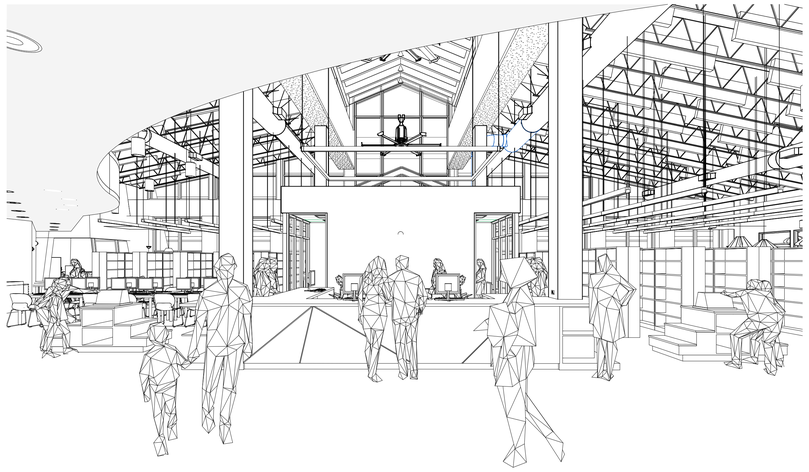
PERRYVILLE BRANCH LIBRARY RENOVATION

CECIL COUNTY PUBLIC LIBRARY
500 COUDON BLVD
PERRYVILLE, MD 21903

3D VIEW



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Grand total: 29

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VICINITY MAPS

PLAN NORTH

PROFESSIONAL CERTIFICATION

I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER 19268, EXPIRATION 12/19/2023.

SIGNATURE		08/01/2023 DATE
Charles D. Piper, AIA	19268	12/19/2023
PRINTED NAME	LICENSE NO.	EXPIRATION DATE

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PERRYVILLE BRANCH LIBRARY RENOVATION

CECIL COUNTY PUBLIC LIBRARY

500 COUDON BLVD
PERRYVILLE, MD 21903

STATE OF MARYLAND · CHARLES D. PIPER · No. 19268 · ARCHITECT

No.	Date	Description

PROJECT MANAGER: SW
DRAWN BY: AT

QEA No.42137020

100% CONSTRUCTION DOCUMENTS
08/01/23

COVER SHEET

G001

1 AD101 DEMO PLAN

1/8" = 1'-0" REFERRED FROM:A301

GENERAL DEMO NOTES

1. PRIOR TO THE START OF DEMOLITION ACTIVITIES, THE CONTRACTOR SHALL INSPECT THE BUILDING AND SITE TO FIELD VERITY EXISTING CONDITIONS AND TO FULLY UNDERSTAND THE DEMOLITION SCOPE. DEMOLITION DIMENSIONS AND LOCATIONS ARE APPROXIMATE. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN THE DEMOLITION AND NEW WORK DRAWINGS AND EXISTING CONDITIONS BEFORE PROCEEDING.

2. ALL BUILDING ELEMENTS TO BE DEMOLISHED OR REMOVED ARE SHOWN DASHED. DEMOLITION SHALL NOT BE LIMITED TO DASHED ELEMENTS. REQUIRED DEMOLITION AND REMOVAL INCLUDES ANY EXISTING CONSTRUCTION NEEDED TO BE DEMOLISHED, REMOVED, AND/OR REPLACED TO ACCOMMODATE THE NEW WORK AS DESCRIBED IN THE DOCUMENTS.

3. REFER TO SPECIFICATIONS FOR SELECTIVE DEMOLITION AND CUTTING AND PATCHING REQUIREMENTS. COORDINATE THE LIMITS OF SUCH WITH THE NEW WORK. PREPARE EXISTING SURFACES TO REMAIN TO ACCOMMODATE NEW WORK AND/OR FINISH.

4. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL DRAWINGS FOR NEW OPENINGS, CHASES AND/OR RACEWAYS NEEDED TO ACCOMMODATE THE NEW WORK.

5. PROVIDE TEMPORARY ENCLOSURES AS INDICATED TO ISOLATE AREAS OF THE EXISTING BUILDING NOT INLCUDED IN THE SCOPE OF THE WORK. THE LOCATIONS OF THE ENCLOSURES NOTED HERIN ARE NOT REPRESENTATIVE OF ALL OPENINGS THAT MAY REQUIRE TEMPORARY PROTECTIVE MEASURES.

6. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION SCOPE OF WORK.

7. REMOVAL AND REPLACEMENT OF EXISTING SLAB ON GRADE SHALL BE PROVIDED AS REQUIRED FOR THE INSTALLATION OF NEW ELECTRICAL RACEWAYS.

KEYNOTE LEGEND - DEMO PLAN

NO.	DESCRIPTION
1	DEMO EXISTING COUNTERTOP & SUPPORTS.
2	DEMO EXISTING STUDY ROOM STOREFRONT WALL. REPAIR ADJACENT WINDOW TRIM AS REQ.
3	DEMO EXISTING CIRCULAR BOOK DISPLAY CASEWORK.
4	DEMO EXISTING DOOR & REPAINT EXISTING DOOR FRAME AS NEEDED. SALVAGE DOOR HARDWARE FOR REUSE ON NEW DOOR MOUNTED IN EXISTING FRAME.
5	DEMO EXISTING WINDOW BENCH.
6	DEMO EXISTING CABINET COUNTERTOP WITHIN NICHE AS NEEDED. REF. 2/A432.
7	DEMO EXISTING PENDANTS ABOVE VENDING BAR CASEWORK. PATCH, REPAIR, & REPAINT SOFFIT ABOVE AS REQ'D.
8	DEMO EXISTING VENDING BAR CASEWORK & PENDANTS ABOVE.
9	DEMO EXISTING QUARTZ TILE.
10	DEMO EXISTING REFERENCE/INFO DESK.
11	DEMO EXISTING TAPPERED STACKED STONE BASES & KEEP STRUCTURAL COLUMN INTACT.
12	DEMO EXISTING BUILT-IN METAL BOOKCASES AND ATTACHED BOOKCASE MOUNTED LIGHTING.
13	DEMO 1/2 HEIGHT WALL.
14	DEMO CASEWORK.
15	DEMO EXISTING CIRCULATION DESK.
16	DEMO TEMPORARY GPDW WALL PATCHES & INFILL WITH NEW GWB.
17	DEMO ACOUSTIC WALL PANELS ON ALL WALLS.
18	DEMO CHAIR RAIL & TACK STRIPS - ALL WALLS.
19	DEMO INFO DESK SIGNAGE TRUSS HANGING ABOVE.
20	DEMO EXISTING "CHECKOUT" SIGNAGE MOUNTED TO SOFFIT ABOVE.
21	DEMO EXISTING "SIGHT & SOUND" SIGNAGE MOUNTED TO SOFFIT ABOVE.
22	DEMO EXISTING CARPET AND WALL BASE.
23	REMOVE EXISTING "RETURNS" AND "SELF-CHECK" SIGNAGE AND STORE FOR RE-INSTALLATION AFTER CONSTRUCTION
24	REMOVE EXISTING "CAFE" AND "CHILDREN'S" SIGNAGE AND STORE FOR RE-INSTALLATION AFTER CONSTRUCTION
25	REMOVE FRESH AIR INTAKES. PATCH & REPAIR INTERIOR AND EXTERIOR WALL AT INTAKE OPENING TO MATCH EXISTING WALL ASSEMBLY.
26	REMOVE EXISTING TV MOUNTED TO UNDERSIDE OF SOFFIT & RETURN TO OWNER.
27	DEMO EXISTING PENDANTS ABOVE VENDING BAR CASEWORK.
28	DEMO EXISTING PENDANTS ABOVE CAFE SEATING AREA.

DEMOLITION LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING DOOR TO REMAIN
- ITEM / CONSTRUCTION TO BE REMOVED, SALVAGED OR REINSTALLED
- DOOR TO BE REMOVED, SALVAGED OR REINSTALLED
- TEMPORARY ENCLOSURE

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08/01/23

DEMO FLOOR PLAN

AD101

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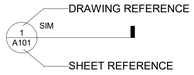
ABBREVIATIONS

A/C	AIR CONDITIONING
A/E	ARCHITECT / ENGINEER
ABV	ABOVE
ACCESS	ACCESSIBLE
ACP	ACOUSTICAL CEILING PANEL
ACST	ACOUSTIC
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
ADD'L	ADDITIONAL
ADJ	ADJACENT/ADJUST
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGG	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINIUM
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL, URE)
ASPH	ASPHALT(IC)
ASSOC	ASSOCIATED
AUTO	AUTOMATIC
AVG	AVERAGE
AWP	ACOUSTICAL WALL PANEL
BBT	BIO-BASED TILE
BC	BRICK COURSE
BD	BOARD
BIT	BITUMINOUS, BITUMEN
BLDG	BUILDING
BLKG	BLOCKING
BLKHD	BULKHEAD
BLW	BELOW
BM	BEAM
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BR	BRASS OR BRONZE
BRG	BEARING
BTWN	BETWEEN
BUR	BUILT-UP ROOF
C-C	CENTER TO CENTER
CAB	CABINET
CEM	CEMENT
CFS	COLD FORMED STEEL
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR(ANCE)
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COM	COMMUNICATIONS
CONC	CONCRETE
COND	CONDITION
CONFIG(S)	CONFIGURATION(S)
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CORR	CORRIDOR
CPT	CARPET(ED)
CT	CERAMIC TILE
CTR	CENTER
D	DEEP/DEPTH
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLISH, DEMOLITION
DETER	DETERIORATING, DETERIORATED
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM(S)	DIMENSION(S)
DIV	DIVIDE
DN	DOWN
DR	DOOR, DRAIN
DS	DOWNSPOUT
DTL	DETAIL
DWG(S)	DRAWING(S)
DWR	DRAWER
E	EAST
E-P	EPOXY PAINT
EA	EACH
EJ	EXPANSION JOINT
EL	ELEVATION (TOPO)
ELEC	ELECTRICAL
ELEV	ELEVATION (ARCH), ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOS(E,URE)
ENGR	ENGINEER
ENTR	ENTRANCE
EOS	EDGE OF SLAB
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EPS	EXPANDED POLYSTYRENE BOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE(D)
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXHB	EXHIBIT
EXP	EXPOSED, EXPANSION
EXT	EXTERIOR
EXTG	EXISTING
FA	FIRE ALARM
FAS	FASTEN(ER)
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDTN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH(ED) FACE
FF&E	FURNITURE, FIXTURES & EQUIPMENT
FH	FIRE HOSE, FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIN(S)	FINISH(ES)
FIXT	FIXTURE
FL	FLOOR(ING)
FLAM	FLAMMABLE
FLUOR	FLUORESCENT
FO	FINISHED OPENING
FOS	FACE OF STUDS
FP	FIRE PROTECTION
FR	FRAME(D,ING), FIRE RATING, FIRE RESISTANT
FT	FEET
FTG	FOOTING
FUR	FURR(ED,ING)
FWC	FABRIC WALL COVERING
G	NATURAL GAS
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACT(OR)
GEN	GENERATOR
GF	GLASS FILM
GFRC	GLASS-FIBER-REINFORCED CONCRETE
GFRG	GLASS-FIBER-REINFORCED GYPSUM
GFRP	GLASS-FIBER-REINFORCED POLYESTER, GLASS-FIBER-REINFORCED PLASTIC
GL	GLASS, GLAZING
GLU LAM	GLUE LAMINATED WOOD
GOVT	GOVERNMENT
GT	GROUT
GWB	GYPSUM WALLBOARD
H	HIGH
HAZ MAT	HAZARDOUS MATERIAL
HB	HOSE BIBB
HC	HOLLOW CORE, HOSE CABINET
HCWD	HOLLOW CORE WOOD DOOR
HD	HEAVY DUTY
HDR	HEADER
HDW	HARDWARE
HDWD	HARDWOOD
HID	HIGH INTENSITY DISCHARGE
HM	HOLLOW METAL
HORIZ	HORIZONTAL(LY)
HP	HIGH POINT
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT(S)
HT	HEIGHT
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HW	HOT WATER
ID	INSIDE DIAMETER
ILO	IN LIEU OF
IN	INCH(ES)
INCAN	INCANDESCENT
INCL	INCLUDE(S,D,ING)
INFO	INFORMATION
INSUL	INSULATION, INSULATED
INT	INTERIOR
INV	INVERT
IRMA	INVERTED ROOF MEMBRANE ASSEMBLY
J-BOX	JUNCTION BOX
JAN	JANITOR
JT(S)	JOINT(S)
KIT	KITCHEN
KO	KNOCK OUT
L	ANGLE
LAM	LAMINATE(D)
LAV	LAVATORY
LBL	LABEL
LGMP	LIGHT GAUGE METAL POST
LH	LEFT HAND
LHR	LEFTHAND REVERSE
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LTG	LIGHTING
LV	LOW VOLTAGE
LVT	LUXURY VINYL TILE
LW	LIGHT WEIGHT
MAS	MASONRY
MATL	MATERIAL(S)
MAX	MAXIMUM
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MFR	MANUFACTURE(R)
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MOD BIT	MODIFIED BITUMEN
MR	MLISTURE RESISTANT
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
N	NORTH
NA	NOT APPLICABLE
NAT	NATURAL
NC	NOISE CRITERIA, NORMALLY CLOSED
NIC	NOT IN CONTRACT, NOISE ISOLATION CLASS
NO('S)	NUMBER(S), NORMALLY OPEN
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
O-O	OUT TO OUT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF/CI	OWNER FURNISHED / CONTRACTOR INSTALLED
OFC	OFFICE
OH	OPPOSITE HAND, OVERHEAD
OPNG	OPENING(S)
ORIG	ORIGINAL
PA	PUBLIC ADDRESS
PAR	PARALLEL
PART	PARTITION(S), PARTIAL
PC	PRECAST
PERF	PERFORATE(D)
PL	PLATE, PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLWD	PLYWOOD
PNL	PANEL(ED)
POL	POLISHED
POLY	POLYETHYLENE
PR	PAIR
PREP	PREPARE (SURFACE)
PROV	PROVIDE(D)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT, POST-TENSIONED, PRESSURE TREATED
PTD	PAINTED
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER
QT	QUARRY TILE
QTY	QUANTITY
QUAD	QUADRANT
QZ	QUARTZ
QZT	QUARTZ TILE
R	RADIUS, RISER, THERMAL RESISTANCE
RB	RUBBER BASE
RBR	RUBBER
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REBAR	REINFORCING BAR
REF	REFERENCE
REG	REGISTER, REGULATION
REINF	REINFORCED
REPL	REPLACE
REQ	REQUIRED
RES	RESILIENT
RET	RETAINING, RETURN
REV	REVISION(S) / REVISE(D)
RFG	ROOFING
RFG	ROOFING
RH	RIGHT HAND, RELATIVE HUMIDITY
RHR	RIGHT HAND REVERSE
RL	RAIN LEADER
RM	ROOM
RO	ROUGH OPENING
RS	RESILIENT SHEET
RTF	RUBBER TILE FLOOR
RTU	ROOF TOP UNIT
RV	ROOF VENTILATOR
S	SOUTH, SEAL
SAB	SOUND ATTENUATION BATT
SALV	SALVAGE
SAN	SANITARY
SB	SPLASH BLOCK
SC	SOLID CORE
SCHED	SCHEDULE
SCT	STRUCTURAL CLAY TILE
SCWD	SOLID CORE WOOD DOOR
SDT	STANDARD DISSIPATIVE TILE
SEC	SECURE, SECURITY
SECT	SECTION
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SLD	SEALED
SLL	SOUND / LIGHT LOCK
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSM	SOLID SURFACE MATERIAL
ST	STONE
STD	STANDARD
STL	STEEL
STN	STAIN
STO	STORAGE
STRUC	STRUCTURAL
SUB	SUBSTITUTION
SUSP	SUSPENDED
SYS	SYSTEM
T	THICK, TREAD, TOILET
T&G	TONGUE AND GROOVE
T.O.	TOP OF
TBB	TILE BACKER BOARD
TECH	TECHNOLOGY
TEL	TELEPHONE
TEMP	TEMPORARY, TEMPERED
THRS	THRESHOLD
THRU	THROUGH
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOJ	TOP OF JOIST
TOM	TOP OF MASONRY
TOP	TOP OF PARAPET
TOS	TOP OF STEEL
TOW	TOP OF WALL
TRANS	TRANSPARENT
TRZ	TERAZZO
TV	TELEVISION
TYP	TYPICAL
UC	UNDERCUT
UH	UNIT HEATER
UIO	UNLESS INDICATED OTHERWISE
UL	UNDERWRITER'S LABORATORY
UNFIN	UNFINISHED
UR	URINAL
VAR	VARIES
VAT	VINYL ASBESTOS TILE
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VTR	VENT THROUHG ROOF
VU	VENTILATION UNIT
VWC	VINYL WALLCOVERING
W	WEST, WIDE, WIDE FLANGE
W-W	WALL TO WALL
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WH	WALL HEATER
WP	WATERPROOFING, WORK POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
X BRACE	CROSS BRACING
XFER	TRANSFER
YD	YARD, YARD DRAIN
#	NUMBER, POUND
&	AND
@	AT
±	PLUS / MINUS

GRAPHIC SYMBOLS

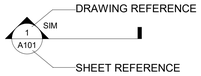
DETAIL / PLAN

DETAIL CUT

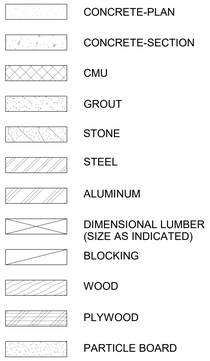


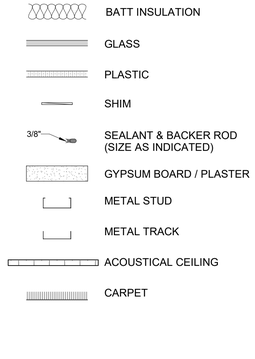
INTERIOR ELEVATION

WALL SECTION CUT

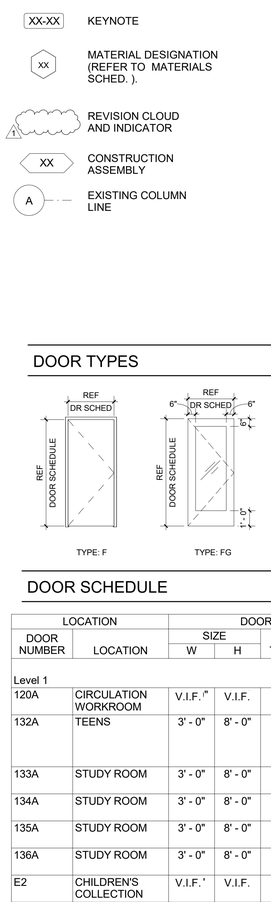


MATERIAL SYMBOLS





SYMBOLS



GENERAL NOTES

1. ALL PARTITIONS SHEATHING LAYERS TO EXTEND TO STRUCTURE OR DECK ABOVE UNLESS NOTED OTHERWISE.
   - A. SEE PLANS FOR LEGEND & PARTITIONS WITH VARIED EXTENT
   - B. PROVIDE DEFLECTION TRACK AT BOTTOM OF STRUCTURE OR DECK ABOVE

2.PARTITION TYPES DO NOT DEPICT FINISHES TYPICALLY
   - A. SEE FINISH SCHEDULE AND INTERIOR ELEVATIONS FOR EXTENT OF FINISHES
   - B.SEE SPECIFIC PARTITION TYPES INCORPORATING FINISH AND BACKUP

3. SOUND ISOLATING FRAMED PARTITIONS (STC RATING IDENTIFIED IN SCHEDULE) ARE TO INCLUDE
   - A. PERIMETER ACOUSTIC SEALANT BEAD FOR FULL DEPTH OF SHEATHING LAYER ADJACENT TO FRAMING EACH SIDE.
     1. BASE: SEAL BETWEEN BOTTOM OF SHEATHING TO STRUCTURAL DECK
     2. TOP: SEAL BETWEEN TOP OF SHEATHING TO STRUCTURAL DECK OR RATED CEILING SHEATHING WHERE APPLICABLE
   - B. FULL FRAMING DEPTH SOUND ATTENUATION BATT FOR FULL HEIGHT OF PARTITION

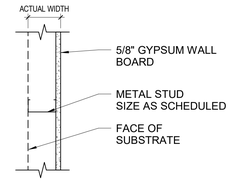
VISUAL DISPLAY SURFACE

GENERAL NOTES:
1. SYMBOL # REPRESENTS LENGTH IN FEET
2. REFER TO SPECIFICATION SECTION 1011000 VISUAL DISPLAY SURFACES
3. COUNT REFERS TO QUANTITY IN ENTIRE PROJECT

VISUAL DISPLAY SURFACE SCHEDULE

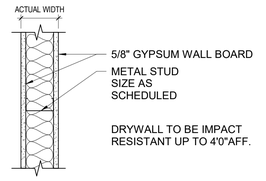
TAG	DESCRIPTION	HEIGHT	MOUNTING HEIGHT (BOTTOM)	COUNT
MB-6	MARKER BOARD 6' WIDE	4' - 0"	3'-0" AFF	4

PARTITION TYPES



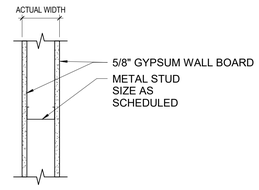
PARTITION - S2A & S4A

TYPE	CORE SIZE	ACTUAL WIDTH	UL FIRE TEST	STC	DETAILS	
					TOP	BOTTOM
S2A	1 5/8"	0' - 2 1/4"	NA	NA		
S4A	3 5/8"	0' - 4 1/4"	NA	NA		



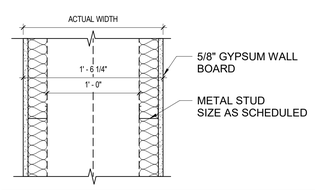
PARTITION - S6

TYPE	CORE SIZE	ACTUAL WIDTH	UL FIRE TEST	STC	DETAILS	
					TOP	BOTTOM
S6	6"	0' - 7 1/4"	NA	50 MIN		



PARTITION - S4C

TYPE	CORE SIZE	ACTUAL WIDTH	UL FIRE TEST	STC	DETAILS	
					TOP	BOTTOM
S4C	3 5/8"	0' - 4 7/8"	NA	NA		

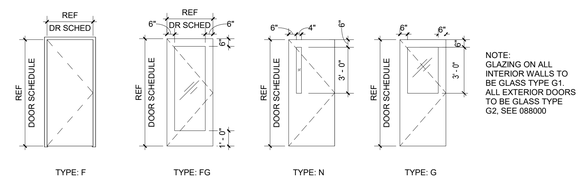


PARTITION - S12

TYPE	CORE SIZE	ACTUAL WIDTH	UL FIRE TEST	STC	DETAILS	
					TOP	BOTTOM
S12	12"	1' - 6 1/4"				

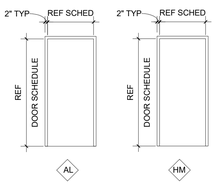
DOOR TYPES

1/4" = 1'-0"



FRAME TYPES

1/4" = 1'-0"



DOOR SCHEDULE

LOCATION		DOOR				FRAME			HARDWARE		
DOOR NUMBER	LOCATION	SIZE W	SIZE H	TYPE	MAT'L	TYPE	MAT'L	FINISH	HDWR SET	ELECTRONIC SECURITY	NOTES
Level 1											
120A	CIRCULATION WORKROOM	V.I.F."	V.I.F.	FG	WD	AL	AL				DOOR TO BE PLACED IN EXISTING STOREFRONT - EXACT DIMENSIONS TO BE V.I.F.
132A	TEENS	3' - 0"	8' - 0"	FG	AL	AL	AL				HDW: 3-HEAVY DUTY BALL BEARING HINGES, KICKPLATE, & LOCKSET TO MATCH OTHER WOOD DOROS IN HM FRAM CONDITIONS ELSEWHERE IN BUILDING. PROVIDE A SURFACE MNT'D CLOSER ON THE WORKROOM SIDE OF DOOR WITH INTEGRAL HOLD OPEN FUNCTION.
133A	STUDY ROOM	3' - 0"	8' - 0"	FG	AL	AL	AL				HDW SUPPLIED BY THE STOREFRONT MANF. TO MATCH EXISTING. COORDINATE KEY & LOCKING FUNCTION W/ OWNER.
134A	STUDY ROOM	3' - 0"	8' - 0"	FG	AL	AL	AL				HDW SUPPLIED BY THE STOREFRONT MANF. TO MATCH EXISTING. COORDINATE KEY & LOCKING FUNCTION W/ OWNER.
135A	STUDY ROOM	3' - 0"	8' - 0"	FG	AL	AL	AL				HDW SUPPLIED BY THE STOREFRONT MANF. TO MATCH EXISTING. COORDINATE KEY & LOCKING FUNCTION W/ OWNER.
136A	STUDY ROOM	3' - 0"	8' - 0"	FG	AL	AL	AL				HDW SUPPLIED BY THE STOREFRONT MANF. TO MATCH EXISTING. COORDINATE KEY & LOCKING FUNCTION W/ OWNER.
E2	CHILDREN'S COLLECTION	V.I.F.'	V.I.F.	G	HM	HM	HM				HDW: RELOCATE EXISTING HARDWARE TO NEW DOOR. ADD ALTERNATE 2: INSTALL ELECTRIC ADA DOOR ACTUATOR.
Grand total: 7											

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"LEGENDS, SYMBOLS," ABBREVIATIONS, DOOR & PARTITION TYPES

A001

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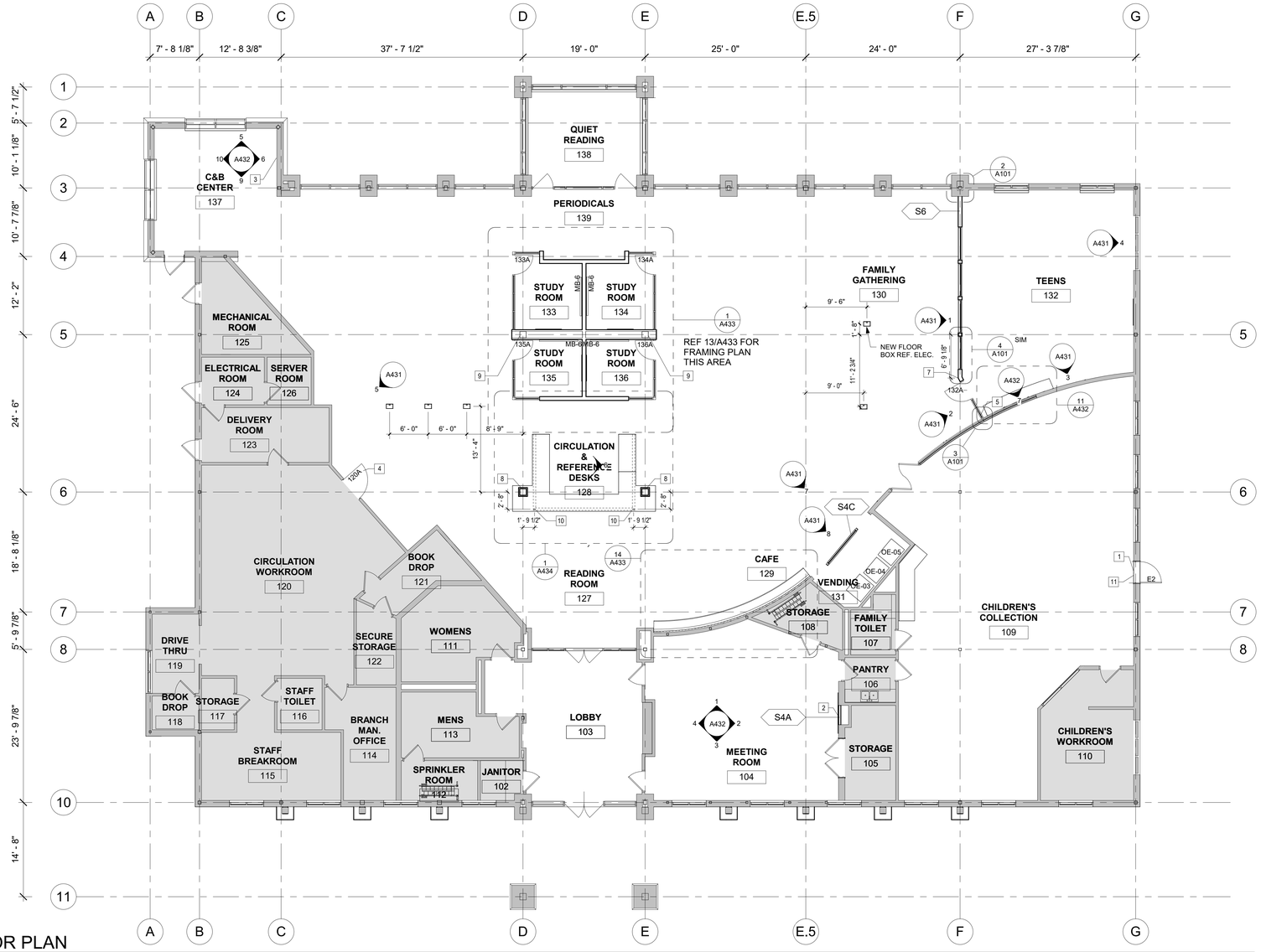
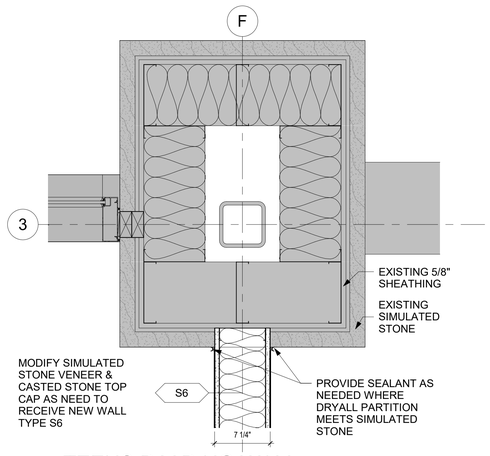
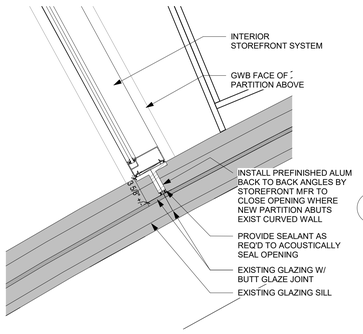


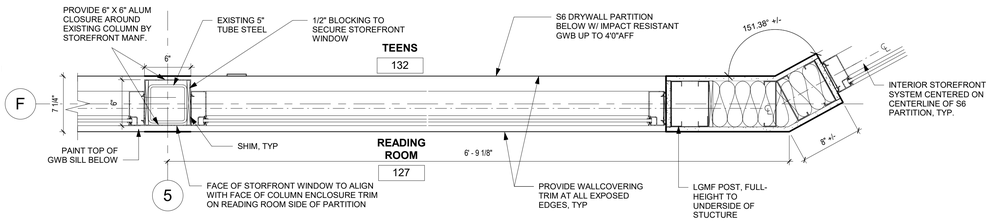
1 FLOOR PLAN
A101 — 1/8" = 1'-0" REFERRED FROM:A301



2 TEENS DIVIDING WALL - NORTH EDGE
A101 — 1 1/2" = 1'-0" REFERRED FROM:A101



3 TEENS DIVIDING WALL - SOUTH EDGE
A101 — 1 1/2" = 1'-0" REFERRED FROM:A101



4 TEENS DEMISING WALL PLAN DETAIL @ WINDOW
A101 — 1 1/2" = 1'-0" REFERRED FROM:A101

GENERAL NOTES

1. DIMENSION ARE TO FINISH FACE UNLESS INDICATED OTHERWISE.
2. INTERIOR PARTITIONS TO BE:
   - A. TYPE **S1C** UNLESS INDICATED OTHERWISE.
   - B. CENTERED ON GRIDLINE WHERE SHOWN, U.N.O.
   - C. ALIGNED WITH ADJACENT CONSTRUCTION WHERE SHOWN, U.N.O.
3. DOORS TO BE 4" FROM CORNER TO OUTSIDE OF FRAME UNLESS INDICATED OTHERWISE.
4. OPENINGS, MATERIAL JOINTS, CONTROL JOINTS OR OTHER ELEMENTS TO BE CENTERED ON GRIDLINES OR CENTERED BETWEEN GRIDLINES UNLESS DIMENSIONED ON PLANS OR INDICATED OTHERWISE.
5. NEW FLOOR BOXES SHOWN FOR DIMENSIONAL LOCATION PURPOSES ONLY, REF. ELECTRICAL.

KEYNOTE LEGEND - FLOOR PLAN	
NO.	DESCRIPTION
1	INSTALL NEW HOLLOW METAL EXTERIOR DOOR IN EXISTING FRAME. SALVAGE EXISTING DOOR HARDWARE FOR RE-USE ON NEW DOOR. REF. DOOR SCHEDULE FOR DETAILS.
2	INFILL NICHE ABOVE EXISTING CABINET WITH NEW GWP PARTITION. PROVIDE BLOCKING AS REQ'D TO SUPPORT OF/OI FLAD PANEL DISPLAY. REF. ELEC FOR POWER/DATA.
3	DEMO EXISTING POWER/DATA IN PROJECTOR NICHE AND INFILL WITH GWB.
4	PREP EXISTING STOREFRONT CASED OPENING TO RECEIVE NEW WOOD DOOR.
5	CENTERLINE OF NEW PARTITION TO BE INSTALLED PERPENDICULAR TO EXISTING CURVED PARTITION. ALIGN NEW PARTITION WITH BUTT-GLAZED JOINT IN EXISTING WINDOW.
7	PROVIDE CUSTOM ALUMINUM CORNER GUARD TO PROTECT WALLCOVERING AT OUTSIDE CORNER. GUARD TO BE 48"H WITH 1"W LEGS AND MATCH ANGLE OF PARTITION. FINISH TO BE SELECTED BY ARCHITECT.
8	EXISTING STEEL COLUMN AND DECORATE METAL COLUMN ENCLOSURES TO BE CLAD WITH GWB ON ALL SIDES, FULL-HEIGHT TO UNDERSIDE OF EXISTING BULKHEAD.
9	EXISTING STEEL COLUMN TO BE EMBEDDED IN S12 WALL AT STUDY ROOMS; ABOVE STUDY ROOM ENCLOSURE CLAD WITH GWB ON ALL SIDES TO UNDERSIDE OF EXISTING BULKHEAD
10	CONDUIT STUB- UPS FOR POWER AND DATA TO SUPPORT CUSTOM DESK, REF ELEC; CONFIRM EXACT LOCATION OF CONDUITS WITH LOCATION OF CHASE WALL OF CUSTOM DESK
11	ADD ALTERNATE 2: INSTALL ELECTRIC ADA DOOR ACTUATOR.

LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING DOOR TO REMAIN
- WALL / PARTITION
- NEW DOOR
- AREA NOT IN SCOPE

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FLOOR PLAN

A101

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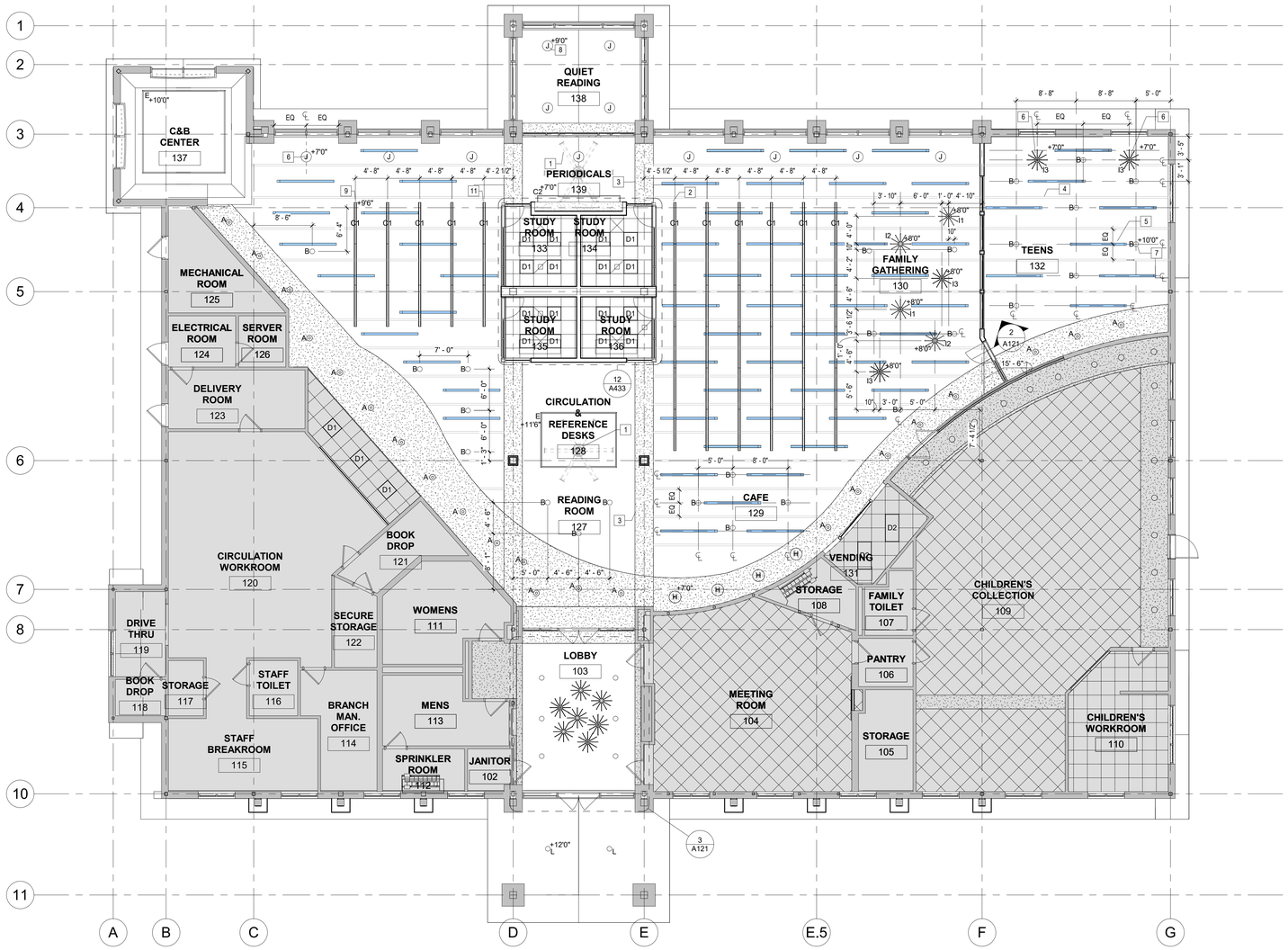
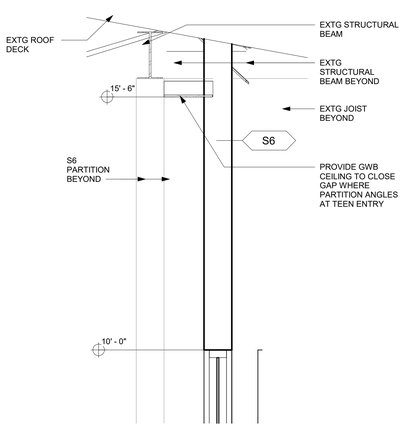
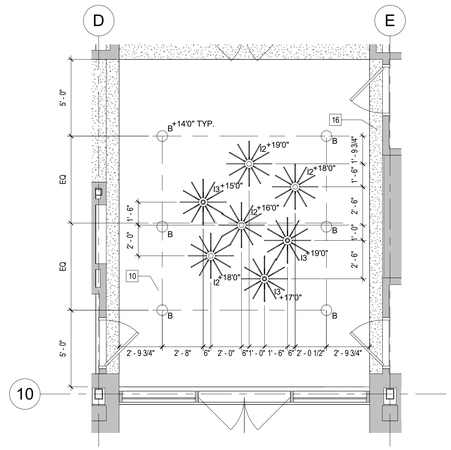


1 A121 **REFLECTED CEILING PLAN**
1/8" = 1'-0" REFERRED FROM:A301



2 A121 **CLG AT TEENS ENTRY**
3/4" = 1'-0" REFERRED FROM:A121



3 A121 **ENLARGED LOBBY RCP**
1/4" = 1'-0" REFERRED FROM:A121

NOTE: LIGHTING FIXTURE AND DEVICE LOCATIONS AT UPPER LEVEL CEILING ARE TO BE FINALIZED UPON SURVEY OF EXISTING STRUCTURE. DIMENSIONS INDICATED ARE BASED ON ARCHITECT'S UNDERSTANDING OF EXISTING STRUCTURE AND ARE SUBJECT TO CHANGE AFTER DEMOLITION IS COMPLETED AND EXISTING CONDITIONS ARE EXPOSED. CONTRACTOR SHALL MEET WITH ARCHITECT PRIOR TO ELECTRICAL ROUGH-IN TO REVIEW EXISTING CONDITIONS AGAINST REFLECTED CEILING PLAN.

GENERAL NOTES

1. DIMENSIONS ARE TO FINISH FACE UNLESS INDICATED OTHERWISE.
2. WHERE EXISTING LIGHTS ARE DEMO'D PATCH & REPAIR CEILING AS REQ'D BEFORE RECEIVING NEW FINISH.
3. COORDINATE MOUNTING LOCATIONS FOR PENDANT LIGHTS AND SUSPENDED ACOUSTIC BAFFLES WITH EXISTING DUCTWORK.
4. DUCTWORK NOT SHOWN FOR CLARITY PURPOSES; REF MECHANICAL FOR LAYOUT

KEYNOTE LEGEND - RCP	
NO.	DESCRIPTION
1	REFERENCE MECH FOR CEILING FAN. COORDINATE EXACT PLACEMENT WITH CEILING MOUNTED PENDANT LIGHTS.
2	MOUNTING OF BOOK STACK LIGHT FIXTURES TO COORDINATE WITH DUCTWORK. REFERENCE ELECTRICAL DRAWINGS.
3	COVE LIGHTING MOUNTED TO TOP EDGE OF EXISTING BULKHEAD REF. ELEC.
4	EXISTING ROOF TRUSS.
5	SACP-01 24" X 96" X 4" THICK FABRIC WRAPPED ACOUSTIC CEILING BAFFLE SUSPENDED FROM EXPOSED ACOUSTIC DECK ON AIRCRAFT CABLE. PANELS TO BE CENTERED BETWEEN EXISTING ROOF TRUSSES U.N.O. BAFFLES TO RUN PARALLEL TO THE SLOPE OF THE ROOF DECK AND TOP OF PANEL TO BE MOUNTED AT 4" BELOW DECK
6	ALIGN CENTERLINE OF FIXTURE WITH CENTERLINE OF THE WINDOW. ALL J TYPE LIGHT FIXTURES TO BE 7'-0" IN MAIN READING ROOM.
7	ALL B TYPE LIGHT FIXTURES TO BE 10'0"AFF U.N.O. REF. ELECTRICAL DRAWINGS.
8	ALL J TYPE LIGHT FIXTURES TO BE 9'0" AFF IN QUIET READING. REF. ELECTRICAL DRAWINGS. LOCATION OF LIGHTS TO MATCH EXISTING UTILIZE EXISTING LIGHT ROUGH-INS FOR NEW PENDANT LIGHTS.
9	ALL C1 & C1E TYPE LIGHT FIXTURES TO BE 9'6" AFF U.N.O. REF. ELECTRICAL DRAWINGS.
10	ALL B TYPE LIGHT FIXTURES IN THE LOBBY TO BE 14'0" AFF U.N.O. REF. ELECTRICAL DRAWINGS.
11	ALIGN EDGE OF C1 FIXTURES WITH ADJACENT STUDY ROOM WALL.

RCP LEGEND

- PARTITION
- SACT-1: ACOUSTIC PANEL CEILING
- GYPSUM BOARD CEILING
- SACP-1: 8'L X 2'H X 4"D ACOUSTIC BAFFLES
- EXISTING TO REMAIN - NOT IN SCOPE

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REFLECTED CEILING PLAN & CEILING DETAILS

A121

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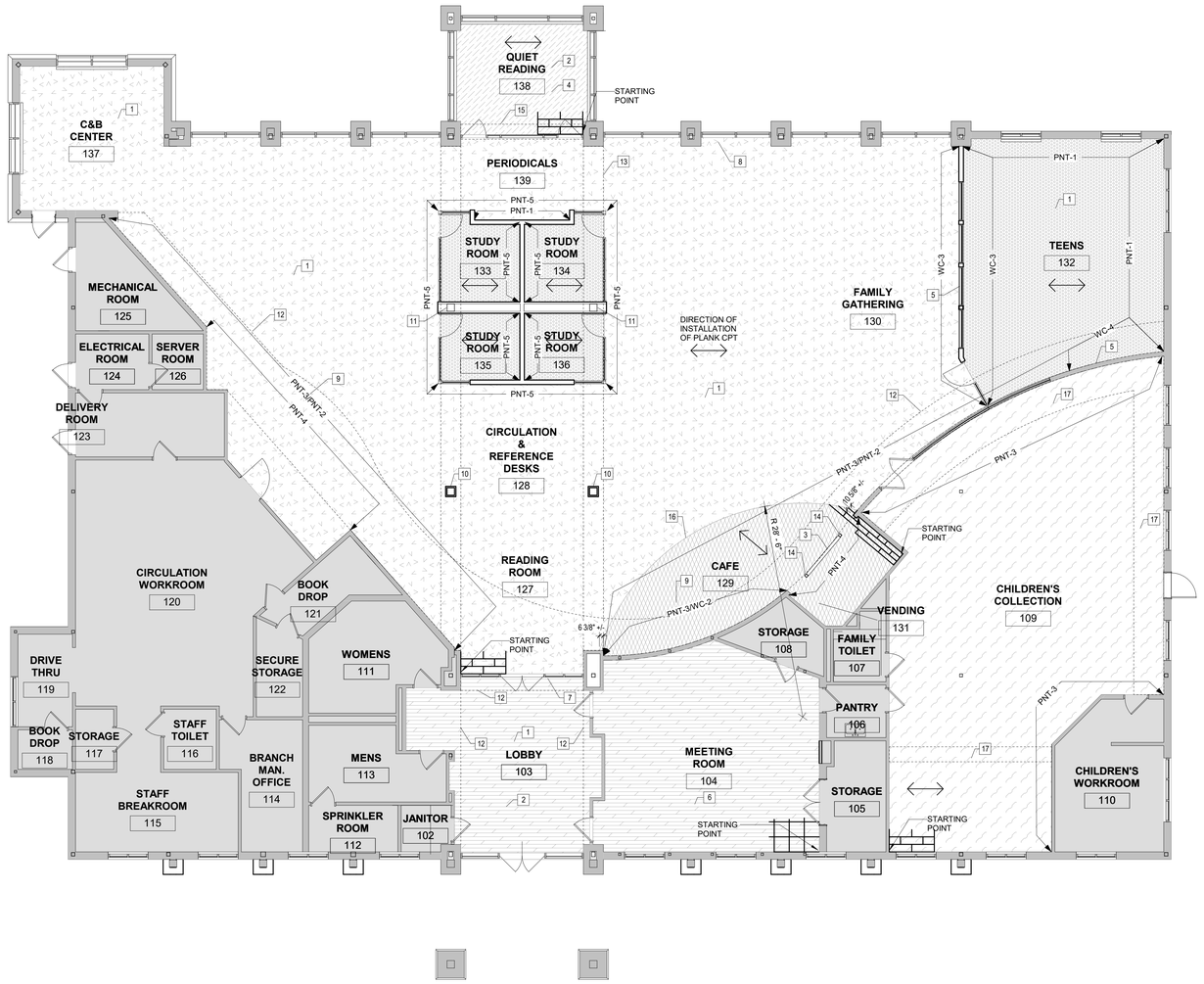

1 A131 FINISH PLAN

1/8" = 1'-0" REFERRED FROM:A301

FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING	COMMENTS
Level 1									
103	LOBBY	CPT	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	EXTG	
104	MEETING ROOM	CPT	RB-1	WC-1,PNT-1	WC-1,PNT-1	WC-1,PNT-1	WC-1,PNT-1	EXTG	
109	CHILDREN'S COLLECTION	CPT	RB-1	PNT-3	PNT-1	PNT-1	PNT-1	EXTG	EXISTING CURVED SOFFITS TO BE PAINTED PNT-2.
127	READING ROOM	CPT	RB-1	PNT-1	REF ELEV.	REF ELEV.	REF ELEV.	EXTG	EXISTING CURVED SOFFIT TO BE PAINTED PNT-2.
128	CIRCULATION & REFERENCE DESKS	CPT	RB-1					EXTG	
129	CAFE	LVT	RB-1			PNT-2, PNT-3, PNT-4, WC-2		EXTG,ACP-1	EXISTING CURVED SOFFITS TO BE PAINTED PNT-2.
130	FAMILY GATHERING	CPT	RB-1		GL, WC-3	PNT-2, PNT-3		EXTG,ACP-1	EXISTING CURVED SOFFITS TO BE PAINTED PNT-2.
131	VENDING	LVT	RB-1	PNT-4, RESIN PANEL	PNT-4	PNT-4	PNT-4	EXTG	1/2 WALL TO BE PAINTED PNT-3 W/ RESIN PANEL ABOVE.
132	TEENS	CPT	RB-1	PNT-1	PNT-1	PNT-2, PNT-3,WC-4	WC-3	EXTG,ACP-1	EXISTING CURVED SOFFIT TO BE PAINTED PNT-2.
133	STUDY ROOM	CPT	RB-1	GL, PNT-1	PNT-5	PNT-1	GL	SACT-1	EXTERIOR WALLS OF STUDY ROOM TO BE PNT-5, GL, & RB-1.
134	STUDY ROOM	CPT	RB-1	GL, PNT-1	GL	PNT-1	PNT-5	SACT-1	EXTERIOR WALLS OF STUDY ROOM TO BE PNT-5, GL, & RB-1.
135	STUDY ROOM	CPT	RB-1	PNT-1	PNT-5	GL, PNT-1	GL	SACT-1	EXTERIOR WALLS OF STUDY ROOM TO BE PNT-5, GL, & RB-1.
136	STUDY ROOM	CPT	RB-1	PNT-1	GL	GL, PNT-1	PNT-5	SACT-1	EXTERIOR WALLS OF STUDY ROOM TO BE PNT-5, GL, & RB-1.
137	C&B CENTER	CPT	RB-1	PNT-1,PNT-2,AWP-1	PNT-1,PNT-2,AWP-1	PNT-1,PNT-2,AWP-1	PNT-1,PNT-2,AWP-1	EXTG	EXISTING BULKHEAD TO BE PAINTED PNT-2.
138	QUIET READING	CPT	RB-1	EXTG	EXTG	EXTG	EXTG	EXTG	EXISTING BULKHEAD TO BE PAINTED PNT-2.
139	PERIODICALS	CPT	RB-1	EXTG		PNT-1, PNT-5, GL		EXTG	

PAINT SCHEDULE

TAG	LOCATION
PNT-1	SHERWIN WILLIAMS - SW 6232 MISTY
PNT-2	SHERWIN WILLIAMS - SW 7042 PURE WHITE
PNT-3	SHERWIN WILLIAMS - SW 6226 LANGUID BLUE
PNT-4	SHERWIN WILLIAMS - SW 6230 RAINSTORM
PNT-5	SHERWIN WILLIAMS - SW 0018 TEAL STENCIL
PNT-6	SHERWIN WILLIAMS - SW 9141 WATERLOO

PLAM SCHEDULE

TAG	LOCATION
PLAM-1	WILSONART - PALISADES OAK 7987-38 - FINE VELVET FINISH
PLAM-2	FORMICA - WINTER SKY 8792-58 - MATTE FINISH
PLAM-3	CHEMETAL - BRUSHED BLUE ALUMINUM 950
PLAM-4	FORMICA - COLOR CORE - NEW WHITE 7223
PLAM-5	WILSONART - KENSINGTON MAPLE 10776-60 - MATTE FINISH

FINISH PLAN NOTES

1. ALL GWB WALLS TO RECEIVE EGGSHELL FINISH. ALL PTD CEILINGS TO RECEIVE FLAT FINISH. ALL HM DOORS AND FRAMES, EXPOSED STEEL STRUCTURE, EXPOSED DUCTWORK, AND EXPOSED PIPING TO RECEIVE SEMI-GLOSS FINISH.

2. ALL PAINTED SURFACES TO BE PNT-1 UNLESS NOTED OTHERWISE.

3.ALL EXISTING EXPOSED STEEL COLUMNS TO BE PNT'D PNT-6.

4. ALL HOLLOW METAL DOORS AND FRAMES TO BE PAINTED TO MATCH ADJACENT WALL COLOR.

5. REFERENCE ELEVATIONS FOR COLORS AND EXTENTS OF PNT'D CEILING ELEMENTS.

KEYNOTE LEGEND - FINISH PLAN

NO.	DESCRIPTION
1	ADD ALTERNATE #1: PAINT EXISTING ACOUSTIC ROOF DECK, EXPOSED DUCTWORK, PIPING, AND ELECTRICAL CONDUIT PNT-2.
2	BASE BID SHALL INCLUDE PAINTING THE EXISTING EXPOSED ACOUSTIC ROOF DECK & STRUCTURE AT QUIET READING PNT-2.
3	VENDING 1/2 WALL TO BE PAINTED PNT-3.
4	PAINT ALL GWB SURFACES ABOVE ALUM STOREFRONT WINDOWS, PNT-1.
5	REFERENCE ELEVATION FOR EXTENTS OF WC-4.
6	WC-1 & PNT-1, ALL WALLS. REF ELEVATIONS ON A432 FOR LAYOUT.
7	EXISTING WALL MURAL TO REMAIN, PROTECT DURING CONSTRUCTION.
8	PAINT GWB ABOVE ALUM STOREFRONT WINDOWS & GWB WRAPPED PIERS ABOVE SIMULATED STONE PNT-1 THIS ELEV, TYP.
9	REF ELEV. FOR A431 FOR EXACT PAINT & WC LOCATIONS.
10	PNT-6, GWB COLUMN WRAP
11	GWB COLUMN WRAP ABOVE STUDY ROOM COLUMNS BETWEEN THE TOP OF THE STUDY ROOM & THE CEILING ABOVE. PAINT GWB COLUMN WRAP PNT-6.
12	EXISTING SOFFIT ABOVE TO BE PAINTED PNT-2.
13	EXISTING SOFFIT ABOVE - PAINT ALL FACES OF GWB SOFFIT PNT-2.
14	EXISTING GWB COLUMN WRAP TO BE PAINTED PNT-3.
15	EXISTING SOFFIT ABOVE - PAINT ALL FACES OF GWB SOFFIT PNT-2.
16	PROVIDE CURVED METAL TRANSITION BETWEEN CPT-1 & LVT-1.
17	EXISTING SOFFIT TO BE PAINTED PNT-2.

FLOOR FINISH LEGEND

- INDICATES INSTALLATION DIRECTION PER LONG DIMENSION OF TILE
- CPT-1
- CPT-2
- CPT-3
- CPT-4
- CPT-5
- LVT-1
- NOT IN CONTRACT

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FINISH PLAN

A131

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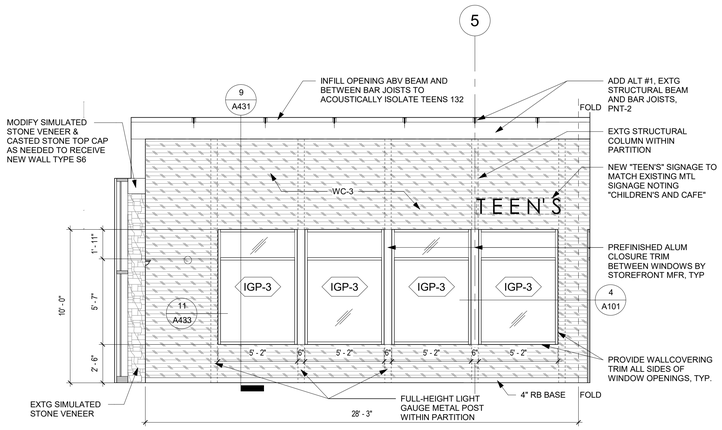
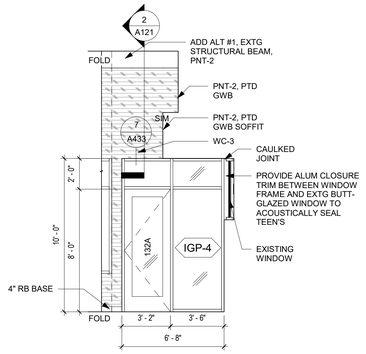


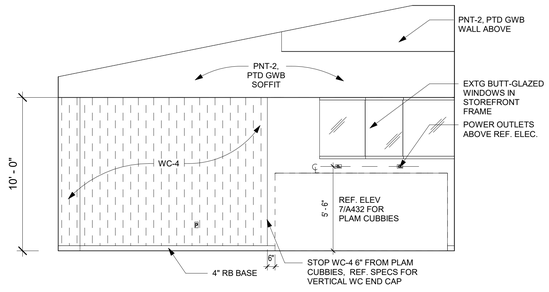
1 A431 FAMILY COLLABORATION EAST ELEVATION

1/4" = 1'-0" REFERRED FROM:A101



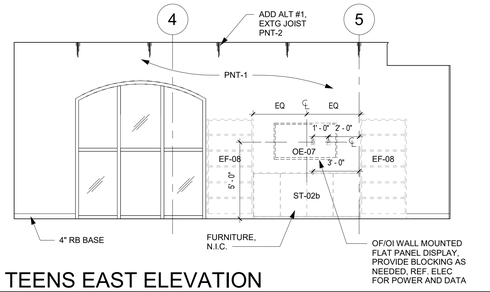
2 A431 TEENS ENTRY ELEVATION

1/4" = 1'-0" REFERRED FROM:A101



3 A431 TEENS SOUTH ELEVATION

1/4" = 1'-0" REFERRED FROM:A101

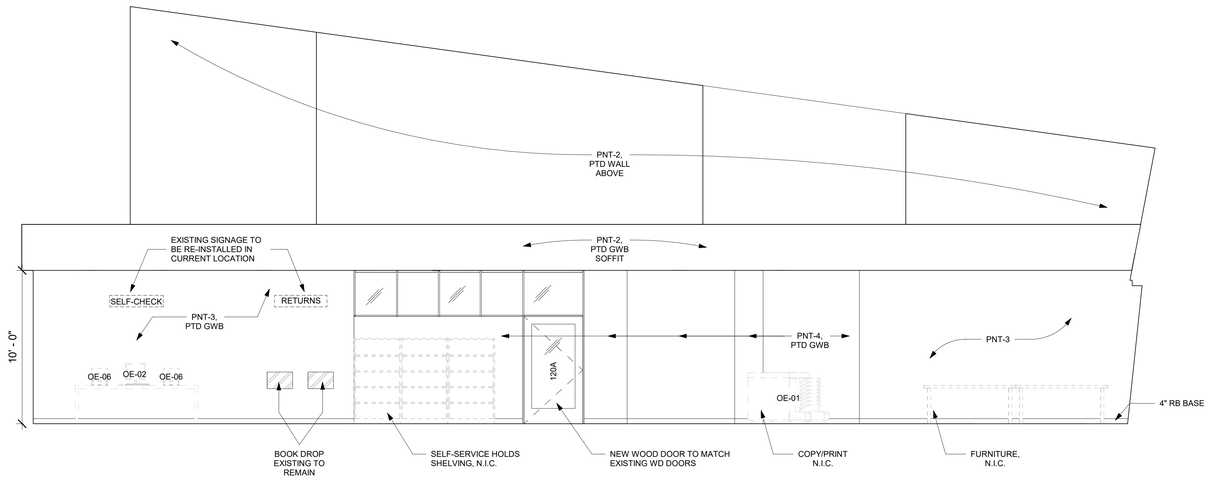


4 A431 TEENS EAST ELEVATION

1/4" = 1'-0" REFERRED FROM:A101

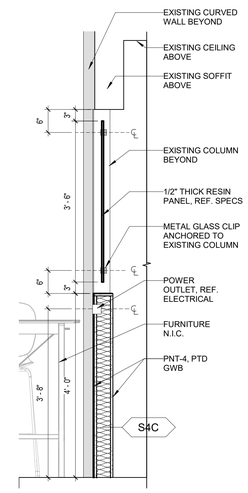
GENERAL NOTES

1. DIMENSION ARE TO FINISH FACE UNLESS INDICATED OTHERWISE.
2. OPENINGS, MATERIAL JOINTS, CONTROL JOINTS OR OTHER ELEMENTS TO BE CENTERED ON GRIDLINES OR CENTERED BETWEEN GRIDLINES UNLESS DIMENSIONED ON PLANS OR INDICATED OTHERWISE.
3. CEILINGS AS INDICATED IN THE REFLECTED CEILING PLANS.



5 A431 READING ROOM SW ELEVATION

1/4" = 1'-0" REFERRED FROM:A101

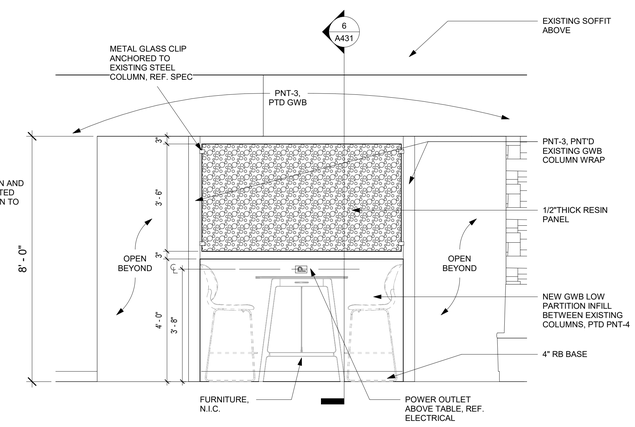


6 A431 CAFE/VENDING ACCENT WALL SECTION

3/4" = 1'-0" REFERRED FROM:A431

7 A431 CAFE & CHILDREN'S ENTRANCE

1/4" = 1'-0" REFERRED FROM:A101



8 A431 CAFE/VENDING ACCENT WALL

1/2" = 1'-0" REFERRED FROM:A101

SECTION AT TEENS DEMISING WALL

9 A431 — 3/4" = 1'-0" REFERRED FROM:A431

QUINN EVANS
1840 WEST BROAD STREET
SUITE 400
RICHMOND, VA 23220
v 804.788.4774
QUINNEVANS.COM

PERRYVILLE BRANCH LIBRARY RENOVATION

CECIL COUNTY PUBLIC LIBRARY

500 COUDON BLVD
PERRYVILLE, MD 21903

STATE OF MARYLAND — CHARLES D. RIPPEY — No. 19288 — ARCHITECT

No.	Date	Description

PROJECT MANAGER: SW
DRAWN BY: AT

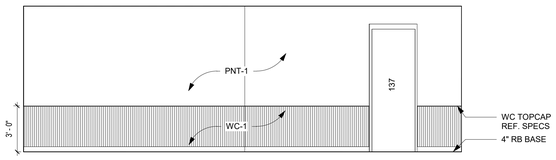
QEA No.42137020

100% CONSTRUCTION DOCUMENTS
08/01/23

INTERIOR ELEVATIONS

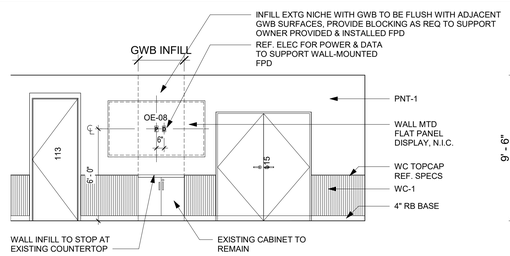
A431

PATH & FILENAME: Autodesk Docs://Perryville Branch Library/42137020_Perryville Branch Library_R22.rvt
PLOTTING DATE & TIME: 8/2/2023 4:06:20 PM



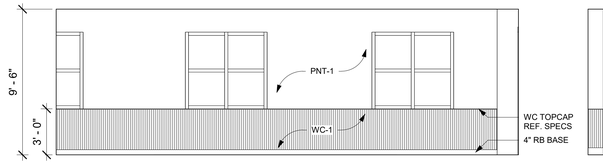
1 A432 MEETING ROOM - NORTH ELEVATION

1/4" = 1'-0" REFERRED FROM:A101



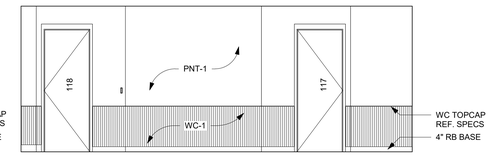
2 A432 MEETING ROOM - EAST ELEVATION

1/4" = 1'-0" REFERRED FROM:A101



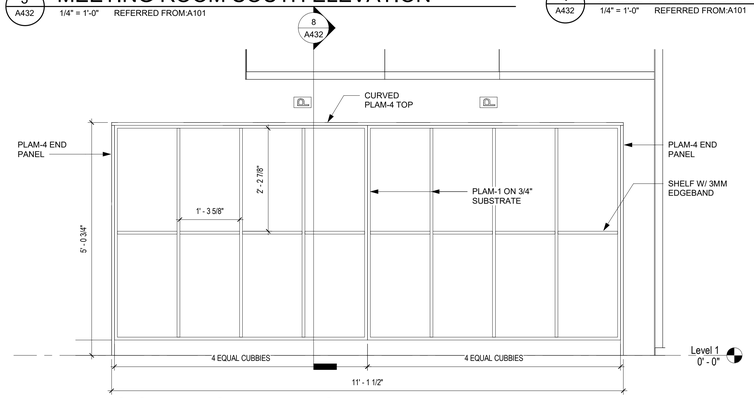
3 A432 MEETING ROOM SOUTH ELEVATION

1/4" = 1'-0" REFERRED FROM:A101



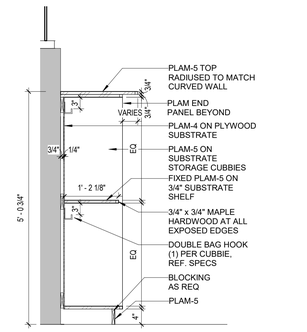
4 A432 MEETING ROOM WEST ELEVATION

1/4" = 1'-0" REFERRED FROM:A101



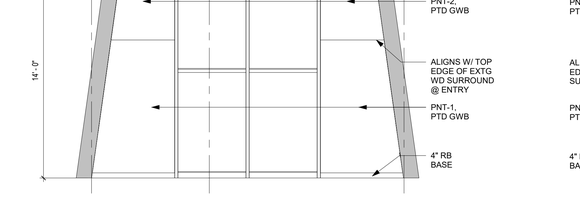
7 A432 TEENS CUBBIES ELEVATION

3/4" = 1'-0" REFERRED FROM:A101



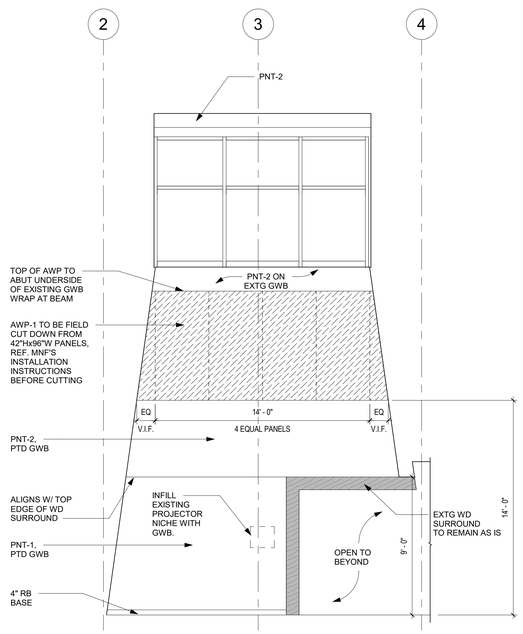
8 A432 TEENS CUBBIES SECTION

3/4" = 1'-0" REFERRED FROM:A432



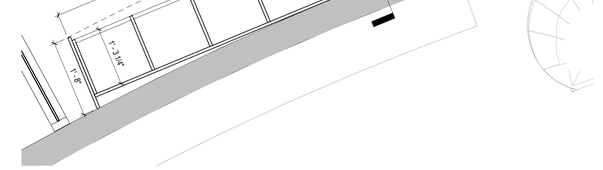
5 A432 C&B CENTER NORTH ELEVATION

1/4" = 1'-0" REFERRED FROM:A101



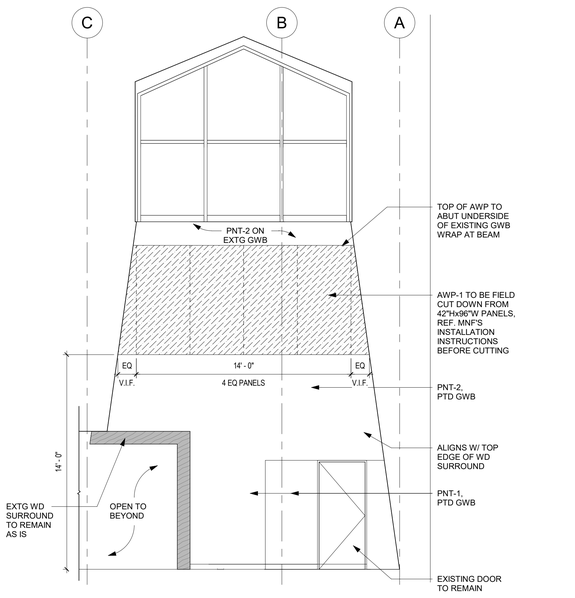
6 A432 C&B CENTER EAST ELEVATION

1/4" = 1'-0" REFERRED FROM:A101



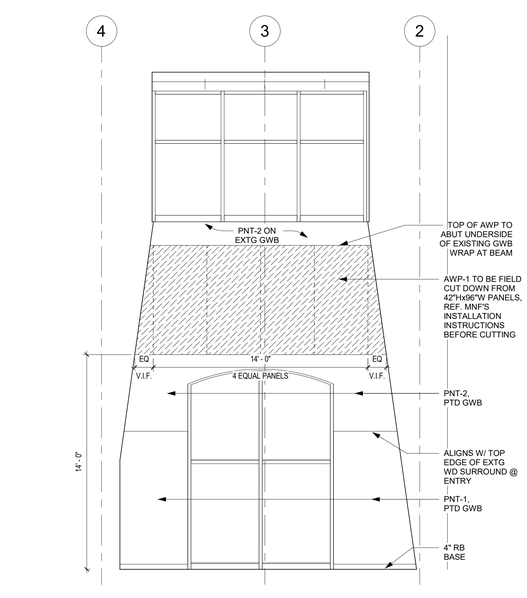
11 A432 ENLARGED PLAN @ TEENS CUBBIES

3/4" = 1'-0" REFERRED FROM:A101



9 A432 C&B CENTER SOUTH ELEVATION

1/4" = 1'-0" REFERRED FROM:A101



10 A432 C&B CENTER WEST ELEVATION

1/4" = 1'-0" REFERRED FROM:A101

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1840 WEST BROAD STREET
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RICHMOND, VA 23220
v 804.788.4774
QUINNEVANS.COM

PERRYVILLE BRANCH LIBRARY RENOVATION

CECIL COUNTY PUBLIC LIBRARY

500 COUDON BLVD
PERRYVILLE, MD 21903

STATE OF MARYLAND
CHARLES D. PIPER
No. 19268
ARCHITECT

No.	Date	Description

PROJECT MANAGER: SW
DRAWN BY: AT

QEA No.42137020

100% CONSTRUCTION DOCUMENTS
08/01/23

INTERIOR ELEVATIONS & CASEWORK DETAILS

A432

PATH & FILENAME: Autodesk Docs://Perryville Branch Library/42137020_Perryville Branch Library_R22.rvt
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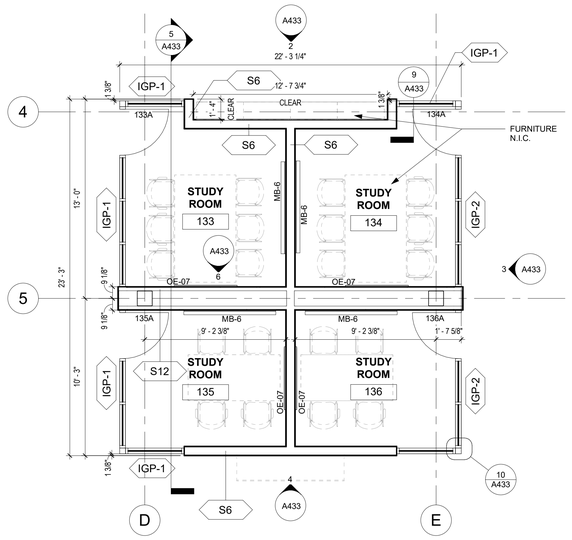
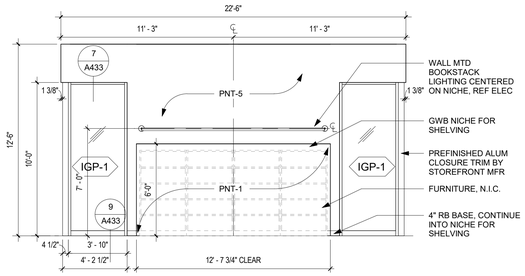
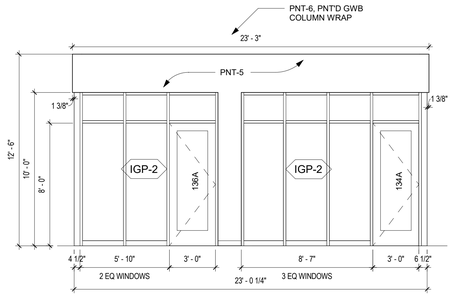


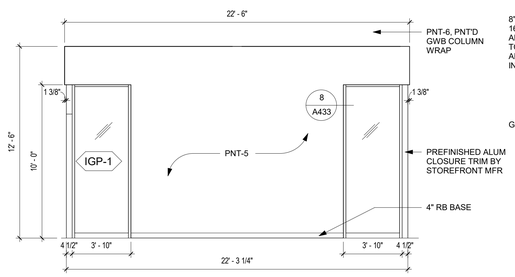
1 A433 — STUDY ROOMS ENLARGED PLAN
1/4" = 1'-0" REFERRED FROM:A101



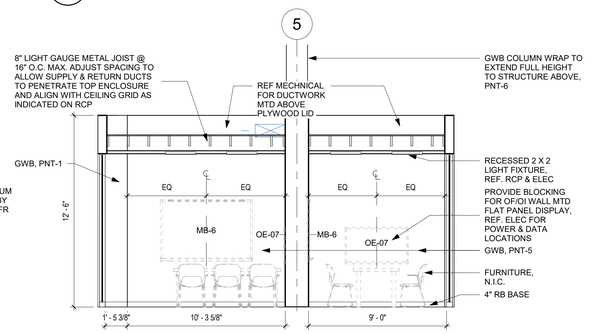
2 A433 — PERIODICALS SOUTH ELEVATION
1/4" = 1'-0" REFERRED FROM:A433



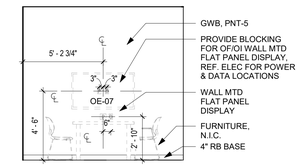
3 A433 — STUDY ROOM POD EAST ELEVATION
1/4" = 1'-0" REFERRED FROM:A433



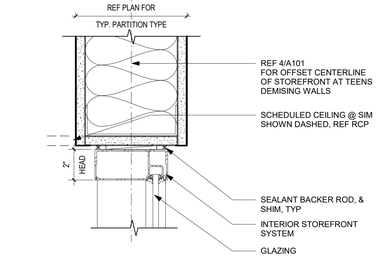
4 A433 — STUDY ROOM POD SOUTH ELEVATION
1/4" = 1'-0" REFERRED FROM:A433



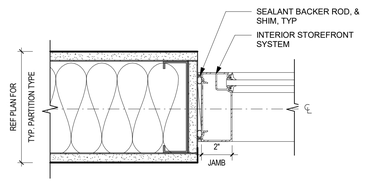
5 A433 — STUDY ROOM INTERIOR SECTION
1/4" = 1'-0" REFERRED FROM:A433



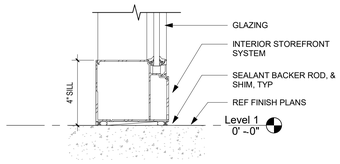
6 A433 — STUDY ROOM - TYP. DISPLAY WALL
1/4" = 1'-0" REFERRED FROM:A433



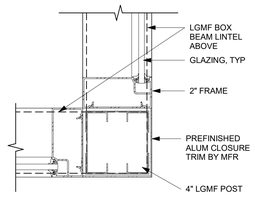
7 A433 — INT SF HEAD TYP
3" = 1'-0" REFERRED FROM:A431



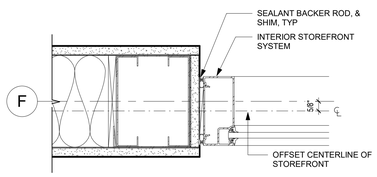
8 A433 — INT SF JAMB TYP
3" = 1'-0" REFERRED FROM:A433



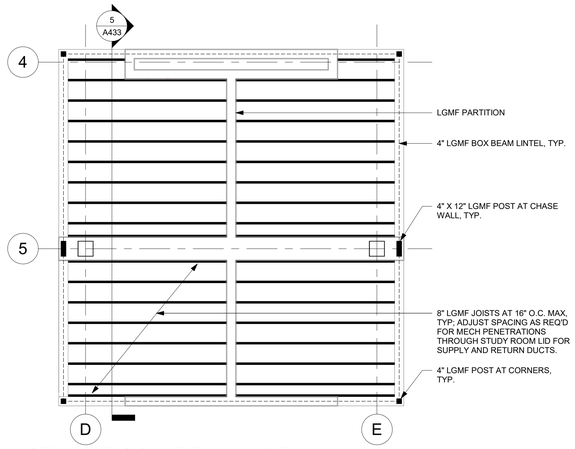
9 A433 — INT SF TYP SILL
3" = 1'-0" REFERRED FROM:A433



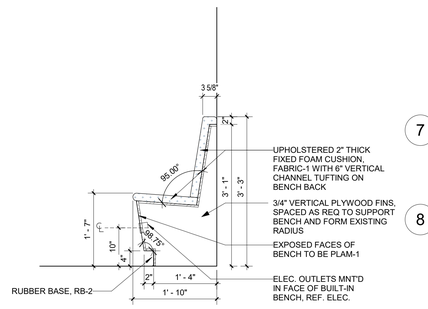
10 A433 — INT SF JAMB @ CORNER
3" = 1'-0" REFERRED FROM:A433



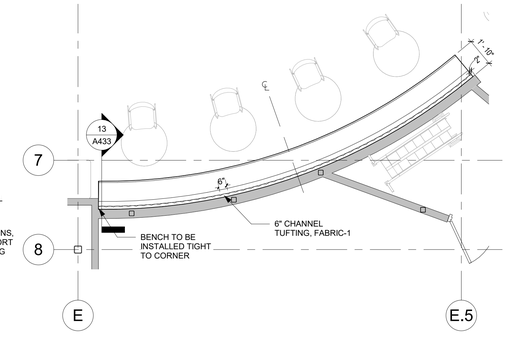
11 A433 — INT SF JAMB W/ OFFSET CENTERLINE
3" = 1'-0" REFERRED FROM:A431



12 A433 — STUDY ROOM FRAMING PLAN
1/4" = 1'-0" REFERRED FROM:A121



13 A433 — CAFE BENCH SECTION
3/4" = 1'-0" REFERRED FROM:A431



14 A433 — PLAN DETAIL @ CAFE BENCH
1/4" = 1'-0" REFERRED FROM:A101

QUINN EVANS
1840 WEST BROAD STREET
SUITE 400
RICHMOND, VA 23220
v 804.788.4774
QUINNEVANS.COM

PERRYVILLE BRANCH LIBRARY RENOVATION

CECIL COUNTY PUBLIC LIBRARY

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PERRYVILLE, MD 21903

STATE OF MARYLAND · CHARLES D. PIPER · No. 19268 · ARCHITECT

No.	Date	Description

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ENLARGED PLANS & ELEVATIONS

A433

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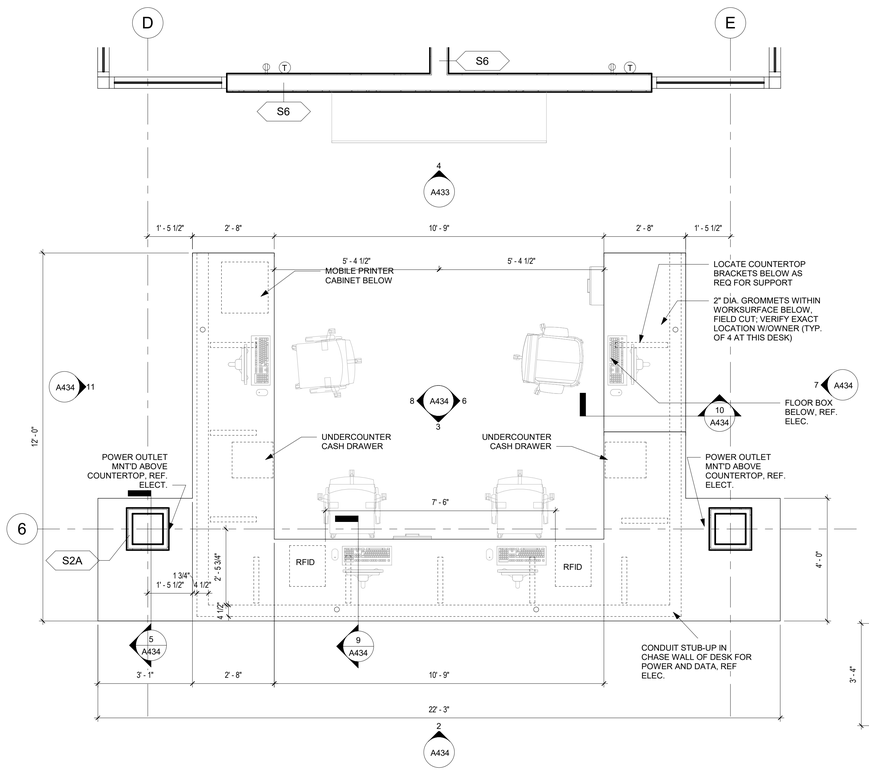
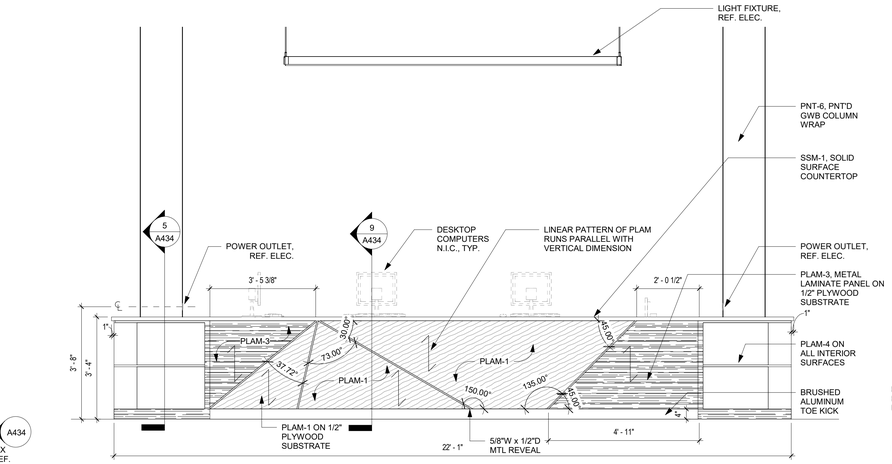


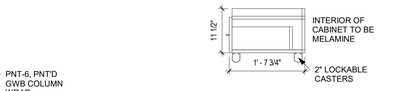
1 A434 CIRC/REF DESK ENLARGED PLAN

1/2" = 1'-0" REFERRED FROM:A101



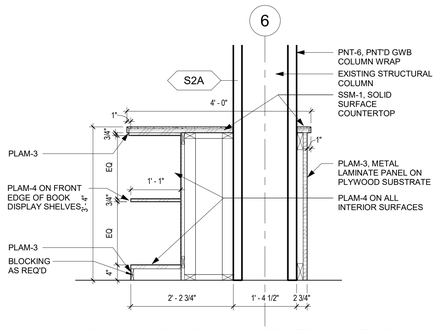
2 A434 CIRC/REF DESK FRONT ELEVATION

1/2" = 1'-0" REFERRED FROM:A434



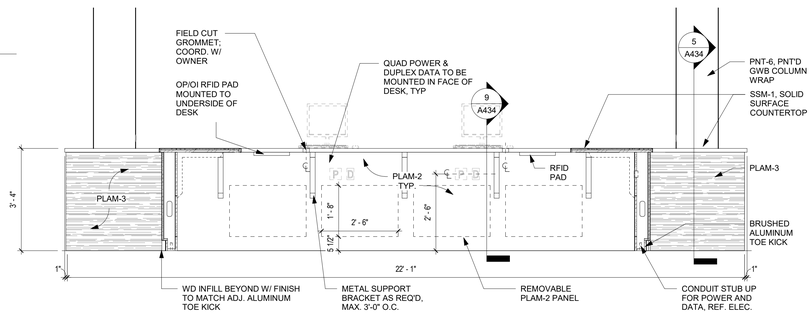
4 A434 MOBILE PRINTER CABINET SECTION

3/4" = 1'-0" REFERRED FROM:



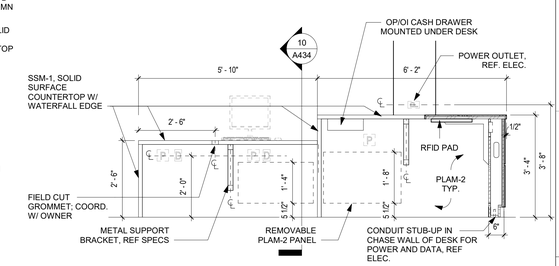
5 A434 BOOK DISPLAY SECTION, TYP.

3/4" = 1'-0" REFERRED FROM:A434



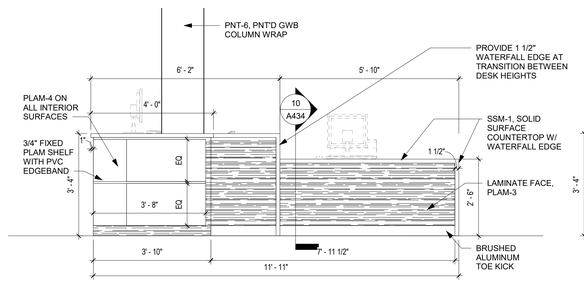
3 A434 CIRC/REF DESK SECTION

1/2" = 1'-0" REFERRED FROM:A434



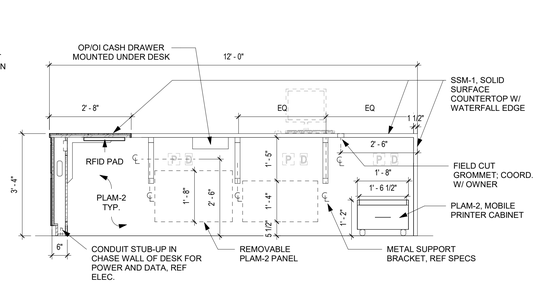
6 A434 CIRC/REF DESK INTERIOR WEST ELEVATION

1/2" = 1'-0" REFERRED FROM:A101



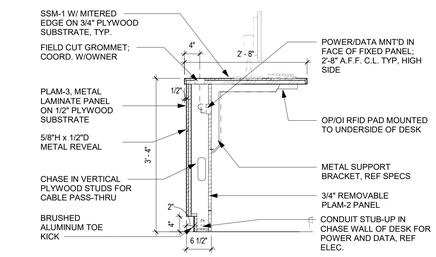
7 A434 CIRC/REF DESK EAST ELEVATION

1/2" = 1'-0" REFERRED FROM:A433



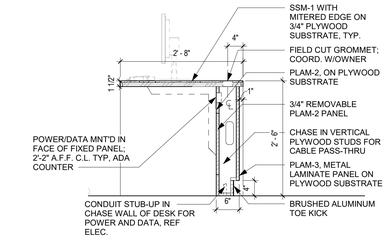
8 A434 CIRC/REF DESK INTERIOR EAST ELEVATION

1/2" = 1'-0" REFERRED FROM:A433



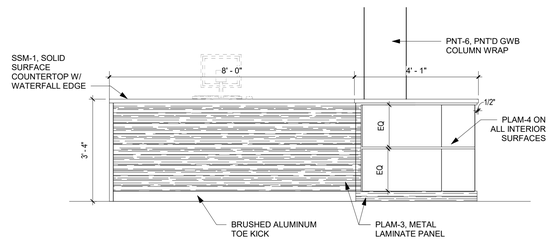
9 A434 CIRC/REF DESK - CIRC.

3/4" = 1'-0" REFERRED FROM:A434



10 A434 REFERENCE COUNTER SECTION

3/4" = 1'-0" REFERRED FROM:A434



11 A434 CIRC/REF DESK WEST ELEVATION

1/2" = 1'-0" REFERRED FROM:A433

12 A434 PERSPECTIVE VIEW - CIRC/REF DESK

REFERRED FROM:

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STATE OF MARYLAND · CHARLES D. PIPER · No. 19268 · ARCHITECT

No.	Date	Description

PROJECT MANAGER: SW
DRAWN BY: AT

QEA No.42137020

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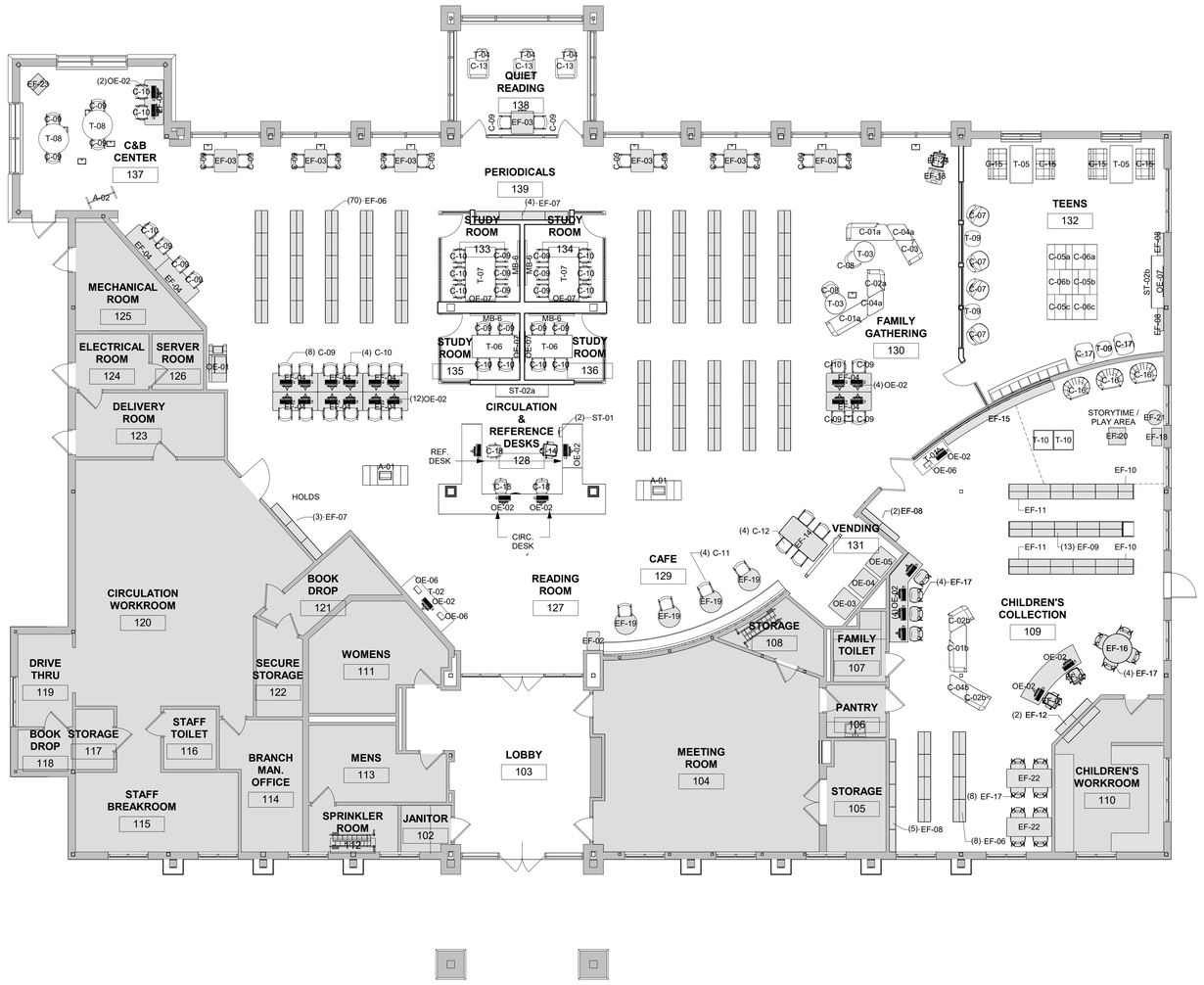
08/01/23

CASEWORK ELEVATIONS & DETAILS

A434



1 A701 FURNITURE PLAN

1/8" = 1'-0" REFERRED FROM:A301

NOTE: FURNITURE FOR INFORMATIONAL PURPOSES ONLY. FURNITURE NOT IN CONTRACT

OWNER-PROVIDED EQUIPMENT			
TAG	COMMENTS	DESCRIPTION	COUNT
OE-01	OF/OI	PRINTER/COPIER	1
OE-02	OF/OI	MONITOR & PC	30
OE-03	OF/OI	SNACK VENDING MACHINE	1
OE-04	OF/OI	COFFEE VENDING MACHINE	1
OE-05	OF/OI	DRINK VENDING MACHINE	1
OE-06	OF/OI	IPAD SELF-CHECK OUT	3
OE-07	OF/OI	WALL MOUNTED FLAT PANEL DISPLAY - 55"	5
OE-08	OF/OI	WALL MOUNTED FLAT PANEL DISPLAY - 85"	1

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FURNITURE PLAN

A701

PATH & FILENAME: Autodesk Docs://Perryville Branch Library/42137020_Perryville Branch Library_R22.rvt
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MECHANICAL GENERAL NOTES

1. THE MECHANICAL CONTRACT DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO INDICATE SCOPE AND THE GENERAL ARRANGEMENT OF THE SYSTEMS. WHERE APPLICABLE THE FOLLOWING NOTES SHALL APPLY TO ALL MECHANICAL (HVAC, PIPING AND FIRE PROTECTION) SYSTEMS.
2. THOUGH SOME DUCTWORK AND PIPING OFFSETS AND TRANSITIONS ARE INDICATED, IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL OFFSETS AND TRANSITIONS REQUIRED. THE CONTRACTOR SHALL FULLY COORDINATE THE MECHANICAL WORK WITHIN ITSELF AND WITH THE WORK OF ALL OTHER TRADES TO PROVIDE COMPLETE AND OPERABLE SYSTEMS WITHOUT INTERFERENCES.
3. DEMOLISH ALL SYSTEMS AND EQUIPMENT INDICATED TO BE REMOVED BY DRAWINGS OR NOTES. WHERE EXISTING SYSTEMS ARE TO REMAIN IN USE, REMOVE ALL UNUSED PORTIONS OF THE SYSTEMS TO A POINT AS CLOSE TO THE REMAINING SYSTEMS AS POSSIBLE AND CAP WITH MATERIALS AND CONSTRUCTION MATCHING THE REMAINING SYSTEMS' CUT END.
4. PROVIDE APPROVED FIRE STOPPING MATERIAL AROUND ALL DUCTWORK AND PIPING PENETRATIONS (NEW AND EXISTING) THROUGH FIRE RATED FLOORS AND WALLS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED FLOORS AND WALLS. PROVIDE FIRE DAMPERS AT ALL DUCT PENETRATIONS THROUGH FLOORS AND FIRE RATED WALLS AND FIRE/SMOKE DAMPERS AT ALL PENETRATIONS THROUGH SHAFT ENCLOSURES.
5. SUPPORT ALL EQUIPMENT (I.E. HEAT PUMPS, ETC.) FROM STRUCTURE WITH SPECIFIED VIBRATION ISOLATION.
6. ALL DUCT SIZES REFER TO INTERNAL FREE AREA. REFER TO DRAWINGS AND SPECIFICATIONS FOR INTERNAL INSULATION AND SOUND LINING PRIOR TO FABRICATION.
7. ALL DUCTWORK SHALL BE CONSTRUCTED OF RIGID SHEET METAL UNLESS OTHERWISE NOTED.
8. COORDINATE DIFFUSER, REGISTER AND GRILLE LOCATIONS AND BORDER TYPES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
9. INSTALL DUCTWORK AND PIPING MAINS TIGHT TO UNDERSIDE OF STRUCTURE UNLESS OTHERWISE INDICATED.
10. REFER TO MECHANICAL DETAILS FOR TYPICAL EQUIPMENT CONNECTIONS.
11. PIPING CONNECTIONS TO HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
12. PATCH AND SEAL ALL REMAINING OPENINGS (NEW AND EXISTING) THROUGH FLOORS, CEILINGS, AND WALLS RESULTING FROM DEMOLITION OR NEW WORK WITH MATERIALS AND FINISHES TO MATCH EXISTING CONSTRUCTION AND FIRE RATING.
13. AS AN INTEGRAL PART OF THESE DOCUMENTS, THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
14. PRIOR TO THE BALANCING OF SYSTEMS BY THE AABC CERTIFIED BALANCING CONTRACTOR, ALL LOW PRESSURE SYSTEMS SHALL BE TESTED BY THE MECHANICAL CONTRACTOR FOR DUCT LEAKAGE. DUCT LEAKAGE SHALL NOT EXCEED 1% FOR A DURATION OF TEN (10) MINUTES. SEE SPECIFICATIONS FOR ADDITIONAL TESTING CRITERIA. INSULATION MATERIALS SHALL NOT BE APPLIED UNTIL SYSTEMS HAVE BEEN WITNESSED, DOCUMENTED AND SUBMITTED TO MEET THE ABOVE TESTING REQUIREMENTS. REFER SPECIFICATIONS FOR SYSTEMS INDICATED AS LOW PRESSURE OR HIGH PRESSURE. THE BALANCE CONTRACTOR SHALL WITNESS AND CERTIFY ALL DUCT PRESSURE TESTS.
15. CONTRACTOR SHALL VISIT THE SITE AND VERIFY EXISTING CONDITIONS PRIOR TO THE BEGINNING OF ANY WORK. FAILURE TO VISIT THE SITE SHALL IN NO WAY RELIEVE THE CONTRACTOR FROM ANY RESPONSIBILITY.
16. CONTRACTOR SHALL USE CARE WHEN PERFORMING SELECTIVE DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO BUILDING FINISHES, EQUIPMENT, FURNITURE, STRUCTURE, AND MECHANICAL/ELECTRICAL SYSTEMS AND EQUIPMENT. SHOULD ANY DAMAGE OCCUR THE CONTRACTOR SHALL RESTORE DAMAGED AREA/ITEMS TO ORIGINAL CONDITION TO MEET THE OWNER'S SATISFACTION.
17. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE OWNER ANY UTILITY OUTAGES. OWNER SHALL BE GIVEN A MINIMUM OF 72 HOURS NOTICE (THREE WORKING DAYS) FOR ANY OUTAGES.
18. HVAC SHALL BE MAINTAINED TO ALL AREAS OUTSIDE OF THE CURRENT PHASE OF THE RENOVATED AREA AT ALL TIMES. PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO COORDINATE OUTAGES WITH THE OWNER A MINIMUM OF 72 HOURS (THREE WORKING DAYS) IN ADVANCE.
19. DEMOLITION AND NEW WORK THAT WILL RESULT IN DOWN TIME OF SERVICES (HVAC, ETC.) SHALL BE PERFORMED AT PREMIUM TIME AS REQUIRED TO MINIMIZE DOWN TIME TO ADJACENT SPACES. COORDINATE ALL OUTAGES WITH OWNER.
20. SCHEDULE ALL WORK IN OCCUPIED SPACES WITH OWNER AT LEAST TWO (2) WEEKS PRIOR TO CONSTRUCTION.
21. RETURN TO OWNER, AT THEIR DISCRETION, ALL UNUSED MECHANICAL EQUIPMENT (I.E. HEAT PUMPS, THERMOSTATS AND CONTROLS).
22. CONTRACTOR SHALL PRE-TEST ERV-2, HP-2.5, AND HP-2.6 (LOCATED IN THE EAST MEZZANINE) TO DOCUMENT EXISTING AIR FLOW (CFM) AND TOTAL STATIC PRESSURE DROP PRIOR TO START OF WORK. PROVIDE DOCUMENTATION OF TEST TO THE ENGINEER AND OWNER .
23. CONTRACTOR SHALL REBALANCE EXISTING ERV-2, HP-2.6, AND HP-2.6 (LOCATED IN THE EAST MEZZANINE) TO OBTAIN AIR QUANTITIES INDICATED. PROVIDE SHEAVE AND BELT ADJUSTMENT AND / OR REPLACEMENT AS REQUIRED. CLEAN EXISTING FAN AND REPAIR / REPLACE EXISTING FLEXIBLE DUCT CONNECTIONS.
24. CONTRACTOR SHALL TEST/BALANCE ALL AIR AND HYDRONIC EQUIPMENT AND DEVICES INDICATED ON THE DOCUMENTS. AIR SYSTEM EQUIPMENT AND DEVICES SHALL INCLUDE, BUT NOT BE LIMITED TO: DUCT MOUNTED VOLUME DAMPERS, ETC. HYDRONIC EQUIPMENT AND DEVICES SHALL INCLUDE, BUT NOT BE LIMITED TO: PUMPS, COILS, BALANCING VALVES, ETC. BALANCE ALL EQUIPMENT AND DEVICES TO THE AIR/WATER FLOWS (CFM OR GPM) INDICATED ON THE DOCUMENTS (WHERE FLOWS ARE NOT CLEARLY INDICATED, CONTACT THE A/E FOR CLARIFICATION).
25. PROVIDE SURFACE PREPARATION, PRIMING AND PAINTING OF ALL MECHANICAL AND BOILER ROOM FLOORS TO PROVIDE A SMOOTH, CLEANABLE SURFACE. PRIMER AND PAINT SHALL BE APPROPRIATE FOR CONCRETE SLAB SURFACES. WHERE PAINTING OVER EXISTING SURFACES, COATINGS OR WHERE THE FLOOR IS SOILED, DEGREASE AND FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR SURFACE PREPARATION, PRIMING AND PAINTING. SEE SPECIFICATION SECTIONS "PAINTING" AND "HVAC RELATED WORK", WHERE APPLICABLE, FOR ADDITIONAL PAINTING REQUIREMENTS. COLOR SHALL BE SELECTED BY THE A/E.
26. CONTRACTOR SHALL REMOVE, REINSTALL AND/OR RELOCATE ANY EXISTING CONDUIT, PIPING SYSTEMS, DUCTWORK, TELECOMMUNICATIONS WIRING, HANGERS/SUPPORTS, ETC. AS REQUIRED TO ACCOMPLISH THE MECHANICAL WORK INDICATED.

MECHANICAL ABBREVIATIONS

ABOVE FINISHED FLOOR	AFF	INCH(ES)	IN
AIR FLOW MONITOR	AFM	KILOWATT	KW
AIR PRESSURE DROP	APD	LENGTH	L
ARCHITECTURAL	ARCH	LEAVING AIR TEMPERATURE	LAT
AUTOMATIC TEMPERATURE CONTROLS	ATC	POUNDS	LBS
BUILDING AUTOMATION SYSTEM	BAS	LOCKED ROTOR AMPS	LRA
BRAKE HORSEPOWER	BHP	LEAVING WATER TEMPERATURE	LWT
BRITISH THERMAL UNIT	BTU	MAXIMUM	MAX
BRITISH THERMAL UNITS PER HOUR	BTUH	THOUSAND BRITISH THERMAL UNITS PER HOUR	MBH
CAPACITY	CAP	MINIMUM CIRCUIT AMPACITY	MCA
CUBIC FEET PER HOUR	CFH	MAXIMUM FUSE SIZE	MFS
CUBIC FEET PER MINUTE	CFM	MINIMUM	MIN
CONDITIONED OUTSIDE AIR	COA	MAXIMUM OVERCURRENT PROTECTION	MOP
CONNECT TO EXISTING	CX	NORMALLY CLOSED	NC
DRY BULB	DB	NOT IN CONTRACT	NIC
DESIGNATION	DESIG	NORMALLY OPEN / NUMBER	NO
DIAMETER	DIA	OUTSIDE AIR	OA
DOWN	DN	OPEN END DUCT	OED
DIFFERENTIAL PRESSURE SENSOR	DPS	POUNDS PER SQUARE INCH	PSI
DUAL TEMPERATURE WATER RETURN	DTR	PRESSURE	PRESS
DUAL TEMPERATURE SUPPLY	DTS	PUMPED DISCHARGE	PD
DRAWING(S)	DWG	QUANTITY	QTY
EXHAUST AIR	EA	RETURN AIR	RA
ENTERING AIR TEMPERATURE	EAT	RETURN AIR FAN	RAF
ENERGY EFFICIENCY RATIO	EER	RELATIVE HUMIDITY	RH
ENERGY MANAGEMENT CONTROL SYSTEM	EMCS	REVOLUTIONS PER MINUTE	RPM
EXTERNAL STATIC PRESSURE	ESP	REMOVE EXISTING	RX
EXISTING TO REMAIN	ETR	SUPPLY AIR	SA
ENTERING WATER TEMPERATURE	EWT	STATIC PRESSURE	SP
FLEXIBLE CONNECTION / FORWARD CURVED	FC	TESTING AND BALANCING	TAB
FULL LOAD AMPS	FLA	TOTAL STATIC PRESSURE	TSP
FEET PER MINUTE	FPM	TYPICAL	TYP
FEET	FT	UNLESS OTHERWISE NOTED	UON
FACE VELOCITY	FV	VOLTS	V
GALLON(S)	GAL	VARIABLE FREQUENCY DRIVE	VFD
GALLONS PER MINUTE	GPM	WIDTH	W
HEIGHT	H	WET BULB	WB
HORSEPOWER	HP	WATER COLUMN	WC
HEATER	HTR	WATER GAUGE	WG
HERTZ	HZ	WATER PRESSURE DROP	WPD

MECHANICAL LEGEND

CONDENSER WATER SUPPLY	CS
CONDENSER WATER RETURN	CR
GLYCOL WATER SUPPLY	GWS
GLYCOL WATER RETURN	GWR
DUAL TEMPERATURE SUPPLY	DTS
DUAL TEMPERATURE RETURN	DTR
CHECK VALVE	
BALL VALVE	
BALANCING VALVE W/ FLOW METER FITTING (VENTURI TYPE)	
TEE	
PIPING CAP	
PIPING ELBOW DOWN	
PIPING ELBOW UP	
PIPE CONNECTION BOTTOM	
PIPE CONNECTION TOP	
SUPPLY AIR & OUTSIDE AIR DUCT UP (DASHED LINES FOR DOWN)	
RETURN DUCT UP (DASHED LINES FOR DOWN)	
EXHAUST DUCT UP (DASHED LINES FOR DOWN)	

FLEXIBLE DUCT	
DOUBLE THICKNESS TURNING VANES	
EXISTING DUCTWORK	
DUCTWORK TO BE REMOVED	
OPEN ENDED DUCT	OED
NEW DUCTWORK	
DUCT TRANSITION ROUND TO RECTANGULAR	Ø
DUCT TRANSITION	
CHANGE IN DUCT ELEVATION (R-RISE, D-DROP)	R, D
DUCT SIZE (FIRST FIGURE IS SIDE SHOWN)	12x20
BALANCING DAMPER	
MOTOR OPERATED DAMPER	MOD
THERMOSTAT	T
LIMIT OF DEMOLITION	
CONNECT TO EXISTING	
CARBON DIOXIDE SENSOR	CO2

FAN SCHEDULE

DESIG	TYPE	AREA SERVED	CFM	MOTOR			MIN FAN DIA	DRIVE TYPE	METHOD OF CONTROL	BASIS OF DESIGN	
				WATTS	VOLTS	PHASE				MANUFACTURER	MODEL
CF-1	CEILING FAN	129 CIRCULATION	5436	67.1	120	1	56"	DIRECT	SWITCH	QMARK	56201CLS
CF-2	CEILING FAN	136 FAMILY GATHERING	5436	67.1	120	1	56"	DIRECT	SWITCH	QMARK	56201CLS

NOTE:
1. PROVIDE WITH WALL MOUNTED SPEED CONTROLLER CAPABLE OF FORWARD AND REVERSE DIRECTION CONTROL.

AIR DEVICE SCHEDULE

DESIG	DUTY	SIZE (IN)	CFM RANGE	INLET / NECK SIZE (IN)	MAX SP	MAX NC	DESCRIPTION	BASIS OF DESIGN	
								MANUFACTURER	MODEL
A	SUPPLY	24 x 24 MODULE	121 - 210	8"Ø	0.10"	20	(18 x 18 NECK W/ FACTORY MOUNTED SQUARE - ROUND TRANSITION)	TITUS	TDC
B	RETURN	24 x 24 MODULE	126 - 220	8 x 8	0.10"	20	PERFORATED FACE - REGISTER (FLUSH)	TITUS	PAR

NOTE:
ALL AIR DEVICES SHALL BE ALUMINUM.

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MECHANICAL ABBREVIATIONS LEGEND AND GENERAL NOTES

M001

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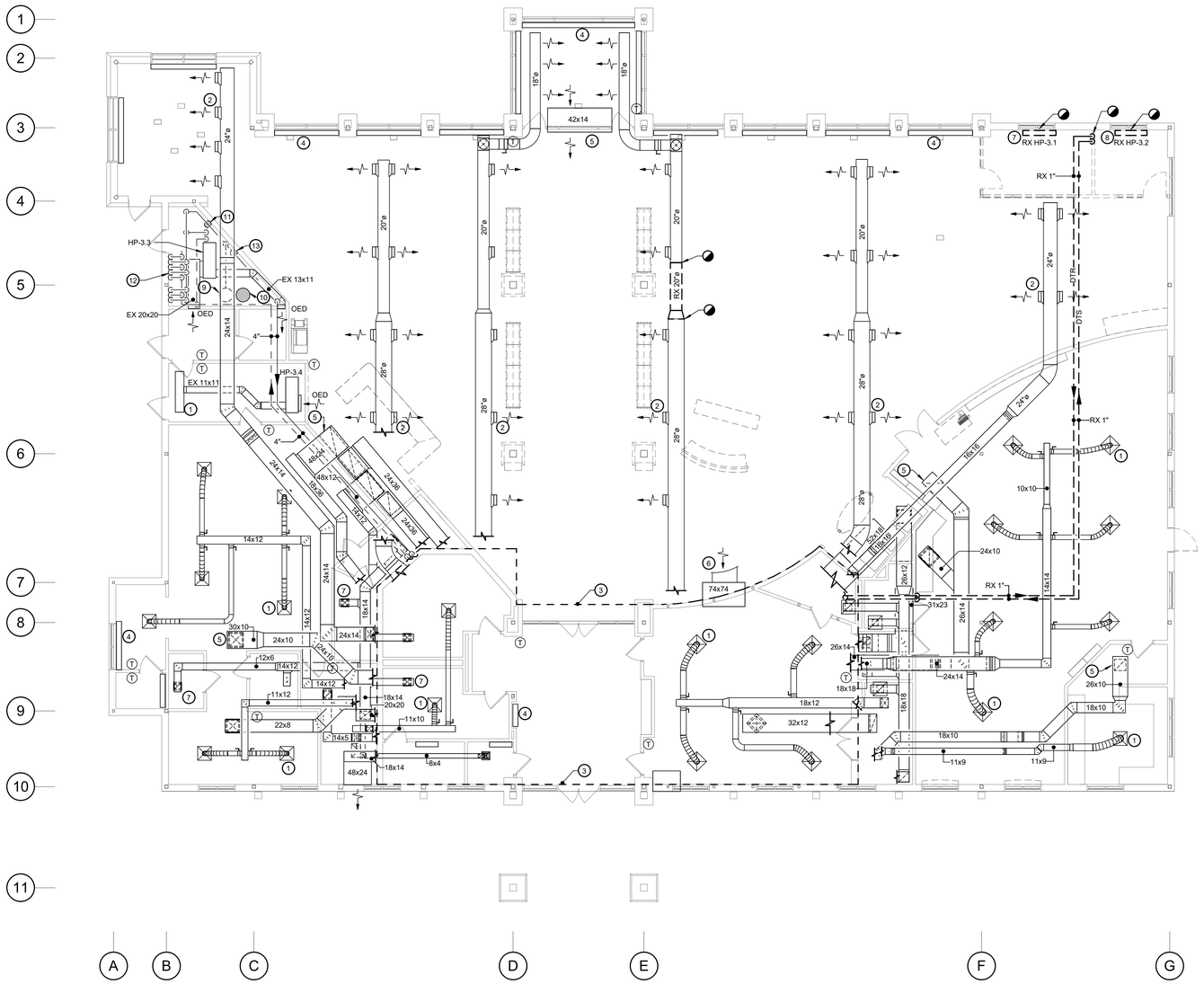

1 LEVEL 1 PLAN - HVAC - DEMOLITION

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

GENERAL NOTES:

1. REFER TO M001 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.

DRAWING NOTES:

1. EXISTING SUPPLY AIR DIFFUSER. TYPICAL.
2. EXISTING SUPPLY AIR SIDE WALL REGISTER. TYPICAL.
3. REFER TO M102 FOR CONTINUATION.
4. EXISTING ELECTRIC BASEBOARD RADIANT HEATERS. TYPICAL.
5. EXISTING RETURN AIR GRILLE. TYPICAL
6. EXISTING RETURN AIR SIDEWALL REGISTER. TYPICAL.
7. REMOVE EXISTING HEAT PUMP HP-3.1.
8. REMOVE EXISTING HEAT PUMP HP-3.2.
9. EXISTING EXPANSION TANK.
10. EXISTING GYCOL FEED TANK.
11. EXISTING AIR AND DIRT SEPARATOR.
12. EXISTING 3" HEAT PUMP WATER SUPPLY AND 3" HEAT PUMP WATER RETURN TO EACH PIPING CIRCUIT. TYPICAL OF 4.
13. EXISTING VERTICAL IN LINE CIRCULATING PUMPS P-1 AND P-2 RACKED VERTICALLY ON WALL.

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

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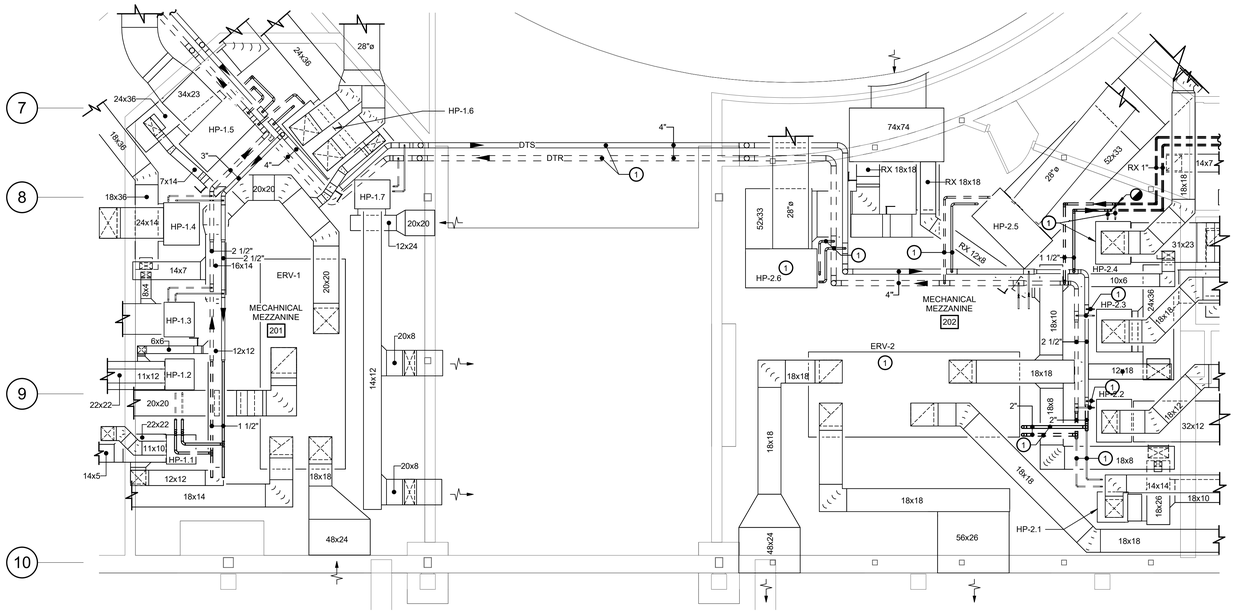
LEVEL 1 PLAN
HVAC
DEMOLITION

MD101

BKM#22240.01



1 MEZZANINE PLAN - HVAC - DEMOLITION

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

GENERAL NOTES:

1. REFER TO M001 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.

DRAWING NOTES:

1. CONTRACTOR SHALL PREFORM PRE-DEMOLITION TESTING AND BALANCING AND REPORT RESULTS BACK TO ENGINEER.

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

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MEZZANINE PLAN - HVAC DEMOLITION

MD102

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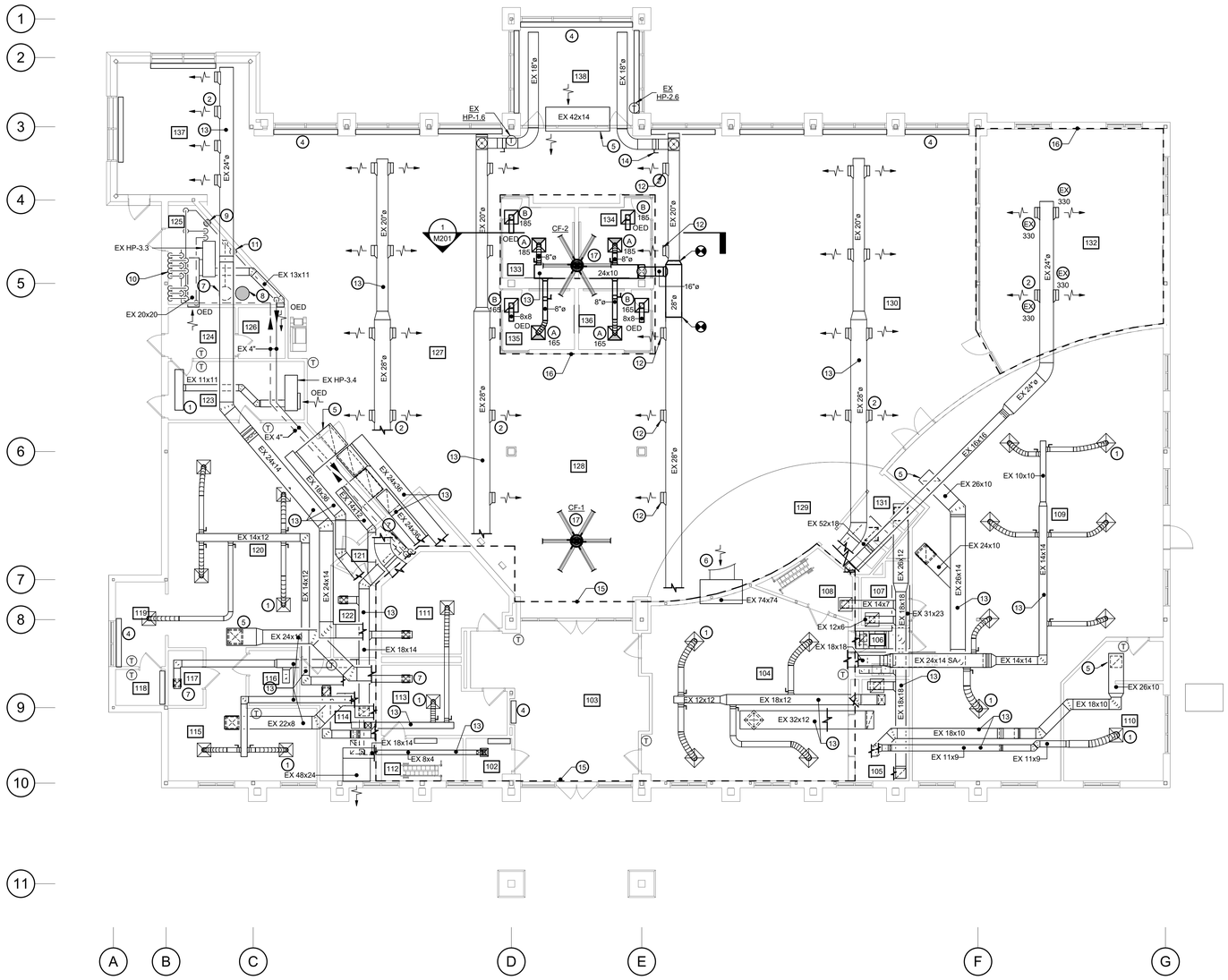

LVL1 ROOM LIST NEW

102	JANITOR
103	LOBBY
104	MEETING ROOM
105	STORAGE
106	PANTRY
107	FAMILY TOILET
108	STORAGE
109	CHILDREN'S COLLECTION
110	CHILDREN'S WORKROOM
111	WOMENS
112	SPRINKLER ROOM
113	MENS
114	BRANCH MAN. OFFICE
115	STAFF BREAKROOM
116	STAFF TOILET
117	STORAGE
118	BOOK DROP
119	DRIVE THRU
120	CIRCULATION WORKROOM
121	BOOK DROP
122	SECURE STORAGE
123	DELIVERY ROOM
124	ELECTRICAL ROOM
125	MECHANICAL ROOM
126	SERVER ROOM
127	READING ROOM
128	CIRCULATION & REFERENCE DESKS
129	CAFE
130	FAMILY GATHERING
130	PERIODICALS
131	VENDING
132	TEENS
133	STUDY ROOM
134	STUDY ROOM
135	STUDY ROOM
136	STUDY ROOM
137	CAREER & BUSINESS CENTER
138	QUIET READING

1 LEVEL 1 PLAN - HVAC - NEW WORK

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

GENERAL NOTES:

1. REFER TO M001 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.

DRAWING NOTES:

1. EXISTING SUPPLY AIR DIFFUSER. TYPICAL.
2. EXISTING SUPPLY AIR SIDE WALL REGISTER. TYPICAL.
3. PROVIDE DUCTWORK WITH 1" SOUND LINING.
4. EXISTING RADIANT HEATERS. TYPICAL.
5. EXISTING RETURN AIR GRILLE. TYPICAL
6. EXISTING RETURN AIR SIDEWALL REGISTER. TYPICAL.
7. EXISTING EXPANSION TANK.
8. EXISTING GYCOL FEED TANK.
9. EXISTING AIR AND DIRT SEPARATOR.
10. EXISTING 3" HEAT PUMP WATER SUPPLY AND 3" HEAT PUMP WATER RETURN TO EACH PIPING CIRCUIT, TYPICAL OF 4.
11. EXISTING VERTICAL IN LINE CIRCULATING PUMPS P-1 AND P-2 RACKED VERTICALLY ON WALL.
12. REBALANCE EXISTING SUPPLY AIR SIDEWALL REGISTER TO 190 CFM.
13. EXISTING MECHANCAL HEAT PUMP SYSTEM NOT IN SCOPE.
14. REBALANCE EXISTING DAMPER TO 800 CFM.
15. REFER TO SHEET M102 FOR CONTINUATION.
16. CONTRACTOR SHALL MODIFY THE EXISTING SPRINKLER PIPING IN ACCORDANCE WITH NFPA 13 AND LOCAL AUTHORITY HAVING JURISDICTION TO ACCOMODATE NEW ARCHITECTURAL LAYOUT. PROVIDE SEMI RECESSED, QUICK ACTION TYPE SPRINKLERS WITH WHITE ESCUTCHEON PLATE.
17. MOUNT CEILING FAN APPROXIMATELY 34'-0" ABOVE FINISHED FLOOR. FAN BLADES SHALL BE A MINIMUM OF 12" BELOW ROOF STRUCTURE. PROVIDE EXTENSION ROD AS REQUIRED. COORDINATE FINAL LOCATION WITH ARCHITECT/OWNER.

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

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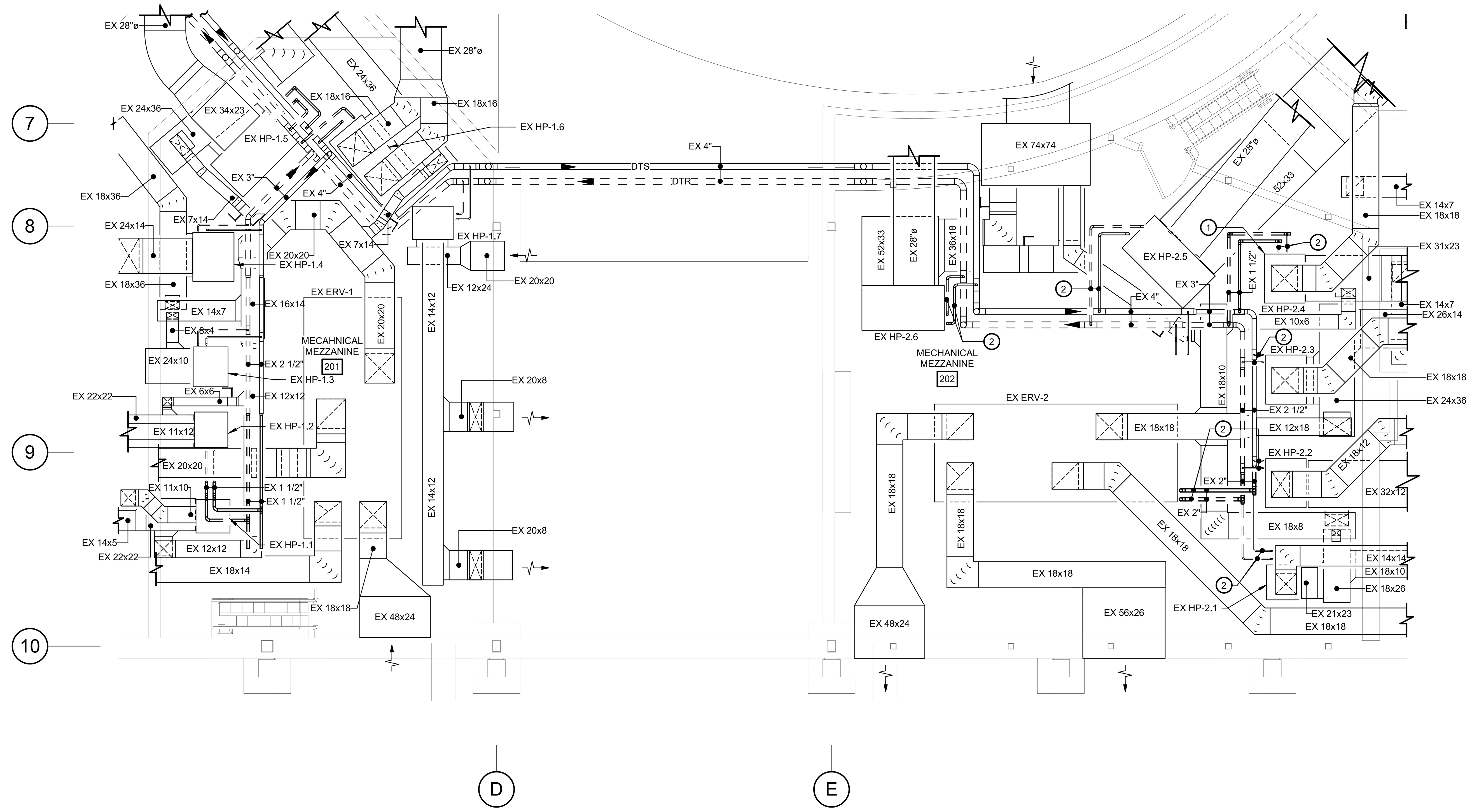
LEVEL 1 PLAN
HVAC
NEW WORK

M101

BKM#22240.01



1 LOWER MEZZANINE PLAN - HVAC - NEW WORK

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

GENERAL NOTES:

1. REFER TO M001 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.

DRAWING NOTES:

1. REBALANCE EXISTING HP-2.4 TO 1320 CFM.
2. REBALANACE GPM TO FINDINGS FROM PRE-DEMOLITION.

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

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MEZZANINE PLAN - HVAC NEW WORK

M102

BKM#22240.01

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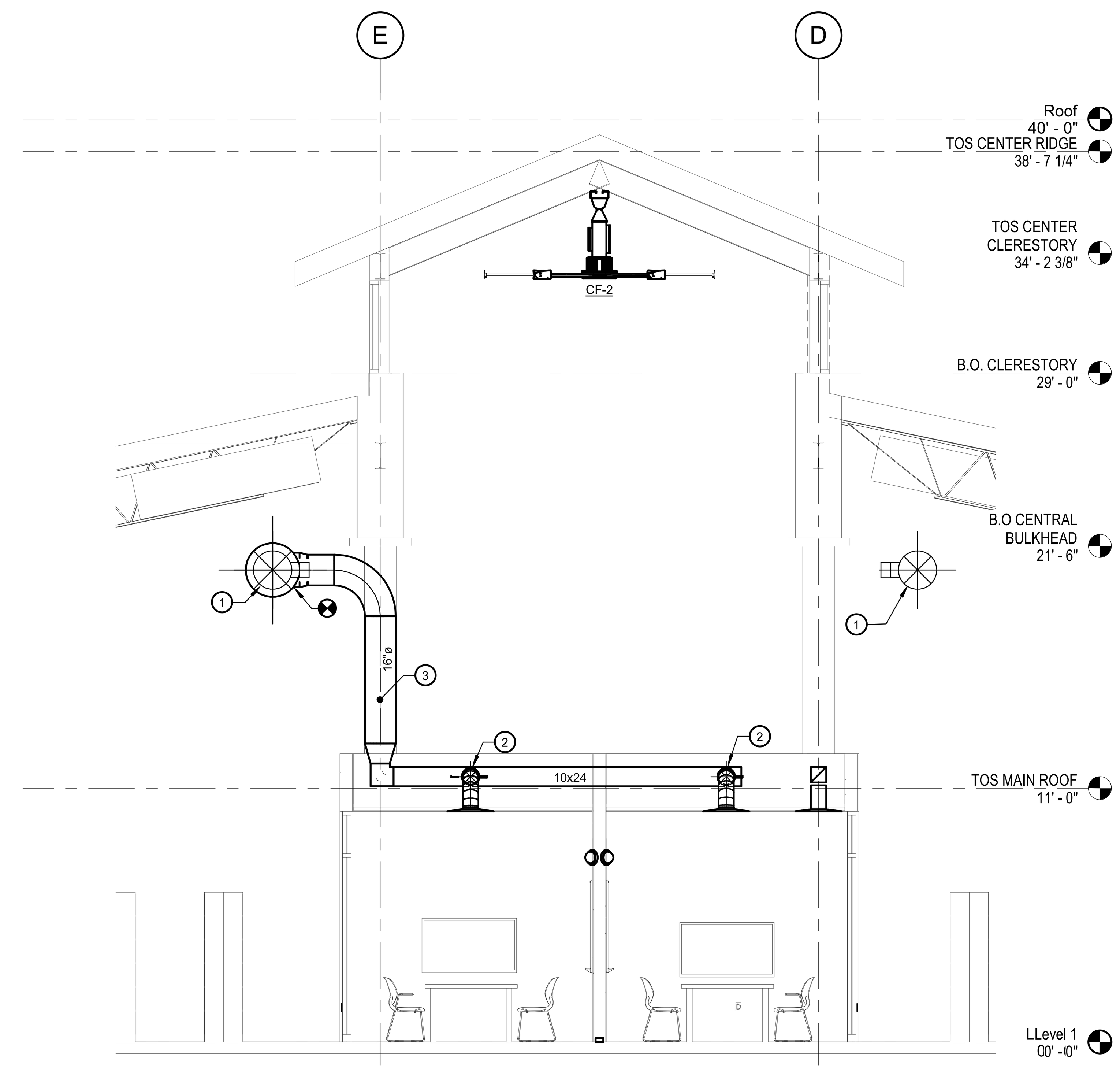

1 MECHANICAL SECTION - STUDY ROOMS

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

GENERAL NOTES:

1. REFER TO M001 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.

DRAWING NOTES:

1. EXISTING 20" ROUND SUPPLY AIR DUCT UP AND DOWN.
2. 8" ROUND SUPPLY AIR UP TO CIELING SUPPLY DIFFUSERS.
3. 16" ROUND VERTICAL DUCT SHALL BE PARALLEL TO AND CENTERED ON COLUMN LINE E.

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

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

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No.	Date	Description

PROJECT MANAGER: JMW
DRAWN BY: KMF

QEA No.42137020

100% CONSTRUCTION DOCUMENTS
08/01/23

MECHANICAL SECTIONS

M201

BKM#22240.01

MECHANICAL SPECIFICATIONS

1 - BASIC MECHANICAL REQUIREMENTS

1.1 CONTRACT DOCUMENTS

A. CONTRACT DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC, INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT. CONTRACTOR SHALL REVIEW AND COORDINATE ROUTING OF NEW WORK TO CLEAR EXISTING PIPING, DUCT, ELECTRICAL, STRUCTURE, ETC. AT NO COST TO THE OWNER, ALL DIMENSIONS OF EXISTING CONDITIONS SHALL BE CONSIDERED APPROXIMATE (FOR INFORMATION ONLY). ALL DIMENSIONS SHALL BE VERIFIED PRIOR TO CONSTRUCTION.

B. CONTRACT DOCUMENT INTERPRETATION/DISCREPANCIES:

1. SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES OR OMISSIONS ON THE DRAWINGS OR IN THE SPECIFICATIONS, HE SHALL NOTIFY THE ARCHITECT/ENGINEER (A/E) OF SUCH CONDITIONS PRIOR TO THE BID DATE, OTHERWISE, IT WILL BE UNDERSTOOD THAT THE DRAWINGS AND SPECIFICATIONS ARE CLEAR AS TO WHAT IS INTENDED AND SHALL BE AS INTERPRETED BY THE A/E.

2. IN ADDITION, SHOULD ANY CONTRADICTION, AMBIGUITY, INCONSISTENCY, DISCREPANCY OR CONFLICT APPEAR IN OR BETWEEN ANY OF THE CONTRACT DOCUMENTS, THE CONTRACTOR, SHALL, BEFORE PROCEEDING WITH THE WORK IN QUESTION, NOTIFY THE A/E AND REQUEST AN INTERPRETATION, IN NO CASE SHALL HE PROCEED WITH THE AFFECTED WORK UNTIL ADVISED BY THE A/E.

3. IF THE CONTRACTOR FAILS TO MAKE A REQUEST FOR INTERPRETATION OF DISCREPANCIES OR CONFLICTS IN THE DRAWINGS OR SPECIFICATIONS, NO EXCUSE WILL BE ACCEPTED FOR FAILURE TO CARRY OUT THE WORK IN A SATISFACTORY MANNER, AS INTERPRETED BY THE A/E. IN ALL CASES, THE CONTRACTOR WILL BE DEEMED TO HAVE ESTIMATED THE MOST STRINGENT MATERIALS AND METHODS (I.E. THE HIGHEST QUALITY MATERIALS AND MOST EXPENSIVE MANNER OF COMPLETING THE WORK) UNLESS HE HAS REQUESTED AND OBTAINED WRITTEN AUTHORIZATION AS TO WHICH METHODS OR MATERIALS WILL BE REQUIRED.

4. EACH AND EVERY TRADE OR SUBCONTRACTOR WILL BE DEEMED TO HAVE FAMILIARIZED HIMSELF WITH ALL DRAWINGS OF THIS PROJECT, INCLUDING SITE/CIVIL, ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, INFORMATION TECHNOLOGY, ETC. SO AS TO AVOID COORDINATION ERRORS, OMISSIONS, AND MISINTERPRETATIONS. NO ADDITIONAL COMPENSATION WILL BE AUTHORIZED FOR ALLEGED ERRORS, OMISSIONS, AND MISINTERPRETATION, WHETHER THEY ARE A RESULT OF FAILURE TO OBSERVE THESE REQUIREMENTS OR NOT.

C. THE COMPLETE SET OF ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS APPLY TO THIS WORK.

1.2 SUBMITTALS

A. A DETAILED SUBMITTAL REVIEW SCHEDULE INDICATING PRIORITY SUBMITTALS FOR CRITICAL PATH OR LONG LEAD SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER AND AGREED TO PRIOR TO THE START OF ANY SUBMITTAL REVIEWS. THE ENGINEER SHALL BE PROVIDED UP TO TEN (10) BUSINESS DAYS TO PROVIDE THE REVIEW, PROCESSING, AND RETURN ANY SUBMITTALS OR RESUBMITTALS. ADDITIONAL REVIEW/PROCESSING TIME MAY BE NEEDED FOR CONCURRENT REVIEW OF MULTIPLE SUBMITTALS IF MORE THAN FOUR (4) ARE RECEIVED ON THE SAME DAY.

B. SUBMITTALS WILL BE CHECKED ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND ARE SUBJECT TO THE ORIGINAL CONTRACT DOCUMENTS. AS WELL AS ANY CORRECTIONS AND COMMENTS NOTED, COMMENTS NOTED, IF ANY, WILL NOT BE CONSIDERED A COMPLETE LIST OF ALL OMISSIONS, DEVIATIONS AND CORRECTIONS NECESSARY TO MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR WILL BE RESPONSIBLE TO CONFIRM THAT THE FINAL PRODUCT AND INSTALLATION WILL BE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS IN THEIR ENTIRETY, INCLUDING THE RESPONSIBILITY TO FULLY COORDINATE ALL WORK WITH OTHER TRADES AND TO CONFIRM THE CORRECTNESS OF DIMENSIONS, QUANTITIES, AND CAPACITIES. SUBMITTAL REVIEW DOES NOT AUTHORIZE OR CONSTITUTE A CHANGE TO THE CONTRACT REQUIREMENTS AND DOES NOT RELEASE THE CONTRACTOR OF RESPONSIBILITY TO CONFORM TO THE CONTRACT REQUIREMENTS. REQUIREMENTS OF THE CONTRACT ARE NOT WAIVED BY REVIEW OF ANY AND ALL SUBSTITUTIONS. THE CONTRACTOR MUST FULFILL THE TERMS OF THE CONTRACT.

C. ACCEPTANCE WILL NOT CONSTITUTE WAIVER OF CONTRACT REQUIREMENTS UNLESS DEVIATIONS ARE SPECIFICALLY INDICATED AND CLEARLY NOTED.

D. ALL MECHANICAL EQUIPMENT SHALL BE APPROVED AND LISTED BY UNDERWRITERS' LABORATORIES (UL) OR ETL, AND SHALL BEAR NAMEPLATE INDICATING THE SAME,

E. ACCEPTANCE WILL NOT CONSTITUTE A WAIVER OF SYSTEM PERFORMANCE.

1.3 MANUFACTURER'S RECOMMENDATIONS

A. INSTALLATION PROCEDURES ARE REQUIRED TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL BEING INSTALLED.

1.4 ACCESSIBILITY

A. INSTALL EQUIPMENT AND MATERIALS TO PROVIDE REQUIRED ACCESS FOR SERVICING AND MAINTENANCE., ALLOW AMPLE SPACE FOR REMOVAL OF ALL PARTS THAT REQUIRE REPLACEMENT OR SERVICING.

1.5 COORDINATION

A. COORDINATE ALL WORK AND COOPERATE WITH ALL OTHER TRADES TO FACILITATE EXECUTION OF WORK.

1.6 SITE EXAMINATION

A. FAILURE TO VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING PROJECT CONDITIONS PRIOR TO BIDDING WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE CONTRACT DOCUMENTS.

1.7 QUALITY ASSURANCE

A. MANUFACTURER'S QUALIFICATIONS: FIRMS REGULARLY ENGAGED IN MANUFACTURE OF MECHANICAL PRODUCTS, OF TYPES AND SIZES REQUIRED, WHOSE PRODUCTS HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR NOT LESS THAN FIVE (5) YEARS.

B. INSTALLER'S QUALIFICATIONS: FIRMS WITH AT LEAST FIVE (5) YEARS SUCCESSFUL INSTALLATION EXPERIENCE ON PROJECTS WITH MECHANICAL PRODUCTS SIMILAR TO THAT REQUIRED FOR THIS PROJECT.

1.8 REGULATIONS AND PERMITS

A. WORK SHALL COMPLY WITH ALL APPLICABLE STATE, LOCAL AND FEDERAL CODES/REGULATIONS. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS.

1.9 FIELD INSTRUCTION

A. UPON COMPLETION OF WORK, INSTRUCT OWNER'S REPRESENTATIVE IN THE PROPER OPERATION AND MAINTENANCE OF THE MECHANICAL AND ELECTRICAL SYSTEMS.

1.10 GUARANTEE

A. EACH CONTRACTOR SHALL FURNISH A GUARANTEE COVERING ALL LABOR AND MATERIALS FURNISHED BY HIM FOR A PERIOD OF TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE OF HIS WORK, AND HE SHALL AGREE TO REPAIR AND MAKE GOOD AT HIS OWN EXPENSE ANY AND ALL DEFECTS WHICH MAY APPEAR IN HIS WORK DURING THAT TIME IF, IN THE JUDGMENT OF THE ENGINEER, SUCH DEFECTS ARISE FROM DEFECTIVE WORKMANSHIP AND/OR IMPERFECT OR INFERIOR MATERIAL.

B. THE ABOVE SHALL NOT IN ANY WAY VOID OR ABROGATE EQUIPMENT MANUFACTURER'S GUARANTEE OR WARRANTY. CERTIFICATES OF GUARANTEE SHALL BE DELIVERED TO THE OWNER,

C. WITHIN THE TWO (2) YEAR WARRANTY/GUARANTEE PERIOD, MANUFACTURER'S RECOMMENDED MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR.

2 - DEMOLITION

2.1 ALL DEMOLITION OF EXISTING MECHANICAL AND ELECTRICAL PIPING, AUXILIARIES AND EQUIPMENT, SHALL BE AS SPECIFIED UNDER THE "DEMOLITION" SECTION, OF THESE SPECIFICATIONS, AS SHOWN ON THE DRAWINGS, AND AS REQUIRED TO COMPLETE THE NEW AND RENOVATED INSTALLATIONS AND SHALL BE PERFORMED BY THE RESPECTIVE MECHANICAL AND ELECTRICAL CONTRACTORS.

2.2 CONTRACTOR SHALL PERFORM PRE-DEMOLITION TESTING AND BALANCING OF ALL MECHANICAL EQUIPMENT INDICATED ON THE CONTRACT DOCUMENTS TO BE EXISTING TO REMAIN OR EXISTING TO BE RELOCATED. CONTACTOR SHALL PROVIDE BALANCE AND FUNCTIONALITY REPORT TO DESIGN TEAM FOR REVIEW.

2.3 THIS WORK SHALL INCLUDE THE DISCONNECTION AND CAPPING OF EXISTING SERVICES, RELOCATION OF CERTAIN EQUIPMENT, AND THE REMOVAL OF EXISTING PIPING, WIRING, FITTINGS, EQUIPMENT, INCLUDING HEAT TRANSFER UNITS, AIR HANDLING UNITS, FANS, ELECTRICAL CONTROLS AND PANELBOXES, DUCTWORK, ETC., NOT REUSED IN THE NEW WORK OR REQUIRED TO COMPLETE THE RENOVATION WORK. CONTRACTOR SHALL NOTE THE DRAWINGS SPECIFY CERTAIN EXISTING EQUIPMENT TO BE REUSED.

2.4 WHERE SUPPORTS AND PIPING ARE REMOVED, HOLES REMAINING IN FLOORS, WALLS AND CEILINGS MUST BE PATCHED AND REFINISHED TO MATCH THE ADJOINING ORIGINAL SURFACES AND FINISHES.

2.5 ANY REMOVED ITEMS REQUESTED BY THE OWNER SHALL REMAIN THE PROPERTY OF THE OWNER. CONTRACTOR SHALL REMOVE EQUIPMENT AND STORE ON SITE AS DIRECTED BY THE OWNER. ALL OTHER EQUIPMENT OR MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. CONTRACTOR SHALL MEET FEDERAL EPA LAWS, REGULATIONS AND GUIDELINES IN REGARD TO REMOVAL OF ASBESTOS INSULATION.

2.6 THE CONTRACTOR SHALL USE CARE WHEN PERFORMING SELECTIVE BUILDING AND SITE DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE INCLUSIVE OF BUT NOT LIMITED TO: BUILDING FINISHES, LIGHTING (INTERIOR AND EXTERIOR), FURNITURE, STRUCTURE, SITE, UTILITIES (ABOVE AND BELOW GROUND), MECHANICAL, PLUMBING, TELECOMMUNICATIONS AND ELECTRICAL EQUIPMENT / SYSTEMS. SHOULD ANY DAMAGE OCCUR OR SHOULD ANY REMEDIAL WORK BE REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR AND OR REPLACE THE DAMAGED ITEM(S) TO THE OWNER'S SATISFACTION AT NO ADDITIONAL COST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEYING (INCLUDING CONTACTING MISS UTILITY), PHOTO DOCUMENTING AND RESTORING THE SURROUNDING WORK SITE(S) TO THE ORIGINAL PRE-DEMOLITION CONDITION AND / OR TO THE OWNER'S SATISFACTION UPON COMPLETION OF THE WORK AT NO ADDITIONAL COST.

3 - PIPING

3.1 PIPE AND FITTINGS

1. FIRE PROTECTION PIPING:

a. 2" (50 MM) AND SMALLER: SCHEDULE 40 BLACK STEEL, CAST-IRON THREADED OR ROLL-GROOVED FITTINGS.

b. 2-1/2" (65 MM) AND LARGER: SCHEDULE 10 BLACK STEEL, WELDED OR ROLL-GROOVED FITTINGS.

c. PIPING AND FITTINGS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 13.

4 - FIRE PROTECTION

IN ACCORDANCE WITH THE LOCAL AUTHORITY AND THE MOST CURRENT VERSION OF NFPA STANDARDS, DESIGN, FURNISH AND INSTALL THE COMPLETE FIRE PROTECTION SYSTEM TO ACCOMMODATE THE ARCHITCETURAL LAYOUT. PROVIDE NEW SPRINKLER TO MATCH EXISTING STYLE, SPRINKLERS SHALL BE QUICK RESPONSE TYPE.

5 - AIR DISTRIBUTION

5.1 LOW PRESSURE DUCTWORK

A. TYPES OF LOW PRESSURE DUCTWORK REQUIRED FOR THIS PROJECT INCLUDE THE FOLLOWING:

1. RETURN AIR DUCTWORK

2. SUPPLY AIR DUCTWORK (DOWNSTREAM OF TERMINAL UNITS ONLY)

3. AIR TRANSFER DUCTWORK

B. FABRICATION AND INSTALLATION OF LOW PRESSURE DUCTWORK SHALL BE IN COMPLIANCE WITH APPLICABLE SMACNA AND ASHRAE STANDARDS. DUCTWORK SHALL BE GALVANIZED SHEET METAL UNLESS OTHERWISE NOTED.

C. DUCT LINER: LINER SHALL BE ONE INCH (25 MM) FIBROUS GLASS. DUCT LINING SHALL BE NFPA 90A AND UL 181 APPROVED AND CONTAIN AN EPA REGISTERED ANTIMICROBIAL AGENT WHICH RESISTS THE GROWTH OF BACTERIA AND FUNGI AS PROVEN BY TESTS IN ACCORDANCE WITH ASTM G21 AND ASTM G22. DUCT LINER SHALL BE JOHNS MANVILLE LINACOUSTIC RC OR EQUIVALENT BY CERTAINTEED, KNAUF OR OWENS CORNING. PROVIDE DUCT LINER AT THE FOLLOWING LOCATIONS:

1. ALL SUPPLY AIR DUCTWORK
2. RETURN AIR DUCTWORK
3. AIR TRANSFER DUCTWORK

D. WHERE INDICATED, PROVIDE FACTORY INSULATED FLEXIBLE DUCTWORK BETWEEN LOW PRESSURE SUPPLY DUCTWORK AND ROUND INLET CEILING DIFFUSERS. PROVIDE SPIN-IN FITTING WITH DAMPER BETWEEN THE FLEXIBLE DUCT AND THE LINED SHEET METAL DUCTWORK. THE MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL BE 3'-0" (915 MM).

E. SEAL DUCTWORK, AFTER INSTALLATION, TO SMACNA SEAL CLASS "A".

5.2 DUCTWORK ACCESSORIES

A. INSTALL BALANCING DAMPERS WHERE INDICATED, AND AT EACH DUCTED AIR INLET AND OUTLET. DAMPERS ARE NOT REQUIRED WHERE A SINGLE AIR OUTLET OCCURS DOWNSTREAM OF AN AIR TERMINAL (VAV BOXES, ETC.).

B. INSTALL TURNING VANES IN SQUARE OR RECTANGULAR 90 DEGREE ELBOWS IN SUPPLY, RETURN AND EXHAUST AIR SYSTEMS, AND ELSEWHERE AS INDICATED.

C. FLEXIBLE DUCTWORK: PROVIDE INSULATED FLEXIBLE DUCTWORK WHERE INDICATED ON DRAWINGS. AS MANUFACTURED BY FLEX MASTER TYPE 6B, OR EQUIVALENT. FLEXIBLE DUCTWORK SHALL BE IN COMPLIANCE WITH UL-181 CLASS 1 AIR DUCT, FABRICATED WITH AN ACOUSTICALLY TRANSPARENT NYLON INNER FABRIC.

1. LINER: NYLON FABRIC, MECHANICALLY LOCKED WITHOUT ADHESIVES.

2. HELIX: CORROSION RESISTANT GALVANIZED STEEL; FORMED AND MECHANICALLY LOCKED TO FABRIC.

3. VAPOR BARRIER: BLACK FIRE RETARDANT, POLYETHYLENE.

4. INSULATION: 1" THICK, R-VALUE OF 6.0.

5. PRESSURE RATING: 6" WG POSITIVE.

6. SOUND ATTENUATION: FLEXIBLE DUCTWORK SHALL HAVE SOUND ATTENUATING CAPABILITIES AS INDICATED BELOW FOR NOMINAL THREE FEET OF STRAIGHT DUCT:

DUCTINSERTION LOSS
(DB)631252505001000200040006391011121212839910101212103999101111012398891 18

5.3 DIFFUSERS, REGISTERS AND GRILLES

A. DIFFUSERS, REGISTERS AND GRILLES SHALL BE TESTED AND RATED IN COMPLIANCE WITH ARI 650 AND ASHRAE STANDARDS.

B. PROVIDE DIFFUSERS, REGISTERS AND GRILLES WITH BORDER STYLES COMPATIBLE WITH ADJACENT SURFACES. REFER TO ARCHITECTURAL PLANS.

C. DIFFUSER, REGISTER AND GRILLE MATERIALS:

1. ALUMINUM CONSTRUCTION: MANUFACTURER'S STANDARD EXTRUDED ALUMINUM FRAME AND ADJUSTABLE BLADES.

D. DIFFUSER TYPES:

1. SQUARE: SQUARE HOUSING, CORE OF SQUARE CONCENTRIC LOUVERS, SQUARE OR ROUND DUCT CONNECTION. (SEE DRAWINGS.)

E. REGISTER AND GRILLE TYPES:

1. PERFORATED: SQUARE, HOUSING COVERING WITH REMOVABLE PERFORATED PANEL IN FRAME..

F. DIFFUSERS, REGISTERS AND GRILLES SHALL BE AS MANUFACTURED BY TITUS, KRUEGER, PRICE, OR NAILOR.

6 - TESTING, ADJUSTING AND BALANCING

6.1 DESCRIPTION OF WORK

A. EXTENT OF TESTING, ADJUSTING AND BALANCING (TAB) WORK REQUIRED IS INDICATED ON DRAWINGS AND SCHEDULES, AND IS DEFINED TO INCLUDE, BUT IS NOT NECESSARILY LIMITED TO, AIR DISTRIBUTION SYSTEMS, HYDRONIC DISTRIBUTION SYSTEMS, AND ASSOCIATED EQUIPMENT AND APPARATUS OF MECHANICAL WORK. THE WORK CONSISTS OF SETTING SPEED AND VOLUME (FLOW), ADJUSTING FACILITIES PROVIDED FOR SYSTEMS, RECORDING DATA, CONDUCTING TESTS, PREPARING AND SUBMITTING REPORTS, AND RECOMMENDING MODIFICATIONS TO WORK AS REQUIRED BY CONTRACT DOCUMENTS.

B. TESTING OF ALL DUCTWORK AND PIPING SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARD TESTING REQUIREMENTS OR AS INDICATED OTHERWISE.

C. CONTRACTOR SHALL TEST/BALANCE ALL AIR AND HYDRONIC EQUIPMENT AND DEVICES INDICATED ON THE DOCUMENTS. AIR SYSTEM EQUIPMENT AND DEVICES SHALL INCLUDE, BUT NOT BE LIMITED TO: AIR HANDLING EQUIPMENT (HEAT PUMPS, ETC.), FANS, AIR DEVICES, DUCT MOUNTED VOLUME DAMPERS, ETC., BALANCE ALL EQUIPMENT AND DEVICES TO THE AIR/WATER FLOWS (CFM OR GPM) INDICATED ON THE DOCUMENTS (WHERE FLOWS ARE NOT CLEARLY INDICATED, CONTACT THE A/E FOR CLARIFICATION).

D. THE COMPLETE VERIFICATION OF EACH CONTROL FUNCTION SHALL BE INCLUDED IN A FINAL TEST REPORT AND THE OPERATIONS AND MAINTENANCE MANUALS. VERIFICATION OF EACH CONTROL FUNCTION SHALL INCLUDE AN ITEMIZED LIST OF ALL MECHANICAL EQUIPMENT AND ASSOCIATED CONTROL DEVICE, THE DATE OF THE VERIFICATION AND THE INITIALS OF THE INDIVIDUALS WHO VERIFIED THE PROPER OPERATION OF THE CONTROL FUNCTION. AT A MINIMUM, TWO (2) INDIVIDUALS, THE BALANCE CONTRACTOR AND THE CONTROL MANUFACTURER, SHALL PERFORM, WITNESS AND VERIFY THE PROPER OPERATION OF EACH CONTROL FUNCTION INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.PRIOR TO THE VERIFICATION PROCESS, THE OWNER SHALL BE GIVEN THE OPTION TO PROVIDE REPRESENTATIVE(S) TO WITNESS THE VERIFICATION OF ANY OR ALL EQUIPMENT/CONTROL FUNCTIONS.

6.2 QUALITY ASSURANCE

A. TESTER'S QUALIFICATIONS: A FIRM CERTIFIED BY ASSOCIATED AIR BALANCE COUNCIL (AABC) IN THOSE TESTING AND BALANCING DISCIPLINES SIMILAR TO THOSE REQUIRED FOR THIS PROJECT, WHO IS NOT INSTALLER OF SYSTEM TO BE TESTED AND IS OTHERWISE INDEPENDENT OF THE PROJECT.

1. AABC COMPLIANCE: COMPLY WITH AABC MANUAL "AABC NATIONAL STANDARDS", AS APPLICABLE TO MECHANICAL AIR AND HYDRONIC DISTRIBUTION SYSTEMS, AND ASSOCIATED EQUIPMENT AND APPARATUS.

2. INDUSTRY STANDARDS: COMPLY WITH ASHRAE RECOMMENDATIONS PERTAINING TO MEASUREMENTS, INSTRUMENTS, AND TESTING, ADJUSTING AND BALANCING, EXCEPT AS OTHERWISE INDICATED.

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STATE OF MARYLAND
MICHAEL JOSEPH COLLINS JR.
17117
REGISTERED
PROFESSIONAL ENGINEER

"I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, License No. 17117 , Expiration Date 10/25/24.

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MECHANICAL SPECIFICATIONS

M301

BKM#22240.01

ELECTRICAL LEGEND

DRAWING SYMBOLS

Symbol	Description
#	DRAWING NOTE (APPLIES TO THIS DRAWING ONLY)
	DETAIL, SECTION OR ELEVATION NUMBER DRAWING NUMBER
#	REVISION NUMBER - CLOUDED AREA ON DRAWING CONTAINS REVISION

DEMOLITION SYMBOLS

Symbol	Description
	EXISTING ELECTRICAL CIRCUIT TO BE REMOVED
	EXISTING ELECTRICAL EQUIPMENT TO BE REMOVED
	EXISTING ELECTRICAL CIRCUIT TO REMAIN
	EXISTING ELECTRICAL EQUIPMENT TO REMAIN
$	TOGGLE SWITCH TO BE DEMOLISHED

ELECTRICAL POWER PLAN SYMBOLS

Symbol	Description
	ELECTRICAL CIRCUIT - 2 #12, 1 #12 GW IN 3/4" CONDUIT, UON
	HOMERUN TO PANELBOARD - ARROWS INDICATE NUMBER OF CIRCUITS SLASHES INDICATE CIRCUIT CONDUCTORS NO SLASH INDICATES TWO CIRCUIT CONDUCTORS. PROVIDE GROUNDING CONDUCTOR, NOT SHOWN
	ELECTRICAL CIRCUIT CONCEALED BELOW GRADE OR FINISHED FLOOR
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
C	CLOCK OUTLET, 80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER.
J J J	JUNCTION BOX: CEILING, WALL OR FLUSH-FLOOR MOUNTED
GFCI WP xx"	DUPLEX RECEPTACLE - 2P, 3W, 20A, 125V, NEMA 5-20R IN RECESSED OUTLET BOX, 18" AFF, UON: xx" - DENOTES MOUNTING HEIGHT. WP - WEATHERPROOF, MW - MICROWAVE, RE - REFRIGERATOR, CM - COFFEE MAKER, DW - DISHWASHER, GFCI - GROUND FAULT CIRCUIT INTERRUPTER
	DUPLEX RECEPTACLE, MOUNTED 6" ABOVE COUNTERTOP BACK SPLASH UNLESS OTHERWISE NOTED
	DUPLEX RECEPTACLE - 2P, 3W, 20A, 125V, NEMA 5-20R IN SURFACE OUTLET BOX, 18" AFF, UON
	TWO DUPLEX RECEPTACLES WITH COMMON FACEPLATE 2P, 3W, 20A, 125V, NEMA 5-20R IN RECESSED TWO-GANG OUTLET BOX, 18" AFF, UON
	TWO DUPLEX RECEPTACLES WITH COMMON FACEPLATE IN SURFACE OUTLET BOX, 18" AFF, UON
	DUPLEX RECEPTACLE - 2P, 3W, 20A, 125V, NEMA 5-20R IN FLUSH MOUNTED OUTLET BOX - FLOOR, CEILING
	TWO DUPLEX RECEPTACLES WITH COMMON FACEPLATE 2P, 3W, 20A, 125V, NEMA 5-20R IN FLUSH MOUNTED TWO-GANG OUTLET BOX - FLOOR, CEILING
T	TRANSFORMER, TYPE AS NOTED ON DRAWING
	PANELBOARD, RECESSED OR SURFACE MOUNTED
	ELECTRICAL MOTOR
S_M	MOTOR SWITCH WITH THERMAL OVERLOAD
	EMERGENCY PUSHBUTTON OFF SWITCH
	COMBINATION MAGNETIC MOTOR STARTER WITH MCP OR FUSIBLE DISCONNECT SWITCH
	MAGNETIC MOTOR CONTROLLER/STARTER
V	VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECT
100/80	FUSED DISCONNECT SWITCH, UPPER NUMERAL INDICATES SWITCH SIZE, LOWER NUMERAL INDICATES FUSE SIZE
60	NONFUSED DISCONNECT SWITCH, NUMERAL INDICATES SIZE
	HARD-WIRED CONNECTION.

ELECTRICAL POWER RISER SYMBOLS

Symbol	Description
90A	FUSE - NUMERAL INDICATES FUSE AMPERE RATING
90A	LOW VOLTAGE MOLDED CASE CIRCUIT BREAKER, RATING AS INDICATED, SEE SCHEDULE FOR TYPE AND ACCESSORIES
100AF / 90AT	LOW VOLTAGE DRAW-OUT CIRCUIT BREAKER, UPPER NUMBER INDICATES FRAME SIZE, LOWER NUMBER INDICATES TRIP RATING, SEE SCHEDULE FOR TYPE AND ACCESSORIES
	TRANSFORMER, TYPE AS NOTED ON DRAWING
	AUTOMATIC TRANSFER SWITCH
	PUSH BUTTON SWITCH, NORMALLY OPEN
	PUSH BUTTON SWITCH, NORMALLY CLOSED
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
R	RELAY COIL
ST	SHUNT TRIP COIL
M	PIECE OF EQUIPMENT WITH FACTORY INSTALLED MOTOR CONTROLLER
G R	INDICATING LAMP: GREEN AND RED
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
Δ	3 PHASE DELTA CONNECTION
	3 PHASE WYE CONNECTION WITH GROUNDED NEUTRAL
	GROUNDING
A AS	AMMETER, AMMETER SWITCH
V VS	VOLTMETER, VOLTMETER SWITCH
M	WATT / HOUR METER
E G	ENGINE-DRIVEN GENERATOR

LIGHTING PLAN SYMBOLS

Symbol	Description
A	UPPER CASE - FIXTURE TYPE (TYPICAL FOR ALL LIGHTING FIXTURES) - SEE LIGHTING FIXTURE SCHEDULE
1	NUMERICAL INDICATES CIRCUIT NUMBER,
	LIGHTING FIXTURE: DOWNLIGHT, 2' x 4' & 2' x 2'
a	LOWER CASE - INDICATES CONTROLLING SWITCH(ES) (TYPICAL FOR ALL LIGHTING FIXTURES)
	LINEAR LIGHTING FIXTURE
	LINEAR LIGHTING FIXTURE, INDUSTRIAL TYPE
	LIGHTING FIXTURE ON BATTERY BACKUP
	LIGHTING FIXTURE, WALL MOUNTED - SEE LIGHTING FIXTURE SCHEDULE
	EXIT LIGHT - DARKENED SECTION INDICATES FACE WITH DIRECTIONAL ARROWS AS INDICATED. SEE LIGHTING FIXTURE SCHEDULE
	SELF-CONTAINED, BATTERY POWERED EMERGENCY LIGHT WITH TWIN LAMPHEAD. SEE LIGHTING FIXTURE SCHEDULE
	SITE LIGHTING FIXTURE, POLE MOUNTED. SEE LIGHTING FIXTURE SCHEDULE
S_a	SINGLE POLE TOGGLE SWITCH - SUBSCRIPT INDICATES FIXTURES CONTROLLED BY THE SWITCH (TYPICAL FOR ALL LIGHTING SWITCHES), 48" AFF, UON: 3 - THREE WAY TOGGLE SWITCH, 4 - FOUR WAY TOGGLE SWITCH, D - DIMMER SWITCH, K - KEY SWITCH, P - PILOT LIGHT, T - TIMER, O - WALL MTD. OCCUPANCY SENSOR, WP - WEATHERPROOF, LV - LOW VOLTAGE
PC	PHOTOCELL CONTROL, INDOOR
PC	PHOTOCELL CONTROL, OUTDOOR
TC	TIME CLOCK
OS, OS	OCCUPANCY SENSOR - CEILING MOUNTED, WALL MOUNTED

FIRE ALARM SYMBOLS

Symbol	Description
CLG 15	FIRE ALARM VISUAL DEVICE, SUBSCRIPT DENOTES CANDELA RATING, 80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER. CLG - DENOTES CEILING MOUNTED.
CLG 15	FIRE ALARM SPEAKER/HORN WITH VISUAL DEVICE, SUBSCRIPT DENOTES CANDELA RATING, 80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER. CLG - DENOTES CEILING MOUNTED.
	FIRE ALARM MANUAL STATION, 48" AFF, UON
	FIRE ALARM HEAT DETECTOR
	FIRE ALARM SMOKE DETECTOR
FSD	SMOKE DETECTOR, DUCT TYPE. FSD - DENOTES FIRE/SMOKE DAMPER TYPE.
	FIRE ALARM SYSTEM MAGNETIC DOOR HOLDER
FACP	FIRE ALARM CONTROL PANEL
FAP	FIRE ALARM ANNUNCIATOR PANEL
MM	FIRE ALARM ADDRESSABLE MONITOR MODULE
CM	FIRE ALARM ADDRESSABLE CONTROL MODULE

TELECOMMUNICATION SYSTEMS SYMBOLS

Symbol	Description
XX +54" #	TELECOM/DATA DROP IN DOUBLE GANG RECESSED OUTLET BOX, MOUNTED 18" AFF, U.O.N. PROVIDE CAT 6A CABLE HOMERUN BACK TO NEAREST SERVER ROOM. CABLE LENGTH SHALL NOT EXCEED 295': "XX" INDICATES DEVICE TYPE. "+54" INDICATES MOUNTING HEIGHT ABOVE FINISHED FLOOR. "#" INDICATES QUANTITY OF CABLES DEVICE TYPES: TELECOM/DATA (NO LABEL) TV (TELEVISION/DISPLAY SCREEN) AV (AUDIO VISUAL)
#	FLOOR MOUNTED TELECOM/DATA OUTLET. # INDICATES QUANTITY OF CABLES. PROVIDE CAT 6A CABLE HOMERUN BACK TO NEAREST SERVER ROOM. FLOOR BOX AND CONDUIT RACEWAYS SHALL BE PROVIDED AND INSTALLED BY E.C.
	2 POST / 4 POST DATA RACK

SECURITY SYSTEMS SYMBOLS

Symbol	Description
EX	SECURITY CAMERA. PROVIDE CAT 6A CABLE HOMERUN BACK TO NEAREST SERVER ROOM AND TERMINATE ON PATCH PANEL. CAMERA AND MOUNTING HARDWARE SHALL BE PROVIDED BY OWNER. CABLE LENGTH SHALL NOT EXCEED 295'. EX DENOTES EXISTING CAMERA TO BE REMOVED

ELECTRICAL ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
AFC	ABOVE FINISHED COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ANSI	AMERICAN NAT'L STANDARDS INSTIT.
ASYM	ASYMMETRICAL
ATC	AUTOMATIC TEMPERATURE CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CTLR	CONTROLLER
CTR	CENTER
CTRL	CONTROL
CU	COPPER
CX	CONNECT TO EXISTING
DB	DIRECT BURIAL
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
ECB	ENCLOSED CIRCUIT BREAKER
E.C.	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ELEC	ELECTRIC / ELECTRICAL
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EX	EXISTING
FA	FIRE ALARM
FAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FDR	FEEDER
F	FUSED OR FUSIBLE
FLA	FULL LOAD AMPERES
FSD	FIRE/SMOKE DAMPER
FSS	FUSED SAFETY SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GW	GROUND WIRE
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HZ	HERTZ
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERE
KW	KILOWATT
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MH	MANHOLE
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MT HT	MOUNTING HEIGHT
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUF. ASSOC.
NF	NON-FUSED
NFSS	NON-FUSED SAFETY SWITCH
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PH or Ø	PHASE
P	POLE
PB	PUSH BUTTON
PNL	PANEL
PVC	POLYVINYL CHLORIDE
RM	ROOM
RX	REMOVE EXISTING
SW	SWITCH
SCHED	SCHEDULE
SD	SMOKE DAMPER
SEC	SECONDARY
SFA	SPRINKLER FLOW ALARM
SS	SAFETY SWITCH
SYM	SYMMETRICAL
TEL	TELEPHONE
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERUPTIBLE POWER SYSTEM
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
VPS	VALVE POSITION (TAMPER) SWITCH
W	WIRE
WAP	WIRELESS ACCESS POINT
WP	WEATHERPROOF
XFMR	TRANSFORMER

ELECTRICAL GENERAL NOTES

1. SOME SYMBOLS MAY NOT BE USED.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ROOM NAME LIST.
3. REFER TO MECHANICAL PLANS FOR EXACT MECHANICAL EQUIPMENT LOCATION & ELECTRICAL CONNECTION REQUIREMENTS.
4. EXISTING CONDITIONS INFORMATION WAS OBTAINED FROM RECORD DRAWINGS AND LIMITED SITE SURVEYS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
5. UNLESS OTHERWISE NOTED, ALL DEVICES SHOWN IN THIS DRAWING SHALL BE REMOVED IN THEIR ENTIRETY INCLUSIVE OF ALL ASSOCIATED CONDUIT & WIRING BACK TO PANEL, SOURCE OR POINT OF ORIGIN.
6. ALL EQUIPMENT SHOWN ON THIS DEMOLITION PLAN IS EXISTING. ELECTRICAL EQUIPMENT SHOWN SOLID AND LIGHT SHALL REMAIN ALONG WITH ASSOCIATED WORK UNLESS OTHERWISE NOTED. ELECTRICAL EQUIPMENT SHOWN DASHED AND DARK SHALL BE REMOVED AND TURNED OVER TO THE OWNER. DISPOSE OF ALL ITEMS REFUSED BY THE OWNER.
7. ALL WIRING PASSING THROUGH AREA OF DEMOLITION WHICH IS NOT PART OF DEMOLITION SHALL REMAIN SUPPORTED FROM STRUCTURE ABOVE CEILING. CONTRACTOR SHALL RESUPPORT WIRING & LIGHTING IF NECESSARY AFTER DEMOLITION HAS FINISHED. MAINTAIN THE LIGHTING CIRCUITS AND FIRE ALARM SYSTEM SERVING AREA BEYOND SCOPE OF WORK.
8. PATCH AND SEAL ALL REMAINING OPENINGS THROUGH FLOORS AND WALLS RESULTING FROM DEMOLITION OR NEW WORK WITH MATERIALS AND FINISHES TO MATCH EXISTING CONSTRUCTION AND TO MAINTAIN FIRE RATING.
9. ALL WORK IN OCCUPIED SPACES, INCLUDING BUT NOT LIMITED TO CORRIDORS, SHALL BE PERFORMED OFF-HOURS AND SPACES SHALL BE RETURNED TO THEIR ORIGINAL CONDITION AT COMPLETION OF WORK IN THOSE AREAS.
10. CONTRACTOR SHALL VERIFY ALL TELECOM WIRING & DEVICES ON THIS TELEPHONE TERMINAL BOARD ARE NOT IN SERVICE BEFORE REMOVAL.
11. CONTRACTOR SHALL CONNECT NEW AND RELOCATED FIRE ALARM DEVICES TO EXISTING FIRE ALARM CIRCUIT.
12. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF LIGHTING FIXTURES.
13. CIRCUIT NUMBERS INDICATED ARE FOR CLARIFICATION OF GROUPING ONLY. ADJUST CIRCUIT NUMBERS TO COORDINATE WITH ACTUAL CIRCUIT BREAKERS USED.
14. CONTRACTOR SHALL CONNECT BRANCH CIRCUITS TO SPARE CIRCUIT BREAKERS INDICATED.
15. CONTRACTOR SHALL UPDATE EXISTING PANELBOARD LEGENDS TO INDICATE ALL BRANCH CIRCUITS WHICH HAVE BEEN MODIFIED.
16. PROVIDE LABEL ON ALL RECEPTACLE COVER PLATES. LABEL SHALL INDICATE SOURCE PANEL & CIRCUIT NUMBER. COORDINATE WITH ARCHITECT & OWNER FOR DIRECTION ON WHETHER TO PUT LABEL ON FRONT OR BACK SIDE OF COVER PLATE. IF ON BACK SIDE OF COVER PLATE, USE PERMANENT, INDELIBLE, BLACK MARKER. IF ON FRONT OF COVER PLATE, PROVIDE LAMINATED POLYESTER, STICK-ON TYPE LABEL WITH BLACK LETTERING ON CLEAR BACKGROUND (SEE SPECIFICATION). FORMAT LABEL IS AS FOLLOWS: PANEL NAME - CIRCUIT NUMBER. IF BUILDING STANDARD IS ALREADY IN PLACE, USE THE BUILDING STANDARD IN LIEU OF THE LABELING CALLED FOR IN THIS NOTE.
17. PROVIDE EMPTY JUNCTION BOX WITH SINGLE GANG EXTENSION WITH 1" CONDUIT FROM BOX TO ACCESSIBLE CEILING SPACE WITH PULL STRING FOR ALL TELEPHONE/DATA OUTLETS INDICATED. CABLE, JACKS AND FACEPLATES PROVIDED BY OTHERS.

BRANCH CIRCUIT WIRE SIZING

(20 AMPERE SINGLE PHASE CIRCUITS) (1) (4)

LENGTH OF RUN (5)	HOMERUN SIZE (2)	CIRCUIT WIRE SIZE (3)
120 VOLT SYSTEM		
0' - 50'	#12	#12
50' - 100'	#10	#12
100' - 175'	#8	#10
175' - 300'	#6	#8
208 OR 240 VOLT SYSTEM		
0' - 125'	#12	#12
125' - 200'	#10	#12
200' - 300'	#8	#10
277 VOLT SYSTEM		
0' - 150'	#12	#12
150' - 275'	#10	#12
275' - 400'	#8	#10

WIRE SIZING CHART NOTES:

1. WIRING FOR BRANCH CIRCUITS PROTECTED BY 20 AMPERE OVERCURRENT PROTECTIVE DEVICES SHALL BE SIZED IN ACCORDANCE WITH THE ABOVE TABLE (UON). WIRING FOR OTHER BRANCH CIRCUITS SHALL BE SIZED AS SHOWN ON DRAWINGS. EQUIPMENT GROUNDING CONDUCTOR SHALL BE SIZED THE SAME AS THE HOMERUN/CIRCUIT CONDUCTOR.
2. HOMERUN LENGTH SHALL BE FROM THE PANELBOARD TO THE CLOSEST OUTLET, DEVICE OR FIXTURE ON THE CIRCUIT.
3. CIRCUIT LENGTH SHALL BE FROM THE CLOSEST TO THE FARTHEST OUTLET, DEVICE OR FIXTURE.
4. PROVIDE CODE COMPLIANT MEANS OF REDUCING CONDUCTOR SIZE AS NEEDED FOR TERMINATIONS. PROVIDE ADDITIONAL JUNCTION BOXES, SPLICES, LUGS, ETC. AS NEEDED.
5. LENGTH OF RUN REFERS TO THE LENGTH OF THE HOME RUN OR THE LENGTH OF THE CIRCUIT (WITH EACH DEFINED IN NOTES 2 & 3).

GENERAL NEW WORK NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR ROOM NAME LIST.
2. DRAWINGS SHALL NOT BE SCALED. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS AND MOUNTING HEIGHTS OF FIXTURES AND DEVICES.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF LIGHTING FIXTURES.
4. REFER TO ARCHITECTURAL DRAWINGS FOR COLORS AND FINISHES FOR WIRING DEVICES AND COVERPLATES.
5. THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES. THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ALL OTHER DRAWINGS AND SPECIFICATIONS SHALL BE CONSULTED AND COORDINATED WITH PRIOR TO ROUGH-IN.
6. REFER TO MECHANICAL PLANS FOR EXACT MECHANICAL EQUIPMENT LOCATION & ELECTRICAL CONNECTION REQUIREMENTS.
7. WHEREVER POSSIBLE, THE CONTRACTOR SHALL OBTAIN ACTUAL ROUGH-IN DRAWINGS FOR THE ACTUAL ITEM OF EQUIPMENT TO BE INSTALLED PRIOR TO ROUGH-IN. THIS SHALL APPLY TO ALL EQUIPMENT, WHETHER IT IS TO BE INSTALLED BY THE CONTRACTOR OR BY THE OWNER.
8. IT IS THE INTENT OF THESE DRAWINGS THAT ALL NEW ELECTRICAL WORK TO BE INSTALLED IN FINISHED AREAS, BE INSTALLED CONCEALED WITHIN NEW OR EXISTING WALLS, FLOORS OR CEILINGS. ANY AND ALL CUTTING AND PATCHING OF SURFACES SHALL BE PROVIDED BY THE CONTRACTOR. SURFACE METAL RACEWAYS SHALL BE PERMITTED IN FINISHED AREAS ONLY WHERE SPECIFICALLY APPROVED IN THE FIELD BY THE ARCHITECT.
9. PRIOR TO PURCHASE AND INSTALLATION OF ANY MOTOR CONTROL EQUIPMENT (STARTERS, ETC.), THE CONTRACTOR SHALL VERIFY THE ACTUAL MOTOR ELECTRICAL CHARACTERISTICS. STARTER OVERLOADS SHALL BE SIZED IN ACCORDANCE WITH THE ACTUAL MOTOR RUNNING LOAD AMPERES.
10. PROVIDE EQUIPMENT GROUNDING CONDUCTORS FOR ALL FEEDERS AND CIRCUITS.
11. WHERE CIRCUIT AND HOMERUN LINES ARE NOT SHOWN, PROVIDE MINIMUM 2#12+1#12 GROUND IN 3/4" CONDUIT. FOR CIRCUITS WITH SHARED NEUTRAL, PROVIDE NO MORE THAN 3#12 (PHASE), 1#12 (NEUTRAL) AND 1#12 GROUND IN 3/4" CONDUIT. CIRCUITS SHALL NOT SHARE NEUTRAL CONDUCTORS UNLESS NOTED OTHERWISE. ALL CIRCUITS WITH SHARED NEUTRAL SHALL BE PROTECTED BY MULTI-POLE CIRCUIT BREAKERS PER NEC. PROVIDE ADDITIONAL CONDUCTORS FOR LIGHTING CIRCUITS FOR SWITCHLEGS, TRAVELLERS, DIMMING BALLASTS/DRIVERS, ETC. FOR ISOLATED GROUND RECEPTACLES, PROVIDE #12 ISOLATED GROUND CONDUCTOR IN ADDITION TO EQUIPMENT GROUND CONDUCTOR. REFER TO BRANCH CIRCUIT WIRE SIZING CHART FOR SIZING OF CONDUCTORS FOR LONG CIRCUITS.
12. COORDINATE NUMBER AND TYPE OF CONDUCTORS REQUIRED FOR DIMMING CIRCUITS WITH TYPE OF DIMMING BALLAST/DIMMER SWITCHES TO BE PROVIDED.
13. FOR INTERIOR AND EXTERIOR LIGHTING FIXTURES WITH EMERGENCY DRIVERS, PROVIDE HOT CONDUCTOR IN ADDITION TO SWITCHLEG FROM WALL SWITCH, TIME CLOCK, CONTACTOR, ETC. THE ONLY EXCEPTION TO THIS IS FOR INTERIOR FIXTURES DESIGNATED AS NIGHT LIGHTS.
14. CIRCUITS WITH CONDUCTORS SIZED #10 AWG AND SMALLER WHERE RUN CONCEALED MAY BE TYPE MC CABLE. FEEDERS AND BRANCH CIRCUITS WITH CONDUCTORS LARGER THAN #10 AWG, OR WHERE RUN EXPOSED, SHALL BE TYPE THHN/THWN IN CONDUIT.
15. UNLESS NOTED OTHERWISE, ALL CONDUCTORS SHOWN ON THESE DRAWINGS HAVE BEEN SIZED BASED ON COPPER IN ACCORDANCE WITH 75° C (167° F) INSULATION TYPE. FOR OTHER TYPES OF CABLE, SIZE ACCORDING TO NEC 2020 TABLE 310.16 FOR PROPER AMPACITY.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FIRE RATING OF UNIT DEMISING WALLS (AND ANY FIRE RATED WALLS). WALL RECESSED ELECTRICAL BOXES THAT ARE ON OPPOSITE SIDES OF THESE RATED WALLS SHALL BE SEPARATED BY A MINIMUM OF 24". IF THIS SPACING CANNOT BE MET WHILE ADHERING TO PROJECT REQUIREMENTS, THE CONTRACTOR SHALL PROVIDE LISTED PUTTY PADS OR PROVIDE SOME OTHER MEANS OF ADHERING TO IBC 2018 SECTION 714.4.2.
17. WHERE LIGHT SWITCHES ARE SHOWN GROUPED TOGETHER, THEY SHALL BE UNDER MULTIGANG PLATE. WHERE DIMMER SWITCHES ARE USED, SELECTION OF CAPACITY SHALL BE BASED ON LOAD SERVED AND ANY DE-RATING REQUIRED DUE TO GANGING OF SWITCHES.
18. ON THE ROOF, XHHW-2 CONDUCTORS SHALL BE USED.
19. CIRCUIT NUMBERS INDICATED ARE FOR CLARIFICATION OF GROUPING ONLY. ADJUST CIRCUIT NUMBERS TO COORDINATE WITH ACTUAL CIRCUIT BREAKERS USED.
20. PROVIDE TYPED CIRCUIT DIRECTORIES FOR ALL PANELBOARDS TO INDICATE TYPE OF LOAD SERVED AND AREA SERVED (E.G. RECEPTACLES-OFFICE 201). CONTRACTOR SHALL TRACE CIRCUITS AND FIELD VERIFY EXISTING LOADS TO BE CONNECTED TO NEW PANELBOARDS. THE LABEL "EXISTING CIRCUIT" SHALL NOT BE ACCEPTABLE.
21. PROVIDE LABEL ON ALL RECEPTACLE COVER PLATES. LABEL SHALL INDICATE SOURCE PANEL & CIRCUIT NUMBER. COORDINATE WITH ARCHITECT & OWNER FOR DIRECTION ON WHETHER TO PUT LABEL ON FRONT OR BACK SIDE OF COVER PLATE. IF ON BACK SIDE OF COVER PLATE, USE PERMANENT, INDELIBLE, BLACK MARKER. IF ON FRONT OF COVER PLATE, PROVIDE LAMINATED POLYESTER, STICK-ON TYPE LABEL WITH BLACK LETTERING ON CLEAR BACKGROUND (SEE SPECIFICATION). FORMAT LABEL IS AS FOLLOWS: PANEL NAME - CIRCUIT NUMBER. IF BUILDING STANDARD IS ALREADY IN PLACE, USE THE BUILDING STANDARD IN LIEU OF THE LABELING CALLED FOR IN THIS NOTE. FOR ALL RECEPTACLES THAT ARE CONTROLLED BY AUTOMATIC MEANS, LABEL PER NEC 2020 ARTICLE 406.3(E).
22. CABLES AND CONDUITS RUN UNDER ROOF DECKING SHALL BE INSTALLED PER NEC 2020 300.4 (E).
23. ALL PANELBOARDS, SWITCHBOARDS, ECB's, TRANSFORMERS, AND DISCONNECT SWITCHES SHALL BE LABELED AS TO THEIR SOURCE AND IN ACCORDANCE WITH CLIENT STANDARDS.
24. MECHANICAL EQUIPMENT ELECTRICAL CONNECTIONS ARE SIZED BASED ON THE MECHANICAL BASIS OF DESIGN (BOD). IF OTHER MECHANICAL EQUIPMENT IS SUBMITTED THAT IS OTHERWISE EQUAL TO THE BOD, IT MAY BE APPROVED CONTINGENT ON THE REQUIREMENT THAT ANY ADDITIONAL ELECTRICAL COST, INCLUDING ANY POSSIBLE DESIGN AND/OR ENGINEERING COST, BE ABSORBED BY THE CONTRACTOR AT NO COST TO THE OWNER.
25. ALL EQUIPMENT TERMINATIONS SHALL BE RATED AT 75 DEGREES. IF ANY EQUIPMENT TERMINATIONS ARE RATED AT 60 DEGREES, CONTRACTOR SHALL DERATE CABLES TO 60 DEGREES PER NEC 2020 ARTICLE 110.14(C)(1)(a) AND NEC 2020 ARTICLE 310.15 AT NO COST TO THE OWNER.
26. REFER TO SINGLE LINE DIAGRAM FOR BUS AMPERAGE OF ALL SWITCHBOARD SECTIONS.
27. THE TELECOM CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES. THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ALL OTHER DRAWINGS AND SPECIFICATIONS SHALL BE CONSULTED AND COORDINATED WITH PRIOR TO ROUGH-IN.
28. WHEREVER POSSIBLE, THE CONTRACTOR SHALL OBTAIN ACTUAL ROUGH-IN DRAWINGS FOR THE ACTUAL ITEM OF EQUIPMENT TO BE INSTALLED PRIOR TO ROUGH-IN. THIS SHALL APPLY TO ALL EQUIPMENT, WHETHER IT IS TO BE INSTALLED BY THE CONTRACTOR OR BY THE OWNER.
29. IT IS THE INTENT OF THESE DRAWINGS THAT ALL NEW TECHNOLOGY WORK TO BE INSTALLED IN FINISHED AREAS, BE INSTALLED CONCEALED WITHIN NEW OR EXISTING WALLS, FLOORS OR CEILINGS. ANY AND ALL CUTTING AND PATCHING OF SURFACES SHALL BE PROVIDED BY THE CONTRACTOR.

GENERAL NOTES - SPECIAL SYSTEMS:

1. ELECTRICAL CONTRACTOR (E.C.) SHALL BE RESPONSIBLE FOR COORDINATING WITH SPECIAL SYSTEMS SUPPLIERS AND INSTALLERS FOR TELECOMMUNICATIONS, SECURITY, ACCESS CONTROL, AND A/V WORK.
2. CONTRACTOR SHALL PERFORM ALL ROUGH-IN WORK FOR SPECIAL SYSTEMS MENTIONED ABOVE INCLUDING EMPTY CONDUITS WITH PULL STRINGS, GANG BOXES, AND CABLE TRAY (IF APPLICABLE). OTHER SUPPORT SYSTEMS SUCH AS J-HOOKS, OR U-HOOKS, MAY BE INSTALLED BY SPECIAL SYSTEMS CONTRACTOR OR E.C.
3. FOR ALL WALL TYPES USE 1" CONDUIT FROM GANG BOX UP TO ACCESSIBLE CEILING UNLESS NOTED OTHERWISE.
4. ALL SPECIAL SYSTEMS CONDUITS INCLUDING SERVICE CONDUITS AND CONDUITS FROM OUTLETS, ETC. SHALL HAVE ENDS BUSHED.
5. ACCESS CONTROL CONTRACTOR SHALL COORDINATE ALL DOOR HARDWARE AND ACCESS CONTROL DEVICES WITH ARCHITECTURAL PLANS PRIOR TO PROCUREMENT.

TECHNOLOGY GENERAL NOTES:

1. ALL SYSTEMS EQUIPMENT, CABLING, BOXES, FIRESEALS, BONDING AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE NEC.
2. ALL LOW VOLTAGE CABLING MUST BE INSTALLED ACCORDING TO BICSI GUIDELINES AND METHODS.
3. ALL CABLING SHALL BE APPROPRIATELY LABELED.
4. CONTRACTOR SHALL NOT INSTALL ANY EQUIPMENT PRIOR TO ITS APPROVAL BY OWNER. CONTRACTOR SHALL BE LIABLE FOR IT'S REMOVAL IN ANY SUCH CASE.
5. ANY PENETRATION OF A FIRE-RATED BARRIER MUST BE PROPERLY SEALED WITH FIRESTOPPING MATERIAL IN ACCORDANCE WITH LOCAL AND STATE LAWS AND THE AUTHORITY HAVING JURISDICTION.
6. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS FOR COMPLETE INSTALLATION.
7. THE WORK SHALL BE PERFORMED AND COMPLETED BY EXPERIENCED TRADESPERSONS WHO ARE LICENSED IN THE JURISDICTION WHERE THE PROJECT IS BEING CONSTRUCTED.
8. THE TECHNOLOGY PLANS ARE DIAGRAMMATIC. ALL WORK MUST BE COORDINATED PRIOR TO INSTALLATION.

TECHNOLOGY GENERAL NOTES:

9. THE CONTRACTOR SHALL INFORM THE OWNER PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO COMPLETION TO ALLOW FOR SUFFICIENT TIME OF WORK REQUIRING ADDITIONAL COORDINATION.
10. THE CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST, ANY LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS (IN ADDITION TO CONTRACT DRAWINGS AND DOCUMENTS) IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, INDICATED OR EXPRESSED.
11. BEFORE SUBMITTING BIDS, THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE SITE, ADJOINING SITES AND STRUCTURES, ANY EXISTING STRUCTURES OR BUILDINGS AND SPACES RELEVANT TO THEIR WORK. THE CONTRACTOR SHALL PROVIDE WRITTEN REPORT THAT DETAILS ANY CONDITIONS WHICH MIGHT PREVENT EQUIPMENT INSTALLATION IN THE MANNER SHOWN ON THE CONTRACT DOCUMENTS.
12. NO CONSIDERATION OR ALLOWANCE SHALL BE GIVEN FOR FAILURE TO VISIT THE SITE, NOR FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED AND INSTALLED PROPERLY.
13. THE CONTRACTOR SHALL NOTIFY THE DESIGNER AND OWNER IN WRITING OF ANY DISCOVERED CONFLICTS BETWEEN EXISTING INSTALLATIONS WHICH ARE NOT SCHEDULED FOR DEMOLITION AND THE WORK INDICATED WITHIN THE CONTRACT DOCUMENTS. SUCH NOTIFICATION SHALL BE ACCOMPANIED BY A DRAWING DELINEATING THE PROPOSED SOLUTION PRIOR TO STARTING WORK IN THE AFFECTED AREA.

TECHNOLOGY GENERAL NOTES:

14. CABLE AND EQUIPMENT COUNTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND PROVIDING ALL CABLING AND EQUIPMENT NECESSARY AS INDICATED IN FLOOR PLANS AND DIAGRAMS.
15. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS, WRITTEN SUBMITTALS, CUT SHEETS, CALCULATIONS AND EQUIPMENT LITERATURE FOR ALL EQUIPMENT BEING PROVIDED AS PART OF THIS SCOPE OF WORK. THE EXACT DEVICE OR PIECE OF EQUIPMENT MUST BE CLEARLY CALLED OUT FOR THE DESIGNER TO REVIEW. SUBMITTALS WITHOUT THE PROPER INFORMATION HIGHLIGHTED SHALL BE REJECTED FOR RESUBMITTAL.
16. THE CONTRACTOR SHALL PROVIDE COMPLETE AS-BUILT DOCUMENTATION IN HARDCOPY AND ELECTRONIC FORMAT FOR REVIEW AND APPROVAL BY THE OWNER PRIOR TO JOB COMPLETION. PROVIDE BICSI CLASS 3 LABEL ADMINISTRATION DRAWINGS AND LABELING.
17. THE CONTRACTOR SHALL PROVIDE A COMPLETE PUNCHLIST OF ALL INSTALLED SYSTEMS TO THE OWNER WHEN THE INSTALLED WORK IS READY TO BE EXAMINED BY THE DESIGNER. INCOMPLETE SYSTEMS SHALL NOT BE REVIEWED UNTIL IT IS DETERMINED THAT THE SYSTEM ARE SUBSTANTIALLY COMPLETE.

TECHNOLOGY SCOPE NOTES:

1. ALL LOW VOLTAGE PATHWAYS INCLUDING, BUT NOT LIMITED TO, CONDUITS, BOXES, JUNCTION BOXES, SLEEVES, CHASES, RACEWAYS AND CABLE TRAYS SHALL BE PROVIDED BY THE CONTRACTOR. J-HOOKS SHALL BE PROVIDED AS REQUIRED FOR SUPPORT OF CABLING WITHIN SPACES.
2. CONTRACTOR SHALL BOND TO THE GROUNDING SYSTEM PROVIDED BY E.C.
3. PROVIDE AND INSTALL A COMPLETE DATA AND VOIP STRUCTURED CABLING SYSTEM INCLUDING ALL CAT 6A UTP CABLES, PATCH PANELS, WIRE MANAGERS AND ASSOCIATED COMPONENTS.
4. PROVIDE AND INSTALL ALL DATA, VOICE, AND A/V OUTLETS AS SHOWN INCLUDING JACKS, CABLES, AND FACEPLATES.
5. PROVIDE AND INSTALL ALL JUMPER CABLES AND PATCH CORDS AS NEEDED TO PROVIDE A COMPLETE AND FULLY FUNCTIONAL DATA AND VOIP STRUCTURED CABLING SYSTEM.
6. PROVIDE AND INSTALL ALL CONDUIT SLEEVES WITH PENETRATION FIRESTOPPING GREATER THAN OR EQUAL TO THE FIRE RATING OF THE FLOOR, CEILING, WALL, OR PARTITION MATERIAL.

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No.	Date	Description

PROJECT MANAGER: JMW
DRAWN BY: TAN

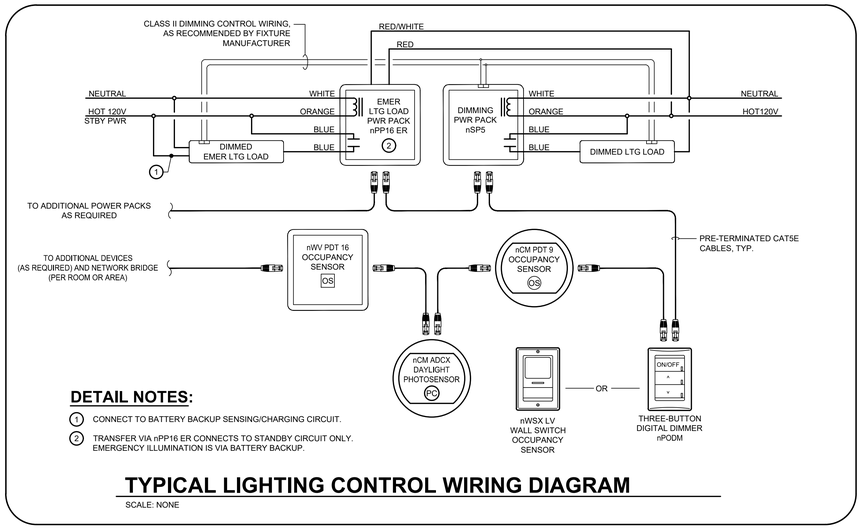
QEA No.42137020

100% CONSTRUCTION DOCUMENTS
08/01/23

ELECTRICAL ABBREVIATIONS, LEGEND AND GENERAL NOTES

E001

BKM#22240.01



DETAIL NOTES:

1. CONNECT TO BATTERY BACKUP SENSING/CHARGING CIRCUIT.
2. TRANSFER VIA nPP16 ER CONNECTS TO STANDBY CIRCUIT ONLY. EMERGENCY ILLUMINATION IS V/A BATTERY BACKUP.

TYPICAL LIGHTING CONTROL WIRING DIAGRAM

SCALE: NONE

LIGHTING CONTROL SYSTEM LEGEND

LIGHTING CONTROL SYSTEM BASIS OF DESIGN IS SENSOR SWITCH, INC. (nLIGHT PRODUCT LINE). REFER TO LIGHTING CONTROL SYSTEM SPECIFICATION SECTION FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

OS OS	LIGHTING CONTROL SYSTEM - OCCUPANCY SENSOR, SENSOR SWITCH (NLIGHT) MODEL, QUANTITY AND LOCATION AS RECOMMENDED BY SENSOR SWITCH FOR THIS APPLICATION
PC	LIGHTING CONTROL SYSTEM - DAYLIGHT PHOTOCELL. SENSOR SWITCH (NLIGHT) MODEL, QUANTITY AND LOCATION AS RECOMMENDED BY SENSOR SWITCH FOR THIS APPLICATION
LS	LIGHTING CONTROL SYSTEM - LOW VOLTAGE ADDRESSABLE THREE-BUTTON DIGITAL ON/OFF/DIMMING SWITCH AS INDICATED. SENSOR SWITCH (NLIGHT) NPODM SERIES.
LSO	LIGHTING CONTROL SYSTEM - COMBINATION WALL SWITCH WITH INTEGRAL OCCUPANCY SENSOR WITH MANUAL ON / AUTOMATIC OFF CAPABILITY. SENSOR SWITCH (NLIGHT) WSX SERIES.

NOTE:

SOME SYMBOLS MAY NOT BE USED ON THIS PROJECT.

LIGHTING CONTROL SYSTEM NOTES:

1. EACH ROOM/SPACE CONTAINS A LIGHTING CONTROL SEQUENCE TAG WHICH MATCH THE CORRESPONDING TAG DESIGNATION AND SEQUENCE OF OPERATION SHOWN IN THE LIGHTING CONTROL SEQUENCE OF OPERATION SCHEDULE SHOWN ON THIS SHEET. LIGHTING CONTROL SYSTEM SHALL PROVIDE LIGHTING CONTROL SEQUENCE OF OPERATION SHOWN ON THE LIGHTING CONTROL SEQUENCE OF OPERATION ON THIS DRAWING FOR EACH ROOM/SPACE
2. PROVIDE ALL LABOR, MATERIALS, TOOLS, ADDITIONAL SYSTEM DESIGN AND ALL INCIDENTALS TO PROVIDE A COMPLETE AND OPERABLE LIGHTING CONTROL SYSTEM AS SHOWN AND TO THE SATISFACTION OF THE OWNER AND ENGINEER.
3. NOTE: ONLY MAJOR LIGHTING CONTROL SYSTEM COMPONENTS AND SEQUENCES ARE SHOWN ON THIS DRAWING IN ORDER TO CONVEY SYSTEM DESIGN INTENT. CERTAIN LIGHTING CONTROL SYSTEM COMPONENTS INCLUDING, BUT NOT LIMITED TO, POWER/RELAY PACKS, OCCUPANCY SENSORS, INTERFACE DEVICES, POWER SUPPLIES, INTERFACE DEVICES AND LOW VOLTAGE INTERCONNECT CABLES (I.E. CAT5E CABLE) ARE NOT SHOWN IN THIS DRAWING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE LIGHTING CONTROL SYSTEM MANUFACTURER TO DETERMINE ALL REQUIRED COMPONENTS AND TO INCLUDE ALL REQUIRED COMPONENTS IN THE PROJECT BID PRICE.
4. LIGHTING CONTROL SYSTEM BASIS OF DESIGN IS SENSOR SWITCH. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

LIGHTING CONTROL SEQUENCE OF OPERATION

LIGHTING CONTROL SEQUENCE TAG	SEQUENCE OF OPERATION	NOTES
1	LIGHTS CONTROLLED BY TIME CLOCK AND MANUAL SWITCH(ES). MANUAL ON/OFF. DIMMING TO 50%. AUTOMATIC OFF AFTER HOURS WITH MANUAL 2 HOUR OVERRIDE. LIGHTS LOCATED IN DAYLIGHT ZONE SHALL BE CONTINUOUSLY DIMMED CONTROLLED BY DAYLIGHT CONTROLLER (PHOTOCELL) LOCATED IN THE AREA. EMERGENCY LIGHTS GO TO FULL ILLUMINATION UPON LOSS OF NORMAL POWER TO THE AREA. ALL LIGHTS GO TO FULL ILLUMINATION UPON ACTIVATION OF FIRE ALARM SYSTEM	1,2
2	LIGHTS CONTROLLED BY OCCUPANCY SENSOR(S) AND MANUAL SWITCH(ES). MANUAL ON/OFF. AUTOMATIC OFF BASED ON ROOM OCCUPANCY (20 MINUTES AFTER ROOM IS NOT OCCUPIED). EMERGENCY LIGHTS GO TO FULL ILLUMINATION UPON LOSS OF NORMAL POWER.	1,2

LIGHTING SEQUENCE NOTES:

1. STAND ALONE ROOM LIGHTING CONTROL SYSTEM.
2. ALL STAND ALONE LIGHTING CONTROL SYSTEM DEVICES SHALL BE BY THE SAME MANUFACTURER.

LIGHTING FIXTURE SCHEDULE 2

TYPE	DESCRIPTION	LENS/ LOUVER	MOUNTING	VOLTS	LAMP DATA			MANUFACTURER CATALOG NO.	NOTES
					NO.	WATTS	CODE		
A	2" RECESSED, TRIMMED DOWNLIGHT, 60° BEAM ANGLE, 3500K, 1016 LUMENS.	ACRYLIC	CR	MVOLT	1	10	LED	FLEXALIGHTING FN1 1 1 35 9 W	
B	CYLINDRICAL PENDANT DOWNLIGHT, CEILING MOUNTED, MEDIUM OUTPUT, 3000K, 40° BEAM ANGLE	ACRYLIC	CC	MVOLT	1	27	LED	ENTRA ENCY3R P L27 930 4 D UNV W W	REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS
C1	4" SUSPENDED DIRECT/INDIRECT LINEAR, 3500K U/D, CONTINUOUS RUN	ACRYLIC	CC10	MVOLT	1	123	LED	UTOPIA CUBE4-CON XX' 6 D18L/U18L UBAT 35K UNV 2 SV X3 AC96	REFER TO DRAWINGS FOR RUN LENGTH "XX" . COORDINATE WITH MANUFACTURER FOR CUSTOM CABLE LENGTH
C1E	4" SUSPENDED DIRECT/INDIRECT LINEAR, 3500K U/D, CONTINUOUS RUN, BATTERY BACKUP	ACRYLIC	CC10	MVOLT	1	123	LED	UTOPIA CUBE4-CON XX' 6 D18L/U18L UBAT 35K UNV 2 SV X3 AC96 EMG15	3
C2	WALL MOUNTED LINEAR WALL WASH FIXTURE	ACRYLIC	WS	MVOLT	1	108	LED	INSIGHT C5X2 MO 35K DL SMA 12 DIM TW TW ILV CR	REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS
D1	2'x2' RECESSED FLAT LENS FIXTURE, 4800 LUMENS, 80 CRI, 35K	LENS	CR	MVOLT	1	34	LED	LED LIGHTING WHOLESALE ZY-P4-40W XDZ 3500K	
D1E	2'x2' RECESSED FLAT LENS FIXTURE, 4800 LUMENS, 80 CRI, 35K	LENS	CR	MVOLT	1	34	LED	LED LIGHTING WHOLESALE ZY-P4-40W XDZ 3500K	3
D2	2'x4' RECESSED FLAT LENS FIXTURE, 4800 LUMENS, 80 CRI, 35K	LENS	CR	MVOLT	1	34	LED	LED LIGHTING WHOLESALE ZY-P7-40W XDZ 3500K	
E	RECTANGULAR LINEAR PENDANT	ACRYLIC	CC10	MVOLT		12/FT	LED	AXIS SCDI 500 500 80 35 BW FL # C UNV BI 1+E(1) CASL(#) B(1)	REFER TO DRAWINGS FOR RUN LENGTHS.
F	WALL MOUNTED INDIRECT LINEAR UPLIGHT	ACRYLIC	WS	MVOLT	1	6/FT	LED	QTRAN LALO ST SST DF P1 98"	
H	DECORATIVE PENDANT, CAFE	N/A	CC6	MVOLT	1	60	LED	MATTEO 64001CP	REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS
I1	ACOUSTICAL PENDANT	N/A	CC	MVOLT	1	9	LED	OCL KW1 P1FF 36 MW --- LED2/35K ND UNV --- DM1	REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS. COORDINATE WITH ARCHITECT FOR FINISH SELECTION.
I2	ACOUSTICAL PENDANT	N/A	CC	MVOLT	1			OCL KW2 P1FF 36 MW --- LED2/35K ND UNV --- DM1	REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS. COORDINATE WITH ARCHITECT FOR FINISH SELECTION.
I3	ACOUSTICAL PENDANT	N/A	CC	MVOLT	1			OCL KW3 P1FF 36 MW --- LED2/35K ND UNV --- DM1	REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS. COORDINATE WITH ARCHITECT FOR FINISH SELECTION.
J	DECORATIVE PENDANT, WINDOWS	N/A	CC8	MVOLT			LED	CASIA 18 06-280-18 W O - 35 P1	REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS
L	EXTERIOR CANOPY FIXTURE, SUSPENDED DOWLIGHT	LENS	CC12	MVOLT	1	41	LED	ARCLUCE INTIS L-IN 7 0 4 4 US-16 S	PROVIDE SLOPED CEILING PENDANT ADAPTOR
	EXIT SIGN	N/A	CC	MVOLT			LED	LITHONIA LQM	1
	EMERGENCY LIGHT	N/A	WS				LED	LITHONIA ELM6L UVOLT LTP SDRT	3

MOUNTING:

CS - CEILING, SURFACE CR - CEILING, RECESSED, ACT	CC# - CEILING, SUSPENDED, # FEET A.F.F. CG - CEILING, RECESSED, GYPSUM BD.	WS - WALL, SURFACE

1 PROVIDE MOUNTING TYPES, DIRECTIONAL ARROWS AND FACE QUANTITIES (SINGLE / DOUBLE) AS INDICATED ON DRAWING. COORDINATE LETTERING COLOR OF THE EXIT SIGN WITH AUTHORITY HAVING JURISDICTION.

2 REFER TO ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS.

3 FIXTURES WHOSE LABELS ARE APPENDED WITH AN E HAVE BATTERY BACKUP.

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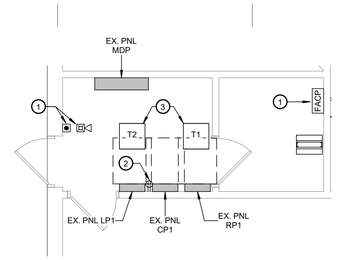
LIGHTING FIXTURES SCHEDULES AND SEQUENCES

E002

BKM#22240.01



2 LEVEL 1 PART PLAN - ELECTRICAL ROOM - DEMOLITION

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

DRAWING NOTES:

1. FIRE ALARM DEVICE EXISTING TO REMAIN.
2. RECEPTACLE EXISTING TO REMAIN.
3. TRANSFORMER EXISTING TO REMAIN.

1 LEVEL 1 PLAN - ELECTRICAL - DEMOLITION

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

GENERAL NOTES:

1. REFER TO E001 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. UNLESS NOTED OTHERWISE, ELECTRICAL ITEMS SHOWN HEAVY DASHED (— — —) SHALL BE REMOVED, ELECTRICAL ITEMS SHOWN HEAVY SOLID (———) SHALL BE NEW AND ELECTRICAL ITEMS SHOWN LIGHT SOLID (———) SHALL BE EXISTING TO REMAIN.

DRAWING NOTES:

1. FIRE ALARM DEVICE EXISTING TO REMAIN.
2. RECEPTACLE EXISTING TO REMAIN.
3. REMOVE EXISTING FLOOR BOX.
4. DATA OUTLET EXISTING TO REMAIN.
5. REMOVE EXISTING RECEPTACLE.
6. REMOVE EXISTING LIGHTING CONTROLS.
7. REMOVE EXISTING DATA OUTLET.
8. REMOVE EXISTING FIRE ALARM DEVICE.
9. REMOVE EXISTING SECURITY DEVICE .
10. REMOVE EXISTING FLOOR BOX. PROTECT EXISTING WIRING AND CONDUIT FOR RECONNECTION TO NEW FLOOR BOX. REFER TO NEW WORK PLAN SHEET E101.
11. U.O.N ALL LIGHT FIXTURE WITHIN THE PROJECT AREA ARE TO BE REMOVED, ALONG WITH ALL ASSOCIATED WIRING, BACK TO SOURCE.
12. REMOVE, PROTECT AND RELOCATE EXISTING LIGHT FIXTURE TO BE REINSTALLED AS PART OF NEW WORK.

0 2 4 8 16 24
SCALE: 1/8" = 1'-0"

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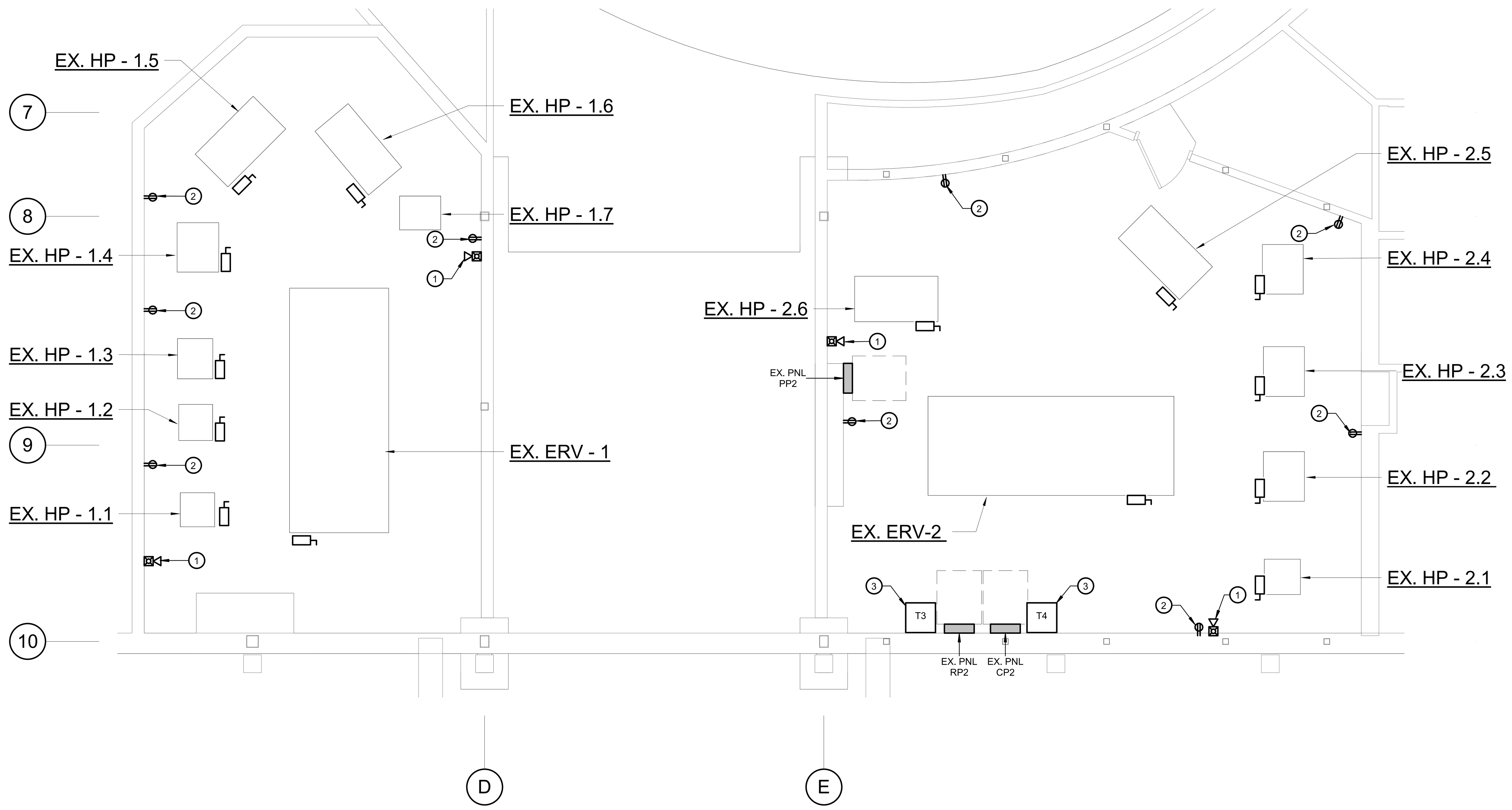
LEVEL 1 PLAN ELECTRICAL DEMOLITION

ED101

BKM#22240.01



1 MEZZANINE PLAN - ELECTRICAL - DEMOLITION

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

GENERAL NOTES:

1. REFER TO E001 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. UNLESS NOTED OTHERWISE, ELECTRICAL ITEMS SHOWN HEAVY DASHED (— —) SHALL BE REMOVED, ELECTRICAL ITEMS SHOWN HEAVY SOLID (———) SHALL BE NEW AND ELECTRICAL ITEMS SHOWN LIGHT SOLID (———) SHALL BE EXISTING TO REMAIN.
3. REMOVE, PROTECT AND REINSTALL ANY LIGHT FIXTURES IN THIS AREA AS NECESSARY TO COMPLETE MECHANICAL DEMOLITION. COORDINATE WITH MECHANICAL PLANS.

DRAWING NOTES:

1. FIRE ALARM DEVICE EXISTING TO REMAIN.
2. RECEPTACLE EXISTING TO REMAIN.
3. TRANSFORMER EXISTING TO REMAIN.

0 2 4 8 16 24
SCALE: 1/8" = 1'-0"

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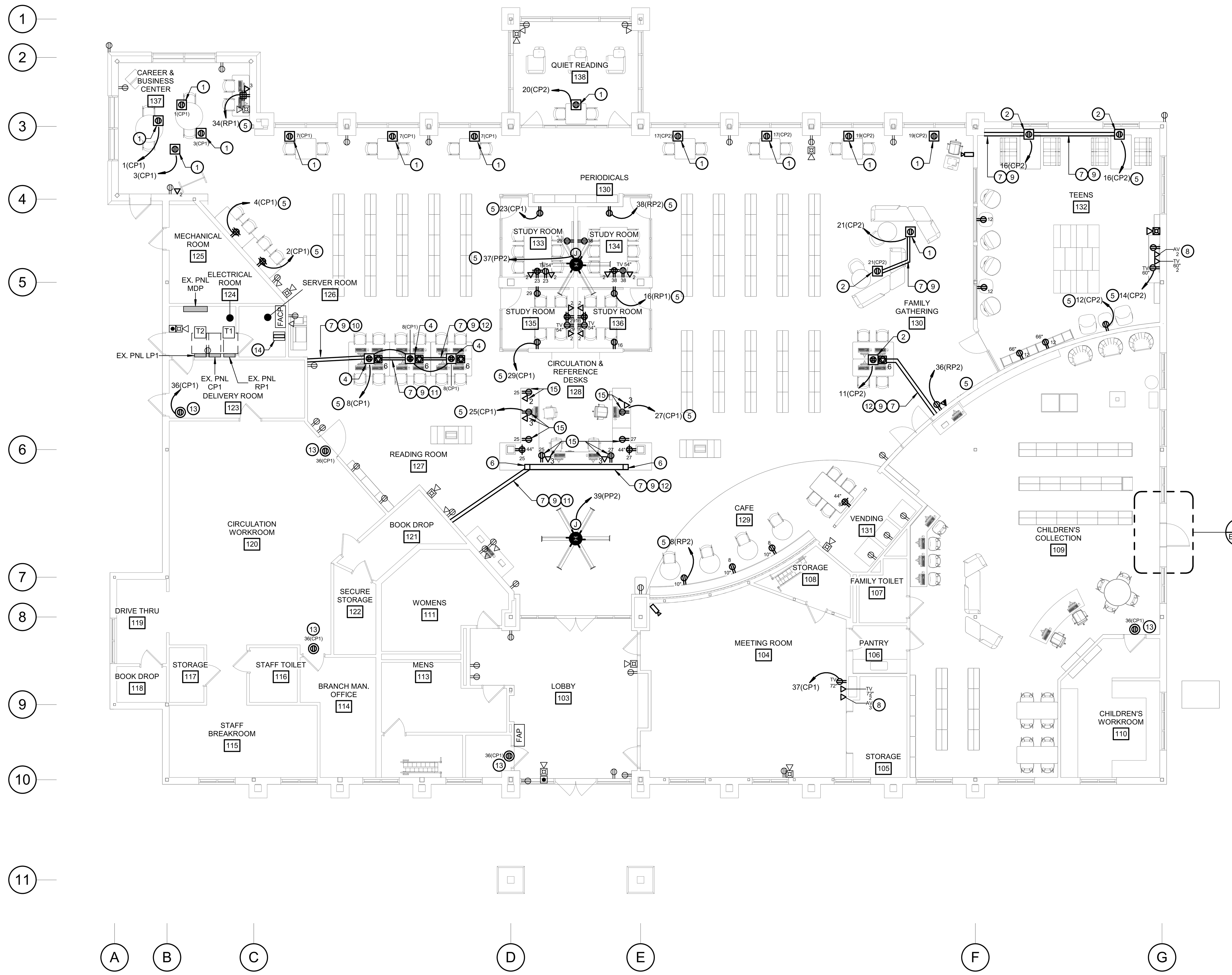
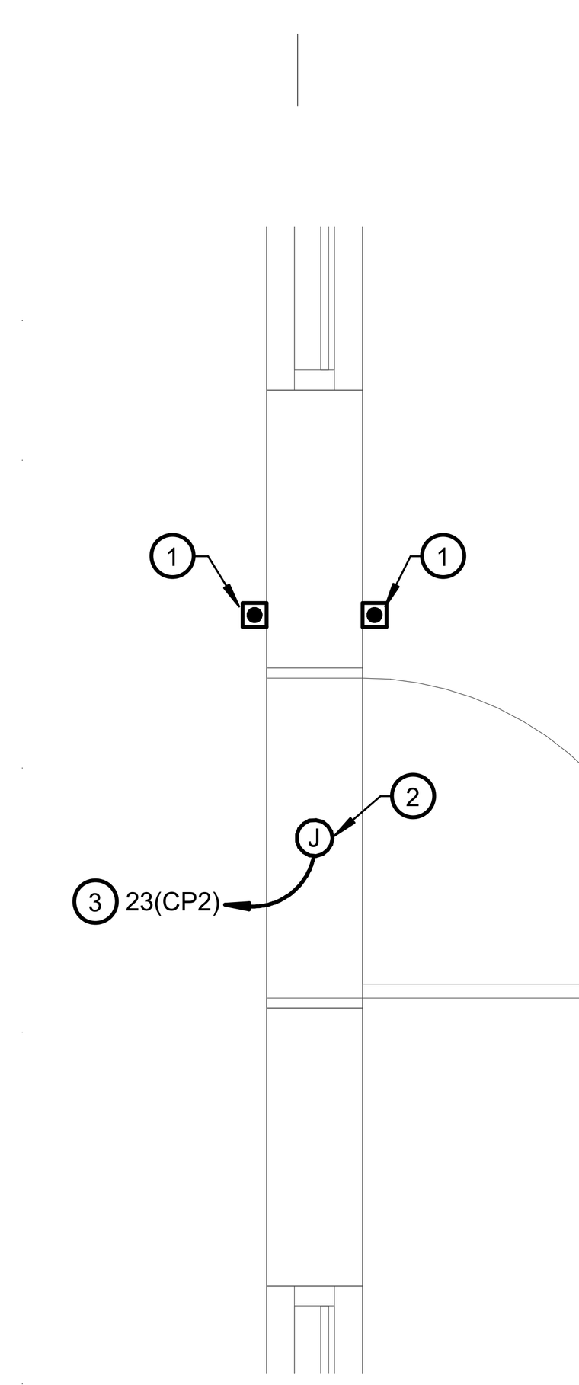
MEZZANINE PLAN - ELECTRICAL - DEMOLITION

ED102

BKM#22240.01





1 LEVEL 1 PLAN - POWER & SPECIAL SYSTEMS - NEW WORK

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

GENERAL NOTES:

1. REFER TO E001 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. UNLESS NOTED OTHERWISE, ELECTRICAL ITEMS SHOWN HEAVY DASHED (— —) SHALL BE REMOVED, ELECTRICAL ITEMS SHOWN HEAVY SOLID (———) SHALL BE NEW AND ELECTRICAL ITEMS SHOWN LIGHT SOLID (———) SHALL BE EXISTING TO REMAIN.

DRAWING NOTES:

1. PROVIDE RECESSED, FLUSH-MOUNTED, COMBINATION POWER/DATA FLOOR BOX WITH COVER IN LOCATION OF DEMOLISHED FLOOR BOX. FLOOR BOX TO BE EQUIVALENT TO LEGRAND WIREMOLD RFBA SERIES 2-GANG ON GRADE BOX. RECONNECT FLOOR BOX TO SALVAGED WIRING AND CONDUIT. PACK EACH CONDUIT THAT ENTERS THE FLOOR BOX WITH MARINE GRADE WATER PROOFING PUTTY TO PREVENT WATER FROM ENTERING THE FLOOR BOX.
2. PROVIDE RECESSED, FLUSH-MOUNTED, COMBINATION POWER/DATA FLOOR BOX WITH COVER. FLOOR BOX TO BE EQUIVALENT TO LEGRAND WIREMOLD RFBA SERIES 2-GANG ON GRADE BOX. PACK EACH CONDUIT THAT ENTERS THE FLOOR BOX WITH MARINE GRADE WATER PROOFING PUTTY TO PREVENT WATER FROM ENTERING THE FLOOR BOX.
3. EXISTING NETWORK RACK. PROVIDE ALL PATCH PANELS, PATCH CORDS, AND WIRE MANAGERS AS NEEDED TO SUPPORT INSTALLATION OF NEW DATA/SECURITY CAMERA DATA DROPS (APPROX. 52 DATA DROPS & 19 CAMERA DROPS ANTICIPATED).
4. PROVIDE RECESSED, FLUSH-MOUNTED, COMBINATION POWER/DATA FLOOR BOX WITH COVER. FLOOR BOX TO BE EQUIVALENT TO LEGRAND WIREMOLD RFBA SERIES 4-GANG ON GRADE BOX. PACK EACH CONDUIT THAT ENTERS THE FLOOR BOX WITH MARINE GRADE WATER PROOFING PUTTY TO PREVENT WATER FROM ENTERING THE FLOOR BOX.
5. PROVIDE HOMERUN TO PANEL INDICATED. CIRCUIT TO EXISTING SPARE BREAKER OR BREAKER MADE SPARE BY DEMOLITION ON THIS PROJECT.
6. PROVIDE ONE 3/4" CONDUIT FOR POWER AND ONE 1" CONDUIT FOR DATA BELOW SLAB. STUB UP CONDUIT IN CHASE OF RECEPTION DESK. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF STUB-UPS.
7. SAWCUT CONCRETE FOUNDATION FOR INSTALLATION OF NEW FLOORBOXES/CONDUITS.
8. AV DATA DROP SHALL BE LOCATED BEHIND CABINET/CREDENZA. COORDINATE EXACT LOCATION WITH ARCHITECTURAL PLANS.
9. PROVIDE 1#3/4" C FOR POWER TO FLOOR BOX.
10. PROVIDE 1#1" C FOR DATA TO EACH FLOOR BOX (TOTAL OF 3).
11. PROVIDE 1#1" C FOR DATA TO EACH FLOOR BOX (TOTAL OF 2).
12. PROVIDE 1#1" C FOR DATA TO FLOOR BOX (TOTAL OF 1).
13. PROVIDE DUPLEX RECEPTACLE ABOVE DROP CEILING FOR ACCESS CONTROLS POWER. COORDINATE WITH SECURITY CONTRACTOR.
14. PROVIDE POWER FOR MOTORIZED DOOR. PROVIDE EMPTY BOXES AND RACEWAYS FOR DOOR CONTROLS. COORDINATE WITH MOTORIZED DOOR SYSTEM PROVIDER/INSTALLER.
15. PROVIDE POWER AND DATA IN THE FACE OF THE DESK. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS.

2 PART PLAN - POWER & SPECIAL SYSTEMS - NEW WORK - ADD ALTERNATE #2

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

DRAWING NOTES:

1. PUSH BUTTON ACTUATOR
2. PROVIDE POWER FOR MOTORIZED DOOR. PROVIDE EMPTY BOXES AND RACEWAYS FOR DOOR CONTROLS. COORDINATE WITH MOTORIZED DOOR SYSTEM PROVIDER/INSTALLER.
3. PROVIDE HOMERUN TO PANEL INDICATED. CIRCUIT TO EXISTING SPARE BREAKER.

LVL1 ROOM LIST NEW

102	JANITOR
103	LOBBY
104	MEETING ROOM
105	STORAGE
106	PANTRY
107	FAMILY TOILET
108	STORAGE
109	CHILDREN'S COLLECTION
110	CHILDREN'S WORKROOM
111	WOMENS
112	SPRINKLER ROOM
113	MENS
114	BRANCH MAN. OFFICE
115	STAFF BREAKROOM
116	STAFF TOILET
117	STORAGE
118	BOOK DROP
119	DRIVE THRU
120	CIRCULATION WORKROOM
121	BOOK DROP
122	SECURE STORAGE
123	DELIVERY ROOM
124	ELECTRICAL ROOM
125	MECHANICAL ROOM
126	SERVER ROOM
127	READING ROOM
128	CIRCULATION & REFERENCE DESKS
129	CAFE
130	FAMILY GATHERING
130	PERIODICALS
131	VENDING
132	TEENS
133	STUDY ROOM
134	STUDY ROOM
135	STUDY ROOM
136	STUDY ROOM
137	CAREER & BUSINESS CENTER
138	QUIET READING

0 2 4 8 16 24
SCALE: 1/8" = 1'-0"

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LEVEL 1 PLAN
POWER & SPECIAL SYSTEMS
NEW WORK

E101A

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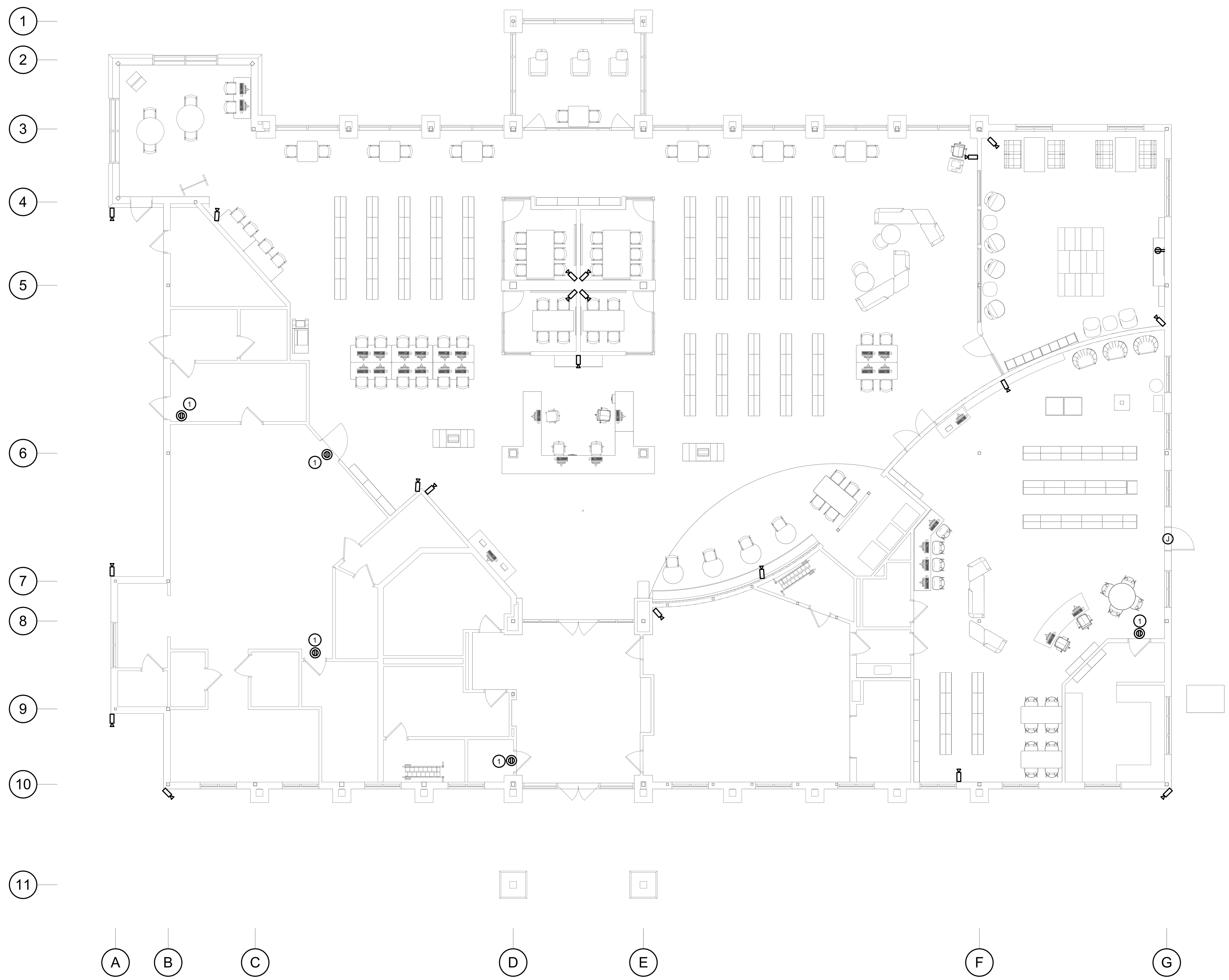

1 LEVEL 1 PLAN - SECURITY SYSTEMS - NEW WORK

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

GENERAL NOTES:

1. REFER TO E001 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. UNLESS NOTED OTHERWISE, ELECTRICAL ITEMS SHOWN HEAVY DASHED (— —) SHALL BE REMOVED, ELECTRICAL ITEMS SHOWN HEAVY SOLID (———) SHALL BE NEW AND ELECTRICAL ITEMS SHOWN LIGHT SOLID (———) SHALL BE EXISTING TO REMAIN.

DRAWING NOTES:

1. DUPLEX RECEPTACLE ABOVE ACCESSIBLE CEILING FOR ACCESS CONTROLS POWER PROVIDED BY E.C.

LVL1 ROOM LIST NEW

102	JANITOR
103	LOBBY
104	MEETING ROOM
105	STORAGE
106	PANTRY
107	FAMILY TOILET
108	STORAGE
109	CHILDREN'S COLLECTION
110	CHILDREN'S WORKROOM
111	WOMENS
112	SPRINKLER ROOM
113	MENS
114	BRANCH MAN. OFFICE
115	STAFF BREAKROOM
116	STAFF TOILET
117	STORAGE
118	BOOK DROP
119	DRIVE THRU
120	CIRCULATION WORKROOM
121	BOOK DROP
122	SECURE STORAGE
123	DELIVERY ROOM
124	ELECTRICAL ROOM
125	MECHANICAL ROOM
126	SERVER ROOM
127	READING ROOM
128	CIRCULATION & REFERENCE DESKS
129	CAFE
130	FAMILY GATHERING
130	PERIODICALS
131	VENDING
132	TEENS
133	STUDY ROOM
134	STUDY ROOM
135	STUDY ROOM
136	STUDY ROOM
137	CAREER & BUSINESS CENTER
138	QUIET READING

0 2 4 8 16 24
SCALE: 1/8" = 1'-0"

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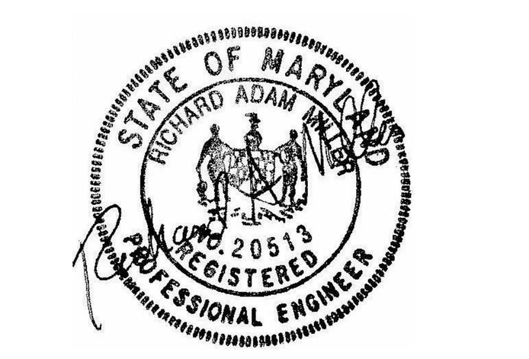

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LEVEL 1 PLAN
POWER & SPECIAL SYSTEMS
NEW WORK

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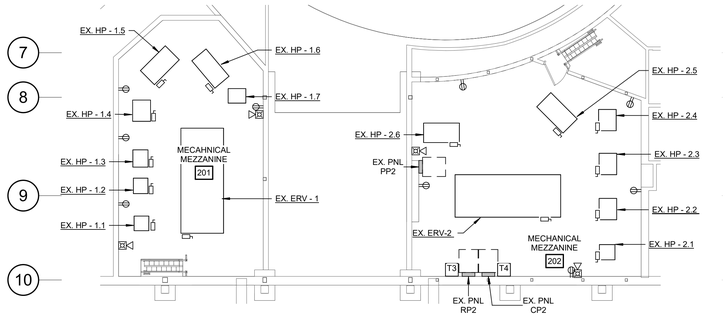
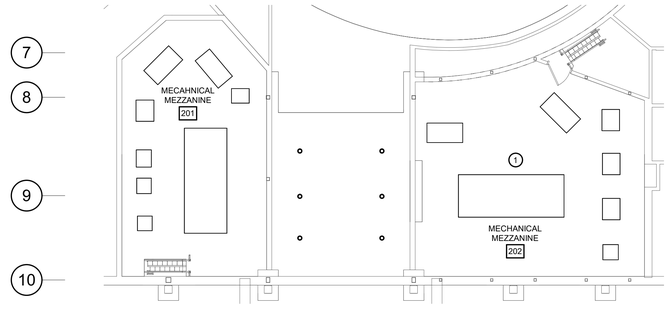


1 MEZZANINE PLAN - POWER & SPECIAL SYSTEMS - NEW WORK

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

GENERAL NOTES:

1. REFER TO E001 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. UNLESS NOTED OTHERWISE, ELECTRICAL ITEMS SHOWN HEAVY DASHED (— —) SHALL BE REMOVED, ELECTRICAL ITEMS SHOWN HEAVY SOLID (———) SHALL BE NEW AND ELECTRICAL ITEMS SHOWN LIGHT SOLID (———) SHALL BE EXISTING TO REMAIN.



2 MEZZANINE PLAN - LIGHTING - NEW WORK

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

DRAWING NOTES:

1. REINSTALL ANY LIGHTING FIXTURES THAT WERE REMOVED AS PART OF MECHANICAL DEMOLITION ON THIS PROJECT.

0 2 4 8 16 24

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

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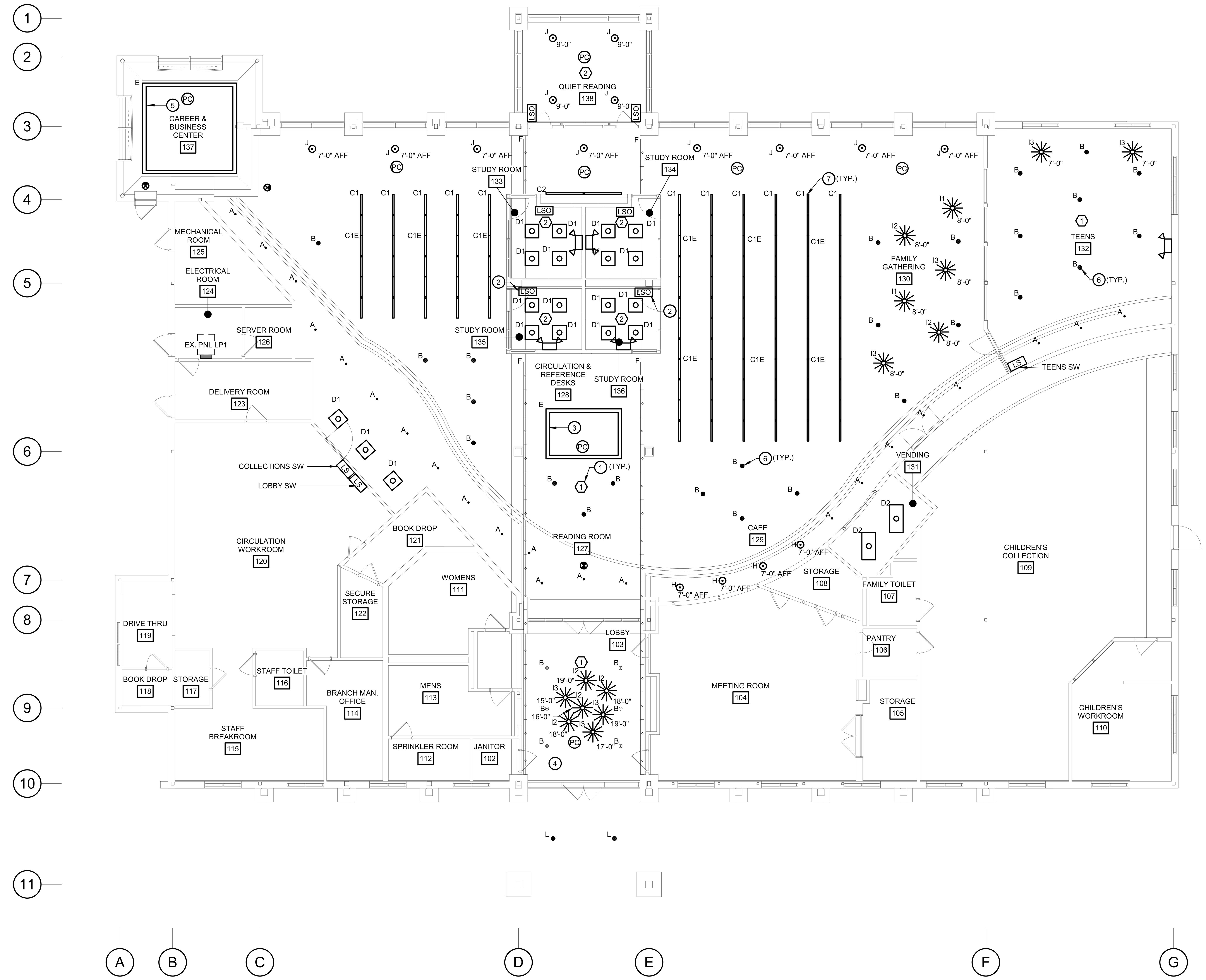
MEZZANINE PLAN POWER & SPECIAL SYSTEMS NEW WORK

E102

BKM#22240.01



LVL1 ROOM LIST NEW

102	JANITOR
103	LOBBY
104	MEETING ROOM
105	STORAGE
106	PANTRY
107	FAMILY TOILET
108	STORAGE
109	CHILDREN'S COLLECTION
110	CHILDREN'S WORKROOM
111	WOMENS
112	SPRINKLER ROOM
113	MENS
114	BRANCH MAN. OFFICE
115	STAFF BREAKROOM
116	STAFF TOILET
117	STORAGE
118	BOOK DROP
119	DRIVE THRU
120	CIRCULATION WORKROOM
121	BOOK DROP
122	SECURE STORAGE
123	DELIVERY ROOM
124	ELECTRICAL ROOM
125	MECHANICAL ROOM
126	SERVER ROOM
127	READING ROOM
128	CIRCULATION & REFERENCE DESKS
129	CAFE
130	FAMILY GATHERING
130	PERIODICALS
131	VENDING
132	TEENS
133	STUDY ROOM
134	STUDY ROOM
135	STUDY ROOM
136	STUDY ROOM
137	CAREER & BUSINESS CENTER
138	QUIET READING

1 LEVEL 1 PLAN - LIGHTING - NEW WORK

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

GENERAL NOTES:

1. REFER TO E001 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. UNLESS NOTED OTHERWISE, ELECTRICAL ITEMS SHOWN HEAVY DASHED (— —) SHALL BE REMOVED, ELECTRICAL ITEMS SHOWN HEAVY SOLID (———) SHALL BE NEW AND ELECTRICAL ITEMS SHOWN LIGHT SOLID (———) SHALL BE EXISTING TO REMAIN.
3. U.O.N ALL NEW WORK LIGHT FIXTURES WILL BE CIRCUITED TO EXISTING LIGHTING CIRCUIT BREAKERS IN PANEL LP1 SERVING PROJECT AREA. PROVIDE HOMERUN(S) TO 480/277V PANEL LP1.

DRAWING NOTES:

1. LIGHTING CONTROL SEQUENCE TAG. REFER TO E002 FOR LIGHTING CONTROLS SEQUENCE SCHEDULE.
2. POSITION LIGHTING CONTROL DEVICE AT LEAST 3'-0" FROM THE EDGE OF THE DOOR FRAME TO PREVENT CONFLICT WITH WALL MOUNTED MARKERBOARD.
3. MOUNT FIXTURE AT 11'-6" AFF.
4. MOUNT TYPE B FIXTURES IN THE LOBBY SPACE AT 14'-0" AFF.
5. MOUNT FIXTURE AT 10'-0" AFF.
6. MOUNT TYPE B FIXTURES AT 10'-0" AFF.
7. MOUNT TYPE C1 & C1E FIXTURES AT 9'-6" AFF.

0 2 4 8 16 24
SCALE: 1/8" = 1'-0"

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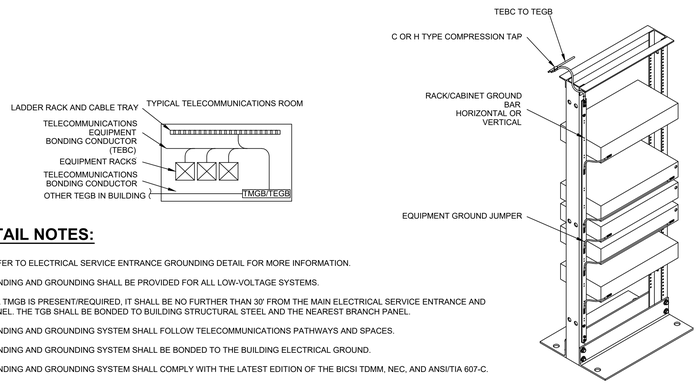
LEVEL 1 PLAN
LIGHTING
NEW WORK

E201

BKM#22240.01

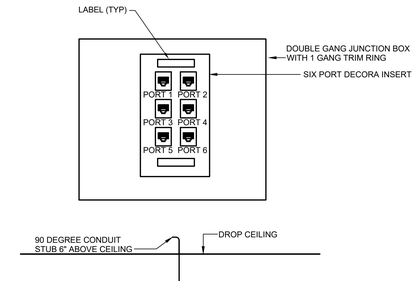


DETAIL NOTES:

1. REFER TO ELECTRICAL SERVICE ENTRANCE GROUNDING DETAIL FOR MORE INFORMATION.
2. BONDING AND GROUNDING SHALL BE PROVIDED FOR ALL LOW-VOLTAGE SYSTEMS.
3. IF A TMGB IS PRESENT/REQUIRED, IT SHALL BE NO FURTHER THAN 30' FROM THE MAIN ELECTRICAL SERVICE ENTRANCE AND PANEL. THE TGB SHALL BE BONDED TO BUILDING STRUCTURAL STEEL AND THE NEAREST BRANCH PANEL.
4. BONDING AND GROUNDING SYSTEM SHALL FOLLOW TELECOMMUNICATIONS PATHWAYS AND SPACES.
5. BONDING AND GROUNDING SYSTEM SHALL BE BONDED TO THE BUILDING ELECTRICAL GROUND.
6. BONDING AND GROUNDING SYSTEM SHALL COMPLY WITH THE LATEST EDITION OF THE BICSI TDMM, NEC, AND ANSI/TIA 607-C.

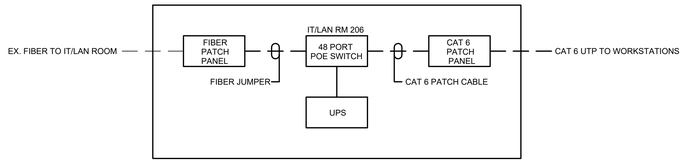
1 TECHNOLOGY GROUNDING DIAGRAM

SCALE: NOT TO SCALE



4 DATA FACEPLATE & PATHWAY

SCALE: NOT TO SCALE

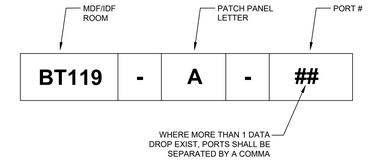


DETAIL NOTES:

1. PROVIDE NEW EQUIPMENT RACKS.
2. PROVIDE NEW FIBER + COPPER PATCH PANELS.
3. PROVIDE NEW UPS EQUIPMENT.
4. PROVIDE NEW CAT 6 PATCH PANEL.
5. PROVIDE AND INSTALL NEW HORIZONTAL CAT 6 UTP DATA CABLE AND PATCH CORD FOR BOTH ENDS OF THE STRUCTURED CABLE.
6. INSTALL WITH 3' O CABLE SLACK AT THE WORKSTATION END AMD 10' OF SLACK AT THE RACK.

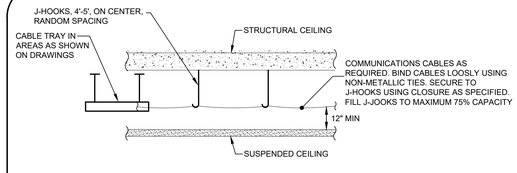
3 DATA/VOIP STRUCTURED CABLING DIAGRAM

SCALE: NONE



8 WALL JACK LABEL IDENTIFICATION

NO SCALE



6 COMMUNICATIONS CABLE SUPPORT ABOVE CEILING, TYP

NO SCALE

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TELECOM DETAILS

E301

BKM#22240.01

EX Panel: CP1

LOCATION: ELECTRICAL ROOM 124 **MAINS RATING:** 100 A **VOLTAGE:** 120/208 3Ø 4W
MOUNTING: Surface **MAINS TYPE:** MCB **AIC RATING:**

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	**CAREER AND BUSINESS...**	20 A	1	0.36			0.36			1	20 A	**COMPUTERS**	2
3	**CAREER AND BUSINESS...**	20 A	1		0.36			0.36		1	20 A	**COMPUTERS**	4
5	COMPUTER LAB	20 A	1			0.00			0.00	1	20 A	SPARE	6
7	**READING AREA**	20 A	1	0.54			1.08			1	20 A	**COMPUTERS**	8
9	READING AREA	20 A	1		0.00			0.00		1	20 A	SPARE	10
11	COPIER	20 A	1			0.00			0.00	1	20 A	SPARE	12
13	CIRC WORKRM	20 A	1	0.00			0.00			1	20 A	SPARE	14
15	CIRC WORKRM	20 A	1		0.00			0.00		1	20 A	CIRC WORKRM COPIER	16
17	COLUM E16 RECEPT.	20 A	1			0.00			0.00	1	20 A	CIRC WORKRM FX	18
19	CENTER READING AREA	20 A	1	0.00			0.00			1	20 A	CIRC WORKRM	20
21	CENTER READING AREA	20 A	1		0.00			0.00		1	20 A	BRANCH MGR OFFICE	22
23	**RECEPTACLE STUDY ROO...**	20 A	1			0.90			0.00	1	20 A	SELF-CHECK	24
25	**RECEPTACLE CIRCULATIO...**	20 A	1	0.90			0.00			1	20 A	SECURITY PANEL	26
27	**RECEPTACLE CIRCULATIO...**	20 A	1		0.72			0.00		1	20 A	DOOR ACCESS	28
29	**STUDY ROOM RECEPTACLE**	20 A	1			0.90			0.00	1	20 A	MDF	30
31	FACP	20 A	1	0.00			0.00			1	20 A	MDF	32
33	FACP	20 A	1		0.00			0.00		1	20 A	MDF	34
35	FACP	20 A	1			0.00			0.90	1	20 A	CARD READERS	36
37	**RECEPTACLE MEETING...**	20 A	1	0.18			0.00			1	20 A	MDF	38
39	SPARE	20 A	1		0.00			0.00		1	20 A	TVSS	40
41	SPARE	20 A	1			0.00			--	1	--	SPACE	42

Connected Load
AØ: 3.42 KVA = 29 A A
BØ: 1.44 KVA = 12 A A
CØ: 2.70 KVA = 23 A A

Notes:
1. CIRCUIT DESCRIPTION RENDERED IN BOLD ARE NEW CIRCUIT DESIGNATIONS SHOWN ON DRAWINGS. CIRCUIT DESCRIPTIONS NOT RENDERED IN BOLD ARE EXISTING CIRCUITS.

EX Panel: RP1

LOCATION: ELECTRICAL ROOM 124 **MAINS RATING:** 150 A **VOLTAGE:** 120/208 3Ø 4W
MOUNTING: Surface **MAINS TYPE:** MCB **AIC RATING:**

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	SPARE PULLED	20 A	1	0.00			0.00			1	20 A	TANKLESS WATER HTR	2
3	MICROWARE HOOD	20 A	1		0.00			0.00		1	20 A	STAFF BATH	4
5	MEZZ A INSTA HOT	20 A	1			0.00			0.00	1	20 A	SPARE	6
7	MEZZ A INSTA HOT	20 A	1	0.00			0.00			1	20 A	GFI PANEL RM	8
9	GRINDER PUMP	20 A	1		0.00			0.00		1	20 A	LIGHTING CONTROLS	10
11	GRINDER PUMP	20 A	1			0.00			0.00	1	20 A	DOORBELL	12
13	SPARE	20 A	1	0.00			0.00			1	20 A	COMP LAB CELING FAN	14
15	MECH RM RECP	20 A	1		0.00			0.90		1	20 A	**STUDY ROOM 133 RECP**	16
17	ATC PANEL	20 A	1			0.00			0.00	1	20 A	SPARE	18
19	DELIVERY RM RECP	20 A	1	0.00			0.00			1	20 A	SPARE	20
21	CIRC WORKRM RECP	20 A	1		0.00			0.00		1	20 A	RESTROOM SENSOR	22
23	BOOK DROP RECP	20 A	1			0.00			0.00	1	20 A	TANKLESS WATER HTR	24
25	BRANCH MGR RECP	20 A	1	0.00			0.00			1	20 A	SPARE	26
27	STAFF HAND DRYER	20 A	1		0.00			0.00		1	20 A	BLACK SIGN	28
29	STAFF LOUNGE RECP	20 A	1			0.00			0.00	1	20 A	RED SIGN	30
31	DISPOSAL	20 A	1	0.00			0.00			1	20 A	COMP LAB RECP	32
33	STAFF LOUNGE CTR	20 A	1		0.00			0.36		1	20 A	**CAREER & BUSINESS RECP**	34
35	DISHWASHER	20 A	1			0.00			0.00	1	20 A	COMPUTER LAB FAN	36
37	STAFF LOUNGE CTR	20 A	1	0.00			0.00			1	20 A	READING AREA RECP	38
39	SPARE	20 A	1		0.00			0.00		1	20 A	RANGE	40
41	REFRIGERATOR	20 A	1			0.00			--	1	--	SPACE	42

Connected Load
AØ: 0.00 KVA = 0 A A
BØ: 1.26 KVA = 11 A A
CØ: 0.00 KVA = 0 A A

Notes:
1. CIRCUIT DESCRIPTION RENDERED IN BOLD ARE NEW CIRCUIT DESIGNATIONS SHOWN ON DRAWINGS. CIRCUIT DESCRIPTIONS NOT RENDERED IN BOLD ARE EXISTING CIRCUITS.

EX Panel: PP2

LOCATION: MECHANICAL MEZZANINE 202 **MAINS RATING:** 225 A **VOLTAGE:** 120/208 3Ø 4W
MOUNTING: Surface **MAINS TYPE:** MCB **AIC RATING:**

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	ERVU 2	50 A	3	0.00			0.00			3	20 A	HPU 9	2
3	--	--	--		0.00			0.00		--	--	--	4
5	--	--	--			0.00			0.00	--	--	--	6
7	HPU 10	20 A	3	0.00			0.00			3	20 A	HPU 11	8
9	--	--	--		0.00			0.00		--	--	--	10
11	--	--	--			0.00			0.00	--	--	--	12
13	HPU 12	30 A	3	0.00			0.00			3	30 A	HPU 13	14
15	--	--	--		0.00			0.00		--	--	--	16
17	--	--	--			0.00			0.00	--	--	--	18
19	HPU 8	15 A	1	0.00			0.00			1	20 A	EBR 17	20
21	HPU15	15 A	1		0.00			0.00		1	20 A	EBR 16	22
23	HPU14	15 A	1			0.00			0.00	1	20 A	EBR 15	24
25	SPARE	20 A	1	0.00			0.00			1	20 A	EBR 14	26
27	SPARE	20 A	1		0.00			0.00		1	20 A	EBR 13	28
29	SPARE	20 A	1			0.00			0.00	1	20 A	EBR 12	30
31	EBR1	60 A	3	0.00			0.00			1	20 A	EBR 11	32
33	--	--	--		0.00			0.00		1	20 A	EBR 2	34
35	--	--	--			0.00			0.00	1	20 A	EBR 3	36
37	**CEILING FAN**	20 A	1	0.07			0.00			3	20 A	SPARE	38
39	**CEILING FAN**	20 A	1		0.07			0.00		--	--	--	40
41	SPARE	20 A	1			0.00			0.00	--	--	--	42

Connected Load
AØ: 0.07 KVA = 1 A A
BØ: 0.07 KVA = 1 A A
CØ: 0.00 KVA = 0 A A

Notes:
1. CIRCUIT DESCRIPTION RENDERED IN BOLD ARE NEW CIRCUIT DESIGNATIONS SHOWN ON DRAWINGS. CIRCUIT DESCRIPTIONS NOT RENDERED IN BOLD ARE EXISTING CIRCUITS.

EX Panel: CP2

LOCATION: MECHANICAL MEZZANINE 202 **MAINS RATING:** 60 A **VOLTAGE:** 120/208 3Ø 4W
MOUNTING: Surface **MAINS TYPE:** MCB **AIC RATING:**

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	MEETING ROOM PA	20 A	1	0.00			0.00			1	20 A	CHILD INFO DESK	2
3	MEETING ROOM PROJ	20 A	1		0.00			0.00		1	20 A	CHILD INFO DESK	4
5	CHILDREN'S COLLECTION	20 A	1			0.00			0.00	1	20 A	CHILDREN'S COLLECTION	6
7	CHILD STAFF WORKRM	20 A	1	0.00			0.00			1	20 A	CHILDREN'S COLLECTION	8
9	CHILD STAFF WORKRM	20 A	1		0.00			0.00		1	20 A	CHILDREN'S COLLECTION	10
11	**COMPUTERS**	20 A	1			0.36			0.90	1	20 A	**TEENS 137 RECP**	12
13	INFORMATION DESK	20 A	1	0.00			0.18			1	20 A	**TEENS 137 RECP**	14
15	SPARE	20 A	1		0.00			0.36		1	20 A	**TEENS 137 RECP**	16
17	**ADULT COLLECTION 140...**	20 A	1			0.36			0.00	1	20 A	DISPLAY AREA	18
19	**ADULT COLLECTION 140...**	20 A	1	0.36			0.18			1	20 A	**QUIET READING RECP**	20
21	**FAMILY GATHERING RECP**	20 A	1		0.36			0.00		1	20 A	MEETING ROOM	22
23	**ADA POWERED DOOR (2)**	20 A	1			0.18			0.00	1	20 A	LOBBY DISPLAY VCT	24
25	SPARE	20 A	1	0.00			0.00			1	20 A	SPARE	26
27	SPARE	20 A	1		0.00			0.00		1	20 A	SPARE	28
29	TUSS	20 A	3			0.00			0.00	1	20 A	SPARE	30
31	--	--	--	0.00			--			1	--	SPACE	32
33	--	--	--		0.00			--		1	--	SPACE	34
35	SPACE	--	1			--			--	1	--	SPACE	36
37	SPACE	--	1	--			--			1	--	SPACE	38
39	SPACE	--	1		--			--		1	--	SPACE	40
41	SPACE	--	1			--			--	1	--	SPACE	42

Connected Load
AØ: 0.72 KVA = 6 A A
BØ: 0.72 KVA = 6 A A
CØ: 1.80 KVA = 15 A A

Notes:
1. CIRCUIT DESCRIPTION RENDERED IN BOLD ARE NEW CIRCUIT DESIGNATIONS SHOWN ON DRAWINGS. CIRCUIT DESCRIPTIONS NOT RENDERED IN BOLD ARE EXISTING CIRCUITS.
2. CIRCUIT PROVIDED ONLY AS PART OF ADD ALTERNATE #2

EX Panel: RP2

LOCATION: MECHANICAL MEZZANINE 202 **MAINS RATING:** 150 A **VOLTAGE:** 120/208 3Ø 4W
MOUNTING: Surface **MAINS TYPE:** MCB **AIC RATING:**

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	PROJECTION SCREEN	20 A	1	0.00			0.00			1	20 A	VENDING MACHINE	2
3	UC REFRIGERATOR	20 A	1		0.00			0.00		1	20 A	VENDING MACHINE	4
5	PANTRY COUNTER	20 A	1			0.00			0.00	1	20 A	VENDING MACHINE	6
7	MEZZANINE RECP	20 A	1	0.00			0.72			1	20 A	**RECEPTACLE CAFE 130**	8
9	CHILDREN'S RECP	20 A	1		0.00			0.00		1	20 A	HAND DRYER	10
11	MEZZANINE RECP	20 A	1			0.00			0.00	1	20 A	CHILDRENS RECP	12
13	MEETING ROOM RECP	20 A	1	0.00			0.00			1	20 A	STAFF WORKRM RECP	14
15	READING RECP	20 A	1		0.00			0.00		1	20 A	LOBBY RECP	16
17	READING RECP	20 A	1			0.00			0.00	1	20 A	MEZZANINE RECP	18
19	TANKLESS WATER HTR	20 A	2	0.00			0.00			1	20 A	EWC	20
21	--	--	--		0.00			0.00		1	20 A	POWER DOOR ASSIST	22
23	TANKLESS WATER HTR	20 A	2			0.00			0.00	1	20 A	POWER DOOR ASSIST	24
25	--	--	--	0.00			0.00			1	20 A	WOMEN'S HAND DRYER	26
27	TANKLESS WATER HTR	20 A	2		0.00			0.00		1	20 A	MEN'S HAND DRYER	28
29	--	--	--			0.00			0.00	1	20 A	PUBLIC RESTRM RECP	30
31	TANKLESS WATER HTR	20 A	2	0.00			0.00			1	20 A	RESTRM AUTOSENSORS	32
33	--	--	--		0.00			0.00		1	20 A	RESTRM AUTOSENSORS	34
35	TANKLESS WATER HTR	20 A	2			0.00			0.18	1	20 A	**ADULT COLLECTION 140...**	36
37	--	--	--	0.00			0.90			1	20 A	**STUDY ROOM 135 RECP**	38
39	CHILD RESTRM...	20 A	1		0.00			0.00		2	40 A	MEZZ INSTA HOT	40
41	SPARE	20 A	1			0.00			0.00	--	--	--	42

Connected Load
AØ: 1.62 KVA = 14 A A
BØ: 0.00 KVA = 0 A A
CØ: 0.18 KVA = 2 A A

Notes:
1. CIRCUIT DESCRIPTION RENDERED IN BOLD ARE NEW CIRCUIT DESIGNATIONS SHOWN ON DRAWINGS. CIRCUIT DESCRIPTIONS NOT RENDERED IN BOLD ARE EXISTING CIRCUITS.

Panel: LP1

LOCATION: ELECTRICAL ROOM 124 **MAINS RATING:** 100 A **VOLTAGE:** None
MOUNTING: Surface **MAINS TYPE:** MCB **AIC RATING:**

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	WALKWAY LTS	20 A	1	0.00			0.00			1	20 A	PARKING LOT LTS	2
3	WALKWAY LTS	20 A	1		0.00			0.00		1	20 A	PARKING LIOT LTS	4
5	STAFF PARKING LTS	20 A	1			0.00			0.00	1	20 A	FACADE LTS	6
7	PENDANT LTS	20 A	1	0.00			0.00			1	20 A	SPARE	8
9	PENDANT LTS	20 A	1		0.00			0.00		1	20 A	EXTERIOR BLDG LTS	10
11	PENDANT LTS	20 A	1			0.00			0.00	1	20 A	COMPUTER LAB/YA LTS	12
13	PENDANT LTS	20 A	1	0.00			0.00			1	20 A	QUIET READING LTS	14
15	SPARE	20 A	1		0.00			0.00		1	20 A	SPARE	16
17	SPARE	20 A	1			0.00			0.00	1	20 A	DESK AND BULKHEAD LTS	18
19	SPARE	20 A	1	0.00			0.00			1	20 A	SPARE	20
21	SPARE	20 A	1		0.00			0.00		1	20 A	UTILITY ROOM LTS	22
23	SPARE	20 A	1			0.00			0.00	1	20 A	STAFF WORKROOM LTS	24
25	SPARE	20 A	1	0.00			0.00			1	20 A	LOUGE/OFFICE LTS	26
27	SPARE	20 A	1		0.00			0.00		1	20 A	LOBBY LTS	28
29	SPARE	20 A	1			0.00			0.00	1	20 A	MEETING ROOM LTS	30
31	SPARE	20 A	1	0.00			0.00			1	20 A	MEZZANINE LTS	32
33	CENTER PENDANT LTS	20 A	1		0.00			0.00		1	20 A	CHILDRENS LTS	34
35	SPARE	20 A	1			0.00			0.00	1	20 A	CHILDRENS LTS "A"	36
37	SPARE	20 A	1	0.00			0.00			1	20 A	CHILDRENS LTS "B"	38
39	SPARE	20 A	1		0.00			0.00		1	20 A	CHILDRENS LTS "C"	40
41	SPARE	20 A	1			0.00			0.00	1	20 A	SPARE	42

Connected Load
AØ: 0.00 KVA = 0 A A
BØ: 0.00 KVA = 0 A A
CØ: 0.00 KVA = 0 A A

Notes:
1. SHOWN FOR INFOMRATION ONLY.

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100% CONSTRUCTION DOCUMENTS
08/01/23

PANEL SCHEDULES

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ELECTRICAL SPECIFICATIONS

1 - BASIC ELECTRICAL REQUIREMENTS

1.1 GENERAL

A. GENERAL PROVISIONS OF THE CONTRACT APPLY. ALL WORK PERFORMED AND MATERIALS PROVIDED SHALL CONFORM TO ALL APPLICABLE CODES AND STANDARDS AND THE NATIONAL ELECTRICAL CODE (NEC).

B. PRIOR TO STARTING WORK, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE.

C. AVOID INTERFERENCE WITH STRUCTURE AND WITH WORK OF OTHER TRADES, PRESERVING ADEQUATE HEADROOM AND CLEARING ALL DOORS AND PASSAGEWAYS.

D. CONFIRM THE LOCATIONS OF ALL EXISTING UTILITIES. REPAIR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY CONSTRUCTION FORCES.

E. LEAVE ALL AREAS BROOM CLEAN DAILY. REMOVE ALL CONSTRUCTION DEBRIS AND TRASH FROM THE SITE DAILY.

F. BEFORE ORDERING ANY MATERIALS OR EQUIPMENT, SUBMIT TO THE ENGINEER DATA FOR ALL MATERIALS AND EQUIPMENT. CHECK EQUIPMENT DIMENSIONS OF PROPOSED SUBSTITUTE EQUIPMENT. THE COST OF ANY REDESIGNING CAUSED BY A SUBSTITUTION SHALL BE BORNE BY THE CONTRACTOR.

G. CONTRACTOR SHALL DO ALL CUTTING, DRILLING AND PATCHING REQUIRED BY HIS WORK. ALL REPAIRS TO FINISH SHALL BE OF LIKE KIND, COLOR AND QUALITY AS EXISTING. STRUCTURAL MEMBERS SHALL NOT BE CUT WITHOUT APPROVAL FROM THE ARCHITECT.

H. PROVIDE TEMPORARY POWER AS MAY BE REQUIRED FOR CONSTRUCTION OR AS MAY BE REQUIRED TO MAINTAIN CRITICAL OPERATIONS DURING CHANGEOVER OF FEEDERS OR SERVICES. PROVIDE ALL EQUIPMENT, MAKE ALL ARRANGEMENTS, AND MAKE ALL CONNECTIONS REQUIRED FOR TEMPORARY POWER. REMOVE ALL PROVISIONS FOR TEMPORARY POWER UPON COMPLETION OF THE PROJECT.

I. SCHEDULE IN ADVANCE ALL OUTAGES OF BUILDING UTILITIES. OUTAGES SHALL BE AS SHORT AS POSSIBLE. ALL SERVICES SHALL BE RESTORED AND PLACED IN OPERATION WHEN CONTRACTOR'S PERSONNEL LEAVE THE SITE EACH DAY.

J. TAKE NECESSARY PRECAUTIONS TO PROTECT BUILDING'S OCCUPANTS AND CONTENTS, AND PREVENT THE SPREAD OF DUST AND DIRT INTO OCCUPIED AREAS.

K. THE CONTRACTOR SHALL MAINTAIN A SET OF APPROVED CONSTRUCTION DOCUMENTS WITH ALL APPROVED REVISIONS, AT THE SITE AS A RECORD MARK-UP OF AS-BUILT CONDITIONS. THESE RED-LINED PLANS SHALL BE SUBMITTED AS PART OF THE O & M MANUALS.

L. IN FIRE-RATED PARTITIONS WHERE HORIZONTAL SEPARATION OF OPPOSITE-FACING ELECTRICAL BOXES IS LESS THAN 24 INCHES, PROVIDE UL LISTED FIRESTOP AROUND ELECTRICAL BOXES AS REQUIRED TO MAINTAIN FIRE RATING OF WALL.

1.2 CONTRACT DOCUMENTS

A. CONTRACT DRAWINGS FOR ELECTRICAL WORK ARE DIAGRAMMATIC, INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT.

B. CORRECTION OF FAULTY WORK DUE TO RESOLVING DISCREPANCIES WITHOUT AUTHORIZATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

C. SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES OR OMISSIONS ON THE DRAWINGS OR IN THE SPECIFICATIONS, HE SHALL NOTIFY THE ENGINEER OF SUCH CONDITIONS PRIOR TO THE BID DATE. OTHERWISE, IT WILL BE UNDERSTOOD THAT THE DRAWINGS AND SPECIFICATIONS ARE CLEAR AS TO WHAT IS INTENDED AND SHALL BE AS INTERPRETED BY THE ENGINEER.

1.3 SUBMITTALS

A. SUBMIT SHOP DRAWINGS, MANUFACTURER'S DATA AND CERTIFICATES FOR EQUIPMENT, MATERIALS AND FINISH, AND PERTINENT DETAILS FOR EACH SYSTEM AND OBTAIN APPROVAL BEFORE PROCUREMENT, FABRICATION, OR DELIVERY OF THE ITEMS TO THE JOB SITE. PARTIAL SUBMITTALS ARE NOT ACCEPTABLE AND WILL BE RETURNED WITHOUT REVIEW.

B. SUBMITTALS SHALL INCLUDE THE MANUFACTURER'S NAME, TRADE NAME, CATALOG MODEL OR NUMBER, NAMEPLATE DATA, SIZE, LAYOUT DIMENSIONS, CAPACITY, PROJECT SPECIFICATION AND PARAGRAPH REFERENCE, APPLICABLE PUBLICATION REFERENCES, YEARS OF SATISFACTORY SERVICE, AND OTHER INFORMATION NECESSARY TO ESTABLISH CONTRACT COMPLIANCE OF EACH ITEM THE CONTRACTOR PROPOSES TO FURNISH.

C. SUBMITTALS WILL BE CHECKED ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND ARE SUBJECT TO THE ORIGINAL CONTRACT DOCUMENTS, AS WELL AS ANY CORRECTIONS AND COMMENTS NOTED. COMMENTS NOTED, IF ANY, WILL NOT BE CONSIDERED A COMPLETE LIST OF ALL OMISSIONS, DEVIATIONS AND CORRECTIONS NECESSARY TO MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR WILL BE RESPONSIBLE TO CONFIRM THAT THE FINAL PRODUCT AND INSTALLATION WILL BE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS IN THEIR ENTIRETY, INCLUDING THE RESPONSIBILITY TO FULLY COORDINATE ALL WORK WITH OTHER TRADES AND TO CONFIRM THE CORRECTNESS OF DIMENSIONS, QUANTITIES, AND CAPACITIES. SUBMITTAL REVIEW DOES NOT AUTHORIZE OR CONSTITUTE A CHANGE TO THE CONTRACT REQUIREMENTS AND DOES NOT RELEASE THE CONTRACTOR OF RESPONSIBILITY TO CONFORM TO THE CONTRACT REQUIREMENTS. REQUIREMENTS OF THE CONTRACT ARE NOT WAIVED BY REVIEW OF ANY AND ALL SUBSTITUTIONS. THE CONTRACTOR MUST FULFILL THE TERMS OF THE CONTRACT.

D. ACCEPTANCE WILL NOT CONSTITUTE WAIVER OF CONTRACT REQUIREMENTS UNLESS DEVIATIONS ARE SPECIFICALLY INDICATED AND CLEARLY NOTED.

E. ALL ELECTRICAL EQUIPMENT SHALL BE APPROVED AND LISTED BY UNDERWRITERS' LABORATORIES (UL) AND SHALL BEAR NAMEPLATE INDICATING SAME.

F. ACCEPTANCE WILL NOT CONSTITUTE A WAIVER OF SYSTEM PERFORMANCE.

G. THE ENGINEER WILL PROVIDE A MAXIMUM OF TWO (2) SUBMITTAL REVIEWS PER EQUIPMENT SUBMITTAL; THE INITIAL REVIEW PLUS ONE (1) RE-SUBMITTAL. SHOULD THE RE-SUBMITTAL BE RETURNED "NOT ACCEPTABLE" OR "REVISE AND RESUBMIT", THE CONTRACTOR SHALL CHOOSE ONE OF THE FOLLOWING COURSES OF ACTION:

1. PROVIDE THE EXACT MANUFACTURER AND MODEL INDICATED IN THE CONTRACT DOCUMENTS AS THE BASIS OF DESIGN, OR

2. REIMBURSE THE ENGINEER FOR ALL ADDITIONAL REVIEW TIME REQUIRED TO ACHIEVE A SUBMITTAL REVIEW FROM THE ENGINEER OF "NO EXCEPTIONS TAKEN."

SHOULD THE CONTRACTOR CHOOSE OPTION 2 ABOVE, THE ENGINEER SHALL BE REIMBURSED AT AN HOURLY RATE OF $175 PER HOUR WITH PAYMENT DUE PRIOR TO THE RETURN OF THE FINAL SUBMITTAL. IN ADDITION, THE CONTRACTOR SHALL ACCEPT COMPLETE RESPONSIBILITY FOR ALL DELAYS RESULTING FROM THE SUBMITTAL REVIEW PROCESS EXTENDING BEYOND TWO (2) REVIEWS PER EQUIPMENT SUBMITTAL.

H. PRIOR TO FINAL ACCEPTANCE, SUBMIT OPERATION AND MAINTENANCE MANUALS, WHICH INCLUDE TESTING REPORTS AND ALSO SUBMIT AS-BUILT PLANS.

1.4 MANUFACTURER'S RECOMMENDATIONS

A. INSTALLATION PROCEDURES ARE REQUIRED TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL BEING INSTALLED.

1.5 COORDINATION

A. COORDINATE ALL WORK AND COOPERATE WITH ALL OTHER TRADES TO FACILITATE EXECUTION OF WORK.

1.6 SITE EXAMINATION

A. FAILURE TO VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING PROJECT CONDITIONS PRIOR TO BIDDING WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE CONTRACT DOCUMENTS.

1.7 QUALITY ASSURANCE

A. MANUFACTURER'S QUALIFICATIONS: FIRMS REGULARLY ENGAGED IN MANUFACTURE OF ELECTRICAL PRODUCTS, OF TYPES AND SIZES REQUIRED, WHOSE PRODUCTS HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR NOT LESS THAN FIVE (5) YEARS.

B. INSTALLER'S QUALIFICATIONS: FIRMS WITH AT LEAST FIVE (5) YEARS SUCCESSFUL INSTALLATION EXPERIENCE ON PROJECTS WITH ELECTRICAL PRODUCTS SIMILAR TO THAT REQUIRED FOR THIS PROJECT.

1.8 REGULATIONS AND PERMITS

A. WORK SHALL COMPLY WITH ALL APPLICABLE STATE, LOCAL AND FEDERAL CODES/REGULATIONS. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS.

1.9 FIELD INSTRUCTION

A. UPON COMPLETION OF WORK, INSTRUCT OWNER'S REPRESENTATIVE IN THE PROPER OPERATION AND MAINTENANCE OF THE ELECTRICAL SYSTEMS.

1.10 GUARANTEE

A. EACH CONTRACTOR SHALL FURNISH A GUARANTEE COVERING ALL LABOR AND MATERIALS FURNISHED BY HIM FOR A PERIOD OF TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE OF HIS WORK, AND HE SHALL AGREE TO REPAIR AND MAKE GOOD AT HIS OWN EXPENSE ANY AND ALL DEFECTS WHICH MAY APPEAR IN HIS WORK DURING THAT TIME IF, IN THE JUDGMENT OF THE ENGINEER, SUCH DEFECTS ARISE FROM DEFECTIVE WORKMANSHIP AND/OR IMPERFECT OR INFERIOR MATERIAL.

B. THE ABOVE SHALL NOT IN ANY WAY VOID OR ABROGATE EQUIPMENT MANUFACTURER'S GUARANTEE OR WARRANTY. CERTIFICATES OF GUARANTEE SHALL BE DELIVERED TO THE OWNER.

C. WITHIN THE TWO (2) YEAR WARRANTY/GUARANTEE PERIOD, MANUFACTURER'S RECOMMENDED MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR.

1.11 DEMOLITION

A. THE ELECTRICAL DEMOLITION IN THE RENOVATION AREAS INDICATED ON THE DRAWINGS SHALL BE COMPLETE AND INCLUDE ALL ELECTRICAL WORK IN THE AREA UNLESS NOTED OTHERWISE.

B. EXISTING ELECTRICAL SYSTEMS PASSING THROUGH AREAS OF DEMOLITION TO SERVE EQUIPMENT BEYOND THE DEMOLITION AREAS SHALL REMAIN IN SERVICE, OR BE SUITABLY RELOCATED AND RESTORED TO NORMAL OPERATION, THROUGHOUT THE DEMOLITION AND RECONSTRUCTION OF THE AREA. THE CONTRACTOR SHALL INVESTIGATE AND IDENTIFY SUCH EQUIPMENT PRIOR TO DEMOLITION.

C. PROVIDE TEMPORARY ELECTRICAL SERVICE TO EQUIPMENT DISTURBED BY THE DEMOLITION UNTIL SUCH TIME AS THE PERMANENT SERVICE CAN BE RESTORED.

D. WHERE CONDUIT AND WIRING TO REMAIN ARE INADVERTENTLY DAMAGED OR DISTURBED, CUT OUT AND REMOVE DAMAGED PORTION AND ALL DAMAGED WIRING FROM THE SOURCE SWITCHBOARD, PANELBOARD OR PULLBOX TO THE DESTINATION CONNECTION POINT. PROVIDE NEW WIRING OF EQUAL CAPACITY.

E. EXPOSED CONDUIT TO BE DEMOLISHED SHALL BE REMOVED IN ITS ENTIRETY. CONCEALED CONDUIT, ABANDONED IN PLACE, SHALL BE CUT OUT APPROXIMATELY TWO INCHES BEYOND THE FACE OF ADJACENT CONSTRUCTION, PLUGGED, AND THE ADJACENT SURFACE PATCHED TO MATCH EXISTING.

F. WIRING TO BE DEMOLISHED SHALL BE REMOVED FROM BOTH CONCEALED AND EXPOSED CONDUIT. NO WIRING WHICH BECOMES UNUSED AS A RESULT OF THE CONTRACT SHALL BE ABANDONED IN PLACE.

G. EQUIPMENT SPECIFIED OR INDICATED TO BE DEMOLISHED, SHALL BE REMOVED FROM THE PROJECT SITE AND SHALL NOT BE REUSED.

H. THE CONTRACTOR SHALL USE CARE WHEN PERFORMING SELECTIVE BUILDING AND SITE DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE INCLUSIVE OF BUT NOT LIMITED TO: BUILDING FINISHES, LIGHTING (INTERIOR AND EXTERIOR), FURNITURE, STRUCTURE, SITE, UTILITIES (ABOVE AND BELOW GROUND), MECHANICAL, PLUMBING, TELECOMMUNICATIONS AND ELECTRICAL EQUIPMENT / SYSTEMS. SHOULD ANY DAMAGE OCCUR OR SHOULD ANY REMEDIAL WORK BE REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR AND OR REPLACE THE DAMAGED ITEM(S) TO THE OWNER'S SATISFACTION AT NO ADDITIONAL COST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEYING (INCLUDING CONTACTING MISS UTILITY), PHOTO DOCUMENTING AND RESTORING THE SURROUNDING WORK SITE(S) TO THE ORIGINAL PRE-DEMOLITION CONDITION AND / OR TO THE OWNER'S SATISFACTION UPON COMPLETION OF THE WORK AT NO ADDITIONAL COST.

I. ANY OUTAGES IN SYSTEMS SHALL BE COORDINATED WITH THE OWNER. WHERE DURATION OF PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.

2 - RACEWAY

2.1 GENERAL

A. ALL WIRING SHALL BE INSTALLED IN RACEWAY. MINIMUM CONDUIT SIZES SHALL BE 3/4" FOR POWER CIRCUITS, 1/2" FOR CONTROL CIRCUITS, AND 1" FOR DATA/TELECOM CIRCUITS.

B. GALVANIZED RIGID STEEL SHALL BE USED IN EXTERIOR LOCATIONS ABOVE GRADE, ALL EXPOSED LOCATIONS SUBJECT TO DAMAGE OR BELOW 6 FEET IN VEHICLE OR CART TRAFFIC AREAS, IN CRAWL SPACES, IN DAMP OR WET LOCATIONS, IN CONCRETE OR MASONRY CONSTRUCTION, BELOW SLAB ON GRADE, AND WHERE REQUIRED BY THE NEC.

C. PVC SHALL NOT BE USED EXCEPT WHERE NOTED ON THE DRAWINGS.

D. ELECTRICAL RACEWAY CONNECTIONS TO VIBRATING EQUIPMENT AND MACHINERY SUCH AS MOTORS, DRY TYPE TRANSFORMERS, ETC., SHALL BE MADE WITH FLEXIBLE METAL CONDUIT (LIQUIDTIGHT IN OUTDOOR OR UNDERFLOOR LOCATIONS). FLEXIBLE CONNECTIONS TO MOTORS SHALL CONTAIN A 90 DEGREE BEND.

E. SURFACE METAL RACEWAYS SHALL BE USED ONLY IN FINISHED AREAS AND ONLY WHERE SPECIFICALLY NOTED ON THE DRAWINGS.

F. ELECTRICAL METALLIC TUBING WITH STEEL INSULATED THROAT COMPRESSION FITTINGS SHALL BE USED IN ALL LOCATIONS EXCEPT WHERE NOTED OTHERWISE.

G. ALL NEW RACEWAYS IN FINISHED AREAS SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED OTHERWISE.

H. GROUT AROUND ALL CONDUITS AT CEILING, FLOOR, AND WALL PENETRATIONS TO PROVIDE AIRTIGHT SEAL. ALL FLOOR SLAB AND FIRE-RATED WALL PENETRATIONS SHALL BE SEALED WITH FIREPROOF COMPOUND.

I. GROUP TOGETHER EXPOSED CONDUIT INSOFAR AS POSSIBLE. INSTALL ALL CONDUITS PARALLEL OR PERPENDICULAR TO THE BUILDING SURFACES. MOUNT ON CHANNEL STRUT SUPPORTS.

J. ALL CONDUITS SHALL BE RIGIDLY SUPPORTED TO BUILDING STRUCTURE. CONDUITS SHALL NOT BE SUPPORTED FROM SUSPENDED CEILING SUPPORT WIRES.

K. ALL CONDUIT BENDS SHALL BE MADE WITH AN APPROVED CONDUIT BENDER AND NO BEND SHALL HAVE A CENTERLINE RADIUS LESS THAN SIX TIMES THE DIAMETER OF THE CONDUIT.

L. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING STRUCTURAL INTEGRITY OF ALL FLOORS AND WALLS AFTER CORE DRILLS FOR CONDUITS ARE MADE.

M. CONDUITS SHALL HAVE APPROVED INSULATED BUSHING AT EACH END.

3 - BOXES

3.1 GENERAL

A. INTERIOR OUTLET BOXES SHALL BE GALVANIZED STEEL, MINIMUM 14 GAUGE, NO LESS THAN 4" SQUARE WITH EXTENSION RINGS AND MOUNTING BRACKETS.

B. JUNCTION AND PULL BOXES SHALL HAVE SCREW-ON COVERS OR LOCKING HINGED COVERS. NEMA 1 BOXES SHALL BE USED INDOORS. NEMA 3R BOXES WITH THREADED HUBS SHALL BE USED OUTDOORS.

C. OUTLET BOXES SHALL BE RIGIDLY AND SECURELY FASTENED IN PLACE.

D. OUTLET BOXES IN FINISHED AREAS SHALL BE FLUSH MOUNTED UNLESS OTHERWISE NOTED.

E. BOXES SHALL BE SIZED IN ACCORDANCE WITH NEC ARTICLE 314.

F. ALL CONDUIT CONNECTORS AND ENTRY HUBS SHALL BE INSULATED OR HAVE INSULATED BUSHINGS.

G. OUTLETS SHOWN ADJACENT TO ONE ANOTHER ON THE PLANS AT THE SAME MOUNTING HEIGHT SHALL BE GANGED EXCEPT WHERE NOTED.

H. OUTLETS SHOWN ADJACENT TO ONE ANOTHER ON THE PLANS AT DIFFERENT MOUNTING HEIGHTS SHALL BE LOCATED WITH THE UPPER OUTLET CENTERED DIRECTLY OVER THE LOWER OUTLET.

I. LOW VOLTAGE FACEPLATES SHALL BE SIX PORT, VERTICAL SINGLE GANG FACEPLATES DESIGNED TO MOUNT TO SINGLE GANG WALL BOXES. HIGH-IMPACT PLASTIC FOR USE WITH SNAP-IN JACKS ACCOMMODATING ANY COMBINATION OF TWISTED PAIR WORK AREA CORDS.

4 - WIRE AND CABLE

4.1 GENERAL

A. ALL WIRE SHALL BE COPPER WITH INSULATION RATED AT 600 VOLTS, 75 DEGREES CELSIUS MINIMUM.

B. MINIMUM WIRE SIZES SHALL BE #12 FOR POWER WIRING, #14 FOR CONTROL WIRING AND AS SPECIALLY NOTED FOR SYSTEMS WIRING.

C. WIRE SHALL BE TYPE THHN OR THWN UP TO SIZE 10 AWG AND STRANDED TYPE THWN, XHHW, OR THHN FOR SIZE 8 AWG AND LARGER (UNLESS NOTED OTHERWISE).

D. MC CABLE MAY BE USED FOR LIGHTING WHIPS. MAXIMUM 6 FOOT LENGTH, IN ACCESSIBLE LOCATIONS. MC CABLE MAY BE USED FOR BRANCH CIRCUITS WITHIN PARTITION WALLS. HORIZONTAL BRANCH CIRCUIT RUNS NOT WITH PARTITION WALLS SHALL BE IN CONDUIT.

E. MOLDED CONNECTORS (WIRE NUTS) MAY BE USED FOR SPLICING SIZE 10 AWG OR SMALLER WIRES ON LIGHTING AND RECEPTACLE CIRCUITS ONLY. ALL OTHER WIRING SHALL BE SPLICED ONLY WITH LUGS AND/OR TERMINAL BLOCKS.

F. TERMINAL LUGS SHALL BE MECHANICAL CLAMP OR COMPRESSION TYPE UNLESS PART OF A CIRCUIT BREAKER OR SWITCH ASSEMBLY. SET SCREW TYPE LUGS IN WHICH THE SET SCREW BEARS DIRECTLY ON THE CONDUCTOR SHALL NOT BE USED.

G. SPECIAL LUGS MAY BE REQUIRED TO ACCOMMODATE CONDUCTOR SIZES SHOWN ON THE DRAWINGS. CONTRACTOR SHALL VERIFY LUG REQUIREMENTS FOR ALL CIRCUIT BREAKERS AND EQUIPMENT TERMINALS AND SHALL PROVIDE CORRECT LUGS AS REQUIRED.

H. UNDER NO CIRCUMSTANCES SHALL FEEDERS BE SPLICED.

I. LIGHTING AND RECEPTACLE BRANCH CIRCUIT HOMERUNS OVER 100 FEET LONG SHALL BE SIZE 10 AWG MINIMUM.

J. COLOR CODE THE ENTIRE POWER WIRING SYSTEM AS FOLLOWS:

120/208 VOLT SYSTEM	277/480 VOLT SYSTEM
PHASE A - BLACK	PHASE A - BROWN
PHASE B - RED	PHASE B - ORANGE
PHASE C - BLUE	PHASE C - YELLOW
NEUTRAL - WHITE	NEUTRAL - GRAY
GROUND - GREEN	GROUND - GREEN

4.2 LOW VOLTAGE

A. CATEGORY 6A TWISTED PAIR CABLE SHALL BE UTP, PLENUM RATED WITH JACKET COLOR AS DIRECTED BY OWNER.

5 - GROUNDING

5.1 GENERAL

A. PROVIDE A COMPLETE EQUIPMENT SAFETY GROUND SYSTEM ("GREENWIRE" GROUND) FOR THE ENTIRE ELECTRICAL SYSTEM AS REQUIRED BY ARTICLE 250 OF THE NEC, AND AS SPECIFIED HEREIN.

B. PROVIDE ADDITIONAL GROUNDING AS INDICATED ON THE PLANS.

C. ALL GROUNDING WIRE, LUGS, JUMPERS AND BUS SHALL BE COPPER.

D. ALL FEEDER AND BRANCH CIRCUITS SHALL CONTAIN AN EQUIPMENT GROUND WIRE. NO CONDUIT OR RACEWAY OF ANY KIND OR LENGTH SHALL BE USED AS THE EQUIPMENT GROUNDING CONDUCTOR.

E. EQUIPMENT GROUNDING CONDUCTORS AND STRAPS SHALL BE SIZED IN ACCORDANCE WITH THE NEC. REFER TO FEEDER SCHEDULES FOR GROUND WIRE REQUIREMENTS WHICH MAY EXCEED THE NEC. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE PROVIDED WITH GREEN INSULATION EQUIVALENT TO THE INSULATION ON THE ASSOCIATED PHASE CONDUCTORS.

F. THE EQUIPMENT GROUNDING SYSTEM SHALL BE INSTALLED SO ALL METALLIC STRUCTURES, ENCLOSURES, RACEWAYS, PIPING, SYSTEMS, JUNCTION BOXES, OUTLET BOXES, CABINETS, MACHINE FRAMES AND PORTABLE EQUIPMENT FRAMES OPERATE CONTINUOUSLY AT GROUND POTENTIAL AND PROVIDE A LOW IMPEDANCE PATH FOR GROUND FAULT CURRENTS.

G. WHERE PARALLEL FEEDERS ARE USED, EACH RACEWAY SHALL CONTAIN AN EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH NEC 250-122 FOR THE COMBINED PARALLEL CIRCUIT AMPERAGE.

H. GROUNDING CONDUCTORS SHALL BE CONTINUOUS AND NO SPLICING SHALL BE ALLOWED.

I. RECEPTACLES SHALL BE BONDED TO THEIR OUTLET BOXES WITH #12 COPPER STRAPS.

1. EXCEPTIONS

a. STRAPS MAY BE OMITTED IF SELF-GROUNDING DEVICES ARE UTILIZED.

J. BOND ALL SEPARATELY DERIVED POWER SOURCES IN ACCORDANCE WITH NEC 250.

6 - EQUIPMENT

6.1 GENERAL

A. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE INSTALLATION OF ALL EQUIPMENT SHOWN ON THE DRAWINGS. ALL MANUFACTURERS' SPECIFICATIONS SHALL BE FOLLOWED IN REGARD TO THE INSTALLATION OF ALL EQUIPMENT. ANY SPECIAL MANUFACTURERS' REQUIREMENTS NECESSARY FOR PROPER OR SAFE INSTALLATION OF EQUIPMENT REGARDLESS OF WHETHER THE AFOREMENTIONED SPECIAL REQUIREMENTS ARE INDICATED ON THE DRAWINGS SHALL BE AT THE EXPENSE AND RESPONSIBILITY OF THE CONTRACTOR.

B. THE CONTRACTOR IS RESPONSIBLE FOR THE PURCHASE, RIGGING, ERECTION, INSTALLATION, AND FUNCTIONAL OPERATION OF ALL ELECTRICAL EQUIPMENT EXCEPT WHERE NOTED. ALL MATERIALS AND EQUIPMENT SHALL, WHEN A LISTING IS NORMAL FOR THE PARTICULAR CLASS OF MATERIAL OR EQUIPMENT, BE LISTED AND LABELED BY UL OR A NRTL.

C. MAKE FINAL ELECTRICAL CONNECTIONS TO ALL ITEMS OF MECHANICAL EQUIPMENT.

D. ALL LOCATIONS OF EQUIPMENT AND FIXTURES ARE APPROXIMATE AND MAY REQUIRE MINOR ADJUSTMENT TO SUIT FIELD CONDITIONS. ALL ADJUSTMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

E. NOT ALL LOCATIONS WHERE MOTOR DISCONNECT SWITCHES ARE REQUIRED MAY BE SHOWN ON THE DRAWINGS. PROVIDE DISCONNECTS AT ALL LOCATIONS REQUIRED BY CODE WHETHER SHOWN OR NOT. WHEN REQUIRED, EACH MOTOR SHALL BE EQUIPPED WITH A TWO OR THREE POLE FUSED, HEAVY-DUTY DISCONNECT SWITCH, SIZED TO MATCH THE MOTOR

1. EXCEPTION: FRACTIONAL HP MOTORS SHALL BE EQUIPPED WITH TOGGLE-TYPE DISCONNECT SWITCHES. EQUIPMENT WITH INTEGRAL DISCONNECTING MEANS THAT SATISFY NEC AND LOCAL AUTHORITY REQUIREMENTS FOR MOTOR SAFETY DISCONNECTS SHALL NOT REQUIRE A SEPARATE DISCONNECT SWITCH.

F. DISCONNECT SWITCHES SHALL BE HEAVY-DUTY, HORSEPOWER RATED, QUICK-MAKE, QUICK BREAK TYPE WITH SPRING REINFORCED WIRE GRIPS AND SELF-ALIGNING SWITCH CONTACTS. SWITCHES SHALL BE ENCLOSED IN A HEAVY SHEET METAL ENCLOSURE WITH HINGED INTERLOCKING COVER WHICH SHALL PREVENT THE COVER BEING OPENED WHEN SWITCH IS "ON". PROVIDE NEMA 3R WEATHERPROOF ENCLOSURES FOR OUTDOOR AND WET LOCATION APPLICATIONS, NEMA 1 FOR DRY, INDOOR APPLICATIONS, AND CLASS R REJECTION KITS ON ALL FUSE HOLDERS.

G. COORDINATE ALL RECEPTACLES, PLUGS, WIRING AND LOCATIONS WITH THE EQUIPMENT PROVIDED PRIOR TO ROUGH-IN.

H. THE CONTRACTOR SHALL RECEIVE, STORE, UNPACK AND INSTALL ALL BATTERIES IN COMPLETE ACCORDANCE WITH THE MANUFACTURERS, SPECIFICATIONS AND IEEE STANDARDS 450 AND 484. THE SUPPLIER OF THE BATTERIES SHALL PROVIDE TESTS IN ACCORDANCE WITH IEEE 484. THE CONTRACTOR SHALL REMAKE CONNECTIONS AND INSTALL REPLACEMENT BATTERIES AS NECESSARY TO MEET IEEE 484 INSTALLATION REQUIREMENTS.

7 - DEVICES

7.1 GENERAL

A. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE.

B. THE CONTRACTOR SHALL VERIFY LOCATION AND MOUNTING HEIGHT OF ALL DEVICES PRIOR TO INSTALLATION.

C. WIRING DEVICES SHALL BE WHITE IN COLOR UNLESS OTHERWISE NOTED. COORDINATE FINAL DEVICE FINISHES WITH ARCHITECT.

D. RECEPTACLES SHALL BE FLUSH, DUPLEX, GROUNDING TYPE, 20A, 2P, 3W, 125VAC, NEMA 5-20R STRAIGHT BLADE, NYLON OR HIGH-STRENGTH THERMOPLASTIC MATERIAL UNLESS INDICATED AS SPECIAL PURPOSE OUTLET. RECEPTACLES SHALL BE DESIGNED TO ACCEPT STANDARD TWO-WIRE PARALLEL CONNECTOR CAPS AND SHALL GRIP BOTH SIDES OF THE CONNECTOR WIRE.

E. SINGLE THROW LIGHTING SWITCHES SHALL BE QUIET TYPE, 20A, 1P, 120/277VAC, ABLE TO ACCOMMODATE UP TO #10 CONDUCTORS AND DESIGNED FOR INDUCTIVE LIGHTING LOADS.

F. THREE-WAY TOGGLE SWITCHES SHALL BE QUIET TYPE, 20A, 120/277VAC. SWITCHES SHALL BE POSITIVE ACTION TYPE AND SHALL NOT PERMIT A MAINTAINED NEUTRAL POSITION.

G. FOUR- WAY TOGGLE SWITCHES SHALL BE QUIET TYPE, 20A, 120/277VAC. SWITCHES SHALL BE POSITIVE ACTION TYPE AND SHALL NOT PERMIT A MAINTAINED NEUTRAL POSITION.

H. CONVENIENCE RECEPTACLES SERVING BATHROOMS, TOILETS, OUTDOOR AND WET LOCATIONS AND CONSTRUCTION SITES SHALL BE GROUND FAULT INTERRUPTER TYPE, 20A, 2P, 3W, 125VAC, NEMA 5-20R, STRAIGHT BLADE, NYLON OR HIGH-STRENGTH THERMOPLASTIC MATERIAL.

I. PROVIDE 0.04 INCH THICK SATIN FINISH, TYPE 302, STAINLESS STEEL PLATES AT ALL RECEPTACLE AND SWITCH OUTLETS UNLESS OTHERWISE SPECIFIED. PROVIDE GALVANIZED STEEL PLATES IN UNFINISHED SPACES.

J. GANG MULTIPLE OUTLETS AT ONE LOCATION UNDER A SINGLE MULTI-GANG COVER PLATE.

K. SWITCHES SHALL BE MOUNTED VERTICALLY. NOTIFY ENGINEER OF ANY DISCREPANCIES BEFORE ROUGHING IN OUTLET AND OBTAIN A NEW LOCATION. GANG MULTIPLE SWITCHES AT ONE LOCATION UNDER A SINGLE MULTI-GANG PLATE. LOCATE SWITCHES ON STRIKE SIDE OF DOOR BETWEEN 6" AND 12" FROM EDGE OF DOOR FRAME.

L. DEVICE PLATES SHALL BE FITTED TIGHT TO THE WALL.

M. DELAY INSTALLATION OF DEVICE PLATES UNTIL PAINTING IS COMPLETE.

N. MOUNTING HEIGHT OF DEVICES SHALL BE TO THE CENTER LINE UNLESS OTHERWISE NOTED.

8 - IDENTIFICATION

8.1 GENERAL

A. COORDINATE NAMES, ABBREVIATIONS AND OTHER DESIGNATIONS USED IN ELECTRICAL WORK WITH CORRESPONDING DESIGNATIONS SHOWN, SPECIFIED OR SCHEDULED. PROVIDE NUMBERS, LETTERING AND WORDING AS RECOMMENDED BY MANUFACTURERS OR AS REQUIRED FOR PROPER IDENTIFICATION AND OPERATION/MAINTENANCE OF ELECTRICAL SYSTEMS AND EQUIPMENT.

B. DELAY INSTALLATION OF IDENTIFICATION UNTIL PAINTING IS COMPLETE.

C. COMPLY WITH GOVERNING REGULATIONS AND REQUESTS OF GOVERNING AUTHORITIES FOR IDENTIFICATION OF ELECTRICAL WORK.

D. INSTALL ENGRAVED PLASTIC-LAMINATE NAMEPLATES ON ALL DISCONNECT SWITCHES AND OTHER ELECTRICAL BOXES AND CABINETS INSTALLED UNDER THIS CONTRACT (BLACK LETTERS ON WHITE BACKGROUND).

E. INSTALL ENGRAVED PLASTIC-LAMINATE NAMEPLATES AT EACH PROTECTIVE DEVICE IN ALL SWITCHBOARDS IDENTIFYING CIRCUIT SERVICE (BLACK LETTERS ON WHITE BACKGROUND).

F. WHERE ELECTRICAL CONDUIT IS EXPOSED, APPLY IDENTIFICATION ON CONDUIT. EXCEPT AS OTHERWISE INDICATED, USE PERMANENT VINYL, SELF-ADHERING MARKERS WITH BLACK LETTERS ON ORANGE BACKGROUND.

G. APPLY SELF-ADHERING VINYL OR HEAT-SHRINK PLASTIC CABLE/CONDUCTOR IDENTIFICATION MARKERS ON EACH CABLE AND CONDUCTOR IN EACH BOX, ENCLOSURE OR CABINET WHERE WIRES OF MORE THAN ONE CIRCUIT ARE PRESENT, EXCEPT WHERE ANOTHER FORM OF IDENTIFICATION (SUCH AS COLOR-CODED CONDUCTORS) IS PROVIDED. MATCH IDENTIFICATION WITH MARKING SYSTEM USED IN PANELBOARDS, SHOP DRAWINGS AND CONTRACT DOCUMENTS.

H. WHEREVER REASONABLY REQUIRED TO ENSURE SAFE AND EFFICIENT OPERATION AND MAINTENANCE OF ELECTRICAL SYSTEMS AND ELECTRICALLY CONNECTED MECHANICAL SYSTEMS, INSTALL SELF-ADHESIVE PLASTIC SIGNS WITH APPROPRIATE INSTRUCTIONS OR WARNINGS. WHERE DETAILED INSTRUCTIONS OR EXPLANATIONS ARE NEEDED, PROVIDE PLASTICIZED TAGS WITH CLEARLY WRITTEN MESSAGES ADEQUATE FOR INTENDED PURPOSES.

I. INSTALL WARNING SIGNS AT THE ENTRANCES TO ALL ROOMS AND SPACES IN WHICH ELECTRICAL CONDUCTORS OR EQUIPMENT ARE INSTALLED (WHITE LETTERS ON RED BACKGROUND).

J. ALL FIELD INSTALLED CONTROL CIRCUITS SHALL HAVE TUBULAR SLEEVE-TYPE WIRE MARKERS AT EACH END OF THE CIRCUIT AND AT ALL SPLICE POINTS. WIRE MARKERS SHALL BE PERMANENTLY STAMPED WITH A NUMBERING SYSTEM SELECTED BY THE CONTRACTOR. THE NUMBERING SYSTEM SHALL BE THOROUGHLY DOCUMENTED AND PROVIDED TO THE ENGINEER.

K. RECEPTACLE COVER PLATES: PROVIDE LABEL ON FRONT OF COVER PLATE UNLESS OTHERWISE NOTED. LABEL SHALL INDICATE SOURCE PANEL AND CIRCUIT NUMBER. LABEL SHALL BE A LAMINATED, ADHESIVE BACKED, PEEL-OFF, POLYESTER TYPE LABEL. LABEL SHALL BE COMPRISED OF A POLYESTER BASE/SUBSTRATE AND A CLEAR POLYESTER TOP LAYER/LAMINATE. THE LABEL INK SHALL BE PRINTED UNDERNEATH THE CLEAR POLYESTER LAMINATE. LABEL SHALL HAVE BLACK LETTERING ON CLEAR BACKGROUND. LABEL WIDTH SHALL BE A NOMINAL 0.47" (12 MM) WIDE. BASIS OF DESIGN IS THE TZE LABELING TAPE BY BROTHER MOBILE SOLUTIONS, INC. FOR USE WITH THE BROTHER P-TOUCH EDGE SERIES LABELING TOOLS.

L. DYMO (OR EQUIVALENT) LABELS SHALL NOT BE USED.

11 - LIGHTING

11.1 GENERAL

A. PROVIDE LIGHTING FIXTURES OF THE SIZES, TYPES AND RATINGS INDICATED ON THE DRAWINGS AND IN THE SCHEDULES. FIXTURES SHALL BE COMPLETE WITH HOUSINGS, ENERGY EFFICIENT BALLASTS, STARTERS, DRIVERS, WIRING, ENERGY EFFICIENT LAMPS, LAMP HOLDERS, LENSES, LOUVERS AND REFLECTORS. LIGHT FIXTURE VOLTAGE SHALL MATCH THE VOLTAGE OF THE CIRCUIT SERVING THE LIGHT FIXTURE.

B. LIGHT EMITTING DIODE (LED) FIXTURES:

1. COMPLY WITH IES LM79 AND IES LM80 LED PRODUCT TESTING PROCEDURES, AND DOE ENERGY STAR CRITERIA. COLOR SPATIAL UNIFORMITY SHALL BE WITHIN .004 OF CIE 1976 DIAGRAM. COLOR MAINTENANCE OVER RATED LIFE SHALL BE WITHIN .007 OF CIE 1976.

2. WHITE LED LUMINAIRES SHALL ACHIEVE A MINIMUM CRI OF 80, AND R9 VALUE ABOVE 24, AND BINNING OF WHITE LEDS USED IN THE LUMINAIRES SHALL FALL WITHIN A 3-STEP MACADAM ELLIPSE MINIMUM, OR AS INDICATED IN THE LIGHTING FIXTURE SCHEDULE.

3. LED PACKAGE(S)/MODULE(S)/ARRAY(S) USED IN QUALIFIED LUMINAIRES SHALL DELIVER AT LEAST 70% OF INITIAL LUMENS, WHEN INSTALLED IN-SITU, FOR A MINIMUM OF 35,000 HOURS.

C. LED POWER SUPPLIES AND DRIVERS:

1. POWER FACTOR 0.90 OR HIGHER. OUTPUT OPERATING FREQUENCY: 120HZ. INTERFERENCE: EMI AND RFI COMPLIANT WITH FCC 47 CFR PART 15. TOTAL HARMONIC DISTORTION RATING: LESS THAN 3%, OR AS SPECIFIED IN THE LIGHT FIXTURE SCHEDULE. MEET ELECTRICAL AND THERMAL CONDITIONS AS DESCRIBED IN LM-80 SECTION 5.0.

2. OPERATING TEMPERATURE: MINIMUM OF -20°C OR BELOW WHEN USED IN LUMINAIRES INTENDED FOR OUTDOOR USE.

3. MAXIMUM DRIVER CASE TEMPERATURE NOT TO EXCEED DRIVER MANUFACTURER RECOMMENDED IN-SITU OPERATION.

E. LED CONTROL SYSTEM:

1. SYSTEM ELECTRONICS DRIVER / CONTROLLER TO USE COORDINATED COMMUNICATION PROTOCOLS: DMX512, 0-10V, DALI, OR PROPRIETARY AS REQUIRED.

2. CONTRACTOR TO ENSURE THAT EXTERNAL CONTROL EQUIPMENT IS COMPATIBLE WITH LED CONTROL REQUIREMENTS.

3. COMPATIBILITY: CERTIFIED BY MANUFACTURER FOR USE WITH INDIVIDUALLY SPECIFIED LUMINAIRE AND INDIVIDUALLY SPECIFIED POWER SUPPLIES AND/OR DRIVERS.

F. PHOTO CONTROL RELAYS SHALL BE HERMETICALLY SEALED IN A DIE CAST HOUSING WITH FIELD ADJUSTABLE LIGHT-LEVEL CONTROL, RATED 1800 WATTS, 120-277 VOLT, INCANDESCENT, RELAY RATINGS SHALL BE COORDINATED WITH FIXTURE RATINGS WHEN USED WITH HID LAMPS.

G. PHOTO CONTROL RELAYS SHALL HAVE POSITIVE, SNAP-ACTION CONTACTS, AND SHALL HAVE A BUILT IN 15-60 SECOND TIME DELAY TO ELIMINATE CYCLING. THE RELAYS SHALL BE SUITABLE FOR OPERATING TEMPERATURES FROM -50 TO +150 DEGREES F.

H. FIXTURES SHALL BE SECURED TO STRUCTURAL SUPPORTS AND SHALL NOT RELY ON CEILING SYSTEMS FOR SUPPORT. PENDANT FIXTURES SHALL BE PLUMB AND LEVEL. PENDANT MOUNTED FIXTURES, LARGER THAN 2 FEET SHALL BE INSTALLED WITH TWO (2) STEM HANGERS. STEM HANGERS SHALL HAVE BALL ALIGNERS AND PROVISIONS FOR MINIMUM ONE INCH VERTICAL ADJUSTMENT. PLASTER FRAMES SHALL BE PROVIDED FOR ALL RECESSED FIXTURES, INSTALLED IN OTHER THAN A SUSPENDED ACCESS CEILING SYSTEM.

I. SURFACE MOUNTED FIXTURES GREATER THAN 2 FEET IN LENGTH SHALL BE SUPPORTED FROM AT LEAST ONE POINT IN ADDITION TO THE FIXTURE OUTLET BOX STUD.

J. SET, AIM AND ADJUST ADJUSTABLE FIXTURES IN ACCORDANCE WITH INSTRUCTION AND GUIDELINES PROVIDED BY THE ARCHITECT. ADJUST LIGHT LEVEL OF PHOTO CONTROL RELAYS IN ACCORDANCE WITH INSTRUCTIONS FROM THE ARCHITECT.

K. WARRANTY PERIOD FOR LED LIGHT FIXTURES IS FIVE YEARS FROM SUBSTANTIAL COMPLETION.

12 - FIRE ALARM SYSTEM

12.1 GENERAL

A. SPEAKER/STROBES SHALL BE SEMI-FLUSH MOUNTED WITH RED COVERS AND CLEAR STROBE LENS. SPEAKER/STROBE SIGNALS SHALL COMPLY WITH THE REQUIREMENTS OF THE ADA.

B. STROBE UNITS SHALL CONSIST OF A RED COVER AND CLEAR LENS. STROBE SIGNALS SHALL COMPLY WITH THE REQUIREMENTS OF THE ADA.

C. STROBES SHALL BE PROVIDED WITH A CANDELA RATING AS INDICATED.

D. ANALOG SMOKE DETECTORS SHALL BE ADDRESSABLE, IONIZATION (OR PHOTOELECTRIC WHERE INDICATED ON THE DRAWINGS), PLUG-IN TYPE WITH BASE. THE DETECTOR BASE SHALL BE OF THE TWIST/LOCK TYPE WITH SCREW TERMINALS FOR FIELD WIRING. AN AUTOMATIC GAIN CONTROL CIRCUIT SHALL BE PROVIDED TO COMPENSATE FOR DETECTOR AGING AND DIRT ACCUMULATION AND MAINTAIN THE DETECTOR WITHIN THE CORRECT SENSITIVITY RANGE. A CRITICAL REDUCTION OF SENSITIVITY CAUSED BY DIRT ACCUMULATION SHALL INITIATE A TROUBLE SIGNAL. DETECTOR SENSITIVITY SHALL BE CAPABLE OF BEING READ AND ADJUSTED FROM THE CONTROL PANEL.

E. INTERFACE MONITOR MODULES SHALL BE ADDRESSABLE, MOUNTED IN STANDARD 4" X 4" SQUARE OR OCTAGONAL ELECTRICAL BOXES WITH COVERS. COVER SHALL BE LABELED OR EMBOSSED WITH FIRE ALARM SYSTEM INTERFACE MODULE DESIGNATION. A SOLID STATE LED INDICATOR LAMPS SHALL BE VISIBLE IN THE COVER. THESE MODULES ARE TO BE USED FOR CONNECTION OF CONVENTIONAL ALARM DEVICES SUCH AS WATERFLOW SWITCHES, VALVE TAMPER SWITCHES, FIRE PUMP ALARMS AND OTHER NON-ADDRESSABLE DEVICES. CONNECTIONS BETWEEN DEVICES AND MODULES SHALL BE INTEGRALLY SUPERVISED FOR OPEN AND GROUND FAULTS. MONITOR AND CONTROL FUNCTIONS MAY BE INTEGRATED IN A SINGLE INTERFACE MODULE IF LISTED AND APPROVED FOR THIS PURPOSE.

F. DUCT TYPE DETECTOR ASSEMBLIES SHALL CONSIST OF AN ADDRESSABLE ANALOG PHOTOELECTRIC DETECTOR, AN AIR DUCT SAMPLING TUBE AND DETECTOR HOUSING. PROVIDE A REMOTE TEST STATION WITH ALARM INDICATING LAMP FOR ALL DUCT DETECTORS INSTALLED IN CONCEALED SPACES.

G. MANUAL STATIONS SHALL BE ADDRESSABLE, RED IN COLOR, NON-CODED, DOUBLE-ACTION TYPE. MANUAL STATION COVERS SHALL BE HINGED AND SECURED WITH A LOCKSET. LOCKSET SHALL BE KEYED THE SAME AS THE CONTROL UNIT LOCKSET.

H. HEAT DETECTORS SHALL BE ADDRESSABLE, PLUG-IN TYPE WITH BASE. THE DETECTOR BASE SHALL BE OF THE TWIST LOCK TYPE WITH SCREW TERMINALS FOR FIELD WIRING. DETECTORS SHALL BE RATE COMPENSATION, FIXED TEMPERATURE TYPE, RATED AT 135 DEGREES F. DETECTOR ELEMENT SHALL BE SELF-RESTORING AFTER OPERATION.

I. ALL FIELD WIRING SHALL BE INSTALLED IN CONDUIT. CONDUIT AND BOXES SHALL BE SIZED ACCORDING TO NATIONAL ELECTRICAL CODE REQUIREMENTS BASED ON THE NUMBER OF CONDUCTORS. INITIATING DEVICE CIRCUIT WIRING SHALL BE TWO-CONDUCTOR TWISTED WITH INTEGRAL SHIELD AND GROUND. INDICATING APPLIANCE CIRCUITS SHALL BE MINIMUM 14 AWG.

J. FIRE ALARM CIRCUITS SHALL BE IDENTIFIED BY RED JUNCTION BOX COVERS STENCILED IN WHITE LETTERS "FIRE ALARM".

K. FIRE ALARM WIRING SHALL BE COLOR CODED IN ACCORDANCE WITH REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION.

13 - TESTING

13.1 GENERAL

A. THOROUGHLY CLEAN THE ELECTRICAL EQUIPMENT AND ASSOCIATED ELECTRICAL MATERIALS BEFORE ENERGIZATION OF ANY PART OF THE ELECTRICAL SYSTEM. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE ALL THE ELECTRICAL EQUIPMENT, RACEWAYS, CABLING, CABLE INSULATION AND OTHER RELATED ELECTRICAL SYSTEMS TESTED. ALL TEST RESULTS SHALL BE RECORDED, DATED AND SUBMITTED TO THE ENGINEER AND OWNER FOR RECORD. TEST PROCEDURES AND RESULTS SHALL BE PER NETA STANDARDS. IN THE ABSENCE OF RELEVANT NETA STANDARDS, THE CONTRACTOR SHALL SUBSTITUTE APPROPRIATE TEST PROCEDURES FROM IEEE OR ANSI. THE SUBSTITUTE TEST PROCEDURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONDUCTING THE TESTS.

B. THE CONTRACTOR SHALL VERIFY THAT EACH KEY SYSTEM INTERFACES CORRECTLY WITH ALL RELATED SYSTEMS. THE CONTRACTOR SHALL FURNISH ALL TEST DATA TO THE ENGINEER VERIFYING THAT ALL SYSTEMS HAVE BEEN INSTALLED CORRECTLY AND WORK TOGETHER TO PROVIDE A COMPLETELY OPERATIONAL ELECTRICAL POWER SYSTEM AS DESIGNED.

C. THE ENGINEER RESERVES THE RIGHT TO ACCEPT OR REJECT TEST DATA WHICH DOES NOT CONFORM TO THE MANUFACTURER'S DATA OR IS NOT OBTAINED IN ACCORDANCE WITH THESE SPECIFICATIONS.

END OF ELECTRICAL DRAWING SPEC

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ELECTRICAL SPECIFICATIONS

E501

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