

# Michigan State University Wharton - Masonry Restoration to SW Exterior Stairs (FY24)

Wharton Center  
East Lansing, Michigan

Capital Project Number CP23026

Issued for: Bids & Construction, 12/1/2023

**fishbeck** Proj. No.: 231032  
 Design: CLF  
 Designer: CLF  
 Reviewer: MTV  
 Manager: KN  
 engineers  
 scientists  
 architects  
 constructors

## BUILDING CODE INFORMATION

THE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE FOLLOWING CODES, NOTIFY THE ARCHITECT OF ANY CONFLICTS

### CODES:

2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS  
 2015 MICHIGAN BUILDING CODE (AS AMENDED)  
 2015 MICHIGAN MECHANICAL CODE (AS AMENDED)  
 2017 NATIONAL ELECTRIC CODE (NEC)  
 (AS AMENDED - MICHIGAN AMENDMENTS PART 8 RULES)  
 BARRIER FREE REQUIREMENTS:  
 2015 MICHIGAN BUILDING CODE, CHAPTER 11  
 2009 ACCESSIBLE AND USABLE BUILDING AND FACILITIES - ICC/ANSI A117.1

### CLASSIFICATION RENOVATION WORK:

THIS PROJECT IS AN EXTERIOR RENOVATION PROJECT WITH WORK TO BE CLASSIFIED AS FOLLOWS:

ARCHITECTURAL WORK WITH INCIDENTAL STRUCTURAL, PLUMBING AND ELECTRICAL WORK AT THE EXTERIOR EGRESS STAIRS FROM THE SECOND FLOOR TO GRADE CONSTITUTES MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS CHAPTER 7 ALTERATION - LEVEL 1 WORK FOR REMOVAL AND REPLACEMENT OF EXISTING MATERIALS / ELEMENTS USING NEW MATERIALS / ELEMENTS WHICH SERVE THE SAME PURPOSE AND REPAIRS OF DAMAGED MATERIALS / ELEMENTS FOR PURPOSE OF MAINTAINING MATERIALS / ELEMENTS IN GOOD CONDITION.

AN INTERIOR RENOVATION IS ALSO PLANNED FOR THE EXISTING BUILDING AND WILL BE PERFORMED AS A SEPARATE PROJECT. THE INTERIOR RENOVATION WORK / CONSTRUCTION IS PLANNED TO OCCUR CONCURRENTLY TO THE EXTERIOR EGRESS STAIR WORK / CONSTRUCTION.

### BUILDING USE GROUP:

BUILDING USE GROUP: A-1 (ASSEMBLY) (MBC SECTION 303)  
 NO CHANGE THIS PROJECT

### TYPE OF CONSTRUCTION:

CONSTRUCTION TYPE: IA (MBC TABLE 601)  
 NO CHANGE THIS PROJECT

### FIRE SUPPRESSION:

FULLY SPRINKLERED (MBC SECTION 903)  
 NO CHANGE THIS PROJECT

### BUILDING HEIGHT:

NO CHANGE IN THIS PROJECT

### BUILDING AREA:

NO CHANGE IN THIS PROJECT

### BUILDING OCCUPANCY:

NO CHANGE IN THIS PROJECT

### EGRESS COMPONENTS:

MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS, SECTION 704.1: MEANS OF EGRESS COMPONENTS WILL MAINTAIN THE EXISTING LEVEL OF PROTECTION PROVIDED.

DURING CONSTRUCTION EGRESS FROM THE SECOND FLOOR SOUTHWEST AUDITORIUM EXIT AND FROM THE SOUTHWEST STAIR WILL BE PROHIBITED. THE BUILDING WILL BE OCCUPIED ONLY BY CONSTRUCTION PERSONNEL WITH ALL OTHER EXITS FROM SECOND FLOOR AUDITORIUM AND STAIRS AT THE UPPER FLOORS BEING MAINTAINED AND ALLOWING EGRESS. IF CONSTRUCTION DOES NOT OCCUR CONCURRENTLY WITH INTERIOR RENOVATION, TEMPORARY INTERIOR EGRESS SIGNAGE IS TO BE PROVIDED DIRECTING OCCUPANTS TO EXITS OTHER THAN SECOND FLOOR SOUTHWEST AUDITORIUM EXIT AND SOUTHWEST STAIR PER DIRECTION FROM FIRE MARSHALL.

Infrastructure  
 Planning and Facilities  
 MICHIGAN STATE  
 UNIVERSITY

Michigan State University  
 East Lansing, Michigan  
 Wharton Center  
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 APPR. \_\_\_\_\_  
 DATE \_\_\_\_\_  
 SCALE AS NOTED  
 REVISIONS  
 12/1/2023 BIDS & CONST.

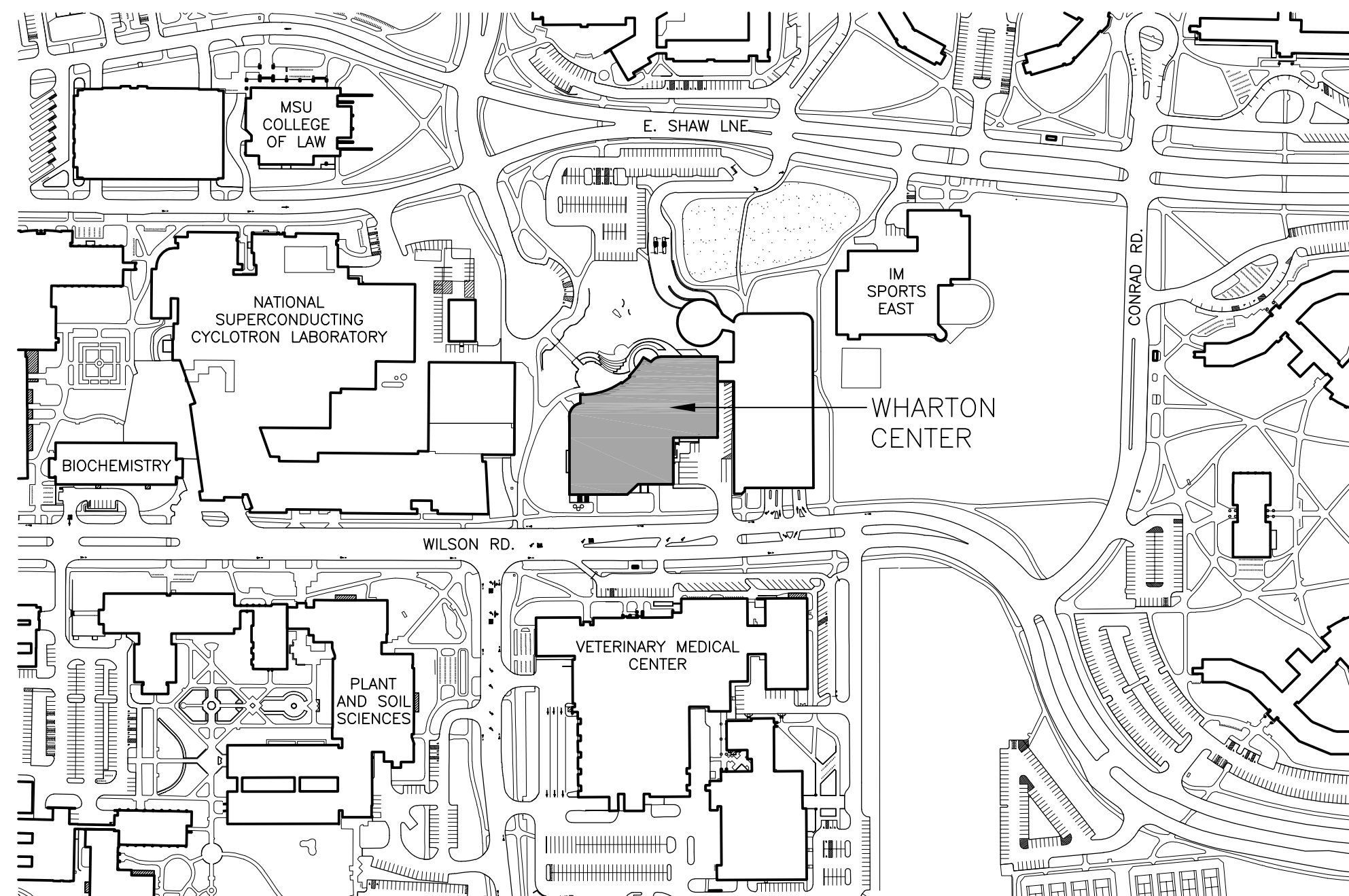
COVER SHEET

G-1

1 OF 13



fishbeck.com 1515 Arboretum Drive  
 800.456.3824 Grand Rapids, Michigan



## GENERAL

G-1 COVER SHEET

## DEMOLITION

DA-1 ARCHITECTURAL DEMOLITION PLANS  
 DA-2 DEMOLITION EXTERIOR ELEVATIONS  
 DP-1 PLUMBING DEMOLITION PLANS  
 DE-1 ELECTRICAL DEMOLITION PLANS

## ARCHITECTURAL

A-1 ARCHITECTURAL PLANS  
 A-2 EXTERIOR ELEVATIONS  
 A-3 SCHEDULES AND DETAILS

## STRUCTURAL

S-1 STRUCTURAL PLANS

## PLUMBING

P-1 PLUMBING PLANS  
 P-2 SCHEDULES AND INFORMATION

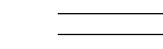
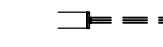

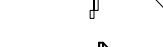
## ELECTRICAL

E-1 ELECTRICAL PLANS  
 E-2 ELECTRICAL PLANS, SCHEDULES AND INFORMATION

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PLOT\_INFO: Z:\2023\231032\CADD\SEF\DKN\_231032.DWG LAYOUT: DA-1 DATE: 12/1/2023 TIME: 12:20:17 PM USER: LFTINNEY

**DEMOLITION SYMBOL LEGEND**

-  EXISTING WALLS TO REMAIN
-  EXISTING WINDOW TO BE REMOVED
-  EXISTING DOOR TO REMAIN
-  EXISTING DOOR TO BE REMOVED

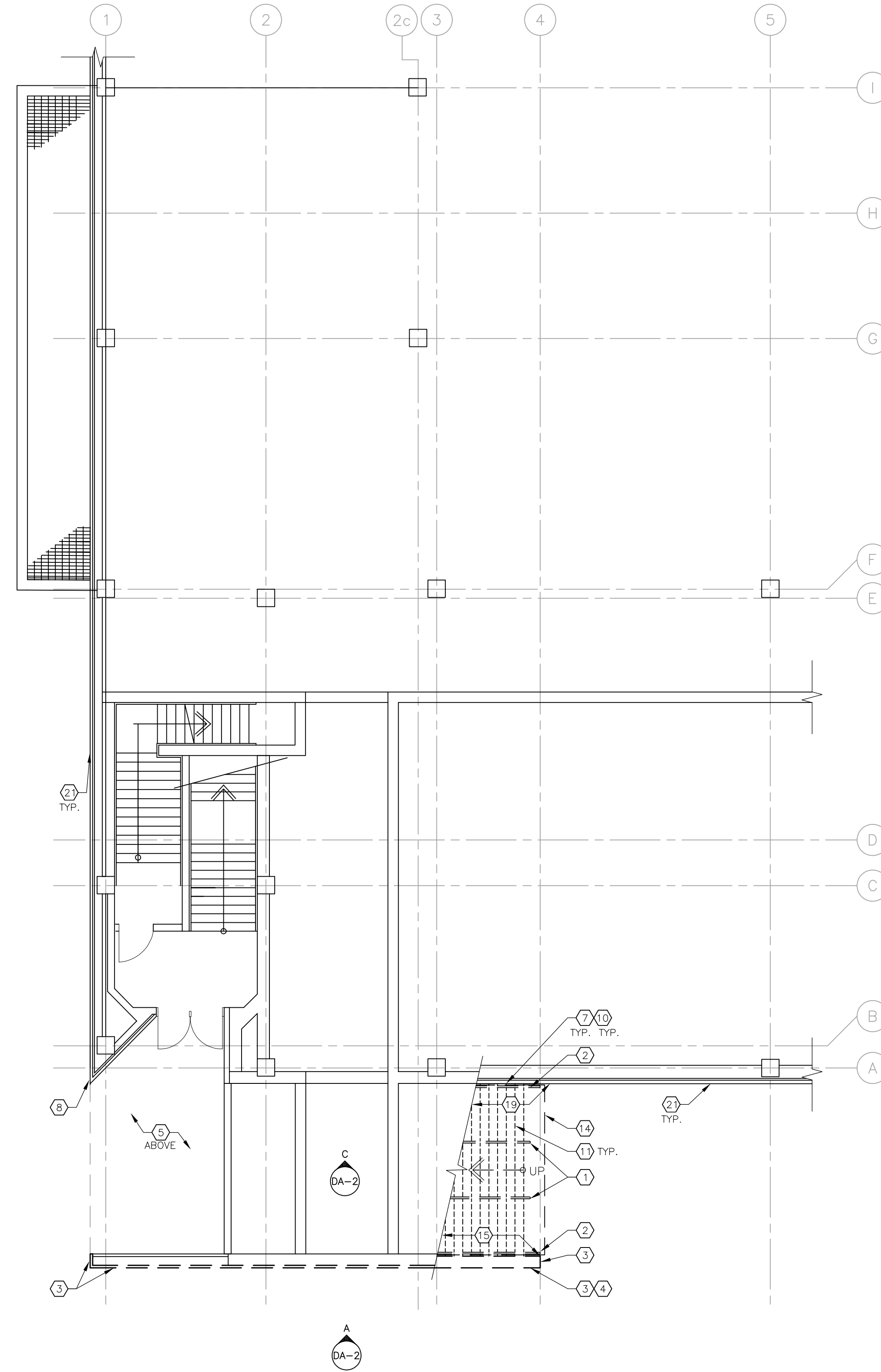
**fishbeck** Proj. No.: 231032  
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**DEMOLITION GENERAL NOTES**

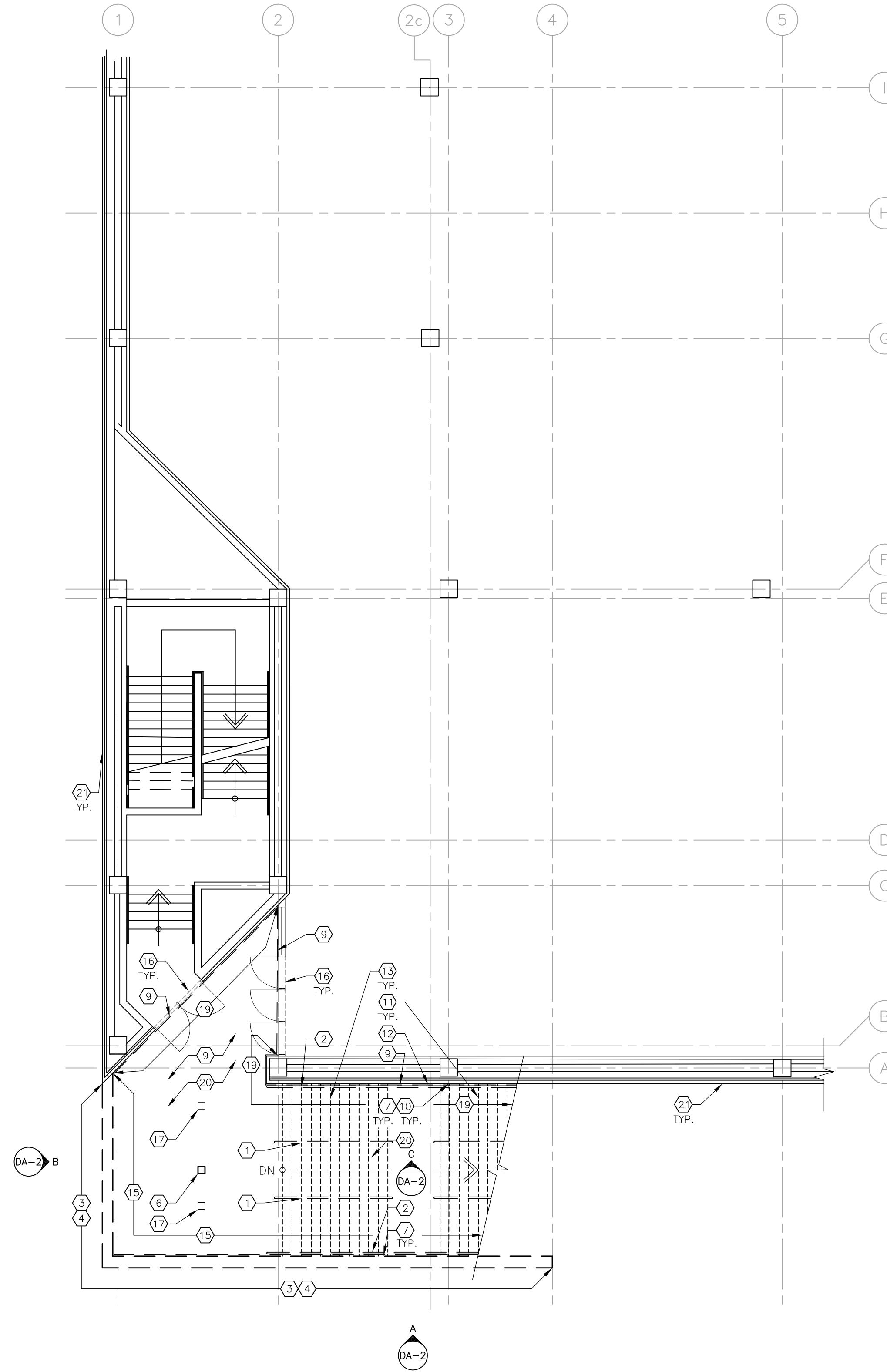
1. GENERAL DEMOLITION NOTES, KEYED DEMOLITION NOTES AND SPECIFICATIONS (DIVISION 2 - SITE DEMOLITION) APPLY TO ARCHITECTURAL DEMOLITION PLANS INCLUDED WITHIN THIS DOCUMENT SET.
2. THESE DEMOLITION NOTES AND PLANS DO NOT FULLY REPRESENT ALL DEMOLITION WORK REQUIRED TO INSTALL NEW WORK IN ACCORDANCE WITH CONTRACT DOCUMENTS, BUT ARE INTENDED TO SERVE AS GENERAL DEMOLITION GUIDELINES.
3. COORDINATE AND PHASE DEMOLITION IN ACCORDANCE WITH PLANS AND SPECIFICATIONS IN ORDER TO MAINTAIN BUILDING SECURITY, WEATHER TIGHTNESS, AND CONTINUING OPERATIONS FOR OWNER.
4. ALL WORK INDICATED WITH SOLID LINES IS EXISTING TO REMAIN, UNLESS OTHERWISE NOTED.
5. WHERE ITEMS ARE REMOVED, SEE NEW WORK DOCUMENTS FOR PATCH AND REPAIR REQUIREMENTS.
6. ALL ITEMS NOT PART OF THE SCOPE OF DEMOLITION ARE TO BE PRESERVED AND PROTECTED THROUGHOUT THE DURATION OF DEMOLITION AND CONSTRUCTION.
7. UPON REMOVAL CONCRETE AND / OR MASONRY, CONTRACTOR TO NOTIFY OWNER AND ARCHITECT IN WRITING, IF CONDITION OF EXISTING LINTELS AND / OR SUPPORT BEAMS ARE DETERIORATED (INCLUDING BUT NOT LIMITED TO EXCESS, EXTENSIVE RUST, EXTENSIVE CORROSION OF STEEL THICKNESS, ETC.).
8. SAWCUTTING OF ALL BRICK FOR REMOVAL SHALL OCCUR AT MASONRY JOINTS (HAND AND BED).

**DEMOLITION KEY NOTES**

- (DEMOLITION KEY NOTES ARE NOT APPLICABLE TO EACH SHEET)
1. REMOVE EX. FLOOR / STEP MOUNTED HANDRAIL, INCLUDING BRACKETS AND ANCHORS, IN ITS ENTIRETY.
  2. REMOVE EX. WALL MOUNTED HANDRAIL, INCLUDING BRACKETS AND ANCHORS, IN ITS ENTIRETY.
  3. REMOVE EX. BRICK VENEER, (SALVAGE AND REMOVE MORTAR FROM BRICK AS NECESSARY FOR BRICK VENEER INFILL WHERE NOTED) IN ITS ENTIRETY AT EXTERIOR SIDE OF STAIR SILL WALL.
  4. REMOVE, SALVAGE AND REMOVE MORTAR FROM EX. STONE CAP AT STAIR SILL WALL.
  5. REMOVE EX. GYPSUM BOARD CEILING IN ITS ENTIRETY.
  6. REMOVE EX. AREA DRAIN, REFER TO PLUMBING FOR EXTENT OF AREA DRAIN REMOVAL.
  7. REMOVE ALL EX. RECESSED 'STAIR' WALL SCONCES, REFER TO ELECTRICAL FOR EXTENT OF LIGHTING REMOVAL.
  8. SAWCUT AND REMOVE EX. BRICK VENEER AS REQUIRED FOR NEW BRICK VENEER TOOTH-IN WHERE BRICK VENEER WAS REMOVED FOR PRE-DESIGN INVESTIGATION.
  9. REMOVE CONCRETE LANDING IN ITS ENTIRETY, SUB-SLAB BELOW CONCRETE LANDING TO REMAIN; REFER TO STRUCT. FOR ADDITIONAL DETAILS AND INFORMATION.
  10. SAWCUT AND REMOVE EX. BRICK VENEER AS REQUIRED FOR NEW BRICK VENEER TOOTH-IN AROUND EX. RECESSED 'STAIR' WALL SCONCE OPENINGS.
  11. REMOVE EX. CONCRETE STAIR ON GRADE IN ITS ENTIRETY, REFER TO STRUCT. FOR ADDITIONAL DETAILS AND INFORMATION.
  12. REMOVE EX. CONCRETE LANDING ON GRADE IN ITS ENTIRETY, REFER TO STRUCT. FOR ADDITIONAL DETAILS AND INFORMATION.
  13. REMOVE EX. CONCRETE STAIR IN ITS ENTIRETY, SUB-SLAB BELOW CONCRETE STAIR TO REMAIN; REFER TO STRUCT. FOR ADDITIONAL DETAILS AND INFORMATION.
  14. REMOVE EX. CONCRETE SLAB ON GRADE IN ITS ENTIRETY, GRADE BEAM FOR SLAB TO REMAIN, REFER TO STRUCT. FOR ADDITIONAL DETAILS AND INFORMATION.
  15. REMOVE EX. BRICK VENEER, (SALVAGE AND REMOVE MORTAR FROM BRICK AS NECESSARY FOR BRICK VENEER INFILL WHERE NOTED) IN ITS ENTIRETY AT INTERIOR SIDE OF STAIR SILL WALL PARAPET.
  16. SELECTIVELY REMOVE AND SALVAGE DOOR THRESHOLD AS REMOVED FOR REMOVAL OF CONCRETE LANDING.
  17. CORE SUB-SLAB AS REQ'D. FOR NEW AREA DRAIN, REFER TO NEW WORK DRAWINGS FOR LAYOUT AND INFORMATION.
  18. SAWCUT AND REMOVE EX. BRICK VENEER AT BRICK LOCATIONS WITH ABANDON ANCHORS / PENETRATIONS FROM REMOVED STAIR HANDRAIL.
  19. SAWCUT AND REMOVE EX. EPOXY COATED BRICK VENEER AT COURSES ABOVE STAIRS / LANDINGS.
  20. REMOVE WATERPROOFING MEMBRANE (LOCATED BETWEEN EX. TO REMAIN SUB-SLAB AND REMOVED CONCRETE STAIRS / LANDINGS) IN ITS ENTIRETY.
  21. ALTERNATE NO. 1: CUT AND REMOVE ALL DAMAGED, CRACKED AND FRILING SEALANT FROM EXISTING BRICK VENEER CONTROL JOINTS AROUND ENTIRE EXTERIOR PERIMETER OF WHARTON CENTER.

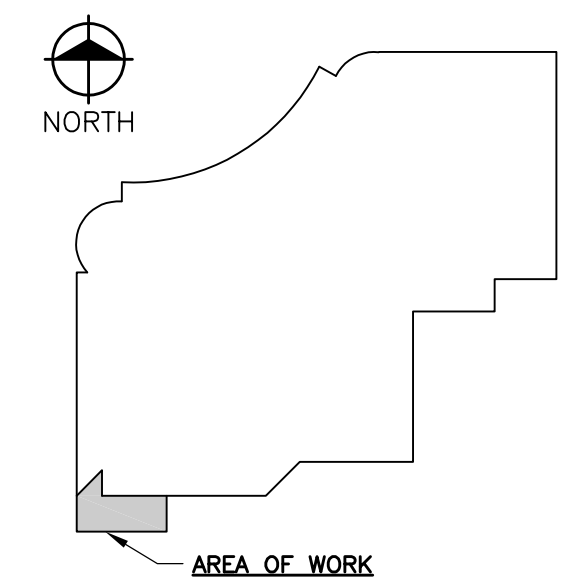


**PARTIAL FIRST FLOOR DEMOLITION PLAN**  
 SCALE: 1/8" = 1'-0"



**PARTIAL SECOND FLOOR DEMOLITION PLAN**  
 SCALE: 1/8" = 1'-0"

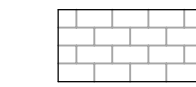
**KEYPLAN**



Infrastructure Planning and Facilities  
**MICHIGAN STATE UNIVERSITY**  
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 SCALE AS NOTED  
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 ARCHITECTURAL DEMOLITION PLANS  
**DA-1**  
 2 OF 13

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**ELEVATION SYMBOL LEGEND**

 EXISTING BRICK VENEER TO BE REMOVED  
(SALVAGE BRICK AS NECESSARY FOR BRICK INFILL WHERE NOTED)

<b>fishbeck</b> engineers scientists architects constructors	Proj. No.: 231032
	Desg. By: CLF
	Designer: CLF
	Reviewer: MTV
	Manager: KN

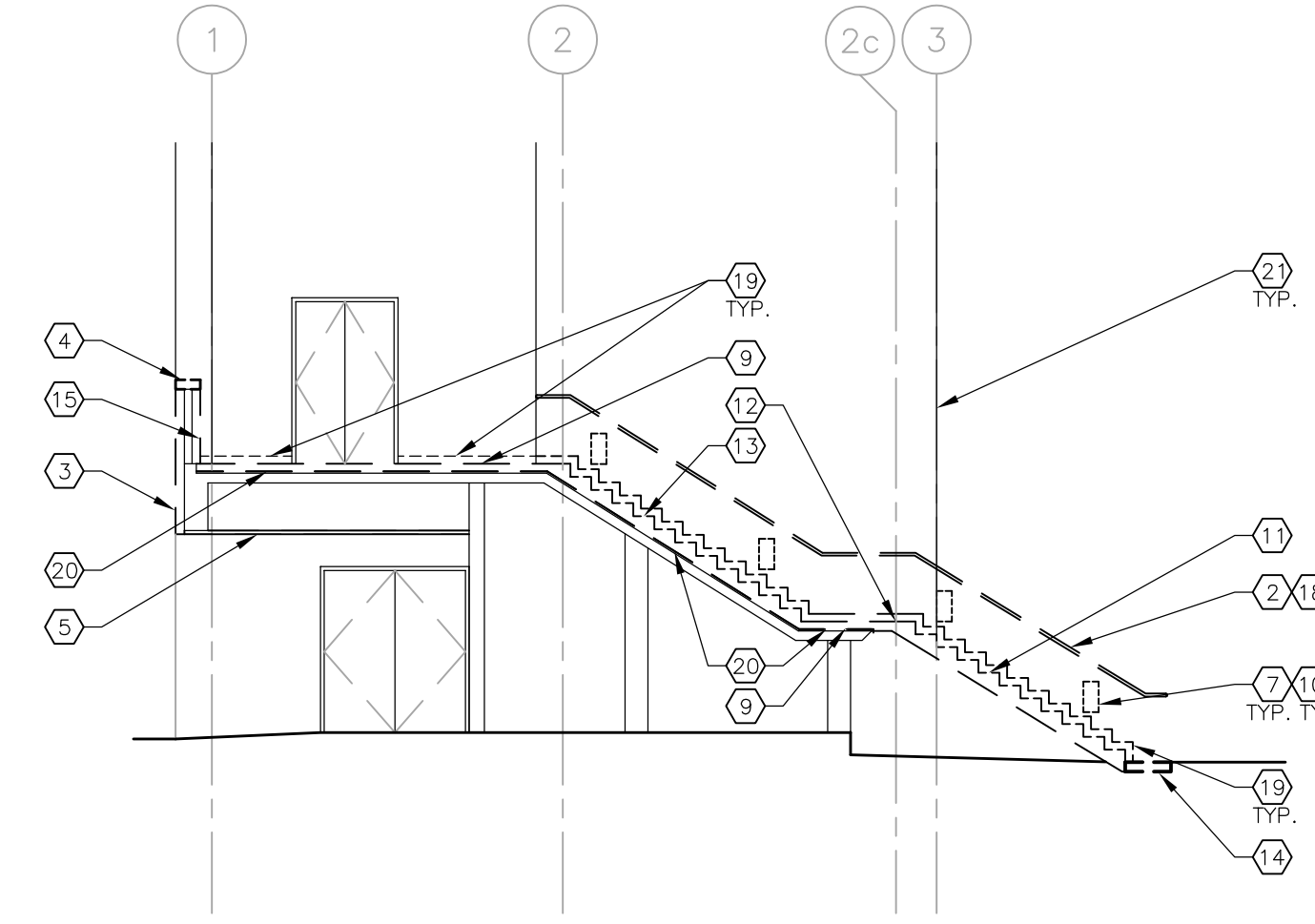
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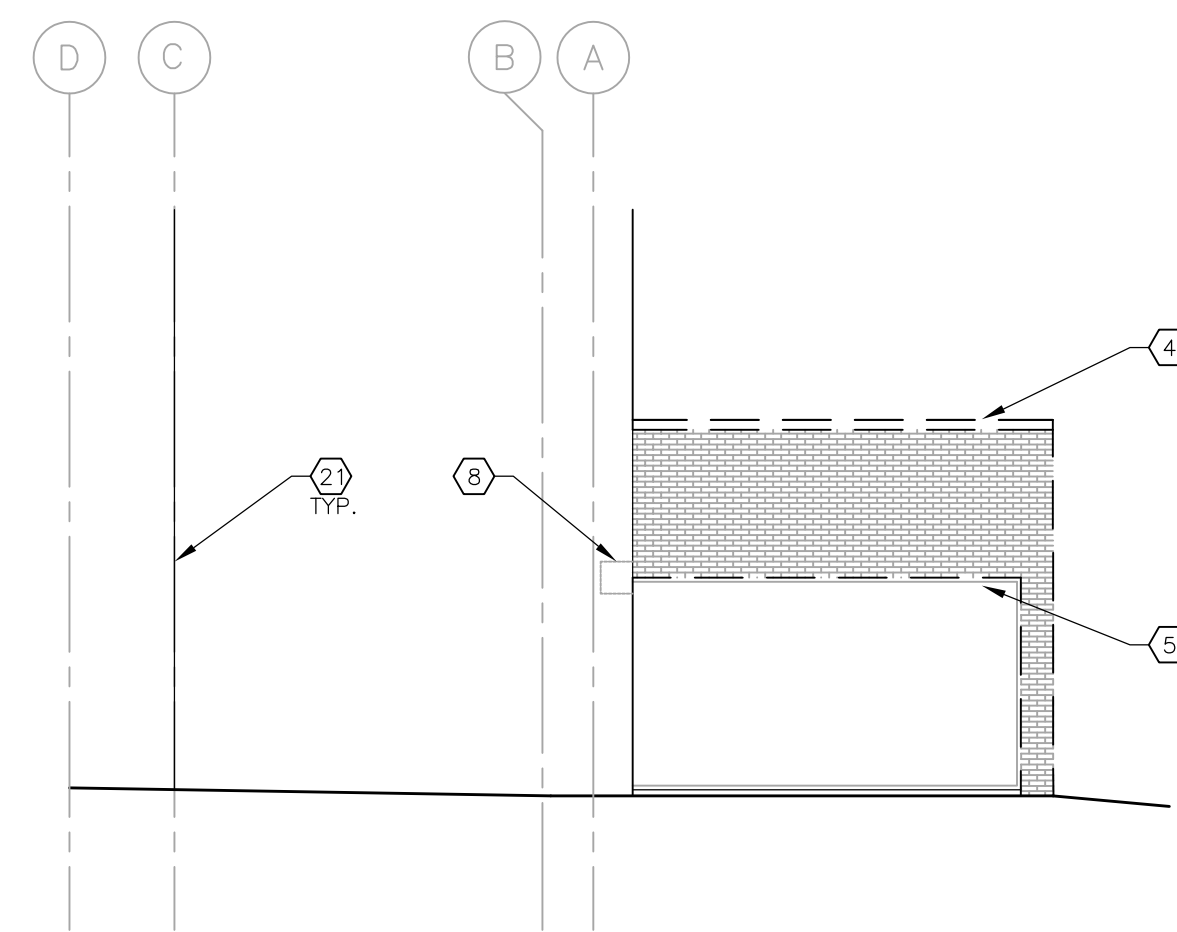
**DEMOLITION KEY NOTES**

(DEMOLITION KEY NOTES ARE NOT APPLICABLE TO EACH SHEET)

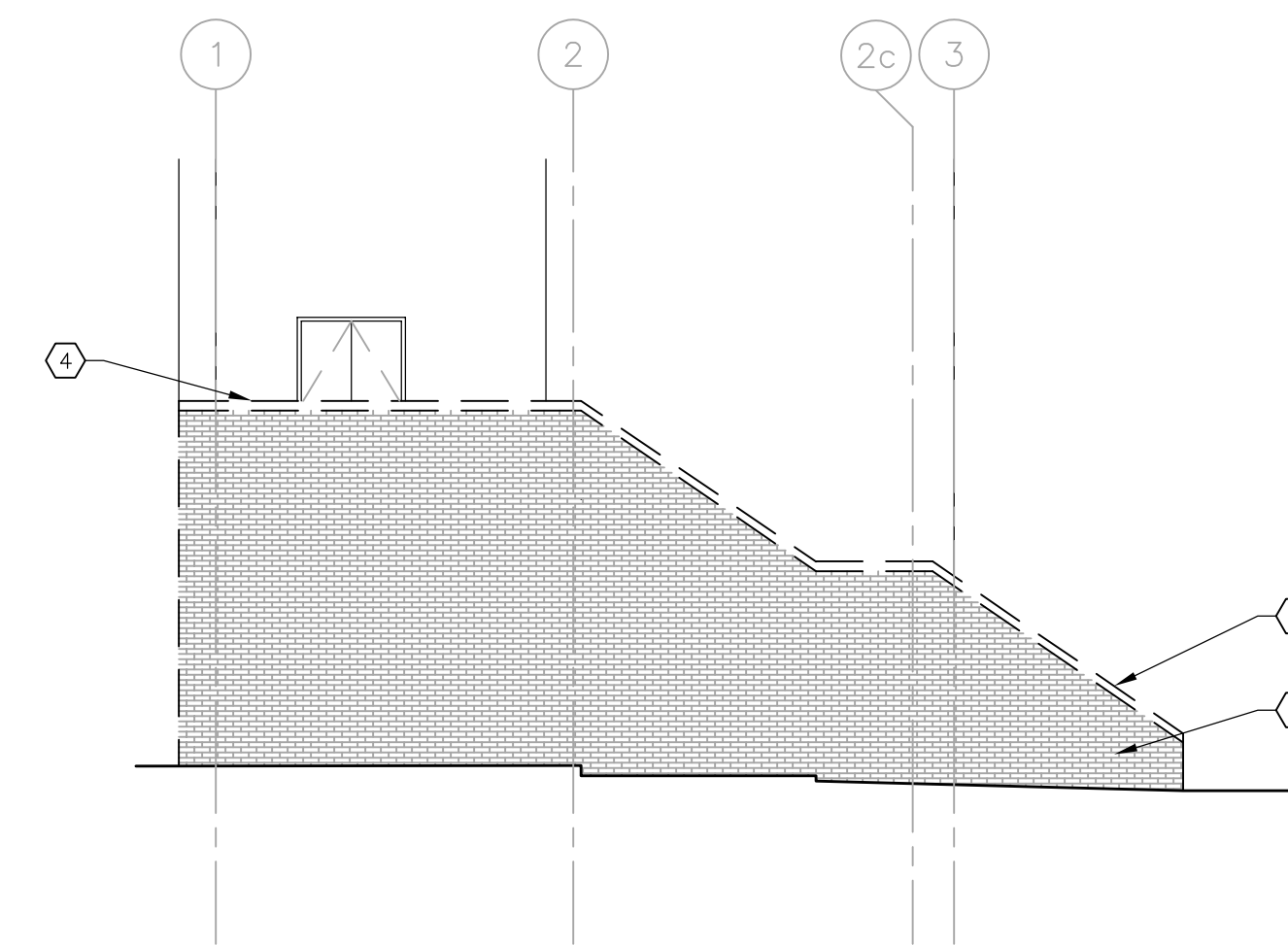
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**C PARTIAL DEMOLITION SOUTH ELEVATION**  
SCALE: 1/8" = 1'-0"



**B PARTIAL DEMOLITION WEST ELEVATION**  
SCALE: 1/8" = 1'-0"



**A PARTIAL DEMOLITION SOUTH ELEVATION**  
SCALE: 1/8" = 1'-0"

Infrastructure  
Planning and Facilities

**MICHIGAN STATE UNIVERSITY**

**Michigan State University**  
East Lansing, Michigan

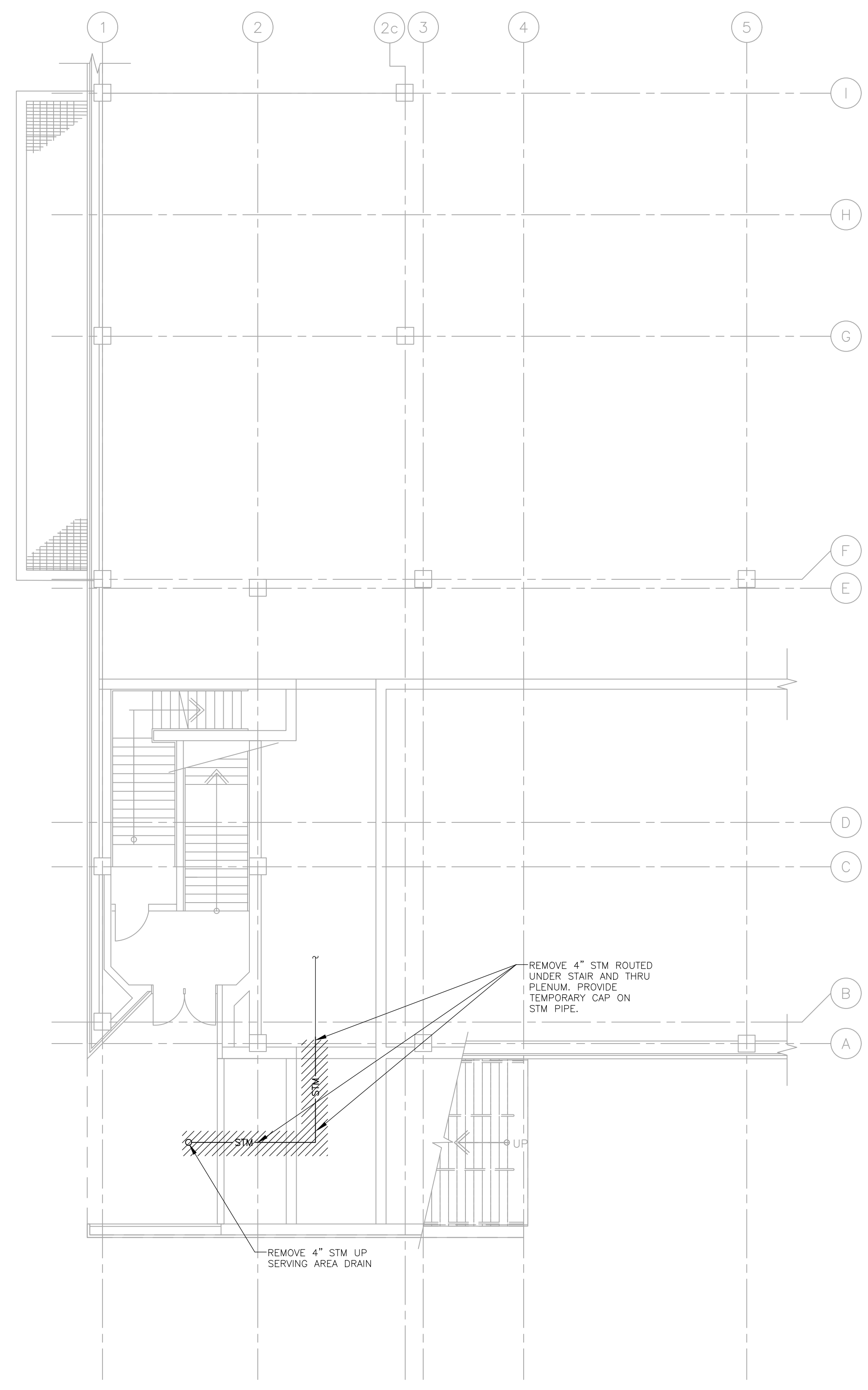
Wharton Center  
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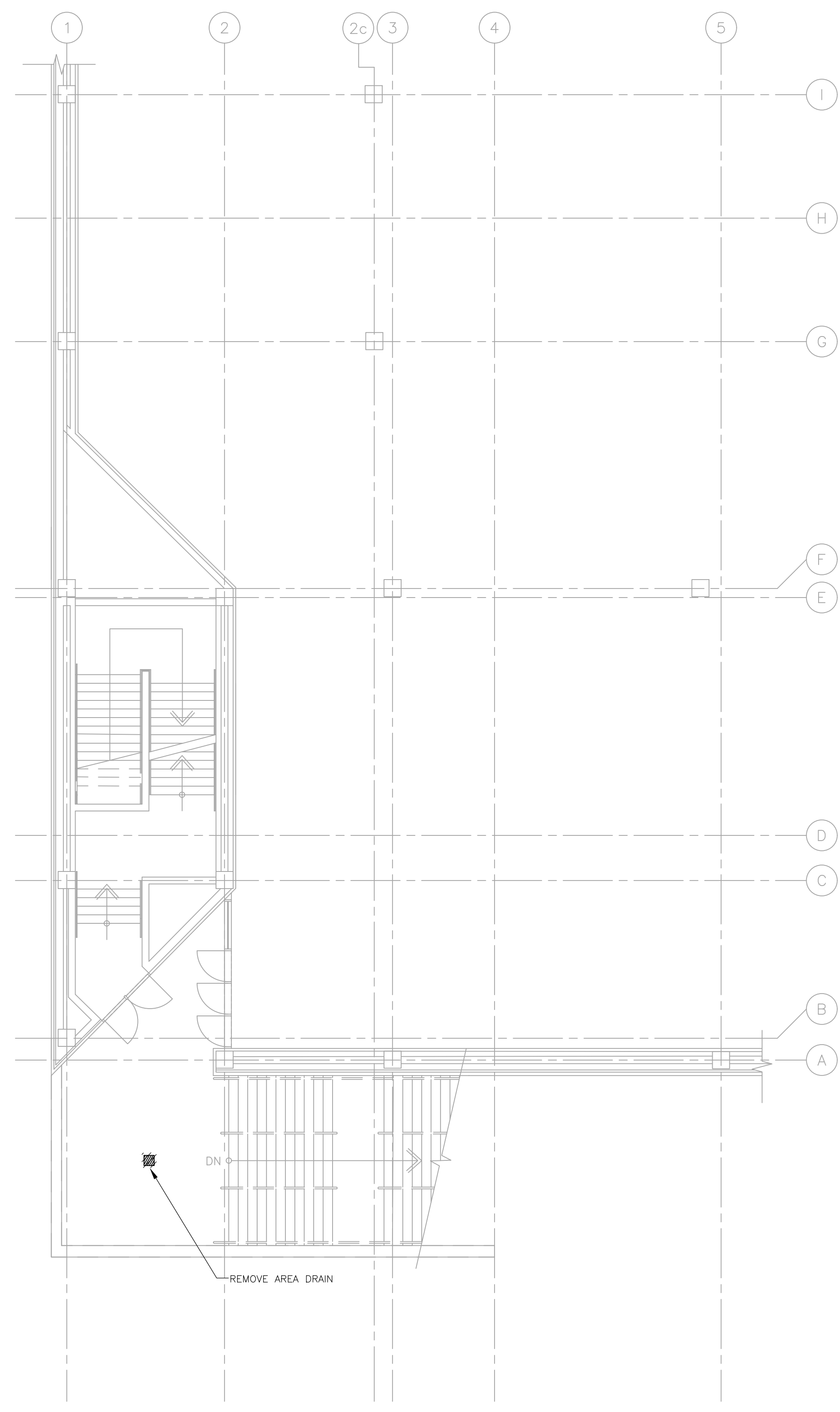
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CONST. REP.	
APPR.	
DATE	AS NOTED
SCALE	AS NOTED
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12/1/2023	BIDS & CONST.

DEMOLITION  
EXTERIOR  
ELEVATIONS  
**DA-2**  
3 OF 13

CAPITAL PROJ. NO. CP23026	
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**PARTIAL FIRST FLOOR PLUMBING DEMOLITION PLAN**  
 SCALE: 1/8" = 1'-0"  
 NORTH

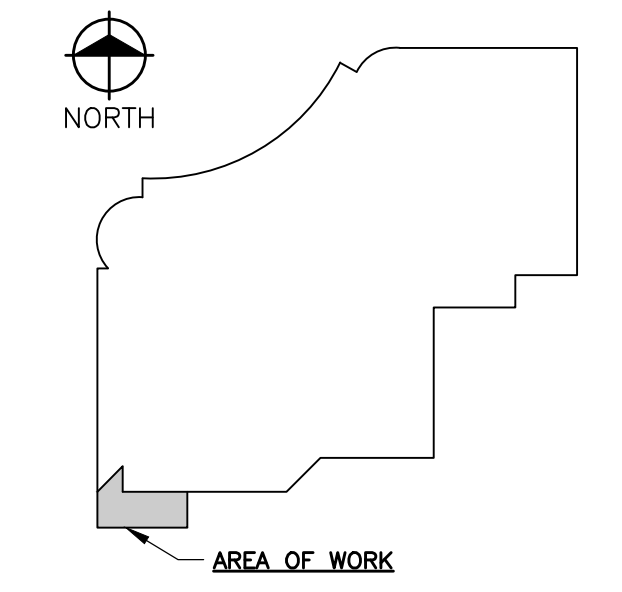


**PARTIAL SECOND FLOOR PLUMBING DEMOLITION PLAN**  
 SCALE: 1/8" = 1'-0"  
 NORTH

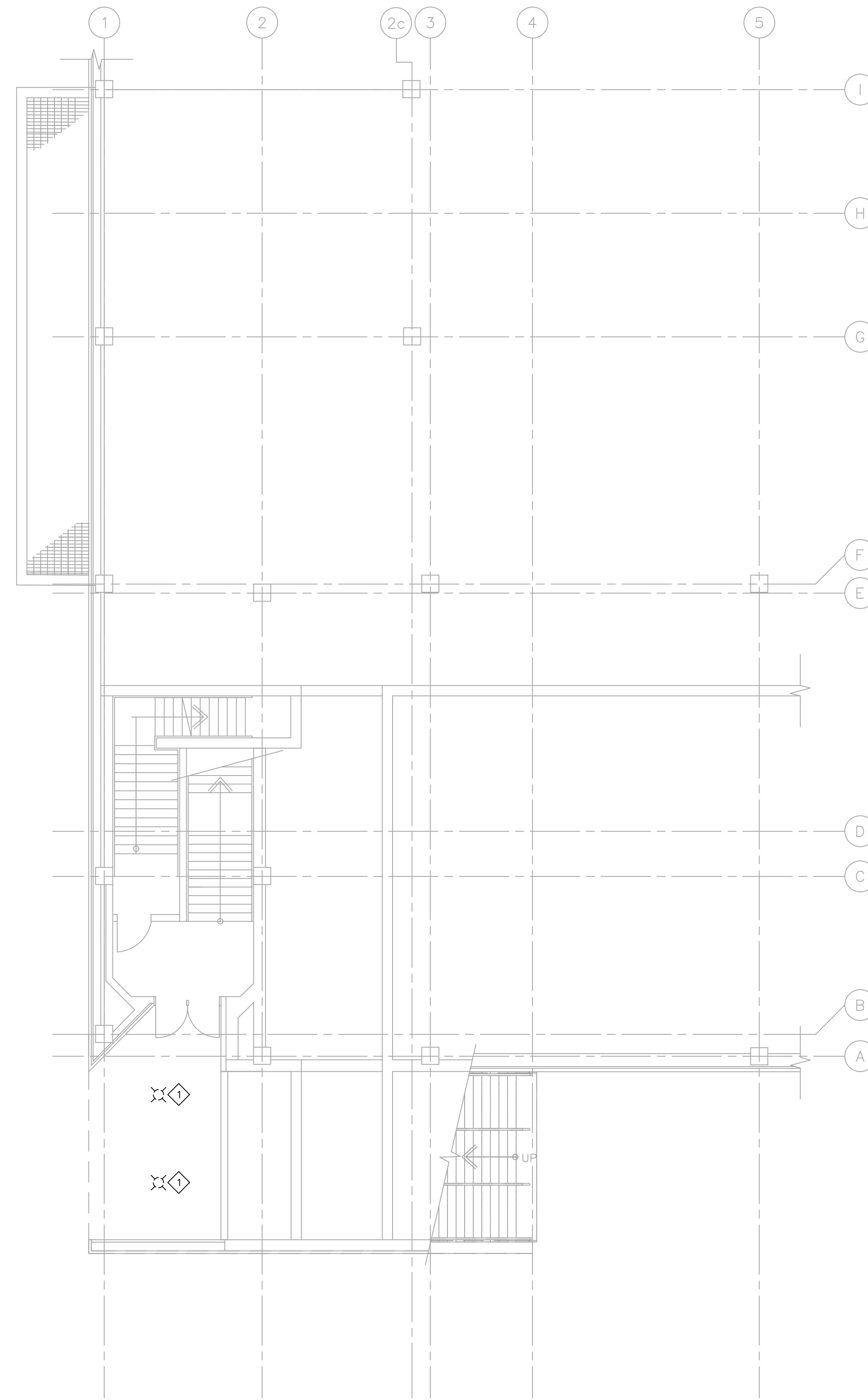
**GENERAL NOTES**

- DEMOLITION NOTES**
1. REMOVE ALL PORTIONS OF WORK IDENTIFIED BY CROSS HATCHING UNLESS NOTED OTHERWISE.
  2. FIELD DETERMINE EXACT LOCATIONS AND REMOVE PORTIONS OF PIPING AND EQUIPMENT SHOWN BY CROSS-HATCHING. SCHEDULE SHUT-DOWNS WITH OWNER. CAP ALL OPEN PIPE ENDS AT END OF WORK DAY. REFER TO OTHER DRAWINGS FOR COORDINATION OF EXTENT OF DEMOLITION WITH NEW WORK.
  3. PATCH OPENINGS LEFT BY DEMOLITION IN WALLS AND FLOORS TO MATCH SURROUNDING SURFACES.
  4. REPAIR TO ORIGINAL CONDITIONS ANY PIPE INSULATION DAMAGED DURING DEMOLITION.
  5. PROVIDE ISOLATION, DRAIN AND FILLING OF PIPING SYSTEMS AS REQUIRED TO PERFORM THE WORK OF DEMOLITION.

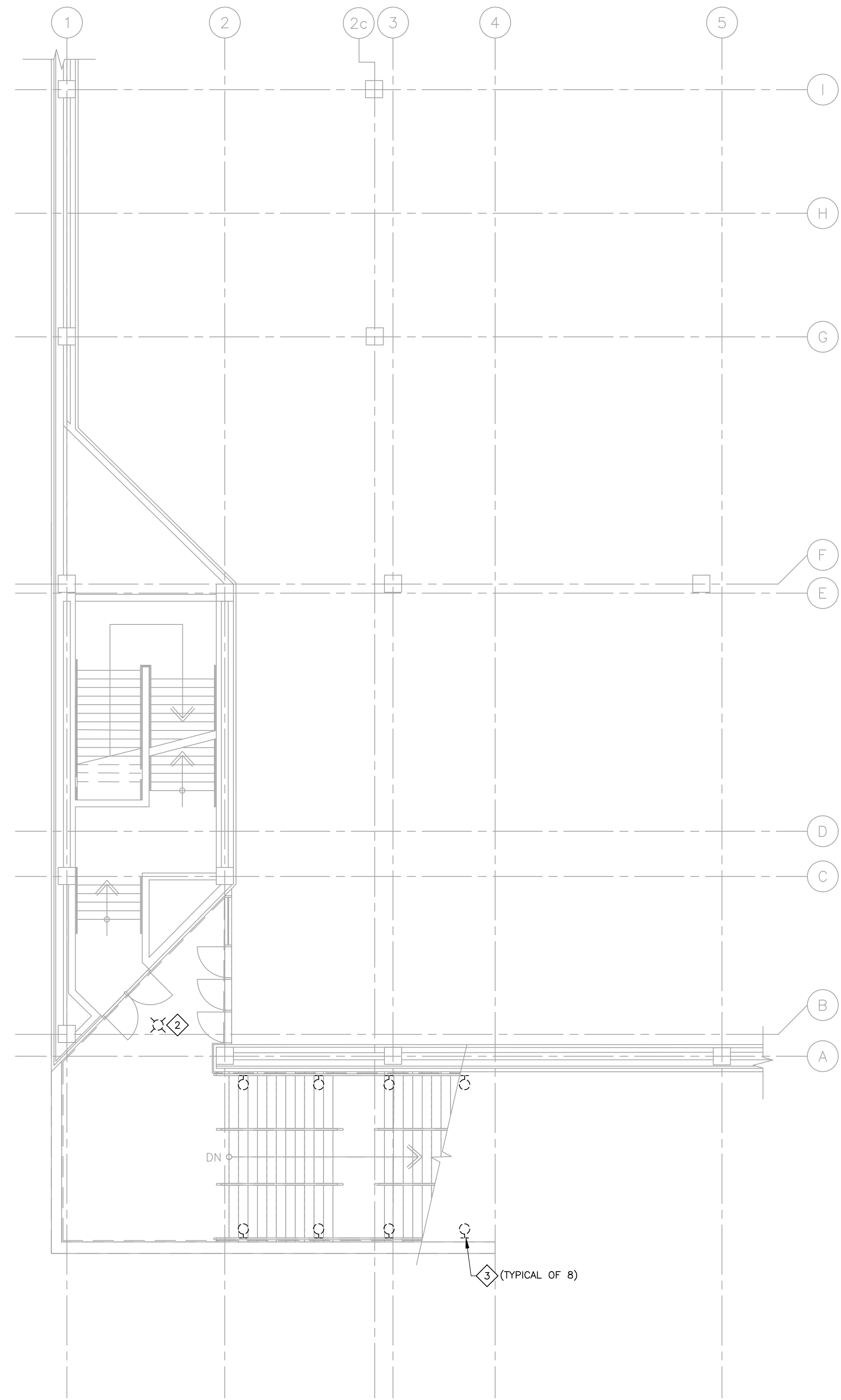
**KEYPLAN**



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**PARTIAL FIRST FLOOR ELECTRICAL DEMOLITION PLAN**  
 SCALE: 1/8" = 1'-0"



**PARTIAL SECOND FLOOR ELECTRICAL DEMOLITION PLAN**  
 SCALE: 1/8" = 1'-0"

**SYMBOL LEGEND**

- ⊗ EXTERIOR DOWNLIGHT
- ⊕ EXTERIOR WALL SCONCE

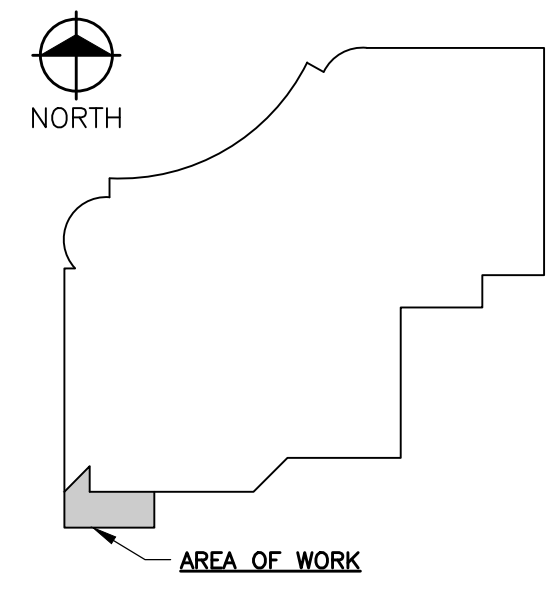
**NOTES**

1. INSTALLATION OF ELECTRICAL WORK SHALL CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION.
2. ALL ELECTRICAL EQUIPMENT SHALL BE UL LISTED.
3. ALL EXISTING, NON-COMFORMING ELECTRICAL INSTALLATIONS WITHIN THE PROJECT AREAS SHALL BE CORRECTED TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AND THE MSU PROJECT MANAGER.
4. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE SUBMISSION OF BIDS. WHERE EXISTING CONDITIONS ARE DIFFERENT THAN INFORMATION INDICATED ON THE DRAWINGS, CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR INFORMATION TO THE ENGINEER FOR RESOLUTION.
5. ALL WORK SHALL BE SUBJECT TO REVIEW AND ACCEPTANCE BY THE MSU PROJECT MANAGER AND THE AUTHORITY HAVING JURISDICTION. WORK THAT DOES NOT MEET THE SATISFACTION OF THE MSU PROJECT MANAGER OR THE AUTHORITY HAVING JURISDICTION SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
6. WHERE ELECTRICAL CIRCUITS ARE MODIFIED OR ADDED TO EXISTING PANELBOARDS, CONTRACTOR SHALL PROVIDE AN UPDATED, TYPEWRITTEN, PANELBOARD CIRCUIT DIRECTORY.
7. SEAL ALL CONDUITS PENETRATING BUILDING WALLS OR FLOORS AS INDICATED IN ELECTRICAL UNDERGROUND DUCTS AND MANHOLES SPECIFICATION.
8. ALL EXTERIOR LIGHTING SHALL BE CONTROLLED BY THE MSU CENTRAL CONTROL SYSTEM, UNO.
9. DASHED LINES INDICATE EQUIPMENT TO BE REMOVED.
10. COMPLETE ALL WORK IN ACCORDANCE WITH MSU TECHNICAL STANDARDS.

**KEY NOTES**

1. REMOVE LIGHTING FIXTURES. DEMO CONDUIT/WIRING BACK TO LOCATION WHERE THE CONDUIT CAN BE RE-WORKED FOR THE NEW LIGHTING FIXTURES. LIGHTING CIRCUIT AND SWITCHING TO BE RE-USED.
2. REMOVE LIGHTING FIXTURE AND SWITCHING. DEMO CONDUIT/WIRING BACK TO LOCATION WHERE THE CONDUIT CAN BE RE-WORKED FOR THE NEW CIRCUITING.
3. REMOVE LIGHTING FIXTURES. DEMO CONDUIT/WIRING BACK TO LOCATION WHERE THE CONDUIT CAN BE RE-WORKED FOR THE NEW WALL PACK LIGHTING. LIGHTING CIRCUIT TO BE RE-USED.

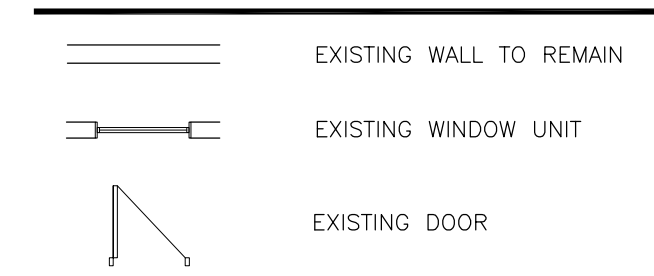
**KEYPLAN**



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PLOT: INF01\_Z:\2023\231032\CAD\CD\A1\_231032.DWG LAYOUT: A-1 DATE: 12/1/2023 TIME: 4:07:10 PM USER: LFINNEY

**FLOOR PLAN SYMBOL LEGEND**



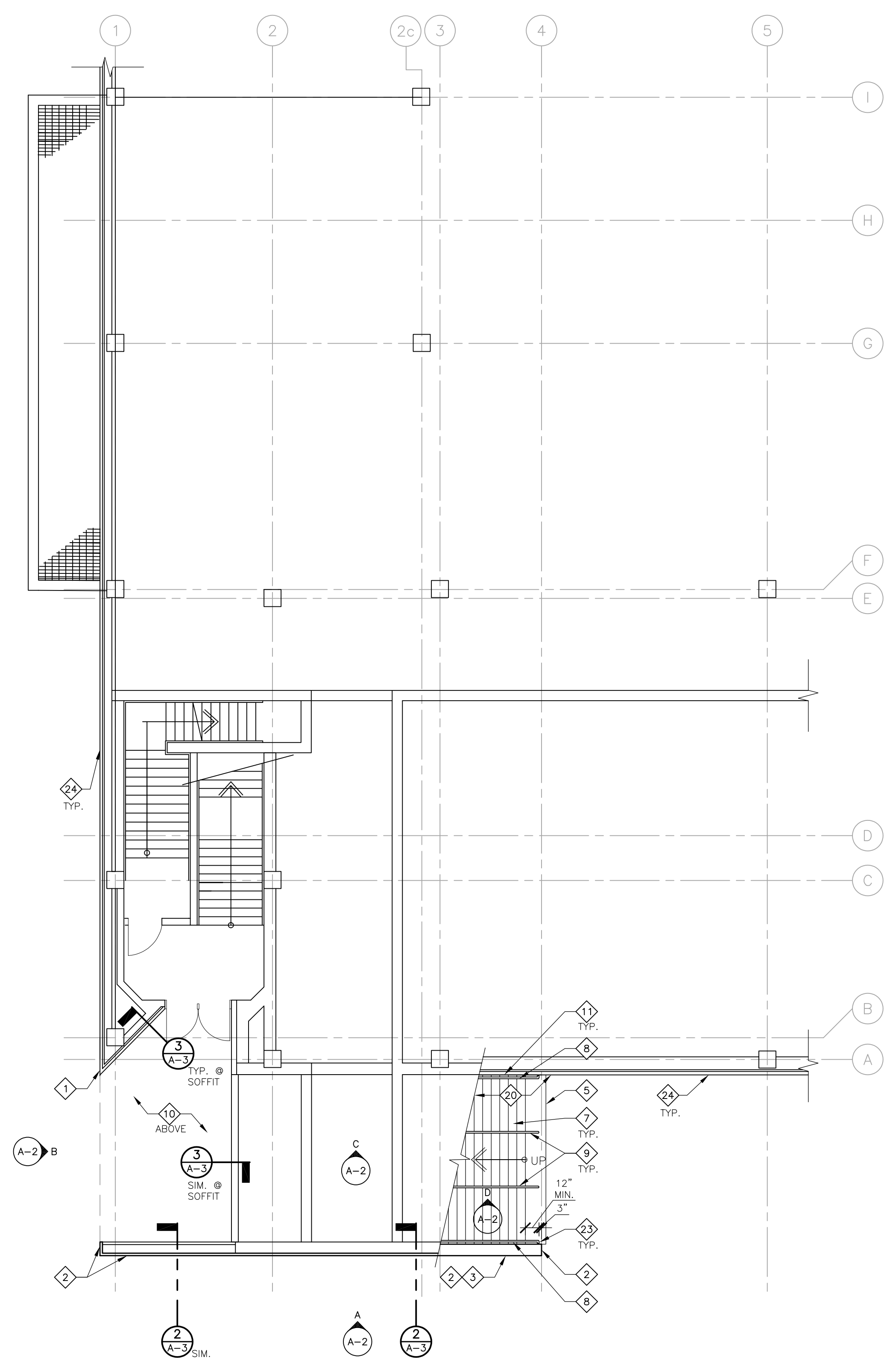
**fishbeck** Proj. No.: 231032  
 engineers Day. By: CLF  
 architects Designer: CLF  
 constructors Reviewer: MTV  
 Manager: KN

**NEW WORK GENERAL NOTES**

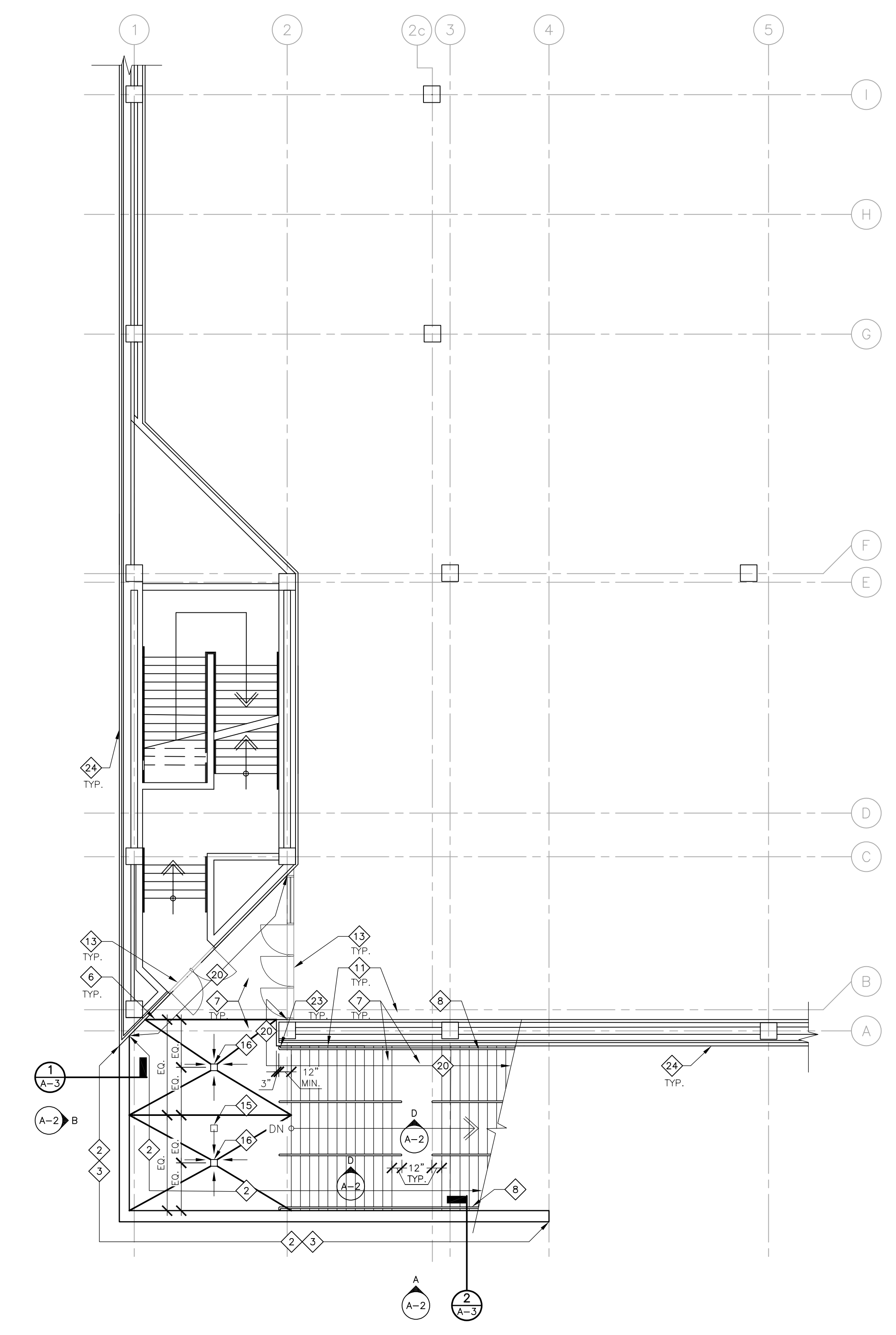
- COORDINATE ALL WORK INDICATED PER THE PROJECT MANUAL AND DRAWINGS - NOTE: THE MOST STRINGENT REQUIREMENT OR MORE COSTLY WORK SHALL GOVERN WHERE CONFLICTS OCCUR.
- CONTRACTOR SHALL COORDINATE PHASING AND SEQUENCING OF THE WORK TO MAINTAIN BUILDING SECURITY AND WEATHER TIGHTNESS.
- PROVIDE INTERIOR AND/OR EXTERIOR SHORING, BRACING, OR SUPPORT AS REQUIRED TO PREVENT MOVEMENT, SETTLEMENT, DAMAGE, OR COLLAPSE OF THE STRUCTURE WHERE WORK OCCURS.
- ALL DIMENSIONS AND FIELD CONDITIONS INDICATED ON DRAWINGS SHALL BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION; COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.
- IF AREAS WITHIN THE BUILDING ARE TO REMAIN OCCUPIED, CONTRACTOR TO PROVIDE AND MAINTAIN CONSTRUCTION BARRIER BETWEEN CONSTRUCTION AND OCCUPIED AREA.
- ALL DIMENSIONS ON FLOOR PLANS ARE SHOWN TO FINISHED FACE OF WALL, UNLESS OTHERWISE NOTED. SEE ENLARGED FLOOR PLANS, SECTIONS, AND DETAILS FOR OTHER DIMENSIONS.
- PROVIDE PROTECTION OF EXTERIOR DOORS OR FINISHES WITHIN AREA OF WORK DURING DEMOLITION AND CONSTRUCTION ACTIVITIES TO PROTECT EXISTING FINISHES AND MATERIALS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE MODIFICATION/REPAIR/REPLACEMENT OF EXISTING CONSTRUCTION AND FINISHES THAT ARE REQUIRED TO BE REMOVED FOR COMPLETION OF NEW WORK.

**NEW WORK KEY NOTES**

- (NEW WORK KEY NOTES ARE NOT APPLICABLE ON EACH SHEET)
- TOOTH-IN SALVAGED BRICK VENEER WHERE BRICK WAS REMOVED FOR PRE-DESIGN INVESTIGATION.
  - NEW BRICK VENEER.
  - REINSTALLED STONE CAP.
  - BRICK VENEER CONTROL JOINT.
  - NEW REINFORCED CONCRETE SLAB WITH CLEAR SEALER ON GRADE, REFER TO STRUCT. FOR SLAB INFORMATION, DETAILS AND CONNECTION TO EXISTING GRADE BEAM.
  - SLOPE NEW CONCRETE TO AREA DRAIN. CONCRETE LANDING PERIMETER TO MATCH ELEVATION OF EX. REMOVE CONCRETE LANDING PERIMETER, AREA DRAIN TO BE SET 3/4" BELOW HEIGHT OF PERIMETER CONCRETE ELEVATION.
  - NEW REINFORCED CONCRETE STAIRS AND LANDING WITH CLEAR SEALER. STAIR DIMENSIONS AND LAYOUT (RISER, TREADS AND LANDINGS) IS TO MATCH EX. REMOVE CONCRETE STAIR / LANDING ELEVATIONS, DIMENSIONS AND LAYOUT; STAIR RISE TO BE 7" MAX., RUN TO BE 12" MAX. V.I.F.) REFER TO STRUCT. FOR STAIR INFORMATION AND DETAILS.
  - NEW 2" DIA. BRONZE ANODIZED ALUM. WALL MOUNTED HANDRAIL W/ COVER PLATE OVER WALL BRACKET ANCHORS.
  - NEW 2" DIA. BRONZE ANODIZED ALUM. FLOOR MOUNTED HANDRAIL W/ COVER PLATE OVER ANCHORS.
  - NEW DIRECT-APPLIED EXTERIOR FINISH SYSTEM SOFFIT WITH SUPPORT FRAMING.
  - TOOTH-IN SALVAGED BRICK WHERE EX. RECESSED 'STAIR' WALL SCOTCH WAS REMOVED.
  - CUT AND REMOVE BRICK HEAD JOINT FOR NEW PVC CELL VENT / WEEP (PROVIDE CONT. BUTYL BEAD AROUND VENT / WEEP AND INSERT INTO HEAD JOINT - DO NOT BLOCK VENT OPENINGS); REMOVE HEAD JOINT AT FIRST FULL BRICK COURSE ABOVE LANDINGS @ 24" O.C.; REMOVE HEAD JOINT AT FIRST FULL BRICK COURSE ABOVE STEPS (EVERY OTHER STEP) AND AT FIRST STEP AT GRADE.
  - REINSTALL SALVAGED THRESHOLD AT DOORS WHERE THRESHOLD WAS REMOVED, SET THRESHOLD IN 3 CONT. BEADS OF BUTYL SEALANT.
  - GALVANIZED STEEL LINTEL, REFER TO STRUCT.
  - INFILL SUB-SLAB WHERE EX. AREA DRAIN WAS REMOVED, REFER TO STRUCT.
  - NEW AREA DRAIN, FIELD VERIFY DRAIN LOCATION SO AS TO NOT LOCATE AT SUB-SLAB BEAM / STRUCT., REFER TO PLUMBING.
  - TOOTH-IN SALVAGED BRICK WHERE EX. BRICK (AT REMOVED STAIR HANDRAIL ANCHORS / PENETRATIONS) WAS REMOVED.
  - NEW SURFACE MOUNTED LIGHT FIXTURE WITH PAINTED (COLOR TO MATCH MORTAR COLOR) SURFACE MOUNTED CONDUIT, REFER TO ELECTRICAL. FIXTURE TO BE CENTERED ON STAIR LANDING AND CENTERED ON MASONRY BED JOINT (15'-0" A.F.F., V.I.F.).
  - EX. CONTROL JOINT TO REMAIN.
  - TOOTH-IN SALVAGED BRICK WHERE EX. EPOXY COATED BRICK WAS REMOVED AT COURSES ABOVE STAIRS / LANDINGS.
  - NEW WATERPROOFING MEMBRANE BETWEEN SUB-SLAB AND AND STAIR / LANDING SLAB.
  - TURN WATERPROOFING DOWN AT OUTSIDE EDGE OF SUB-SLAB.
  - HANDRAIL RETURN TO WALL.
  - ALTERNATE NO. 1: CLEAN AND RESEAL ALL BRICK VENEER CONTROL JOINTS AROUND ENTIRE EXTERIOR PERIMETER OF WHARTON CENTER WHERE DAMAGED, CRACKED AND FAILING SEALANT WAS REMOVED.

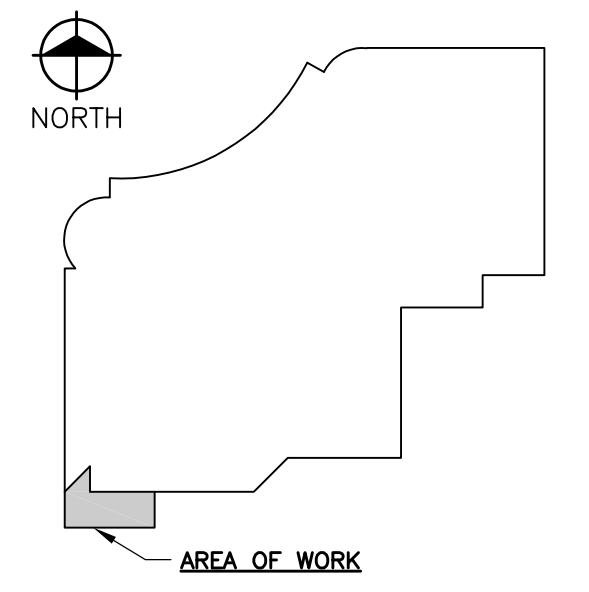


**PARTIAL FIRST FLOOR PLAN**  
SCALE: 1/8" = 1'-0"  
NORTH



**PARTIAL SECOND FLOOR PLAN**  
SCALE: 1/8" = 1'-0"  
NORTH

**KEYPLAN**



CAPITAL PROJ. NO. CP23026

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ARCH.	B. CHARLAND
MECH.	
ELEC.	K. HOWARD
CIVIL	
L.A.	
STRUCT.	S. LAUGHLIN
CONST. REP.	
APPR.	
DATE	AS NOTED
SCALE	
REVISIONS	
12/1/2023	BIDS & CONST.

PLOT\_INFO\_Z:\2023\231032\CAD\CD\A2\_231032.DWG LAYOUT: A-2 USER: LFINNEY DATE: 12/1/2023 TIME: 4:07:49 PM

ELEVATION SYMBOL LEGEND



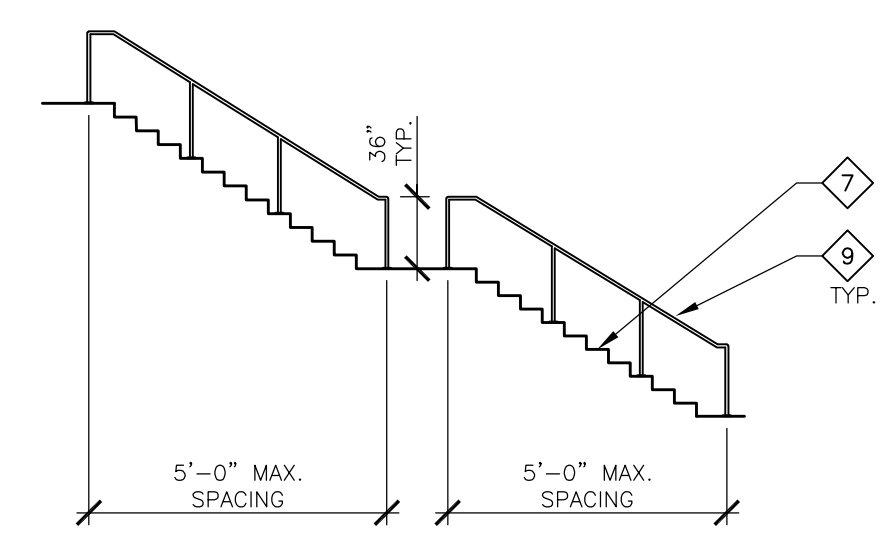
**fishbeck** Proj. No.: 231032  
 engineers Day. By: CLF  
 architects Designer: CLF  
 constructors Reviewer: MTV  
 Manager: KN

NEW WORK GENERAL NOTES

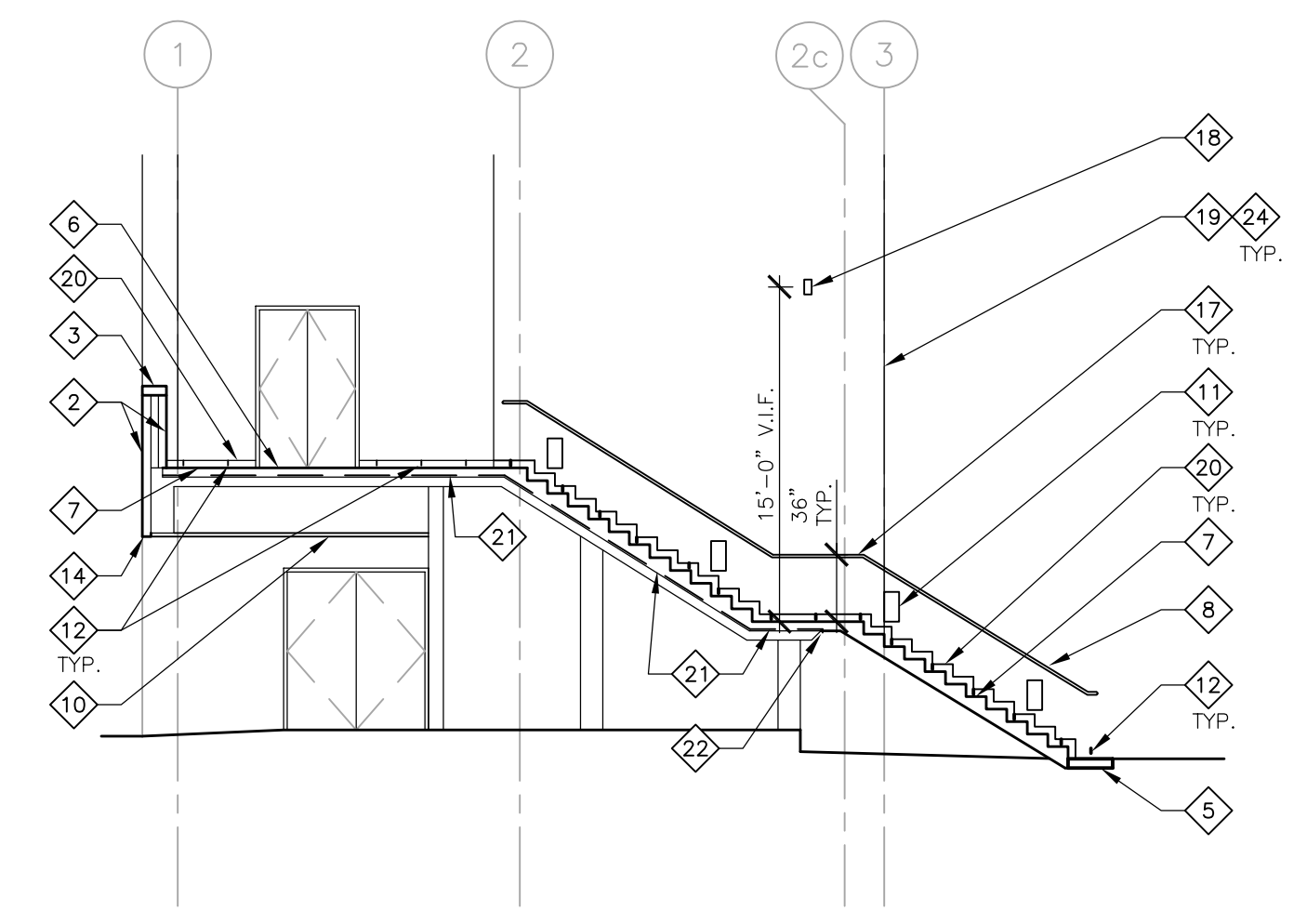
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NEW WORK KEY NOTES

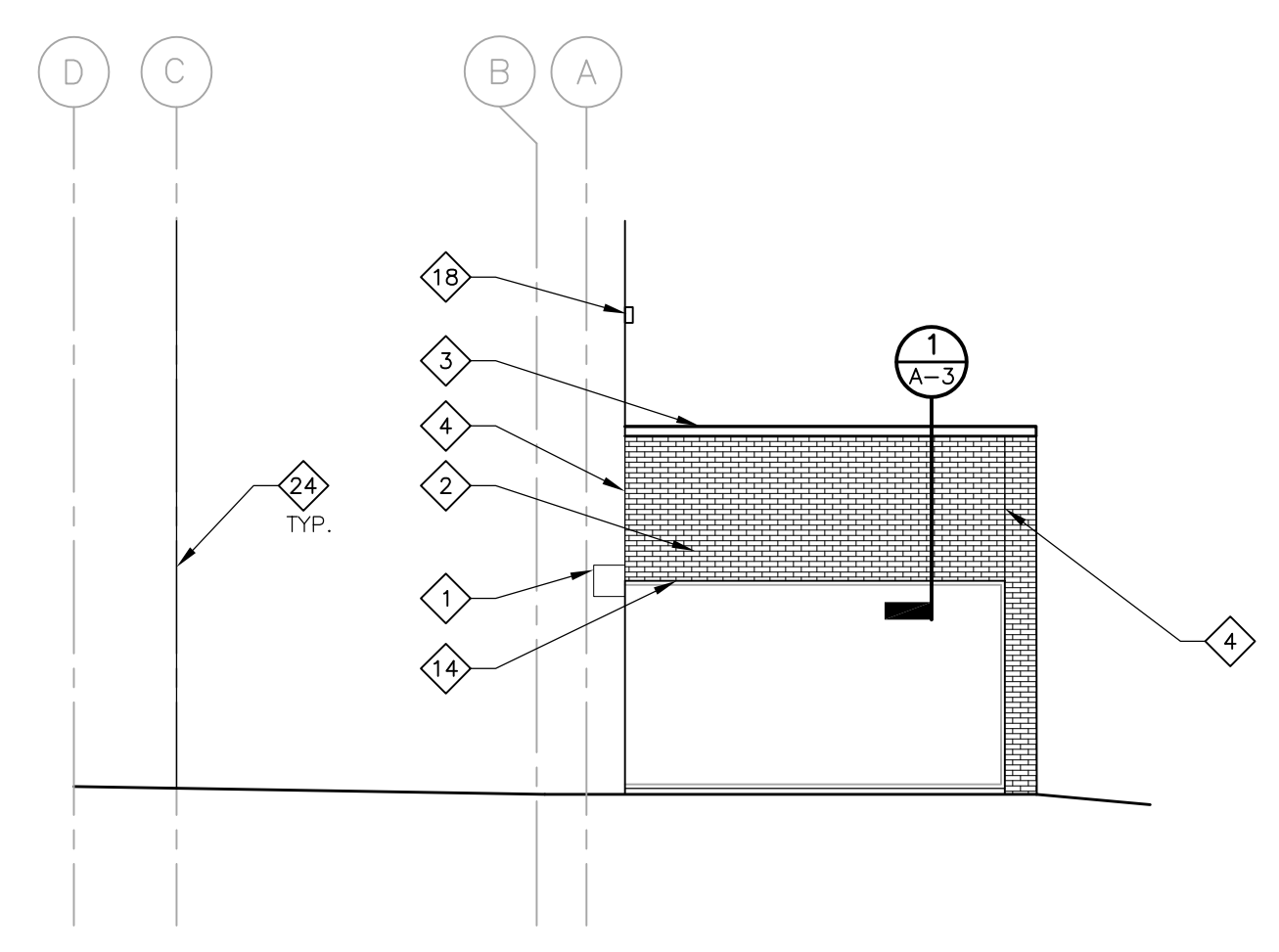
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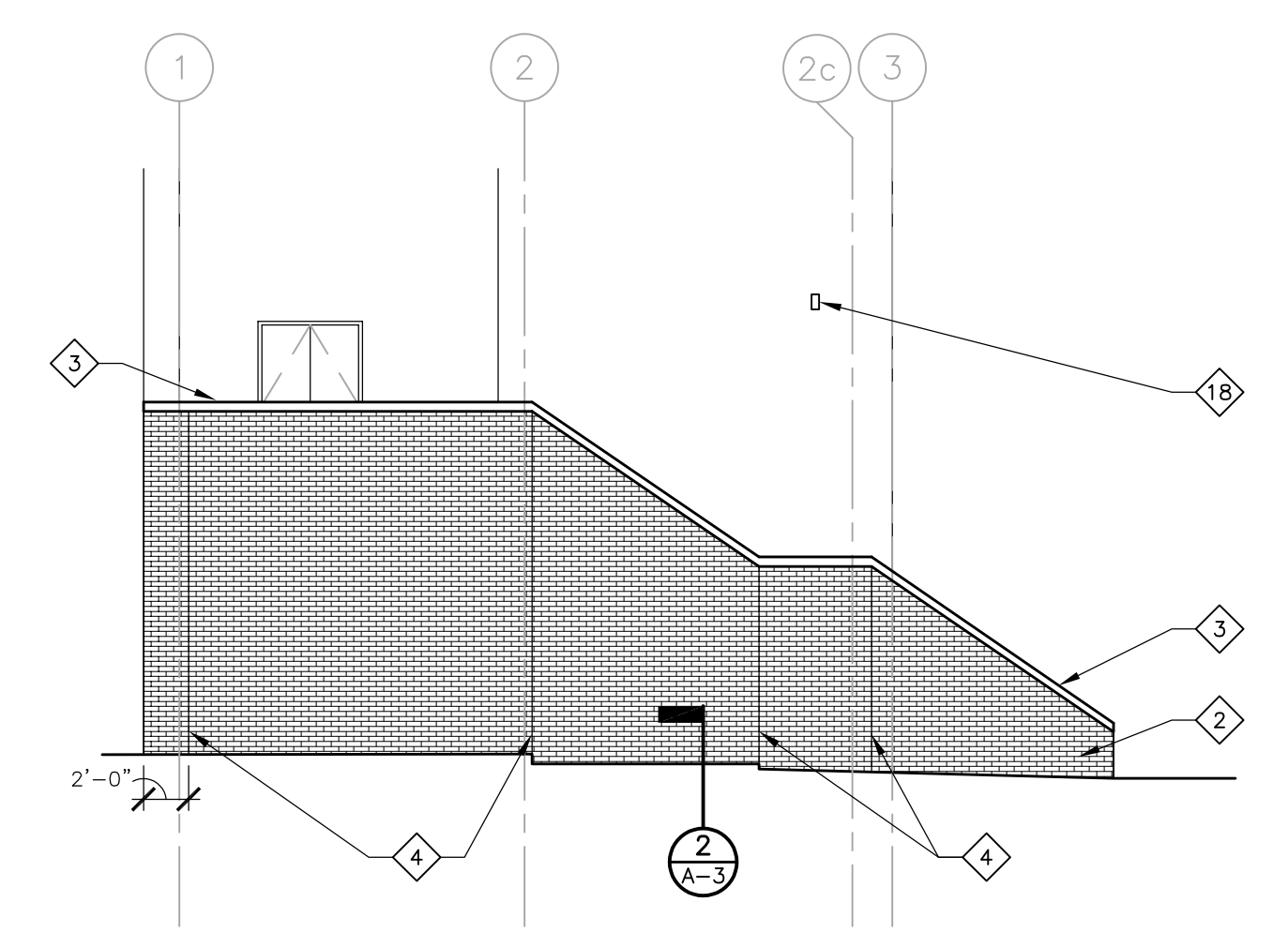
**D PARTIAL SOUTH ELEVATION**  
SCALE: 1/8" = 1'-0"



**C PARTIAL SOUTH ELEVATION**  
SCALE: 1/8" = 1'-0"



**B PARTIAL WEST ELEVATION**  
SCALE: 1/8" = 1'-0"



**A PARTIAL SOUTH ELEVATION**  
SCALE: 1/8" = 1'-0"

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ELEC.	K. HOWARD
CIVIL	
L.A.	
STRUCT.	S. LAUGHLIN
CONST. REP.	
APPR.	
DATE	AS NOTED
SCALE	AS NOTED
REVISIONS	
12/1/2023	BIDS & CONST.

EXTERIOR ELEVATIONS

PLOT\_INFO\_Z:\2023\231032\CAD\CDVA3\_231032.DWG LAYOUT: A-3 DATE: 12/1/2023 TIME: 4:02:06 PM USER: LEFINNEY

**fishbeck** Proj. No.: 231032  
 engineers Day. By: CLF  
 scientists Designer: CLF  
 architects Reviewer: MTV  
 constructors Manager: KN

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Infrastructure  
 Planning and Facilities

MICHIGAN STATE  
 UNIVERSITY

Michigan State University  
 East Lansing, Michigan  
 Wharton Center

Wharton - Masonry Restoration to SW Exterior Stairs (FY24)

CAPITAL PROJ. NO.  
 CP23026

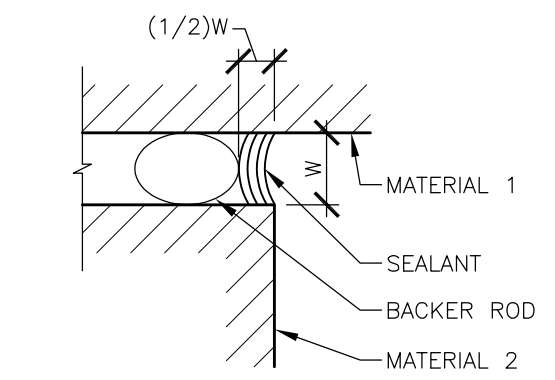
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L.A.	
STRUCT.	S. LAUGHLIN
CONST. REP.	
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REVISIONS	
12/1/2023	BIDS & CONST.

SCHEDULES AND  
 DETAILS

A-3

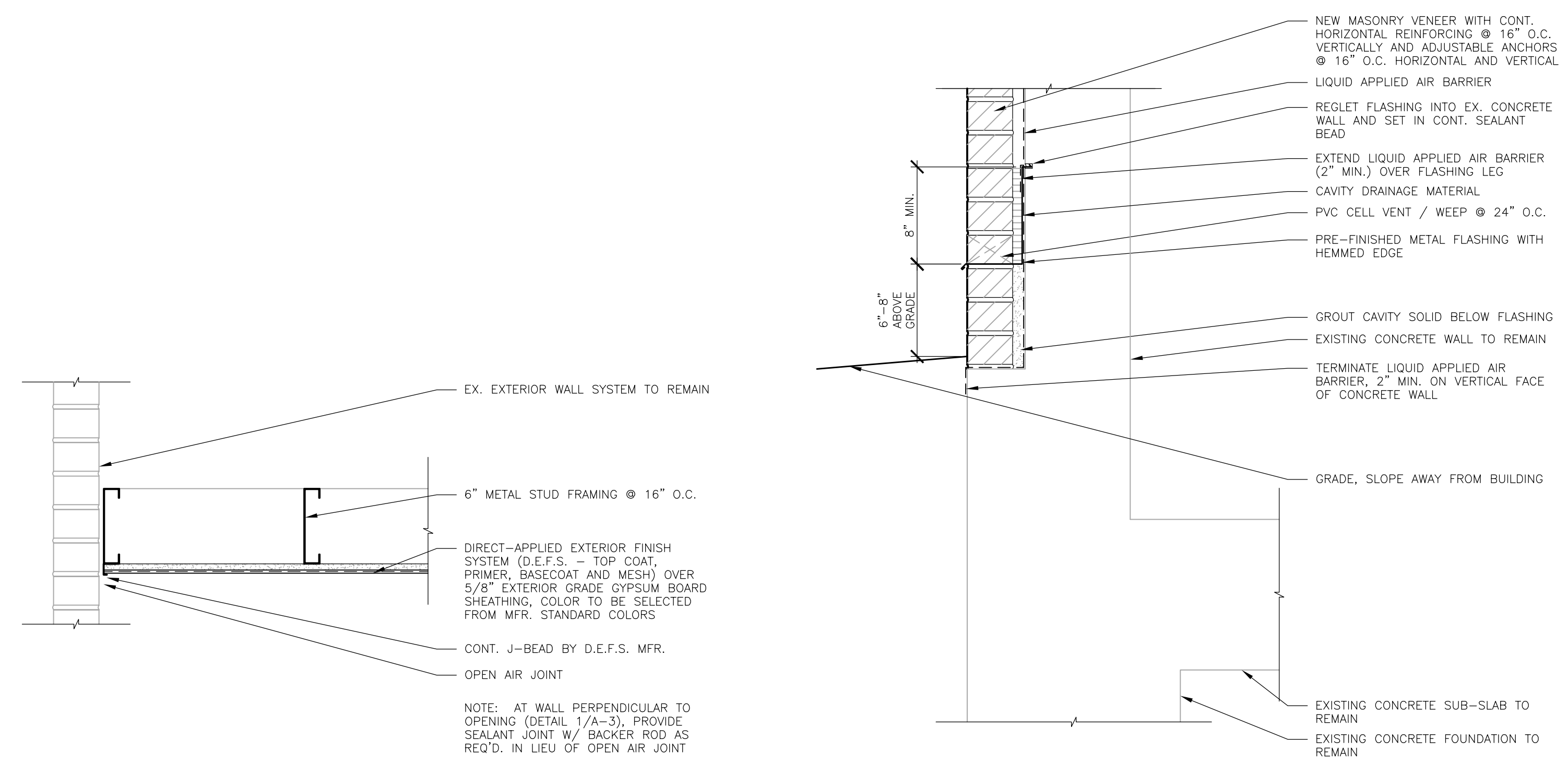
8 OF 13

STANDARD DETAILS

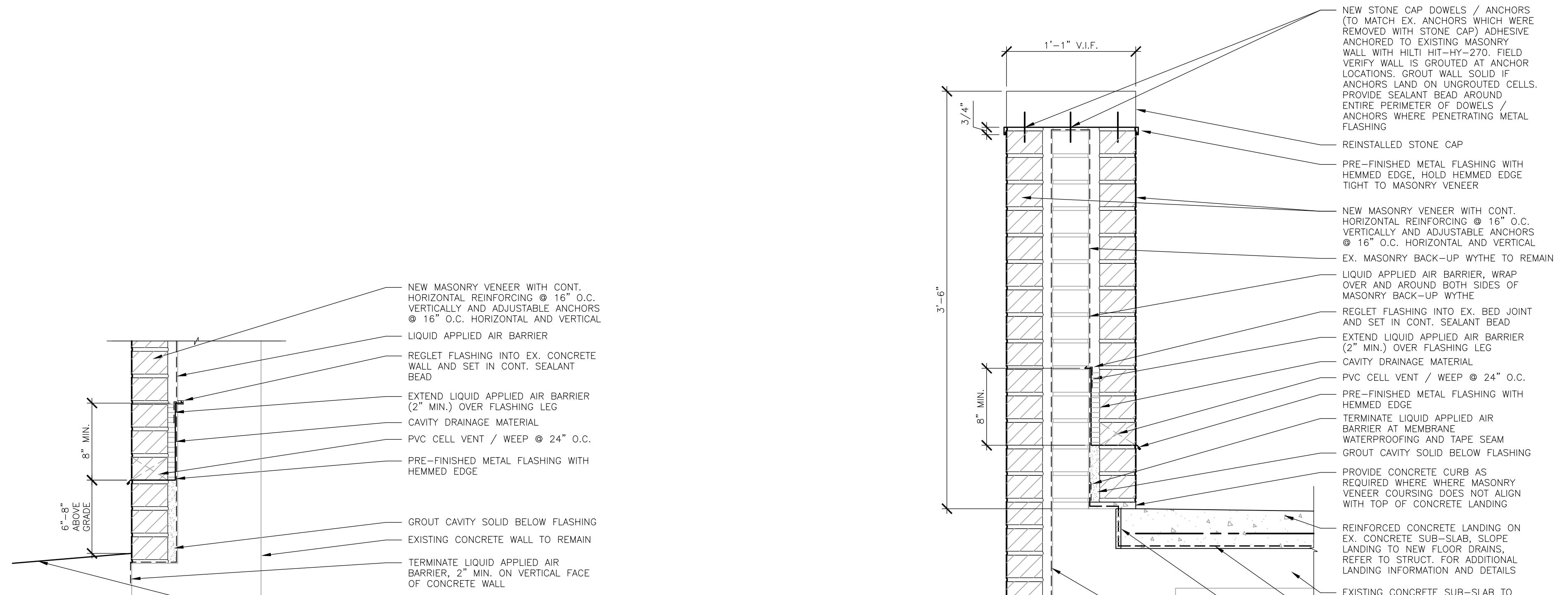


NOTE:  
 CLEAN AND PREPARE SURFACE  
 TO RECEIVE SEALANT.  
 TEST JOINT TO ENSURE  
 PROPER BONDING.

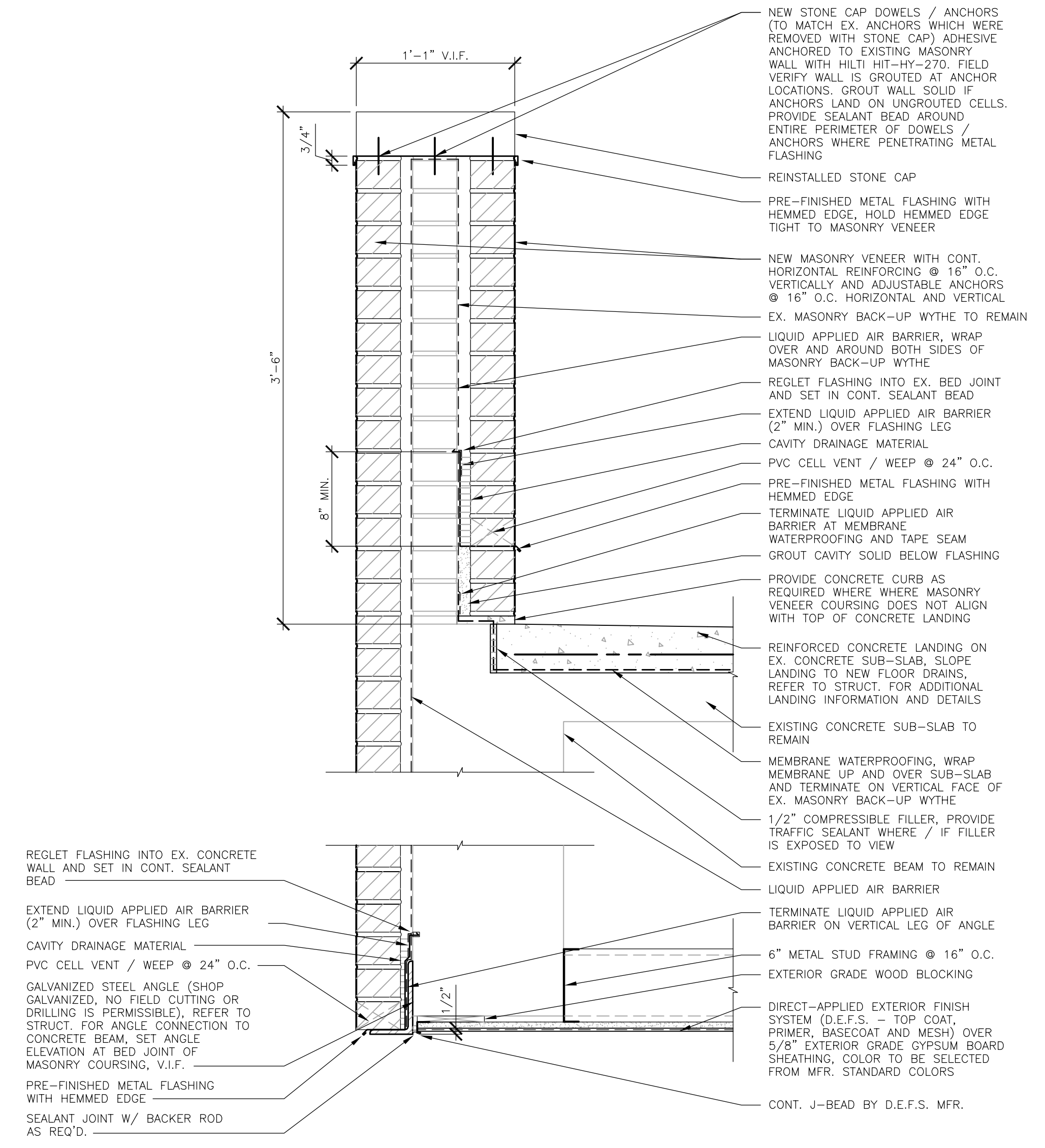
TYPICAL SEALANT JOINT  
 BETWEEN DISSIMILAR MATERIALS  
 NOT TO SCALE



3 SECTION DETAIL  
 SCALE: 1 1/2" = 1'-0"

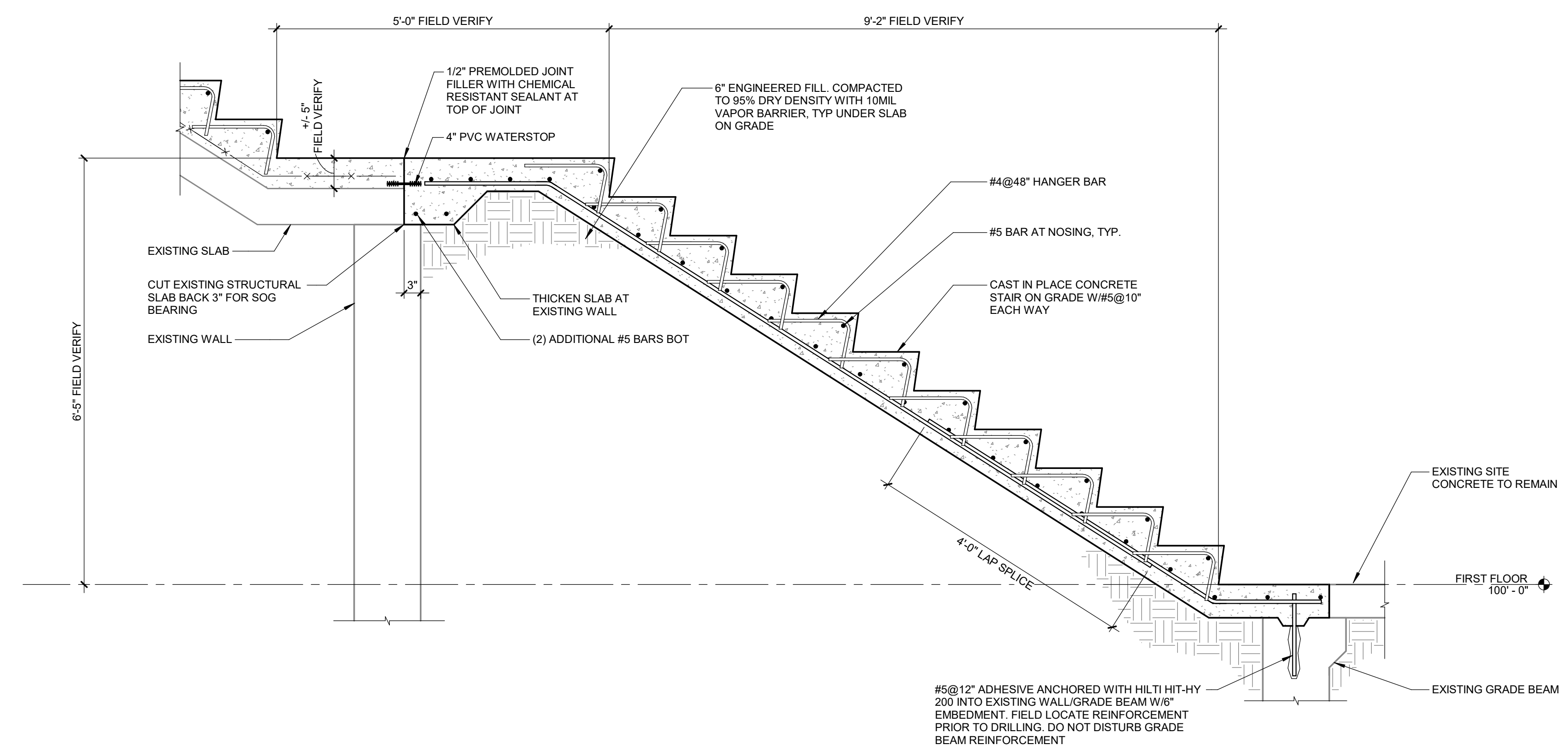


2 SECTION DETAIL  
 SCALE: 1 1/2" = 1'-0"

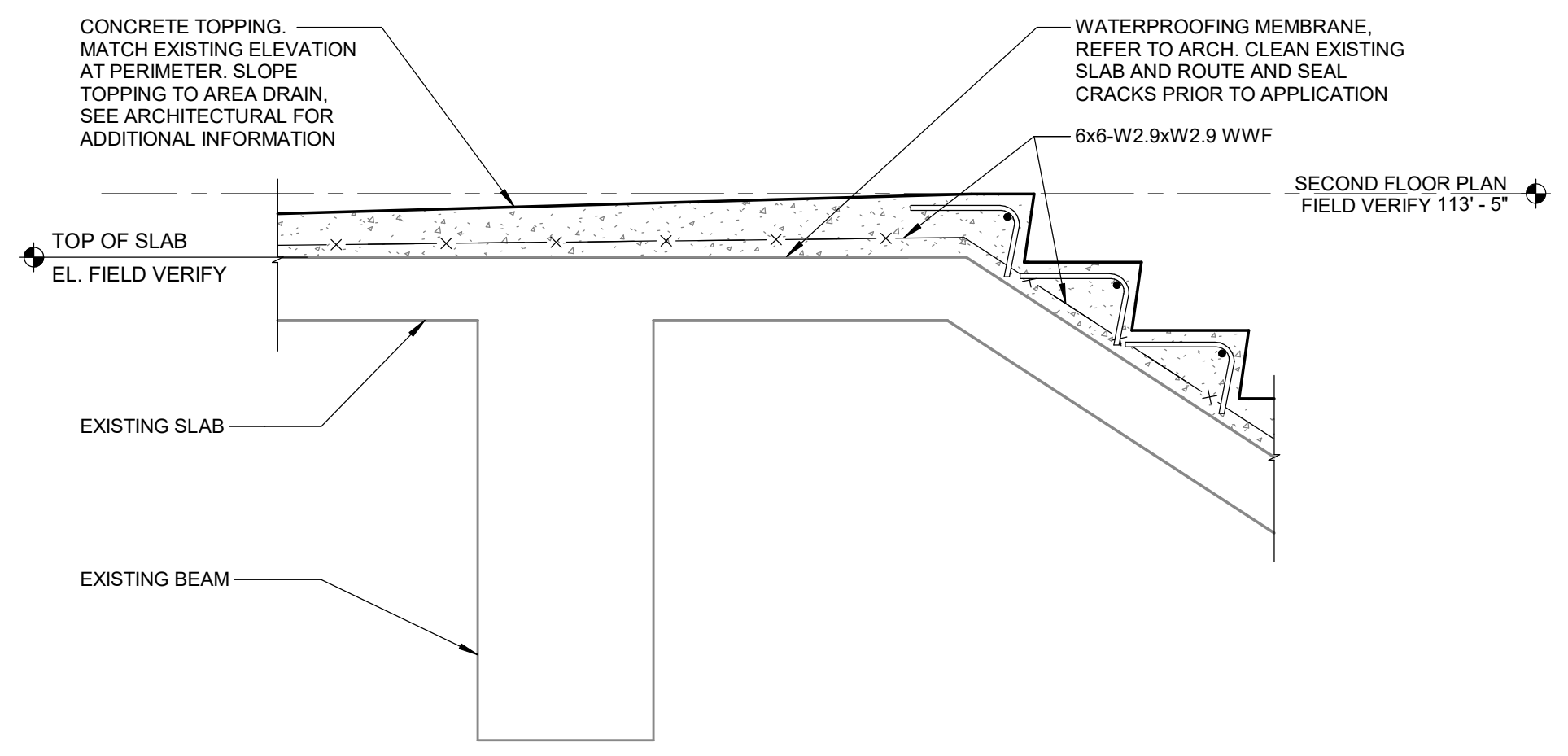


1 SECTION DETAIL  
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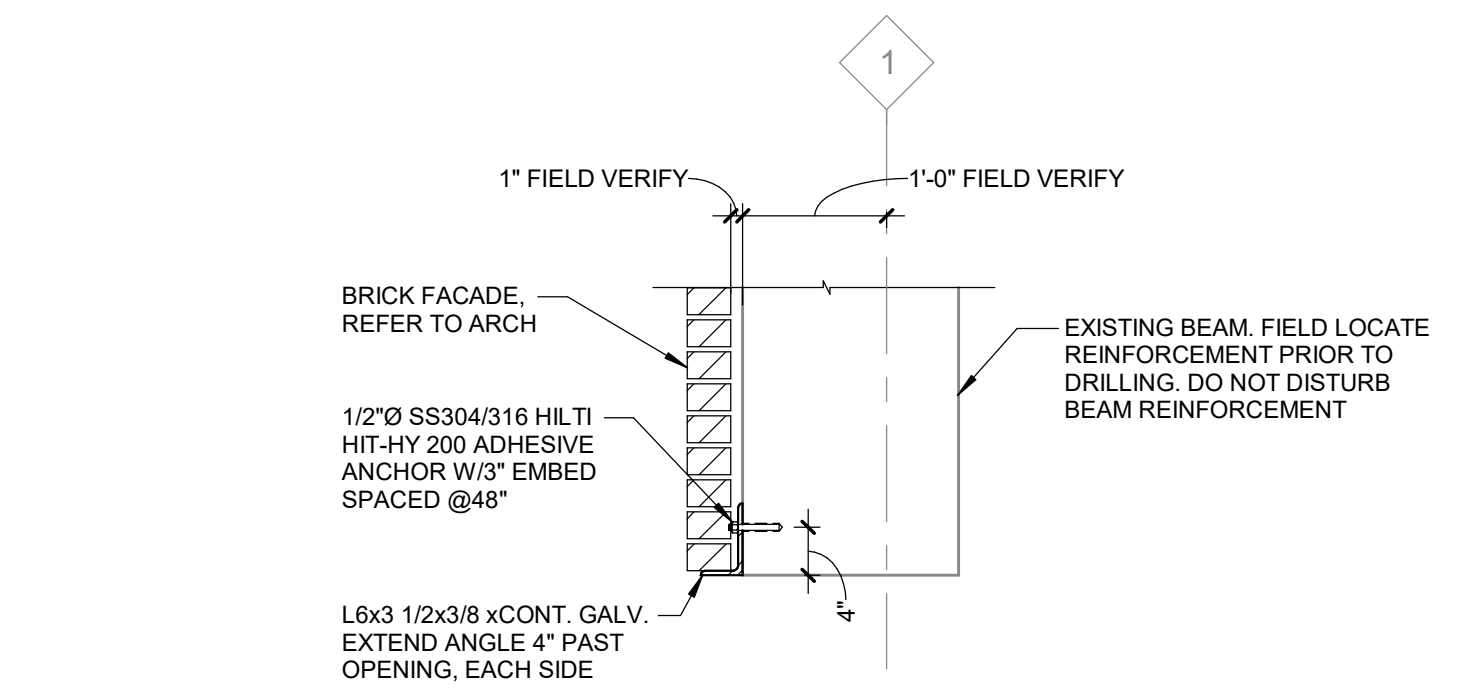




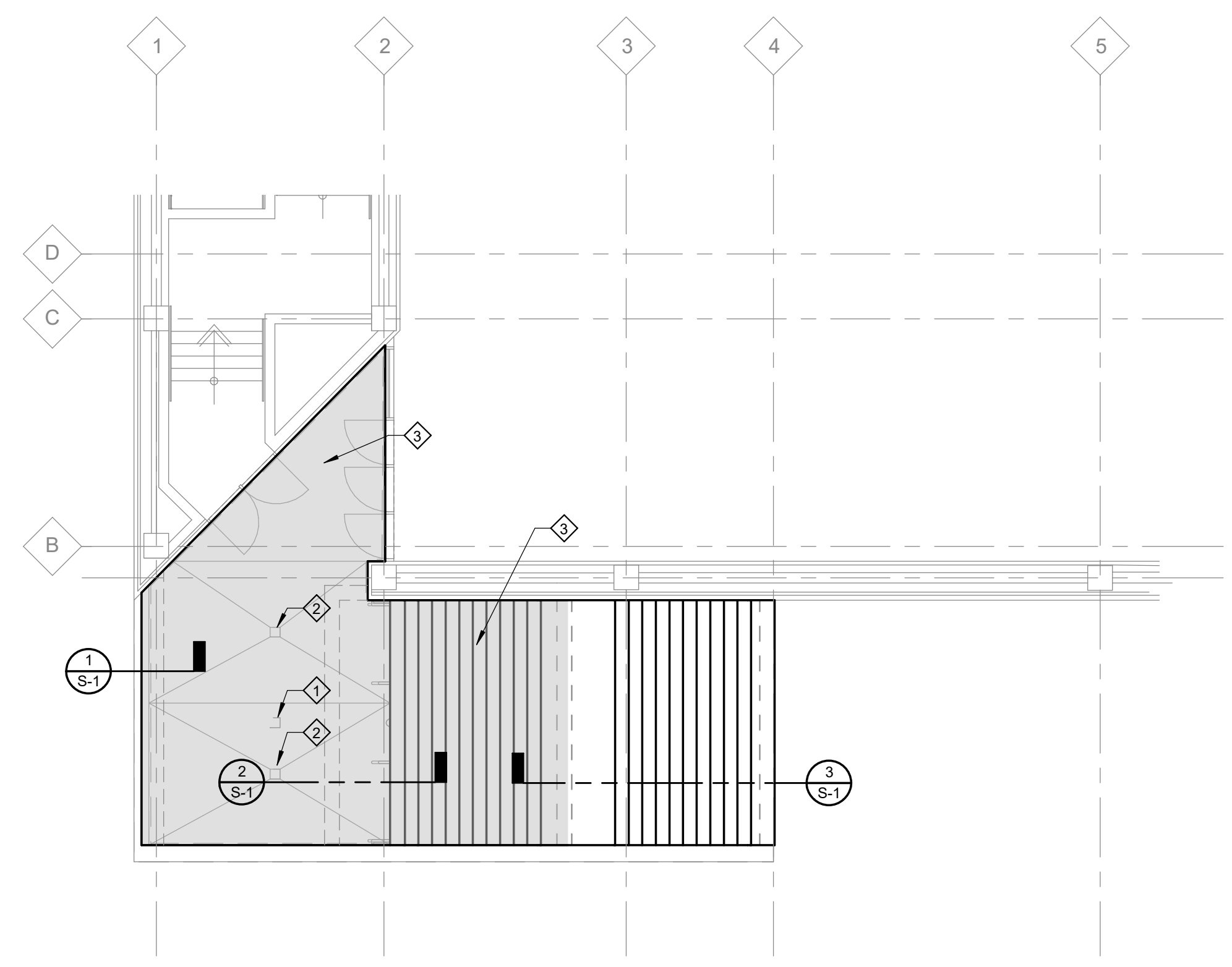
**3 SECTION**  
 SCALE: 3/4" = 1'-0"



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



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



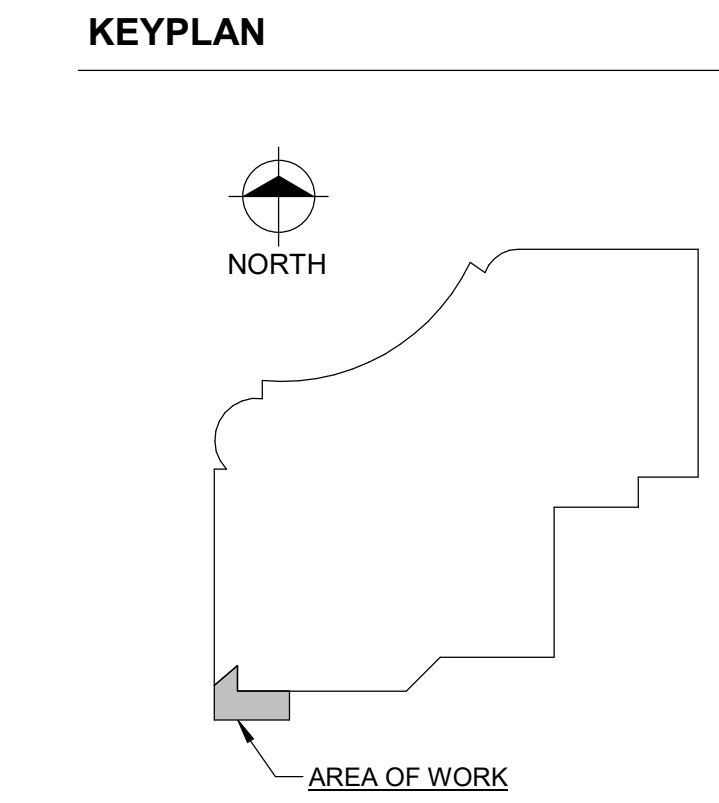
**PARTIAL SECOND FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"

**DESIGN DATA**

BUILDING CODE	2015 MICHIGAN BUILDING CODE
RISK CATEGORY	II
ALLOWABLE SOIL PRESSURE	1,500 PSF (ASSUMED)
DESIGN STRESSES	
CONCRETE REINFORCING	Fy = 60,000 PSI
WELDED WIRE FABRIC	Fy = 65,000 PSI
STRUCTURAL STEEL	
ANGLES	Fy = 36,000 PSI
CONCRETE	
SLAB ON GRADE/TOPPING	fc = 4,000 PSI
MASONRY	fm = 2,000 PSI
DESIGN LOADS	
LIVE LOADS	
ELEVATED STAIR	100 PSF
SLAB ON GRADE	100 PSF
OR NON-CONCURRENT CONCENTRATED LOAD	1,000 LBS

- NOTES**
- INFORMATION ON THIS SHEET SUPPLEMENTS THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
  - COORDINATE SIZE AND LOCATION OF SLAB OPENINGS WITH ASSOCIATED TRADES.
  - OBTAIN ENGINEER'S REVIEW PRIOR TO MAKING ALTERATIONS TO A STRUCTURAL ITEM OR MEMBER NOT INDICATED ON THE DRAWINGS.
  - FIELD VERIFY EXISTING CONDITIONS.
  - FOR LIMITS OF DEPRESSED SLABS AND FLOOR SLOPES, SEE ARCHITECTURAL.
  - COORDINATE SIZE, LOCATION AND PLACEMENT OF EMBEDDED ITEMS SUCH AS PLATES, HARDWARE AND PIPE SLEEVES WITH RESPECTIVE TRADES.
  - SECURELY PLACE EMBEDDED ITEMS PRIOR TO PLACING CONCRETE.
  - DO NOT CORE OR CUT CONCRETE UNLESS REVIEWED BY ENGINEER.
  - WHERE DRILLING OR CUTTING INTO HARDENED CONCRETE IS REQUIRED, FIELD LOCATE REINFORCEMENT WITH A REINFORCING BAR DETECTOR TO AVOID DAMAGING THE REINFORCING BAR.
  - ALL STEEL TO BE PREDRILLED AND HOT DIP GALVANIZED. NO FIELD CUTTING OR DRILLING IS PERMISSIBLE.
  - GEOTECHNICAL DATA WAS NOT PROVIDED FOR THIS PROJECT. ASSUMED BEARING PRESSURE SHALL BE VERIFIED IN FIELD.
  - ALL SLAB REINFORCEMENT TO BE EPOXY COATED. WELDED WIRE FABRIC TO BE GALVANIZED.
  - CONCRETE TOPPING SLAB TO UTILIZE A LOW SHRINKAGE FORMULATION AND A SHRINKAGE REDUCING AND COMPENSATING ADMIXTURE. MINIMUM W/C OF 0.45. MAX AGGREGATE SIZE 3/8". SUBMIT MIX FOR APPROVAL.

- KEY NOTES**
- INFILL EXISTING SLAB OPENING WITH CONCRETE.
  - CORE EXISTING SLAB FOR NEW FLOOR DRAIN.
  - TOPPING SLAB. SEE ARCHITECTURAL FOR MORE INFORMATION.



PLOT INFO: 12/1/2023 12:02:38 PM

PLOT: INFO\_Z:\2023\231032\CAD\DWG\_LAYOUT\_P-1 DATE: 12/1/2023 TIME: 9:55:13 AM USER: BHALL

**fishbeck** Proj. No.: 231032  
 engineers, scientists, architects, constructors  
 Designer: BNH  
 Reviewer: PL  
 Manager: KN

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**MICHIGAN STATE UNIVERSITY**  
 Infrastructure Planning and Facilities

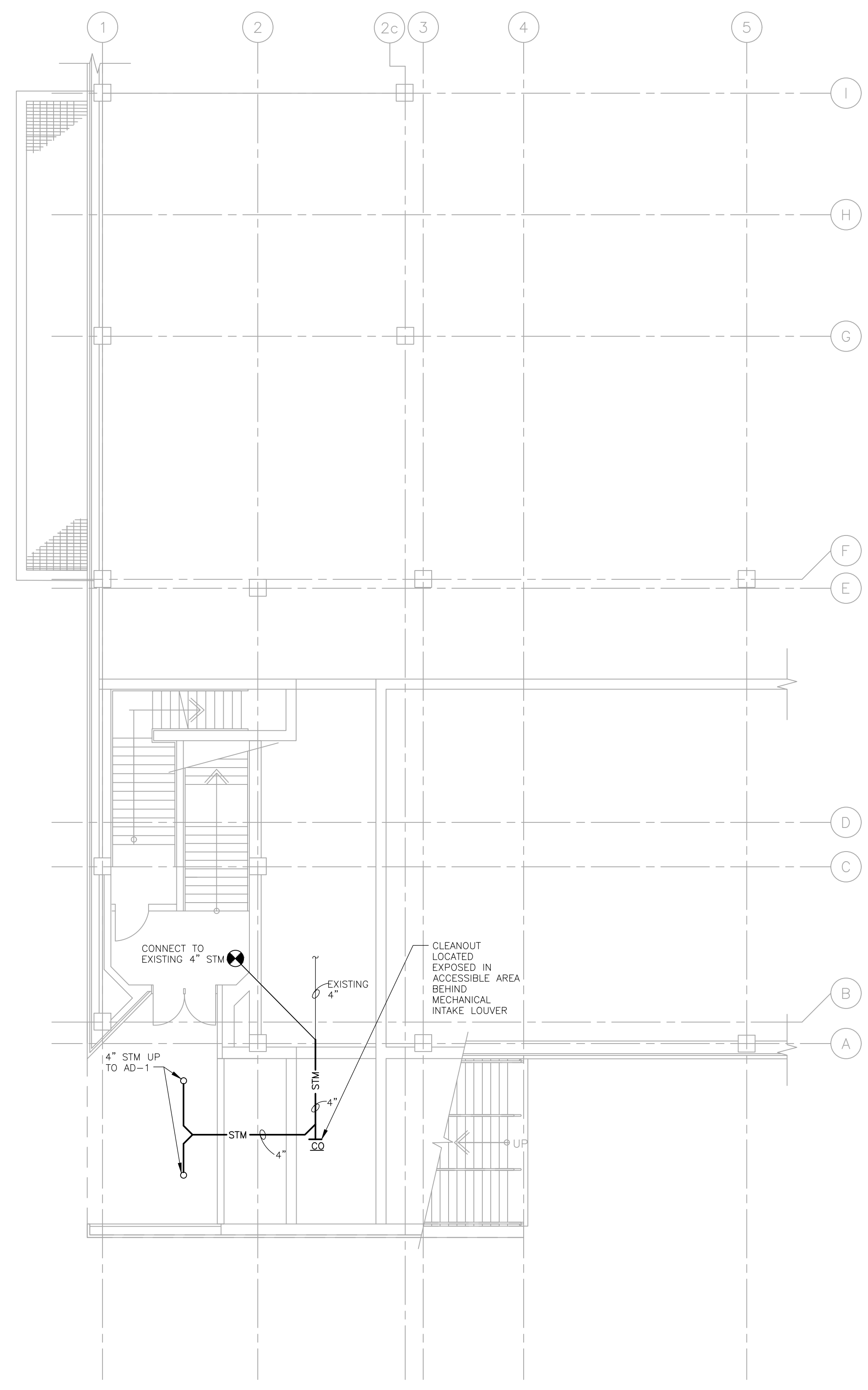
**Michigan State University**  
 East Lansing, Michigan  
 Wharton Center  
 Wharton - Masonry Restoration to SW Exterior Stairs (FY24)

CAPITAL PROJ. NO. CP23026

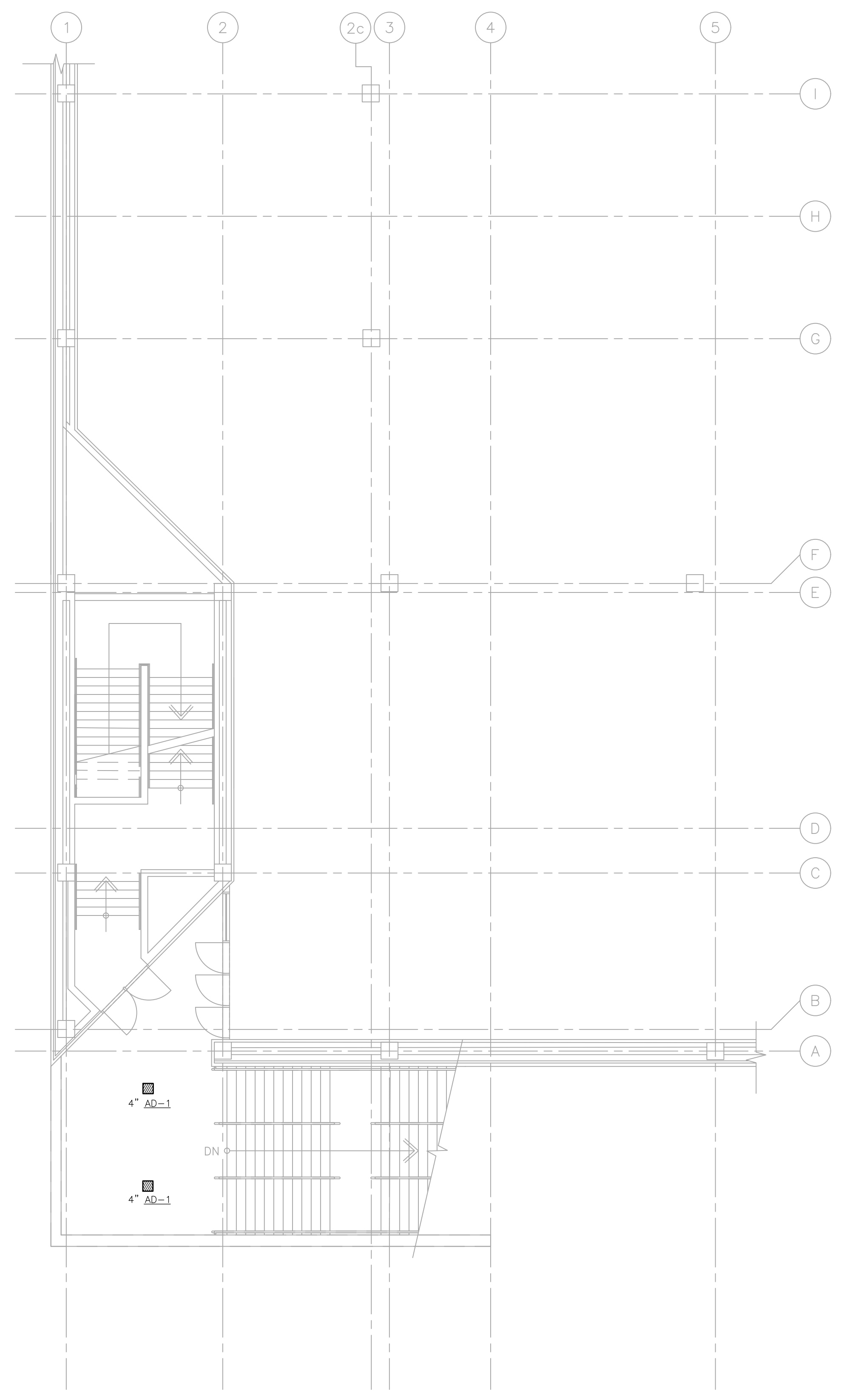
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DATE	AS NOTED
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REVISIONS	
12/1/2023	BIDS & CONST.

PLUMBING PLANS

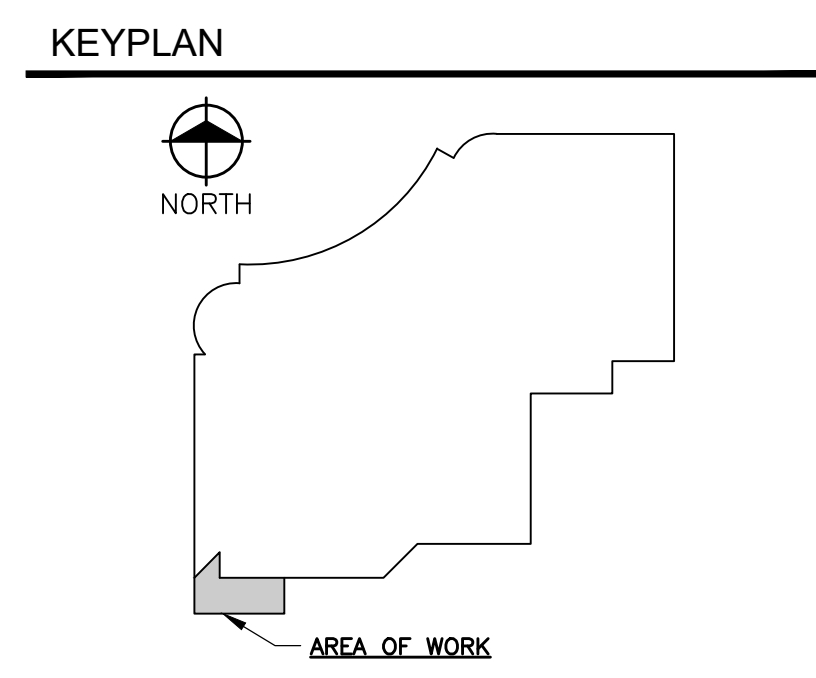
**P-1**  
 10 OF 13



**PARTIAL FIRST FLOOR PLUMBING PLAN**  
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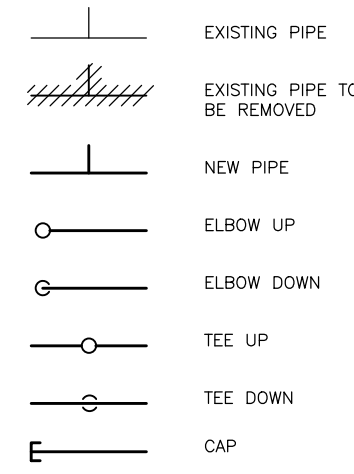


**PARTIAL SECOND FLOOR PLUMBING PLAN**  
 SCALE: 1/8" = 1'-0"

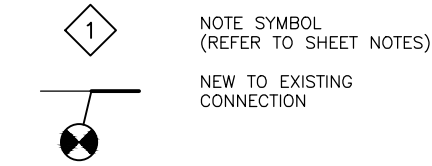


**LEGEND**

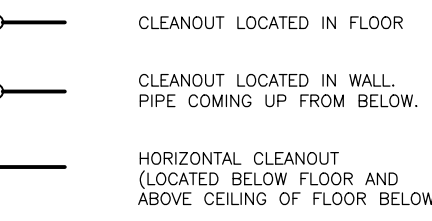
**PIPE/FITTING SYMBOLS**



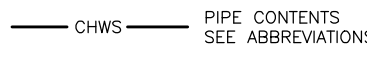
**GENERAL DESIGNATION**



**MISC. PIPING SYMBOLS**



**PIPING DESIGNATION**

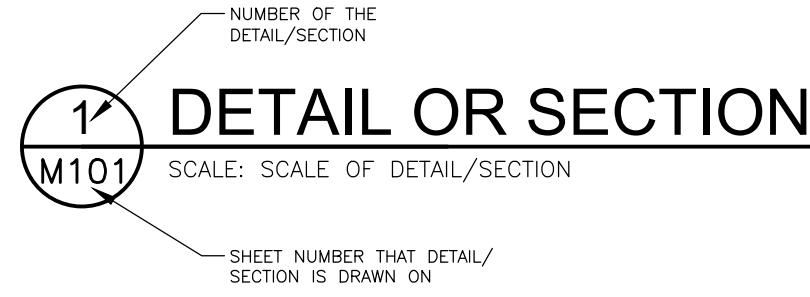


**GENERAL ABBREVIATIONS**

AFF	ABOVE FINISHED FLOOR
AD	AREA DRAIN
CI	CAST IRON
IE	INVERT ELEVATION
L	LOUVER
NC	NOT IN CONTRACT

**PIPE CONTENTS ABBREVIATIONS**

STM	STORM SEWER
-----	-------------



**GENERAL NOTES**

**PLUMBING PIPING NOTES**

- CLOSELY COORDINATE THE INSTALLATION OF ALL PIPING WITH NEW SHEET METAL, HVAC PIPING, ELECTRICAL AND STRUCTURAL CONDITIONS. PROVIDE REQUIRED OFFSETS AND FITTINGS WHETHER INDICATED OR NOT. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR CLEARANCES, THE LOCATION OF SANITARY, STORM, AND VENT LINES TAKE PRECEDENCE OVER HVAC AND FIRE PROTECTION PIPING, AND ELECTRICAL CONDUIT AND CABLE TRAY.
- PIPING AND EQUIPMENT SHOWN LIGHTLY IS EXISTING TO REMAIN.
- AT RENOVATED AREAS THE INDICATED ROUTING OF PIPING SYSTEMS IS INTENDED TO INDICATE REUSE OF AS MUCH OF THE EXISTING SYSTEMS AS POSSIBLE. THE ROUTE SHOWN AND INFORMATION GIVEN IS NOT INTENDED TO REPRESENT EXACTLY WHERE AND HOW TO INSTALL THESE SYSTEMS. IT HAS BEEN DETERMINED THAT ADEQUATE SPACE EXISTS, BUT NO ATTEMPT HAS BEEN MADE TO INDICATE THE LOCATION AND IDENTIFY EVERY INTERFERENCE, NOR THE RESULTANT REQUIRED RESOLUTION OF INTERFERENCES. INCLUDE ADDITIONAL PIPE, MATERIAL, LABOR, AND LAYOUT TIME REQUIRED TO RESOLVE INTERFERENCES AND THEIR REROUTING.
- PIPE ROUTING INDICATED IS SCHEMATIC IN CONCEPT. FIELD LOCATE EXACT TIE-IN-POINTS TO EXISTING PIPING, FINAL ROUTING SHALL BE COORDINATED WITH SHEET METAL, ELECTRICAL, AND STRUCTURAL SYSTEMS. PROVIDE ALL NECESSARY OFFSETS. COORDINATE TIME OF EXISTING PIPING REROUTING WITH OWNER TO MINIMIZE DOWNTIME.
- SLEEVE AND SEAL EXTERIOR WALL AND ROOF PENETRATIONS TO A WEATHER TIGHT CONDITION. SLEEVE AND SEAL INTERIOR FLOOR PENETRATIONS TO A WATERTIGHT CONDITION.
- SAWCUT CONCRETE AS REQUIRED TO INSTALL NEW PIPING. FINISH CONCRETE PATCH TO RECEIVE NEW SURFACE FINISH AS REQUIRED.
- CORE DRILL OPENINGS IN WALLS AND SLABS AS REQUIRED FOR NEW PIPING. COORDINATE LOCATION OF REINFORCING STEEL TO AVOID DAMAGE.
- PRIOR TO MAKING CONNECTIONS TO EXISTING PIPING FOR REUSE, CONFIRM THAT EXISTING PIPING BEING TIED INTO IS ACTIVE FOR REUSE.

PLUMBING FIXTURE SCHEDULE	
IDENTIFICATION	DESCRIPTION
AD-1	AREA DRAIN: 1. ZURN MODEL Z1749 16 GAGE TYPE 304 SS FLOOR DRAIN, 12" SQ. WITH ANTI-SPLASH STAINLESS STEEL INTERIOR DOME STRAINER, EXTRA HEAVY DUTY TOP FRAME, HEEL-PROOF AND VANDAL PROOF SECURED TOP.

**fishbeck** Proj. No.: 231032  
 engineers  
 scientists  
 architects  
 constructors  
 Desg. By: BNH  
 Designer: BNH  
 Reviewer: PL  
 Manager: KN

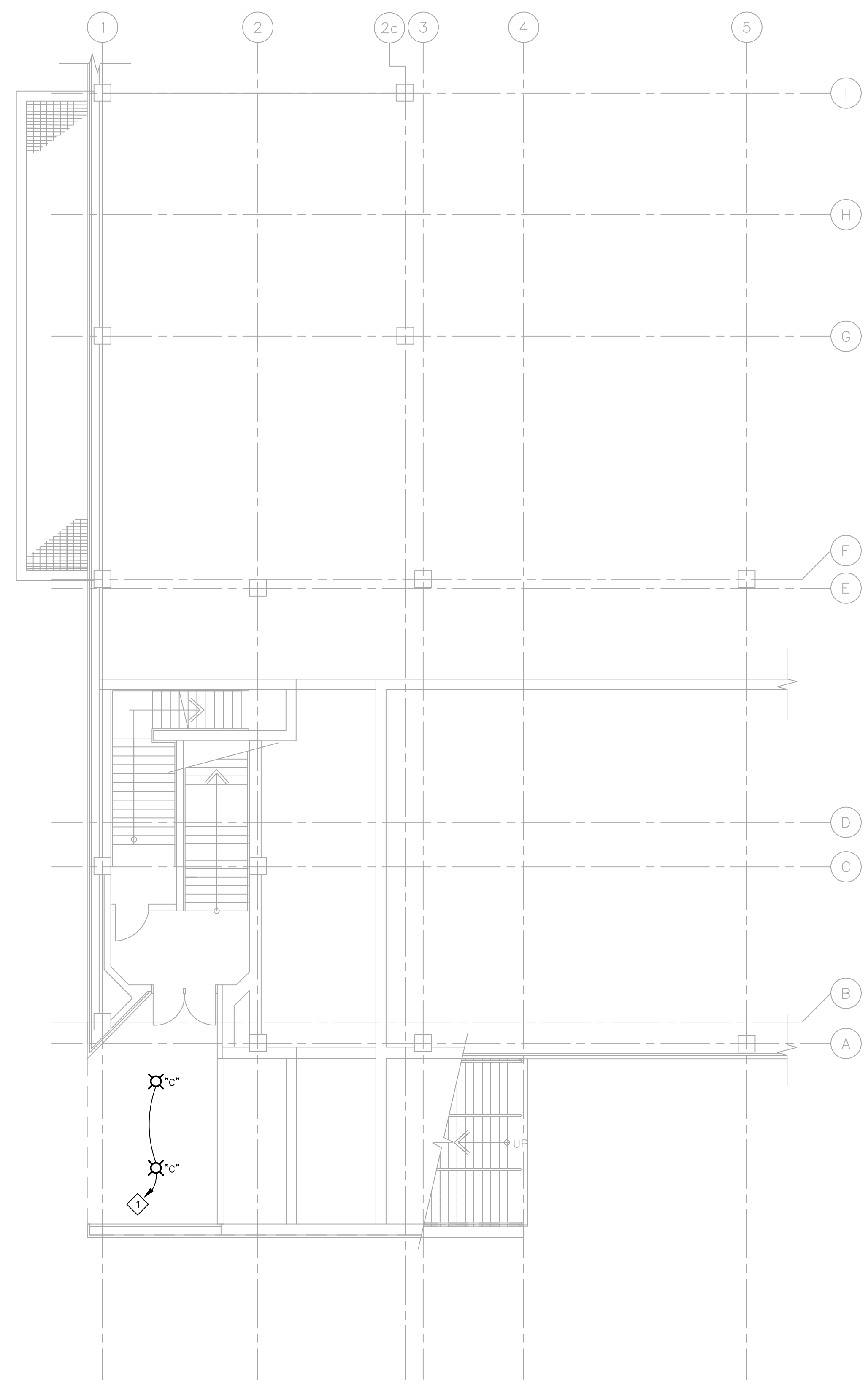
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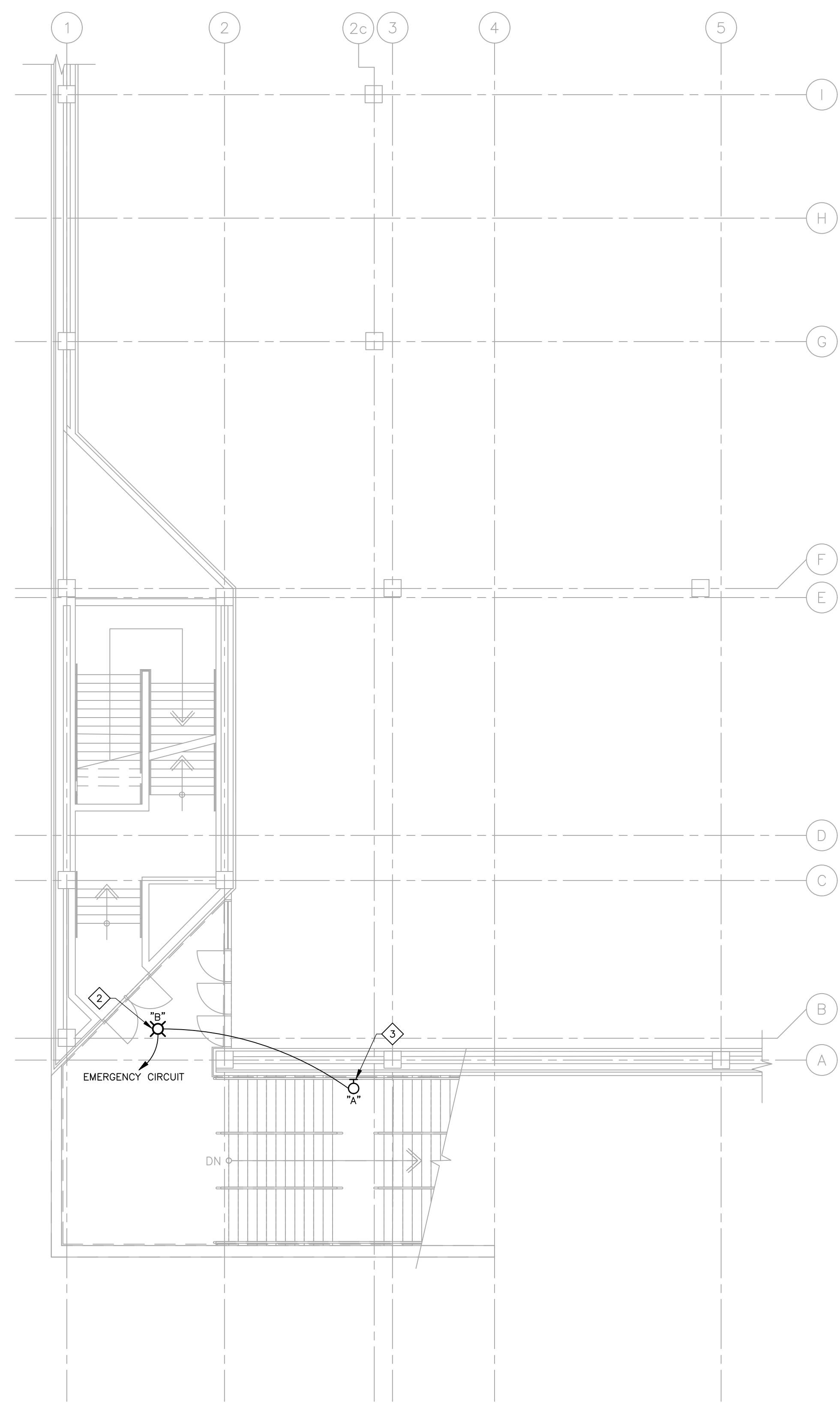
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 Wharton Center  
 Wharton - Masonry Restoration to SW Exterior Stairs (FY24)

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MECH.	
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L.A.	
STRUCT.	S. LAUGHLIN
CONST. REP.	
APPR.	
DATE	
SCALE	AS NOTED
REVISIONS	
12/1/2023	BIDS & CONST.

SCHEDULES AND INFORMATION  
**P-2**  
 11 OF 13



**PARTIAL FIRST FLOOR ELECTRICAL PLAN**  
 SCALE: 1/8" = 1'-0"



**PARTIAL SECOND FLOOR ELECTRICAL PLAN**  
 SCALE: 1/8" = 1'-0"

**SYMBOL LEGEND**

- ⊗ EXTERIOR DOWNLIGHT
- EXTERIOR WALL PACK

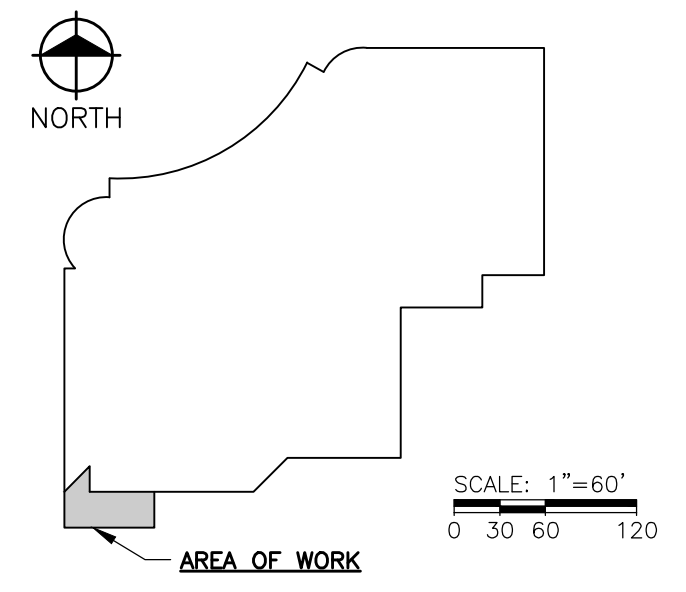
**NOTES**

1. INSTALLATION OF ELECTRICAL WORK SHALL CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION.
2. ALL ELECTRICAL EQUIPMENT SHALL BE UL LISTED.
3. ALL EXISTING, NON-CONFORMING ELECTRICAL INSTALLATIONS WITHIN THE PROJECT AREAS SHALL BE CORRECTED TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AND THE MSU PROJECT MANAGER.
4. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE SUBMISSION OF BIDS. WHERE EXISTING CONDITIONS ARE DIFFERENT THAN INFORMATION INDICATED ON THE DRAWINGS, CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR INFORMATION TO THE ENGINEER FOR RESOLUTION.
5. ALL WORK SHALL BE SUBJECT TO REVIEW AND ACCEPTANCE BY THE MSU PROJECT MANAGER AND THE AUTHORITY HAVING JURISDICTION. WORK THAT DOES NOT MEET THE SATISFACTION OF THE MSU PROJECT MANAGER OR THE AUTHORITY HAVING JURISDICTION SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
6. WHERE EXISTING ELECTRICAL CIRCUITS ARE MODIFIED OR ADDED TO EXISTING PANELBOARDS, CONTRACTOR SHALL PROVIDE AN UPDATED, TYPEWRITTEN, PANELBOARD CIRCUIT DIRECTORY.
7. SEAL ALL CONDUITS PENETRATING BUILDING WALLS OR FLOORS AS INDICATED IN ELECTRICAL UNDERGROUND DUCTS AND MANHOLES SPECIFICATION.
8. ALL EXTERIOR LIGHTING SHALL BE CONTROLLED BY THE MSU CENTRAL CONTROL SYSTEM, UNO.
9. COMPLETE ALL WORK IN ACCORDANCE WITH MSU TECHNICAL STANDARDS.

**KEY NOTES**

1. PROVIDE NEW LIGHTING FIXTURES. RE-WORK CONDUIT/WIRING TO NEW LIGHTING FIXTURES. RE-USE EXISTING LIGHTING CIRCUIT AND SWITCHING.
2. PROVIDE NEW LIGHTING FIXTURE. RE-WORK THE CONDUIT/WIRING FROM THIS LIGHTING FIXTURE TO THE NEW EMERGENCY LIGHTING CIRCUIT. MATCH EXISTING CONDUCTOR SIZES.
3. PROVIDE NEW LIGHTING FIXTURE. RE-WORK EXISTING STREET LIGHTING CIRCUIT LP-0, STAIRS S.W. TO NEW WALL PACK LIGHTING FIXTURE AND 3RD FLOOR LIGHTING FIXTURE. USE SURFACE MOUNTED 3/4" GALVANIZED RIGID STEEL CONDUIT TO THE LIGHTING FIXTURES. PAINT CONDUIT DARK BRONZE. MATCH EXISTING CONDUCTOR SIZES.

**KEYPLAN**



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LUMINAIRE SCHEDULE											
MARK	DESCRIPTION	MANUFACTURER	CATALOG NO.	OR EQUAL BY	LUMINAIRE DATA						REMARKS
					VOLTAGE	LOAD	LUMENS	CCT	CRI	DIMMING	
A	LED EXTERIOR WEDGE ARCHITECTURAL WALL SCONCE	LITHONIA	WDGE2 LED-P4-70CRI-T4M-MVOLT-SRM-DDBXD	-	277V	47 VA	4,177 LM	4000K	80	-	MOUNT 15'-0" ABOVE MIDDLE STAIR LANDING
B	8" LED EXTERIOR RECESSED DOWNLIGHT, WET LISTED, 4,000 LUMENS	LITHONIA	LBR8-40LM-40K-AR-LSS-WD-MVOLT-WL	-	277V	39 VA	4,000 LM	4000K	80	-	
C	6" LED EXTERIOR RECESSED DOWNLIGHT, WET LISTED, 1,500 LUMENS	LITHONIA	LBR6-15LM-40K-AR-LSS-WD-MVOLT-WL	-	277V	39 VA	1,500 LM	4000K	80	-	

**fishbeck** Proj. No.: 231032  
 engineers  
 scientists  
 architects  
 constructors  
 Designer: ACF  
 Reviewer: ARK  
 Manager: KN

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**SYMBOL LEGEND**

-  EXISTING ELECTRICAL PANEL
-  FUSED DISCONNECT

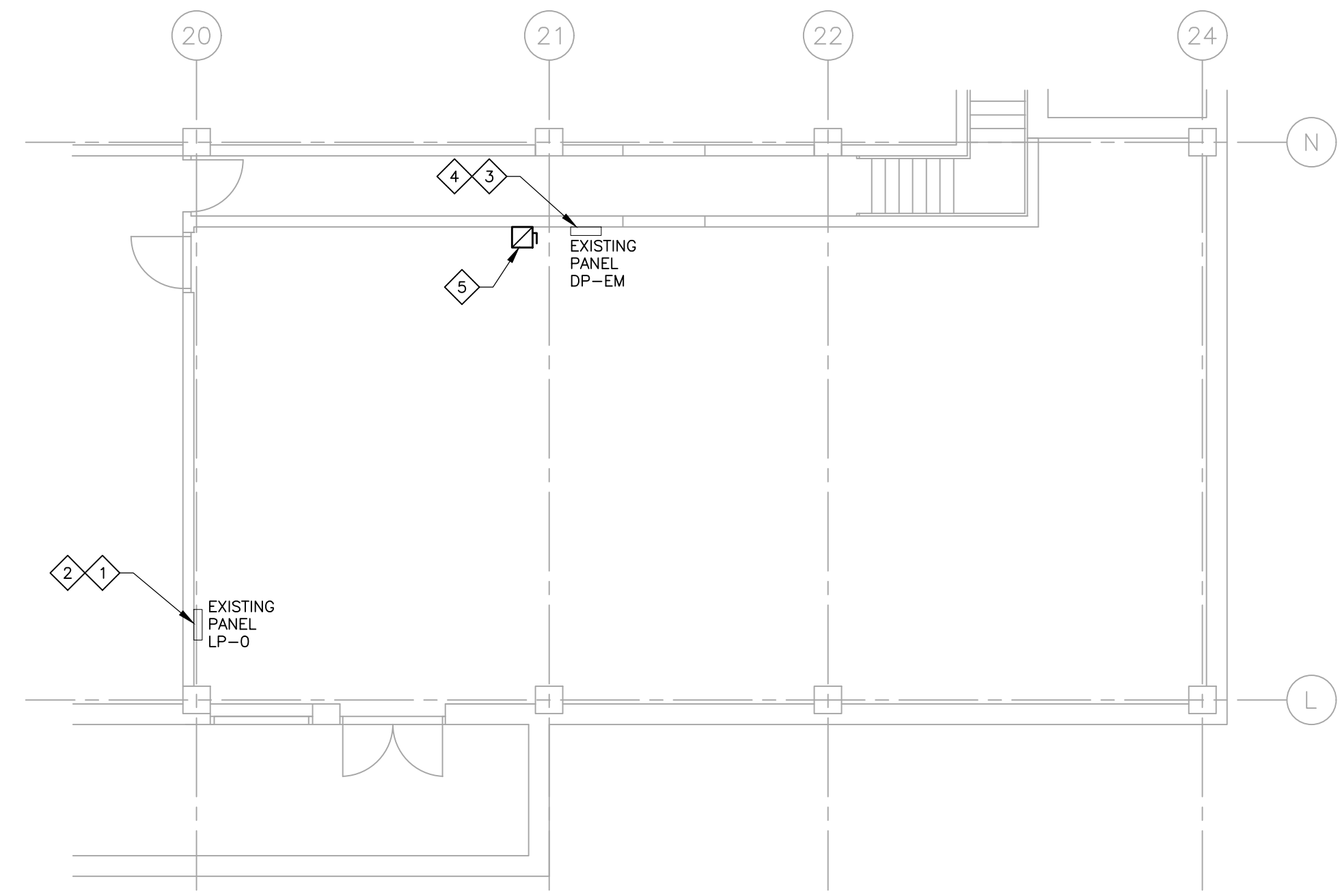
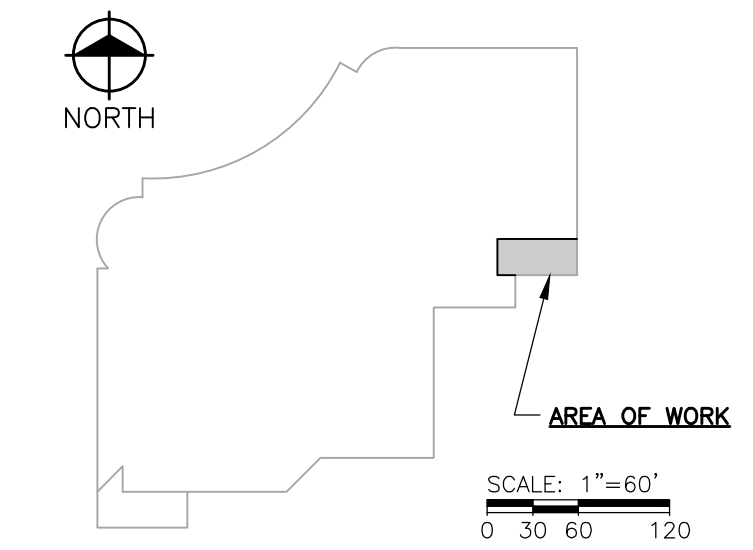
**NOTES**

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- ALL EXISTING, NON-CONFORMING ELECTRICAL INSTALLATIONS WITHIN THE PROJECT AREAS SHALL BE CORRECTED TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AND THE MSU PROJECT MANAGER.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE SUBMISSION OF BIDS. WHERE EXISTING CONDITIONS ARE DIFFERENT THAN INFORMATION INDICATED ON THE DRAWINGS, CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR INFORMATION TO THE ENGINEER FOR RESOLUTION.
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- WHERE EXISTING ELECTRICAL CIRCUITS ARE MODIFIED OR ADDED TO EXISTING PANELBOARDS, CONTRACTOR SHALL PROVIDE AN UPDATED, TYPEWRITTEN, PANELBOARD CIRCUIT DIRECTORY.
- SEAL ALL CONDUITS PENETRATING BUILDING WALLS OR FLOORS AS INDICATED IN ELECTRICAL UNDERGROUND DUCTS AND MANHOLES SPECIFICATION.
- ALL EXTERIOR LIGHTING SHALL BE CONTROLLED BY THE MSU CENTRAL CONTROL SYSTEM, UNO.
- COMPLETE ALL WORK IN ACCORDANCE WITH MSU TECHNICAL STANDARDS.

**KEY NOTES**

- RE-WORK EXISTING STREET LIGHTING CIRCUIT LP-0 STAIRS S.W. CONDUIT/WIRING OUT OF THE 240V STREET LIGHTING PANEL TO A NEW 277V JUNCTION BOX. LABEL THE 240V CIRCUIT AS SPARE.
- PROVIDE THOMAS AND BRETT'S EMERGLITE COMPACT SERIES 1000VA LIGHTING INVERTER P/N: 277SG1000FTCM277IGB0420WB. PROVIDE 3/4" CONDUIT WITH 2#10,#12G FROM LIGHTING INVERTER TO 480V DISTRIBUTION PANEL IN ELECTRICAL ROOM.
- PROVIDE A TAP ON THE BUS OF PANEL EM-DP WITH 2#9,#12G TO A 30A FUSED DISCONNECT WITH A 20A FUSE. INSTALL THE DISCONNECT APPROXIMATELY 6 FEET WEST OF PANEL EM-DP.
- PROVIDE 3/4" CONDUIT WITH 2#10,#12G FROM FUSED DISCONNECT TO THE STREET LIGHTING CONTACTOR PANEL. CONNECT 277V CIRCUITS TO (2) SPARE POLES ON THE LIGHTING CONTACTOR. PROVIDE EQUIVALENT CONTACTOR WITH ADDITIONAL POLES IF POLES ARE NOT AVAILABLE.
- PROVIDE GENERAL DUTY, NEMA 12, 600V, FUSED DISCONNECT P/N: EATON DG261FDB WITH BUSSMAN FRS-R-20 FUSE.

**KEYPLAN**



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

PLOT: INF01\_Z:\2023\231032\CAD\CD\VEE\_231032.DWG LAYOUT: E-2 DATE: 12/1/2023 TIME: 10:47:24 AM USER: ACFOLEY

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Wharton Center  
Wharton - Masonry Restoration to SW Exterior Stairs (FY24)

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DATE	AS NOTED
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ELECTRICAL PLANS,  
SCHEDULES AND  
INFORMATION

**E-2**