BAILEY FARMS CLUBHOUSE

1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

CONSTRUCTION DOCUMENTS

AUGUST 13, 2025

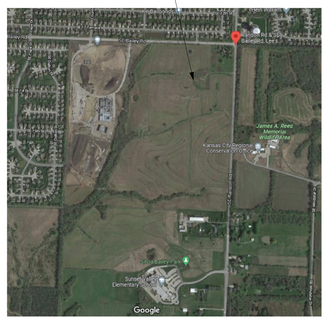
COLLINS WEBB #: 23115

collins | webb ARCHITECTURE

307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com



PROJECT LOCATION



GENERAL

SHEET NUMBER	SHEET NAME
CS	COVER SHEET
G001	GENERAL INFORMATION
G002	ACCESSIBILITY GUIDELINES
G003	LIFE SAFETY PLANS AND PROJECT INFO.
G500	GENERAL PROJECT SPECIFICATIONS
G501	GENERAL PROJECT SPECIFICATIONS
G502	GENERAL PROJECT SPECIFICATIONS
G503	GENERAL PROJECT SPECIFICATIONS

STRUCTURAL

SHEET NUMBER	SHEET NAME
S001	GENERAL NOTES
S002	SPECIFICATIONS
S003	SPECIFICATIONS
S100	STRUCTURAL PLANS
S101	ROOF TRUSS LOADING PLANS
S200	TRUSS PROFILES
S210	TYPICAL DETAILS
S211	FOUNDATION SECTIONS
S220	ROOF FRAMING SECTIONS

ARCHITECTURAL

SHEET NO.	SHEET NAME
A101	FLOOR PLAN
A102	REFLECTED CEILING PLAN
A103	ROOF PLAN - CLUBHOUSE
A111	ENLARGED PLANS AND ELEVATIONS - KITCHEN AND RESTROOMS
A201	EXTERIOR ELEVATIONS - CLUBHOUSE
A301	BUILDING SECTIONS - CLUBHOUSE
A401	WALL SECTIONS & DETAILS
A402	WALL SECTIONS & DETAILS
A501	DOOR SCHEDULE AND DETAILS - CLUBHOUSE
A901	FINISH LEGEND AND SCHEDULE - CLUBHOUSE

MEP

SHEET NUMBER	SHEET NAME
MEP001	COVER SHEET
MEP002	SPECIFICATIONS
MEP101	SITE PLAN
M101	HVAC PLAN
M201	MECHANICAL SCHEDULES AND DETAILS
P101	DOMESTIC WATER PLAN
P201	WASTE & VENT PLAN
P301	PLUMBING SCHEDULES AND DETAILS
E101	LIGHTING PLAN
E201	POWER PLAN
E301	ELECTRICAL RISER AND SCHEDULES

OWNER

SUMMIT HOMES
120 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P: 816.326.2909

ARCHITECT

COLLINS | WEBB ARCHITECTURE
307B SW MARKET ST.
LEE'S SUMMIT, MISSOURI 64063
P: 816.249.2270
www.collinsandwebb.com

CIVIL

SCHLAGEL
14920 WEST 107th STREET
LENEXA, KS 66215
P: 913.492.5158
WWW.SCHLAGELASSOCIATES.COM

STRUCTURAL ENGINEER

LEIGH & O'KANE
250 NE MULBERRY SUITE 201
LEE'S SUMMIT, MO 64086
P: 816.444.3144

MEP ENGINEER

PKMR ENGINEERS
13300 W. 98TH ST.
LENEXA, KS 66215
P: 913.492.2400
www.pkmreng.com

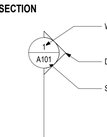
STATE OF MISSOURI
ROGER L. WEBB II
NUMBER A-2016040008
ARCHITECT
08/13/2026

ARCHITECTURAL ABBREVIATIONS

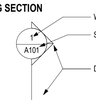
&	AND
<	ANGLE
AB	ANCHOR BOLT
ACOUS/ACST	ACOUSTIC(AL)
ACT	ACOUSTICAL CEILING TILE
ACP	ACOUSTICAL CEILING PANEL
ACS PNL	ACCESS PANEL
AD	AREA DRAIN
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AFS	ABOVE FINISH SLAB
AGGR	AGGREGATE
ALUM, AL	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
ASPH	AT
AVG	AVERAGE
BB	BULLETIN BOARD
BD	BOARD
BTWN	BETWEEN
BITUM	BITUMINOUS
BLK / BLKG	BLOCK / BLOCKING
BLDG	BUILDING
BM	BENCHMARK
BMD	BOTTOM OF METAL DECK
BO	BOTTOM OF / BY OTHERS
BOT	BOTTOM
BOS	BOTTOM OF STEEL
BRG	BEARING
BSMT	BASEMENT
BUR	BUILT UP ROOFING SYSTEM
[	CHANNEL
CAB	CABINET
CPT	CARPET
CI	CAST IRON
CB	CATCH BASIN
CCR	CARD CONTROL READER
CSWK	CASEWORK
CCT	CUBICLE CURTAIN TRACK
CCTV	CLOSED CIRCUIT TELEVISION
CSP	COMBINATION STAND PIPE
CG	CORNER GUARD
CEM	CEMENT, CEMENTITIOUS
CER	CERAMIC
CT	CERAMIC TILE
CH BD	CHALKBOARD
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CLO	CLOSET
CMU	CONCRETE MASONRY UNIT
CRSC	COLD ROLLED STEEL CHANNEL
CW	COLD WATER
COL	COLUMN
CNTR	COUNTER
CSK	COUNTERSUNK
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CJ	CONTROL JOINT
CG	CORNER GUARD
CORR	CORRUGATED, CORRIDOR
CU	CUBIC
D	DEPTH
DBL	DOUBLE
DBL ACT	DOUBLE ACTING
DEG	DEGREE
DEMO	DEMOLISH
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFUSER
DIM	DIMENSION
DIM PT	DIMENSION POINT
DISP	DISPENSER
DIST	DISTANCE
DK	DECK
DN	DOWN
DR	DRAIN, DOOR
DS	DOWNSPOUT
DSP	DRY STANDPIPE
DT	DRAPERY TRACK
DTL	DETAIL
DW	DISHWASHER
DWG / DWGS	DRAWING / DRAWINGS
E	EAST
EA	EACH
EDR	EQUIPMENT DRAWING
EG	EDGE GUARD
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER
EOS	EDGE OF SLAB
EP	ELECTRICAL PANEL
EPB	ELECTRICAL PANEL BOARD
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ESCAL	ESCALATOR
EST	ESTIMATED(D)
EWC	ELECTRIC WATER COOLER
EXC	EXCAVATED
EXH	EXHAUST
EXIST, (E)	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
EX-BR	EXISTING BRICK
F/F	FACE TO FACE
FA	FIRE ALARM
FAS	FIRE ALARM STATION
FB	FLAT BAR
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FEC	FIRE EXTINGUISHER CABINET
FE	FIRE EXTINGUISHER
FF	FINISH FACE
FG	FINISH GRADE
FHC	FIRE HOSE CABINET
FH/FEC	FIRE HOSE / EXTINGUISHER CABINET
FHMS	FLAT HEAD MACHINE SCREW
FHWS	FLAT HEAD WOOD SCREW
FHY	FIRE HYDRANT
FIN	FINISH, FINISHED
FLAM	FLAMMABLE
FLASH	FLASHING
FLEX	FLEXIBLE
FLR	FLOOR
FLUOR	FLUORESCENT
FO	FACE OF
FRT	FIRE RETARDANT TREATMENT
FRZ	FREEZER
FSB	FOLDING SHOWER BENCH
FSTNR	FASTENER
FT	FOOT, FEET
FTG	FOOTING
FURN	FURNITURE
FXTR	FIXTURE
G	GAS
GA	GAUGE, GAGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS
GLU LAM	GLUE LAMINATED
GLZ	GLAZING
GR	GRADE OR GRADING
GVL	GRAVEL
GYP	GYPSUM
GYP BD	GYPSUM BOARD
GYP PLAS	GYPSUM PLASTER
H	HIGH
HB	HOSE BIBB
HC	HOLLOW CORE
HD	HEAD
HDBD	HARDBOARD
HDW, HDWR	HARDWARE
HDWD	HARDWOOD
HGT, HT	HEIGHT
HM	HOLLOW METAL
HNDRL	HANDRAIL
HORIZ	HORIZONTAL
HPT	HIGH POINT
HR	HOUR
HVAC	HEATING-VENTILATION-AIR CONDITIONING
HW	HOT WATER
ID	INSIDE DIAMETER
IN	INCH
INCAND	INCANDESCENT
INCL	INCLUDE, INCLUDING
INFO	INFORMATION
INSUL	INSULATION
INTR	INTERIOR
INVERT	INVERT
IVT	INTRAVENOUS TRACK
JAN	JANITOR
JST	JOIST
JT	JOINT
KG	KILOGRAM
KIT	KITCHEN
KPL	KICK PLATE
KS	KNEE SPACE
L	LENGHT, LONG
LAB	LABORATORY
LAM	LAMINATE, LAMINATION
LAV	LAVATORY
LB	POUND
LED	LIGHT EMITTING DIODE
LF	LINEAR FOOT
LG	LENGTH
LIN	LINEAR
LL	LEAD LINED
LPT	LOW POINT
LT	LIGHT
LT WT	LIGHT WEIGHT
LTG	LIGHTING
LVR	LOUVER
M	METERS
MACH	MACHINE
MATL	MATERIAL
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MB	MACHINE BOLT
MC	MEDICINE CABINET
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MED	MEDIUM
MET, MTL	METAL
MEMB	MEMBRANE
MFR / MFG	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLDG	MOLDING
MM	MILLIMETERS
NO	MASONRY OPENING
MOD	MODULE, MODULAR
MTD	MOUNTED
MTG	MOUNTING
MVBL	MOVABLE
MULL	MULLION
(N)	NEW
N	NORTH
NA	NOT APPLICABLE
NAT	NATURAL
NE	NORTHEAST
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NRC	NOICE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OA	OVERALL
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED-CONTRACTOR INSALLED
OFOI	OWNER FURNISHED-OWNER INSTALLED
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
OVHD	OVERHEAD
OZ	OUNCE
PA	PUBLIC ADDRESS
PART	PARTIAL
PBD	PARTICLEBOARD
PBX	PRIVATE TELEPHONE EXCHANGE
PCF	POUNDS PER CUBIC FOOT
PCI	POUNDS PER CUBIC INCH
PERF	PERFORATED
PERIM	PERIMETER
PERM	PERMANENT
PERP	PERPENDICULAR
PI	POINT OF INTERSECTION
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER, PLASTIC
PLBG	PLUMBING
PLF	POUNDERS PER LINEAR FOOT
PLYWD	PLYWOOD
PNEU	PNEUMATIC
PNL	PANEL
PNL BD	PANEL BOARD
PNT, P	PAINT
PORT	PORTABLE
PP	PUSH PLATE
PPM	PARTS PER MILLION
PR	PAIR
PRCST	PRECAST
PREP	PREPARATION
PREFAB	PREFABRICATION
PRKG	PARKING
PROJ	PROJECT
PROP	PROPERTY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT / PTD	POINT, PAINT / PAINTED
PTN	PARTITION
PTS	PNEUMATIC TUBE STATION
PVC	POLYVINYL CHLORIDE
PVG	PAVING
PVMT	PAVEMENT
PWR	POWER
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
R	RISER
RA	RETURN AIR
RAD	RADIUS
RB	RESILIENT BASE
RCP	REFLECTED CEILING PLAN
RCPT	RECEPTACLE
RD	ROOF DRAIN
RECT	RECTANGULAR
REF	REFERENCE
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCE (D) (ING) (MENT)
REQD	REQUIRED
REQT	REQUIREMENT
RESIL	RESILIENT
RET	RETURN
REV	REVISION
RF	RESILIENT FLOORING
RH	RIGHT HAND
RHMS	ROUND HEAD MACHINE SCREW
RHWS	ROUND HEAD WOOD SCREW
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RWL	RAIN WATER LEADER
S	SOUTH
SA	SUPPLY AIR
SB	SPLASH BLOCK
SC	SOLID CORE
SCHED	SCHEDULE
SCRN	SCREEN
SD	STORM DRAIN
SE	SOUTHEAST
SECT	SECTION
SEG	SEGMENT
SEP	SEPARATION OR SEPARATE
SEP JT	SEPARATION JOINT
SHT	SHEET, SHEETING
SHWR	SHOWER
SHV	SHELVES, SHELVING
SIM	SIMILAR
SK	SINK
SMS	SHEET METAL SCEW
SP	SPACE, SPACED, SPACING
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SPKR	SPEAKER
SQ	SQUARE
SS	SANITARY SEWER
SSK	SERVICE SINK
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STAG	STAGGERED
STC	SOUND TRANSMISSION COEFFICIENT
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
STS	SELF-TAPPING STEEL
SUSP	SUSPENDED
SUSP CLG	SUSPENDED CEILING
SVCE	SERVICE
SW	SOUTHWEST
SYMM	SYMMETRICAL
SYST	SYSTEM
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TC	TOP OF CONCRETE, TOP OF CURB
TD	TRENCH DRAIN
TEL	TELEPHONE
TEMP	TEMPORARY
THERM	THERMAL
THK	THICK, THICKNESS
THRES	THRESHOLD
THRU	THROUGH
TMPD GL	TEMPERED GLASS
TO	TOP OF
TOR	TOP OF RAILING
TOS	TOP OF STEEL
TOT	TOTAL
TOW	TOP OF WALL
TP	TOP OF PAVEMENT
TPH	TOILET PAPER HOLDER
TRANS	TRANSPARENT
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TYP	TYPICAL
TW	TOP OF WALL
UC	UNDER COUNTER
UL	UNDERWRITERS LABORATORIES
UNF	UNFINISHED
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTABLE POWER SUPPLY
UR	URINAL
UTIL	UTILITY
VAC	VACUUM
VB	VALVE BOX
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIT	VIREOUS
VP	VENT PIPE
VOL	VOLUME
VWC	VINYL WALL COVERING
W	WEST
W/	WITH
W/O	WITHOUT
WW	WALL TO WALL
WAINS	WAINSCOT
WC	WATER CLOSET, WALL COVERING
WD	WOOD
WDW	WINDOW
WGL	WIRE GLASS
WCHR	WHEELCHAIR
WM	WIRE MESH
WO	WHERE OCCURS
WP	WATERPROOF
WPT	WORKING POINT
WR	WATER RESISTANT
WSCT	WAINSCOT
WSP	WET STANDPIPE
WT	WEIGHT
WTHPRF	WEATHERPROOF
WTRPRF	WATERPROOF
WWF	WELDED WIRE FRABRIC
WWM	WELDED WIRE MESH
XFMR	TRANSFORMER
YD	YARD

TYPICAL ARCHITECTURAL REFERENCE SYMBOLS

WALL SECTION



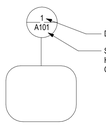
BUILDING SECTION



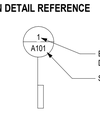
EXTERIOR ELEVATION



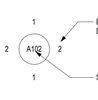
DETAIL REFERENCE



SECTION DETAIL REFERENCE



INTERIOR ELEVATION REFERENCE



PARTITION TYPE IDENTIFICATION MARK



EQUIPMENT/ACCESSORY IDENTIFICATION MARK



DOOR IDENTIFICATION MARK



WINDOW AND LOUVER TYPE MARK



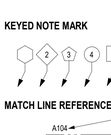
LEVEL LINE



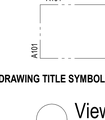
ROOM NAME AND NUMBER



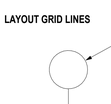
REVISION EXTENT



KEYED NOTE MARK



MATCH LINE REFERENCE



DRAWING TITLE SYMBOLS



LAYOUT GRID LINES

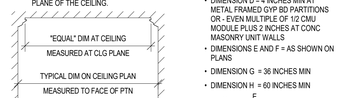
NORTH ARROW REFERENCE

ARCHITECTURAL DIMENSIONING CONVENTIONS

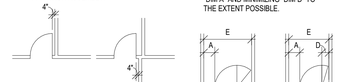
1. EXCEPT WHERE DIRECTED TO PLACE ITEMS OF THE WORK AT THE "APPROXIMATE LOCATION SHOWN," DO NOT SCALE DRAWINGS FOR DIMENSIONAL INFORMATION.
2. ALL ELEMENTS OF THE DRAWINGS MAY NOT BE DRAWN TO EXACT SCALE. ALL DIMENSIONS REQUIRED ARE SHOWN (OR MAY BE DERIVED FROM THOSE SHOWN OR NOTED) ON THE FLOOR PLANS, DETAIL PLANS, ELEVATIONS, SECTIONS, SCHEDULES, CONFIGURATION DETAILS, AND SPECIFICATIONS. SEE THE NOTES BELOW FOR DIMENSIONING CONVENTIONS USED ON THIS PROJECT.
3. EXCEPT WHERE SPECIFICALLY NOTED TO THE CONTRARY, ALL DIMENSIONS SHOWN ON THE ARCHITECTURAL DRAWINGS CONFORM TO THE FOLLOWING CONVENTIONS:
   A. DIMENSIONS UTILIZING THE "CENTERLINE" SYMBOL ARE MEASURED TO:
      - STRUCTURAL OR DIMENSIONAL GRID LINES.
      - CENTERLINE OF CONCRETE OR CONC MASONRY UNIT WALLS (EXCLUSIVE OF FURRING OR APPLIED FINISHES HAVING THICKNESS). REFER TO THE ARCH PLANS AND SECTIONS, THE STRUCT DRAWINGS, OR PARTITION SCHEDULE TO DETERMINE THE THICKNESS OF CONCRETE OR CONC MASONRY UNIT WALLS.
      - CENTERLINE OF PARTITION ASSEMBLY (EXCLUSIVE OF ANY APPLIED FINISHES HAVING THICKNESS WHICH MAY BE ADDED TO SUCH WALLS) AT PARTITIONS FRAMED WITH METAL STUDS. REFER TO "PARTITION SCHEDULE" TO DETERMINE THICKNESS OF EACH PARTITION TYPE.
      - CENTERLINE OF DOOR, WINDOW, OR LOUVER OPENING.
      - CENTERLINE OF EQUIPMENT OR FURNISHING.
      - CENTERLINE OF OTHER FEATURES AS INDICATED.
   B. REFER TO ABBREVIATIONS LEGEND FOR SYMBOL USED TO INDICATE CENTERLINE DIMENSION.
   C. DIMENSIONS UTILIZING THE "FACE OF" SYMBOL ARE MEASURED TO:
      - FACE OF CONCRETE OR CONC MASONRY UNIT WALL (EXCLUSIVE OF APPLIED FINISHES HAVING THICKNESS OR FURRING WHICH MAY BE ADDED TO THE FACE OF SUCH WALLS).
      - FACE OF PARTITION ASSEMBLY (EXCLUSIVE OF ANY APPLIED FINISHES HAVING THICKNESS WHICH MAY BE ADDED TO SUCH WALL) AS DEFINED BY THE PARTITION SCHEDULE UNLESS NOTED AS A "FACE OF FINISH" OR "CLEAR" DIMENSION (SEE NOTE 'E' BELOW). DIMENSIONS ARE NOT MEASURED TO THE FACE OF APPLIED FINISH. REFER TO THE "PARTITION SCHEDULE" TO DETERMINE THE THICKNESS OF EACH PARTITION TYPE.
      - INSIDE EDGE OF FINISHED DOOR OPENING. REFER TO THE DOOR SCHEDULE FOR ADDITIONAL DIMENSIONAL INFORMATION.
      - DIMENSION OR WORK POINT AS INDICATED ON RELATED ARCH DETAIL PLAN, SECTION, ELEVATION, LAYOUT OR CONFIGURATION DETAIL, OR CONSTRUCTION DETAIL.
   D. REFER TO ABBREVIATIONS LEGEND FOR SYMBOL USED TO INDICATE "FACE OF" DIMENSION.
   E. WHERE "FACE OF FINISH" OR "CLEAR" DIMENSIONS ARE SPECIFICALLY NOTED, THE DIM IS MEASURED TO:
      - FINISH FACES AT THE MOST NARROW OR CONSTRICTED POINTS OF SECTION WHERE DIMENSION IS SHOWN, WHEN THE DIMENSION OCCURS ACROSS AN OPEN SPACE. THIS CASE, A "FACE OF FINISH" DIMENSION IS EQUIVALENT TO A "CLEAR" DIMENSION.
      - FINISH FACES AT THE WIDEST OR MOST EXPANSIVE POINTS OF THE SECTION THE DIMENSION IS SHOWN WHEN THE DIMENSION OCCURS ACROSS AN OBJECT OR GROUP OF OBJECTS.
   F. WHERE "EQUAL" DIMENSIONS ARE USED ON REFLECTED CEILING PLANS TO LOCATE CEILING GRID WORK POINTS, MEASURE DIMENSIONS TO:
      - EDGE OF THE INDICATED CEILING AT THE FACE OF THE ADJACENT APPLIED FINISH MEASURED AT THE PLANE OF THE CEILING.

NOTE NO 3 CONTINUED:

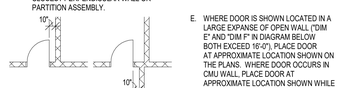
- CAUTION: DUE TO THE POSSIBLE APPLICATION OF APPLIED FINISHES - THICKNESS OF WHICH MAY VARY BETWEEN FLOOR AND CEILING AND IS NOT ACCOUNTED FOR (EXCEPT AS INDICATED BY "FOR" OR "CLEAR") BY THE DIMENSION SHOWN ON THE FLOOR PLANS - THE CONTRACTOR MUST ADJUST, AS NECESSARY, THE FLOOR PLAN DIMENSIONS TO REFLECT THE ACTUAL DIMENSIONS FOUND AT PLANE OF THE CEILING.



4. WHERE DIMENSIONS ARE NOT PROVIDED ON FLOOR PLANS TO LOCATE DOOR OPENINGS, APPLY THE FOLLOWING RULES, **IN ORDER**, TO DETERMINE THE LOCATION OF DOOR OPENINGS:
   A. DOOR OPENINGS MAY BE DIMENSIONED ON DRAWINGS OTHER THAN THE FLOOR PLANS. REFER TO THE SECTIONS, ELEVATIONS, DETAILS, AND DOOR SCHEDULE NOTES FOR ADDITIONAL DIMENSIONAL INFORMATION.
   B. WHERE THE HINGE-SIDE OF A DOOR IS SHOWN ADJACENT TO A WALL - OR WALLS - PERPENDICULAR TO THE WALL IN WHICH THE DOOR OPENING OCCURS:
      - AT DOORS OCCURRING IN METAL FRAMED GYPSUM BOARD PARTITIONS, LOCATE THE HINGE-SIDE OF THE DOOR FINISHED OPENING 4 INCHES FROM THE FACE (EXCLUSIVE OF APPLIED FINISHES) OF THE CLOSEST PERPENDICULAR WALL OR PARTITION ASSEMBLY.

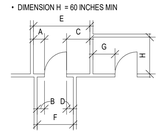


      - AT DOORS OCCURRING IN WALLS OF CONC MASONRY UNIT CONSTRUCTION, LOCATE THE HINGE-SIDE OF THE DOOR FINISHED OPENING 10 INCHES FROM THE FACE (EXCLUSIVE OF APPLIED FINISHES) OF THE CLOSEST PERPENDICULAR WALL OR PARTITION ASSEMBLY.



NOTE NO 4 CONTINUED:

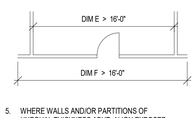
   C. WHERE DOOR OCCURS NOT ADJACENT TO A PERPENDICULAR WALL AND EITHER "DIM E" OR "DIM F" IN DIAGRAM BELOW IS 16'-0" OR LESS, LOCATE DOOR UTILIZING THE FOLLOWING MINIMUM DIMENSIONS:
      - DIMENSION A = 18 INCHES MIN
      - DIMENSION B = 12 INCHES MIN
      - DIMENSION C = DOOR WIDTH + 2 INCHES MINIMUM
      - DIMENSION D = 4 INCHES MIN AT METAL FRAMED GYP BD PARTITIONS OR - EVEN MULTIPLE OF 1/2 CMU MODULE PLUS 2 INCHES AT CONC MASONRY UNIT WALLS
      - DIMENSIONS E AND F = AS SHOWN ON PLANS
      - DIMENSION G = 36 INCHES MIN
      - DIMENSION H = 60 INCHES MIN



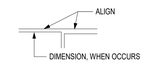
      - IF SPACE ALLOWS, CENTER DOOR IN WALL SHOWN ON THE DRAWINGS SO THAT EITHER "DIM A" EQUALS "DIM C" OR "DIM B" EQUALS "DIM D".

   D. IF "DIM E" IN DIAGRAMS BELOW IS LESS THAN THE SUM OF 2 TIMES THE DOOR WIDTH PLUS 20 INCHES, LOCATE DOOR SO THAT MINIMUMS STATED BY NOTE NO 4C ABOVE FOR "DIM A", "DIM B," AND "DIM D" ARE MET - MAXIMIZING "DIM A" AND MINIMIZING "DIM D" TO THE EXTENT POSSIBLE.

   E. WHERE DOOR IS SHOWN LOCATED IN A LARGE EXPANSE OF OPEN WALL ("DIM E" AND "DIM F" IN DIAGRAM BELOW BOTH EXCEED 16'-0"), PLACE DOOR AT APPROXIMATE LOCATION SHOWN ON THE PLANS. WHERE DOOR OCCURS IN CMU WALL, PLACE DOOR AT APPROXIMATE LOCATION SHOWN WHILE MINIMIZING "CUT" OR PARTIAL CMU MODULES ADJACENT TO THE JAMBS.



5. WHERE WALLS AND/OR PARTITIONS OF UNEQUAL THICKNESS ABUT, ALIGN EXPOSED FACES, UNLESS OTHERWISE NOTED.



TYPICAL RULES FOR DETERMINING REFLECTED CEILING PLAN LOCATIONS, DIMENSIONS, AND CONFIGURATIONS

GENERAL NOTES

A. THE A-SERIES DRAWINGS ESTABLISH AND COORDINATE THE FINISHED APPEARANCE AND LOCATION OF ALL EXPOSED ELEMENTS. THE A-SERIES DRAWINGS TAKE PRECEDENCE FOR THE FINISHED APPEARANCE AND LOCATION OF ALL PARTS OF THE WORK. **EXCEPTION:** DIMENSIONED LOCATIONS SHOWN ON DRAWINGS OF OTHER DISCIPLINES SHALL GOVERN ONLY WHERE:
   1. SPECIFICALLY AND INDIVIDUALLY INDICATED BY SYMBOL, KEYED NOTE, OR NOTATION ON THE ARCHITECTURAL DRAWINGS.
   2. OCCURRING WITHIN A ROOM OR OTHER IDENTIFIABLE SPACE FOR WHICH ARCH SHEET OR SCHEDULE NOTES INDICATE THAT DIMENSIONS PROVIDED ELSEWHERE SHALL GOVERN.

B. THE PURPOSE OF THIS SHEET IS TO ILLUSTRATE THE TYPICAL RULES WHICH GOVERN THE LOCATION, CONFIGURATION IN RELATIONSHIP TO OTHER ELEMENTS OF THE WORK, AND FINISHED ALIGNMENT OF ALL ITEMS OCCURRING ON REFLECTED CEILING PLANS OF THE PROJECT.

C. THE A-SERIES FLOOR PLANS, REFLECTED CEILING PLANS, SECTIONS, ELEVATIONS, AND DETAILS ILLUSTRATE THE DIMENSIONED LOCATION OF MANY - BUT NOT ALL - EXPOSED PARTS OF THE WORK. APPLY THE RULES ON THIS SHEET **- IN ORDER -** TO DETERMINE THE LOCATION OF EXPOSED PART OF THE WORK.
   1. WHEN UNIQUELY AND SPECIFICALLY DIMENSIONED ON THE A-SERIES PLANS, SECTIONS, OR ELEVATIONS (OR COMBINATION THEREOF), LOCATE AS DIMENSIONED.
   2. IF NOT SHOWN, OR IF SHOWN BUT NOT DIMENSIONED, BY THE A-SERIES PLANS OR ELEVATIONS, LOCATE AS INDICATED BY THE APPLICABLE RULE.

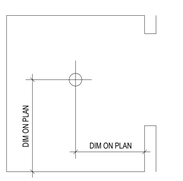
D. REFER TO THE "ARCHITECTURAL GENERAL NOTES" FOR ADDITIONAL NOTES WHICH MAY BE APPLICABLE TO THE WORK SHOWN ON THIS SHEET.

E. FOR MANY SPACES, THE ARCHITECTURAL REFLECTED CEILING PLANS ESTABLISH AN IDEAL PATTERN FOR LOCATING SPRINKLER HEADS. IN SPACES WHERE HEADS ARE SHOWN, FOLLOW PATTERN ESTABLISHED BY THE DRAWINGS. WHERE ADDL HEADS ARE REQUIRED TO CONFORM WITH CODE, PROVIDE HEADS IN GENERAL CONFORMITY WITH PATTERN ESTABLISHED BY THE DRAWINGS.

F. IN SPACES WHERE SPRINKLER HEADS ARE NOT SHOWN BY THE ARCHITECTURAL REFLECTED CEILING PLANS, PROVIDE HEADS AS REQUIRED BY CODE.

RULE 1

WHEN COMPLETELY DIMENSIONED ON REFLECTED CEILING PLAN

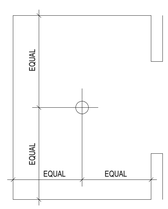


LOCATE ITEMS AS INDICATED WHEN SHOWN DIMENSIONED BY A REFLECTED CEILING PLAN, ENLARGED REFLECTED CEILING PLAN, OR DETAIL.

SPECIFIC DIMENSIONS SHOWN BY REFLECTED CEILING PLANS, ELEVATIONS, OR DETAILS TAKE PRECEDENCE OVER TYPICAL LOCATION RULES.

RULE 2

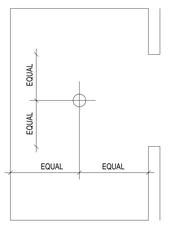
WHEN NOT DIMENSIONED BUT SHOWN CENTERED



LOCATE ITEMS CENTERED IN SPACE (OR CEILING PLANE) WHEN SHOWN (BUT NOT DIMENSIONED) VISUALLY AT APPROXIMATE CENTER OF SPACE.

RULE 3

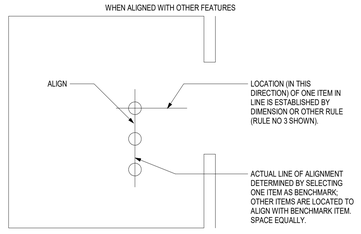
WHEN OFF-CENTER IN SPACE BUT CENTERED ON ADJACENT FEATURE



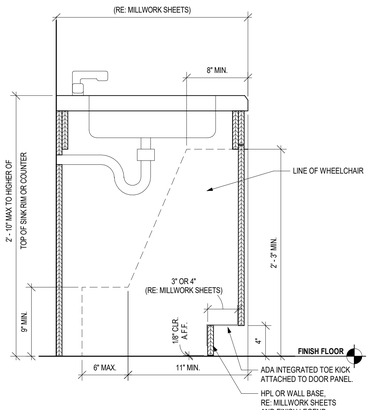
LOCATE ITEMS CENTERED ON ADJACENT OPENING OR FEATURE WHEN SHOWN (BUT NOT DIMENSIONED) OFF-CENTER IN OVERALL SPACE BUT CENTERED AGAINST ADJACENT FEATURE.

RULE 4

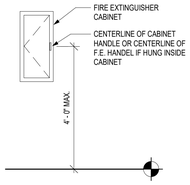
WHEN ALIGNED WITH OTHER FEATURES



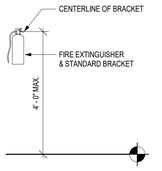
LOCATE ITEMS (LIGHT FIXTURES, SPRINKLER HEADS, DEVICES, ETC) ALIGNED WITH ADJACENT ITEMS FOR WHICH DIMENSIONS OR RULES ARE PROVIDED. VISUAL ALIGNMENT IS CRITICAL. THE CONTRACTOR SHALL SELECT ONE ITEM IN EACH LINE (ON BASIS OF TOLERANCES, SEQUENCE OF CONSTRUCTION,



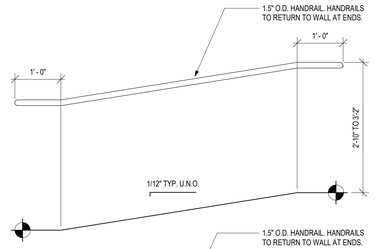
H12 ADA INTEGRATED TOE KICK
1 1/2" = 1'-0"

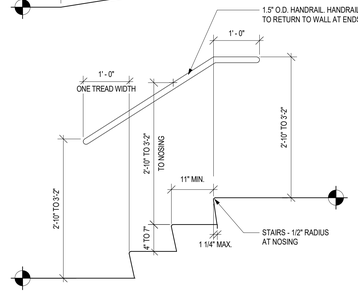


J10 FE CABINET
1/2" = 1'-0"

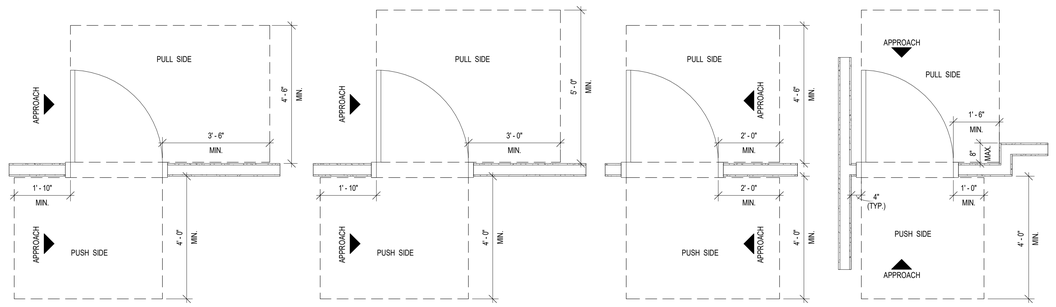


G10 FIRE EXTINGUISHER
1/2" = 1'-0"

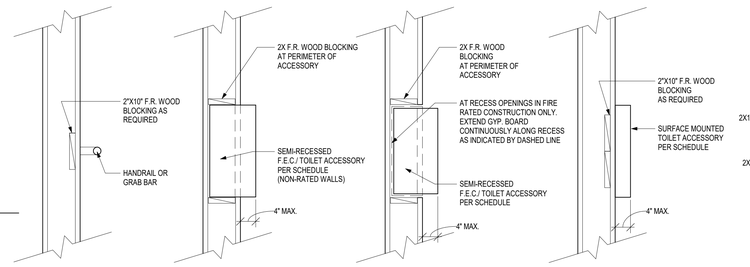




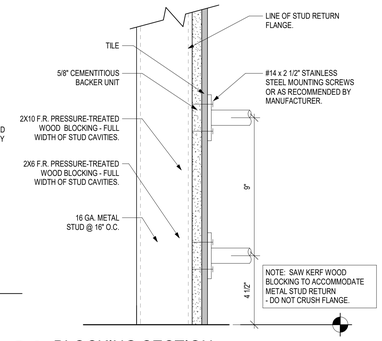
G9 HANDRAIL @ STAIRS AND RAMPS
3/4" = 1'-0"



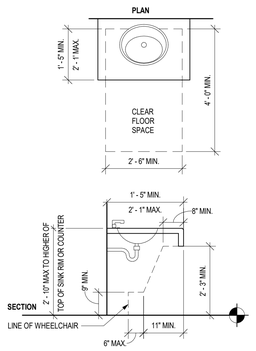
J6 TYP. DOOR APPROACH CLEARANCES
1/2" = 1'-0"



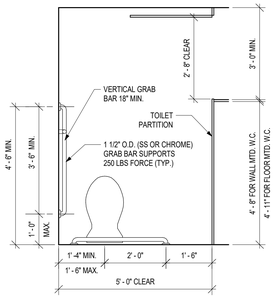
G6 TYP. BLOCKING DETAILS
3/4" = 1'-0"



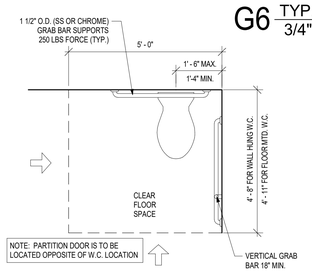
G2 BLOCKING SECTION
3" = 1'-0"



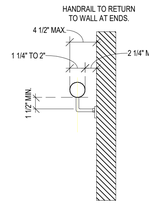
E12 SINK IN COUNTER CLEARANCES
1/2" = 1'-0"



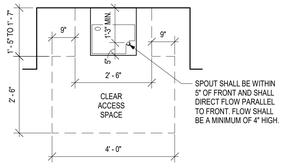
E10 ACCESSIBLE TOILET STALL
1/2" = 1'-0"



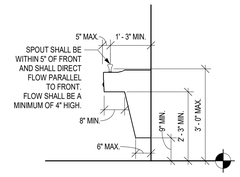
E8 ACCESSIBLE CLEAR FLOOR SPACE
1/2" = 1'-0"



E6 HANDRAIL CLEARANCES
1 1/2" = 1'-0"



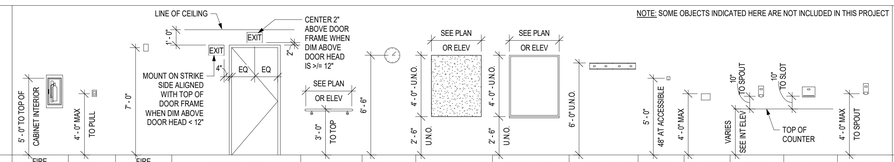
E4 E.W.C. - CLEAR SPACE
1/2" = 1'-0"



E2 E.W.C. - SECTION
1/2" = 1'-0"

MISCELLANEOUS ACCESSORY TYPICAL MOUNTING HEIGHTS

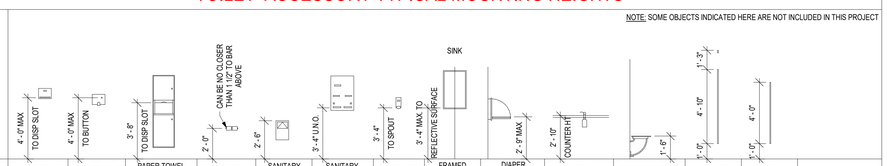
NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT



FINISH FLOOR															
ACCESSORY TYPE	FIRE EXTINGUISHER CABINET	MANUAL FIRE PULL	FIRE STROBE/LIGHT/ AUDIBLE ALARM	WALL MOUNTED EXIT SIGN	WALL MOUNTED HANDRAIL	WALL CLOCK	FABRIC COVERED TACK BOARD	MARKER BOARD	MOP & BROOM HOLDER	ROBE HOOK	ELAPSED TIME CLOCK	SOAP DISPENSER	PAPER TOWEL DISPENSER	ALCOHOL DISPENSER
COMMENTS	SEMI RECESSED	SURFACE MOUNTED	SURFACE MOUNTED	WALL MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED

TOILET ACCESSORY TYPICAL MOUNTING HEIGHTS

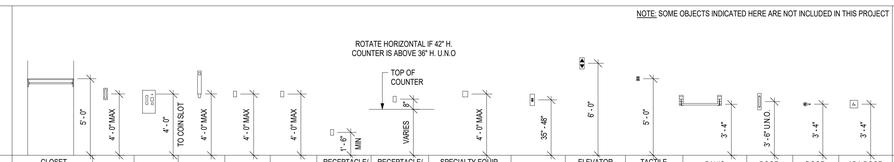
NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT



FINISH FLOOR															
ACCESSORY TYPE	PAPER TOWEL DISPENSER	POWER HAND DRYER	PAPER TOWEL DISPENSER & TRASH RECEPTACLE	TOILET TISSUE DISPENSER	SANITARY NAPKIN DISPOSAL	SANITARY NAPKIN DISPENSER	VANITY SOAP DISPENSER	FRAMED VANITY MIRROR	DIAPER CHANGING STATION	SOAP DISPENSER	COUNTERTOP MOUNTED	FOLDING SHOWER SEAT	TOILET PARTITION	URINAL SCREEN
COMMENTS	SURFACE MOUNTED	SURFACE MOUNTED	SEMI RECESSED	SURFACE MOUNTED	SURFACE MOUNTED	RECESSED & SURFACE	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	WALL MOUNTED	WALL MOUNTED

MISCELLANEOUS ACCESSORY TYPICAL MOUNTING HEIGHTS

NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT



FINISH FLOOR															
ACCESSORY TYPE	CLOSET HANGAR ROD & SHELF	WALL PHONE	TELEPHONE HOUSING	CUP DISPENSER	WALL SWITCH	TELEPHONE OUTLET	RECEPTACLE/ TELEPHONE/ DATA	RECEPTACLE/ TELEPHONE/ DATA	SPECIALTY EQUIP (IE. THERMOSTAT,CARD READER,INTERCOM)	ELEVATOR CALL BUTTON	ELEVATOR VISIBLE SIGNAL INDICATOR	TACTILE CHARACTER INDICATOR	PANIC BAR	DOOR PULL	DOOR LATCH	ADA DOOR OPERATOR
COMMENTS	WALL MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	VARIES

PLUMBING FIXTURE TYPICAL MOUNTING HEIGHTS

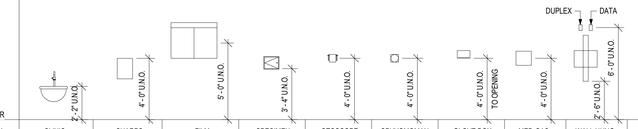
NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT



FINISH FLOOR											
ACCESSORY TYPE	SHOWER MIXING VALVE	SHOWER HEAD	HAND HELD SHOWER	LAVATORY	LAVATORY	CHILDREN'S DRINKING FOUNTAIN	SINGLE DRINKING FOUNTAIN	DOUBLE DRINKING FOUNTAIN		TOILET	URINAL
COMMENTS	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED	COUNTER MOUNTED	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED		WALL/FLOOR MOUNTED	WALL MOUNTED

HEALTHCARE ACCESSORY TYPICAL MOUNTING HEIGHTS

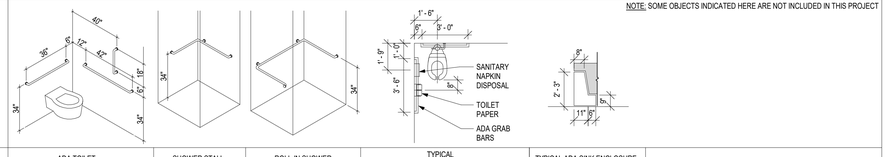
NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT



FINISH FLOOR									
ACCESSORY TYPE	CLINIC SINK	SHARPS CONTAINER	FILM ILLUMINATOR	SPECIMEN PASS-THRU	OTOSCOPE	SPHYGMOMAN-METER	GLOVE BOX	MED-GAS SHUT OFF	WALL HUNG COMPUTER
COMMENTS	WALL MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	THRU-WALL MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED

GRAB BAR TYPICAL MOUNTING HEIGHTS & TOILET ACCESSORY PLANS

NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT



FINISH FLOOR					
ACCESSORY TYPE	ADA TOILET GRAB BAR	SHOWER STALL GRAB BAR	ROLL-IN SHOWER STALL GRAB BAR	TYPICAL ACCESSORIES AT ACCESSIBLE TOILET	TYPICAL ADA SINK ENCLOSURE PANEL CLEARANCE
COMMENTS	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	NOTE: SANITARY NAPKIN DISPOSAL AT WOMEN'S & UNISEX ONLY	

A11 TYP. MOUNTING HEIGHTS
1/4" = 1'-0"

GENERAL NOTES: ACCESSIBILITY GUIDELINES

1. NOTE: ALL DIMENSIONS ARE MEASURED FROM FLOOR, UNLESS NOTED OR SHOWN OTHERWISE.
2. ADA UNOBSTRUCTED REACH RANGES: ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
3. DOOR HARDWARE (TO CENTER OF HARDWARE): STANDARD MOUNTING HEIGHTS: PUSH PLATES = 42", PULL HANDLES = 42", KNOBS/ LEVERS = 40", PANIC EXIT = 42" CENTERLINE OF BAR, KICKPLATES: WIDTH = DOOR WIDTH MINUS 2", CENTER, HEIGHT = 16" FROM B.O. DOOR. THRESHOLDS: STANDARD = 1/2" MAX. AT EXT. SLIDING DOORS = 3/4" MAX., ADA HARDWARE = 34" MIN. TO 48" MAX.
4. DRINKING FOUNTAINS & EWC'S (TO SPOUT): STANDARD = 40" TYP., 42" MAX. ADA =36" MAX. (27" MIN. CLEAR KNEE SPACE)
5. COUNTERTOPS (TO SINK RIM/ COUNTERTOP): ADA = 28" MIN. TO 34" MAX.
6. WATER CLOSETS (TO TOP OF SEAT): STANDARD = 14" TO 15", ADA (TO TOP OF SEAT) = 17" TO 19". ADA FLUSH CONTROLS = 44" MAX.
7. URINALS (TO RIM): STANDARD = 24" MAX. ADA =17" MAX. ADA FLUSH CONTROLS = 44" MAX.
8. LAVATORIES (TO SINK RIM/ COUNTERTOP): STANDARD = 36" MAX. ADA = 34" MAX. (29" MIN. CLEAR KNEE SPACE)
9. MIRRORS (TO B.O. REFLECTIVE SURFACE): STANDARD = VARIES. ADA = 40" MAX.
10. GRAB BARS - ADA (TO TOP OF BAR): WATER CLOSETS = 33" MIN. TO 36" MAX. SHOWERS = 33" MIN. TO 36" MAX. (FROM B.O.SHOWER). BATHTUBS: TOP BAR = 33" MIN. TO 36" MAX. BOT. BAR = 9" ABOVE T.O. TUB
11. SHOWER HEADS (FROM FLOOR TO HEAD): STANDARD = 72" TO 84". ADA = SPRAY UNIT W/ HOSE 60" LONG MIN. ADA = FIXED SHOWER HEAD = 48" AFF.
12. SHOWER CONTROLS (TO CONTROL AREA): STANDARD = 48" MAX. (TO TOP). ADA = 38" MIN. TO 48" MAX.
13. SHOWER ROD (FROM FLOOR TO C.L.): STANDARD = 78" MAX.
14. TOILET ROOM PARTITIONS: TOILETS = 12" TO BOT. & 70" TO TOP URINALS = 18" TO BOT. & 60" TO TOP
15. TOILET PAPER DISPENSERS (TO C.L. OF OUTLET): STANDARD = 24". ADA = 19" MIN. TO 24" MAX.
16. WALL MOUNTED SOAP DISPENSERS (TO C. L. OF PUSH BUTTON): STANDARD = 40". ADA = VARIES. RE: OBSTRUCTED AND UNOBSTRUCTED REACH RANGES. ADA SIDE REACH = 46" MAX. ABOVE SINK IN COUNTER.
17. PAPER TOWEL DISPENSER/ WASTE RECEPTACLE (TO TOWEL SLOT): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
18. WARM AIR HAND DRYER (TO PUSH SWITCH): STANDARD = 44" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
19. SANITARY NAPKIN DISPENSER (TO C.L. OF COIN SLOT): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
20. SANITARY NAPKIN DISPOSAL (TO TOP OF UNIT): STANDARD = 28" MAX. ADA = 19" MIN. TO 24" MAX. (TO OPNG.)
21. TOILET SEAT COVER DISPENSERS (TO OPNG.): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
22. SHELVES: ADA = 48" MAX.
23. COAT HOOKS: STANDARD = 68". ADA = 48" MAX.
24. CHALKBOARDS, TACKBOARDS, & MARKERBOARDS: STANDARD = 32" TO 39" (TO B.O. BOARD OR CHALKTRAY). STANDARD = 80" (RECOMMENDED, TO T.O. BOARD)
25. THERMOSTATS & CONTROL DEVICES (TO TOP): ADA FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX.
26. LIGHT SWITCHES & CARD READERS (TO C.L.): LOCATE 6" FROM DOOR JAMB. ADA = 48" MAX.
27. CONVENIENCE RECEPTACLES – ELECTRICAL/ TELEPHONE/ DATA (TO C.L.): STANDARD = 18". ADA = 15" MIN.
28. EXIT LIGHTS - WALL MOUNTED: 2" MIN. BELOW CEILING. 2" MIN. ABOVE DOOR FRAME. EQUAL SPACE FROM CEILING TO TOP OF FRAME.
29. FIRE EXTINGUISHERS (TO TOP, U.N.O.): GROSS WT. 40 LBS. OR LESS = 60" MAX. GROSS WT. MORE THAN 40 LBS. = 42" MAX. ADA = 40" MAX. (B.O. CABINET)
30. FIRE ALARM PULL STATIONS (TO LEVER): STANDARD = 48" MAX. ADA FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX.
31. SMOKE AND/OR HEAT DETECTORS: STANDARD = CEILING HEIGHT
32. HORN/ SPEAKER/ VISUAL SIGNALS: STANDARD = 80" AFF. OR 6" BELOW CEILING - WHICHEVER IS LOWER.
33. ROOM SIGNAGE (TO C.L.): STANDARD = 60" HIGH AFF. & WITHIN 18" OFLATCH SIDE OF DOOR

collins|webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ROGER L. WEBB II
NUMBER A-2010024928
08/13/2025
ARCHITECT

PROFESSIONAL SEAL

G002

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

ACCESSIBILITY GUIDELINES

8/12/2025 8:49:11 AM

WALL PRIORITY LEGEND

NOTE: *THIS LEGEND IS FOR GRAPHIC REPRESENTATION ONLY.*

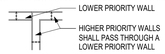
FOUR HOUR FIRE WALL (**4FW**)
THREE HOUR FIRE WALL (**3FW**)
TWO HOUR FIRE WALL (**2FW**)
FOUR HOUR FIRE BARRIER (**4FB**)
THREE HOUR FIRE BARRIER (**3FB**)

TWO HOUR FIRE BARRIER (**2FB**) *(INCLUDES THE FOLLOWING)*
- TWO HOUR SHAFT ENCLOSURE (**2SE**)

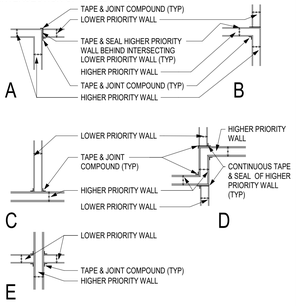
ONE HOUR FIRE BARRIER (**1FB**) *(INCLUDES THE FOLLOWING)*
- ONE HOUR SHAFT ENCLOSURE (**1SE**)

SMOKE TIGHT PARTITION (**X**) *(INCLUDES THE FOLLOWING)*
- SMOKE TIGHT PARTITION TO SMOKE TIGHT CEILING (**XC**)
- SMOKE TIGHT PARTITION WITHIN PLENUM ABOVE CEILING (**XP**)
- SMOKE TIGHT PARTITION SEPARATION OF INTERSTITIAL SPACES (**XI**)

DETAIL ABUTMENT OF DISSIMILAR WALL



INTERSECTION OF RATED WALLS



NOTES:
1. REFER TO WALL TYPES ON SHEET G121-TI FOR WALL COMPONENTS, NUMBER OF GYPSUM BOARD LAYERS, TYPE OF GYPSUM BOARD, AND OTHER SIMILAR INFO.
2. THE HIGHER PRIORITY WALL SHALL PASS THROUGH THE LOWER PRIORITY WALL.
3. TAPING AND SEALING OF HIGHER PRIORITY WALLS SHALL BE CONTINUOUS.
4. ALTERNATE LAYERS OF GYPSUM BOARD SHALL OVERLAP AT CORNER INTERSECTIONS OF MULTI-LAYERED RATED GYPSUM BOARD PARTITIONS.

GENERAL DESCRIPTION

PROJECT NAME: BAILEY FARMS CLUBHOUSE
PROJECT LOCATION: LEE'S SUMMIT
COUNTY: JACKSON
COLLINS WEBB ARCHITECTURE
13A SW 3RD STREET
LEES SUMMIT, MISSOURI 64063

APPLICABLE CODES:
2012 NFPA 101 LIFE SAFETY CODE
INTERNATIONAL BUILDING CODE - 2018 ED.
INTERNATIONAL PLUMBING CODE - 2018 ED.
INTERNATIONAL FUEL GAS CODE - 2018 ED.
INTRNATIONAL ENERGY CONSERVATION CODE - 2018 ED.
NATIONAL ELECTRICAL CODE - 2018 ED.
INTERNATIONAL FIRE CODE - 2018 ED.
INTERNATIONAL SWIMMING POOL, AND SPA CODE - 2018 ED.
ADA STANDARDS FOR ACCESSIBLE DESIGN - 2010 ED.

CODE INFORMATION

		TABLE/SECTION/REFERENCE
BUILDING/PROJECT USE:	**COMMUNITY CLUBHOUSE**	**IBC SECTION 303**
CONSTRUCTION TYPE	**TYPE VB**	**IBC TABLE 601**
OCCUPANCY CLASSIFICATION	**GROUP "A3" NEW ASSEMBLY ,**	**IBC SECTION 303**
BUILDING FRAME	**GROUP "B" NEW ASSEMBLY**	
		IBC SECTION 503
ACTUAL TENANT AREA (GROSS)	**1,969 SQ. FT.**	
NET TENANT AREA	**1,899 SQ. FT.**	
ALLOWABLE STORIES	**2 STORIES**	**IBC TABLE 504.4**
ACTUAL NUMBER OF STORIES	**1 STORIES**	
ALLOWABLE HEIGHT	**40'-0"**	**IBC TABLE 504.3**
ACTUAL HEIGHT IN FEET	**22'-8"**	

FIRE RESISTIVE REQUIREMENTS

		TABLE/SECTION/REFERENCE
PRIMARY FRAME	**0 HRS**	**IBC TABLE 601**
NON-BEARING WALLS	**0 HRS**	**IBC TABLE 601**
BEARING WALLS INT./ EXT.	**0 INT. / 0 EXT. HRS**	**IBC TABLE 601**
FLOOR CONSTRUCTION	**0 HRS**	**IBC TABLE 601**
CEILING/ROOF	**0 HRS**	**IBC TABLE 601**
CORRIDORS	**0 HRS**	**IBC TABLE 1018.1**

FIRE EXTINGUISHERS

1. **PROVIDE PORTABLE FIRE EXTINGUISHERS IN OCCUPANCIES AND LOCATIONS AS REQUIRED BY THE MISSOURI FIRE PREVENTION CODE. SEE PLANS FOR SUGGESTED LOCATIONS. NOTIFY ARCHITECT OF ANY PROPOSED RELOCATION OR IF A CONFLICT IS ENCOUNTERED.**
2. **PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED, INSPECTED, AND MAINTAINED IN ACCORDANCE WITH NFPA 10, STANDARD FOR PORTABLE FIRE EXTINGUISHERS.**

CEILING HEIGHT NOTES: (IBC 1208)

1. **ALL MEANS OF EGRESS TO HAVE A MINIMUM CEILING HEIGHT OF 7'-6" A.F.F., NOR SHALL HAVE ANY PROJECTION FROM THE CEILING BE LESS THAN 6'-8" A.F.F.**
2. **OCCUPIED SPACES, HABITABLE SPACES AND CORRIDORS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-6" A.F.F.**
3. **BATHROOMS, TOILET ROOMS, KITCHENS, STORAGE ROOMS AND LAUNDRY ROOMS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-0" A.F.F.**

INTERIOR FINISHES

GROUP A	MAX. FLAME SPREAD	
EXIT ENCLOSURES	**CLASS A**	**803.9 IBC**
LOBBIES & CORRIDORS	**CLASS A or CLASS B**	**803.9 IBC**
ALL OTHER SPACES	**CLASS A, B or C (76-200)**	**803.9 IBC**
TEXTILES	**CLASS A (0-25)**	**IBC 803.1.3 & 803.1.4**
SMOKE DEVELOPED	**0-450**	**TABLE/SECTION/REFERENCE**

NOTE:
Decorative Materials and Trim (including plastics) must comply with above.

GENERAL EXITING REQUIREMENTS

		TABLE/SECTION/REFERENCE
EXIT TRAVEL DISTANCE	**250 FEET**	**SECTION 12.2.6.2**
DEAD END CORRIDOR	**20 FEET**	**SECTION 12.2.2.5.1.3**
COMMON PATH OF TRAVEL	**20' FEET, OR 75' IF OCC. < 50**	**SECTION 12.2.5.1.2**
MIN. CORRIDOR WIDTH	**44", OR 36" IF OCC. < 50**	**SECTION 12.2.3.8**

POSTING OF OCCUPANT LOAD

EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD OF THE ROOM OR SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE ROOM OR SPACE. POSTED SIGNS SHALL BE OF AN APPROVED LEGIBLE PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER OR AUTHORIZED AGENT.

EXIT REQUIREMENTS

	TABLE/SECTION/REFERENCE
A. REQUIRED CAPACITY	
1. STAIRS - 0.3" / PERSON	**TABLE 7.3.3.1**
2. OTHER COMPONENTS - 0.2" / PERSON	**TABLE 12.2.3.2**
3. OTHER COMPONENTS WITHIN THEATER ROOMS - 0.22" / PERSON	
B. MINIMUM NUMBER	
1. OCCUPANT LOAD OF 1-500 PERSONS - 2 EXITS PER STORY	**SECTION 7.4.1.1**
2. OCCUPANT LOAD OF 501-1000 PERSONS - 3 EXITS PER STORY	**SECTION 7.4.1.2**
3. OCCUPANT LOAD OF MORE THAN 1000 PERSONS - 4 EXITS PER STORY	

SIGNAGE

1. **STAIR TACTILE AND BRAILLE SIGNAGE ON EACH FLOOR FOR EXIT STAIRWELL, FLOOR DISCHARGE, AND ROOF TOP ACCESS IN ACCORDANCE WITH IBC 2018**
2. **PROVIDE SIGNAGE "IN FIRE EMERGENCY DO NOT USE ELEVATOR, USE EXIT STAIRS" IN ACCORDANCE WITH IBC (3002.3)**
3. **EVACUATION DIAGRAM PROVIDED IN ACCORDANCE WITH IBC 2018**

OCCUPANT LOAD

OCCUPANT LOAD : LEVEL 1		TABLE/SECTION/REFERENCE			
GREAT ROOM	**46 OCC**	**GREAT ROOM:**	**682 SF**	**15 SF/OCC**
KITCHEN	**9 OCC**	**KITCHEN:**	**131 SF**	**15 SF/OCC**
STORAGE 103	**1 OCC**	**STORAGE:**	**38 SF**	**300 SF/OCC**
CONFERENCE/FLEX	**14 OCC**	**CONFERENCE:**	**204 SF**	**15 SF/OCC**
STORAGE 105	**1 OCC**	**STORAGE:**	**73 SF**	**300 SF/OCC**
OCCUPANT LOAD THIS LEVEL	**71 OCCUPANTS**			
EXITS REQUIRED THIS LEVEL	**2 EXITS**			
EXITS PROVIDED THIS LEVEL	**2 EXITS**			

PLUMBING FIXTURE REQUIREMENTS

B OCC WATER CLOSETS	**= 1/25 MALE 1/50 FEMALE**
B OCC LAVATORIES	**= 1/40 BOTH MALE/FEMALE**
B OCC DRINKING FOUNTAIN	**= 1/100**
B OCC SERVICE SINK	**= 1**

PLUMBING FIXTURES REQUIRED (B OCCUPANCY)

MEN WATER CLOSETS:	**= .5 REQUIRED**
WOMEN WATER CLOSETS:	**= .3 REQUIRED**
LAVATORIES:	**= .375 REQUIRED**
DRINKING FOUNTAINS:	**= .15 REQUIRED**
SERVICE SINKS:	**= 1 REQUIRED**

A3 OCC WATER CLOSETS	**= 1/40 MALE 1/40 FEMALE**
A3 OCC LAVATORIES	**= 1/75 BOTH MALE/FEMALE**
A3 OCC DRINKING FOUNTAIN	**= 1/500**
A3 OCC SERVICE SINK	**= 1**

PLUMBING FIXTURES REQUIRED (A3 OCCUPANCY)

MEN WATER CLOSETS:	**= 1.4 REQUIRED**
WOMEN WATER CLOSETS:	**= 1.4 REQUIRED**
LAVATORIES:	**= .75 REQUIRED**
DRINKING FOUNTAINS:	**= .1 REQUIRED**
SERVICE SINKS:	**= 1 REQUIRED**

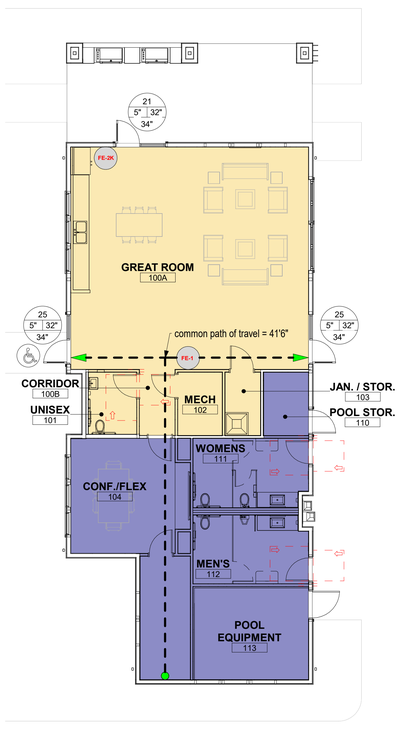
TOTAL PLUMBING FIXTURES REQUIRED FOR BOTH USES:

MEN WATER CLOSETS:	**= 2 REQUIRED**
WOMEN WATER CLOSETS:	**= 2 REQUIRED**
LAVATORIES:	**= 2 REQUIRED**
DRINKING FOUNTAINS:	**= 1 REQUIRED**
SERVICE SINKS:	**= 1 REQUIRED**

PLUMBING FIXTURES PROVIDED

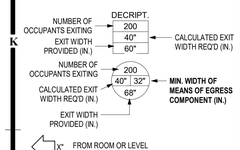
MEN WATER CLOSETS:	**= 2 PROVIDED**
WOMEN WATER CLOSETS:	**= 2 PROVIDED**
MEN LAVATORIES:	**= 1 PROVIDED**
WOMEN LAVATORIES:	**= 1 PROVIDED**
UNISEX WATER CLOSETS:	**= 1 PROVIDED**
UNISEX LAVATORIES:	**= 1 PROVIDED**
DRINKING FOUNTAINS:	**= KITCHEN PROVIDED WATER**
SERVICE SINKS:	**= 1 PROVIDED**





A7 1ST FLOOR - LIFE SAFETY
1/8" = 1'-0"

FIRE RESISTIVE LEGEND



X" FROM ROOM OR LEVEL
X = CLEAR WIDTH OF OPENING IN INCHES

F.E.C. FIRE RISER CABINET

ACCESSIBLE EGRESS COMPONENT

EGRESS PATH

FE-1 INDICATES FIRE EXTINGUISHER CABINET(FE) LOCATION WITH 75'-0" RADIUS COVERAGE AREA. SEE SPECIFICATIONS FOR FE TYPE.

FE-2K INDICATES KITCHEN/ BAR FIRE EXTINGUISHER (FE) LOCATION WITH 75'-0" RADIUS COVERAGE AREA. SEE SPECIFICATIONS FOR FE TYPE.

FE-3 INDICATES TEMPORARY WALL HUNG FIRE EXTINGUISHER (FE) LOCATION WITH 75'-0" RADIUS COVERAGE AREA. SEE SPECIFICATIONS FOR FE TYPE.

COLLINS WEBB ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ROGER L. WEBB II
NUMBER A-2016018908
ARCHITECT
08/13/2025
PROFESSIONAL SEAL

G003

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

LIFE SAFETY PLANS AND PROJECT INFO.

8/12/2025 8:49:12 AM

SPECIFICATIONS - PRODUCT & INSTALLATION GENERAL REQUIREMENTS

GENERAL REQUIREMENTS APPLICABLE TO ALL MATERIALS FOR THE PROJECT:

1.NO SUBSTITUTIONS OF MATERIALS WITHOUT COMPLETION OF A SUBSTITUTION REQUEST FORM & APPROVAL OF SUBSTITUTION BY BOTH ARCHITECT & OWNER PROJECT MANAGER. FORM CAN BE REQUESTED FROM ARCHITECT.
2. A CONDENSED SET OF SPECIFICATIONS ARE PROVIDED FOR THE PROJECT. STRICT ADHEARANCE TO MANUFACTURER REQUIREMENTS AND INSTALLATION ARE REQUIRED TO BE FOLLOWED WITH SECTIONS PROVIDED WITHIN. IF REQUIRED THE ARCHITECT WILL ISSUE ADDITIONAL SECTIONS TO PROVIDE CLARITY TO PRODUCTS OR INSTALLATION REQUIREMENTS.

DIVISION 1 - GENERAL REQUIREMENTS
1. 1 SEE ADMINISTRATIVE SPECIFICATION FOR GENERAL REQUIREMENTS RELATED TO ADMINISTRATION OF THIS CONTRACT.

A. CONTRACTOR LICENSES
1. THE CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED IN THE PROJECT SHALL BE REQUIRED TO OBTAIN AND PAY FOR ALL NECESSARY LICENSES AS REQUIRED BY ANY LAW OR AGENCIES HAVING JURISDICTION (AHJ) OVER THE PROJECT.

B. BUILDING PERMITS
1. THE GENERAL CONTRACTOR WILL PAY FOR ALL PERMITS REQUIRED BY ANY AGENCY HAVING JURISDICTION (AHJ) OVER THE PROJECT FOR ALL WORK TO BE PREFORMED BY THE GENERAL CONTRACTOR.

C. UTILITY FEES
1. THE CONTRACTOR SHALL PAY THE NECESSARY FEES TO CONNECT TO EXISTING UTILITIES AT THE PROPERTY LINE OR IN ADJACENT STREETS AND RIGHT OF WAY AS SPECIFIED, NECESSARY, AND/OR INCLUDED IN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL PAY ALL UTILITY COSTS (BILLS) DURING CONSTRUCTION UNTIL OWNER TAKES POSSESSION OF THE FACILITY OR THE FACILITY IS CERTIFIED AS SUBSTANTIALLY COMPLETE.

D. PROTECTION OF FINISHED WORK
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT FINISHED SURFACES. PROTECTION FOR FINISHES SUCH AS DOORS, WALLS AND FLOORS SHOULD BE PROVIDED AS REQUIRED. ANY DAMAGES TO THESE AREAS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR OR REPLACE.

E. GENERAL CONDITIONS
1. ANY DISCREPANCY OR CONFLICT WITHIN OR BETWEEN DRAWINGS AND ANY DISCREPANCY OR CONFLICT BETWEEN ANY DRAWING AND ANY SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. NOTWITHSTANDING, DISCREPANCIES OR CONFLICTS NOT BROUGHT TO THE ARCHITECT'S AND/ OWNERS ATTENTION AND CLARIFIED DURING THE BIDDING OF THE PROJECT WILL BE DEEMED TO HAVE BEEN BID OR PROPOSED IN THE MORE COSTLY OR DIFFICULT MANNER, AND THE BETTER QUALITY OR GREATER QUANTITY OF THE WORK SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH ARCHITECT'S INTERPRETATION.
2. THE GENERAL CONTRACTOR SHALL KEEP A COMPLETE PROTOTYPE SET OF DOCUMENTS ON THE PROJECT SITE AT ALL TIMES FOR REFERENCE DURING CONSTRUCTION.
3. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE CONTRACTOR'S BEST SKILLS AND ATTENTION. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER CONSTRUCTION MEANS AND METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
4. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER ALL JOB SITE SAFETY PROCEDURES AND POLICIES. THE GENERAL CONTRACTOR SHALL HAVE A SAFETY COORDINATOR AND BE RESPONSIBLE TO HOLD REGULARLY SCHEDULED SAFETY TRAINING WITH ALL JOB SITE PERSONNEL, INCLUDING ALL SUB CONTRACTOR PERSONNEL.
5. NEITHER THE ARCHITECTS OR THE OWNERS INSPECTION NOR FAILURE TO INSPECT SHALL RELIEVE THE CONTRACTOR OF ANY OBLIGATION HEREUNDER. IF ANY WORK FAILS TO CONFORM TO THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY REMEDY AND/OR REPLACE THE SAME AT THE CONTRACTOR'S EXPENSE. NO ACCEPTANCE OR PAYMENT BY THE OWNER OR ARCHITECT SHALL CONSTITUTE A WAIVER OF THE FOREGOING AND NOTHING HEREIN SHALL EXCLUDE OR LIMIT ANY WARRANTIES IMPLIED BY LAW.
6. THE GENERAL CONTRACTOR SHALL SO CONDUCT ITS OPERATIONS AS NOT TO UNREASONABLY INTERFERE WITH TRAFFIC ON PUBLIC THOROUGHFARES ADJACENT OR NEAR TO THE PROJECT SITE.
7. DO NOT SCALE DRAWINGS.

F. PROJECT REQUIREMENTS
1. THE GENERAL CONTRACTOR REPRESENTS THAT IT POSSESSES THE SKILLS REQUIRED FOR THE WORK, ASSUMES THE RESPONSIBILITIES OF AN EMPLOYER FOR PERFORMANCE OF THE WORK, AND ACTS AS AN EMPLOYER OF ONE OR MORE EMPLOYEES BY PAYING WAGES, DIRECTING ACTIVITIES AND PERFORMING OTHER SIMILAR FUNCTIONS. THE GENERAL CONTRACTOR IS AN INDEPENDENT CONTRACTOR, FREE TO DETERMINE THE MANNER IN WHICH THE WORK IS PERFORMED.
2. THE GENERAL CONTRACTOR SHALL PROVIDE, AND MAINTAIN IN GOOD WORKING ORDER, THE FOLLOWING ITEMS FOR USE BY THE PROJECT SUPERINTENDENT DAILY DURING THE ENTIRE DURATION OF THE PROJECT:
   A. LAPTOP WITH INTERNET ACCESS.
   B. DIGITAL CAMERA WITH 'DATE STAMP' CAPABILITY AND WITH PROPER CABLES TO ATTACH TO LAPTOP.
   C. EMAIL ACCESS THROUGH THE LAPTOP.
   D. A PRINTER/SCANNER/FAX MACHINE WITH PROPER CABLES TO ATTACH TO LAPTOP.
   E. CELL PHONE.
3. THE GENERAL CONTRACTOR SHALL HAVE A CONSTRUCTION SUPERINTENDENT ASSIGNED TO THIS PROJECT, AND THIS SUPERINTENDENT SHALL BE ON SITE EVERY DAY THERE IS ANY CONSTRUCTION ON THIS PROJECT. THE SUPERINTENDENT SHALL BE REACHABLE BY PHONE DURING NORMAL BUSINESS HOURS. ONCE ASSIGNED, THE SUPERINTENDENT SHALL NOT BE REMOVED OR REPLACED WITHOUT WRITTEN APPROVAL FROM OWNER & ARCHITECT, UNLESS SPECIFICALLY REQUESTED TO BE REPLACED BY OWNER.
4. THE SUPERINTENDENT WILL BE REQUIRED TO PROVIDE PHOTOGRAPHS (VIA EMAIL USING A DIGITAL CAMERA) TO THE OWNER & ARCHITECT EACH FRIDAY BY NOON CST, SHOWING THE PROGRESS OF CONSTRUCTION. THE GENERAL CONTRACTOR IS ENCOURAGED TO TAKE PHOTOS SEVERAL TIMES EACH WEEK TO HELP MAINTAIN PROOF OF CONSTRUCTION PROGRESS, RECORD UNCOVERED CONDITIONS, RECORD CONDITION AND AMOUNTS OF VENDOR GOODS UPON RECEIPT, AND RECORD CONSTRUCTION THAT VARIES FROM THE CD'S (AS PART OF THE AS-BUILTS). ALL PHOTOS WILL HAVE A 'DATE STAMP'.

G. INSPECTIONS/OBSERVATIONS
1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OVERSEE CONSTRUCTION OF THE PROJECT. CONTINUALLY INSPECTING THE WORK, MATERIALS, AND WORKMANSHIP PROVIDED BY ALL OF HIS TRADESMEN, SUBCONTRACTORS, AND SUPPLIERS. EXCELLENCE IN QUALITY OF CONSTRUCTION CAN ONLY BE ACHIEVED IF THE CONTRACTOR ENFORCES HIGH STANDARDS OF ACCEPTABILITY. THE GENERAL CONTRACTOR CANNOT DELEGATE HIS RESPONSIBILITY TO THE SUBCONTRACTORS, BUT MUST CONTINUALLY MONITOR THE WORK OF EACH TRADE ON THE PROJECT.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE AND SCHEDULE ALL AGENCIES HAVING JURISDICTION (AHJ) INSPECTIONS NECESSARY TO OBTAIN THE CERTIFICATE OF OCCUPANCY (CERTIFICATE OF COMPLIANCE). PRIOR TO THE DATE OF THE AGENCY INSPECTION, THE GENERAL CONTRACTOR SHOULD INSPECT THE PROJECT TO INSURE THAT CONSTRUCTION COMPLIES WITH THE AGENCY REQUIREMENTS. SCHEDULING FINAL INSPECTIONS WITH AGENCY REPRESENTATIVES WHEN THE PROJECT IS NOT COMPLETE MUST BE AVOIDED. COPIES OF FINAL INSPECTIONS MUST BE PROVIDED TO OWNER & ARCHITECT AS THEY ARE AVAILABLE.
3. PRIOR TO REQUESTING THE SUBSTANTIAL COMPLETION INSPECTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT HIS OWN PRE-SUBSTANTIAL COMPLETION INSPECTION OF THE CONSTRUCTION FOR QUALITY OF CONSTRUCTION AND COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.
4. THE FOLLOWING PEOPLE SHOULD BE IN ATTENDANCE FOR THE SUBSTANTIAL COMPLETION INSPECTION:
   A. GENERAL CONTRACTOR
   B. GENERAL CONTRACTOR SUPERINTENDENT
   C. MECHANICAL CONTRACTOR
   D. ELECTRICAL CONTRACTOR
   E. PLUMBING CONTRACTOR
   F. PAINTING CONTRACTOR
   H. FLOORING CONTRACTOR
5. ITEMS TO BE SUBMITTED AS A PREREQUISITE TO THE REQUEST FOR THE CERTIFICATE OF SUBSTANTIAL COMPLETION AND OWNER / ARCHITECT OBSERVATION OF ITEMS TO BE COMPLETED AND CORRECTED.
   A. GENERAL CONTRACTOR'S PUNCH LISTS
   B. HVAC TEST AND BALANCE REPORT
   C. SPRINKLER SYSTEM ACCEPTANCE INSPECTION REPORT
   D. COPY OF VIDEO OF COMPLETED SEWER SYSTEM
6. THE REVIEW TEAM SHOULD PROCEED IN AN ORGANIZED MANNER THROUGHOUT THE BUILDING INSPECTING EACH SPACE OR ROOM. THE PUNCH LIST GENERATED BY THE SUBSTANTIAL COMPLETION INSPECTION TOUR IS TO BE PREPARED BY THE CONTRACTOR. ALONG WITH THE PUNCH LIST, THE ARCHITECT SHALL PREPARE THE "CERTIFICATE OF SUBSTANTIAL COMPLETION."
7. IMMEDIATELY AFTER RECEIPT OF THE PUNCH LIST, THE GENERAL CONTRACTOR AND SUBCONTRACTORS ARE EXPECTED TO BEGIN CORRECTION OF THE OUTSTANDING ITEMS. AFTER COMPLETION OF PUNCHLIST, THE CONTRACTOR SHALL NOTIFY OWNER & ARCHITECT IN WRITTING THAT FULL LIST OF ITEMNS TO BE COMPLETED AND OR CORRECT IS FINALIZED.

H. RECORD (CLOSE-OUT) DOCUMENTS
1. THE OWNER REQUIRES THE GENERAL CONTRACTOR AND SUBCONTRACTORS TO MAINTAIN AN ACCURATE, CURRENT SET OF RECORD DOCUMENTS (AS-BUILTS) AS CONSTRUCTION PROGRESSES. ALL PERTINENT INFORMATION RELATING TO THE PROJECT MUST BE TIMELY MAINTAINED ON THE AS-BUILTS. THE AS-BUILTS MUST BE MAINTAINED ON-SITE IN THE GENERAL CONTRACTOR'S OFFICE AND WILL NOT BE USED FOR ANY OTHER PURPOSE. WHEN THE OWNER WILL OWN AND OPERATE THE FACILITY, IT IS IMPERATIVE THAT ALL PARTIES MAINTAIN ACCURATE INFORMATION REGARDING THE ACTUAL CONSTRUCTION OF THE PROJECT.
   ALL DEVIATIONS FROM THE CONTRACT SET OF DRAWINGS MUST BE NOTED ON THE AS-BUILTS IN RED WITH CLOUDS FOR CLEAR IDENTIFICATION. THE OWNER WILL REVIEW THE AS-BUILTS FOR ACCURACY AND COMPLETENESS MONTHLY, DURING THE PAYMENT APPLICATION REVIEW PROCESS. FAILURE TO POST CHANGES TO THE PROJECT ON THE AS- BUILTS AS IDENTIFIED DURING THE ON-SITE MONTHLY REVIEW WILL BE CAUSE TO SUSPEND PAYMENT UNTIL RECTIFIED. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ENFORCE THE TIMELY POSTING OF AS-BUILT CHANGES WITH THE SUBCONTRACTORS.

I. FINAL CLOSE-OUT OF THE PROJECT
1. WITHIN THIRTY (30) CALENDAR DAYS AFTER THE FINAL PROJECT SUBSTANTIAL COMPLETION, THE GENERAL CONTRACTOR SHALL COMPILE ALL CLOSE-OUT DOCUMENTS AND SUBMIT THEM TO THE OWNER FOR REVIEW. IF THE CONTRACTOR FAILS TO COMPLETE ITS REQUIREMENTS WITHIN THIS TIMELINE NOTED ABOVE THE CONTRACTOR MAY BE SUBJECT TO ADDITONAL ADMINISTATION FEES.

J. CLOSE-OUT DOCUMENTS
1. THE CATEGORIES LISTED BELOW SHOULD BE SUBMITTED AT THE SAME TIME.
   A. A DISK WITH ALL PHOTOS TAKEN DURING CONSTRUCTION.
   B. CHANGE ORDERS AND ALL ADDENDA ATTACHED AND POSTED TO THE AS-BUILT DRAWINGS.
   C. AS-BUILT DRAWINGS: ONE HARD COPY TO REMAIN ON SITE AND IN PLAN TUBE; ONE ELECTRONIC COPY TO BE SENT WITH CLOSE-OUT PAPERWORK.
   D. MATERIALS SELECTION DATA - PROVIDE ALL APPROVED SUBMITTALS.
   E. OPERATION AND MAINTENANCE MANUALS (O&M) - PROVIDE O&M MANUALS BOXED AND BOUND. THIS ITEM IS OF SIGNIFICANT IMPORTANCE TO MSI FUTURE MAINTENANCE ACTIVITIES.
   F. ALL HVAC TEST AND BALANCE REPORTS.
   H. RELEASE OF LIEN (AIA FORM 706A), PAYMENT OF DEBT (AIA FORM 706),
      I. WARRANTIES, CERTIFICATES, AFFIDAVITS.
      2. ALL INFORMATION INCLUDED IN THIS CATEGORY WILL BE FURNISHED IN ONE (1) COPY AND BOUND IN A STURDY THREE-RING BINDER WITH A LABEL ON THE OUTSIDE READING 'GENERAL CLOSE-OUT DOCUMENTS' TO INCLUDE AN INDEX OF THE CONTENTS. ALL AIA DOCUMENTS WILL BE ORIGINAL (WITH RED LETTERING ON THE BOTTOM OF THE FORM) AND NOTARIZED. IF THE ELECTRONIC VERSION IS USED A COPY WITH ORIGINAL SIGNATURES WILL BE SUBMITTED. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR WILL HAVE SEPARATE TABS IDENTIFYING EACH BY NAME. THE GENERAL CONTRACTOR WILL LIST EACH SUBCONTRACTOR ALPHABETICALLY AND WILL CHECK TO INSURE THAT A 'RELEASE OF LIEN' - AIA FORM G706A AND A 'PAYMENT OF DEBT-AIA FORM G706 IS INCLUDED FOR HIMSELF AND EACH SUBCONTRACTOR. THE GENERAL CONTRACTOR WILL INCLUDE A "CONSENT OF SURETY" - AIA FORM G707. IN ADDITION, THE GENERAL CONTRACTOR WILL INCLUDE BEHIND HIS TAB THE FOLLOWING INFORMATION:
         A. A LIST OF NAMES, BUISNESS ADDRESSES, PHONE NUMBERS AND EMAIL ADRESSES FOR THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR.
         B. AN ANNOTATED COPY OF THE SUBSTANTIAL COMPLETION PUNCH LIST INDICATING ACTION TAKEN ON EACH ITEM.
         C. WARRANTIES, CERTIFICATES AND AFFIDAVITS SHALL BE INCLUDED FOR ANY EQUIPMENT, MATERIALS OR SYSTEMS, COMBINED WITH

DIVISION 4 - MASONRY

04 7000 MASONRY VENEERS & SIMULATED STONES
A. SUBMITTALS: SHOP DRAWINGS AND CALCULATIONS INDICATING PRODUCTS TYPES AND LAYOUT, VERTICAL AND HORIZONTAL DIMENSIONS, EDGE CONDITIONS, AND CONNECTION DETAILS TO SUBSTRATES. PROVIDE GROUT TYPES AND COLOR SAMPLES.

B. BASIS OF DESIGN: ELDORADO STONE, TYPES AS IN THE CONSTRUCTION DOCUMENTS.

C. MATERIALS:
1. MORTAR: TYPE "N" TINTED TO A COLOR SELECTED BY THE ARCHITECT.
2. METAL LATH SHALL BE MINIMUM 2.5 LB. PAPER BACKED GALVANIZED METAL LATH (DIAMOND MESH) ATTACHED WITH 1-1/4" TYPE S-12 GALVANIZED NAILS. GALVANIZED FLASHING MAY ALSO BE USED.

C. FABRICATIONS: FABRICATE ITEMS IN LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE.

F. INSTALLATION:
1. FOLLOW MANUFACTURER RECOMMENDED INSTALLATION INSTRUCTIONS TO MAINTAIN WARRANTY.
2. APPLY MORTAR 1/2" TO 3/4" THICK TO PREPARED SURFACE AREA USING A PLASTERER'S OR MASON'S TROWEL AND LAY SIMULATED STONE UNITS LEVEL AND TRUE TO LINE IN FULL BEDS OF MORTAR. ALL JOINTS MUST BE COMPLETELY FILLED. APPLY ONLY ENOUGH MORTAR TO ALLOW STONES TO BE SET BEFORE MORTAR BEGINS TO HARDEN.
3. ALL JOINTS IN SIMULATED STONE WORK SHALL NOT EXCEED AN AVERAGE OF 1/2" IN WIDTH.
4. RETAIN 1/2" DEEP X 1/4" WIDE SEALANT JOINTS AT PERIMETER OF ADJACENT CONSTRUCTION.
5. DO NOT ALLOW MORTAR DROPPINGS TO HARDEN ON EXPOSED SURFACES.
6. WALLS SHALL BE COVERED WITH 15 LB. BUILDING FELT AND GALVANIZED METAL LATH SHALL BE INSTALLED PRIOR TO APPLICATION OF THE MORTAR BASE. MORTAR BASE MAY BE APPLIED DIRECTLY TO MASONRY BACK-UP.

DIVISION 6 - WOOD AND PLASTICS

06 1000 ROUGH CARPENTRY

1.PROVIDE SUFFICIENT FIRE RETARDANT TREATED WOOD BLOCKING AT ALL STUDS FOR SECURING OF WALL & CEILING ITEMS, WHETHER FURNISHED BY OWNER OR CONTRACTOR.
2.CONCEALED WOOD IS TO BE FIRE RETARDANT TREATED UNLESS NOTED OTHERWISE.
3.PRESERVATIVE TREATED LUMBER IS REQUIRED FOR ALL ITEMS TO REMAIN IN CONTACT WITH CONCRETE OR MASONRY TO CONFORM TO AWPA STANDARD 5.
4.PLYWOOD SHALL BE CD GRADE APA FIR OR YELLOW PINE. ALL PLY-WOOD TO BE FIRE RATED WHERE WALLS ARE INDICATED AS RATED CONSTRUCTION.
5.BLOCKING SHALL BE CLOSELY FITTED, ACCURATELY SET TO REQUIRED LINES & LEVELS, SECURELY CONNECTED & RIGIDLY FIXED IN PLACE, USING NAILS, SCREWS, &/OR BOLTS AS INDICATED OR REQUIRED BY GOOD PRACTICE AND MANUFACTURER'S RECOMMENDATIONS.

06 4023 INTERIOR ARCHITECTURAL WOODWORK
A. SUBMITTALS: SAMPLES OF FINISH MATERIALS, CATALOG CUTS OF HARDWARE, AND SHOP DRAWINGS INCLUDING DIMENSIONED PLANS, ELEVATIONS, AND SECTIONS.

B. QUALITY STANDARD: ARCHITECTURAL WOODWORK INSTITUTE'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS"

C. MATERIALS:
1. HARDBOARD: AHA A235.4
2. MEDIUM DENSITY FIBERBOARD: ANSI A208.2, GRADE MD, MADE WITH BINDER CONTAINING NO UREA FORMALDEHYDE.
3. PARTICLEBOARD: ANSI A208.1, GRADE M-2
4. SOFT PLYWOOD: DOC PS 1
5. HARDWOOD PLYWOOD AND FACE VENEERS: HPVA HP-1, MADE WITH ADHESIVE CONTAINING NO UREA FORMALDEHYDE.
6. HIGH PRESSURE DECORATIVE LAMINATE: NEMA LD 3
7. HARDWARE: COMPLY WITH BHMA A156
   a. HINGES: CONCEALED (EUROPEAN-TYPE) BHMA A156.9
   b. PULLS: AS SPECIFIED ON DRAWINGS
   c. DRAWER SLIDES: SIDE-MOUNTED, ZINC-PLATED FULL EXTENSION STEEL DRAWER SLIDES WITH STEEL BALL BEARINGS. COMPLYING WITH BHMA A 156.9, GRADE 1 AND RATED AS FOLLOWS: BOX DRAWERS: 100lbf; FILES DRAWERS: 200 lbf, PENCIL DRAWERS: 45 lbf.
   d. DOOR AND DRAWER LOCKS: BHMA A156.11
   e. GROMMETS: MOLDED PLASTIC WITH CAPS; FURNISH IN COLOR AND LOCATIONS AS DIRECTED.
   f. HARDWARE FINISH:SATIN CHROME BHMA 626 OR 652 OR SATIN STAINLESS STEEL: BHMA 630.

D. INTERIOR WOODWORK:
1. COMPLETE FABRICATION BEFORE SHIPPING TO PROJECT SITE TO MAXIMUM EXTENT FEASIBLE. DISASSEMBLE ONLY AS NEEDED FOR SHIPPING AND INSTALLING. WHERE NECESSARY FOR FITTING AT PROJECT SITE, PROVIDE FOR SCRIBING AND TRIMMING.
2. BACKOUT AND GROOVE BACKS OF FLAT MEMBERS, KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT WHERE ENDS WILL BE EXPOSED IN FINISHED WORK.

E. INSTALLATION:
1. DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETED, HVAC IS OPERATING, AND WOODWORK IS CONDITIONED TO PREVAILING CONDITIONS OF SPACE WHERE INSTALLED.
2. INSTALL WOODWORK LEVEL AND PLUMB AND SHIM AS REQUIRED WITH CONCEALED SHIMS TO A TOLERANCE OF 1 "/96" AND TO COMPLY WITH REFERENCED QUALITY STANDARD FOR GRADE SPECIFIED.
3.SCRIBE AND CUT WOODWORK TO FIT ADJOINING WORK, SEAL CUT SURFACES, AND REPAIR DAMAGED FINISH AT CUTS.
4. INSTALL TRIM WITH MINIMUM NUMBER OF JOINTS POSSIBLE USING FULL-LENGTH PIECES TO GREATEST EXTENT POSSIBLE. STAGGER JOINTS IN ADJACENT AND RELATED MEMBERS.

06 4023 INTERIOR ARCHITECTURAL WOODWORK
A. SUBMITTALS: SAMPLES OF FINISH MATERIALS, CATALOG CUTS OF HARDWARE, AND SHOP DRAWINGS INCLUDING DIMENSIONED PLANS, ELEVATIONS, AND SECTIONS.

B. QUALITY STANDARD: ARCHITECTURAL WOODWORK INSTITUTE'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS"

C. MATERIALS:
1. CLUBHOUSE MILLWORK FLAT TRIM SHALL BE AS INDICATED OF PAINT GRADE POPLAR OR PAINT GRADE PINE.

D. INSTALLATION:
1. INSTALL NO INTERIOR FINISH CARPENTRY OR MILLWORK UNTIL SPACES ARE ENCLOSED, DRY, AND CAPABLE OF BEING HEATED. MAINTAIN TEMPERATURE BETWEEN 65 F. AND 75 F. FOR 72 HOURS BEFORE BEGINNING INSTALLATION AND FOR DURATION OF PROJECT.
2. LUMBER FOR TRANSPARENT FINISH (STAINED OR CLEAR): USE PIECES MADE OF SOLID LUMBER STOCK.
3. LUMBER FOR PAINTED FINISH: AT CONTRACTOR'S OPTION, USE PIECES WHICH ARE EITHER GLUED-UP OR MADE OF SOLID LUMBER STOCK.
4. DISCARD UNITS OF MATERIAL WHICH ARE UNSOUND, WARPED, BOWED, TWISTED, IMPROPERLY TREATED, NOT ADEQUATELY SEASONED OR TOO SMALL TO FABRICATE WORK WITH MINIMUM OF JOINTS OR OPTIMUM JOINTING ARRANGEMENTS, OR WHICH ARE DEFECTIVELY MANUFACTURED WITH RESPECT TO SURFACES, SIZES OR PATTERNS.
5. INSTALL THE WORK PLUMB, LEVEL, TRUE AND STRAIGHT WITH NO DISTORTIONS. SHIM AS REQUIRED USING CONCEALED SHIMS.
6. SCRIBE AND CUT WORK TO FIT ADJOINING WORK, AND REFINISH CUT SURFACES OR REPAIR DAMAGED FINISH AT CUTS.
7. FINISH WORK SHALL BE SMOOTH, FREE FROM ABRASION, TOOL MARKS, RAISED GRAIN MARKINGS, OR SIMILAR DEFECTS ON EXPOSED SURFACES.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

07 2100 BUILDING INSULATION
A. SUBMITTALS: PRODUCT DATA FOR EACH TYPE OF INSULATION SPECIFIED.

B. SURFACE BURNING CHARACTERISTICS:
1. FLAME SPREAD INDEX: 25 OR LESS
2. SMOKE DEVELOPED INDEX: 50 OR LESS IN EXPOSED AREAS AND PLENUMS; 450 OR LESS WHERE CONCEALED.

C. INSULATION PRODUCTS:
1. MINERAL FIBER OR GLASS FIBER BLANKET INSULATION: TYPE I, UNFACED WHERE SPECIFIED WITH SEPARATE VAPOR BARRIER,FIBERS MANUFACTURED FROM GLASS, SLAG WOOL, OR ROCK WOOL. SEE DRAWINGS FOR SPECIFIC TYPES.

D. ACCESSORIES:
1. VAPOR RETARDER: 6 MIL POLYETHYLENE AT CONCEALED AREAS (FLAME SPREAD/SMOKE DEVELOPED: 25/450), FOIL/SCRIM AT PLENUMS AND EXPOSED AREAS (FLAME SPREAD/SMOKE DEVELOPED: 25/50)

E. PRODUCTS:
1. ALL BATT INSULATION SHALL BE THE PRODUCT OF OWENS/CORNING FIBERGLAS OR EQUAL.
2. BATT INSULATION IN ALL 2X4 OR 2X6 EXTERIOR WALLS SHALL BE 3-1/2" THICK, R-15 IN 2X4 CONSTRUCTION OR 5-1/2" THICK R-19, KRAFT FACED FIBERGLASS BATTS AS REQUIRED TO FILL THE STUD SPACE.
3. BATT OR BLOWN-IN INSULATION IN ALL CEILINGS ADJACENT TO ATTIC SPACES SHALL BE THICKNESS REQUIRED TO ACHIEVE MINIMUM R-49 RATING. PROVIDE A VAPOR RETARDER HAVING A TRANSMISSION RATE NOT EXCEEDING 1 PERM IN ACCORDANCE WITH ASTM E 96 INSTALLED ON THE WARM SIDE OF THE ATTIC INSULATION.

F. INSTALLATION:
1. INSTALL INSULATION IN AREAS AND IN THICKNESSES INDICATED OR REQUIRED TO PRODUCE R-VALUES WHERE INDICATED. CUT AND FIT TIGHTLY AROUND OBSTRUCTIONS AND FILL VOIDS WITH INSULATION.
2. EXTEND VAPOR RETARDER TO EXTREMITIES OF AREAS TO BE PROTECTED FROM VAPOR TRANSMISSION. SECURE IN PLACE WITH ADHESIVES OR OTHER ANCHORAGE AS RECOMMENDED BY MANUFACTURER. LOCATE SEAMS AT FRAMING MEMBERS, OVERLAP AND SEAL WITH SUITABLE TAPE (DUCT TAPE IS NOT SUITABLE).
3. SOUND CONTROL BATT INSULATION IN BOTH WALLS OF PARTITIONS SEPARATING APARTMENT UNITS AS WELL AS CORRIDOR AND STAIRWAY WALLS. ALL UNIT CEILINGS WITH UNITS ABOVE AND ALL WALLS AND CEILINGS INDICATED TO RECEIVE ACOUSTICAL BATT INSULATION SHALL BE QUITZONE FIBERGLASS ACOUSTIC BATTS.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION - CONT

07 4646 ENGINEERED SIDING & ACCESSORIES
A. SUBMITTALS: PRODUCT DATA: INDICATE PANEL PROFILES, SIZES, FASTENING METHODS, SURFACE TEXTURE, AND FINISH.
1. SAMPLES:
   A. 4 X 6 INCH PANEL SAMPLES.
   B. 3 INCH LONG TRIM SAMPLES.

B. QUALITY ASSURANCE:
1. SINGLE SOURCE RESPONSIBILITY: PANELS, METAL TRIM, AND FASTENERS FURNISHED BY SINGLE MANUFACTURER.
2. MOCK-UP WALL: PROVIDE A MOCK-UP WALL AS EVALUATION TOOL FOR PRODUCT AND INSTALLATION WORKMANSHIP. MAY BE PART OF PERMANENT INSTALLATION IF APPROVED.
   A. SIZE: MINIMUM 4 X 8 FEET.
   B. SHOW: MOISTURE BARRIER, FURRING, PANELS, TRIM, FLASHINGS, AND JOINT SEALERS. INCLUDE ONE HORIZONTAL FLASHING AND ONE INTERNAL AND ONE EXTERNAL CORNER.

C. BASIS OF DESIGN:
1. SUBJECT TO COMPLIANCE WITH REQUIREMENTS PROVIDE FIBER-CEMENT VERTICAL PANEL SYSTEM BY JAMES HARDIE OR APPROVED EQUAL.
2.HORIZONTAL SIDING:- WOODTONE - RUSTIC SERIES
3. MEET ASTM C1186, GRADE A, TYPE II.
4. COMBUSTIBILITY; NONCOMBUSTIBLE, TESTED TO ASTM E136.
5. FINISH: FACTORY PRIME PAINTED, FOR FIELD-APPLIED PAINT FINISH.

D. ACCESSORY MATERIALS
1. MATERIAL: EXTRUDED ALUMINUM, ASTM B221, 6063-T5 ALLOY AND TEMPER, CLEAR ANODIZED FINISH.
2. SHAPES AS REQUIRED:
   A. VERTICAL TRIM.
   B. VERTICAL F-TRIM.
   C. HORIZONTAL TRIM.
   D. HORIZONTAL EDGE TRIM.
   E. OUTSIDE CORNER TRIM.
   F. DRAINAGE FLASHING TRIM.
3. FASTENERS: STAINLESS STEEL, TORX PAN HEAD TYPE AS RECOMMENDED BY PANEL MANUFACTURER, OF EQUAL OR GREATER HOLDING POWER THAN REQUIRED BY MANUFACTURER'S CODE COMPLIANCE REPORTS.
4. EDGE SEALER: TYPE RECOMMENDED BY PANEL MANUFACTURER.
5. FILLER: PC-WOODY BY PROTECTIVE COATING CO. (WWW.PCEPOXY.COM)

D. INSTALLATION
1. GENERAL: INSTALL PRODUCTS IN ACCORDANCE WITH THE LATEST INSTALLATION GUIDELINES OF THE MANUFACTURER AND ALL APPLICABLE BUILDING CODES AND OTHER LAWS, RULES, REGULATIONS AND ORDINANCES. REVIEW ALL MANUFACTURER INSTALLATION, MAINTENANCE INSTRUCTIONS, AND OTHER APPLICABLE DOCUMENTS BEFORE INSTALLATION.

07 7200 ROOFING MATERIALS & ACCESSORIES

METAL ROOFING MATERIALS & ACCESSORIES
A. SUBMITTALS: PRODUCT DATA, AND SAMPLES OF EACH PRODUCT AND COLOR OPTIONS.

B. WARRANTY: SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF METAL PANEL SYSTEMS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.
1. WARRANTY PERIOD: TWO YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

SPECIAL WARRANTY ON PANEL FINISHES: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR FINISH OR REPLACE METAL PANELS THAT SHOW EVIDENCE OF DETERIORATION OF FACTORY-APPLIED FINISHES WITHIN SPECIFIED WARRANTY PERIOD.
1. FINISH WARRANTY PERIOD: 20 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

SPECIAL WEATHERTIGHTNESS WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE STANDING-SEAM METAL ROOF PANEL ASSEMBLIES THAT FAIL TO REMAIN WEATHERTIGHT, INCLUDING LEAKS, WITHIN SPECIFIED WARRANTY PERIOD.
1. WARRANTY PERIOD: 20 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

C. BASIS OF DESIGN: VERTICAL-RIB, SNAP-JOINT, STANDING-SEAM METAL ROOF PANELS;SUBJECT TO COMPLIANCE WITH REQUIREMENTS PROVIDE HIGH SEAM TEE-PANEL ROOFING, WITH 18-1/4 INCH COVERAGE AND 1" HIGH RIBS AS MANUFACTURED BY BERRIDGE MANUFACTURING COMPANY OR APPROVED EQUAL.
1. METALLIC-COATED STEEL SHEET: ZINC-COATED (GALVANIZED) STEEL SHEET COMPLYING WITH ASTM A 653/A 653M, G90 (Z275) COATING DESIGNATION, OR ALUMINUM-ZINC ALLOY-COATED STEEL SHEET COMPLYING WITH ASTM A 792/A 792M, CLASS AZ50 (CLASS AZM150) COATING DESIGNATION; STRUCTURAL QUALITY. PREPAINTED BY THE COIL-COATING PROCESS TO COMPLY WITH ASTM A 755/A 755M.
A. NOMINAL THICKNESS: 0.034 INCH, 22 GA.
B. EXTERIOR FINISH: 70% KYNA

1. Quantity: Provide the following hinge quantity:

   a. Two Hinges: For doors with heights up to 60 inches.
   b. Three Hinges: For doors with heights 61 to 90 inches.
   c. Four Hinges: For doors with heights 91 to 120 inches.
   d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.

2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:

   a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
   b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.

3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:

   a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
   b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

4. Hinge Options: Comply with the following:

   a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.

5. Manufacturers:

   a. McKinney (MK) - TA/T4A Series, 5-knuckle.

2.3 CONTINUOUS HINGES

A. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 continuous geared hinge, with minimum 0.120-inch thick extruded 6063-T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.

   1. Manufacturers:.

      a. Pemko (PE).

2.4 POWER TRANSFER DEVICES

A. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.

   1. Provide one each of the following tools as part of the base bid contract:

      a. McKinney (MK) - Electrical Connecting Kit: QC-R001.
      b. McKinney (MK) - Connector Hand Tool: QC-R003.

   2. Manufacturers:

      a. McKinney (MK) - QC-C Series.

2.5 DOOR OPERATING TRIM

A. Door Push Plates and Pulls: ANSI/BHMA A156.6 door pushes and pull units of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.

   1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
   2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
   3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
   4. Pulls, where applicable, shall be provided with a 10" clearance from the finished floor on the push side to accommodate wheelchair accessibility.
   5. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
   6. Manufacturers:

      a. Rockwood (RO).

2.6 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:

   1. Threaded mortise cylinders with rings and cams to suit hardware application.
   2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
   3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
   4. Tubular deadlocks and other auxiliary locks.
   5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
   6. Keyway: Manufacturer's Standard.

C. Keying System: Each type of lock and cylinders to be factory keyed.

   1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
   2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
   3. New System: Key locks to a new key system as directed by the Owner.

D. Key Quantity: Provide the following minimum number of keys:

   1. Change Keys per Cylinder: Two (2)
   2. Master Keys (per Master Key Level/Group): Five (5).
   3. Construction Keys (where required): Ten (10).

E. Construction Keying: Provide construction master keyed cylinders.

F. Key Registration List (Bitting List):

   1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
   2. Provide transcript list in writing or electronic file as directed by the Owner.

2.7 KEY CONTROL

A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.

   1. Manufacturers:

      a. Lund Equipment (LU).
      b. MMF Industries (MM).
      c. Telkee (TK).

2.8 CYLINDRICAL LOCKS AND LATCHING DEVICES

A. Cylindrical Locksets, Grade 1 (Commercial Duty): ANSI/BHMA A156.2, Series 4000, Operational Grade 1 Certified Products Directory (CPD) listed cylindrical locksets. Listed manufacturers shall meet all functions and features as specified herein.

   1. Manufacturers:

      a. ASSA ABLOY ACCENTRA, formerly known as Yale (YA) 4700LN Series.

2.9 DEADLOCKS AND LATCHES

A. Cylindrical Deadlocks: ANSI/BHMA A156.36 Grade 1 Certified Products Directory (CPD) listed deadlocks to fit standard ANSI 161 preparation. Provide tapered collars to resist vandalism and 1" throw solid steel bolt with hardened steel roller pins. Deadlocks to be products of the same source manufacturer and keyway as other locksets.

   1. Manufacturers:

      a. ASSA ABLOY ACCENTRA, formerly known as Yale (YA) - D100 Series.

2.10 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:

   1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
   2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
   3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
   4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:

   1. Strikes for Mortise Locks and Latches: BHMA A156.13.
   2. Strikes for Bored Locks and Latches: BHMA A156.2.
   3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
   4. Dustproof Strikes: BHMA A156.16.

2.11 ELECTRIC STRIKES

A. Standard Electric Strikes: Electric strikes conforming to ANSI/BHMA A156.31, Grade 1, for use on non-rated or fire rated openings. Strikes shall be of stainless steel construction tested to a minimum of 1500 pounds of static strength and 70 foot-pounds of dynamic strength with a minimum endurance of 1 million operating cycles. Provide strikes with 12 or 24 VDC capability, fail-secure unless otherwise specified. Where specified provide latchbolt and latchbolt strike monitoring indicating both the position of the latchbolt and locked condition of the strike.

   1. Manufacturers:

      a. HES (HS) - 1500/1600 Series.

B. Surface Mounted Rim Electric Strikes: Surface mounted rim exit device electric strikes conforming to ANSI/BHMA A156.31, Grade 1, and UL Listed for both Burglary Resistance and for use on fire rated door assemblies. Construction includes internally mounted solenoid with two heavy-duty, stainless steel locking mechanisms operating independently to provide tamper resistance. Strikes tested for a minimum of 500,000 operating cycles. Provide strikes with 12 or 24 VDC capability supplied standard as fail-secure unless otherwise specified. Option available for latchbolt and latchbolt strike monitoring indicating both the position of the latchbolt and locked condition of the strike. Strike requires no cutting to the jamb prior to installation.

   1. Manufacturers:

      a. HES (HS) - 9400/9500/9600/9700/9800 Series.

C. Provide electric strikes with in-line power controller and surge suppressor by the same manufacturer as the strike with the combined products having a five year warranty.

2.12 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:

   1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
   2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
   3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where seecified in Hardware Sets.
   4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
   5. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.

      a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
      b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.

   6. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
   7. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
   8. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
   9. Rail Sizing: Provide exit device rails factory sized for proper door width application.
   10. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

B. Conventional Push Rail Exit Devices (Commercial Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed exit devices. Listed manufacturers shall meet all functions and features as specified herein. Listed manufacturers shall meet all functions and features as specified herein.

   1. Provide locksets with functions and features as follows:

      a. Where required by code, provide knurling or abrasive coating on all levers leading to hazardous areas.
      b. Meets UL and CUL Standard 10C Positive Pressure, Fire Test of Door Assemblies with levers that meet A117.1 Accessibility Code.
      c. Five-year limited warranty for mechanical features.

   2. Manufacturers:

      a. ASSA ABLOY ACCENTRA, formerly known as Yale (YA) - 6000 Series.

2.13 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:

   1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
   2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
   3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use.

      Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
   4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
   5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
   6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Commercial Duty): ANSI/BHMA 156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, institutional grade door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck, closing sweep, and latch speed control valves. Provide non-handed units standard.

   1. Manufacturers:

      a. ASSA ABLOY ACCENTRA, formerly known as Yale (YA) - 3500 Series.
      b. ASSA ABLOY ACCENTRA, formerly known as Yale (YA) - 5800 Series.

2.14 ARCHITECTURAL TRIM

A. Door Protective Trim

   1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
   2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
   3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
   4. Protection Plates: ANSI/BHMA A156.6 protection plates (kick, armor, or mop), fabricated from the following:

      a. Stainless Steel: 300 grade, 050-inch thick.

   5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
   6. Manufacturers:

      a. Rockwood (RO).

2.15 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.

   1. Manufacturers:

      a. Rockwood (RO).

2.16 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.

   1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.

2.17 ELECTRONIC ACCESSORIES

A. Request-to-Exit Motion Sensor: Request-to-Exit Sensors motion detectors specifically designed for detecting exiting through a door from the secure area to a non-secure area. Include built-in timers (up to 60 second adjustable timing), door monitor with sounder alert, internal vertical pointability coverage, 12VDC or 24VDC power and selectable relay trigger with fail safe/fail secure modes.

   1. Manufacturers:

      a. Alarm Controls (AK) - SREX Series.
      b. Securitron (SU) - XMS Series.

2.18 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.19 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

   1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:

   1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
   2. DH TDH-007-20: Installation Guide for Doors and Hardware.
   3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
   4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.

   1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

   1. Quantities listed are for each pair of doors, or for each single door.
   2. The supplier is responsible for handing and sizing all products.
   3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.

B. Manufacturer's Abbreviations:

1. MK - McKinney
2. PE - Pemko
3. YA - ASSA ABLOY ACCENTRA
4. HS - HES
5. RO - Rockwood
6. SU - Securitron

7. LU - Lund Equipment Co

Hardware Sets

Set: 1.0

Doors: 100D
Description: EXTERIOR TELESCOPING ALD

1 Hardware By Others	Hardware By Door Supplier			

Set: 2.0

Doors: 100A, 100B, 100C
Description: EXTERIOR ALD NL EXIT X PULL X ELEC STRIKE CPS CLOSER

1 Continuous Hinge	BSPFMSLF-HD1		PE	087100	
1 Rim Exit Device, Nightlatch	6100ED 121NL	BSP	YA	087100	
1 Electric Strike	9600	BSP	HS	087100	ϟ
1 SMART Pac Bridge Rectifier	2005M3		HS	087100	ϟ
1 Pull, offset	RM201	BSP	RO	087100	
1 Surface Closer	5831	BSP	YA	087100	
1 Drop Plate	5800PDP	BSP	YA	087100	
1 Blade Stop	BSS	BSP	YA	087100	
1 Set Weatherstrip	by Door Manufacturer				
1 Sweep	3452BSPV		PE	087100	
1 Threshold	279x292BSPFGPK		PE	087100	
1 ElectroLynx Harness	QC-C1500/C1500P		MK	087100	ϟ
1 Motion Sensor	XMS		SU	087100	ϟ
1 Power Supply	AQD per hardware requirements		SU	087100	ϟ
1 CARD READER	Wall Reader to be provided by Systems Integrator				

Notes: ACCESS BY AUTHORIZED CARD CREDENTIAL OR MANUAL KEY. ALWAYS FREE EGRESS.

Set: 3.0

Doors: 113
Description: EXTERIOR HMD STOREROOM LOCK ELEC STRIKE CPS CLOSER SRI

1 Continuous Hinge	BSPFMHD1		PE	087100	
1 Storeroom or Closet Lock	PB 4705LN	BSP	YA	087100	
1 SMART Pac Bridge Rectifier	2005M3		HS	087100	ϟ
1 Electric Strike	1600	BSP	HS	087100	ϟ
1 Surface Closer	3531	600 x BSP	YA	087100	
1 Rain Guard	346BSP		PE	087100	
1 Gasketing	2891BSPS		PE	087100	
1 Sweep	3452BSPV		PE	087100	
1 Threshold	1710BSP		PE	087100	
1 ElectroLynx Harness	QC-C1500/C1500P		MK	087100	ϟ
1 Motion Sensor	XMS		SU	087100	ϟ
1 Power Supply	AQD per hardware requirements		SU	087100	ϟ
1 CARD READER	Wall Reader to be provided by Systems Integrator				

Notes: ACCESS BY AUTHORIZED CARD CREDENTIAL OR MANUAL KEY. ALWAYS FREE EGRESS.

Set: 4.0

Doors: 110
Description: EXTERIOR HMD STOREROOM LOCK CPS CLOSER SRI

1 Continuous Hinge	BSPFMHD1		PE	087100
1 Storeroom or Closet Lock	PB 4705LN	BSP	YA	087100
1 Surface Closer	3531	600 x BSP	YA	087100
1 Rain Guard	346BSP		PE	087100
1 Gasketing	2891BSPS		PE	087100
1 Sweep	3452BSPV		PE	087100
1 Threshold	1710BSP		PE	087100

Notes: CORROSIVE ENVIORNMENT, SEE MISC SET FOR ATTIC STOCK LOCKSET.

Set: 5.0

Doors: 111, 112
Description: EXTERIOR HMD CLASSROOM LOCK CLOSER

3 Hinge, Full Mortise, Hvy Wt	T4A3386 FT 4-1/2" x 4-1/2"	BSP(SS)	MK	087100
1 Deadbolt	D161	BSP	YA	087100
1 Pull Plate	110x70C	BSP	RO	087100
1 Push Plate	70C-RKW	BSP	RO	087100
1 Surface Closer	3501	600 x BSP	YA	087100
1 Wall Stop	RM861	BSP	RO	087100
1 Gasketing	S88BL		PE	087100
1 Rain Guard	346BSP		PE	087100
1 Sweep	315BSPN		PE	087100
1 Threshold	1710BSP		PE	087100

Set: 6.0

Doors: 102, 103
Description: STOREROOM LOCK CPS CLOSER GASKET

3 Hinge, Full Mortise	TA2714 NRP FT 4-1/2" x 4-1/2"	BSP	MK	087100
1 Storeroom or Closet Lock	PB 4705LN	BSP	YA	087100
1 Surface Closer	5831	BSP	YA	087100
1 Kick Plate	K1050 10" x 2" LDW BEV CSK	BSP	RO	087100
1 Gasketing	S88BL		PE	087100

Set: 7.0

Doors: 105
Description: STOREROOM LOCK PR CLOSER

3 Hinge, Full Mortise	TA2714 NRP FT 4-1/2" x 4-1/2"	BSP	MK	087100
1 Storeroom or Closet Lock	PB 4705LN	BSP	YA	087100
1 Surface Closer	5801	BSP	YA	087100
1 Kick Plate	K1050 10" x 2" LDW BEV CSK	BSP	RO	087100
1 Wall Stop	RM861	BSP	RO	087100
3 Silencer	608-RKW		RO	087100

Set: 8.0

Doors: 104
Description: PASSAGE LATCH NO CLOSER ***WIDE STILE REQUIRED***

4 Hinge, Full Mortise	TA2714 FT 4-1/2" x 4-1/2"	BSP	MK	087100
1 Passage Latch	PB 4701LN	BSP	YA	087100
1 Wall Stop	RM861	BSP	RO	087100

Set: 9.0

Doors: 101
Description: PRIVACY LATCH NO CLOSER GASKET

3 Hinge, Full Mortise	TA2714 FT 4-1/2" x 4-1/2"	BSP	MK	087100
1 Privacy Lock	PB 4702LN	BSP	YA	087100
1 Wall Stop	RM861	BSP	RO	087100
1 Gasketing	S88BL		PE	087100

Set: 10.0

Doors: MISC
Description: MISC

4 Storeroom or Closet Lock	PB 4705LN	BSP	YA	087100
1 BITTING LIST	KEY RECORDS			
1 KEY BLANKS	BOX OF 50			
1 Key Cabinet	Sized per specification documents		LU	
1 Knox Box	Knox Box (coordinate with local fire station for requirements and location)			

Notes: LOCKSET FOR ATTIC STOCK AT CORROSIVE LOCATIONS.

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

   1. Standard and custom hollow metal doors and frames.
   2. Steel sidelight, borrowed lite and transom frames.
   3. Louvers installed in hollow metal doors.
   4. Light frames and glazing installed in hollow metal doors.

B. Related Sections:

   1. Division 01 Section "General Conditions".
   2. Division 04 Section "Unit Masonry" for embedding anchors for hollow metal work into masonry construction.
   3. Division 08 Section "Flush Wood Doors".
   4. Division 08 Section "Glazing" for glass view panels in hollow metal doors.
   5. Division 08 Section "Door Hardware".
   6. Division 08 Section "Access Control Hardware".
   7. Division 09 Sections "Exterior Painting" and "Interior Painting" for field painting hollow metal doors and frames.

C. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

   1. ANSI/SDI A250.8 - Recommended Specifications for Standard Steel Doors and Frames.
   2. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames, Frames Anchors and Hardware Reinforcing.
   3. ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.
   4. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
   5. ANSI/SDI A250.11 - Recommended Erection Instructions for Steel Frames.
   6. ASTM A1008 - Standard Specification for Steel Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
   7. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
   8. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
   9. ASTM C 1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus.
   10. ANSI/BHMA A156.115 - Hardware Preparation in Steel Doors and Frames.
   11. ANSI/SDI 122 - Installation and Troubleshooting Guide for Standard Steel Doors and Frames.
   12. ANSI/NFPA 80 - Standard for Fire Doors and Fire Windows; National Fire Protection Association.
   13. ANSI/NFPA 105: Standard for the Installation of Smoke Door Assemblies.
   14. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association.
   15. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
   16. UL 1784 - Standard for Air Leakage Tests of Door Assemblies.

1.3 QUALITY ASSURANCE

A. Source Limitations: Obtain hollow metal doors and frames through one source from a single manufacturer wherever possible.

B. Quality Standard: In addition to requirements specified, furnish SDI-Certified manufacturer products that comply with ANSI/SDI A250.8, latest edition, "Recommended Specifications for Standard Steel Doors and Frames".

C. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to UL10C (neutral pressure at 40" above sill) or UL 10C.

   1. Oversize Fire-Rated Door Assemblies Construction: For units exceeding sizes of tested assemblies, attach construction label certifying doors are built to standard construction requirements for tested and labeled fire rated door assemblies except for size.
   2. Temperature-Rise Limit: Where indicated and at vertical exit enclosures (stairwell openings) and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire-test exposure.
   3. Smoke Control Door Assemblies: Comply with NFPA 105.

      a. Smoke "S" Label: Doors to bear "S" label, and include smoke and draft control gasketing applied to frame and on meeting stiles of pair doors.

D. Fire-Rated, Borrowed-Light Frame Assemblies: Assemblies complying with NFPA 80 that are listed and labeled, by a testing and inspecting agency acceptable to authoritics having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257. Provide labeled glazing material.

E. Storm Shelter Openings: Provide complete door systems for hurricane or tornado storm shelters, and other areas of refuge, complying and tested according to ICC 500 (2014/2020), ICC/NSSA Standard for the Design and Construction of Storm Shelters.

   1. Each unit to bear third party permanent label indicating compliance with the referenced testing standards.

F. Pre-Submittal Conference: Conduct conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier, Installer, and Contractor to review proper methods and procedures for installing hollow metal doors and frames and to verify installation of electrical knockout boxes and conduit at frames with electrified or access control hardware.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project site storage. Do not use non-vented plastic.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch high wood blocking. Do not store in a manner that traps excess humidity.

   1. Provide minimum 1/4-inch space between each stacked door to permit air circulation. Door and frames to be stacked in a vertical upright position.

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.6 COORDINATION

A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

B. Building Information Modeling (BIM) Support: Utilize designated BIM software tools and obtain training needed to successfully participate in the Project BIM processes. All technical disciplines are responsible for the product data integration and data reliability of their Work into the coordinated BIM applications.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.

B. Warranty includes installation and finishing that may be required due to repair or replacement of defective doors.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide steel doors and frames from a SDI Certified manufacturer:

   1. CECO Door Products (C).
   2. Curries Company (CU).

2.2 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

C. Frame Anchors: ASTM A 653/A 653M, Commercial Steel (CS), Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

2.3 HOLLOW METAL DOORS

A. General: Provide 1-3/4 inch doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8 and ANSI/NAAMM HMMA 867.

CAW ARCHITECTURE
collins webb
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE

COPYRIGHT © BY
COLLINS WEBB
ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ROGER L. WEBB II
NUMBER A-2016041008
08/13/2025
ARCHITECT
PROFESSIONAL SEAL

G501

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

GENERAL PROJECT SPECIFICATIONS

B. Exterior Doors: Face sheets fabricated of commercial quality hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:

1. Design: Flush panel.
2. Core Construction: Manufacturer's standard polystyrene. Where indicated, provide doors fabricated as thermal-rated assemblies with a minimum R-value of 2.8 or better.
3. Level/Model: Level 3 and Physical Performance Level A (Extra Heavy Duty), Minimum 16 gauge (0.053-inch - 1.3-mm) thick steel, Model 2.
4. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.
5. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
6. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

C. Interior Doors: Face sheets fabricated of commercial quality cold rolled steel that complies with ASTM A 1008/A 1008M. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:

1. Design: Flush panel.
2. Core Construction: Manufacturer's standard kraft-paper honeycomb, or one-piece polystyrene core, securely bonded to both faces.
   a. Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated.
3. Level/Model: Level 2 and Physical Performance Level B (Heavy Duty), Minimum 18 gauge (0.042-inch - 1.0-mm) thick steel, Model 2.
4. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet.
5. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
6. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

D. Manufacturers Basis of Design:

1. Curries Company (CU) - Polystyrene Core - 707 Series.

2.4 HOLLOW METAL FRAMES

A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.

B. Exterior Frames: Fabricated of hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60.

1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
2. Frames: Minimum 14 gauge (0.067-inch -1.7-mm) thick steel sheet.
3. Manufacturers Basis of Design:
   a. Curries Company (CU) – M Series.

C. Interior Frames: Fabricated from cold-rolled steel sheet that complies with ASTM A 1008/A 1008M.

1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
2. Frames: Minimum 16 gauge (0.053-inch -1.3-mm) thick steel sheet.
3. Manufacturers Basis of Design:
   a. Curries Company (CU) - CM Series.
   b. Curries Company (CU) - M Series.

D. Fire rated frames: Fabricate frames in accordance with NFPA 80, listed and labeled by a qualified testing agency, for fire-protection ratings indicated.

E. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 Table 4 with reinforcement plates from same material as frames.

2.5 FRAME ANCHORS

A. Jamb Anchors:

1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, formed from A60 metallic coated material, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
2. Stud Wall Type: Designed to engage stud and not less than 0.042 inch thick.
3. Compression Type for Drywall Slip-on (Knock-Down) Frames: Adjustable compression anchors.

B. Floor Anchors: Floor anchors to be provided at each jamb, formed from A60 metallic coated material, not less than 0.042 inches thick.

C. Mortar Guards: Formed from same material as frames, not less than 0.016 inches thick.

2.6 LOUVERS

A. Metal Louvers: Unless otherwise indicated provide louvers to meet the following requirements.

1. Blade Type: Vision proof inverted V or inverted Y.
2. Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish. Match pre-finished door paint color where applicable.

B. Louvers for Fire Rated Doors: Metal louvers with fusible link and closing device, listed and labeled for use in doors with fire protection rating of 1-1/2 hours and less.

1. Manufacturers: Subject to compliance with requirements, provide louvers to meet rating indicated.
2. Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish. Match pre-finished door paint color where applicable.

2.7 LIGHT OPENINGS AND GLAZING

A. Stops and Moldings: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted or mitered hairline joints at fabricator's shop. Fixed and removable stops to allow multiple glazed lites each to be removed independently. Coordinate frame rabbet widths between fixed and removable stops with the type of glazing and installation indicated.

B. Moldings for Glazed Lites in Doors and Loose Stops for Glazed Lites in Frames: Minimum 20 gauge thick, fabricated from same material as door face sheet in which they are installed.

C. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch (16 mm) high unless otherwise indicated. Provide fixed frame moldings and stops on outside of exterior and on secure side of interior doors and frames.

D. Preformed Metal Frames for Light Openings: Manufacturer's standard frame formed of 0.048-inch-thick, cold rolled steel sheet; with baked enamel or powder coated finish; and approved for use in doors of fire protection rating indicated. Match pre-finished door paint color where applicable.

2.8 ACCESSORIES

A. Mullions and Transom Bars: Join to adjacent members by welding or rigid mechanical anchors.

B. Grout Guards: Formed from same material as frames, not less than 0.016 inches thick.

2.9 FABRICATION

A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. When shipping limitations so dictate, frames for large openings are to be fabricated in sections for splicing or splining in the field by others.

B. Tolerances: Fabricate hollow metal work to tolerances indicated in ANSI/SDI A250.8.

C. Hollow Metal Doors:

1. Exterior Doors: Provide optional weep-hole openings in bottom of exterior doors to permit moisture to escape where specified.
2. Glazed Lites: Factory cut openings in doors with applied trim or kits to fit. Factory install glazing where indicated.
3. Astragals: Provide overlapping astragals as noted in door hardware sets in Division 08 Section "Door Hardware" on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted.
4. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge strap for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".

D. Hollow Metal Frames:

1. Shipping Limitations: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
2. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
   a. Welded frames are to be provided with two steel spreaders temporarily attached to the bottom of both jambs to serve as a brace during shipping and handling. Spreader bars are for bracing only and are not to be used to size the frame opening.
3. Sidelight and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.
4. High Frequency Hinge Reinforcement: Provide high frequency hinge reinforcements at door openings 48-inches and wider with mortise butt type hinges at top hinge locations.
5. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge straps for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".
6. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated for removable stops, provide security screws at exterior locations.
7. Mortar Guards: Provide guard boxes at back of hardware mortises in frames at all hinges and strike preps regardless of grouting requirements.
8. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
9. Jamb Anchors: Provide number and spacing of anchors as follows:
   a. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
      1) Two anchors per jamb up to 60 inches high.
      2) Three anchors per jamb from 60 to 90 inches high.
      3) Four anchors per jamb from 90 to 120 inches high.
      4) Four anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high.
   b. Stud Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
      1) Three anchors per jamb up to 60 inches high.
      2) Four anchors per jamb from 60 to 90 inches high.
      3) Five anchors per jamb from 90 to 96 inches high.
      4) Five anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
      5) Two anchors per head for frames above 42 inches wide and mounted in metal stud partitions.
10. Door Silencers: Except on weatherstripped or gasketed doors, drill stops to receive door silencers. Silencers to be supplied by frame manufacturer regardless if specified in Division 08 Section "Door Hardware".
11. Bituminous Coating: Where frames are fully grouted with an approved Portland Cement based grout or mortar, coat inside of frame throat with a water based bituminous or asphaltic emulsion coating to a minimum thickness of 3 mils DFT, tested in accordance with UL 10C and applied to the frame under a 3rd party independent follow-up service procedure.

E. Hardware Preparation: Factory prepare hollow metal work to receive template mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware."

1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
2. Reinforce doors and frames to receive non-template, mortised and surface mounted door hardware.
3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 26 Sections.

2.10 STEEL FINISHES

A. Prime Finishes: Doors and frames to be cleaned, and chemically treated to insure maximum finish paint adhesion. Surfaces of the door and frame exposed to view to receive a factory applied coat of rust inhibiting shop primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead and chromate free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; and compatible with substrate and field-applied coatings.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. General Contractor to verify the accuracy of dimensions given to the steel door and frame manufacturer for existing openings or existing frames (strike height, hinge spacing, hinge back set, etc.).

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove welded in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.

B. Prior to installation, adjust and securely brace welded hollow metal frames for square, level, twist, and plumb condition.

C. Tolcrances shall comply with SDI-117 "Manufacturing Tolcrances Standard Steel Doors and Frames."

D. Drill and tap doors and frames to receive non-template, mortised, and surface-mounted door hardware.

E. Verify tolerances against manufacturers installations instructions for tornado and hurricane storm shelter openings.

3.3 INSTALLATION

A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.

B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11 and NFPA 80 at fire rated openings.

1. Set frames accurately in position, plumbed, leveled, aligned, and braced securely until permanent anchors are set. After wall construction is complete and frames properly set and secured, remove temporary braces, leaving surfaces smooth and undamaged. Shim as necessary to comply with installation tolerances.
2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with post-installed expansion anchors.
3. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with mortar.
4. Grout Requirements: Do not grout head of frames unless reinforcing has been installed in head of frame. Do not grout vertical or horizontal closed mullion members.

C. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.

1. Non-Fire-Rated Standard Steel Doors:
   a. Jambs and Head: 1/8 inch plus or minus 1/16 inch.
   b. Between Edges of Pairs of Doors: 1/8 inch plus or minus 1/16 inch.
   c. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch.
   d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch.
2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.

D. Field Glazing: Comply with installation requirements in Division 08 Section "Glazing" and with hollow metal manufacturer's written instructions.

3.4 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.

B. Remove grout and other bonding material from hollow metal work immediately after installation.

C. Prime-Coat and Painted Finish Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat, or painted finishes, and apply touchup of compatible air drying, rust-inhibitive primer, zinc rich primer (exterior and galvanized openings) or finish paint.

3.5 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.

1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

END OF SECTION 081113

08 8100 MIRRORS

A. SUBMITTALS: FOR EACH TYPE OF PRODUCT INDICATED.THE CONTRACTOR SHALL PREPARE, AND SUBMIT TO THE ARCHITECT FOR APPROVAL, COMPLETE SHOP DRAWINGS: INCLUDE MIRROR ELEVATIONS, EDGE DETAILS, MIRROR HARDWARE, AND ATTACHMENTS TO OTHER WORK. WARRANTY: SAMPLE OF SPECIAL WARRANTY.

B. QUALITY ASSURANCE: VINYL CASEMENT WINDOWS- BASIS OF DESIGN: MI 5930 VINYL SINGLE- HUNG WINDOWS.
1. GLAZING PUBLICATIONS: COMPLY WITH GANA'S "GLAZING MANUAL" AND "MIRRORS, HANDLE WITH EXTREME CARE: TIPS FOR THE PROFESSIONAL ON THE CARE AND HANDLING OF MIRRORS."
2.SAFETY GLAZING PRODUCTS: FOR MIRRORS, PROVIDE PRODUCTS COMPLYING WITH TESTING REQUIREMENTS IN 16 CFR 1201 FOR CATEGORY II MATERIALS.
3. PRECONSTRUCTION MIRROR MASTIC COMPATIBILITY TEST: SUBMIT MIRROR MASTIC PRODUCTS TO MIRROR MANUFACTURER FOR TESTING TO DETERMINE COMPATIBILITY OF MASTIC WITH MIRROR BACKING AND SUBSTRATES ON WHICH MIRRORS ARE INSTALLED.

C. WARRANTY: SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MIRROR MANUFACTURER AGREES TO REPLACE MIRRORS THAT DETERIORATE WITHIN SPECIFIED WARRANTY PERIOD. DETERIORATION OF MIRRORS IS DEFINED AS DEFECTS DEVELOPED FROM NORMAL USE THAT ARE NOT ATTRIBUTED TO MIRROR BREAKAGE OR TO MAINTAINING AND CLEANING MIRRORS CONTRARY TO MANUFACTURER'S WRITTEN INSTRUCTIONS. DEFECTS INCLUDE DISCOLORATION, BLACK SPOTS, AND CLOUDING OF THE SILVER FILM.
1. WARRANTY PERIOD: FIVE YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

D. BASIS OF DESIGN: SILVERED FLAT GLASS MIRRORS
1. GLASS MIRRORS, GENERAL: ASTM C 1503; MANUFACTURED USING COPPER FREE, LOW LEAD MIRROR COATING PROCESS.
2. CLEAR GLASS: MIRROR GLAZING QUALITY; ULTRACLEAR (LOW IRON) FLOAT GLASS WITH A MINIMUM 91 PERCENT VISIBLE LIGHT TRANSMISSION. NOMINAL THICKNESS: 1/4 INCH.
3. TEMPERED CLEAR GLASS: MIRROR GLAZING QUALITY, FOR BLEMISH REQUIREMENTS; AND COMPLY WITH ASTM C 1048 FOR KIND FT, CONDITION A. TEMPERED FLOAT GLASS BEFORE SILVER COATING IS APPLIED. NOMINAL THICKNESS: 1/4 INCH.

E. MIRROR HARDWARE: TOP AND BOTTOM ALUMINUM J CHANNELS: ALUMINUM EXTRUSIONS WITH A RETURN DEEP ENOUGH TO PRODUCE A GLAZING CHANNEL TO ACCOMMODATE MIRRORS OF THICKNESS INDICATED AND IN LENGTHS REQUIRED TO COVER BOTTOM AND TOP EDGES OF EACH MIRROR IN A SINGLE PIECE. FINISH: CLEAR BRIGHT ANODIZED.

1. TOP AND BOTTOM MIRROR MOUNTING CLIPS: #277 MIRROR CLIPS AS MANUFACTURED BY KNAPE & VOGT OR APPROVED EQUAL.
2. FASTENERS: FABRICATED OF SAME BASIC METAL AND ALLOY AS FASTENED METAL AND MATCHING IT IN FINISHED COLOR AND TEXTURE WHERE FASTENERS ARE EXPOSED.

F. INSTALLATION: GENERAL: EXAMINE SUBSTRATES, OVER WHICH MIRRORS ARE TO BE MOUNTED, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH INSTALLATION TOLERANCES, SUBSTRATE PREPARATION, AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK.
A. VERIFY COMPATIBILITY WITH AND SUITABILITY OF SUBSTRATES, INCLUDING COMPATIBILITY OF MIRROR MASTIC WITH EXISTING FINISHES OR PRIMERS.
B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED AND SURFACES ARE DRY.

1.INSTALL MIRRORS TO COMPLY WITH MIRROR MANUFACTURER'S WRITTEN INSTRUCTIONS AND WITH REFERENCED GANA PUBLICATIONS. MOUNT MIRRORS ACCURATELY IN PLACE IN A MANNER THAT AVOIDS DISTORTING REFLECTED IMAGES.
2. INSTALL WALL MOUNTED ANNEALED GLASS MIRRORS IN THE APARTMENT UNITS WITH MIRROR CLIPS. ATTACH MIRROR HARDWARE SECURELY TO MOUNTING SURFACES WITH MECHANICAL FASTENERS INSTALLED WITH
3. ANCHORS OR INSERTS AS APPLICABLE. INSTALL FASTENERS SO HEADS DO NOT IMPOSE POINT LOADS ON BACKS OF MIRRORS.
4. PROTECT MIRRORS FROM BREAKAGE AND CONTAMINATING SUBSTANCES RESULTING FROM CONSTRUCTION OPERATIONS.
5. MAINTAIN ENVIRONMENTAL CONDITIONS THAT WILL PREVENT MIRRORS FROM BEING EXPOSED TO MOISTURE FROM CONDENSATION OR OTHER SOURCES FOR CONTINUOUS PERIODS OF TIME.
6. WASH EXPOSED SURFACE OF MIRRORS NOT MORE THAN FOUR DAYS BEFORE DATE SCHEDULED FOR INSPECTIONS THAT ESTABLISH DATE OF SUBSTANTIAL COMPLETION. WASH MIRRORS AS RECOMMENDED IN WRITING BY MIRROR MANUFACTURER.

DIVISION 9 - FINISHES

9.1 - NON-STRUCTURAL METAL FRAMING

A. SUBMITTALS: SHOP DRAWINGS: INDICATE PREFABRICATED WORK, COMPONENT DETAILS, STUD LAYOUT, FRAMED OPENINGS, ANCHORAGE TO STRUCTURE, ACOUSTIC DETAILS, TYPE AND LOCATION OF FASTENERS, ACCESSORIES, AND ITEMS OF OTHER RELATED WORK. DESCRIBE METHOD FOR SECURING STUDS TO TRACKS, SPLICING, AND FOR BLOCKING AND REINFORCEMENT OF FRAMING CONNECTIONS.
1. PRODUCT DATA: PROVIDE MANUFACTURER'S DATA ON PARTITION HEAD TO STRUCTURE CONNECTORS, SHOWING COMPLIANCE WITH REQUIREMENTS.
2. MANUFACTURER'S INSTALLATION INSTRUCTIONS: INDICATE SPECIAL PROCEDURES AND PERIMETER CONDITIONS REQUIRING SPECIAL ATTENTION.

B. MANUFACTURERS:
1. CLARKDIETRICH BUILDING SYSTEMS: WWW.CLARKDIETRICH.COM.
2. CEMCO: WWW.CEMCOSTEEL.COM.
3. JAMES INDUSTRIES: WWW.JAMESIND.COM
4. STEEL CONSTRUCTION SYSTEMS: WWW.STEELCONSYSTEMS.COM

C. FRAMING MATERIALS:
1. FIRE RATED ASSEMBLIES: COMPLY WITH APPLICABLE CODE AND AS FOLLOWS:
a.TOP OF FIRE RATED PARTITIONS: LISTED ASSEMBLY BY UL, NO. [ON DRAWINGS]; [1 AND 2] HOUR RATING.
B. FIRE RATED SHAFT WALL REQUIREMENTS: LISTED ASSEMBLY BY UL, NO. [ON DRAWINGS]; [1] HOUR RATING.

2. NON-LOADBEARING FRAMING SYSTEM COMPONENTS: ASTM C645; GALVANIZED SHEET STEEL, OF SIZE AND PROPERTIES NECESSARY TO COMPLY WITH ASTM C754 FOR THE MAXIMUM DEFLECTION OF WALL FRAMING OF L/240 AT 5 PSF.
A. TRACKS AND RUNNERS: SAME MATERIAL AND THICKNESS AS STUDS, BENT LEG RETAINER NOTCHED TO RECEIVE STUDS WITH PROVISION FOR CRIMP LOCKING TO STUD. STUDS: C SHAPED WITH FLAT OR FORMED WEBS WITH KNURLED FACES.
B. CEILING CHANNELS: C SHAPED.
C. FURRING: HAT-SHAPED SECTIONS, MINIMUM DEPTH OF 7/8 INCH.
D. CONTRACTOR TO PROVIDE BRACING AS REQUIRED TO COMPLETE SYSTEM.
F. WHERE INDICATED IN DRAWINGS, SHAFT WALL STUDS AND ACCESSORIES: ASTM C645; GALVANIZED SHEET STEEL, OF SIZE AND PROPERTIES NECESSARY TO COMPLY WITH ASTM C754 AND SPECIFIED PERFORMANCE REQUIREMENTS.
G. CEILING HANGERS: TYPE AND SIZE AS SPECIFIED IN ASTM C754 FOR SPACING REQUIRED.
H. PARTITION HEAD TO STRUCTURE CONNECTIONS: PROVIDE MECHANICAL ANCHORAGE DEVICES THAT ACCOMMODATE DEFLECTION USING SLOTTED HOLES, SCREWS AND ANTI-FRICTION BUSHINGS, PREVENTING ROTATION OF STUDS WHILE MAINTAINING STRUCTURAL PERFORMANCE OF PARTITION.
I. FIT, REINFORCE, AND BRACE FRAMING MEMBERS TO SUIT DESIGN REQUIREMENTS.

D. INSTALLATION:
1.COMPLY WITH REQUIREMENTS OF ASTM C754.
2.VERIFY EXISTING CONDITIONS BEFORE STARTING WORK.
3. VERIFY THAT ROUGH-IN UTILITIES ARE IN PROPER LOCATION.
4.EXTEND PARTITION FRAMING TO STRUCTURE WHERE INDICATED AND TO CEILING IN OTHER LOCATIONS.
5. PARTITIONS TERMINATING AT CEILING: ATTACH CEILING RUNNER SECURELY TO CEILING TRACK IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
6.PARTITIONS TERMINATING AT STRUCTURE: ATTACH TOP RUNNER TO STRUCTURE, MAINTAIN CLEARANCE BETWEEN TOP OF STUDS AND STRUCTURE, AND CONNECT STUDS TO TRACK USING SPECIFIED MECHANICAL DEVICES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS; VERIFY FREE MOVEMENT OF TOP OF STUD CONNECTIONS; DO NOT LEAVE STUDS UNATTACHED TO TRACK.
7.FIT RUNNERS UNDER AND ABOVE OPENINGS; SECURE INTERMEDIATE STUDS TO SAME SPACING AS WALL STUDS.
8. ALIGN STUD WEB OPENINGS HORIZONTALLY.
9. SECURE STUDS TO TRACKS USING CRIMPING METHOD. DO NOT WELD.
10. STUD SPLICING IS NOT PERMISSIBLE.
11. FABRICATE CORNERS USING A MINIMUM OF THREE STUDS.
12. DOUBLE STUD AT WALL OPENINGS, DOOR AND WINDOW JAMBS, NOT MORE THAN 2 INCHES FROM EACH SIDE OF OPENINGS.
13. BRACE STUD FRAMING SYSTEM RIGID.
14. COORDINATE ERECTION OF STUDS WITH REQUIREMENTS OF DOOR FRAMES; INSTALL SUPPORTS AND ATTACHMENTS.
15. COORDINATE INSTALLATION OF BUCKS, ANCHORS, AND BLOCKING WITH ELECTRICAL, MECHANICAL, AND OTHER WORK TO BE PLACED WITHIN OR BEHIND STUD FRAMING.
16. BLOCKING: USE WOOD BLOCKING SECURED TO STUDS. PROVIDE BLOCKING FOR SUPPORT OF PLUMBING FIXTURES, WALL CABINETS, TOILET ACCESSORIES, HARDWARE, AND OPENING FRAMES.

9.2 GYPSUM BOARD ASSEMBLIES

A. STEEL FRAMING MEMBERS: COMPLY WITH ASTM C754 IN DEPTHS AND GAGES AS INDICATED IN THE CONSTRUCTION DRAWINGS AND AS FOLLOWS:
1. STEEL SHEET COMPONENTS: COMPLY WITH ASTM C645 WITH MANUFACTURER'S STANDARD CORROSION-RESISTANT ZINC COATING.
2. TIE WIRE: ASTM A 641/A 641M, CLASS 1 ZINC COATING, SOFT TEMPER. .0625" DIAMETER OR DOUBLE STRAND OF .0475" DIAMETER WIRE.
3. WIRE HANGERS: ASTM A 641/A 641M, CLASS 1 ZINC COATING, SOFT TEMPER. .0162" DIAMETER.

B. PANEL PRODUCTS:PROVIDE IN THICKNESS AND TYPE INDICATED IN THE CONSTRUCTION DRAWINGS IN MAXIMUM LENGTHS AVAILABLE TO MINIMIZE END-TO-END BUTT JOINTS AND AS FOLLOWS:
1. GYPSUM WALLBOARD: ASTM C 36, TYPE 'X' WITH TAPERED EDGES, SAG-RESISTANT TYPE FOR CEILING SURFACES.
2. WATER-RESISTANT GYPSUM BACKING BOARD: ASTM C 630, TYPE 'X' ON ALL TOILET ROOM AND SHOWER ROOM WALLS, BEHIND ALL PLUMBING FIXTURES, AND AS INDICATED.

C. ACCESSORIES:
1. TRIM: ASTM 1047, FORMED FROM GALVANIZED OR ALUMINUM COATED STEEL SHEET, ROLLED ZINC, OR PLASTIC
a. OUTSIDE CORNERS: PROVIDE CORNER BEAD UNLESS NOTED OTHERWISE
b. EXPOSED PANEL EDGES: PROVIDE LC-BEAD (J-BEAD) UNLESS NOTED OTHERWISE; USE TEAR-AWAY BEAD WHERE O/P. BD. MEETS WINDOW FRAMES OR CEILING GRID.
c. CONTROL JOINTS: PROVIDE WHERE INDICATED OR APPROXIMATELY 30'-0" MAX. CONTACT ARCHITECT FOR LOCATIONS IF NOT INDICATED.
2. SOUND-ATTENUATION BLANKETS: ASTM C 665, TYPE I (UNFACED)
3. ACOUSTICAL SEALANT: COMPLY WITH ASTM C 834, NONSAG, PAINTABLE, NONSTAINING LATEX.

D. INSTALLATION:
1. FRAMING: COMPLY WITH ASTM C 754 AND ASTM C 840 AND WITH U.S. GYPSUM'S "GYPSUM CONSTRUCTION HANDBOOK" ISOLATE FRAMING FROM BUILDING STRUCTURE TO PREVENT TRANSFER OF LOADING IMPOSED BY STRUCTURAL MOVEMENT AND PROVIDE BRACING AS NECESSARY FOR PROPER SUPPORT WHETHER INDICATED OR NOT.
2. GYPSUM PANELS AND FINISH: COMPLY WITH ASTM C 840 AND GA-216. ISOLATE GYPSUM BOARD ASSEMBLIES FROM ABUTTING STRUCTURAL AND MASONRY WORK AND FINISH AS FOLLOWS:
a. LEVEL 1 (EMBED TAPE AT JOINTS): AT CONCEALED AREAS UNLESS A HIGHER LEVEL IS INDICATED OR REQUIRED FOR FIRE-RESISTANCE-RATED ASSEMBLY.
b. LEVEL 2 (EMBED TAPE AND APPLY SEPARATE FIRST COAT OF JOINT COMPOUND TO TAPE. FASTENERS, AND TRIM FLANGES AND SAND SMOOTH AFTER EACH COAT): AT SUBSTRATES BEHIND TILE.
c. LEVEL 4 (EMBED TAPE AND APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES AND SAND SMOOTH AFTER EACH COAT): AT ALL WALLS RECEIVING FLAT, EGGSHELL, OR SATIN SHEEN PAINT OR WALLCOVERING)
d. LEVEL 5 (EMBED TAPE, APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES, AND APPLY THIN SKIM COAT OF JOINT COMPOUND OVER ENTIRE SURFACE AND SAND SMOOTH AFTER EACH COAT): AT ALL WALLS RECEIVING SEMI-GLOSS OR GLOSS SHEEN PAINT, AND ALL GYPSUM BOARD CEILINGS)

9.3 PAINTING

A. SUBMITTALS: PRODUCT DATA AND THREE (3) DRAW-DOWN SAMPLES OF EACH COLOR AND SHEEN SPECIFIED.

B. ATTIC STOCK: FURNISH ONE (1) GALLON OF EACH PAINT COLOR AND SHEEN, IN CONTAINERS, PROPERLY LABELED AND SEALED.

C. PRODUCTS: PROVIDE MANUFACTURER'S BEST QUALITY PAINTS OF COLOR AND SHEEN AS INDICATED IN THE CONSTRUCTION DOCUMENTS THAT ARE FORMULATED AND RECOMMENDED BY MANUFACTURER FOR APPLICATION INDICATED. PROVIDE MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH SUBSTRATES.

D. PAINT SYSTEMS:
1. ALL PAINT, STAIN, AND VARNISH SHALL BE PRODUCTS OF DEVOE, KWAL, SHERWIN WILLIAMS, PPG INDUSTRIES, PRATT & LAMBERT OR APPROVED EQUAL.
2. ALL MATERIAL SHALL BE OF THE STANDARD RESIDENTIAL GRADE OF THE TYPES DESIGNATED.
3. ALL MATERIAL SHALL BE DELIVERED TO THE JOB SITE IN THE ORIGINAL, UNOPENED, LABELED CONTAINERS. COLORS NOT SPECIFICALLY CALLED FOR IN THE PAINT SCHEDULE WILL BE SELECTED BY THE ARCHITECT.

E. APPLICATION / INSTALLATION:
1. EQUIPMENT: APPLY COATINGS BY BRUSH, ROLLER, SPRAY, OR OTHER APPLICATORS ACCORDING TO COATING MANUFACTURER'S WRITTEN INSTRUCTIONS. WHEN SPRAYED, EXTERIOR COATINGS SHALL BE BACK-ROLLED FOLLOWING SPRAY APPLICATION. USE ROLLERS FOR FINISH COAT ON INTERIOR WALLS AND CEILINGS.
2. PIGMENTED (OPAQUE) FINISHES: COMPLETELY COVER SURFACES TO PROVIDE A SMOOTH, OPAQUE SURFACE OF UNIFORM APPEARANCE. PROVIDE A FINISH FREE OF CLOUDINESS, SPOTTING, HOLIDAYS, LAPS, BRUSH MARKS, RUNS, SAGS, ROPINESS, OR OTHER SURFACE IMPERFECTIONS.
3. APPLY PRODUCTS PER MANUFACTURER RECOMMENDED GUIDELINES. PRODUCT COVERAGE MINIMUM ONE COAT OF PRIMER AND TWO FINAL COATS ON MATERIALS.APPLY PRODUCTS TO MATERIALS APPROVED BY MANUFCTURER PRODUCT DATA SHEETS.

A. Exterior Work:	
1. ALL EXTERIOR GALVANIZED METAL FLASHINGS, CONNECTORS, ETC.	ONE COAT COMMERCIAL METAL ETCH. ONE COAT EXTERIOR METAL PRIMER. TWO COATS EXTERIOR SEMI-GLOSS METAL PAINT.
2.ALL EXPOSED STEEL FRAMES, ANGLES, ETC.	TWO COATS SEMI-GLOSS METAL PAINT. (PRIME COAT CHANNELS, POSTS, RAILINGS, BEAMS, ETC. SURFACES THAT ARE NOT PRIMED.)
3. ALL EXPOSED MISC. FERROUS METAL ITEMS INCLUDING RAILS, PLATES, ANGLES, BOLTS, GRATES, CONDUITS, POSTS, PIPING, ETC.	TWO COATS SEMI-GLOSS METAL PAINT. (PRIME COAT SURFACES THAT ARE NOT PRIMED.)
4. ALL UNPRIMED EXTERIOR MILLWORK, TRIM, SMOOTH WOOD MATERIALS, ETC. SEMI-GLOSS PAINT.	PRIME AND BACK LATEX PRIMER. TWO COATS OF EXTERIOR LATEX SATIN OR
5. PRIMED MILLWORK AND TRIM.	TOUCH-UP PRIME. TWO COATS OF EXTERIOR 100% SATIN OR SEMI-GLOSS ACRYLIC LATEX PAINT.
6. ROUGH SAWN TRIM, BEAMS, COLUMNS, ETC.	ONE COAT PRIMER. TWO COATS EXTERIOR HEAVY BODIED STAIN.
7. PRIMED METAL ENTRY DOORS, FRENCH DOORS AND METAL FRAMES, GARAGE DOORS.	PATCH DENTS, TOUCH UP PRIMER. TWO COATS OF LATEX SEMI-GLOSS PAINT INSIDE AND OUTSIDE.

9.3 PAINTING- CONT

8. ANY OTHER PAINTING REQUIRED BY THE DRAWINGS.	TWO COATS TO MATCH ADJACENT SURFACES.
B. INTERIOR WORK:	
1. GYPSUM BOARD WALLS EXCEPT IN KITCHENS, BATHROOMS, LAUNDRIES AND COMMON AREA CORRIDORS, UNLESS SCHEDULED FOR WALLCOVERING	ONE COAT OF PRIME LATEX PAINT AND ONE FINISH COAT OF LATEX EGGSHELL WALL PAINT. (TWO COATS IF REQUIRED TO ACHIEVE FULL COVERAGE.) ONE WALL IN EACH APARTMENT UNIT LIVING SPACE AND EACH BEDROOM SHALL BE PAINTED ACCENT COLORS.
2. GYPSUM BOARD WALLS IN KITCHENS, BATHROOMS AND LAUNDRIES UNLESS SCHEDULED FOR WALLCOVERING OR TILE.	ONE COAT OF PRIME LATEX P

DIVISION 11 - EQUIPMENT

11 3113 APPLIANCES

A. REFERENCE CONSTRUCTION DRAWINGS FOR QUANTITY, AND LOCATION OF APPLIANCES.

SUBMITTALS PRODUCT DATA: MANUFACTURER'S DATA SHEETS ON EACH PRODUCT TO BE USED
1. SUBMIT SHOP DRAWINGS OF ALL WORK SPECIFIED HEREIN SHOWING SIZES, METHODS OF INSTALLATION AND MOUNTING REQUIREMENTS, INCLUDING ROUGH-IN AND CONNECTION DETAILS FOR ELECTRICAL, PLUMBING, AND VENTILATION, CATALOG CUTS, BROCHURES, AND OPERATING CHARACTERISTICS OF ALL ITEMS.
2. SUBMIT EQUIPMENT DATA, FLOOR PLANS AND SHOP DETAILS WITH THE CLEAR UNDERSTANDING THAT NO FABRICATION OR ORDERING OF EQUIPMENT SHALL PROCEED UNTIL EQUIPMENT AND DRAWINGS HAVE BEEN APPROVED BY ARCHITECT.
3. OPERATION AND MAINTENANCE DATA.

WARRANTY: SPECIAL WARRANTIES: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE RESIDENTIAL APPLIANCES OR COMPONENTS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.
1. WARRANTY PERIOD: TWO YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

MATERIALS:
A. THE FOLLOWING APPLIANCES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WORK SHALL INCLUDE SETTING-IN-PLACE ALL APPLIANCES AND ALL ELECTRICAL, MECHANICAL AND PLUMBING HOOK-UPS TO MAKE A COMPLETE AND FIRST-CLASS INSTALLATION. KITCHEN APPLIANCES SHALL BE STAINLESS STEEL AND LAUNDRY APPLIANCES SHALL BE WHITE. APPLIANCES LISTED ARE AS MANUFACTURED BY GENERAL ELEC-TRIC UNLESS OTHERWISE NOTED.

EXECUTION:
A. BUILT-IN EQUIPMENT: SECURELY ANCHOR UNITS TO SUPPORTING CABINETS OR COUNTERTOPS WITH CONCEALED FASTENERS. VERIFY THAT CLEARANCES ARE ADEQUATE FOR PROPER FUNCTIONING AND THAT ROUGH OPENINGS ARE COMPLETELY CONCEALED.
B. FREESTANDING EQUIPMENT: PLACE UNITS IN FINAL LOCATIONS AFTER FINISHES HAVE BEEN COMPLETED IN EACH AREA. VERIFY THAT CLEARANCES ARE ADEQUATE TO PROPERLY OPERATE EQUIPMENT.
C. RANGE ANTI-TIP DEVICE: INSTALL AT EACH RANGE ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
D. UTILITIES: COMPLY WITH PLUMBING AND ELECTRICAL REQUIREMENTS.

FIELD QUALITY CONTROL:
A. TESTS AND INSPECTIONS:
1. PERFORM VISUAL, MECHANICAL, AND ELECTRICAL INSPECTION AND TESTING FOR EACH APPLIANCE ACCORDING TO MANUFACTURERS' WRITTEN RECOMMENDATIONS. CERTIFY COMPLIANCE WITH EACH MANUFACTURER'S APPLIANCE-PERFORMANCE PARAMETERS.
2. OPERATIONAL TEST: AFTER INSTALLATION, START UNITS TO CONFIRM PROPER OPERATION.
3. TEST AND ADJUST CONTROLS AND SAFETIES. REPLACE DAMAGED AND MALFUNCTIONING CONTROLS AND COMPONENTS.

B. CLEANING
1. PRIOR TO FINAL ACCEPTANCE, CLEAN ALL EQUIPMENT AND REMOVE ALL STAINS, PAINT SPOTS, PROTECTIVE WRAPPINGS AND COATINGS, TAPES, GREASE, OIL, PLASTER, DUST, POLISHING COMPOUNDS AND INSTALL ALL INTERNAL COMPONENTS AND ACCESSORIES.

C. AFTER INSTALLATION, PROVIDE MAINTENANCE MANUALS, OPERATING INSTRUCTIONS, REPLACEMENT PARTS LIST, SERIAL AND MODEL NUMBERS AND REGISTRY CARDS FOR EACH ITEM OF EQUIPMENT.

DIVISION 32 - EXTERIOR IMPROVEMENTS

32 3113 FENCES, GATES & HARDWARE

A. REFERENCE CONSTRUCTION DRAWINGS FOR QUANTITY, AND LOCATIONS

B.SUBMITTALS: THE CONTRACTOR SHALL PREPARE, AND SUBMIT TO THE ARCHITECT FOR APPROVAL, COMPLETE SHOP DRAWINGS FOR ALL WORK INCLUDED.PROVIDE PRODUCT DATA IN THE FORM OF MANUFACTURER'S TECHNICAL DATA, SPECIFICATIONS, AND INSTALLATIONS FOR FENCE, POSTS, GATE UPRIGHTS, POST CAPS, GATES, GATE HARDWARE AND ACCESSORIES.VERIFY LAYOUT INFORMATION FOR FENCES AND GATES SHOWN ON THE DRAWINGS IN RELATION TO THE PROPERTY SURVEY AND EXISTING STRUCTURES. VERIFY DIMENSIONS BY FIELD MEASUREMENTS. PROVIDE SAMPLES IN THE FORM OF 3" LENGTHS OF ACTUAL PRODUCT USED.

C. WARRANTY: LIFETIME NON-PRORATED LIMITED TRANSFERABLE WARRANTY APPLIES TO ORIGINAL HOMEOWNER/CONSUMER, OR 30 YEAR NON-PRORATED LIMITED WARRANTY APPLIES TO COMMERCIAL APPLICATIONS.

D. BASIS OF DESIGN: DIGGER SPECIALTIES INC.(DSI), POLYVINYL FENCE SYSTEMS. TRI-MAX II, HEIGHT -72"

E. MATERIALS:
1. POSTS, RAILS, PICKETS, GATE UPRIGHTS, POST CAPS, AND ACCESSORIES SHALL BE OF HIGH IMPACT, ULTRA VIOLET (U.V.) RESISTANT, RIGID PVC, AND SHALL COMPLY WITH ASTM D 1784, CLASS 14344B.
2.FENCE POSTS: ONE PIECE EXTRUDED, OF LENGTHS INDICATED AND PRE-ROUTED TO RECEIVE RAILS AT SPACING INDICATED. PROVIDE CROSS SECTION, WALL THICKNESS AND CORNER RADIUS MINIMUM TOLERANCES.
3.RAILS: ONE PIECE EXTRUDED, OF LENGTHS INDICATED PRE-ROUTED TO RECEIVE PICKETS AT SPACING INDICATED.
PROVIDE CROSS SECTION, WALL THICKNESS AND CORNER RADIUS MINIMUM TOLERANCES.
4. PICKETS: ONE PIECE EXTRUDED, OF LENGTHS INDICATED. PROVIDE CROSS SECTION, WALL THICKNESS AND CORNER RADIUS MINIMUM TOLERANCES. PICKET SPACING FULL PRIVACY.
5.GATE UPRIGHTS: ONE PIECE EXTRUDED, OF LENGTHS INDICATED WITH ALUMINUM U CHANNEL INSERT. PROVIDE CROSS SECTION, WALL THICKNESS AND CORNER RADIUS MINIMUM TOLERANCES.
6. POST CAPS: MOLDED, ONE PIECE. CROSS SECTION TO MATCH POST OR GATE SECTION. PROVIDE MINIMUM THICKNESS REQUIREMENTS. CONFIGURATION: FLAT OR FOUR-SIDED AS REQUIRED FOR INSTALLATION TO TOP OF POSTS AND GATE. ACCESSORIES: MANUFACTURERS' STANDARD GATE BRACE, SCREW CAPS, RAIL END REINFORCERS, AND OTHER ACCESSORIES AS REQUIRED.
7. STIFFENER CHANNELS, GALVANIZED STEEL STRUCTURAL CHANNEL. CONFIGURE CHANNELS FOR CONCEALED INSTALLATION WITHIN PVC RAILS WITH PRE-DRILLED HOLES FOR DRAINAGE. ALUMINUM EXTRUDED CHANNEL AVAILABLE UPON REQUEST. CROSS SECTION: 1.775 X 1.700 GALVANIZED STEEL CHANNEL THICKNESS: 0.040 GAUGE (MINIMUM).
8. FASTENERS AND ANCHORAGE: STAINLESS STEEL. ALL FASTENERS TO BE CONCEALED OR COLORED HEADS TO MATCH. PROVIDE SIZES AS RECOMMENDED BY FENCE MANUFACTURER.
9. PVC CEMENT: AS RECOMMENDED BY FENCE MANUFACTURER.

F. HARDWARE:
1. GENERAL: PROVIDE HARDWARE AND ACCESSORIES FOR EACH GATE ACCORDING TO THE FOLLOWING REQUIREMENTS:
2. HINGES: COLOR- BLACK, SIZE AND MATERIAL TO SUIT GATE SIZE. NON LIFT-OFF TYPE, SELF CLOSING, GLASS FILLED NYLON WITH ADJUSTER PLATE, OFFSET TO PERMIT 120 DEGREE GATE OPENING. PROVIDE ONE PAIR OF HINGES FOR EACH GATE.
3. LATCH: FINISH TO MATCH HINGE. MANUFACTURERS' STANDARD SELF LATCHING, GLASS FILLED NYLON AND STAINLESS STEEL COMPOSITION SINGLE OR DUAL ACCESS GRAVITY LATCH. PROVIDE ONE LATCH PER GATE.
4. HARDWARE: FINISH TO MATCH HINGE.STAINLESS STEEL. PROVIDE SIZES AS RECOMMENDED BY FENCE MANUFACTURER.

G. CONCRETE:
1. CONCRETE: PROVIDE CONCRETE CONSISTING OF PORTLAND CEMENT PER ASTM C 150, AGGREGATES PER ASTM C 33, AND POTABLE WATER. MIX MATERIALS TO OBTAIN CONCRETE WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2000 PSI. USE AT LEAST FOUR SACKS OF CEMENT PER CUBIC YARD, 1-INCH MAXIMUM SIZE AGGREGATE, 3-INCH MAXIMUM SLUMP. USE ½ INCH MAXIMUM SIZE AGGREGATE IN POST WHERE REQUIRED.
2. PACKAGES CONCRETE MIX: MIX DRY-PACKAGED NORMAL-WEIGHT CONCRETE CONFORMING TO ASTM C 387 WITH CLEAN WATER TO OBTAIN A 2 TO 3 INCH SLUMP.

H. INSTALLATION:
1. INSTALL FENCE IN COMPLIANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. DURING INSTALLATION, PVC COMPONENTS SHALL BE CAREFULLY HANDLED AND STORED TO AVOID CONTACT WITH ABRASIVE SURFACES. INSTALL

collins|webb ARCHITECTURE
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
LEE'S SUMMIT, MO

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

PROFESSIONAL SEAL

G503

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

GENERAL PROJECT SPECIFICATIONS

8/12/2025 8:49:20 AM

1. ALL WORK SHALL CONFORM TO 2018 INTERNATIONAL BUILDING CODE AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT, MISSOURI.
2. DESIGN LOADS
   - A. OVERALL BUILDING CLASSIFICATIONS
     - 1. RISK CATEGORY — III
     - 2. SNOW IMPORTANCE FACTOR, I_s — 1.10
     - 3. ICE IMPORTANCE FACTOR - WIND, I_w — 1.00
     - 4. SEISMIC IMPORTANCE FACTOR, I_e — 1.25
   - B. SLAB ON GRADE FLOOR LOADS
     - 1. LIVE LOAD — 100 PSF
     - 2. CONCENTRATED LOAD — 3000 LB ACTING ON AN AREA 4.5 IN. BY 4.5 IN.
   - C. ROOF DEAD AND LIVE LOADS
     - 1. DEAD LOAD TOP CHORD — 10 PSF
     - 2. DEAD LOAD BOT. CHORD — 10 PSF
     - 3. LIVE LOAD TOP CHORD — 20 PSF
     - 4. LIVE LOAD BOT. CHORD — 0 PSF (U.N.O)
   - D. ROOF SNOW LOADS
     - 1. GROUND SNOW LOAD, P_g — 20 PSF
     - 2. FLAT ROOF SNOW LOAD, P_f — 15.4 PSF
     - 3. SNOW EXPOSURE FACTOR, C_e — 1.0
     - 4. THERMAL FACTOR, C_t — 1.0
     - 5. SLOPE FACTOR, C_s — 1.0
     - 6. DRIFTING — PER CODE
   - E. WIND LOADS
     - 1. BASIC WIND SPEED (3 SECOND GUST) — 117 MPH
     - 2. EXPOSURE CATEGORY — B
     - 3. INTERNAL PRESSURE COEFFICIENT, GC_{pi} — +/- 0.18
     - 4. COMPONENTS AND CLADDING PER ASCE 7-16.
   - F. SEISMIC LOADS
     - 1. S_S — 0.100
     - 2. S_1 — 0.068
     - 3. SITE CLASS — D
     - 4. S_{DS} — 0.106
     - 5. S_{D1} — 0.109
     - 6. SEISMIC DESIGN CATEGORY — B
     - 7. SEISMIC FORCE RESISTING SYSTEM — WOOD WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR
     - 8. DESIGN BASE SHEAR — C_s/W
     - 9. DESIGN RESPONSE COEFFICIENT, C_s — 0.017
     - 10. RESPONSE MODIFICATION COEFFICIENT, R — 6.5
     - 11. ANALYSIS PROCEDURE USED — EQUIVALENT LATERAL FORCE (ELF) PROCEDURE
   - G. ROOF RAIN LOADS
     - 1. 60-MIN DURATION/100 YEAR RAIN INTENSITY, i — 3.91 IN/HR
     - 2. 15-MIN DURATION/100 YEAR RAIN INTENSITY, i — 8.30 IN/HR
3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO FABRICATION.
4. IF DISCREPANCIES EXIST BETWEEN CONTRACT DRAWINGS, AND/OR SHOP DRAWINGS NOTIFY THE ENGINEER OF RECORD.
5. THE CONTRACTOR SHALL REVIEW DRAWINGS FROM ALL OTHER DISCIPLINES FOR PERTINENT MISC. ITEMS OR INFORMATION RELATED TO THE STRUCTURAL WORK AND COORDINATE AS REQUIRED.
6. THE BUILDING IS NOT STRUCTURALLY STABLE UNTIL ALL CONNECTIONS, FRAMING, SHEAR WALLS, PERMANENT BRACING, AND EXTERIOR LOAD-BEARING WALLS ARE COMPLETE AND HAVE ACHIEVED THEIR RESPECTIVE DESIGN STRENGTHS. CONTRACTOR IS SOLELY RESPONSIBLE FOR MAINTAINING STRUCTURAL STABILITY DURING ERECTION AND CONSTRUCTION. TEMPORARY BRACING SYSTEMS ARE NOT TO BE REMOVED UNTIL STRUCTURAL WORK IS COMPLETE.
7. PROVIDE ADEQUATE SHORING DURING CONSTRUCTION TO RESIST FORCES SUCH AS WIND AND UNBALANCED LOADS DUE TO CONSTRUCTION. DO NOT BACKFILL UNTIL CONCRETE HAS CURED 14 DAYS.
8. FOUNDATIONS
   - A. FOUNDATIONS ARE DESIGNED TO BEAR ON 1500 PSF FOR STRIP FOOTINGS ON SOIL AND 1500 PSF FOR SPREAD FOOTINGS ON SOIL.
   - B. CONTRACTOR SHALL REMOVE EXISTING FOOTINGS AND FOUNDATIONS THAT ARE LOCATED WITHIN THE FOOTPRINT OF THE NEW BUILDING.
9. CONCRETE
   - A. CAST-IN-PLACE CONCRETE CONSTRUCTION SHALL CONFORM TO LATEST APPLICABLE AMERICAN CONCRETE INSTITUTE DOCUMENTS, ACI-301, 305, 306, 315, 318, AND 347 UNLESS NOTED OTHERWISE IN THESE CONTRACT DOCUMENTS.
   - B. ALL CONCRETE, UNLESS NOTED OTHERWISE, SHALL DEVELOP A 28 DAY COMPRESSIVE STRENGTH AND HAVE MAXIMUM DRY SHRINKAGE PER ASTM C157 AS FOLLOWS:
     - 1. FOOTINGS, GRADE BEAMS, WALLS, BEAMS, COLUMNS: — 4000 PSI (DS MAX 0.05%)
     - 2. SLAB ON GRADE: — 4000 PSI (DS MAX 0.05%)
     - 3. REFER TO THE SPECIFICATION FOR AIR-ENTRAINED CONCRETE.
   - C. SLABS-ON-GRADE SHALL DEVELOP A 90 DAY COMPRESSIVE STRENGTH.
   - D. IT IS THE INTENT OF THESE CONCRETE SPECIFICATIONS THAT THE CONTRACTOR SUPPLY CONCRETE MIXES WITH A MINIMUM AMOUNT OF WATER IN ORDER TO LIMIT PLASTIC SHRINKAGE CRACKING IN FRESHLY PLACED CONCRETE. IT IS EXPECTED THAT PRODUCING WORKABILITY FOR CONCRETE MIXES WILL REQUIRE THE ADDITION OF WATER-REDUCING CHEMICAL ADMIXTURES.
   - E. CONCRETE MIX DESIGNS SHALL INCLUDE ALL APPLICABLE ADMIXTURES.
   - F. CONCRETE SLUMP SHALL BE A MAXIMUM OF 4" +/- 1" (ASTM C-145) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY IF ADMIXTURE IS TO BE ADDED IN THE FIELD IS SHALL BE ADDED THROUGH THE USE OF AN EXTERNAL MEASURING DEVICE (I.E. 5 GALLON BUCKET).
   - G. CONCRETE EXPOSED TO WEATHER, PARKED VEHICLES, AND/OR DEICING CHEMICAL SHALL CONTAIN 6% (+/- 1%) ENTRAINED AIR BY VOLUME.
   - H. CHAMFER ALL EXPOSED CORNERS OF CONCRETE WALLS, 3/4" UNLESS NOTED OTHERWISE.
   - I. ALL CONTROL JOINTS IN CONCRETE SLABS-ON-GRADE SHALL BE CUT TO 1/3 OF DEPTH WHEN USING WET-CUTTING PROCESS AND 1/4 OF DEPTH WHEN USING EARLY-ENTRY DRY-CUT PROCESS. CUT JOINTS AS SOON AS APPLICABLE PER PROCESS USED AFTER CONCRETE HAS BEEN PLACED WITHOUT DISLODGING AGGREGATE, OR USE A KEYED COLD JOINT.
   - J. CUT SLABS-ON-GRADE INTO AREAS OF APPROXIMATELY 225 SQUARE FEET MAINTAINING AS CLOSE TO SQUARE AREAS AS POSSIBLE. LENGTH TO WIDTH RATIOS OF JOINTED PANELS SHALL NOT EXCEED 1.5:1. COORDINATE LOCATIONS OF CONTROL JOINTS WITH ARCHITECT.
   - K. CONTROL JOINTS IN WALLS SHALL BE PLACED AT 20'-0" O.C. MAXIMUM UNLESS NOTED OTHERWISE. LOCATE JOINTS BESIDE PIERS INTEGRAL WITH WALLS, NEAR CORNERS, AND IN CONCEALED LOCATIONS WHERE POSSIBLE. CONSTRUCTION JOINTS MAY BE PLACED IN LIEU OF CONTROL JOINTS AT CONTRACTOR'S DISCRETION. COORDINATE LOCATION OF CONTROL JOINTS WITH ARCHITECT.
   - L. PRIOR TO PLACING CONCRETE IN ANY LOCATION, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO HAVE THOROUGHLY CHECKED AND COORDINATED ALL DIMENSIONS, ELEVATIONS, OPENINGS, RECESS, AND BLOCKOUTS AS SHOWN ON ANY CONTRACT DRAWINGS. IN THE EVENT ERRORS, CONFLICTS, OR OMISSIONS EXIST, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE ARCHITECT OR ENGINEER FOR NECESSARY CORRECTIVE ACTION.
   - M. EMBEDDED ITEMS ARE TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR PRIOR TO PLACING CONCRETE.
   - N. ANCHOR RODS AND ANCHOR BOLTS SHALL BE HELD IN PLACE WITH A RIGID TEMPLATE
   - O. HORIZONTAL JOINTS BEYOND THOSE SHOWN IN THE CONTRACT DOCUMENTS SHALL NOT BE CONSTRUCTED WITHOUT THE APPROVAL OF THE ARCHITECT AND ENGINEER.
10. REINFORCING STEEL
    - A. ALL REINFORCING SHALL BE ASTM A615 GRADE 60, EXCEPT WELDED REINFORCING WHICH SHALL BE ASTM A706 GRADE 60.
    - B. ALL WELDED WIRE FABRIC SHALL BE ASTM A82 COLD DRAWN WIRE.
    - C. ALL ACCESSORIES FOR SUPPORTING REINFORCING SHALL BE GALVANIZED OR HAVE PLASTIC-COATED FEET.
    - D. PROVIDE CORNER BARS AT THE EXTERIOR FACE OF ALL WALL AND FOOTING CORNERS EQUAL TO HORIZONTAL BARS.
    - E. REINFORCING SHALL BE DETAILED, FABRICATED, PLACED, AND SUPPORTED IN ACCORDANCE WITH ACI 315, LATEST APPLICABLE EDITION.
    - F. STANDARD COVERAGE OF REINFORCING SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE.
      - 1. PERMANENTLY EXPOSED TO WEATHER
        - A. CAST AGAINST EARTH — 3"
        - B. IN CONTACT WITH WATER — 3"
        - C. FORMED — 2"
      - 2. NOT EXPOSED TO EARTH OR WEATHER
        - A. SLABS AND WALLS — 3/4"
        - B. BEAMS AND COLUMNS — 1 1/2"
    - G. SPLICE LENGTH
      - 1. 3000 PSI CONCRETE
        - A. NON-COATED — 55 db (BAR DIAMETER)
        - B. EPOXY COATED — 83 db
      - 2. 4000 PSI CONCRETE
        - A. NON-COATED — 48 db
        - B. EPOXY COATED — 72 db
      - 3. 5000 PSI CONCRETE
        - A. NON-COATED — 43 db
        - B. EPOXY COATED — 64 db
    - H. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN AND NOTED ON THE CONTRACT DRAWINGS OR PERMITTED BY THE ENGINEER OF RECORD.
    - I. ALL REINFORCEMENT AND EMBEDDED ITEMS INCLUDING PLATES AND ANCHOR RODS SHALL BE ACCURATELY PLACED, ADEQUATELY SUPPORTED, AND SECURED AGAINST DISPLACEMENT BEFORE CONCRETE IS PLACED. NEITHER REINFORCEMENT NOR EMBEDDED ITEMS SHALL BE PLACED INTO FRESHLY PLACED CONCRETE UNLESS APPROVED BY THE ENGINEER OF RECORD.
11. STRUCTURAL STEEL
    - A. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, LATEST APPLICABLE EDITION AND AISC CODE OF STANDARD PRACTICE.
    - B. ALL STRUCTURAL STEEL FOR WIDE FLANGE SHALL BE A992 GRADE 50 UNLESS NOTED OTHERWISE. ALL ANGLES, PLATES AND CHANNELS SHALL BE ASTM A36 UNLESS NOTED OTHERWISE. ALL RECTANGULAR AND ROUND HSS SHAPES SHALL BE ASTM A500, GRADE B.
    - C. ALL BOLTS SHALL BE 3/4" Ø A-325 BOLTS WITH HEAVY HEX HEADS UNLESS NOTED OTHERWISE. ALL CONNECTIONS SHALL HAVE A MINIMUM OF (2) 3/4" Ø BOLTS, BEARING TYPE CONNECTIONS ONLY.
    - D. ALL STRUCTURAL STEEL WELDS IN THE SHOP OR IN THE FIELD SHALL BE PERFORMED BY A QUALIFIED WELDER AND SHALL CONFORM TO THE CURRENT REQUIREMENTS OF A.W.S.
    - E. SHOP WELDED AND FIELD BOLTED CONNECTIONS ARE PREFERRED UNLESS NOTED OTHERWISE.
    - F. ALL STEEL EXPOSED TO THE EXTERIOR, EXHIBITS, POOLS, AND LSS AREAS SHALL BE HOT-DIP GALVANIZED AND PAINTED PER ARCHITECT UNLESS NOTED OTHERWISE.
    - G. THE CONTRACTOR SHALL PROVIDE SHELF ANGLES, GLASS SUPPORTS, LINTELS, AND OTHER MISC. STEEL AS SHOWN ON THESE DRAWINGS AS REQUIRED TO PROVIDE SUPPORT (STABILIZATION) AROUND AND THROUGHOUT THE BUILDING. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL MISC. STEEL DETAILS.
12. ROUGH CARPENTRY
    - A. HEADERS, JOISTS, AND RAFTERS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REQUIREMENTS. (EXAMPLE SPECIES: #2 SPRUCE-PINE-FIR)
      - 1. F_B — 875 PSI
      - 2. F_V — 135 PSI
      - 3. F_C — 1150 PSI
      - 4. E — 1400 KSI
    - B. INTERIOR WALLS AND EXTERIOR WALLS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REQUIREMENTS. (EXAMPLE SPECIES: #2 SPRUCE-PINE-FIR)
      - 1. F_B — 875 PSI
      - 2. F_V — 135 PSI
      - 3. F_C — 1150 PSI
      - 4. E — 1400 KSI
    - C. TIMBER FRAMING MEMBERS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REQUIREMENTS. (EXAMPLE SPECIES: #2 SPRUCE-PINE-FIR)
      - 1. F_B — 875 PSI
      - 2. F_V — 135 PSI
      - 3. F_C — 1150 PSI
      - 4. E — 1400 KSI
    - D. ALL LVL MEMBERS SHALL BE MICROLLAM 2.0E 2600 OR APPROVED EQUAL.
    - E. ALL WOOD FRAMING MEMBERS INDICATED ARE NOMINAL SIZES. PROVIDE ACTUAL DRESSED SIZES, KILN-DRIED, WITH MAXIMUM 3N-PLACE MOISTURE CONTENT OF 19%.
    - F. ALL BOLTS ARE A36 OR A307, GRADE 1, AND ALL NAILS ARE COMMON WIRE NAILS UNLESS NOTED OTHERWISE.
    - G. LAY ALL STRUCTURAL PANELS WITH FACE GRAIN PERPENDICULAR TO SUPPORTING MEMBERS AND OFFSET END JOINTS 4'-0". PANELS TO BE APA RATED AND STAMPED FOR THE LOADING SHOWN IN SECTION 2 "DESIGN" AND SHOULD MATCH THE SUPPORT SPACING SHOWN ON THE PLANS.
    - H. ROOF DECKING SHALL BE 3/4" THICK APA RATED EXTERIOR GRADE SHEATHING FASTENED WITH 10d NAILS AT 6" O.C. ON EDGES AND 12" O.C. IN FIELD UNLESS NOTED OTHERWISE.
    - I. FASTENER QUALITY, QUANTITY, SIZE, AND SPACING SHALL COMPLY WITH IBC FASTENING SCHEDULE (TABLE 2304.9) UNLESS NOTED OTHERWISE.
    - J. ALL WOOD IN CONTACT WITH CONCRETE OR EXPOSED TO WEATHER SHALL BE PRESERVATIVE TREATED.
13. PREFABRICATED WOOD TRUSSES
    - A. TRUSS SPACING TO BE AS SHOWN ON DRAWINGS.
    - B. LOADS SHOWN IN SECTION 2 "DESIGN LOADS" ARE A MINIMUM. TRUSS DESIGNER IS RESPONSIBLE FOR ESTABLISHING FINAL LOADS USED FOR DESIGN, INCLUDING LIVE, DEAD, SNOW (WITH DRIFTS), WIND, AND SEISMIC LOADS. TRUSS FABRICATOR IS TO SUPPLY SEALED TRUSS SHOP DRAWINGS AND SEALED PLAN PLACEMENT DRAWINGS PREPARED UNDER THE SUPERVISION OF THE SAME LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MISSOURI.
    - C. TRUSS MANUFACTURER IS RESPONSIBLE FOR DESIGNING, DETAILING, AND PROVIDING ALL TRUSS-TO-TRUSS, TRUSS-TO-WALL, AND TRUSS-TO-BEAM CONNECTIONS, UNLESS NOTED OTHERWISE.
    - D. ROOF SHOP DRAWINGS SHALL INCLUDE DETAILED ERECTION DRAWINGS, AS WELL AS DESIGN INFORMATION FOR EACH TRUSS. PROVIDE ALL INFORMATION AS REQUIRED IN THE INTERNATIONAL BUILDING CODE SECTION 2303.4 "TRUSSES", INCLUDING CONNECTION DESIGN.
    - E. TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED, OR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN CONCURRENCE AND APPROVAL OF THE LICENSED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE TRUSS DESIGN AND THE ENGINEER OF RECORD.
    - F. REFERENCE SECTION 16 "SUBMITTALS" FOR MORE INFORMATION.
14. POST CONSTRUCTION ANCHORS
    - A. POST INSTALLED ANCHORS ARE NOT TO BE SUBSTITUTED FOR ANCHORS SHOWN ON THE DRAWINGS. IF CAST IN PLACE ANCHOR IS DETERMINED TO BE OUT OF TOLERANCE OR OMITTED, CONTRACTOR MUST GENERATE A REQUEST FOR INFORMATION IN REGARDS TO THE SOLUTION.
    - B. EMBEDMENT DEPTH SHALL BE DEFINED AS THE DISTANCE FROM THE SURFACE OF THE LOAD-BEARING BASE MATERIAL TO THE DEEPEST PART OF THE ANCHOR AFTER THE ANCHOR HAS BEEN DRIVEN INTO THE HOLE.
    - C. OBSERVATION AND VERIFICATION OF EMBEDMENT HOLE CLEANING, DEPTH, AND ANCHOR INSTALLATION IS REQUIRED FOR ALL EPOXY ANCHORS.
    - D. EQUIVALENT ANCHORS MAY BE SUBMITTED FOR THE ENGINEER'S APPROVAL. SUBMITTALS ARE THE CONTRACTOR'S RESPONSIBILITY AND MUST INCLUDE EVALUATION REPORTS FROM THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS, CURRENT WITH THE REQUIREMENTS OF THE PROJECT.
15. STRUCTURAL ENGINEER SITE OBSERVATIONS
    - A. THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCES.
    - B. THE ENGINEER SHALL NOT HAVE CONTROL NOR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, PROCEDURES,TECHNIQUES, OR SEQUENCES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR, OR AN OTHER PERSONS PERFORMING ANY OF THE WORK, OR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
    - C. PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF LEIGH & O'KANE L.L.C. IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS AND DEFICIENCIES IN THE WORK OF THE CONTRACTOR.
16. SUBMITTALS
    - A. ALL SHOP DRAWINGS AND SUBMITTALS MUST BE REVIEWED AND APPROVED BY THE CONTRACTOR PRIOR TO SUBMITTAL. ENGINEER'S REVIEW OF SHOP DRAWINGS IS LIMITED TO CHECKING FOR GENERAL CONFORMANCE WITH DESIGN DRAWINGS AND STRENGTH OF COMPONENTS AND MATERIALS. CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES FROM THE DESIGN DRAWINGS, QUANTITIES, DIMENSIONAL ERRORS, OR OMISSIONS IN THE SHOP DRAWINGS.
    - B. ALL SHOP DRAWINGS MUST BE ORIGINAL DOCUMENTS AND SHALL NOT BE REPRODUCTIONS OF THESE CONTRACT DOCUMENTS.
    - C. SUBMIT SHOP DRAWINGS DETAILING FABRICATION OF EACH MEMBER AND ITS CONNECTIONS. DETAIL DRAWINGS ARE TO BE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MISSOURI FOR THE FOLLOWING ITEMS.
      - 1. PREFABRICATED WOOD TRUSSES
    - D. CONTRACTOR SHALL SUBMIT STRUCTURAL SHOP DRAWINGS FOR THE FOLLOWING ITEMS.
      - 1. CONCRETE MIX DESIGN AND MATERIALS
      - 2. CONCRETE REINFORCING STEEL
      - 3. PREFABRICATED WOOD TRUSSES
    - E. PROVIDE A FINAL, "FOR CONSTRUCTION" SET OF ALL SHOP DRAWINGS TO THE ENGINEER OF RECORD PRIOR TO FABRICATION OR CONSTRUCTION OF THOSE ITEMS.
17. SPECIAL INSPECTIONS
    - A. THE FOLLOWING MINIMUM ITEMS REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH THE BUILDING CODE.
      - 1. CONCRETE PLACING
      - 2. CONCRETE REINFORCING
      - 3. BOLTS EMBEDDED IN CONCRETE / POST-INSTALLED ANCHORS
      - 4. ANCHOR RODS
      - 5. ROOF DIAPHRAGM ATTACHMENT
      - 6. SOIL VERIFICATION
    - B. THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE ITEMS LISTED ABOVE PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF THE WORK.

SCHEDULE OF MINIMUM SPECIAL INSPECTIONS

		INSPECTION FREQUENCY	
		CONTINUOUS	PERIODIC
REQUIRED VERIFICATION AND INSPECTION OF STRUCTURAL STEEL CONSTRUCTION			
1.	MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:		
	A. IDENTIFICATION MARKING TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	X
	B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	-	X
2.	INSPECTION OF HIGH-STRENGTH BOLTING: (INSPECTION SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS)		X
	A. SNUG-TIGHT JOINTS.	-	X
	B. PRE-TENSIONED AND SLIP-CRITICAL JOINTS USING THE TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT DIRECT TENSION INDICATOR METHODS OF INSTALLATION.	-	X
	C. PRE-TENSIONED AND SLIP-CRITICAL JOINTS USING THE CALIBRATED WRENCH OR TURN-OF-NUT METHOD WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION.	X	-
3.	MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:		
	A. FOR STRUCTURAL STEEL, INDENTIFICATION MARKING TO CONFORM TO AISC 360.	-	X
	B. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	X
	C. MANUFACTURERS' CERTIFIED TEST REPORTS.	-	X
4.	MATERICAL VERIFICATION OF WELD FILLER MATERIALS:		
	A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	X
	B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE.	-	X
5.	INSTPECTION OF WELDING: (WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1)(IN COOPERATION WITH OWNER'S TESTING LAB)		
	A. STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:		
	1. COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS.	X	-
	2. MULTIPASS FILLET WELDS.	X	-
	3. SINGLE-PASS FILLET WELDS > 5/16.	X	-
	4. PLUG AND SLOT WELDS.	X	-
	5. SINGLE PASS FILLET WELDS ≤ 5/16.	-	X
	6. FLOOR AND ROOF DECK WELDS.	-	X
	B. REINFORCING STEEL:		
	1. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.	-	X
	2. REINFORCING STEEL-RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	X	-
	3. SHEAR REINFORCEMENT.	X	-
	4. OTHER REINFORCING STEEL.	-	X
6.	INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE:		
	A. DETAILS SUCH AS BRACING AND STIFFENING.	-	X
	B. MEMBER LOCATIONS.	-	X
	C. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	-	X
7.	INSPECTION OF COLD-FORMED STEEL TRUSSES SPANNING 60 FT OR GREATER:		
	A. VERIFY TEMPORARY INSTALLATION RESTRAINT/BRACING AND THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE.	-	X
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION			
1.	INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT. VERIFY GRADE, SIZE, QUANTITY, AND SPACING OF REINFORCING BARS FOR COMPLIANCE WITH CONTRACT DOCUMENTS AS WELL AS APPROVED SHOP DRAWINGS. REPORT ANY NOTED CONFLICT BEFORE CONCRETE IS POURED SO THAT CORRECTIONS MAY BE MADE. (INSPECTION MAY BE PERIODIC BUT ALL REBAR TO BE INSPECTED).	X	-
2.	INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1705.3 (REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION, INSPECTION OF WELDING, REINFORCING STEEL).	X	-
3.	INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	X	-
4.	INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE.	X	-
5.	VERIFYING USE OF REQUIRED DESIGN MIX.	X	-
6.	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-
7.	INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-
8.	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X
9.	INSPECTION OF PRESTRESSED CONCRETE:		
	A. APPLICATION OF PRESTRESSING FORCES.	-	X
	B. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.	-	X
10.	ERECTION OF PRECAST CONCRETE MEMBERS.	-	X
11.	VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POSTTENSIONED CONRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X
12.	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF CONCRETE MEMBER BEING FORMED.	-	X
REQUIRED VERIFICATION AND INSPECTION OF SOILS (IN COOPERATION WITH OWNERS' GEOTECHNICAL TESTING AGENCY)			
1.	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X
2.	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X
3.	PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.	-	X
4.	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
5.	PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X
REQUIRED VERIFICATION AND INSPECTION OF CAST-IN-PLACE DEEP FOUNDATION ELEMENTS (IN COOPERATION W/ OWNER'S GEOTECHNICAL TESTING AGENCY)			
1.	OBSERVE DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	X	-
2.	VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS (IF APPLICABLE), EMBEDMENT INTO BEDROCK (IF APPLICABLE) AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CONCRETE OR GROUT VOLUMES.	X	-
3.	FOR CONCRETE ELEMENTS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH THE REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION NOTED ABOVE.	-	X
REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION			
1.	COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS.	-	X
2.	VERIFICATION OF F'M AND F'AAC PRIOR TO CONSTRUCTION AND FOR EVERY 5000 SQUARE FEET DURING CONSTRUCTION.	-	X
3.	VERIFICATION OF PROPORTIONS OF MATERIALS IS PREMIXED OR PREBLEDED MORAR AND GROUT AS DELIVERED TO THE SITE.	-	X
4.	VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERD TO THE SITE FOR SELF-CONSOLIDATION GROUT.	X	-
5.	THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		
	A. PROPORTIONS OF SITE-PREPARED MORTAR, GROUT, AND PRESTRESSING FOR BONDED TENDONS.	-	X
	B. PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORAR JOINTS.	-	X
	C. PLACEMENT OF REINFORCEMENT CONNECTORS AND PRESTRESSING TENDONS AND ANCHORAGES.	-	X
	D. GROUT SPACE PRIOR TO PLACEMENT.	X	-
	E. PLACEMENT OF GROUT.	X	-
	F. PLACEMENT OF PRESTRESSING GROUT.	X	-
	G. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	-	X
	H. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION.	-	X
	I. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES.	-	X
	J. WELDING OF REINFORCING BARS.	X	-
	K. PREPARATION OF ANY REQUIRED GROUT SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.	-	X
	L. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE.	X	-

PLAN SYMBOL KEY

- F? = FOOTING TYPE (REFER TO FOOTING SCHEDULE)
- C? = COLUMN TYPE (REFER TO COLUMN SCHEDULE)
- W? = WOOD WALL TYPE (REFER TO WOOD WALL SCHEDULE)
- SW? = SHEAR WALL TYPE (REFER TO WOOD WALL SCHEDULE)
- CW? = CONCRETE WALL TYPE (REFER TO CONCRETE WALL SCHEDULE)
- MW? = MASONRY WALL TYPE (REFER TO MASONRY WALL SC

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

B. Related Requirements:

1.3 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, other pozzolans, and silica fume; materials subject to compliance with requirements.

B. W/C Ratio: The ratio by weight of water to cementitious materials.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with cast-in-place concrete to attend, including the following:
   a. Contractor's superintendent.
   b. Independent testing agency responsible for concrete design mixtures.
   c. Ready-mix concrete manufacturer.
   d. Concrete subcontractor.
   e. Special concrete finish subcontractor.

2. Review special inspection and testing and inspecting agency procedures for field quality control, concrete finishes and finishing, cold- and hot-weather concreting procedures, mixture design adjustments, formwork removal and reshoring procedures, shoring and reshoring, anchor rod and anchorage device installation tolerances, steel reinforcement installation, methods for achieving specified floor and slab flatness and levelness floor and slab flatness and levelness measurement, concrete repair procedures, and concrete protection.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1. Indicate amounts of mixing water to be withheld for later addition at Project site.

C. Steel Reinforcement Shop Drawings: Placing Drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.

D. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.

1. Location of construction joints is subject to approval of the Architect.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer, manufacturer, and testing agency.

B. Welding certificates.

C. Material Certificates: For each of the following, signed by manufacturers:

1. Cementitious materials.
2. Admixtures.
3. Form materials and form-release agents.
4. Curing compounds.
5. Floor and slab treatments.
6. Bonding agents.
7. Adhesives.
8. Vapor retarders.
9. Joint-filler strips.
10. Repair materials.

D. Material Test Reports: For the following, from a qualified testing agency:

1. Aggregates: Include service record data indicating absence of deleterious expansion of concrete due to alkali-aggregate reactivity.

E. Formwork Shop Drawings: Prepared by or under the supervision of a qualified professional engineer, detailing fabrication, assembly, and support of formwork.

1. Shoring and Reshoring: Indicate proposed schedule and sequence of stripping formwork, shoring removal, and reshoring installation and removal.

F. Floor surface flatness and levelness measurements indicating compliance with specified tolerances.

G. Field quality-control reports.

H. Minutes of preinstallation conference.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.

B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

C. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.

1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician, Grade I. Testing agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician, Grade II.

D. Welding Qualifications: Qualify procedures and personnel according to AWS D1.4/D 1.4M.

1.8 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on concrete mixtures.

1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.

B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash: 25 percent.
2. Combined Fly Ash and Pozzolan: 25 percent.
3. Slag Cement: 50 percent.
4. Combined Fly Ash or Pozzolan and Slag Cement: 50 percent portland cement minimum, with fly ash or pozzolan not exceeding 25 percent.
5. Silica Fume: 10 percent.
6. Combined Fly Ash, Pozzolan, and Silica Fume: 35 percent with fly ash or pozzolans not exceeding 25 percent and silica fume not exceeding 10 percent.
7. Combined Fly Ash or Pozzolans, Slag Cement, and Silica Fume: 50 percent with fly ash or pozzolans not exceeding 25 percent and silica fume not exceeding 10 percent.

C. Limit water-soluble, chloride-ion content in hardened concrete to 0.06 percent by weight of cement.

D. Admixtures: Use admixtures according to manufacturer's written instructions.

1. Use water-reducing, high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability.
2. Use water-reducing admixture in concrete where required by high temperatures, low humidity, or other weather conditions.
3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure concrete, concrete required to be watertight, and concrete with a w/c ratio below 0.50.
4. Use corrosion-inhibiting admixture in concrete mixtures where indicated.

2.12 CONCRETE MIXTURES FOR BUILDING ELEMENTS

A. Footings: Normal-weight concrete.

1. Minimum Compressive Strength: 4000 psi at 28 days.
2. Maximum W/C Ratio: 0.42.
3. Slump Limit: 4 inches for concrete with vertical slump of 2 to 4 inches (50 to 100 mm) before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch.
4. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 3/4-inch nominal maximum aggregate size.

B. Slabs-on-Grade: Normal-weight concrete.

1. Minimum Compressive Strength: 4000 psi at 28 days.
2. Maximum W/C Ratio: 0.42.
3. Minimum Cementitious Materials Content: 540 lb/cu. yd.
4. Slump Limit: 4 inches, plus or minus 1 inch.
5. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 3/4-inch nominal maximum aggregate size.
6. Air Content: Do not allow air content of trowel-finished floors to exceed 3 percent.

2.13 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.14 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes, when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum-type batch machine mixer.

1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
2. For mixer capacity larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd.
3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixture time, quantity, and amount of water added. Record approximate location of final deposit in structure.

PART 3 - EXECUTION

3.1 FORMWORK INSTALLATION

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:

1. Class A, 1/8 inch for smooth-formed finished surfaces.
2. Class B, 1/4 inch for rough-formed finished surfaces.

D. Construct forms tight enough to prevent loss of concrete mortar.

E. Construct forms for easy removal without hammering or prying against concrete surfaces. Provide crush-out wedges or other devices where stripping may damage cast-concrete surfaces. Provide top forms for inclined surfaces steeper than 1:3 horizontal to 1 vertical.

1. Install keyways, reglets, recesses, and the like, for easy removal.
2. Do not use rust-stained steel form-facing material.

F. Set edge forms, bulkheads, and intermediate strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.

G. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

H. Chamfer exterior corners and edges of permanently exposed concrete.

I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

J. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

K. Retighten forms and loose bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

L. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 EMBEDDED ITEM INSTALLATION

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of ASC 303.
2. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.
3. Install dovetail anchor slots in concrete structures as indicated.

3.3 REMOVING AND REUSING FORMS

A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 30 deg F for 24 hours after placing concrete. Concrete has to be hard enough to not be damaged by form-removal operations, and curing and protection operations need to be maintained.

1. Leave formwork for beam soffits, joists, slabs, and other structural elements that support weight of concrete in place until concrete has achieved at least 70 percent of its 28-day design compressive strength.
2. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.

B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material are not acceptable for exposed surfaces. Apply new form-release agent.

C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

3.4 SHORING AND RESHORING INSTALLATION

A. Comply with ACI 318 and ACI 301 for design, installation, and removal of shoring and reshoring.

1. Do not remove shoring or reshoring until measurement of slab tolerances is complete.

B. In multistory construction, extend shoring or reshoring over a sufficient number of stories to distribute loads in such a manner that no floor or member will be excessively loaded or will induce tensile stress in concrete members without sufficient steel reinforcement.

C. Plan sequence of removal of shores and reshore to avoid damage to concrete. Locate and provide adequate reshoring to support construction without excessive stress or deflection.

3.5 VAPOR-RETARDER INSTALLATION

A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.

1. Lap joints 6 inches and seal with manufacturer's recommended tape.

B. Bituminous Vapor Retarders: Place, protect, and repair bituminous vapor retarder according to manufacturer's written instructions.

3.6 STEEL REINFORCEMENT INSTALLATION

A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that reduce bond to concrete.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supporters to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

1. Weld reinforcing bars according to AWS D1.4/D 1.4M, where indicated.

D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

E. Install welded-wire reinforcement in longest practicable lengths on bar supports spaced to minimize splices. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

3.7 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.

1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
2. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:

1. *Grooved Joints:* Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tracks and restore surface finish.
2. *Sawed Joints:* Form joints with sawing equipment equipped with abrasive or diamond-rimmed blades. Cut 1/8-inch-wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random shrinkage cracks.

D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated.
2. Terminate joint-filler strips not less than 1/2 inch or more than 1 inch below finished concrete surface where joint sealants, specified in Section 079200 "Joint Sealants," are indicated.
3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or butt joints tightly.

E. Doweled Joints: Install dowels and support assemblies at joints where indicated. Lubricate or asphalt-coat one-half of dowel length to prevent concrete bonding to one side of joint.

3.8 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections are completed.

B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.

C. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.

1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

D. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, place concrete to predetermined construction joints as indicated. Deposit concrete to avoid segregation.

1. Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints.
2. Consolidate concrete during placing operations, using equipment according to ACI 301.
3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and prevent formation of voids or segregation.
4. Install and maintain supporting scaffolding and runways, so they do not rest on portions of forms, reinforcement, or embedded items that may be displaced by their weight.
5. Place and finish concrete as continuous operation until placing is complete.

E. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
2. Maintain reinforcement in position on chairs during concrete placement.
3. Screed slab surfaces with a straightedge and strike off to correct elevations.
4. Slope surfaces uniformly to drains where required.
5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

3.9 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces exposed to public view, to receive a rubbed finish, or to be covered with a coating or covering material applied directly to concrete.

C. Rubbed Finish: Apply the following to smooth-formed-finished as-cast concrete where indicated:

1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or other abrasive until uniformly colored and texture. Do not apply cement grout other than that created by the rubbing process.
2. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix 1 part portland cement to 1-1/2 parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches, so color of dry grout matches adjacent surfaces. Scrub grout into voids and abrasive clean-off grout residue. Wet concrete surfaces and apply a second coat of grout to provide uniform finish and color, concrete surface to be watertight, and concrete with a w/c ratio below 0.50.
3. Use commercial bonding admixture in concrete mixtures where indicated.

3.10 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes to produce a profile amplitude of 1/4 inch in one direction.

1. Apply scratch finish to surfaces as indicated per Architect.

C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power-driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.

1. Apply float finish to surfaces as indicated per Architect.

D. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.

1. Apply a trowel finish to surfaces as indicated per Architect.
2. Finish surfaces to the following tolerances, measured by ASTM E 1155, for a randomly selected location indicated by Architect:
   a. Specified overall values of flatness, F(F) 25; and of levelness, F(L) 20; with minimum local values of flatness, F(F) 17; and of levelness, F(L) 15.
   b. Specified overall values of flatness, F(F) 30; and of levelness, F(L) 25; with minimum local values of flatness, F(F) 24; and of levelness, F(L) 17; for slab-on-grade.
   c. Specified overall values of flatness, F(F) 30; and of levelness, F(L) 20; with minimum local values of flatness, F(F) 24; and of levelness, F(L) 15; for suspended slabs.
   d. Specified overall values of flatness, F(F) 45; and of levelness, F(L) 30; with minimum local values of flatness, F(F) 30; and of levelness, F(L) 24.

3. Finish and maintain surfaces at an gap at gap of 3/4 inch between concrete surface and an unleveled, freestanding, 10-ft.- long straightedge resting on two high spots and placed anywhere on the surface does not exceed 3/16 inch.

E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces as indicated per Architect. While concrete is still plastic, slightly scarify surface with a fine broom.

1. Comply with flatness and levelness tolerances for trowel-finished floor surfaces.

F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and walkways as indicated.

3.11 MISCELLANEOUS CONCRETE ITEM INSTALLATION

A. Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with the in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and finishing surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

C. Equipment Bases and Foundations:

1. Coordinate sizes and locations of concrete bases with actual equipment provided.
2. Construct concrete bases 6 inches high unless otherwise indicated, and extend base not less than 6 inches in each direction beyond the maximum dimensions of supported equipment or anchor-bolt locations, unless otherwise indicated or required for seismic anchor support.
3. Minimum Compressive Strength: 4000 psi at 28 days.

4. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around the full perimeter of concrete base.
5. For supported equipment, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural steel frame.
6. Prior to pouring concrete, place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
7. Cast anchor-bolt insert into base. Install anchor bolts to elevations required for proper attachment to supported equipment.

D. Steel Pan Stairs: Provide concrete fill for steel pan stair treads, landings, and associated items. Cast-in inserts and accessories as shown on Drawings. Screed, tamp, and trowel finish concrete surfaces.

3.12 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after removing forms. If removing forms before end of curing period, continue curing for remainder of curing period.

D. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaced areas.

E. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
   a. Water.
   b. Continuous water-fog spray.
   c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Ensure cover is free of holes or tears during curing period. Cover repair area before curing period, using cover material and waterproof tape.
   a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.

3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
   a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer.

4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.13 LIQUID FLOOR TREATMENT APPLICATION

A. Penetrating Liquid Floor Treatment: Prepare, apply, and finish penetrating liquid floor treatment according to manufacturer's written instructions.

1. Remove curing compounds, sealers, oil, dirt, laitance, and other contaminants and complete repairs.
2. Do not apply to concrete that is less than three days' old.
3. Do not apply concrete floor sealer until curing compound has dried or has been removed, and repeat broom cleaning or scrubbing. Rinse with water; remove excess material until surface is dry. Apply a second coat in a similar manner if surface is rough or porous.

B. Sealing Coat: Uniformly apply a continuous sealing coat of curing and sealing compound to concrete floors indicated. Apply according to manufacturer's written instructions.

3.14 JOINT FILLING

A. Prepare, clean, and install joint filler according to manufacturer's written instructions.

1. Defer joint filling until concrete has aged at least one month(s). Do not fill joints until construction traffic and other joint-filling processes are complete.

B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joints clean and dry.

1. Install nonsagging joint filler full depth in saw-cut joints and at least 2 inches deep in formed joints. Overfill joint and trim joint filler flush with top of joint after hardening.

3.15 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

B. Patching Mortar: Mix dry-pack patching mortar, consisting of 1 part portland cement to 2-1/2 parts fine aggregate passing a No. 16 sieve, using only enough water for handling and placing.

C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.

1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension to solid concrete. Limit cut depth to 3/4 inch. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so, when dry, color of patch matches adjacent surface color. Patch a test area as recommended by Architect to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Architect.

D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and tolerance requirements. Correct low and high areas as specified in Section 3.10 "Finishing Floors and Slabs" before starting repairs.

1. Correct high areas by grinding.
2. Correct low areas during, or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
3. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor surfaces.
4. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a uniform, smooth, plane, and level surface.
5. Repair defective areas, except random cracks and single holes 1 inch or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a 3/4-inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete, except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
6. Perform structural repairs of concrete, subject to Architect's approval, using epoxy adhesive and mortar.
7. Repair materials and installation not specified above may be used, subject to Architect's approval.

3.16 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a special inspector and qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.

B. Testing Agency: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.

C. Inspections:

1. Steel reinforcement placement.
2. Steel reinforcement welding.
3. Headed bolts and studs.
4. Verification of use of required design mixture.
5. Concrete placement, including conveying and depositing.
6. Curing procedures and maintenance of adequate curing temperature.
7. Verification of concrete strength before removal of shores and forms from beams and slabs.

D. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172/C 172M shall be performed according to the following requirements:

1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test per shift. When frequency of testing will provide fewer than five tests for a given mixture, take composite samples from different batches.
3. Air Content: ASTM C 231/C 231M, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
4. Air Content: ASTM C 173/C 173M, volumetric method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
5. Compression Test Specimens: ASTM C 31/C 31M.
6. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below or 80 deg F and above, and one test for each composite sample.
7. Compression Test Specimens: ASTM C 39/C 39M.

E. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172/C 172M shall be performed according to the following requirements:

1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test per shift. When frequency of testing will provide fewer than five tests for a given mixture, take composite samples from different batches.
3. Air Content: ASTM C 231/C 231M, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
4. Air Content: ASTM C 173/C 173M, volumetric method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
5. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below or 80 deg F and above, and one test for each composite sample.
6. Compression Test Specimens: ASTM C 31/C 31M.
7. Compression Test Specimens: ASTM C 39/C 39M.

F. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.

G. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.

H. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.

I. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.

J. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Architect.

K. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

L. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

3.17 PROTECTION OF LIQUID FLOOR TREATMENTS

A. Protect liquid floor treatment from damage and wear during the remainder of construction period. Use protective methods recommended by manufacturer or approved by Architect.

END OF SECTION 033000

SECTION 051200 - STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Structural steel.
2. Prefabricated building columns.
3. Field-installed shear connectors.
4. Grout.

1.3 DEFINITIONS

A. Structural Steel: Elements of the structural frame indicated on Drawings and as described in ASC 303, "Code of Standard Practice for Steel Buildings and Bridges."

B. Seismic-Load-Resisting System: Elements of structural-steel frame designated as "SLRS" or along grid lines designated as "SLRS" on Drawings, including columns, beams, and braces and their connections.

C. Heavy Sections: Rolled and built-up sections as follows:

1. Shapes, Including Built-Up: 2-inch- thick flanges thicker than 1-1/2 inches.
2. Welded built-up members with plates thicker than 2 inches.
3. Column base plates thicker than 2 inches.

D. Protected Zone: Structural members or portions of structural members indicated as "Protected Zone" on Drawings. Connections of structural and nonstructural elements to protected zones are limited.

E. Demand Critical Weld: Those welds, the failure of which would result in significant degradation of the strength and stiffness of the Seismic-Load-Resisting System and which are indicated as "Demand Critical" or "Seismic Critical" on Drawings.

1.4 COORDINATION

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

B. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

1.5 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.6 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and calculated weights and loads of fabricated units.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include type of preservative used and net amount of preservative retained.
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
3. For fire-retardant treatments, describe effects of treatment on treated lumber's both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was dried after treatment to 19 percent maximum.

B. Fastener Patterns: Full-size templates for fasteners in exposed framing.

1.5 INFORMATIONAL SUBMITTALS

A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the Architect and authorities having jurisdiction.

B. Evaluation Reports: For the following, from ICC-ES:

1. Wood-preservative-treated wood.
2. Fire-retardant-treated wood.
3. Engineered wood products.
4. Mechanical fasteners.
5. Power-driven fasteners.
6. Post-installed anchors.
7. Metal framing anchors.

1.6 QUALITY ASSURANCE

A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Stack wood products flat with spacers between each bundle and between each bundle to provide air circulation. Protect wood products from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back

SECTION 061600 - SHEATHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Wall sheathing.
2. Roof sheathing.
3. Parapet sheathing.
4. Combustible sub-base insulated roof sheathing.
5. Underlayment.
6. Underlayment.
7. Sheathing joint and penetration treatment.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for plywood backing panels.
2. Section 072500 "Weather Barriers" for water-resistive barrier applied over wall sheathing.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification from treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification from treating plant that treated materials comply with requirements. Include physical properties of treated materials.
3. For fire-retardant treatments, include physical properties of treated plywood both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5516.
4. For products receiving waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

1.4 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For the following, from ICC-ES:

1. Wood-preservative-treated plywood.
2. Fire-retardant-treated plywood.
3. Foam-plastic sheathing.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance Ratings: As tested according to ASTM E 119, testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

2.2 WOOD PANEL PRODUCTS

A. Emissions: Products shall meet the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

B. Thickness: As needed to comply with requirements specified, but not less than thickness indicated.

C. Factory mark panels to indicate compliance with applicable standard.

2.3 PRESERVATIVE-TREATED PLYWOOD

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with ground, and Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.

C. Application: Treat items indicated on Drawings and plywood in contact with masonry or concrete or used with roofing, flashing, vapor barriers, and waterproofing.

2.4 FIRE-RETARDANT-TREATED PLYWOOD

A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.

B. Fire-Retardant Treated Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.

1. Use treatment that does not promote corrosion of metal fasteners.
2. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
3. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use for interior locations where exterior type is not indicated.
4. Design Value Adjustment Factors: Treated lumber shall be tested according to ASTM D 5664, and design value adjustment factors shall be calculated according to ASTM D 6841. For enclosed roof framing and framing in attic spaces, and where high-temperature drying processes are used, design value adjustment factors shall be calculated for all species and grades of not less than 0.85 modulus of elasticity and 0.75 for extreme fiber in bending for Project's climatological zone.

C. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent.

D. Identify fire-retardant-treated wood with appropriate classification marking of testing and inspecting agency acceptable to authorities having jurisdiction.

E. Application: Treat items indicated on Drawings per Architect, and the following:

2.5 WALL SHEATHING

A. Plywood Sheathing: , Exterior, Structural I sheathing.

1. Span Rating: Not less than 24/0.
2. Nominal Thickness: Not less than 15/32 inch.

B. Oriented-Strand-Board Sheathing: DOC PS 2, Exposure 1, Structural I sheathing.

1. Span Rating: Not less than 24/0.
2. Nominal Thickness: Not less than 15/32 inch.

C. Paper-Surfaced Gypsum Sheathing: ASTM C 1396/C 1396M, gypsum sheathing, with water-repellent-treated core and with water-repellent paper bonded to core's face, back, and long edges.

1. Type and Thickness: Type X, 5/8 inch thick.
2. Edge and End Configuration: V-shaped, tongue-and-groove long edges; square ends.
3. Size: 48 by 96 inches for vertical installation.

D. Glass-Mat Gypsum Sheathing: ASTM C 1177/1177M.

1. Type and Thickness: Type X, 5/8 inch thick.
2. Size: 48 by 96 inches for vertical installation.

2.6 ROOF SHEATHING

A. Plywood Sheathing: , Exterior, Structural I sheathing.

1. Span Rating: Not less than 24/0.
2. Nominal Thickness: Not less than 15/32 inch.

B. Oriented-Strand-Board Sheathing: DOC PS 2, Exposure 1, Structural I sheathing.

1. Span Rating: Not less than 24/0.
2. Nominal Thickness: Not less than 15/32 inch.

2.7 PARAPET SHEATHING

A. Plywood Sheathing: , Exterior, Structural I sheathing.

1. Span Rating: Not less than 24/0.
2. Nominal Thickness: Not less than 15/32 inch.

B. Oriented-Strand-Board Sheathing: DOC PS 2, Exposure 1, Structural I sheathing.

1. Span Rating: Not less than 24/0.
2. Nominal Thickness: Not less than 15/32 inch.

C. Glass-Mat Gypsum Sheathing: ASTM C 1177/1177M.

1. Type and Thickness: Type X, 5/8 inch thick.
2. Size: 48 by 96 inches for vertical installation.

2.8 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. For roof parapet and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.

D. Screws for Fastening Sheathing to Wood Framing: ASTM C 1002.

E. Screws for Fastening Wood Structural Panels to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.

F. Screws for Fastening Gypsum Sheathing to Cold-Formed Metal Framing: Steel drill screws, in length recommended by sheathing manufacturer for thickness of sheathing to be attached.

1. For steel framing less than 0.0329 inch thick, use screws that comply with ASTM C 1002.
2. For steel framing from 0.033 to 0.112 inch thick, use screws that comply with ASTM C 954.

G. Screws for Fastening Composite Nail Base Insulated Roof Sheathing to Metal Roof Deck: Steel drill screws, in type and length recommended by sheathing manufacturer for thickness of sheathing to be attached, with organic-polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B 117. Provide washers or plates recommended by sheathing manufacturer.

2.9 SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIALS

A. Sealant for Glass-Mat Gypsum Sheathing: Elastomeric, medium-modulus, neutral-curing silicone joint sealant compatible with joint substrates formed by gypsum sheathing and other materials against which sealant must perform and recommended by sheathing manufacturer complying with requirements for elastomeric sealants specified in Section 079200 "Joint Sealants."

B. Sealant for Glass-Mat Gypsum Sheathing: Silicone emulsion sealant complying with ASTM C 834, compatible with sheathing tape and sheathing and recommended by tape and sheathing manufacturer for use with glass-fiber sheathing tape and for covering exposed fasteners.

1. Sheathing Tape: Self-adhering glass-fiber tape, minimum 2 inches wide, 10 by 10 or 10 by 20 threads/inch, of type recommended by sheathing and tape manufacturers for use with silicone emulsion sealant in sealing joints in glass-mat gypsum sheathing and with a history of successful in-service use.

C. Sheathing Tape for Foam-Plastic Sheathing: Pressure-sensitive plastic tape recommended by sheathing manufacturer for sealing joints and penetrations in sheathing.

2.10 MISCELLANEOUS MATERIALS

A. Adhesives for Field Gluing Panels to Wood Framing: Formulation complying with APA AFG-01, and as recommended for use with type of construction panel indicated by manufacturers of both adhesive and panels.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated, complying with the following:

1. Table 2304.9.1, "Fastening Schedule," in the ICC's International Building Code.
2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in the ICC's International Residential Code for One- and Two-Family Dwellings.
3. ICC-ES evaluation report for fastener.

D. Use common wire nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood.

E. Coordinate wall parapet and roof sheathing installation with flashing and joint-sealant installation so moisture shed by sheathing will be directed to exterior surface and manner that prevent exterior moisture from passing through completed assembly.

F. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

G. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

3.2 WOOD STRUCTURAL PANEL INSTALLATION

A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.

B. Fastening Methods: Fasten panels as indicated below:

1. Combination Subfloor-Underlayment:
   a. Glue and nail to wood framing.
   b. Screw to cold-formed metal framing.
   c. Space panels 1/8 inch apart at edges and ends.
2. Wall and Roof Sheathing:
   a. Nail to wood framing.
   b. Screw to cold-formed metal framing.
   c. Space panels 1/8 inch apart at edges and ends.
   d. Fill and sand edge joints of underlayment receiving resilient flooring immediately before installing flooring.

3.3 GYPSUM SHEATHING INSTALLATION

A. Comply with GA-253 and with manufacturer's written instructions.

1. Fasten gypsum sheathing to wood framing with nails or screws.
2. Fasten gypsum sheathing to cold-formed metal framing with screws.
3. Install panels with a 3/8-inch gap where non-load-bearing construction abuts structural elements.
4. Install panels with a 1/4-inch gap where they abut masonry or similar materials that might retain moisture, to prevent wicking.

B. Apply fasteners so heads bear tightly against face of sheathing, but do not cut into facing.

C. Horizontal Installation: Install sheathing with V-grooved edge down and tongue edge up. Interlock tongue with groove to bring long edges in contact with edges of adjacent panels without forcing. Abut ends over centers of studs, and stagger end joints of adjacent panels not less than one stud spacing. Attach at perimeter and within field of panel to each stud.

1. Space fasteners approximately 8 inches o.c. and set back a minimum of 3/8 inch from edges and ends of panels.
2. For sheathing under stucco cladding, panels may be initially tacked in place with screws if overlying self-furring metal lath is screw-attached through sheathing to studs immediately after sheathing is installed.

D. Vertical Installation: Install vertical edges centered over studs. Abut ends and edges with those of adjacent panels. Attach at perimeter and within field of panel to each stud.

1. Space fasteners approximately 8 inches o.c. and set back a minimum of 3/8 inch from edges and ends of panels.
2. For sheathing under stucco cladding, panels may be initially tacked in place with screws if overlying self-furring metal lath is screw-attached through sheathing to studs immediately after sheathing is installed.

E. Seal sheathing joints according to sheathing manufacturer's written instructions.

1. Apply elastomeric sealant to joints and fasteners and trowel flat. Apply sufficient amount of sealant to completely cover joints and fasteners after troweling. Seal other penetrations and openings.

2. Apply glass-fiber sheathing tape to glass-mat gypsum sheathing joints and apply and trowel sealant to embed entire face of tape to sheathing. Apply sealant to exposed fasteners with a trowel so fasteners are completely covered. Seal other penetrations and openings.

3.4 CEMENTITIOUS BACKER UNIT INSTALLATION

A. Install panels and treat joints according to ANSI A108.11 and manufacturer's written instructions for type of application indicated.

3.5 FIBERBOARD SHEATHING INSTALLATION

A. Comply with ASTM C 846 and with manufacturer's written instructions.

B. Fasten fiberboard sheathing panels to intermediate supports and then at edges and ends. Use galvanized roofing nails; comply with manufacturer's recommended spacing and referenced fastening schedule. Drive fasteners flush with surface of sheathing and locate perimeter fasteners at least 3/8 inch from edges and ends.

C. Install sheathing vertically with long edges parallel to, and centered over, studs. Install solid wood blocking where end joints do not occur over framing. Allow 1/8-inch open space between edges and ends of adjacent units. Stagger horizontal joints if any.

D. Cover sheathing as soon as practical after installation to prevent deterioration from wetting.

3.6 FOAM-PLASTIC SHEATHING INSTALLATION

A. Comply with manufacturer's written instructions.

B. Foam-Plastic Wall Sheathing: Install vapor-relief strips or equivalent for permitting escape of moisture vapor that otherwise would be trapped in stud cavity behind sheathing.

C. Apply sheathing tape to joints between foam-plastic sheathing panels and at items penetrating sheathing. Apply at spreading flashing to overlap both flashing and sheathing.

3.7 PARTICLEBOARD UNDERLAYMENT INSTALLATION

A. Comply with CPA's recommendations for type of subfloor indicated. Fill and sand gouges, gaps, and chipped edges. Sand uneven joints flush.

1. Fastening Method: Glue and nail underlayment to subflooring.

3.8 HARDBOARD UNDERLAYMENT INSTALLATION

A. Comply with CPA's recommendations and hardboard manufacturer's written instructions for preparing and applying hardboard underlayment.

1. Fastening Method: Nail underlayment to subflooring.

END OF SECTION 061600

SECTION 061753 - SHOP-FABRICATED WOOD TRUSSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Wood roof trusses.
2. Wood floor trusses.

B. Related Requirements:

1. Section 313116 "Termite Control" for site application of borate treatment to wood trusses.

1.3 ALLOWANCES

A. Provide wood truss bracing under the Metal-Plate-Connected Truss Bracing Allowance as specified in Section 012100 "Allowances."

1.4 DEFINITIONS

A. Metal-Plate-Connected Wood Trusses: Planar structural units consisting of metal-plate-connected members fabricated from dimension lumber and cut and assembled before delivery to Project site.

1.5 ACTION SUBMITTALS

A. Product Data: For fire-retardant-treated lumber, metal-plate connectors, metal truss accessories, and fasteners.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification from treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification from treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
4. For products receiving waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to truss fabricator.

B. Shop Drawings: Show fabrication and installation details for trusses.

1. Show location, pitch, span, camber, configuration, and spacing for each type of truss required.
2. Indicate sizes, stress grades, and species of lumber.
3. Indicate locations and installation of temporary bracing required to prevent buckling of individual truss members due to design loads.
4. Indicate locations, sizes, and materials for permanent bracing required to prevent buckling of individual truss members due to design loads.
5. Indicate type, size, material, finish, design values, orientation, and location of metal connector plates.
6. Show splice details and bearing details.

C. Delegated-Design Submittal: For metal-plate-connected wood trusses indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation and licensed in the state of Missouri.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For metal connector-plate manufacturer professional engineer and fabricator.

B. Material Certificates: For dimension lumber specified to comply with minimum specific gravity. Indicate species and grade selected for each use and specific gravity.

C. Product Certificates: For metal-plate-connected wood trusses, signed by officer of truss-fabricating firm.

D. Evaluation Reports: For the following, from ICC-ES:

1. Wood-preservative-treated lumber.
2. Fire-retardant-treated wood.
3. Metal connector plates.
4. Metal truss accessories.

1.7 QUALITY ASSURANCE

A. Metal Connector-Plate Manufacturer Qualifications: A manufacturer that is a member of TPI and that complies with quality-control procedures in TPI 1 for manufacture of connector plates.

1. Manufacturer's responsibilities include providing professional engineering services needed to assume engineering responsibility.

2. Engineering Responsibility: Preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.

B. Fabricator Qualifications: Shop that participates in a recognized quality-assurance program, complies with quality-control procedures in TPI 1, and involves third-party inspection by an independent testing and inspecting agency acceptable to Architect and authorities having jurisdiction and is certified for chain of custody by an FSC-accredited certification body.

C. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Handle and store trusses to comply with recommendations in SBCA BCSI, "Building Component Safety Information: Guide to Good Practice for Handling, Installing, Restraining, & Bracing Metal Plate Connected Wood Trusses."

1. Store trusses flat, off of ground, and adequately supported to prevent lateral bending.
2. Protect trusses from weather by covering with waterproof sheeting, securely anchored.
3. Provide for air circulation around stacks and under coverings.

B. Inspect trusses showing discoloration, corrosion, or other evidence of deterioration. Discard and replace trusses that are damaged or defective.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design metal-plate-connected wood trusses.

B. Structural Performance: Metal-plate-connected wood trusses shall be capable of withstanding design loads within limits and under conditions indicated. Comply with requirements in TPI 1 unless more stringent requirements are specified below.

1. Design Loads: As indicated.
2. Maximum Deflection under Design Loads:
   a. Roof Trusses: Vertical deflection of 1/240 of span.
   b. Floor Trusses: Vertical deflection of 1/360 of span.

C. Comply with applicable requirements and recommendations of TPI 1, TPI DSB, and SBCA BCSI.

D. Wood Structural Design Standard: Comply with applicable requirements in AF&PA's "National Design Specifications for Wood Construction" and its "Supplement."

E.

2.2 DIMENSION LUMBER

A. Lumber: DOC PS 20 and applicable rules of any rules-writing agency certified by the American Lumber Standard Committee (ALSC) Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. For exposed lumber indicated to receive a natural or natural finish, omit grade stamp and provide certificates of grade compliance issued by grading agency.
3. Provide dressed lumber, S4S.
4. Provide dry lumber with 19 percent maximum moisture content at time of dressing.

B. Minimum Chord Size for Roof Trusses: 2 by 6 inches nominal for both top and bottom chords.

C. Minimum Specific Gravity for Top Chords: 0.50.

D. Permanent Bracing: Provide wood bracing that complies with requirements for miscellaneous lumber in Section 061000 "Rough Carpentry."

2.3 FIRE-RETARDANT-TREATED WOOD

A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products according to test method indicated by a qualified testing agency.

B. Fire-Retardant-Treated Lumber by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not exceeding more than 10.5 feet beyond the centerline of the burners at any time during the test.

1. Use treatment that does not promote corrosion of metal fasteners.
2. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
3. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use for interior locations where exterior type is not indicated.
4. Design Value Adjustment Factors: Treated lumber shall be tested according to ASTM D 5664, and design value adjustment factors shall be calculated according to ASTM D 6841. For enclosed roof framing and framing in attic spaces, and where high-temperature drying processes are used, design value adjustment factors shall be calculated for all species and grades of not less than 0.85 modulus of elasticity and 0.75 for extreme fiber in bending for Project's climatological zone.

C. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent.

D. Identify fire-retardant-treated wood with appropriate classification marking of testing and inspecting agency acceptable to authorities having jurisdiction.

E. Application: Treat items indicated on Drawings per Architect, and the following:

2.4 METAL CONNECTOR PLATES

A. General: Fabricate connector plates to comply with TPI 1.

B. Hot-Dip Galvanized-Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B), G60 coating designation, and not less than 0.036 inch thick.

1. Use for interior locations unless otherwise indicated.

2.

2.5 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. Provide fasteners for use with metal framing anchors that comply with written recommendations of framing anchor manufacturer.
2. Where trusses are exposed to weather, in ground contact, made from pressure-preservative treated wood, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

2.6 METAL FRAMING ANCHORS AND ACCESSORIES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. KC Metals Products, Inc.
2. Simpson Strong-Tie Co., Inc.
3. USP Structural Connectors.

B. Allowable design loads, as published by manufacturer, shall comply with or exceed those of basis-of-design products. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency. Framing anchors shall be punched for fasteners adequate to withstand same loads as framing anchors.

C. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 coating designation.

1. Use for interior locations unless otherwise indicated.

D. Hot-Dip Heavy-Galvanized-Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185 coating designation; and not less than 0.036 inch thick.

1. Use for wood-preservative-treated lumber and where indicated.

E.

F. Roof Truss Clips: Angle clips for bracing bottom chord of roof trusses at non-load-bearing and load bearing walls, 3 inches (76mm) by 2 inches (51 mm) by 3 ½ inches (89mm) and 0.075 inches thick (14ga.).

2.7 MISCELLANEOUS MATERIALS

A. Galvanizing Repair Paint: SSPC-Paint 20, with dry film containing a minimum of 92 percent zinc dust by weight.

2.8 FABRICATION

A. Cut truss members to accurate lengths, angles, and sizes to produce close-fitting joints.

B. Fabricate metal connector plates to sizes, configurations, thicknesses, and anchorage details required to withstand design loads for types of joint designs indicated.

C. Assemble truss members in design configuration indicated, use jigs or other means to ensure uniformity and accuracy of assembly of trusses that are duplicates. Bind to comply with tolerances in TPI 1. Position members to produce design camber indicated.

1. Fabricate wood trusses within manufacturing tolerances in TPI 1.

D. Connect truss members by metal connector plates located and securely embedded simultaneously in both sides of wood members by air or hydraulic press.

2.9 SOURCE QUALITY CONTROL

A. Special Inspections: Owner will engage a qualified special inspector to perform special inspections.

1. Provide special inspector with access to fabricator's documentation of detailed fabrication and quality-control procedures that provide a basis for inspection control of the fabrication process and the fabricator's ability to conform to approved construction documents and referenced standards.
2. Provide special inspector with access to places where wood trusses are being fabricated to perform inspections.

B. Correct deficiencies in Work that special inspections indicate do not comply with the Contract Documents.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install wood trusses only after supporting construction is in place and is braced and secured.

B. If trusses are delivered to Project site in more than one piece, assemble trusses before installing.

C. Hoist trusses in place by lifting equipment suited to sizes and types of trusses required, exercising care not to damage truss members or joints by out-of-plane bending or other causes.

D. Install and brace trusses according to TPI recommendations and as indicated.

E. Install trusses plumb, square, and true to line and securely fasten to supporting construction.

F. Space trusses as indicated; adjust and align trusses in location before permanently fastening.

G. Anchor trusses securely at bearing points; use metal truss tie-downs or floor truss hangers as applicable. Install fasteners through each fastener hole in metal framing anchors according to manufacturer's fastening schedules and written instructions.

H. Securely connect each truss ply required for forming built-up girder trusses.

1. Anchor trusses to girder trusses as indicated.

I. Install and fasten permanent bracing during truss erection and before construction loads are applied. Anchor ends of permanent bracing where terminating at walls or beams.

1. Install bracing to comply with Section 061000 "Rough Carpentry."
2. Install temporary and permanent bracing vertically against vertical web of parallel-chord floor trusses at centers indicated.

J. Install wood trusses within installation tolerances in TPI 1.

K. Do not alter trusses in field. Do not cut, drill, notch, or remove truss members.

L. Replace wood trusses that are damaged or do not comply with requirements.

1. Damaged trusses may be repaired according to truss repair details signed and sealed by the qualified professional engineer responsible for truss design, when approved by Architect.

3.2 REPAIRS AND PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect wood trusses from weather. If, despite protection, wood trusses become wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

C. Repair damaged galvanized coatings on exposed surfaces according to ASTM A 780/A 780M and manufacturer's written instructions.

3.3 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a qualified special inspector to perform special inspections during truss erection and bracing. Verify temporary and permanent individual truss member restraint/bracing are installed in accordance with the approved truss submittal package.

END OF SECTION 061753

collins|webb ARCHITECTURE
CONSTRUCTION DOCUMENTS
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY
COLLINS WEBB
ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ADAM C. WEBB
NUMBER A-2007018978
PROFESSIONAL ENGINEER
8/13/25
PROFESSIONAL SEAL

S003

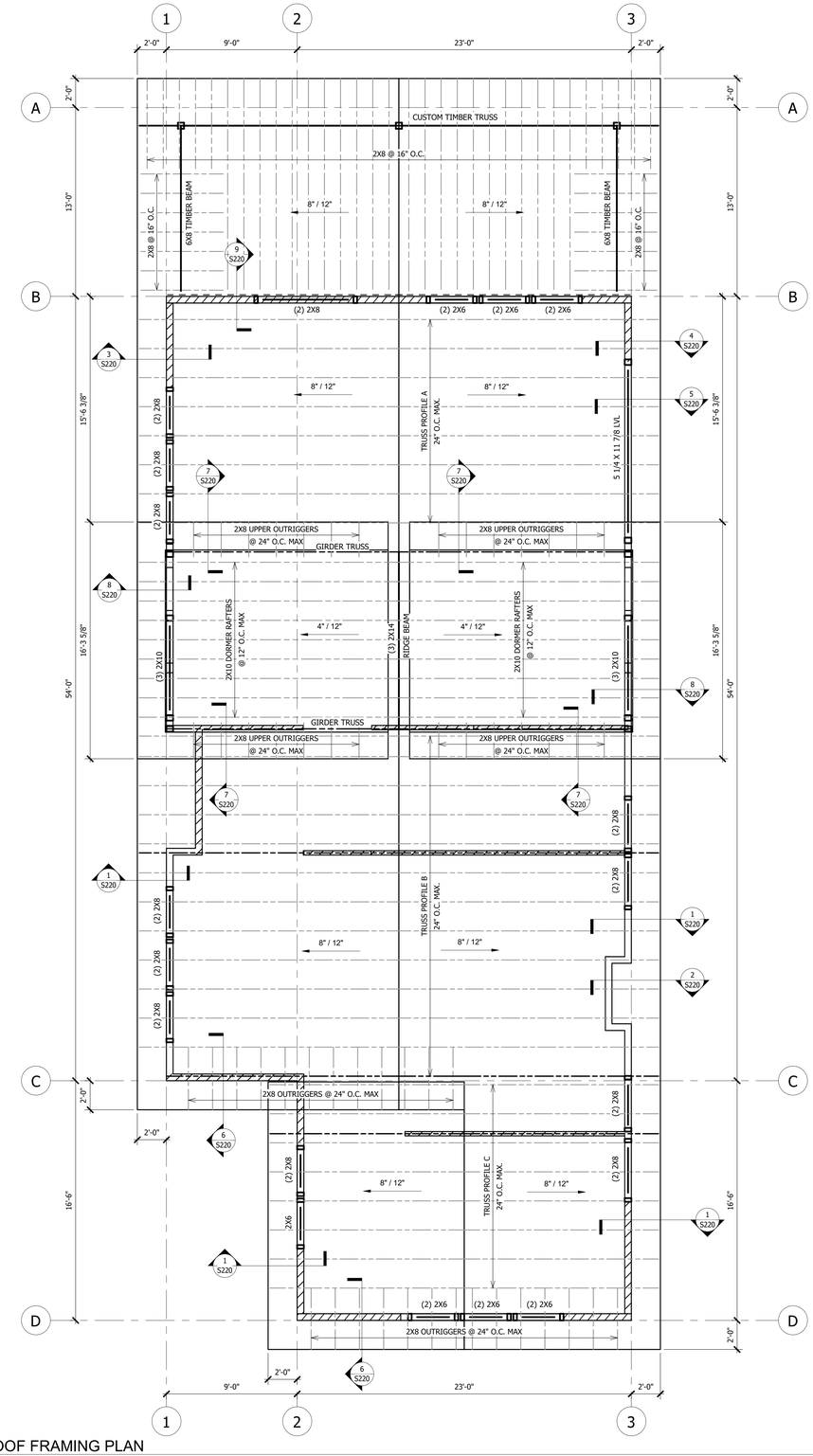
ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

SPECIFICATIONS

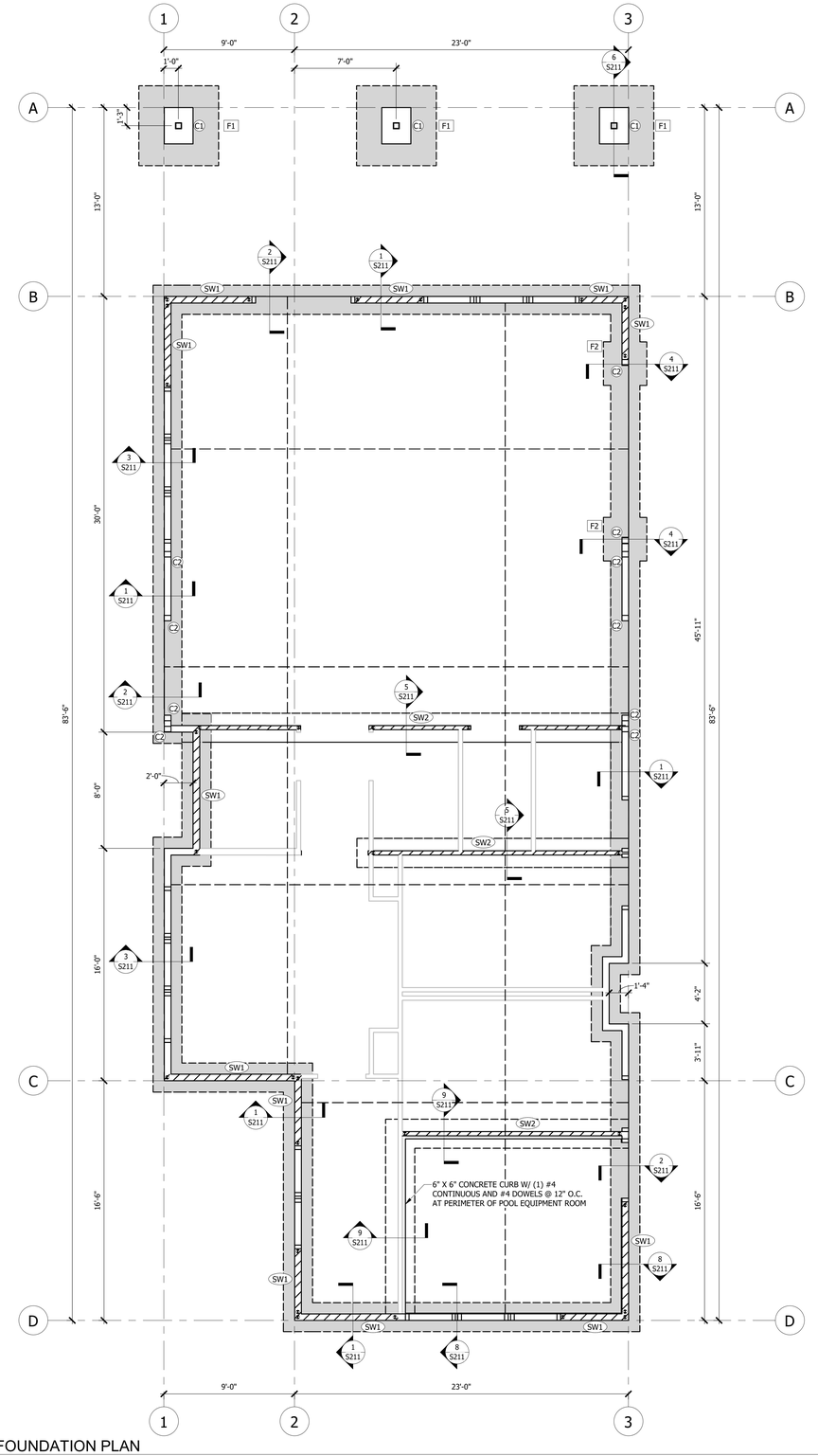
8/13/2025 10:14:30 AM

ISOLATED FOOTING SCHEDULE					
CALLOUT	COUNT	LENGTH	WIDTH	THICKNESS	REINFORCING
F1	3	5'-6"	5'-6"	3'-0"	(6) #8 BARS EACH WAY TOP AND BOT.
F2	2	3'-0"	3'-0"	3'-0"	(4) #8 BARS EACH WAY TOP AND BOT.

WOOD COLUMN SCHEDULE	
CALLOUT	SIZE
C1	HSS5X5X3/8
C2	(3) 2X6



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



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

FOUNDATION PLAN NOTES

1. TOP OF CONCRETE SLAB ELEVATION = 100'-0".
2. 4" SLAB ON GRADE TO BE REINFORCED WITH #4 @ 16" O.C. OVER 4" GRANULAR FILL AND 15 MIL VAPOR BARRIER, UNLESS NOTED OTHERWISE.
3. VERIFY ALL LOCATIONS OF THICKENED SLAB AREAS PRIOR TO POURING CONCRETE.
4. ALL LOAD-BEARING WALLS TO BE 2X6 @ 16" O.C. UNLESS NOTED OTHERWISE. ALL LOAD-BEARING WALLS TO HAVE DOUBLE TOP PLATE AND SINGLE BOTTOM PLATE.
5. ALL EXTERIOR WALLS TO BE SHEATHED WITH 1/2" STRUCTURAL I ZIP SYSTEM SHEATHING, UNLESS NOTED OTHERWISE.
6. COORDINATE LOCATION OF ALL NON-LOAD-BEARING STUD WALLS WITH ARCHITECTURAL DRAWINGS.
7. ALL SILL ANCHORS TO BE SIMPSON PDPAWL-287 @ 12" O.C.
8. PROVIDE #4 X 5'-0" LONG AT ALL RE-ENTRANT CORNERS.
9. DURING INSTALLATION OF POST CONSTRUCTION ANCHORS, CARE MUST BE TAKEN TO AVOID ALL REINFORCING.
10. REFER TO SHEET S210 FOR TYPICAL DETAILS.
11. REFER TO SHEET S210 FOR SHEAR WALL INFORMATION.
12. COORDINATE ALL FLOOR AND WALL PENETRATIONS WITH ALL OTHER DISCIPLINES.
13. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.

ROOF FRAMING PLAN NOTES

1. ROOF DECK TO BE 3/4" BLOCKED PLYWOOD DECK. ATTACH TO STRUCTURE WITH 8D NAILS @ 6" O.C. REFER TO PLAN FOR ELEVATIONS AND SLOPING INFORMATION.
2. ALL LOAD-BEARING WALLS TO BE 2X6 @ 16" O.C. UNLESS NOTED OTHERWISE. ALL LOAD-BEARING WALLS TO HAVE DOUBLE TOP PLATE AND SINGLE BOTTOM PLATE.
3. COORDINATE LOCATION OF ALL NON-LOAD-BEARING STUD WALLS WITH ARCHITECTURAL DRAWINGS. PROVIDE A 1" GAP BETWEEN TOP OF STUD AND BOTTOM OF FRAMING.
4. HEADERS TO BE (2) 2X6 U.N.O.
5. PROVIDE (2) JACK STUDS UNDER ALL HEADERS AND BEAMS UNLESS NOTED OTHERWISE.
6. ALL JACK STUDS TO BE CARRIED DOWN TO THE FOUNDATION LEVEL.
7. REFER TO SHEET S210 FOR TYPICAL DETAILS.
8. REFER TO SHEET S210 FOR SHEAR WALL INFORMATION.
9. COORDINATE ALL ROOF AND WALL PENETRATIONS WITH ALL OTHER DISCIPLINES.
10. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
11. ALL TRUSSES SHALL BE FREE-SPAN FROM WALL TO WALL OR WALL TO GIRDER
12. ALL GABLE TRUSSES TO HAVE INSTALLED VERTICAL STUDDING @ 16" O.C.
13. TRUSSES SHOWN FOR GENERAL DESIGN INFORMATION ONLY. TRUSS MANUFACTUERER SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.

collins | webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE

1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

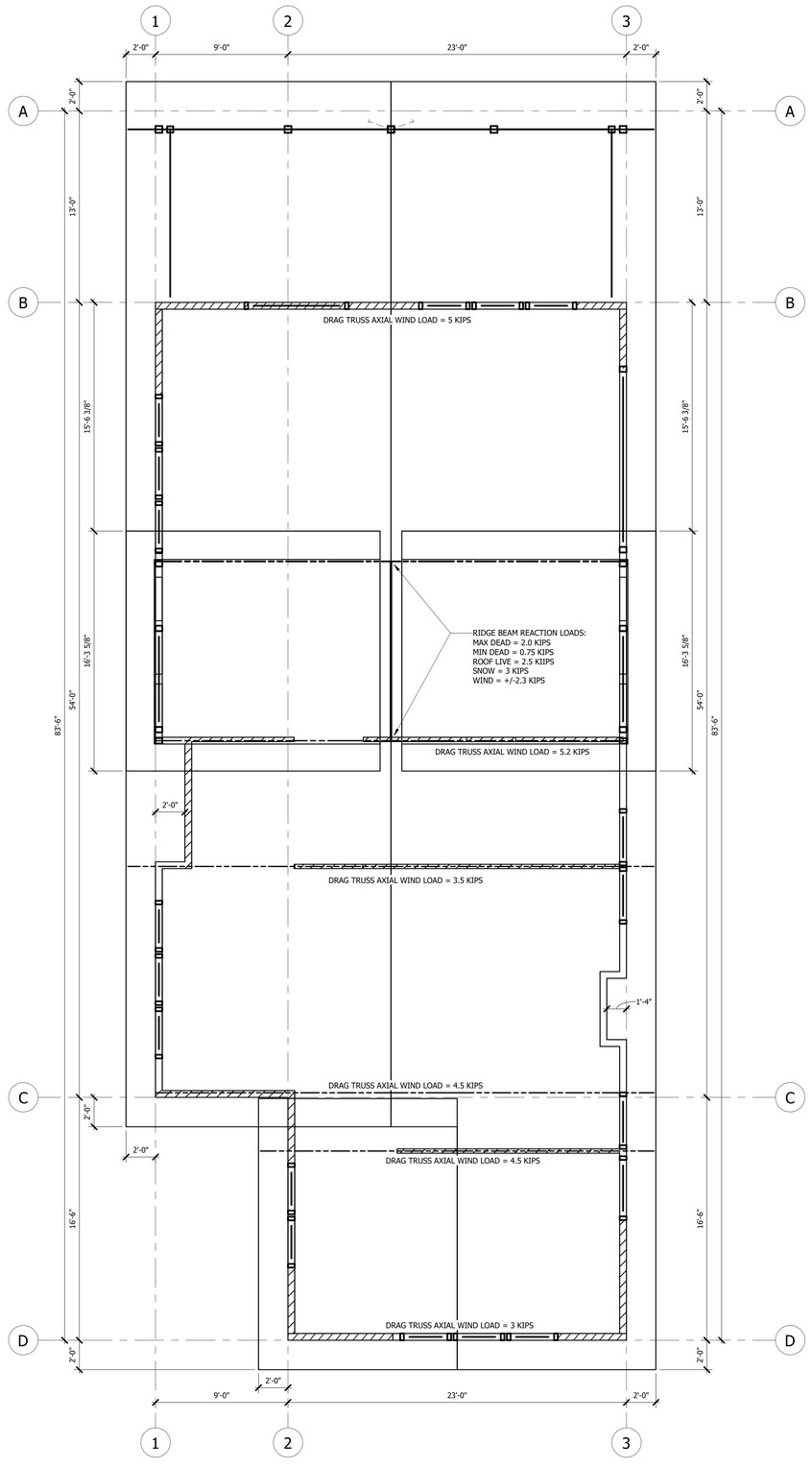
STATE OF MISSOURI
ADAM CHRISTOPHER WEBB
PROFESSIONAL ENGINEER
08/13/25
PROFESSIONAL SEAL

S100

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

STRUCTURAL PLANS

8/13/2025 10:14:35 AM



1 TRUSS LOADING PLAN
1/4" = 1'-0"

ROOF FRAMING PLAN NOTES

1. ROOF DECK TO BE 3/4" BLOCKED PLYWOOD DECK. ATTACH TO STRUCTURE WITH 8D NAILS @ 6" O.C. REFER TO PLAN FOR ELEVATIONS AND SLOPING INFORMATION.
2. ALL LOAD-BEARING WALLS TO BE 2X6 @ 16" O.C. UNLESS NOTED OTHERWISE. ALL LOAD-BEARING WALLS TO HAVE DOUBLE TOP PLATE AND SINGLE BOTTOM PLATE.
3. COORDINATE LOCATION OF ALL NON-LOAD-BEARING STUD WALLS WITH ARCHITECTURAL DRAWINGS. PROVIDE A 1" GAP BETWEEN TOP OF STUD AND BOTTOM OF FRAMING.
4. HEADERS TO BE (2) 2X6 U.N.O.
5. PROVIDE (2) JACK STUDS UNDER ALL HEADERS AND BEAMS UNLESS NOTED OTHERWISE.
6. ALL JACK STUDS TO BE CARRIED DOWN TO THE FOUNDATION LEVEL.
7. REFER TO SHEET S210 FOR TYPICAL DETAILS.
8. REFER TO SHEET S210 FOR SHEAR WALL INFORMATION.
9. COORDINATE ALL ROOF AND WALL PENETRATIONS WITH ALL OTHER DISCIPLINES.
10. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
11. ALL TRUSSES SHALL BE FREE-SPAN FROM WALL TO WALL OR WALL TO GIRDER
12. ALL GABLE TRUSSES TO HAVE INSTALLED VERTICAL STUDDING @ 16" O.C.
13. TRUSSES SHOWN FOR GENERAL DESIGN INFORMATION ONLY. TRUSS MANUFACTUERER SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.

collins|webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY
COLLINS WEBB
ARCHITECTURE, LLC

REVISION DATES:

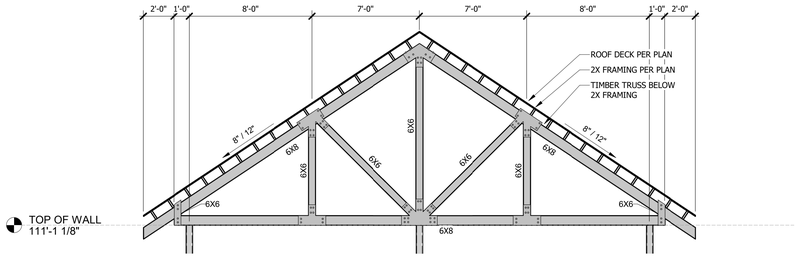
STATE OF MISSOURI
ADAM C. WEBB
NUMBER
PROFESSIONAL ENGINEER
08/13/25
PROFESSIONAL SEAL

S101

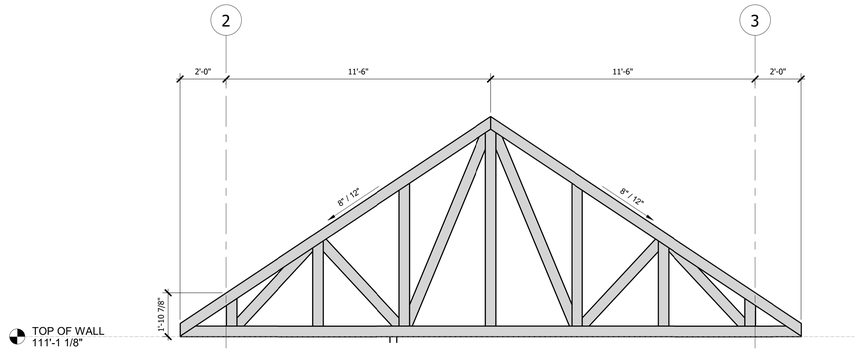
ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

ROOF TRUSS LOADING PLAN

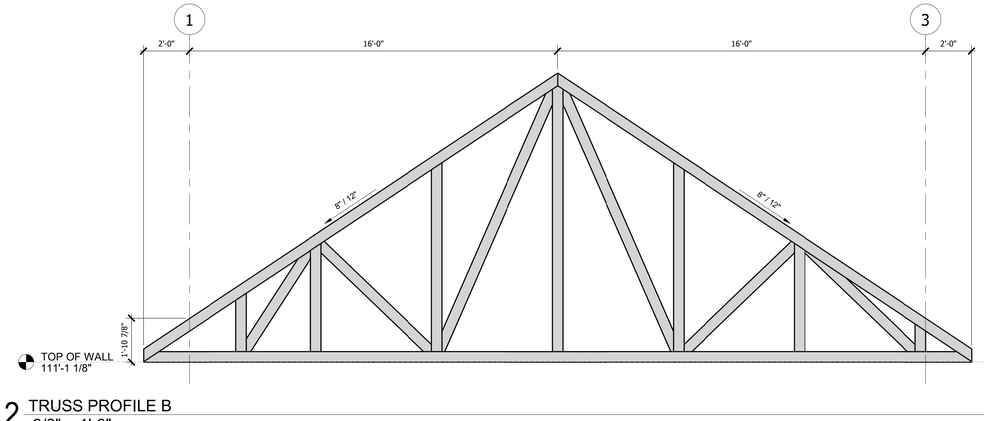
8/13/2025 10:14:35 AM



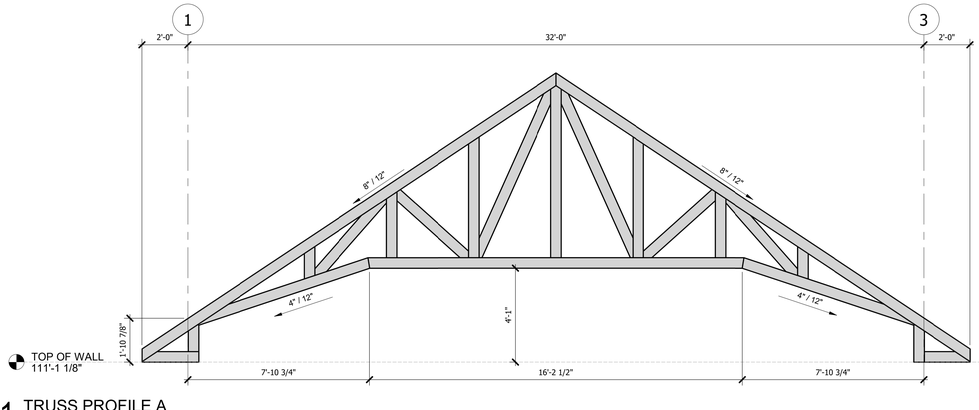
4 CUSTOM TIMBER TRUSS
1/4" = 1'-0"



3 TRUSS PROFILE C
3/8" = 1'-0"



2 TRUSS PROFILE B
3/8" = 1'-0"



1 TRUSS PROFILE A
3/8" = 1'-0"

8/13/2025 10:14:41 AM

CONSTRUCTION DOCUMENTS

collins|webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

BAILEY FARMS CLUBHOUSE

1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY
COLLINS WEBB
ARCHITECTURE, LLC

REVISION DATES:

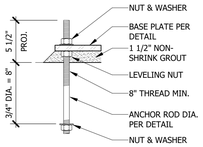


PROFESSIONAL SEAL

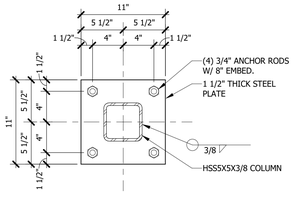
S200

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

TRUSS PROFILES

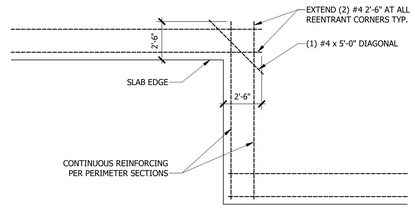


12 ANCHOR BOLT DETAIL
1 1/2" = 1'-0"

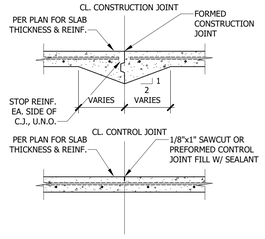


TYPICAL HSS5X5

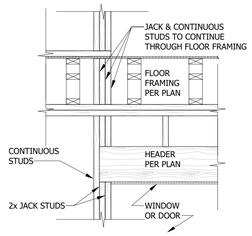
11 BASE PLATE DETAILS
1 1/2" = 1'-0"



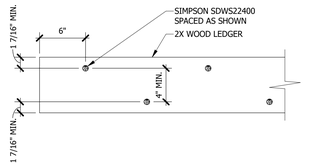
10 TYPICAL REENTRANT CORNER REINF. DETAIL
1/4" = 1'-0"



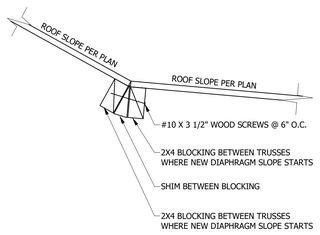
9 SLAB JOINT DETAILS
3/4" = 1'-0"



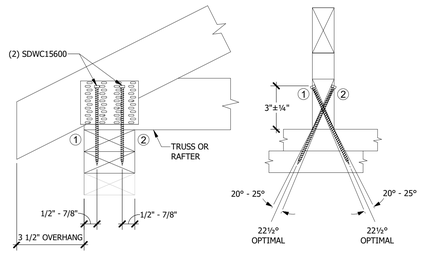
8 JACK STUD DETAIL
3/4" = 1'-0"



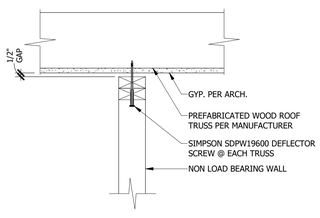
13 TYPICAL WOOD LEDGER
1 1/2" = 1'-0"



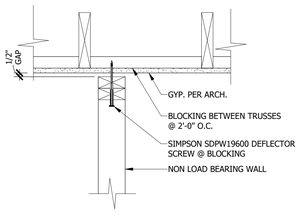
7 SLOPED DIAPHRAGM TRANSITION DETAIL
1 1/2" = 1'-0"



6 SIMPSON SDWC INSTALLATION DETAIL
3/4" = 1'-0"

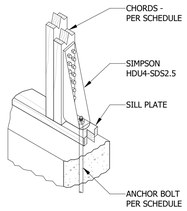


5 NLB WALL PERP. TO TRUSS CONNECTION
1 1/2" = 1'-0"

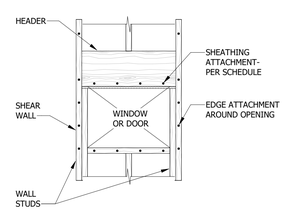


4 NLB WALL PARALLEL TO TRUSS CONNECTION
1 1/2" = 1'-0"

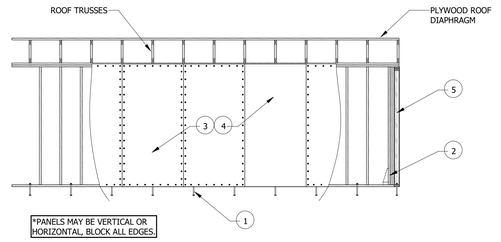
SHEAR WALL			SHEAR WALL SW1 (EXTERIOR)			SHEAR WALL SW2 (INTERIOR)		
LOCATION	ITEM	ITEM	SIZE	SPACING	REMARKS	SIZE	SPACING	REMARKS
1ST FLOOR	5	CHORDS	(2) 2X6	EA. CHORD	SPF #2 GRADE	(2) 2x4	EA. CHORD	SPF #2 GRADE
	4	SHEATHING ATTACHMENT	10d 10d	4" O.C. 4" O.C.	ALL INTERMIDATE SUPPORTS ALL PANEL EDGES	6d 6d	7" O.C. 7" O.C.	ALL INTERMEDIATE SUPPORTS ALL PANEL EDGES
	3	SHEATHING TYPE	1/2"	BLOCKED	STRUCTURAL I ZIP SYSTEM SHEATHING	5/8"	BLOCKED	GYPSUM WALLBOARD TWO SIDES
	2	SIMPSON HOLDOWN	HDU4-SDS2.5	EA. CHORD	FASTEN TO CHORD WITH (10) 1/4 X 2 1/2 SDS 5/8"ø ANCHOR ROD DRILL AND EPOXY 4" USING SET-3G	HDU4-SDS2.5	EA. CHORD	FASTEN TO CHORD WITH (10) 1/4 X 2 1/2 SDS 5/8"ø ANCHOR ROD DRILL AND EPOXY 4" USING SET-3G
	1	SILL PLATE ANCHORAGE	SIMPSON PDPAWL-287	8" O.C.	-	SIMPSON PDPAWL-287	12" O.C.	-



3 SHEAR WALL HOLDOWN DETAIL
1 1/2" = 1'-0"



2 SHEAR WALL OPENING DETAIL
3/4" = 1'-0"



1 TYPICAL 1 STORY SHEAR WALL ELEVATION
1/4" = 1'-0"

cw/ collins|webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

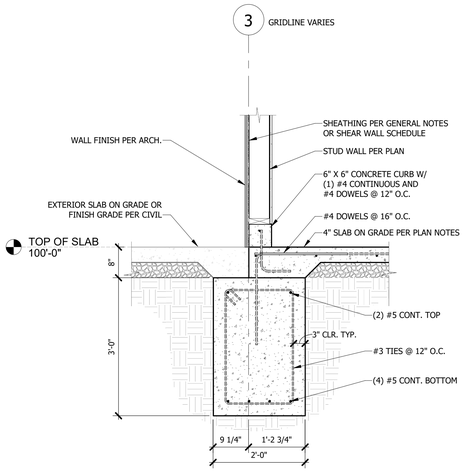
STATE OF MISSOURI ADAM CHRISTOPHER WEBB NUMBER PROFESSIONAL ENGINEER
08/13/25
PROFESSIONAL SEAL

S210

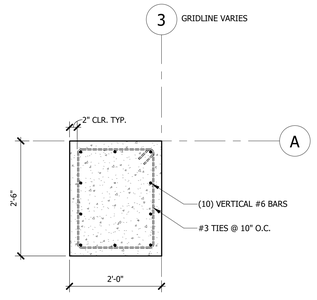
ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

TYPICAL DETAILS

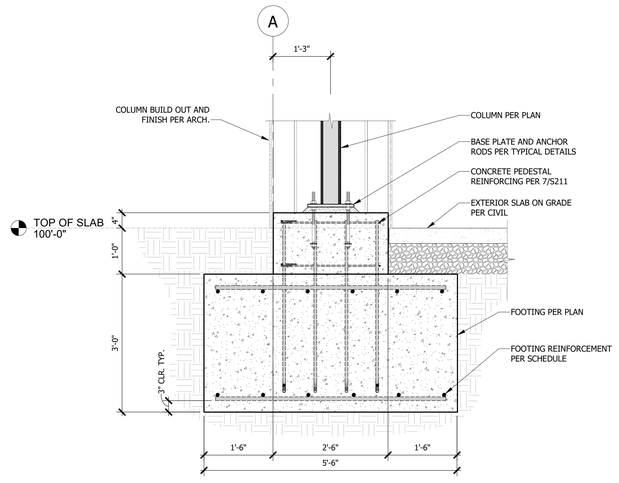
8/13/2025 10:14:42 AM



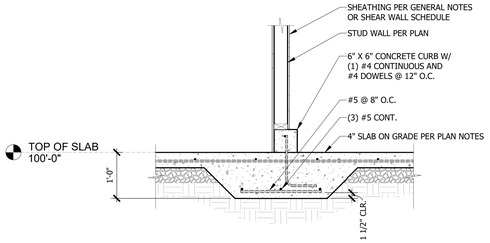
8 FOUNDATION SECTION AT POOL EQUIP. ROOM
3/4" = 1'-0"



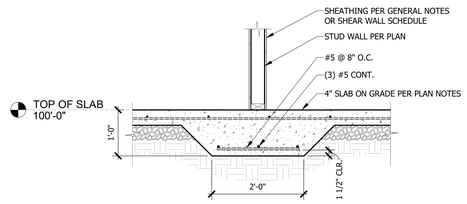
7 CONCRETE PEDESTAL REINFORCING
3/4" = 1'-0"



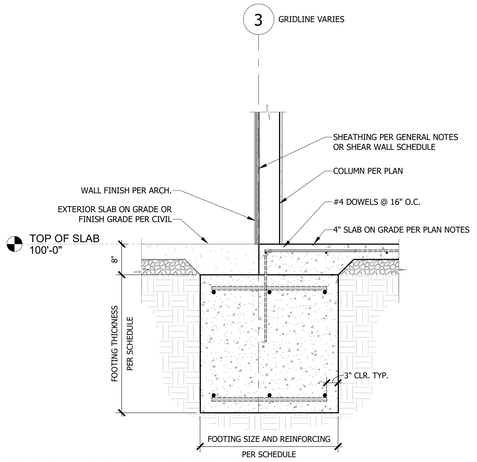
6 COVERED PATIO FOUNDATION SECTION
3/4" = 1'-0"



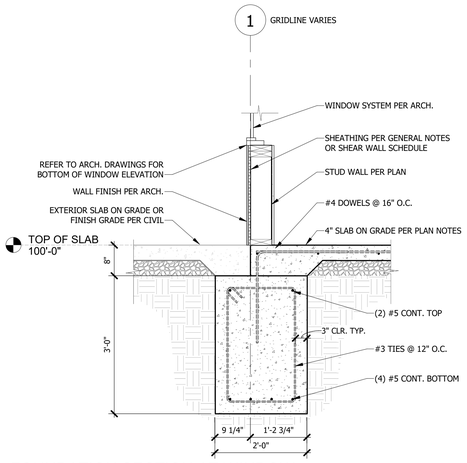
9 THICKENED SLAB IN POOL EQUIPMENT ROOM
3/4" = 1'-0"



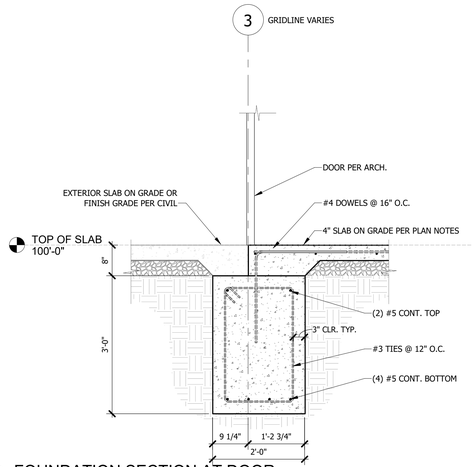
5 TYPICAL THICKENED SLAB SECTION
3/4" = 1'-0"



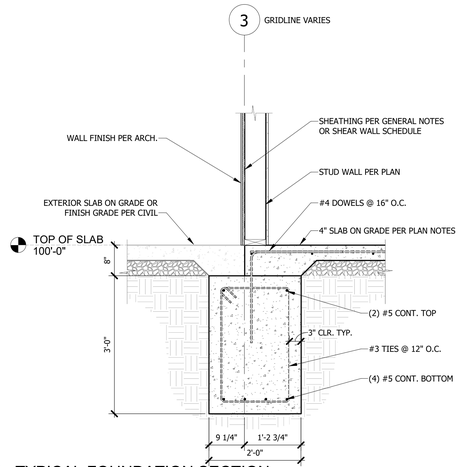
4 TYPICAL ISOLATED FOOTING SECTION
3/4" = 1'-0"



3 FOUNDATION SECTION AT WINDOW
3/4" = 1'-0"



2 FOUNDATION SECTION AT DOOR
3/4" = 1'-0"



1 TYPICAL FOUNDATION SECTION
3/4" = 1'-0"

CWA collins|webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

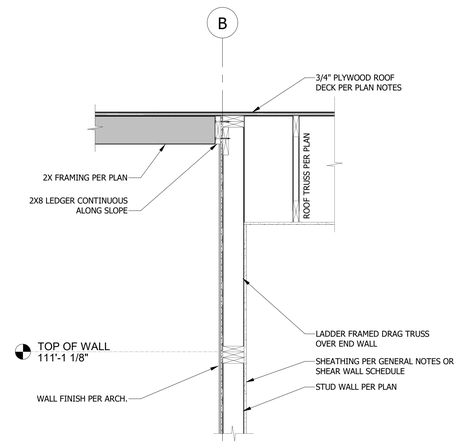
STATE OF MISSOURI ADAM CHRISTOPHER WEBB NUMBER PROFESSIONAL ENGINEER
08/13/25
PROFESSIONAL SEAL

S211

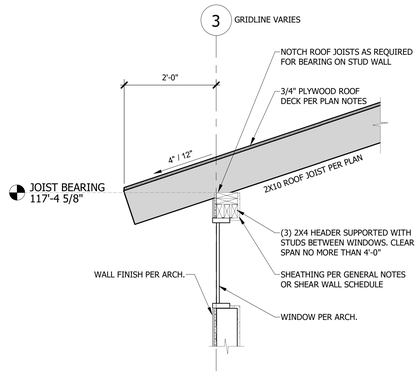
ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

FOUNDATION SECTIONS

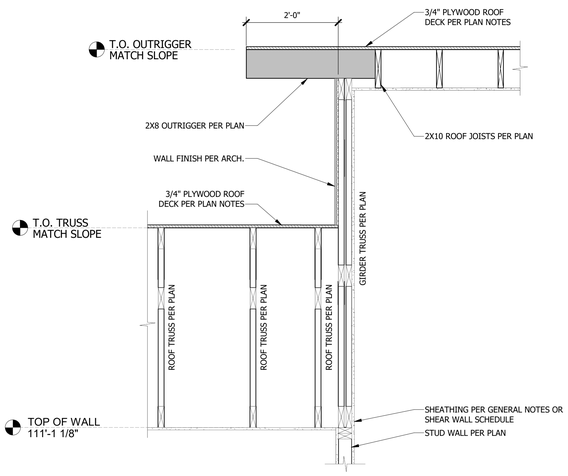
8/13/2025 10:14:49 AM



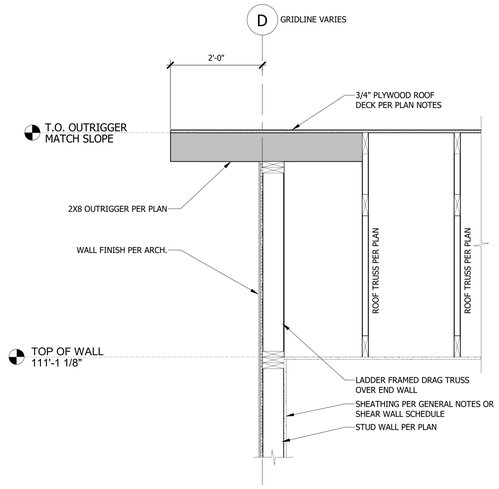
9 COVERED PATIO TRANSITION DETAIL
3/4" = 1'-0"



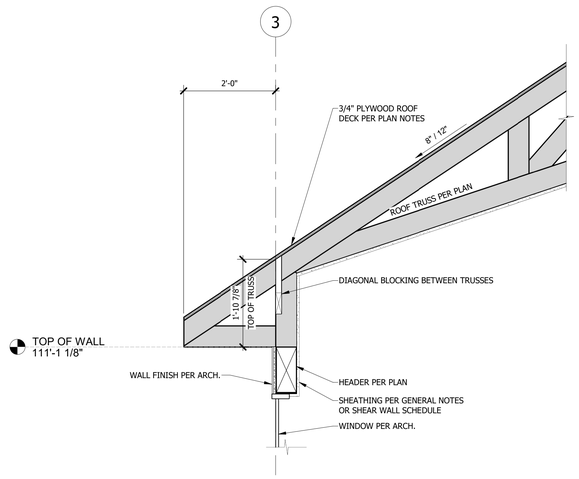
8 DORMER SECTION AT WINDOW
3/4" = 1'-0"



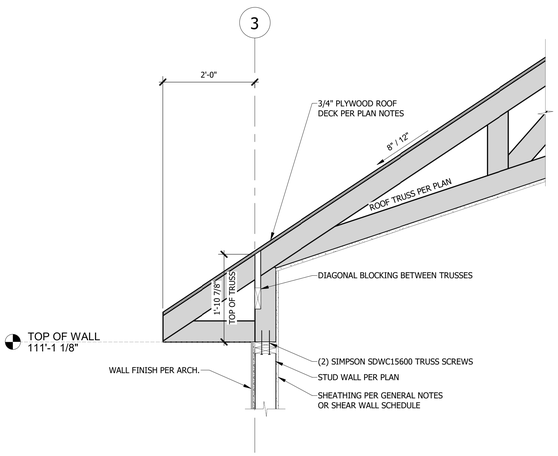
7 ROOF FRAMING SECTION AT UPPER ROOF ENDS
3/4" = 1'-0"



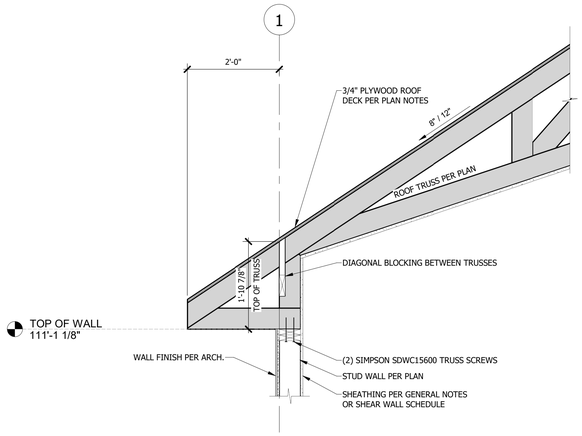
6 ROOF FRAMING SECTION AT MAIN ROOF ENDS
3/4" = 1'-0"



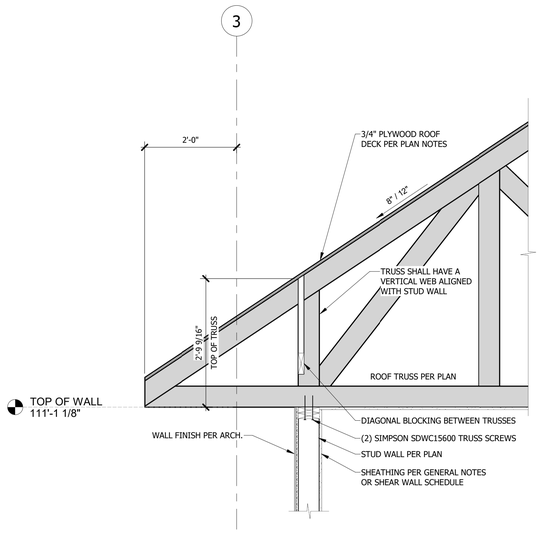
5 ROOF FRAMING SECTION AT EAST GREAT ROOM OVER WINDOW
3/4" = 1'-0"



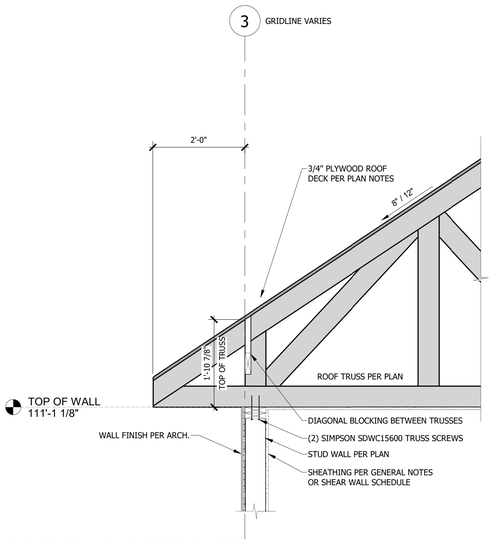
4 ROOF FRAMING SECTION AT EAST GREAT ROOM
3/4" = 1'-0"



3 ROOF FRAMING SECTION AT WEST GREAT ROOM
3/4" = 1'-0"



2 ROOF FRAMING SECTION AT INSET RESTROOMS
3/4" = 1'-0"



1 ROOF FRAMING SECTION TYP.
3/4" = 1'-0"

8/13/2025 10:14:55 AM

collins|webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

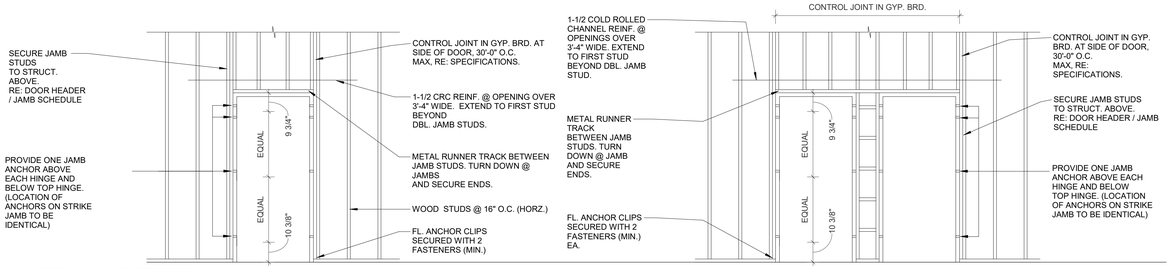
REVISION DATES:

STATE OF MISSOURI ADAM CHRISTOPHER WEBB PROFESSIONAL ENGINEER
08/13/25
PROFESSIONAL SEAL

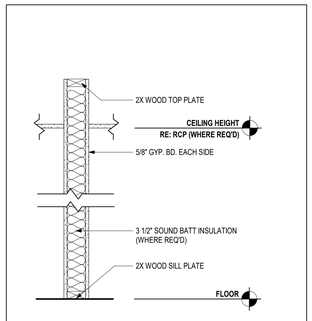
S220

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

ROOF FRAMING SECTIONS

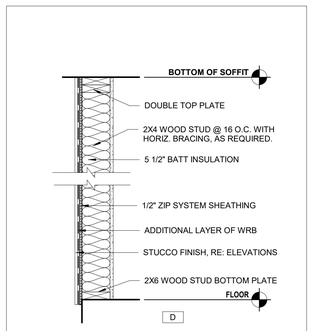


J12 FRAMING DETAILS
3/8" = 1'-0"



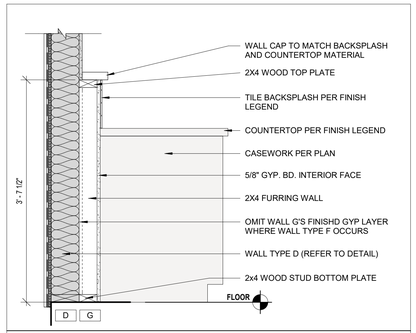
WALL TYPE A

TYPE	WALL DESCRIPTION
A	• 2X4 WOOD STUD @ 16" O.C. TO DECK ABOVE • 5/8" TYPE "X" GYP. BD. EACH SIDE TO DECK ABOVE • NO SOUND BATT INSUL. • NON RATED



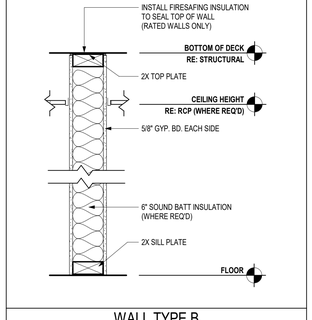
WALL TYPE D

TYPE	WALL DESCRIPTION
D	• 2X6 STUD @ 16" O.C. • 5/8" TYPE "X" GYP. BD. ONE SIDE • 5-1/2" BATT INSUL. TO FULL HEIGHT OF WALL • 1/2" STRUCTURAL ZIP SYSTEM • STUCCO WITH ADDITIONAL LAYER WRB SHEATHING: • INSTALL PER MFR DETAILS. • NON RATED



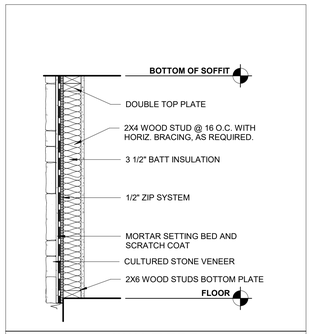
WALL TYPE G

TYPE	WALL DESCRIPTION
G	• WALL TYPE D AS THE BASE (EXTERIOR WALL) • 2X4 WOOD STUD @ 16" O.C. TO HEIGHT OF 3' - 7 1/2" • 5/8" TYPE 'X' GYP. BD. INTERIOR SIDE • BACKSPLASH AND WALL CAP TO MATCH COUNTERTOP • NON RATED



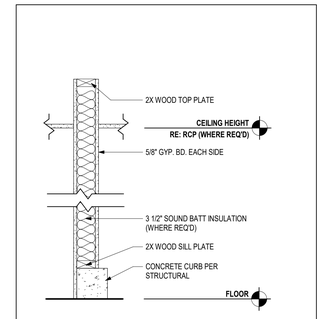
WALL TYPE B

TYPE	WALL DESCRIPTION
B	• 2X6 WOOD STUD @ 16" O.C. TO DECK ABOVE • 5/8" TYPE "X" GYP. BD. EACH SIDE TO DECK ABOVE • BATT INSUL. • NON RATED
B1	• 2X6 WOOD STUD @ 16" O.C. TO DECK ABOVE • 5/8" TYPE "X" GYP. BD. EACH SIDE TO DECK ABOVE • NO SOUND BATT INSUL. • FIRE-RATED SEALANT AT FLOOR, DECK, & ALL PENETRATIONS • 1-HR RATED RE: UL # U314



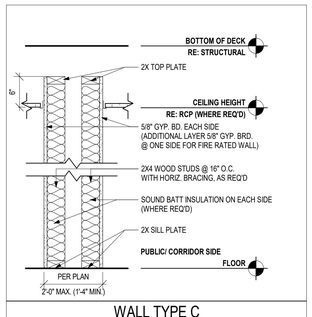
WALL TYPE E

TYPE	WALL DESCRIPTION
E	• 2X6 STUD @ 16" O.C. • 1/2" TYPE "X" GYP. BD. ONE SIDE • 3-1/2" BATT INSUL. TO FULL HEIGHT OF WALL • 1/2" ZIP SYSTEM • HOUSE WRAP/WEATHER BARRIER • MORTAR SETTING BED AND SCRATCH COAT • CULTURED STONE VENEER - ELDORADO STONE - CUT COARSE STONE - SEASHELL: INSTALL PER MFR DETAILS • NON RATED



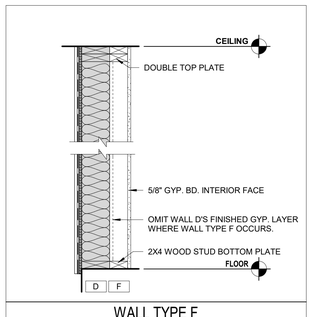
WALL TYPE H

TYPE	WALL DESCRIPTION
H	• 6X6 CONCRETE CURB AT BASE, PER STRUCTURAL • 2X4 WOOD STUD @ 16" O.C. TO DECK ABOVE • 5/8" TYPE "X" GYP. BD. EACH SIDE TO DECK ABOVE • NO SOUND BATT INSUL. • NON RATED



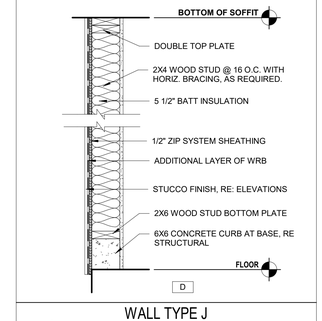
WALL TYPE C

TYPE	WALL DESCRIPTION
C	• 2 ROWS OF 2X4 WOOD STUDS @ 16" O.C. • 5/8" TYPE "X" GYP. BD. EACH EXPOSED SIDE TO DECK ABOVE • NON RATED



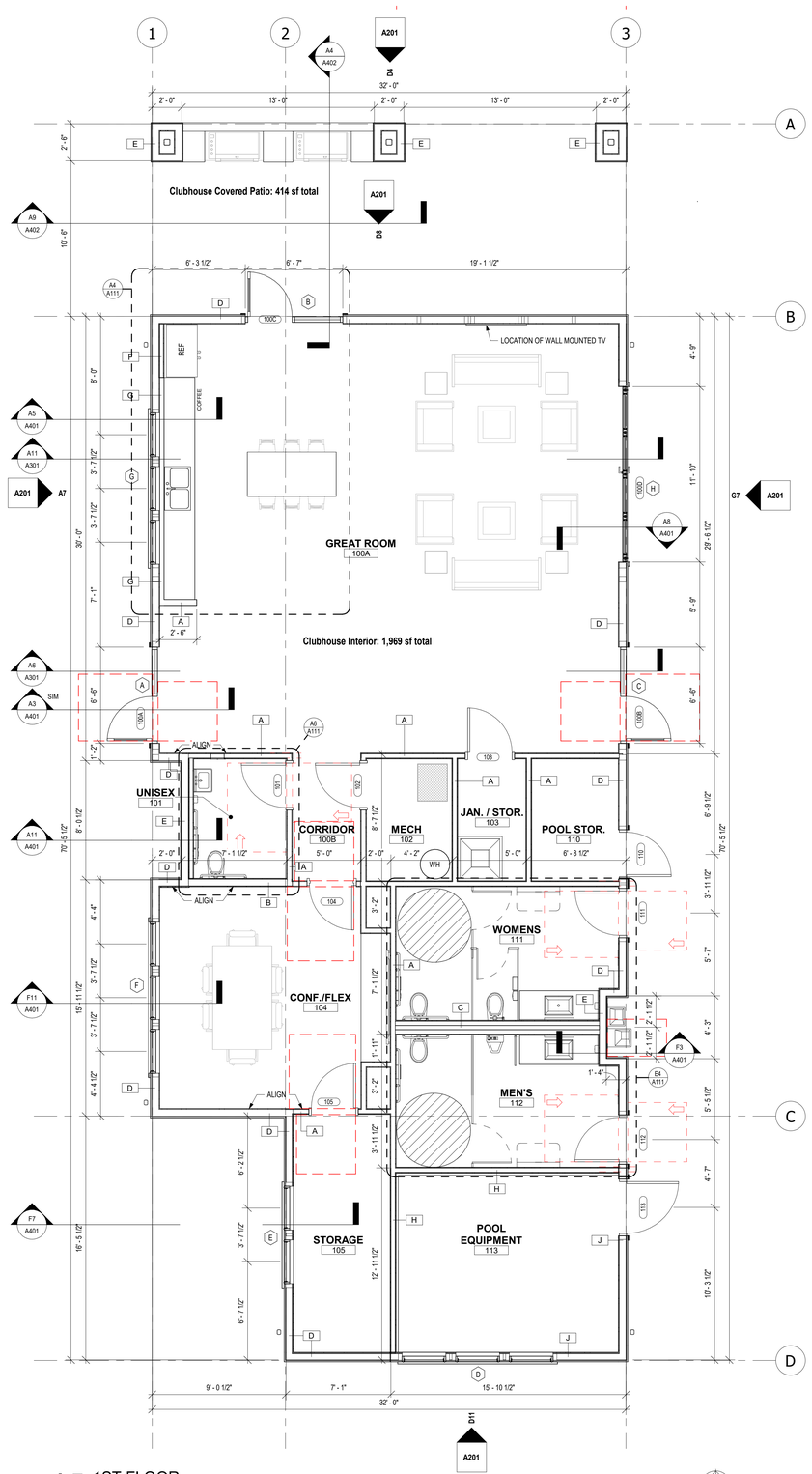
WALL TYPE F

TYPE	WALL DESCRIPTION
F	• WALL TYPE D AS THE BASE (EXTERIOR WALL) • 2X4 STUD @ 16" O.C. TO HEIGHT OF THE CEILING • 5/8" TYPE "X" GYP. BD. FINISHED SIDE • NON RATED



WALL TYPE J

TYPE	WALL DESCRIPTION
J	• 2X6 STUD @ 16" O.C. • 5/8" TYPE "X" GYP. BD. ONE SIDE • 5-1/2" BATT INSUL. TO FULL HEIGHT OF WALL • 1/2" STRUCTURAL ZIP SYSTEM • STUCCO WITH ADDITIONAL LAYER WRB SHEATHING: • INSTALL PER MFR DETAILS. • NON RATED



GENERAL NOTES: FLOOR PLANS

1. SEE GENERAL ARCHITECTURAL SHEETS FOR ADDITIONAL NOTES AND DETAILS THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0"
3. DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF GYP. BOARD/ WALL (FOG), FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
4. NOTE: WALL THICKNESSES ARE ACTUAL DIMENSIONS AND PER WALL TYPES. SEE GENERAL SHEETS.
5. DOOR OPENINGS NOT LOCATED BY DIMENSION SHALL BE CENTERED IN WALL SHOWN OR LOCATED 4 INCHES FROM FINISH WALL TO HINGE SIDE OF THE DOOR, ALWAYS ALLOWING A MINIMUM OF 18" FROM THE PULL SIDE (STRIKE SIDE) OF THE DOOR TO THE INTERSECTING WALL, OR OTHER PROTRUDING OBJECTS.
6. ALL ALCOVES WITHOUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FINISHES AS THE ADJOINING SPACES.
7. ALL WALLS TO BE PROVIDED WITH A LEVEL 4 FINISH UNLESS NOTED OTHERWISE.
8. RE: FINISH LEGEND, FINISH SCHEDULE AND SPECIFICATIONS FOR DOOR AND DOOR FRAME FINISHES.

CWA ARCHITECTURE
collins|webb
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

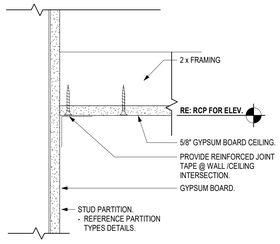
STATE OF MISSOURI
ROGER L. WEBB II
NUMBER A-2016018895
08/13/2025
ARCHITECT
PROFESSIONAL SEAL

A101

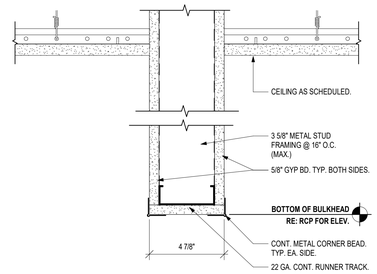
ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

FLOOR PLAN

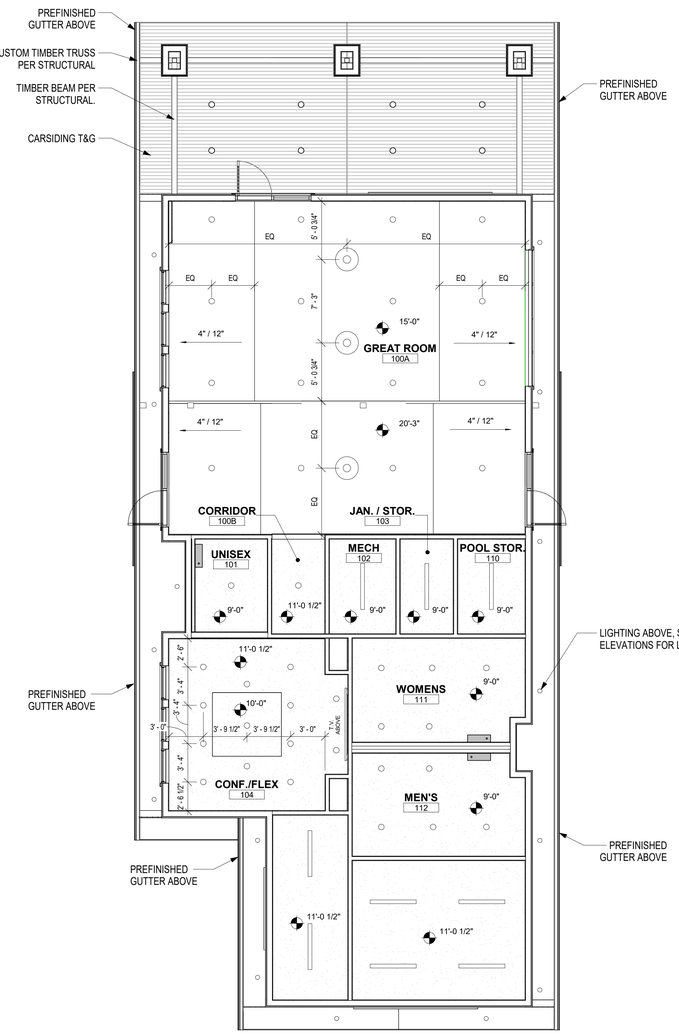
8/12/2025 8:49:20 AM



J6 RCP DETAIL - GYP. BD. CELING
3" = 1'-0"



J3 RCP DETAIL - BULKHEAD
3" = 1'-0"



A5 1ST FLOOR
3/16" = 1'-0"

NORTH

GENERAL NOTES: REFLECTED CEILING PLANS

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: DETAILS FOR ADDITIONAL CONDITIONS AND CEILING HEIGHT INFORMATION.
3. RE: FINISH LEGEND AND FINISH SCHEDULE FOR ROOM CEILING FINISHES.
4. RE: ELECTRICAL SHEETS AND SPECIFICATIONS FOR DETAILED INFORMATION ON LIGHT FIXTURE SCHEDULE & EXIT SIGNAGE.
5. RE: MECHANICAL SHEETS AND SPECIFICATIONS FOR DETAILED INFORMATION ON DIFFUSERS.
6. DIMENSIONS SHOWN ON THE REFLECTED CEILING PLANS ARE TO THE FACE OF GYP. BOARD (FOG), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
7. ALL CEILINGS HEIGHT ARE NOTED ON RCP.
8. ALL CEILING HEIGHTS AS SHOWN ON PLANS AND DETAILS ARE FROM SLAB OR TILE FLOOR (FINISHED FLOOR) TO FINISH CEILING.
9. AT ALL GYP. BD. SOFFITS: EXTEND GYP. BD. UP 6 INCHES ABOVE ADJACENT CEILING.
10. RECESSED LIGHTING, SPEAKERS, SMOKE DETECTORS, ETC. AND PENDANT LIGHT FIXTURES - SHALL BE CENTERED IN CEILING TILE OR GYP. BD. CEILING, UNLESS NOTED OTHERWISE.
11. COORDINATE ALL PENDANT MOUNTED LIGHT FIXTURES IN EQUIPMENT AREAS WITH EXPOSED STRUCTURE.
12. COORDINATE ALL CEILING MOUNTED EQUIPMENT WITH CASEWORK BELOW.
13. IF THERE IS A CONFLICT BETWEEN ANY ABOVE-CEILING MECHANICAL / ELECTRICAL / PLUMBING WORK & THE SCHEDULED OR SHOWN CEILING HEIGHT, CONTACT THE ARCHITECT IMMEDIATELY FOR CLARIFICATION.
14. PROVIDE OVERALL CEILING COORDINATION DRAWING SHOWING ALL DEVICES DURING SHOP SUBMITTAL PROCESS.
15. ALL LIGHTING BY G.C. COORD. WITH MILLWORK CONTRACTOR FOR LOCATION.

REFLECTED CEILING PLAN SYMBOLS

- 9'-0" — CEILING HEIGHT
- GYP. BD.
- SUPPLY
- RETURN
- EXHAUST
- 2X4 LIGHT FIXTURE
- 1X4 LIGHT FIXTURE
- 2X2 LIGHT FIXTURE DIRECT/INDIRECT
- FLUORESCENT STRIP FIXTURE
- TRACK LIGHTING
- PENDANT FIXTURE
- CAN LIGHT
- FIRE EXIT SIGN
- S — SPEAKER
- CONTROL JOINT IN GYP BD CEILING
- EXTERIOR METAL PANEL SOFFIT

CWA collins|webb ARCHITECTURE
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ROGER L. WEBB II
NUMBER A-2016024928
08/13/2026
ARCHITECT

PROFESSIONAL SEAL

A102

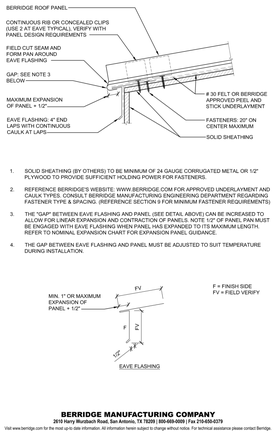
ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

REFLECTED CEILING PLAN

8/12/2025 8:49:21 AM

COMMON DETAILS

EAVE DETAIL



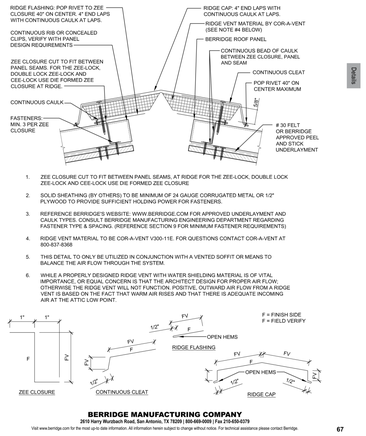
1. SOLID SHEATHING (BY OTHERS) TO BE MINIMUM OF 24 GAUGE CORRUGATED METAL OR 1/2" PLYWOOD TO PROVIDE SUFFICIENT HOLDING POWER FOR FASTENERS.
2. REFERENCE BERRIDGE'S WEBSITE: WWW.BERRIDGE.COM FOR APPROVED UNDERLAYMENT AND CAULK TYPES. CONSULT BERRIDGE MANUFACTURING ENGINEERING DEPARTMENT REGARDING FASTENER TYPE & SPACING. (REFERENCE SECTION 9 FOR MINIMUM FASTENER REQUIREMENTS)
3. THE "GAP" BETWEEN EAVE FLASHING AND PANEL (SEE DETAIL ABOVE) CAN BE INCREASED TO ALLOW FOR LINEAR EXPANSION AND CONTRACTION OF PANELS. NOTE 1/2" OF PANEL PAN MUST BE ENGAGED WITH EAVE FLASHING WHEN PANEL HAS EXPANDED TO ITS MAXIMUM LENGTH. REFER TO NOMINAL EXPANSION CHART FOR EXPANSION PANEL GUIDANCE.
4. THE GAP BETWEEN EAVE FLASHING AND PANEL MUST BE ADJUSTED TO SUIT TEMPERATURE DURING INSTALLATION.

BERRIDGE MANUFACTURING COMPANY
2010 Harry Wurzbach Road, San Antonio, TX 78209 | 800-669-0009 | Fax 210-650-0379
Visit www.berridge.com for the most up-to-date information. All information herein subject to change without notice. For technical assistance please contact Berridge.

G12 EAVE DETAIL.
1 1/2" = 1'-0"

COMMON DETAILS

RIDGE VENT CAP DETAIL



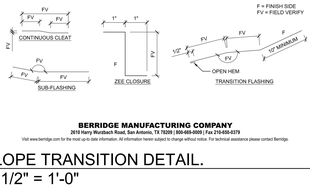
1. ZEE CLOSURE CUT TO FIT BETWEEN PANEL SEAMS, AT RIDGE FOR THE ZEE-LOCK, DOUBLE LOCK ZEE-LOCK AND CEE-LOCK USE DIE FORMED ZEE CLOSURE
2. SOLID SHEATHING (BY OTHERS) TO BE MINIMUM OF 24 GAUGE CORRUGATED METAL OR 1/2" PLYWOOD TO PROVIDE SUFFICIENT HOLDING POWER FOR FASTENERS.
3. REFERENCE BERRIDGE'S WEBSITE: WWW.BERRIDGE.COM FOR APPROVED UNDERLAYMENT AND CAULK TYPES. CONSULT BERRIDGE MANUFACTURING ENGINEERING DEPARTMENT REGARDING FASTENER TYPE & SPACING. (REFERENCE SECTION 9 FOR MINIMUM FASTENER REQUIREMENTS)
4. RIDGE VENT MATERIAL TO BE COR-A-VENT V300-11E. FOR QUESTIONS CONTACT COR-A-VENT AT 800-837-8368
5. THIS DETAIL TO ONLY BE UTILIZED IN CONJUNCTION WITH A VENTED SOFFIT OR MEANS TO BALANCE THE AIR FLOW THROUGH THE SYSTEM.
6. WHILE A PROPERLY DESIGNED RIDGE VENT WITH WATER SHIELDING MATERIAL IS OF VITAL IMPORTANCE, OR EQUAL CONCERN IS THAT THE ARCHITECT DESIGN FOR PROPER AIR FLOW; OTHERWISE THE RIDGE VENT WILL NOT FUNCTION. POSITIVE, OUTWARD AIR FLOW FROM A RIDGE VENT IS BASED ON THE FACT THAT WARM AIR RISES AND THAT THERE IS ADEQUATE INCOMING AIR AT THE ATTIC LOW POINT.

BERRIDGE MANUFACTURING COMPANY
2010 Harry Wurzbach Road, San Antonio, TX 78209 | 800-669-0009 | Fax 210-650-0379
Visit www.berridge.com for the most up-to-date information. All information herein subject to change without notice. For technical assistance please contact Berridge.

G9 RIDGE VENT DETAIL.
1 1/2" = 1'-0"

COMMON DETAILS

GABLE DETAIL



1. FIELD CUT AND FORM LAST PANEL AROUND DRIP FLASHING, PANEL MUST BE CONTINUOUS FROM RIDGE TO EAVE.
2. SOLID SHEATHING (BY OTHERS) TO BE MINIMUM OF 24 GAUGE CORRUGATED METAL OR 1/2" PLYWOOD TO PROVIDE SUFFICIENT HOLDING POWER OF FASTENERS.
3. REFERENCE BERRIDGE'S WEBSITE: WWW.BERRIDGE.COM FOR APPROVED UNDERLAYMENT AND CAULK TYPES. CONSULT BERRIDGE MANUFACTURING ENGINEERING DEPARTMENT REGARDING FASTENER TYPE & SPACING. (REFERENCE SECTION 9 FOR MINIMUM FASTENER REQUIREMENTS)



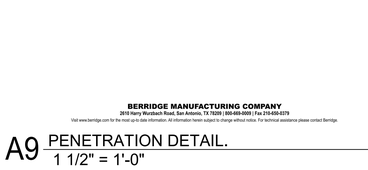
BERRIDGE MANUFACTURING COMPANY
2010 Harry Wurzbach Road, San Antonio, TX 78209 | 800-669-0009 | Fax 210-650-0379
Visit www.berridge.com for the most up-to-date information. All information herein subject to change without notice. For technical assistance please contact Berridge.

D12 GABLE DETAIL.
1 1/2" = 1'-0"

COMMON DETAILS

HEAD WALL DETAILS

HEAD WALL WITH FASCIA PANEL - SOLID SUBSTRATE



1. ZEE CLOSURE CUT TO FIT BETWEEN PANEL SEAMS, AND, IF PERPENDICULAR TO THE PANEL SEAM FOR THE ZEE-LOCK, DOUBLE LOCK ZEE-LOCK, AND CEE-LOCK USE DIE FORMED ZEE CLOSURE.

HEAD WALL WITH REGLET FLASHING - SOLID SUBSTRATE

BERRIDGE MANUFACTURING COMPANY
2010 Harry Wurzbach Road, San Antonio, TX 78209 | 800-669-0009 | Fax 210-650-0379
Visit www.berridge.com for the most up-to-date information. All information herein subject to change without notice. For technical assistance please contact Berridge.

D9 ROOF/ WALL DETAIL.
1 1/2" = 1'-0"

COMMON DETAILS

SLOPE TERMINATION DETAIL

1. ZEE CLOSURE CUT TO FIT BETWEEN SEAMS, FOR THE ZEE-LOCK, DOUBLE LOCK ZEE-LOCK, AND CEE-LOCK USE DIE FORMED ZEE-CLOSURE.
2. AS ROOF PANELS ARE INSTALLED, FIELD CUT PANEL SEAM AND TURN PANEL PAN UNDER, HOOK ONTO CLEAT. REFERENCE EAVE DETAILS FOR EXPANSION AND CONTRACTION REQUIREMENTS.
3. SOLID SHEATHING (BY OTHERS) TO BE MINIMUM 1/2" PLYWOOD OR EQUIVALENT IN STRENGTH FOR HOLDING POWER OF FASTENERS
4. REFERENCE BERRIDGE'S WEBSITE: WWW.BERRIDGE.COM FOR APPROVED UNDERLAYMENT AND CAULK TYPES. CONSULT BERRIDGE MANUFACTURING ENGINEERING DEPARTMENT REGARDING FASTENER TYPE & SPACING. (REFERENCE SECTION 9 FOR MINIMUM FASTENER REQUIREMENTS)

BERRIDGE MANUFACTURING COMPANY
2010 Harry Wurzbach Road, San Antonio, TX 78209 | 800-669-0009 | Fax 210-650-0379
Visit www.berridge.com for the most up-to-date information. All information herein subject to change without notice. For technical assistance please contact Berridge.

A12 SLOPE TRANSITION DETAIL.
1 1/2" = 1'-0"

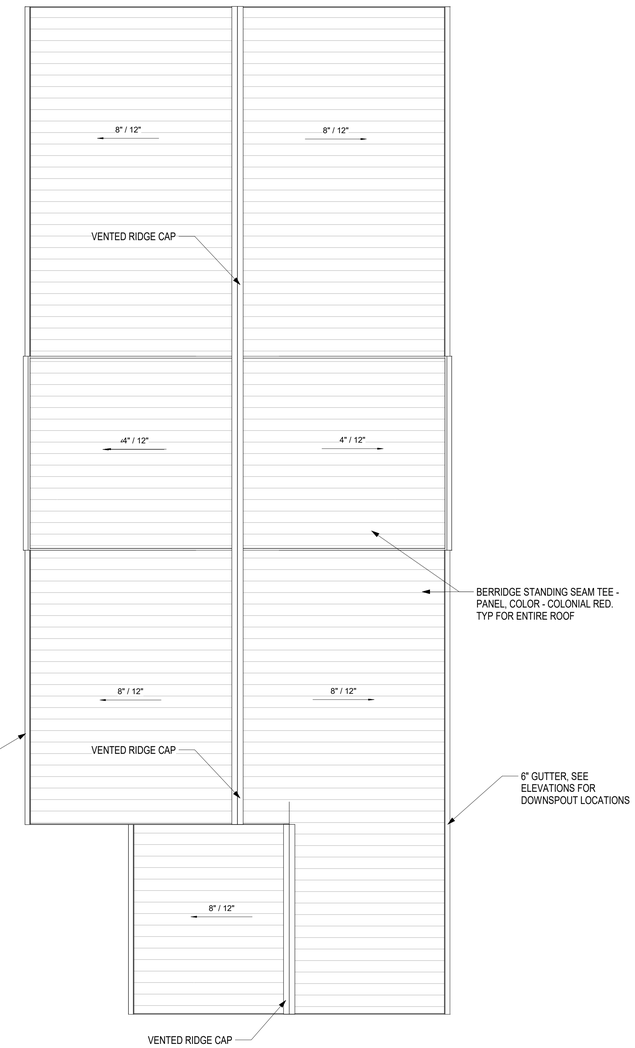
COMMON DETAILS

ROUND PENETRATION DETAIL

1. PIPE PENETRATION TO BE IN PAN OF PANEL ONLY
2. FIELD CUT HOLE IN PANEL 1" LESS THAN DIA. OF STACK. BACK CUT HOLE AND BEND PANEL UP AROUND STACK. CAULK CONTINUOUS.
3. IF PANELS ARE 30' OR LONGER, CUT HOLE TO ALLOW FOR THERMAL MOVEMENT.
4. IF PIPE IS METAL, IT MUST BE PAINTED TO PREVENT RUST RUN-OFF FROM STAINING PANELS.

BERRIDGE MANUFACTURING COMPANY
2010 Harry Wurzbach Road, San Antonio, TX 78209 | 800-669-0009 | Fax 210-650-0379
Visit www.berridge.com for the most up-to-date information. All information herein subject to change without notice. For technical assistance please contact Berridge.

A9 PENETRATION DETAIL.
1 1/2" = 1'-0"



A5 ROOF
3/16" = 1'-0"

NORTH

GENERAL NOTES: ROOF PLANS

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. DIMENSIONS SHOWN ON THE ROOF PLAN ARE TO THE FACE OF EXTERIOR WALL; FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
3. PROVIDE 1/2" / FT. TAPERED INSULATION AT ALL ROOF CURBS AND AT EQUIPMENT WHICH EXCEEDS 18 INCHES IN WIDTH.

ROOF PLAN LEGEND

SLOPE DIRECTION

CWA ARCHITECTURE
collins|webb
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ROGER L. WEBB II
NUMBER A-2016038198
08/13/2025
ARCHITECT

PROFESSIONAL SEAL

A103

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

ROOF PLAN - CLUBHOUSE

8/12/2025 8:49:24 AM

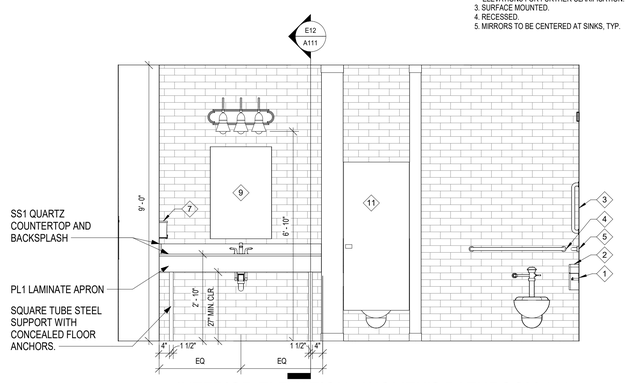
ACCESSORY SCHEDULE NOTES:

GENERAL NOTES:
A. ALL TOILET ACCESSORY LOCATIONS BASED ON FLOOR PLAN LAYOUT.
B. REFER TO INTERIOR ELEVATIONS FOR ANY ACCESSORIES THAT MAY NOT SHOW UP ON THE PLANS.
C. REFER TO G002 AND MANUFACTURER'S SPECIFICATIONS FOR MOUNTING HEIGHTS.
D. COORDINATE ALL MOUNTING HEIGHTS W/ PLUMBING FIXTURES TO ALLOW PROPER OPERATION & INFORM ARCHITECT IN WRITING OF ANY CONFLICTS.
E. G.C. TO VERIFY DIRECTLY W/ OWNER TO DETERMINE MOUNTING HEIGHTS, U.N.O.
F. REFER TO PLANS AND ELEVATIONS FOR ITEMS NOTED AS FF&E.
G. PROVIDE ALLOWANCE FOR ALL ROUNDED VANITY MIRRORS.

REMARKS:
1. OWNER FURNISHED, OWNER INSTALLED.
2. FF&E ITEM - OWNER FURNISHED, CONTRACTOR INSTALLED. REFER TO PLANS AND ELEVATIONS FOR FURTHER CLARIFICATION.
3. SURFACE MOUNTED.
4. RECESSED.
5. MIRRORS TO BE CENTERED AT SINKS, TYP.

ACCESSORY SCHEDULE

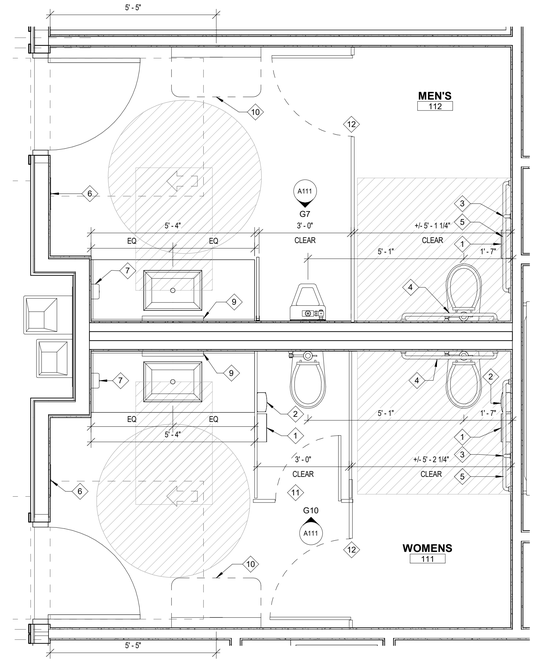
TYPE MARK	MANUFACTURER	DESCRIPTION	MODEL	WxDxH	FINISH	QTY.	COMMENTS	REMARKS
1	BOBRICK WASHROOM EQUIPMENT, INC.	DOUBLE ROLL TOILET TISSUE DISPENSER & UTILITY SHELF	B-540			4		3
2	BOBRICK WASHROOM EQUIPMENT, INC.	SANITARY NAPKIN DISPOSAL	B-270		SATIN	3		3
3	BOBRICK WASHROOM EQUIPMENT, INC.	VERTICAL GRAB BAR, 1-1/2" DIA., SS,18"	B-6806-18	18"X1.5" DIA	SATIN	3		3
4	BOBRICK WASHROOM EQUIPMENT, INC.	GRAB BAR, 1-1/2" DIA., SS, 36"	B-5806-36	1-1/2" DIA x 36"	SATIN	3		3
5	BOBRICK WASHROOM EQUIPMENT, INC.	GRAB BAR, 1-1/2" DIA., SS, 42"	B-6806-42	1-1/2" DIA x 42"	SATIN	3		3
6	BOBRICK WASHROOM EQUIPMENT, INC.	RECESSED PAPER TOWEL DISPENSER	B-359		SATIN	3		4
7	BOBRICK WASHROOM EQUIPMENT, INC.	SOAP DISPENSER	B-40			3		3
8	(TBD)	TEMPERED FLOAT GLASS MIRROR - 18"W x 36"H	SELECTION BY OWNER			1		3, 5
9	(TBD)	TEMPERED FLOAT GLASS MIRROR - 24"W x 36"H	SELECTION BY OWNER			2		3, 5
10	(TBD)	CHANGING STATION	SELECTION BY OWNER			2		2
11	BRADLEY CORPORATION	RESTROOM PARTITIONS - STANDARD	FLOOR-TO-CEILING		HDPE OR PHENOLIC	1	(UP TO 10' CEILING HEIGHTS)	
12	BRADLEY CORPORATION	RESTROOM PARTITIONS - ADA	FLOOR-TO-CEILING		HDPE OR PHENOLIC	2	(UP TO 10' CEILING HEIGHTS)	
13	BRADLEY CORPORATION	RESTROOM PARTITIONS - URINAL	URINAL SCREEN		HDPE OR PHENOLIC	1	WALL-MOUNTED	
14	JENN AIR	REFRIGERATOR	SIDE BY SIDE, JS42PPDUDE, OR SIMILAR			1	COORD. SELECTION W/ OWNER	2



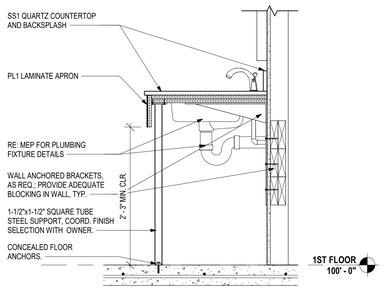
G10 INTERIOR ELEVATION - WOMEN'S BATHROOM 111
1/2" = 1'-0"



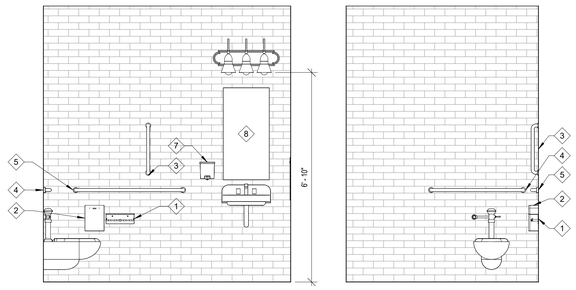
G7 INTERIOR ELEVATION - MEN'S BATHROOM 112
1/2" = 1'-0"



E4 ENLARGED PLAN RESTROOMS-111 & 112
1/2" = 1'-0"

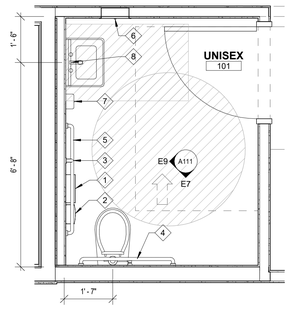


E12 RESTROOM VANITY SECTION
1" = 1'-0"

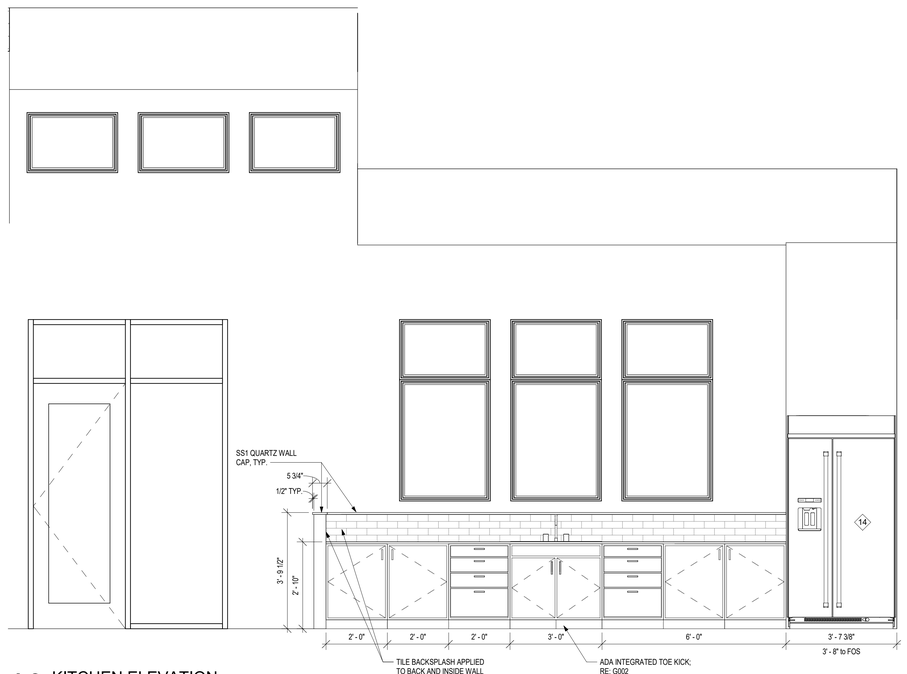


E9 INTERIOR ELEV. UNISEX 101
1/2" = 1'-0"

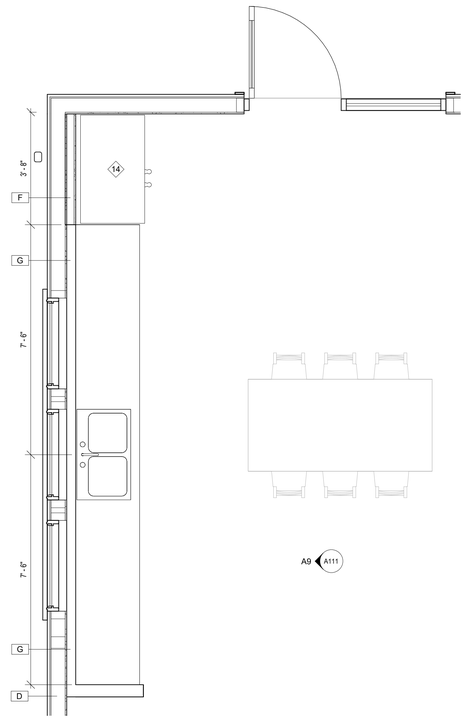
E7 INT. ELEV. UNISEX 101
1/2" = 1'-0"



A6 ENLARGED PLAN - UNISEX 101
1/2" = 1'-0"



A9 KITCHEN ELEVATION
1/2" = 1'-0"



A4 ENLARGED PLAN - KITCHEN
1/2" = 1'-0"

GENERAL NOTES: FLOOR PLANS

1. SEE GENERAL ARCHITECTURAL SHEETS FOR ADDITIONAL NOTES AND DETAILS THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0"
3. DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF GYP. BOARD WALL (FOG), FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
4. NOTE: WALL THICKNESSES ARE ACTUAL DIMENSIONS AND PER WALL TYPES. SEE GENERAL SHEETS.
5. DOOR OPENINGS NOT LOCATED BY DIMENSION SHALL BE CENTERED IN WALL SHOWN OR LOCATED 4 INCHES FROM FINISH WALL TO HINGE SIDE OF THE DOOR, ALWAYS ALLOWING A MINIMUM OF 18" FROM THE PULL SIDE (STRIKE SIDE) OF THE DOOR TO THE INTERSECTING WALL, OR OTHER PROTRUDING OBJECTS.
6. ALL ALCOVES WITHOUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FINISHES AS THE ADJOINING SPACES.
7. ALL WALLS TO BE PROVIDED WITH A LEVEL 4 FINISH UNLESS NOTED OTHERWISE.
8. RE: FINISH LEGEND, FINISH SCHEDULE AND SPECIFICATIONS FOR DOOR AND DOOR FRAME FINISHES.

collins | webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

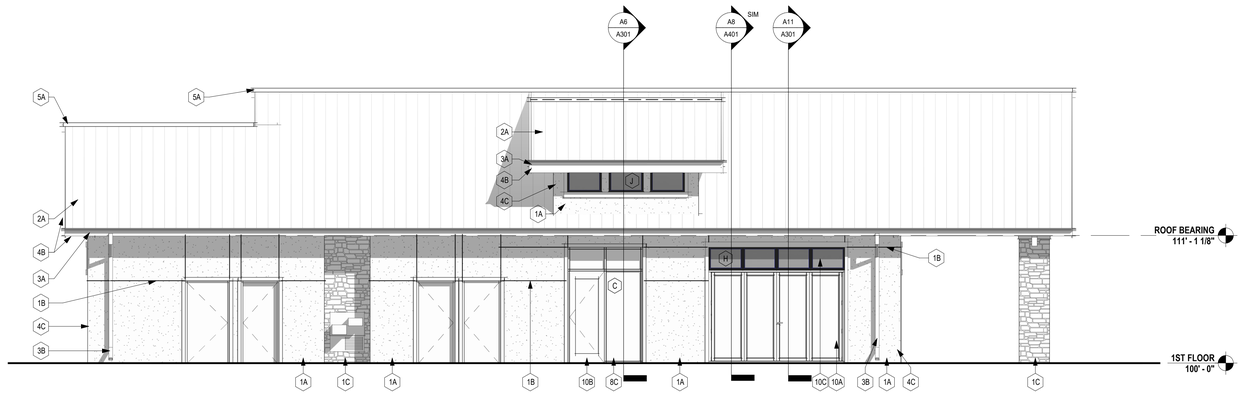
STATE OF MISSOURI
ROGER L. WEBB II
NUMBER A-2016024008
08/13/2025
ARCHITECT
PROFESSIONAL SEAL

A111

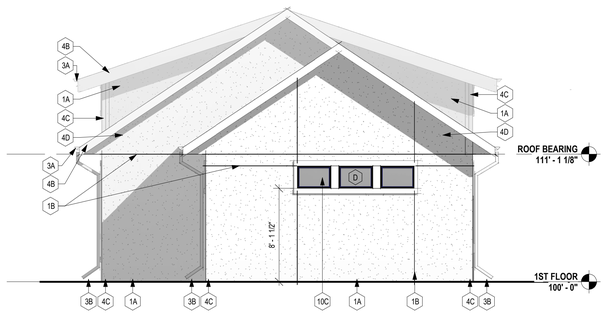
ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

ENLARGED PLANS AND ELEVATIONS - KITCHEN AND RESTROOMS

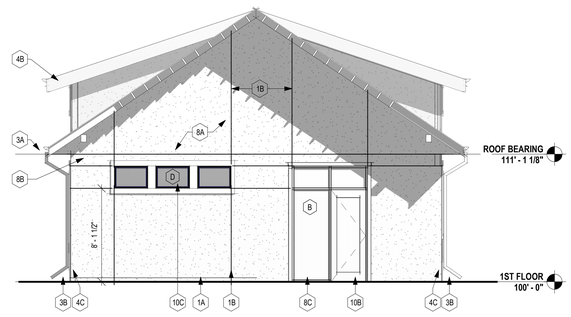
8/12/2025 9:15:53 AM



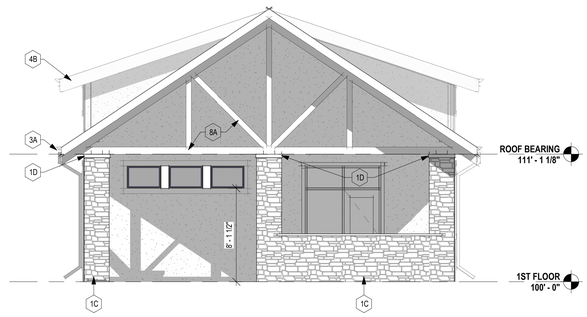
G7 POOL ELEVATION
3/16" = 1'-0"



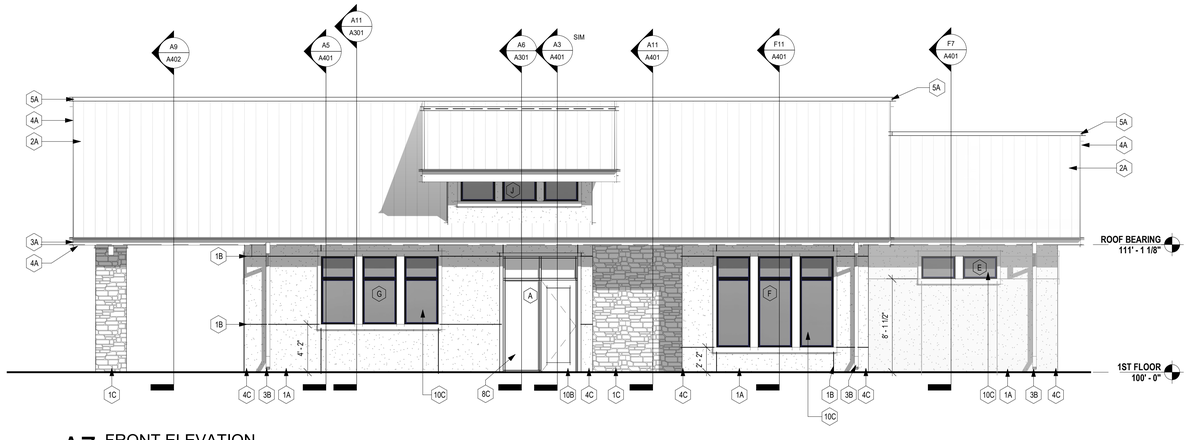
D11 STORAGE/POOL EQUIP. ELEVATION
3/16" = 1'-0"



D8 GREAT ROOM ELEVATION
3/16" = 1'-0"



D4 BBQ AREA ELEVATION
3/16" = 1'-0"



A7 FRONT ELEVATION
3/16" = 1'-0"

GENERAL NOTES EXTERIOR ELEVATIONS:

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. DIMENSIONS SHOWN ON THE EXTERIOR ELEVATIONS ARE TO THE FACE OF EXTERIOR WALL, FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), FACE OF STUD, AND COLUMN GRID LINES, UNLESS OTHERWISE NOTED OR INDICATED.
3. RE: THE WINDOW TYPES SHEET FOR ALL EXTERIOR WINDOW TYPES AND GLASS TYPES.
4. PROVIDE ALL BLOCKING AND POWER AS REQUIRED FOR EXTERIOR SIGNAGE.

KEY NOTES EXTERIOR ELEVATIONS:

- 1A STUCCO: BASIS OF DESIGN: STO STUCCO COLOR : TBD
- 1B STUCCO CONTROL JOINT PER MFR. STANDARDS.
- 1C CULTURED STONE VENEER BASIS OF DESIGN: EL DORADO STACK STONE COLOR: KORYAK RIDGE (OR SIM.)
- 1D CULTURED STONE WALL CAP BASIS OF DESIGN: TBD COLOR: TBD
- 2A CHARCOAL GRAY STANDING SEAM METAL ROOF BASIS OF DESIGN : BERRIDGE
- 3A PREFINISHED ALUMINUM GUTTER. RE: EXT. FINISH LEGEND
- 3B PREFINISHED ALUMINUM DOWNSPOUT CONNECT TO UNDERGROUND DRAINAGE
- 4A PREFINISHED ALUM. FLASHING
- 4B FASCIA BOARD
- 4C 1X4 TRIM BOARD
- 4D 1X6 TRIM BOARD
- 5A PREFINISHED METAL VENTED RIDGE CAP
- 6A LIGHT FIXTURE. RE: ELECTRICAL
- 7A CONCRETE FOUNDATION. PAINT WITH EXTERIOR CONCRETE PAINT. RE: EXT. FINISH LEGEND
- 8A CUSTOM TIMBER TRUSS, RE: STRUCTURAL STAIN, COLOR: TBD.
- 8B TIMBER BEAM. RE: STRUCTURAL
- 8C MANKO 2450OG STOREFRONT SERIES CENTER GLAZED SYSTEM
- 9A PREFIN. ALUM. DECK RAILING. BASIS OF DESIGN WESTBURY ALUM. RAILING - TUSCANY SERIES
- 10A WESTERN WINDOW BI-FOLD SLIDING DOOR. RE: DOOR SCHEDULE
- 10B MANKO 2450OG STOREFRONT SERIES DOOR RE: DOOR SCHEDULE
- 10C MGM INDUSTRIES WINDOW SYSTEM.
- 10D STRUCTURAL HEADER. RE:STRUCTURAL DRAWINGS
- 11A PREFINISHED ALUMINUM SOFFIT

EXTERIOR ELEVATION MATERIALS

- STANDING SEAM METAL ROOF BASIS OF DESIGN - BERRIDGE COLOR: CHARCOAL GREY
- STUCCO WALL SYSTEM: BASIS OF DESIGN - STO STUCCO COLOR: TBD
- STONE VENEER BASIS OF DESIGN: EL DORADO STACK STONE COLOR: KORYAK RIDGE (OR SIM.)
- TRIM / SOFFIT - BASIS OF DESIGN LP SMARTSIDE SMOOTH TRIM AND FASCIA CEDAR TEXTURE, COLOR: WHITE TO MATCH SIDING
- BLACK VINYL WINDOWS - BASIS OF DESIGN MI 3500 SINGLE HUNG RE: WINDOW SCHEDULE
- FOUNDATION WALL - CONCRETE PAINT, COLOR: TBD
- PREFINISHED GUTTERS AND DOWNSPOUTS TO BE WHITE.

CWA ARCHITECTURE
collins | webb
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ROGER L. WEBB II
NUMBER A-20160204008
08/13/2025
ARCHITECT

PROFESSIONAL SEAL

A201

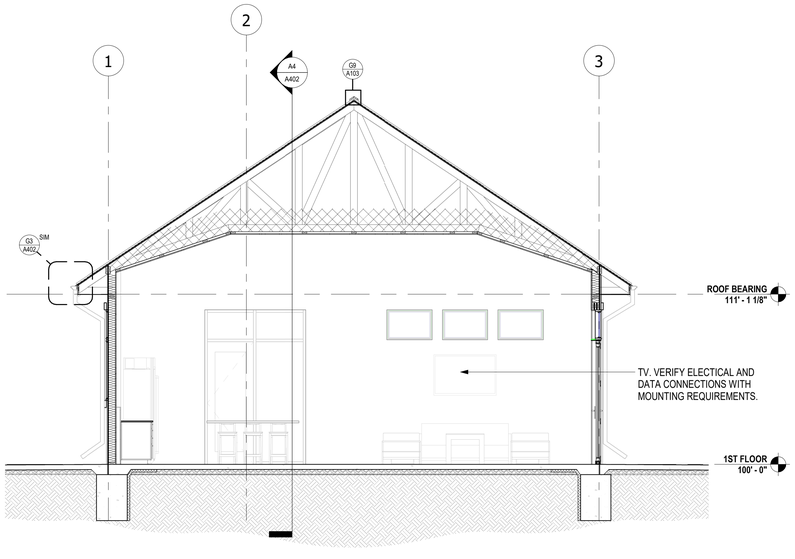
ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

EXTERIOR ELEVATIONS - CLUBHOUSE

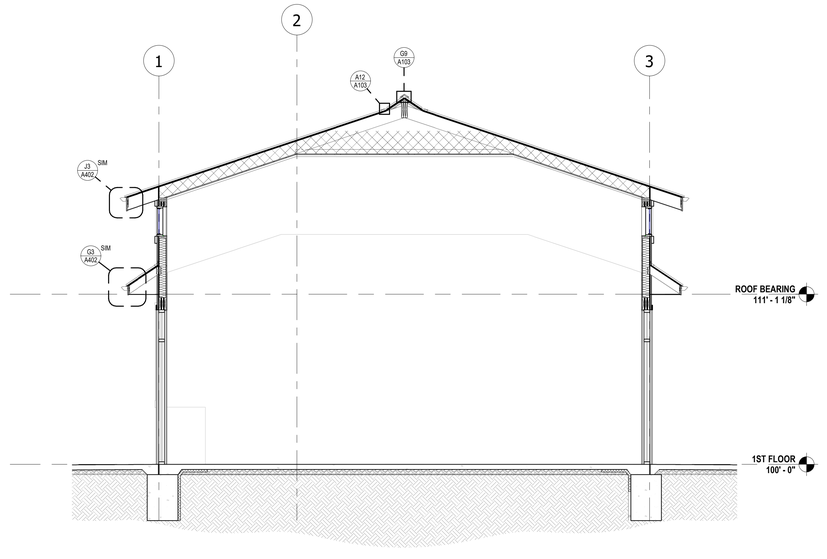
8/12/2025 8:50:00 AM

GENERAL NOTES: EXTERIOR WALL SECTIONS/ DETAILS

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: FLOOR PLANS, ROOF PLAN AND ELEVATIONS FOR SECTION CUT LOCATIONS.
3. ALL WINDOW AND DOOR OPENING DIMENSIONS ARE ROUGH OPENING DIMENSIONS, UNLESS NOTED OTHERWISE.
4. DIMENSIONS SHOWN ON THE WALL SECTIONS ARE TO THE FACE OF EXTERIOR WALL, FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
5. PAINT ALL EXPOSED STEEL, INCLUDING STEEL LINTELS, ETC. (TYP.)
6. SEE STRUCTURAL DRAWINGS FOR SPECIFIC STRUCTURAL FRAMING REQUIREMENTS.



A11 BUILDING SECTION
1/4" = 1'-0"



A6 BUILDING SECTION
1/4" = 1'-0"

collins|webb ARCHITECTURE
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY
COLLINS WEBB
ARCHITECTURE, LLC

REVISION DATES:

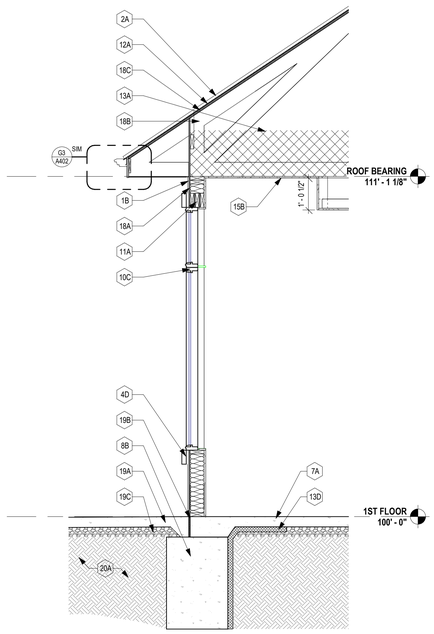
STATE OF MISSOURI
ROGER L. WEBB II
NUMBER A-2016018908
ARCHITECT
08/13/2025
PROFESSIONAL SEAL

A301

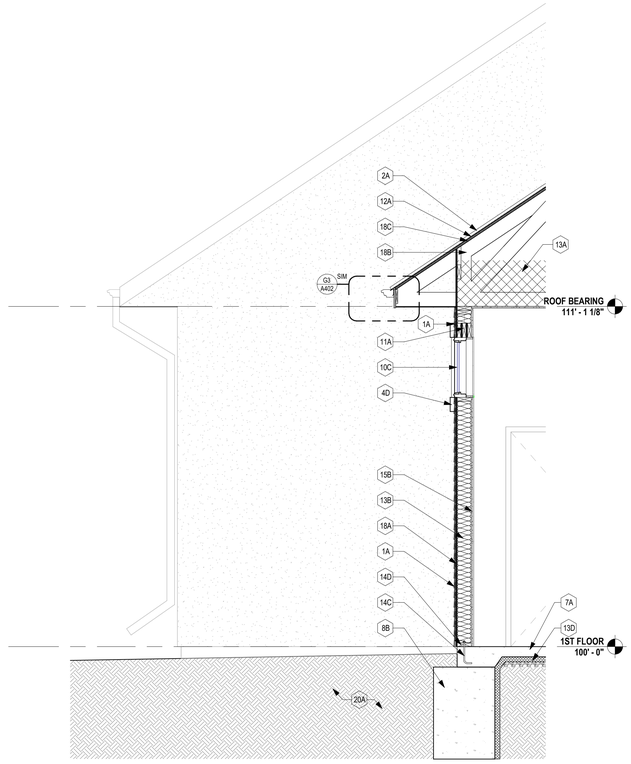
ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

BUILDING SECTIONS - CLUBHOUSE

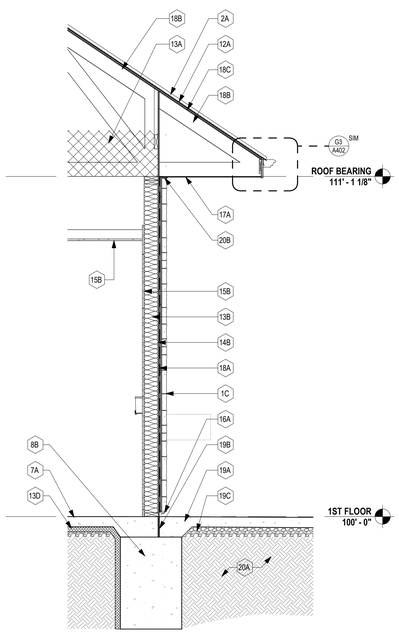
8/12/2025 8:50:07 AM



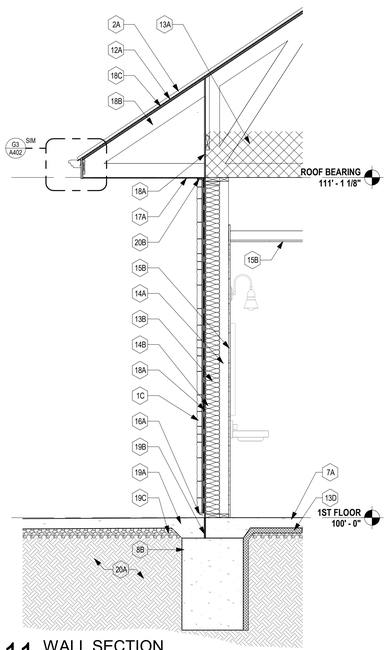
F11 WALL SECTION
1/2" = 1'-0"



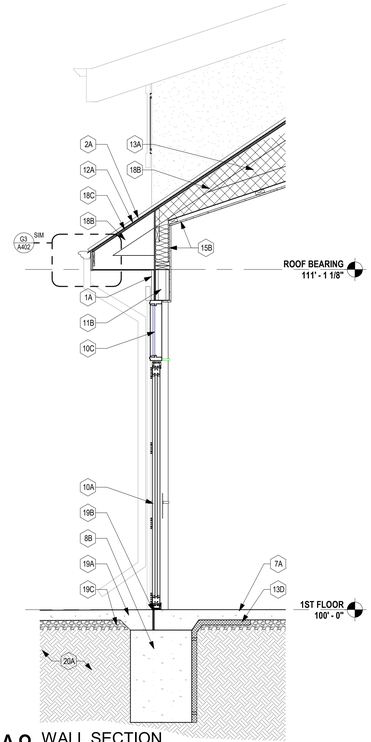
F7 WALL SECTION
1/2" = 1'-0"



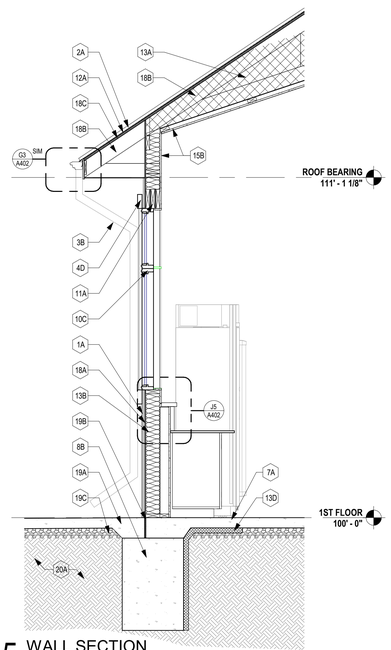
F3 WALL SECTION
1/2" = 1'-0"



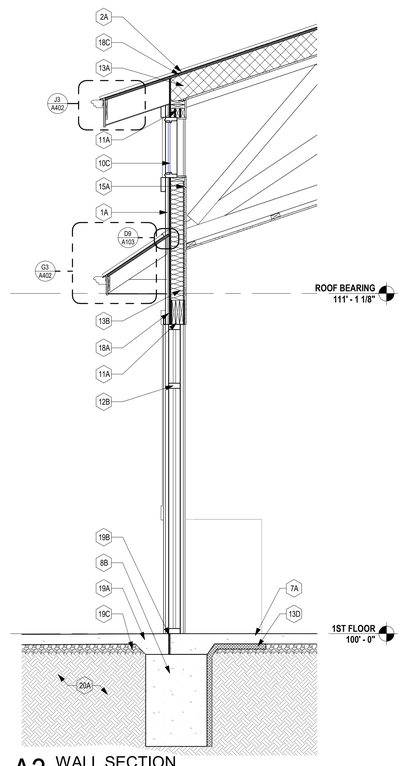
A11 WALL SECTION
1/2" = 1'-0"



A8 WALL SECTION
1/2" = 1'-0"



A5 WALL SECTION
1/2" = 1'-0"



A3 WALL SECTION
1/2" = 1'-0"

WALL SECTION KEYNOTES LEGEND

MARK	DESCRIPTION
1A	STUCCO SYSTEM: RE: ELEVATIONS
1B	NOT USED
1C	CULTURED STONE VENEER BASIS OF DESIGN: TBD COLOR: TBD
2A	BARRIDGE HIGH SEAM TEE-PANEL- METAL ROOF FELT PAPER AND ICE DAM (AT EDGES)
3A	PREFINISHED ALUMINUM GUTTER.
3B	PREFINISHED ALUMINUM DOWNSPOUT CONNECTED TO UNDERGROUND DRAINAGE
4A	PREFINISHED FASCIA BOARD OVER 1X SUB BOARD
4B	1X4 TRIM BOARD
4C	1X8 TRIM BOARD
4D	1X6 TRIM BOARD
5A	PREFINISHED METAL VENTED RIDGE CAP. COLOR TO MATCH ROOF
6A	LIGHT FIXTURE, RE: ELECTRICAL
7A	CONCRETE SLAB ON GRADS, RE: STRUCTURAL
8A	WOOD COLUMN, RE: STRUCTURAL
8B	CONCRETE FOOTING, RE: STRUCTURAL
8C	WOOD BEAM SYSTEM, RE: STRUCTURAL
8D	CUSTOM TIMBER TRUSS, RE: STRUCTURAL
10A	WESTERN WINDOW BI-FOLD SLIDING DOOR, RE: DOOR SCHEDULE
10B	MANKO 2450CG STOREFRONT DOOR, RE: DOOR SCHEDULE
10C	MGM INDUSTRIES WINDOW SYSTEM, RE: WINDOW SCHEDULE
10D	GALVANIZED HOLLOW METAL DOOR RE: DOOR SCHEDULE
11A	2X HEADER, RE: STRUCTURAL.
11B	HEADER, RE: STRUCTURAL.
12A	ICE AND WATERSHIELD OVER ROOF SHEATHING. RE: STRUCTURAL DWGS.
12B	MANKO 2450CG STOREFRONT SERIES
13A	MIN. R-38 BATT INSULATION
13B	R-19 BATT INSULATION
13C	AMERIMAX RECTANGULAR BLACK WEATHER RESISTANT PVC SOFFIT VENT
13D	2" RIGID INSULATION
13E	WEATHER BARRIER OVER PLYWOOD SUBSTRATE
14A	2X4 WOOD STUD
14B	2X6 WOOD STUD
14C	SILL PLATE ANCHOR, RE: STRUCTURAL
14D	2X TREATED SILL PLATE
14E	2X TRUSS LEDGER
15A	1/2" GYPSUM BOARD
15B	5/8" TYPE "X" GYPSUM BOARD
16A	PREFINISHED ALUM. FLASHING, RE. TO MANUF. FOR INSTALLATION
17A	SOFFIT PANEL TO MATCH FASCIA MATERIAL
18A	1/2" ZIP SYSTEM SHEATHING
18B	ROOF TRUSS/STRUCTURE , RE: STRUCTURAL
18C	PLYWOOD ROOF SHEATHING
18D	TOUNG & GROOVE DECKING, RE: STRUCTURAL
19A	4" CONCRETE SIDEWALK, RE: STRUCTURAL
19B	1/2" ASPHALTIC EXPANSION JOINT
19C	GRAVEL BASE
20A	EARTH FILL
20B	BACKER ROD AND SEALANT

collins | webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE

1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ROGER L. WEBB
NUMBER A-7201001005
ARCHITECT
08/13/2025

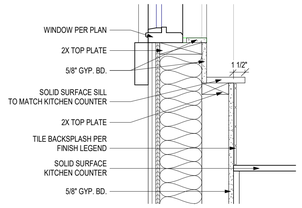
PROFESSIONAL SEAL

A401

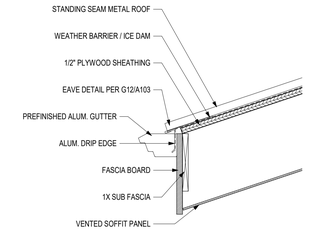
ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

WALL SECTIONS & DETAILS

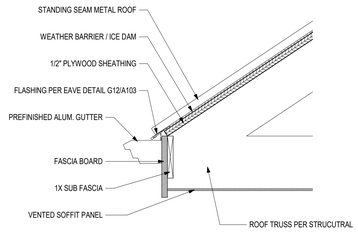
8/12/2025 8:50:08 AM



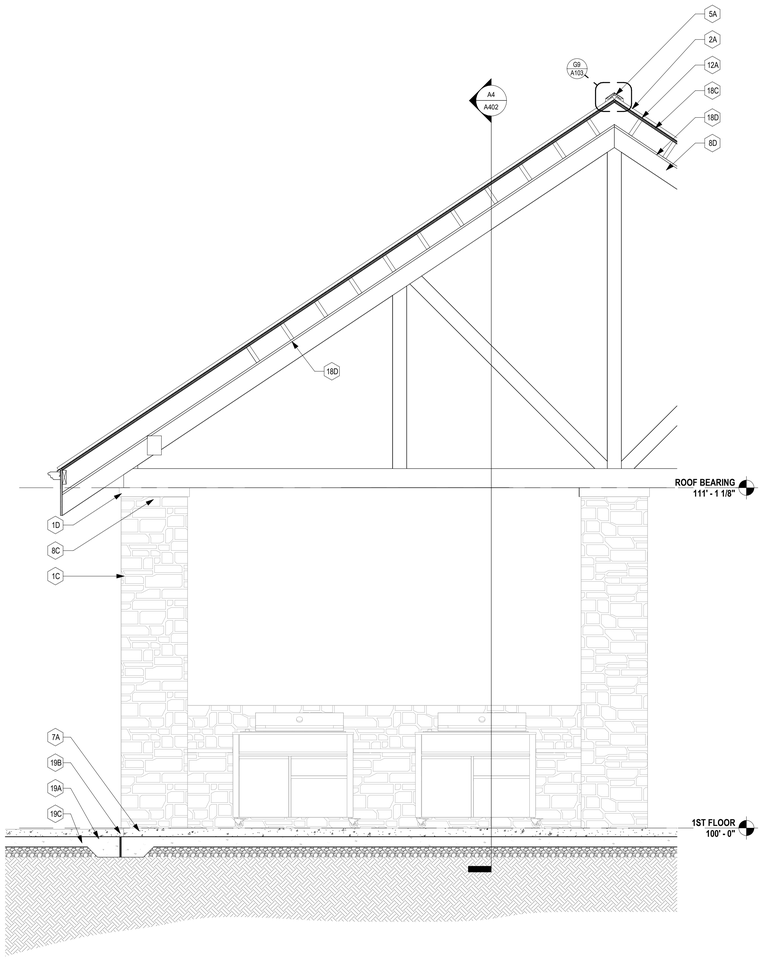
J5 DETAIL - KITCHEN BACKSPASH
1 1/2" = 1'-0"



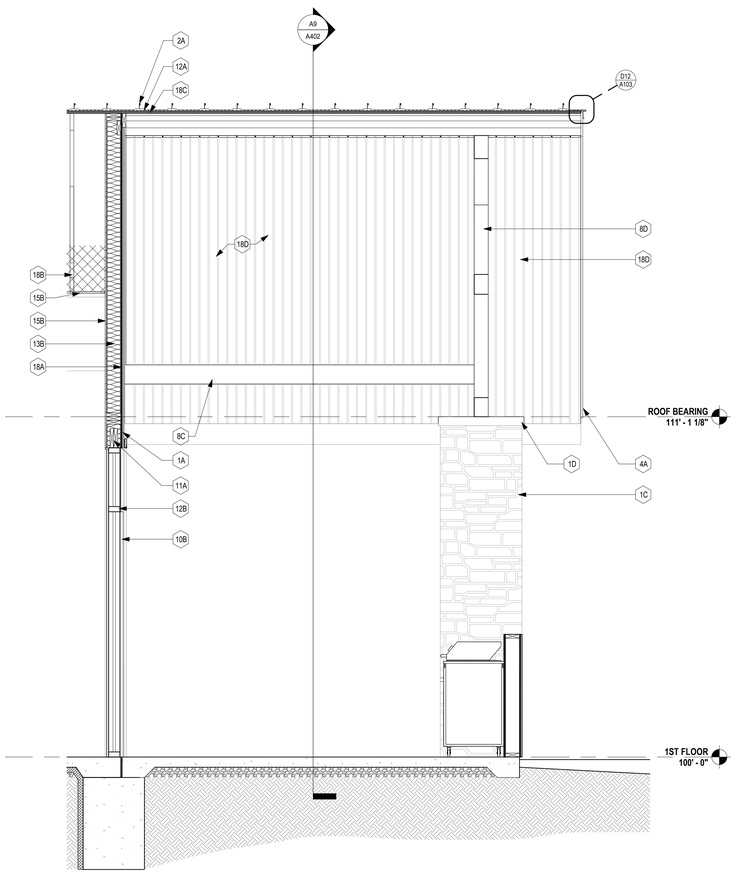
J3 DETAIL - DORMER EAVE
1 1/2" = 1'-0"



G3 DETAIL - TYPICAL EAVE
1 1/2" = 1'-0"



A9 WALL SECTION
1/2" = 1'-0"



A4 WALL SECTION
1/2" = 1'-0"

WALL SECTION KEYNOTES LEGEND

MARK	DESCRIPTION
1A	STUCCO SYSTEM: RE: ELEVATIONS
1B	NOT USED
1C	CULTURED STONE VENEER BASIS OF DESIGN: TBD COLOR: TBD
1D	CULTURED STONE WALL CAP BASIS OF DESIGN: TBD COLOR: TBD
2A	BARRIDGE HIGH SEAM TEE-PANEL- METAL ROOF FELT PAPER AND ICE DAM (AT EDGES)
3A	PREFINISHED ALUMINUM GUTTER.
3B	PREFINISHED ALUMINUM DOWNSPOUT CONNECTED TO UNDERGROUND DRAINAGE
4A	PREFINISHED FASCIA BOARD OVER 1X SUB BOARD
4B	1X4 TRIM BOARD
4C	1X8 TRIM BOARD
4D	1X6 TRIM BOARD
5A	PREFINISHED METAL VENTED RIDGE CAP. COLOR TO MATCH ROOF
6A	LIGHT FIXTURE, RE: ELECTRICAL
7A	CONCRETE SLAB ON GRADS, RE: STRUCTURAL
8A	WOOD COLUMN, RE: STRUCTURAL
8B	CONCRETE FOOTING, RE: STRUCTURAL
8C	WOOD BEAM SYSTEM, RE: STRUCTURAL
8D	CUSTOM TIMBER TRUSS, RE: STRUCTURAL
10A	WESTERN WINDOW BI-FOLD SLIDING DOOR, RE: DOOR SCHEDULE
10B	MANKO 2450CG STOREFRONT DOOR, RE: DOOR SCHEDULE
10C	MGM INDUSTRIES WINDOW SYSTEM, RE: WINDOW SCHEDULE
10D	GALVANIZED HOLLOW METAL DOOR RE: DOOR SCHEDULE
11A	2X HEADER, RE: STRUCTURAL.
11B	HEADER, RE: STRUCTURAL.
12A	ICE AND WATERSHIELD OVER ROOF SHEATHING. RE: STRUCTURAL DWGS.
12B	MANKO 2450CG STOREFRONT SERIES
13A	MIN. R-38 BATT INSULATION
13B	R-19 BATT INSULATION
13C	AMERIMAX RECTANGULAR BLACK WEATHER RESISTANT PVC SOFFIT VENT
13D	2" RIGID INSULATION
13E	WEATHER BARRIER OVER PLYWOOD SUBSTRATE
14A	2X4 WOOD STUD
14B	2X6 WOOD STUD
14C	SILL PLATE ANCHOR, RE: STRUCTURAL
14D	2X TREATED SILL PLATE
14E	2X TRUSS LEDGER
15A	1/2" GYPSUM BOARD
15B	5/8" TYPE "X" GYPSUM BOARD
16A	PREFINISHED ALUM. FLASHING. RE. TO MANUF. FOR INSTALLATION
17A	SOFFIT PANEL TO MATCH FASCIA MATERIAL
18A	1/2" FIRE RATED PLYWOOD SHEATHING
18B	ROOF TRUSS/STRUCTURE , RE: STRUCTURAL
18C	PLYWOOD ROOF SHEATHING
18D	CARSIDING TOUNG & GROOVE DECKING.
19A	4" CONCRETE SIDEWALK, RE: STRUCTURAL
19B	1/2" ASPHALTIC EXPANSION JOINT
19C	GRAVEL BASE
20A	EARTH FILL
20B	BACKER ROD AND SEALANT

collins|webb ARCHITECTURE
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ROGER L. WEBB
NUMBER A-2010010005
08/13/2025
ARCHITECT

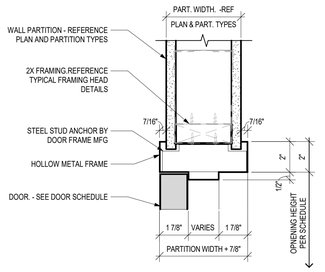
PROFESSIONAL SEAL

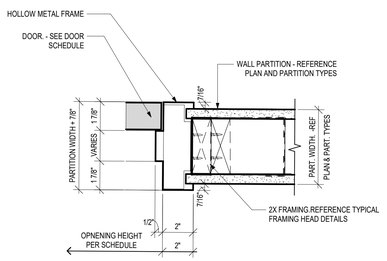
A402

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

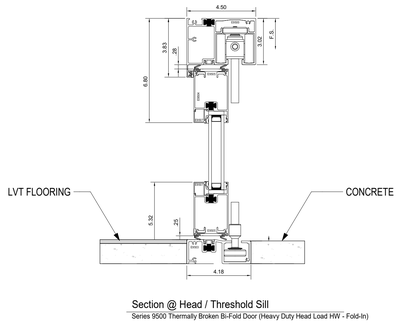
WALL SECTIONS & DETAILS

8/12/2025 8:50:09 AM





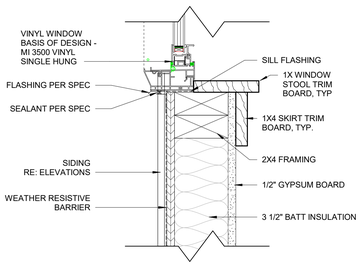
H12 HM DOOR HEAD/ JAMB DETAIL
3" = 1'-0"



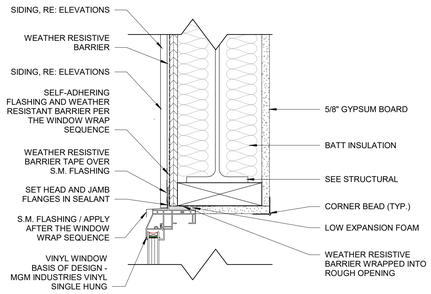
Section @ Head / Threshold Sill
Series 9500 Thermally Broken Bi-Fold Door (Heavy Duty Head Load HW - Fold-In)

Series 9500: Bi-Fold Door - (Thermal Break) - Heavy Duty Head Load Hardware
Equal Leg Block Frame - (3L3R) - Fold In w/ Flush Threshold Sill

H7 BI-FOLD THRESHOLD / HEAD TRACK DETAIL
3" = 1'-0"



F12 TYP. WINDOW SILL DETAIL
3" = 1'-0"



F10 TYPICAL WINDOW HEAD DETAIL
3" = 1'-0"

GENERAL NOTES: DOOR SCHEDULE

1. HM REFERS TO HOLLOW METAL
2. AL REFERS TO ALUMINUM
3. WD REFERS TO WOOD
4. SCWD REFERS TO SOLID CORE WOOD
5. ALL EXTERIOR ALUMINUM DOORS & FRAMES ARE TO BE FINISHED BLACK ALUMINUM.
6. FOR FINISH COLOR DESIGNATION FOR INTERIOR DOOR AND FRAMES, REFER TO FINISH LEGEND.
7. REFER TO SPECIFICATION FOR DOOR HARDWARE SET DESIGNATIONS.
8. PROTECT ALL DOORS & FRAMES FROM DAMAGE THROUGHOUT CONSTRUCTION PHASES.
9. ALL EGRESS DOORS TO BE PROVIDED WITH PANIC HARDWARE.

GLASS TYPE LEGEND

DESIGNATION NUMBER	DESCRIPTION
G1	INSULATED TEMPERED GLASS COLOR: CLEAR
G2	INSULATED GLASS COLOR: CLEAR
G3	1/4" TEMPERED GLASS: CLEAR

NOTE EXTERIOR INSULATED GLASS
INSULATED GLASS PRODUCT BASIS OF DESIGN : PPG SOLARBAN 70XL (2) +CLEAR.

VISIBLE LIGHT TRANSMITTANCE: 64 PERCENT MIN.
WINTER NIGHTTIME U- FACTOR: .28 MAX.
SUMMER DAYTIME U- FACTOR: .26 MAX.
SOLAR HEAT GAIN COEFFICIENT: .27 MAX.
PROVIDE SAFETY GLAZING LABELING.

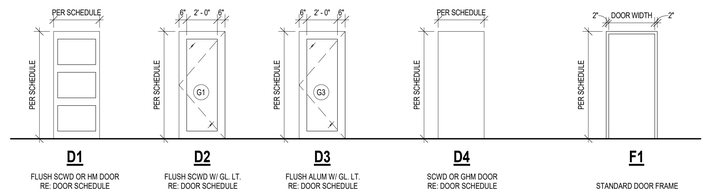
DOOR SCHEDULE MASTER

ROOM NO.	ROOM NAME	WIDTH	HEIGHT	DOOR TYPE	DOOR MAT.	DOOR FINISH	FRAME TYPE	FRAME MAT.	FRAME FINISH
100A	GREAT ROOM	3' - 0"	8' - 0"	D3	ALUM/GL	ALUM	-	ALUM	ALUM
100B	GREAT ROOM	3' - 0"	8' - 0"	D3	ALUM/GL	ALUM	-	ALUM	ALUM
100C	GREAT ROOM	3' - 0"	8' - 0"	D3	ALUM/GL	ALUM	-	ALUM	ALUM
100D	GREAT ROOM	11' - 10"	8' - 1"	-	ALUM/GL	ALUM	-	ALUM	ALUM
101	UNISEX	3' - 0"	7' - 0"	D4	WD	WD1	F1	HM	PT
102	MECH	3' - 0"	7' - 0"	D4	WD	WD1	F1	HM	PT
103	JAN./STOR.	3' - 0"	7' - 0"	D1	WD	WD1	F1	HM	PT
104	CONF/FLEX	3' - 0"	7' - 0"	D2	WD	WD1	F1	HM	PT
105	STORAGE	3' - 0"	7' - 0"	D4	WD	WD1	F1	HM	PT
110	POOL STORAGE	3' - 0"	7' - 0"	D4	HM	PT	F1	HM	PT
111	WOMEN'S	3' - 0"	7' - 0"	D4	HM	PT	F1	HM	PT
112	MEN'S	3' - 0"	7' - 0"	D4	HM	PT	F1	HM	PT
113	POOL STORAGE	3' - 6"	7' - 0"	D4	HM	PT	F1	HM	PT

DOOR SCHEDULE REMARKS:

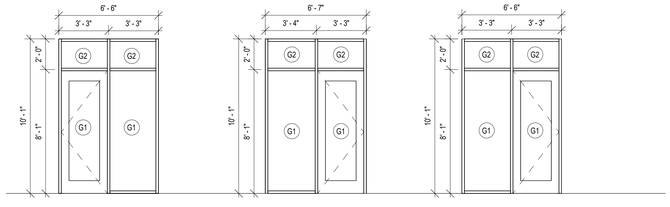
1. **PROTECT DOOR AND FRAME FROM DAMAGE THROUGHOUT CONSTRUCTION. ANY DAMAGE TO BE REPAIRED/REPLACED PER OWNER DISCRETION.**
2. **ACCESS CONTROL SYSTEMS - REFERENCE ELECTRICAL SHEETS & COORDINATE WITH ACCESS CONTROL VENDOR AND CLIENT.**

ACCESS CONTROL VIA KEY FOB. CLUBHOUSE ACCESSED DURING STAFFED HOURS AND POOL AND POOL RESTROOMS ACCESSIBLE 8:00AM-10:00PM DAILY. FITNESS ACCESSIBLE 6:00AM -12:00 AM DAILY.

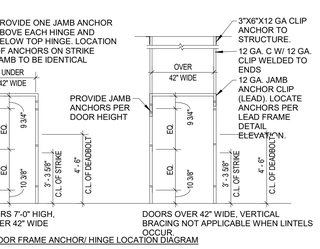


NOTE:
1. DOORS TO BE 1-3/4" THICK, UNLESS NOTED OTHERWISE ON DOOR SCHEDULE.
2. REFER TO GLASS SCHEDULE FOR GLAZING.

E5 DOOR & FRAME TYPE ELEVATIONS
1/4" = 1'-0"

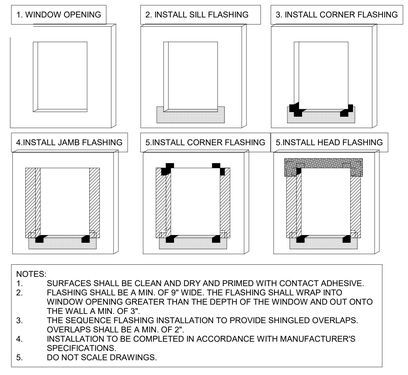


NOTE:
1. ALL STOREFRONT TO BE BLACK ANODIZED.
2. REFER TO GLASS SCHEDULE FOR GLAZING.



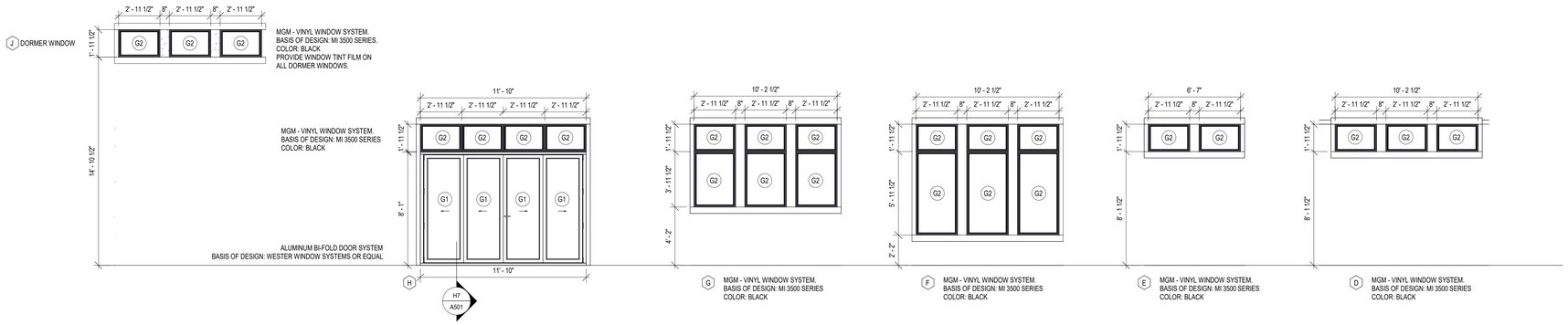
TYPICAL HM DOOR FRAME ANCHOR/ HINGE LOCATION DIAGRAM

D12 HM ANCHORING DETAILS
1/4" = 1'-0"



NOTES:
1. SURFACES SHALL BE CLEAN AND DRY AND PRIMED WITH CONTACT ADHESIVE.
2. FLASHING SHALL BE A MIN. OF 9" WIDE. THE FLASHING SHALL WRAP INTO WINDOW OPENING GREATER THAN THE DEPTH OF THE WINDOW AND OUT ONTO THE WALL A MIN. OF 3".
3. THE SEQUENCE FLASHING INSTALLATION TO PROVIDE SHINGLED OVERLAPS. OVERLAPS SHALL BE A MIN. OF 2".
4. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. DO NOT SCALE DRAWINGS.

D8 WINDOW FLASHING DETAILS
3/8" = 1'-0"



collins|webb ARCHITECTURE
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ROGER L. WEBB II
NUMBER A-2016034928
08/13/2025
ARCHITECT

PROFESSIONAL SEAL

A501

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

DOOR SCHEDULE AND DETAILS - CLUBHOUSE

8/12/2025 8:50:11 AM

GENERAL NOTE:

FINISH MATERIALS TO BE PROCURRED AS INDICATED IN THE SPECIFICATIONS. ALTERNATES OR SUBSTITUTIONS SHALL BE OF EQUAL QUALITY AND PERFORMANCE.

FINISH LEGEND

SYMBOL	MARK	BASIS OF DESIGN / DESCRIPTION
		GRAIN / INSTALL DIRECTION
	P1	PAINT, LATEX - ORIGAMI SW7636
	P2	PAINT, EPOXY - ORIGAMI SW7636
	WP-CG	WALL PROTECTION - CORNER GUARD, SELECTION BY OWNER
	WP-EC	WALL PROTECTION - END CAP, SELECTION BY OWNER
	PC1/SC	POLISHED / SEALED CONCRETE
	EPOXY FLOORING	EPOXY FLOORING, COLOR AND FINISH SELECTION BY OWNER
	LVP	CORTEC - FERNDOWN OAK
	T1	KITCHEN WALL: EMSER KAZE WHITE 4X4 ON 12X16 MESH STRAIGHT STACK CHARCOAL GROUT
	T2	RR WALL TILE: EMSER BUILDING BLOCKS MIXT ENHANCE LIGHT GRAY BRUSHED 24X24
	SIM. STONE	ACCENT WALL ROOM 102 FRONT ENTRANCE EL DORADO TUNDRA BRICK - BAILEY FARMS LOGO PAINTED IN BLACK
	PL1	CASEWORK - HIGH PRESSURE LAMINATE, COLOR AND FINISH SELECTION BY OWNER
	SS1	COUNTERTOPS - MIAMI VENA QUARTZ, 2CM
	MTL1	METAL SUPPORTS AT VANITY COUNTERTOPS, COORDINATE FINISH WITH OWNER
	WD1	WOOD STAIN WITH CLEAR POLY FINISH, COORDINATE FINISH WITH OWNER
	WB1	1X6 FINISHED WOOD BASE, WOOD STAIN WITH CLEAR POLY FINISH (OR) PAINTED, COORDINATE FINISH WITH OWNER
	FT1	FLOOR TRANSITION: COORDINATE WITH FLOORING MFR. FOR TRANSITIONS AT DOOR THRESHOLDS BETWEEN DISSIMILAR FLOORING TYPES. TRANSITION TO MEET MIN. ADA REQUIREMENTS. RE: FINISH PLAN FOR LOCATIONS.
	FRP1	FIBERGLASS REINFORCED PANEL: INSTALLED TO 4'-0" A.F.F., COORDINATE SELECTION WITH OWNER; RE: FINISH PLAN FOR LOCATIONS.

NOTES:

NOT ALL WALL FINISHES ARE GRAPHICALLY SHOWN . REFER TO FINISH SCHEDULE AND INTERIOR ELEVATIONS FOR SPECIFIC LOCATIONS AND MATERIALS.

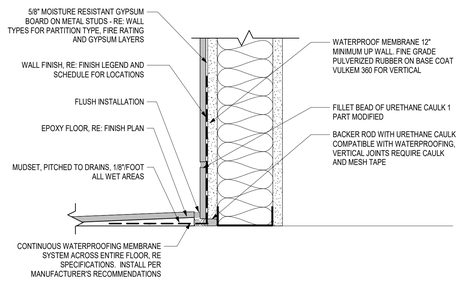
NOT ALL FLOOR FINISHES ARE GRAPHICALLY SHOWN , ONLY THOSE FOR TRANSITION CLARIFICATION.

LVT FLOORING SHALL BE COMMERCIAL GRADE SLIP RESISTANT FLOORING.

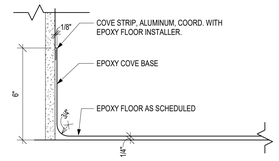
CONFIRM ALL FINISH SELECTIONS WITH OWNER.

ROOM FINISH SCHEDULE

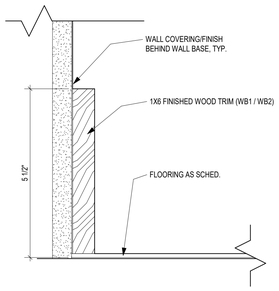
RM. NO.	ROOM NAME	FLOORS		WALL FINISH				CEILING FINISH	REMARKS
		FLOOR	WALL BASE	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL		
100A	GREAT ROOM	LVP	WB1	P1	P1	P1	P1/T1	GYP / P1	
100B	CORRIDOR	LVP	WB1	P1	P1	P1	P1	GYP / P1	
101	UNISEX	LVP	TB1	T2/P2	P2	T2/P2	T2/P2	GYP / P1	1
102	MECH	PC1/SC	-	TAPE/MUD	TAPE/MUD	TAPE/MUD	TAPE/MUD	TAPE/MUD	
103	JAN. / STOR.	PC1/SC	-	P2	P2	P2, FRP1	P2, FRP1	TAPE/MUD	3
104	CONF./FLEX	LVP	WB1	P1	P1	P1	P1	GYP / P1	
105	STORAGE	PC1/SC	-	TAPE/MUD	TAPE/MUD	TAPE/MUD	TAPE/MUD	TAPE/MUD	
110	POOL STOR.	PC1/SC	-	TAPE/MUD	TAPE/MUD	TAPE/MUD	TAPE/MUD	TAPE/MUD	
111	WOMENS	EPOXY	TB1	T2/P2	T2/P2	P2	T2/P2	GYP / P1	1
112	MEN'S	EPOXY	TB1	P2	T2/P2	T2/P2	T2/P2	GYP / P1	1
113	POOL EQUIPMENT	PC1/SC	-	TAPE/MUD	TAPE/MUD	TAPE/MUD	TAPE/MUD	TAPE/MUD	



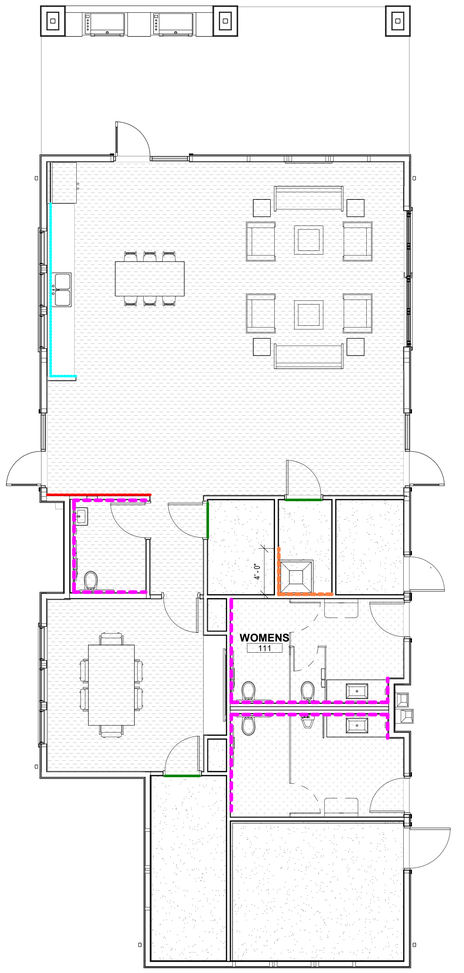
G6 BASE DETAIL - WATERPROOFING
3" = 1'-0"



G4 BASE DETAIL - EPOXY COVE
3" = 1'-0"



G2 BASE DETAIL - WOOD BASE
6" = 1'-0"



A5 1ST FLOOR - FINISH
3/16" = 1'-0"

NORTH

GENERAL NOTES: INTERIOR FINISHES

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: G002 FOR ACCESSIBILITY GUIDELINES.
3. RE: A900 SERIES SHEETS FOR ADDITIONAL FLOOR FINISH & WALL PROTECTION INFORMATION.
4. HOLLOW METAL FRAMES SHALL RECEIVE SEMI-GLOSS FINISH, WHERE WALL COLOR IS DIFFERENT ON EACH SIDE OF THE HOLLOW METAL FRAME, PAINT FRAME TO MATCH CORRIDOR WALL, UNLESS NOTED OR SHOWN OTHERWISE.
5. CONTINUE WALL FINISH AS SCHEDULED BEHIND EQUIPMENT.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CASEWORK FABRICATION AND INSTALLATION.
7. ALL EXPOSED CASEWORK SURFACES SHALL BE FINISHED PLASTIC LAMINATE AS SCHEDULED, U.N.O.
8. ALL PLASTIC LAMINATE DOOR AND DRAWERS TO RECEIVE 1MM PVC EDGEBAND
9. WHERE TWO MODULAR TILES (PORCELAIN, MARBLE, OR QUARRY) OF VARYING THICKNESSES MEET, THE SETTING BED FOR THE THINNER TILE SHALL BE BUILT UP TO ENSURE THAT THE FACES OF THE DIFFERENT TILES ARE FLUSH.
10. TRANSITION ALL WALL FINISHES/COLOR CHANGES AT INSIDE CORNERS, UNLESS NOTED OTHERWISE (U.N.O.)
11. TRANSITION WALL BASE AT INSIDE CORNERS, U.N.O.
12. INSTALL METAL TRANSITION STRIP WHERE WALL TILE MEETS PAINTED GYP. BD. WALL IN ALL VERTICAL AND/ OR HORIZONTAL CONDITIONS, U.N.O.

ROOM FINISH SCHEDULE REMARKS:

AREAS WITH MULTIPLE DESIGNATED FINISHES, RE: FINISH FLOOR PLANS & INTERIOR ELEVATIONS FOR ADDITIONAL CLARIFICATION.

1. PROVIDE FULL HEIGHT WALL TILE RESTROOM WALLS, RE: INTERIOR ELEVATIONS.
2. VERIFY WITH OWNER PAINTED ACCENT WALL LOCATIONS.
3. INSTALL FRP TO 4'-0" A.F.F.

GENERAL NOTES: FLOOR FINISH PLANS

1. RE: G-SHEETS - FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: FINISH LEGEND, FINISH SCHEDULE, AND FLOOR FINISH PLANS FOR SPECIFIC FLOOR FINISH INFORMATION AND LOCATIONS.
3. FLOOR FINISHES SHOWN ARE FOR ACCENT CLARIFICATION ONLY.
4. INSTALL TRANSITION STRIPS AT ALL FLOOR FINISH MATERIAL CHANGES, UNLESS NOTED OTHERWISE.
5. RE: DETAILS FOR FINISH & FLOOR TRANSITION DETAILS.
6. FLOOR FINISH PATTERN SHALL BE CENTERED IN ROOM, UNLESS NOTED OTHERWISE.
7. ALIGN ALL WALL TILE JOINTS WITH FLOOR TILE JOINTS, UNLESS NOTED OR SHOWN OTHERWISE.
8. ALL CLOSETS & ALCOVES W/OUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FLOOR FINISHES AS ADJOINING SPACES.
9. FLOOR FINISH MATERIAL &/ OR PATTERN SHALL BE INSTALLED UNDER TOE KICKS OF CASEWORK/ MILLWORK, UNDER OPEN COUNTERTOPS, & UNDER EQUIPMENT.
10. FLOOR MATERIAL/ COLOR TRANSITIONS TO ALIGN WITH ROOM SIDE OF DOOR STOP, UNLESS NOTED OTHERWISE.

WALL FINISH / WALL PROTECTION PLANS:

1. RE: G-SHEETS - FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: FINISH LEGEND & FINISH SCHEDULE FOR SPECIFIC FINISH INFORMATION & LOCATIONS.
3. CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING FOR WALL PROTECTION ATTACHMENT. THIS INCLUDES, BUT IS NOT LIMITED TO: HANDRAILS, TV MONITORS, BATHROOM ACCESSORIES, FIRE EXTINGUISHERS AND EQUIPMENT. RE: ROUGH CARPENTRY SPECIFICATION SECTION FOR CLARIFICATION.
4. CONTRACTOR SHALL PROVIDE MANUFACTURER'S STANDARD ACCESSORY MOLDING OR TRIM FOR WALL PROTECTION ITEMS, UNLESS NOTED OTHERWISE.

collins|webb ARCHITECTURE
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DOCUMENTS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ROGER L. WEBB II
NUMBER A-2016018908
08/13/2025
ARCHITECT

PROFESSIONAL SEAL

A901

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

FINISH LEGEND AND SCHEDULE - CLUBHOUSE

8/12/2025 8:50:13 AM

ELECTRICAL SYMBOL LEGEND

SOME SYMBOLS AND ABBREVIATIONS ON THIS LEGEND MAY NOT BE USED

CIRCUITING

- HOME RUN (3)#12thr. (1)#12G UNLESS NOTED OTHERWISE
- INDICATES 2 PHASE, 1 N, AND 1 GND CONDUCTORS
- HOME RUN. SECOND SYMBOL INDICATES SHARED CIRCUIT.
- HOME RUN. SECOND SYMBOL DENOTES #10 CONDUCTORS.

UTILITIES

- OHE — OVERHEAD ELECTRICAL FEEDER AND/OR CONDUITS
- UGC — UNDERGROUND ELECTRICAL FEEDER AND/OR CONDUITS
- TELE — ABOVE-GRADE TELECOMMUNICATIONS CONDUIT(S)
- TELE — TELECOMMUNICATIONS CONDUIT(S) BELOW GRADE

LIGHTING

- GRID-MOUNTED TROFFER LIGHT FIXTURE
- EMERGENCY/EGRESS LIGHT FIXTURE
- CRITICAL / STANDBY LIGHT FIXTURE
- STRIP LIGHT FIXTURE
- SURFACE/RECESSED LIGHT FIXTURE
- WALL-MOUNTED LIGHT FIXTURE
- POLE-MOUNTED LIGHT FIXTURE
- EXIT LIGHT (WALL / CEILING MOUNTED)
- BATTERY-OPERATED EMERGENCY LIGHT (WALL-MTD)
- BATTERY-OPERATED EMERGENCY LIGHT (CEILING-MTD)
- COMBINATION WALL-MOUNTED EXIT LIGHT / BATTERY-OPERATED EMERGENCY LIGHT
- $ — LIGHT SWITCH - SINGLE POLE
- $3 — LIGHT SWITCH - 3-WAY
- $4 — LIGHT SWITCH - 4-WAY
- $K — LIGHT SWITCH - KEY
- $D — LIGHT SWITCH - DIMMER
- $PIL — LIGHT SWITCH - WITH PILOT LIGHT
- $M — WALL-MOUNTED MOTION SENSOR.
- (S) — WALL (CORNER) - MOUNTED MOTION SENSOR.
- (M) — CEILING-MOUNTED MOTION SENSOR.
- SB — SWITCHBANK. REFER TO PLANS / DETAILS.
- $DL1 — LOW-VOLTAGE DATALINE SWITCH - RE: DETAILS.
- RCS-1 — REMOTE CONTROL SWITCH AS SCHEDULED.
- TC — TIMECLOCK. REFER TO PLANS / DETAILS.

EQUIPMENT

- DISCONNECT SWITCH. RE: PLANS FOR INFORMATION.
- MAGNETIC MOTOR STARTER
- COMBINATION DISCONNECT SWITCH / MOTOR STARTER
- TOGGLE-TYPE DISCONNECT SWITCH. WHERE USED FOR MOTORS, PROVIDE W/ THERMAL PROTECTION.
- SURFACE-MOUNTED PANELBOARD
- RECESSED PANELBOARD
- DISTRIBUTION PANELBOARD
- SWITCHBOARD. FEEDER/MAIN CIRCUIT BREAKER SECTION AND DISTRIBUTION SECTION.

GENERAL SYMBOLS

- INDICATES CONNECT TO EXISTING
- XXX — EQUIPMENT TAG. REFER TO CONNECTIONS SCHEDULE(S) FOR ELECTRICAL CONNECTIONS AND LOAD INFORMATION FOR EQUIPMENT (KITCHEN, SHOP, ETC.)

POWER DEVICES

- DUPLEX RECEPTACLE
- LINE THROUGH DEVICE INDICATES ABOVE COUNTER
- SWITCHED RECEPTACLE. MOUNT UPSIDE DOWN.
- QUAD-PLEX RECEPTACLE
- 5-20R — SIMPLEX RECEPTACLE W/ NEMA CONFIG AS NOTED
- 14-50R — MULTI-POLE RECEPTACLE W/ NEMA CONFIG AS NOTED
- FB — CEILING-MOUNTED RECEPTACLE
- RECEPTACLE/DEVICE MOUNTED IN "TOMBSTONE"
- J — JUNCTION BOX
- FIRE-RATED POKE-THRU - POWER ONLY
- POKE-THRU WITH DATA JACKS
- POKE-THRU WITH POWER AND DATA
- FB — SINGLE GANG FLOOR BOX (2,3,4 GANG SIMILAR)
- DIVIDED (HIGH/LOW VOLTAGE) POWER POLE
- PLUG MOLD / WIRE MOLD AS SPECIFIED.
- PUSH BUTTON

TELEPHONE/DATA

- TELEPHONE JACK LOCATION (SINGLE-GANG BOX W/ (1)3/4" C. TO ABOVE ACCESSIBLE CEILING)
- LINE THROUGH DEVICE INDICATES ABOVE COUNTER
- DATA JACK LOCATION (DOUBLE-GANG BOX W/ (2)3/4" CONDUITS TO ABOVE ACCESSIBLE CEILING)
- TELEDATA JACK LOCATION (DOUBLE-GANG BOX W/ (2)3/4" C. TO ABOVE ACCESSIBLE CEILING)
- 1V — PHONE OUTLET WITH NUMBER OF PHONE JACKS AS INDICATED - RE: DETAILS FOR ADDITIONAL INFORMATION.
- 1D — DATA OUTLET WITH NUMBER OF DATA JACKS AS INDICATED - REFER TO DETAILS FOR ADDITIONAL INFORMATION.
- 1D/1V — TELE/DATA OUTLET WITH NUMBER OF PHONE AND DATA JACKS AS INDICATED - REFER TO DETAILS.
- W — WIRELESS INTERNET TRANSMITTER.

AUDIO/VISUAL

- TV — TELEVISION JACK LOCATION (SINGLE-GANG BOX W/ (1)3/4" C. TO ABOVE ACCESSIBLE CEILING)
- TR — REVERSE TELEVISION JACK LOCATION (CABLE TO HEAD END)
- AV — RECESSED COMBINATION AV AND POWER OUTLET COORD LOCATION OF DEVICE WITH TV MOUNT
- S — WALL-MOUNTED SPEAKER LOCATION (SINGLE-GANG BOX)
- S S — CEILING SPEAKER LOCATION (SINGLE-GANG BOX)
- V — VOLUME CONTROL LOCATION (SINGLE GANG BOX)
- I — INTERCOM CALL STATION
- ICMS — INTERCOM MASTER STATION

SECURITY

- CCTV CAMERA
- CR — CARD READER
- KP — SECURITY KEYPAD
- ML — MAG LOCK

FIRE ALARM

- F — MANUAL PULL STATION (DUAL-ACTION)
- D — SMOKE DETECTOR
- D — DUCT SMOKE DETECTOR
- H — HEAT DETECTOR
- CO — CARBON MONOXIDE DETECTOR
- WF — WATER FLOW SWITCH
- TS — TAMPER SWITCH
- 75 — WALL-MOUNTED FA STROBE WITH CANDELA RATING. 15cd RATING UNLESS OTHERWISE NOTED ON PLANS.
- 30 — WALL-MOUNTED FA HORN/STROBE WITH CANDELA RATING. 15cd UNLESS OTHERWISE NOTED ON PLANS.
- WALL-MOUNTED FIRE ALARM HORN
- WALL-MOUNTED FIRE ALARM SPEAKER
- 30 — WALL-MOUNTED FA SPEAKER/STROBE WITH CANDELA RATING. 15cd UNLESS OTHERWISE NOTED ON PLANS.
- 75 — CEILING-MOUNTED FA STROBE LIGHT WITH CANDELA RATING. MIN. OF 15cd RATING.
- 30 — CEILING-MOUNTED COMBINATION HORN/STROBE WITH CANDELA RATING. MIN. OF 15cd RATING.
- 30 — CEILING-MOUNTED COMBINATION SPEAKER/STROBE WITH CANDELA RATING. MIN. OF 15cd RATING.
- CEILING-MOUNTED FIRE ALARM SPEAKER
- R — FIRE ALARM RELAY
- IAM — INDIVIDUAL ADDRESSABLE MODULE
- ZAM — ZONE ADDRESSABLE MODULE
- FACP — FIRE ALARM CONTROL PANEL
- FAAP — FIRE ALARM ANNUNICIATOR PANEL
- FAEC — FIRE ALARM AUXILIARY POWER SUPPLY
- D 120 V — SINGLE / MULTI-STATION 120V SMOKE ALARM
- DH — DOOR HOLD-OPEN

RESCUE ASSISTANCE

- ARA — AREA OF RESCUE ASSISTANCE STATION
- ARAM — AREA OF RESCUE ASSISTANCE MASTER STATION
- ARAP — AREA OF RESCUE ASSISTANCE POWER SUPPLY
- ECS — ELEVATOR 2-WAY COMMUNICATION CALL STATION
- ECAP — ELEVATOR 2-WAY COMM. ANNUNCIATOR PANEL
- ECPS — ELEVATOR 2-WAY COMMUNICATION POWER SUPPLY

NURSE CALL

- N — NURSE CALL PATIENT STATION (WITH CALL CORD)
- PC — NURSE CALL EMERGENCY PULL CORD
- CB — NURSE CALL CODE BLUE STATION
- SS — NURSE CALL STAFF STATION
- DS — NURSE CALL DUTY STATION
- DL — NURSE CALL DOME LIGHT
- ZL — NURSE CALL ZONE LIGHT
- NCM — NURSE CALL MASTER STATION
- RCM — RESIDENT CALL MASTER STATION
- RC — RESIDENT CALL EMERGENCY PULL CORD
- N — RESIDENT CALL RECEIVER STATION

ABBREVIATIONS

A/E	ARCHITECT / ENGINEER	ELEV	ELEVATION	MLO	MAIN LUGS ONLY
AFF	ABOVE FINISHED FLOOR	EM	EMERGENCY FIXTURE/DEVICE	NFA	NET FREE AREA
AFG	ABOVE FINISHED GRADE	EWT	ENTERING WATER TEMPERATURE	NL	NIGHT LIGHT
AG	ABOVE GRADE	EX	EXISTING ITEM	OA	OUTSIDE AIR
AHJ	AUTHORITY HAVING JURISDICTION	FFA	FROM FLOOR ABOVE	ORD	OVERFLOW ROOF DRAIN
AHU	AIR HANDLING UNIT	FFB	FROM FLOOR BELOW	P/C	PLUMBING CONTRACTOR
ARCH	ARCHITECT	FFCO	FINISH FLOOR CLEANOUT	PSI	POUNDS PER SQUARE INCH
BFP	BACKFLOW PREVENTER	FGCO	FINISH GRADE CLEANOUT	PVC	POLYVINYL CHLORIDE
BG	BELOW GRADE	FL	FLOW LINE	RA	RETURN AIR
BLDG	BUILDING	FLR	FLOOR	RE/REF	REFER TO / REFERENCE
BMS	BUILDING MANAGEMENT SYSTEM	FP	FIRE PROTECTION	RF	RELIEF FAN
C	CONDUIT	FPM	FEET PER MINUTE	RL	RELOCATED ITEM
CD	CANDELA	FWCO	FLUSH WALL CLEANOUT	RPZ	REDUCED PRESSURE ZONE
CD	COLD DECK	G	GROUND / GANG	RR	RESTROOM
CLG	COOLING	G/C	GENERAL CONTRACTOR	SA	SUPPLY AIR
CM	COORDINATE MOUNTING HEIGHT	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SPD	SURGE PROTECTIVE DEVICE
CO	CLEANOUT	GPM	GALLONS PER MINUTE	ST	SHUNT TRIP
CTE	CONNECT TO EXISTING	HD	HOT DECK	TA	TRANSFER AIR
DCVA	DOUBLE CHECK VALVE ASSEMBLY	HTG	HEATING	TFA	TO FLOOR ABOVE
DCW	DOMESTIC COLD WATER	IG	ISOLATED GROUND	TFB	TO FLOOW BELOW
DDC	DIRECT DIGITAL CONTROLS	JB	JUNCTION BOX	TP	TAMPER PROOF
DF	DRINKING FOUNTAIN	LED	LIGHT EMMITING DIODE	TYP	TYPICAL
DHW	DOMESTIC HOT WATER	LWT	LEAVING WATER TEMPERATURE	UNO	UNLESS NOTED OTHERWISE
DHWR	DOMESTIC HOT WATER RETURN	M/C	MECHANICAL CONTRACTOR	VRF	VARIABLE REFRIGERANT FLOW
DIA	DIAMETER	MA	MIXED AIR	VTR	VENT THROUGH ROOF
DN	DOWN	MAU	MAKE UP AIR UNIT	WCO	WALL CLEANOUT
E/C	ELECTRICAL CONTRACTOR	MCB	MAIN CIRCUIT BREAKER	WG	WIRE GUARD
EA	EXHAUST AIR	MECH	MECHANICAL	WP	WEATHERPROOF
EDF	ELECTRIC DRINKING FOUNTAIN	MH	MANHOLE		

MECHANICAL AND PLUMBING SYMBOL LEGEND

SOME SYMBOLS AND ABBREVIATIONS ON THIS LEGEND MAY NOT BE USED

SHEET METAL

- HIGH-EFFICIENCY DUCT TAKEOFF (WITH AND WITHOUT MANUAL DAMPER)
- SPIN-IN ROUND DUCT TAKEOFF
- CONICAL BELLMOUTH ROUND DUCT TAKEOFF
- ROUND DUCT TAKEOFF WITH FLEX DUCT RUNOUT (MAXIMUM FLEX DUCT LENGTH IS 6'-0")
- DUCTWORK ELBOWS (WITH AND WITHOUT TURNING VANES)
- FD — FD: FIRE DAMPER; FS: FIRE/SMOKE DAMPER; SD: SMOKE DAMPER; BD: BACKDRAFT DAMPER (GRAVITY)
- MD — AUTOMATIC MOTORIZED DAMPER
- 8"Ø 225 — SUPPLY DIFFUSER AND CALLOUT (NECK SIZE, TYPE, AND CFM)
- LINEAR/SLOT DIFFUSER
- 22x22 — RETURN GRILLE (NECK SIZE AND TYPE. MAY ALSO INCLUDE CFM)
- 10x10 — EXHAUST GRILLE (NECK SIZE AND TYPE, MAY ALSO INCLUDE CFM)
- SUPPLY AIR FLOW INDICATOR
- RETURN OR EXHAUST AIR FLOW INDICATOR
- CONTROL WIRING
- THERMOSTAT
- TEMPERATURE SENSOR
- H — HUMIDITY SENSOR
- DP — DIFFERENTIAL PRESSURE SENSOR
- CO2 — CARBON DIOXIDE DETECTOR
- CO — CARBON MONOXIDE DETECTOR
- NO2 — NITROUS OXIDE DETECTOR
- GAS — GAS DETECTOR
- VOC — VOLATILE ORGANIC COMPOUND DETECTOR

MEDICAL GAS

- MV — MEDICAL VACUUM PIPING
- O — OXYGEN PIPING
- NO — NITROUS OXIDE PIPING
- MA — MEDICAL COMPRESSED AIR PIPING
- N — NITROGEN PIPING
- CO — CARBON DIOXIDE PIPING
- VV — VACUUM VENT PIPING
- WAGD — WASTE ANESTHETIC GAS DISPOSAL PIPING
- GV — MEDICAL GAS VENT PIPING
- MEDICAL GAS INLET/OUTLET W/DESIGNATION (RE: PIPE TYPES)
- MEDICAL SLIDE
- MA — MEDICAL GAS ALARM WIRING CONNECTION
- PS — MEDICAL GAS ALARM WIRING - PRESSURE SWITCH
- TR — MEDICAL GAS ALARM WIRING - TRANSDUCER

MECHANICAL PIPING

- D — DRAIN (CONDENSATE)
- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- RV — REFRIGERANT VENT
- RD — RUPTURE DISK
- CWS — CHILLED WATER SUPPLY
- CWR — CHILLED WATER RETURN
- CHWS — CHILLED/HOT WATER SUPPLY
- CHWR — CHILLED/HOT WATER RETURN
- HWS — HOT WATER SUPPLY
- HWR — HOT WATER RETURN
- CTWS — COOLING TOWER WATER SUPPLY
- CTWR — COOLING TOWER WATER RETURN
- STM — STEAM (ANY W'S DENOTE PRESSURE)
- CR — CONDENSATE RETURN (ANY W'S DENOTE PRESSURE)

PLUMBING PIPING

- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- RECIRCULATING DOMESTIC HOT WATER
- SAN — WASTE ABOVE GRADE OR FLOOR
- SAN — WASTE BELOW GRADE OR FLOOR
- V — PLUMBING VENT
- W — WATER SERVICE
- ST — STORM DRAIN ABOVE GRADE OR FLOOR
- ST — STORM DRAIN BELOW GRADE OR FLOOR
- STO — STORM OVERFLOW ABOVE GRADE OR FLOOR
- STO — STORM OVERFLOW BELOW GRADE OR FLOOR
- SCW — SOFT COLD WATER
- SHW — SOFT HOT WATER
- SRW — SOFT RECIRCULATING HOT WATER
- RO — REVERSE OSMOSIS WATER
- DI — DE-IONIZED WATER
- G — NATURAL GAS
- LP — PROPANE
- NP — NON-POTABLE WATER
- CA — COMPRESSED AIR
- ACID — ACID WASTE
- ACID — ACID VENT
- PD — PUMPED DISCHARGE (FROM SUMP PUMP'S / EJECTORS)

GENERAL SYMBOLS

- INDICATES CONNECT TO EXISTING
- FL ? — INDICATES ELEVATION
- W&V #1 — PLUMBING RISER CALLOUT (TYPE/RISER NO.) (W&V = WASTE AND VENT, WAT = DOMESTIC WATER)
- XXX — EQUIPMENT TAG. REFER TO CONNECTIONS SCHEDULE(S) FOR ELECTRICAL CONNECTIONS AND LOAD INFORMATION FOR EQUIPMENT (KITCHEN, SHOP, ETC.)

PIPING SYMBOLS

- SHUTOFF VALVE
- SHUTOFF VALVE IN RISER
- BALANCING VALVE
- PIPING ELBOW UP
- PIPING ELBOW DOWN
- PIPING TEE
- PIPING ELBOW
- PIPING TEE UP
- PIPING TEE DOWN
- INCREASER/REDUCER
- UNION
- CAP
- PIPE FLEX
- 3-WAY VALVE
- CHECK VALVE
- Y-STRAINER
- IN-LINE (BASKET) STRAINER
- AUTOMATIC 2-WAY CONTROL VALVE
- AUTOMATIC 3-WAY CONTROL VALVE
- S — SOLENOID VALVE

PIPING SPECIALTIES

- PRESSURE AND TEMPERATURE GAUGE (WITH COCK)
- THERMOMETER
- PRESSURE REDUCING VALVE
- RELIEF VALVE
- WATER HAMMER ARRESTOR

PIPING FIXTURES / EQUIPMENT

- HOSE BIBB
- WALL HYDRANT
- CLEANOUTS
- RPZ — REDUCED PRESSURE BACKFLOW PREVENTER
- DCPB — DOUBLE CHECK BACKFLOW PREVENTER
- WC-1 / S-1 — PLUMBING FIXTURE AND CALLOUT
- FLOOR DRAIN, AREA DRAIN, OR FLOOR SINK
- ROOF DRAIN OR OVERFLOW ROOF DRAIN

FIRE SPRINKLER

- F — FIRE SPRINKLER PIPING/SERVICE
- FIRE SPRINKLER HEAD - PENDANT
- FIRE SPRINKLER HEAD - SIDEWALL
- FIRE DEPARTMENT SIAMESE CONNECTION
- POST INDICATOR VALVE

COORDINATION NOTES

1. COORDINATE REQUIREMENTS FOR INSTALLATION OF SYSTEMS AND EQUIPMENT WITH ALL OTHER TRADES.
2. THE CONTRACTOR SHALL COORDINATE THE ROUTING AND PATH OF ALL SYSTEMS, CONDUITS, PIPES, DUCTS, ETC WITH THE POSITION AND LAYOUT OF THE STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NECESSARY OFFSETS, TURNS, RISES AND DROPS FOR SYSTEMS AND COMPONENTS AS NEEDED TO INSTALL THE MEP SYSTEMS TO CLEAR STRUCTURE, CEILINGS, ETC AND OTHER SYSTEMS IN POTENTIAL CONFLICT WITH ROUTING.
3. COORDINATE WORK WITH OTHER TRADES TO INSTALL SYSTEMS ABOVE CEILING HEIGHTS INDICATED ON ARCHITECTURAL PLANS.
4. CHECK SPACE REQUIREMENTS WITH OTHER TRADES AND STRUCTURE/CONSTRUCTION TO INSURE THAT ALL MATERIALS AND EQUIPMENT CAN BE INSTALLED IN THE SPACE ALLOTTED INCLUDING FINISHED SUSPENDED CEILINGS AND OTHER SPACES, CHASES, ETC WITHIN THE BUILDING. MAKE MODIFICATIONS THERETO AS REQUIRED AND APPROVED.
5. TRANSMIT TO OTHER TRADES ALL INFORMATION REQUIRED FOR WORK TO BE PROVIDED UNDER THEIR RESPECTIVE SECTIONS IN AMPLE TIME FOR INSTALLATION.
6. WHEREVER WORK INTERCONNECTS WITH WORK OF OTHER TRADES, COORDINATE WITH THOSE TRADES TO INSURE THAT ALL SUBCONTRACTORS HAVE THE INFORMATION NECESSARY SO THAT THEY MAY PROPERLY INSTALL ALL CONNECTIONS AND EQUIPMENT. IDENTIFY ALL ITEMS OF WORK THAT REQUIRE ACCESS SO THAT THE CEILING TRADE WILL KNOW WHERE TO INSTALL ACCESS DOORS AND PANELS.
7. COORDINATE, PROJECT AND SCHEDULE WORK WITH OTHER TRADES IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE.
8. DRAWINGS SHOW THE GENERAL RUNS OF CONDUITS, PIPING AND DUCTWORK AND APPROXIMATE LOCATION OF OUTLETS. ANY SIGNIFICANT CHANGES IN LOCATION OF ITEMS NECESSARY IN ORDER TO MEET FIELD CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER AND RECEIVE HIS APPROVAL BEFORE SUCH ALTERATIONS ARE MADE. ALL SUCH MODIFICATIONS SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF SURFACES, AREAS AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES.
10. ADJUST LOCATION OF PIPING, DUCTWORK, ETC. TO PREVENT INTERFERENCES, BOTH ANTICIPATED AND ENCOUNTERED. DETERMINE THE EXACT ROUTE AND LOCATION OF EACH ITEM PRIOR TO FABRICATION. MAKE OFFSETS, TRANSITIONS AND CHANGES IN DIRECTION IN SYSTEMS AS REQUIRED TO MAINTAIN ADEQUATE CLEARANCES AND HEADROOM.
11. WHEREVER THE WORK IS OF SUFFICIENT COMPLEXITY, PREPARE ADDITIONAL COORDINATION DRAWINGS AND ORGANIZE ON-SITE MEETINGS WITH ALL RELATED SUBCONTRACTORS TO COORDINATE THE WORK BETWEEN TRADES . DRAWINGS SHALL CLEARLY SHOW THE WORK AND ITS RELATION TO THE WORK OF OTHER TRADES, AND BE SUBMITTED FOR REVIEW PRIOR TO COMMENCING SHOP FABRICATION OR ERECTION IN THE FIELD.
12. COORDINATE WITH LOCAL UTILITY PROVIDERS FOR THEIR REQUIREMENTS FOR SERVICE CONNECTIONS AND PROVIDE ALL NECESSARY PAYMENTS, MATERIALS, LABOR AND TESTING TO ACCOMPLISH THE WORK.

GENERAL MECHANICAL NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE INTERNATIONAL MECHANICAL CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ.
2. ANY POWER FOR CONTROL SYSTEMS TO BE PROVIDED BY E/C IS INDICATED ON ELECTRICAL PLANS. ANY ADDITIONAL LINE VOLTAGE OR LOW VOLTAGE POWER REQUIRED BY THE M/C OR SUBCONTRACTORS TO HAVE A FULLY FUNCTIONING SYSTEM SHALL BE PROVIDED BY THE M/C CONTRACTOR OR SUBS.
3. ALL EQUIPMENT SHALL BE ADEQUATELY AND PROPERLY SUPPORTED AND FASTENED FROM STRUCTURE.
4. ALL EQUIPMENT AND ACCESSORIES INSTALLED IN CONCEALED SPACES REQUIRING ACCESS SHALL BE PROVIDED WITH ACCESS DOORS MEETING ANY FIRE REQUIREMENTS OF THE WALL/CEILING THEY ARE INSTALLED.
5. EACH AIR HANDLING UNIT OVER 2000CFM SHALL BE PROVIDED WITH A SMOKE DETECTOR TO SHUT DOWN THE UNIT PER IMC 606 AS REQUIRED BY AHJ. COORDINATE WITH OTHER TRADES.
6. START UP AND ADJUST ALL EQUIPMENT AND VERIFY ALL MECHANICAL SYSTEMS IN OPERATE IN ACCORDANCE WITH THEIR INTENDED PURPOSES. SUBMIT BALANCE AND START UP REPORTS TO THE A/E. REFER TO SPECIFICATIONS FOR ANY ADDITIONAL REQUIREMENTS.

GENERAL PLUMBING NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE INTERNATIONAL PLUMBING CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ.
2. NO PIPING SHALL BE INSTALLED WHERE IT WILL SUBJECT TO FREEZING TEMPERATURES. PIPING IN EXTERIOR WALLS SHALL BE INSTALLED ON THE WARM SIDE OF BUILDING INSULATION. INSULATED AND THE CHASE SHALL BE VENTILATED WITH GRILLES ALLOWING INDOOR AMBIENT CONDITIONS TO CIRCULATE THROUGH THE CHASE.
3. PROVIDE CLEANOUTS IN THE FOLLOWING LOCATIONS:
   1. IN ALL HORIZONTAL DRAINS (WITHIN THE BUILDING) NOT MORE THAN 100 FEET APART.
   2. IN BUILDING SEWERS LOCATED NO MORE THAN 100 FEET APART MEASURED FROM THE UPSTREAM ENTRANCE OF THE CLEANOUT.
   3. EACH CHANGE OF DIRECTION OF THE BUILDING DRAIN OR HORIZONTAL WASTE OR SOIL LINES GREATER THAN 45 DEGREES. WHERE MORE THAN ONE CHANGE OF DIRECTION OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FEET OF DEVELOPED LENGTH OF THE DRAINAGE PIPING.
   4. AT THE BASE OF EACH WASTE OR SOIL STACK.
   5. NEAR THE JUNCTION OF THE BUILDING DRAIN AND BUILDING SEWER.

GENERAL ELECTRICAL NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ.
2. COORDINATE LOCATIONS OF RECEPTACLES, SWITCHES, ETC. WITH ARCHITECTURAL CASEWORK AND ELEVATIONS.
3. REFER TO MOUNTING HEIGHTS DETAIL FOR MOUNTING HEIGHTS OF ALL DEVICES NOT INDICATED OTHERWISE.
4. PROVIDE ALL EMPTY CONDUITS WITH PULL STRINGS AND BUSHED ENDS.
5. CONTRACTOR SHALL CONCEAL ALL CONDUIT, FITTINGS, AND DEVICES FROM VIEW WHERE REASONABLY POSSIBLE.
6. ALL CONDUCTOR SIZES INDICATED ON DRAWINGS ARE FOR COPPER CONDUCTORS UNLESS SPECIFICALLY NOTED OTHERWISE. ALUMINUM CONDUCTORS MAY BE USED ONLY UNDER THE FOLLOWING CONDITIONS:
   - CONTRACTOR SHALL INCLUDE A DEDUCT ALTERNATE FOR USE OF SAME WITH BIDS, FOR OWNER ACCEPTANCE.
   - AL CONDUCTORS MAY ONLY BE USED ON FEEDERS 100A OR GREATER - NO EXCEPTIONS.
   - ALUMINUM CABLING SHALL BE COMPACTED ALUMINUM (STABILOY).
   - PROVIDE COMPRESSION-TYPE ONE-HOLE OR TWO-HOLE LUG TERMINATIONS.
   - PROVIDE ANTI-OXIDANT COMPOUND AT TERMINATIONS.
   - CABLE TERMINATIONS SHALL BE MARKED "AL/CU".
   - FINAL SIZES OF CONDUCTORS TO BE CONFIRMED BY ENGINEER.
   - ALUMINUM SERVICE CONDUCTORS MUST HAVE "AA-8000" SERIES LABELING ON CABLE JACKETS PER EVERGY REQUIREMENTS - NO EXCEPTIONS.

   ENGINEER RESERVES FINAL RIGHT TO ACCEPT/DENY USE OF ALUMINUM CONDUCTORS FOR PART OR ALL OF PROJECT.

GENERAL NOTES

1. SOME ROOM NAMES MAY NOT BE SHOWN FOR PURPOSE OF CLARIFYING PLAN. REFER TO ARCHITECTURAL PLANS FOR REFERENCE TO ROOM NAMES NOT SHOWN.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND KEEP AT THE JOB SITE, AN UP TO DATE SET OF 'RECORD DRAWINGS' SHOWING ALL CHANGES FROM THE ORIGINAL PLANS. THE CONTRACTOR SHALL DELIVER THE 'RECORD DRAWINGS' TO THE ENGINEER AT THE CONCLUSION OF THE PROJECT ELECTRONICALLY.
3. THESE DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS (NEW AND EXISTING), DIMENSIONS, AND CLEARANCES PRIOR TO THE COMMENCEMENT OF WORK AND SHALL INCLUDE ALL COSTS, EQUIPMENT, MATERIAL, ACCESSORIES, ETC. REQUIRED FOR A FULLY COMPLETE, FUNCTIONAL AND CODE COMPLIANT INSTALLATION.
4. FINAL LOCATIONS OF ALL DEVICES, LIGHT FIXTURES, EQUIPMENT ETC SHALL BE INDICATED ON THE ARCHITECTURAL DRAWINGS. ALL DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM ARCHITECTURAL PLANS. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM MEP DRAWINGS.
5. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, APPROVALS, LICENSES, ETC. AS NEEDED FOR THE COMPLETE INSTALLATION AND PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR ALL FEES AND DATA NEEDED FOR THIS.

FIRE SEALING NOTES

1. COORDINATE CONSTRUCTION OF OPENINGS AND PENETRATING ITEMS TO ENSURE THAT THROUGH-PENETRATION FIRESTOP SYSTEMS ARE INSTALLED ACCORDING TO SPECIFIED AND APPLICABLE UL REQUIREMENTS.
2. COORDINATE SIZING OF SLEEVES, OPENINGS, CORE-DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE THROUGH-PENETRATION FIRESTOP SYSTEMS.
3. DO NOT COVER-UP THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLATIONS UNTIL EXAMINED BY INSPECTOR, IF REQUIRED BY AUTHORITIES HAVING JURISDICTION.
4. COMPATIBILITY: PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS THAT ARE COMPATIBLE WITH ONE ANOTHER, WITH THE SUBSTRATES FORMING OPENINGS, AND WITH THE ITEMS, IF ANY, PENETRATING THROUGH-PENETRATION FIRESTOP SYSTEMS, UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.
5. PROVIDE COMPONENTS FOR EACH THROUGH-PENETRATION FIRESTOP SYSTEM THAT ARE NEEDED TO INSTALL FILL MATERIALS. USE ONLY COMPONENTS SPECIFIED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER AND APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY FOR FIRESTOP SYSTEMS INDICATED.
6. PROVIDE SLEEVES THROUGH ALL FIRE-RATED WALLS AND FILL VOIDS SURROUNDING SLEEVES AND INTERIOR TO SLEEVES AROUND PIPING WITH FIRE STOP PUTTY WITH UL LISTED 3 HOUR RATING INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
7. FIRE SEAL ALL PIPING, CONDUIT, CABLE, ETC PENETRATIONS ROUTED THROUGH FIRE RATED WALLS.
8. PROVIDE FIRE RATED ENCLOSURES OR WRAPS ON LIGHT FIXTURES AND OTHER ITEMS PENETRATING FIRE RATED CEILINGS, FLOOR/CEILING/ CEILING/ROOF ASSEMBLIES TO MAINTAIN UL LISTING FOR CONSTRUCTION.

SHEET INDEX

MEP001	COVER SHEET
MEP002	SPECIFICATIONS
MEP101	SITE PLAN
M101	HVAC PLAN
M201	MECHANICAL SCHEDULES AND DETAILS
P101	DOMESTIC WATER PLAN
P201	WASTE AND VENT PLAN
P301	PLUMBING SCHEDULES AND DETAILS
E101	LIGHTING PLAN
E201	POWER PLAN
E301	ELECTRICAL RISER AND SCHEDULES

collins webb ARCHITECTURE
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DRAWINGS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI — ANDREA PERATT — NUMBER PE-2021000132 — PROFESSIONAL ENGINEER — 6/6/2024
Andrea Peratt - Engineer
MO# PE-2021000132

STATE OF MISSOURI — DARREN E. THRASHER — NUMBER PE-2014007277 — PROFESSIONAL ENGINEER — 6/6/2024
Darren E. Thrasher - Engineer
PROFESSIONAL SEAL 72777

MEP001

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

COVER SHEET

pkmr ENGINEERS 24.046
PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC
13300 W 98TH STREET LENEXA, KS 66215
913.492.3400 WWW.PKMRENG.COM
MO State Certificate of Authority #E-2002020886

6/27/2024 11:58:38 AM

GENERAL MECHANICAL/ELECTRICAL SPECIFICATIONS

GENERAL MECHANICAL / ELECTRICAL PLUMBING REQUIREMENTS

1. APPLICABILITY
   A. These general requirements apply to all divisions (22, 23, 26, 27, 28). Refer to individual divisions as included for specific information regarding each trade or scope of work.
2. GENERAL REQUIREMENTS
   A. Furnish & install all labor & materials required for complete, functioning, mechanical & plumbing systems w/ all associated equipment & apparatus as shown on plans.
   B. Obtain & pay for all permits required for execution of this work & shall make arrangements for modifications to water, gas & sewer connections to building as required.
   C. All materials shall be new & shall bear UL label where applicable.
   D. Visit site & observe conditions under which work will be done. Any discrepancies shall be called to architect's attention. No subsequent allowance will be made in contract for any error or negligence on contractor's part.
   E. Final acceptance of work shall be subject to condition that all systems, equipment, apparatus & appliances operate satisfactorily as designed & intended. Work shall include required adjustment of systems & control equipment installed under these specifications.
   F. Warrant to owner quality of materials, equipment, workmanship & operation of equipment provided under these specifications for one year from & after completion of building & acceptance of mechanical systems by owner.
   G. All materials installed in plenums shall be noncombustible or have flame/smoke index of no more than 25/50 in accordance w/ ASTM e 84.
   H. Requirements under Division one & general & supplementary conditions of these specifications shall be part of this section. Contractor shall become cognizant w/ its contents as to requirements that affect this Division of work required under this section includes material. Equipment, appliances. Transportation. Services. & labor required to complete entire system as required by drawings & specifications.
   I. The specifications & drawings for project are complementary, & portions of work described in one, shall be provided as if described in both. In event of discrepancies, notify engineer & request clarification prior to proceeding w/ work involved.
3. EXTENT OF CONTRACT WORK
   A. Provide MEP systems indicated on drawings, specified or reasonably implied. In addition to specific equipment called out in plans and specifications, provide every device, component, programming, interlocking and accessory necessary for proper operation and completion of totally functional MEP systems.
   B. In no case will claims for "Extra Work" be allowed for work about which Contractor could have been informed before bids were taken.
   C. Contractor shall become familiar with equipment provided by other contractors that require plumbing connections and controls.
   D. Electrical work required to install and complete plumbing equipment, which is not shown on plans or specified under Division 26, shall be included in Contractor's base bid proposal.
   E. All automatic temperature control devices shall be mounted as indicated in automatic temperature control section of specifications.
   F. The cost of larger wiring, conduit, control and protective devices resulting from installation of equipment which was not used for basis of design as outlined in specifications shall be paid for by the supplying Contractor at no cost to Owner or Architect Engineer.
   G. Contractor shall be responsible for providing supervision to other trade Contractors to insure that required connections, interlocking and interconnection of MEP equipment is made to attain intended control sequences and system operation.
   H. Contractor shall obtain complete MEP data on shop drawings and shall list this data on an approved form that shall be presented on request, to other trade Contractors. Data shall be complete with wiring diagrams received to date and shall contain necessary data on electrical components of plumbing equipment such as HP, voltage, amperes, watts, locked rotor current to allow other trade Contractors to order support or other equipment coordinated as required in his contract.
4. DEFINITIONS
   A. Where used in these specifications or drawings, following terms shall have indicated meanings:
   B. Furnish: term "Furnish" is used to mean "supply & deliver to project site. Ready for unloading, unpacking, assembly. Installation & similar operations.
   C. Install: term "install" is used to describe operations at project site including actual "unloading, unpacking, Assembly. Erection. Placing. Anchoring. Applying. working to dimension. Finishing, curing, protecting, cleaning. & similar operations."
   D. Provide: term "Provide" means "to Furnish & Install. Complete & ready for intended use." furnished by owner or furnished by others: item will be furnished by owner or others. It is to be installed & connected under requirements of this Division, complete & ready for operation, including items incidental to work, including services necessary for proper installation & operation. Installation shall be included under guarantee required by this Division.
   E. Engineer: where referenced in this Division, "Engineer" is engineer of record & design professional for work under this Division, & is consultant to, & an authorized representative of, architect. As defined in general &/or supplementary conditions. When used in this Division. It means increased involvement by. & obligations to, engineer, in addition to involvement by, & obligations to, "Architect".
   F. AHJ: local code &/or inspection agency (authority) having jurisdiction over work.
   G. The terms "Approved equal", "Equivalent". Or "Equal" are used synonymously & shall mean "accepted by or acceptable to engineer as equivalent to item or manufacturer specified".
   H. The term "approved" shall mean labeled, listed. Or both. By nationally recognized testing laboratory (e.g. UL. ETL. CSA). & acceptable to AHJ over this project.
5. MATERIAL & WORKMANSHIP
   A. Provide new material, equipment. & apparatus under this contract unless otherwise stated herein. Of best quality normally used for purpose in good commercial practice & free from defects. Model numbers listed in specifications or shown on drawings are not necessarily intended to designate required trim, written descriptions of trim govern model numbers.
   B. Pipe, fittings, specialties & valves shall be manufactured in USA. Work performed under this contract shall provide neat & "workmanlike" appearance when completed to satisfaction of architect & engineer. Workmanship shall be finest possible by experienced mechanics. Installations shall comply w/ applicable codes & laws. Complete installation shall function as designed & intended w/ respect to efficiency, capacity, noise level. etc. Abnormal noise caused by rattling equipment, piping, ducts, air devices & squeaks in rotating components will not be acceptable. In general materials & equipment shall be of commercial specification grade in quality. Light duty & residential equipment is not acceptable.
   C. Remove from premises waste material present from work, including cartons, crating, paper, stickers, &/or excavation material not used.
   D. Clean equipment installed under this contract to present neat & clean installation at completion.
   E. Repair or replace public & private property damaged as result of work performed under this contract to satisfaction of authorities & regulations having jurisdiction.
6. COORDINATION
   A. Coordinate work w/ other trades so various components of systems will be installed at proper time will fit available space & will allow proper service access for maintenance. Components which are installed without regard to above shall be relocated at no additional cost to owner.
   B. Obtain equipment submittal information for all pieces of equipment to be connected to from other trades that clearly indicates all connection requirements, locations, sizes, and similar requirements. Obtain this information in ample time to coordinate other trade submittals and equipment coordination. Where requirements differ from that on plans or differs from provisions made in the work, immediately notify the architect/engineer. Do not proceed with work that is incompatible with equipment provided.
   C. Unless otherwise indicated, general contractor will provide chases & openings in building construction required for installation of systems specified herein. Contractor shall furnish general contractor w/ information where chases & openings are required.
   D. Keep informed as to work of other trades engaged in construction of project & execute work in manner as to not interfere w/ or delay work of other trades. Figured dimensions shall be taken in preference to scale dimensions.
   E. Contractor shall take his own measurements at building, as variations may occur. Contractor will be held responsible for errors that could have been avoided by proper checking & comparison.
   F. Provide materials w/ trim that will properly fit types of ceiling, wall. Or floor finishes actually installed. Model numbers listed in specifications or shown on drawings are not intended to designate required trim.
   G. Coordinate construction operations included in different sections of the specifications to ensure efficient and orderly installation of each part of the work. Coordinate construction operations, included in different sections, that depend on each other for proper installation, connection, and operation.
   H. Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the work. Each contractor shall coordinate its operations with operations, included in different sections, that depend on each other for proper installation, connection, and operation.
   I. Schedule construction operations in sequence required to obtain the best results where installation of one part of the work depends on installation of other components, before or after its own installation.
   J. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
   K. Make adequate provisions to accommodate items scheduled for later installation.
   L. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
   M. Prepare coordination drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities. Content: project-specific information drawn accurately to scale. Do not base coordination drawings on reproductions of the contract documents or standard printed data. Include the following information, as applicable:
      1) Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
      2) Indicate required installation sequences.
      3) Indicate dimensions shown on the contract drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to architect for resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the contract.
   N. Meetings: conduct project coordination meetings at regular intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.
      1) Attendees: each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with project and authorized to conclude matters relating to the work. Notify architect of meeting.
      2) Agenda: review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress.
      3) Combined contractor's construction schedule: review progress since the last coordination meeting. Determine whether each contractor is on time, ahead or behind schedule, in relation to construction schedule. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the contract time. Discuss impact of various contractor schedules upon other contractors and how to remedy impacts.
      4) Review present and future needs of each contractor present
   O. After shop drawings have been reviewed and approved by all parties, transmit a set of submittals to each other trade (eg Plumbing, Mechanical, Electrical, Controls, etc) that will interface with installation. Each other contractor shall review the submittal for coordination and return a stamped submittal indicating they have reviewed the submittal for coordination purposes.
7. ARCHITECTURAL VERIFICATION AND RELATED DOCUMENTS
   A. Contractor shall consult all Architectural Drawings and specifications in their entirety incorporating and certifying all millwork, furniture, and equipment roughin including utility characteristics such as voltage, phase, amperage, pipe sizes, duct sizes, including height, location and orientation. Shop drawings incorporating these requirements should be submitted to the Architect for approval prior to installation or rough in.
8. ORDINANCES & CODES
   A. Work performed under this contract shall be in strict compliance w/ current applicable codes adopted by local AHJ including any amendments & standards as set forth by National Fire Protection Association (NFPA). Underwriters Laboratories (UL). Occupational Safety & Health Administration (OSHA). American Society of Mechanical Engineers (ASME). American Society of Heating, Refrigeration, & Air Conditioning Engineers (ASHRAE). American national standards institute (ANSI). American Society of Testing Materials (ASTM) & other national standards & codes where applicable.
   B. Where contract documents exceed requirements of referenced codes. Standards, etc., contract documents shall take precedence.
   C. Procure & pay for permits & licenses required for accomplishment of work herein described. Where required, obtain. Pay for & furnish certificates of inspection to owner. Contractor will be held responsible for violations of law.
9. STANDARDS
   A. Drawings and specifications indicate minimum construction standard. Should any work indicated be sub standard to any ordinances, laws, codes, rules or regulations bearing on work, Contractor shall promptly notify Architect Engineer in writing before proceeding with work so that necessary changes can be made. However, if the Contractor proceeds with work knowing it to be contrary to any ordinances, laws, rules, and regulations, Contractor shall thereby have assumed full responsibility for and shall bear all costs required to correct non complying work.
10. PROTECTION OF EQUIPMENT & MATERIALS
   A. Store & protect from damage equipment & materials delivered to job site. Cover as required to protect from dirt & damage. Plug or cap open ends of ductwork & piping systems while stored & installed during construction when not in use to prevent entrance of debris into systems. Equipment & material that has been damaged by construction activities will be rejected, & contractor is obligated to furnish new equipment & material of like kind. Keep premises broom clean from foreign material created during work performed under this contract. Piping, equipment, etc. Shall have neat & clean appearance at completion.
11. SUBSTITUTIONS
   A. The base bid shall include only products from manufacturers specifically named in drawings & specifications. No substitution will be considered prior to receipt of bids unless written request for approval to bid has been received by engineer at least ten calendar days prior to date for receipt of bids. Request shall include name of material or equipment for substitution & complete description of proposed substitute including drawings, cuts, performance & test data & other information for evaluation. Statement setting forth changes in other materials, equipment or other work that incorporation of substitute would require shall be included.
   B. The intent of these specifications is to allow ample opportunity for Contractor to use his ingenuity and abilities to perform the work to his and the Owner's best advantage, and to permit maximum competition in bidding on standards of materials and equipment required.
   C. Material and equipment installed under this contract shall be first class quality, new, unused and without defects.
   D. In general, these specifications identify required materials and equipment by naming one or more manufacturer's brand, model, catalog number and/or other identification. The first named manufacturer or product is used as the basis for design; other manufacturers named must furnish products consistent with specification of first named product as determined by Engineer. Base bid proposal shall be based only on materials and equipment by manufacturers named, except as hereinafter provided.
   E. Where material and equipment are described but not named, provide required items of first quality, adequate in every respect for intended use. Such items shall be submitted to Architect Engineer for review prior to purchase.
   F. Materials and equipment proposed for substitutions shall be equal to or superior to that specified in construction, efficiency, utility, aesthetic design, and color as determined by Architect Engineer whose decision shall be final and without further recourse. Physical size of substitute brand shall be no larger than space provided including allowances for access for installation and maintenance. Requests must be accompanied by complete descriptive and technical data including manufacturer's name, model and catalog number, photographs or cuts, physical dimensions, operating characteristics and any other information requested for comparison.
   G. The burden of proof of merit of proposed substitute is upon proposer. Engineer's decision of approval or disapproval to bid of proposed substitution shall be final. Terms approved", "approved equal", & "equal" refer to approval by engineer as an acceptable alternate bid. No substitutions will be considered that are not bid as an alternate.
   H. No material substitutions shall be considered for approval after to award of contract. Coordinate & verify w/ other trades whether or substituted equipment can be installed as shown or construction drawings without modification to associated systems or architectural or engineering design. Include additional & electrical & engineering design fees in bid if drawing modifications are required because of substituted equipment.
12. SHOP DRAWINGS
   A. Equipment to be furnished under this contract, items requiring coordination between contractors & sheet metal ductwork fabrication drawings. Before submitting shop drawings verify equipment submitted is mutually compatible & is suitable for intended use & will fit available space with ample room for maintenance. Engineer's checking & subsequent approval of such shop drawings will not relieve contractor from responsibility for errors in dimensions, details, size of members, quantities, omission of necessary fittings; coordination of electrical requirements; or for coordinating items w/ actual building conditions. Proceed w/ procurement & installation of equipment only after receiving approved shop drawings relative to such item.
   B. Submittal data shall be neatly organized, identified & indexed. Each item or model number shall be clearly marked & accessories indicated. Label catalog data w/ equipment identification acronym or number as used on drawings & include performance curves, capacities, sizes, materials, finishes, wiring diagrams & deviations from specified equipment or materials. Mark out inapplicable items. Shop drawings will be returned without review if above mentioned requirements are not met.
   C. Requirements shall be met electronically & submitted as pdf in files less than 10mb.
   D. Contractor's stamp, which shall certify that stamped drawings have been checked by contractor, comply w/ drawings & specifications, & have been coordinated w/ other trades.
   E. Transmit submittals as early as required to support schedule. Allow for two weeks a/e review time, plus duplication of this time for resubmittals, if required. Transmit submittals as soon as possible after notice to proceed & before construction starts. Engineer's submittal reviews will not relieve contractor from responsibility for errors in dimensions, details, size of members, or quantities, or for omitting components or fittings, or for not coordinating items w/ actual building conditions.
   F. Final copies shall be furnished to owner as part of O&M documents in hard & electronic formats.
13. OPERATION & MAINTENANCE INSTRUCTIONS
   A. Collect & compile complete brochure of equipment furnished & installed on this project. Include operational & maintenance instructions, manufacturer's catalog sheets, wiring diagrams, parts lists, approved shop drawings, test & balance reports, & descriptive literature as furnished by equipment manufacturer. Include an inside cover sheet that lists project name, address, owner, architect, consulting engineer, general contractor, sub-contractor, & an index of contents. Submit three copies of literature bound in vinyl covered binder & table appearing equipment types to architect at termination of work. Final approval of plumbing systems will be withheld until manual is received & deemed complete by architect & engineer. Provide "as-built" drawings (see Division 1 & general conditions).
   B. These requirements may shall also be provided to the owner in a well organized pdf electronic submission & delivered on a DVD or USB thumbdrive.
14. TRAINING
   A. Provide factory trained & authorized representative to train owner's designated personnel on operation & maintenance of equipment provided for this project. Provide training to include but not be limited to an overview of system &/or equipment as it relates to facility as whole; operation & maintenance procedures & schedules related to startup & shutdown, troubleshooting, servicing, preventive maintenance & appropriate operator intervention; & review of data included in operation & maintenance manuals. Submit certification letter to architect stating that owner's designated representative has been trained as specified herein. Letter shall include date, time, duration of training. Contractor & owner's representative shall sign certification letter indicating agreement that training has been provided. Schedule owner training w/ at least 7 days' advance notice.
15. SPARE PARTS
   A. Furnish to owner, w/ receipt one set of spare filters of each type required for each unit. In addition to spare set of filters, install new filters prior to testing, adjusting, & balancing work & before turning system over to owner.
   B. Furnish one complete set of belts for each fan.
16. EQUIPMENT LABELS:
   A. Material and thickness: multilayer, multicolor, plastic labels for mechanical engraving, 1/16 inch thick, and having predrilled holes for attachment hardware. Black letters on white background.
   B. Minimum label size: length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
   C. Minimum letter size: 1/4" for name of units if viewing distance is less than 24 inches, 1/2" for viewing distances up to 72" & proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
17. WARRANTIES
   A. Warrant each system & each element thereof against all defects due to faulty workmanship design or material for period of 12 months from date of substantial completion unless specific items are noted to carry longer warranty in construction documents or manufacturer's standard warranty exceeds 12 months. Remedy all defects, occurring within warranty period(s) stated in general conditions & Division 1. Where materials shall include labor & materials. Make repairs or replacements without any additional costs to owner. Perform remedial work promptly, upon written notice from engineer or owner.
   B. At time of substantial completion, deliver to owner all warranties in writing & properly executed including term limits for warranties extending beyond one year period. Each warranty instrument being addressed to owner & stating commencement date & term.
18. CUTTING & PATCHING
   A. Perform cutting of walls, floors, ceilings, etc. As required to install work under this section. Obtain permission from architect prior to cutting. Do not cut or disturb structural members without prior approval from architect. Cut holes as small as possible. General contractor shall patch walls, floors, etc. As required by work under this section. Patching shall match original material & construction. Repair & refinish areas disturbed by work to condition of adjoining surfaces in manner satisfactory to architect.
19. EXCAVATION AND BACKFILL
   A. Perform necessary excavation to receive work. Provide necessary sheathing, shoring, cribbing, barpaulins, etc. For this operation, and remove it at completion of work. Perform excavation in accordance with appropriate section of these specifications, and in compliance with osha safety standards.
   B. Excavate trenches of sufficient width to allow ample working space, and no deeper than necessary for installation work.
   C. Conduct excavations so as walls or footings are disturbed or injured. Backfill excavations made under or adjacent to footing with selected earth or sand and tamp to compaction required by architect engineer. Mechanically tamp backfill under concrete and pavings in six inch layers to 95% standard density, reference Division 2.
   D. Backfill trenches and excavations to required heights with allowance made for settlement. Tamp fill materials thoroughly and moistened as required for specified compaction density. Dispose of excess earth, rubble and debris as directed by architect.
   E. When available, refer to test hole information on architectural or civil drawings or specifications for types of soil to be encountered in excavations.
20. ROUGH-IN
   A. Coordinate rough-in w/ general construction & other trades. Conceal piping & conduit rough-in except in unfinished areas & where otherwise shown.
21. STRUCTURAL STEEL
   A. Structural steel used for support of equipment, ductwork & piping shall be new, clean, & conform to ASTM a-36. Support mechanical components from building structure as required. Do not support mechanical components from ceilings, other mechanical or electrical components, & other non-structural elements.
22. ACCESS DOORS
   A. Provide access doors in ceilings, walls, etc. Where indicated or required for access or maintenance to concealed valves & equipment installed under this section. Provide concealed hinges, screwdriver-type lock, anchor straps; manufactured by Milcor, Zurn, Titus, or equal. Obtain architect's approval of type, size. Location & color before ordering.
23. PENETRATIONS
   A. Seal mechanical floor, exterior wall & roof penetrations watertight & weathertight. Seal around mechanical penetrations w/ 3M CP-25 fire barrier caulk (thickness as required & recommended by manufacturer) to maintain resistance rating of fire-rated assemblies. Provide prefabricated roof curbs manufactured by Custom Curb, Pate, Thycurb or approved equal. Provide roof curb w/ factory installed wood nailer; welded, 18 gauge galvanized steel shell, base plate & flashing; 1-1/2" thick, 3-pound rigid insulation; fully mitered 3-inch raised cant; cover of weather-resistant, weather-proof material & pipe collar of weather-resistant material w/ stainless steel pipe clamps. Make roof penetrations by authorized roofing contractor when required.
24. MOTORS & STARTERS
   A. Provide motors & starting equipment where not furnished w/ equipment package. Motors shall have copper windings, class b insulation, & standard squirrel cage w/ starting torque characteristics suitable for equipment served. Motors for air handling equipment shall be selected for quiet operation. Each motor shall be checked for proper rotation after electrical connection has been completed. Provide dripproof enclosure for locations protected from weather & not in air stream of fan; & totally enclosed fan cooled enclosure for motors exposed to weather. Motors shall be manufactured by Century, GE, Westinghouse, or approved equal. Provide every motor, except fractional horsepower single phase motors w/ an approved type of "built-in" thermal overload protection, w/ motor starter. Each starter shall be provided w/ overload heaters sized to motor rating, & every three phase motor starter shall have overload heaters in each phase. Ambient compensated heaters shall be installed wherever necessary. Unless noted otherwise, motor starters shall be furnished by Division 22/23 contractor for installation & connection by Division 26 contractor. Starters shall be Allen-Bradley, Clark, Furnas, Square D, or approved equal.
25. ELECTRICAL WIRING
   A. Line voltage wiring shall be provided by Division 26. Line voltage control & interlock wiring for mechanical systems shall also be provided by Division 26 contractor. Low voltage control wiring shall be provided by Division 22/23 contractor. Furnish wiring diagrams to Division 26 contractor as required for proper equipment hookup. Coordinate w/ Division 26 contractor actual wire sizing amps for submitted mechanical equipment to ensure proper installation
26. DISCONNECT SWITCHES
   A. Provide heavy-duty horsepower rated safety switches rated in accordance with NEMA enclosed switch standard KS 1, 1969 and 198 standard.
   B. Each piece of electrical equipment shall be provided with a disconnecting means.
   C. Equivalents by: GE, Eaton, Siemens, Square D.
27. REFRIGERANT & OIL
   A. Provide full refrigerant & oil charge in refrigeration systems. Maintain for full term of warranty.
28. EQUIPMENT FURNISHED BY OTHERS
   A. Provide necessary equipment & accessories that are not provided by equipment supplier or owner to complete installation of cooling equipment; washing equipment, etc., furnished by others, in locations as indicated on drawings &/or described in general notes to this contractor.
   B. Equipment & accessories not provided by equipment supplier may include fuses, vents, intakes, associated roof jacks & caps to outdoors, dampers. In-line fans, roof fans, control interlocks, etc. As required for proper operation of complete system in accordance w/ manufacturer's instructions.
   C. Contractor shall be responsible for correct rough-in dimensions, & shall verify same w/ architect &/or equipment supplier prior to service installations.
29. SETTING, ADJUSTMENT AND EQUIPMENT SUPPORTS
   A. Work shall include mounting, alignment and adjustment of systems and equipment. Set equipment level on adequate foundation and provide proper anchor bolts and isolation as shown, specified or required by manufacturers in installation instructions. Level, shim and grout equipment bases as recommended by manufacturer. Mount motors, align and adjust drive shafts and belts according to manufacturer's instructions.
   B. Equipment failures resulting from improper installation or field alignment shall be repaired or replaced by Contractor at no cost to Owner.
   C. Provide floor or slab mounted equipment with 3, 1/2" high concrete bases unless specified otherwise. Individual concrete pad shall be no less than 4" wider and 4" longer than equipment, and shall extend no less than 2" from each side of equipment.
   D. Provide each piece of equipment or apparatus suspended from ceiling or mounted above floor level with suitable structural support, platform or carrier in accordance with best-recognized practice. Verify that structural members of buildings are adequate to support equipment and unless otherwise indicated on plans or specified, arrange for their inclusion and attachment to building structure. Provide hangers with vibration isolators.
   E. Submit details of hangers, platforms and supports together with total weights of mounted equipment to Architect_Engineer for review before proceeding with fabrication or installation.
30. VIBRATION ISOLATION
   A. Provide vibration isolation equipment & materials by single manufacturer. Amber booth, kinetics noise control, mason industries, inc., vibration eliminator co., inc., & vibration mounting & controls. General requirements: select vibration isolators by weight distribution to produce uniform deflection. Isolators shall operate in linear portion of their load versus deflection curves. Spring isolators shall have 50 percent excess capacity without becoming coil bound. Coat vibration isolators w/ factory-applied paint. Coat vibration isolators exposed to weather & corrosion w/ factory-applied protection. Install & adjust isolators in accordance w/ manufacturers instructions.
31. FIRE BARRIERS
   A. General: for penetrations through fire-resistance-rated constructions, including both empty openings and openings containing penetrating items, provide through-penetration firestop systems that are compatible with each other & with the following: the firestop systems penetrants indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of construction penetrated.
32. WELDING
   A. Contractor shall be responsible for quality of welding and suitability of welding procedures. All welding shall be in accordance with American Welding Society standard B3.0 and ANSI standard b31.1.
   B. Welded pipe joints shall be made by certified welding procedures and welders. Welding electrodes shall be type and strength recommended by manufacturer of material to be welded. All pipe and fittings ends shall be beveled a minimum of 30 degrees prior to welding.
   C. Only welders who have successfully passed welder qualifications tests in previous 12 months for type of welding required shall do welding. Each welder shall identify his work with a code marking before starting any welded splice. Contractor shall submit three copies of a list of welders who will work on project listing welders' code, date and types of latest qualification test passed by each welder.
   D. Welded joints shall be fusion welded in accordance with level AR3 of American Welding Society standard AWS D10.9 "Standard For Qualification Of Welding Procedures And Welders For Pipe And Tubing". Welders qualified under national certified pipe welding bureau will be acceptable.
   E. Bevel all piping and fittings in accordance with recognized standards by flame cutting or mechanical means. Align and position parts so that branches and fittings are not true. Make changes in direction of piping systems with factory made welding fittings. Make branch connections with welding tees or forged weldolet.

END OF GENERAL MEP REQUIREMENTS

MECHANICAL SPECIFICATIONS

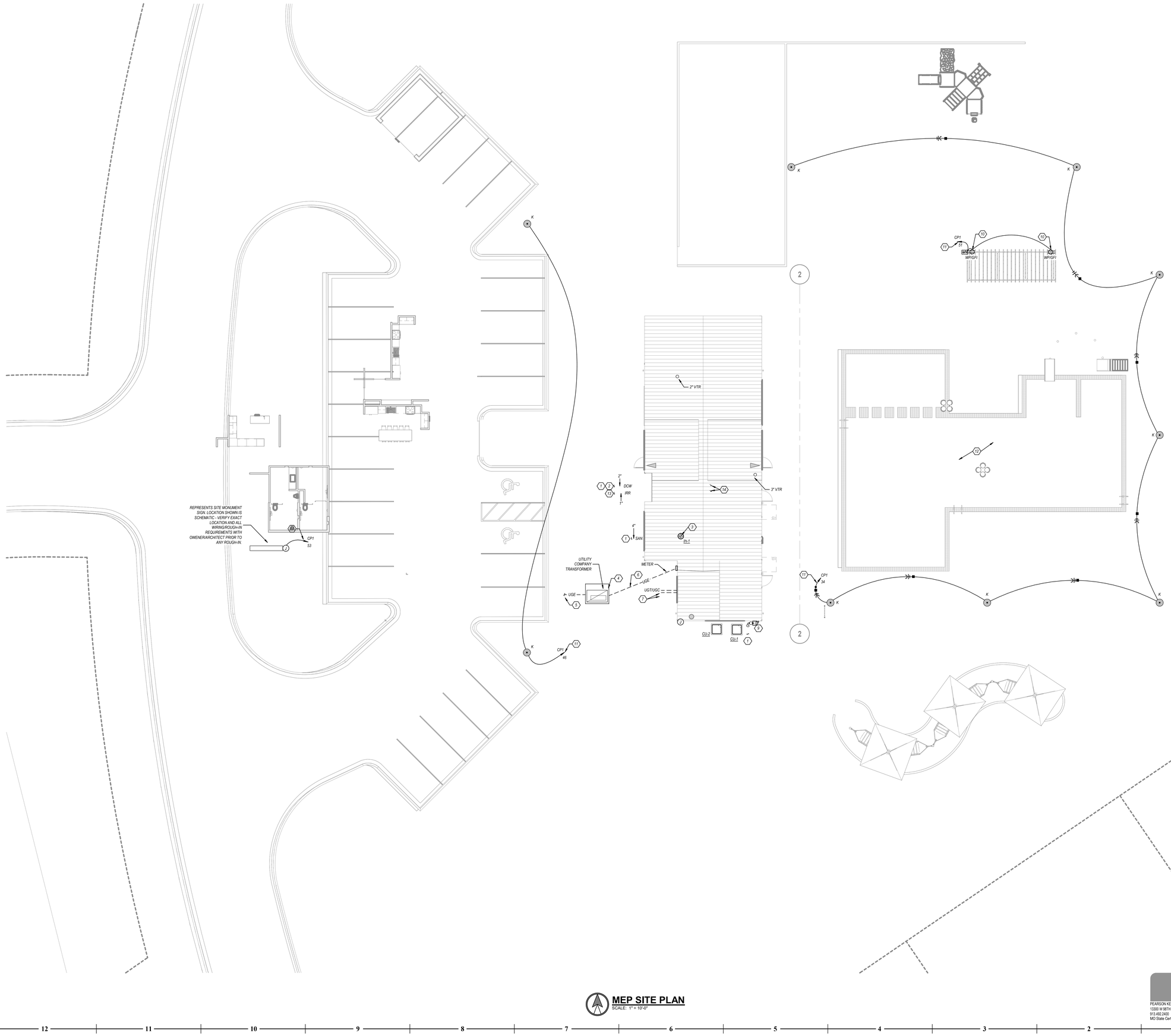
DIVISION 220000 - PLUMBING

1. PLUMBING GENERAL REQUIREMENTS
   A. Refer to GENERAL MECHANICAL, ELECTRICAL AND PLUMBING requirements
2. PIPING & INSULATION
   A. Water service piping shall be CPVC SDR-11 piping properly bedded and supported.
   B. Water piping - all water piping over 1" shall be CPVC SDR-11, insulate w/ fiberglass w/ ASJ & PVC covers. Water piping 1" or smaller shall be PEX-a or PEX-b. Insulate w/ elastomeric w/ ASJ & PVC covers. Insulation thickness in accordance w/ ASHRAE 90.1.
   C. Waste & vent piping - CI bell & spigot below grade or hubless CI w/ neoprene gasket fittings w/ stainless steel bands above grade. Sched 40 PVC w/ solvent welds may be used where allowed by local code. PVC not allowed in plenums.
   D. Gas piping - Provide sched 40 cont. Weld carbon steel w/ corresponding fittings. Provide threaded fittings. Provide iron body-brass plug gas stops. Provide 2 coats paint on exterior gas piping.
3. VALVES
   A. Equivalent valves listed on current comparison charts of specified valve manufactures by Milwaukee, Stockham, Powell, Red-White, Crane, Apollo, Mueller, Muesco, Watts, Hays, Rockwell-Nordstrom.
   B. Ball valves - 2" & under - bronze full port w/ teflon seats, bronze ball & insulated handle.
   C. Balancing valves - Armstrong model CBV-1 or CBV-S, 125 degrees F, after 250 degrees F, meter connections w/ built-in check valves screwed or flanged ends. Provide polyurethane insulation cover.
   D. Check valves - 2" & smaller screwed or solder bronze check valve, 200 psi-wog/125 psi-swp, teflon or bronze disc & seat ring. 2-1/2" & larger flanged, ASTM 126 iron body, bronze trimmed, 200psi-wog/125 psi-swp.
   E. Plug valves - 1" & smaller iron body gas cock, 175 PSI_WOG bronze plug washer and nut, screwed ends, 1, 1/4" & larger, semi, steel-lubricated plug valve, 175 PSI_WOG coated plug, two bolt cover, and short pattern screwed ends. Provide w/ std. pattern cast handle.
4. Installation
   1) Install necessary valves within piping systems to provide required flow control, to allow isolation for inspection, maintenance and repair of each piece of equipment or fixture, and on each main and branch service loop.
   2) Each valve shall be installed so that it is easily accessible for operation, visual inspection, and maintenance and wherever possible, gate, check and ball valves shall be installed on a horizontal run with the bonnet upright and within 15 degrees of vertical. Butterfly valves shall be installed with the stem in the horizontal position and the handle at 90 degrees from vertical.
   3) Valves installed in piping systems shall be compatible with system maximum test pressure, pipe materials, pipe joining method, and fluid or gas conveyed in system.
5. FIXTURES
   A. See schedules for further requirements and specific fixtures.
   B. Fixtures: American Standard, Kohler, Crane, Zurn, Toto.
   C. Stainless steel fixtures: Elkay, Just, Moen Commercial
   D. Fittings & Valves: Speakman, Symmons, Smith, Wade, Zurn, Or Jonespec.
   E. Seats: Church, Olsonite, Bemis Or Beneke.
   F. Drinking fountains: Halsey Taylor, Elkay, Oasis, Or Haws.
   G. Trim by Moen, Delta, Eljer, Kohler, American Std&rd, Crane, Sloan.
   H. Flushvalves: Sloan, Zurn, Toto
   I. Drains by Watts, Wade, Zurn, Woodford, Smith, Josam.
   J. Wall hydrants Josam series 71000 w/ connections for ¾" pipe & hose. Non-freezing w/ key, removable, locking cover. Equivalent by Watts, J.R. Smith, Wade, Woodford or Zurn.
6. PLUMBING EQUIPMENT
   A. See schedules for further requirements and specific equipment.
   B. Tank Water heaters - State, Rheem, National, A.O. Smith. Porcelainized glasslined tank. Cold water inlet drop tube. Magnesium anode rods. UL seal, 160 psi, factory temperature & pressure relief valve. NSF- construction 3 y warranty.
   C. Recirculation pumps - horizontal, oil-lubricated, all bronze. 125psi. Non-overloading motor.
   D. Provide gas pressure regulators with internal relief and low pressure cut_off as manufactured by Fisher Control Corporation. Capacities and pressures as shown on plans or as required for proper service. Verify capacities and pressures with each piece of equipment served.
   E. Backflow preventers provide where shown on plans or as required by Code/AHJ the following types of backflow preventers. Provide isolation valve ahead of backflow preventers. Equivalent backflow preventer by Watts, Febco, Lawler.
      1) Reduced pressure zone principle (3/4"-10"): watts series 909 reduced pressure backflow preventer complete with strainers and valves. Provide isolation valve ahead of backflow preventers. Provide with air gap fitting and pipe to floor drain.
      2) Double check valve (1/2"-2"): watts series 007 double check valve assembly complete with ball type test cocks, full port ball valve offs and strainer.
      3) Pressure vacuum breakers (1/2"-2"): watts series 800m4qt pressure vacuum breaker with integral ball valve shut offs.
      4) Pressure vacuum breakers (3/8"-1/2"): watts series 008qt pressure vacuum breaker for anti-spill applications, with integral ball valve shut offs.
      5) Atmospheric vacuum breaker (1/4"-3"): watts series 288a atmospheric vacuum breaker in pipe line form.
      6) Hose bibb vacuum breakers vacuum breakers for hose end connections shall be Watts model b-6000 non-removable type.
   F. Domestic hot water expansion tanks be welded steel, diaphragm type tank, and pre_charged to the minimum operating pressure. Tanks shall be suitable for domestic water service. Provide by Amtrol, Bell & Gossett, Watts.
   G. Provide thermometers and wells at all water heaters. Provide pressure test plugs and gauges at waterheaters, booster pumps, etc. so that proper testing/ balancing & trouble shooting can be accomplished.
7. PLUMBING EXECUTION
   A. Provide unions for flanged joints in each pipe line preceding connections to equipment to allow removal for repair or replacement. Provide all screwed & control valves w/ unions adjacent to each connection. Provide screwed end valves w/ union adjacent to valve unless valve can be otherwise easily removed from line.
   B. All piping shall be properly supported with hangers and supports specifically intended for that purpose. Provide clevis hangers, unistrut brackets and pipe clamps and similar systems. Protect integrity of insulation and provide rigid insulation inserts or pipe saddles as necessary.
   C. After piping is in place test lines to insure no leaks.
   D. All piping & equipment shall be supported properly from structure.
   E. Escutcheons - provide nickel-brass or chrome plated on all exposed pipes when passing thru wall or ceiling finished areas.
   F. Verify floor materials used from architectural plans & provide proper cleanout tops, where they occur in carpet, quarry tile, vinyl tile or ceramic tile.
   G. Provide water hammer arrestors for all plumbing banks w/ fixtures utilizing flush valves in any capacity. Locate arrester between last two fixtures served on branch line.

END OF DIVISION 220000

DIVISION 230000 - MECHANICAL

1. MECHANICAL GENERAL REQUIREMENTS
   A. Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements
2. SHEET METAL WORK
   A. HVAC ductwork shall be galv sheet metal of gauges & joint types specified in SMACNA manual. Provide turning vanes in elbows.
   B. Coordinate routing of ductwork w/ other contractors such that piping, electrical conduit, & associated supports are not routed through ductwork. Construct supply ducts to meet SMACNA positive pressure of 3" WG. Construct return, outdoor & exhaust ductwork downstream of fans to meet SMACNA positive pressure of 1" WG.
   C. Seal ductwork w/ heavy liquid sealant, Hardcast Inorgrip 601, Design Polymer DP 1010, United McGill duct sealer or approved equal, applied according to sealant manufacturer's instructions.
   D. Ducts shall be connected to fans, fan casings & fan plenums by means of flexible connectors. Flexible connectors shall be neoprene coated glass cloth canvas connections, Duro-Dyne, Elgen, Ventfabric or equal. Flexible connectors shall have flame spread of 25 or less & smoke developed rating not higher than 50. Make airtight joints & install w/ minimum 1-1/2" slack.
   E. All ductwork must be supported properly from structure.
3. DUCTWORK SPECIALTIES
   A. Flexible ducts - Thermaflex or equal sound rated type G-KM insulated. (duct w/o published acoustical attenuation ratings not acceptable.) Take off fitting shall be hi-eff style w/ locking damper. Maximum length of flexible ductwork shall be 5'-0".
   B. Diffusers & grilles - see schedule. Equivalent by Price, Tuttle & Bailey, Titus, Metal-Aire, Krueger. Coordinate color, mounting w/ duct, ceilings, architect. Select air devices to limit room noise level to no higher than NC-30 unless otherwise shown. Provide devices w/ soft plastic gasket to make an airtight seal against mounting surface. Coordinate final location, frame, & mounting type of air devices w/ architectural reflected ceiling plans. Submit complete shop drawings including information on noise level, pressure drop, throw, cfm for each air device, styles, borders, etc. Clearly marked w/ specified equipment number. Provide ceiling supply air diffusers & return air grilles of lay-in or surface mounted type as required to be compatible w/ ceiling construction. Provide ceiling diffusers & grilles w/ white enamel finish unless noted otherwise. Provide slot plenums by diffuser manufacturer. Plenums shall be internally insulated by manufacturer.
   C. Louvers - Greenheck type FSK-400 fabricated galvanized steel louver w/ trim flange. Equivalent by Ruskin, Louvers & Dampers, Greenheck, American Warming & Ventilating, Industrial Louvers, Acme. Coordinate finish w/ architect.
   D. Provide balancing dampers, manufactured by Ruskin, Greenheck, Nailor Industries, Cesco, Louvers & Dampers, Pottorff or approved equal, where shown on drawings & wherever necessary for complete control of air flow. Splitter dampers shall be controlled by locking quadrants; provide young regulator or ventlok set locking devices for damper rod. Rectangular volume dampers shall be opposed blade interlocking type. Round volume dampers shall be butterfly type consisting of circular blade mounted to shaft.
   E. Damper leakage for outside air dampers shall not exceed 6.5 cfm/square foot in full closed position at 4" wg pressure differential across damper. Reference manufacturer & model number for outside air dampers is Ruskin model CD-50.
4. DUCT INSULATION WORK
   A. Duct insulation & wraps shall meet flame/smoke rating of 25/50 per ASTM E 84.
   B. Line all low pressure supply & return air ductwork w/ 1/2" liner.
   C. Line all transfer boots w/ ½" liner.
   D. Wrap all outside air HVAC ductwork w/ Certainteed 1-1/2" thick insulation w/ vapor barrier in concealed locations. Exposed installations shall use 1-1/2" thick rigid board insulation or lined with 1" liner.
5. PIPING
   A. Refrigerant piping - copper tube type acr, hard temper nitrogenized refrigerant tube, ASTM b-88. Type L or K. Brazed joints. Insulate w/ Armaflex in thickness per ASHRAE 90.1. Provide UV stabilized exterior rated or coated Armaflex outdoors.
   B. Condensate piping - copper ASTM b-88. Type L or K. Brazed joints. Insulate w/ Armaflex in thickness per ASHRAE 90.1.
6. MINI-SPLIT SYSTEMS
   A. AHU's, evaporators, & condensing units as scheduled. Factory assembled including coil, condensate pan, fan motor(s), filters & controls in insulated casing w/TXV. ARI rated, UL listed & labeled for indoor.
   B. Approved equ



GENERAL SITE NOTES

1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
2. REFER TO CIVIL PLANS FOR CONTINUATION OF SERVICES BEYOND 5'-0" FROM BUILDING UNLESS OTHERWISE SHOWN.
3. REFER TO RESPECTIVE FLOOR PLANS FOR CONTINUATION OF SERVICES INSIDE BUILDING AND/OR EXACT LOCATIONS OF EQUIPMENT.
4. CONTACT UTILITY LOCATING SERVICE TO LOCATE EXACT LOCATION OF ALL EXISTING UTILITIES BELOW GRADE.

KEYED NOTES - SITE

1. REFER TO CIVIL FOR CONTINUATION
2. 2" WATER SERVICE. REFER TO CIVIL PLANS FOR METER LOCATION ON SITE.
3. INTAKE HOOD ON SLOPED ROOF. PROVIDE MINIMUM 10' CLEARANCE FROM ALL EXHAUST AND FLUE TERMINATIONS ON ROOF.
4. PROPOSED LOCATION FOR UTILITY COMPANY PAD-MOUNTED TRANSFORMER.COORDINATE EXACT LOCATION AND REQUIREMENTS WITH ELECTRICAL UTILITY COMPANY. PRIOR TO ANY ROUGH-IN. CONTRACTOR TO PROVIDE CONCRETE PAD PER UTILITY COMPANY REQUIREMENTS.
5. PRIMARY UNDERGROUND FEEDERS. REFER TO ELECTRICAL RISER DIAGRAM FOR MORE INFORMATION. COORDINATE ALL SITE WORK WITH CIVIL ENGINEER. ROUTE CONDUITS TO PROPERTY LINE PER UTILITY COMPANY REQUIREMENTS
6. SECONDARY UNDERGROUND FEEDERS. REFER TO ELCTRICAL RISER DIAGRAM FOR MORE INFORMATION. COORDINATE ALL SITE WORK WITH CIVIL ENGINEER.
7. TWO (2) 3" COUNDUITS FOR TELECOMMUNICATION AND TELEVISION SERVICE. REFER TO E201 FOR CONTINUATION BELOW GRADE TO IT EQUIPMENT ROOM.
9. GAS METER. BY UTILITY. GAS SERVICE SHOULD BE RATED FOR +/- 100 MBH AT 7-11 "W.C..
10. RECEPTACLE INSTALLED UP HIGH ON POST AT TRELLIS FRAME FOR TRELLIS LIGHTING STRANDS. COORDINATE EXACT LOCATION WITH OWNER/ARCHITECT PRIOR TO ANY ROUGH-IN.
11. WIRE THROUGH LIGHTING CONTROL PANEL LCP-1.
12. ALL WORK SHOWN AT THE POOL AND POOL EQUIPMENT ROOM DONE BY POOL CONSULTANT.
13. 1" IRRIGATION LINE. COORDINATE WITH IRRIGATION PLAN FOR CONTINUATION.
14. CONCENTRIC VENTS TO FURNACES. MAINTAIN 10' MIN. DISTANCE AWAY FROM ANY FRESH AIR INTAKES.

MEP SITE PLAN
SCALE: 1" = 10'-0"

collins | webb ARCHITECTURE
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DRAWINGS

BAILEY FARMS CLUBHOUSE

1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ANDREA PERATT
NUMBER PE-2021000132
PROFESSIONAL ENGINEER
6/26/2024
Andrea Peratt - Engineer
MO# PE-2021000132

STATE OF MISSOURI
DARREN E. THRASHER
NUMBER PE-2014007277
PROFESSIONAL ENGINEER
6/26/2024
Darren E. Thrasher - Engineer
PROFESSIONAL SEAL 7277

MEP101

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

SITE PLAN

pkmr ENGINEERS
PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC
13300 W 98TH STREET LENEXA, KS 66215
913.492.2400 WWW.PKMRENG.COM
MO State Certificate of Authority #E-2002020886

21,046

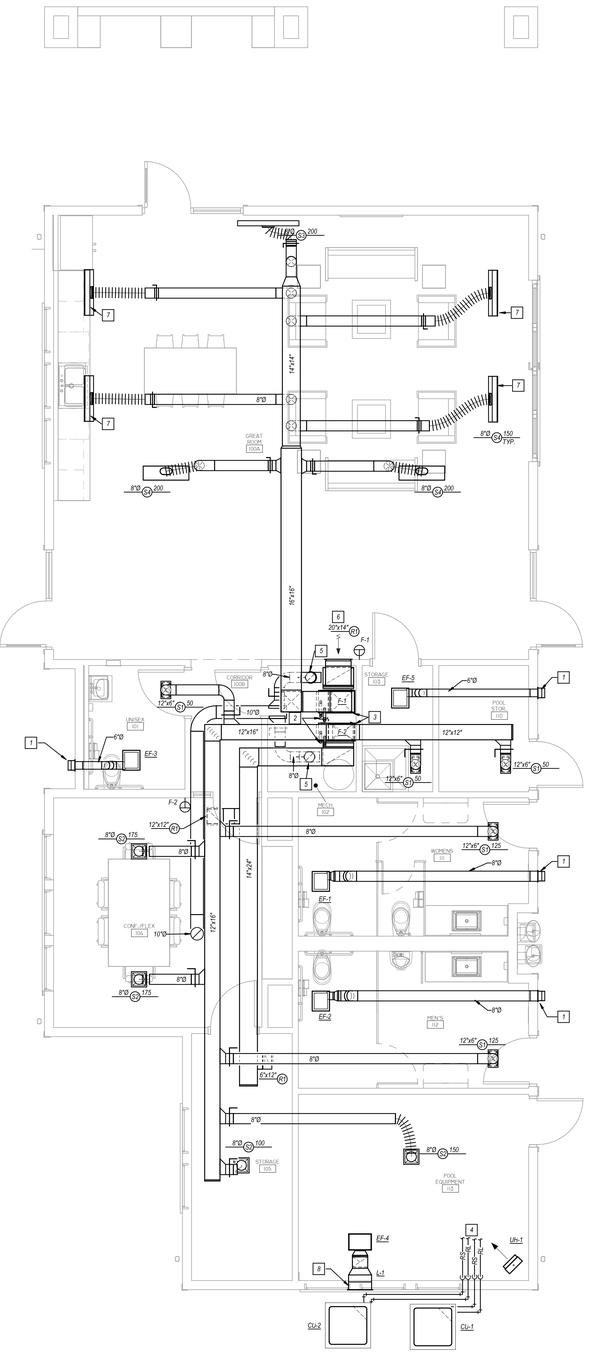
6/27/2024 11:58:40 AM

GENERAL HVAC NOTES

1. *REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.*
2. *ROUND BRANCH DUCT RUNOUTS AND FLEXIBLE DUCT SHALL BE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.*
3. *MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 5'-0".*
4. *ALL RUNOUTS TO TERMINAL BOXES SHALL BE ONE SIZE LARGER THAN BOX INLETS UNLESS NOTED OTHERWISE.*
5. *ALL AIR DISTRIBUTION DEVICES SHALL HAVE LOCKABLE VOLUME CONTROL DEVICES.*
6. *ALL 90 DEGREE TURNING ELBOWS SHALL BE SMOOTH ROUND OR SQUARE WITH TURNING VANES.*
7. *DUCT SIZES SHOWN ON PLANS ARE INSIDE FREE AREA.*
8. *PROVIDE ACCESS DOORS IN DUCTS AHEAD OF ALL AUTOMATIC, FIRE, AND SMOKE DAMPERS.*
9. *FOR BALANCING THE OUTSIDE AIRFLOW QUANTITIES, REFER TO HVAC SCHEDULES.*

KEYED NOTES - HVAC

1. *EXHAUST DUCT TO WALL CAP. WALL CAP SHALL BE PRIMED AND PAINTED TO MATCH EXTERIOR WALL. COORDINATE COLOR AND FINISH WITH ARCHITECTURAL PLANS.*
2. *FURNACE INTAKE AND EXHAUST UP THROUGH ROOOF. TERMINATE WITH CONCENTRIC ROOF VENT. CONCENTRIC VENT SHALL NOT BE WITHIN 10' OF FRESH AIR INTAKE.*
3. *ROUTE CONDENSATE DRAIN TO NEAREST FLOOR DRAIN.*
4. *ROUTE REFRIGERANT LINES THROUGH STRUCTURE TO CORRESPONDING COIL. CONTRACTOR SHALL VERIFY WITH EQUIPMENT SUPPLIER EXACT ROUTING AND SIZE OF INSULATED REFRIGERANT PIPING. INSTALL PER MANUFACTURER'S RECOMMENDATION. SEAL WALL EXTERIOR PENETRATIONS WATER TIGHT.*
5. *MOTORIZED DAMPER IN 8" DIA. OUTDOOR AIR DUCT. SEE FURNACE DETAIL ON M201.*
6. *MOUNT RETURN AIR GRILLE AT 13'-0" AFF.*
7. *INSTALL LINEAR SLOT BETWEEN WOOD BEAMS. COORDINATE BEAM LOCATIONS WITH ARCHITECTURAL PLANS.*
8. *EXHAUST LOUVER SHALL BE INSTALLED WITH BOTTOM OF LOUVER AT 140", CENTERED ON WALL. COODRINATE LOUVER COLOR WITH ARCHITECT..*



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

collins|webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DRAWINGS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:



Andrea Peratt - Engineer
MCHE #E-2021000132
PROFESSIONAL SEAL

M101

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

HVAC PLAN

pkmr ENGINEERING
PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC
13300 W 98TH STREET LENEXA, KS 66215
913.492.2400 WWW.PKMRENG.COM
MO State Certificate of Authority #E-2002020886
24.046

6/27/2024 11:58:41 AM

ELECTRIC HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	CFM	KW	TEMP RISE	ELECTRICAL		REMARKS
							VOLTAGE	PHASE	
UH-1	QMARK	MUH-05	UNIT HEATER	350	5.0	45 °F	240	1	ALL

REMARKS:
1 PROVIDE WITH INTEGRAL THERMOSTAT AND DISCONNECT.
2 PROVIDE WITH ALL NECESSARY SUPPORTS, HANGERS, ETC.
3 PROVIDE WITH WIRE GUARD.
4 INSTALL WITH CLEARANCES PER MANUFACTURER'S RECOMMENDATIONS.

LOUVER SCHEDULE

MARK	MANUFACTURER	MODEL	TYPE	DIMENSIONS		FREE AREA		REMARKS
				HEIGHT	WIDTH	%	TOTAL	
L-1	RUSKIN	ELF375DX	DRAINABLE STATIONARY	12"	18"	54	0.40 SF	1,2,3

REMARKS:
1 PROVIDE EXTENDED SILL AND MOUNTING FRAME TO MATCH CONSTRUCTION. COORDINATE EXACT LOUVER SIZE TO INSTALL WITHIN WALL DIMENSIONS.
2 PROVIDE COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.
3 EXTRUDED ALUMINUM LOUVER WITH DRAINABLE BLADES.

SPLIT SYSTEM CONDENSING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	COOLING CAPACITY	MIN. SEER	AMBIENT TEMP.	ELECTRICAL				REMARKS
						VOLTAGE	PHASE	MCA	MOCP	
CU-1	YORK	YCJF36	3.0 ton	14.5	95 °F	240 V	1	19.1 A	30.0 A	ALL
CU-2	YORK	YCJF30	2.5 ton	14.5	95 °F	240 V	1	18.4 A	30.0 A	ALL

REMARKS:
1 COOLING CAPACITY BASED ON A SUCTION TEMPERATURE OF 45°F.
2 PROVIDE WITH 3-1/2" CONCRETE PAD.

VENTILATOR SCHEDULE

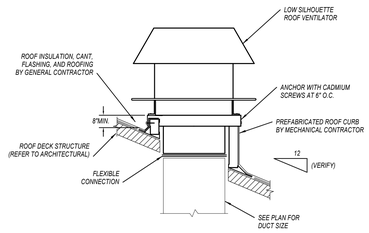
MARK	MANUFACTURER	SERVICE	MODEL	HOOD SIZE (IN.)	THROAT SIZE (IN.)	CFM	S.P.D. (IN. W.C.)	REMARKS
IH-1	COOK	INTAKE	PR	18-1/4"Ø	13.5" x 13.5"	320	0.13 in-wg	1

REMARKS:
1 PROVIDE WITH RAIN GUTTER SLOPPED INSULATED CURB, GRAVITY INTAKE DAMPER AND BIRDSCREEN.

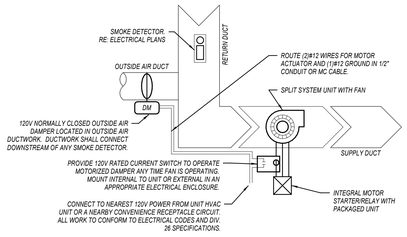
EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	FAN DATA				ELECTRICAL		CONTROLS	REMARKS
				CFM	E.S.P. (IN.)	HP	DRIVE	RPM	VOLTAGE	PHASE	
EF-1	COOK	GC-164	CEILING FAN WITH STEEL GRILLE	175	0.250	87W	DIRECT	1100	120	1	WALL SWITCH	1,2,3
EF-2	COOK	GC-164	CEILING FAN WITH STEEL GRILLE	175	0.250	87W	DIRECT	1100	120	1	WALL SWITCH	1,2,3
EF-3	COOK	GC-164	CEILING FAN WITH STEEL GRILLE	100	0.250	87W	DIRECT	1100	120	1	WALL SWITCH	1,2,3
EF-4	COOK	GC-420	CEILING FAN WITH STEEL GRILLE	200	0.250	77W	DIRECT	1145	120	1	CONTINUOUS	1,4
EF-5	COOK	GC-164	CEILING FAN WITH STEEL GRILLE	100	0.250	87W	DIRECT	1100	120	1	WALL SWITCH	1,2,3

REMARKS:
1 PROVIDE WITH VIBRATION ISOLATION HANGER AND FAN SPEED CONTROLLER INSTALLED AT FAN.
2 PROVIDE WITH WALL CAP AND BIRDSCREEN.
3 UNIT CONTROLLED WITH WALL SWITCH - REFER TO ELECTRICAL PLANS.
4 UNIT TO RUN CONTINUOUSLY.

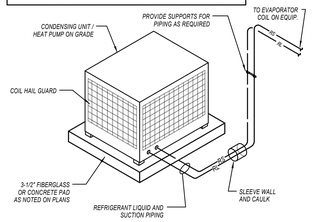


INTAKE/RELIEF VENTILATOR DETAIL
NOT TO SCALE

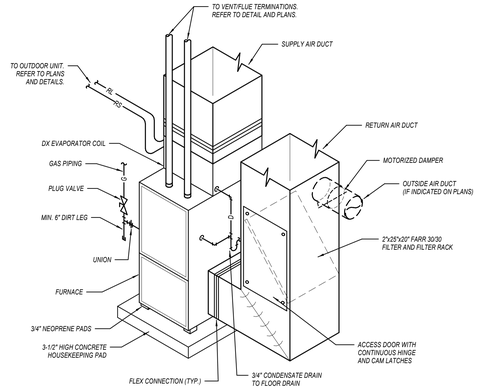


OUTSIDE AIR DAMPER WIRING SCHEMATIC
NOT TO SCALE

NOTES:
1. CONDENSING UNIT MANUFACTURER TO SIZE ALL REFRIGERANT LINES AND PROVIDE ALL ACCESSORIES FOR VERTICAL RUNS AS REQUIRED.
2. INSULATE REFRIGERANT SUCTION LINES - REFER TO SPECIFICATIONS.



CONDENSING UNIT / HEAT PUMP DETAIL
NOT TO SCALE



HIGH-EFFICIENCY FURNACE DETAIL
NOT TO SCALE

SPLIT SYSTEM FURNACE SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	AIRFLOW	FAN DATA			COOLING COIL		HEATING				ELECTRICAL			REMARKS
				CFM	O.A. CFM	E.S.P. (IN.)	HP	COIL TYPE	NOMINAL CAPACITY	INPUT	OUTPUT	EFFICIENCY	ΔT	VOLTAGE	PHASE		
F-1	YORK	TM9V	HIGH EFFICIENCY FURNACE	1,200	200	0.500	1/2	FULLY CASED	3.0 ton	60,000 Btu/h	58,000 Btu/h	97.0%	40 °F	120	1	1,2	
F-2	YORK	TM9V	HIGH EFFICIENCY FURNACE	1,000	120	0.500	1/2	FULLY CASED	2.5 ton	40,000 Btu/h	38,000 Btu/h	97.0%	32 °F	120	1	1,2	

REMARKS:
1 ENERGY-STAR COMPLIANT.
2 CAPACITIES AND AIRFLOWS ARE MANUFACTURER'S VALUES AT RATED CONDITIONS, NOT ACTUAL OPERATING CONDITIONS.

GRILLE, REGISTER, AND DIFFUSER SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	BORDER TYPE	FACE SIZE (IN.)	NECK SIZE	VOLUME DAMPER	MATERIAL	FINISH	REMARKS
SUPPLY										
S1	TITUS	300RL	ADJUSTABLE GRILLE WITH DOUBLE DEFLECTION	SURFACE/WALL	NECK SIZE + 2-1/2"	AS INDICATED	NO	STEEL	WHITE	1,2
S2	TITUS	OMNI	SQUARE PLAQUE DIFFUSER	GRID	12x12	AS INDICATED	YES	STEEL	WHITE	1,2
S3	TITUS	TBD-30-48-2	PLENUM SLOT DIFFUSER WITH 1" SLOT(S)	GRID	4 x 48	AS INDICATED	NO	STEEL	BLACK	1,2,3
S4	TITUS	TBD-30-36-2	PLENUM SLOT DIFFUSER WITH 1" SLOT(S)	GRID	4 x 36	AS INDICATED	NO	STEEL	BLACK	1,2,3
RETURN										
R1	TITUS	350RL	GRILLE WITH 3/4" SPACING AND 35° DEFLECTION	SURFACE/WALL	NECK SIZE + 2-1/2"	AS INDICATED	YES	STEEL	WHITE	1,2

REMARKS:
1 PROVIDE WITH ALL NECESSARY MOUNTING HARDWARE.
2 COLOR OF DIFFUSER SHALL MATCH CEILING.
3 PROVIDE WITH FLEXIBLE REMOTE CABLE CONTROL DAMPER.

HVAC PIPING MATERIAL AND INSULATION SCHEDULE

PIPING						ALLOWABLE IN PLENUMS	INSULATION	
SYSTEM	SIZE	MATERIAL	TYPE/SCHED	ACCEPTABLE FITTINGS	FIELD TEST PRESSURE/TIME		TYPE	THICKNESS
CONDENSATE DRAIN - INTERIOR	1/2"-2"	Copper	L	Solder, Pro-Press	10 FT - 1/2 HR	Yes	Fiberglass w/ASJ	1/2" (Plenum Only)
REFRIGERANT LINES	ALL	Copper	ACR	Brazed	---	Yes	Elastomeric	1"

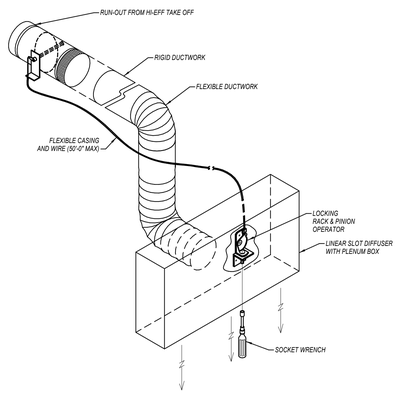
REMARKS:
1 ALL PIPING AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.
2 ALL INSULATION THICKNESSES SHALL MEET ASHRAE 90.1 - 2007 REQUIREMENTS AT A MINIMUM.
3 REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION.

DUCTWORK INSULATION SCHEDULE

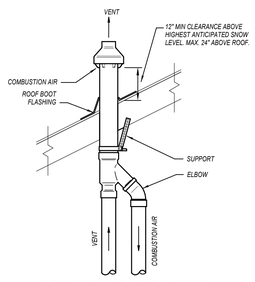
DUCT				INSULATION			
PURPOSE	DUTY	LOCATION	STYLE	MATERIAL	APPLICATION	THICKNESS	NOTES
SUPPLY	LOW PRESSURE / VELOCITY	CONCEALED	RECTANGULAR	FIBERGLASS	LINED	1/2"	---
		CONCEALED	ROUND	MINERAL FIBER	WRAPPED	1-1/2"	---
		EXPOSED	RECTANGULAR	FIBERGLASS	LINED	1/2"	---
		EXPOSED	ROUND	FIBERGLASS	LINED	1/2"	---
	ALL	UNCONDITIONED ATTICS	ALL	MINERAL FIBER	WRAPPED	1-1/2"	1
		EXTERIOR	ALL	FLEXIBLE ELASTOMERIC	WRAPPED	2"	---
RETURN	LOW PRESSURE / VELOCITY	CONCEALED	RECTANGULAR	FIBERGLASS	LINED	1/2"	---
		CONCEALED	ROUND	MINERAL FIBER	WRAPPED	1-1/2"	---
		EXPOSED	RECTANGULAR	FIBERGLASS	LINED	1/2"	---
		EXPOSED	ROUND	FIBERGLASS	LINED	1/2"	---
		RETURN/TRANSFER BOOTS	RECTANGULAR	FIBERGLASS	LINED	1/2"	---
	ALL	UNCONDITIONED ATTICS	ALL	MINERAL FIBER	WRAPPED	1-1/2"	1
		EXTERIOR	ALL	FLEXIBLE ELASTOMERIC	WRAPPED	2"	---
EXHAUST	LOW PRESSURE / VELOCITY	CONCEALED	RECTANGULAR	FIBERGLASS	LINED	1/2"	---
		CONCEALED	ROUND	FIBERGLASS	LINED	1/2"	2
		EXPOSED	RECTANGULAR	FIBERGLASS	LINED	1/2"	---
		EXPOSED	ROUND	FIBERGLASS	LINED	1/2"	2
OUTSIDE AIR	ALL	CONCEALED OR MECH. SPACE	RECTANGULAR	MINERAL FIBER	WRAPPED	1-1/2"	---
		CONCEALED OR MECH. SPACE	ROUND	MINERAL FIBER	WRAPPED	1-1/2"	---

NOTES:
1. IN ADDITION TO OTHER SCHEDULED INSULATION.
2. PROVIDE LINER ONLY WITHIN 10' OF FAN FOR ACCOUSTICS.

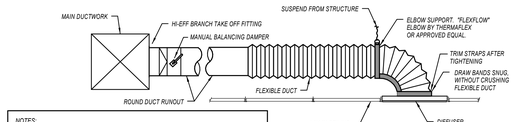
GENERAL REMARKS (APPLICABLE TO ALL TYPES):
1) ALL DUCTWORK, INSULATION AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.
2) ALL INSULATION THICKNESSES SHALL MEET ASHRAE 90.1 - 2010 REQUIREMENTS AT A MINIMUM.
3) REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION FOR INSULATION PRODUCTS AND SYSTEMS.



FLEXIBLE REMOTE CABLE CONTROL DAMPER FOR PLENUM SLOT DIFFUSER
NOT TO SCALE

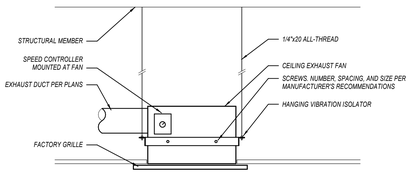


CONCENTRIC ROOF VENT
NOT TO SCALE



NOTES:
1. RUN-OUT DUCT SIZE SHALL BE SAME AS SIZE SPECIFIED FOR DIFFUSER INLET. INCREASE RUN-OUT DUCT SIZE 2" WHEN LENGTH OF RUN-OUT DUCT EXCEEDS 20'-0" AND PROVIDE TRANSITION AT THE DIFFUSER.
2. MAXIMUM FLEXIBLE DUCTWORK LENGTH IS 6'-0" UNLESS OTHERWISE NOTED ON DRAWINGS.
3. FLEXIBLE DUCTWORK MUST BE FULLY EXTENDED AND NOT IN CONTACT WITH PIPES AND/OR CONDUITS.
4. INSTALL FLEXIBLE DUCTWORK SUPPORTS AT ALL ROUND NECK OUTLETS/INLETS UNLESS OTHERWISE NOTED ON DRAWINGS.
5. FLEXIBLE DUCTWORK IS NOT TO BE USED IN UNACCESSIBLE LOCATIONS. (ABOVE GYP. BOARD CEILINGS, ETC.)

DUCT CONNECTION TO LAY-IN DIFFUSER DETAIL
NOT TO SCALE



CABINET EXHAUST FAN MOUNTING DETAIL
NOT TO SCALE

6/27/2024 11:58:42 AM

CAW ARCHITECTURE
collins|webb
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

CONSTRUCTION DRAWINGS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ANDREA PERATT
NUMBER PE-2021000132
PROFESSIONAL ENGINEER
6/27/2024
Andrea Peratt - Engineer
MPE PE-2010101132
PROFESSIONAL SEAL

M201

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

MECHANICAL SCHEDULES AND DETAILS

pkmr ENGINEERS
PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC
13300 W 98TH STREET LENEXA, KS 66215
913.492.2400 WWW.PKMRENG.COM
MO State Certificate of Authority #E-2002020686

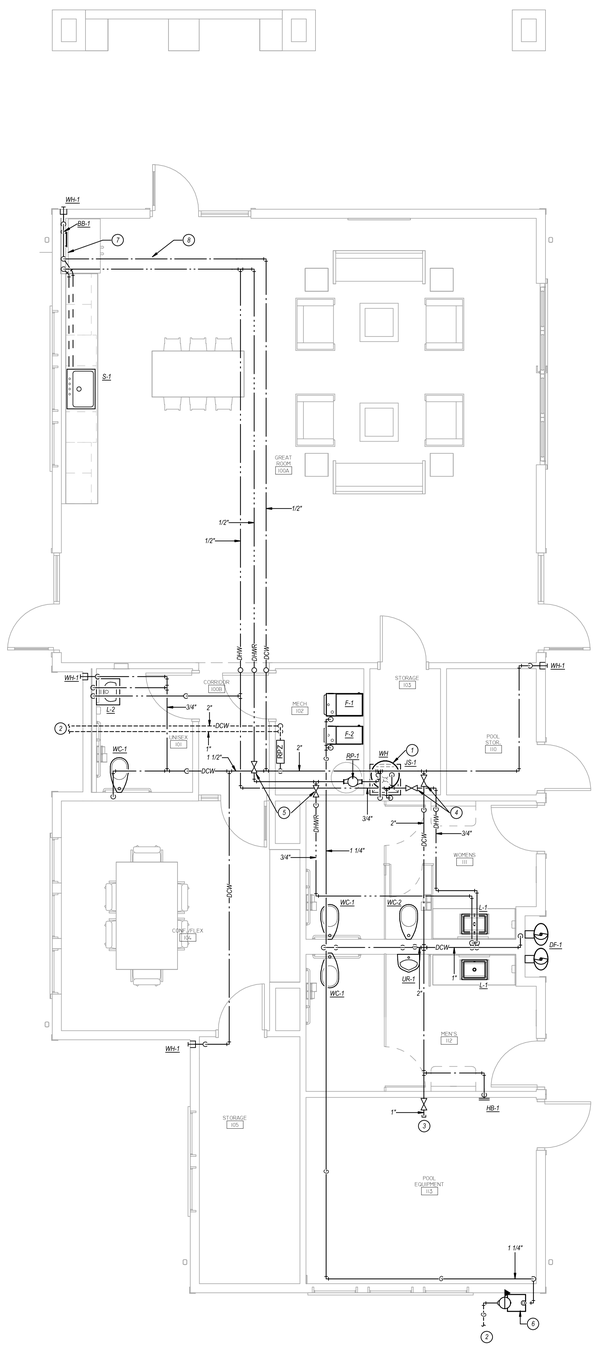
24.046

GENERAL PLUMBING NOTES

1. *REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.*
2. *REFER TO PLUMBING FIXTURE / DRAIN SCHEDULES FOR PIPING SIZES FOR INDIVIDUAL CONNECTIONS TO FIXTURES AND RISERS NOT SHOWN ON PLANS.*
3. *NO SANITARY OR VENT PIPING BELOW GRADE SHALL BE LESS THAN 2".*
4. *NO DOMESTIC WATER PIPING SHALL BE SMALLER THAN 3/4" UNLESS NOTED OTHERWISE.*
5. *ALL VENT PIPING SHOWN IS DIAGRAMMATIC. USE APPROPRIATE FITTINGS FOR VENT PIPING BELOW FLOOD RIM OF FIXTURE.*
6. *NOT ALL CLEANOUTS ARE SHOWN FOR DRAWING CLARITY. CONTRACTOR SHALL INSTALL ALL CODE-REQUIRED CLEANOUTS (RE: GENERAL NOTES ON COVER SHEET). COORDINATE EXACT LOCATIONS OF CLEANOUTS WITH ARCHITECT.*
7. ALL FLOOR DRAIN TRAPS SHALL BE PROTECTED BY ONE OF THE FOLLOWING METHODS, TO BE INSTALLED AT CONTRACTORS DISCRETION AND IN COMPLIANCE WITH ADOPTED VERSION OF PLUMBING CODE AND/OR AHJ.
   - 7.1. PROVIDE TRAP SEALS LISTED FOR PROPOSED USE.
   - 7.2. PROVIDE TRAP PRIMERS. 1/2" TRAP PRIMER PIPING TO NEAREST TRAP PRIMER VALVE. PIPING SHALL BE TYPE "K" SOFT COPPER SEAMLESS WITH NO JOINTS FROM VALVE TO DRAIN.

④ NOTES - DOMESTIC WATER

1. *INSTALL WATER HEATER ABOVE JANITORS SINK.*
2. *REFER TO CIVIL FOR CONTINUATION*
3. *DCW LINE TO POOL EQUIPMENT ROOM. REFER TO OTHERS FOR SPECIFIC NEEDS.*
4. *PROVIDE SHUT OFF VALVES AND COMPRESSED AIR CONNECTION ON HW AND CW LINES TO ALLOW FOR WINTERIZING OF POOLSIDE RESTROOMS. HW AND CW PIPING SHALL SLOPE FIXTURES FOR DRAINING OF PIPING.*
5. *PROVIDE SHUT OFF AND BALANCING VALVES ON EACH HW RECIRC BRANCH LINES (TYP.)*
6. *GAS METER BY UTILITY. LOCATE GAS METER BASED ON UTILITY STANDARDS AND MAINTAIN REQUIRED CLEARANCES TO BUILDING OPENINGS.*
7. *1/2" DCW AND 1/2" DHW DOWN IN FURRED OUT WALL BEHIND REFRIGERATOR. ROUTE PIPING TO KITCHEN SINK BELOW COUNTER.*
8. *CONCEALED PIPING SHALL FOLLOW THE ROOF SLOPE AND BE INSTALLED BELOW THE INSULATED ROOF.*



DOMESTIC WATER PLAN
SCALE: 1/4" = 1'-0"

pkmr ENGINEERS
PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC
13300 W 98TH STREET LENEXA, KS 66215
913.492.2400 WWW.PKMRENG.COM
MO State Certificate of Authority #E-2002020886

CWA collins|webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DRAWINGS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:



Andrea Peratt - Engineer
MO# PE-2021000132
PROFESSIONAL SEAL

P101

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

DOMESTIC WATER PLAN

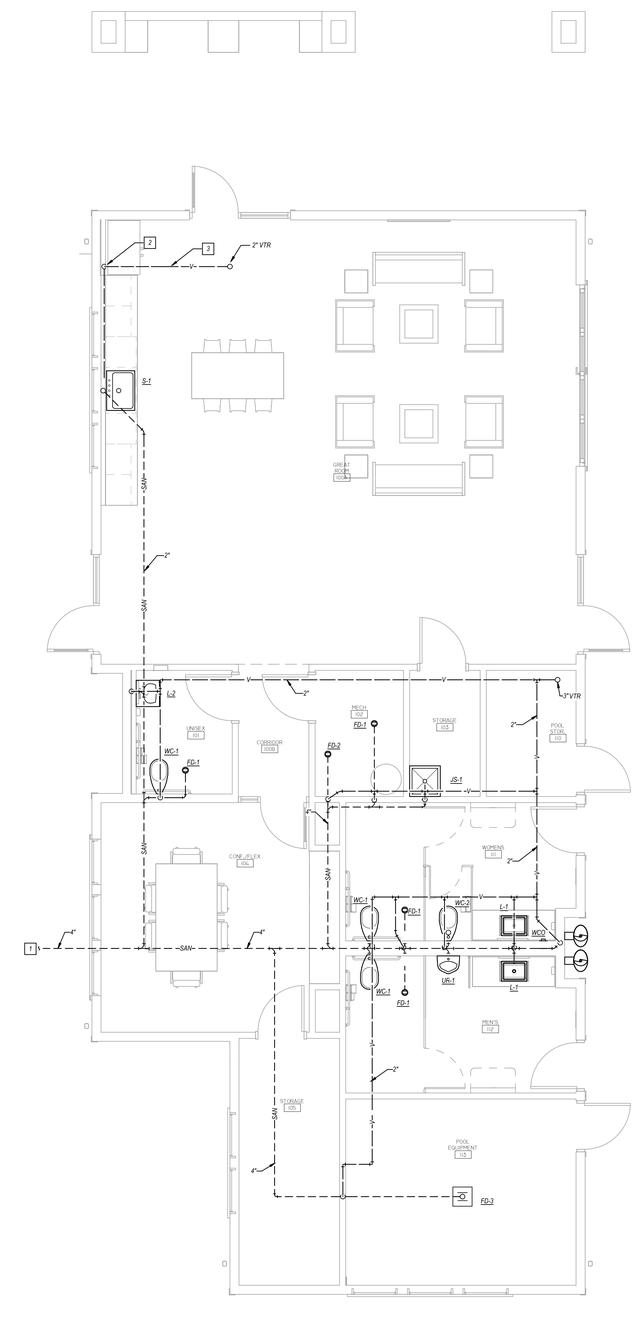
6/27/2024 11:58:43 AM

GENERAL PLUMBING NOTES

1. *REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.*
2. *REFER TO PLUMBING FIXTURE / DRAIN SCHEDULES FOR PIPING SIZES FOR INDIVIDUAL CONNECTIONS TO FIXTURES AND RISERS NOT SHOWN ON PLANS.*
3. *NO SANITARY OR VENT PIPING BELOW GRADE SHALL BE LESS THAN 2".*
4. *NO DOMESTIC WATER PIPING SHALL BE SMALLER THAN 3/4" UNLESS NOTED OTHERWISE.*
5. *ALL VENT PIPING SHOWN IS DIAGRAMMATIC. USE APPROPRIATE FITTINGS FOR VENT PIPING BELOW FLOOD RIM OF FIXTURE.*
6. *NOT ALL CLEANOUTS ARE SHOWN FOR DRAWING CLARITY. CONTRACTOR SHALL INSTALL ALL CODE-REQUIRED CLEANOUTS (RE: GENERAL NOTES ON COVER SHEET). COORDINATE EXACT LOCATIONS OF CLEANOUTS WITH ARCHITECT.*
7. ALL FLOOR DRAIN TRAPS SHALL BE PROTECTED BY ONE OF THE FOLLOWING METHODS, TO BE INSTALLED AT CONTRACTOR'S DISCRETION AND IN COMPLIANCE WITH ADOPTED VERSION OF PLUMBING CODE AND/OR AHJ.
   - 7.1. PROVIDE TRAP SEALS LISTED FOR PROPOSED USE.
   - 7.2. PROVIDE TRAP PRIMERS. 1/2" TRAP PRIMER PIPING TO NEAREST TRAP PRIMER VALVE. PIPING SHALL BE TYPE "K" SOFT COPPER SEAMLESS WITH NO JOINTS FROM VALVE TO DRAIN.

2 NOTES - WASTE & VENT

1. *REFER TO CIVIL FOR CONTINUATION*
2. *2" VENT DWN IN FURRED OUT WALL BEHIND REFRIGERATOR. ROUTE PIPING TO KITCHEN SINK BELOW COUNTER.*
3. *CONCEALED PIPING SHALL FOLLOW THE ROOF SLOPE AND BE INSTALLED BELOW THE INSULATED ROOF.*



WASTE AND VENT PLAN
SCALE: 1/4" = 1'-0"

pkmr ENGINEERS 24.046
PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC
13000 W 98TH STREET LENEXA, KS 66215
913.492.2400 WWW.PKMRENG.COM
MO State Certificate of Authority #E-2002020886

collins|webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DRAWINGS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI ANDREA PERATT NUMBER PE-2021000132 PROFESSIONAL ENGINEER 6/24/2024
Andrea Peratt - Engineer
MO# PE-2021000132
PROFESSIONAL SEAL

P201

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

WASTE AND VENT PLAN

6/27/2024 11:58:44 AM

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE			FITTINGS			REMARKS	CONNECTION SIZES			
	MANUFACTURER	MODEL	DESCRIPTION	MANUFACTURER	MODEL	DESCRIPTION		DHW	DCW	WASTE	VENT
BB-1	GUY GRAY	BIM875	GALVANIZED STEEL REFRIGERATOR OUTLET BOX.	---	---	---	---		3/8"		
DF-1	ELKAY	EDFPB117C	ADA-COMPLIANT, OUTDOOR, DUAL-HEIGHT, BARRIER-FREE, DRINKING FOUNTAIN. MOUNT WITH MIN. 27" KNEE CLEARANCE AND LOWER SPOUT AT NO MORE THAN 36" A.F.F.	---	---	---	4		1/2"	2"	1 1/4"
HB-1	WATTS	FH-1	FROST-PROOF, AUTOMATIC DRAINING WALL HYDRANT WITH 1/2 IN. HOSE BIBB CONNECTION.				---		1/2"		
JS-1	FIAT	MSB	JANITOR'S SINK. 24"x24"x10". WHITE, ONE-PIECE MOLDED STONE MOP BASIN. UNIT SHALL BE ONE HOMOGENOUS PIECE. STAINLESS STEEL INTEGRAL DRAIN BODY WITH CAULKED CONNECTION FOR 3" PIPE. PROVIDE WITH STAINLESS STEEL WALL GUARDS.	CHICAGO FAUCET / FIAT	897-CP / 889C, 832AA	C.P. SERVICE SINK FITTING WITH VACUUM BREAKER, 3/4" HOSE THREAD ON SPOUT, ADJUSTABLE WALL BRACE, PAIL HOOK, AND 1/2" FLANGED FEMALE ADJUSTABLE ARMS WITH INTEGRAL STOPS. CAULK BETWEEN WALL AND FLANGE WITH GE SILICONE SEALANT. 3" C.I. "P" TRAP. / PROVIDE HOSE AND BRACKET, MOP HANGER, AND HOSE RACK.	---	3/4"	3/4"	3"	2"
L-1	SERENITY SINKS	SVC1912	UNDERCOUNTER-MOUNTED LAVATORY. 21" X 14 1/2". WHITE VITREOUS CHINA. UNGLAZED RIM WITH FRONT OVERFLOW. SUPPLY WITH MOUNTING KIT.	DELTA	15940LF-BL	SINGLE-HANDLE BATHROOM SINK FAUCET, BRASS CONSTRUCTION, ONE-PIECE, SELF-CONTAINED CERAMIC DISC VALVE, HIGH-TEMPERATURE LIMIT, SINGLE-HOLE, POP-UP DRAIN WITH TAILPIECE, LOW SPOUT DESIGN, 5" SPOUT REACH, STATIONARY SPOUT, 1.0 GAL/MIN	1,2,7	1/2"	1/2"	2"	1 1/4"
L-2	AMERICAN STANDARD	0321975.020	ADA-COMPLIANT WALL-HUNG LAVATORY. 20"x18" WHITE VITREOUS CHINA BOWL WITH 4" BACK FOR USE WITH CONCEALED ARM HANGER. FAUCET HOLES COORDINATED WITH FAUCET AND TRIM. PROVIDE CONCEALED ARM CARRIER. MOUNT TOP OF RIM AT 34" A.F.F.	DELTA	15840LF-BL	SINGLE-HANDLE BATHROOM SINK FAUCET, BRASS CONSTRUCTION, ONE-PIECE, SELF-CONTAINED CERAMIC DISC VALVE, HIGH-TEMPERATURE LIMIT, SINGLE-HOLE, POP-UP DRAIN WITH TAILPIECE, LOW SPOUT DESIGN, 5" SPOUT REACH, STATIONARY SPOUT, 1.0 GAL/MIN	1,2,3,4,5	1/2"	1/2"	2"	1 1/4"
S-1	SERENITY SINKS	3018UM18	30-1/2" X 18-1/2" SINGLE COMPARTMENT STAINLESS STEEL SINK. BOWL DIMENSIONS OF 28L X 16W X 10D UNDERMOUNT WITH 1-3/4 IN. RADIUS COVED CORNERS. SEAMLESS 8 IS GAUGE, TYPE 302 NICKEL-BEARING STAINLESS STEEL. LK-SK-H SATIN FINISH. FULLY UNDERCOATED. MINIMUM 36" CABINET SIZE REQUIRED FURNISH WITH INSINKERATOR "BADGER 5" GARBAGE DISPOSAL, CONTINUOUS FEED, 1/2 HP MOTOR, STAINLESS STEEL 360° SWIVEL LUGS, GALVANIZED STEEL CONSTRUCTION AND GRINDING ELEMENTS, PERMANENTLY LUBRICATED BEARINGS. PROVIDE WITH STAINLESS STEEL SINK FLANGE AND STOPPER.	DELTA	9113-BL-DST	DECK-MOUNTED RIGID/SWING GOOSENECK SPOUT WITH PULL DOWN DUAL-PATTTERN SPRAY,SINGLE HOLE METAL LEVER HANDLE WITH CERAMIC MIXING CARTRIDGE AND VOLUME CONTROL. BLACK FINISH.	3	1/2"	1/2"	1 1/2"	1 1/2"
UR-1	AMERICAN STANDARD	6561.017	ADA-COMPLIANT WALL-HUNG URINAL. WHITE VITREOUS CHINA. 3/4" TOP SPUD. 1.0 GALLON SIPHON JET FLUSHING ACTION. MOUNT FIXTURE RIM AT 17" A.F.F. PROVIDE FLOOR-MOUNTED, HEAVY-DUTY TUBULAR STEEL UPRIGHTS, ADJUSTABLE CARRIER, PLATED HANGER, AND ALL OTHER REQUIRED MOUNTING HARDWARE.	SLOAN	ROYAL 186-1.0	EXPOSED URINAL FLUSH VALVE. CHROME-PLATED, METAL OSCILLATING NON-HOLD-OPEN HANDLE. 3/4" I.P.S. SCREWDRIVER BACK-CHECK ANGLE STOP WITH PROTECTIVE CAP. ADJUSTABLE TAILPIECE. 1.0 GPF. VACUUM BREAKER FLUSH CONNECTION AND SPUD COUPLING FOR 3/4" TOP SPUD. PROVIDE WALL AND SPUD FLANGES. MAXIMUM HANDLE HEIGHT PER ADA STANDARDS.	---			3/4"	2"	1 1/2"
WC-1	AMERICAN STANDARD CHURCH	MADERA 3043.001 9500C	ADA-COMPLIANT, 1.28 GALLON, FLOOR-MOUNTED FLUSH VALVE WATER CLOSET. TOP SPUD AND FLAT BOLT COVERS. WHITE VITREOUS CHINA ELONGATED BOWL, 16-1/2" HIGH. WHITE, SOLID PLASTIC, OPEN-FRONT SEAT FOR ELONGATED BOWL, INTEGRAL BUMPERS. EXTERNAL/CHECK HINGES WITH STAINLESS STEEL POSTS.	SLOAN	ROYAL 111-1.28	EXPOSED WATER CLOSET FLUSH VALVE. CHROME-PLATED, METAL OSCILLATING NON-HOLD-OPEN HANDLE. 1"I.P.S. SCREWDRIVER BACK-CHECK ANGLE STOP WITH PROTECTIVE CAP. ADJUSTABLE TAILPIECE. 1.28 GPF. VACUUM BREAKER FLUSH CONNECTION AND SPUD COUPLING FOR 1-1/2" TOP SPUD. PROVIDE WALL AND SPUD FLANGES. HANDLE HEIGHT PER MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH ADA GUIDELINES.	6			1 1/4"	4"	2"
WC-2	AMERICAN STANDARD CHURCH	MADERA 2234.001 9500C	1.28 GALLON, FLOOR-MOUNTED FLUSH VALVE WATER CLOSET. TOP SPUD AND FLAT BOLT COVERS. WHITE VITREOUS CHINA ELONGATED BOWL, 15" HIGH. WHITE, SOLID PLASTIC, OPEN-FRONT SEAT FOR ELONGATED BOWL, INTEGRAL BUMPERS. EXTERNAL/CHECK HINGES WITH STAINLESS STEEL POSTS.	SLOAN	ROYAL 111-1.28	EXPOSED WATER CLOSET FLUSH VALVE. CHROME-PLATED, METAL OSCILLATING NON-HOLD-OPEN HANDLE. 1"I.P.S. SCREWDRIVER BACK-CHECK ANGLE STOP WITH PROTECTIVE CAP. ADJUSTABLE TAILPIECE. 1.28 GPF. VACUUM BREAKER FLUSH CONNECTION AND SPUD COUPLING FOR 1-1/2" TOP SPUD. PROVIDE WALL AND SPUD FLANGES. HANDLE HEIGHT PER MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH ADA GUIDELINES.	6			1 1/4"	4"	2"
WH-1	WATTS	HY-420	EXPOSED, NON-FREEZE WALL HYDRANT WITH INTEGRAL VACUUM BREAKER, 3/4 IN. HOSE CONNECTION. LOCKING, STAINLESS STEL BOX.				---		1/2"		

REMARKS:
1 PROVIDE CHROME-PLATED BRASS TAILPIECE AND GRID DRAIN.
2 PROVIDE CHROME-PLATED BRASS P-TRAP.
3 PROVIDE HANDLE STOPS AND FLEXIBLE RISERS.
4 PROVIDE CONCEALED ARM TYPE CARRIER WITH SQUARE, TUBULAR STEEL UP-RIGHTS AND BLOCK TYPE BASES.
5 INSULATE EXPOSED TAILPIECE, P-TRAP, AND WATER RISERS. REFER TO SPECIFICATIONS FOR INSULATION METHODS.
6 PROVIDE FLUSH VALVE HANDLE ON WIDE SIDE OF STALL.
7 PROVIDE CHROME-PLATED BRASS TAILPIECE AND BASKET STRAINER.

GENERAL NOTES (APPLICABLE TO ALL FIXTURES):
1 ALL LAVATORIES AND SINKS USED FOR HAND WASHING SHALL BE PROVIDED WITH AN ANTI-SCALD TEMPERATURE MIXING VALVE ON THE HOT WATER SUPPLY - REFER TO DETAIL.
2 FIXTURE CONNECTION SIZES SHOWN IN SCHEDULE ARE CONNECTION SIZE AT FIXTURE ON PLANS.
3 COORDINATE FIXTURE REQUIREMENTS SCHEDULED ABOVE WITH OTHER TRADES. VERIFY CABINET SIZES, COUNTERTOP MATERIALS, WALL THICKNESSES, ETC ARE APPROPRIATE FOR SPECIFIED FIXTURES PRIOR TO ORDERING.

WATER HEATER SCHEDULE - ELECTRIC

MARK	MANUFACTURER	MODEL NUMBER	DESCRIPTION	TANK VOLUME	HEATING ELEMENT(S)			RECOVERY		ELECTRICAL		REMARKS
					#	WATTAGE	TOTAL KW	RATE	RISE	VOLTAGE	PHASE	
WH	A.O. SMITH	ECL-30	LOWBOY	30 gal	1	4,500	4.5	21.0 GPH	100 °F	240	1	1,2,3

REMARKS:
1 "LOWBOY"-TYPE WATER HEATER.
2 MOUNT ON SHELF. REFER TO DETAIL ON THIS SHEET.
3 GLASS-LINED TANK.

RECIRC PUMP SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	GPM	HEAD (FT. W.C.)	PUMP HP	MAX. RPM	ELECTRICAL		REMARKS
							VOLTAGE	PH	
RP-1	BELL AND GOSSET	NFF-22U	3	5	92W	2940	120 V	1	1,2,3

REMARKS:
1 ALL BRONZE CONSTRUCTION.
2 PROVIDE WITH AQUASTAT AND TIMER FOR OPERATION OF PUMP.
3 MOUNT PUMP AND ACCESSORIES NEAR WATER HEATER AND NO HIGHER THAN 6' AFF.

FLOOR DRAIN SCHEDULE

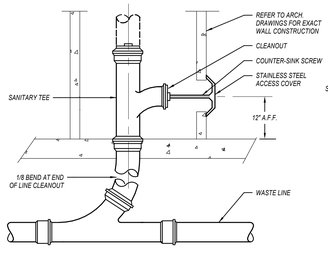
MARK	MANUFACTURER	MODEL	SERVICE	TOP/GRATE SIZE	WASTE SIZE	REMARKS
FD-1	WATTS	FD-100A-S-2	FLOOR DRAIN	5"	2"	1
FD-2	WATTS	FD-100A-S-4	FLOOR DRAIN	5"	4"	1
FD-3	WATTS	FD-450	FLOOR DRAIN	15"	4"	2

REMARKS:
1 PROVIDE WITH NICKEL BRONZE TOP AND TRAP SEAL.
2 PROVIDE WITH HINGED GRATE AND SEDIMENT BUCKET.

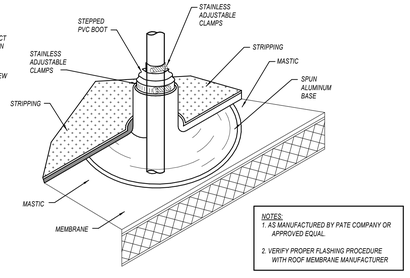
PIPING MATERIAL AND INSULATION SCHEDULE

SYSTEM	PIPING SIZE	PIPING MATERIAL	PIPING TYPE/SCHED	ACCEPTABLE FITTINGS	FIELD TEST PRESSURE/TIME	ALLOWABLE IN PLENUMS	INSULATION TYPE	INSULATION THICKNESS
DOMESTIC COLD WATER	1-1/4" - 2"	CPVC	SDR-11 (CTS)	Solvent Joined	130 PSI - 1/2 HR	Yes	---	---
DOMESTIC COLD WATER	1/2" - 1"	PEX	PEX-a or PEX-b	Pro-Press / Cold Expansion - Brass or Poly	130 PSI - 1/2 HR	Yes	---	---
DOMESTIC HOT WATER & HW RETURN	1/2" - 1"	PEX	PEX-a or PEX-b	Pro-Press / Cold Expansion - Brass or Poly	130 PSI - 1/2 HR	Yes	Elastomeric	1"
NATURAL GAS	1/2"-2"	Steel - Seemless	Schedule 40	Threaded or Welded	75 PSI - 1 HR	Yes	---	---
NATURAL GAS - BELOW GRADE	All	Polyethylene	SDR-11	Fusion Joints	100 PSI - 1 HR	N/A	---	---
SANITARY WASTE ABOVE GRADE	2"-8"	PVC	Schedule 40	Solvent Joined	10 FT - 1/2 HR	No	---	---
SANITARY WASTE BELOW GRADE	2"-8"	PVC	Schedule 40	Solvent Joined	10 FT - 1/2 HR	N/A	---	---
VENT ABOVE GRADE	1-1/2"-4"	PVC	Schedule 40	Solvent Joined	10 FT - 1/2 HR	No	---	---
DOMESTIC WATER SERVICE BELOW GRADE	1"-3"	HDPE	CTS	Continuous Tubing, Fused	130 PSI - 1/2 HR	No	---	---

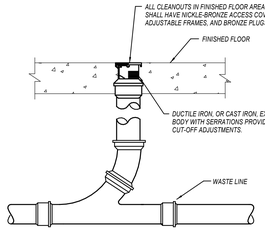
REMARKS:
1 ALL PIPING AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.
2 ALL INSULATION THICKNESSES SHALL MEET ASHRAE 90.1 - 2007 REQUIREMENTS AT A MINIMUM.
3 REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION.
4 WELDED PIPING IS REQUIRED FOR GAS PIPING WHEN: A) PIPING IS AT OR OVER 2PSI; B) WHEN PIPING OF ANY PRESSURE IS ROUTED THROUGH CONCEALED SPACES.



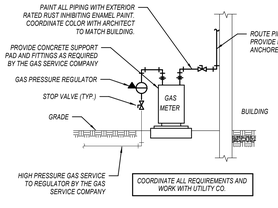
WALL CLEANOUT DETAIL
NOT TO SCALE



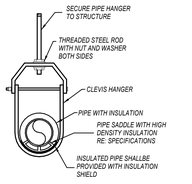
ROOF PLUMBING VENT
NOT TO SCALE



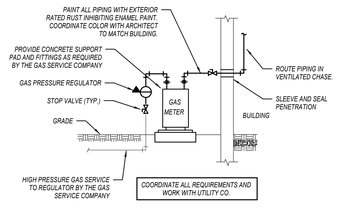
FLOOR CLEANOUT DETAIL
NOT TO SCALE



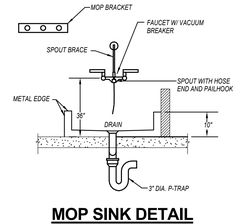
GAS SERVICE DETAIL
NOT TO SCALE



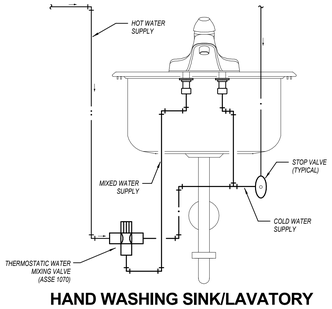
PIPE HANGER DETAIL
NOT TO SCALE



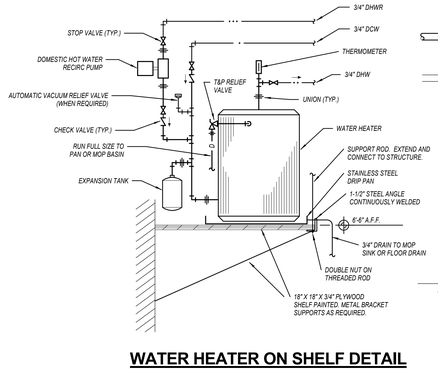
GAS SERVICE DETAIL
NOT TO SCALE



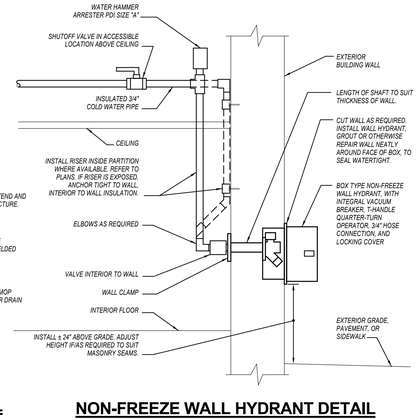
MOP SINK DETAIL
NOT TO SCALE



HAND WASHING SINK/LAVATORY TEMPERED WATER SCHEMATIC
NOT TO SCALE

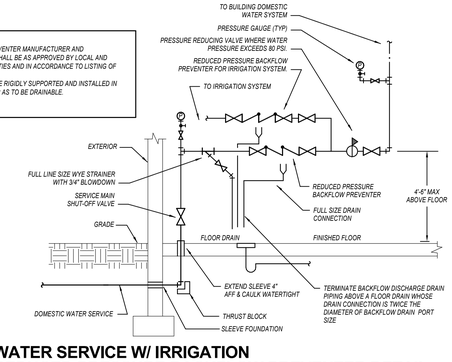


WATER HEATER ON SHELF DETAIL
NOT TO SCALE



NON-FREEZE WALL HYDRANT DETAIL
NOT TO SCALE

NOTES:
1. BACKFLOW PREVENTER MANUFACTURER AND INSTALLATION SHALL BE AS APPROVED BY LOCAL AND STATE AUTHORITIES AND IN ACCORDANCE TO LISTING OF DEVICE.
2. ALL PIPING TO BE RIGIDLY SUPPORTED AND INSTALLED IN SUCH A MANNER AS TO BE DRAINABLE.



WATER SERVICE W/ IRRIGATION
REDUCED PRESSURE BACKFLOW PREVENTER DETAIL
NOT TO SCALE

CONSTRUCTION DRAWINGS
collins|webb ARCHITECTURE
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
ANDREA PERATT
NUMBER PE-2021000132
PROFESSIONAL ENGINEER
6/24/2024
Andrea Peratt - Engineer
MO# PE-2021000132
PROFESSIONAL SEAL

P301

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

PLUMBING SCHEDULES AND DETAILS

pkmr ENGINEERS
PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC
13300 W 98TH STREET LENEXA, KS 66215
913.492.2400 WWW.PKMRENG.COM
MO State Certificate of Authority #E-2002020886

24.046

6/27/2024 11:58:45 AM

LIGHTING CONTROL DEVICE SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	VOLTAGE
CEILING SENSORS				
MD2	WATTSTOPPER	LMDC-100	DIGITAL DUAL-TECHNOLOGY CEILING SENSOR. 24V OPERATION WITH CAT5 CONNECTION.	24 V
SWITCHES				
LI#	WATTSTOPPER	LMSW-100 SERIES	DIGITAL DECORA PUSHBUTTON SWITCH WITH LED PILOT LIGHT. CAT5 CONNECTION TO CONTROLLER. # REFERS TO QUANTITY OF BUTTONS ON FACE.	24 V
LD1	WATTSTOPPER	LMDM-101	DIGITAL DECORA DIMMING SWITCH WITH LED PILOT AND INDICATING LIGHTS. CAT5 CONNECTION TO CONTROLLER.	120 V
WALL SENSORS				
M2	WATTSTOPPER	DSW-100	DUAL-TECHNOLOGY WALL SENSOR. LINE VOLTAGE.	120 V
MR2	WATTSTOPPER	DSW-200	DUAL-TECHNOLOGY DUAL RELAY WALL SENSOR. LINE VOLTAGE.	120 V

LIGHTING CONTROLS

REFER TO SCHEDULES FOR SPECIFIC INFORMATION ON DEVICES. UNLESS NOTED OTHERWISE, WHERE "#" IS USED BELOW IT REFERS TO THE DEVICE IDENTITY IN THE RESPECTIVE SCHEDULE.

STANDARD SENSORS/CONTROLLERS

- $_{M\#}$ — *WALL-MOUNTED SENSOR*
- $_{MR\#}$ — *WALL-MOUNTED SENSOR - DUAL-RELAY*
- *CORNER-MOUNTED (ON CEILING) MOTION SENSOR*
- *CORNER-MOUNTED (ON WALL) MOTION SENSOR*
- MX — *CEILING-MOUNTED MOTION SENSOR*

DIGITAL LIGHTING MANAGEMENT SENSORS/CONTROLLERS

- $_{MD\#}$ — *DIGITAL WALL-MOUNTED SENSOR*
- $_{MDR\#}$ — *DIGITAL WALL-MOUNTED SENSOR - DUAL-RELAY*
- *DIGITAL CORNER-MOUNTED (ON WALL) MOTION SENSOR*
- MDX — *DIGITAL CEILING-MOUNTED MOTION SENSOR*
- $_{L\#}$ — *DIGITAL ON/OFF SWITCH (# INDICATES NO. OF BUTTONS)*
- $_{LD\#}$ — *DIGITAL DIMMING SWITCH (# INDICATES NO. OF BUTTONS)*
- ■ RC# — *DIGITAL ON/OFF ROOM CONTROLLER*
- ■ RD# — *DIGITAL DIMMING ROOM CONTROLLER*

LIGHTING CONTROL PANEL SYSTEMS

- $_{SW\#}$ — *LIGHTING CONTROL PANEL SWITCH*
- LCP-X — *LIGHTING CONTROL PANEL*

TRAINING AND PROGRAMMING

OWNER TRAINING:

- *PROVIDE FACTORY REPRESENTATIVE TRAINING TO OWNER FOR EACH LIGHTING CONTROL SYSTEM UTILIZED, INCLUDING PROGRAMMING FOR SCHEDULING AND OPERATION OF EACH ROOM PER OWNER DIRECTION.*
- *PROVIDE RECORD OF TIME DELAY SETTINGS ON ALL SENSOR DEVICES FOR OWNER USE.*

SENSOR ADJUSTMENTS AND SETTING:

- *SYSTEMS SHALL BE SET/PROGRAMMED TO OPERATE TYPICALLY IN MANUAL ON/AUTO OFF MODE:*
  1. *SET WALL MOUNTED MOTION SENSOR TO MANUAL ON MODE.*
  2. *SET POWER PACKS AND ROOM CONTROLLERS CONTROLLED BY MOTION SENSORS TO MANUAL ON AND CONTROL WITH MOMENTARY WALL SWITCH.*
- *PROVIDE FINAL SETTINGS/ADJUSTMENTS PER OWNER'S DIRECTION.*

CONTROLS SEQUENCES

WALL-MOUNTED LINE VOLTAGE SENSORS:

- *TURN ON LIGHTS IN ROOM/AREA UPON BUTTON ON SENSOR BEING ACTIVATED BY OCCUPANT.*
- *TURN OFF LIGHTS AFTER NO MOTION IS DETECTED AND DELAY EXPIRES.*

GREAT ROOM:

- *MANUAL ON AND DIMMING CONTROL OF LIGHTING VIA DIMMING SWITCHES.*
- *TURN OFF LIGHTS AFTER NO MOTION IS DETECTED BY WALL MOUNTED SENSOR AND DELAY EXPIRES.*
- *PROVIDE SWITCHES AT EACH DOOR.*
- *WHERE MULTIPLE SWITCH LOCATIONS ARE SHOWN, EACH SWITCH IS TO FUNCTION AS A THREE-WAY SWITCH IN CONJUNCTION WITH THE SWITCH SERVING SAME LOAD AT THE OTHER DOOR IN THE ROOM.*
- *DIM AND CONTROL ROOM ZONES INDIVIDUALLY FOR PENDANTS AND DOWNLIGHTS.*

PUBLIC RESTROOMS (MULTI OCCUPANT):

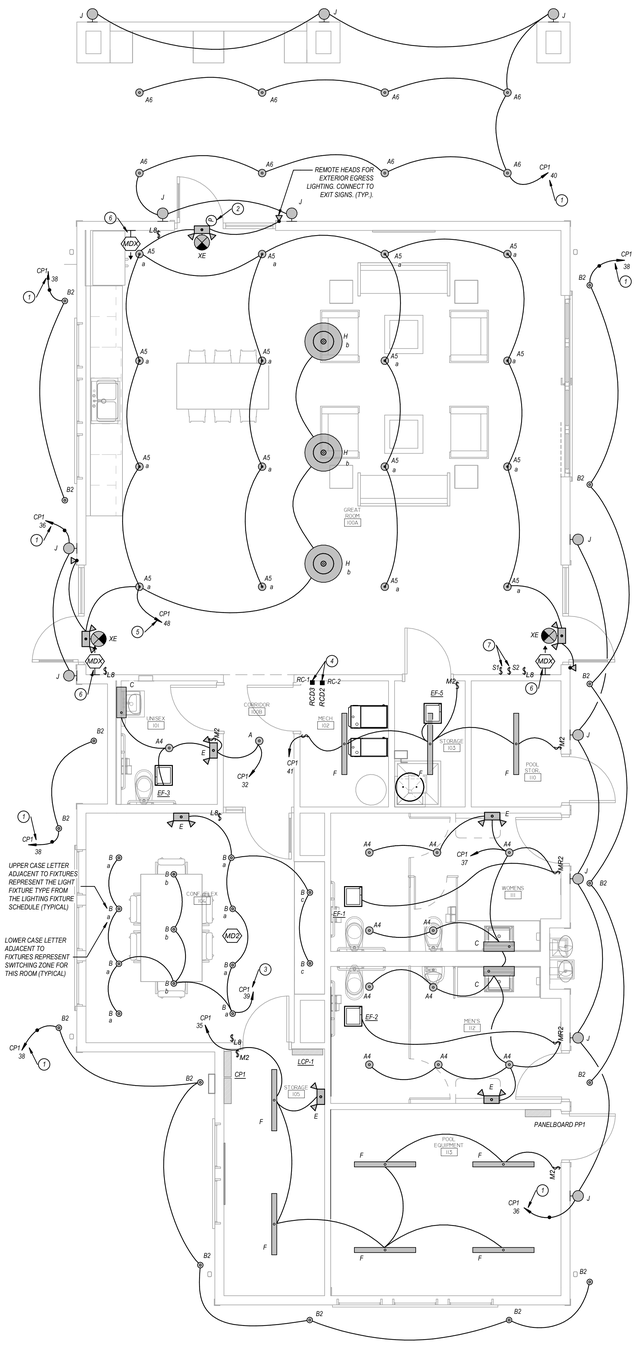
- *TURN ON LIGHTS AUTOMATICALLY UPON SENSING MOTION.*
- *TURN OFF LIGHTS AFTER NO MOTION IS DETECTED AND DELAY EXPIRES.*
- *INTERLOCK VIA RELAY TO CONTROL EXHAUST FANS WHERE SHOWN.*

PUBLIC RESTROOMS (SINGLE OCCUPANT):

- *SAME AS GENERAL WALL MOUNTED LINE VOLTAGE SENSOR SEQUENCES. EXCEPTING:*
- *OPERATE EXHAUST FAN VIA SECOND RELAY FROM WALL MOUNTED SWITCH AND SET DELAY FOR 5 MIN AFTER LIGHTS TURN OFF.*

CONFERENCE/FLEX ROOM:

- *MANUAL ON/OFF AND DIMMING CONTROL OF LIGHTING VIA DIMMING SWITCHES.*
- *TURN OFF LIGHTS AFTER NO MOTION IS DETECTED AND DELAY EXPIRES.*
- *PROVIDE SWITCHES AT EACH DOOR*
- *DIM AND CONTROL ROOM ZONES INDIVIDUALLY FOR CONFERENCE TABLE AND PERIMETER AREAS.*
- *EACH SWITCH IS TO FUNCTION AS A THREE-WAY SWITCH IN CONJUNCTION WITH THE SWITCH SERVING SAME LOAD AT THE OTHER DOOR IN THE ROOM.*



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

GENERAL LIGHTING NOTES

1. *REFER TO GENERAL NOTES ON M/E/P COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.*
2. *LIGHT FIXTURES INDICATED AS EMERGENCY FIXTURES ARE TO FUNCTION AS NIGHT LIGHTS UNLESS SPECIFICALLY SHOWN SWITCHED.*

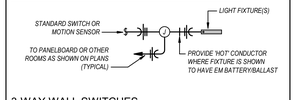
⑥ KEYED NOTES - LIGHTING

1. *WIRE CIRCUIT THROUGH LIGHTING CONTROL PANEL LCP-1. THEN HOMERUN TO PANELBOARD. REFER TO LIGHTING CONTROL PANEL SCHEDULE AND SCHEMATIC WIRING DETAIL 1/E401 FOR MORE INFORMATION.*
2. *PHOTOCELL FOR LIGHTING CONTROL SYSTEM INSTALLED AS HIGH AS POSSIBLE AT THE PEAK. ORIENT TO THE NORTH.*
3. *WIRE THROUGH ROOM CONTROLLER RC-1 AT MECHANICAL ROOM. REFER TO DETAIL 2/3401. PROVIDE 0-10V WIRING BETWEEN ROOM CONTROLLER AND LIGHT FIXTURES (NOT SHOWN FOR CLARITY).*
4. *WALL-MOUNT ROOM CONTROLLERS AT 9'' ABOVE FINISH FLOOR IN AN ACCESSIBLE LOCATION. EXTEND LOW-VOLTAGE WIRING BETWEEN ROOM CONTROLLER, OCCUPANCY SENSORS AND LOW-VOLTAGE SWITCHES PER MANUFACTURER'S REQUIREMENTS. REFER TO DETAIL 2/E401 FOR ADDITIONAL NOTES.*
5. *WIRE THROUGH ROOM CONTROLLER RC-2 AT MECHANICAL ROOM. REFER TO DETAIL 2/E401. PROVIDE 0-10V WIRING BETWEEN ROOM CONTROLLER AND LIGHT FIXTURES (NOT SHOWN FOR CLARITY).*
6. *WALL-MOUNTED VACANCY SENSOR MOUNTED AT 120° AFF. DO NOT MOUNT ON COLUMN. LOCATE AS CLOSE TO THE CORNER AS POSSIBLE. AIMED TO COVER ROOM PER MANUFACTURER'S RECOMMENDATION.*
7. *LOW-VOLTAGE LIGHTING CONTROL PANEL SWITCHES FOR CONTROL OF THE TRELLIS LIGHTING. LOCATION SHOWN IS SCHEMATIC - VERIFY EXACT LOCATION WITH OWNER PRIOR TO ANY ROUGH-IN. PROVIDE LABEL FOR SWITCH INDICATING 'TRELLIS' AND 'GRILLE TRELLIS' LIGHTING.*

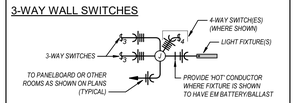
TYPICAL WIRING OF CONTROLS AND LIGHT FIXTURES

THE WIRING AND/OR TIC MARKS SHOWN BELOW ARE NOT SHOWN ON THE PLANS FOR CLARITY. PROVIDE WIRING FROM JUNCTION BOX(ES) TO SWITCHES/CONTROLLERS AND LIGHT FIXTURES AS SHOWN BELOW FOR EACH ROOM/AREA.

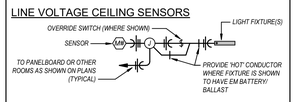
LINE VOLTAGE STANDARD WALL SWITCHES



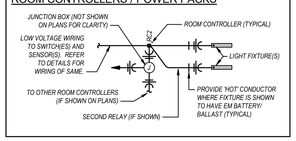
3-WAY WALL SWITCHES



LINE VOLTAGE CEILING SENSORS



ROOM CONTROLLERS / POWER PACKS



collins|webb ARCHITECTURE
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DRAWINGS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:



Darren E. Thrasher - Engineer
M.O. # PE-2014007277
6/26/2024
PROFESSIONAL SEAL

E101

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

LIGHTING PLAN

pkmr ENGINEERING
24.046
PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC
13300 W 98TH STREET LENEXA, KS 66215
913.492.2400 WWW.PKMRENG.COM
MO State Certificate of Authority #E-2002029896

6/27/2024 11:58:46 AM

ELECTRICAL FLOOR DEVICE SCHEDULE

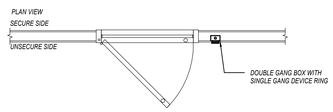
MARK	MANUFACTURER	MODEL	DESCRIPTION	CORE HOLE SIZE	FIRE RATING	CONDUIT - POWER NO.	CONDUIT - POWER SIZE	CONDUIT - LV NO.	CONDUIT - LV SIZE	DEVICE QUANTITIES RECEPTACLES	DEVICE QUANTITIES TELECOM	SUB-PLATE MODEL #	SUB-PLATE DESCRIPTION	COVER MODEL #	COVER DESCRIPTION	REMARKS
FB-2		*HUBBELL*	*CFBK3GXRCI*	*4-GANG RECESSED FLOOR BOX*			*2*	*3/4"*	*2*	*1 1/2"*	*4*	*4*	*FBMPREC / FBMPKIS*	*(2) OPENINGS FOR DUPLEX RECEPTACLES AND (2) FACEPLATES FOR (6) KEYSTONE JACKS OR FLUSH ANY CONNECTORS.*	*CFBS19RCVRBLK*	*CAST ALUMINUM RECESSED COVER ASSEMBLY. BLACK FINISH.*	*1,2,3,4*

REMARKS:
1. *COORDINATE FINISH COLORS WITH ARCHITECT/OWNER PRIOR TO ORDERING.*
2. *CONTRACTOR TO FURNISH/INSTALL DEVICES AS SHOWN.*
3. *LOW VOLTAGE DEVICES BY OWNER/OTHERS.*
4. *HINGED DOORS OPEN 180°. SCREWS ALLOW EACH DOOR TO BE SECURED SHUT.*

DISCONNECT SWITCH SCHEDULE

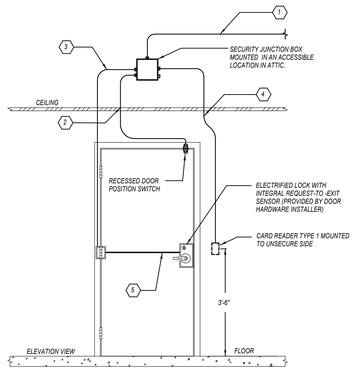
MARK	SWITCH RATING	POLES	TYPE	DESCRIPTION	ENCLOSURE TYPE	LOCATION	EQUIPMENT SERVED	NOTES
DS-1	*30*	*2*	*NON-FUSIBLE*	*HEAVY-DUTY DISCONNECT SWITCH*	*NEMA 3R*		*CU-1*	*1,2*
DS-2	*30*	*2*	*NON-FUSIBLE*	*HEAVY-DUTY DISCONNECT SWITCH*	*NEMA 3R*		*CU-2*	*1,2*
DS-3	*30*	*2*	*NON-FUSIBLE*	*HEAVY-DUTY DISCONNECT SWITCH*	*NEMA 1*	*STORAGE 103*	*WH*	*1*

REMARKS:
1. *MAINTAIN ALL REQUIRED CLEARANCES ABOUT DISCONNECT AND/OR EQUIPMENT.*
2. *MOUNT AT 36" TO BOTTOM OF DISCONNECT ABOVE ROOF/GRADE.*



KEYED NOTES

1. *ONE (1) 1" EC FROM SECURITY JUNCTION BOX TO ACCESS CONTROL PANEL.*
2. *ONE (1) 3/4" EC FROM DOOR POSITION SWITCH MOUNT LOCATION TO ACCESSIBLE AFC.*
3. *ONCE (1) 3/4" EC FROM ACCESSIBLE AFC STUBBED BEHIND DOOR FRAME TO ELECTRIFIED POWER TRANSFER DEVICE*
4. *DOUBLE GANG BOX WITH SINGLE GANG DEVICE RING MOUNTED 42" A.F.F. WITH ONE (1) 3/4" TO ACCESSIBLE AFC.*
5. *ONE (1) 3/8" CORE DRILL THROUGH DOOR TO LOCKSET*



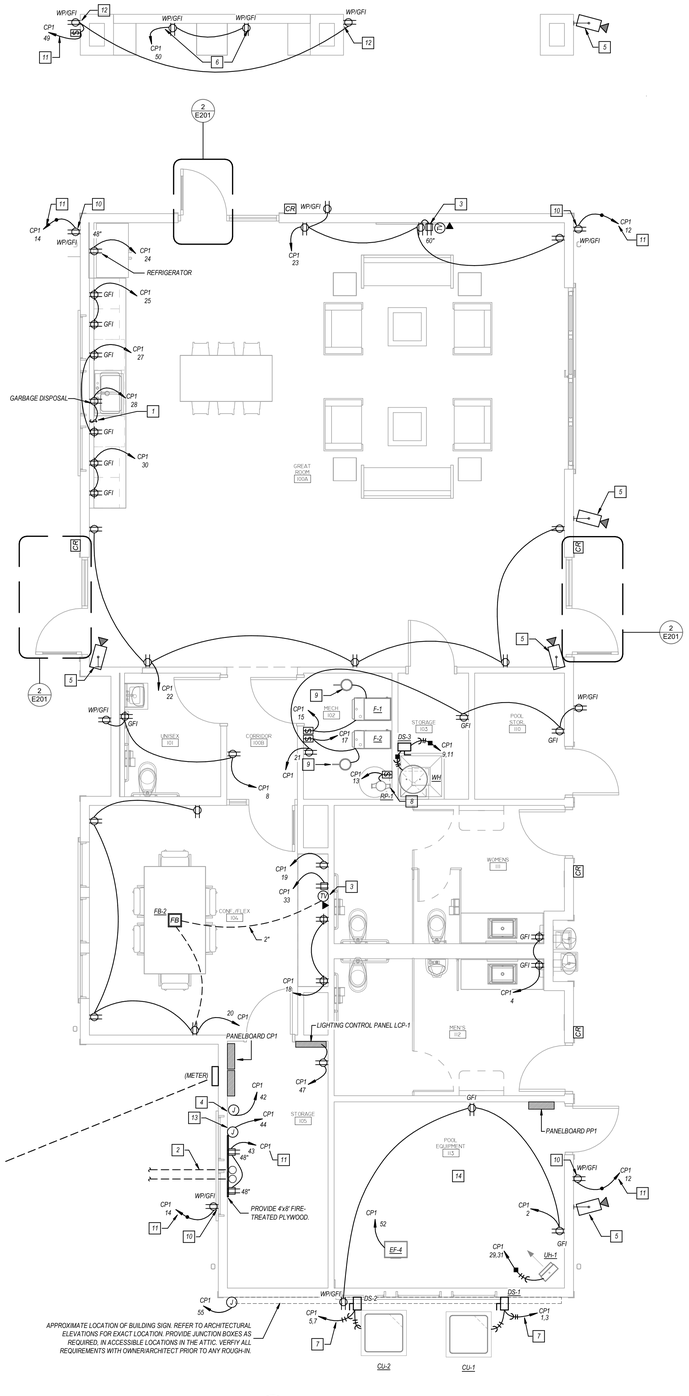
GENERAL NOTES

1. *PROVIDE MANUFACTURER'S REQUIRED CABLING FOR INTERCONNECTION OF ALL ACCESS CONTROL SYSTEM COMPONENTS PER SPECIFICATIONS.*
2. *ALL CARD READERS SHALL BE PY-2 COMPLIANT.*
3. *THESE DIAGRAMS INDICATE ELECTRONIC ACCESS CONTROL SYSTEM COMPONENTS ONLY. REFER TO SPECIFICATIONS FOR OTHER HARDWARE AND CONSTRUCTION REQUIREMENTS.*
4. *ACCESS CONTROL TYPE D6 ONLY INDICATES THE SCHEMATIC CONFIGURATION OF ACCESS CONTROL ELECTRONICS AND MOUNTING HARDWARE. REFER TO SECTIONAL OVERHEAD DOOR SPECIFICATION FOR OTHER DOOR / GATE HARDWARE REQUIREMENTS.*
5. *PROVIDE CABLING AND CONNECTIONS TO GATE CONTROLLERS FOR VEHICLE GATES.*

ABBREVIATIONS

DP = RECESSED DOOR CONTACT (DOOR POSITION SWITCH)
ES = ELECTRIC STRIKE
CARD = PROXIMITY CARD READER
REX = REQUEST TO EXIT

2 ACCESS CONTROL DETAIL
NOT TO SCALE



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

GENERAL POWER NOTES

1. *REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.*
2. *COORDINATE EXACT NEMA CONFIGURATIONS OF RECEPTACLES SERVING EQUIPMENT WITH EXACT EQUIPMENT BEING FURNISHED.*
3. *EXACT MECHANICAL EQUIPMENT LOCATIONS MAY NOT BE SHOWN FOR CLARITY. COORDINATE EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT, DUCT DETECTORS, ETC. WITH MECHANICAL DRAWINGS AND CONTRACTOR.*
4. *COORDINATE EXACT LOCATIONS OF SMOKE DETECTORS WITH CEILING FANS, HVAC DIFFUSERS, SPRINKLER HEADS, ETC. PER NFPA REQUIREMENTS.*

KEYED NOTES - POWER

1. *SWITCH ABOVE COUNTER FOR GARBAGE DISPOSAL. GANG WITH RECEPTACLE ADJACENT.*
2. *TWO (2) 3" CONDUITS FOR TELECOMMUNICATION AND TELEVISION SERVICES. STUB UP TO 12" ABOVE FINISH FLOOR WITH BUSHED ENDS. COORDINATE WITH SERVICE PROVIDER.*
3. *RECEPTACLE, TELEVISION AND DATA OUTLETS INSTALLED BEHIND WALL-MOUNTED TELEVISION. REFER TO ARCHITECTURAL ELEVATIONS. VERIFY EXACT MOUNTING HEIGHT AND LOCATION WITH OWNER/ARCHITECT, AND ADJUST DEVICE LOCATIONS BASED ON ACTUALLY-PROVIDED TELEVISION AND MOUNTING BRACKET. FOR THE TELEVISION OUTLET, PROVIDE HBL260, 4"x4"x3.25" BACK BOX WITH 2" CONDUIT KNOCKOUT. AT THE CONFERENCE ROOM, EXTEND 2" CONDUIT FROM BOX DOWN TO BELOW GRADE AND EXTEND TO FLOOR BOX*
4. *ROUGH-IN AND CONNECT TO SECURITY PANEL PROVIDED BY OTHERS. COORDINATE EXACT REQUIREMENTS AND LOCATION WITH SECURITY PANEL PROVIDER.*
5. *ROUGH-IN FOR SECURITY CAMERA BY OTHERS. COORDINATE EXACT LOCATION AND NUMBER OF CAMERAS REQUIRED WITH SECURITY CAMERA PROVIDER AND OWNER. EXTEND (1) 3/4" CONDUIT ABOVE/UP ACCESSIBLE CEILING BACK TO MAIN SECURITY PANEL.*
6. *RECEPTACLES FOR GRILLE LOCATION. COORDINATE EXACT LOCATION WITH OWNER/ARCHITECT PRIOR TO ANY ROUGH-IN.*
7. *(3) #6 WIRE AND (1) #10 GROUND WITH 3/4" CONDUIT.*
8. *WIRE PUMP THROUGH AQUASTAT FOR CONTROL. COORDINATE ALL REQUIREMENTS WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.*
9. *MOTORIZED DAMPER ON OUTSIDE AIR DUCT. EXTEND WIRING TO FURNACE AND PROVIDE RELAY FOR OPEN/CLOSE CONTROL PER THE OUTSIDE AIR DAMPER WIRING SCHEMATIC ON SHEET M201. DAMPER SHALL OPEN WHEN FURNACE IS ON AND CLOSE WHEN OFF. COORDINATE ALL WORK WITH MECHANICAL CONTRACTOR.*
10. *RECEPTACLE INSTALLED AS HIGH AS POSSIBLE BELOW THE ROOF EAVE, CONCEALED FROM VIEW AS MUCH AS POSSIBLE, FOR CHRISTMAS LIGHTING. LOCATION SHOWN IN APPROXIMATE - VERIFY EXACT LOCATION AND ALL REQUIREMENTS WITH OWNER/ARCHITECT PRIOR TO ANY ROUGH-IN.*
11. *WIRE THROUGH LIGHTING CONTROL PANEL LCP-1.*
12. *RECEPTACLE INSTALLED UP HIGH ON POST AT TRELLIS FRAME FOR TRELLIS LIGHTING STRANDS. COORDINATE EXACT LOCATION WITH OWNER/ARCHITECT PRIOR TO ANY ROUGH-IN.*
13. *PROVIDE 4-POLE LIGHTING CONTACTOR FOR POOL LIGHTING CIRCUITS. WIRE COIL OF CONTACTOR THROUGH LIGHTING CONTROL PANEL LCP-1 FOR TIMECLOCK CONTROL.*
14. *ALL POOL EQUIPMENT PROVIDED, AND ASSOCIATED ELECTRICAL EQUIPMENT AND WIRING BY POOL CONSULTANT.*

pkmr ENGINEERS
PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC
13300 W 98TH STREET LENEXA, KS 66215
913.492.2400 WWW.PKMRENG.COM
MO State Certificate of Authority #E-2002020886
24.046

collins|webb ARCHITECTURE
3078 SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DRAWINGS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
DARREN E. THRASHER
NUMBER PE-2014007277
PROFESSIONAL ENGINEER
6/26/2024
Darren E. Thrasher - Engineer
MO# DE-2014007277
PROFESSIONAL SEAL

E201

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

POWER PLAN

6/27/2024 11:58:48 AM

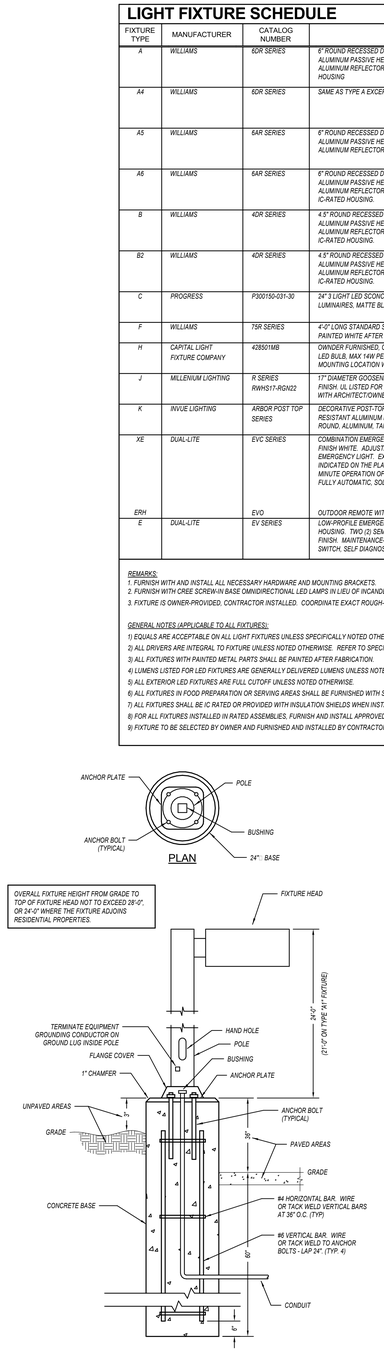
LIGHT FIXTURE SCHEDULE

FIXTURE TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LED MODULE / DRIVER ID	WATTS	LUMENS	CRI	CCT	DIMMING	VOLTAGE	REMARKS
A	*WILLIAMS*	*6DR SERIES*	*6" ROUND RECESSED DOWNLIGHT. DIE-FORMED STEEL PAN WITH FINNED, EXTRUDED ALUMINUM PASSIVE HEAT SINK. OPEN, SELF-FLANGED, SEMI-SPECULAR LOW IRIDESCENT FINISH ALUMINUM REFLECTOR WITH WIDE BEAM DISTRIBUTION , 'TD' LENS OVER DIODES AND IC-RATED HOUSING*	*L20*	*19*	*1782*	*80*	*3000K*	*0-10V*	*120*	*1*
A4	*WILLIAMS*	*6DR SERIES*	*SAME AS TYPE A EXCEPT WITH A DIFFERENT LUMEN PACKAGE.*	*L20*	*13.8*	*1497*	*80*	*3000K*	*0-10V*	*120*	*1*
A5	*WILLIAMS*	*6AR SERIES*	*6" ROUND RECESSED DOWNLIGHT. DIE-FORMED STEEL PAN WITH FINNED, EXTRUDED ALUMINUM PASSIVE HEAT SINK. OPEN, SELF-FLANGED, SEMI-SPECULAR LOW IRIDESCENT FINISH ALUMINUM REFLECTOR WITH WIDE BEAM DISTRIBUTION AND IC-RATED HOUSING.*	*L30*	*31.3*	*2917*	*80*	*3000K*	*0-10V*	*120*	*1*
A6	*WILLIAMS*	*6AR SERIES*	*6" ROUND RECESSED DOWNLIGHT. DIE-FORMED STEEL PAN WITH FINNED, EXTRUDED ALUMINUM PASSIVE HEAT SINK. OPEN, SELF-FLANGED, SEMI-SPECULAR LOW IRIDESCENT FINISH ALUMINUM REFLECTOR WITH WIDE BEAM DISTRIBUTION, 'WET/CC' LENS OVER DIODES AND IC-RATED HOUSING.*	*L30*	*31.3*	*2917*	*80*	*3000K*	*0-10V*	*120*	*1*
B	*WILLIAMS*	*4DR SERIES*	*4.5" ROUND RECESSED DOWNLIGHT. DIE-FORMED STEEL PAN WITH FINNED, EXTRUDED ALUMINUM PASSIVE HEAT SINK. OPEN, SELF-FLANGED, WHITE TEXTURE POWDER COAT FINISH ALUMINUM REFLECTOR WITH MEDIUM BEAM DISTRIBUTION, 'TD' LENS OVER DIODES AND IC-RATED HOUSING.*	*L20*	*19.8*	*2005*	*80*	*3000K*	*0-10V*	*120*	*1*
B2	*WILLIAMS*	*4DR SERIES*	*4.5" ROUND RECESSED DOWNLIGHT. DIE-FORMED STEEL PAN WITH FINNED, EXTRUDED ALUMINUM PASSIVE HEAT SINK. OPEN, SELF-FLANGED, WHITE TEXTURE POWDER COAT FINISH ALUMINUM REFLECTOR WITH NARROW BEAM DISTRIBUTION, 'WET/CC' LENS OVER DIODES AND IC-RATED HOUSING.*	*L20*	*19.8*	*2005*	*80*	*3000K*	*0-10V*	*120*	*1*
C	*PROGRESS*	*P300150-031-30*	*24" 3 LIGHT LED SCONCE FOR BATHROOM VANITY. FURNISH WITH DOWNWARD FACING LUMINAIRES, MATTE BLACK SHADES, AND BRUSHED NICKLE FINISH.*	-	*THREE(3) 100 WATT E26 SOCKET*	-	-	*3000K*	*0-10V*	*120*	*1,2*
F	*WILLIAMS*	*7SR SERIES*	*4'-0" LONG STANDARD STRIP FIXTURE WITH ROUND LENS AND SURFACE MOUNTING. ALL PARTS PAINTED WHITE AFTER FABRICATION.*	*L65*	*42.3*	*6313*	*80*	*3000K*	*0-10V*	*120*	*1*
H	*CAPITAL LIGHT FIXTURE COMPANY*	*428501MB*	*OWNNDER FURNISHED, CONTRACTOR INSTALLED PENDANT LIGHT. CONTRACTOR TO PROVIDE LED BULB, MAX 14W PER BULB. COORDINATE WITH OWNER FOR BULB TYPE. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECT/OWNER.*	-	*168*	*1500*	-	*3000K*	-	*120*	*1,2,3*
J	*MILLENIUM LIGHTING*	*R SERIES RWHS17-RGN22*	*17" DIAMETER GOOSENECK WALL MOUNTED SHADE LIGHT. FURNISHED WITH SATIN BLACK FINISH. UL LISTED FOR WET LOCATIONS. VERIFY EXACT MOUNTING LOCATIONS AND HEIGHTS WITH ARCHITECT/OWNER.*	-	*ONE(1) 200 WATT E26 SOCKET*	-	-	*3000K*	-	*120*	*1,2*
K	*INVUE LIGHTING*	*ARBOR POST TOP SERIES*	*DECORATIVE POST-TOP SINGLE-HEAD LIGHT, LED, WITH TWO-PIECE IP66 RATED CORROSION RESISTANT ALUMINUM HOUSING, WAVESTREAM LED OPTICS, TYPE IV DISTRIBUTION WITH 5° ROUND, ALUMINUM, TAPERED 14'-0" TALL POLE BASE WITH COVER.*	*B3*	*96*	*8740*	*80*	*3000K*	*0-10V*	*120*	*1*
XE	*DUAL-LITE*	*EVC SERIES*	*COMBINATION EMERGENCY LIGHTING UNIT / EXIT LIGHT. UV-STABLE THERMOPLASTIC HOUSING, FINISH WHITE. ADJUSTABLE EYEBALL STYLE LIGHTING HEADS WITH GLASS LENS FOR EMERGENCY LIGHT. EXIT SIGN TO HAVE RED LETTERS WITH DIRECTIONAL ARROWS AS INDICATED ON THE PLANS. MAINTENANCE-FREE LITHIUM ION PHOSPHATE BATTERY FOR 90 MINUTE OPERATION OF LAMPS AND EXIT SIGN. FURNISH WITH CAPACITY FOR REMOTE HEAD. FULLY AUTOMATIC, SOLID-STATE CHARGER WITH TEST SWITCH AND AC-ON LIGHT.*	*TOTAL POWER CONSUMPTION = 2.4 WATTS.*	-	-	-	-	*120*	-
			EMERGENCY: FOUR (4) HIGH-OUTPUT LEDS.	-	-	-	-				
ERH		*EVO*	*OUTDOOR REMOTE WITH 2 HEADS. BLACK FINISH.*	*EXIT: FOUR (4) HIGH-OUTPUT LEDS.*	-	-	-				
E	*DUAL-LITE*	*EV SERIES*	*LOW-PROFILE EMERGENCY LIGHTING UNIT. FLAME-RATED, UV-STABLE THERMOPLASTIC HOUSING. TWO (2) SEMI-RECESSED, ADJUSTABLE 'EYEBALL' HEADS WITH GLASS LENS. WHITE FINISH. MAINTENANCE-FREE BATTERY FOR 90 MINUTE OPERATION OF LAMPS. INTEGRAL TEST SWITCH, SELF DIAGNOSTICS AND AC-ON INDICATOR.*	-	*3 WATT HEADS*	-	-	-	-	*120*	*1*

REMARKS:
1. *FURNISH WITH AND INSTALL ALL NECESSARY HARDWARE AND MOUNTING BRACKETS.*
2. *FURNISH WITH CREE SCREW-IN BASE OMNIDIRECTIONAL LED LAMPS IN LIEU OF INCANDESCENT LAMPS. USE 9W LAMPS FOR 60W INCANDESCENT, 6W FOR 40W, 13.5W FOR 75W, AND 18W FOR 100W.*
3. *FIXTURE IS OWNER-PROVIDED, CONTRACTOR INSTALLED. COORDINATE EXACT ROUGH-IN REQUIREMENTS PRIOR TO CONSTRUCTION.*

GENERAL NOTES (APPLICABLE TO ALL FIXTURES):
1) *EQUALS ARE ACCEPTABLE ON ALL LIGHT FIXTURES UNLESS SPECIFICALLY NOTED OTHERWISE. REFER TO SPECIFICATIONS FOR APPROVED EQUAL FIXTURE MANUFACTURERS.*
2) *ALL DRIVERS ARE INTEGRAL TO FIXTURE UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS FOR ADDITIONAL FIXTURE/DRIVER/BALLAST REQUIREMENTS.*
3) *ALL FIXTURES WITH PAINTED METAL PARTS SHALL BE PAINTED AFTER FABRICATION.*
4) *LUMENS LISTED FOR LED FIXTURES ARE GENERALLY DELIVERED LUMENS UNLESS NOTED OTHERWISE.*
5) *ALL EXTERIOR LED FIXTURES ARE FULL CUTOFF UNLESS NOTED OTHERWISE.*
6) *ALL FIXTURES IN FOOD PREPARATION OR SERVING AREAS SHALL BE FURNISHED WITH SHATTER-RESISTANT LAMPS UNLESS LENSED.*
7) *ALL FIXTURES SHALL BE IC RATED OR PROVIDED WITH INSULATION SHIELDS WHEN INSTALLED IN INSULATED AREAS OF THE TRUSS SPACE.*
8) *FOR ALL FIXTURES INSTALLED IN RATED ASSEMBLIES, FURNISH AND INSTALL APPROVED FIRE BARRIER (E.2. BARRIER OR TENMAT FF109 SERIES) OVER FIXTURE TO MAINTAIN 1 HOUR CEILING ASSEMBLY RATING.*
9) *FIXTURE TO BE SELECTED BY OWNER AND FURNISHED AND INSTALLED BY CONTRACTOR.*

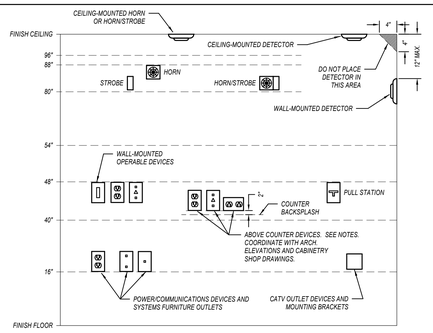
PLAN



SECTION

5 E301 POLE BASE DETAIL

NOT TO SCALE 611-02



GENERAL NOTES:
1. *MOUNTING HEIGHTS SHOWN IN THIS DETAIL ARE TYPICAL UNLESS OTHERWISE NOTED ON THE PLANS.*
2. *SEE ARCHITECTURAL ELEVATIONS FOR SPECIAL CONDITIONS. NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS.*
3. *ALL INSTALLATIONS SHALL COMPLY WITH ADA.*

VISUAL FIRE ALARM NOTIFICATION DEVICES (STROBE)
LOCATE DEVICE SO THE BOTTOM OF THE DEVICE IS BETWEEN 80" AND 96" A.F.F. (NFPA) OR 6" BELOW CEILING, WHICHEVER IS LOWER (ADA 2010).

AUDIBLE FIRE ALARM NOTIFICATION DEVICES (HORN)
LOCATE DEVICE SO THAT THE TOP OF UNIT IS NOT MORE THAN 90" A.F.F. AND NOT LESS THAN 6" BELOW CEILING (NFPA)

FIRE ALARM ACTIVATION DEVICES (PULL STATION)
LOCATE FRONT-APPROACH DEVICES SO THAT THE HIGHEST OPERABLE PORTION OF THE DEVICE IS NOT MORE THAN 48" A.F.F. (ADA 2010) AND NOT LESS THAN 42" A.F.F. (NFPA).

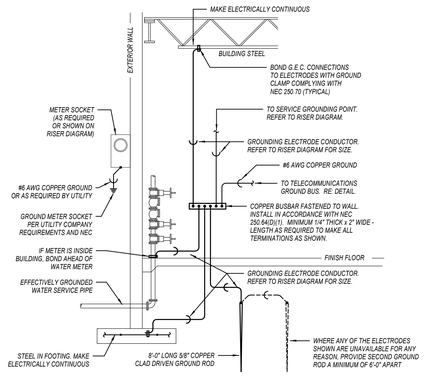
POWER/COMMUNICATION DEVICES:
OUTLETS SHALL BE LOCATED AT 16" A.F.F. TO THE BOTTOM OF THE BOX. ABOVE COUNTER DEVICES SHALL BE LOCATED AT 2" ABOVE THE BACKSPLASH OF THE COUNTER TO THE BOTTOM OF THE DEVICES. VERIFY WITH ARCHITECTURAL DETAILS.

WALL-MOUNTED OPERABLE DEVICES:
OPERABLE DEVICES SHALL BE LOCATED AT 48" A.F.F. TO THE TOP OF THE OPERABLE PORTION OF THE DEVICE.

WALL-MOUNTED OPERABLE DEVICES INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
LIGHT SWITCHES, DIMMERS, CONTROLS, ETC.
PUSH BUTTONS
NURSE/PATIENT CALL DEVICES (INLUDING THOSE FOR STAFF USE)
OTHER CONTROL OR "CALL" DEVICES

4 E301 MOUNTING HEIGHTS FOR WALL-MOUNTED DEVICES

NOT TO SCALE 601-01



3 E301 ELECTRICAL SERVICE GROUNDING DETAIL

NOT TO SCALE 625-01

SINGLE-SECTION PANELBOARD SCHEDULE

PANEL DESIGNATION: **PP1**

MOUNTING: *SURFACE*
LOCATION: *POOL EQUIPMENT*

MAIN LUG AMPS: *125*
MAIN BREAKER: *M.L.O.*
VOLTAGE: *240/120*
PHASE/WIRE: *1Ø, 3W*

DESCRIPTION	PHASE A	PHASE B	C/B TRIP	C/B POLE	CIRCUIT #	CIRCUIT #	C/B POLE	C/B TRIP	PHASE A	PHASE B	DESCRIPTION
SPARE	-		*20*	*1*	1	2	*1*	*20*		-	SPARE
SPARE		-	*20*	*1*	3	4	*1*	*20*	-		SPARE
SPARE	-		*20*	*1*	5	6	*1*	*20*		-	SPARE
SPARE		-	*20*	*1*	7	8	*1*	*20*	-		SPARE
SPARE	-		*20*	*1*	9	10	*1*	*20*		-	SPARE
SPARE		-	*20*	*1*	11	12	*1*	*20*	-		SPARE
SPARE	-		*20*	*1*	13	14	*1*	*20*		-	SPARE
SPARE		-	*20*	*1*	15	16	*1*	*20*	-		SPARE
SPARE	-		*20*	*1*	17	18	*1*	*20*		-	SPARE
SPACE		-	-	*1*	19	20	*1*	-	-		SPACE
SPACE	-		-	*1*	21	22	*1*	-		-	SPACE
SPACE		-	-	*1*	23	24	*1*	-	-		SPACE
SPACE	-		-	*1*	25	26	*1*	-		-	SPACE
SPACE		-	-	*1*	27	28	*1*	-	-		SPACE
SPACE	-		-	*1*	29	30	*1*	-		-	SPACE
SPACE		-	-	*1*	31	32	*1*	-	-		SPACE
SPACE	-		-	*1*	33	34	*1*	-		-	SPACE
SPACE		-	-	*1*	35	36	*1*	-	-		SPACE
SPACE	-		-	*1*	37	38	*1*	-		-	SPACE
SPACE		-	-	*1*	39	40	*1*	-	-		SPACE
SPACE	-		-	*1*	41	42	*1*	-		-	SPACE
TOTALS	*0*	*0*							*0*	*0*	TOTALS

PANELBOARD SIZING LOAD

LOAD DESCRIPTION	CONNECTED	DEMAND	CODE MIN. (VA)
LIGHTS	*0*	*1.25*	*0*
RECEPTACLES	*0*	*10KVA + 50% REST*	*0*
MOTORS	*0*	*1.0 x LARGEST + SUM OF REST*	*0*
AIR CONDITIONING	*0*	*1.00*	*0*
SPACE HEATING	*0*	*0.00*	*0*
CONTINUOUS	*0*	*1.25*	*0*
NON-CONTINUOUS	*0*	*1.00*	*0*
POOL EQUIPMENT	*16,000*	*1.00*	*16,000*
MISC. LOADS 2	*0*	*1.00*	*0*
		SIZING LOAD:	16,000
		SIZING LOAD (AMPS):	*67*

CONNECTED PHASE LOADS

PHASE	VA	AMPS
A	*0*	*0.0*
B	*0*	*0.0*
TOTALS	0	0.0

REMARKS:
1. *SQUARE D NQ PANELBOARD OR EQUAL.*

LIGHTING CONTROL PANEL SCHEDULE (LCP1)

RELAY	LOAD DESCRIPTION	CIRCUIT #	NOTES
1	*EXTERIOR BUILDING LTS*	*CP1-36*	*3*
2	*EXTEIOR PERIMETER SOFFIT LTS*	*CP1-38*	*3*
3	*POOL DECK POST LIGHTS*	*CP1-34*	*3*
4	*TRELLIS LIGHTING*	*CP1-51*	*1*
5	*GRILLE TRELLIS LIGHTING*	*CP1-49*	*1*
6	*POOL LIGHTING CONTACTOR*	*CP1-44*	*4*
7	*CHRISTMAS LIGHT RECEPTACLES WEST*	*CP1-14*	*4*
8	*CHRISTMAS LIGHT RECEPTACLES EAST*	*CP1-12*	*4*
9	*SITE MONUMENT SIGN*	*CP1-53*	*4*
10	*PATIO LIGHTING*	*CP1-40*	*3*
11	*PARKING LOT LIGHTING*	*CP1-46*	*3*
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

GENERAL PANEL NOTES:
1. *WATTSTOPPER LIGHTING INTEGRATOR SERIES PANEL OR EQUAL.*
2. *FEED-THROUGH 24-RELAY PANEL.*
3. *FURNISH WITH OPTIONAL SUB-SECTION FOR LIGHTING CONTACTORS.*
4. *FURNISH WITH DIVIDERS BETWEEN LOAD TYPES (EM / NORMAL) AND VOLTAGES (277V / 120V)*
5. *FURNISH IN SURFACE-MOUNTED NEMA 1 ENCLOSURE.*

RELAY NOTES:
1. *SWITCH AND/OR SENSOR ON / TIMECLOCK OFF (AUTOMATIC BUILDING SHUTOFF AT NIGHT).*
2. *SWITCH OVERRIDE SENSOR ON/OFF. MAXIMUM OVERRIDE TIME OF 2 HOURS.*
3. *PHOTOCELL ON / TIMECLOCK OFF.*
4. *TIMECLOCK ON / TIMECLOCK OFF.*
5. *WALL SWITCH ON/OFF (AUTOMATIC BUILDING SHUTOFF AT NIGHT).*

TWO-SECTION PANELBOARD SCHEDULE

PANEL DESIGNATION: **CP1**

MOUNTING: *SURFACE*
LOCATION: *STORAGE*

MAIN LUG AMPS: *400*
MAIN BREAKER: *400*
VOLTAGE: *240/120*
PHASE/WIRE: *1Ø, 3W*

DESCRIPTION	PHASE A	PHASE B	C/B TRIP	C/B POLE	CIRCUIT #	CIRCUIT #	C/B POLE	C/B TRIP	PHASE A	PHASE B	DESCRIPTION
CONDENSING UNIT CU-1	*2063*		*30*	*2*	1	2	*1*	*20*	*900*		*RECPT - POOL EQUIP*
		2063			3	4	*1*	*20*		*180*	*RECEPT - RR 111, 112 COUNTER*
CONDENSING UNIT CU-2	*1987*		*30*	*2*	5	6	*1*	*20*	-		*SPARE*
		1987			7	8	*1*	*20*		*180*	*RECEPT - RR 101/COR./EXT.*
WATER HEATER WH	*2250*		*25*	*2*	9	10	*1*	*20*	-		*SPARE*
		2250			11	12	*1*	*20*		*500*	*LTS - CHRISTMAS LTS EAST*
RECIRC PUMP RP-1	*100*		*15*	*1*	13	14	*1*	*20*		*500*	*LTS - CHRISTMAS LTS WEST*
FURNACE F-1		*1176*	*20*	*1*	15	16	*1*	*20*	-		*SPARE*
FURNACE F-2	*1176*		*20*	*1*	17	18	*1*	*20*	*360*		*RECEPT - CONF./FLEX*
RECEPT- CONF./FLEX		*180*	*20*	*1*	19	20	*1*	*20*		*1080*	*RECEPT - CONF./FLEX*
RECEPT - MECH/STOR	*720*		*20*	*1*	21	22	*1*	*20*	*900*		*RECEPT - GREAT ROOM*
RECEPT - GREAT ROOM		*900*	*20*	*1*	23	24	*1*	*20*		*180*	*RECEPT - GREAT ROOM REFRIG.*
RECEPT - GREAT ROOM COUNTER	*180*		*20*	*1*	25	26	*1*	*20*	-		*SPARE*
RECEPT - GREAT ROOM COUNTER		*180*	*20*	*1*	27	28	*1*	*20*		*1200*	*GREAT ROOM DISP.*
ELECTRIC UNIT HEATER UH-1	*2500*		*30*	*2*	29	30	*1*	*20*	*180*		*RECEPT - GREAT ROOM COUNTER*
		2500			31	32	*1*	*20*		*430*	*LTS - RR 101, CORRIDOR*
RECEPT - CONF./FLEX	*360*		*20*	*1*	33	34	*1*	*20*	*119*		*LTS - POOL DECK POST LIGHTS*
LTS - POOL EQUIP/STOR.		*99*	*20*	*1*	35	36	*1*	*20*		*1400*	*LTS - EXTERIOR BLDG*
LTS - MENS/WOMENS	*942*		*20*	*1*	37	38	*1*	*20*	*297*		*LTS - EXTERIOR SOFFIT*
LTS - CONF./FLEX		*260*	*20*	*1*	39	40	*1*	*20*		*1250*	*LTS - PATIO*
LTS - MECH/STOR/POOL STOR	*186*		*20*	*1*	41	42	*1*	*20*	*200*		*SECURITY PANEL*
TOTALS	*12464*	*11595*							*3456*	*6400*	TOTALS

SECOND SECTION: **CP1**

MOUNTING: *SURFACE*
LOCATION: *STORAGE*

MAIN LUG AMPS: *400*
MAIN BREAKER: *-*
VOLTAGE: *240/120*
PHASE/WIRE: *1Ø, 3W*

DESCRIPTION	PHASE A	PHASE B	C/B TRIP	C/B POLE	CIRCUIT #	CIRCUIT #	C/B POLE	C/B TRIP	PHASE A	PHASE B	DESCRIPTION
RECEPT - STORAGE	*720*		*20*	*1*	43	44	*1*	*20*	*100*		*POOL LIGHTING CONTACTOR*
SPARE		-	*20*	*1*	45	46	*1*	*20*		*34*	*LTS - PARKING LOT*
LIGHTING CONTROL PANEL LCP-1	*500*		*20*	*1*	47	48	*1*	*20*	*1005*		*LTS - GREAT ROOM*
LTS - COOKING AREA		*360*	*20*	*1*	49	50	*1*	*20*		*360*	*RECPET - COOKING AREA*
LTS - TRELLIS	*360*		*20*	*1*	51	52	*1*	*15*	*77*		*EXHAUST FAN (EF-5)*
SITE MONUMENT SIGN		*1200*	*20*	*1*	53	54	*1*	*20*		-	*SPARE*
BUILDING SIGN	*1200*		*20*	*1*	55	56	*1*	*20*	-		*SPARE*
SPARE		-	*20*	*1*	57	58	*1*	*20*		-	*SPARE*
SPARE	-		*20*	*1*	59	60	*1*	*20*	-		*SPARE*
SPARE		-	*20*	*1*	61	62	*1*	*20*		-	*SPARE*
SPARE	-		*20*	*1*	63	64	*1*	*20*	-		*SPARE*
SPARE		-	*20*	*1*	65	66	*1*	*20*		-	*SPARE*
SPARE	-		*20*	*1*	67	68	*1*	-	-		*SPACE*
SPARE		-	*20*	*1*	69	70	*1*	-		-	*SPACE*
SPARE	-		*20*	*1*	71	72	*1*	-	-		*SPACE*
SPARE		-	*20*	*1*	73	74	*1*	-		-	*SPACE*
SPARE	-		*20*	*1*	75	76	*1*	-	-		*SPACE*
SPARE		-	*20*	*1*	77	78	*1*	-		-	*SPACE*
PANELBOARD PP1	*0*		*100*	*2*	79	80	*1*	-	-		*SPACE*
		0			81	82	*1*	-		-	*SPACE*
SPARE	-		*20*	*1*	83	84	*1*	-	-		*SPACE*
TOTALS	*2780*	*1560*							*1182*	*394*	TOTALS

PANELBOARD SIZING LOAD

LOAD DESCRIPTION	CONNECTED	DEMAND	CODE MIN. (VA)
LIGHTS	*10,742*	*1.25*	*13,428*
RECEPTACLES	*8,760*	*10KVA + 50% REST*	*8,760*
MOTORS	*2,352*	*1.0 x LARGEST + SUM OF REST*	*2,646*
AIR CONDITIONING	*8,100*	*1.00*	*8,100*
SPACE HEATING	*5,000*	*0.00*	*0*
CONTINUOUS	*4,677*	*1.25*	*5,846*
NON-CONTINUOUS	*200*	*1.00*	*200*
POOL EQUIPMENT	*16,000*	*1.00*	*16,000*
MISC. LOADS 2	*0*	*1.00*	*0*
		SIZING LOAD:	54,980
		SIZING LOAD (AMPS):	229

CONNECTED PHASE LOADS

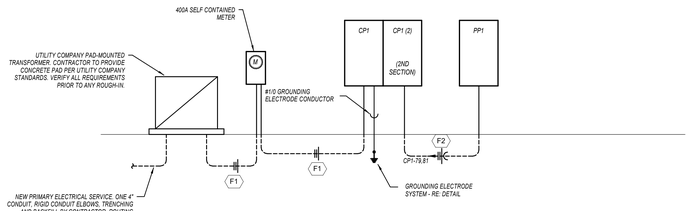
PHASE	VA	AMPS
A	*19,880*	*165.7*
B	*19,949*	*166.2*
TOTALS	39,831	166.0

REMARKS:
1. *SQUARE D NQ PANELBOARD OR EQUAL*
2. *PANELBOARD SHALL BE SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT.*

EQUIPMENT FAULT CURRENT RATING SCHEDULE

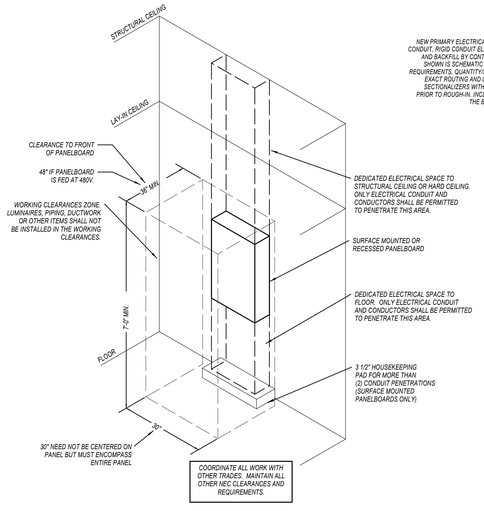
EQUIPMENT	SCA **	SCCR	NOTES
PANELBOARD CP1	*30,907*	*42,000*	*1,2*
PANELBOARD PP1	*15,006*	*22,000*	*1*

NOTES:
1. *RATING BASED ON AN ASSUMED FAULT AT UTILITY CO. TRANSFORMER OF 43,490 AIC.*
2. *BRANCH BREAKERS IN EQUIPMENT MAY BE SERIES RATED.*
** *CALCULATIONS PERFORMED USING BUSSMANN POINT-TO-POINT METHOD.*



1 E301 ELECTRICAL RISER DIAGRAM

NOT TO SCALE



2 E301 TYPICAL PANELBOARD INSTALLATION DETAIL

NOT TO SCALE

EQUIPMENT FEEDER SCHEDULE

FEEDER NO.	EQUIPMENT	LOAD (AMPS)	FEEDER SETS	FEEDER # OF WIRES	FEEDER SIZE	FEEDER GROUND	FEEDER MATERIAL	CONDUIT SIZE	CONDUIT TYPE
F1	*PANELBOARD CP1*	*218.8*	*1*	*3*	*500 MCM*	-	*COPPER*	*3"*	*RNC-40*
F2	*PANELBOARD PP1*	*66.7*	*1*	*3*	*#1*	*#8*	*COPPER*	*1-1/2"*	*EMT*

collins|webb ARCHITECTURE
307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinswebb.com

CONSTRUCTION DRAWINGS

BAILEY FARMS CLUBHOUSE
1451 SE BAILEY FARMS PARKWAY
LEE'S SUMMIT, MO 64081

COPYRIGHT © BY COLLINS WEBB ARCHITECTURE, LLC

REVISION DATES:

STATE OF MISSOURI
DARREN E. THRASHER
NUMBER PE-2014007277
PROFESSIONAL ENGINEER
6/26/2024
Darren E. Thrasher - Engineer
MPE# PE-2014007277
PROFESSIONAL SEAL

E301

ISSUE DATE: AUGUST 13, 2025
COLLINS WEBB #: 23115

ELECTRICAL RISER AND SCHEDULES

pkmr ENGINEERS 24.046
PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC
13300 W 98TH STREET LENEXA, KS 66215
913.492.2400 WWW.PKMRENG.COM
MO State Certificate of Authority #E-2002020886

6/27/2024 11:58:48 AM