LAMAR COMMUNITY COLLEGE
BOWMAN BUILDING LIBRARY RENOVATION

BID DRAWINGS

PROJECT NUMBER: 2011-002P21

MARCH 12, 2024

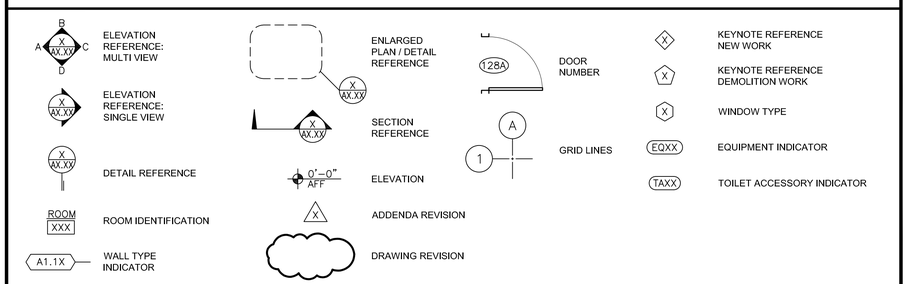
ABBREVIATIONS

&	AND
∠	ANGLE
@	AT
℄	CENTER LINE
#	NUMBER OR POUND
℄	PROPERTY LINE
Ø	DIAMETER
A/C	AIR CONDITIONING
AB	ANCHOR BOLT
ABV	ABOVE
ACP	ACOUSTIC CEILING PANEL
ACT	ACOUSTIC CEILING TILE
ADA	AMERICANS W/ DISABILITIES ACT
ADD	ADDENDUM
ANOD	ANODIZE / ANODIZED
ADJ	ADJACENT
AED	AUTOMATIC EXTERNAL DEFIBRILLATOR
AFF	ABOVE FINISHED FLOOR
AGG	AGGREGATE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZE / ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL, ARCHITECT
ASI	ARCHITECT'S SUPPLEMENTARY INSTRUCTIONS
ASPH	ASPHALT
AUTO	AUTOMATIC
BD	BOARD
BITUM	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BN	BULL NOSE
BO	BOTTOM OF ____
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
BUR	BUILT-UP ROOFING
C&G	CURB & GUTTER
CAB	CABINET
CEM	CEMENT
CER	CERAMIC
CFM	CUBIC FEET PER MINUTE
CG	CORNER GUARD
CI	CAST IRON
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	CHANGE ORDER OR COMPANY
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR OR CORRUGATED
CPT	CARPET
CR	CARD READER
CT	CERAMIC TILE
CTR	CENTER
CTSK	COUNTER SUNK
CUH	CABINET UNIT HEATER
CW	COLD WATER
CY	CUBIC YARD
D	DOWN OR DRAIN
DBL	DOUBLE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN OR DOUGLAS FIR
DIA	DIAMETER
DIM	DIMENSION
DIMS	DIMENSIONS
DL	DEAD LOAD
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DTL	DETAIL
DW	DISHWASHER
DWG	DRAWING(S)
(E)	EXISTING
E	EAST
EA	EACH
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
ENCL	ENCLOSURE
ENGR	ENGINEER
EP	ELECTRICAL PANEL
EQ	EQUAL
EQPT	EQUIPMENT
EST	ESTIMATED
ETC	ETCETERA
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXIST	EXISTING
EXP	EXPANSION OR EXPOSED
EXT	EXTERIOR
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FUTURE BY OWNER
FCO	FLOOR CLEAN OUT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FFL	FINISH FLOOR LINE
FIN	FINISH, FINISHED
FIXT	FIXTURE
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FLR	FLOOR
FLSG	FLASHING
FLUOR	FLUORESCENT
FOS	FACE OF STUD
FRP	FIBERGLASS REINFORCED PLASTIC (OR POLYESTER)
FT	FIRE-TREATED OR FOOT, FEET
FTG	FOOTING
FUT	FUTURE
FV	FIELD VERIFY
GA	GAGE, GAUGE
GALV	GALVANIZE
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GL	GLASS
GLB	GLUE-LAMINATED BEAM
GLULAM	GLUE-LAMINATED
GR	GUARD RAIL
GYP BD	GYPSUM BOARD
HB	HOSE BIBB
HC	HANDICAPPED
HDR	HEADER
HDWE	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT OR HORSE POWER
HR	HAND RAIL OR HOUR
HSS	HOLLOW STRUCTURAL SHAPE
HT	HEIGHT
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
HW	HOT WATER
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IN	INCH
INCL	INCLUDED
INFO	INFORMATION
INSUL	INSULATE, INSULATION
INT	INTERIOR
INV	INVERT
J-BOX	JUNCTION BOX
JAN	JANITOR
JST	JOIST
JT	JOINT
KD	KNOCKDOWN
KIT	KITCHEN
KO	KNOCKOUT
LAB	LABORATORY
LAV	LAVATORY
LF	LINEAL FOOT, LINEAL FEET
LINO	LINOLEUM
LKR	LOCKER
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LT	LIGHT
LVR	LOUVER
MAINT	MAINTAIN, MAINTENANCE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MARKER BOARD
MDF	MEDIUM-DENSITY FIBERBOARD
MECH	MECHANICAL
MEMB	MEMBER OR MEMBRANE
MFR	MANUFACTURER
MH	MAN HOLE
MIN	MINIMUM
MIRR	MIRROR
MISC	MISCELLANEOUS
MLDG	MOULDING
MO	MASONRY OPENING
MR	MOISTURE RESISTANT
MTD	MOUNTED
MTL	METAL
MUL	MULLION
(N)	NEW
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
O/	OVER
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OPG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
OZ	OUNCE
PCF	POUND(S) PER CUBIC FOOT
PL	PLATE OR PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PNT	PAINT, PAINTED
PR	PAIR
PREFAB	PREFABRICATED
PROJ	PROJECT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT OR POINT
PTD	PAPER TOWEL DISPENSER
PTR	PAPER TOWEL RECEPTACLE
PVC	POLYVINYL CHLORIDE
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
R	RADIUS OR RISER
RA	RETURN AIR
RAD	RADIUS
RAG	RETURN AIR GRILLE
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RE:	REFER TO
REF	REFERENCE
REFR	REFRIGERATOR
REINF	REINFORCING
REQ'D	REQUIRED
REQ'T	REQUIREMENT
RES	RESILIENT
REV	REVISED, REVISION
RL	RAIN LEADER
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RTU	ROOF TOP UNIT
S	SOUTH
SA	SUPPLY AIR
SAT	SUSPENDED ACOUSTIC TILE
SB	SPLASH BLOCK
SCHED	SCHEDULE, SCHEDULED
SD	SMOKE DETECTOR OR SOAP DISPENSER OR STORM DRAIN
SECT	SECTION
SF	SQUARE FOOT, SQUARE FEET
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SJ	SLIP JOINT
SLDG	SLIDING
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SOG	SLAB ON GRADE
SPEC	SPECIFICATION, SPECIFIED
SQ	SQUARE
SQFT	SQUARE FOOT, SQUARE FEET
SS	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STL	STEEL
STRUC	STRUCTURE, STRUCTURAL
SUSP	SUSPENDED
SV	SHEET VINYL
SYM	SYMMETRICAL
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TB	TOWEL BAR OR TACK BOARD
TBD	TO BE DETERMINED
TELE	TELEPHONE
TEMP	TEMPORARY
THK	THICK, THICKNESS
THRU	THROUGH
TO	TOP OF _____
TOC	TOP OF CONCRETE
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TS	TUBE STEEL
TYP	TYPICAL
UC	UNDERCUT
UL	UNDERWRITER'S LABORATORY
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
W/	WITH
W/IN	WITHIN
W/OUT	WITHOUT
W	WEST
WB	WOOD BASE
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WD	WOOD
WF	WIDE FLANGE
WP	WATER PROOF(ING)
WR	WATER RESISTANT
WSCT	WAINSCOT
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER
YD	YARD

GENERAL NOTES

1. THE FOLLOWING GENERAL NOTES APPLY TO THE ENTIRE SET OF DRAWINGS AND ARE NOT SPECIFIC TO ANY ONE DISCIPLINE. THESE NOTES SUPPLEMENT THE SPECIFICATIONS.
2. ALL WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH CURRENT FEDERAL, STATE, AND LOCAL CODES.
3. THE CONSTRUCTION, REMODEL OR DEMOLITION OF A BUILDING SHALL COMPLY WITH IFC CHAPTER 14 AND NFPA 241.
4. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS, UNLESS OTHERWISE SPECIFIED IN THESE DOCUMENTS, AND COORDINATE AND SCHEDULE ALL REQUIRED INSPECTIONS AND TESTS.
5. THE GENERAL CONTRACTOR SHALL MAINTAIN THROUGHOUT THE PROJECT A CERTIFICATE OF INSURANCE FOR ALL LIABILITIES, WITH A HOLD HARMLESS FOR THE OWNER AND ARCHITECT.
6. REQUIREMENTS INDICATED IN THE PROJECT MANUAL ARE AN INTEGRAL PART OF THESE DOCUMENTS. DRAWINGS, SPECIFICATIONS, AND NOTES ARE COMPLEMENTARY AS ARE THE DRAWINGS OF EACH DISCIPLINE. NO DRAWING IN THIS SET IS TO BE USED INDIVIDUALLY. ALL LABOR AND MATERIALS REQUIRED TO FULLY CARRY OUT THE INTENTIONS OF THE CONTRACT DOCUMENTS ARE PART OF THIS CONTRACT, WHETHER OR NOT SPECIFICALLY NOTED.
7. THE DRAWINGS INDICATE EXISTING CONDITIONS AND BUILDING DATA THAT ARE BELIEVED TO BE RELIABLE; HOWEVER THE ARCHITECT DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS AS THEY ARE PARTIALLY BASED ON LIMITED ACCESS TO THE SITE/BUILDING. ALL CONTRACTORS SHALL FIELD VERIFY CONDITIONS WHICH MAY AFFECT THEIR WORK.
8. DO NOT SCALE DRAWINGS. IF ADDITIONAL DIMENSIONS ARE REQUIRED, CONTACT ARCHITECT FOR CLARIFICATION.
9. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THE WORK, NOTIFY THE ARCHITECT OF DISCREPANCIES FOR CLARIFICATION / DIRECTION PRIOR TO STARTING THE WORK.
10. ALL CONFLICTS OR NON-CODE COMPLIANT ITEMS DEPICTED IN PLANS OR EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION. DO NOT PROCEED WITH WORK ON THE ITEM UNTIL CLARIFICATION / DIRECTIVE IS RECEIVED FROM THE ARCHITECT OR ENGINEER.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ON-SITE COORDINATION WITH OWNER REGARDING: PROJECT PHASING, SITE ACCESS, TEMPORARY UTILITIES AND FACILITIES REQUIRED TO MAINTAIN OWNER OCCUPANCY IN CERTAIN PORTIONS OF THE BUILDING DURING CONSTRUCTION. TEMPORARY BARRICADES AND/OR RATED ENCLOSURES MAY BE REQUIRED FOR PROJECT PHASING.
12. CONTRACTOR SHALL COORDINATE ANY DISRUPTION IN THE UTILITY SERVICE WITH OWNER, NOT LESS THAN 72 HOURS PRIOR TO DISRUPTION, OR AS SPECIFIED.
13. UNLESS OTHERWISE NOTED, ALL MATERIALS WORKMANSHIP AND EQUIPMENT SHALL BE WARRANTED FOR ONE YEAR AFTER NOTICE OF SUBSTANTIAL COMPLETION. PROVIDE TYPEWRITTEN OPERATING INSTRUCTIONS, AND EQUIPMENT WARRANTIES. ALL MATERIALS USED FOR THIS PROJECT SHALL BE NEW AND BEAR THE UL LABEL WHERE SUCH SERVICE AND LABEL ARE REGULARLY PROVIDED AND BE OF THE APPROPRIATE NEMA STANDARDS. REFER TO SPECIFICATIONS FOR INDIVIDUAL WARRANTY REQUIREMENTS.
14. THE CONTRACTOR SHALL MAINTAIN A CURRENT/UPDATED SET OF RECORD DRAWINGS ON SITE AT ALL TIMES.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY, INCLUDING BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, BARRIERS, FALL PROTECTION, AND OSHA REGULATIONS.
16. ALL SUBCONTRACTORS SHALL VISIT THE JOB SITE WITHIN 24 HOURS PRIOR TO COMMENCING WORK. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING RELATED TRADES SUBSURFACE PREPARATION AND SHALL REPORT ANY NON-CONFORMING DISCREPANCY TO THE GENERAL CONTRACTOR. EXECUTION OF WORK BY ANY SUBCONTRACTOR INDICATES ACCEPTANCE OF PREVIOUS TRADE'S WORK.
17. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE AND PERFORM THE TEMPORARY OR PERMANENT RELOCATION OF ALL ELECTRICAL RACEWAYS WIRING, PIPING, MECHANICAL DEVICES AND EQUIPMENT AND SIMILAR SUCH ITEMS TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK UNDER THIS CONTRACT.
18. PLUMBING, MECHANICAL AND ELECTRICAL PENETRATIONS IN RATED ASSEMBLIES SHALL COMPLY WITH CHAPTER 7 OF THE IBC.
19. PROVIDE ACCESS PANELS WHERE NECESSARY TO PROVIDE ACCESS TO FIRE AND/OR SMOKE DAMPERS, ELECTRICAL BOXES AND EQUIPMENT, PUMPS, VALVES, ETC. WHERE SUCH PANEL IS IN A RATED ASSEMBLY, IT SHALL BE OF THE SAME RATING AS THAT ASSEMBLY. COORDINATE WITH MECHANICAL AND ELECTRICAL FOR ADDITIONAL ACCESS PANELS THAT MAY BE REQUIRED BUT NOT SPECIFICALLY NOTED ON ARCHITECTURAL PLANS.
20. ALL INTERIOR FINISHES MUST COMPLY WITH THE REQUIREMENTS OF CHAPTER 8 OF THE IBC.
21. CONTRACTOR SHALL LEGALLY DISPOSE OF ALL DEMOLITION/CONSTRUCTION WASTE.
22. THE CONTRACTOR SHALL KEEP AREAS FREE FROM ACCUMULATION OF DEBRIS AND SHALL CONTROL ALL DUST, WORK AREA MUST BE BROOM CLEAN AT THE END OF EACH DAY TO THE GREATEST EXTENT POSSIBLE.
23. PROVIDE DUST CONTAINMENT DURING CONSTRUCTION ADEQUATE TO PROTECT ALL ADJACENT AREAS AND TO MEET ALL LOCAL, REGIONAL, STATE AND FEDERAL REQUIREMENTS FOR ENVIRONMENTAL CONTROL WHERE THERE IS CONTINUOUS FOOD PREPARATION.
24. CONTRACTOR SHALL PROTECT ADJACENT AREAS FROM DAMAGE. ALL DAMAGE SHALL BE REPAIRED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
25. CONTRACTOR SHALL PATCH AND REPAIR ANY EXISTING SURFACES TO REMAIN THAT ARE AFFECTED BY DEMOLITION WORK TO MAINTAIN A CLEAN AND UNIFORM FINISHED SURFACE.
26. WHEN REFINISHING/REPAINTING A WALL, CEILING/SOFFIT SURFACE, OR OTHER ELEMENT AFFECTED BY REPAIR WORK, FINISHING/PAINTING SHALL COVER ENTIRE SURFACE CORNER TO CORNER. COLOR SHALL MATCH EXISTING ADJACENT UNO.
27. ALL EXPOSED EXTERIOR METAL FITTINGS, FLASHING, CONDUIT, ETC. SHALL BE PAINTED TO MATCH ADJACENT SURFACES.
28. FOR ALL SALVAGED ITEMS TO BE REUSED, CONTRACTOR SHALL THOROUGHLY CLEAN AND PREPARE FOR NEW FINISH IF SCHEDULED.
29. ARCHITECT AND ARCHITECT'S CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL AND DISPOSAL OF, OR ANY EXPOSURE OF PERSONS TO, HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS, LEAD-BASED PAINTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES. IF SUCH MATERIALS ARE DISCOVERED AND ARE TO BE DISTURBED, THE OWNER SHALL BE INFORMED PRIOR TO ANY WORK BEING PERFORMED.
30. THE PROJECT SITE HAS A STRICT PARKING POLICY. ALL CONTRACTORS SHALL REVIEW AND ABIDE BY THE POLICY.
31. MANY OF THE WORK AREAS OF THE PROJECT ARE CONGESTED. THE CONTRACTOR SHALL CAREFULLY PRE-PLAN WORK, ORGANIZE NEW LAYOUTS, AND CLOSELY COORDINATE ALL TRADES TO ASSURE ADEQUATE SPACE FOR THE WORK/EQUIPMENT. ALL COSTS TO RELOCATE IMPROPERLY INSTALLED WORK/EQUIPMENT SHALL BE BORN BY THE CONTRACTOR.
32. CONTRACTOR SHALL MAINTAIN A WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
33. CONTRACTOR SHALL COORDINATE DIMENSIONS OF ALL OPENINGS, BLOCKOUTS, DEPRESSIONS, ETC. WITH DRAWINGS FROM ALL DISCIPLINES, PROJECT SHOP DRAWINGS, AND FIELD CONDITIONS.
34. CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS, METHODS, AND SEQUENCES OF CONSTRUCTION.
35. CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES.
36. CONTRACTOR SHALL SECURE AND COMPLY WITH ALL TERMS AND CONDITIONS OF THE COLORADO PERMIT FOR STORM WATER DISCHARGE, STORM WATER MANAGEMENT PLAN, AND THE EROSION CONTROL PLAN.
37. EXISTING FENCES, TREES, SHRUBS, STREETS, SIDEWALKS, CURBS AND GUTTERS, LANDSCAPING, STRUCTURES, OR IMPROVEMENTS DESTROYED, DAMAGED, OR REMOVED DUE TO CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED OR RESTORED IN KIND AT THE CONTRACTOR'S EXPENSE UNLESS OTHERWISE NOTED.
38. [IF APPLICABLE] CONTRACTOR SHALL PROVIDE AND MAINTAIN A PROJECT ADDRESS SIGN AS REQUIRED BY THE FIRE DEPARTMENT DURING CONSTRUCTION. SEE SPECIFICATIONS FOR ANY OTHER SPECIFIC REQUIREMENTS.
39. [IF APPLICABLE] THE RECOMMENDATIONS OF THE SOILS REPORT ARE TO BE INCORPORATED AS AN INTEGRAL PART OF THESE CONTRACT DOCUMENTS. A COPY OF THIS REPORT IS AVAILABLE FROM THE ARCHITECT OR THE SOILS ENGINEER.
40. PLANS FOR FIXED FIRE PROTECTION EQUIPMENT SUCH AS STANDPIPES, SPRINKLER SYSTEMS, AND FIRE ALARM SYSTEMS MUST BE SUBMITTED TO AND APPROVED BY THE FIRE PREVENTION AHJ PRIOR TO INSTALLATION.

ARCHITECTURAL SYMBOL LEGEND



DIRECTORY

OWNER

LAMAR COMMUNITY COLLEGE
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ARCHITECT

HALL ARCHITECTS
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STRUCTURAL ENGINEER

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MECHANICAL ENGINEER

THE FARNSWORTH GROUP
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PHONE: (719) 590-9194
EMAIL: cfreer@F-W.com

ELECTRICAL ENGINEER

THE FARNSWORTH GROUP
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PHONE: (719) 590-9194
EMAIL: cfreer@F-W.com

PROJECT CODE SUMMARY

APPLICABLE CODES: 2021 IBC, IEBC, IECC, IFC, IFGC, IMC, AND IPC
2020 NEC
2017 ICC/ANSI A117.1

FIRE DEPARTMENT AHJ: LAMAR FIRE DEPARTMENT
FIRE ALARM
FIRE SPRINKLER

DATE OF ORIGINAL CONSTRUCTION: 1967-68

LAST MAJOR ADDITION/ RENOVATION: 2021

CONSTRUCTION TYPE: III-B (SPRINKLERED)

OCCUPANCY GROUP: B HIGHER ED. CLASSES & OFFICES

NUMBER OF STORIES: 2 STORIES W/BASEMENT

FIRE SPRINKLERED: YES; BUILDING WILL BE FULLY SPRINKLERED UNDER THIS PROJECT SCOPE

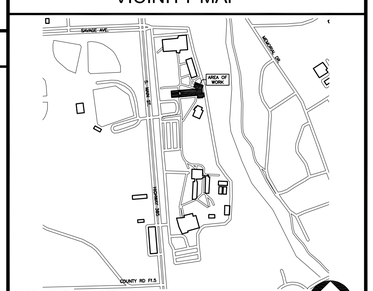
FIRE ALARM: YES

BUILDING AREA (IN SQUARE FEET):

FIRST FLOOR	20,228
SECOND FLOOR	10,990
BASEMENT	4,164
TOTAL	35,382

SEE CODE COMPLIANCE PLANS FOR ADDITIONAL INFORMATION

VICINITY MAP



PROJECT ADDRESS:
2401 S. MAIN ST.
LAMAR, COLORADO 81052

PROJECT SCOPE OF WORK

PROJECT CONSISTS OF DEMOLITION AND THE RENOVATION OF THE EXISTING BOWMAN LIBRARY SPACE AND THE REMODELING OF EXISTING CLASSROOM SPACE INTO NEW STUDY HALLS AND TUTORING SUITE, AND ASSOCIATED MECHANICAL, PLUMBING, AND ELECTRICAL WORK.

THE FOLLOWING ARE CONSIDERED ADDITIVE ALTERNATES, SEE PROJECT MANUAL FOR FURTHER INFORMATION.

ALTERNATE #1: SELECT COUNTERTOPS IN CORRIDOR 118, CORRIDOR 117, AND LIBRARY 144
ALTERNATE #2: LIBRARY SKYLIGHT AND ASSOCIATED ROOF & STRUCTURAL WORK
ALTERNATE #3: DOOR ALCOVE CONSTRUCTION AT STUDY HALL/CLASSROOM 129
ALTERNATE #4: UPGRADE OF (N) SUSPENDED CEILING TILE TO TEGULAR WITH CENTER REVEALS
ALTERNATE #5: NORTHERN WALL & INTERIOR WINDOWS OF STUDY HALL/CLASSROOM 147
ALTERNATE #6: SOUTHERN WALL & INTERIOR WINDOWS OF STUDY HALL/CLASSROOM 129

DRAWING INDEX

LAMAR COMMUNITY COLLEGE

HALL ARCHITECTS
1935 DOMINION WAY, SUITE 202
COLORADO SPRINGS, CO 80918
PHONE: (719) 277-7300

BOWMAN LIBRARY RENOVATION
LAMAR COMMUNITY COLLEGE
2401 S. MAIN ST.
LAMAR, CO 81052

BID SET

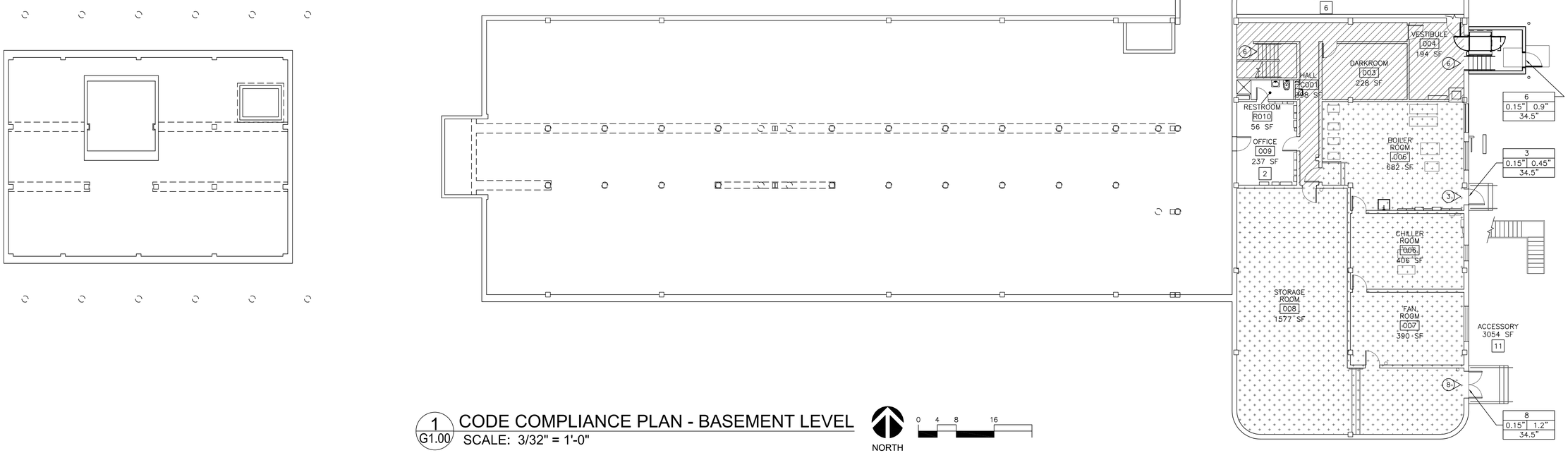
SHEET TITLE:
TITLE SHEET AND PROJECT INFORMATION

DATE: 3/12/2024

REV:

SHEET NO.:
G0.00

S:\Lamar Community College\Bowman Library Renovation 2022_LCC Bowman Library - plans.dwg Mar 18, 2024 - 1:55pm



1 G1.00 CODE COMPLIANCE PLAN - BASEMENT LEVEL

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

NORTH 0 4 8 16

PROJECT CODE ANALYSIS:

APPLICABLE CODES: 2021 IBC, IEBC, IECC, IFC, IFGC, IMC, AND IPC
2020 NEC
2017 ICC/ANSI A117.1

FIRE DEPARTMENT AHJ: LAMAR FIRE DEPARTMENT

DATE OF ORIGINAL CONSTRUCTION: 1967-68

LAST MAJOR ADDITION/ RENOVATION: 2021

CONSTRUCTION TYPE: III-B (SPRINKLERED; SEE BELOW)

OCCUPANCY GROUP: B & A-3; NON-SEPARATED MIXED USE

NUMBER OF STORIES: 2 STORIES W/ BASEMENT

FIRE SPRINKLERED: EXISTING NOT SPRINKLERED, BUT BUILDING WILL BE FULLY SPRINKLERED UNDER CONCURRENT CAPITAL RENEWAL PROJECT

FIRE ALARM: YES

BUILDING AREA (APPROXIMATE SQUARE FOOTAGE):

FIRST FLOOR	20,228
SECOND FLOOR	10,990
BASEMENT	4,164
TOTAL	35,382 SF

IBC T-506.2: ALLOWABLE AREA FOR SINGLE STORY OF TYPE III-B FOR A-3 OCCUPANCY, FULLY-SPRINKLERED MULTISTORY BUILDING IS 28,500 S.F.

28,500 > 19,970 (1ST LEVEL GOVERNS AS LARGEST FLOOR AREA)

AREA OF RENOVATION: 7,187 SF

THIS PROJECT IS CONSIDERED A LEVEL 2 ALTERATION PER IEBC

OCCUPANT LOAD OF BUILDING:

AREA (SF)		LOAD FACTOR	OCCUPANT LOAD
BASEMENT LEVEL:			
GEN. BUSINESS AREA:	820	1:150	6
ACCESSORY AREA:	3054	1:300	11
OFFICE 009:	237	1:150	2
BASEMENT TOTAL:	4111		19
FIRST LEVEL:			
WEST GEN. BUS. AREA:	2742	1:150	19
EAST GEN. BUS. AREA:	5438	1:150	37
LIBRARY (READING):	2694	1:50 (NET)	54
LIBRARY (STACKS):	669	1:100	7
OFFICE 141:	165	1:150	2
ARCHIVES:	364	1:15 (NET)	25
WORK ROOM:	234	1:150	2
STORAGE:	74	1:300	1
LECTURE HALL 138:	1002	(FIXED SEATS)	78
LECTURE HALL 139:	2207	(FIXED SEATS)	169
STUDY 144A:	110	1:15 (NET)	8
CLASSROOM 128:	536	1:20 (NET)	27
CLASSROOM 129:	1045	1:20 (NET)	53
CLASSROOM 147:	1041	1:20 (NET)	53
TUTORING LAB 148A:	205	1:15 (NET)	14
TUTORING LAB 148B:	111	1:15 (NET)	8
TUTORING LAB 149:	347	1:15 (NET)	24
OFFICE 149A:	140	1:150	1
CLASSROOM 150:	558	1:20 (NET)	28
1ST LEVEL TOTAL:	19,790		610
SECOND LEVEL:			
WEST GEN. BUS. AREA:	2161	1:150	15
EAST GEN. BUS. AREA:	4044	1:150	30
CONFERENCE 202:	296	1:15 (NET)	20
CLASSROOM 219:	539	1:20 (NET)	27
CLASSROOM 220:	536	1:20 (NET)	27
CLASSROOM 221:	536	1:20 (NET)	27
CLASSROOM 222:	534	1:20 (NET)	27
CLASSROOM 232:	551	1:20 (NET)	28
CLASSROOM 233:	546	1:20 (NET)	28
CLASSROOM 234:	546	1:20 (NET)	28
CLASSROOM 235:	551	1:20 (NET)	28
2ND LEVEL TOTAL:	10,840		285
BUILDING TOTAL:	34,741		914

PLUMBING FIXTURES:

970 OCCUPANTS TOTAL (485 MEN & 485 WOMEN)

	REQ'D	EXISTING PROVIDED	NEW PROVIDED
ASSEMBLY CLASSIFICATION (247 OCCUPANTS):			
MEN'S WC (1:125)	1		
WOMEN'S WC (1:65)	2		
MEN'S LAVS (1:200)	1		
WOMEN'S LAVS (1:200)	1		
DRINKING FOUNTAIN (1:500)	1		
BUSINESS CLASSIFICATION (723 OCCUPANTS):			
MEN'S WC (1:25 FOR FIRST 50, 1:50 BEYOND)	9		
WOMEN'S WC (1:25 FOR FIRST 50, 1:50 BEYOND)	9		
MEN'S LAVS (1:40 FOR FIRST 80, 1:80 BEYOND)	6		
WOMEN'S LAVS (1:40 FOR FIRST 80, 1:80 BEYOND)	6		
DRINKING FOUNTAIN (1:100)	8		
TOTAL:			
MEN'S WC (WITH URINALS)	10	20	16
WOMEN'S WC	11	14	16
MEN'S LAVS	7	9	9
WOMEN'S LAVS	7	9	9
DRINKING FOUNTAINS	9	2	6
SERVICE SINKS (1)	1	4	4

LEGEND:

EXISTING 1-HOUR RATED WALL

27 — AREA OCCUPANCY LOAD CALCULATED PER IBC TABLE 1004.1.2 (OR MODIFIED PER EXCEPTION)

60 — OCCUPANT LOAD ALONG EGRESS ROUTE

EGRESS WIDTH CALC. FACTOR
TOTAL OCCUPANT LOAD SERVED
REQD. MIN. CLR. EGRESS WIDTH
ACTUAL CLR. EGRESS WIDTH PROVIDED
521 / 0.2" / 79" / 103"
EGRESS STAIR OR EGRESS COMPONENT CALCULATION NOTATION (IBC 1005.3.1 & 1005.3.2)

DIRECTION OF EXIT TRAVEL USED IN EXITING CALCULATIONS

OCCUPANCY:

GENERAL B OCCUPANCY 1:100

ACCESSORY OCCUPANCY 1:300

LAMAR COMMUNITY COLLEGE

HALL ARCHITECTS
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COLORADO SPRINGS, CO 80918
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LAMAR, CO 81052

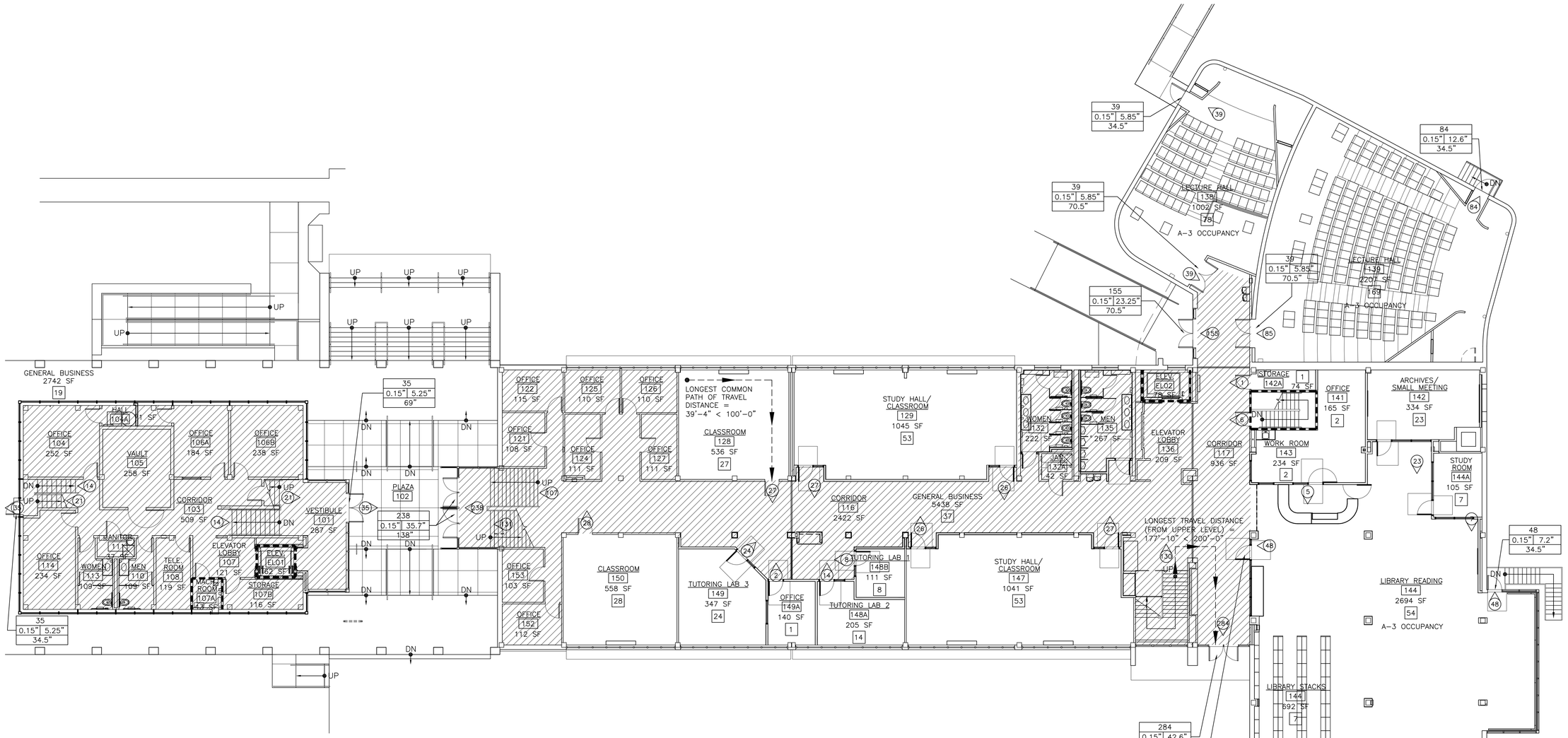
BID SET

SHEET TITLE: BASEMENT LEVEL CODE COMPLIANCE PLAN

DATE: 3/12/2024

REV:

SHEET NO.: G1.00



1 G1.01 CODE COMPLIANCE PLAN - FIRST LEVEL

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

NORTH 0 4 8 16

PROJECT CODE ANALYSIS:

APPLICABLE CODES: 2021 IBC, IEBC, IECC, IFC, IFGC, IMC, AND IPC
2020 NEC
2017 ICC/ANSI A117.1

FIRE DEPARTMENT AHJ: LAMAR FIRE DEPARTMENT

DATE OF ORIGINAL CONSTRUCTION: 1967-68

LAST MAJOR ADDITION/ RENOVATION: 2021

CONSTRUCTION TYPE: III-B (SPRINKLERED; SEE BELOW)

OCCUPANCY GROUP: B & A-3; NON-SEPARATED MIXED USE

NUMBER OF STORIES: 2 STORIES W/ BASEMENT

FIRE SPRINKLERED: EXISTING NOT SPRINKLERED, BUT BUILDING WILL BE FULLY SPRINKLERED UNDER CONCURRENT CAPITAL RENEWAL PROJECT

FIRE ALARM: YES

BUILDING AREA (APPROXIMATE SQUARE FOOTAGE):

FIRST FLOOR	20,228
SECOND FLOOR	10,990
BASEMENT	4,164
TOTAL	35,382 SF

IBC T-506.2: ALLOWABLE AREA FOR SINGLE STORY OF TYPE III-B FOR A-3 OCCUPANCY, FULLY-SPRINKLERED MULTISTORY BUILDING IS 28,500 S.F.

28,500 > 19,970 (1ST LEVEL GOVERNS AS LARGEST FLOOR AREA)

AREA OF RENOVATION: 7,187 SF

THIS PROJECT IS CONSIDERED A LEVEL 2 ALTERATION PER IEBC

OCCUPANT LOAD OF BUILDING:

AREA (SF)		LOAD FACTOR	OCCUPANT LOAD
BASEMENT LEVEL:			
GEN. BUSINESS AREA:	820	1:150	6
ACCESSORY AREA:	3054	1:300	11
OFFICE 009:	237	1:150	2
BASEMENT TOTAL:	4111		19
FIRST LEVEL:			
WEST GEN. BUS. AREA:	2742	1:150	19
EAST GEN. BUS. AREA:	5438	1:150	37
LIBRARY (READING):	2694	1:50 (NET)	54
LIBRARY (STACKS):	669	1:100	7
OFFICE 141:	165	1:150	2
ARCHIVES:	364	1:15 (NET)	25
WORK ROOM:	234	1:150	2
STORAGE:	74	1:300	1
LECTURE HALL 138:	1002	(FIXED SEATS)	78
LECTURE HALL 139:	2207	(FIXED SEATS)	169
STUDY 144A:	110	1:15 (NET)	8
CLASSROOM 128:	536	1:20 (NET)	27
CLASSROOM 129:	1045	1:20 (NET)	53
CLASSROOM 147:	1041	1:20 (NET)	53
TUTORING LAB 148A:	205	1:15 (NET)	14
TUTORING LAB 148B:	111	1:15 (NET)	8
TUTORING LAB 149:	347	1:15 (NET)	24
OFFICE 149A:	140	1:150	1
CLASSROOM 150:	558	1:20 (NET)	28
1ST LEVEL TOTAL:	19,790		610
SECOND LEVEL:			
WEST GEN. BUS. AREA:	2161	1:150	15
EAST GEN. BUS. AREA:	4044	1:150	30
CONFERENCE 202:	296	1:15 (NET)	20
CLASSROOM 219:	539	1:20 (NET)	27
CLASSROOM 220:	536	1:20 (NET)	27
CLASSROOM 221:	536	1:20 (NET)	27
CLASSROOM 222:	534	1:20 (NET)	27
CLASSROOM 232:	551	1:20 (NET)	28
CLASSROOM 233:	546	1:20 (NET)	28
CLASSROOM 234:	546	1:20 (NET)	28
CLASSROOM 235:	551	1:20 (NET)	28
2ND LEVEL TOTAL:	10,840		285
BUILDING TOTAL:	34,741		914

PLUMBING FIXTURES:

970 OCCUPANTS TOTAL (485 MEN & 485 WOMEN)

	REQ'D	EXISTING PROVIDED	NEW PROVIDED
ASSEMBLY CLASSIFICATION (247 OCCUPANTS):			
MEN'S WC (1:125)	1		
WOMEN'S WC (1:65)	2		
MEN'S LAVS (1:200)	1		
WOMEN'S LAVS (1:200)	1		
DRINKING FOUNTAIN (1:500)	1		
BUSINESS CLASSIFICATION (723 OCCUPANTS):			
MEN'S WC (1:25 FOR FIRST 50, 1:50 BEYOND)	9		
WOMEN'S WC (1:25 FOR FIRST 50, 1:50 BEYOND)	9		
MEN'S LAVS (1:40 FOR FIRST 80, 1:80 BEYOND)	6		
WOMEN'S LAVS (1:40 FOR FIRST 80, 1:80 BEYOND)	6		
DRINKING FOUNTAIN (1:100)	8		
TOTAL:			
MEN'S WC (WITH URINALS)	10	20	15
WOMEN'S WC	11	14	15
MEN'S LAVS	7	9	9
WOMEN'S LAVS	7	9	9
DRINKING FOUNTAINS	9	2	6
SERVICE SINKS (1)	1	4	4

LEGEND:

- EXISTING 1-HOUR RATED WALL
- 27 — AREA OCCUPANCY LOAD CALCULATED PER IBC TABLE 1004.1.2 (OR MODIFIED PER EXCEPTION)
- 60 — OCCUPANT LOAD ALONG EGRESS ROUTE
- 521 / 0.2" / 79" / 103" — EGRESS WIDTH CALC. FACTOR; TOTAL OCCUPANT LOAD SERVED; REQD. MIN. CLR. EGRESS WIDTH; ACTUAL CLR. EGRESS WIDTH PROVIDED — EGRESS STAIR OR EGRESS COMPONENT CALCULATION NOTATION (IBC 1005.3.1 & 1005.3.2)
- DIRECTION OF EXIT TRAVEL USED IN EXITING CALCULATIONS

OCCUPANCY:

- GENERAL B OCCUPANCY 1:100
- ACCESSORY OCCUPANCY 1:300

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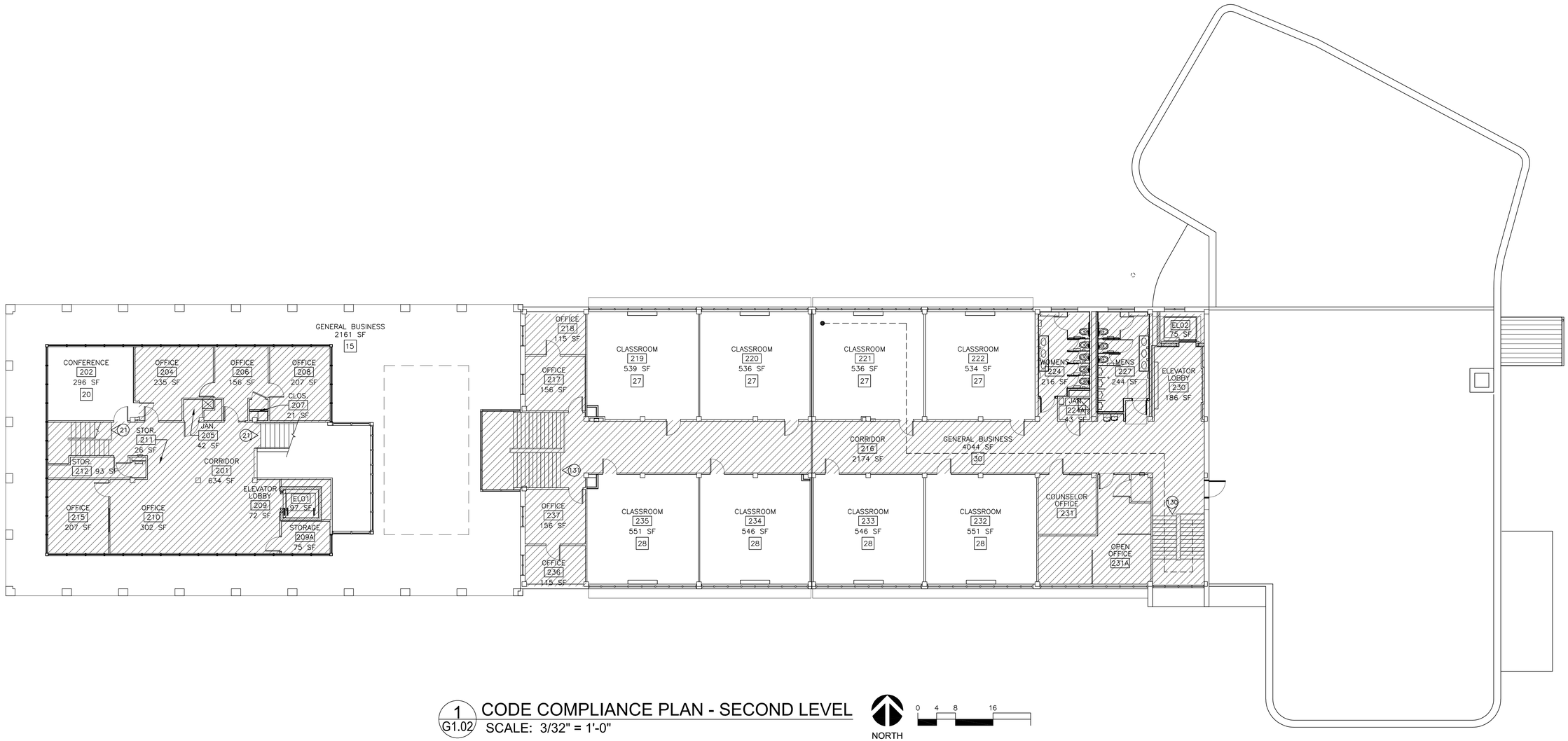
BID SET

SHEET TITLE:
FIRST LEVEL
CODE COMPLIANCE
PLAN

DATE: 3/12/2024

REV:

SHEET NO.:
G1.01



1 CODE COMPLIANCE PLAN - SECOND LEVEL
G1.02 SCALE: 3/32" = 1'-0"

NORTH 0 4 8 16

PROJECT CODE ANALYSIS:

APPLICABLE CODES: 2021 IBC, IEBC, IECC, IFC, IFGC, IMC, AND IPC
2020 NEC
2017 ICC/ANSI A117.1

FIRE DEPARTMENT AHJ: LAMAR FIRE DEPARTMENT

DATE OF ORIGINAL CONSTRUCTION: 1967-68

LAST MAJOR ADDITION/ RENOVATION: 2021

CONSTRUCTION TYPE: III-B (SPRINKLERED; SEE BELOW)

OCCUPANCY GROUP: B & A-3; NON-SEPARATED MIXED USE

NUMBER OF STORIES: 2 STORIES W/ BASEMENT

FIRE SPRINKLERED: EXISTING NOT SPRINKLERED, BUT BUILDING WILL BE FULLY SPRINKLERED UNDER CONCURRENT CAPITAL RENEWAL PROJECT

FIRE ALARM: YES

BUILDING AREA (APPROXIMATE SQUARE FOOTAGE):

FIRST FLOOR	20,228
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28,500 > 19,970 (1ST LEVEL GOVERNS AS LARGEST FLOOR AREA)

AREA OF RENOVATION: 7,187 SF

THIS PROJECT IS CONSIDERED A LEVEL 2 ALTERATION PER IEBC

OCCUPANT LOAD OF BUILDING:

AREA (SF)		LOAD FACTOR	OCCUPANT LOAD
BASEMENT LEVEL:			
GEN. BUSINESS AREA:	820	1:150	6
ACCESSORY AREA:	3054	1:300	11
OFFICE 009:	237	1:150	2
BASEMENT TOTAL:	4111		19

FIRST LEVEL:			
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EAST GEN. BUS. AREA:	5438	1:150	37
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LECTURE HALL 139:	2207	(FIXED SEATS)	169
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CLASSROOM 129:	1045	1:20 (NET)	53
CLASSROOM 147:	1041	1:20 (NET)	53
TUTORING LAB 148A:	205	1:15 (NET)	14
TUTORING LAB 148B:	111	1:15 (NET)	8
TUTORING LAB 149:	347	1:15 (NET)	24
OFFICE 149A:	140	1:150	1
CLASSROOM 150:	558	1:20 (NET)	28
1ST LEVEL TOTAL:	19,790		610
SECOND LEVEL:			
WEST GEN. BUS. AREA:	2161	1:150	15
EAST GEN. BUS. AREA:	4044	1:150	30
CONFERENCE 202:	296	1:15 (NET)	20
CLASSROOM 219:	539	1:20 (NET)	27
CLASSROOM 220:	536	1:20 (NET)	27
CLASSROOM 221:	536	1:20 (NET)	27
CLASSROOM 222:	534	1:20 (NET)	27
CLASSROOM 232:	551	1:20 (NET)	28
CLASSROOM 233:	546	1:20 (NET)	28
CLASSROOM 234:	546	1:20 (NET)	28
CLASSROOM 235:	551	1:20 (NET)	28
2ND LEVEL TOTAL:	10,840		285
BUILDING TOTAL:	34,741		914

PLUMBING FIXTURES:

970 OCCUPANTS TOTAL (485 MEN & 485 WOMEN)

	REQ'D	EXISTING PROVIDED	NEW PROVIDED
ASSEMBLY CLASSIFICATION (247 OCCUPANTS):			
MEN'S WC (1:125)	1		
WOMEN'S WC (1:65)	2		
MEN'S LAVS (1:200)	1		
WOMEN'S LAVS (1:200)	1		
DRINKING FOUNTAIN (1:500)	1		
BUSINESS CLASSIFICATION (723 OCCUPANTS):			
MEN'S WC (1:25 FOR FIRST 50, 1:50 BEYOND)	9		
WOMEN'S WC (1:25 FOR FIRST 50, 1:50 BEYOND)	9		
MEN'S LAVS (1:40 FOR FIRST 80, 1:80 BEYOND)	6		
WOMEN'S LAVS (1:40 FOR FIRST 80, 1:80 BEYOND)	6		
DRINKING FOUNTAIN (1:100)	8		
TOTAL:			
MEN'S WC (WITH URINALS)	10	20	16
WOMEN'S WC	11	14	16
MEN'S LAVS	7	9	9
WOMEN'S LAVS	7	9	9
DRINKING FOUNTAINS	9	2	6
SERVICE SINKS (1)	1	4	4

LEGEND:

- EXISTING 1-HOUR RATED WALL
- 27 — AREA OCCUPANCY LOAD CALCULATED PER IBC TABLE 1004.1.2 (OR MODIFIED PER EXCEPTION)
- 60 — OCCUPANT LOAD ALONG EGRESS ROUTE
- EGRESS STAIR OR EGRESS COMPONENT CALCULATION NOTATION (IBC 1005.3.1 & 1005.3.2)
  - EGRESS WIDTH CALC. FACTOR
  - TOTAL OCCUPANT LOAD SERVED
  - REQD. MIN. CLR. EGRESS WIDTH
  - ACTUAL CLR. EGRESS WIDTH PROVIDED
  - 521 / 0.2" / 79" / 103"
- DIRECTION OF EXIT TRAVEL USED IN EXITING CALCULATIONS

OCCUPANCY:

- GENERAL B OCCUPANCY 1:100
- ACCESSORY OCCUPANCY 1:300

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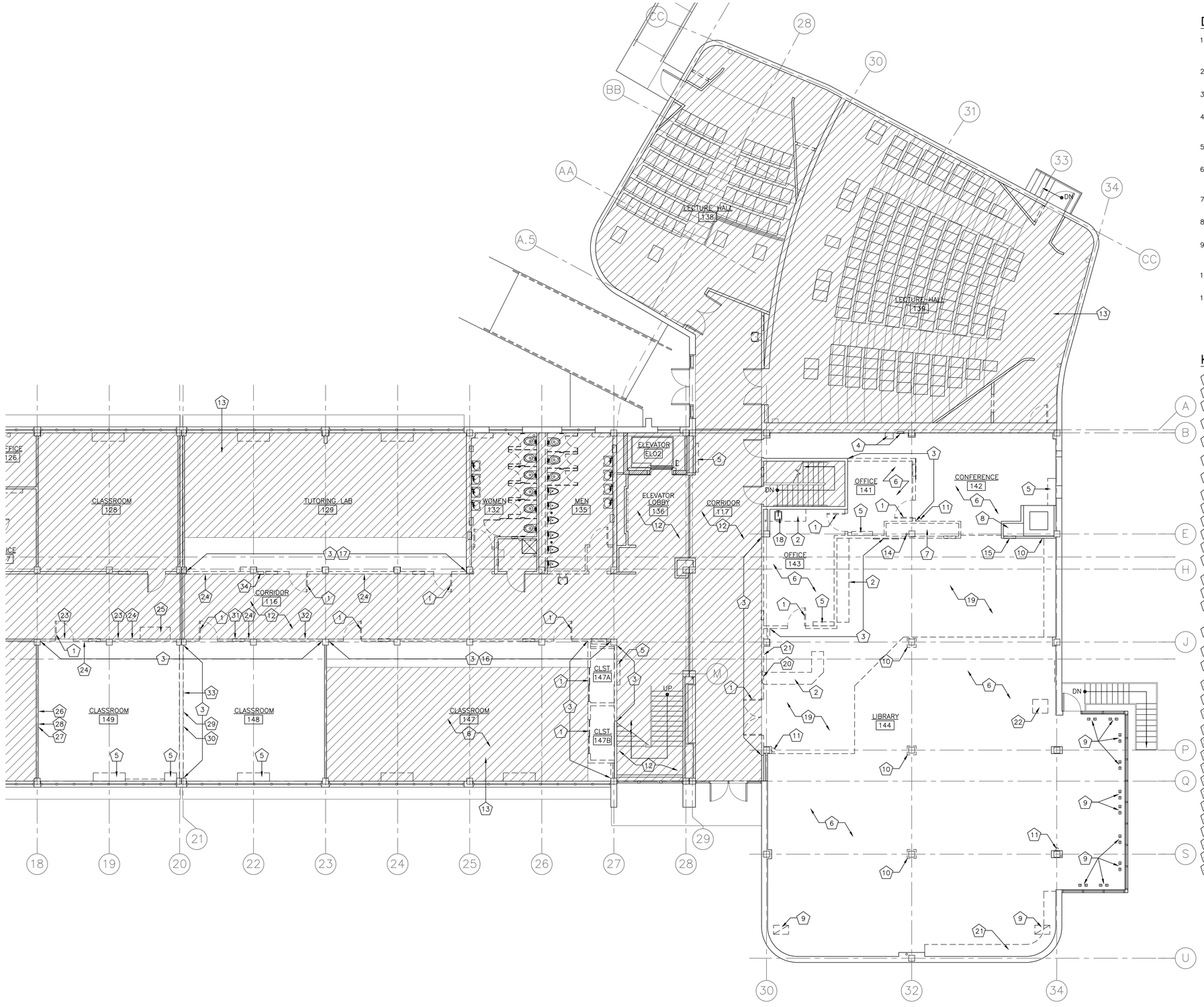
BID SET

SHEET TITLE:
SECOND LEVEL CODE COMPLIANCE PLAN

DATE: 3/12/2024

REV:

SHEET NO.:
G1.02



DEMOLITION FLOOR PLAN GENERAL NOTES:

1. REFER TO STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS/SPECIFICATIONS FOR ADDITIONAL INFORMATION ON THEIR RESPECTIVE DISCIPLINES.
2. CONTRACTOR SHALL LEGALLY DISPOSE OF ALL DEMOLITION/CONSTRUCTION WASTE.
3. DURING CONSTRUCTION, CONTRACTOR SHALL PROTECT ALL EXISTING ELEMENTS TO REMAIN.
4. FLOORING TO BE REMOVED SHALL BE REMOVED TO EXISTING SLAB UNLESS OTHERWISE NOTED. PATCH, REPAIR, AND LEVEL TO RECEIVE NEW MATERIAL UNLESS OTHERWISE NOTED.
5. PATCH AND LEVEL ALL EXISTING FLOOR SLABS TO REMAIN AS REQUIRED FOR SMOOTH AND LEVEL SURFACE EQUAL TO NEW FLOOR SLABS.
6. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACE.
7. FOR ALL SALVAGED ITEMS TO BE REUSED, CONTRACTOR SHALL THOROUGHLY CLEAN AND PREPARE FOR NEW FINISH IF SCHEDULED.
8. EXISTING FIRE ALARM SYSTEM SHALL REMAIN IN SERVICE DURING DEMOLITION. DETECTORS MAY BE CAPPED.
9. UNLESS OTHERWISE NOTED, EXISTING FIXTURES, CASEWORK, DOORS/FRAMES, GLAZING, CEILING PANEL SYSTEMS, AND EQUIPMENT NOTED TO BE REMOVED IS TO BE SALVAGED TO THE OWNER.
10. THE OWNER WILL REMOVE ALL SECURITY CAMERAS AND ACCESSORIES PRIOR TO CONSTRUCTION.
11. CONTRACTOR SHALL COORDINATE ALL ABATEMENT SCOPES OF WORK AND SCHEDULING.

KEY NOTES:

1. (E) DOOR, FRAME, & HARDWARE TO BE REMOVED
2. (E) BASE CASEWORK AND COUNTERTOP TO BE REMOVED
3. (E) PARTITIONS TO BE SAWCUT AND REMOVED; PATCH & REPAIR (E) ADJ WALL CONSTRUCTION TO REMAIN
4. (E) ELEC. PANEL/TRANSFORMER TO BE REMOVED; PATCH & REPAIR WALL FINISH; SEE ELEC. DWGS.
5. (E) MECH EQPT TO BE REMOVED UNDER CAPITAL RENEWAL PROJECT; SEE MECH DWGS
6. (E) CARPET AND (E) ACM FLOOR FINISH BENEATH TO BE REMOVED UNDER CAPITAL RENEWAL PROJECT
7. (E) MECH SHAFT TO BE REMOVED AND INFILLED UNDER CAPITAL RENEWAL PROJECT; SEE MECH DWGS
8. (E) MECH SHAFT TO REMAIN; SEE MECH DWGS.
9. (E) MECH FLOOR REGISTER TO BE REMOVED AND INFILLED; SEE MECH DWGS
10. REMOVE (E) FURRING
11. (E) FIRE EXTINGUISHER AND BRACKET TO BE REMOVED; SALVAGE TO OWNER
12. (E) FLOOR FINISH TO REMAIN; PROTECT DURING CONSTRUCTION
13. HATCHED AREAS INDICATE AREAS OF WORK UNDER A SEPARATE PROJECT SCOPE (CAPITAL RENEWAL) UNLESS NOTED OTHERWISE
14. (E) ROOF DRAIN PIPE TO REMAIN
15. (E) MECH. WALL LOUVER TO BE REMOVED AND INFILLED; SEE MECH DWGS
16. BASE BID: DEMOLISH PORTION OF (E) PARTITION TO ACCOMMODATE (N) DOOR ALCOVE CONSTRUCTION ONLY; SEE NEW CONSTRUCTION PLAN
    ADD ALTERNATE: DEMOLISH ENTIRE LENGTH OF PARTITION INDICATED
17. BASE BID: NO DEMOLITION WORK ON INDICATED (E) PARTITION
    ADD ALTERNATE: DEMOLISH ENTIRE LENGTH OF (E) PARTITION INDICATED
18. (E) PLUMBING FIXTURE TO BE REMOVED; SEE PLUMBING DWGS
19. (E) LAMINATE FLOORING AND (E) ACM FLOOR FINISH BENEATH TO BE REMOVED UNDER CAPITAL RENEWAL PROJECT
20. (E) RECESSED DISPLAY CASE TO BE REMOVED
21. (E) COUNTERTOP AND SUPPORT BRACKETS TO BE REMOVED
22. (E) SCULPTURE AND BASE TO BE REMOVED. SALVAGE TO OWNER FOR REINSTALLATION.
23. REMOVE (E) WOOD SIGN; SALVAGE TO OWNER
24. REMOVE (E) BULLETIN BOARD; SALVAGE FOR REINSTALLATION
25. REMOVE (E) DISPLAY CASE; SALVAGE TO OWNER
26. (E) CLOCK TO REMAIN; PROTECT DURING CONSTRUCTION
27. (E) PA SPEAKER TO REMAIN
28. (E) CHALKBOARD TO BE REMOVED; SALVAGE TO OWNER
29. (E) CLOCK TO BE REMOVED; SALVAGE TO OWNER
30. (E) PA SPEAKER TO BE REMOVED
31. (E) BULLETIN BOARD STRIP TO BE REMOVED
32. (E) BELL TO BE REMOVED
33. (E) WHITEBOARD TO BE REMOVED; SALVAGE FOR REINSTALLATION
34. (E) FIRE EXTINGUISHER CABINET TO BE REMOVED; SALVAGE TO OWNER

1 A1.02 DEMOLITION FLOOR PLAN - EAST FIRST LEVEL
SCALE: 1/8" = 1'-0"

NORTH 0 4 8 16

LAMAR COMMUNITY COLLEGE

HALL ARCHITECTS
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LAMAR, CO 81052

BID SET

SHEET TITLE:
DEMOLITION
FLOOR PLAN
EAST FIRST LEVEL

DATE: 3/12/2024
REV:

SHEET NO.:
A1.06

DEMOLITION RCP GENERAL NOTES:

1. REFER TO STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS/SPECIFICATIONS FOR ADDITIONAL INFORMATION ON THEIR RESPECTIVE DISCIPLINES.
2. CONTRACTOR SHALL LEGALLY DISPOSE OF ALL DEMOLITION/CONSTRUCTION WASTE.
3. DURING CONSTRUCTION, CONTRACTOR SHALL PROTECT ALL EXISTING ELEMENTS TO REMAIN.
4. FOR ALL SALVAGED ITEMS TO BE REUSED, CONTRACTOR SHALL THOROUGHLY CLEAN AND PREPARE FOR NEW FINISH IF SCHEDULED.
5. EXISTING FIRE ALARM SYSTEM SHALL REMAIN IN SERVICE DURING DEMOLITION. DETECTORS MAY BE CAPPED.
6. EXISTING FIRE SPRINKLER SYSTEM SHALL REMAIN IN SERVICE DURING DEMOLITION.
7. UNLESS OTHERWISE NOTED, EXISTING FIXTURES, CASEWORK, DOORS/FRAMES, GLAZING, CEILING PANEL SYSTEMS, AND EQUIPMENT NOTED TO BE REMOVED IS TO BE SALVAGED TO THE OWNER.
8. THE OWNER WILL REMOVE ALL SECURITY CAMERAS AND ACCESSORIES PRIOR TO CONSTRUCTION.
9. SEE MECHANICAL AND ELECTRICAL FOR ABOVE CEILING WORK. REMOVE, REINSTALL/REPAIR EXISTING CEILING GRID AND PANELS AS REQUIRED.

KEY NOTES:

1. (E) PLASTER CEILING TO BE REMOVED
2. (E) LIGHT FIXTURE TO BE REMOVED; SEE ELEC DWGS; (TYP.)
3. (E) PLASTER CEILING AND ACOUSTICAL CEILING TILE TO BE REMOVED
4. (E) LAY–IN CEILING TO BE REMOVED
5. (E) LAY–IN CEILING TO BE REMOVED; RETAIN FOR REINSTALLATION AFTER ABOVE–CEILING WORK IS COMPLETED
6. (E) GYP BOARD CEILING/SOFFIT TO REMAIN
7. (E) LIGHT FIXTURE TO REMAIN; SEE ELEC DWGS
8. (E) LIGHT FIXTURE TO REMAIN; SEE ELEC DWGS; (TYP. IN LECTURE HALLS)
9. HATCHED AREAS INDICATE AREAS OF WORK UNDER A SEPARATE PROJECT SCOPE (CAPITAL RENEWAL) UNLESS NOTED OTHERWISE
10. (E) EXIT SIGN TO BE REMOVED; SEE ELEC DWGS

1 A1.12 DEMOLITION REFLECTED CEILING PLAN - EAST FIRST LEVEL
SCALE: 1/8" = 1'-0"

NORTH 0 4 8 16

LAMAR COMMUNITY COLLEGE

HALL ARCHITECTS
1935 DOMINION WAY, SUITE 202
COLORADO SPRINGS, CO 80918
PHONE: (719) 277-7300

BOWMAN LIBRARY RENOVATION
LAMAR COMMUNITY COLLEGE
2401 S. MAIN ST.
LAMAR, CO 81052

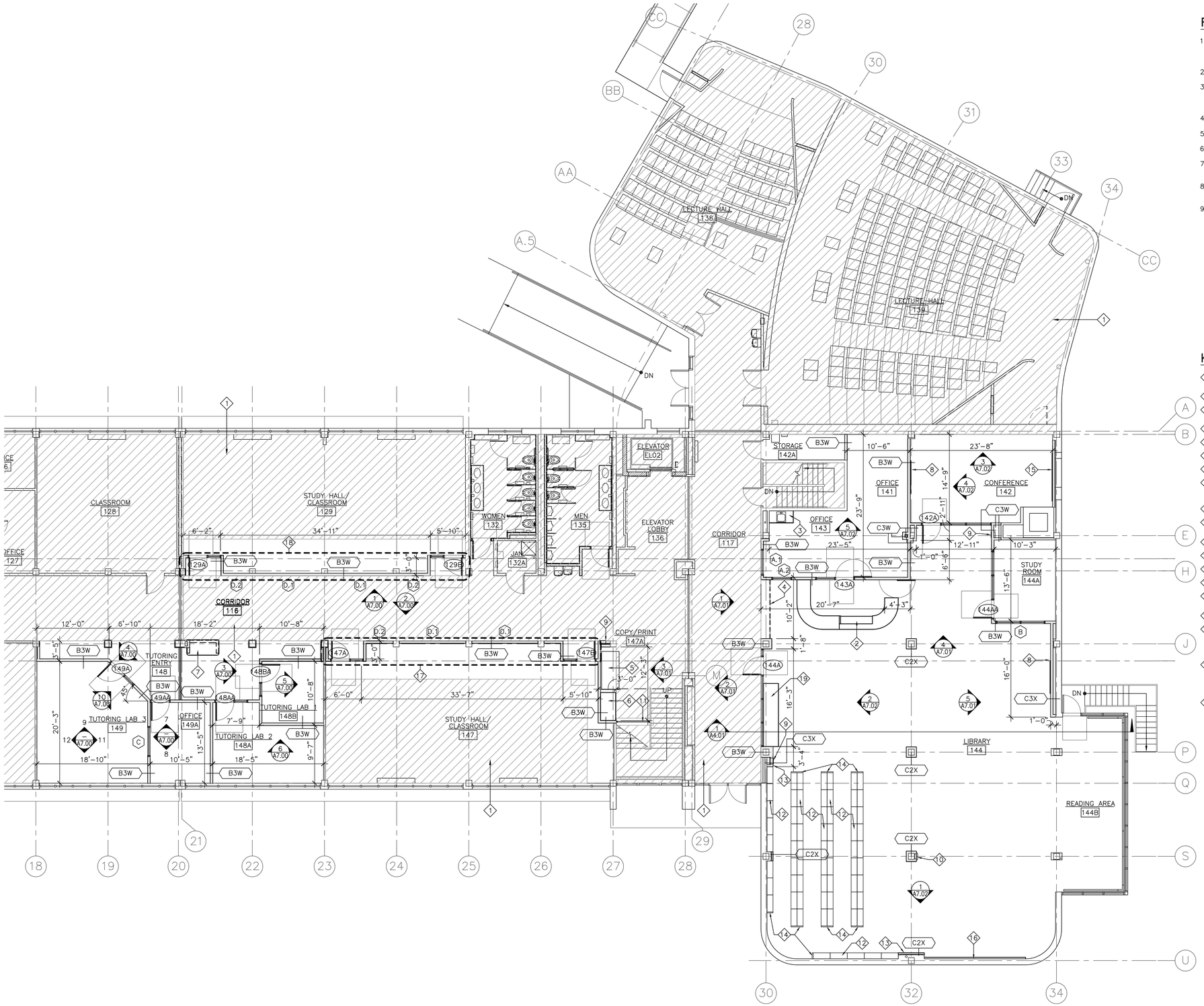
BID SET

SHEET TITLE:
DEMOLITION REFLECTED CEILING PLAN
EAST FIRST LEVEL

DATE: 3/12/2024

REV:

SHEET NO.:
A1.16



1 A2.02 FLOOR PLAN - EAST FIRST LEVEL
SCALE: 1/8" = 1'-0"

NORTH 0 4 8 16

FLOOR PLAN GENERAL NOTES:

1. REFER TO STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS/SPECIFICATIONS FOR ADDITIONAL INFORMATION ON THEIR RESPECTIVE DISCIPLINES.
2. SEE CODE COMPLIANCE PLANS FOR GENERAL RATING REQUIREMENTS.
3. ALL DIMENSIONS ARE TO FACE OF MASONRY WALL, CONCRETE COLUMN, OR FACE OF GYPSUM BOARD (OR CEMENT BACKER BOARD) MATERIAL AT STUD WALLS, UNLESS NOTED OTHERWISE.
4. FLOOR ELEVATION IS 100'–0" UNLESS OTHERWISE NOTED.
5. SEE SHEET A6.02 FOR PARTITION SCHEDULE.
6. SEE SHEET A6.03 FOR DOOR AND WINDOW SCHEDULES.
7. PROVIDE SEALANT AT ALL JOINTS OR CRACKS WHICH OCCUR WHERE MATERIALS INTERSECT UNLESS OTHERWISE NOTED.
8. PROVIDE HORIZONTAL WINDOW BLINDS AT ALL EXTERIOR WINDOWS PER FINISH SCHEDULES.
9. ROOM SIGNAGE TO BE PROVIDED BY OWNER

KEY NOTES:

1. HATCHED AREAS INDICATE AREAS OF WORK UNDER A SEPARATE PROJECT SCOPE (CAPITAL RENEWAL) UNLESS NOTED OTHERWISE
2. CIRCULATION DESK BASE CASEWORK & COUNTERTOP; SEE 3/A9.10
3. BASE CASEWORK & COUNTERTOP W/WORK SINK; SEE 10/A9.10 AND PLUMBING DWGS.
4. OVERHEAD COILING SECURITY GRILLE W/SIDE GUIDERAILS; SEE 8/A9.11
5. COPIER/PRINTER ALCOVE; SEE ELEC. DWGS.
6. ADD ALTERNATE #1: BASE CASEWORK & COUNTERTOP; SEE 1/A9.11
7. ADD ALTERNATE #1: CHECK-IN STATION COUNTERTOP; SEE 4/A9.10
8. WALL-MTD MONITOR; PROVIDE WD BLKG AS REQD BY MFR; MONITOR SHALL NOT PROTRUDE MORE THAN 4" FROM F.O. FIN. WALL; SEE ELEC. DWGS.
9. FULLY-RECESSED FIRE EXTINGUISHER CABINET
10. SEMI-RECESSED FIRE EXTINGUISHER CABINET; SHALL NOT PROTRUDE MORE THAN 4" FROM F.O. FIN. WALL
11. FLOOR-MOUNTED CANE DETECTION RAIL; SEE 3/A7.03
12. RELOCATED (E) BOOKSHELVES; (TYP.)
13. ALIGN FIN. F.O. WALL W/ F.O. BOOKSHELF
14. INSTALL (N) PNL O/(E) END PNL OF (E) BOOKSHELVES; SEE 2/A9.11
15. 8'–0" LONG X 4'–0" HIGH MARKERBOARD PROVIDED BY OWNER; INSTALLED BY CONTRACTOR
16. WALL GRAPHIC; SEE 1/A7.02
17. BASE BID: CONSTRUCT (N) DOORS, FRAMES, & DOOR ALCOVE WALLS ONLY
    ADD ALTERNATE #5: CONSTRUCT NEW PARTITION W/INTERIOR WINDOWS BETWEEN (N) DOOR ALCOVES
18. BASE BID: NO WORK THIS AREA
    ADD ALTERNATE #3: CONSTRUCT (N) DOORS, FRAMES, & DOOR ALCOVE WALLS ONLY
    ADD ALTERNATE #6: CONSTRUCT (N) PARTITION W/INTERIOR WINDOWS
19. ADD ALTERNATE #1: 10'–6" LONG X 2'–6" DEEP X 3'–2" HIGH SOLID SURFACE WORK COUNTER W/ WATERFALL EDGE; SEE 7/A9.10

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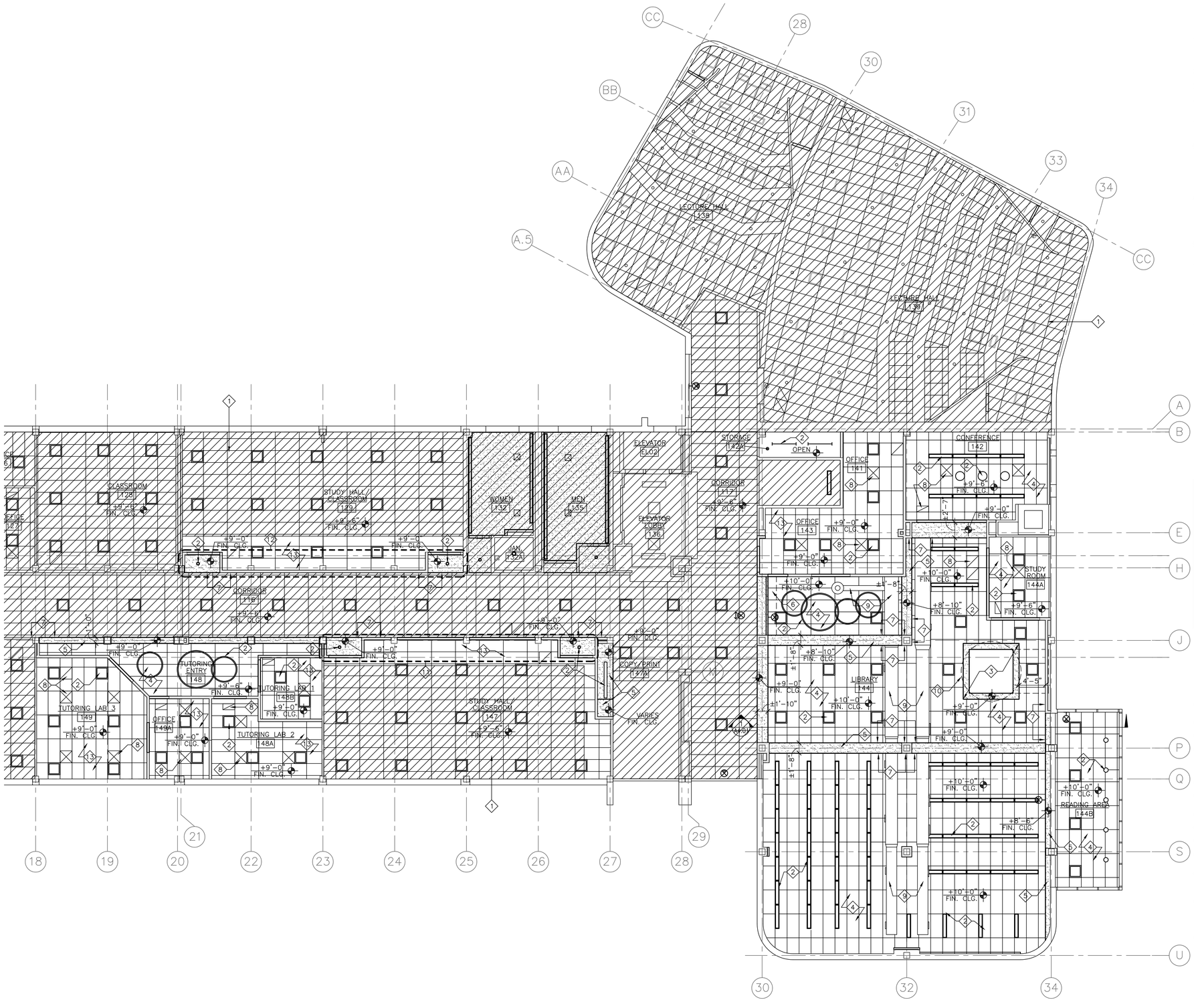
SHEET TITLE:
FLOOR PLAN
EAST FIRST LEVEL

DATE: 3/12/2024
REV:

SHEET NO.:
A2.06



RCP GENERAL NOTES:

1. REFER TO STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS/SPECIFICATIONS FOR ADDITIONAL INFORMATION ON THEIR RESPECTIVE DISCIPLINES.
2. SEE CODE COMPLIANCE PLANS FOR GENERAL RATING REQUIREMENTS.
3. CEILING ELEVATIONS SHALL MATCH EXISTING, UNLESS OTHERWISE NOTED.
4. CENTER CEILING GRIDS IN ROOM TYPICALLY EXCEPT WHERE DIMENSIONS ARE PROVIDED, UNLESS OTHERWISE NOTED.
5. CENTER FIXTURES, EQUIPMENT, AND SPRINKLER HEADS IN CEILING TILES OR HALF TILES AS SHOWN.
6. ARCHITECT SHALL BE CONSULTED FOR LOCATION OF ALL REQUIRED CEILING ACCESS PANELS. GENERAL CONTRACTOR SHALL COORDINATE LOCATION OF ALL ABOVE CEILING EQUIPMENT AND ASSOCIATED ACCESS PANELS PRIOR TO INSTALLATION OF EQUIPMENT, CONDUIT, OR PIPING.
7. PAINT EXPOSED DUCTS, PIPING, ETC, UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL REMOVE, REPLACE, OR REINSTALL (E) SUSPENDED ACOUSTIC PANEL CEILING AND SUPPORT GRID TO REMAIN AS NECESSARY TO FACILITATE THE STRUCTURAL, MECHANICAL, AND ELECTRICAL WORK INDICATED ELSEWHERE IN THESE DOCUMENTS. ALL DAMAGED COMPONENTS SHALL BE REPLACED WITH NEW TO MATCH EXISTING.
9. GYPSUM BOARD CEILING SHALL BE FRAMED PER SCHEDULE BELOW, UNLESS OTHERWISE NOTED.
10. PROVIDE CONTROL JOINTS IN GYPSUM BOARD CEILING CONSTRUCTION AS INDICATED; WHERE NOT INDICATED, PROVIDE MAXIMUM SPACING BETWEEN JOINTS OF 30 FEET. VERIFY FINAL CONTROL JOINT LOCATIONS WITH ARCHITECT PRIOR TO STARTING WORK.
11. PROVIDE SEALANT AT ALL JOINTS OR CRACKS WHICH OCCUR WHERE MATERIALS INTERSECT UNLESS OTHERWISE NOTED.
12. DRAFT STOPS SHALL BE INSTALLED IN FLOOR–CEILING ASSEMBLIES OR COMBUSTIBLE CONSTRUCTION SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1,000 SQUARE FEET AND SO THAT THE HORIZONTAL DISTANCE BETWEEN STOPS DOES NOT EXCEED 60 FEET, WHERE APPROVED AUTOMATIC SPRINKLERS ARE INSTALLED WITHIN THE CONCEALED SPACE. THE AREA BETWEEN DRAFT STOPS MAY BE 3,000 SQUARE FEET AT THE HORIZONTAL DIMENSION MAY BE 100 FEET. DRAFT STOPS SHALL BE INSTALLED IN ROOF–CEILING ASSEMBLIES AND ATTICS OF COMBUSTIBLE CONSTRUCTION. THE AREAS AND HORIZONTAL DIMENSIONS ARE 3,000–60 AND 9,000–100 RESPECTIVELY.

CEILING FRAMING SCHEDULE

FRAMING AT 16" OC	MAXIMUM SPAN W/OUT MID-SPAN SUPPORT	
	1 LAYER 5/8" GYP BD	2 LAYERS 5/8" GYP BD
2½ x 25 GA	7'–11"	6'–10"
2½ x 20 GA	9'–6"	8'–3"
3⅝ x 25 GA	10'–6"	7'–3"
3⅝ x 20 GA	12'–8"	11'–0"
4 x 25 GA	11'–0"	9'–0"
4 x 20 GA	13'–8"	11'–11"
6 x 20 GA	18'–11"	16'–6"
2½ CH x 25 GA	6'–7"	5'–6"
2½ CH x 22 GA	9'–4"	7'–9"
2½ CH x 20 GA	10'–3"	8'–3"
4 CH x 25 GA	9'–4"	7'–6"
4 CH x 20 GA	14'–6"	12'–6"

KEY NOTES:

1. HATCHED AREAS INDICATE AREAS OF WORK UNDER A SEPARATE PROJECT SCOPE (CAPITAL RENEWAL) UNLESS NOTED OTHERWISE
2. ELEC. LIGHT FIXTURE; SEE ELEC. DWGS.; (TYP.)
3. ADD ALTERNATE #2: SKYLIGHT WELL & SOFFIT; SEE 3 & 12/A9.11
4. LAY–IN TILE CEILING;
   BASE BID: 2'–0" X 4'–0" STD TILES;
   ADD ALTERNATE #4: 2'–0" X 4'–0" TEGULAR EDGE TILES W/CENTER REVEAL; (TYP.)
5. GYP BD SOFFIT; SEE 3/A9.11; (TYP.)
6. OVERHEAD–COILING SECURITY GRILL COIL BOX LOCATED ABOVE CEILING; SEE 4/A9.11
7. ALIGN F.O. SOFFIT W/F.O. INDICATED ADJ WALL SURFACE
8. CLG–MTD GRILLE/REGISTER/DIFFUSER; SEE MECH. DWGS.; (TYP.)
9. EXPOSED DUCTWORK; SEE MECH DWGS
10. CEILING–SUSPENDED LIGHTWEIGHT MOBILE ART SCULPTURE; COORDINATE MOUNTING REQUIREMENTS W/ARTIST
11. BASE BID: DOOR ALCOVE WALLS & SOFFITS ONLY; SEE ELEC DWGS
    ADD ALTERNATE #5: CONSTRUCT NEW PARTITION W/INTERIOR WINDOWS BETWEEN (N) DOOR ALCOVES
12. BASE BID: NO WORK THIS AREA
    ADD ALTERNATE #3: CONSTRUCT (N) DOOR ALCOVE WALLS AND SOFFITS ONLY; SEE ELEC DWGS
    ADD ALTERNATE #6: CONSTRUCT (N) PARTITION W/INTERIOR WINDOWS
13. LAY–IN TILE CEILING; 2'–0" X 4'–0" STD TILES

1 A2.12 REFLECTED CEILING PLAN - EAST FIRST LEVEL
SCALE: 1/8" = 1'-0"

NORTH 0 4 8 16

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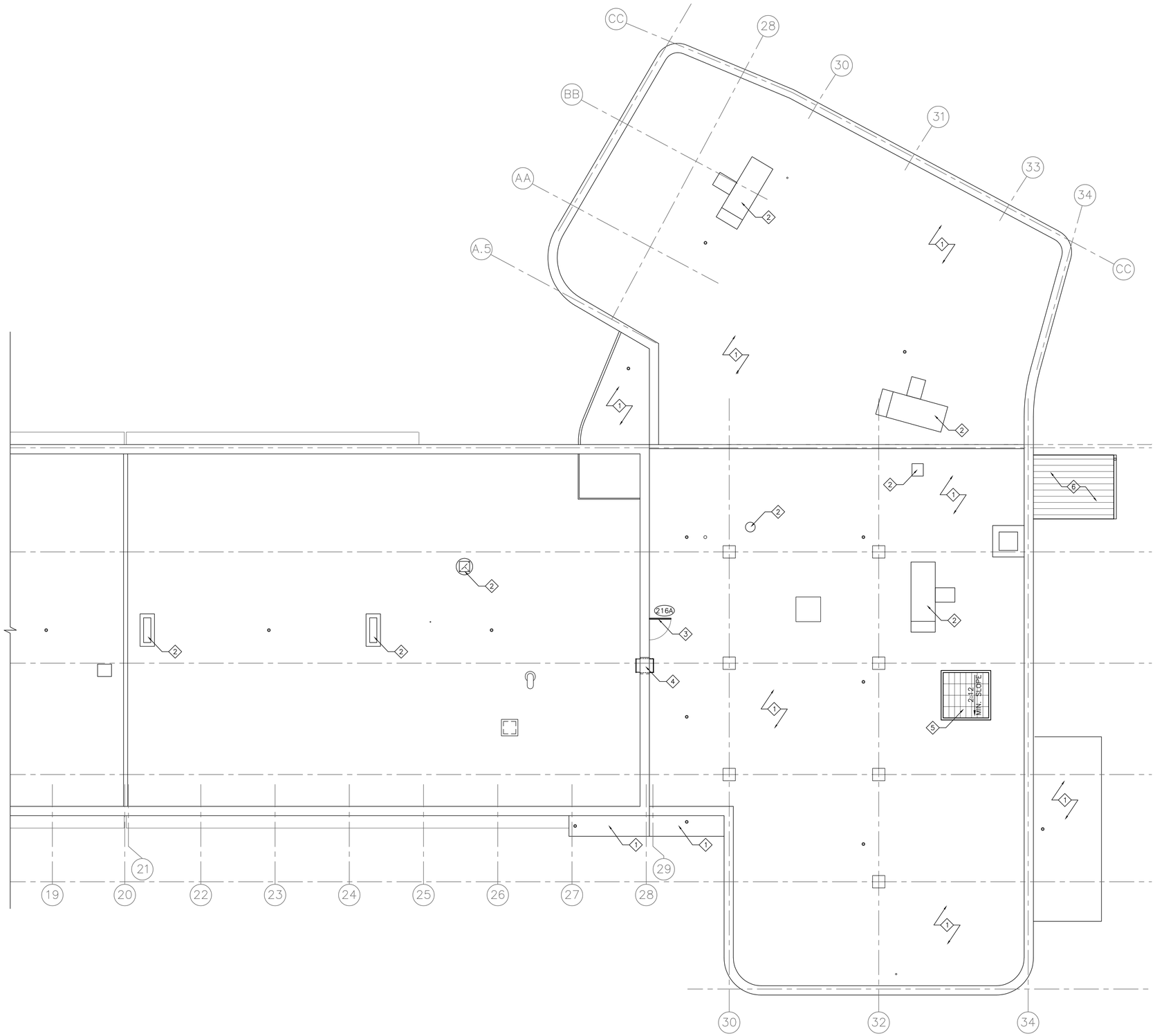
SHEET TITLE:
RELFECTED CEILING PLAN EAST FIRST LEVEL

DATE: 3/12/2024
REV:

SHEET NO.:
A2.16



1 A2.32 PARTIAL EAST - ROOF PLAN
SCALE: 1/8" = 1'-0"

NORTH 0 4 8 16

ROOF PLAN GENERAL NOTES:

1. COORDINATE ROOF DRAIN AND OVERFLOW ROOF DRAIN LOCATIONS WITH FINAL JOIST LAYOUT.
2. SLOPES SHOWN ARE MINIMUM TO BE PROVIDED.
3. PROVIDE FIRE–TREATED WOOD BLOCKING UNDER PREFABRICATED CURBS AT MECHANICAL EQUIPMENT FOR A MINIMUM EXPOSED CURB OF 12 INCHES ABOVE ROOF SURFACE.
4. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL PLANS FOR ADDITIONAL ROOF PENETRATION REQUIREMENTS. MAINTAIN A MINIMUM OF FIVE FEET FROM ALL PARAPETS, UNLESS OTHERWISE NOTED.
5. PROVIDE TAPERED INSULATION CRICKET ON HIGH SIDE OF ALL MECHANICAL, PLUMBING, AND ELECTRICAL EQUIPMENT.
6. HOLD ALL LIGHTNING PROTECTION BACK FROM ROOF EDGE TWO FEET MINIMUM.
7. PAINT ALL NON–PREFINISHED EXTERIOR LADDERS, BRACKETS, EXPOSED GAS PIPING, ETC, UNLESS OTHERWISE NOTED.

KEY NOTES:

1. FULLY–ADHERED EPDM ROOFING SYSTEM O/(E) ROOFING ASSEMBLY TO BE INSTALLED UNDER SEPARATE SCOPE OF WORK (N.I.C.); SEE NEW ASSEMBLIES DESCRIBED BELOW FOR REFERENCE; (TYP.)
2. ROOFTOP MECH. EQUIPMENT (N.I.C.); SEE MECH. DWGS.
3. ROOFTOP ACCESS DOOR PROVIDED AND INSTALLED UNDER SEPARATE SCOPE OF WORK (N.I.C.)
4. EXTERIOR ROOF ACCESS LADDER AND PLATFORM PROVIDED AND INSTALLED UNDER SEPARATE SCOPE OF WORK (N.I.C.)
5. SKYLIGHT ASSEMBLY O/INSULATED STL CURB; SEE 12/A9.11
6. ROOF OF VESTIBULE ADDITION BELOW; (N.I.C.)

NOTE: ROOF RE-COVER IS NOT PART OF THE LIBRARY RENOVATION SCOPE OF WORK AND ASSEMBLY INFORMATION IS PROVIDED BELOW FOR CONTRACTOR REFERENCE ONLY.

EXISTING ROOFING ASSEMBLY

GRAVEL SURFACING
ASPHALT BUILT-UP ROOFING
0.75" PERLITE COVER BOARD
TAPERED PERLITE INSULATION (6.25" MAX. DEPTH)
OVER (E) PRECAST CONCRETE DOUBLE TEE STRUCTURAL ROOF DECK

NEW ROOFING ASSEMBLY (ROOF AREAS O/ LECTURE HALLS & LIBRARY)

60 MIL EPDM MEMBRANE - FULLY ADHERED
0.5" HD. ISO. FOAM COVER BOARD
3.0" POLYISO. FOAM INSULATION BOARD
(E) ASPHALT BUILT-UP ROOFING
(E) 0.75" PERLITE COVER BOARD
(E) TAPERED PERLITE INSULATION (6.25" MAX. DEPTH)
OVER (E) PRECAST CONCRETE DOUBLE TEE STRUCTURAL ROOF DECK

WIND PRESSURE APPLICABLE TO ALL WORK THIS SHEET:

PRESSURES DERIVED BY ASD METHOD WITH A SAFETY FACTOR OF 2X.

MINIMUM DESIGN UPLIFT-RESISTANCE CAPACITIES ARE AS FOLLOWS:
(ZONES AS DEFINED BY ASCE 7-16)

ZONE 1 (ROOF FIELD AREA)	58.3 PSF
ZONE 2 (ROOF PERIMETER 12 FT WIDE):	76.8 PSF
ZONE 3 (ROOF CORNERS 4 FT X 4 FT EA. DIRECTION):	104.7 PSF

WIND LOAD DESIGN PERIMETER EDGE METAL SHALL BE AS FOLLOWS:
(ZONES AS DEFINED BY ASCE 7-16)

ZONE 2 (ROOF EDGE PERIMETER, VERTICAL LOAD):	76.8 PSF
ZONE 3 (ROOF CORNERS, VERTICAL LOAD):	104.7 PSF
ZONE 4 (ROOF EDGE PERIMETER, HORIZ. LOAD):	39.6 PSF
ZONE 5 (ROOF CORNERS, HORIZ. LOAD):	48.9 PSF

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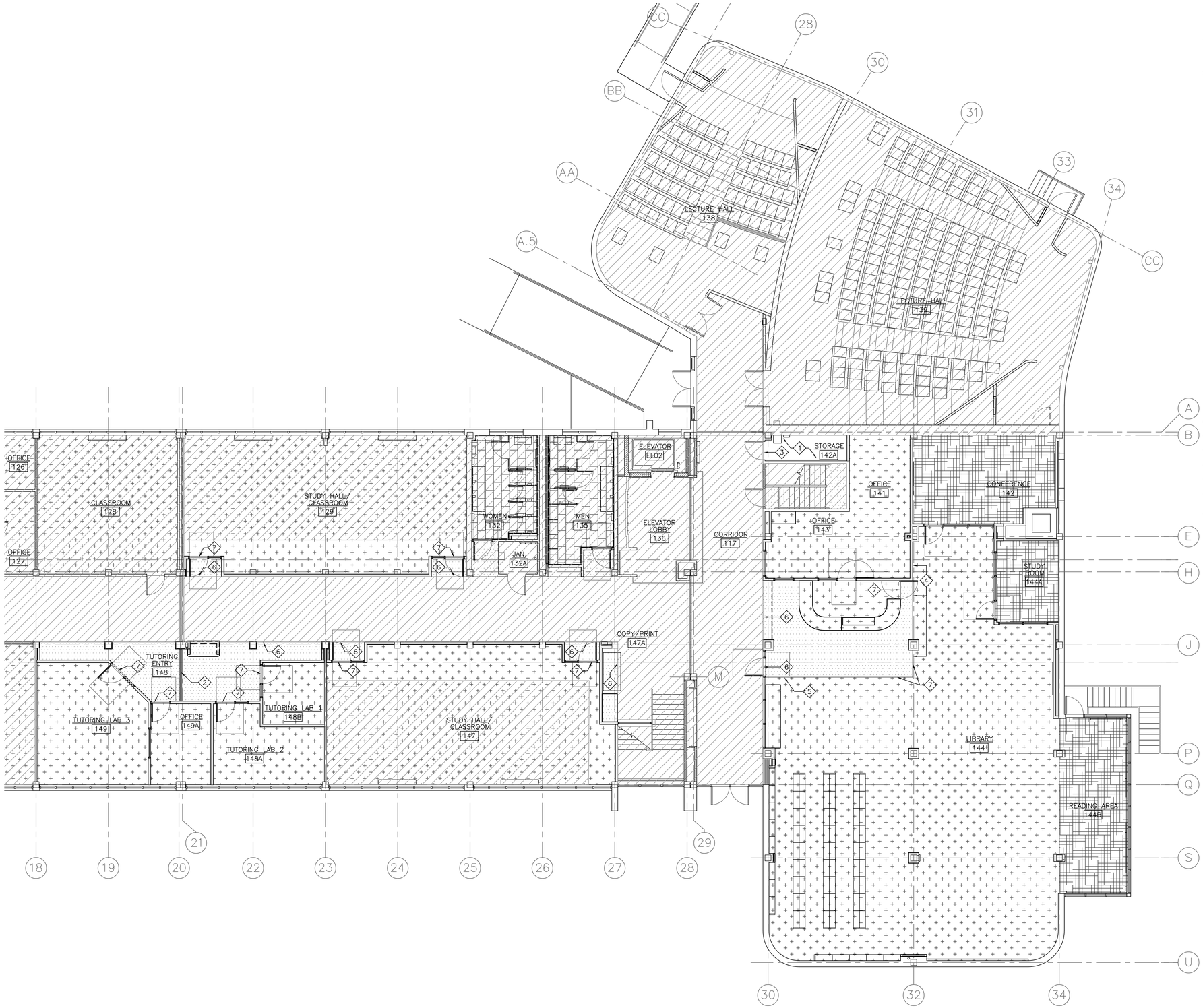
SHEET TITLE:
PARTIAL EAST ROOF PLAN

DATE: 3/12/2024
REV:

SHEET NO.:
A2.32



FLOOR FINISH PLAN GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL CARPET TILE ARE 18" X 36" RECTANGLES LAID IN ASHLAR FORMAT PER MFR.; ORIENT W/LONG EDGE RUNNING IN EAST–WEST DIRECTION U.N.O.
2. SEE 5/A9.11 FOR TYPICAL FLOORING TRANSITION STRIP DETAIL

KEY NOTES:

1. EXPOSED CONC FLOOR
2. FLOOR EXPANSION JOINT COVER
3. RUBBER FLOORING TRANSITION STRIP; (TYP.)
4. ALIGN FLOOR FINISH TRANSITION W/ F.O. ADJ WALL
5. ALIGN FLOOR FINISH TRANSITION 2" SOUTH OF ADJ DOOR OPENING
6. PROVIDE FLUSH TRANSITIONS BETWEEN (E) TERRAZZO & LVT FLOOR FINISHES; (TYP.)
7. PROVIDE FLUSH TRANSITIONS BETWEEN LVT & CPT FLOOR FINISHES; (TYP.)

LEGEND:

- CARPET 1 (CPT1) – J&J ANALYTIC 18" X 36" CARPET TILE; STYLE 7632; COLOR 3590 "COOL"
- CARPET 2 (CPT2) – J&J ANALYTIC DIFFUSE 18" X 24" CARPET TILE; STYLE 7632; COLOR 3599 "COOL BLUE"
- LUXURY VINYL TILE (LVT1)

1 A2.40 FLOOR FINISH PLAN
SCALE: 1/8" = 1'-0"

NORTH 0 4 8 16

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FLOOR FINISH PLAN

DATE: 3/12/2024
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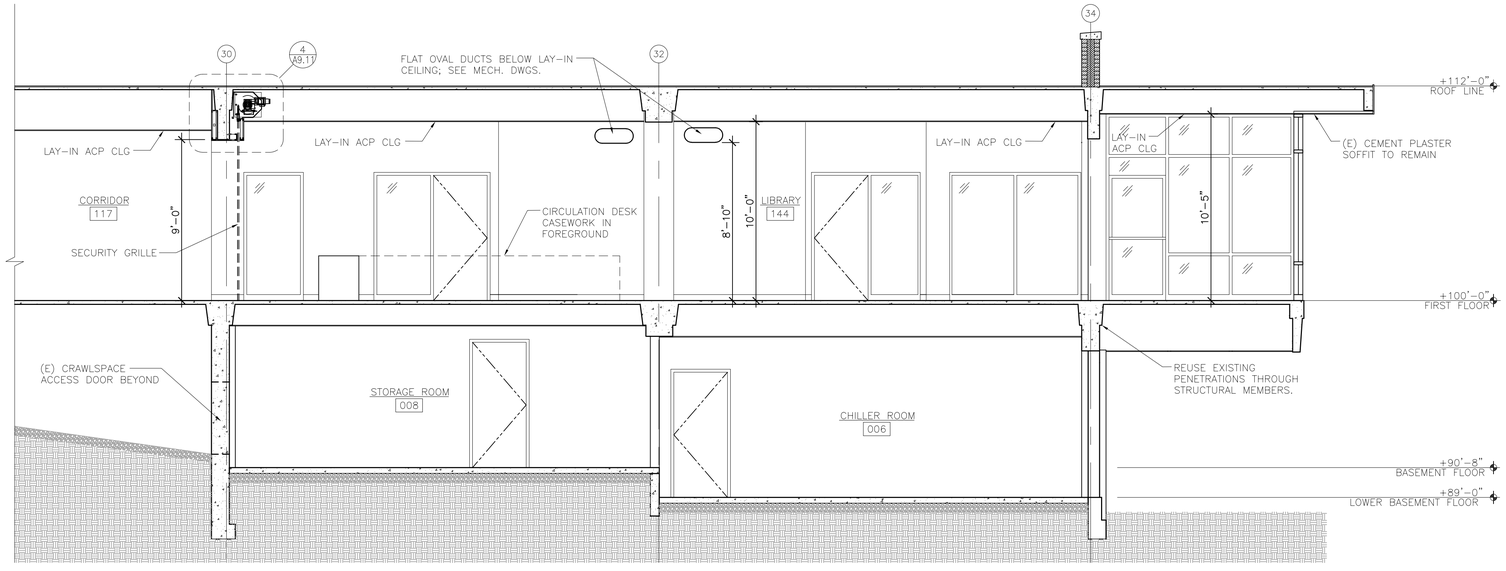
A2.40



1 / A4.02 BUILDING SECTION
SCALE: 1/4" = 1'-0"

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SHEET TITLE:
BUILDING SECTION

DATE: 3/12/2024

REV:

SHEET NO.:
A4.02

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	WALL BASE	WALLS								CEILINGS		COMMENTS
				NORTH		EAST		SOUTH		WEST				
				MATL	FINISH	MATL	FINISH	MATL	FINISH	MATL	FINISH	MATL	FINISH	
116	CORRIDOR	(E)/LVT	(E)/4" TSR	(E)/GB	P1	-	-	(E)/GB	P1	-	-	ACP/GB	FF/P2	-
117	CORRIDOR	(E)/LVT	(E)/4" TSR	(E)PLAS	P1	(E)/GB	P1	-	-		P1	ACP/GB	FF/P2	-
129	STUDY HALL/CLASSRM.	CPT	4" TSR	(E)PLAS	P1	(E)PLAS	P1	GB	P1	(E)PLAS	P1	ACP	FF	1
141	OFFICE	CPT	4" TSR	(E)PLAS	P1	GB	P1	(E)PLAS	P1	(E)/GB	P1	ACP	FF	-
142	CONFERENCE	CPT	4" TSR	(E)PLAS	P1	GB	P1	GB	P1	GB	P1	ACP	FF	-
142A	STORAGE	EC	4" TSR	(E)PLAS	P1	GB	P1	(E)PLAS	P1	(E)PLAS	P1	-	-	-
143	OFFICE	CPT	4" TSR	(E)PLAS	P1	GB	P1	GB	P1	GB	P1	ACP	FF	-
144	LIBRARY	CPT/LVT	4" TSR	GB	P1	(E)/GB	P1	(E)PLAS	P1	(E)/GB	P1	ACP/GB	FF/P2	-
144A	STUDY ROOM	CPT	4" TSR	GB	P1	(E)PLAS	P1	GB	P1	GB	P1	ACP	FF	-
144B	READING AREA	CPT	4" TSR	(E)	FF	(E)	FF	(E)	FF	-	-	ACP	FF	-
147	STUDY HALL/CLASSRM.	CPT	4" TSR	GB	P1	(E)/GB	P1	(E)PLAS	P1	(E)PLAS	P1	ACP	FF	1
147A	COPY/PRINT	LVT	4" TSR	GB	P1	-	-	GB	P1	GB	P1	GB	P2	-
148	TUTORING ENTRY	LVT	4" TSR	-	-	GB	P1	GB	P1	GB	P1	ACP	FF	-
148A	TUTORING LAB	CPT	4" TSR	GB	P1	(E)/GB	P1	(E)PLAS	P1	GB	P1	ACP	FF	-
148B	TUTORING LAB	CPT	4" TSR	GB	P1	(E)PLAS	P1	GB	P1	GB	P1	ACP	FF	-
149	TUTORING LAB	CPT	4" TSR	GB	P1	GB	P1	(E)PLAS	P1	(E)PLAS	P1	ACP	FF	-
149A	OFFICE	CPT	4" TSR	GB	P1	GB	P1	(E)PLAS	P1	GB	P1	ACP	FF	-

SCHEDULE ABBREVIATIONS

ACP	ACOUSTICAL CEILING PANEL	ME	MATCH EXISTING
ACT	ACOUSTICAL CEILING TILE	MFR	PER MANUFACTURER
AFF	ABOVE FINISHED FLOOR	MIN	MINUTES
ALUM	ALUMINUM	(N)	NEW
ANOD	ANODIZE / ANODIZED	PLAM	PLASTIC LAMINATE
CMU	CONCRETE MASONRY UNIT	PLAS	PLASTER
CMU1	SMOOTH-FACE CMU	P	PAINT
CMU2	SPLIT-FACE CMU	P1	PAINT - SEMI-GLOSS
CP	CEMENT PLASTER	P2	PAINT - FLAT
CPT	CARPET / CARPET TILE	QT	QUARRY TILE
CPT1	CARPET / CARPET TILE - PATTERN 1	RAF	RAISED ACCESS FLOOR
CPT2	CARPET / CARPET TILE - PATTERN 2	SDT	STATIC DISSIPATIVE TILE
CT	CERAMIC TILE	SRT	SLIP RETARDANT TILE
CT1	CERAMIC TILE - TILE 1	STD	STANDARD
CT2	CERAMIC TILE - TILE 2	SSTL	STAINLESS STEEL
(E)	EXISTING	STL	STEEL
EC	EXPOSED CONCRETE	TSR	TOP-SET RUBBER BASE
FF	FACTORY FINISH	TSR4	TOP-SET RUBBER BASE - 4"
FRP	FIBERGLASS REINFORCED PLASTIC	TSR6	TOP-SET RUBBER BASE - 6"
GB	GYPSUM BOARD	TZO	TERRAZZO
HDWE	HARDWARE	VCT	VINYL COMPOSITE TILE
HM	HOLLOW METAL	VCT1	VINYL COMPOSITE TILE - STANDARD
HR	HOUR	VCT2	VINYL COMPOSITE TILE - DECORATIVE
LINO	LINOLEUM	VWC	VINYL WALL COVERING
LVT	LUXURY VINYL TILE	WD	WOOD
MAT	WALK-OFF MAT	WSCT	WAINSCOT
MATL	MATERIAL		

ROOM FINISH SCHEDULE NOTES:

1. CEILING AND FLOOR FINISH REPLACEMENT TO BE PERFORMED UNDER CAPITAL RENEWAL PROJECT
2. NOT USED

INTERIOR PARTITION SCHEDULE

	WALL TYPE MARK	WALL WIDTH	STUDS/STRUCTURE			INSUL TYPE	RATINGS			DETAIL FIGURE	WALL TYPE MARK	NOTES
			DEPTH	GAUGE	SPACING		FIRE	ASSEMBLY #	ACOUSTIC			
NON-RATED WALLS	A2	3-3/4"	2-1/2"	25	16" OC	--	--	--	--	P1	A2	--
	A3	4-7/8"	3-5/8"	25	16" OC	--	--	--	--	P1	A3	--
	A4	5-1/4"	4"	25	16" OC	--	--	--	--	P1	A4	--
	A6	7-1/4"	6"	25	16" OC	--	--	--	--	P1	A6	--
	B2	3-3/4"	2-1/2"	25	16" OC	3" SB	--	--	STC-XX	P2	B2	--
	B3	4-7/8"	3-5/8"	25	16" OC	3" SB	--	--	STC-XX	P2	B3	--
	B4	5-1/4"	4"	25	16" OC	3" SB	--	--	STC-XX	P2	B4	--
	B6	7-1/4"	6"	25	16" OC	3" SB	--	--	STC-XX	P2	B6	--
	C1	1-1/8"	1/2" RC		16" HORIZ	--	--	--	--	P3	C1	--
	C1.1	1-1/2"	7/8" HC		16" HORIZ	--	--	--	--	P4	C1.1	--
	C1.2	2-1/8"	1-1/2"		12" OC	--	--	--	--	P5	C1.2	--
	C2	3-1/8"	2-1/2"	25	16" OC	--	--	--	--	P5	C2	--
	C3	4-1/4"	3-5/8"	25	16" OC	--	--	--	--	P5	C3	--
	C4	4-5/8"	4"	25	16" OC	--	--	--	--	P5	C4	--
	C6	6-5/8"	6"	25	16" OC	--	--	--	--	P5	C6	--
	D2	3-1/8"	2-1/2"	25	16" OC	3" SB	--	--	STC-XX	P6	D2	--
	D3	4-1/4"	3-5/8"	25	16" OC	3" SB	--	--	STC-XX	P6	D3	--
	D4	4-5/8"	4"	25	16" OC	3" SB	--	--	STC-XX	P6	D4	--
	D6	6-5/8"	6"	25	16" OC	3" SB	--	--	STC-XX	P6	D6	--
RATED	L4	4-5/8"	C-H 4"	25	24" OC	3" SB	--	UL-XXX	STC-XX	P11	L4	--

INT PARTITION SCHED LEGEND:

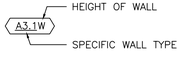
RC	RESILIENT CHANNEL
HC	HAT CHANNEL
SB	SOUND BATT
TB R-#	THERMAL BATT W/ R-VALUE
RIGID R-#	RIGID BETWEEN STUDS
RIGID-CONT R-#	RIGID CONTINUOUS BEHIND STUDS
SF R-#	SPRAY FOAM BETWEEN STUDS
SF-CONT R-#	SPRAY FOAM CONTINUOUS BEHIND STUDS
PERLITE	FILL OPEN MASONRY CELLS WITH PERLITE
SAND	FILL OPEN MASONRY CELLS WITH SAND

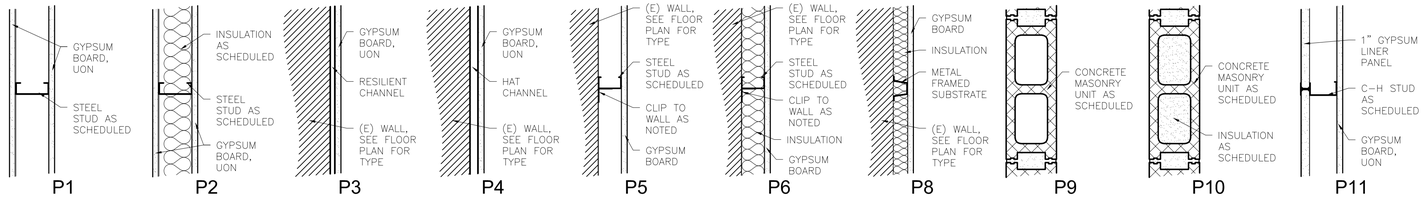
INT PARTITION SCHED NOTES:

1. FINISH ONE SIDE ONLY.

HEIGHT OF WALL DESIGNATION:

W	TO FLOOR OR ROOF DECK ABOVE
X	TO 6" ABOVE CEILING
Y	TO BOTTOM OF CEILING
Z	LOW WALL, REFER TO DRAWINGS FOR SPECIFIC HEIGHT





1 A6.02 PARTITION TYPES
SCALE: 1-1/2" = 1'-0"

INTERIOR PARTITION SCHEDULE GENERAL NOTES:

1. DIMENSIONS SHOWN ON PLANS ARE TO FINISH SURFACE OF WALL SUBSTRATE (E.G. FACE OF GYP BD). MASONRY DIMENSIONS GIVEN ARE NORMAL.
2. USE MOISTURE RESISTANT GYPSUM BOARD ON ALL WET WALLS & WALLS SUBJECT TO WATER SPLASH.
3. ALL GYPSUM BOARD ON WALLS SHALL BE 5/8" THICK TYPE "X"; UON. USE ABUSIVE-RESISTANT GYP BD TO 8'-0" HIGH ON ALL CORRIDOR WALLS.
4. USE CEMENTITIOUS BACKER BOARD IN LIEU OF GYPSUM BOARD UNDER ALL WALLS THAT HAVE CERAMIC TILE FINISH. SEE THE INTERIOR FINISH SCHEDULE AND/OR PLANS FOR LOCATIONS.
5. ALL CEMENTITIOUS BACKER BOARDS SHALL BE 5/8" THICK UON, AND SHALL ALIGN WITH GYPSUM BOARD SURFACE ABOVE WHERE OCCURS.
6. BRACE ALL FURRING STUDS TO BACKING WALL AT MID-HEIGHT AND NEAR TOP OF WALL.
7. ALL RATED WALLS MUST COMPLY WITH THE RATED ASSEMBLY CITED.
8. SEE CODE COMPLIANCE PLAN SHEETS FOR RATED PARTITION/WALL TYPE. (FIRE WALL, FIRE BARRIER, FIRE PARTITION, CORRIDOR FIRE PARTITIONS, SHAFT FIRE BARRIERS). CONTRACTOR SHALL ALSO REFER TO APPROPRIATE IBC SECTION FOR FULL EXTENT OF REQUIREMENTS.
9. ALL PENETRATIONS IN FIRE RATED WALL ASSEMBLIES SHALL BE FIRESTOPPED OR PROVIDED WITH APPROVED SMOKE AND/OR FIRE DAMPERS.
10. PARTITIONS WITH ACOUSTIC INSULATION SHALL BE PROVIDED WITH ACOUSTIC SEALANT AT PERIMETERS OF WALL AND AT ALL PENETRATIONS. ALL GYPSUM BOARD JOINTS MUST BE TAPED AND FINISHED.
11. PARTITIONS DESIGNATED AS SMOKE PARTITIONS SHALL BE PROVIDED WITH SEALANT AT PERIMETERS OF WALL AND AT ALL PENETRATIONS. ALL GYPSUM BOARD JOINTS MUST BE TAPED AND FINISHED.
12. ALL PARTITIONS ABUTTING EXTERIOR WINDOWS SHALL BE CENTERED ON MULLION, UON DO NOT MECHANICALLY ATTACH STUDS TO MULLIONS.
13. ALL DOOR JAMBS SHALL BE FRAMED WITH DOUBLE 20 GA MINIMUM STUDS, WITH BRACING AT TOP OF WALL STRIKE SIDE JAMB.
14. INSTALL SOLID WOOD BLOCKING BEHIND ALL WALL MOUNTED DOOR STOPS, GRAB BARS, AND HANDRAIL BRACKET MOUNTS.
15. PROVIDE 16 GA X 6 INCH WIDE SHEET METAL STRAP BACKING BEHIND ALL PARTITION MOUNTED OR ATTACHED EQUIPMENT, CASEWORK, AND TOILET PARTITIONS.
16. ALL NEW MASONRY WALLS SHALL HAVE JOINTS ALIGN WITH EXISTING ADJACENT MASONRY WALLS.
17. UON, ALL NEW MASONRY PARTITIONS ARE TO BE REINFORCED WITH LADDER REINFORCING AT 16" HORIZONTALLY AND #4 AT 48" OC VERTICALLY. PROVIDE A BOND BEAM WITH 2-#4 AT TOP OF WALL.
18. ALL OPENINGS EXCEEDING 32 INCHES IN WIDTH IN STUD FRAMED WALLS SHALL HAVE 20 GA. DOUBLE STUDS AT JAMBS OF OPENINGS.
19. BRACE INTERIOR PARTITION HEADS PER 6/A9.11 & 7/A9.11

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SHEET TITLE:
ROOM FINISH AND INTERIOR PARTITIONS SCHEDULES

DATE: 3/12/2024

REV:

SHEET NO.:
A6.02

DOOR AND FRAME SCHEDULE

DOOR NO.	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR TYPE	DOOR MATL	DOOR FINISH	DOOR GLASS TYPE	FRAME TYPE	FRAME MATL	FRAME FINISH	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS SILL	HDWE SET	FIRE RATING	CARD READER	SIGN TYPE	NOTES
129A	3'–0"	7'–0"	D2	WD	STAIN	G1	F2	HM	PAINT	X/A9.0X	X/A9.0X	X/A9.0X	X	NONE	YES/NO	–	X
129B	3'–0"	7'–0"	D2	WD	STAIN	G1	F2	HM	PAINT	X/A9.0X	X/A9.0X	X/A9.0X	X	NONE	–	–	X
142A	3'–0"	7'–0"	D5	ALUM	CLR. ANOD.	G1	F6	ALUM	CLR. ANOD.	X/A9.0X	X/A9.0X	X/A9.0X	X	NONE	–	–	X
143A	3'–0"	7'–0"	D5	ALUM	CLR. ANOD.	G1	F4	ALUM	CLR. ANOD.	X/A9.0X	X/A9.0X	X/A9.0X	X	NONE	–	–	X
144A	3'–0"	7'–0"	D5	ALUM	CLR. ANOD.	G1	F3	ALUM	CLR. ANOD.	X/A9.0X	X/A9.0X	X/A9.0X	X	NONE	–	–	X
144AA	3'–0"	7'–0"	D5	ALUM	CLR. ANOD.	G1	F5	ALUM	CLR. ANOD.	X/A9.0X	X/A9.0X	X/A9.0X	X	NONE	–	–	X
147A	3'–0"	7'–0"	D2	WD	STAIN	G1	F2	HM	PAINT	X/A9.0X	X/A9.0X	X/A9.0X	X	NONE	–	–	X
147B	3'–0"	7'–0"	D2	WD	STAIN	G1	F2	HM	PAINT	X/A9.0X	X/A9.0X	X/A9.0X	X	NONE	–	–	X
148AA	3'–0"	7'–0"	D5	WD	STAIN	G1	F2	HM	PAINT	X/A9.0X	X/A9.0X	X/A9.0X	X	NONE	–	–	X
148BA	3'–0"	7'–0"	D5	WD	STAIN	G1	F2	HM	PAINT	X/A9.0X	X/A9.0X	X/A9.0X	X	NONE	–	–	X
149A	3'–0"	7'–0"	D5	WD	STAIN	G1	F2	HM	PAINT	X/A9.0X	X/A9.0X	X/A9.0X	X	NONE	–	–	X
149AA	3'–0"	7'–0"	D4	WD	STAIN	G1	F1	HM	PAINT	X/A9.0X	X/A9.0X	X/A9.0X	X	NONE	–	–	X

GLASS TYPES: (SEE SPECS FOR ADDITIONAL INFO)

G1 1/4" CLEAR TEMPERED UNINSULATED

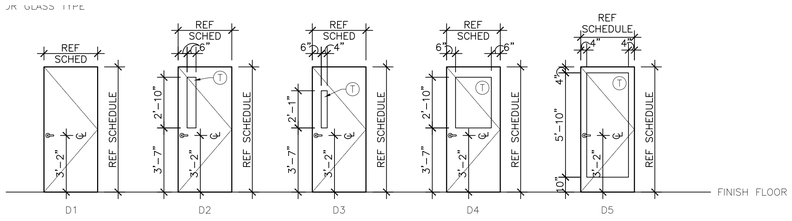
(T) TEMPERED

DOOR SCHEDULE NOTES:

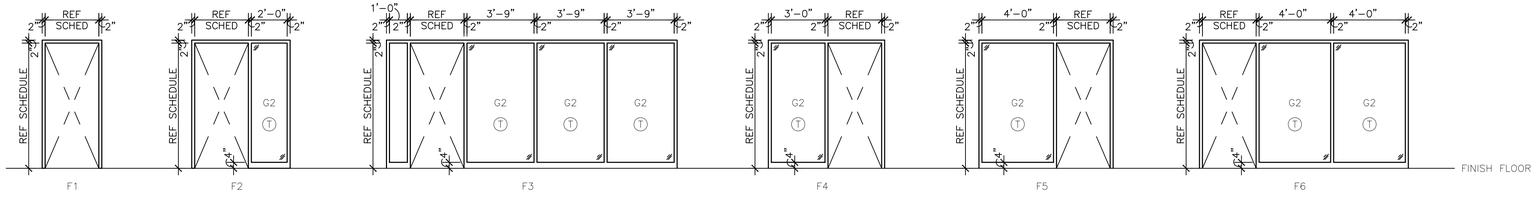
1. XXXX

DOOR & FRAME GENERAL NOTES:

1. ALL DOORS ARE 1–3/4 INCH THICK UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL VERIFY HOLLOW METAL FRAME THROAT THICKNESS REQUIREMENT AGAINST WALL TYPE SCHEDULE AND DETAILS FOR ALL DOORS.
3. WHERE A FIRE RATING IS INDICATED ON THE DOOR SCHEDULE, HARDWARE AND DOOR ASSEMBLY COMPONENTS SHALL MEET THE REQUIREMENTS OF THAT RATING. DOORS AND FRAMES MUST BEAR AN APPROPRIATE LABEL. REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS FOR ACHIEVING RATED INSTALLATION.
4. REFER TO PROJECT MANUAL FOR HARDWARE SCHEDULE.
5. ALL GLAZING IS TYPE G1 UNLESS NOTED OTHERWISE. SEE GLAZING LEGEND AND SPECIFICATIONS FOR GLASS TYPES.
6. INSTALL DOOR GLASS USING WET–GLAZING METHOD.
7. UNDERCUT DOORS AS REQUIRED BY FINAL FLOOR FINISH; ½" MAXIMUM UNLESS INDICATED OTHERWISE.
8. GROUT ALL NEW HOLLOW METAL DOOR FRAMES IN MASONRY WALL CONSTRUCTION.
9. PROVIDE SEALANT BETWEEN HOLLOW METAL FRAME PERIMETERS AND SURROUNDING WALL CONSTRUCTION UNLESS OTHERWISE INDICATED.
10. PROVIDE SEALANT BETWEEN INTERIOR AND EXTERIOR STOREFRONT FRAME PERIMETERS AND SURROUNDING WALL CONSTRUCTION UNLESS OTHERWISE INDICATED.
11. PROVIDE INTERIOR SIGNAGE ADJACENT TO DOOR, AS SCHEDULED AND/OR DETAILED ON SHEET A6.01.
12. THE MAXIMUM HEIGHT OF DOOR THRESHOLDS SHALL BE ½" ABOVE FLOOR AND/OR LANDING ON BOTH SIDES OF DOOR.
13. THE MAXIMUM DOOR OPENING EFFORT SHALL BE AS FOLLOWS:
    5.0 LBS AT INTERIOR DOORS
    8.5 LBS AT EXTERIOR DOORS
    15.0 LBS AT FIRE RATED DOORS
14. AT CORNER CONDITIONS, OUTER EDGE OF DOOR JAMB TO BE 4" FROM FACE OF ADJACENT INTERSECTING WALL, UNLESS OTHERWISE NOTED.
15. ALL HOLLOW METAL FRAMES ARE TO BE FULLY WELDED AND FACTORY PRIMED. NO KNOCK–DOWN FRAMES ALLOWED UNLESS SPECIFICALLY NOTED ON DRAWINGS.
16. EXISTING DOORS THAT ARE NOT PROVIDED A TAG LABEL ON THE FLOOR PLANS SHALL BE ASSUMED TO BE EXISTING TO REMAIN; CONTRACTOR SHALL PROTECT EXISTING DOORS & FRAMES TO REMAIN FROM DAMAGE DURING WORK.



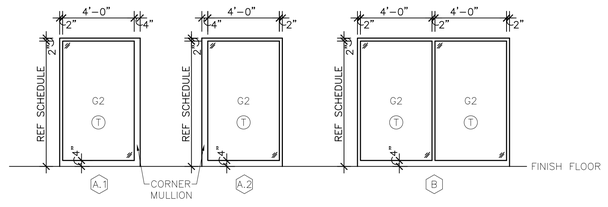
1 A6.03 DOOR TYPES
SCALE: 1/4" = 1'-0"



2 A6.03 DOOR FRAME TYPES
SCALE: 1/4" = 1'-0"

GLASS TYPES:
(SEE SPECS FOR ADDITIONAL INFO)

G1 ¼" CLEAR FLOAT GLASS
G2 ¼" CLEAR, TEMPERED GLASS
G3 ¼" WIRED, RATED GLASS
G4 ¼" WIRED, RATED, SAFETY GLASS
G5 ¼" CLEAR, RATED GLASS
G6 ¼" CLEAR, RATED, SAFETY GLASS
G7 1" INSULATED CLASS
G8 1" INSULATED CLASS
(T) TEMPERED
(L) LAMINATED
(F) FIELD APPLIED SAFETY FILM



3 A6.03 WINDOW TYPES
SCALE: 1/4" = 1'-0"

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DOOR AND WINDOW SCHEDULES

DATE: 3/12/2024
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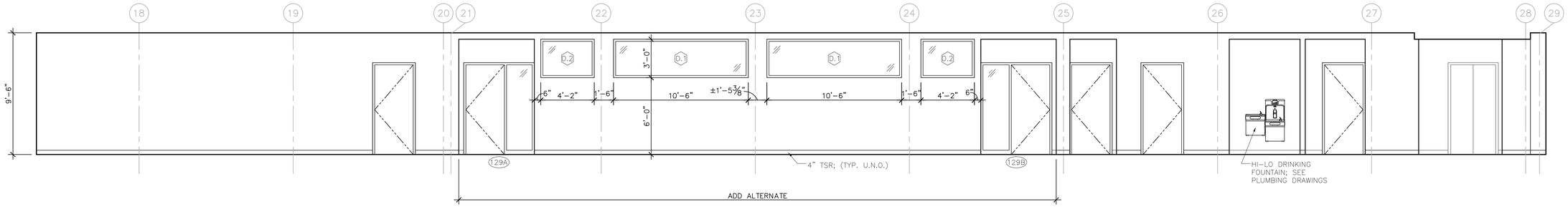
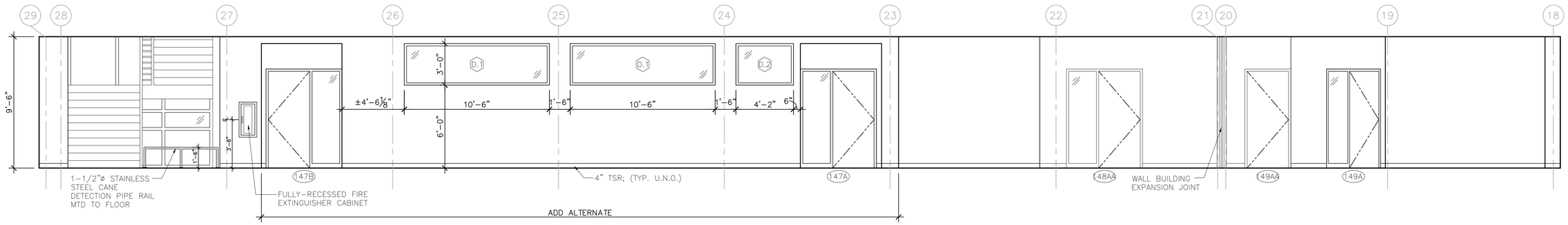
A6.03



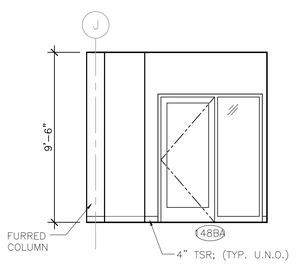
1 A7.00 CORRIDOR 116 NORTH ELEVATION

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



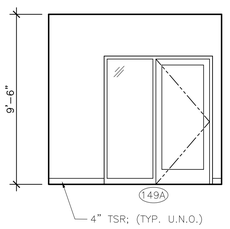
2 A7.00 CORRIDOR 116 SOUTH ELEVATION

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



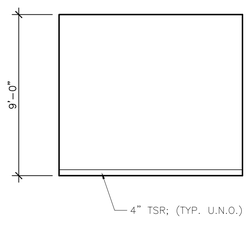
3 A7.00 TUTORING ENTRY 148 EAST ELEVATION

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



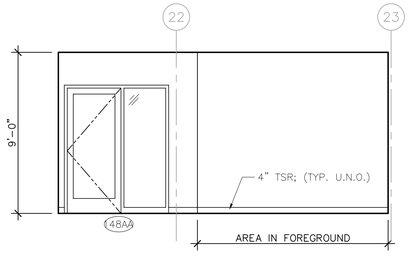
4 A7.00 TUTORING ENTRY 148 SOUTHWEST ELEVATION

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



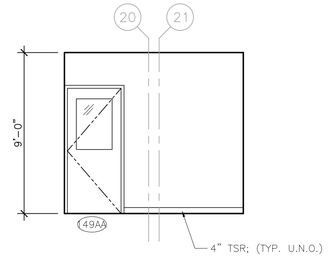
5 A7.00 TUTORING LAB 1 - 148B EAST ELEVATION

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



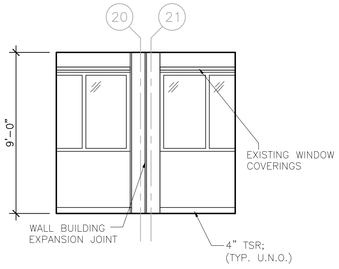
6 A7.00 TUTORING LAB 2 - 148A NORTH ELEVATION

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



7 A7.00 OFFICE - 149A NORTH ELEVATION

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



8 A7.00 OFFICE - 149A SOUTH ELEVATION

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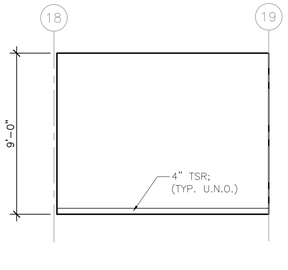
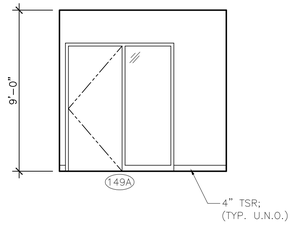


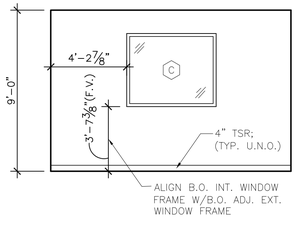
9 A7.00 TUTORING LAB 3 - 149 NORTH ELEVATION

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



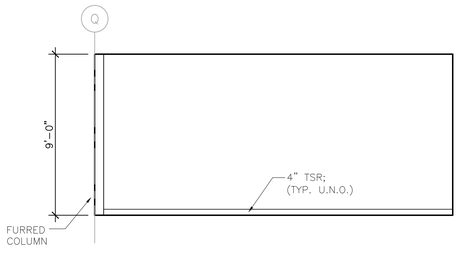
10 A7.00 TUTORING LAB 3 - 149 NORTHEAST ELEVATION

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



11 A7.00 TUTORING LAB 3 - 149 EAST ELEVATION

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



12 A7.00 TUTORING LAB 3 - 149 WEST ELEVATION

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

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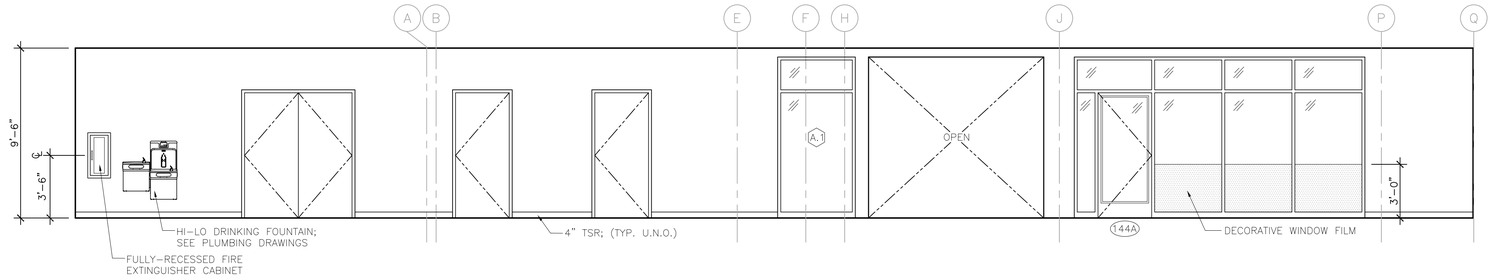
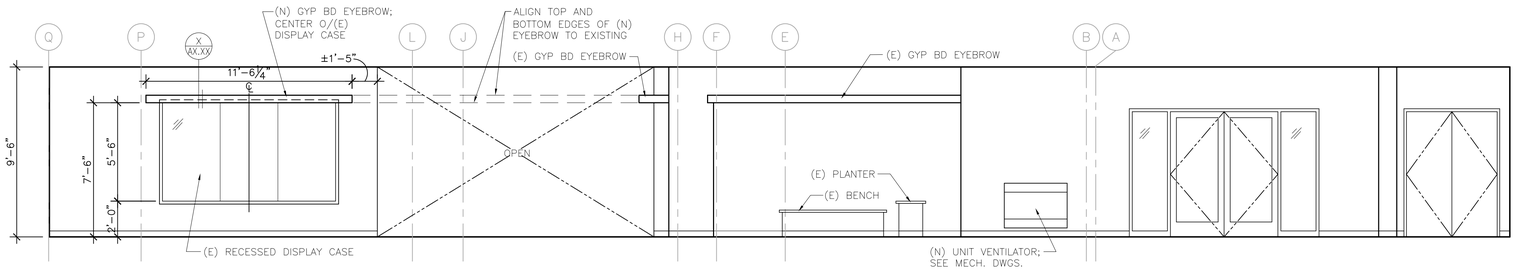


1 A7.01 CORRIDOR 117 EAST ELEVATION

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



2 A7.01 CORRIDOR 117 WEST ELEVATION

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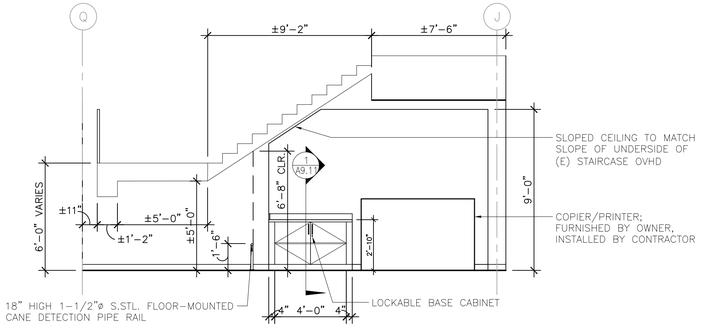
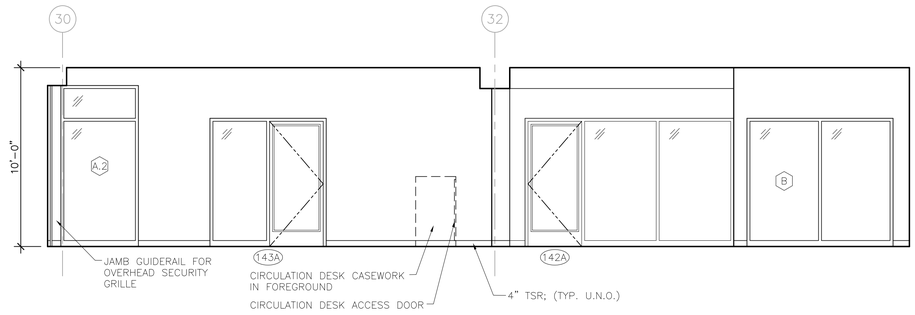


3 A7.01 COPY / PRINT 147A WEST ELEVATION

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



4 A7.01 LIBRARY NORTH ELEVATION

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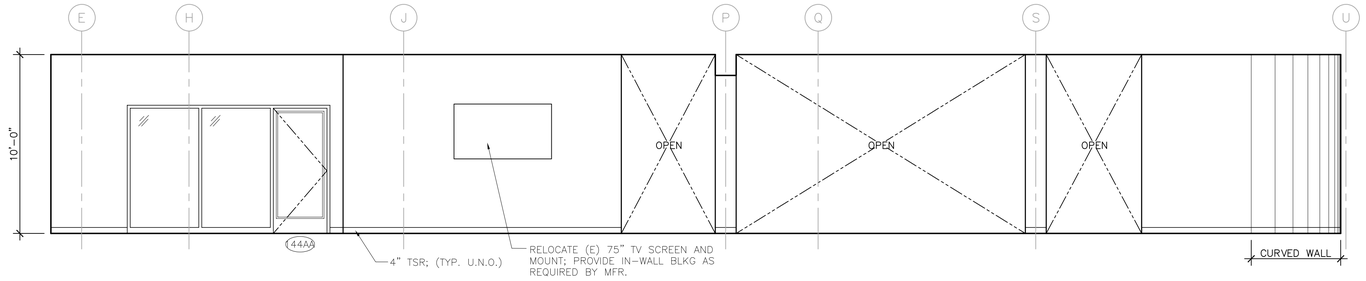

5 A7.01 LIBRARY 144 EAST ELEVATION

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

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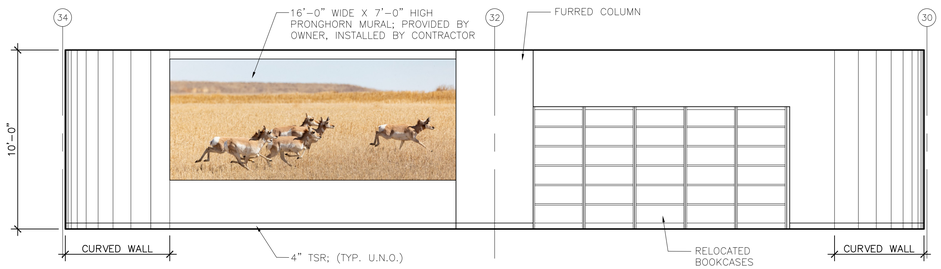

1 A7.02 LIBRARY 144 SOUTH ELEVATION

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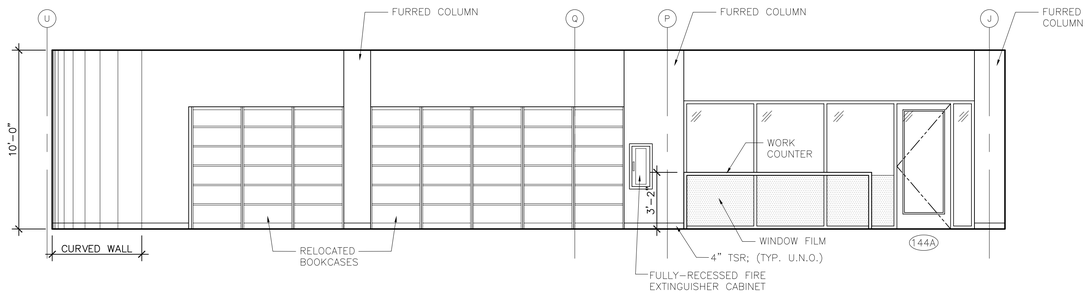

2 A7.02 LIBRARY 144 WEST ELEVATION

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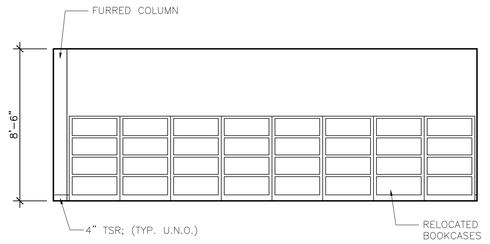

3 A7.02 CONF 142 NORTH ELEVATION

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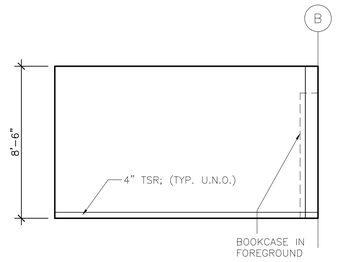

4 A7.02 CONF 142 WEST ELEVATION

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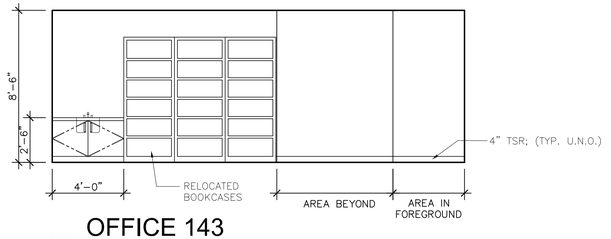

5 A7.02 OFFICE 143 NORTH ELEVATION

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

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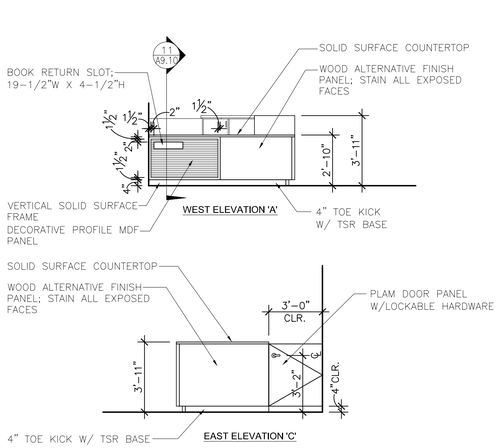
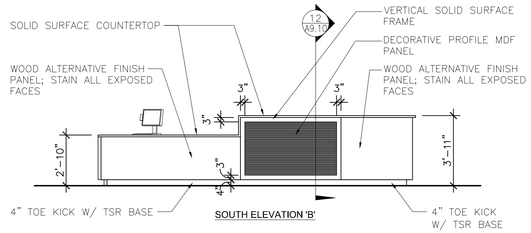
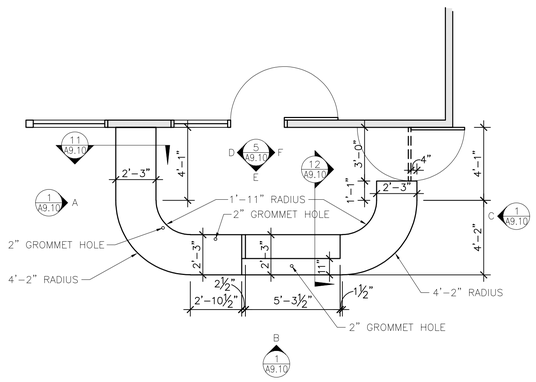
A7.02

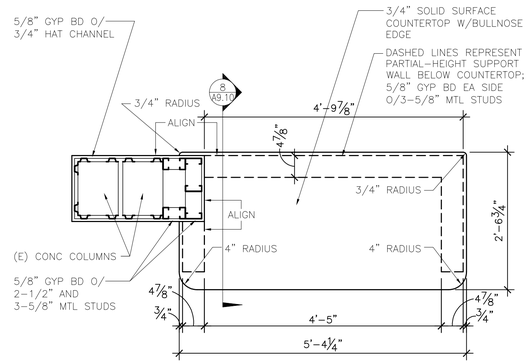




1 A9.10 CIRCULATION DESK OUTER INTERIOR ELEVATIONS
SCALE: 1/4" = 1'-0"

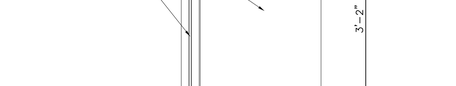


3 A9.10 CIRCULATION DESK ENLARGED PLAN
SCALE: 1/4" = 1'-0"



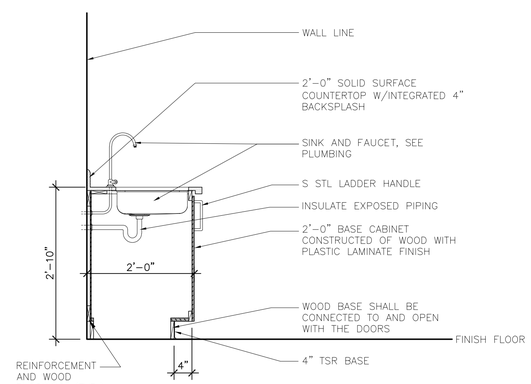
4 A9.10 TUTORING LAB COUNTERTOP
SCALE: 3/4" = 1'-0"

5 A9.10 CIRCULATION DESK INNER INTERIOR ELEVATIONS
SCALE: 1/4" = 1'-0"

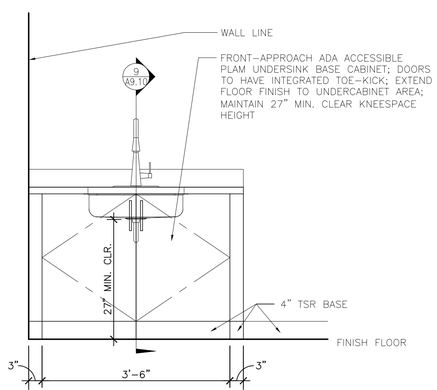


7 A9.10 LIBRARY WORK COUNTER
SCALE: 3/4" = 1'-0"

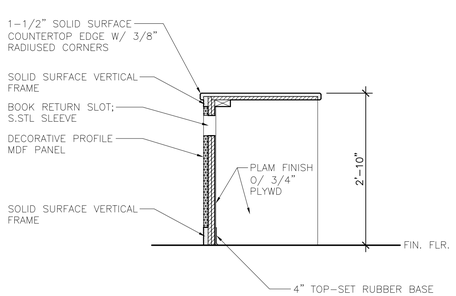
8 A9.10 COUNTERTOP SECTION
SCALE: 3/4" = 1'-0"



9 A9.10 WORK SINK CASEWORK SECTION
SCALE: 3/4" = 1'-0"



10 A9.10 WORK SINK CASEWORK ELEVATION
SCALE: 3/4" = 1'-0"



11 A9.10 CIRCULATION DESK SECTION
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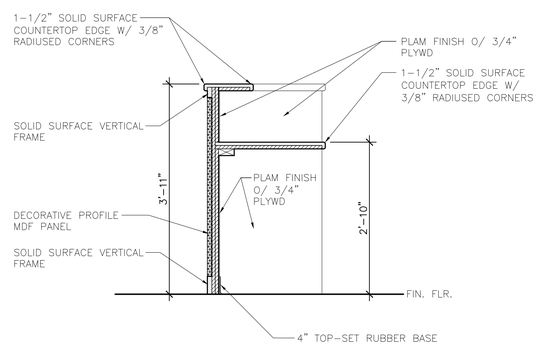

12 A9.10 CIRCULATION DESK SECTION
SCALE: 3/4" = 1'-0"

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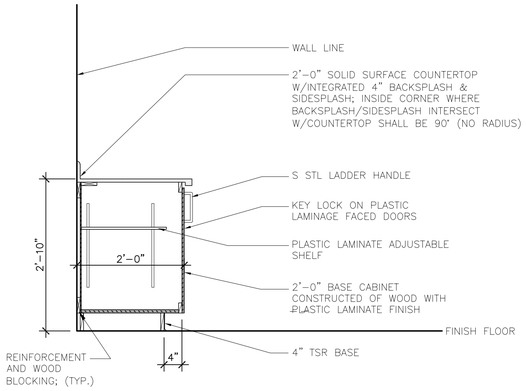
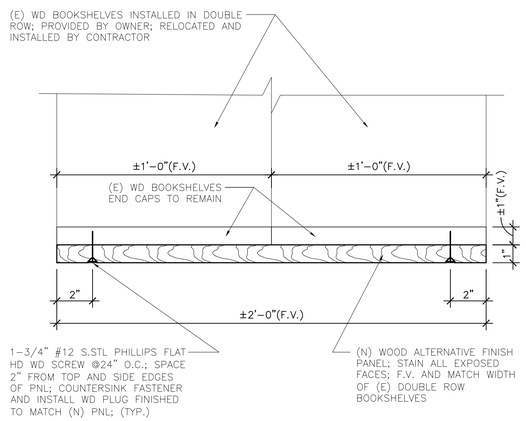
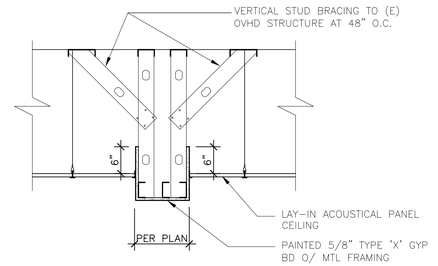


1 A9.11 COPY/PRINT CASEWORK DETAIL
SCALE: 3/4" = 1'-0"



2 A9.11 BOOKSHELF END PANEL
SCALE: 3" = 1'-0"



3 A9.11 INTERIOR SOFFIT DETAIL
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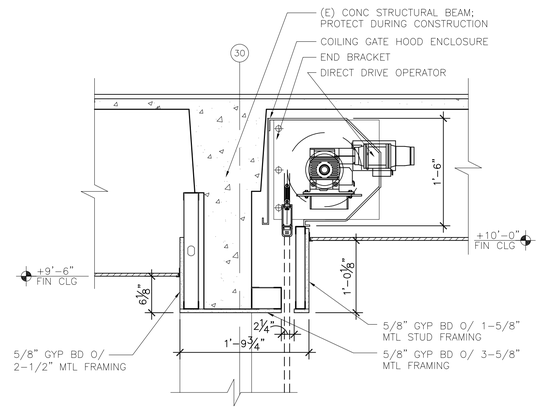
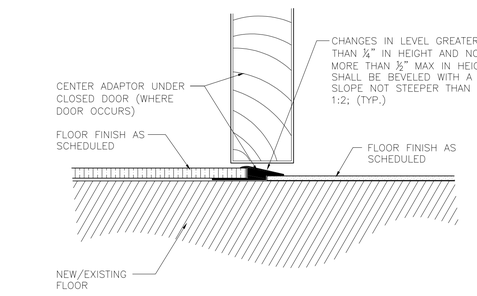
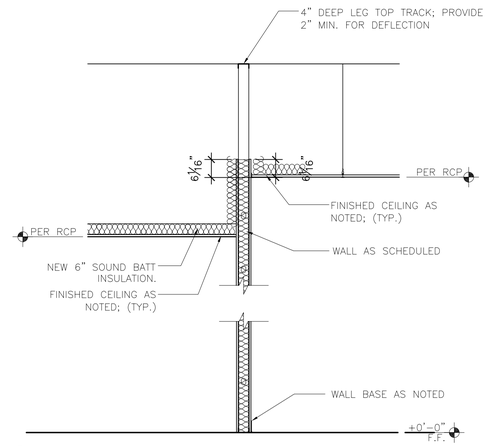


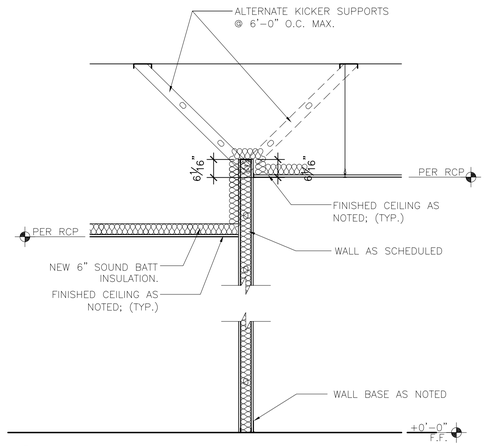
4 A9.11 SECURITY GRILLE SECTION
SCALE: 1/4" = 1'-0"



5 A9.11 TYP. INT. FLOORING TRANSITION
SCALE: 6" = 1'-0"



6 A9.11 PARTITION TYPE "W" HEAD BRACING
SCALE: 1/2" = 1'-0"



7 A9.11 TYP. PARTITION HEAD BRACING
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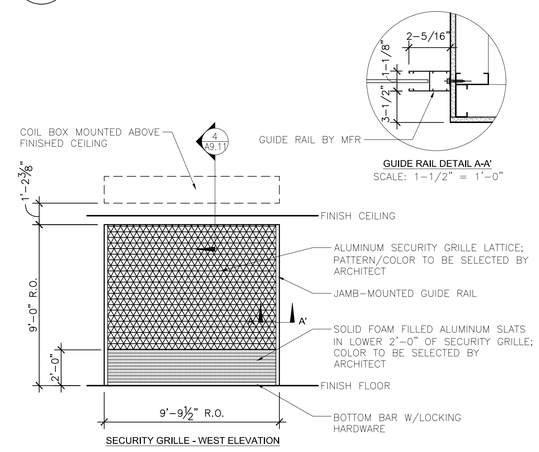
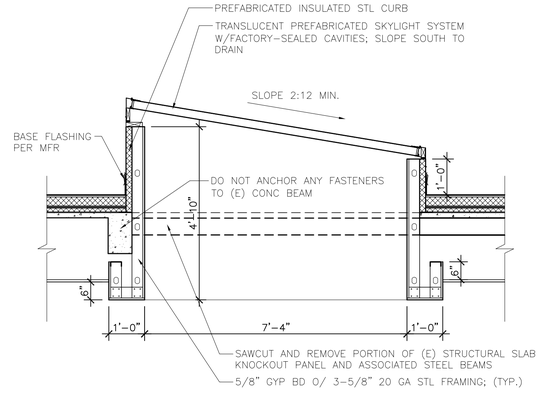


8 A9.11 SECURITY GRILLE ELEVATION
SCALE: 1/4" = 1'-0"



12 A9.11 SKYLIGHT - ADD ALTERNATE
SCALE: 1/2" = 1'-0"

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GENERAL NOTES:

DESIGN CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE 2021 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), AS ADOPTED AND AMENDED BY THE AUTHORITY HAVING JURISDICTION.

2. DESIGN MINIMUM LOADING CRITERIA:
   FLOOR LOADS:

   OCCUPANCY OR USE: — LIVE LOADS: — CONCENTRATED LOAD:
   LOBBIES, FIRST FLOOR CORRIDORS, STAIRS & EXITS, ... 100 p.s.f. — 2,000 lbs

   ROOF LOAD:
   ROOF LIVE LOAD .... 20 p.s.f.

   SNOW LOADS:
   GROUND SNOW LOAD, P_g .... 30 p.s.f.
   FLAT ROOF SNOW LOAD, P_f (W/O) DRIFTING) .... 30 p.s.f.

   ROOF SNOW LOAD DATA:
   EXPOSURE FACTOR, C_e 1.0
   IMPORTANCE FACTOR, I_S 1.1
   THERMAL FACTOR, C_t 1.0

   SEISMIC LOADS
   RISK CATEGORY III
   IMPORTANCE FACTOR, I_e 1.25

   MAPPED SPECTRAL RESPONSE ACCELERATIONS (USGS MAPS):
   S_S 0.106
   S_1 .... 0.041
   SITE CLASS C
   DESIGN SPECTRAL RESPONSE ACCELERATIONS:
   S_{DS} 0.092
   S_{D1} 0.041
   SEISMIC DESIGN CATEGORY .... A

   BASIC SEISMIC FORCE-RESISTING SYSTEM(S): LIGHT FRAMED (COLD FORMED STEEL) SHEAR WALLS WITH PANELS OF ALL OTHER MATERIALS.

   DESIGN BASE SHEAR .... 0.13 KIPS
   SEISMIC RESPONSE COEFFICIENT, C_S 0.033
   RESPONSE MODIFICATION FACTOR, R 2

   ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE

   WIND LOADS:
   BASIC WIND SPEED (3 SECOND GUST), V_{ULT} .... 115 m.p.h.
   NOMINAL DESIGN WIND SPEED, V_{ASD} .... 90 m.p.h.
   WIND EXPOSURE C
   INTERNAL PRESSURE COEFFICIENT, GC_{pi} .... ±0.18

COMPONENTS AND CLADDING WIND PRESSURE (p.s.f.)				
TYPE	WIND ZONE	LOAD CASE	EFFECTIVE WIND AREA	
			LESS THAN 10 FT^2	GREATER THAN 100 FT^2 (ROOFS), 500 FT^2 (WALLS)
ROOF	1	UPLIFT	−37.9	−29.6
	2	UPLIFT	−50.0	−39.3
	3	UPLIFT	−68.1	−46.8
	1 2 3	POSITIVE	16.0	16.0
WALL	4	OUTWARD	−25.8	−22.2
	5	OUTWARD	−31.9	−24.7
	4 5	INWARD	23.8	20.2

WIND ZONE DEFINITIONS:
ZONE 1: ROOF AREAS MORE THAN 10 FEET FROM EDGES AND CORNERS.
ZONE 2: ROOF AREAS WITHIN 10 FEET OF ROOF EDGES.
ZONE 3: ROOF AREAS WITHIN 10 FEET FROM WALL CORNERS.
ZONE 4: WALL AREAS MORE THAN 10 FEET FROM WALL CORNERS.
ZONE 5: WALL AREAS WITHIN 10 FEET OF WALL CORNERS.

NOTES:
1. DESIGN WIND PRESSURE INDICATED SHALL BE USED IN THE DESIGN OF ALL COMPONENTS AND CLADDING ELEMENTS.
2. PRESSURES ARE UNFACTORED ULTIMATE PRESSURES AS DETERMINED BY ASCE7–16 AND DO NOT INCLUDE GRAVITY LOADS.

FLOOD LOADS:

PROJECT IS NOT IN FLOOD HAZARD ZONE

3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THE LOCATION OF MECHANICAL OPENINGS, FLOOR DRAINS, INSERTS, DEPRESSIONS, BURIED CABLES, AND UTILITIES, ETC. WITH ARCHITECTURAL, CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS.
4. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS, NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES. WRITTEN DIMENSIONS TAKE PRECIDENCE OVER SCALED DIMENSIONS.

LIGHTGAUGE STEEL:

1. LIGHTGAUGE STRUCTURAL FRAMING SHALL CONFORM TO ASTM A1011, A1008 AND/OR A653.
2. ALL LIGHTGAUGE STEEL STUDS/JOISTS SHALL HAVE A 1–5/8" FLANGE WIDTH WITH 1/2" RETURN UNLESS NOTED OTHERWISE.
3. LIGHTGAUGE BUILT-UP STRUCTURAL FRAMING COMPONENTS SHALL BE CONNECTED BY WELDING AT 24" O.C. ON EACH SIDE UNLESS NOTED OTHERWISE.
4. PROVIDE BRIDGING, BLOCKING AND ACCESSORIES AS RECOMMENDED BY LIGHTGAUGE STEEL MANUFACTURER.
5. ALL WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED FOR THE WELD TYPES AND POSITIONS REQUIRED ACCORDING TO THE REQUIREMENTS OF THE AWS D1.1 AND D1.3 WELDING CODES, CURRENT EDITIONS. WELDING SHALL BE INSPECTED BY THE TESTING AND INSPECTION AGENCY TO INSURE CONFORMANCE WITH THE DETAILS AND STANDARD PRACTICE.

STRUCTURAL STEEL:

1. ALL STRUCTURAL STEEL DESIGN, MATERIALS, FABRICATION AND ERECTION SHALL CONFORM TO THE AISC 360–16 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, THE INTERNATIONAL BUILDING CODE, 2021 EDITION, AND THE PROJECT SPECIFICATIONS.
2. MATERIAL SPECIFICATIONS:

   WIDE FLANGE (W) STRUCTURAL STEEL SHAPES .... ASTM A992
   CHANNELS (C AND MC), ANGLES (L), BARS AND PLATES .... ASTM A36
   WELDED AND SEAMLESS STEEL PIPE .... ASTM A53, TYPE E OR S, GRADE B
   HOLLOW STRUCTURAL STEEL (HSS) .... ASTM A1085, GRADE A
   STRUCTURAL TEES CUT FROM WIDE FLANGE SHAPES (WT) .... ASTM A36
   ANCHOR BOLTS .... ASTM 1554, GRADE 36
   HIGH STRENGTH BOLTS .... ASTM F3125, GR. A325
   HEADED ANCHOR STUDS .... ASTM A108
3. SHOP CONNECTIONS SHALL BE WELDED WITH E70XX ELECTRODES AND GROUND SMOOTH WHERE EXPOSED FIELD WELDS SHALL BE MADE WITH E70XX ELECTRODES. ALL WELDING SHALL BE DONE BY WELDERS CERTIFIED FOR THE WELD TYPES AND POSITIONS REQUIRED ACCORDING TO AWS D1.1 WELDING CODE, CURRENT EDITION. WIELDING SHALL BE INSPECTED BY THE TESTING AND INSPECTION AGENCY TO INSURE CONFORMANCE WITH THE DETAILS AND STANDARD PRACTICE.
4. PROVIDE ANGLE FRAME AROUND ALL SIDES OF ALL OPENINGS IN ROOF DECK. ANGLES SHALL BE L4x4x1/4 WITH FULL WELDED INTERSECTIONS AND WELDED TO SUPPORT EACH END.
5. ALL STRUCTURAL STEEL SHALL BE PAINTED WITH ONE SHOP COAT OF RED OXIDE PRIMER.

STATEMENT OF SPECIAL INSPECTIONS:

- THE FOLLOWING IS THE MINIMUM LEVEL SPECIAL INSPECTIONS THAT ARE REQUIRED TO ENSURE THAT THE CONSTRUCTION OF THIS PROJECT CONFORMS TO BUILDING CODE REQUIREMENTS.
- SPECIAL INSPECTORS SHALL PROVIDE DOCUMENTATION OF INSPECTIONS TO THE CONTRACTING OFFICER IN A TIMELY MANNER AND NOTIFY THE CONTRACTOR IMMEDIATELY OF ANY DISCREPANCIES THAT ARE NOTED IN THE CONSTRUCTION.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE SPECIAL INSPECTORS WHEN WORK REQUIRING SPECIAL INSPECTION IS BEING PERFORMED SO THAT PROPER DOCUMENTATION OF CONSTRUCTION IS MADE.
- THE FOLLOWING MATERIALS AND WORK SHALL BE SPECIALLY INSPECTED BY AN APPROVED TESTING AGENCY.

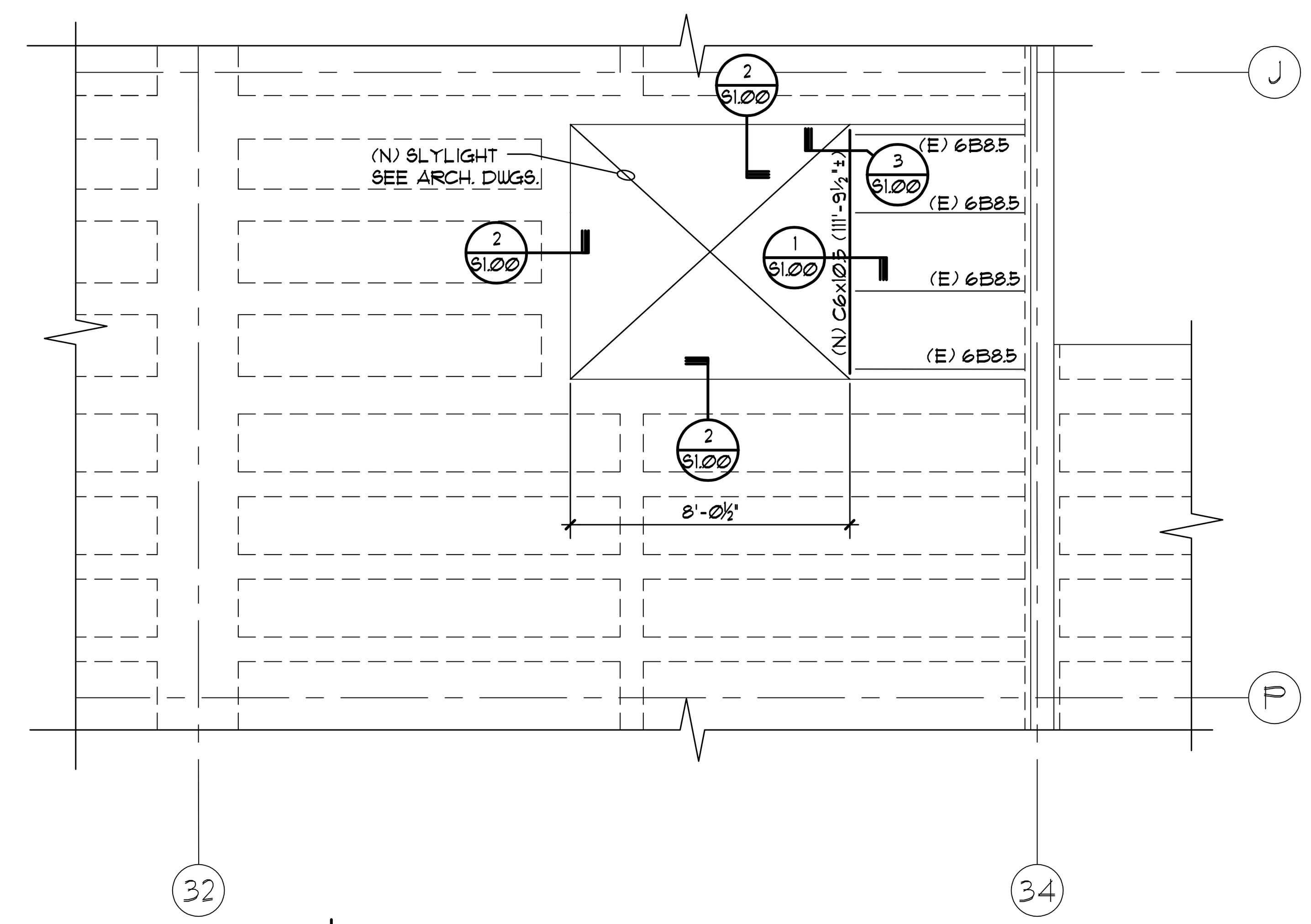
STEEL CONSTRUCTION:

1. STRUCTURAL STEEL – SPECIAL INSPECTIONS AND NON-DESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360.
2. COLD-FORMED STEEL DECK – SPECIAL INSPECTION AND QUALIFICATION OF WELDING SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF SDI QA/QC

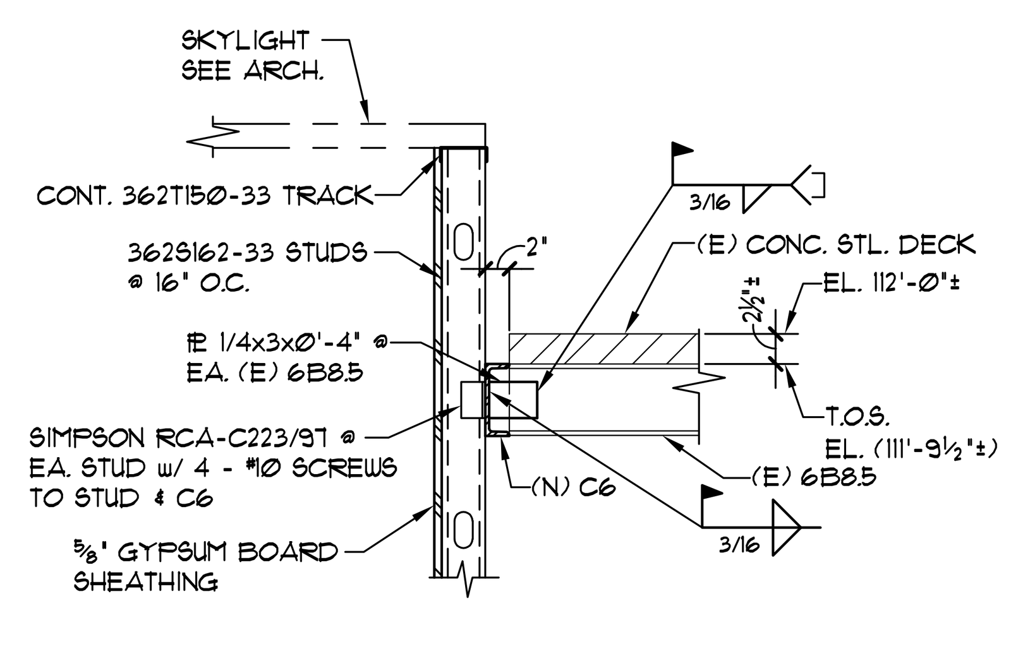
CONCRETE CONSTRUCTION: SPECIAL INSPECTIONS AND TESTS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 1705.3 OF THE 2021 I.B.C. AND TABLE 1705.3 (SEE BELOW)

TABLE 1705.3 REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

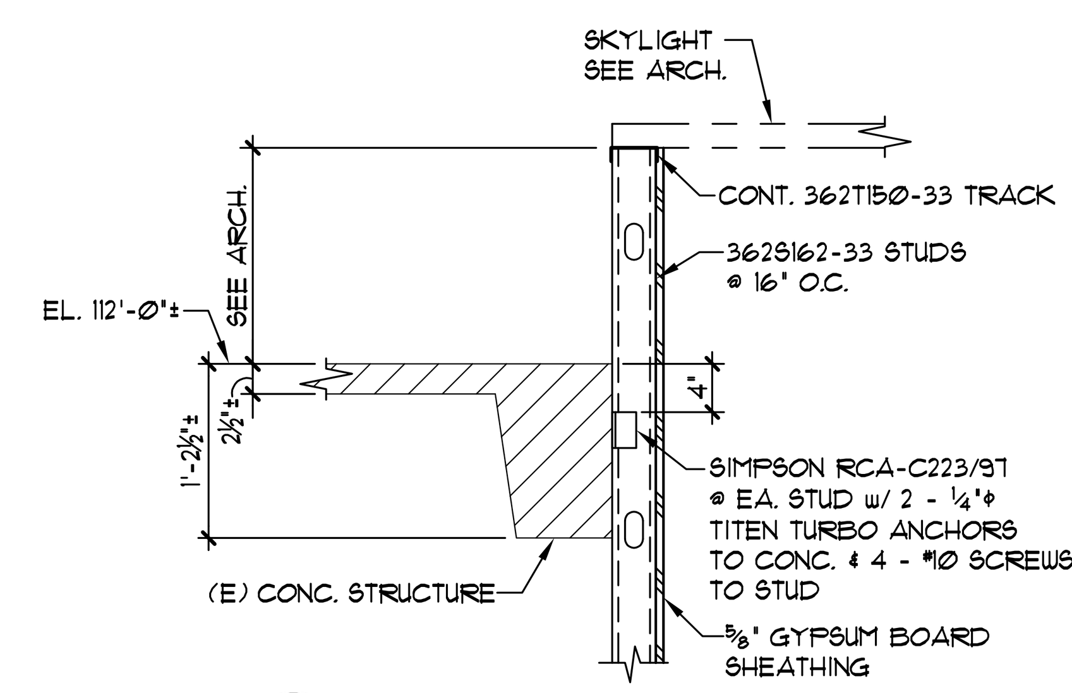
TYPE	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
1. INSPECT REINFOREMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	–	X	ACI 318: CH. 20, 25.2, 25.3, 26.6.1–26.6.3	–
2. REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706 b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16, AND c. INSPECT ALL OTHER WELDS	– X	X X	AWS D1.4 ACI 318: 26.6.4	–
3. INSPECT ANCHORS CAST IN CONCRETE	–	X	ACI 318: 17.8.2	–
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a	X –	– X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	–
5. VERIFYING USE OF REQUIRED DESIGN MIX.	–	X	ACI 318: CH. 19, 26.4.3, 26.4.4	IBC 1904.1, 1904.2
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	–	ASTM C 31 ASTM C 172 ACI 318: 26.5, 26.12	–
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	–	ACI 318: 26.5	–
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	–	X	ACI 318: 26.5.3 – 26.5.5	–
9. INSPECT PRESTRESSED CONCRETE FOR: a. APPLICATION OF PRESTRESSING FORCES; AND b. GROUPING OF BONDED PRESTRESSING TENDONS.	X X	– –	ACI 318: 26.10	–
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	–	X	ACI 318: 26.9	–
11. INSPECTION OF PRECAST CONCRETE DIAPHRAM CONNECTIONS REINFORCEMENT AT JOINTS CLASSIFIED AS MODERATE OR HI DEFORMABILITY ELEMENTS (MDE OR HDE) IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATAGORY C,D,E OR F, INSPECT SUCH CONNECTIONS AND REINFORCEMENT IN FIELD FOR: a. INSTALLATION OF EMBEDDED PARTS b. COMPLETION OF THE CONTINUITY OF REINFORCEMENT ACROSS JOINTS c. COMPLETION OF CONNECTIONS IN THE FIELD	X X X	– – –	ACI 318: 26.13.1.3 ACI 550.5	–
12. INSPECT OF INSTALLATION TOLERANCES OF PRECAST CONCRETE DIAPHRAM CONNECTIONS FOR COMPLIANCE WITH ACI 550.5	–	x	ACI 318: 26.13.1.3	–
13. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	–	X	ACI 318: 26.11.2	–
14. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	–	X	ACI 318: 26.11.1.2(b)	–



SKYLIGHT FRAMING PLAN - ADD ALTERNATE
SCALE: 1/8" = 1'-0"



1 S1.00 ADD ALTERNATE
SCALE: 3/4" = 1'-0"



2 S1.00 ADD ALTERNATE
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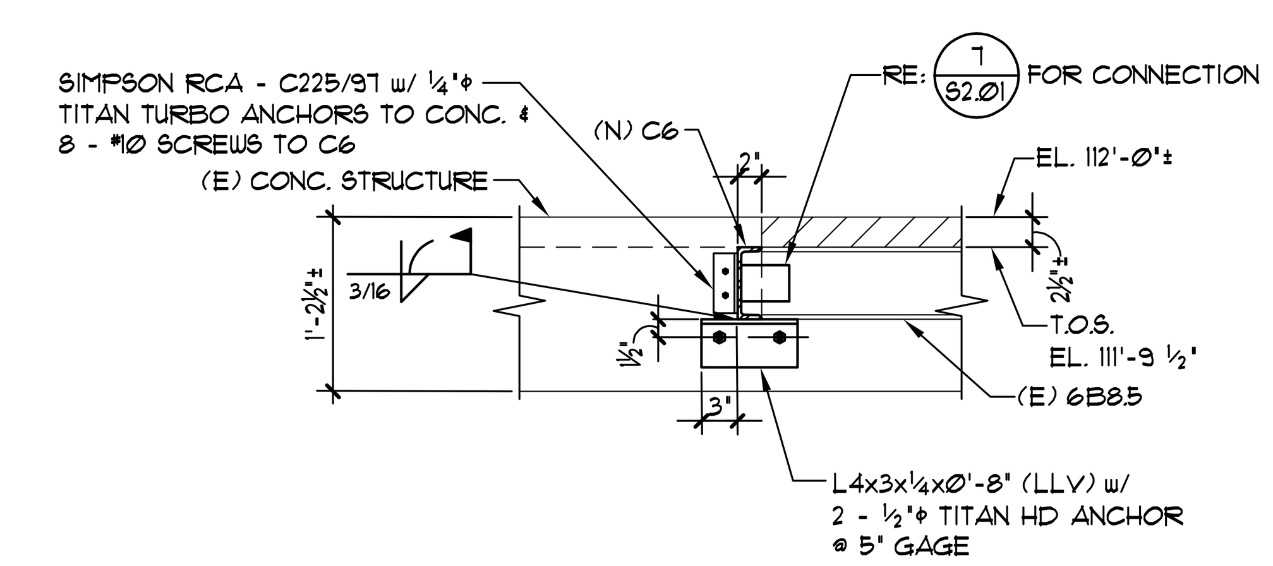

3 S1.00 ADD ALTERNATE
SCALE: 3/4" = 1'-0"

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GENERAL NOTES, SKYLIGHT FRAMING PLAN AND DETAILS

DATE: 3/12/2024
REV:

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S1.00

SYMBOLS LEGEND

NOTE: NOT ALL SYMBOLS ARE USED IN CONSTRUCTION DOCUMENTS

HYDRONIC

- 3-WAY CONTROL VALVE
- ANGLE GATE VALVE
- ANGLE GLOBE VALVE
- BALANCING/SHUTOFF VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CALIBRATED BALANCING VALVE
- CHECK VALVE
- CONTROL VALVE
- EXPANSION VALVE
- GAS COCK
- GATE VALVE
- GLOBE VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE (WATER)
- PRESSURE REGULATOR (GAS)
- QUICK OPEN VALVE
- SAFETY RELIEF VALVE
- SOLENOID VALVE
- VACUUM RELIEF VALVE
- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- (F) FLOW SENSOR/SWITCH
- (P) PRESSURE SENSOR/SWITCH
- (T) TEMPERATURE SENSOR/SWITCH
- PRESSURE GAUGE
- THERMOMETER
- PIPE SLOPE ARROW
- PIPE ANCHOR
- PIPE GUIDES
- PIPE EXPANSION JOINT
- FLEXIBLE PIPE CONNECTOR
- PIPE UNION
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- WYE STRAINER
- WYE STRAINER W/DRAIN VALVE
- DIRECTION OF FLOW
- STEAM BUCKET TRAP
- STEAM F&T TRAP
- BACKFLOW PREVENTER
- PRESSURE/TEMPERATURE PLUG
- PUMP
- (M) METER
- PIPE TURNING UP
- PIPE TURNING DOWN
- TEE OFF TOP
- TEE OFF BOTTOM
- PIPE TEE
- PIPE CAP
- PLAN 90 DEGREE ELBOW
- PLAN 45 DEGREE ELBOW

PIPING SYSTEM (SOLID LINE)

BD	BOILER BLOW DOWN
CD	CONDENSATE DRAIN
CHS	CHILLED WATER SUPPLY
CWS	CONDENSER WATER SUPPLY
HCWS	DUAL TEMPERATURE SUPPLY
HPS	HIGH PRESSURE STEAM
HRS	HEAT RECOVERY SUPPLY
HTWS	HIGH TEMP WATER SUPPLY
HWS	HOT WATER SUPPLY
LPS	LOW PRESSURE STEAM
LS	LOOP SUPPLY
MPS	MEDIUM PRESSURE STEAM
PD	PUMP DISCHARGE
RHG	REFRIGERANT HOT GAS
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION

PIPING SYSTEM (DASHED LINE)

CHR	CHILLED WATER RETURN
CWR	CONDENSER WATER RETURN
HCWR	DUAL TEMPERATURE RETURN
HPR	HIGH PRESSURE STEAM CONDENSATE RETURN
HRR	HEAT RECOVERY RETURN
HTWR	HIGH TEMP WATER RETURN
HWR	HOT WATER RETURN
LPR	LOW PRESSURE STEAM CONDENSATE RETURN
LR	LOOP RETURN
MPR	MEDIUM PRESSURE STEAM CONDENSATE RETURN

VENTILATION

- THERMOSTAT
- (T) AHU-1 / GUARD — EQUIPMENT TO BE CONTROLLED / LOCKABLE GUARD WHERE INDICATED
- (S) TEMP, HUMID, CO, CO2 — SENSOR
- GUARD — ELEMENT TO BE MONITORED / LOCKABLE GUARD WHERE INDICATED
- (H) HUMIDISTAT
- $ WALL SWITCH
- CFM TRANSFER AIR
- 12x8 RECTANGULAR DUCT
- 12"ø ROUND DUCT
- 12x8Φ FLAT OVAL DUCT
- SUPPLY DIFFUSER/REGISTER
- RETURN REGISTER/GRILLE
- EXHAUST REGISTER/GRILLE
- DIFFUSER AIRFLOW PATTERN IF OTHER THAN 4-WAY BLOW
- FLEXIBLE BRANCH RUNOUT TO SUPPLY DIFFUSER, 36" MAX LENGTH
- CEILING RETURN REGISTER WITH LINED DUCT FOR SOUND ATTENUATION OPEN TO CEILING PLENUM
- FLEXIBLE DUCT CONNECTION TO EQUIPMENT OR BETWEEN DUCTS
- VOLUME DAMPER
- MOTORIZED DAMPER
- FIRE DAMPER
- SMOKE DAMPER
- COMBINATION FIRE/SMOKE DAMPER
- SUPPLY AIR DUCT TOWARDS
- SUPPLY AIR DUCT AWAY
- RETURN/OUTDOOR AIR DUCT TOWARDS
- RETURN/OUTDOOR AIR DUCT AWAY
- EXHAUST AIR DUCT TOWARDS
- EXHAUST AIR DUCT AWAY

GENERAL

- AHU / 1 — MECHANICAL EQUIPMENT TAG: EQUIPMENT TYPE / EQUIPMENT MARK
- S1 / 12x12 / 250 — AIR TERMINAL DESIGNATION: THROAT SIZE / AIRFLOW IN CFM
- ## / # — DETAIL OR SECTION MARK: DETAIL # / SHEET #
- (#) KEYNOTE
- POINT OF NEW CONNECTION
- CAP EXISTING PIPE OR DUCT
- NEW — BOLD TEXT INDICATES PROPOSED ITEM
- *EXISTING* — ITALIC TEXT INDICATES EXISTING ITEM
- LINE STYLE INDICATES DEMOLISHED ITEM

ABBREVIATIONS

AC	ABOVE CEILING/AIR CONDITIONER	GRH	GAS RADIANT HEATER
ACC	AIR COOLED CONDENSER	GS	GLYCOL SUPPLY
AF	AIR FILTER	GUH	GAS UNIT HEATER
AFF	ABOVE FINISHED FLOOR	HU	HUMIDIFIER
AHU	AIR HANDLING UNIT	HC	HEATING COIL
AL	ALUMINUM	HCWR	DUAL TEMPERATURE RETURN
AMS	AIR MEASURING STATION	HCWS	DUAL TEMPERATURE SUPPLY
AS	AIR SEPARATOR	HP	HEAT PUMP
AV	AUTOMATIC AIR VENT	HPR	HIGH PRESSURE STEAM RETURN
B	BOILER	HPS	HIGH PRESSURE STEAM SUPPLY
BP	BOILER PUMP	HRC	HEAT RECOVERY COIL
BAS	BUILDING AUTOMATION SYSTEM	HRV	HEAT RECOVERY VENTILATOR (SENSIBLE)
BDD	BACKDRAFT DAMPER	HS	HUMIDITY SENSOR
BFC	BELOW FINISHED CEILING	HWC	HEATING WATER COIL
BFP	BACKFLOW PREVENTION DEVICE	HWP	HEATING WATER PUMP
BJ	BETWEEN JOISTS	HWR	HEATING WATER RETURN
BOD	BOTTOM OF DUCT	HWS	HEATING WATER SUPPLY
BOP	BOTTOM OF PIPE	HX	HEAT EXCHANGER
BTUH	BRITISH THERMAL UNITS PER HOUR	ISP	INTERNAL STATIC PRESSURE
C	COMPRESSOR	KH	KITCHEN HOOD - COMMERCIAL
CA	COMPRESSED AIR	L	LOUVER
CBS	COUNTER BALANCED SHUTTER	LPR	LOW PRESSURE STEAM RETURN
CC	COOLING COIL	LPS	LOW PRESSURE STEAM SUPPLY
CF	CEILING / CIRCULATING FAN	MA	MIXED AIR
CFM	CUBIC FEET PER MINUTE	MAU	MAKEUP AIR UNIT
CH	CHILLER	MBH	THOUSANDS OF BTU PER HOUR
CHP	CHILLED WATER PUMP	MC	MECHANICAL CONTRACTOR
CHR	CHILLED WATER RETURN	MD	MOTORIZED DAMPER
CHS	CHILLED WATER SUPPLY	MS	MOTORIZED SHUTTER
CNV	CONVECTOR	NTS	NOT TO SCALE
COND	CONDENSATE	OA	OUTDOOR AIR
CP	CONDENSATE PUMP	OBD	OPPOSED BLADE DAMPER
CRAC	COMPUTER ROOM AIR CONDITIONER	P	PUMP
CT	COOLING TOWER	PC	PLUMBING CONTRACTOR
CU	CONDENSING UNIT	PBD	PARALLEL BLADE DAMPER
CUH	CABINET UNIT HEATER	PDH	POOL ROOM DEHUMIDIFIER
CV	CONTROL VALVE	PRV	PRESSURE RELIEF VALVE
CW	DOMESTIC COLD WATER	PS	PRESSURE SWITCH
CWP	CONDENSER WATER PUMP	PSI	POUNDS PER SQUARE INCH
CWR	CONDENSER WATER RETURN	PTAC	PACKAGED TERMINAL AIR CONDITIONER
CWS	CONDENSER WATER SUPPLY	RA	RETURN AIR
DAC	DOOR AIR CURTAIN	RF	RETURN AIR FAN
DC	DRY COOLER	RG	RETURN GRILLE (LESS DAMPER)
DH	DEHUMIDIFIER	RH	ROOF HOOD
DN	DOWN	RHC	REHEAT COIL
DOAS	DEDICATED OUTDOOR AIR SYSTEM	RLFA	RELIEF AIR
DP	DIFFERENTIAL PRESSURE	RP	RADIANT PANEL
DS	DUCT SILENCER	RPZ	REDUCED PRESSURE BFP
DSU	DUCTLESS SPLIT UNIT	RR	RETURN REGISTER (WITH DAMPER)
DX	DX COOLING COIL	RTU	ROOFTOP AIR HANDLING UNIT
EA	EXHAUST AIR	SA	SUPPLY AIR
EBB	ELECTRIC BASEBOARD HEATER	SAS	SELF-ACTING SHUTTER
EC	ELECTRICAL CONTRACTOR	SD	SUPPLY DIFFUSER/SMOKE DAMPER
EF	EXHAUST FAN	SF	SUPPLY FAN / SQUARE FOOT
EG	EXHAUST GRILLE (LESS DAMPER)	SFD	SMOKE/FIRE DAMPER
EHC	ELECTRIC HEATING COIL	SG	SUPPLY GRILLE
EL	ELEVATION	SR	SUPPLY REGISTER
ER	EXHAUST REGISTER	TCAC	TEMP. CONTROL AIR COMPRESSOR
ERP	ELECTRIC RADIANT PANEL	TCAD	TEMP. CONTROL AIR DRYER
ERV	ENERGY RECOVERY VENTILATOR	TDV	TRIPLE DUTY VALVE
ESP	EXTERNAL STATIC PRESSURE	TFA	TO FLOOR ABOVE
ET	EXPANSION TANK	TFB	TO FLOOR BELOW
EUH	ELECTRIC UNIT HEATER	TJ	THROUGH JOISTS
FA	FRESH AIR	TOD	TOP OF DUCT
FCU	FAN COIL UNIT	TOP	TOP OF PIPE
FD	FIRE DAMPER	TSP	TOTAL STATIC PRESSURE
FDC	FLEXIBLE DUCT CONNECTION	UC	UNIT COOLER
FFA	FROM FLOOR ABOVE	UFD	UNDERFLOOR DUCT
FFB	FROM FLOOR BELOW	UFT	UNDERFLOOR FAN TERMINAL
FPC	FLEXIBLE PIPE CONNECTION	UH	UNIT HEATER
FPT	FAN POWERED AIR TERMINAL	UV	UNIT VENTILATOR
FT	FINNED TUBE RADIATION	VAV	VARIABLE AIR VOLUME TERMINAL
GC	GENERAL CONTRACTOR	VD	VOLUME DAMPER
GF	GAS FURNACE	VFD	VARIABLE FREQUENCY DRIVE
GIH	GRAVITY INTAKE HOOD	VRP	VERTICAL RADIANT PANEL
GPM	GALLONS PER MINUTE	WAC	WINDOW / WALL AIR CONDITIONER
GR	GLYCOL RETURN		

GENERAL NOTES

COMMON REQUIREMENTS

A. THIS FACILITY HAS BEEN DESIGNATED A "SMOKE-FREE" ENVIRONMENT. NO MECHANICAL VENTILATION PROVISIONS HAVE BEEN MADE TO ACCOMMODATE TOBACCO USAGE BY THE BUILDING OCCUPANTS

B. ALL MECHANICAL SYSTEMS SHALL BE INSTALLED TO THE SATISFACTION OF THE LOCAL CODE AUTHORITIES HAVING JURISDICTION

C. EVERY ATTEMPT HAS BEEN MADE TO COORDINATE THE ROUTING OF DUCTWORK WITHIN THE CLEAR STRUCTURAL SPACE. REFRAIN FROM PREFABRICATING DUCTWORK DESIGNATED FOR INSTALLATION UNTIL EXISTING STRUCTURAL CONDITIONS CAN BE FIELD VERIFIED.

MECHANICAL EQUIPMENT INSTALLATION

A. INSTALL EQUIPMENT TO ALLOW MAXIMUM POSSIBLE HEADROOM UNLESS SPECIFIC MOUNTING HEIGHTS ARE INDICATED

B. INSTALL EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS IN EXPOSED INTERIOR SPACES, UNLESS OTHERWISE INDICATED

C. INSTALL HVAC EQUIPMENT TO FACILITATE SERVICE, MAINTENANCE, AND REPAIR OR REPLACEMENT OF COMPONENTS. CONNECT EQUIPMENT FOR EASE OF REMOVAL, WITH MINIMUM INTERFERENCE TO OTHER INSTALLATIONS

D. ALL MECHANICAL EQUIPMENT WITH THE EXCEPTION OF AIR HANDLING UNITS, SUPPORTED FROM FLOOR STRUCTURE SHALL BE MOUNTED ON 4" THICK CONCRETE HOUSEKEEPING PADS UNLESS NOTED OTHERWISE. AIR-HANDLING UNITS SHALL BE MOUNTED ON 6" THICK CONCRETE HOUSEKEEPING PADS TO ACCOMMODATE PROPER TRAPPING OF THE CONDENSATE DRAIN

E. AIR FILTERS SHALL BE REPLACED IN ALL AIR HANDLING EQUIPMENT EMPLOYING SUCH PRIOR TO FINAL COMPLETION AND OWNER OCCUPANCY

F. THE INSTALLING CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ALL MECHANICAL EQUIPMENT PUT INTO OPERATION PRIOR TO THE INSTALLATION OF A WORKING CONTROL SYSTEM, TESTING, AND BALANCING, AND SUBSTANTIAL COMPLETION. ALL RETURN AND EXHAUST DUCT OPENINGS SHALL BE COVERED WITH ROLL TYPE FILTER MEDIA DURING SUCH TEMPORARY OPERATION. OPERATION OF THE MECHANICAL EQUIPMENT PRIOR TO FINAL COMPLETION SHALL NOT IMPACT THE EQUIPMENT WARRANTY. MINIMUM 1-YEAR FROM SUBSTANTIAL COMPLETION UNLESS SPECIFIED OTHERWISE

G. PROVIDE FLEXIBLE DUCT CONNECTION BETWEEN MOTOR DRIVEN MECHANICAL UNITS AND SHEET METAL SUPPLY, OUTDOOR AIR, EXHAUST, AND/OR RETURN AIR DUCTWORK CONNECTIONS

H. PROVIDE FLEXIBLE PIPE CONNECTION BETWEEN MOTOR DRIVEN MECHANICAL UNITS AND CONNECTING PIPING

I. BASIS OF DESIGN MECHANICAL EQUIPMENT IS AS SCHEDULED ON THE DRAWINGS. INSTALLING CONTRACTOR ASSUMES RESPONSIBILITY FOR COORDINATING PHYSICAL SPACE REQUIREMENTS OF EQUIVALENT CAPACITY MECHANICAL EQUIPMENT DEEMED ACCEPTABLE BY THE ENGINEER

J. MECHANICAL EQUIPMENT FACTORY FINISH DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION PRIOR TO FINAL ACCEPTANCE

DUCTWORK REQUIREMENTS

A. DUCTWORK IS SHOWN IN SCHEMATIC FORM AND ALL DIMENSIONS ON SHEET REFER TO INSIDE DUCT DIMENSION. ALL REQUIRED DUCT RISERS AND DROPS TO ALLOW GENERAL ROUTING DEPICTED MAY NOT BE SHOWN. PROVIDE OFFSETS AS REQUIRED TO MEET SPACE REQUIREMENTS AND TO AVOID INTERFERENCE WITH OTHER TRADES AND FIELD CONDITIONS. EXACT LOCATION OF THE DUCTWORK MAY VARY ACCORDING TO THE COORDINATED SPACE REQUIREMENTS. EACH TRADE SHALL BE TOTALLY RESPONSIBLE FOR COORDINATION WITH OTHER TRADES. NOTIFY ENGINEER OF CONDITIONS REPRESENTING SIGNIFICANT CHANGES TO THE DESIGNED ROUTING

B. COMPLY WITH NFPA 90A, "INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS," UNLESS OTHERWISE INDICATED

C. COMPLY WITH NFPA 90B, "INSTALLATION OF WARM AIR HEATING AND AIR CONDITIONING SYSTEMS," UNLESS OTHERWISE INDICATED

D. FABRICATE RECTANGULAR DUCTS, ELBOWS, TRANSITIONS, OFFSETS, BRANCH CONNECTIONS, AND OTHER CONSTRUCTION WITH GALVANIZED, SHEET STEEL, ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS--METAL AND FLEXIBLE." COMPLY WITH REQUIREMENTS FOR METAL THICKNESS, REINFORCING TYPES AND INTERVALS, TIE-ROD APPLICATIONS, AND JOINT TYPES AND INTERVALS

E. COORDINATE SIZE, QUANTITY, AND LOCATION OF ALL OPENINGS REQUIRED FOR DUCT AND PIPE PENETRATIONS THROUGH WALLS, FLOORS, AND ROOFS, WITH CONTRACTOR RESPONSIBLE FOR ROUGH FRAMING. COORDINATE LOCATION OF AIR INTAKES WITH EXHAUST AND PLUMBING VENTS SO THAT INTAKES ARE A MINIMUM OF 10 FEET FROM EXHAUST OPENINGS OR PLUMBING VENTS

F. INSTALL DUCTS IN LONGEST LENGTH POSSIBLE AND FEWEST POSSIBLE JOINTS. INSTALL FABRICATED FITTINGS FOR CHANGES IN DIRECTIONS, CHANGES IN SIZE AND SHAPE, AND CONNECTIONS

G. INSTALL DUCTS, UNLESS OTHERWISE INDICATED, VERTICALLY AND HORIZONTALLY, PARALLEL AND PERPENDICULAR TO BUILDING LINES; AVOID DIAGONAL RUNS UNLESS SPECIFICALLY INDICATED ON DRAWINGS

H. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF CEILING MOUNTED DEVICES. COORDINATE MECHANICAL CEILING DEVICES SUCH AS DIFFUSERS AND REGISTERS WITH LIGHT FIXTURES, SPEAKERS, SPRINKLER HEADS, ETC.

I. ELECTRICAL EQUIPMENT SPACES: ROUTE DUCTWORK TO AVOID PASSING THROUGH TRANSFORMER VAULTS AND ELECTRICAL EQUIPMENT SPACES AND ENCLOSURES. AVOID ROUTING DUCTWORK DIRECTLY ABOVE ELECTRICAL EQUIPMENT UNLESS SPECIFICALLY INDICATED ON THE MECHANICAL DRAWINGS

J. NON-FIRE-RATED PARTITION PENETRATIONS: WHERE DUCTS PASS THROUGH INTERIOR PARTITIONS AND ARE EXPOSED TO VIEW IN MECHANICAL ROOMS, CONCEAL SPACE BETWEEN CONSTRUCTION OPENING AND DUCT OR DUCT INSULATION WITH SHEET METAL FLANGES OF SAME METAL THICKNESS AS DUCT. OVERLAP OPENING ON FOUR SIDES BY AT LEAST 1-1/2 INCHES UNLESS INDICATED OTHERWISE

K. FIRE-RATED PARTITION PENETRATIONS: WHERE DUCTS PASS THROUGH INTERIOR PARTITIONS, INSTALL APPROPRIATELY RATED FIRE DAMPER. FIRE DAMPER INSTALLATION MUST STRICTLY ADHERE TO MANUFACTURER'S WRITTEN INSTRUCTIONS

L. PROVIDE MANUAL VOLUME-CONTROL BALANCING DAMPER AT ALL BRANCH DUCTS AND AT ALL OTHER LOCATIONS REQUIRED FOR A COMPLETE AND BALANCEABLE AIR DISTRIBUTION SYSTEM

M. BALANCE ENTIRE AIR DISTRIBUTION SYSTEM TO AIRFLOW QUANTITIES INDICATED ON MECHANICAL DRAWINGS

N. FLEXIBLE DUCTWORK SHALL BE ALLOWED ONLY IN POSITIVE PRESSURE APPLICATIONS AT SUPPLY BRANCH RUNOUTS TO DIFFUSERS ABOVE ACCESSIBLE CEILINGS. FLEXIBLE DUCTWORK SHALL NOT EXCEED 36" IN LENGTH. 90 DEGREE TURNS SHALL ONLY BE ALLOWED IF RETAINING BANDS EQUAL TO THERMAFLEX "FLEX-FLOW" ARE EMPLOYED. UNDER NO CIRCUMSTANCES SHALL FLEXIBLE DUCTWORK BE ALLOWED IN NEGATIVE PRESSURE APPLICATIONS

PIPING SYSTEM REQUIREMENTS

A. DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF PIPING SYSTEMS. INDICATED LOCATIONS AND ARRANGEMENTS WERE USED TO SIZE PIPE AND CALCULATE FRICTION LOSS, EXPANSION, PUMP SIZING, AND OTHER DESIGN CONSIDERATIONS. INSTALL PIPING AS INDICATED UNLESS DEVIATIONS TO LAYOUT ARE APPROVED BY ENGINEER

B. DELIVER PIPES AND TUBES WITH FACTORY-APPLIED END CAPS. MAINTAIN END CAPS THROUGH SHIPPING, STORAGE, AND HANDLING TO PREVENT PIPE END DAMAGE AND TO PREVENT ENTRANCE OF DIRT, DEBRIS, AND MOISTURE

C. COORDINATE PIPE ROUTINGS, CHASES, AND OPENINGS IN BUILDING STRUCTURE WITH ALL TRADES DURING PROGRESS OF CONSTRUCTION. COORDINATE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SET SLEEVES IN POURED-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS AS THEY ARE CONSTRUCTED

D. INSTALL PIPING IN CONCEALED LOCATIONS, UNLESS OTHERWISE INDICATED AND EXCEPT IN EQUIPMENT ROOMS AND SERVICE AREAS. INSTALL PIPING INDICATED TO BE EXPOSED AND PIPING IN EQUIPMENT ROOMS AND SERVICE AREAS AT RIGHT ANGLES OR PARALLEL TO BUILDING WALLS. DIAGONAL RUNS ARE PROHIBITED UNLESS SPECIFICALLY INDICATED OTHERWISE

E. INSTALL PIPING ABOVE ACCESSIBLE CEILINGS TO ALLOW SUFFICIENT SPACE FOR CEILING PANEL REMOVAL

F. INSTALL PIPING TO PERMIT VALVE SERVICING

G. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS

H. INSTALL PIPING TO ALLOW APPLICATION OF INSULATION

I. INSTALL ESCUTCHEONS FOR PENETRATIONS OF FINISHED WALLS, CEILINGS, AND FLOORS

J. SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES.

K. PERMANENT SLEEVES ARE NOT REQUIRED FOR HOLES FORMED BY REMOVABLE PE SLEEVES

L. INSTALL SLEEVES FOR PIPES PASSING THROUGH CONCRETE AND MASONRY WALLS AND CONCRETE FLOOR AND ROOF SLABS

M. UNDERGROUND, EXTERIOR-WALL PIPE PENETRATIONS: INSTALL CAST-IRON "WALL PIPES" FOR SLEEVES. SEAL PIPE PENETRATIONS USING MECHANICAL SLEEVE SEALS. SELECT SLEEVE SIZE TO ALLOW FOR 1-INCH ANNULAR CLEAR SPACE BETWEEN PIPE AND SLEEVE FOR INSTALLING MECHANICAL SLEEVE SEALS

N. FIRE-BARRIER PENETRATIONS: MAINTAIN INDICATED FIRE RATING OF WALLS, PARTITIONS, CEILINGS, AND FLOORS AT PIPE PENETRATIONS. SEAL PIPE PENETRATIONS WITH FIRESTOP MATERIALS.

O. VERIFY FINAL EQUIPMENT LOCATIONS FOR ROUGHING-IN.

DEMOLITION

A. VERIFY EXACT SIZE AND LOCATION OF EXISTING UTILITIES PRIOR TO START OF DEMOLITION WORK

B. RELOCATE, REMOVE, AND ADJUST ALL MECHANICAL AND ELECTRICAL ITEMS AS REQUIRED TO ACCOMPLISH SCOPE OF NEW WORK

C. EXISTING MECHANICAL ITEMS ARE SHOWN IN SCHEMATIC FORM BASED UPON EXISTING CONSTRUCTION DOCUMENTS AND/OR FIELD INVESTIGATION

D. REMOVE EXISTING PIPING AND DUCTWORK BACK TO LAST ACTIVE SERVICE AND CAP

E. FIXTURES AND EQUIPMENT INDICATED TO BE REUSED OR SALVAGED SHALL REMAIN THE PROPERTY OF THE OWNER AND BE STORED IN A LOCATION AS DIRECTED BY OWNER'S REPRESENTATIVE

F. IN LOCATIONS WHERE EXISTING CONSTRUCTION IS REMOVED AND NO ADDITIONAL CONSTRUCTION IS INDICATED, PATCH EXISTING CONSTRUCTION TO MATCH ADJACENT SURFACES AND FINISHES

G. CONNECTIONS TO, AND SHUTDOWNS OF, EXISTING SYSTEMS SHALL BE COORDINATED WITH OWNER'S REPRESENTATIVE TO ALLOW MINIMUM INTERFERENCE WITH OWNER'S OPERATION AND DOWNTIME OF EXISTING UTILITIES. CONTRACTOR SHALL SUBMIT TO OWNER FOR REVIEW AND APPROVAL THE PROPOSED PHASING PLAN FOR CONNECTING NEW SERVICES TO EXISTING

DESIGN CONDITIONS

HVAC DESIGN LOAD CALCULATIONS ARE BASED ON THE FOLLOWING CLIMATE DATA:

CITY AND STATE: LAMAR, CO

ELEVATION 3,704 FEET

CLIMATE ZONE 4B

WINTER OUTDOOR AMBIENT DB: 0.6 °F

SUMMER OUTDOOR AMBIENT DB/WB: 100.6°F / 65.4°F

MECHANICAL SYSTEMS HAVE BEEN DESIGNED BASED UPON THE 2021 INTERNATIONAL MECHANICAL CODE, 2021 INTERNATIONAL ENERGY CONSERVATION CODE, NATIONAL FIRE PROTECTION (NFPA) STANDARDS, AND AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR-CONDITIONING ENGINEERS (ASHRAE) STANDARDS AND PRACTICES

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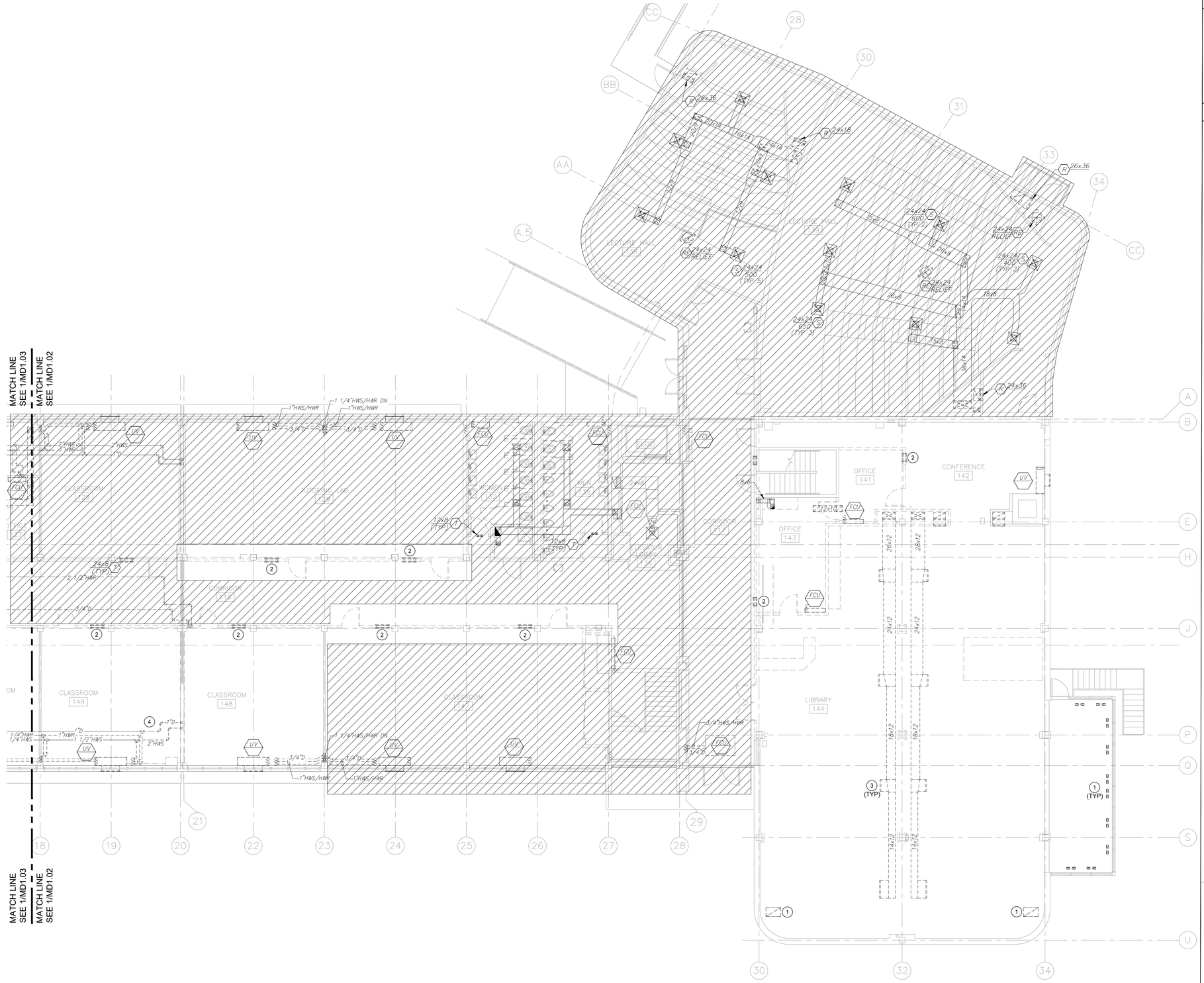
SHEET TITLE:
MECHANICAL GENERAL INFORMATION

DATE: 3/12/2024

REV:

SHEET NO.:
M0.21



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

0 4 8 16

NORTH

GENERAL NOTES

A. COORDINATE ALL DOWN TIME WITH OWNER A MINIMUM OF 24 HOURS IN ADVANCE.

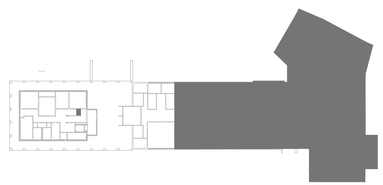
B. SEAL OFF CONSTRUCTION AREAS FROM EXISTING AIR HANDLING EQUIPMENT TO PREVENT CONSTRUCTION DUST AND DEBRIS FROM ENTERING EXISTING PLENUMS AND EQUIPMENT.

C. FIELD VERIFY EXACT EQUIPMENT INSTALLATION LOCATION.

D. REMOVE ALL UNUSED SUPPORT HANGERS, RODS, AND SUPPORTS. NO EQUIPMENT, PIPING, OR DUCTWORK, SHALL BE ABANDONED IN PLACE UNLESS OTHERWISE NOTED.

KEY NOTES (#)

1. DEMOLISH AIR DEVICES LOCATED IN THE FLOOR. PATCH ACCORDING TO ARCHITECT.
2. DEMOLISH TRANSFER AIR GRILLES LOCATED NEAR THE FLOOR LEVEL. PATCH ACCORDING TO ARCHITECT.
3. DEMOLISH AIR DEVICES.
4. DEMOLITION OF EXISTING HYDRONIC PIPING FOR THE SECOND FLOOR AND BASEMENT WILL FALL UNDER THE CAPITAL RENEWAL PROJECT.



KEY PLAN
SCALE: 1/64"=1'-0"

NORTH

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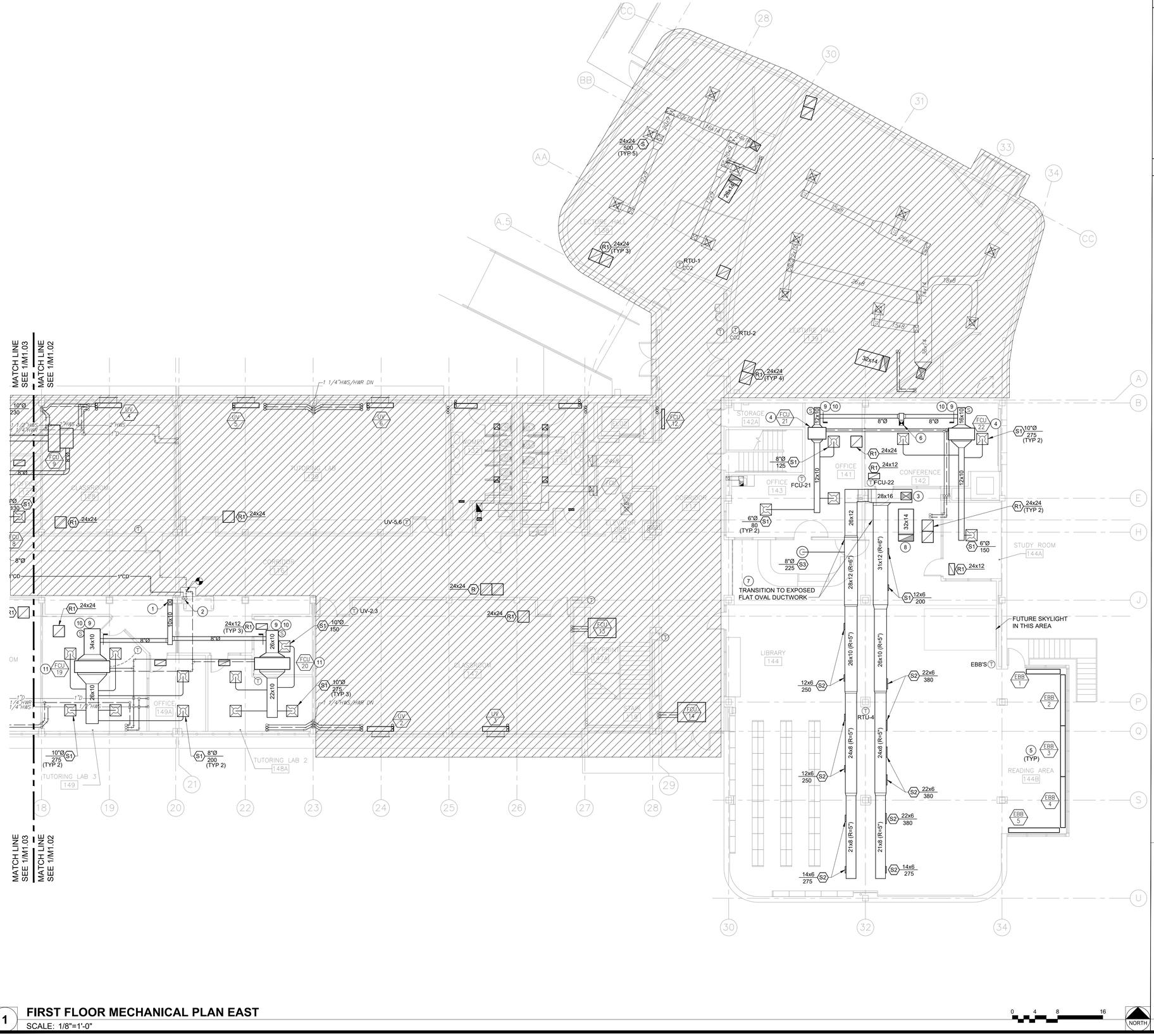
SHEET TITLE:
DEMOLITION MECHANICAL PLAN - EAST FIRST LEVEL

DATE: 3/12/2024

REV:

SHEET NO.:
MD1.20



GENERAL NOTES

A. ADA ACCESSIBLE THERMOSTATS SHALL BE INSTALLED PER ANSI 117.1 SECTION 308, THERMOSTAT MOUNTING HEIGHT SHALL BE 48" A.F.F. TO TOP OF THERMOSTAT. COORDINATE FINAL LOCATION WITH ADJACENT LIGHT SWITCHES.

B. MATERIALS EXPOSED WITHIN DUCTS OR PLENUMS (RETURN AIR PLENUM ABOVE CEILINGS) SHALL BE PLENUM RATED, NON-COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX NOT GREATER THAN 25 AND A SMOKE DEVELOPED INDEX NOT GREATER THAN 50 PER SECTION 602.2 OF THE 2021 INTERNATIONAL MECHANICAL CODE.

C. PROVIDE TEST AND BALANCE WORK FOR ALL MECHANICAL SYSTEMS UPON COMPLETION OF WORK. PROVIDE (1) COPY OF TEST AND BALANCE OF EACH TYPICAL UNIT TO MECHANICAL INSPECTOR AT TIME OF HEATING FINAL INSPECTION.

D. ALL DUCTWORK AND HYDRONIC PIPING IS SHOWN IN SCHEMATIC FORM. PROVIDE OFFSETS AS REQUIRED TO MEET SPACE REQUIREMENTS AND TO AVOID INTERFERENCE WITH OTHER TRADES AND FIELD CONDITIONS. EXACT LOCATION OF MECHANICAL WORK MAY VARY ACCORDING TO THE COORDINATED SPACE REQUIREMENTS. EACH TRADE SHALL BE RESPONSIBLE FOR COORDINATION WITH OTHER TRADES.

KEY NOTES (#)

1. 10x10 OUTSIDE AIR DUCT IN PLENUM TO ROOF FOR FCU'S.
2. EXISTING HYDRONIC AND NEW DRAIN PIPING IN FURRED OUT WALL.
3. TRANSITION DUCTWORK BETWEEN CONCRETE JOISTS UP TO RTU ON ROOF. INSTALLATION OF NEW RTU AND HYDRONIC PIPING FOR THIS SPACE WILL FALL UNDER THE CAPITAL RENEWAL PROJECT.
4. INSTALL FAN COIL UNIT CONCEALED ABOVE CEILING. ROUTE 3/4" CONDENSATE DRAIN ALONGSIDE HYDRONIC PIPING TO FLOOR DRAIN IN BASEMENT.
5. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR.
6. 10x10 OUTSIDE AIR CHASE IN PLENUM TO ROOF FOR FCU'S.
7. PROVIDE EXPOSED FLAT OVAL DUCTWORK WITH ECCENTRIC TRANSITIONS ON BOTTOM OF DUCT. TOP OF DUCT SHALL REMAIN FLAT AND TIGHT TO STRUCTURE.
8. PROVIDE MIN. 48" RETURN DUCT WITH BOOT FOR SOUND ATTENUATION AND TERMINATE WITH 1/4"x1/4" WIRE MESH.
9. OPEN RETURN AIR DUCT BOOT WITH ¼"x¼" WIRE MESH ON OPEN END, MINIMUM 48" LONG. PROVIDE BALANCING DAMPER ON OUTSIDE AIR DUCT TAP OF BOOT.
10. INSTALL DUCT SMOKE DETECTOR PRIOR TO OUTSIDE AIR BRANCH. PROVIDED BY DIV 23, POWERED BY DIV 26.
11. 3/4" CONDENSATE PIPING FROM EACH FAN COIL UNIT, ROUTED OVER AND CONNECTED TO EXISTING CONDENSATE DRAIN PIPING IN WALL.

1 **FIRST FLOOR MECHANICAL PLAN EAST**
SCALE: 1/8"=1'-0"

0 4 8 16

NORTH

KEY PLAN
SCALE: 1/64"=1'-0"

NORTH

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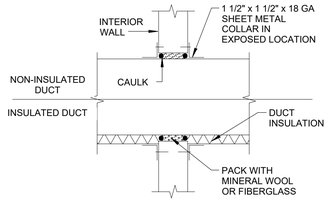
SHEET TITLE:
MECHANICAL PLAN - EAST FIRST LEVEL

DATE: 3/12/2024

REV:

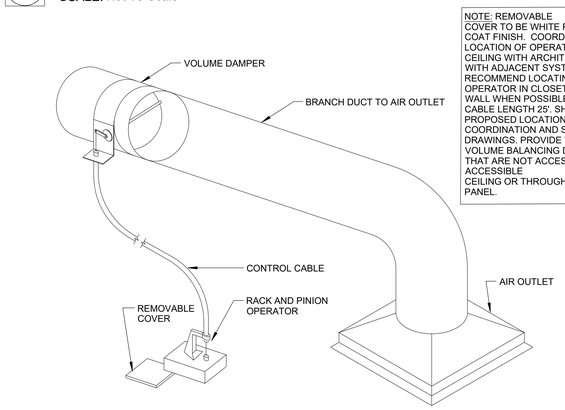
SHEET NO.:
M1.21

J:\2023\0230189.00 — Lamar CC Bowman Capital Renewal\04_Drawings\DWG\Mechanical_M_Ventilation_ Mechanical Lamar Bowman Capital Renewal — 0230189.00.dwg Mar 12, 2024 — 11:08am

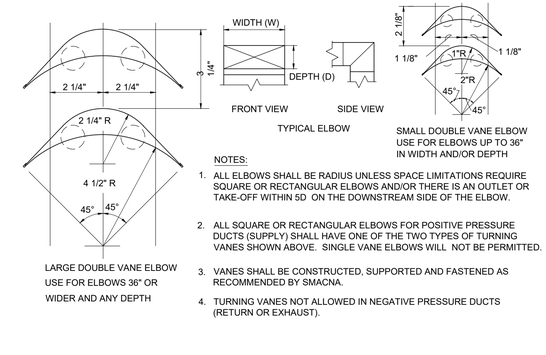


7 DUCT PENETRATION FOR NON-RATED WALLS

SCALE: Not To Scale



NOTE: REMOVABLE COVER TO BE WHITE POWDER COAT FINISH. COORDINATE EXACT LOCATION OF OPERATOR IN CEILING WITH ARCHITECT. ALIGN WITH ADJACENT SYSTEMS. RECOMMEND LOCATING OPERATOR IN CLOSET HIGH ON WALL WHEN POSSIBLE. MAX. CABLE LENGTH 25'. SHOW PROPOSED LOCATIONS ON COORDINATION AND SHOP DRAWINGS. PROVIDE THIS FOR ALL VOLUME BALANCING DAMPERS THAT ARE NOT ACCESSIBLE THROUGH ACCESSIBLE CEILING OR THROUGH CEILING ACCESS PANEL.



LARGE DOUBLE VANE ELBOW USE FOR ELBOWS 36" OR WIDER AND ANY DEPTH

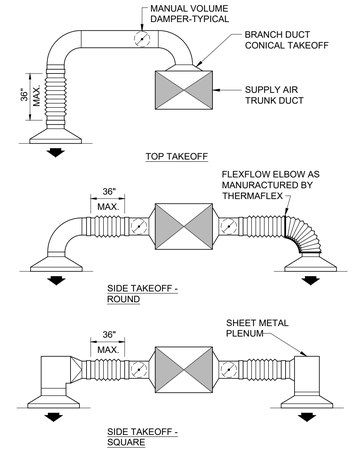
SMALL DOUBLE VANE ELBOW USE FOR ELBOWS UP TO 36" IN WIDTH AND/OR DEPTH

NOTES:

1. ALL ELBOWS SHALL BE RADIUS UNLESS SPACE LIMITATIONS REQUIRE SQUARE OR RECTANGULAR ELBOWS AND/OR THERE IS AN OUTLET OR TAKE-OFF WITHIN 5D ON THE DOWNSTREAM SIDE OF THE ELBOW.
2. ALL SQUARE OR RECTANGULAR ELBOWS FOR POSITIVE PRESSURE DUCTS (SUPPLY) SHALL HAVE ONE OF THE TWO TYPES OF TURNING VANES SHOWN ABOVE. SINGLE VANE ELBOWS WILL NOT BE PERMITTED.
3. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.
4. TURNING VANES NOT ALLOWED IN NEGATIVE PRESSURE DUCTS (RETURN OR EXHAUST).

3 TURNING VANES DETAIL

SCALE: Not To Scale

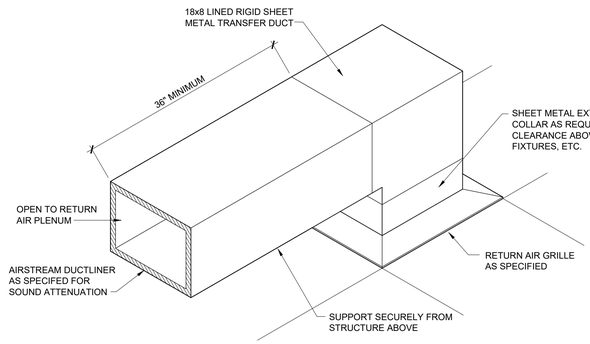


APPLICATION NOTES:

1. FLEXIBLE DUCTWORK IS INTENDED FOR THE SOLE PURPOSE OF DIFFUSER ALIGNMENT.
2. UNDER **NO** CIRCUMSTANCE WILL THE USE OF FLEXIBLE DUCT BE ALLOWED IN NEGATIVE PRESSURE APPLICATIONS.
3. FLEXIBLE DUCTWORK MAY BE INSTALLED ONLY ABOVE ACCESSIBLE CEILINGS.

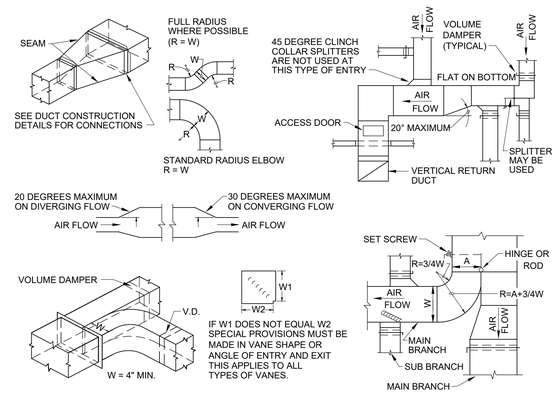
6 REMOTE DAMPER CONTROL SYSTEM

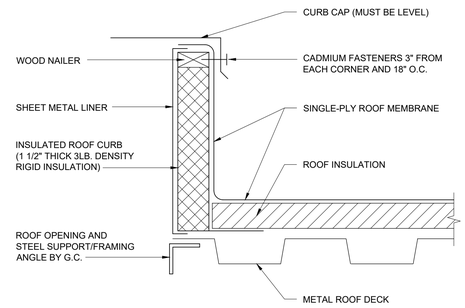
SCALE: Not To Scale



2 TYPICAL CONNECTION TO DIFFUSER

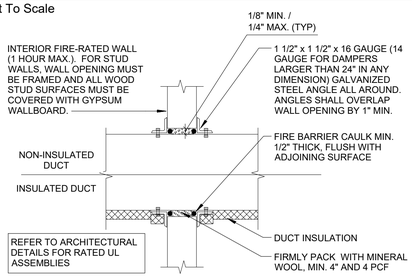
SCALE: Not To Scale





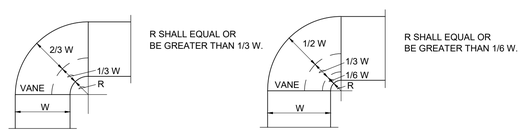
9 PREFABRICATED ROOF CURB

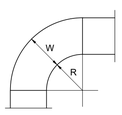
SCALE: Not To Scale



5 RETURN AIR GRILL OPEN TO PLENUM

SCALE: Not To Scale





NOTES:

1. THE INNER SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
2. ALL STANDARD RADIUS ELBOWS SHOWN ON PLANS MAY BE MADE SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

8 DUCT PENETRATION FOR 1 HOUR RATED WALLS

SCALE: Not To Scale

4 STANDARD ELBOW RADIUS DETAIL

SCALE: Not To Scale

1 TYPICAL DUCT CONSTRUCTION

SCALE: Not To Scale

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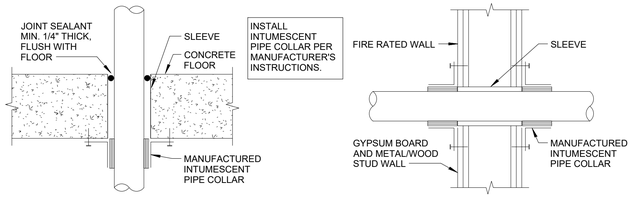
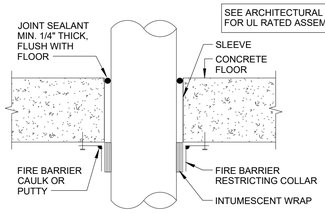
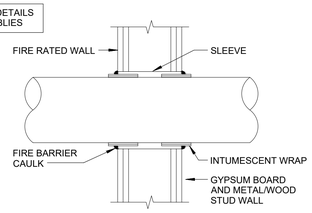


1 1/2"- 4" PVC PIPING FLOOR PENETRATION

1 1/2"- 4" PVC PIPING WALL PENETRATION



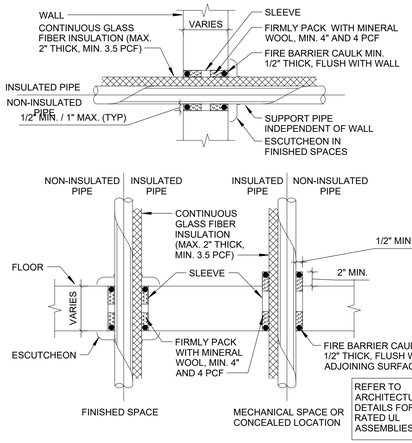
PVC PIPE LARGER THAN 4" FLOOR PENETRATION



PVC PIPE LARGER THAN 4" WALL PENETRATION

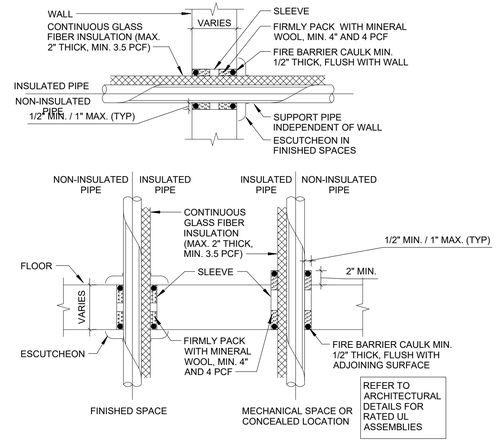
6 PVC PIPE PENETRATION FOR FIRE-RATED WALLS AND FLOORS

SCALE: Not To Scale



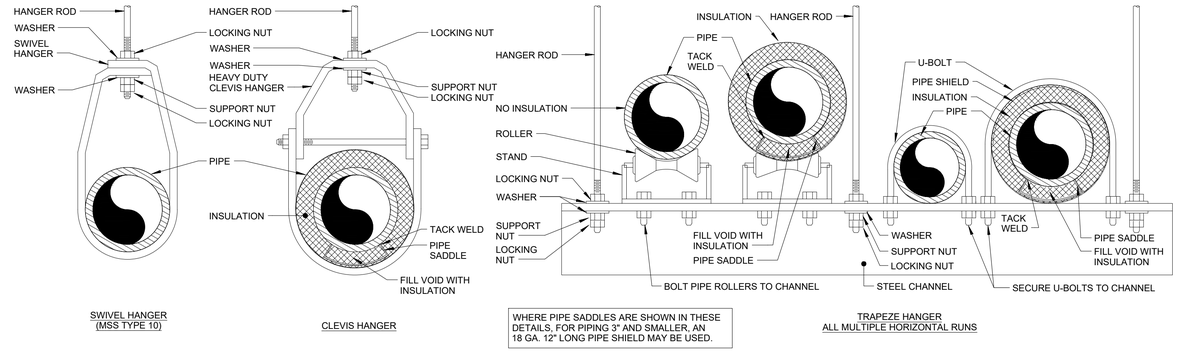
4 PIPE PENETRATION FOR FIRE-RATED WALLS AND FLOORS

SCALE: Not To Scale



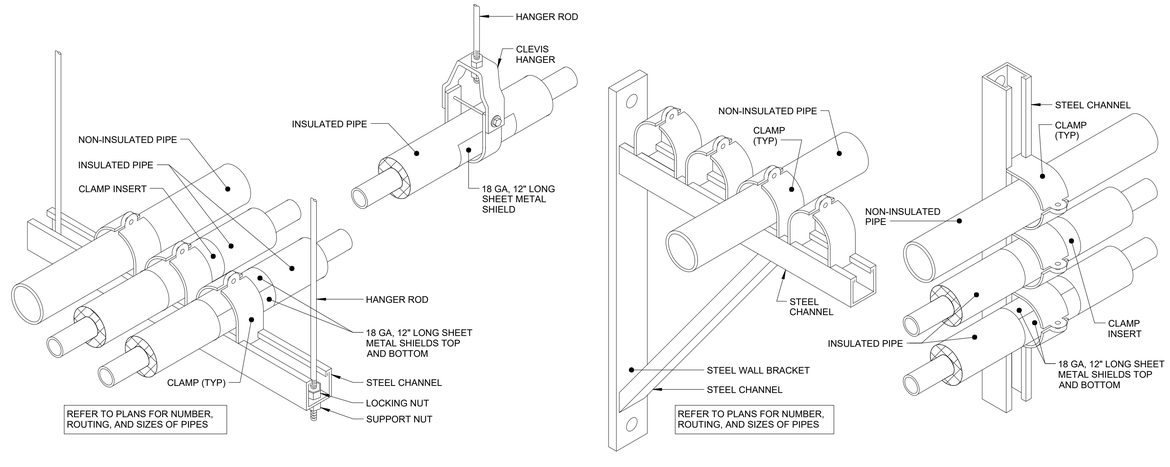
3 PIPE PENETRATION FOR NON-RATED WALLS AND FLOORS

SCALE: Not To Scale



2 PIPING SUPPORTS 2

SCALE: Not To Scale

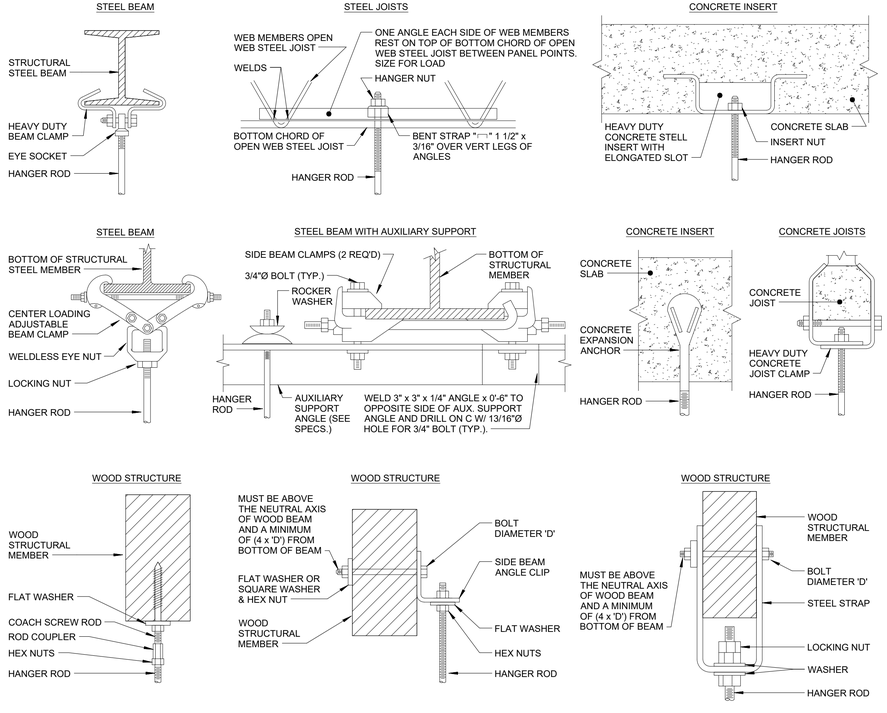


1 PIPING SUPPORTS

SCALE: Not To Scale

5 PIPING SUPPORT ATTACHMENT TO STRUCTURE

SCALE: Not To Scale



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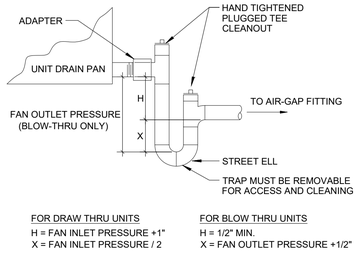
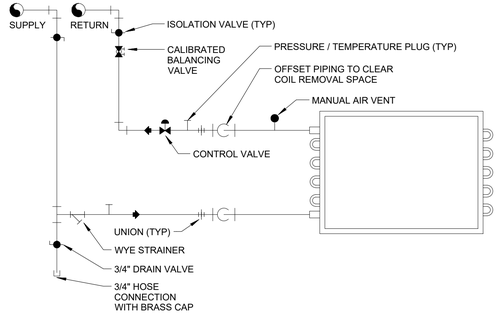


FOR DRAW THRU UNITS
H = FAN INLET PRESSURE +1"
X = FAN INLET PRESSURE / 2

FOR BLOW THRU UNITS
H = 1/2" MIN.
X = FAN OUTLET PRESSURE +1/2"

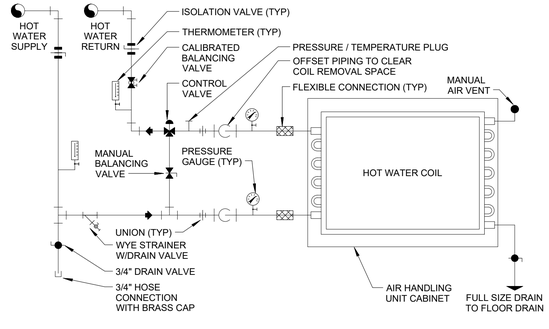
2 CONDENSATE DRAIN

SCALE: Not To Scale



3 TERMINAL UNIT TWO PIPE COIL W/2-WAY VALVE

SCALE: Not To Scale



1 AIR HANDLING UNIT HOT WATER COIL W/3-WAY VALVE

SCALE: Not To Scale

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BOWMAN LIBRARY FAN COIL UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	LOCATION	SERVICE	ARRANGEMENT	SUPPLY FAN				COOLING						HEATING					FILTER				ELECTRICAL DATA				PHYSICAL DATA				REMARKS
						CFM	MIN. OA CFM	ESP (IN. W.C.)	HP	TOTAL CAP. (MBH)	SENS. (MBH)	FLOW (GPM)	MAX. FLUID P.D. (FT. W.C.)	EWT (°F)	LWT (°F)	TOTAL CAP. (MBH)	FLOW (GPM)	MAX. FLUID P.D. (FT. W.C.)	EWT (°F)	LWT (°F)	TYPE	MERV	THICK. (IN.)	MAX. FACE VEL. (FPM)	V/PH	FLA	MCA	MOCP	L (IN.)	W (IN.)	H (IN.)	WT. (LB.)	
FCU-19	TRANE	FCCB1201	TUTORING	OFFICES	HORIZONTAL CONCEALED	1500	230	0.52	0.152	31.6	31.6	6.95	14.0	45	55	17.1	1.21	0.51	120	90	PLEATED	13	1"	500	115/1	15	6.08	15	75	25	10	182	ALL
FCU-20	TRANE	FCCB1001	TUTORING	OFFICES	HORIZONTAL CONCEALED	1170	160	0.38	0.168	19.1	19.1	1.88	1.37	45	55	16.0	1.13	0.46	120	90	PLEATED	13	1"	500	115/1	15	6.08	15	75	25	10	182	ALL
FCU-21	TRANE	FCCB0401	OFFICE 141	OFFICES	HORIZONTAL CONCEALED	285	50	0.28	0.034	8.6	8.6	2.10	8.4	45	55	8.4	0.59	0.78	120	90	PLEATED	13	1"	500	115/1	15	2.75	15	38	25	10	110	ALL
FCU-22	TRANE	FCCB0801	CONFERENCE 142	CONFERENCE ROOMS	HORIZONTAL CONCEALED	700	185	0.33	0.102	15.3	15.3	3.66	6.6	45	55	17.1	1.21	0.81	120	90	PLEATED	13	1"	500	115/1	15	3.88	15	56	25	10	150	ALL

NOTES:
1. UNITS SHALL BE CHANGEOVER COIL FOR 2-PIPE DUAL TEMPERATURE SYSTEM
2. UNITS SHALL BE SELECTED TO OPERATED ON MEDIUM FAN SPEED CONDITIONS
3. PROVIDE WITH ECM TYPE MOTOR, VALVE PACKAGE, DISCONNECT SWITCH, AND CONDENSATE PUMP WITH OVERFLOW SAFETY SWITCH
4. UNITS TO BE SELECTED BASED ON A 30 PERCENT PROPYLENE GLYCOL SOLUTION, ELEVATION OF 3,704 FT, CHILLED WATER EWT OF 45°F, CHILLED WATER LWT OF 55°F, AND HEATING EWT OF 120°F
5. PROVIDE WITH INTEGRAL DISCONNECT.
6. PROVIDE UNIT WITH DUCT SMOKE DETECTOR PRIOR TO OUTSIDE AIR BRANCH. PROVIDED BY DIV 23, POWERED BY DIV 26.

BOWMAN LIBRARY MINIMUM REQUIRED VENTILATION RATES

IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE

SPACE DATA						CODE INPUT					REQUIRED AND PROVIDED AIRFLOWS			
EQUIPMENT (ROOM)	CLASSIFICATION	OCCUPANCY SUB-CLASSIFICATION	FLOOR AREA	FIXTURES	OCCUPANT DENSITY	PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE	AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE	EXHAUST AIRFLOW RATE	AIR DISTRUBUTION EFFECTIVEENESS	OCCUPANTS	EXHAUST AIRFLOW RATE REQUIRED	EXHAUST AIRFLOW RATE PROVIDED	MINIMUM OUTDOOR AIRFLOW REQUIRED	TOTAL OUTDOOR AIR SUPPLIED
			FT2		PEOPLE/1000FT2	RP, CFM/PERSON	RA, CFM/FT2	CFM/FT2	EZ		CFM	CFM	CFM	CFM
FCU-20														
TUTORING LAB 2 (148A)	EDUCATION	MEDIA CENTER	210	0	25	10	0.12	0	1.0	7	0	0	95	110
TUTORING LAB 1 (148B)	EDUCATION	MEDIA CENTER	100	0	35	10	0.12	0	1.0	4	0	0	47	50
													142	**160**
FCU-19														
TUTORING LAB 3 (149)	EDUCATION	MEDIA CENTER	350	0	35	10	0.12	0	1.0	10	0	0	142	170
OFFICE (149A)	EDUCATION	MEDIA CENTER	130	0	35	10	0.12	0	1.0	3	0	0	46	60
													188	**230**
FCU-21														
OFFICE (141)	OFFICES	OFFICE SPACES	130	0	5	5	0.06	0	0.8	1	0	0	14	20
OFFICE (143)	OFFICES	OFFICE SPACES	250	0	5	5	0.06	0	0.8	1	0	0	27	30
													40	**50**
FCU-22														
CONFERENCE (142)	OFFICES	CONFERENCE ROOMS	340	0	50	5	0.06	0	0.8	10	0	0	88	110
STUDY ROOM (144A)	OFFICES	CONFERENCE ROOMS	100	0	50	5	0.06	0	0.8	4	0	0	33	50
													121	**160**
NOTES:														

BOWMAN LIBRARY AIR DEVICE SCHEDULE

MARK	MANUFACTURER	MODEL	SERVICE	STYLE	FACE SIZE	MAX. AIR P.D. (IN. W.C.)	NOISE CRITERIA	FRAME	FINISH	MATERIAL	REMARKS
S1	PRICE	SPD	SUPPLY	PLAQUE	24x24	0.1	< 20	LAY-IN	WHITE	ALUMINUM	1, 2, 3
S2	PRICE	SDG	SUPPLY	GRILLE	PER MANUFACTURER	0.1	< 20	DUCT MTD	WHITE	ALUMINUM	1, 4, 5
S3	PRICE	RCD	SUPPLY	ROUND	PER MANUFACTURER	0.1	< 20	DUCT MTD	WHITE	ALUMINUM	1, 2, 3
R1	PRICE	80	RETURN	EGGCRATE	PER MANUFACTURER	0.1	< 20	SURFACE	WHITE	ALUMINUM	1, 2, 3
R2	PRICE	630	RETURN	GRILLE	PER MANUFACTURER	0.1	< 20	SURFACE	WHITE	ALUMINUM	1

NOTES:
1. SEE PLANS FOR NECK SIZES.
2. PROVIDE MOUNTING FRAME FOR DIFFUSERS INSTALLED IN GYPSUM CEILINGS.
3. PROVIDE SQUARE TO ROUND ADAPTOR WHEN CONNECTING ROUND DUCT TO SPD DIFFUSER.
4. PROVIDE WITH AIR SCOOP AND OPPOSED BLADE DAMPER.
5. SELECT PER MANUFACTURER BASED ON OVAL DUCT.

BOWMAN LIBRARY ELECTRIC BASEBOARD HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	SERVICE	TOTAL CAP. (MBH)	ELECTRICAL DATA		PHYSICAL DATA			REMARKS
					V/PH	WATTS	L (IN.)	W (IN.)	H (IN.)	
EBB-1	RUNTAL	EB3-120D	READING AREA	3000	208/1	879	72	2.8	10.5	1,2
EBB-2	RUNTAL	EB3-120D	READING AREA	4500	208/1	1319	108	2.8	10.5	1,2
EBB-3	RUNTAL	EB3-120D	READING AREA	4500	208/1	1319	108	2.8	10.5	1,2
EBB-4	RUNTAL	EB3-120D	READING AREA	4500	208/1	1319	108	2.8	10.5	1,2
EBB-5	RUNTAL	EB3-120D	READING AREA	4500	208/1	1319	108	2.8	10.5	1,2

NOTES:
1. CONTROL EBB-1 THROUGH EBB-5 WITH SINGLE THERMOSTAT.
2. PROVIDE ALL INSIDE CORNERS AND TRIM KIT FOR A FULLY CONTINUOUS, SINGLE-APPEARING BASEBOARD HEATER.

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COMcheck Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: Bowman Library Renovation
Location: Lamar, Colorado
Climate Zone: 4b
Project Type: Alteration

Construction Site: Owner/Agent: Designer/Contractor:

Mechanical Systems List

Quantity	System Type & Description
1	FCU-19 (Single Zone): Heating: 1 each - Hydronic or Steam Coil, Hot Water, Capacity = 17 kBtu/h No minimum efficiency requirement applies Cooling: 1 each - Hydronic Coil, Capacity = 38 kBtu/h, Unknown Economizer No minimum efficiency requirement applies Fan System: FCU 19 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FCU 19 Supply, Constant Volume, 1500 CFM, 0.2 motor nameplate hp, 1.10 fan energy index , fan exception: Single fan <= 5HP
1	FCU-20 (Single Zone): Heating: 1 each - Hydronic or Steam Coil, Hot Water, Capacity = 16 kBtu/h No minimum efficiency requirement applies Cooling: 1 each - Hydronic Coil, Capacity = 32 kBtu/h, Unknown Economizer No minimum efficiency requirement applies Fan System: FCU 20 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FCU 20 Supply, Constant Volume, 1171 CFM, 0.2 motor nameplate hp, 1.10 fan energy index , fan exception: Single fan <= 5HP
1	FCU-21 (Single Zone): Heating: 1 each - Hydronic or Steam Coil, Hot Water, Capacity = 8 kBtu/h No minimum efficiency requirement applies Cooling: 1 each - Hydronic Coil, Capacity = 8 kBtu/h, Unknown Economizer No minimum efficiency requirement applies Fan System: FCU 21 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FCU 21 Supply, Constant Volume, 285 CFM, 0.1 motor nameplate hp, 1.10 fan energy index , fan exception: Single fan <= 5HP
1	FCU-22 (Single Zone): Heating: 1 each - Hydronic or Steam Coil, Hot Water, Capacity = 17 kBtu/h No minimum efficiency requirement applies Cooling: 1 each - Hydronic Coil, Capacity = 15 kBtu/h, Unknown Economizer No minimum efficiency requirement applies Fan System: FCU 22 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FCU 22 Supply, Constant Volume, 700 CFM, 0.1 motor nameplate hp, 1.10 fan energy index , fan exception: Single fan <= 5HP

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

ANTHONY RATTIGAN — Name - Title
Signature
03.06.2024 — Date

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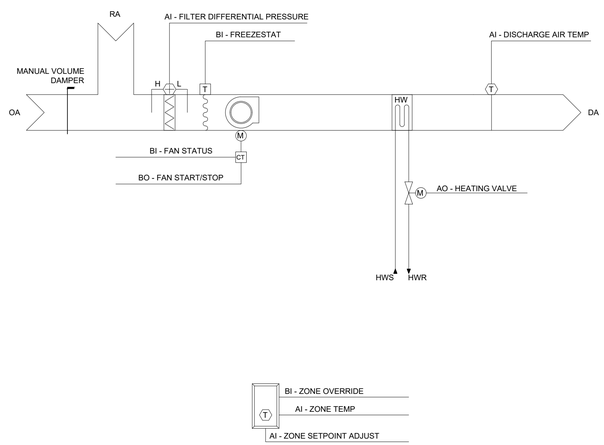
SHEET NO.:
M6.22



	HARDWARE POINTS				SOFTWARE POINTS						
POINT NAME	**AI**	**AO**	**BI**	**BO**	**AV**	**BV**	**Loop**	**Sched**	**Trend**	**Alarm**	**Show on Graphic**
Zone Temp	x								x		x
Zone Setpoint Adjust	x										x
Filter Differential Pressure	x								x		x
Discharge Air Temp	x								x		x
Cooling Valve		x							x		x
Heating Valve		x							x		x
Mixed Air Dampers		x							x		x
Zone Override			x						x		x
Freezestat			x						x	x	x
Fan Status			x								x
Fan Start/Stop				x					x		x
Emergency Shutdown						x			x		x
Schedule								x			
Heating Setpoint									x		x
Cooling Setpoint									x		x
High Zone Temp										x	
Low Zone Temp										x	
Filter Required										x	
High Discharge Air Temp										x	
Low Discharge Air Temp										x	
Fan Failure										x	
Fan in Hand										x	
Fan Runtime Exceeded										x	

2 **FAN COIL UNIT CONTROLS**
SCALE: NOT TO SCALE

SEQUENCE OF OPERATION - FAN COIL UNIT (FCU'S)

RUN CONDITIONS - SCHEDULED: THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:
- OCCUPIED MODE: THE UNIT SHALL MAINTAIN
- A 74°F (ADJ.) COOLING SETPOINT
- A 70°F (ADJ.) HEATING SETPOINT.
- UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN
- A 85°F (ADJ.) COOLING SETPOINT.
- A 55°F (ADJ.) HEATING SETPOINT.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH ZONE TEMP: IF THE ZONE TEMPERATURE IS GREATER THAN THE COOLING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).
- LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

DEMAND LIMITING - ZONE SETPOINT OPTIMIZATION:
TO LOWER POWER CONSUMPTION, THE ZONE SETPOINTS SHALL AUTOMATICALLY RELAX WHEN THE FACILITY POWER CONSUMPTION EXCEEDS DEFINABLE THRESHOLDS. THE AMOUNT OF RELAXATION SHALL BE INDIVIDUALLY CONFIGURABLE FOR EACH ZONE. THE ZONE SETPOINTS SHALL AUTOMATICALLY RETURN TO THEIR PREVIOUS SETTINGS WHEN THE FACILITY POWER CONSUMPTION DROPS BELOW THE THRESHOLDS.

ZONE SETPOINT ADJUST:
THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING AND COOLING SETPOINTS AT THE ZONE SENSOR.

ZONE OPTIMAL START:
THE UNIT SHALL USE AN OPTIMAL START ALGORITHM FOR MORNING START-UP. THIS ALGORITHM SHALL MINIMIZE THE UNOCCUPIED WARM-UP OR COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED OCCUPIED PERIOD. ZONE UNOCCUPIED OVERRIDE: A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT INTO AN OCCUPIED MODE FOR AN ADJUSTABLE PERIOD OF TIME. AT THE EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULE.

EMERGENCY SHUTDOWN:
THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING AN EMERGENCY SHUTDOWN SIGNAL.

FREEZE PROTECTION:
THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A FREEZESTAT STATUS.

SMOKE DETECTION: THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A SMOKE DETECTOR STATUS.

FAN:
THE FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES.

FACE AND BYPASS DAMPERS CONTROL:
THE UNIT SHALL MAINTAIN ZONE HEATING AND COOLING SETPOINTS BY MODULATING THE FACE AND BYPASS DAMPERS THROUGH ONE OF THE FOLLOWING:

COOLING:
- WHEN THE ZONE TEMPERATURE IS GREATER THAN THE COOLING SETPOINT, THE FACE AND BYPASS DAMPERS SHALL MODULATE OPEN TO FACE POSITION (CLOSED TO BYPASS POSITION) TO MAINTAIN SETPOINT BY MODULATING THE AIR PASSING OVER THE COOLING COIL.
- WHEN THE ZONE TEMPERATURE IS LESS THAN THE COOLING SETPOINT, THE FACE AND BYPASS DAMPERS SHALL CLOSE TO FACE POSITION (OPEN TO BYPASS POSITION).

HEATING:
- WHEN THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT, THE FACE AND BYPASS DAMPERS SHALL MODULATE OPEN TO FACE POSITION (CLOSED TO BYPASS POSITION) TO MAINTAIN SETPOINT BY MODULATING THE AIR PASSING OVER THE HEATING COIL.
- WHEN THE ZONE TEMPERATURE IS GREATER THAN THE HEATING SETPOINT, THE FACE AND BYPASS DAMPERS SHALL CLOSE TO FACE POSITION (OPEN TO BYPASS POSITION).

COOLING COIL VALVE:
THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND MODULATE THE COOLING COIL VALVE TO MAINTAIN ITS COOLING SETPOINT.

THE COOLING SHALL BE ENABLED WHENEVER:
- OUTSIDE AIR TEMPERATURE IS GREATER THAN 60°F (ADJ.).
- AND THE ZONE TEMPERATURE IS ABOVE COOLING SETPOINT.
- AND THE FAN IS ON.

THE COOLING COIL VALVE SHALL OPEN WHENEVER THE FREEZESTAT (IF PRESENT) IS ON.

HEATING COIL VALVE:
THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND MODULATE THE HEATING COIL VALVE TO MAINTAIN ITS HEATING SETPOINT.

THE HEATING SHALL BE ENABLED WHENEVER:
- OUTSIDE AIR TEMPERATURE IS LESS THAN 65°F (ADJ.).
- AND THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT.
- AND THE FAN IS ON.

THE HEATING COIL VALVE SHALL OPEN WHENEVER THE FREEZESTAT (IF PRESENT) IS ON.

HEATING - HIGH DISCHARGE AIR TEMPERATURE LIMIT:
THE CONTROLLER SHALL MEASURE THE DISCHARGE AIR TEMPERATURE AND, ON RISING TEMPERATURE, LIMIT THE HEATING AS FOLLOWS:
- AS THE DISCHARGE AIR TEMPERATURE RISES FROM 90°F TO 120°F (ADJ.),
- THE CONTROLLER SHALL LIMIT THE HEATING OUTPUT FROM 100% TO 0% (ADJ.).

FILTER DIFFERENTIAL PRESSURE MONITOR:
THE CONTROLLER SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- FILTER CHANGE REQUIRED: FILTER DIFFERENTIAL PRESSURE EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

DISCHARGE AIR TEMPERATURE:
THE CONTROLLER SHALL MONITOR THE DISCHARGE AIR TEMPERATURE.
ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH DISCHARGE AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS GREATER THAN 120°F (ADJ.).
- LOW DISCHARGE AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS LESS THAN 40°F (ADJ.).

FAN STATUS:
THE CONTROLLER SHALL MONITOR THE FAN STATUS.
ALARMS SHALL BE PROVIDED AS FOLLOWS:
- FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- FAN RUNTIME EXCEEDED: FAN STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

ZONE CARBON DIOXIDE (CO2) CONCENTRATION MONITORING:
THE CONTROLLER SHALL MEASURE THE ZONE CO2 LEVELS.
ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH ZONE CARBON DIOXIDE CONCENTRATION: IF THE ZONE CO2 CONCENTRATION IS GREATER THAN 1000PPM (ADJ.) WHEN IN THE OCCUPIED MODE.

GENERAL CONTROL NOTES:

EXISTING BAS INTEGRATION
ALL NEW COMPONENTS SHALL BE INTEGRATED INTO EXISTING HONEYWELL BUILDING AUTOMATION SYSTEM. ALL LOGIC RELATED TO HEATING, COOLING, ECONOMIZER, EXHAUST, AND BUILDING PRESSURIZATION SHALL BE APPLIED TO NEW EQUIPMENT.

SEQUENCE OF OPERATION - BASEBOARD HEATER - ELECTRIC

RUN CONDITIONS - SCHEDULED:
THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:
- OCCUPIED MODE: THE UNIT SHALL MAINTAIN A HEATING SETPOINT OF 70°F (ADJ.).
- UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN A HEATING SETPOINT OF 65°F (ADJ.).
  ALARMS SHALL BE PROVIDED AS FOLLOWS:
- LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

ELECTRIC HEATING STAGES:
THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS HEATING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A USER DEFINABLE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

THE HEATING SHALL BE ENABLED WHENEVER:
- OUTSIDE AIR TEMPERATURE IS LESS THAN 65°F (ADJ.).
- AND THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT.

	HARDWARE POINTS				SOFTWARE POINTS						
POINT NAME	**AI**	**AO**	**BI**	**BO**	**AV**	**BV**	**Loop**	**Sched**	**Trend**	**Alarm**	**Show on Graphic**
Zone Temp	x								x		x
Heating Stage 1				x					x		x
Schedule								x			
Heating Setpoint									x		x
Low Zone Temp										x	

1 **BASEBOARD HEATING CONTROLS**
SCALE: NOT TO SCALE

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BID SET

NOT FOR CONSTRUCTION

SHEET TITLE:

DATE: 3/12/2024

REV:

SHEET NO.:

M7.21

PLUMBING SYMBOLS & ABBREVIATIONS

NOTE: NOT ALL SYMBOLS ARE USED ON THIS PROJECT

Annotation Abbreviations

AC	ABOVE CEILING
AFF	ABOVE FINISHED FLOOR
BAS	BUILDING AUTOMATION SYSTEM
BF	BELOW FLOOR
BG	BELOW GRADE
BH	BOOSTER HEATER
BFP	BACKFLOW PREVENTION DEVICE
BJ	BETWEEN JOISTS
BOP	BOTTOM OF PIPE
BTUH	BRITISH THERMAL UNITS PER HOUR
CF	COMBINATION FIXTURE
COND	CONDENSATE
CP	CONDENSATE PUMP
CSS	CLINICAL SERVICE SINK
CV	CONTROL VALVE
D	DISPOSAL
DF	DRINKING FOUNTAIN
DN	DOWN
DW	DISHWASHER
EC	ELECTRICAL SUBCONTRACTOR
EEW	EMERGENCY EYE WASH
EEWSH	COMB. EMERGENCY EYE WASH/SHOWER
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FA	FROM ABOVE
FB	FROM BELOW
FBO	FURNISHED BY OTHERS
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FPC	FIRE PROTECTION SUBCONTRACTOR
FS	FLOOR SINK
FT	FILL TANK
GPM	GALLONS PER MINUTE
GWH	GAS WATER HEATER
GC	GENERAL CONTRACTOR
HAP	HIGH AS POSSIBLE
HB	HOSE BIBB (INTERIOR)
HS	HOSE STATION
HWCP	HOT WATER RECIRCULATION PUMP
HWS	HANDWASHING SINK
IM	ICE MAKER
L	LAVATORY
LS	LAUNDRY SINK
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL SUBCONTRACTOR
MSB	MOP SINK BASIN
NTS	NOT TO SCALE
OW	OIL WASTE
P	PUMP
PC	PLUMBING SUBCONTRACTOR
PRV	PRESSURE RELIEF VALVE
RD	ROOF DRAIN
RPZ	REDUCED PRESSURE BFP
SC	SILLCOCK (EXTERIOR)
SE	SEWAGE EJECTOR
S.F.	SQUARE FOOT
SH	SHOWER
SK	SINK
SP	SUMP PUMP
SS	SERVICE SINK
TFA	TO FLOOR ABOVE
TB	TO BELOW
TFB	TO FLOOR BELOW
TMV	THERMOSTATIC MIXING VALVE
TOP	TOP OF PIPE
UR	URINAL
VB	VACUUM BREAKER
VTR	VENT THRU ROOF
WB	WASHER BOX
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WFL	WATER FILTER
WH	WALL HYDRANT
WS	WATER SOFTENER
YCO	YARD CLEANOUT

Plumbing Symbology

	PIPING SYSTEM
	AW ACID WASTE CA COMPRESSED AIR CD CONDENSATE DRAIN CO2 CARBON DIOXIDE G NATURAL GAS GW GREASE WASTE MA MEDICAL AIR N2 NITROGEN N2O NITROUS OXIDE OST OVERFLOW STORM OW OIL WASTE O2 OXYGEN PD PUMP DISCHARGE ST STORM VAC VACUUM WAGD WASTE ANESTHETIC GAS DISPOSAL W SANITARY WASTE
	AV ACID VENT OV OIL VENT V SANITARY VENT
	CW DOMESTIC COLD WATER DI DE-IONIZED WATER NPCW NONPOTABLE COLD WATER RO REVERSE OSMOSIS WATER SCW SOFTENED COLD WATER
	HW DOMESTIC HW HW 140 DOMESTIC HW (OTHER TEMP.)
	HWC DOMESTIC HW RECIRCULATION
	FLOW ARROW
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	3-WAY CONTROL VALVE
	ANGLE GATE VALVE
	ANGLE GLOBE VALVE
	BALANCING/SHUTOFF VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CALIBRATED BALANCING VALVE
	CHECK VALVE
	CONTROL VALVE
	EXPANSION VALVE
	GAS COCK
	GATE VALVE
	GLOBE VALVE
	PLUG VALVE
	PRESSURE REDUCING VALVE (WATER)
	PRESSURE REGULATOR (GAS)
	QUICK OPEN VALVE
	SAFETY RELIEF VALVE
	SOLENOID VALVE
	VACUUM RELIEF VALVE
	BACKFLOW PREVENTER
	HOSE BIBB / SILLCOCK
	AUTOMATIC AIR VENT
	PRESSURE GAUGE
	TEMPERATURE GAUGE
	FLOW SWITCH
	PRESSURE SWITCH
	TEMPERATURE SWITCH
	PIPE UNION
	WYE STRAINER
	WYE STRAINER WITH DRAIN
	PUMP
OR	FLOOR DRAIN - SQUARE OR ROUND
OR	FLOOR CLEANOUT - SQUARE OR ROUND
	SUSPENDED CLEANOUT (CO)
WCO	WALL CLEANOUT
	PIPE CAP
	PIPE TURNING DOWN
	PIPE TURNING UP
	TEE UP
	TEE DOWN
	DROP AND RUN
	DROP AND TURN
	TEE OFF TOP
	TEE OFF BOTTOM
	CROSS AND RISER
	PLAN 90° ELBOW
	PIPE TEE
	FLEXIBLE PIPE CONNECTOR
	PIPE ANCHOR
	PIPE GUIDE
M	WATER METER

Annotation Symbology

(11)	PLUMBING KEYED NOTE
22	EQUIPMENT KEYED NOTE
NEW	BOLD TEXT INDICATES NEW ITEM
(E)EXISTING	ITALIC TEXT INDICATES EXISTING ITEM
3 / P1.1	DETAIL MODULE NUMBER DETAIL OR SECTION MARK SHOWN ON DRAWING
	POINT OF NEW CONNECTION
	POINT OF TERMINATION/CAP
L1	PLUMBING EQUIPMENT DESIGNATION

Plumbing Demolition General Notes

1. THE PLUMBING CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR THE DISCONNECTION AND REMOVAL OF ALL PLUMBING FIXTURES, PIPING, EQUIPMENT, AND ASSOCIATED APPURTENANCES. NO PERSON OTHER THAN A LICENSED PLUMBER IN THE STATE OF COLORADO SHALL REMOVE PLUMBING ITEMS FROM THEIR ORIGINAL LOCATION. THE REMOVED FIXTURES SHALL BE TAKEN OFFSITE AND DISPOSED OF.
2. VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO START OF DEMOLITION. RELOCATE, REMOVE AND ADJUST ALL MECHANICAL AND ELECTRICAL ITEMS AS NECESSARY TO COORDINATE WITH NEW WORK PLANS.
3. ALL ITEMS SHOWN ARE EXISTING AND SHOWN IN SCHEMATIC FORM ONLY. REMOVE PIPING AS REQUIRED BACK TO LAST ACTIVE SERVICE. REMOVED FIXTURES SHALL REMAIN THE PROPERTY OF THE OWNER.
4. IN AREAS WHERE EXISTING CONSTRUCTION IS REMOVED AND NO ADDITIONAL CONSTRUCTION IS INDICATED, PATCH TO MATCH EXISTING ADJACENT CONDITIONS.
5. SHUTDOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH OWNER TO LIMIT INTERFERENCE WITH OWNER'S OPERATION AND DOWNTIME. CONTRACTOR SHALL SUBMIT TO OWNER FOR REVIEW AND APPROVAL, THE PROPOSED PHASING PLAN FOR SHUTDOWN OF EXISTING SERVICES.
6. ---- INDICATES REQUIRED DEMOLITION OF PIPING. REMOVE PIPING AS INDICATED AND CAP AT MAIN AS REQUIRED.
7. CONTRACTOR SHALL COMPLY WITH GENERAL CONDITIONS AND PROTECTION PROVISIONS SPECIFIED FOR JOINT OWNER/CONTRACTOR OCCUPANCY WORK AREAS.
8. CONTRACTOR SHALL PROTECT EXISTING UTILITIES TO REMAIN FROM DAMAGE DURING DEMOLITION. ANY UTILITIES AND SERVICES DAMAGED SHALL BE REPAIRED AT NO EXPENSE TO OWNER.
9. CONTRACTOR SHALL TEMPORARILY MOVE OR TAKE EQUIPMENT OUT OF SERVICE AS NECESSARY TO COMPLETE WORK. SUCH SERVICES SHALL BE REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
10. SAWCUT CONCRETE FLOOR AS REQUIRED FOR DEMOLITION WORK INDICATED. COORDINATE WITH NEW PLUMBING WORK, STRUCTURAL ELEMENTS, AND ARCHITECTURAL WORK. PATCH TO MATCH ADJACENT CONDITIONS.

Plumbing General Notes

1. WORK SHALL BE PERFORMED BY A LICENSED PLUMBER OF THE STATE OF COLORADO.
2. MATERIALS, INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF STATE AND LOCAL CODE PROCEDURES, METHODS AND REQUIREMENTS, INCLUDING THE MOST STRINGENT OF HEALTH AND SAFETY STANDARDS AS REQUIRED AND AS INTERPRETED BY THE AUTHORITY HAVING JURISDICTION. PROVIDE AMENITIES IN RESTROOM AS PER COLORADO HOUSE BILL 23-1057 WHERE APPLICABLE. MINIMUM CODE AND STANDARDS REQUIRED, BUT NOT LIMITED TO THE FOLLOWING:
"COLORADO STATE PLUMBING CODE" (CURRENT EDITION)
"INTERNATIONAL PLUMBING CODE" (2021)
"NFPA 54 - NATIONAL FUEL GAS CODE"
APPLICABLE LOCAL AND MUNICIPAL CODES AND ORDINANCES.
3. MEANING AND INTENT OF DRAWINGS: DRAWINGS ARE DIAGRAMMATIC. PIPING IS SHOWN IN SCHEMATIC FORM. SCALES INDICATED ARE FOR ARCHITECTURAL REFERENCE ONLY. IT IS NOT INTENDED THAT THE DRAWINGS SHOW EVERY WASTE, VENT, WATER PIPE, FITTING, SUPPORTS, ETC., AND IT IS UNDERSTOOD THAT THE DRAWINGS MUST BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES WILL PERMIT, THE PROPER INSTALLATION ACCORDING TO THE TRUE INTENT AND MEANING OF THE DRAWINGS, LOCAL CODES AND STANDARD PRACTICES SHALL BE PROVIDED. PLUMBING CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION. REPORT ANY PROBLEMS OR CONFLICTS TO THE ARCHITECT/ENGINEER. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS. ANY MINOR CHANGES IN LOCATION OF EQUIPMENT, WASTE VENT, WATER PIPE, ETC., FROM THOSE LOCATIONS SHOWN ON THE DRAWINGS, SHALL BE MADE WITHOUT EXTRA COST, IF SO DIRECTED BY THE ARCHITECT/ENGINEER BEFORE THE INSTALLATION IS MADE. A MINOR CHANGE IN LOCATION IS CONSIDERED TO BE WITHIN 5'-0" OF THE ORIGINAL INDICATED LOCATION. THE EQUIPMENT INDICATED ON THESE DRAWINGS INCLUDE ONLY THE MAJOR EQUIPMENT REQUIREMENTS.
NOT WITHSTANDING, THE DETAILS PRESENTED IN THESE DRAWINGS VERIFY THE COMPLETENESS OF THE MATERIALS LISTS AND SUITABILITY OF DEVICES TO MEET THE INTENT OF THIS PROJECT. ANY ADDITIONAL EQUIPMENT OR MATERIAL REQUIRED, EVEN IF NOT SPECIFICALLY MENTIONED HEREIN SHALL BE PROVIDED WITHOUT CLAIM FOR ADDITIONAL PAYMENT; IT BEING UNDERSTOOD THAT A COMPLETE AND OPERATIONAL PLUMBING SYSTEM, SATISFACTORY TO THE ARCHITECT/ENGINEER AND THE OWNER SHALL BE PROVIDED. USE ONLY THE MANUFACTURER'S TESTED ASSEMBLIES.
4. ALL GENERAL NOTES ARE PART OF THIS CONTRACT.
5. ALL EXPENSES CARRIED BY THE ARCHITECT/ENGINEER IN TROUBLESHOOTING SYSTEM(S) PROBLEMS CAUSED BY INADEQUATE WORKMANSHIP, LACK OF TECHNICAL EXPERTISE OR OTHER FORMS OF POOR PERFORMANCE ON THE PART OF A CONTRACTOR, SHALL BE BORN BY THAT CONTRACTOR.
6. PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL SERVICES IN BUILDING AND TO 5'-0" BEYOND THE BUILDING CONSTRUCTION LINE. SITE UTILITY CONTRACTOR IS RESPONSIBLE FOR ALL OTHER PIPING.
7. COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES AND STRUCTURAL CONDITIONS TO AVOID ANY CONFLICTS.
8. MAINTAIN A MINIMUM CLEARANCE OF 3'-0" IN FRONT OF ELECTRICAL PANELS AND 1'-0" EITHER SIDE FROM STRUCTURE TO STRUCTURE AND FLOOR TO STRUCTURE ROUTE PIPING AROUND AND NOT DIRECTLY ABOVE ELECTRICAL PANELS. VERIFY CLEARANCE REQUIREMENTS WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLING PIPE.
9. INCLUDE IN BID, ALL LICENSE, PERMIT, INSPECTION AND OTHER FEES REQUIRED BY UTILITY COMPANIES OR AUTHORITIES HAVING JURISDICTION REQUIRED FOR COMPLETION OF WORK SO THAT NO UNEXPECTED ADDITIONAL EXPENSES ARE INTRODUCED TO OWNER.
10. PROMPTLY INFORM THE ENGINEER, IN WRITING, OF ANY DEVIATIONS IN THE CONTRACT DOCUMENTS FROM REQUIREMENTS OF LOCAL UTILITIES, MUNICIPALITIES, STATE OR FEDERAL LAWS AND REGULATIONS. PERFORM THE WORK IN ACCORDANCE WITH SUCH REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
11. PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, ETC. REQUIRED FOR COMPLETE AND FUNCTIONAL SYSTEM AS SPECIFIED AND INDICATED ON THE DRAWINGS.
12. ALL CLEANOUTS, VALVES, AIR CHAMBERS, ETC. ARE TO BE ACCESSIBLE. EXTEND PIPING AND PROVIDE ACCESS PANELS AS NECESSARY. PLUMBING CONTRACTOR WILL BE REQUIRED TO DEMONSTRATE ACCESSIBILITY IF IT IS QUESTIONABLE. ACCESS PANEL SIZES, LOCATIONS, AND FINAL COLOR SHALL BE COORDINATED WITH THE ARCHITECT AS WELL AS ALL OTHER TRADES TO AVOID ANY CONFLICTS. ACCESS PANELS PROVIDED BY PLUMBING CONTRACTOR FOR INSTALLATION BY GENERAL CONTRACTOR.
13. DURING CONSTRUCTION PROCEDURES, THE ENTIRE WORK AREA SHALL BE CLEAN OF ALL DUST, DIRT AND OTHER DEBRIS BEFORE APPLICATION OF ANY NEW MATERIALS.
14. ALL VALVES IN CORRIDORS SHALL BE LOCATED 1'-0" AWAY FROM WALLS UNLESS NOTED OTHERWISE. VALVES SHALL NOT BE LOCATED OVER INACCESSIBLE CEILINGS UNLESS ADEQUATE ACCESS IS PROVIDED.
15. FURNISH AND INSTALL BALL TYPE SHUTOFF VALVES IN ALL DOMESTIC WATER BRANCH PIPING OFF OF THE MAINS, RISERS, AND IN ALL BRANCH PIPING TO EACH SEPARATE ROOM TO PERMIT WATER SUPPLY SHUT OFF WITHOUT INTERFERING WITH ANY OTHER ROOM OR PORTION OF BUILDING.
16. SANITARY WASTE PIPING SHALL BE SLOPED AT 1/8-INCH PER FOOT MINIMUM FOR ALL PIPING 4-INCH AND LARGER AND AT 1/4-INCH PER FOOT MINIMUM FOR ALL PIPING 3-INCH AND SMALLER.
17. INDIRECT DRAIN FROM FIXTURES, SPECIALTIES, AND EQUIPMENT SHALL BE ROUTED TO FLOOR DRAIN OR OTHER APPROVED RECEPTACLE AND TERMINATED WITH AN AIR GAP 2 TIMES THE DIAMETER OF THE DRAIN PIPING, BUT NO LESS THAN 1 INCH GAP. SUPPORT PIPING SO DRAIN PIPING CANNOT BE DEFLECTED FROM DRAIN SOURCE.
18. ALL VENTS FROM HORIZONTAL SOIL OR WASTE PIPE SHALL COME OFF TOP OR AT 45 DEGREE VERTICALLY FROM CENTER OF PIPE BEFORE OFFSETTING HORIZONTALLY TO RISER.
19. ALL VENT TERMINATIONS SHALL BE COORDINATED WITH BUILDING OPENINGS, AIR INTAKES AND AIR EXHAUST OPENINGS. ADJUST VENT THROUGH ROOF LOCATIONS TO COMPLY WITH APPLICABLE CODE AND TO BE IN THE LEAST VISIBLE EXTERIOR VIEWPOINT.
20. SUPPORT ALL NEW PIPING AND EQUIPMENT FROM STRUCTURE ABOVE AS REQUIRED. PLUMBING CONTRACTOR SHALL PROVIDE ALL SUPPLEMENTAL STEEL TO SPAN BETWEEN PRIMARY BUILDING STRUCTURAL MEMBERS. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE DESIGN OF SUPPLEMENTAL STEEL AND PIPE SUPPORTS, INCLUDING REACTION LOADS TO PRIMARY BUILDING STRUCTURAL MEMBERS.
21. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL NAIL PLATES WHERE PIPING PASSES THROUGH STUD(S) WITHIN 2" OF NAILING SURFACE TO PROTECT PIPE FROM NAILS OR DRYWALL SCREWS.
22. PLUMBING CONTRACTOR SHALL INSTALL APPROVED WATER HAMMER ARRESTORS IN WATER LINES, BOTH HOT AND COLD, SERVING BATTERY AND BACK TO BACK FIXTURE INSTALLATIONS IN PIPE SPACE AND PIPE CHASES AND SHALL BE ACCESSIBLE.
23. PLUMBING CONTRACTOR SHALL INSTALL HOT WATER DISTRIBUTION LOOP AND BRANCH SUPPLY PIPING AS CLOSE AS POSSIBLE TO THE HOT WATER INLET SIDE OF POINT OF USE THERMOSTATIC MIXING VALVE, INCLUDING FIXTURES WITH INTEGRAL MIXING VALVES, SO THAT THERE IS NO MORE THAN 10 LINEAR FEET DISTANCE. THIS SHALL BE IN SINGLE FIXTURE APPLICATIONS. IN MULTIPLE FIXTURE APPLICATIONS BATTERIED IN WALL OR PIPE CHASES, THE HOT WATER SUPPLY PIPING SHALL BE AS CLOSE AS REASONABLY POSSIBLE TO THE FIXTURE CONNECTIONS.
24. ALL P-TRAPS FOR FLOOR DRAINS AND FLOOR SINKS SHALL BE DEEP SEAL TRAP FILLED WITH VEGETABLE OIL. 2" TRAPS SHALL HAVE A 4" MINIMUM WATER SEAL.
25. PLUMBING CONTRACTOR TO INSTALL, TEST, AND FIELD BALANCE APPROVED EQUIPMENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.

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LAMAR, CO 81052

BID SET

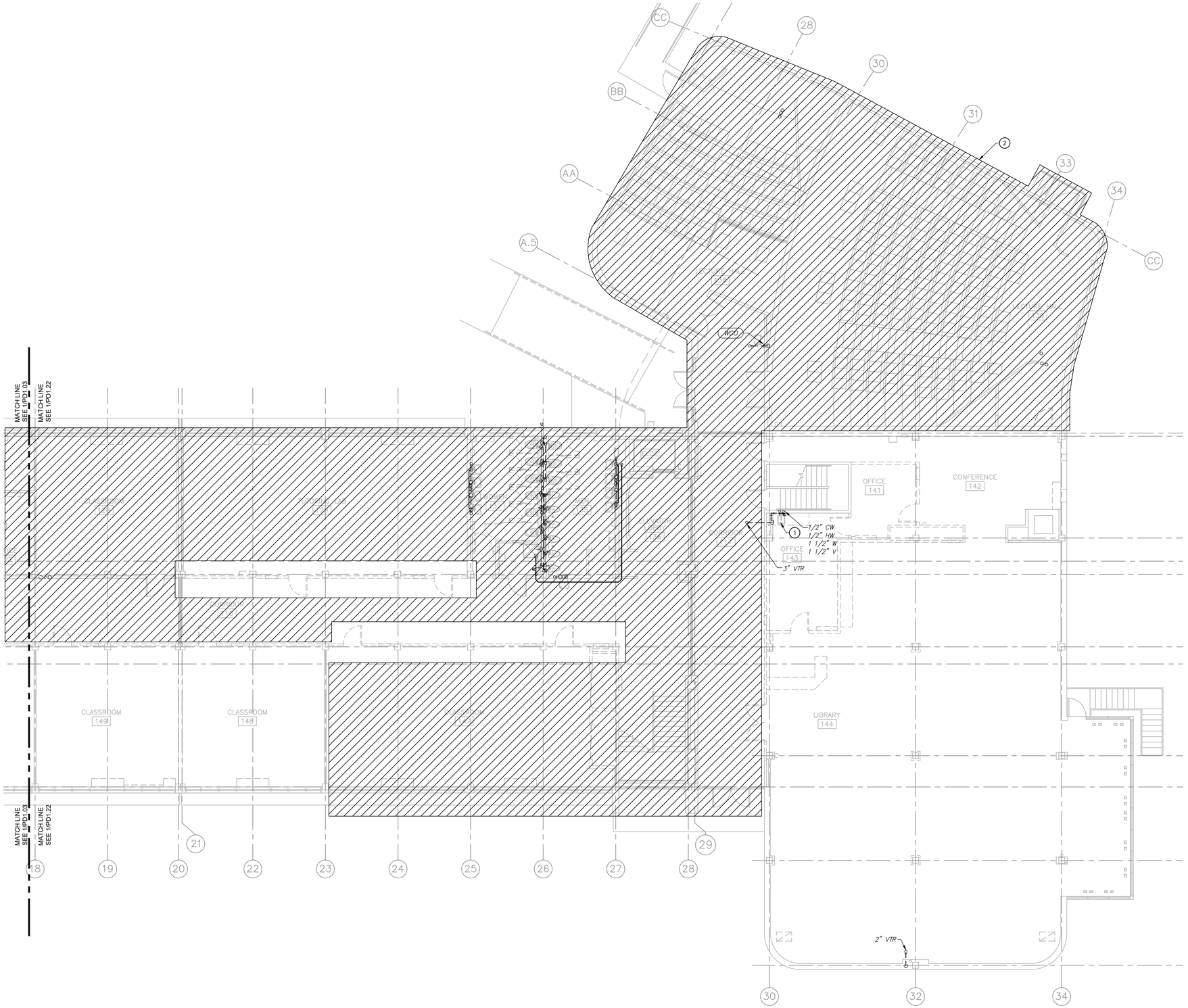
NOT FOR CONSTRUCTION

SHEET TITLE:
PLUMBING GENERAL INFORMATION

DATE: 3/12/2024

REV:

SHEET NO.:
P0.21



GENERAL NOTES

A. REFER TO P0.02 FOR ADDITIONAL NOTES.

B. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND INSTRUCTIONS.

C. AT START OF CONSTRUCTION, CONTRACTOR SHALL SEWER SNAKE, WATER JET AND CONDUCT VIDEO INSPECTION OF COMPLETE UNDERGROUND, CRAWLSPACE, AND SEWER PIPING FROM WITHIN BUILDING OUT TO CONNECTION AT THE UTILITY. CONTRACTOR SHALL NOTE ANY SYSTEM DEFICIENCIES AND PROVIDE A WRITTEN EVALUATION OF FINDINGS AND ADEQUACY OF THE SANITARY PIPING FOR REUSE TO ENGINEER AT START OF WORK.

D. ALL PIPING TO REMAIN IN SERVICE FOR REUSE UNLESS NOTED OTHERWISE AND/OR INDICATED BY DASHED LINES.

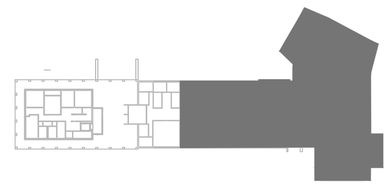
KEY NOTES (#)

1. DEMOLISH AND REMOVE FIXTURE TO BE REPLACED. TEMPORARILY CAP AND PREPARE PIPING FOR INSTALLATION OF NEW SINK.

2. NO SCOPE AREA, TYPICAL. REFER TO CAPITAL RENEWAL PROJECT DRAWINGS.

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

0 4 8 16



KEY PLAN
SCALE: 1/64"=1'-0"

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FIRST FLOOR DEMOLITION PLUMBING PLAN EAST

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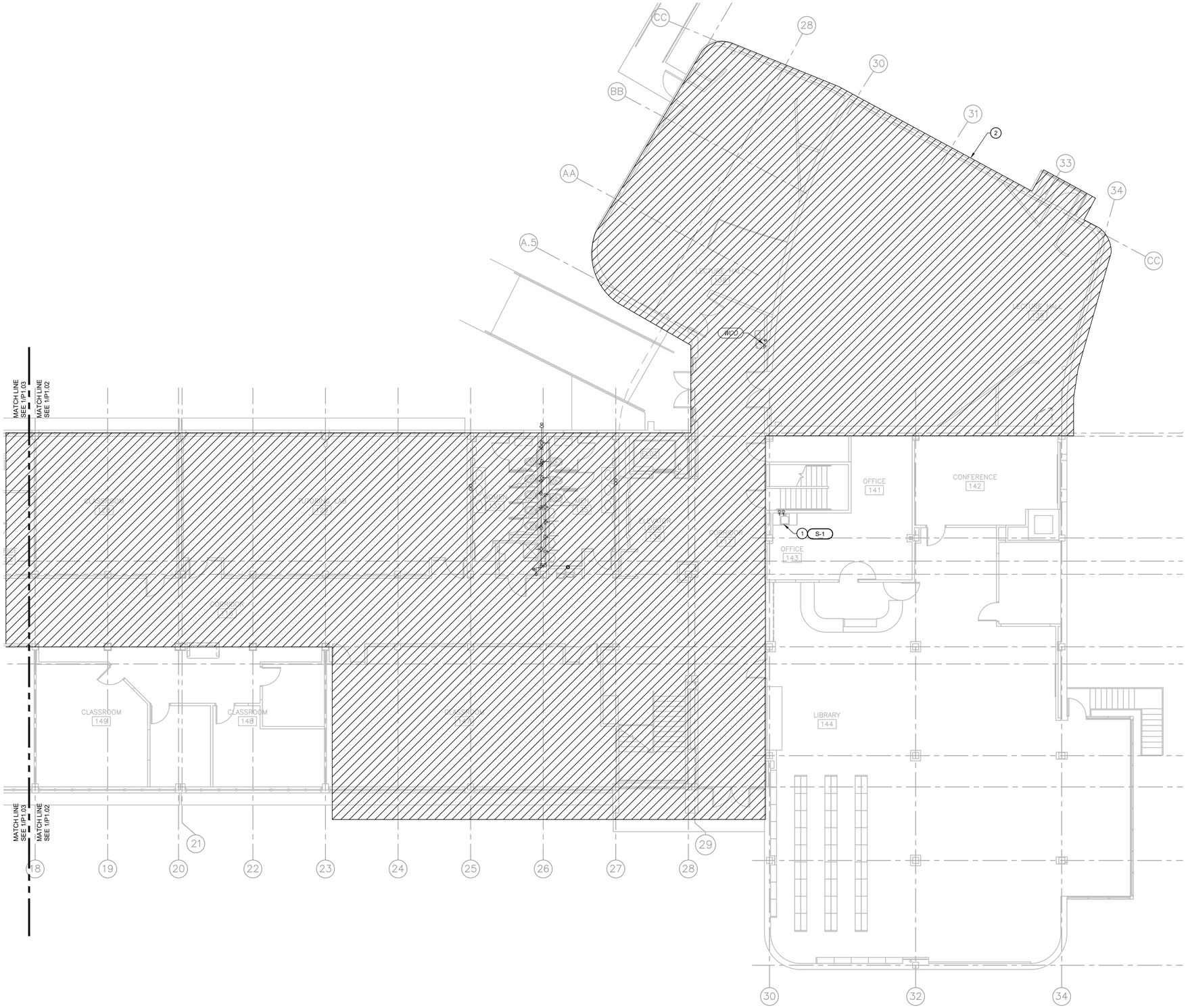
J:\2023\0230189.00 — Lamar CC Bowman Capitol Renewal\04_Drawings\DWG\Plumbing_P_DEMO_ Plumbing Lamar Bowman Capitol Renewal — 0230189.00.dwg Mar 12, 2024 — 11:30am



1 **FIRST FLOOR DOMESTIC PLUMBING PLAN EAST**
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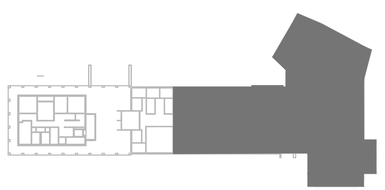

KEY PLAN
SCALE: 1/64"=1'-0"

GENERAL NOTES

A. REFER TO P0.02 FOR ADDITIONAL NOTES.

B. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND INSTRUCTIONS.

C. ALL PIPING SHOWN IS EXISTING TO REMAIN FOR REUSE UNLESS NOTED OTHERWISE.

D. ALL PIPING SHOWN IS EXISTING TO REMAIN FOR REUSE UNLESS OTHERWISE NOTED.

E. PROVIDE NEW STOPS WHERE NEW FIXTURES ARE INSTALLED. ALL DOMESTIC SHUT OFF VALVES SHALL BE REPLACED.

KEY NOTES (#)

1. INSTALL NEW FIXTURE, CONNECT TO EXISTING DOMESTIC HOT AND COLD WATER PIPING. EXTEND PIPING IF NECESSARY. REPLACE VALVES AND INSULATION IF NEEDED.

2. WORK IN SHADED AREAS IS NOT IN CONTRACT.

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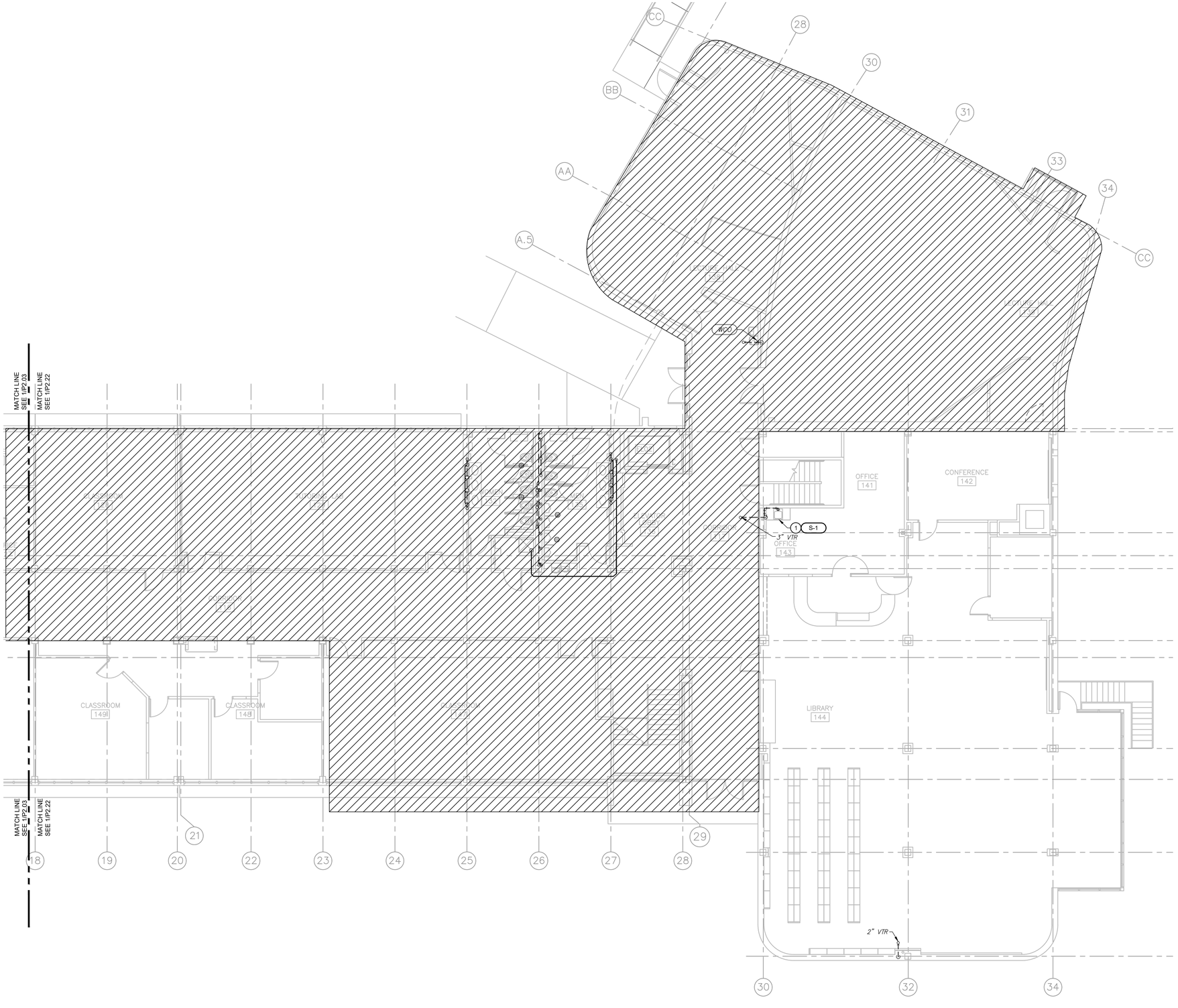


GENERAL NOTES

A. REFER TO P0.02 FOR ADDITIONAL NOTES.

B. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND INSTRUCTIONS.

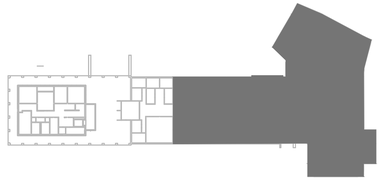
C. ALL PIPING SHOWN IS EXISTING TO REMAIN FOR REUSE UNLESS OTHERWISE NOTED.

KEY NOTES (#)

1. INSTALL NEW FIXTURE, CONNECT TO EXISTING SANITARY AND VENT PIPING. RELOCATE VENT AND SANITARY PIPING AS NECESSARY.

1 **FIRST FLOOR DWV PLUMBING PLAN EAST**
SCALE: 1/8"=1'-0"

0 4 8 16



KEY PLAN
SCALE: 1/64"=1'-0"

NORTH

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PLUMBING PIPING MATERIAL SCHEDULE

SYSTEM TYPE	MATERIAL SELECTION
DOM. CW ABOVE GRADE	ASTM B88 (ASTM B88M), TYPE L COPPER. PEX PIPING ONLY ALLOWED FOR PIPING ONE INCH IN SIZE OR SMALLER
DOM. HW ABOVE GRADE	ASTM B88 (ASTM B88M), TYPE L COPPER. PEX PIPING ONLY ALLOWED FOR PIPING ONE INCH IN SIZE OR SMALLER
DOM. HWC ABOVE GRADE	ASTM B88 (ASTM B88M), TYPE L COPPER. PEX PIPING ONLY ALLOWED FOR PIPING ONE INCH IN SIZE OR SMALLER
SANITARY WASTE ABOVE GRADE PIPING	CAST IRON, CISPI 301 HUBLESS OR HUB AND SPIGOT PIPING
SANITARY VENT PIPING	CAST IRON, CISPI 301 HUBLESS OR HUB AND SPIGOT PIPING

NOTES:

PROVIDE ALL SOLDER COPPER PIPING WITH ASTM B88 (ASTM B88M) PIPING, ASME B16.18 OR ASME B16.22 PIPE FITTINGS, SOLDER AND FLUX (IF USED) THAT COMPLY WITH NSF 61 AND NSF 372 FOR MAXIMUM LEAD CONTENT FOR COPPER PIPING INSTALLATIONS.

PROVIDE ALL DOMESTIC SOLDER COPPER SYSTEMS WITH ASME B16.18 OR ASME B16.22 PIPE FITTINGS, SOLDER AND FLUX (IF USED) THAT COMPLY WITH NSF 61 AND NSF 372 FOR MAXIMUM LEAD CONTENT FOR COPPER PIPING INSTALLATIONS.

PROVIDE ALL MECHANICAL PRESSED SEALED DOMESTIC COPPER PIPING WITH DOUBLE PRESSED TYPE, NSF 61/NSF 372 APPROVED FITTINGS UTILIZING EDPM, NON-TOXIC RUBBER SEALING ELEMENTS WITH FOOD GRADE RATED LUBRICANTS.

PROVIDE ALL HUBLESS CAST IRON PIPING WITH CAST IRON FITTINGS AND EACH JOINT WITH CISPI 310, HEAVY DUTY, STAINLESS STEEL CLAMP AND SHIELD ASSEMBLY WITH NEOPRENE GASKETS.

PROVIDE ALL HUB AND SPIGOT CAST IRON PIPING WITH ASTM C564, COMPRESSION TYPE, NEOPRENE GASKETS.

PROVIDE ASTM D2564 SOLVENT FOR ANY PVC DRAIN PIPING.

IN ALL CASES REFER TO PLUMBING SPECIFICATIONS.

PLUMBING FIXTURE SCHEDULE

PLAN MARK	FIXTURE DESCRIPTION AND REMARKS	MINIMUM INDIVIDUAL LINE SIZES				
		COLD WATER	HOT WATER	WASTE	VENT	ELEC
S-1	**SINK - UNDERMOUNT, ADA COMPLIANT, 18 GAUGE 304 STAINLESS STEEL, 18 INCH x 23 INCH x 5-1/2 INCH DEEP, SINGLE COMPARTMENT, CENTER DRAIN.** **ACCEPTABLE MANUFACTURERS: ELKAY (ELUHAD211555)** **SINK TRIM: CHROME PLATED, HOT AND COLD WANTER HANDLES, RIGID GOOSENECK SPOUT, ADA COMPLIANT, 1.5 GPM MAX, CONCEALED DECK MOUNT WITH 8 INCH CENTERS. 4 INCH VANDAL-PROOF WRISTBLADE HANDLES. PROVIDE WITH TMV-1 AND SET THE MAX OUTLET TEMPERATURE AT 110°F.** **ACCEPTABLE MANUFACTURERS: CHICAGO FAUCETS (786-E36ABCP)** **ACCESSORIES: PROVIDE 1-1/4" P-TRAP WITH INTEGRAL CLEANOUT, PROVIDE WITH ADA TRAP, STOP AND SUPPLY PROTECTORS, TRUEBRO 103 EZ OR EQUIVALENT.** **VERIFY EQUIPMENT LOCATION AND ROUGH IN REQUIREMENTS.** **SUPPLIES STOPS: PROVIDE QUARTER TURN, CHROME PLATED SOLID BRASS ANGLE STOPS WITH FLEXIBLE CONNECTORS AND CHROME PLATED WALL ESCUTCHEONS.**	1/2"	1/2"	2"	1-1/2"	N/A

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P6.20

SYMBOLS LEGEND

NOTE: NOT ALL SYMBOLS ARE USED IN CONSTRUCTION DOCUMENTS.

GENERAL SYMBOLS

- AHU 1 — MECHANICAL EQUIPMENT CALL-OUT: REFER TO THE EQUIPMENT DATA SCHEDULE FOR DETAILS
- GWH1 — PLUMBING EQUIPMENT CALL-OUT: REFER TO THE EQUIPMENT DATA SCHEDULE FOR DETAILS
- # — KEYED NOTE
- ###A#G — FEEDER CALL-OUT
- 1 — FOOD SERVICE EQUIPMENT DESIGNATION
- ROOM NAME NO. — ROOM NUMBER
- A — REVISION CALL-OUT
- NEW EQUIPMENT (TYPICAL)
- EXISTING EQUIPMENT (TYPICAL)
- DEMOLITION EQUIPMENT (TYPICAL)
- WALL MOUNT BRACKET (TYPICAL)

WIRING AND CONDUITS

- CONDUIT - CONCEALED IN SUSPENDED CEILING OR WALL
- CONDUIT - EXPOSED
- CONDUIT - CONCEALED BELOW SLAB OR GRADE
- CONDUIT - TURNING UP
- CONDUIT - TURNING DOWN
- CONDUIT - UP AND DOWN (CHANGE IN ELEVATION)
- CONDUIT - CONTINUED
- CONDUIT - FLEXIBLE
- CONDUIT - CAPPED
- J — JUNCTION BOX
- J — JUNCTION BOX - EMERGENCY POWER
- CONDUIT FITTING (CONDULET)
- EXPANSION FITTING
- SEALING FITTING
- CABLE TRAY

COMMUNICATIONS SYMBOLS (FOR ROUGH-IN ONLY WITH 1"CONDUIT TO ACCESSIBLE CEILING)

- TTB — TELEPHONE TERMINAL BACKBOARD (PROVIDE WITH 3/4" FIRERATED PLYWOOD)
- TELEPHONE OUTLET - WALL MOUNTED
  - \- WALL MOUNTED 18" AFF
  - T TOUCH TONE DEVICE FOR THE DEAF
  - W WALL PHONE (MOUNTED 54" AFF)
  - D DEDICATED TELEPHONE OUTLET
- AC — ABOVE COUNTER TELEPHONE OUTLET
- TELEPHONE OUTLET - FLOOR MOUNTED
- TELEPHONE OUTLET - CEILING MOUNTED
- COMPUTER OUTLET - WALL MOUNTED 18" AFF
- AC — ABOVE COUNTER DATA OUTLET
- COMPUTER OUTLET - FLOOR MOUNTED
- COMPUTER OUTLET - CEILING MOUNTED
- COMBINATION TELEPHONE/DATA OUTLET - WALL MOUNTED 18" A.F.F
- AC — ABOVE COUNTER COMMUNICATIONS OUTLET
- COMBINATION TELEPHONE/DATA OUTLET - FLOOR MOUNTED
- COMBINATION TELEPHONE/DATA OUTLET - CEILING MOUNTED
- WIFI — WIRELESS ACCESS POINT

POWER SYMBOLS

- BRANCH CIRCUIT PANELBOARD - SURFACE MOUNTED
- BRANCH CIRCUIT PANELBOARD - FLUSH MOUNTED
- DISTRIBUTION PANELBOARD OR SWITCHBOARD
- T — TRANSFORMER
- T — POLE MOUNTED TRANSFORMER
- MOTOR CONTROL CENTER
- CONTROL PANEL
- GROUND BAR
- M — UTILITY KILOWATT-HOUR METER
- SAFETY SWITCH - NON-FUSIBLE
- F — SAFETY SWITCH - FUSIBLE
- MAGNETIC STARTER
- VFD — COMBINATION STARTER
  - VFD VARIABLE FREQUENCY DRIVE
- EQUIPMENT - MOTOR
- DUPLEX RECEPTACLE (NEMA 5-20R) - MOUNTED 18" AFF
  - GFI GROUND FAULT CIRCUIT INTERRUPTER
  - SS SURGE SUPPRESSOR (ISOLATED GROUND TYPE)
  - WP WEATHERPROOF
  - H HOSPITAL GRADE
  - TP TAMPER PROOF
  - D DEDICATED
  - USB STANDARD DUPLEX WITH 2 USB PORTS
- AC — DUPLEX RECEPTACLE - MOUNTED 6" ABOVE COUNTER
- DUPLEX RECEPTACLE - SPLIT WIRED - MOUNTED 18" AFF
- DUPLEX RECEPTACLE - EMERGENCY POWER - MOUNTED 18" AFF
- DUPLEX RECEPTACLE - CEILING MOUNTED
- DUPLEX RECEPTACLE - FLUSH FLOOR MOUNTED
- QUADRUPLEX RECEPTACLE - MOUNTED 18" AFF
- AC — QUADRUPLEX RECEPTACLE - MOUNTED 6" ABOVE COUNTER
- QUADRUPLEX RECEPTACLE - CEILING MOUNTED
- QUADRUPLEX RECEPTACLE - FLOOR MOUNTED
- SINGLE RECEPTACLE - MOUNTED 18" AFF
- SPECIAL PURPOSE RECEPTACLE - MOUNTED 18" AFF
- SPECIAL PURPOSE RECEPTACLE - CEILING MOUNTED
- SPECIAL PURPOSE RECEPTACLE - FLOOR MOUNTED
- FLOOR BOX - SEE SPECS OR KEYED NOTES ON PLAN FOR DETAILS
- PP — POWER POLE
- CEILING FAN
- H — HAND DRYER
- B — PUSH BUTTON

NURSE CALL SYMBOLS

- NCP — NURSE CALL CONTROL PANEL
- N # — NURSE CALL DEVICE
  - P PULL CORD
  - B BED STATION
  - D DUTY STATION
  - M MASTER STATION
- NURSE CALL DOME LIGHT

LIGHTING SYMBOLS

- A — LUMINAIRE TYPE
- 1LP-1a NL — LUMINAIRE - RECESSED (REFER TO LUMINAIRE SCHEDULE)
  - CONNECTED FOR NIGHT LIGHT USE
  - CIRCUIT NUMBER AND SWITCH LEG (LUMINAIRES ARE CONTROLLED BY LOCAL SWITCH UNLESS DESIGNATION GIVEN)
  - PANEL NAME
- LUMINAIRE - SURFACE MOUNTED
- RECESSED LUMINAIRE CONNECTED TO THE EMERGENCY POWER SYSTEM OR BALLAST/DRIVER
- OPEN INDUSTRIAL LUMINAIRE
- OPEN INDUSTRIAL LUMINAIRE EMERGENCY POWER SYSTEM OR BALLAST/DRIVER
- WALL MOUNTED LUMINAIRE
- RECESSED DOWNLIGHT - CEILING MOUNTED
- RECESSED DOWNLIGHT w/ EMERGENCY BALLAST/DRIVER - CEILING MTD.
- SURFACE MOUNTED DOWNLIGHT
- RECESSED ADJUSTABLE/WALLWASH - CEILING MOUNTED
- POLE MOUNTED SITE LIGHTING - SINGLE HEAD
- POLE MOUNTED SITE LIGHTING - DUAL HEAD
- POLE MOUNTED SITE LIGHTING - TRIPLE HEAD
- POLE MOUNTED SITE LIGHTING - QUAD HEAD
- LINEAR PENDANT
- PENDANT
- TRACK LIGHTING
- EXIT SIGN - SINGLE FACE, CEILING MOUNTED ARROW INDICATES DIRECTION OF EXIT
- EXIT SIGN - SINGLE FACE, WALL MOUNTED
- EXIT SIGN - DUAL FACE, CEILING MOUNTED
- EXIT SIGN - DUAL FACE, WALL MOUNTED
- EXIT SIGN WITH EMERGENCY LIGHT ARROW INDICATES DIRECTION OF EXIT
- EMERGENCY LIGHT
- $a — TOGGLE SWITCH - MOUNTED 48" AFF
  - b LOWER CASE LETTER DENOTES LTG. SWITCH GROUP
  - 2 DOUBLE-POLE SINGLE-THROW (DPST)
  - 3 3-WAY
  - 4 4-WAY
  - B PUSHBUTTON
  - D DIMMER (WALL BOX TYPE)
  - K KEY OPERATED
  - M MANUAL MOTOR STARTER
  - P PILOT LIGHT T TIMER
  - TT THERMAL TRIP SWITCH
  - WP WEATHER PROOF
  - OS WALL BOX OCCUPANCY SENSOR
  - OS2 WALL BOX OCCUPANCY SENSOR FOR TWO LEVEL SWITCHING
  - VS WALL BOX VACANCY SENSOR
  - LV LOW VOLTAGE SWITCH
  - TC TEACHER ENTRY STATION
  - TE TEACHER ENTRY STATION
  - MC MOMENTARY CONTACT
- OS a — CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR
  - a LOWER CASE LETTER DENOTES LTG. SWITCH GROUP
- DL a — CEILING MOUNTED DAYLIGHT SENSOR
  - a LOWER CASE LETTER DENOTES LTG. SWITCH GROUP
- VS a — CEILING MOUNTED DUAL TECHNOLOGY VACANCY SENSOR
  - a LOWER CASE LETTER DENOTES LTG. SWITCH GROUP
- PC — PHOTOCELL
- LC1 — LIGHTING CONTROLLER
- LRP — LIGHTING RELAY PANEL
- INV — INVERTER

FIRE ALARM SYMBOLS

- FCP — MAIN CONTROL PANEL (FACP)
  - FCP F/A MAIN CONTROL PANEL
  - FSA FIRE SYSTEM ANNUNCIATOR
  - FTR F/A TRANSPONDER OR TRANSMITTER
  - ESR ELEVATOR STATUS RECALL
  - FRP F/A RELAY PANEL
  - FAC F/A COMMUNICATOR
  - FPS FIRE ALARM ANNUNCIATION CIRCUIT POWER SUPPLY
- F — MANUAL PULL STATION - MOUNTED 46" AFF
- S P — SMOKE DETECTOR
  - P PHOTOELECTRIC
  - PL PLENUM SMOKE DETECTOR
  - S SOUNDER BASE
  - LF LOW FREQUENCY TONE PER NFPA72 18.4.5.3
- D — DUCT DETECTOR HOUSING AND SAMPLING TUBE
- H R — THERMAL (HEAT) DETECTOR
  - R RATE OF RISE ONLY
  - F FIXED TEMPERATURE
  - L LINE TYPE FIXED TEMPERATURE CABLE
  - ALL HEAT DETECTORS SHALL BE 135°, COMBINATION TYPE UNLESS INDICATED OTHERWISE.
- DP — SUPERVISORY SWITCH - DRY-PIPE PRESSURE SWITCH
- TS — SUPERVISORY SWITCH - TAMPER SWITCH
- WF — SUPERVISORY SWITCH - WATER FLOW SWITCH
- CONTROL DEVICE - DOOR HOLD OPEN
- C — ADDRESSABLE INTERFACE MODULE
  - C CONTROL
  - M MONITORING
  - S SIGNALING
  - V SOLENOID VALVE
- C — NOTIFICATION APPLIANCE MOUNTED 80" AFF OR 6" FROM CEILING WHICHEVER IS LOWER
  - C CHIME
  - H HORN
  - LF LOW FREQUENCY
- 75 — NOTIFICATION APPLIANCE - STROBE ONLY MOUNTED 80" AFF
  - CANDELA VALUE AS SHOWN MINIMUM
- 75 C — NOTIFICATION APPLIANCE WITH STROBE MOUNTED 80" AFF OR 6" FROM CEILING WHICHEVER IS LOWER
  - CANDELA VALUE AS SHOWN MINIMUM
  - C CHIME
  - H HORN
  - LF LOW FREQUENCY
- SHUNT TRIP PUSH BUTTON - MOUNTED 46" AFF
- 75 C — NOTIFICATION APPLIANCE (CEILING)
  - CANDELA VALUE AS SHOWN MINIMUM
  - C CHIME
  - H HORN
  - LF LOW FREQUENCY
- CO — CARBON MONOXIDE DETECTOR - WALL MOUNTED AT 18" AFF
- 75 — CEILING MOUNTED COMBINATION VOICE EVACUATION SPEAKER AND STROBE
  - CANDELA VALUE AS SHOWN MINIMUM
- 75 S — COMBINATION VOICE EVACUATION SPEAKER AND STROBE MOUNTED 80" AFF
  - CANDELA VALUE AS SHOWN MINIMUM
- S — CEILING MOUNTED VOICE EVACUATION SPEAKER
- S — VOICE EVACUATION SPEAKER MOUNTED 80" AFF
- $RTS — REMOTE TEST SWITCH

SPECIAL SYSTEMS SYMBOLS

- ACCP — ACCESS CONTROL CONTROL PANEL
- DVR — DVR AND RACK
- CR — CARD READER - MOUNTED 48" AFF WITH 3/4" CONDUIT
  - K WITH KEY PAD
- ES — ELECTRIC STRIKE WITH 3/4" CONDUIT
- ML — ELECTRO-MAGNETIC LOCK WITH 3/4" CONDUIT
- VM — VIDEO MONITOR, FLAT SCREEN LCD WITH 3/4" CONDUIT
- DC — DOOR STATUS SWITCH WITH 3/4" CONDUIT
- MS — MOTION DETECTOR WITH 3/4" CONDUIT
- PS — POWER SUPPLY FOR PTZ CAMERA WITH 3/4" CONDUIT
- PS4 — 4-CHANNEL CAMERA POWER SUPPLY WITH 3/4" CONDUIT
- INDOOR FIXED CAMERA WITH 3/4" CONDUIT
  - PTZ PAN TILT ZOOM
  - WP WEATHERPROOF
- TV — TV OUTLET WITH 3/4" CONDUIT - MOUNTED 18" AFF
- HANDICAP DOOR OPERATORS - SEE ARCHITECTURALS WITH 3/4" CONDUIT
- GB — GLASS BREAK SENSOR WITH 3/4" CONDUIT
- V — VOLUME CONTROLLER - MOUNTED 48" AFF WITH 3/4" CONDUIT
- S — CEILING MOUNTED SPEAKER
- S — WALL MOUNTED SPEAKER
- IMS — INTERCOM MASTER STATION
- I — INTERCOM REMOTE STATION
  - P PEDESTAL MOUNT
  - S HIGH SECURITY
  - G GENERAL USE
- DOOR BELL PUSH BUTTON
- DB — DOOR BELL

ONE-LINE DIAGRAM SYMBOLS

- SERVICE DROP
- PANEL ### — PANELBOARD
- T-1 45 KVA 3Ø 208Y/120VAC — DELTA-WYE TRANSFORMER
- G # KVA/KW 480Y/277V, 3Ø, 4W — GENERATOR
- # A # POLES — AUTOMATIC TRANSFER SWITCH
- GROUND
- # AF # AT — CIRCUIT BREAKER
- # AF # AT — DRAWOUT CIRCUIT BREAKER
- M # A — METER
- CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER
- G — GROUND FAULT PROTECTED BREAKER
- ST — SHUNT TRIP BREAKER
- # A — SWITCH
- FUSE
- CONTACTOR
- THERMAL OVERLOAD
- 49 — ELECTRONIC OVERLOAD
- SPD — SURGE PROTECTION DEVICE
- VFD — VARIABLE FREQUENCY DRIVE
- K — KIRK KEY INTERLOCK
- DPM — DIGITAL POWER METER

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GENERAL NOTES

COMMON REQUIREMENTS:

A. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, ELEVATIONS, AND BUILDING DETAILS. VERIFY LOCATION OF ALL WALL OUTLETS, SWITCHES, ETC., WITH ARCHITECTURAL DRAWINGS AND ACTUAL CONDITIONS.

B. PRIOR TO ROUGH-IN AND FINAL CONNECTION, VERIFY ELECTRICAL REQUIREMENTS AND EXACT LOCATION OF EQUIPMENT BEING PROVIDED BY OTHER TRADES. REFERENCE ENTIRE SET OF CONSTRUCTION DOCUMENTS AS WELL AS FINALIZED SHOP DRAWINGS.

C. SEE MECHANICAL/PLUMBING DRAWINGS FOR ELECTRICAL REQUIREMENTS OF ALL MECHANICAL/PLUMBING/KITCHEN EQUIPMENT, FOR WIRING AND CONTROL DIAGRAMS, AND FOR EXACT LOCATION OF EQUIPMENT.

D. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY, COORDINATE AND CONFIRM WITH THE MECHANICAL AND PLUMBING CONTRACTOR THE EXACT LOCATIONS AND FEED REQUIREMENTS OF ALL EQUIPMENT NEEDING AN ELECTRICAL CONNECTION.

E. COORDINATE SCHEDULE OF CONSTRUCTION WITH THE OWNER, OTHER TRADES AND UTILITIES INVOLVED BEFORE TRENCHING AND INSTALLATION OF UNDERGROUND CONDUIT. USE EXTREME CAUTION DURING EXCAVATION TO LOCATE EXISTING UNDERGROUND PIPING, CONDUITS, ETC. LOCATE AND PROTECT ANY BURIED UTILITIES IN AREAS OF EXCAVATION.

F. GROUT AND SEAL ALL CONDUIT PENETRATIONS OF WALLS AND FLOOR SLABS TO PRESERVE FIRE RATING AND WATERTIGHT INTEGRITY.

G. DRAWINGS SHOW EXISTING CONDITIONS OF THE SITE. AN ATTEMPT HAS BEEN MADE TO SHOW EXISTING BUILDING, SITE DETAILS, ETC., BUT ACCURACY CANNOT BE GUARANTEED. VERIFY EXACT LOCATIONS OF ALL CIRCUITS, CONDUITS, PIPING, EQUIPMENT, ETC. VERIFY ALL SITE AND BUILDING DETAILS.

H. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ACTUAL LAYOUT OF LUMINAIRES AND CEILING TYPES. VERIFY CEILING TYPES PRIOR TO ORDERING LUMINAIRES.

I. REFER TO ARCHITECTURAL PLANS TO CONFIRM ALL FIRE-RATED CEILINGS AND WALLS.

1. ALL PENETRATIONS OF FIRE-RESISTIVE FLOORS OR SHAFT WALLS SHALL BE PROTECTED BY MATERIALS AND INSTALLATION DETAILS THAT CONFORM TO UNDERWRITERS' LABORATORIES LISTINGS FOR "THROUGH-PENETRATION FIRE STOP SYSTEMS." THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILS, FURNISHED BY THE MANUFACTURER OF THE FIRE STOP MATERIAL, WHICH SHOW COMPLETE CONFORMANCE TO THE UL LISTING AND SHALL BE SPECIFIC FOR EACH PENETRATION WITH ALL VARIABLES DEFINED. THESE FINAL AND APPROVED DRAWINGS SHALL BE READILY AVAILABLE TO THE LOCAL INSPECTORS AT ALL TIMES AT THE PROJECT SITE.

K. PRIOR TO ANY ROUGH-IN FOR ELECTRIC WATER COOLER RECEPTACLES, COORDINATE WITH THE ELECTRIC WATER COOLER INSTALLER THE EXACT LOCATION SO THAT THE ENTIRE ELECTRIC CORD WILL BE CONCEALED FROM ELECTRIC WATER COOLER TO RECEPTACLE.

L. ALL LUMINAIRES SHALL BE EQUIPPED WITH A GREEN GROUND WIRE BONDED TO THE HOUSING.

M. ALL RECESSED LUMINAIRES IN HARD CEILINGS SHALL HAVE FEED-THRU JUNCTION BOXES.

N. FINISH OF ALL LUMINAIRES IS SUBJECT TO ARCHITECT'S APPROVAL. SUBMIT SAMPLES IF REQUESTED.

O. ALL LUMINAIRES WITH EMERGENCY BATTERIES SHALL HAVE THE BATTERY CHARGER CIRCUITED TO THE AMBIENT LIGHTING CIRCUIT IN THE SPACE BUT SHALL BE UNSWITCHED. IF THE LUMINAIRE IS INDICATED AS SWITCHED, ONLY THE LUMINAIRE SHALL BE CONTROLLED BY THE SWITCHED CONDUCTORS (BATTERY CHARGER SHALL REMAIN UNSWITCHED).

P. THE ELECTRICAL CONTRACTOR SHALL BE HELD FINANCIALLY RESPONSIBLE FOR ANY AND ALL COSTS OF THE ENGINEERS TIME REQUIRED TO REVIEW AND RESEARCH NON-SPECIFIED EQUIPMENT SUBMITTED FOR SUBSTITUTION BY THE ELECTRICAL CONTRACTOR. THESE COSTS SHALL BE AUTOMATICALLY INVOICED TO THE CONTRACTOR UNLESS SUCH SUBSTITUTIONS FOLLOW THE GUIDELINES FOR SUBSTITUTION AND ARE WITHIN THE PROPER TIME FRAME AS OUTLINED IN OTHER SECTIONS OF THIS SPECIFICATION.

Q. FIELD ADJUST ALL LUMINAIRES REQUIRING AIMING WITH THE OWNER PRESENT AND TO THEIR SATISFACTION.

R. ON LINEAR WALL SLOT LUMINAIRES, LAMPS SHALL BE CONTINUOUS INCLUDING CORNERS.

S. PROVIDE AND INSTALL IN EACH PANEL, TYPEWRITTEN NEAT TWO-COLUMN CIRCUIT INDEX CARD SET UNDER PLASTIC COVERS ON INSIDE OF DOORS. EACH ODD-NUMBERED CIRCUIT SHALL BE IN SEQUENCE ON ONE COLUMN AND THE EVEN-NUMBERED CIRCUITS ON THE OTHER COLUMN (E.G. 1,3,5...,2,4,6...). EACH CIRCUIT SHALL BE IDENTIFIED AS TO THE USE AND ROOM NAME(S) OR AREA(S). THE CONTRACTOR SHALL CONFIRM ROOM NAMES AND/OR ROOM NUMBERS WITH THE ARCHITECT PRIOR TO PROJECT COMPLETION.

T. FROM EACH FLUSH MOUNTED PANEL STUB (2) 3/4"C AND (1) 1"C INTO NEAREST ACCESSIBLE CEILING SPACE.

U. PRIOR TO SUBMITTING BID PROPOSAL, BIDDER SHALL EXAMINE ALL GENERAL CONSTRUCTION DRAWINGS AND VISIT CONSTRUCTION SITE TO BE FAMILIAR WITH EXISTING CONDITIONS UNDER WHICH HE WILL HAVE TO OPERATE AND WHICH WILL IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN THIS CONNECTION ON BEHALF OF THE CONTRACTOR FOR ANY ERROR OR NEGLIGENCE ON HIS PART.

V. UNLESS INDICATED IN SOME MANNER THAT ELECTRICAL EQUIPMENT IS EXISTING, ALL EQUIPMENT SHALL BE NEW.

W. CONTRACTOR SHALL NOT SCALE DRAWING FOR QUANTITIES. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL MEASUREMENTS.

X. IF POSSIBLE, ALL NEWLY INSTALLED RECEPTACLES SHALL BE INSTALLED IN SEPARATE OR ADJACENT STUD SPACES, TO AVOID SOUND TRANSMISSION AND WALL INTEGRITY ISSUES. ALL NEWLY INSTALLED RECEPTACLES LOCATED IN COMMON STUD SPACES OF FIRE-RESISTANT WALLS SHALL BE EQUIPPED WITH FIRE-RESISTANT PUTTY PADS AT THE BACK OF EACH BOX IN ACCORDANCE WITH NEC.

Y. PROVIDE PROTECTIVE WIRE CAGES FOR ALL OVERHEAD SUSPENDED LIGHTS, EXIT LIGHTS, WALL MOUNTED EMERGENCY LIGHTS, FIRE ALARM MANUAL PULL STATIONS, FIRE ALARM AUDIBLE/VISUAL DEVICES, FIRE ALARM VISUAL DEVICES AND ANY OTHER WALL MOUNTED ELECTRICAL EQUIPMENT SUBJECT TO DAMAGE IN GYMNASIUMS.

Z. SECURE ALL LOW VOLTAGE DATA, SIGNALING AND CONTROL WIRING TO THE STRUCTURE AT INTERVALS NO MORE THAN 4 FEET.

AA. ALL FLOOR MOUNTED SWITCH GEAR, UNIT SUBSTATIONS, BOXES AND TRANSFORMERS LARGER THAN 75 KVA SHALL BE INSTALLED ON A NOMINAL 4" HOUSEKEEPING PAD. PAD SHALL EXTEND FROM ELECTRICAL EQUIPMENT 6" IN ANY DIRECTION.

BB. WHERE CONDUIT AND WIRING RUNS ARE NOT SHOWN ON FLOOR PLANS, THE CONTRACTOR SHALL DETERMINE AND PROVIDE THE REQUIRED CONDUIT AND WIRING FOR SPECIFIED CIRCUITING IN ACCORDANCE WITH NEC AND THE FOLLOWING MINIMUM REQUIREMENTS:
1. MINIMUM CONDUIT SIZE SHALL BE 3/4".
2. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG. #10 AWG SHALL BE USED FOR HOME RUNS OF 20 AMP BRANCH CIRCUITS OVER 100 FEET IN LENGTH.
3. EACH RACEWAY SHALL CONTAIN AN INSULATED EQUIPMENT GROUNDING CONDUCTOR PER NEC.
4. DERATING OF CONDUCTOR AMPACITY SHALL BE APPLIED PER NEC.
5. NO SHARING OF NEUTRALS ALLOWED. CIRCUIT SHALL HAVE DEDICATED NEUTRAL CONDUCTORS. ONE CIRCUIT, ONE NEUTRAL.
6. MAXIMUM SIX FOOT FLEXIBLE LUMINAIRE WHIP SHALL BE USED FOR FINAL CONNECTIONS TO LUMINAIRES INSTALLED IN LAY-IN CEILINGS. MAXIMUM FOUR LUMINAIRE WHIPS SHALL BE CONNECTED FROM ONE JUNCTION BOX. FEED THRU BETWEEN LUMINAIRES SHALL NOT BE ALLOWED.

RENOVATION NOTES:

A. CERTAIN RENOVATION OF ELECTRICAL FACILITIES WILL BE REQUIRED IN THE EXISTING BUILDING. EXISTING CONDUIT RUNS ARE GENERALLY NOT SHOWN, ALTHOUGH A FULL ATTEMPT HAS BEEN MADE TO SHOW SOME EXISTING CONDITIONS, OF WHICH INFORMATION HAS BEEN TAKEN FROM EXISTING RECORD DRAWINGS OF THIS PROJECT. THE DRAWINGS SHOWING LOCATION OF EXISTING EQUIPMENT, OUTLETS, LUMINAIRES, ETC., IN EXISTING AREAS ARE APPROXIMATE ONLY (FIELD VERIFY).

B. BRANCH CIRCUITS SHALL BE REUSED WHERE PRACTICAL AND SHALL, IN ADDITION, BE REMODELED AS REQUIRED. THE CONTRACTOR SHALL CONCEAL ALL WORK WHERE POSSIBLE. WHERE EXPOSED WORK IS REQUIRED IN FINISHED AREAS, THE CONTRACTOR SHALL USE WIREMOLD RACEWAY WITH #500 BEING THE MINIMUM SIZE ACCEPTABLE.

C. EXISTING ELECTRICAL WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THIS CONTRACT SHALL BE RESTORED TO OPERATING CONDITION, AS REQUIRED AND/OR DIRECTED. WHERE REQUIRED, SHOWN AND/OR DIRECTED, OUTLETS AND CONDUIT RUNS SHALL BE RELOCATED. IN SOME CASES IT MAY BE NECESSARY TO EXTEND CONDUITS AND PULL IN NEW WIRING OR INSTALL JUNCTION BOXES AND SPLICE IN NEW WIRING OR REPLACE OLD WIRING WITH NEW.

D. OUTLETS FROM WHICH LUMINAIRES, SWITCHES, RECEPTACLES, AND/OR OTHER ELECTRICAL DEVICES ARE MOVED AND WHICH ARE NOT REPLACED OR REUSED SHALL BE REMOVED OR, IF IT IS NOT POSSIBLE TO REMOVE, PLACE A BLANK COVER ON THE OUTLET BOX. WHERE OUTLETS, BOXES, ETC., ARE COMPLETELY REMOVED, THE CONTRACTOR SHALL CUT OFF CONDUITS AND REMOVE WIRING.

E. WHERE EXISTING LUMINAIRES ARE TO BE REUSED, THE ELECTRICAL CONTRACTOR SHALL CLEAN AND REPLACE LAMPS, REPAIR OR REPLACE DEFECTIVE PARTS, LENS, BALLAST, ETC. AS REQUIRED.

F. WHERE EXISTING CONDUIT IS TO BE ABANDONED, THE CONDUIT SHALL BE REMOVED IF IT IS EXPOSED, IN A CRAWL SPACE OR IN AN ACCESSIBLE CEILING. WHERE IT IS IMPOSSIBLE TO REMOVE THE CONDUIT, IT SHALL BE CUT OFF AND CAPPED OR PLUGGED, THAT IT WILL NOT PROTRUDE BEYOND THE FINISHED SURFACE. WHERE CONDUITS EXTENDING THROUGH FLOORS ARE TO BE ABANDONED, THE CONTRACTOR SHALL CUT AND CAP OR PLUG CONDUIT, THAT IT WILL NOT PROTRUDE ABOVE THE FLOOR.

G. THE CONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRED PATCHING, PLASTERING, PAINTING AND/OR OTHER REPAIR DUE TO THE INSTALLATION OF ELECTRICAL WORK UNDER THE TERMS OF THIS SPECIFICATION. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED. THE CONTRACTOR SHALL EMPLOY QUALIFIED AND EXPERIENCED WORKMEN FOR THIS WORK. ALL RESTORATION WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT AND/OR THE OWNER.

H. ALL TEMPORARY AND REMODELING WORK SHALL BE CONSIDERED A PART OF THIS CONTRACT AND NO EXTRA CHARGES WILL BE ALLOWED. THIS SHALL INCLUDE MINOR ITEMS OF MATERIAL OR EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.

I. EXAMINE ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS AND SPECIFICATIONS TO DETERMINE THE SEQUENCE OF CONSTRUCTION THROUGHOUT THE PROJECT, INCLUDING EXISTING, TEMPORARY, REMODELED AND NEW AREAS.

J. ALL ELECTRICAL CONNECTIONS REQUIRING AN OUTAGE SHALL BE MADE DURING AN APPROVED TIME LIMIT. CHANGEOVERS SHALL BE AS SHORT A DURATION AS POSSIBLE AND SHALL NOT INTERFERE WITH NORMAL OPERATION OF THE OWNER'S FACILITIES. NOTICE SHALL BE REQUIRED IN ADVANCE OF A SHUTDOWN OF ANY ELECTRICAL CIRCUIT FOR CHANGEOVER, AND SUCH A CHANGEOVER SHALL BE DONE DURING HOURS AS DIRECTED BY OWNER. WORK SHALL BE SCHEDULED SO THAT AT NO TIME WILL ANY EMERGENCY FEEDER, CIRCUIT, OR FIRE ALARM ZONE BE OUT OF SERVICE. PROVIDE NECESSARY TEMPORARY FEEDERS TO ACCOMPLISH THIS REQUIREMENT.

K. EXISTING LOW VOLTAGE WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THIS CONTRACT SHALL BE RESTORED TO CONDITION, OR POSITION, AS REQUIRED. PROPERLY RE-SECURE CABLE IN CHASES, CRAWL SPACES, TUNNELS, AND CEILING SPACES AS REQUIRED BY NEC. IN SOME CASES IT MAY BE NECESSARY TO ADD SUPPORTING HARDWARE TO ACCOMPLISH THIS REQUIREMENT.

DEMOLITION:

A. RETURN REMOVED MATERIAL DEEMED SALVAGEABLE BY OWNER'S REPRESENTATIVE. MATERIALS DEEMED NOT SALVAGEABLE SHALL BE REMOVED FROM THE PREMISES.

B. REMOVE ALL EXISTING WIRING DEVICES, LUMINAIRES, WIRE, CONDUIT, ETC., AS NOTED OR INDICATED WITHIN DEMOLITION AREA. (ALL ITEMS MAY NOT BE SHOWN). REWORK AS NECESSARY CIRCUITING WHICH REQUIRES CONTINUATION THROUGH THE AREA.

C. ELECTRICAL CONTRACTOR TO PROVIDE ALL NECESSARY LABOR, CONDUIT, WIRE, CONNECTIONS, ETC., FOR DEVICES, LUMINAIRES, ETC., NOTED AS "EXISTING TO REMAIN" SUCH THAT EXISTING CIRCUIT CONTINUITY IS MAINTAINED.

D. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK REQUIRED TO REMOVE/RELOCATE ANY EXISTING ELECTRICAL EQUIPMENT SUCH THAT ELECTRIC SHOCK HAZARDS TO WORKMEN ARE ELIMINATED DURING DEMOLITION AND NEW CONSTRUCTION.

E. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK IN REMOVING AND REPLACING "EXISTING TO REMAIN" LUMINAIRES, DEVICES, ETC., AS REQUIRED SO THAT THESE DEVICES ARE NOT DAMAGED DURING DEMOLITION. RELOCATED TO NEAREST APPROPRIATE LOCATION TO AVOID CONFLICTS WITH OTHER TRADES' WORK. REPLACE WITH NEW ANY "EXISTING TO REMAIN" LUMINAIRE, DEVICE, ETC., NOT DEEMED SALVAGEABLE BY OWNER'S REPRESENTATIVE.

F. REMOVED OR DAMAGED CONDUIT, WIRE, AND FITTINGS SHALL NOT BE REUSED FOR RELOCATED OR NEW DEVICES.

G. MAKE AS-BUILTS WITH NEW TYPED DIRECTORIES FOR ALL PANELBOARDS, INDICATING CIRCUIT DESCRIPTION (USED OR SPARE), CIRCUIT BREAKERS AND CIRCUIT LOAD.

H. WORK REQUIRED FOR EXISTING EQUIPMENT NOTED AS ``EXISTING TO BE REMOVED" SHALL INCLUDE:
1. REMOVAL OF FEEDER FROM EQUIPMENT TO POINT OF FEED.
2. REMOVAL OR RE-CIRCUITING OF ALL BRANCH CIRCUITING.
3. REMOVAL OF ALL FITTINGS, SUPPORTS, BRACKETS, ETC.
4. PATCHING OF WALLS, FLOORS AND CEILINGS PER ARCHITECT'S INSTRUCTIONS.
5. CAPPING OF FEEDER CONDUIT AT 6" ABOVE OR BELOW FLOOR/CEILING AS REQUIRED AND MARKING LOCATION OF POINT OF FEED WITH AN ENGRAVED BRASS TAG.
6. REMOVAL OF FEEDER CONDUIT IF FOUND TO BE UNSALVAGEABLE BY ARCHITECT, ENGINEER OR OWNER'S REPRESENTATIVE.

I. EXISTING EQUIPMENT NOT IMPLICITLY SHOWN ON THE DRAWINGS IS INTENDED TO BE ``EXISTING TO REMAIN UNCHANGED", UNLESS NOTED OTHERWISE.

ABBREVIATIONS

(E)	EXISTING (ALSO COVERED BY TEXT WEIGHT)
(F)	FUTURE
(PART)	PARTIAL CIRCUIT
(R)	RELOCATE
2S1W	TWO SPEED, SINGLE WINDING
2S2W	TWO SPEED, DOUBLE WINDING
A	AMPERES
AC	6" ABOVE COUNTER
ADA	AMERICANS WITH DISABILITIES ACT
AF	AMPERES FRAME
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERES INTERRUPTING CAPACITY
AL	ALUMINUM
AT	AMPERES TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CAM	CAMERA
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CCW	COUNTER CLOCKWISE
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
CO	CONDUIT ONLY
CRI	COLOR RENDERING INDEX
CT	CURRENT TRANSFORMER
CU	COPPER
CW	CLOCKWISE
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DR	DUPLEX RECEPTACLE
DWG	DRAWING(S)
EC	ELECTRICAL CONTRACTOR
ELC	ELEVATOR CONTRACTOR
ELEC	ELECTRIC/ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXP	EXPLOSION PROOF
F	FUSED
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FC	FOOTCANDLE
FLA	FULL LOAD AMPERES
FMC	FLEXIBLE METAL CONDUIT
FO	FIBER OPTIC
FPC	FIRE PROTECTION CONTRACTOR
FS	FUSED SWITCH
FSD	FIRE/SMOKE DAMPER
FT	FOOT/FEET
FVNR	FULL VOLTAGE, NON-REVERSING
FVR	FULL VOLTAGE, REVERSING
G	GROUND
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GF	GROUND FAULT
GFI/GFCI	GROUND FAULT INTERRUPTER
GND	GROUND/GROUNDING
H	HORIZONTALLY MOUNTED
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HZ	FREQUENCY
I/O	INPUT/OUTPUT
IC	INTERRUPTING CAPACITY
ID	INSIDE DIAMETER
IDF	INTERMEDIATE DISTRIBUTION FRAME
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
K	KELVIN (COLOR TEMPERATURE)
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLTS
KVA	KILOVOLT-AMPERES
KW	KILOWATTS
KWH	KILOWATT-HOUR
LAN	LOCAL AREA NETWORK
LC	LIGHTING CONTACTOR
LCP	LIGHTING CONTROL PANEL
LED	LIGHT EMITTING DIODE
LF	LINEAR FOOT
LFMC	LIQUID-TIGHT FLEXIBLE METAL CONDUIT
LM	LUMEN
LTG	LIGHTING
LV	LOW VOLTAGE
MAN	MANUAL MOTOR STARTER WITH OVERLOADS
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPERES
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDF	MAIN DISTRIBUTION FRAME
MDP	MAIN DISTRIBUTION PANEL
MEPFP	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION
MGB	MASTER GROUND BAR
MH	MANHOLE
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUG ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MSB	MAIN SWITCHBOARD
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MVA	MEGAVOLT-AMPERES
MW	MEGAWATTS
MWH	MEGAWATT-HOURS
N	NEUTRAL
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NONFUSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NP	NAMEPLATE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OWN	OWNER
P	POLE
PA	PUBLIC ADDRESS
PB	PULL BOX
PC	PHOTOCELL
PC	PLUMBING CONTRACTOR
PDT	PASSIVE DUAL TECHNOLOGY
PF	POWER FACTOR
PH	PHASE
PIR	PASSIVE INFRARED
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PR	PAIR
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PV	PHOTOVOLTAIC
PVC	POLYVINYL CHLORIDE
PWC	PRE-WIRED CONTROLS
PWR	POWER
RCPT	RECEPTACLE
REQD	REQUIRED
RF	RADIO FREQUENCY
RM	ROOM
RMC	RIGID METAL CONDUIT
RNC	RIGID NON-METALLIC CONDUIT (SCH 40)
RVAT	REDUCED VOLTAGE - AUTOTRANSFORMER
SC	SHORT CIRCUIT
SCC	SHORT CIRCUIT CURRENT RATING
SDP	SUBDISTRIBUTION PANEL
SEC	SECONDARY
SHLD	SHIELD(ED) (AS IN CABLE)
SHT	SHEET
SPD	SURGE-PROTECTIVE DEVICE
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SR	SINGLE RECEPTACLE
ST	SHUNT TRIP
SW	MOTOR RATED SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TBD	TO BE DETERMINED
TC	TIMECLOCK
TCC	TEMPERATURE CONTROLS CONTRACTOR
TEMP	TEMPERATURE
TT	THERMAL TRIP SWITCH
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
U	UTILITY
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERUPTABLE POWER SUPPLY
V	VOLTS
VA	VOLT-AMPERES
VAC	VOLTS ALTERNATING CURRENT
VDC	VOLTS DIRECT CURRENT
VFD	VARIABLE FREQUENCY DRIVE
VND	VENDOR
W	WATTS
W	WIRE
WHM	WATTHOUR METER
WP	WEATHERPROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
Z	IMPEDANCE

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DATE: 3/12/2024

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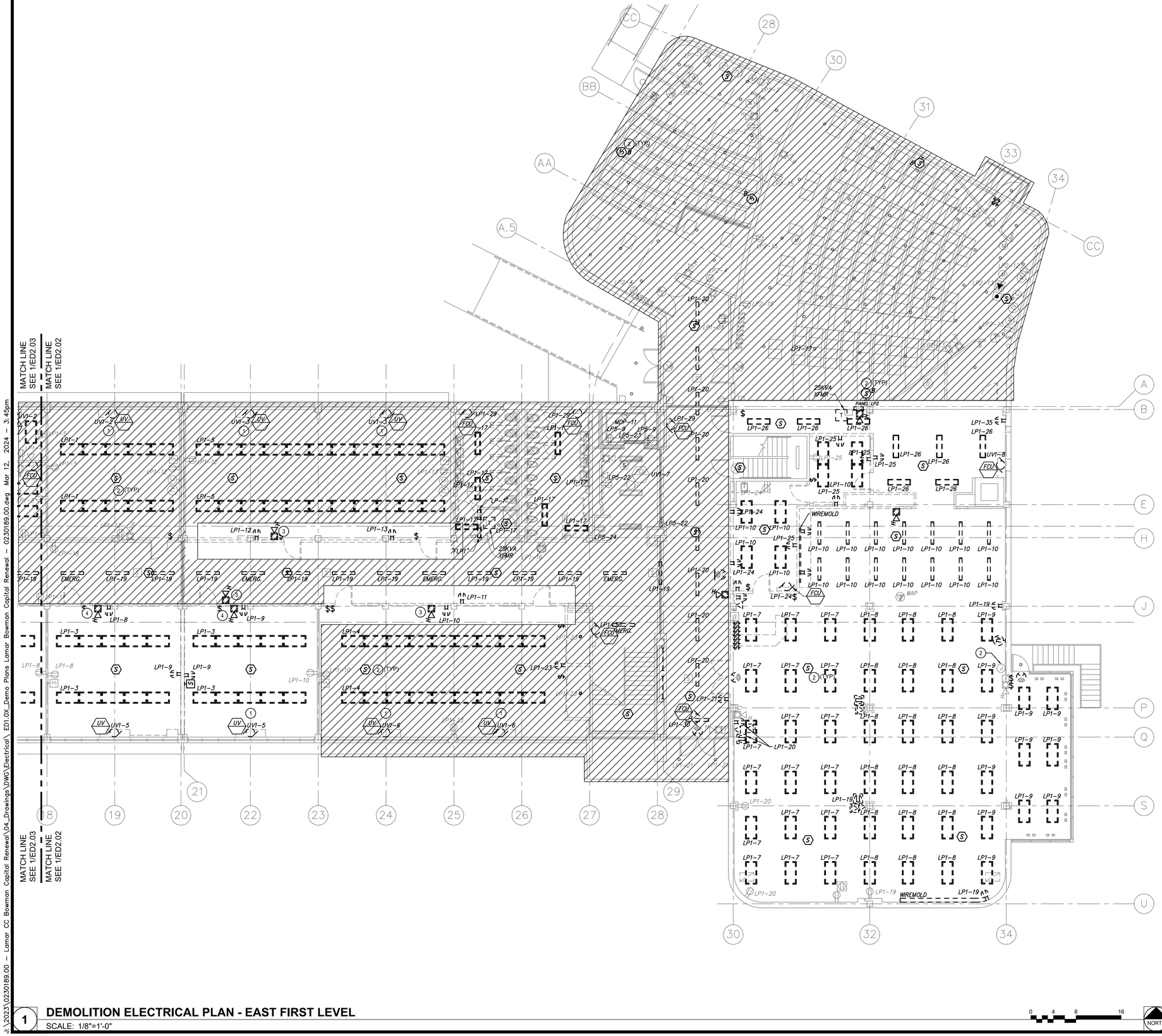

KEYNOTES (#)

1. PROTECT EXISTING CIRCUIT DURING DEMOLITION FOR RE-USE. UNIT VENTILATORS WILL BE REPLACED ONE FOR ONE.
2. EXISTING DISPLAY CASE CONTAINS WIREMOLD TO BE PROTECTED DURING DEMOLITION.

GENERAL NOTES

A. FOR EACH PANEL TO BE DEMOED, DISCONNECT EXISTING PANELBOARD BRANCH CIRCUITS AND FEEDERS. PROVIDE NEW FEEDERS AND NEW CONDUITS INCLUDING GROUND CONDUCTORS AS NOTED ON THE ASSOCIATED POWER PLANS (NEW WORK).

B. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

1 **DEMOLITION ELECTRICAL PLAN - EAST FIRST LEVEL**
SCALE: 1/8"=1'-0"

0 4 8 16

NORTH

J:\2023\02301890.00 – Lamar CC Bowman Capital Renewal\04_Drawings\DWG\Electrical_ED1.0X_Demo Plans Lamar Bowman Capital Renewal – 02301890.00.dwg Mar 12, 2024 – 3:45pm

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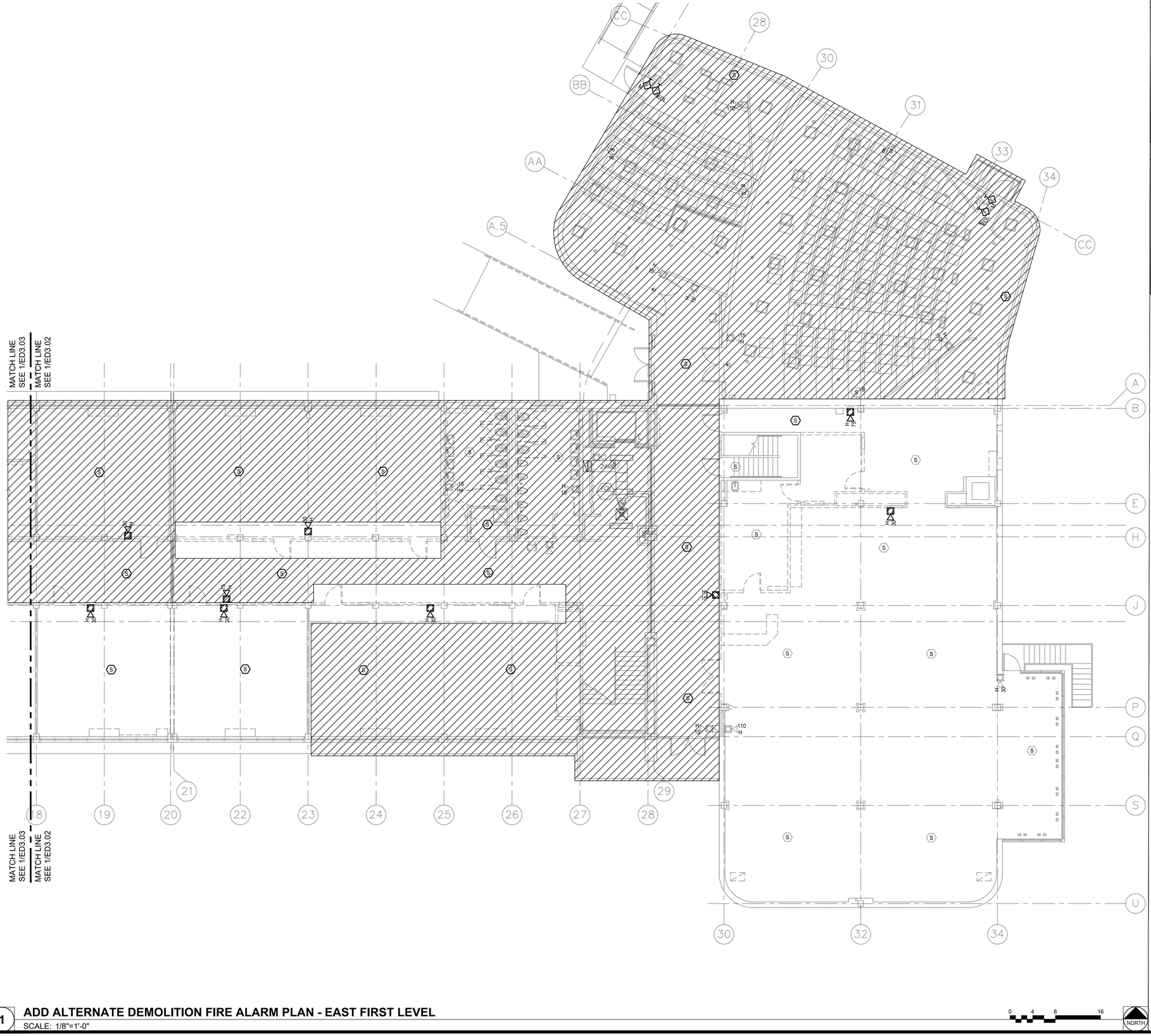

KEYNOTES (#)

1. EXISTING DEVICE TO REMAIN. MAINTAIN EXISTING CIRCUIT CONTINUITY TO EXISTING ANNUNCIATION/INITIATION CIRCUIT AS REQUIRED.
2. REMOVE EXISTING FIRE ALARM DEVICE. PROTECT EXISTING CABLING AND ROUGH-IN FOR INSTALLATION OF NEW DEVICE. REFER TO ASSOCIATED ADD ALTERNATE FIRE ALARM PLANS FOR ADDITIONAL INFORMATION.
3. DISCONNECT AND REMOVE EXISTING SMOKE DETECTOR. REMOVE EXISTING INITIATION CIRCUIT AND ROUGH-IN (BUILDING SPRINKLER IS BEING ADDED AS PART OF THIS RENOVATION MAKING DETECTION NO LOONGER REQUIRED).

GENERAL NOTES

A. PROVIDE 24 HOUR/7DAY PER WEEK FIRE WATCH DURING THE DURATION OF THE EXISTING FIRE ALARM SYSTEM REPLACEMENT. FIRE WATCH SHALL REMAIN IN PLACE UNTIL NEW FIRE ALARM SYSTEM IS FULLY FUNCTIONAL. IF IT IS FEASIBLE, THE NEW FIRE ALARM SYSTEM MAY BE PHASED USING MONITOR MODULES TO MONITOR SECTIONS OF THE EXISTING FIRE ALARM SYSTEM FOLLOWING THE REMOVAL OF THE EXISTING FIRE ALARM PANEL. THE FIRE ALARM MANUFACTURER SHALL DETERMINE EXACT SEQUENCING REQUIREMENTS.

1 **ADD ALTERNATE DEMOLITION FIRE ALARM PLAN - EAST FIRST LEVEL**
SCALE: 1/8"=1'-0"

0 4 8 16

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SHEET TITLE:
ADD ALTERNATE DEMOLITION FIRE ALARM PLAN - EAST FIRST LEVEL

DATE: 3/12/2024

REV:

SHEET NO.:

ED3.20

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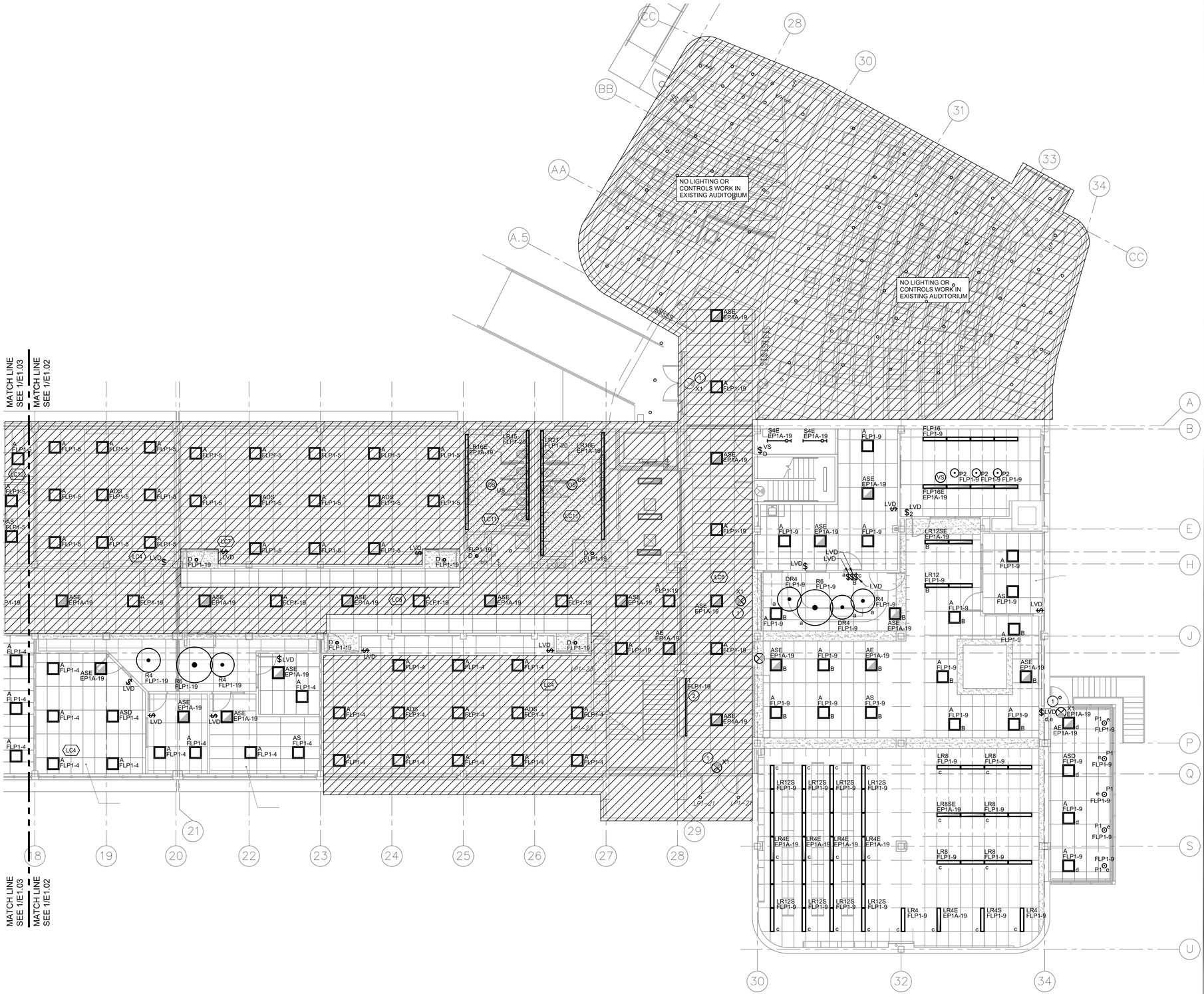

1 **LIGHTING PLAN - EAST FIRST LEVEL**
SCALE: 1/8"=1'-0"

0 4 8 16

NORTH

KEYNOTES (#)

1. CONNECT TO EXISTING EMERGENCY/EGRESS LIGHTING CIRCUIT PROTECTED DURING DEMOLITION.

GENERAL NOTES

A. LUMINAIRES WITH THE SUFFIX "S" SHALL INCLUDE INTEGRAL OCCUPANCY/VACANCY SENSOR. LUMINAIRE WITH THE SUFFIX "SD" SHALL INCLUDE INTEGRAL COMBINATION OCCUPANCY/VACANCY/DAYLIGHT SENSOR.

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LIGHTING
PLAN - EAST
FIRST LEVEL

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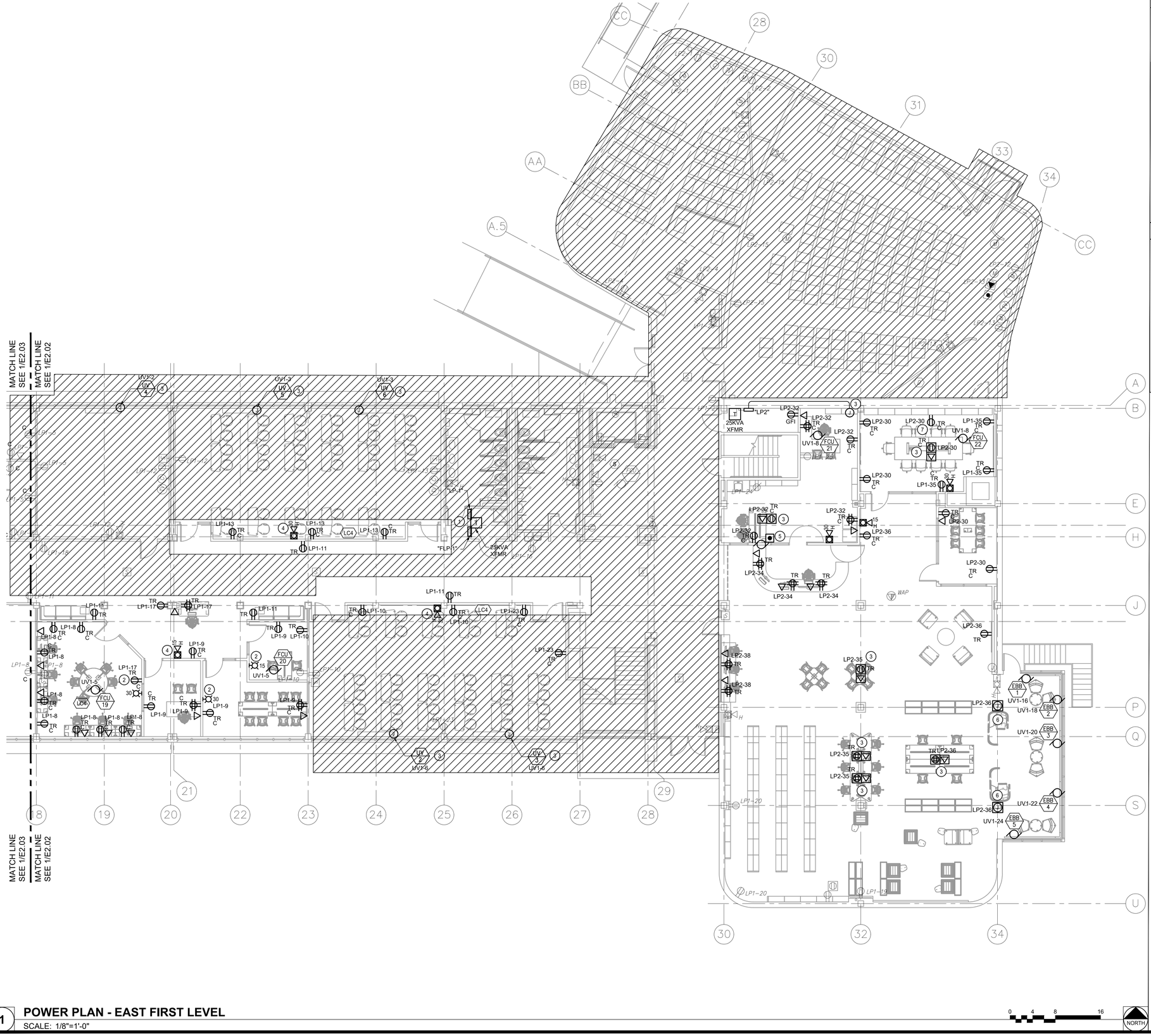

1 **POWER PLAN - EAST FIRST LEVEL**

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

0 4 8 16

NORTH

KEYNOTES

1. RECONNECT EXISTING BRANCH CIRCUITS AND FEEDER TO NEW PANELBOARDS AND TRANSFORMERS (TYPICAL). REFER TO GENERAL NOTES FOR ADDITIONAL REQUIREMENTS WITH REGARDS TO BRANCH CIRCUITS AND FEEDERS.
2. PROVIDE LEGRAND EVOLUTION SERIES 6-GANG FLOOR BOX (#RFB6) WITH HINGED, GASKETED COVER (FINISH PER ARCHITECT). SAW CUT EXISTING SLAB FOR INSTALLATION. SAW CUT SLAB FROM BOX LOCATION TO NEAREST FULL HEIGHT WALL FOR EXTENSION OF (1) 3/4" SCHEDULE 40 PVC AND (2) 1-1/4" SCHEDULE 40 PVC CONDUITS TO ABOVE ACCESSIBLE CEILING. TRANSITION FROM PVC TO EMT ONCE ABOVE CONCRETE. X-RAY EXISTING SLAB PRIOR TO SAW CUTTING.
3. PROVIDE LEGRAND EVOLUTION SERIES FIRE RATED POKE THRU DEVICE (#6AT) WITH HINGED COVER (2) 20A DUPLEX RECEPTACLES AND (2) DATA PLATES. CORE DRILL EXISTING SLAB. EXTEND CONDUIT TO NEAREST FULL HEIGHT WALL FOR PATHWAY TO ABOVE ACCESSIBLE CEILING. X-RAY EXISTING SLAB PRIOR TO CORE DRILLING.
4. PROVIDE OUTLET/PULL BOX (SIZED AS REQUIRED) ABOVE CEILING FOR EXTENSION OF FEEDER AND BRANCH CIRCUITING FOR PANELBOARD "UV1" RELOCATION. INCLUDE (24) 3/4" CONDUITS AND #12 CONDUCTORS IN BID. REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR FEEDER SIZE.
5. REFER TO SECURITY DOOR MANUFACTURER REQUIREMENTS FOR ADDITIONAL INFORMATION.
6. PROVIDE CONNECTION FOR POWER TRACKS UNDER CARPET FOR POWER HUBS. COORDINATE EXACT LOCATION WITH POWER HUB INSTALLER.
7. PROVIDE SURFACE MOUNTED OUTLET AND RECEPTACLE MOUNTED ON STACKS FED BY 3/4" EMT CONDUIT.

GENERAL NOTES

A. ALTERNATE: REPULL ALL EXISTING BRANCH CIRCUITS TO INCLUDE GROUNDING CONDUCTOR.

B. ALTERNATE: REPULL EXISTING FEEDER CODUCTORS IN EXISTING CONDUIT TO INCLUDE GROUND CONDUCTOR.

C. REFER TO MECHANICAL AND PLUMBING DOCUMENTS FOR NEW EQUIPMENT, LOCATIONS AND LOADS.

D. PROVIDE ADDRESSABLE FIRE ALARM SYSTEM WITH HORN/STROBE/COMBINATION NOTIFICATION DEVICES, PHOTOELECTRIC SMOKE DETECTION SYSTEMS, ETC. AS REQUIRED PER THE NFPA72.

E. FIRE ALARM SHOWN ON THIS PLAN SHALL BE CONSIDERED BASE BID. REFER TO ADD ALTERNATE FIRE ALARM PLANS FOR ALTERNATE FIRE ALARM REQUIREMENTS UPON REPLACEMENT OF THE EXISTING FIRE ALARM SYSTEM.

F. RECEPTACLES IN AREA OF WORK SHALL BE 50% CONTROLLED. PROVIDE SPILL CONTROLLED DEVICES WITH THE TOP RECEPTACLE CONTROLLED, BOTTOM RECEPTACLE CONSTANT HOT. PROVIDE PLUG LOAD POWER PACK CONNECTED LOCATED TO THE LOCAL OCCUPANCY/VACANCY SENSOR SERVING ROOM.

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POWER
PLAN - EAST
FIRST LEVEL

DATE: 3/12/2024

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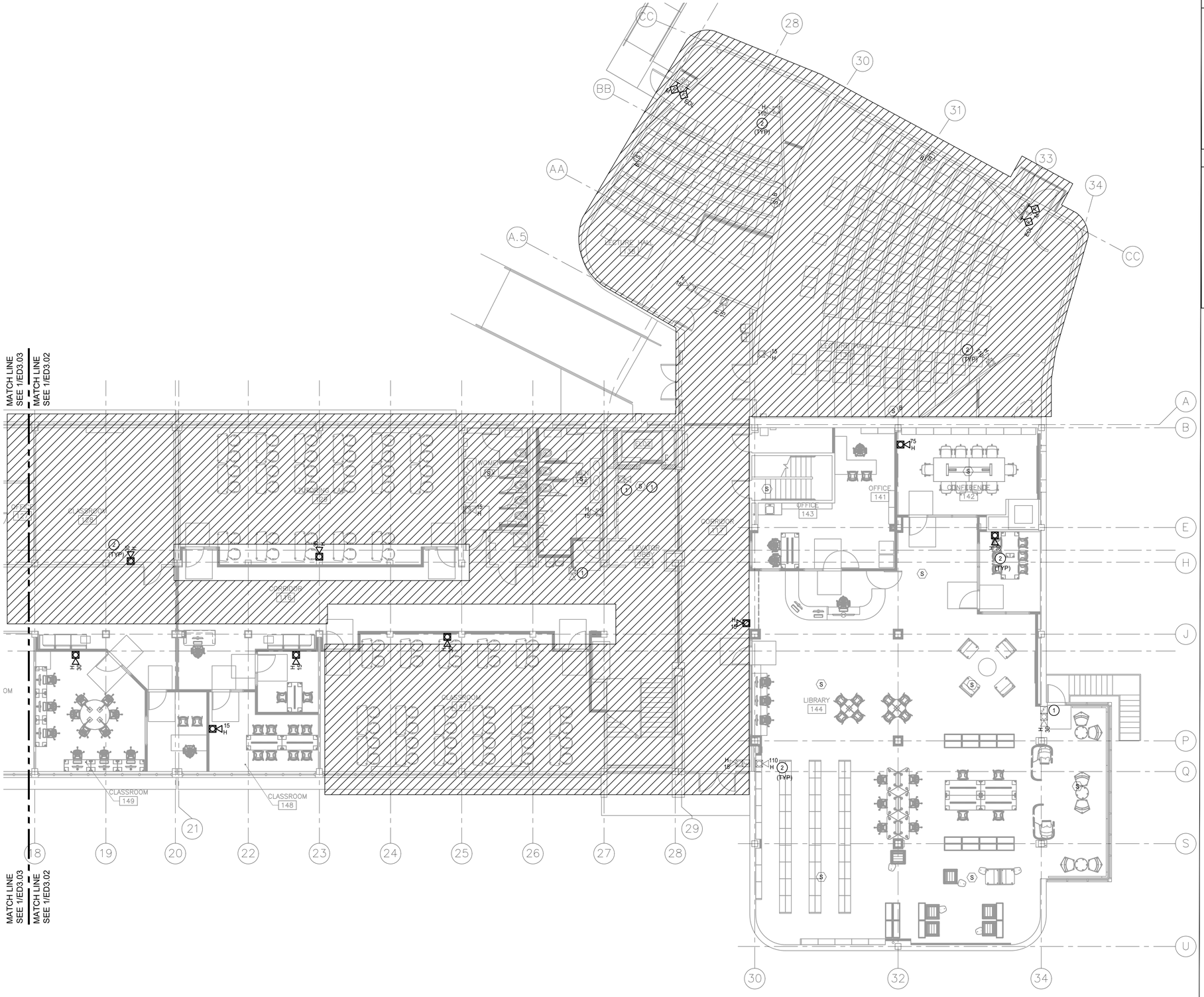
E2.20



1 **ADD ALTERNATE FIRE ALARM PLAN - EAST FIRST LEVEL**

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

0 4 8 16

NORTH

KEYNOTES (#)

1. EXISTING DEVICE TO REMAIN. MAINTAIN EXISTING FIRE ALARM ANNUNCIATION/INITIATION CIRCUIT AS REQUIRED.
2. INSTALL NEW HORN/STROBES AND EXISTING REMAINING SMOKE/FIRE DETECTORS TO EXISTING CABLING PROTECTED DURING DEMOLITION OF EXISTING DEVICES.

GENERAL NOTES

A. PROVIDE ADDRESSABLE FIRE ALARM SYSTEM WITH HORN/STROBE/COMBINATION NOTIFICATION DEVICES, PHOTOELECTRIC SMOKE DETECTION SYSTEMS, ETC. AS REQUIRED PER THE NFPA72.

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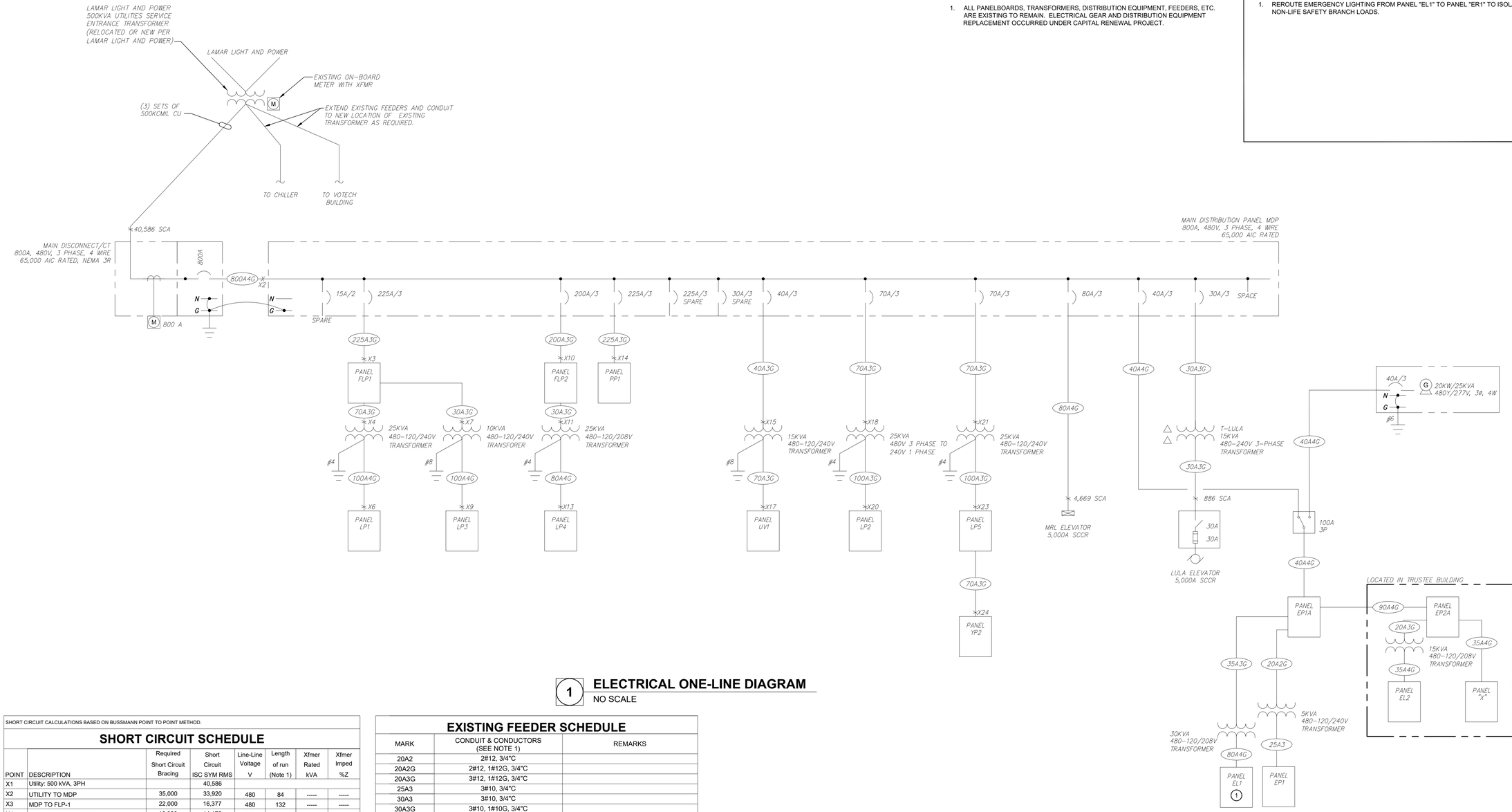
PRICING NOTES

1. ALL PANELBOARDS, TRANSFORMERS, DISTRIBUTION EQUIPMENT, FEEDERS, ETC. ARE EXISTING TO REMAIN. ELECTRICAL GEAR AND DISTRIBUTION EQUIPMENT REPLACEMENT OCCURRED UNDER CAPITAL RENEWAL PROJECT.

KEYNOTES (#)

1. REROUTE EMERGENCY LIGHTING FROM PANEL "EL1" TO PANEL "ER1" TO ISOLATE NON-LIFE SAFETY BRANCH LOADS.



1 ELECTRICAL ONE-LINE DIAGRAM

NO SCALE

SHORT CIRCUIT CALCULATIONS BASED ON BUSSMANN POINT TO POINT METHOD.

SHORT CIRCUIT SCHEDULE

POINT	DESCRIPTION	Required Short Circuit Bracing	Short Circuit ISC SYM RMS	Line-Line Voltage V	Length of run (Note 1)	Xfmer Rated kVA	Xfmer Imped %Z
X1	Utility: 500 kVA, 3PH		40,586				
X2	UTILITY TO MDP	35,000	33,920	480	84	-----	-----
X3	MDP TO FLP-1	22,000	16,377	480	132	-----	-----
X4	FLP-1 TO 25KVA XFMR	18,000	14,176	480	10	-----	-----
X5	25 KVA XFMR	22,000	1,872	-----	-----	25	3
X6	25 KVA XFMR TO LP-1	10,000	1,833	240	10	-----	-----
X7	FLP-1 TO 10KVA XFMR	10,000	5,834	480	30	-----	-----
X8	10 KVA XFMR	10,000	750	-----	-----	10	3
X9	10KVA XFMR TO LP3	10,000	731	240	10	-----	-----
X10	MDP TO FLP2	14,000	11,923	480	297	-----	-----
X11	FLP2 TO 25KVA XFMR	14,000	10,712	480	10	-----	-----
X12	25KVA XFMR	22,000	1,833	-----	-----	25	3
X13	25KVA FMR TO LP4	10,000	1,796	240	10	-----	-----
X14	MDP TO PP1	35,000	30,910	480	12	-----	-----
X15	MDP TO 15KVA XFMR	14,000	10,535	480	27	-----	-----
X16	15KVA XFMR	5,000	1,138	-----	-----	15	3
X17	15KVA XFMR TO UV1	5,000	1,110	240	10	-----	-----
X18	MDP TO 25KVA XFMR	5,000	3,215	480	297	-----	-----
X19	25KIVA XFMR	5,000	1,528	-----	-----	25	3
X20	25KVA XFMR TO LP2	5,000	1,502	240	10	-----	-----
X21	MDP TO 25KVA XFMR	25,000	21,931	480	17	-----	-----
X22	25KVA XFMR	10,000	1,917	-----	-----	25	3
X23	25KVA XFMR TO LP5	10,000	1,876	240	10	-----	-----
X24	LP5 TO YP2	10,000	1,589	240	44	-----	-----

Notes:

1. CONTRACTOR IS RESPONSIBLE FOR ALL QUANTITIES, FEEDER ROUTING AND INSTALLATION. INDICATED FEEDER LENGTH WAS USED TO CALCULATE FAULT CURRENT AND IS AN APPROXIMATE LENGTH. IF THE INSTALLED FEEDER LENGTH IS 10% SHORTER OR LONGER THAN THE INDICATED FEEDER LENGTH THE FAULT CURRENT MUST BE RE-EVALUATED AND REQUIRED BRACING RESIZED.

EXISTING FEEDER SCHEDULE

MARK	CONDUIT & CONDUCTORS (SEE NOTE 1)	REMARKS
20A2	2#12, 3/4"C	
20A2G	2#12, 1#12G, 3/4"C	
20A3G	3#12, 1#12G, 3/4"C	
25A3	3#10, 3/4"C	
30A3	3#10, 3/4"C	
30A3G	3#10, 1#10G, 3/4"C	
35A3G	3#8, 1#10G, 3/4"C	
35A4G	4#8, 1#10G, 3/4"C	
40A2	2#8, 3/4"C	
40A3G	3#8, 1#10G, 3/4"C	
40A4G	4#8, 1#10G, 3/4"C	
45A3	3#8, 1"C	
45A3G	3#8, 1#10G, 1"C	
70A2	2#4, 3/4"C	
70A3G	3#4, 1#8G, 1-1/4"C	
80A4G	4#3, 1#8G, 1-1/4"C	
90A4G	4#2, 1#8G, 1-1/4"C	
100A3G	3#3, 1#8G, 1-1/2"C	
100A4G	4#1, 1#8G, 2"C	
200A4	4#3/0, 2"C	
200A4G	4#3/0, 1#6G, 2"C	
225A3	3#4/0, 2"C	
225A4	4#4/0, 2"C	
225A4G	4#4/0, 1#4G, 2-1/2"C	
300A4	4#350, 2-1/2"C	
800A4	3 SETS (4#300, 2-1/2"C)	
800A4G	3 SETS (4#300, 1#1/0G, 2-1/2"C)	

REMARKS:

1. THIS FEEDER SCHEDULE IS BASED ON 60 DEGREE CENTIGRADE (TYPE TW) WIRE AND TERMINATIONS FOR SIZES #12 TO #1, AND 75 DEGREE CENTIGRADE (TYPE THHN/THWN) WIRE AND TERMINATIONS FOR SIZES #1/0 AND LARGER. UNLESS NOTED OTHERWISE, CONDUIT IS SIZED BASED ON TYPE EMT CONDUIT. USE OF OTHER CONDUIT TYPES REQUIRES RESIZING OF CONDUIT.

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ELECTRICAL ONE-LINE DIAGRAM

DATE: 3/12/2024

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PANELBOARD FLP1

VOLTAGE:	480/277V	CONNECTED LOAD PER PHASE			ISOLATED GROUND BUS (Y/N): N
PHASE / WIRE:	3Ø / 4W				BUSSING: SEE SPEC
RATED AMPERAGE:	225 A	A	B	C	MOUNTING: RECESSED
MAIN:	225 A MCB				MCB GROUND FAULT PROTECTION (Y/N): N
SCC RATING (SYM):	SEE ONE-LINE	22340 VA	13396 VA	27521 VA	MCB SHUNT TRIP (Y/N): N
		81 A	48 A	99 A	MCB 100% RATED (Y/N): N

CKT	IDENTIFICATION	TYPE (*)	BKR SIZE	POLES	A	A	B	B	C	C	POLES	BKR SIZE	TYPE (*)	IDENTIFICATION	CKT
1	LIGHTS RM. 121,122,124,128		20A	1	1200	1200					1	20A		LIGHTS RM. 152,153,150	2
3	LIGHTS RM. 148, 149		20A	1			1200	1200			1	20A		LIGHTS RM. 147	4
5	LIGHTS RM. 129, 130		20A	1					1200	1200	1	20A		LIGHTS RM. 136, 137	6
7	SPARE		20A	1	0	0					1	20A		SPARE	8
9	SPARE		20A	1			0	1200			1	20A		LIGHTS RM. 141, 143, 144	10
11	LIGHTS RM. 218, 236		20A	1					1200	1200	1	20A		LIGHTS RM. 234, 235	12
13	LIGHTS RM. 232, 233		20A	1	1200	1200					1	20A		LIGHTS RM. 219, 220	14
15	LIGHTS RM. 221, 222		20A	1			1200	1200			1	20A		LIGHTS RM. 229, 230, 231	16
17	SPARE		20A	1					0	1200	1	20A		LIGHTS RM. SERVISE DRIVE	18
19	LIGHTS CORRIDOR 116		20A	1	1200	1200					1	20A		LIGHTS CORRIDOR 117	20
21	LIGHTS CORRIDOR 216		20A	1			1200	6196			2	35A		XFMR FOR PANEL LP3	22
23	XFMR FOR PANEL LP1		100A	2					14787	6734					24
25					15140	0					1	20A		SPARE	26
27	SPARE		20A	1			0	0			1	20A		SPARE	28
29	SPARE		20A	1					0	0	1	20A		SPARE	30

Load Classification	Connected Load	Demand Factor	Demand Load	PANEL TOTALS	
Lighting - Continuous	20400 VA	125%	25500 VA		
Receptacle - First 10 kVA	10000 VA	100%	10000 VA	TOTAL CONNECTED LOAD:	63257 VA
Remainder	19927 VA	50%	9964 VA	TOTAL DEMAND:	61626 VA
Motor - Largest	0 VA	125%	0 VA	TOTAL CONNECTED CURRENT:	76 A
Remainder	0 VA	100%	0 VA	TOTAL DEMAND CURRENT:	74 A
Kitchen Equip - Non-Dwelling Unit	0 VA	****	#VALUE!		
Electric Heat	0 VA	125%	0 VA		
Other Continuous Load	12930 VA	125%	16163 VA		
Other Non-Continuous Load	0 VA	100%	0 VA		

NOTES:
1. ALL BREAKERS ARE STANDARD UNLESS OTHERWISE NOTED
2. (*) NUMBER INDICATES BREAKER TYPE: 1 = AFCI, 2 = CLASS A 5mA GFCI, 3 = 30mA GFPE, 4 = SHUNT TRIP ACTIVATED, 5 = PANELBOARD FEEDER SERVING UNIT SHALL BE LOCKABLE USING A PADLOCK, IN ACCORDANCE WITH OSHA LOCK-OUT-TAG RULES.

PANELBOARD EP1A

VOLTAGE:	480/277V	CONNECTED LOAD PER PHASE			ISOLATED GROUND BUS (Y/N): N
PHASE / WIRE:	3Ø / 4W				BUSSING: SEE SPEC
RATED AMPERAGE:	100 A	A	B	C	MOUNTING: SURFACE
MAIN:	100 A MCB				MCB GROUND FAULT PROTECTION (Y/N): N
SCC RATING (SYM):	SEE ONE-LINE	4460 VA	5150 VA	3650 VA	MCB SHUNT TRIP (Y/N): N
		16 A	19 A	13 A	MCB 100% RATED (Y/N): N

CKT	IDENTIFICATION	TYPE (*)	BKR SIZE	POLES	A	A	B	B	C	C	POLES	BKR SIZE	TYPE (*)	IDENTIFICATION	CKT
1					750	2150									2
3	EP2A IN TRUSTEE		100A	3			550	3300			3	40A		XFMR TO PANEL EL1	4
5									200	2730					6
7	XFMR EP1		15A	2	800	180					1	20A		ADMIN LIGHTS 1ST FLOOR	8
9							780	180			1	20A		ADMIN LIGHTS 1ST FLOOR	10
11	LIBRARY LIGHTS		20A	1					360	180	1	20A		ADMIN LIGHTS 2ND FLOOR	12
13	LIBRARY LIGHTS		20A	1	360	220					1	20A		ADMIN LIGHTS 2ND FLOOR	14
15	LIBRARY LIGHTS		20A	1			340	0			1	20A		SPARE	16
17	OFFICE 009 LIGHTS		20A	1					180	0	1	20A		SPARE	18
19	SPARE		20A	1	0	0					1	20A		SPARE	20
21	SPARE		20A	1			0	0			1	20A		SPARE	22
23	SPARE		20A	1					0	0	1	20A		SPARE	24
25	SPARE		20A	1	0	0					1	20A		SPARE	26
27	SPARE		20A	1			0	0			1	20A		SPARE	28
29	SPARE		20A	1					0	0	1	20A		SPARE	30

Load Classification	Connected Load	Demand Factor	Demand Load	PANEL TOTALS	
Lighting - Continuous	2000 VA	125%	2500 VA		
Receptacle - First 10 kVA	0 VA	100%	0 VA	TOTAL CONNECTED LOAD:	13260 VA
Remainder	0 VA	50%	0 VA	TOTAL DEMAND:	16575 VA
Motor - Largest	0 VA	125%	0 VA	TOTAL CONNECTED CURRENT:	16 A
Remainder	0 VA	100%	0 VA	TOTAL DEMAND CURRENT:	20 A
Kitchen Equip - Non-Dwelling Unit	0 VA	****	#VALUE!		
Electric Heat	0 VA	125%	0 VA		
Other Continuous Load	11260 VA	125%	14075 VA		
Other Non-Continuous Load	0 VA	100%	0 VA		

NOTES:
1. ALL BREAKERS ARE STANDARD UNLESS OTHERWISE NOTED
2. (*) NUMBER INDICATES BREAKER TYPE: 1 = AFCI, 2 = CLASS A 5mA GFCI, 3 = 30mA GFPE, 4 = SHUNT TRIP ACTIVATED, 5 = PANELBOARD FEEDER SERVING UNIT SHALL BE LOCKABLE USING A PADLOCK, IN ACCORDANCE WITH OSHA LOCK-OUT-TAG RULES.

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	LAMP DESCRIPTION	VOLTAGE	LOAD (VA)	FINISH	MOUNTING	DESCRIPTION
A	LITHONIA	CPX SERIES	LED, 4000LM 80CRI, 4000K	277	26	WHITE	RECESSED	2'x2' RECESSED LED, FLAT PANEL
AS	LITHONIA	CPX SERIES	LED, 4000LM 80CRI, 4000K	277	26	WHITE	RECESSED	2'x2' RECESSED LED, FLAT PANEL WITH INTEGRATED VACANCY/OCCUPANCY SENSORS
ASD	LITHONIA	CPX SERIES	LED, 4000LM 80CRI, 4000K	277	26	WHITE	RECESSED	2'x2' RECESSED LED, FLAT PANEL WITH INTEGRATED COMBINATION VACANCY/DAYLIGHT SENSORS
D	LITHONIA	LDN6 SERIES	LED, 2000LM 80CRI, 4000K	277	22	WHITE	RECESSED	6" RECESSED ROUND DOWNLIGHT, SEM-SPECULAR CLEAR ALZAC REFLECTOR, WHITE PAINTED TRIM
LR(X) (LENGTH PER PLAN)	MARK	SL4L SERIES	LED, 3200LM 80CRI, 4000K	277	32	WHITE	RECESSED	LED RECESSED LINEAR WITH FROSTED LENS, 4" APURTURE LENGTH PER PLAN
LR(X)S (LENGTH PER PLAN)	MARK	SL4L SERIES	LED, 3200LM 80CRI, 4000K	277	32	WHITE	RECESSED	LED RECESSED LINEAR WITH FROSTED LENS, 4" APURTURE LENGTH PER PLAN WITH INTEGRAL OCCUPANCY/VACANCY SENSOR
P1	MODERN FORMS	COSMIC SERIES (PD-28801)	LED, 412LM 80CRI, 4000K	277	7.3	WHITE	PENDANT	9" FROSTED GLASS LED SPHERE WITH BLACK HARDWARE, ALUMINUM HARDWARE, ART GLASS SHADE
P2	BASELITE CORPORATION	ATOMIC SERIES	LED, 1280LM 90CRI, 4000K	277	25	WHITE	PENDANT	LED DECORATIVE PENDANT WITH 16" WIDE TEIRED SHADE, WHITE FINISH, WHITE CORD/CANOPY, 0-10V DIMMING
R4	SPI LIGHTING	NOVATO SERIES	LED, 7687LM 80CRI, 4000K	277	75	WHITE	PENDANT	48" LED RING WITH WHITE ACRYLIC LENS, CABLE SUSPENSION, HARDWARE FINISH PER THE ARCHITECT
R6	SPI LIGHTING	NOVATO SERIES	LED, 11544LM 80CRI, 4000K	277	117	WHITE	PENDANT	72" LED RING WITH WHITE ACRYLIC LENS, CABLE SUSPENSION, HARDWARE FINISH PER THE ARCHITECT
DR4	SPI LIGHTING	NOVATO SERIES	LED, 3570LM 80CRI, 3500K	277	45	WHITE	PENDANT	48" LED DRUM WITH WHITE FROSTED ACRYLIC SHADE
S4	ACUITY LIGHTING	CLX SERIES	LED, 3500LM 80CRI, 3500K	277	37	WHITE	PENDANT/ SURFACE	CEILING MOUNTED ACOUSTICAL FEATURE PENDANT, (2) IN CONFERENCE ROOM AND (1) IN OFFICE SUITE
S4E	ACUITY LIGHTING	CLX SERIES	LED, 3500LM 80CRI, 3500K	277	37	WHITE	PENDANT/ SURFACE	CEILING MOUNTED ACOUSTICAL FEATURE PENDANT, 10W EMERGENCY BATTERY PACK
X	LITHONIA	LQM SERIES	LED, RED	277	5	WHITE	8'-0"	EXIT SIGN, WHITE HOUSING WITH RED LETTERS, SELF-DIAGNOSTICS, NI-CAD BATTERY

NOTES:
A. REMOVE ALL FINGER PRINTS FROM LENSES, REFLECTORS, AND LOUVERS FOLLOWING LIGHT FIXTURE INSTALLATION.
B. FOR APPROVAL OF FIXTURES FROM MANUFACTURERS OTH+A1:J100ER THAN THOSE LISTED, PROPOSED FIXTURES SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER BEFORE THE DEADLINE FOR QUESTIONS DURING THE BID PROCESS. FINAL DETERMINATION OF "EQUAL" STATUS FOR BIDDING SHALL BE THE SOLE DETERMINATION OF THE ARCHITECT/ENGINEER.

EQUIPMENT DATA SCHEDULE

DESCRIPTION					LOAD DATA			DISCONNECT AT EQUIP.					
MARK	EQUIPMENT	FURNISHED BY	INSTALLED BY	LOCATION	LOAD	VOLTAGE	PHASE	DISC. TYPE	DISC. SIZE	FURNISHED BY	INSTALLED BY	WIRE & CONDUIT	REMARKS
AHU-1	AIR HANDLING UNIT	MC	MC	PENTHOUSE	13.97 FLA	480	3	-		VND	VND	3#12, 1#12G, 3/4"C	
EF-1	EXHAUST FAN	MC	MC	BOILER ROOM	1 HP	120	1	SW		VND	VND	2#12, 1#12G, 3/4"C	
EF-2	EXHAUST FAN	MC	MC	RESTROOMS	1/15 HP	120	1	SW		VND	VND	2#12, 1#12G, 3/4"C	
EF-3	EXHAUST FAN	MC	MC	RESTROOMS	1/10 HP	120	1	SW		VND	VND	2#12, 1#12G, 3/4"C	
FCU-1	FAN COIL UNIT	MC	MC	OFFICE	48 W	120	1	SW		VND	VND	2#12, 1#12G, 3/4"C	
FCU-2	FAN COIL UNIT	MC	MC	DARKROOM	48 W	120	1	SW		VND	VND	2#12, 1#12G, 3/4"C	
FCU-3	FAN COIL UNIT	MC	MC	VESTIBULE	39 W	120	1	SW		VND	VND	2#12, 1#12G, 3/4"C	
FCU-4	FAN COIL UNIT	MC	MC	CHILLER ROOM	48 W	120	1	SW		VND	VND	2#12, 1#12G, 3/4"C	

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BOWMAN LIBRARY RENOVATION
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SHEET TITLE:
ELECTRICAL SCHEDULES

DATE: 3/12/2024
REV:

SHEET NO.:
E5.01

PANELBOARD LP1

VOLTAGE:	240/120V	CONNECTED LOAD PER PHASE	ISOLATED GROUND BUS (Y/N): N
PHASE / WIRE:	1Ø / 3W		BUSSING: SEE SPEC
RATED AMPERAGE:	125 A	A / B	MOUNTING: RECESSED
MAIN:	125 A MCB		MCB GROUND FAULT PROTECTION (Y/N): N
SCC RATING (SYM):	SEE ONE-LINE	14787 VA / 15140 VA	MCB SHUNT TRIP (Y/N): N
		123 A / 126 A	MCB 100% RATED (Y/N): N

CKT	IDENTIFICATION	TYPE (*)	BKR SIZE	POLES	A	B	POLES	BKR SIZE	TYPE (*)	IDENTIFICATION	CKT
1	REC. RM 121, 122		20A	1	900	540	1	20A		REC. RM 122, 125	2
3	REC. RM 124, 125, 128		20A	1		540	720	1	20A		REC. RM 125, 126, 127	4
5	REC. RM 126, 127, 128		20A	1	720	720		1	20A		REC. RM 152, 153	6
7	REC. RM 150, 152		20A	1		720	1240	1	20A		REC. TUTORING	8
9	REC. RM 148, 149		20A	1	540	540		1	20A		REC. RM 147, 148	10
11	REC. CORRIDOR 116		20A	1		720	720	1	20A		REC. RM 128	12
13	REC. RM 129		20A	1	720	1080		1	20A		REC. RM 136, 137	14
15	REC. RM 136, 137		20A	1		1080	500	1	20A		EWC - CORRIDOR 116	16
17	REC. CORRIDOR 116		20A	1	0	500		1	20A		EWC - CORRIDOR 116	18
19	REC. ENTRY TO LIB. 144		20A	1		1080	1080	1	20A		REC. LIB. 144	20
21	REC. CORR. 117 LIGHTS 117		20A	1	1080	1080		1	20A		REC. RM 141,142	22
23	REC. RM 147		20A	1		540	1080	1	20A		REC. RM 143	24
25	REC. RM 143		20A	1	1080	0		1	20A		SPARE	26
27	COPIER		20A	1		1000	500	1	20A		EWC - CORRIDOR 147	28
29	FAN COIL CORR 117, 132, 135		20A	1	1000	667		1	20A		FAN COIL CORR. 116, 117	30
31	LIBRARY ENTRY REC.		20A	1		1080	600	1	20A		LIGHTS STAIR 119	32
33	LIGHTS ENTRY 115		20A	1	600	1000		1	20A		SPC. REC RM. 147	34
35	PRINTER		20A	1		1000	540	1	20A		FLOOR REC. RM 149	36
37	REC. RM 130		20A	1	1080	540		1	20A		FLOOR REC. RM 149	38
39	RM 130 A/C		20A	1		200	200	1	20A		A/C 129 WEST	40
41	CONTACTOR FOR SERVICE DR.		20A	1	200	200		1	20A		A/C 147	42

Load Classification	Connected Load	Demand Factor	Demand Load	PANEL TOTALS	
Lighting - Continuous	1200 VA	125%	1500 VA		
Receptacle - First 10 kVA	10000 VA	100%	10000 VA	TOTAL CONNECTED LOAD:	29927 VA
Remainder	16660 VA	50%	8330 VA	TOTAL DEMAND:	21897 VA
Motor - Largest	0 VA	125%	0 VA	TOTAL CONNECTED CURRENT:	125 A
Remainder	2067 VA	100%	2067 VA	TOTAL DEMAND CURRENT:	91 A
Kitchen Equip - Non-Dwelling Unit	0 VA	****	#VALUE!		
Electric Heat	0 VA	125%	0 VA		
Other Continuous Load	0 VA	125%	0 VA		
Other Non-Continuous Load	0 VA	100%	0 VA		

NOTES:
1. ALL BREAKERS ARE STANDARD UNLESS OTHERWISE NOTED
2. (*) NUMBER INDICATES BREAKER TYPE: 1 = AFCI, 2 = CLASS A 5mA GFCI, 3 = 30mA GFPE, 4 = SHUNT TRIP ACTIVATED, 5 = PANELBOARD FEEDER SERVING UNIT SHALL BE LOCKABLE USING A PADLOCK, IN ACCORDANCE WITH OSHA LOCK-OUT-TAG RULES.

PANELBOARD LP2

VOLTAGE:	240/120V	CONNECTED LOAD PER PHASE	ISOLATED GROUND BUS (Y/N): N
PHASE / WIRE:	1Ø / 3W		BUSSING: SEE SPEC
RATED AMPERAGE:	225 A	A / B	MOUNTING: RECESSED
MAIN:	125 A MCB		MCB GROUND FAULT PROTECTION (Y/N): N
SCC RATING (SYM):	SEE ONE-LINE	12476 VA / 15340 VA	MCB SHUNT TRIP (Y/N): N
		104 A / 128 A	MCB 100% RATED (Y/N): N

CKT	IDENTIFICATION	TYPE (*)	BKR SIZE	POLES	A	B	POLES	BKR SIZE	TYPE (*)	IDENTIFICATION	CKT
1	REC. RM 138		20A	1	1080	1080	1	20A		REC. RM 138	2
3	REC. RM 138		20A	1		1080	1080	1	20A		REC. RM 138	4
5	LIGHTS RM. 138		20A	1	380	500		1	20A		POP MACHINE	6
7	LIGHTS RM. 138		20A	1		1200	540	1	20A		STAGE REC E LECTURE HALL	8
9	STAGE REC. E LECTURE HALL		20A	1	540	360		1	20A		LIGHTS RM. 138	10
11	LIGHTS RM. 138		20A	1		360	1080	1	20A		REC. RM 138 & MOVIE SCREEN	12
13	REC. RM 139		20A	1	1080	540		1	20A		REC. RM 139 & W. WALL BOOTH	14
15	REC. RM 139		20A	1		1080	540	1	20A		STAGE REC E LECTURE HALL	16
17	LIGHTS RM & ENTRY 139		20A	1	360	1200		1	20A		LIGHTS RM. 139	18
19	LIGHTS RM 139		20A	1		360	380	1	20A		LIGHTS RM 138 & 139	20
21	LIGHTS RM 139		20A	1	360	380		1	20A		LIGHTS RM 139	22
23	LIGHTS RM 139		20A	1		360	1000	1	20A		PROCESSOR AND CONTROL	24
25	LIGHTS RM 139		20A	1	360	540		1	20A		STAGE REC E LECTURE HALL	26
27	POP MACHINE		20A	1		500	540	1	20A		STAGE REC E LECTURE HALL	28
29	UNIT HEATER		20A	1	156	1260		1	20A		R-CONFERENCE ROOM	30
31	EWH-1		30A	1		2000	1260	1	20A		R-OFFICE 141/143	32
33	SECURITY DOOR		20A	1	500	1080		1	20A		R-FRONT DESK	34
35	R-LIBRARY 144 FLOOR					900	1080	1	20A		R-LIBRARY 144 WALL/PWR HUB	36
37	SPACE				0	720		1	20A		R-LIBRARY COMP STATION	38
39	SPACE					0	0				SPACE	40
41	SPACE				0	0					SPACE	42

Load Classification	Connected Load	Demand Factor	Demand Load	PANEL TOTALS	
Lighting - Continuous	6060 VA	125%	7575 VA		
Receptacle - First 10 kVA	10000 VA	100%	10000 VA	TOTAL CONNECTED LOAD:	26916 VA
Remainder	6200 VA	50%	3100 VA	TOTAL DEMAND:	25620 VA
Motor - Largest	0 VA	125%	0 VA	TOTAL CONNECTED CURRENT:	112 A
Remainder	500 VA	100%	500 VA	TOTAL DEMAND CURRENT:	107 A
Kitchen Equip - Non-Dwelling Unit	0 VA	****	#VALUE!		
Electric Heat	0 VA	125%	0 VA		
Other Continuous Load	1156 VA	125%	1445 VA		
Other Non-Continuous Load	3000 VA	100%	3000 VA		

NOTES:
1. ALL BREAKERS ARE STANDARD UNLESS OTHERWISE NOTED
2. (*) NUMBER INDICATES BREAKER TYPE: 1 = AFCI, 2 = CLASS A 5mA GFCI, 3 = 30mA GFPE, 4 = SHUNT TRIP ACTIVATED, 5 = PANELBOARD FEEDER SERVING UNIT SHALL BE LOCKABLE USING A PADLOCK, IN ACCORDANCE WITH OSHA LOCK-OUT-TAG RULES.

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E5.02

COM*check* Software Version COMcheckWeb

Envelope Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: LCC LIBRARY
Location: Lamar, Colorado
Climate Zone: 4b
Project Type: Alteration

Construction Site: 2401 S. MAIN ST. LAMAR, Colorado 81052
Owner/Agent:
Designer/Contractor:

Building Area	Floor Area
1-School/University : Nonresidential	6071

Envelope Assemblies

Envelope TBD: No envelope assemblies specified

COM*check* Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: LCC LIBRARY
Project Type: Alteration

Construction Site: 2401 S. MAIN ST. LAMAR, Colorado 81052
Owner/Agent:
Designer/Contractor:

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-School/University	6071	0.72	4371
		Total Allowed Watts =	4371

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
School/University (6071 sq.ft.)				
LED: A/AS/ADS: TROFFER: Other:	1	39	25	975
LED: D: DOWNLIGHT: Other:	1	4	22	88
LED: LR4: LINEAR: Other:	1	8	32	256
LED: LR8: LINEAR: Other:	1	8	64	512
LED: LR12: LINEAR: Other:	1	10	96	960
LED: P1: PENDANT: Other:	1	5	7	36
LED: P2: PENDANT: Other:	1	3	25	75
LED: S4: STRIP LIGHT: Other:	1	2	37	74
LED: FLP16: LINEAR: Other:	1	2	128	256
LED: R4: PENDANT: Other:	1	5	75	375
LED: R6: PENDANT: Other:	1	2	117	234
		Total Proposed Watts =		3842

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

COM*check* Software Version COMcheckWeb

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: LCC LIBRARY
Project Type: Alteration
Exterior Lighting Zone 0 (Unspecified)

Construction Site: 2401 S. MAIN ST. LAMAR, Colorado 81052
Owner/Agent:
Designer/Contractor:

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
			Total Tradable Watts (a) =	0
			Total Allowed Watts =	0
			Total Allowed Supplemental Watts (b) =	350

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 350 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

Exterior Lighting TBD: Exterior lighting zone not specified (see project screen)

COM*check* Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: LCC LIBRARY
Location: Lamar, Colorado
Climate Zone: 4b
Project Type: Alteration

Construction Site: 2401 S. MAIN ST. LAMAR, Colorado 81052
Owner/Agent:
Designer/Contractor:

Mechanical Systems List

Quantity System Type & Description

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

COM*check* Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2021 IECC

Requirements: 38.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4]¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3.1 [EL22]¹	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1, C405.2.1.1 [EL18]¹	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, corridors, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.2 [EL19]¹	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more within 20 minutes of when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor. Lights not turned off by occupant sensors is done so by time-switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.3 [EL20]¹	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) general lighting in each zone permitted to turn on upon occupancy in control zone, 3) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 4) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2, C405.2.2.1 [EL21]¹	Each area not served by occupancy sensors (per C405.2.1.1) have time-switch controls and functions detailed in sections C405.2.2.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.4, C405.2.4.1, C405.2.4.2 [EL23]¹	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.5 [EL27]¹	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.7 [EL26]²	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.8 [EL27]²	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.9.1, C405.9.2 [EL28]²	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.10 [EL29]²	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.1.1 [EL30]²	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.11, C405.11.1 [EL31]²	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17]³	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.1.1 [FI57]³	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5 [FI16]³	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.3 [FI33]³	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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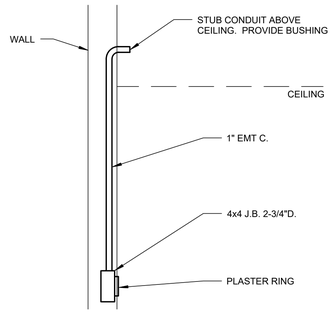
SHEET TITLE:
COMCHECK

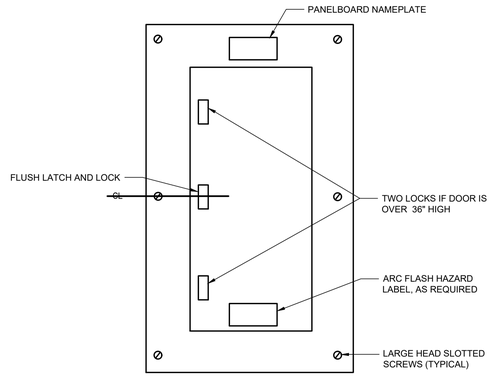
DATE: 3/12/2024
REV:

SHEET NO.:
E6.20



4 TYPICAL TELE-DATA OUTLET BOX DETAIL

SCALE: NOT TO SCALE

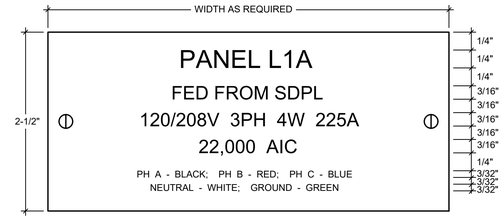


3 PANELBOARD COVER DETAIL

SCALE: NOT TO SCALE

NOTES:

1. ALL BOLTS SHALL HAVE LARGE (¼") ROUND HEAD, NO WASHERS ALLOWED.
2. TYPICAL FOR ALL BRANCH PANELBOARDS.
3. PROVIDE DOOR-IN-DOOR COVER WHEN REQUIRED BY DIVISION 26 SPECIFICATIONS.

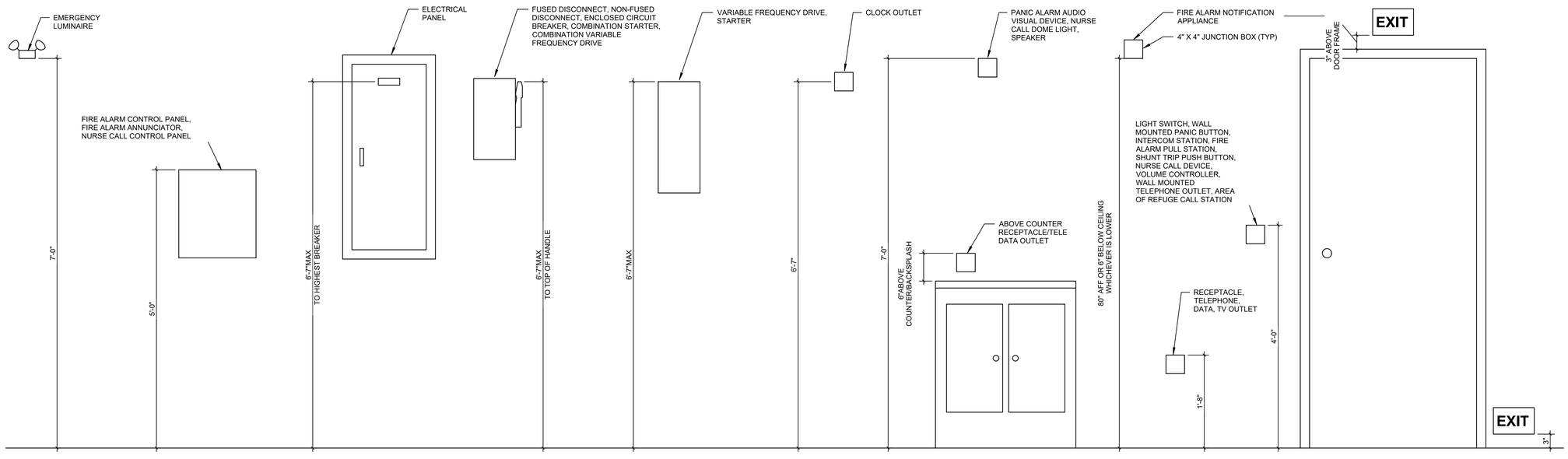


2 SUB-DISTRIBUTION CENTER AND BRANCH PANELBOARD NAMEPLATE DETAIL

SCALE: NOT TO SCALE

NOTES:

1. SEE DIVISION 26 SPECIFICATIONS FOR ADDITIONAL NAMEPLATE INFORMATION.
2. REWORD NAMEPLATE FOR FIELD CONDITIONS.
3. AMP RATING SHALL INDICATE BUS RATING.



1 TYPICAL MOUNTING HEIGHT DETAIL

SCALE: NOT TO SCALE

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