LEWIS AND CLARK

6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS

3215 Cuming St.
Omaha, NE 68131

PROJECT NO. 003-10201-014
04.04.2025
CONSTRUCTION DOCUMENTS

LEO A DALY

PLANNING
ARCHITECTURE
ENGINEERING
INTERIORS

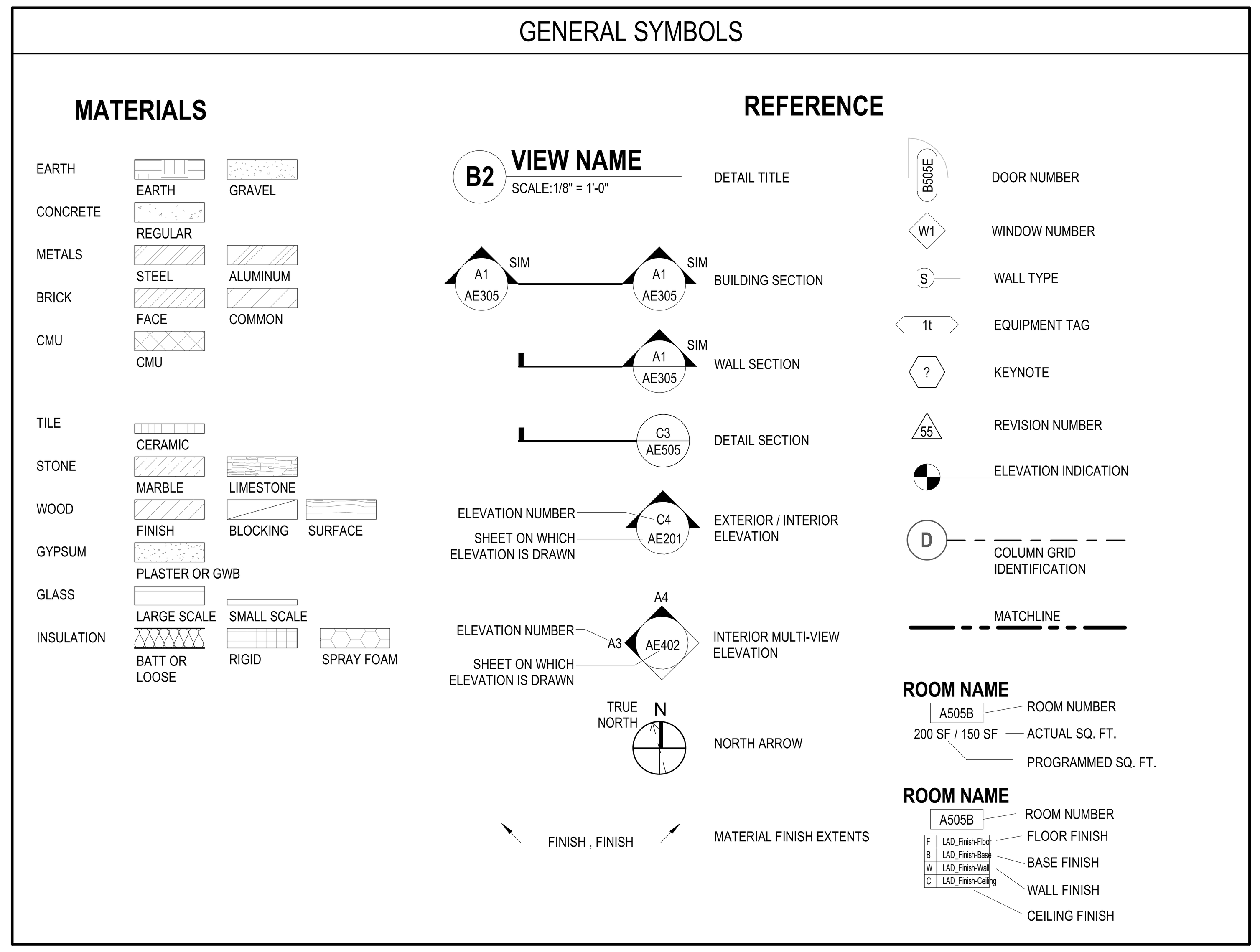
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
Certificate of Authorization No: CA-0280

I, JONATHAN B. PIELS, AM THE COORDINATING PROFESSIONAL ON THE LEWIS AND CLARK PROJECT.

CONSTRUCTION DOCUMENTS

1 2 3 4 5 6 7

F E D C B A



GENERAL NOTES

1. DO NOT SCALE DRAWINGS.
2. THE FOLLOWING GENERAL NOTES APPLY TO THE ENTIRE SET OF DRAWINGS LISTED BY THE "INDEX OF DRAWINGS".
3. FOR GENERAL NOTES, ABBREVIATIONS, AND SYMBOLS APPLICABLE ONLY TO THE DRAWINGS OF ONE DISCIPLINE, REFER TO THE DRAWINGS OF THAT DISCIPLINE – SEE "INDEX OF DRAWINGS".
4. THE SET OF DRAWINGS, WHEN COMPLETE, CONSISTS OF ALL DRAWINGS LISTED BY THE "INDEX OF DRAWINGS". THE WORK DESCRIBED BY THE DRAWINGS OF ANY ONE DISCIPLINE MAY BE AFFECTED BY AND REFERENCE THE WORK DESCRIBED ON DRAWINGS OF ANOTHER DISCIPLINE. DO NOT DISTRIBUTE OR UTILIZE PARTIAL SETS OF DRAWINGS.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND COORDINATE THE WORK OF ALL SUBCONTRACTORS, TRADES AND SUPPLIERS WITH ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS, AND WITH MANUFACTURER'S INSTRUCTIONS, BEFORE COMMENCING CONSTRUCTION, AND TO ASSURE THAT ALL PARTIES ARE AWARE OF ALL REQUIREMENTS, REGARDLESS OF WHERE THE REQUIREMENTS OCCUR IN THE CONTRACT DOCUMENTS, WHICH MIGHT AFFECT THE WORK OF THAT PARTY.
6. ALL ARCHITECTURAL DRAWINGS ESTABLISH AND COORDINATE THE FINISHED APPEARANCE AND LOCATION OF ALL EXPOSED ELEMENTS OF THE WORK, INCLUDING THAT WORK, WHICH IS ILLUSTRATED PRIMARILY ON DRAWING OF OTHER DISCIPLINES, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
7. REFER TO THE STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER SPECIALTY ENGINEERING DRAWINGS FOR THE DETAILED DESIGN OF THE STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS, OF WHICH PORTIONS MAY ALSO BE SHOWN ON THE ARCHITECTURAL DRAWINGS.
8. ALL PARTS OF THE WORK – INCLUDING MATERIALS, METHODS, ASSEMBLIES, ETC – SHALL COMPLY WITH ALL APPLICABLE GOVERNING RULES, CODES, REGULATIONS, ORDINANCES, AND LAWS OF ALL FEDERAL, STATE DISTRICT, TERRITORIAL AND LOCAL GOVERNMENT AUTHORITIES HAVING JURISDICTION OVER THE DESIGN, CONSTRUCTION, AND OCCUPANCY OF THE PROJECT, WHETHER LISTED BY THE CONTRACT DOCUMENTS OR NOT.
9. NO PART OF THE CONTRACT DOCUMENTS SHALL BE CONSTRUED TO REQUIRE OR PERMIT WORK CONTRARY TO AN APPLICABLE GOVERNING RULE, CODE, REGULATION, ORDINANCE, OR LAW.
10. IF A CONFLICT EXISTS BETWEEN THE CONTRACT DOCUMENTS AND A REGULATORY REQUIREMENT, THE CONTRACTOR SHALL COMPLY WITH THE ONE ESTABLISHING THE MORE STRINGENT OR RESTRICTIVE REQUIREMENT:
    a. THE DRAWINGS AND SPECIFICATIONS MAY SET FORTH MORE DETAILED, MORE SPECIFIC, AND/OR MORE RESTRICTIVE REQUIREMENTS THAN THOSE SET FORTH BY THE APPLICABLE REGULATORY REQUIREMENTS, WHERE THE DRAWINGS AND SPECIFICATIONS PROVIDE MORE DETAILED, MORE SPECIFIC, AND/OR MORE RESTRICTIVE REQUIREMENTS, THE CONTRACTOR SHALL COMPLY WITH THOSE REQUIREMENTS.
    b. WHERE THE APPLICABLE REQUIREMENTS OF THE REFERENCED RULES, CODES, REGULATIONS, ORDINANCES, OR LAWS ARE MORE RESTRICTIVE THAN THAT SET FORTH BY THE DRAWINGS AND SPECIFICATION, THE CONTRACTOR SHALL COMPLY WITH ALL SUCH MORE RESTRICTIVE REQUIREMENTS. ALTHOUGH SUCH REQUIREMENTS MAY NOT BE ILLUSTRATED BY THE DRAWINGS AND SPECIFICATIONS.
11. APPLICABLE PORTIONS OF THE CODES, REGULATIONS, AND STANDARDS LISTED HERE ARE INCORPORATED BY REFERENCE INTO THE REQUIREMENTS OF THIS CONTRACT AND ESTABLISH MINIMUM REQUIREMENTS WITH WHICH THE WORK MUST COMPLY.
12. PROPRIETARY PRODUCTS OR ASSEMBLIES UTILIZED AS "BASIS OF DESIGN".
    a. ON OCCASION, THE DRAWINGS MAY REFER TO A SINGLE PROPRIETARY PRODUCT OR ASSEMBLY WHILE THE SPECIFICATIONS LIST TWO OR MORE ACCEPTABLE MANUFACTURES AND/OR PRODUCTS, WHEN THIS OCCURS, THE PRODUCT OR ASSEMBLY ILLUSTRATED BY THE DRAWINGS IS THE "BASIS OF DESIGN" PRODUCT OR ASSEMBLY.
    b. THE DIMENSIONS, MOUNTING HEIGHTS, CLEARANCES, AND ACCESS REQUIREMENTS OF SPECIFIED PRODUCTS AND ASSEMBLIES OTHER THAN THE "BASIS OF DESIGN" MAY VARY FROM THAT SHOWN BY THE DRAWINGS.
13. THE CONTRACTOR SHALL NOT SCALE DRAWINGS, ALL OF WHICH ARE DIAGRAMMATIC IN NATURE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO THE START OF WORK AND SHALL NOT THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

SHEET INDEX

ABBREVIATIONS

A	
A/C	AIR CONDITIONING
AB	ANCHOR BOLT / AIR BLENDER
ABS	ACRYLONITRILE-BUTADIENE-STYRENE
AC	ALTERNATING CURRENT / AIR COMPRESSOR
ACP	ASBESTOS CEMENT PIPE
ACU	AIR CONDITIONING UNIT
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT / ADJUSTABLE
ADR	ACCESS DOOR
AFF	ABOVE FINISH FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
APC	ACOUSTICAL PANEL CEILING
APPROX	APPROXIMATELY
APT	APARTMENT
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
ATB	AIR TERMINAL BOX
ATC	ACOUSTICAL TILE CEILING
ATD	AIR TRANSFER DUCT
ATU	AIR TERMINAL UNIT
AUX	AUXILIARY
AVG	AVERAGE
AWT	ACOUSTICAL WALL TREATMENT
AZ	AZIMUTH
B	
BB	BALLED AND BURLAPPED
BD	BOARD
BDD	BACK DRAFT DAMPER
BE	BOTTOM ELEVATION
BL	BUILDING LINE
BLDG	BUILDING
BLKG	BLOCKING
BM	BENCH MARK / BEAM
BR	BARE ROOT
BRG	BEARING
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C	
C/C	CENTER TO CENTER
CAB	CABINET
CB	CIRCUIT BREAKER / CATCH BASIN
CC	COOLING UNIT
CE	COVER ELEVATION
CEM	CEMENT
CFM	CUBIC FEET PER MINUTE
CG	CORNER GUARD
CH	CHILLER
CI	CURB INLET / CAST IRON
CIP	CAST IRON PIPE
CJ	CONTROL JOINT OR CONTRACTION JOINT
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CM	CENTIMETER
CMH	CUBIC METER PER HOUR
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT / CARBON MONOXIDE
CO2	CARBON DIOXIDE
COL	COLUMN
COMB	COMBINATION / COMBINE
COMP	COMPRESSIBLE
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS / CONTINUATION
CONTR	CONTRACTOR
CORR	CORRIDOR
CP	CEMENT PIPE
CPT	CARPET
CR	CRASH RAIL
CS	CONCRETE SEALER
CSF	CUBIC FEET PER SECOND
CT	CERAMIC TILE / COOLING TOWER
CTB	CERAMIC TILE BASE
CTF	CERAMIC TILE FLOOR
CTR	CENTER
CTW	CERAMIC TILE WALL
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CUYD	CUBIC YARD
CW	COLD WATER
D	
D	DRAIN / DIFFUSER
DA	DENTAL AIR
DBL	DOUBLE
DEPR	DEPRESSED
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFUSER
DIP	DUCTILE IRON PIPE
DISC	DISCONNECT
DISP	DISPENSER
DIST	DISTRIBUTION
DK	DECK
DL	DEAD LOAD
DN	DOWN
DO	DITTO
DPR	DAMPER
DR	DOOR
DS	DOWNSPOUT
DV	DENTAL VACUUM
DWG	DRAWING
DWL	DOWEL
DWP	DOMESTIC WATER PUMP
E	
EA	EACH / EXHAUST AIR
ECT	ENTRY CARPET TILE
EF	EACH FACE / EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR
EMBED	EMBEDMENT
EMD	ESTIMATED MAXIMUM DEMAND
EMT	ELECTRICAL METAL TUBING
ENG	ENTRANCE GRATING
EP	EPOXY PAINT
EQ	EQUAL
EQUIP	EQUIPMENT
ET	EXPANSION TANK / EPOXY TERRAZZO
ETB	EPOXY TERRAZZO INTEGRAL COVE BASE
EVAC	MEDICAL GAS EVACUATION
EW	EACH WAY
EWC	ELECTRICAL WATER COOLER
EWH	ELECTRICAL WATER HEATER
EXH	EXHAUST
EXP	EXPOSED
EXPN	EXPANSION
EXST	EXISTING
EXT	EXTERIOR
F	
F	FIRE MAIN
FA	FIRE ALARM
FCU	FAN COIL UNIT
FD	FLOOR DRAIN / FIRE DAMPER
FD / SD	COMBINATION FIRE AND SMOKE DAMPER
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FDR	FEEDER
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF&E	FURNITURE, FIXTURE, AND EQUIPMENT
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIN	FINISH
FIX	FIXTURE
FL	FLOOR
FM	FORCE MAIN / FACTORY MUTUAL
FP	FIREPROOFING / FIRE PUMP
FPM	FEET PER MINUTE
FR	FIRE RATED
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FLOW SWITCH
FT	FEET
FTG	FOOTING
FVC	FIRE VALVE CABINET
G	
G	GAS / GRILLE
GA	GAGE
GALV	GALVANIZED
GB	GRAB BAR
GBD	GRAVITY BACKDRAFT DAMPER
GEN	GENERATOR
GFRC	GLASS FIBER REINFORCED CONCRETE
GI	GALVANIZED IRON
GL	GLASS
GLB	GLASS BLOCK
GLP	GLASS PANEL
GLT	GLASS TILE
GP	GLAZED PAINT
GPM	GALLONS PER MINUTE
GR	GRADE
GRV	GRAVITY ROOF VENTILATOR
GT	GROUT
GWB	GYPSUM WALLBOARD
GYP	GYPSUM
H	
HB	HOSE BIBB
HC	HEATING COIL
HDNR	HARDENER
HDW	HARDWARE
HDWD	HARDWOOD
HK1E	HOOK ONE END
HK2E	HOOK TWO ENDS
HM	HOLLOW METAL
HNDRL	HANDRAIL
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPT	HIGH POINT
HR	HOUR
HS	HIGH STRENGTH
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HW	HOT WATER
HWC	HOT WATER CIRCULATING
HZ	HERTZ
I	
IA	INSTRUMENT AIR
IC	INTERCOM
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
IN	INCH
INSUL	INSULATION
INT	INTERIOR
J	
JAN	JANITOR
JB	JUNCTION BOX
JP	JOCKEY PUMP
JST	JOIST
JT	JOINT
K	
KC MIL	THOUSAND CIRCULAR MILS
KCJ	KEYED CONSTRUCTION JOINT
KIT	KITCHEN
KPA	KILOPASCALS
KS	KITCHEN SINK
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATTS
L	
L	LITER
LA	LABORATORY AIR
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LBS	POUNDS
LF	LINEAR FEET
LIN	LINEAR
LINO	LINOLEUM
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LMU	LIGHTWEIGHT MASONRY UNITS
LONG	LONGITUDINAL
LPM	LITERS PER MINUTE
LT	LIGHT
LT WT	LIGHT WEIGHT
LTG	LIGHTING
LV	LABORATORY VACUUM
LVL	LEVEL
LVT	LUXURY VINYL TILE
M	
M	METER
M2	SQUARE METER
M3	CUBIC METER
MA	MEDICAL AIR
MAINT	MAINTENANCE
MAR	MARBLE
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
MB	METAL BASE
MBH	1000 BTUH
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MET	METAL
MFR	MANUFACTURER
MG	MOTOR GENERATOR / MEDICAL GAS
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MM	MILLIMETER
MO	MASONRY OPENING
MP	METAL PANEL
MT	METAL TRANSITION
MTD	MOUNTED
MTG	MOUNTING
MULL	MULLION
MV	MEDICAL VACUUM
N	
N	NITROGEN
N2O	NITROUS OXIDE
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O	
O/S	OFFSET
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OX	OXYGEN
OZ	OUNCE
P	
P	PAINT / PUMP / PENDANT
PA	PASCAL
PART	PARTITION
PAVT	PAVEMENT
PC	POINT OF CURVATURE / PRIVACY CURTAIN
PCF	POUNDS PER CUBIC FOOT
PED	PEDESTAL
PERP	PERPENDICULAR
PHC	PREHEAT COIL
PHVAC	PLUMBING, HEATING, VENTILATING AND AIR CONDITIONING
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
PKG	PARKING
PL	PLASTIC LAMINATE / PROPERTY LINE / PLATE
PLAS	PLASTER
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PLYWD	PLYWOOD
PNL	PANEL
POL CONC	POLISHED CONCRETE
PR	PAIR
PRF	POURED RESINOUS FLOORING
PROJ	PROJECTION
PRV	PRESSURE REGULATING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PTB	PORCELAIN TILE BASE
PTF	PORCELAIN TILE FLOOR
PTVC	POINT OF VERTICAL CURVATURE
PTW	PORCELAIN TILE WALL
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
Q	
QTB	QUARRY TILE BASE
QTF	QUARRY TILE FLOOR
QZP	QUARTZ POLYMER
R	
R	RADIUS / REGISTER
RA	RETURN AIR
RAF	RAISED ACCESS FLOORING
RB	RESILIENT BASE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REF	REFERENCE
REFL	REFLECTED
REG	REGISTER
REINF	REINFORCED
REQD	REQUIRED
REV	REVERSE / REVISION
RF	RETURN FAN
RGS	RIGID GALVANIZED STEEL
RH	ROOF HOOD / RELATIVE HUMIDITY / REHEAT
RHC	REHEAT COIL
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RS	RESILIENT SHEET
RT	RESILIENT TILE
S	
S	STAIR / STAIN / SURFACE / SANITARY
SA	SUPPLY AIR / SOUND ATTENUATOR
SAN	SANITARY
SCH	SCHEDULE
SD	SMOKE DAMPER / SUB DRAIN / STORM SEWER
SECT	SECTION
SF	SUPPLY FAN
SHT	SHEET
SIM	SIMILAR
SOG	SLAB-ON-GRADE
SP	SUMP PUMP
SPEC	SPECIFICATIONS
SQ	SQUARE
SS	SERVICE SINK / SANITARY SEWER
SSM	SOLID SURFACE MATERIAL
SSO	STORM SEWER OVERFLOW
SST	STAIR TREAD
SSTL	STAINLESS STEEL
STA	STATION
STD	STANDARD
STE	STANDARD TAPERED END
STIFF	STIFFENER
STIR	STIRRUP
STL	STEEL
STOR	STORAGE
STR	STRUCTURAL
SUSP	SUSPENDED
SW	SWITCH
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
T	
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TC	TOP OF CURB
TE	TOP ELEVATION
TEL	TELEPHONE
TEMP	TEMPERATURE
TERR	TERRAZZO
TLT	TOILET
TOPO	TOPOGRAPHY
TOS	TOP OF STEEL
TOW	TOP OF WALL
TP	TOP OF PAVEMENT
TRANS	TRANSVERSE
TS	TRANSITION STRIP
TYP	TYPICAL
U	
UC	UNDERCUT
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
UV	UNIT VENTILATOR
V	
V	VOLT
VAV	VARIABLE AIR VOLUME
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W	
W	WATT / WATER
W/	WITH
W/O	WITHOUT
WAGD	WASTE ANESTHESIA GAS DISPOSAL
WC	WATER CLOSET / WALL COVERING
WD	WOOD
WDB	WOOD BASE
WDF	WOOD FLOOR
WDP	WOOD PANEL
WDW	WINDOW
WDWF	WINDOW FILM
WGD	WALL GUARD
WH	WATER HEATER / WALL HYDRANT
WP	WEATHERPROOF
WPFG	WATERPROOFING
WS	WATER STOP
WT	WEIGHT / WINDOW TREATMENT
WWF	WELDED WIRE FABRIC
X	
XFMR	TRANSFORMER
Y	
YD	YARD
YH	YARD HYDRANT

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LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	JBP
Draw	JBP
Check	SLF

STAMP

ARCHITECT
JONATHAN B. PIELS
A-4859
STATE OF NEBRASKA
4.4.2025

Project No. 003-10201-014
04.04.2025

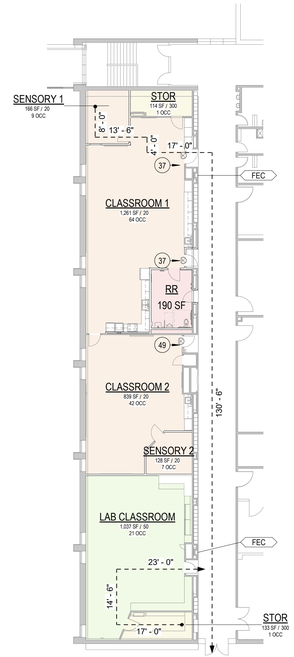
SHEET INDEX, GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

GI002

CONSTRUCTION DOCUMENTS

4/4/2025 11:11:48 AM Model: \\ladco\shares\projects\003\003-10201-014\4-0-Production-Working\4-1-BIM-CAD\Revit\ ARCH_OPSLC.rvt

A1 MAIN LEVEL AREA OF WORK
SCALE: 1/16" = 1'-0"

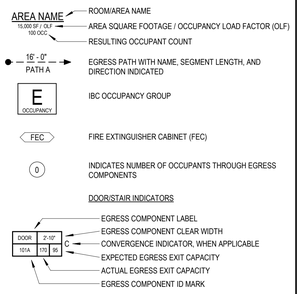


D5 LIFE SAFETY PLAN MAIN LEVEL
SCALE: 1/16" = 1'-0"

GENERAL LIFE SAFETY NOTES

1. ALL FIRE RATED PARTITIONS ARE EXISTING, PATCH TO MAINTAIN RATING IF DISTURBED.
2. WOOD USED FOR BLOCKING, NAILERS, OR FRAMING IN FIRE RATED ASSEMBLIES SHALL BE FIRE RETARDANT TREATED.
3. FOR EXIT LIGHTS AND EMERGENCY LIGHTING, SEE ELECTRICAL.
4. FOR FIRE DETECTION SYSTEM, SEE ELECTRICAL.
5. FOR FIRE ALARM SYSTEM, SEE ELECTRICAL.
6. WHERE FIRE EXTINGUISHER CABINETS OR OTHER EQUIPMENT IS RECESSED IN FIRE RATED PARTITIONS, MODIFY THE PARTITION AS REQUIRED TO PROVIDE A CONTINUOUS ENCLOSURE TO ENSURE UNINTERRUPTED FIRE RATING.
7. AT EXISTING FIRE RATED DOOR LOCATIONS FRAMES SHALL BE NEW AND DOORS SHALL BE LABELED FOR THE INTENDED USE OR EQUIVALENT.
8. NON-RATED SMOKE PARTITIONS SHALL BE CONSTRUCTED TO LIMIT THE TRANSFER OF SMOKE. PARTITIONS SHALL EXTEND FROM FLOOR SLAB TO UNDERSIDE THE DECK ABOVE. THE SPACE ADJACENT TO THE DECK AND OTHER SURFACES AND THE SPACES AROUND PENETRATING ITEMS SHALL BE CAULKED TO LIMIT THE FREE PASSAGE OF SMOKE.

CODE ANALYSIS LEGEND



EGRESS PATH SCHEDULE

PATH NAME	TRAVEL DISTANCE	MAXIMUM ALLOWABLE
LONGEST COMMON PATH	54'-6"	75'
LONGEST TOTAL PATH	173'-0"	250'

CLASSIFICATION OF WORK

NAME	AREA	% OF TOTAL
MAIN LEVEL		
NO WORK	65558 SF	94%
LEVEL 1 RENOVATION	4279 SF	6%
	69837 SF	100%

OCCUPANT LOAD SCHEDULE

NAME	AREA	USE CLASSIFICATION	OLF (SF/PERSON)	GROSS/NET	# OCCUPANTS
MAIN LEVEL					
RR	190 SF	-NOT OCCUPIED-	0	N/A	
STOR	114 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300	GROSS	1
STOR	133 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300	GROSS	1
CLASSROOM 1	1,261 SF	EDUCATIONAL - CLASSROOM AREA	20	NET	64
CLASSROOM 2	839 SF	EDUCATIONAL - CLASSROOM AREA	20	NET	42
SENSORY 1	166 SF	EDUCATIONAL - CLASSROOM AREA	20	NET	9
SENSORY 2	128 SF	EDUCATIONAL - CLASSROOM AREA	20	NET	7
LAB CLASSROOM	1,037 SF	EDUCATIONAL - SHOPS AND OTHER VOCATIONAL ROOM AREAS	50	NET	21
MAIN LEVEL	3,867 SF				145
TOTALS	3,867 SF				145

CODE DATA

DESCRIPTION OF PROJECT: RENOVATION OF 3 CLASSROOMS AT EXISTING MIDDLE SCHOOL. SCOPE OF WORK DOES NOT INCLUDE A CHANGE IN OCCUPANCY, BUILDING HEIGHT OR BUILDING AREA.

1.1 APPLICABLE CODES & STANDARDS
- 1.1.1 INTERNATIONAL BUILDING CODE, 2018 (IBC)
- 1.1.2 INTERNATIONAL EXISTING BUILDING CODE, 2018 (IEBC)
- 1.1.3 OMAHA MUNICIPAL CODE
- 1.1.4 INTERNATIONAL FIRE CODE (2012)
- 1.1.5 INTERNATIONAL ENERGY CODE, 2018 (IECC)
- 1.1.6 OMAHA PLUMBING CODE, 2018 (OPC)
- 1.1.7 INTERNATIONAL FUEL GAS CODE, 2012
- 1.1.8 INTERNATIONAL MECHANICAL CODE, 2012 (IMC)
- 1.1.9 ACCESSIBLE AND USABLE FACILITIES ICC A117.1-2009
- 1.1.10 NFPA 10, STANDARD FOR PORTABLE FIRE EXTINGUISHERS; 2013
- 1.1.11 NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS; 2013
- 1.1.12 NFPA 70, NATIONAL ELECTRIC CODE; 2017
- 1.1.13 NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE; 2013
- 1.1.14 NFPA 101, LIFE SAFETY CODE, 2012

1.2 OCCUPANCY CLASSIFICATION
IBC CHAPTER 3
- 1.2.1 GROUP E - EDUCATION

1.3 BUILDING HEIGHT & AREA LIMITATIONS - FULLY SPRINKLERED
IBC CHAPTER 5 - TYPE II-B
- 1.3.1 SECTION 508.3 OCCUPANCY: EDUCATION

1.4 CONSTRUCTION TYPE
IBC CHAPTER 6
- 1.4.1 TYPE II-B NONCOMBUSTIBLE CONSTRUCTION

1.5 FIRE RESISTIVE REQUIREMENTS
IBC CHAPTER 6 TABLE 601
- 1.5.1 PRIMARY STRUCTURAL FRAME = 0-HOUR RATING
- 1.5.2 BEARING WALLS, EXTERIOR = 0-HOUR RATING
- 1.5.3 BEARING WALLS, INTERIOR = 0-HOUR RATING
- 1.5.4 NON-BEARING WALLS & PARTITIONS, EXTERIOR = 0-HOUR RATING
- 1.5.5 NON-BEARING WALLS & PARTITIONS, INTERIOR = 0-HOUR RATING
- 1.5.6 FLOOR CONSTRUCTION = 0-HOUR RATING
- 1.5.7 ROOF CONSTRUCTION = 0-HOUR RATING

1.6 FIRE PROTECTION AND LIFE SAFETY SYSTEMS
CHAPTER 9
1.6.1 BUILDING IS FULLY SPRINKLERED PER NFPA 13.

1.7 MEANS OF EGRESS
IBC CHAPTER 10
- 1.7.1 MINIMUM WIDTH OF DOORS - 1008.1.1 = 32" MINIMUM, 32" PROVIDED
- 1.7.2 MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE - TABLE 1006.2.1 E (EDUCATION) = 75'
- 1.7.3 EXIT ACCESS TRAVEL DISTANCE - TABLE 1017.2; E (EDUCATION) = 250'
- 1.7.4 ARRANGEMENT OF MEANS OF EGRESS - 1007.1.1, EXCEPTION 2 = THE SEPARATION DISTANCE OF THE EXIT DOORS OR EXIT ACCESS DOORWAYS SHALL NOT BE LESS THAN ONE- THIRD OF THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE AREA SERVED
- 1.7.5 DEAD END CORRIDORS - 1020.4 E (EDUCATION) = 50'

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	JBP
Draw	JBP
Check	SLF

STAMP

0 8" 16" 32"
SCALE : 1/16" = 1'-0"

Project No. 003-10201-014
04.04.2025

CODE ANALYSIS

GI003

CONSTRUCTION DOCUMENTS

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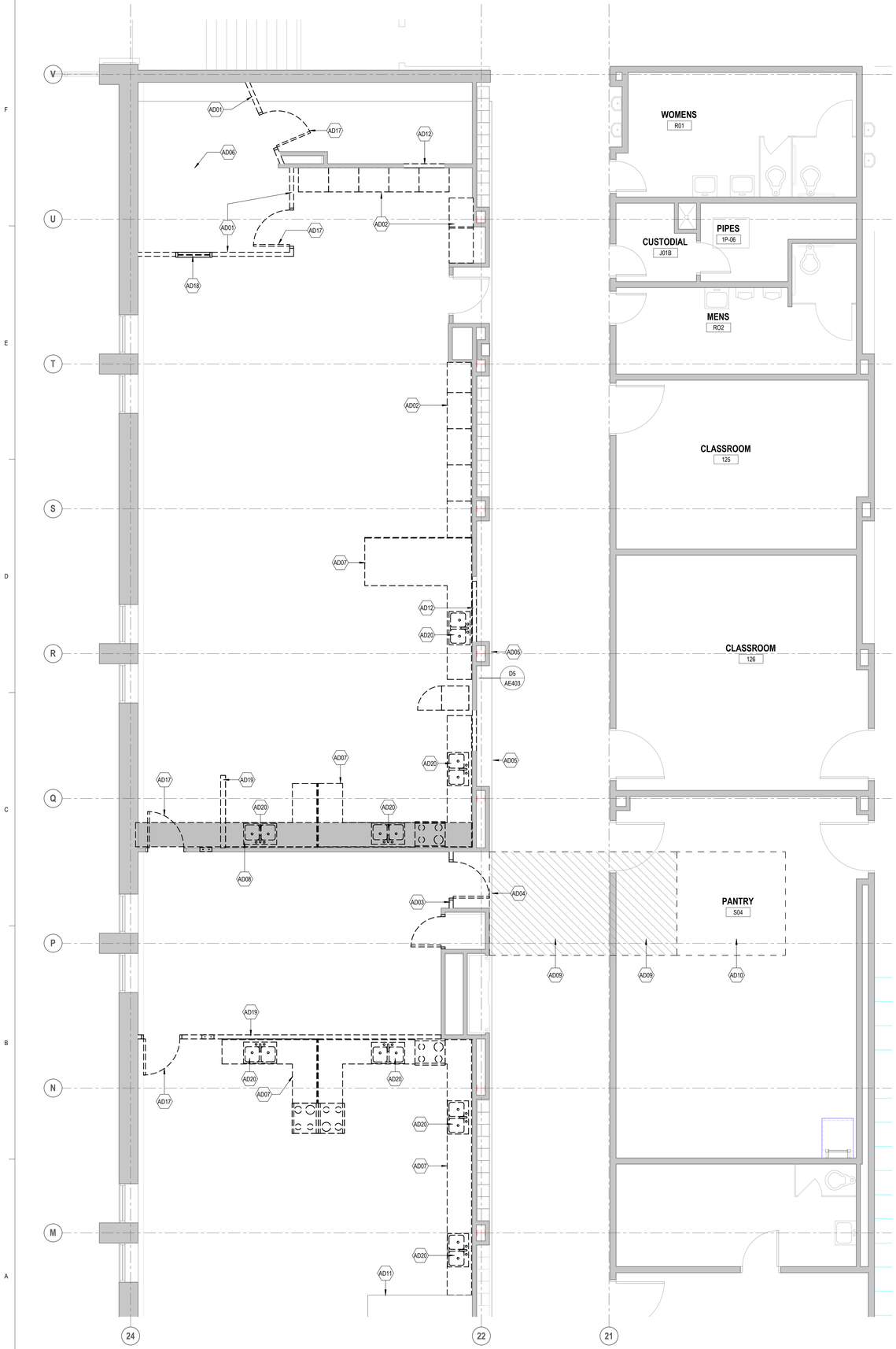
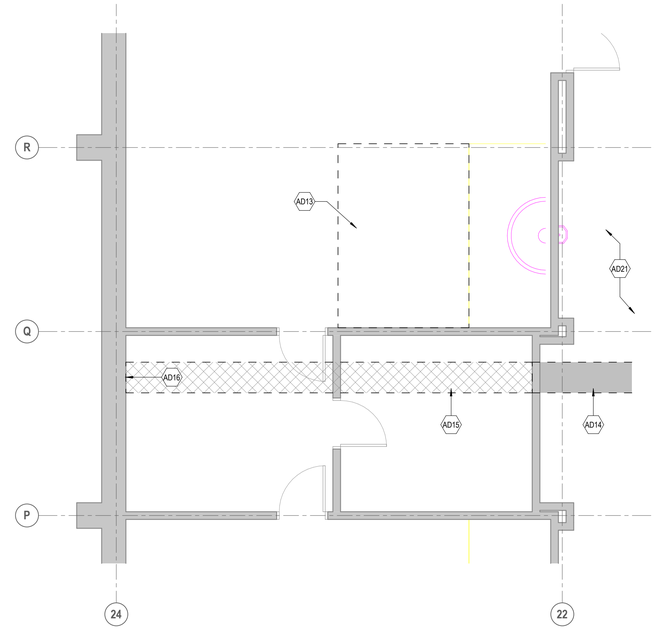


A1 ENLARGED DEMOLITION PLAN MAIN LEVEL

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



A4 ENLARGED DEMOLITION PLAN LOWER LEVEL

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

GENERAL DEMOLITION NOTES

1. HALF-TONE NOTES AND DIMENSIONS ARE PROVIDED FOR INFORMATION ONLY.
2. DASHED AREAS INDICATE MATERIAL OR EQUIPMENT TO BE REMOVED. ITEMS INDICATED TO BE REMOVED ARE TO BE REMOVED IN THEIR ENTIRETY. COORDINATE WITH OWNER ON ITEMS TO BE RETURNED.
3. CONSTRUCTION SCHEDULING AND SEQUENCING SHALL BE COORDINATED WITH THE OWNER PRIOR TO BEGINNING ANY WORK. COORDINATE DEMOLITION WORK TO ACCOMMODATE OWNER'S NORMAL OPERATIONS.
4. THE GENERAL CONTRACTOR SHALL ACCEPT THE PROJECT AS IT EXISTS.
5. REPORT CONFLICTS AND/OR DISCREPANCIES DISCOVERED IN DOCUMENTS TO THE ARCHITECT FOR CLARIFICATION PRIOR TO STARTING WORK.
6. THE EXISTING CONDITIONS, WHETHER OR NOT SPECIFICALLY NOTED ON THE DRAWINGS SHALL BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK.
7. VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK. ENSURE WITH OWNER THAT HAZARDOUS MATERIALS, INCLUDING ASBESTOS, HAVE BEEN REMOVED FROM THE BUILDING PRIOR TO COMMENCEMENT OF DEMOLITION.
8. DEMOLITION DRAWINGS INDICATE GENERAL SCOPE OF WORK ONLY. NOT ALL DEMOLITION WORK NECESSARY IS SPECIFICALLY INDICATED. THE EXTENT AND METHOD OF DEMOLITION SHALL BE AS REQUIRED TO ACCOMMODATE NEW WORK.
9. THE NOTATION "NO WORK" INDICATES THAT SUBSTANTIAL DEMOLITION ACTIVITIES ARE NOT ANTICIPATED IN THE DESIGNATED ROOM OR AREA. INCIDENTAL MODIFICATION OR DEMOLITION MAY BE REQUIRED TO ACCOMMODATE NEW WORK / SYSTEMS AS INDICATED ON OTHER DRAWINGS.
10. PATCH AND REPAIR EXISTING CONSTRUCTION WHICH IS DAMAGED OR DISTURBED DURING DEMOLITION TO MATCH EXISTING OR RESTORE TO ITS ORIGINAL CONDITION.
11. CONTRACTOR SHALL COORDINATE DEMOLITION AND CUT AND PATCHING WORK WITH NEW CONSTRUCTION TO MINIMIZE CUT AND PATCHING. SEE NEW CONSTRUCTION DRAWINGS FOR COORDINATION AND THE SPECIFICATIONS FOR CUT AND PATCHING REQUIREMENTS.
12. ALL PENETRATIONS ARE TO BE APPROVED BY THE ARCHITECT/ENGINEER PRIOR TO THE COMMENCEMENT OF ANY CUTTING AND CORING OPERATIONS.
13. ANY NEW PENETRATIONS OF STRUCTURAL FLOORS OR OTHER MEMBERS SHALL BE X-RAYED TO LOCATE REINFORCING BARS, CONDUIT OR OTHER POSSIBLE OBSTRUCTIONS.
14. REFER TO MECHANICAL AND ELECTRICAL DEMOLITION DRAWINGS FOR SPECIFIC DEMOLITION OF RELATED ITEM(S).
15. SEE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR REQUIRED MECHANICAL, ELECTRICAL AND PLUMBING DEMOLITION.
16. THE EXACT LOCATION AND EXTENT OF SUBSURFACE UTILITIES ARE NOT KNOWN. CONTRACTOR IS RESPONSIBLE FOR LOCATING SUBSURFACE UTILITIES PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR IS ALSO RESPONSIBLE FOR THE REPAIR OR RELOCATION OF ANY SUCH UTILITIES ENCOUNTERED DURING CONSTRUCTION.
17. WHERE AREAS OR ITEMS THAT ARE INDICATED TO BE REMOVED, ABUT OR ADJOIN EXISTING CONSTRUCTION INDICATED TO REMAIN, SAWCUT OR OTHERWISE REMOVE TO PROVIDE A CLEAN EDGE. IF EVIDENCE OF DEMOLITION WILL NOT BE CONCEALED BY NEW WORK, PATCH AND/OR REPAIR TRANSITION TO MATCH ADJACENT SURFACE AND FINISH.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF EXISTING STRUCTURES SURROUNDING THE CONTRACT AREA. DAMAGE TO EXISTING STRUCTURES OR EQUIPMENT SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
19. ERECT TEMPORARY PARTITIONS/BARRIERS AS REQUIRED TO PREVENT CONTAMINATION OF ADJACENT AREAS THAT ARE OR WILL BE USED BY THE OWNER. CONTAMINATION INCLUDES DUST, DEBRIS, AND EXCESSIVE NOISE CAUSED BY DEMOLITION ACTIVITIES.
20. SHORE AND/OR BRACE EXISTING WORK AS REQUIRED TO SAFELY REMOVE ITEM(S) OR EXISTING CONSTRUCTION WITHOUT DAMAGE TO EXISTING CONSTRUCTION INDICATED TO REMAIN.
21. REMOVAL WORK AT EXTERIOR OF BUILDING SHALL BE DONE IN SUCH A MANNER AS TO PREVENT MATERIALS FROM DAMAGING ADJACENT STRUCTURES OR STRUCTURES BELOW.
22. DO NOT MODIFY EXISTING STRUCTURE UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR APPROVED IN ADVANCE BY BOTH THE ARCHITECT AND STRUCTURAL ENGINEER.
23. COORDINATE WITH OWNER REGARDING MODIFICATIONS TO EXISTING AV, PHONE, SECURITY SYSTEMS, ETC. PRIOR TO DEMOLITION.
24. REMOVE FLOOR FINISHES AS NOTED AND ANY PRIOR ADHESIVES AND MAKE READY FOR NEW.
25. REMOVE CEILINGS AS NOTED AND MAKE READY FOR NEW.

GENERAL CUTTING AND PATCHING NOTES

1. MATERIALS USED FOR PATCHING SHALL BE THE SAME MATERIALS, FINISH, TEXTURE AND QUALITY AS EXISTING.
2. PATCHING SHALL MATCH SURROUNDING AREA TO BE PATCHED, UNLESS NOTED OTHERWISE. IN GENERAL, ALL NECESSARY CUTTING AND PATCHING OF CEILINGS, WALLS AND FLOORS FOR DUCTS, PIPES, AND CONDUITS WHICH ARE INDICATED ON MECH/ELECTRICAL DRAWINGS SHALL BE DONE BY THE CONTRACTOR.
3. JUNCTION BETWEEN NEW AND EXISTING FINISH MATERIALS SHALL BE FLUSH AND LEVEL. AFTER FINAL FINISH IS APPLIED, THE JOINTS BETWEEN NEW AND EXISTING MATERIALS SHALL NOT BE OBVIOUS WHEN VIEWED AT A DISTANCE OF 2 FEET.
4. IF A PATCHED AREA WITHIN A CEILING, WALL OR FLOOR DOES NOT MATCH THE SURROUNDING AREA IN THE OPINION OF THE ARCHITECT (AS NOTED ABOVE #3) THEN THAT ENTIRE CEILING, WALL OR FLOOR SHALL BE REFINISHED.

HAZARDOUS MATERIALS NOTES

1. COORDINATE EXTENT OF DEMOLITION WORK WITH OWNER.
2. COORDINATE EXTENT OF HAZARDOUS MATERIAL REMOVAL WITH OWNER'S ABATEMENT TEAM.
3. ALL HAZARDOUS MATERIALS ARE TO BE REMOVED OR ENCAPSULATED IN ACCORDANCE WITH LOCAL CODES AND APPLICABLE REGULATIONS. CONFIRM ALL AREAS OF ENCAPSULATION WITH OWNERSHIP PRIOR TO COMMENCEMENT OF WORK.

KEYNOTE LEGEND

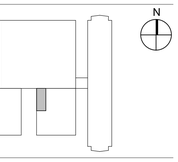
AD01	REMOVE METAL STUD PARTITIONS TO ACCOMMODATE NEW LAYOUT
AD02	REMOVE FULL HEIGHT CASEWORK
AD03	REMOVE DOOR AND PORTION OF STRUCTURAL CLAY TILE PARTITION WALL TO ACCOMMODATE ADA CLEARANCES AT NEW DOOR
AD04	REMOVE TERRAZZO FLOOR AT JOINTS. ADJ. COVE TO REMAIN. PREP SLAB FOR NEW FINISH.
AD05	SAW CUT AND REMOVE TERRAZZO BASE AND COVE AT NEW DOOR DROP. POLISH CUTS FOR FINISHED APPEARANCE. SEE CONSTRUCTION PLANS FOR EXTENTS
AD06	EXST ROOF MOUNTED SUPPORT ABOVE TO REMAIN (NOT SHOWN)
AD07	REMOVE KITCHEN CASEWORK AND APPLIANCES
AD08	CORE EXST REINFORCED CIP CONCRETE WAFFLE SLAB FOR NEW PLUMBING. COORDINATE AND SCAN EXACT LOCATIONS.
AD09	REMOVE PORTIONS OF CEILING AS NEEDED TO COMPLETE MECHANICAL SCOPE OF WORK. REPLACE IN KIND.
AD10	APPROXIMATE LOCATION OF AHU-6 ABOVE. SEE MECHANICAL.
AD11	MODIFY EXST CASEWORK TO ACCOMMODATE NEW PARTITION.
AD12	REMOVE PORTION OF STRUCTURAL CLAY TILE PARTITION WALL TO ACCOMMODATE NEW DOOR
AD13	REMOVE ABANDONED WELDING HOOD AND ASSOCIATED DUCTWORK. SEE MECHANICAL DRAWINGS.
AD14	HATCH INDICATES APPROXIMATE AREA OF WORK IN CRAWL SPACE FOR UNDERGROUND PLUMBING CONNECTION. SEE PLUMBING DRAWINGS.
AD15	HATCH INDICATES AREA OF CORING ABOVE
AD16	CORE FOR DRYER VENT. EXST 8" CMU WALL W/ 4" FACE BRICK VENEER
AD17	REMOVE ENTIRE DOOR AND DOOR FRAME
AD18	REMOVE WINDOW
AD19	REMOVE WOOD STUD PARTITIONS TO ACCOMMODATE NEW LAYOUT
AD20	REMOVE SINK AND CAP PLUMBING. SEE PLUMBING DRAWINGS.
AD21	SEE PLUMBING DRAWINGS FOR EXTENT OF OVERHEAD WORK IN CORRIDOR. REMOVE CEILING TILES AND SALVAGE FOR RELOCATION AS NEEDED. REPLACE DAMAGED TILES IN KIND.

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	JBP
Draw	JBP
Check	SLF

STAMP

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

Project No. 003-10201-014
04.04.2025

ENLARGED DEMOLITION PLANS

AD401

CONSTRUCTION DOCUMENTS

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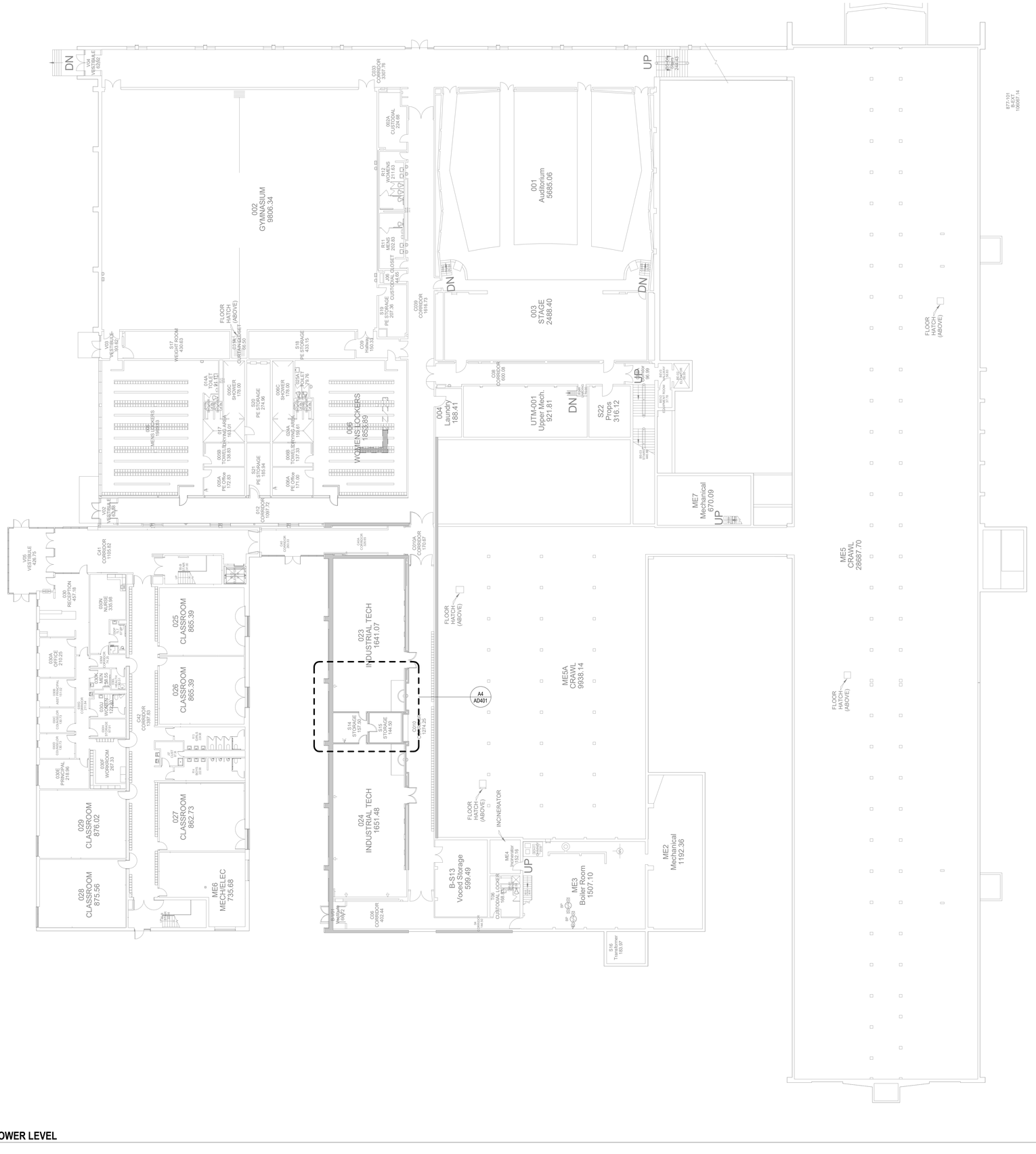


A1 FLOOR PLAN LOWER LEVEL

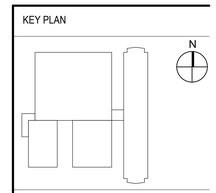
SCALE: 1/16" = 1'-0"

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	JBP
Draw	JBP
Check	SLF

STAMP

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SCALE : 1/16" = 1'-0"

Project No. 003-10201-014
04.04.2025

LOWER LEVEL FLOOR PLAN OVERALL

AE101

CONSTRUCTION DOCUMENTS

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A1 **FLOOR PLAN MAIN LEVEL**
SCALE: 1/16" = 1'-0"

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	JBP
Draw	JBP
Check	SLF

STAMP

ARCHITECT
JONATHAN B. PIELS
A-4859
STATE OF NEBRASKA
4.4.2025

0 8" 16" 32"
SCALE : 1/16" = 1'-0"

Project No. 003-10201-014
04.04.2025

MAIN LEVEL FLOOR PLAN OVERALL

AE102

CONSTRUCTION DOCUMENTS

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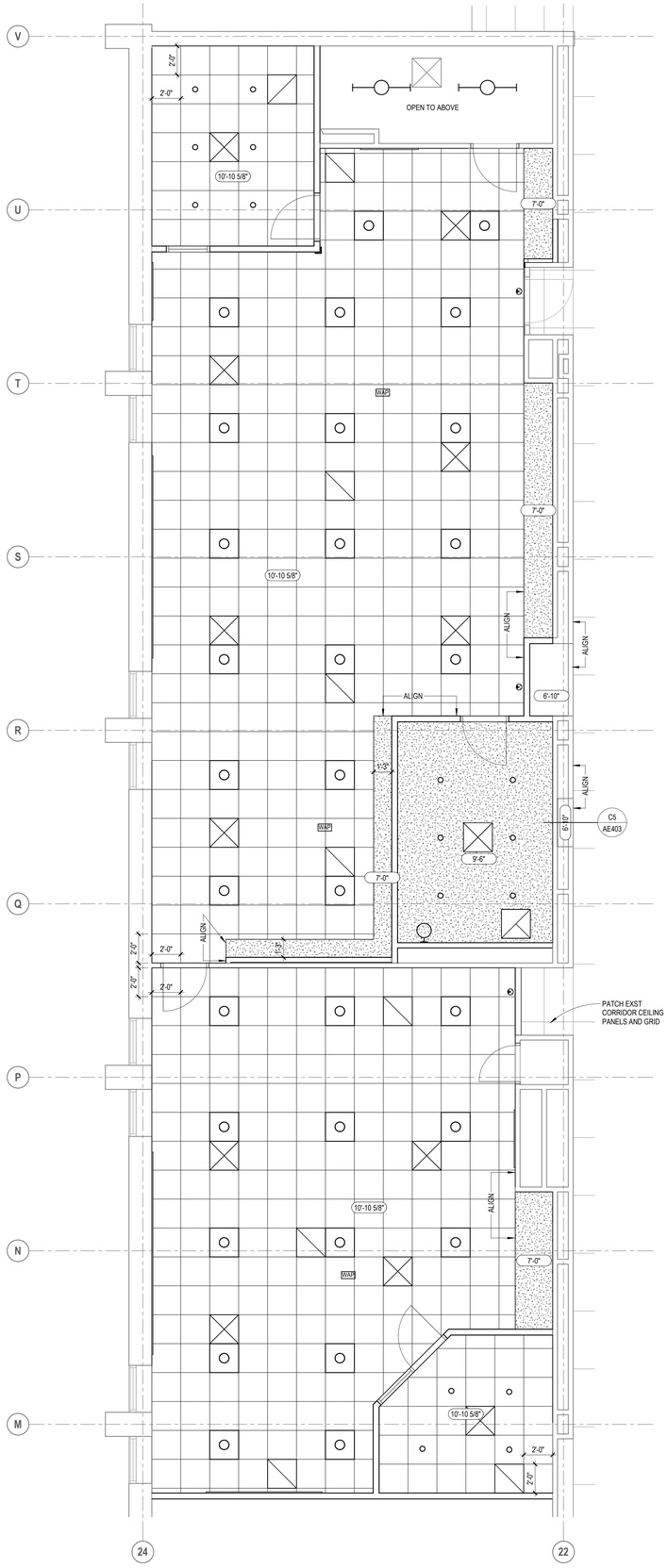


A1 REFLECTED CEILING PLAN

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

GENERAL CEILING PLAN NOTES

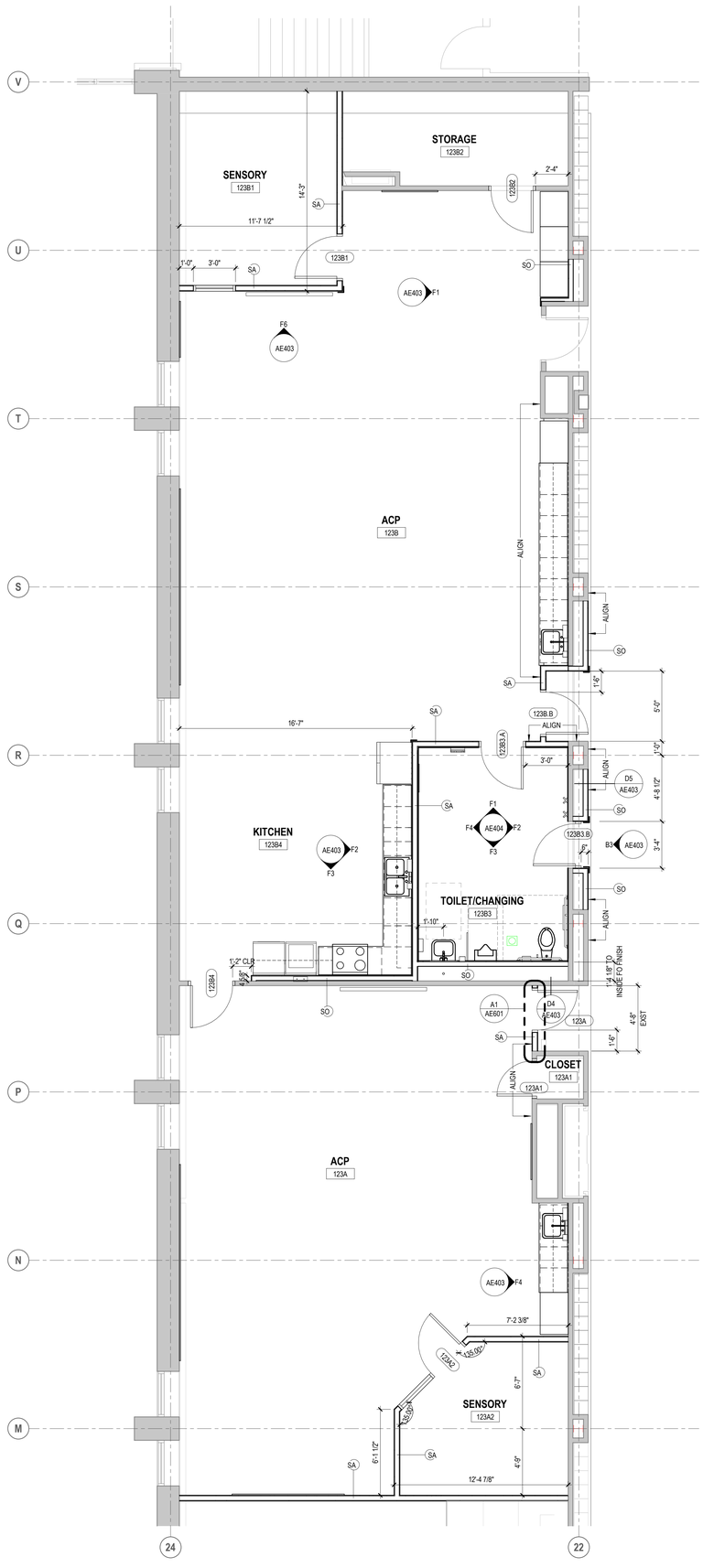
1. RELOCATE EXST SPRINKLER HEADS TO ALIGN WITH NEW CEILING LAYOUT. ADDITIONAL HEADS TO BE LOCATED AS NEEDED.
2. SPRINKLER HEADS TO BE CENTERED IN TILE.
3. MECHANICAL AND ELECTRICAL INFORMATION IS SHOWN TO COMMUNICATE DESIGN INTENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR DETAILED INFORMATION. NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.
4. COORDINATE CEILING MOUNTED EQUIPMENT SUPPORTS, DEVICE LOCATIONS, CLEARANCES, ETC. WITH EQUIPMENT INSTALLERS AND SUPPLIERS PRIOR TO INSTALLATION.
5. ALL GYPSUM BOARD CEILINGS TO BE PAINTED P-2 UNLESS NOTED OTHERWISE.
6. CEILING MOUNTED ITEMS (LIGHT FIXTURES, SPRINKLER HEADS, SPEAKERS, ETC.) SHALL BE CENTERED IN ACOUSTICAL CEILING PANELS OR GYPSUM BOARD SOFFITS UNLESS OTHERWISE NOTED OR DIMENSIONED.
7. SPACE LIGHT FIXTURES EVENLY IN ROOMS, BAYS, SPACES, ETC. AND CENTER BETWEEN EXPOSED STRUCTURAL ELEMENTS WHERE APPROPRIATE UNLESS OTHERWISE NOTED.
8. DIMENSIONS TO CEILING INSTALLED ITEMS ARE TO CENTERLINE OF FIXTURE OR EQUIPMENT UNLESS NOTED OTHERWISE.
9. PAINT VISIBLE ITEMS INCLUDING CONDUITS, DUCTWORK, SUPPORTS, HANGERS, ETC. THAT WILL REMAIN EXPOSED TO VIEW. MATCH COLOR INDICATED FOR STRUCTURE UNLESS NOTED OTHERWISE.
10. MEP TO COORDINATE LAYOUT WITH FIRE PROTECTION TO MAINTAIN CEILING HEIGHTS.
11. SUBCONTRACTORS SHALL COORDINATE WITH MECHANICAL FOR TYPICAL ACCESS PANEL LOCATIONS IN CEILINGS WHICH MAY NOT BE SHOWN ON THIS PLAN. TYPICAL. VERIFY SIZE AND LOCATION OF CEILING ACCESS PANELS WITH ABOVE CEILING MEP EQUIPMENT AND CONTROLS. VERIFY WITH ARCHITECT IF ACCESS DISCREPANCIES ARE DISCOVERED PRIOR TO INSTALLATION OF CEILINGS.

CEILING LEGEND

- RECTANGULAR LUMINAIRE
- ROUND LUMINAIRE
- STRIP LUMINAIRE
- EXIT SIGN, CEILING OR WALL MOUNT
- OCCUPANCY SENSOR, ON CEILING
- WAP — WIRELESS ACCESS POINT
- MECH SUPPLY AIR DIFFUSER
- MECH RETURN AIR DIFFUSER
- ACCOUSTICAL CEILING PANEL OR TILE SYSTEM
- GYPSUM BOARD CEILING SYSTEM
- ACCESS PANEL

NOTE:

1. SEE ELECTRICAL FOR LIGHTING FIXTURE TYPES.
2. SEE MECHANICAL FOR AIR DEVICES.
3. COORDINATE SPRINKLER HEAD LOCATIONS WITH CEILING ITEMS SHOWN.



A4 ENLARGED PLAN LEVEL 1

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

GENERAL ARCHITECTURAL NOTES

A. PARTITIONS AND WALLS
1. FLOOR PLAN DIMENSIONS ARE LOCATED FROM THE FINISHED FACE OF PARTITIONS AND COLUMN CENTERLINES, UNLESS NOTED OTHERWISE.
2. PARTITIONS SHALL BE 3-5/8 INCH METAL STUDS AT 16 INCHES ON CENTER WITH 5/8 GYPSUM WALLBOARD EACH SIDE, UNLESS NOTED OTHERWISE.
3. ALL PARTITIONS SHALL EXTEND FROM FLOOR TO UNDER SIDE OF DECK ABOVE EXCEPT WHERE NOTED OR SHOWN OTHERWISE.
4. EXTEND ALL SOUND RATED PARTITIONS TO THE UNDER SIDE OF DECK ABOVE TO PREVENT SOUND TRANSMISSION. FURNISH 4-1/4 POUNDS DENSITY GLASS FIBER INSULATION SHAPED TO FIT THE VOID ABOVE THE PARTITION WHERE AIR-BORNE SOUND CAN PENETRATE SPACES.
5. CONTROL JOINTS SHALL BE PROVIDED ABOVE DOORS AT EACH JAMB ON EACH SIDE IN STUD AND GWB PARTITIONS.
6. PROVIDE ALL WALL AND FLOOR OPENINGS FOR MECHANICAL AND ELECTRICAL ITEMS. ALL OPENINGS MORE THAN 16 INCHES WIDE IN MASONRY PARTITIONS SHALL HAVE LINTELS AS SCHEDULED ON THE STRUCTURAL DRAWINGS.
7. FOR WALL PARTITION TYPES, SEE SHEET AE601.

A. DOORS AND FRAMES
1. PROVIDE LABELS ON DOORS AND FRAMES WHERE SCHEDULED.
2. INSTALL CONTINUOUS CAULKING AROUND METAL FRAMES UNLESS NOTED OTHERWISE.
3. HOLLOW METAL FRAMES SHALL BE ANCHORED TO THE STRUCTURAL FLOOR WITH A MINIMUM OF TWO (2) ANCHOR BOLTS.
4. HOLLOW METAL FRAMES SHALL BE FILLED WITH GROUT TO THE DEPTH OF THE FRAME ANCHOR FULL HEIGHT IN ORDER TO DAMPEN HOLLOW SOUND. GROUT PRIOR TO SETTING IN PLACE.
5. INSTALL CASING (J) BEADS AND CAULK WHERE GWB ABUTS METAL FRAMES WITHOUT SLIPPING BEHIND.
6. DOOR TYPES AND SIZES ARE INDICATED IN THE DOOR AND FRAME SCHEDULE SHOWN ON SHEET AE601.

B. MISCELLANEOUS
1. PROJECT DRAWINGS ARE BASED ON RECORD DRAWINGS, ALL CONDITIONS SHOWN SHALL BE VERIFIED IN FIELD PRIOR TO FABRICATION OF NEW ITEMS. INFORM ARCHITECT OF ANY DISCREPANCIES FOUND AND REQUEST DIRECTION.
2. PROVIDE BLOCKING AS REQUIRED TO SUPPORT WALL MOUNTED ITEMS (INCLUDING, BUT NOT LIMITED TO, MAP RAILS, MARKER BOARDS, SIGNAGE, CASEWORK, MILLWORK, GRAB BARS, TOILET ACCESSORIES, AND EQUIPMENT). ANCHOR WALL ATTACHED ITEMS TO 2X6 WOOD BLOCKING ANCHORED BETWEEN STUDS, UNLESS NOTED OTHERWISE. BLOCKING SHALL BE CONTINUOUS AND LOCATED BOTH AT BOTTOM AND TOP OF EQUIPMENT.

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	JBP, EGM
Draw	JBP, EGM
Check	SLF, DLH

STAMP

ARCHITECT
JONATHAN B. PIELS
A-4859
STATE OF NEBRASKA
4.4.2025

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

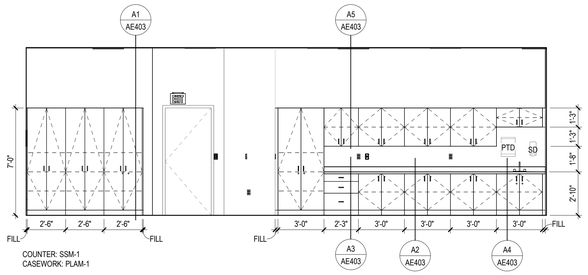
Project No. 003-10201-014
04.04.2025

ENLARGED PLANS

AE401

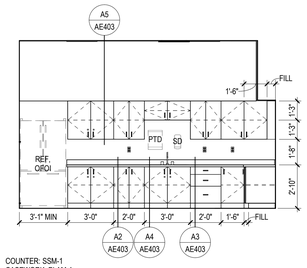
CONSTRUCTION DOCUMENTS

4/30/2025 8:37:46 AM Model: \\adfocshares\projects\003\003-10201-014\4-Production-Working\4-1-BIM-CAD\Revit\ARCH_OPSLC.rvt



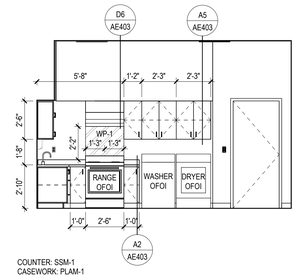
COUNTER: SSM-1
CASEWORK: PLAM-1

F1 ACP EAST
SCALE: 1/4" = 1'-0"



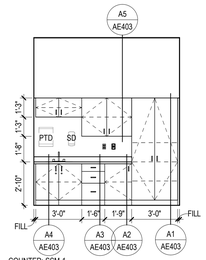
COUNTER: SSM-1
CASEWORK: PLAM-1

F2 KITCHEN EAST
SCALE: 1/4" = 1'-0"



COUNTER: SSM-1
CASEWORK: PLAM-1

F3 KITCHEN SOUTH
SCALE: 1/4" = 1'-0"



COUNTER: SSM-1
CASEWORK: PLAM-1

F4 ADDED SPACE EAST
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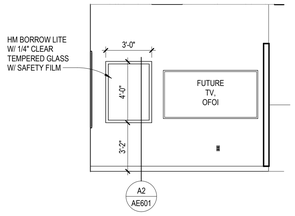

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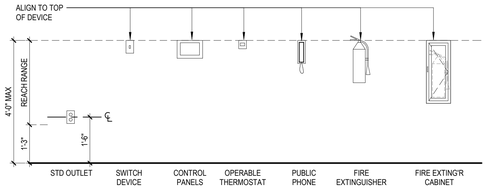
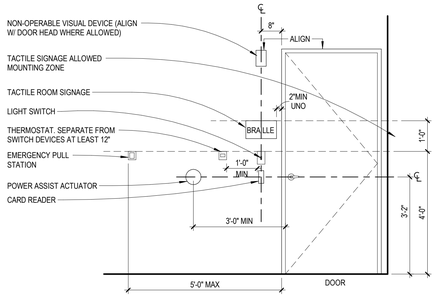
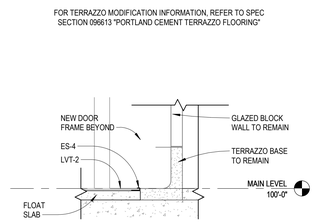
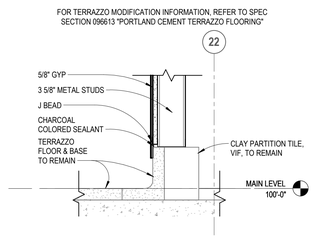




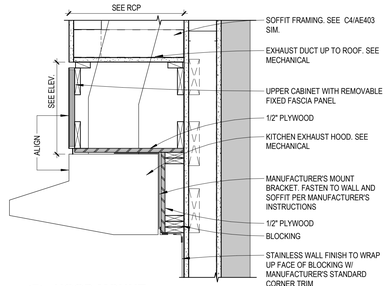
D1 WALL MOUNTED ACCESSORIES - UNOBSTRUCTED
SCALE: 1/2" = 1'-0"



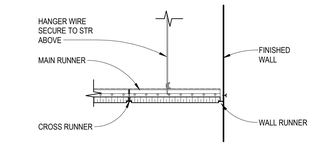
D4 FLOOR DETAIL AT DOOR
SCALE: 1 1/2" = 1'-0"



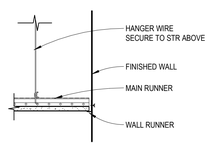
D5 FLOOR DETAIL AT EXISTING BASE
SCALE: 1 1/2" = 1'-0"



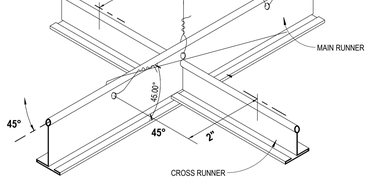
D6 HOOD MOUNT
SCALE: 1 1/2" = 1'-0"



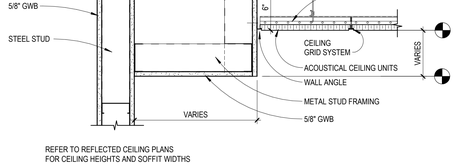
C1 APC CEILING DETAIL
SCALE: 1 1/2" = 1'-0"



C2 GYP BD CLG DETAIL
SCALE: 1 1/2" = 1'-0"

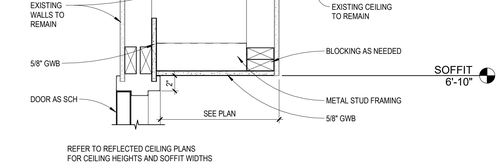


C3 SUSPENSION SYSTEM DETAIL
SCALE: 3" = 1'-0"



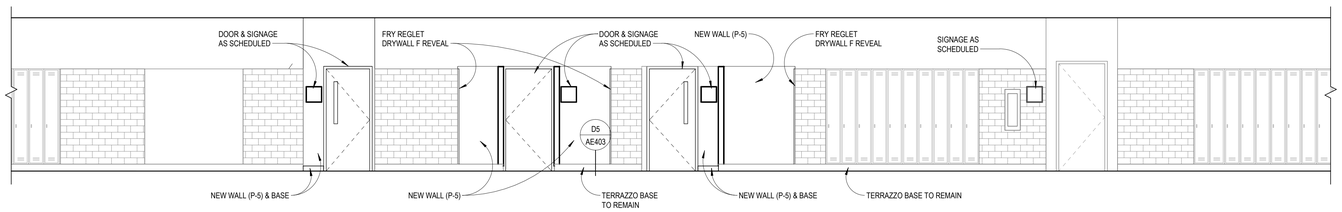
REFER TO REFLECTED CEILING PLANS
FOR CEILING HEIGHTS AND SOFFIT WIDTHS

C4 SOFFIT DETAIL - GWB AND APC 3
SCALE: 1 1/2" = 1'-0"

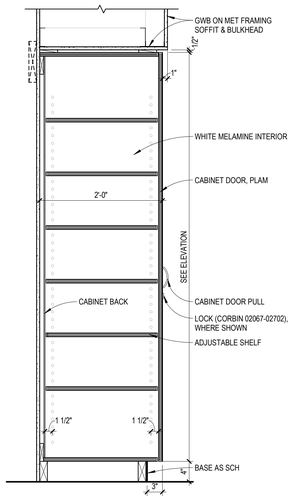


REFER TO REFLECTED CEILING PLANS
FOR CEILING HEIGHTS AND SOFFIT WIDTHS

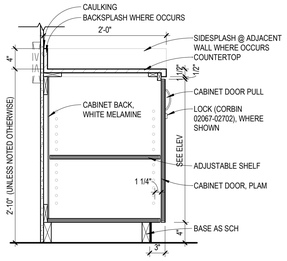
C5 SOFFIT DETAIL - CORRIDOR
SCALE: 1 1/2" = 1'-0"



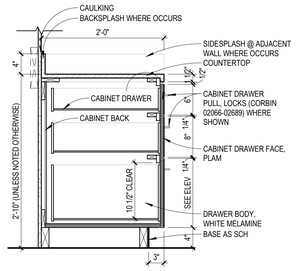
B3 CORRIDOR WEST
SCALE: 1/4" = 1'-0"



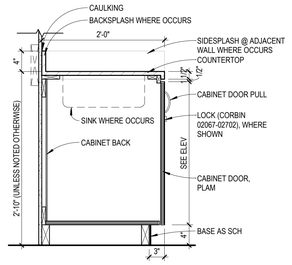
A1 WARDROBE STORAGE
SCALE: 1" = 1'-0"



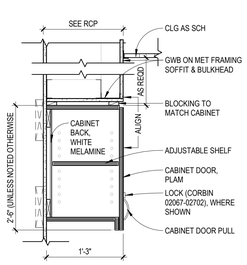
A2 TYP BASE
SCALE: 1" = 1'-0"



A3 3-DRAWER BASE
SCALE: 1" = 1'-0"



A4 SINK BASE
SCALE: 1" = 1'-0"



A5 TYP UPPER
SCALE: 1" = 1'-0"

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	JBP, EGM
Draw	JBP, EGM
Check	SLF, DLH

STAMP

ARCHITECT
JONATHAN B. PIELS
A-4559
STATE OF NEBRASKA
4.4.2025

SCALE : 1/4" = 1'-0"
0 1" 2" 4"
SCALE : 1/2" = 1'-0"
0 1/2" 1" 2"
SCALE : 1" = 1'-0"
0 1/2" 1" 1 1/2"
SCALE : 1 1/2" = 1'-0"
0 3" 6" 9"
SCALE : 3" = 1'-0"

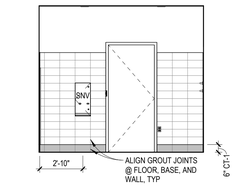
Project No. 003-10201-014
04.04.2025

INTERIOR ELEVATIONS AND DETAILS

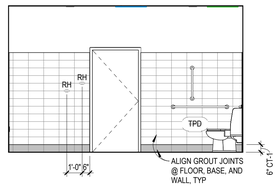
AE403

CONSTRUCTION DOCUMENTS

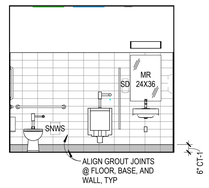
4/30/2025 8:44:34 AM Model: \\adodcfshares\projects\003\003-10201-014\14-0-Production-Working\14-1-BIM-CAD\Revit\ARCH_OPSLC.rvt



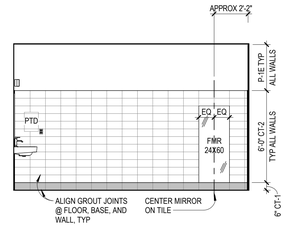
F1 TOILET NORTH
SCALE: 1/4" = 1'-0"



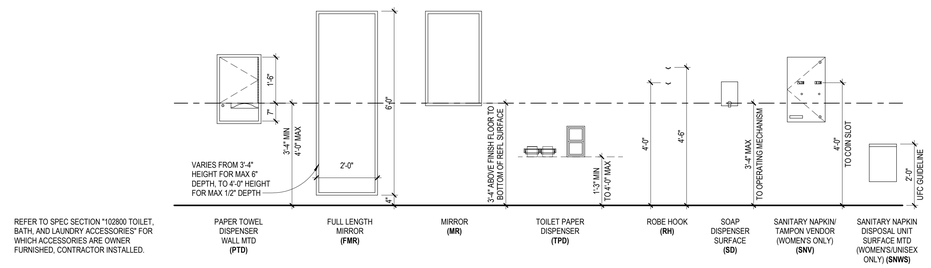
F2 TOILET EAST
SCALE: 1/4" = 1'-0"



F3 TOILET SOUTH
SCALE: 1/4" = 1'-0"



F4 TOILET WEST
SCALE: 1/4" = 1'-0"



B1 TOILET FIXTURE AND ACCESSORIES
SCALE: 1/2" = 1'-0"

GENERAL SHEET NOTES

1. ACCESSIBILITY DETAILS SHOWN SHALL BE USED WHERE ACCESSIBLE WORK IS IDENTIFIED IN THESE DOCUMENTS. CONTRACTOR SHALL THOROUGHLY REVIEW THESE DOCUMENTS. SHOULD ANY CONFLICTS IN THESE DOCUMENTS ARISE, THE CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE IN WRITING PRIOR TO PURCHASE, INSTALLATION, AND CONSTRUCTION OF ANY ELEMENT OF THE WORK.

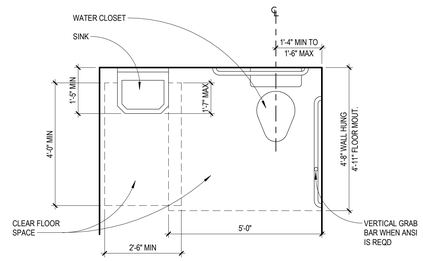
2. APPLICABLE ACCESSIBILITY STANDARDS AND CODES ARE SHOWN IN THE CODE INFORMATION ON SHEET **GI003.**

3. WHERE MORE THAN ONE CODE AND / OR STANDARD IS INDICATED AS BEING APPLICABLE, THE MOST STRINGENT CASE SHALL BE ADHERED TO.

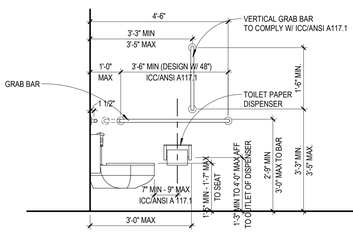
4. STANDARDS AND CODES ON THIS SHEET ARE APPLICABLE TO ADA, ICC/ANSI A117.1 AND INTERNATIONAL PLUMBING CODE, UNLESS OTHERWISE NOTED.

5. WHEN ICC/ANSI A117.1 IS INDICATED AS APPLICABLE, THE NOTE "ICC/ANSI A117.1 "GOVERNS" APPLIES.

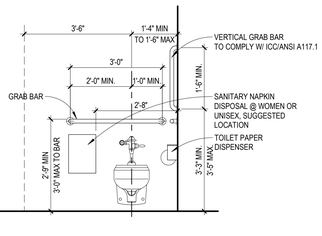
6. TOE CLEARANCE AT THE FRONT OF THE PARTITIONS IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 5'-2" DEEP WITH A WALL-HUNG WATER CLOSET OR 5'-5" DEEP WITH A FLOOR-MOUNTED WATER CLOSET. TOE CLEARANCE AT THE SIDE IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 5'-6" WIDE (ICC/ANSI A117.1). TOE CLEARANCE IS EXCLUSIVE OF PARTITION SUPPORT MEMBERS. IF DEPTH OF STALL IS GREATER THAN 5'-0" TOE CLEARANCE DOES NOT APPLY - ADA/ANSI A117.1 GOVERNS).



CLEARANCE AT WATER CLOSET

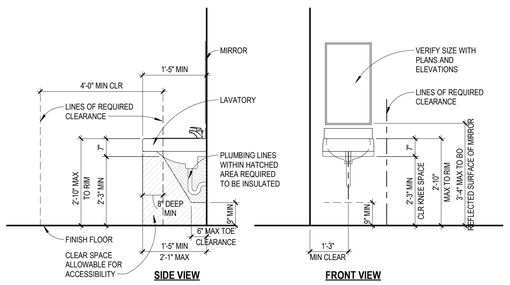


SIDE WALL



REAR WALL

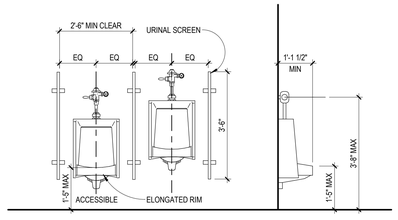
A1 ACCESSIBLE TOILET CLEARANCE
SCALE: 1/2" = 1'-0"



SIDE VIEW

FRONT VIEW

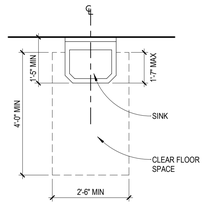
A2 ACCESSIBLE LAVATORY CLEARANCE
SCALE: 1/2" = 1'-0"



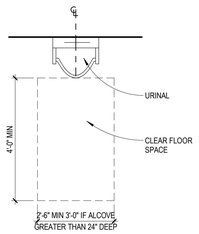
FRONT VIEW

SIDE VIEW

A3 ACCESSIBLE URINAL CLEARANCES
SCALE: 1/2" = 1'-0"



CLEARANCE AT SINK



CLEARANCE AT URINAL

A4 CLEAR FLOOR SPACES
SCALE: 1/2" = 1'-0"

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	JBP, EGM
Draw	JBP, EGM
Check	SLF, DLH

STAMP

ARCHITECT
JONATHAN B. PIELS
A-4859
STATE OF NEBRASKA
04.04.2025

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

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

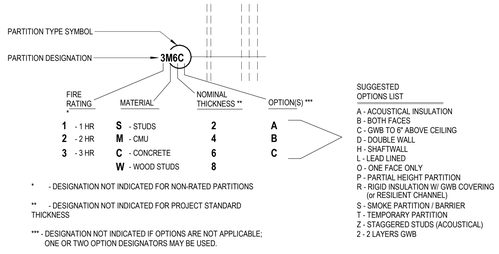
Project No. 003-10201-014
04.04.2025

RESTROOM ELEVATIONS AND DETAILS

AE404

CONSTRUCTION DOCUMENTS

4/30/2025 8:37:48 AM Model: \\adcrs\shares\projects\003\003-10201-01414-0-Production-Working\4-1-BIM-CAD\Revit\ARCH_OPSLC.rvt



* - DESIGNATION NOT INDICATED FOR NON-RATED PARTITIONS

** - DESIGNATION NOT INDICATED FOR PROJECT STANDARD THICKNESS

*** - DESIGNATION NOT INDICATED IF OPTIONS ARE NOT APPLICABLE; ONE OR TWO OPTION DESIGNATORS MAY BE USED.

PARTITION TYPES LEGEND

GENERAL NOTES:

1. PROVIDE MINIMUM 0.0312" STUDS @ WALLS TO RECEIVE FINISH (TILE, STONE, WOOD, ETC).
2. PROVIDE MINIMUM 0.0312" STUDS @ JAMBS OF DOOR AND FIXED GLASS FRAMES, @ OPEN PARTITION ENDS, AND WHERE PARTITION IS TO RECEIVE WALL MOUNTED SHELVES, CASEWORK, PLUMBING FIXTURES, ETC.
3. USE 5/8" FR GWB @ ALL FIRE-RATED PARTITIONS, ANCHOR W/ SCREWS @ 8" OC ON EDGES @ 12" OC IN FIELD PER UL DESIGN NUMBERS LISTED.
4. SEE ALL SPECIFICATIONS FOR GWB REQUIREMENTS @ TOILETS AND ALL WET AREAS.
5. APPLIES TO POWER AND COMMUNICATIONS, ETC.
   A) BACK-TO-BACK PLACEMENT OF OUTLET BOXES NOT PERMITTED.
   B) PLUG ALL UNUSED KNOCK-OUTS IN OUTLET BOXES WITH KNOCK-OUT CAPS.
   C) PROVIDE 'HILTI' FIRESTOP PUTTY PAD OR EQUAL TO OUTLET BOXES IN FIRE-RATED WALLS OR WHERE OTHERWISE INDICATED.
   D) DEPTH OF OUTLET BOX TO BE COMPATIBLE WITH STUD SIZES IN ORDER TO ACCOMMODATE BOX PAD.
6. PROVIDE 2" x 8" FIRE TREATED WOOD BLOCKING @ WALL HUNG CASEWORK, SHELVES, COUNTERTOPS, HEAVY WALL SCONCES, AND MAJOR ARTWORK.
7. NOTE: THE DIAGONAL BRACING COLUMN INDICATES THAT THE CONTRACTOR HAS AN OPTION TO PROVIDE BRACING TO REDUCE THE VERTICAL SPANS OF STUDS IN ORDER TO MINIMIZE SIZE, GAGE OR SPACING, PROVIDED THAT DOING SO DOESN'T CONFLICT WITH ARCHITECTS DESIGN CRITERIA.

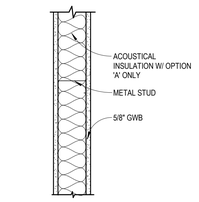
INTERIOR STUD CHART NOTES:

* REFERENCE STEEL STUD MANUFACTURER ASSOCIATION'S STANDARDS FOR SECTION PROPERTIES AND DESIGN OF STUD SIZE LISTED HERE.

USE L/240 DEFLECTION CHART FOR ALL AREAS UNLESS OTHERWISE NOTED.

INTERIOR STUD GAGE AND SPACING CHART*

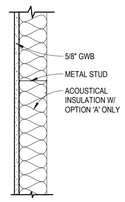
STUD WIDTH	DESIGN THICKNESS (GAGE)	STUD SPACING (INCHES)	PARTITION HEIGHT DEFLECTION VALUE 5 psf L/120	L/240	L/360	BRACING SPACING WHERE OCCURS
1 5/8"	0.0179" (25)	16"	10'-7"	8'-4"	-	4'-0" OC
		24"	9'-9"	7'-11"	-	4'-0" OC
	0.0312" (20)	16"	12'-1"	9'-8"	8'-5"	4'-0" OC
		24"	11'-0"	8'-9"	7'-8"	4'-0" OC
2 1/2"	0.0179" (25)	16"	13'-3"	11'-3"	9'-10"	6'-0" OC
		24"	11'-10"	10'-7"	9'-3"	6'-0" OC
	0.0312" (20)	16"	16'-5"	12'-10"	11'-2"	6'-0" OC
		24"	14'-10"	11'-7"	10'-0"	6'-0" OC
3 5/8"	0.0179" (25)	16"	15'-4"	14'-4"	12'-4"	8'-0" OC
		24"	13'-9"	13'-5"	11'-7"	8'-0" OC
	0.0312" (20)	16"	20'-8"	16'-5"	14'-3"	8'-0" OC
		24"	18'-6"	14'-9"	12'-9"	8'-0" OC
4"	0.0179" (25)	16"	17'-2"	15'-4"	13'-4"	8'-0" OC
		24"	15'-1"	14'-2"	12'-4"	8'-0" OC
	0.0312" (20)	16"	23'-1"	18'-4"	15'-11"	8'-0" OC
		24"	20'-9"	16'-5"	14'-3"	8'-0" OC
6"	0.0179" (25)	16"	19'-9"	19'-9"	17'-11"	10'-0" OC
		24"	16'-9"	16'-9"	16'-9"	10'-0" OC
	0.0312" (20)	16"	30'-10"	24'-6"	21'-4"	10'-0" OC
		24"	27'-2"	21'-7"	18'-10"	10'-0" OC



NON-RATED PARTITION

S — 3 5/8" METAL STUDS @ 16" OC W/ 5/8" GWB BOTH SIDES TO STRUCTURE

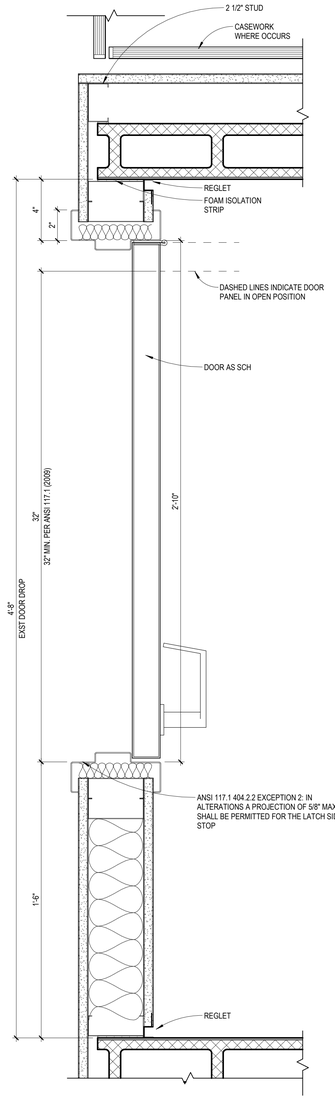
SA — 3 5/8" METAL STUDS @ 16" OC W/ ACOUSTICAL INSULATION W/ 5/8" GWB BOTH SIDES TO STRUCTURE, STC 49



OPTION 'O' - ONE GWB FACE ONLY

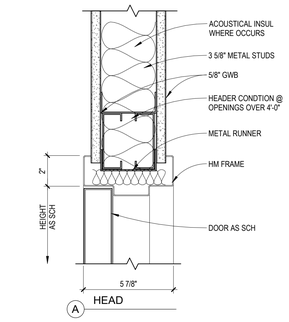
SO — 3 5/8" METAL STUDS @ 16" OC W/ 5/8" GWB ONE FACE ONLY TO STRUCTURE

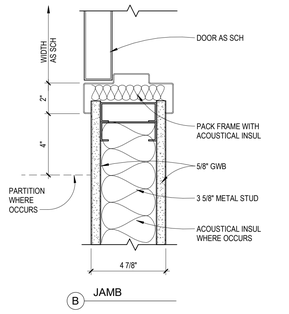
PARTITION TYPES STUD (PLANS)



A1 HM DOOR FRAME JAMB

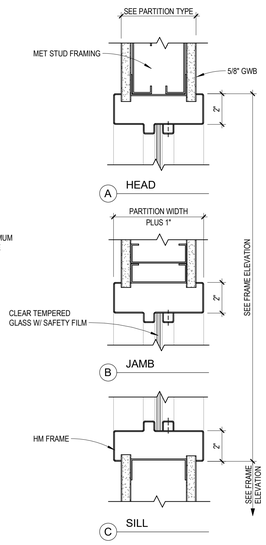
SCALE: 3" = 1'-0"





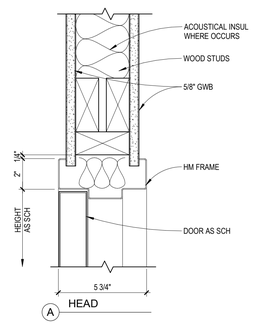
C2 HM DOOR FRAME DETAIL AT METAL STUDS

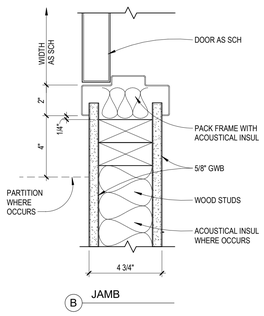
SCALE: 3" = 1'-0"



A2 BORROWED LIGHT DETAILS

SCALE: 3" = 1'-0"



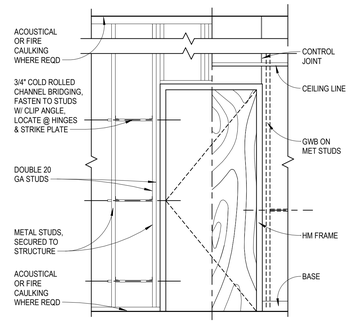


A3 HM DOOR FRAME DETAIL AT WOOD STUDS

SCALE: 3" = 1'-0"

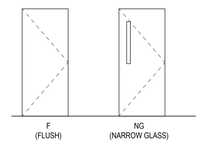
DOOR SCHEDULE

DOOR NO.	DOOR WIDTH	DOOR HEIGHT	DOOR HDWE SET	DOOR TYPE	DOOR MAT'L	DOOR FIN.	FRAME TYPE	FRAME MAT'L	FRAME FIN.	FRAME DET NOS	FRAME DET SHT	LABEL HOUR	REMARKS
123A	2'-10"	6'-8"	2	NG	WD	WD-1	1	HM	P-3	A1	AE601	--	
123A1	2'-6"	7'-0"	3	F	WD	WD-1	1	HM	P-3	A3	AE601	--	
123A2	3'-0"	7'-0"	1	F	WD	WD-1	2	HM	P-3	A2	AE601	--	
123B1	3'-0"	7'-0"	1	F	WD	WD-1	1	HM	P-3	C2	AE601	--	
123B2	3'-0"	7'-0"	3	F	WD	WD-1	1	HM	P-3	A3	AE601	--	
123B3.A	3'-0"	7'-0"	4	F	WD	WD-1	1	HM	P-3	C2	AE601	--	
123B3.B	3'-0"	6'-8"	5	F	WD	WD-1	1	HM	P-3	A3	AE601	--	
123B4	3'-0"	7'-0"	1	F	WD	WD-1	1	HM	P-3	A3	AE601	--	
123B.B	3'-0"	6'-8"	2	NG	WD	WD-1	1	HM	P-3	C2	AE601	--	

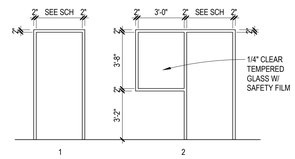


A4 TYPICAL DOOR FRAMING

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



DOOR TYPES



FRAME TYPES

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	JBP
Draw	JBP
Check	SLF

STAMP

ARCHITECT JONATHAN B. PIELS A-4859 STATE OF NEBRASKA 4.4.2025

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

SCALE : 3" = 1'-0"

Project No. 003-10201-014
04.04.2025

PARTITION TYPES, DOOR DETAILS & SCHEDULE

AE601

CONSTRUCTION DOCUMENTS

Model: \\adcdclsharesprojects\003\003-10201-014\4-0 Production-Working\4-1-BIM-CAD\Revit\ ARCH_OPSLC.rvt
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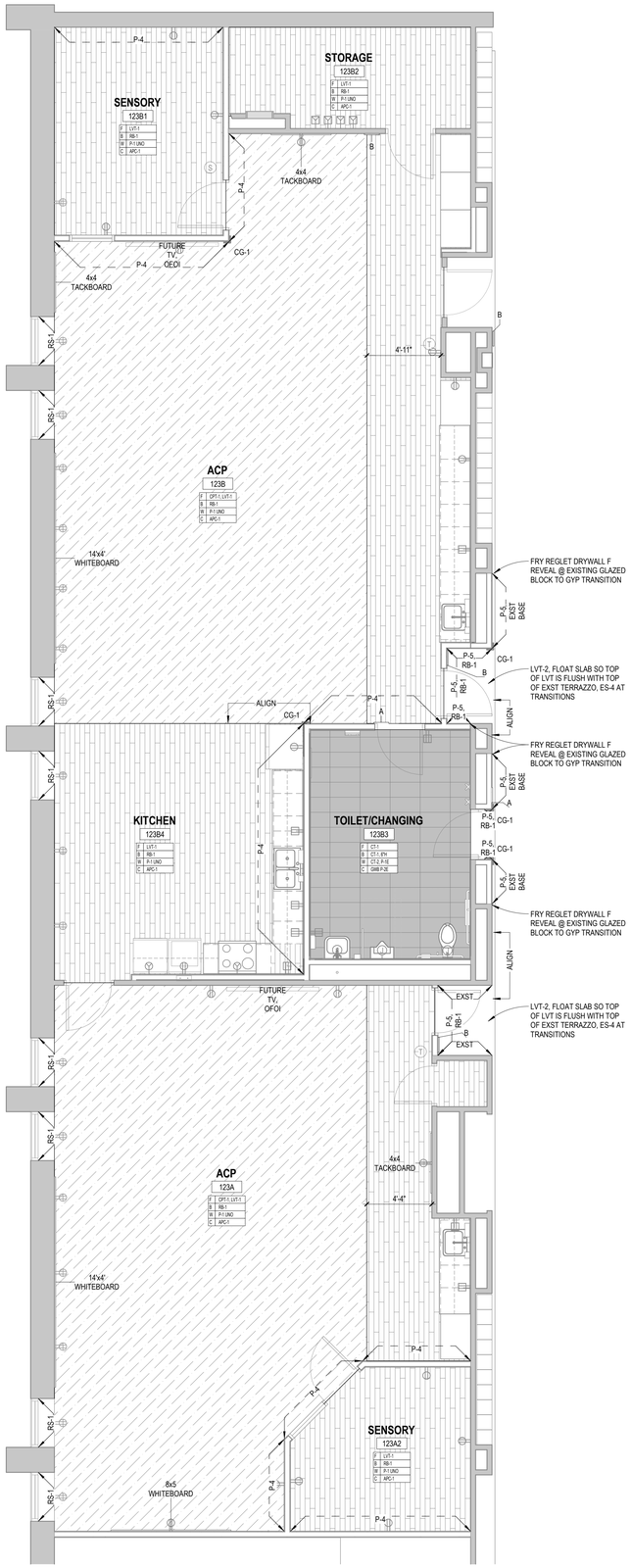
SIGNAGE SCHEDULE

ROOM NO. / DOOR TAG	ROOM NAME	SIGN TYPE	MESSAGE LINE 1	MESSAGE LINE 2	MESSAGE LINE 3	REMARKS
A						
123B3	TOILET/CHANGING	A	[NAME]	[NUMBER]	[BRAILLE]	
123B3	TOILET/CHANGING	A	[NAME]	[NUMBER]	[BRAILLE]	
A: 2 QUANTITY						
B						
		B	NOTE 1	[NUMBER]	[BRAILLE]	
123A	ACP	B	NOTE 1	[NUMBER]	[BRAILLE]	
123B	ACP	B	NOTE 1	[NUMBER]	[BRAILLE]	
123B2	STORAGE	B	[NAME]	[NUMBER]	[BRAILLE]	
B: 4 QUANTITY						

SIGNAGE STYLE AND COLORS TO COMPLY WITH EXISTING FACILITY SIGNAGE STANDARDS
RESTROOM SIGNAGE - COMPLY WITH ICC A117.1 703 AND ADAAG CHAPTER 7
NOTE 1: ACP ROOM IDENTIFICATION NAME TO COMPLY WITH OMAHA PUBLIC SCHOOL STANDARDS AND TO BE COORDINATED WITH THE CLIENT



1 **ENLARGED FINISH PLAN LEVEL 1**
SCALE: 1/4" = 1'-0"

GENERAL FINISH NOTES

1. SEE SHEET **GI002** FOR COMPLETE LIST OF SYMBOLS AND ABBREVIATIONS.
2. "UNO" WITHIN A ROOM FINISH TAG INDICATES A CHANGE IN FINISH. REFER TO FINISH PLANS, ELEVATIONS, REFLECTED CEILING PLANS, AND/OR DETAILS FOR EXTENTS OF CHANGES IN FINISHES.
3. REFER TO SECTION 090609 COLOR SCHEDULE FOR COLOR / MATERIAL INFORMATION.
4. NOT ALL FINISHES ARE SHOWN IN THE FINISH PLAN; REFER TO ELEVATIONS, REFLECTED CEILING PLAN, AND SECTION 090609 COLOR SCHEDULE FOR A COMPLETE LIST.
5. FLOORING TRANSITIONS BETWEEN ROOMS SHALL BE AT CENTERLINE OF DOOR WHEN CLOSED, UNO. REFER TO SECTION 090609 FOR EDGE STRIP INFORMATION.
6. ALL EXPOSED TILE EDGES TO BE FINISHED WITH METAL TRANSITION STRIP (ES), UNO. REFER TO SECTION 090609 FOR EDGE STRIP INFORMATION.
7. SEE FINISH PLANS AND/OR REFLECTED CEILING PLANS FOR LOCATIONS OF ROLLER SHADES (RS). ENSURE ADEQUATE BACKING IN EXISTING WINDOW FRAME. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTION.
8. SOFFITS SHALL BE PAINTED TO MATCH ADJACENT PARTITIONS AND/OR SURFACES, UNO.
9. INSTALLATION PATTERNS OF FLOORING ARE INDICATED ON DRAWINGS.
10. INSTALLATION PATTERNS OF WALL TILE ARE INDICATED ON ELEVATIONS.
11. GWB WALLS SHALL BE PREPARED TO A LEVEL 4 FINISH AT ALL EXPOSED, PAINTED LOCATIONS, TYP.
12. FINISHES OUTSIDE OF DESIGNATED PROJECT SCOPE AREA THAT ARE DISTURBED BY CONSTRUCTION SHALL BE REPAIRED WITH NEW FINISHES TO MATCH EXISTING.
13. CONTRACTOR SHALL COORDINATE WALL MOUNTED DEVICES AMONG ALL CONTRACTORS WHOSE DEVICES ARE TO BE LOCATED IN A GIVEN SPACE. DEVICE SHALL BE ALIGNED WITH EACH OTHER AT A COMMON HEIGHT AND SHALL COMPLY WITH ADA ACCESSIBLE MOUNTING HEIGHTS AND LOCAL CODES AS INDICATED IN THE DOCUMENTS. DEVICES THAT ARE MOUNTED HIGHER ON A WALL SHALL BE ALIGNED VERTICALLY WITH OTHER DEVICES PRESENT BELOW. WHERE ALIGNMENT, LOCATION, OR HEIGHTS ARE UNCLEAR, CONTRACTOR SHALL NOTIFY ARCHITECT, PRIOR TO INSTALLATION.
14. REFER TO FINISH PLAN FOR TV LOCATIONS. TVS ARE SHOWN FOR REFERENCE ONLY AND ARE PROVIDED BY OTHERS. VERIFY MOUNTING HEIGHT WITH OWNER. PROVIDE SUFFICIENT BACKING IN WALL.

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Tel 402.391.8111 Fax 402.391.8564
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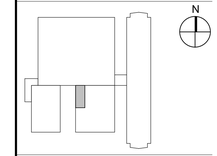
KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	EGM
Draw	EGM
Check	

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Project No. 003-10201-014
04.04.2025

ENLARGED FINISH PLAN

IN101

CONSTRUCTION DOCUMENTS

4/30/2025 8:37:48 AM Model: \\adocshares\projects\003\003-10201-014\4-Production-Working\4-1-BIM-CAD\Revit\ARCH_OPSLC.rvt

PIPING LINES	
SYMBOL	DESCRIPTION
SS	SANITARY SEWER (BELOW FLOOR)
SD	STORM DRAIN (BELOW FLOOR)
SDO	STORM DRAIN OVERFLOW (BELOW FLOOR)
SSD	SUBSOIL DRAIN (BELOW FLOOR)
SS	SANITARY SEWER (ABOVE FLOOR)
SD	STORM DRAIN (ABOVE FLOOR)
SDO	STORM DRAIN OVERFLOW (ABOVE FLOOR)
SSD	SUBSOIL DRAIN (ABOVE FLOOR)
V	SANITARY VENT
AW	ACID WASTE (BELOW FLOOR)
AW	ACID WASTE (ABOVE FLOOR)
AV	ACID VENT
-	DOMESTIC COLD WATER
- -	DOMESTIC HOT WATER
- - -	DOMESTIC HOT WATER RECIRCULATING
-T-	TEMPERED WATER
-T- -	TEMPERED WATER RECIRCULATING
SSO	DRINKING WATER SUPPLY
SSR	DRINKING WATER RECIRCULATING
IRM	IRRIGATION WATER MAIN
G	NATURAL GAS
F	FIRE LINE
SM	SPRINKLER MAIN
FOS	FUEL OIL SUPPLY
FOR	FUEL OIL RETURN
FOV	FUEL OIL VENT
FOF	FUEL OIL FILL
FOG	FUEL OIL GAGE
NPCW	NON POTABLE COLD WATER
NPHW	NON POTABLE HOT WATER
SCW	SOFT COLD WATER
SHW	SOFT HOT WATER
ROR	REVERSE OSMOSIS RETURN
ROS	REVERSE OSMOSIS SUPPLY
PWS	PURE WATER SUPPLY
PWR	PURE WATER RETURN

MEDICAL GAS PIPING	
A	COMPRESSED AIR
V	VACUUM
MA	MEDICAL COMPRESSED AIR
MV	MEDICAL VACUUM
OX	OXYGEN
N2O	NITROUS OXIDE
N	NITROGEN
CO2	CARBON DIOXIDE
WAGD	WASTE ANESTHETIC GAS DISPOSAL
DA	DENTAL AIR
DSV	DENTAL SURGICAL VACUUM
DV	DENTAL VACUUM
IA	INSTRUMENT AIR
OE	ORAL EVACUATION

PIPE VALVES, FITTINGS, SENSORS AND GAGES	
SYMBOL	DESCRIPTION
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	ECCENTRIC PLUG VALVE
	BALL VALVE
	STRAINER
	UNION
	FLANGE
	CAP
	BLIND FLANGE
	BALANCING VALVE
	GAS COCK
	PRESSURE REGULATING VALVE
	SOLENOID VALVE
	CONTROL VALVE (2-WAY)
	CONTROL VALVE (3-WAY)
	THERMOMETER
	PRESSURE GAGE
	SAFETY RELIEF VALVE
	COCK (GAGE, AIRVENT, DRAIN)
	PIPE ANCHOR
	PIPE GUIDE
	PIPE EXPANSION COMPENSATOR
	VACUUM BREAKER
	SUPERVISED O.S.& Y VALVE
FE	FLOW MEASURING ELEMENT
	TEST PLUG
	SIGHT GLASS (FLOW TYPE)
	AIR ELIMINATOR
	TEMPERATURE & PRESSURE RELIEF VALVE
	STEAM TRAP
	PIPE ELBOW UP
	PIPE ELBOW DOWN
	PIPE TEE UP
	PIPE TEE DOWN
CO	CLEANOUT
FCO	FLOOR CLEANOUT
GCO	GRADE CLEANOUT
WCO	WALL CLEANOUT
	FLEXIBLE PIPE CONNECTION
(DRAINS)	DRAINS - FLOOR - FD, TRENCH - TD, AREA - AD
RD.	ROOF DRAIN OR OVERFLOW ROOF DRAIN
HB.	HOSE BIBB
WH.	WALL HYDRANT
	FIRE DEPARTMENT CONNECTION
FS	FLOW SWITCH
M	WATER METER
	BACKFLOW PREVENTER
FHC	FIRE HOSE CABINET
FVC	FIRE VALVE CABINET

GENERIC ANNOTATIONS	
SYMBOL	DESCRIPTION
	CONTINUATION - PIPE NOT SHOWN
	CONNECT TO EXISTING
#	KEYNOTE
EQUIP ID	MECHANICAL EQUIPMENT TAG

PLUMBING GENERAL DEMO NOTES

1. ALL LINEWORK SHOWN BOLD, DASHED, OR HATCHED ON DEMOLITION DRAWINGS ARE TO BE REMOVED UNLESS NOTED OTHERWISE.
2. ALL EXISTING EQUIPMENT, PIPING, AND ACCESSORIES SHOWN HALFTONE ARE EXISTING AND TO REMAIN.
3. NOT ALL EXISTING EQUIPMENT, PIPING, AND ACCESSORIES ARE SHOWN FOR CLARITY. THE SIZES AND LOCATIONS OF EXISTING EQUIPMENT, PIPING, AND DUCTWORK ARE SHOWN ACCORDING TO RECORD INFORMATION. CONTRACTOR SHALL MAKE APPROPRIATE PRE-BID SITE INSPECTIONS IN ORDER TO ASCERTAIN EXISTING CONDITIONS AND SHALL INCLUDE IN BID THE COST OF ALL WORK RESULTING FROM EXISTING CONDITIONS. REFER ALL QUESTIONS TO THE A/E PRIOR TO BID FOR CLARIFICATION.
4. ALL UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO START OF WORK.
5. DEMOLITION WORK THAT WILL INTERRUPT PLUMBING CONTINUITY TO OTHER AREAS OF THE FACILITY THAT ARE TO REMAIN IN OPERATION, SHALL BE COORDINATED WITH THE OWNER TO ACCOMMODATE THE OWNER'S NEEDS AS REQUIRED.
6. PATCH ALL FLOOR AND WALL PENETRATIONS EXPOSED BY DEMOLITION OF PIPING, AND EQUIPMENT UNLESS THE OPENING WILL BE REUSED. INTENT IS TO REUSE AS MANY EXISTING OPENINGS AS POSSIBLE.
7. ALL PLUMBING ITEMS INSTALLED IN WALLS, FLOORS, OR CEILINGS TO BE DEMOLISHED SHALL BE REMOVED IN THEIR ENTIRETY UNLESS OTHERWISE NOTED OR REQUIRED BY OTHER CONDITIONS IN THESE DOCUMENTS. SEE DRAWINGS OF ALL OTHER TRADES FOR EXTENT OF DEMOLITION WORK. MECHANICAL ITEMS SHALL INCLUDE PIPING, AND EQUIPMENT. REFER ALL QUESTIONS OF APPLICABILITY TO THE A/E PRIOR TO BID FOR CLARIFICATION, OTHERWISE FIELD DECISIONS BY THE A/E/ SHALL BE BINDING.
8. IT IS NOTED THAT THESE DRAWINGS DEPICT THE GENERAL INTENT OF THE SCOPE OF THE DEMOLITION WORK AND THAT NOT ALL ITEMS OF PLUMBING DEMOLITION ARE NECESSARILY SHOWN. THE CONTRACTOR SHALL BE REQUIRED TO FIELD VERIFY AND FIELD DETERMINE THE SCOPE OF THE DEMOLITION WORK PRIOR TO BID. REFER ALL QUESTIONS TO THE A/E PRIOR TO BID FOR CLARIFICATION.
9. PHASING OF PLUMBING DEMOLITION SHALL FOLLOW THAT OF THE GENERAL CONTRACTOR. COORDINATE REMOVAL OF PLUMBING WORK WITH OTHER CONSTRUCTION ACTIVITIES AND THE REQUIREMENTS OF THE OWNER.
10. THE OWNER SHALL HAVE SALVAGE RIGHTS TO ANY ITEMS THAT ARE TO BE DEMOLISHED. ITEMS THAT THE OWNER WISHES TO SALVAGE SHALL BE CAREFULLY REMOVED AND STORED IN A LOCATION AS DIRECTED BY THE OWNER. ALL OTHER ITEMS OF DEMOLITION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
11. WHERE DEMOLITION WORK WILL INTERRUPT UTILITIES TO OTHER AREAS OF THE FACILITY THAT ARE TO REMAIN IN OPERATION, THEN TEMPORARY PIPING OR DUCTWORK SHALL BE INSTALLED TO MAINTAIN THOSE AREAS IN COMPLETE OPERATION. PROVIDE TEMPORARY CONNECTIONS AS REQUIRED. COORDINATE ANY INTERRUPTIONS WITH THE OWNER AT LEAST TWO WEEKS PRIOR AND ACCOMMODATE THE OWNER'S NEEDS AS REQUIRED.
12. IF HAZARDOUS MATERIALS (I.E. ASBESTOS, PCB's, ETC.) ARE ENCOUNTERED AT ANY TIME DURING CONSTRUCTION IN THE WORK AREA, STOP WORK IMMEDIATELY AND CONTACT THE A/E/ OR THE OWNER.

PLUMBING GENERAL NOTES

1. THE CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE AND SATISFACTORILY OPERATING SYSTEMS AS INDICATED ON THE CONTRACT DOCUMENTS. IT IS NOTED THAT THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENTS OF SYSTEMS AND WORK. THE CONTRACTOR SHALL OBTAIN EXACT LOCATION, MEASUREMENTS LEVELS, ETC AT THE SITE AND SHALL ADAPT THE WORK TO THE ACTUAL CONDITIONS OF THE FIELD.
2. THE CONTRACTOR SHALL COORDINATE THE PLUMBING WORK WITH THE WORK OF ALL OTHER TRADES` INCLUDING, BUT NOT LIMITED TO, ARCHITECTURAL, STRUCTURAL, LIGHTING, POWER, SYSTEMS, MECHANICAL, FIRE PROTECTION AND OTHERS FOR EXISTING AND NEW WORK SO AS TO AVOID CONFLICTS. RESOLVE ALL CONFLICTS THROUGH THE A/E PRIOR TO INSTALL. FAILURE TO PROVIDE SUCH COORDINATION PRIOR TO WORK BEING INSTALLED SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION TO THE CONTRACTOR, AND MAY RESULT IN REJECTION OF THE WORK. IT IS THE CONTRACTORS' RESPONSIBILITY TO COORDINATE SUBSTITUTIONS WITH OTHER TRADES.
3. THE SIZE AND LOCATION OF EQUIPMENT INSTALLED UNDER DIVISION 22 PLUMBING SHALL BE COORDINATED WITH OTHER TRADES. CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EQUIPMENT FURNISHED.
4. ALL PIPING IS TO BE CONCEALED ABOVE CEILING OR IN NEW WALLS UNLESS SPECIFICALLY NOTED AS EXPOSED OR SURFACE MOUNTED. CONTRACTOR TO COORDINATE WITH THE GENERAL CONTRACTOR TO PAINT ALL EXPOSED PIPING TO MATCH CORRESPONDING EXPOSED AREAS.
5. ALL EQUIPMENT SHALL BE SECURELY FASTENED BY MEANS OF ANCHORS, RODS, HANGERS, SUPPORTS, GUIDES, SWAY BRACES, ETC., TO MAINTAIN ALIGNMENT AND PREVENT EQUIPMENT MOVEMENT.
6. ANY EQUIPMENT, PIPING, DUCTWORK, ETC. SHALL ONLY BE SUPPORTED FROM THE BUILDING STRUCTURE. NO EQUIPMENT SHALL BE SUPPORTED FROM OTHER PIPING, DUCTWORK, METAL ROOF DECK, LATERAL BRACING, OR CONDUIT.
7. ALL PENETRATIONS OF FIRE OR SMOKE RATED CONSTRUCTION SHALL BE SEALED WITH FIRESTOPPING MATERIALS APPROVED AND LISTED FOR THE RATING OF THE CONSTRUCTION TO BE PENETRATED. PROVIDE DOCUMENTATION ON ALL SUCH PENETRATION SEALING SYSTEMS FOR VERIFICATION OF PROPER INSTALLATION.
8. ALL PENETRATIONS OF ROOFS, EXTERIOR WALLS, FOUNDATIONS, OR OTHER WATER OR MOISTURE PROOF CONSTRUCTION SHALL BE SEALED WITH APPROPRIATE SEALING FITTINGS OR SEALED CONSTRUCTION TO PREVENT THE INTRODUCTION OF MOISTURE INTO THE BUILDING.
9. ALL CONCRETE HOUSEKEEPING PADS FOR MECHANICAL AND PLUMBING EQUIPMENT SHALL BE SIZED AND LOCATED BY THE MECHANICAL /PLUMBING CONTRACTOR. A MINIMUM THICKNESS OF ANY HOUSEKEEPING PADS SHALL BE 4" AND EXTEND A MINIMUM OF 4" BEYOND THE MECHANICAL OR PLUMBING EQUIPMENT. MECHANICAL/PLUMBING CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR THE SIZE AND LOCATION OF HOUSEKEEPING PADS.
10. MAINTAIN CLEARANCE OF A MINIMUM OF 6" BETWEEN DUCTWORK, PIPING, EQUIPMENT, ETC., AND ALL FIRE RATED AND FIRE/SMOKE RATED PARTITIONS TO ALLOW FOR INSPECTIONS OF RATED WALLS.
11. ALL DASHED LINEWORK AROUND MECHANICAL AND PLUMBING EQUIPMENT INDICATES REQUIRED SERVICE CLEARANCES. ALL EQUIPMENT SHALL BE INSTALLED IN A MANNER TO MAINTAIN THE CODE OR MANUFACTURER'S REQUIRED CLEARANCES. FOLLOW MANUFACTURER'S RECOMMENDATIONS ON EQUIPMENT ACCESS AND MAINTENANCE WHEN NOT INDICATED ON PLANS.
12. DO NOT LOCATE VALVES, ANY EQUIPMENT WITH MOVING PARTS OR ANY EQUIPMENT NEEDING ACCESS OR REGULAR MAINTENANCE ABOVE INACCESSIBLE CEILINGS. WHERE LOCATIONS OF VALVES CONTROLS OR EQUIPMENT IS UNAVOIDABLE, PROVIDE MIN. 24"X24" ACCESS PANELS.
13. COORDINATE PLUMBING, MECHANICAL AND ELECTRICAL SUCH THAT PIPING, DUCTWORK AND EQUIPMENT ARE NOT LOCATED OVER ANY ELECTRICAL PANELS. DO NOT INSTALL EXTERNAL PIPING AND DUCTWORK THROUGH ELEVATOR EQUIPMENT ROOMS.
14. APPLICABLE PLUMBING CODES AND STANDARDS:
    -OMAHA PLUMBING CODE 2018
    -OMAHA PUBLIC SCHOOL STANDARDS

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Tel 402.391.8111 Fax 402.391.8564
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KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	GMH
Draw	GMH
Check	RLM

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Project No. 003-10201-014
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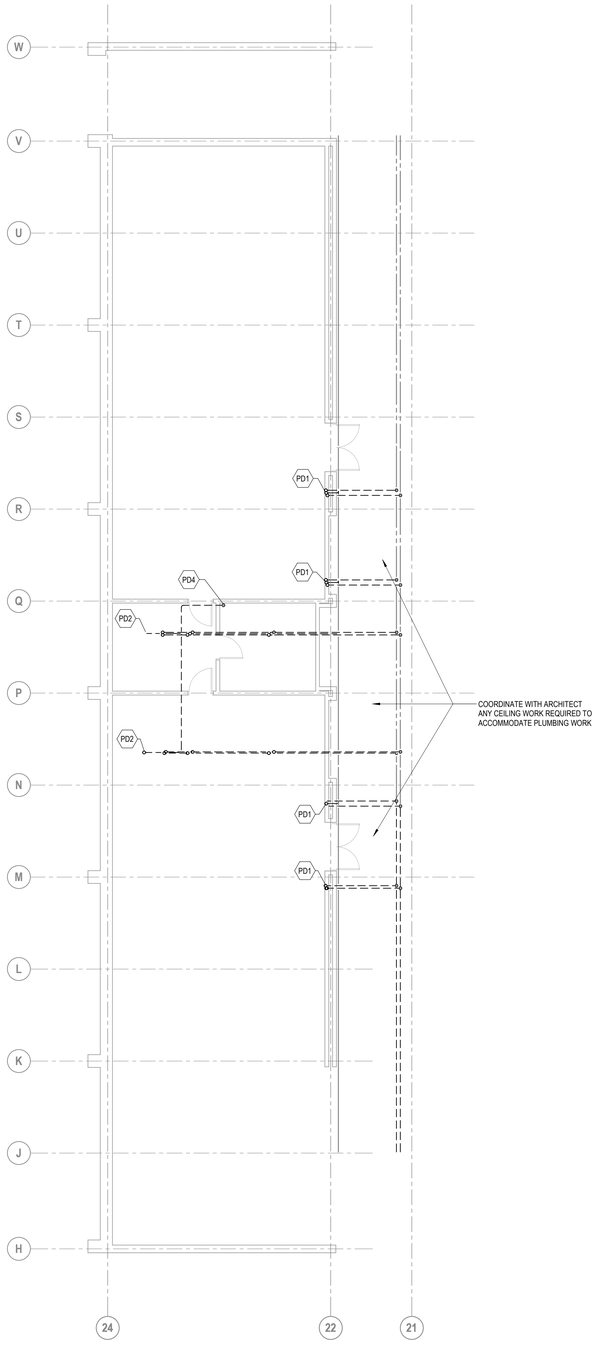
PLUMBING NOTES AND SYMBOLS

P-001

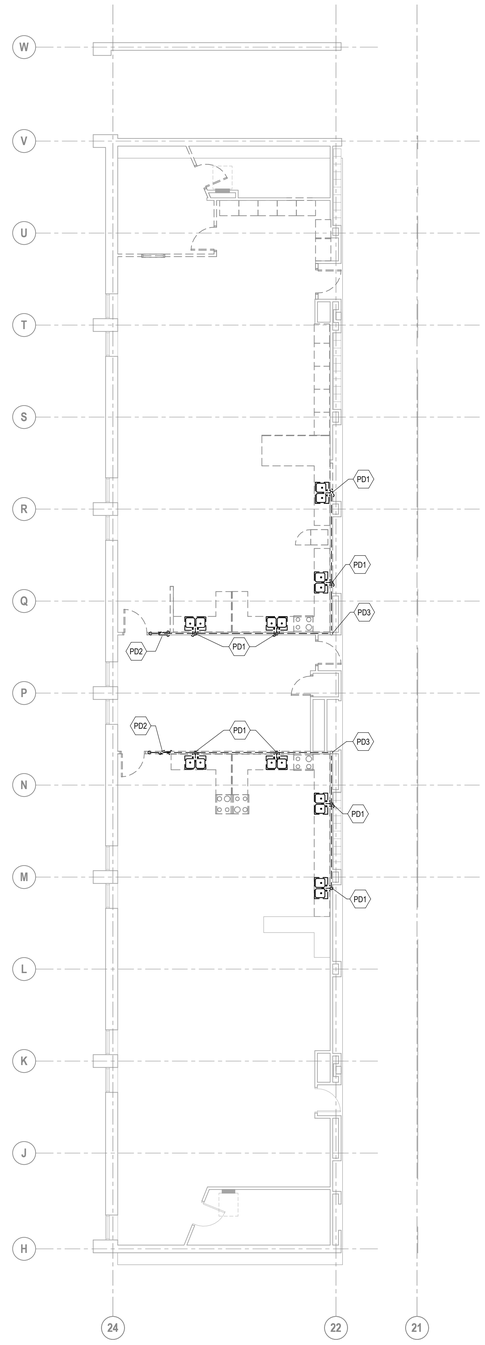
CONSTRUCTION DOCUMENTS

4/4/2025 11:47:23 AM Model: \\adcdcshares\projects\003\003-10201-014\4-0-Production-Working\4-1-BIM-CAD\Revit\ MEP_OPSLC.rvt

KEYNOTE LEGEND	
PD1	REMOVE EXISTING SINK AND ALL ASSOCIATED PLUMBING PIPING SHOWN DASHED. CAP MAIN CONNECTION.
PD2	REMOVE EXISTING DRAIN BOX AND ALL ASSOCIATED PLUMBING PIPING SHOWN DASHED. CAP MAIN CONNECTION.
PD3	EXISTING VENT PIPE UP TO REMAIN FOR NEW CONNECTIONS. FIELD VERIFY SIZE AND LOCATION.
PD4	FIELD VERIFY PIPE OPENING IN FLOOR FOR NEW 4" SAN CONNECTION DOWN THROUGH FLOOR.



A2 ENLARGED PLUMBING DEMOLITION PLAN LOWER LEVEL
SCALE: 1/8" = 1'-0"



A5 ENLARGED PLUMBING DEMOLITION PLAN MAIN LEVEL
SCALE: 1/8" = 1'-0"

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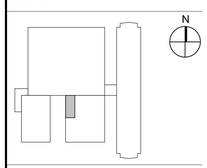
KEY PLAN



REVISIONS

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ACTIVITY	BY
Manager	EPF
Design	GMH
Draw	GMH
Check	RLM

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

Project No. 003-10201-014
04.04.2025

ENLARGED PLUMBING DEMOLITION PLANS

PD101

CONSTRUCTION DOCUMENTS

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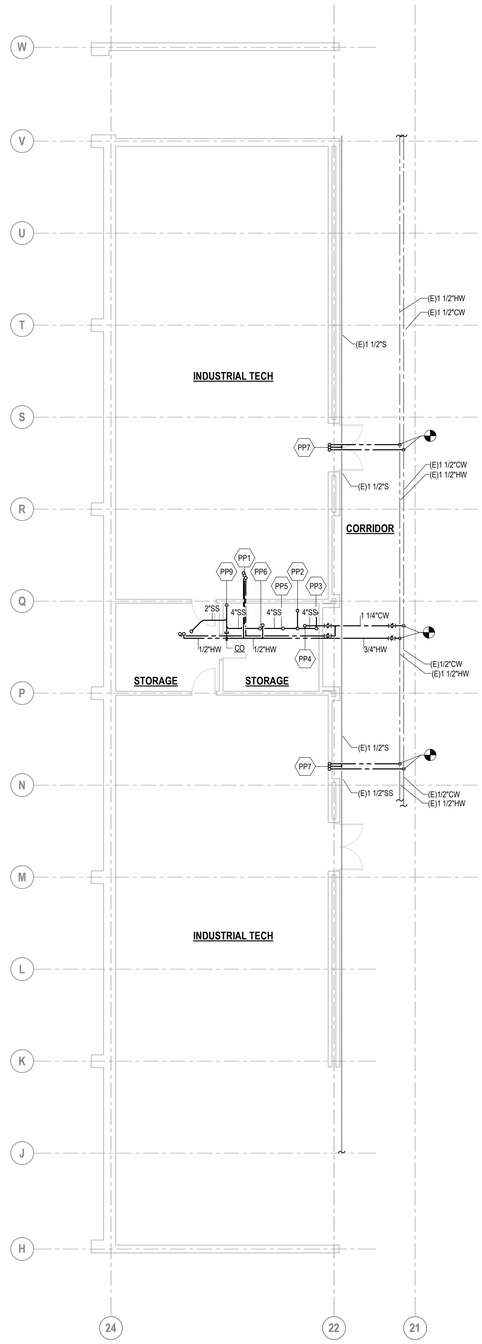
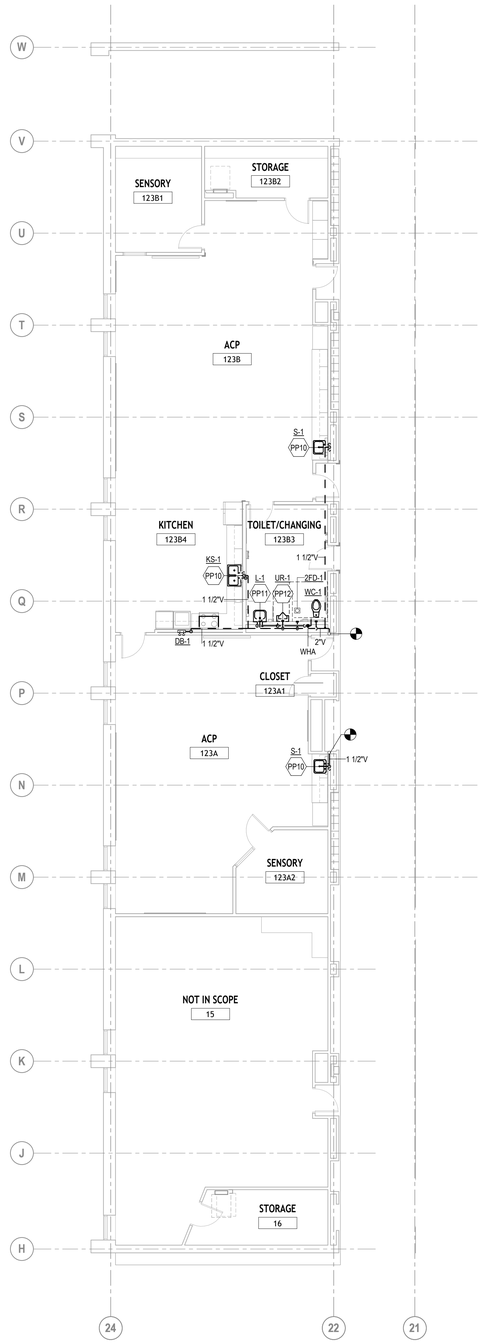
KEYNOTE LEGEND

PP1	1/2" CW, 1/2" HW, 1 1/2" SAN UP TO SK-1.
PP2	2" SAN & 1 1/2" V UP TO FD-1.
PP3	4" SAN UP TO WC-1.
PP4	1 1/4" CW UP INTO PLUMBING CHASE.
PP5	2" SAN UP TO UR-1.
PP6	1/2" HW, 1 1/2" SAN UP TO L-1.
PP7	1/2" CW, 1/2" HW, 1 1/2" SAN UP TO S-1.
PP9	CONNECT SANITARY TO EXISTING SANITARY LINE BELOW FLOOR. FIELD VERIFY SIZE AND LOCATION.
PP10	WCO JUST ABOVE SINK FAUCET.
PP11	WCO JUST ABOVE LAVATORY FAUCET.
PP12	WCO JUST ABOVE URINAL FLUSH VALVE.



A2 ENLARGED PLUMBING PLAN LOWER LEVEL
SCALE: 1/8" = 1'-0"



A5 ENLARGED PLUMBING PLAN MAIN LEVEL
SCALE: 1/8" = 1'-0"

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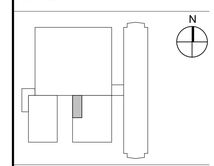
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	GMH
Draw	GMH
Check	RLM

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

Project No. 003-10201-014
04.04.2025

ENLARGED PLUMBING PLANS

PP101

CONSTRUCTION DOCUMENTS

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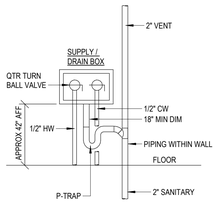
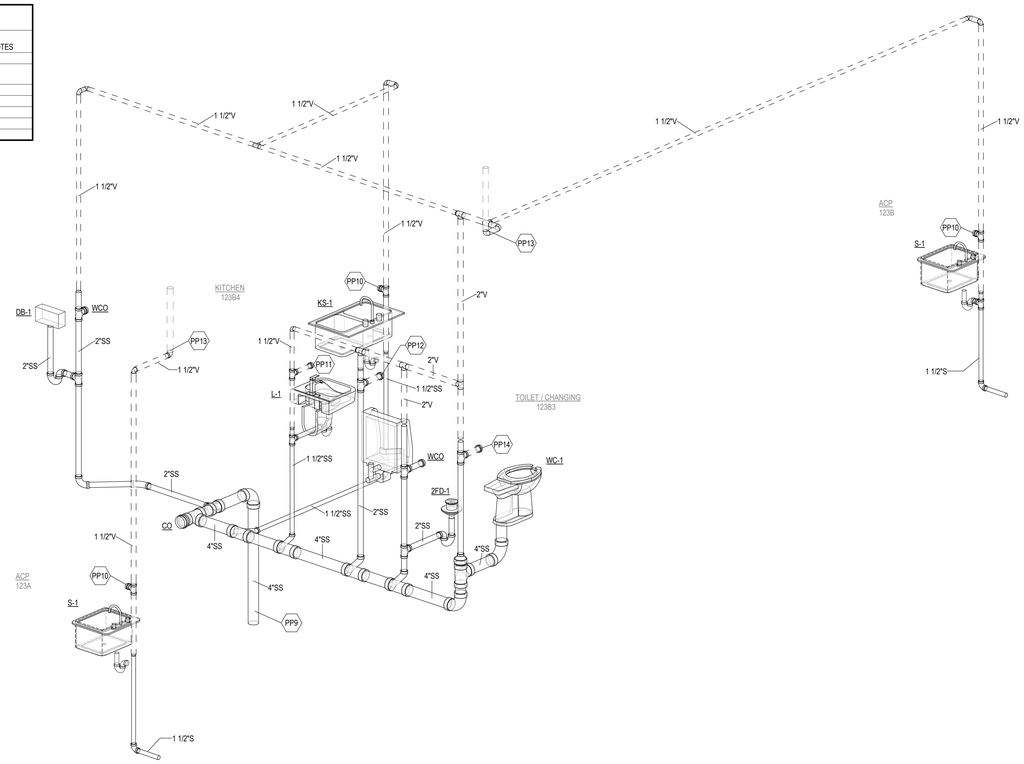
PLUMBING FIXTURE SCHEDULE

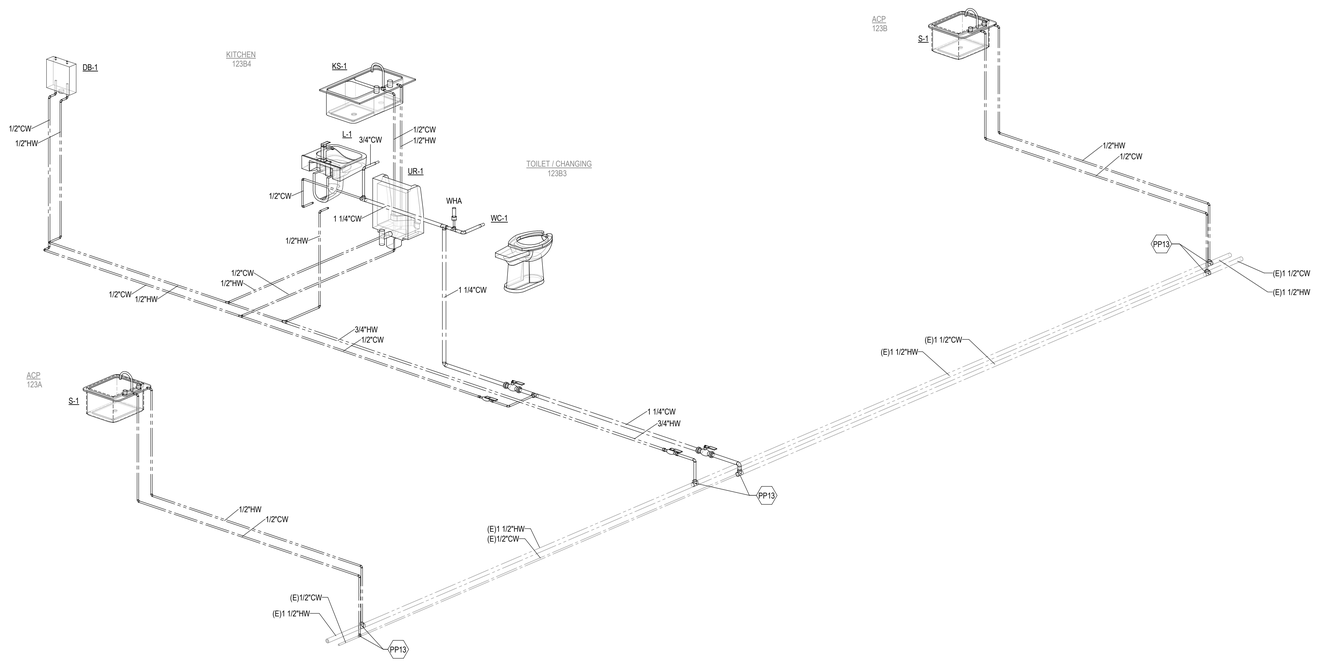
EQPM ID	FIXTURE		FITTING		CONNECTION SIZE				NOTES
	DESCRIPTION	MODEL	DESCRIPTION	MODEL	WASTE	VENT	CW	HW	
2FD-1	GENERAL PURPOSE FLOOR DRAIN	ZURN MODEL NO. Z415B	BARRIER TRAP SEAL DEVICE	ZURN MODEL NO. Z1072	2"	1 1/2"			
DB-1	WASHING MACHINE SUPPLY BOX	OATEY MODEL W/ 1/4 TURN BRASS VALVES AND ADDED HAMMIER ARRESTORS	-	-	2"	0"	1/2"	1/2"	
KS-1	DROP IN KITCHEN SINK	MOEN MODEL NO. GS202683	HANDLE HIGH ARC FAUCET	MOEN MIKAH MODEL NO. 87069	1 1/2"	1 1/2"	1/2"	1/2"	
L-1	WALL HUNG LAVATORY	AMERICAN STANDARD LUCERNE MODEL NO. 0355.012	CENTERSET FAUCET	AMERICAN STANDARD MODEL NO. 6059.205	1 1/2"	1 1/2"	1/2"	1/2"	
S-1	DROP IN SINK	MOEN MODEL NO.GS181733B	BLADE HANDLE GOOSENECK FAUCET	MOEN MIKAH MODEL NO. 8248	1 1/2"	1 1/2"	1/2"	1/2"	
UR-1	WALL HUNG URINAL	AMERICAN STANDARD WASHBROOK FLOWISE	MANUAL FLUSH VALVE	MOEN ECOS 186 HW-0.125-OR-HW	2"	2"	3/4"		
WC-1	FLOOR MOUNTED WATER CLOSET	AMERICAN STANDARD MODEL NO. 3461.001	MANUAL FLUSH VALVE	SLOAN G2 111 HW-1.6-1-IN-STOP-OR-HW-LT	4"	2"	1"		



D1 SUPPLY/DRAIN BOX
SCALE: NTS



C4 SANITARY RISER DIAGRAM
SCALE: NTS



A2 DOMESTIC WATER RISER DIAGRAM
SCALE: NTS

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

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PLUMBING RISER DIAGRAMS, DETAILS, AND SCHEDULES

PP401

CONSTRUCTION DOCUMENTS

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HVAC PIPING	
SYMBOL	DESCRIPTION
CHWS	CHILLED WATER SUPPLY (COOLING)
CHWR	CHILLED WATER RETURN (COOLING)
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CD	CONDENSATE DRAIN
LPS	LOW PRESSURE STEAM (0-5 PSIG)
MPS	MEDIUM PRESSURE STEAM (15-50 PSIG)
HPS	HIGH PRESSURE STEAM (50-200 PSIG)
LPC	LOW PRESSURE CONDENSATE
MPC	MEDIUM PRESSURE CONDENSATE
HPC	HIGH PRESSURE CONDENSATE
PC	PUMP CONDENSATE
RS	REFRIGERANT SUCTION
RL	REFRIGERANT LIQUID
RD	REFRIGERANT HOT GAS DISCHARGE
CF	CHEMICAL FEED
GHS	GLYCOL HEATING SUPPLY
GHR	GLYCOL HEATING RETURN
HPWS	HEAT PUMP WATER SUPPLY
HPWR	HEAT PUMP WATER RETURN
HTWS	HIGH TEMP WATER SUPPLY (HEATING)
HTWR	HIGH TEMP WATER RETURN (HEATING)
HCS	HOT OR CHILLED WATER SUPPLY
HCR	HOT OR CHILLED WATER RETURN

HVAC SYMBOLS	
SYMBOL	DESCRIPTION
	ROUND FACE SUPPLY DIFFUSER
	SQUARE FACE SUPPLY DIFFUSER
	SQUARE FACE RETURN GRILLE
	SQUARE FACE EXHAUST GRILLE
	LINEAR SLOT DIFFUSER
12Ø	ROUND OR SPIRAL DUCTWORK
12x6	FLAT OVAL DUCT - FIRST NUMBER IS SIDE SHOWN
12x6	RECTANGULAR DUCTWORK
	SUPPLY DUCT UP OR DOWN
	RETURN / OUTSIDE AIR DUCT UP OR DOWN
	EXHAUST DUCT UP OR DOWN
	MANUAL VOLUME DAMPER
M	MOTORIZED DAMPER
	ROUND DUCT TAP WITH MANUAL VOLUME DAMPER
	CONICAL TAKE-OFF
	RECTANGULAR TAKE-OFF
	MITERED ELBOW WITH TURNING VANES
	RADIUSED ELBOW
	FLEXIBLE DUCT
	FIRE DAMPER
	SMOKE DAMPER
	COMBINATION FIRE & SMOKE DAMPER
	AIRFLOW MEASURING STATION

PIPE VALVES, FITTINGS, SENSORS AND GAGES	
SYMBOL	DESCRIPTION
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	ECCENTRIC PLUG VALVE
	BALL VALVE
	STRAINER
	UNION
	FLANGE
	CAP
	BLIND FLANGE
	BALANCING VALVE
	GAS COCK
	PRESSURE REGULATING VALVE
	SOLENOID VALVE
	CONTROL VALVE (2-WAY)
	CONTROL VALVE (3-WAY)
T	THERMOMETER
P	PRESSURE GAGE
	SAFETY RELIEF VALVE
	COCK (GAGE, AIRVENT, DRAIN)
	PIPE ANCHOR
	PIPE GUIDE
	PIPE EXPANSION COMPENSATOR
	VACUUM BREAKER
	SUPERVISED O S & Y VALVE
T	THERMOSTAT
H	HUMIDISTAT
S	TEMPERATURE, HUMIDITY, OR CO2 SENSOR
P	PRESSURE SENSOR
	EMERGENCY BOILER SHUTDOWN SWITCH
FE	FLOW MEASURING ELEMENT
	TEST PLUG
	SIGHT GLASS (FLOW TYPE)
	AIR ELIMINATOR
	TEMPERATURE & PRESSURE RELIEF VALVE
	STEAM TRAP
	PIPE ELBOW UP
	PIPE ELBOW DOWN
	PIPE TEE UP
	PIPE TEE DOWN
FCO	FLOOR CLEANOUT
GCO	GRADE CLEANOUT
WCO	WALL CLEANOUT
CO	CLEANOUT
	FLEXIBLE PIPE CONNECTION
(DRAINS)	DRAINS - FLOOR - FD, TRENCH - TD, AREA - AD
RD-	ROOF DRAIN OR OVERFLOW ROOF DRAIN
HB	HOSE BIBB
WH	WALL HYDRANT
	FIRE DEPARTMENT CONNECTION
FS	FLOW SWITCH
W	WATER METER
	BACKFLOW PREVENTER
FHC	FIRE HOSE CABINET
FVC	FIRE VALVE CABINET

GENERIC ANNOTATIONS		
SYMBOL	DESCRIPTION	
	CONTINUATION - PIPE NOT SHOWN	
	CONNECT TO EXISTING	
#	KEYNOTE	
EQUIP ID	MECHANICAL EQUIPMENT TAG	
#ØD1 / ###	ROUND NECK DIFFUSER/GRILLE TAG	NECK DIAMETER, ID / AIRFLOW (CFM)
#x#G1 / ###	SQUARE NECK DIFFUSER/GRILLE TAG	NECK SIZE, ID / AIRFLOW (CFM)

MECHANICAL DEMOLITION NOTES

1. ALL LINEWORK SHOWN BOLD, DASHED, OR HATCHED ON DEMOLITION DRAWINGS ARE TO BE REMOVED UNLESS NOTED OTHERWISE.
2. ALL EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PIPING, AND ACCESSORIES SHOWN HALFTONE ARE EXISTING AND TO REMAIN.
3. NOT ALL EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PIPING, AND ACCESSORIES ARE SHOWN FOR CLARITY. THE SIZES AND LOCATIONS OF EXISTING EQUIPMENT, PIPING, AND DUCTWORK ARE SHOWN ACCORDING TO RECORD INFORMATION. CONTRACTOR SHALL MAKE APPROPRIATE PRE-BID SITE INSPECTIONS IN ORDER TO ASCERTAIN EXISTING CONDITIONS AND SHALL INCLUDE IN BID THE COST OF ALL WORK RESULTING FROM EXISTING CONDITIONS. REFER ALL QUESTIONS TO THE A/E PRIOR TO BID FOR CLARIFICATION.
4. THE OWNER SHALL HAVE SALVAGE RIGHTS TO ANY ITEMS THAT ARE TO BE DEMOLISHED. EXISTING AHUs, FAN COIL UNITS, CHILLERS, PUMPS, EXHAUST FANS, AND VAV BOXES SHALL REMAIN PROPERTY OF THE OWNER AND SHALL ONLY BE DISPOSED IF DESIRED BY THE OWNER. ALL SHEET METAL AND PIPING WILL BE DISPOSED BY THE GENERAL CONTRACTOR.
5. DEMOLITION WORK THAT WILL INTERRUPT HVAC OR PLUMBING CONTINUITY TO OTHER AREAS OF THE FACILITY THAT ARE TO REMAIN IN OPERATION, SHALL BE COORDINATED WITH THE OWNER TO ACCOMMODATE THE OWNER'S NEEDS AS REQUIRED.
6. IF HAZARDOUS MATERIALS (I.E. ASBESTOS, PCB's, ETC.) ARE ENCOUNTERED AT ANY TIME DURING CONSTRUCTION IN THE WORK AREA, STOP WORK IMMEDIATELY AND CONTACT THE ARCHITECT OR THE OWNER.
7. ANY BRANCH DUCTWORK OR PIPING SHOWN TO BE DEMOLISHED SHALL BE REMOVED BACK TO THE MAIN AND CAPPED UNLESS OTHERWISE NOTED.
8. COORDINATE WITH MECHANICAL AND ELECTRICAL CONTRACTOR ALL THE EQUIPMENT TO BE REMOVED. REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL FIELD CONDITIONS TO ARCHITECT PRIOR TO THE COMMENCEMENT OF DEMOLITION WORK.
9. DEMOLISHED MATERIALS MUST BE PROPERLY CLEANED AND PLACED IN AN AIRTIGHT CONTAINER BEFORE REMOVAL FROM THE AREA THROUGH ALL OCCUPIED SPACES.
10. OPENINGS IN WALLS, FLOORS, AND CEILINGS REMAINING FROM DUCT AND PIPE REMOVAL SHALL BE FILLED AND SEALED TO MATCH EXISTING WALL CONSTRUCTION AND MAINTAIN EXISTING WALL SMOKE AND FIRE RATING.
11. DEMOLITION SHALL BE PERFORMED IN SUCH A MANNER THAT WILL NOT DAMAGE ADJOINING SURFACES OR EQUIPMENT INDICATED TO REMAIN.
12. CONTRACTOR SHALL GIVE THE OWNER NOTICE PRIOR TO ANY INTERRUPTION OF HVAC & PLUMBING SERVICES AS SPECIFIED.
13. ANY AREAS DISRUPTED BY DEMOLITION THAT DOES NOT HAVE NEW WORK SHALL BE REPAIRED/PATCHED TO MATCH EXISTING CONDITIONS AND FINISHES.
14. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING MATERIALS, EQUIPMENT, APPLIANCES AND DEVICES THAT ARE TO BE REUSED SHALL BE RECONDITIONED, TESTED AND PLACED IN GOOD AND PROPER WORKING CONDITION AND APPROVED. ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO BID.
15. RELOCATE EXISTING SYSTEMS (E.G. DUCT, PIPING, CONDUIT, CABLE TRAYS) OBSTRUCTING THE NEW CONSTRUCTION.

MECHANICAL GENERAL NOTES

1. THE CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE AND SATISFACTORILY OPERATING SYSTEMS AS INDICATED ON THE CONTRACT DOCUMENTS. IT IS NOTED THAT THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENTS OF SYSTEMS AND WORK. THE CONTRACTOR SHALL OBTAIN EXACT LOCATION, MEASUREMENTS LEVELS, ETC AT THE SITE AND SHALL ADAPT THE WORK TO THE ACTUAL CONDITIONS OF THE FIELD.
2. THE CONTRACTOR SHALL COORDINATE THE MECHANICAL WORK WITH THE WORK OF ALL OTHER TRADES INCLUDING, BUT NOT LIMITED TO, ARCHITECTURAL, STRUCTURAL, LIGHTING, POWER, SYSTEMS, PLUMBING, FIRE PROTECTION AND OTHERS FOR EXISTING AND NEW WORK SO AS TO AVOID CONFLICTS. RESOLVE ALL CONFLICTS THROUGH THE A/E PRIOR TO INSTALL. FAILURE TO PROVIDE SUCH COORDINATION PRIOR TO WORK BEING INSTALLED SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION TO THE CONTRACTOR, AND MAY RESULT IN REJECTION OF THE WORK. IT IS THE CONTRACTORS' RESPONSIBILITY TO COORDINATE SUBSTITUTIONS WITH OTHER TRADES.
3. THE SIZE AND LOCATION OF EQUIPMENT INSTALLED UNDER DIVISION 23 MECHANICAL SHALL BE COORDINATED WITH OTHER TRADES. CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EQUIPMENT FURNISHED.
4. ALL PIPING AND DUCT IS TO BE CONCEALED ABOVE CEILING OR IN NEW WALLS UNLESS SPECIFICALLY NOTED AS EXPOSED OR SURFACE MOUNTED. CONTRACTOR TO COORDINATE WITH THE GENERAL CONTRACTOR TO PAINT ALL EXPOSED PIPING TO MATCH CORRESPONDING EXPOSED AREAS.
5. ALL EQUIPMENT SHALL BE SECURELY FASTENED BY MEANS OF ANCHORS, RODS, HANGERS, SUPPORTS, GUIDES, SWAY BRACES, ETC., TO MAINTAIN ALIGNMENT AND PREVENT EQUIPMENT MOVEMENT.
6. ANY EQUIPMENT, PIPING, DUCTWORK, ETC. SHALL ONLY BE SUPPORTED FROM THE BUILDING STRUCTURE. NO EQUIPMENT SHALL BE SUPPORTED FROM OTHER PIPING, DUCTWORK, METAL ROOF DECK, LATERAL BRACING, OR CONDUIT.
7. ALL PENETRATIONS OF FIRE OR SMOKE RATED CONSTRUCTION SHALL BE SEALED WITH FIRESTOPPING MATERIALS APPROVED AND LISTED FOR THE RATING OF THE CONSTRUCTION TO BE PENETRATED. PROVIDE DOCUMENTATION ON ALL SUCH PENETRATION SEALING SYSTEMS FOR VERIFICATION OF PROPER INSTALLATION.
8. ALL PENETRATIONS OF ROOFS, EXTERIOR WALLS, FOUNDATIONS, OR OTHER WATER OR MOISTURE PROOF CONSTRUCTION SHALL BE SEALED WITH APPROPRIATE SEALING FITTINGS OR SEALED CONSTRUCTION TO PREVENT THE INTRODUCTION OF MOISTURE INTO THE BUILDING.
9. ALL CONCRETE HOUSEKEEPING PADS FOR MECHANICAL AND PLUMBING EQUIPMENT SHALL BE SIZED AND LOCATED BY THE MECHANICAL CONTRACTOR. A MINIMUM THICKNESS OF ANY HOUSEKEEPING PADS SHALL BE 4" AND EXTEND A MINIMUM OF 4" BEYOND THE MECHANICAL OR PLUMBING EQUIPMENT. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR THE SIZE AND LOCATION OF HOUSEKEEPING PADS.
10. ALL DUCTWORK AND PIPING IS SHOWN SCHEMATICALLY. PROVIDE ALL TRANSITIONS, ELBOWS, FITTINGS, ETC., TO ALLOW SMOOTH FLOWS. ALL SPLIT DUCT FITTINGS SHALL TRANSITION TO FULL SIZE OF THE SUM OF BOTH BRANCHES UPSTREAM OF SPLIT.
11. MAINTAIN CLEARANCE OF A MINIMUM OF 6" BETWEEN DUCTWORK, PIPING, EQUIPMENT, ETC., AND ALL FIRE RATED AND FIRE/SMOKE RATED PARTITIONS TO ALLOW FOR INSPECTIONS OF RATED WALLS.
12. ALL DASHED LINEWORK AROUND MECHANICAL AND PLUMBING EQUIPMENT INDICATES REQUIRED SERVICE CLEARANCES. ALL EQUIPMENT SHALL BE INSTALLED IN A MANNER TO MAINTAIN THE CODE OR MANUFACTURER'S REQUIRED CLEARANCES. FOLLOW MANUFACTURER'S RECOMMENDATIONS ON EQUIPMENT ACCESS AND MAINTENANCE WHEN NOT INDICATED ON PLANS.
13. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COORDINATING WORK WITH THE TEST AND BALANCE FIRM. PRIOR TO TESTING AND BALANCING, THE CONTRACTOR SHALL START-UP, PRE-BALANCE, AND REPLACE ALL AIR FILTERS FOR EVERY AHU BEING TESTED. ALL DISCREPANCIES, DRIVE CHANGES, ETC. REPORTED BY ARCHITECT OR TEST AND BALANCE FIRM SHALL BE CORRECTED BY CONTRACTOR WITHIN SPECIFIED NUMBER OF CALENDAR DAYS AT NO ADDITIONAL COST. TESTING AND BALANCING SHALL BE COMPLETED PRIOR TO SUBSTANTIAL COMPLETION.
14. DO NOT LOCATE VALVES, DAMPERS, ACTUATORS, CONTROL COMPONENTS, ANY EQUIPMENT WITH MOVING PARTS OR ANY EQUIPMENT NEEDING ACCESS OR REGULAR MAINTENANCE ABOVE INACCESSIBLE CEILINGS. WHERE LOCATIONS OF VALVES CONTROLS OR EQUIPMENT IS UNAVOIDABLE, PROVIDE MIN. 24"X24" ACCESS PANELS.
15. COORDINATE MECHANICAL AND ELECTRICAL SUCH THAT PIPING, DUCTWORK AND EQUIPMENT ARE NOT LOCATED OVER ANY ELECTRICAL PANELS. DO NOT INSTALL EXTERNAL PIPING AND DUCTWORK THROUGH ELEVATOR EQUIPMENT ROOMS.
16. THERMOSTATS AND TEMPERATURE/HUMIDITY/CO2 SENSORS SHALL BE MOUNTED 48" ABOVE FINISHED FLOOR. COORDINATE THEIR LOCATIONS WITH FURNITURE/EQUIPMENT LAYOUTS, WINDOWS, ELECTRICAL SWITCHES, AND DOOR SWING AREAS.
17. APPLICABLE HVAC CODES AND STANDARDS:
    - INTERNATIONAL MECHANICAL CODE, 2012 EDITION
    - CITY OF OMAHA PLUMBING CODE, 2018 EDITION
    - INTERNATIONAL BUILDING CODE, 2018 EDITION
    - ASHRAE HANDBOOKS AND STANDARDS, LATEST EDITIONS
    - SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE - LATEST EDITION
    - AHRI STANDARD 340/360, LATEST EDITION

DUCTWORK:

1. OFFSETS IN DUCTS AND PIPING (INCLUDING DIVIDING DUCTS) AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST.
2. ALL SUPPLY, RETURN, AND EXHAUST BRANCH DUCTWORK TO DIFFUSERS, REGISTERS, AND GRILLES SHALL BE THE SAME SIZE AS THE NECK SIZE UNLESS OTHERWISE NOTED.
3. FLEXIBLE DUCTWORK SHALL BE FULLY EXTENDED NOT TO EXCEED 5'-0" IN LENGTH.
4. ALL VOLUME DAMPERS INSTALLED ABOVE GYPSUM BOARD CEILING SHALL HAVE A REMOTELY OPERATED DAMPER OR DAMPER IN DUCT SHALL BE ACCESSIBLE THROUGH ACCESS DOOR. THE DAMPER LOCATION TO BE ACCURATELY LOCATED AND LABELED ON THE AS-BUILT DRAWINGS AT THE COMPLETION OF THE PROJECT.
5. ALL EQUIPMENT, DUCTWORK, ETC., SHALL BE SUPPORTED AS DETAILED AND/OR SPECIFIED. PROVIDE ADDITIONAL SUPPORTS AS REQUIRED TO PROVIDE A VIBRATION-FREE, RIGID INSTALLATION. SUPPORT ALL OBJECTS FROM STRUCTURE.
6. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH NFPA 90A AND 90B. DUCT SIZES SHOWN ARE MINIMUM INSIDE DIMENSIONS. BEFORE FABRICATION, VERIFY AND COORDINATE ALL DIMENSIONS IN FIELD. DUCT SIZES AND ALL OPENINGS THROUGH BUILDING CONSTRUCTION SHALL SUIT EQUIPMENT FURNISHED.
7. ACCESS PANELS IN DUCTWORK AND CEILINGS SHALL BE PROVIDED WHERE REQUIRED FOR OPERATION, BALANCING, AND MAINTENANCE OF ALL MECHANICAL EQUIPMENT.
8. PROVIDE FLEXIBLE DUCT CONNECTIONS ON ALL DUCTS CONNECTING TO EACH FAN AND FAN COIL UNIT.
9. DIFFUSER NECKS SHALL MATCH SIZES OF FLEX DUCTS TO BE CONNECTED.
10. COORDINATE DIFFUSER, GRILLE, AND REGISTER LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND EQUIPMENT OF ALL TRADES.
11. ALL VISIBLE SURFACES BEHIND THE GRILLES, REGISTERS AND DIFFUSERS SHALL BE PAINTED FLAT BLACK.
12. PROVIDE FIRE DAMPERS AT EACH FIRE RATED WALL, FLOOR, AND CEILING PENETRATION OF ALL AIR SUPPLY, RETURN, EXHAUST AND VENTILATION DUCTS. IF NOT SHOWN ON THE DOCUMENTS THIS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BID.
13. PROVIDE A REMOVABLE 3/4" X 3/4" MINIMUM MESH SCREEN AT ALL INTAKE LOUVERS, NO INSECT SCREENS.
14. ALL TRANSFER DUCTS ARE ACOUSTICALLY LINED TURNED-UP ELBOWS ABOVE THE CEILING, SEE DETAILS FOR FURTHER CLARIFICATION.
15. ALL DUCTWORK SHALL BE G90 GALVANIZED STEEL CONSTRUCTED PER SMACNA STANDARDS. SUPPLY AIR DUCTWORK SHALL BE INSULATED WITH 2" THICK, 3/4 POUND DENSITY FIBERGLASS INSULATION WITH FSK VAPOR BARRIER.

CONTROLS:

1. INSTALLATION OF SMOKE DETECTORS IN SUPPLY DUCT AND RETURN DUCT PRIOR TO MIXING WITH FRESH AIR SHALL BE INSTALLED BY THE MECHANICAL CONTRACTOR AND PROVIDED BY ELECTRICAL CONTRACTOR.
2. CONTROL DEVICE MOTORS (DAMPERS, ETC.), WITH THE EXCEPTION OF SMOKE AND SMOKE/FIRE DAMPERS, SHALL BE 24VAC TYPE WITH ALL ELECTRICAL POWER REQUIREMENTS CLEARLY NOTED ON THE CONSTRUCTION DRAWINGS.
3. PROVIDE SMOKE DETECTORS, AND COORDINATE WITH ELECTRICAL, IN THE RETURN AIR DUCTS UPSTREAM OF ANY FILTERS, RELIEF AIR CONNECTIONS, AND OUTDOOR AIR CONNECTIONS FOR ALL AHU'S WITH A DESIGN CAPACITY OF 2000 CFM OR GREATER IN ACCORDANCE WITH NFPA 72. DUCT MOUNTED SMOKE DETECTORS SHALL HAVE AIR VELOCITY RATING FROM 100 TO 4,000 FPM WITH A TRANSPARENT COVER FOR VISUAL INSPECTION.

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MECHANICAL NOTES AND SYMBOLS

M-001

CONSTRUCTION DOCUMENTS

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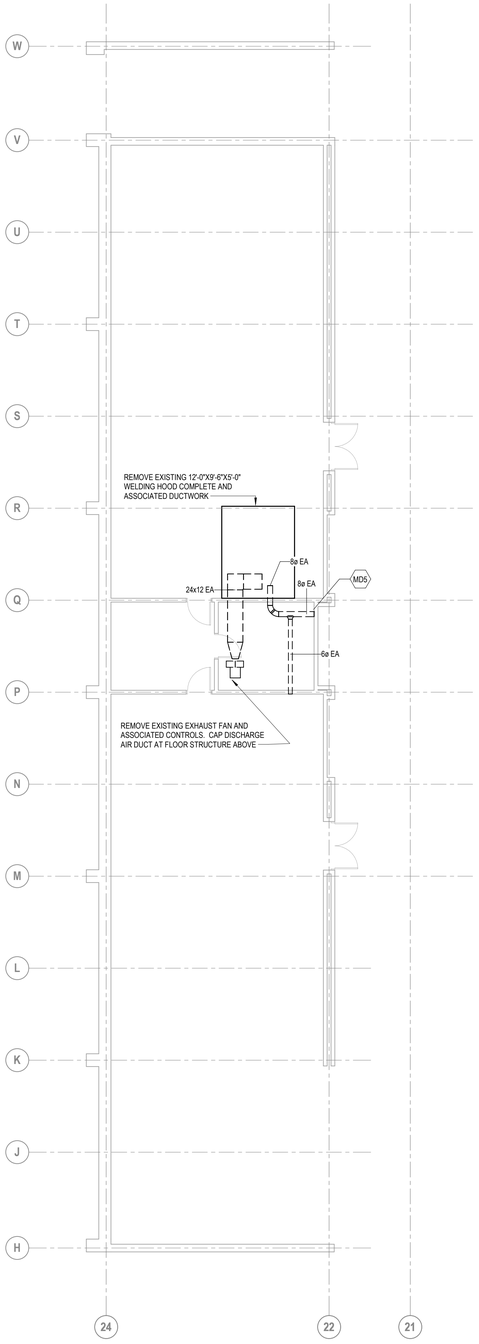
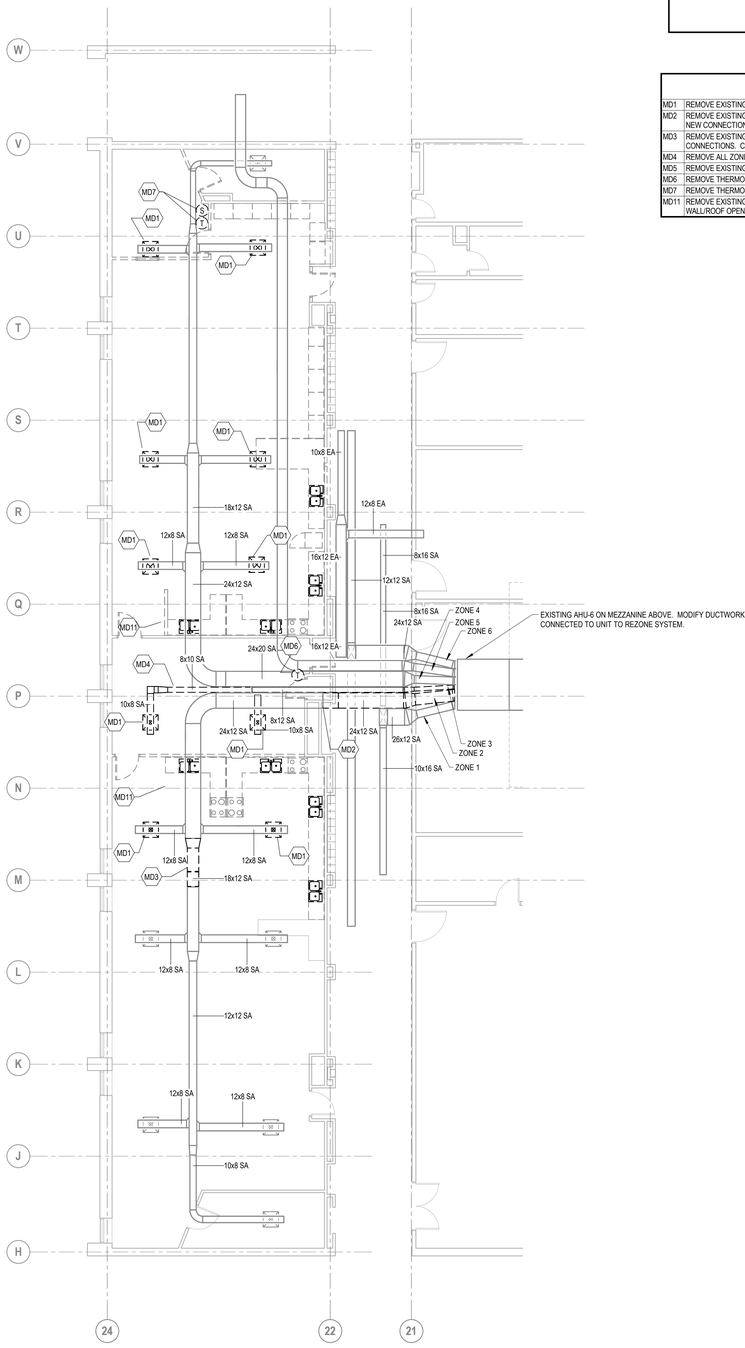


A2 ENLARGED HVAC DEMOLITION PLAN LOWER LEVEL

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



A4 ENLARGED HVAC DEMOLITION PLAN MAIN LEVEL

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

GENERAL NOTES

1. PRIOR TO DEMOLITION, PROVIDE TEST AND BALANCE OF AHU-6 MEASURING THE AIR FLOW FOR EACH ZONE. PROVIDE ZONE AIR FLOW DATA TO THE ENGINEER.
2. EXISTING CONDITIONS ARE BASED ON EXISTING DRAWINGS BY OTHERS. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS.

KEYNOTE LEGEND

MD1	REMOVE EXISTING DIFFUSER
MD2	REMOVE EXISTING SUPPLY AIR DUCTWORK BACK TO AHU-6. SEE NEW PLAN FOR NEW CONNECTIONS.
MD3	REMOVE EXISTING DUCTWORK SHOWN DASHED. SEE NEW PLAN FOR NEW CONNECTIONS. CAP OPEN DUCT.
MD4	REMOVE ALL ZONE DUCTWORK SHOWN DASHED BACK TO AHU-6
MD5	REMOVE EXISTING EXHAUST DUCTWORK, CAP DUCT AT WALL.
MD6	REMOVE THERMOSTAT FOR REINSTALLATION.
MD7	REMOVE THERMOSTAT AND SENSOR FOR RELOCATION. SEE NEW PLANS.
MD11	REMOVE EXISTING 4" DRYER VENT COMPLETE. FIELD VERIFY ROUTING AND PATCH WALL/ROOF OPENING.

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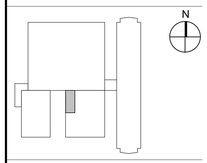

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ENLARGED HVAC DEMOLITION PLANS

MD101

CONSTRUCTION DOCUMENTS

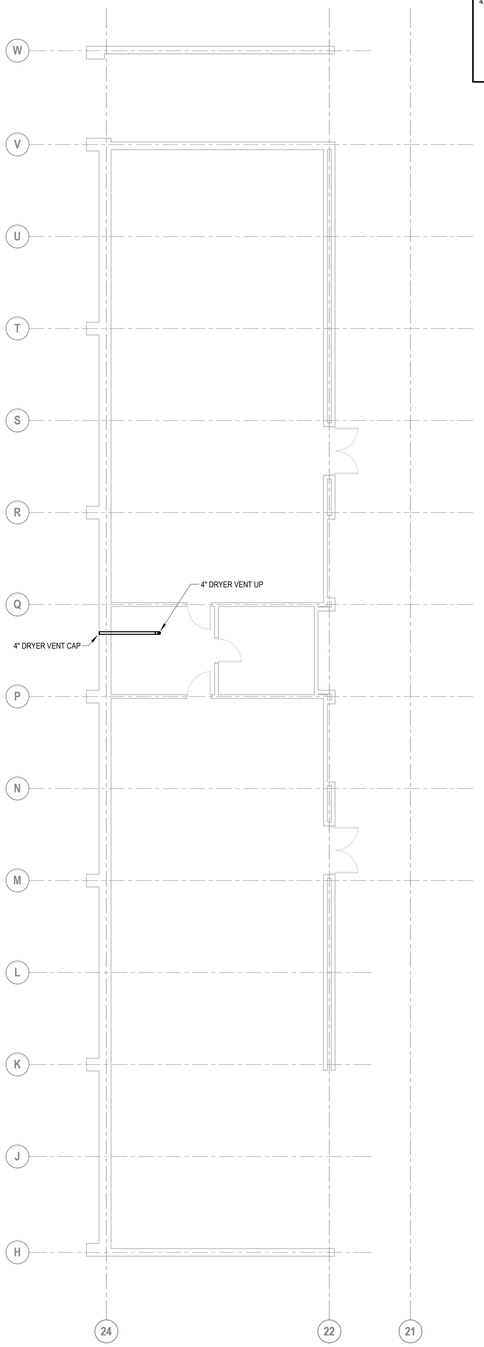
4/4/2025 11:47:23 AM Model: \\lacfcos\shared\projects\003\003-10201-014\4-0-Production-Working\4-1-BIM-CAD\Revit MEP_OPSLC.rvt

GENERAL NOTES

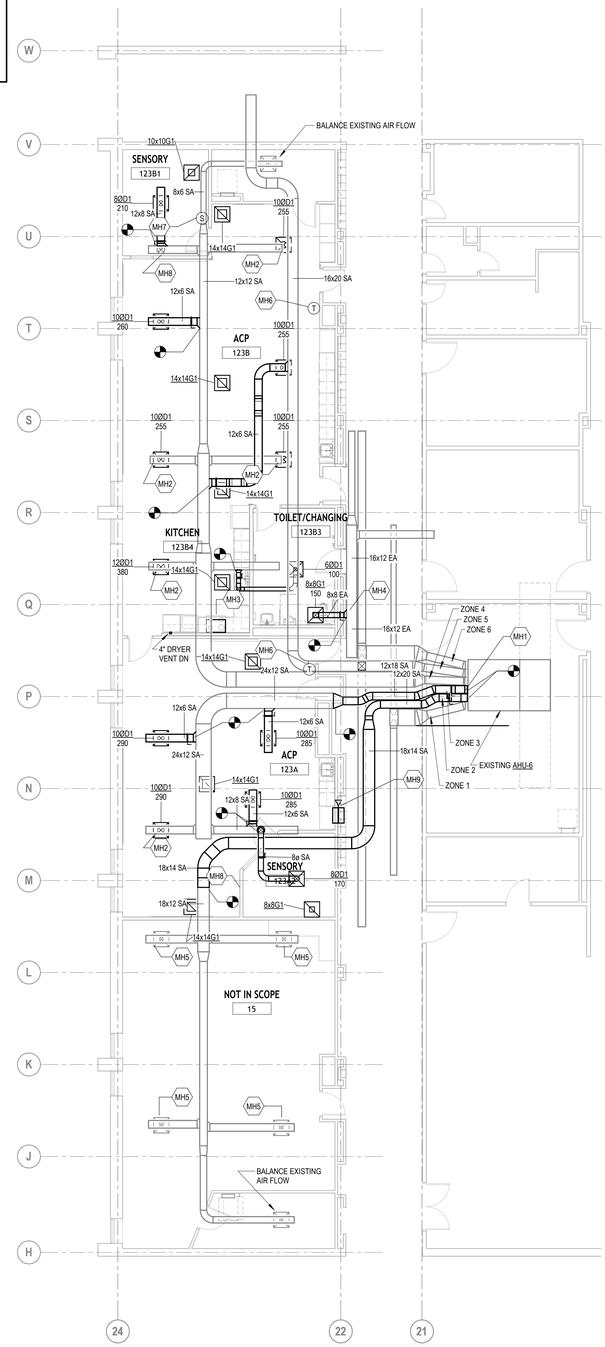
1. BALANCE AHU-6 AT THE COMPLETION OF CONSTRUCTION. BALANCE ZONES 1, 2, 3, AND 6 TO AIR FLOWS MEASURED PRIOR TO DEMOLITION. BALANCE ZONES 4 AND 5 TO AIR QUANTITIES SHOWN. SUBMIT TEST AND BALANCE REPORT.
2. EXISTING CONDITIONS ARE BASED ON EXISTING DRAWINGS BY OTHERS. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS.
3. NEW DIFFUSERS D1 SHALL BE TITUS OMNI OR EQUAL WITH WHITE FINISH AND 24"X24" FACE WITH NECK SIZE AS SHOWN. VERIFY FRAME TYPE WITH CEILING.
4. NEW GRILLES G1 SHALL BE TITUS MODEL PAR OR EQUAL. PERFORATED 24"X24" FACE WITH NECK SIZE AS SHOWN. VERIFY FRAME TYPE WITH CEILING. GRILLES ARE TO BE OPEN TO PLENUM CEILING UNLESS SHOWN OTHERWISE.

KEYNOTE LEGEND

MH1	REMOVE EXISTING DUCTWORK FROM AHU-6. FIELD VERIFY THAT EXISTING DUCTWORK IS CONNECTED TO 3 ZONE DAMPERS AND ONE ZONE DAMPER RESPECTIVELY. MODIFY DUCTWORK TO CONNECT TO TWO ZONE DAMPERS EACH. ROUTE NEW DUCTWORK TO EXISTING DUCTWORK AS SHOWN.
MH2	NEW DIFFUSER. CONNECT TO EXISTING DUCTWORK AND BALANCE TO AIR QUANTITY SHOWN.
MH3	DOMESTIC KITCHEN HOOD DENLAR MODEL D1030-D-RF-NFPA101 OR APPROVED EQUAL. 30" WIDE HOOD WITH FACTORY INSTALLED WET CHEMICAL FIRE SUPPRESSION SYSTEM. PROVIDE COMPONENTS IN COMPLIANCE WITH NFPA 101 WITH SHUT-OFF FOR AN ELECTRIC APPLIANCE, 120 VOLT POWER AND ROOF MOUNTED EXHAUST FAN. EXHAUST FAN SHALL BE PROVIDED FOR 500 CFM. PROVIDE 10"Ø, 24 GUAGE DUCT WITH WITH LIQUID TIGHT JOINTS AND SEAMS FROM THE HOOD TO ROOF MOUNTED FAN. PROVIDE WITH 30" TALL SLOPED ROOF CURB.
MH4	PRIOR TO CONSTRUCTION FIELD VERIFY LOCATION OF EXISTING EXHAUST FAN SERVING EXISTING 16/12 EA DUCT. MEASURE AIR FLOW IN EXISTING 16/12. REBALANCE EXHAUST FAN TO PROVIDE 150 CFM FOR RESTROOM GRILLE AND MAINTAIN EXISTING AIR FLOW TO THE REMAINDER OF THE EXHAUST SYSTEM.
MH5	EXISTING DIFFUSER BALANCE TO 350 CFM
MH6	REINSTALL EXISTING THERMOSTAT
MH7	REINSTALL EXISTING TEMPERATURE SENSOR
MH8	CUT 12"X12" OPENING IN GYP. BOARD 24" ABOVE CEILING FOR TRANSFER AIR.
MH9	24"X12" TRANSFER AIR DUCT WITH FIRE DAMPER ABOVE CEILING.



A2 ENLARGED HVAC PLAN LOWER LEVEL
SCALE: 1/8" = 1'-0"



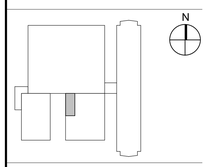
A5 ENLARGED HVAC PLAN MAIN LEVEL
SCALE: 1/8" = 1'-0"

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	MJB
Draw	MJB
Check	RLM

STAMP

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

Project No. 003-10201-014
04.04.2025

ENLARGED HVAC PLANS

MH101

CONSTRUCTION DOCUMENTS

4/4/2025 11:47:23 AM Model: \\adodcfstares\projects\003\003-10201-014\4-0 Production-Working\4-1-BIM-CAD\Revit MEP_OPSLC.rvt

LIGHTING EQUIPMENT

SYMBOL	DESCRIPTION
	STANDARD SYMBOL INDICATES LUMINAIRE CONNECTED TO NORMAL POWER BRANCH
	FULL HATCHED SYMBOL INDICATES LUMINAIRE CONNECTED TO CODE REQUIRED EMERGENCY / LIFE SAFETY BRANCH. WHEN LUMINAIRE SYMBOL PREVENTS HATCH FROM SHOWING, "LS" SHALL IDENTIFY LIFE SAFETY SECTION.
	HALF-SHADED SYMBOL INDICATES LUMINAIRE CONNECTED TO OPTIONAL STANDBY / CRITICAL / EQUIPMENT BRANCH. WHEN LUMINAIRE SYMBOL PREVENTS HATCH FROM SHOWING, "CR" SHALL IDENTIFY CRITICAL SECTION.
	LUMINAIRE LABELING
A1 1 a 72"	A1 = LUMINAIRE TYPE 1 = CIRCUIT NUMBER a = RELAY CONTROL ZONE ID 72" = MOUNTING HEIGHT ^ = DIRECTIONAL LIGHTING
	RECTANGULAR LUMINAIRE
	ROUND LUMINAIRE
	RECTANGULAR LUMINAIRE
	WALL MOUNTED LUMINAIRE
	LINEAR LUMINAIRE
	WALL MOUNTED LINEAR LUMINAIRE
	STRIP LUMINAIRE
	WALL MOUNTED LUMINAIRE
	UNDER CABINET LUMINAIRE
	SUSPENDED LINEAR LUMINAIRE
	COVE OR SPECIALTY LUMINAIRE - NORMAL, SEE EQUIPMENT SCHEDULE FOR TYPE
	COVE OR SPECIALTY LUMINAIRE - SEE HATCHING LEGEND ABOVE, SEE EQUIPMENT SCHEUDLE FOR TYPE
	COVE OR SPECIALTY LUMINAIRE - SEE HATCHING LEGEND ABOVE, SEE EQUIPMENT SCHEUDLE FOR TYPE
	TRACK LIGHTING, QUANTITY AND ORIENTATION AS SHOWN
	SPECIALTY LUMINAIRE, SUSPENDED
	EXIT SIGN, CEILING OR WALL MOUNT
	EMERGENCY LIGHTING UNIT
	REMOTE DRIVER ENCLOSURE
	POLE MOUNTED LIGHTING (HEADS AS INDICATED)
	POLE MOUNTED LIGHTING MULTI-HEAD
	POLE MOUNTED LIGHTING POST TOP HEAD
	BOLLARD LUMINAIRE
	FLOOD LIGHTING
	IN-GRADE LIGHTING

SWITCHING AND CONTROL OUTLETS

SYMBOL	DESCRIPTION
$	SINGLE POLE, TOGGLE
$$	TWO SINGLE POLE, TOGGLE, INDICATES BI-LEVEL SWITCHING
S# a,#1	LOW VOLTAGE LIGHTING CONTROL SWITCH S# = 'S#' INDICATES SWITCH ID, SEE LIGHTING CONTROL SWITCH SCHEDULES FOR ADDITIONAL INFORMATION a = RELAY CONTROL ZONE ID WHEN RELAY CONTROL ZONE ID IS PRESENT ON BOTH LUMINAIRE AND LOW VOLTAGE LIGHTING CONTROL SWITCH, SWITCH SHALL BE PROGRAMMED TO CONTROL LUMINAIRES WITH MATCHING RELAY CONTROL ZONE ID. #1 = '#1' INDICATES CONTROL AREA ID, SEE LIGHTING CONTROL AREA PLANS FOR ADDITIONAL INFORMATION
DS	DAYLIGHT SENSOR, ON CEILING
OS	OCCUPANT SENSOR, ON CEILING
PC	PHOTOCELL SENSOR
CR	LIGHTING CONTROL RELAY CONSOLIDATION LOCATION
PS #A	PILLOW SPEAKER LIGHTING CONTROL INTERFACE ## INDICATES KEYPAD ID, SEE PILLOW SPEAKER LIGHTING CONTROL INTERFACE SCHEDULE FOR ADDITIONAL INFORMATION
RP	RETRACTABLE WALL POSITION SENSOR, ON CEILING
DS	DAYLIGHT SENSOR, ON WALL
OS	OCCUPANT SENSOR, ON WALL
PC	PHOTOCELL SENSOR, ON WALL
XXX #1	LIGHTING CONTROL TAG - SEE LIGHTING CONTROL SEQUENCE OF OPERATION SCHEDULE #1 = '#1' INDICATES CONTROL AREA ID, SEE LIGHTING PLANS FOR ADDITIONAL INFORMATION
	SWITCH LABELING
$ a #	a = INDICATES LUMINAIRES CONTROLLED BY SWITCH # = INDICATES SWITCH TYPE AS BELOW:

2 = DOUBLE POLE, SINGLE THROW
3 = THREE WAY
4 = FOUR WAY
D = DIMMER
P = INTERNAL PILOT LIGHT
TS = TIME SWITCH
TE = THERMAL ELEMENT
K = KEY OPERATED
M = MOTOR RATED
MC = MOMENTARY CONTACT
O = OCCUPANT SENSOR
T = TIMER
LV = LOW VOLTAGE

TELECOMMUNICATION

SYMBOL	DESCRIPTION
	VOICE OUTLET
W	VOICE OUTLET, WALL PHONE PLATE, 54" A.F.F UON
#	DATA OUTLET, # DENOTES NUMBER OF CABLES
	VOICE/DATA OUTLET
	SAME AS INDICATED ABOVE EXCEPT CIRCULAR SYMBOLS INDICATE FLUSH MOUNTED IN CEILING AND SQUARE SYMBOLS INDICATE FLUSH MOUNTED IN FLOOR
C	CHIME
	CABLE TRAY - TYPE/SIZE AS INDICATED ON PLANS
WAP	WIRELESS ACCESS POINT
DAS	DISTRIBUTED ANTENNA SYSTEM ANTENNA
	TELECOMMUNICATIONS CABINET
	TELECOMMUNICATIONS RACK
TGB	TELECOMMUNICATIONS GROUND BAR
TMGB	TELECOMMUNICATIONS MAIN GROUND BAR
Z1	SPEAKER ZONE IDENTIFICATION FOR THE ROOM OR AREA
TV	TELEVISION OUTLET, ON CEILING
SM	SOUND MASKING, ON CEILING
TV	TELEVISION OUTLET, WALL MOUNTED 60" A.F.F. UON
S	SPEAKER, ON CEILING
S	SPEAKER, WALL MOUNTED 90" A.F.F. UON
V	VOLUME CONTROL, WALL MOUNTED 46" A.F.F. UON
I	INTERCOM STATION, WALL MOUNTED 46" A.F.F. UON
M	MICROPHONE, WALL MOUNTED 46" A.F.F. UON
	3/4" PLYWOOD, PAINTED W/ 2 COATS FIRE PROOF GREY PAINT

POWER OUTLETS

SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE, EMERGENCY POWER
	DUPLEX RECEPTACLE, GFCI DEVICE
	DUPLEX RECEPTACLE, EMERGENCY POWER, GFCI DEVICE
	DUPLEX RECEPTACLE, FLUSH MOUNTED ON CEILING
	DUPLEX RECEPTACLE, FLUSH MOUNTED IN FLOOR
	DOUBLE DUPLEX RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE, EMERGENCY POWER
	DOUBLE DUPLEX RECEPTACLE, GFCI DEVICE
	DOUBLE DUPLEX RECEPTACLE, EMERGENCY POWER, GFCI DEVICE
	DOUBLE DUPLEX RECEPTACLE, FLUSH MOUNTED ON CEILING
	DOUBLE DUPLEX RECEPTACLE, FLUSH MOUNTED IN FLOOR
	DUPLEX RECEPTACLE, HORIZONTAL MOUNT
	SINGLE RECEPTACLE
	SINGLE RECEPTACLE, EMERGENCY POWER
	SPECIAL RECEPTACLE, AS NOTED
	SPECIAL RECEPTACLE, AS NOTED, EMERGENCY POWER
	DEAD-FRONT GFCI DEVICE - SEE ELECTRICAL SYMBOL LEGEND NOTES FOR DEVICE LABELING INSTRUCTIONS, 46" A.F.F. UON
	DEAD-FRONT GFCI DEVICE, EMERGENCY POWER - SEE ELECTRICAL SYMBOL LEGEND NOTE FOR DEVICE LABELING INSTRUCTIONS, 46" A.F.F. UON
C	WALL CLOCK RECEPTACLE, 90" A.F.F. UON
AV #	AV WALL BOX, SEE SCHEDULE FOR CONFIGURATION
FB #	FLOOR BOX, SEE SCHEDULE FOR CONFIGURATION
	PUSHBUTTON, NUMBER OF BUTTONS AS SHOWN
	MULTI-OUTLET ASSEMBLY, AS NOTED

POWER DISTRIBUTION

SYMBOL	DESCRIPTION
A-1,3,5	WIRING IDENTIFICATION LETTER INDICATES PANEL, NUMBERS INDICATE CIRCUITS
	CONDUIT CONCEALED IN CEILING OR WALL
	CIRCUIT ZONE BOUNDARY
NORMAL CIRCUIT CRITICAL CIRCUIT LIFE SAFETY CIRCUIT	CIRCUIT HOMERUN TAG(S) PER ZONE
	CONDUIT EXPOSED
	CONDUIT CONCEALED IN FLOOR OR BELOW GRADE
	CONDUIT SEAL
	CONDUIT DOWNWARD
	CONDUIT UPWARD
	CONDUIT CONTINUATION
	CONDUIT END CAP
CDB	CONDUIT IN DUCTBANK
	SURFACE MOUNTED BRANCH PANELBOARD
	FLUSH MOUNTED BRANCH PANELBOARD
	DISTRIBUTION PANEL
	SWITCHBOARD
	MOTOR CONTROL CENTER
	ELECTRICAL CABINET OR SPECIAL PURPOSE ENCLOSURE
PB	PULL BOX
MH	MANHOLE
HH	HANDHOLE
ATS	AUTOMATIC TRANSFER SWITCH
SPD	SURGE PROTECTION DEVICE
VFD	VARIABLE FREQUENCY DEVICE
	MOTOR
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	INDIVIDUAL MOLDED CASE CIRCUIT BREAKER IN ENCLOSURE
	MAGNETIC MOTOR STARTER
	COMBINATION MOTOR STARTER AND DISCONNECT SWITCH
J	JUNCTION BOX, WALL MOUNTED
J	JUNCTION BOX, FLUSH MOUNTED ON CEILING
J	JUNCTION BOX, FLUSH MOUNTED IN FLOOR
R	RELAY
	RECESSED FLOOR DUCT, TYPE/SIZE AS INDICATED ON PLANS
	POLE MOUNTED TRANSFORMER
	3 PHASE POLE MOUNTED TRANSFORMERS

FIRE ALARM

SYMBOL	DESCRIPTION
F	FIRE ALARM MANUAL STATION
F	FIRE ALARM EXTERIOR BELL (WP)
F	FIRE ALARM HORN
F #	FIRE ALARM HORN STROBE, # INDICATES CANDELA RATING
#	FIRE ALARM SPEAKER STROBE, # INDICATES CANDELA RATING
#	FIRE ALARM STROBE, # INDICATES CANDELA RATING
S	FIRE ALARM SPEAKER ONLY
C	FIRE ALARM STROBE AND CHIME COMBINATION
C	FIRE ALARM CHIME
DH	FIRE ALARM DOOR HOLDER
#	FIRE ALARM STROBE, ON CEILING, # INDICATES CANDELA RATING
	FIRE ALARM HORN, ON CEILING
#	FIRE ALARM HORN STROBE, ON CEILING, # INDICATES CANDELA RATING
	FIRE ALARM SPEAKER, ON CEILING
#	FIRE ALARM SPEAKER STROBE, ON CEILING # INDICATES CANDELA RATING
#	MASS NOTIFICATION SPEAKER/STROBE, # INDICATES CANDELA RATING
#	MASS NOTIFICATION STROBE, # INDICATES CANDELA RATING
S M #	MASS NOTIFICATION SPEAKER, # INDICATES DECIBEL RATING
#	MASS NOTIFICATION STROBE, ON CEILING, # INDICATES CANDELA RATING
M #	MASS NOTIFICATION SPEAKER, ON CEILING, # INDICATES DECIBEL RATING
M #	MASS NOTIFICATION SPEAKER STROBE, ON CEILING, # INDICATES CANDELA RATING
F SC	COMBINATION SMOKE AND CARBON MONOXIDE DETECTOR
R/F	HEAT DETECTOR COMBINATION FIXED TEMPERATURE AND RATE OF RISE
F°	HEAT DETECTOR, FIXED TEMPERATURE
	GAS DETECTOR/SENSOR, # INDICATES GAS TYPE
	FIRE ALARM SMOKE DETECTOR
I	FIRE ALARM IONIZATION TYPE SMOKE DETECTOR
P	FIRE ALARM PHOTOELECTRIC TYPE SMOKE DETECTOR
	DUCT SMOKE DETECTOR
	SMOKE DAMPER
	FIRE/SMOKE DAMPER
M	MOTORIZED FIRE/SMOKE DAMPER
PIV	POST INDICATOR VALVE
TS	TAMPER SWITCH
FS	FLOW SWITCH
ET	EMERGENCY TEXTUAL VISIBLE APPLIANCE
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FMCP	FIRE ALARM AND MASS NOTIFICATION SYSTEM CONTROL PANEL
EVAC	FIRE ALARM SYSTEM VOICE EVACUATION AUDIO PANEL
BATT	FIRE ALARM SYSTEM BATTER PACK/CHARGER CABINET
NAC#	FIRE ALARM NOTIFICATION APPLIANCE CIRCUIT (NAC)
MNCP	MASS NOTIFICATION SYSTEM CONTROL PANEL
LOC	LOCAL OPERATING CONSOLE
MN#	POWER SUPPLY AND INTERFACE TERMINAL CABINET
A	ABORT SWITCH
M	MANUAL RELEASING STATION
R	FIRE ALARM RELAY

GROUNDING AND LIGHTNING PROTECTION

SYMBOL	DESCRIPTION
	LIGHTNING PROTECTION AIR TERMINAL
	GROUND ROD
	DOWN CONDUCTOR
	BONDING LUG TYPE GROUNDING CONNECTION
	EXOTHERMIC WELD TYPE GROUNDING CONNECTION
	GROUNDING BUSBAR, WALL MOUNTED
	GROUNDING MODULE, WALL MOUNTED
G	UNDERGROUND COUNTERPOISE GROUNDING CONDUCTOR
G	GROUND CONDUCTORS EXPOSED ON SURFACE

ELECTRICAL SYMBOL LEGEND NOTES

1. ALL SYMBOLS INDICATED ARE NOT NECESSARILY USED ON PLANS.
2. FOR POWER AND SYSTEMS DEVICES, ALL MOUNTING DIMENSIONS INDICATED ARE TO THE CENTERLINE (CL) OF THE DEVICE AND ABOVE FINISHED FLOOR (A.F.F.) OR ABOVE FINISHED GRADE (A.F.G.) UNLESS OTHERWISE NOTED.
3. FOR WALL MOUNTED LUMINAIRES, MOUNTING DIMENSIONS ARE TO THE CENTER OF LUMINAIRE AND ABOVE FINISHED FLOOR (A.F.F.) OR ABOVE FINISHED GRADE (A.F.G.) UNLESS OTHERWISE NOTED.
4. FOR SUSPENDED LUMINAIRES, MOUNTING DIMENSIONS ARE TO THE BOTTOM OF LUMINAIRE AND ABOVE FINISHED FLOOR (A.F.F.) OR ABOVE FINISHED GRADE (A.F.G.) UNLESS OTHERWISE NOTED.
5. MOUNT BOTTOM OF EXIT SIGNS 4" ABOVE TOP OF DOOR FRAME U.O.N.. IF SIGN IS NOT DIRECTLY ABOVE DOOR, USE HEIGHT OF ADJACENT DOOR AS A GUIDE.
6. WHEN LOCATED ON WALL NEXT TO A DOOR, WALL MOUNTED LIGHT SWITCHES ARE TO BE LOCATED 46" A.F.F. AND 2" FROM EDGE OF DOOR FRAME TO EDGE OF DEVICE PLATE. WHEN NO SPACE IS AVAILABLE NEXT TO DOOR FRAME, LIGHT SWITCH SHALL BE INSTALLED ON SAME WALL AS DOOR SWING OPENS UP TO, AND 2" FROM WHERE DOOR SWING HITS ON WALL.
7. LIGHT SWITCHES LOCATED ABOVE COUNTERTOPS SHALL MATCH ABOVE COUNTER RECEPTACLE HEIGHT.
8. OUTLETS INDICATED AS BEING FOR WALL MOUNTED TELEPHONES SHALL BE LOCATED 54" A.F.F. UNLESS OTHERWISE NOTED.
9. WALL MOUNTED FIRE ALARM MANUAL PULL STATIONS ARE TO BE LOCATED 46" A.F.F. AND WITHIN 60" OF THE NEAREST ADJACENT EXIT DOOR FROM THE FLOOR OR BUILDING.
10. FIRE ALARM VISUAL NOTIFICATION APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS BETWEEN 80" AND 96" A.F.F..
11. FIRE ALARM CONTROL CABINETS, AND OTHER SIMILAR CABINETS SHALL BE MOUNTED 72" A.F.F. TO THE TOP.
12. CONVENIENCE OUTLETS SHALL BE MOUNTED 18" A.F.F. AND SHALL BE ALIGNED VERTICALLY. PROVIDE HORIZONTAL INSTALLATIONS ONLY WHEN SPACE IS LIMITED, SUCH AS BETWEEN MIRRORS AND CABINET BACKSPLASHES. THE GROUND PIN SHALL BE ORIENTED IN THE UP POSITION.
13. CONVENIENCE OUTLETS LOCATED IN MECHANICAL AND BOILER ROOMS SHALL BE LOCATED 46" A.F.F..
14. CONVENIENCE OUTLETS LOCATED OUTSIDE SHALL BE GFI AND WEATHERPROOF RATED, FURNISHED WITH A WEATHERPROOF "WHILE-IN-USE" COVER AND MOUNTED 24" A.F.F. OR A.F.G.. EXTERIOR CONVENIENCE OUTLETS SHALL BE INSTALLED WITHIN 25 FEET AND ON THE SAME LEVEL AS HEATING, AIR CONDITIONING AND REFRIGERATION EQUIPMENT.
15. OUTLETS FOR WALL MOUNTED TELECOMMUNICATION OR COMPUTER DEVICES SHALL BE LOCATED 18" A.F.F. AND SHALL BE ALIGNED VERTICALLY. PROVIDE HORIZONTAL INSTALLATIONS ONLY WHEN SPACE IS LIMITED, SUCH AS BETWEEN MIRRORS AND CABINET BACKSPLASHES.
16. MISCELLANEOUS WALL MOUNTED CONTROL DEVICES, SUCH AS SPEAKER VOLUME CONTROLS, DOOR BELLS, AUTOMATIC DOOR PUSH PADS, ETC. SHALL BE MOUNTED AT 46" A.F.F.
17. WALL MOUNTED LUMINAIRES SHALL BE MOUNTED AS INDICATED ON THE DRAWINGS.
18. PANELBOARDS SHALL BE MOUNTED 72" AFF TO TOP OF TRIM, UNLESS OTHERWISE INDICATED. ADJUST MOUNTING HEIGHT TO TOP OF TRIM TO ACCOMMODATE PANELBOARDS WITH GREATER THAN 42-POLES. IN NO CASE SHALL THE OPERATING HANDLE OF THE TOP-MOST SWITCH OR CIRCUIT BREAKER, IN THE ON POSITION, BE ANY HIGHER THAN 79" AFF.
19. MOTOR CONTROLLERS AND SAFETY SWITCHES SHALL BE MOUNTED 60" A.F.F..
20. CEILING MOUNTED SMOKE DETECTORS SHALL BE LOCATED NO MORE THAN 30' ON CENTER FROM EACH AND NO MORE THAN 15' FROM THE END OF A CORRIDOR OR SMOKE PARTITION. SMOKE DETECTORS SHALL ALSO NOT BE PLACED WITHIN 3' OF SUPPLY OR RETURN AIR DIFFUSERS, ADJUST SPACING SHOWN ON DRAWINGS AS REQUIRED.
21. DEVICE BOXES SHALL BE MOUNTED FLUSH IN WALLS UNLESS OTHERWISE NOTED OR REQUIRED. FLUSH SHALL BE DEFINED AS EVEN WITH THE FACE OF THE WALL, OR RECESSED NO MORE THAN 1/16".
22. WHERE DEVICES CONNECTED TO NORMAL AND EMERGENCY POWER SYSTEMS ARE LOCATED IN THE SAME BOX, PROVIDE LISTED METALLIC BARRIERS AND SEPARATE RACEWAYS. BOXES SHALL BE PROPERLY CONFIGURED TO ACCEPT BARRIERS.
23. WHERE RECEPTACLES ARE INDICATED AS BEING PROTECTED BY SEPARATE GFCI DEVICE IN PLANS, CONTRACTOR SHALL LABEL RECEPTACLE FACEPLATE "PROTECTED BY REMOTE DEAD-FRONT GFCI DEVICE" OR "PROTECTED BY GFCI CIRCUIT BREAKER", AS APPLICABLE.
24. WHERE DEAD-FRONT GFCI DEVICES ARE INDICATED IN PLANS, CONTRACTOR SHALL LABEL DEAD-FRONT GFCI DEVICE FACEPLATE WITH GFCI PROTECTED EQUIPMENT OR FUNCTION. FOR EXAMPLE, "MICROWAVE", "REFRIGERATOR", OR "COUNTERTOP".

SUBSCRIPTS

SYMBOL	DESCRIPTION
44"	MOUNTING HEIGHT A.F.F. TO CENTER LINE OF DEVICE
AC	MOUNT DEVICE 6" ABOVE COUNTER OR 36" A.F.F. AT WORKSTATIONS
C	CONTROLLED RECEPTACLE - SEE LIGHTING CONTROL SEQUENCE OF OPERATIONS SCHEDULE
CS	CONTROLLED / SPLIT RECEPTACLE - SEE LIGHTING CONTROL SEQUENCE OF OPERATIONS SCHEDULE
D	DEDICATED
E	EMERGENCY
EX	EXPLOSION PROOF, CLASS GROUP AND DIVISION AS NOTED
FA	UNIT IS CONNECTED TO FIRE ALARM SYSTEM
G	GROUND FAULT CIRCUIT INTERRUPTER
H	HOSPITAL GRADE
IG	ISOLATED GROUND
NL	UNSWITCHED NIGHT LIGHT
RT	RAINTIGHT NEMA TYPE 3R OR EQUIVALENT
S	SWITCHED RECEPTACLE
SP	SURGE PROTECTED TYPE RECEPTACLE
T	TAMPER-RESISTANT
TV	TELEVISION
U	CONNECTED TO UPS SYSTEM
UON	UNLESS OTHERWISE NOTED
USB	USB CHARGING INCLUDED IN DEVICE
WP	WEATHERPROOF NEMA TYPE 3 OR EQUIVALENT
PTZ	PAN, TILT, ZOOM TYPE CAMERA

ELECTRICAL GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE APPLICABLE EDITIONS OF THE NATIONAL ELECTRICAL CODE, THE STATE BUILDING CODE, AND ANY OTHER LOCAL, STATE, OR FEDERAL CODES, ORDINANCES, OR AUTHORITATIVE INTERPRETATIONS THAT MAY APPLY. A CERTIFICATE OF FINAL ELECTRICAL INSPECTION SHALL BE OBTAINED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK AND PRESENTED TO BOTH THE OWNER AND THE A/E.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE AND SATISFACTORILY OPERATING SYSTEMS AS INDICATED ON THE CONTRACT DOCUMENTS. IT IS NOTED THAT THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENTS OF SYSTEMS AND WORK. CIRCUIT NUMBERS, INTERCONNECTIONS, HOME RUNS, AND SWITCH LEGS HAVE BEEN SHOWN, AND THE CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT AND WIRING AS REQUIRED TO ACCOMPLISH THE FUNCTIONS INDICATED. SPECIAL SYSTEMS DEVICES (COMMUNICATIONS, SECURITY, ETC.) HAVE BEEN SHOWN AND THE CONTRACTOR SHALL FURNISH AND INSTALL THE REQUIRED QUANTITIES AND TYPES OF CABLES, CONDUCTORS, RACEWAYS, REMOTE POWER SUPPLIES AND CONNECTIONS, SHIELDING REQUIREMENTS, ETC., AS REQUIRED BY THE SYSTEM MANUFACTURER, THE SPECIFICATIONS, AND ANY APPLICABLE CODES.
3. THE CONTRACTOR SHALL COORDINATE THE ELECTRICAL WORK WITH THE WORK OF ALL OTHER TRADES SO AS TO AVOID CONFLICTS. RESOLVE ALL CONFLICTS THROUGH THE A/E PRIOR TO ROUGH-IN. FAILURE TO PROVIDE SUCH COORDINATION PRIOR TO WORK BEING INSTALLED SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION TO THE CONTRACTOR, AND MAY RESULT IN REJECTION OF THE WORK. IT IS THE CONTRACTORS' RESPONSIBILITY TO COORDINATE SUBSTITUTIONS WITH OTHER TRADES.
4. ALL MATERIALS SHALL BE NEW, SHALL BE SUITABLE FOR THE APPLICATION INTENDED, AND SHALL BEAR LABELS OR MARKINGS INDICATING THIRD PARTY TESTING LABORATORY LISTINGS ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION UNLESS OTHERWISE NOTED.
5. VERIFY LOCATIONS OF LUMINAIRES WITH ARCHITECTURAL REFLECTED CEILING PLANS AND THE PLANS OF ALL OTHER TRADES. COORDINATE LUMINAIRE RECESSING DEPTHS WITH MECHANICAL WORK AND COORDINATE ACCORDINGLY.
6. ALL WIRING FOR POWER AND LIGHTING SYSTEMS SHALL BE INSTALLED IN METALLIC RACEWAY SYSTEMS UNLESS OTHERWISE NOTED. ALL CONDUCTORS SHALL BE COPPER, SHALL BE #12AWG MINIMUM, AND SHALL HAVE 600V TYPE THHN/THWN INSULATION, UNLESS OTHERWISE NOTED. ALL RACEWAYS AND CIRCUITS SHALL INCLUDE INSULATED GROUND CONDUCTORS SIZED AS INDICATED OR AS REQUIRED BY THE NEC. MINIMUM RACEWAY SIZE SHALL BE 3/4" UNLESS OTHERWISE NOTED.
7. WHERE 20A, 120V LIGHTING AND POWER CIRCUIT LENGTHS EXCEED 100 FEET, PROVIDE #10 PHASE AND NEUTRAL CONDUCTORS WITH #10 GND IN MIN. 3/4" CONDUIT.
8. PROVIDE #16 AWG 0-10V LIGHTING CONTROL CONDUCTORS WHEN LENGTH BETWEEN DIMMER MODULE AND FURTHEST CONTROLLED DRIVER IS 100 FEET OR LESS. WHEN 0-10V LIGHTING CONTROL CONDUCTOR LENGTH EXCEEDS 100 FEET COORDINATE CONDUCTOR SIZE WITH LUMINAIRE MANUFACTURER TO ENSURE VOLTAGE DROP IS WITHIN MANUFACTURER'S VOLTAGE DROP TOLERANCE. VOLTAGE RATING OF CABLE SHALL BE SUITABLE FOR EITHER CLASS I OR CLASS II, REMOTE CONTROL OR SIGNAL CIRCUIT, AS DETERMINED BY CODES AND ACTUAL INSTALLATION.
9. WHEN INSTALLED WITHIN INACCESSIBLE CEILING SPACES OR WALLS, LOW VOLTAGE CLASS 2 LIGHTING CONTROL WIRING SHALL BE INSTALLED IN CONDUIT SEPARATE FROM ANY LINE VOLTAGE WIRING. WHEN CONDUIT EXTENDS INTO ACCESSIBLE CEILING SPACE, LIGHTING CONTROL WIRING MAY BE RUN EXPOSED. PROVIDE AN INSULATED BUSHING AT THE TRANSITION.
10. WHEN INSTALLED WITHIN ACCESSIBLE CEILING SPACE, LOW VOLTAGE CLASS 2 LIGHTING CONTROL WIRING SHALL BE PROTECTED FROM PHYSICAL DAMAGE BY USING CONDUIT, STRAPS, STAPLES, HANGERS, CABLE TIES, OR SIMILAR FITTINGS DESIGNED AND INSTALLED SO AS NOT TO DAMAGE THE CABLE. SECURE CABLE IN PLACE AT INTERVALS NOT EXCEEDING 5'-0" AND WITHIN 12" IN FROM EVERY CABINET, JUNCTION BOX OR DEVICE. ALL ROUTING OF CONTROL WIRING SHALL RUN PARALLEL AND PERPENDICULAR TO BUILDING LINES, AND BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER.
11. LOW VOLTAGE CLASS 2 LIGHTING CONTROL WIRING INSTALLED WITHIN PLENUM SPACES. WHEN PLENUM SPACE IS ACCESSIBLE, LIGHTING CONTROL WIRING SHALL BE PLENUM RATED OR INSTALLED IN CONDUIT. WHEN PLENUM SPACE IS INACCESSIBLE, LIGHTING CONTROL WIRING SHALL BE INSTALLED IN CONDUIT.
12. RACEWAYS SHALL NOT CONTAIN MORE THAN THREE PHASE CONDUCTORS, THREE NEUTRALS, AND ONE GROUND CONDUCTOR, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL PROVIDE SEPARATE NEUTRALS FOR ALL 20A/1P CIRCUIT BREAKERS. PROVIDING MULTI-POLE CIRCUIT BREAKERS IN CONJUNCTION WITH SHARED NEUTRALS IN A MULTI-WIRE CIRCUIT IN ACCORDANCE WITH NEC 210.4 SHALL REQUIRE APPROVAL BY THE ENGINEER.
13. EXPOSED RACEWAY UP TO 8'-0" ABOVE FINISHED FLOOR OR GRADE ELEVATION, OR ANY RACEWAY SUBJECT TO DAMAGE, SHALL BE RMC.
14. ALL CONNECTIONS FOR ELECTRICALLY POWERED EQUIPMENT, INCLUDING BUT NOT LIMITED TO MECHANICAL AND OWNER SUPPLIED EQUIPMENT, SHALL BE FURNISHED AND INSTALLED. WHERE NOT INDICATED AS BEING PROVIDED WITH THE EQUIPMENT, ALL REQUIRED DISCONNECTING MEANS SHALL BE FURNISHED AND INSTALLED AS A PART OF THE ELECTRICAL WORK. COORDINATE LOCATIONS OF DISCONNECTING AND CONTROLLING MEANS WITH EQUIPMENT TO MAINTAIN CODE AND INSTALLATION REQUIREMENTS. DEDICATED WORKING SPACE FOR MOTOR CONTROLLERS AND SAFETY SWITCHES SHALL BE PER NEC 110.26 REQUIREMENTS.
15. ALL RACEWAY AND WIRING SHALL BE CONCEALED IN FINISHED SPACES, AND MAY BE INSTALLED EXPOSED IN UNFINISHED SPACES SUCH AS MECHANICAL AND ELECTRICAL ROOMS. ALL RACEWAY AND WIRING, WHETHER CONCEALED OR EXPOSED, SHALL BE RUN EITHER PERPENDICULAR OR PARALLEL TO THE BUILDING'S STRUCTURAL COMPONENTS.
16. PROVIDE PULL AND JUNCTION BOXES AS REQUIRED TO MEET CODE AND INSTALLATION REQUIREMENTS. PULL AND JUNCTION BOXES SHALL BE CONCEALED IN FINISHED SPACES AND LOCATIONS SHALL BE COORDINATED WITH THE WORK OF ALL OTHER TRADES SO AS TO AVOID CONFLICTS.
17. ALL CONDUCTORS SHALL BE IDENTIFIED AT EACH JUNCTION BOX, OUTLET BOX, CABINET, PULL BOX, ETC., WITH VINYL SELF-ADHESIVE TAGS INDICATING PANEL AND CIRCUIT NUMBER, CONTROL WIRE IDENTIFICATION NUMBER, OR OTHER APPROPRIATE INFORMATION. ALL PULL AND JUNCTION BOXES SHALL BE LABELED AS TO FUNCTION.
18. ALL EQUIPMENT SHALL BE SECURELY FASTENED BY MEANS OF ANCHORS, RODS, HANGERS, SUPPORTS, GUIDES, SWAY BRACES, ETC., TO MAINTAIN ALIGNMENT AND PREVENT EQUIPMENT MOVEMENT.
19. ALL PENETRATIONS OF FIRE OR SMOKE RATED CONSTRUCTION SHALL BE SEALED WITH FIRESTOPPING MATERIALS APPROVED AND LISTED FOR THE RATING OF THE CONSTRUCTION TO BE PENETRATED. PROVIDE DOCUMENTATION ON ALL SUCH PENETRATION SEALING SYSTEMS FOR VERIFICATION OF PROPER INSTALLATION.
20. ALL PENETRATIONS OF ROOFS, EXTERIOR WALLS, FOUNDATIONS, OR OTHER WATER OR MOISTURE PROOF CONSTRUCTION SHALL BE SEALED WITH APPROPRIATE SEALING FITTINGS OR SEALED CONSTRUCTION TO PREVENT THE INTRODUCTION OF MOISTURE INTO THE BUILDING.
21. WHERE EMPTY RACEWAYS ARE INSTALLED, THEY SHALL BE LABELED AT BOTH ENDS AND FITTED WITH NYLON PULLSTRINGS FOR FUTURE USE.
22. TO PREVENT PERSONNEL INJURY AND POTENTIAL SYSTEM FAILURE, ELECTRICAL WORK SHALL BE PERFORMED ON DE-ENERGIZED SYSTEMS ONLY. WHERE WORK ON EXISTING SYSTEMS WILL REQUIRE INTERRUPTION OF ELECTRICAL SERVICE, THEN TEMPORARY PROVISIONS ACCEPTABLE TO THE OWNER FOR TEMPORARY POWER SHALL BE UTILIZED UNTIL THE WORK IS COMPLETE. PROVIDE ARC FLASH LABELS FOR ALL SWITCHBOARDS, PANELBOARDS, AND MOTOR CONTROL CENTERS.
23. IF THE CONTRACTOR SUBSTITUTES EQUIPMENT WITH DIFFERENT CHARACTERISTICS THAN WHAT IS SPECIFIED, INCLUDING ELECTRICAL CHARACTERISTICS, IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE THESE DIFFERENCES WITH OTHER TRADES.
24. IN SPACES WITH WALL-MOUNTED TILE WORK, COORDINATE EXACT LOCATION OF ELECTRICAL ROUGH-IN WITH PROPOSED TILE PATTERN TO MINIMIZE THE AMOUNT OF TILE CUTTING REQUIRED.
25. RECEPTACLES INSTALLED IN BATHROOMS SHALL BE GROUND FAULT - CIRCUIT INTERRUPTER TYPE.
26. DEVICE BOXES SHALL BE MOUNTED FLUSH IN WALLS UNLESS OTHERWISE NOTED OR REQUIRED. FLUSH SHALL BE DEFINED AS EVEN WITH THE FACE OF THE WALL, OR RECESSED NO MORE THAN 1/16". J-BOXES INSTALLED WITH PLASTER RINGS TO BE FLUSH WITH WALL. EXAMPLE: WALLS WITH 5/8" THICK SHEET ROCK REQUIRES 3/4" PLASTER RING. PROVIDE PLASTER RINGS AS REQUIRED FOR VARYING WALL THICKNESS COVERINGS. J-BOXES TO BE SUPPORTED WITH STUD-TO-STUD BACK BOX BRACING.
27. WALL BOXES FOR SINGLE AND TWO-GANG SWITCHES, CONVENIENCE OUTLETS, SHALL BE 4" SQUARE. TELECOMMUNICATION OR DATA WALL BOXES SHALL BE 4-11/16" SQUARE BY 2-1/8" DEEP. WALLS WITH 5/8" THICK SHEET ROCK REQUIRE 3/4" PLASTER RING. PROVIDE SINGLE OR DOUBLE GANG PLASTER RINGS OF CORRECT DEPTH FOR WALL CONSTRUCTION FOR VARYING WALL THICKNESS COVERINGS. J-BOXES TO BE SUPPORTED WITH STUD-TO-STUD BACK BOX BRACING. SECTIONAL OR MULTI-GANG BOXES WITH APPROPRIATE PLASTER RINGS SHALL BE USED FOR MULTI-GANG APPLICATIONS.
28. LUMINAIRES RECESSED IN CEILINGS, FLOORS, OR WALLS SHALL NOT BE USED TO ACCESS OUTLET, PULL OR JUNCTION BOXES, OR CONDUIT BODIES, UNLESS THE BOX OR CONDUIT BODY IS AN INTEGRAL PART OF THE LISTED LUMINAIRE.
29. SWITCHBOARDS, SWITCHGEAR, AND PANELBOARDS SHALL HAVE A SHORT-CIRCUIT CURRENT RATING NOT LESS THAN THE AVAILABLE FAULT CURRENT. IN OTHER THAN ONE-AND TWO-FAMILY DWELLING UNITS, THE AVAILABLE DEFAULT CURRENT AND THE DATE OF CALCULATION WAS PERFORMED SHALL BE FIELD MARKED ON THE ENCLOSURE AT THE POINT OF SUPPLY.

ELECTRICAL DEMOLITION NOTES

1. ALL ELECTRICAL ITEMS INSTALLED IN WALLS, FLOORS, OR CEILINGS TO BE DEMOLISHED SHALL BE REMOVED IN THEIR ENTIRETY UNLESS OTHERWISE NOTED OR REQUIRED BY OTHER CONDITIONS IN THESE DOCUMENTS. SEE DRAWINGS OF ALL OTHER TRADES FOR EXTENT OF DEMOLITION WORK. ELECTRICAL ITEMS SHALL INCLUDE POWER, LIGHTING, AND SPECIAL SYSTEMS. REFER ALL QUESTIONS OF APPLICABILITY TO THE A/E PRIOR TO BID FOR CLARIFICATION; OTHERWISE, FIELD DECISIONS BY THE A/E SHALL BE BINDING.
2. IT IS NOTED THAT THESE DRAWINGS DEPICT THE GENERAL INTENT OF THE SCOPE OF THE DEMOLITION WORK AND THAT NOT ALL ITEMS OF ELECTRICAL DEMOLITION ARE NECESSARILY SHOWN. THE CONTRACTOR SHALL BE REQUIRED TO FIELD VERIFY AND FIELD DETERMINE THE SCOPE OF THE DEMOLITION WORK PRIOR TO BID. REFER ALL QUESTIONS TO THE A/E PRIOR TO BID FOR CLARIFICATION.
3. PHASING OF ELECTRICAL DEMOLITION SHALL FOLLOW THAT OF THE GENERAL CONTRACTOR. COORDINATE REMOVAL OF ELECTRICAL WORK WITH OTHER CONSTRUCTION ACTIVITIES AND THE REQUIREMENTS OF THE OWNER.
4. THE OWNER SHALL HAVE SALVAGE RIGHTS TO ANY ITEMS THAT ARE TO BE DEMOLISHED. ITEMS SUCH AS SPEAKERS AND CAMERAS AND OTHER ITEMS THAT THE OWNER WISHES TO SALVAGE SHALL BE CAREFULLY REMOVED AND STORED IN A LOCATION AS DIRECTED BY THE OWNER. ALL OTHER ITEMS OF DEMOLITION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
5. WHERE DEMOLITION WORK WILL INTERRUPT CIRCUIT CONTINUITY TO OTHER AREAS OF THE FACILITY THAT ARE TO REMAIN IN OPERATION, THEN RACEWAY AND WIRING SHALL BE INSTALLED TO MAINTAIN THOSE AREAS IN COMPLETE OPERATION. PROVIDE TEMPORARY CONNECTIONS AS REQUIRED. COORDINATE ANY INTERRUPTIONS WITH THE OWNER AT LEAST TWO WEEKS PRIOR AND ACCOMMODATE THE OWNER'S NEEDS AS REQUIRED.
6. ELECTRICAL CIRCUITS THAT ARE TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY. CONDUCTORS SHALL BE REMOVED FROM THE ITEM TO BE DEMOLISHED TO THE SOURCE OVERCURRENT DEVICE. RACEWAYS WHICH ARE INSTALLED IN OR BELOW FLOORS OR WITHIN WALLS MAY BE ABANDONED, BUT ALL OVERHEAD OR EXPOSED RACEWAYS SHALL BE REMOVED. EXPOSED RACEWAYS TO BE ABANDONED SHALL BE REMOVED AND SHALL BE CUT OR CHISELED AT LEAST 2"" INTO THE WALL OR FLOOR AND THE OPENING GROUTED SMOOTH.
7. WHERE EXISTING DEVICE OR JUNCTION BOXES MUST REMAIN IN EXISTING WALLS OR CEILINGS (SUCH AS FOR CIRCUITS THAT MUST BE MAINTAINED TO OTHER AREAS), THEN THEY SHALL BE FITTED WITH BLANK COVERPLATES.
8. WHERE DISTRIBUTION OR BRANCH CIRCUIT EQUIPMENT (PANELBOARDS, SWITCHBOARDS, ETC.) IS TO BE REMOVED, THEN ALL CIRCUITS WHICH FEED ITEMS TO REMAIN SHALL BE RECONNECTED TO NEW DISTRIBUTION OR BRANCH CIRCUIT EQUIPMENT. REFER ALL QUESTIONS TO THE A/E FOR CLARIFICATION.
9. THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN IN OPERATION THROUGHOUT CONSTRUCTION. AUTOMATIC SMOKE DETECTORS IN THE AREA OF CONSTRUCTION SHALL BE DISCONNECTED AND TEMPORARILY REPLACED WITH HEAT DETECTORS WHEN THE SPACE IS STAFFED BY THE CONTRACTOR IN ACCORDANCE WITH THE APPROVED FIRE SAFETY PROCEDURES OF THE OWNER AND THE LOCAL FIRE MARSHALL, BUT SHALL BE REACTIVATED WHENEVER THE SPACE IS NOT OCCUPIED BY THE CONTRACTOR. AUTOMATIC SMOKE DETECTORS SHALL BE PROTECTED FROM DUST AND DIRT ACCUMULATION BY REMOVING THE DEVICE FROM ITS BASE DURING THOSE TIMES WHEN THE SYSTEM IS ALLOWED TO BE OUT OF OPERATION.
10. IF HAZARDOUS MATERIALS (I.E. ASBESTOS, PCB's, ETC.) ARE ENCOUNTERED AT ANY TIME DURING CONSTRUCTION IN THE WORK AREA, STOP WORK IMMEDIATELY AND CONTACT THE A/E OR THE OWNER.
11. REMOVE ALL DEVICES SHOWN ON DEMOLITION PLAN UNLESS OTHERWISE NOTED.
12. REMOVE CABLING BACK TO SOURCE FOR ALL TEL/DATA OUTLETS BEING REMOVED.
13. DEMOLISH ADDITIONAL ITEMS NOT SHOWN ON DRAWINGS, BUT WHICH MUST BE REMOVED TO COMPLETE THE PROJECT. SUCH AS:
   A. DEVICES IN EXISTING WALLS IDENTIFIED TO BE REMOVED.
   B. ELECTRICAL CONNECTIONS (ALL) TO MECHANICAL EQUIPMENT BEING REMOVED. SEE MECHANICAL PLANS FOR MORE INFORMATION.
14. RESUPPORT ANY EXISTING CONDUITS WHOSE SUPPORTS ARE REMOVED BY DEMOLITION OF EXISTING CEILING.

FIRE ALARM GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE APPLICABLE EDITIONS OF NFPA 70, NFPA 72, IBC, AND ANY OTHER LOCAL, STATE, OR FEDERAL CODES, ORDINANCES, OR AUTHORITATIVE INTERPRETATIONS THAT MAY APPLY. A CERTIFICATE OF FINAL ELECTRICAL INSPECTION SHALL BE OBTAINED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK AND PRESENTED TO BOTH THE OWNER AND THE A/E.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE AND SATISFACTORILY OPERATING SYSTEMS AS INDICATED ON THE CONTRACT DOCUMENTS AND AS EVIDENTLY INTENDED. IT IS NOTED THAT THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENTS OF SYSTEMS AND WORK. INTERCONNECTIONS HAVE BEEN SHOWN, AND THE CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT AND WIRING AS REQUIRED TO ACCOMPLISH THE FUNCTIONS INDICATED. ADDITIONALLY, FIRE ALARM SYSTEM HAVE BEEN SHOWN AND THE CONTRACTOR SHALL FURNISH AND INSTALL THE REQUIRED QUANTITIES AND TYPES OF CABLES, CONDUCTORS, RACEWAYS, REMOTE POWER SUPPLIES AND CONNECTIONS, SHIELDING REQUIREMENTS, ETC., AS REQUIRED BY THE SYSTEM MANUFACTURER, THE SPECIFICATIONS, AND ANY APPLICABLE CODES. ALL WIRING SHOWN ON RISER DIAGRAMS SHALL ALSO BE FURNISHED AND INSTALLED REGARDLESS OF WHETHER THESE ITEMS ARE SHOWN ON THE FLOOR PLANS.
3. THE CONTRACTOR SHALL COORDINATE THE ELECTRICAL WORK WITH THE WORK OF ALL OTHER TRADES AND EXISTING CONDITIONS SO AS TO AVOID CONFLICTS. RESOLVE ALL CONFLICTS THROUGH THE A/E PRIOR TO ROUGH-IN. FAILURE TO PROVIDE SUCH COORDINATION PRIOR TO WORK BEING INSTALLED SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION TO THE CONTRACTOR, AND MAY RESULT IN REJECTION OF THE WORK.
4. ADDITIONAL DEVICES MAY BE REQUIRED. DO NOT USE THESE DRAWINGS FOR DEVICE COUNTS.
5. ALL MATERIALS SHALL BE NEW, SHALL BE SUITABLE FOR THE APPLICATION INTENDED, AND SHALL BEAR LABELS OR MARKINGS INDICATING THIRD PARTY TESTING LABORATORY LISTINGS ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION.
6. VERIFY LOCATIONS OF WIRING DEVICES IN FINISHED SPACES, MILLWORK, AND CASEWORK WITH ARCHITECTURAL DRAWINGS, DETAILS, AND ELEVATIONS, AND WITH THE OWNER'S EQUIPMENT AND FURNITURE LAYOUTS PRIOR TO ROUGH-IN.
7. ALL FIRE ALARM CABLES SHOULD BE INSTALLED IN METAL RACEWAYS.
8. ALL RACEWAY AND WIRING SHALL BE CONCEALED IN FINISHED SPACES, AND MAY BE INSTALLED EXPOSED IN UNFINISHED SPACES SUCH AS MECHANICAL AND ELECTRICAL ROOMS. ALL RACEWAY AND WIRING, WHETHER CONCEALED OR EXPOSED, SHALL BE RUN EITHER PERPENDICULAR OR PARALLEL TO THE BUILDING'S STRUCTURAL COMPONENTS.
9. PROVIDE PULL AND JUNCTION BOXES AS REQUIRED TO MEET CODE AND INSTALLATION REQUIREMENTS. PULL AND JUNCTION BOXES SHALL BE CONCEALED IN FINISHED SPACES AND LOCATIONS SHALL BE COORDINATED WITH THE WORK OF ALL OTHER TRADES SO AS TO AVOID CONFLICTS.
10. ALL CONDUCTORS SHALL BE IDENTIFIED AT EACH JUNCTION BOX, OUTLET BOX, CABINET, PULL BOX, ETC., WITH VINYL SELF-ADHESIVE TAGS INDICATING PANEL AND CIRCUIT NUMBER, CONTROL WIRE IDENTIFICATION NUMBER, OR OTHER APPROPRIATE INFORMATION. ALL PULL AND JUNCTION BOXES SHALL BE LABELED AS TO FUNCTION.
11. ALL EQUIPMENT SHALL BE SECURELY FASTENED BY MEANS OF ANCHORS, RODS, HANGERS, SUPPORTS, GUIDES, SWAY BRACES, ETC., TO MAINTAIN ALIGNMENT AND PREVENT EQUIPMENT MOVEMENT. ALL EQUIPMENT LOCATED IN SEISMIC ZONES SHALL BE SECURED WITH MEANS APPROVED FOR THE SEISMIC CLASSIFICATION ENCOUNTERED.
12. ALL PENETRATIONS OF FIRE OR SMOKE RATED CONSTRUCTION SHALL BE SEALED WITH FIRESTOPPING MATERIALS APPROVED AND LISTED FOR THE RATING OF THE CONSTRUCTION TO BE PENETRATED. PROVIDE DOCUMENTATION ON ALL SUCH PENETRATION SEALING SYSTEMS FOR VERIFICATION OF PROPER INSTALLATION.
13. ALL PENETRATIONS OF ROOFS, EXTERIOR WALLS, FOUNDATIONS, OR OTHER WATER OR MOISTURE PROOF CONSTRUCTION SHALL BE SEALED WITH APPROPRIATE SEALING FITTINGS OR SEALED CONSTRUCTION TO PREVENT THE INTRODUCTION OF MOISTURE INTO THE BUILDING.
14. WHERE EMPTY RACEWAYS ARE INSTALLED, THEY SHALL BE LABELED AT BOTH ENDS AND FITTED WITH NYLON PULLSTRINGS FOR FUTURE USE.
15. ELECTRICAL WORK SHALL BE PERFORMED ON DE-ENERGIZED SYSTEMS ONLY TO PREVENT PERSONNEL INJURY AND POTENTIAL SYSTEM FAILURE. WHERE WORK ON EXISTING SYSTEMS WILL REQUIRE INTERRUPTION OF ELECTRICAL SERVICE, THEN TEMPORARY PROVISIONS ACCEPTABLE TO THE OWNER FOR TEMPORARY POWER SHALL BE UTILIZED UNTIL THE WORK IS COMPLETE.
16. FIRE ALARM SYSTEM SHALL COMPLY WITH ALL RELATED NFPA AND BUILDING CODES, AND LOCAL FIRE DEPARTMENT REGULATIONS.
17. WALL MOUNTED FIRE ALARM PULL STATIONS ARE TO BE LOCATED 46" A.F.F. AND WITHIN 5' OF THE NEAREST ADJACENT EXIT DOOR FROM THE FLOOR OR BUILDING.
18. WALL MOUNTED FIRE ALARM NOTIFICATION APPLIANCES, EITHER VISUAL, OR COMBINATION AUDIO/VISUAL, SHALL BE LOCATED SUCH THAT THE ENTIRE LENS OF THE VISUAL PORTION IS BETWEEN 80" AND 96" A.F.F. AUDIO ONLY APPLIANCES SHALL BE LOCATED, NOT LESS THAN, 90" A.F.F. TO TOP OF APPLIANCE, OR 6" BELOW CEILING.
19. LIGHTING CONTROL UL-924 DEVICES SHALL BE INTEGRATED WITH THE FIRE ALARM SYSTEM. IN THE EVENT OF AN ALARM, UL-924 DEVICES SHALL ENERGIZE EMERGENCY LIGHTING TO FULL BRIGHTNESS. COORDINATE WITH LIGHTING CONTROL VENDOR AND PROVIDE CONNECTIONS AS REQUIRED.
20. CONTRACTOR SHALL PROVIDE FIRE ALARM DESIGN PER DELEGATED DESIGN REQUIREMENTS IN DIGITAL, ADDRESSABLE FIRE ALARM SYSTEM SPECIFICATION SECTION 283111 ON SHEET E-002. THE SCOPE OF WORK SHALL INCLUDE AREAS WHERE EXISTING FIRE ALARM DEVICES ARE TO BE DISRUPTED OR DEMOLISHED AND THE NEW ADDITION. NEW DEVICES SHALL COORDINATE WITH AND CONNECT TO EXISTING FIRE ALARM SYSTEM. EXPAND EXISTING SYSTEM AS REQUIRED.

LOW VOLTAGE SYSTEMS RESPONSIBILITY MATRIX SCHEDULE NOTES

LOW VOLTAGE SYSTEMS GENERAL NOTES:

1. ALL SYSTEM COMPONENTS INCLUDING POWER SUPPLIES SHALL BE FURNISHED AND/OR INSTALLED ACCORDING TO THE RESPONSIBILITY MATRIX AND SHALL BE A COMPLETE AND FULLY FUNCTIONAL SYSTEM. COORDINATE ALL REQUIREMENTS WITH OWNER.
2. THE LOW VOLTAGE RESPONSIBILITY MATRIX DENOTES WHICH PARTY IS RESPONSIBLE FOR FURNISHING AND INSTALLING EACH LOW VOLTAGE SYSTEM. FINAL DIVISION OF WORK SHALL BE AT THE DETERMINATION OF THE GENERAL CONTRACTOR.
3. CONTRACTOR SHALL COORDINATE WITH OWNER'S STANDARDS AND SPECIFICATIONS FOR LOW VOLTAGE DATA AND WIRELESS ACCESS POINT MATERIALS AND SCOPE.

LOW VOLTAGE SYSTEMS RESPONSIBILITY MATRIX

SYSTEM	ACTIVE HEAD-END...	CABLING	DEVICES	ROUGH-IN	TERMINATIONS	EXISTING SYSTEM, IF APPLICABLE
DATA / TELEPHONE / VOIP	OWNER	CONTRACTOR	OWNER	CONTRACTOR	CONTRACTOR	YES
WIRELESS ACCESS POINTS	OWNER	CONTRACTOR	OWNER	CONTRACTOR	CONTRACTOR	YES
AUDIO-VISUAL SYSTEM	OWNER	OWNER	OWNER	CONTRACTOR	OWNER	YES
FIRE ALARM SYSTEM	CONTRACTOR	CONTRACTOR	CONTRACTOR	CONTRACTOR	CONTRACTOR	YES

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS

3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	BJR
Draw	EKJ
Check	JKN

STAMP

PROFESSIONAL ELECTRICAL ENGINEER BENJAMIN JACOB RIES E-14970 4/4/2025 STATE OF NEBRASKA

Project No. 003-10201-014
04.04.2025

ELECTRICAL SYMBOLS AND GENERAL NOTES

E-001

CONSTRUCTION DOCUMENTS

SECTION 260010 - GENERAL PROVISIONS

A. THIS SECTION SUPPLEMENTS ALL SECTIONS OF THIS DIVISION AND SHALL APPLY TO ALL PHASES OF WORK REQUIRED TO PROVIDE FOR COMPLETE INSTALLATION OF ELECTRICAL SYSTEMS. REFER TO CIVIL, ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS WHICH MAY DESIGNATE WORK TO BE ACCOMPLISHED.
   1. FURNISH LABOR, MATERIAL, SERVICES, AND SKILLED SUPERVISION NECESSARY FOR THE CONSTRUCTION, INSTALLATION, CONNECTION, TESTING, AND ADJUSTMENT OF ELECTRICAL WORK. ELECTRICAL SYSTEM SHALL BE INSTALLED COMPLETE, READY FOR USE.

B. EQUIPMENT OR FIXTURES: USE ONLY NEW MATERIAL UNLESS OTHERWISE NOTED. NEW EQUIPMENT AND MATERIALS OF SAME TYPE OR CLASSIFICATION SHALL BE PRODUCTS OF SAME MANUFACTURER. EQUIPMENT AND FIXTURES SHALL BE CONNECTED TO PROVIDE CIRCUIT CONTINUITY IN ACCORDANCE WITH APPLICABLE CODES WHETHER OR NOT EACH PIECE OF CONDUCTOR, CONDUIT, OR PROTECTIVE DEVICE IS SHOWN BETWEEN SUCH ITEMS OF EQUIPMENT OR FIXTURES AND POINT OF CIRCUIT ORIGIN.

C. REQUIREMENTS OF REGULATORY AGENCIES:
   1. PERFORM WORK IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, APPLICABLE BUILDING ORDINANCES, AND OTHER APPLICABLE CODES, HEREINAFTER REFERRED TO AS THE "CODE." WHERE CONTRACT DOCUMENTS EXCEED MINIMUM REQUIREMENTS, CONTRACT DOCUMENTS TAKE PRECEDENCE. WHERE CODE CONFLICTS OCCUR, THE MOST STRINGENT SHALL APPLY UNLESS VARIANCE IS APPROVED.
   2. PERMITS, LICENSES, FEES, INSPECTIONS AND ARRANGEMENTS REQUIRED FOR WORK UNDER THIS CONTRACT SHALL BE OBTAINED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE SPECIFIED.
   3. COMPLY WITH REQUIREMENTS OF THE APPLICABLE UTILITY COMPANIES SERVING THIS PROJECT. MAKE ARRANGEMENTS WITH UTILITY COMPANIES FOR PROPER COORDINATION OF THE WORK.

D. PROTECT APPARATUS, FIXTURES, APPLIANCES, MATERIAL, EQUIPMENT, AND INSTALLATIONS FROM DAMAGE. THE OWNER OR THE OWNER'S REPRESENTATIVE MAY REJECT ANY PARTICULAR PIECE OR PIECES OF MATERIAL, APPARATUS, OR EQUIPMENT THAT IS SCRATCHED, DENTED, OR OTHERWISE DAMAGED.

E. SEAL EQUIPMENT AND COMPONENTS EXPOSED TO WEATHER TO MAKE WEATHERTIGHT AND INSECT PROOF. PROTECT EQUIPMENT OUTLETS AND CONDUIT OPENINGS WITH TEMPORARY PLUGS OR CAPS AT ALL TIMES THAT WORK IS NOT IN PROGRESS.

F. PROVIDE DESIGN, FABRICATION, AND ERECTION OF SUPPLEMENTARY STRUCTURAL FRAMING REQUIRED FOR ATTACHMENT OF HANGERS OR OTHER DEVICES SUPPORTING ELECTRICAL EQUIPMENT.
   1. PROVIDE FRAMING MEMBERS OF STANDARD ROLLED STEEL SHAPES, A 36 STEEL. PROVIDE MEMBERS WELDED TO STRUCTURAL MEMBERS EQUAL TO THE SPECIFICATION FOR MAIN STRUCTURAL MEMBER. PROVIDE "SIMPLE BEAM" TYPE FRAMING WITH END CONNECTIONS WELDED OR BOLTED FOR SHEAR LOADS. SUBMIT LOCATION OF SUPPLEMENTARY FRAMING FOR REVIEW BY THE OWNER OR THE OWNER'S REPRESENTATIVE. USE ONLY CERTIFIED WELDERS.
   2. DESIGN FRAMING MEMBERS FOR THEIR ACTUAL LOADS, WITH ALLOWABLE STRESSES SPECIFIED BY AISC, WITHOUT EXCESSIVE DEFLECTION AND WITH CONSIDERATION FOR RIGIDITY UNDER VIBRATION, IN ACCORDANCE WITH STANDARD STRUCTURAL PRACTICES. SHOW SUPPLEMENTARY FRAMING ON SHOP DRAWINGS, INCLUDING DESIGN LOADS, MEMBER SIZES, AND LOCATIONS.
   3. PROVIDE EQUIPMENT BASES ON FLOOR MOUNTED EQUIPMENT FURNISHED UNDER THIS CONTRACT.

G. ALIGN, LEVEL, AND ADJUST EQUIPMENT AND MATERIALS FOR SATISFACTORY OPERATION. INSTALL EQUIPMENT SO PARTS ARE EASILY ACCESSIBLE FOR INSPECTION, OPERATION, MAINTENANCE, AND REPAIR.

H. OBTAIN WRITTEN PERMISSION FROM THE OWNER OR THE OWNER'S REPRESENTATIVE BEFORE CUTTING OR PIERCING STRUCTURAL MEMBERS.
   1. USE CRAFTSMEN SKILLED IN THEIR RESPECTIVE TRADES FOR CUTTING, FITTING, REPAIRING, PATCHING OF PLASTER AND FINISHING OF MATERIALS INCLUDING CARPENTRY WORK, METAL WORK OR CONCRETE WORK REQUIRED FOR THIS WORK. DO NOT WEAKEN WALLS, PARTITIONS OR FLOOR WITH CUTTING. HOLES REQUIRED TO BE CUT IN FLOORS MUST BE DRILLED WITHOUT EXCESSIVE BREAKING OUT AROUND THE HOLES.
   2. AT FIRE RATED FLOOR AND WALL PENETRATIONS, PROVIDE PENETRATION SEALANT AS SPECIFIED IN SECTION 07900, CAULKING AND SEALANTS.

I. EQUIPMENT ACCESS: LOCATE STARTERS, SWITCHES, RECEPTACLES, AND PULL BOXES TO PROVIDE EASY ACCESS FOR OPERATION, REPAIR, AND MAINTENANCE, AND IF CONCEALED, PROVIDE ACCESS DOORS.

J. MOUNTING HEIGHTS, TO CENTER OF BOX ABOVE FINISHED FLOOR, SHALL BE AS FOLLOWS UNLESS OTHERWISE SHOWN OR INDICATED. OTHER MOUNTING HEIGHTS ARE INDICATED ON THE DRAWINGS BY DETAIL OR BY A PLUS DIMENSION SHOWN ADJACENT TO THE SYMBOL:
   1. WALL MOUNTED LUMINAIRES: 84 INCHES
   2. SWITCHES: 46 INCHES
   3. CONVENIENCE OUTLETS AND SIMILAR DEVICES: 18 INCHES
   4. CONVENIENCE OUTLETS IN MECHANICAL AND BOILER ROOMS: 46 INCHES
   5. MOTOR CONTROLLERS: 60 INCHES TO TOP
   6. PANELBOARDS: 72 INCHES TO TOP
   7. TELEPHONE PANELS: 72 INCHES TO TOP
   8. EXTERIOR WP CONVENIENCE OUTLETS: 24 INCHES ABOVE GRADE
   9. CLOCK HANGER OUTLETS: 90 INCHES
   10. TELEPHONE AND COMMUNICATION OUTLETS: 18 INCHES
   11. TELEVISION AND RADIO OUTLETS: 18 INCHES
   12. MICROPHONE OUTLETS: 18 INCHES
   13. SPEAKER VOLUME CONTROL OUTLETS: 46 INCHES
   14. DOOR BELL PUSH BUTTONS: 46 INCHES
   15. ALL VISUAL ALARM SIGNAL DEVICES: 90 INCHES
   16. ALL OTHER BELLS, CHIMES, AND SIMILAR SIGNAL DEVICES: 90 INCHES
   17. FIRE ALARM MANUAL STATION: 46 INCHES
   18. FIRE ALARM CONTROL PANEL: 72 INCHES TO TOP

K. PROVIDE CHROME PLATED SPRING CLIPPED ESCUTCHEON PLATES WHERE EXPOSED PIPE PASSES THROUGH WALLS, FLOORS, OR CEILINGS. COVER SLEEVES AND ENTIRE OPENING MADE FOR PIPE WITH ESCUTCHEON PLATES. PROVIDE AIR AND WATERTIGHT CONDUIT OPENINGS THROUGH FLOOR SLABS, MASONRY WALLS, AND CONTINUOUS PARTITIONS. TIGHTLY CAULK SPACE BETWEEN CONDUIT AND FIRE-RATED BUILDING MATERIALS WITH PENETRATION SEALANT.

L. IDENTIFY EACH PIECE OF EQUIPMENT, INCLUDING DISCONNECT SWITCHES AND MOTOR STARTERS, WITH ENGRAVED LABELS. CLEARLY IDENTIFY ON THE LABEL THE EQUIPMENT SERVED AND SPELL OUT FULL NAME OF EQUIPMENT, SUCH AS "AIR HANDLING UNIT AH 1" AND "HOT WATER CIR. PUMP P 1", IN LIEU OF ABBREVIATED PLAN REFERENCES SUCH AS "AH 1" OR "P 1." COORDINATE DESIRED NAMING WITH OWNER.

M. WHERE MARRING OR DISFIGUREMENT HAS OCCURRED, REPLACE OR REFINISH DAMAGED SURFACES AS DIRECTED AND TO THE SATISFACTION OF OWNER OR THE OWNER'S REPRESENTATIVE.

SECTION 260519 - CONDUCTORS (600 VOLT)

A. CONDUCTORS SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND USE.

B. PROVIDE COPPER CONDUCTORS WITH INSULATION RATED FOR 600 VOLTS CONFORMING TO UL STANDARDS.

C. CONDUCTORS: UNLESS NOTED OTHERWISE, PROVIDE SOLID COPPER CONDUCTORS, NO. 10 AWG OR SMALLER, AND STRANDED COPPER CONDUCTORS FOR NO. 8 AWG OR LARGER, WITH TYPE THHN/THWN (75 DEGREE C WET OR DRY) INSULATION.

D. FEEDERS, BRANCH CIRCUITS, AND CONTROL CIRCUITS SHALL BE SINGLE CONDUCTORS IN CONDUIT THROUGHOUT UNLESS OTHERWISE SPECIFIED ON DRAWINGS. PROVIDE NO. 12 AWG MINIMUM COPPER BRANCH CIRCUIT WIRE SIZE.

E. LOW VOLTAGE CONTROL WIRING SHALL BE MINIMUM NO. 18 AWG, INSULATED CABLE FOR EACH CONDUCTOR. VOLTAGE RATING OF CABLE SHALL BE SUITABLE FOR EITHER CLASS I OR CLASS II, REMOTE CONTROL OR SIGNAL CIRCUIT, AS DETERMINED BY CODES AND ACTUAL INSTALLATION.

F. INSTALLATION: PROVIDE CONDUCTORS CONTINUOUS FROM OUTLET TO OUTLET AND SPLICE ONLY AT OUTLET OR JUNCTION BOXES. NO SPLICING OR JOINTS WILL BE PERMITTED IN EITHER FEEDER OR BRANCH CIRCUITS EXCEPT AT OUTLET OR ACCESSIBLE JUNCTION BOXES.

G. 600V CONDUCTOR INSTALLATION: INSTALL CONDUCTORS IN A SINGLE RACEWAY AT ONE TIME ENSURING CONDUCTORS DO NOT CROSS ONE ANOTHER WHILE BEING PULLED INTO RACEWAY. LEAVE SUFFICIENT CONDUCTOR AT FITTINGS OR BOXES AND PREVENT CONDUCTOR KINKS. DO NOT EXCEED MANUFACTURER'S RECOMMENDED MAXIMUM PULLING TENSIONS AND SIDEWALL PRESSURE VALUES.
   1. USE MANUFACTURER-APPROVED PULLING COMPOUND OR LUBRICANT WHERE NECESSARY; COMPOUND USED MUST NOT DETERIORATE CONDUCTOR OR INSULATION.
   2. PROVIDE CONDUCTOR SUPPORTS AS REQUIRED BY CODES AND RECOMMENDED BY CONDUCTOR MANUFACTURER. WHERE REQUIRED, PROVIDE CABLE SUPPORTS IN VERTICAL CONDUITS SIMILAR TO O-Z TYPE C.M.T., AND PROVIDE LOWER END OF CONDUIT WITH O-Z TYPE KVF CONDUIT VENTILATORS.
   3. SPLICING:
      a. UTILIZE PREINSULATED CONNECTORS, FOR SPLICES AND TAPS IN CONDUCTORS NO. 10 AWG AND SMALLER. ALL OTHER TWIST ON CONNECTORS MUST BE APPROVED BY THE OWNER OR THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
      b. PRESSURE INDENT TYPE CONNECTORS MUST BE SUBMITTED TO THE OWNER OR THE OWNER'S REPRESENTATIVE FOR APPROVAL.
      c. TAPE ALL SPLICES AND JOINTS WITH VINYL PLASTIC TAPE.
      d. KEEP SPLICES IN UNDERGROUND JUNCTION BOXES, HANDHOLES, AND MANHOLES TO AN ABSOLUTE MINIMUM. WHERE SPLICES ARE NECESSARY, USE RESIN PRESSURE SPLICES AND RESIN SPLICING KITS MANUFACTURED BY THE 3M COMPANY TO TOTALLY ENCAPSULATE SPLICE. ARRANGE SPLICING KIT TO MINIMIZE EFFECTS OF MOISTURE.
      e. CONDUCTOR TERMINATION: PROVIDE ALL POWER AND CONTROL CONDUCTORS THAT TERMINATE ON EQUIPMENT OR TERMINAL STRIPS WITH SOLDERLESS LUGS OR FORK AND FLANGED TONGUE TERMINALS. PROVIDE THOMAS & BETTS "STA-KON" TONGUE TERMINAL. THIS TYPE CONDUCTOR TERMINATION IS NOT REQUIRED WHEN EQUIPMENT IS PROVIDED WITH SOLDERLESS CONNECTORS.
      f. CONDUCTOR IDENTIFICATION: ALL CONDUCTORS (NO. 10 AWG AND SMALLER) THROUGHOUT PROJECT SHALL BE PROVIDED WITH COLOR CODED INSULATION AS FOLLOWS:
         1. 208/120 VOLT
            A. PHASE A: BLACK
            B. PHASE B: RED
            C. PHASE C: BLUE
         2. 480/277 VOLT
            A. PHASE A: BROWN
            B. PHASE B: ORANGE
            C. PHASE C: YELLOW
         3. NEUTRAL: WHITE
         4. GROUND: GREEN
      g. CONDUCTORS NO. 8 AWG AND LARGER SHALL BE BLACK WITH BANDS OF COLORED, NON-AGING, PLASTIC TAPE TO COLOR CODE CONDUCTORS, UTILIZING SAME SCHEME AS FOR BRANCH CIRCUITS. BANDS SHALL OCCUR WITHIN EACH ENCLOSURE WHERE A TAP, SPLICE OR TERMINATION IS MADE.

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

A. PROVIDE GROUND SYSTEMS AND MAKE CONNECTIONS MECHANICALLY SECURE AND ELECTRICALLY CONTINUOUS.

B. SERVICE ENTRANCE GROUNDING: EQUIPMENT GROUNDING CONDUCTORS AND GROUNDING ELECTRODE CONDUCTORS SHALL BE CONNECTED TO THE GROUND BUS. INSTALL A MAIN BONDING JUMPER BETWEEN THE NEUTRAL AND GROUND BUSES.

C. MAKE CONNECTIONS WITH CLEAN, BARE METAL AT POINTS OF CONTACT.

D. INSTALL METALLIC RACEWAYS MECHANICALLY AND ELECTRICALLY SECURE AT JOINTS AND AT BOXES, CABINETS, FITTINGS, AND EQUIPMENT.

E. PROVIDE GROUND CONDUCTOR IN ELECTRICAL RACEWAYS TO BOND METALLIC RACEWAYS, FIXTURES, PANELS, CONTROLS, DISCONNECT SWITCHES, EXTERIOR LIGHTING POLES AND BOLLARDS, AND NONCURRENT CARRYING ENCLOSURES TO BUILDING GROUND SYSTEM. USE PARITY SIZE EQUIPMENT GROUND CONDUCTORS AS CURRENT CARRYING CONDUCTORS FOR NO. 10 AWG AND SMALLER. USE NEC TABLE 250.66 FOR CIRCUITS WITH CURRENT CARRYING CONDUCTORS NO. 8 AND LARGER, IF NOT SHOWN ON DRAWINGS.

F. PERMANENTLY CONNECT GROUND TERMINAL ON EACH RECEPTACLE TO GROUND CONDUCTOR.

G. ON MOTOR CIRCUITS, CONNECT GROUND CONDUCTORS TO CONDUIT WITH APPROVED GROUNDING BUSHING AND TO METAL MOTOR FRAME WITH BOLTED SOLDERLESS LUG. BOLTS, SCREWS, AND WASHERS SHALL BE BRONZE OR CADMIUM PLATED STEEL. PROVIDE FLEXIBLE GROUND STRAP, NO. 6 AWG EQUIVALENT, AT EACH FLEXIBLE DUCT CONNECTION, AIR HANDLER, EXHAUST FAN, AND SUPPLY FAN. INSTALL TO PREVENT TRANSMISSION OF VIBRATION OR LOSS OF GROUND CONNECTION DUE TO VIBRATION.

SECTION 260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

A. RACEWAYS AND RACEWAY COMPONENTS SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

B. METALLIC CONDUIT:
   1. GALVANIZED RIGID STEEL (GRC): COMPLY WITH ANSI C80.1 AND UL 6.
   2. RIGID ALUMINUM (ARC): COMPLY WITH ANSI C80.5 AND UL 6A.
   3. ELECTRICAL METALLIC TUBING (EMT): COMPLY WITH ANSI C80.3 AND UL 797.
   4. INTERMEDIATE METAL CONDUIT (IMC): COMPLY WITH ANSI C80.6 AND UL 1242.
   5. FLEXIBLE METALLIC (FMC): ZINC-COATED STEEL AND COMPLYING WITH UL 1.
   6. LIQUID-TIGHT FLEXIBLE METAL (LFMC): FLEXIBLE STEEL CONDUIT WITH PVC JACKET AND COMPLYING WITH UL 360.

C. SURFACE METALLIC RACEWAY: GALVANIZED STEEL WITH SNAP-ON COVERS COMPLYING WITH UL 5. COMPLETE WITH FITTINGS.

D. NONMETALLIC CONDUIT:
   1. RIGID NONMETALLIC CONDUIT (RNC): TYPE EPC-40-PVC. COMPLY WITH NEMA TC 2 AND UL 651 UNLESS OTHERWISE INDICATED.

E. PULL BOXES, ENCLOSURES, AND CABINETS:
   1. BOXES, ENCLOSURES, AND CABINETS INSTALLED IN WET LOCATIONS SHALL BE LISTED AND LABELED FOR USE IN WET LOCATIONS.
   2. SHEET METAL BOXES: COMPLY WITH NEMA OS 1 AND UL 514A.
   3. CAST METAL BOXES: COMPLY WITH NEMA FB 1, ALUMINUM, TYPE FD, WITH GASKETED COVER.
   4. NONMETALLIC BOXES: COMPLY WITH NEMA OS 2 AND UL 514C.

F. RACEWAY APPLICATION: MINIMUM RACEWAY SIZE SHALL BE 1/2 INCH TRADE SIZE.
   1. OUTDOORS: APPLY RACEWAY PRODUCTS AS SPECIFIED UNLESS OTHERWISE INDICATED:
      a. EXPOSED CONDUIT: GRC
      b. CONCEALED CONDUIT, ABOVE GROUND: GRC
      c. UNDERGROUND CONDUIT: RNC TYPE EPC-40-PVC
      d. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): LFMC
   2. INDOORS: APPLY RACEWAY PRODUCTS AS SPECIFIED UNLESS OTHERWISE INDICATED:
      a. EXPOSED, NOT SUBJECT TO PHYSICAL DAMAGE: EMT
      b. EXPOSED, SUBJECT TO PHYSICAL DAMAGE: GRC
      c. CONCEALED IN CEILINGS AND INTERIOR WALLS AND PARTITIONS: EMT
      d. DAMP OR WET LOCATIONS: GRC
      e. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): FMC, EXCEPT USE LFMC IN DAMP OR WET LOCATIONS.

G. RACEWAY FITTINGS:
   1. GRC AND IMC: USE THREADED RIGID STEEL CONDUIT FITTINGS UNLESS OTHERWISE INDICATED. COMPLY WITH NEMA FB 2.10.
   2. EMT: USE STEEL SETSCREW OR COMPRESSION FITTINGS. COMPLY WITH NEMA FB 2.10.
   3. FLEXIBLE CONDUIT: USE ONLY FITTINGS LISTED FOR USE WITH FLEXIBLE CONDUIT. COMPLY WITH NEMA FB 2.20.

H. INSTALLATION: COMPLY WITH NECA 1 AND NECA 101. COMPLY WITH NECA 102 FOR ALUMINUM CONDUITS.
   1. COMPLETE RACEWAY INSTALLATION PRIOR TO STARTING CONDUCTOR INSTALLATION.
   2. CONCEAL CONDUIT WITHIN FINISHED WALLS, CEILINGS, AND FLOORS UNLESS OTHERWISE INDICATED.
   3. INSTALL CONDUITS PARALLEL TO OR PERPENDICULAR TO WALLS, BEAMS, COLUMNS, AND OTHER BUILDING ELEMENTS.
   4. MAINTAIN AT LEAST 6 INCHES BETWEEN RACEWAYS AND PARALLEL RUNS OF FLUES AND STEAM OR HOT-WATER PIPES. INSTALL HORIZONTAL RACEWAY RUNS ABOVE WATER AND STEAM PIPING.
   5. PROVIDE PULL WIRES WITHIN EMPTY CONDUITS AND EMBEDDED PATHWAYS. USE POLYPROPYLENE OR MONOFILAMENT PLASTIC LINE WITH NOT LESS THAN 200-LB TENSILE STRENGTH. LEAVE A MINIMUM OF 12 INCHES OF SLACK AT EACH END OF PATHWAY.
   6. STUB-UPS: USE A CONDUIT BUSHING OR INSULATED FITTING TO TERMINATE STUB-UPS THAT ARE NOT TERMINATED IN HUBS OR IN AN ENCLOSURE.
   7. DO NOT FASTEN CONDUITS ONTO THE BOTTOM SIDE OF A METAL DECK ROOF.
   8. PROVIDE EXPANSION FITTINGS FOR EMBEDDED RACEWAYS, AT ALL LOCATIONS WHERE CONDUITS CROSS BUILDING OR STRUCTURE EXPANSION JOINTS, AND WHERE DIRECTED BY MANUFACTURER'S INSTRUCTIONS.
   9. IN ADDITION TO METHODS DESCRIBED IN NECA 1, EMT MAY BE SUPPORTED BY OPENINGS THROUGH STRUCTURAL MEMBERS, ACCORDING TO NFPA 70.

SECTION 262726 - WIRING DEVICES

A. PROVIDE WIRING DEVICES BY PASS & SEYMOUR, LEVITON, OR HUBBELL. PROVIDE SIMILAR DEVICES BY SAME MANUFACTURER UNLESS OTHERWISE INDICATED.

B. ALL WIRING DEVICES SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

C. TOGGLE SWITCHES: PROVIDE 20A, 120/277V SWITCH. COMPLY WITH UL 20 AND FS W-S-896.

D. RECEPTACLES: RECEPTACLES SHALL BE 20A, 125V, TWO POLE, THREE WIRE, SELF-GROUNDING, AND NEMA 5-20R CONFIGURATION UNLESS OTHERWISE INDICATED. RECEPTACLES SHALL COMPLY WITH UL 498 AND FS W-C-596.
   1. GFCI RECEPTACLES: INTEGRAL GFCI WITH "TEST" AND "RESET" BUTTONS AND LED INDICATOR LIGHT. NON-FEED-THROUGH TYPE. COMPLY WITH UL 498, UL 943 CLASS A, AND FS W-C-596.
   2. TAMPER RESISTANT RECEPTACLES: INTEGRAL SHUTTERS THAT OPERATE ONLY WHEN A PLUS IS INSERTED IN THE RECEPTACLE.
   3. HOSPITAL-GRADE RECEPTACLES: SINGLE-PIECE, RIVETLESS, NICKEL-PLATED, ALL-BRASS GROUNDING SYSTEM. NICKEL-PLATED BRASS MOUNTING STRAP. COMPLY WITH UL 498 SUPPLEMENT SD. LISTED AND LABELED AS COMPLYING WITH NFPA 70 ARTICLE 517.

E. DEVICE COLORS:
   1. WIRING DEVICES CONNECTED TO NORMAL POWER SYSTEM: WHITE, UNLESS OTHERWISE INDICATED.
   2. WIRING DEVICES CONNECTED TO ESSENTIAL ELECTRICAL SYSTEM: RED.

F. WALL PLATES:
   1. MATERIAL FOR FINISHED SPACES: SMOOTH, HIGH-IMPACT THERMOPLASTIC WITH FINISH TO MATCH DEVICE COLOR.
   2. MATERIAL FOR UNFINISHED SPACES: SMOOTH, HIGH-IMPACT THERMOPLASTIC WITH FINISH TO MATCH DEVICE COLOR.
   3. PLATE SECURING SCREWS: METAL WITH HEAD COLOR TO MATCH PLATE FINISH.

SECTION 262416 - PANELBOARDS

A. PROVIDE PANELBOARDS AND ENCLOSURES INCLUDING CIRCUIT BREAKERS, BUS BARS, HINGED DOOR, LOCK, TRIM, AND ALL OTHER APPURTENANCES FOR A COMPLETE INSTALLATION.

B. COMPONENTS AND DEVICES SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

C. SHORT-CIRCUIT CURRENT RATING: FULLY RATED TO INTERRUPT SYMMETRICAL SHORT-CIRCUIT CURRENT AVAILABLE AT TERMINALS. SHORT-CIRCUIT RATINGS SHALL BE AS INDICATED ON DRAWINGS, WITH THE FOLLOWING EXCEPTIONS:
   1. COMPONENTS RATED 240V OR LESS SHALL HAVE A MINIMUM RATING OF 10,000 A.
   2. COMPONENTS RATED ABOVE 240V AND LESS THAN 600V SHALL HAVE A MINIMUM RATING OF 14,000 A.
   3. UL LISTED, SERIES-RATED COMBINATIONS OF BREAKERS MAY NOT BE USED TO ACHIEVE RATING INDICATED ON DRAWINGS.

D. CIRCUIT BREAKERS: PROVIDE BOLT-ON, MOLDED CASE CIRCUIT BREAKERS COMPLYING WITH UL 489. PROVIDE THE FOLLOWING UNLESS INDICATED OTHERWISE:
   1. BREAKER FRAMES LESS THAN 125A: PROVIDE THERMAL-MAGNETIC CIRCUIT BREAKERS.
   2. BREAKER FRAMES FROM 125A TO LESS THAN 400A: PROVIDE THERMAL-MAGNETIC CIRCUIT BREAKERS WITH ADJUSTABLE MAGNETIC TRIP SETTING.
   3. BREAKER FRAMES 400A AND ABOVE: PROVIDE ELECTRONIC TRIP CIRCUIT BREAKERS.

SECTION 262813 - FUSES

A. FUSES SHALL BE LISTED AND LABELED AS DEFINED BY NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

B. COMPLY WITH NFPA 70 AND NEMA FU 1.

C. OBTAIN FUSES FROM A SINGLE MANUFACTURER. PROVIDE FUSES BY BUSSMAN (EATON), EDISON (EATON), OR LITTELFUSE.

D. INTERRUPTING RATING: FUSES SHALL HAVE AN INTERRUPTING RATING OF 200 kA RMS SYMMETRICAL.

E. FUSES SHALL BE CURRENT-LIMITING.

F. FUSE APPLICATIONS:
   1. UP TO 600A: PROVIDE CLASS RK1, FAST ACTING FUSES.
   2. 600A AND GREATER: PROVIDE CLASS L, TIME DELAY FUSES.
   3. MOTOR CIRCUITS: PROVIDE CLASS RK1, TIME DELAY FUSES.

G. CONTRACTOR SHALL PROVIDE THREE SPARE FUSES FOR EACH FUSE TYPE AND RATING.

SECTION 265100 - INTERIOR LIGHTING

A. LIGHTING FIXTURES, COMPONENTS, DEVICES, AND ACCESSORIES SHALL BE LISTED AND LABELED AS DEFINED BY NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

B. CEILING RECESSED FIXTURES: COMPLY WITH NEMA LE 4 FOR CEILING COMPATIBILITY.

C. PROVIDE ALL NECESSARY ACCESSORIES REQUIRED FOR MOUNTING AND SUPPORT OF LUMINAIRES, INCLUDING, BUT NOT LIMITED TO: MOUNTING FRAMES, CANOPIES, STEMS, WIRES, AND CORDS.

D. LED LUMINAIRES:
   1. LED LUMINAIRE SHALL CONSIST OF A COMPLETE LUMINAIRE, INCLUDING, BUT NOT LIMITED TO: HOUSING, LED SOURCE, AND ELECTRONIC DRIVER.
   2. REMOTE DRIVERS SHALL ONLY BE ALLOWED WHERE INDICATED ON DRAWINGS.
   3. INDIVIDUAL LEDS SHALL BE CONNECTED SUCH THAT A CATASTROPHIC LOSS OR FAILURE OF ONE LED WILL NOT RESULT IN THE LOSS OF THE ENTIRE ARRAY OR LUMINAIRE.
   4. DIMMING: LUMINAIRES SHALL BE CAPABLE OF CONTINUOUS DIMMING WITHOUT PERCEIVABLE FLICKER OVER DIMMING RANGE INDICATED ON DRAWINGS. DIMMING SHALL UTILIZE 0-10V CONTROL SIGNAL UNLESS OTHERWISE INDICATED.

E. EMERGENCY BATTERY LIGHTING UNITS:
   1. SELF-CONTAINED UNITS COMPLYING WITH UL 924.
   2. INTEGRAL SELF-TEST: INITIATES CODE-REQUIRED TEST OF UNIT'S EMERGENCY OPERATION AT REQUIRED INTERVALS. TEST FAILURE ANNUNCIATED BY AN INTEGRAL, AUDIBLE ALARM AND FLASHING LED LIGHT.

SECTION 270526 - GROUNDING AND BONDING FOR COMMUNICATIONS SYSTEMS

A. PROVIDE WORK IN ACCORDANCE WITH SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS AND IN ACCORDANCE WITH ANSI/TIA-607-C

B. CONDUCTORS: PROVIDE STRANDED COPPER WIRE INSULATED FOR 600V AND COMPLYING WITH UL83. GROUNDING JUMPERS FOR CUSTOMER EQUIPMENT AND CABLE TRAYS SHALL NOT BE SMALLER THAN NO. 6 AWG.

C. CONNECTORS: CAST SILICON BRONZE, MECHANICAL CONNECTORS COMPLYING WITH UL486A-486B. CONNECTOR WITH A LONG BARREL AND TWO HOLES SPACE ON 5/8- OR 1-INCH CENTER FOR A TWO-BOLT CONNECTION TO THE BUSBAR.

D. GROUNDING BUSBARS: PRE-DRILLED, RECTANGULAR BARS OF HARD-DRAWN SOLID COPPER COMPLYING WITH ANSI/TIA-607-C.
   1. TELECOMMUNICATIONS GROUND BAR (TGB): 1/4 BY 2 INCHES IN CROSS SECTION, LENGTH AS INDICATED ON THE DRAWINGS. MOUNT USING STAINLESS STEEL STAND-OFF BRACKETS PROVIDING A 2-INCH CLEARANCE TO ACCESS THE REAR OF BUSBAR. STAND-OFF INSULATORS SHALL BE LEXAN OR PVC COMPLYING WITH UL 891.

SECTION 270536 - CABLE TRAYS FOR COMMUNICATIONS SYSTEMS

A. CABLE TRAYS AND ACCESSORIES SHALL BE MARKED FOR INTENDED LOCATION, APPLICATION, AND GROUNDING. ALL CABLE TRAYS AND COMPONENTS SHALL BE OBTAINED FROM A SINGLE MANUFACTURER. SEE THE DRAWINGS FOR SPECIFIC REQUIREMENTS FOR TYPES, MATERIALS, SIZES, AND CONFIGURATIONS.

B. CABLE TRAYS SHALL BE CAPABLE OF SUPPORTING A UNIFORMLY DISTRIBUTED LOAD WHEN AS A SIMPLE SPAN AND TESTED ACCORDING TO NEMA VE 1.

C. WIRE BASKET CABLE TRAYS: HIGH-STRENGTH-STEEL WIRES FORM A 2-BY-4 INCH MESH PATTERN WITH INTERSECTING WIRES WELDED TOGETHER. WIRES ALONG WIRE-BASKET FLANGES SHALL BE ROUNDED DURING MANUFACTURING TO MAINTAIN INTEGRITY OF CABLES AND FOR INSTALLER SAFETY. HARDWARE SHALL BE ASTM F593 AND ASTM F594 STAINLESS STEEL, TYPE 316. SUPPORT USING TRAPEZE HANGARS WITH 1/4 INCH DIAMETER RODS.

D. CABLE TRAY FITTINGS, INCLUDING TEES, CROSSES, RISER, ELBOWS, SHALL BE OF THE SAME MATERIAL AND FINISHES AS THE CABLE TRAY.

E. PROVIDE CABLE TRAY SUPPORTS AND CONNECTORS, INCLUDING BONDING JUMPERS, AS RECOMMENDED BY THE CABLE TRAY MANUFACTURER. LOCATE AND INSTALL SUPPORTS IN ACCORDANCE WITH NEMA VE 2.

F. INSTALL CABLE TRAYS IN ACCORDANCE WITH NEMA VE 2 AND WITH AT MINIMUM 12 INCHES OF WORKSPACE ABOVE AND 12 INCHES OF WORKSPACE TO ONE SIDE TO PERMIT ACCESS TO INSTALLING CABLES. REMOVE BURRS AND SHARP EDGES FROM CABLE TRAYS.

G. CABLE TRAYS SHALL BE GROUNDED IN ACCORDANCE WITH NFPA 70 AND ANSI/TIA-607-C. COMPLY WITH REQUIREMENTS IN SECTION 270526 - GROUNDING AND BONDING FOR COMMUNICATIONS SYSTEMS.

H. IN EXISTING CONSTRUCTION, REMOVE INACTIVE OR DEAD CABLES FROM CABLE TRAYS DURING THE DEMOLITION PHASE.

SECTION 283111 - DIGITAL, ADDRESSABLE FIRE-ALARM SYSTEM

A. ALL FIRE ALARM COMPONENTS, DEVICES, AND ACCESSORIES SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

B. SUBMIT SHOP DRAWINGS FOR APPROVAL. OBTAIN APPROVAL BY AUTHORITIES HAVING JURISDICTION PRIOR TO SUBMITTING TO ARCHITECT FOR REVIEW AND APPROVAL. SHOP DRAWINGS SHALL COMPLY WITH THE RECOMMENDATIONS AND REQUIREMENTS OF THE "DOCUMENTATION" CHAPTER OF NFPA 72, INCLUDING PLANS INDICATING ALL FIRE ALARM DEVICES AND EQUIPMENT.

C. SOURCE LIMITATIONS FOR FIRE-ALARM SYSTEM AND COMPONENTS: COMPONENTS SHALL BE COMPATIBLE WITH, AND OPERATE AS AN EXTENSION OF, EXISTING SYSTEM. PROVIDE SYSTEM MANUFACTURER'S CERTIFICATIONS THAT ALL COMPONENTS PROVIDED HAVE BEEN TEST AS, AND WILL OPERATE AS, A SYSTEM.

D. INSTALLATION: PERFORM ALL WORK IN ACCORDANCE WITH THE HIGHEST STANDARD PRACTICE AND DELIVER TO THE OWNER A COMPLETE SYSTEM, APPROVED BY THE AUTHORITY HAVING JURISDICTION.

E. ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO TEST AND INSPECT COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS.

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS

3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	BJR
Draw	EKJ
Check	JKN

STAMP

PROFESSIONAL ELECTRICAL ENGINEER
BENJAMIN JACOB RIES
E-14970
4/4/2025
STATE OF NEBRASKA

Project No. 003-10201-014
04.04.2025

ELECTRICAL SHEET SPECIFICATIONS

E-002

CONSTRUCTION DOCUMENTS

BRANCH PANEL : P6 (EXISTING)

MAINS TYPE: MLO | **VOLTS:** 120/208 WYE | **LOCATION:** STORAGE 16
PHASES: 3 | **SUPPLY FROM:**
PHASE BUS RATING: | **WIRES:** 4 | **MOUNTING:** SURFACE
NEUTRAL BUS RATING: | **S.C.C.R. RATING:** | **ENCLOSURE:**

NOTES:

LOAD DESCRIPTION	BKR	P	CKT...	A		B		C		CKT...	P	BKR	LOAD DESCRIPTION
EXISTING SPARE	20	1	1	0	0					2	1	20	EXISTING SPARE
EXISTING SPARE	20	1	3			0	0			4	1	20	EXISTING SPARE
EXISTING PLUGS WEST WALL	20	1	5					0	0	6	1	20	EXISTING SPARE
EXISTING SPARE	20	1	7	0	0					8	1	20	EXISTING SPARE
EXISTING PLUG	20	1	9			0	0			10	1	20	EXISTING PLUGS E. WALL H.M
EXISTING LIGHTS CABINETS	20	1	11					0	0	12	1	20	EXISTING LIGHTS CABINET
EXISTING CLASS BELL	20	1	13	0	0					14	1	20	EXISTING PLUGS WEST WALL
EXISTING PLUG WEST WALL	20	1	15			0	0			16	1	20	EXISTING SPARE
EXISTING PLUGS	20	1	17					0	0	18	2	20	EXISTING SPARE
EXISTING SOUTH SYNERGISTIC	20	1	19	0	0					20			
EXISTING SPARE	20	2	21			0	0			22	2	20	EXISTING SPARE
			23					0	0	24			
EXISTING SPARE	20	1	25	0	0					26	1	20	EXISTING SPARE
EXISTING SPARE	20	1	27			0	--			28	1	--	SPACE
EXISTING SPARE	20	1	29					0	--	30	1	--	SPACE
EXISTING SPARE	20	1	31	0	--					32	1	--	SPACE
EXISTING SPARE	20	1	33			0	0			34	1	20	EXISTING NORTH SYNERGISTIC
R: ACP 123A	20	1	35					1080	0	36	1	20	EXISTING MAIN FIRE PANEL
R: ACP 123A, SENSORY 123A2	20	1	37	1080	--					38	1	--	SPACE
SPACE	--	1	39			--	--			40	1	--	SPACE
SPACE	--	1	41					--	--	42	1	--	SPACE
			TOTAL...	1080.00 VA		0.00 VA		1080.00 VA					
			TOTAL...	10.4 A		0.0 A		10.4 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND FACTOR	PANEL TOTALS
RECEPTACLES	2160 VA	100.00%	2160 VA	**TOTAL CONNECTED LOAD:** 2.2 kVA
				TOTAL CONNECTED CURRENT: 6.0 A
				TOTAL ESTIMATED DEMAND LOAD: 2.2 kVA
				TOTAL ESTIMATED DEMAND... 6.0 A
				FUTURE LOAD GROWTH:
				MINIMUM PANEL RATING (AMPS): 6 A

BRANCH PANEL : P7 (EXISTING)

MAINS TYPE: MLO | **VOLTS:** 120/208 WYE | **LOCATION:** STORAGE 123B2
PHASES: 3 | **SUPPLY FROM:**
PHASE BUS RATING: 225 A | **WIRES:** 4 | **MOUNTING:** SURFACE
NEUTRAL BUS RATING: 225 A | **S.C.C.R. RATING:** | **ENCLOSURE:**

NOTES:
* - GFCI BREAKER - CONTRACTOR TO CONFIRM EXISTING PANEL CAN ACCOMMODATE GFCI BREAKERS AS INDICATED. DEADFRONT GFCI SHALL BE PROVIDED IF NOT

LOAD DESCRIPTION	BKR	P	CKT...	A		B		C		CKT...	P	BKR	LOAD DESCRIPTION
POWER	20	1	1	0	0					2	1	20	EXISTING SPARE
EXISTING SPARE	20	1	3			0	0			4	1	20	EXISTING RECEP OUTSIDE GFCI FOR A/C
R: WASHING MACHINE*	20	1	5					0	0	6	1	20	EXISTING SPARE
R: REFRIGERATOR*	20	1	7	180	0					8	1	20	EXISTING
EXISTING RECEP. SOUTH SIDE RM	20	1	9			0	0			10	1	20	EXISTING RECEP EAST SIDE ROOM
EXISTING LIGHTS N. CAB	20	1	11					0	0	12	1	20	EXISTING RECEP SOUTH SIDE RM
EXISTING RESTROOM HAND DRYER BOYS	20	1	13	0	0					14	1	20	EXISTING RECEP N-W SIDE RM
EXISTING RESTROOM HAND DRYER BOYS	20	1	15			0	0			16	1	20	EXISTING RECEP WEST CENTER SIDE RM
DRYER*	20	2	17					0	0	18	1	20	EXISTING PLUG STRIP WEST WALL
			19	0	0					20	1	20	EXISTING PLUG STRIP WEST WALL
EXISTING SPARE	20	2	21			0	0			22	1	20	EXISTING SPLIT A/C UNIT IDF IT ROOM
			23					0	0	24	1	20	EXISTING SPLIT A/C UNIT IDF IT ROOM
EXISTING SPARE	20	2	25	0	0					26	2	20	EXISTING SPARE
			27			0	0			28			
RANGE*	20	2	29					0	0	30	2	20	EXISTING SPARE
			31	0	0					32			
EXISTING RESTROOM HAND DRYER GIRLS	20	1	33			0	360			34	1	20	R: RM 123B4
EXISTING RESTROOM HAND DRYER GIRLS	20	1	35					0	720	36	1	20	R: RM 123B EAST WALL
EXISTING EWC FOUNTAINS	20	1	37	0	1080					38	1	20	R: RM 123B1, RM 123B NORTH WALL
EXISTING RECEP QUAD IDF ROOM IT	20	1	39			0	720			40	1	20	R: RM 123B3, KITCHEN 123B4
EXISTING RECEP QUAD IDF ROOM IT	20	1	41					0	180	42	1	20	R: RANGE HOOD
			TOTAL...	1260.00 VA		1080.00 VA		900.00 VA					
			TOTAL...	10.7 A		9.2 A		7.5 A					

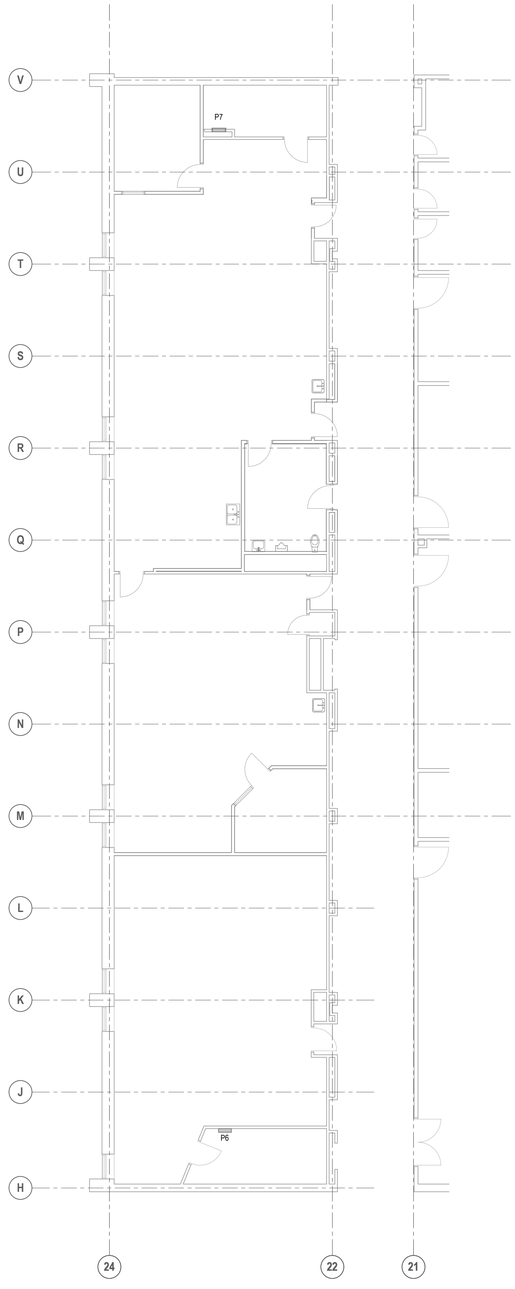
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND FACTOR	PANEL TOTALS
POWER	0 VA	0.00%	0 VA	**TOTAL CONNECTED LOAD:** 3.2 kVA
RECEPTACLES	3240 VA	100.00%	3240 VA	**TOTAL CONNECTED CURRENT:** 9.0 A
				TOTAL ESTIMATED DEMAND LOAD: 3.2 kVA
				TOTAL ESTIMATED DEMAND... 9.0 A
				FUTURE LOAD GROWTH:
				MINIMUM PANEL RATING (AMPS): 9 A

POWER GENERAL NOTES

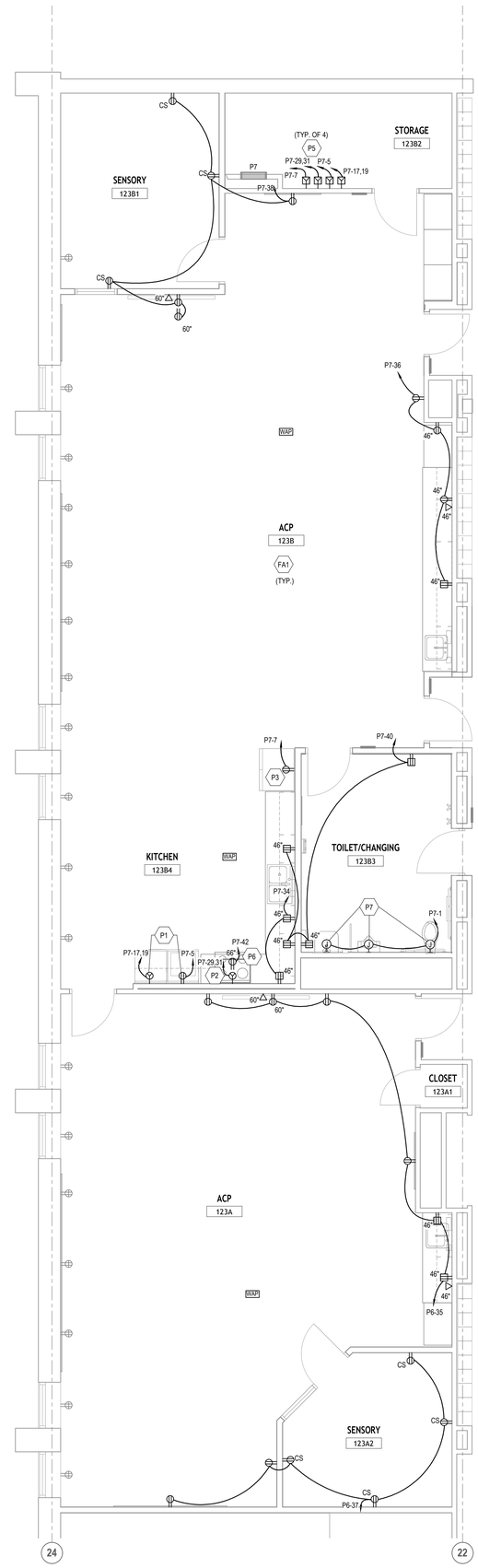
1. ALL RECEPTACLES SHALL BE TAMPER RESISTANT UNLESS NOTED OTHERWISE.

KEYNOTE LEGEND

FA1	CONTRACTOR SHALL PROVIDE FIRE ALARM DESIGN PER DELEGATED DESIGN. THE SCOPE OF WORK SHALL INCLUDE ALL AREAS WHERE EXISTING FIRE ALARM DEVICES ARE TO BE DISRUPTED OR DEMOLISHED. NEW DEVICES SHALL COORDINATE WITH AND CONNECT TO EXISTING FIRE ALARM SYSTEM. EXPAND EXISTING SYSTEM AS REQUIRED.
P1	RECEPTACLES FOR WASHER AND DRYER. COORDINATE WITH MANUFACTURER TO CONFIRM EXACT POWER REQUIREMENTS.
P2	RECEPTACLES FOR RANGE. COORDINATE WITH MANUFACTURER TO CONFIRM EXACT POWER REQUIREMENTS.
P3	RECEPTACLE FOR REFRIGERATOR. PROVIDE GFCI BREAKER IN PANEL. LABEL RECEPTACLE TO INDICATE GFCI PROTECTION BY BREAKER.
P5	CONTRACTOR TO CONFIRM EXISTING PANEL CAN ACCOMMODATE GFCI BREAKERS AS INDICATED. DEADFRONT GFCI SHALL BE PROVIDED IF NOT.
P6	RECEPTACLE FOR RANGE HOOD. CONTRACTOR TO COORDINATE EXACT LOCATION OF RECEPTACLE WITH RANGE HOOD REQUIREMENTS.
P7	



A3 POWER & SYSTEMS PLAN MAIN LEVEL OVERALL
SCALE: 1/8" = 1'-0"



A5 POWER & SYSTEMS PLAN MAIN LEVEL AREA B
SCALE: 1/4" = 1'-0"

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	BJR
Draw	EKJ
Check	JKN

STAMP

PROFESSIONAL ELECTRICAL ENGINEER
BENJAMIN JACOB RIES
E-14970
STATE OF NEBRASKA

Project No. 003-10201-014
04.04.2025

POWER PLAN MAIN LEVEL AREA B

EP102

CONSTRUCTION DOCUMENTS

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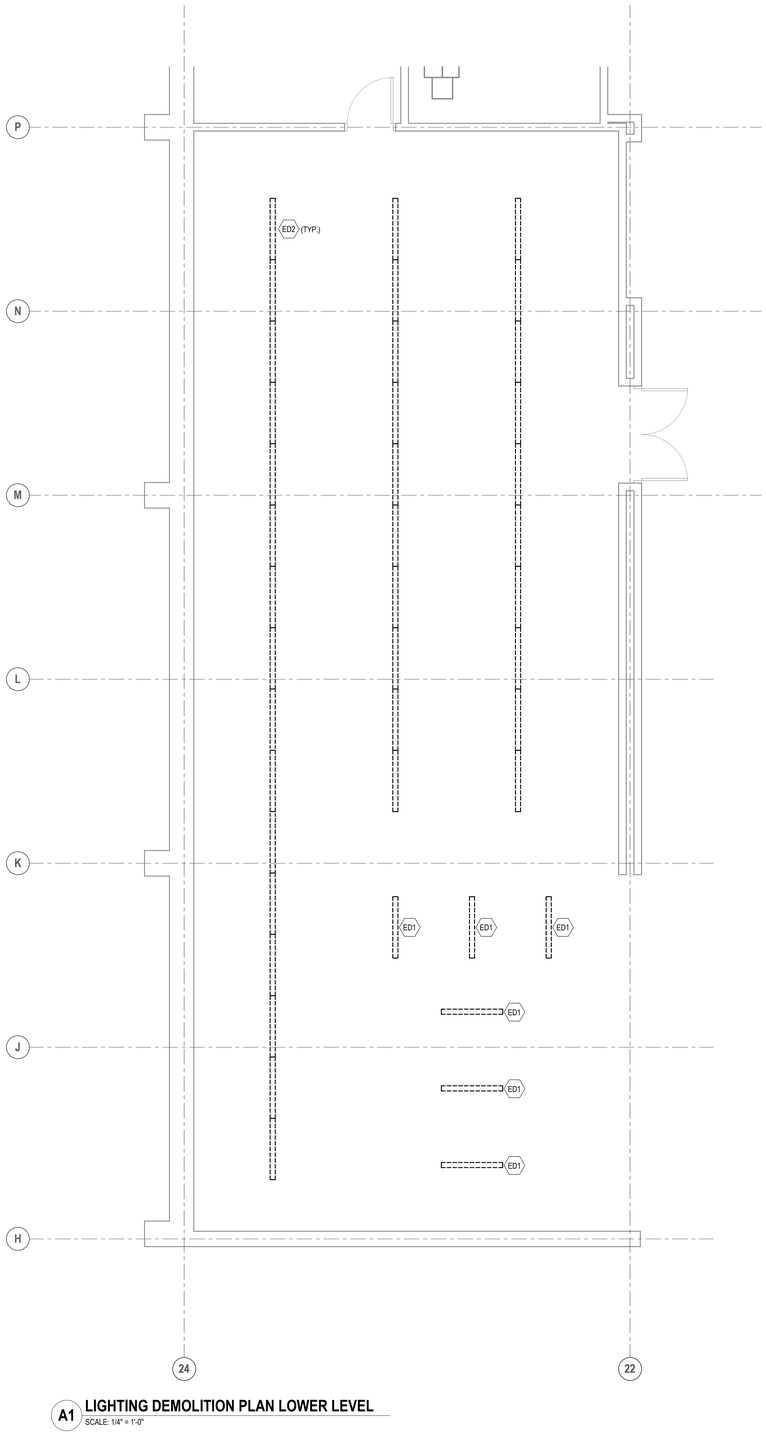
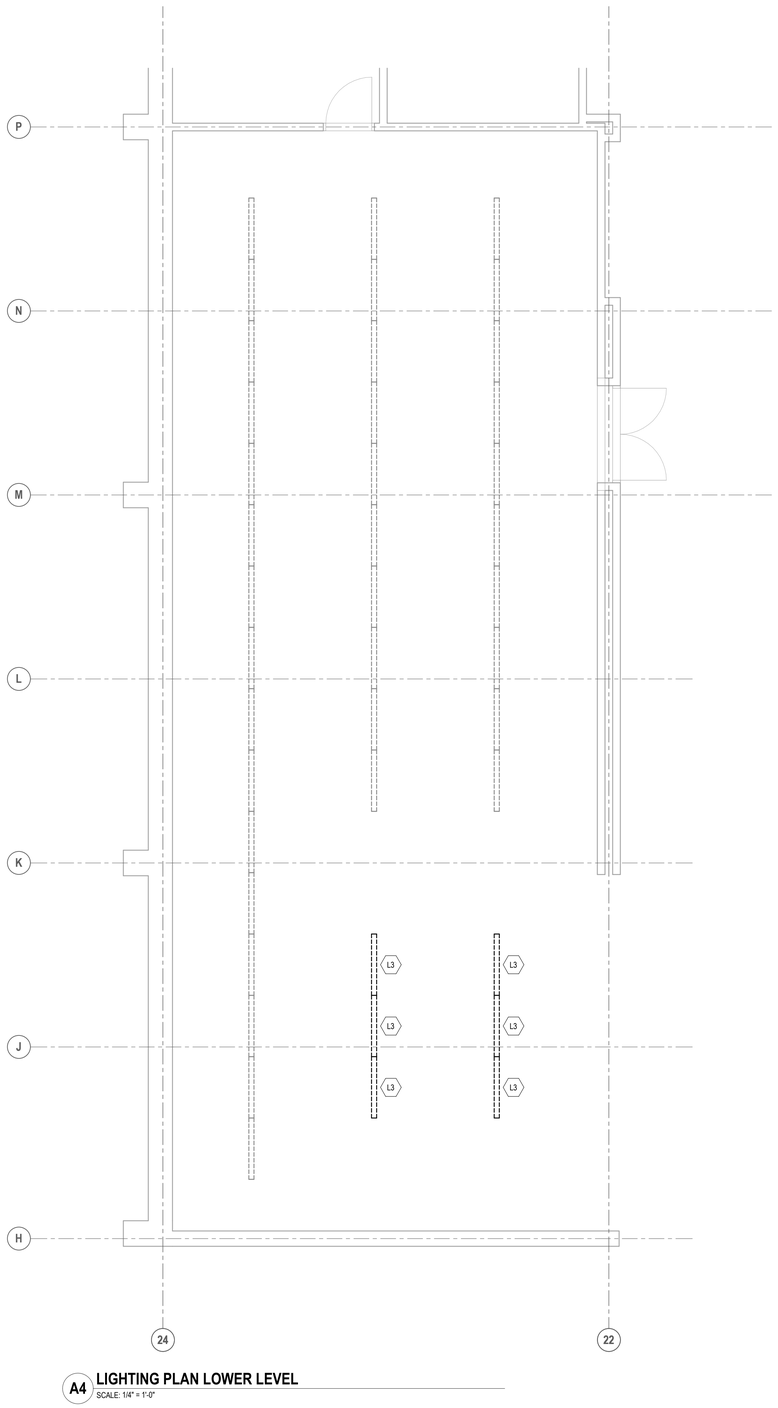


A1 LIGHTING DEMOLITION PLAN LOWER LEVEL
SCALE: 1/4" = 1'-0"



A4 LIGHTING PLAN LOWER LEVEL
SCALE: 1/4" = 1'-0"

LIGHTING GENERAL NOTES

1. REFER TO LIGHTING CONTROL SEQUENCE OF OPERATIONS FOR AUTOMATIC LIGHTING CONTROL DEVICES REQUIRED BASED ON LIGHTING CONTROL TAGS LOCATED ON LIGHTING PLAN AND LIGHTING CONTROL AREA PLAN. IN AREAS OF HIGH IMPORTANCE, LIGHTING CONTROL SENSOR LOCATIONS HAVE BEEN IDENTIFIED ON PLANS. IN ALL OTHER AREAS PROVIDE ALL NECESSARY DEVICES AND ACCESSORIES AS REQUIRED TO PROVIDE LEVEL OF CONTROL SPECIFIED WITHIN SEQUENCE OF OPERATIONS FOR EACH GIVEN SPACE TYPE.
2. MANUAL CONTROL OF LIGHTING ZONES IDENTIFIED ON LIGHTING PLANS SHALL BE MANUALLY CONTROLLED VIA LOW VOLTAGE OR MANUAL SWITCH(ES) LOCATED IN THE SAME AREA. REFER TO LIGHTING PLANS FOR LOW VOLTAGE SWITCH IDENTIFICATION AND LOW VOLTAGE SWITCH SCHEDULES SHEET E-702 FOR ADDITIONAL CONTROL INFORMATION.
3. CIRCUITING IS NOT SHOWN BETWEEN MANUAL LIGHTING CONTROL DEVICES AND LUMINAIRES CONTROLLED.
   A. WHERE SPACE INCLUDES A SINGLE ZONE OF CONTROL, LIGHTING CONTROL DEVICES WITHIN THAT SPACE SHALL CONTROL ALL OF THE LIGHTING WITHIN THE SPACE.
   B. WHERE SPACES INCLUDE MULTIPLE ZONES OF CONTROL, CONNECT LIGHTING CONTROL DEVICES AS INDICATED BY ZONE SUBSCRIPTS INDICATED ON PLANS AND CONTROL AS INDICATED ON SWITCH SCHEDULES, SEQUENCE OF OPERATIONS AND MANUAL SWITCH SUBSCRIPTS.
4. EMERGENCY LUMINAIRES AND EXIT LIGHTS SHALL BE SERVED FROM A COMMON 20A EMERGENCY CENTRAL BATTERY INVERTER BRANCH CIRCUIT. EMERGENCY LUMINAIRES SHALL BE SWITCHED BY CONTROLS INDICATED. PROVIDE EMERGENCY LIGHTING CONTROL RELAYS PER UL-924 LIGHTING CONTROL RELAY DETAIL FOR EMERGENCY LIGHTING OVERRIDE.
5. PROVIDE UNSWITCHED CONNECTION FROM LOCAL EMERGENCY CIRCUIT TO ALL EXIT SIGNS TO ENSURE THAT THEY REMAIN ENERGIZED AT ALL TIMES. REFER TO UL-924 LIGHTING CONTROL RELAY DETAIL FOR ADDITIONAL INFORMATION.
6. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN(S) FOR EXACT LOCATION OF ALL CEILING MOUNTED DEVICES.
7. ROUTE ALL WIRE AND CONDUIT CONCEALED UNLESS OTHERWISE NOTED.
8. ALL CONDUIT AND EXPOSED LIGHTING CONTROL WIRING IN EXPOSED CEILING AREAS SHALL BE PAINTED TO MATCH CEILING AND BE RUN IN STRAIGHT LINES PARALLEL TO OR AT RIGHT ANGLES TO BUILDING LINES.
9. MOUNT 2X2 LUMINAIRES SUCH THAT THE LUMINAIRE IS PERPENDICULAR TO THE LONG DIMENSION OF THE ROOM.
10. VERIFY TRIM COMPATIBILITY WITH CEILING TYPE INDICATED IN ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ORDERING LUMINAIRES.
11. WHEN REQUIRED RECESSED LUMINAIRES INSTALLED IN GYP. BOARD OR PLASTER CEILINGS SHALL HAVE PLASTER FRAMES INSTALLED PRIOR TO CEILING MATERIAL.
12. THE CANOPY PORTION OF A PENDANT-HUNG LUMINAIRE INSTALLED IN A FINISHED SPACE WITH AN EXPOSED-TO-STRUCTURE CEILING SHALL BE INSTALLED DIRECTLY TO THE BOTTOM OF THE STRUCTURAL DECK UNLESS OTHERWISE NOTED. SUSPENDING THE BOX/CANOPY AT A LOWER MOUNTING HEIGHT VIA UNISTRUT, ALL-THREAD, OR SIMILAR MEANS IS NOT ACCEPTABLE. NOTIFY ENGINEER IMMEDIATELY IF ON-SITE CONDITIONS WILL RESULT IN A MOUNTING CONFLICT.
13. COORDINATE PENDANT HUNG INDUSTRIAL STRIP(S) IN UNFINISHED AREAS WITH PIPING, DUCTWORK, EQUIPMENT, CABLE TRAY, ETC. TO AVOID CONFLICTS. MAKE MINOR ADJUSTMENTS TO LUMINAIRE LOCATIONS AS REQUIRED.
14. ALL LUMINAIRES SHALL HAVE 0'-3" MINIMUM CLEARANCE FROM PIPING, DUCTWORK, ETC. COORDINATE WITH ALL TRADES.
15. PROVIDE ENCLOSURES OVER RECESSED LUMINAIRES INSTALLED IN RATED CEILINGS SO ALL CODE REQUIRED RATINGS ARE MAINTAINED. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES AND RATINGS. FULLY COORDINATE ALL REQUIREMENTS WITH THE GENERAL CONTRACTOR.
16. GROUPED SWITCHES OF 2 OR MORE SHALL SHARE THE SAME BACK BOX. PROVIDE BARRIER(S) BETWEEN NORMAL AND EMERGENCY SOURCES.

KEYNOTE LEGEND

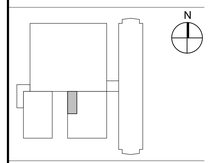
ED1	LUMINAIRES TO BE RELOCATED.
ED2	CLEAN, RELAMP, AND REPAIR ALL EXISTING LUMINAIRES. PROVIDE NEW LAMPS AND BALLASTS TO MATCH EXISTING LUMINAIRE COLOR TEMPERATURE AND LUMEN OUTPUT, WHERE REQUIRED.
L3	RELOCATED LUMINAIRES. RECONNECT TO EXISTING CIRCUIT AND LIGHTING CONTROLS SERVING AREA.

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	BJR
Draw	EKJ
Check	BRL

STAMP

PROFESSIONAL ELECTRICAL ENGINEER
BENJAMIN JACOB RIES
E-14970
STATE OF NEBRASKA

Project No. 003-10201-014
04.04.2025

LIGHTING PLAN LOWER LEVEL OVERALL

EL101

CONSTRUCTION DOCUMENTS

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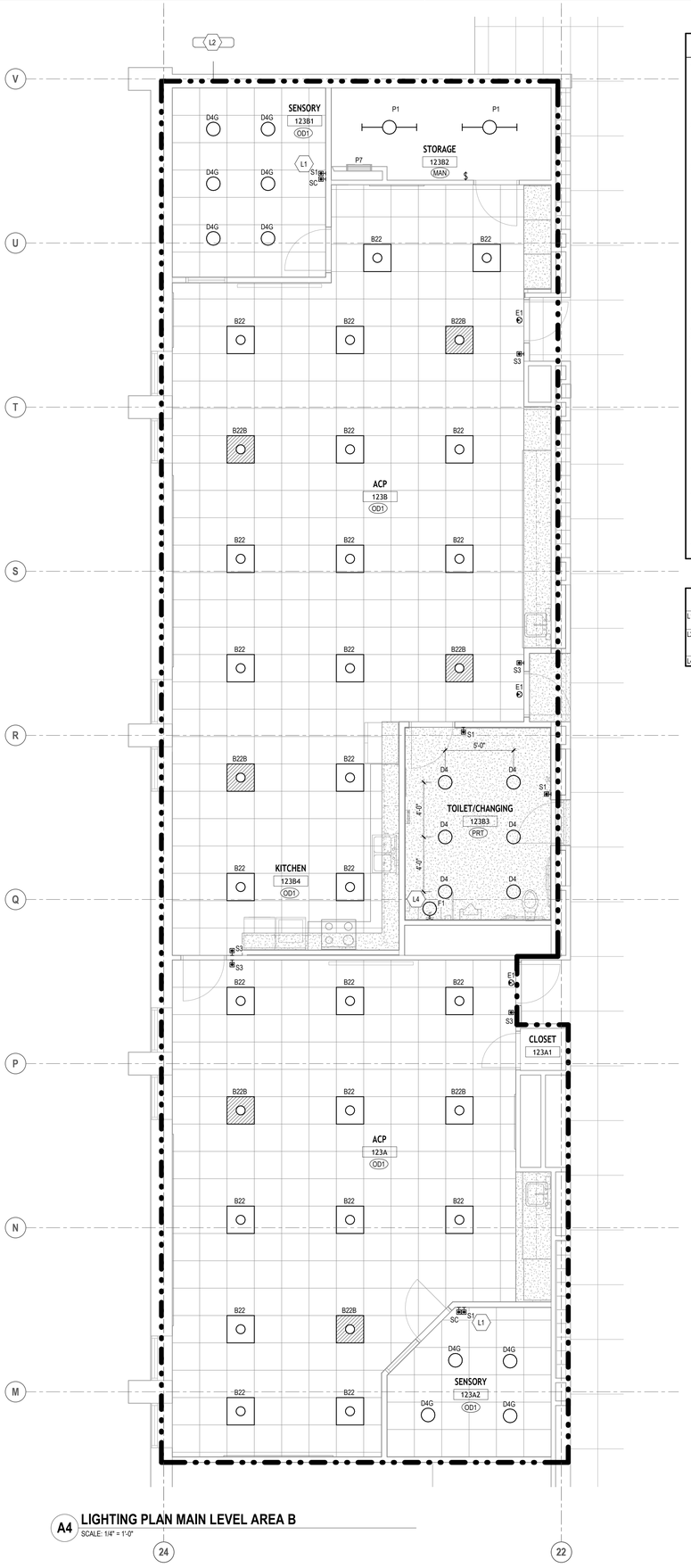


A4 **LIGHTING PLAN MAIN LEVEL AREA B**
SCALE: 1/4" = 1'-0"

LIGHTING GENERAL NOTES

1. REFER TO LIGHTING CONTROL SEQUENCE OF OPERATIONS FOR AUTOMATIC LIGHTING CONTROL DEVICES REQUIRED BASED ON LIGHTING CONTROL TAGS LOCATED ON LIGHTING PLAN AND LIGHTING CONTROL AREA PLAN. IN AREAS OF HIGH IMPORTANCE, LIGHTING CONTROL SENSOR LOCATIONS HAVE BEEN IDENTIFIED ON PLANS. IN ALL OTHER AREAS PROVIDE ALL NECESSARY DEVICES AND ACCESSORIES AS REQUIRED TO PROVIDE LEVEL OF CONTROL SPECIFIED WITHIN SEQUENCE OF OPERATIONS FOR EACH GIVEN SPACE TYPE.
2. MANUAL CONTROL OF LIGHTING ZONES IDENTIFIED ON LIGHTING PLANS SHALL BE MANUALLY CONTROLLED VIA LOW VOLTAGE OR MANUAL SWITCH(ES) LOCATED IN THE SAME AREA. REFER TO LIGHTING PLANS FOR LOW VOLTAGE SWITCH IDENTIFICATION AND LOW VOLTAGE SWITCH SCHEDULES SHEET E-702 FOR ADDITIONAL CONTROL INFORMATION.
3. CIRCUITING IS NOT SHOWN BETWEEN MANUAL LIGHTING CONTROL DEVICES AND LUMINAIRES CONTROLLED.
   A. WHERE SPACE INCLUDES A SINGLE ZONE OF CONTROL, LIGHTING CONTROL DEVICES WITHIN THAT SPACE SHALL CONTROL ALL OF THE LIGHTING WITHIN THE SPACE.
   B. WHERE SPACES INCLUDE MULTIPLE ZONES OF CONTROL, CONNECT LIGHTING CONTROL DEVICES AS INDICATED BY ZONE SUBSCRIPTS INDICATED ON PLANS AND CONTROL AS INDICATED ON SWITCH SCHEDULES, SEQUENCE OF OPERATIONS AND MANUAL SWITCH SUBSCRIPTS.
4. EMERGENCY LUMINAIRES AND EXIT LIGHTS SHALL BE SERVED FROM A COMMON 20A EMERGENCY CENTRAL BATTERY INVERTER BRANCH CIRCUIT. EMERGENCY LUMINAIRES SHALL BE SWITCHED BY CONTROLS INDICATED. PROVIDE EMERGENCY LIGHTING CONTROL RELAYS PER UL-924 LIGHTING CONTROL RELAY DETAIL FOR EMERGENCY LIGHTING OVERRIDE.
5. PROVIDE UNSWITCHED CONNECTION FROM LOCAL EMERGENCY CIRCUIT TO ALL EXIT SIGNS TO ENSURE THAT THEY REMAIN ENERGIZED AT ALL TIMES. REFER TO UL-924 LIGHTING CONTROL RELAY DETAIL FOR ADDITIONAL INFORMATION.
6. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN(S) FOR EXACT LOCATION OF ALL CEILING MOUNTED DEVICES.
7. ROUTE ALL WIRE AND CONDUIT CONCEALED UNLESS OTHERWISE NOTED.
8. ALL CONDUIT AND EXPOSED LIGHTING CONTROL WIRING IN EXPOSED CEILING AREAS SHALL BE PAINTED TO MATCH CEILING AND BE RUN IN STRAIGHT LINES PARALLEL TO OR AT RIGHT ANGLES TO BUILDING LINES.
9. MOUNT 2X2 LUMINAIRES SUCH THAT THE LUMINAIRE IS PERPENDICULAR TO THE LONG DIMENSION OF THE ROOM.
10. VERIFY TRIM COMPATIBILITY WITH CEILING TYPE INDICATED IN ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ORDERING LUMINAIRES.
11. WHEN REQUIRED RECESSED LUMINAIRES INSTALLED IN GYP. BOARD OR PLASTER CEILINGS SHALL HAVE PLASTER FRAMES INSTALLED PRIOR TO CEILING MATERIAL.
12. THE CANOPY PORTION OF A PENDANT-HUNG LUMINAIRE INSTALLED IN A FINISHED SPACE WITH AN EXPOSED-TO-STRUCTURE CEILING SHALL BE INSTALLED DIRECTLY TO THE BOTTOM OF THE STRUCTURAL DECK UNLESS OTHERWISE NOTED. SUSPENDING THE BOX/CANOPY AT A LOWER MOUNTING HEIGHT VIA UNISTRUT, ALL-THREAD, OR SIMILAR MEANS IS NOT ACCEPTABLE. NOTIFY ENGINEER IMMEDIATELY IF ON-SITE CONDITIONS WILL RESULT IN A MOUNTING CONFLICT.
13. COORDINATE PENDANT HUNG INDUSTRIAL STRIP(S) IN UNFINISHED AREAS WITH PIPING, DUCTWORK, EQUIPMENT, CABLE TRAY, ETC. TO AVOID CONFLICTS. MAKE MINOR ADJUSTMENTS TO LUMINAIRE LOCATIONS AS REQUIRED.
14. ALL LUMINAIRES SHALL HAVE 0'-3" MINIMUM CLEARANCE FROM PIPING, DUCTWORK, ETC. COORDINATE WITH ALL TRADES.
15. PROVIDE ENCLOSURES OVER RECESSED LUMINAIRES INSTALLED IN RATED CEILINGS SO ALL CODE REQUIRED RATINGS ARE MAINTAINED. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES AND RATINGS. FULLY COORDINATE ALL REQUIREMENTS WITH THE GENERAL CONTRACTOR.
16. GROUPED SWITCHES OF 2 OR MORE SHALL SHARE THE SAME BACK BOX. PROVIDE BARRIER(S) BETWEEN NORMAL AND EMERGENCY SOURCES.

KEYNOTE LEGEND

L1	SWITCH S1 SHALL CONTROL SWITCHED RECEPTACLES IN ROOM. CONTROLLED RECEPTACLES SHALL ALSO BE CONTROLLED BY OCCUPANCY SENSOR.
L2	CONNECT TO EXISTING LIGHTING CIRCUIT MADE AVAILABLE BY DEMOLITION. CONTRACTOR TO CONFIRM CIRCUIT DOES NOT EXCEED 80% CAPACITY OF CIRCUIT BREAKER.
L4	LUMINAIRE SHALL BE CENTERED ABOVE VANITY MIRROR.

LIGHTING CIRCUIT ZONE LEGEND

CIRCUIT ZONE BOUNDARY - CONNECT LUMINAIRES WITHIN BOUNDARY TO CIRCUIT INDICATED BY LUMINAIRE CIRCUIT TAG

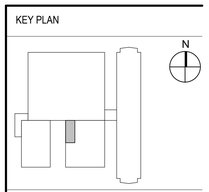
NORMAL PANELBOARD — PANELBOARD TAG(S) - PANELBOARD TAG(S) INDICATE PANELBOARD(S) SERVING CIRCUIT ZONE BOUNDARY REGION

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	BJR
Draw	EKJ
Check	BRL

STAMP

PROFESSIONAL ELECTRICAL ENGINEER
BENJAMIN JACOB RIES
E-14970
4/4/2025
STATE OF NEBRASKA

Project No. 003-10201-014
04.04.2025

LIGHTING PLAN MAIN LEVEL AREA B

EL102

CONSTRUCTION DOCUMENTS

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LIGHTING EQUIPMENT SCHEDULE NOTES

GENERAL NOTES:

A. CATALOG NUMBER VERIFICATION - CONTRACTOR SHALL VERIFY LUMINAIRE INSTALLATION REQUIREMENTS AND CATALOG NUMBER PRIOR TO ORDERING. CATALOG NUMBER SPECIFICATION SYMBOL INFORMATION BELOW.
   a. ## - LENGTH TAKEN FROM DRAWINGS. LUMINAIRES HAVE BEEN IDENTIFIED ON PLANS IN FEET AND INCHES i.e. ((8'-0") OR (6'-3")). LENGTHS HAVE BEEN ROUNDED TO THE NEAREST WHOLE INCH.
   b. * - WHEN STAR IS PRESENT, REFERENCE LIGHTING EQUIPMENT SCHEDULE COLUMNS FOR ORDERING INFORMATION.
   c. _ - UNDERSCORE INDICATES "BLANK" OPTION IS BEING SPECIFIED OR NO OPTION IS REQUIRED.
   d. % - CONTRACTOR RESPONSIBLE FOR COORDINATING SPECIFICATION OPTION SELECTION WITH INSTALLATION CONDITIONS.
B. SUBSTITUTIONS - WHERE INDICATED WITH 'N' (NO), NO SUBSTITUTIONS WILL BE ACCEPTED. WHERE INDICATED WITH 'P' (PRIOR APPROVAL), SUBSTITUTIONS MUST BE APPROVED PRIOR TO BID WITH ACCEPTANCE ISSUED BY ADDENDUM. WHERE INDICATED WITH 'Y' (YES), THE FOLLOWING MANUFACTURERS ARE CONSIDERED ACCEPTABLE EQUIVALENT MANUFACTURERS, PROVIDED THE EQUIVALENT LUMINAIRE IS OF THE SAME BUILD QUALITY, EFFICACY, OUTPUT, DISTRIBUTION, AND MATCHING AESTHETICS AS SCHEDULED. LUMINAIRES SUBMITTED FOR PRIOR APPROVAL MUST INCLUDE A COMPARISON OF CRITERIA SPECIFIED IN THE LIGHTING EQUIPMENT SCHEDULE COLUMNS.
   a. ACUITY
   b. COOPER LIGHTING SOLUTIONS
   c. CURRENT
   d. WILLIAMS
   e. PHILLIPS/SIGNIFY
   f. LEGRAND
C. DIMMING %:
   a. INDICATES DIMMING PROTOCOL (FORWARD PHASE, REVERSE PHASE, 0-10V, DMX, DALI, LLC (LUMINAIRE LEVEL CONTROL), ETC.) AND REQUIRED MINIMUM DIMMING % (10%, 1%, 0.1%, DIM TO DARK, ETC.). COORDINATE EXACT DIMMING PROTOCOL AND DRIVER COMPATIBILITY WITH SUBMITTED LUMINAIRE AND LIGHTING CONTROL MANUFACTURER.
D. ACCEPTABLE EQUIVALENTS - THE FOLLOWING MANUFACTURER AND IDENTIFIED LUMINAIRE FAMILIES ARE CONSIDERED ACCEPTABLE EQUIVALENTS, PROVIDED THE EQUIVALENT LUMINAIRE IS OF THE SAME EFFICIENCY, PERFORMANCE AND HAS THE SAME SPECIFICATION CHARACTERISTICS AS THE SCHEDULED LUMINAIRE.
E. DRIVERS - COORDINATE LINEAR VS. LOGARITHMIC DIMMING DRIVER REQUIREMENTS WITH DIMMING DRIVER AND LIGHTING CONTROL DIMMING RELAY/DIMMER SWITCH.
F. MOUNTING HEIGHT: PROVIDE MOUNTING HEIGHT AS INDICATED ON SCHEDULE UNLESS OTHERWISE NOTED ON PLAN.
   a. BOL: MOUNTING HEIGHT TO BOTTOM OF LUMINAIRE
   b. COL: MOUNTING HEIGHT TO CENTER OF LUMINAIRE
   c. TOL: MOUNTING HEIGHT TO TOP OF LUMINAIRE
G. CEILING COORDINATION - ALL CEILING MOUNTED LUMINAIRE TYPES SHALL HAVE LUMINAIRE MOUNTING COORDINATED WITH GRID TYPE OR CEILING MATERIAL TYPE. PROVIDE GYP. MOUNTING FRAMES WHEN REQUIRED DUE TO CEILING CONSTRUCTION. REFER TO ARCHITECTURAL SHEETS FOR GRID TYPE USED IN EACH AREA. LUMINAIRES INSTALLED IN 9/16" GRID SHALL BE PROVIDED WITH MOUNTING CLIPS IF RECOMMENDED BY LUMINAIRE MANUFACTURER.
H. LINEAR LUMINAIRES - LUMINAIRES IDENTIFIED WITH EMERGENCY NORMAL SECTIONS AND DEDICATED DAYLIGHT ZONE SECTIONS SHALL BE PROVIDED WITH DEDICATED EMERGENCY DRIVER(S) SEPARATED FROM NORMAL DRIVER(S) BY BARRIER. PROVIDE LABEL READING "WARNING - LUMINAIRE SUPPLIED WITH MULTIPLE CIRCUITS - NORMAL AND EMERGENCY. PLACE LABEL ON DRIVER COVER.
I. LINEAR AND LINEAR PATTERN LUMINAIRES - COORDINATE EXACT PATTERN AND SECTION LENGTHS WITH REFLECTED CEILING PLAN. PROVIDE DETAILED SHOP DRAWINGS OF EMERGENCY SECTION, POWER/CONTROL CONNECTIONS, INTEGRAL OR REMOTE DRIVER LOCATIONS (POWER ENTRY LOCATIONS SHALL BE COORDINATED WITH THE PLANNED POWER ROUTING PATH), END PLATES AND MOUNTING REQUIREMENTS. LUMINAIRE SHALL BE PROVIDED WITH ILLUMINATED CORNERS, INTERSECTIONS, AND FIELD ADJUSTABLE EXTENSIONS. SHOP DRAWINGS SHALL INDICATE PENDANT OR MOUNTING BRACKET LOCATIONS.
J. LINEAR WALL-TO-WALL MOUNTING - PROVIDE LUMINAIRE WITH CONTINUOUS ILLUMINATION FROM WALL TO WALL. COORDINATE EXACT WALL DIMENSIONS WITH GENERAL CONTRACTOR AND ARCHITECTURAL DETAILS. PROVIDE MANUFACTURER'S WALL-TO-WALL MOUNTING ACCESSORY(S) AS REQUIRED FOR A COMPLETE INSTALLATION. WHEN LUMINAIRE IS NOT PROVIDED WITH FIELD ADJUSTABLE EXTENSIONS, COORDINATE FIELD MEASURED OVERALL DIMENSIONS FOR WALL TO WALL, WALL TO CORNER, AND RECESSED ARCHITECTURAL POCKET CONDITIONS.
K. TAKE STEPS TO COVER AND PROTECT PERIMETER AND ARCHITECTURAL POCKET LUMINAIRES FROM PAINTING AND PAINT SPRAY. REMOVING LENSES IS NOT ADEQUATE PROTECTION. LENSES OR DIODES WITH PAINT ON THEM SHALL BE REPLACED.

REMARKS:

1. EXIT SIGNS: PROVIDE EXIT DIRECTION CHEVRONS AND MOUNTING TYPE AS INDICATED ON PLANS.
2. PENDANT/SUSPENSION MOUNTING - COORDINATE EXACT LOCATION, MOUNTING ELEVATION, AND REQUIRED PENDANT/SUSPENSION LENGTH WITH ARCHITECTURAL DETAILS.
3. WALL MOUNTING - COORDINATE EXACT LOCATION WITH ARCHITECTURAL DETAILS. COORDINATE FRAMING AND BOX SUPPORTS PRIOR TO ROUGH-IN FOR EXACT PLACEMENT OF BOX TO ACHIEVE CENTERING AND ALIGNMENT WITH FINAL ARCHITECTURAL FINISHES.

LIGHTING EQUIPMENT SCHEDULE

MARK	DESCRIPTION	SUBSTITUTIONS N	P	Y	MANUFACTURER	MODEL	LED SOURCE DELIVERED LUMENS	(*K) CCT	MIN. CRI	APPARENT LOAD VA	VA/LF	VOLTAGE	DIMMING %	FINISH	MOUNTING	REMARKS
B22	2x2 TUNABLE WHITE FLAT PANEL		X		LITHONIA	CPXTW-*-TUWH-RHYR-*-*-SWL-MVOLT-_-NLT	4,293 LUMENS	2700-6500	80	36 VA		120 V	1% (0-10V)	WHITE	RECESSED	
B22B	2x2 TUNABLE WHITE FLAT PANEL		X		LITHONIA	CPXTW-*-TUWH-RHYR-*-*-SWL-MVOLT-E10WLCP-NLT	4,293 LUMENS	2700-6500	80	36 VA		120 V	1% (0-10V)	WHITE	RECESSED	
D4	4" RECESSED DOWNLIGHT		X		LITHONIA	EVO4-*/*-AR-_-LD-MWD-MVOLT-GZ10-NLT	1,526 LUMENS	3500	80	14 VA		120 V	10% (0-10V)	WHITE	RECESSED	
D4G	4" RECESSED DOWNLIGHT		X		LITHONIA	EVO4-TUWH-RHYR/*-AR-_-WD-LD-MVOLT-NLT	1,526 LUMENS	3500	80	14 VA		120 V	10% (0-10V)	WHITE	RECESSED	
E1	LED EXIT SIGN.		X		DUAL LITE	SE S R W E I	LED (SIGN)	RED	N/A	1 VA		120 V	N/A	WHITE	CEILING	1
F1	2 FOOT WALL VANITY BRACKET.		X		LITHONIA	BLWP2 * PDSM MVOLT EZ1 * TRS	855 LUMENS	3500	80	7 VA		120 V	10%	WHITE	WALL MOUNTED	3
P1	4 FOOT INDUSTRIAL STRIP.		X		LITHONIA	ZL1D-L48-_-*-FST-MVOLT-*-*	5,456 LUMENS	3500	80	41 VA		120 V	10% (0-10V)	WHITE	CABLE HUNG	2

LIGHTING CONTROL SWITCH SCHEDULE NOTES

1. SEE LIGHTING CONTROL SEQUENCE OF OPERATION FOR ADDITIONAL INFORMATION.
2. SUBMIT PROPOSED LOW VOLTAGE SWITCH BUTTON CONFIGURATIONS FOR ALL LOW VOLTAGE SWITCHES, CLEARLY IDENTIFYING ANY DEVIATIONS THAT NEED TO BE MADE DUE TO SWITCH CONFIGURATION OR ENGRAVING CONSTRAINTS, FOR APPROVAL. IF SUBMITTED BUTTON CONFIGURATIONS DO NOT MEET DESIGN INTENT, ADDITIONAL LOW VOLTAGE SWITCHES MAY BE REQUIRED.
3. UNLESS OTHERWISE SPECIFIED, OCCUPIED SHALL BE ASSUMED TO BE 100% OUTPUT AND UNOCCUPIED SHALL BE ASSUMED TO BE 0% OUTPUT.
4. WHEN NIGHTTIME TASK LEVEL TUNING IS SPECIFIED, DIM LIGHTING TO 10% OF SPECIFIED LEVEL 5 MINUTES BEFORE TRANSITIONING TO UNOCCUPIED LEVEL.
5. UNLESS SPECIFICALLY IDENTIFIED, MANUAL DIMMING SHALL BE PERFORMED BY DEDICATED BUTTONS. COMBINATION ZONE/SCENE SELECT AND HOLD TO DIM BUTTONS ARE NOT ALLOWED.
6. SEE LIGHTING PLANS FOR COVERPLATE ENGRAVING REQUIREMENTS.
7. IN AREAS WITH TIME SWITCH CONTROL OF LIGHTING, LIGHTING CONTROL SWITCH(ES) LOCATED WITHIN AREA OF CONTROL SHALL OVERRIDE TIME SWITCH CONTROL FOR 2 HOURS. 10 MINUTES BEFORE THE END OF THE 2 HOUR TIMEOUT, PROVIDE BLINK-WARN OR DIM CONTROLLED LIGHTING TO 10% TO NOTIFY THE USERS OF SPACE OF IMPENDING SWITCH BACK TO TIME SWITCH CONTROL. SEE LIGHTING CONTROL SEQUENCE OF OPERATION SCHEDULE FOR ADDITIONAL INFORMATION.
8. LIGHTING CONTROL SWITCHES CONTAINING SCENES SHALL REQUIRE ENGINEER TO BE PRESENT DURING SYSTEM STARTUP TO APPROVE LIGHT LEVELS AND CONTROL ZONE CONFIGURATIONS.

LIGHTING CONTROL SWITCH SCHEDULE

KEYPAD ID	DESCRIPTION	BUTTON #	BUTTON LABEL	SCENE DESCRIPTION
S1	ON/OFF	1	ALL ON	ADJUSTS ALL ROOM LIGHTING TO OCCUPIED LEVEL
		2	ALL OFF	ADJUSTS ALL ROOM LIGHTING TO UNOCCUPIED LEVEL
S2	50%/ON/OFF	1	HALF LIGHTS	ADJUSTS ALL ROOM LIGHTING TO HALF OF OCCUPIED LEVEL
		2	FULL LIGHTS	ADJUSTS ALL ROOM LIGHTING TO MAX OCCUPIED LEVEL
		3	ALL OFF	ADJUSTS ALL ROOM LIGHTING TO UNOCCUPIED LEVEL
S3	50%/ON/OFF DIMMING	1	HALF LIGHTS	ADJUSTS ALL ROOM LIGHTING TO HALF OF OCCUPIED LEVEL
		2	FULL LIGHTS	ADJUSTS ALL ROOM LIGHTING TO MAX OCCUPIED LEVEL
		3	RAISE	HOLDING RAISES ALL ROOM LIGHTING
		4	LOWER	HOLDING LOWERS ALL ROOM LIGHTING
		5	ALL OFF	ADJUSTS ALL ROOM LIGHTING TO UNOCCUPIED LEVEL
SC	COLOR TUNING	1	ON	ADJUSTS CONFERENCE ROOM LIGHTING TO 100% OUTPUT
		2	GENERAL	ADJUSTS ALL ROOM LIGHTING TO FACTORY PRESET COLOR TEMPERATURE AND 80% OUTPUT.
		3	READING	ADJUSTS ALL ROOM LIGHTING TO FACTORY PRESET COLOR TEMPERATURE AND 60% OUTPUT.
		4	TESTING	ADJUSTS ALL ROOM LIGHTING TO FACTORY PRESET COLOR TEMPERATURE AND 100% OUTPUT.
		5	ENERGY	ADJUSTS ALL ROOM LIGHTING TO FACTORY PRESET COLOR TEMPERATURE AND 100% OUTPUT.
		6	OFF	ADJUSTS ALL ROOM LIGHTING TO UNOCCUPIED LEVEL.
		7	RAISE	HOLDING RAISES ALL ROOM LIGHTING.
		8	LOWER	HOLDING LOWERS ALL ROOM LIGHTING.

LIGHTING CONTROL SEQUENCE OF OPERATION NOTES

DEVICES:
OCCUPANT SENSOR (IF INDICATED IN OCCUPANCY OR VACANCY COLUMN TO BE PROVIDED WITH SENSOR, PROVIDE TYPE BELOW. CEILING MOUNT UNLESS NOTED OTHERWISE):
- F = FINE MOTION (COVERAGE PATTERN < 500 SQ FT)
- L = LARGE MOTION (COVERAGE PATTERN > 2000 SQ FT)
- LT / HH = LOW TEMP / HIGH HUMIDITY
- HB = HIGH BAY (CEILING ABOVE 15')
- A = HIGH BAY AISLE (CEILING ABOVE 15')
- O = OUTDOOR

SENSOR DETECTION TYPE:
- IR = PASSIVE INFRARED
- US = ULTRASONIC / MICROPHONIC
- DT = DUAL TECHNOLOGY

TIMEOUT:
- LENGTH OF TIME FOR OCCUPANT SENSOR TO DETERMINE SPACE IS UNOCCUPIED AFTER SENSOR STOPS DETECTING MOTION.

AUTO ON:
- OUTPUT % OR FC LEVEL LIGHTS ADJUST TO WHEN OCCUPANCY IS DETECTED.

AUTO OFF:
- OUTPUT % OR FC LEVEL LIGHTS ADJUST TO WHEN OCCUPANCY TIMES OUT.

NETWORK - NETWORK LIGHTING CONTROL COMMUNICATIONS:
- Y = CONNECT NETWORK ROOM DEVICES TO BUILDING-WIDE LIGHTING CONTROLS NETWORK COMMUNICATIONS.
- N = BUILDING-WIDE LIGHTING CONTROLS NETWORK COMMUNICATIONS NETWORK NOT REQUIRED TO THIS ROOM.

AUX - INTEGRATE LIGHTING CONTROL SYSTEM WITH AUXILIARY SYSTEM:
- CONTACT = AUXILIARY INPUT THAT ALLOWS COMMUNICATION WITH OTHER SYSTEM.
- BMS = INTERFACE AND PROVIDE TWO-WAY COMMUNICATION WITH BUILDING MANAGEMENT SYSTEM (BMS).
- A/V = INTEGRATE LIGHTING CONTROL SYSTEM WITH A/V SYSTEM. LIGHTING CONTROL SYSTEM SHALL BE CAPABLE OF RECALLING PRESET SCENES, ACTIVATING LIGHTING ZONES AND RAISING / LOWERING LIGHTING LEVELS BASED ON SIGNALS RECEIVED FROM THE A/V SYSTEM.
- FIRE ALARM = INTEGRATE UL-924 DEVICES OR RELAYS WITH FIRE ALARM SYSTEM. IN THE EVENT OF A FIRE ALARM LIGHTING CONTROL SHALL OVERRIDE EMERGENCY LIGHTING TO FULL BRIGHTNESS REGARDLESS OF LIGHTING CONTROL STATE.
- PART = PROVIDE PARTITION SENSOR TO SEPARATE OR COMBINE OPERATION OF SEPARATE AREAS.
- SHADE = LIGHTING CONTROL SYSTEM SHALL RAISE/LOWER OR STOP AUTOMATED SHADES WITHIN SPACE.

RECEPTACLE CONTROL:
OCCUPANT SENSOR SHALL TURN RECEPTACLES OFF 20 MINUTES AFTER ALL OCCUPANTS HAVE LEFT THE SPACE. RECEPTACLES SHALL ONLY SWITCH OFF, ON OCCUPANT SENSOR TIMEOUT AND SHALL OPERATE INDEPENDENTLY OF LUMINAIRES LOCATED WITHIN THE SPACE.

TIME SWITCH CONTROL:
COORDINATE EXACT HOURS OF OPERATION WITH OWNER PRIOR TO SYSTEM COMMISSIONING.

GENERAL NOTES:
CONTROL SYSTEM NOTES:
A. SUBMIT DOCUMENTATION CONFIRMING CONTROL SYSTEM'S ABILITY TO COMPLY WITH SPECIFIED LIGHTING CONTROL SEQUENCE OF OPERATIONS. CLEARLY IDENTIFY ANY CONTROL DEVIATIONS NECESSARY DUE TO SUBMITTED CONTROL SYSTEMS FUNCTIONALITY, ALONG WITH PROPOSED SEQUENCE OF OPERATIONS.
B. SUBMIT MANUFACTURER INTERCONNECTION DIAGRAMS INDICATING DEVICE QUANTITIES, LOCATIONS, AND ASSOCIATED CONTROLS CABLING FOR APPROVAL.
C. REFER TO LIGHTING PLANS FOR LIGHTING CONTROL SWITCH TYPES AND LOCATIONS. LIGHTING CONTROL SWITCH SCHEDULES SPECIFY LIGHTING CONTROL SWITCH CONFIGURATION, OPERATION AND LABELING.
D. UNLESS NOTED OTHERWISE, INTERIOR AND BUILDING MOUNTED LIGHTING SHALL UTILIZE CONTINUOUS DIMMING. COORDINATE DIMMER TYPE (FORWARD PHASE, REVERSE PHASE, 0-10V, DMX, DALI, LLC (LUMINAIRE LEVEL CONTROL), ETC.) AND DIMMER COMPATIBILITY WITH SUBMITTED LUMINAIRE AND LIGHTING CONTROL MANUFACTURER.
E. PROVIDE ALL LIGHTING CONTROL SYSTEM COMPONENTS, CONTROL WIRING, AND SYSTEM PROGRAMMING FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM THAT CONTROLS AND DIMS LUMINAIRES AS SPECIFIED IN THE LIGHTING CONTROL SEQUENCE OF OPERATIONS.
F. PROVIDE FUNCTIONAL TESTING OF LIGHTING CONTROLS THAT COMPLIES WITH IECC 2018 REQUIREMENTS. LIGHTING CONTROL FUNCTIONAL TESTING INCLUDES TESTING FOR PROPER CALIBRATION, ADJUSTMENT, PROGRAMMING AND WORKING CONDITION. TESTING INDIVIDUAL SHALL NOT BE INVOLVED WITH PROJECT DESIGN OR CONSTRUCTION AND MUST PROVIDE CERTIFYING DOCUMENT TO ENGINEER FOR REVIEW AND ONCE REVIEWED TO AHJ THAT LIGHTING CONTROLS MEET THE PERFORMANCE CRITERIA.
G. CONTRACTOR TO PROVIDE OWNER DOCUMENTS CERTIFYING LIGHTING CONTROLS MEET PERFORMANCE CRITERIA WITHIN 90 DAYS AFTER CERTIFICATE OF OCCUPANCY.
H. ALL LIGHTING CONTROL DEVICES SHALL BE INSTALLED BEFORE FACTORY STARTUP AND PROGRAMMING AGENT IS ON-SITE.
I. START-UP, PROGRAM, AND COMMISSION LIGHTING CONTROLS PER CONSTRUCTION DOCUMENTS. THE SYSTEM SHALL BE PROGRAMMED TO MEET ENERGY CODE, SEQUENCE OF OPERATIONS, AND THE INTENT SHOWN ON THE DRAWINGS.
J. CONTRACTOR SHALL PROVIDE ELECTRONIC PLAN TO OWNER DOCUMENTING ALL SEQUENCE OF OPERATION AND SWITCH PROGRAMMING SETTINGS.

OCCUPANT SENSOR NOTES:
A. OCCUPANT SENSOR LOCATIONS HAVE BEEN IDENTIFIED IN AREAS OF CRITICAL IMPORTANCE. IN ALL OTHER AREAS, PROVIDE OCCUPANT SENSORS AS REQUIRED TO PROVIDE COMPLETE COVERAGE OF SPACE AND INTENDED SYSTEM OPERATION AS INDICATED ON LIGHTING PLANS AND LIGHTING CONTROL SEQUENCE OF OPERATION SCHEDULE.
B. UNLESS OTHERWISE NOTED OCCUPANT SENSORS SHALL CONTROL ALL LIGHTING WITHIN THE AREA THAT SENSOR IS LOCATED IN AND IF TWO OR MORE OCCUPANT SENSORS ARE LOCATED IN THE SAME AREA, MOVEMENT DETECTED BY EITHER SENSOR SHALL RESET SENSOR TIMEOUT.
C. OCCUPANT SENSORS SHALL BE INSTALLED SO THAT NO POSSIBILITY EXISTS WHERE THE SENSORS MAY BE COVERED OR COVERAGE BLOCKED DURING ROUTINE USE.
D. UNLESS OTHERWISE NOTED WHEN INSTALLED IN SPACES WITH EXPOSED-TO-STRUCTURE CEILINGS OCCUPANT SENSORS SHALL BE MOUNTED DIRECTLY TO BOTTOM OF STRUCTURAL DECK. SUSPENDING THE BOX/CANOPY AT A LOWER MOUNTING HEIGHT VIA UNISTRUT, ALL-THREAD OR SIMILAR MEANS IS NOT ACCEPTABLE UNLESS APPROVED BY ENGINEER. NOTIFY ENGINEER IMMEDIATELY IF ON-SITE CONDITIONS WILL RESULT IN A MOUNTING CONFLICT OR NEGATIVELY IMPACT THE SENSOR COVERAGE PATTERN.
E. SUBMIT PLAN WITH OCCUPANT SENSOR COVERAGE PATTERNS CLEARLY IDENTIFIED ON A SEPARATE CONTROL SUBMITTAL FLOOR PLAN.
F. UNLESS SPECIFICALLY IDENTIFIED ON THE LIGHTING PLANS, OCCUPANCY WALL SWITCHES ARE NOT ALLOWED.
G. WHEN LIGHTING CONTROLLED BY AN OCCUPANCY SENSOR IS MANUALLY SWITCHED OFF, THE LIGHTING SHALL REMAIN OFF FOR AS LONG AS MOVEMENT IS DETECTED. AFTER SENSOR TIMEOUT HAS EXPIRED, OCCUPANCY SENSOR OPERATION SHALL REVERT TO ON, ON MOVEMENT DETECTION.
H. PLACE OCCUPANT SENSORS TO AVOID THE SENSOR HAVING A VIEW OUTSIDE OF THE SPACE BEING CONTROLLED. CEILING MOUNTED SENSORS SHALL BE PLACED CLOSE TO THE WALLS CONTAINING DOORS. WALL-MOUNTED SENSORS SHALL BE MOUNTED ON WALLS CONTAINING THE DOORS TO AVOID VIEWS OUTSIDE OF THE ROOM.
I. OCCUPANT SENSOR'S VIEW OF THE ROOM AND ROOM ENTRANCE SHALL NOT BE BLOCKED BY AN OPEN DOOR.
J. WHEN POSSIBLE MOUNT SENSORS AWAY FROM AIR VENTS. MOUNT PIR SENSORS A MINIMUM OF 4 FT AND ULTRASONIC SENSORS 6 FT AWAY FROM AIR VENTS.
K. ADJUST OCCUPANT SENSOR LAYOUT TO ENSURE THAT TALL FURNITURE AND EQUIPMENT WILL NOT OBSTRUCT THE SENSORS VIEW OF THE ROOM.
L. ADD ADDITIONAL SENSORS AS NECESSARY TO PROVIDE COMPLETE COVERAGE OF ROOM.

REMARKS:

LIGHTING CONTROL SEQUENCE OF OPERATION

TAG	SPACE TYPE	OCCUPANT SENSOR: OCCUPANCY	VACANCY	DETECTION TYPE	TIME OUT	AUTO ON	AUTO OFF	NETWORK	AUX	RECEPTACLE CONTROL	TIME CLOCK CONTROL	REMARKS
MAN	MANUAL	-	-	-	-	-	0%	-	-	-	-	
OD1	OCCUPANCY CONTROL (DUAL) - FINE MOTION	FINE	-	DT	15 MIN.	50%	0%	Y	-	-	-	
PRT	RESTROOM - SINGLE	FINE	-	IR	15 MIN	100%	0%	Y	-	-	-	

LEWIS AND CLARK
6901 Burt St.
Omaha, NE 68132

OMAHA PUBLIC SCHOOLS
3215 Cuming St.
Omaha, NE 68131

LEO A DALY
8600 Indian Hills Drive
Omaha, NE 68114-4039
Tel 402.391.8111 Fax 402.391.8564
COA: CA-0280

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	EPF
Design	BJR
Draw	EKJ
Check	BRL

STAMP

PROFESSIONAL ELECTRICAL ENGINEER
BENJAMIN JACOB RIES
E-14970
Registered
STATE OF NEBRASKA

Project No. 003-10201-014
04.04.2025

LIGHTING SCHEDULES

E-701

CONSTRUCTION DOCUMENTS

Model: \\aebcd\shares\projects\003\003-10201-014\4-0-Production-Working\st-1-BIM\CAD\Revit\ARCH_OPSLC.rvt
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