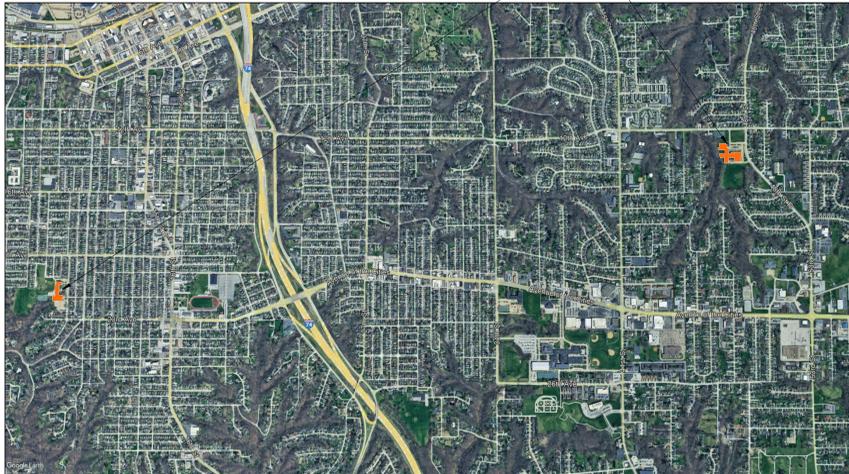


MOLINE-COAL VALLEY SCHOOL DISTRICT

2025 CONTROLLED ENTRY IMPROVEMENTS

SITE LOCATIONS MAP



JOHN DEERE MIDDLE SCHOOL
WILSON MIDDLE SCHOOL

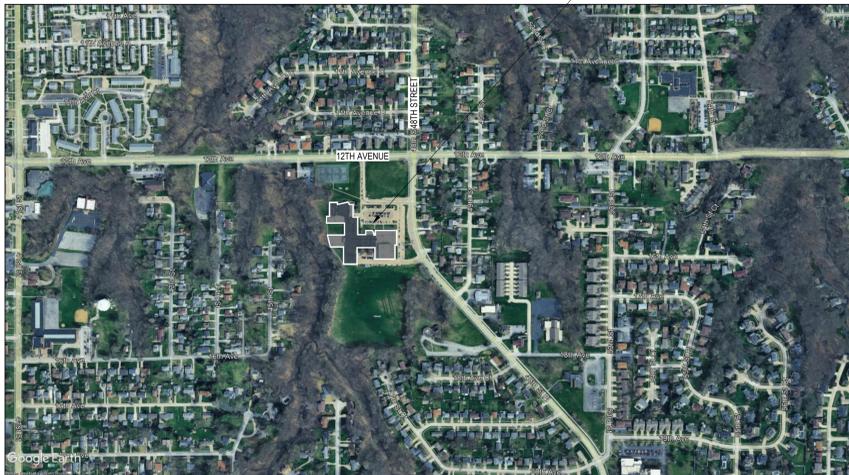
SITE LOCATION MAP



JOHN DEERE MIDDLE SCHOOL

2035 11th STREET, MOLINE, IL 61265

SITE LOCATION MAP



WILSON MIDDLE SCHOOL

1301 48th STREET, MOLINE, IL 61265

SCHEDULE OF DRAWINGS

GENERAL DRAWINGS	FIRE PROTECTION DRAWINGS
G-001 TITLE SHEET	F000 FIRE PROTECTION LEGEND
CIVIL DRAWINGS	FJ101 FIRE PROTECTION NEW WORK PLANS - JOHN DEERE
CJ-100 EXISTING CONDITIONS AND DEMO PLAN	FW101 FIRE PROTECTION FIRST FLOOR PLAN - WILSON
CJ-200 SITE LAYOUT AND GRADING PLAN	
CW-100 EXISTING CONDITIONS AND DEMO PLAN	MECHANICAL DRAWINGS
CW-200 SITE LAYOUT AND GRADING PLAN	M000 MECHANICAL LEGEND
STRUCTURAL DRAWINGS	M001 MECHANICAL SPECIFICATIONS
SJ-000 GENERAL NOTES	M200 CONTROLS LEGEND
SJ-001 TESTING AND INSPECTIONS	M201 ELECTRIC UNIT HEATER CONTROL DIAGRAM
SJ-100 DEMO PLAN	MJ101 MECHANICAL DEMOLITION & NEW WORK PLANS - JOHN DEERE
SJ-101 FOUNDATION AND FRAMING PLANS	MW101 MECHANICAL FIRST FLOOR PLAN - WILSON
SJ-300 DETAILS	ELECTRICAL DRAWINGS
SW-000 GENERAL NOTES	EJ101 ELECTRICAL FIRST FLOOR DEMOLITION PLAN
SW-002 TESTING AND INSPECTIONS	EJ101 ELECTRICAL FIRST FLOOR DEMOLITION PLAN
SW-100 FOUNDATION AND FRAMING PLAN	E000 ELECTRICAL GENERAL NOTES AND SYMBOLS
SW-300 DETAILS	E001 ELECTRICAL SPECIFICATIONS
ARCHITECTURAL DRAWINGS	EJ101 ELECTRICAL FIRST FLOOR PLAN
AJ-011 OVERALL REFERENCE PLAN	EJ101 ELECTRICAL FIRST FLOOR PLAN
AJ-100 LOWER LEVEL FLOOR PLAN	EJ101 ELECTRICAL FIRST FLOOR PLAN
AJ-101 VESTIBULE PLANS AND DETAILS - JOHN DEERE	EJ101 ELECTRICAL FIRST FLOOR PLAN
AJ-501 EXTERIOR DETAILS	EJ101 ELECTRICAL FIRST FLOOR PLAN
AW-101 VESTIBULE PLANS AND DETAILS - WILSON	

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RELEASE

BIDDING

DATE OF ISSUE

02.10.2025

ARCHITECT'S PROJECT NUMBER

225017.00

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SIGNATURE _____
DATE _____

REVISIONS		
NO.	DESCRIPTION	DATE
1		

PROJECT NUMBER 225017.00
DATE OF ISSUE 02.10.2025
DRAWN BY _____ Author
REVIEWED BY _____ Checker

TITLE SHEET

G-001
BIDDING

**Moline School
District #40**

**MCVSD/Moline,
IL/JDMS Wall Infill**

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STRUCTURAL ABBREVIATION KEY

ABBR: DESCRIPTION:

@	NUMBER OR POUNDS
AT	DEGREE
Ø	DIAMETER
EXISTING	EXISTING
A.B.	ANCHOR BOLT
ARCH	ARCHITECT -URE, -URAL
B.O.	BOTTOM
BF	BEAM FLANGE WIDTH
BFM	BRACE FRAME
B	BEAM
B.N.	BOUNDARY NAILING
BOTT	BOTTOM
BETWN	BETWEEN
C	COLD FORM STEEL FRAMING
CFSP	CENTER OF GRAVITY OF TENDON
C/S	COMPLETE JOINT PENETRATION WELD
CJP	CLEAR
CMU	CENTERLINE
CON	CONCRETE MASONRY UNIT
COL	CONC
CONC	CONCRETE
CONN	CONCRETE CONSTRUCTION
CONST	COORDINATION
COORD	COORDINATION
DIA	DIAMETER
DL	DEAD LOAD
DET	DETAIL
DWG	DRAWING
DOWL	DOWEL
EACH	EACH
EFF	EACH FACE
ELEV	ELEVATION
ELEC	ELECTRICAL
EMBED	EMBEDMENT
EOS	EDGE NAILING
EOD	EDGE OF DECK
EQ	EQUAL
EQUIP	EQUIPMENT
ETC	ETC
EXP	EXPANSION
EXT	EXTEND
CON	CONCRETE COMPRESSIVE STRENGTH
FND	FOUNDATION
F.N.	FIELD NAILING
FT	FOOT
FTG	FOOTING
FS	FIELD STRESS
GAGE	GAGE OR GAUGE
GLV	GALVANIZED
GLB	GALVALUM
GT	GIRDER TRUSS
HORIZ	HORIZONTAL
HORIZ	HEADED STUD ANCHOR
HSB	HIGH STRENGTH BOLT
J	JOINT
K, JIP	KNIFE (1,000 POUNDS)
KSI	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
LENGTH	LENGTH
LBS	POUNDS
LIVE	LIVE LOAD
LONG LEH	LONG LEAD HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LONG	LONG LEAD HORIZONTAL
LSV	LONG SIDE VERTICAL
LT WT	LIGHTWEIGHT
MAXIMUM	MAXIMUM
MECH	MECHANICAL
MANUF	MANUFACTURER
MIN	MINIMUM
NIC	NOT IN CONTRACT
NHS	NOT TO SCALE
ON CENTER	ON CENTER
OH	OPPOSITE HAND
OPENING	OPENING
ORIENTED STRAND BOARD	ORIENTED STRAND BOARD
PFB	POUNDS PER CUBIC FOOT
P.P.H.	PENTHOUSE
PARTIAL JOINT PENETRATION WELD	PARTIAL JOINT PENETRATION WELD
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
POST-TENSION, ED., -ING	POST-TENSION, ED., -ING
RADIUS	RADIUS
REINFORCING, MENT., ED	REINFORCING, MENT., ED
REQD	REQUIRED
RTM	RTM TOP UNIT
SLIP	SLIP CRACK
SCHED	SCHEDULE
SEISMIC FORCE-RESISTING SYSTEM	SEISMIC FORCE-RESISTING SYSTEM
SIM	SIMILAR
SNOW LOAD	SNOW LOAD
S.M.S.P.	SHEET METAL SCREW
SPACE(S)	SPACE(S)
SPECS	SPECIFICATION(S)
SQ	SQUARE
STIFFENER	STIFFENER
STL	STEEL
SYM	SYMMETRICAL
TAB	TOP AND BOTTOM
TOP	TOP OF
TEMP	PRE-TENSIONED BOLT
T.O.	TEMPERATURE
THICK	BEAM FLANGE THICKNESS
TRANS	THICK
VERT	TRANSVERSE
UNO	TYPICAL
UNLESS OTHERWISE NOTED	UNLESS OTHERWISE NOTED
VF	VERTICAL
VF	VERIFY IN FIELD
WP	WORK POINT
WT	WEIGHT
WTR	WELDED WIRE REINFORCING

STRUCTURAL SHEET INDEX

SHEET NUMBER	SHEET NAME
SJ-000	GENERAL NOTES
SJ-001	TESTING AND INSPECTIONS
SJ-100	FOUNDATION AND FRAMING PLANS
SJ-300	DETAILS
SJ-400	DETAILS
GRAND TOTAL: 6	

SIGNATURE

DATE

NO.	REVISIONS	DATE

PROJECT NUMBER: 24006955.02
DATE OF ISSUE: 2/07/2025
DRAWN BY: ARUMON
REVIEWED BY: TODBAR

GENERAL NOTES

DESIGN CRITERIA

- STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH 2021 IBC AND SUBSEQUENT REFERENCE STANDARDS.
- RISK CATEGORY II
- SUPERIMPOSED LIVE LOADS: LIVE LOAD REDUCTION USED AS ALLOWED PER CODE

FLOOR	CORRIDORS & PUBLIC AREAS	100 PSF

- ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED BY THE EXISTING BUILDING IN EACH ORTHOGONAL DIRECTION.

GENERAL

- DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL AND LOCAL SAFETY ORDINANCES. TEMPORARY BRACING, SHORING, GUYS, ETC. SHALL AVOID EXCESSIVE STRESSES AND HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. THE STRUCTURE SHOULD NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK THAT DEVIATES FROM OR IS PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR THE DESIGN PROFESSIONALS.
- THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALLOWABLE CONSTRUCTION LOADS AND FOR DETERMINING SEQUENCES OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKERS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, FALSEWORK, FORMWORK, STAGING, BRACING, AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
- ALL DIMENSIONS AND SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO BID SUBMITTAL. START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
- STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE ARCHITECT, THE STRUCTURAL ENGINEER, SUPPLIER SHALL PROVIDE SIGNED AND SEALED DESIGN CALCULATIONS OR SUITABLE PRODUCT LITERATURE FOR THE COMPONENTS. ALL PRODUCT SUBSTITUTIONS SHALL INCLUDE A CODE EVALUATION REPORT SPECIFIC TO THE BUILDING CODE LISTED IN THE DESIGN CRITERIA.
- STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW ALL DETAIL DIMENSIONS TO FIT INTRICATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL CONSTRUCT THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DESIGN.
- ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
- DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND OVER LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION WITH ARCHITECT.
- TYPICAL DETAILS SHALL APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
- SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR DETAILS, CONDITIONS, NOTES, DEPRESSIONS, ROOF / FLOOR OPENINGS, TOP OF WALL ELEVATIONS, STAIRS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS. FOR THESE NON-STRUCTURAL ELEMENTS, SHOW ON STRUCTURAL DRAWINGS. THEY ARE FOR GENERAL INFORMATION ONLY.
- PROVIDE TEMPORARY BLOCKOUTS AND TEMPORARY OPENINGS IN THE STRUCTURE AS REQUIRED TO PERMIT INSTALLATION OF ALL WORK, BLOCKOUTS AND TEMPORARY OPENINGS SHALL BE LOCATED, CONFIGURED, DETAILED, AND NEEDED IN A MANNER THAT ALTERS NEITHER THE STRENGTH OF THE STRUCTURAL FRAMING NOR THE STRENGTH OF CONNECTIONS. INFILL ALL BLOCKOUTS AND TEMPORARY OPENINGS USING THE MATERIALS SPECIFIED FOR THE FRAMING AT THE LOCATIONS WHERE THE BLOCKOUTS AND OPENINGS OCCUR. SUBMIT DRAWINGS INDICATING THE LOCATIONS, DIMENSIONS, AND DETAILS OF ALL PROPOSED BLOCKOUTS AND OPENINGS AND DETAILS INDICATING THE MANNER IN WHICH THE BLOCKOUTS AND OPENINGS WILL BE FILLED.
- NO HOLES, NOTCHES, BLOCK-OUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
- PENETRATIONS IN CONCRETE SHALL BE CAST-IN-PLACE AND SHALL NOT BE PERMITTED EXCEPT AS SHOWN IN THE STRUCTURAL DRAWINGS.
- BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, CONTRACTOR SHALL VISIT THE PREMISES AND BE FULLY ACCAINTED WITH FIELD CONDITIONS. TEMPORARY BRACING CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE PROPOSAL SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK.

SUBMITTALS

- SUBMITTALS ARE:
 - CONCRETE MIX DESIGNS
 - CONCRETE REINFORCING
- SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE DESIGN PROFESSIONALS.
- SUBMITTALS SHALL BE REVIEWED BY THE DESIGN PROFESSIONALS FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE DESIGN PROFESSIONALS ON THE SHOP DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
- FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

DELEGATED DESIGN

- DELEGATED DESIGNS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
- DELEGATED DESIGNS ARE:
 - SHORING
- ALL DELEGATED DESIGNS SHALL BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION RESPONSIBLE FOR THE PREPARATION OF THESE DOCUMENTS.

EXISTING CONDITIONS / DEMOLITION

- EXISTING CONDITIONS:
 - EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM EXISTING DRAWINGS DATED DECEMBER 14, 1929 BY WILLIAM H. SCHULZKE
 - EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM FIELD TAKE-OFF BY IMEG AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.
 - ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE. CONTRACTOR TO VERIFY EXISTING INFORMATION, DIMENSIONS, AND SIZES AS REQUIRED TO COMPLETE THEIR WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ARCHITECT SO CLARIFICATION MAY BE MADE. MODIFICATION OF CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT.
- ALL DEMOLITION SHALL BE CARRIED OUT IN SUCH A WAY TO PREVENT DAMAGE TO EXISTING ELEMENTS WHICH ARE TO REMAIN.
- ALL ELEMENTS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDER COST. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
- CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS OF EXISTING STRUCTURE AND SITES THAT ARE AFFECTED BY NEW WORK BEFORE PROCEEDING WITH FABRICATION AND CONSTRUCTION.

- ALL CONSTRUCTION IS NEW UNLESS IDENTIFIED AS EXISTING. "EY" THE CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENT. NEW SLABS ARE TO BE AT THE SAME ELEVATIONS AS ADJACENT EXISTING SLABS UNLESS THE FOUNDATION ELEVATIONS OR COLUMN LENGTHS SHALL BE ADJUSTED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER TO ACHIEVE MATCHING SLAB ELEVATIONS.
- REINFORCING STEEL IN EXISTING CONCRETE SHALL BE LOCATED PRIOR TO INSTALLATION OF NEW OPENINGS OR CORING OF HOLES IN THE CONCRETE. REINFORCING STEEL MAY NOT BE CUT WITHOUT APPROVAL FROM THE ENGINEER.
- SHORING:
 - SHORING DRAWINGS AND CALCULATIONS BY OTHERS, AS REQUIRED, ARE NOT INCLUDED IN THIS PACKAGE. SHORING DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE PROVIDED BY CONTRACTOR FOR REVIEW.
 - SHORING / UNDERPINNING OF EXISTING BUILDINGS OR IMPROVEMENTS SHALL BE PROVIDED BEFORE EXISTING WALLS, SLABS, FOUNDATIONS, PAVEMENT, ETC. ARE CUT, MODIFIED, OR REMOVED.

EARTHWORK

- FOUNDATION DESIGN IS IN ACCORDANCE WITH THE INFORMATION SHOWN ON THE EXISTING BUILDING DRAWINGS. NO NEW GEOTECHNICAL REPORT HAS BEEN PROVIDED BY THE OWNER FOR THIS PROJECT.
- SOIL PROPERTIES:

FROST DEPTH	-3'-6"FT
EQUIVALENT FLUID PRESSURES:	
ACTIVE	60 PSF/FT (DRAINED) (ASSUMED)
AT REST	100PSF/FT (DRAINED) (ASSUMED)
- A GEOTECHNICAL ENGINEER SHALL BE EMPLOYED TO VERIFY THAT THE PRESUMED ALLOWABLE BEARING PRESSURE WILL BE ACHIEVED PRIOR TO CONSTRUCTION. THAT ENGINEER SHALL DEVELOP AND ENSURE IMPLEMENTATION OF A SITE SUBGRADE PREPARATION PROGRAM AS REQUIRED TO ACHIEVE THE PRESUMED SOIL BEARING PRESSURE. FOOTING AND SLAB-ON-GRADE SUBGRADE PREPARATION SHALL BE IN COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
- ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING / BASEMENT WALLS BEFORE CONCRETE HAS ATTAINED SPECIFIED COMPRESSIVE STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL WALLS BELOW GRADE FROM LATERAL LOADS UNTIL SUPPORTING LOADS ARE COMPLETELY IN PLACE AND HAVE ATTAINED 7-DAY STRENGTH MINIMUM. BACKFILLING IS NOT PERMITTED FOR FOUNDATION WALLS UNTIL SUPPORTED SLAB TOP AND BOTTOM ARE IN PLACE OR THE WALL IS ADEQUATELY BRACED TO RESIST LATERAL LOADS.
- SOIL BEHIND RETAINING WALLS AND BASEMENT WALLS SHALL BE DRAINED TO ELIMINATE HYDROSTATIC PRESSURE BEHIND THE WALL. DESIGN OF SUCH WALL DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL PROVIDE DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUNDWATER, OR SEEPAGE. DETAILS OF GROUNDWATER INFORMATION SHALL BE OBTAINED FROM THE GEOTECHNICAL REPORT. IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION, PROCEDURES SHALL BE IMPLEMENTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- PROVIDE SHORING WHERE THERE IS INSUFFICIENT SPACE FOR STABLE-SLOPED EMBANKMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL CRIBBING, SHEETING, SHORING, ETC. REQUIRED FOR CONSTRUCTION OF THE PROJECT AND SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES. CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECTS JURISDICTION.
- CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILL MATERIAL OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, AND FOUNDATIONS. IF ANY SUCH MATERIAL OR STRUCTURES ARE FOUND, ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.
- ANY REQUIRED IMPORT FILL SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO IMPORTING.
- UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL. BELOW GRADE UTILITY OR PIPE ELEVATIONS, WHERE SHOWN, ARE INDICATED FOR REFERENCE ONLY. REQUIRED ELEVATIONS SHALL BE DETERMINED BY OTHERS AND COORDINATED WITH THE FOUNDATION DESIGN.
- WHERE GRADE ELEVATIONS ARE APPROXIMATELY EQUAL ON BOTH SIDES OF WALLS, BACKFILL SHALL BE PLACED SO THAT IT IS NOT UNBALANCED BY MORE THAN 2 FEET ON EITHER SIDE.
- ALL REQUIRED BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE COMPACTED IN ACCORDANCE WITH A GEOTECHNICAL ENGINEER.

SHALLOW FOUNDATIONS

LOCATION	FC AT 28 DAYS (PSI)	MAX PERMITTED W/C	EXPOSURE CLASS
ALL FOUNDATION CONCRETE UNO	5000	0.45	F1, S0, W1, C1
SLAB-ON-GRADE UNO	3000	0.55	F0, S0, W0, C0
WALLS OTHER THAN SHEAR WALLS	5000***	0.50	F1, S0, W1, C1

REINFORCING STEEL

- ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE," AND ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE," UNO.
- REINFORCING STEEL UNO: ASTM A615, GR 60, Fy=60 KSI
WELDED WIRE REINFORCING: ASTM A1064, Fy=65 KSI
- CONCRETE REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS:

CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	COVER (IN)
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#6 TO #18	2
		#5 AND SMALLER	1 1/2
- MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:

ITEM FOR WHICH TOLERANCE IS BEING MEASURED	PERMITTED TOLERANCE
CONCRETE COVER FOR SLAB TOP AND BOTTOM BARS	±1/4"
COVER FOR OTHER REINFORCING STEEL	±3/8"
SPECIFIED SPACING BETWEEN PARALLEL BARS IN SLAB	± (SPECIFIED SPACING/4) BUT NOT TO EXCEED 1"
HORIZONTAL DEVIATION FROM SPECIFIED LOCATION UNO	±3"
SPACING AND LOCATION OF BEAM STRUTUPS	± (BEAM DEPTH IN INCHES/12) x 1"
SPACING AND LOCATION OF COLUMN TIES	± (MINIMUM COLUMN DIMENSION IN INCHES/12) x 1"
LOCATION OF ENDS OF BARS PERPENDICULAR TO SLAB EDGES	±1"
- THE ABOVE LIST OF PERMITTED TOLERANCES SHALL BE PROVIDED ON ALL REINFORCING STEEL PLACING DRAWINGS AND ON ALL POST-TENSIONED TENDON PLACING DRAWINGS. PLACING DRAWINGS THAT DO NOT PROVIDE THIS LIST OF TOLERANCES WILL BE REJECTED.
- FIELD BENDING OF REINFORCING STEEL IS NOT PERMITTED UNO.
- WELDING OF REINFORCING STEEL OTHER THAN A706 IS PROHIBITED. WELDING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH AWS D1.4 OR D1.8.
- ALL WELDED WIRE REINFORCING SHALL BE LAP SPliced 2 PANELS (1'-0" MIN).
- SPlicing:

- SPICES IN REINFORCING STEEL SHALL BE MADE ONLY AT THOSE LOCATIONS WHERE SPICES ARE SHOWN ON THE STRUCTURAL DRAWINGS AND AT THOSE LOCATIONS WHERE SPICES HAVE BEEN DETAILED ON THE REINFORCING STEEL PLACING DRAWINGS THAT HAVE BEEN REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER. ALL SPICES SHALL BE CLASS B TENSION LAP SPICES UNO.
 - MECHANICAL SPICE COUPLERS MAY BE USED INSTEAD OF TENSION LAP SPICES AT THE CONTRACTOR'S OPTION AT ANY LOCATION. MECHANICAL SPICE COUPLERS MUST BE USED WHERE SPICES #4 AND LARGER BARS, INCLUDING WHERE SPICES #14 AND LARGER BARS TO #11 AND SMALLER BARS. STAGGER MECHANICAL SPICES IN ADJACENT BARS 30" MINIMUM.
 - COMPRESSION LAP SPICES MAY BE USED ONLY AT THOSE LOCATIONS WHERE SUCH SPICES ARE SPECIFICALLY INDICATED. STAGGER SPICES WHERE REQUIRED TO PROVIDE 1 1/2" MINIMUM CLEAR SPACING BETWEEN REINFORCING STEEL AT SPICE LOCATIONS.
- ALL HOOKS SHALL BE STANDARD HOOKS OR STANDARD STRUTUP HOOKS UNO. STANDARD STRUTUP HOOKS SHALL HAVE CONTINUOUS BAR AT INSIDE CORNER OF HOOK.
 - VERTICAL REINFORCING STEEL IN CONCRETE AND MASONRY WALLS WITH ONE LAYER OF REINFORCING BARS SHALL BE INSTALLED IN THE CENTER OF THE WALL UNO.
 - STANDARD STRUTUP HOOKS FOR #3, #4, AND #5 BARS SHALL BE PROVIDED IN SLABS LESS THAN 7" THICK.
 - DOWELS SHALL MATCH GRADE, SIZE, SPACING, AND QUANTITY OF LAPPED REINFORCING STEEL UNO. EXTEND ALL DOWELS FOR FULL DEPTH OF SUPPORTING ELEMENT AND PROVIDE HOOKS UNO. DOWELS SHALL NOT BE POST-INSTALLED INTO FRESH CONCRETE.
 - FIELD CUTTING OF REINFORCING STEEL IS PROHIBITED UNLESS INDICATED ON THE REINFORCING PLACING DRAWINGS.
 - HEATING OF BARS FOR BENDING IS PROHIBITED.
 - REINFORCING STEEL PLACING DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 315. THE PLACING DRAWINGS SHALL SHOW ALL INFORMATION NECESSARY TO FABRICATE AND PLACE THE REINFORCING STEEL.
 - REINFORCING STEEL SPACINGS ARE CENTER-TO-CENTER UNLESS OTHERWISE INDICATED. REINFORCING STEEL SHOWN IN SECTION PERPENDICULAR TO THE CUT ARE CONTINUOUS UNO.
 - THE SPACING OF ALL REINFORCING STEEL MUST BE COMPUTED BY THE REINFORCING STEEL DETAILER AND MUST BE INDICATED ON THE PLACING DRAWINGS. EXTENT ARROWS MUST BE USED TO CLEARLY INDICATE THE LOCATIONS WHERE GROUPS OF REINFORCING BARS ARE TO BE INSTALLED.
 - ALL REINFORCING STEEL PLACING DRAWINGS SHALL SHOW DIMENSIONS UNO. REINFORCING STEEL SHALL CONFORM TO ASTM STANDARDS AS NOTED BELOW:

WIDE FLANGE SHAPES	ASTM A992	Fy=50 KSI
WIDE FLANGE SHAPES, HIGH-STRENGTH WHERE NOTED	ASTM A913, GR 65	Fy=65 KSI
OTHER ROLLED SHAPES	ASTM A36	Fy=36 KSI
PIPE SECTIONS	ASTM A53, GR B	Fy=35 KSI
HSS SECTIONS, ROUND	ASTM A500, GR C	Fy=46 KSI
HSS SECTIONS, SQUARE	ASTM A500, GR C	Fy=50 KSI
HP SHAPES	ASTM A572	Fy=50 KSI
BASE AND CONNECTION PLATES	ASTM A36 A572	Fy=36 50 KSI
ANCHOR RODS	ASTM F1554, GR 36 55	Fy=36 55 KSI
HIGH STRENGTH BOLTS	ASTM F3125, GR A325 A490	Fy=120 150 KSI
HIGH STRENGTH TWIST-OFF BOLTS	ASTM F3125, GR F1852 F2280	Fy=120 150 KSI
HEAVY HEX NUTS	ASTM A563	
WASHERS	ASTM F436	
HEADED STUD ANCHORS (HSA)	ASTM A108, TYPE B	
 - ELECTRODES FOR ARC WELDING: AWS 5.1, E70XX
 - HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS." SEE DETAILS FOR BOLT SIZE AND MATERIAL. ASTM DESIGNATION.
 - ALL ROD END CONNECTIONS SHALL BE GROUDED BEARING TYPE BOLTS UNO. ALL BOLTS SHALL BE INSTALLED TO A MINIMUM SNUG TIGHT CONDITION UNO.
 - FULLY TENSIONED HIGH STRENGTH BOLTS AND SLIP CRITICAL HIGH STRENGTH BOLTS SHALL USE TENSION-CONTROL "TWIST-OFF" BOLTS OR BE INSTALLED USING THE TURN OF THE NUT METHOD.
 - EXCEPT WHERE DETAILED OTHERWISE, FABRICATOR SHALL SELECT ASD LRFD BOLTED (OR WELDED EQUIVALENT) SIMPLE SHEAR CONNECTIONS PER AISC 360 PART 10 TO SUPPORT LOADS INDICATED ON THE STRUCTURAL DRAWINGS. WHEN LOADS ARE NOT SHOWN, CONNECTION SHALL SUPPORT 60% OF THE TOTAL UNIFORM LOAD CAPACITY FOR EACH GIVEN BEAM SIZE AND SPAN AS LISTED IN AISC 360 TABLE 3-6. FOR COMPOSITE CONNECTIONS, CONNECTION SHALL SUPPORT 80% OF THE TOTAL UNIFORM LOAD CAPACITY FOR EACH BEAM SIZE AND SPAN.
 - FIELD CONNECTIONS SHALL BE WELDED OR BOLTED. SHOP CONNECTIONS SHALL BE WELDED UNO. WELDS INDICATED WITH A SHOP WELD SYMBOL MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. LOCATIONS OF ALL FIELD WELDS SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS. WELDS SHALL BE DESIGNED TO BE FULLY EQUIVALENT IN STRENGTH TO BOLTED CONNECTIONS DETAILED TO MINIMIZE BENDING IN THE CONNECTION.
 - WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED, WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.
 - ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING INDICATED. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES" OF THE AMERICAN WELDING SOCIETY (AWS).
 - HEADED STUD ANCHORS (HSA), SHALL BE INSTALLED IN ACCORDANCE WITH AWS D1.1 AND SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE HSA AND THE STEEL SHAPE. THERE SHOULD BE NO INTERFERENCE OR LACK OF FUSION BETWEEN THE WELDED END OF THE HSA AND THE STEEL SHAPE. THE HSA SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 3/8" AND SMALLER AND 3/16" FOR LARGER THAN 5/8".
 - MINIMUM HORIZONTAL CONCRETE COVER FOR HSA TO BE 2".
 - BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE DRAWINGS, WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.
 - SPlicing OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPICE, AND CONNECTION TO BE MADE.
 - CONCRETE SHALL BE CAST AND PLACED IN ACCORDANCE WITH THE STRUCTURAL STEEL NOT COVERED WITH CONCRETE, FIREPROOFING, MASONRY, OR AT CONTACT SURFACES AT HIGH STRENGTH BOLTS.
 - ALL STEEL EXPOSED TO WEATHER OR AS NOTED ON PLAN SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 G60. ABRADED AREAS TO BE TOUCHED UP WITH COLD GALVANIZING COMPOUND IN ACCORDANCE WITH ASTM A780.
 - ALL GALVANIZED HOLLOW SECTIONS SHALL HAVE WELDED CAP PLATES TO SEAL EXPOSED ENDS.
 - CUTS, HOLES, OPENINGS, ETC. REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OR TORCHING OF HOLES, CUTS, AND OTHER FIELD MODIFICATIONS SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.
 - SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC. FOR MISCELLANEOUS STEEL NOT DETAILED SPECIFICALLY ON THE STRUCTURAL DRAWINGS.
 - PROVIDE CONTINUOUS BENTONITE WATERSTOPPS IN ALL CONSTRUCTION JOINTS IN BELOW GRADE CONCRETE CONSTRUCTION. COORDINATE WATERSTOPPS WITH ARCHITECTURAL DRAWINGS.
 - PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A 3/4" CHAMFER UNO ON ARCHITECTURAL DRAWINGS.
 - SLOPE SLABS TO DRAINS. SEE ARCHITECTURAL AND MEP DRAWINGS FOR DRAIN LOCATIONS AND SLOPE REQUIREMENTS. SLAB THICKNESSES SHOWN ON DRAWINGS ARE MINIMUMS.
 - AFTER CONCRETE IS PLACED, IN NO CASE SHALL THE SUPERIMPOSED CONSTRUCTION LOADS BE GREATER THAN SPECIFIED DESIGN LIVE LOADS UNLESS THE WORK IS SHORED. CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.
 - CORING OF CONCRETE IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER. SUBMIT LOCATIONS OF PROPOSED CONCRETE CORES.
 - REINFORCING STEEL SHALL NOT BE DAMAGED WHEN DRAILING CONCRETE.
 - ADHERE TO ACI 308R AND ACI

POST-INSTALLED ANCHORS

- 1. BASIS OF DESIGN ANCHORS: INSTALLATION CONDITION, ANCHOR TYPE, EXPANSION ANCHORS INTO CONCRETE, HILTI KWIK BOLT TZ2 (ESR-4266), SCREW ANCHORS > 1/4"Ø INTO CONCRETE, HILTI KWIK HUS-EZ (ESR-3027), ADHESIVE ANCHORS INTO CONCRETE, HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 AND HIT-Z ROD (ESR-4868) or HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 AND HAS-E THREADED ROD (ESR-4868) or HILTI SAFE-SET SYSTEM w/ HIT-RE 500 V3 AND HAS-E THREADED ROD (ESR-3814), SCREW ANCHORS > 1/4"Ø INTO GROUDED CMU, HILTI KWIK HUS-EZ (ESR-3056), SCREW ANCHORS > 1/4"Ø INTO CONCRETE OR GROUDED CMU, HILTI KWIK-CON II+, ADHESIVE DOWELING FOR ANCHORING REINFORCING BARS INTO (E) CONCRETE, HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 ADHESIVE (ESR-4868) or HILTI SAFE-SET SYSTEM w/ HIT-RE 500 V3 ADHESIVE (ESR-3814), 2. ALTERNATIVE ANCHORS MAY BE USED IF APPROVED IN WRITING BY THE STRUCTURAL ENGINEER... 3. CRACKED CONCRETE IS ASSUMED FOR ALL ANCHORAGE DESIGN CONDITIONS UNLESS IT CAN BE DEMONSTRATED THROUGH ENGINEERING ANALYSIS THAT THE CONCRETE REMAINS UNCRACKED DURING THE GOVERNING ULTIMATE LOAD STATE... 4. POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS... 5. THE CONTRACTOR SHALL ARRANGE FOR AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ON-SITE INSTALLATION TRAINING FOR EACH SPECIFIED ANCHOR TYPE... 6. INSTALLATION OF ADHESIVE ANCHORS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPROVED CERTIFICATION PROGRAM... 7. CONCRETE SHALL HAVE ACHIEVED DESIGN STRENGTH PRIOR TO INSTALLING POST-INSTALLED ANCHORS... 8. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ANCHORS AND PROXIMITY OF ANCHORS TO EDGES OF CONCRETE OR MASONRY... 9. POST-INSTALLED ANCHORS AND DOWELS SHALL BE INSTALLED IN A MANNER THAT DOES NOT DAMAGE REINFORCING STEEL... 10. ADHESIVE ANCHORING SYSTEMS ARE PERMITTED TO BE USED FOR INSTALLATION OF REINFORCING STEEL INTO EXISTING CONCRETE ONLY WHERE SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS... 11. WHERE POST-INSTALLED MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE SPECIFIED, THOSE DEPTHS ARE THE REQUIRED MINIMUM NOMINAL EMBEDMENT DEPTHS... 12. ADHESIVE ANCHORS SHALL BE INSTALLED WITH A MINIMUM 6" EMBEDMENT DEPTH UON.

TESTING, INSPECTIONS, AND OBSERVATIONS

THE STRUCTURAL ENGINEER DOES NOT PROVIDE INSPECTIONS OF CONSTRUCTION. STRUCTURAL ENGINEER MAY MAKE PERIODIC OBSERVATIONS OF THE CONSTRUCTION... THE REPORTS SHALL BE COMPLETED AND FURNISHED WITHIN 48 HOURS OF INSPECTED WORK... DUTIES OF THE INSPECTION AGENCY PER IBC CHAPTER 17: SUBMIT A PROPOSED TESTING AND INSPECTION PROGRAM TO THE OWNER, THE ARCHITECT AND THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK... SPECIAL INSPECTIONS AND TESTS ARE REQUIRED FOR MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN CHAPTER 17 OF THE IBC OR IN STANDARDS REFERENCED BY THE IBC. THESE ITEMS INCLUDE: POST-INSTALLED ANCHORS - INSPECTION

Table with 5 columns: VERIFICATION AND INSPECTION TASK, CONTINUOUS, PERIODIC, MATERIAL STD REFERENCE, IBC REFERENCE. Rows include: INSPECT REINFORCEMENT AND VERIFY PLACEMENT, REINFORCING BAR WELDING, INSPECT ANCHORS CAST IN CONCRETE, INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS, PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION, VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS, INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.

Table with 5 columns: VERIFICATION AND INSPECTION TASK, QC, QA, AISC 360, RCSC SECTIONS. Rows include: MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS, FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS, CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE), CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL, CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS, PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED, PROTECTION STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS.

Table with 5 columns: VERIFICATION AND INSPECTION TASK, QC, QA, AISC 360, RCSC SECTIONS. Rows include: FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS AND NUTS ARE POSITIONED AS REQUIRED, JOINT BROUGHT TO THE SHUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION, FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING, FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES.

Table with 5 columns: VERIFICATION AND INSPECTION TASK, QC, QA, AISC 360, RCSC SECTIONS. Rows include: DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS, P=PERFORM.

Table with 5 columns: VERIFICATION AND INSPECTION TASK, QC, QA, AISC 360, AWS D1.1 CLAUSES. Rows include: WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS, WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE, MANUFACTURER CERTIFICATES FOR WELDING CONSUMABLES AVAILABLE, MATERIAL IDENTIFICATION (TYPE/GRADE), WELDER IDENTIFICATION.

Table with 5 columns: VERIFICATION AND INSPECTION TASK, QC, QA, AISC 360, AWS D1.1 CLAUSES. Rows include: FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY), JOINT PREPARATIONS, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION), BACKING TYPE AND FIT (IF APPLICABLE), FIT-UP OF C/JP GROOVE WELDS OF HSS T-, Y-, & K- JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY), JOINT PREPARATIONS, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION), CONFIGURATION AND FINISH OF ACCESS HOLES.

Table with 5 columns: VERIFICATION AND INSPECTION TASK, QC, QA, AISC 360, AWS D1.1 CLAUSES. Rows include: FIT-UP OF FILLET WELDS, DIMENSIONS (ALIGNMENT, GAPS AT ROOT), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION), CHECK WELDING EQUIPMENT.

Table with 5 columns: VERIFICATION AND INSPECTION TASK, QC, QA, AISC 360, AWS D1.1 CLAUSES. Rows include: USE OF QUALIFIED WELDERS, CONTROL AND HANDLING OF WELDING CONSUMABLES, PACKAGING, EXPOSURE CONTROL, NO WELDING OVER CRACKED TACK WELDS, ENVIRONMENTAL CONDITIONS, WIND SPEED WITHIN LIMITS, PRECIPITATION AND TEMPERATURE, WPS FOLLOWED, SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, SELECTED WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED (MIN/MAX), PROPER POSITION (F, V, H, OH), WELDING TECHNIQUES, INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATIONS, EACH PASS MEETS QUALITY REQUIREMENTS, PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS.

Table with 5 columns: VERIFICATION AND INSPECTION TASK, QC, QA, AISC 360, AWS D1.1 CLAUSES. Rows include: USE OF QUALIFIED WELDERS, CONTROL AND HANDLING OF WELDING CONSUMABLES, PACKAGING, EXPOSURE CONTROL, NO WELDING OVER CRACKED TACK WELDS, ENVIRONMENTAL CONDITIONS, WIND SPEED WITHIN LIMITS, PRECIPITATION AND TEMPERATURE, WPS FOLLOWED, SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, SELECTED WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED (MIN/MAX), PROPER POSITION (F, V, H, OH), WELDING TECHNIQUES, INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATIONS, EACH PASS MEETS QUALITY REQUIREMENTS, PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS.

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Table with 5 columns: VERIFICATION AND INSPECTION TASK, QC, QA, AISC 360, AWS D1.1 CLAUSES. Rows include: WELDS CLEANED, SIZE, LENGTH, AND LOCATION OF WELDS, WELDS MEET VISUAL ACCEPTANCE CRITERIA, CRACK PROHIBITION, WELD BASE METAL FUSION, CRATER CROSS-SECTION, WELD PROFILES, WELD SIZE, UNDERCUT, POROSITY, ARC STRIKES, AREA, WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES, BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED), REPAIR ACTIVITIES, DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER, NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR, OBSERVE AND P=PERFORM.

1 WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3" OF THE WELD. THE VISUAL INSPECTION SHALL BE PERFORMED NO SOONER THAN 48 HOURS FOLLOWING COMPLETION OF THE WELDING. 2 AFTER ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS, SOILS:

Table with 5 columns: VERIFICATION AND INSPECTION TASK, CONTINUOUS, PERIODIC. Rows include: VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY, VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL, PERFORM CLASSIFICATIONS AND TESTING OF COMPACTED FILL MATERIAL, VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL, PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.

Moline School District #40

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CIVIL ENGINEER / LANDSCAPE ARCHITECT

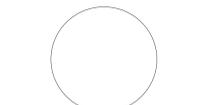
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SIGNATURE DATE

Table with 3 columns: NO, REVISIONS, DATE. Rows include: NO, DESCRIPTION, DATE.

PROJECT NUMBER 24006955.02 DATE OF ISSUE 2/07/2025 DRAWN BY ARUMON REVIEWED BY TODBAR

TESTING AND INSPECTIONS

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SJ-001

(E) BEAM REINFORCEMENT SCHEDULE

BEAM SIZE	STRAIGHT BARS			TRUSSED BARS		TOP BARS		STIRRUPS	
	NO	SIZE	HOOK	NO	SIZE	NO	SIZE	NO	SIZE
(E) 12x28 CONC BEAM	3	1" Ø	BOTH ENDS	3	1" Ø	2	1/2" Ø	14	1/2" Ø
(E) 19x24 CONC BEAM	2	1" Ø	BOTH ENDS	2	1" Ø	2	1" Ø	14	3/8" Ø

NOTES:
 1. EXISTING REINFORCEMENT SCHEDULE IS FOR REFERENCE ONLY WHEN DETERMINING REBAR CORROSION. SEE SJ-400.

(E) SLAB REINFORCEMENT SCHEDULE

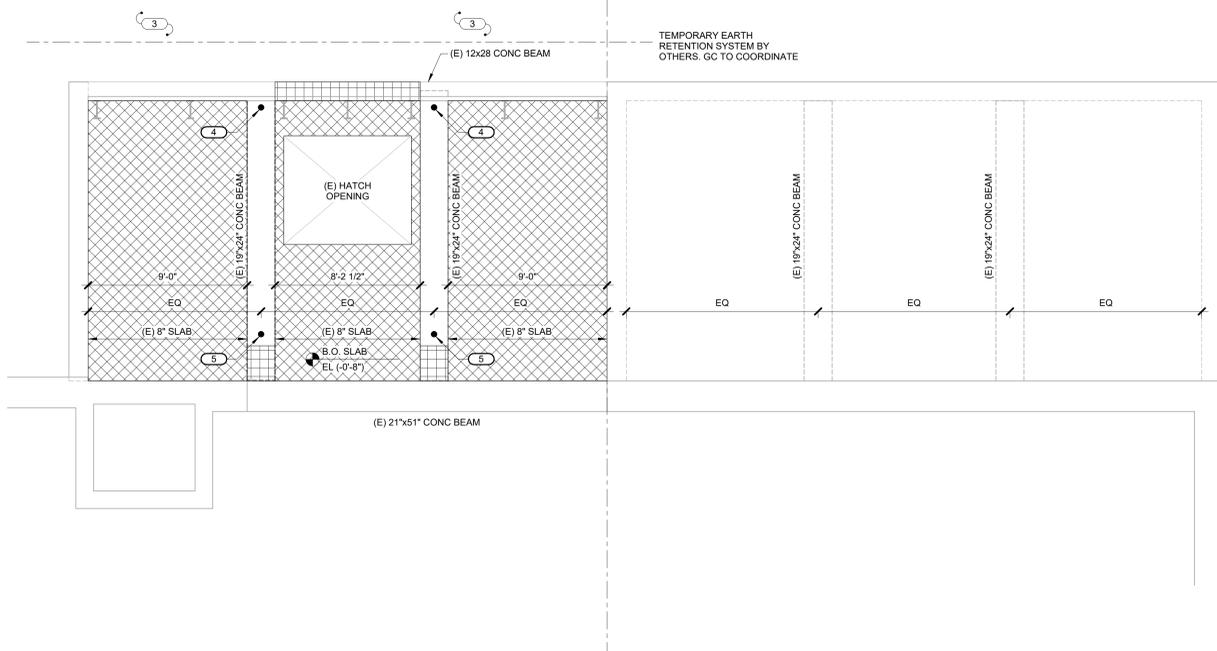
SLAB	THICKNESS OF SLAB	STEEL		REMARKS
		STRAIGHT BARS	BENT BARS	
(E) 8" SLAB	8"	3/4" Ø - 17" OC	3/4" Ø - 17" OC	

NOTES:
 1. EXISTING REINFORCEMENT SCHEDULE IS FOR REFERENCE ONLY WHEN DETERMINING REBAR CORROSION. SEE SJ-400.

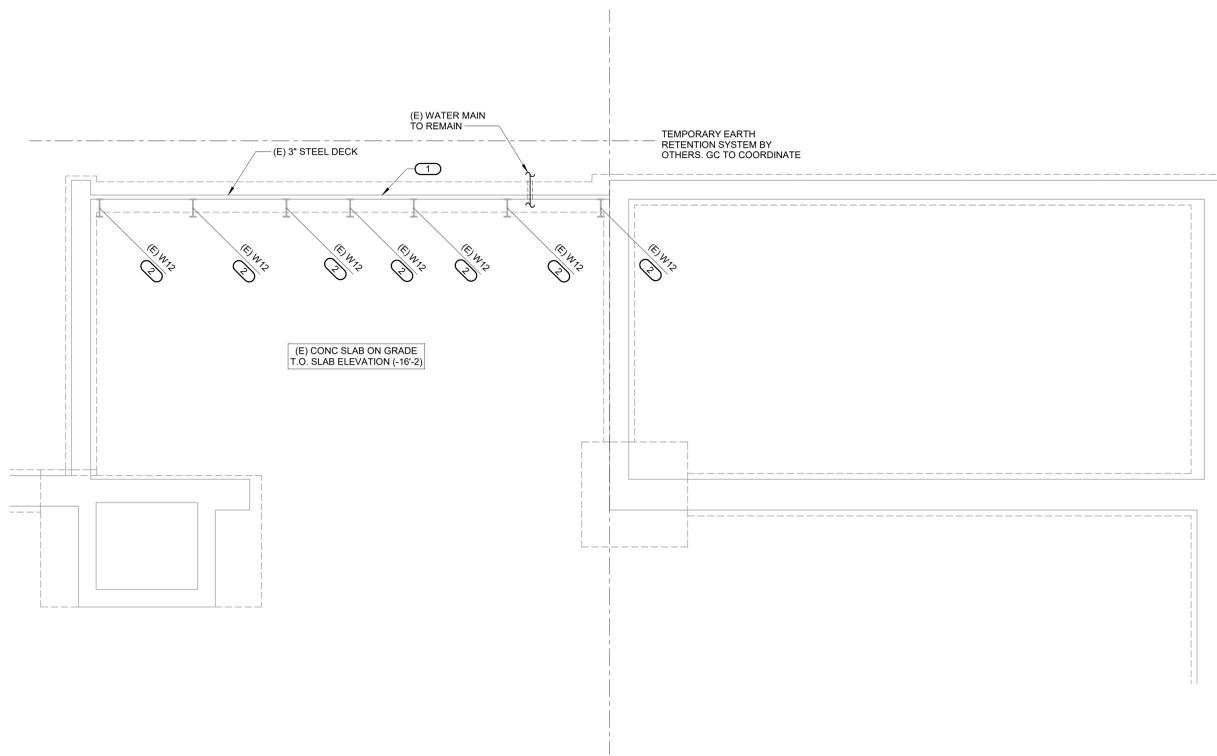
NOTES:
 1. PRIOR TO DEMO, PROVIDE TEMPORARY EARTH RETENTION AND SHORE EXISTING CONCRETE BEAMS. SEE PLAN.
 2. DEMO EXISTING CONCRETE SLAB ON GRADE AS NEEDED FOR FOOTING CONSTRUCTION. SEE 3/SJ-300 WHERE SLAB NEEDS TO BE INFILLED AFTER DEMO.
 3. SHORE EXISTING UTILITIES PRIOR TO CONSTRUCTION.

KEYNOTES: (C #)
 1. DEMO EXISTING STEEL DECK WALL FRAMING AFTER SOIL REMOVAL.
 2. DEMO (E) STEEL COLUMNS, BASE PLATES, AND ANCHOR BOLTS AFTER SOIL REMOVAL.
 3. DEMO EXISTING SITE PAVING AS NEEDED TO COMPLETE WORK.
 4. SHORE EXISTING CONCRETE BEAMS DURING WALL REPLACEMENT. SHORES TO BE REMOVED AFTER CONCRETE REACHES SPECIFIED STRENGTH.
 5. SHORE EXISTING CONCRETE BEAMS DURING PATCH WORK.

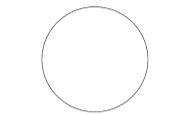
LEGENDS:
 INDICATES EXISTING ELEVATED CONCRETE SLAB TO BE PATCHED AT EXPOSED REBAR. SEE 1/SJ-400 FOR EXAMPLE.
 a. FOR SPALL AREAS < 10 SQ IN, NO NEED FOR REPAIR.
 b. FOR SPALL AREAS > 10 SQ IN, PATCH USING PATCHING MATERIAL.
 INDICATES EXISTING BEAM TO BE PATCHED AT EXPOSED REBAR. SEE 2/SJ-400 FOR EXAMPLE.
 a. FOR SPALL AREAS < 10 SQ IN, NO NEED FOR REPAIR.
 b. FOR SPALL AREAS > 10 SQ IN, PATCH USING PATCHING MATERIAL.



2 FRAMING PLAN - DEMOLITION
 1/4" = 1'-0"



1 FOUNDATION PLAN - DEMOLITION
 1/4" = 1'-0"



SIGNATURE _____
 DATE _____

REVISIONS		
NO	DESCRIPTION	DATE

PROJECT NUMBER 24006955.02
 DATE OF ISSUE 2/07/2025
 DRAWN BY ARUMON
 REVIEWED BY TODBAR

DEMO PLAN

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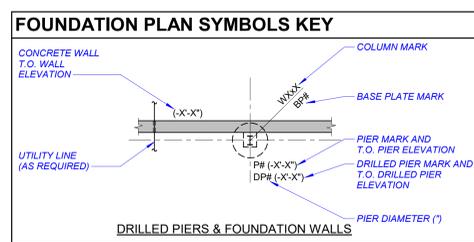
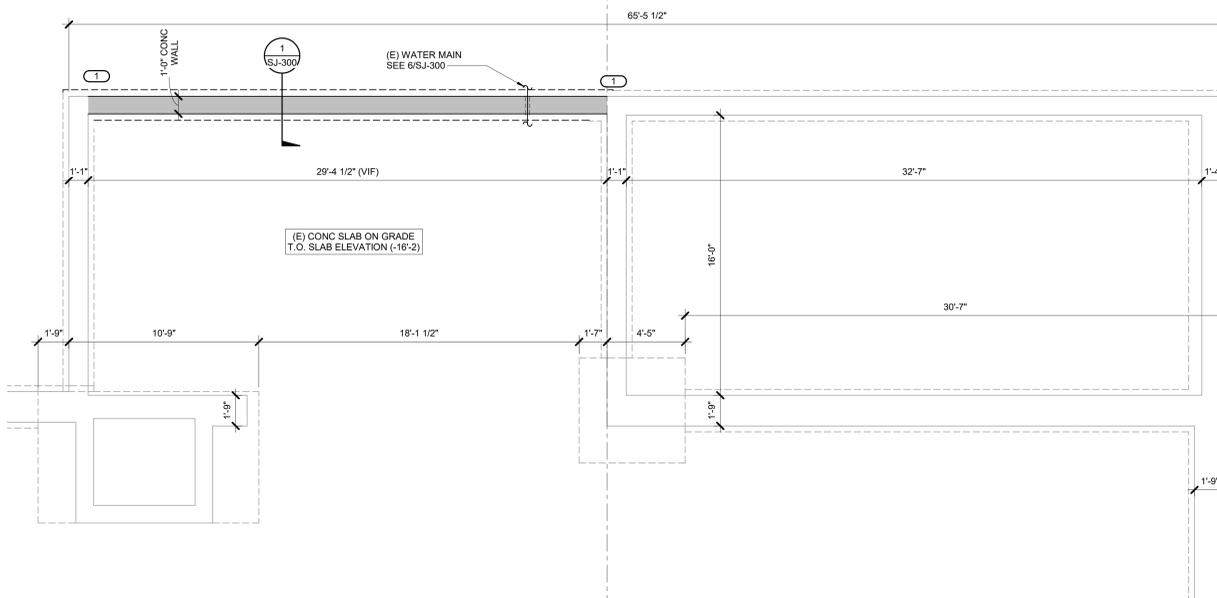
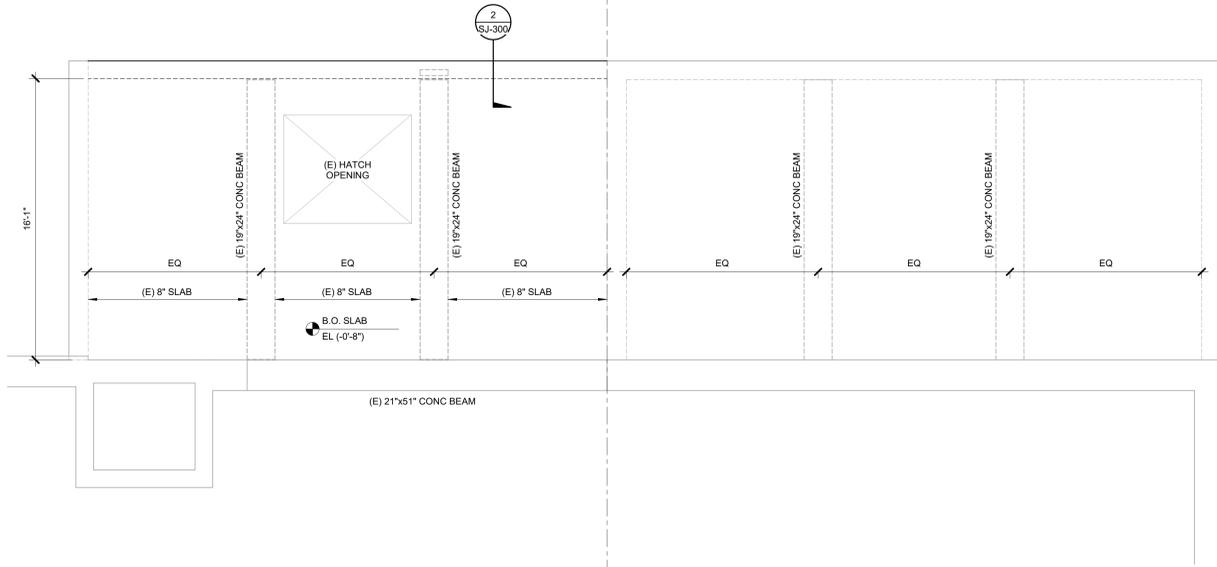
REF. SCALE IN INCHES PROJECT 24006955.02

NOTES:

- CONTRACTOR TO VERIFY EXISTING FIELD CONDITIONS PRIOR TO NEW CONSTRUCTION.
- SHORE EXISTING MEP UTILITIES TO FACILITATE NEW CONSTRUCTION.
- SEE 4/SJ-300 FOR REBAR LAP SPLICE LENGTH.

KEYNOTES: (#)

- DRILL AND EPOXY NEW CONCRETE WALL CONSTRUCTION TO EXISTING CONCRETE WALL PER 6/SJ-300.



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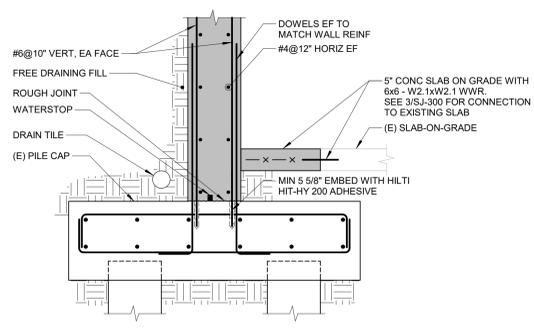
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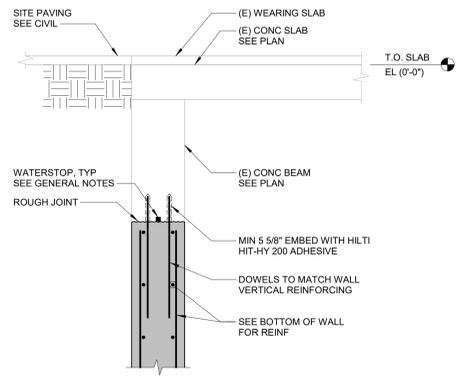
REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 24006955.02
DATE OF ISSUE: 2/07/2025
DRAWN BY: ARUMON
REVIEWED BY: TODBAR

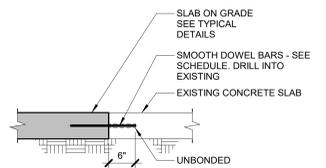
FOUNDATION AND FRAMING PLANS



1 BASEMENT WALL WITH PILE CAP
3/4" = 1'-0"
2400-03



2 BASEMENT WALL SUPPORTING SLAB
3/4" = 1'-0"
2405-04



SLAB THICKNESS	SMOOTH DOWEL BAR
4"	1/2"Ø x 1'-4" @ 18" OC
5"	3/4"Ø x 1'-4" @ 12" OC
> 6"	1"Ø x 1'-4" @ 12" OC

3 NEW TO EXISTING SLAB DETAIL
3/4" = 1'-0"

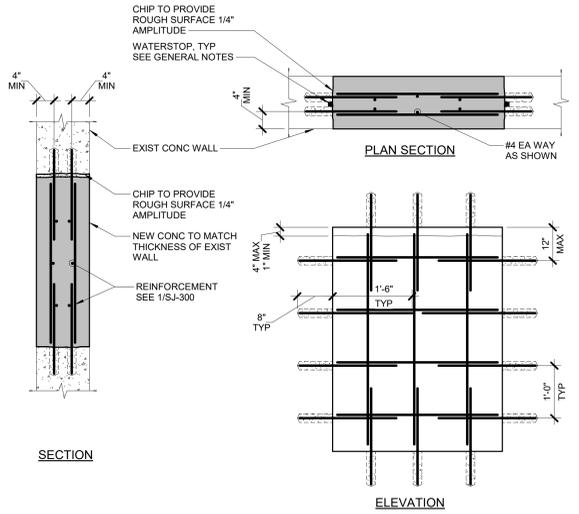
CLASS B TENSION LAP SPlice LENGTH										
REINF STEEL	BAR SIZE	BAR LOCATION	CONCRETE STRENGTH, Fc							
			3 KSI	4 KSI	5 KSI	6 KSI	7 KSI	8 KSI	9 KSI	10 KSI
60 KSI	#3	TOP	2'-4"	2'-1"	1'-10"	1'-8"	1'-7"	1'-6"	1'-5"	1'-4"
		OTHER	1'-10"	1'-7"	1'-5"	1'-4"	1'-3"	1'-2"	1'-1"	1'-0"
	#4	TOP	3'-2"	2'-9"	2'-5"	2'-3"	2'-1"	1'-11"	1'-10"	1'-9"
		OTHER	2'-5"	2'-1"	1'-11"	1'-9"	1'-7"	1'-6"	1'-5"	1'-4"
	#5	TOP	5'-11"	3'-5"	3'-0"	2'-9"	2'-7"	2'-5"	2'-3"	2'-2"
		OTHER	3'-0"	2'-7"	2'-4"	2'-2"	2'-0"	1'-10"	1'-9"	1'-8"
	#6	TOP	4'-8"	4'-1"	3'-8"	3'-4"	3'-1"	2'-11"	2'-9"	2'-7"
		OTHER	3'-7"	3'-1"	2'-10"	2'-7"	2'-4"	2'-3"	2'-1"	2'-0"
	#7	TOP	6'-9"	5'-11"	5'-3"	4'-10"	4'-6"	4'-2"	3'-11"	3'-9"
		OTHER	5'-3"	4'-6"	4'-1"	3'-9"	3'-5"	3'-3"	3'-0"	2'-11"
	#8	TOP	7'-9"	6'-9"	6'-0"	5'-6"	5'-1"	4'-9"	4'-6"	4'-3"
		OTHER	6'-0"	5'-2"	4'-8"	4'-3"	3'-11"	3'-8"	3'-6"	3'-3"
	#9	TOP	8'-9"	7'-7"	6'-9"	6'-2"	5'-9"	5'-4"	5'-1"	4'-10"
		OTHER	6'-9"	5'-10"	5'-3"	4'-9"	4'-5"	4'-2"	3'-11"	3'-8"
	#10	TOP	9'-10"	8'-6"	7'-8"	7'-0"	6'-5"	6'-0"	5'-8"	5'-5"
		OTHER	7'-7"	6'-7"	5'-11"	5'-4"	5'-0"	4'-8"	4'-5"	4'-2"
	#11	TOP	10'-11"	9'-6"	8'-6"	7'-9"	7'-2"	6'-8"	6'-4"	6'-0"
		OTHER	8'-5"	7'-3"	6'-6"	5'-11"	5'-6"	5'-2"	4'-10"	4'-7"

- NOTES:**
- SPlice LENGTHS SHOWN ARE APPLICABLE FOR SPlices OCCURRING UNDER THE FOLLOWING CONDITIONS:
 - NORMAL-WEIGHT CONCRETE
 - MIN BAR SPACING REQUIREMENTS:
 - CLEAR SPACING BETWEEN BARS AT SPlice LOCATION > BAR DIAMETER, CLEAR COVER TO BARS > BAR DIAMETER, AND TIES OR STIRRUPS OCCUR PER CODE SPACING WITHIN LENGTH OF SPlice; OR
 - CLEAR SPACING BETWEEN BARS AT SPlice ≥ 2 x BAR DIAMETER AND CLEAR COVER > BAR DIAMETER
 - INDICATED SPlice LENGTHS SHALL BE INCREASED BY THE LISTED FACTORS WHERE THE FOLLOWING CONDITIONS EXIST:

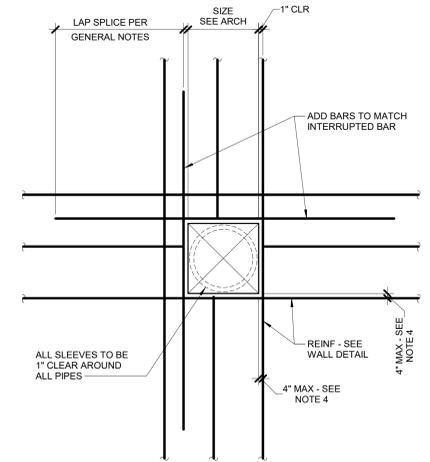
CONDITION	SPlice LENGTH MULTIPLIER*
A. BAR SPACING OR CLEAR COVER IS LESS THAN REQUIRED PER NOTE 1	1.5
B. LIGHTWEIGHT CONCRETE	1.3
C. EPOXY COATED REINF WITH COVER < 3 x BAR DIAMETER OR CLEAR SPACING < 6 x BAR DIAMETER	1.5
D. ALL OTHER EPOXY COATED BARS	1.2

*WHERE MULTIPLE CONDITIONS EXIST, APPLY EACH OF THE APPLICABLE FACTORS TO THE TABULATED TENSION LAP SPlice LENGTH TO OBTAIN THE REQUIRED SPlice LENGTH.
 - TOP BARS ARE HORIZ BARS LOCATED WHERE MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BARS.
 - USE SMALLER BAR SIZE TO DETERMINE LENGTH WHERE SPlicing BARS OF DIFFERENT SIZES.

4 CLASS B TENSION LAP SPlice LENGTHS
3/4" = 1'-0"
3010-01



5 INFILL OF EXISTING OPENING
3/4" = 1'-0"



- NOTES:**
- OPENING SIZE 4" TO 1'-6" MAX IN EITHER DIRECTION. FOR OPENING SIZES LARGER THAN 1'-6", SEE
 - OPENINGS SHALL BE LOCATED SO AS NOT TO INTERFERE WITH JAMB REBAR.
 - NO ADDED BARS REQUIRED IF NO BARS ARE INTERRUPTED.
 - ADD ADDITIONAL TRIM BARS TO MATCH INTERRUPTED BAR IF 4" MAX DIMENSION IS EXCEEDED.

6 TYPICAL WALL OPENING SMALLER THAN 1'-6\"/>

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REF. SCALE IN INCHES PROJECT #24006955-02

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DATE OF ISSUE 2/07/2025
DRAWN BY ARUMON
REVIEWED BY TODD BAR

DETAILS

SJ-300



1 TYPICAL SLAB UNDERSIDE SPALL REQUIRING REPAIR
NO SCALE

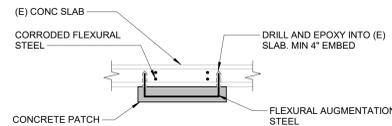


2 TYPICAL BEAM UNDERSIDE SPALL REQUIRING REPAIR
NO SCALE

SCHEDULE 1 - REBAR LOSS INFORMATION

Ø (IN)	D.B. CROSS SECTION AREA LOSS (IN)						
	0%	10%	20%	30%	40%	50%	60%
0.375	0.375	0.36	0.34	0.31	0.29	0.27	0.24
0.5	0.5	0.47	0.45	0.42	0.39	0.35	0.32
0.625	0.625	0.59	0.56	0.52	0.48	0.44	0.40
0.75	0.75	0.71	0.67	0.63	0.58	0.53	0.47
0.875	0.875	0.83	0.78	0.73	0.68	0.62	0.55
1.0	1	0.95	0.89	0.84	0.77	0.71	0.63
1.128	1.128	1.07	1.01	0.94	0.87	0.80	0.71
1.27	1.27	1.20	1.14	1.06	0.98	0.90	0.80

- NOTES:**
- THIS TABLE SHALL BE USED FOR INFORMATIONAL PURPOSES. THE VALUE REFER TO DIAMETER LOSS OF AN EXISTING BAR AND ITS CORRESPONDING CROSS-SECTIONAL AREA LOSS. FOR EXAMPLE, A NUMBER 4 BAR WITH A 10 PERCENT CROSS-SECTIONAL AREA LOSS WILL HAVE A DIAMETER OF 0.47 IN.
 - ALL MEASUREMENTS SHALL BE PERFORMED AFTER REBAR HAS BEEN CLEANED OF CORROSION BYPRODUCTS IN ACCORDANCE WITH ICRI GUIDELINES.

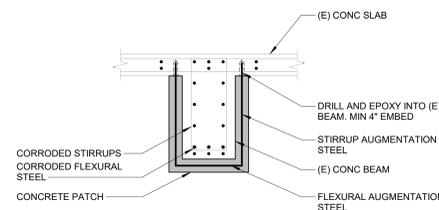


3 SLAB PATCH DETAIL
3/4" = 1'-0"

SCHEDULE 2 - STEEL AUGMENTATION TABLE-FLEXURAL STEEL

EXISTING REBAR	REQUIRED AUGMENTATION STEEL, 10% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 20% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 30% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 40% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 50% SECTION LOSS
0.75" Ø	#3 BAR	#3 BAR	#4 BAR	#4 BAR	#5 BAR
0.625" Ø	#3 BAR	#3 BAR	#3 BAR	#4 BAR	#4 BAR
0.5" Ø	#3 BAR				

- NOTES:**
- ONLY VALID FOR LONGITUDINAL BEAM/COLUMN REINFORCEMENT
 - LONGITUDINAL BARS WITH GREATER THAN 50% LOSS BY AREA SHOULD BE REPLACED IN-KIND.
 - REFER TO DETAIL 3 AND 4/SJ-400 FOR STANDARD AUGMENTATION DETAIL FOR LONGITUDINAL BARS.



4 BEAM PATCH DETAIL
3/4" = 1'-0"

SCHEDULE 3 - STEEL AUGMENTATION TABLE-STIRRUPS

EXISTING REBAR	REQUIRED AUGMENTATION STEEL, 10% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 20% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 30% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 40% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 50% SECTION LOSS
#3 BAR	(2) #3 HOOK BARS, MATCH EXISTING SPACING	(2) #3 HOOK BARS, MATCH EXISTING SPACING	(2) #3 HOOK BARS, MATCH EXISTING SPACING	(2) #3 HOOK BARS, MATCH EXISTING SPACING, EMBED 20" INTO SOUND CONCRETE	(2) #3 HOOK BARS, MATCH EXISTING SPACING, EMBED 20" INTO SOUND CONCRETE

- NOTES:**
- ONLY VALID FOR STIRRUPS IN BEAMS.
 - REFER TO DETAIL 3/SJ-400 FOR TYPICAL AUGMENTATION DETAIL.
 - AUGMENTATION ONLY REQUIRED FOR THIS TIES WITH SECTION LOSS.

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PROJECT NUMBER 24006955-02
DATE OF ISSUE 2/07/2025
DRAWN BY ARUMON
REVIEWED BY TODBAR

DETAILS

SJ-400

1301 48th St.
Moline, IL 61265

Legat Architects, Inc.

1515 5th Ave. Suite 108
Moline, IL 61265
P: 309.517.5536
www.legat.com

CIVIL ENGINEER / LANDSCAPE ARCHITECT

Civil Engineer Name

Address Line 1
Address Line 2
P: xxx.xxx.xxx
www...com

STRUCTURAL ENGINEER

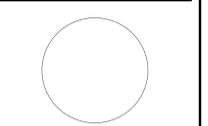
Structural Engineer Name

Address Line 1
Address Line 2
P: xxx.xxx.xxx
www...com

MEP/FP ENGINEER

RTM Engineering

5137 Unica Ridge Road
Davenport, IA 52807
P: 563.726.6310
www.rtmec.com



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REVISONS		
NO.	DESCRIPTION	DATE

PROJECT NUMBER 24006955.03
DATE OF ISSUE 02.07.2025
DRAWN BY ARUMON
REVIEWED BY TODBAR

GENERAL NOTES

DESIGN CRITERIA

- STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH 2021 IBC AND SUBSEQUENT REFERENCE STANDARDS.
 - RISK CATEGORY III
 - SUPERIMPOSED LIVE LOADS: LIVE LOAD REDUCTION USED AS ALLOWED PER CODE
- | FLOOR | CORRIDORS & PUBLIC AREAS | 100 PSF |
|---|--------------------------|----------|
| WIND: | | |
| BASIC WIND SPEED | VULT = 115 MPH | |
| EXPOSURE CLASS | B | |
| INTERNAL PRESSURE COEFFICIENT, GCp1 | ±0.18 | |
| MAIN WIND FORCE PRESSURE (STRENGTH LEVEL) | 25 PSF | |
| COMPONENTS & CLADDING: | | |
| WALL COMPONENTS | ZONE 4 | ZONE 5 |
| A=20 SF | 21.5 PSF | 23.0 PSF |
| A=50 SF | 23.5 PSF | 27.0 PSF |
| A=20 SF | 26.0 PSF | 37.0 PSF |
- C & C NOTES:
- THE PRESSURES LISTED ARE IN ACCORDANCE CBC AND ASCE 7, AND THE DESIGN FORCES USED BY THE SUBCONTRACTOR FOR A SPECIFIC APPLICATION ARE THE RESPONSIBILITY OF THE SUBCONTRACTOR.
 - WIND PRESSURES ARE ULTIMATE DESIGN LEVEL.
 - SEE ASCE 7 FOR ZONE DEFINITIONS AND EXTENT OF ZONES.
 - SUBMIT DESIGN CALCULATIONS SIGNED AND SEALED BY A LICENSED ENGINEER IN THE PROJECT'S JURISDICTION FOR ANY DESIRED MODIFICATION TO THE STATED PRESSURES.
- ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED BY THE EXISTING BUILDING IN EACH ORTHOGONAL DIRECTION.

GENERAL

- DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES. TEMPORARY BRACING, SHORING, GUYING, ETC. SHALL AVOID EXCESSIVE STRESSES AND HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. THE STRUCTURE SHOULD NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DOCUMENTS.
- ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK THAT DEVIATES FROM OR IS PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR THE DESIGN PROFESSIONALS.
- THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALLOWABLE CONSTRUCTION LOADS AND FOR DETERMINING SEQUENCES OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKERS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: FALSEWORK, FORMWORK, STAGING, BRACING, AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
- ALL DIMENSIONS AND TOLERANCES SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOBSITE PRIOR TO BID SUBMITTAL, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
- STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. SUPPLIER SHALL PROVIDE SIGNED AND SEALED DESIGN CALCULATIONS OR SUTABLE PRODUCT LITERATURE FOR THE COMPONENTS. ALL PRODUCT SUBSTITUTIONS SHALL INCLUDE A CODE EVALUATION REPORT SPECIFIC TO THE BUILDING CODE LISTED IN THE DESIGN CRITERIA.
- STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW ALL DETAIL DIMENSIONS TO FIT INTRICATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL CONSTRUCT THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DESIGN.
- ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
- DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION WITHIN TOLERANCE WITH THE WORK.
- SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR DETAILS, CONDITIONS, PITS, TRENCHES, PADS, DEPRESSIONS, ROOF/FLOOR OPENINGS, TOP OF WALL ELEVATIONS, STAIRS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS. FOR THESE NON-STRUCTURAL ELEMENTS SHOWN ON STRUCTURAL DRAWINGS, THEY ARE FOR GENERAL INFORMATION ONLY.
- PROVIDE TEMPORARY BLOCKOUTS AND TEMPORARY OPENINGS IN THE STRUCTURE AS REQUIRED TO PERMIT INSTALLATION OF ALL WORK. BLOCKOUTS AND TEMPORARY OPENINGS SHALL BE LOCATED, CONFIGURED, DETAILED, AND FILLED IN A MANNER THAT ALTERS NEITHER THE STRENGTH OF THE STRUCTURAL FRAMING NOR THE STRENGTH OF CONNECTIONS. INFILL ALL BLOCKOUTS AND TEMPORARY OPENINGS USING THE MATERIALS SPECIFIED FOR THE FRAMING AT THE LOCATIONS WHERE THE BLOCKOUTS AND OPENINGS OCCUR. SUBMIT DRAWINGS INDICATING THE LOCATIONS, DIMENSIONS, AND DETAILS OF ALL PROPOSED BLOCKOUTS AND OPENINGS AND DETAILS INDICATING THE MANNER IN WHICH THE BLOCKOUTS AND OPENINGS WILL BE FILLED.
- NO HOLES, NOTCHES, BLOCK-OUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
- BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, CONTRACTOR SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH FIELD CONDITIONS, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE PROPOSAL SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK.
- ELEMENTS SUCH AS NON-BEARING PARTITIONS, ETC. ATTACHED TO AND/OR SUPPORTED BY THE STRUCTURE SHALL TAKE INTO ACCOUNT DEFLECTIONS AND OTHER STRUCTURAL MOVEMENTS. THE STRUCTURAL FRAMING WAS DESIGNED TO LIMIT DRIFT AND DEFLECTION OF THE STRUCTURAL SYSTEM TO LESS THAN THE MAXIMUM PERMITTED DEFLECTIONS LISTED IN THE BUILDING CODE. THE CONTRACTOR SHALL COORDINATE THE WORK OF OTHER TRADES TO ACCOMMODATE THESE DEFLECTIONS AND TO ACCOMMODATE CONSTRUCTION TOLERANCES.

SUBMITTALS

- SUBMITTALS ARE:
 - CONCRETE MIX DESIGNS
 - CONCRETE REINFORCING
 - STEEL FABRICATION AND MISCELLANEOUS METALS
- SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE DESIGN PROFESSIONALS.
- SUBMITTALS SHALL BE REVIEWED BY THE DESIGN PROFESSIONALS FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE DESIGN PROFESSIONALS ON THE SHOP DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
- FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

DELEGATED DESIGN

- STRUCTURED DESIGNS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
- DELEGATED DESIGN ARE:
 - EXCAVATION, SHORING, AND UNDERPINNING
 - CURTAIN WALL AND STOREFRONT SYSTEMS
- ALL DELEGATED DESIGNS SHALL BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION RESPONSIBLE FOR THE PREPARATION OF THESE DOCUMENTS.

EXISTING CONDITIONS / DEMOLITION

- EXISTING CONDITIONS:
 - EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM EXISTING DRAWINGS.
 - DATED MAY 24, 1986 BY HOWARD M PARKURST.
 - DATED MAY 25, BY SHIVE HATTERY.
 - DATED JULY 1, 2007 BY SHIVE HATTERY.
 - EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM FIELD TAKE-OFF BY IMEG AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.
 - ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE. CONTRACTOR TO VERIFY EXISTING INFORMATION, DIMENSIONS, AND SIZES AS REQUIRED TO COMPLETE THEIR WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ARCHITECT SO CLARIFICATION MAY BE MADE. MODIFICATION OF CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT.
- ALL DEMOLITION SHALL BE CARRIED OUT IN SUCH A WAY TO PREVENT DAMAGE TO EXISTING ELEMENTS WHICH ARE TO REMAIN.
- ALL ELEMENTS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDED COST. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
- CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS OF EXISTING STRUCTURE AND SITES THAT ARE AFFECTED BY NEW WORK BEFORE PROCEEDING WITH FABRICATION AND CONSTRUCTION.
- ALL CONSTRUCTION IS NEW UNLESS IDENTIFIED AS EXISTING. "E1", THE CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENT. NEW SLABS ARE TO BE AT THE SAME ELEVATIONS AS ADJACENT EXISTING SLABS UN. FOUNDATION ELEVATIONS OR COLUMN LENGTHS SHALL BE ADJUSTED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER TO ACHIEVE MATCHING SLAB ELEVATIONS.
- SHORING:
 - SHORING DRAWINGS AND CALCULATIONS BY OTHERS, AS REQUIRED, ARE NOT INCLUDED IN THIS PACKAGE. SHORING DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE PROVIDED BY CONTRACTOR FOR REVIEW.
 - SHORING / UNDERPINNING OF EXISTING BUILDINGS OR IMPROVEMENTS SHALL BE PROVIDED BEFORE EXISTING SUPPORTING WALLS, SLABS, FOUNDATIONS, PAVEMENT, ETC. ARE CUT, MODIFIED, OR REMOVED.

EARTHWORK

- FOUNDATION DESIGN IS IN ACCORDANCE WITH THE INFORMATION SHOWN ON THE EXISTING BUILDING DRAWINGS. NO NEW GEOTECHNICAL REPORT HAS BEEN PROVIDED BY THE OWNER FOR THIS PROJECT.
- SOIL PROPERTIES:

FROST DEPTH:	3'-6" FT
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- A GEOTECHNICAL ENGINEER SHALL BE EMPLOYED TO VERIFY THAT THE PRESUMED ALLOWABLE BEARING PRESSURE WILL BE ACHIEVED PRIOR TO CONSTRUCTION. THAT ENGINEER SHALL DEVELOP AND ENSURE IMPLEMENTATION OF A SITE SUBGRADE PREPARATION PROGRAM AS REQUIRED TO ACHIEVE THE PRESUMED SOIL BEARING PRESSURE. FOOTING AND SLAB-ON-GRADE SUBGRADE PREPARATION SHALL BE IN COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL CRIBBING, SHEETING, SHORING, ETC. REQUIRED FOR CONSTRUCTION OF THE PROJECT AND SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES. CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECTS JURISDICTION.
- ALL REQUIRED BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.

SHALLOW FOUNDATIONS

- SHALLOW FOUNDATIONS SHALL HAVE THE FOLLOWING MINIMUM NET ALLOWABLE SERVICE LOAD BEARING PRESSURES:

NET ALLOWABLE BEARING PRESSURE	1500 PSF (ASSUMED)
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REINFORCING STEEL

- ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH ACI 318. *BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AND ACI 301. *SPECIFICATIONS FOR STRUCTURAL CONCRETE, UN.
- CONCRETE REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS:

REINFORCING STEEL UN	ASTM A615, GR 60	Fy=60 KSI
WELDED WIRE REINFORCING	ASTM A1064	Fy=65 KSI
- MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:

CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	COVER (IN)
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3
			2
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#6 AND SMALLER	1 1/2
- REINFORCING STEEL SHALL BE INSTALLED TO WITHIN THE FOLLOWING TOLERANCES INDICATED TOLERANCES ARE PER ACI 117. *SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS*.

ITEM FOR WHICH TOLERANCE IS BEING MEASURED	PERMITTED TOLERANCE
CONCRETE COVER FOR SLAB TOP AND BOTTOM BARS	±1/4"
COVER FOR OTHER REINFORCING STEEL	±3/8"
SPECIFIED SPACING BETWEEN PARALLEL BARS IN SLAB	+ (SPECIFIED SPACING/4) BUT NOT TO EXCEED 1"
HORIZONTAL DEVIATION FROM SPECIFIED LOCATION UN	±3"
SPACING AND LOCATION OF BEAM STIRRUPS	± (BEAM DEPTH IN INCHES/12) x 1"
SPACING AND LOCATION OF COLUMN TIES	± (MINIMUM COLUMN DIMENSION IN INCHES/12) x 1"
LOCATION OF ENDS OF BARS PERPENDICULAR TO SLAB EDGES	±1"
HORIZONTAL LOCATION OF PRESTRESSED TENDONS	±1/2" FOR MEMBER DEPTH = 24"
	±1" FOR MEMBER DEPTH > 24"
VERTICAL LOCATION (DRAPE) OF PRESTRESSED TENDONS	±1/4" FOR MEMBER DEPTH = 8"
	±3/8" FOR MEMBER DEPTH 8" <lt; D = 24"
	±1/2" FOR MEMBER DEPTH > 24"

- THE ABOVE LIST OF PERMITTED TOLERANCES SHALL BE PROVIDED ON ALL REINFORCING STEEL PLACING DRAWINGS AND ON ALL POST-TENSIONED TENDON PLACING DRAWINGS. REINFORCING DRAWINGS THAT DO NOT PROVIDE THIS LIST OF TOLERANCES WILL BE REJECTED.
- FIELD BENDING OF REINFORCING STEEL IS NOT PERMITTED UN.
 - WELDING OF REINFORCING STEEL OTHER THAN A706 IS PROHIBITED. WELDING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH AWS D1.4 OR D1.8.
 - ALL WELDED WIRE REINFORCING SHALL BE LAP SPICED 2 PANELS (1'-0" MIN).
 - SPLICING:
 - SPLICES IN REINFORCING STEEL SHALL BE MADE ONLY AT THOSE LOCATIONS WHERE SPLICES ARE SHOWN ON THE STRUCTURAL DRAWINGS AND AT THOSE LOCATIONS WHERE SPLICES HAVE BEEN DETAILED ON THE REINFORCING STEEL PLACING DRAWINGS THAT HAVE BEEN REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER. ALL SPLICES SHALL BE CLASS B TENSION LAP SPLICES UN.
 - MECHANICAL SPLICE COUPLERS MAY BE USED INSTEAD OF TENSION LAP SPLICES AT THE CONTRACTOR'S OPTION AT ANY LOCATION. MECHANICAL SPLICE COUPLERS MUST BE USED WHERE SPLICES #14 AND LARGER BARS, INCLUDING WHERE SPLICES #14 AND LARGER BARS TO #11 AND SMALLER BARS. STAGGER MECHANICAL SPLICES IN ADJACENT BARS 30" MINIMUM.
 - COMPRESSION LAP SPLICES MAY BE USED ONLY AT THOSE LOCATIONS WHERE SUCH SPLICES ARE SPECIFICALLY INDICATED. STAGGER SPLICES WHERE REQUIRED TO PROVIDE 1 1/2" MINIMUM CLEAR SPACING BETWEEN REINFORCING STEEL AT SPLICE LOCATIONS.
 - ALL HOOKS SHALL BE STANDARD HOOKS OR STANDARD STIRRUP HOOKS UN. STANDARD STIRRUP HOOKS SHALL HAVE CONTINUOUS BAR AT INSIDE CORNER OF HOOK.
 - VERTICAL REINFORCING STEEL IN CONCRETE AND MASONRY WALLS WITH ONE LAYER OF REINFORCING BARS SHALL BE INSTALLED IN THE CENTER OF THE WALL UN.
 - STANDARD STIRRUP HOOKS FOR #3, #4, AND #5 BARS SHALL BE PROVIDED IN SLABS LESS THAN 9" THICK.
 - DOWELS SHALL MATCH GRADE, SIZE, SPACING, AND QUANTITY OF LAPPED REINFORCING STEEL UN. EXTEND ALL DOWELS FOR FULL DEPTH OF SUPPORTING ELEMENT AND PROVIDE HOOKS UN. DOWELS SHALL NOT BE POST-INSTALLED INTO FRESH CONCRETE.
 - HEADED DEFORMED BARS MAY ONLY BE USED ON #11 AND SMALLER BARS. THREADED OR FORGED HEADS CAN BE USED AT THE FABRICATOR'S DISCRETION.
 - FIELD CUTTING OF REINFORCING STEEL IS PROHIBITED UNLESS INDICATED ON THE REINFORCING PLACING DRAWINGS.
 - HEATING OF BARS FOR BENDING IS PROHIBITED.
 - REINFORCING STEEL PLACING DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 315. THE PLACING DRAWINGS SHALL SHOW ALL INFORMATION NECESSARY TO FABRICATE AND PLACE THE REINFORCING STEEL.
 - REINFORCING STEEL SPACINGS ARE CENTER-TO-CENTER DIMENSIONS UN. REINFORCING STEEL SHOWN IN SECTION PERPENDICULAR TO THE CUT ARE CONTINUOUS UN.
 - THE SPACING OF ALL REINFORCING STEEL MUST BE COMPUTED BY THE REINFORCING STEEL DETAILER AND MUST BE INDICATED ON THE PLACING DRAWINGS. EXTENT ARROWS MUST BE USED TO CLEARLY INDICATE THE LOCATIONS WHERE GROUPS OF REINFORCING BARS ARE TO BE INSTALLED.
 - A LIST OF ALL APPLICABLE REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE INDICATED ON ALL REINFORCING STEEL PLACING DRAWINGS. PLACING DRAWINGS THAT DO NOT SHOW SUFFICIENT INFORMATION NEEDED TO PLACE THE REINFORCING STEEL WILL BE REJECTED.

CAST-IN-PLACE CONCRETE

- CONCRETE MATERIALS SHALL CONFORM TO:

PORTLAND LIMESTONE CEMENT	ASTM C595, TYPE II
FLY ASH	ASTM C618, TYPE OR F
SLAG CEMENT	ASTM C989
FINE AND COARSE AGGREGATE	ASTM C33
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C260
WATER REDUCING ADMIXTURE	ASTM C494
- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AND ACI 301. SPECIFICATIONS FOR STRUCTURAL CONCRETE UN.
- AIR ENTRAINMENT:

NOMINAL MAXIMUM AGGREGATE SIZE	F1	F2
3/8"	6%	7.5%
1/2"	5.5%	7%
3/4"	5%	6%
1"	4.5%	6%

 - CONCRETE SHALL BE AIR ENTRAINED WITH THE APPROPRIATE PERCENTAGE AIR CONTENT LISTED IN THE TABLE ABOVE AS APPLICABLE FOR THE INDICATED EXPOSURE CLASS AND NOMINAL MAXIMUM AGGREGATE SIZE IN THE CONCRETE MIX. THE REQUIRED AIR CONTENT VALUE MAY BE REDUCED BY 1% FOR ALL CONCRETE WITH COMPRESSIVE STRENGTH GREATER THAN 5000 PSI. THE PERMITTED TOLERANCE ON THE REQUIRED AIR CONTENT IS ±1.5%.
- CONCRETE STRENGTHS SHALL CONFORM TO:

LOCATION	f'c AT 28 DAYS (PSI)	MAX PERMITTED W/C	EXPOSURE CLASS
ALL FOUNDATION CONCRETE UN	4500	0.45	F1, S0, W1, C1
SLAB-ON-GRADE UN	3000	0.55	F0, S0, W0, C0
WALLS OTHER THAN SHEAR WALLS	4500***	0.50	F1, S0, W1, C1

*LIGHTWEIGHT CONCRETE SHALL HAVE A 115 PCF DRY UNIT WEIGHT (±3PCF). LIGHTWEIGHT AGGREGATES SHALL BE PRESOAKED AS REQUIRED IN ACCORDANCE WITH ACI 301.
** SEE SCHEDULE OR ELEVATIONS FOR AREAS OF DIFFERENT STRENGTH REQUIREMENTS.
*** WALLS MONOLITHIC WITH COLUMNS OR PIERS SHALL BE CONSTRUCTED USING CONCRETE SPECIFIED FOR THE COLUMNS WITHIN 15 FEET MINIMUM TO EACH SIDE OF THE COLUMNS.
- REQUIRED NOMINAL MAXIMUM COARSE AGGREGATE SIZE:

CONCRETE ELEMENT	REQUIRED NOMINAL MAXIMUM COARSE AGGREGATE SIZE*
ALL CONCRETE UN	1"
TOPPING SLABS LESS THAN 3" THICK	3/8"

* SMALLER NOMINAL MAXIMUM COARSE AGGREGATE SIZE SHALL BE USED WHERE REQUIRED PER ACI 318.
- COMBINED AGGREGATE GRADING FOR STRUCTURAL SLABS: 8-22% BY WEIGHT OF AGGREGATE SHALL BE RETAINED ON EACH SIEVE BELOW THE MAXIMUM AGGREGATE SIZE SIEVE AND ABOVE THE #100 SIEVE.
- ALL FOUNDATION ELEMENTS SHALL BE CENTERED UNDER WALLS, PIERS, OR COLUMNS UN.
- "ROUGH JOINTS" ARE JOINTS ROUGHENED TO AN AMPLITUDE OF 1/4" AND FREE AND CLEAN OF LANTAGE. PROVIDE ROUGH JOINTS AT ALL CONSTRUCTION JOINTS UN.
- CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS OF ALL CONSTRUCTION JOINTS WHERE JOINTS ARE NOT INDICATED ON THE DRAWINGS.
- CONSTRUCTION JOINTS IN CAST-IN-PLACE CONCRETE SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF SPAN. PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SHOWN ON REINFORCING STEEL PLACING DRAWINGS. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS UN. ALL REINFORCING TO BE CONTINUOUS THROUGH JOINTS UN.
- HORIZONTAL CONSTRUCTION JOINTS THROUGH CAST-IN-PLACE CONCRETE FRAMING ARE NOT PERMITTED EXCEPT WHERE SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS.
- JOINTS ABUTTING EXISTING CONCRETE CONSTRUCTION SHALL BE ROUGH JOINTS UN.
- PROVIDE TEMPLATES TO SET EMBEDDED ITEMS.
- INSTALLATION OF ELECTRICAL CABLE, CONDUIT, AND PIPING IN OR THROUGH CONCRETE COLUMNS AND WALLS IS PROHIBITED UNLESS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. INSTALLATION OF PIPING IN CAST-IN-PLACE CONCRETE IS PROHIBITED UNLESS APPROVED BY STRUCTURAL ENGINEER PRIOR TO INSTALLATION. DRAWINGS SHALL BE SUBMITTED FOR REVIEW SHOWING PROPOSED PLACEMENT OF ELECTRICAL CABLE AND CONDUIT IN SLABS. THOSE DRAWINGS SHALL SHOW SIZES AND DIMENSIONED LOCATIONS OF ALL CABLE AND CONDUIT.
- PROVIDE CONTINUOUS BENTONITE WATERSTOPS IN ALL CONSTRUCTION JOINTS IN BELOW GRADE CONCRETE CONSTRUCTION. COORDINATE WATERSTOPS WITH ARCHITECTURAL DRAWINGS.
- PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A 3/4" CHAMFER UN ON ARCHITECTURAL DRAWINGS.

- SLOPE SLABS TO DRAINS. SEE ARCHITECTURAL AND MEP DRAWINGS FOR DRAIN LOCATIONS AND SLOPE REQUIREMENTS. SLAB THICKNESSES SHOWN ON DRAWINGS ARE MINIMUMS.
- AFTER CONCRETE IS PLACED, IN NO CASE SHALL THE SUPERIMPOSED CONSTRUCTION LOADS BE GREATER THAN SPECIFIED DESIGN LIVE LOADS UNLESS THE WORK IS SHORED.
- CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.
- CORNER OF CONCRETE SHALL NOT BE PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER. SUBMIT LOCATIONS OF PROPOSED CONCRETE CORERS.
- REINFORCING STEEL SHALL NOT BE DAMAGED WHEN DRILLING CONCRETE.
- ADHERE TO ACI 305R AND ACI 308R FOR HOT AND COLD WEATHER CONCRETE CONSTRUCTION.
- THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE TESTING AND INSPECTION AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE APPLICABLE CODE. MIX DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.
- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, LOCATIONS, AND DETAILS OF ALL ARCHITECTURAL FEATURES IN THE CONCRETE. SEE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR ALL CONCRETE FINISHES.

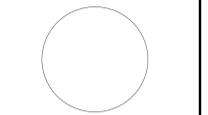
STEEL

- STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "DETAILING FOR STEEL CONSTRUCTION" AND FABRICATED AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
- STRUCTURAL STEEL SHALL CONFORM TO ASTM STANDARDS AS NOTED BELOW:

WIDE FLANGE SHAPES	ASTM A992	Fy=50 KSI
OTHER ROLLED SHAPES	ASTM A36	Fy=36 KSI
HSS SECTIONS, SQUARE	ASTM A500, GR C	Fy=50 KSI
BASE AND CONNECTION PLATES	ASTM A36 A572	Fy=36 50 KSI
ANCHOR RODS	ASTM F1554, GR 36 55	Fy=36 55 KSI
HEAVY HEX NUTS	ASTM A563	
WASHERS	ASTM F436	
ELECTRODES FOR ARC WELDING	AWS 5.1, E70XX	
- ALL BOLTED CONNECTIONS SHALL BE GRADE A325N BEARING TYPE BOLTS UN. ALL BOLTS SHALL BE INSTALLED TO A MINIMUM SNUG TIGHT CONDITION UN.
- FULLY TENSIONED HIGH STRENGTH BOLTS AND SLP CRITICAL HIGH STRENGTH BOLTS SHALL USE TENSION-CONTROL, "TWIST-OFF" BOLTS OR BE INSTALLED USING THE TURN OF THE NUT METHOD.
- FIELD CONNECTIONS SHALL BE WELDED OR BOLTED. SHOP CONNECTIONS SHALL BE WELDED UN. WELDS INDICATED WITH A SHOP WELD SYMBOL MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. LOCATIONS OF ALL FIELD WELDS SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS. WELDS SHALL BE DESIGNED TO BE FULLY EQUIVALENT IN STRENGTH TO BOLTED CONNECTIONS DETAILED TO MINIMIZE BENDING IN THE CONNECTION.
- WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.
- ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING INDICATED. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES" OF THE AMERICAN WELDING SOCIETY (AWS).
- BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE DRAWINGS. WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.
- SPLICING OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE, AND CONNECTION TO BE MADE.
- PROVIDE ONE SHOP COAT OF PAINT ON ALL STRUCTURAL STEEL NOT COVERED WITH CONCRETE, FIREPROOFING, MASONRY, OR AT CONTACT SURFACES AT HIGH STRENGTH BOLTS.
- ALL STEEL EXPOSED TO WEATHER OR AS NOTED ON PLAN SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. GALVABRADED AREAS TO BE TOUCHED UP WITH COLD GALVANIZING COMPOUND IN ACCORDANCE WITH ASTM A780.
- ALL GALVANIZED HOLLOW SECTIONS SHALL HAVE WELDED CAP PLATES TO SEAL EXPOSED ENDS.
- CUTS, HOLES, OPENINGS, ETC. REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OR TORCHING OF HOLES, CUTS, AND OTHER FIELD MODIFICATIONS SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.
- SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC. FOR MISCELLANEOUS STEEL NOT DETAILED SPECIFICALLY ON THE STRUCTURAL DRAWINGS.
- GROUT FOR BASE AND BEARING PLATES SHALL BE A NON-SHRINK, NON-METALLIC PRODUCT. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 10,000 PSI. INSTALL GROUT PRIOR TO APPLYING SIGNIFICANT LOADING TO MEMBER.
- THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STRUCTURAL STEEL FOR REVIEW AND APPROVAL BEFORE FABRICATION.

STRUCTURAL ABBREVIATION KEY

#	DESCRIPTION:
##	NUMBER OR POUNDS
@	AT
Δ	DEGREE
∅	DIAMETER
(E)	EXISTING
A.B.	ANCHOR BOLT
ARCH	ARCHITECT, -URE, -URAL
B.O.	BOTTOM OF
B.F.	BOUNDARY WIDTH
BM	BEAM
B.W.	BOUNDARY NAILING
BO	BOTTOM
BTWN	BETWEEN
CFSP	COLD FORM STEEL FRAMING
CG	CENTER OF GRAVITY OF THE TENDON
CJP	COMPLETE JOINT PENETRATION WELD
CL	CLEAR
C/LR	CENTERLINE
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATION
DIA	DIAMETER
DL	DEAD LOAD
DET	DETAIL
DWG	DRAWING
DOWL	DOWEL
EA	EACH
E.A.F.	EACH FACE
EFF	EFFECTIVE
EL	ELEVATION
ELC	ELECTRICAL
EMBED	EMBEDMENT
EON	EDGE NAILING
EOS	EDGE OF SLAB
EQU	EQUAL
EQUIP	EQUIPMENT
ETC	ETCETERA
EW	EACH WAY
EXT	EXTERIOR
FC	CONCRETE COMPRESSIVE STRENGTH
FDN	FOUNDATION
F.N.	FIELD NAILING
FT	FOOT
FTG	FOOTING
FY	YIELD STRESS



SIGNATURE _____

DATE _____

REVISIONS		
NO	DESCRIPTION	DATE

PROJECT NUMBER 24006955.03
DATE OF ISSUE 02.07.2025
DRAWN BY ARUMON
REVIEWED BY TODBAR

TESTING AND INSPECTIONS

TESTING, INSPECTIONS, AND OBSERVATIONS

- THE STRUCTURAL ENGINEER DOES NOT PROVIDE INSPECTIONS OF CONSTRUCTION. STRUCTURAL ENGINEER MAY MAKE PERIODIC OBSERVATIONS OF THE CONSTRUCTION. SUCH OBSERVATIONS SHALL NOT REPLACE REQUIRED INSPECTIONS BY THE GOVERNING AUTHORITIES OR SERVE AS 'SPECIAL INSPECTIONS' AS MAY BE REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
- SEE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS OR SPECIFICATIONS FOR TESTING AND INSPECTION REQUIREMENTS OF NON-STRUCTURAL COMPONENTS.
- DUTIES OF THE INSPECTION AGENCY PER IBC CHAPTER 17:
 - SUBMIT A PROPOSED TESTING AND INSPECTION PROGRAM TO THE OWNER, THE ARCHITECT AND THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.
 - PERFORM ALL TESTING AND INSPECTION REQUIRED PER APPROVED TESTING AND INSPECTION PROGRAM.
 - FURNISH INSPECTION REPORT TO THE BUILDING OFFICIAL, THE OWNER, THE ARCHITECT, STRUCTURAL ENGINEER AND THE GENERAL CONTRACTOR. THE REPORTS SHALL BE COMPLETED AND FURNISHED WITHIN 48 HOURS OF INSPECTED WORK.
 - SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTION AGENCY'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
- SPECIAL INSPECTIONS AND TESTS ARE REQUIRED FOR MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN CHAPTER 17 OF THE IBC OR IN STANDARDS REFERENCED BY THE IBC. THESE ITEMS INCLUDE:
 - POST-INSTALLED ANCHORS - INSPECTION
- THE FOLLOWING WORK SHALL BE INSPECTED BY THE SPECIAL INSPECTOR UNLESS SPECIFICALLY WAIVED BY THE BUILDING OFFICIAL.

CONCRETE CONSTRUCTION:

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
INSPECT REINFORCEMENT AND VERIFY PLACEMENT		X	ACI 318: CH 20, 25.2, 26.3, 26.6-1, 26.6.3	1908.4
REINFORCING BAR WELDING:			AWS D1.4 ACI 318: 26.6.4	
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706		X		
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"		X		
c. INSPECTS ALL OTHER WELDS	X			
INSPECT ANCHORS CAST IN CONCRETE		X	ACI 318: 17.8.2	
INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:				
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X		ACI 318: 17.8.2.4	
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE	X	X	ACI 318: 17.8.2	1904.1, 1904.2
VERIFY USE OF REQUIRED DESIGN MIX		X	ACI 318: CH 19, 26.4.3, 26.4.4	1908.2, 1908.3
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X		ASTM C172, ASTM C31, ACI 318: 26.5, 26.12	1908.10
INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X		ACI 318: 26.5	1908.6, 1908.7, 1908.9
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X	ACI 318: 26.5.3-26.5.5	1908.9
INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X	ACI 318: 26.11.1, 2(b)	

STRUCTURAL STEEL - INSPECTION TASKS PRIOR TO BOLTING (AS A MINIMUM):

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	RCSC SECTIONS
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P	TABLE N5.6-1	2.1, 9.1
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O	TABLE N5.6-1	FIG. C-2.1, 9.1
CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)	O	O	TABLE N5.6-1	2.3.2, 2.7.2, 9.1
CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O	TABLE N5.6-1	4, 8
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE PAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O	TABLE N5.6-1	3, 9.1, 9.3
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O	TABLE N5.6-1	7, 9.2
PROTECTION STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS	O	O	TABLE N5.6-1	2.2, 8, 9.1

O=OBSERVE AND P=PERFORM

STRUCTURAL STEEL - INSPECTION TASKS DURING TO BOLTING (AS A MINIMUM):

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	RCSC SECTIONS
FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS AND NUTS ARE POSITIONED AS REQUIRED	O	O	TABLE N5.6-2	7.1(1), 8.1, 9.1, 9.1
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O	TABLE N5.6-2	8.1, 9.1
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O	TABLE N5.6-2	8.2, 9.2
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O	TABLE N5.6-2	8.2, 9.2

O=OBSERVE AND P=PERFORM

STRUCTURAL STEEL - INSPECTION TASKS AFTER BOLTING (AS A MINIMUM):

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	RCSC SECTIONS
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P	TABLE N5.6-3	

P=PERFORM

STRUCTURAL STEEL - INSPECTIONS TASKS PRIOR TO WELDING (AS A MINIMUM):

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	AWS D1.1 CLAUSES
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	P	O	TABLE N5.4-1	N/A
WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	P	P	TABLE N5.4-1	6.3
MANUFACTURER CERTIFICATES FOR WELDING CONSUMABLES AVAILABLE	P	P	TABLE N5.4-1	6.2
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O	TABLE N5.4-1	6.2
WELDER IDENTIFICATION	O	O	TABLE N5.4-1	6.4 (WELDER QUALIFICATION)
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)				
a. JOINT PREPARATIONS	O	O	TABLE N5.4-1	6.5.2
b. DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	O	O	TABLE N5.4-1	5.22
c. CLEANLINESS (CONDITION OF STEEL SURFACES)	O	O	TABLE N5.4-1	5.14
d. TACKING (TACK WELD QUALITY AND LOCATION)	O	O	TABLE N5.4-1	5.17
e. BACKING TYPE AND FIT (IF APPLICABLE)	O	O	TABLE N5.4-1	5.9, 5.21, 1.1
FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- & K- JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY)				
a. JOINT PREPARATIONS	P	O	TABLE N5.4-1	9.11.2
b. DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	P	O	TABLE N5.4-1	9.11.2
c. CLEANLINESS (CONDITION OF STEEL SURFACES)	P	O	TABLE N5.4-1	9.11.2
d. TACKING (TACK WELD QUALITY AND LOCATION)	P	O	TABLE N5.4-1	9.11.2
e. CONFIGURATION AND FINISH OF ACCESS HOLES	O	O	TABLE N5.4-1	6.5.2, 5.16 (6 SEE AISC 360 SECT. J1.6)
FIT-UP OF FILLET WELDS				
a. DIMENSIONS (ALIGNMENT, GAPS AT ROOT)	PIO ¹	O	TABLE N5.4-1	5.21.1
b. CLEANLINESS (CONDITION OF STEEL SURFACES)	PIO ¹	O	TABLE N5.4-1	5.14
c. TACKING (TACK WELD QUALITY AND LOCATION)	PIO ¹	O	TABLE N5.4-1	5.17
d. CHECK WELDING EQUIPMENT	O	O	TABLE N5.4-1	6.2, 5.10

O=OBSERVE AND P=PERFORM

STRUCTURAL STEEL - INSPECTION TASKS DURING WELDING (AS A MINIMUM):

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	AWS D1.1 CLAUSES
USE OF QUALIFIED WELDERS	O	O	TABLE C-N5.4-2	6.4
CONTROL AND HANDLING OF WELDING CONSUMABLES	O	O	TABLE N5.4-2	6.2
a. PACKAGING	O	O	TABLE N5.4-2	5.3.1
b. EXPOSURE CONTROL	O	O	TABLE N5.4-2	5.3.2 (FOR SMAW), 5.3.3 (FOR SAW)
NO WELDING OVER CRACKED TACK WELDS	O	O	TABLE N5.4-2	5.17
ENVIRONMENTAL CONDITIONS				
a. WIND SPEED WITHIN LIMITS	O	O	TABLE N5.4-2	5.11.1
b. PRECIPITATION AND TEMPERATURE	O	O	TABLE 5.4-2	6.3.3, 6.5.2, 5.5, 5.20
WPS FOLLOWED				
a. SETTINGS ON WELDING EQUIPMENT	O	O	TABLE N5.4-2	
b. TRAVEL SPEED	O	O	TABLE N5.4-2	
c. SELECTED WELDING MATERIALS	O	O	TABLE N5.4-2	
d. SHIELDING GAS TYPE/FLOW RATE	O	O	TABLE N5.4-2	
e. PREHEAT APPLIED	O	O	TABLE N5.4-2	5.6, 5.7
f. INTERPASS TEMPERATURE MAINTAINED (MIN/MAX)	O	O	TABLE N5.4-2	
g. PROPER POSITION (F, V, H, OH)	O	O	TABLE N5.4-2	
WELDING TECHNIQUES	O	O	TABLE 5.4-2	6.5.2, 6.5.3, 5.23
a. INTERPASS AND FINAL CLEANING	O	O	TABLE N5.4-2	5.29.1
b. EACH PASS WITHIN PROFILE LIMITATIONS	O	O	TABLE N5.4-2	
c. EACH PASS MEETS QUALITY REQUIREMENTS	O	O	TABLE N5.4-2	
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P	P	TABLE N5.4-2	

O=OBSERVE AND P=PERFORM

STRUCTURAL STEEL - INSPECTION TASKS AFTER WELDING (AS A MINIMUM):

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	AWS D1.1 CLAUSES
WELDS CLEANED	O	O	TABLE N5.4-3	5.29.1
SIZE, LENGTH, AND LOCATION OF WELDS	P	P	TABLE N5.4-3	6.5.1
WELDS MEET VISUAL ACCEPTANCE CRITERIA				6.5.3
a. CRACK PROHIBITION	P	P	TABLE N5.4-3	TABLE 6.1(1)
b. WELDBASE-METAL FUSION	P	P	TABLE N5.4-3	TABLE 6.1(2)
c. CRATER CROSS-SECTION	P	P	TABLE N5.4-3	TABLE 6.1(3)
d. WELD PROFILES	P	P	TABLE N5.4-3	TABLE 6.1(4), 5.24
e. WELD SIZE	P	P	TABLE N5.4-3	TABLE 6.1(6)
f. UNDERCUT	P	P	TABLE N5.4-3	TABLE 6.1(7)
g. POROSITY	P	P	TABLE N5.4-3	TABLE 6.1(8)
ARC STRIKES	P	P	TABLE N5.4-3	5.28
K-AREA	P	P	TABLE N5.4-3	
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES ²	P	P	TABLE N5.4-3	5.16, 6.5.2 (6, SEE AISC 360 SECT. J1.6)
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P	TABLE N5.4-3	5.9, 5.30
REPAIR ACTIVITIES	P	P	TABLE N5.4-3	6.5.3, 5.25
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P	TABLE N5.4-3	6.5.4, 6.5.5
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	O	O	TABLE N5.4-3	

O=OBSERVE AND P=PERFORM

1 WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3' OF THE WELD. THE VISUAL INSPECTION SHALL BE PERFORMED NO SOONER THAN 48 HOURS FOLLOWING COMPLETION OF THE WELDING.

2 AFTER ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS.

STRUCTURAL DECKING:

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE
1. DECK PLACEMENT AND ATTACHMENT	X	X	

SOILS:

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X
PERFORM CLASSIFICATIONS AND TESTING OF COMPACTED FILL MATERIAL	X	X
VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL		X
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X

POST-INSTALLED ANCHORS

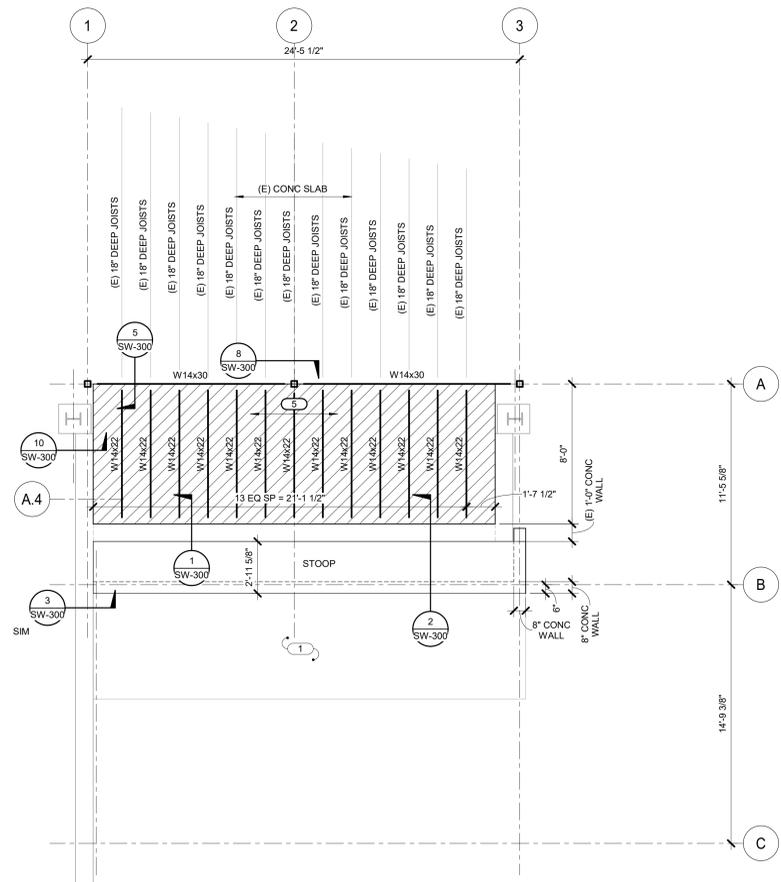
INSTALLATION CONDITION	ANCHOR TYPE
EXPANSION ANCHORS INTO CONCRETE	HILTI KWIK BOLT TZZ (ESR-4266)
SCREW ANCHORS > 1/4"Ø INTO CONCRETE	HILTI KWIK HUS-EZ (ESR-3027)
ADHESIVE ANCHORS INTO CONCRETE	HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 AND HIT-Z ROD (ESR-4888) or HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 AND HAS-E THREADED ROD (ESR-4866) or HILTI SAFE-SET SYSTEM w/ HIT-RE 500 V3 AND HAS-E THREADED ROD (ESR-3814) FOR ALL ADHESIVE ANCHORS, HOLES SHALL BE HAMMER DRILLED AND HOLES MAY BE DRY OR WATER SATURATED.
EXPANSION ANCHORS INTO GROUTED CMU	HILTI KWIK TZZ (ESR-4561)
SCREW ANCHORS > 1/4"Ø INTO GROUTED CMU	HILTI KWIK HUS-EZ (ESR-3056)
SCREW ANCHORS = 1/4"Ø INTO CONCRETE OR GROUTED CMU	HILTI KWIK-CON II+
ADHESIVE ANCHORS IN GROUTED CMU OR SOLID BRICK	HILTI HIT-HY Z70 SYSTEM w/ HAS-E THREADED ROD (ESR-4143)
ADHESIVE ANCHORS INTO HOLLOW CMU, BRICK OR MULTI-WYTHE BRICK WALLS	HILTI HIT-HY Z70 SYSTEM w/ HAS-E THREADED ROD AND APPROPRIATE SCREEN TUBE (ESR-4144)
ADHESIVE DOWELING FOR ANCHORING REINFORCING BARS INTO (E) CONCRETE	HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 ADHESIVE (ESR-4866) or HILTI SAFE-SET SYSTEM w/ HIT-RE 500 V3 ADHESIVE (ESR-3814)
POWDER-ACTUATED FASTENERS (PAF's) IN CONCRETE	HILTI X-U FASTENERS (ESR-2269)

- ALTERNATIVE ANCHORS MAY BE USED IF APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. THE CONTRACTOR SHALL SUBMIT CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION VERIFYING PROPOSED ALTERNATIVE ANCHORS WILL PROVIDE THE SAME OR GREATER LOAD-CARRYING CAPACITY AS THE SPECIFIED ANCHORS. THE CONTRACTOR SHALL SUBMIT EVALUATION REPORTS, EACH ANCHOR CONFIGURATION SHALL BE EVALUATED AND COMPARED TO THE SPECIFIED ANCHOR.
- CRACKED CONCRETE IS ASSUMED FOR ALL ANCHORAGE DESIGN CONDITIONS UNLESS IT CAN BE DEMONSTRATED THROUGH ENGINEERING ANALYSIS THAT THE CONCRETE REMAINS UNCRACKED DURING THE GOVERNING ULTIMATE LOAD STATE.
- POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
- THE CONTRACTOR SHALL ARRANGE FOR AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR EACH SPECIFIED ANCHOR TYPE. THE STRUCTURAL ENGINEER SHALL RECEIVE DOCUMENTATION VERIFYING ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS HAVE BEEN TRAINED PRIOR TO COMMENCEMENT OF INSTALLING ANCHORS.
- INSTALLATION OF ADHESIVE ANCHORS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPROVED CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACICRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR EQUIVALENT. THE ACCEPTABILITY OF CERTIFICATIONS OTHER THAN THE ACICRSI ADHESIVE INSTALLER CERTIFICATION WILL BE DETERMINED BY THE STRUCTURAL ENGINEER.
- CONCRETE SHALL HAVE ACHIEVED DESIGN STRENGTH PRIOR TO INSTALLING POST-INSTALLED ANCHORS. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE THAT HAS CURED FOR A MINIMUM OF 21 DAYS.
- ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ANCHORS AND PROXIMITY OF ANCHORS TO EDGES OF CONCRETE OR MASONRY. INSTALL ANCHORS IN ACCORDANCE WITH SPACINGS AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
- POST-INSTALLED ANCHORS AND DOWELS SHALL BE INSTALLED IN A MANNER THAT DOES NOT DAMAGE REINFORCING STEEL, CONDUIT OR OTHER EMBEDDED ITEMS. REINFORCING STEEL SHALL BE LOCATED BY NON-DESTRUCTIVE MEANS PRIOR TO DRILLING HOLES. PLATES AND BRACKETS THROUGH WHICH ANCHORS WILL BE INSTALLED SHALL NOT BE FABRICATED UNTIL AFTER REINFORCING STEEL IS LOCATED AND ANCHOR LOCATIONS ARE ADJUSTED. CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER TO OBTAIN ALTERNATIVE ANCHOR LAYOUT WHERE ANCHORS MUST BE RELOCATED TO AVOID INTERFERENCE WITH REINFORCING STEEL.
- ADHESIVE ANCHORING SYSTEMS ARE PERMITTED TO BE USED FOR INSTALLATION OF REINFORCING STEEL INTO EXISTING CONCRETE ONLY WHERE SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS OR WITH APPROVAL FROM THE STRUCTURAL ENGINEER. LOCATIONS WHERE REINFORCING STEEL WAS INCORRECTLY PLACED OR MISSED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
- WHERE POST-INSTALLED MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE SPECIFIED, THOSE DEPTHS ARE THE REQUIRED MINIMUM NOMINAL EMBEDMENT DEPTHS. WHERE MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE NOT INDICATED, THE ANCHORS SHALL BE INSTALLED TO THE MAXIMUM EMBEDMENT DEPTH NOTED IN THE MANUFACTURER'S PRODUCT TECHNICAL GUIDE.
- ADHESIVE ANCHORS SHALL BE INSTALLED WITH A MINIMUM 6" EMBEDMENT DEPTH UNON.

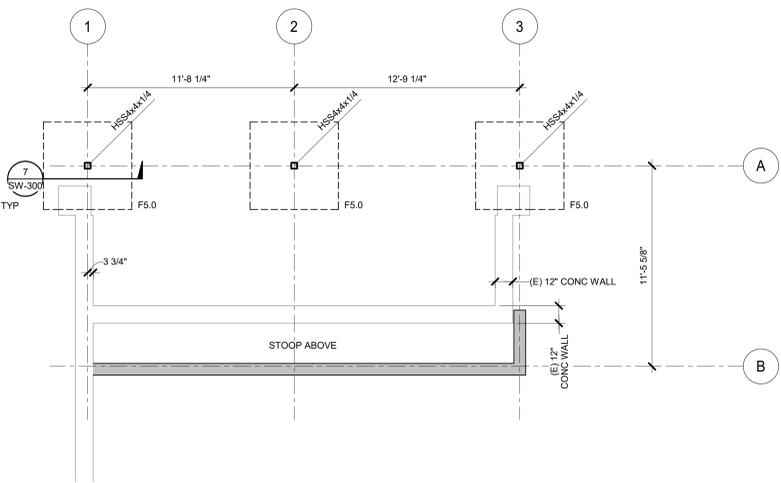
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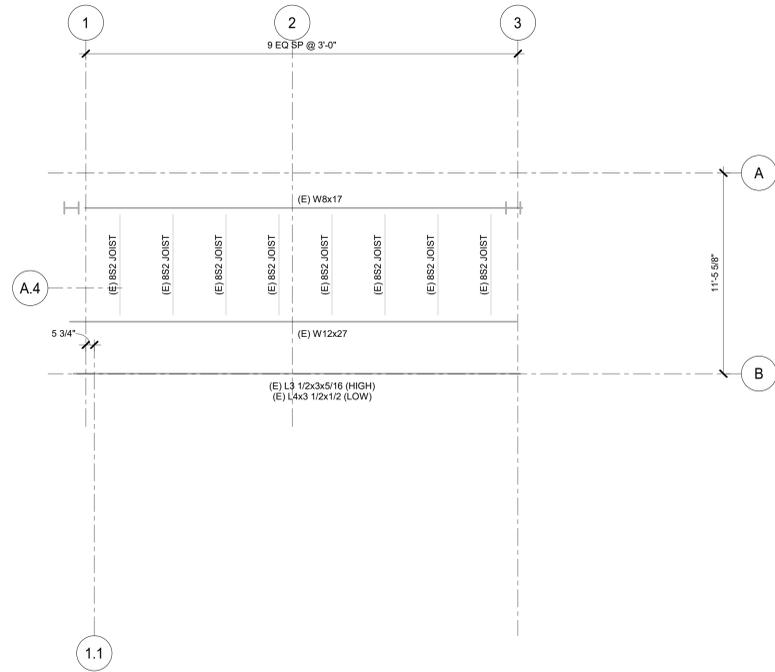
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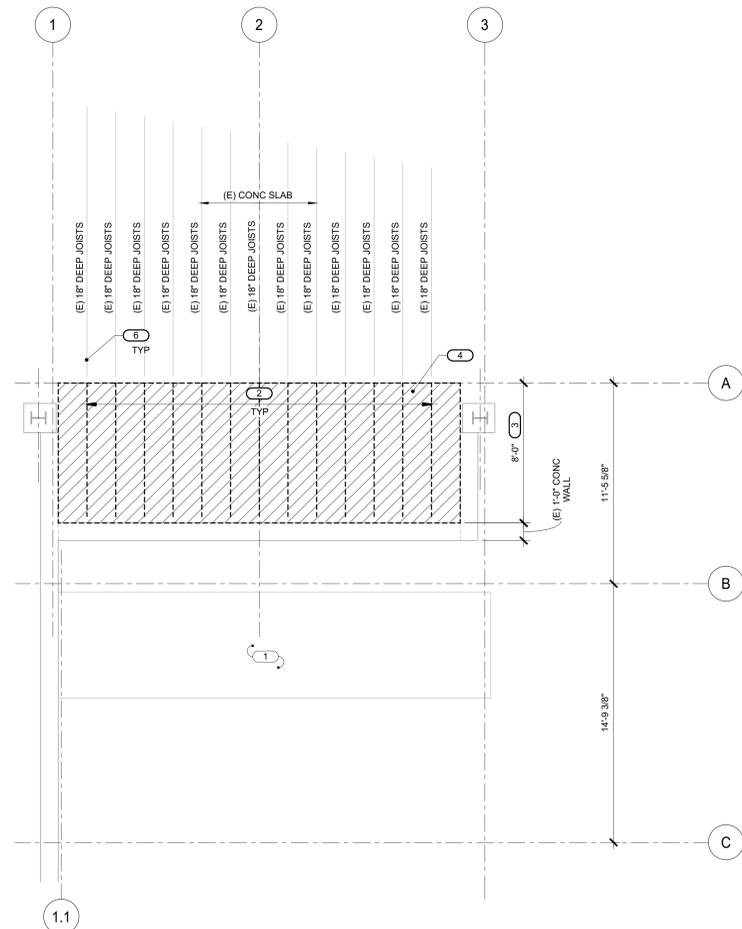
2 FIRST FLOOR FRAMING PLAN
1/4" = 1'-0"



1 FOUNDATION PLAN
1/4" = 1'-0"



3 FRAMING PLAN
1/4" = 1'-0"



4 FIRST FLOOR DEMO PLAN
1/4" = 1'-0"

- NOTES:**
- CONTRACTOR TO VERIFY EXISTING FIELD CONDITION PRIOR TO NEW CONSTRUCTION AND COORDINATE WITH STEEL SUPPLIER.
 - SHORE AND RELOCATE EXISTING MEP UTILITIES TO FACILITATE NEW CONSTRUCTION AND REPLACE AFTER NEW CONSTRUCTION.
 - ALL NEW STRUCTURAL STEEL FRAMING TO BE HOT DIPPED GALVANIZED.
 - SEE 8/SW-300 FOR HSS COLUMN BASE PLATES.
 - ALTERNATE 3 TO ONLY INCLUDE SHORING AS SHOWN IN 4/SW-100.
 - ALTERNATE 4 TO INCLUDE SHORING AND FULL REPLACEMENT AS SHOWN ON 1 THROUGH 4/SW-100.
- KEYNOTES: (C #)**
- (E) CONCRETE SLAB ON GRADE.
 - DEMO END OF EXISTING JOIST. SEE 9/SW-300.
 - ANTICIPATED JOIST DEMO LENGTH. CONTRACTOR TO VERIFY EXISTING CONDITIONS IN FIELD. NOTIFY EOR IF (E) JOIST CORROSION EXTENDS PAST JOIST DEMO.
 - DEMO EXISTING SLAB TO FACILITATE NEW CONSTRUCTION.
 - 1.5C-32 (20 GA) NON-COMPOSITE STEEL DECK WITH 5" CONCRETE SLAB (TOTAL THICKNESS) WITH 8#x-W2 1#W2 1 WWR. TOP OF SLAB EL. (0'-0"). SEE 4/SW-300 FOR CONNECTION TO EXISTING SLAB.
 - PRIOR TO DEMO, PROVIDE TEMPORARY SHORING OF (E) JOIST BRACING TO REMAIN IN PLACE UNTIL JOIST MODIFICATIONS ARE COMPLETE.

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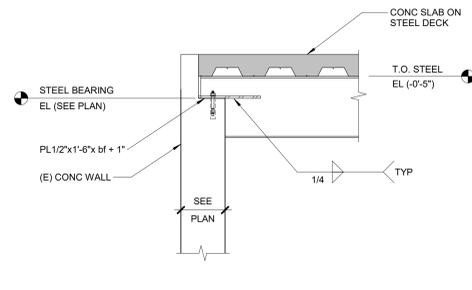
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NO.	DESCRIPTION	DATE

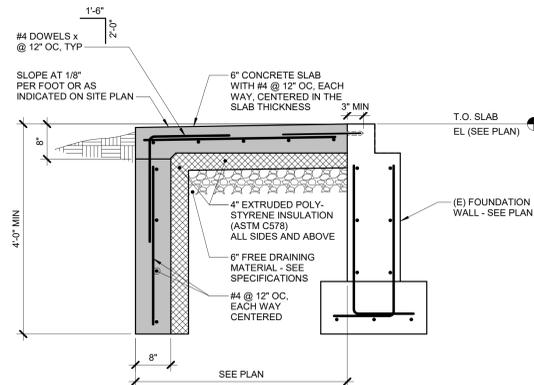
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DRAWN BY ARUMON
REVIEWED BY TODBAR

FOUNDATION AND FRAMING PLAN

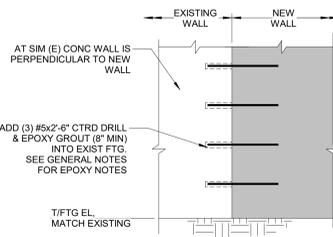
SW-100



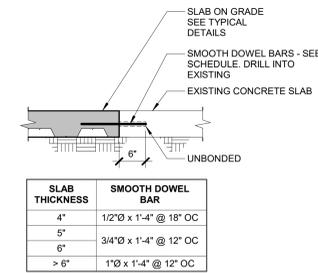
1 BEAM BEARING ON CONC WALL
3/4" = 1'-0"



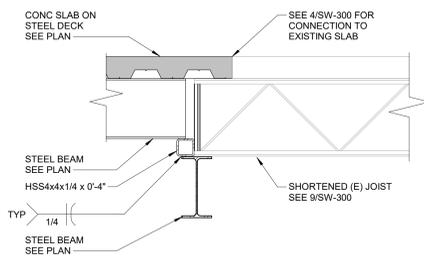
2 TYPICAL STOOP DETAIL
3/4" = 1'-0"



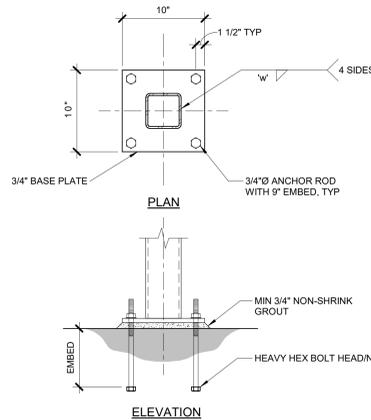
3 NEW WALL TO EXISTING WALL
3/4" = 1'-0"



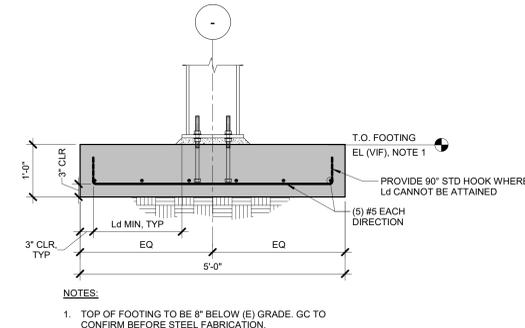
4 NEW TO EXISTING SLAB DETAIL
3/4" = 1'-0"



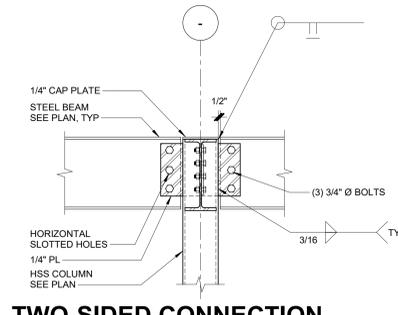
5 JOIST MODIFICATION DETAIL
3/4" = 1'-0"



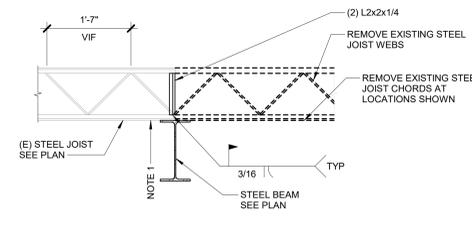
6 HSS COLUMN BASE PLATE
1" = 1'-0"



7 COLUMN FOOTING DETAIL
3/4" = 1'-0"

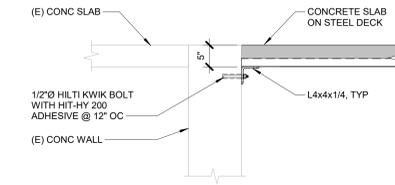


8 TWO-SIDED CONNECTION AT HSS COLUMN
3/4" = 1'-0"
S_5-013



NOTES:
1. SHORE STEEL JOIST BEFORE CUTTING CHORDS AND WEBS.
SHORING LOAD EACH JOIST:
1.0 DL = 500 LBS
1.0 LL = 860 LBS (20 PSF CONSTRUCTION LL)

9 SHORTENED EXISTING JOIST
3/4" = 1'-0"



10 SLAB TO (E) WALL
3/4" = 1'-0"

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DETAILS

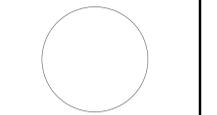
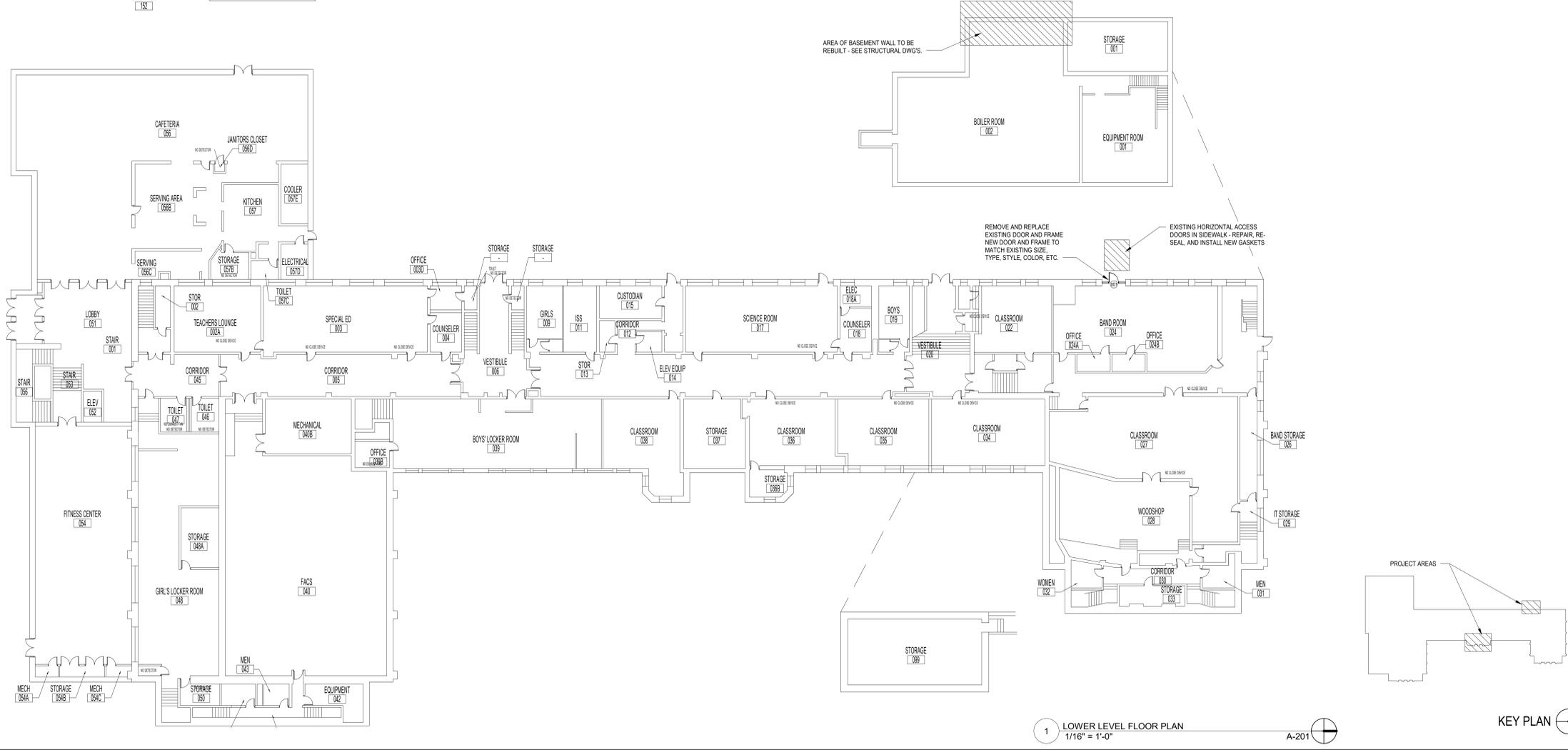
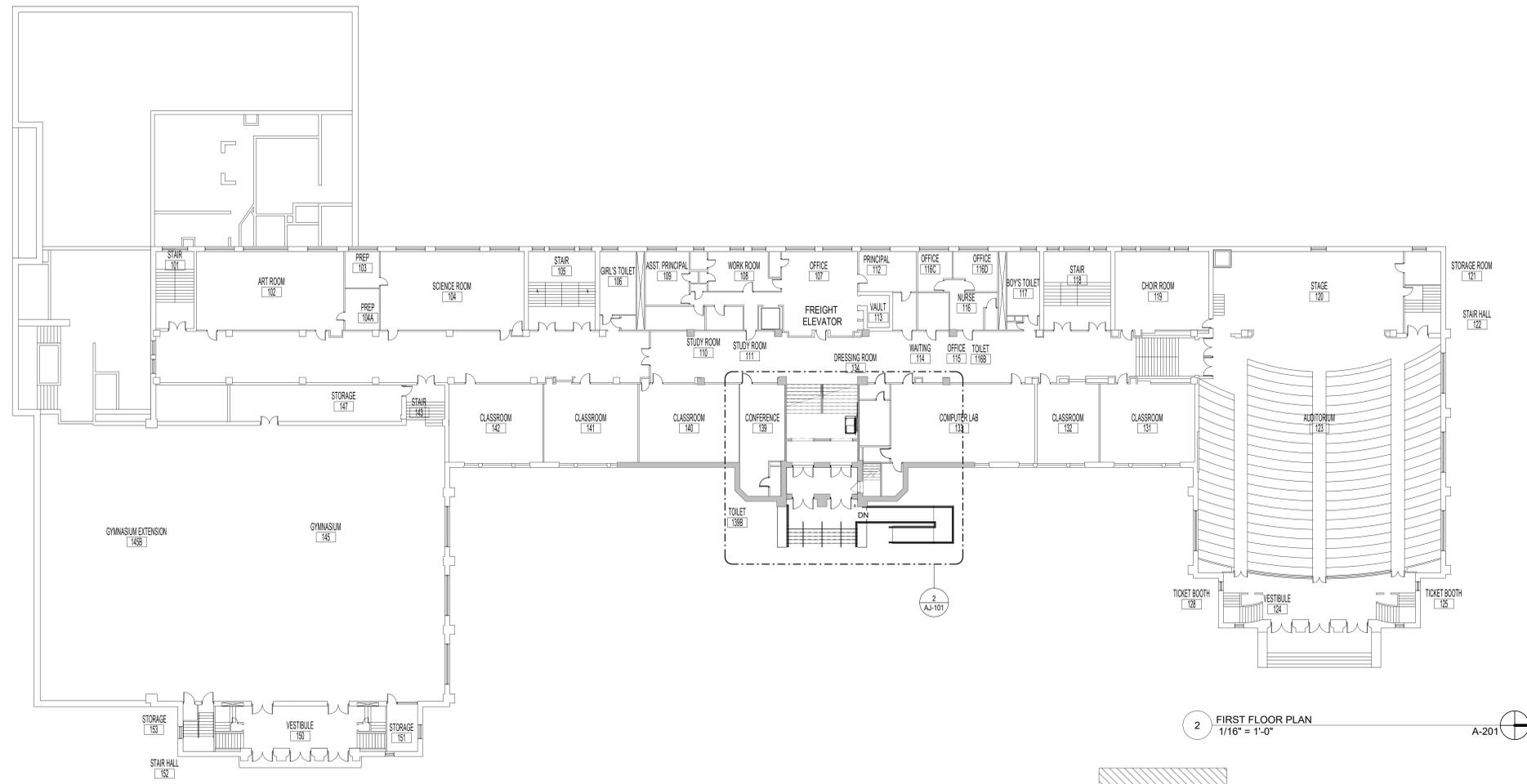
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REVIEWED BY Checker

OVERALL REFERENCE PLAN

AJ-011
BIDDING

FLOOR PLAN LEGEND			
	DETAIL SECTION TAG		CORNER GReP - REFER TO DETAIL
	BUILDING & WALL SECTION TAG		FIRE EXTINGUISHER - WALL MOUNTED
	WALL TYPE - REFER TO A-611 FOR WALL TYPES		RECESSED FIRE EXTINGUISHER AND CABINET
	DOOR NUMBER - REFER TO A-601 FOR DOOR AND FRAME SCHEDULE		FIRE RATED RECESSED FIRE EXTINGUISHER AND CABINET
	ROOM NAME		SEMI-RECESSED FIRE EXTINGUISHER AND CABINET
	ROOM NUMBER		SEMI-RECESSED FIRE EXTINGUISHER AND CABINET AND BLANKET
	INTERIOR ELEVATION TAG		MARKER BOARD
	EXTERIOR ELEVATION TAG		TACK BOARD
	COLUMN TAG AND COLUMN CENTERLINE		FLOOR DRAIN
	STOREFRONT, CURTAIN WALL, AND WINDOW ELEVATION		AREA NOT IN CONTRACT
			NEW WORK NOTE

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MOLINE-COAL VALLEY SCHOOL DISTRICT

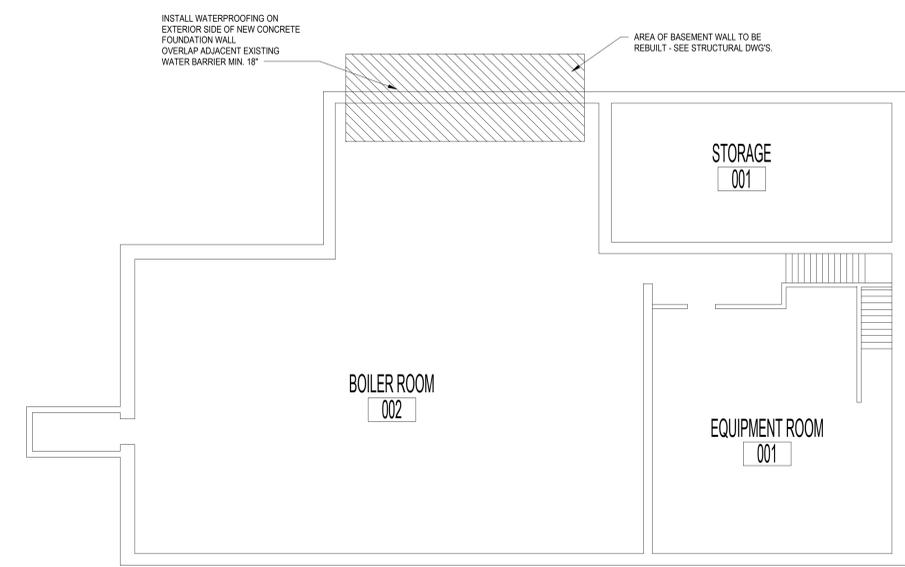
2025 CONTROLLED ENTRY IMPROVEMENTS

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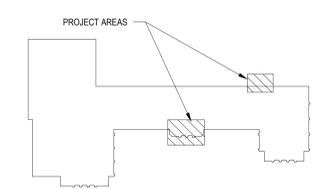
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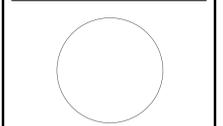
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1 LOWER LEVEL FLOOR PLAN
1/8" = 1'-0"



KEY PLAN



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LOWER LEVEL FLOOR PLAN

AJ-100
BIDDING

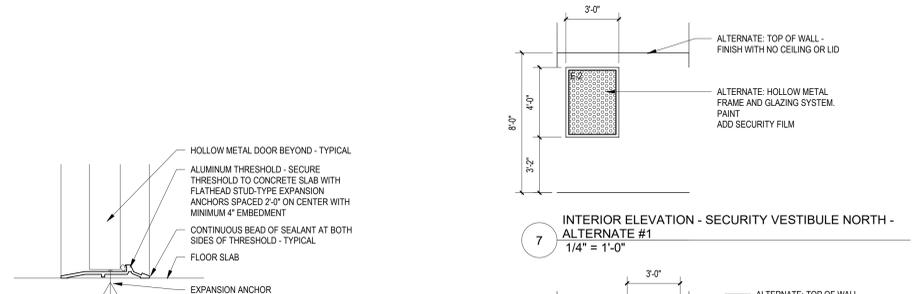
DOOR AND FRAME SCHEDULE													
DOOR #	TYPE	MATERIAL	OPENING			THICKNESS	FRAME			FRAME DETAILS			REFERENCED NOTES
			WIDTH	HEIGHT	S		MATERIAL	DEPTH	HDWR	HEAD	JAMB	SILL	
001	N	HM	3'-0"	7'-0"	1-3/4"	DF	HM	5-3/4"	01				EXISTING DOOR AND FRAME TO BE REPLACED. NEW DOOR AND FRAME TO MATCH EXISTING STYLE, COLOR, SIZE, ETC.
100	FG2	HM	5'-8"	7'-0"	1-3/4"	DF	HM	5-3/4"	02				VERIFY DIMENSIONS IN FIELD. PROVIDE CARD READER AND ELECTRIC LATCH, AUTOMATIC DOOR OPERATOR SYSTEM, PAINT.
100A	FG2	HM	5'-8"	7'-0"	1-3/4"	DF	HM	5-3/4"	03				VERIFY DIMENSIONS IN FIELD. PROVIDE CARD READER AND ELECTRIC LATCH, AUTOMATIC DOOR OPERATOR SYSTEM, PAINT.
100B	FG2	HM	5'-8"	7'-0"	1-3/4"	DF	HM	5-3/4"	04				VERIFY DIMENSIONS IN FIELD. PROVIDE CARD READER AND ELECTRIC LATCH, AUTOMATIC DOOR OPERATOR SYSTEM, PAINT.
100C	FG2	HM	5'-8"	7'-0"	1-3/4"	DF	HM	5-3/4"	05				VERIFY DIMENSIONS IN FIELD. PROVIDE CARD READER AND ELECTRIC LATCH, AUTOMATIC DOOR OPERATOR SYSTEM, PAINT.
102	F	HM	3'-0"	7'-0"	1-3/4"	DF	HM	5-3/4"	06				ALTERNATE: DOOR FOR VESTIBULE SECURITY OFFICE.

ARCHITECTURAL PLAN NOTES	
NOTE	DESCRIPTION
N001	INFILL EXISTING OPENING WITH DOUBLE DOOR TO MATCH EXISTING ADJACENT DOORS.
N002	METAL RAILING SYSTEM WITH HANDRAIL.
N003	CONCRETE KNEE WALL. FILL ALL HOLES IN CONCRETE AND PROVIDE RUB FINISH.
N004	NEW CONCRETE STEPS UP TO LEVEL OF EXISTING VESTIBULE - SEE CIVIL DWGS.
N005	CONCRETE RAMP WITH GUARDRAILS AND HANDRAILS.
N006	WALL MOUNT, SIDE LOAD, INCLINE WHEELCHAIR LIFT.
N007	PEDESTAL FOR ADA DOOR ACTUATOR, APHONE, AND CARD READER.
N008	ADD 3-5/8" STUD WALL WITH 5/8" GYP. BD ON EA. SIDE AT TOP OF EXISTING STAIR - EXTEND UP TO STRUCTURE ABOVE.
N009	SLOPE TOP OF CONCRETE KNEE WALL 1/4" PER 12" AWAY FROM STAIRS.
N010	PATCH AND REPAIR EXISTING WALLS AND CEILINGS AS REQUIRED AT AREAS OF NEW WORK. PAINT APPLICABLE LOCATIONS, MATCH EXISTING ADJACENT.

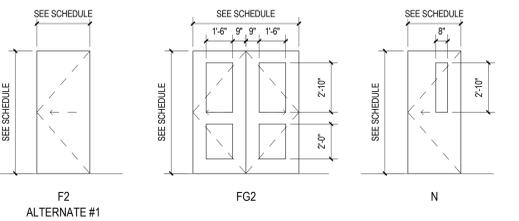
DEMOLITION PLAN GENERAL NOTES	
1	REFERENCED DEMOLITION NOTES REFER TO THE MINIMUM AMOUNT OF DEMOLITION REQUIRED TO COMPLETE THE PROJECT. TRADE CONTRACTORS SHALL VISIT PROJECT SITE TO BECOME FAMILIAR WITH COMPLETE SCOPE OF REMOVALS/DEMOLITIONS AND FIELD VERIFY THE EXTENT OF DEMOLITION.
2	VERIFY DIMENSIONS AND BIDDING PURPOSES ONLY. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD. THE ACTUAL AREA OF DEMOLITION SHOULD BE KEPT TO THE MINIMUM REQUIRED TO COMPLETE THE PROJECT REQUIREMENTS.
3	IN THE EVENT THAT AN EXISTING ITEM NOT SHOWN ON THE DRAWINGS COMFLICTS WITH WORK UNDER THIS CONTRACT, CONTACT THE ARCHITECT PRIOR TO REMOVAL OF THAT ITEM.
4	ALL UTILITIES SHALL REMAIN IN SERVICE FOR OTHER OCCUPANCIES. ANY SHUTDOWNS OF BUILDING MUST BE APPROVED BY OWNER AND OCCUR AT OFF HOURS AS DEFINED BY OWNER.
5	THE OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL MATERIAL OR EQUIPMENT IDENTIFIED TO BE REMOVED. ALL ITEMS NOT TURNED OVER TO THE OWNER SHALL BE DISPOSED OF PROPERLY AND LAWFULLY.
6	REFER TO DRAWINGS FOR LOCATIONS OF ALL ITEMS TO BE REINSTALLED. ALL ITEMS NOT SPECIFICALLY INDICATED FOR REINSTALLATION ON DRAWINGS ARE TO BE TURNED OVER TO THE OWNER. ALL ITEMS NOT TURNED OVER TO THE OWNER SHALL BE DISPOSED OF PROPERLY AND LAWFULLY.
7	ALL REMOVED ITEMS IDENTIFIED FOR REINSTALLATION OR TO BE TURNED OVER TO THE OWNER SHALL BE PROTECTED UNTIL TIME OF REINSTALLATION OR OWNER POSSESSION. DAMAGED ITEMS SHALL BE REPAIRED OR REPLACED BY THE RESPONSIBLE TRADE CONTRACTOR.
8	THROUGHOUT DEMOLITION AND CONSTRUCTION, PROTECT ITEMS SCHEDULED TO REMAIN AND/OR ALL ADJACENT MATERIALS AND EQUIPMENT, ETC. INDICATED TO REMAIN. COORDINATE REMOVAL AND PROTECTIONS WITH OWNER.
9	DO NOT COMMENCE DEMOLITION UNTIL OWNER HAS REMOVED ALL ARTWORK AND DISPLAYS FROM AREAS OF DEMOLITION.
10	AT REMOVAL OF SELECTED DEMOLITION ITEMS WHERE NO NEW CONSTRUCTION IS IDENTIFIED, PATCH, CLEAN, PREPARE, AND PAINT SURFACES TO MATCH FINISH COLOR, TEXTURE AND SHEEN OF ADJACENT SURFACES.
11	ALL ITEMS TO BE REMOVED, ALSO REMOVE ALL ASSOCIATED BRACKETS, SUPPORTS, FASTENERS, ANCHORS, ETC. PATCH, CLEAN, PREPARE, AND PAINT SURFACES TO MATCH FINISH COLOR, TEXTURE AND SHEEN OF ADJACENT SURFACES.
12	CONTRACTOR SHALL REMOVE EXISTING PLUMBING, MECHANICAL, ELECTRICAL OR OTHER MISCELLANEOUS ITEMS REQUIRED TO COMPLETE NEW WORK BUT NOT REQUIRED TO REMAIN.
13	CONTRACTOR SHALL REMOVE ALL DEBRIS AND TRASH RESULTING FROM CONSTRUCTION ON A DAILY BASIS.
14	GENERAL CONTRACTOR SHALL RECYCLE DEMOLITION CONSTRUCTION DEBRIS IN ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION AND SUSTAINABLE BEST PRACTICES.
15	IN THE EVENT HAZARDOUS MATERIALS ARE UNCOVERED GENERAL CONTRACTOR IS NOT RESPONSIBLE FOR REMOVAL/ABATEMENT OF HAZARDOUS MATERIALS. CONTRACTOR TO PROVIDE REMOVAL/ABATEMENT AT LOCATIONS NECESSARY.
16	REFER TO THE CIVIL, LANDSCAPE, STRUCTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION, ELECTRICAL AND TECHNOLOGY DRAWINGS FOR THE DEMOLITION WORK SPECIFIC TO THOSE DISCIPLINES.
17	STRUCTURAL ITEMS SHOWN AS TO BE REMOVED ARE FOR REFERENCE ONLY. VERIFY APPROPRIATE SHORING OR REINFORCEMENT CONDITION WITH STRUCTURAL DRAWINGS.

DEMOLITION NOTES	
Type	DESCRIPTION
D03.01	PORTION OF EXISTING CONCRETE SLAB TO BE DEMOLISHED IN PREPARATION FOR NEW CONSTRUCTION.
D03.02	EXISTING CONCRETE STAIRS TO BE DEMOLISHED IN PREPARATION FOR NEW CONSTRUCTION.
D03.03	EXISTING CONCRETE WALL TO BE DEMOLISHED IN PREPARATION FOR NEW CONSTRUCTION.
D08.01	EXISTING HOLLOW METAL DOORS AND FRAMES TO BE DEMOLISHED IN PREPARATION FOR NEW DOORS AND FRAMES.
D08.02	EXISTING HOLLOW METAL DOOR TO REMAIN.
D08.01	PROTECT SURFACES AND FINISHES AS REQUIRED FOR DURATION OF PROJECT. REPAIR ALL DAMAGES TO PRE-CONSTRUCTION CONDITIONS.
D09.02	EXISTING CEILING TO REMAIN - REPAIR ALL DAMAGES TO PRE-CONSTRUCTION CONDITIONS.
D09.03	REMOVE EXISTING STAIR HANDRAIL.
D21.01	EXISTING APHONE SYSTEM AND CARD READER TO REMAIN.
D28.01	EXISTING FIRE ALARM PANELS TO REMAIN.

GLAZING TYPES	
EXTERIOR:	
E-1	1" INSULATED CLEAR GLAZING UNIT
E-2	1" INSULATED CLEAR GLAZING UNIT W/ SECURITY FILM AND ATTACHMENT SYSTEM
INTERIOR:	
I-1	1/4" CLEAR TEMPERED GLASS
I-2	1/4" CLEAR TEMPERED GLASS WITH TRANSLUCENT FILM
	SECURITY FILM



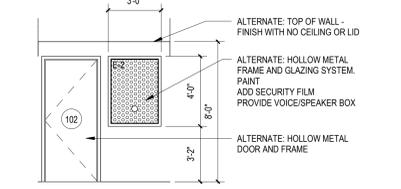
7 INTERIOR ELEVATION - SECURITY VESTIBULE NORTH - ALTERNATE #1
1/4" = 1'-0"



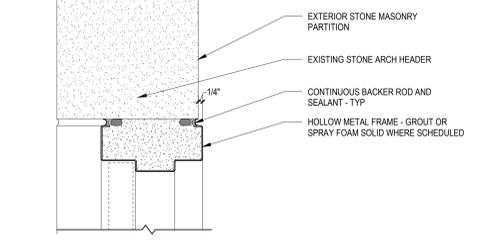
DOOR TYPES
1/4" = 1'-0"



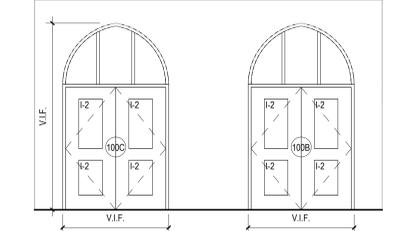
10 DOOR OPENING SILL DETAIL
3" = 1'-0"



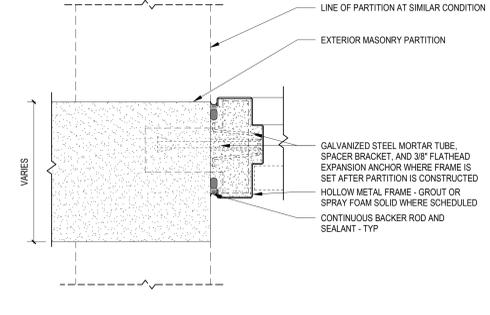
6 INTERIOR ELEVATION - SECURITY VESTIBULE SOUTH - ALTERNATE #1
1/4" = 1'-0"



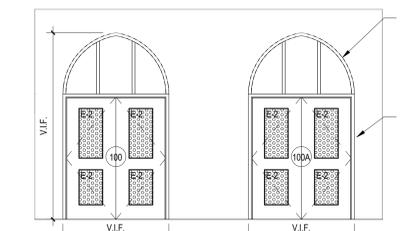
9 TYP. HOLLOW METAL - HEAD DETAIL - MASONRY
3" = 1'-0"



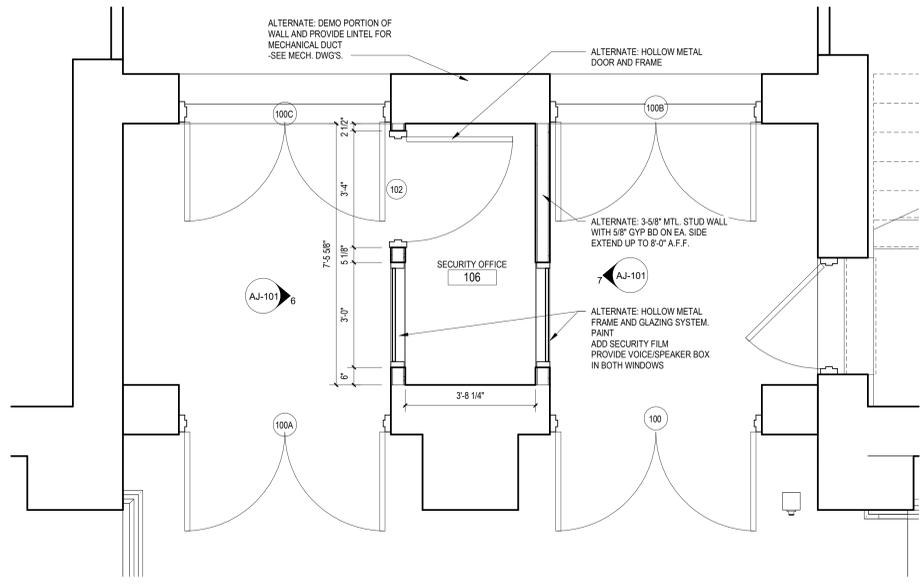
5 INTERIOR ELEVATION - WEST
1/4" = 1'-0"



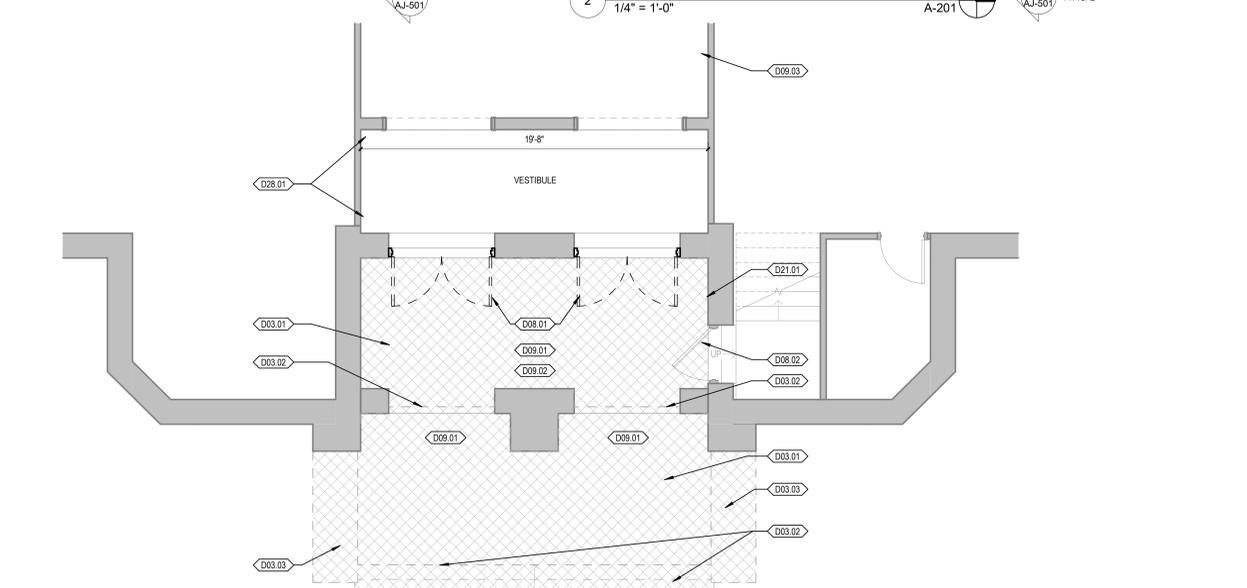
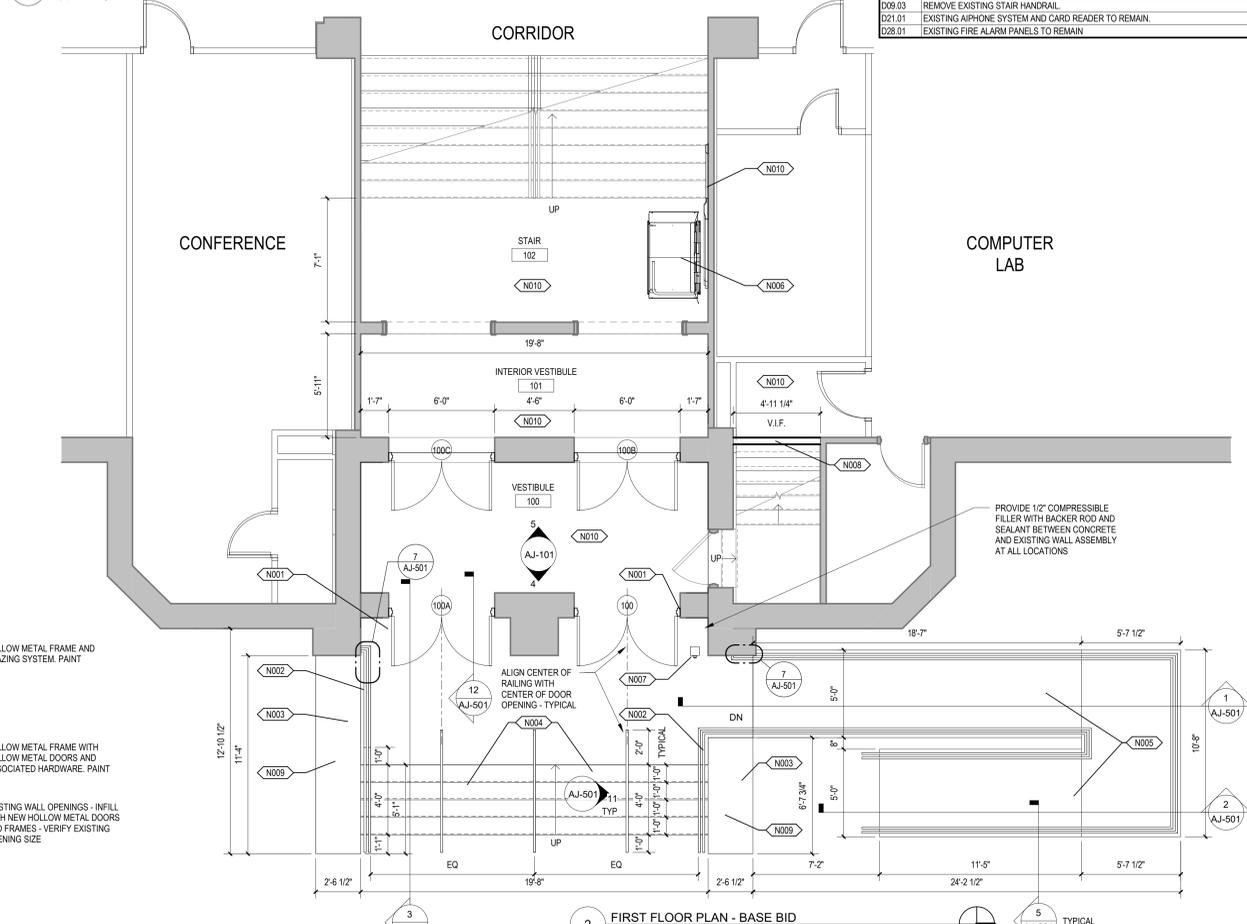
8 TYP. HOLLOW METAL - JAMB DETAIL - MASONRY
3" = 1'-0"



4 INTERIOR ELEVATION - EAST
1/4" = 1'-0"



3 FIRST FLOOR PLAN - ALTERNATE #1
1/2" = 1'-0"



2 FIRST FLOOR PLAN - BASE BID
1/4" = 1'-0"

1 FIRST FLOOR DEMOLITION PLAN
1/4" = 1'-0"

DEMOLITION LEGEND	
D##	DEMOLITION TAG
---	EXISTING WALLS TO REMAIN
- - -	EXISTING WALLS TO BE DEMOLISHED
---	LIMITS OF DEMOLITION WORK - SEE MECH DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS
---	EXISTING DOORS TO REMAIN
---	EXISTING DOORS TO BE DEMOLISHED

GENERAL NOTES	
1	ALL WORK SHALL BE COMPLIANT WITH THE CODES, ORDINANCES, AND REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION OVER THE PROJECT LOCATION.
2	THE TRADE CONTRACTORS PERSONNEL SHALL NOT BE ALLOWED ON THE PROJECT SITE WITHOUT COMPLYING WITH THE OWNER'S SECURITY PROTOCOLS.
3	WHERE CONFLICTS EXIST WITHIN OR BETWEEN PARTS OF THE CONTRACT DOCUMENTS, OR BETWEEN THE CONTRACT DOCUMENTS AND APPLICABLE STANDARDS, CODES, ORDINANCES, AND REGULATIONS THE MORE STRINGENT OR HIGH QUALITY OR GREATER QUALITY REQUIREMENTS SHALL APPLY. LARGE-SCALE DRAWINGS TAKE PRECEDENCE OVER SMALL-SCALE DRAWINGS. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS, AND NOTED MATERIALS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATIONS.
4	THE CONTRACT DOCUMENTS IDENTIFY THE MINIMUM AMOUNT OF WORK REQUIRED. TRADE CONTRACTORS SHALL PROVIDE THE EXTENT OF WORK NECESSARY FOR A COMPLETE INSTALLATION.
5	REFER TO THE PROJECT MANUAL FOR PRODUCTS, MATERIALS, AND PROCEDURES NOT IDENTIFIED ON THE CONTRACT DRAWINGS.
6	THE ACTUAL AREAS OF WORK SHALL BE KEPT TO THE MINIMUM REQUIRED TO PROPERLY EXECUTE THE CONTRACT REQUIREMENTS. EXISTING DIMENSIONS AND HATCHED AREAS INDICATED ON CONTRACT DOCUMENTS ARE FOR GENERAL REFERENCE AND BIDDING PURPOSES ONLY.
7	PRIOR TO BIDDING, THE TRADE CONTRACTORS SHALL FIELD VERIFY THE EXTENT OF WORK REQUIRED TO PROPERLY EXECUTE THE CONTRACT REQUIREMENTS. ADDITIONAL WORK THAT IS REQUIRED, WAS VISIBLE, AND COULD HAVE BEEN IDENTIFIED DURING BIDDING SHALL BE COMPLETED BY THE RESPONSIBLE TRADE CONTRACTORS AT NO ADDITIONAL COST TO THE OWNER.
8	THE TRADE CONTRACTORS SHALL BE FAMILIAR WITH THE EXISTING CONDITIONS AND NOTIFY THE ARCHITECT OR CONSTRUCTION MANAGER OF ANY CONFLICTS WITH THE CONSTRUCTION DOCUMENTS PRIOR TO PREPARING SUBMITTALS OR BEGINNING ANY WORK.
9	THE TRADE CONTRACTORS SHALL PROVIDE ALL TEMPORARY CONSTRUCTION AND/OR SHORING REQUIRED TO PROPERLY EXECUTE THE REQUIREMENTS OF THEIR CONTRACT.
10	PATCHING, REPAIRING, AND REFINISHING WORK SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE EXISTING ADJACENT CONSTRUCTION AS CLOSELY AS POSSIBLE IN MATERIAL, FINISH, COLOR, TEXTURE AND SHEEN. REFER TO THE CONTRACT DRAWINGS FOR EXISTING BUILDING CONSTRUCTION TO REMAIN.
11	TRADE CONTRACTORS SHALL PROTECT THEIR WORK AND EXISTING CONSTRUCTION, FINISHES, AND EQUIPMENT TO REMAIN TO PREVENT DAMAGE. ANY WORK AND/OR EXISTING FINISHES TO REMAIN DAMAGED DURING THE REMOVAL OF EXISTING WORK OR THE INSTALLATION OF NEW WORK SHALL BE REPAIRED, REPLACED AND REFINISHED BY THE RESPONSIBLE TRADE CONTRACTOR TO MATCH THE ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER AND TO THE SATISFACTION OF THE OWNER AND ARCHITECT.
12	THE ARCHITECT SHALL REVIEW AND APPROVE LOCATIONS FOR ALL JUNCTION BOXES AND RACEWAYS PRIOR TO INSTALLATION OF WIRING / CABLING.
13	EXISTING SITE FEATURES, MATERIALS, ADJUTIES, LANDSCAPING, ETC. DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE RESTORED, REPAIRED, OR REPLACED BY THE RESPONSIBLE TRADE CONTRACTORS AT NO ADDITIONAL COST TO THE OWNER AND TO THE SATISFACTION OF THE OWNER AND ARCHITECT.
14	CONTRACTOR SHALL COORDINATE THE WORK WITH ALL PARTIES INVOLVED SO THAT THE CONSTRUCTION CAN PROCEED SMOOTHLY, WITHOUT TRADE INTERFERENCE OR WASTE OF TIME AND MATERIAL.
15	AFTER REMOVAL OF ITEMS IDENTIFIED TO BE REMOVED, CLEAN AND REPAIR THE EXISTING SURFACES TO MATCH THE CONSTRUCTION MATERIALS AND METHODS, FINISHES, TEXTURE, PATTERN, COLOR AND SHEEN OF THE ADJACENT SURFACES TO REMAIN. PATCH, CLEAN, PREPARE, PAINT, ETC. EXISTING SURFACES AS REQUIRED.
16	WHERE EXISTING EQUIPMENT IS REMOVED AND NEW EQUIPMENT IS SMALLER AND INSTALLED IN THE SAME LOCATION, CLEAN AND REPAIR THE SIGHT EXPOSED SURFACES TO REMAIN TO MATCH THE CONSTRUCTION MATERIALS AND METHODS, FINISHES, TEXTURE, PATTERN, COLOR AND SHEEN OF THE ADJACENT SURFACES TO REMAIN. PATCH, CLEAN, PREPARE, PAINT, ETC. EXISTING SURFACES AS REQUIRED.
17	ALL PENETRATIONS THROUGH ANY MATERIAL SHALL BE SEALED WITH A COMPATIBLE MATERIAL APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.
18	PROVIDE A CONTINUOUS BEAD OF SEALANT BETWEEN DISSIMILAR MATERIALS, U.N.O.
19	PROVIDE GALVANIC PROTECTION SEPARATING DISSIMILAR METALS.
20	WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. AN ASBESTOS MANAGEMENT PLAN IS AVAILABLE IN THE SCHOOL FOR REVIEW UPON REQUEST. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS(S) CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

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PROJECT AREAS	
	KEY PLAN

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	KEY PLAN

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VESTIBULE PLANS AND DETAILS - JOHN DEERE

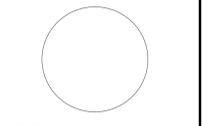
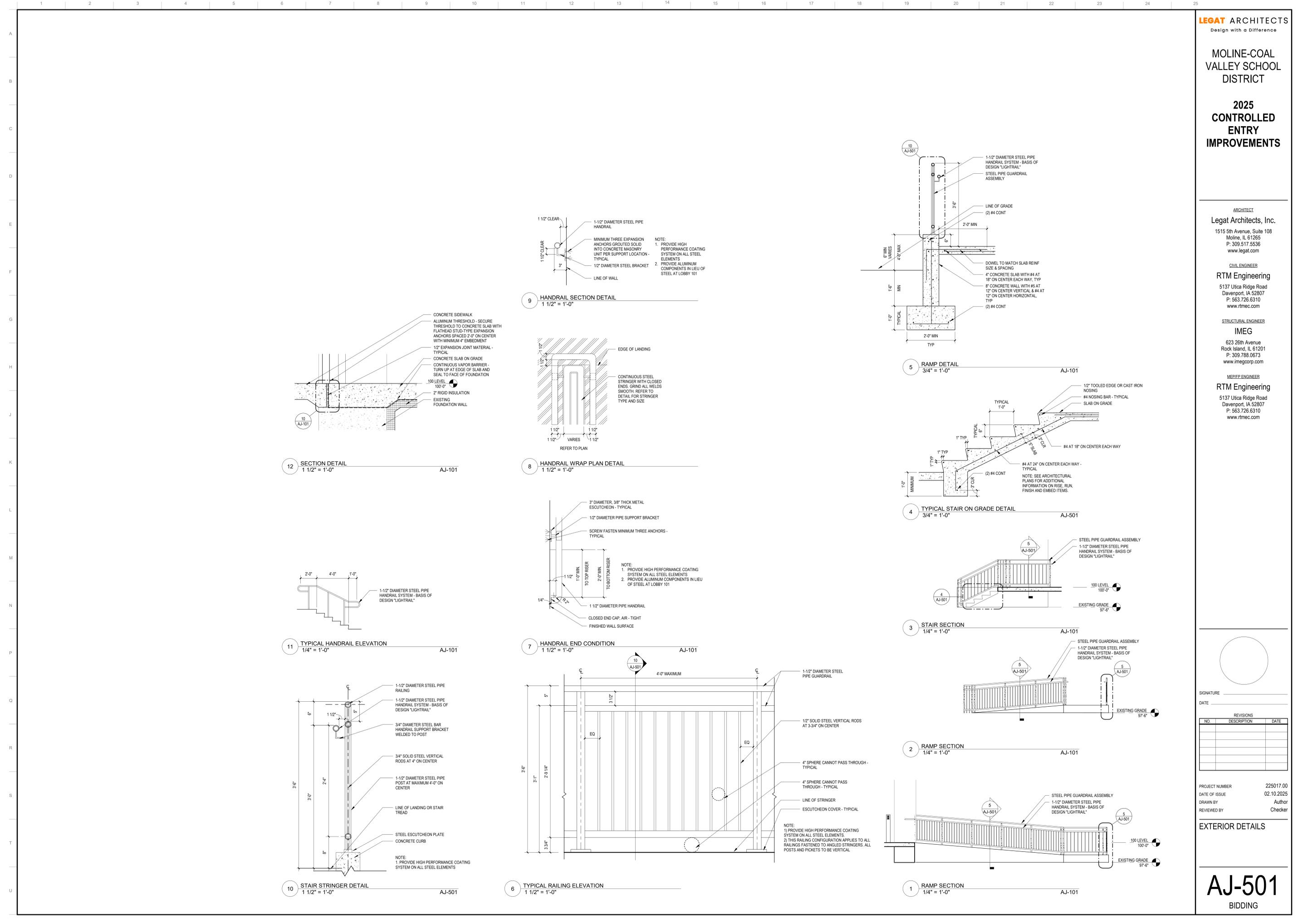
AJ-101
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EXTERIOR DETAILS

AJ-501
BIDDING

ARCHITECT

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FIRE PROTECTION SPECIFICATIONS

THE GENERAL CONDITIONS AND SUPPLEMENTAL GENERAL CONDITIONS ISSUED BY THE ARCHITECT SHALL GOVERN WHERE APPLICABLE.

THIS CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AT THE JOB SITE BEFORE SUBMITTING BID. FAILURE TO RECOGNIZE WORK REQUIRED SHALL BE AT THE EXPENSE OF THIS CONTRACTOR. NO CONSIDERATION SHALL BE GIVEN FOR ADDITIONAL COMPENSATION AFTER THE LETTING OF BIDS.

ENTIRE INSTALLATION SHALL BE PERFORMED IN A FIRST-CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEMS SHALL BE FULLY OPERATIONAL. ACCEPTANCE BY THE OWNER SHALL BE A CONDITION WITH OTHER TRADES IN ORDER TO AVOID INTERFERENCES, PRESERVE MAXIMUM HEADROOM AND AVOID OMISSIONS.

CONTRACTOR TO MAKE ALL NECESSARY TAPS, AS CALLED FOR ON THE DRAWINGS.

THIS CONTRACTOR SHALL REMOVE ALL DEBRIS ON COMPLETION OF THE JOB AND CLEAN ALL FIXTURES.

IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO START-UP, ADJUST AND CHECK FOR PROPER OPERATION. ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT.

THIS CONTRACTOR SHALL ALLOW IN HIS INITIAL BID THE COST OF SERVICE ON ALL EQUIPMENT INSTALLED UNDER HIS CONTRACT FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL INSPECTION OF THE WORK.

THIS CONTRACTOR SHALL SUBMIT TO THE ARCHITECT/ENGINEER, OWNERS INSURANCE UNDERWRITER, AND LOCAL FIRE DEPARTMENT FOR APPROVAL COMPLETE INSTALLATION AND DESIGN DRAWINGS SHOWING THE SPRINKLER SYSTEM LAYOUTS. THE LAYOUT SHALL INDICATE ALL OF THE SPRINKLER PIPING, SPRINKLER HEAD LOCATIONS AND DETAILS OF ANCHORS AND SUPPORTS AS REQUIRED.

THE SPRINKLER SYSTEM SHALL BE LAID OUT TO ELIMINATE ALL CONFLICTS BETWEEN THE SPRINKLER SYSTEM AND THE STRUCTURE INCLUDING THE MECHANICAL AND ELECTRICAL SYSTEMS AS THEY ARE SHOWN ON THE CONTRACT DRAWINGS.

THE LAYOUT SHALL INDICATE COORDINATION BETWEEN SUCH ITEMS AS DUCTWORK, LIGHTS, STRUCTURAL MEMBERS, ETC. PIPE FOR ABOVE GRADE SHALL BE NEW SCHEDULE 40 FOR BRANCHES AND SCHEDULE 10 FOR MAINS. STANDARD WEIGHT STEEL DESIGNED FOR 175 LB. WORKING PRESSURE, CONFORMING TO A.S.A. B36.10 MANUFACTURED IN THE U.S.

FITTINGS SHALL BE NEW 1/2" LB. CAST IRON SCREWED OR FLANGED CONFORMING TO A.S.A. B16.4, MANUFACTURED IN THE U.S. AND APPROVED FOR FIRE PROTECTION SPRINKLER SYSTEMS.

THE SPRINKLER RISERS, MAINS AND BRANCH PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE, USING APPROVED TYPE STEEL HANGERS, BRACKETS, ANCHORS AND STUDS, OF SIZE AND NUMBER IN ACCORDANCE WITH N.F.P.A. #13.

THE SPRINKLER SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH PARAGRAPH 13 OF THE NATIONAL FIRE PROTECTION ASSOCIATION AND ALL REQUIREMENTS OF THE LOCAL FIRE DEPARTMENT AND OWNERS' INSURANCE UNDERWRITER.

ALL PIPING ABOVE GRADE SHALL BE HYDROSTATICALLY TESTED AT 200 PSI FOR A TWO-HOUR PERIOD IN ACCORDANCE WITH N.F.P.A. #24.

CONTRACTOR IS RESPONSIBLE FOR SPACING, PIPE SIZE, OFFSETS, CLEARANCES, VALVES, ELBOWS, HANGERS, ALL ACCESSORIES AND QUANTITIES FOR ALL.

THIS CONTRACTOR SHALL DESIGN AND INSTALL A COMPLETE SPRINKLER SYSTEM PER NFPA AND LOCAL CODES

WATER SUPPLY AND DISTRIBUTION:

- DENOTES PUBLIC WATER MAIN (INDICATE PIPE SIZE AND MATERIAL)
- DENOTES PRIVATE WATER MAIN (INDICATE PIPE SIZE AND MATERIAL)
- DENOTES WATER MAIN UNDER BUILDING (INDICATE PIPE SIZE AND MATERIAL)
- DENOTES SUCTION PIPE (INDICATE PIPE SIZE AND MATERIAL)
- DENOTES THRUST BLOCK
- DENOTES RISER
- DENOTES VALVE IN GENERAL (BASIC SHAPE - INDICATE VALVE SIZE)
- DENOTES VALVE IN PIT (INDICATE VALVE SIZE)
- DENOTES VALVE WITH INDICATOR POST (INDICATE VALVE SIZE)
- DENOTES KEY-OPERATED VALVE (INDICATE VALVE SIZE)
- DENOTES OS&Y VALVE (OUTSIDE SCREW AND YOKE, RISING STEM - INDICATE VALVE SIZE)
- DENOTES INDICATING BUTTERFLY VALVE (INDICATE VALVE SIZE)
- DENOTES NON-INDICATING VALVE (NON-RISING STEM - INDICATE VALVE SIZE)
- DENOTES CHECK VALVE (BASIC SHAPE - INDICATE VALVE SIZE AND DIRECTION OF FLOW)
- DENOTES BACKFLOW PREVENTER - DOUBLE-CHECK TYPE
- DENOTES BACKFLOW PREVENTER - REDUCED PRESSURE ZONE TYPE
- DENOTES PRESSURE REGULATING VALVE
- DENOTES PRESSURE RELIEF VALVE
- DENOTES FLOAT VALVE
- DENOTES METER (INDICATE TYPE)
- DENOTES PRIVATE HYDRANT, ONE HOSE OUTLET (INDICATE SIZE, TYPE OF THREAD OR CONNECTION)
- DENOTES PUBLIC HYDRANT, TWO HOSE OUTLETS (INDICATE SIZE, TYPE OF THREAD OR CONNECTION)
- DENOTES PUBLIC HYDRANT, TWO HOSE OUTLETS AND PUMPER CONNECTION (INDICATE SIZE, TYPE OF THREAD OR CONNECTION)
- DENOTES WALL HYDRANT, TWO HOSE OUTLETS (INDICATE SIZE, TYPE OF THREAD OR CONNECTION)
- DENOTES PRIVATE HOUSED HYDRANT, TWO HOSE OUTLETS (INDICATE SIZE, TYPE OF THREAD OR CONNECTION)
- DENOTES SIAMESE FIRE DEPARTMENT CONNECTION (SPECIFY TYPE, SIZE, AND ANGLE)
- DENOTES FREESTANDING SIAMESE FIRE DEPARTMENT CONNECTION (SIDEWALK OR PIT TYPE, SPECIFY SIZE)
- DENOTES SINGLE FIRE DEPARTMENT CONNECTION (SPECIFY TYPE, SIZE, THREAD, AND ANGLE)
- DENOTES FIRE PUMP WITH DRIVER
- DENOTES FREESTANDING TEST HEADER (SPECIFY NUMBER AND SIZES OF OUTLETS)
- DENOTES WALL-MOUNTED TEST HEADER (SPECIFY NUMBER AND SIZES OF OUTLETS)
- FLOW SWITCH
- PRESSURE GAUGE

PIPING, VALVES, HANGERS, AND CONTROL DEVICES:

- DENOTES SPRINKLER PIPING AND BRANCHLINE (INDICATE PIPE SIZE)
- DENOTES ANGLE VALVE (ANGLE HOSE VALVE - INDICATE SIZE, TYPE, THREADS, AND OTHER REQUIRED DATA)
- DENOTES CHECK VALVE (GENERAL)
- DENOTES ALARM CHECK VALVE (SPECIFY SIZE, DIRECTION OF FLOW)
- DENOTES DRY PIPE VALVE WITH QUICK OPENING DEVICE (ACCELERATOR OR EXHAUSTER - SPECIFY SIZE AND TYPE)
- DENOTES DRY PIPE VALVE (SPECIFY SIZE)
- DENOTES DELUGE VALVE (SPECIFY SIZE AND TYPE)
- DENOTES PREACTION VALVE (SPECIFY SIZE AND TYPE)

GENERAL ABBREVIATIONS:

- AE ARCHITECT/ENGINEER
- ABV ABOVE
- AFF ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- ALT ALTERNATE
- APPROX APPROXIMATELY
- ARCH ARCHITECT
- AVG AVERAGE
- BFG BELOW FINAL GRADE
- BLDG BUILDING
- CLG CEILING
- DEG-F, °F DEGREES FAHRENHEIT
- DIR DIRECT
- DISC DISCONNECT
- DN DOWN
- EC ELECTRICAL CONTRACTOR
- ELEV ELEVATION REFERENCE
- EM EMERGENCY
- EP EXPLOSION PROOF
- FLUSH FURNISHED BY OTHERS
- FBO FURNISHED BY OTHERS
- FLT FULL LOAD AMPS
- FLR FLOOR
- FP FIRE PROTECTION
- FS FLOW SWITCH
- GC GENERAL CONTRACTOR
- GRD GROUND
- GYP GYPSUM BOARD
- HVAC HEATING & VENTILATING - AIR CONDITIONING
- HVC HEATING VENTILATING CONTRACTOR
- HW HEAVY WALL
- ID INDIRECT
- IE INVERT ELEVATION
- IL INTERLOCK
- IU IN UNIT
- J-BX JUNCTION BOX
- LG LAY-IN GRID
- LTG LIGHTING
- LV LOW VOLTAGE
- LVT LINE VOLTAGE THERMOSTAT
- MAX MAXIMUM
- MIN MINIMUM
- MISC MISCELLANEOUS
- MTD MOUNTED
- N/A NOT APPLICABLE
- NIC NOT IN CONTRACT
- NTS NOT TO SCALE
- PC PLUMBING CONTRACTOR
- PLBG PLUMBING
- RM ROOM
- REQ REQUIRED
- RF SQUARE FEET
- SPEC SPECIFICATION(S)
- SURF SURFACE
- TS TAMPER SWITCH
- TYP TYPICAL
- UG UNDERGROUND
- UNO UNLESS NOTED OTHERWISE

RENOVATION LEGEND:

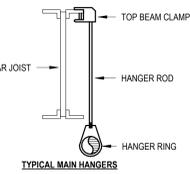
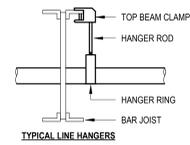
- <x> EXISTING TO REMAIN
- <XRL> EXISTING TO BE RELOCATED
- <XO> EXISTING TO BE REMOVED
- <XNL> EXISTING IN NEW LOCATION
- <N> NEW
- <R> REMAIN AS IS

GENERAL:

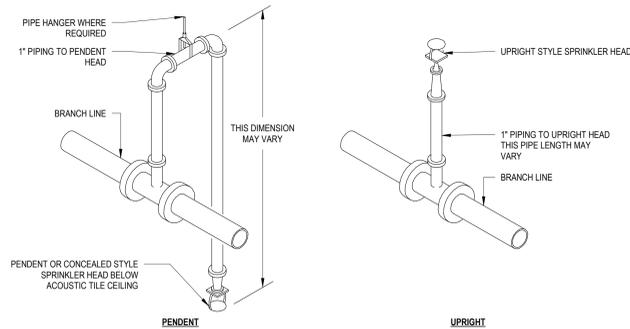
- DRAWING KEYNOTE SYMBOL
- DETAIL NUMBER
- BUILDING SECTION
- SHEET NUMBER
- DETAIL NUMBER
- BUILDING ELEVATION
- SHEET NUMBER
- DETAIL NUMBER
- CALLOUT BOUNDARY
- SHEET NUMBER
- DETAIL NUMBER
- VIEW REFERENCE CALLOUT
- SHEET NUMBER
- +X' - X" MOUNTING HEIGHT DESIGNATION

FIRE SPRINKLERS:

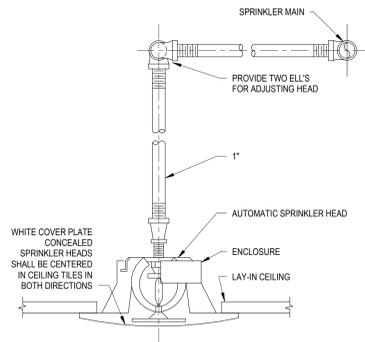
- DENOTES UPRIGHT SPRINKLER
- DENOTES PENDENT SPRINKLER (NOTE 'DP' ON DRAWING AND / OR SPECIFICATION WHERE DRY PENDENT SPRINKLERS ARE EMPLOYED)
- DENOTES UPRIGHT SPRINKLER ON SPRIG
- DENOTES UPRIGHT SPRINKLER ON TOP OF RISER NIPPLE
- DENOTES UPRIGHT SPRINKLER ON TOP OF RISER NIPPLE WITH SPRIG
- DENOTES PENDENT SPRINKLER ON DROP NIPPLE (NOTE 'DP' ON DRAWING AND / OR SPECIFICATION WHERE DRY PENDENT SPRINKLERS ARE EMPLOYED)
- DENOTES SPRINKLER WITH GUARD (UPRIGHT SPRINKLER SHOWN)
- DENOTES SIDEWALL SPRINKLER
- DENOTES OUTSIDE SPRINKLER - SPECIFY TYPE, ORIFICE SIZE, FOR EXAMPLE, OPEN SPRINKLER (WINDOW OR CORNICE)
- DENOTES OPEN SPRINKLER ON BRANCH LINE
- DENOTES OPEN SPRINKLER ON BRANCH LINE WITH SPRIG
- DENOTES WATER SPRAY NOZZLE
- DENOTES WINDOW SPRINKLERS



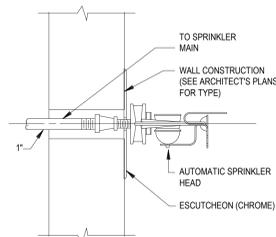
1 HANGAR DETAIL FOR FIRE PROTECTION
F-000 SCALE: N.T.S.



2 SPRINKLER TAKEOFF DETAIL
F-000 SCALE: N.T.S.



3 CONCEALED SPRINKLER HEAD MOUNTING DETAIL
F-000 SCALE: N.T.S.



4 SIDE WALL SPRINKLER HEAD MOUNTING DETAIL
F-000 SCALE: N.T.S.

SIGNATURE _____

DATE _____

REVISIONS		
NO	DESCRIPTION	DATE

PROJECT NUMBER 225017.00
DATE OF ISSUE 02.07.2025
DRAWN BY BMA
REVIEWED BY MB

FIRE PROTECTION LEGEND

GENERAL NOTES:

- DRAWINGS ARE TO BE REVIEWED IN FULL DETAIL WITH SPECIFICATIONS. IN THE EVENT THAT THERE IS CROSS DIRECTION, A REQUEST FOR INFORMATION (RFI) IS TO BE SENT TO THE ENGINEER TO RECORD. AS STATED IN SPECIFICATION DIV. 1, THE HIGHER COST OF THE TWO OPTIONS IS TO BE TAKEN AS THE OPTION WHILE AT BID UNLESS CLARIFICATION FROM RFI.
- ALL FIRE PROTECTION SHEETS SHALL BE REVIEWED AND COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
- REFER TO SHEET F-000 FOR LEGEND.
- SPRINKLER HEADS IN CEILING TO BE POSITIONED IN CENTER OF TILE IN ORDER TO PROVIDE FULL COVERAGE.
- SPRINKLER CONTRACTOR TO INSTALL SPRINKLER SYSTEM TO MEET NFPA 13 REQUIREMENTS.
- ALL UPRIGHT SPRINKLER HEADS TO FOLLOW DETAIL 3 ON SHEET FP-000 FOR SPRINKLER HEAD ORIENTATION.

KEYNOTES

- EXISTING SPRINKLER HEAD TO REMAIN.

LEGAT ARCHITECTS
Design with a Difference

MOLINE-COAL VALLEY SCHOOL DISTRICT

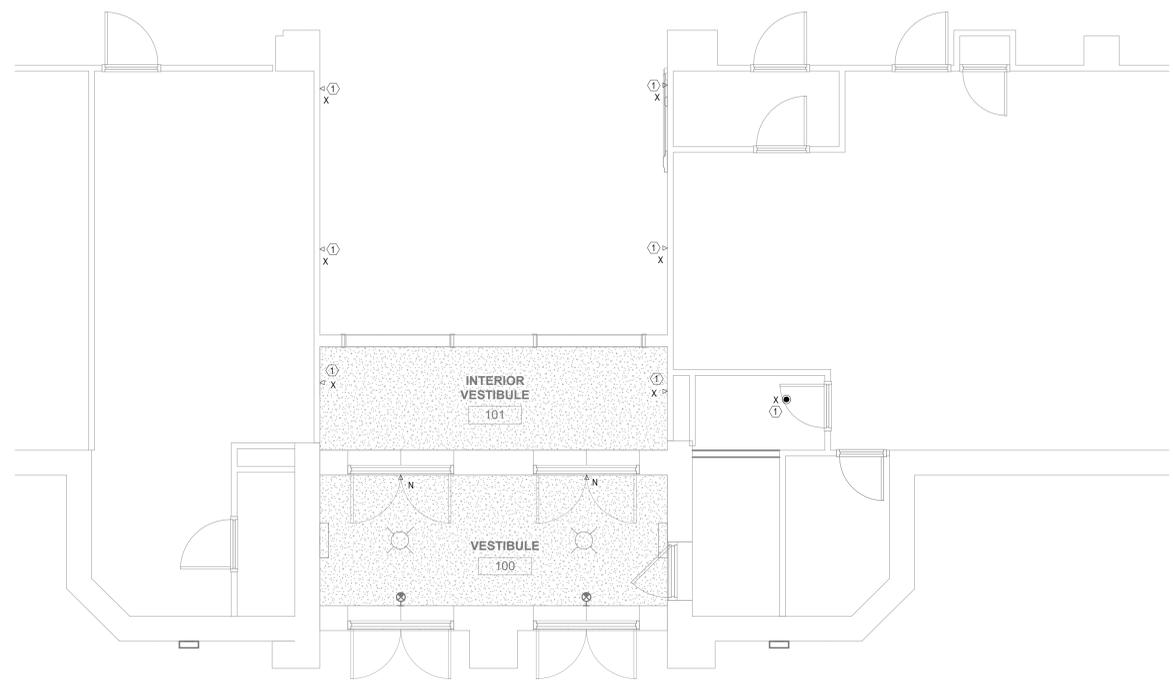
2025 CONTROLLED ENTRY IMPROVEMENTS

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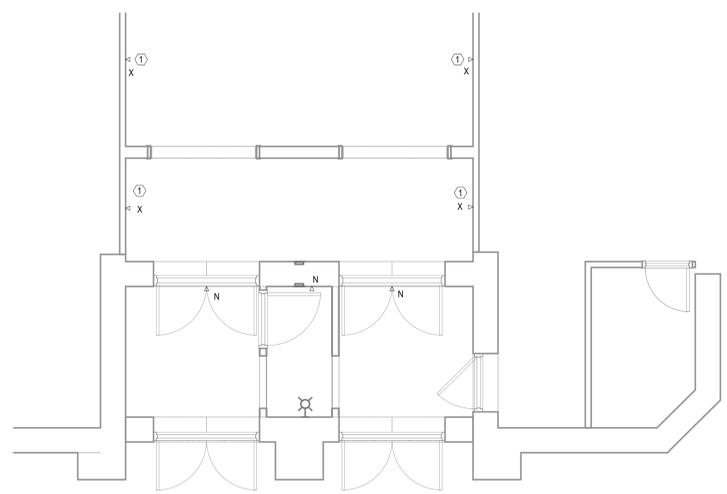
CIVIL ENGINEER
RTM Engineering
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STRUCTURAL ENGINEER
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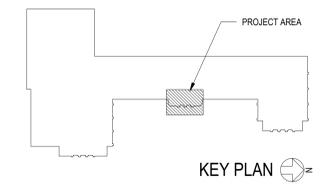
MEDIA ENGINEER
RTM Engineering
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P: 563.726.6310
www.rtmec.com



1 FIRE PROTECTION FIRST FLOOR PLAN
FJ-101 1/4" = 1'-0"



2 FIRE PROTECTION FIRST FLOOR PLAN - ALTERNATIVE BID
FJ-101 1/4" = 1'-0"



SIGNATURE _____
DATE _____

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NUMBER 225017.00
DATE OF ISSUE 02.07.2025
DRAWN BY BMA
REVIEWED BY MB

FIRE PROTECTION NEW WORK PLANS - JOHN DEERE

FJ-101
BID DOCUMENTS

GENERAL NOTES:
 1. DRAWINGS ARE TO BE REVIEWED IN FULL DETAIL WITH SPECIFICATIONS. IN THE EVENT THAT THERE IS CROSS DIRECTION, A REQUEST FOR INFORMATION (RFI) IS TO BE SENT TO THE ENGINEER TO RECORD. AS STATED IN SPECIFICATION DIV. 1, THE HIGHER COST OF THE TWO OPTIONS IS TO BE TAKEN AS THE OPTION WHILE AT BID UNLESS CLARIFICATION FROM RFI.
 2. ALL FIRE PROTECTION SHEETS SHALL BE REVIEWED AND COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
 3. REFER TO SHEET FP-000 FOR LEGEND.
 4. SPRINKLER HEADS IN CEILING TO BE POSITIONED IN CENTER OF TILE IN ORDER TO PROVIDE FULL COVERAGE.
 5. SPRINKLER CONTRACTOR TO INSTALL SPRINKLER SYSTEM TO MEET NFPA 13 REQUIREMENTS.
 6. ALL UPRIGHT SPRINKLER HEADS TO FOLLOW DETAIL 3 ON SHEET FP-000 FOR SPRINKLER HEAD ORIENTATION.
KEYNOTES
 1 EXISTING SPRINKLER HEAD TO BE RELOCATED TO NEW LOCATION.
 2 EXISTING SPRINKLER HEAD TO REMAIN.

LEGAT ARCHITECTS
 Design with a Difference

MOLINE COAL VALLEY SCHOOL DISTRICT
2024 WILSON CONTROLLED ENTRY IMPROVEMENTS

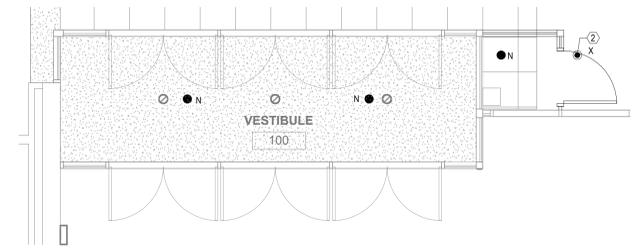
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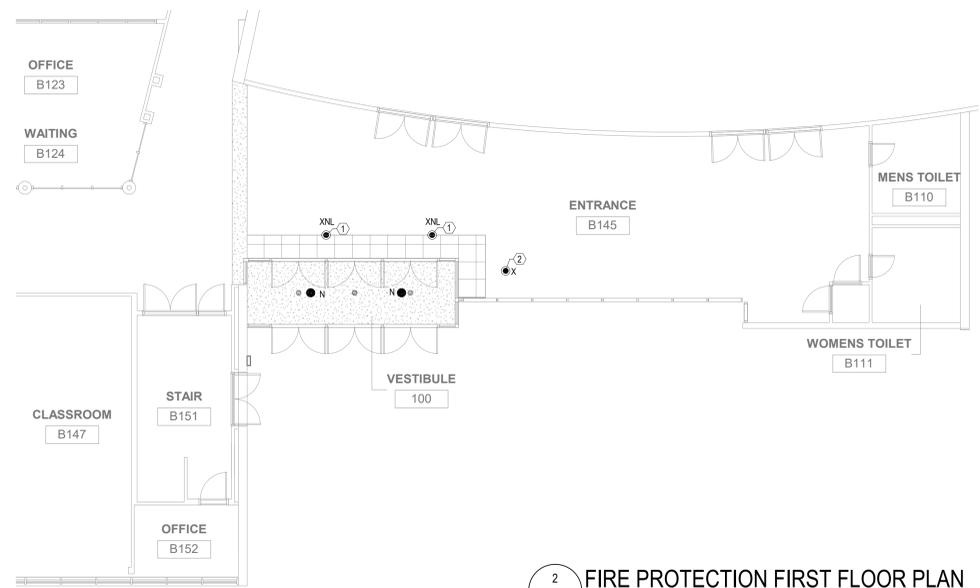
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Civil Engineer Name
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 Address Line 2
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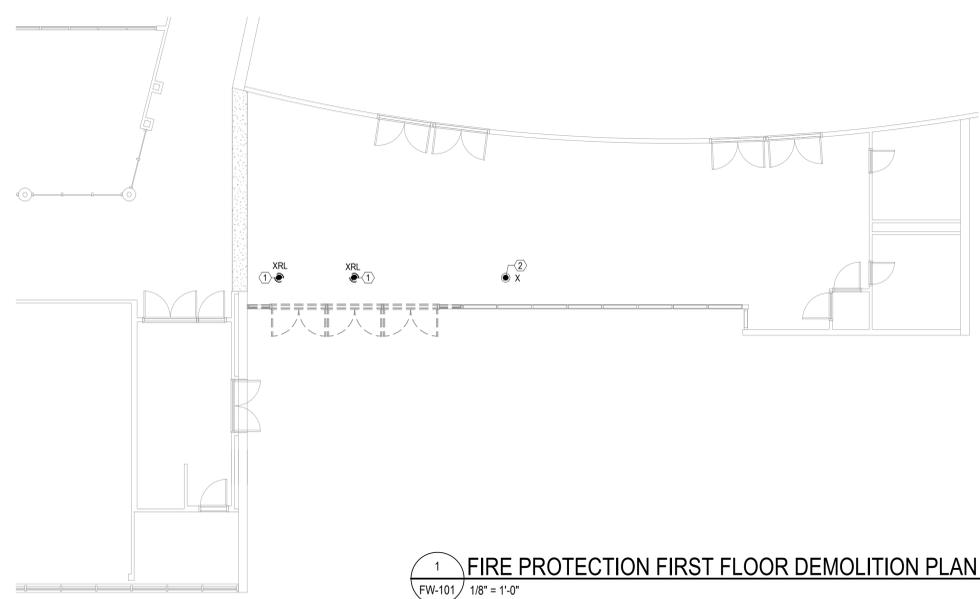
MEPEE ENGINEER
RTM Engineering
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 www.rtmec.com



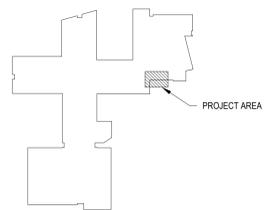
3 FIRE PROTECTION FIRST FLOOR PLAN - ENLARGED W/ ALTERNATE
 FW-101 / 1/4" = 1'-0"



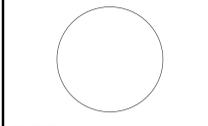
2 FIRE PROTECTION FIRST FLOOR PLAN
 FW-101 / 1/8" = 1'-0"



1 FIRE PROTECTION FIRST FLOOR DEMOLITION PLAN
 FW-101 / 1/8" = 1'-0"



KEY PLAN



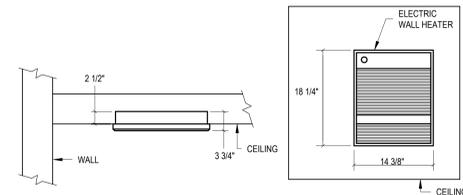
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REVISIONS		
NO	DESCRIPTION	DATE

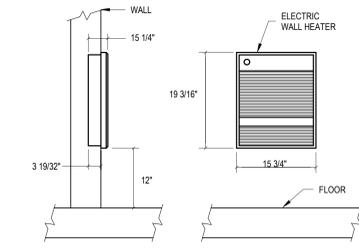
PROJECT NUMBER 225029 00
 DATE OF ISSUE 02.07.2025
 DRAWN BY BMA
 REVIEWED BY MB

FIRE PROTECTION FIRST FLOOR PLAN - WILSON

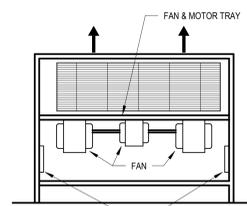
FW-101
 BID DOCUMENTS



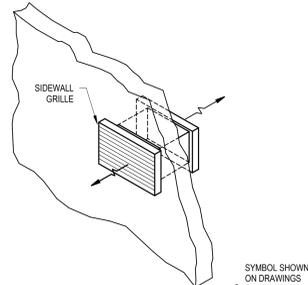
1 ELECTRIC CEILING HEATER (RECESSED)
M-000 SCALE: N.T.S.



3 ELECTRIC WALL HEATER (RECESSED)
M-000 SCALE: N.T.S.



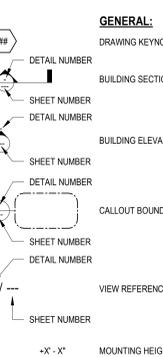
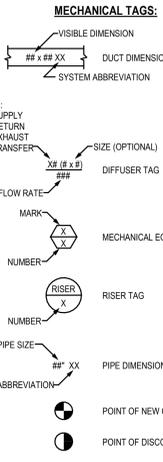
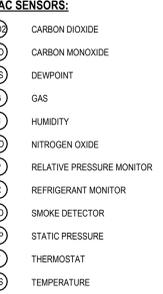
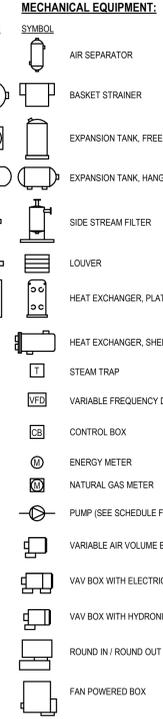
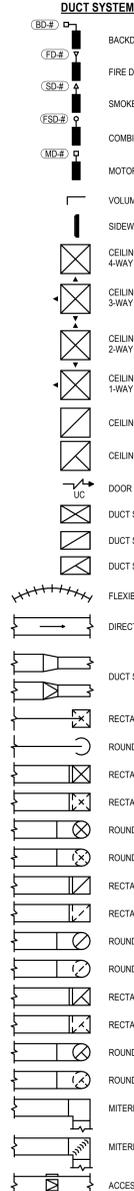
2 CABINET UNIT HEATER DETAIL
M-000 SCALE: N.T.S.



4 TRANSFER DUCT DETAIL
M-000 SCALE: N.T.S.

- GENERAL NOTES:**
- CONTRACTOR SHALL PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR AS REQUIRED TO INSTALL A COMPLETE AND OPERABLE HVAC SYSTEM PER THE NEW ARCHITECTURAL LAYOUT AND AS TO COMPLY WITH THE SPECIFICATION DETAILS, THIS SCOPE OF WORK AND ALL APPLICABLE CODES.
 - ALL WORK PERFORMED SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND COORDINATE ALL NEW WORK WITH ALL TRADES PRIOR TO ANY WORK BEING DONE TO INSURE CONFLICTS DO NOT OCCUR.
 - DISRUPTION OF ANY EXISTING SERVICE SHALL BE CLEARED WITH THE OWNER. COMMUNICATION SHALL BE PERFORMED AT A TIME AND IN A MANNER SO AS TO CAUSE MINIMAL INCONVENIENCE TO THE OWNER.
 - ALL DUCT SIZES INDICATED ON PLANS AND RISERS ARE CLEAR INSIDE DIMENSIONS. DUCT SIZES NOT SHOWN SHALL BE SIZED TO VELOCITIES NO GREATER THAN UPSTREAM SECTION USING SIMILAR ASPECT RATIOS.
 - ALL SUPPLY AIR TAKEOFFS FROM MAIN TRUNK DUCTS ARE TO BE INSTALLED WITH BELL MOUTH FITTINGS OR 45 DEGREE ENTRY TO PROVIDE THE SMOOTHEST AIR FLOW POSSIBLE.
 - PROVIDE TURNING VANES IN ALL LOW-PRESSURE 90-DEGREE DUCT TURNS.
 - ALL THERMOSTAT LOCATIONS SHALL BE APPROVED BY THE ARCHITECT.
 - ALL DUCTS LOCATED ABOVE INACCESSIBLE CEILINGS ARE TO BE BALANCED PRIOR TO CEILING INSTALLATIONS. PROVIDE REMOTE CABLE OPERATED BALANCING DAMPER FOR DIFFUSERS MOUNTED IN HARD CEILING.
 - CONTRACTOR SHALL PROVIDE ACCESS DOORS FOR SERVICE AND MAINTENANCE OF ALL EQUIPMENT LOCATED ABOVE INACCESSIBLE CEILINGS.
 - PROVIDE GUIDES, HANGERS, EXPANSION LOOPS AND SUPPLEMENTARY STEEL SUPPORT WHERE REQUIRED FOR ALL PIPING.

- DUCT INSULATION NOTES:**
- | | |
|---|-----------|
| ALL EXPOSED DUCTWORK IN CONDITIONED SPACES OR SPIRAL DUCT | NONE |
| ALL EXTERIOR DUCTWORK | MIN. R-12 |
| ALL CONCEALED SUPPLY AND RETURN DUCT | MIN. R-6 |
| ALL EXHAUST UP TO 10'-0" FROM DISCHARGE | MIN. R-6 |
| ALL HEATING AND COOLING HYDRONIC PIPING | MIN. 2" |
| CONDENSATE PIPING | MIN. 1" |
- NOTE: ALL SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHEN LOCATED IN UNCONDITIONED SPACES AND WITH A MINIMUM OF R-12 INSULATION WHEN LOCATED OUTSIDE THE BUILDING ENVELOPE. WHEN LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXCEPT SPACES BY A MINIMUM OF R-12 INSULATION. ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK SHALL BE SECURELY FASTENED AND SEALED WITH VELDS, GASKETS, MASTICS, MASTIC-PLUS-EMBEDDED-FABRIC SYSTEM OR TAPES. TAPES AND MASTICS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS.



- MECHANICAL ABBREVIATIONS:**
- ACH AIR CHANGES PER HOUR
 - AF AIR FILTER
 - AHU AIR HANDLING UNIT
 - APD AIR PRESSURE DROP
 - BAS BUILDING AUTOMATION SYSTEM
 - BHP BRAKE HORSEPOWER
 - BTU BRITISH THERMAL UNIT
 - BTUH BTU PER HOUR
 - CC COOLING COIL
 - CF CUBIC FEET
 - CFH CUBIC FEET PER HOUR
 - CFM CUBIC FEET PER MINUTE
 - CH CHILLER
 - CO CLEANOUT
 - CT COOLING TOWER
 - CU CONDENSING UNIT
 - CUH CABINET UNIT HEATER
 - CV CONSTANT AIR VOLUME
 - DAT DISCHARGE AIR TEMPERATURE
 - DB DECEBEL OR DRY BULB TEMPERATURE
 - DDC DIRECT DIGITAL CONTROL
 - DH DUCT HEATER
 - DK DIRECT EXPANSION
 - EAT ENTERING AIR TEMPERATURE
 - EER ENERGY EFFICIENCY RATIO
 - EP EXHAUST FAN
 - ESP EXTERNAL STATIC PRESSURE
 - ET EXPANSION TANK
 - EWT ENTERING WATER TEMPERATURE
 - FA FREE AREA
 - FC FAN COIL
 - FD FIRE DAMPER
 - FH FUME HOOD
 - FPB FAN POWERED BOX
 - FFM FEET PER MINUTE
 - FPS FEET PER SECOND
 - FS FREEZE STAT
 - FSD COMBINATION FIRE/SMOKE DAMPER
 - GAL GALLON
 - GPH GALLONS PER HOUR
 - GPM GALLONS PER MINUTE
 - H HUMIDISTAT
 - HC HEATING COIL
 - HD HOOD OR HEAT DETECTOR
 - HEPA HIGH EFFICIENCY PARTICULATE AIR FILTER
 - HP HORSEPOWER OR HEAT PUMP
 - HR HOUR
 - HUM HUMIDIFIER
 - HZ HEAT EXCHANGER
 - HERTZ
 - IN W.C. INCHES WATER COLUMN
 - IN W.G. INCHES WATER GAUGE
 - KW KILOWATT
 - KWH KILOWATT HOUR
 - LAT LEAVING AIR TEMPERATURE
 - LSB LEAVING WATER TEMPERATURE
 - LWT LEAVING WATER TEMPERATURE
 - MBH THOUSAND BTUH
 - NC NORMALLY CLOSED
 - NK NECK
 - NO NORMALLY OPEN
 - P PUMP
 - PA PASCAL
 - PH PHASE
 - PRV PRESSURE REDUCING VALVE
 - PSIA POUNDS PER SQUARE INCH ABSOLUTE
 - PSIG POUNDS PER SQUARE INCH GAUGE
 - RF RETURN FAN
 - RH RELATIVE HUMIDITY
 - RHC REHEAT COIL
 - RO RELIEF OPENING
 - RPM REVOLUTIONS PER MINUTE
 - SAT SUPPLY AIR TEMPERATURE
 - SD SMOKE DAMPER OR SMOKE DETECTOR
 - SF SQUARE FEET OR SUPPLY FAN
 - SPS STATIC PRESSURE SENSOR
 - T THERMOSTAT
 - TD TEMPERATURE DIFFERENCE
 - TO TRANSFER OPENING
 - TYP TYPICAL
 - UC UNDERCUT (DOOR)
 - UH UNIT HEATER
 - VAV VARIABLE AIR VOLUME
 - VD VOLUME DAMPER
 - VFD VARIABLE FREQUENCY DRIVE
 - VSD VARIABLE SPEED DRIVE
 - VTR VENT THROUGH ROOF
 - W WATT
 - WB WET BULB TEMPERATURE
 - WC WATER COLUMN
 - WPD WATER PRESSURE DROP

- GENERAL ABBREVIATIONS:**
- A/E ARCHITECT/ENGINEER
 - ABV ABOVE
 - AFB ABOVE FINISHED FLOOR
 - AFG ABOVE FINISHED GRADE
 - ALT ALTERNATE
 - ARCH ARCHITECT
 - BFG BELOW FINIAL GRADE
 - BLDG BUILDING
 - CLG CEILING
 - DIR DIRECT
 - DISC DISCONNECT
 - DN DOWN
 - EC ELECTRICAL CONTRACTOR
 - ELEV ELEVATION REFERENCE
 - EM EMERGENCY
 - EP EXPLOSION PROOF
 - EWC ELECTRIC WATER COOLER
 - F FLUSH
 - FBO FURNISHED BY OTHERS
 - FIXT FIXTURE
 - FLA FULL LOAD AMPS
 - FLR FLOOR
 - FS FLOW SWITCH
 - GC GENERAL CONTRACTOR
 - GRD GROUND
 - GYP GYPSUM BOARD
 - HC HEATING CONTRACTOR
 - HVAC HEATING & VENTILATING - AIR CONDITIONING
 - HW HEAVY WALL
 - ID INDIRECT
 - IL INTERLOCK
 - IU IN UNIT
 - J-BOX JUNCTION BOX
 - LG LAY-IN GRID
 - LTG LIGHTING
 - LV LOW VOLTAGE
 - LVT LINE VOLTAGE THERMOSTAT
 - MCA MECHANICAL CONTRACTOR
 - MCA MINIMUM CIRCUIT AMPS
 - MOCP MAXIMUM OVERCURRENT PROTECTION
 - MTD MOUNTED
 - NIC NOT IN CONTRACT
 - NTS NOT TO SCALE
 - PLBG PLUMBING CONTRACTOR
 - RUM ROOM
 - SURF SURFACE
 - TS TAMPER SWITCH
 - TYP TYPICAL
 - UG UNDERGROUND
 - VC VENTILATION CONTRACTOR

- DUCT SYSTEM ABBREVIATIONS:**
- CA COMBUSTION AIR
 - CV COMBUSTION VENT
 - EA-AH EXHAUST AIR - AIRBORNE INFECTIOUS ISOLATION
 - EA-CH EXHAUST AIR - CHEMICAL
 - EA-D EXHAUST AIR - DRYER
 - EA EXHAUST AIR - ENVIRONMENTAL
 - EA-K1 TYPE 1 - KITCHEN EXHAUST
 - EA-K2 TYPE 2 - KITCHEN EXHAUST
 - OA OUTDOOR AIR
 - RA RETURN AIR
 - SA SUPPLY AIR

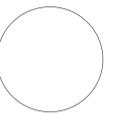
- RENOVATION LEGEND:**
- <-> EXISTING TO REMAIN
 - <-RL> EXISTING TO BE RELOCATED
 - <-D> EXISTING TO BE REMOVED
 - <-NL> EXISTING IN NEW LOCATION
 - <-N> NEW
 - <-RAI> REMAIN AS IS

SIGNATURE _____
DATE _____

REVISIONS		
NO	DESCRIPTION	DATE

PROJECT NUMBER 225017.00
DATE OF ISSUE 02.07.2025
DRAWN BY BMA
REVIEWED BY MB

MECHANICAL LEGEND



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NO	DESCRIPTION	DATE

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MECHANICAL SPECIFICATIONS

MECHANICAL SPECIFICATIONS

1.0 GENERAL REQUIREMENTS

1.01 SCOPE OF WORK
A. THE GENERAL REQUIREMENTS OF THE ARCHITECTURAL SPECIFICATIONS ARE PART OF THESE SPECIFICATIONS. WHERE AN INCONSISTENCY EXISTS BETWEEN THE WORDING OR INTENT, THIS DIVISION SHALL TAKE PRECEDENCE.
B. THE STANDARD FORM OF GENERAL CONDITIONS ISSUED BY THE AMERICAN INSTITUTE OF ARCHITECTS DOCUMENT A01, LATEST EDITION, SHALL FORM A PART OF THIS CONTRACT.
C. ALL CONTRACTORS FOR THIS WORK SHALL VERIFY EQUIPMENT LOCATIONS, WEIGHTS AND CLEARANCES IN THE FIELD PRIOR TO SUBMITTING BIDS TO VERIFY CONDITIONS, INTERFERENCES WITH OTHER TRADES, AND DIMENSIONS. NO ALLOWANCES WILL BE MADE AFTER ACCEPTANCE OF BIDS FOR FAILURE TO COMPLY.
D. PROVIDE ALL LABOR AND MATERIALS, EQUIPMENT, FACILITIES, TRANSPORTATION AND SERVICES NECESSARY TO FURNISH, INSTALL AND COMPLETE THE HEATING, VENTILATING AND AIR CONDITIONING WORK AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN. THE WORKMANSHIP SHALL BE COMPLETE IN EVERY RESPECT, BE TESTED AND APPROVED, AND BE SATISFACTORY TO THE ARCHITECT/ENGINEER AND IN ACCORDANCE WITH THE LOCAL, COUNTY AND STATE LAWS GOVERNING THIS INSTALLATION, INCLUDING THE FIRE MARSHAL.
E. THE DRAWINGS INDICATE DIAGRAMMATICALLY THE EXTENT AND LOCATION OF THE WORK INCLUDED WORK INDICATED, BUT HAVING MINOR DETAILS OBVIOUSLY OMITTED, SHALL BE PROVIDED, INCLUDING THESE DETAILS, WITHOUT EXTRA COST.
F. IT IS THE DECLARED AND ACKNOWLEDGED INTENT OF THESE SPECIFICATIONS TO PROVIDE THE HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS, INCLUSIVE OF ALL REQUIRED PARTS, ACCESSORIES AND CONTROLS COMPLETE AND READY FOR USE AS INDICATED ON THE ACCOMPANYING DRAWINGS. WORK INDICATED ON THE DRAWINGS, BUT NOT NECESSARILY INDICATED IN THESE SPECIFICATIONS SHALL BE PROVIDED AS REQUIRED.

1.02 RELATED WORK
POWER WIRING (IE FEEDERS) TO MOTORS, INCLUDING FINAL CONNECTIONS TO EQUIPMENT, SHALL BE PROVIDED BY THE DIVISION 16 - ELECTRICAL CONTRACTOR.
1.03 VISITING THE SITE
THE CONTRACTOR SHALL, PRIOR TO SUBMITTING HIS BID FOR DOING WORK AS DESCRIBED IN THIS SPECIFICATION AND ON THE ACCOMPANYING DRAWINGS, VISIT THE SITE AND COMPLETELY FAMILIARIZE HIMSELF WITH THE DIFFICULTIES AND FACILITIES THAT WILL BE INVOLVED FOR THE PROPER EXECUTION OF THE CONTRACT. NO EXTRA COMPENSATION SHALL BE ALLOWED FOR THE CONTRACTOR FAILING TO DO SO OR NOT TO FULLY APPRECIATE THE DIFFICULTIES AT HAND.
1.04 FEES AND INSPECTIONS
ALL OF THE CONTRACTORS SHALL APPLY, PROCURE AND PAY FEES FOR ALL PERMITS AND INSPECTIONS OR OTHER OBLIGATIONS THAT THE CITY, COUNTY, STATE OR UTILITIES MAY REQUIRE IN ORDER FOR HIM TO DO HIS WORK ACCORDING TO THE PLANS AND SPECIFICATIONS, UNLESS OTHERWISE NOTED.
1.05 LAWS AND ORDINANCES
THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES AND REGULATIONS BEARING ON THE SUBJECT OF WORK AS DRAWN AND SPECIFIED. IF THE CONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT VARIANCE THEREWITH, HE SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING WHEN SUBMITTING HIS BID AND ANY NECESSARY CHANGES SHALL BE ADJUSTED AS PROVIDED ON THE CONTRACT. IF THE CONTRACTOR OBSERVES THAT THE DRAWINGS PERFORM ANY WORK CONTRARY TO SUCH LAWS, ORDINANCES, RULES AND REGULATIONS, HE SHALL BEAR ALL COSTS FOR CORRECTING THE WORK.

1.06 TRADE JURISDICTION
WHEN IT BECOMES NECESSARY FOR THE COMPLETE FULFILLMENT OF THIS WORK, FOR THE CONTRACTOR TO FURNISH LABOR OR MATERIALS OTHER THAN WHICH IS GENERALLY ACCEPTED BY HIS TRADE OR BRANCH OF WORK, THE CONTRACTOR SHALL SUBLET SAME TO A CONTRACTOR NORMALLY ENGAGED IN THE TRADE OR BRANCH OF WORK INVOLVED TO THE END, SO THAT THERE IS NO DELAY TO OR STOPPAGE OF WORK DUE TO THE INFRINGEMENT OR ALLEGED INFRINGEMENT TO TRADE AGREEMENTS AS TO THE JURISDICTION.
1.07 SUBMITTALS
THIS CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL, COMPLETE LISTS INCLUDING CATALOG CUTS, ETC. AND WHERE APPLICABLE DIMENSIONED SHOP DRAWINGS OF ALL MATERIALS, FIXTURES AND EQUIPMENT TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT. INCLUDE SHEET METAL DUCT LAYOUTS AND PIPING PLAN LAYOUTS. REFER TO THE ARCHITECT'S GENERAL CONDITIONS FOR NUMBER OF COPIES TO BE SUBMITTED. DO NOT ORDER EQUIPMENT, FABRICATE DUCTWORK, OR INSTALL EQUIPMENT, DUCTWORK OR PIPING BEFORE RECEIVING SHOP DRAWINGS WHICH HAVE BEEN REVIEWED AND APPROVED BY THE ENGINEER.
REQUIRED ITEMS TO BE SUBMITTED SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
DIFFUSERS, GRILLES AND REGISTERS
ACCESS PANELS
LOUVERS
MOTORIZED DAMPERS
FIRE DAMPERS
EQUIPMENT
ROOF CURBS
INSULATION
CONTROLS
SPECIALTIES

1.08 RECORD DRAWING SUBMITTAL
AT PROJECT CLOSEOUT, THE CONTRACTOR SHALL SUBMIT RECORD "AS-BUILT" DRAWINGS OF INSTALLED DUCTWORK, PIPING AND EQUIPMENT AS IT WAS ACTUALLY INSTALLED SO AS TO MAKE A PERMANENT RECORD. REFER TO THE ARCHITECT'S GENERAL CONDITIONS FOR NUMBER OF COPIES TO BE SUBMITTED.
1.09 WORKMANSHIP AND MATERIALS
ALL MATERIALS SHALL BE NEW AND OF FIRST QUALITY. ALL LABOR SHALL BE EXECUTED IN A NEAT WORKMANLIKE MANNER AND SHALL BE PERFORMED BY MECHANICS SKILLED IN THEIR RESPECTIVE TRADES. THE ENGINEER SHALL DECIDE ALL MATTERS PERTAINING TO THE QUALITY OF WORKMANSHIP AND MATERIALS.
ALL DUCTWORK BEING STORED ON SITE AWAITING INSTALLATION AND ALL INSTALLED DUCTWORK WITH OPEN ENDS SHALL BE COVERED TO REDUCE THE CLEANING EFFORT ONCE THE SYSTEM IS PUT INTO OPERATION.
1.10 SPECIFICATIONS AND DRAWINGS
SPECIFICATIONS AND DRAWINGS ARE INTENDED TO BE COOPERATIVE. WHAT IS CALLED FOR BY EITHER SHALL BE AS BIDDING AS IT CALLED FOR BY BOTH. ANY WORK OR MATERIALS NOT SPECIFICALLY MENTIONED, THOUGH REQUIRED TO MAKE THE JOB COMPLETE, SHALL BE FURNISHED BY THE CONTRACTOR AT HIS EXPENSE.
1.11 OPERATING INSTRUCTIONS
THIS CONTRACTOR SHALL PREPARE A TYPEWRITTEN LIST OF OPERATING INSTRUCTIONS FOR ALL THE EQUIPMENT INSTALLED UNDER THIS CONTRACT, AND SHALL INSTRUCT THE OWNER IN ITS OPERATION. INDIVIDUAL MANUALS PROVIDED BY THE EQUIPMENT MANUFACTURERS SHALL BE INCLUDED.
1.12 EQUIPMENT SCHEDULE
THIS CONTRACTOR SHALL PREPARE AND FURNISH TO THE OWNER, TWO (2) BOUND BOOKLETS, EACH CONTAINING A COMPLETE LIST OF ALL EQUIPMENT AND VALVES INSTALLED UNDER THIS CONTRACT. EACH PIECE OF EQUIPMENT AND VALVE LISTED SHALL INCLUDE ITS TAG NUMBER, MANUFACTURERS MODEL NUMBER AND COMPONENTS THEREIN WHICH MAKE UP THE SPARE PARTS LIST.
1.13 GUARANTEE
THIS CONTRACTOR SHALL GUARANTEE HIS WORK TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL CERTIFICATE. ANY REPAIRS OR REPLACEMENT DURING THE PERIOD SHALL BE MADE WITHOUT COST TO THE OWNER, UPON HIS OR HER REQUEST.

1.14 COORDINATION OF WORK
THE CONTRACTOR SHALL CONFER WITH OTHER TRADES WHOSE WORK MAY AFFECT HIS INSTALLATION TO AVOID INTERFERENCE BEFORE STARTING THE INSTALLATION. ALL CHANGES IN THE WORK OF THIS CONTRACTOR CAUSED BY HIS NEGLIGENCE TO COMPARE AND CONFER WITH OTHER TRADES SHALL BE MADE BY HIM AT HIS OWN EXPENSE.
1.15 CUTTING AND PATCHING
EACH CONTRACTOR SHALL DO HIS OWN CUTTING AND PATCHING. IF STRUCTURALLY REQUIRED, HE SHALL PROVIDE AND INSTALL THE NECESSARY STEEL WHEN GOING THROUGH A LOAD BEARING WALL. THIS CONTRACTOR SHALL NOT ENDANGER ANY WORK BY CUTTING, DIGGING OR OTHERWISE, AND SHALL NOT CUT OR ALTER THE WORK OF OTHER TRADES WITHOUT CONSENT OF THE ARCHITECT/ENGINEER.

1.16 DEMOLITION
A. PIPING, VALVES, DUCTWORK, EQUIPMENT, ETC., WHICH IS REQUIRED TO BE REMOVED TO PERFORM WORK UNDER THIS SPECIFICATION WILL BE PERFORMED BY THIS CONTRACTOR AND TURNED OVER AND DELIVERED TO THE BUILDING MAINTENANCE DEPARTMENT OR DISPOSED OF AS DIRECTED.
B. ANY HOLES OR OPENINGS LEFT IN WALLS, ROOFS, FLOORS, CEILINGS, ETC., AFTER REQUIRED DEMOLITION WORK, SHALL BE FILLED IN AND PATCHED BY THIS CONTRACTOR IN A MANNER APPROVED BY THE ARCHITECT AND ENGINEER. FAILURE ON THIS CONTRACTORS PART TO COMPLY WITH ABOVE SHALL MAKE HIM RESPONSIBLE FOR ANY EXTRA EXPENSE INVOLVED.
C. ANY EQUIPMENT OR ARCHITECTURAL ELEMENTS DAMAGED OR DESTROYED IN THE DEMOLITION WORK SHALL BE REPAIRED, REPLACED AND/OR BROUGHT BACK TO GOOD WORKING ORDER TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.

1.17 MECHANICAL IDENTIFICATION
A. GENERAL: PROVIDE MECHANICAL IDENTIFICATION FOR ALL MECHANICAL EQUIPMENT, PIPING AND DUCT SYSTEMS. COMPLY WITH ANSI A13.1 FOR LETTERING SIZE, LENGTH OF COLOR FIELD, COLORS AND VIEWING ANGLES OF IDENTIFICATION DEVICES.
B. EQUIPMENT: PROVIDE EQUIPMENT SYSTEM NUMBER, CAPACITY, FLOW RATE, STATIC PRESSURE, PUMP HEAD, HORSEPOWER AND VOLTAGE. PROVIDE SETON MODEL NUMBER AND/OR IDENTIFICATION "SETMARK" PIPE MARKERS.
C. PIPING: PROVIDE SYSTEM DESIGNATION NAME AND DIRECTION OF FLOW. PROVIDE SETON MODEL NUMBER AND/OR IDENTIFICATION "SETMARK" PIPE MARKERS.
D. DUCTS: PROVIDE SYSTEM DESIGNATION NAME AND DIRECTION OF FLOW. PROVIDE SETON MODEL NUMBER AND/OR IDENTIFICATION "SETMARK" MARKERS.
E. VALVES: PROVIDE BRASS VALVE TAGS AND BRASS "9" HOOK FASTENERS WITH VALVE NUMBER AND TYPE OF SERVICE NOTED ON THE TAG. PROVIDE DUPLICATE VALVE CHARTS. THE CHART SHALL BE FOR ALL VALVES AND SHALL INDICATE VALVE IDENTIFICATION NUMBER, LOCATION AND PURPOSE. PROVIDE SETON BRASS VALVE TAGS AND VALVE CHARTS.

1.18 TESTING AND BALANCING
THIS CONTRACTOR SHALL NEGOTIATE A CONTRACT WITH AN INDEPENDENT, QUALIFIED AND CERTIFIED MEMBER OF NEBB OR AABC TO COMPLETELY BALANCE THE AIR AND HYDRONIC SYSTEMS INCLUDED IN THIS SPECIFICATION AND ACCOMPANYING DRAWINGS, AS REQUIRED. THE CONTRACTOR SHALL SUBMIT A PROJECT CERTIFICATION GUARANTEE AND CERTIFIED BALANCE REPORT TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FINAL ACCEPTANCE OF THE SYSTEMS BY THE OWNER.
1.19 NOISE AND VIBRATION CONTROL
THIS CONTRACTOR SHALL PROVIDE ACOUSTICAL AND VIBRATION TREATMENT FOR ALL EQUIPMENT WITH MOVING PARTS TO MEET CODE AND MAINTAIN THE FOLLOWING NOISE CRITERIA:
LOBBIES, TOILETS AND CORRIDORS NC 40
SPACE ADJACENT TO FAN ROOMS NC 45
OFFICES, CONFERENCE ROOM, ETC. NC 35
VIBRATION ISOLATORS AND FLEXIBLE CONNECTIONS SHALL BE USED AT EACH PIECE OF EQUIPMENT WITH MOVING PARTS.
1.20 BUILDING STANDARDS
IF BUILDING HAS STANDARDS FOR PIPING, DUCTWORK, DIFFUSERS, GRILLES, REGISTERS, TEMPERATURE CONTROLS, OTHER EQUIPMENT, ETC., PROVIDE SAME UNLESS OTHERWISE NOTED.

2.0 PRODUCTS, MATERIALS AND CONTROLS

2.01 HANGERS AND SUPPORTS
A. PIPING HANGERS AND SUPPORTS SHALL COMPLY WITH MSS SP-58. PROVIDE ONLY ONE TYPE OF HANGER/SUPPORT, BY ONE MANUFACTURER, FOR EACH PIPING SERVICE.
B. DUCT HANGERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS.
C. EQUIPMENT HANGERS AND SUPPORTS SHALL BE PROVIDED AND INSTALLED PER THE EQUIPMENT MANUFACTURERS REQUIREMENTS.
2.02 ACCESS DOORS
ACCESS DOORS SHALL BE INSTALLED FOR ALL NON-ACCESSIBLE EQUIPMENT, VALVES, OPERATIONS, CONTROLS, OR OTHER WORKING PARTS REQUIRING MAINTENANCE OR ADJUSTMENT. THIS CONTRACTOR SHALL FURNISH ALL SUCH ACCESS DOORS AND ADVISE GENERAL CONTRACTOR OF THE LOCATION OF ALL ACCESS DOORS REQUIRED THROUGHOUT THE PROJECT. ACCESS DOOR MANUFACTURERS DATA SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ARCHITECT AND ENGINEER. COLOR OF ACCESS DOORS SHALL BE APPROVED BY THE ARCHITECT.
2.03 EQUIPMENT
A. PROVIDE AND INSTALL ALL EQUIPMENT AS SHOWN IN THE EQUIPMENT SCHEDULES.
B. ALL EQUIPMENT DATA SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ARCHITECT AND ENGINEER.
C. COLOR OF ALL DIFFUSERS, GRILLES AND REGISTERS SHALL BE APPROVED BY THE ARCHITECT.
D. COORDINATE FINAL LOCATION OF ALL THERMOSTATS, DIFFUSERS, GRILLES AND REGISTERS WITH THE ARCHITECT'S REFLECTED CEILING PLAN.

2.04 DUCTWORK AND ACCESSORIES
A. ALL DUCTWORK SHALL BE PRIME GALVANIZED SHEET STEEL, LOCK FORMING, FIRST QUALITY, FABRICATED IN ACCORDANCE WITH THE LATEST EDITION OF THE ASHRAE GUIDE, EXCEPT AS NOTED OTHERWISE.
B. ROUND SPIRAL DUCTWORK SHALL BE UNITED SHEET METAL TYPE DUCT FITTINGS, OR APPROVED EQUIVAL, INSTALLED AND SUSPENDED AS PER MANUFACTURERS RECOMMENDATIONS.
C. ALL DUCTS ARE TO HAVE GALVANIZED STIFFENERS IN THE FORM OF SEAMS INVOLVING AT LEAST THREE FOLDS OF SHEET METAL (POCKET LOCKS, STANDING SEAMS, STANDING S-SLIPS, ETC.).
D. VENTILATION CONSTRUCTION NOT COVERED BY THE ASHRAE GUIDE AND/OR GOVERNING AUTHORITIES SHALL BE IN ACCORDANCE WITH THE MAXIMUM STANDARDS AND TRADE PRACTICES AS SET FORTH BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) INCLUDING THEIR MOST CURRENT DUCT MANUAL.
E. DUCT DIMENSIONS SHOWN ON THE DRAWINGS INDICATE INSIDE DIMENSIONS. INCREASE DUCT SIZE WHEN LINING IS UTILIZED.
F. LOW PRESSURE DUCTWORK SHALL BE CONSIDERED AS ALL DUCTWORK NOT DEFINED AS MEDIUM PRESSURE DUCTWORK, UNLESS NOTED OTHERWISE. PROVIDE 2" SP DUCT CONSTRUCTION FOR SUPPLY AIR DUCTS AND 1" SP CONSTRUCTION FOR RETURN AND EXHAUST AIR DUCTS, UNLESS OTHERWISE NOTED.

G. MEDIUM PRESSURE DUCTWORK SHALL BE CONSIDERED AS ALL DUCTWORK UPSTREAM OF VAV BOXES AND FAN-POWERED BOXES. PROVIDE 3" SP DUCT CONSTRUCTION UNLESS NOTED OTHERWISE. ROUND SINGLE WALL, MEDIUM PRESSURE DUCTWORK IN SOUND-LENDED SYSTEMS WILL NOT BE PERMITTED IN LENGTHS GREATER THAN FIVE FEET.
H. ALL LOW AND MEDIUM PRESSURE DUCTWORK SHALL BE SEALED WITH AN APPROVED MASTIC.
I. ALL DUCT SYSTEMS ARE TO BE TESTED FOR LEAKAGE. MAXIMUM ALLOWABLE LEAKAGE FOR ANY SYSTEM WILL BE 5% OF TOTAL AIR QUANTITY. SUBMIT TEST DATA SHEET(S) TO ARCHITECT/ENGINEER FOR APPROVAL.
J. A 6" O" MAXIMUM LENGTH OF INSULATED FLEXIBLE DUCT WILL BE PROVIDED TO EACH SUPPLY OUTLET AND RETURN INLET AS REQUIRED.

K. DIFFUSER TAKE-OFF WHERE DIFFUSER IS LOCATED BELOW THE MAIN TRUNK, AND WHERE INDICATED, DEVICE SHALL BE COMPLETE WITH WORM GEAR MECHANISM FOR OPERATION OR ADJUSTMENTS THRU THE FACE OF THE DIFFUSER. IF TURNING DEVICE IS LOCATED REMOTELY FROM GRILLE, REGISTER OR DIFFUSER, PROVIDE EXTENSION ROD ON ADJUSTING DEVICE. TITLED AND BAILEY, "VENTROL NLC" OR APPROVED EQUAL.
L. PROVIDE FACTORY-FABRICATED TURNING VANES IN ALL SQUARE ELBOWS. VANES SHALL BE BARBER-COLEMAN "AIRTURBS" OR APPROVED EQUAL.
M. TAPERED SPIN-IN FITTING, WITH LOCK-IN QUADRANT AND VOLUME DAMPER SHALL BE PROVIDED FROM BRANCHES TO DIFFUSERS, FOR LOW PRESSURE DUCTWORK.
N. ALL BRANCH DUCT TAKE-OFFS SHALL BE EQUIPPED WITH TAPERED FITTINGS.
O. ALL FULL RADIUS ELBOWS SHALL HAVE A CENTERLINE RADIUS OF 1.5 TIMES THE DUCT WIDTH. ELBOWS WITH A CENTERLINE RADIUS LESS THAN 1.5 TIMES THE DUCT WIDTH SHALL HAVE TURNING VANES.
P. VOLUME DAMPERS SHALL BE PROVIDED FOR AIR BALANCE PURPOSES. PROVIDE MANUAL VOLUME DAMPERS ON ALL LOW PRESSURE SUPPLY, RETURN AND EXHAUST DUCT BRANCHES AND TO AIR DIFFUSERS, REGISTERS AND GRILLES, UNLESS NOTED OTHERWISE. DAMPERS SHALL BE OPPOSED BLADE TYPE UNLESS NOTED OTHERWISE.

1. FOR VOLUME DAMPERS ABOVE DRYWALL CEILINGS AND OTHER INACCESSIBLE LOCATIONS, PROVIDE LEVER, POSITION INDICATOR AND LOCK NUT, ENCLOSED IN A DEEP DIE-CAST BOX WITH ADJUSTABLE 2.5" DIAMETER COVER, YOUNG REGULATOR SERIES 315 OR VENTLOCK SERIES 677 AND/OR PROVIDE ACCESS PANEL, SIZED AS REQUIRED (12" X 12" MINIMUM).
2. FOR VOLUME DAMPERS ABOVE ACCESSIBLE CEILINGS, PROVIDE LOCKING TYPE WITH LEVER HANDLE, POSITION INDICATOR AND LOCK NUT, YOUNG REGULATOR SERIES 400 OR VENTLOCK SERIES 600.
Q. DYNAMIC RATED FIRE DAMPERS SHALL BE PROVIDED PER CODE REQUIREMENTS. PROVIDE TYPE "B" FIRE DAMPERS FOR LOW PRESSURE DUCTWORK AND TYPE "C" FIRE DAMPERS FOR MEDIUM PRESSURE DUCTWORK. PROVIDE A DUCT ACCESS DOOR FOR EACH FIRE DAMPER.
R. ROOFTOP UNIT LEVELING CURBS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. THE MECHANICAL CONTRACTOR IS TO INSTALL FACTORY PROVIDED CURBS ON TOP OF LEVELING CURB SO THAT THE ROOFTOP EQUIPMENT IS INSTALLED PLUMB AND LEVEL, UNLESS OTHERWISE NOTED.
S. PROVIDE RIGID LINER CONNECTIONS AT THE INLET AND OUTLET OF EACH VAV BOX AND INLET OF EACH FAN-POWERED BOX. FLEXIBLE CONNECTIONS ARE ONLY PERMITTED ON THE DISCHARGE OF FAN-POWERED BOXES.
T. ALL UNINSULATED EXTERIOR DUCTWORK WHICH IS EXPOSED TO THE OUTDOOR ELEMENTS SHALL BE GALVANIZED OR BLACK IRON AND OF CONSTRUCTION TO COMPLY WITH SMACNA STANDARDS. PROVIDE WATER-PROOF SEAMS AND TWO COATS OF FAR-BASED PAINT OVER ALL DUCTWORK EXPOSED TO THE OUTDOOR ELEMENTS. PROVIDE "PATE CO" TYPE ROOF SUPPORTS WITH ALL NECESSARY ANGLE IRON SUPPORT LEGS AND CROSSES. WHEREVER THIS DUCTWORK PENETRATES THE BUILDING ENVELOPE, THE PENETRATION SHALL BE MADE WATER-PROOF.

U. ALL KITCHEN HOOD EXHAUST DUCTWORK SHALL BE 14 GAUGE BLACK IRON OR 16 GAUGE 303 STAINLESS STEEL, WITH CONTINUOUSLY WELDED SEAMS. ACCESS DOORS SHALL BE PROVIDED EVERY 20 FEET AND AT EVERY CHANGE IN DIRECTION.
V. ALL DISHWASHER EXHAUST DUCTWORK SHALL BE ALUMINUM OF WATERTIGHT CONSTRUCTION. DUCTWORK SHALL BE PITCHED AT 1/4" PER FOOT TO ENSURE THAT ANY DEVELOPED CONDENSATION TRAVELS BACK TO THE DISHWASHER EQUIPMENT.
2.05 PIPING
A. ALL PIPING FOR WORK CONTAINED IN THIS SPECIFICATION AND ACCOMPANYING DRAWINGS SHALL BE IN CONFORMANCE WITH ASTM STANDARDS. ALL CHANGES IN DIRECTION WILL BE MADE WITH FITTINGS. REAM ALL PIPING AND CLEAN OUT SAME BEFORE ASSEMBLY. PROVIDE VALVES OF SIMILAR MATERIAL AS THE PIPING MATERIAL. THEY ARE INSTALLED IN FERROUS BODY VALVES WITH STEEL PIPING, BRASS AND BRONZE VALVES WITH COPPER PIPING. PROVIDE DIELECTRIC FITTINGS, UNIONS, ETC. WHERE PIPING, VALVES, FITTINGS, EQUIPMENT, ETC. OF DISSIMILAR METALS ARE JOINED. COVER OPEN PIPING DURING CONSTRUCTION. FLUSH OUT AND CLEAN PIPING IN A MANNER THAT IS APPROVED BY THE ENGINEER. FOR EACH BRANCH TAKE-OFF, PROVIDE A 3/8" ELBOW 2" SHAPE CONNECTION TO PROVIDE PIPING FLEXIBILITY FOR EXPANSION. PROVIDE GUIDES, ANCHORS, EXPANSION LOOPS, SUPPORTS, VENTS, DRAINS, MAKE-UP WATER, ETC. AS REQUIRED.
B. COPPER PIPING SHALL HAVE SOCKET FITTINGS FOR SOLDER OR BRAZING CONNECTIONS.
C. STEEL PIPING SHALL BE SCHEDULE 40, ASTM A100 OR A53, UNLESS OTHERWISE NOTED. THE FITTINGS IN PIPE 2" AND SMALLER SHALL BE CAST IRON OR MALLEABLE, UNLESS OTHERWISE NOTED. ALL PIPING 2-1/2" AND LARGER SHALL BE BUTT WELDED. WELDING SHALL BE DONE ONLY BY WELDERS CERTIFIED FOR THIS TYPE OF WORK. ALL FITTINGS SHALL BE AS MANUFACTURED BY STOCKHOLM, BONNEY FORGE, WALWORTH, GRINELL, OR TUBE TURNS. PAINT ALL EXPOSED THREADS AFTER ASSEMBLY. FOR ALL PIPING EXPOSED TO THE OUTSIDE AIR, PAINT PIPING WITH ONE COAT OF RUST INHIBITING PRIMER AND ONE COAT OF BLACK FINISH PAINT.
D. PIPING SYSTEMS AND MATERIALS

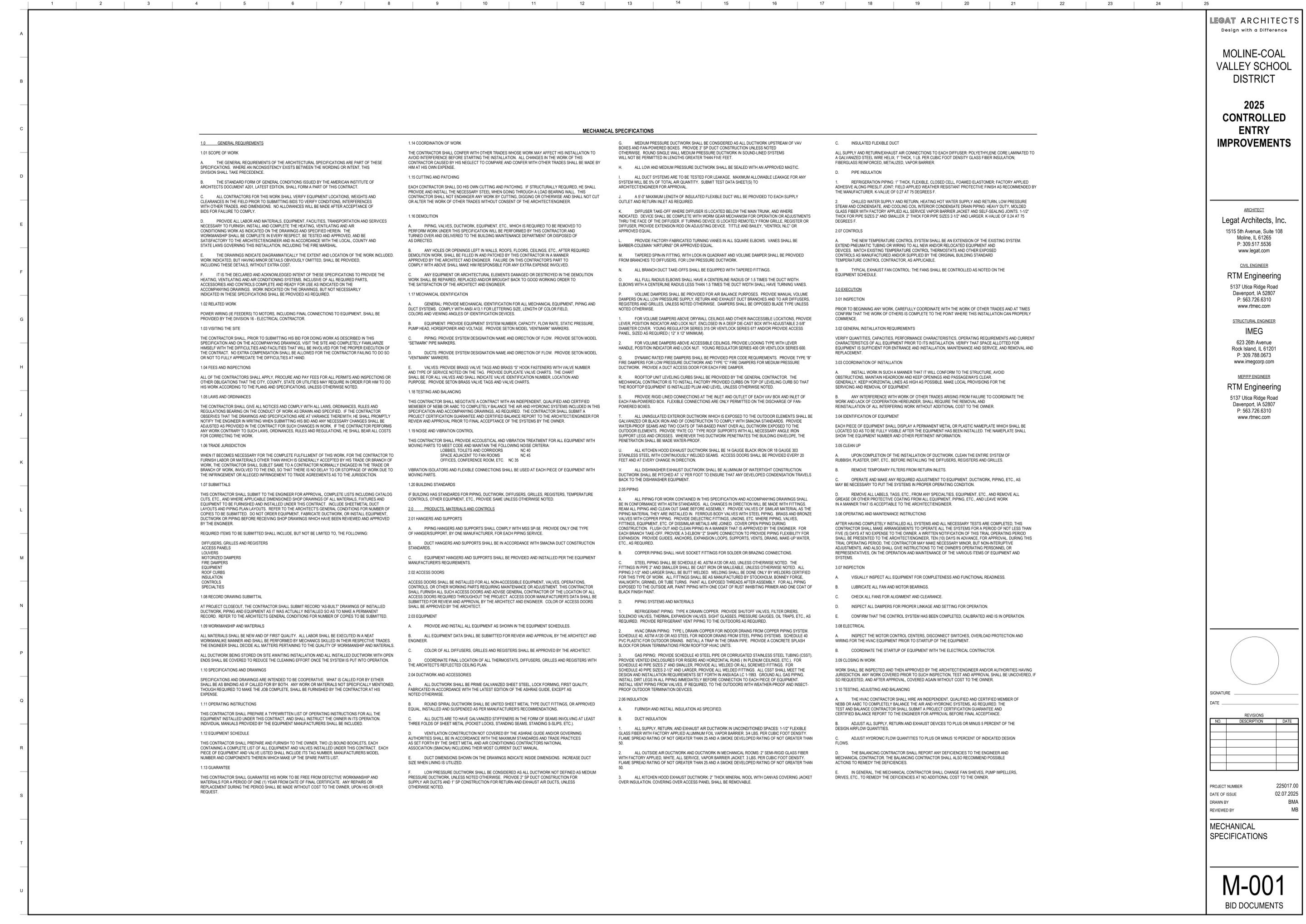
1. REFRIGERANT PIPING: TYPE K DRAWN COPPER. PROVIDE SHUTOFF VALVES, FILTER DRIERS, SOLENOID VALVES, THERMAL EXPANSION VALVES, SIGHT GLASSES, PRESSURE GAUGES, OIL TRAPS, ETC., AS REQUIRED. PROVIDE REFRIGERANT VENT PIPING TO THE OUTDOORS AS REQUIRED.
2. HVAC DRAIN PIPING: TYPE L DRAWN COPPER FOR INDOOR DRAINS FROM COPPER PIPING SYSTEM. SCHEDULE 40, ASTM A120 OR A53 STEEL FOR INDOOR DRAINS FROM STEEL PIPING SYSTEMS. SCHEDULE 40 PVC PLASTIC FOR OUTDOOR DRAINS. INSTALL A TRAP IN THE DRAIN PIPE. PROVIDE A CONCRETE SPLASH BLOCK FOR DRAIN TERMINATIONS FROM ROOFTOP HVAC UNITS.
3. GAS PIPING: PROVIDE SCHEDULE 40 STEEL PIPE OR CORRUGATED STAINLESS STEEL TUBING (CSST). PROVIDE VENTED ENCLOSURES FOR RISERS AND HORIZONTAL RUNS (IN PLENUM CEILINGS, ETC.) FOR SCHEDULE 40 PIPE SIZES 2" AND SMALLER. PROVIDE ALL WELDED FITTINGS. FOR SCHEDULE 40 PIPE SIZES 2-1/2" AND LARGER, PROVIDE ALL WELDED FITTINGS. ALL CSST SHALL MEET THE DESIGN AND INSTALLATION REQUIREMENTS SET FORTH IN ANSI/AGA C 1-1993. GROUND ALL GAS PIPING. INSTALL DIRT LEGS IN ALL PIPING IMMEDIATELY BEFORE CONNECTION TO EACH PIECE OF EQUIPMENT. INSTALL VENT PIPING FROM VALVES, IF REQUIRED, TO THE OUTDOORS WITH WEATHER-PROOF AND INSECT-PROOF OUTDOOR TERMINATION DEVICES.
2.06 INSULATION
A. FURNISH AND INSTALL INSULATION AS SPECIFIED.
B. DUCT INSULATION

1. ALL SUPPLY, RETURN, AND EXHAUST AIR DUCTWORK IN UNCONDITIONED SPACES: 1-1/2" FLEXIBLE GLASS FIBER WITH FACTORY APPLIED ALUMINUM FOIL VAPOR BARRIER, 3/4 LBS. PER CUBIC FOOT DENSITY. FLAME SPREAD RATINGS OF NOT GREATER THAN 25 AND A SMOKE DEVELOPED RATING OF NOT GREATER THAN 50.
2. ALL OUTSIDE AIR DUCTWORK AND DUCTWORK IN MECHANICAL ROOMS: 2" SEMI-RIGID GLASS FIBER WITH FACTORY APPLIED WHITE, ALL SERVICE, VAPOR BARRIER JACKET, 1 LBS. PER CUBIC FOOT DENSITY. FLAME SPREAD RATINGS OF NOT GREATER THAN 25 AND A SMOKE DEVELOPED RATING OF NOT GREATER THAN 50.
3. ALL KITCHEN HOOD EXHAUST DUCTWORK: 2" THICK MINERAL WOOL WITH CANVAS COVERING JACKET OVER INSULATION, COVERING OVER ACCESS PANEL SHALL BE REMOVABLE.

C. INSULATED FLEXIBLE DUCT
ALL SUPPLY AND RETURN EXHAUST AIR CONNECTIONS TO EACH DIFFUSER, POLYETHYLENE CORE LAMINATED TO A GALVANIZED STEEL WIRE HELIX, 1" THICK, 1 LB. PER CUBIC FOOT DENSITY GLASS FIBER INSULATION, FIBERGLASS REINFORCED, METALIZED, VAPOR BARRIER.
D. PIPE INSULATION
1. REFRIGERATION PIPING: 1" THICK, FLEXIBLE, CLOSED CELL, FOAMED ELASTOMER, FACTORY APPLIED ADHESIVE ALONG PRESUIT JOINT, FIELD APPLIED WEATHER RESISTANT PROTECTIVE FINISH AS RECOMMENDED BY THE MANUFACTURER, K-VALUE OF 0.27 AT 75 DEGREES F.
2. CHILLED WATER SUPPLY AND RETURN, HEATING HOT WATER SUPPLY AND RETURN, LOW PRESSURE STEAM AND CONDENSATE, AND COOLING COIL, INTERIOR CONDENSATE DRAIN PIPING: HEAVY DUTY, MOLDED GLASS FIBER WITH FACTORY APPLIED ALL SERVICE VAPOR BARRIER JACKET AND SELF-SEALING JOINTS, 1-1/2" THICK FOR PIPE SIZES 2" AND SMALLER, 2" THICK FOR PIPE SIZES 2-1/2" AND LARGER, K-VALUE OF 0.24 AT 75 DEGREES F.
2.07 CONTROLS

A. THE NEW TEMPERATURE CONTROL SYSTEM SHALL BE AN EXTENSION OF THE EXISTING SYSTEM. EXTEND PNEUMATIC TUBING OR WIRING TO ALL NEW AND/OR RELOCATED EQUIPMENT AND DEVICES. MATCH EXISTING TEMPERATURE CONTROL, THERMOSTATS AND OTHER EXPOSED CONTROLS AS MANUFACTURED AND/OR SUPPLIED BY THE ORIGINAL BUILDING STANDARD TEMPERATURE CONTROL CONTRACTOR, AS APPLICABLE.
B. TYPICAL EXHAUST FAN CONTROL: THE FANS SHALL BE CONTROLLED AS NOTED ON THE EQUIPMENT SCHEDULE.
3.0 EXECUTION
3.01 INSPECTION
PRIOR TO BEGINNING ANY WORK, CAREFULLY COORDINATE WITH THE WORK OF OTHER TRADES AND AT TIMES CONFIRM THAT THE WORK OF OTHERS IS COMPLETE TO THE POINT WHERE THIS INSTALLATION CAN PROPERLY COMMENCE.
3.02 GENERAL INSTALLATION REQUIREMENTS
VERIFY QUANTITIES, CAPACITIES, PERFORMANCE CHARACTERISTICS, OPERATING REQUIREMENTS AND CURRENT CHARACTERISTICS OF ALL EQUIPMENT PRIOR TO ITS INSTALLATION. VERIFY THAT SPACE ALLOTTED FOR EQUIPMENT IS SUFFICIENT FOR ENTRANCE AND INSTALLATION, MAINTENANCE AND SERVICE, AND REMOVAL AND REPLACEMENT.
3.03 COORDINATION OF INSTALLATION
A. INSTALL WORK IN SUCH A MANNER THAT IT WILL CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, MAINTAIN HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. GENERALLY, KEEP HORIZONTAL LINES AS HIGH AS POSSIBLE. MAKE LOCAL PROVISIONS FOR THE SERVICING AND REMOVAL OF EQUIPMENT.
B. ANY INTERFERENCE WITH WORK OF OTHER TRADES ARISING FROM FAILURE TO COORDINATE THE WORK AND LACK OF COOPERATION HEREUNDER, SHALL REQUIRE THE REMOVAL AND REINSTALLATION OF ALL INTERFERING WORK WITHOUT ADDITIONAL COST TO THE OWNER.
3.04 IDENTIFICATION OF EQUIPMENT
EACH PIECE OF EQUIPMENT SHALL DISPLAY A PERMANENT METAL OR PLASTIC NAMEPLATE WHICH SHALL BE LOCATED SO AS TO BE FULLY VISIBLE AFTER THE EQUIPMENT HAS BEEN INSTALLED. THE NAMEPLATE SHALL SHOW THE EQUIPMENT NUMBER AND OTHER PERTINENT INFORMATION.
3.05 CLEAN UP
A. UPON COMPLETION OF THE INSTALLATION OF DUCTWORK, CLEAN THE ENTIRE SYSTEM OF RUBBISH, PLASTER, DIRT, ETC., BEFORE INSTALLING THE DIFFUSERS, REGISTERS AND GRILLES.
B. REMOVE TEMPORARY FILTERS FROM RETURN INLETS.
C. OPERATE AND MAKE ANY REQUIRED ADJUSTMENT TO EQUIPMENT, DUCTWORK, PIPING, ETC., AS MAY BE NECESSARY TO PUT THE SYSTEMS IN PROPER OPERATING CONDITION.
D. REMOVE ALL LABELS, TAGS, ETC., FROM ANY SPECIALTIES, EQUIPMENT, ETC., AND REMOVE ALL GREASE OR OTHER PROTECTIVE COATING FROM ALL EQUIPMENT, PIPING, ETC., AND LEAVE WORK IN A MANNER THAT IS ACCEPTABLE TO THE ARCHITECT/ENGINEER.

3.06 OPERATING AND MAINTENANCE INSTRUCTIONS
AFTER HAVING COMPLETELY INSTALLED ALL SYSTEMS AND ALL NECESSARY TESTS ARE COMPLETED, THIS CONTRACTOR SHALL MAKE ARRANGEMENTS TO OPERATE ALL THE SYSTEMS FOR A PERIOD OF NOT LESS THAN FIVE (5) DAYS AT NO EXPENSE TO THE OWNER. A WRITTEN NOTIFICATION OF THIS TRIAL OPERATING PERIOD SHALL BE PRESENTED TO THE ARCHITECT/ENGINEER, TEN (10) DAYS IN ADVANCE, FOR APPROVAL. DURING THIS TRIAL OPERATING PERIOD, THE CONTRACTOR MAY MAKE NECESSARY MINOR, BUT NON-INTERUPTIVE ADJUSTMENTS, AND ALSO SHALL GIVE INSTRUCTIONS TO THE OWNER'S OPERATING PERSONNEL, OR REPRESENTATIVES, ON THE OPERATION AND MAINTENANCE OF THE VARIOUS ITEMS OF EQUIPMENT AND SYSTEMS.
3.07 INSPECTION
A. VISUALLY INSPECT ALL EQUIPMENT FOR COMPLETENESS AND FUNCTIONAL READINESS.
B. LUBRICATE ALL FAN AND MOTOR BEARINGS.
C. CHECK ALL FANS FOR ALIGNMENT AND CLEARANCE.
D. INSPECT ALL DAMPERS FOR PROPER LINKAGE AND SETTING FOR OPERATION.
E. CONFIRM THAT THE CONTROL SYSTEM HAS BEEN COMPLETED, CALIBRATED AND IS IN OPERATION.
3.08 ELECTRICAL
A. INSPECT THE MOTOR CONTROL CENTERS, DISCONNECT SWITCHES, OVERLOAD PROTECTION AND WIRING FOR THE HVAC EQUIPMENT PRIOR TO STARTUP OF THE EQUIPMENT.
B. COORDINATE THE STARTUP OF EQUIPMENT WITH THE ELECTRICAL CONTRACTOR.
3.09 CLOSING IN WORK
WORK SHALL BE INSPECTED AND THEN APPROVED BY THE ARCHITECT/ENGINEER AND/OR AUTHORITIES HAVING JURISDICTION. ANY WORK COVERED PRIOR TO SUCH INSPECTION, TEST AND APPROVAL SHALL BE UNCOVERED, IF SO REQUESTED, AND AFTER APPROVAL, COVERED AGAIN WITHOUT COST TO THE OWNER.
3.10 TESTING, ADJUSTING AND BALANCING
A. THE HVAC CONTRACTOR SHALL HIRE AN INDEPENDENT, QUALIFIED AND CERTIFIED MEMBER OF NEBB OR AABC TO COMPLETELY BALANCE THE AIR AND HYDRONIC SYSTEMS, AS REQUIRED. THE TEST AND BALANCE CONTRACTOR SHALL SUBMIT A PROJECT CERTIFICATION GUARANTEE AND CERTIFIED BALANCE REPORT TO THE ENGINEER FOR APPROVAL BEFORE FINAL ACCEPTANCE.
B. ADJUST ALL SUPPLY, RETURN AND EXHAUST DEVICES TO PLUS OR MINUS 5 PERCENT OF THE DESIGN AIRFLOW QUANTITIES.
C. ADJUST HYDRONIC FLOW QUANTITIES TO PLUS OR MINUS 10 PERCENT OF INDICATED DESIGN FLOWS.
D. THE BALANCING CONTRACTOR SHALL REPORT ANY DEFICIENCIES TO THE ENGINEER AND MECHANICAL CONTRACTOR. THE BALANCING CONTRACTOR SHALL ALSO RECOMMEND POSSIBLE ACTIONS TO REMEDY THE DEFICIENCIES.
E. IN GENERAL, THE MECHANICAL CONTRACTOR SHALL CHANGE FAN SHELVES, PUMP IMPELLERS, DRIVES, ETC., TO REMEDY THE DEFICIENCIES AT NO ADDITIONAL COST TO THE OWNER.



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STRUCTURAL ENGINEER

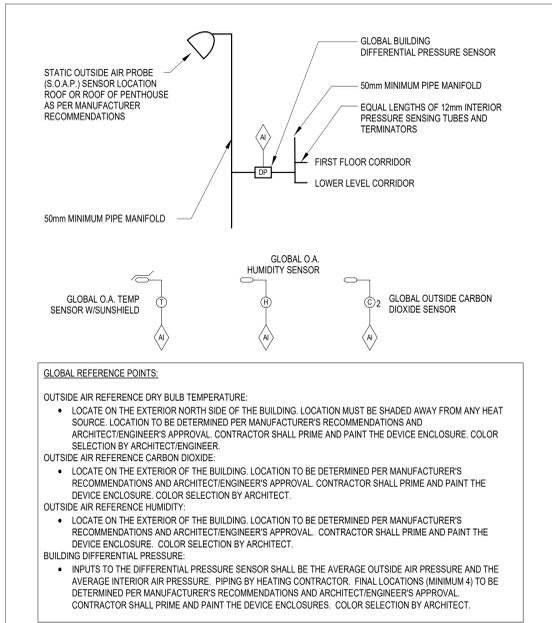
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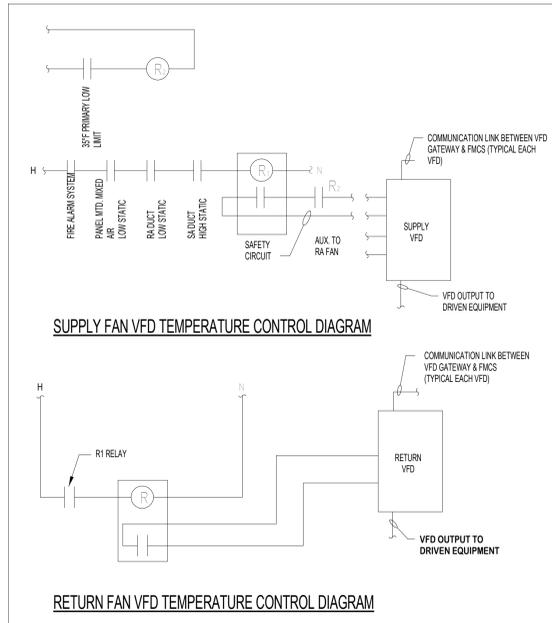
MEDIA ENGINEER

RTM Engineering

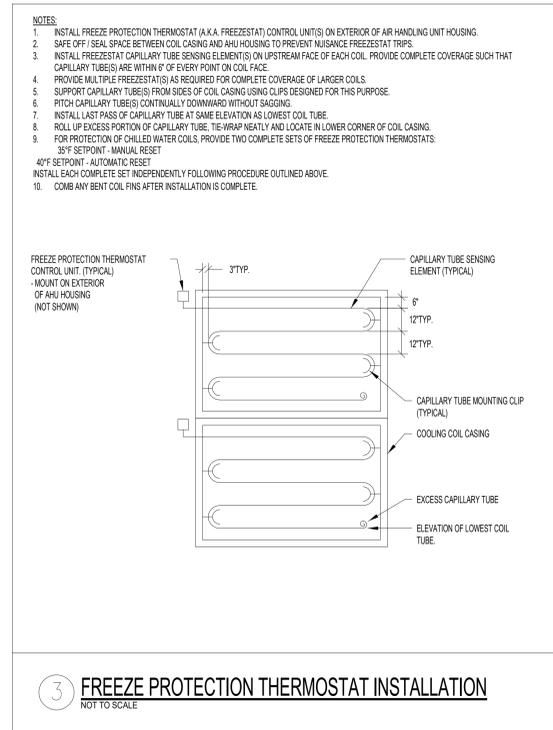
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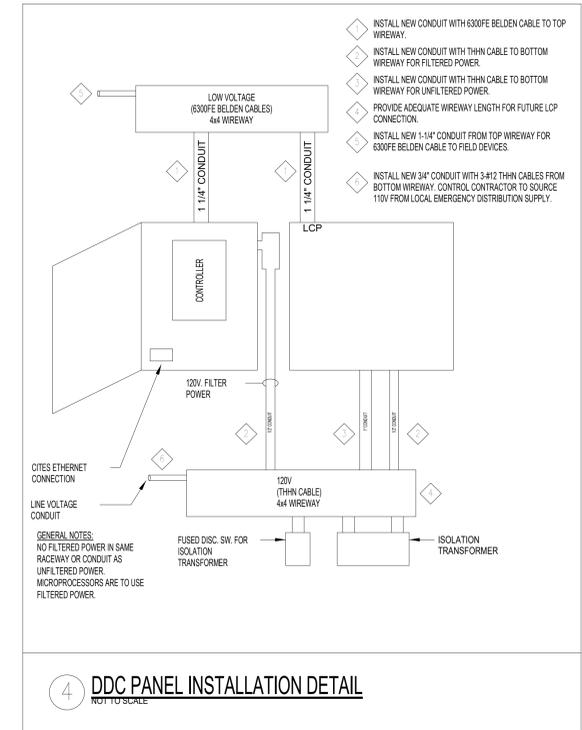
1 BUILDING PRESSURE SENSOR (S.O.A.P.)
NOT TO SCALE



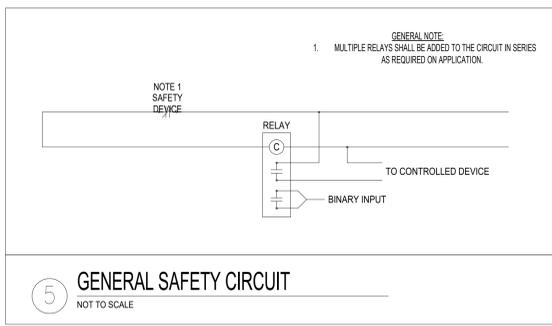
2 SUPPLY & RETURN FAN VFD SAFETY CONTROL DIAGRAM
NOT TO SCALE



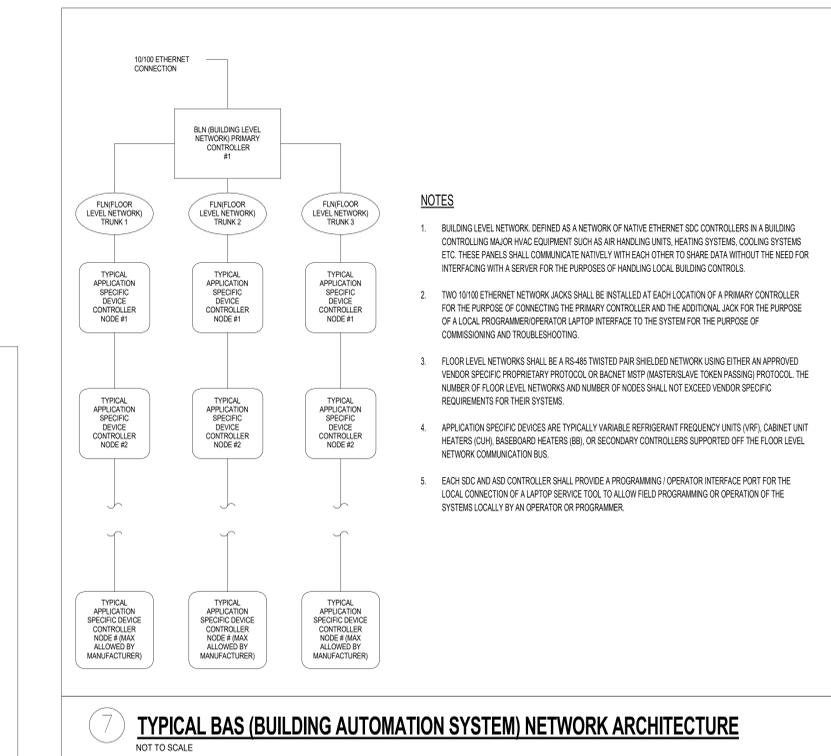
3 FREEZE PROTECTION THERMOSTAT INSTALLATION
NOT TO SCALE



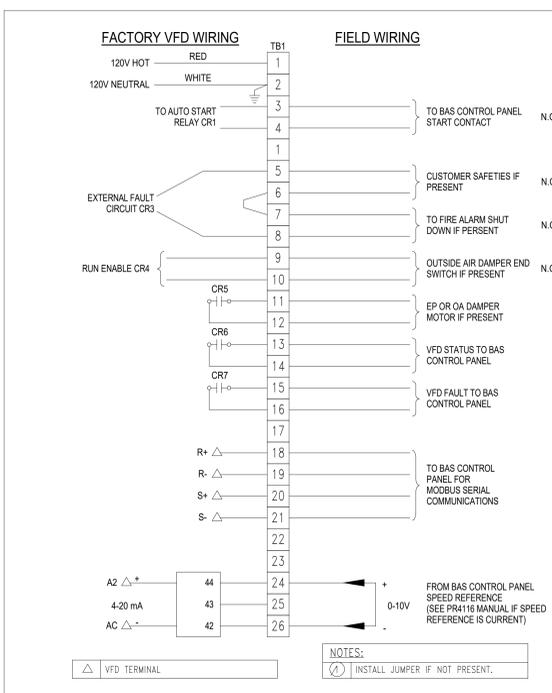
4 DDC PANEL INSTALLATION DETAIL
NOT TO SCALE



5 GENERAL SAFETY CIRCUIT
NOT TO SCALE



7 TYPICAL BAS (BUILDING AUTOMATION SYSTEM) NETWORK ARCHITECTURE
NOT TO SCALE



6 FACTORY VFD WIRING TO FIELD WIRING TERMINAL STRIP
NOT TO SCALE

CONTROLS SYMBOLS					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AI	DDC POINT DESCRIPTOR WITH NAME AI - ANALOG INPUT DI - DIGITAL INPUT AO - ANALOG OUTPUT DO - DIGITAL OUTPUT	AHU OR EQ. NO.	ZONE DESCRIPTOR		THREE WAY CONTROL VALVE
TS1	TEMPERATURE SENSOR WITH AVERAGING ELEMENT	480V 120V	CONTROL TRANSFORMER	ACT	DAMPER ACTUATOR
TS1	TEMPERATURE SENSOR WITH SINGLE POINT ELEMENT	MS EP1 S	RELAY COILS	AD	DUCT AIR QUALITY SENSOR
TS1	TEMPERATURE SENSOR WITH PIPE WELL		FUSE		HIGH LIMIT HUMIDISTAT
HIS	HUMIDITY SENSOR	OL	THERMAL OVERLOAD	TDR	TIME DELAY RELAY DELAY ON MAKE OR BREAK
FS1	LOW TEMPERATURE SWITCH (FREEZESTAT)	HAND OFF	NORMALLY OPEN AND NORMALLY CLOSED CONTACTS		DUCT MOUNTED HUMIDISTAT
FS1	HIGH TEMPERATURE SWITCH (FIRESTAT)		HAND-OFF-AUTO SELECTOR SWITCH	FOI	FIBER OPTIC INTERFACE
SD1	SMOKE DETECTOR		WIRING DESIGNATION (NO. OF HATCHES INDICATES NO. OF CONDUCTORS)	DCS	NEW DIGITAL CONTROL STATION
DPS1	DIFFERENTIAL PRESSURE SWITCH			OCC	OCCUPANCY SENSOR
	MAIN AIR SUPPLY	ON-OFF	ON-OFF SELECTOR SWITCH		
	CURRENT TO PNEUMATIC TRANSDUCER	T	ROOM TEMPERATURE SENSOR AS SHOWN ON FLOOR PLANS		AIR FLOW MONITORING STATION
	TWO WAY CONTROL VALVE	H	ROOM HUMIDITY SENSOR AS SHOWN ON FLOOR PLANS	FAR	FIRE ALARM RELAY
ST	STARTER	PS	PRESSURE SENSOR AS SHOWN ON FLOOR PLANS		THREE WAY CONTROL VALVE

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NO.	DESCRIPTION	DATE

PROJECT NUMBER: 225017.00
DATE OF ISSUE: 02.07.2025
DRAWN BY: BMA
REVIEWED BY: MB

CONTROLS LEGEND

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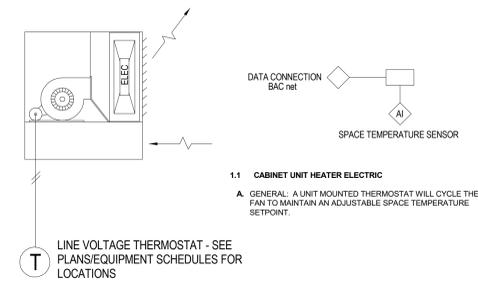
Sequence of Operations
EUH Flow

Occupied Mode:
During occupied periods the supply fan shall run continuously. The electric heat shall stage to maintain the active space temperature setpoint.

Unoccupied Mode:
When the space temperature is below the unoccupied heating setpoint of 60.0 deg. F (adj.) the supply fan shall start and the electric heat shall energize. When the space temperature rises above the unoccupied heating setpoint of 60.0 deg. F (adj.) plus the unoccupied differential of 2.0 deg. F (adj.) the supply fan shall stop and the electric heat shall deenergize.

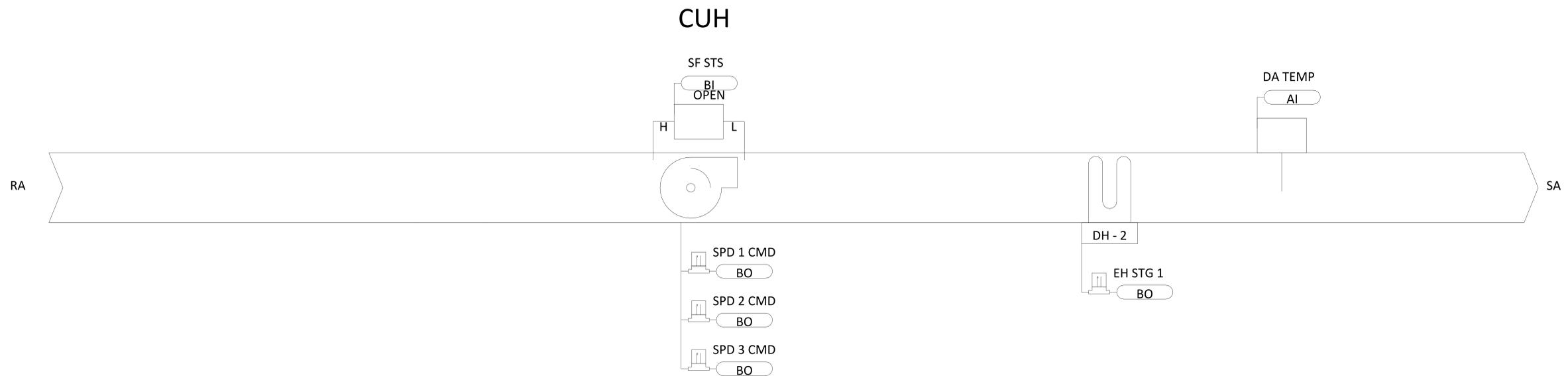
Space Temperature Control:
Cascade zone control shall be used in the occupied, occupied bypass, and occupied standby modes. It maintains zone temperature by controlling the discharge air temperature to control the zone temperature while minimizing the fan speed. The space temperature shall be maintained at the occupied heating setpoint of 71.0 deg. F (adj.).

Supply Fan Operation:
The supply fan shall run continuously during occupied mode. When the controller transitions to the occupied mode, the supply fan shall start at high speed before transitioning to continuous operation at the selected speed. The supply fan status shall be monitored by a differential pressure switch. A manual reset shall be required to restart the fan.

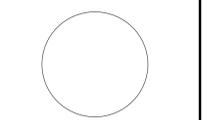


TYPICAL ELEC CABINET UNIT HEATER

CABINET HEATER (ELECTRIC) CONTROL DIAGRAM



EUH TYPICAL - SYSTEM POINTS LIST



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REVIEWED BY MB

ELECTRIC UNIT HEATER CONTROL DIAGRAM

INTERNATIONAL MECHANICAL CODE 2018 VENTILATION SCHEDULE - JOHN DEERE - ALTERNATIVE BID													
ROOM NUMBER	ROOM NAME	FLOOR AREA (SF)	OCCUPANCY CLASSIFICATION	DEFAULT OCCUPANCY (#/1000 SF)	# OF PEOPLE	IMC 2018 REQUIREMENTS				ACTUAL		EQUIPMENT	
						OA (CFM/PERSON)	OA (CFM/SF)	OA (CFM)	EA (CFM)	SUPPLY (CFM)	EXHAUST (CFM)	SUPPLY FAN	EXHAUST FAN
103	VESTIBULE	64 SF	VESTIBULE	0	0	0	0.00	0	0	0 CFM	0 CFM	CUH 103	-
104	VESTIBULE	64 SF	VESTIBULE	0	0	0	0.00	0	0	0 CFM	0 CFM	CUH 104	-
105	INTERIOR VESTIBULE	121 SF	VESTIBULE	0	0	0	0.00	0	0	0 CFM	0 CFM	EXISTING	-
106	SECURITY OFFICE	28 SF	OFFICE SPACES	5	1	5	0.06	7	0	50 CFM	10 CFM	EWH 106	-

ELECTRIC HEATER SCHEDULE - JOHN DEERE - ALTERNATIVE BID															
TAG	LOCATION	AIRFLOW (CFM)	HEATING CAPACITY (KW)	ELECTRICAL DATA				DIMENSIONS (IN)			WEIGHT (LBS)	MANUFACTURER	MODEL NO.	REMARKS	
				MCA	MOCp	V	PH	HZ	LENGTH	WIDTH					HEIGHT
CUH 103	VESTIBULE 103	250	2.0	9	15	208	3	60	35	10	26	120	QMARK	CU935	1,3-5
CUH 104	VESTIBULE 104	250	2.0	9	15	208	3	60	35	10	26	120	QMARK	CU935	1,3-5
EWH 106	SECURITY OFFICE 106	150	1.5	13	20	120	1	60	16	10	19	25	QMARK	AWH150	2-5

- REMARKS:
- UNIT TO BE SURFACE MOUNTED.
 - UNIT TO BE RECESSED WALL MOUNTED.
 - UNIT TO BE PROVIDED WITH INTERNAL THERMOSTAT.
 - COLOR TO BE DETERMINED AND APPROVED BY AOR.
 - UNIT TO BE PROVIDED WITH FACTORY INSTALLED DISCONNECT SWITCH.

GRILLE, REGISTERS, AND DIFFUSER SCHEDULE - JOHN DEERE - ALTERNATIVE BID												
TAG	AIR STREAM	MOUNTING TYPE	DIA.	HEIGHT	WIDTH	INLET SIZE (IN)		FRAME SIZE		MANUFACTURER	MODEL NO.	REMARKS
						HEIGHT	WIDTH	HEIGHT	WIDTH			
A	SUPPLY	WALL		6"	6"	0'-7 1/2"	0'-7 1/2"			TITUS	301FL	ALL

- REMARKS:
- 4-WAY THROW UNLESS OTHERWISE NOTED.
 - PROVIDE ADAPTOR BOOTS AS REQUIRED.
 - PROVIDE WITH MANUAL VOLUME BALANCE DAMPER.
 - COORDINATE FRAME STYLE WITH ARCHITECTURAL PLANS.
 - REFER TO PLAN FOR FACE AND DUCT SIZE.

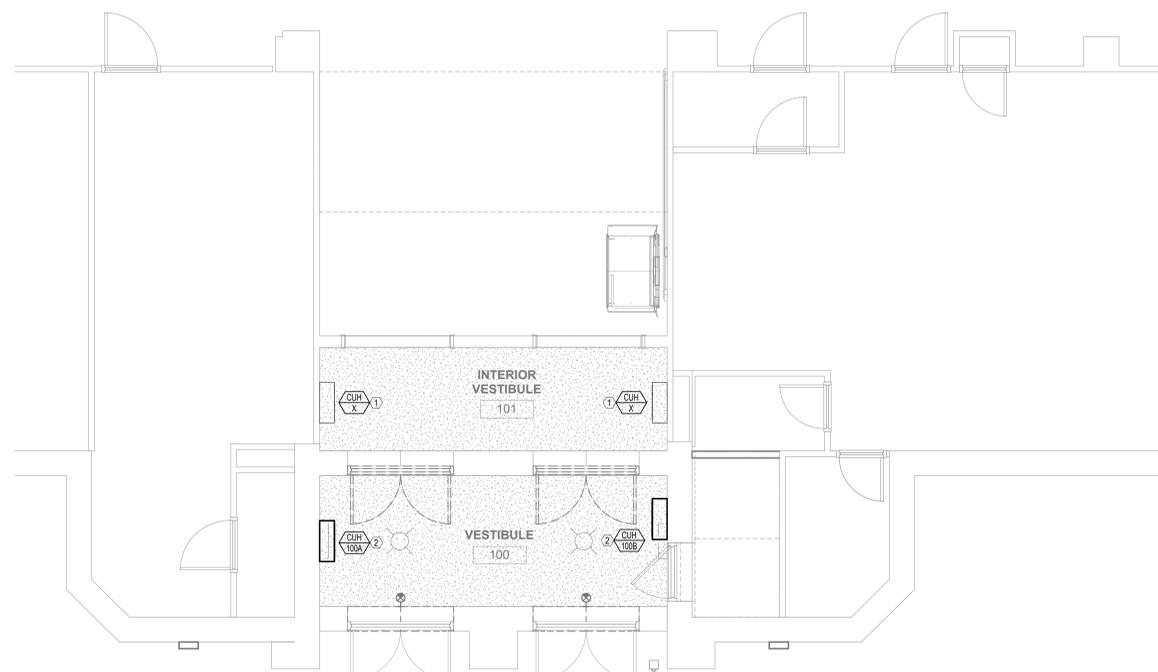
INTERNATIONAL MECHANICAL CODE 2018 VENTILATION SCHEDULE - JOHN DEERE													
ROOM NUMBER	ROOM NAME	FLOOR AREA (SF)	OCCUPANCY CLASSIFICATION	DEFAULT OCCUPANCY (#/1000 SF)	# OF PEOPLE	IMC 2018 REQUIREMENTS				ACTUAL		EQUIPMENT	
						OA (CFM/PERSON)	OA (CFM/SF)	OA (CFM)	EA (CFM)	SUPPLY (CFM)	EXHAUST (CFM)	SUPPLY FAN	EXHAUST FAN
100	VESTIBULE	164 SF	VESTIBULE	0	0	0	0.00	0	0	0 CFM	0 CFM	CUH 100A	-
101	INTERIOR VESTIBULE	121 SF	VESTIBULE	0	0	0	0.00	0	0	0 CFM	0 CFM	EXISTING	-

ELECTRIC HEATER SCHEDULE - JOHN DEERE															
TAG	LOCATION	AIRFLOW (CFM)	HEATING CAPACITY (KW)	ELECTRICAL DATA				DIMENSIONS (IN)			WEIGHT (LBS)	MANUFACTURER	MODEL NO.	REMARKS	
				MCA	MOCp	V	PH	HZ	LENGTH	WIDTH					HEIGHT
CUH 100A	VESTIBULE 100	250	2.0	9	15	208	3	60	35	10	26	120	QMARK	CU935	ALL
CUH 100B	VESTIBULE 100	250	2.0	9	15	208	3	60	35	10	26	120	QMARK	CU935	ALL

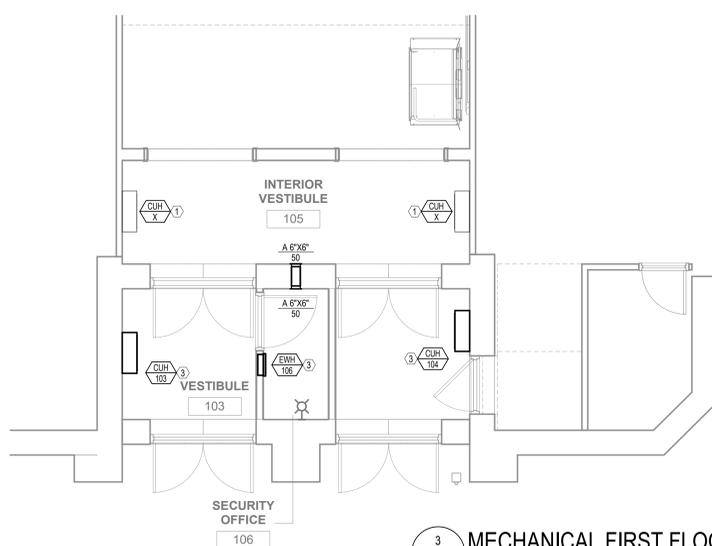
- REMARKS:
- UNIT TO BE WALL MOUNTED.
 - UNIT TO BE PROVIDED WITH INTERNAL THERMOSTAT.
 - COLOR TO BE DETERMINED AND APPROVED BY AOR.
 - UNIT TO BE PROVIDED WITH FACTORY INSTALLED DISCONNECT SWITCH.

- GENERAL NOTES:
- DRAWINGS ARE TO BE REVIEWED IN FULL DETAIL WITH SPECIFICATIONS. IN THE EVENT THAT THERE IS CROSS DIRECTION, A REQUEST FOR INFORMATION (RFI) IS TO BE SENT TO THE ENGINEER TO RECORD. AS STATED IN SPECIFICATION DIV. 1, THE HIGHER COST OF THE TWO OPTIONS IS TO BE TAKEN AS THE OPTION WHILE AT BID UNLESS CLARIFICATION FROM RFI.
 - ALL MECHANICAL SHEETS SHALL BE REVIEWED AND COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
 - REFER TO SHEET M-000 FOR DUCT AND PIPE INSULATION.
 - ALL PLENUM MATERIALS SHALL HAVE A FLAME SPREAD INDEX NOT GREATER THAN 25 AND A SMOKE DEVELOPED INDEX NOT GREATER THAN 50 WHEN TESTED WITH ASTM 384 OR UL 723. PVC VENT PIPING PLENUM SHALL BE FIRE WRAPPED OR MEET PREVIOUS STATEMENT.

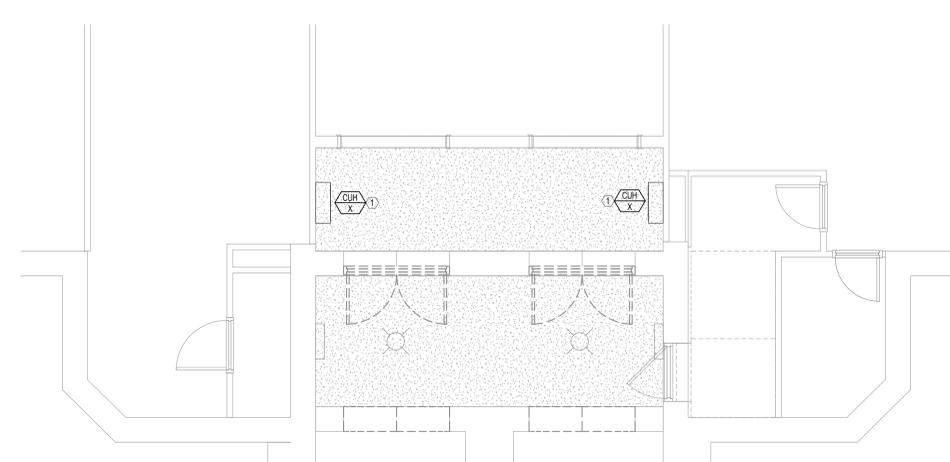
- # KEYNOTES
- EXISTING UNIT HEATER TO REMAIN.
 - SEE CONTROL SHEET M-201 FOR MORE INFORMATION.
 - ALTERNATIVE BID - SEE CONTROL SHEET M-201 FOR MORE INFORMATION.



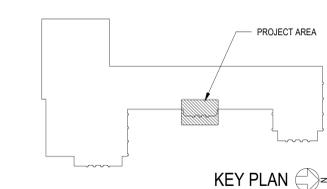
1 MECHANICAL FIRST FLOOR PLAN
MJ-101 1/4" = 1'-0"



3 MECHANICAL FIRST FLOOR PLAN - ALTERNATIVE BID
MJ-101 1/4" = 1'-0"



2 MECHANICAL FIRST FLOOR DEMOLITION PLAN
MJ-101 1/4" = 1'-0"



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REVIEWED BY MB

MECHANICAL DEMOLITION & NEW WORK PLANS - JOHN DEERE

INTERNATIONAL MECHANICAL CODE 2021 VENTILATION SCHEDULE - WILSON - ALTERNATIVE													
ROOM NUMBER	ROOM NAME	FLOOR AREA (SF)	OCCUPANCY CLASSIFICATION	DEFAULT OCCUPANCY (#/1000 SF)	# OF PEOPLE	IMC 2012 REQUIREMENTS			ACTUAL			EQUIPMENT	
						OA (CFM/PERSON)	OA (CFM/SF)	EA (CFM)	SUPPLY (CFM)	EXHAUST (CFM)	SUPPLY FAN	EXHAUST FAN	
100	VESTIBULE	180 SF	VESTIBULE	0	0	0	0.00	0	0	0 CFM	0 CFM	CUH 100C.D	-
101	OFFICE	17 SF	OFFICE SPACES	5	1	5	0.06	6	0	50 CFM	10	0 CFM	CUH 101
B145	ENTRANCE	2407 SF	CORRIDORS	0	0	0	0.06	144	0	1700 CFM	340	0 CFM	EXISTING
TOTAL		2603 SF						150	0	1750 CFM	350	0 CFM	

ELECTRIC UNIT HEATER SCHEDULE - WILSON - ALTERNATIVE BID												
TAG	LOCATION	AIRFLOW (CFM)	HEATING CAPACITY (KW)	ELECTRICAL DATA				WEIGHT (LBS)	MANUFACTURER	MODEL NO.	REMARKS	
				MCA	MOCF	V	PH					
CUH 100C	VESTIBULE 100	150	2.0	10	15	208	1	60	23	QMARK	EFF4008	ALL
CUH 100D	VESTIBULE 100	150	2.0	10	15	208	1	60	23	QMARK	EFF4008	ALL
CUH 101	VESTIBULE 100	150	1.5	13	20	120	1	60	23	QMARK	EFF1500	ALL

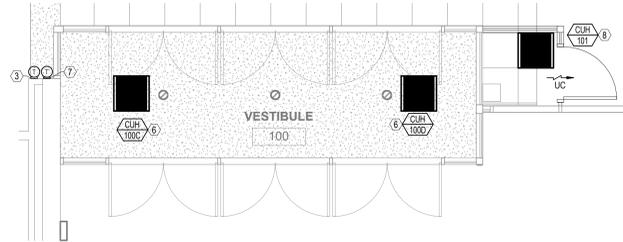
- REMARKS:
- UNIT TO BE RECESSED IN CEILING.
 - UNIT TO BE PROVIDED WITH INTERNAL THERMOSTAT.
 - COLOR TO BE DETERMINED AND APPROVED BY AOR.
 - UNIT TO BE PROVIDED WITH FACTORY INSTALLED DISCONNECT SWITCH.

INTERNATIONAL MECHANICAL CODE 2021 VENTILATION SCHEDULE - WILSON													
ROOM NUMBER	ROOM NAME	FLOOR AREA (SF)	OCCUPANCY CLASSIFICATION	DEFAULT OCCUPANCY (#/1000 SF)	# OF PEOPLE	IMC 2012 REQUIREMENTS			ACTUAL			EQUIPMENT	
						OA (CFM/PERSON)	OA (CFM/SF)	EA (CFM)	SUPPLY (CFM)	EXHAUST (CFM)	SUPPLY FAN	EXHAUST FAN	
100	VESTIBULE	180 SF	VESTIBULE	0	0	0	0.00	0	0	0 CFM	0	0 CFM	CUH 100C.D
B145	ENTRANCE	2407 SF	CORRIDORS	0	0	0	0.06	144	0	1700 CFM	340	0 CFM	EXISTING
TOTAL		2586 SF						144	0	1700 CFM	340	0 CFM	

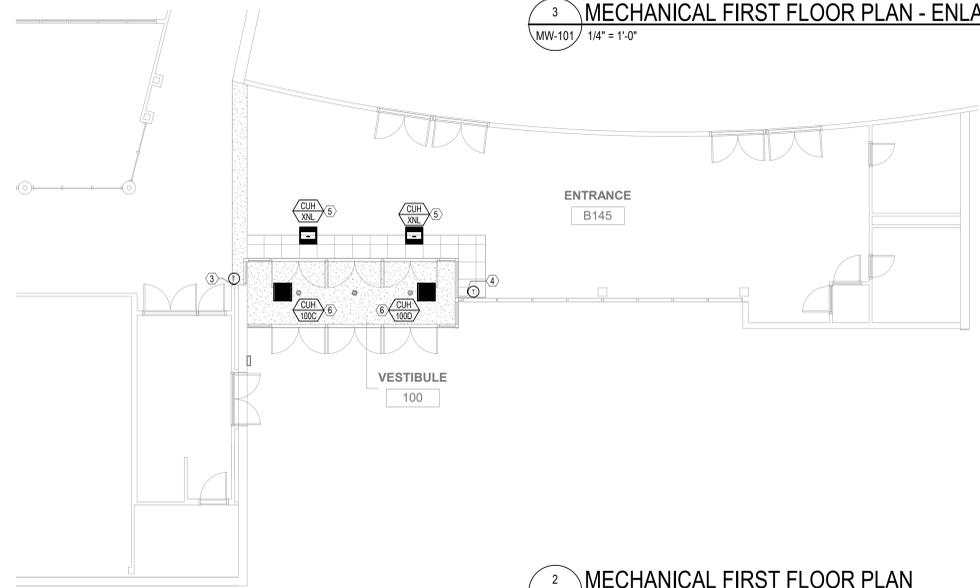
ELECTRIC UNIT HEATER SCHEDULE - WILSON												
TAG	LOCATION	AIRFLOW (CFM)	HEATING CAPACITY (KW)	ELECTRICAL DATA				WEIGHT (LBS)	MANUFACTURER	MODEL NO.	REMARKS	
				MCA	MOCF	V	PH					
CUH 100C	VESTIBULE 100	150	2.0	10	15	208	1	60	23	QMARK	EFF4008	ALL
CUH 100D	VESTIBULE 100	150	2.0	10	15	208	1	60	23	QMARK	EFF4008	ALL

- REMARKS:
- UNIT TO BE RECESSED IN CEILING.
 - UNIT TO BE PROVIDED WITH INTERNAL THERMOSTAT.
 - COLOR TO BE DETERMINED AND APPROVED BY AOR.
 - UNIT TO BE PROVIDED WITH FACTORY INSTALLED DISCONNECT SWITCH.

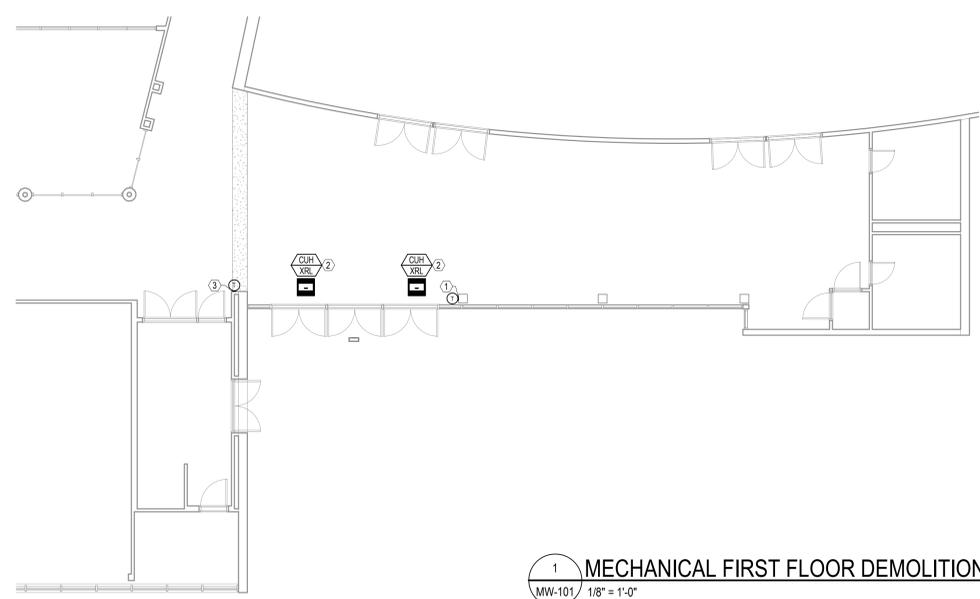
- GENERAL NOTES:
- DRAWINGS ARE TO BE REVIEWED IN FULL DETAIL WITH SPECIFICATIONS. IN THE EVENT THAT THERE IS CROSS DIRECTION, A REQUEST FOR INFORMATION (RFI) IS TO BE SENT TO THE ENGINEER TO RECORD, AS STATED IN SPECIFICATION DIV. 1. THE HIGHER COST OF THE TWO OPTIONS IS TO BE TAKEN AS THE OPTION WHILE AT BID UNLESS CLARIFICATION FROM RFI.
 - ALL MECHANICAL SHEETS SHALL BE REVIEWED AND COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
 - REFER TO SHEET M-000 FOR DUCT AND PIPE INSULATION.
 - ALL PLENUM MATERIALS SHALL HAVE A FLAME SPREAD INDEX NOT GREATER THAN 25 AND A SMOKE DEVELOPED INDEX NOT GREATER THAN 50 WHEN TESTED WITH ASTM 384 OR UL 723. PVC VENT PIPING PLENUM SHALL BE FIRE WRAPPED OR MEET PREVIOUS STATEMENT.
- # KEYNOTES
- EXISTING THERMOSTAT TO BE RELOCATED TO NEW LOCATION.
 - EXISTING UNIT HEATER TO BE RELOCATED TO NEW LOCATION.
 - EXISTING THERMOSTAT TO REMAIN.
 - EXISTING THERMOSTAT ALONG WITH EXISTING WIRING TO BE RELOCATED TO NEW LOCATION.
 - EXISTING UNIT HEATER TO BE RELOCATED TO NEW LOCATION. EXTEND AND RECONNECT DDC CONTROL WIRING.
 - SEE CONTROL SHEET M-201 FOR MORE INFORMATION.
 - ALTERNATIVE BID - EXISTING THERMOSTAT ALONG WITH EXISTING WIRING TO BE RELOCATED TO NEW LOCATION.
 - ALTERNATIVE BID - SEE CONTROL SHEET M-201 FOR MORE INFORMATION.



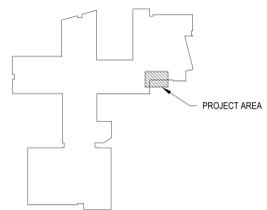
3 MECHANICAL FIRST FLOOR PLAN - ENLARGED W/ ALTERNATE
MW-101 / 1/4" = 1'-0"



2 MECHANICAL FIRST FLOOR PLAN
MW-101 / 1/8" = 1'-0"



1 MECHANICAL FIRST FLOOR DEMOLITION PLAN
MW-101 / 1/8" = 1'-0"



SIGNATURE _____
DATE _____

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NUMBER 225029 00
DATE OF ISSUE 02.07.2025
DRAWN BY BMA
REVIEWED BY MB

MECHANICAL FIRST FLOOR PLAN - WILSON

GENERAL NOTES:
 1. REFER TO ELECTRICAL GENERAL NOTES AND SYMBOLS ON SHEET E-000.
 2. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E-001.
 3. ALL DEVICES ARE SHOWN EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

KEYNOTES
 1. MECHANICAL EQUIPMENT IS EXISTING TO BE REMOVED. EC TO DISCONNECT AND REMOVE ALL ASSOCIATED ELECTRICAL EQUIPMENT AND FEEDERS.
 2. MECHANICAL EQUIPMENT IS EXISTING TO REMAIN.

LEGAT ARCHITECTS
 Design with a Difference

MOLINE-COAL VALLEY SCHOOL DISTRICT

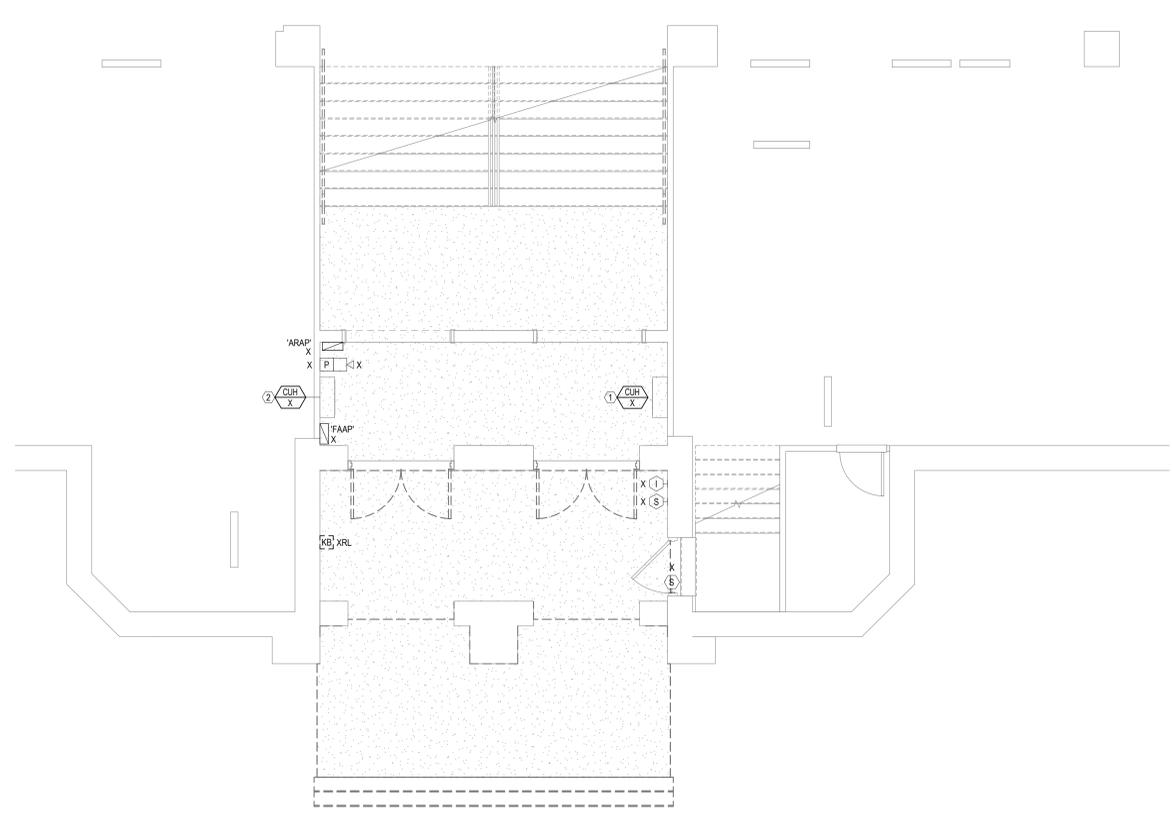
2025 CONTROLLED ENTRY IMPROVEMENTS

ARCHITECT
Legat Architects, Inc.
 1515 5th Avenue, Suite 108
 Moline, IL 61265
 P: 309.517.5536
 www.legat.com

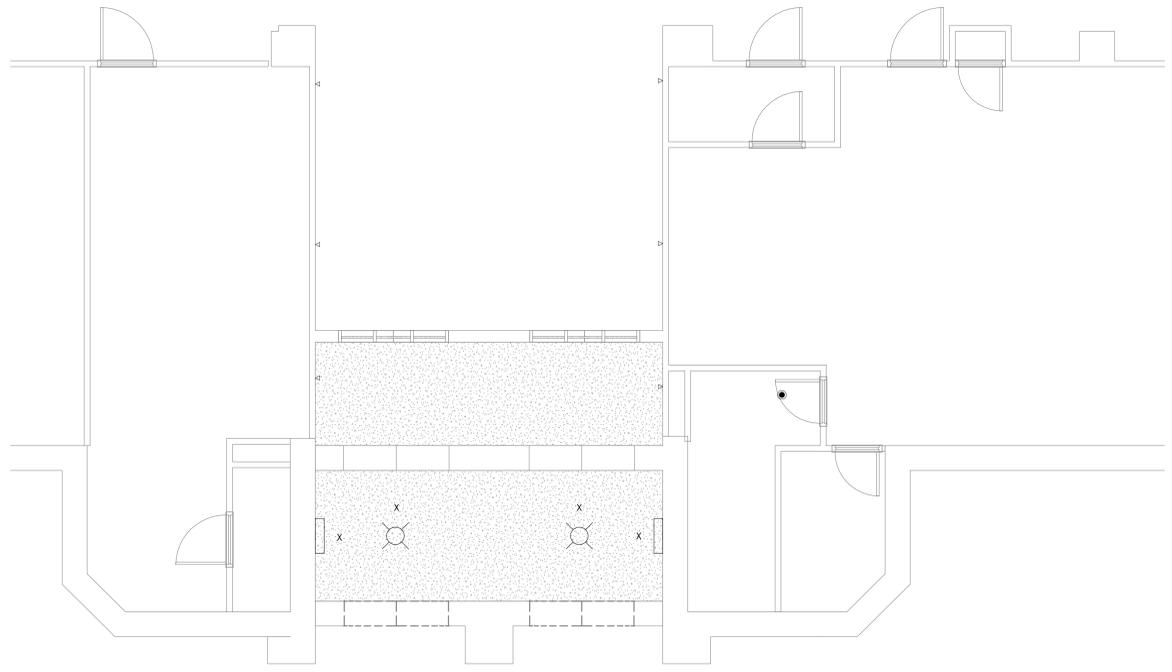
CIVIL ENGINEER
RTM Engineering
 5137 Ulca Ridge Road
 Davenport, IA 52807
 P: 563.726.6310
 www.rtmec.com

STRUCTURAL ENGINEER
IMEG
 623 26th Avenue
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 P: 309.788.0673
 www.imegoorp.com

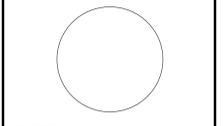
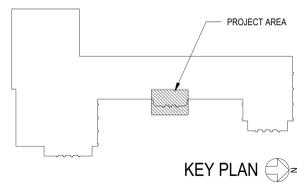
MEEPE ENGINEER
RTM Engineering
 5137 Ulca Ridge Road
 Davenport, IA 52807
 P: 563.726.6310
 www.rtmec.com



1 ELECTRICAL FIRST FLOOR DEMOLITION PLAN - POWER
 EJD-101/ 1/4" = 1'-0"



2 ELECTRICAL FIRST FLOOR DEMOLITION PLAN - LIGHTING
 EJD-101/ 1/4" = 1'-0"



SIGNATURE _____
 DATE _____

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NUMBER 225017.00
 DATE OF ISSUE 02.07.2025
 DRAWN BY CM
 REVIEWED BY NI

ELECTRICAL FIRST FLOOR DEMOLITION PLAN

EJD-101
 BID DOCUMENTS

GENERAL NOTES:

1. REFER TO ELECTRICAL GENERAL NOTES AND SYMBOLS ON SHEET E-000.
2. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E-001.
3. ALL DEVICES ARE SHOWN EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

LEGAT ARCHITECTS
Design with a Difference

MOLINE COAL VALLEY SCHOOL DISTRICT

2024 WILSON CONTROLLED ENTRY IMPROVEMENTS

1301 48th St.
Moline, IL 61265

ARCHITECT

Legat Architects, Inc.

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www.legat.com

CIVIL ENGINEER / LANDSCAPE ARCHITECT

Civil Engineer Name

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Address Line 2
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www. .com

STRUCTURAL ENGINEER

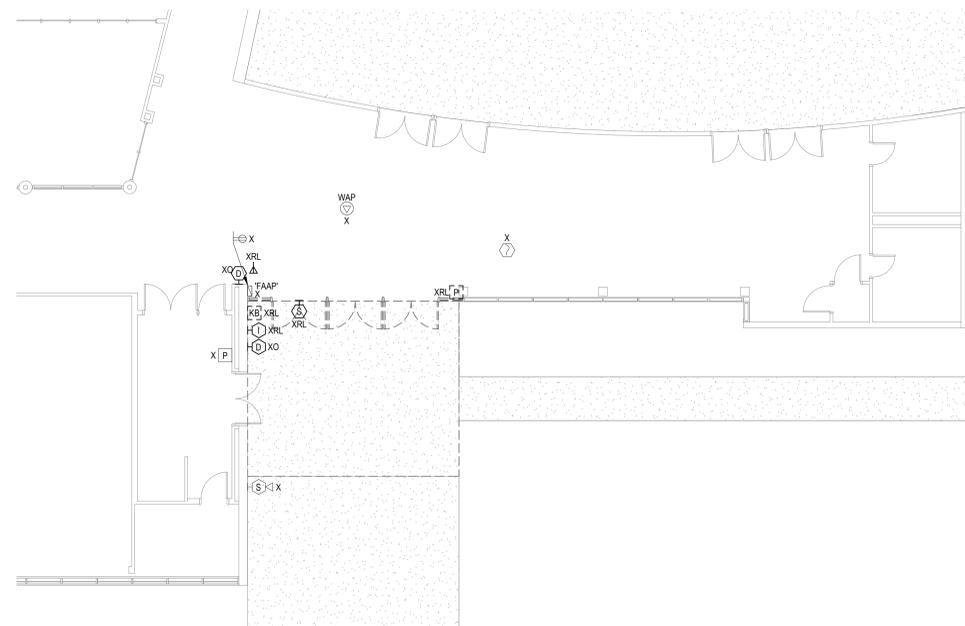
IMEG

623 26th Avenue
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www.imegoorp.com

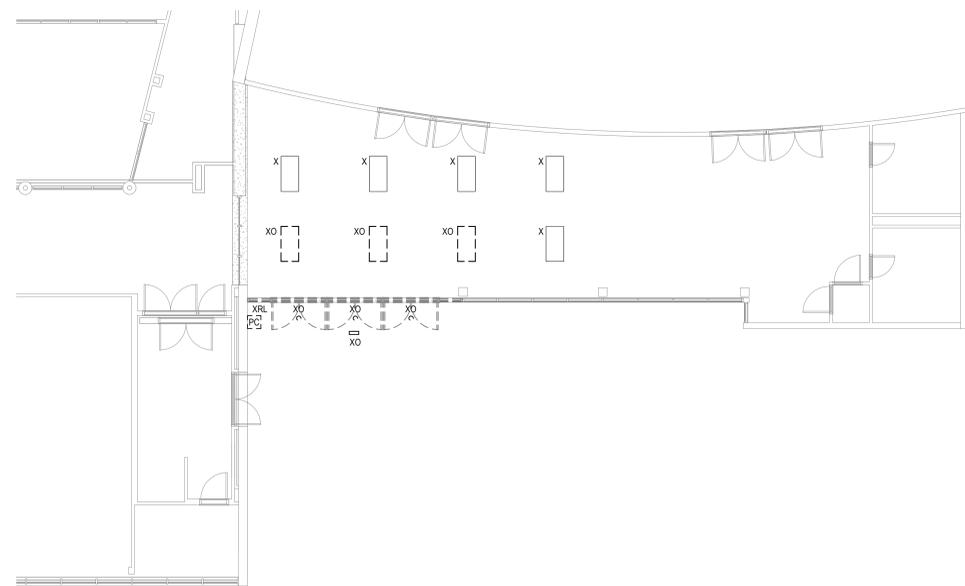
MEDIA ENGINEER

RTM Engineering

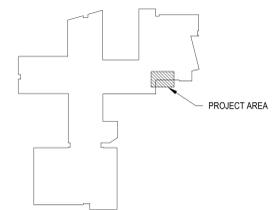
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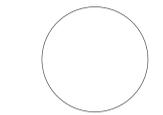
1 ELECTRICAL FIRST FLOOR DEMOLITION PLAN
EWD-101/ 1/8" = 1'-0"



2 ELECTRICAL FIRST FLOOR DEMOLITION PLAN - LIGHTING
EWD-101/ 1/8" = 1'-0"



KEY PLAN



SIGNATURE _____
DATE _____

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NUMBER 225029 00
DATE OF ISSUE 02.07.2025
DRAWN BY CM
REVIEWED BY NI

ELECTRICAL FIRST FLOOR DEMOLITION PLAN

EWD-101
BID DOCUMENTS

SYMBOL LIST NOTE:

MOUNTING HEIGHTS FOR DEVICES AND EQUIPMENT TO BE MEASURED FROM FLOOR TO CENTERLINE OF DEVICE. DEVICES EXTENDING GREATER THAN 4" FROM THE WALL SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 80" AFF TO BOTTOM OF DEVICE.

PANELS:

ELECTRICAL PANEL - SURFACE / RECESSED

EQUIPMENT CABINETS:

WITHOUT DOOR - SURFACE / RECESSED

WITH DOOR - SURFACE / RECESSED

POWER:

SIMPLEX RECEPTACLE - MOUNTED 18" AFF UNLESS NOTED OTHERWISE

DUPLEX RECEPTACLE - MOUNTED 18" AFF UNLESS NOTED OTHERWISE

DUPLEX RECEPTACLE - GFCI (INDICATED BY CENTER HATCH) - MOUNTED 18" AFF UNLESS NOTED OTHERWISE

DUPLEX RECEPTACLE - GFCI - MOUNTED 4" ABOVE COUNTERTOP OR COUNTER BACKSPLASH WHERE PRESENT

DUPLEX RECEPTACLE - MOUNTED 4" ABOVE COUNTERTOP OR COUNTER BACKSPLASH WHERE PRESENT

DUPLEX RECEPTACLE - CEILING MOUNTED

NON NEMA 5-20R RECEPTACLE

QUADRUPLEX RECEPTACLE - MOUNTED 18" AFF UNLESS NOTED OTHERWISE

QUADRUPLEX RECEPTACLE - GFCI (INDICATED BY CENTER HATCH) - MOUNTED 18" AFF UNLESS NOTED OTHERWISE

QUADRUPLEX RECEPTACLE - MOUNTED 4" ABOVE COUNTERTOP OR COUNTER BACKSPLASH WHERE PRESENT

FLOOR MOUNTED ELECTRICAL BOX

DISCONNECT SWITCH

FUSED DISCONNECT SWITCH

MOTOR STARTER

METER SOCKET

TRANSFORMER, WALL / FLOOR MOUNTED

INDICATES TRANSFORMER MOUNTED ON EQUIPMENT PAD

JUNCTION BOX

PULL BOX

GROUND ROD

EQUIPMENT TAG

MOTOR CONNECTION

CONDUCTOR QUANTITY IN RACEWAY. NUMBERS INDICATE WIRE SIZES (AWG).

INDICATES PHASE CONDUCTOR

INDICATES NEUTRAL CONDUCTOR

INDICATES GREEN GROUND CONDUCTOR

TECHNOLOGY:

DENOTES QUANTITY

D DENOTES DATA TYPE

TECHNOLOGY OUTLET WITH BACKBOX, CONDUIT, AND INDICATED DEVICES AND CABLES. 4" ABOVE COUNTER/COUNTER BACKSPLASH WHERE PRESENT.

TECHNOLOGY OUTLET WITH BACKBOX, CONDUIT, AND INDICATED DEVICES AND CABLES. 18" AFF UNLESS NOTED OTHERWISE.

FLOOR MOUNTED DATA BOX

CEILING MOUNTED DATA BOX

WIRELESS ACCESS POINT

FREE STANDING OPEN FRAME DATA CABINET. (HEAVY LINE INDICATES FRONT OF CABINET)

FREE STANDING ENCLOSED FRAME DATA CABINET. FLOOR MOUNTED / WALL MOUNTED. (HEAVY LINE INDICATES FRONT OF CABINET)

GROUND BUS BAR

SYSTEMS:

PAGING AND SOUND SYSTEM - CEILING / WALL

CLOCK SYSTEM - CEILING / WALL

SECURITY:

DOOR HARDWARE INSTALLATION - CEILING / WALL (SEE DETAILS, ARCHITECTURAL PLANS AND SPECIFICATIONS)

XX DENOTES THE FOLLOWING (AO) AUTODOOR OPERATOR (ES) ELECTRICAL STRIKE

SECURITY, ACCESS CONTROL AND DOOR MOUNTING - CEILING / WALL

XX DENOTES THE FOLLOWING (CR) CARD READER (ES) ELECTRICAL STRIKE (DR) DOOR RELEASE BUTTON

SECURITY CAMERA - CEILING / WALL

INTERCOM SYSTEM - WALL

LIGHTING:

NOTE: SHADING ANY OF THE LIGHTING FIXTURE INDICATES UNIT IS WIRED TO AN EMERGENCY OR NIGHT LIGHTING CIRCUIT.

CEILING MOUNTED FIXTURE - SURFACE / RECESSED

FIXTURE DESIGNATION

SWITCH LEG. NO DESIGNATION INDICATES PORTION OF CIRCUIT SWITCHED FROM LOCAL SWITCH AND/OR OCCUPANCY SENSOR

CIRCUIT NUMBER

STRIP LIGHT FIXTURE

LINEAR WALL MOUNTED FIXTURE

CEILING MOUNTED DOWNLIGHT FIXTURE - SURFACE / RECESSED

CEILING MOUNTED DOWNLIGHT FIXTURE - WALL WASH - SURFACE / RECESSED

POLE MOUNTED FIXTURE

WALL MOUNTED FIXTURE - SURFACE / RECESSED

EXIT LIGHT - WALL MOUNTED / CEILING MOUNTED

PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLAN

EMERGENCY BATTERY POWER SPOT ILLUMINATION UNIT - DUAL HEAD LIGHT - WALL MOUNT 12" BELOW CEILING UNLESS NOTED OTHERWISE.

SWITCHING DEVICES:

NOTE: ALL SWITCHING DEVICES SHALL BE MOUNTED AT 44" AFF, UNLESS OTHERWISE NOTED.

SINGLE POLE TOGGLE SWITCH

XX DENOTES THE FOLLOWING (O) 3 WAY (K) KEY OPERATED

X DENOTES SWITCH DESIGNATION (LOWER CASE)

DIMMER SWITCH

OCCUPANCY SENSOR

VACANCY SENSOR

PHOTO-CONTROL

NOTIFICATION DEVICES:

COMBINATION HORN-STROBE - CEILING / WALL MOUNTED

REMOTE ALARM INDICATING AND TEST SWITCH

SPEAKER - CEILING / WALL MOUNTED

STROBE - CEILING / WALL MOUNTED

COMBINATION SPEAKER-STROBE - CEILING / WALL MOUNTED

DETECTORS:

COMBINED SMOKE-GAS DETECTOR - CEILING MOUNTED

COMBINED SMOKE-HEAT DETECTOR - CEILING MOUNTED

DUCT SMOKE DETECTOR - RECTANGULAR/SQUARE

GAS DETECTOR

XX DENOTES THE FOLLOWING (CO) CARBON MONOXIDE

SMOKE DETECTOR

X DENOTES THE FOLLOWING (W) WALL MOUNTED

MANUAL PULL STATION

KNX BOX

ELECTRICAL ABBREVIATIONS:

AIE ARCHITECT/ENGINEER

ABV ABOVE

AFB ABOVE FINISHED FLOOR

AFG ABOVE FINISHED GRADE

AIC AVAILABLE INTERRUPTING CURRENT

ALT ALTERNATE

ALT SW ALTERNATOR SWITCH

ARCH ARCHITECT

ATS AUTOMATIC TRANSFER SWITCH

BFG BELOW FINIAL GRADE

BKR BREAKER

BLDG BUILDING

BOL BUILT IN OVERLOAD

BPC BOLTED PRESSURE CONTACT SWITCH

CATV CABLE TELEVISION

CB CIRCUIT BREAKER

CCCTV CLOSED CIRCUIT TELEVISION

CKT CIRCUIT

CLG CEILING

CP CONTROL PANEL

CS COMBINATION STARTER

CT CURRENT TRANSFORMER

DE DUAL ELEMENT FUSES

DIR DIRECT

DISC DISCONNECT

DN DOWN

EC ELECTRICAL CONTRACTOR

ELEV ELEVATION REFERENCE

EM EMERGENCY

EMT ELECTRIC METALLIC TUBING

ENT ELECTRICAL NON-METALLIC TUBING

EOL END OF LINE RESISTOR

EP EXPLOSION PROOF

EWC ELECTRIC WATER COOLER

FLUSH

FAAP FIRE ALARM ANNUNCIATOR PANEL

FACP FIRE ALARM CONTROL PANEL

FED FURNISHED BY OTHERS

FDR FEEDER

FIXT FIXTURE

FLA FULL LOAD AMPS

FLR FLOOR

FLUOR FLUORESCENT

FS FLOW SWITCH

FVNR FULL VOLTAGE NON-REVERSING

GC GENERAL CONTRACTOR

GFI GROUND FAULT INTERRUPTER

GRC GALVANIZED RIGID CONDUIT

GRD GROUND

GYP GYPSUM BOARD

HID HIGH INTENSITY DISCHARGE

HOA HAND-OFF-AUTO SWITCH

HP HORSEPOWER

HPS HIGH PRESSURE SODIUM

HVAC HIGH VOLTAGE HEATING & VENTILATING - AIR CONDITIONING

HVC HEATING VENTILATING CONTRACTOR

HW HEAVYWALL

ID INDIRECT

IL INTERLOCK

IMC INTERMEDIATE METAL CONDUIT

INC INCANDESCENT

IU IN UNIT

J-BOX JUNCTION BOX

LG LAY-IN GRID

LTO LIGHTING

LV LOW VOLTAGE

LVT LINE VOLTAGE THERMOSTAT

MAG MAGNETIC STARTER

MAN MANUAL STARTER

MCC MOTOR CONTROL CENTER

MDR MAIN DISTRIBUTION PANEL

MLO MAIN LINES ONLY

MSB MAIN SWITCHBOARD

MOUNTED

NOT IN CONTRACT

NU NEAR UNIT

OU ON UNIT

P POLE

PB PUSH BUTTON

PC PHOTO CONTROL

PE SW PNEUMATIC SWITCH

PEND PENDANT

PLBG PLUMBING CONTRACTOR

PNL PANEL

R RELAY

REC RECESS

RECP RECEPTACLE

RM ROOM

RVS REDUCED VOLTAGE STARTING

S SPLINE

SEL SW SELECTOR SWITCH

SP SW SPEED SWITCH

SURF SURFACE

SW SWITCH

TC TIME CLOCK

TCC TEMPERATURE CONTROL CONTRACTOR

TCR TEMPERATURE CONTROL PANEL

TS TAMPER SWITCH

TYPICAL

UG UNDERGROUND

UNIV UNIVERSAL

USB UNIT SUBSTATION

WP WEATHERPROOF

XFMR TRANSFORMER

GENERAL NOTES

- 1. THE CONTRACTOR PROPOSING TO PERFORM THE ELECTRICAL WORK SHALL VISIT THE JOB SITE AND FULLY INFORM THEMSELVES OF ALL CONDITIONS THAT AFFECT THE WORK, OR COST THEREOF, AND EXAMINE THE DRAWINGS AND SPECIFICATIONS PRIOR TO SUBMITTING HIS BID.
- 2. ALL ELECTRICAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND ALL OTHER DRAWINGS RELATED TO THE PERFORMANCE OF THE WORK.
- 3. THE CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THIS WORK SHALL BECOME THOROUGHLY FAMILIAR WITH THE PROJECT SPECIFICATIONS BEFORE COMMENCING ANY WORK. THE PROJECT SPECIFICATIONS AND DRAWINGS FORM THE BASIS OF THIS CONTRACT REQUIREMENTS AND INCLUDE THE TYPE AND GRADE OF MATERIALS TO BE INSTALLED, EQUIPMENT TO BE FURNISHED, THE MANNER BY WHICH TO BE INSTALLED AND WHERE TO BE LOCATED. IN THE EVENT OF A CONFLICT BETWEEN THE PROJECT SPECIFICATIONS AND DRAWINGS, SPECIFICATIONS GOVERN UNLESS THE ARCHITECT/ENGINEER DIRECTS OTHERWISE.
- 4. THE ELECTRICAL CONTRACTOR SHALL CHECK CAREFULLY ALL CONSTRUCTION DRAWINGS AND SPECIFICATIONS THAT ARE PART OF THIS PROJECT TO ENSURE THAT NO FIXTURE, OUTLET, ALARM STATION OR CONTROL AND POWER WIRING IS OMITTED. HE SHALL CONSULT ALL TRADES FURNISHING EQUIPMENT AND OBTAIN FROM THEM ALL DATA, IN SOME CASES EQUIPMENT, FIXTURES AND DEVICES ARE SHOWN ONLY. ASCERTAIN AND PROVIDE THE WIRING AND CONTROL STATIONS REQUIRED FOR THE PROPER FUNCTION OF BUILDING EQUIPMENT. NO EXTRA CHARGES SHALL BE ACCEPTED BY OWNER AFTER BIDDING FOR SUCH EQUIPMENT AND LABOR.
- 5. EQUIPMENT LABELS AND INSTRUCTIONS REGARDING THE APPLICATION AND INSTALLATION OF THE LISTED EQUIPMENT SHALL BE FOLLOWED TO ENSURE THAT THE EQUIPMENT IS BEING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTING INSTRUCTIONS. THE TEMPERATURE RATING OF THE EQUIPMENT TERMINATIONS MUST BE CAREFULLY CORRELATED WITH THE CONDUCTOR AMPACITY TO PREVENT OVERHEATING AND PREMATURE FAILURE.
- 6. COORDINATE WORK WITH OTHER TRADES AND INSTALL CONDUIT AND BOXES TO CLEAR EMBEDDED DUCTS, OPENINGS AND OTHER STRUCTURAL FEATURES.
- 7. ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS.
- 8. CONDUIT RUNS SHOWN ON DRAWINGS ARE DIAGRAMMATIC. ALL CONDUITS SHALL RUN CONCEALED, EXCEPT IN EQUIPMENT ROOMS AND WHERE APPROVED BY ARCHITECT.
- 9. FURNISH AND INSTALL EQUIPMENT DISCONNECT SWITCHES IN STRICT COMPLIANCE WITH CODE REQUIREMENTS.
- 10. POWER AND DATA DEVICES SHALL BE SPACED NO MORE THAN 4" APART. PROVIDE JUNCTION BOX MOUNTING BRACKET BETWEEN STUDS AS NEEDED.
- 11. ALL RECEPTACLES, TELEPHONE, AND DATA OUTLETS SHALL BE MOUNTED AT 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. ALL DEVICES SHALL BE NEW UNLESS OTHERWISE NOTED.
- 12. ALL FIRE ALARM SIGNAL DEVICES SHALL BE MOUNTED AT 80" AFF IN ACCORDANCE WITH ADA, UNLESS OTHERWISE NOTED.
- 13. DETERMINE, IN ADVANCE OF PURCHASE, THAT ALL ELECTRICAL MATERIALS AND EQUIPMENT TO BE INSTALLED SHALL FIT INTO THE ROOM OR SPACE ALLOCATED, AS INDICATED ON THE DRAWINGS, ALLOWING SUFFICIENT CLEARANCE FOR THE SAFE SERVICE AND/OR MAINTENANCE OF RELATED EQUIPMENT, INCLUDING THAT OF OTHER TRADES.
- 14. ALL LOW VOLTAGE CABLING AND DEVICES TO BE PROVIDED AND INSTALLED BY OWNER.
- 15. CONDUCTORS SUPPLYING CIRCUITS SHALL NOT BE LESS THAN #12 AWG COPPER FOR ANY CIRCUIT.
- 16. AT THE COMPLETION OF THE JOB, IT WILL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO TURN OVER TO THE BUILDING MANAGER AN AS-BUILT DRAWING IN REPRODUCIBLE FORM. THESE DRAWINGS DO NOT HAVE TO BE MADE FROM SCRATCH. THE ENGINEERS REFLECTED CEILING AND ELECTRICAL/TELEPHONE PLANS MAY BE USED AS BACKGROUND WITH THE ACTUAL CIRCUITING CHANGES ADDED.
- 17. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL 1-BOX AND 3/4" FOR MECHANICAL THERMOSTAT + CONTROLS. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- 18. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE 2020 NEC AND THE LATEST REQUIREMENTS OF ALL CODES AND REGULATIONS.
- 19. ALL EXTERIOR RECEPTACLES SHALL HAVE METAL COVERS.
- 20. EC SHALL UPSIZE WIRE AND CONDUIT AS REQUIRED FOR VOLTAGE DROP. BRANCH CIRCUITS SHALL BE INSTALLED WITH A MAXIMUM OF A 3% VOLTAGE DROP, AND FEEDERS SHALL BE INSTALLED WITH A MAXIMUM OF 2% VOLTAGE DROP. NO ELECTRICAL CIRCUITS SHALL EXCEED A VOLTAGE DROP OF MORE THAN 5%.
- 21. DRAWINGS ARE TO BE REVIEWED IN FULL DETAIL WITH SPECIFICATIONS. IN THE EVENT THAT THERE IS A CROSS DIRECTION, A REQUEST FOR INFORMATION (RFI) IS TO BE SENT TO THE ENGINEER OF RECORD. AS STATED IN SPECIFICATION DIV 1, THE HIGHER COST OF THE TWO OPTIONS IS TO BE TAKEN AS THE OPTION WHILE AT BID UNLESS CLARIFICATION FROM RFI.
- 22. ALL EXPOSED ELECTRICAL CONDUIT, CABLE, AND JUNCTION BOXES INSTALLED OPEN CEILING CEILINGS SHALL BE PAINTED. MC CABLE AND FLEXIBLE CONDUIT SHALL BE LIMITED IN EXPOSURE TO CEILING LOCATIONS TO A 90" MAXIMUM LENGTH FOR INDIVIDUAL WIRING RUNS. EQUIPMENT CONNECTIONS: INSTALL ALL CONDUIT, CABLE, AND JUNCTION BOXES IN A NEAT AND CONSISTENT MANNER. COLOR SELECTIONS BY ARCHITECT.
- 23. TYPE MC CABLE SHALL BE INSTALLED FOR BRANCH CIRCUITS IN ONLY CONCEALED LOCATIONS WITHIN THE SPACE THAT THE LIGHTING, EQUIPMENT, AND/OR RECEPTACLE DEVICES IT SERVES ARE LOCATED, UNLESS NOTED OTHERWISE.

DEMOLITION GENERAL NOTES

- 1. EACH CONTRACTOR SHALL REVIEW THE EXISTING SYSTEMS IN THE FIELD ALONG WITH BID DOCUMENTS & DETERMINE SELECTIVE DEMO & ADDITION OF TEMPORARY SYSTEMS (IF REQUIRED) TO MAKE PHASED DEMO & PROPOSED REMODELING. IT SHALL ASSURE UNINTERRUPTED SAFE OPERATION OF AREAS THAT ARE AFFECTED BY DEMO & ADDITION OF PROPOSED SYSTEMS AT ALL TIMES. INCLUDE THE NECESSARY WORK TO ACCOMPLISH THIS & COORDINATE PHASING ACCORDINGLY.
- 2. CONFIRM WITH THE MANUFACTURERS OF EXISTING EQUIPMENT THAT IS TO BE REUSED OR EXTENDED THAT IT IS IN GOOD WORKING ORDER.
- 3. WHERE EXISTING ELECTRICAL WORK PREVENTS PROPER CONSTRUCTION OF NEW WORK AS INDICATED, REMOVE, REROUTE, RELOCATE, OR IN OTHER WAYS ALTER EXISTING WORK IN ORDER TO ACCOMMODATE.
- 4. WHERE EXISTING CONDUIT, WIRE, SUPPORTS, HANGERS & OTHER ELECTRICAL WORK MUST BE REMOVED AS A RESULT OF THE ALTERATIONS, THEY SHALL BE COMPLETELY REMOVED, BACK TO THE FIRST OUTLET WHICH IS LEFT UNAFFECTED BY THE DEMOLITION. CONDUIT WHICH IS BURIED IN CONCRETE OR OTHERWISE INACCESSIBLY POSITIONED MAY BE ABANDONED. IN SUCH CASES, WIRE SHALL BE PULLED OUT & THE CONDUIT SHALL BE PLUGGED AT EACH END.
- 5. EXISTING ELECTRICAL MATERIALS AND EQUIPMENT, INCLUDING WAP, CLOCKS, FIRE ALARM NOTIFICATION AND DETECTION DEVICES, SECURITY CAMERAS, AND SECURITY EQUIPMENT, LIGHT FIXTURES, SWITCHES, SPEAKERS, INTERCOM EQUIPMENT, CONTROLS, CONDUIT OUTLETS, FITTINGS, AND OTHER DEVICES REMOVED AS A RESULT OF THE DEMOLITION SHALL REMAIN THE PROPERTY OF THE OWNER (UNLESS OTHERWISE INDICATED) AND SHALL BE REUSED WHERE INDICATED.
- 6. EXAMINE THE CONDITION OF ANY MATERIALS AND EQUIPMENT TO MAKE A PRIOR DETERMINATION OF WHETHER IT IS SUITABLE FOR REUSE. PRESENT FINDINGS TO THE ENGINEER WHO WILL IN TURN MAKE THE FINAL DECISION REGARDING REUSABILITY. ALL WIRE AND CABLE FOR REUSED AND RELOCATED EQUIPMENT SHALL BE NEW.
- 7. IN ORDER TO COORDINATE THE WORK OF THE MECHANICAL AND ELECTRICAL TRADES, REMOVE EXISTING ELECTRICAL WORK IN AND ABOVE CEILING OF THESE AREAS (AS REQUIRED), AFTER WHICH, INSTALL NEW WORK AND RENOVATE EXISTING WORK TO REMAIN, AS SHOWN ON THE DRAWINGS. EXISTING MATERIALS AND EQUIPMENT SHALL BE REUSED ONLY WHERE INDICATED.
- 8. SOME EXCEPTIONS MAY ARISE WHEREIN EQUIPMENT, EITHER IN ALTERED AREAS OR OTHER AREAS, MUST BE KEPT IN SERVICE, REQUIRING THAT FEEDERS, SIGNAL CONDUCTORS, CONDUITS, BOXES, ETC. SERVING SAME ALSO BE KEPT IN SERVICE. IN SUCH CASES, THOSE ELECTRICAL FEEDERS, SIGNAL CONDUCTORS, CONDUITS, BOXES, ETC. SHALL BE REROUTED & RECONNECTED BEFORE PRESENT WORK IS REMOVED. IF THIS IS NOT POSSIBLE, TEMPORARY WIRING SHALL BE PROVIDED, AFTER WHICH NEW WORK SHALL BE INSTALLED & TEMPORARY WIRING REMOVED.
- 9. ANY ELECTRICAL EQUIPMENT THAT IS TAGGED TO BE DISPOSED OF SHALL BE DONE PER APPROVED METHOD IN ACCORDANCE WITH THE CONSTRUCTION PLAN & LOCAL AUTHORITIES.
- 10. THIS DRAWING SHOWS A REPRESENTATIVE SAMPLE OF DEMOLITION WORK THAT IS TO TAKE PLACE. NOTE THAT NOT EVERY DEVICE AND CONDUIT ETC. REQUIRED TO BE DEMOLISHED IS NECESSARILY INDICATED ON THIS PLAN. THE CONTRACTOR SHALL VISIT THE JOB SITE TO FAMILIARIZE HIMSELF WITH THE EXTENT OF EXISTING WORK TO BE DEMOLISHED.
- 11. ALL PROPOSED DEMOLITION WORK SHALL BE THOROUGHLY COORDINATED WITH ALL OTHER TRADES.
- 12. DISCONNECT & REMOVE ALL ELECTRICAL EQUIPMENT, DEVICES AND CONDUITS IN WALLS, FLOORS & CEILING SCHEDULED FOR DEMOLITION.
- 13. MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS, FEEDERS AND BRANCH CIRCUITS PASSING THROUGH RENOVATED AREA AND SERVING UNDISTURBED AREAS.
- 14. ANY PORTION OF THE EXISTING CONDUIT SYSTEM THAT IS TO BE REUSED OF THE NEW INSTALLATION SHALL BE CHECKED TO ENSURE THAT IT IS CLEAN, FREE OF DAMAGE, FREE OF CORROSION AND ADEQUATELY SUPPORTED.
- 15. EXISTING ELECTRICAL SYSTEM IS DESCRIBED BASED ON SURVEYS OF EXISTING CONDITIONS THAT ARE VISIBLE DURING THE DESIGN PHASE. CONTRACTOR SHALL CONFIRM ALL SERVICES PRIOR TO PROCEEDING WITH DEMOLITION.
- 16. PATCH ALL HOLES IN SLABS, WALLS & CEILINGS WHERE ELECTRICAL DEVICES AND/OR CONDUIT ARE REMOVED. IF THE REMOVAL OF CONDUIT, BOXES, EQUIPMENT, ETC. COMPROMISES THE FIRE RATINGS OF THESE ITEMS, THE CONTRACTOR SHALL SEAL OPENINGS WITH CODE APPROVED FIRE STOPPING MATERIAL.
- 17. CONTRACTOR IS TO PERFORM DEMOLITION WORK IN A NEAT, SKILLFUL & CAREFUL MANNER SO AS NOT TO DAMAGE OR DEFACE EXISTING CONSTRUCTION THAT IS TO REMAIN.
- 18. WHERE FEEDERS OR BRANCH CIRCUITS ARE DISCONNECTED AND REMOVED FROM EXISTING PANEL BOARDS, CONTRACTOR SHALL MARK THE AFFECTED BREAKERS IN THOSE PANEL BOARDS AS "SPARE." INSTALL NEW KNOCK-OUT BLANK INSERT IN PANEL BOX.
- 19. VERIFY THAT REMOVAL OF DEVICES IN RENOVATED AREA DOES NOT AFFECT DEVICES IN OTHER AREAS THAT MAY BE FED FROM THE CIRCUIT BEING DISCONNECTED.
- 20. PROVIDE ADDITIONAL CABLE AND/OR CONDUIT AND WIRE AS REQUIRED FOR EXISTING TO REMAIN DEVICES TO REMAIN FULLY OPERATIONAL AFFECTED BY DEVICES SCHEDULED TO BE REMOVED AND/OR RELOCATED. NEW CONDUIT AND WIRE CHARACTERISTICS SHALL MATCH EXISTING.

GENERAL:

DRAWING KEYNOTE SYMBOL

DETAIL NUMBER

BUILDING SECTION

SHEET NUMBER

DETAIL NUMBER

BUILDING ELEVATION

DETAIL NUMBER

CALLOUT BOUNDARY

SHEET NUMBER

DETAIL NUMBER

VIEW REFERENCE CALLOUT

SHEET NUMBER

-X - X' MOUNTING HEIGHT DESIGNATION

RENOVATION LEGEND:

X EXISTING TO REMAIN

XNL EXISTING IN NEW LOCATION

XNP EXISTING LOCATION, NEW DEVICE OR EQUIPMENT TO BE INSTALLED IN PLACE

XRL EXISTING

MOLINE-COAL VALLEY SCHOOL DISTRICT

2025 CONTROLLED ENTRY IMPROVEMENTS

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PART 1 - GENERAL

1.1 General Conditions

- A. The General, Special, and Other Conditions of the Architectural, Mechanical and Vendor documents shall be considered an integral part of these Electrical Specifications.
 - B. Reference to "Contractor" in this specification shall mean "Electrical Contractor (EC)", unless otherwise noted. All work specified herein is the responsibility of the Electrical Contractor unless specifically noted otherwise.
- 1.2 Scope of Work
- A. Furnish all labor, materials, equipment, tools, and other items necessary for, or incidental to, installation of a complete electrical system as required for this project.
 - B. Also include all other work and miscellaneous equipment not specifically mentioned, but reasonably inferred, that are required for a fully functional and tested system.
- 1.3 Drawings and Documents
- A. The Drawings and Specifications form a complete set of plans for the electrical work for this project. What is required by either shall be as binding as required by both. In the event the Drawings and Specifications are in conflict, the greater requirement or cost shall be included in bid, or if time, a clarification will be provided.
 - B. Bidders shall examine and include all other trade equipment Vendor Drawings and Specifications to avoid omissions, duplications, and to insure complete installation of all work for electrical.
 - C. The Electrical Drawings are diagrammatic and are intended to show approximate location only. Placement of electrical equipment and devices shall not interfere with locations or clearances of other trades' materials or equipment. Coordinate the placement of electrical devices with Architectural plans, elevations and details.
 - D. The direct routing of conduits and wiring is not assured. Exact requirements shall be governed by the conditions of the project site. Extra lengths of wiring or the addition of pull or junction boxes, etc., necessitated by such conditions, shall be included in the Bid.
- 1.4 Codes, Inspections, and Fees
- A. The completed electrical installation shall comply with the latest edition of the National Electrical Code as well as all applicable Federal, State, and Local Codes, Regulations, and standards including interpretations by appropriate Authorities Having Jurisdiction. Where the Drawings and Specifications call for workmanship or materials in excess of code or regulatory requirements, the Drawings and Specifications shall govern.
 - B. The work specified herein shall be subject to inspection and approval by authorized representatives of the National Board of Fire Underwriters, State and Local Authorities Having Jurisdiction, and the Engineer. The Contractor shall make the necessary arrangements to have the electrical work inspected by appropriate inspectors) and shall provide two (2) copies of final signed "Certificate of Inspection" to the Owner.
 - C. Obtain and pay for all licenses, permits, fees and charges for all work installed by the Contractor. Contractor is responsible to pay all fees and charges levied by the Electric Utility Company for connection to electric services.

1.5 Job Site Safety

- A. The Contractor is solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of work. This requirement will apply continuously and not be limited to normal working hours.
 - B. No on-site drawing review or construction review by the Owner, the Engineers or their Consultants, is intended to include review of the adequacy of the Contractor's safety measures in, on, or near the construction site.
- 1.6 Conditions at the Site
- A. Examine the site and be familiar with all existing building conditions and limitations prior to submitting bid. No extra payment will be allowed for work required because of these conditions, or if information is visible or readily ascertainable, or if the Contractor is responsible for existing conditions.
 - B. Any discrepancies from these documents should be reported to the Architect/Engineer prior to bid.
- 1.7 Workmanship and Contractor Qualifications
- A. Install electrical equipment and materials in a neat and workmanlike manner by persons experienced and skilled in the trade. Only the best quality workmanship will be accepted. Haphazard or poor installation will be cause for rejection of work. All exposed components of the electrical systems shall be square and true with building lines and in accordance with existing conditions.
 - B. Contractor shall be licensed in the state in which the project is located.
- 1.8 Coordination of Work
- A. Give careful consideration to the work of the general, mechanical and all other contractor/subcontractors on the project. Organize and phase the electrical work so that it will not interfere with the work of other trades.
 - B. Drawings and Specifications for other trades and general construction drawings shall be consulted for coordination information, details, dimensions, etc. Coordinate all shafts, chases, furred spaces, suspended ceiling, locations of equipment, etc.
 - C. The location of all outlets, wiring, and equipment shall be verified. The electrical requirements of any equipment shall be verified with actual equipment or approved Shop Drawings prior to any rough in work. Notify Engineer of any discrepancies.
 - D. Dimensions given on the Drawings shall take precedence over scaled dimensions. Dimensions, whether calculated or scaled, shall be verified in the field.
 - E. Check actual job conditions before fabricating work. Coordinate with other trades to avoid rework due to field conditions. Changes or additions, subject to additional compensation, which are made without written authorization and an agreed price, shall be at the Contractor's risk and expense.
 - F. Coordinate routing of all conduit and wire concealed in walls, soffits or ceilings provided by the General Contractor. Field coordinate all work to conceal installations not coordinated or specifically approved by the Architect and Engineer.
 - G. Verify items such as door swings, window locations, casework, etc., before installing any electrical equipment or devices.
 - H. Make minor adjustments to work where requested by the Owner or the Owner's representative when adjustments are necessary for proper operation and within the intent of the contract.

1.9 Materials and Equipment

- A. Unless otherwise specified, all material and equipment shall be new and manufactured by approved or listed manufacturers. All materials and equipment shall meet the requirements of all governing codes.
 - B. All material and equipment shall be listed and labeled by Underwriters Laboratories, Inc. (UL), as conforming to its standards in every case where such a standard has been established for that type of material or equipment.
 - C. Obtain written approval within 7 days prior to bid, to use any proposed substitute material or equipment before contracting to purchase such materials. The Owner reserves the right to require the removal of any material or equipment which does not have this written approval and which does not comply with the Specifications, regardless of the state of installation of such equipment.
 - D. Where equipment specified by the Contractor has characteristics other than as specified herein, the Contractor shall, at no additional cost to the Owner, remove and replace the electrical work necessitated by the substituted product.
- 1.10 Demolition
- A. Where electrical work to remain is damaged or disturbed in the course of the work, remove damaged portions and install new products of equal capacity, quality, and functionality.
 - B. Accessible work indicated to be demolished: Remove exposed electrical installation in the entirety. C. Abandoned work: Cut and remove buried raceway and wiring indicated to be abandoned in place 2 inches below the surface of adjacent construction. Cap and patch surface to match existing finish. D. Removal: Remove demolished material from the project site. E. Temporary disconnection: Remove, store, clean, re-install, reconnect, and make operational components indicated for relocation.
- 1.11 Cutting and Patching
- A. Perform all core drilling, cutting and patching necessary for the completion of the electrical work for this project. No structural members shall be disturbed without obtaining written permission of the Engineer.
 - B. Any surface which is disturbed in any way by the Contractor shall be repaired and refinished to provide a surface equal in strength, durability, and appearance to the original surface.
 - C. Where it is necessary to drill or cut concrete surfaces, the edges shall be sharply defined. Holes shall be made with a rotary drill. Cuts shall be made with a concrete saw unless some other method of making specific cuts is approved by the Engineer.
 - D. Penetrations through smoke, fire, hazardous area, or other rated separations shall be the sole responsibility of the Contractor. Penetrations shall be made with a rotary drill. Cuts shall be made with a concrete saw unless some other method of making specific cuts is approved by the Engineer.
 - E. All cutting, drilling, patching, repairing, and refinishing shall be done by persons skilled in specialized trades.
 - F. Clean away all rubbish and litter generated during electrical installation.

1.12 Maintenance Manual and Record Drawings

- A. Furnish the Owner with two (2) printed copies and two (2) digital data DVD's of a manual covering the operation and maintenance of all equipment provided under this contract. The manuals shall be in a 3-ring, loose leaf, heavy duty binder and submitted to the Architect/Engineer for approval. Each manual shall contain the following:
 1. Complete manufacturer catalog data, manufacturer's literature, wiring diagrams, detailed operating instructions, and a complete listing of suppliers and distributors where replacement parts and maintenance services are available for all equipment.
 2. Physical description and installation instructions and user's manual and operating instructions.
 3. Replaceable parts list. Include replacement lamp part type.
 4. Inspection certificates, signed by the appropriate inspector, shall be furnished in the maintenance manual.
 5. Manufacturer's warranty.
 6. Data DVD with indexed PDF documents of all the manual content of items 1-5 above.
 - B. Markup a set of construction documents as work progresses, to show actual circuit routing with dimensional information, sizes types, etc., equipment location changes, and any other changes or deviations between project work, as built, and the contract documents. Markings shall be neat, legible, and permanent. Upon completion of the work, the Contractor shall transfer applicable markings to second set of documents and provide both sets of record documents to the Owner.
- 1.13 Clean-Up
- A. Rid the premises of scrap materials, trash and debris both during construction and at

completion of project. Leave the building and surrounding area in a clean and orderly condition.

- 1.14 Acceptance Demosnstration and Training
 - A. Perform system start-up, testing and programming prior to Owner's training. Do not schedule demonstrations until systems are completely ready to turn over to the Owner as final.
 - B. Demonstrate to the Owner the operation of the electrical installations, including any and all special items installed by EC or installed under EC supervision. The timing of the demonstration will be determined by the Owner upon completion of the work. Properly set automatic time switches to perform under specified conditions in accordance with schedules provided by the Owner's Representative, and demonstrate (using the manufacturer's operating instructions) how to override, test and program lighting programs.
- 1.15 Rebar Program
 - A. Provide the Owner with all rebar forms, filled with applicable project information, for utility or product rebate programs to which the Owner is eligible.
- 1.16 Guarantees and Warranties
 - A. Furnish the Owner with a written guarantee for the period of one (1) year against the failure of any part of the electrical systems installed under the Specifications due to faulty material or workmanship, without charge. To the Owner. Guarantee period to start upon substantial completion or as specified under general and special conditions. Lamps shall be operable on the start date of, but not excluded from, the guarantee.
 - B. Assume that any extended warranties to which the Owner is eligible, are passed on to the Owner.

PART 2 - PRODUCTS

2.1 Material Approval

- A. All materials must be new and bear Underwriter's Laboratories (UL) label. Materials that are not covered by UL testing standards shall be tested and approved by an independent testing laboratory or a governmental agency. Material not in accordance with these Specifications may be rejected either before or after installation.
- 2.2 Conductors and Cables
- A. Electrical conductors shall be building wire, except where other type of wire or cable is specifically indicated.
 - B. Building wire conductors shall be soft-drawn annealed copper, having a conductivity of not less than 88% pure copper. Conductor sizes are American Wire Gauge (AWG) or circular mils (CMIL) as follows:
 - 1. #12 AWG and smaller shall be solid copper.
 - 2. #10 AWG and larger shall be stranded copper.
 - C. Branch circuits to be color coded, color impregnated wire.
 - D. Color type breakers shall be black and shall have black terminal nuts on the toggle handle. All breakers shall be quick-make, quick-break, thermal magnetic, common trip on all multi-pole breakers and have a minimum UL short circuit rating as shown on the Drawings. Each breaker shall have its full current rating clearly marked on the toggle handle. All breakers used for lighting switching control shall be UL listed "SWD" switching devices. All breakers used for motor or high inductance loads shall be HACR rated.
 - E. Light switches and switches used for emergency lighting shall be UL listed "SWD" switching devices. All breakers used for lighting switching control shall be UL listed "SWD" switching devices. All breakers used for motor or high inductance loads shall be HACR rated.

2.3 Low Voltage Control and Switching

- A. LUTP cable Category 6, 100-ohm, four-pair, Listed and Labeled by an NRTL acceptable to Authorities Having Jurisdiction as complying with UL 444 and NFPA 70, LUTP Cable Connecting Hardware: IDC type, using modules designed for punch-down caps or tools. Cables shall be terminated with connecting hardware of the same category or higher. Plenum rated.
 - B. RS-232 Cable: Plenum rated, Type CMP, two pair, No. 22 AWG, stranded copper, each pair 100 ohms impedance and shielded. Plenum rated.
 - C. RS-485 cable: Plenum rated, Type CMP, two twisted pair, No. 22 AWG, stranded copper, unshielded.
 - D. Install cables for CATV, MATV and DBS:
 - 1. RG-6: 16 AWG, solid, copper-covered steel conductor; gas-jacketed, foam-PE insulation. Double shielded with 100 percent aluminum-foil shield and 60 percent aluminum braid. Plenum rated, suitable for square and true with building lines and in accordance with existing conditions.
 - 2. RG-59 20 AWG, solid, copper-covered steel conductor; gas-jacketed, foam-PE insulation. Double shielded with 100 percent aluminum-foil shield and 40 percent aluminum braid. Plenum rated, Type CMP. Use for single device or from a tap or splitter.
- 2.4 Grounding and Bonding
- A. Circuits, metal raceway systems, and all other permanently installed electrical equipment shall be solidly grounded in accordance with the National Electrical Code to form a continuous, permanent and effective grounding system.
 - B. Grounding conductor connections shall be made with solderless pressure type fittings. Where welded connections are practical, connections may be made by the use of suitable welding process. All effective grounding system.
 - C. To maintain uninterrupted electrical continuity, flexible raceway sections must have conductance equal to that of the system's inflexible raceway. Raceway fittings listed must be such as to ensure electrical continuity of a permanent bond. Grounding bushings shall be provided to ground conductors to control center. All new equipment shall be grounded to the existing grounding system.
 - D. Include a separate bare ground conductor on all flexible metal cable of the same size as phase conductors.
 - E. Isolated ground conductors: green colored insulation with continuous yellow stripe.
 - F. Bonding interior metal ducts: bond metal air ducts to equipment grounding conductors of associated fans, blowers, electric heaters, and air cleaners. Install bonded jumper to bond across flexible duct connectors to achieve continuity.
 - G. Ground rods shall be 1/2"x3/4" copper clad steel. Ground rods at exterior area lights to be 6"x8"x8" copper clad steel.

2.5 Conduit Hangers

- A. For individual conduit runs not directly fastened to the structure, use threaded rod and hangers manufactured by Caddy, Unistrut or Powershield.
- B. Galvanized steel slotted channel support systems with fittings and supports by the same manufacturer.

2.6 Raceways and Outlet Boxes

- A. Provide raceways, fittings, connectors and accessories for a complete raceway system. Raceways include:
 1. Rigid steel, hot-dipped galvanized.
 2. Intermediate metal conduit (IMC), hot-dipped galvanized.
 3. Electrical metallic tubing (EMT), electro-galvanized.
 4. Wireways, enamel finish, hinged type.
 5. Flexible metallic conduit for final connection in dry locations less than 6' lengths.
 6. Liquid tight flexible metal conduit: for final connection in damp or wet locations less than 6' lengths.
- B. Provide fittings and accessories approved for the purpose equal in all respects to the conduit or raceway, EMT connectors and couplings shall be steel setscrew type indoors and steel compression type in damp or wet locations and outdoors.
- C. Outlet boxes: 4" square, 1-1/2" deep (or larger) galvanized steel KO-type with plaster ring and cover for general interior use. Cast metal type FS or FD with matching screw covers for exterior and exposed interior locations (gasketed in damp or wet locations).
- D. Junction boxes shall be same as outlet boxes up to 42 cu. in. Use code-gauge steel in larger sizes with surface or flush-type screw-mounted trim covers. Boxes and covers painted with inhibitor-primed paint inside and out.
- E. Pull boxes shall be same as junction boxes unless indicated otherwise on the Drawings, with covers.
- F. Telephone outlet boxes shall be the type and size required by the serving telephone company but not smaller than 4-1/16" square x 2-1/2" deep with single-gang ring. Other configurations as shown on the plan.

2.7 Identification and Labeling

- A. Label all control devices and device enclosures with individual name plates or legend plates.
- B. Individual name or legend plates to be black laminated plastic plates with white cut letters. Paper, foil or tape markers attached with adhesives shall not be used.
- C. Engraved, laminated acrylic or melamine label, punched or drilled for screw mounting. White letters on a dark gray background. Minimum letter height shall be 3/16 inch.
- D. Equipment to be labeled:
 1. Panelboards, electrical cabinets, and enclosures.
 2. Access doors and panels for concealed electrical items.
 3. Electrical breakers in existing distribution panels.
 4. Transformers.
 5. Emergency system boxes and enclosures.
 6. Disconnect switches.
 7. Enclosed circuit breakers.
 8. Motor starters.
 9. Push-button stations.
 10. Contactors.
 11. Remote-controlled switches, dimmer modules, and control devices.
 12. Panels, terminal cabinets, and racks.
- E. Accessible raceways and cables of auxiliary systems: Identify the following systems at panel and junction box locations within each room as follows:
 1. Fire alarm system: Red boxes and covers.
 2. 120/208 volt: Mark covers with panel and circuit numbers.

3. 277/480 volt: Mark covers with panel and circuit numbers.

2.8 Lighting Control Devices

- A. Time switches: Solid state programmable unit with multiple chatters for exterior lighting control.
- B. Indoor occupancy sensor to be dual technology with solid state separate external relay unit for ceiling and wall outlets.
- C. Wall box occupancy sensors to have adaptive technology with time delay, quantity of integral switches as shown on the Drawings (minimum of one (1) switch).
- D. Lighting contactors: Mechanically held, non-latched switch with 2 wire solid state control modules.
- E. Emergency shut relay: Normally closed electrically held with automatic switching contacts to bypass local room controls.
- F. Wall mounted programmable dimming control: installed where shown on the Drawings with scene selector and multi-rotation dimming over ride controls, Lutron Graphic Eye system.
- G. LED wall box dimmers: rated for quantity and type of fixtures shown on Drawings. Divide switch legs and add additional dimmers to meet manufacturer's recommendation.

2.9 Panelboards

- A. Panelboards shall be Schneider Electric style RQJ for 100-400A, L-line for 400A-800A or equal by Cutler-Hammer, G.E., or Siemens.
- B. Panelboards shall be dead front safety type with enclosures of code grade steel. Oversize gutters shall be provided for feed through where indicated or required. Where double legs are not permitted by local code, a suitable pull box or gutter adjacent to panels shall be provided for connections.
- C. Panelboards shall have trim and flat locking doors with both hinges and trim clamps completely concealed. Panels to be door in door construction. Door locks shall be flush with the cover. All door locks shall be common keyed. Two (2) keys shall be provided for each panelboard. A clear plastic-covered typewritten circuit directory shall be mounted in a card holder attached to the inner side of the door. Panelboards shall have black plastic plates with 1/2-inch high white cut letters stating panelboard number and voltage. Where panelboards are in public areas, identification plates shall be inside door.
- D. Buses shall be made from 98 percent electrolytic copper or 95 percent conductivity aluminum and shall be independently supported (without dependence upon the circuit breakers).
- E. Branch breakers shall be quick-make, quick-break, thermal magnetic, common trip on all multi-pole breakers and have a minimum UL short circuit rating as shown on the Drawings. Each breaker shall have its full current rating clearly marked on the toggle handle. All breakers used for lighting switching control shall be UL listed "SWD" switching devices. All breakers used for motor or high inductance loads shall be HACR rated.
- F. Metal cabinet assembled panelboards shall be Schneider Electric OMB for 225A-1600A or equal by Cutler-Hammer, G.E., or Siemens with requirements noted above:
 1. Trims to a piece without top for NEMA 1, with door where noted on the Drawings or for NEMA 3R and 3R2.
 2. Fused switches: NEMA KS 1, Type HD, Twin, side by side mount for 30A-250A. Single mount for 400A and above.
 3. Motor circuit repletion fuses as noted in 2.14 below.

2.10 Wiring Devices

- A. Wiring devices shall be installed in metal device boxes.
- B. Electrical equipment assembled panelboards shall be Schneider Electric OMB for 225A-1600A or equal by Cutler-Hammer, G.E., or Siemens with requirements noted above:
 1. Fused switches: NEMA KS 1, Type HD, Twin, side by side mount for 30A-250A. Single mount for 400A and above.
 2. Fused switches: NEMA KS 1, Type HD, Twin, side by side mount for 30A-250A. Single mount for 400A and above.
 3. Motor circuit repletion fuses as noted in 2.14 below.
- C. Switches shall be heavy duty grade, ac quiet type, 20-amp, 120/277-volt, with silver alloy contacts, equal to Hubbell R5362.
- D. Fractional HP starters shall be heavy duty grade, NEMA 3-20R, 20-amp, 125-volt, 3-wire grounding type devices with brass one piece ground strap, third pole grounding to the outlet box.
- E. Fractional HP starter (GFI) duplex receptacles shall be heavy duty grade, 20-amp devices used so that each unit is self-contained. GFI receptacles shall not be connected to feed through unless specifically noted on the Drawings.
- F. Disconnect switches shall be weather resistant and have NEC Weather Resistant rating.
- G. Tamper Resistant rating in areas required by the Owner.
- H. AFCI outlets where required by the NEC.
- I. Isolated ground receptacles to be orange in color.
- J. Surge Protective Device (SPD) type 3 duplex receptacle with indication light and audible alarm.
- K. Special color plastic covers to match Style Line type receptacles as noted on the plans with matching outlets.
- L. Weatherproof duplex receptacles shall be GFI protected with "white-in-use" weatherproof covers.

2.11 Fuses

- A. Fuses shall be one-time cartridge fuses manufactured by Bussmann, Ferraz Shawmut, or Littelfuse.
- B. The Contractor shall furnish and install fuses of the types and ratings designated in the Drawings and Specifications in each fusible device installed by the Contractor.
 1. Feeder and branch circuit class RRT time delay.
 2. Motor circuit class RK5 time delay.
 3. Control circuit fuses to be time delay.
- C. Disconnect switches shall be heavy duty, AC, single throw safety switches, built in accordance with NEMA requirements with a suitable full cover interlock and quick-make, quick-break mechanism. Each switch shall be fusible unless non-fusible (NF) is specifically indicated. Switches shall be in NEMA 1 enclosures in dry locations and NEMA 3R where exposed to the weather.
- D. Provide auxiliary contacts to shut down VFD prior to disconnecting power. Provide repletion fuses where noted.
- E. Full voltage non-reversing starters size 0 minimum.
- F. All starters to be combination starters and molded case circuit breaker or fused disconnect as noted on the Drawings with cover mounted HOA and pilot lights.
- G. Manufactured by Caddy, Unistrut or Powershield.
- H. Fractional HP starters quick make quick break single pole switches for integrally protected motors.
- I. Multi pole horse power rated switches or enclosed circuit breakers in flush NEMA 1 enclosures where motors are located in finished spaces.
- J. All devices NEMA rated for the environment they are located.

2.12 Enclosed Switches, Circuit Breakers and Controllers

- A. Disconnect switches shall be heavy duty, AC, single throw safety switches, built in accordance with NEMA requirements with a suitable full cover interlock and quick-make, quick-break mechanism. Each switch shall be fusible unless non-fusible (NF) is specifically indicated. Switches shall be in NEMA 1 enclosures in dry locations and NEMA 3R where exposed to the weather.
- B. Provide auxiliary contacts to shut down VFD prior to disconnecting power. Provide repletion fuses where noted.
- C. Full voltage non-reversing starters size 0 minimum.
- D. All starters to be combination starters and molded case circuit breaker or fused disconnect as noted on the Drawings with cover mounted HOA and pilot lights.
- E. Manufactured by Caddy, Unistrut or Powershield.
- F. Fractional HP starters quick make quick break single pole switches for integrally protected motors.
- G. Multi pole horse power rated switches or enclosed circuit breakers in flush NEMA 1 enclosures where motors are located in finished spaces.
- H. All devices NEMA rated for the environment they are located.

2.13 Lighting Fixtures

- A. Rigid fixtures to be LED, refer to light fixture schedule with drawing set for specifics.
- B. Dimming driver to be 0-10V compatible with the dimming controller selected.

2.14 Voice/Data Systems

- A. The Electrical Contractor is to install an empty conduit, backbox and junction box system for installation of the Owner's voice and data system by others. All telephone and network systems equipment and cabling shall be provided by the Owner's communications cabinet contractor.
- B. Provide machine labels on all lighting switches and convenience and special purpose receptacles to show panel and circuit number to which the device is connected.
- C. Panelboard schedule: After completion of work, provide typewritten updated panelboard schedules for all panelboards in a metal framed circuit directory inside cover, with plastic protector. Color code wires as follows:
 1. Voltage phase A phase, B phase, C, neutral ground.
 2. 120/208V black, red, blue, white, green.
 3. 277/480V brown, orange, yellow, grey, green.
 - E. Provide Brady wire markers where number of conductors in a box exceeds four.

2.15 Miscellaneous Low Voltage Systems

- A. The Electrical Contractor is to install an empty conduit, backbox and junction box rough in for installation of the following Owner's systems:
 1. Security and Detrus systems.

PART 3 - EXECUTION

3.1 General

- A. Electric system layouts indicated on the Drawings are generally diagrammatic and shall be followed as closely as actual construction and work of other trades will permit. Govern exact routing of cable and wiring and the locations of outlets by the structure and equipment served. Take all dimensions from Architectural drawings.
- B. Consult all other drawings, verify scales and report any dimensional discrepancies or other conflicts with Owner before submitting bid.
- C. All home runs to panelboards are indicated as starting from the outlet nearest the panel and continuing in the general direction of final panel. Continue such circuits to the panel as though the routes were completely indicated. (Minimum terminals of signal, alarm

and communication systems in a similar manner.

3.2 Conduits and Cables

- A. Avoid cutting and boring holes through structure or structural members wherever possible. Obtain prior approval of Owner and conform to all structural requirements when cutting or boring such structure is necessary and permitted.
- B. Furnish and install all necessary hangers, blockers, blocking, brackets, hangers, bungs, etc., required for equipment specified under this section.
- C. Provide necessary backing under to insure rigid mounting of outlet boxes.
- D. All low voltage cables installed in a metal box and raceway system to an accessible ceiling. B. Minimum conduit size is 1/2" with larger sizes noted on plan. Install plastic bushing on conduit ends. C. Group and bundle low voltage cables and provide support independent of ceiling supports. Utilize D rings, J hooks or approved nylon straps to hold cables and provide supports independent of the ceiling supports.
- E. Provide dedicated neutral circuits for all 120V and 277V branch circuits.
- F. Megger and record insulated in accordance with all 600 volt insulated conductors size #4/0 and larger using 500 volt megger for one minute. Make notes with circuit isolated from source and load.

3.3 Low Voltage Conductors and Cables

- A. All low voltage cables installed in a metal box and raceway system to an accessible ceiling. B. Minimum conduit size is 1/2" with larger sizes noted on plan. Install plastic bushing on conduit ends. C. Group and bundle low voltage cables and provide support independent of ceiling supports. Utilize D rings, J hooks or approved nylon straps to hold cables and provide supports independent of the ceiling supports.
- D. Megger and record insulated in accordance with all 600 volt insulated conductors size #4/0 and larger using 500 volt megger for one minute. Make notes with circuit isolated from source and load.

3.4 Grounding and Bonding

- A. The building and electrical systems shall be grounded and bonded in accordance with the NEC, IEEE and best practices.
- B. Electrical service and separately derived alternating current systems shall be grounded in accordance with NEC, Article 250.
- C. All feeder and branch circuits shall have a green copper ground conductor run with the phase and neutral conductors.
- D. Electrical Code required #6 or larger ground conductor and 12" ground bus at telecommunication demarcation location.

3.5 Raceways and Boxes

- A. Enclose all electrical power ground in conduit. Conduit shall be rigid steel, IMC or EMT as follows:
 1. Above ground: use rigid steel or IMC only.
 2. Locations subject to mechanical injury: Rigid steel or IMC only.
 3. Dry locations and not subject to mechanical injury: EMT, IMC or rigid steel conduit.
- C. Use flexible conduit in the following applications:
 1. Recessed lighting fixtures.
 2. Motor connection.
 3. At building joints.
 4. At wet locations, flexible conduit shall be liquid tight type.
- D. Metal cabinet assembled panelboards shall be Schneider Electric OMB for 225A-1600A or equal by Cutler-Hammer, G.E., or Siemens with requirements noted above:
 1. Trims to a piece without top for NEMA 1, with door where noted on the Drawings or for NEMA 3R and 3R2.
 2. Fused switches: NEMA KS 1, Type HD, Twin, side by side mount for 30A-250A. Single mount for 400A and above.
 3. Motor circuit repletion fuses as noted in 2.14 below.

3.6 Cable Tray

- A. Hang cable tray with threaded rod below mechanical ductwork and piping above finished lay in ceiling.
- B. All cable trays to be center hung or angle wall hung for unobstructed cable access.

3.7 Identification

- A. Provide nameplates for switchgears, panelboards, and all similar devices. Nameplates shall be screwed (no adhesive) engraved plastic or photo-etched metallic nameplate identification showing panel designation, voltage and phase in minimum 1/2" high letters.
- B. Provide machine labels on all lighting switches and convenience and special purpose receptacles to show panel and circuit number to which the device is connected.
- C. Panelboard schedule: After completion of work, provide typewritten updated panelboard schedules for all panelboards in a metal framed circuit directory inside cover, with plastic protector. Color code wires as follows:
 1. Voltage phase A phase, B phase, C, neutral ground.
 2. 120/208V black, red, blue, white, green.
 3. 277/480V brown, orange, yellow, grey, green.
 - E. Provide Brady wire markers where number of conductors in a box exceeds four.

3.8 Lighting Control Devices

- A. Controllers: Furnish 120 volt power to each control panel and time switch requiring a source of power to operate.

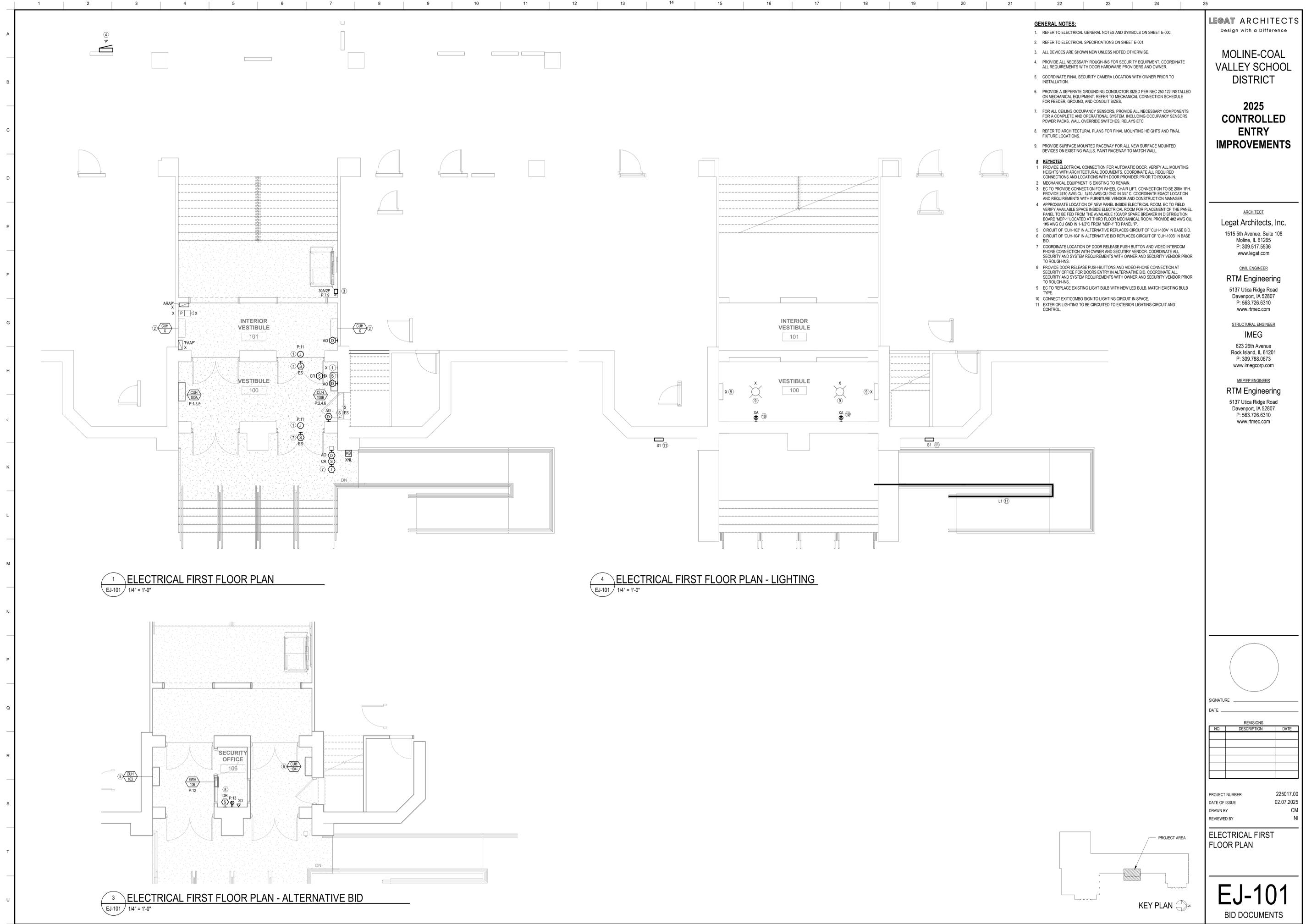
3.9 Panelboards

- A. Where panelboards are flush mounted in walls, provide a minimum of 4-1" conduits stubbed to an accessible ceiling above the panel.
- B. Circuit numbers appearing on Drawings shall be used for reference only. Actual connections shall be in accordance with phasing of the cabinet and load balancing requirements. Room numbers or names used for circuit identification shall correspond to name plates installed on room doors by the General Contractor or as selected by the Owner and shall be verified as these may not be the same as room titles on the

Drawings.

3.10 Wiring Devices

- A. The Contractor shall furnish and install wall plates for all flush mounted wiring devices and all flush mounted special system outlets. Sectional wall plates shall not be used. Blank plates shall be installed over all outlets provided for future use. Wall plates shall be colored as noted on plans as manufactured by Lutron, Eagle Bryant, General Electric, Hubbell or Leviton. Wall plates shall be secured with matching screws. Engraved wall plates shall have back fill.
- B. The Contractor shall furnish and install outlets for and make final electrical connections to all electrically powered equipment indicated on the plans or equipment schedules.



- GENERAL NOTES:**
- REFER TO ELECTRICAL GENERAL NOTES AND SYMBOLS ON SHEET E-000.
 - REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E-001.
 - ALL DEVICES ARE SHOWN NEW UNLESS NOTED OTHERWISE.
 - PROVIDE ALL NECESSARY ROUGH-INS FOR SECURITY EQUIPMENT. COORDINATE ALL REQUIREMENTS WITH DOOR HARDWARE PROVIDERS AND OWNER.
 - COORDINATE FINAL SECURITY CAMERA LOCATION WITH OWNER PRIOR TO INSTALLATION.
 - PROVIDE A SEPARATE GROUNDING CONDUCTOR SIZED PER NEC 250.122 INSTALLED ON MECHANICAL EQUIPMENT. REFER TO MECHANICAL CONNECTION SCHEDULE FOR FEEDER, GROUND, AND CONDUIT SIZES.
 - FOR ALL CEILING OCCUPANCY SENSORS, PROVIDE ALL NECESSARY COMPONENTS FOR A COMPLETE AND OPERATIONAL SYSTEM INCLUDING OCCUPANCY SENSORS, POWER PACKS, WALL OVERRIDE SWITCHES, RELAYS ETC.
 - REFER TO ARCHITECTURAL PLANS FOR FINAL MOUNTING HEIGHTS AND FINAL FIXTURE LOCATIONS.
 - PROVIDE SURFACE MOUNTED RACEWAY FOR ALL NEW SURFACE MOUNTED DEVICES ON EXISTING WALLS. PAINT RACEWAY TO MATCH WALL.

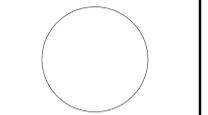
- # KEYNOTES**
- PROVIDE ELECTRICAL CONNECTION FOR AUTOMATIC DOOR. VERIFY ALL MOUNTING HEIGHTS WITH ARCHITECTURAL DOCUMENTS. COORDINATE ALL REQUIRED CONNECTIONS AND LOCATIONS WITH DOOR PROVIDER PRIOR TO ROUGH-IN.
 - MECHANICAL EQUIPMENT IS EXISTING TO REMAIN.
 - EC TO PROVIDE CONNECTION FOR WHEEL CHAIR LIFT. CONNECTION TO BE 208V 1PH. PROVIDE 2#10 AWG CU, 1#10 AWG CU GND IN 3/4" C. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH FURNITURE VENDOR AND CONSTRUCTION MANAGER.
 - APPROXIMATE LOCATION OF NEW PANEL INSIDE ELECTRICAL ROOM. EC TO FIELD. VERIFY AVAILABLE SPACE INSIDE ELECTRICAL ROOM FOR PLACEMENT OF THE PANEL. PANEL TO BE FED FROM THE AVAILABLE 100A/3P SPARE BREAKER IN DISTRIBUTION BOARD MBP-1 LOCATED AT THIRD FLOOR MECHANICAL ROOM. PROVIDE #2 AWG CU, #6 AWG CU GND IN 1-1/2" C FROM MBP-1 TO PANEL "P".
 - CIRCUIT OF CUH-103 IN ALTERNATIVE REPLACES CIRCUIT OF CUH-100A IN BASE BID.
 - CIRCUIT OF CUH-104 IN ALTERNATIVE BID REPLACES CIRCUIT OF CUH-100B IN BASE BID.
 - COORDINATE LOCATION OF DOOR RELEASE PUSH BUTTON AND VIDEO INTERCOM PHONE CONNECTION WITH OWNER AND SECURITY VENDOR. COORDINATE ALL SECURITY AND SYSTEM REQUIREMENTS WITH OWNER AND SECURITY VENDOR PRIOR TO ROUGH-INS.
 - PROVIDE DOOR RELEASE PUSH-BUTTONS AND VIDEO-PHONE CONNECTION AT SECURITY OFFICE FOR DOORS ENTRY IN ALTERNATIVE BID. COORDINATE ALL SECURITY AND SYSTEM REQUIREMENTS WITH OWNER AND SECURITY VENDOR PRIOR TO ROUGH-INS.
 - EC TO REPLACE EXISTING LIGHT BULB WITH NEW LED BULB. MATCH EXISTING BULB TYPE.
 - CONNECT EXIT/COMBO SIGN TO LIGHTING CIRCUIT IN SPACE.
 - EXTERIOR LIGHTING TO BE CIRCUITED TO EXTERIOR LIGHTING CIRCUIT AND CONTROL.

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NO.	DESCRIPTION	DATE

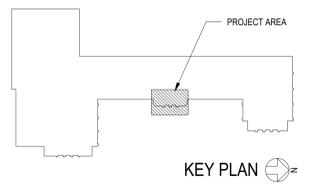
PROJECT NUMBER 225017.00
DATE OF ISSUE 02.07.2025
DRAWN BY CM
REVIEWED BY NI

ELECTRICAL FIRST FLOOR PLAN

1 ELECTRICAL FIRST FLOOR PLAN
EJ-101 1/4" = 1'-0"

4 ELECTRICAL FIRST FLOOR PLAN - LIGHTING
EJ-101 1/4" = 1'-0"

3 ELECTRICAL FIRST FLOOR PLAN - ALTERNATIVE BID
EJ-101 1/4" = 1'-0"



GENERAL NOTES:

- REFER TO ELECTRICAL GENERAL NOTES AND SYMBOLS ON SHEET E-000.
- REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E-001.

Branch Panel: P													
Location:			Volts: 120/208 Wye				A.I.C. Rating: 10K						
Supply From:			Phases: 3				Mains Type: MCB						
Mounting: Surface			Wires: 4				Bus Amps: 100 A						
Enclosure: Type 1							MCB Rating: 100 A						
CB Info	CKT	Circuit Description	Amps	Trip	Poles	A	B	C	Poles	Trip	Amps	CB Info	
1	3	CUH-100A	8.99 A	15 A	3	1080 VA	1080 VA		3	15 A	8.99 A	2	
5						1080 VA	1080 VA	1080 VA	1080 VA			4	
7		WHEELCHAIR LIFT	15.8	30 A	2	1650 VA	0 VA		1	20 A	--	6	
9						1650 VA	0 VA		1	20 A	--	8	
11		AUTO-DOOR POWER	3 A	20 A	1			360 VA	1560 VA	1	20 A	--	10
13		POWER SECURITY OFFICE 108	1.5 A	20 A	1	180 VA	0 VA		1	20 A	--	12	
15		SPARE	--	20 A	1		0 VA	0 VA	1	20 A	--	14	
17		SPARE	--	20 A	1		0 VA	0 VA	1	20 A	--	16	
19		SPARE	--	20 A	1	0 VA	0 VA		1	20 A	--	18	
21		SPARE	--	20 A	1		0 VA	0 VA	1	20 A	--	20	
23		SPARE	--	20 A	1		0 VA	0 VA	1	20 A	--	22	
			Total Load:			9950 VA	3810 VA	4080 VA					24
			Tot.:			33 A	32 A	34 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	8040 VA	100.00%	8040 VA	
Other	3300 VA	100.00%	3300 VA	Total Conn. Load: 11880 VA
Power	540 VA	100.00%	540 VA	Total Est. Demand: 11880 VA
				Total Conn.: 33 A
				Total Est. Demand: 33 A

Notes:
ALTERNATIVE BID ONLY SCOPE. REPLACE WITH SPARE IN BASE BID.

MECHANICAL EQUIPMENT CONNECTION SCHEDULE						
TAG	DESCRIPTION	LOAD	WIRE/CONDUIT	STARTER	VOLTAGE	LOCAL DISCONNECT
CUH	CABINET UNIT HEATER (100A, 100B, 103, 104)	9 MCA 15 MDCP	3#12 AWG 1#12 AWG EQ. GND. 3/4" C.	<input checked="" type="checkbox"/> INTEGRAL TO EQUIPMENT <input type="checkbox"/> IN MCC <input type="checkbox"/> NEMA SIZE <input type="checkbox"/> 00 TYPE	208V 3P	<input type="checkbox"/> FUSED A FUSE <input checked="" type="checkbox"/> NON-FUSED A SWITCH <input type="checkbox"/> THERMAL SWITCH, 120V, 1P
EWHA	ELECTRIC WALL HEATER	13 MCA 20 MDCP	2#12 AWG 1#12 AWG EQ. GND. 3/4" C.	<input checked="" type="checkbox"/> INTEGRAL TO EQUIPMENT <input type="checkbox"/> IN MCC <input type="checkbox"/> NEMA SIZE <input type="checkbox"/> 00 TYPE	120V 1P	<input type="checkbox"/> FUSED A FUSE <input checked="" type="checkbox"/> NON-FUSED A SWITCH <input type="checkbox"/> THERMAL SWITCH, 120V, 1P

SCHEDULE KEY NOTES

- VERIFY FINAL LOCATION OF ALL EQUIPMENT WITH EQUIPMENT INSTALLER BEFORE INSTALLING FEEDERS.
- SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR MORE INFORMATION.
- SEE STARTER/FEEDER DISCONNECT PER FINAL EQUIPMENT REQUIREMENTS.
- PROVIDE FEEDERS AS INDICATED, VERIFY WITH EQUIPMENT REQUIREMENTS.
- PROVIDE OVERLOAD PROTECTION (FUSES OR MOTOR CIRCUIT PROTECTOR) FOR STARTERS PER SPECIFICATIONS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
- VERIFY FINAL VOLTAGE AND PHASE REQUIREMENTS OF ALL EQUIPMENT WITH INSTALLER BEFORE INSTALLING FEEDERS.
- EC TO PROVIDE LOCAL DISCONNECT WITHIN 5'-0" OF EQUIPMENT. NON-STANDARD ITEMS, TIMERS, METERS, INTERLOCKS, ETC.

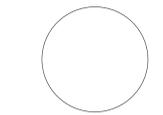
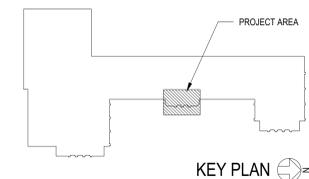
SCHEDULE GENERAL NOTES

- PROVIDE POWER CONNECTIONS TO ALL ARCHITECTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND OWNER FURNISHED EQUIPMENT. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR LOCATIONS AND POWER REQUIREMENTS. VERIFY ALL TECHNICAL DATA WITH FINAL SHOP DRAWINGS.
- OVER CURRENT PROTECTION SIZES LISTED ARE FROM MANUFACTURER'S AND STANDARD MOTOR DATA, FURNISH FUSES BASED ON FUSE MANUFACTURER'S STANDARDS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
- FLEXIBLE CONNECTIONS TO MOTORS SHALL BE IN FLEXIBLE CONDUIT. PROVIDE COPPER EQUIPMENT GROUND FROM DISCONNECT TO MOTOR CONNECTION. EC TO COORDINATE WITH THE MECHANICAL EQUIPMENT SCHEDULES TO PROVIDE DISCONNECTS FOR THE MECHANICAL EQUIPMENT.

LIGHTING FIXTURE SCHEDULE								
TYPE	DESCRIPTION	FIXTURE TYPE	K	CRI	INPUT WATTS	VOLTS	MANUFACTURER	MODEL NO.
L1	HAND RAIL LIGHT	LED	30	85	3.0	120	COLE LIGHTING	LRS
S1	EXTERIOR WALL MOUNTED SCENCE	LED	30	80	40.0	120	STERNBERG	1W 800LED BB 1L 30 T4 MDL07 CSA DBT
XA	EMERGENCY LIGHT/EXIT COMBO	LED	0	0	2.0	120	LITHONIA	ECRG RD M6

NOTES:

- PROVIDE ALL NECESSARY MOUNTING HARDWARE AND ACCESSORIES FOR A COMPLETE INSTALLATION OF FIXTURE(S) IN THE SPACE. COORDINATE ALL INSTALLATION REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
- THE FIRST LISTED FIXTURE PRODUCT IN THE APPROVED MANUFACTURERS COLUMN WITH A FULL PRODUCT NUMBER FOR EACH FIXTURE TYPE IS THE BASIS OF DESIGN. ADDITIONAL APPROVED PRODUCT SERIES LISTED MUST MEET ALL THE CHARACTERISTICS LISTED AS THE BASIS OF DESIGN FIXTURE. FINAL PRODUCT APPROVAL WILL BE PROVIDED DURING THE SUBMITTAL PROCESS.
- COORDINATE SELECTION OF HANDRAIL LIGHTING WITH ARCHITECT AND HANDRAIL VENDOR PRIOR TO ORDERING.
- COORDINATE SELECTION OF WALL MOUNTED SCENCE WITH ARCHITECT AND OWNER PRIOR TO ORDERING.



SIGNATURE _____

DATE _____

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 225017.00
DATE OF ISSUE: 02.07.2025
DRAWN BY: CM
REVIEWED BY: NI

ELECTRICAL SCHEDULES

MECHANICAL EQUIPMENT CONNECTION SCHEDULE						
TAG	DESCRIPTION	LOAD	WIRE/CONDUIT	STARTER	VOLTAGE	LOCAL DISCONNECT
CLH 100	CABINET UNIT HEATER (100C, 100D)	10 MCA 15 MOCIP	2#12 AWG 1#12 AWG EQ. GND 3/4" C.	<input checked="" type="checkbox"/> INTEGRAL TO EQUIPMENT <input type="checkbox"/> IN MCC - NEMA SIZE <input type="checkbox"/> 00 TYPE	208V 1P	<input type="checkbox"/> FUSED - A FUSE <input checked="" type="checkbox"/> NON-FUSED - A SWITCH <input type="checkbox"/> THERMAL SWITCH, 120V, 1P
CLH 101	CABINET UNIT HEATER	13 MCA 20 MOCIP	2#12 AWG 1#12 AWG EQ. GND 3/4" C.	<input checked="" type="checkbox"/> INTEGRAL TO EQUIPMENT <input type="checkbox"/> IN MCC - NEMA SIZE <input type="checkbox"/> 00 TYPE	120V 1P	<input type="checkbox"/> FUSED - A FUSE <input checked="" type="checkbox"/> NON-FUSED - A SWITCH <input type="checkbox"/> THERMAL SWITCH, 120V, 1P

SCHEDULE KEY NOTES

- VERIFY FINAL LOCATION OF ALL EQUIPMENT WITH EQUIPMENT INSTALLER BEFORE INSTALLING FEEDERS.
- SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR MORE INFORMATION.
- SIZE STARTER/FEEDER DISCONNECT PER FINAL EQUIPMENT REQUIREMENTS.
- PROVIDE FEEDERS AS INDICATED, VERIFY WITH EQUIPMENT REQUIREMENTS.
- PROVIDE OVERLOAD PROTECTION (FUSES OR MOTOR CIRCUIT PROTECTOR) FOR STARTERS PER SPECIFICATIONS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
- VERIFY FINAL VOLTAGE AND PHASE REQUIREMENTS OF ALL EQUIPMENT WITH INSTALLER BEFORE INSTALLING FEEDERS.
- PEC TO PROVIDE LOCAL DISCONNECT WITHIN 5'-0" OF EQUIPMENT.
- NON-STANDARD ITEMS, TIMERS, METERS, INTERLOCKS, ETC.

SCHEDULE GENERAL NOTES

- PROVIDE POWER CONNECTIONS TO ALL ARCHITECTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND OWNER FURNISHED EQUIPMENT. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR LOCATIONS AND POWER REQUIREMENTS. VERIFY ALL TECHNICAL DATA WITH FINAL SHOP DRAWINGS. OVER CURRENT PROTECTION SIZES LISTED ARE FROM MANUFACTURERS AND STANDARD MOTOR DATA, FURNISH FUSES BASED ON FUSE MANUFACTURER'S STANDARDS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
- FLEXIBLE CONNECTIONS TO MOTORS SHALL BE IN FLEXIBLE CONDUIT. PROVIDE COPPER EQUIPMENT GROUND FROM DISCONNECT TO MOTOR CONNECTION ED TO COORDINATE WITH THE MECHANICAL EQUIPMENT SCHEDULES TO PROVIDE DISCONNECTS FOR THE MECHANICAL EQUIPMENT.

LIGHTING FIXTURE SCHEDULE							
TYPE	DESCRIPTION	FIXTURE TYPE	K	CRI	INPUT WATTS	VOLTS	MANUFACTURER
F1	6" RECESSED LED DOWNLIGHT	LED	35	80	22.5	120	LITHONIA PRESCOLITE COOPER LDN6-35/20-L06AR-LSS-MVOLT-GZ1
FIE	6" RECESSED LED DOWNLIGHT WITH EMERGENCY BACKUP	LED	35	80	22.5	120	LITHONIA PRESCOLITE COOPER LDN6-35/20-L06AR-LSS-MVOLT-GZ1-E10WCP
XWP	EXTERIOR WALL PACK WITH BATTERY BACKUP	LED	30	80	32.0	120	LITHONIA HUBBEL COOPER TRW1 LED ALD SWW2 W/OLT PE E7WC DDBTXD

NOTES:

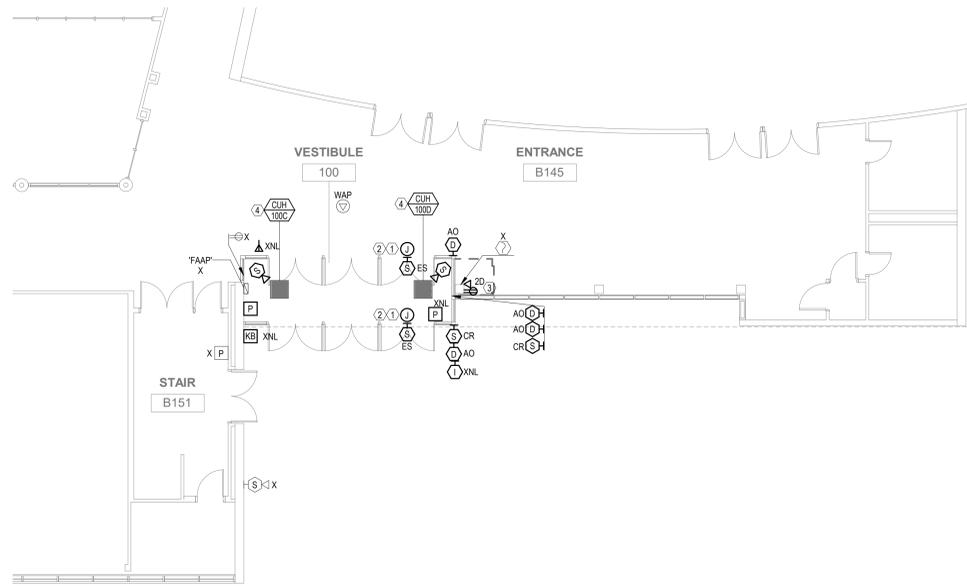
- PROVIDE ALL NECESSARY MOUNTING HARDWARE AND ACCESSORIES FOR A COMPLETE INSTALLATION OF FIXTURE(S) IN THE SPACE. COORDINATE ALL INSTALLATION REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
- THE FIRST LISTED FIXTURE PRODUCT IN THE APPROVED MANUFACTURERS COLUMN WITH A FULL PRODUCT NUMBER FOR EACH FIXTURE TYPE IS THE BASIS OF DESIGN. ADDITIONAL APPROVED PRODUCT SERIES LISTED MUST MEET ALL THE CHARACTERISTICS LISTED AS THE BASIS OF DESIGN. FIXTURE FINAL PRODUCT APPROVAL WILL BE PROVIDED DURING THE SUBMITTAL PROCESS.

GENERAL NOTES:

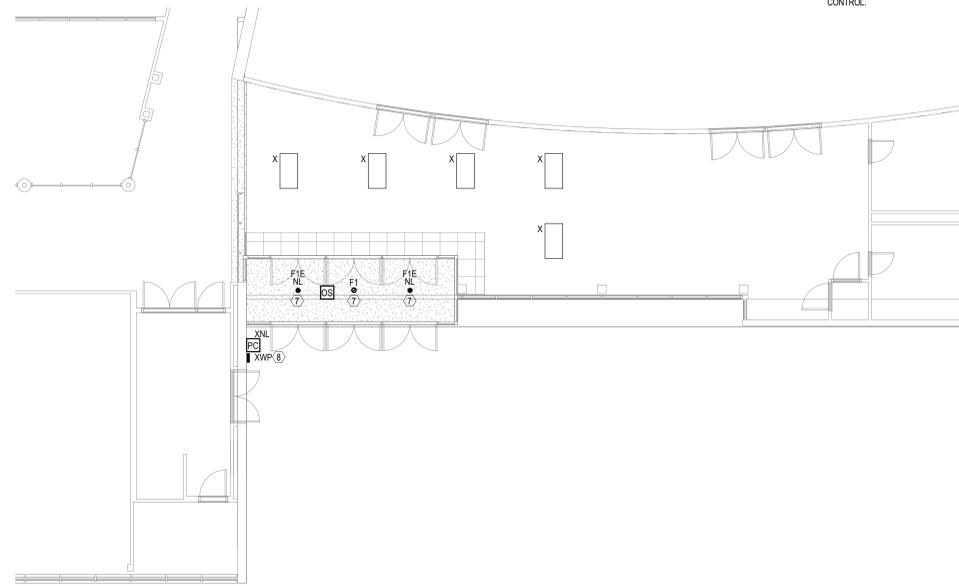
- REFER TO ELECTRICAL GENERAL NOTES AND SYMBOLS ON SHEET E-000.
- REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E-001.
- ALL DEVICES ARE SHOWN NEW UNLESS NOTED OTHERWISE.
- PROVIDE ALL NECESSARY ROUGH-INS FOR SECURITY EQUIPMENT. COORDINATE ALL REQUIREMENTS WITH DOOR HARDWARE PROVIDERS AND OWNER.
- COORDINATE FINAL SECURITY CAMERA LOCATION WITH OWNER PRIOR TO INSTALLATION.
- PROVIDE A SEPARATE GROUNDING CONDUCTOR SIZED PER NEC 250.122 INSTALLED ON MECHANICAL EQUIPMENT. REFER TO MECHANICAL CONNECTION SCHEDULE FOR FEEDER, GROUND, AND CONDUIT SIZES.
- FOR ALL CEILING OCCUPANCY SENSORS, PROVIDE ALL NECESSARY COMPONENTS FOR A COMPLETE AND OPERATIONAL SYSTEM, INCLUDING OCCUPANCY SENSORS, POWER PACKS, WALL OVERRIDE SWITCHES, RELAYS ETC.
- REFER TO ARCHITECTURAL PLANS FOR FINAL MOUNTING HEIGHTS AND FINAL FIXTURE LOCATIONS.
- PROVIDE SURFACE MOUNTED RACEWAY FOR ALL NEW SURFACE MOUNTED DEVICES ON EXISTING WALLS. PAINT RACEWAY TO MATCH WALL.

KEYNOTES

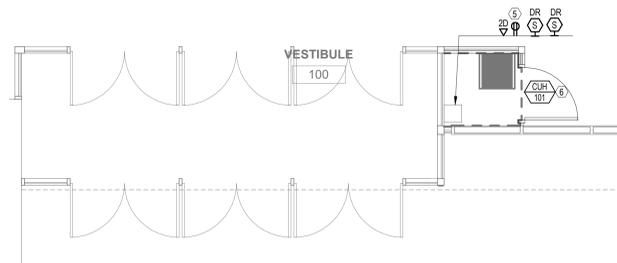
- PROVIDE ELECTRICAL CONNECTION FOR AUTOMATIC DOOR. VERIFY ALL MOUNTING HEIGHTS WITH ARCHITECTURAL DOCUMENTS. COORDINATE ALL REQUIRED CONNECTIONS AND LOCATIONS WITH DOOR PROVIDER PRIOR TO ROUGH-IN.
- PROVIDE ELECTRICAL CIRCUIT FOR THE 2 AUTO-DOORS FROM PANEL 'PP-1F' AT 'PR RM B119'. PROVIDE 20A/1P BREAKER IN BUSSED SPACE.
- PROVIDE ELECTRICAL CIRCUIT FROM PANEL 'PP-1F' AT 'PR RM B119'. PROVIDE 20A/1P BREAKER IN BUSSED SPACE.
- PROVIDE ELECTRICAL CIRCUIT FROM PANEL 'MP-1E' AT 'PR RM B119'. PROVIDE 15A/2P BREAKER IN BUSSED SPACE.
- PROVIDE ELECTRICAL CIRCUIT FROM PANEL 'PP-1F' AT 'PR RM B119'. PROVIDE 20A/1P BREAKER IN BUSSED SPACE.
- PROVIDE ELECTRICAL CIRCUIT FROM PANEL 'MP-1E' AT 'PR RM B119'. PROVIDE 20A/1P BREAKER IN BUSSED SPACE.
- LIGHTING FIXTURE TO BE CIRCUITED TO EXISTING INTERIOR LIGHTING CIRCUIT.
- EXTERIOR WALL PACK TO BE CIRCUITED TO EXTERIOR LIGHTING CIRCUIT AND CONTROL.



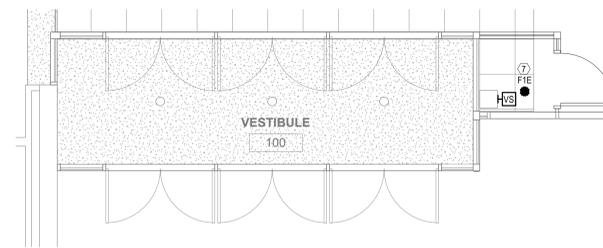
1 ELECTRICAL FIRST FLOOR PLAN
EW-101 1/8" = 1'-0"



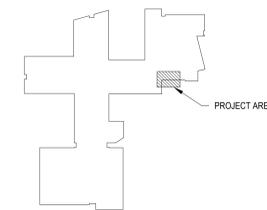
2 ELECTRICAL FIRST FLOOR PLAN - LIGHTING
EW-101 1/8" = 1'-0"



3 ELECTRICAL FIRST FLOOR PLAN - ALTERNATIVE BID
EW-101 1/4" = 1'-0"



4 ELECTRICAL FIRST FLOOR PLAN - LIGHTING - ALTERNATIVE BID
EW-101 1/4" = 1'-0"



KEY PLAN

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Moline, IL 61265

ARCHITECT

Legat Architects, Inc.

1515 5th Ave, Suite 108
Moline, IL 61265
P: 309.517.5536
www.legat.com

CIVIL ENGINEER / LANDSCAPE ARCHITECT

Civil Engineer Name

Address Line 1
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P: xxx.xxx.xxx
www. .com

STRUCTURAL ENGINEER

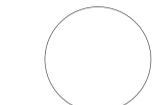
IMEG

623 26th Avenue
Rock Island, IL 61201
P: 309.788.0673
www.imegcorp.com

MEPEE ENGINEER

RTM Engineering

5137 Unica Ridge Road
Davenport, IA 52807
P: 563.726.6310
www.rtmec.com



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PROJECT NUMBER 225029 00
DATE OF ISSUE 02.07.2025
DRAWN BY CM
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ELECTRICAL FIRST FLOOR PLAN