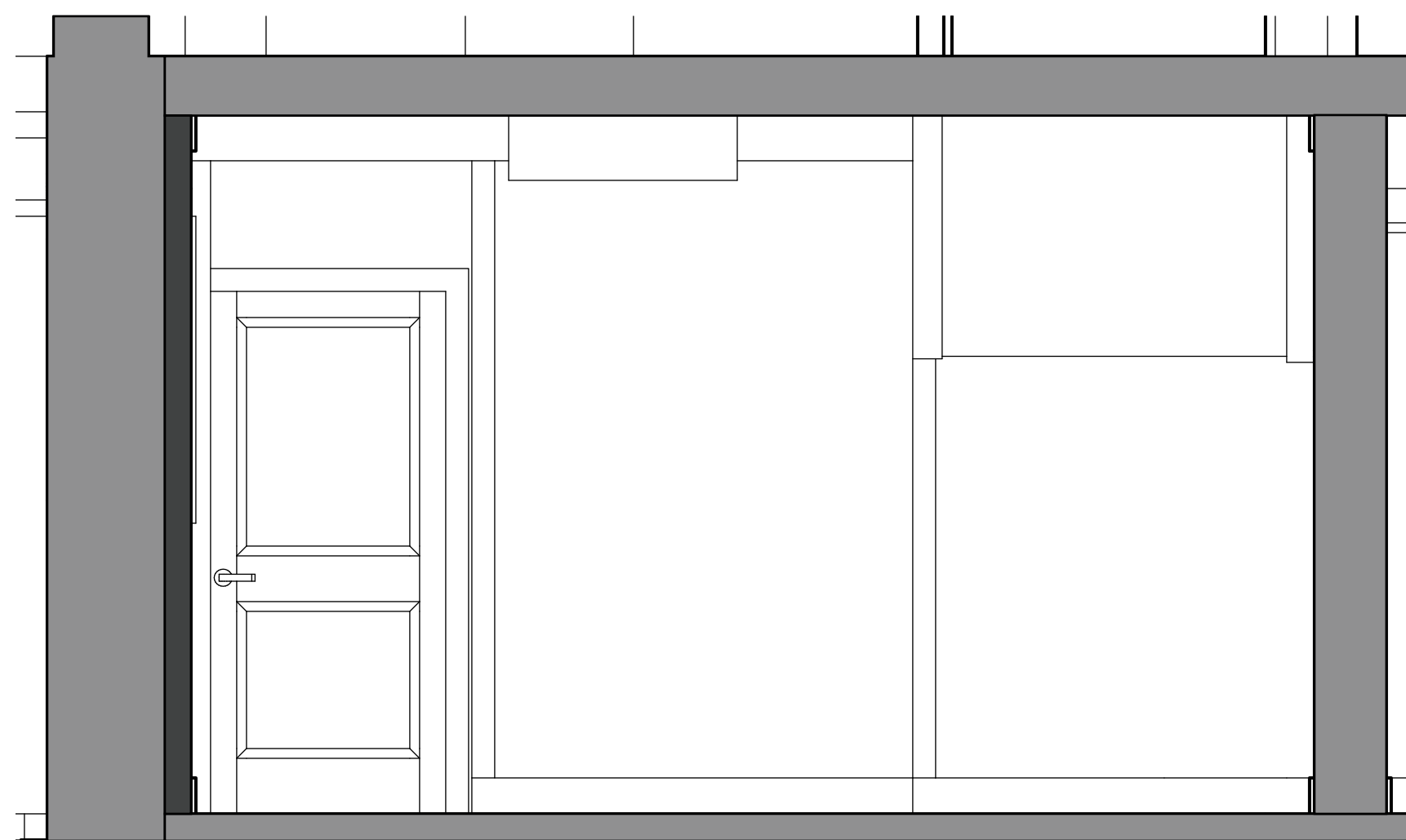


NEW STAIR-SECTION K
 SCALE: 1/2" = 1'-0"

1 INTERIOR ELEVATION
 A5.0 SCALE: 1/2" = 1'-0"

NEW STAIR-SECTION E
 SCALE: 1/2" = 1'-0"

STAIR SECTIONS / INTERIOR ELEVATIONS
 SCALE: 1/2" = 1'-0"



1 INTERIOR ELEVATION
 A5.0 SCALE: 1/2" = 1'-0"

2 INTERIOR ELEVATION
 A5.0 SCALE: 1/2" = 1'-0"

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

SECTIONS/INTERIOR ELEVATIONS

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CHI PSI LODGE RENOVATION

620 S. STATE ST., ANN ARBOR, MI 48104

DESIGN CRITERIA		
Design is in accordance with CODE		CODE REFERENCE
Risk Category	II	IBC Table 1604.5 ASCE Table 1.5-1
FLOOR LIVE LOADS		
RESIDENTIAL	40 PSF + PARTITIONS	ASCE Table 4-1
BALCONY	60 PSF	ASCE Table 4-1
ROOF	25 PSF	ASCE Table 4-1
PARTITIONS	15 PSF	ASCE Table 4-1
SNOW LOADS		
Ground Snow Load	Pg = 25 PSF	ASCE Figure 7-1
Flat Roof Snow Load	Pf = 25 PSF (minimum)	ASCE Section 7.3
Exposure Factor	Ce = 1.0	ASCE Table 7-2
Importance Factor	I = 1.0	ASCE Table 1.5-2
Thermal Factor	Ct = 1.0	ASCE Table 7-3
Snow loads adjacent to vertical projections, on lower roofs adjacent to high roofs, or sloped roofs are increased for the effects of drifting.		
WIND LOADS		
Ultimate Design Wind Speed (3 sec. gust)	V(ULTIMATE) = 115 MPH	ASCE Figure 26.5-1A
Nominal Design Wind Speed	V(SERVICE) = 89 MPH	IBC Section 1609.3.1
Exposure Category	B	ASCE Section 26.7.3
Internal Pressure Coefficient	± 0.18 (Enclosed)	ASCE Section 26.11-1
SEISMIC LOADS		
Seismic Importance Factor	Ie = 1.0	ASCE Table 1.5-2
Short Period Spectral Response Acceleration	SS = 0.103g	ASCE Section 11.4.1
1.0 sec. Period Spectral Response Acceleration	S1 = 0.0475 g	ASCE Section 11.4.1
Site Class	D	ASCE Section 11.4.2
Design Short Spectral Response Acceleration	SDS = 0.11 g	ASCE Section 11.4.4
Design Short Period Spectral Response Acceleration	SD1 = 0.076 g	ASCE Section 11.4.4
Seismic Design Category	B	ASCE Section 11.6
Seismic Force Resisting System	Ordinary Plain Masonry Shear Walls	ASCE Table 12.2-1
Seismic Response Coefficient	CS = 0.073	ASCE Section 12.8.1.1
Response Modification Factor	R = 1.5	ASCE Table 12.2-1
Analysis Procedure	Equivalent Lateral Force	ASCE Section 12.8
Building design displacements	Seismic Inelastic Story Drift (Delta m) = 2.0%	
SUPERIMPOSED DEAD LOAD		
Typical Floors and Roof	5 PSF (MEP)	

CONCRETE

- Mixing, batching, transporting, and placing of all concrete and selection of concrete materials shall conform to ACI 301 specification for structural concrete for buildings, UNO
- Each mix design listed below shall be submitted, with current supporting data, and be approved by architect/structural engineer and the testing laboratory prior to use. Concrete mix designs shall be stamped and signed by a civil or structural engineer licensed in the state of Michigan. Submittals shall include the following:
 - Cement type and source.
 - Cement cube strength.
 - Course and fine aggregate source and grading.
 - Admixture data sheets.
- Use of calcium chloride, chloride ions or other salts in concrete mix is prohibited.
- The schedule below indicates the minimum concrete design mix requirements. Some design mix properties may need to exceed minimum requirements in order to make other properties meet minimum requirements.
 - Type A - Slab-on-grade (including curbs and pads)
 - Normal weight concrete (150 pcf)
 - Strength - Fc = 4000 psi (at 28 days)
 - Max w/c ratio = 0.40
 - Flyash / cement ratio = 50 percent
 - Type B - Concrete on Metal Deck
 - Normal weight concrete (150 pcf)
 - Strength - Fc = 4000 psi (at 28 days)
 - Max w/c ratio = 0.40
 - Flyash / cement ratio = 50 percent
 - Type C - Lean Concrete Fill (beneath footings and conduit encasement)
 - Normal weight concrete (150 pcf)
 - Strength - Fc = 500 psi (at 28 days)
- Concrete exposed to freeze/thaw cycles including foundation walls shall be air-entrained 6% +/- 1%.
- Minimum concrete cover over reinforcing steel shall be as follows (UNO):
 - Concrete on Steel Deck - 1" clear from top of slab
 - Slabs and Walls
 - Interior Faces - 3/4" (#1 and smaller)
 - Exposed to Weather - 1.5" (#5 and smaller) & 2" (#6 & larger)
 - Exposed to earth - 2"
 - Footings or Grade Beams
 - Not exposed to Earth - 2"
 - Exposed to Earth - 2"
 - Cast Against Earth - 3"
 - Slab on Grade - 2" from bottom
- The contractor shall provide minimum 4" reinforced concrete cover around all steel members or components (WF, TS, plates, bolts, etc.) adjacent to and exposed to soil.
- Do not place conduits or other elements exceeding 25% of the depth of the concrete slab or wall. No conduit is allowed in columns or beams unless reviewed and approved by Structural Engineer.
- Anchor rods, leveling plates, bearing plates and other structural steel embeds shall be secured in place within a 1/8" tolerance in any direction prior to placing concrete.
- Aluminum products are prohibited embed or directly attached to concrete.

REINFORCING STEEL

- Steel reinforcement shall be as follows:
 - ASTM A615 grade 60 UNO
 - ASTM A706 Gr 60 for bars to be welded, coupled and where noted on drawings.
- Reinforcing bars shall be lap spliced per the lap splice schedule. Lap splices are to be securely tied at all side and end laps. Splice reinforcing where indicated on the drawings.
- Mechanical splices, if used at contractor's option, shall be ICC approved and be capable of developing 125% of specified minimum yield strength of bar in tension or compression.
- Welded wire fabric shall conform to ASTM A185.
- Welded wire fabric shall be lap spliced 8" or one full mesh spacing plus 2", whichever is greater.
- Welding of reinforcing steel shall be in accordance with AWS D1.4. Weld reinforcing bars only where noted on the drawings. Tack welding or welding of bars to plates, templates, etc. is prohibited, unless specifically shown on the drawings.
- Submit rebar shop drawings in accordance with ACI 315 for review and acceptance by architect/engineer prior to fabrication. The shop drawings shall include:
 - Reinforcing size, lengths and bends.
 - Location, spacing and number of bars.
 - Methods and details of support to maintain specified cover.
 - Locations of construction joints.
 - Location and length of all splices.
- Contractor shall investigate and coordinate reinforcing steel placement in congested areas and provide templates, reinforcing bar coupling, or bar welding where necessary to maintain bar placement.
- Bars shall not be bent or twisted in the field, unless specifically detailed on the structural drawings.
- Securely tie all reinforcing in-place with iron wire. Support all reinforcing in place with acceptable chairs.

CONCRETE BLOCK MASONRY

- Masonry construction shall be in accordance with ACI 530.
- Compressive strength of grouted CMU construction f'm shall be 2000 psi.
- All hollow concrete masonry units shall conform to ASTM C90, moisture controlled block, lightweight classification, compression strength of block shall be 2150 psi to achieve f'm of 2000 psi, 13% maximum absorption for exposed to weather units. Use open ended bond beam units where possible.
- Compressive strength of the grout shall be 2000 psi. Maximum size of aggregate in grout shall be per CODE.
- Mortar shall conform to CODE with strength of 2500 psi.
- f'm shall be justified by preconstruction prism tests and prism tests during construction as specified in CODE.
- Provide control joints in wall at a maximum spacing of 25 feet on center per detail provided on the drawings. See architectural drawings for control joint locations.
- Pipes and conduits shall not be embedded in any masonry unless approved by architect & structural engineer.
- Grouting of cores shall be in accordance with "low lift grouting" per ACI 530.
- Grout lifts shall be keyed 4" into lower masonry course.
- High lift grouting shall be in conformance with the CODE. Contractor shall submit a block lift grouting procedure for review and approval by the architect.

POST-INSTALLED ANCHORS IN CONCRETE

- Expansion anchors shall be per CODE requirements
 - Expansion Anchors shall be: Kwik-Bolt TZ (ESR-1917) by Hilti, Power-Stud+ SD2 (ESR-2502) by Power Fasteners, Strong Bolt (ESR-1771) by Simpson, TruBolt+ (ESR-2427) by ITW Red Head or approved equal.
 - For interior condition use carbon steel anchors and for exterior condition use stainless steel anchors
 - Tension test 50% of all expansion anchors to test load provided by manufacturer
- Adhesive anchors
 - Comply with CODE requirements.
 - Adhesive anchors shall be: HIT-HY 200 (ESR-3187) by Hilti, HIT-RE 500 SD (ESR-2732) by Hilti, Set-XP (ESR-2508) by Simpson, or approved equal.
 - For interior condition use carbon steel anchors and for exterior condition use stainless steel anchors
 - Tension test 50% of all expansion anchors to test load provided by manufacturer.

STRUCTURAL OBSERVATIONS

- Resurget Engineering shall provide Structural Observation of the structural systems for general conformance to the drawings and specifications at significant stages of construction and at completion of the primary structural system as defined in Code.
- Structural Observation does not include or waive any of the responsibilities of the Special Inspector as required per the Section "Special Inspections".
- At the conclusion of work included in permit, the structural observer will submit to the building official a written statement that the structural observations have been completed and that to the best of their knowledge the work is in conformance with the construction documents.
- Structural Observation on this project shall be conducted on the following structural elements:
 - Spread Footings
 - Structural steel

SHOP DRAWINGS:

- Verify all existing dimension before submitting shop drawings for review.
- Review all shop drawings for accuracy and compliance with shop drawing before submitting for review. Review of shop drawings does not relieve the Contractor of any responsibility or errors and omissions.
- Use of 2D Drawing or 3D REVIT model does not relieve the Contractor of any responsibility specified in the contract documents.
- Allow a minimum of 10 working days for review by Structural Engineer of each set of submitted contract drawing. Submit shop drawings in reasonable quantities with at least 10 working days between submittals. Review time stated for Structural Engineer only, add additional time to schedule as required for review by other disciplines.
- Contractor shall coordinate work between multiple trades before submitting shop drawings. Dimensions and elevations specific to equipment installation shall be provided and coordinated prior to submittal for review. Failure to provide these dimensions shall result in return of shop drawings without review.
- Structural Engineer is not responsible for coordination of work marked as "by others" on shop drawings.

EXISTING CONSTRUCTION

- Before submitting a proposal for work, and/or preparing shop drawings for this work each Bidder, Contractor and Sub-Contractor shall visit the site and become fully acquainted with the existing conditions. Discrepancies to existing drawings which may not reflect actual conditions. Discrepancies to be noted and immediately brought to the attention of the Structural Engineer. Provide temporary shoring and bracing as required before, during and after construction as required until all materials have reached the required strength and stability.
- Existing construction not undergoing alteration is to remain undisturbed. Where such construction is disturbed as a result of the operations of this contract, Contractor shall repair or replace as required and to the satisfaction of the Architect/Structural Engineer and Owner's Representative.
- Verify the existence, location and elevation of existing utilities, sewers, drains, etc. in demolition areas and adjacent to new work before proceeding with the work. All discrepancies shall be documented and reported, do not proceed with work until discrepancies have been resolved.
- Provide fire safety precautions during field cutting and welding operations, meeting the Owner's requirements.
- Provide temporary protection of existing equipment during execution of work, satisfying the Owner's requirements.
- Provide temporary protection to prevent damage from the weather and vandalism.
- Coordinate work with the Owner's personnel to avoid any interference in their operations.
- Refer to "SHORING AND BRACING" notes for additional requirements.

SHORING AND BRACING

- Contractor shall provide temporary shoring and bracing of existing construction, new construction and underground utilities as follows:
 - Where shown or noted on the Drawings.
 - Where existing construction is to be altered or disturbed until permanent support is in place.
 - Where existing construction is not undergoing alteration and is to remain undisturbed but is disturbed as a result of the work of this contract.
 - As required for safe erection, installation of new construction, equipment, etc.
 - When needed for Contractor's "means and methods" of construction, and other safety related issues.
- Shoring and bracing shown on the Drawings is conceptual. Contractor shall be responsible for verifying existing conditions, shoring and bracing calculations, methods of installation, transfer of loads through to final load support, and work sequence phasing with new construction.
- Shoring and bracing shall be performed by a Contractor with minimum 5 years demonstrated experience in similar size and scope of shoring and bracing projects.
- Shoring and bracing shall be designed by a Professional Engineer registered in the State of the Project with minimum 5 years demonstrated experience in similar size and scope of shoring and bracing projects. Design loads and methods shall conform to applicable codes. Soil and material strengths shall be verified by tests, unless conservative estimates that do not affect deflections and deformations are approved by the Architect/Structural Engineer.
- Contractor shall submit drawings and calculations sealed and signed by the Contractor's Professional Engineer showing complete design including temporary conditions, final conditions and sequence of work.
- Before starting work, Contractor shall perform condition survey of the existing building structure, exterior facade and interior finishes, including photographic documentation and submit survey to the Owner for record.
- During the shoring and bracing operations, Contractor shall:
 - Keep the existing and new construction in a safe condition.
 - Monitor existing and new construction to detect any signs of distress or deformation.
 - Take immediate steps to prevent distress, deformation or damage.
- Contractor shall continuously monitor the shoring and bracing system. Contractor shall review and ascertain that all field connections are completed according to the Contractor's design and issue approval for inspection of the work by the Testing Agency.
- After completion of shoring and bracing and completion of work requiring shoring and bracing, Contractor shall repair any damage to the existing and new construction, without any cost to the Owner, and to the satisfaction of the Owner and Architect/Structural Engineer.

ERECTION NOTES

- The drawings indicate the structure in its final condition. The contractor is fully responsible for all temporary measures necessary for erection prior to the structure's final condition.
- The contractor is responsible for means and methods, scheduling, sequencing of construction or compliance with OSHA provisions.
- The contractor shall coordinate with other trades in determining the erection sequence so that the erection sequence and associated site conditions will not adversely impact or damage work by other trades or previously erected structure.
- Deflection and movement of structure
 - Floor beams, trusses, transfer girders, and cantilevers will continue to deflect as additional loads are applied during construction. Although camber may be shown to account for the theoretical dead load deflection, this may not occur until all dead load is on the member.
 - The contractor shall coordinate the attachment of any items to the structure so that typical lateral movements of adjacent floors in any direction are accommodated by the attachments. The lateral movement of adjacent floors is 1/160 the floor height.

FIREPROOFING STRUCTURAL STEEL

- Refer to the architectural drawings for minimum hourly values of steel fire protection for determining the thickness of spray applied fireproofing.
- The structural steel frame consists of all structural steel members sized, identified, or indicated on the structural drawings.
- All structural steel beams and columns shown on the structural drawings shall be considered primary members UNO. Braces in brace frames shall be considered secondary members.
- All structural framing shall be considered as restrained.

GENERAL NOTES

- Governing Design Code: 2015 Michigan Building Code with local jurisdiction amendments (hereafter referred to as "CODE")
- All construction shall be in accordance with the following:
 - CODE
 - Drawings and Specifications
- The structural drawing notes are intended to work together and be complementary with the project specifications. Consult the specifications for additional requirements in each section. Information provided on structural drawings shall take precedence over the specifications. Information shown on specific details shall take precedence over typical details and structural notes.
- Typical details and general notes shall apply UNO.
- The structural drawings shall be used in conjunction with the architectural drawings. See architectural drawings for information not shown, including but not limited to the following:
 - Setting out dimensions and angles of all grid lines
 - Setting out dimensions of concrete walls and wall openings that are not shown on the structural drawings.
 - Slab geometry that includes the following:
 - Edge of slab locations at building perimeter
 - Edge of slab location at interior openings
 - Location and geometry of slab depressions and slopes (depressions and slopes in structural slabs that are not shown diagrammatically on the structural drawings shall be reviewed by SEOR)
 - Concrete curb locations, height and width
 - Interior partitions and ceilings including:
 - Interior metal stud partitions (size, location and detailing)
 - Interior glazed walls (location and detailing)
 - Interior CMU partition (locations and openings)
 - Exterior non-bearing wall construction. This includes:
 - Exterior metal studs (size, location, and detailing)
 - Curtain wall and louver details
 - Aluminum trellises (sizes and detailing)
 - Architectural (non-structural) topping slabs - location and detailing
 - Concrete finishes
 - Dimensions not shown on the structural drawings
 - All fireproofing requirements including fireproofing requirements for structural steel elements
 - Misc steel required for support of architectural elements
- See the mechanical, electrical and plumbing drawings for information not shown, including but not limited to:
 - Wall and slab openings for services, pipe sleeves, hangers, trenches, except as shown
 - Electrical conduit runs, boxes, outlets in walls and slabs
 - Concrete inserts for electrical, mechanical, or plumbing
 - Size and location of equipment pads and equipment anchor bolts (typical concrete pad detail are provided on the Structural Drawings)
 - Locations for beam penetrations for pipes and ducts, except as shown (typical steel penetrations are provided on the Structural Drawings)
- Contractor is responsible for the coordinating all equipment pad sizes and locations with the actual layout provided in the shop drawings.
- Drawing scales noted on structural drawings are for reference only. Do NOT scale drawings. The contractor shall verify dimensions not provided with the architect prior to proceeding with work.

ARCHITECTURAL SLAB PLANS

- See Architectural Slab Plans that show the following information:
 - Locations of the edge of slab at perimeter and interior openings
 - Slab elevations
 - Slab depressions (elevations and locations of depression)
 - Slab slopes
 - Concrete curbs (width, height, location)

SPECIAL INSPECTIONS

- Special inspections shall be provided by the Owner's Testing Lab in accordance to the code and the project specifications. The special inspector shall observe the work for conformance with the construction documents. The special inspector shall send reports to the inspector of record, architect, engineer, contractor and Owner. All discrepancies shall be brought to the attention of the contractor for correction. When work is done to the satisfaction of the inspector, then the special inspector shall submit a final signed report stating that, to the best of their knowledge, the work was completed in conformance with the plans, specifications, and the applicable workmanship provisions of the CODE.
- Refer to Special Inspection tables and notes for specific requirements.

S-1

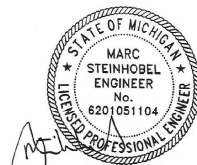
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STATEMENT OF SPECIAL INSPECTIONS - FIRE RESISTANT MATERIALS					
TASK	INSPECTION FREQUENCY		REFERENCED STANDARD	IBC REFERENCE	RESPONSIBLE AGENT
	CONTINUOUS	PERIODIC			
1. SPRAYED FIRE RESISTANT MATERIALS:					
A. SURFACE CONDITIONS	X	-	MANUFACTURER'S REQUIREMENTS	1705,13,2	SITA
B. APPLICATION	-	X	MANUFACTURER'S REQUIREMENTS	1705,13,3	
C. THICKNESS	X	-	ASTM E605	1705,13,4	
D. DENSITY	-	X	ASTM E605	1705,13,5	
E. BOND STRENGTH	-	X	ASTM E736	1705,13,6	
2. MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS.	-	X	AWCI 12-B	1705,14	SITA

STATEMENT OF SPECIAL INSPECTIONS - CONCRETE CONSTRUCTION					
TASK	INSPECTION FREQUENCY		REFERENCED STANDARD	MBC REFERENCE	RESPONSIBLE AGENT
	CONTINUOUS	PERIODIC			
1. INSPECT REINFORCEMENT, INCLUDING POST-TENSIONED CABLES, AND VERIFY PLACEMENT.	-	X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4	SI
3. INSPECT ANCHORS CAST IN CONCRETE.	-	X	ACI 318: 17.8.2	-	SI / TA
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED MEMBERS.					
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	-	ACI 318: 17.8.2.4		
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	-	X	ACI 318: 17.8.2		
5. VERIFY USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3	SI / TA
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C172 ASTM C31 ACI 318: 26.4, 26.12	1908.10	SI / TA
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8	SI
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 26.5.3-26.5.5	1908.9	SI

SPECIAL INSPECTION NOTES	
1.	PERFORM SPECIAL INSPECTIONS IN ACCORDANCE WITH THE 2015 MICHIGAN (INTERNATIONAL) BUILDING CODE CHAPTER 17 AND AS MODIFIED IN THE MATERIAL SPECIFIC STATEMENTS OF SPECIAL INSPECTION.
2.	<p><u>DESIGNATION OF RESPONSIBLE AGENT AND THEIR QUALIFICATIONS</u></p> <p>SI SPECIAL INSPECTOR QUALIFIED WITH DEMONSTRATED COMPETENCE DOCUMENTED BY CERTIFICATIONS FROM RECOGNIZED AGENCIES SUCH AS AWS, ACI, MASONRY INSTITUTE OF MICHIGAN (MIM), ETC., AS SUBMITTED AND APPROVED BY THE BUILDING OFFICIAL. SPECIAL INSPECTOR MAY BE A FIRM WITH MULTIPLE SPECIALISTS AND A PROJECT MANAGER PROVIDING REPORTS.</p> <p>TA TESTING AGENCY QUALIFIED TO TEST AND INSPECT MATERIALS AND ASSEMBLIES. TESTING AGENCY SHALL BE UNDER THE SUPERVISION OF THE SPECIAL INSPECTOR.</p> <p>GE GEOTECHNICAL ENGINEER WHO PROVIDED THE ORIGINAL PROJECT GEOTECHNICAL SOILS INVESTIGATION REPORT.</p> <p>SE SPECIALTY ENGINEER RESPONSIBLE FOR DESIGNING ASSEMBLIES SUCH AS PRECAST CONCRETE, STEEL JOISTS, COLD FORMED FRAMING ASSEMBLIES, ETC., SPECIALTY ENGINEER SHALL PROVIDE OBSERVATION OF FABRICATED AND INSTALLED ITEMS OF THEIR DESIGN IN ADDITION TO THE SPECIAL INSPECTION.</p>
3.	TA, GE AND SE SHALL SUBMIT RECORDS OF THE INSPECTION RESULTS TO THE SI. THE SI SHALL COMPILE AND SUBMIT INSPECTION RECORDS TO THE ARCHITECT/ENGINEER AND BUILDING OFFICIAL. RECORDS SHALL INCLUDE STATEMENTS OF TESTS, WHETHER INSTALLED/FABRICATED ITEM COMPLIES WITH CONTRACT DOCUMENTS, REMEDIAL WORK PERFORMED, RETESTS.
4.	SI SHALL PROVIDE A DAILY REPORT OF ANY DISCREPANCIES FROM THE CONTRACT DOCUMENTS FOUND ON THE SAME DAY OF THE INSPECTION TO THE ENGINEER OF RECORD, FORMAL REPORTS OF COMPLIANCE CAN FOLLOW BY A MAXIMUM OF 2 WEEKS. SI SHALL PROVIDE AND SIGN FINAL REPORT WITH A SUMMARY OF ALL TESTS PERFORMED AND RESULTS TO THE ENGINEER OF RECORD AND BUILDING OFFICIAL. IN ACCORDANCE WITH SECTION 1704.2.4.
5.	SI, TA & GE SHALL BE PAID BY THE OWNER IN COMPLIANCE WITH THE MICHIGAN (INTERNATIONAL) BUILDING CODE.
6.	WHERE FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES IS BEING CONDUCTED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION. SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE FABRICATOR MAINTAINS APPROVED DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND THE GOVERNING BUILDING CODE. APPROVAL SHALL BE BASED UPON REVIEW OF FABRICATION AND QUALITY CONTROL PROCEDURES AND PERIODIC INSPECTION OF FABRICATION PRACTICES BY THE BUILDING OFFICIAL. SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE FABRICATOR IS REGISTERED AND APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1.
7.	REFER TO MATERIAL SPECIFIC STATEMENTS OF SPECIAL INSPECTION AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL QUALITY CONTROL TESTING AND INSPECTIONS.

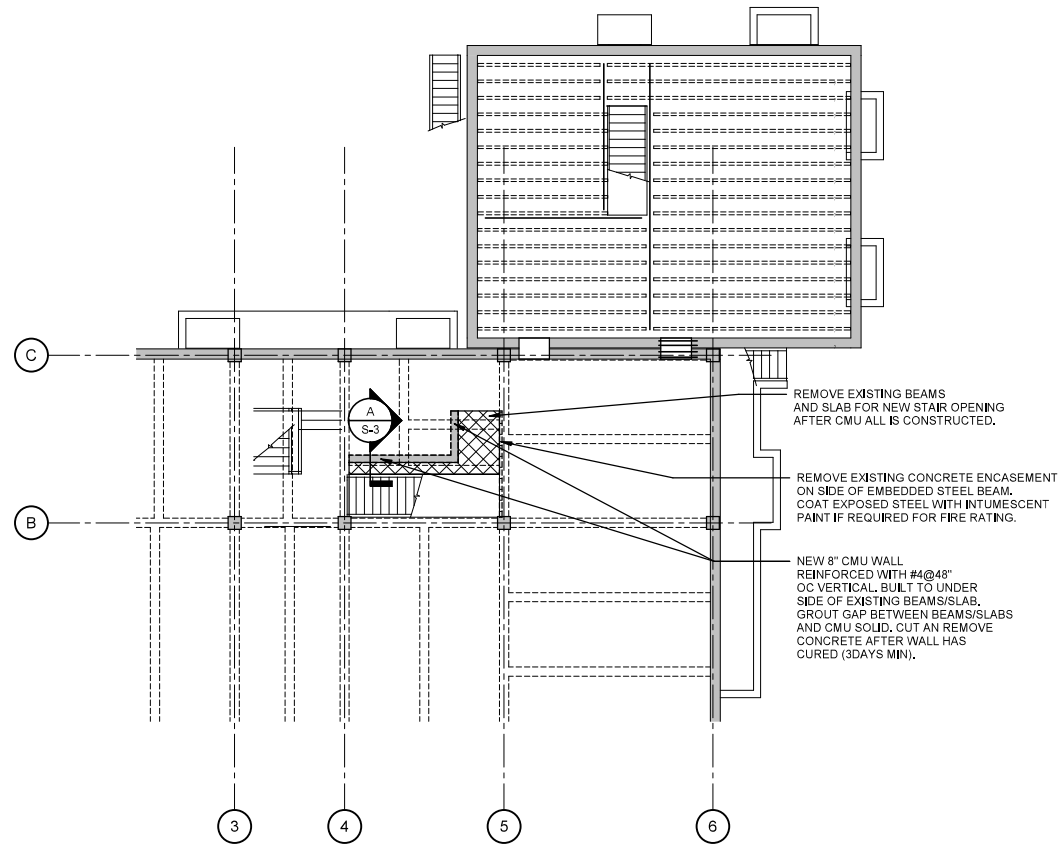
SPECIAL INSPECTION

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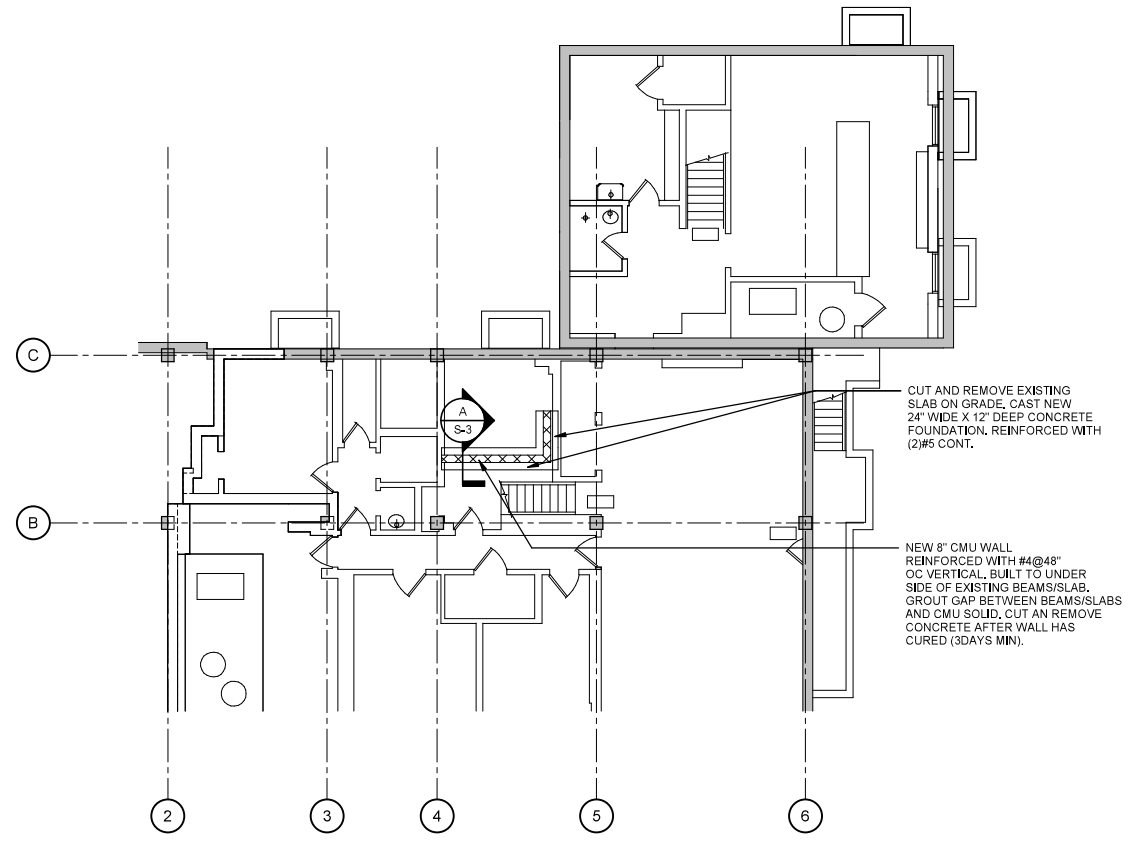
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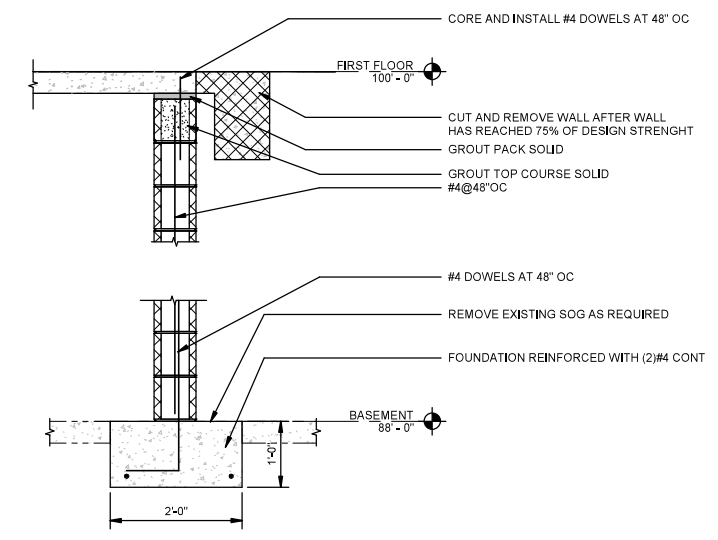




FIRST FLOOR STAIR OPENING
SCALE: 1/8" = 1'-0"
NORTH



PARTIAL BASEMENT PLAN - STAIR OPENING
SCALE: 1/8" = 1'-0"
NORTH



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



STAIR OPENING PLANS

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