

# SLCC MARKOSIAN LIBRARY TESTING CENTER

4600 South Redwood Rd  
Taylorsville, UT 84123

GENERAL NOTES:  
1. WHILE THE DOCUMENTS ARE SEPARATED BY SHEET NUMBERS FOR CONVENIENCE IN REFERENCING DOCUMENTATION, SHEET NAMES AND NUMBERS ARE NOT INTENDED TO DEFINE SCOPE. CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR ALL WORK DESCRIBED IN THE ENTIRE PACKAGE.

**JRCA**  
ARCHITECTS  
577 South 200 East  
S L C, Utah 84111  
ph: (801) 533-2100  
jrcaesign.com

REVIEWED FOR CODE COMPLIANCE  
FOR COMPLIANCE WITH THE IBC 2018 IBC  
CONSTRUCTION CODES IDENTIFIED BELOW:  
BUILDING STRUCTURAL  
MECHANICAL PLUMBING  
ELECTRICAL ENERGY  
ACCESSIBILITY FIRE  
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION BY PROJECT OR VIOLATION OF ANY FEDERAL, STATE OR LOCAL REGULATIONS.  
DATE: 02/18/21  
WEST COAST CODE CONSULTANTS, INC.

### ABBREVIATIONS

A	ABOVE	G	GALVANIZED	R	RADIUS
ABV	ABOVE FINISH FLOOR	GA	GAUGE	RCF	REFLECTED CEILING PLAN
AC	ACOUSTIC	GC	GENERAL CONTRACTOR	REG	REGISTER
ADD	ADDENDUM	GSN	GENERAL STRUCTURAL NOTES	REQD	REQUIRED
AC	AIR CONDITIONING	GL	GLASS OR GLAZING	RA	RETURN AIR
ALT	ALTERNATE	GR	GRADE	REV	REVISION
ALUM	ALUMINUM	GRD	GROUND	RD	ROOF DRAIN
AB	ANCHOR BOLT	GRLL	GRILLE	RFG	ROOFING
&	AND	GRD	GROUND	RM	ROOM
ANOD	ANODIZED	GYP	GYPSUM	RGH	ROUGH
ARCH	ARCHITECTURAL	H	HARDWARE	RND	ROUND
ASPH	ASPHALT	HDW	HARDWARE	S	SECTION
@	AT	HDWD	HARDWOOD	SHT	SHEET
B	BASEMENT	HT	HEIGHT	SIM	SIMILAR
B5MT	BELT	HP	HIGH POINT	SLDG	SLIDING
BLW	BELOW	HM	HOLLOW METAL	SPEC	SPECIFICATION
BM	BENCHMARK	HORIZ	HORIZONTAL	SPL	SPLASH
BLKG	BLOCKING	HB	HOSE BIB	SQ	SQUARE
BD	BOARD	HW	HOT WATER	SS	STAINLESS STEEL
BDG	BOTTOM OF BUILDING	HR	HOUR	STD	STANDARD
C	CABINET	HSK	HOUSEKEEPING	STOR	STORAGE
CAB	CABINET	I	INCH	STRUC	STRUCTURE OR STRUCTURAL
CPT	CARPET	IN	INSIDE DIAMETER	SA	SUPPLY AIR
CP	CAST IN PLACE	ID	INSIDE DIAMETER	SUSP	SUSPENDED
CB	CATCH BASIN	INSUL	INSULATION	T	TELEPHONE COMPANY
CLG	CEILING	INT	INTERIOR	TELCO	TELEPHONE COMPANY
CL	CENTER LINE	INV	INVERT	TG	TEMPERED GLASS
CT	CERAMIC TILE	J	JANITOR	T&G	TONGUE & GROOVE
CH	CHANNEL	JAN	JANITOR	T&B	TOP & BOTTOM
CO	CLEAN OUT	JT	JOINT	TOF	TOP OF
CLR	CLEAR	JST	JOIST	TOC	TOP OF CURB
CL	CLOSET	L	LAMINATED	TOD	TOP OF DECK
COL	COLUMN	LAM	LAMINATED	TOM	TOP OF MASONRY
CONC	CONCRETE	LANDG	LANDING	TOP	TOP OF PARAPET
CMU	CONCRETE MASONRY UNIT	LAV	LAVATORY	TOW	TOP OF WALL
COND	CONDITION	LVR	LOUVER	TYP	TYPICAL
CONN.	CONNECTION	M	MANUFACTURER	U	UNLESS NOTED OTHERWISE
CONST	CONSTRUCTION	MFR	MANUFACTURER	V	VENT
CONT	CONTINUOUS	MO	MASONRY OPENING	V	VENT
CJ	CONTROL JOINT	MATL	MATERIAL	VTR	VENT THROUGH ROOF
D	DAMP PROOFING	MAX	MAXIMUM	VERT	VERTICAL
DP	DECK BEARING	MECH	MECHANICAL	VEST	VESTIBULE
DB	DECK BEARING (DEMOLISHED)	MTL	METAL	VCT	VINYL COMPOSITION TILE
DIAG	DIAGONAL	MEZZ	MEZZANINE	W	WATER CLOSET
DA	DIAMETER	MIN	MINIMUM	WH	WATER HEATER
DM	DIMENSION	MULL	MULLION	WP	WATER PROOF
DISP	DISPENSER	N	NATURAL GRADE	WR	WATER RESISTANT
DWL	DOWEL	NOM	NOMINAL	WRF	WELDED WIRE FABRIC
DN	DOWN	NA	NOT APPLICABLE	WF	WIDE FLANGE
DS	DOWN SPOUT	NIC	NOT IN CONTRACT	WVW	WINDOW
DRN. BD	DRAINAGE BOARD	NTS	NOT TO SCALE	W	WITH
DWG	DRAWING	O	ON CENTER	WIO	WITHOUT
E	EACH	OC	ON CENTER	WD	WOOD
EWC	ELEC. WATER COOLER	OPNG	OPENING		
ELEC	ELECTRIC	OPP	OPPOSITE		
ELEV	ELEVATION	OD	OUTSIDE DIAMETER		
EQ	EQUAL	ORD	OVERFLOW ROOF DRAIN		
EQUIP	EQUIPMENT	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED		
EXH	EXHAUST	P	PAINT		
EXIST	EXISTING	PR	PAIR		
EJ	EXPANSION JOINT	PNL	PANEL		
EXT	EXTERIOR	PVMT	PAVEMENT		
F	FEET	P	PENNY		
FT	FEET	PLAM	PLASTIC LAMINATE		
FIN	FINISHED	PL	PLATE		
FE	FIRE EXTINGUISHER	PLBG	PLUMBING		
FEC	FIRE EXTINGUISHER & CABINET	PLYWD	PLYWOOD		
FIKT	FIXTURE	PSI	POUND PER SQUARE INCH		
FL	FLASHING	PSF	POUNDS PER SQUARE FOOT		
FLR	FLOOR				
FTG	FOOTING				
FND	FOUNDATION				

### MATERIALS / SYMBOLS

	PLYWOOD (SECTION)		CENTERLINE
	WOOD MOLDING		BUILDING SECTION FLAG
	CONCRETE (SECTION)		WALL SECTION / EXTERIOR ELEVATION
	GYPSUM BOARD (SECTION)		INTERIOR ELEVATION
	TILE (PLAN)		DETAIL
	COMPACTED GRAVEL (SECTION)		GRID HEAD
	COMPACTED SUBGRADE		WINDOW TAG
	STEEL FRAMING (PLAN, SECTION)		DOOR TAG
	CMU (PLAN, SECTION)		ROOM TAG
	BRICK VENEER (PLAN, SECTION)		WALL TYPE
	STONE VENEER (PLAN, SECTION)		KEYNOTE TAG
	RIGID INSULATION (SECTION)		REVISION TAG
	LANDSCAPE - PLANTING		WINDOW GLAZING TAG
	ELEVATION NAME		DRAWING TITLE

### DESIGN TEAM

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<b>STRUCTURAL ENGINEER</b> BHB Structural 2786 South Main Street Salt Lake City, Utah 84115 (801)355-5656 Ph. Contact: Alex Piket alex.piket@bhbenigneers.com	
<b>MECHANICAL &amp; PLUMBING ENGINEER</b> WHW ENGINEERING 8619 South Sandy Parkway #101 Sandy, Utah 84070 (801) 801-465-4021 Ph. Contact: Brad Lash bradl@whw-engineering.com	
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### DRAWING INDEX

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<b>VICINITY MAP</b> 	<b>VICINITY MAP</b> 

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PROJECT #: 20029

BID DOCUMENT SET	02/17/2021
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1	02/05/21 Revision 1



GENERAL INFORMATION

GI101



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### CODE ANALYSIS

Project: SLCC Testing Center  
Project Address: 4600 South Redwood Rd, Taylorsville, UT 84123  
Municipality/Jurisdiction: SLCC  
Owner: SLCC

Applicable Codes: 2018 International Building Code  
2018 International Existing Building Code  
2018 International Energy Conservation Code  
2018 International Plumbing Code  
2018 International Mechanical Code  
2017 National Electric Code  
NFPA 101 (Current Edition)  
ANSI/ASHRAE 90.1  
2018 ASHRAE 90.1

Construction Type (circle):  
I-A I-B II-A (EB) III-A III-B IV-A IV-B V-A V-B

IBC Alteration Level:  
Effect Area of Alteration: 9,015 sf  
Existing Floor Footprint: 20,019 sf  
9,015 sf / 20,019 sf = 45%

Level 2 Alteration  
Occupancy Group(s): B, A-3  
Mixed Use (circle): YES NO

Section 503 - Allowable Height and Area  
Allowable Height of Building as per IBC Table 504.3: FEET - 55, STORIES - 3  
Allowable Area per Story as per IBC Table 503:

Type I-B  
B 69,000  
A-3 (3) 28,500

Total Allowable Area = 28,500 SF per Story  
Actual Height of Building: FEET - 36, STORIES - 2

Lower Level Gross Area = 20,019 SF  
Entire building is equipped with automatic fire suppression system: YES

Section 508 - Building Area Modification  
Non-Separated Occupancies as per IBC 508.3 (circle): YES NO  
Separated Occupancies as per IBC 508.4 (circle): YES NO

Chapter 6 - Fire Resistance Rated Construction  
Table 601 - Type I-B does not require fire resistance for building elements.

Chapter 7 - Fire and Smoke Protection  
Section 707 - Fire barriers required for separated uses per Table 508.4  
Section 707.6 - Openings shall be protected per Section 716  
Section 707.7 - Penetrations shall comply with Section 714

Design Occupant Load  
Design Occupant Load as per IBC Table 1004.1.2:  
A-3: 293 Occupants  
B: 55 Occupants  
Total: 348 Occupants

IBC 1005.3  
Required Egress Width as per IBC 1005.3: 107" Total  
Actual Egress Width Provided: 142" Total

IBC 1005.3  
Assumed Existing Occupant Load: 315 Occupants  
Design Occupant Load: 348 Occupants  
20% Occupant Increase = 63 Occupants  
Actual Occupant Load Increase = 33 Occupants

Alterations to Plumbing Fixture Count Not Required  
Plumbing Fixtures (Table 2902.1)  
Existing Male Fixtures = 4 Fixtures  
Existing Female Fixtures = 4 Fixtures  
Existing Lavatories = 8

Existing Drinking Fountains = 2  
Existing Service Sinks = 1  
Exit Access Travel Distance (Table 1016.2)  
A-3: 250'

Corridor Width (Table 1003.2)  
Required minimum: 44 inches  
Actual minimum: 48 inches

AREA DENOTES 'B' OCCUPANCY

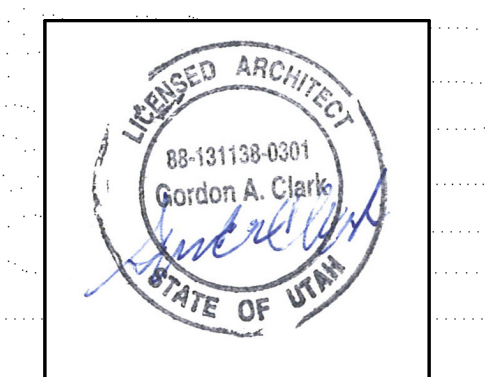
JRCA ARCHITECTS  
577 South 200 East  
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REVIEWED FOR CODE COMPLIANCE  
FOR COMPLIANCE WITH THE IBC PLAN CONSTRUCTION CODES IDENTIFIED BELOW:  
BUILDING STRUCTURAL MECHANICAL PLUMBING ELECTRICAL ENERGY ACCESSIBILITY  
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION BY PROCEEDING IN VIOLATION OF ANY FEDERAL, STATE OR LOCAL REGULATIONS.  
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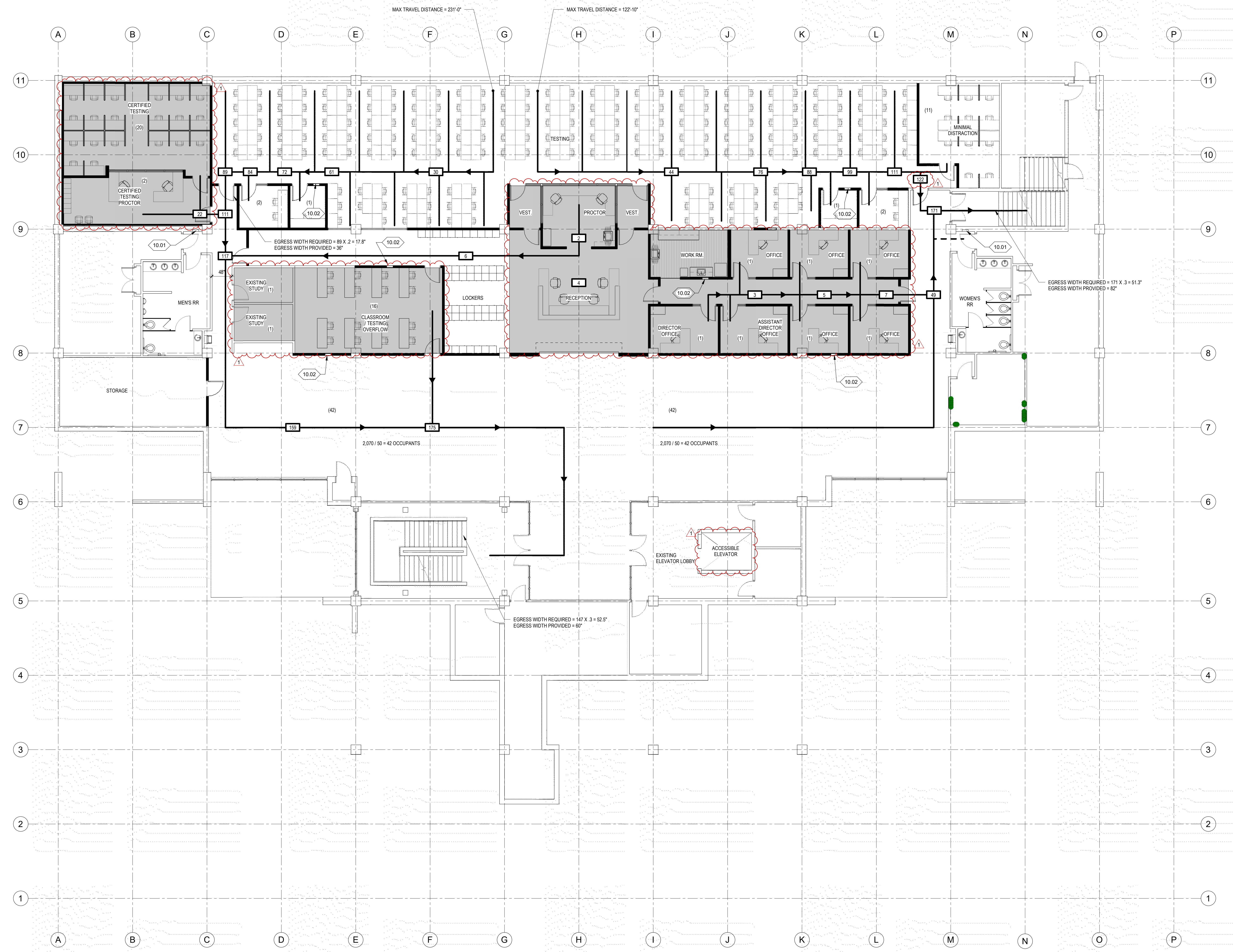
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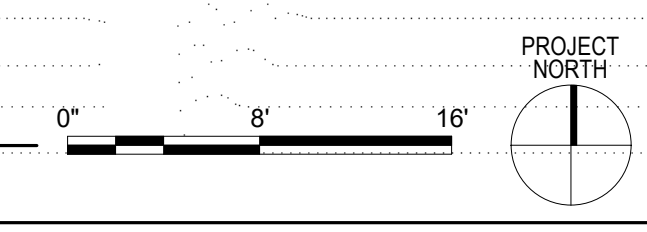


CODE ANALYSIS

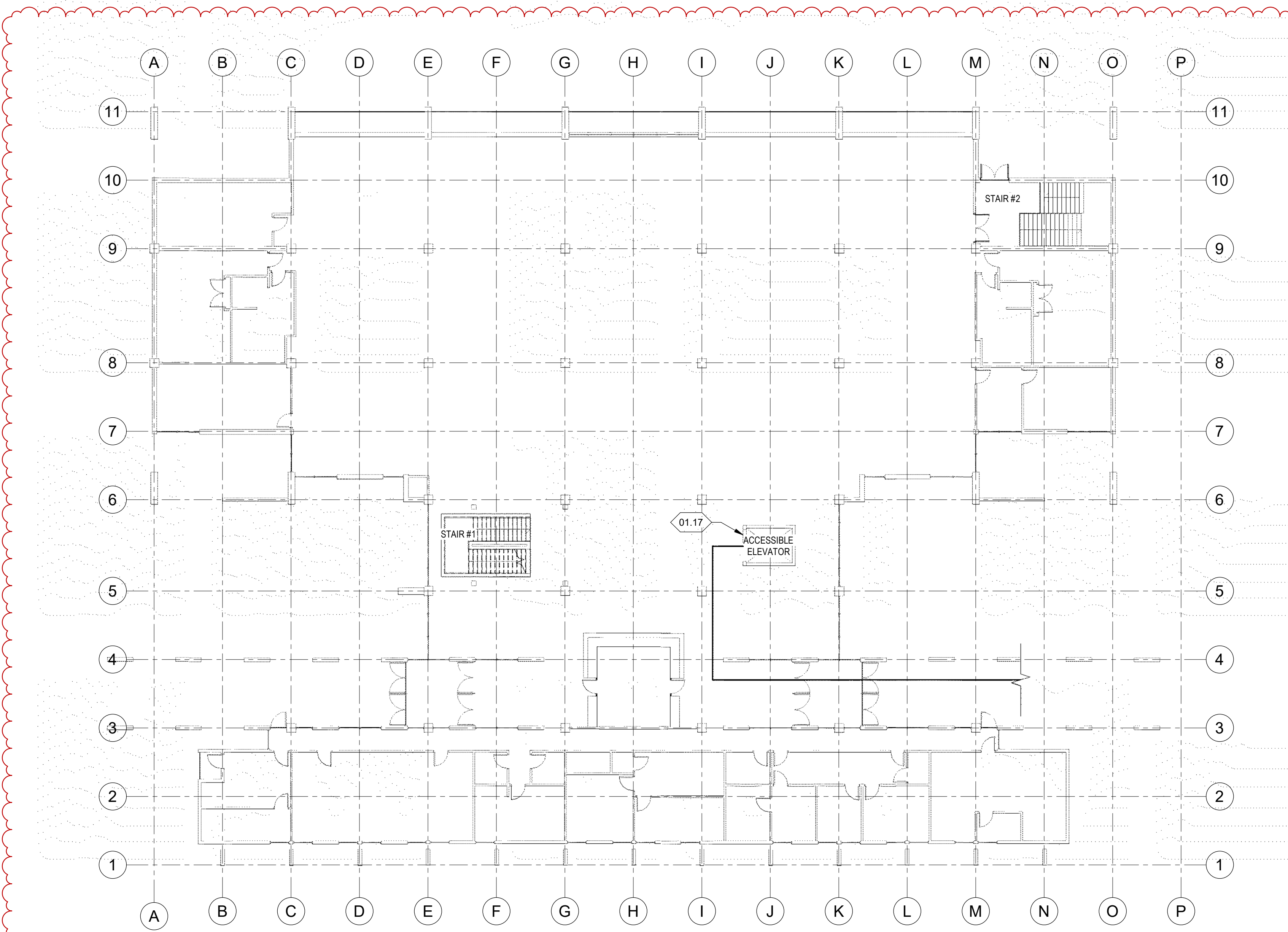
GI111



1 LOWER LEVEL FLOOR PLAN CODE COMPLIANCE PLAN  
SCALE 1/8" = 1'-0"





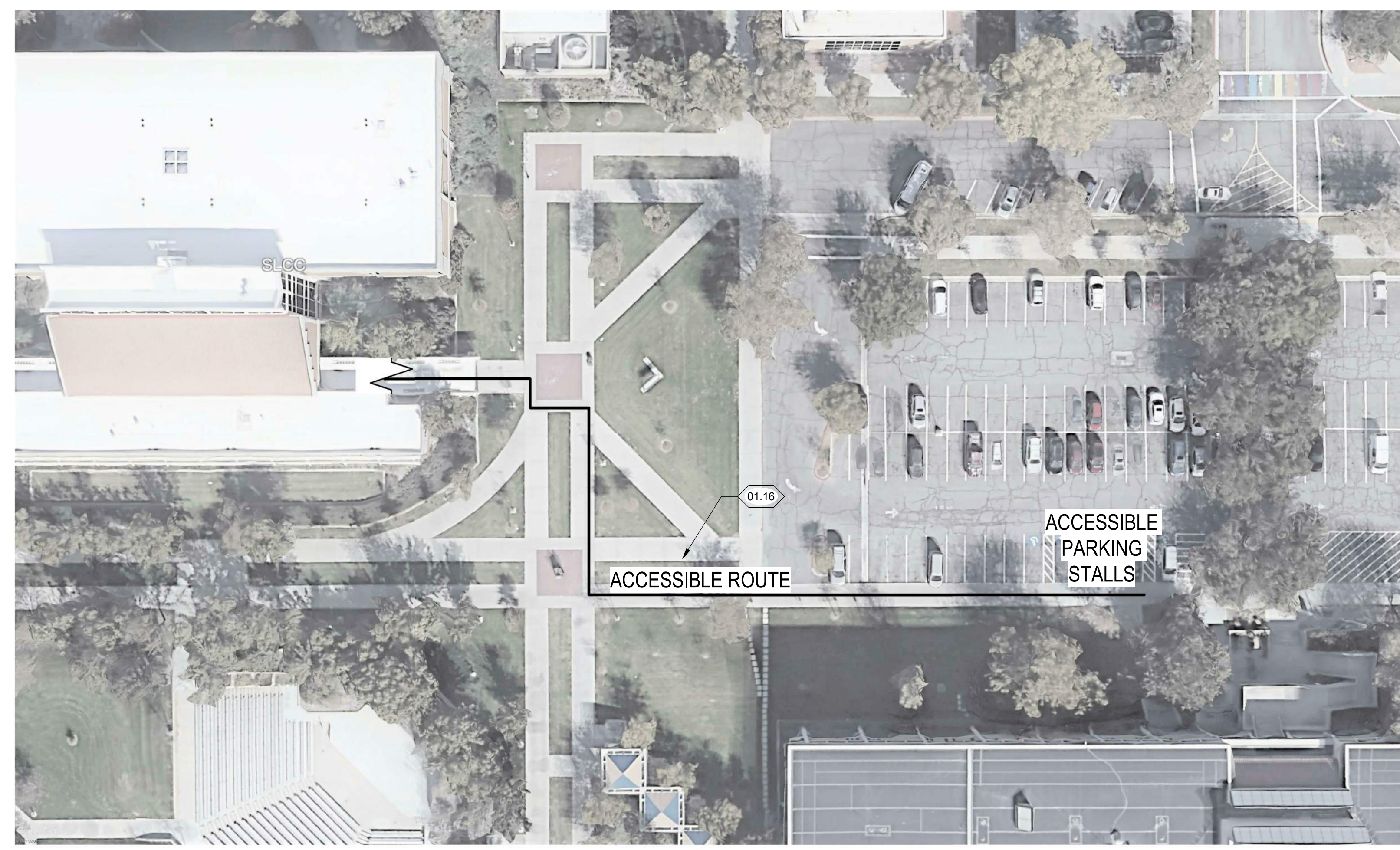


**KEY NOTES:**

01.16 CONTRACTOR AND INSPECTOR TO FIELD VERIFY THE EXISTING ACCESSIBLE ROUTE BETWEEN THE EXISTING ACCESSIBLE PARKING AND BUILDING ENTRANCE AND THAT ACCESSIBLE ROUTE DOES NOT EXCEED A 5% RUNNING SLOPE AND 2% CROSS SLOPE AS REQUIRED BY IBC 1104.1 AND ICC A117.1-99 SECTION 403.3. IF THE EXISTING ACCESSIBLE ROUTE IS NOT COMPLIANT, THE CONTRACTOR IS TO INFORM ARCHITECT IMMEDIATELY.

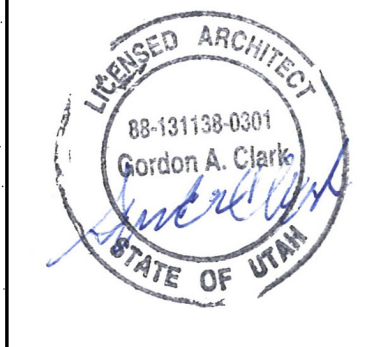
01.17 CONTRACTOR TO VERIFY THAT THE EXISTING ELEVATOR COMPLIES WITH SECTION 407 OF ICC A117.1-99. THIS INCLUDES CALL CONTROLS, SIGNALS, HOISTWAY SIGNAGE, ELEVATOR SIZES, ELEVATOR BUTTONS (IN CAB), CAR POSITION INDICATORS, AND SIGNAGE AT ELEVATOR.

**2**  
 GI112 MAIN LEVEL FLOOR PLAN CODE ANALYSIS  
 SCALE 1/16" = 1'-0"

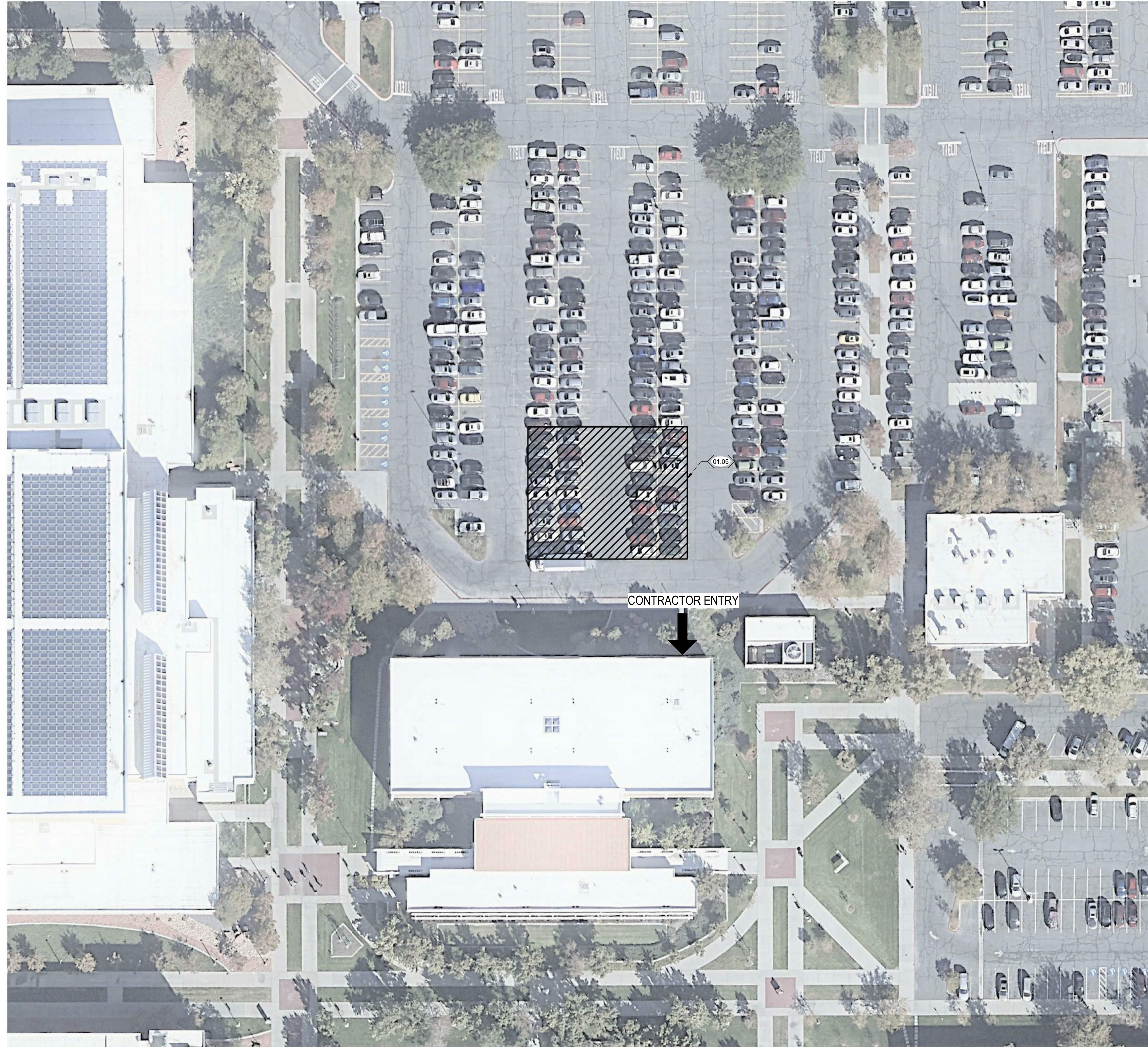


**1**  
 GI112 Accessible Route Map  
 SCALE 1/2" = 1'-0"

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KEY NOTES:

- 01.05 CONTRACTOR STAGING AND PARKING AREA. CONTRACTOR TO VERIFY FINAL REQUIREMENTS OF STAGING AREA AND RECEIVE APPROVAL PRIOR TO DESIGNATING AREA. CONTRACTOR TO PROVIDE SITE SECURITY FOR STAGING AREA INCLUDING BUT NOT LIMITED TO FENCING, SIGNAGE ETC.



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 BUILDINGS     STRUCTURAL  
 MECHANICAL     PLUMBING  
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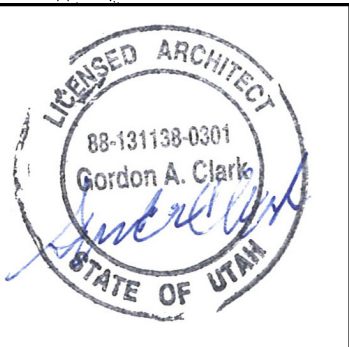
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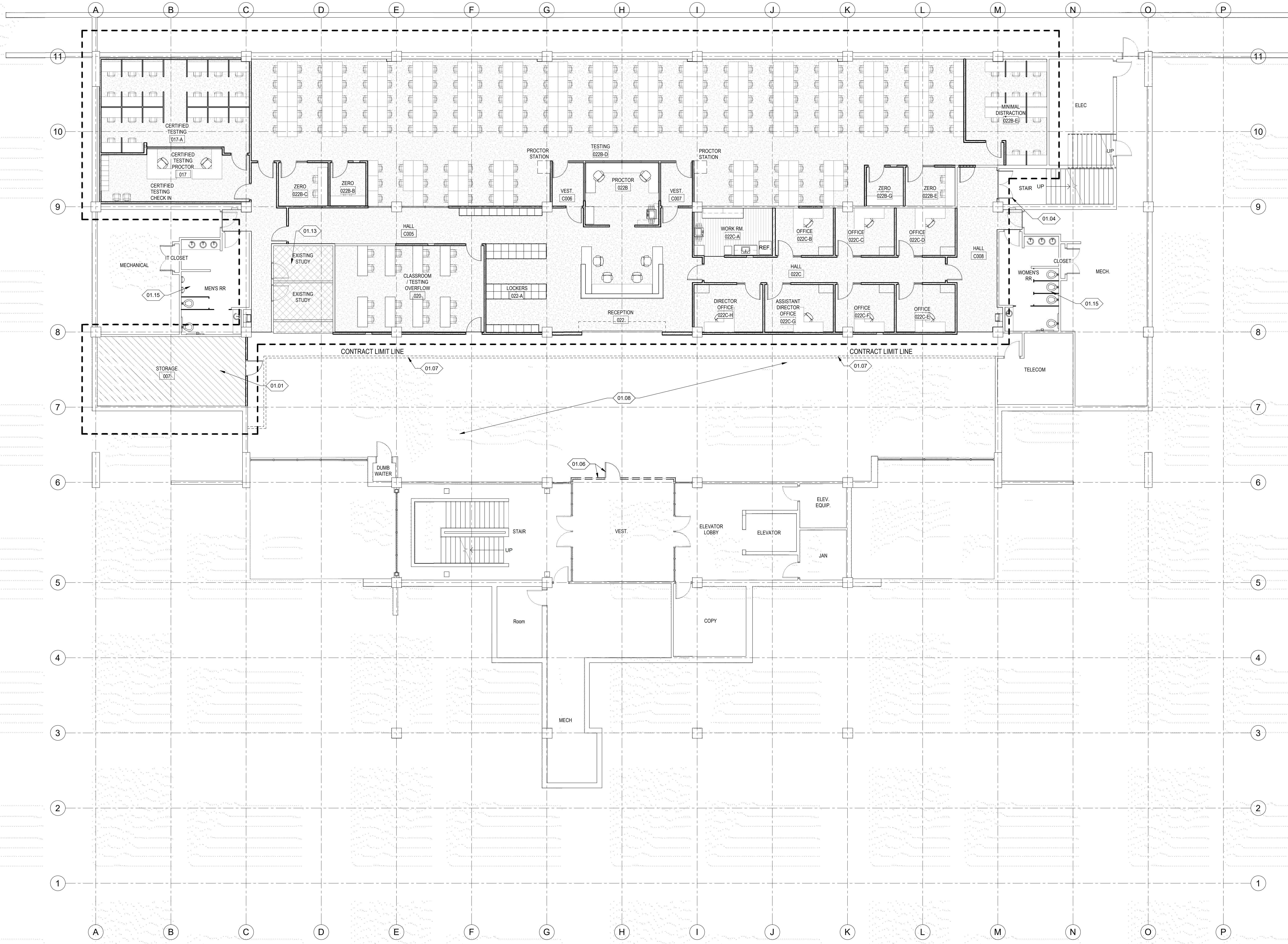


VIEW AND PRINT THIS SHEET IN COLOR

SITE WORK PLAN

G1120





**GENERAL NOTES:**

- EXCESSIVELY LOUD ACTIVITIES INCLUDING BUT NOT LIMITED TO SAWCUTTING, PNEUMATIC HAMMERS, PNEUMATIC DRILLING, EXCAVATING, BACKFILLING, COMPACTING SHALL BE CONDUCTED BETWEEN CLOSED HOURS OR ON WEEKENDS. IN THE EVENT THAT EXCESSIVELY NOISY ACTIVITIES NEED TO BE CONDUCTED OUTSIDE OF THE ABOVE MENTIONED TIMES, GENERAL CONTRACTOR TO COORDINATE AND RECEIVE AUTHORIZATION FROM APPROVED LIBRARY REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR TO ONLY USE INDICATED ACCESS POINT FOR THE PROJECT.

**GENERAL LIBRARY SCHEDULE:**

**Regular hours:** January 1<sup>st</sup> through May 6<sup>th</sup> with the exception of Spring Break  
 M-Th 7:30 AM - 10:00 PM  
 Friday 7:30 AM - 6:00 PM  
 Sat. 9:30 AM - 6:00 PM  
 Closed Sundays

**Spring break hours:** March 7<sup>th</sup> - 14<sup>th</sup> There are fewer students in the library. Some increased noise and activity is okay.  
 M-F 8:00AM - 4:30PM  
 Closed Saturday and Sunday

**Final exams and finals prep:** April 26<sup>th</sup> to May 6<sup>th</sup> We request that noise and disruptions in the building be kept to an absolute minimum.

**Between semester break hours:** May 7<sup>th</sup> to May 16<sup>th</sup> There are fewer students in the library. Some increased noise and activity is okay.  
 M-F 8:00AM - 4:30PM  
 Closed Saturday and Sunday

**Regular Summer hours:** May 17<sup>th</sup> to August 7<sup>th</sup>  
 M-Th 7:30AM - 8:30PM  
 Friday 7:30AM - 5:00PM  
 Sat. 9:30AM - 5:00PM  
 Closed Sunday

**Between semester break hours:** August 7<sup>th</sup> to August 22<sup>nd</sup> There are fewer students in the library. Some increased noise and activity is okay.  
 M-F 8:00AM - 4:30PM  
 Closed Saturday and Sunday

**KEY NOTES:**

- 01.01 AREA TO BE CONSIDERED PHASE 1 OF THE PROJECT. AREA TO BE COMPLETED PRIOR TO THE COMMENCEMENT OF THE REMAINDER OF WORK SHOWN. SLCC STAFF TO UTILIZE STORAGE SPACE THROUGH THE REMAINDER OF THE PROJECT.
- 01.04 EXISTING DOOR ASSEMBLY TO BE USED FOR CONSTRUCTION ACCESS. PRESERVE & PROTECT DOOR DURING CONSTRUCTION. REPAIR POST CONSTRUCTION OR NECESSARY, SLCC TO MODIFY DOOR TO ACCOMMODATE CONTRACTOR ACCESS. DOOR TO BE SECURED WHEN NOT BEING ACTIVELY USED.
- 01.06 TEMPORARY BARRIER AND DOOR TO BE CONSTRUCTED TO 6' ABOVE ADJACENT CEILING. DOOR FRAME, DOOR AND HARDWARE PROVIDED BY SLCC. CONTRACTOR TO INSTALL SECURED WHEN NOT BEING ACTIVELY USED.
- 01.07 TEMP DUST BARRIER AS REQUIRED.
- 01.08 PROTECT IN PLACE FURNISHINGS TO REMAIN DURING CONSTRUCTION. PROVIDE FINAL CLEANING POST CONSTRUCTION ACTIVITIES.
- 01.13 EXISTING SPACE NOT INCLUDED IN THE SCOPE OF WORK.
- 01.15 RESTROOMS ACCESSIBLE BY CONTRACTOR FOR USE THROUGH THE DURATION OF PROJECT. CONTRACTOR IS RESPONSIBLE FOR THE CLEANING OF RESTROOMS THROUGH DURATION OF PROJECT.

**LEGEND:**

**JRCA ARCHITECTS**  
 577 South 200 East  
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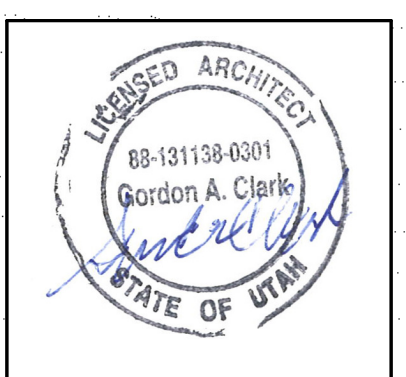
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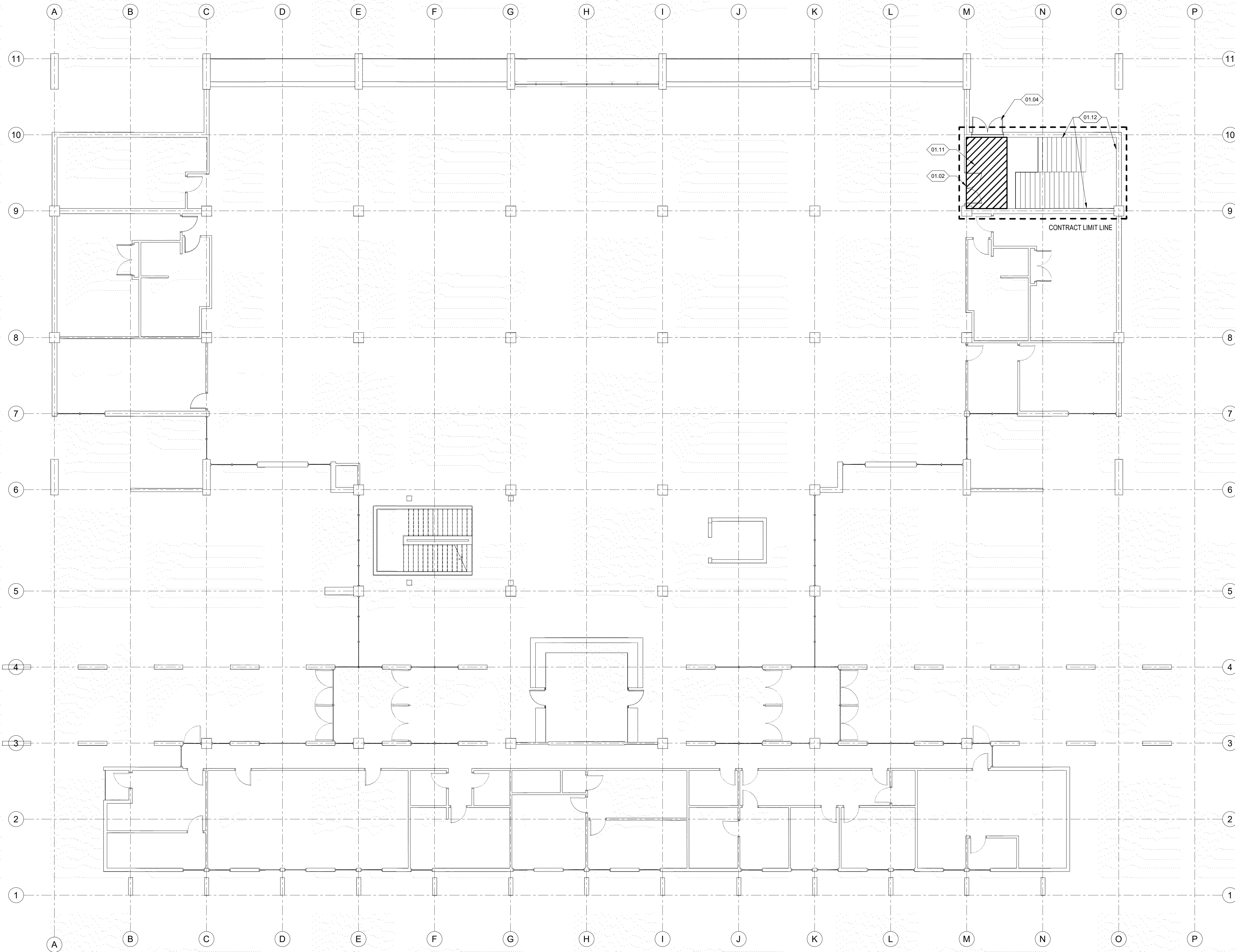
LOWER LEVEL WORK PLAN

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 Closed Sundays

Spring break hours: March 7<sup>th</sup> - 14<sup>th</sup> There are fewer students in the library. Some increased noise and activity is okay.  
 M - F: 8:00AM - 4:30PM  
 Closed Saturday and Sunday

Final exams and finals prep: April 20<sup>th</sup> to May 6<sup>th</sup> We request that noise and disruptions in the building be kept to an absolute minimum.

Between semester break hours: May 7<sup>th</sup> to May 16<sup>th</sup> There are fewer students in the library. Some increased noise and activity is okay.  
 M - F: 8:00AM - 4:30PM  
 Closed Saturday and Sunday

Regular Summer hours: May 17<sup>th</sup> to August 7<sup>th</sup>  
 M - Th: 7:30AM - 8:30PM  
 Friday: 7:30AM - 5:00PM  
 Sat: 9:30AM - 5:00PM  
 Closed Sunday

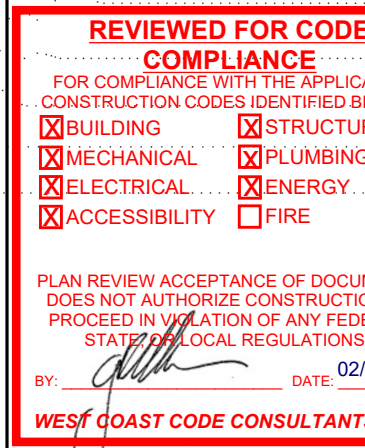
Between semester break hours: August 7<sup>th</sup> to August 22<sup>nd</sup> There are fewer students in the library. Some increased noise and activity is okay.  
 M - F: 8:00AM - 4:30PM  
 Closed Saturday and Sunday

**KEY NOTES:**

- 01.02 SIGNAGE TO BE APPLIED TO DOOR FOR EMERGENCY EXIT ONLY. NO CONTRACTOR USE OF THIS DOOR. DOOR TO REMAIN CLOSED DURING CONSTRUCTION. EMERGENCY EGRESS TO BE MAINTAINED AT ALL TIMES.
- 01.04 EXISTING DOOR ASSEMBLY TO BE USED FOR CONSTRUCTION ACCESS. PRESERVE & PROTECT DOOR DURING CONSTRUCTION. REPAIR POST CONSTRUCTION OR NECESSARY. SICC TO MODIFY DOOR TO ACCOMMODATE CONTRACTOR ACCESS. DOOR TO BE SECURED WHEN NOT BEING ACTIVELY USED.
- 01.11 AREA TO REMAIN FREE AND CLEAR OF OBSTRUCTIONS FOR DURATION OF CONSTRUCTION FOR EMERGENCY EGRESS. PRESERVE AND PROTECT WALLS FOR DURATION OF CONSTRUCTION.
- 01.12



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PROJECT #: 20029

BID DOCUMENT SET

02/17/2021

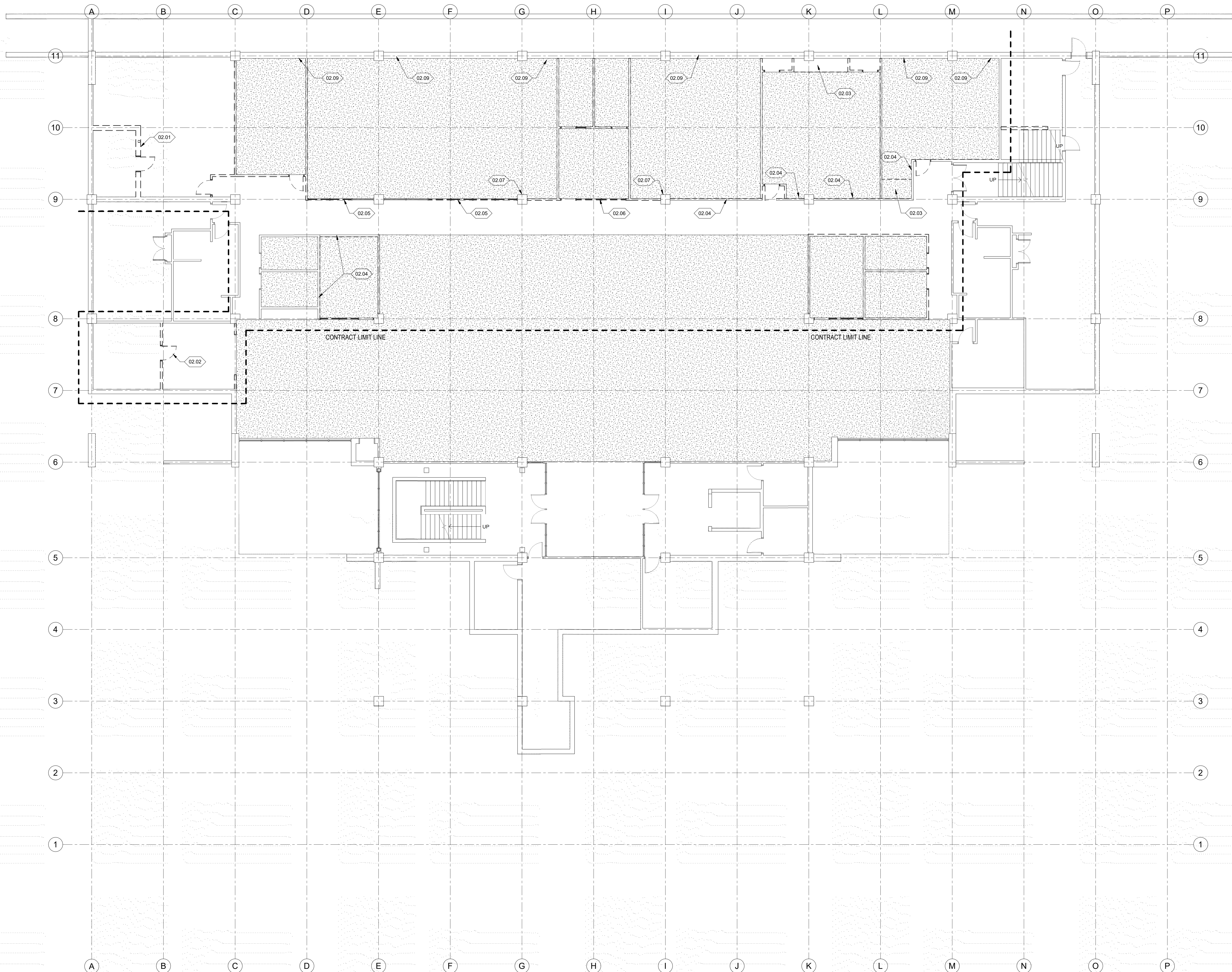
DATE	REVISION



MAIN LEVEL WORK PLAN

G1122





**GENERAL NOTES:**

1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS, AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE DOCUMENTED PRIOR TO COMMENCING DEMOLITION.
2. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AND/OR PLUMBING DRAWINGS WHEN DEMOLITION REQUIRES REMOVAL OR TERMINATION OF SUCH UTILITIES.
3. DASHED LINES INDICATE EXISTING WALLS, CASEWORK, FIXTURES, AND/OR OPENINGS WHICH ARE TO BE REMOVED, U.N.O.
4. THE CONTRACTOR IS TO REVIEW THE COMPLETE DOCUMENT SET AND COORDINATE THE WORK LISTED IN THE DEMOLITION DOCUMENTS WITH THE SCOPE OF THE NEW CONSTRUCTION. ALL DISCREPANCIES WILL BE NOTED TO THE ARCHITECT IN WRITING PRIOR TO COMMENCING.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE PLACEMENT AND ERECTION OF ALL TEMPORARY PROTECTION FOR MEANS OF EGRESS AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION.
6. DO NOT DISTURB, DISRUPT, DAMAGE OR ALTER ANY STRUCTURAL CONDITION OF THE EXISTING BUILDING UNLESS SPECIFICALLY INDICATED IN THESE DOCUMENTS.
7. IN ANY CUTTING, PATCHING OR ALTERATIONS OF THE EXISTING STRUCTURE OR ITS COMPONENTS THAT MAY BE REQUIRED FOR THE INSTALLATION OF NEW CONSTRUCTION, THE CONTRACTOR WILL NOTIFY THE ARCHITECT IN WRITING, IN ADVANCE OF ALL SUCH WORK AS MAY BECOME NECESSARY.
8. THE EXISTING PERIMETER WALL SYSTEMS ARE NOT TO BE REMOVED, U.N.O. ANY DAMAGE EITHER EXISTING OR AS A RESULT OF CONSTRUCTION ACTIVITY IS TO BE REPAIRED TO MATCH EXISTING AND ACCEPT NEW CONSTRUCTION WHERE APPLICABLE.
9. COORDINATE SAWCUT AND FLOOR REMOVAL REQUIREMENTS WITH STRUCTURAL, MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS.
10. REFER TO ELECTRICAL DRAWINGS FOR FIXTURES TO BE SALVAGED AND REUSED.

**KEY NOTES:**

- 02.01 SAWCUT AND REMOVE CONCRETE WALLS TO 11'-0" AFF. SHORE WALLS AS REQUIRED BY STRUCTURAL DRAWINGS.
- 02.02 REMOVE AND RELOCATE DOOR IN NEW WALL ASSEMBLY.
- 02.03 DEMOLISH EXISTING MILLWORK.
- 02.04 REMOVE EXISTING GYPSUM BOARD FROM ONE SIDE. PROVIDE NEW GYPSUM BOARD AND SOUND BATTS AS REQUIRED.
- 02.05 MODIFY EXISTING WINDOW SYSTEM TO MATCH NEW PLAN. REPAINT WINDOW SYSTEM.
- 02.06 REMOVE EXISTING WINDOW SYSTEM IN ITS ENTIRETY.
- 02.07 PATCH AND REPAIR EXISTING CONCRETE FINISH EXISTING WALL TO REMAIN. PATCH AND REPAIR AS NEEDED.
- 02.09

**DEMO FLOOR PLAN LEGEND:**

- EXISTING DOOR AND FRAME TO REMAIN. SEE DOOR HARDWARE SPEC. FOR DOOR HARDWARE COMPONENTS TO REMAIN.
- EXISTING DOOR, FRAME AND HARDWARE TO BE REMOVED. EXISTING SIDELIGHT TO BE REMOVED, WHERE OCCURS.
- EXISTING WALL TO BE REMOVED.
- EXISTING WALL TO BE REMAIN.

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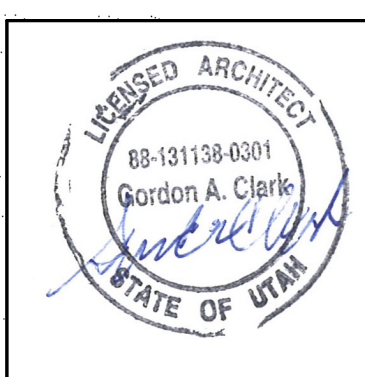
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 FOR COMPLIANCE WITH THE IBC AND OTHER APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW:  
 BUILDING  STRUCTURAL  
 MECHANICAL  PLUMBING  
 ELECTRICAL  ENERGY  
 ACCESSIBILITY  FIRE

PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION BY PRODUCED IN VIOLATION OF ANY FEDERAL, STATE OR LOCAL REGULATIONS.  
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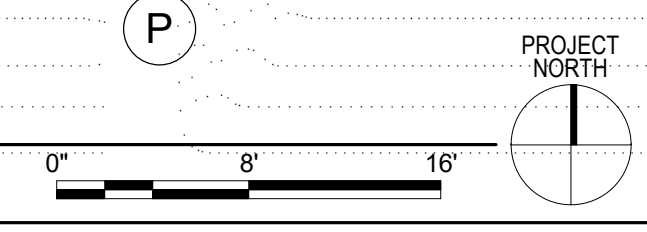
PROJECT #: 20029

BID DOCUMENT SET	
DATE	REVISION
02/17/2021	

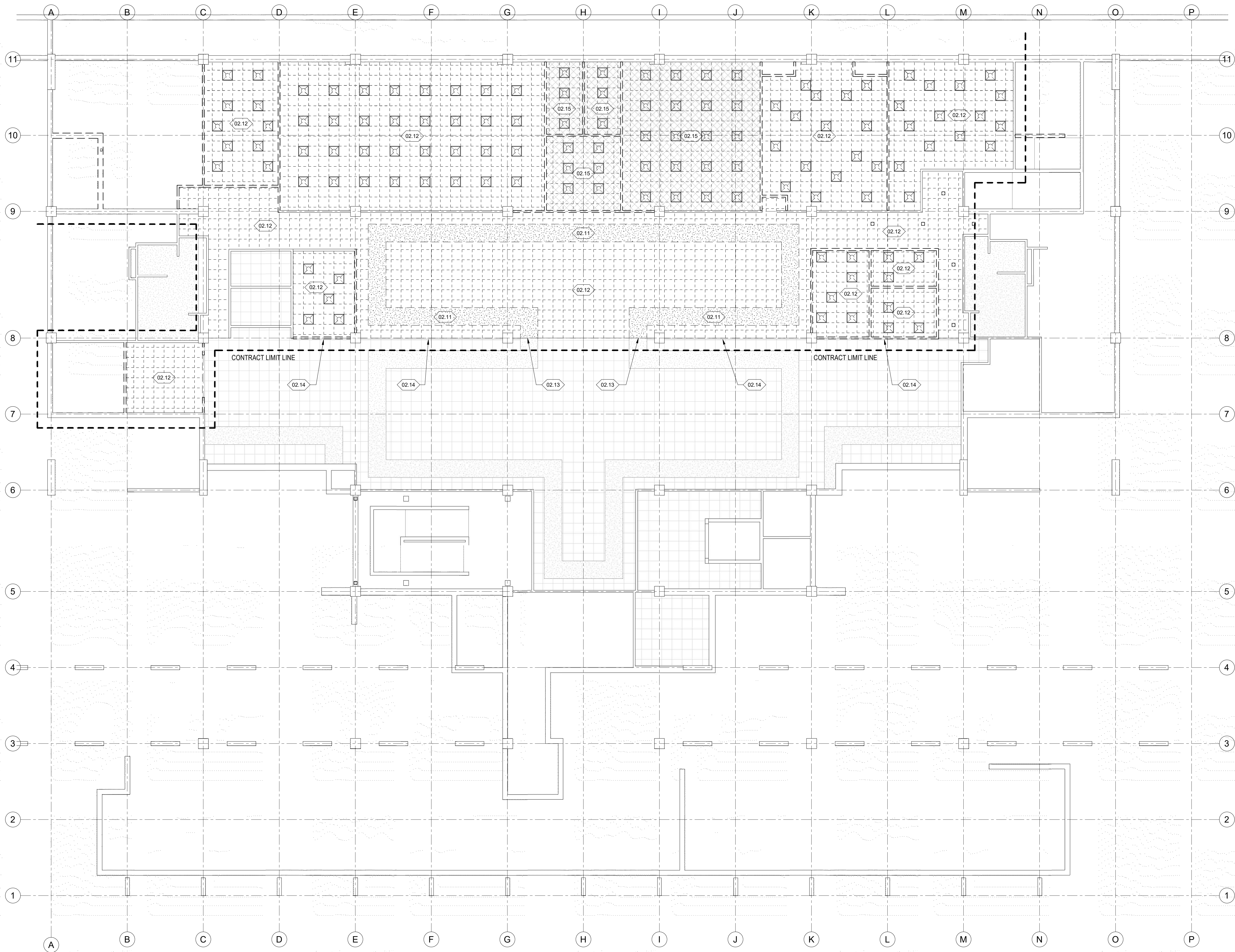


**BUILDING DEMOLITION PLAN**

**DP101**







GENERAL NOTES:

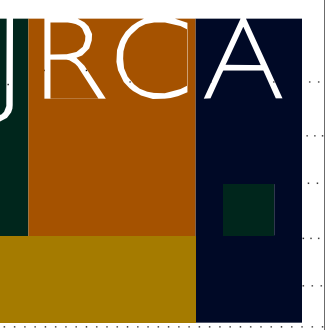
1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS, AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE DOCUMENTED PRIOR TO COMMENCING DEMOLITION.
2. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AND/OR PLUMBING DRAWINGS WHEN DEMOLITION REQUIRES REMOVAL OR TERMINATION OF SUCH UTILITIES.
3. DASHED LINES INDICATE EXISTING WALLS, CASEWORK, FIXTURES, AND/OR OPENINGS WHICH ARE TO BE REMOVED, U.N.O.
4. THE CONTRACTOR IS TO REVIEW THE COMPLETE DOCUMENT SET AND COORDINATE THE WORK LISTED IN THE DEMOLITION DOCUMENTS WITH THE SCOPE OF THE NEW CONSTRUCTION. ALL DISCREPANCIES WILL BE NOTED TO THE ARCHITECT IN WRITING PRIOR TO COMMENCING.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE PLACEMENT AND ERECTION OF ALL TEMPORARY PROTECTION FOR MEANS OF EGRESS AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION.
6. DO NOT DISTURB, DISRUPT, DAMAGE OR ALTER ANY STRUCTURAL CONDITION OF THE EXISTING BUILDING UNLESS SPECIFICALLY INDICATED IN THESE DOCUMENTS.
7. IN ANY CUTTING, PATCHING OR ALTERATIONS OF THE EXISTING STRUCTURE OR ITS COMPONENTS THAT MAY BE REQUIRED FOR THE INSTALLATION OF NEW CONSTRUCTION, THE CONTRACTOR WILL NOTIFY THE ARCHITECT IN WRITING, IN ADVANCE OF ALL SUCH WORK AS MAY BECOME NECESSARY.
8. THE EXISTING PERIMETER WALL SYSTEMS ARE NOT TO BE REMOVED, U.N.O. ANY DAMAGE EITHER EXISTING OR AS A RESULT OF CONSTRUCTION ACTIVITY IS TO BE REPAIRED TO MATCH EXISTING AND ACCEPT NEW CONSTRUCTION WHERE APPLICABLE.
9. COORDINATE SAWCUT AND FLOOR REMOVAL REQUIREMENTS WITH STRUCTURAL, MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS.
10. REFER TO ELECTRICAL DRAWINGS FOR FIXTURES TO BE SALVAGED AND REUSED.

KEY NOTES:

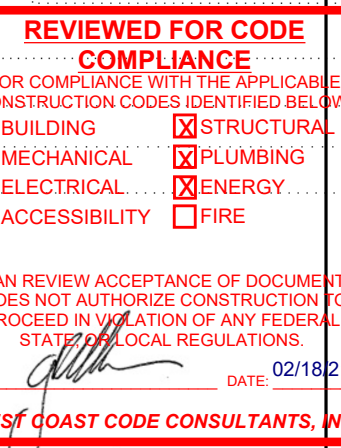
- 02.11 EXISTING SOFFIT TO BE REMOVED. ALL ASSOCIATED FRAMING TO BE REMOVED.
- 02.12 EXISTING CEILING AND ALL COMPONENTS TO BE REMOVED.
- 02.13 PORTION OF EXISTING SOFFIT TO BE REMOVED TO ALLOW FOR NEW CONSTRUCTION. CONTRACTOR TO THE EXISTING SOFFIT BACK INTO NEW WALL CONSTRUCTION.
- 02.14 PORTION OF EXISTING CEILING SYSTEM TO BE REMOVED TO ALLOW FOR NEW CONSTRUCTION. CONTRACTOR TO THE EXISTING CEILING SYSTEM BACK INTO NEW WALL CONSTRUCTION.
- 02.15 PORTION OF EXISTING CEILING TILES TO BE SALVAGED AND RE-USED. SALVAGED TILES TO BE CONTAINED TO WHOLE ROOM. DO NOT MIX SALVAGED AND NEW ACOUSTICAL CEILING TILES IN THE SAME CEILING.

DEMO REFLECTED CEILING PLAN LEGEND:

- ACOUSTICAL CEILING GRID TO BE REMOVED
- 2x2 LIGHT FIXTURE TO BE REMOVED
- RECESSED CAN LIGHT TO BE REMOVED



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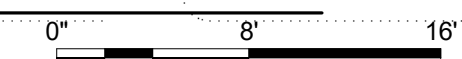
DATE	REVISION
02/02/21	Revision 1



LOWER FLOOR  
DEMO  
REFLECTED  
CEILING PLAN

DP161

PROJECT NORTH



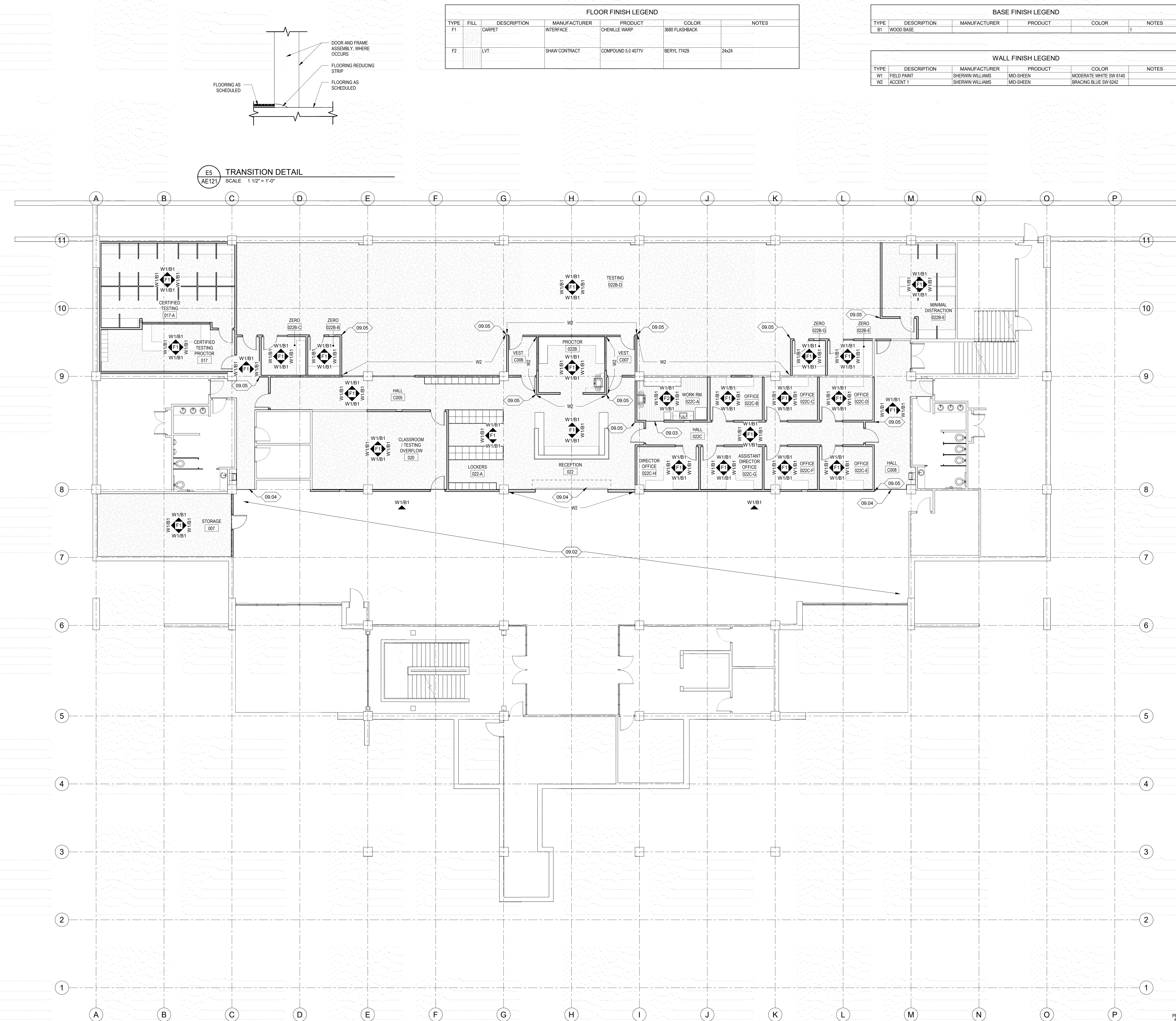






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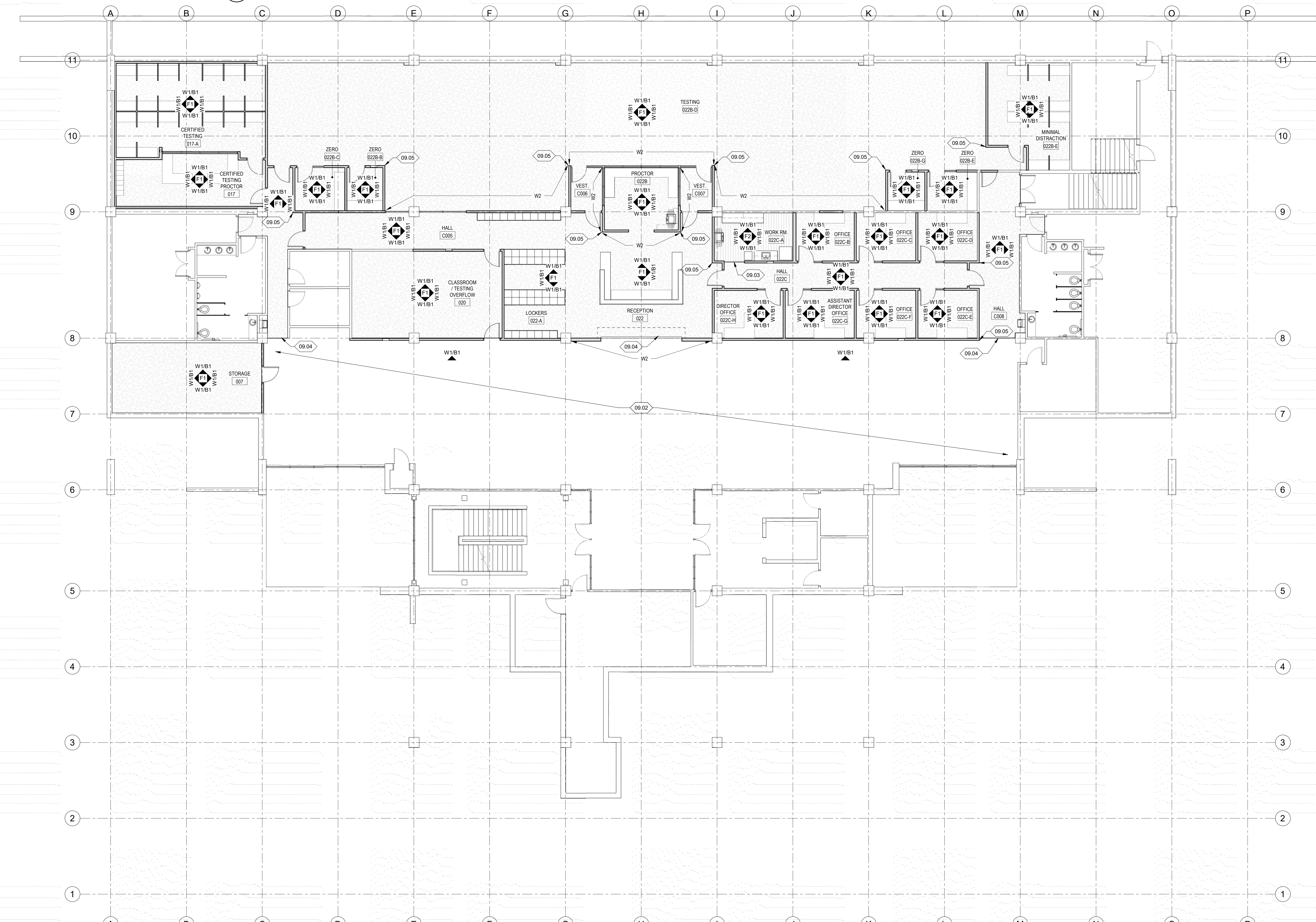


FLOOR FINISH LEGEND						
TYPE	FILL	DESCRIPTION	MANUFACTURER	PRODUCT	COLOR	NOTES
F1	[Pattern]	CARPET	INTERFACE	CHELENILE WARP	3680 FLASHBACK	
F2	[Pattern]	LVT	SHAW CONTRACT	COMPOUND S.O 407TV	BERYL 77429	24x24

BASE FINISH LEGEND					
TYPE	DESCRIPTION	MANUFACTURER	PRODUCT	COLOR	NOTES
B1	WOOD BASE				1

WALL FINISH LEGEND					
TYPE	DESCRIPTION	MANUFACTURER	PRODUCT	COLOR	NOTES
W1	FIELD PAINT	SHERWIN WILLIAMS	MID-SHEEN	MODERATE WHITE SW 6140	
W2	ACCENT 1	SHERWIN WILLIAMS	MID-SHEEN	BRACING BLUE SW 6242	

E5 TRANSITION DETAIL  
SCALE 1 1/2" = 1'-0"



1 LOWER LEVEL FINISH PLAN  
SCALE 1/8" = 1'-0"

**GENERAL NOTES:**

- WOOD BASE WILL MATCH EXISTING ADJACENT SPACES. CONTRACTOR TO SUBMIT SAMPLES FOR APPROVAL.

**FINISH LEGEND NOTES:**

- WOOD BASE WILL MATCH EXISTING ADJACENT SPACES. CONTRACTOR TO SUBMIT SAMPLES FOR APPROVAL.

**KEY NOTES:**

- EXISTING CARPET TO REMAIN. PATTERN OF NEW CARPET INTO THE NEW SPACE SHALL BE CONTINUED FROM THE EXISTING PATTERN.
- FLOORING TRANSITION. DETAIL E5AE121
- OLD TO NEW CARPET TRANSITION.
- CORNER GUARD - KOROGUARD GS20 STAINLESS STEEL CORNER GUARD. HEIGHT OF 4'-0" AFF.

**FINISH PLAN LEGEND:**

- W1/B1/W2/B1/W3/B1/W4/B1 WALL FINISH TYPE / BASE TYPE
- F1 FLOOR FINISH TYPE
- FLOOR FINISH INSTALLATION DIRECTIONAL ARROW

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BUILDING STRUCTURAL MECHANICAL PLUMBING ELECTRICAL ENERGY ACCESSIBILITY FIRE  
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02/17/2021	

REGISTERED ARCHITECT  
58-131138-0301  
Gordon A. Clark  
STATE OF UTAH

VIEW AND PRINT THIS SHEET IN COLOR

FINISH PLAN

AE121

















ARCHITECTS  
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FOR COMPLIANCE WITH THE IBC/IRC/UPC/ASCE/ENR/CSDE/CONSTRUCTION CODES IDENTIFIED BELOW:

BUILDING  STRUCTURAL  
 MECHANICAL  PLUMBING  
 ELECTRICAL  ENERGY  
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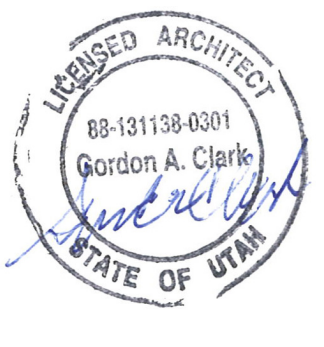
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PROJECT #: 20029

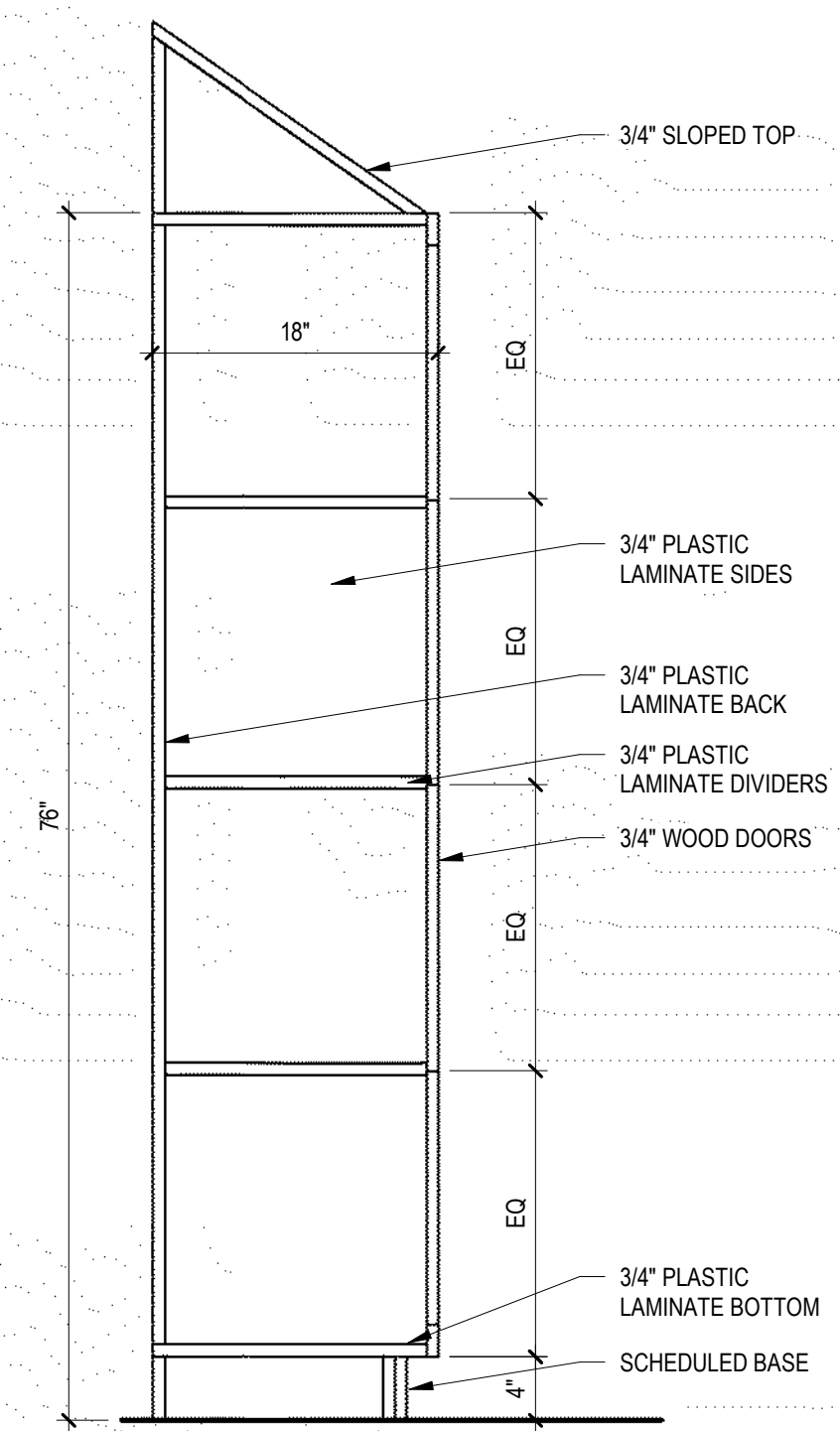
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DATE	REVISION

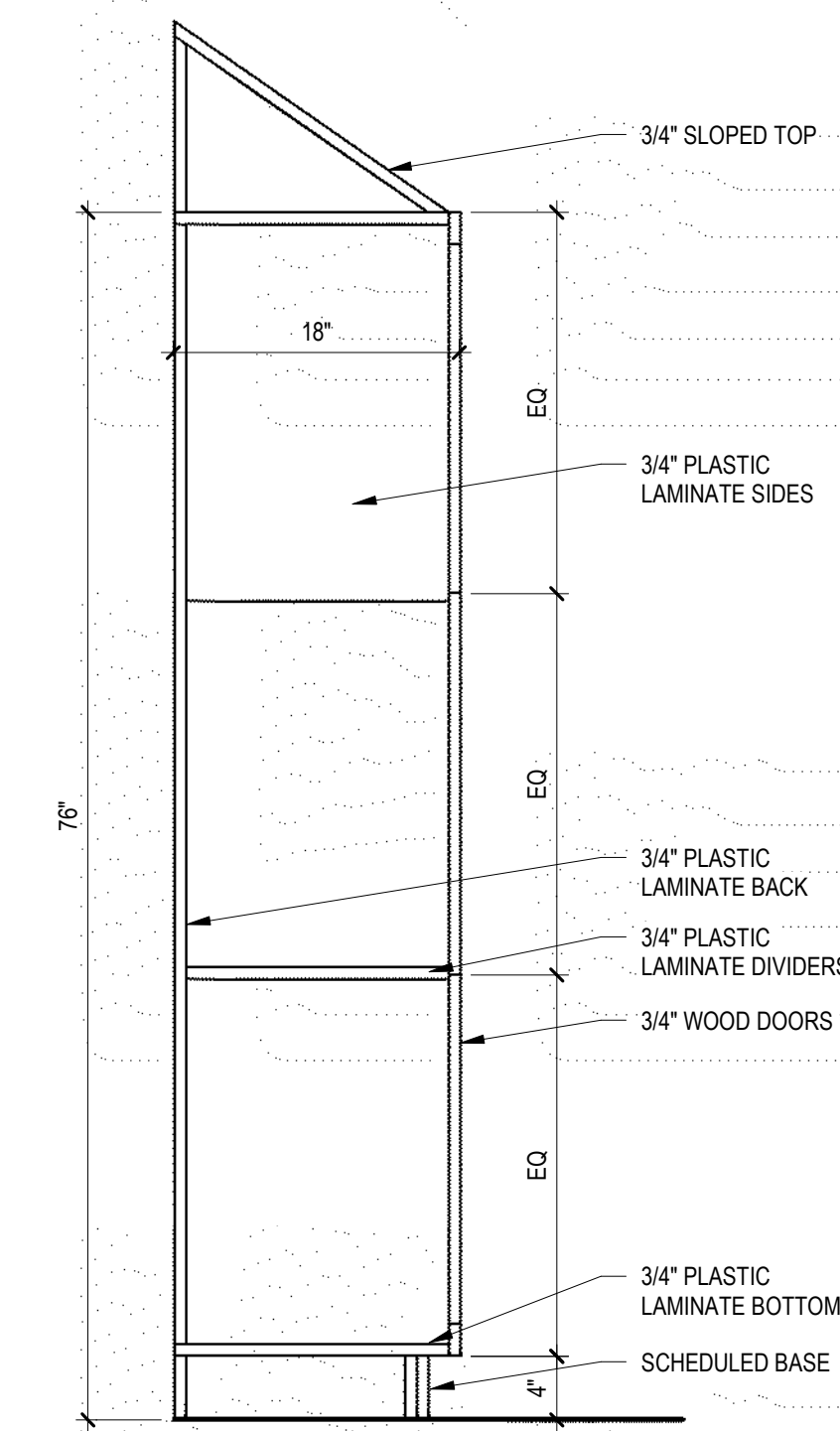


DETAILS

AE402



A2  
AE402  
4 TIER LOCKER SECTION  
SCALE 1" = 1'-0"



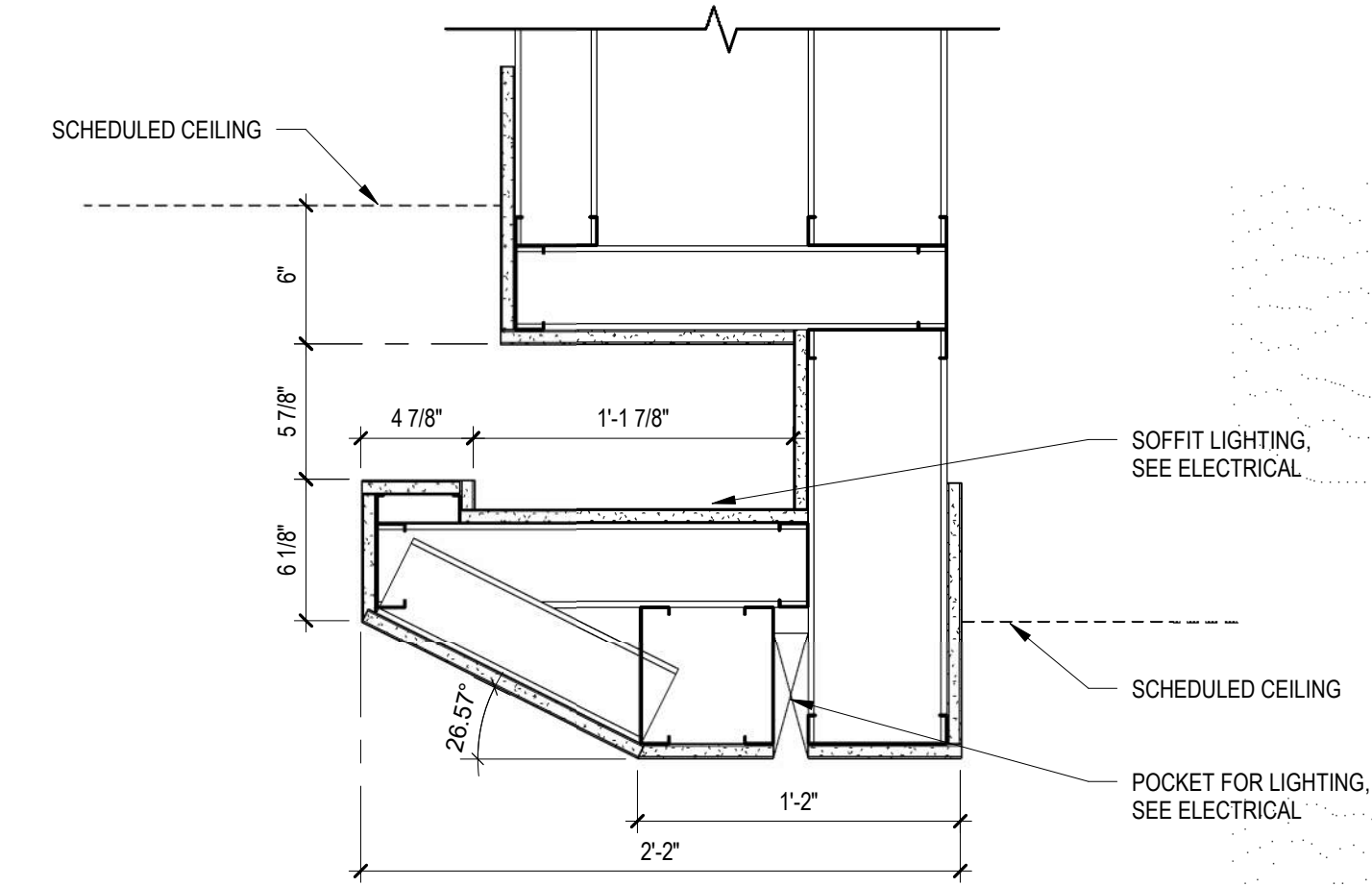
A1  
AE402  
3 TIER LOCKER SECTION  
SCALE 1" = 1'-0"



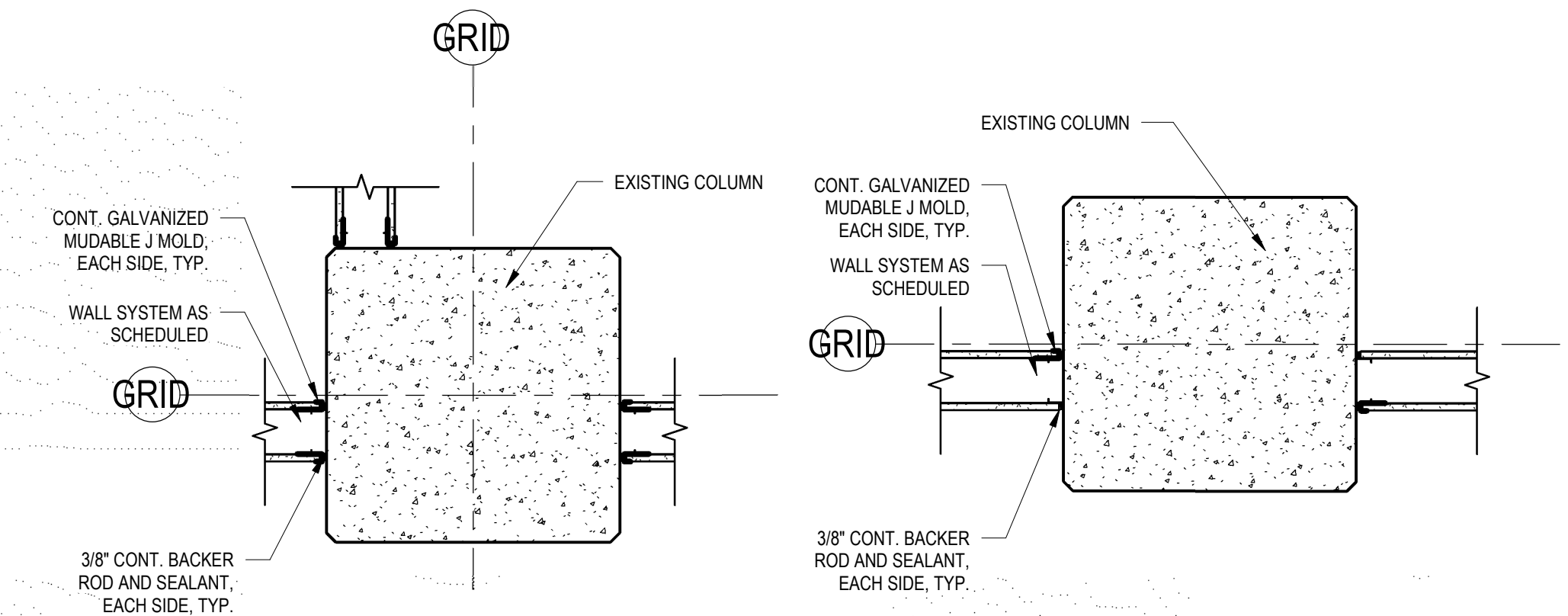




GENERAL NOTES:

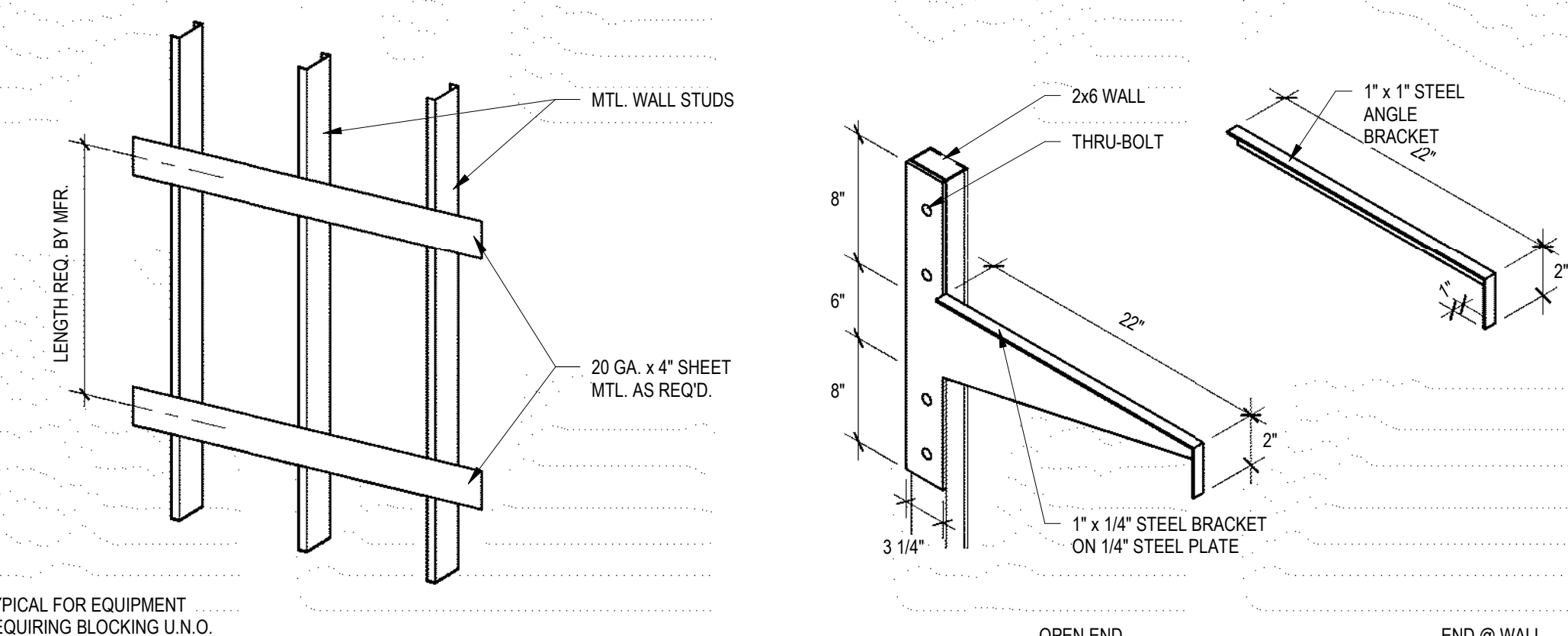


D2 SOFFIT DETAIL @ RECEPTION DESK  
SCALE 1 1/2" = 1'-0"



C2 WALL PARTITION TO COLUMN DETAIL  
SCALE 1" = 1'-0"

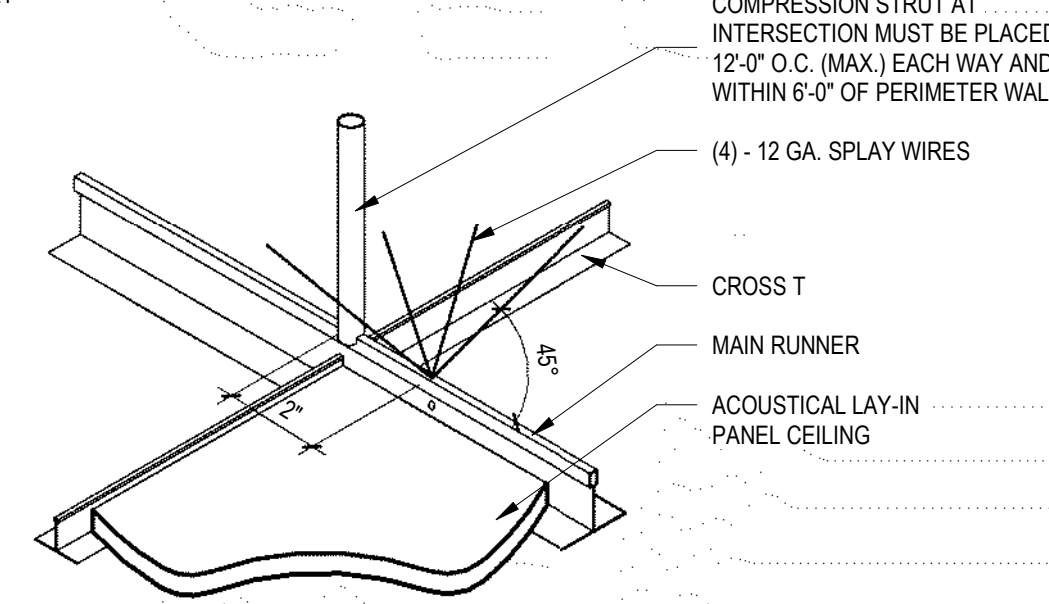
C1 WALL PARTITION TO COLUMN DETAIL  
SCALE 1" = 1'-0"



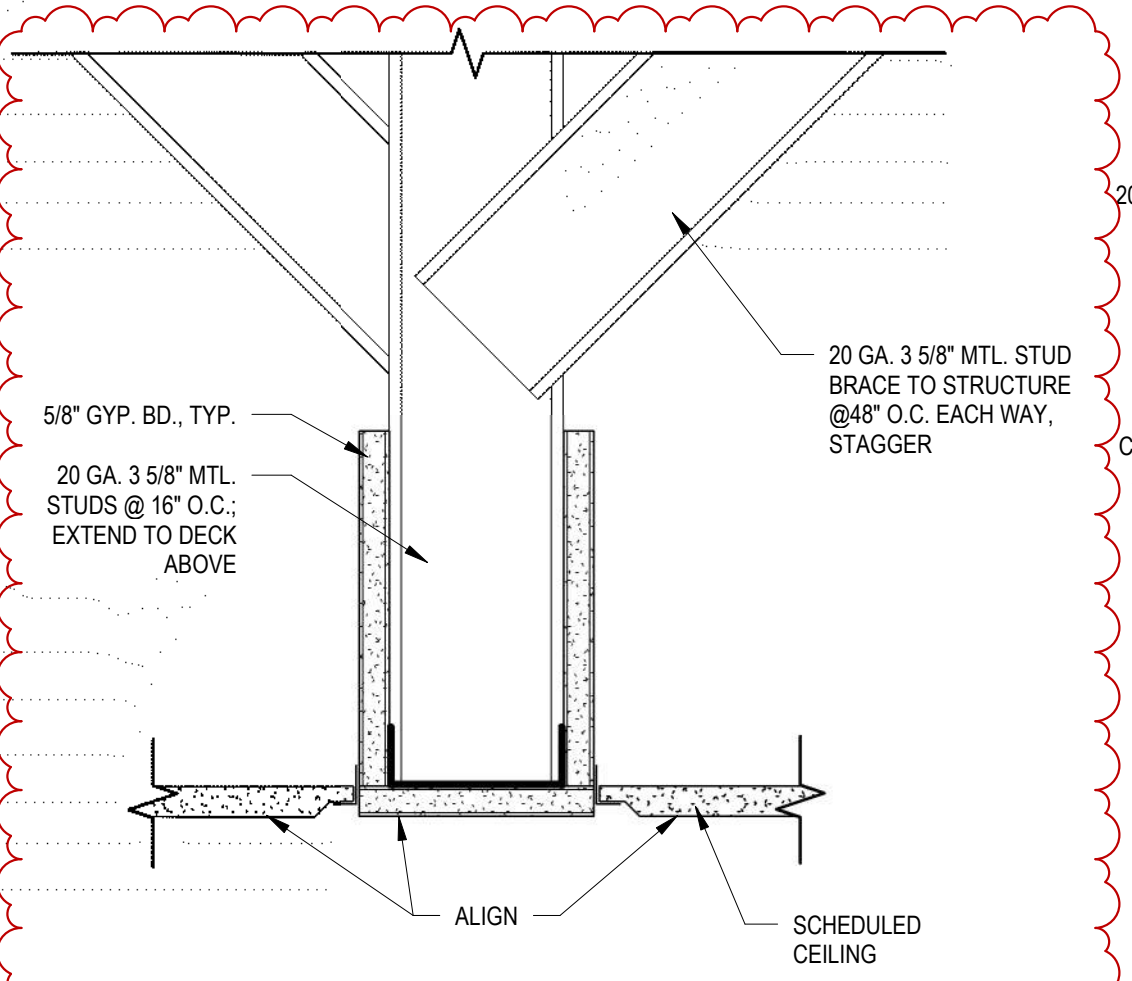
B2 BLOCKING DETAIL  
SCALE 1 1/2" = 1'-0"

B1 COUNTER MOUNTING BRACKET  
SCALE 3" = 1'-0"

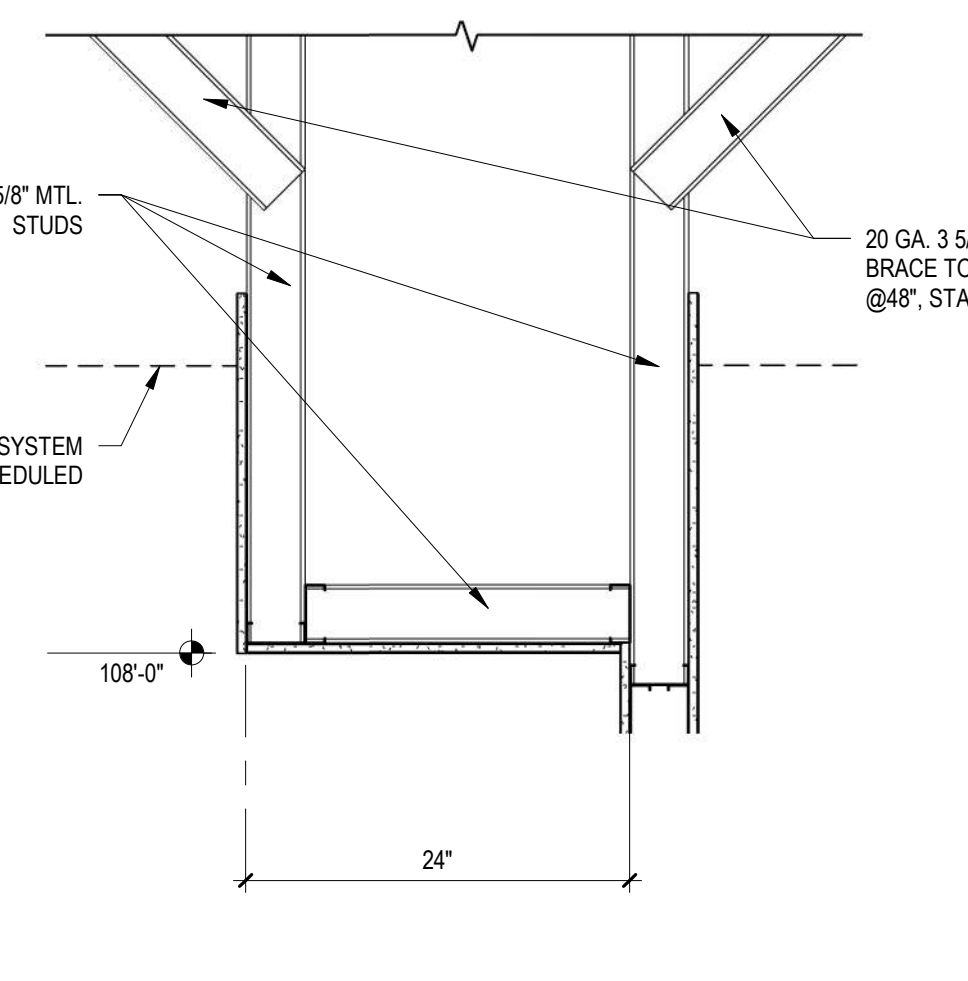
STRUT SIZE	MAX. LENGTH
3/4" DIAMETER CONDUIT (EMT)	8'-6"
1" DIAMETER CONDUIT (EMT)	10'-0"
SINGLE 2 1/2" X 20 GA. METAL STUD (min = 0.18 in)	11'-6"
BACK TO BACK 2 1/2" X 20 GA. METAL STUDS SCREWED TOGETHER @ 24" O.C.	15'-0"



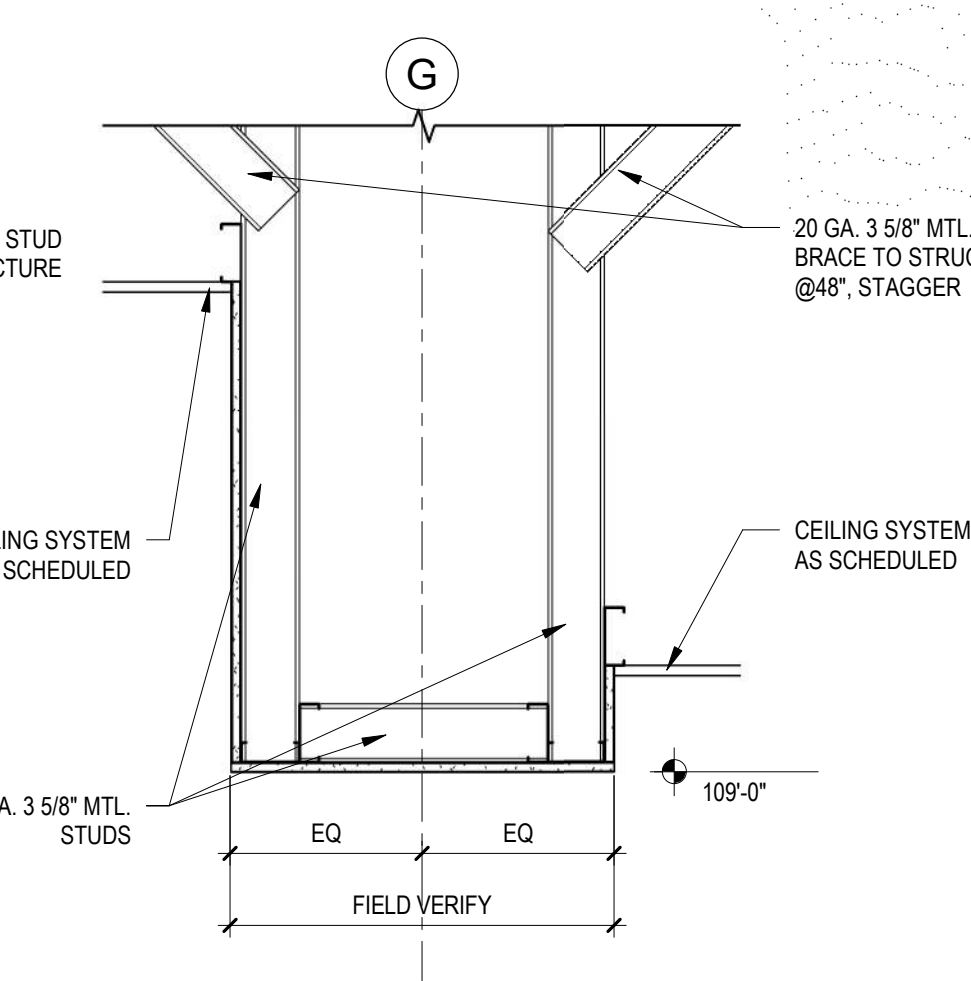
A1 TYPICAL COMPRESSION STRUT  
SCALE 3" = 1'-0"



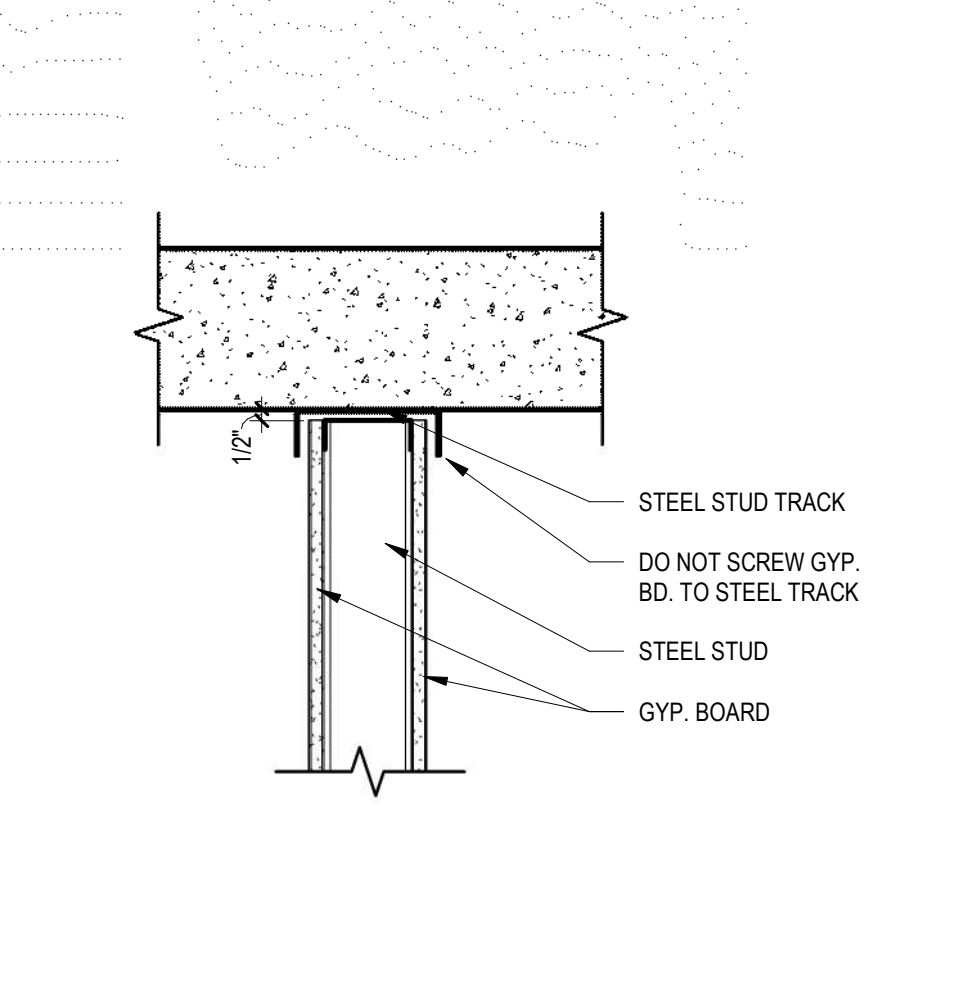
B6 CEILING TRANSITION DETAIL  
SCALE 3" = 1'-0"



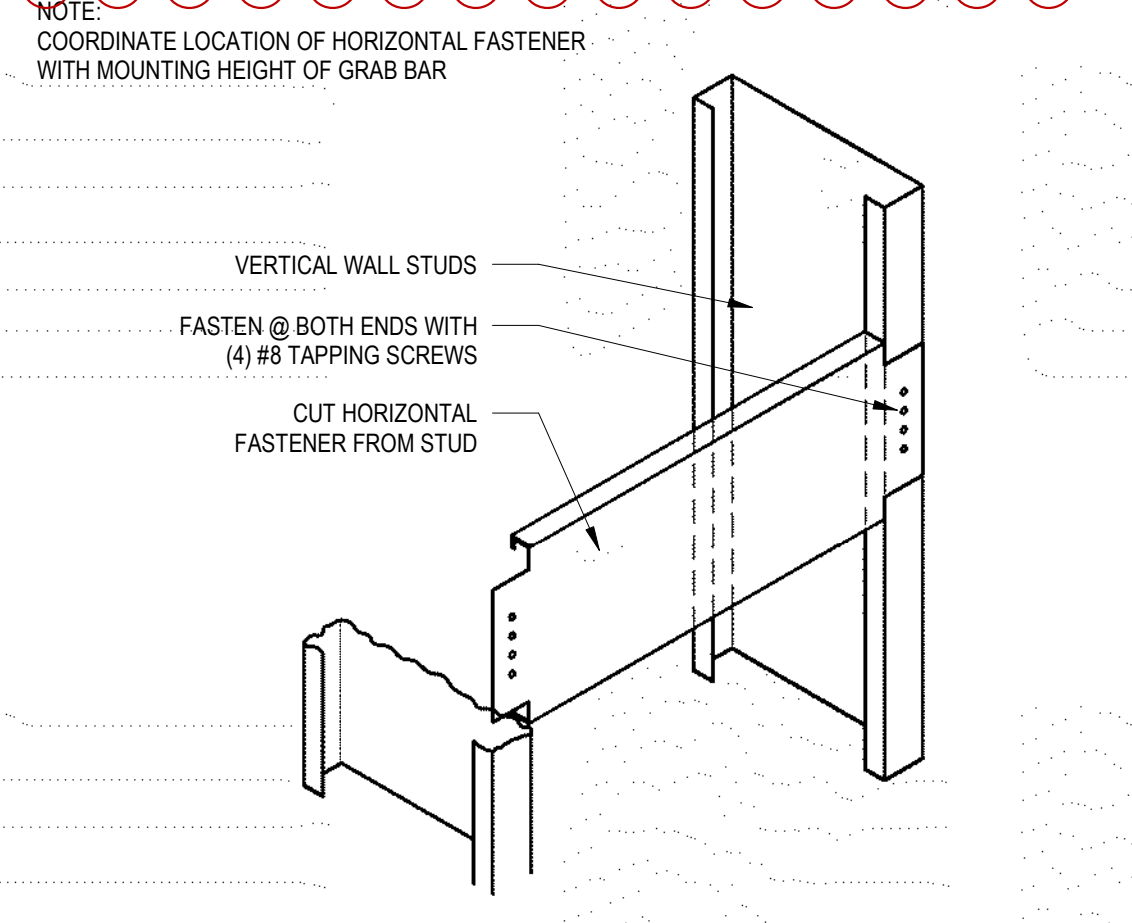
B5 SOFFIT DETAIL  
SCALE 1" = 1'-0"



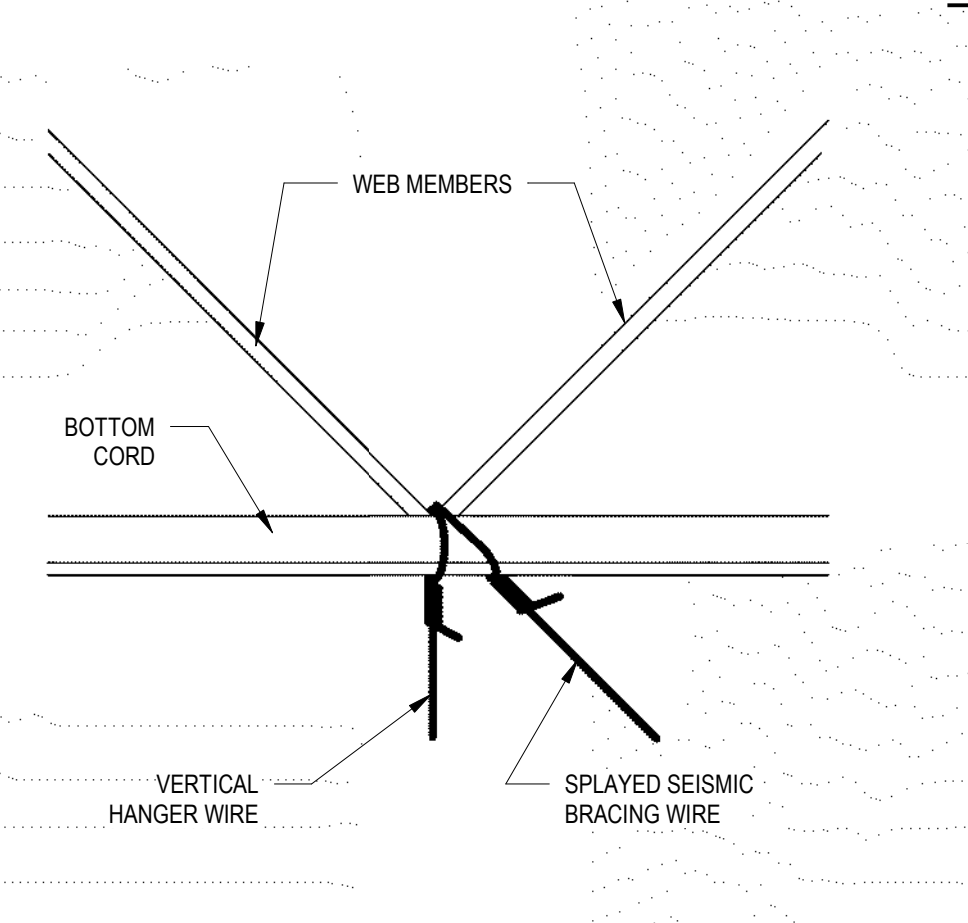
B4 LOCKER SOFFIT DETAIL  
SCALE 1" = 1'-0"



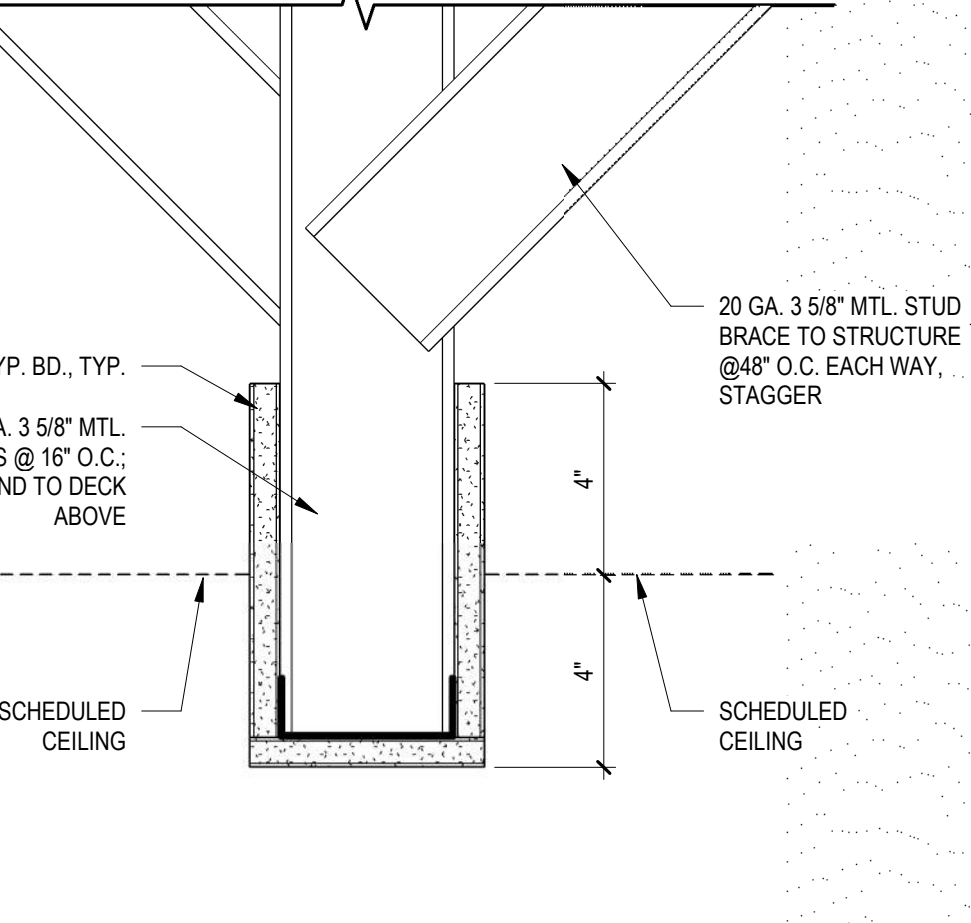
B3 DEFLECTION TRACK  
SCALE 1 1/2" = 1'-0"



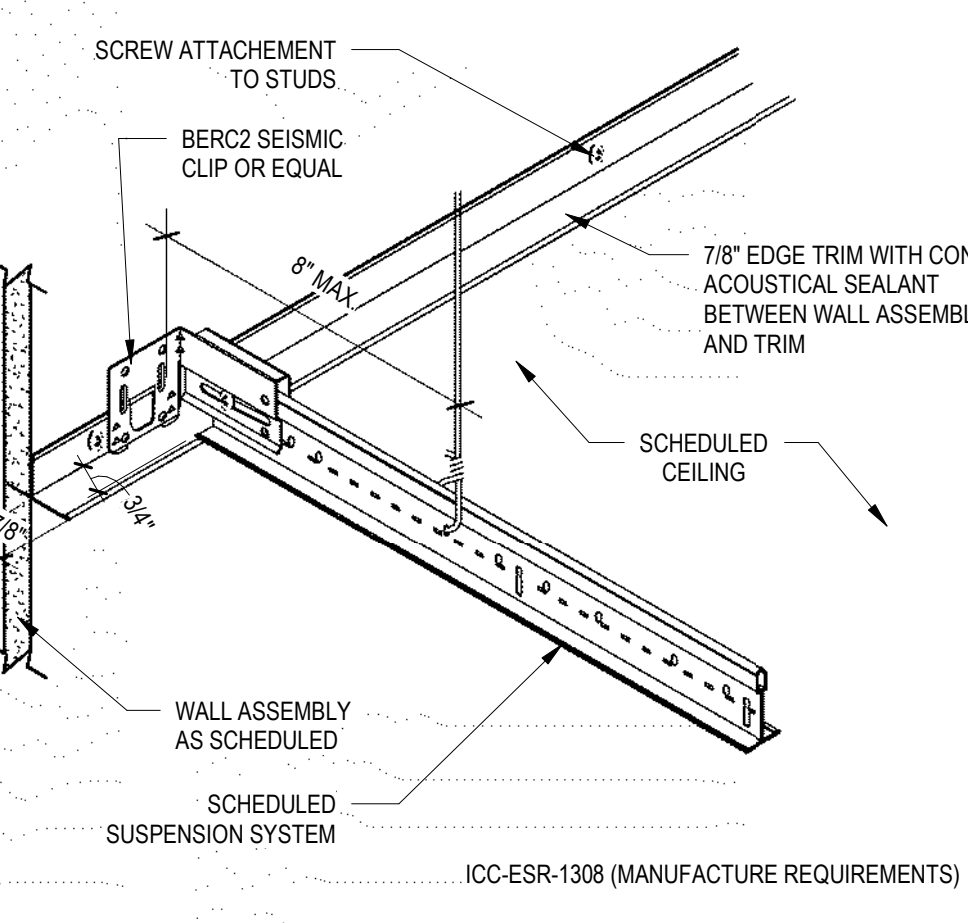
A6 2-12 GRAB BAR BLOCKING DETAIL  
SCALE 1 1/2" = 1'-0"



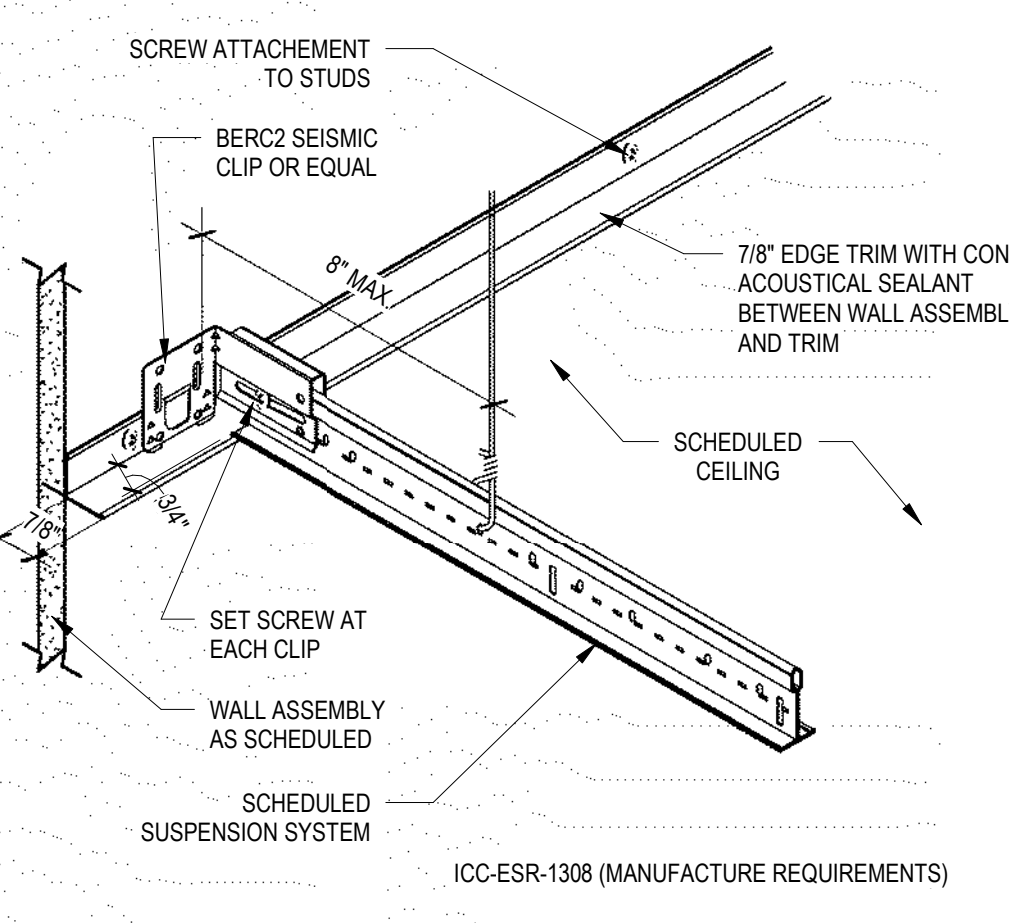
A5 SUSPENDED CEILING DETAIL  
SCALE 3" = 1'-0"



A4 CEILING TRANSITION DETAIL  
SCALE 3" = 1'-0"



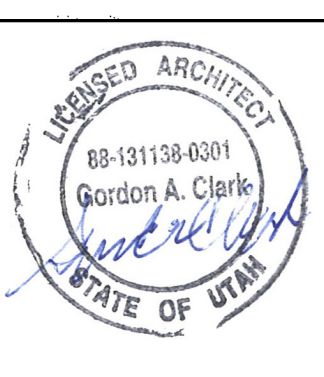
A3 UNRESTRAINED EDGE DETAIL  
SCALE 3" = 1'-0"



A2 RESTRAINED EDGE DETAIL  
SCALE 3" = 1'-0"

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DATE	REVISION
02/05/21	Revision 1









GENERAL STRUCTURAL NOTES

GENERAL

- The structural notes are intended to complement the project specifications. Specific notes and details in the drawings shall govern over the structural notes and typical details.
- Typical details and sections shall apply where specific details are not shown.
- The structural drawings are not all-inclusive and do not contain all dimensions, elevations, openings, mechanical shafts and penetrations needed to build the structure. The contractor shall coordinate these items with the Architectural, Mechanical and Electrical drawings.
- Omissions or conflicts between the contract drawings and/or specifications shall be brought to the attention of the architect/engineer before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the architect/engineer at no additional cost to the owner.
- The contractor shall submit a written request to the architect/engineer before proceeding with any changes, substitutions or modifications. Any work done by the contractor before receiving written approval will be at the contractor's risk.
- The contractor shall coordinate with all trades any items that are to be integrated into the structural system such as openings, penetrations, mechanical and electrical equipment, etc. Sizes and locations of mechanical and other equipment that differs from those shown on the contract drawings shall be reported to the architect/engineer.
- The contractor shall provide adequate shoring and bracing as required for the chosen method of erection. Shoring and bracing shall remain in place until final connections for the permanent members are completed. The building shall not be considered stable until all connections are completed. Walls shall not be considered self-supporting and shall be braced until the floor/roof system is completed.
- The contractor shall not cut or core any holes in concrete walls without prior review by the architect/engineer.
- Site observations by BHB Consulting Engineers' field representative shall not be construed as approval of construction procedures nor special inspection.
- Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings. The structural drawings shall be used in conjunction with the architectural and other consultants' drawings. Some dimensions and elements such as elevations, depressions, slopes, mechanical housekeeping pads, etc. are not shown in the structural drawings. All dimensions shown on structural drawings shall be verified by contractor with architectural, mechanical and electrical drawings.

- Contractor shall review shop drawings for compliance with contract documents, and stamp shop drawings with review stamp prior to submission to architect for review. Review of shop drawings by BHB Consulting Engineers is for general compliance only and is not intended for approval. The shop drawing review shall not relieve the contractor from the responsibility of completing the project according to the contract documents. Fabrication shall not begin until shop drawings review process is complete. Shop drawings made from reproductions of the contract drawings will be rejected unless the contractor signs a release agreement prior to the shop drawings being reviewed.
- Only an authorized representative of BHB Consulting Engineers may make changes to these contract drawings. BHB Consulting Engineers shall not be held responsible or liable for any claims arising directly or indirectly from changes made without written authorization by an authorized representative of BHB Consulting Engineers.

BASIS OF DESIGN

- Governing Code: International Building Code 2018
- Risk Category: III
- Floor Live Loads:
  - Office: 80 psf + 20 psf Partition

EXISTING CONDITIONS

- Structural connections and the framing systems shown in the structural drawings are based on a limited site survey. The contractor shall verify the existing conditions of exposed framing systems, connections, walls, and other structural elements within the project area. If existing conditions vary from the information in the contract documents, the contractor shall notify the architect/engineer prior to proceeding with the fabrication or construction of any affected elements.
- Existing framing systems and foundations taking new loads are assumed to be in good condition, unless noted otherwise in the contract documents. The contractor shall immediately notify the architect/engineer of any deficiencies in the existing structure that are observed or revealed during construction (e.g. corrosion of steel members, cracking or crumbling of concrete, checking or splitting of wood members) prior to proceeding with the fabrication or construction of any affected elements.
- The contractor shall use the foundation systems indicated on the plans for reference only, and shall field verify foundation sizes, locations, and thicknesses during construction. The contractor shall notify the architect/engineer if existing foundations vary from the information in the contract documents prior to proceeding with the fabrication or construction of any affected elements.
- While performing work adjacent to existing structures, the contractor shall be responsible for adequate shoring and protection of all existing structures, utilities, and services which will be affected by the work in the contract documents.

FOUNDATION

- Soils Investigation Report: None
- Assumed Soil bearing pressure: 1500 psf - Contractor shall verify at time of construction.
- Frost Protection: 30" minimum.
- Clear excavations of debris and loose soil prior to placing footings. All footings shall bear on undisturbed natural sub-grade or engineered compacted fill as noted in these drawings.

EARTHWORK

- Prior to construction, the contractor shall verify that the soil conditions are adequate for 1,500 psf allowable soil bearing pressure. If needed, structural fill shall be provided beneath footings.
- Clearing: Remove all existing structures and associated foundations, slabs, fencing, asphalt, concrete, and incidental structures as necessary for project completion. The building area shall be stripped of all vegetation, topsoil and debris. Following stripping, all fill soils and any remaining loose natural soils shall be excavated to expose competent natural soils.
- Proof roll the entire building pad area with normal compaction equipment to check for the presence of unsuitable fills, soft spots, or other undesirable materials or conditions. Remove sub-grade materials that are unsuitable and replace with compacted structural fill or 2,000 psi lean concrete.
- Compacted structural fill: All fill material shall be a well-graded granular material with a maximum size less than 3" and with not more than 15 percent passing a No. 200 sieve. It shall be compacted to at least 95 percent of the maximum laboratory density as determined by ASTM D 1557 for fill beneath footings and 90 percent for fill beneath floor slabs. All fill shall be tested. Compacted structural fill shall be placed in lifts not exceeding 8" in uncompacted thickness.
- Floor slabs thicknesses shall be required by the plans and underlain by a granular layer at least 4" thick. The granular layer shall have a maximum size less than 1" with not more than 5 percent passing a #200 sieve and shall be compacted to at least 90 percent of the maximum laboratory density as determined by ASTM D 1557.
- Consult the project specifications for further earthwork requirements.

CONCRETE

- Materials, unless noted otherwise:
  - Normal weight aggregates: ASTM C 33
  - Combined aggregate gradation for slabs on grade and other designated concrete shall be 8% - 18% for large top size aggregates (1.1/2") or 8% - 22% for smaller top size aggregates (1" or 3/4") retained on each sieve below the top size and above the No. 30. The range for the No. 30 and No.50 sieves shall be 8% - 15% retained in each. To avoid gap gradation the following shall occur:
    - The percent retained on two adjacent sieves shall not fall below 5%.
    - The percent retained on three adjacent sieves shall not fall below 5%.
    - When the percent retained on two adjacent sieves is less than 5%, the total retained on either of these sieves and the adjacent outside sieve shall be at least 13%. See ACI 302 Section 5.4.3.3 for more information.
  - Maximum Aggregate Size shall not be larger than:

3. 1/2" or 1/5 the narrowest dimension of the forms
- 1/3 the depth of the slab
- 3/4 the minimum clear spacing between bars
- Reinforcing Steel:
  - ASTM 615 Grade 60 (Fy = 60 ksi)
  - Use Grade 40 (Fy = 40 ksi) for field bent dowels with spacings indicated reduced by 1/3.
- Deformed Bar Anchors (DBA): ASTM A496
- Headed Stud Anchors (HSA): ASTM A108
- Anchor Rods:
  - Typical, uno: ASTM F1554, Grade 36, with ASTM A563 heavy hex nuts and hardened washers Grade A
- Admixtures:
  - AI-entraining admixtures shall comply with ASTM C 260 (when used).
  - Calcium chloride shall not be added to the concrete mix.
  - Water-reducing admixture shall comply with ASTM C 494/C 494M, Type A (when used)
  - Retarding admixture shall comply with ASTM C 494/C 494M, Type B (when used).
  - Water-reducing and retarding admixture shall comply with ASTM C 494/C 494M, Type D (when used).
  - High-range, water-reducing admixture shall comply with ASTM C 494/C 494M, Type F (when used).
  - High-range, water-reducing and retarding admixture shall comply with ASTM C 494/C 494M Type G (when used).
  - Admixture manufacturer shall have ISO 9001 Quality Certification. To ensure compatibility all admixtures shall be from the same manufacturer.
  - Type V cement complying with ASTM C-150 shall be used for all concrete. Cement source shall remain the same for the entire job.
  - The water/cementitious materials ratios shall meet the requirements of Table 19.3.2.1 of ACI 318-14.
  - Fly Ash - ASTM C618, Class F - 25% maximum cementitious content.
  - Provide air entraining as recommended by Table 19.3.3.1 of ACI 318-14. Concrete that extends above grade and is exposed to freezing and thawing while moist shall be air-entrained. Concrete in unconditioned spaces shall be considered site concrete.
  - No aluminum conduit or product containing aluminum or any other material injurious to concrete shall be embedded in concrete.
- Compressive strengths of concrete at 28 days shall meet the follow performance requirements (see ACI-318-14, Chapter 19):
  - Interior Footings:
 

Strength	3,000 psi
Classification	F0, S0, W0, C0
- Only one grade or type of concrete shall be poured on the site at any given time.
- The contractor shall be responsible for the design, detailing, care, placement and removal of all formwork and shores.
  - Supporting forms and shoring shall not be removed until structural members have acquired sufficient strength to safely support their own weight and any construction load to which they may be subjected. In no case, however, shall forms and shoring be removed in less than 24 hours after concrete placement.
- Reinforcement shall have the following concrete cover:
 

Clear Cover	
Cast-in-place Concrete	3"
Formed concrete exposed to earth or weather:	2"
#6 thru #18 bars	1.1/2"
#5 and smaller bars	1.1/2"
Concrete not exposed to weather or in contact with ground:	
Slabs, Walls and their piers, Joists; #11 bars and smaller	3/4"
Beams, Columns; Primary Reinfr., Ties, Stirrups, Spirals	1.1/2"
- Detailing:
  - Lap splice lengths shall be detailed to comply with the "Concrete Reinforcing Bar Lap Splice Schedule" on sheet S501. Splices may be made with mechanical splices capable of 125% tension capacity of the bar being spliced. Mechanical splices shall be the positive connecting type coupler and shall meet all International Building Code requirements and shall have a current ICC-ES report or IAPMO Certification. Use "Lentor" Standard Couplers (ICC-ES ESR-3967), "Bar-Lock" (ICC-ES ESR-2495) or equal with internal protector. If mechanical splices are used, splices or couplers on adjacent bars shall be staggered a minimum of 24" apart along the longitudinal axis of the reinforcing bars.
  - At joints, provide reinforcing dowels to match the member reinforcing, unless noted otherwise.
  - At all discontinuous control or construction slab on grade joints, provide 2 - #4 x 48".
- Construction Joints, Control (Contraction) Joints:
  - Construction joints in all horizontal and vertical construction joints including between top of footing and foundation walls shall be intentionally roughened to a full amplitude of approximately 1/4". The laitance on the concrete (thin, flaky layer of harden, weakened hydrated cement) shall be mechanically removed from the surface after the concrete has achieved final set. Construction joints in slabs on grade shall not exceed a distance of 125'-0" o.c. in any direction.
  - Control joints shall be installed in slabs on grade so the length to width ratio of the slab is no more than 1:25:1. Control joints shall be completed as soon as final set is achieved and it is okay to operate the cutter on the slab. Final set is typically achieved within the first 4 to 12 hours after the slab has been finished in an area (depending on weather conditions and concrete hydration rate; 4 hours in hot weather to 12 hours in cold weather). For early entry saw cutting, joints should be cut within the first 1 to 4 hours (depending on weather conditions and concrete hydration rate; 1 hour for hot weather and 4 hours for cold weather). Where saw cut joints cannot be cut along the entire projected length of the joint, a 90-degree hand grinder or other tool shall be used to complete the joint. Control joints may be installed by:
    - Saw cut a depth of 1/4 the thickness of the slab (1.1/4" ± for early entry saws) minimum.
    - Tooled joints a depth of 1/4 the thickness of the slab
- Construction:
  - Use chairs or other support devices recommended by the CRSI to support and tie reinforcement bars prior to placing concrete. Reinforcing steel for slabs on grade shall be adequately supported. Support reinforcing steel of slabs on grade with precast concrete units. Lifting the reinforcing off the grade during placement of concrete is not permitted.
  - Concrete to be mechanically consolidated during placement per ACI standards.
  - Contractor shall coordinate placement of all openings, curbs, dowels, sleeves, conduits, bolts, inserts and other embedded items prior to concrete placement.
  - All embeds, anchors and dowels shall be securely tied to formwork or to adjacent reinforcing prior to the placement of concrete.
  - No pipes, ducts, sleeves, etc shall be placed in structural concrete unless specifically detailed or approved by the structural engineer. Penetrations through walls when approved shall be built into the wall prior to concrete placement. Penetrations will not be allowed in footings or grade beams unless detailed. Piping shall be routed around footings and grade beams and unless detailed. Footings shall be stepped to avoid piping.
  - Reinforcing Bars shall not be welded. Do not substitute reinforcing bars for DBAs or HSAs.

STRUCTURAL STEEL

- Material:
  - Wide Flanges Section: ASTM A992 (50 ksi)
  - All Thread Rods, Other Shapes & Plates: ASTM A36 (36 ksi)
  - Square or Rectangular HSS: ASTM A500 (50 ksi) Grade C or ASTM A1085 (50ksi)
  - Deformed Bar Anchors (DBA): ASTM A496
  - Headed Stud Anchors (HSA): ASTM A108
  - Non-Metallic Shrinkage Resistant Grout: ASTM C 1107
  - Anchor Rods:
    - Typical, uno: ASTM F1554, Grade 36, with ASTM A563 heavy hex nuts and ASTM F436 hardened washers Grade A
  - Bolted Connections:
    - ASTM F436 hardened washers.
- Fabrication and construction shall comply with the latest edition of the following Codes and Standards:
  - American Institute of Steel Construction (AISC), "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings," with "Commentary"
  - AISC "Code of Standard Practice" excluding the following: Section 3.2, Section 4.4, Section 4.4.1, AISC "Specification for Structural Joints Using High-Strength Bolts"
  - American Welding Society (AWS), Structural Welding Code (specific items do not apply when they conflict with the AISC requirements).
  - AISC "Seismic Provision for Structural Steel Buildings"- ANSI/AISC 341
- Welding:
  - Field weld flags that have been put in these documents are for suggestion only. The contractor has the option to substitute shop welding for field welding or vice versa. The steel fabrication and steel erection drawings must clearly distinguish between shop welds and field welds prior to any work being performed.
  - Steel fabricators shall indicate the shop welds that are excluded from their bids. Steel erectors shall indicate the field welds that are excluded from their bids. It is the responsibility of the contractor to coordinate shop welding and field welding with the appropriate subcontractors.
  - All welding and cutting shall be performed by AWS certified welders.
  - Use E-70 XX (58 ksi yield, 70 ksi tensile) unless noted otherwise.
  - All intersecting steel shapes which are not bolted shall be connected by a fillet weld all around, unless noted otherwise. Where fillet weld sizes are not shown they shall be 1/16" less than the thinnest of the connected parts for thicknesses 1/4" and larger. Fillet welds on plates less than 1/4" shall be of the same size as the thinnest of the connected part.
  - Reinforcing Bars: Do not weld rebar. Do not substitute reinforcing bars for deformed bar anchors (DBAs), machine bolts, or headed stud anchors (HSAs).
  - Do not weld anchor bolts, including "tack" welds.
  - Headed Stud Anchors (HSAs) welding and deformed bar anchor welding shall conform to the manufacturer's specifications.
- Bolted Connections:
  - Use bolts for steel to steel connections, as noted herein or as noted on the drawings. Bolts shall be used in connections for simple span framing and beam (or girder) to bearing plate connections. Tighten bolts to a snug tight condition. See sheet S501.
  - Use hardened washers beneath the turned element of all bolts or nuts. Use hardened beveled washers, to compensate for the lack of parallelism, where the outer face of the bolted parts has a slope greater than one in twenty with respect to the plane normal to the bolt axis. At oversized holes hardened washers or plates shall conform with ASTM F-436 and shall completely cover the slot after installation.
  - Where a steel to steel beam connection is not shown, provide a standard AISC framed connection for one half the total uniform load capacity of the beam for the span and steel specified.
  - Bolts, nuts and washers shall not be reused.
- Provide baseplate anchor rod connections to concrete elements that correlate with ACI 117. Circular or square washers are acceptable:
 

ANCHOR ROD DIAMETER	HOLE DIAMETER	WASHER SIZE	WASHER THICKNESS (MIN)
3/4"	1.5/16"	2"	1/4"
7/8"	1.9/16"	2.1/2"	5/16"
1"	1.7/8"	3"	3/8"
1.1/4"	2.1/8"	3.1/2"	1/2"
1.1/2"	2.3/8"	4"	1/2"
1.3/4"	2.7/8"	4.1/2"	5/8"
2"	3.1/4"	5"	3/4"
2.1/2"	3.3/4"	5.1/2"	7/8"
- Provide full-depth web-stiffener plates at each side of all beams at all bearing points. Stiffener plates shall be the thickness called out below unless noted otherwise and shall be welded both sides with fillet welds all around:
 

FLANGE WIDTH	STIFFENER THICKNESS	WELD SIZE
Less than 8.1/4"	1/4"	3/16"
8.1/4" to 12.1/4"	3/8"	1/4"
12.1/4" to 16.1/2"	1/2"	5/16"
16.1/2" to 20.3/4"	5/8"	3/8"

POST-INSTALLED ANCHORS

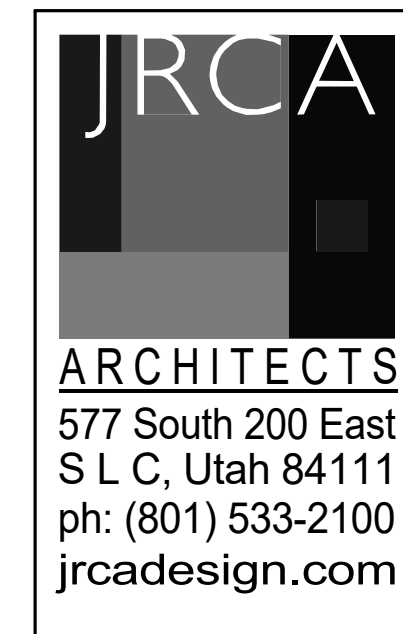
- General Post-Installed Anchor Notes
  - Do not install adhesive anchors in concrete if less than 21 days old; do not install mechanical anchors, screw anchor or powder actuated anchors in concrete less than 7 days old. Contractor must obtain written approval from the engineer to install prior to these time periods. Do not apply full load to anchors until concrete has reached 28-day compression strength.
  - Anchors or adhesives specified in details shall be provided; alternative anchors or adhesives may be used if the contractor provides calculations demonstrating that the alternative can achieve the performance values of the specified product. These calculations, along with an ICC-ES ESR or IAPMO-UES ER approval for use in cracked concrete and compliant with the specified codes herein, must be submitted to the structural engineer prior to use.
  - Follow all the manufacturer's recommendations and certification testing reports for anchor installation. See specific anchors below for more information.
  - No anchor shall be installed within 1.5 anchor rod diameters of an abandoned hole that has been filled with non-shrink grout; increase distance to 3 anchor rod diameters when the abandoned hole has not been filled.
- Adhesive Anchors
  - For anchors in concrete, the adhesives shall be divided into two groups: Standard Adhesives and High Strength Adhesives. Standard adhesives can be used in general applications when details reference the "Standard Adhesive Embedment Schedule" on sheet S501. High Strength adhesive groups will be specified for the particular application in the drawings and details. When a High Strength Adhesive is specified, the contractor has the option to use any of the adhesives in the High Strength group. When a Standard Adhesive is specified, the contractor has the option to use any of the adhesives in either group. See below for the acceptable adhesives in each group.
    - Standard Adhesive Group for anchors in concrete includes the following adhesives:
      - SET-XP (ICC-ES ESR-2508) by Simpson Strong-Tie
      - Pure 50+ (ICC-ES ESR-3576) by Dewart
      - AC100+ Gold (ICC-ES ESR-2582) by Dewart
      - HT-RE 100 (ICC-ES ESR-3829) by Hilti, Inc.
    - High Strength Adhesive Group for anchors in concrete includes the following adhesives:
      - SET-3G (ICC-ES ESR-4057) by Simpson Strong-Tie
      - Pure 110+ (ICC-ES ESR-3298) by Dewart
      - AC200+ (ICC-ES ESR-4027) by Dewart
      - HT-RE 500-V3 (ICC-ES ESR-3814) by Hilti Inc.
      - HIT-HY 200 (ICC-ES ESR-3187) by Hilti Inc.
  - Adhesive shall be within the manufacturer's recommended life time and prior to expiration date. Do not use adhesive that has not been stored per manufacturer's recommendations or may have experienced

- freeze thaw cycles or extreme heat.
- Do not install adhesive anchor in wet or damp hole unless product is approved for such conditions without strength reduction. Do not install adhesive anchors if concrete temperature is below 50-degree F unless adhesive is approved for lower temperature without strength reduction. Refer to manufacturer's published installation instructions.
- Follow all the manufacturer's recommendations and certification testing reports regarding hole cleaning prior to adhesive installation. All holes shall be drilled with ANSI standard bits designed for concrete. Diamond core drilled holes are not allowed unless indicated in specific details or approved by the structural engineer prior to use.

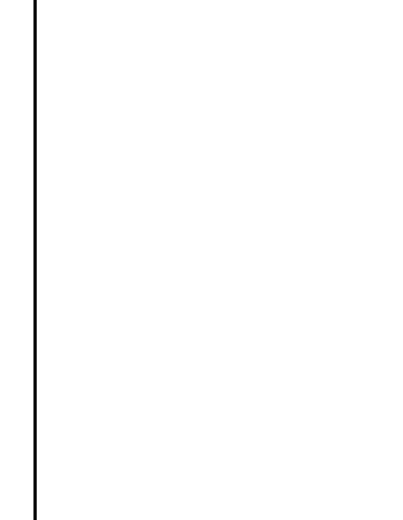
- Mechanical Anchors
  - For concrete, the mechanical anchor shall be Kwik Bolt TZ (ICC-ES ESR-1917) by Hilti Inc., Strong-Bolt 2 (ICC-ES ESR-3037) by Simpson Strong-Tie Inc. or Power-Stud+ SD2 (ICC-ES ESR-2502) by Dewart.
- Screw Anchors
  - For concrete, the screw anchors shall be Titan HD (ICC-ES ESR-2713 for concrete only) by Simpson Strong-Tie, or Screw-Bolt + (ICC-ER ESR-3889 for concrete only) by DeWalt or Kwik HUS-EZ (ICC-ES ESR-3027 for concrete only) by Hilti Inc.
- Powder Actuated Fasteners
  - For fasteners driven into steel (except at metal decks), the fastener shall be X-U P8 TH Universal Knurled Shank Fastener (ICC-ES ESR-2269) by Hilti Inc., POPA (ICC-ES ESR-2138) by Simpson Strong-Tie Inc. or 8mm Head Spiral CSI Drive Pin (ICC-ES ESR-2024) by Dewart.

LEGEND OF MARKS AND ABBREVIATIONS

AB	ANCHOR BOLT(S)	K	KIP(S) = 1000 POUNDS
ABV	ABOVE	KLF	KIPS PER LINEAL FOOT
ALT	ALTERNATE	KSF	KIPS PER SQUARE FOOT
APPROX	APPROXIMATE		
ARCH	ARCHITECTURAL	LBS	POUNDS
		LF	LINEAL FOOT
BLDG	BUILDING	LLH	LONG LEG HORIZONTAL
BLW	BELOW	LSV	LONG LEG VERTICAL
BM	BEAM	LSH	LONG SIDE HORIZONTAL
BOT	BOTTOM	LSV	LONG SIDE VERTICAL
BRG	BEARING		
BTWN	BETWEEN	MAX	MAXIMUM
		MECH	MECHANICAL
		MFR	MANUFACTURER
CC	CENTER TO CENTER	MIN	MINIMUM
CES	CENTER OF GROSS STEEL	MISC	MISCELLANEOUS
CJ	CONST/CONTROL JOINT		
COL	COLUMN		
CONC	CONCRETE	NIC	NOT IN CONTRACT
CONST	CONSTRUCTION	NTS	NOT TO SCALE
CTR	CENTER		
CONC-X	CONCRETE WALL	O.C.	ON CENTER
		O.F.	OUTSIDE FACE
DB	DECK BEARING	OPNG	OPENING
DBA	DEFORMED BAR ANCHOR	OPP	OPPOSITE
DBE	DECK BEARING ELEVATION		
DBL	DOUBLE	PAF	POWDER-ACTUATED FASTENER
DET	DETAIL	PCF	POUNDS PER CUBIC FOOT
DIA	DIAMETER	PL	PLATE
DIM	DIMENSION	PLF	POUNDS PER LINEAL FOOT
DN	DOWN	PSF	POUNDS PER SQUARE FOOT
DWG	DRAWING	DWG	POUNDS PER SQUARE INCH
DWL	DOWEL	PT	POINT
(E)	EXISTING	REINF	REINFORCING
EA	EACH	REQD	REQUIRED
E.F.	EACH FACE	R.D.	ROOF DRAIN
E.J.	EXPANSION JOINT	RTU	ROOF TOP UNITS
ELEC	ELECTRICAL		
ELEV	ELEVATION	SBP-x	STEEL BASE PLATE MARK
EQUIP	EQUIPMENT	SCW	SEISMIC CRITICAL WELD
EQ	EQUAL	SC-x	STEEL COLUMN MARK
E.W.	EACH WAY	SCP-x	STEEL CAP PLATE MARK
EXST	EXISTING	SHT	SHEET
EXT	EXTERIOR	SI	SPECIAL INSPECTION
		SIM	SIMILAR
		SMU	SUSPENDED MECHANICAL UNITS
FC-x	CONTINUOUS FOOTING MARK	SOG	SLAB-ON-GRADE
F.D.	FLOOR DRAIN	SQ	SQUARE
FDN	FOUNDATION	STAG	STAGGERED
F.F.	FINISHED FLOOR	STD	STANDARD
FR-x	RECTANGULAR FOOTING	STL	STEEL
FS-x	SQUARE FOOTING MARK	STR	STRUCTURAL
FT	FOOT	STS	SELF TAPPING SCREWS
FTG	FOOTING		
FWS-x	THICKENED SLAB MARK	T&B	TOP AND BOTTOM
		TEMP	TEMPERATURE
GA	GAUGE	THDS	THREADS
F.D.	FLOOR DRAIN	T.O.	TOP OF
GEN	GENERAL STRUCTURAL NOTES	TOC	TOP OF CONCRETE
		TOD	TOP OF DECK
HORIZ	HORIZONTAL	TOF	TOP OF FOOTING
HSA	HEADED STUD ANCHOR	TOS	TOP OF STEEL
HT	HEIGHT	TOW	TOP OF WALL
		TYP	TYPICAL
ICC	INTERNATIONAL CODE COUNCIL	UNO	UNLESS NOTED OTHERWISE
IBC	INTERNATIONAL BUILDING CODE		
I.F.	INSIDE FACE		
IN.	INCH	VERT	VERTICAL
INT	INTERIOR		
		W/	WITH
JT	JOINT	WT	WALL THICKNESS
JST	JOIST	WWF	WELDED WIRE FABRIC
		WWM	WELDED WIRE MESH



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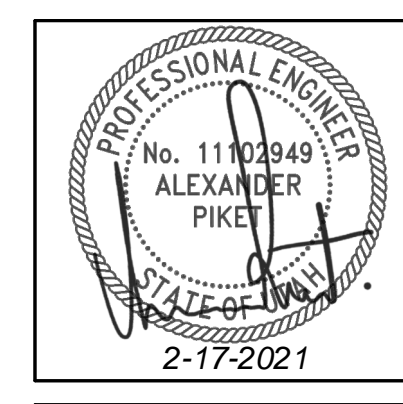


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SLCC TESTING CENTER  
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Taylorsville, UT 84123

PROJECT #: 201247

BID SET	2/17/2021
DATE	REVISION



GENERAL STRUCTURAL NOTES

S001



REQUIREMENTS FOR SPECIAL INSPECTION, MATERIAL TESTING, AND STRUCTURAL OBSERVATION

STATEMENT OF SPECIAL INSPECTION AND QUALITY ASSURANCE

Special inspection and quality assurance (including structural testing), as required by section 1704 and 1705 of the 2018 IBC, shall be provided by an independent agency employed by the owner for the items in this section and other areas of the approved construction documents, unless waived by the building official.  
The names and credentials of the Special Inspectors to be used shall be submitted to the Building Official for approval.

Responsibilities of the Special Inspector

Special Inspector shall review all work listed in the special inspection schedules herein for conformance with the approved construction plans, specifications and 2018 IBC.  
Testing and inspection reports shall be sent on a weekly basis to the architect, engineer, building official and contractor for review. All items not in compliance shall be brought to the immediate attention of the contractor for correction, and if uncorrected, to the architect, engineer and building official.  
Once corrections have been made by the contractor, the special inspector shall submit a final signed report to the building official stating that the work requiring special inspection was, to the best of the special inspector's knowledge, in conformance with the approved construction plans, specifications and 2018 IBC.

Responsibilities of the Contractor

The contractor shall submit a written statement of responsibility to the owner and the building official prior to the commencement of work in accordance with 2018 IBC section 1704.4. This statement shall indicate that the contractor will coordinate and cooperate with the required inspections contained herein.  
The contractor shall notify the designated special inspector that work is ready for inspection at least 24 hours before said inspection is required.  
All work requiring special inspection shall remain open and accessible until it has been observed by the special inspector and deemed acceptable through inspection report.  
Special inspection during fabrication is not required if the fabricator is registered and approved by the authority having jurisdiction to perform such work without special inspection. Upon completion of fabrication, the approved fabricator shall submit a certificate of compliance for submittal to the building official.  
The contractor shall be responsible for their own quality control including materials, fabrication, erection, etc.

SOILS CONSTRUCTION INSPECTIONS

Soils (2018 IBC Section 1705.6)

ITEM FOR VERIFICATION & INSPECTION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
Site Preparation	-	X	Verify that the site has been prepared in accordance with the Earthwork section of the General Structural Notes and per recommendations by a geotechnical engineer (if required) prior to placement of prepared fill.
Fill Material	X	-	Verify that the material being used, the maximum lift thickness and the in-place dry density of the compacted fill material comply with the Earthwork section of the General Structural Notes and per recommendations by a geotechnical engineer (if required) during placement and compaction.
Continuous Footing Backfill: at least one test for each 40 linear feet or less of wall length, but no fewer than 2 tests.	-	X	At each compacted backfill layer.
Spot Footing Backfill: Minimum of one compaction test for each lift for each spot footing.	-	X	At each compacted backfill layer.

CONCRETE CONSTRUCTION INSPECTIONS

Concrete (2018 IBC Section 1705.3, Table 1705.3, and Section 1705.12) The following concrete elements require special inspection:  
All concrete footings

ITEM FOR VERIFICATION & INSPECTION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
Protection of concrete during cold and hot weather	-	X	
Verify materials used including use of the required mix design	-	X	Verify mix design meets strength and exposure requirements listed on General Structural Notes
Formwork	-	X	Verify shape, location and member dimensions
Bolts installed in concrete	X	-	Inspection of anchors or embeds cast in concrete is required when allowable loads have been increased or where strength design is used. Prior to and during concrete placement.
Embeds and Inserts installed in concrete	X	-	Prior to and during concrete placement.
Concrete reinforcing steel placement	-	X	Verify that reinforcing is of specified type, grade and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report.
Concrete placement and samples	X	-	Cylinders, slump, temperature and air-entrainment shall be done for every 150 cubic yards or each day's production if the day's production is less than 150 cubic yards nor less than once for each 5000 sq. ft. of surface area for slabs and walls.

STEEL BOLTED CONSTRUCTION INSPECTIONS

Where special inspections are listed under "Random Basis", special inspection of elements and items shall be performed on a random basis. Operations need not be delayed pending these inspections. Where special inspection items are listed under "Every Element", special inspection shall be performed for each element, joint, or member, as applicable based on the task listed below.

High Strength Bolted Connections (2018 IBC section 1705.2.1, section 1705.12.1 and section 1705.13.1 and AISC 360-16 Chapter N and AISC 341-16 Chapter J)

ITEM FOR VERIFICATION & INSPECTION	INSPECTION PLAN		COMMENTS
	Every Element	Random Basis	
<b>Inspection Tasks Prior to Bolting</b>			
Manufacturer's certifications available for fastener materials	X	-	
Fasteners	-	X	Marked in accordance with ASTM requirements
Proper fasteners selected for the joint detail	-	X	Including grade, type, bolt length if threads are to be excluded from shear plane.
Proper bolting procedure selected for joint detail	-	X	
Connecting elements	-	X	Including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	-	X	Not required if only snug-tight joints are specified per [Section N5.6(1) of AISC 360-16]
Proper storage	-	X	Storage provided for bolts, nuts, washers and other fastener components
<b>Inspection Tasks During Bolting</b>			
Fastener assemblies, of suitable condition	-	X	Verify that fasteners placed in all holes and washers (if required) are positioned as required.
Joint	-	X	Verify that joint brought to the snug-tight condition (min) unless noted otherwise.
Fastener component	-	X	Verify that fastener component not turned by the wrench prevented from rotating.
Pretensioned Fasteners	-	X	Verify that pretensioned fasteners are pretensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges (Not required if only snug-tight joints are specified per [Section N5.6(1) of AISC 360-16]; Not required for pretensioned joints using turn-of-the-nut method with match-marking, direct-tension-indicators or twist-off type tension control bolt methods)
<b>Inspection Tasks After Bolting</b>			
Document acceptance or rejection of each bolted connection	X	-	

Inspection Tasks During Bolting

Fastener assemblies, of suitable condition	-	X	Verify that fasteners placed in all holes and washers (if required) are positioned as required.
Joint	-	X	Verify that joint brought to the snug-tight condition (min) unless noted otherwise.
Fastener component	-	X	Verify that fastener component not turned by the wrench prevented from rotating.
Pretensioned Fasteners	-	X	Verify that pretensioned fasteners are pretensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges (Not required if only snug-tight joints are specified per [Section N5.6(1) of AISC 360-16]; Not required for pretensioned joints using turn-of-the-nut method with match-marking, direct-tension-indicators or twist-off type tension control bolt methods)

Inspection Tasks After Bolting

Document acceptance or rejection of each bolted connection	X	-	
--	---	---	--

STEEL WELDED CONSTRUCTION INSPECTIONS

Definition of Terms

Where special inspections are listed under "Random Basis", special inspection of elements and items shall be performed on a random basis. Operations need not be delayed pending these inspections. Where special inspection items are listed under "Every Element", special inspection shall be performed for each element, joint, or member, as applicable based on the task listed below.

Structural Welding (2018 IBC section 1705.2 and section 1705.12.1 and section 1705.13.1 and AISC 360-16 Chapter N and AISC 341-16 Chapter J)

ITEM FOR VERIFICATION & INSPECTION	INSPECTION PLAN		COMMENTS
	Every Element	Random Basis	
<b>Inspection Tasks Prior to Welding</b>			
Welding procedures specifications and manufacturer certifications for welding consumables shall be available	X	-	Welding procedures shall be submitted to the Engineer of Record for review.
Material identification (type/grade)	-	X	
Welder identification system	-	X	Verify there is a system in place to identify the welder who has welded a joint or member.
Fit-up of groove welds	-	X	Including joint geometry, joint preparation, dimensions, cleanliness, tacking and backing type and fit.
Configuration and finish of access holes	-	X	
Fit-up of fillet welds	-	X	Including alignment, gaps at root, dimensions, cleanliness and tacking.
Check welding equipment	-	X	
<b>Inspection Tasks During Welding</b>			
Use of qualified welders	-	X	
Control and handling of welding consumables	-	X	Including packaging and exposure control
Cracked tack welds	-	X	Verify no welding over cracked tack welds.
Environmental conditions	-	X	Including wind speed within limits and precipitation and temperature
WPS followed	-	X	Including settings on welding equipment, travel speed, selected welding materials, shielding gas type/flow rate, preheat applied, interpass temperature (min./max.) maintained, proper position (F, V, H, OH)
Welding techniques	-	X	Including interpass and final cleaning, each pass within profile limitations, each pass meets quality requirements

ITEM FOR VERIFICATION & INSPECTION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
Welds cleaned	-	X	
Size, length and location of welds	X	-	
Welds meet visual acceptance criteria	X	-	Including crack prohibition, weld/base-metal fusion, crater cross section, weld profiles, weld size, undercut and porosity.
Arc strikes, k-area, weld access holes for flanges greater than 2", backing removed and weld tabs removed (if required), repair activities	X	-	When welding of doubler plates, continuity plates, or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3" of the weld.
Ultrasonic testing (UT) for complete-joint-penetration (CJP) groove welds, partial penetration groove welds when used in column splices, and welds subject to fatigue	-	X	Perform UT on 10% of welds subject to transversely applied tension loading in butt, T- and corner joints, in material 5/16" thick or greater. For materials less than 5/16" thick, ultrasonic testing is not required. The UT rate must be increased to 100% if the rejection rate exceeds 5% of the welds tested. See Sections N5.5d and N5.5f for more information.
Document acceptance or rejection of each welded joint or member	X	-	

POST-INSTALLED ANCHOR INSPECTIONS

ITEM FOR VERIFICATION & INSPECTION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
<b>Post-Installed Anchors and Reinforcing Bars (2018 IBC Section 1705.1.1)</b>			
Adhesive Anchors and Reinforcing Bars	X	-	Special inspection shall be performed per manufacturer's requirements and approved ICC-ES reports noted in POST-INSTALLED ANCHOR section of the General Structural Notes prior to installation of epoxy and anchor rod. If the anchor is not installed in a horizontal, upwardly inclined or overhead orientation meant to resist sustained tension loads, special inspection may be reduced to a periodic frequency.
Mechanical Anchors and Screw Anchors	-	X	Special inspection shall be provided per manufacturer's requirements and approved ICC-ES reports noted in POST-INSTALLED ANCHOR section of the General Structural Notes prior to installation of mechanical or screw anchor.

STRUCTURAL OBSERVATION PROGRAM

If structural observations are required, they shall be done by the Engineer of Record or an approved subordinate at the stages of construction listed in the Construction Notification Phases section of these notes. At the conclusion of the project, the designated structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that to the best of the structural observer's knowledge have not been resolved (See IBC 2018 1704.6).

STRUCTURAL OBSERVATION PROGRAM REQUIRED BY CODE:	YES	NO
	X	

CONSTRUCTION MILESTONE SCHEDULE

CONTRACTOR TO NOTIFY ENGINEER AT THE FOLLOWING CONSTRUCTION PHASES:	
CONCRETE	
Footings	Prior to pouring concrete

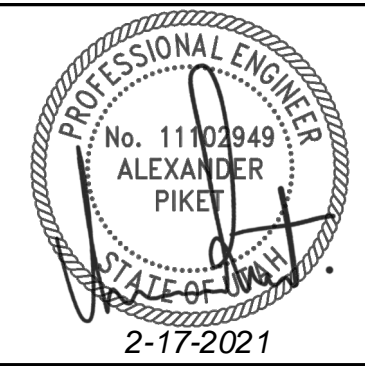
DEFERRED SUBMITTALS

For the purposes of this section, deferred submittals are defined as per section 107.3.4.1 of the IBC 2018. Submittal documents for deferred submittal items shall be submitted to the engineer, architect and building official for their review for general conformance with the design of the building.

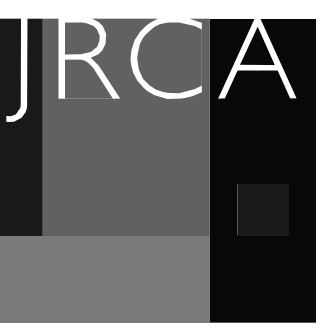
DEFERRED STRUCTURAL SUBMITTALS FOR THIS PROJECT ARE

None

BID SET	DATE	REVISION
2/17/2021		

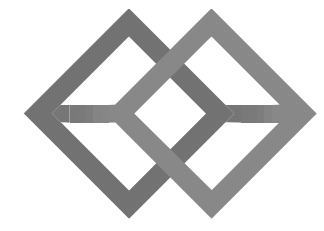






**ARCHITECTS**  
 577 South 200 East  
 S L C, Utah 84111  
 ph: (801) 533-2100  
 jrcadesign.com

**REVIEWED FOR CODE COMPLIANCE**  
 FOR COMPLIANCE WITH THE UTAH BUILDING CODES IDENTIFIED BELOW:  
 BUILDING  STRUCTURAL  
 MECHANICAL  PLUMBING  
 ELECTRICAL  ENERGY  
 ACCESSIBILITY  FIRE  
 PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION OR PROCEED IN VIOLATION OF ANY FEDERAL, STATE OR LOCAL REGULATIONS.  
 DATE: 02/11/21  
 WEST COAST CODE CONSULTANTS, INC.



**BHB STRUCTURAL**  
 2766 South Main Street  
 Salt Lake City, Utah 84115  
 801-355-5656  
 bhb@bhbenigneers.com

**SLCC TESTING CENTER**  
 4600 South Redwood Rd  
 Taylorsville, UT 84123

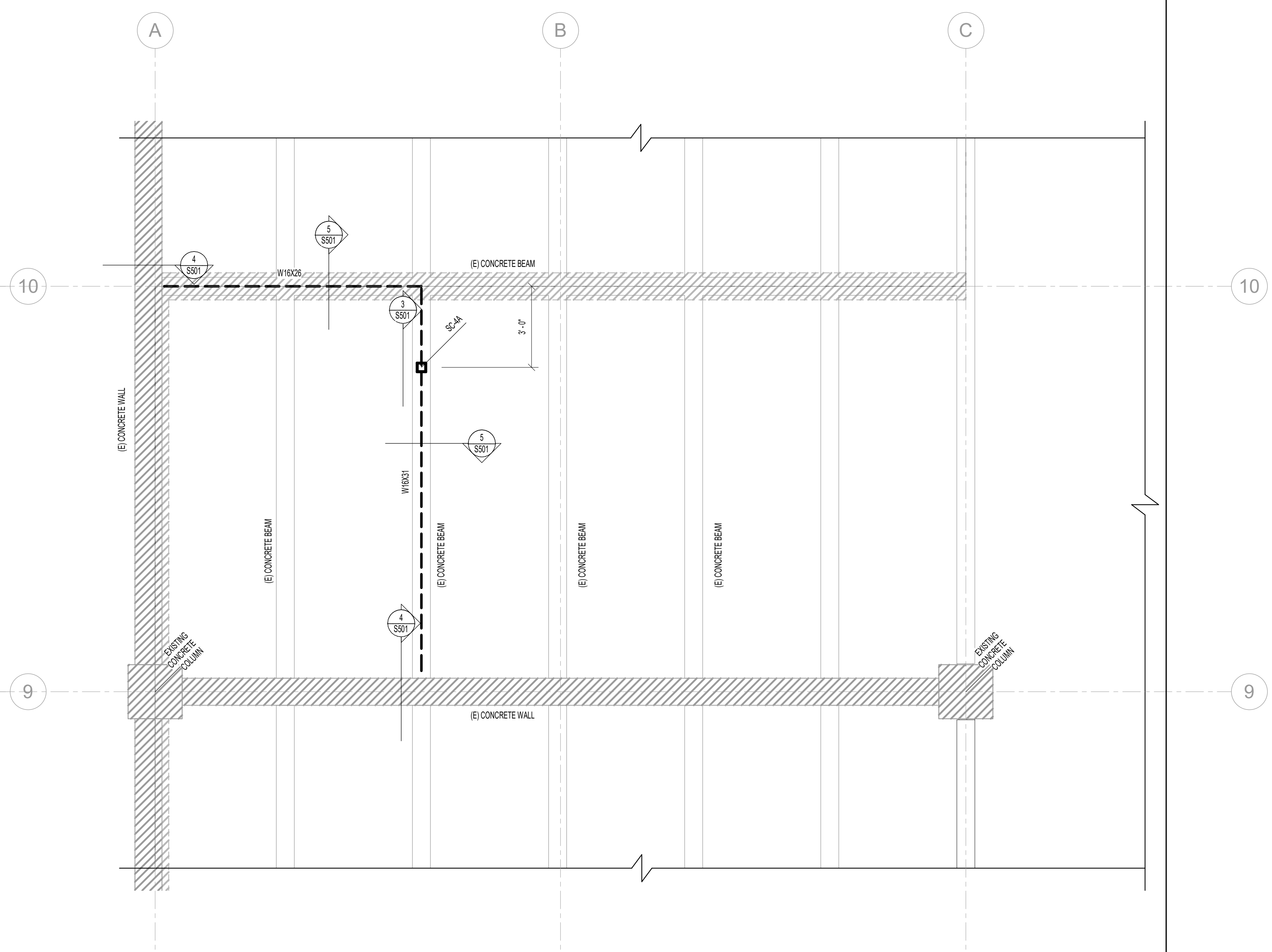
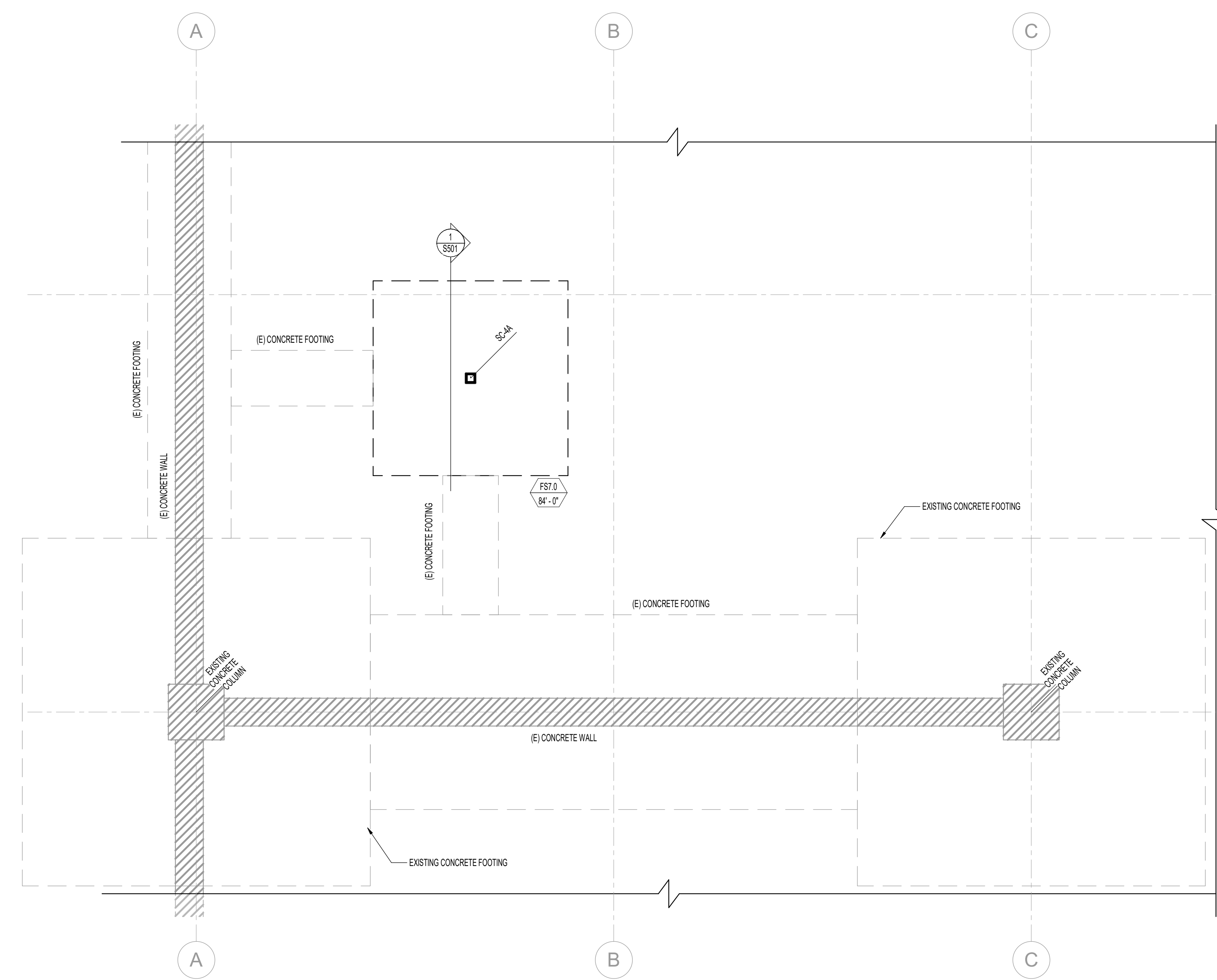
PROJECT #: 201247

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DATE	REVISION
2/17/2021	



**FLOOR FRAMING AND FOUNDATION PLANS**

**S101**



**1 FOOTING AND FOUNDATION PLAN**

**2 FLOOR FRAMING PLAN**

**MARKS AND SYMBOLS LEGEND**

	SECTION MARK
	SHEET NUMBER
	FOOTING DESIGNATION
	TOP OF FOOTING ELEVATION
	INDICATES EXISTING STRUCTURE
SC+	INDICATES STEEL COLUMN, SEE SCHEDULE ON SHEET S301

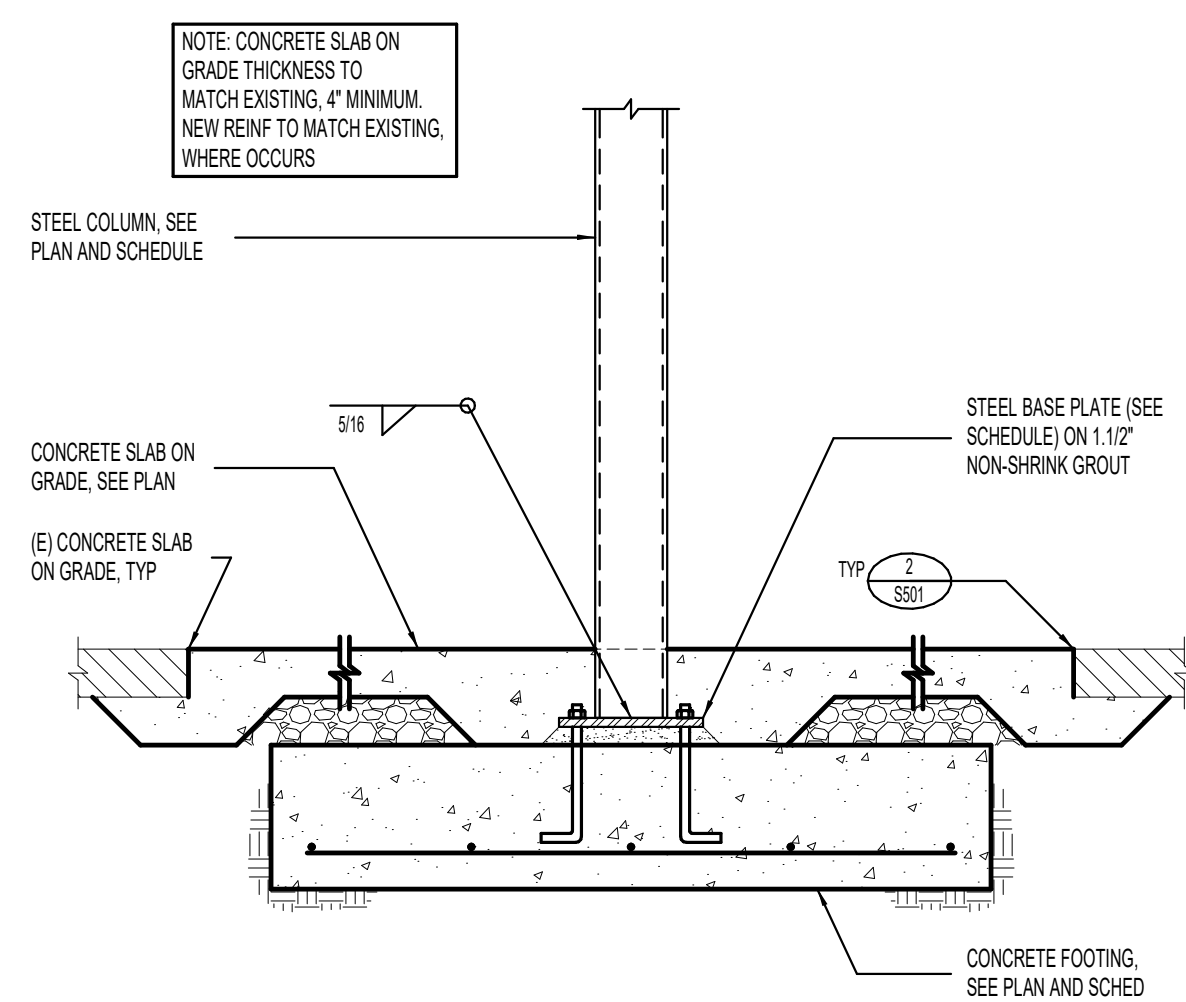
**PLAN NOTES**

1. ALL SPOT FOOTINGS SHALL BE CENTERED UNDER COLUMNS (UNO).

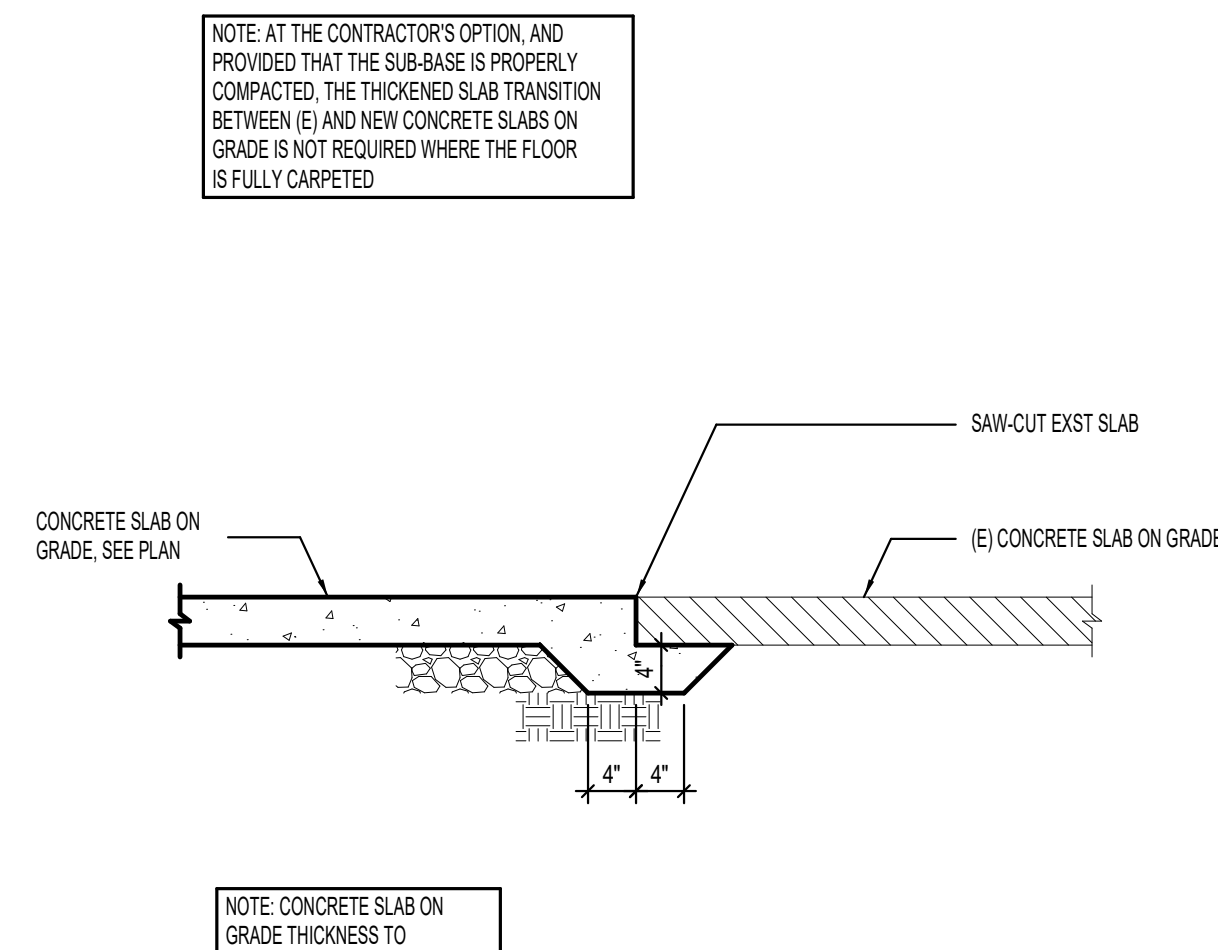
BIM 360/201247 - SLCC Remodel/201247 - S-MODL 2020 BIM360.rvt

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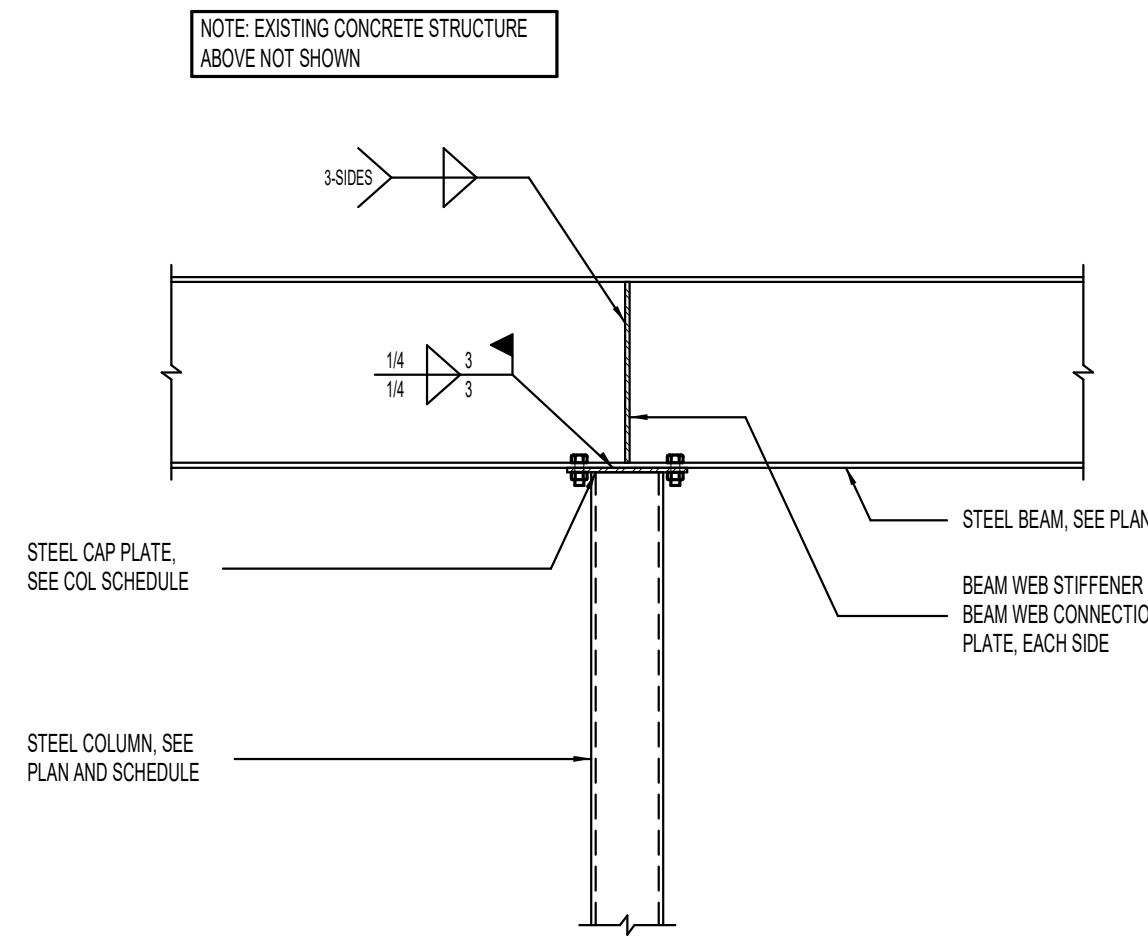




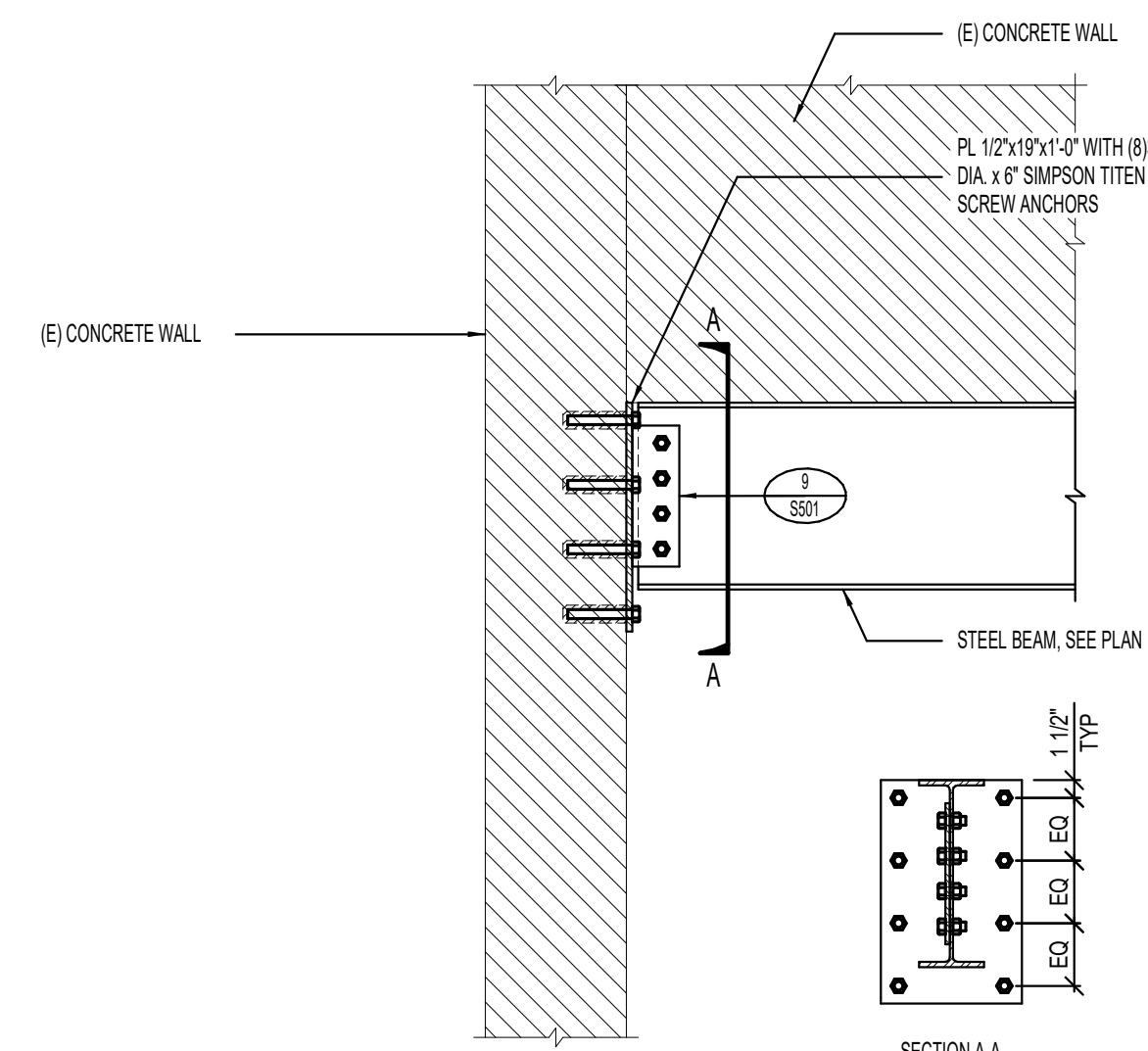
1 TYPICAL INTERIOR STEEL COLUMN AT CONCRETE FOOTING NO SCALE



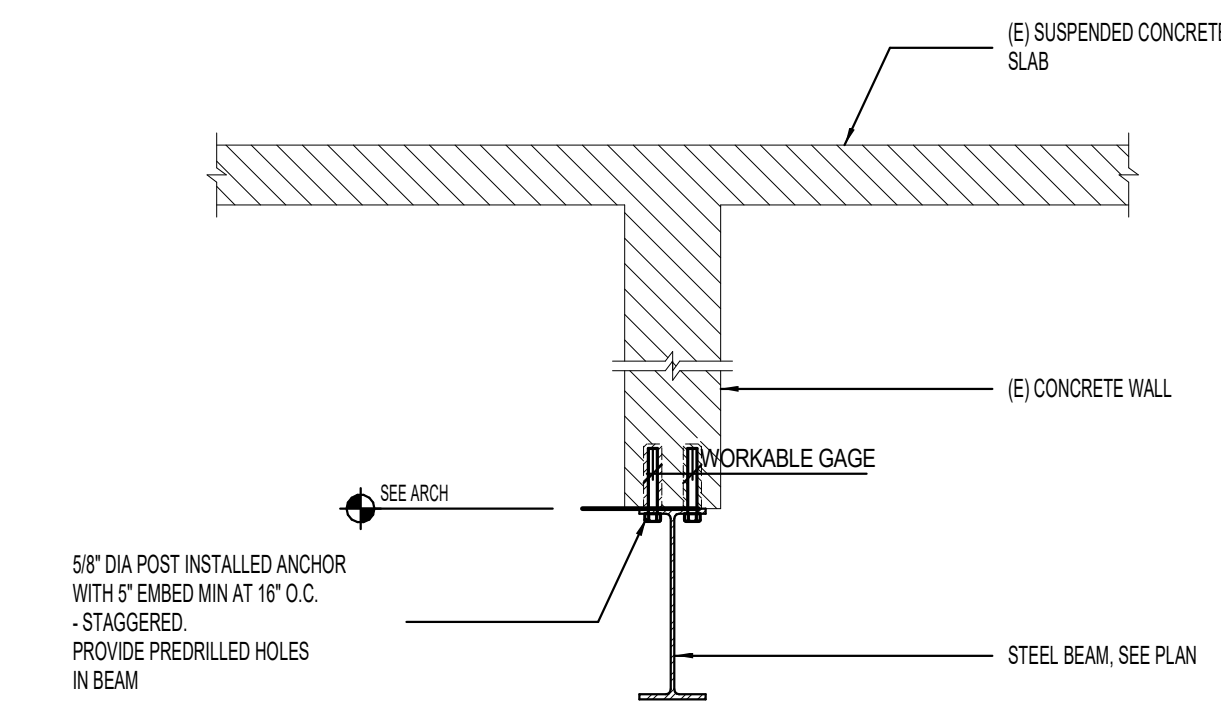
2 TYPICAL SLAB PATCH DETAIL NO SCALE



3 BEAM TO COLUMN CONNECTION NO SCALE



4 BEAM CONNECTION AT EXISTING WALL NO SCALE



5 EXISTING CONCRETE STRUCTURE AT STEEL BEAM NO SCALE

CONCRETE FOOTING SCHEDULE												
MARK	WIDTH	LENGTH	DEPTH	REINFORCING CROSSWISE				REINFORCING LENGTHWISE				COMMENTS
				No.	SIZE	LENGTH	SPACING	No.	SIZE	LENGTH	SPACING	
FST-0	7'-0"	7'-0"	13"	7	#5	6'-0"	EQ	7	#5	6'-0"	EQ	

- CONCRETE FOOTING NOTES:
- PLACE ALL FOOTING REINFORCING IN THE BOTTOM OF THE FOOTING WITH 3" CLEAR CONCRETE COVER (MIN).
  - TOP REINFORCING, WHERE OCCURS, SHALL BE PLACED IN THE TOP OF THE FOOTING WITH 2" MINIMUM CONCRETE COVER.
  - IF FOOTINGS ARE EARTH-FORMED, FOOTINGS SHALL BE 9" LONGER AND WIDER THAN SCHEDULED.
  - SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
  - SOME SCHEDULED FOOTINGS MAY NOT BE USED. SEE FOOTING AND FOUNDATION PLAN FOR FOOTING MARKS.

6 CONCRETE FOOTING SCHEDULE NO SCALE

REBAR DOWEL (THREADED ROD SIZE)		MINIMUM EMBEDMENT INTO CONCRETE OR GROUTED MASONRY
#3 (3/8")		3.38"
#4 (1/2")		4.12"
#5 (5/8")		5.50"
#6 (3/4")		6.34"

- STANDARD ADHESIVE EMBEDMENT NOTES:
- SPECIFIC EMBEDMENTS, NOTES AND DETAILS IN DRAWINGS SHALL GOVERN OVER THIS SCHEDULE.
  - HOLE DIAMETER SHALL BE DOWEL ROD DIAMETER PLUS 1/8". FOLLOW MANUFACTURER'S INSTRUCTIONS FOR HOLE PREPARATION.
  - PROVIDE A 2" MINIMUM EDGE DISTANCE TO CENTER OF HOLE.
  - CONTACT STRUCTURAL ENGINEER IF MINIMUM EMBEDMENTS INDICATED ABOVE ARE NOT ACHIEVABLE.
  - SEE "POST INSTALLED ANCHORS" SECTION OF GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

8 STANDARD ADHESIVE EMBEDMENT SCHEDULE NO SCALE

CONCRETE REINFORCING BAR LAP SPlice SCHEDULE																
BAR SIZE	f <sub>c</sub> = 3000 psi & f <sub>t</sub> = 3500 psi				f <sub>c</sub> = 4000 psi & f <sub>t</sub> = 4500 psi				f <sub>c</sub> = 5000 psi							
	REGULAR		TOP		REGULAR		TOP		REGULAR		TOP					
	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS				
#3	17"	22"	22"	28"	15"	19"	19"	24"	13"	17"	17"	22"	12"	16"	15"	20"
#4	22"	29"	29"	37"	19"	25"	25"	32"	17"	22"	22"	29"	16"	20"	20"	27"
#5	28"	36"	36"	47"	24"	31"	31"	40"	22"	28"	28"	36"	20"	26"	26"	33"
#6	33"	43"	43"	56"	29"	37"	37"	48"	28"	33"	33"	43"	24"	31"	31"	40"
#7	40"	53"	53"	69"	34"	44"	44"	56"	33"	40"	40"	53"	34"	44"	44"	56"
#8	50"	66"	66"	87"	41"	53"	53"	67"	40"	49"	49"	64"	41"	51"	51"	66"
#9	62"	81"	81"	106"	50"	64"	64"	81"	48"	60"	60"	78"	51"	62"	62"	80"
#10	76"	100"	100"	131"	60"	77"	77"	98"	58"	72"	72"	93"	60"	73"	73"	93"
#11	92"	121"	121"	157"	72"	93"	93"	118"	70"	86"	86"	110"	72"	87"	87"	110"

TABULATED VALUES ARE FOR CASE 1 REINFORCEMENT, WHERE THE REQUIREMENTS OF TABLE BELOW ARE MET. WHERE THESE CONDITIONS ARE NOT MET, MULTIPLY THE LAP LENGTHS (L) BY 1.5.

REQUIREMENT FOR CASE 1 LAP LENGTHS		
BAR CLEAR SPACING	CLEAR COVER	STIRRUPS OR TIES
>= 4s	>= 4s	>= CODE FOR MINIMUM THROUGHOUT L <sub>1</sub>
>= 2d <sub>s</sub>	>= 4s	NO REQUIREMENT

- CONCRETE REINFORCING BAR LAP SPlice NOTES:
- THIS SCHEDULE SHALL BE USED FOR ALL BAR SPICES IN CONCRETE WALLS, UNLESS NOTED OTHERWISE.
  - CLASS 'A' SPICES MAY BE USED ONLY IN CASES WHERE 50% OR LESS OF THE BARS ARE SPICED WITHIN THE LAP SPlice LENGTH.
  - CLASS 'B' SPICES SHALL BE USED FOR ALL SPICES UNLESS THE REQUIREMENTS OF NOTE NO. 2 ABOVE ARE MET.
  - TIES AND STIRRUPS SHALL NOT BE SPICED.
  - DO NOT SPlice VERTICAL BARS IN RETAINING WALLS UNLESS SPECIFICALLY SHOWN.
  - THE VALUES TABULATED IN SCHEDULE ARE FOR GRADE 60 REINFORCING BARS. FOR GRADE 75, MULTIPLY LAP LENGTHS BY 1.25 AND FOR GRADE 80 MULTIPLY BY 1.33.
  - THE VALUES TABULATED IN SCHEDULE ARE MINIMUM REQUIREMENTS. LONGER LENGTHS MAY BE USED FOR CONSTRUCTIBILITY.
  - TOP BARS ARE CLASSIFIED AS HORIZONTAL BARS WHERE 12" OR MORE OF FRESH CONCRETE IS CAST BELOW THE REINFORCING BAR.
  - SPICES FOR BUNDLED BARS:
    - FOR BUNDLED BARS OF THREE OR LESS, LAP SPlice LENGTHS SHALL BE MULTIPLIED BY 1.2.
    - FOR BUNDLED BARS OF FOUR OR MORE, LAP SPlice LENGTHS SHALL BE MULTIPLIED BY 1.33.
  - INDIVIDUAL BAR SPICES WITHIN A BUNDLE SHALL NOT OVERLAP.
  - ENTIRE BUNDLES SHALL NOT BE LAP SPICED.
  - SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

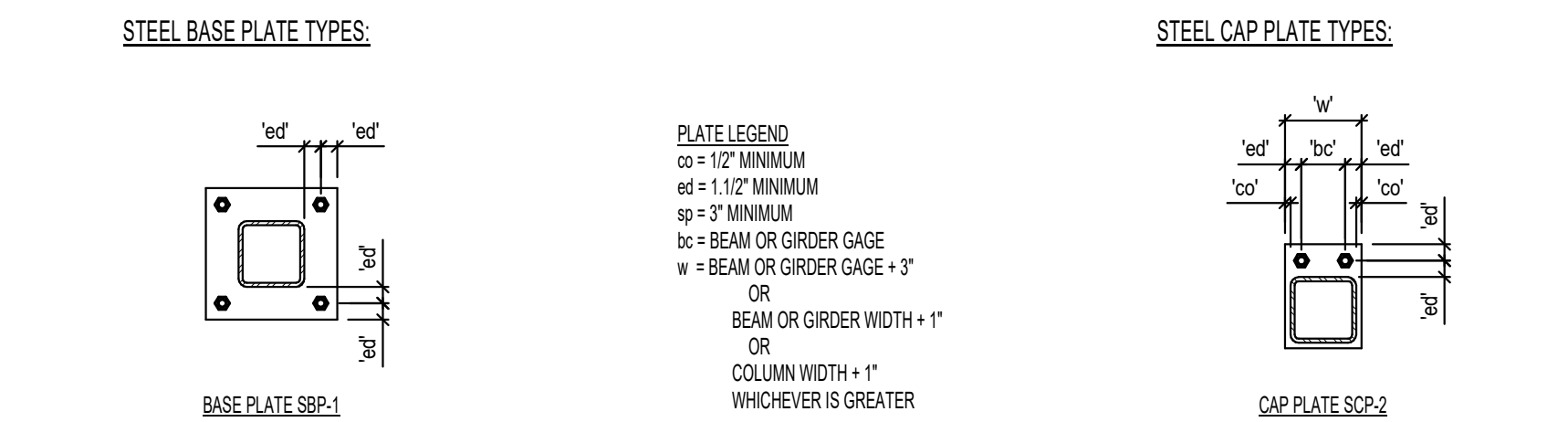
7 CONCRETE REINFORCING BAR LAP SPlice SCHEDULE NO SCALE

A-325 BOLT SCHEDULE			
MAXIMUM BEAM SIZE IN EACH BEAM DEPTH GROUP	No. PER BEAM	CLASS	ASD CAPACITY
W18	4	A325	42.4K

9 TYPICAL 3/4" DIA BOLTED WEB PLATE CONNECTIONS WITH BOLT SCHEDULE [SINGLE SHEAR STEEL TUBE AND WIDE FLANGE COLUMN] NO SCALE

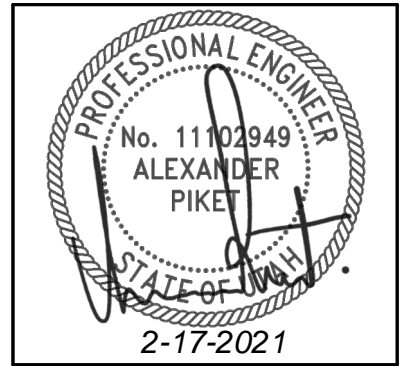
STEEL COLUMN SCHEDULE				
MARK	SIZE	STEEL BASE PLATE	STEEL CAP PLATE	COMMENTS
SC-4A	HSS44x43.8	1" (SBP-1)	1/2" (SCP-2)	

- STEEL COLUMN NOTES:
- UNLESS NOTED OTHERWISE, ALL COLUMNS SHALL BE INSTALLED WITH (A) 3/4" DIA ANCHOR RODS WITH 2" MINIMUM HOOKS. PROJECT ANCHOR RODS 2" MINIMUM ABOVE THE TOP OF THE BASE PLATE. EMBEDMENT SHALL BE 2" MINIMUM. ALL RODS SHALL BE INSTALLED WITH HARDENED WASHERS BENEATH THE NUT. ANY BOLT HOLES LARGER THAN THE ROD DIAMETER PLUS 5/16" SHALL HAVE 5/16" PLATE WASHERS INSTALLED BENEATH THE HARDENED WASHERS.
  - ALL CAP PLATE BOLTS SHALL BE 3/4" DIA A325 BOLTS. TYPICAL UNLESS NOTED OTHERWISE.
  - ANCHOR RODS SHALL NOT BE WELDED (INCLUDING TACK WELDS).
  - SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.



10 STEEL COLUMN SCHEDULE NO SCALE

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DATE	REVISION
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### MECHANICAL LEGEND

SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION
GENERAL TERMINOLOGY											
		SECTION LETTER DESIGNATION			EXISTING AIR DUCT TO BE REMOVED			PUMP			PITCH DOWN
		SECTION DRAWN ON THIS SHEET			EXISTING AIR DUCT TO REMAIN			REGULATOR			ELBOW UP/DN
		DETAIL NUMBER DESIGNATION CORRESPONDING WITH GRID LOCATION			NEW AIR DUCT			UNION			TEE UP/DN
		MECHANICAL EQUIPMENT DESIGNATION			RECT TO RECT AIR DUCT TAKE-OFF			MANUAL ACTUATOR			EXISTING PIPING TO BE REMOVED
		EQUIPMENT ITEM DESIGNATION			RECT TO RND AIR DUCT TAKE-OFF			PNEUMATIC DIAPHRAM ACTUATOR			EXISTING PIPING TO REMAIN
		REGISTER, GRILLE OR DIFFUSER DESIGNATION WITH BALANCING CFM LISTED BELOW			RND TO RND AIR DUCT TAKE-OFF			ELECTRIC MOTOR ACTUATOR			NEW PIPING
		GRILLE OR LOUVER DESIGNATION WHERE BALANCING NOT REQUIRED			MEDIUM PRESSURE TAKE-OFF			SOLENOID ACTUATOR			PIPE CAP OR PLUG
		REVISION DESIGNATOR AND NUMBER			FLEXIBLE AIR DUCT			BUTTERFLY VALVE			REDUCER - CONCENTRIC / ECCENTRIC
		KEY NOTE DESIGNATOR AND NUMBER			LINED DUCT			GATE VALVE			EXPANSION JOINT
	POC	POINT OF CONNECTION			ECCENTRIC DUCT TRANSITION			GLOBE VALVE - STRAIGHT PATTERN			FLEXIBLE CONNECTION
	POR	POINT OF REMOVAL			CONCENTRIC DUCT TRANSITION			GLOBE VALVE - ANGLE PATTERN			ANCHOR POINT
		ABOVE FINISHED FLOOR			VOLUME DAMPER		CD	MOTORIZED 2-WAY CONTROL VALVE		CD	CONDENSATE DRAIN
		ACCESS PANEL			SUPPLY AIR DIFFUSER		G	MOTORIZED 3-WAY CONTROL VALVE		G	NATURAL GAS PIPING
	C EL.	CENTERLINE ELEVATION			RETURN & TRANSFER AIR GRILLE		PRV	PRESSURE REDUCING VALVE		CF	CHEMICAL FEED LINE
	GC	GENERAL CONTRACTOR			CHECK VALVE			CHECK VALVE		GF	GLYCOL FILL LINE
	MC	MECHANICAL CONTRACTOR			EXHAUST GRILLE OR CEILING EXH. FAN			CIRCUIT BALANCING VALVE		MU	MAKE-UP WATER LINE
	ATC	CONTROLS CONTRACTOR			RETURN & OUTSIDE AIR DUCT UP/DN			BALL VALVE		CW	CULINARY COLD WATER
	EC	ELECTRICAL CONTRACTOR			RETURN & OA ROUND DUCT UP/DN			PRESSURE RELIEF VALVE		HW	CULINARY HOT WATER
	FPC	FIRE PROTECTION CONTRACTOR			SUPPLY AIR DUCT UP/DN			THERMAL RELIEF VALVE		HWREC	CULINARY HOT WATER RECIRC
	NIC	NOT IN CONTRACT			SUPPLY AIR ROUND DUCT UP/DN			SAFETY RELIEF VALVE		HWS	HEATING WATER SUPPLY
	NTS	NOT TO SCALE			EXHAUST AIR DUCT UP/DN			PLUG VALVE		HWR	HEATING WATER RETURN
	VCP	VITRIFIED CLAY PIPE			EXHAUST AIR ROUND DUCT UP/DN			NEEDLE VALVE		CHWS	CHILLED WATER SUPPLY
	C	COMMON		AP	ACCESS PANEL			TRIPLE DUTY VALVE		CHWR	CHILLED WATER RETURN
	NC	NORMALLY CLOSED			EXISTING EQUIPMENT TO BE REMOVED			AUTOMATIC AIR VENT		HTWS	HIGH TEMP HEATING WATER SUPPLY
	NO	NORMALLY OPEN			EXISTING EQUIPMENT TO REMAIN			MANUAL AIR VENT		HTWR	HIGH TEMP HEATING WATER RETURN
					NEW EQUIPMENT			STRAINER		LPS	LOW PRESSURE STEAM
				SA	SUPPLY AIR			STRAINER W/ PLUG BLOW OFF		LPR	LOW PRESSURE STEAM RETURN
				RA	RETURN AIR			VENTURI		HPS	HIGH PRESSURE STEAM
				EA	EXHAUST AIR			PRESSURE GAUGE W/ COCK - WATER		HPR	HIGH PRESSURE STEAM RETURN
				OA	OUTSIDE AIR			PRESSURE GAUGE W/ COCK - STEAM		CS	CONDENSER SUPPLY
				MA	MIXED AIR			THERMOMETER & THERMOWELL		CR	CONDENSER RETURN
				RF	RELIEF AIR			WATER TEMP SENSOR & THERMOWELL		PC	PUMPED CONDENSATE
				FO	FLAT OVAL			FLOW SWITCH		L	REFRIGERANT LIQUID
				MVD	MOTORIZED VOLUME DAMPER			PRESSURE SWITCH		S	REFRIGERANT SUCTION
				BD	BACKDRAFT DAMPER			THERMOWELL		HG	REFRIGERANT HOT GAS
				FD	FIRE DAMPER			PRESSURE & TEMP TAP		FOS	FUEL OIL SUPPLY
				SD	SMOKE DAMPER			INVERTED BUCKET STEAM TRAP		FOR	FUEL OIL RETURN
				FS	FIRE & SMOKE DAMPER			THERMOSTATIC STEAM TRAP		FOV	FUEL OIL VENT
				T	WALL MOUNTED THERMOSTAT			FLOAT & THERMOSTATIC STEAM TRAP			
				S	WALL MOUNTED TEMP. SENSOR			DIRECTION OF FLOW			
				H	WALL MOUNTED HUMIDISTAT			BACKFLOW PREVENTING VALVE			
				F	WALL MOUNTED FIRESTAT						

#### GENERAL NOTES

**G-1** - MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION OF THE EXISTING BUILDING AND SITE CONDITIONS, EXISTING PIPING, EXISTING ELECTRICAL, AND EXISTING SUPPORTS.

**A** - EACH DRAWING SHEET AND THE SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN AND NOTED ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN ALL PLACES. ITEMS IN SPECIFICATIONS OR DRAWINGS LISTED WHICH ARE DIFFERING IN EFFICIENCY OR QUALITY SHALL BE HELD TO THE GREATEST OF: EFFICIENCY, QUALITY OR GOVERNING CODE.

**B** - THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.

**C** - THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH PROPER SERVICE ACCESS AND CLEARANCES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL REVIEW SUPPLIERS BID PACKAGES FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS, SCHEDULES, AND DESIGN INTENT (ALL EQUIPMENT AND METHODS). THE CONTRACTOR SHALL REMOVE AND REINSTALL CORRECTLY AT HIS OWN EXPENSE ANY EQUIPMENT NOT IN COMPLIANCE.

**D** - THE CONTRACTOR SHALL CONSULT MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SIZES, METHODS, ACCESSORIES, AND CLEARANCES IN SPACE AVAILABLE PRIOR TO BIDDING PROJECT.

**E** - ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO THE ENGINEER IN WRITING.

**G-2** - ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO CHANGES FOR APPROVAL. CONTRACTOR SHALL NOT START ANY CHANGES UNTIL NOTIFIED IN WRITING. IF CHANGES ARE MADE PRIOR TO APPROVAL CONTRACTOR SHALL TAKE ALL RESPONSIBILITY FOR THE CHANGES MADE AND ALL COSTS RELATING TO FAILURE OR REPLACEMENT OF ALTERATIONS.

**G-3** - CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS.

**G-4** - THE WORKING DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL DRAWINGS. THE CONTRACTOR SHALL PROVIDE OR COORDINATE WITH THE GENERAL CONTRACTOR PROVISIONS FOR BLOCKOUTS OR CORE DRILLS THROUGH STRUCTURE.

**G-5** - THE INSTRUCTION TO "PROVIDE" ALSO INCLUDES INSTALLATION.

**G-6** - MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL SMOKE AND FIRE DAMPERS AS REQUIRED BY LOCAL CODES AND AUTHORITIES.

**G-7** - SHEET METAL DUCT SIZES SHOWN ON DRAWINGS ARE FREE AREA DIMENSIONS.

**G-8** - PROVIDE AND INSTALL BALANCING DAMPERS IN ALL SUPPLY AND EXHAUST AIR BRANCH DUCTS. BALANCE TO CFM SHOWN ON PLAN.

**G-9** - SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF DIFFUSERS AND GRILLES.

**G-10** - PROVIDE TURNING VANES IN ALL ELBOWS OF RECTANGULAR DUCT.

**G-11** - THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY IN HANDLING AND DISPOSING OF REFRIGERANTS, OILS, ETC. ALL SUCH MATERIALS SHALL BE HANDLED, DISPOSED, AND USED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS.

**G-12** - THE MECHANICAL CONTRACTOR SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWING BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.

**G-13** - C.F.M. LISTED IS ACTUAL AIR.

**G-14** - SUPPLIERS SHALL REVIEW ALL DRAWINGS AND THE SPECIFICATIONS PRIOR TO SUBMITTING PRICES TO THE CONTRACTOR. ALL QUESTIONS AND DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.

**G-15** - CONTRACTOR SHALL THOROUGHLY REVIEW AND SIGN SUBMITTALS FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS PRIOR TO ENGINEERS REVIEW. SUPPLIERS SHALL HIGHLIGHT OR MARK ALL INFORMATION REQUIRED TO SHOW COMPLIANCE TO THE SPECIFICATIONS. ALL REQUESTED EXCEPTIONS TO THE SPECIFICATIONS, OR SCHEDULES SHALL BE CLEARLY NOTED AND EXPLAINED. SUBMITTAL REVIEW AND ACCEPTANCE IS FOR DESIGN CONCEPT ONLY, AND DOES NOT AT ANY TIME RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO MEET SPECIFICATIONS, CAPACITIES, OR DESIGN INTENT.

**G-16** - ALL MECHANICAL SHALL BE INSTALLED AND CONFORM TO THE 2018 EDITION OF THE IMC AND IPC WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.

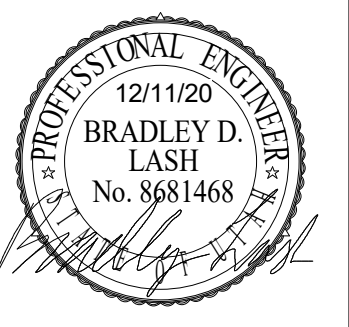
**G-17** - THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAINING DOWN AND REFILLING OF ALL SYSTEMS NECESSARY TO COMPLETE THE WORK OUTLINED BY THIS PROJECT. THIS INCLUDES PROVIDING THE REQUIRED CHEMICAL TREATMENT WHEN REFILLING THE SYSTEM.

**G-18** - ALL PIPING, MATERIALS, ETC. SHALL BE NEW AND DOMESTIC MADE UNLESS SPECIFICALLY AUTHORIZED IN WRITING PRIOR TO BID.

**G-19** - PROVIDE FIRE SPRINKLER MODIFICATIONS PER PERFORMANCE SPECIFICATION THROUGH NICET LEVEL 3 CERTIFIED DESIGN BUILD FIRE SPRINKLER CONTRACTOR.



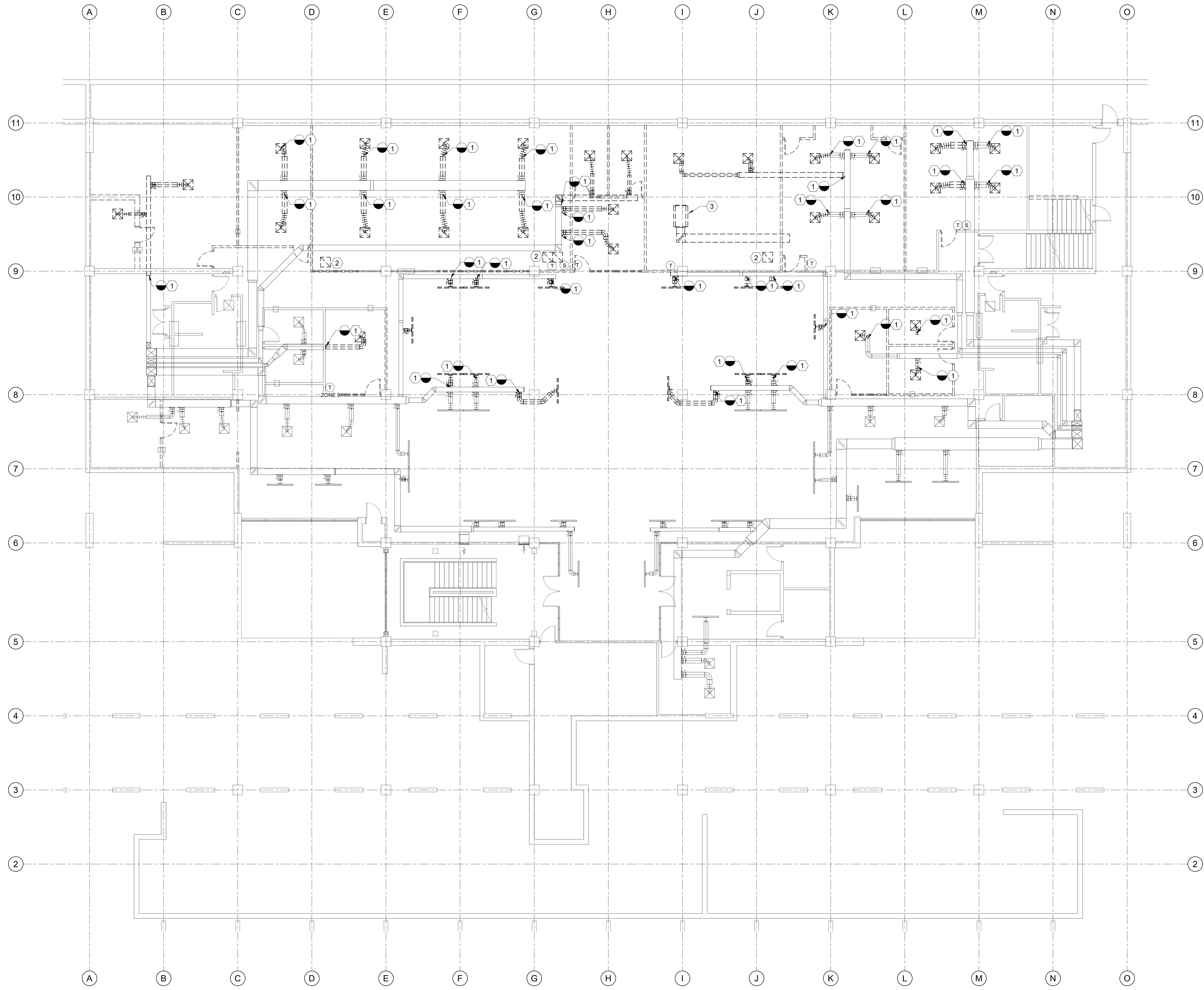
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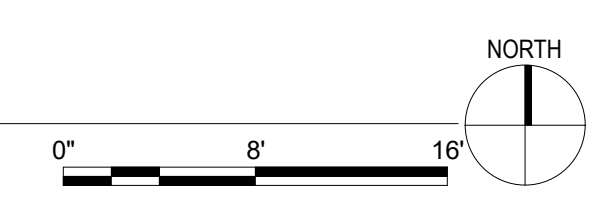


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A6 LOWER LEVEL MECHANICAL DEMOLITION PLAN  
 MD101 SCALE 1/8" = 1'-0"



**SHEET NOTES**

- 1 REMOVE EXISTING DIFFUSERS, GRILLES, DUCTWORK, HANGARS, AND ALL ASSOCIATED ITEMS TO THIS APPROXIMATE LOCATION. FIELD VERIFY. CAP IF NEW DUCT IS NOT BEING INSTALLED. SEE NEW PLANS.
- 2 DEMOLISH EXISTING AIR DEVICE IN THIS APPROXIMATE LOCATION. FIELD VERIFY.
- 3 DEMOLISH COMPUTER ROOM UNIT AND ASSOCIATED ITEMS IN THIS APPROXIMATE LOCATION; FIELD VERIFY.

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REVIEW FOR CODE  
 ENGINEER/ARCHITECT  
 PROFESSIONAL SEAL  
 MECHANICAL/ELECTRICAL/PLUMBING/ENERGY/ACCESSIBILITY/FIRE

PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION BY PROCEED IN VIOLATION OF ANY FEDERAL, STATE OR LOCAL REGULATIONS.  
 02/16/2021  
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**SLCC MARKOSIAN LIBRARY TESTING CENTER**  
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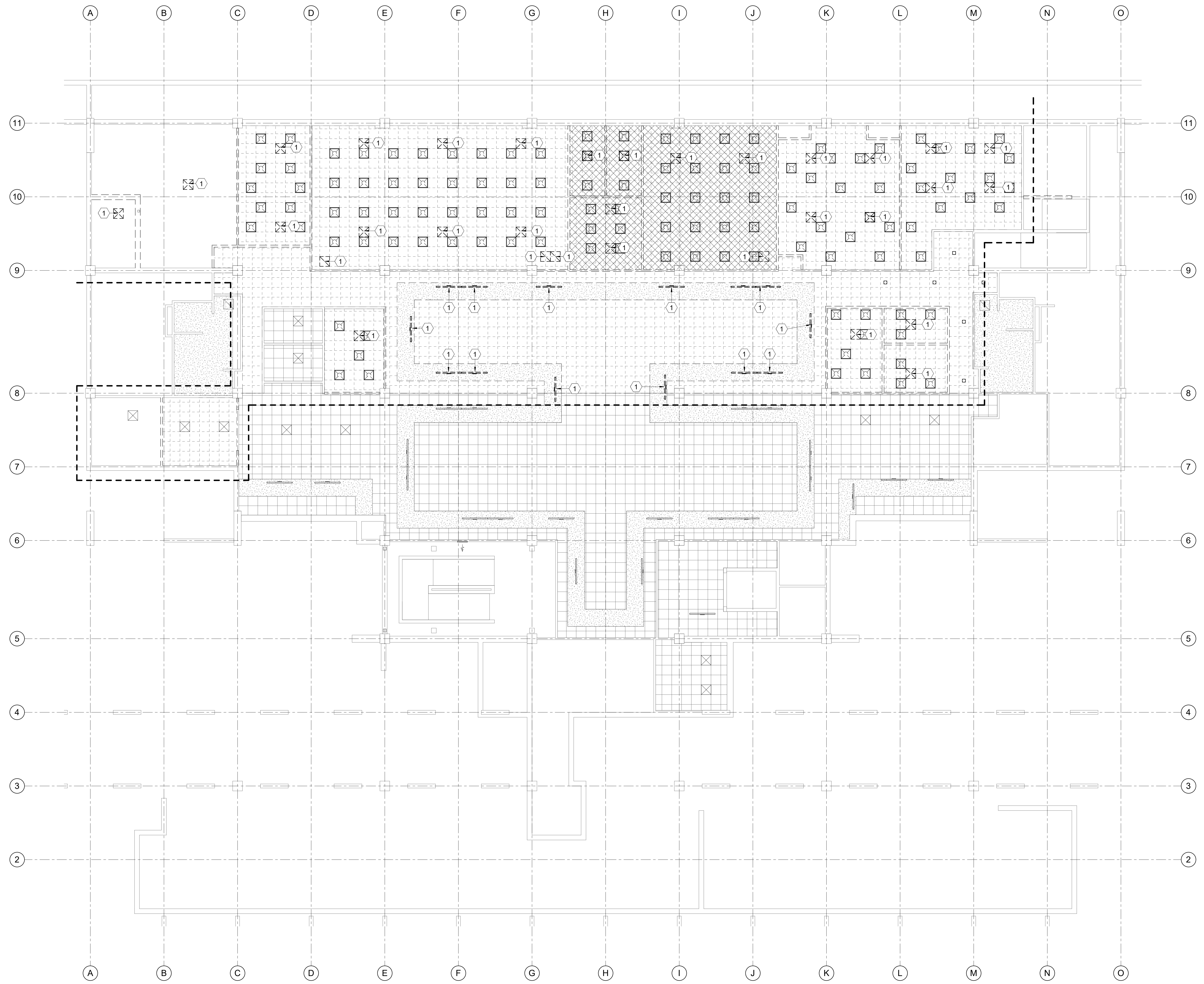
LOWER LEVEL  
 MECHANICAL  
 DEMOLITION  
 PLAN

**MD101**



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1 LOWER LEVEL MECHANICAL CEILING DEMO PLAN  
 MD101.1 SCALE 1/8" = 1'-0"

**SHEET NOTES**

- 1 DEMOLISH EXISTING AIR DEVICE IN THIS APPROXIMATE LOCATION. FIELD VERIFY.

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REVIEW FOR CODE  
**ENGINEER/ARCHITECT**  
 PROFESSIONAL SEAL REQUIRED  
 QUALIFIED PROFESSIONAL ENGINEER OR ARCHITECT  
 MECHANICAL ELECTRICAL PLUMBING  
 ACCESSIBILITY FIRE  
 PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION BY PROCEED IN VIOLATION OF ANY FEDERAL, STATE OR LOCAL REGULATIONS.  
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VIEW AND PRINT THIS SHEET IN COLOR  
**LOWER LEVEL  
 MECHANICAL  
 CEILING DEMO  
 PLAN**

**MD101.1**

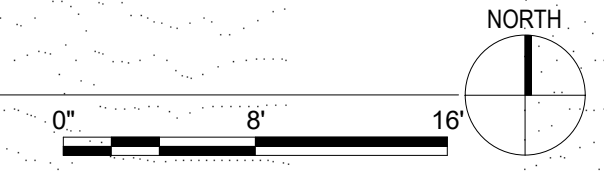


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A6 LOWER LEVEL MECHANICAL PLAN  
 ME101 SCALE 1/8" = 1'-0"



**SHEET NOTES**

- 1 CONNECT TO EXISTING DUCT AND TRANSITION AS NEED TO MATCH SIZE OF DUCT FOR DIFFUSER NECK SIZE. FIELD VERIFY.
- 2 EXISTING MULTIZONE AHU SHALL REMAIN AND ZONES REBALANCES AS NOTED.
- 3 PROVIDE NEW TEMPERATURE SENSOR IN THIS APPROXIMATE LOCATION. MOUNT 48" AFF. TIE INTO EXISTING JOHNSON CONTROLS SYSTEM AND MATCH CURRENT SEQUENCE OF OPERATION AND GRAPHICS.

GENERAL NOTES:

1. PROVIDE MANUAL BALANCING DAMPER ON ALL NEW SUPPLY AND EXHAUST BRANCHES AND BALANCE TO CFM SHOWN.
2. THE ABOVE CEILING AREA IS A RETURN AIR PLENUM. EVERYTHING IN THE PLENUM SHALL BE PLENUM RATED.

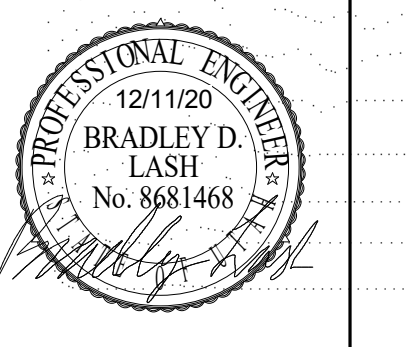
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 ph: (801) 533-2100  
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REGISTERED PROFESSIONAL ENGINEER  
 ENGINEERING CODE  
 20101 SLCC LIB TESTING CENTER  
 02/16/2021  
 WEST COAST CODE CONSULTANTS, INC.

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 Taylorsville, UT 84123

PROJECT #: 20029

DATE	REVISION
1/29/21	PLAN REVIEW



LOWER LEVEL  
 MECHANICAL  
 PLAN

ME101

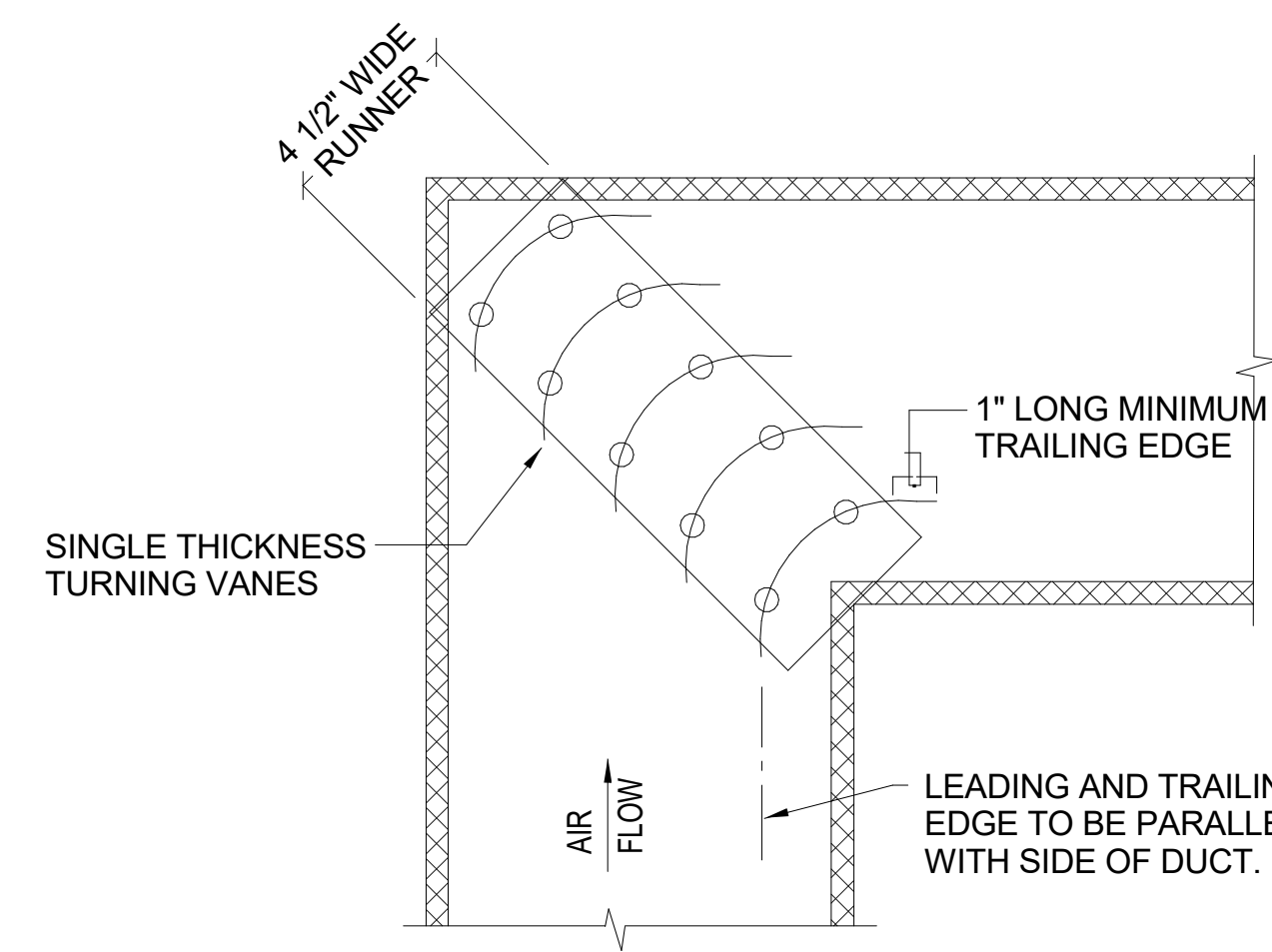




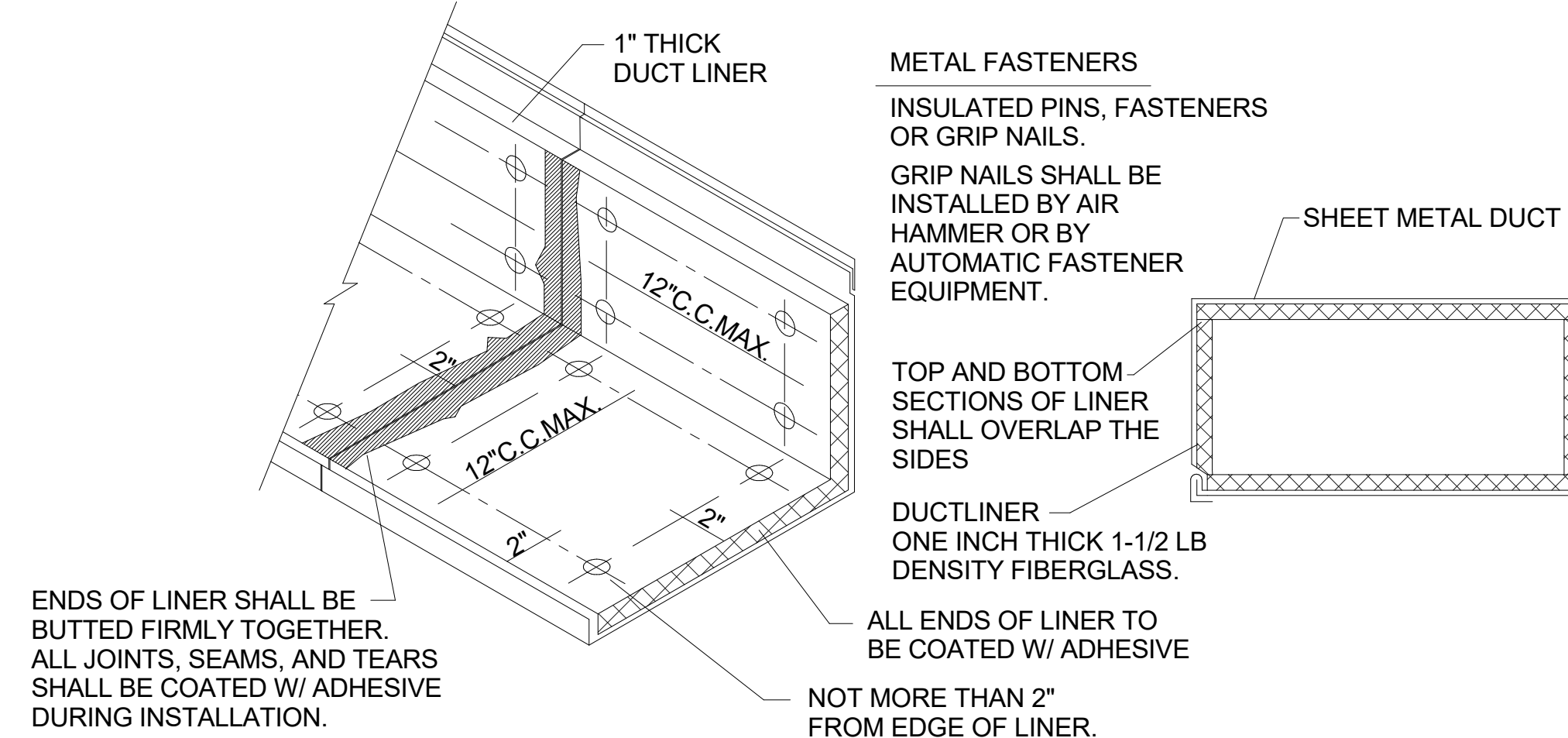


TAG	MAX FLOW	FACE SIZE		NECK SIZE		CEILING TYPE	BLOW PATTERN	THROW @ 50 FPM	MAX NC	MANUF & MODEL	SCHEDULE NOTES
		LENGTH	WIDTH	LENGTH/DIAMETER	WIDTH						
D-1	100 CFM	24"	24"	6"	0"	LAY-IN	4 WAY	8'	25	PRICE SPD	1,2
D-2	200 CFM	24"	24"	8"	0"	LAY-IN	4 WAY	10'	25	PRICE SPD	1,2
D-3	375 CFM	24"	24"	10"	0"	LAY-IN	4 WAY	11'	25	PRICE SPD	1,2
R-1	600 CFM	24"	12"	24"	12"	LAY-IN	N/A	0'	25	PRICE 535	1,2
R-2	1,200 CFM	24"	24"	24"	24"	LAY-IN	N/A	0'	25	PRICE 535	1,2

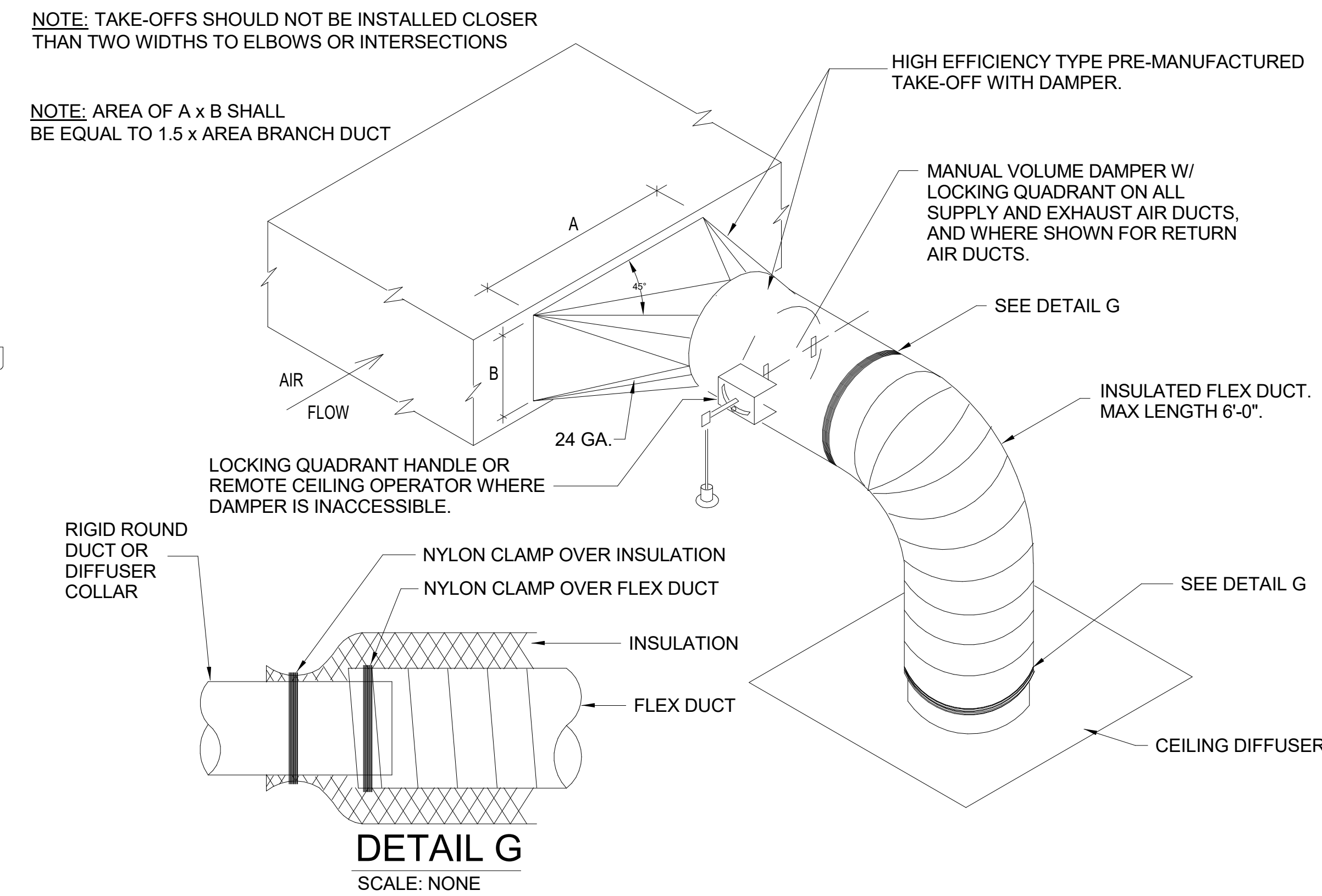
- SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
- FINISH SHALL BE SPECIFIED BY ARCHITECT.



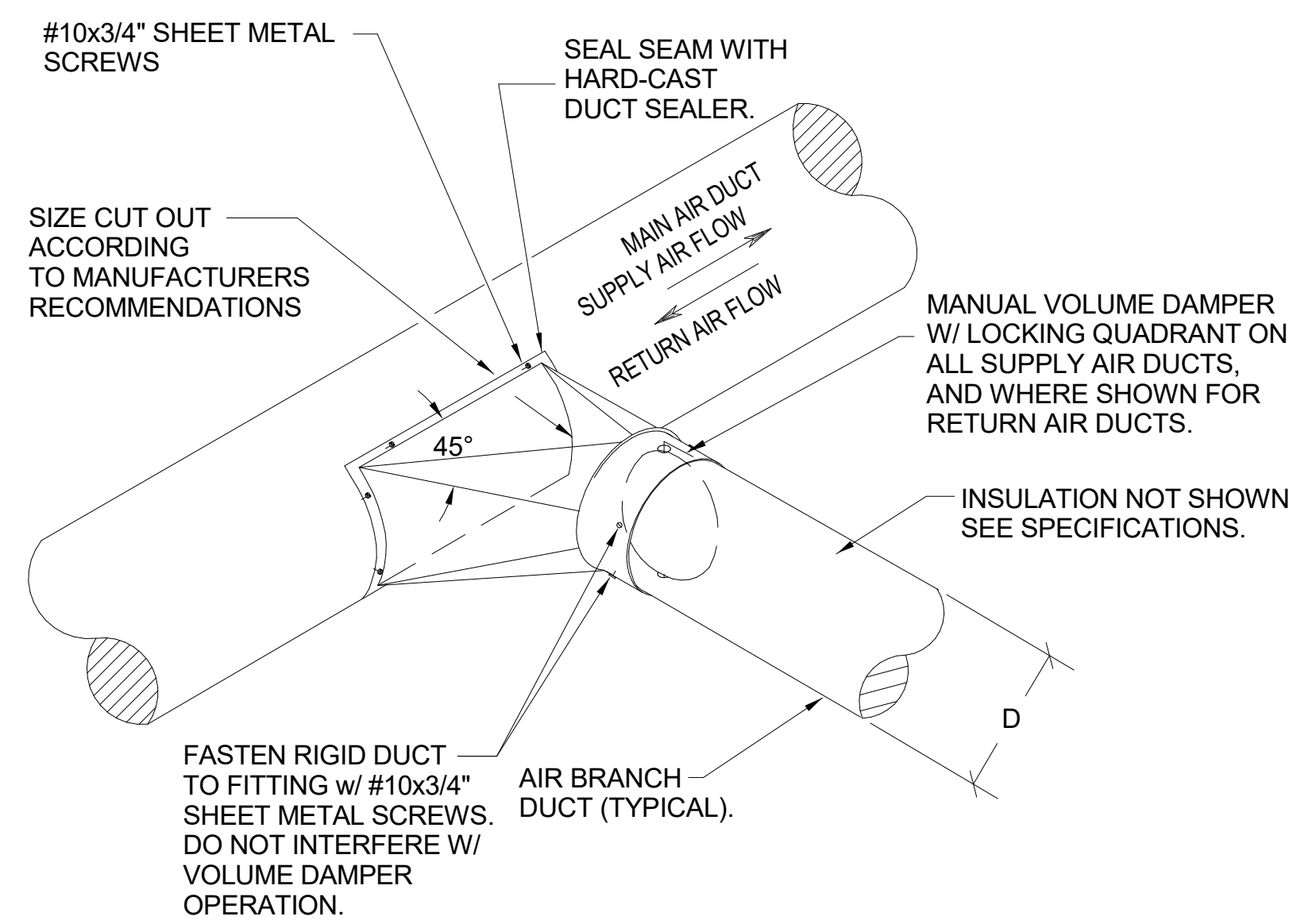
**1 SINGLE THICKNESS TURNING VANE DETAIL**  
SCALE: NONE



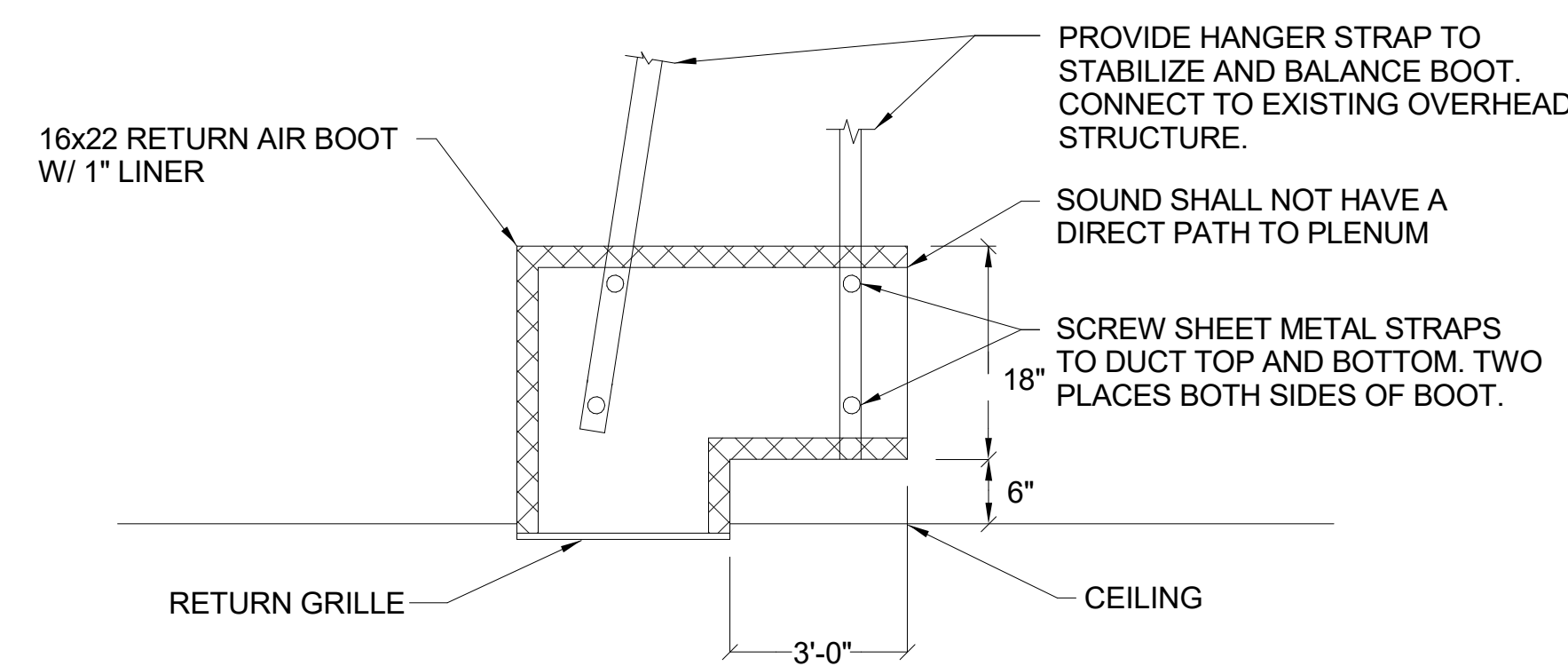
**2 DUCT LINER DETAIL**  
SCALE: NONE



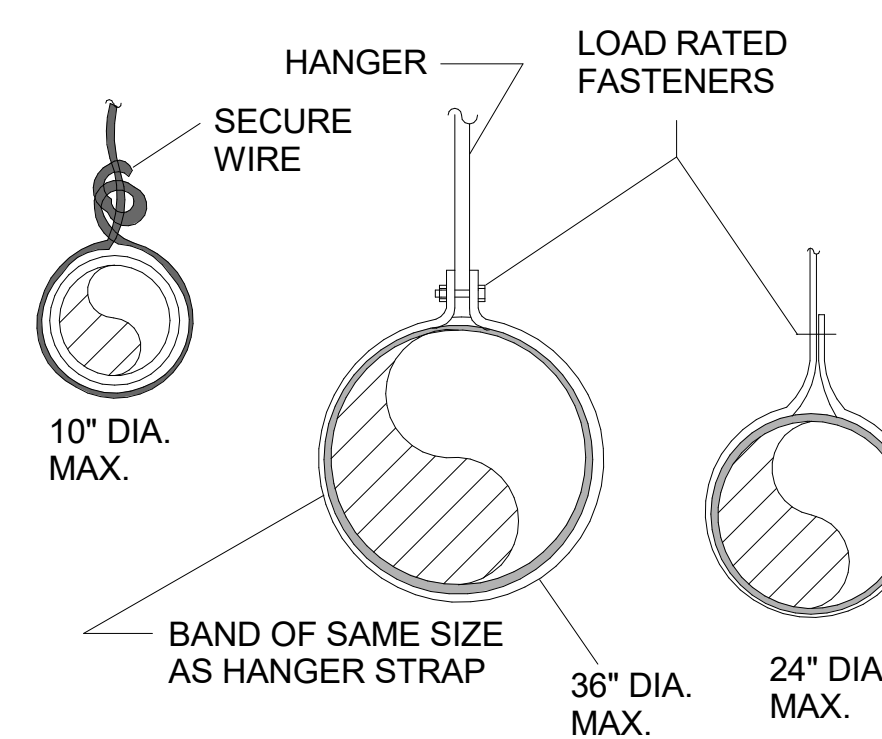
**3 SQUARE-TO-ROUND TAKE-OFF DETAIL**  
SCALE: NONE



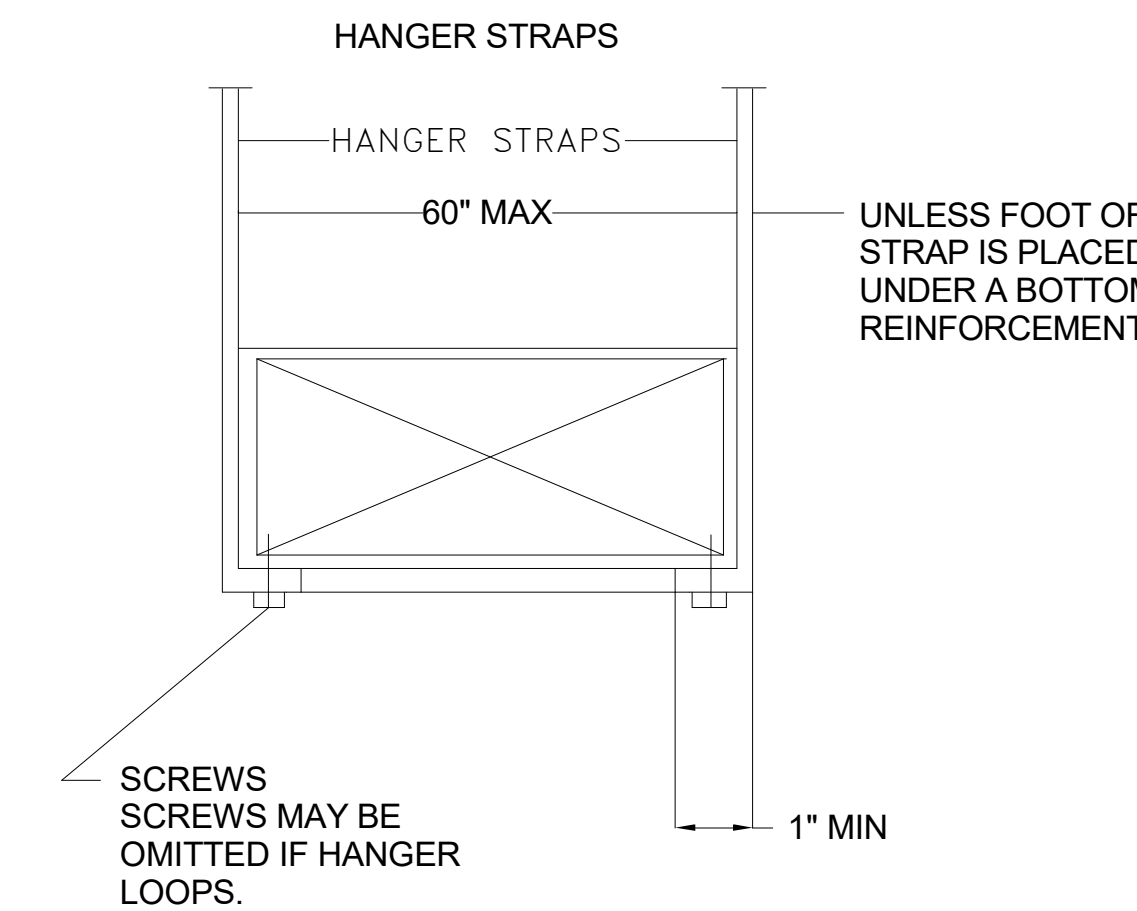
**4 ROUND-TO-ROUND DUCT CONSTRUCTION DETAIL**  
SCALE: NONE



**5 RETURN AIR BOOT DETAIL**  
SCALE: NONE



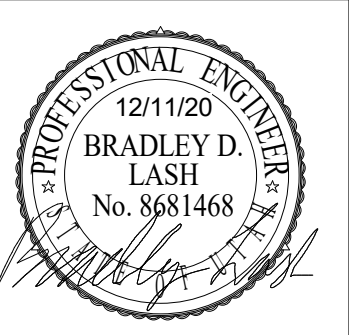
**6 DUCT SUPPORTS**  
SCALE: NONE



**7 DUCT SUPPORTS**  
SCALE: NONE



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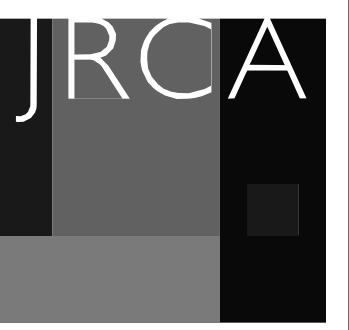




PLUMBING LEGEND			
MEANING	SYMBOL OR ABBREVIATION	MEANING	SYMBOL OR ABBREVIATION
HOT WATER LINE	— HW —	WALL CLEANOUT	WCO
COLD WATER LINE	— CW —	CLEANOUT	CO
HOT WATER RECIRCULATING LINE	— HWREC —	CLEANOUT TO GRADE	COTG
VENT LINE	--- V ---	FLOOR CLEANOUT	FCO
WASTE LINE	--- SS ---	BALL VALVE	⊕
GAS LINE	G	UNION	— —
VENT THRU ROOF	VTR	CONNECTION TO EXISTING PIPING	⊕
UNDER FLOOR	UF	REGULATOR	Ⓜ
SANITARY SEWER	SS	SOFT WATER	SW
PRIMARY ROOF DRAIN	PRD	SECONDARY ROOF DRAIN	SRD

**PLUMBING GENERAL NOTES**

- G-1** - ALL PLUMBING SHALL BE INSTALLED AND CONFORM TO THE 2018 EDITION OF THE INTERNATIONAL PLUMBING CODE (IPC) WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.
- G-2** - ALL PIPING MATERIALS SHALL MEET ALL REQUIREMENTS OF IPC AND LOCAL AUTHORITY. PLASTIC PIPING SHALL BE ALLOWED ONLY WHERE ALLOWED BY CODE. PLASTIC PIPING SHALL NOT BE ROUTED THROUGH RETURN AIR PLENUMS OR OTHER AREAS PROHIBITED BY THE IMC, IPC, OR NFPA CODES OR BY LOCAL AUTHORITY.
- G-3** - GAS PIPING INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH GAS COMPANY REGULATIONS, NFPA CODE REQUIREMENTS, AND LOCAL AUTHORITY.
- G-4** - ALL MATERIALS SHALL BE NEW AND SHALL BE DOMESTIC MADE UNLESS SPECIFICALLY APPROVED OTHERWISE IN WRITING BY ARCHITECT OR OWNER.
- G-5** - PROVIDE VACUUM BREAKERS AND BACK FLOW PREVENTERS WHERE REQUIRED BY CODE OR WHERE THERE MAY BE ANY POSSIBLE CHANCE FOR CROSS CONTAMINATION. PREVENTERS SHALL BE INSTALLED IN ACCORDANCE WITH UTAH CODE.
- G-6** - ALL PLUMBING INFORMATION IS NOT LIMITED TO THE PLUMBING DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS INCLUDING SPECIFICATIONS, ARCHITECTURAL DRAWING, STRUCTURAL DRAWINGS, MECHANICAL DRAWINGS, AND ELECTRICAL DRAWINGS.
- G-7** - THE WORKING DRAWINGS ARE DIAGRAMMATIC. BECAUSE OF THE SMALL SCALE OF THE DRAWING, THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL PIPING SHALL BE CHECKED AND COORDINATED WITH THE SPECIFICATIONS, ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.
- G-8** - COORDINATE ALL PIPING AND PLUMBING EQUIPMENT WITH ALL OTHER TRADES AND/OR CONTRACTORS PRIOR TO INSTALLATION.
- G-9** - ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR AND ARCHITECT/ENGINEER SHALL BE NOTIFIED IN WRITING PRIOR TO CHANGES.
- G-10** - GAS LINE FITTINGS SHALL BE STANDARD WELD FITTINGS WITH TAPERED REDUCERS. DO NOT USE VALVES, UNIONS, OR AUTO CONTROLS IN GAS LINES ROUTED IN INACCESSIBLE CONCEALED SPACES.
- G-11** - ALL WATER SYSTEMS SHALL MEET THE REQUIREMENTS OF ANSI/NSF STANDARD 61 SECTION 9 (1998), CONCERNING METAL CONTAMINANTS IN THE WATER SYSTEM.
- G-12** - WATER PIPING SHALL NOT BE ROUTED IN OUTSIDE WALLS OR ON EXTERIOR SIDE OF BUILDING INSULATION ENVELOPE.
- G-13** - WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ALL WATER LINES WITH QUICK OPEN OR QUICK CLOSE VALVES.
- WATER HAMMER ARRESTOR SCHEDULE:**  
 TYPE A 1-11 FIXTURE UNITS  
 TYPE B 12-32 FIXTURE UNITS  
 TYPE C 33-60 FIXTURE UNITS  
 TYPE D 61-113 FIXTURE UNITS
- G-14** - ALL PIPING, MATERIALS, ETC. SHALL BE NEW AND DOMESTIC MADE UNLESS SPECIFICALLY AUTHORIZED IN WRITING PRIOR TO BID.



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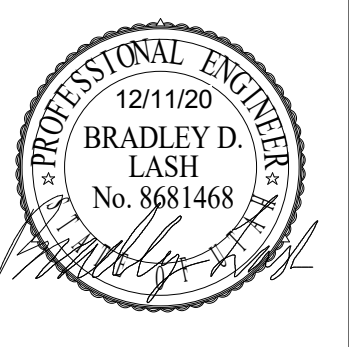


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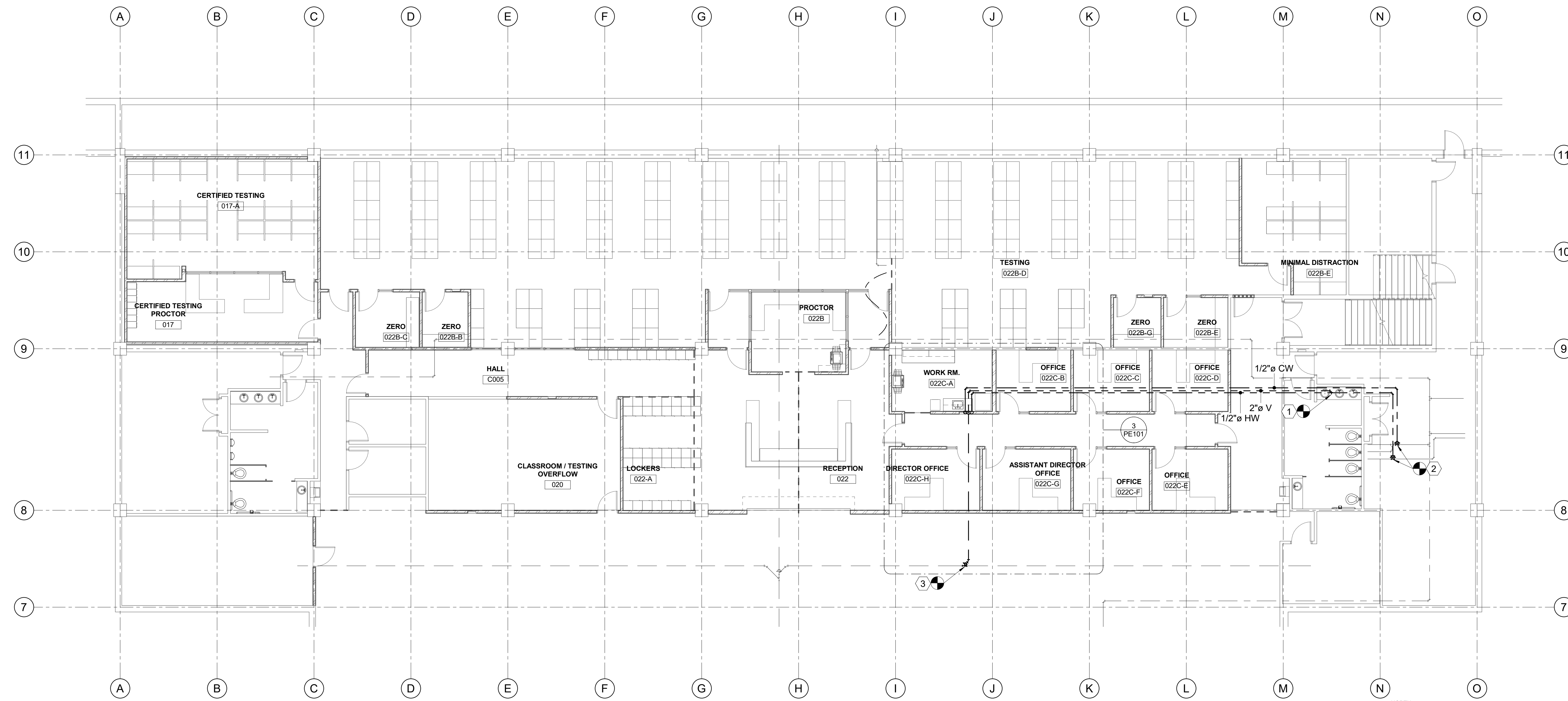


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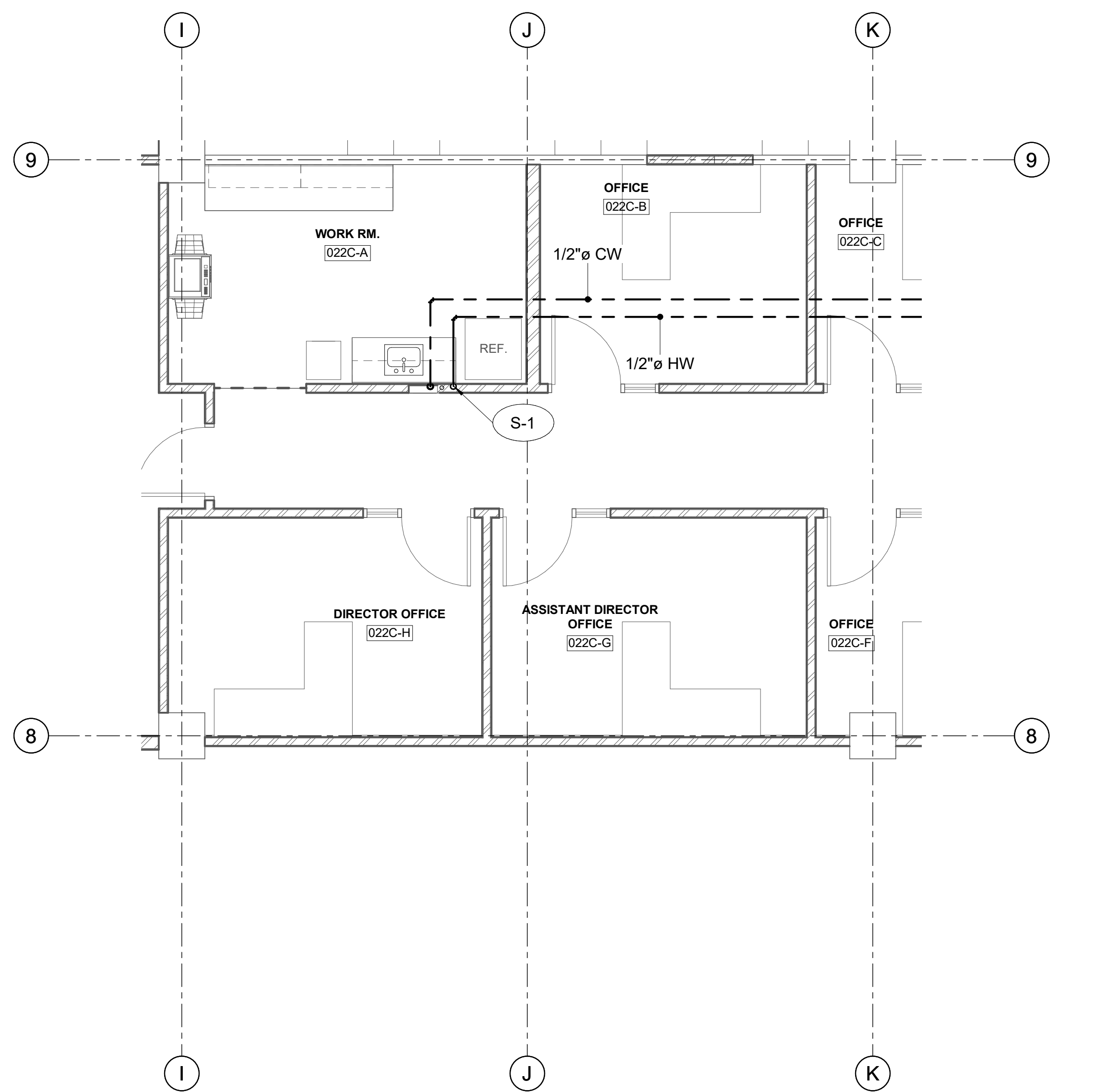
PLUMBING  
LEGEND AND  
GENERAL  
NOTES

PG001

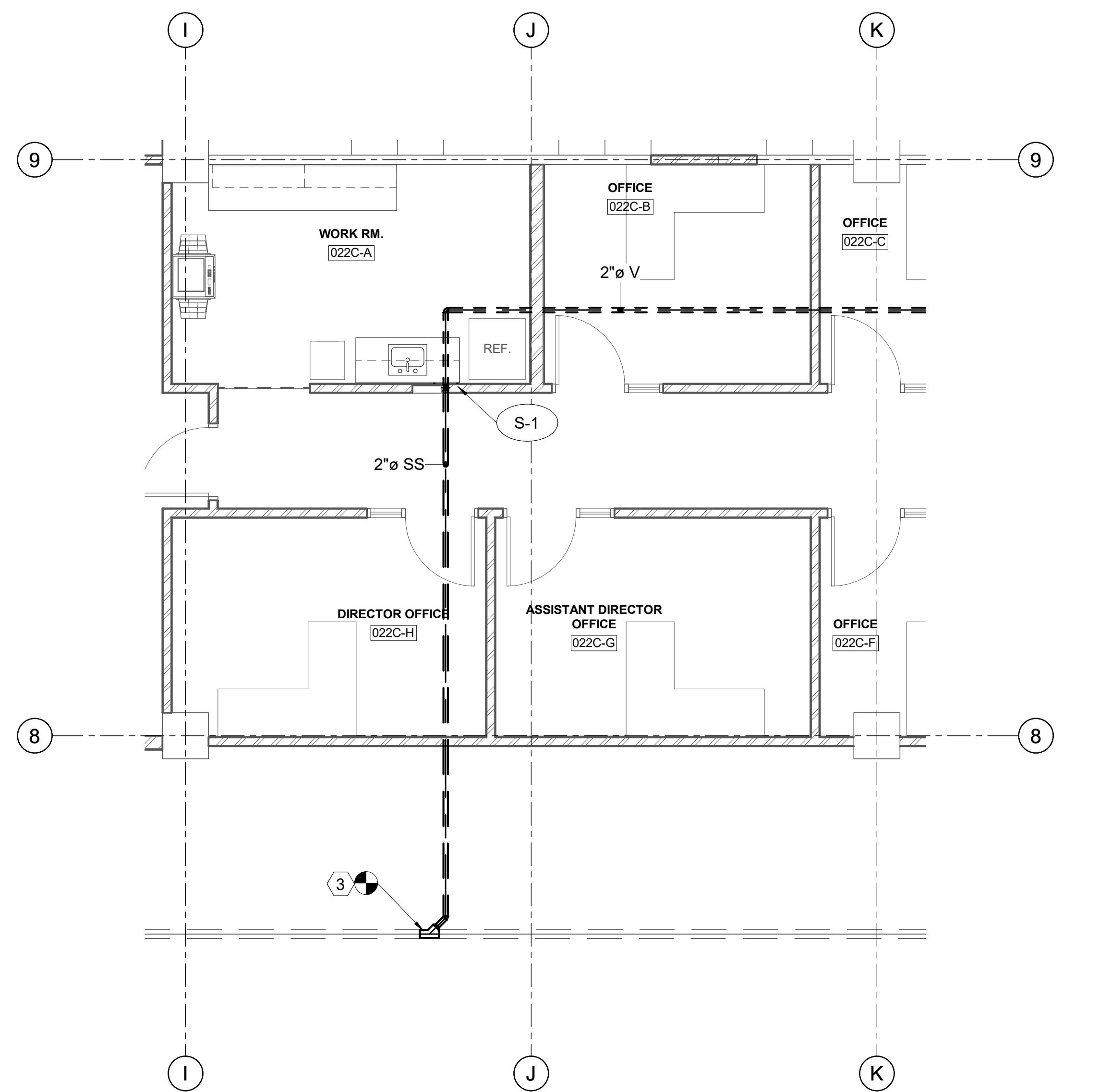




1 LOWER LEVEL PLUMBING PLAN  
 PE101 SCALE 1/8" = 1'-0"



2 LOWER LEVEL ENLARGED DOMESTIC PLAN  
 PE101 SCALE 1/4" = 1'-0"



3 LOWER LEVEL ENLARGED WASTE AND VENT PLAN  
 PE101 SCALE 1/4" = 1'-0"

SHEET NOTES

- CONNECT TO EXISTING SANITARY VENT FROM RESTROOM LAVATORIES IN THIS APPROXIMATE LOCATION. FIELD VERIFY EXACT LOCATION.
- CONNECT TO EXISTING DOMESTIC COLD AND HOT WATER IN THIS APPROXIMATE LOCATION. FIELD VERIFY EXACT LOCATION.
- CONNECT TO EXISTING SANITARY WASTE IN THIS APPROXIMATE LOCATION. FIELD VERIFY EXACT LOCATION AND INVERT.

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LOWER LEVEL  
 PLUMBING  
 PLAN

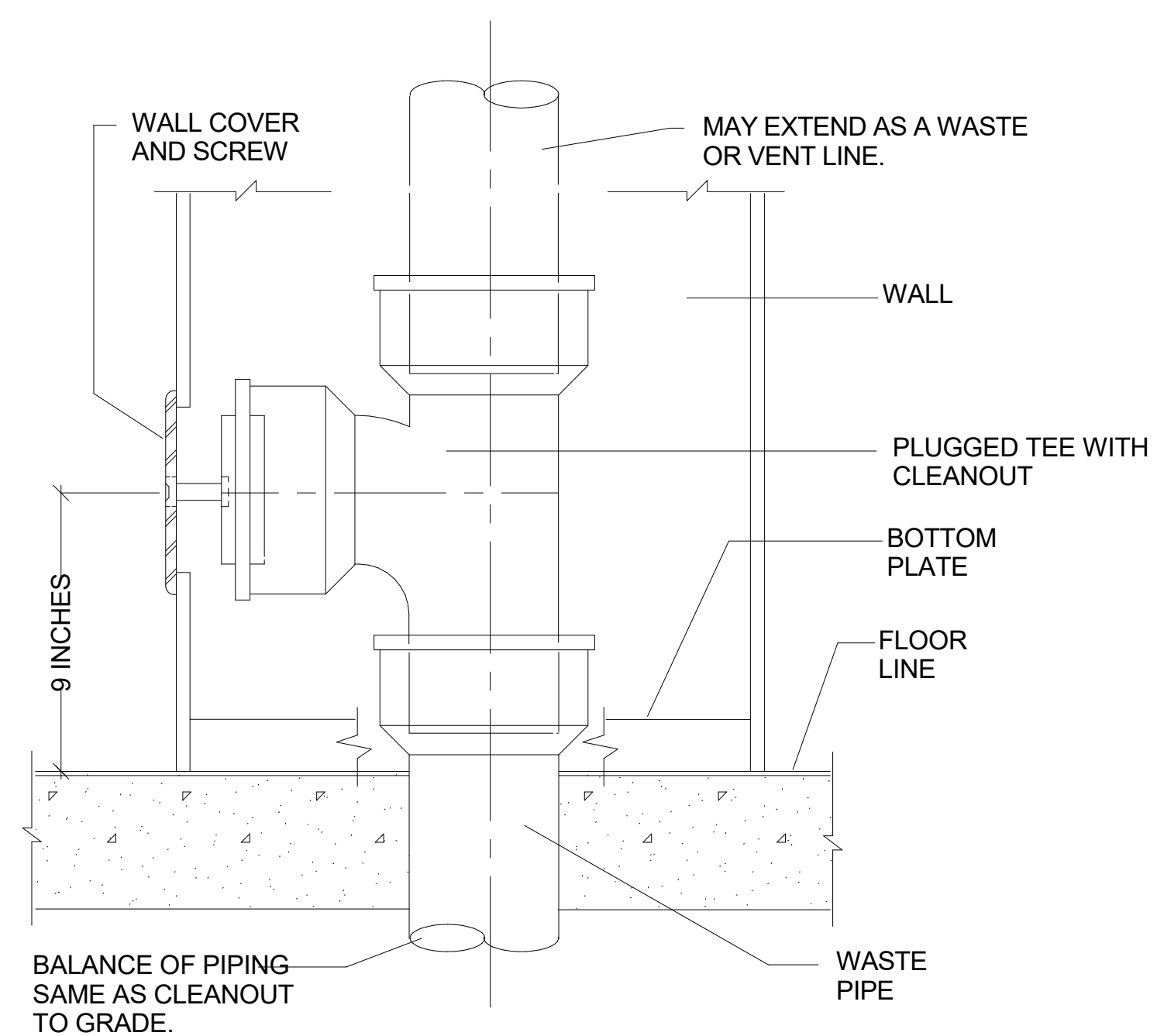
PE101

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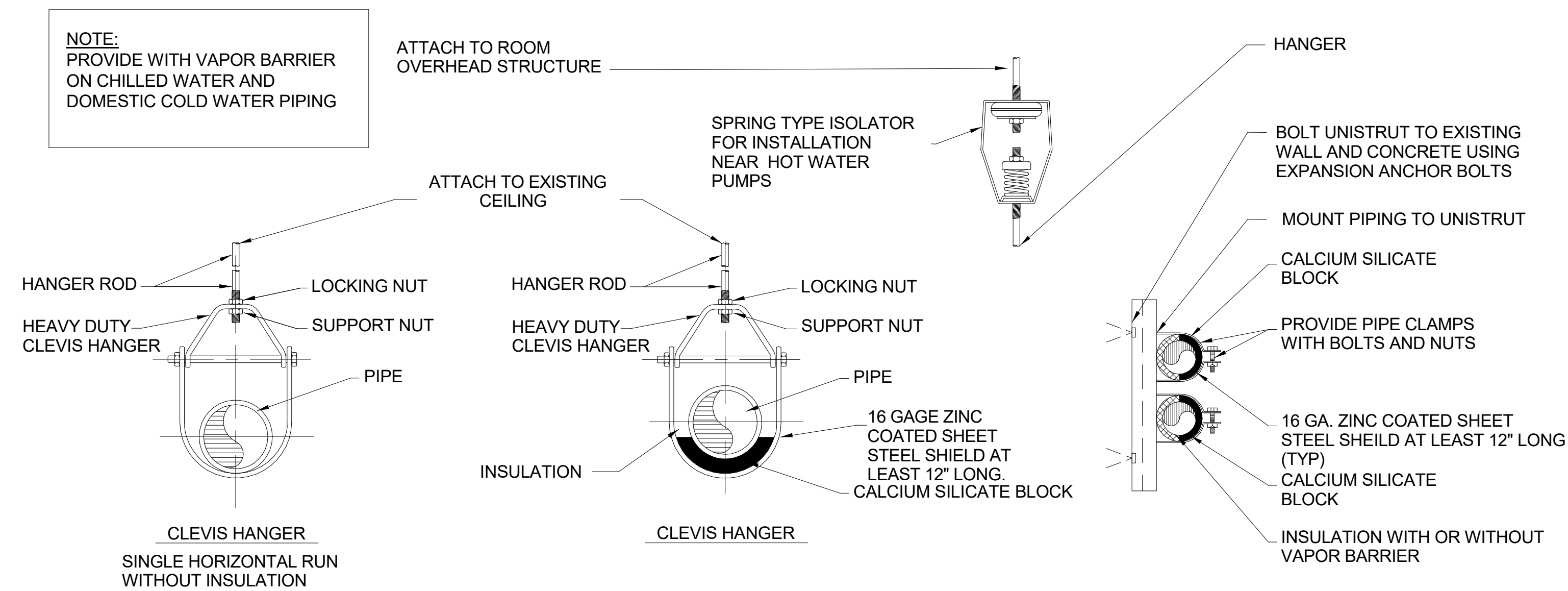
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EQUIPMENT NUMBER	FIXTURE	PLUMBING PIPE SIZES						POINT OF USE MIXING VALVE?	MAX OUTLET TEMP	REMARKS
		TRAP	WASTE	VENT	COLD WATER	HOT WATER				
S-1	SINK	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	Yes	110 °F	COUNTER UNDERMOUNT STAINLESS STEEL SINK, JUST 18 GAUGE OR EQUAL. PROVIDE ZURN Z871B4-XL FAUCET OR APPROVED EQUAL. PROVIDE WITH THERMOSTATIC AND PRESSURE MIXING VALVE.	



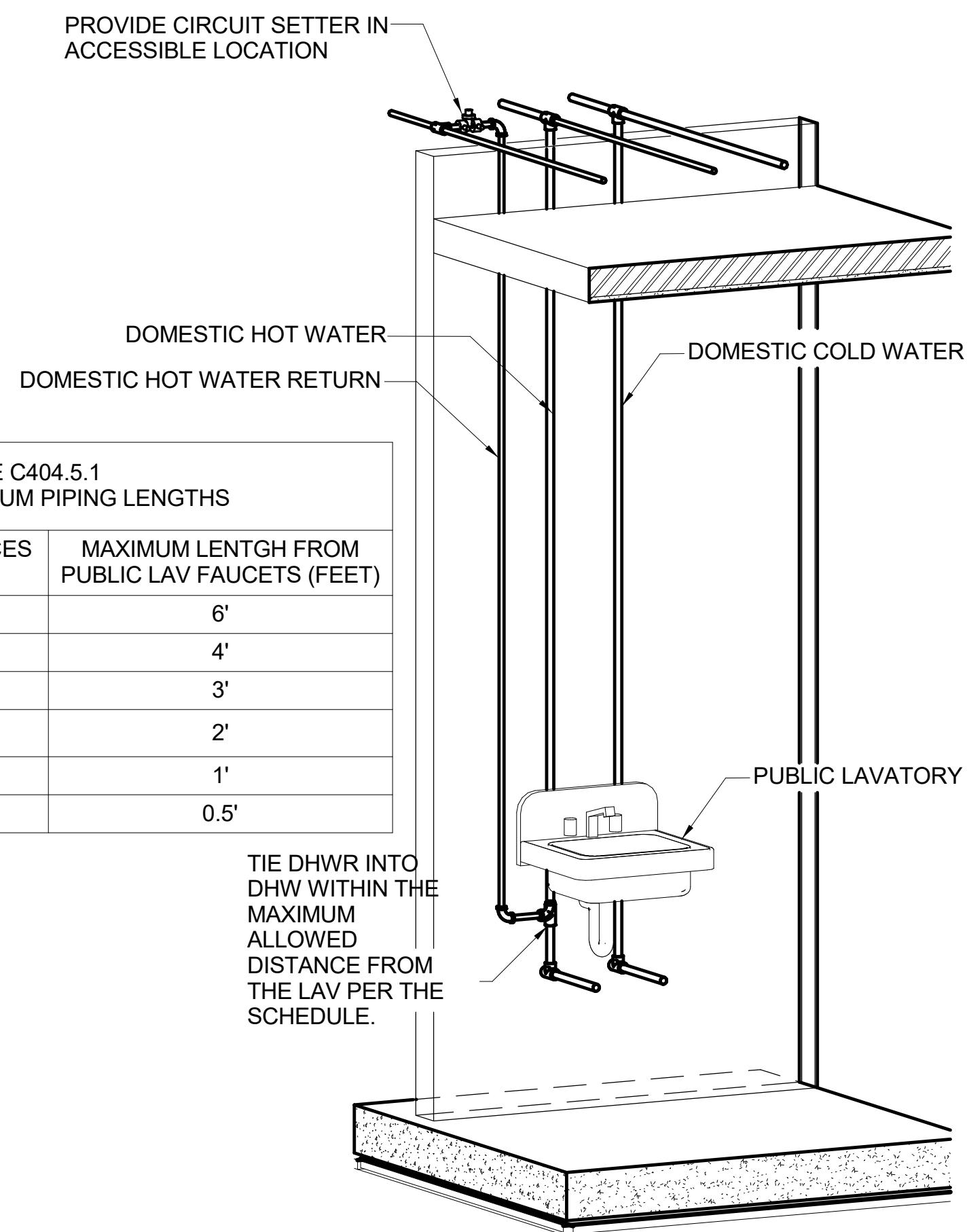
**1 WALL CLEAN-OUT DETAIL**  
SCALE: NONE



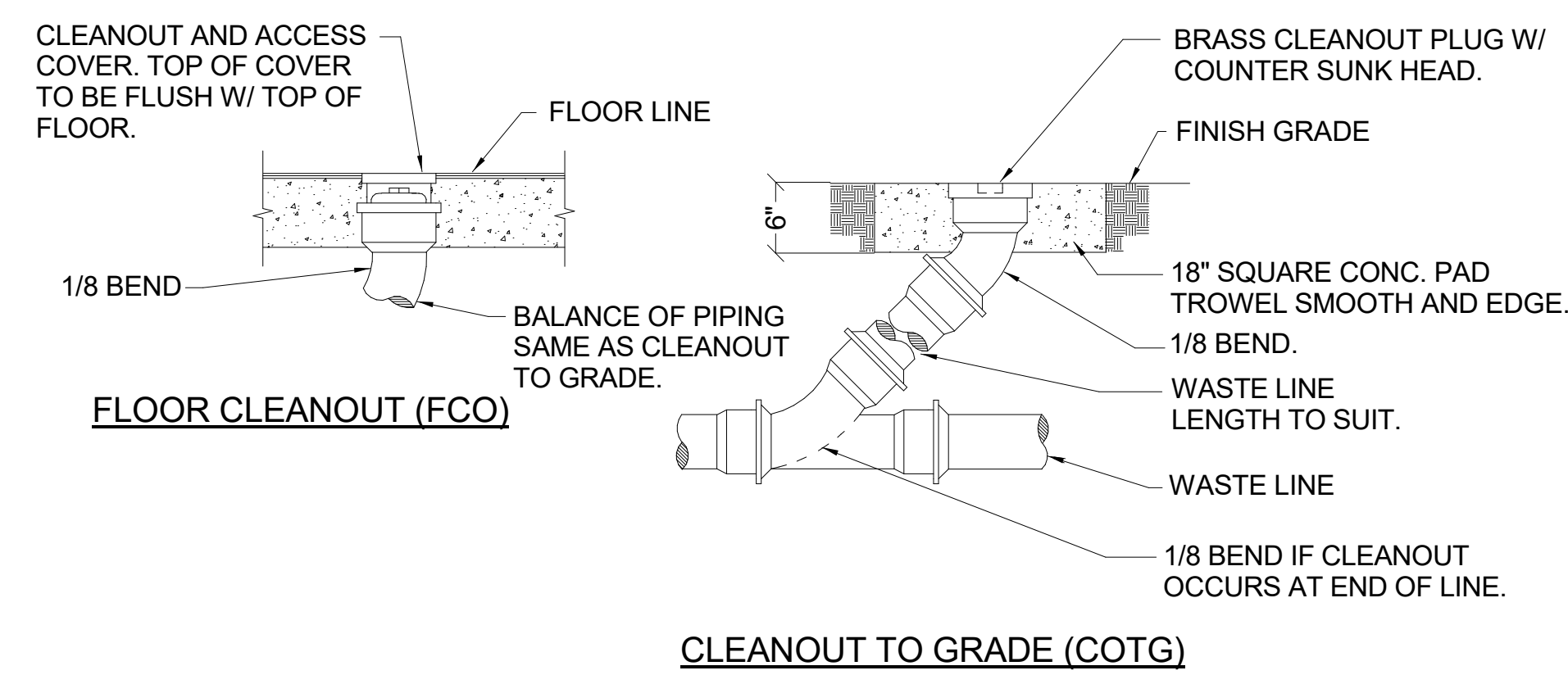
**2 PIPE HANGER DETAIL**

IECC 2015 TABLE C404.5.1  
PIPING VOLUME AND MAXIMUM PIPING LENGTHS

NOMINAL PIPE SIZE (INCHES)	VOLUME (LIQUID OUNCES PER FOOT LENGTH)	MAXIMUM LENGTH FROM PUBLIC LAV FAUCETS (FEET)
1/4"	0.33	6'
5/16"	0.5	4'
3/8"	0.75	3'
1/2"	1.5	2'
5/8"	2	1'
3/4"	3	0.5'



**3 DOMESTIC HOT WATER RETURN DETAIL**  
SCALE: NONE



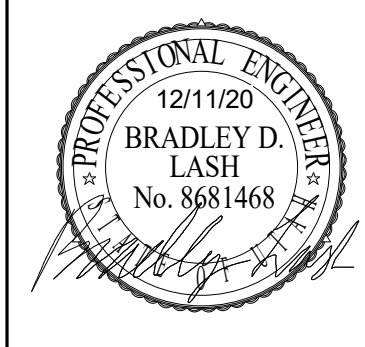
**4 CLEAN-OUT DETAILS**  
SCALE: NONE



REVIEW FOR CODE ENGINEER/ARCHITECT  
PLUMBING  
MECHANICAL  
ELECTRICAL  
ACCESSIBILITY  
FIRE  
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE OR LOCAL REGULATIONS.  
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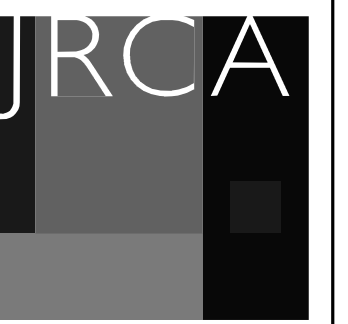
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PLUMBING DETAILS AND SCHEDULES



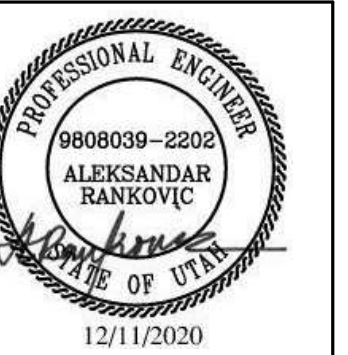


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GENERAL  
NOTES AND  
SYMBOLS LISTS

EG001



### ABBREVIATION SCHEDULE

NOTE: NOT ALL ABBREVIATIONS MAY BE USED.

A	ABOVE COUNTER	LFMC	LIQUID-TIGHT METAL CONDUIT
AMP	AMP OR AMPS	LFNC	LIQUID-TIGHT NONMETAL CONDUIT
ADJ	ADJACENT	LS	LONG-TIME SHORT-TIME
AFF	ABOVE FINISHED FLOOR	LSI	LONG-TIME SHORT-TIME INSTANTANEOUS
AHJ	AUTHORITY HAVING JURISDICTION	LSIG	LONG-TIME SHORT-TIME INSTANTANEOUS
AL	ALUMINUM	NSC	GROUND FAULT
C	CONDUIT	NCA	MINIMUM CIRCUIT AMPS
CB	CIRCUIT BREAKER	MCA	MINIMUM CIRCUIT BREAKER
CKT	CIRCUIT	MLO	MAIN LUGS ONLY
C.O.S	CONVENIENCE OUTLETS	N.C.	NORMALLY CLOSED
COPPER	COPPER	N.L.C.	NOT IN CONTRACT
DAS	DISTRIBUTED ANTENNA SYSTEM	N.L.	NIGHT LIGHT
E, EX	EXISTING	N.O.	NORMALLY OPEN
EA	EACH	O.C.	ON CENTER(S)
ELEC	ELECTRICAL	OCP	OVER CURRENT PROTECTION
EM	EMERGENCY	QTY	QUANTITY
EMT	ELECTRIC METALLIC TUBING	R	REMOVE
ENT	ELECTRIC NONMETALLIC TUBING	REQ.	REQUIREMENTS
EQUIP	EQUIPMENT	RMC	RIGID METAL CONDUIT
EWC	ELECTRIC WATER COOLER	RNC	RIGID NONMETALLIC CONDUIT
EXP	EXPLOSION PROOF	RR	REMOVE AND RELOCATE
FA	FIRE ALARM	SCP	SECURITY CONTROL PANEL
FACP	FIRE ALARM CONTROL PANEL	SFL	SUB-FEED LUGS
FLA	FULL LOAD AMPS	SS	SURGE SUPPRESSION
FMC	FLEXIBLE METAL CONDUIT	TR	TAMPER RESISTANT
FOB	FREIGHT ON BOARD	TVS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
FTL	FEED-THROUGH LUGS	TYP	TYPICAL
GND	GROUND CONDUCTOR	U, USB	DUPLEX OUTLET W/(2) 3.1A, 12VDC USB PORTS
HOA	HAND-OFF-AUTO	U.N.O.	UNLESS NOTED OTHERWISE
HP	HORSE POWER	UF	UNDER FLOOR
IG	ISOLATED GROUND	UG	UNDERGROUND
IMC	INTERMEDIATE METAL CONDUIT	USB	UNIVERSAL SERIAL BUS
INS	INSULATED	W	WITH
ISO	ISOLATED	WP	WEATHER PROOF
KVA	KILO VOLT AMPERES	XFMR	TRANSFORMER
KW	KILOWATTS		

### ELECTRICAL SYMBOL SCHEDULE GENERAL NOTES

- MOUNT ALL OUTLETS, DEVICES, AND EQUIPMENT AT HEIGHTS INDICATED BELOW, UNLESS NOTED OTHERWISE ON THE DRAWINGS. UNLESS NOTED OTHERWISE, HEIGHTS ARE GIVEN FROM FINISHED FLOOR TO CENTER OF OUTLET BOX.
- WHERE OUTLETS, DEVICES, AND EQUIPMENT ARE NOTED BY SUBSCRIPTS, REFER TO ABBREVIATION SCHEDULE FOR DEFINED REQUIREMENTS.
- WHERE OUTLETS, DEVICES AND EQUIPMENT ARE NOTED BY THE SUBSCRIPT 'A', MOUNT AT 4" ABOVE COUNTER. IF COUNTER HAS A BACK SPLASH, MOUNT AT 4" ABOVE BACK SPLASH. REFER TO ARCHITECTURAL INTERIOR ELEVATIONS AND COORDINATE WITH CASEWORK SUPPLIER.
- NOT ALL ELECTRICAL SYMBOLS MAY BE USED.

### GENERAL SYMBOLS

SYMBOL	DESCRIPTION	REMARKS
(XX)	KEYED NOTE	
1 E-1	DETAIL REFERENCE	TOP NUMBER INDICATES DETAIL NUMBER; BOTTOM LETTER-NUMBER INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN; WHERE NOT SPECIFICALLY REFERENCED, DETAIL IS GENERAL IN NATURE AND SHALL APPLY WHERE APPLICABLE.
2 E-2	ELEVATION REFERENCE	TOP NUMBER INDICATES ELEVATION NUMBER; BOTTOM LETTER-NUMBER INDICATES WHERE ELEVATION IS SHOWN.
3 E-2	SECTION REFERENCE	TOP NUMBER INDICATES ELEVATION NUMBER; BOTTOM LETTER-NUMBER INDICATES WHERE ELEVATION IS SHOWN.
100	ARCHITECTURAL ROOM NUMBER	
AHU 1	EQUIPMENT NAME / NUMBER	TOP NUMBER ABBREVIATES EQUIPMENT NAME OR TYPE; BOTTOM NUMBER INDICATES EQUIPMENT NUMBER. REFER TO EQUIPMENT SCHEDULE.
1	REVISION NUMBER	USED TO DENOTE CHANGES EITHER ISSUED BY ADDENDUM OR DURING CONSTRUCTION AND TO DENOTE RECORD DRAWING CHANGES.
~	BREAKLINE	USED TO BREAK DRAWINGS.

### BRANCH CIRCUITING SYMBOLS

SYMBOL	DESCRIPTION	REMARKS
→	BRANCH CIRCUIT HOME RUN TO PANEL	ARROWS: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS REQUIRED.
→	BRANCH CIRCUITING (U.N.O.) CONTINUATION	
→	CONDUIT STUB-IN	CAP AND MARK
→	INCOMING SERVICE	
→	UNDERGROUND FEEDER	
⊙	JUNCTION BOX	MOUNT AS NOTED. SUBSCRIPT 'F' INDICATES TO PROVIDE A FLOOR BOX WITH BLANK COVERPLATE.
→	BRANCH CIRCUITING (U.N.O.) TURNED UP OR TOWARDS OBSERVER.	
→	BRANCH CIRCUITING (U.N.O.) TURNED DOWN OR AWAY FROM OBSERVER.	
→	2 CIRCUIT, BRANCH CIRCUIT HOME RUN TO PANEL	ARROWS: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS REQUIRED.
→	3 CIRCUIT, 4 WIRE BRANCH CIRCUIT HOME RUN TO PANEL	ARROWS: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS REQUIRED.

### ELECTRONIC SYSTEM GENERAL SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
PANEL NAME	ELECTRONIC SYSTEM PANELBOARD (SURFACE MOUNT)	TOP AT 72"	ELECTRONIC SYSTEMS MAY INCLUDE BUT ARE NOT SPECIFICALLY LIMITED TO, TELEPHONE, DATA, TELEVISION, LIGHTING CONTROL, CLOCKS, FIRE ALARM, ACCESS CONTROL, SECURITY, CCTV, SOUND SYSTEM, NURSE CALL, OR INTERCOM.
PANEL NAME	ELECTRONIC SYSTEM PANELBOARD (FLUSH MOUNT)	TOP AT 72"	
→	ELECTRONIC SYSTEM TERMINAL BOARD	TOP AT 72"	

### WIRING DEVICE SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
⊕	DUPLEX RECEPTACLE	+18"	
⊕	FOURPLEX RECEPTACLE	+18"	
⊕	GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE	+18"	
⊕	GROUND FAULT CIRCUIT INTERRUPTER FOURPLEX RECEPTACLE	+18"	
⊕	MULTI-OUTLET ASSEMBLY	4" ABOVE BACKSPLASH	
⊕	SPECIAL PURPOSE OUTLET	+18"	SUBSCRIPT IN PARENTHESIS INDICATES NEMA CONFIGURATION IF SHOWN. REFER TO DRAWINGS AND/OR EQUIPMENT SCHEDULES. CONFIRM EXACT CONFIGURATION WITH OWNER PRIOR TO INSTALLATION.

### GENERAL WIRING DEVICES

SYMBOL	DESCRIPTION
B#	FLOOR BOX - REFER TO SUBSCRIPT AND FLOOR BOX SCHEDULE FOR MORE INFORMATION
P	PROVIDE 4" SQUARE DEEP OUTLET BOX AND ELECTRICAL CONNECTIONS TO SYSTEMS FURNITURE. COORDINATE SYSTEM FURNITURE WIRING REQUIREMENTS AND OUTLET BOX LOCATIONS WITH SYSTEM FURNITURE SUPPLIER/INSTALLER PRIOR TO ROUGH-IN. WHIP FROM OUTLET BOX TO SYSTEMS FURNITURE TO BE PROVIDED BY SYSTEM FURNITURE INSTALLER.
C	PROVIDE BOX WITH GROMMETTED COVER PLATE FOR COMMUNICATION CABLING SIZE BOX PER NEC. COORDINATE PLACEMENT OF OUTLET BOXES IN WALLS AND COLUMNS WITH SYSTEM FURNITURE SUPPLIER/INSTALLER PRIOR TO ROUGH-IN. EXTEND CONDUIT WITH NYLON PULL ROPE TO ACCESSIBLE CEILING SPACE. REFER TO TELECOM RISER DIAGRAM FOR CONDUIT SIZING TERMINATE CONDUIT IN CEILING SPACE WITH A NYLON BUSHING.

### LIGHTING CONTROLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
\$	SINGLE-POLE TOGGLE SWITCH	+48"	
\$ <sup>a</sup>	SINGLE-POLE TOGGLE SWITCH	+48"	SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
\$ <sub>2</sub>	DOUBLE-POLE TOGGLE SWITCH	+48"	
\$ <sub>3</sub>	THREE-WAY TOGGLE SWITCH	+48"	
\$ <sub>4</sub>	FOUR-WAY TOGGLE SWITCH	+48"	
\$DIM	DIMMER SWITCH	+48"	RATE DIMMER SWITCH FOR MAXIMUM POSSIBLE WATTAGE
\$TIM	TIMER SWITCH	+48"	
\$X OS	OCCUPANCY SENSOR	+48"	REFER TO OCCUPANCY SENSOR SCHEDULE FOR MORE INFORMATION *# SPECIFIES TYPE
\$# LV	LOW VOLTAGE SWITCH	+48"	REFER TO LOW VOLTAGE SWITCH SCHEDULE FOR MORE INFORMATION *# SPECIFIES TYPE
a #	OCCUPANCY SENSOR	CEILING	*# LOWER CASE SPECIFIES ZONE *# SPECIFIES TYPE REFER TO OCCUPANCY SCHEDULE
a #	DIGITAL DAYLIGHT SENSOR	CEILING	*# LOWER CASE LETTER SPECIFIES ZONE *# SPECIFIES THE FOOTCANDLE SETTING THE SENSOR SHALL BE SET TO
[TP]	WALL MOUNT GRAPHIC TOUCH PAD CONTROLLER	+48"	

### ACCESS CONTROL SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
[REX]	REQUEST-TO-EXIT MOTION DETECTOR	CEILING	
⊕	ELECTROMAGNETIC DOOR STRIKE	DOOR	
⊕	MAGNETIC DOOR CONTACT SWITCH	DOOR	
⊕	MAGNETIC LOCK	DOOR	
[OHS]	OVERHEAD SECURITY	DOOR	
[OHD]	OVERHEAD DOOR CONTACT	DOOR	
⊕	ELECTRIFIED LEVER	DOOR	
⊕	ELECTRIFIED PANIC HARDWARE	DOOR	
⊕	GLASS BREAK HARDWARE	CEILING/WALL	
⊕	POWER SUPPLY	CEILING/WALL	
⊕	INTEGRATED LOCK	+48"	
[PP]	PUSH PLATE FOR AUTOMATIC DOOR OPERATOR	+48"	
[ADO]	AUTOMATIC DOOR OPERATOR	DOOR	
[CR]	CARD READER	+48"	

### CLOSED CIRCUIT TELEVISION SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
→	CLOSED CIRCUIT TELEVISION CAMERA	SEE PLANS	SUBSCRIPT DENOTES DEGREES OF MONITORED AREA
→	CLOSED CIRCUIT TELEVISION CAMERA	WALL	

### LIGHTING SYMBOLS

1. LIGHT FIXTURE SYMBOLS ARE GENERAL IN NATURE AND MAY BE SHOWN ON THE DRAWINGS IN VARIOUS SIZES AND SHAPES. REFER TO THE LIGHT FIXTURE SCHEDULE FOR SPECIFICATION INFORMATION.

2. ARROWS INDICATE AIMING DIRECTION.

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
⊕	LIGHT FIXTURES	AS SPECIFIED OR DETAILED	
⊕	WALL-MOUNTED LINEAR LIGHT FIXTURE	AS SPECIFIED OR DETAILED	
⊕	RECESSED DOWN LIGHT	AS SPECIFIED OR DETAILED	
⊕	LINEAR PENDANT LIGHT FIXTURE	CEILING	
⊕	EGRESS LIGHT FIXTURE	AS SPECIFIED OR DETAILED	THIS IS AN EXAMPLE OF AN EGRESS LIGHT FIXTURE. EGRESS LIGHT FIXTURES ARE HALF-SHADED DIAGONALLY
⊕	CEILING MOUNTED EXIT SIGN	CEILING	DARKENED PORTION OF SIGN INDICATES FACE(S); ARROW(S) INDICATE CHEVRON DIRECTION(S)
⊕	WALL-MOUNTED EXIT SIGN	WALL ABOVE DOOR	
⊕	WALL-MOUNTED EXIT SIGN W/ EMERGENCY LIGHT FIXTURE	WALL ABOVE DOOR	
(XXXX)	LIGHT FIXTURE CALLOUT (LETTER DENOTES FIXTURE TYPE)		

### TELEPHONE / DATA SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
▶	TELEPHONE OUTLET	+18"	
▶	DATA OUTLET	+18"	
▶	COMBINATION TELEPHONE/DATA OUTLET	+18"	
▶	TELEPHONE TERMINAL BOARD	TOP AT 72"	
▶	WIRELESS ACCESS POINT	CEILING	
▶	WIRELESS ACCESS POINT	SEE PLANS	

### FIRE ALARM SYMBOLS

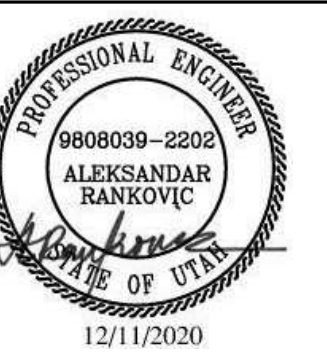
SYMBOL	DESCRIPTION	MOUNTING	REMARKS
[FSD]	FIRE/SMOKE DAMPER		
⊕	HEAT DETECTOR	CEILING	SUBSCRIPT INDICATES SPECIFIC REQUIREMENTS/OPTIONS:
⊕	CARBON MONOXIDE DETECTOR		'S' DEVICE WITH SOUNDER BASE
⊕	SMOKE DETECTOR		'R' DEVICE WITH ADDRESSABLE RELAY
⊕	HEAT DETECTOR	WALL MOUNTED; MAX 12" FROM BOTTOM OF CEILING	'RES' DEVICE HAS 120V. SMOKE ALARM W/BATTERY BACKUP
⊕	CARBON MONOXIDE DETECTOR		
⊕	SMOKE DETECTOR		
⊕	DUCT SMOKE DETECTOR	SIDE OF DUCT	
[F]	FIRE ALARM MANUAL STATION		
[Z]	CONTROL MODULE	AT DEVICE(S) TO BE CONTROLLED	
[M]	MONITOR MODULE	AT DEVICE(S) TO MONITOR	
[R]	FAN SHUTDOWN RELAY	AT CONTROL PANEL	
[D]	MAGNETIC DOOR HOLDER	COORDINATE WITH DOOR INSTALLER. SUBSCRIPT 'F' INDICATES TO MOUNT AT FLOOR LEVEL	COORDINATE WITH DOOR INSTALLER. SUBSCRIPT 'F' INDICATES TO MOUNT AT FLOOR LEVEL
[WF]	WATER FLOOD CONTROL	FLOOR	
[H]	AUDIO HORN	INDOOR - 96" FROM FINISH FLOOR TO TOP OF DEVICE. OUTDOOR - 120" FROM FINISH FLOOR TO TOP OF DEVICE.	SUBSCRIPT WP INDICATES THAT A WEATHER PROOF BACK BOX IS REQ.
⊕	FIRE ALARM VISUAL STROBE		NUMERIC SUBSCRIPT INDICATES CANDELA RATING OF STROBE (I.E. - 15, 75, 110)
⊕	FIRE ALARM AUDIO/VISUAL HORN/STROBE		
⊕	CEILING MOUNTED FIRE ALARM AUDIO/VISUAL HORN/STROBE		
⊕	CEILING MOUNTED FIRE ALARM AUDIO SPEAKER		
⊕	FIRE ALARM AUDIO/VISUAL SPEAKER/STROBE		
⊕	CEILING MOUNTED FIRE ALARM AUDIO/VISUAL SPEAKER/STROBE		
[FACP]	FIRE ALARM CONTROL PANEL		

### EQUIPMENT AND CONTROL SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
\$T	MANUAL STARTER WITH THERMAL OVERLOAD(S)	AT EQUIPMENT	
⊕	ELECTRIC MOTOR		
⊕	NON-FUSED DISCONNECT SWITCH	+60"	
[F]	FUSED DISCONNECT SWITCH	+60"	
[E]	CIRCUIT BREAKER AND ENCLOSURE	+60"	
⊕	MAGNETIC STARTER	+60"	
⊕	COMBINATION MAGNETIC STARTER / FUSED DISCONNECT	+60"	
⊕	COMBINATION MAGNETIC STARTER / NON-FUSED DISCONNECT	+60"	
⊕	COMBINATION MAGNETIC STARTER / MOTOR CIRCUIT PROTECTOR (MCP)	+60"	
[VFD]	COMBINATION VARIABLE FREQUENCY DRIVE / MOTOR CIRCUIT PROTECTOR (MCP)	FLOOR OR WALL AS SPECIFIED	TOP AT +72" IF WALL MOUNTED
→	LIGHTING AND APPLIANCE PANELBOARD (SURFACE-MOUNTED)	TOP AT +72"	20"W X 6"D
→	LIGHTING AND APPLIANCE PANELBOARD (FLUSH-MOUNTED)	TOP AT +72"	20"W X 6"D
→	POWER DISTRIBUTION PANELBOARD	WALL	
→	SWITCHBOARD	FLOOR	THESE SYMBOLS ARE GENERAL IN NATURE AND MAY VARY IN SIZE AND SHAPE TO SUIT APPLICATION. CROSS HATCHING INDICATES 'MAIN PANELBOARD' OR 'SWITCHBOARD' NAME IS INDICATED IN SEMI-QUOTES (I.E. 'L2A', 'MDP')
[T-#]	WET TYPE TRANSFORMER	PAD MOUNT	
[T-#]	DRY TYPE TRANSFORMER	PAD MOUNT	



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LOWER LEVEL -  
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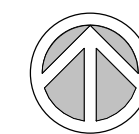
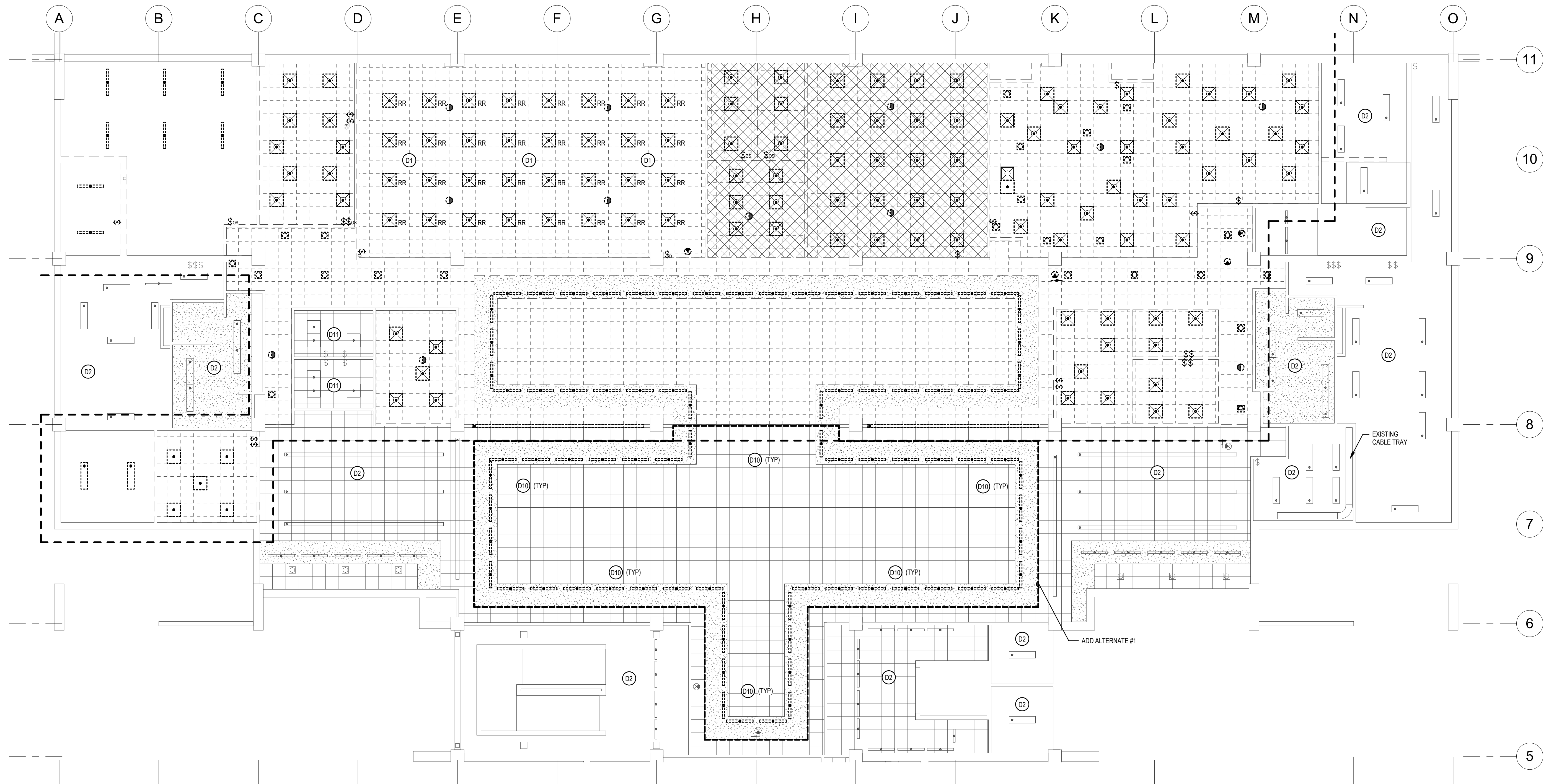
ED101

KEYED NOTES #

- D1 EXISTING LIGHT FIXTURES IN THIS ROOM SHALL BE STORED, CLEANED, REPAIRED AS NECESSARY, PROTECTED, AND REUSED. ANY BROKEN LENSES SHALL BE REPLACED WITH NEW FROM THE EXISTING MANUFACTURER. REFER TO EL101 FOR ADDITIONAL INFORMATION.
- D2 EXISTING LIGHTING, WIRING DEVICES, EQUIPMENT, ETC. IN THIS SPACE SHALL REMAIN. PROTECT AND MAINTAIN CONNECTIVITY THROUGHOUT CONSTRUCTION.
- D10 THE EXISTING FLUORESCENT COVE LIGHTING SHALL BE RETROFITTED WITH NEW LED LAMPING. DEMOLISH ALL FLUORESCENT LAMPS, THE LUMINAIRE HOUSING, CONDUIT, CONDUCTORS, ETC. SHALL REMAIN TO BE UTILIZED IN RETROFIT. CONTROLLED LIGHTING CIRCUITS SHALL BE UTILIZED FOR NEW RETROFIT LIGHT FIXTURES. CONFIRM NUMBER OF EXISTING 4', 3', 3 LAMP, AND 2 LAMP FIXTURES PRIOR TO DEMOLITION AND ORDERING OF NEW RETROFIT FIXTURES.
- D11 EXISTING LIGHTING, WIRING DEVICES, EQUIPMENT, ETC. IN THIS SPACE SHALL REMAIN. PROTECT AND MAINTAIN OUTLET CONNECTIVITY THROUGHOUT CONSTRUCTION. THE EXISTING LIGHTING SHALL BE TEMPORARILY DISCONNECTED AND THEN TIED TO NEW LIGHTING CIRCUIT. REFER TO EL DRAWINGS FOR ADDITIONAL INFORMATION.

GENERAL DEMOLITION NOTES:

1. UNLESS SPECIFICALLY NOTED OTHERWISE, REMOVE ALL ELECTRICAL ITEMS SHOWN IN DARK AND DASHED LINES. LIGHT AND SOLID ITEMS ARE TO REMAIN. DEMOLITION ITEMS ARE SHOWN TO GIVE A BASIC DESCRIPTION OF THE EXTENT OF DEMOLITION WORK, BUT MAY NOT BE INCLUSIVE. PROVIDE DEMOLITION WORK IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.
  - A. DISCONNECT AND REMOVE ANY/ALL FIXTURES, DEVICES, EQUIPMENT, ETC. REQUIRED FOR PROPER COMPLETION OF THE WORK WHETHER SHOWN OR NOT.
  - B. RELOCATE, REWIRE, AND/OR RECONNECT ANY/ALL FIXTURES, DEVICES, EQUIPMENT, ETC. THAT FOR ANY REASON OBSTRUCTS CONSTRUCTION.
  - C. LEAVE ALL EXISTING FIXTURES, DEVICES, EQUIPMENT, ETC. IN PORTIONS OF THE BUILDING NOT BEING REMODELED, IN WORKING CONDITION. RESTORE ALL INTERRUPTED BRANCH CIRCUITS, FEEDERS, ETC.
  - D. REMOVE AND DISPOSE OF ALL RACEWAYS, CONDUCTORS, BOXES, DEVICES, EQUIPMENT, ETC. THAT ARE NOT TO BE REUSED. TERMINATE AT ACCESSIBLE JUNCTION BOX BY PROVIDING PROPER KNOCK-OUT CLOSURE, TAPE CONDUCTORS, LABEL AS "SPARE" WITH CIRCUIT NO., ZONE NO, OR OTHER CHARACTERISTIC IDENTIFYING SOURCE.
  - E. EXISTING RACEWAYS MAY BE REUSED, IF IN PLACE, WHERE POSSIBLE, AND WHERE IN COMPLIANCE WITH THE SPECIFICATIONS AND THE INTENT OF THE CONTRACT DOCUMENTS. UPGRADE AND OR PROVIDE NEW CONDUIT SUPPORTS WHERE NECESSARY FOR ALL RACEWAYS BEING REUSED. ENSURE INTEGRITY OF EXISTING RACEWAYS BEFORE REUSE.
  - F. CONCEAL ALL RACEWAY AND WIRING IN EXISTING WALLS, CEILINGS, FLOORS, ETC. THE USE OF WIREMOLD IS PERMITTED ONLY WHERE SPECIFICALLY NOTED ON DRAWING.
  - G. DO NOT PENETRATE STRUCTURAL ELEMENTS OF FLOORS, WALLS, CEILINGS, ROOFS, ETC.
  - H. COORDINATE WITH OWNER WHAT EQUIPMENT SHOULD BE DISPOSED OF AND WHAT EQUIPMENT IS TO BE RETURNED TO OWNER.
  - I. FIRE ALARM SYSTEM MUST REMAIN OPERATIONAL DURING ALL PHASES OF CONSTRUCTION.
  - J. ALL DEMOLISHED SECURITY DEVICES SHALL BE RETURNED TO SLCC.



1  
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LOWER LEVEL - DEMOLITION REFLECTED CEILING PLAN  
SCALE 1/8" = 1'-0"

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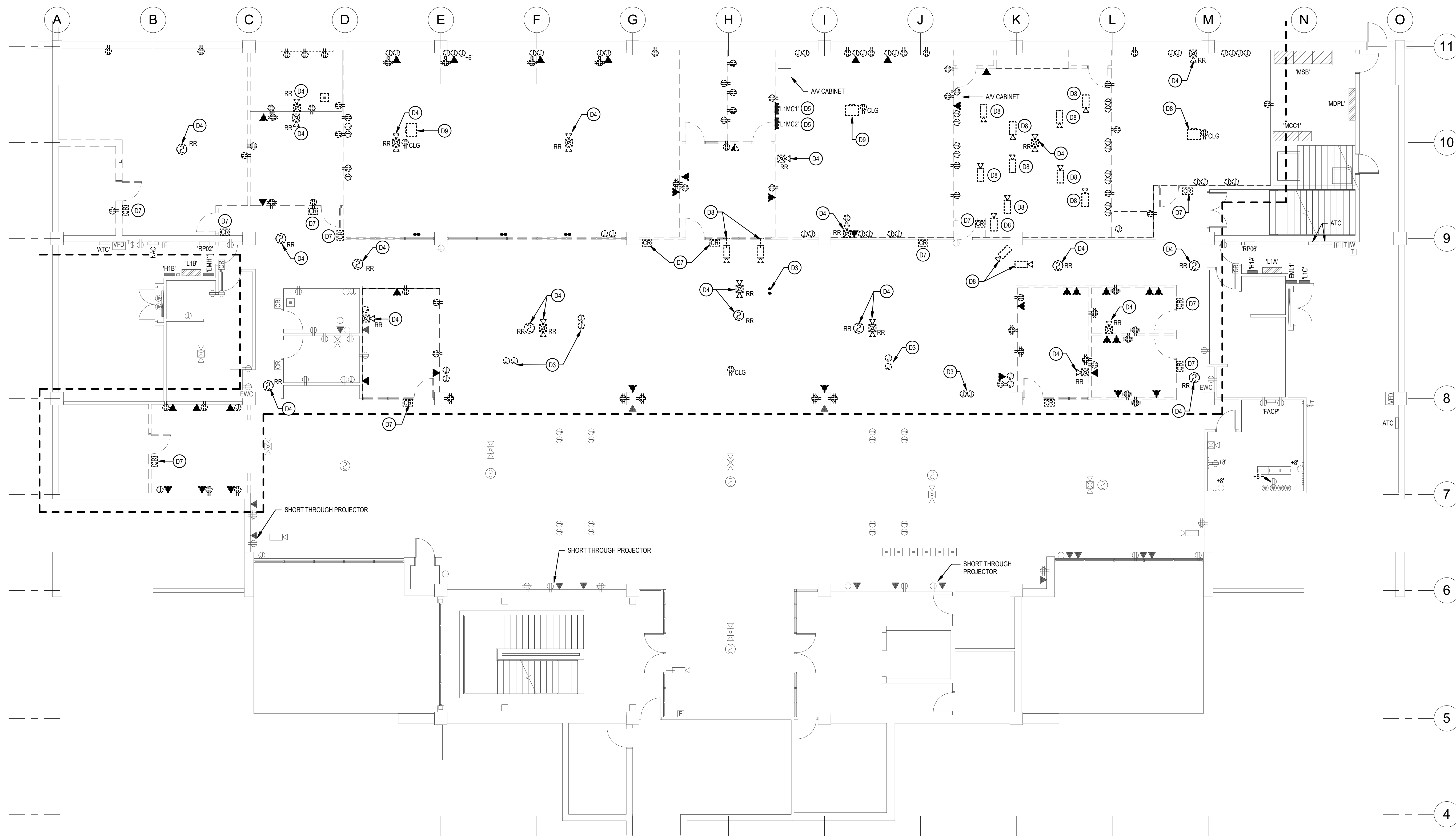


**KEYED NOTES**

- D3 REMOVE FLOOR MOUNTED BOXES AND ASSOCIATED CONDUCTORS BACK TO SOURCE. CONDUITS SHALL BE CAPPED AND ABANDONED IN PLACE. LABEL BREAKERS WITH NO MORE LOADS AS SPARE. ANY CONDUCTORS ALSO IN THE CONDUIT FEEDING OTHER EXISTING TO REMAIN DEVICES SHALL REMAIN.
- D4 EXISTING FIRE ALARM DEVICE SHALL BE STORED, PROTECTED, AND REUSED. REFER TO EY101 FOR ADDITIONAL INFORMATION.
- D5 EXISTING PANELS SHALL BE RELOCATED. EXISTING LOADS THAT ARE TO REMAIN SHALL ALSO BE RELOCATED. REFER TO EP101, EP701, AND EP803 FOR ADDITIONAL INFORMATION.
- D7 RETURN CARD READERS TO SLCC.
- D8 RETURN CCTV AND AV CAMERAS TO SLCC.
- D9 EXISTING PROJECTOR, AV CONNECTION DEVICES, CABLES, ETC. SHALL BE DEMOLISHED. RETURN PROJECTORS TO SLCC.

**GENERAL DEMOLITION NOTES:**

1. UNLESS SPECIFICALLY NOTED OTHERWISE, REMOVE ALL ELECTRICAL ITEMS SHOWN IN DARK AND DASHED LINES. LIGHT AND SOLID ITEMS ARE TO REMAIN. DEMOLITION ITEMS ARE SHOWN TO GIVE A BASIC DESCRIPTION OF THE EXTENT OF DEMOLITION WORK, BUT MAY NOT BE INCLUSIVE. PROVIDE DEMOLITION WORK IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
  - A. DISCONNECT AND REMOVE ANY/ALL FIXTURES, DEVICES, EQUIPMENT, ETC. REQUIRED FOR PROPER COMPLETION OF THE WORK WHETHER SHOWN OR NOT.
  - B. RELOCATE, REWIRE, AND/OR RECONNECT ANY/ALL FIXTURES, DEVICES, EQUIPMENT, ETC. THAT FOR ANY REASON OBSTRUCTS CONSTRUCTION.
  - C. LEAVE ALL EXISTING FIXTURES, DEVICES, EQUIPMENT, ETC. IN PORTIONS OF THE BUILDING NOT BEING REMODELED, IN WORKING CONDITION. RESTORE ALL INTERRUPTED BRANCH CIRCUITS, FEEDERS, ETC.
  - D. REMOVE AND DISPOSE OF ALL RACEWAYS, CONDUCTORS, BOXES, DEVICES, EQUIPMENT, ETC. THAT ARE NOT TO BE REUSED. TERMINATE AT ACCESSIBLE JUNCTION BOX BY PROVIDING PROPER KNOCK-OUT CLOSURE, TAPE CONDUCTORS, LABEL AS "SPARE" WITH CIRCUIT NO., ZONE NO. OR OTHER CHARACTERISTIC IDENTIFYING SOURCE.
  - E. EXISTING RACEWAYS MAY BE REUSED, IF IN PLACE, WHERE POSSIBLE, AND WHERE IN COMPLIANCE WITH THE SPECIFICATIONS AND THE INTENT OF THE CONTRACT DOCUMENTS. UPGRADE AND OR PROVIDE NEW CONDUIT SUPPORTS WHERE NECESSARY FOR ALL RACEWAYS BEING REUSED. ENSURE INTEGRITY OF EXISTING RACEWAYS BEFORE REUSE.
  - F. CONCEAL ALL RACEWAY AND WIRING IN EXISTING WALLS, CEILINGS, FLOORS, ETC. THE USE OF WIREMOLD IS PERMITTED ONLY WHERE SPECIFICALLY NOTED ON DRAWING.
  - G. DO NOT PENETRATE STRUCTURAL ELEMENTS OF FLOORS, WALLS, CEILINGS, ROOFS, ETC.
  - H. COORDINATE WITH OWNER WHAT EQUIPMENT SHOULD BE DISPOSED OF AND WHAT EQUIPMENT IS TO BE RETURNED TO OWNER.
  - I. FIRE ALARM SYSTEM MUST REMAIN OPERATIONAL DURING ALL PHASES OF CONSTRUCTION.
  - J. ALL DEMOLISHED SECURITY DEVICES SHALL BE RETURNED TO SLCC.



**1 LOWER LEVEL - DEMOLITION POWER PLAN**  
 ED102 SCALE 1/8" = 1'-0"

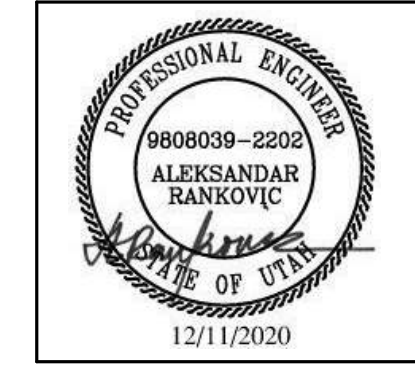
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**SLCC TESTING CENTER**  
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PROJECT #: 20029

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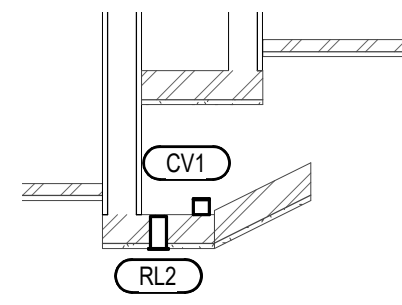


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**LOWER LEVEL - DEMOLITION POWER PLAN**

**ED102**





2 RECEPTION COVE SECTION VIEW  
SCALE: 1/2" = 1'-0"

KEYED NOTES (E)

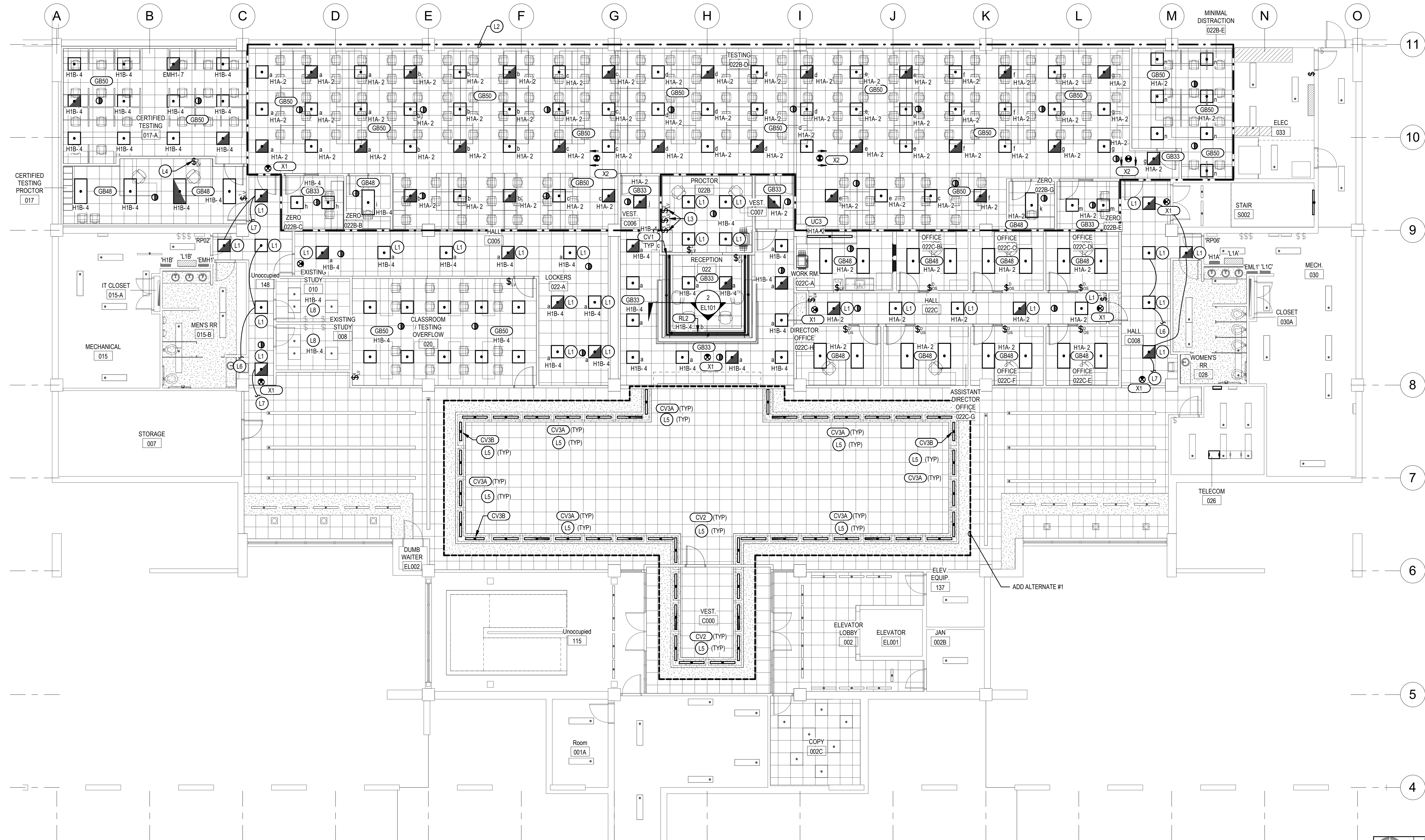
- L1 NEW LOCATION OF EXISTING LIGHT FIXTURE. TIE TO CIRCUIT INDICATED. PROVIDE NEW EM BATTERY PACK AS REQUIRED FOR EXISTING FIXTURES SHOWN AS EMERGENCY.
- L2 ROOMS IN THIS AREA SHALL BE TIED TOGETHER AND CONTROLLED BY SWITCH INDICATED BY KEYED NOTE 'L3'.
- L3 THE INDICATED SWITCHES SHALL CONTROL TESTING ROOMS INDICATED. REFER TO KEYED NOTE 'L2'. LV5 SHALL INDIVIDUALLY SWITCH EACH ZONE, AND LV2 SHALL SWITCH AND DIM ALL ZONES.
- L4 THE INDICATED SWITCH SHALL CONTROL LIGHTING IN CERTIFIED TESTING 122.

KEYED NOTES (F)

- L5 REPLACED EXISTING COVE LIGHTING WITH NEW FIXTURE INDICATED. UTILIZE EXISTING CONTROLLED LIGHTING CIRCUITS. PROVIDE NEW CONDUIT AND CONDUCTORS AS REQUIRED.
- L6 TIE LIGHT FIXTURES TO EXISTING CONTROLLED CIRCUIT USED IN EXISTING OPEN AREA. PROVIDE ADDITIONAL CONDUIT AND CONDUCTORS AS REQUIRED.
- L7 TIE LIGHT FIXTURES TO EXISTING CONTROLLED EMERGENCY CIRCUIT USED IN EXISTING OPEN AREA. PROVIDE ADDITIONAL CONDUIT AND CONDUCTORS AS REQUIRED.
- L8 TIE EXISTING LIGHTING TO NEW CIRCUIT SHOWN. UTILIZE EXISTING CONTROLS IN ROOM, CONDUIT, CONDUCTORS, ETC. PROVIDE NEW CONDUIT AND CONDUCTORS AS REQUIRED.

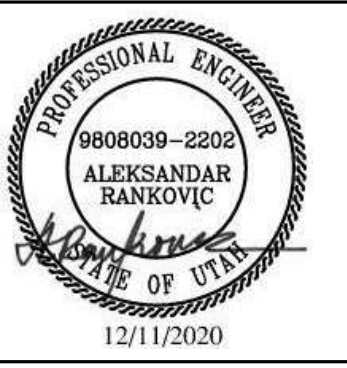
LIGHTING GENERAL NOTES:

1. REFER TO LIGHTING DETAILS SHEETS FOR TYPICAL CONTROL WIRING DIAGRAMS. PROVIDE COMPLETE SYSTEM WITH ALL REQUIRED CONDUIT, WIRING, SWITCHES, SENSORS, POWER PACK, ETC.
2. LOCATE POWER PACKS AND ROOM CONTROLLERS ABOVE ACCESSIBLE CEILING NEAR ROOM ENTRANCES.
3. CONFIRM ALL LOCATIONS OF LIGHT FIXTURES WITH ARCHITECT PRIOR TO INSTALLATION.
4. PROVIDE UNSWITCHED HOT FOR ALL EMERGENCY LIGHTS AND BATTERY PACKS.



1 LOWER LEVEL - LIGHTING PLAN  
SCALE: 1/8" = 1'-0"

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# LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	SOURCE	ELECTRICAL		APPROVED MANUFACTURERS	CATALOG INFORMATION		COMMENTS / NOTES
			VOLTAGE	LOAD		CATALOG NUMBER / SERIES		
CV1	LED TAPE LIGHT IN ROUND EXTRUDED ALUMINUM CHANNEL WITH FROSTED LENS. SURFACE MOUNTED WITH PIVOT MOUNTING CLIP.	LED 350 LUMENS/FT REMOTE DRIVER 0-10V DIM TO 10% 3500K	277 V	4	Q-TRAN (OR APPROVED EQUIVALENT)	SW244.0 ROND-ST-SST-FR		LOCATE REMOTE DRIVER IN NEAREST ACCESSIBLE CEILING AND RUN LOW-VOLTAGE CABLES TO FIXTURE. PROVIDE NUMBER OF DRIVERS AS REQUIRED FOR LENGTHS SHOWN. PROVIDE WITH CORDS AND ALL HARDWARE REQUIRED FOR A COMPLETE SYSTEM.
CV2	4' LED RETROFIT FOR 2 LAMP FLUORESCENT STRIP LIGHTS. BYPASS BALLAST FOR DIRECT LINE WIRING. ADD ALTERNATE #1.	(2) LED 3500K 1,950 LUMENS	277 V	30	TRULY GREEN SOLUTIONS (OR APPROVED EQUIVALENT)	83		PROVIDE SAMPLE TO TEST COMPATIBILITY WITH EXISTING LUMINAIRES PRIOR TO RELEASE.
CV3A	4' LED RETROFIT FOR 3 LAMP FLUORESCENT STRIP LIGHTS. BYPASS BALLAST FOR DIRECT LINE WIRING. ADD ALTERNATE #1.	(3) LED 3500K 1,950 LUMENS	277 V	45	TRULY GREEN SOLUTIONS (OR APPROVED EQUIVALENT)	83		PROVIDE SAMPLE TO TEST COMPATIBILITY WITH EXISTING LUMINAIRES PRIOR TO RELEASE.
CV3B	3' LED RETROFIT FOR 3 LAMP FLUORESCENT STRIP LIGHT. BYPASS BALLAST FOR DIRECT LINE WIRING. ADD ALTERNATE #1.	(3) LED 3500K 1,300 LUMENS	277 V	30	TRULY GREEN SOLUTIONS (OR APPROVED EQUIVALENT)	83		PROVIDE SAMPLE TO TEST COMPATIBILITY WITH EXISTING LUMINAIRES PRIOR TO RELEASE.
GB33	2'X2' LED LAY-IN GRID MOUNTED VOLUMETRIC TROFFER WITH CENTER ROUND OPAL DIFFUSER. HINGED DOOR FOR FIXTURE ACCESS. PROVIDE INTEGRAL UL 524, 90 MINUTE, EM BATTERY BACK FOR EM FIXTURES SHOWN ON THE FLOOR PLANS.	LED 3300 LUMENS INTEGRAL DRIVER 0-10V DIM TO 10% 3500K	277 V	27	LITHONIA (OR APPROVED EQUIVALENT)	2BLT		
GB48	2'X4' LED LAY-IN GRID MOUNTED VOLUMETRIC TROFFER WITH CENTER ROUND OPAL DIFFUSER. HINGED DOOR FOR FIXTURE ACCESS.	LED 5000 LUMENS INTEGRAL DRIVER 0-10V DIM TO 10% 3500K	277 V	38	LITHONIA (OR APPROVED EQUIVALENT)	2BLT4		
GB50	2'X2' LED LAY-IN GRID MOUNTED VOLUMETRIC TROFFER WITH CENTER ROUND OPAL DIFFUSER. HINGED DOOR FOR FIXTURE ACCESS. PROVIDE INTEGRAL UL 524, 90 MINUTE, EM BATTERY BACK FOR EM FIXTURES SHOWN ON THE FLOOR PLANS.	LED 4800 LUMENS INTEGRAL DRIVER 0-10V DIM TO 10% 3500K	277 V	44	LITHONIA (OR APPROVED EQUIVALENT)	2BLT		
RL2	2" WIDE SPACKLE FLANGE RECESSED LINEAR FIXTURE WITH 3/8" DROP OPAL LENS. PROVIDE WITH LIT CORNERS WHERE SHOWN ON THE FLOOR PLANS. EXTRUDED ALUMINUM HOUSING.	LED 420 LM/FT INTEGRAL DRIVER 0-10V DIM TO 10% 3500K	277 V	5	PAL (OR APPROVED EQUIVALENT)	MLR2		WATTAGE SHOWN IS PER FOOT. REFER TO DRAWINGS FOR LENGTHS REQUIRED.
UC3	SMALL 7" THICK AND 2.8" WIDE UNDER CABINET LIGHT FIXTURE WITH INTEGRAL DRIVER AND SWITCH. HARDWARE APPLICATION.	LED 300 LM/FT INTEGRAL DRIVER 3500K	277 V	6	HALO (OR APPROVED EQUIVALENT)	HU30		REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION. PROVIDE NUMBER OF DRIVERS AS REQUIRED FOR LENGTHS SHOWN. PROVIDE WITH CORDS AND ALL HARDWARE REQUIRED FOR A COMPLETE SYSTEM.
X1	DIE-CAST ALUMINUM EDGE-LIT, LED EXIT SIGN, SINGLE FACE, CLEAR BACKGROUND, BRUSHED ALUMINUM FINISH, UNIVERSAL CEILING/BACK MOUNTING, NICKLE CADMIUM BATTERY.	LED	277 V	2	LITHONIA (OR APPROVED EQUIVALENT)	LRP-1		REFER TO DRAWINGS FOR MOUNTING AND ARROWS.
X2	DIE-CAST ALUMINUM EDGE-LIT, LED EXIT SIGN, DOUBLE FACE, MIRROR BACKGROUND, BRUSHED ALUMINUM FINISH, UNIVERSAL CEILING/BACK MOUNTING, NICKLE CADMIUM BATTERY.	LED	277 V	2	LITHONIA (OR APPROVED EQUIVALENT)	LRP-2		

### LIGHT FIXTURE GENERAL NOTES

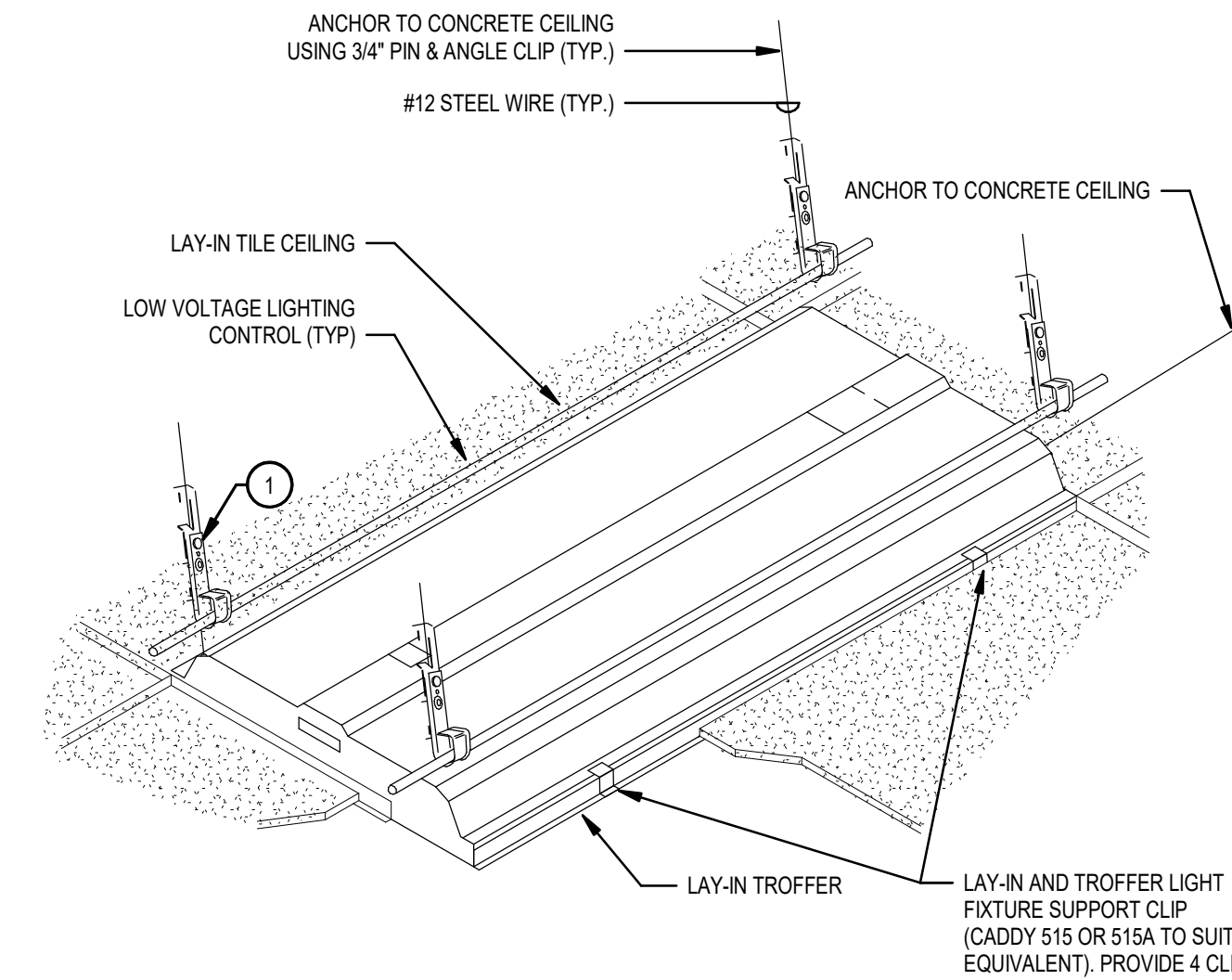
- REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPANCIES OF LOCATIONS AND QUANTITIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.
- CONFIRM MOUNTING HEIGHTS AND LOCATIONS OF ALL LIGHT FIXTURES WITH ARCHITECTURAL ELEVATIONS AND / OR ARCHITECT.
- REFER TO THE SPECIFICATIONS FOR OTHER LIGHT FIXTURE REQUIREMENTS.
- CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL LIGHT FIXTURES AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAWINGS. BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO RELEASE.
- ALL LIGHT FIXTURES ARE TO BE 3500K FOR INTERIOR APPLICATIONS AND 4000K FOR EXTERIOR APPLICATIONS, UNLESS OTHERWISE NOTED IN THE FIXTURE DESCRIPTION.
- ALL LIGHT FIXTURES ARE TO BE A MINIMUM OF 80 CRI UNLESS OTHERWISE NOTED IN THE FIXTURE DESCRIPTION.
- ALL LED SOURCES MUST MEET L80 AT 50,000 HRS MINIMUM UNLESS OTHERWISE NOTED.
- CONFIRM ALL MOUNTING REQUIREMENTS WITH ARCHITECT PRIOR TO RELEASE.
- ALL LIGHT FIXTURES ARE TO HAVE AN EFFICACY OF 80 LUMENS PER WATT MINIMUM.

### BIDDING REQUIREMENTS

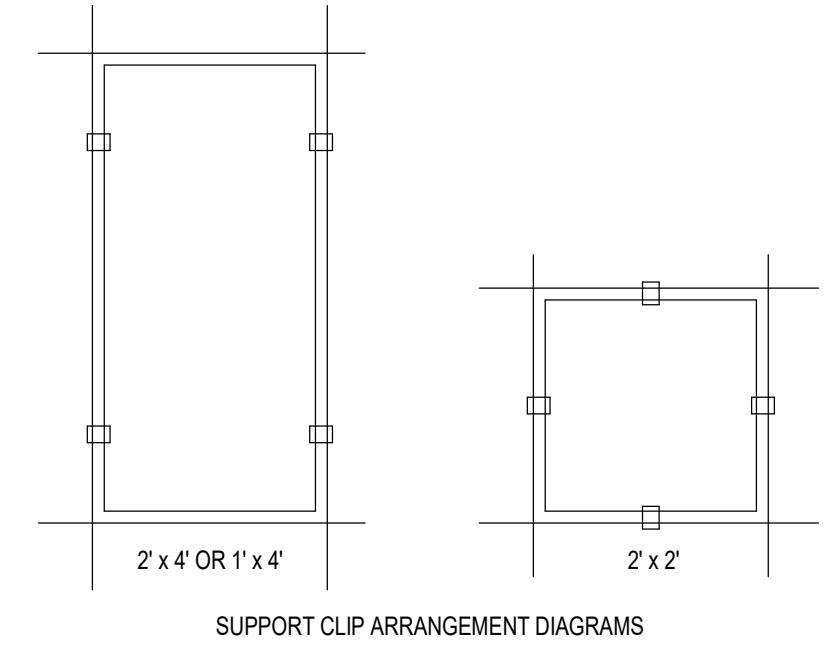
- BID ONLY PRODUCTS THAT ARE SPECIFIED OR APPROVED BY ADDENDUM.
- PACKAGING OF LIGHT FIXTURES WITH OTHER SYSTEMS IS NOT ALLOWED AND MUST BE BID SEPARATELY. I.E. LIGHT FIXTURES, THEATRICAL LIGHTING, SPORTS LIGHTING AND ALL LIGHTING CONTROLS.
- WHEN ONLY ONE PRODUCT IS APPROVED FOR BIDDING, THE PRICE FOR THAT ITEM SHALL BE BROKEN OUT SEPARATELY WHEN SUBMITTING PRICING TO VARIOUS DISTRIBUTORS AND / OR CONTRACTOR.
- WHEN A CONTRADICTION EXISTS BETWEEN A SPECIFIC MODEL NUMBER AND THE DESCRIPTION, THE DESCRIPTION SHALL GOVERN.

### LIGHT FIXTURE PRIOR APPROVAL REQUIREMENTS

- PRIOR APPROVAL IS REQUIRED BEFORE BIDDING THIS PROJECT.
- PRIOR APPROVALS SHALL BE SUBMITTED TO THE ELECTRICAL ENGINEER'S OFFICE AT LEAST (8) WORKING DAYS BEFORE BID TIME. PRIOR APPROVALS RECEIVED AFTER THIS TIME PERIOD SHALL BE REJECTED.
- ITEMS THAT ARE SUBMITTED AND HAVE BEEN APPROVED WILL BE LISTED IN THE ADDENDUM(S). VERBAL APPROVALS WILL NOT BE GIVEN ON ANY ITEM.
- IT IS NOT THE RESPONSIBILITY OF THE ELECTRICAL ENGINEER TO NOTIFY THE SUBMITTING PARTY OF ERRORS IN THE SUBMITTAL. NOTIFICATION OF ERRORS BY THE ELECTRICAL ENGINEER PRIOR TO ISSUANCE OF THE ADDENDUM(S) MAY NOT BE GIVEN.
- PRIOR APPROVALS SHALL CONSIST OF CUT SHEETS DESCRIBING THE PRODUCTS BEING SUBMITTED AS EQUIVALENTS. ALL SPECIFICATION INFORMATION SHALL BE CLEARLY MARKED. PRODUCTS WITHOUT PHOTOMETRIC DATA WILL NOT BE APPROVED.
- LIGHTING PACKAGES WILL BE REVIEWED FOR GENERAL PROJECT COMPLIANCE ONLY. AN IN-DEPTH REVIEW OF ANY ALTERNATE FIXTURES WILL BE DONE DURING THE SUBMITTAL REVIEW PROCESS. ANY FIXTURES THAT ARE NOT TRULY EQUAL, AND / OR DO NOT COMPLY WITH ALL OF THE REQUIREMENTS CONTAINED IN THE CONTRACT DOCUMENTS, WILL NOT BE APPROVED. IF EQUIPMENT IS DISAPPROVED FOR BIDDING, CONTRACTOR SHALL SUPPLY SPECIFIED EQUIPMENT AT NO EXTRA COST TO THE OWNER.

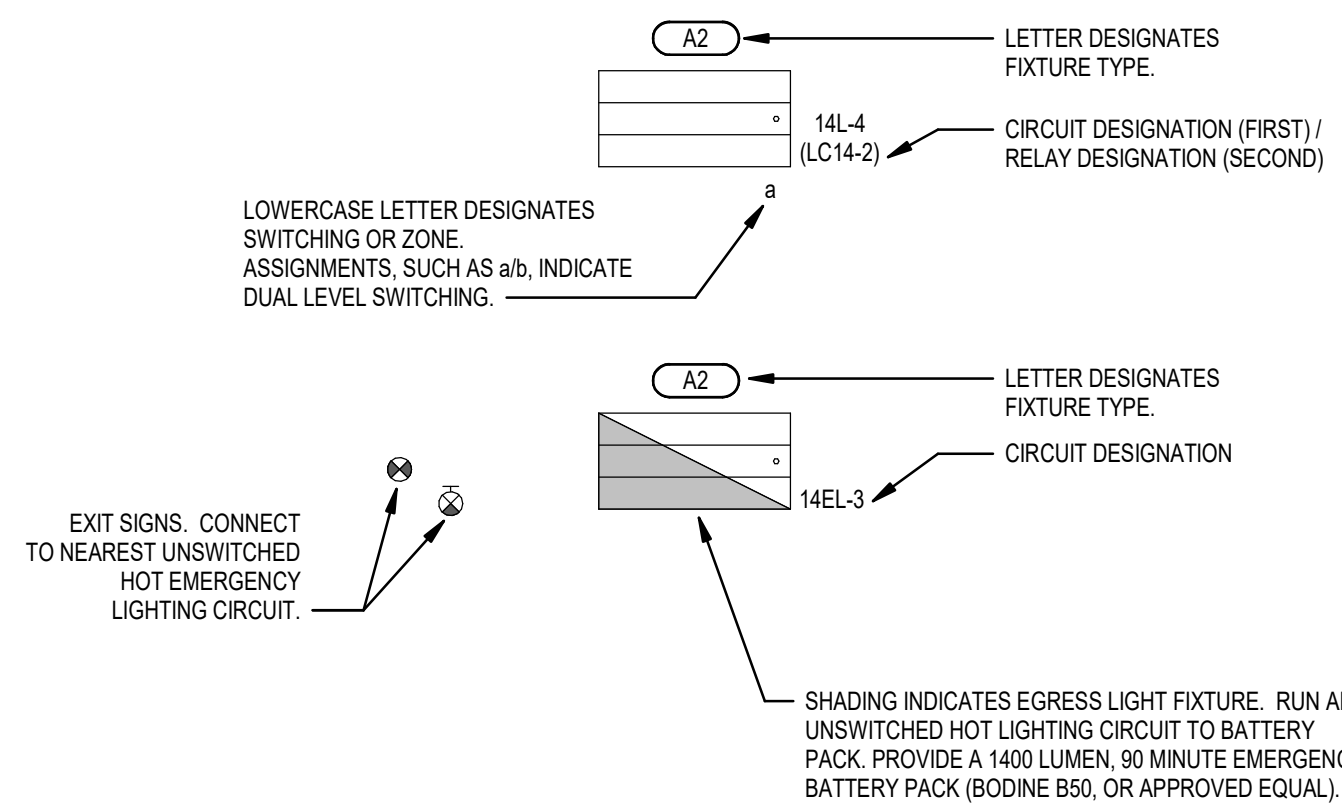


1 PROVIDE J-HOOKS WITH ROD/WIRE CLIP (CADDY 124234 OR APPROVED EQUIVALENT) IN QUANTITIES AS MAY BE REQUIRED FOR ROUTING OF LOW VOLTAGE LIGHTING CONTROL CABLES. INSTALL SUPPORTS AND CLIPS 12" ABOVE RECESSED LAY-IN LIGHT FIXTURES. SECURE CABLES AT A SPACING OF NOT MORE THAN 60" ON CENTERS. SUPPLEMENT WITH J-HOOKS SUSPENDED CABLES AT A SPACING OF NOT MORE THAN 60" ON CENTERS. SUPPLEMENT WITH J-HOOKS SUSPENDED BY ALL-THREAD AS MAY BE REQUIRED TO MEET SPACING CRITERIA. INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE NEC 300.11. ALL CABLES SHALL BE ROUTED IN A NEAT WORKMANLIKE MANNER PARALLEL AND PERPENDICULAR TO CEILING GRIDS.



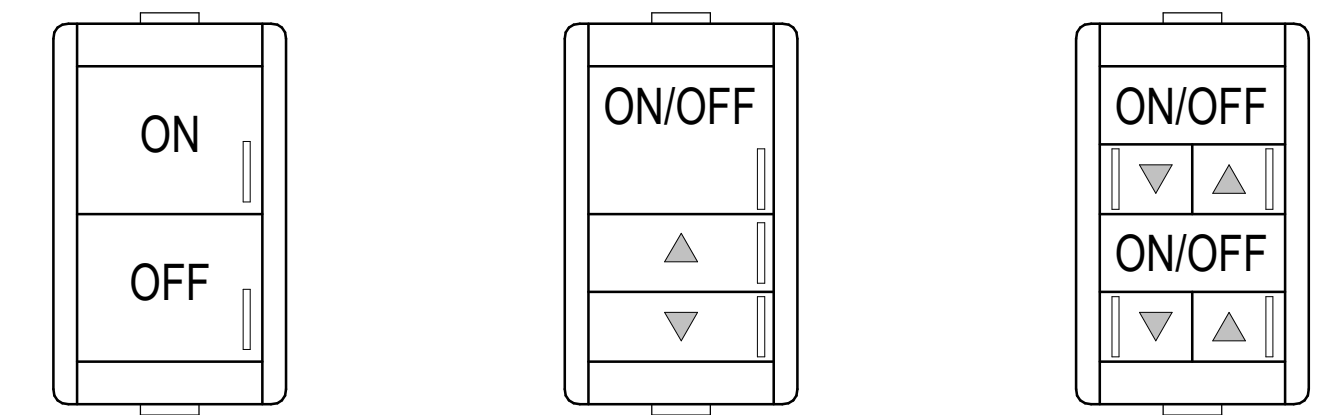
### 6 RECESSED GRID LIGHT FIXTURE SUPPORT DETAIL - WITH CABLE MANAGEMENT

SCALE: NTS



### 1 TYPICAL LIGHT FIXTURE CONVENTION - BATTERY PACK

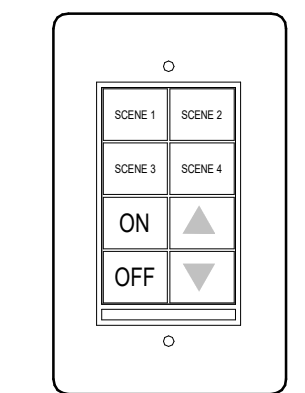
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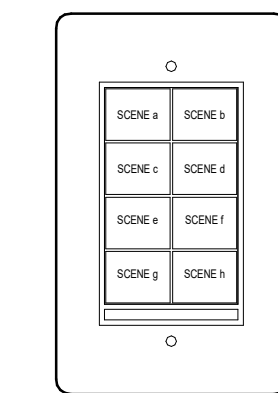
SINGLE CHANNEL ON/OFF

SINGLE CHANNEL ON/OFF- RAISE/LOWER

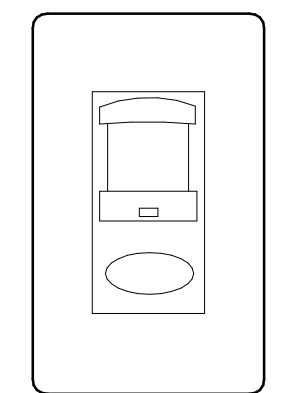
TWO CHANNEL ON/OFF- RAISE/LOWER



4 SCENE CONTROLLER ON/OFF- RAISE/LOWER



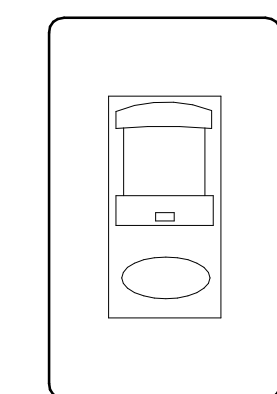
GRAPHIC WALLPOD



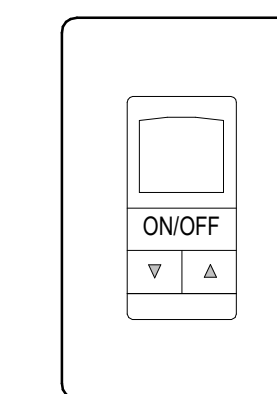
OCCUPANCY SENSOR

### 7 LOW VOLTAGE LIGHTING CONTROL WALL SWITCH DETAILS

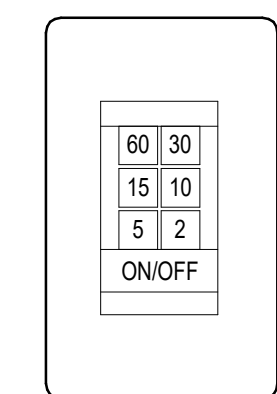
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OCCUPANCY SENSOR WALL SWITCH



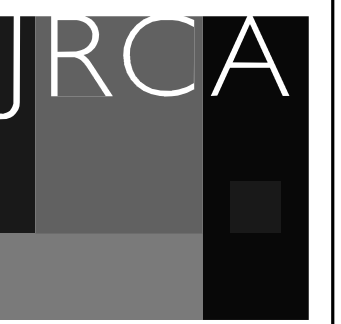
0-10V DIMMING WALL OCCUPANCY SENSOR



PROGRAMMABLE TIMER SWITCH

### 5 LINE VOLTAGE LIGHTING CONTROL WALL SWITCH DETAILS

SCALE: NTS

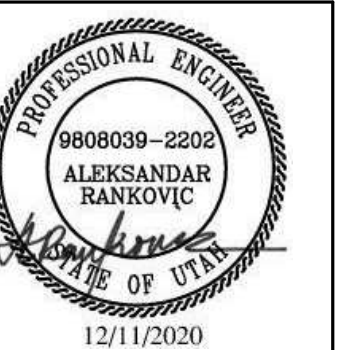


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PROJECT #: 20029

BID SET	
DATE	REVISION
2/17/2021	



VIEW AND PRINT THIS SHEET IN COLOR

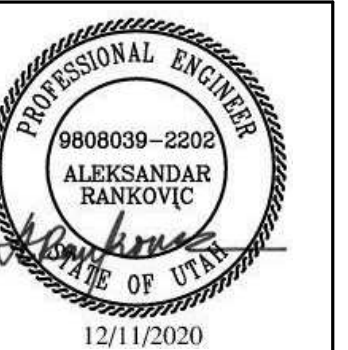
LIGHTING  
DETAILS &  
SCHEDULES



EL501



BID SET	
DATE	REVISION
2/17/2021	

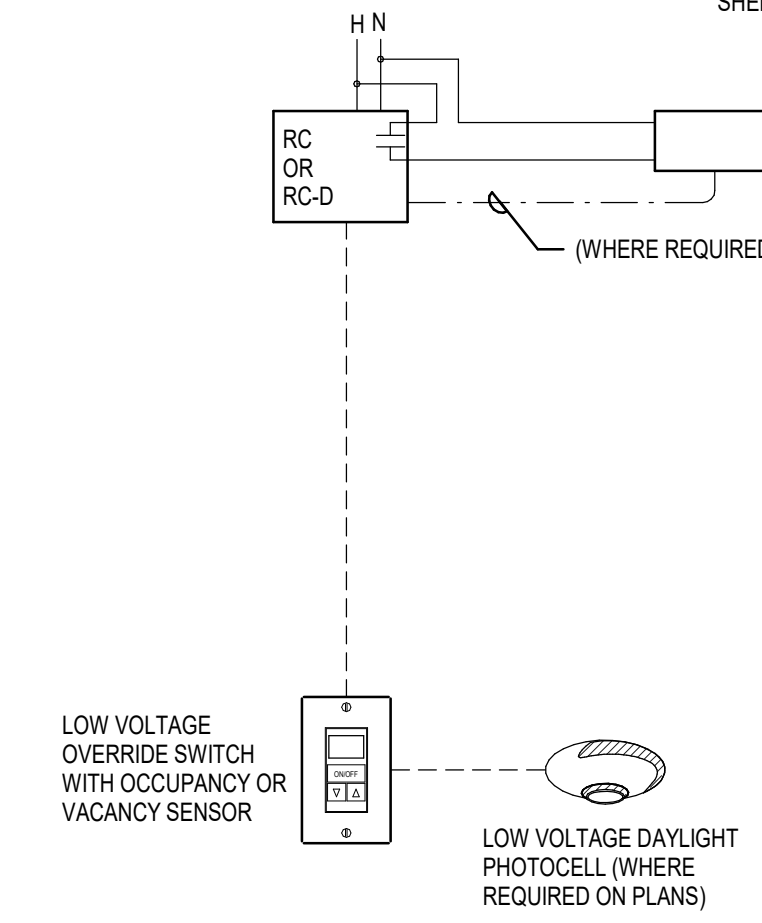


VIEW AND PRINT THIS SHEET IN COLOR

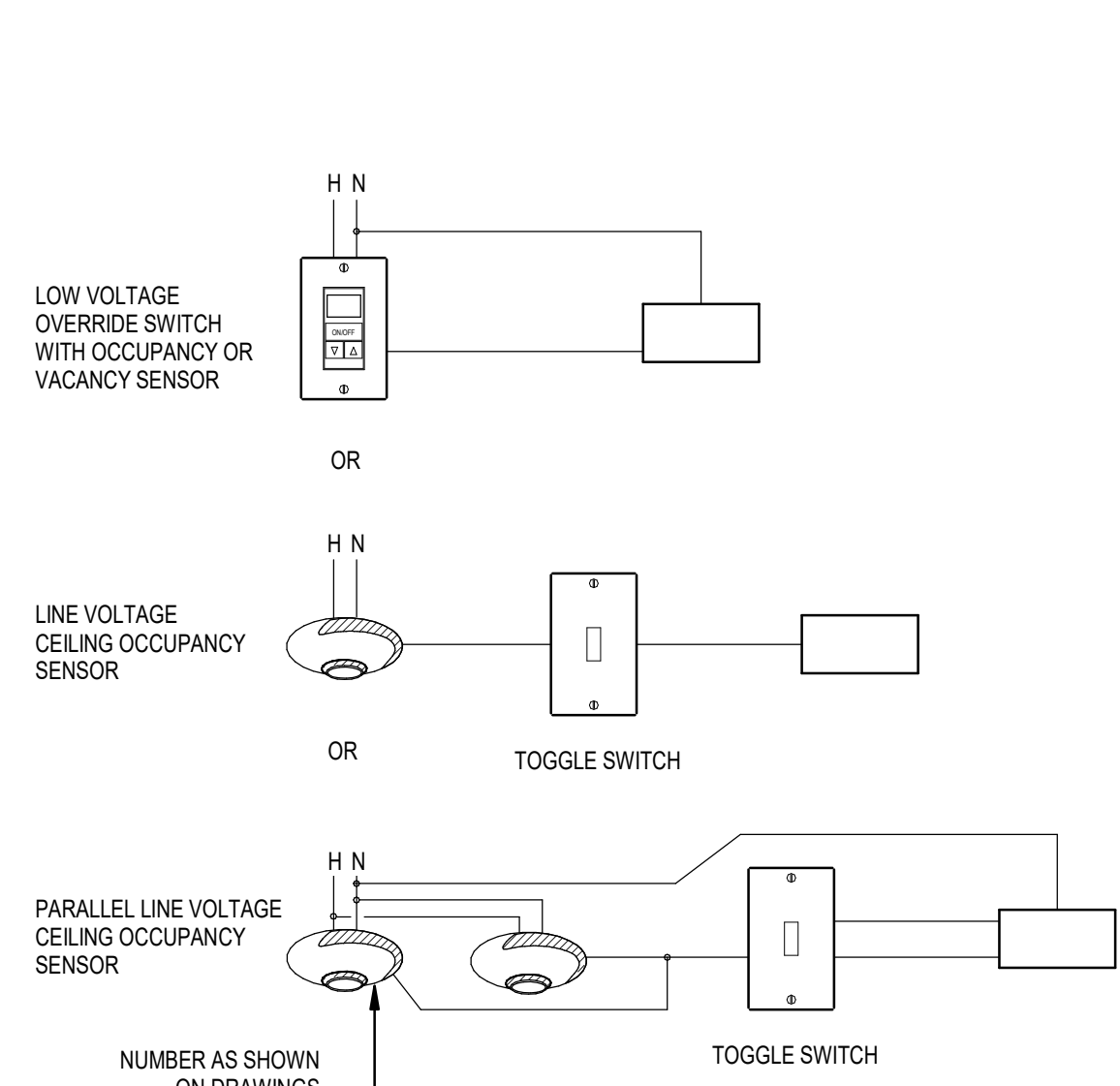
LIGHTING  
CONTROLS  
WIRING  
DIAGRAMS

EL701

1. PROVIDE SEPARATE RELAY FOR DAYLIGHT ZONES SHOWN ON THE DRAWINGS.
2. REFER TO FLOOR PLANS FOR LOCATION AND NUMBER OF EMERGENCY LIGHT FIXTURES. REFER TO 'GENERATOR TRANSFER DEVICE (GTD) DETAIL' ON SHEET EL502 FOR ADDITIONAL INFORMATION.

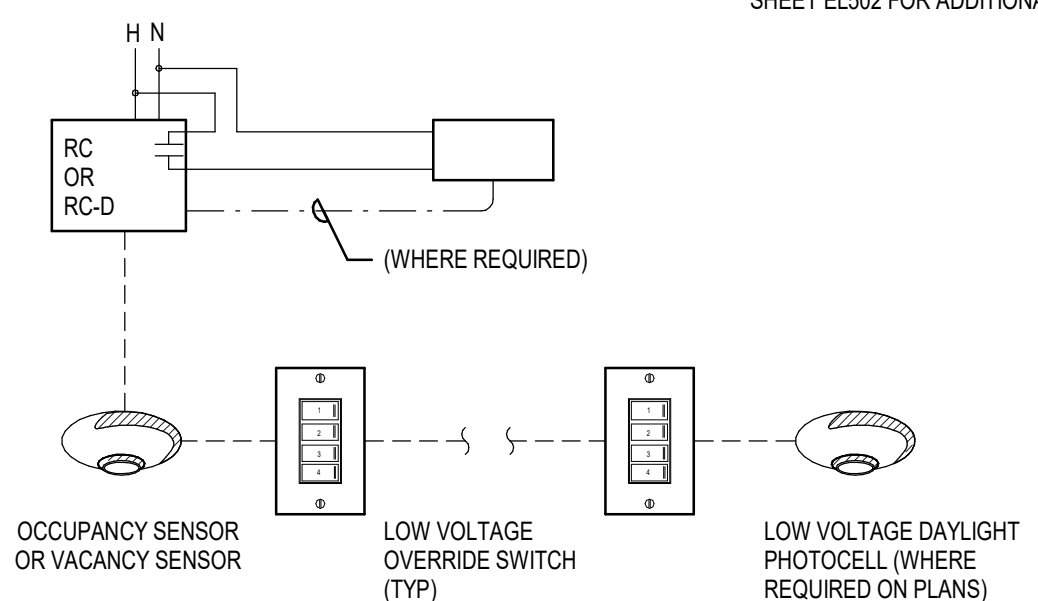


4 TYPICAL LOW-VOLTAGE WALL SWITCH OCC. SENSOR WIRING DIAGRAM  
SCALE: NTS



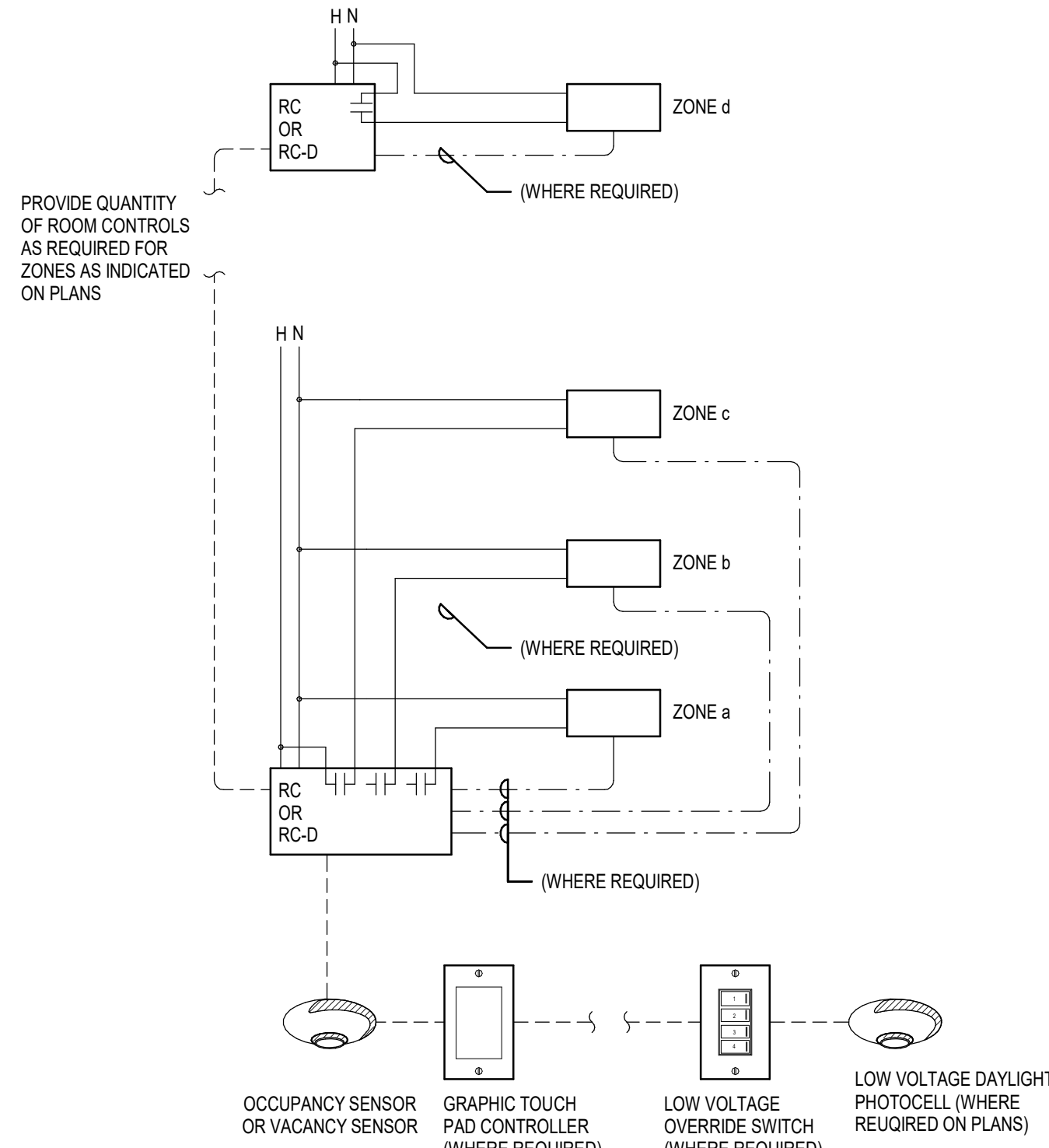
3 TYPICAL LINE VOLTAGE WIRING DIAGRAM  
SCALE: NTS

1. PROVIDE SEPARATE RELAY FOR DAYLIGHT ZONES SHOWN ON THE DRAWINGS.
2. REFER TO FLOOR PLANS FOR LOCATION AND NUMBER OF EMERGENCY LIGHT FIXTURES. REFER TO 'GENERATOR TRANSFER DEVICE (GTD) DETAIL' ON SHEET EL502 FOR ADDITIONAL INFORMATION.



2 TYPICAL LOW-VOLTAGE WIRING DIAGRAM  
SCALE: NTS

1. PROVIDE SEPARATE RELAY FOR DAYLIGHT ZONES SHOWN ON THE DRAWINGS.
2. REFER TO FLOOR PLANS FOR LOCATION AND NUMBER OF EMERGENCY LIGHT FIXTURES. REFER TO 'GENERATOR TRANSFER DEVICE (GTD) DETAIL' ON SHEET EL502 FOR ADDITIONAL INFORMATION.
3. ZONES SHOWN ARE FOR EXAMPLE ONLY. REFER TO FLOOR PLANS FOR REQUIRED ZONING.



5 TYPICAL ZONED LOW-VOLTAGE WIRING DIAGRAM  
SCALE: NTS

LIGHTING WIRING DIAGRAMS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
[Symbol]	LIGHT SWITCH	+48"	
[Symbol]	LOW VOLTAGE LIGHT SWITCH	+48"	WATTSTOPPER (OR APPROVED EQUIVALENT) # LMSW-*** REFER TO SWITCH DETAILS ON SHEET EL702 FOR NUMBER AND TYPE OF BUTTONS REQUIRED.
[Symbol]	WALL MOUNT GRAPHIC TOUCH PAD CONTROLLER	+48"	EQUINOX (OR APPROVED EQUIVALENT) # E073-LCAP. PROVIDE ALL COMPONENTS REQUIRED TO TIE INTO NETWORKED OR STAND-ALONE CONTROLS FOR A COMPLETE SYSTEM.
[Symbol]	OCCUPANCY SENSOR OR VACANCY SENSOR (AS NOTED ON SHEET EL702)	CEILING	WATTSTOPPER (OR APPROVED EQUIVALENT) # LMC-*** (DUAL TECH) & LMC-*** (ULTRASONIC). REFER TO SHEET EL702 NARRATIVE FOR TECHNOLOGY APPLICATIONS.
[Symbol]	DIGITAL DAYLIGHT SENSOR	CEILING	WATTSTOPPER (OR APPROVED EQUIVALENT) # LMS-*** REFER TO SHEET EL702 NARRATIVE FOR ADDITIONAL REQUIREMENTS.
[Symbol]	NORMAL POWER LIGHTING LOAD	CEILING	"a" LOWER CASE LETTER SPECIFIES ZONE
[Symbol]	EMERGENCY POWER LIGHTING LOAD	CEILING	"a" LOWER CASE LETTER SPECIFIES ZONE
[Symbol]	RC: ROOM CONTROLLER RC-D: DIMMING ROOM CONTROLLER LC: RECEPTACLE LOAD CONTROLLER	ABOVE ACCESSIBLE CEILING	WATTSTOPPER (OR APPROVED EQUIVALENT) # LMRC-***. PROVIDE TYPE OF ROOM CONTROLLER AS REQUIRED FOR EACH ROOM REQUIREMENTS. REFER TO FLOOR PLANS FOR EXACT ROOM REQUIREMENTS AND ZONES.
[Symbol]	3/4" WITH LIGHTING BRACH CIRCUIT WIRING		
[Symbol]	3/4" WITH 0-10V DIMMING WIRING		
[Symbol]	3/4" WITH CAT 5 CABLEING		

LIGHTING CONTROL NOTES

1. PROGRAMMING SHALL BE COMPLETED BY THE CONTRACTOR PRIOR TO SUBSTANTIAL COMPLETION.
2. CONTRACTOR SHALL MODIFY PROGRAMMING AND PRESET SCENES AS REQUESTED BY OWNER.
3. PROVIDE FINE TUNING PROGRAMMING MODIFICATIONS AS REQUESTED BY THE OWNER WITHIN 6 MONTHS AFTER BUILDING OCCUPANCY.
4. IN ADDITION TO PRESET SCENES PROVIDE INDIVIDUAL CONTROL FOR EACH ZONE.
5. ALL WIRING DIAGRAMS ARE GENERAL IN NATURE. SPECIFIC CONFIGURATION AND QUANTITIES DUE TO MANUFACTURE AVAILABILITY WILL VARY. CONTRACTOR MUST PROVIDE ALL REQUIRED PARTS OF THE SYSTEM TO PERFORM AS INTENDED.
6. REFER TO FLOOR PLANS FOR EXACT DEVICE COUNT, DEVICE TYPE, QUANTITY OF POWER PACKS, AND PHOTOCELL SETTINGS.

LIGHTING CONTROLS DIAGRAMS AS SHOWN ARE FOR BASIC CONCEPT AND LAYOUT. LIGHTING CONTROLS SYSTEM SUPPLIER TO PROVIDE INSTALLATION DRAWINGS THAT REFLECT THE ACTUAL INSTALLATION REQUIREMENTS, WIRING AND ALL REQUIRED DEVICES. SEE EL702 AND LIGHTING PLANS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

LIGHTING CONTROL SYSTEM REQUIREMENTS:

**STANDALONE LOW VOLTAGE LIGHTING CONTROL SYSTEMS:** PROVIDE DIGITAL STANDALONE LOW VOLTAGE LIGHTING CONTROL SYSTEMS IN ALL ROOMS/AREAS UNLESS OTHERWISE MENTIONED IN LINE-VOLTAGE LIGHTING CONTROL SYSTEM.

THE SYSTEMS SHALL INCLUDE, BUT IS NOT LIMITED TO CEILING-MOUNTED OCCUPANCY SENSORS, LIGHT LEVELS SENSORS, LOW VOLTAGE CONTROL WALL SWITCHES, RELAY PACKS/ROOM CONTROLLERS, LOW VOLTAGE CABLES, PROGRAMMING, ETC.

PROVIDE RELAY PACKS/ROOM CONTROLLERS IN TYPES AND RATINGS AS MAY BE REQUIRED FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM WHETHER SHOWN ON THE DRAWINGS OR NOT. WHERE RELAY PACKS ARE SERVING LOADS IN HIGH CEILING AREAS, LOCATE POWER PACKS IN THE ELECTRICAL ROOM WHERE LINE VOLTAGE WIRING IS ORIGINATING FROM.

OCCUPANCY SENSORS SHALL BE SET FOR 'MANUAL ON - AUTO OFF' WITH A 10 MINUTE DELAY EXCEPT IN THE FOLLOWING SPACES:

- SMALL VESTIBULES AND PASSAGE WAYS (100% AUTO ON)

ALL CEILING-MOUNTED OCCUPANCY SENSORS SHALL BE PROVIDED WITH AN AUXILIARY CONTACT FOR HVAC CONTROL.

ALL LOW VOLTAGE LIGHTING CONTROL SWITCHES SHALL HAVE EACH SCENE NAME SILKSCREENED ONTO THE FRONT OF THE SWITCH IN BLACK LETTERS. COORDINATE SCENE NAME WITH ARCHITECT/OWNER.

COORDINATE WITH OWNER/ARCHITECT ON PROGRAMMING SCENES (PER ZONING SHOWN ON DRAWINGS), TASK TUNING, ETC. EACH STANDALONE SYSTEM SHALL BE PROGRAMMED TO REVERT BACK TO ITS NORMAL 'ON' POSITION ONE HOUR AFTER SELECTING A SCENE OR RAISING OR LOWERING A LIGHTING ZONE.

**LINE-VOLTAGE LIGHTING CONTROL SYSTEM:** PROVIDE LINE-VOLTAGE LIGHTING CONTROL SYSTEMS IN THE FOLLOWING ROOMS/AREAS:

- WALL BOX OCCUPANCY SENSORS:
- CUSTODIANS
- OFFICES
- SMALL STORAGE ROOMS

SET OCCUPANCY SENSOR TO HAVE A 10 MINUTE DELAY

**TIMER SWITCHES:**

- COMMUNICATIONS ROOMS

TIMER SWITCHES SHALL GIVE OCCUPANTS THE ABILITY TO SELECT FROM 2, 5, 10, 15, 30, OR 60 MINUTES.

**TOGGLE SWITCHES:**

- ELECTRICAL ROOMS
- MECHANICAL ROOMS

**OCCUPANCY SENSORS:** PLEASE NOTE THAT ELECTRICAL DRAWINGS INDICATE LOCATIONS OF OCCUPANCY SENSORS IN APPROXIMATE LOCATIONS AND QUANTITIES. PROVIDE OCCUPANCY SENSORS IN LOCATIONS, QUANTITIES, AND TYPES AS RECOMMENDED BY THE MANUFACTURER. PROVIDE COMPLETE PRODUCT DATA AND SHOP DRAWINGS INDICATING THE PROPOSED TYPES, COVERAGE PATTERNS, LOCATIONS, AND QUANTITIES. COORDINATE THE LOCATION OF ALL DEVICES WITH CEILING GRIDS, LIGHT FIXTURES, CEILING DIFFUSERS, SPRINKLER HEADS, ETC.

**LIGHT LEVEL SENSORS:** PLEASE NOTE THAT THE ELECTRICAL DRAWINGS INDICATED LOCATIONS OF LIGHT LEVEL SENSOR IN APPROXIMATE LOCATIONS ONLY. PROVIDE LIGHT LEVEL SENSORS IN LOCATIONS AND TYPES AND RECOMMENDED BY THE MANUFACTURER. PROVIDE COMPLETE PRODUCT DATA AND SHOP DRAWINGS INDICATING THE PROPOSED TYPES AND LOCATIONS. COORDINATE THE LOCATION OF ALL DEVICES WITH CEILING GRIDS, LIGHT FIXTURES, CEILING DIFFUSERS, SPRINKLER HEADS, ETC.

**ZONING REQUIREMENTS:** IT IS PERMISSIBLE FOR ZONES OF LIGHT FIXTURES TO BE CONTROLLED BY COMMON POWER PACKS IN LIEU OF INDIVIDUAL POWER PACKS FOR EACH LIGHT FIXTURE EXCEPT AS FOLLOWS:

1. EGRESS LIGHT FIXTURES IN EACH ZONE SHALL BE PROVIDED WITH A RELAY PACK/ROOM CONTROLLER UL 924 LISTED FOR EMERGENCY OPERATIONS. SEE EMERGENCY OPERATIONS BELOW.
2. EACH ROOM OR AREA SHALL BE CONSIDERED A SEPARATE ZONE, UNLESS NOTED OTHERWISE. PLEASE NOTE THAT SOME ROOMS HAVE MULTIPLE ZONES. REFER TO THE LIGHTING PLANS FOR DELINEATED LIGHTING ZONES.
3. DIFFERENT LIGHT FIXTURE TYPES IN EACH ZONE SHALL HAVE SEPARATE POWER PACKS.
4. POWER PACKS SHALL BE RATED IN AMPERAGES AND VOLTAGES AS MAY BE REQUIRED TO SUIT APPLICATION.
5. PROVIDE A MINIMUM OF AT LEAST 10% EXTRA POWER PACKS OF EACH SIZE AND TYPE UTILIZED AND ZONE AS MAY BE DIRECTED BY THE ELECTRICAL ENGINEER.

TASK TUNING:

SET THE DEFAULT (MAXIMUM) LIGHT LEVELS TO SUIT THE PARTICULAR TASK OR USE OF A WORKSPACE AS FOLLOWS:

FUNCTION / SPACE	ILLUMINANCE (AVG. FOOTCANDLES)
CLASSROOMS	35 FC
VESTIBULES	10 FC
RECEPTION	35 FC
TESTING ROOMS	50 FC
OFFICES	35 FC
WORK ROOMS	30 FC
LARGE STORAGE ROOMS	10 FC
CORRIDORS	10 FC

VALUES INDICATED ABOVE ARE AVERAGE FOOTCANDLE LEVELS ON THE TASK SURFACE. TAKE METER READING AT THE COMPLETION OF THE PROJECT AS MAY BE REQUIRED TO APPROPRIATELY TUNE EACH SPACE; METER TO BE FURNISHED BY LIGHTING CONTROL SUPPLIER.

**LUMEN MAINTENANCE:** WHERE AVAILABLE AS A STANDARD FEATURE, PROVIDE LIGHT FIXTURES WITH AN 80% LUMEN MAINTENANCE FEATURE. IF THIS FEATURE IS NOT AVAILABLE, PLEASE INDICATE THIS IS AN EXCEPTION ON THE BID FORM.

**DIMMING LEADS:** PROVIDE DIMMING LEADS TO ALL FIXTURES THAT HAVE THE FOLLOWING:

1. NETWORK LOW-VOLTAGE LIGHTING CONTROL SYSTEMS.
2. STAND ALONE LOW-VOLTAGE LIGHTING CONTROL SYSTEMS.
3. ANYWHERE TASK TUNING IS REQUIRED.

**EMERGENCY OPERATION:** PROVIDE A UL-924 LISTED 1400 LUMEN, 90 MINUTE EMERGENCY BATTERY PACK (BODINE 850, OR APPROVED EQUIVALENT). REFER TO FLOOR PLANS, LIGHTING DETAILS, AND LIGHT FIXTURES SCHEDULE. ALL EGRESS LIGHT FIXTURES SHALL BE SWITCHED OFF WITH OTHER NORMAL-POWERED LIGHT FIXTURES DURING NORMAL OPERATION, BUT POWERED 'FULL ON' DURING AN EMERGENCY OPERATION.

**LOW VOLTAGE CABLES:** PROVIDE CABLES IN TYPES AND SIZES IN ACCORDANCE WITH ALL MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS. CABLES SHALL BE PLENUM RATED AND SUPPORTED BY J-HOOKS ATTACHED TO LIGHT FIXTURE DROP WIRES AT 12" ABOVE RECESSED LAY-IN LIGHT FIXTURES. SECURE CABLES AT A SPACING OF NOT MORE THAN 80" ON CENTERS. PROVIDE J-HOOKS SUPPORTED FROM ALL-THREAD AS MAY BE REQUIRED TO MEET SPACING CRITERIA. INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE NEC 300.11. ALL CABLES SHALL BE ROUTED IN A NEAT WORKMANLIKE MANNER PARALLEL AND/OR PERPENDICULAR TO CEILING GRIDS.

SHOP DRAWINGS AND PRODUCT DATA:

**PRODUCT DATA:** PROVIDE PRODUCT DATA FOR ALL SYSTEM COMPONENTS CLEARLY DELINEATING THE DEVICES WHICH ARE TO BE PROVIDED.

**SHOP DRAWINGS:** PROVIDE 1/8" SCALED 30" X 42" AUTOCAD DRAWINGS SHOWING THE LIGHTING CONTROL SYSTEM DEVICES PLACED ON THE CEILING AND FLOOR PLANS. OBTAIN FLOOR AND CEILING PLANS FROM THE ARCHITECT. DRAWINGS SHALL INCLUDE COMPLETE LINE AND LOW VOLTAGE INTERCONNECTION REQUIREMENTS. PROVIDE SEPARATE LINE AND LOW VOLTAGE DRAWINGS AS MAY BE REQUIRED FOR CLARITY. LOW VOLTAGE DRAWING SHALL INCLUDE LENGTHS OF ALL CABLES. INCLUDE COMPLETE WIRING DIAGRAMS, ONE-LINE DIAGRAMS, DETAILS, ETC.

**PROGRAMMING SCHEDULES:** PROVIDE COMPLETE SEQUENCING AND PROGRAMMING SCHEDULES FOR ALL DEVICES, ZONES, AND SCENES.

**RECORD DRAWINGS:** AT THE COMPLETION OF THE PROJECT, PROVIDE UPDATED SHOP DRAWINGS INCLUDING ALL CHANGES MADE DURING CONSTRUCTION. INDICATE EXACT LOCATION BY DIMENSION OF ALL POWER PACKS AND OTHER DEVICES MOUNTED ABOVE ACCESSIBLE CEILINGS.

**WARRANTY:** WARRANTY ALL WORK INCLUDING PARTS AND LABOR FOR A PERIOD OF ONE YEAR.

**PROGRAMMING:** PROGRAMMING ALL SYSTEMS AS DIRECTED BY THE ELECTRICAL ENGINEER. MEET WITH THE ELECTRICAL ENGINEER AT THEIR OFFICE PRIOR TO PREPARATION OF SHOP DRAWINGS TO DISCUSS SPECIFIC PROGRAMMING AND ZONING REQUIREMENTS. EACH NETWORKED OR STANDALONE SYSTEM SHALL BE PROGRAMMED TO REVERT BACK TO ITS NORMAL 'ON' POSITION ONE HOUR AFTER SELECTING A SCENE OR RAISING OR LOWERING A LIGHTING ZONE.

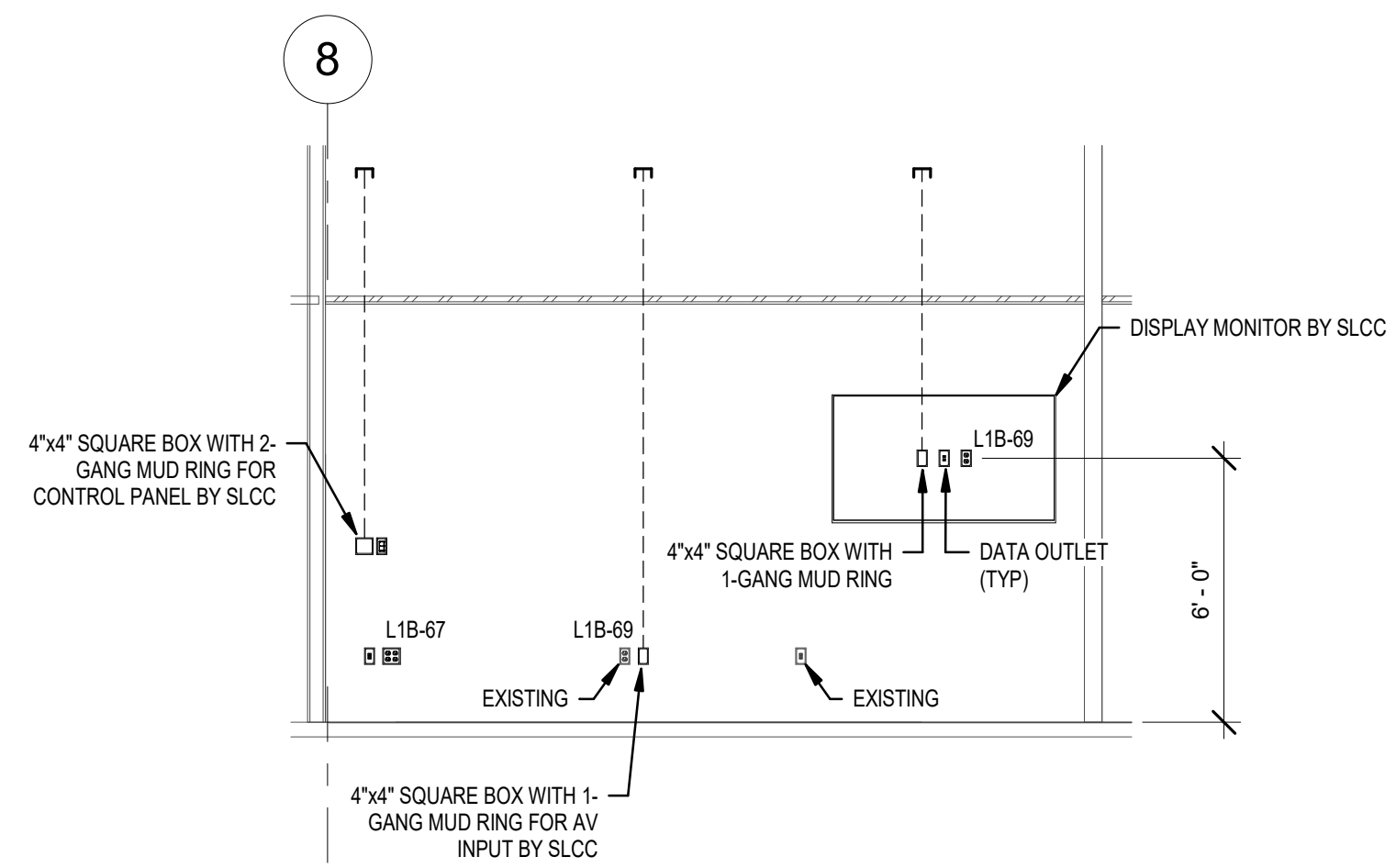
**COMMISSIONING:** COMMISSION EACH PORTION OF THE LIGHTING CONTROL SYSTEMS AT THE COMPLETION OF THE PROJECT TO VERIFY THAT THE SYSTEM PERFORMS AS INTENDED. COORDINATE COMMISSION SERVICES WITH COMMISSIONING AGENT. ASSIST THE OWNER IN PROGRAMMING AND MAPPING THE SYSTEM FOR INTEGRATION INTO THE BACNET BUILDING MANAGEMENT SYSTEM TO THEIR SATISFACTION.

**RETRO-COMMISSIONING:** DURING THE ONE YEAR WARRANTY PERIOD, PROVIDE RETRO-COMMISSIONING SERVICES AT THREE MONTH, SIX MONTH, NINE MONTH, AND ONE YEAR MARKS. PROVIDE AT LEAST 8 HOURS OF COMMISSIONING SERVICE FOR EACH OF THE FOUR RETRO-COMMISSIONING PERIODS. THIS WILL INCLUDE MEETING WITH THE OWNER TO RECEIVE FEEDBACK ON THE SYSTEM AND MAKING CHANGES TO THE SYSTEM INCLUDING PROGRAMMING, TASK TUNING, ETC.

**TRAINING:** PROVIDE EIGHT HOURS OF TRAINING FROM A FACTORY TRAINED AND CERTIFIED TECHNICIAN AT THE COMPLETION OF THE PROJECT. SCHEDULE TRAINING WITH THE OWNER.

**BIDDING REQUIREMENTS (OWNER SPECIFIC MANUFACTURERS):** BIDDERS SHALL BREAK OUT THE LIGHT FIXTURE PACKAGE SEPARATE FROM THE LIGHTING CONTROL SYSTEM. ALL SPECIAL FEATURES PERTAINING TO LIGHTING CONTROLS ASSOCIATED WITH THE LIGHT FIXTURES SHALL BE CONSIDERED LIGHTING CONTROLS. BIDDERS WHO DO NOT CONFORM TO THIS REQUIREMENT MAY BE DISQUALIFIED.

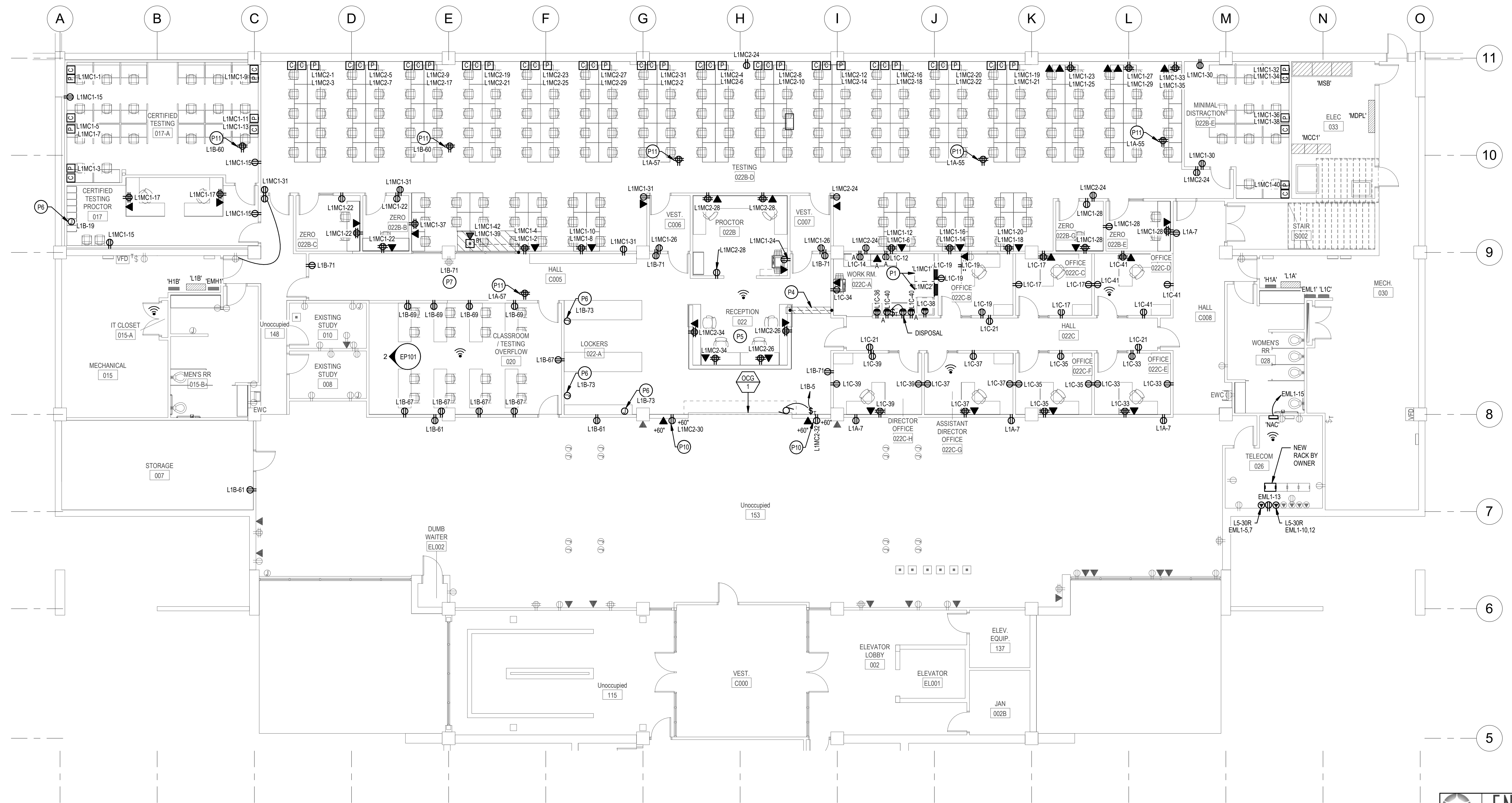




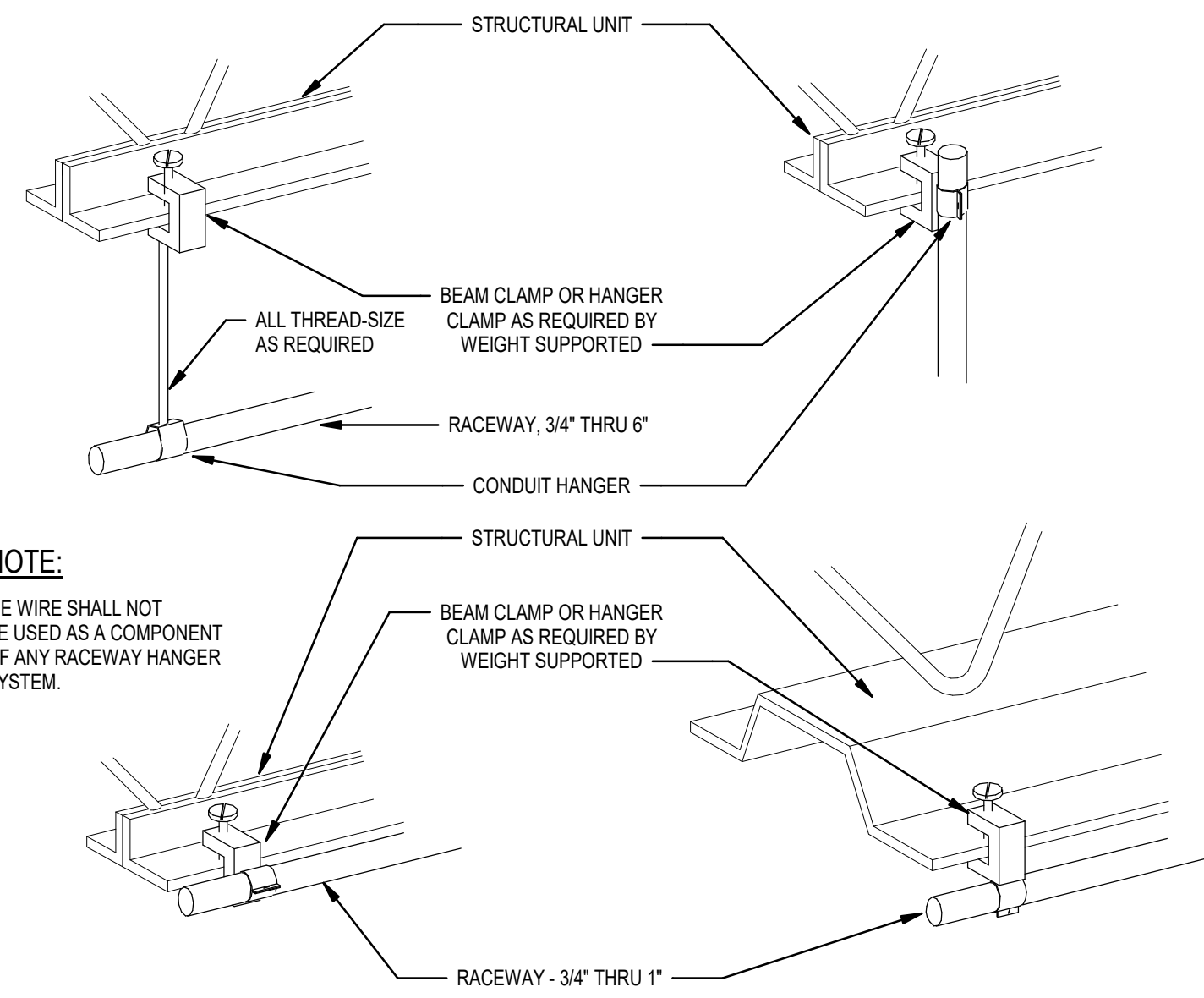
2 CLASSROOM/TESTING OVERFLOW ELEVATION  
EP101 SCALE 1/4" = 1'-0"

- KEYED NOTES** #
- P1 NEW LOCATION OF EXISTING PANELS. REFER TO KEYED NOTE 'P8' AND SHEET EP701 FOR ADDITIONAL INFORMATION.
  - P4 RUN NEW POWER AND DATA CONDUIT UNDER SLAB AND STUB UP INTO RECEPTION DESK WALL. SAW CUT EXISTING SLAB AS REQUIRED. PATCH AND REPAIR SLAB. PULL 1" CONDUIT FOR DATA CABLES.
  - P6 PROVIDE HARDWIRE POWER FOR LOCKERS. COORDINATE EXACT CONNECTION REQUIREMENTS WITH LOCKER SUPPLIER AND ARCHITECT.
  - P7 TIE EXISTING OUTLET TO NEW CIRCUIT SHOWN.
  - P10 TV MONITOR. COORDINATE EXACT LOCATION WITH SLCC.
  - P11 PROVIDE 4-PLEX OUTLET ABOVE ACCESSIBLE CEILING, IN THE STRUCTURE, FOR AV CAMERAS. COORDINATE EXACT LOCATION WITH SLCC.

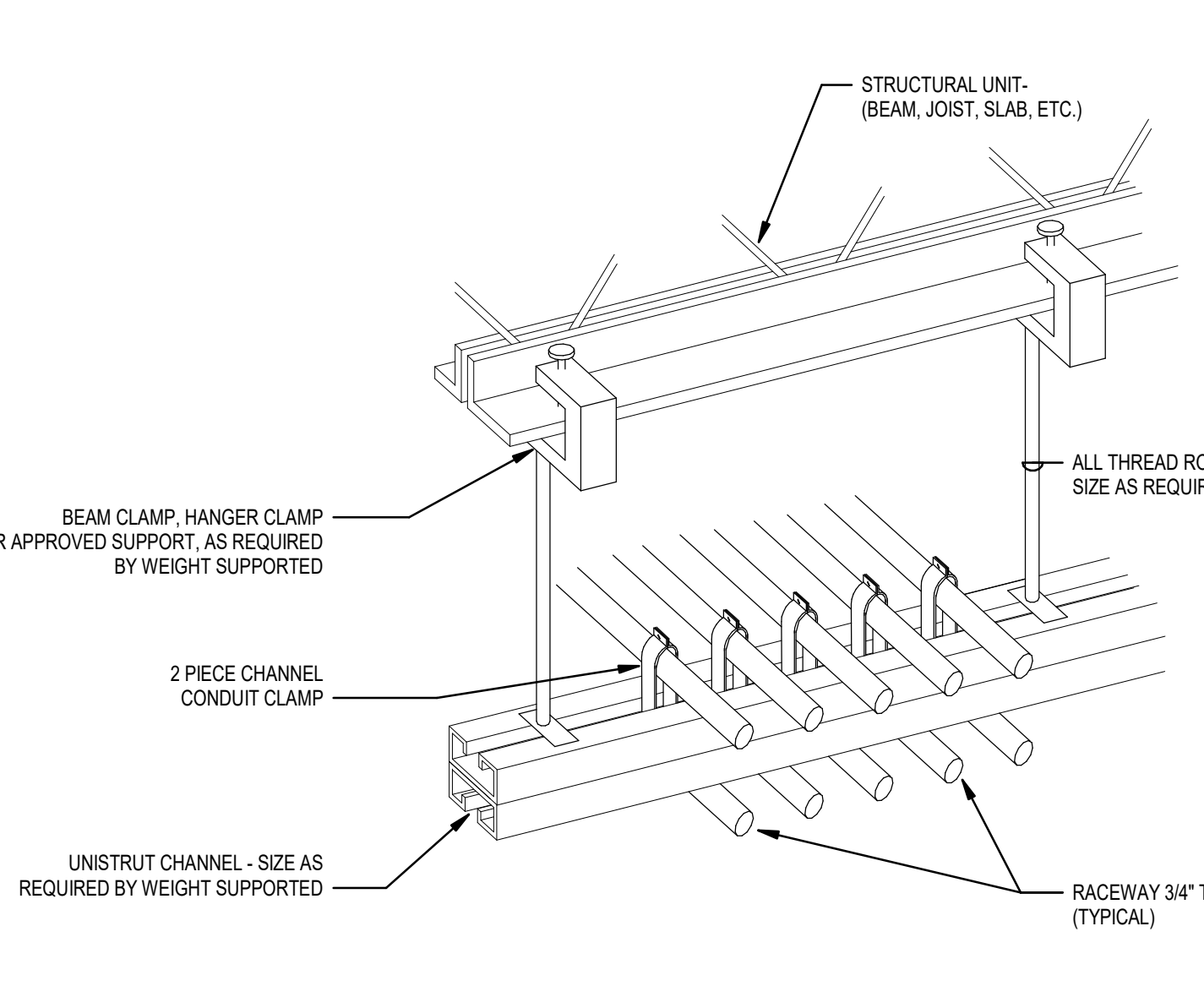
- POWER GENERAL NOTES:**
1. ALL 120V, 20AMP OUTLETS THAT ARE WITHIN 6' OF ANY SINK SHALL BE GFCI.
  2. THE CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A SCHEMATIC REPRESENTATION OF DEVICE LOCATIONS AND CONDUIT RUNS.



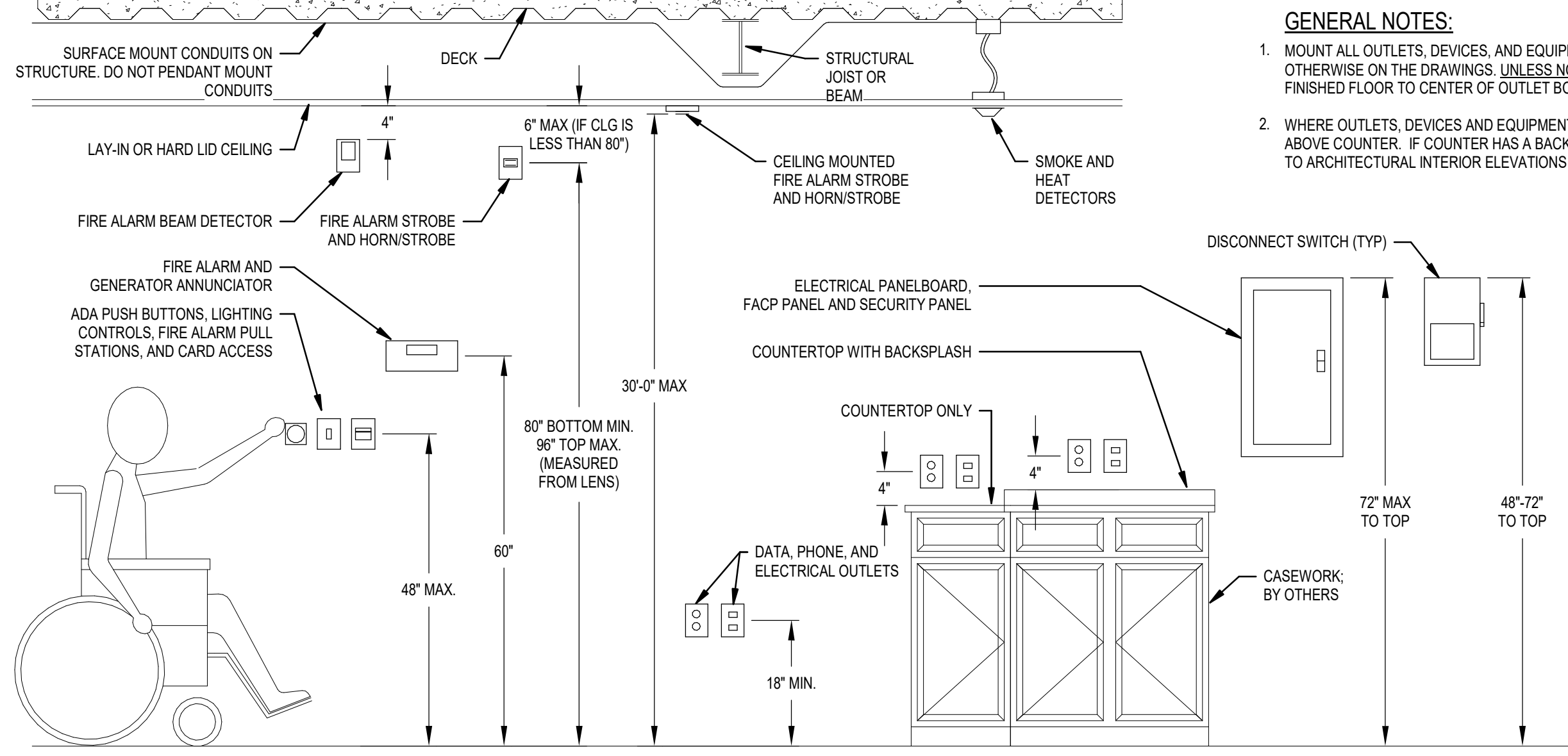




**3 TYPICAL RACEWAY DETAIL**  
SCALE: NTS

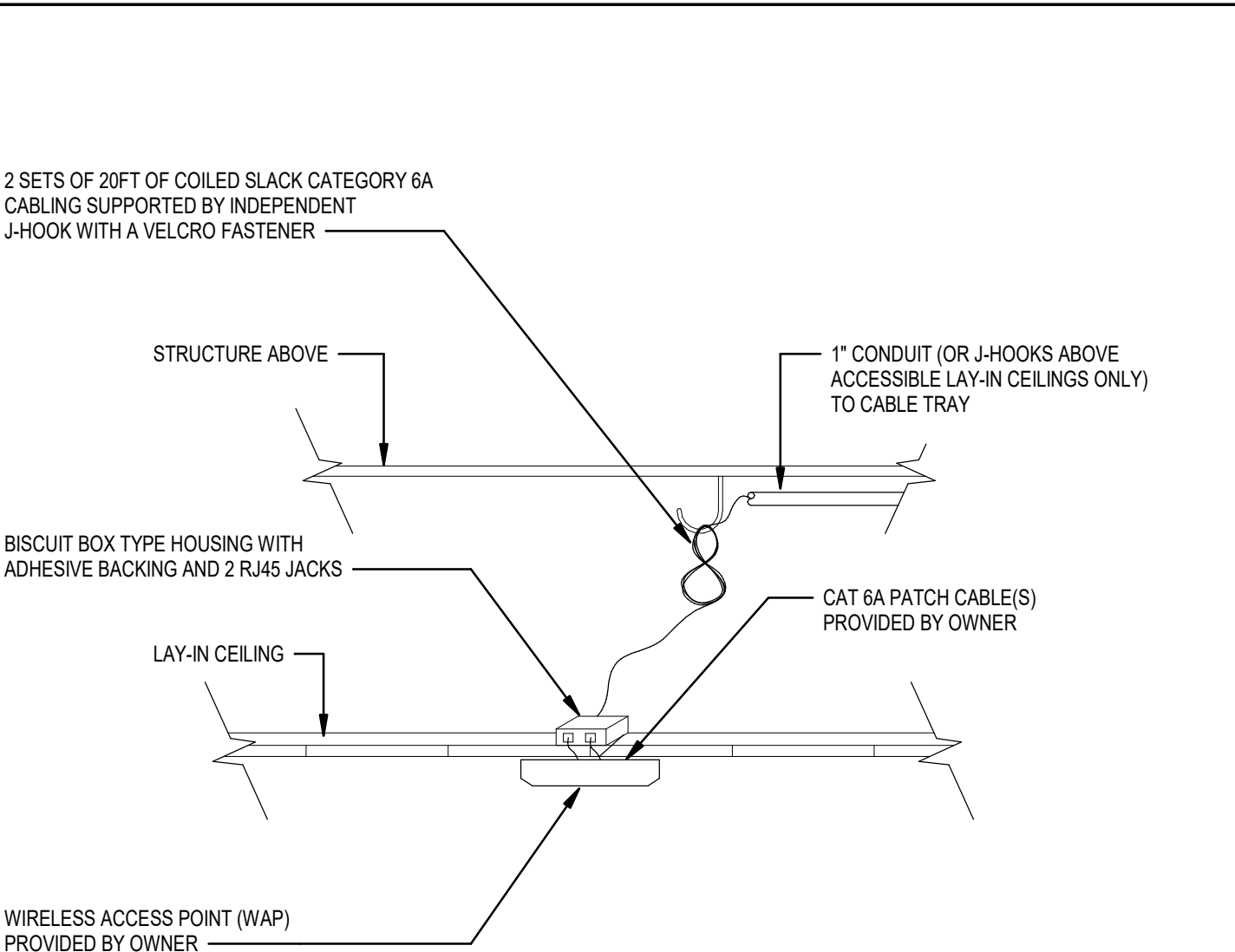


**2 MULTIPLE RACEWAY SUPPORT DETAIL**  
SCALE: NTS

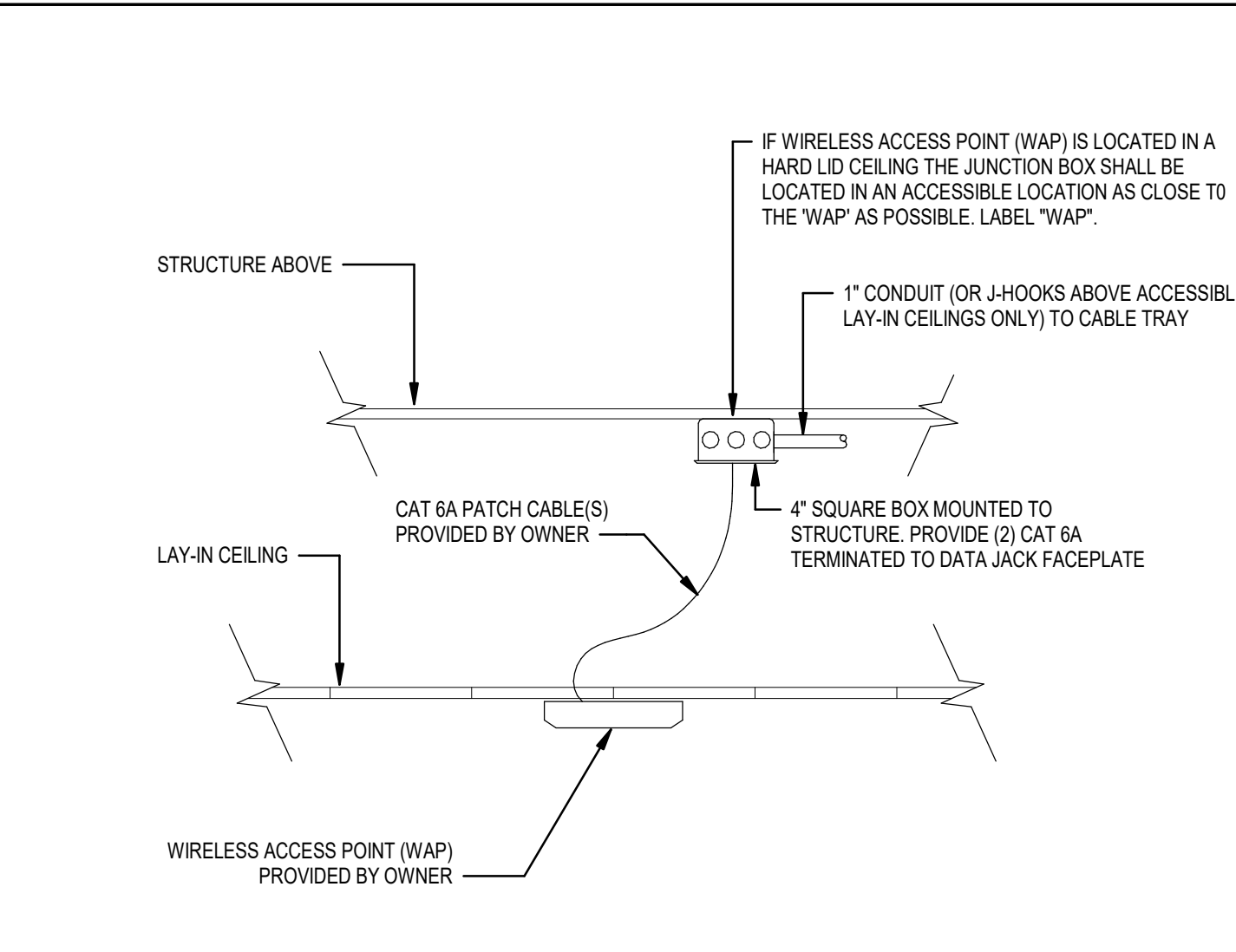


**1 TYPICAL DEVICE ELEVATION DETAIL**  
SCALE: NTS

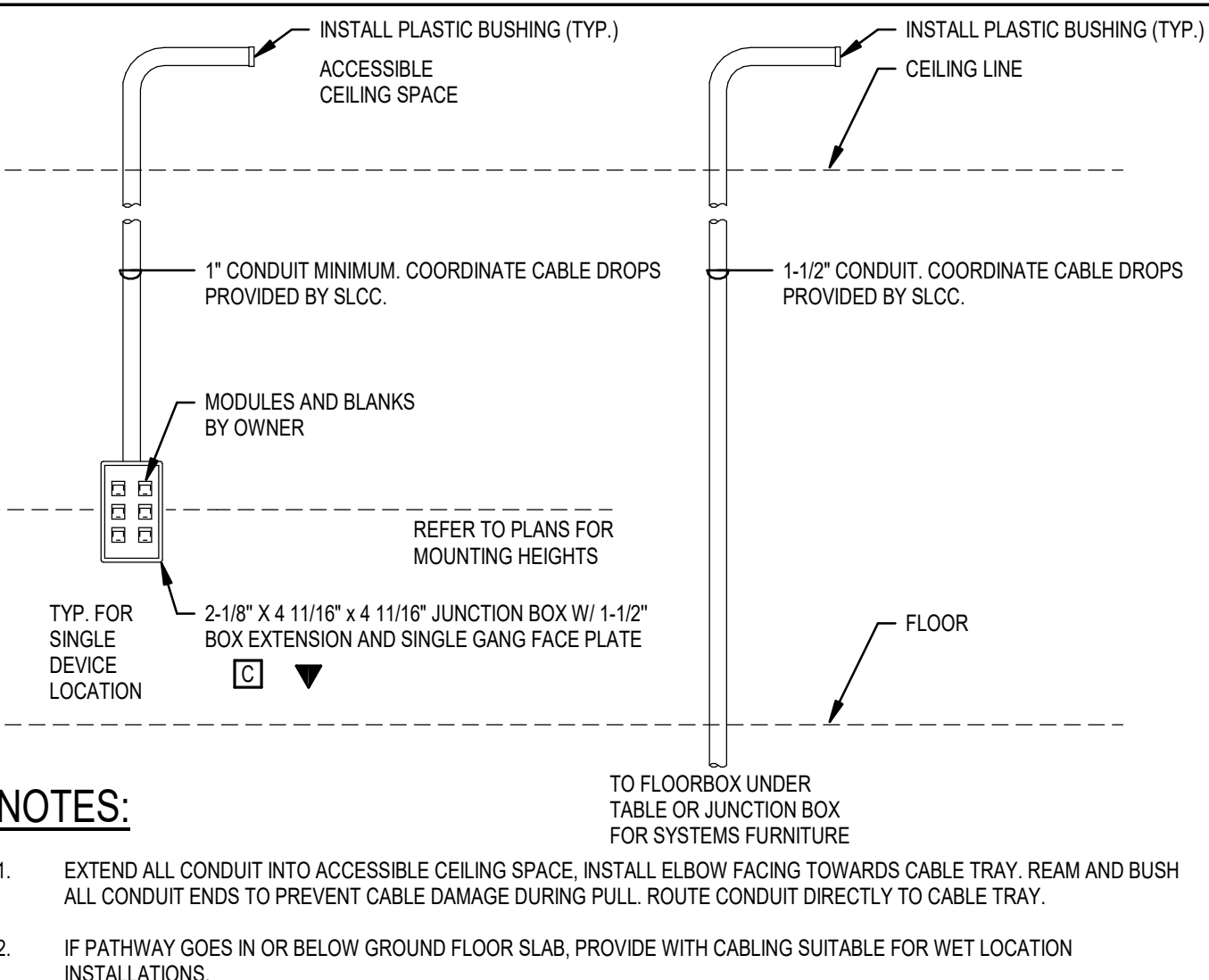
**GENERAL NOTES:**  
1. MOUNT ALL OUTLETS, DEVICES, AND EQUIPMENT AT HEIGHTS INDICATED BELOW. UNLESS NOTED OTHERWISE ON THE DRAWINGS, UNLESS NOTED OTHERWISE, HEIGHTS ARE GIVEN FROM FINISHED FLOOR TO CENTER OF OUTLET BOX.  
2. WHERE OUTLETS, DEVICES AND EQUIPMENT ARE NOTED BY THE SUBSCRIPT 'A', MOUNT AT 4\"/>



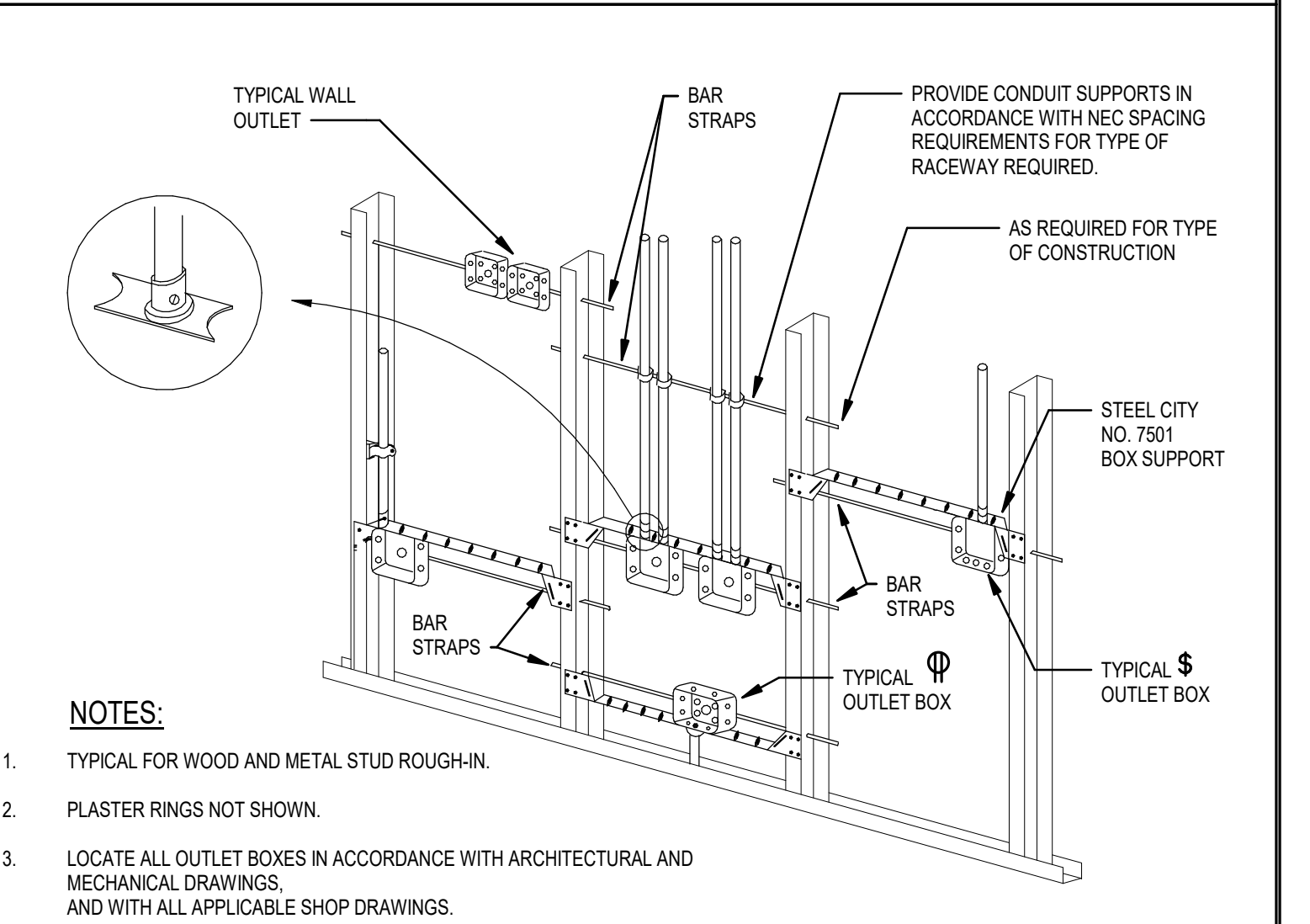
**5 HARD LID DROPPED CEILING MOUNTED WAP DETAIL**  
SCALE: NTS



**6 LAY-IN DROPPED CEILING MOUNTED WAP DETAIL**  
SCALE: NTS



**7 VOICE/DATA ROUGH-IN DETAIL**  
SCALE: NTS



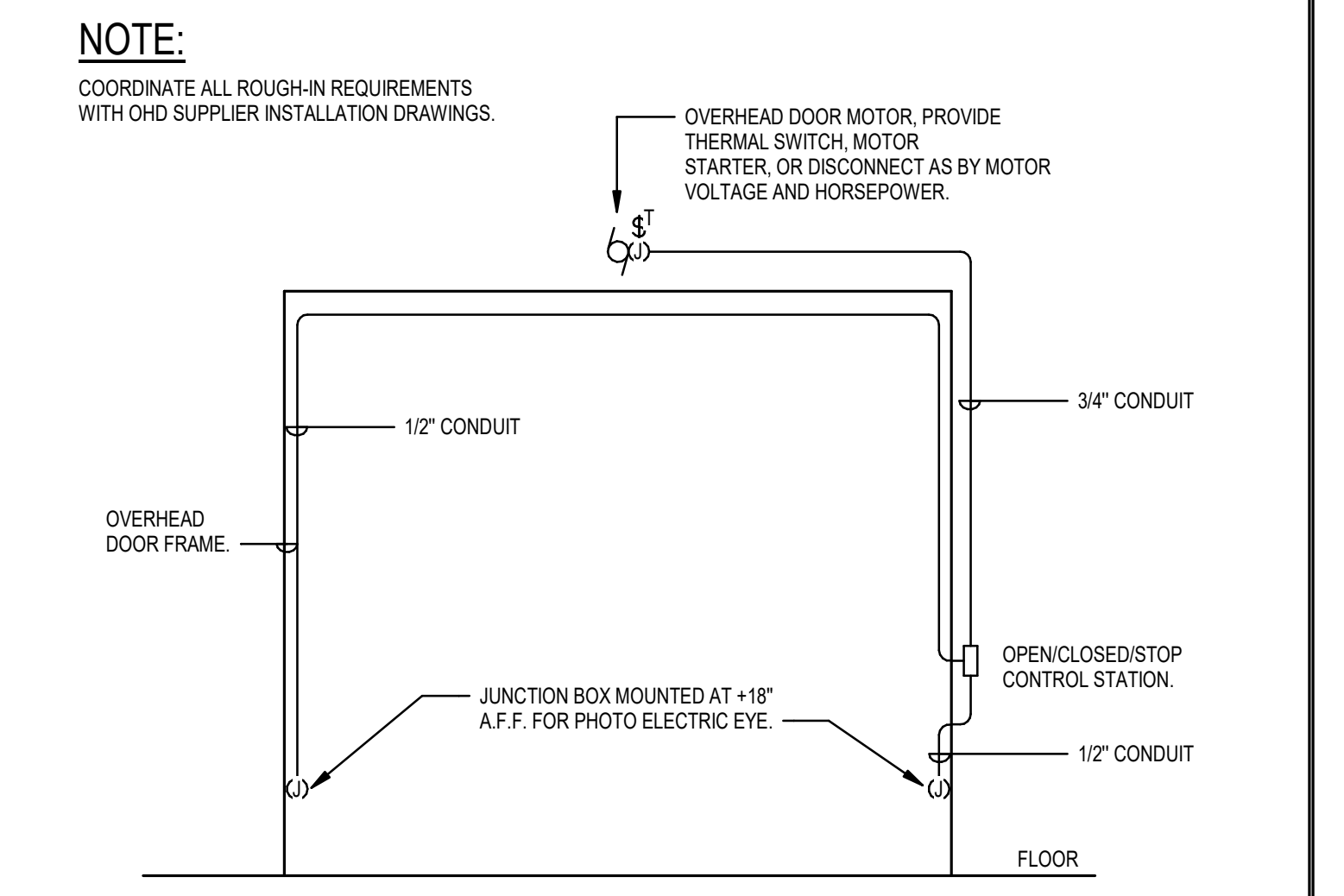
**4 TYPICAL ROUGH-IN REQUIREMENTS**  
SCALE: NTS

FLOOR BOX SCHEDULE											
TYPE	DEVICE CAPACITY	CONDUIT OPENINGS	G1	G2	G3	G4	G5	G6	MANUFACTURER	SERIES #	COMMENTS
B1	4 GANGS	3/4" - 1 1/4"	DUPLEX	DUPLEX	DATA	BLANK	-	-	LEGRAND	RFB4-06	RECESSED FLOOR BOX WITH FLUSH STYLE SQUARE COVER WITH CARPET/TILE INSERT. RATED FOR ON-GRADE CONCRETE FLOORS. PROVIDE ALL ACCESSORIES AS REQUIRED FOR A COMPLETE SYSTEM. COORDINATE ALL COVER FINISHES WITH ARCHITECT PRIOR TO RELEASE.

- NOTES:**
1. RUN 1" CONDUIT FROM EACH FLOOR BOX WITH DATA TO THE NEAREST CABLE TRAY. PROVIDE PULL STRING AND LABEL.
  2. FOR TILE INSTALLATION, MAKE FLUSH WITH TILED FLOOR.
  3. FOR CARPET INSTALLATION, PROVIDE COVER WITH CARPET INSERT.
  4. FOR ALL FLOOR BOXES ON GRADE OR BELOW, POUR SUB-PAD BELOW GRADE.
  5. COORDINATE EXACT LOCATIONS OF FLOOR BOXES AND POKE-THRU'S WITH OWNER/ARCHITECT.

EQUIPMENT SCHEDULE																				
UNIT NAME	TYPE	No.	DESCRIPTION	ELECTRICAL INPUT					FEEDER			STARTER / DISCONNECT / CONNECTION AT UNIT		ENCLOSURE	REMARKS					
				LOAD	TYPE	VOLTS	PHASE	AMPS	QTY	CONDUIT SIZE	WIRE QTY	WIRE SIZE	EQPT GND			NOTE	STARTER SIZE	DISCONNECT SIZE	POLES	
OVERHEAD COIL GRILL	OCG	1		0.75	HP	120 V	1	13.8 A	1	3/4"	2	12	12	1A	-	-	1 HP	1	NEMA 1	COORDINATE EXACT MOTOR SIZE SUPPLIED PRIOR TO ANY WORK.

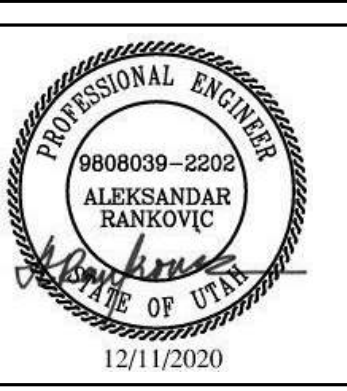
- STARTER/DISCONNECT/CONNECTION AT UNIT NOTES:**
1. MANUAL STARTER WITH THERMAL OVERLOAD
  2. MANUAL STARTER WITH THERMAL OVERLOAD PROTECTION & LOW VOLTAGE RELAY / CONTACTOR FOR ATC CONTROL.
  3. COMBINATION MAGNETIC STARTER / FUSED DISCONNECT
  4. COMBINATION MAGNETIC STARTER / MOTOR CIRCUIT PROTECTOR (MCP)
  5. COMBINATION VARIABLE FREQUENCY DRIVE / MOTOR CIRCUIT PROTECTOR (MCP)
  6. REDUCED VOLTAGE STARTER
  7. COMBINATION TWO-SPEED STARTER / FUSED DISCONNECT
  8. COMBINATION TWO-SPEED STARTER / MOTOR CIRCUIT PROTECTOR (MCP)
  9. NON-FUSED DISCONNECT SWITCH
  10. FUSED DISCONNECT SWITCH
  11. BREAKER AND ENCLOSURE
  12. DIRECT CONNECTION
  13. DUPLEX RECEPTACLE OUTLET
  14. SPECIAL PURPOSE OUTLET
  15. SHUNT-TRIP DISCONNECT
  16. TOGGLE SWITCH
  17. MAGNETIC STARTER
  18. FUSED ELEVATOR SWITCH
  19. PROVIDE LATE-MAKE-EARLY-BREAK DISCONNECT
- GENERAL NOTES:**
1. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND SIZE FEEDER, STARTER, DISCONNECT AND OVERCURRENT PROTECTION IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OF ACTUAL EQUIPMENT SUPPLIED.
  2. REFER TO FEEDER SCHEDULE ON THE ONE-LINE DIAGRAM FOR CONDUIT AND WIRE SIZES.
  3. ELECTRICAL CONTRACTOR SHALL REVIEW MECHANICAL DRAWINGS FOR ANY ADDITIONAL REQUIREMENTS PRIOR TO BID.
  4. ELECTRICAL CONTRACTOR SHALL REVIEW OTHER TRADE SUBMITTALS FOR ANY EQUIPMENT REQUIRING CONNECTION BY ELECTRICAL CONTRACTOR AND COORDINATE ALL REQUIREMENTS PRIOR TO ROUGH-IN.
  5. SIZE ALL FUSES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



**8 TYPICAL OVERHEAD DOOR ROUGH-IN DETAIL**  
SCALE: NTS

PROJECT #: 20029

BID SET	
DATE	REVISION
2/17/2021	



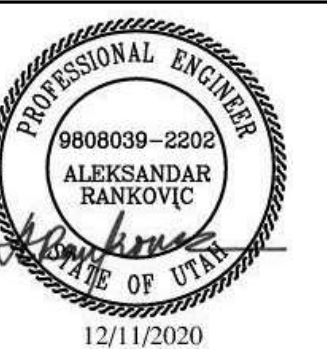
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**POWER DETAILS AND SCHEDULES**



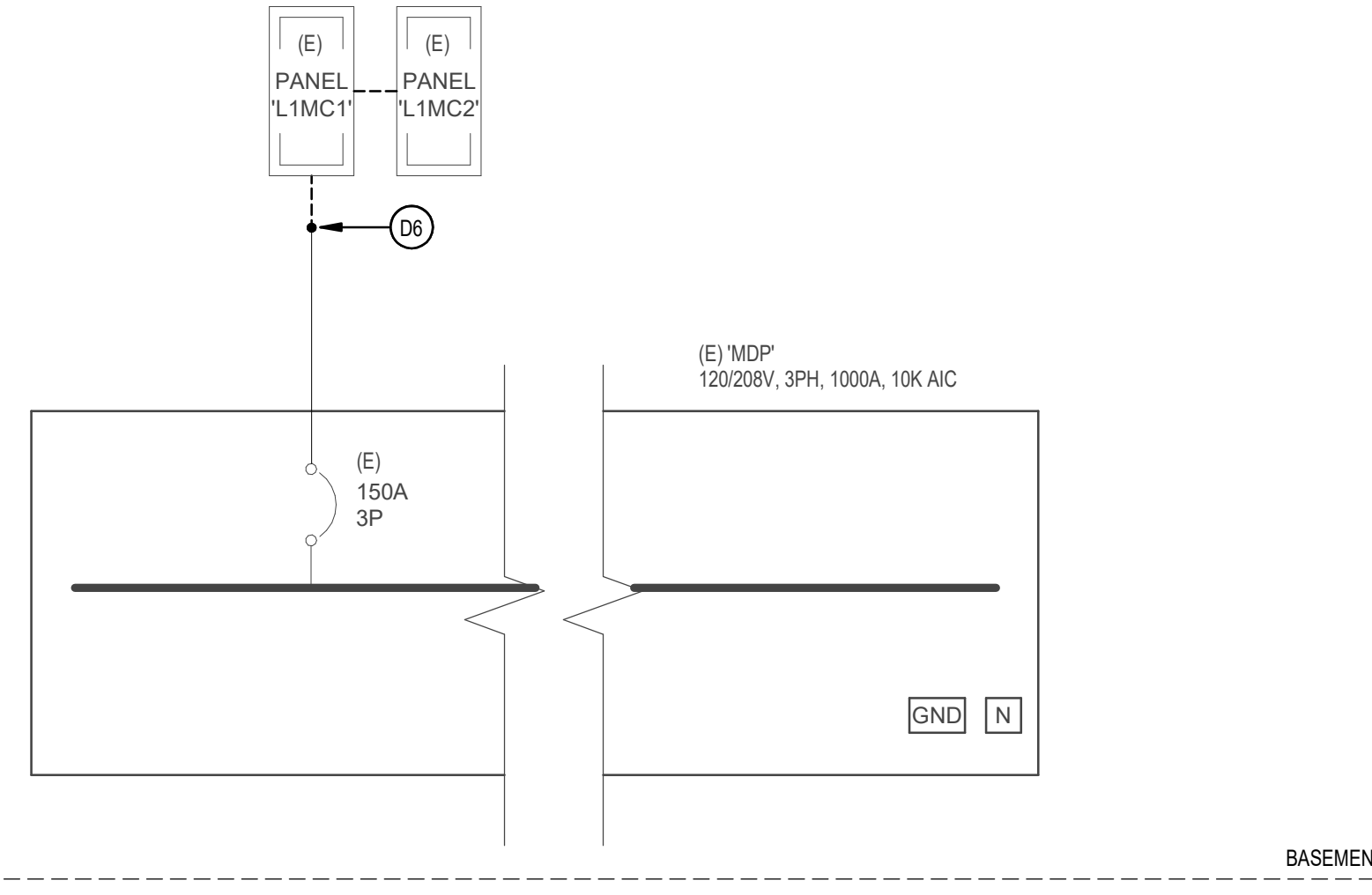


BID SET 2/17/2021	
DATE	REVISION

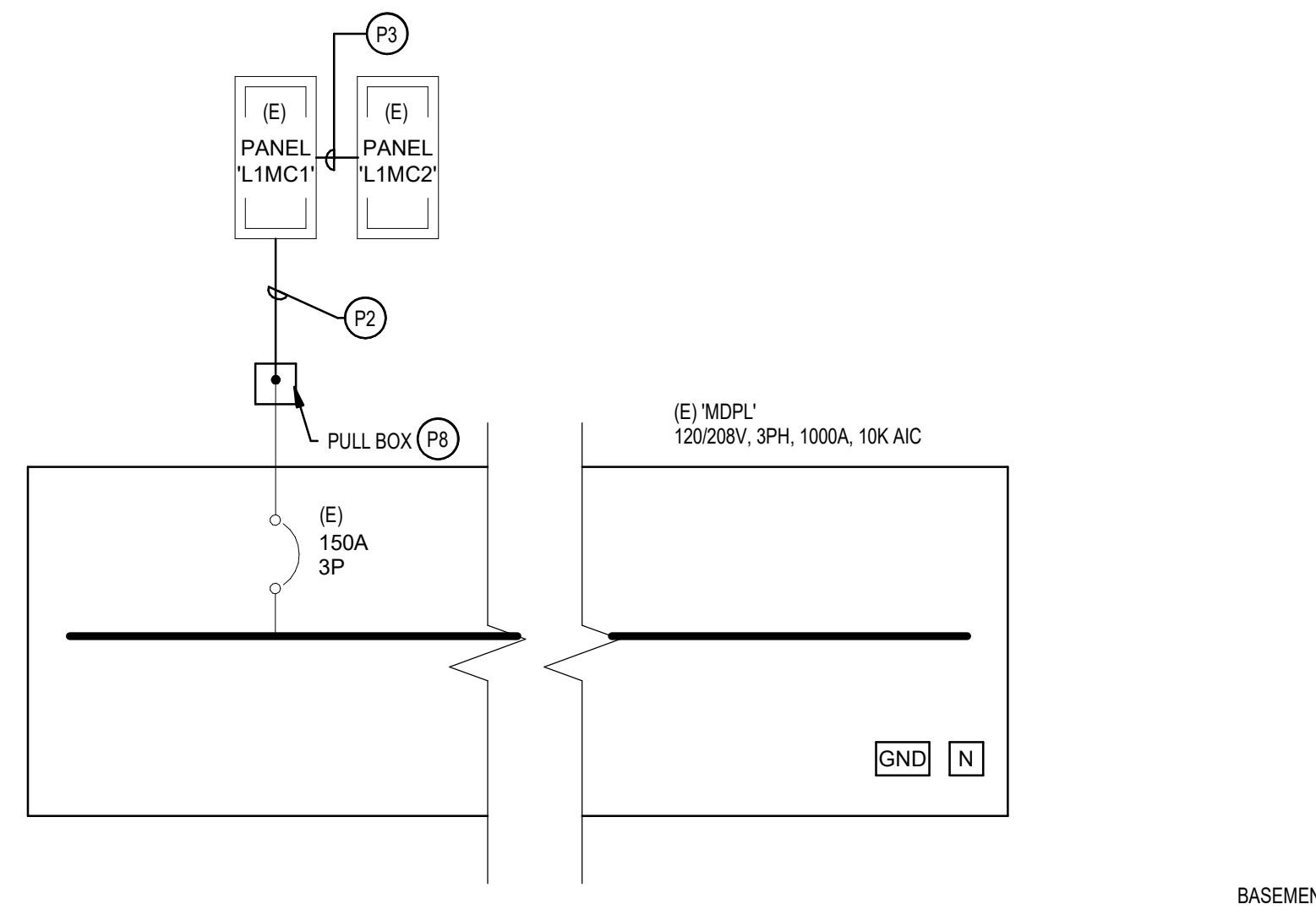


- GENERAL ONE-LINE NOTES:**
- THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE OWNER PRIOR TO BIDDING AND PROVIDE EQUIPMENT RATED ACCORDINGLY. SUBMIT FAULT CURRENT CALCULATIONS WITH SHOP DRAWINGS SUBMITTAL.
  - PROVIDE FULL LENGTH VERTICAL BUSSING ALL IN ALL SWITCHBOARDS, DISTRIBUTION PANELBOARDS, AND PANELBOARDS.
  - COORDINATE SPACE WITH ALL OTHER TRADES TO MAINTAIN ALL CODE-REQUIRED CLEARANCES.
- KEYED NOTES** (P)
- D6 EXISTING FEEDER SHALL BE INTERCEPTED AND EXTENDED TO NEW LOCATIONS. DEMOLISH UNUSED CONDUIT AND CONDUCTORS.
- P2 EXTEND FEEDER TO NEW LOCATION SHOWN ON EP101. ASSUME " CONDUIT, (4) # 1/0 AWG, (1) #6 AWG GND FOR BIDDING PURPOSES. FIELD VERIFY EXACT FEEDER.
- P3 PROVIDE NEW FEEDER, SAME SIZE AS EXISTING. ASSUME " CONDUIT, (4) # 1/0 AWG, (1) #6 AWG GND FOR BIDDING PURPOSES. FIELD VERIFY EXACT FEEDER.
- P8 PROVIDE PULL BOX TO INTERCEPT EXISTING OVERHEAD FEED TO PANELS L1MC1 AND L1MC2. EXTEND FEEDER TO NEW LOCATIONS SHOWN. REFER TO EP701 FOR ADDITIONAL INFORMATION. PROVIDE JUNCTION BOXES AS REQUIRED FOR EXISTING TO REMAIN BRANCH CIRCUITS THAT ARE TO BE EXTENDED TO NEW PANEL LOCATIONS. PROVIDE ADDITIONAL CONDUIT AND CONDUCTORS AS REQUIRED. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.

ONE-LINE SYMBOLS					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	LIGHTING AND APPLIANCE PANEL BOARD		DISTRIBUTION PANEL		LOAD CENTER
	CIRCUIT BREAKER		CIRCUIT BREAKER ENCLOSED		CIRCUIT BREAKER ELECTRONIC
	NORMALLY OPEN CONTACT		NORMALLY CLOSED CONTACT		THERMAL OVERLOAD
	MOTOR		KEY INTERLOCK		RELAY COIL
	DISCONNECT SWITCH		DISCONNECT SWITCH FUSED		SURGE SUPPRESSION DEVICE
	FUSED SWITCH		COMBINATION MCP STARTER WITH THERMAL OVERLOAD		COMBINATION FUSIBLE STARTER WITH THERMAL OVERLOAD
	MUSHROOM PUSH BUTTON		PHASE FAILURE RELAY		METER
	AUTOMATIC TRANSFER SWITCH		GROUND		CURRENT TRANSFORMER
	TRANSFORMER		GUTTER		GENERATOR
	GROUND AND NEUTRAL		STANDARD SWITCHED WAY		GROUND RODS
	POWER FACTOR CORRECTION CAPACITOR & ENCLOSURE		CT CABINET		PULLING SECTION
	CAM LOCK MALE		CAM LOCK FEMALE		LIGHTNING PROTECTION
	COLD WATER PIPE		BUILDING STEEL		CONCRETE ENCASED ELECTRODE
	ISOLATION AUTOMATIC TRANSFER SWITCH		MAIN SWITCHBOARD		
	BUS BAR		GROUND SLEEVE		



**1 PARTIAL POWER SINGLE LINE DIAGRAM - DEMOLITION**  
SCALE: NTS



**3 PARTIAL POWER SINGLE LINE DIAGRAM - NEW**  
SCALE: NTS



TELECOMMUNICATIONS GENERAL NOTES AND GUIDELINES:

COORDINATION

- CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION MEETING WITH OWNER'S REPRESENTATIVES AND ELECTRICAL ENGINEER PRIOR TO BEGINNING ANY WORK OR PURCHASING ANY EQUIPMENT.

GENERAL

- ALL TELECOM ROOMS SHALL BE LINED WITH 1/2" A/C OR BETTER PLYWOOD EXTENDING 8" HIGH WITH OUTLETS EXTENDING FLUSH WITH THE SURFACE OF THE WOOD AT 6 FT ABOVE FINISHED FLOOR.
- ALL BACKBONE AND/OR RISER CONDUITS SHOULD EXTEND 3" FROM THE FLOOR OR CEILING AND NO MORE THAN 2" OFF ANY WALL. CONDUITS SHALL BE THREADED FOR COLLARS AND SPACE ALLOWED FOR BUSHINGS OR CAPS.
- CONDUIT ROWS SHOULD NOT EXCEED TWO DEEP.
- CONDUITS THAT ENTER A TELECOM ROOM SHOULD TERMINATE NEAR THE CORNERS TO ALLOW FOR PROPER RACKING.
- ALL PATHWAYS MUST NOT EXCEED 295' FROM THE TELECOM RACK TO THE DATA OUTLET.
- ALL PENETRATIONS THROUGH FIRE RATED WALL SHALL BE PROVIDED WITH FIRE RATED PATHWAYS, PUTTY PADS AND FIRE CAULKING SUCH THAT THE WALL RATING IS MAINTAINED. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- REFER TO DRAWINGS AND SPECIFICATIONS FOR ALL OUTLET/DEVICE INSTALLATION REQUIREMENTS AND LOCATIONS.

ACCEPTABLE CONDUIT RUNS

- MUST NOT HAVE A BEND OVER 90 DEGREES OR AN AGGREGATE OF BENDS IN EXCESS OF 180 DEGREES BETWEEN PULL POINTS.
- CONDUIT SEGMENTS SHALL NOT EXCEED 100' WITHOUT A PULL POINT.
- CONDUIT RUNS SHOULD BE LIMITED TO LESS THAN 150'
- ALL CONDUITS SHALL BE EQUIPPED WITH A PULL CORD THAT HAS A MINIMUM RATING OF 200LBS. CONDUIT SHALL BE SIZED PER ANSITIA/EIA 569-B, WITH A MINIMUM SIZE OF 1". SEE CONDUIT SIZING SCHEDULE FOR EXACT SIZES REQUIRED.
- ALL HORIZONTAL CABLING CONDUIT RUNS SHALL BE SINGLE CONTINUOUS RUNS FROM THE VOICE/DATA OUTLET TO THE NEAREST ACCESSIBLE CEILING SPACE. JUNCTION BOXES ARE ALLOWED IN ACCESSIBLE LOCATIONS ONLY.
- FLEXIBLE METALLIC AND FLEXIBLE NONMETALLIC CONDUIT ARE PROHIBITED.

PATHWAYS AND CABLE SUPPORT

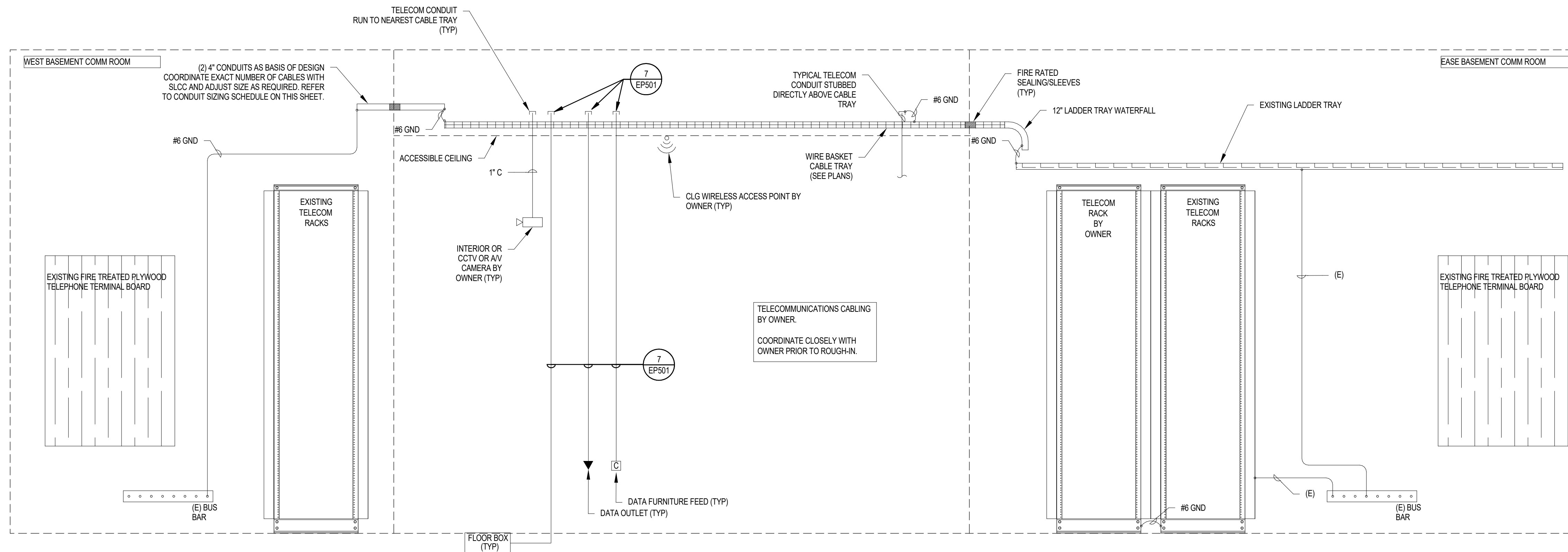
- PATHWAYS MUST HAVE ADEQUATE SUPPORT TO WITHSTAND PULLING THE CABLES.
- PATHWAYS SHOULD BE INSTALLED AT LEAST 3" OF CLEAR VERTICAL SPACE ABOVE THE CEILING TILES AND T-BARS TO ENSURE ACCESSIBILITY, AND SHOULD AT NO POINT REST OR BE SUPPORTED BY ANY COMPONENT OF THE SUSPENDED CEILING.

CABLE TRAYS

- ALL CABLE TRAYS MUST BE INSTALLED TO MEET NATIONAL AND LOCAL BUILDING CODES.
- THE INSIDE OF A CABLE TRAY MUST BE FREE OF BURRS, SHARP EDGES, OR PROJECTIONS THAT CAN DAMAGE THE CABLE DURING INSTALLATION.
- ELEVATION CHANGES AND OFFSETS MUST BE KEPT TO A MINIMUM.
- TRAY SHOULD EXTEND AT LEAST 1" INTO THE TELECOM ROOM THEN WATERFALL TO LOWER CABLE RUNWAY SYSTEM TO ACCOMMODATE INTERNAL RACKING.
- TRAYS SHOULD BE SUPPORTED EVERY 5' AND WITHIN 24" ON EACH SIDE OF A FITTING (UNLESS OTHERWISE NOTED BY THE MANUFACTURER).
- ALL METALLIC CABLE TRAYS MUST BE GROUNDED, MARKED AND ALL SECTIONS BONDED IN ACCORDANCE WITH APPLICABLE CODES, STANDARDS AND REGULATIONS.
- PATHWAYS SHOULD BE KEPT IN COMMON AREAS AS MUCH AS POSSIBLE TO AVOID FUTURE MAINTENANCE OCCURRING IN PRIVATE WORK AREAS OR CONFERENCE ROOMS.
- CABLE TRAYS SHOULD BE SIZED TO BE AT NO MORE THAN 80% FILL (80% FILL OF ALLOWED 50% CABLE TRAY FILL) AT PROJECT COMPLETION. LARGER OR ADDITIONAL CABLE TRAY SHALL BE PROVIDED AS NECESSARY TO MEET THESE REQUIREMENTS.

GROUNTING AND BONDING

- PROVIDE #6 CU MINIMUM BONDING JUMPER TO ALL CONDUITS, RACKS, CABINETS, CABLE TRAYS, LADDER TRAYS, AND OTHER RACEWAY AND EQUIPMENT AS REQUIRED.



**1 TELECOMMUNICATIONS RISER DIAGRAM**  
SCALE: NTS

PROJECT #: 20029

BID SET 2/17/2021	
DATE	REVISION



VIEW AND PRINT THIS SHEET IN COLOR

TELECOM  
RISER  
DIAGRAM

EP702





### PANELBOARD SCHEDULE

**PANEL NAME: L1A**

MOUNTING: SURFACE      VOLTAGE: 120/208 Wye      LOCATION: MECH. 030      FEED FROM: SPD: -  
ENCLOSURE: NEMA 1      PHASE: 3      MAIN TYPE: MLO      BUS RATING: 400 A      NEUTRAL RATING: -  
DOOR TYPE: (EXISTING GE)      WIRES: 4      MCB RATING: -      ISOLATED GROUND: -  
Min. A.I.C. RATING: FIELD VERIFY      BUS MATERIAL: -

BRANCH BREAKERS														
KEYED NOTE	CIRCUIT DESCRIPTION	AMP	POLE	Load Type	CKT #	A	B	C	CKT #	Load Type	POLE	AMP	CIRCUIT DESCRIPTION	KEYED NOTE
9	COFFEE BAR OUTLET	20 A	1	--	1	0 VA	0 VA		2	--	1	20 A	-EXISTING LOAD NOW SPARE-	
9	COFFEE BAR OUTLET	20 A	1	--	3				4	--	1	20 A	-EXISTING LOAD NOW SPARE-	
9	COFFEE BAR OUTLET	20 A	1	--	5				6	--	1	20 A	-EXISTING LOAD NOW SPARE-	
10	RCPT - VEST. 153	20 A	1	R	7	720 VA	0 VA		8	--	1	20 A	-EXISTING LOAD NOW SPARE-	
	-EXISTING LOAD NOW SPARE-	20 A	1	--	9				10	--	1	20 A	-EXISTING LOAD NOW SPARE-	
	-EXISTING LOAD NOW SPARE-	20 A	1	--	11				12	--	1	20 A	CONV. OUTLET RM 28.34.39	9
	-EXISTING LOAD NOW SPARE-	20 A	1	--	13	0 VA	0 VA		14	--	1	20 A	-EXISTING LOAD NOW SPARE-	
	-EXISTING LOAD NOW SPARE-	20 A	1	--	15				16	--	1	20 A	-EXISTING LOAD NOW SPARE-	
	-EXISTING LOAD NOW SPARE-	20 A	1	--	17				18	--	1	20 A	-EXISTING LOAD NOW SPARE-	
9	CONV. OUTLET RM 37.05	20 A	1	--	19	0 VA	0 VA		20	--	1	20 A	FLOOR BOX	9
9	CONV. OUTLET COPIER RM 05	20 A	1	--	21				22	--	1	20 A	FLOOR BOX	9
9	CONV. OUTLET RM 05.44	20 A	1	--	23				24	--	1	20 A	FLOOR BOX	9
9	CONV. OUTLET RM 045	20 A	1	--	25	0 VA	0 VA		26	--	1	20 A	FLOOR BOX	9
9	LIGHTING	20 A	1	--	27				28	--	1	20 A	FLOOR BOX	9
9	LIGHTING	20 A	1	--	29				30	--	1	20 A	FLOOR BOX	9
9	COLUMN OUTLET SO. OF...	20 A	1	--	31	0 VA	0 VA		32	--	3	30 A	RM 064 COND. UNIT	9
	-EXISTING SPARE-	20 A	1	--	33				34	--	--	--	--	--
9	ATC NORTH	20 A	1	--	35				36	--	--	--	--	--
	-EXISTING LOAD NOW SPARE-	20 A	1	--	37	0 VA	0 VA		38	--	1	20 A	-EXISTING LOAD NOW SPARE-	
	-EXISTING LOAD NOW SPARE-	20 A	1	--	39				40	--	1	20 A	-EXISTING LOAD NOW SPARE-	
9	ATC	20 A	1	--	41				42	--	--	--	-SPACE ONLY-	--
9	RESTROOM SENSOR	20 A	1	--	43	0 VA	0 VA		44	--	1	20 A	PUMP P4A,P4B	9
	-EXISTING LOAD NOW SPARE-	20 A	1	--	45				46	--	1	20 A	EF-3, EF-4	9
	-EXISTING LOAD NOW SPARE-	20 A	1	--	47				48	--	1	20 A	EF-5, EF-6	9
	-EXISTING LOAD NOW SPARE-	20 A	1	--	49	0 VA	0 VA		50	--	1	20 A	PUMP P10	9
9	CONV. OUTLET RM 44.46.45	20 A	1	--	51				52	--	1	20 A	PLUGMOLD OUTLETS	9
9	CONV. OUTLET RM 47	20 A	1	--	53				54	--	1	20 A	PLUGMOLD OUTLETS	9
10	RCPT - TESTING 102	20 A	1	R	55	720 VA	0 VA		56	--	1	20 A	-EXISTING SPARE-	
	-EXISTING LOAD NOW SPARE-	20 A	1	--	59				58	--	1	20 A	HAND DRYER	9
	-EXISTING LOAD NOW SPARE-	20 A	1	--	61	0 VA	0 VA		60	--	1	20 A	FAN COIL	9
9	EXISTING LOAD	20 A	1	--	63				64	--	1	20 A	ATC	9
9	EXISTING LOAD	20 A	1	--	65				66	--	1	20 A	EXISTING LOAD	9
	-EXISTING LOAD NOW SPARE-	20 A	1	--	67	0 VA	0 VA		68	--	3	30 A	TVSS	9
	-EXISTING LOAD NOW SPARE-	20 A	1	--	69				70	--	--	--	--	--
	-EXISTING LOAD NOW SPARE-	20 A	1	--	71				72	--	--	--	--	--
	-EXISTING LOAD NOW SPARE-	20 A	1	--	73	0 VA	0 VA		74	--	--	--	-SPACE ONLY-	--
9	WATER HEATER	40 A	2	--	75				76	--	2	30 A	-EXISTING LOAD NOW SPARE-	--
	-EXISTING LOAD NOW SPARE-	20 A	1	--	77				78	--	--	--	--	--
	-EXISTING LOAD NOW SPARE-	20 A	1	--	79	0 VA	0 VA		80	--	1	20 A	-EXISTING LOAD NOW SPARE-	--
	-EXISTING LOAD NOW SPARE-	20 A	1	--	81				82	--	1	20 A	-EXISTING LOAD NOW SPARE-	--
	-EXISTING LOAD NOW SPARE-	20 A	1	--	83				84	--	1	20 A	-EXISTING LOAD NOW SPARE-	--
--	-SEC I SPACE ONLY-	--	--	--	85	0 VA	0 VA		86	--	3	225 A	SEC I - PANEL L2A	9
--	-SEC I SPACE ONLY-	--	--	--	87				88	--	--	--	--	--
--	-SEC I SPACE ONLY-	--	--	--	89				90	--	--	--	--	--
--	-SEC II SPACE ONLY-	--	--	--	91	0 VA	0 VA		92	--	--	--	-SEC II SPACE ONLY-	--
--	-SEC II SPACE ONLY-	--	--	--	93				94	--	--	--	-SEC II SPACE ONLY-	--
--	-SEC II SPACE ONLY-	--	--	--	95				96	--	--	--	-SEC II SPACE ONLY-	--
<b>TOTAL CONNECTED LOAD PER PHASE (VA)</b>						1440 VA	720 VA	0 VA						
<b>TOTAL CONNECTED CURRENT PER PHASE (AMPS)</b>						13 A	7 A	0 A						

TYPE	LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
P	Panel	0 VA	0.00%	0 VA		
R	Receptacle	2160 VA	100.00%	2160 VA	<b>Total Conn. Load:</b>	2160 VA
L	Lighting	0 VA	0.00%	0 VA	<b>25% OF LARGEST MOTOR:</b>	
C	Continuous	0 VA	0.00%	0 VA	<b>Total Est. Demand:</b>	2160 VA
E	Equipment	0 VA	0.00%	0 VA	<b>Total Conn. Current:</b>	6 A
M	Motor	0 VA	0.00%	0 VA	<b>Total Est. Demand Current:</b>	6 A
K	Kitchen	0 VA	0.00%	0 VA		
O	Other	0 VA	0.00%	0 VA		

### PANELBOARD SCHEDULE

**PANEL NAME: EML1**

MOUNTING: SURFACE      VOLTAGE: 120/208 Wye      LOCATION: MECH. 030      FEED FROM: SPD: -  
ENCLOSURE: NEMA 1      PHASE: 3      MAIN TYPE: MCB      BUS RATING: 225 A      NEUTRAL RATING: -  
DOOR TYPE: (EXISTING)      WIRES: 4      MCB RATING: 225 A      ISOLATED GROUND: -  
Min. A.I.C. RATING: FIELD VERIFY      BUS MATERIAL: COPPER

BRANCH BREAKERS														
KEYED NOTE	CIRCUIT DESCRIPTION	AMP	POLE	Load Type	CKT #	A	B	C	CKT #	Load Type	POLE	AMP	CIRCUIT DESCRIPTION	KEYED NOTE
9	RM 062A TIB OUTLET	20 A	1	--	1	0 VA	0 VA		2	--	1	20 A	RM 022A TIB OUTLET	9
9	ELEVATOR CONTROL & LIGHTS	20 A	1	--	3				4	--	1	20 A	RM 064 TIB OUTLET	9
8	L5-30R - RM 064 TELECOM RACK	20 A	2	E	5	2500 VA	0 VA		6	--	1	20 A	RM 064 TIM OUTLET	9
--	--	--	--	--	7				8	--	1	20 A	STEP LIGHTS	9
9	SCP	20 A	1	--	9				10	E	2	30 A	L5-30R - RM 064 TELECOM RACK	8
9	DIALER	20 A	1	--	11				12	--	--	--	--	--
10	RACK OUTLET - TELECOM 104	20 A	1	--	13	180 VA	0 VA		14	--	1	30 A	RM 022A TELECOM RACK	9
10	NAC - TELECOM 104	20 A	1	E	15				16	--	1	20 A	-EXISTING SPARE-	
	-EXISTING SPARE-	20 A	1	--	17				18	--	1	20 A	SUMP PUMP	9
9	RM 064 TELECOM RACK	30 A	1	--	19	0 VA	0 VA		20	--	1	20 A	SUMP PUMP	9
9	SEWAGE EJECTOR PUMP	20 A	3	--	21				22	--	2	30 A	RM 022A TELECOM RACK	7,9
--	--	--	--	--	23				24	--	--	--	--	--
--	--	--	--	--	25	0 VA	0 VA		26	--	1	30 A	RM 064 TELECOM RACK	9
7,9	RM 064 TELECOM RACK	30 A	2	--	27				28	--	2	30 A	RM 064 TELECOM RACK	7,9
--	--	--	--	--	29				30	--	--	--	--	--
<b>TOTAL CONNECTED LOAD PER PHASE (VA)</b>						2680 VA	3000 VA	5000 VA						
<b>TOTAL CONNECTED CURRENT PER PHASE (AMPS)</b>						22 A	25 A	42 A						

TYPE	LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
P	Panel	0 VA	0.00%	0 VA		
R	Receptacle	180 VA	100.00%	180 VA	<b>Total Conn. Load:</b>	10680 VA
L	Lighting	0 VA	0.00%	0 VA	<b>25% OF LARGEST MOTOR:</b>	
C	Continuous	0 VA	0.00%	0 VA	<b>Total Est. Demand:</b>	10680 VA
E	Equipment	10500 VA	100.00%	10500 VA	<b>Total Conn. Current:</b>	30 A
M	Motor	0 VA	0.00%	0 VA	<b>Total Est. Demand Current:</b>	30 A
K	Kitchen	0 VA	0.00%	0 VA		
O	Other	0 VA	0.00%	0 VA		

### PANELBOARD SCHEDULE

**PANEL NAME: H1A**

MOUNTING: SURFACE      VOLTAGE: 480/277 Wye      LOCATION: MECH. 030      FEED FROM: SPD: -  
ENCLOSURE: NEMA 1      PHASE: 3      MAIN TYPE: MLO      BUS RATING: 400 A      NEUTRAL RATING: -  
DOOR TYPE: (EXISTING GE)      WIRES: 4      MCB RATING: -      ISOLATED GROUND: -  
Min. A.I.C. RATING: FIELD VERIFY      BUS MATERIAL: -

BRANCH BREAKERS														
KEYED NOTE	CIRCUIT DESCRIPTION	AMP	POLE	Load Type	CKT #	A	B	C	CKT #	Load Type	POLE	AMP	CIRCUIT DESCRIPTION	KEYED NOTE
9	LTG RM 14 NORTH	20 A	1	--	1	0 VA	4024 VA		2	L	1	20 A	LTG - LOWER LEVEL	10
9	LTG RM 14 SOUTH	20 A	1	--	3				4	--	1	20 A	LTG RM 14 EAST	9
9	LTG RM 8,12.4,10,14	20 A	1	--	5				6	--	--	--	-SPACE ONLY-	--
9	LTG EXT. WALKWAY	20 A	1	--	7	0 VA	0 VA		8	--	--	--	-SPACE ONLY-	--
9	LTG EXT. WALKWAY	20 A	1	--	9				10	--	1	20 A	FUTURE ARTWORK	9
	-EXISTING LOAD NOW SPARE-	20 A	1	--	11				12	--	1	20 A	LIGHTING CONTROL PANEL	9
	-EXISTING LOAD NOW SPARE-	20 A	1	--	13	0 VA	0 VA		14	--	1	20 A	-EXISTING LOAD NOW SPARE-	--
	-EXISTING LOAD NOW SPARE-	20 A	1	--	15				16	--	1	20 A	-EXISTING LOAD NOW SPARE-	--
--	--	--	--	--	17				18	--	--	--	-SPACE ONLY-	--
--	-SPACE ONLY-	--	--	--	19	0 VA	0 VA		20	--	3	20 A	CP-1	9
--	-SPACE ONLY-	--	--	--	21				22	--	--	--	--	--
--	-SPACE ONLY-	--	--	--	23				24	--	--	--	--	--
9	45KVA XFRM PANEL L1C	70 A	3	--	25	0 VA	0 VA		26	--	3	20 A	CP-2	9
--	--	--	--	--	27				28	--	--	--	--	--
--	--	--	--	--	29				30	--	--	--	--	--
9	VFD-1 15HP	40 A	3	--	31	0 VA	0 VA		32	--	3	30 A	VFD-7 7.5 HP	9
--	--	--	--	--	33				34	--	--	--	--	--
--	--	--	--	--	35				36	--	--	--	--	--
9	PANEL H2A, H3A	225 A	3	--	37	0 VA	0 VA		38	--	--	--	-SPACE ONLY-	--
--	--	--	--	--	39				40	--	--	--	-SPACE ONLY-	--
--	--	--	--	--	41				42	--	--	--	-SPACE ONLY-	--
<b>TOTAL CONNECTED LOAD PER PHASE (VA)</b>						4024 VA	0 VA	0 VA						
<b>TOTAL CONNECTED CURRENT PER PHASE (AMPS)</b>						15 A	0 A	0 A						

TYPE	LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
P	Panel	0 VA	0.00%	0 VA		
R	Receptacle	0 VA	0.00%	0 VA	<b>Total Conn. Load:</b>	4024 VA
L	Lighting	4024 VA	125.00%	5030 VA	<b>25% OF LARGEST MOTOR:</b>	
C	Continuous	0 VA	0.00%	0 VA	<b>Total Est. Demand:</b>	5030 VA
E	Equipment	0 VA	0.00%	0 VA	<b>Total Conn. Current:</b>	5 A
M	Motor	0 VA	0.00%	0 VA	<b>Total Est. Demand Current:</b>	6 A
K	Kitchen	0 VA	0.00%	0 VA		
O	Other	0 VA	0.00%	0 VA		

### PANELBOARD SCHEDULE

**PANEL NAME: L1C**

MOUNTING: SURFACE      VOLTAGE: 120/208 Wye      LOCATION: MECH. 030      FEED FROM: SPD: -  
ENCLOSURE: NEMA 1      PHASE: 3      MAIN TYPE: MCB      BUS RATING: 250 A      NEUTRAL RATING: -  
DOOR TYPE: (EXISTING)      WIRES: 4      MCB RATING: 125 A      ISOLATED GROUND: -  
Min. A.I.C. RATING: FIELD VERIFY      BUS MATERIAL: COPPER

BRANCH BREAKERS														
KEYED NOTE	CIRCUIT DESCRIPTION	AMP	POLE	Load Type	CKT #	A	B	C	CKT #	Load Type	POLE	AMP	CIRCUIT DESCRIPTION	KEYED NOTE
9	OPEN AREA COMP TABLES	20 A	1	--	1	0 VA	0 VA		2	--	1	20 A	OPEN AREA COMP TABLES	9
9	OPEN AREA COMP TABLES	20 A	1	--	3				4	--	1	20 A	OPEN AREA COMP TABLES	9
9	OPEN AREA COMP TABLES	20 A	1	--	5				6	--	1	20 A	OPEN AREA COMP TABLES	9
9	OPEN AREA COMP TABLES	20 A	1	--	7	0 VA	0 VA		8	--	1	20 A	OPEN AREA COMP TABLES	9
9														



PANELBOARD SCHEDULE																			
PANEL NAME: L1B					LOCATION: MEN'S RR 015-B					FEED FROM:									
MOUNTING: SURFACE					VOLTAGE: 120/208 Wye					MAIN TYPE: MLO					SPD: -				
ENCLOSURE: NEMA 1					PHASE: 3					BUS RATING: 400 A					NEUTRAL RATING: -				
DOOR TYPE: -					WIRES: 4					MCB RATING: -					ISOLATED GROUND: -				
(EXISTING GE)					Min. A.I.C. RATING: FIELD VERIFY					BUS MATERIAL: -									
BRANCH BREAKERS																			
KEYED NOTE	CIRCUIT DESCRIPTION	AMP	POLE	Load Type	CKT #	A	B	C	CKT #	Load Type	POLE	AMP	CIRCUIT DESCRIPTION	KEYED NOTE					
9	CONV. OUTLET RM 19,15	20 A	1		1	0 VA	0 VA		2			20 A	CONV. OUTLET RM 17,15	9					
9	CONV. OUTLET RM 14 N. WALL	20 A	1		3				4			20 A	CONV. OUTLET RM 17,19 HALL	9					
10	OVERHEAD COIL GRILL	20 A	1	M	5			1656 VA	6				-SPACE ONLY-						
	-EXISTING LOAD NOW SPARE-	20 A	1		7	0 VA	0 VA		8			20 A	CONV. OUTLET RM 14 S. WALL	9					
	-EXISTING LOAD NOW SPARE-	20 A	1		9				10			20 A	CONV. OUTLET RM 1,12,14...	9					
9	FL. BOX 14 SOUTHWALL	20 A	1		11				12			20 A	ATC	9					
9	FL. BOX 14 SOUTHWALL	20 A	1		13	0 VA	0 VA		14			20 A	PUMP P-5A, P-5B-22	9					
9	FL. BOX 14 SOUTHWALL	20 A	1		15				16			20 A	FL. DUCT 14 SOUTH	9					
9	SENSOR REST RM 22	20 A	1		17				18			20 A	FL. DUCT 14 SOUTH	9					
10	LOCKERS - CERTIFIED TESTIN...	20 A	1	E	19	180 VA	0 VA		20			20 A	FL. DUCT 14 SOUTH	9					
9	PLUG MOLD 14 SOUGH	20 A	1		21				22			20 A	CONV. OUTLET RM 26,20	9					
9	PLUG MOLD 14 SOUTH	20 A	1		23	0 VA	0 VA		24			20 A	CONV. OUTLET RM...	9					
9	FL. DUCT 14 NORTH	20 A	1		25				26			20 A	-EXISTING LOAD NOW SPARE-						
9	FL. DUCT 14 NORTH	20 A	1		27				28			20 A	-EXISTING LOAD NOW SPARE-						
9	FL. DUCT 14 NORTH	20 A	1		29				30			20 A	-EXISTING LOAD NOW SPARE-						
9	FL. DUCT 14 NORTH	20 A	1		31	0 VA	0 VA		32			20 A	-EXISTING LOAD NOW SPARE-						
9	FL. DUCT 14 NORTH	20 A	1		33				34			20 A	-EXISTING LOAD NOW SPARE-						
	-EXISTING LOAD NOW SPARE-	20 A	1		35				36			20 A	-EXISTING LOAD NOW SPARE-						
	-SPACE ONLY-				37	0 VA	0 VA		38				-SPACE ONLY-						
	-SPACE ONLY-				39				40				-SPACE ONLY-						
	-SPACE ONLY-				41				42				-SPACE ONLY-						
9	BOOK LIFT 2 HP	20 A	3		43	0 VA	0 VA		44			30 A	TVSS RM 22	9					
	-SPACE ONLY-				45				46				-SPACE ONLY-						
	-SPACE ONLY-				47				48				-SPACE ONLY-						
9	CONV. OUTLET RM 28	20 A	1		49	0 VA	0 VA		50			20 A	-EXISTING LOAD NOW SPARE-						
9	CONV. OUTLET RM 40 WEST	20 A	1		51				52			20 A	-EXISTING LOAD NOW SPARE-						
9	CONV. OUTLET RM 28a	20 A	1		53				54			20 A	-EXISTING LOAD NOW SPARE-						
	-EXISTING LOAD NOW SPARE-	20 A	1		55	0 VA	0 VA		56			20 A	-EXISTING LOAD NOW SPARE-						
	-EXISTING LOAD NOW SPARE-	20 A	1		57				58			20 A	-EXISTING LOAD NOW SPARE-						
	-EXISTING LOAD NOW SPARE-	20 A	1		59				60	R	1	20 A	RCPT - CERTIFIED TESTING 122	10					
8	RCPT - Space 153	20 A	1	R	61	540 VA	0 VA		62				-SPACE ONLY-						
	-SPACE ONLY-				63				64				-SPACE ONLY-						
	-SPACE ONLY-				65				66				-SPACE ONLY-						
8	RCPT - CLASSROOM 117	20 A	1	R	67	1260 VA	0 VA		68				-SPACE ONLY-						
8	RCPT - CLASSROOM 117	20 A	1	R	69		1400 VA	0 VA	70				-SPACE ONLY-						
8	RCPT - HALL 125	20 A	1	R	71			1080 VA	72				-SPACE ONLY-						
8	RCPT - LOCKERS 116	20 A	1	R	73	540 VA	0 VA		74				-SPACE ONLY-						
	-SPACE ONLY-				75				76				-SPACE ONLY-						
	-SPACE ONLY-				77				78				-SPACE ONLY-						
	-SPACE ONLY-				79	0 VA	0 VA		80				-SPACE ONLY-						
	-SPACE ONLY-				81				82				-SPACE ONLY-						
	-SPACE ONLY-				83				84				-SPACE ONLY-						
	-SEC I - SPACE ONLY-				85	0 VA	0 VA		86			3	225 A	SEC I - PANEL L2B	9				
	-SEC I - SPACE ONLY-				87				88				-SPACE ONLY-						
	-SEC I - SPACE ONLY-				89				90				-SPACE ONLY-						
	-SEC II SPACE ONLY-				91	0 VA	0 VA		92				-SEC II SPACE ONLY-						
	-SEC II SPACE ONLY-				93				94				-SEC II SPACE ONLY-						
	-SEC II SPACE ONLY-				95				96				-SEC II SPACE ONLY-						
TOTAL CONNECTED LOAD PER PHASE (VA)						2520 VA	1400 VA	3456 VA											
TOTAL CONNECTED CURRENT PER PHASE (AMPS)						22 A	12 A	30 A											
PANEL TOTALS																			
TYPE	LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND															
P	Panel	0 VA	0.00%	0 VA															
R	Receptacle	4500 VA	100.00%	4500 VA	Total Conn. Load: 7376 VA														
L	Lighting	0 VA	0.00%	0 VA	25% OF LARGEST MOTOR:														
C	Continuous	0 VA	0.00%	0 VA	Total Est. Demand: 7790 VA														
E	Equipment	1220 VA	100.00%	1220 VA	Total Conn. Current: 20 A														
M	Motor	1656 VA	125.00%	2070 VA	Total Est. Demand Current: 22 A														
K	Kitchen	0 VA	0.00%	0 VA															
O	Other	0 VA	0.00%	0 VA															

PANELBOARD SCHEDULE																			
PANEL NAME: H1B					LOCATION: MEN'S RR 015-B					FEED FROM:									
MOUNTING: RECESSED					VOLTAGE: 480/277 Wye					MAIN TYPE: MLO					SPD: -				
ENCLOSURE: NEMA 1					PHASE: 3					BUS RATING: 400 A					NEUTRAL RATING: -				
DOOR TYPE: -					WIRES: 4					MCB RATING: -					ISOLATED GROUND: -				
(EXISTING GE)					Min. A.I.C. RATING: FIELD VERIFY					BUS MATERIAL: -									
BRANCH BREAKERS																			
KEYED NOTE	CIRCUIT DESCRIPTION	AMP	POLE	Load Type	CKT #	A	B	C	CKT #	Load Type	POLE	AMP	CIRCUIT DESCRIPTION	KEYED NOTE					
9	LTG HALL & 14 COVE	20 A	1		1	0 VA			2			20 A	LTG - LOWER LEVEL						
9	LTG WEST 14 COVE	20 A	1		3			0 VA	4	L	1	20 A	LTG - LOWER LEVEL						
9	LTG CENTER 14 COVE	20 A	1		5			0 VA	6				-SPACE ONLY-						
9	LTG WEST OUT WALKWAY	20 A	1		7	0 VA	0 VA		8			20 A	-EXISTING LOAD NOW SPARE-						
9	LTG WEST OUT WALKWAY	20 A	1		9			0 VA	10			20 A	LIGHTING CONTROL PANEL	9					
9	-EXISTING LOAD NOW SPARE-	20 A	1		11			0 VA	12			20 A	-EXISTING LOAD NOW SPARE-						
	-SPACE ONLY-				13	0 VA	0 VA		14				-SPACE ONLY-						
	-SPACE ONLY-				15				16				-SPACE ONLY-						
	-SPACE ONLY-				17				18				-SPACE ONLY-						
	-SPACE ONLY-				19	0 VA	0 VA		20				-SPACE ONLY-						
	-SPACE ONLY-				21				22				-SPACE ONLY-						
	-SPACE ONLY-				23				24				-SPACE ONLY-						
	-SPACE ONLY-				25	0 VA	0 VA		26				-SPACE ONLY-						
	-SPACE ONLY-				27				28				-SPACE ONLY-						
	-SPACE ONLY-				29				30				-SPACE ONLY-						
	-SPACE ONLY-				31	0 VA	0 VA		32				-SPACE ONLY-						
	-SPACE ONLY-				33				34				-SPACE ONLY-						
	-SPACE ONLY-				35				36				-SPACE ONLY-						
9	PANEL H2B,H3B	225 A	3		37	0 VA	0 VA		38			40 A	VFD-2 15 HP	9					
	-SPACE ONLY-				39				40				-SPACE ONLY-						
	-SPACE ONLY-				41				42				-SPACE ONLY-						
TOTAL CONNECTED LOAD PER PHASE (VA)						0 VA	2529 VA	0 VA											
TOTAL CONNECTED CURRENT PER PHASE (AMPS)						0 A	9 A	0 A											
PANEL TOTALS																			
TYPE	LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND															
P	Panel	0 VA	0.00%	0 VA															
R	Receptacle	0 VA	0.00%	0 VA	Total Conn. Load: 2529 VA														
L	Lighting	2529 VA	125.00%	3162 VA	25% OF LARGEST MOTOR:														
C	Continuous	0 VA	0.00%	0 VA	Total Est. Demand: 3162 VA														
E	Equipment	0 VA	0.00%	0 VA	Total Conn. Current: 3 A														
M	Motor	0 VA	0.00%	0 VA	Total Est. Demand Current: 4 A														
K	Kitchen	0 VA	0.00%	0 VA															
O	Other	0 VA	0.00%	0 VA															

PANELBOARD SCHEDULE																			
PANEL NAME: EMH1					LOCATION: MEN'S RR 015-B					FEED FROM:									
MOUNTING: RECESSED					VOLTAGE: 480/277 Wye					MAIN TYPE: MCB					SPD: -				
ENCLOSURE: NEMA 1					PHASE: 3					BUS RATING: 225 A					NEUTRAL RATING: -				
DOOR TYPE: -					WIRES: 4					MCB RATING: 175 A					ISOLATED GROUND: -				
(EXISTING GE)					Min. A.I.C. RATING: FIELD VERIFY					BUS MATERIAL: -									
BRANCH BREAKERS																			
KEYED NOTE	CIRCUIT DESCRIPTION	AMP	POLE	Load Type	CKT #	A	B	C	CKT #	Load Type	POLE	AMP	CIRCUIT DESCRIPTION	KEYED NOTE					
9	LTG WEST	20 A	1		1	0 VA	0 VA		2				-SPACE ONLY-						
9	LTG SOUTH	20 A	1		3			0 VA	4				-SPACE ONLY-						
	-SPACE ONLY-				5				6				-SPACE ONLY-						
	LTG - LOWER LEVEL	20 A	1	L	7	44 VA	0 VA		8				-SPACE ONLY-						
	-SPACE ONLY-				9				10				-SPACE ONLY-						
	-SPACE ONLY-				11				12				-SPACE ONLY-						
	-SPACE ONLY-				13	0 VA	0 VA		14				-SPACE ONLY-						
	-SPACE ONLY-				15				16				-SPACE ONLY-						
9	LTG EAST	20 A	1		17			0 VA	18			20 A	LTG TUNNEL	9					
	-EXISTING SPARE- BAD...	20 A	3		19	0 VA	0 VA		20			20 A	-EXISTING LOAD NOW SPARE-						
	-SPACE ONLY-				21				22			20 A	-EXISTING LOAD NOW SPARE-						
	-SPACE ONLY-				23				24			20 A	-EXISTING LOAD NOW SPARE-						
	-EXISTING LOAD NOW SPARE-	20 A	3		25	0 VA	0 VA		26			3	20 A	-EXISTING LOAD NOW SPARE-					
	-SPACE ONLY-				27				28				-SPACE ONLY-						
	-SPACE ONLY-				29				30				-SPACE ONLY-						
9	ELEVATOR 4A	70 A	3		31	0 VA	0 VA		32			3	20 A	-EXISTING LOAD NOW SPARE-					
	-SPACE ONLY-				33				34										



PANELBOARD SCHEDULE															
PANEL NAME: L1MC1				LOCATION: WORK RM. 022C-A				FEED FROM:							
MOUNTING: RECESSED		VOLTAGE: 120/208 Wye		MAIN TYPE: MCB		SPD: -		ENCLOSURE: NEMA 1		PHASE: 3		BUS RATING: 225 A		NEUTRAL RATING: -	
DOOR TYPE: -		WIRES: 4		MCB RATING: 150 A		ISOLATED GROUND: -		(EXISTING GE)		Min. A.I.C. RATING: FIELD VERIFY		BUS MATERIAL: -			
BRANCH BREAKERS															
KEYED NOTE	CIRCUIT DESCRIPTION	AMP	POLE	Load Type	CKT #	A	B	C	CKT #	Load Type	POLE	AMP	CIRCUIT DESCRIPTION	KEYED NOTE	
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	1	540 VA	180 VA		2	R	1	20 A	RCPT - CERTIFIED TESTING 122	10	
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	3		540 VA	180 VA	4	R	1	20 A	RCPT - CERTIFIED TESTING 122	10	
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	5			360 VA	180 VA	6	R	1	20 A	RCPT - CERTIFIED TESTING 122	10
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	7	360 VA	180 VA		8	R	1	20 A	RCPT - CERTIFIED TESTING 122	10	
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	9		540 VA	180 VA	10	R	1	20 A	RCPT - CERTIFIED TESTING 122	10	
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	11			540 VA	180 VA	12	R	1	20 A	RCPT - CERTIFIED TESTING 122	10
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	13	540 VA	180 VA		14	R	1	20 A	RCPT - CERTIFIED TESTING 122	10	
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	15		720 VA	180 VA	16	R	1	20 A	RCPT - CERTIFIED TESTING 122	10	
10	RCPT - C.T PROCTOR 121	20 A	1	R	17			720 VA	180 VA	18	R	1	20 A	RCPT - CERTIFIED TESTING 122	10
10	RCPT - TESTING 102	20 A	1	R	19	360 VA	180 VA		20	R	1	20 A	RCPT - CERTIFIED TESTING 122	10	
10	RCPT - TESTING 102	20 A	1	R	21		360 VA	1080 VA	22	R	1	20 A	RCPT - ZERO 123	10	
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	23			180 VA	1500 VA	24	E	1	20 A	COPIER - PROCTOR 101	10
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	25	180 VA	360 VA		26	R	1	20 A	RCPT - VEST. 104	10	
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	27		180 VA	1080 VA	28	R	1	20 A	RCPT - ZERO 105	10	
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	29			180 VA	360 VA	30	R	1	20 A	RCPT - MINIMAL DISTRACTION...	10
8	RCPT - TESTING 102	20 A	1	R	31	720 VA	540 VA		32	R	1	20 A	RCPT - MINIMAL DISTRACTION...	10	
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	33		180 VA	540 VA	34	R	1	20 A	RCPT - MINIMAL DISTRACTION...	10	
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	35			180 VA	540 VA	36	R	1	20 A	RCPT - MINIMAL DISTRACTION...	10
10	RCPT - CERTIFIED TESTING 122	20 A	1	R	37	180 VA	540 VA		38	R	1	20 A	RCPT - MINIMAL DISTRACTION...	10	
8	FLOOR BOX - TESTING 102	20 A	1	E	39		360 VA	360 VA	40	R	1	20 A	RCPT - MINIMAL DISTRACTION...	10	
--	-SPACE ONLY-	--	--	--	41			0 VA	360 VA	42	R	1	20 A	FLOOR BOX - TESTING 102	10
<b>TOTAL CONNECTED LOAD PER PHASE (VA)</b>						5040 VA	6480 VA	5460 VA							
<b>TOTAL CONNECTED CURRENT PER PHASE (AMPS)</b>						42 A	55 A	46 A							
TYPE	LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS										
P	Panel	0 VA	0.00%	0 VA											
R	Receptacle	14760 VA	83.88%	12380 VA	<b>Total Conn. Load:</b> 16980 VA										
L	Lighting	0 VA	0.00%	0 VA	<b>25% OF LARGEST MOTOR:</b>										
C	Continuous	0 VA	0.00%	0 VA	<b>Total Est. Demand:</b> 14600 VA										
E	Equipment	2220 VA	100.00%	2220 VA	<b>Total Conn. Current:</b> 47 A										
M	Motor	0 VA	0.00%	0 VA	<b>Total Est. Demand Current:</b> 41 A										
K	Kitchen	0 VA	0.00%	0 VA											
O	Other	0 VA	0.00%	0 VA											

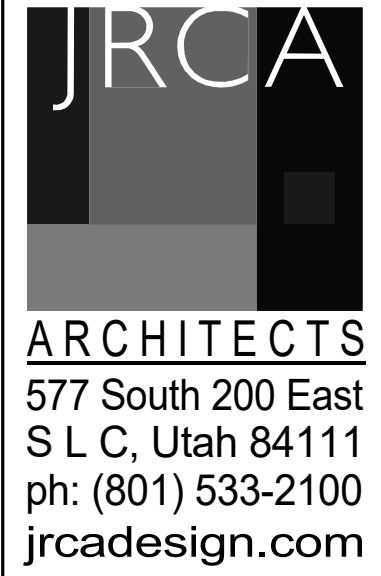
PANELBOARD SCHEDULE															
PANEL NAME: L1MC2				LOCATION: WORK RM. 022C-A				FEED FROM:							
MOUNTING: RECESSED		VOLTAGE: 120/208 Wye		MAIN TYPE: MCB		SPD: -		ENCLOSURE: NEMA 1		PHASE: 3		BUS RATING: 225 A		NEUTRAL RATING: -	
DOOR TYPE: -		WIRES: 4		MCB RATING: 150 A		ISOLATED GROUND: -		(EXISTING GE)		Min. A.I.C. RATING: FIELD VERIFY		BUS MATERIAL: -			
BRANCH BREAKERS															
KEYED NOTE	CIRCUIT DESCRIPTION	AMP	POLE	Load Type	CKT #	A	B	C	CKT #	Load Type	POLE	AMP	CIRCUIT DESCRIPTION	KEYED NOTE	
10	RCPT - TESTING 102	20 A	1	R	1	360 VA	360 VA		2	R	1	20 A	RCPT - TESTING 102	10	
10	RCPT - TESTING 102	20 A	1	R	3		360 VA	360 VA	4	R	1	20 A	RCPT - TESTING 102	10	
10	RCPT - TESTING 102	20 A	1	R	5			360 VA	360 VA	6	R	1	20 A	RCPT - TESTING 102	10
10	RCPT - TESTING 102	20 A	1	R	7	360 VA	360 VA		8	R	1	20 A	RCPT - TESTING 102	10	
10	RCPT - TESTING 102	20 A	1	R	9		360 VA	360 VA	10	R	1	20 A	RCPT - TESTING 102	10	
9	MAIN BREAKER SHUNT	20 A	1	--	11			0 VA	360 VA	12	R	1	20 A	RCPT - TESTING 102	10
9	A/C UNIT ROOM 42C	20 A	2	--	13	0 VA	360 VA		14	R	1	20 A	RCPT - TESTING 102	10	
--	--	--	--	--	15		0 VA	360 VA	16	R	1	20 A	RCPT - TESTING 102	10	
10	RCPT - TESTING 102	20 A	1	R	17			360 VA	360 VA	18	R	1	20 A	RCPT - TESTING 102	10
10	RCPT - TESTING 102	20 A	1	R	19	360 VA	360 VA		20	R	1	20 A	RCPT - TESTING 102	10	
10	RCPT - TESTING 102	20 A	1	R	21		360 VA	360 VA	22	R	1	20 A	RCPT - TESTING 102	10	
10	RCPT - TESTING 102	20 A	1	R	23			360 VA	900 VA	24	R	1	20 A	RCPT - TESTING 102	8
10	RCPT - TESTING 102	20 A	1	R	25	360 VA	720 VA		26	R	1	20 A	RCPT - RECEPTION 100	10	
10	RCPT - TESTING 102	20 A	1	R	27		360 VA	900 VA	28	R	1	20 A	RCPT - PROCTOR 101	10	
10	RCPT - TESTING 102	20 A	1	R	29			360 VA	180 VA	30	R	1	20 A	RCPT - VEST. 153	10
10	RCPT - TESTING 102	20 A	1	R	31	360 VA	180 VA		32	R	1	20 A	RCPT - VEST. 153	10	
--	-SPACE ONLY-	--	--	--	33		0 VA	720 VA	34	R	1	20 A	RCPT - RECEPTION 100	10	
--	-SPACE ONLY-	--	--	--	35			0 VA	0 VA	36	--	--	-SPACE ONLY-	--	
--	-SPACE ONLY-	--	--	--	37	0 VA	0 VA			38	--	--	-SPACE ONLY-	--	
--	-SPACE ONLY-	--	--	--	39		0 VA	0 VA		40	--	--	-SPACE ONLY-	--	
--	-SPACE ONLY-	--	--	--	41			0 VA	0 VA	42	--	--	-SPACE ONLY-	--	
<b>TOTAL CONNECTED LOAD PER PHASE (VA)</b>						4140 VA	4500 VA	3600 VA							
<b>TOTAL CONNECTED CURRENT PER PHASE (AMPS)</b>						35 A	38 A	30 A							
TYPE	LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS										
P	Panel	0 VA	0.00%	0 VA											
R	Receptacle	12240 VA	90.85%	11120 VA	<b>Total Conn. Load:</b> 12240 VA										
L	Lighting	0 VA	0.00%	0 VA	<b>25% OF LARGEST MOTOR:</b>										
C	Continuous	0 VA	0.00%	0 VA	<b>Total Est. Demand:</b> 11120 VA										
E	Equipment	0 VA	0.00%	0 VA	<b>Total Conn. Current:</b> 34 A										
M	Motor	0 VA	0.00%	0 VA	<b>Total Est. Demand Current:</b> 31 A										
K	Kitchen	0 VA	0.00%	0 VA											
O	Other	0 VA	0.00%	0 VA											

- PANELBOARD SCHEDULE KEYED NOTE:**
- PROVIDE CLASS A GROUND FAULT INTERRUPTER TYPE CIRCUIT BREAKER.
  - PROVIDE ARC FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER
  - PROVIDE 30 MILLIAMPERE EQUIPMENT GROUND FAULT PROTECTOR TYE CIRCUIT BREAKER.
  - PROVIDE SHUNT TRIP CIRCUIT BREAKER WITH 120 V COIL.
  - PROVIDE HACR RATED CIRCUIT BREAKER.
  - PROVIDE HANDLE CLAMP FOR HOLDING CIRCUIT BREAKER IN THE "ON" OR "OFF" POSITION.
  - BREAKER HANDLE TIES.
  - PROVIDE NEW CIRCUIT BREAKER IN EXISTING PANELBOARD (WHERE PANEL IS LOCATED AS EXISTING) OF SAME MANUFACTURER AND A.I.C. RATING AS EXISTING.
  - EXISTING LOAD
  - UTILIZE EXISTING BREAKER FOR NEW LOAD

EQUIPMENT SCHEDULE				
	LOAD (KVA)	FACTOR	TOTAL (KVA)	TOTAL (AMPS)
EXISTING LOAD (1)	108.11	1.25	135.14	162.55
LOAD REMOVED (2)	30.43	1	30.43	36.60
NEW LOAD ADDED (3)	71	1	71	85.40
SERVICE SIZE (AMPS):	1200			
NEW TOTAL LOAD (AMPS):	211.35			
CAPACITY:	82.4%			
NOTES:				
1. BASED ON PEAK DEMAND OVER THE LAST 12 MONTHS RECEIVED FROM POWER UTILITY. ASSUMED 0.9 POWER FACTOR.				
2. CALCULATED USING NEC OUTLET LOADS AND FIELD OBSERVED LIGHTING LOADS.				
3. ESTIMATED DEMAND, PER NEC FACTORS, BALANCED BETWEEN THE PHASES.				

**SPECIAL NOTE:**  
ALL EXISTING CIRCUITS AND NEW CIRCUITS TIED TO AVAILABLE BREAKERS SHOWN ARE BASED ON RECORD DRAWINGS AND FIELD OBSERVATIONS. CONTRACTOR SHALL TRACE AND CONFIRM ALL EXACT CIRCUITING. CONTRACTOR SHALL REDLINE AS-BUILT CIRCUITING AS REQUIRED IN SPECIFICATION.

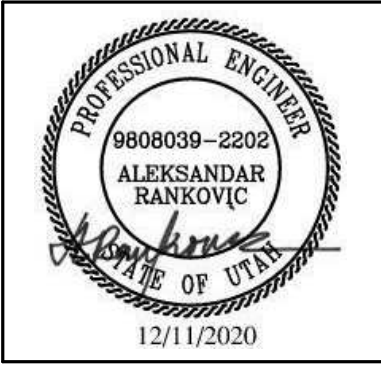
PANEL LEGEND		
	L1MC1	L1MC2



**SLCC TESTING CENTER**  
4600 South Redwood Rd  
Taylorsville, UT 84123

PROJECT #: 20029

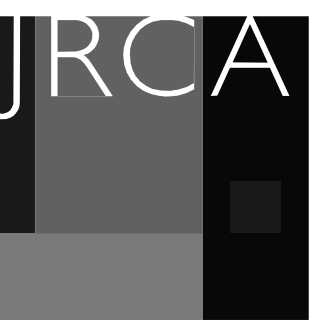
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PANEL SCHEDULES

EP803





577 South 200 East  
S L C, Utah 84111  
ph: (801) 533-2100  
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SLCC TESTING CENTER  
4600 South Redwood Rd  
Taylorsville, UT 84123

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DATE	REVISION



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LOWER LEVEL -  
SYSTEMS PLAN

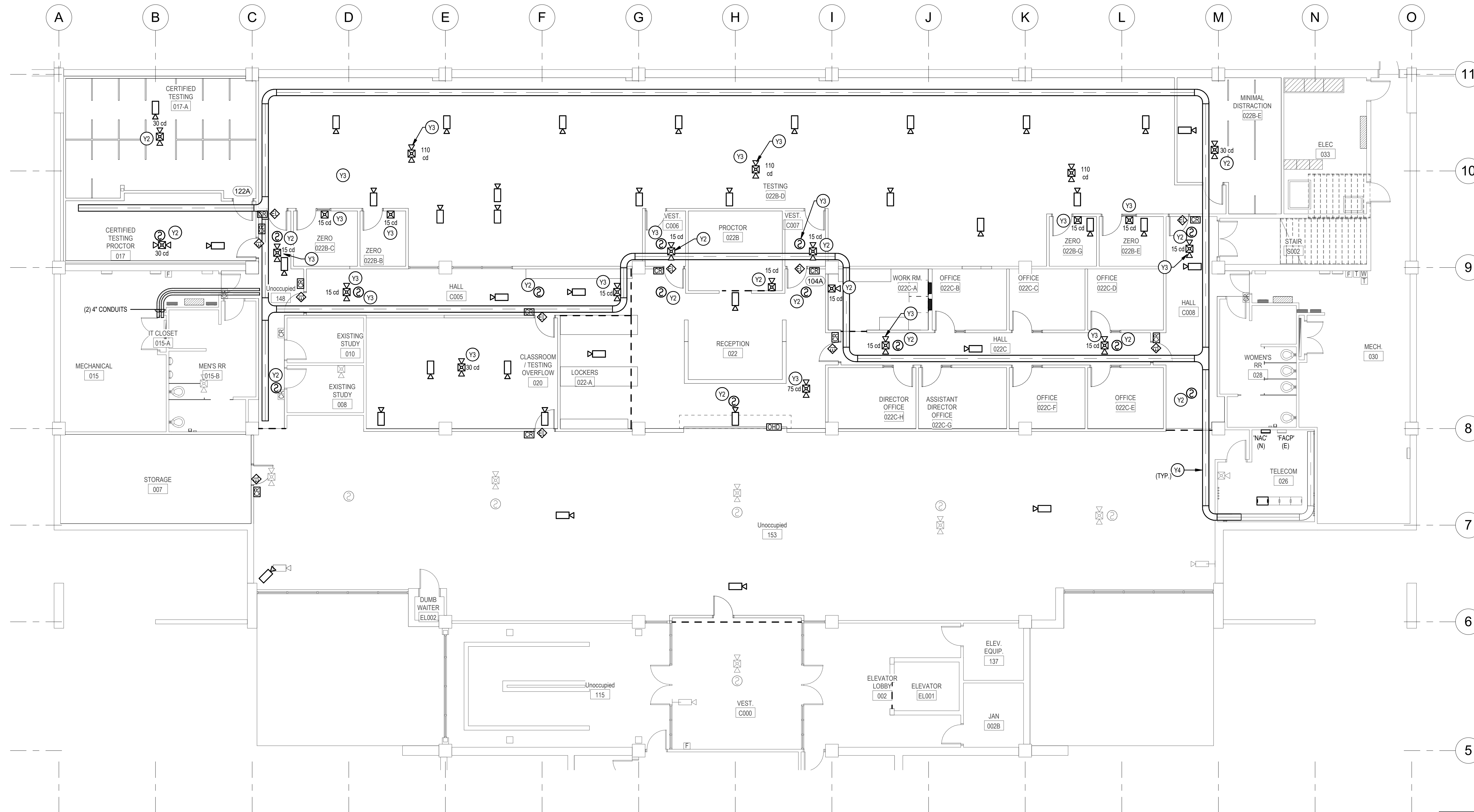
EY101

**KEYED NOTES**

- Y2 NEW LOCATION OF EXISTING FIRE ALARM DEVICE. EXTEND EXISTING LOOP CIRCUIT TO NEW LOCATION. DO NOT SPLICE WIRES. PROVIDE NEW CONDUIT AND CONDUCTORS AS REQUIRED.
- Y3 PROVIDE NEW FIRE ALARM DEVICE OF THE SAME MANUFACTURES AS THE EXISTING SYSTEM. TIE TO AN EXISTING FIRE ALARM LOOP WITH AVAILABLE CAPACITY OR A NEW LOOP CIRCUIT. PROVIDE ADDITIONAL CONDUIT AND CONDUCTORS. SPLICES ARE NOT ALLOWED.
- Y4 PROVIDE A 12" WIDE, 4" HIGH BASKET TYPE CABLE TRAY WITH SOLID BOTTOM. PROVIDE BONDING JUMPER AT ALL THE JOINTS AND GROUND THE TRAY WITH #6 THHN GROUND CONDUCTOR TO THE GROUND BUS BAR IN THE TELECOM ROOM. COORDINATE WITH GENERAL CONTRACTOR AND ARCHITECT FOR EXACT HEIGHT AND LOCATION.

**SYSTEMS GENERAL NOTES:**

- 1. COORDINATE ALL WALL MOUNTED LOCATIONS WITH THE ARCHITECT.
- 2. DO NOT LOCATE ANY FIRE ALARM DEVICES BEHIND DOORS OR SHELVING. REFER TO THE ARCHITECTURAL DRAWINGS FOR SHELVING LOCATIONS.
- 3. THE CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A SCHEMATIC REPRESENTATION OF DEVICE LOCATIONS, AND CONDUIT RUNS.
- 4. ALL CONDUITS THAT TERMINATE ABOVE THE CEILING SHALL TERMINATE WITH NYLON BUSHING.
- 5. CONTRACTOR SHALL COORDINATE ALL CEILING MOUNTED DEVICES WITH THE LIGHTING PLANS. RELOCATED DEVICES AS NECESSARY. RELOCATED DEVICES SHALL COMPLY WITH ALL NFPA SPACING REQUIREMENTS.
- 6. ALL FIRE ALARM DEVICE LOCATIONS, EQUIPMENT LOCATIONS, RISER DIAGRAM, ETC. ARE SCHEMATIC IN NATURE AND ARE SHOWN TO PROVIDE INTENT OF THE FIRE ALARM SYSTEM TO BE PROVIDED. FIRE ALARM SYSTEM SUPPLIER SHALL PROVIDE BID AND SHOP DRAWINGS THAT INCLUDE A FULL CODE COMPLIANT DESIGN INCLUDING ALL NOTIFICATION AND INITIATION DEVICES REQUIRED WHETHER SHOWN OR NOT.
- 7. REFER TO EP702 AND EY501 FOR ADDITIONAL INFORMATION ON CCTV AND A/V CAMERAS.



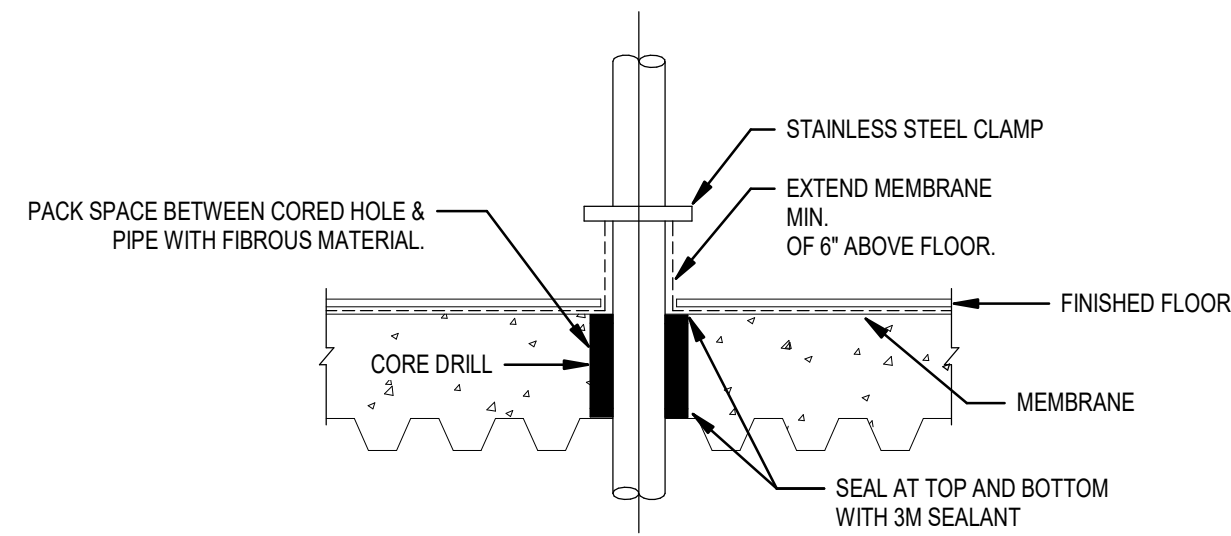
**1 LOWER LEVEL - SYSTEMS PLAN**  
EY101 SCALE 1/8" = 1'-0"

**ENVISION**  
ENGINEERING  
240 E. MORRIS AVE. SUITE 200  
SALT LAKE CITY, UT 84115  
P (801) 534-1130  
F (801) 534-1080  
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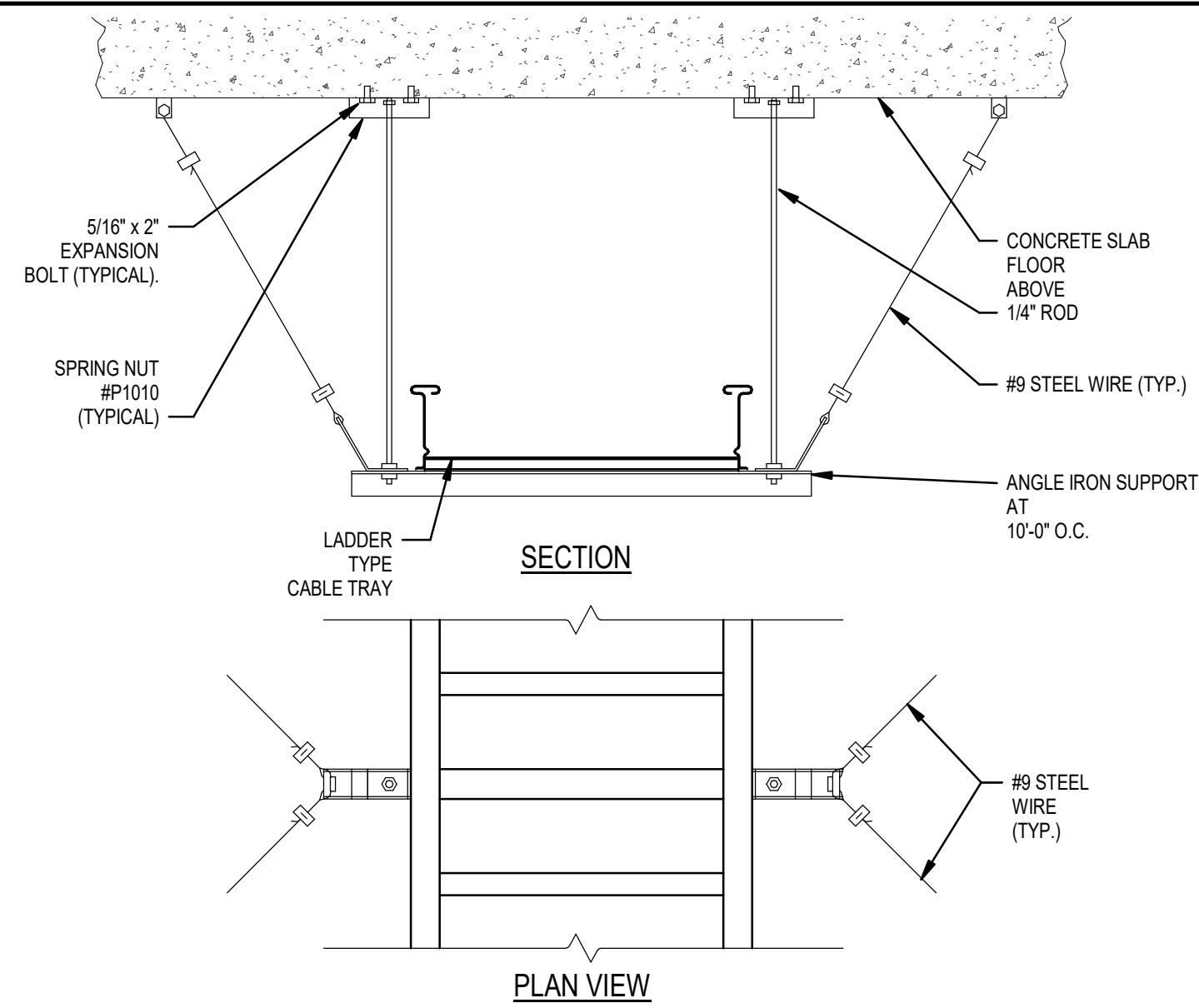


**GENERAL NOTES:**

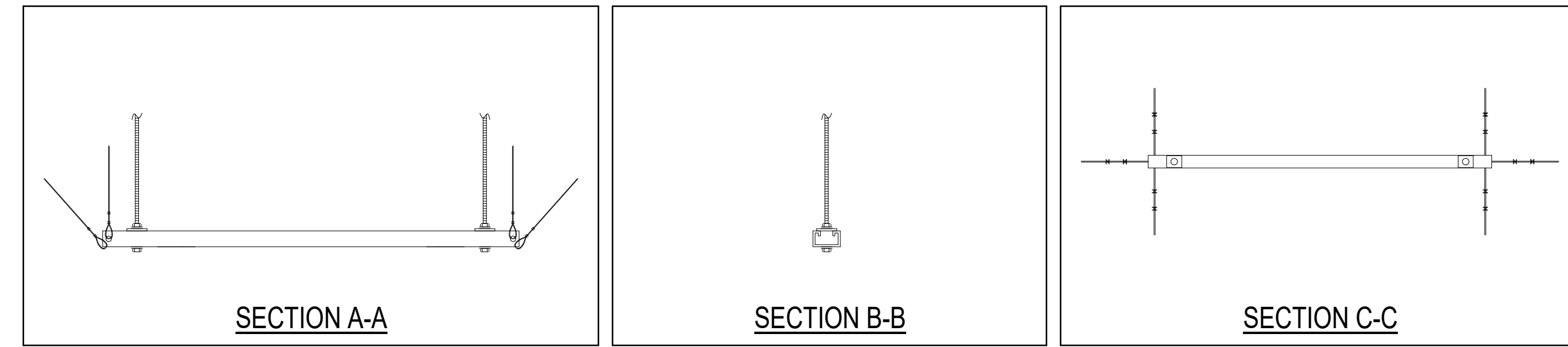
- SEE NON-MEMBRANE FLOOR PENETRATION DETAIL FOR SUPPORT DETAIL.



**3 TYPICAL UPPER LEVEL PIPE/CONDUIT FLOOR PENETRATION**  
SCALE: NTS



**2 TYPICAL CABLE TRAY SUSPENSION DETAIL**  
SCALE: NTS



**NOTES:**

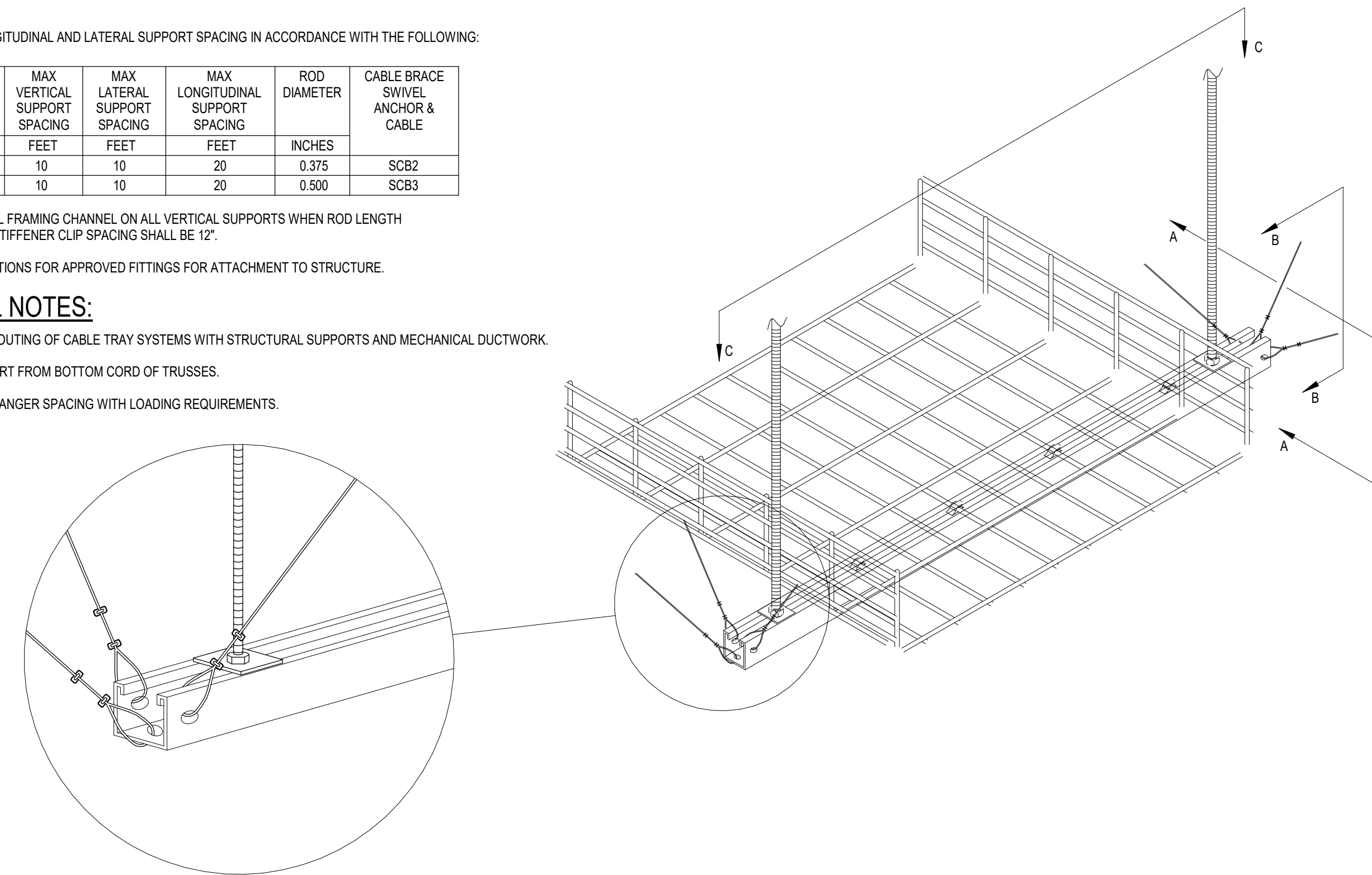
- PROVIDE LONGITUDINAL AND LATERAL SUPPORT SPACING IN ACCORDANCE WITH THE FOLLOWING:

MAXIMUM CABLE TRAY PLUS CABLE WT.	MAX VERTICAL SUPPORT SPACING	MAX LATERAL SUPPORT SPACING	MAX LONGITUDINAL SUPPORT SPACING	ROD DIAMETER	CABLE BRACE SWIVEL ANCHOR & CABLE
POUNDS/FOOT	FEET	FEET	FEET	INCHES	
25	10	10	20	0.375	SCB2
50	10	10	20	0.500	SCB3

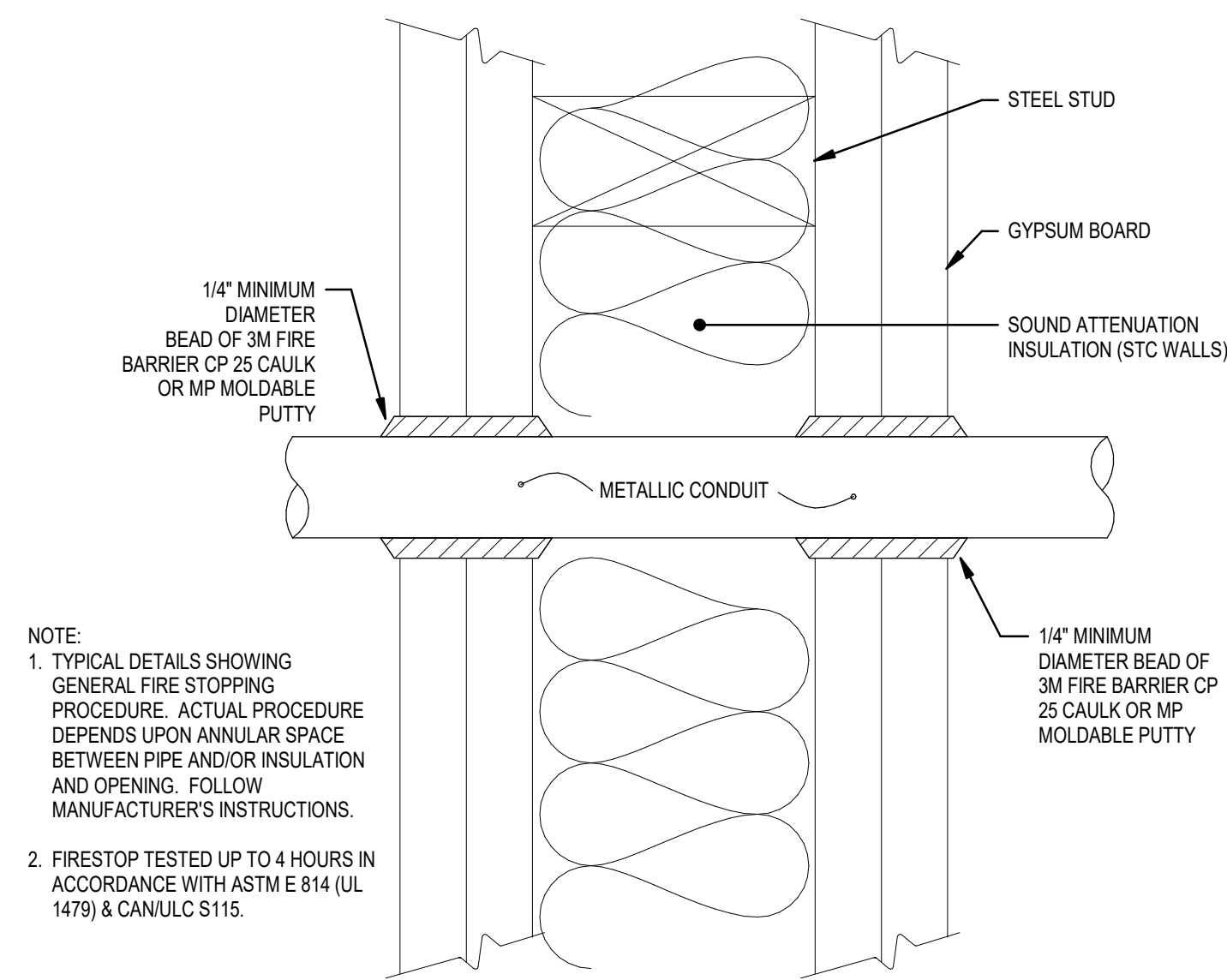
- PROVIDE METAL FRAMING CHANNEL ON ALL VERTICAL SUPPORTS WHEN ROD LENGTH EXCEEDS 14". STIFFENER CLIP SPACING SHALL BE 12".
- SEE SPECIFICATIONS FOR APPROVED FITTINGS FOR ATTACHMENT TO STRUCTURE.

**GENERAL NOTES:**

- COORDINATE ROUTING OF CABLE TRAY SYSTEMS WITH STRUCTURAL SUPPORTS AND MECHANICAL DUCTWORK.
- DO NOT SUPPORT FROM BOTTOM CORD OF TRUSSES.
- COORDINATE HANGER SPACING WITH LOADING REQUIREMENTS.

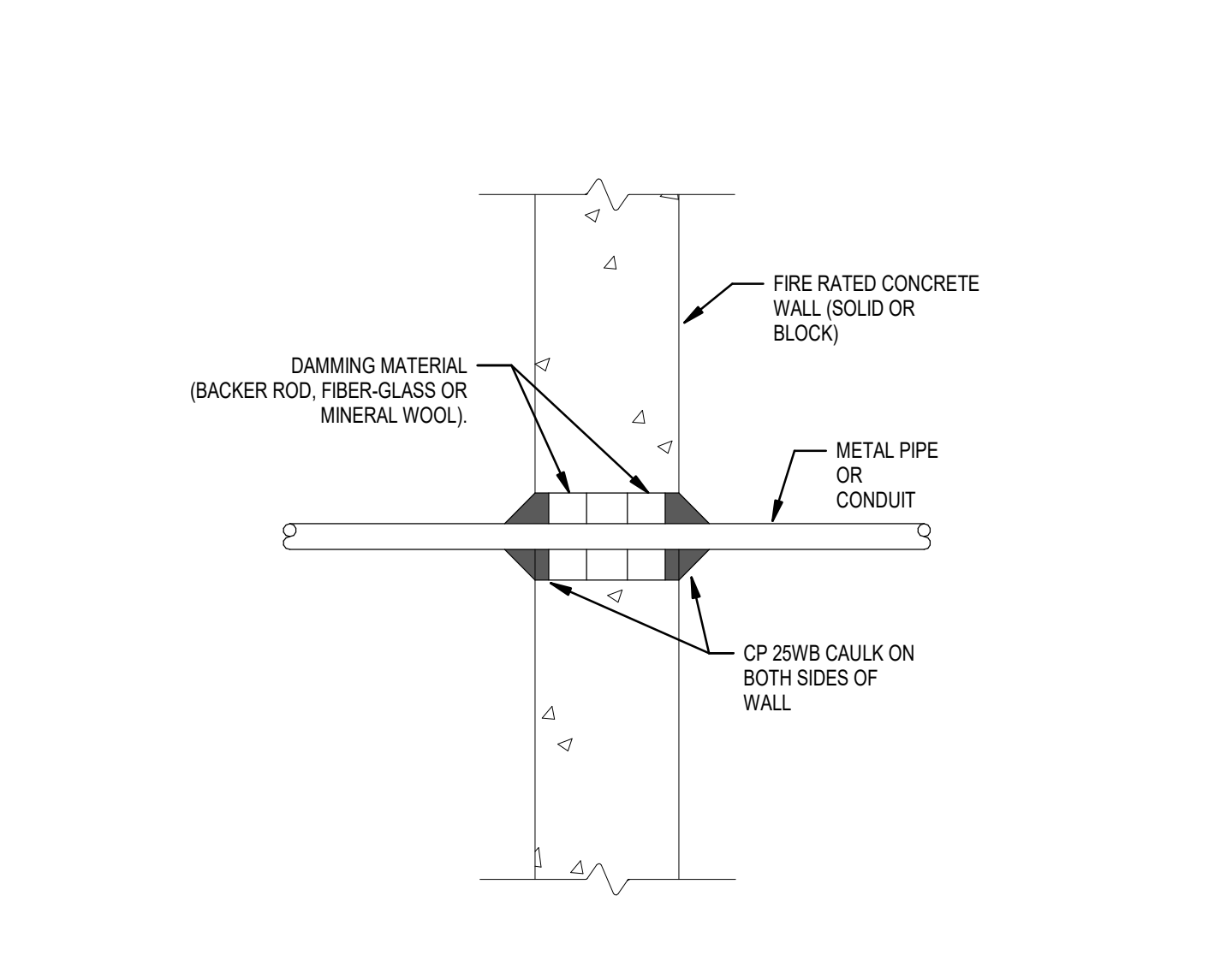


**1 SEISMIC BRACING FOR CABLE TRAY**  
SCALE: NTS

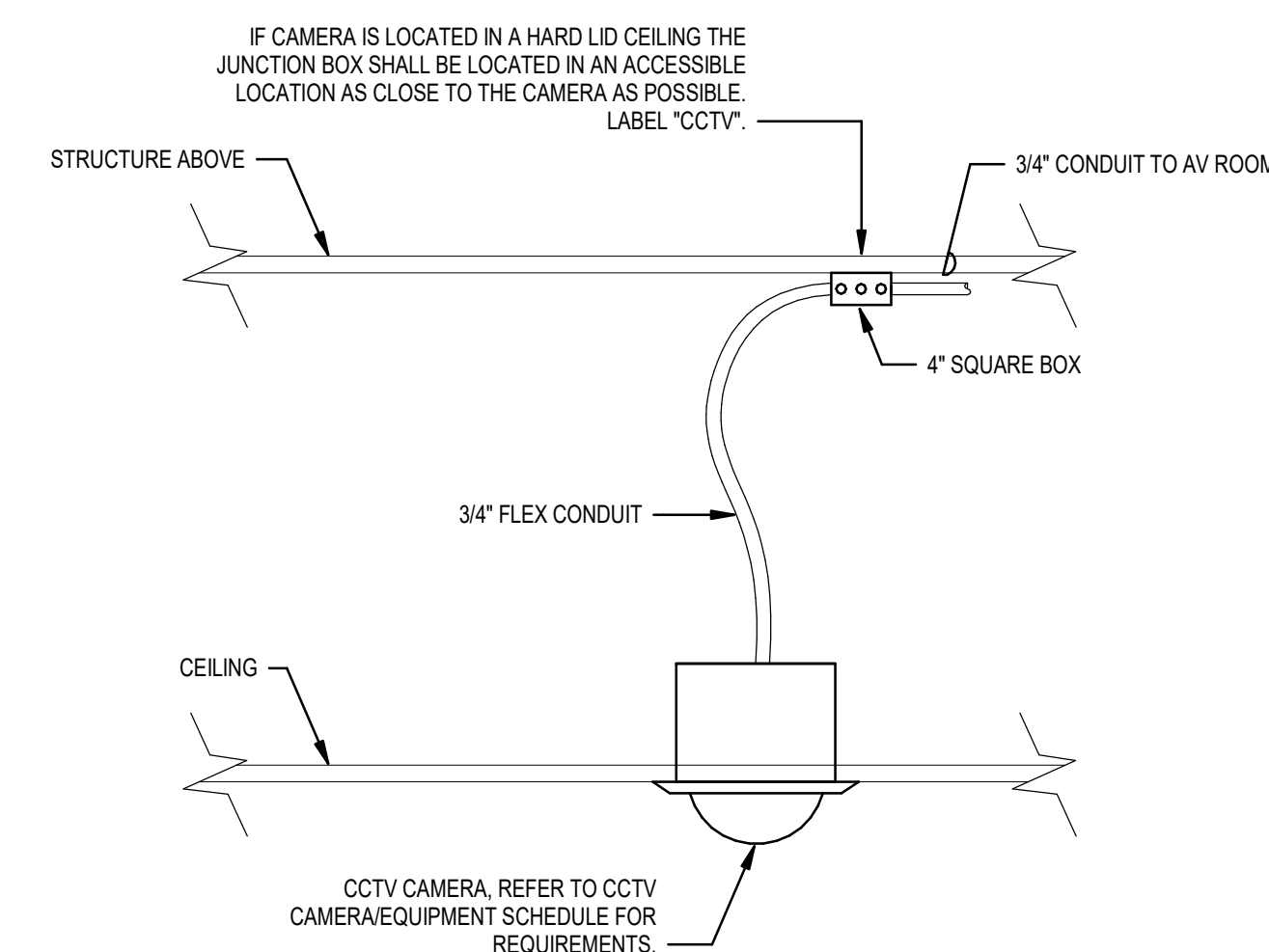


- NOTE:
- TYPICAL DETAILS SHOWING GENERAL FIRE STOPPING PROCEDURE. ACTUAL PROCEDURE DEPENDS UPON ANNULAR SPACE BETWEEN PIPE AND/OR INSULATION AND OPENING. FOLLOW MANUFACTURER'S INSTRUCTIONS.
  - FIRESTOP TESTED UP TO 4 HOURS IN ACCORDANCE WITH ASTM E 814 (UL 1479) & CANULC S115.

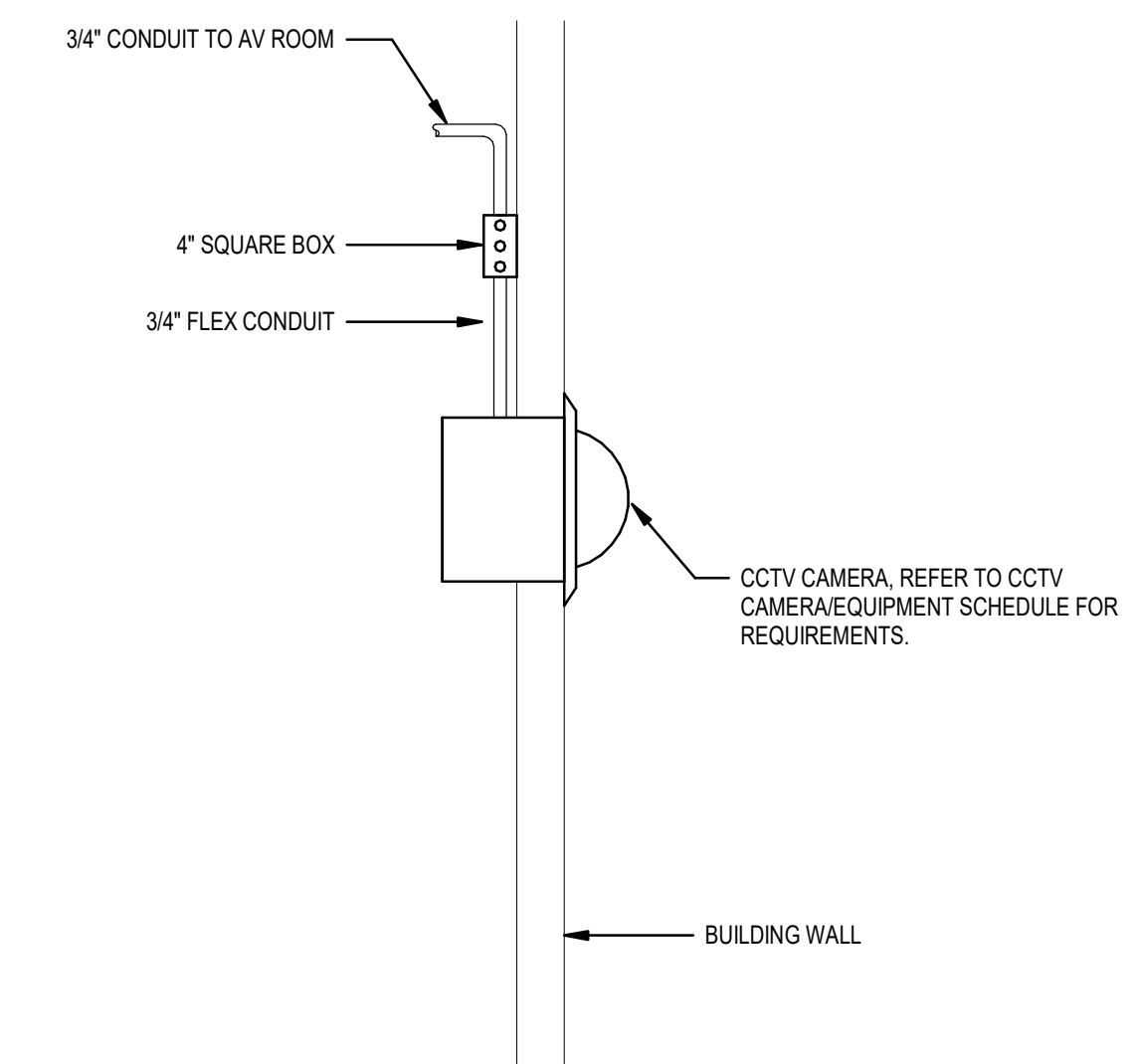
**5 TYPICAL GYPBOARD WALL PENETRATION DETAIL**  
SCALE: NTS



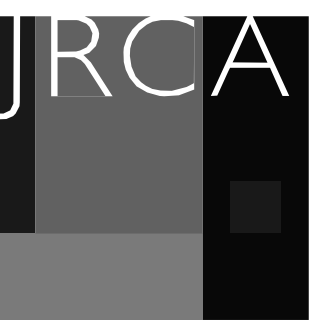
**4 TYPICAL CONCRETE WALL PENETRATION DETAIL**  
SCALE: NTS



**6 INTERIOR RECESSED MOUNTED CAMERA DETAIL**  
SCALE: NTS



**7 INTERIOR WALL MOUNTED CAMERA DETAIL**  
SCALE: NTS



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SLCC TESTING CENTER  
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SYSTEMS  
DETAILS

EY501





**ACCESS CONTROL COORDINATION REQUIREMENTS:**

**CODE REFERENCES AND REQUIREMENTS:**

- 2016 NFPA 101 - LIFE SAFETY CODE
  - 7.2.1.5.6(5) REQUIRES THAT LOSS OF POWER WILL UNLOCK THE ELECTRICALLY CONTROLLED DOOR HARDWARE.
  - 7.2.1.6.2.(4) REQUIRES THAT ACTIVATION OF THE BUILDING FIRE ALARM SYSTEM UNLOCK ALL DOORS LOCATED IN THE PATH OF EGRESS. 2016 NFPA 80 - FIRE DOORS AND OTHER OPENING PROTECTIVES

**2016 NFPA 60 - FIRE DOORS AND OTHER OPENING PROTECTIVES**

- 6.1.3.4 REQUIRES THAT POWER OPERATED FIRE DOORS HAVE A RELEASING DEVICE TO AUTOMATICALLY RELEASE POWER UPON FIRE ALARM.
- 6.4.4.3.3 REQUIRES THAT FIRE RATED DOORS BE POSITIVELY LATCHED TO MAINTAIN THE FIRE RATING. ALL ELECTRIC STRIKES USED IN FIRE RATED DOORS MUST BE FAIL SECURE.

**2012 IBC - INTERNATIONAL BUILDING CODE**

- 1010.1.9.8 REQUIRES ELECTROMAGNETICALLY LOCKED DOORS HAVE A SENSOR RELEASE SWITCH EITHER AUTOMATIC OR BY A READILY ACCESSIBLE WALL MOUNTED PUSHBUTTON TO RELEASE THE LOCK WITHIN 5' OF THE DOOR.

**INTEGRATION WITH FIRE ALARM**

ALL MAGNETIC LOCKS SHALL BE UNLOCKED DURING A GENERAL FIRE ALARM. THIS ACTION IS NOT REQUIRED IF SYSTEM IS IN ALARM BY MEANS OF A MANUAL PULL STATION. AUTOMATIC DETECTION DEVICES SUCH AS SMOKE DETECTORS OR SPRINKLER FLOW REQUIRE UNLOCKING AND THE DOOR MUST REMAIN UNLOCKED UNTIL FIRE ALARM SYSTEM RESET. CONTRACTOR SHALL INCLUDE ALL FIRE ALARM INTERFACE EQUIPMENT SUCH AS ADDRESSABLE CONTROL MODULES OR BY CONTACT CLOSURE SIGNALING TO THE ACCESS CONTROL PANELS AS NECESSARY TO MEET THE CODE REQUIREMENTS. ALL DOORS IN STAIRWELLS MUST ALLOW FOR RE-ENTRY.

\*\*\*TO ENSURE A COMPLETE AND OPERATING ACCESS CONTROL SYSTEM AND TO ELIMINATE DELAYS, INSUFFICIENT OR UNNECESSARY WORK BY ALL OF THE ENTITIES INVOLVED, THE FOLLOWING STEPS SHALL BE COMPLETED. THE FAILURE TO DO SO RESULTING IN ADDED COSTS AND LOST TIME WILL BE BORN SOLELY BY THE CONTRACTOR. NO ADDITIONAL PAYMENTS WILL BE MADE BY THE OWNER TO COVER WORK DESCRIBED BELOW.\*\*\*

**DURING THE BIDDING PROCESS:**

- THE ELECTRICAL CONTRACTOR SHALL REVIEW THE FLOORPLAN DRAWINGS AND DETAILS ON THIS SHEET. THE FLOORPLANS WILL INDICATE WHICH DOORS HAVE ACCESS CONTROL EQUIPMENT REQUIRING ROUGH-IN. DEVICE LOCATIONS REQUIRING JUNCTION BOXES WILL BE SHOWN ON THE FLOORPLANS, BUT ALL CONDUIT AND HARDWARE REQUIREMENTS CAN ONLY BE DETERMINED BY REFERRING TO THE SPECIFIC DOOR ROUGH-IN DETAILS AND THE ARCHITECTURAL DOOR HARDWARE SPECIFICATION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
- THE ELECTRICAL CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DOOR HARDWARE SCHEDULE, DOOR HARDWARE SPECIFICATIONS, AND DEFINED EGRESS PATHS. IDENTIFY ACCESS CONTROLLED DOORS LOCATED IN FIRE RATED WALLS AND IN PATHS OF EGRESS REQUIRING ADDITIONAL CONTROL DEVICES.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY WHICH DOORS USING AN ELECTRIFIED EXIT DEVICE WILL REQUIRE 120V AT THE DOOR. THIS IS MANUFACTURER SPECIFIC AND MUST BE CONFIRMED WITH THE GENERAL CONTRACTOR ACCORDING TO WHICH HARDWARE SUPPLIER BEING USED.

**POST-BID, DURING THE SUBMITTAL PROCESS:**

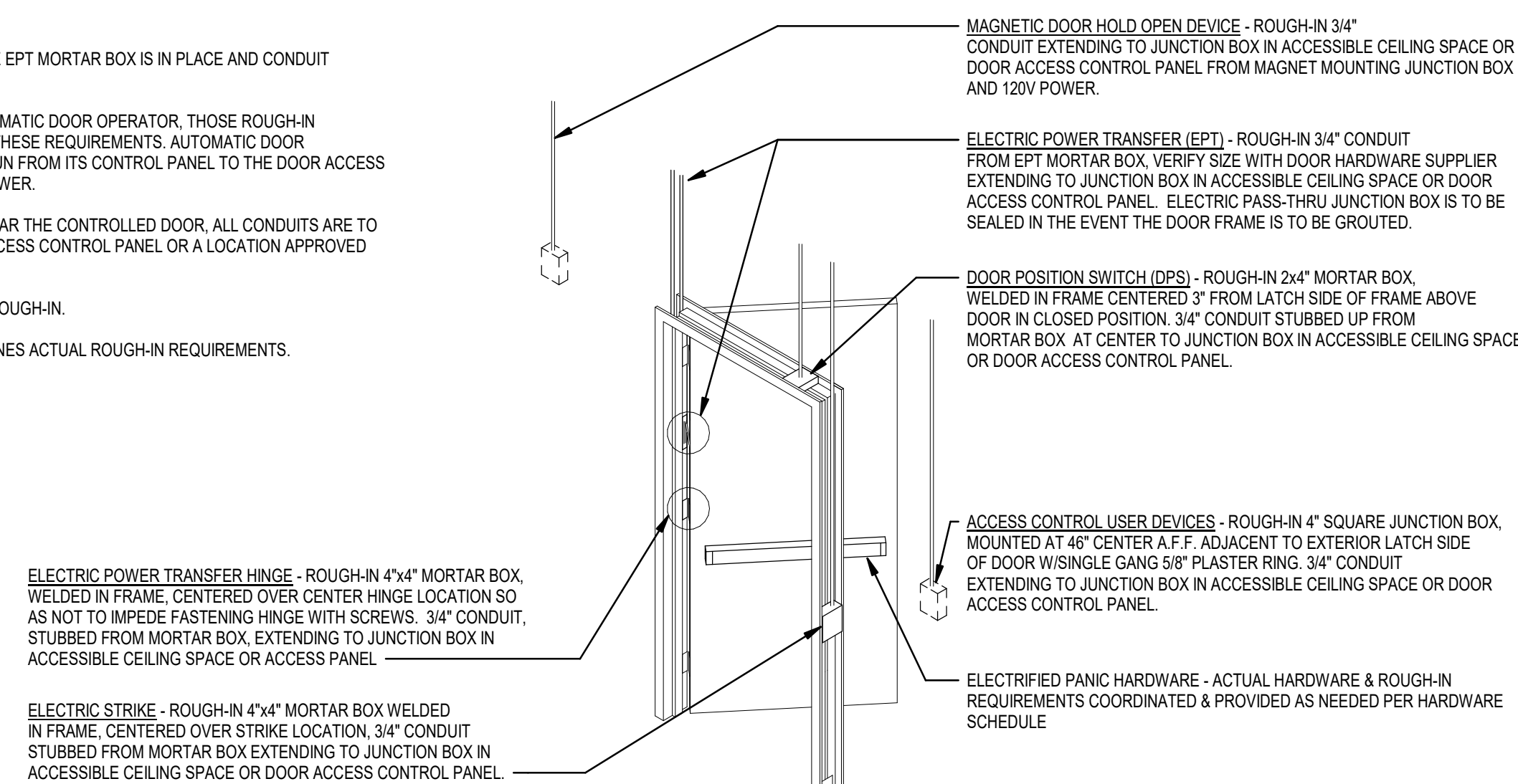
- DURING THE SUBMITTAL PROCESS, THE ELECTRICAL CONTRACTOR SHALL REVIEW THE APPROVED DOOR HARDWARE SUBMITTAL TO CONFIRM THE FINAL HARDWARE SETS PRIOR TO ANY ROUGH-IN. ANY QUESTIONS SHALL BE ISSUED BY FORMAL RFI.
- MEET WITH THE ACCESS CONTROL VENDOR TO REVIEW ALL FINAL INTEGRATION AND ROUGH-IN REQUIREMENTS. ONLY AFTER CONFIRMING THE FINAL DOOR HARDWARE AND ACCESS CONTROL SYSTEM REQUIREMENTS SHALL ANY ROUGH-IN WORK BEGIN.

**GENERAL NOTES:**

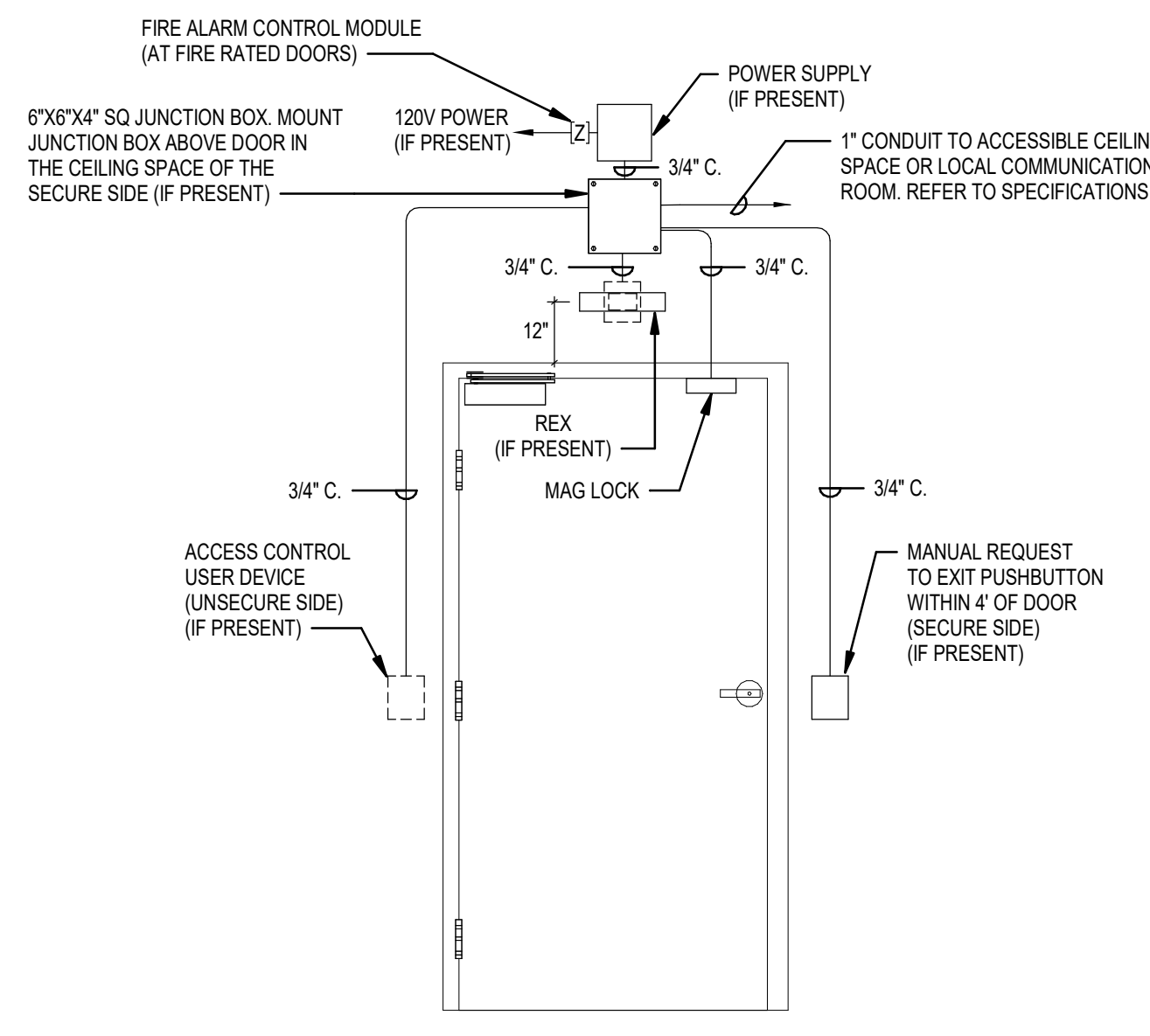
- THE DOOR DETAILS SHOWN BELOW ARE GENERAL ROUGH-IN DETAILS AND NOT ALL DEVICES SHOWN MAY BE PRESENT FOR EACH DOOR. CONTRACTOR SHALL REFER TO THE DOOR HARDWARE SCHEDULE IN THE ARCHITECTS DRAWINGS AND SPECS TO DETERMINE WHAT DEVICES ARE PRESENT FOR EACH DOOR REQUIRING CARD ACCESS DOOR EQUIPMENT.
- NOT ALL DOOR STYLE DETAILS SHOWN BELOW MAY BE INCLUDED IN THE PROJECT.
- ALL CONDUIT SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
- THE DOOR ROUGH-IN INFORMATION SHOWN ON THESE DRAWINGS ARE SCHEMATIC IN NATURE AND CANNOT ACCOUNT FOR ALL SPECIFIC VENDOR REQUIREMENTS, OR ACTUAL DOOR HARDWARE PROVIDED. COORDINATE SPECIFIC LOCATIONS WITH SECURITY CONTRACTOR AND APPROVED DOOR HARDWARE SCHEDULES PRIOR TO ROUGH-IN. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE CONDUIT RACEWAY SYSTEM AT THE DOOR AND BACK TO LOCAL ELECTRICAL ROOM.
- IF REX IS NOT INCLUDED IN DOOR HANDLE OR EXIT DEVICE, PROVIDE BOX FOR WALL MOUNTED REX DEVICE. VERIFY WITH DOOR HARDWARE PRIOR TO ROUGH-IN.
- PROVIDE CONDUIT AND DEVICE BACK BOX ROUGH-IN AT ALL CARD READER DOOR LOCATIONS. CONDUIT SHALL BE 3/4" UNLESS OTHERWISE NOTED AND ALL BOXES SHALL BE 4 SQUARE WITH A SINGLE GANG MUD RING FOR DEVICES OR JUST A SINGLE GANG BOX IF INSTALLED AT THE DOOR FRAME.
- A SINGLE FIRE ALARM CONTROL MODULE MAY BE USED TO CONTROL THE POWER TO MULTIPLE DOORS IF COORDINATED WITH THE ACCESS CONTROL SYSTEM VENDOR TO WIRE DOORS SEPARATE FROM OTHER DOORS TOGETHER ON THE SAME POWER SUPPLY LOOP.
- IF NO ACCESSIBLE CEILING SPACE IS NEAR THE CONTROLLED DOOR, ALL CONDUITS ARE TO BE RUN CONTINUOUS TO THE DOOR ACCESS CONTROL PANEL UNLESS A LOCATION IS DETERMINED TO BE ACCEPTABLE TO THE ENGINEER PRIOR TO INSTALLATION.

**GENERAL NOTES:**

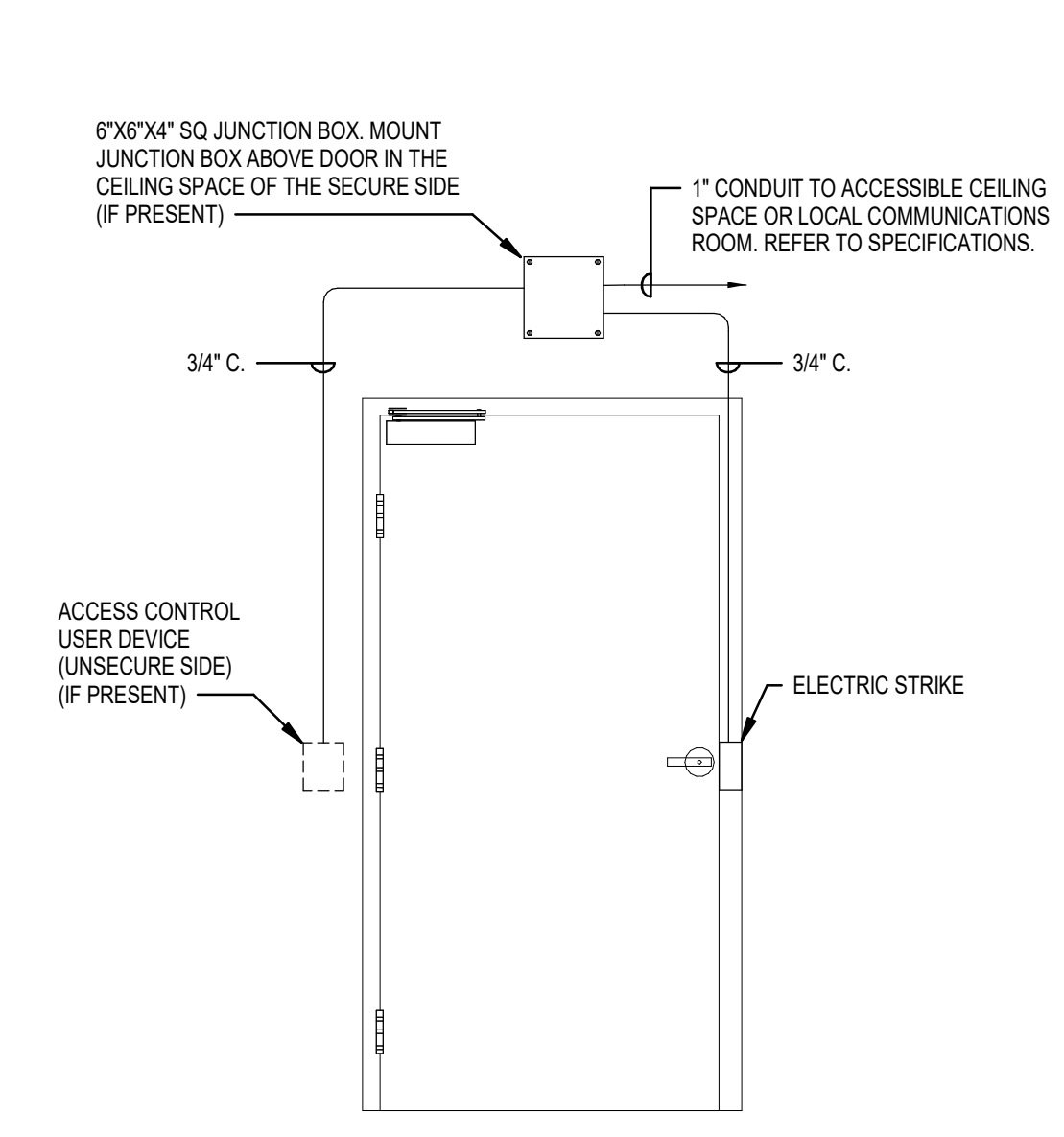
- IF DOOR IS TO BE GROUTED MAKE SURE EPT MORTAR BOX IS IN PLACE AND CONDUIT CONNECTED AND SEALED.
- IF DOOR IS TO BE EQUIPPED WITH AUTOMATIC DOOR OPERATOR, THOSE ROUGH-IN PROVISIONS SHALL BE IN ADDITION TO THESE REQUIREMENTS. AUTOMATIC DOOR OPERATORS SHALL HAVE COMPLETE RUN FROM ITS CONTROL PANEL TO THE DOOR ACCESS CONTROL PANEL AND INCLUDE 120V POWER.
- IF NO ACCESSIBLE CEILING SPACE IS NEAR THE CONTROLLED DOOR, ALL CONDUITS ARE TO BE RUN CONTINUOUS TO THE DOOR ACCESS CONTROL PANEL OR A LOCATION APPROVED BY THE OWNER.
- FOR DOUBLE DOORS, DUPLICATE THE ROUGH-IN.
- DOOR HARDWARE SCHEDULE DETERMINES ACTUAL ROUGH-IN REQUIREMENTS.



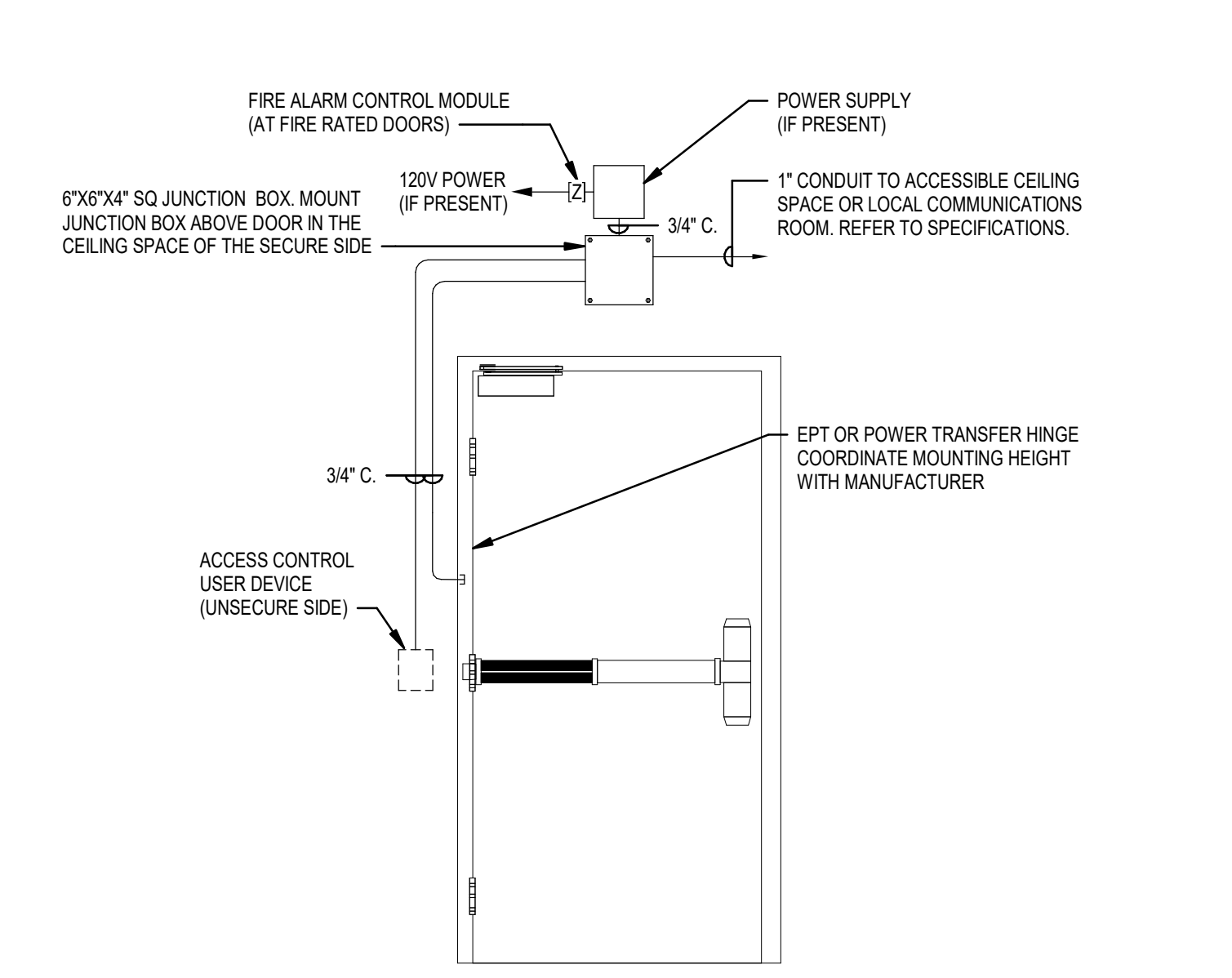
**4 TYPICAL BOX AND CONDUIT REQUIREMENTS ROUGH-IN DETAIL**  
SCALE: NTS



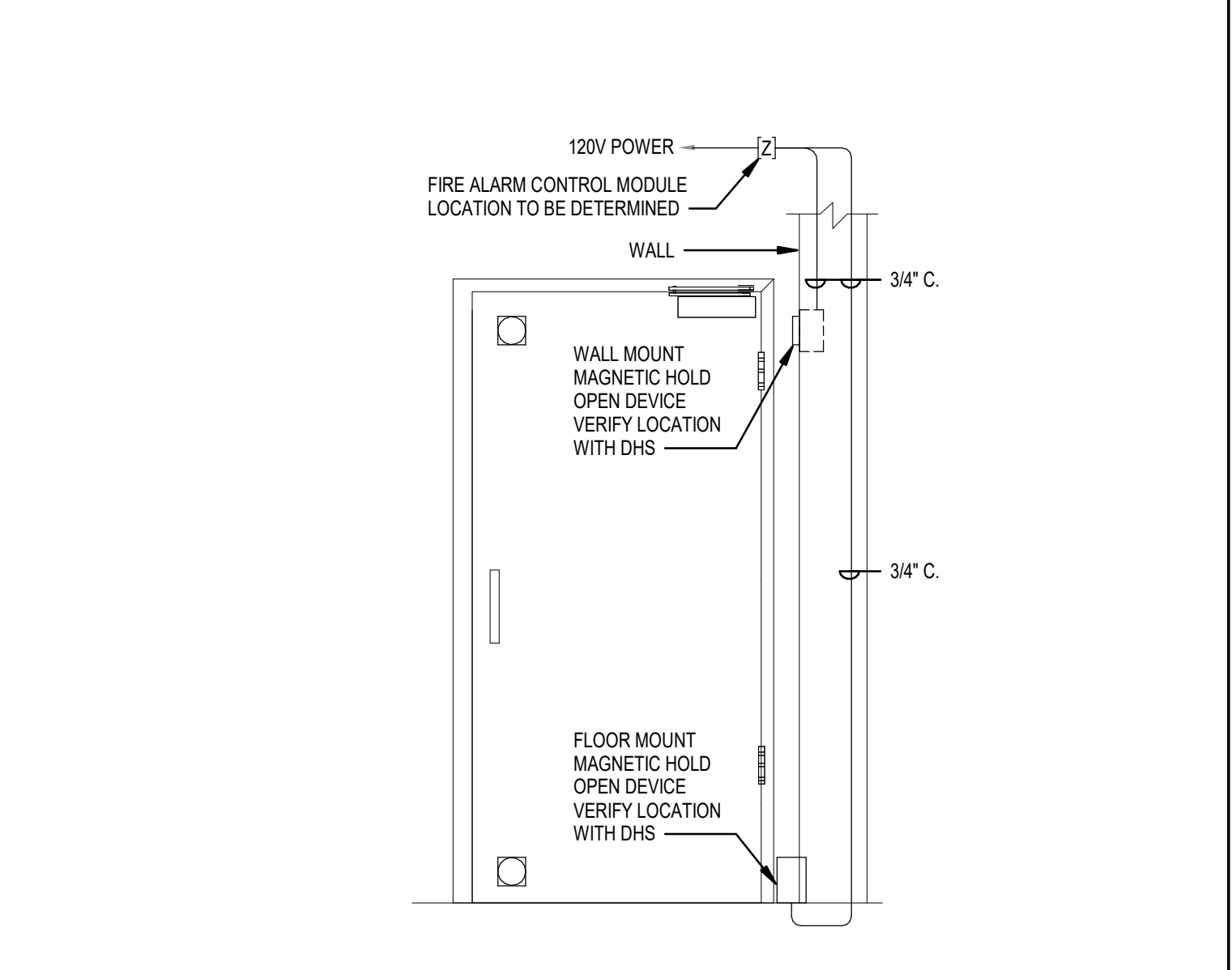
**5 TYPICAL ELECTRO-MAGNETIC LOCK ROUGH-IN DETAIL**  
SCALE: NTS



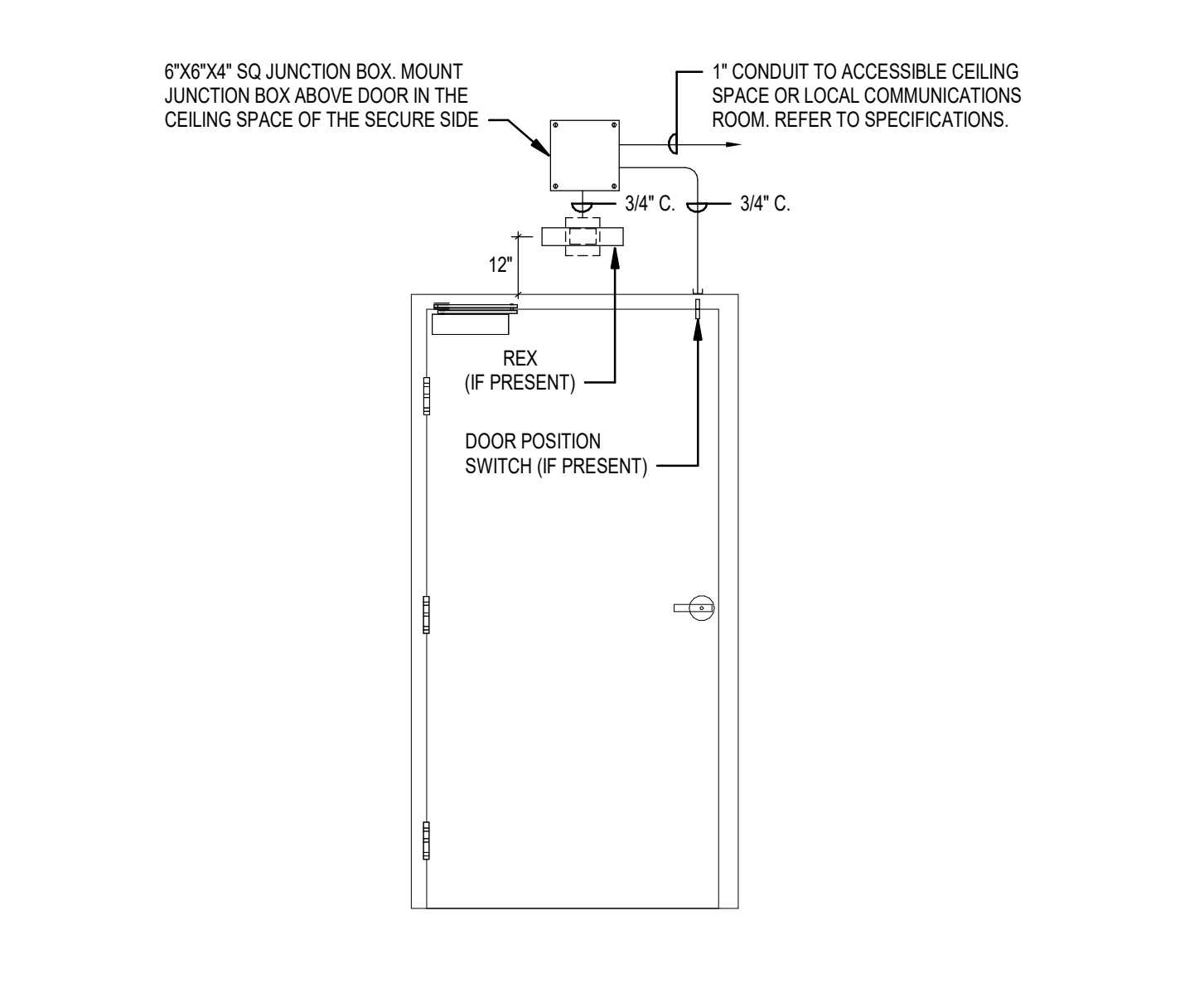
**6 TYPICAL ELECTRIC STRIKE ROUGH-IN DETAIL**  
SCALE: NTS



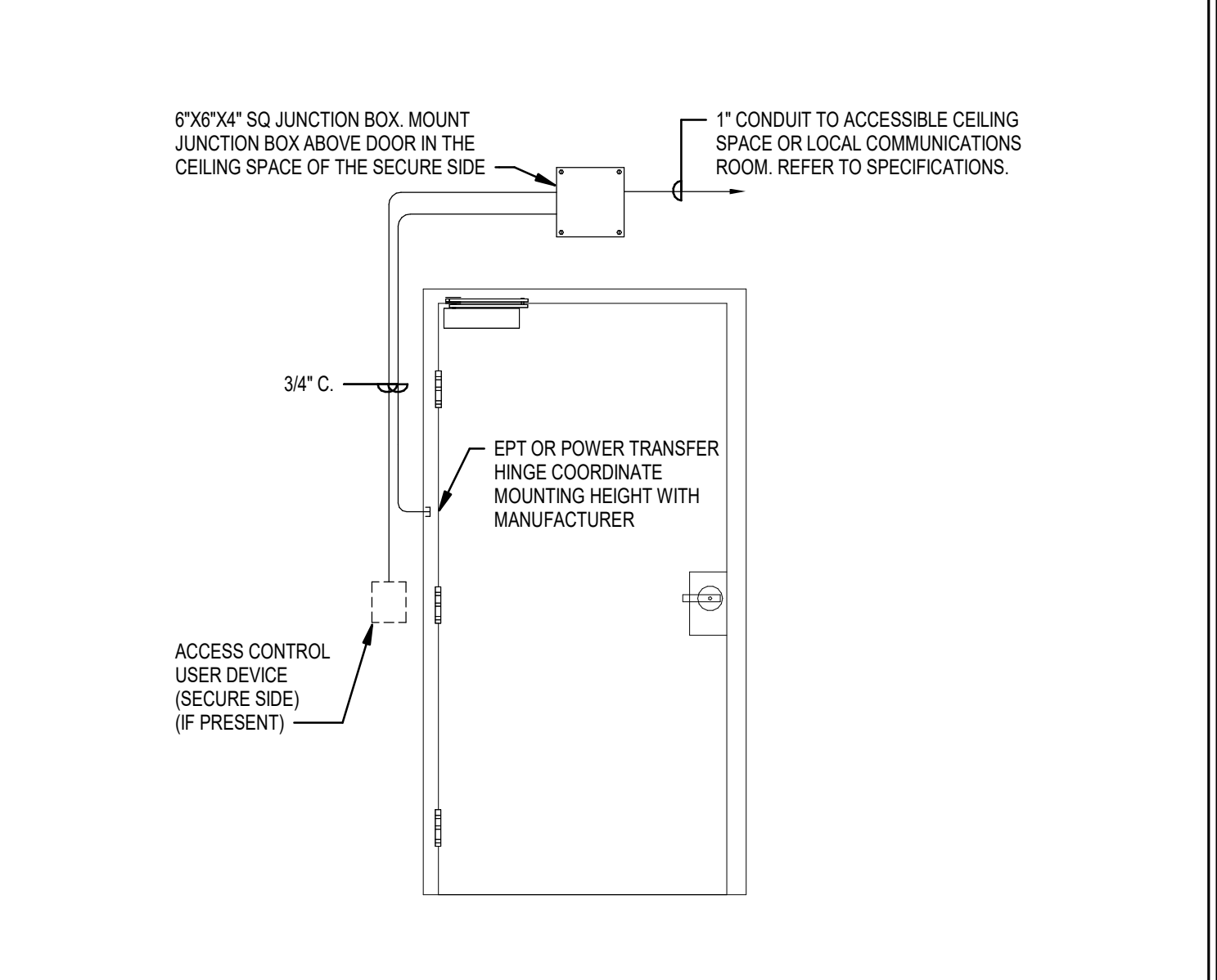
**7 TYPICAL ELECTRIFIED PANIC HARDWARE ROUGH-IN DETAIL**  
SCALE: NTS



**8 TYPICAL MAGNETIC DOOR HOLD OPEN DEVICE ROUGH-IN DETAIL**  
SCALE: NTS



**10 TYPICAL DOOR POSITION SWITCH ROUGH-IN DETAIL**  
SCALE: NTS



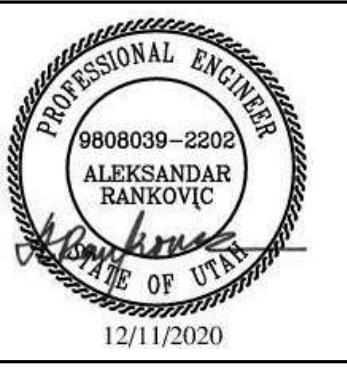
**11 TYPICAL ELECTRIFIED LEVER ROUGH-IN DETAIL**  
SCALE: NTS



**SLCC TESTING CENTER**  
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**ACCESS CONTROL DOOR ROUGH-IN DETAILS**

**EY502**



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**ABBREVIATIONS:**

ADO - AUTOMATIC DOOR OPERATOR  
 AFF - ABOVE FINISHED FLOOR  
 AP - ACCESS CONTROL PANEL  
 CR - CARD READER  
 DHS - DOOR HARDWARE SUPPLIER  
 DPS - DOOR POSITION SWITCH  
 EPT - ELECTRIC POWER TRANSFER  
 ES - ELECTRIC STRIKE  
 MAG LOCK - MAGNETIC LOCK  
 RX - EXIT DEVICE  
 PB - DOOR RELEASE PUSH BUTTON (MANUAL REX)  
 REX - REQUEST TO EXIT  
 RFI - REQUEST FOR INFORMATION

**ACCESS CONTROL COORDINATION REQUIREMENTS:**

**CODE REFERENCES AND REQUIREMENTS:**

- 2016 NFPA 101 - LIFE SAFETY CODE
  - 7.2.1.5.6(5) REQUIRES THAT LOSS OF POWER WILL UNLOCK THE ELECTRICALLY CONTROLLED DOOR HARDWARE.
  - 7.2.1.6.2.(4) REQUIRES THAT ACTIVATION OF THE BUILDING FIRE ALARM SYSTEM UNLOCK ALL DOORS LOCATED IN THE PATH OF EGRESS. 2016 NFPA 80 - FIRE DOORS AND OTHER OPENING PROTECTIVES
- 2016 NFPA 80 - FIRE DOORS AND OTHER OPENING PROTECTIVES
  - 6.1.3.4 REQUIRES THAT POWER OPERATED FIRE DOORS HAVE A RELEASING DEVICE TO AUTOMATICALLY RELEASE POWER UPON FIRE ALARM.
  - 6.4.4.3.3 REQUIRES THAT FIRE RATED DOORS BE POSITIVELY LATCHED TO MAINTAIN THE FIRE RATING, ALL ELECTRIC STRIKES USED IN FIRE RATED DOORS MUST BE FAIL SECURE.
- 2012 IBC - INTERNATIONAL BUILDING CODE
  - 1010.1.9.8 REQUIRES ELECTROMAGNETICALLY LOCKED DOORS HAVE A SENSOR RELEASE SWITCH EITHER AUTOMATIC OR BY A READILY ACCESSIBLE WALL MOUNTED PUSHBUTTON TO RELEASE THE LOCK WITHIN 5' OF THE DOOR.

**INTEGRATION WITH FIRE ALARM**

ALL MAGNETIC LOCKS SHALL BE UNLOCKED DURING A GENERAL FIRE ALARM. THIS ACTION IS NOT REQUIRED IF SYSTEM IS IN ALARM BY MEANS OF A MANUAL PULL STATION. AUTOMATIC DETECTION DEVICES SUCH AS SMOKE DETECTORS OR SPRINKLER FLOW REQUIRE UNLOCKING AND THE DOOR MUST REMAIN UNLOCKED UNTIL FIRE ALARM SYSTEM RESET. CONTRACTOR SHALL INCLUDE ALL FIRE ALARM INTERFACE EQUIPMENT SUCH AS ADDRESSABLE CONTROL MODULES OR BY CONTACT CLOSURE SIGNALING TO THE ACCESS CONTROL PANELS AS NECESSARY TO MEET THE CODE REQUIREMENTS. ALL DOORS IN STAIRWELLS MUST ALLOW FOR RE-ENTRY.

\*\*\*TO ENSURE A COMPLETE AND OPERATING ACCESS CONTROL SYSTEM AND TO ELIMINATE DELAYS, INSUFFICIENT OR UNNECESSARY WORK BY ALL OF THE ENTITIES INVOLVED, THE FOLLOWING STEPS SHALL BE COMPLETED. THE FAILURE TO DO SO RESULTING IN ADDED COSTS AND LOST TIME WILL BE BORN SOLELY BY THE CONTRACTOR. NO ADDITIONAL PAYMENTS WILL BE MADE BY THE OWNER TO COVER WORK DESCRIBED BELOW.\*\*\*

**DURING THE BIDDING PROCESS:**

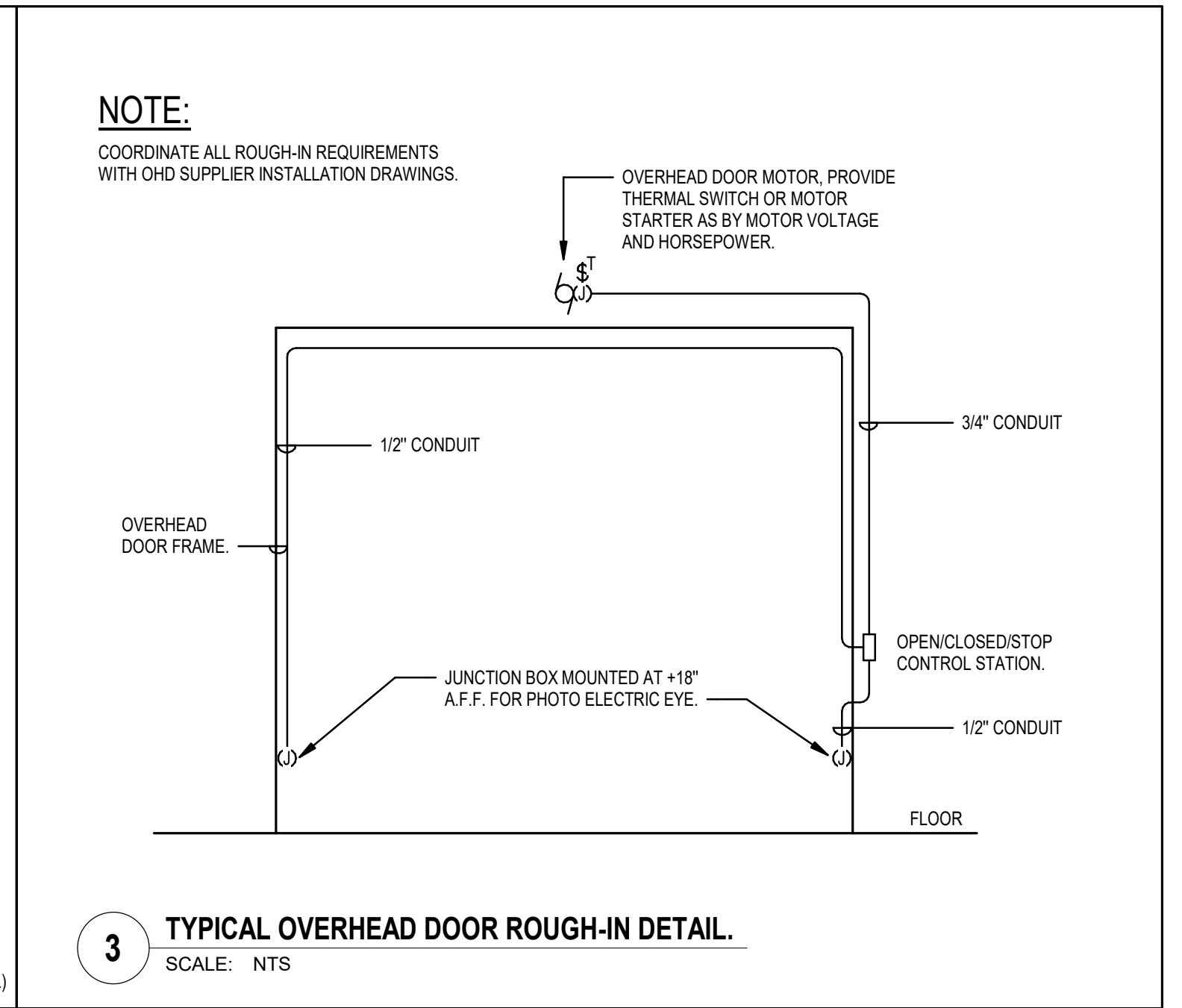
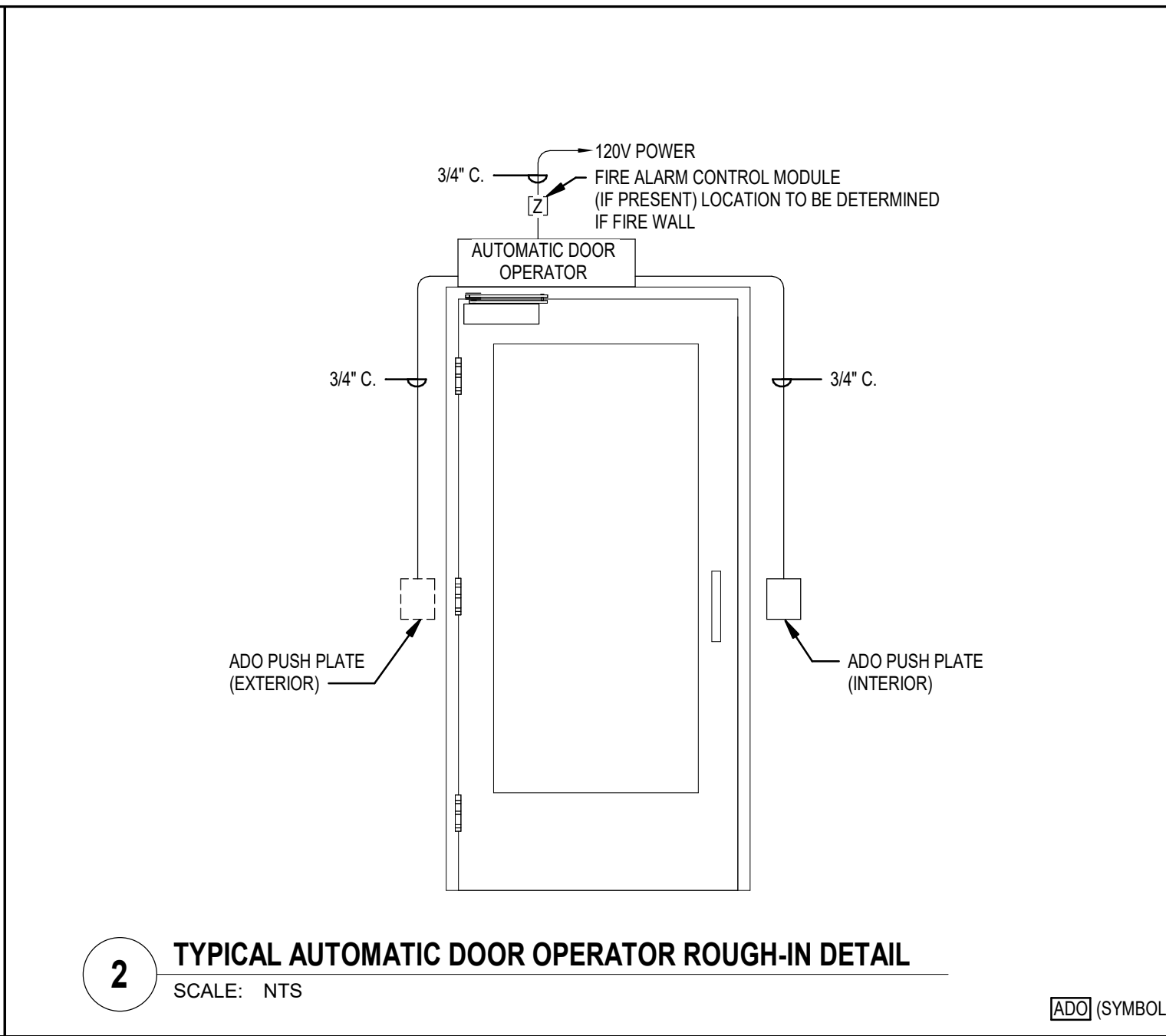
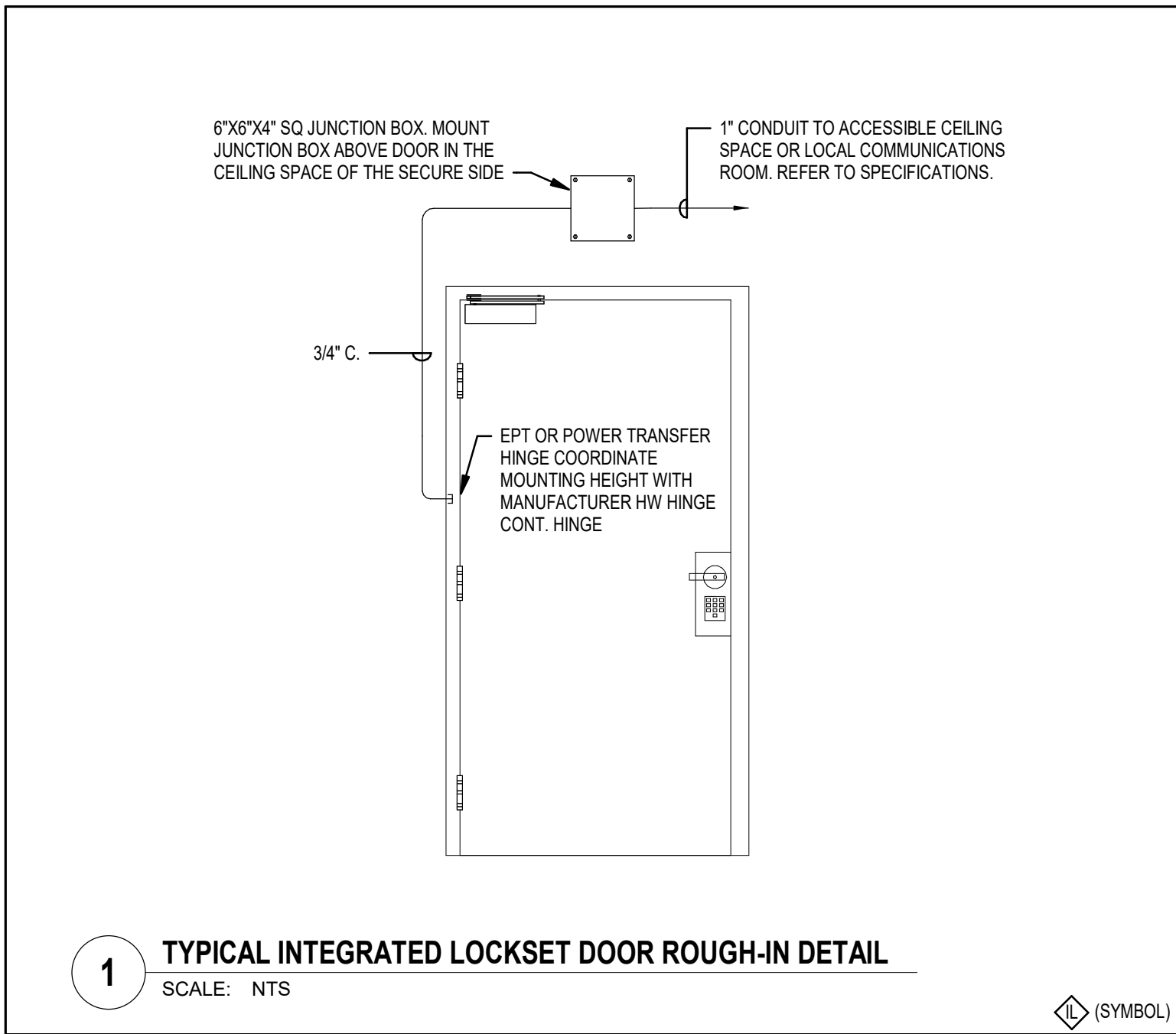
- THE ELECTRICAL CONTRACTOR SHALL REVIEW THE FLOORPLAN DRAWINGS AND DETAILS ON THIS SHEET. THE FLOORPLANS WILL INDICATE WHICH DOORS HAVE ACCESS CONTROL EQUIPMENT REQUIRING ROUGH-IN. DEVICE LOCATIONS REQUIRING JUNCTION BOXES WILL BE SHOWN ON THE FLOORPLANS, BUT ALL CONDUIT AND HARDWARE REQUIREMENTS CAN ONLY BE DETERMINED BY REFERRING TO THE SPECIFIC DOOR ROUGH-IN DETAILS AND THE ARCHITECTURAL DOOR HARDWARE SPECIFICATION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
- THE ELECTRICAL CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DOOR HARDWARE SCHEDULE, DOOR HARDWARE SPECIFICATIONS, AND DEFINED EGRESS PATHS. IDENTIFY ACCESS CONTROLLED DOORS LOCATED IN FIRE RATED WALLS AND IN PATHS OF EGRESS REQUIRING ADDITIONAL CONTROL DEVICES.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY WHICH DOORS USING AN ELECTRIFIED EXIT DEVICE WILL REQUIRE 120V AT THE DOOR. THIS IS MANUFACTURER SPECIFIC AND MUST BE CONFIRMED WITH THE GENERAL CONTRACTOR ACCORDING TO WHICH HARDWARE SUPPLIER BEING USED.

**POST-BID, DURING THE SUBMITTAL PROCESS:**

- DURING THE SUBMITTAL PROCESS, THE ELECTRICAL CONTRACTOR SHALL REVIEW THE APPROVED DOOR HARDWARE SUBMITTAL TO CONFIRM THE FINAL HARDWARE SETS PRIOR TO ANY ROUGH-IN. ANY QUESTIONS SHALL BE ISSUED BY FORMAL RFI.
- MEET WITH THE ACCESS CONTROL VENDOR TO REVIEW ALL FINAL INTEGRATION AND ROUGH-IN REQUIREMENTS. ONLY AFTER CONFIRMING THE FINAL DOOR HARDWARE AND ACCESS CONTROL SYSTEM REQUIREMENTS SHALL ANY ROUGH-IN WORK BEGIN.

**GENERAL NOTES:**

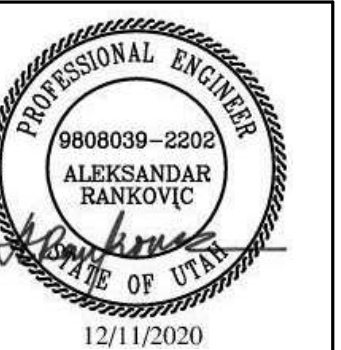
- THE DOOR DETAILS SHOWN BELOW ARE GENERAL ROUGH-IN DETAILS AND NOT ALL DEVICES SHOWN MAY BE PRESENT FOR EACH DOOR. CONTRACTOR SHALL REFER TO THE DOOR HARDWARE SCHEDULE IN THE ARCHITECTS DRAWINGS AND SPECS TO DETERMINE WHAT DEVICES ARE PRESENT FOR EACH DOOR REQUIRING CARD ACCESS DOOR EQUIPMENT.
- NOT ALL DOOR STYLE DETAILS SHOWN BELOW MAY BE INCLUDED IN THE PROJECT.
- ALL CONDUIT SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
- THE DOOR ROUGH-IN INFORMATION SHOWN ON THESE DRAWINGS ARE SCHEMATIC IN NATURE AND CANNOT ACCOUNT FOR ALL SPECIFIC VENDOR REQUIREMENTS, OR ACTUAL DOOR HARDWARE PROVIDED. COORDINATE SPECIFIC LOCATIONS WITH SECURITY CONTRACTOR AND APPROVED DOOR HARDWARE SCHEDULES PRIOR TO ROUGH-IN. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE CONDUIT RACEWAY SYSTEM AT THE DOOR AND BACK TO LOCAL ELECTRICAL ROOM.
- IF REX IS NOT INCLUDED IN DOOR HANDLE OR EXIT DEVICE, PROVIDE BOX FOR WALL MOUNTED REX DEVICE. VERIFY WITH DOOR HARDWARE PRIOR TO ROUGH-IN.
- PROVIDE CONDUIT AND DEVICE BACK BOX ROUGH-IN AT ALL CARD READER DOOR LOCATIONS. CONDUIT SHALL BE 3/4" UNLESS OTHERWISE NOTED AND ALL BOXES SHALL BE 4 SQUARE WITH A SINGLE GANG MUD RING FOR DEVICES OR JUST A SINGLE GANG BOX IF INSTALLED AT THE DOOR FRAME.
- A SINGLE FIRE ALARM CONTROL MODULE MAY BE USED TO CONTROL THE POWER TO MULTIPLE DOORS IF COORDINATED WITH THE ACCESS CONTROL SYSTEM VENDOR TO WIRE DOORS SEPARATE FROM OTHER DOORS TOGETHER ON THE SAME POWER SUPPLY LOOP.
- IF NO ACCESSIBLE CEILING SPACE IS NEAR THE CONTROLLED DOOR, ALL CONDUITS ARE TO BE RUN CONTINUOUS TO THE DOOR ACCESS CONTROL PANEL UNLESS A LOCATION IS DETERMINED TO BE ACCEPTABLE TO THE ENGINEER PRIOR TO INSTALLATION.



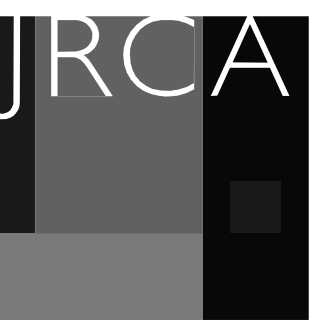
**NOTE:**

COORDINATE ALL ROUGH-IN REQUIREMENTS WITH OHD SUPPLIER INSTALLATION DRAWINGS.

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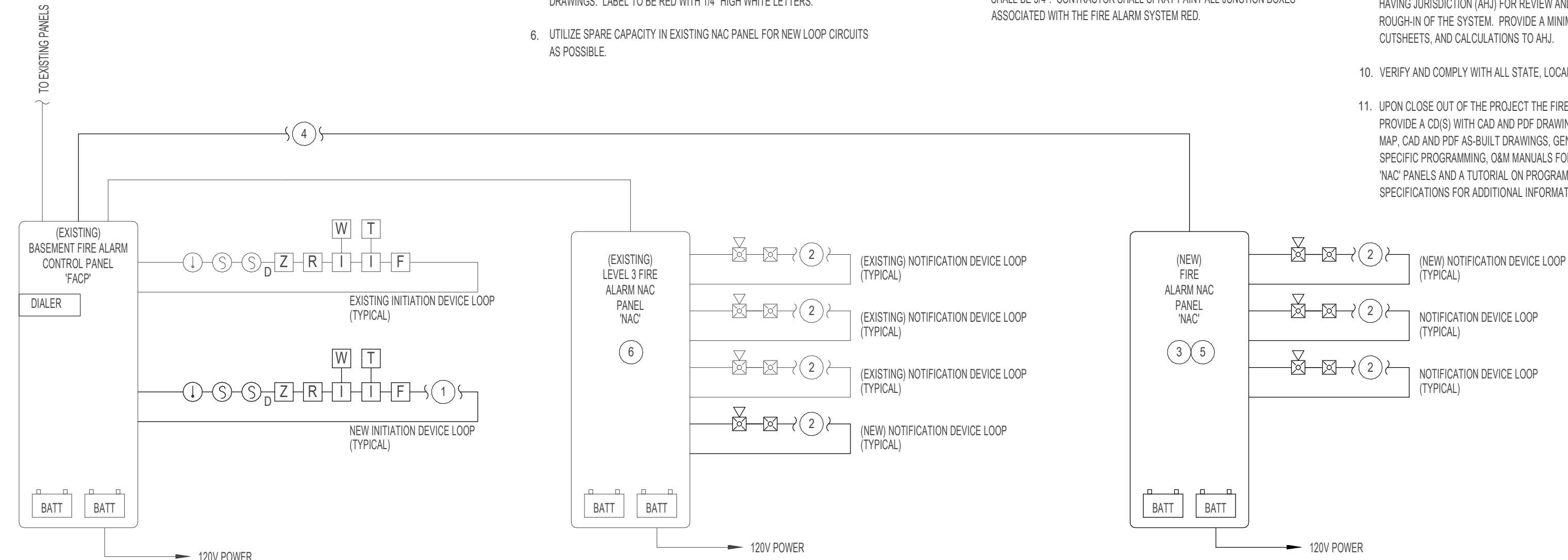
577 South 200 East  
S L C, Utah 84111  
ph: (801) 533-2100  
jrcadesign.com

**FIRE ALARM KEYED NOTES: #**

1. EXTEND A 3/4" CONDUIT WITH INITIATING DEVICE CABLE TO ADDRESSABLE FIRE ALARM DEVICES INCLUDING SMOKE DETECTORS, DUCT SMOKE DETECTORS, HEAT DETECTORS, PULL STATIONS, MONITOR MODULES, AND CONTROL MODULES. REFER TO AUXILIARY PLANS FOR QUANTITIES AND DEVICE TYPES. INCLUDE POWER WIRING AS REQUIRED FOR CONTROL MODULES AND DUCT SMOKE DETECTORS.
2. EXTEND A 3/4" CONDUIT NOTIFICATION DEVICE CABLE TO FIRE ALARM HORNS/STROBES, HORNS AND STROBES. REFER TO AUXILIARY PLANS FOR QUANTITIES AND DEVICE TYPES. SYNCHRONIZE ALL STROBES.
3. PROVIDE NOTIFICATION APPLIANCE CIRCUIT PANEL (NACP) INCLUDING STROBE AND HORN CIRCUIT MODULES, POWER SUPPLIES, AND BATTERIES AS REQUIRED.
4. EXTEND 1" CONDUIT WITH CABLING PER ALL MANUFACTURERS RECOMMENDATIONS.
5. PROVIDE PLASTIC LAMINATE LABEL WITH NAME AS CALLED OUT ON THE DRAWINGS. LABEL TO BE RED WITH 1/4" HIGH WHITE LETTERS.
6. UTILIZE SPARE CAPACITY IN EXISTING NACP FOR NEW LOOP CIRCUITS AS POSSIBLE.

**FIRE ALARM SYSTEM NOTES:**

1. THE EXISTING FIRE ALARM SYSTEM IS SIMPLEX BY JOHNSON CONTROLS. ALL NEW EQUIPMENT AND DEVICES SHALL BE OF THE SAME MANUFACTURER.
2. CONFIRM ALL WIRING REQUIREMENTS WITH FIRE ALARM SYSTEM SUPPLIER AND PROVIDE IN ACCORDANCE THEREWITH.
3. THE SYSTEM SHALL BE PROGRAMMED SO THAT IF ANY INITIATION DEVICE IS ACTUATED, AN ALARM SIGNAL WHICH IS AUDIBLE THROUGHOUT THE BUILDING WILL BE ACTIVATED.
4. WIRING SHALL BE CONTINUOUS FROM ONE DEVICE TO ANOTHER. NO SPLICING IS ALLOWED.
5. PROVIDE FIRE ALARM MAP OF THE BUILDING SHOWING ALL FIRE ALARM SYSTEM DEVICES. LOCATE MAP AT REMOTE ANNUNCIATOR. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. ALL FIRE ALARM CABLING SHALL BE RUN IN CONDUIT. MINIMUM CONDUIT SIZE SHALL BE 3/4". CONTRACTOR SHALL SPRAY PAINT ALL JUNCTION BOXES ASSOCIATED WITH THE FIRE ALARM SYSTEM RED.
7. THE FIRE ALARM SYSTEM SUPPLIER SHALL PROVIDE COMPUTER DRAFTED SHOP DRAWINGS OF THE ENTIRE FIRE ALARM SYSTEM USING FLOOR PLANS PROVIDED BY THE ENGINEER. SHOP DRAWINGS TO INCLUDE BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, PLANS, SECTIONS, ELEVATIONS, FINAL DEVICE LOCATIONS AND ADDRESS, CONDUIT SIZE AND ROUTING AND ALL CONDUCTOR SIZES. TYPICAL RISERS AND CALCULATIONS WILL NOT BE ACCEPTED. ALL SHOP DRAWINGS SHALL BE PREPARED AND APPROVED BY A NICET CERTIFIED FIRE ALARM TECHNICIAN, LEVEL III OR GREATER.
8. ALL NOTIFICATION DEVICE CIRCUIT VOLTAGE DROP CALCULATIONS SHALL BE DONE IN COMPLIANCE WITH NFPA 72. THE FIRE ALARM SYSTEM SUPPLIER TO DETERMINE THE NUMBER OF NOTIFICATION DEVICES SHOWN ON THE DRAWINGS. THE FIRE ALARM SUPPLIER SHALL DETERMINE THE NUMBER OF "NAC" PANELS THAT WILL BE REQUIRED BASED ON THE QUANTITY OF NOTIFICATION DEVICE CIRCUITS.
9. THE FIRE ALARM SYSTEM SUPPLIER SHALL SUBMIT THE FIRE ALARM SHOP DRAWINGS AND MANUFACTURERS CUTSHEETS TO THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR REVIEW AND APPROVAL PRIOR TO THE ROUGH-IN OF THE SYSTEM. PROVIDE A MINIMUM OF TWO (2) SETS OF DRAWINGS, CUTSHEETS, AND CALCULATIONS TO AHJ.
10. VERIFY AND COMPLY WITH ALL STATE, LOCAL AND NATIONAL CODES.
11. UPON CLOSE OUT OF THE PROJECT THE FIRE ALARM SYSTEM SUPPLIER TO PROVIDE A CD(S) WITH CAD AND PDF DRAWINGS OF THE BUILDING FIRE ALARM MAP, CAD AND PDF AS-BUILT DRAWINGS, GENERAL PROGRAMMING, SITE SPECIFIC PROGRAMMING, O&M MANUALS FOR THE FIRE ALARM SYSTEM AND "NAC" PANELS AND A TUTORIAL ON PROGRAMMING THE SYSTEM. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



**1 PARTIAL EXISTING FIRE ALARM RISER DIAGRAM**  
SCALE: NTS

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VIEW AND PRINT THIS SHEET IN COLOR

**FIRE ALARM  
RISER  
DIAGRAM**



**EY701**