

# LEE'S SUMMIT, MO OLDHAM VILLAGE ORIGINAL ISSUE 05/01/25

### PROJECT SUMMARY - EXTERIOR STEEL STUD FRAMING

EXTERIOR FINISHES EXTERIOR CANOPY LANDSCAPING

### **CODE SUMMARY**

REF LOCAL CODE AMENDMENTS IN ADDITION TO THE CODES BELOW APPLICABLE CODES BUILDING CODE 2018 INTERNATIONAL BUILDING CODE ELECTRICAL CODE 2017 NATIONAL ELECTRICAL CODE 2018 INTERNATIONAL PLUMBING CODE PLUMBING CODE 2018 INTERNATIONAL MECHANICAL CODE MECHANICAL CODE FIRE CODE 2018 INTERNATIONAL FIRE CODE ACCESSIBILITY ICC/ANSI A117.1-2009. ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES **ENERGY CODE** 2018 INTERNATIONAL ENERGY CODE

2018 INTERNATIONAL FUEL GAS CODE

FUEL GAS CODE FUTURE / SEPARATE SUBMITTALS FUTURE INTERIOR SCOPE

PLANNING AND ZONING

### CODE ANALYSIS

RESTAURANT STORAGE **BUILDABLE AREA** TOTAL ALLOWABLE AREA 24,000 SF ALLOWABLE HEIGHT TOTAL BUILDING AREA

PROPOSED PRIMARY OCCUPANCY GROUP (MIXED OCCUPANCY)

CONSTRUCTION TYPE VB; FULLY SPRINKLERED FIRE PROTECTION (HOURLY FIRE RESISTANCE RATING REQUIREMENTS PER TABLE LOCATION REQUIRED / PROVIDED

CONSTRUCTION TYPE (ALL WOOD TO ACHIEVE CLASS "C" FLAME SPREAD PER

STRUCTURAL FRAME ROOF CONSTRUCTION **EXTERIOR NONBEARING WALLS EXTERIOR BEARING WALLS** INTERIOR NONBEARING WALLS INTERIOR BEARING WALLS FLOOR CONSTRUCTION

### ACCESSIBILITY NOTES

- 1. FLOOR SURFACES ARE SLIP RESISTANT. 2. ALL CHANGES IN FLOOR ELEVATION ALONG ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2" IN HEIGHT. CHANGES BETWEEN 1/4" AND 1/2" SHALL BE CUT OR
- GROUND TO A BEVEL WITH 1:2 STEEPNESS. LATCHING AND LOCKING DOORS ARE SPECIFIED TO BE OPERABLE WITH A SINGLE EFFORT BY HARDWARE THAT DOES NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. DOOR OPENING HARDWARE IS SPECIFIED TO BE MOUNTED BETWEEN 34" AND 48" ABOVE FLOOR FINISH. 4. CLOSERS FOR FIRE-RATED DOORS ARE SPECIFIED TO BE POWER LEVEL 3 FOR
- INTERIOR DOORS 38" OR LESS IN WIDTH. MAXIMUM PULL OR PUSH EFFORT TO OPERATE NON-FIRE-RATED DOORS SHALL NOT EXCEED 8.5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS, MEASURED AT RIGHT ANGLES TO HINGED DOORS AND AT CENTER PLANE OF SLIDING OR FOLDING DOORS. SPECIFIED CLOSERS TO BE ADJUSTED
- 3. ALL DOORS ARE SPECIFIED 3'-0" MINIMUM IN WIDTH AND 6'-8" MINIMUM IN HEIGHT. DOORS ARE CAPABLE OF OPENING AT LEAST 90 DEGREES WITH A MINIMUM OF 32" CLEAR WIDTH. FLOOR AREAS ON EACH SIDE OF DOORS ARE SPECIFIED TO BE LEVEL AND
- CLEAR. THE DIMENSIONS OF THE LEVEL AREAS ARE SPECIFIED TO MEET ICC A117.1 2009, IAC AND ADA CLEARANCE REQUIREMENTS. A MAXIMUM CHANGE IN LEVEL OF 1/2" ALLOWED AT THRESHOLD OF THE DOORWAY. CHANGES BETWEEN 1/4" AND 1/2" SHALL BE CUT OR GROUND TO A BEVEL WITH 1:2

**OWNER** 

**Q39** 

. MOUNT ALL SWITCHES, RECEPTACLES, THERMOSTATS, ETC IN COMPLIANCE WITH ADA STANDARDS.

PROJECT TEAM

### MOLD/MILDEW REQUIREMENTS

- IN THE EVENT THE CONTRACTOR DISCOVERS, AT ANY TIME DURING DEMOLITION, CONSTRUCTION AND/OR REMODELING OPERATIONS, EXISTING CONDITIONS POTENTIALLY INCLUDING THE PRESENCE OF MOLD AND/OR MILDEW, IMMEDIATELY NOTIFY CLIENT AND THE PROFESSIONAL OF RECORD, IN WRITING, OF THE CONCERNS AND/OR SUSPICIONS. RETAIN A MOLD AND MILDEW CERTIFIED TESTING AGENCY TO PERFORM AN INVESTIGATION AND TESTING AS REQUIRED TO EVALUATE THE NATURE AND
- EXTENT OF DAMAGES. IF THE TESTING AGENCY CONFIRMS HAZARDS, OBTAIN A MINIMUM OF TWO (2) BIDS FROM COMPANIES QUALIFIED AND LICENSED TO PERFORM ALL NECESSARY REMEDIATION WORK, COMPLYING WITH ALL LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS, CODES, AND STATUTES ONCE DISCOVERY OR SUSPICION OF MOLD AND/OR MILDEW IS MADE, TAKE ALL RESPONSIBLE MEASURES AND PRACTICE PRECAUTIONS TO PROTECT ALL CONSTRUCTION PERSONNEL AND THE PUBLIC FROM EXPOSURE TO MOLD AND/OR MILDEW, AND SUCH PRECAUTIONS SHALL REMAIN IN PLACE UNTIL SUCH A TIME AS THE CLIENT OR HEALTH AUTHORITY DIRECTS OTHERWISE CONSTRUCTION OPERATIONS SHALL NOT BE STOPPED OR CURTAILED, EXCEPT IN THE AREA OF MOLD/MILDEW CONCERN, DUE TO THESE REQUIRED
- MAKE ALL REASONABLE EFFORTS TO AVOID CONDITIONS FAVORABLE TO THE DEVELOPMENT OF MOLD AND MILDEW, ESPECIALLY IN NON-VENTILATED VOIDS OR WALL CAVITIES. IN ALL CASES, INTERIOR SPACES AND INTERIOR FINISHED CONSTRUCTION SHALL BE MAINTAINED IN DRY AND WELL-VENTILATED
- . COMPLY WITH FEDERAL ENVIRONMENTAL AND OSHA REGULATIONS AND ALL LOCAL AND STATE HEALTH DEPARTMENT REQUIREMENTS AND RECOMMENDATIONS REGARDING MOLD AND MILDEW.
- ALL PENETRATIONS SHALL BE SEALED WATER-TIGHT TO PREVENT MOISTURE MIGRATION FROM PENETRATING THE WEATHER BARRIER LOCATED WITHIN THE EXTERIOR BUILDING WALLS ENSURE PLUMBING CHASES ARE FREE OF ANY LEAKING PIPES CAUSING ADDED MOISTURE. ALL EXISTING SUPPLY AIR PATHS AND ALL EXISTING RETURN AIR
- PATHS AND PLENUMS SHALL BE KEPT DRY. . CLEAN AND TREAT ALL REUSED DUCTWORK FOR REMOVAL OF ANY POTENTIAL MOLD AND MILDEW. ALL DAMP AREAS SHALL BE DRIED THOROUGHLY INSIDE AND OUTSIDE OF THE DUCT WORK PRIOR TO ENCLOSURE.

### SIGNAGE REQUIREMENTS

- REQUIRED ACCESSIBLE ELEMENTS SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AT THE FOLLOWING LOCATIONS: -ACCESSIBLE ENTRANCES WHERE NOT ALL ENTRANCES ARE ACCESSIBLE. -ACCESSIBLE ROOMS WHERE MULTIPLE SINGLE-USER TOILETS ARE CLUSTERED AT A SINGLE LOCATION. -ACCESSIBLE CHECK-OUT AISLES WHERE NOT ALL AISLES ARE ACCESSIBLE. HE SIGN. WHERE PROVIDED, SHALL BE ABOVE THE CHECK-OUT AISLE IN TI
- -UNISEX TOILET AND BATHING ROOMS. DIRECTIONAL SIGNAGE INDICATING THE ROUTE TO THE NEAREST LIKE ACCESSIBLE ELEMENT SHALL BE PROVIDED AT THE ABOVE LISTED LOCATIONS. THESE DIRECTIONAL SIGNS SHALL INCLUDE THE INTERNAL SYMBOL OF ACCESSIBILITY AT EACH SEPARATE -SEX TOILET INDICATING THE LOCATION OF

SAME LOCATION AS THE CHECK-OUT AISLE NUMBER OR TYPE OF CHECK-OUT

- THE NEAREST UNISEX TOILET. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND. THE BLUE SHALL BE EQUAL TO COLOR NO. 15090 IN FEDERAL STANDARD 599B. PICTOGRAMS AND THEIR FIELDS SHALL HAVE A NON-GLARE FINISH, PICTOGRAMS SHALL CONTRAST THEIR FIELDS, WITH EITHER A LIGHT PICTOGRAM ON A DARK FIELD OR A DARK PICTOGRAM ON
- 4. CHARACTER AND SYMBOLS OF SIGNS SHALL BE IN CONTRAST WITH THEIR BACKGROUND AND SHALL BE EGGSHELL, MATTE, OR OTHER NON-GLARE MATERIAL OR FINISHES. THE UPPERCASE LETTER "O" SHALL BE USED TO DETERMINE THE ALLOWABLE WIDTH OF ALL CHARACTERS OF A FONT. THE WIDTH OF THE UPPERCASE LETTER "O" OF THE FONT SHALL BE 55 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE "I" OF THE FONT, 2010 ADA SECTION 703.2 CHARACTER HEIGHT MEASURED FROM THE BASELINE OF THE
- CHARACTER SHALL BE 5/8" (16 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I". WHEN RAISED CHARACTERS OR SYMBOLS ARE USED, THEY SHALL CONFORM TO THE FOLLOWING: - LETTERS AND NUMBERS ON SIGNS SHALL BE RAISED 1/32" MINIMUM AND SHALL BE SANS-SERIF UPPERCASE CHARACTERS. - RAISED CHARACTERS OR SYMBOLS SHALL BE A MINIMUM OF 5/8" HIGH AND 2" MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I". - PICTORIAL SYMBOL SIGNS (PICTOGRAMS) SHALL BE ACCOMPANIED BY THE

EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE

PICTOGRAM. THE BORDER DIMENSION OF THE PICTOGRAM SHALL BE A

MINIMUM OF 6" IN HEIGHT. ACCESSIBLE SIGNAGE SHALL USE GRADE II BRAILLE. 3. A TACTILE SIGN STATING "EXIT" SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE. REFERENCE DOOR SCHEDULE FOR LOCATIONS.

### GENERAL REQUIREMENTS

- THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR IS RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF ALL CONTRACT DOCUMENTS. THE FAILURE TO REVIEW AND UNDERSTAND DOCUMENTS DOES NOT RELIEVE ANY RESPONSIBILITY FOR PROPERLY PREFORMING WORK. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED BECAUSE OF CONDITIONS THAT OCCUR DUE TO FAILURE TO FAMILIARIZE WORKERS WITH THIS KNOWLEDGE.
- REVIEW AND BID ALL CONTRACT DOCUMENTS. INCLUDING DRAWINGS. SPECIFICATIONS, AND ANY ADDITIONAL REQUIREMENTS DELIVERED AS RESPONSES TO BID QUESTIONS AND ADDENDUMS, BUILLETINS OR REVISIONS ALSO REVIEW AND BID CLIENT PROVIDED DOCUMENTS, SUCH AS THE DESIGN DEVELOPMENT PACKAGE, EQUIPMENT CUT SHEETS, AND VENDOR SHOP DRAWINGS. NOTIFY THE ARCHITECT AND CLIENT OF QUESTIONS OR DISCREPANCIES PRIOR TO BID SUBMISSIONS.
- DO NOT SCALE DRAWINGS. DIMENSIONS SHOWN ON PLANS ARE TO FACE OF FINISH OR CENTER LINE OF COLUMN, UNO. FOLLOW SUBSTITUTION REQUESTS AS DESCRIBED WITHIN PROJECT MANUAL. NO DEVIATION FROM CONTRACT DRAWINGS AND SPECIFICATIONS ALLOWED
- WITHOUT APPROVAL OF THE ARCHITECT OR CLIENT. . FOLLOW TYPICAL CONDITION DETAILS IN ASSUMPTION THAT ALL LIKE OR SIMILAR CONDITIONS ARE THE SAME UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE. BRING ANY DISCREPANCY QUESTIONS OF APPLICABLE DETAILS TO THE ATTENTION OF THE ARCHITECT FOR REVIEW IMMEDIATELY
- UPON DISCOVERY REPORT ANY DRAWING DISCREPANCIES FOUND IN THE FIELD IMMEDIATELY TO CLIENT AND THE ARCHITECT PRIOR TO MAKING ANY STRUCTURAL MODIFICATIONS OR ORDERING ANY MATERIALS.
- GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF CONSTRUCTION ACTIVITIES. PROVIDE ALL REQUIRED NOTICES FOR INSPECTIONS AND APPROVALS OF THE WORK BY THE AUTHORITY HAVING JURISDICTION. THE MOST RESTRICTIVE CODE REQUIREMENTS AS INTERPRETED BY LOCAL OFFICIALS APPLY.
- FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS UNLESS IT IS SPECIFICALLY NOTED AS BEING FURNISHED BY CLIENT. EVEN EQUIPMENT OR MATERIALS FURNISHED BY CLIENT MAY REQUIRE UNLOADING BY THE GENERAL CONTRACTOR. ). ORDER MATERIALS TO PROHIBIT DELAYS OF THE CONSTRUCTION SCHEDULE
- OF THIS PROJECT. COORDINATE DELIVERY OF ALL MATERIALS IN A TIMELY MANNER UPON A CLIENT APPROVED CONSTRUCTION SCHEDULE. ARRANGE PRECONSTRUCTION MEETING WITH ALL TRADES AND CLIENT. MEETING SHALL TAKE PLACE PRIOR TO COMMENCING WORK OR ORDERING MATERIALS. 2. PROVIDE OR MAINTAIN EXISTING SANITARY FACILITIES DURING THE DURATION
- OF THIS PROJECT IN ACCORDANCE WITH INTERNATIONAL PLUMBING CODE AND 13. WORK IN A SAFE AND PROFESSIONAL MANNER AND IN STRICT ACCORDANCE WITH THE APPLICABLE HEALTH AND SAFETY, BUILDING CODES, AND 14. KEEP WORK AREA CLEAN AND FREE OF DEBRIS AND IS TO REMOVE ALL TRASH AND DEBRIS FROM THE CONSTRUCTION AREA DAILY.
- 15. PROTECT SLAB FROM DAMAGE OR STAINING. 16. REPAIR OR REPLACE ANY DAMAGE TO PROPERTY (ADJACENT OR EXISTING), WHICH OCCURS DURING THE PROCESS OF CONSTRUCTION AT NO ADDITIONAL COST TO CLIENT. 17. CLEAN MUD AND REMOVE DEBRIS TRACKED ONTO EXTERIOR PAVING OR CITY

STREETS DURING CONSTRUCTION ACTIVITIES.

18. COORDINATE CONCRETE WASH DOWN AREA WITH CLIENT

- 19. PROVIDE FINAL CLEANING AND SANITIZATION FOR ALL FOOD PREPARATION ROOMS, EQUIPMENT, AND RESTROOM AREAS. CLIENT MUST INSPECT AND APPROVE THIS WORK. 20. PROVIDE RECORD DRAWINGS AND WARRANTY DOCUMENTATION IN CONJUNCTION WITH THE CERTIFICATE OF OCCUPANCY. RECORD DRAWINGS SHALL PROVIDE AS BUILT INFORMATION INCLUDING GRAPHIC MODIFICATIONS OF ALL DEVIATIONS OCCURRING IN THE FIELD DURING CONSTRUCTION
- MODIFICATIONS INTO THE RECORD DRAWINGS. CONFIRM FORMAT WITH I. PROVIDE 1/4" CONTINUOUS CAULK / SEALANT AT ALL DISSIMILAR MATERIAL TRANSITIONS, PLUMBING FIXTURES, COUNTERS, ETC. UNO, COORDINATE WITH CLIENT AND REFERENCE PROJECT MANUAL FOR SPECIFICATIONS. 22. AVOID EXPOSED UTILITY PIPING OR CONDUIT ALONG COOLER FREEZER PANELS. HOWEVER, WHERE UTILITIES MUST BE EXPOSED AT COOLER FREEZER PANELS, CONTRACTOR SHALL PROVIDE INSTALL FOLLOWING AN OPTION DESCRIBED BELOW:

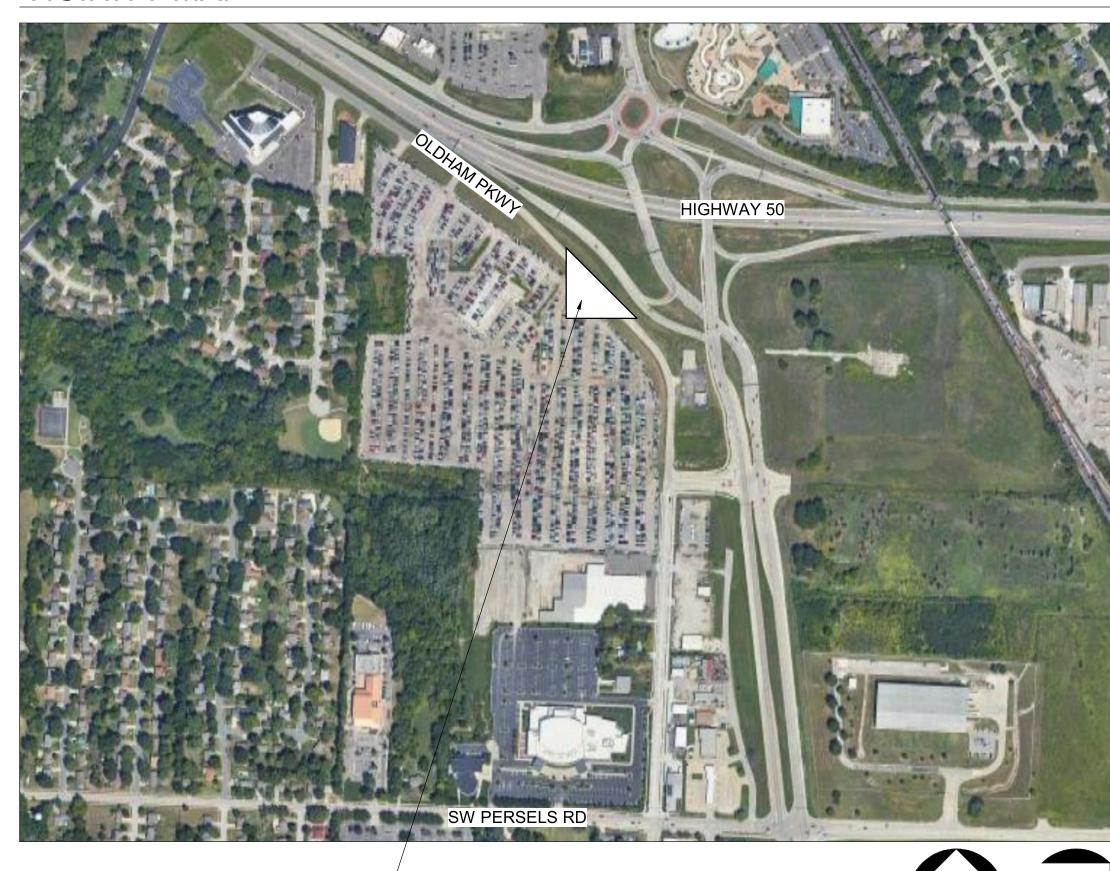
ACTIVITIES, CONSOLIDATE AND INCORPORATE ALL SUBCONTRACTORS'

- SURFACE MOUNT UTILITIES WITH NON-CORROSIVE ANCHORS; SEAL PANEL CONTINUOUSLY WITH SEALANT. - INSTALL UTILITIES 1/2" OFF FACE OF PANEL TO ALLOW FOR CLEANING, USE ONLY NON-CORROSIVE MATERIALS FOR SPACERS AND ANCHORS. - COVER UTILITIES WITH 20 GAUGE STAINLESS STEEL BENT PLATES MOUNTED TO WALL WITH NON-CORROSIVE ANCHORS; APPLY CONTINUOUS SEALANT ALONG EDGES AND JOINTS. 23. PROVIDE LETTERING INDICATING UNIT NUMBERS ON ALL ROOF TOP UNITS.

24. ALL BLOCKING BY GC, COORDINATE WITH CLIENT AND REFERENCE DETAILS

AND SECTIONS FOR LOCATIONS, CUT TO SIZE AS REQUIRED. 25. NO VISIBLE INSULATION AT GLAZING OR FRAMING. 26. ALL EXTERIOR WALLS TO HAVE INSULATION R25 PER COMCHECK CALCULATIONS. NOT SHOWN IN DETAILS FOR CLARITY.

### **VICINITY MAP**



PROJECT SITE

SYMBOLS LEGEND

A101

101 ROOM NAME

NEW

**EXISTING** 

DEMOLISHED

NOT IN SCOPE

SECTION INDICATOR

**ELEVATION INDICATOR** 

**DETAIL INDICATOR** 

GRIDLINE INDICATOR

LEVEL INDICATOR

**ROOM TAG** 

**REVISION TAG** 

INTERIOR WALL TAG

**EXTERIOR WALL TAG** 

FINISH TAG

DOOR TAG

WINDOW TAG

**EQUIPMENT TAG** 

# FIRE SAFETY REQUIREMENTS

- REQUIRED BY LOCAL, STATE, AND FEDERAL AUTHORITIES HAVING JURISDICTION AT ALL TIMES DURING DEMOLITION AND NEW CONSTRUCTION. MAKE FIELD ADJUSTMENTS TO ALL EXIT SIGNS AND EMERGENCY LIGHTING PER INSPECTIONS FROM THE FIRE MARSHAL HAVING AUTHORITY PRIOR FOR FINAL APPROVALS. LIGHTS SHOWN ON ELECTRICAL DRAWINGS ARE SUBJECT TO CHANGE BASED ON INSPECTIONS. PREVENT FLAMMABLE MATERIALS OR LIQUID STORAGE WITHIN BUILDING OR
- CLIENT DEMISED PREMISE. 4. PROVIDE FIRE EXTINGUISHERS IN ACCORDANCE WITH NFPA 10. AUTHORITY HAVING JURISDICTION SHALL APPROVE FINAL FIRE EXTINGUISHER QUANTITY AND LOCATIONS. FOR BIDDING PURPOSES, PROVIDE COST PER UNIT. PORTABLE FIRE EXTINGUISHER SHALL BE LOCATED WITHIN 30 FEET OF COMMERCIAL COOKING EQUIPMENT. FIRE EXTINGUISHERS ARE TO BE MOUNTED SUCH THAT THE BOTTOM OF THE UNIT IS 26" AFF MAX . PROVIDE (1) UL LISTED 2A:20BC DRY CHEMICAL FIRE EXTINGUISHER, OR (1) STANDARD UL LISTED 2-1/2 GALLON WATER (E-10) AND (1) UL LISTED 10BC
- SQFT OF WORK AREA OR FRACTION THEREOF (MINIMUM OF TWO AVAILABLE IN ALL CONSTRUCTION AREAS AT ALL TIMES) DURING ENTIRE CONSTRUCTION 6. PROVIDE AND INSTALL KNOX BOX. COORDINATE TYPE OF BOX AND LOCATION WITH FIRE DEPARTMENT OFFICIAL. SEAL ALL FIRE RATED EGRESS CORRIDORS WITH INTUMESCENT SEALING
- SYSTEMS TO DECK. SEAL BOTH SIDES OF VERTICAL JOINTS AT CMU / GYPSUM BOARD WALLS. SEAL WALL PENETRATIONS SUCH AS BAR JOISTS, PIPING, CONDUIT, DUCTWORK, ETC. PER FIRE STOP MANUFACTURER'S 3. PROVIDE FIRE-STOPPED MATERIAL IN ACCORDANCE WITH LOCAL CODES FOR
- PENETRATIONS IN WALLS, FLOORS OR ROOF REQUIRING PROTECTED HIRE A LICENSED SPRINKLER CONTRACTOR. CONTRACTOR IS TO SUBMIT SIGNED AND SEALED SPRINKLER DRAWINGS FOR APPROVAL PRIOR TO ANY
- AREA WITH REQUIRED ADJUSTMENTS TO EXISTING WORK, FURNISHED AND INSTALLED BY A LICENSED SPRINKLER CONTRACTOR, ANY MODIFICATION TO EXISTING SPRINKLER MAIN LINES MUST BE COORDINATED WITH ARCHITECT AND ENGINEER FOR CLIENT APPROVAL. 10. PROVIDE FIRE BLOCKING IN ACCORANCE WITH SECTION 718.2 AT THE FOLLOWING LOCATIONS: - IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AT THE CEILING AND FLOOR LEVELS. - IN CONCEALED SPACES OF STUD WALLS AND PARTIOITNS, INCLUDING
- AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTALS SPACES SUCH AS THOSE OCCURING AT SOFFITS. DROP

ABBREVIATION	DEFINITION
BH	BUGLE HEAD (FLAT HEAD, COUNTERSUNK)
BP	BLACK PHOSPHATE OVER CARBON STEEL
HEX	SLOTTED HEX WASHER
H/L	HIGH / LOW
KS	KNURLED SHANK
PAF	POWDER ACTUATED FASTENER
SD	SELF DRILLING

### FASTENER SCHEDULE

### THESE ARE MINIMUM REQUIREMENTS FOR CONNECTING AND ATTACHING INTERIOR NON-STRUCTURAL FRAMING MEMBERS AND SHALL NOT SUPERSEDE STRUCTURAL REQUIREMENTS

- MAINTAIN EXISTING FIRE PROTECTION, MEANS OF EGRESS, AND LIFE SAFETY
- CARBON DIOXIDE FIRE EXTINGUISHER MOUNTED TOGETHER IN EACH 3000
- PERMIT, SUBMIT PLANS TO ARCHITECT AND ENGINEER FOR REVIEW, CONFIRM ALL WATER FLOW TEST INFORMATION WITH LOCAL FIRE DEPARTMENT AND WATER DEPARTMENT VIA SPRINKLER CONTRACTOR. INSTALL IBC APPROVED AUTOMATIC FIRE SPRINKLER SYSTEM THROUGHOUT NEW SCOPE OF WORK
- FURRED SPACES, AT 10-FOOT INTERVALS ALONG THE LENGTH OF THE WALL

CEILINGS AND COVE CEILINGS.
- IN CONCEALED SPACES BETWEEN STAIRWAY STRINGERS AT THE TOP AND BOTTOM OF THE RUN AND BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF STAIRS IF THE WALL UNDER THE STAIR IS UNFINISHED.
- IN OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS, FIREPLACES AND SIMILAR OPENINGS WHICH AFFORD A PASSAGE FOR FIRE AT CEILING AND FLOOR LEVELS, WITH NONCOMBUSTIBLE MATERIALS.

ABBREVIATION	DEFINITION
	·
BH	BUGLE HEAD (FLAT HEAD, COUNTERSUNK)
BP	BLACK PHOSPHATE OVER CARBON STEEL
HEX	SLOTTED HEX WASHER
H/L	HIGH / LOW
KS	KNURLED SHANK
PAF	POWDER ACTUATED FASTENER
SD	SELF DRILLING

SELF TAPPING

MATERIALS	SIZE	DRIVER DESIGN	HEAD	LENGTH	TIP	THREADS	QUANTITY
DRYWALL TO METAL FRAMING	#10 WITH SERRATIONS	PHILLIPS #2	PANCAKE	1/2" MIN PENETRATION BEYOND METAL FRAMING	SD	FINE	TO MEET THE GYPSUM ASSOCIATION GUIDELINES
METAL STUD TO TRACKS	#10 WITH SERRATIONS	PHILLIPS #2	PANCAKE	3/4" MIN	SD		ONE PER STUD FLANGE
METAL TO METAL FRAMING	#10 WITH SERRATIONS	HEX	HEX	3/4" MIN	SD		AS SHOWN ON DETAILS WITH MI 1-1/2" BETWEEN EACH (MIN 3)
DRYWALL TO METAL FRAMING	#8	PHILLIPS #2	ВН	1/2" MIN PENETRATION BEYOND THE STUD	ST	FINE	TO MEET THE GYPSUM ASSOCIATION GUIDELINES
SHEET METAL TO STEEL	#12	HEX	HEX	1/2" MIN PENETRATION BEYOND THE STEEL THICKNESS	SD		AS SHOWN ON DETAILS WITH MI 1-1/2" BETWEEN EACH
CEMENT BOARD TO METAL FRAMING	#8 COATED	PHILLIPS #2	WAFER	1/2" MIN PENETRATION BEYOND METAL FRAMING	SD	H/L	TO MEET THE GYPSUM ASSOCIATION GUIDELINES
CEMENT BOARD TO WOOD FRAMING	#9 COATED	PHILLIPS #2	WAFER	3/4" PENETRATION INTO WOOD	ST	H/L	TO MEET THE GYPSUM ASSOCIATION GUIDELINES
WOOD TO STEEL	#12	HEX	HEX	1/2" MIN PENETRATION BEYOND THE STEEL THICKNESS	SD		AS SHOWN ON DETAILS
WOOD TO STEEL	.157" DIA	PAF		PENETRATION THROUGH STEEL	KS		AS SHOWN ON DETAILS
WOOD TO METAL FRAMING	#12	PHILLIPS #3	FLAT	1/2" MIN PENETRATION BEYOND METAL FRAMING	SD		AS SHOWN ON DETAILS
METAL STUD TRACK TO CONCRETE FLOOR	1/4"	HEX	HEX	1-1/2" MIN EMBEDMENT			(2) AT 16" OC - LOCATE 1/4" FROM EDGE OF TRACK
METAL STUD TRACK TO CONCRETE FLOOR	.157" DIA	PAF		1-1/4" MIN EMBEDMENT	KS		(2) AT 16" OC - LOCATE 1/4" FROM EDGE OF TRACK
METAL STUD TRACK TO COOLER PANEL	#12	HEX	HEX	1-1/2" MAX EMBEDMENT	SD		AS SHOWN ON DETAILS

### 3 - ARCHITECTURAL A100 SITE PLAN A101 PARTITION PLAN A102 PARTITION DETAILS CANOPY ENLARGED PLAN AND DETAILS ORIGINAL ISSUE A201 CANOPY DETAILS ORIGINAL ISSUE A300 ROOF PLAN A301 ROOF DETAILS ORIGINAL ISSUE A302 BUILDING SECTIONS ORIGINAL ISSUE EXTERIOR ELEVATIONS ORIGINAL ISSUE WALL SECTIONS WALL SECTIONS ORIGINAL ISSUE TRASH ENCLOSURE PLAN AND DETAILS ORIGINAL ISSUE ENLARGED PATIO PLAN AND DETAILS ORIGINAL ISSUE A800 DOOR AND WINDOW INFORMATION ORIGINAL ISSUE 03 - STRUCTURAL S001 GENERAL NOTES ORIGINAL ISSUE S002 SPECIAL INSPECTIONS ORIGINAL ISSUE CONCRETE TABLES 05/01/25 05/01/25 LOADING DIAPHRAGMS **ORIGINAL ISSUE** S101 05/01/25 FOUNDATION PLAN ORIGINAL ISSUE S102 ROOF FRAMING PLAN 05/01/25 ORIGINAL ISSUE TYPICAL FOUNDATION DETAILS & SECTIONS 05/01/25 **ORIGINAL ISSUE** S211 FOUNDATION DETAILS & SECTIONS **ORIGINAL ISSUE** 05/01/25 05/01/25 TYPICAL FRAMING DETAILS & SECTIONS ORIGINAL ISSUE 05/01/25 FRAMING DETAILS & SECTIONS ORIGINAL ISSUE S321 05/01/25 STEEL SCHEDULES ORIGINAL ISSUE S401 SITE DETAILS 05/01/25 ORIGINAL ISSUE S501 MASONRY SCHEDULES AND DETAILS ORIGINAL ISSUE 05/01/25 04 - MECHANICAL M100 FLOOR PLAN - MECHANICAL 05/01/25 ORIGINAL ISSUE M200 ROOF PLAN - MECHANICAL 05/01/25 ORIGINAL ISSUE M300 MECHANICAL DETAILS, GEN. NOTES, & SYMBOLS 05/01/25 **ORIGINAL ISSUE** MEP100 | SPECIFICATIONS **ORIGINAL ISSUE** 05/01/25 MEP101 SPECIFICATIONS 05/01/25 **ORIGINAL ISSUE** 05/01/25 MEP102 | SPECIFICATIONS **ORIGINAL ISSUE** 05/01/25 MEP103 | MEP SCHEDULES ORIGINAL ISSUE 05 - PLUMBING P100 FLOOR PLAN - PLUMBING 05/01/25 ORIGINAL ISSUE P200 ROOF PLAN - PLUMBING ORIGINAL ISSUE 05/01/25 P300 PLUMBING SCHEDULES, GEN. NOTES, & SYMBOLS ORIGINAL ISSUE 05/01/25 06 - ELECTRICAL E001 SITE PLAN - ELECTRICAL 05/01/25 **ORIGINAL ISSUE** E100 FLOOR PLAN - POWER **ORIGINAL ISSUE** 05/01/25 05/01/25 E200 FLOOR PLAN - LIGHTING ORIGINAL ISSUE E300 FLOOR PLAN - SYSTEMS 05/01/25 ORIGINAL ISSUE 05/01/25 E400 ROOF PLAN - ELECTRICAL ORIGINAL ISSUE E500 ELECTRICAL DETAILS **ORIGINAL ISSUE** 05/01/25 E600 ELECTRICAL SCHEDULES, GEN. NOTES, & SYMBOLS 05/01/25 ORIGINAL ISSUE 09 - FIRE PROTECTION FP100 FLOOR PLAN - FIRE PROTECTION 05/01/25 ORIGINAL ISSUE ABBREVIATION LEGEND ABBREVIATION LEGEND

ACOUSTICAL CEILING TILE

AIR HANDLING

ARCHITECT

LONG LEG HORIZONTAL

LONG LEG VERTICAL

MAXIMUM

AMERICANS WITH DISABILITIES ACT

AMERICAN INSTITUTE OF STEEL CONSTRUC

AMERICAN SOCIETY OF TESTING AND MATER

ABOVE FINISHED FL

BELOW FINISHED FL

**BACK OF HOU** BOTTOM OF STEEL OR BOTTOM OF S CONTROL JO CENTER CONSTRUCTION MANAG CONCRETE MASONRY CONTINU DEMOLISH/DEMOLI7 DIMENSION/DIMENSION **EXTERIOR INSULATION AND FINISH SYS EXISTING TO REM** FINISHED FL FRONT OF HOL FIBERGLASS REINFORCED PLAS FIRE RETARDANT TREAT GENERAL CONTRAC **GYPSUM BO** HOLLOW ME HORIZON HOLLOW STRUCTURAL SECT HEATING, VENTILATION, AIR CONDITION INTERNATIONAL BUILDING C INTERNATIONAL CODE COU **INFORMAT** 

DRAWING INDEX

A000 COVER SHEET

C200 SITE PLAN

A001 LIFE SAFETY PLAN

A002 COMCHECK REPORT A003 SIGHT LINE STUDY

DEMOLITION PLAN

DIMENSION PLAN

PRE-CONSTRUCTION EROSION

MID-CONSTRUCTION EROSION POST-CONSTRUCTION EROSION

**EXISTING DRAINAGE MAP** 

PROPOSED DRAINAGE MAP

**GRADING PLAN** 

STORM LINE 100

UTILITY PLAN

L200 PLANTING DETAILS

STORM LINE 200 & 300

DOWNSPOUT PIPE PLAN

**EROSION CONTROL DETAILS** 

CONSTRUCTION DETAILS

CONSTRUCTION DETAILS

CONSTRUCTION DETAILS

LANDSCAPE PLAN

00 - GENERAL

01 - CIVIL

S312 FRAMING DETAILS & SECTIONS

701	I INICOLL	MEGIANIOAE
OOR	MEPFR	MECHANICAL, ELECTRICAL, PLUMBING, FIRE, REFRIGERATION
UNIT	MFR	MANUFACTURER
TION	MIN	MINIMUM
JRAL	MISC	MISCELLANEOUS
RIALS	MTL	METAL
OOR	MW	MILLWORK
DING	NIC	NOT IN CONTRACT
M OF	NO	NUMBER
USE	NTS	NOT TO SCALE
STUD	ОС	ON CENTER
OINT	OCV	ON CENTER VERTICALLY
LINE	ОН	OPPOSITE HAND
EAR	OTS	OPEN TO STRUCTURE
GER	PAF	POWDER ACTUATED FASTENER
UNIT	PCF	POUNDS PER CUBIC FOOT
ious	PLAM	PLASTIC LAMINATE
TION	PLF	POUNDS PER LINEAR FOOT
TER	PLY	PLYWOOD
DNAL	PSF	POUNDS PER SQUARE FOOT
STEM	PSI	POUNDS PER SQUARE INCH
ICAL	PT	PRESSURE TREATED
QUAL	PVC	POLYVINYL CHLORIDE
MAIN	QTY	QUANTITY
RIOR	RCP	REFLECTED CEILING PLAN
OOR	REF	REFER TO
USE	REINF	REINFORCING
STIC	RO	ROUGH OPENING
ATED	RR	RESTROOM
UGE	RTU	ROOF TOP UNIT
TOR	SCHED	SCHEDULE
ARD	SIM	SIMILAR
IGHT	SPECS	SPECIFICATIONS
ETAL	SQ	SQUARE
NTAL	SS	STAINLESS STEEL
TION	STR	STRUCTURAL
NING	TI	TENANT IMPROVEMENT
ODE	ТО	TOP OF
NCIL	TOS	TOP OF STEEL OR TOP OF STUD
TION	TYP	TYPICAL
TION	UNO	UNLESS NOTED OTHERWISE
IGTH	VERT	VERTICAL
INDS	VIF	VERIFY IN FIELD
.ORD	VOC	VOLATILE ORGANIC COMPOUND

SCHERRER

TM

ROFESSIONAL SEAL

62500002

CHECKED BY

ARCHITECT OF RECORD

LATEST REVISION | REVISED

05/01/25

05/01/25

05/01/25

05/01/25

05/01/25

05/01/25

05/01/25

05/01/25

ORIGINAL ISSUE

ORIGINAL ISSUE

ORIGINAL ISSUE

ORIGINAL ISSUE

ORIGINAL ISSUE

ORIGINAL ISSUE

**ORIGINAL ISSUE** 

ORIGINAL ISSUE

ORIGINAL ISSUE

ORIGINAL ISSUE

ORIGINAL ISSUE ORIGINAL ISSUE

ORIGINAL ISSUE

ORIGINAL ISSUE ORIGINAL ISSUE

ORIGINAL ISSUE

ORIGINAL ISSUE

ORIGINAL ISSUE ORIGINAL ISSUE

ORIGINAL ISSUE

OVERLAND PARK, KS 66204

THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

**COVER SHEET** 

7101 COLLEGE BLVD., STE. 400 **OVERLAND PARK, KS 66210** 

**CIVIL ENGINEER** 

BRR ORIGINAL PRINTED ON RECYCLED PAPER

MEDIUM DENSITY FIBERBOARD

**MECHANICAL** 

1000 W 39TH ST KANSAS CITY, MO 64111 (913) 205-7370

A LIGHT FIELD.

**BRR ARCHITECTURE** INC.

**ARCHITECT** 

8131 METCALF AVENUE **OVERLAND PARK, KS 66204** (913) 262-9095

STRUCTURAL ENGINEER

**SCHAEFER** 

(602) 362-1100

2800 NORTH CENTRAL AVENUE, SUITE 1250 PHOENIX, ARIZONA 85004

**LANKFORD** FENDLER + **ASSOCIATES** 1730 WALNUT ST

KANSAS CITY, MO 64108

(816) 221-1411

MECHANICAL ENGINEER

LANKFORD FENDLER + **ASSOCIATES** 1730 WALNUT ST KANSAS CITY, MO 64108 (816) 221-1411

**ELECTRICAL ENGINEER** 

PLUMBING ENGINEER **LANKFORD** FENDLER + **ASSOCIATES** 1730 WALNUT ST KANSAS CITY, MO 64108

(816) 221-1411

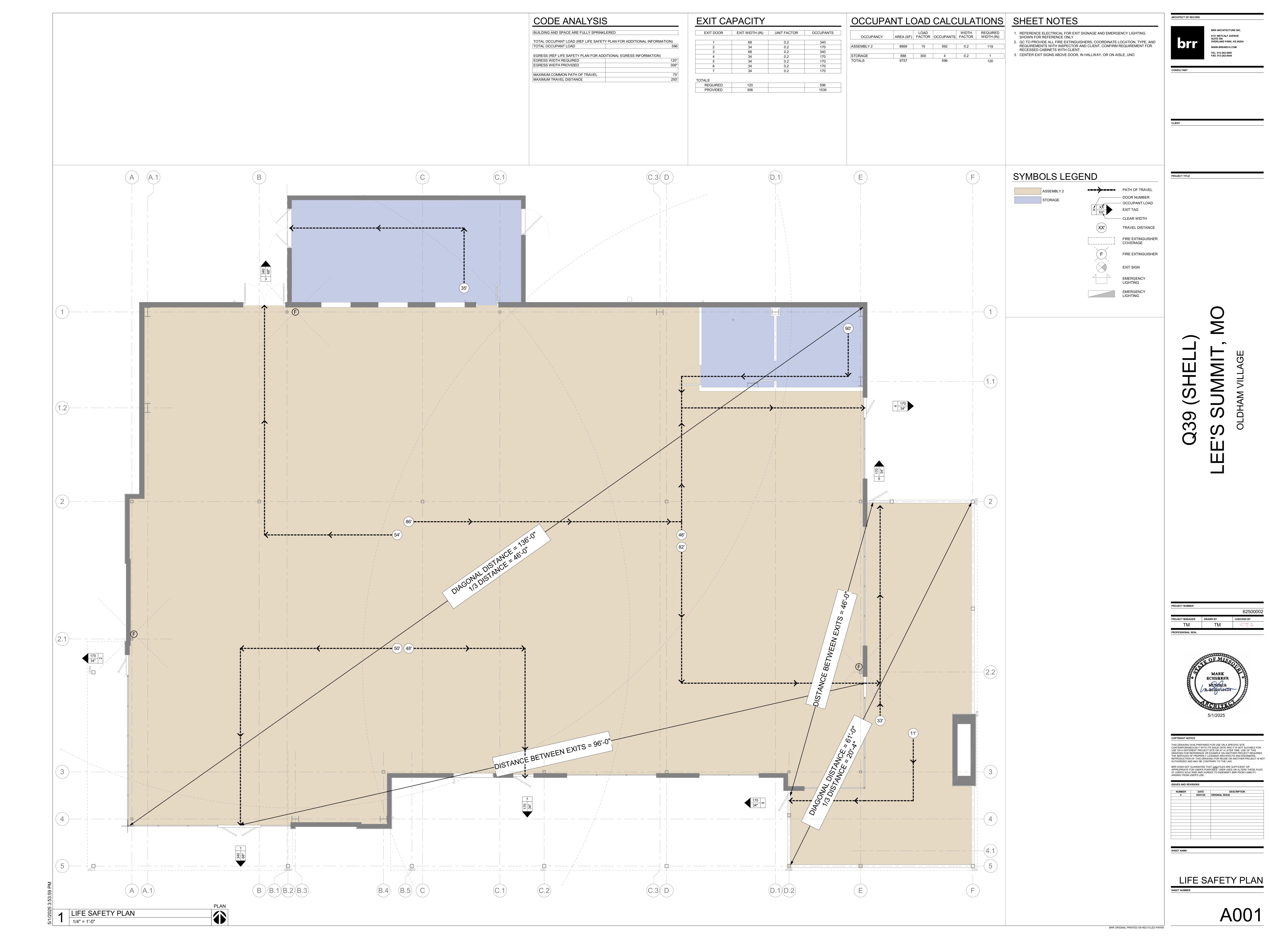
FIRE PROTECTION ENGINEER LANKFORD FENDLER + **ASSOCIATES** 1730 WALNUT ST KANSAS CITY, MO 64108

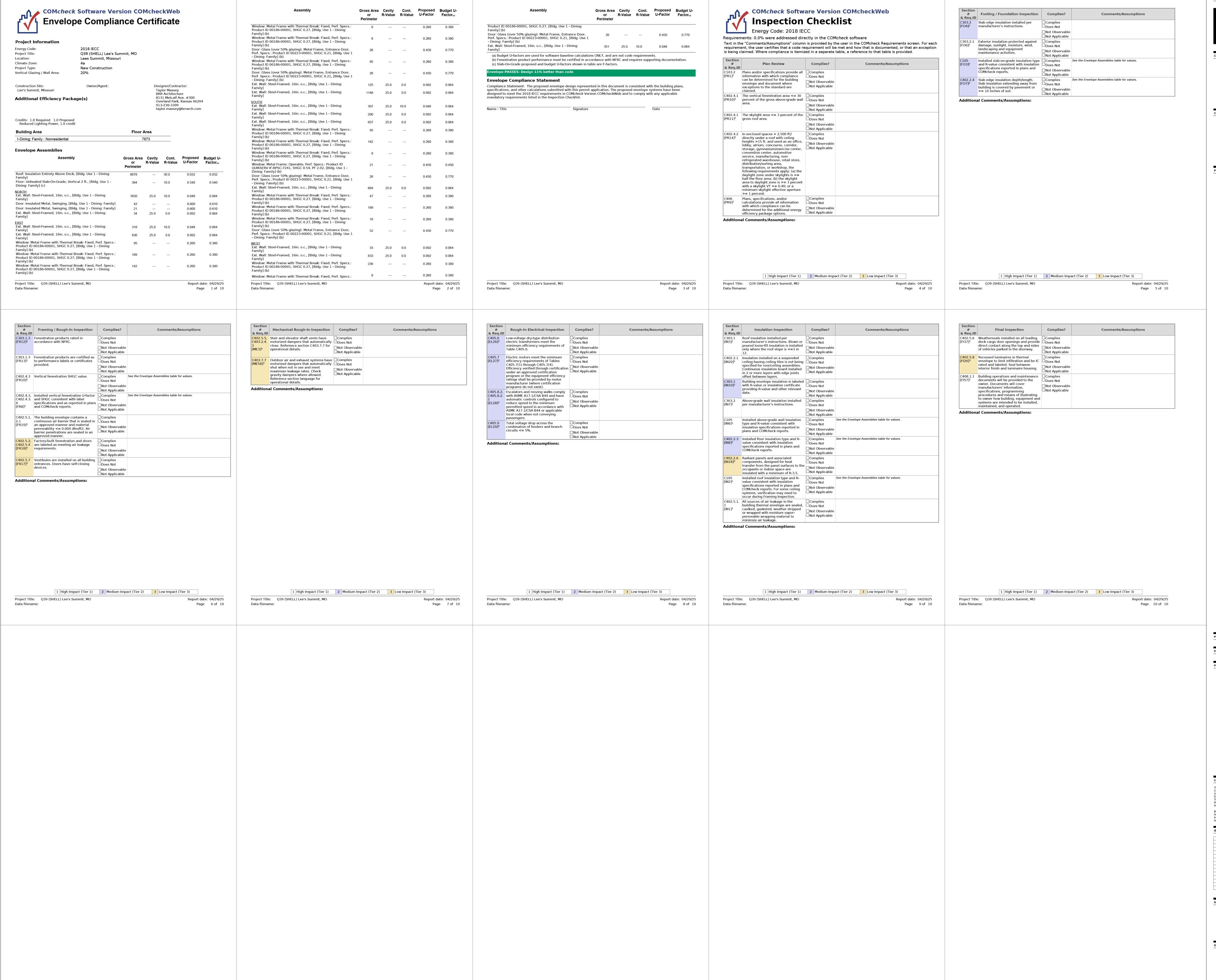
(816) 221-1411

**BHC** 

(913) 663-1900

WALL TO DECK





BRR ARCHITECTURE INC.

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044

CONSULTANT

NT

PROJECT TITLE

LEE'S SUMMIT, MO

PROJECT NUMBER

62500002

PROJECT MANAGER DRAWN BY CHECKED BY

TM TM CT. J.



COPYRIGHT NOTICE

THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

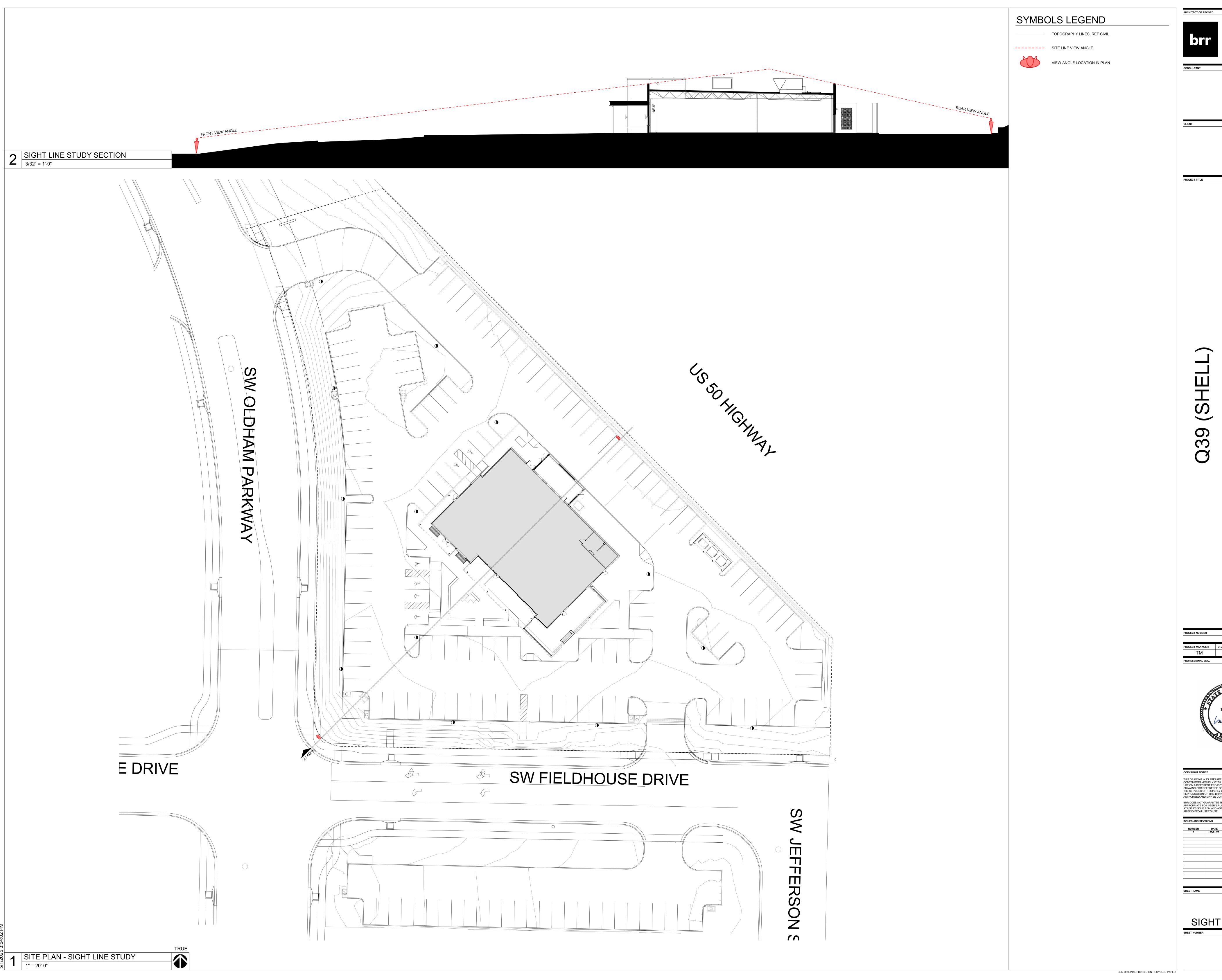
NUMBER DATE DESCRIPTION
0 05/01/25 ORIGINAL ISSUE

SHEET NAME

BRR ORIGINAL PRINTED ON RECYCLED PAPER

REPORT

A002

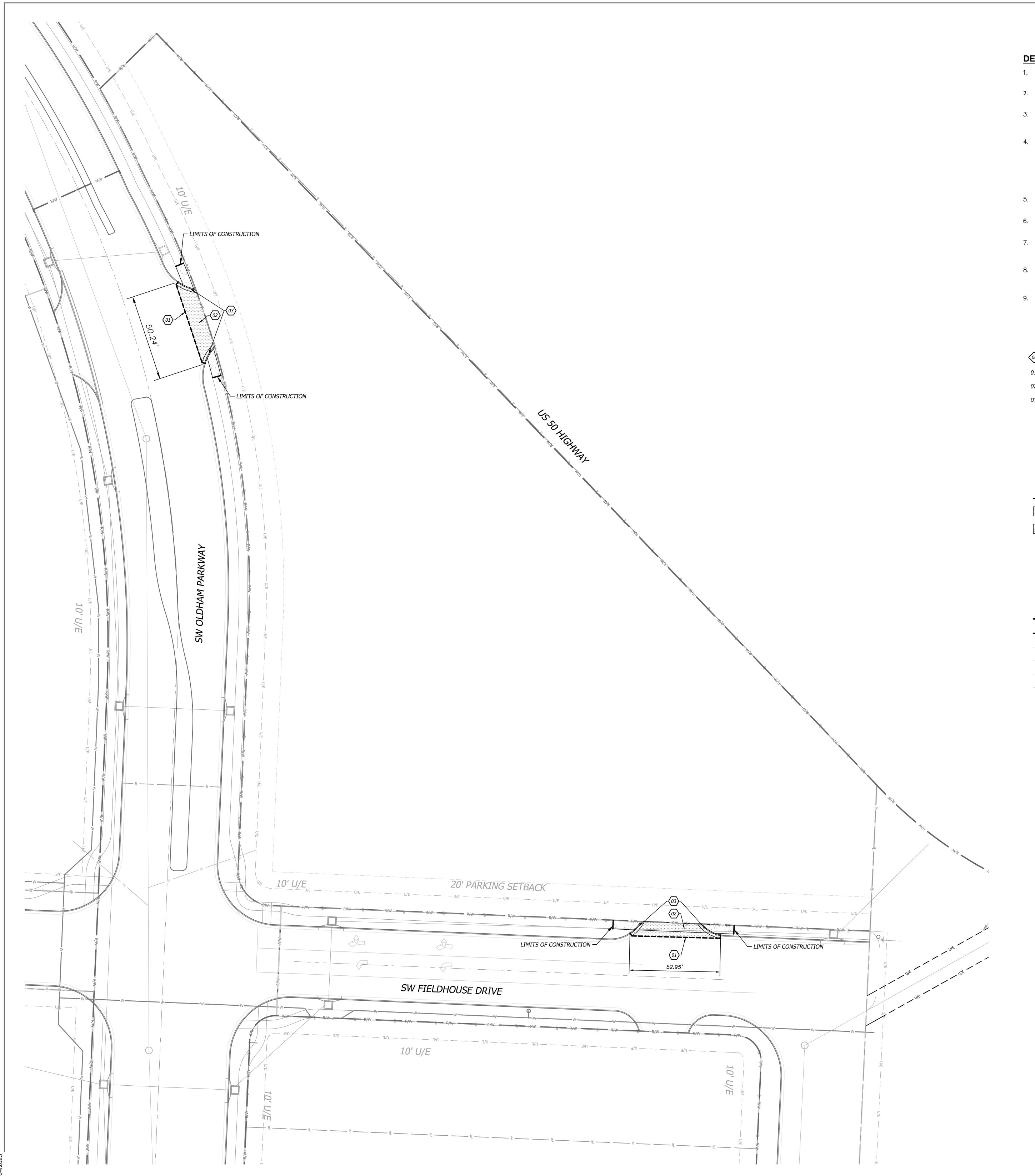


8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204 TEL: 913-262-9095 FAX: 913-262-9044



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

SIGHT LINE STUDY



### **DEMOLITION GENERAL NOTES**

- Contractor shall verify the location, size, material and depth of all utilities prior to any excavation or construction activity.
- 2. All materials shall be removed and disposed of off-site. It is the contractors responsibility to meet all applicable laws and regulations pertaining to the disposal of construction/demolition material.
- 3. The contractor shall ensure that any structures to remain which are damaged during demolition operations shall be repaired to meet current code, at no additional cost to the owner.
- 4. The contractor shall remove any and all existing debris which is encountered from the existing site. This shall include, but shall not be limited to, footings, concrete slabs, conduits, granular subgrade, utility services, and/or unsuitable structural fill material as determined by the owner's engineer. The cost for these removals shall be considered incidental to the project. Said debris shall become property of the contractor and it shall be the responsibility of the contractor to dispose of properly off—site.
- 5. It shall be the contractor's responsibility to meet all applicable laws and regulations pertaining to the disposal of construction/demolition material.
- 6. The contractor shall be responsible for obtaining and payment of any permits for demolition that pertain to this project.
- 7. All protection fencing shall be installed prior to demolition/construction activity.
  The contractor shall provide a 6—foot security fence around the entire job site with locked gated access points, if required by the owner or the City.
- 8. All existing utilities removed during construction shall have their trenches backfilled with structural fill and be compacted to the requirements for structural fill.
- 9. All removals required to properly perform the work (whether shown on the plans or not) shall be performed by the contractor at no additional cost to the owner.

### **DEMOLITION NOTES**

- 01 SAW CUT EXISTING PAVEMENT TO FULL DEPTH AND CLEAN EDGE.
- 02 REMOVE & DISPOSE OF EXISTING ASPHALT.
- 03 REMOVE & DISPOSE OF EXISTING CURB.

### **DEMOLITION LEGEND**

SAW CUT LINE

ASPHALT PAVEMENT TO BE REMOVED

CONCRETE SIDEWALK TO BE REMOVED

# LEGEND

R/W RIGHT - OF - WAY LINE

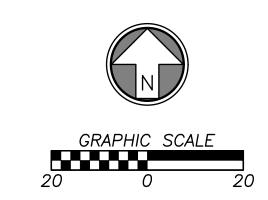
PROPERTY LINE

EXISTING OVERHEAD UTILITY LINES

——— UGE ——— EXISTING UNDERGROUND ELECTRICAL LINE

EXISTING GAS LINE

———— W———— EXISTING WATER LINE



BRR ORIGINAL PRINTED ON RECYCLED PAPER

BRR ARCHITECTURE INC.

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044



PROJECT TITLE

EFS SUMMIT, MO

PROJECT NUMBER

629100

PROJECT MANAGER DRAWN BY CHECKED BY

BRR BRR

PROFESSIONAL SEAL



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE
CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR
USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS
DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES
THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT
AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR
APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES
AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY
ARISING FROM USER'S USE.

ISSUES AND REVISIONS

NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

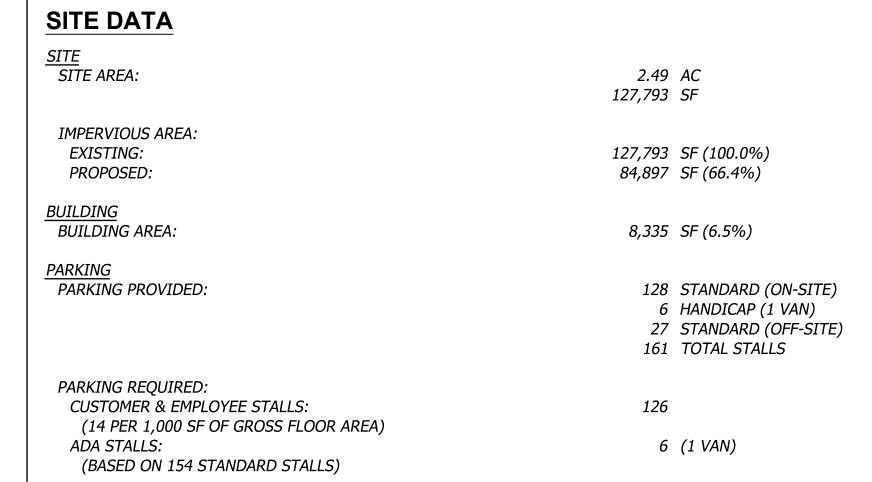
NUMBER DATE DESCRIPTION
0 05/01/25 ORIGINAL ISSUE

DEMOLITION PLAN

SHEET NAME

1. All work in public easement and Right—of—Way shall be installed per the requirements and specifications of the City of Lee's Summit, Missouri.

- 2. The Contractor shall be required to obtain all Federal, State, and Local permits required for this project prior to commencing construction.
  - 3. Any work adjacent to or crossing existing streets requires proper traffic control devices. Traffic control devices shall be placed in accordance with the
- 4. The contractor shall be required to demolish, remove and dispose of all existing structures, pavements, and features necessary to construct the improvements shown hereon. Any waste materials generated during construction shall be removed from the site by the Contractor and disposed of in accordance with all local, State, and Federal regulations governing such disposal.
- 5. The contractor shall prevent any trash, debris, or liquid wastes from being disposed of in sanitary sewers, storm sewers, or open drainage systems.
- 6. The Contractor shall be solely responsible to protect adjacent property, structures, and other improvements from damage during construction. In the event of damage to adjacent property, structures, or improvements, the contractor shall repair or replace such damage to the Owners's satisfaction at
- 7. Contractors at the site shall be solely responsible for jobsite safety for all aspects of work shown hereon.
- 8. All work and materials used in the construction of the improvements shown hereon shall comply with all referenced standards, specifications, and plan
- 9. All buildings are shown as a reference only. All buildings shall be located and constructed per the Architectural drawings prepared by others.
- 10. Contractor shall be responsible for contacting all utility companies for field locations of underground utilities affected by the contract. All existing utilities indicated on these plans are according to the best information available to the engineer; however, all utilities actually existing may not be shown. Utilities damaged through the negligence of the contractor to obtain the location of same shall be repaired or replaced at the expense of the
- 11. Coordinate with facility representative as to when construction activities may be performed to work with the operations of the facility.
- 12. Any and all hazards shall be properly identified and barricaded from access during all non-construction periods.
- 13. Unless specified otherwise, all construction shall meet the requirements of the Missouri Department of Transportation (MODOT) Standard Specifications,



### **ZONING**

CP-2 (PLANNED GENERAL BUSINESS DISTRICT)

# **CONSTRUCTION NOTES**

- 01 LEAD FREE, WATER-BORNE EMULSION BASED TRAFFIC PAINT FOR PARKING LOT STRIPING (WHITE ON ASPHALT & YELLOW ON CONCRETE).
- PROPOSED SCREEN WALL; REFER TO ARCHITECTURAL PLANS. PROPOSED OUTDOOR FIREPLACE; REFER TO ARCHITECTURAL PLANS
- PROPOSED MONUMENT SIGN; REFER TO ARCHITECTURAL PLANS.
- PROPOSED TRASH ENCLOSURE; REFER TO ARCHITECTURAL PLANS.
- PROPOSED STORM SYSTEM; REFER TO SHEET C700-C701 PROPOSED ROOF DRAIN SYSTEM; REFER TO SHEET C702
- PROPOSED TRANSFORMER PAD LOCATION; CONSTRUCTED TO EVERGY STANDARDS.
- PROPOSED LIGHT POLES; REFER TO E002. PROPOSED PLANTERS; REFER TO ARCHITECTURAL PLANS.
- PROPOSED MODULAR BLOCK RETAINING WALL; REFER TO DETAIL 003 ON C200 PROPOSED BUILDING CANOPY; REFER TO ARCHITECTURAL PLANS
- 13 PROPOSED IRON FENCE; REFER TO ARCHITECTURAL PLANS; CONTRACTOR TO COORDINATE SLAB THICKNESS REQUIRED FOR RAILING ANCHORS.
- 14 PROPOSED BENCHES, REFER TO ARCHITECTURAL PLANS.

### **DETAILS**

SEE CONSTRUCTION DETAILS - SHEETS C901-C903 DRIVEWAY ENTRANCE

CONCRETE CURB & GUTTER; RE. LEGEND FOR TYPE MODULAR BLOCK RETAINING WALL

MEDIUM DUTY ASPHALT PAVEMENT HEAVY DUTY ASPHALT PAVEMENT CONCRETE PAD

CONCRETE SIDEWALK 015 PAVER AREA

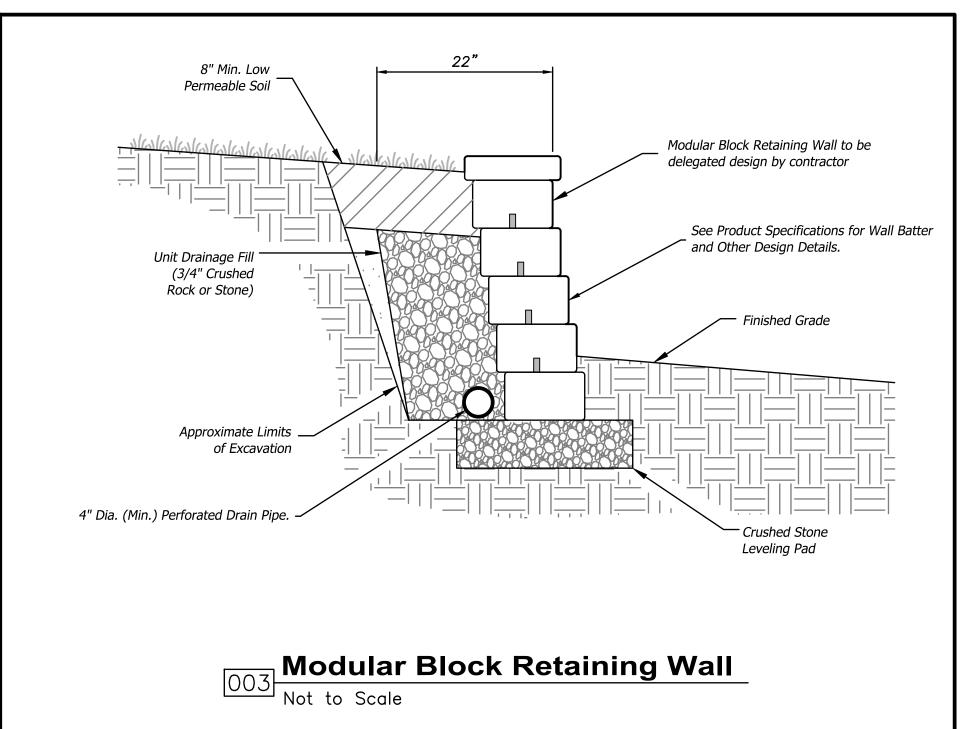
CONCRETE SEAT WALL STEEL/CONCRETE BOLLARD SIDEWALK RAMP 021 (ADA) HANDICAP PARKING STRIPING 022 (ADA) HANDICAP PARKING SIGNAGE

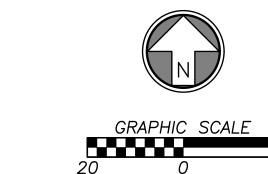
### PARKING STALL COUNT PROPOSED BUILDING MEDIUM DUTY ASPHALT PAVEMENT HEAVY DUTY ASPHALT PAVEMENT CONCRETE SIDEWALK

SITE LEGEND

CONCRETE PAD STANDARD CURB & GUTTER

ZERO HEIGHT CURB TRANSITION CURB





BRR ORIGINAL PRINTED ON RECYCLED PAPER

ARCHITECT OF RECORD BRR ARCHITECTURE INC. 8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

WWW.BRRARCH.COM TEL: 913-262-9095

7101 College Blvd., Suite 400 Overland Park, Kansas 66210 p. (913) 663-1900 BHC is a trademark of Brungardt Honomichl & Company, P.A.

PROJECT NUMBER PROJECT MANAGER DRAWN BY PROFESSIONAL SEAL



COPYRIGHT NOTICE THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

SITE PLAN





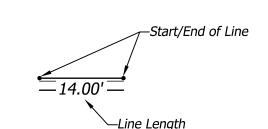
PROJECT TITLE

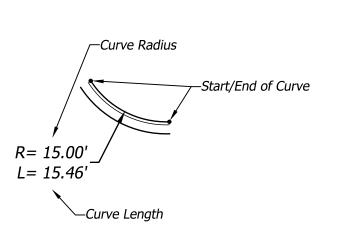
# Q39 (SHELL) E'S SUMMIT, MO

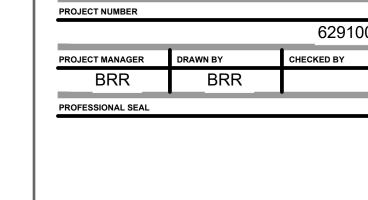
### **DIMENSION NOTES**

- 1. All dimensions are to/along back of curb unless otherwise noted.
- 2. All dimensions are to bottom of wall unless otherwise noted.

## DIMENSION LEGEND









HIS DRAWING WAS PREPARE					
CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR JSE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS					
DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES					
HE SERVICES OF PROPERLY	LICENSED ARCHITECTS AND ENGINEERS.				
	WING FOR REUSE ON ANOTHER PROJECT IS				
AUTHORIZED AND MAY BE CONTRARY TO THE LAW.					
BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR					
	JRPOSES, USER USES OR ALTERS THESE FIL				
AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY					
T USER'S SOLE RISK AND AG					
T USER'S SOLE RISK AND AG RISING FROM USER'S USE.					
RISING FROM USER'S USE.					
RISING FROM USER'S USE.					
RISING FROM USER'S USE.					

NUMBER	DATE	DESCRIPTION
0	05/01/25	ORIGINAL ISSUE

DIMENSION PLAN

BRR ORIGINAL PRINTED ON RECYCLED PAPER

### **GRADING NOTES**

- 1. Contractor shall obtain a copy of the <u>Geotechnical Services Report</u> for the project and be familiar with the existing conditions and recommendations contained in the report if such a report has been prepared.
- 2. Contractor is responsible for any over excavation of existing unsuitable soils will be required under building and pavement areas. Contractor shall perform over excavation of unsuitable soils as a part of this work.
- 3. Contractor shall obtain soils suitable as structural fill from off-site sources. All borrow materials must be tested and approved by the Geotechnical Engineer prior to importing the soils to the project site.
- 4. Contractor shall operate under the terms and permits included in the Stormwater Pollution Prevention Plan (SWPPP) prepared for this project and permitted through the State of Missouri. Contractor shall employ a qualified person to conduct regular inspections of the site erosion control measures and document such inspections in the SWPPP document maintained by the Contractor.
- 5. All topsoil, vegetation, root structures, and deleterious materials shall be stripped from the ground surface prior to the placement of embankments. Contractor shall obtain the on-site geotechnical representative's acceptance of the existing ground surface materials and the proposed fill material prior to the placement of fill.
- 6. All proposed contour lines and spot elevations shown are finish ground elevations. Contractor shall account for pavement depths, building pads, topsoil, etc when grading the site.
- 7. All disturbed areas that are not to be paved (green spaces) shall be finish graded with a minimum of six inches of topsoil. 8. All excavation and embankments shall comply with the recommendations provided by the geotechnical engineer.
- 9. Contractor shall meet requirements as outlined in City of Lee's Summit, Missouri Standard Specifications Section 2102.4 -Excavation, Trenching, and Backfilling where applicable.
- 10. All existing elevations are not surveyed, they are contours based on the Mass Grading plan provided by Engineering Solutions on 1/22/2025.

### **FLOOD STATEMENT**

The subject property lies within Flood Zone "X" (unshaded) (Areas determined to be outside the 0.2% annual chance floodplain.), as shown on the Jackson County, Missouri and Incorporated Areas Flood Insurance Rate Map (F.I.R.M.).

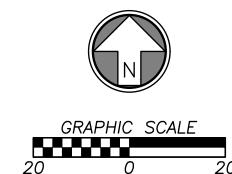
Map Number: 29095C0419G Panel No: 419 of 605

Map Revised Date: January 20, 2017

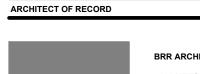
**NOTE:** This statement is provided for informational purposes only and shall in no way constitute a basis for a flood certificate. No field work was performed to establish the boundaries of this zone. The information was derived by scaling the subject property on the above referenced map.

# **GRADING LEGEND**

	STANDARD CURB & GUTTER
	TRANSITION CURB
	ZERO HEIGHT CURB
<b>─</b>	DRAINAGE DIRECTION
980 ———	FINISH GRADE MAJOR CONTOURS
982 ———	FINISH GRADE MINOR CONTOURS
	EXISTING GRADE MAJOR CONTOURS
982	EXISTING GRADE MINOR CONTOURS
	PROPERTY LINE
R/W	RIGHT-OF-WAY LINE



BRR ORIGINAL PRINTED ON RECYCLED PAPER



BRR ARCHITECTURE INC. 8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204 WWW.BRRARCH.COM TEL: 913-262-9095 FAX: 913-262-9044

7101 College Blvd., Suite 400 Overland Park, Kansas 66210 p. (913) 663—1900 BHC is a trademark of Brungardt Honomichl & Company, P.A.

PROJECT NUMBER		
		6291009
PROJECT MANAGER	DRAWN BY	CHECKED BY
BRR	BRR	
PROFESSIONAL SEAL		



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR
USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.
BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

NUMBER	DATE	DESCRIPTION
0	05/01/25	ORIGINAL ISSUE

GRADING PLAN

Phase	Project Stage	BMP Plan Ref. No.	BMP Description	Remove After Stage:	Notes:
Phase I (PRE-CON)	A — Place BMP's Prior to Land Disturbance	01)	Perimeter Silt Fence	E	Place as shown on plan
		02)	Concrete Entrance & Staging Area	D	Place as shown on plan
		03)	Concrete Wash—Out	D	Place as shown on plan
		04)	Existing Inlet Protection	Е	Place as shown on plan
Phase II (MID-CON)	B — After Stripping, Grubbing, & Mass Grading	05)	Storm Inlet Protection	Е	Place as shown on plan
Phase III (POST-CON)	E — Final Grading, Paving & Landscaping	06)	Final Seeding, Sod, and Landscaping	N/A	Silt fencing & inlet protect may be removed once seed & sodded areas are established on 80% of site. (RE: L1.1 Landscape Plan for the stormwater treatment facility)

### **EROSION AND SEDIMENT CONTROL GENERAL NOTES**

- 1. Prior to Land Disturbance activities, the contractor shall:
- •Delineate the outer limits of any natural stream corridor designated with construction fencing. •Install perimeter controls and request the inspection of the pre-construction erosion and sediment control measures designated on the approved erosion and sediment control plan. Land disturbance work shall not proceed until there is a satisfactory inspection. · Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, and
- 2. The contractor shall comply with all requirements of the Storm Water Pollution Prevention Plan, including but not limited to:
  •The contractor shall seed, mulch, or otherwise stabilize any disturbed area where the land disturbance activity has ceased for more than 14 days. •The contractor shall perform inspections of erosion and sediment control measures at the following minimum intervals: o During active construction phases — at least once per week

the erosion and sediment control plan shall be kept on site and made available for review by the regulatory authority.

o During periods of inactivity — at least once per 14 days o After each rainfall event of ½ inch or more — within 24 hours of the rain event

however, anticipated disturbance by utility construction shall not delay installation.

- The contractor shall maintain an inspection log including the inspector's name, date of inspection, observations as to the effectiveness of the erosion and sediment control measures, actions necessary to correct deficiencies, when the deficiencies were corrected, and the signature of the person performing the inspection. The inspection log shall be available for review by the regulatory authority.

  • The contractor shall have the erosion and sediment control plan routinely updated to show all changes and amendments to the plan. A copy of
- 3. Unless otherwise noted in the plans, all seeding must conform to Division II—Construction and Materials Specification—Section 2150 published by the Kansas City Metropolitan Chapter of the American Public Works Association dated May 21, 2008. Permanent seeding shall be installed after completion of final grading except when seeding will occur outside of the acceptable seeding season as specified in Section 2150. When temporary seeding is installed, permanent seeding shall be installed at the next seeding season. Temporary seeding shall not be used as a stabilization measure for a period exceeding 12 months. The Permit will not be closed until permanent seeding has been established to a minimum of 70% density over the entire disturbed area.
- 4. The contractor shall maintain installed erosion and sediment control devices in a manner that preserves their effectiveness for preventing sediment from leaving the site or entering a sensitive area such as a natural stream corridor, areas of the site intended to be left undisturbed, a storm sewer, or an on-site drainage channel.
- 5. The contractor is responsible for providing erosion and sediment control for the duration of a project. If the City determines that the BMPs in place do not provide adequate erosion and sediment control at any time during the project, the contractor shall install additional or alternate measures that provide effective control.
- 6. Concrete wash or rinse water from concrete mixing equipment, tools and/or ready—mix trucks, tools, etc. may not be discharged into or be allowed to run directly into any existing water body or storm inlet. One or more locations for concrete wash out will be designated on site, such that discharges during concrete washout will be contained in a small area where waste concrete can solidify in place.
- 7. Chemicals or materials capable of causing pollution may only be stored onsite in their original container. Materials stored outside must be in closed and sealed water—proof containers and located outside of drainage ways or areas subject to flooding. Locks and other means to prevent or reduce vandalism shall be used. Spills will be reported as required by law and immediate actions taken to contain them.
- 8. Silt fences and erosion control BMPs which are shown along the back of curb must be installed within two weeks of curb backfill and prior to placement of base asphalt. Exact locations of these erosion control methods may be field adjusted to minimize conflicts with utility construction;
- 9. Interior Silt Fence as necessary during construction. Portions may be limited as vegetation is established and hardscape is installed. Entire length may be installed at the contractor's option to aid in stabilizing slopes.
- 10. Private Erosion & Sediment Control inspections are required in accordance with NPDES schedule and requirements. After inspections, provide the City of Lee's Summit with reports and documentation.

### **EROSION CONTROL LEGEND**

——— DISTURBED AREA (2.94 AC) — — SF — SILT/SEDIMENT FENCE — TP — TREE PROTECTION

INLET PROTECTION FILTER BAGS CONSTRUCTION ENTRANCE

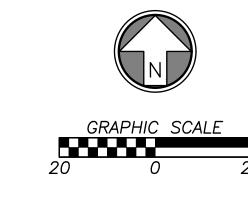
CONCRETE CLEANOUT



SEE EROSION CONTROL DETAIL SHEET FOR THE FOLLOWING

600 TEMPORARY CONSTRUCTION ENTRANCE 601 FILTER FABRIC SILT FENCE

603 STORM INLET PROTECTION 604 CONCRETE WASH-OUT



BRR ORIGINAL PRINTED ON RECYCLED PAPER



7101 College Blvd., Suite 400 Overland Park, Kansas 66210 p. (913) 663-1900 BHC is a trademark of Brungardt Honomichl & Company, P.A.

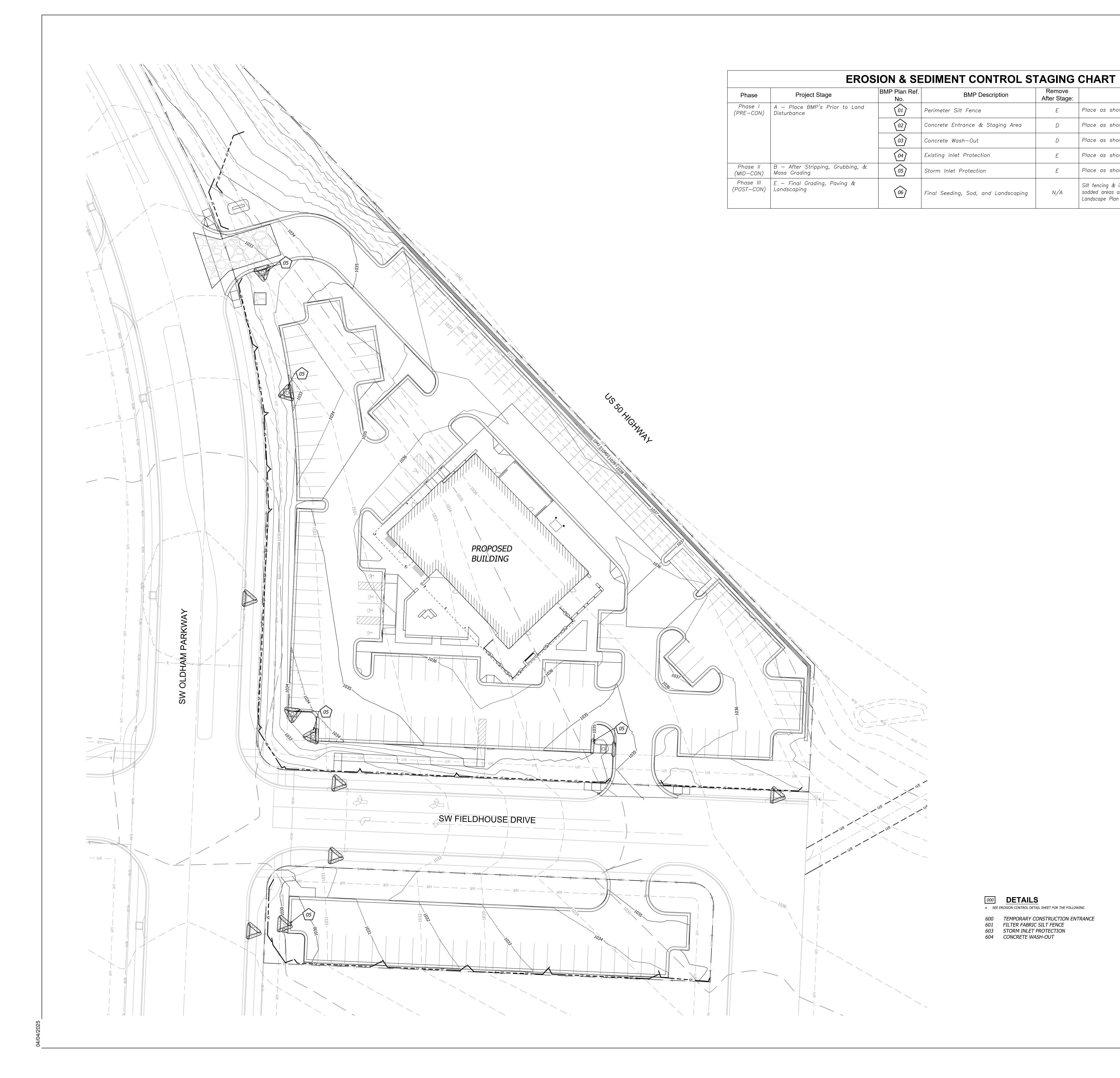
PROJECT NUMBER PROJECT MANAGER DRAWN BY PROFESSIONAL SEAL



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

COPYRIGHT NOTICE

PRE-CONSTRUCTION EROSION







Notes:

Silt fencing & inlet protect may be removed once seed &

sodded areas are established on 80% of site. (RE: L1.1

Landscape Plan for the stormwater treatment facility)

Place as shown on plan

After Stage:



**EROSION CONTROL LEGEND** 

INLET PROTECTION FILTER BAGS

CONSTRUCTION ENTRANCE

CONCRETE CLEANOUT

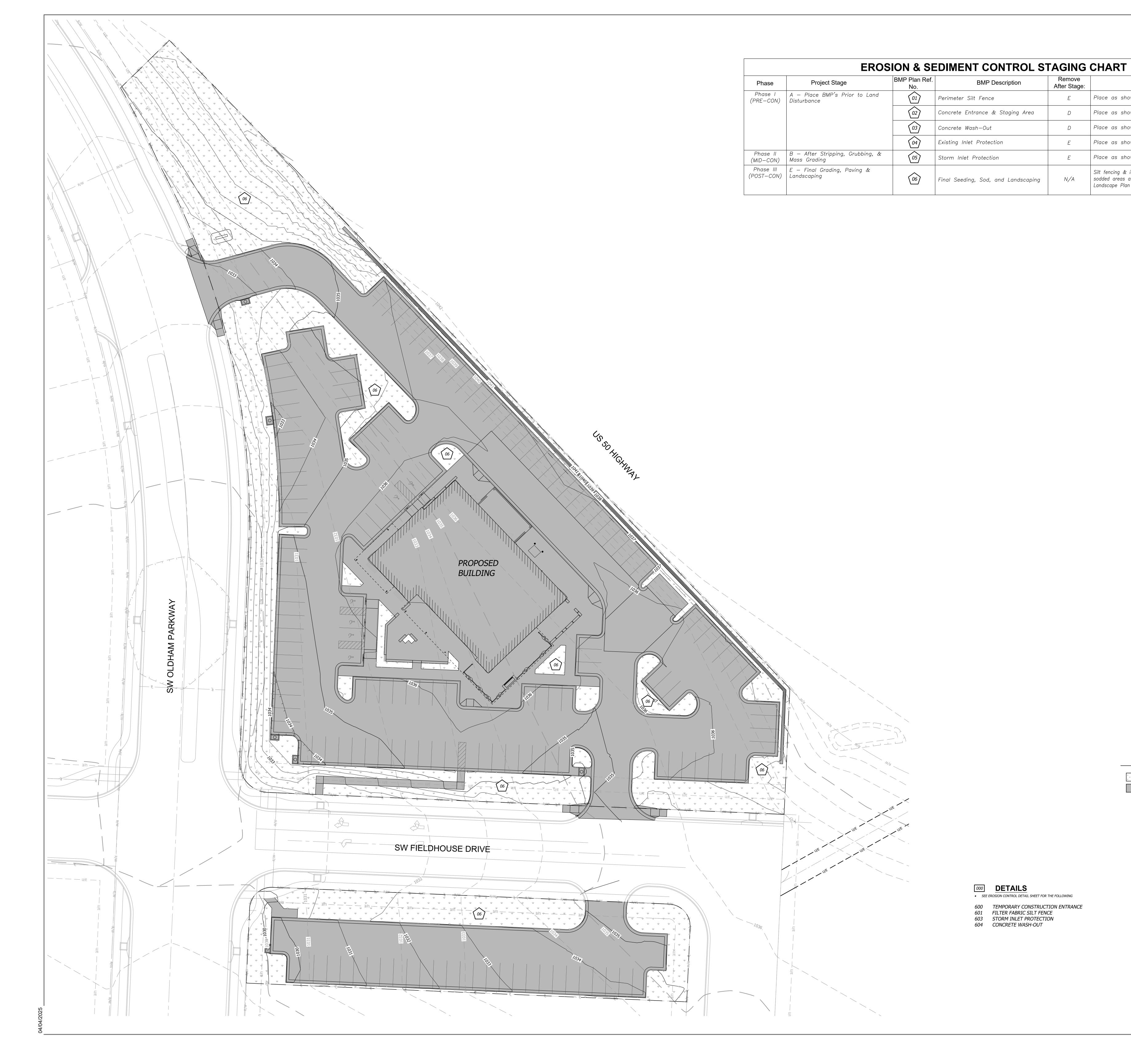
STAGING AREA

——— DISTURBED AREA (2.94 AC)

— — SF — SILT/SEDIMENT FENCE

COPYRIGHT NOTICE THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE. NUMBER DATE DESCRIPTION
0 05/01/25 ORIGINAL ISSUE

MID-CONSTRUCTION EROSION



ARCHITECT OF RECORD BRR ARCHITECTURE INC. 8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204 WWW.BRRARCH.COM

7101 College Blvd., Suite 400 Overland Park, Kansas 66210 p. (913) 663—1900 BHC is a trademark of Brungardt Honomichl & Company, P.A.

Notes:

Silt fencing & inlet protect may be removed once seed &

**EROSION CONTROL LEGEND** 

FINAL SEEDING (SOD &/OR LANDSCAPING)

IMPERVIOUS AREA (2.00 AC)

——— DISTURBED AREA (2.94 AC)

sodded areas are established on 80% of site. (RE: L1.1

Landscape Plan for the stormwater treatment facility)

Place as shown on plan

After Stage:



COPYRIGHT NO	IICE	
		FOR USE ON A SPECIFIC SITE S ISSUE DATE AND IT IS NOT SUITABLE FOR
		SITE OR AT A LATER TIME. USE OF THIS EXAMPLE ON ANOTHER PROJECT REQUIRES
THE SERVICES (	OF PROPERLY LIC	CENSED ARCHITECTS AND ENGINEERS.
		NG FOR REUSE ON ANOTHER PROJECT IS NOT RARY TO THE LAW.
DDD D050 N:07	OLIADANTEE T	T. CAR EU EO ARE OUEFIOIENT OF
		AT <u>CAD</u> FILES ARE SUFFICIENT OR POSES. USER USES OR ALTERS THESE FILES
APPROPRIATE F AT USER'S SOLE	OR USER'S PURF RISK AND AGRE	
APPROPRIATE F	OR USER'S PURF RISK AND AGRE	POSES. USER USES OR ALTERS THESE FILES
APPROPRIATE F AT USER'S SOLE	OR USER'S PURF RISK AND AGRE	POSES. USER USES OR ALTERS THESE FILES
APPROPRIATE F AT USER'S SOLE	OR USER'S PURF ERISK AND AGRE USER'S USE.	POSES. USER USES OR ALTERS THESE FILES
APPROPRIATE F AT USER'S SOLE ARISING FROM U	OR USER'S PURF ERISK AND AGRE USER'S USE.	POSES. USER USES OR ALTERS THESE FILES
APPROPRIATE F AT USER'S SOLE ARISING FROM U ISSUES AND RE	OR USER'S PURE RISK AND AGRE JSER'S USE.	POSES. USER USES OR ALTERS THESE FILES JES TO INDEMNIFY BRR FROM LIABILITY
APPROPRIATE F AT USER'S SOLE ARISING FROM U ISSUES AND REV	OR USER'S PURF RISK AND AGRE JSER'S USE.  VISIONS  DATE	POSES. USER USES OR ALTERS THESE FILES JES TO INDEMNIFY BRR FROM LIABILITY  DESCRIPTION
APPROPRIATE F AT USER'S SOLE ARISING FROM U ISSUES AND REV	OR USER'S PURF RISK AND AGRE JSER'S USE.  VISIONS  DATE	POSES. USER USES OR ALTERS THESE FILES JES TO INDEMNIFY BRR FROM LIABILITY  DESCRIPTION
APPROPRIATE F AT USER'S SOLE ARISING FROM U ISSUES AND REV	OR USER'S PURF RISK AND AGRE JSER'S USE.  VISIONS  DATE	POSES. USER USES OR ALTERS THESE FILES JES TO INDEMNIFY BRR FROM LIABILITY  DESCRIPTION
APPROPRIATE F AT USER'S SOLE ARISING FROM U ISSUES AND REV	OR USER'S PURF RISK AND AGRE JSER'S USE.  VISIONS  DATE	POSES. USER USES OR ALTERS THESE FILES JES TO INDEMNIFY BRR FROM LIABILITY  DESCRIPTION

POST-CONSTRUCTION EROSION



BRR ARCHITECTURE INC.

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044



PROJECT TITLE

EE'S SUMMIT, MC

PROJECT NUMBER

62910099

PROJECT MANAGER DRAWN BY CHECKED BY

BRR BRR

PROFESSIONAL SEAL



CONTEMPORANEOUSLY WI USE ON A DIFFERENT PROJ DRAWING FOR REFERENCE THE SERVICES OF PROPER REPRODUCTION OF THIS DI AUTHORIZED AND MAY BE ( BRR DOES NOT GUARANTE APPROPRIATE FOR USER'S	
CONTEMPORANEOUSLY WI USE ON A DIFFERENT PROJ DRAWING FOR REFERENCE THE SERVICES OF PROPER REPRODUCTION OF THIS DI AUTHORIZED AND MAY BE ( BRR DOES NOT GUARANTE APPROPRIATE FOR USER'S AT USER'S SOLE RISK AND ARISING FROM USER'S USE  ISSUES AND REVISIONS  NUMBER DAT	
APPROPRIATE FOR USER'S AT USER'S SOLE RISK AND ARISING FROM USER'S USE  ISSUES AND REVISIONS  NUMBER DAT	RED FOR USE ON A SPECIFIC SITE TH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR ECT SITE OR AT A LATER TIME. USE OF THIS OR EXAMPLE ON ANOTHER PROJECT REQUIRES LY LICENSED ARCHITECTS AND ENGINEERS. RAWING FOR REUSE ON ANOTHER PROJECT IS NOT CONTRARY TO THE LAW.
NUMBER DAT	E THAT CAD FILES ARE SUFFICIENT OR PURPOSES. USER USES OR ALTERS THESE FILES AGREES TO INDEMNIFY BRR FROM LIABILITY
	E DESCRIPTION

EXISTING DRAINAGE MAP



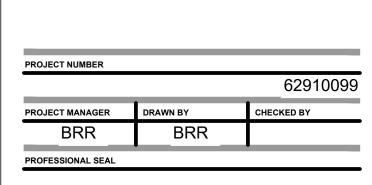
BRR ARCHITECTURE INC.

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044



PROJECT TITLE

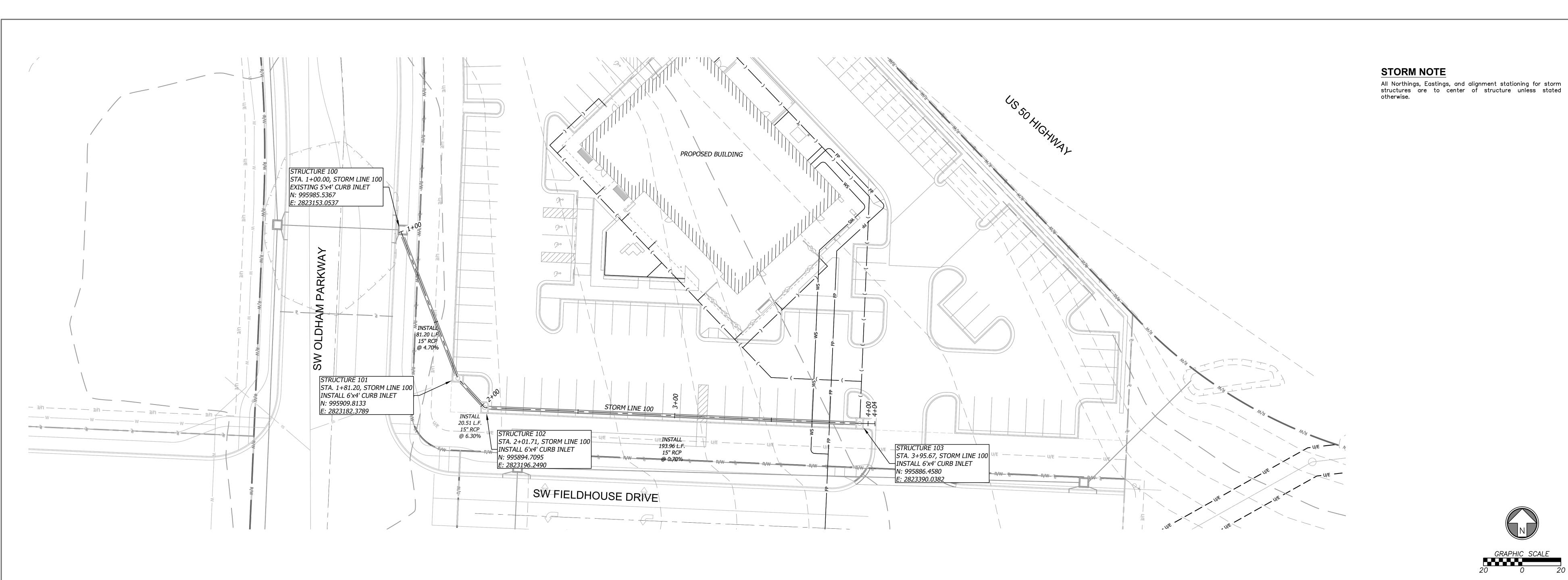
Q39 (SHELL) E'S SUMMIT, MO

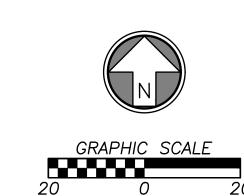


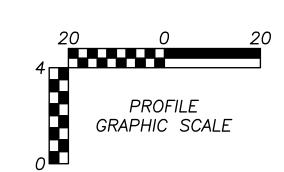


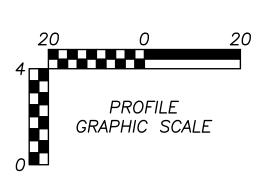
OPYRIGHT NOTI	OPYRIGHT NOTICE					
HIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE ONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR SE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS RAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES HE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. EPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT UTHORIZED AND MAY BE CONTRARY TO THE LAW.  RR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR PPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES IT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY RISING FROM USER'S USE.						
SUES AND REV	ISIONS					
NUMBER	DATE	DESCRIPTION				
0	05/01/25	ORIGINAL ISSUE				
HEET NAME						

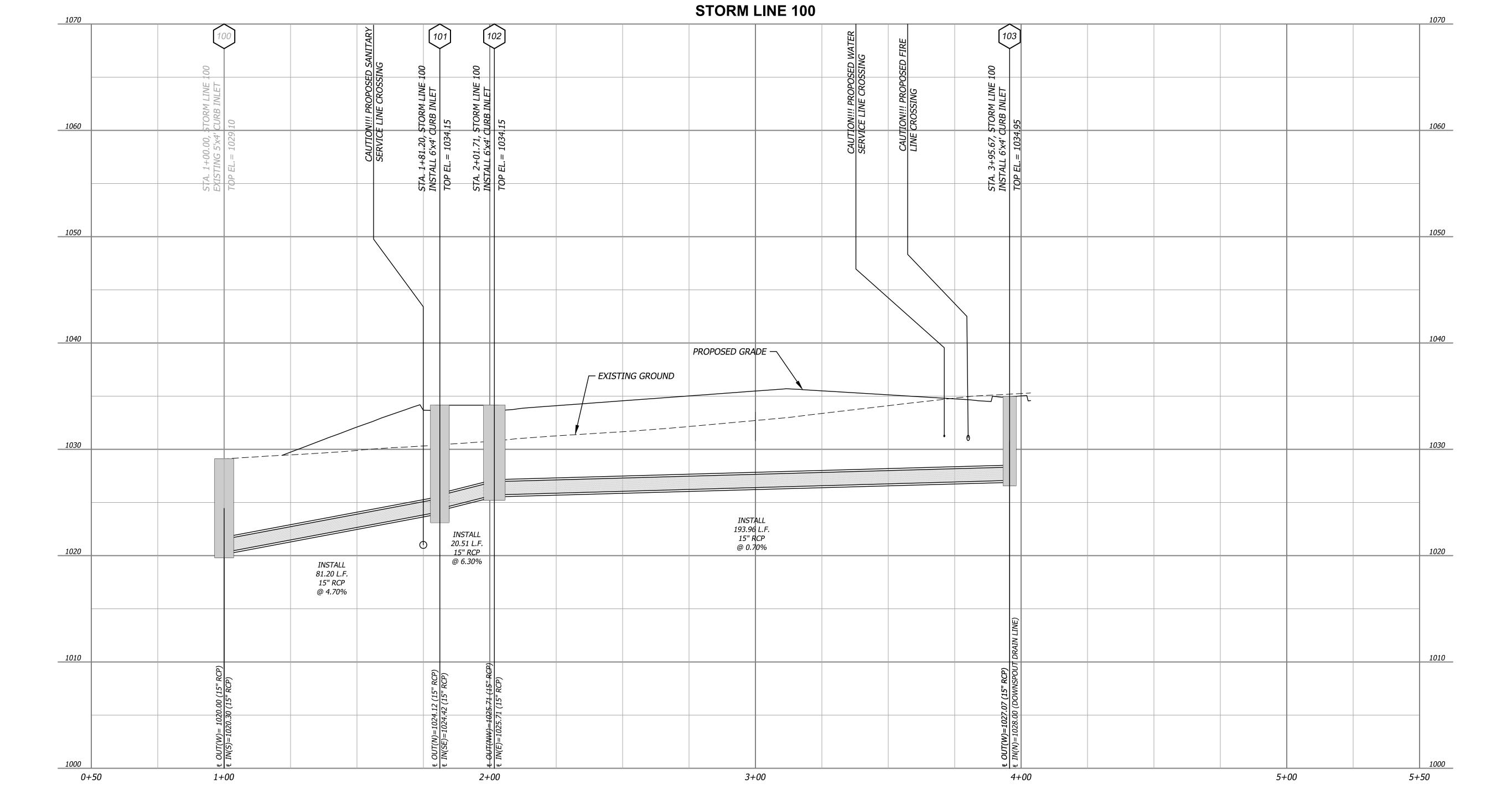
PROPOSED DRAINAGE MAP

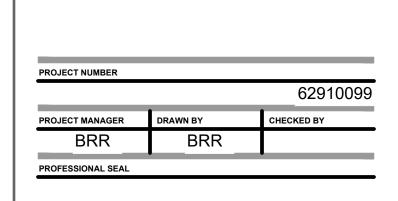












OLDHAM VILLAGE LEE'S SUMMIT, MO

Q39

ARCHITECT OF RECORD

BRR ARCHITECTURE INC.

8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

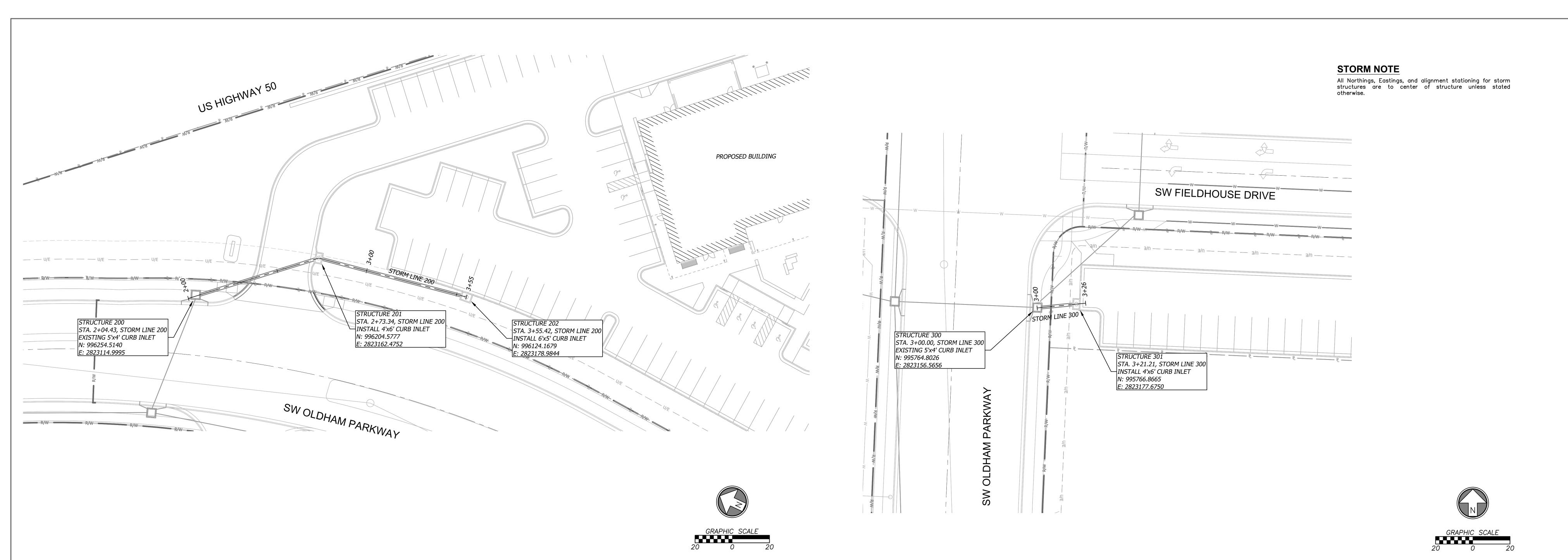
WWW.BRRARCH.COM

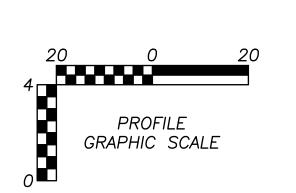
TEL: 913-262-9095 FAX: 913-262-9044

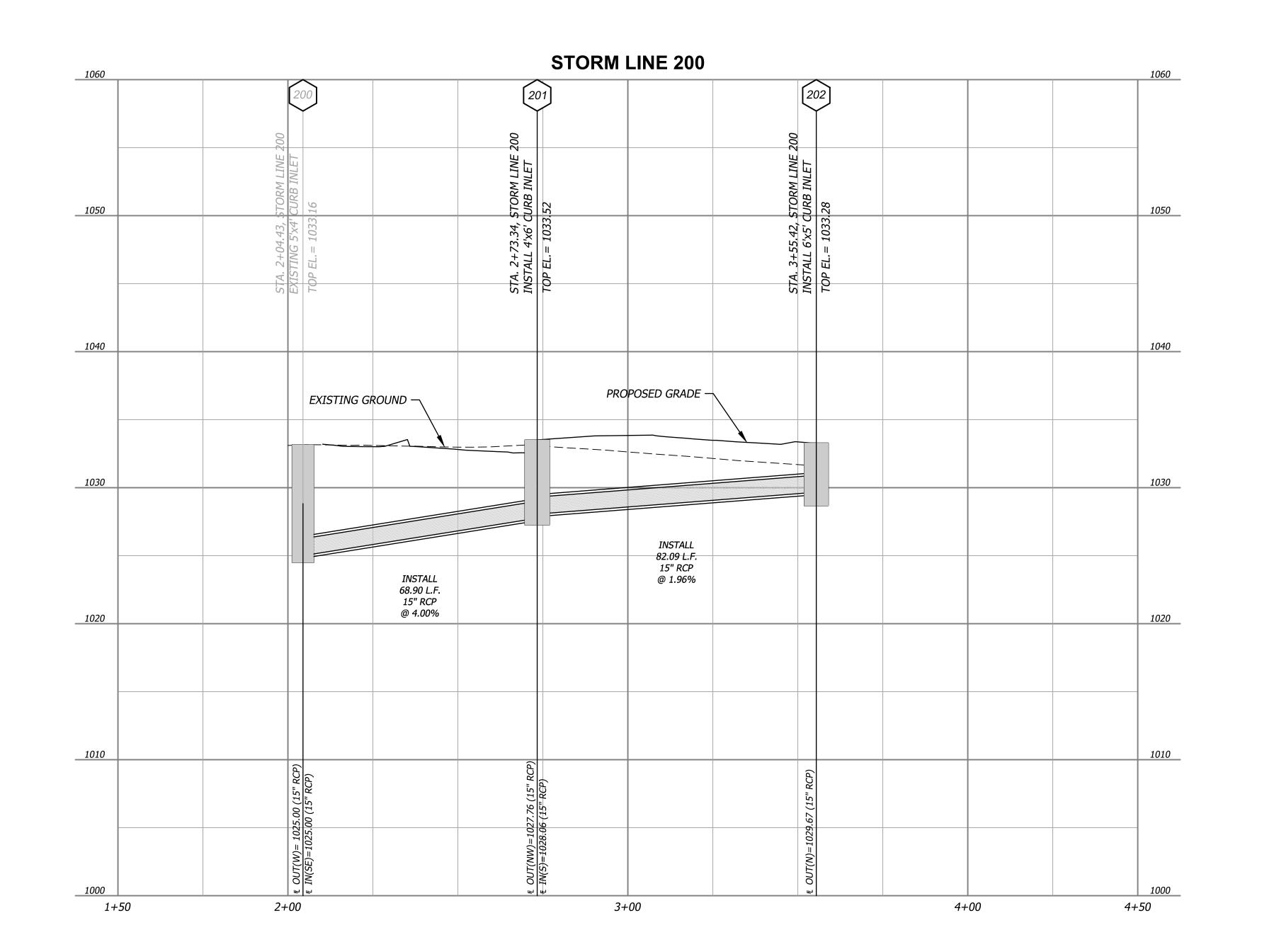
7101 College Blvd., Suite 400 Overland Park, Kansas 66210 p. (913) 663—1900 BHC is a trademark of Brungardt Honomichl & Company, P.A.

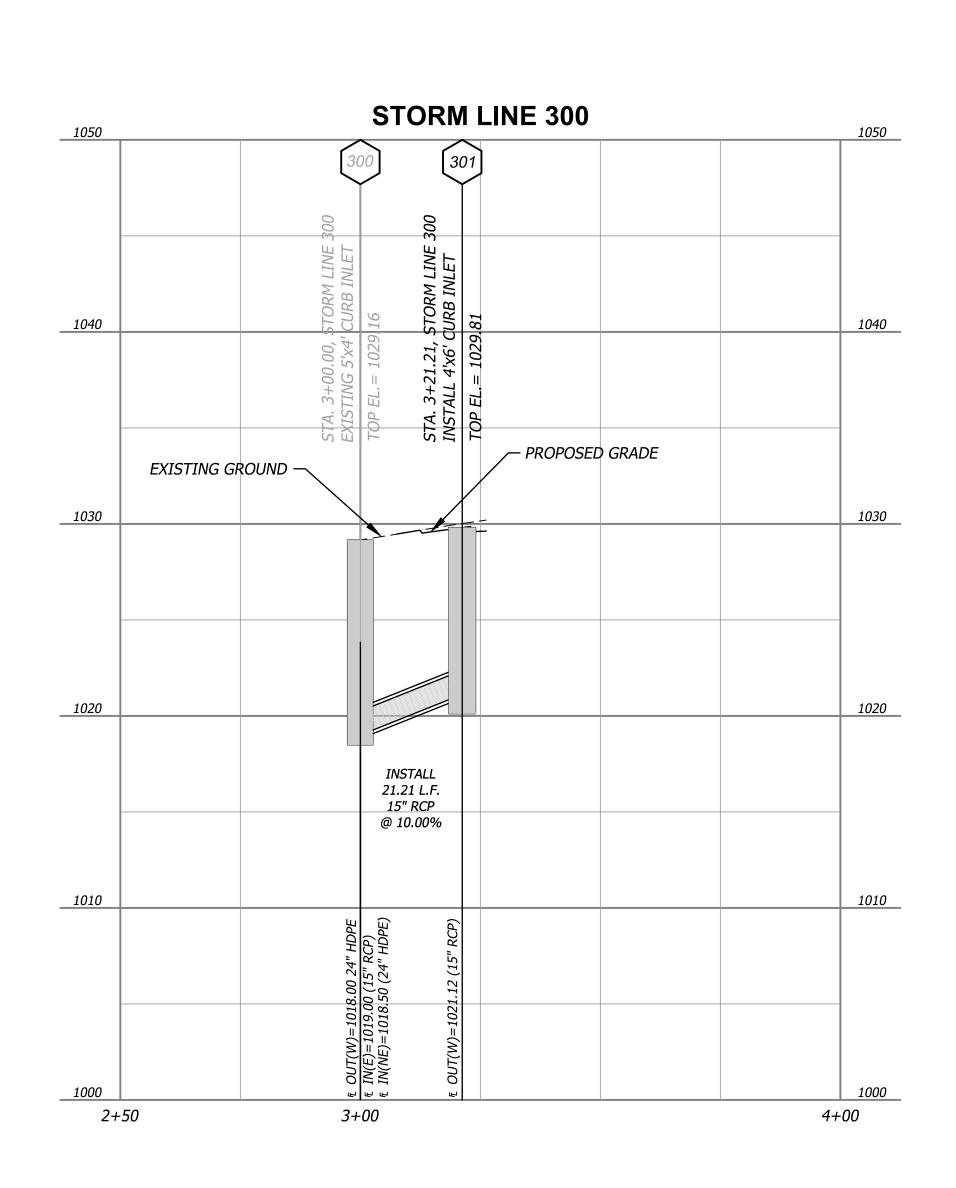


THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITAB USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF TI DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT RE THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEE REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJE AUTHORIZED AND MAY BE CONTRARY TO THE LAW.  BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THE AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABIL ARISING FROM USER'S USE.  ISSUES AND REVISIONS  NUMBER DATE DESCRIPTION  0 05/01/25 ORIGINAL ISSUE	
CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITAB USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF TI DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT RE THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEE REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJE AUTHORIZED AND MAY BE CONTRARY TO THE LAW.  BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THE AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABIL ARISING FROM USER'S USE.  ISSUES AND REVISIONS  NUMBER DATE DESCRIPTION	
APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THE AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABIL ARISING FROM USER'S USE.  ISSUES AND REVISIONS  NUMBER DATE DESCRIPTION	HIS EQUIRES ERS.
NUMBER DATE DESCRIPTION	









BRR ARCHITECTURE INC.

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044



ROJECT TITLE

Q39 (SHELL) E'S SUMMIT, MO

PROJECT NUMBER

62910099

PROJECT MANAGER DRAWN BY CHECKED BY

BRR BRR

PROFESSIONAL SEAL

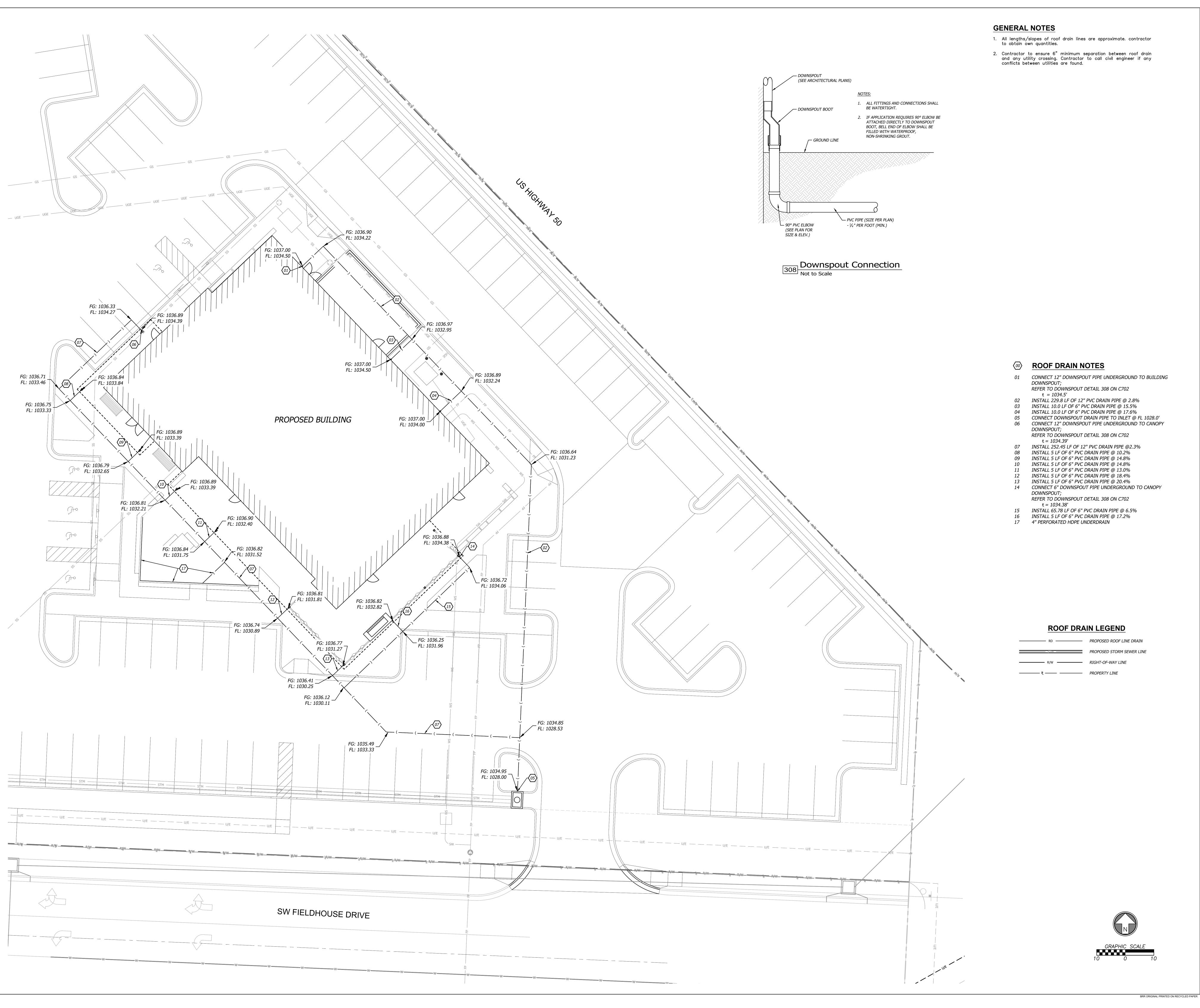


CONTEMPORANI USE ON A DIFFEI DRAWING FOR R THE SERVICES O REPRODUCTION AUTHORIZED AN BRR DOES NOT (	VAS PREPARED F EOUSLY WITH ITS RENT PROJECT E EFFERNCE OR E OF THIS DRAWIN D MAY BE CONTE	FOR USE ON A SPECIFIC SITE SISSUE DATE AND IT IS NOT SUITABLE FOR SITE OR AT A LATER TIME. USE OF THIS XAMPLE ON ANOTHER PROJECT REQUIRES ZENSED ARCHITECTS AND ENGINEERS. NG FOR REUSE ON ANOTHER PROJECT IS NOT RARY TO THE LAW.
CONTEMPORANI USE ON A DIFFEI DRAWING FOR R THE SERVICES C REPRODUCTION AUTHORIZED AN BRR DOES NOT ( APPROPRIATE F	EOUSLY WITH ITS RENT PROJECT S EFFERENCE OR FOR PROPERLY LIC OF THIS DRAWIN D MAY BE CONTE GUARANTEE THA OR USER'S PURP RISK AND AGRE ISER'S USE.	IS ISSUE DATE AND IT IS NOT SUITABLE FOR SITE OR AT A LATER TIME. USE OF THIS XAMPLE ON ANOTHER PROJECT REQUIRES CENSED ARCHITECTS AND ENGINEERS. ING FOR REUSE ON ANOTHER PROJECT IS NO RARY TO THE LAW.

STORM LINE 200 & 30

BRR ORIGINAL PRINTED ON RECYCLED PAPER

BER



BRR ARCHITECTURE INC.

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044



ROJECT TITLE

G39 (SHELL) EE'S SUMMIT, MO

PROJECT NUMBER

62910099

PROJECT MANAGER DRAWN BY CHECKED BY

BRR BRR

PROFESSIONAL SEAL



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE
CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR
USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS
DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES
THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT
AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR
APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES
AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY
ARISING FROM USER'S USE.

ISSUES AND REVISIONS

NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

DOWNSPOUT PIPE PLAN

SHEET NAME

### **X 00** CONSTRUCTION NOTES

W - WATER SERVICE INFORMATION - LEE'S SUMMIT

01 EXISTING 8" WATER MAIN LINE

02 EXISTING WATER STUB 03 CONNECT TO EXISTING WATER MAIN STUB

INSTALL 6"X2" TEE FC. W. INSTALL 107.6 LF OF 6" FIRE PROTECTION LINE WITH MINIMUM DEPTH OF COVER 42".

INSTALL 45° BEND. INSTALL 32.1 LF OF 6" FIRE PROTECTION LINE WITH MINIMUM DEPTH OF COVER 42".

INSTALL ELBOW FITTING. INSTALL 38.2 LF OF 6" FIRE PROTECTION LINE WITH MINIMUM DEPTH OF COVER 42".

INSTALL ELBOW FITTING. INSTALL 11 LF 0F 6" FIRE PROTECTION LINE WITH MINIMUM DEPTH OF COVER 42" AND CONNECT TO

12 CONNECT 2" DOMESTIC SERVICE LINE TO 6"X2" TEE FC. W.

13 INSTALL 7 LF OF 2" DOMESTIC SERVICE LINE WITH MINIMUM 42" COVER. 14 INSTALL ELBOW FITTING.

16 INSTALL WATER METER.

INSTALL 94 LF OF 2" DOMESTIC SERVICE LINE WITH MINIMUM 42 COVER. 18 INSTALL 45° BEND.

INSTALL 4.8 LF OF 2" DOMESTIC SERVICE LINE WITH MINIMUM 42" COVER.

19 INSTALL 31 LF OF 2" DOMESTIC SERVICE LINE WITH MINIMUM 42" COVER.

INSTALL ELBOW FITTING. 21 INSTALL 28.7 LF OF 2" DOMESTIC SERVICE LINE WITH MINIMUM 42" COVER.

INSTALL ELBOW FITTING. 23 INSTALL 4 LF OF 2" DOMESTIC SERVICE LINE WITH MINIMUM 42" COVER AND CONNECT TO BUILDING.

E - ELECTRIC SERVICE INFORMATION - EVERGY CONTRACTOR TO CONTACT EVERGY FOR FINAL PLANS OF MASTER DEVELOPMENT FOR CONNECTION SPOT. 01 EVERGY TO INSTALL PRIMARY UNDERGROUND ELECTRIC SERVICE FROM EXISTING ELECTRIC STRUCTURE.

CONTRACTOR TO INSTALL CONDUIT. 02 PROPOSED TRANSFORMER PAD.

03 CONTRACTOR TO INSTALL SECONDARY UNDERGROUND ELECTRIC SERVICE LINE FROM PROPOSED TRANSFORMER TO BUILDING; REFER TO: ELECTRICAL PLAN.

G - GAS SERVICE INFORMATION - SPIRE

CONTRACTOR TO CONTACT SPIRE FOR FINAL PLANS OF MASTER DEVELOPMENT CONNECTION SPOT. 01 EXISTING 4" GAS MAIN.

02 TAP EXISTING GAS MAIN FOR SERVICE LINE; COORDINATE W/ SPIRE.

INSTALL 152 LF GAS SERVICE LINE. INSTALL 85 LF GAS SERVICE LINE.

INSTALL 23 LF GAS SERVICE LINE.

06 INSTALL 7 LF GAS SERVICE LINE.

GAS METER CONNECTION TO BLDG.; REFER TO: PLUMBING PLAN.

ST - STORM SEWER INFORMATION - CITY OF LEE'S SUMMIT 01 STORM SEWER LINE; REFER TO: SHEET C700-C701

02 ROOF DRAINS; REFER TO: SHEET C702

SS - SANITARY SEWER INFORMATION 01 CONNECT TO EXISTING SANITARY STUB.

FL = 1019.5'02 INSTALL 142 LF OF SANITARY SERVICE LINE @ 9.52% AND CONNECT INTO BUILDING

03 INSTALL WYE FL = 1029.04'

04 INSTALL 60 LF OF SANITARY SERVICE LINE @ 2.18% AND INSTALL WYE

05 INSTALL 87 LF OF SANITARY SERVICE LINE @ 2.18%

FL = 1032.25'06 INSTALL HDPE GREASE INTERCEPTOR; REFER TO MEP PLANS

INSTALL WYE AND CLEAN OUT FL = 1032.82'

08 INSTALL 8 LF OF SANITARY SERVICE LINE @ 2.18% AND CONNECT TO BUILDING FL = 1033.0'

1. Contractor shall refer to all specifications, guidelines, and installation drawings

from Waterone, Spire, Spectrum/AT&T, JCW, City of Lee's Summit Storm, and Evergy for the installation of all service lines. 2. The information shown on these plans concerning the type and location of

underground utilities is not guaranteed to be accurate or all inclusive. The contractor is responsible for contacting all utility companies for field location of all underground utility lines prior to any excavation and for making his own verification as to type and location of underground utilities as may be necessary to avoid

damage thereto. 3. Contractor to ensure 6" minimum separation between utilities at crossings.

Contractor to call engineer if any conflicts between utilities are found.

4. Fire Line Notes:

4.1. All private fire lines shall be installed in accordance with NFPA 24, and other applicable codes and standards. 4.2. Contact the Fire Department to schedule inspections <u>prior to</u> private fire lines

being backfilled. 4.3. Contact the Fire Department to witness scheduled hydrostatic tests and

flushes of private fire lines. 5. Stub all connections to within 5' of the building to provide connection into the

building by mechanical/plumbing contractor. 6. Contractor to ensure min. 18" vertical separation between utilities at crossing. Contractor to call engineer if any conflicts between utilities are found.

> PROJECT MANAGER DRAWN BY PROFESSIONAL SEAL

ARCHITECT OF RECORD

BRR ARCHITECTURE INC.

8131 METCALF AVENUE OVERLAND PARK, KS 66204

WWW.BRRARCH.COM

TEL: 913-262-9095

7101 College Blvd., Suite 400

Overland Park, Kansas 66210 p. (913) 663-1900 BHC is a trademark of Brungardt Honomichl & Company, P.A.



COPYRIGHT NOTICE THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

DATE DESI 05/01/25 ORIGINAL ISSUE 

**CONSTRUCTION SPECIFICATIONS:** . STONE SIZE - USE (2) INCH STONE, OR RECLAIMED OR RECYCLED EQUIVALENT.

2. LENGTH - AS REQUIRED, BUT NOT LESS THAN (50) FEET. 3. THICKNESS - NOT LESS THAN SIX (6) INCHES.

4. WIDTH - TWENTY (20) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.

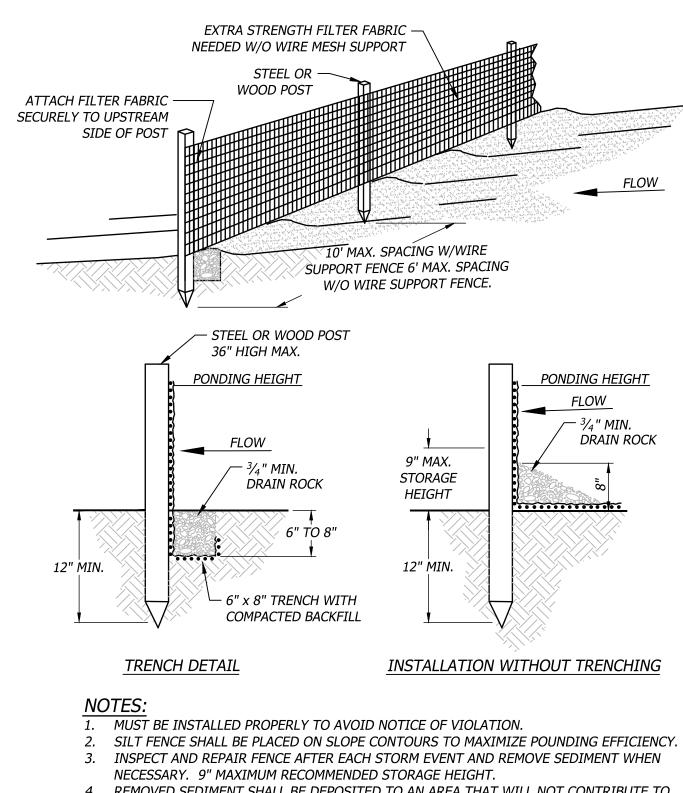
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 3:1 SLOPES WILL BE PERMITTED. 7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP

SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. 8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO

AN APPROVED SEDIMENT TRAPPING DEVICE. 9. PERIODIC INSPECTION AS NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

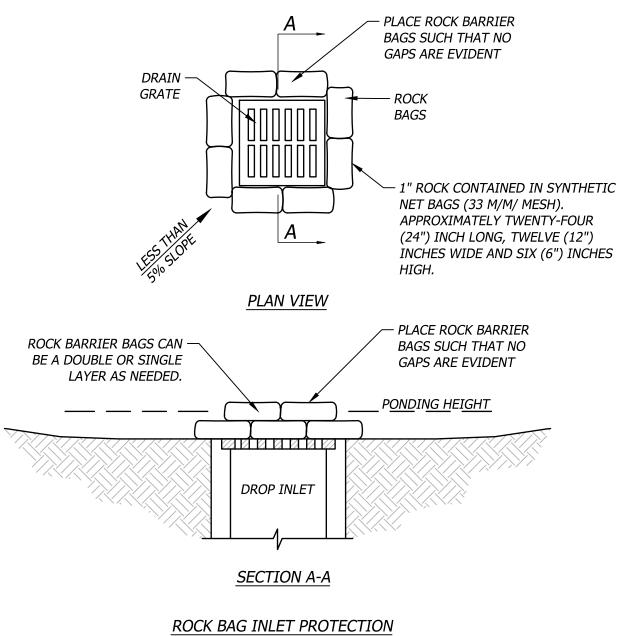
Temporary Construction Entrance

Not to Scale



4. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

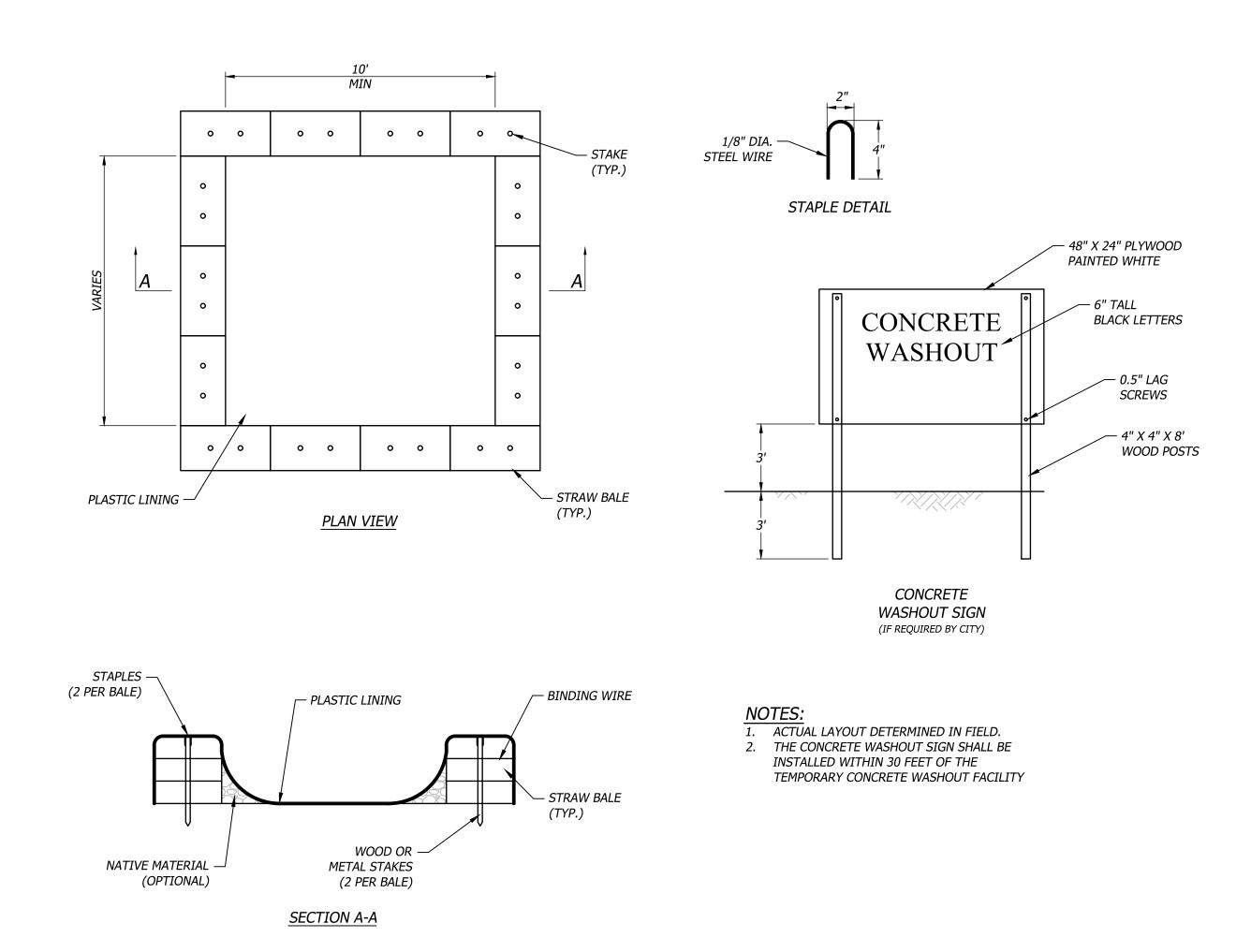
Filter Fabric Silt Fence
Not to Scale



1. PLACE CURB TYPE ROCK BAG BARRIER ON GENTLY SLOPING STREET, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM 2. BAGS OF WOVEN GEOTEXTILE FABRIC, FILLED WITH GRAVEL MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT. 3. LEAVE ONE SANDBAG GAP IN THE TOP ROW ON THE SIDE AWAY FROM FLOW, TO PROVIDE A SPILLWAY; OR IN THE CENTER IF PONDING IS NEEDED ON BOTH SIDES. 4. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT, SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY

Storm Inlet Protection

Not to Scale



Concrete Washout

Not to Scale

Q39

ARCHITECT OF RECORD

BRR ARCHITECTURE INC. 8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

WWW.BRRARCH.COM TEL: 913-262-9095 FAX: 913-262-9044

7101 College Blvd., Suite 400

Overland Park, Kansas 66210

p. (913) 663-1900

BHC is a trademark of Brungardt Honomichl & Company, P.A.

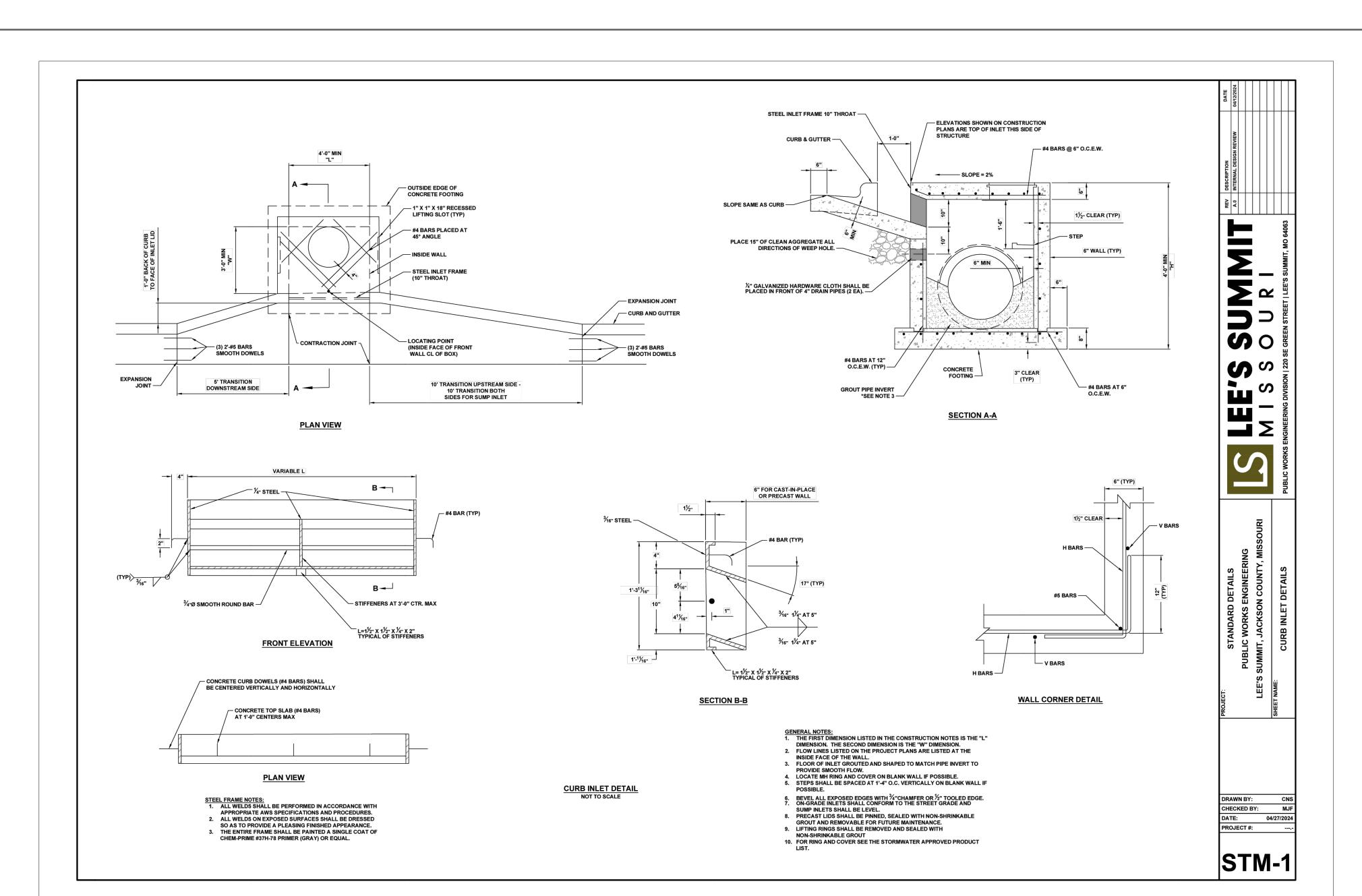
PROJECT NUMBER PROFESSIONAL SEAL

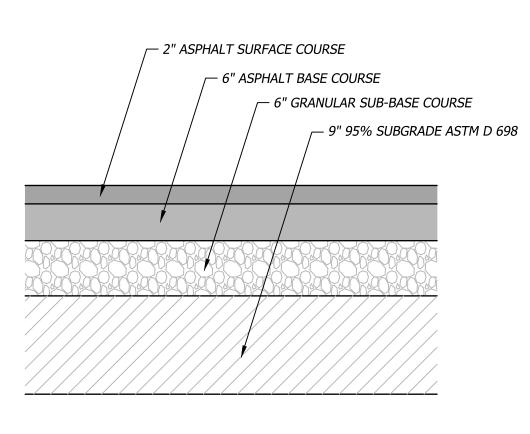


THIS DDAM	ING WAS PREPARED FOR USE ON A	SDECIEIC SITE
5	DRANEOUSLY WITH ITS ISSUE DATE	0. 200 02
USE ON A	DIFFERENT PROJECT SITE OR AT A L	ATER TIME. USE OF THIS
DRAWING F	FOR REFERENCE OR EXAMPLE ON A	NOTHER PROJECT REQUIRES
	CES OF PROPERLY LICENSED ARCH	
	CTION OF THIS DRAWING FOR REUSE	
AUTHORIZI	ED AND MAY BE CONTRARY TO THE	LAW.
BRR DOES	NOT GUARANTEE THAT <u>CAD</u> FILES	ARE SUFFICIENT OR
<b>APPROPRI</b>	ATE FOR USER'S PURPOS <mark>ES.</mark> USER (	JSES OR ALTERS THESE FILES
AT USER'S	SOLE RISK AND AGREES TO INDEMN	NIFY BRR FROM LIABILITY
ARISING FF	ROM USER'S USE.	

NUMBER	DATE	DESCRIPTION
0	05/01/25	ORIGINAL ISSUE

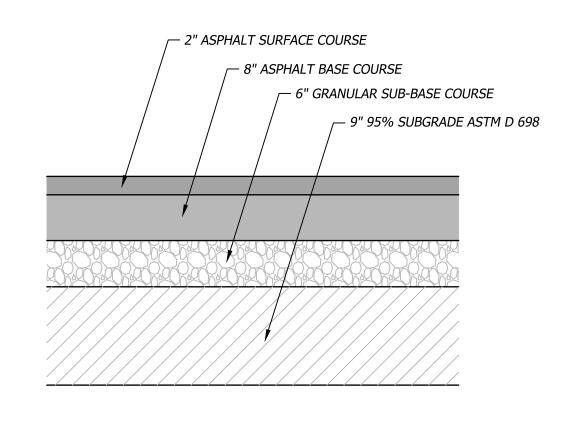
EROSION CONTROL DETAILS





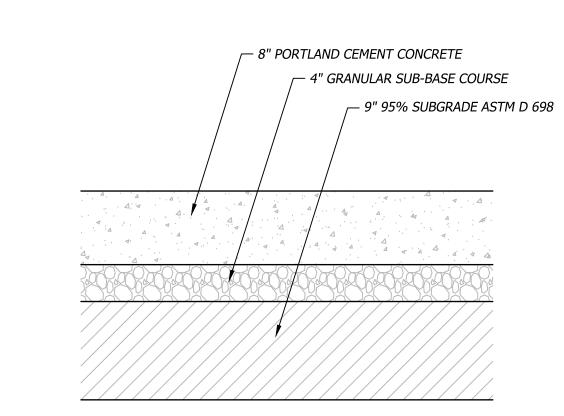
Medium Duty Asphalt Section

Not to Scale



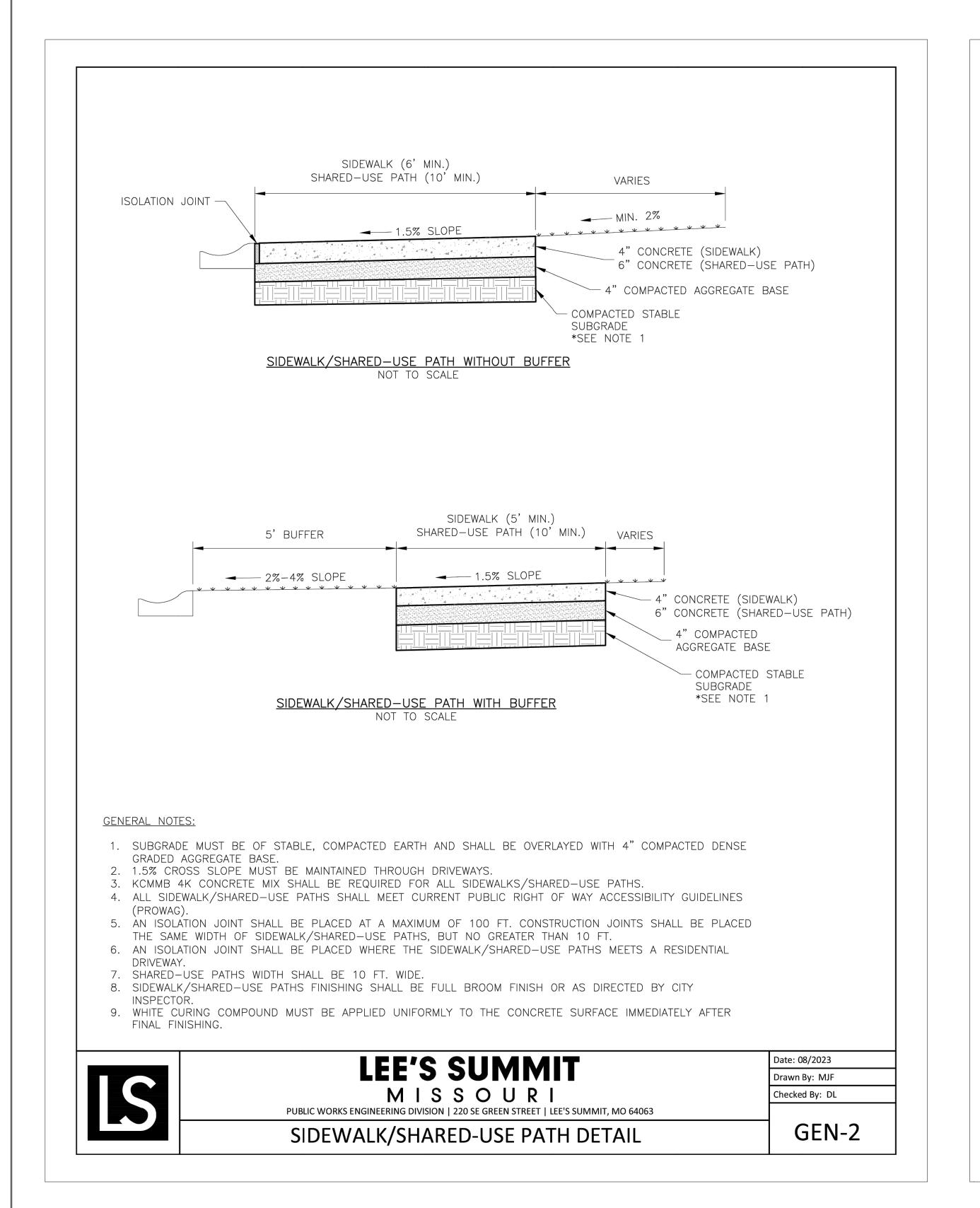
Heavy Duty Asphalt Section

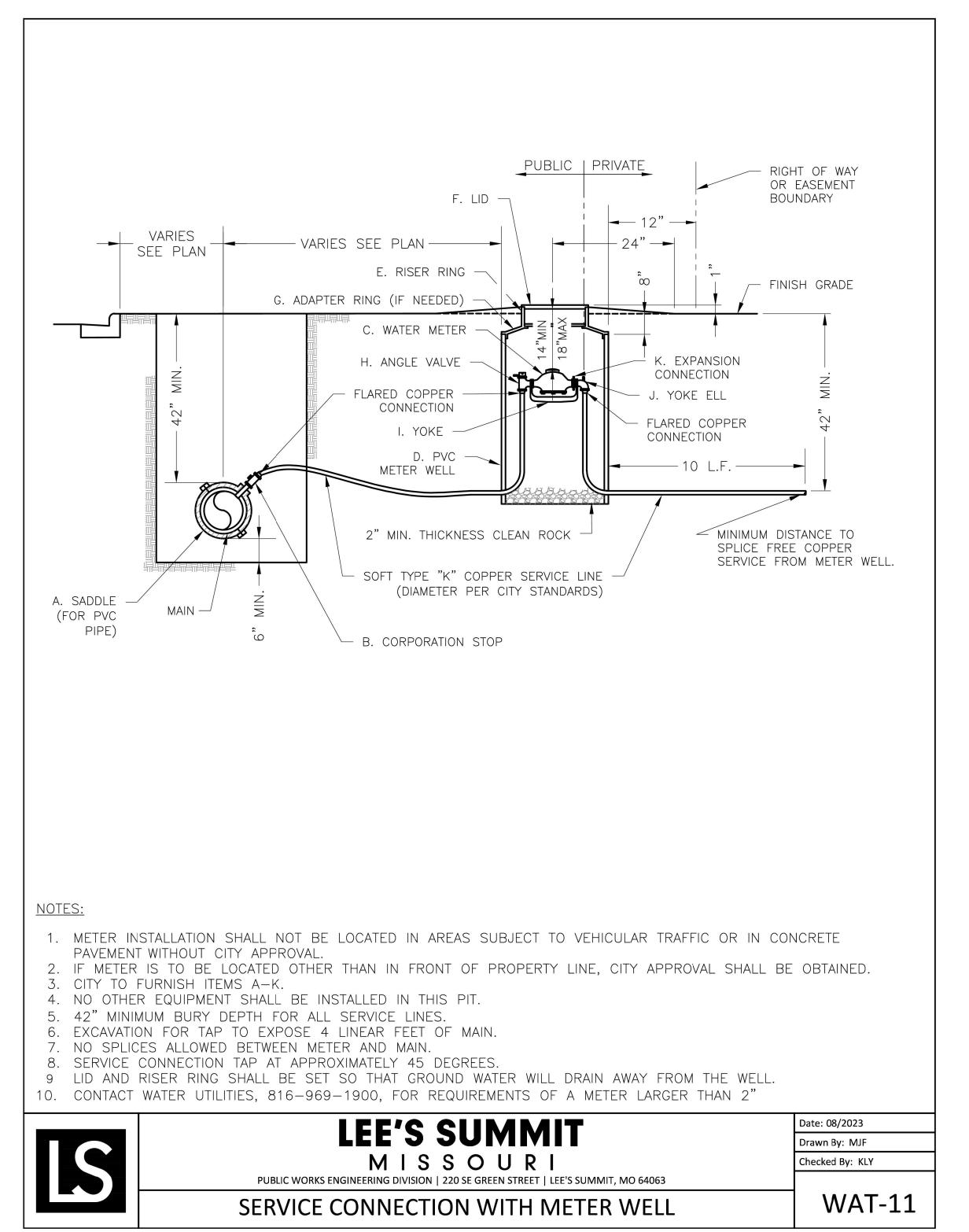
Not to Scale

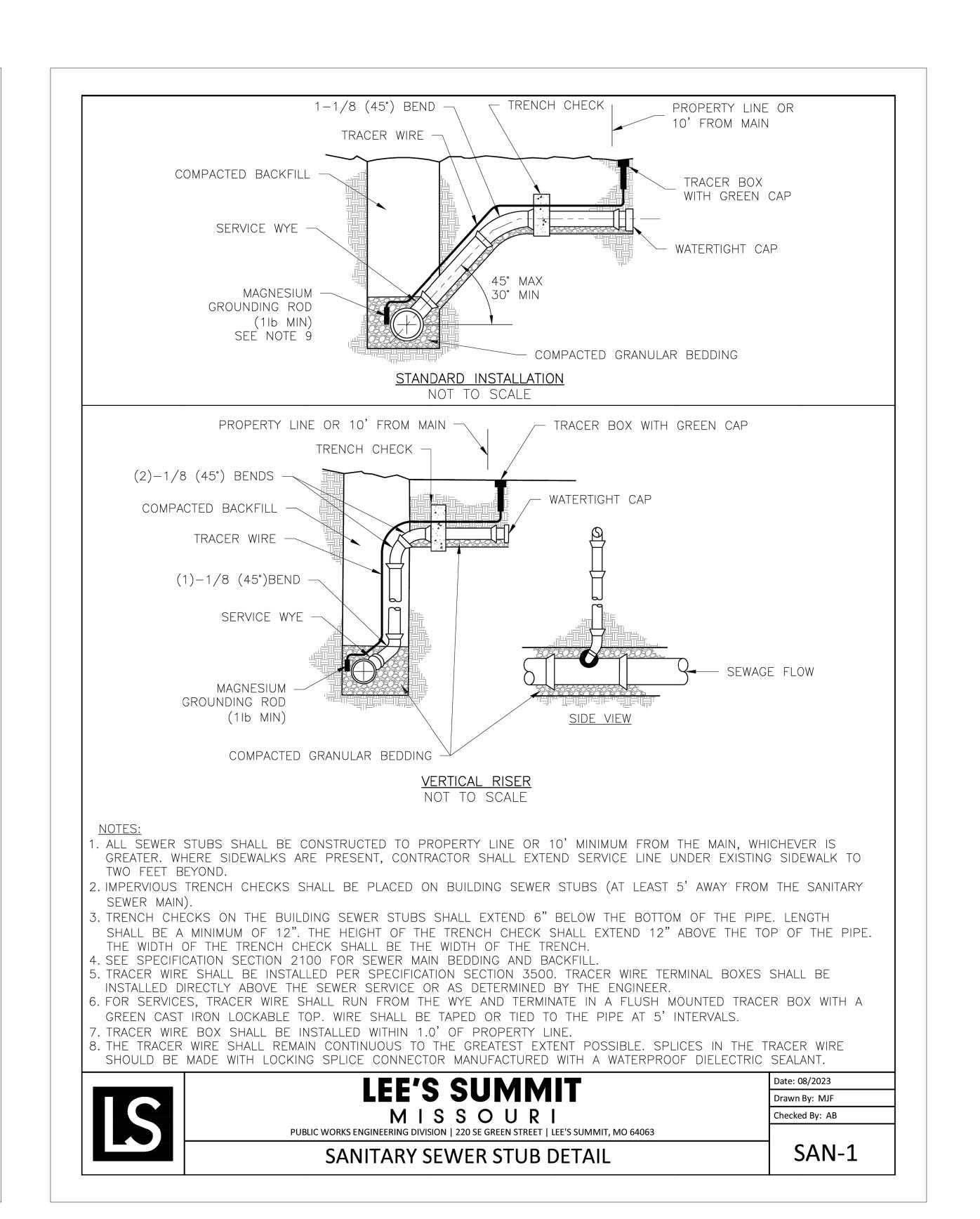


Heavy Duty Concrete Section

Not to Scale









# LEE'S SUMMIT, M

PROJECT NUMBER		
		629
PROJECT MANAGER	DRAWN BY	CHECKED BY
BRR	BRR	

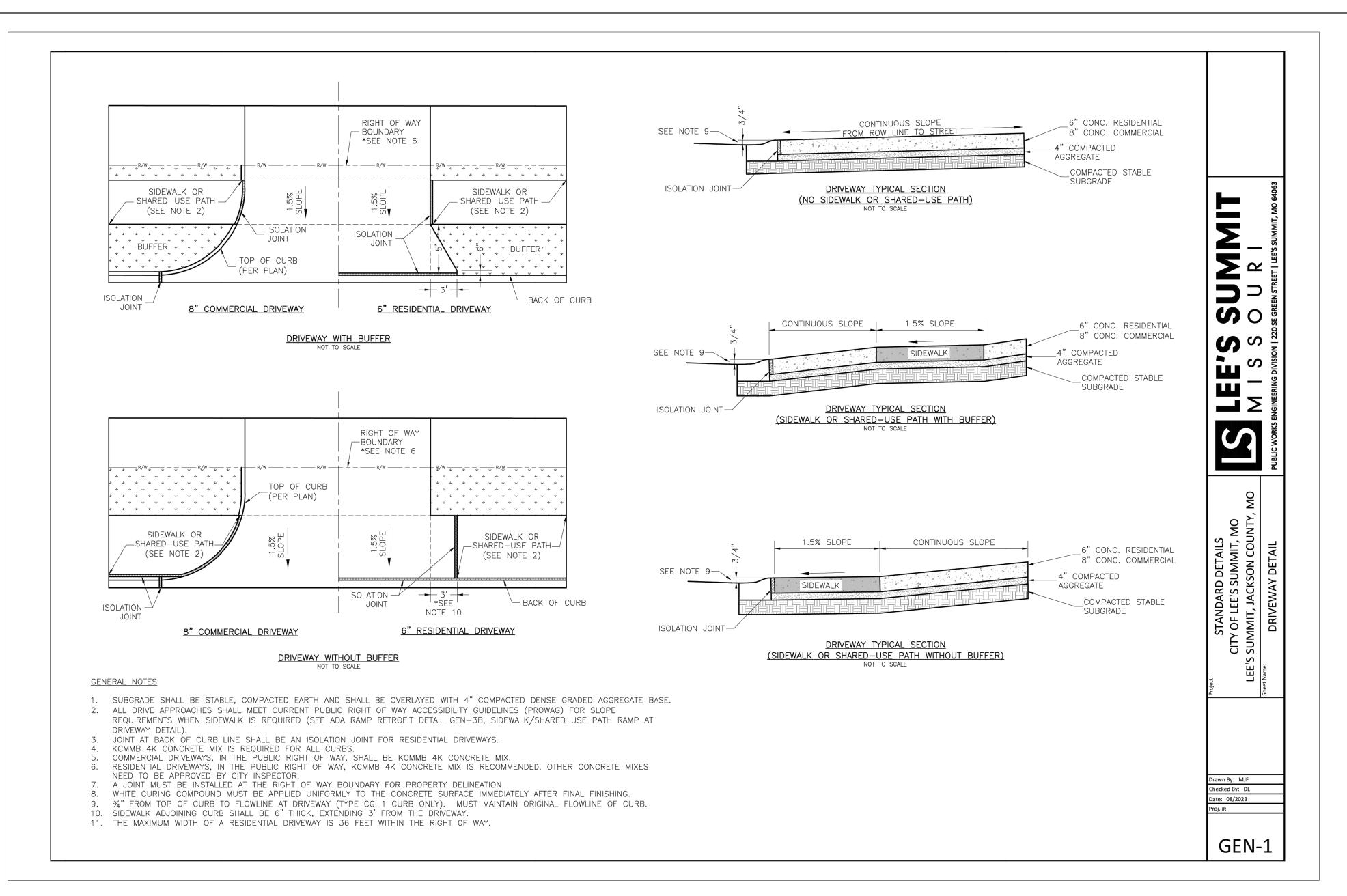


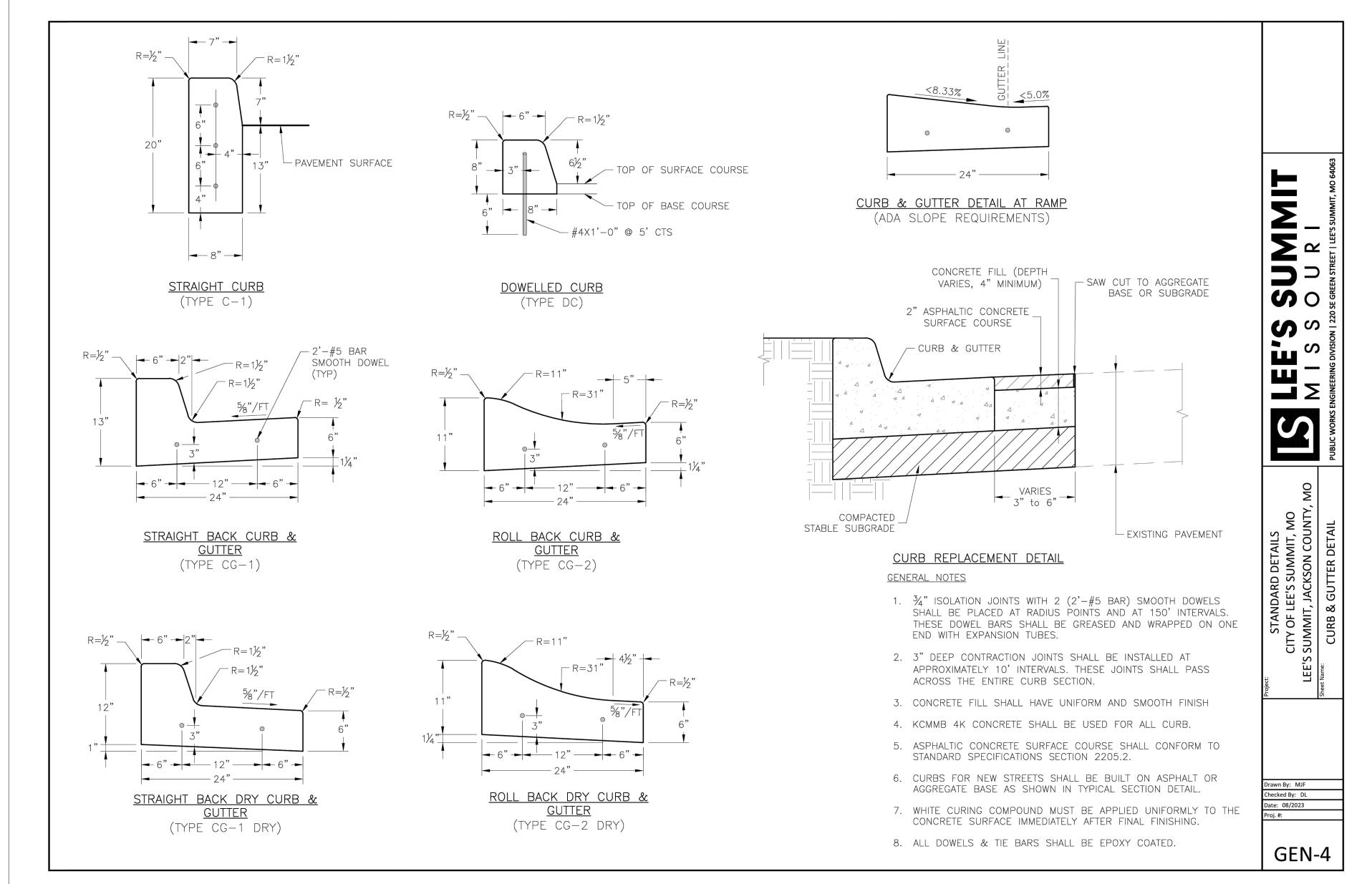
		FOR USE ON A SPECIFIC SITE
		S ISSUE DATE AND IT IS NOT SUITABLE FO SITE OR AT A LATER TIME. USE OF THIS
		EXAMPLE ON ANOTHER PROJECT REQUIR CENSED ARCHITECTS AND ENGINEERS.
		NG FOR REUSE ON ANOTHER PROJECT IS RARY TO THE LAW.
		AT <u>CAD</u> FILES ARE SUFFICIENT OR POSES. USER USES OR ALTERS THESE FII
		EES TO INDEMNIFY BRR FROM LIABILITY
ARISING FROM U	SER'S USE.	
COLLEG AND DEV	SNOIS	
SSUES AND REV	ISIONS	
NUMBER	DATE	DESCRIPTION
		DESCRIPTION ORIGINAL ISSUE
NUMBER	DATE	

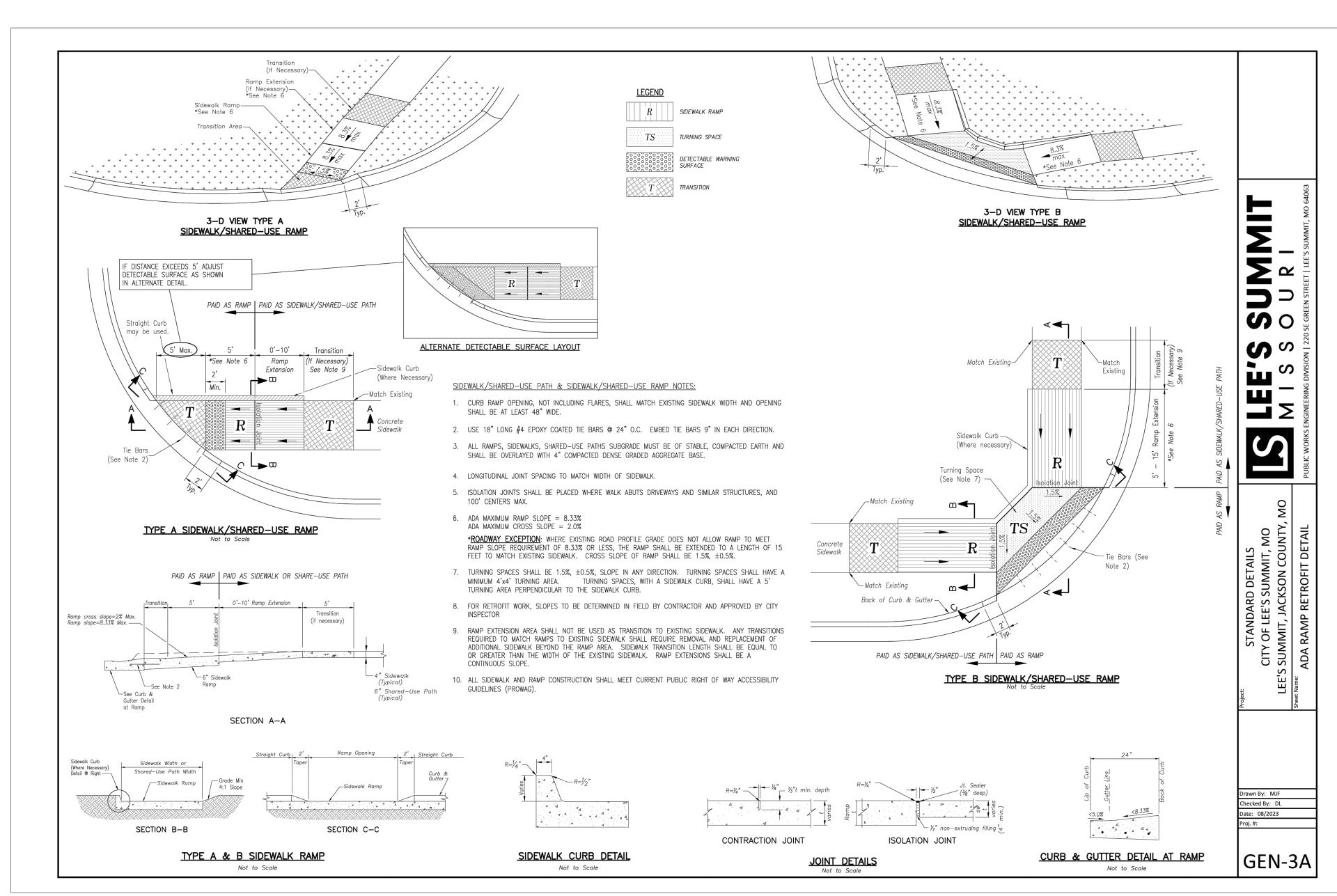
CONSTRUCTION DETAILS

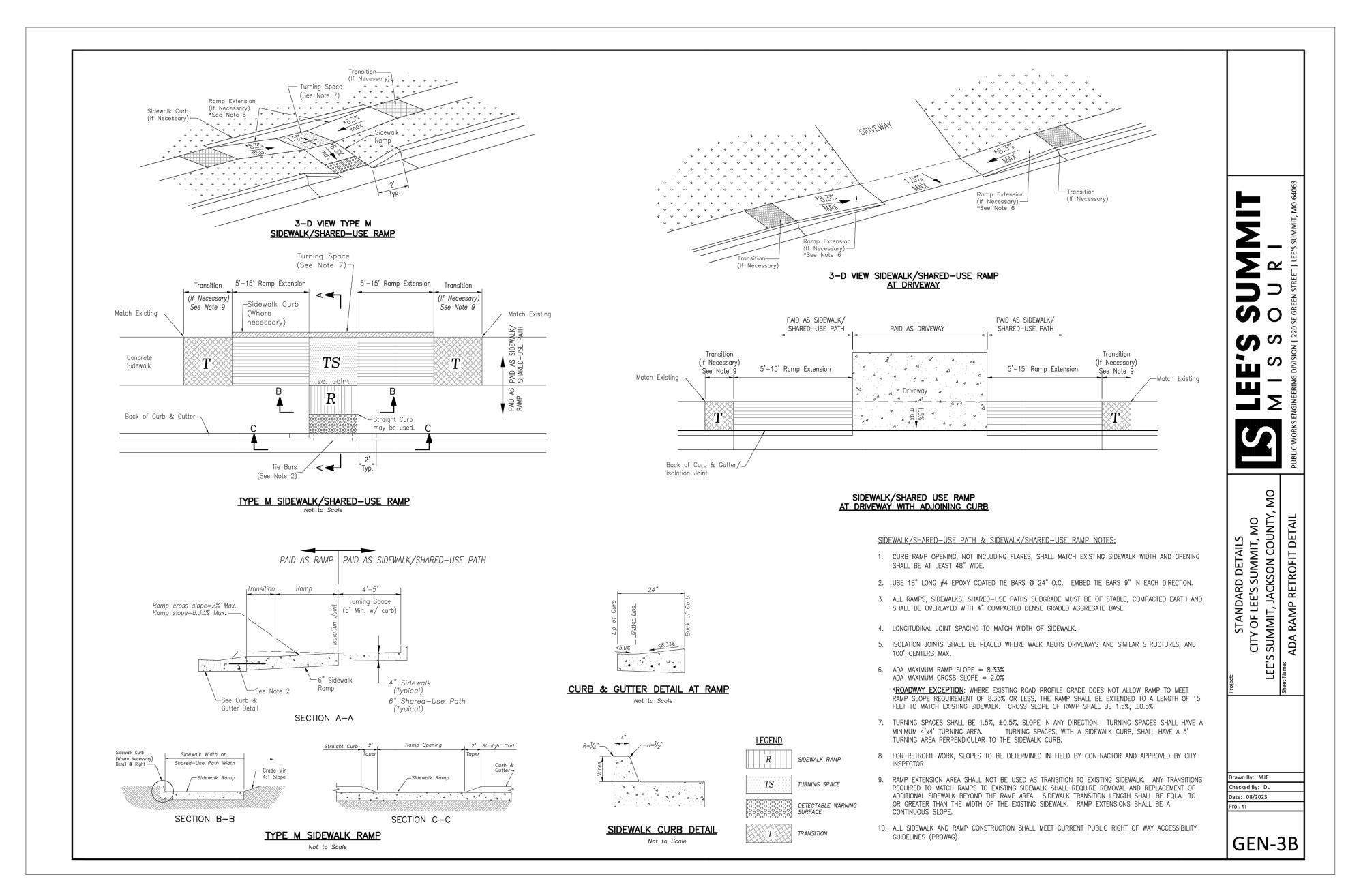
BRR ORIGINAL PRINTED ON RECYCLED PAPER

TNUMBER









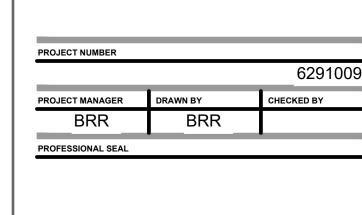
BRR ARCHITECTURE INC.

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044



OJECT TITLE

EE'S SUMMIT, MO





COPYRIGHT NOT	ICE	
CONTEMPORANE USE ON A DIFFER DRAWING FOR RE THE SERVICES O REPRODUCTION AUTHORIZED AND BRR DOES NOT G	COUSLY WITH ITS RENT PROJECT SI EFERENCE OR E) F PROPERLY LIC OF THIS DRAWIN D MAY BE CONTR GUARANTEE THAT	OR USE ON A SPECIFIC SITE ISSUE DATE AND IT IS NOT SUITABLE FOR ITE OR AT A LATER TIME. USE OF THIS KAMPLE ON ANOTHER PROJECT REQUIRES ENSED ARCHITECTS AND ENGINEERS. G FOR REUSE ON ANOTHER PROJECT IS NOT PARY TO THE LAW.
	RISK AND AGREE	OSES. USER USES OR ALTERS THESE FILES ES TO INDEMNIFY BRR FROM LIABILITY
ISSUES AND REV	ISIONS	
NUMBER	DATE	DESCRIPTION
NUMBER 0	DATE 05/01/25	DESCRIPTION ORIGINAL ISSUE

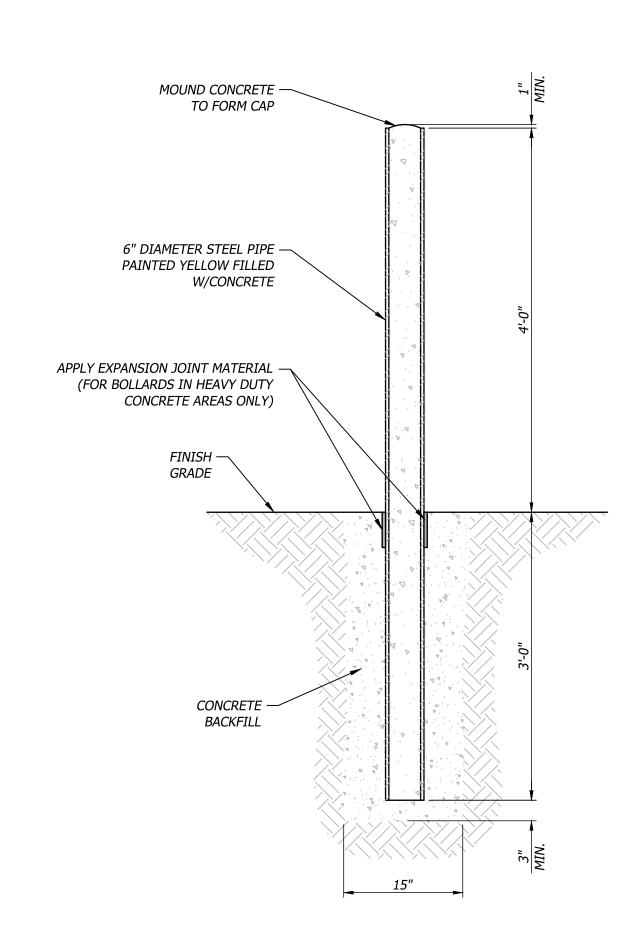
CONSTRUCTION DETAILS

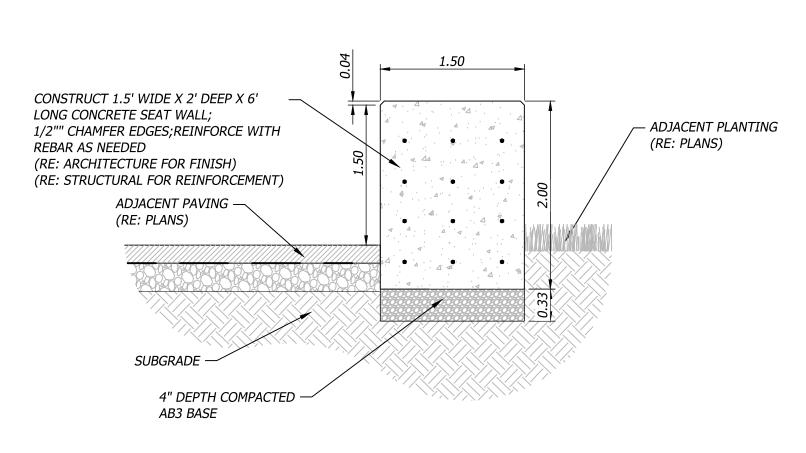
BRR ORIGINAL PRINTED ON RECYCLED PAPER

Cana

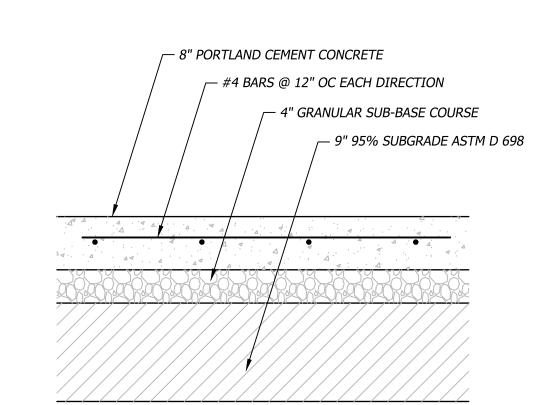
<u>GENERAL NOTES:</u> 1. CONSTRUCTED OF STEEL NOT LESS THAN 4" IN DIAMETER AND CONCRETE FILLED.

- 2. SPACE NOT MORE THAN 4' BETWEEN POST.
- 3. SET NOT LESS THAN 3' DEEP IN A CONCRETE FOOTING OF NOT LESS
- THAN A 15" DIAMETER.
- 4. SET WITH THE TOP OF THE POST NOT LESS THAN 3' ABOVE GROUND.
- 5. LOCATED NOT LESS THAN 3' FROM THE PROTECTED OBJECT.





O16 Concrete Seat Wall
Not to Scale



Concrete Dumpster Pad Section

Not to Scale

<u>NOTES:</u>
1. CONTROL JOINT SPACING SHALL MATCH WIDTH OF SIDEWALK. 2. ISOLATION JOINTS SHALL BE PLACED @ 250' CENTERS OR WHERE WALKS ABUT CURBS, BUILDINGS, ETC.... 3. ALL EXTERIOR CONCRETE SHALL HAVE A BROOM FINISH. \_ 4" PORTLAND CEMENT CONCRETE \_ 4" GRANULAR SUB-BASE COURSE ┌─ 6" MIN. 95% COMPACTED SUBGRADE Varies See Plan

O14 Concrete Sidewalk Section
Not to Scale

— ADJACENT SEAT WALL 4" COMPACTED DRAINAGE – GRAVEL, WRAPPED IN GEOTEXTILE FILTER FABRIC ─ 4" PERFORATED HDPE PIPE, TIE INTO ROOF DRAIN  $\frac{1}{2}$ " DRILLED WEEP HOLE; 36" o.c. DOWN MIDDLE OF CRADLE. COVER EACH WEEP COMPACTED SUBGRADE — HOLE WITH GEOTEXTILE FILTER FABRIC Seat Wall Adjacent — FINISH GRADE PAVER, RE: ARCH — — MORTAR SET ALL EDGES 1" SAND SETTING BED — OF PAVER AREAS POLYMERIC SAND JOINTS -4" REINFORCED CONCRETE BASE -4" COMPACTED DRAINAGE ► ADJACENT PLANTING GRAVEL, WRAPPED IN GEOTEXTILE FILTER FABRIC — 4" PERFORATED HDPE PIPE, TIE INTO ROOF DRAIN \*\*Jan o Roof Dkain

1/2" DRILLED WEEP HOLE; 36" o.c. DOWN
MIDDLE OF CRADLE. COVER EACH WEEP

HOLE WITH GEOTEXTILE FILTER FABRIC COMPACTED SUBGRADE -O15 Paver Detail

Not to Scale

MORTAR SET ALL EDGES – OF PAVER AREAS

FINISH GRADE -

1" SAND SETTING BED —

POLYMERIC SAND JOINTS —

4" REINFORCED CONCRETE BASE —

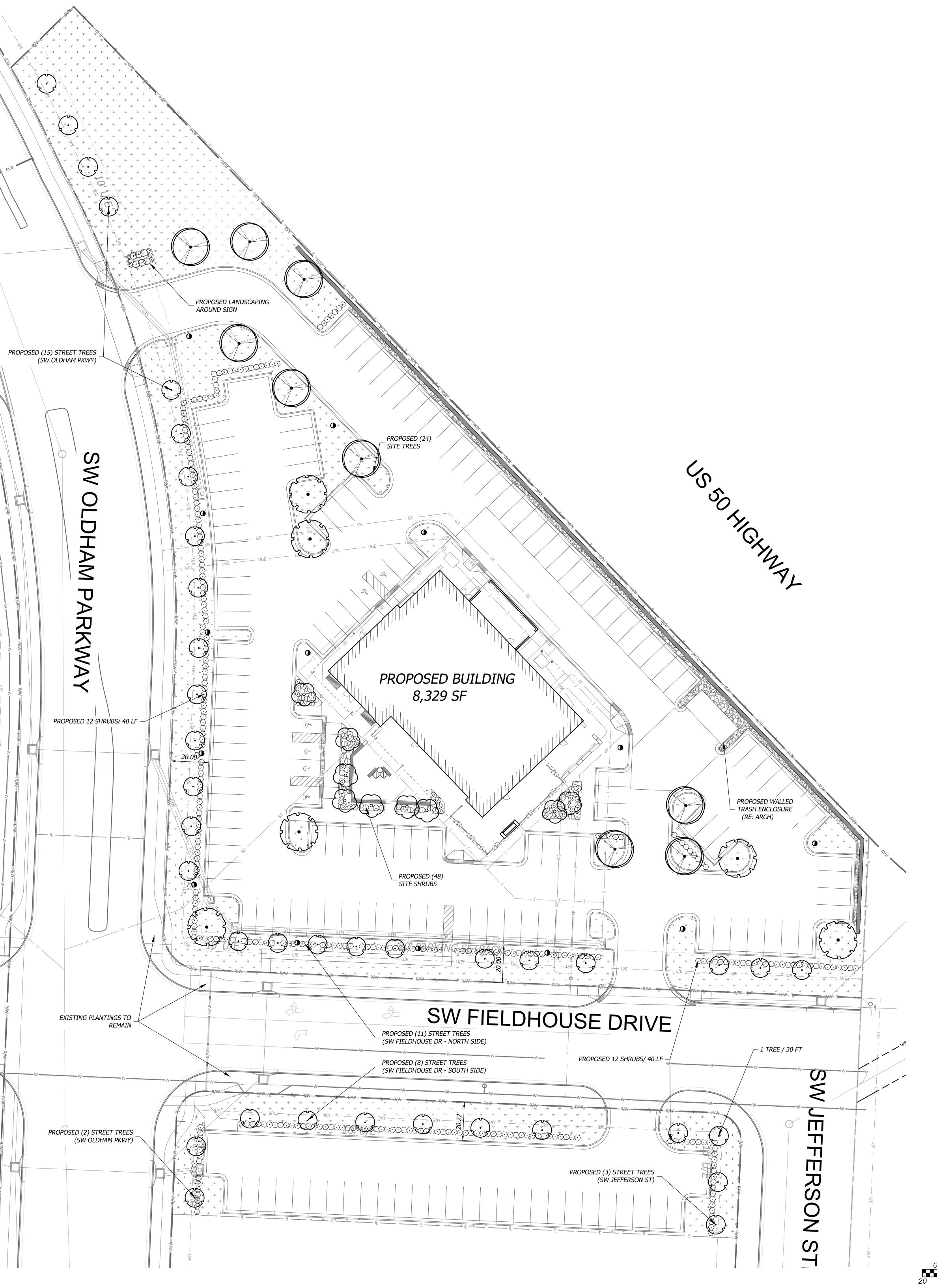
PROJECT NUMBER PROFESSIONAL SEAL

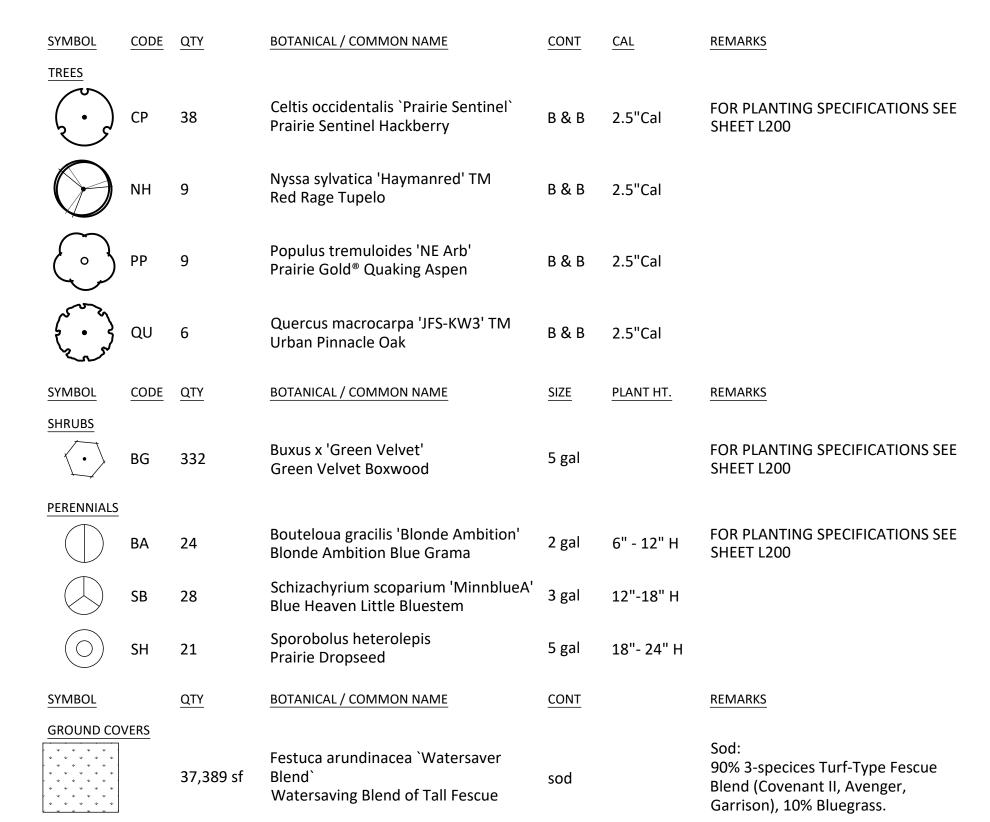


COPYRIGHT NOTICE THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE. ISSUES AND REVISIONS DATE DESCRIPTION
05/01/25 ORIGINAL ISSUE

CONSTRUCTION DETAILS

SHEET NAME





### ROCK SCHEDULE

ROCK MULCH
Buffalo River Rock or regional equal.
SIze: 1"-3". Depth: 3". SAMPLE OF
ROCK MULCH TO BE PROVIDED TO
OWNER AND ARCHITECT FOR
APPROVAL.

NOTE: ALL PLANTING AREAS TO BE COVERED WITH CODE APPROVED GROUNDCOVER SUCH AS MULCH, SOD, OR OTHER APPROVED EQUAL

NOTE: ALL DISTURBED AREAS IN RIGHT OF WAY TO BE RESTORED TO PRIOR CONDITION OR RESEEDED WITH TURF FESCUE GRASS

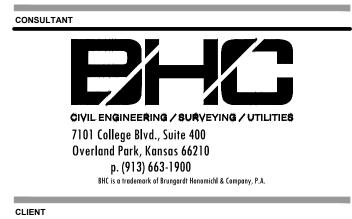
### SITE DATA

	Quantity	Required	Provided
Site Area	119,464		
Open Space Req			
1 tree / 5000 sq ft	119,464	23.89	24
2 shrubs / 5000 sq ft	119,464	47.79	48
Street Tree			
1 tree / 30 LF of street			
SW Oldham Pkwy	502 LF	16.73	17
SW Fieldhouse Dr - North Side	318 LF	10.6	11
SW Fieldhouse Dr - South Side	225 LF	7.5	8
SW Jefferson St	67 LF	2.23	3
Parking Landscape			
total LA are 5% of parking area	N/A	Yes	Yes
12 shrubs / 40 LF	1112 LF	333.6	335
islands to be min 9' wide	N/A	Yes	Yes

# **LEGEND**

SIM —	PROPOSED STORM SEWER LI
RD	PROPOSED ROOF LINE DRAIN
	PROPERTY LINE
R/W	RIGHT-OF-WAY LINE





20 1507 7171 5

Q39 (SHELL) EE'S SUMMIT, MO

PROJECT NUMBER

62910099

PROJECT MANAGER DRAWN BY CHECKED BY

BRR BRR

PROFESSIONAL SEAL



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE
CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR
USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS
DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES
THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT
AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR
APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES
AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY
ARISING FROM USER'S USE.

ISSUES AND REVISIONS

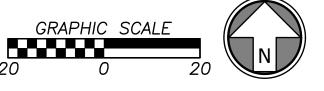
NUMBER DATE DESCRIPTION

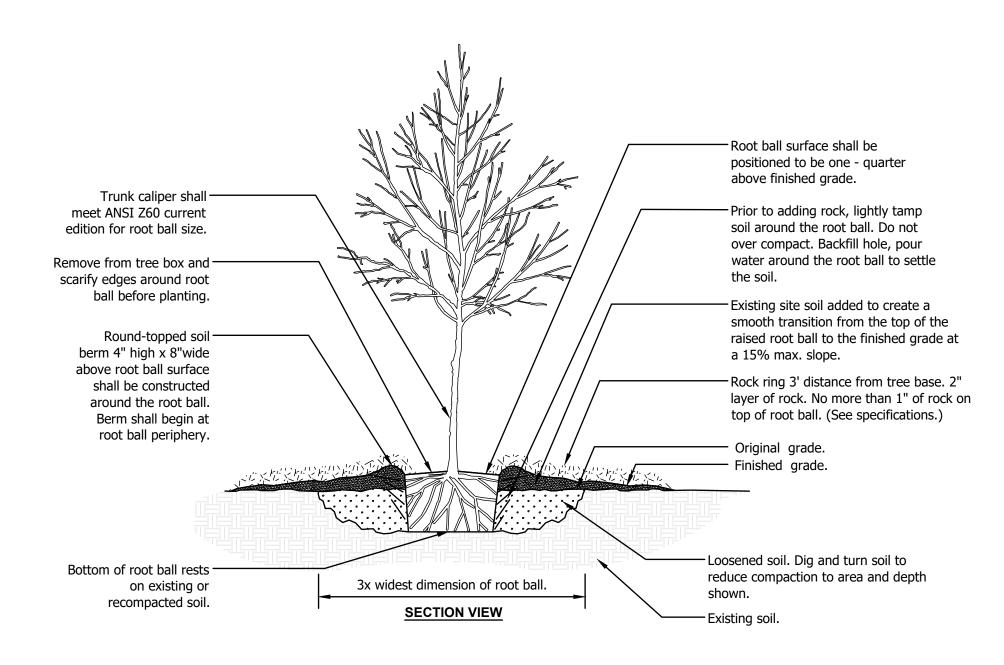
0 05/01/25 ORIGINAL ISSUE

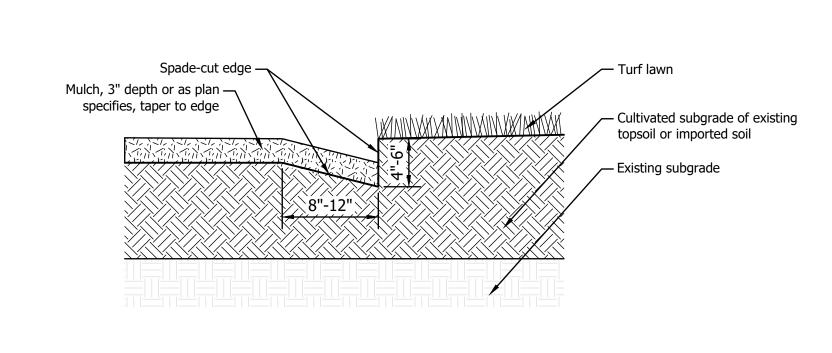
LANDSCAPE PLAN

BRR ORIGINAL PRINTED ON RECYCLED PAPER

L100

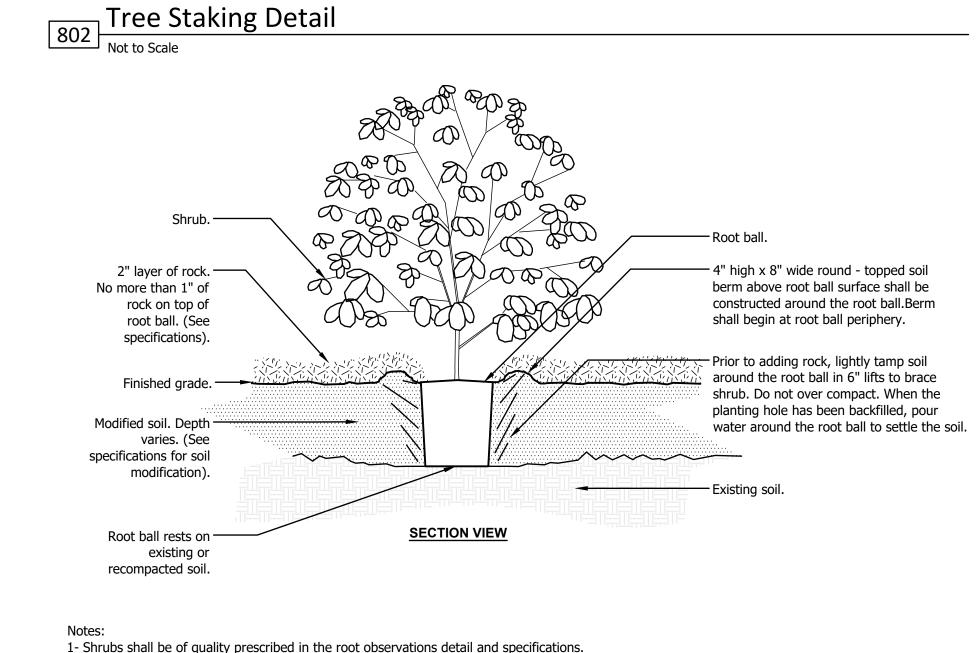






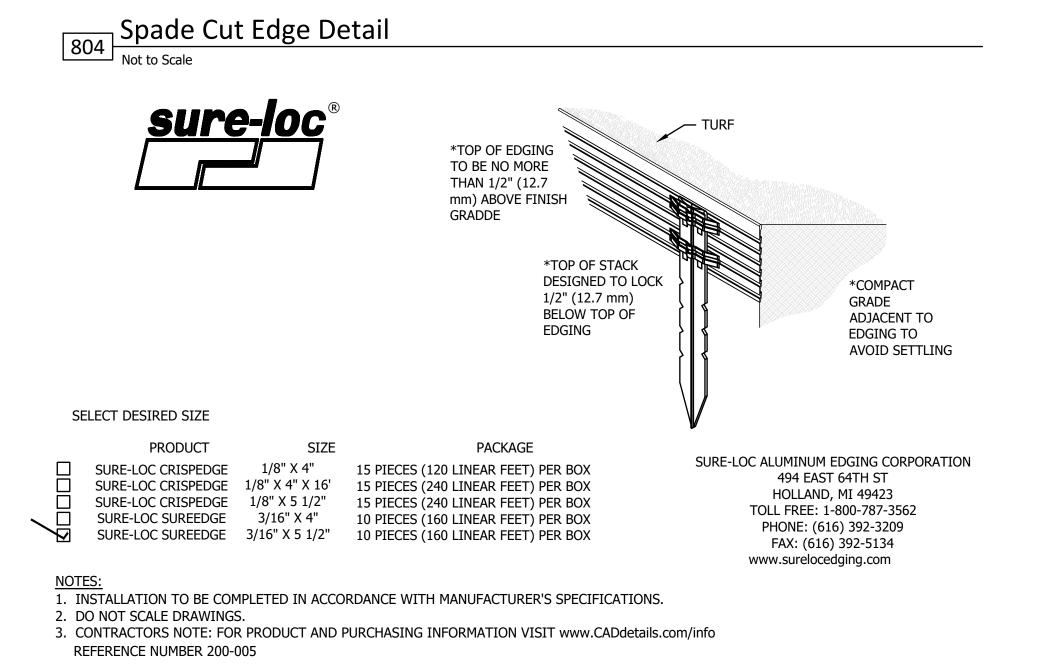
### Remove nursery stake. If central leader needs to be 1" x 9' single metal stake straightened or held erect, it is with metal arm bar acceptable to attach a 1/3" x 8' secured to stake and bamboo pole to the central leader rubber strap 、 and trunk. around trunk. Height of arm bar shall vary per tree. Contractor to adjust as needed to hold tree erect. **PLAN VIEW** Two (2) metal stakes, 1" x 9'. Install per manufacturer's specifications and recommendations. Stake location shall not interfere with branches. URBAN TREE FOUNDATION ©

**SECTION VIEW** 



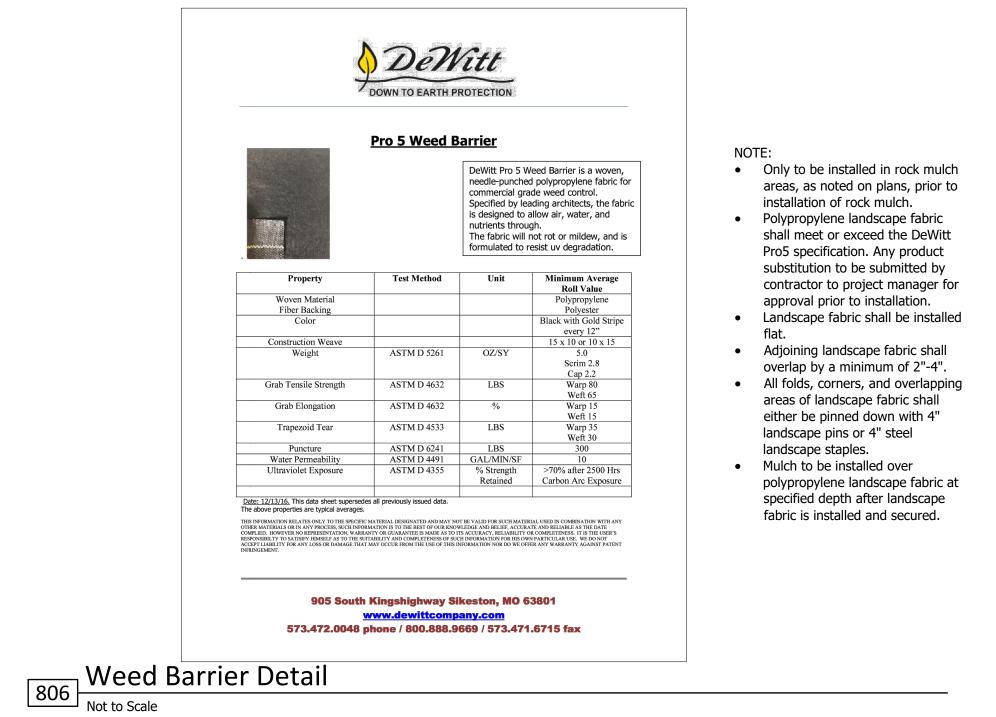
URBAN TREE FOUNDATION © 2014 Shrub Planting Detail

2- See specifications for further requirements related to this detail.



Aluminum Landscape Edging Detail

Not to Scale



### PLANTING NOTES

- 1. All existing utilities need to be located and identified prior to the commencement of any work or installation.
- 2. Protect all structures, utilities, hardscapes, and other facilities, as well as existing turf grass areas and existing plant material from damage caused by planting operations. 3. The planting plan graphically illustrates overall plant massings. Each plant species massing shall be placed in the field to utilize the greatest coverage of ground plane. The
  - following applies for individual plantings unless otherwise specified: A. Creeping groundcover shall be a minimum of 6" from any paving edge. B. All shrubs shall be a minimum of 2' from any paving edge unless adjacent to vehicular parking areas, whereas shrubs shall then be a minimum of 4' from back
- C. All trees shall be a minimum of 3' from any paving edge or curb. D. All plants of the same species shall be equally spaced apart and placed for best aesthetic viewing and overall plant success. 4. Mulch all planting bed areas with decomposed granite to a minimum depth of 2".

### MATERIALS: 1. Plant material shall be healthy, vigorous, and free of disease and insects as per AAN

- 2. Kind, size, and quality of plant material shall conform to American Standard for Nursery Stock, ANSI-Z60.1-2014, or most current edition.
- 3. Any seed planted areas shall not use wet, moldy, or otherwise damaged seed. 4. Shredded bark mulch installed at trees shall be finely chipped and shredded hardwood chips, consisting of pure wood products and free of all other foreign substances. Pine bark compost mulch installed at planting bed areas shall be free of all other foreign
- 5. Topsoil shall be free of stones larger than  $\frac{1}{2}$ ", foreign matter, plants, roots, and seeds. 6. Manure shall be well-rotted, unbleached, stable or cattle manure containing not more than 25% by volume of straw, sawdust, or other bedding materials and shall be free of toxic substances, stones, sticks, soil, weed seeds, and material harmful to plant growth.

### 1. All compacted soil within the area to be landscaped shall be removed to a depth of not

of curb to allow for bumper overhang.

- less than 2' and shall be backfilled with topsoil. 2. Prepare planting beds by incorporating an approved composed organic soil into existing soil for all shrub, perennial, and annual planting beds at a minimum depth of 6". Thoroughly mix organic material into the existing soil by roto-tilling or other approved method to a minimum depth of 12".
- 3. Planting of trees, shrubs, and seeded groundcover shall commence during the spring (March 15 - June15) or fall (September 1 - October 15) planting season. Water shall be available for hand irrigation purposes. 4. Apply liquid root stimulator to all shrubs and groundcovers at rates recommended by
- manufacturer during first plant watering following installation. 5. After plants have been installed, all planting beds shall be treated with dacthal
- pre-emergent herbicide prior to mulch application. 6. All planting areas shall be brought to a smooth, uniform surface, free of ruts and irregularities. All landscape beds shall be level with surrounding surfaces or hardscape
- unless specified otherwise. 7. Plant pit backfill for trees and shrubs shall be 20% peat or well composted manure and 80% topsoil. 8. Trees, shrubs, and perennials shall not be pruned or trimmed before delivery, and shall
- not be pruned during or after installation except to remove damaged or dead growth. 9. Plant material shall be guaranteed for a period of one year after owner's acceptance of finished job. All dead or damaged plant material shall be replaced at landscape
- contractor's expense. 10. Landscape contractor shall maintain all plant material until final acceptance, at which point the one year guarantee begins.

### SOD NOTES

- 1. All disturbed areas shall be sodded/seeded with turf-type tall fescue sod with a minimum of three cultivars. 2. All landscaped areas shall receive a minimum 6" depth of
- topsoil compacted to 85% density at optimum moisture
- 3. The entire surface to be landscaped should be reasonably smooth and free from stones  $\frac{1}{2}$ " and larger, sticks, roots, debris, and other extraneous material in the top 6" of soil.
- 4. Sod shall be machine stripped at a uniform soil thickness of approximately 1" (plus or minus  $\frac{1}{4}$ "). The measurement for thickness shall exclude top growth and thatch, and shall be determined at the time of cutting in the field. Precautions shall be taken to prevent drying and heating. Sod damaged by heat and dry conditions, and sod cut more than 18 hours prior to
- installation shall not be used. 5. Handling of sod shall be done in a manner that will prevent tearing, breaking, drying, and other damage. Protect exposed roots from dehydration. Do not deliver more sod than can be
- laid within 24 hours. 6. Moisten prepared surface immediately prior to laying sod. Water thoroughly and allow surface to dry before installing sod, fertilize, harrow or rake fertilizer in the top  $1\frac{1}{2}$ " of topsoil,
- at a uniform rate. 7. Fertilizer shall be 20-10-5 commercial fertilizer of the grade, type, and form specified and shall comply with the rules of the State Department of Agriculture. Fertilizer shall be identified
- according to the percent N,P,K respectively. 8. Saturate sod with fine water spray within two hours of planting. During the first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum of 4" depth.

BRR ARCHITECTURE INC. 8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

ARCHITECT OF RECORD



7101 College Blvd., Suite 400 Overland Park, Kansas 66210 p. (913) 663-1900 BHC is a trademark of Brungardt Honomichl & Company, P.A.

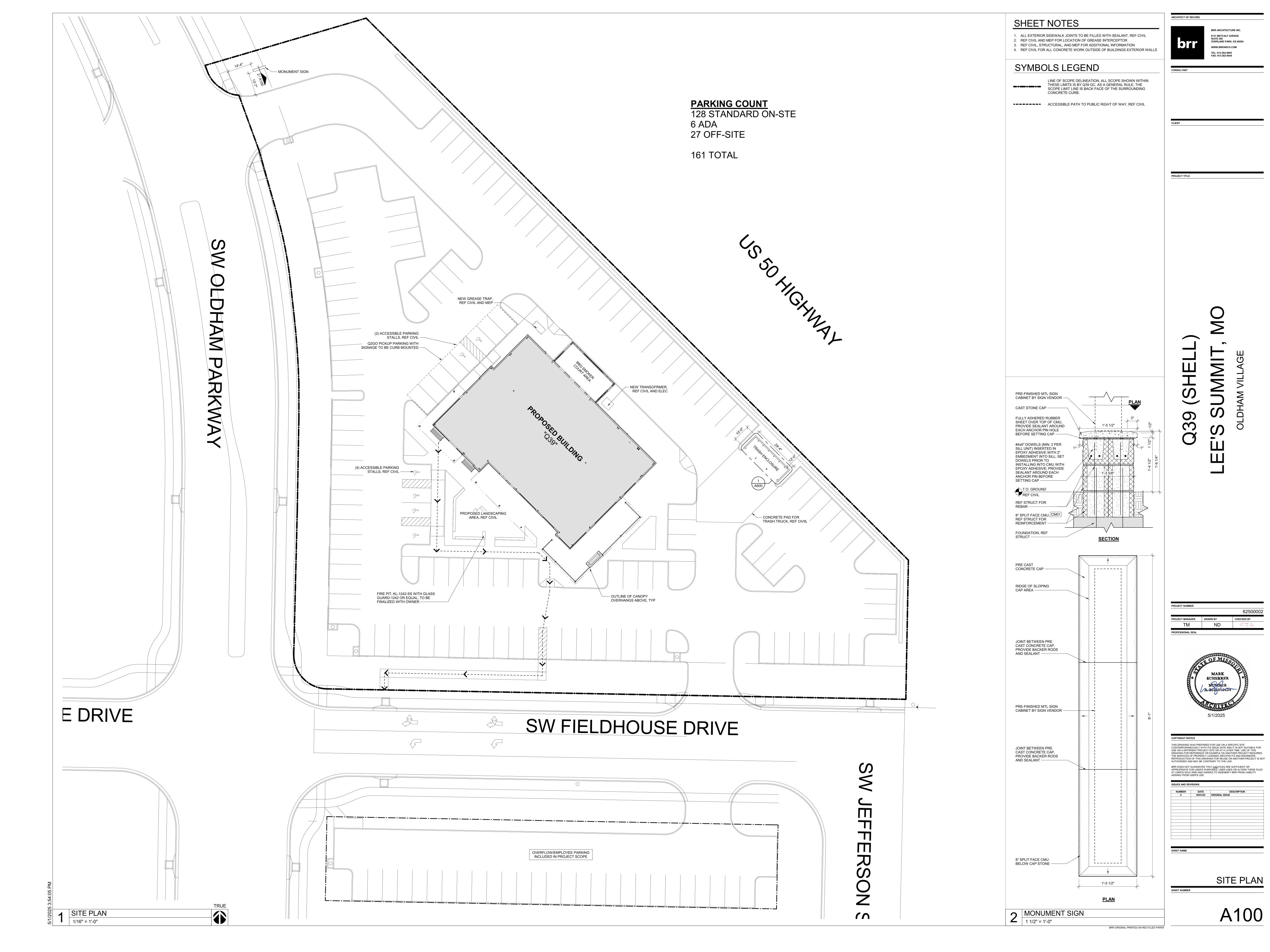
PROJECT TITLE

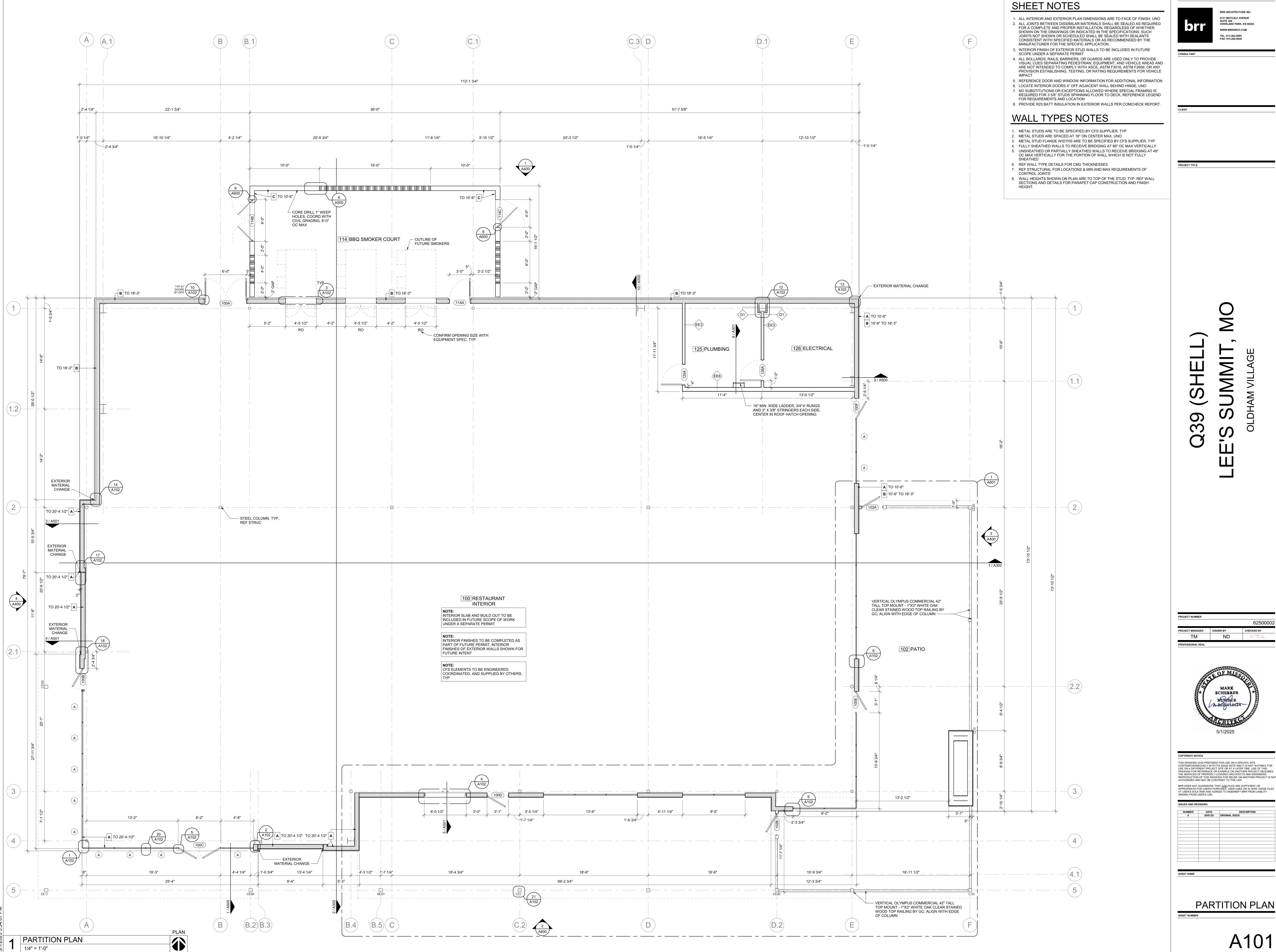
JECT NUMBER		
		62910099
JECT MANAGER	DRAWN BY	CHECKED BY
BRR	BRR	
FESSIONAL SEAL		



COPYRIGHT NOTICE
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NO AUTHORIZED AND MAY BE CONTRARY TO THE LAW.
BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

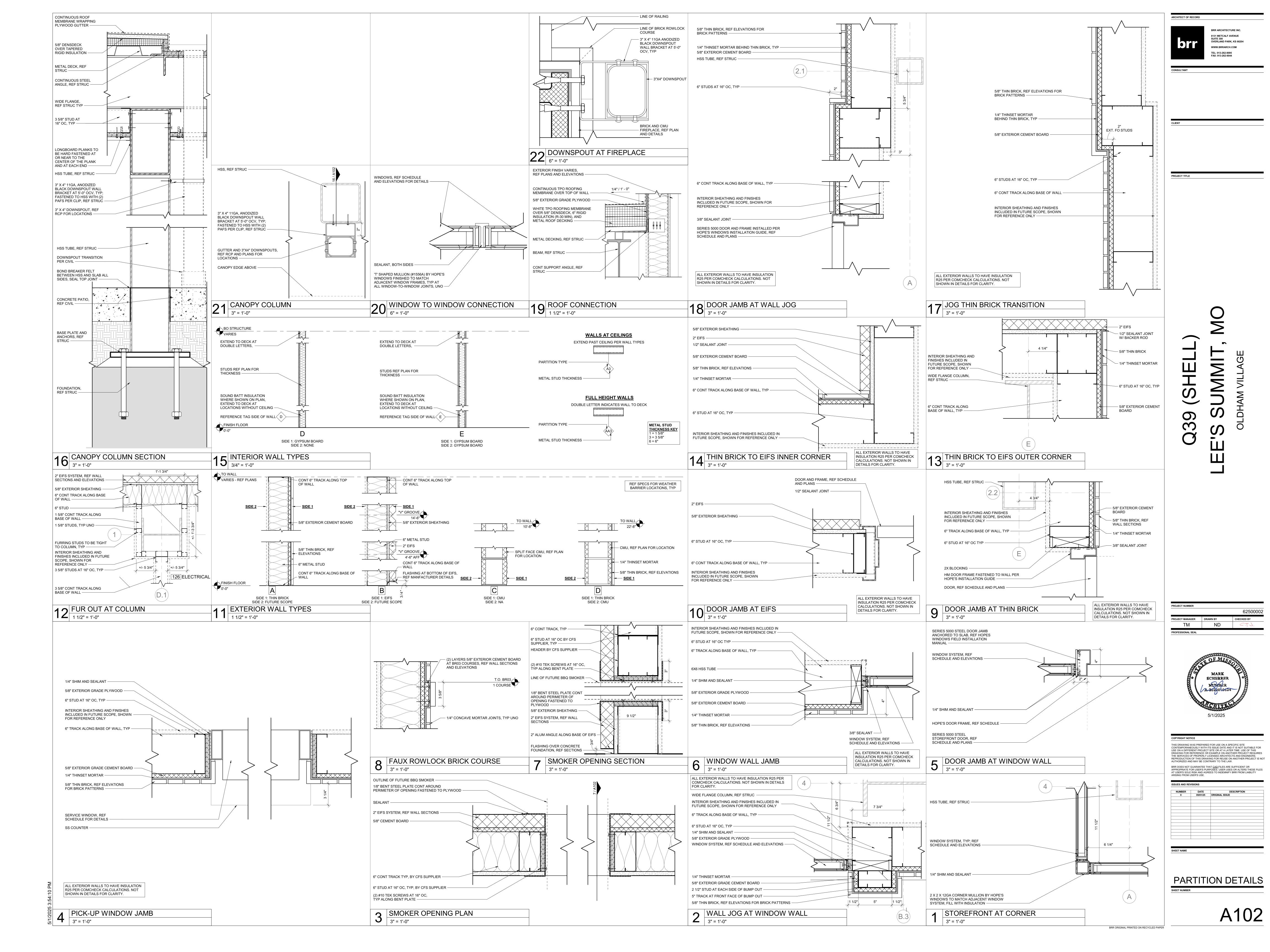
NUMBER	DATE	DESCRIPTION
0	05/01/25	ORIGINAL ISSUE

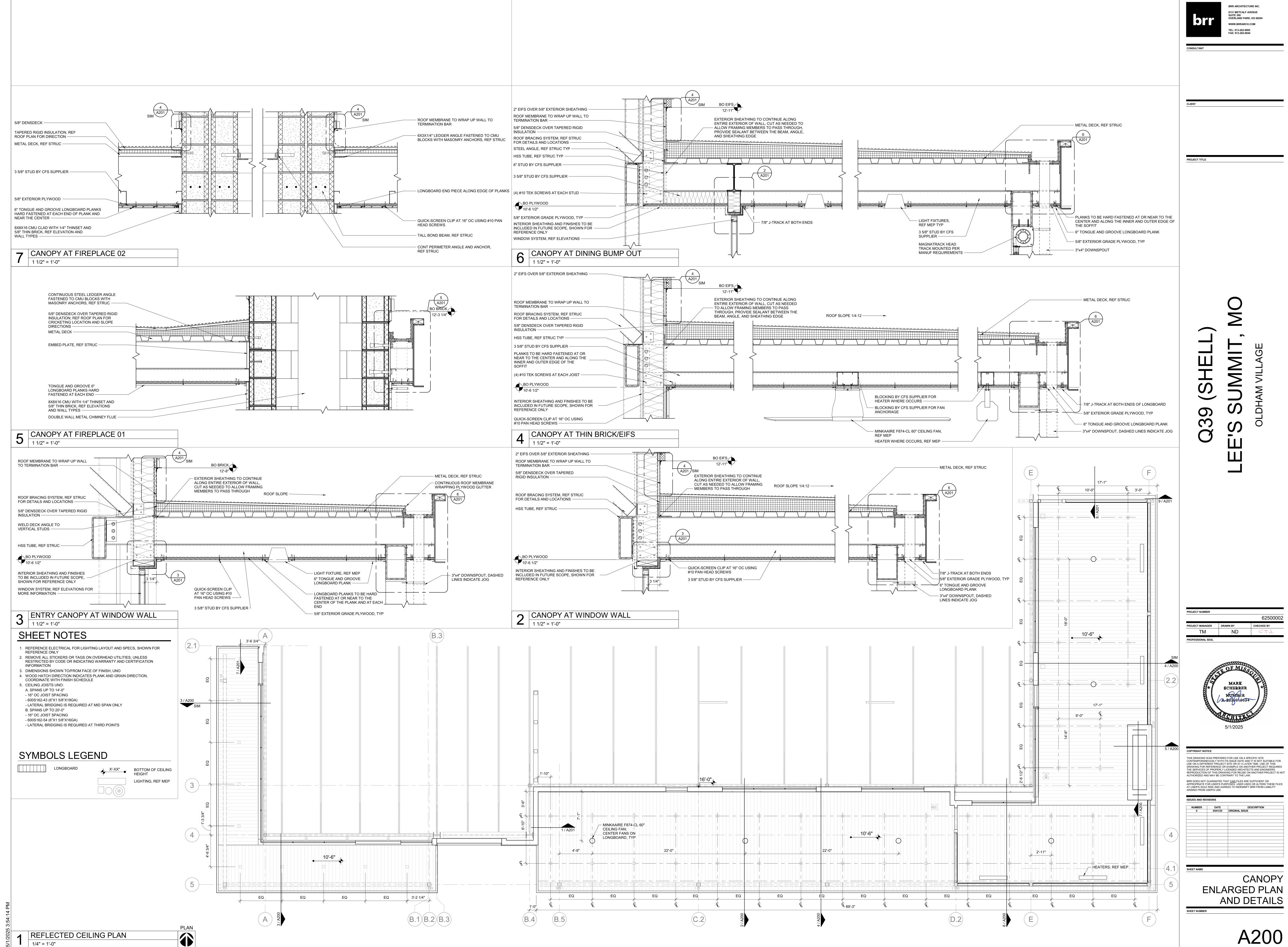




ARCHITECT OF RECORD

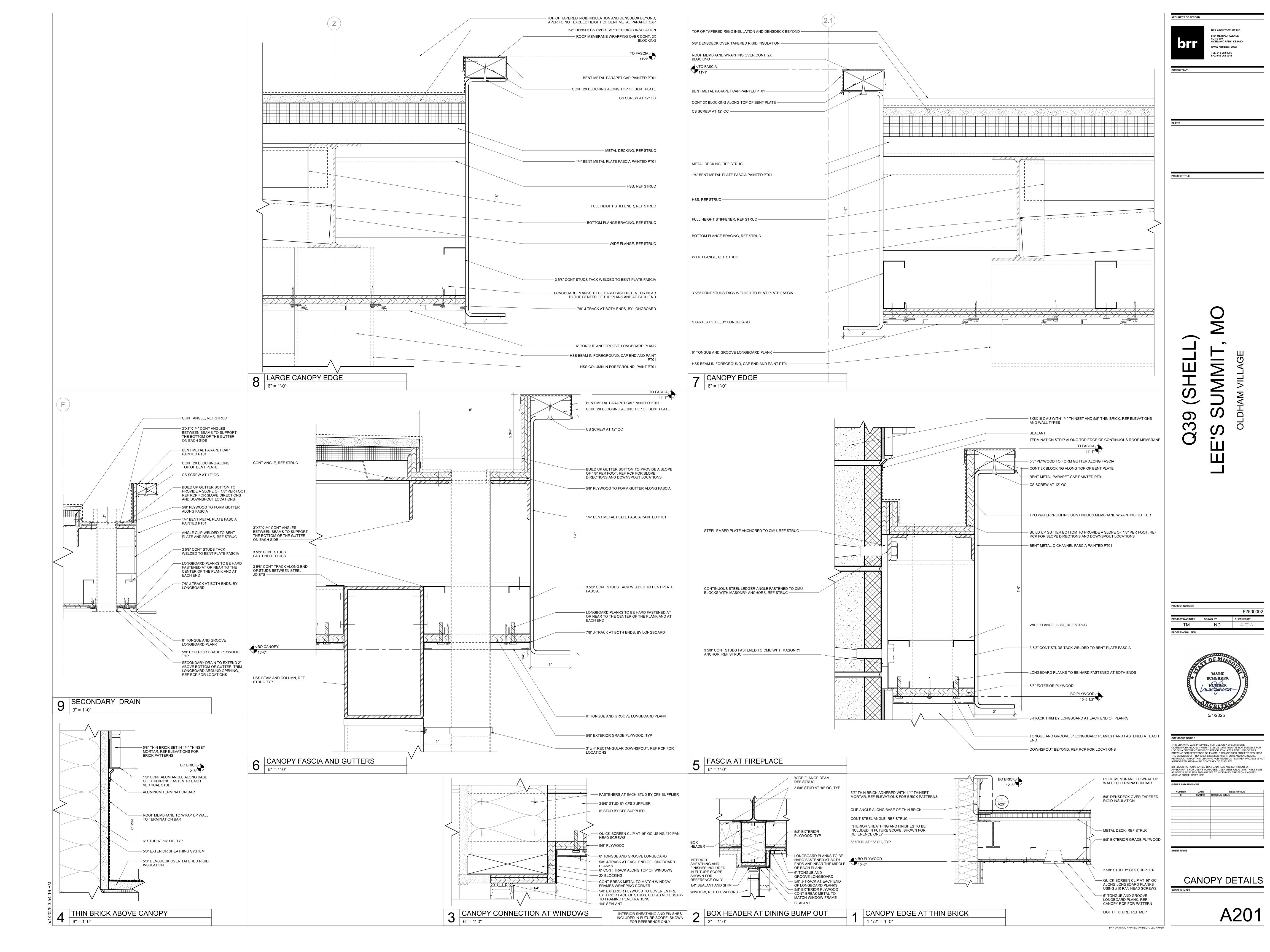
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

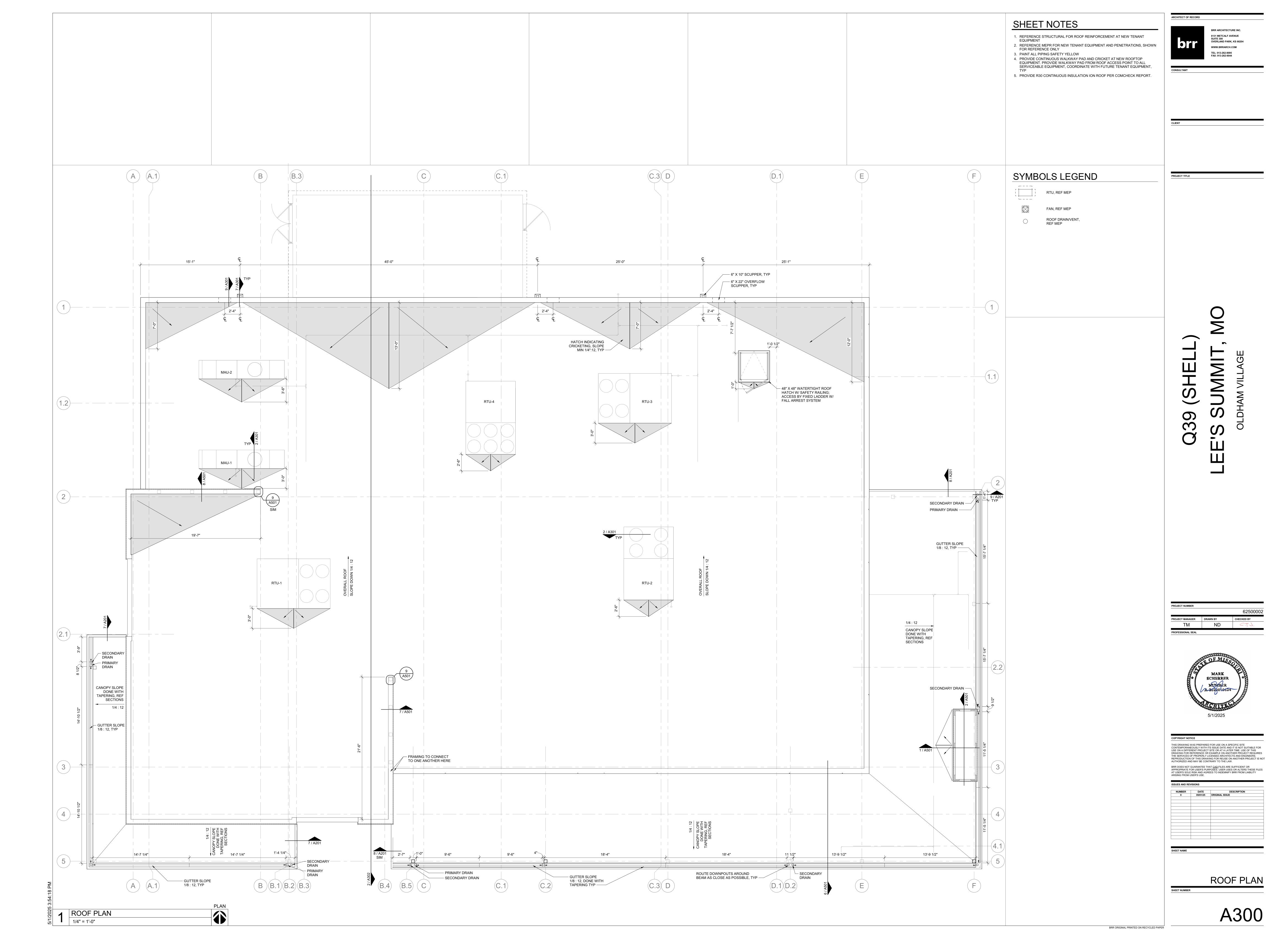


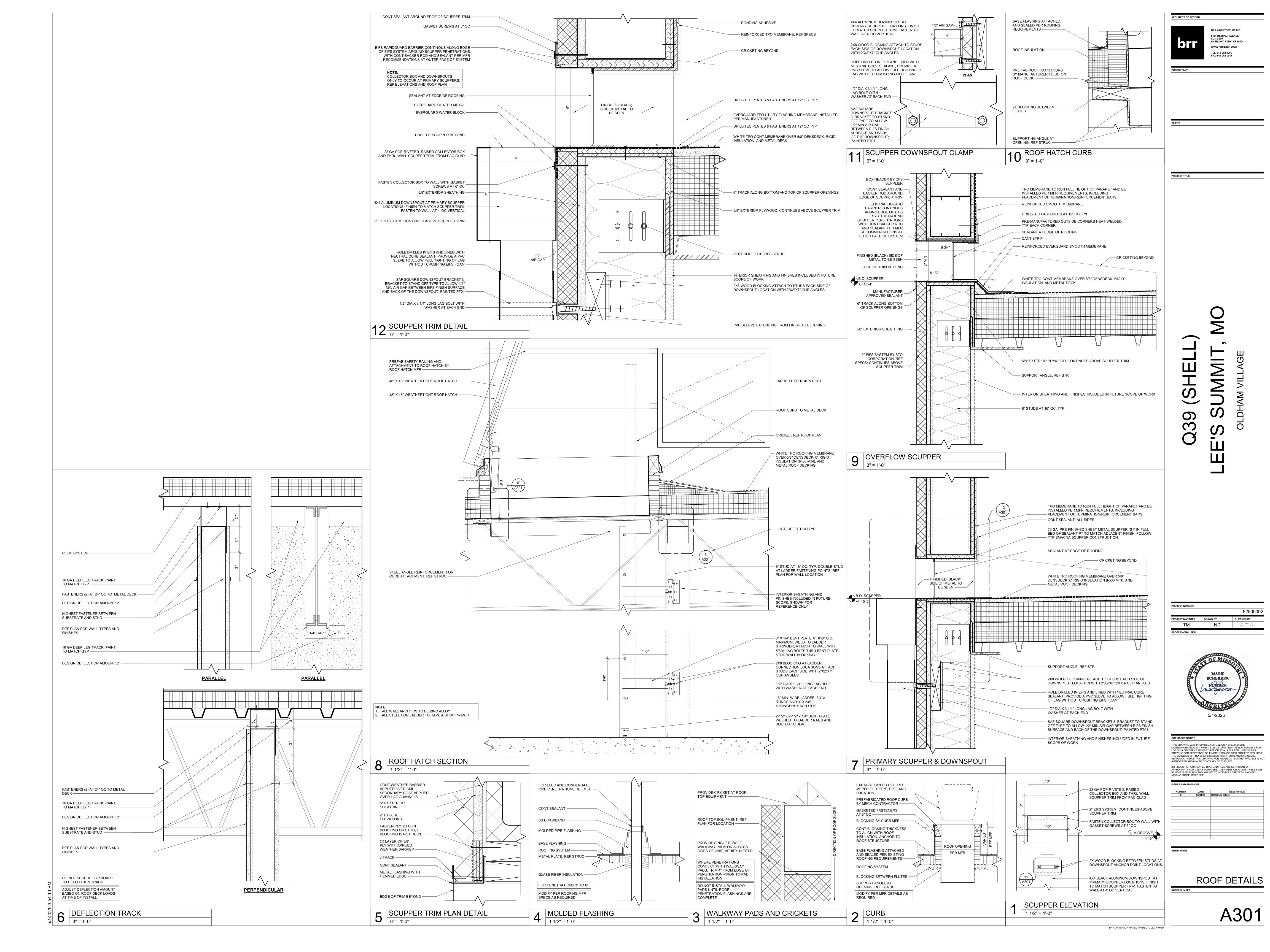


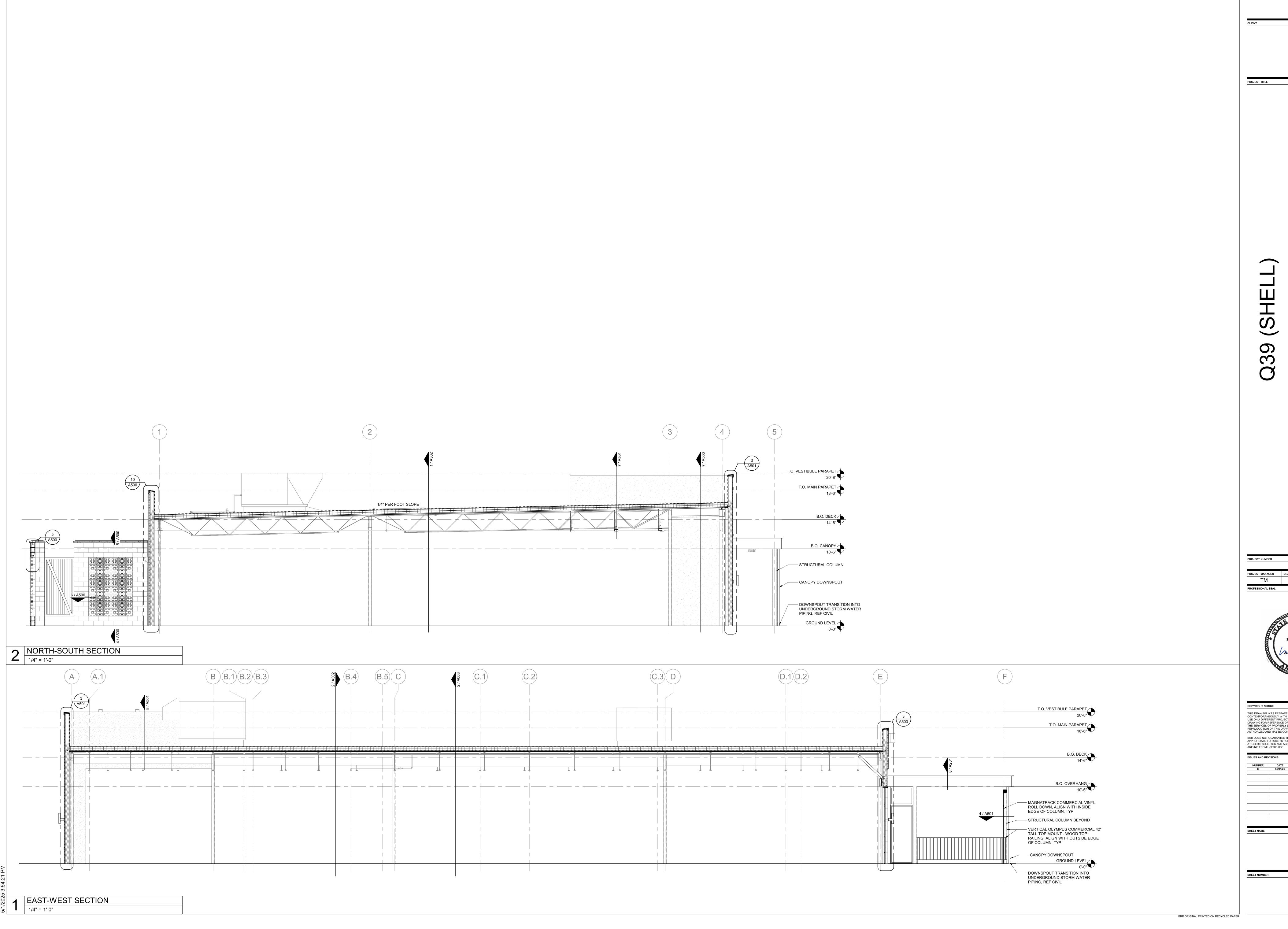
ARCHITECT OF RECORD

CANOPY ENLARGED PLAN AND DETAILS





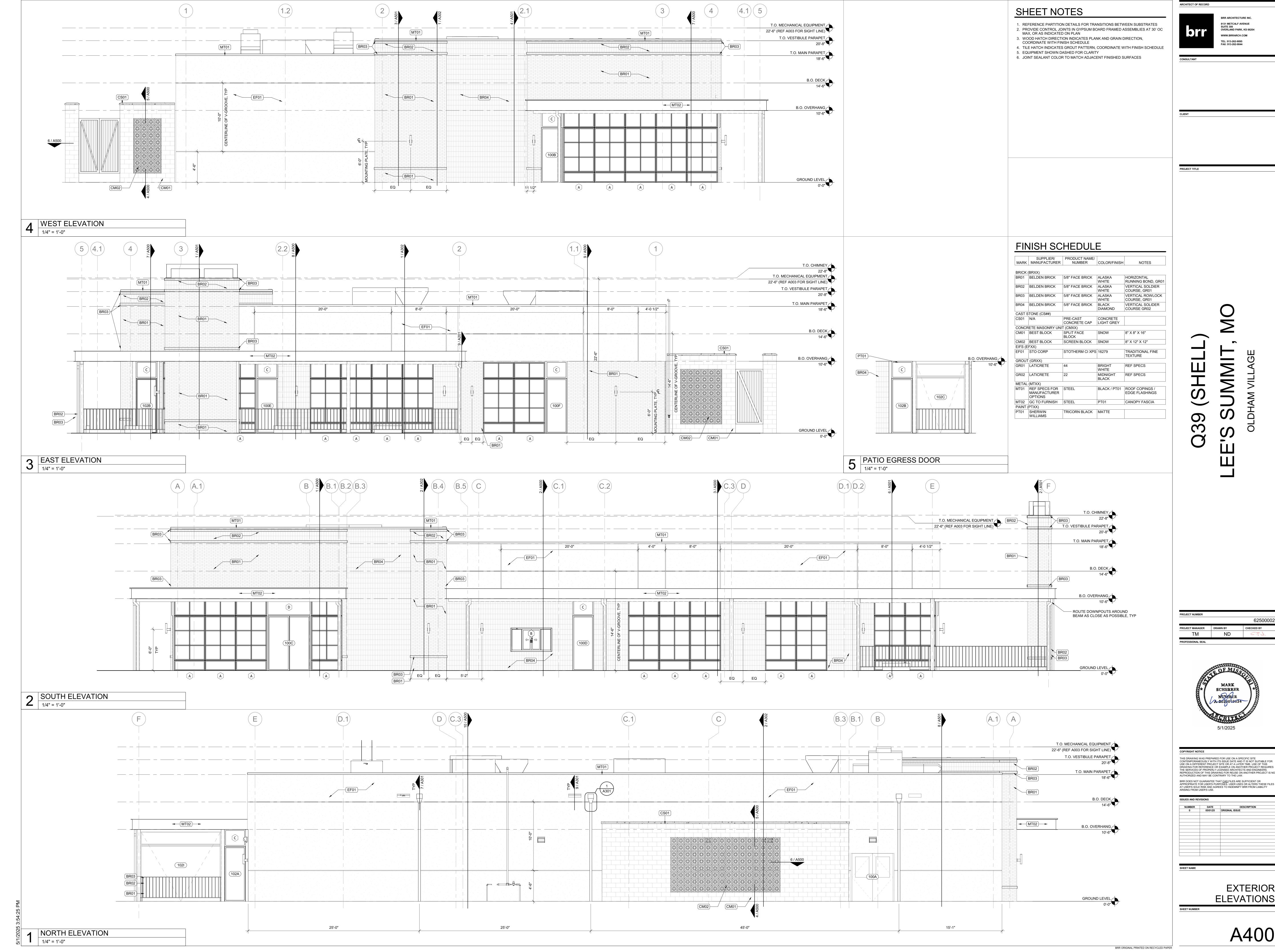






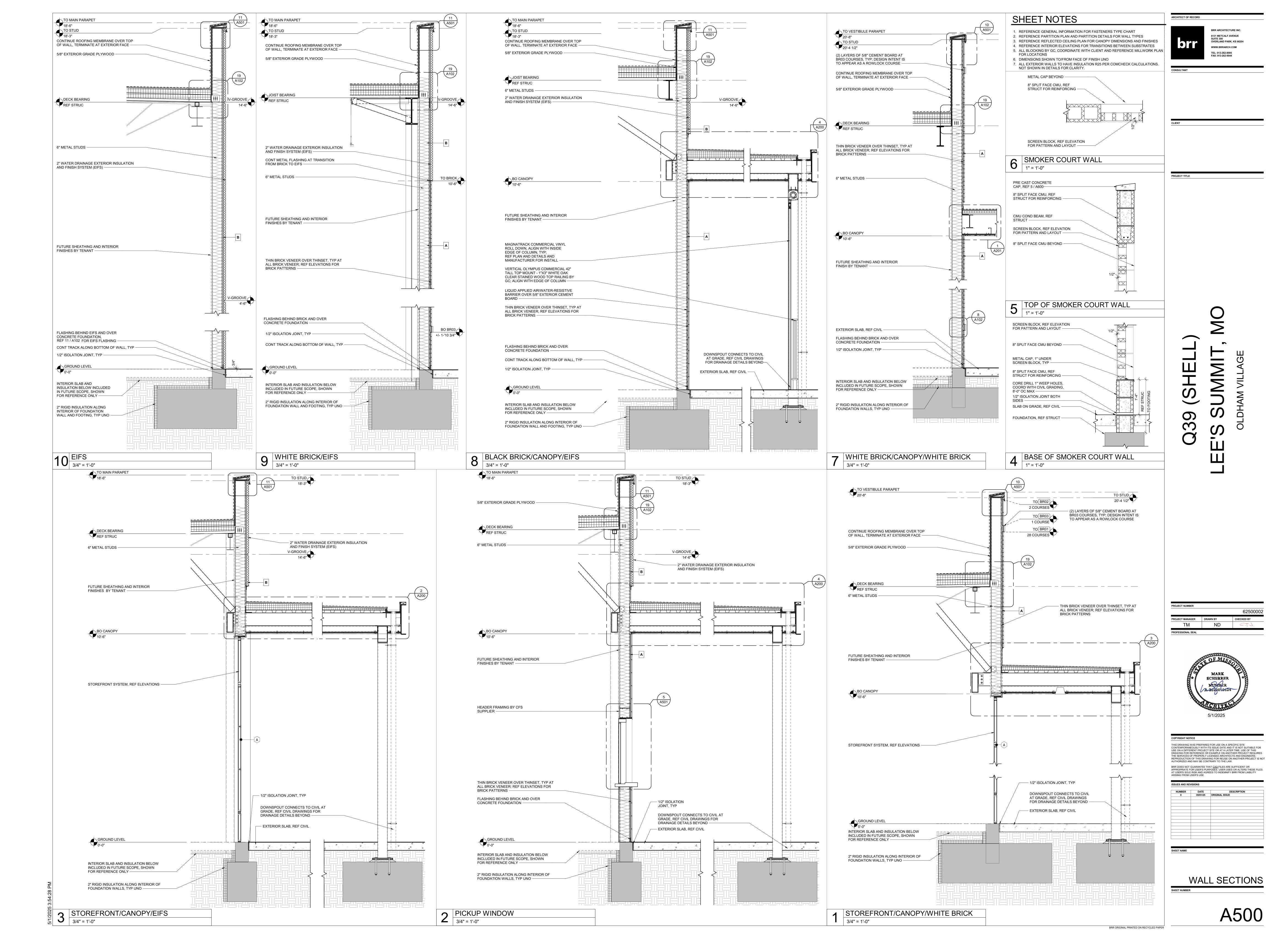
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

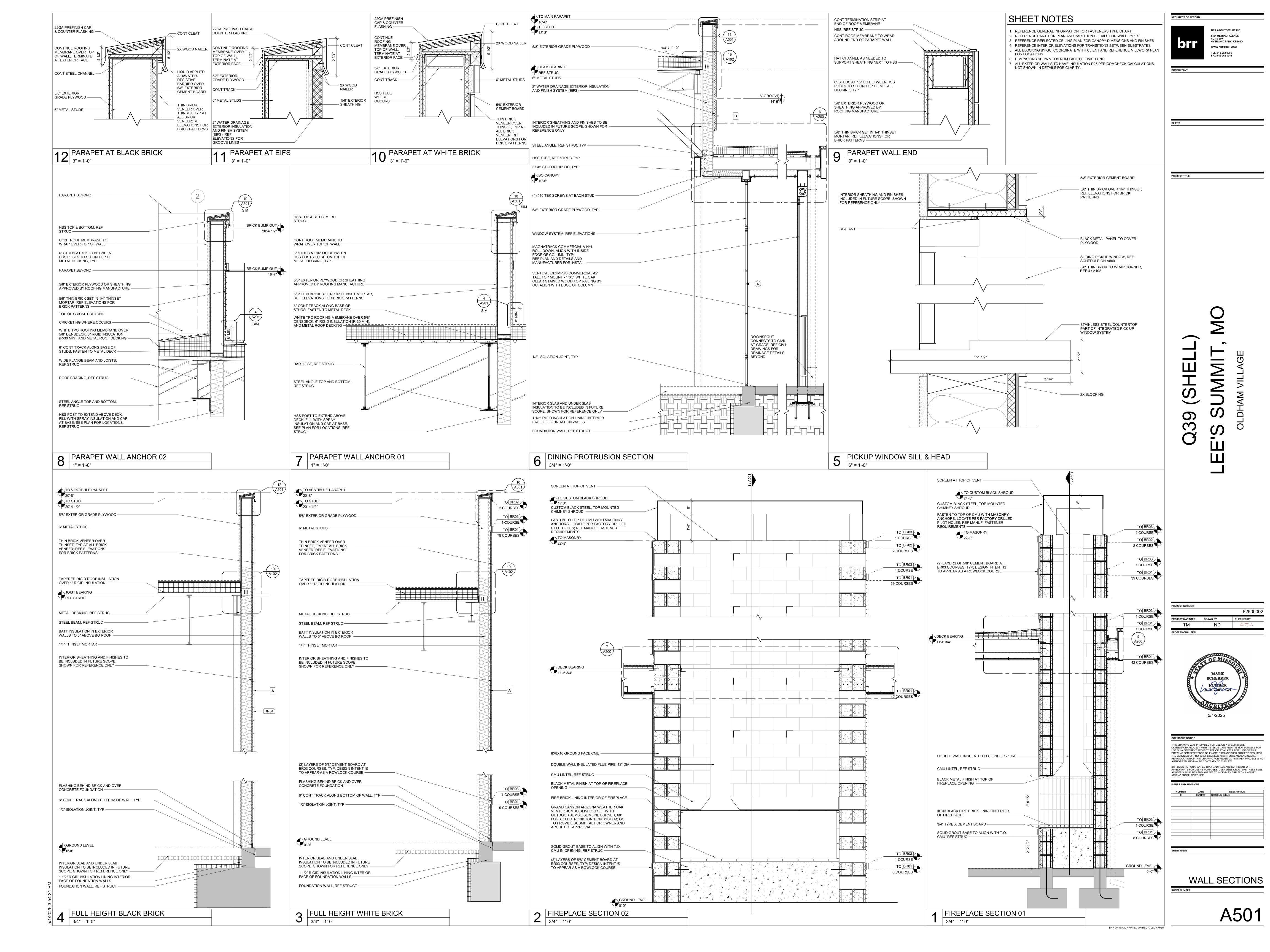
> BUILDING SECTIONS



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

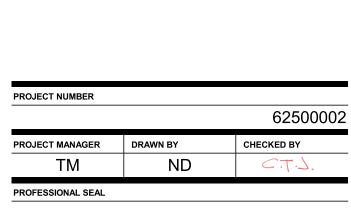
**EXTERIOR ELEVATIONS** 

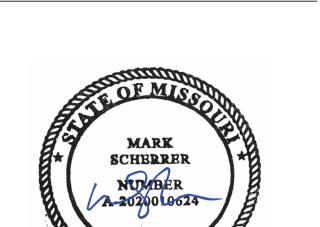


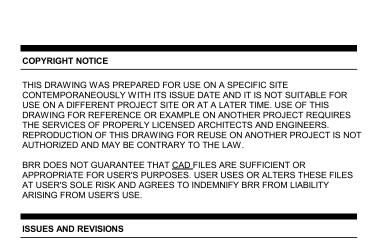


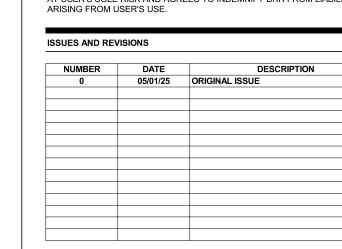






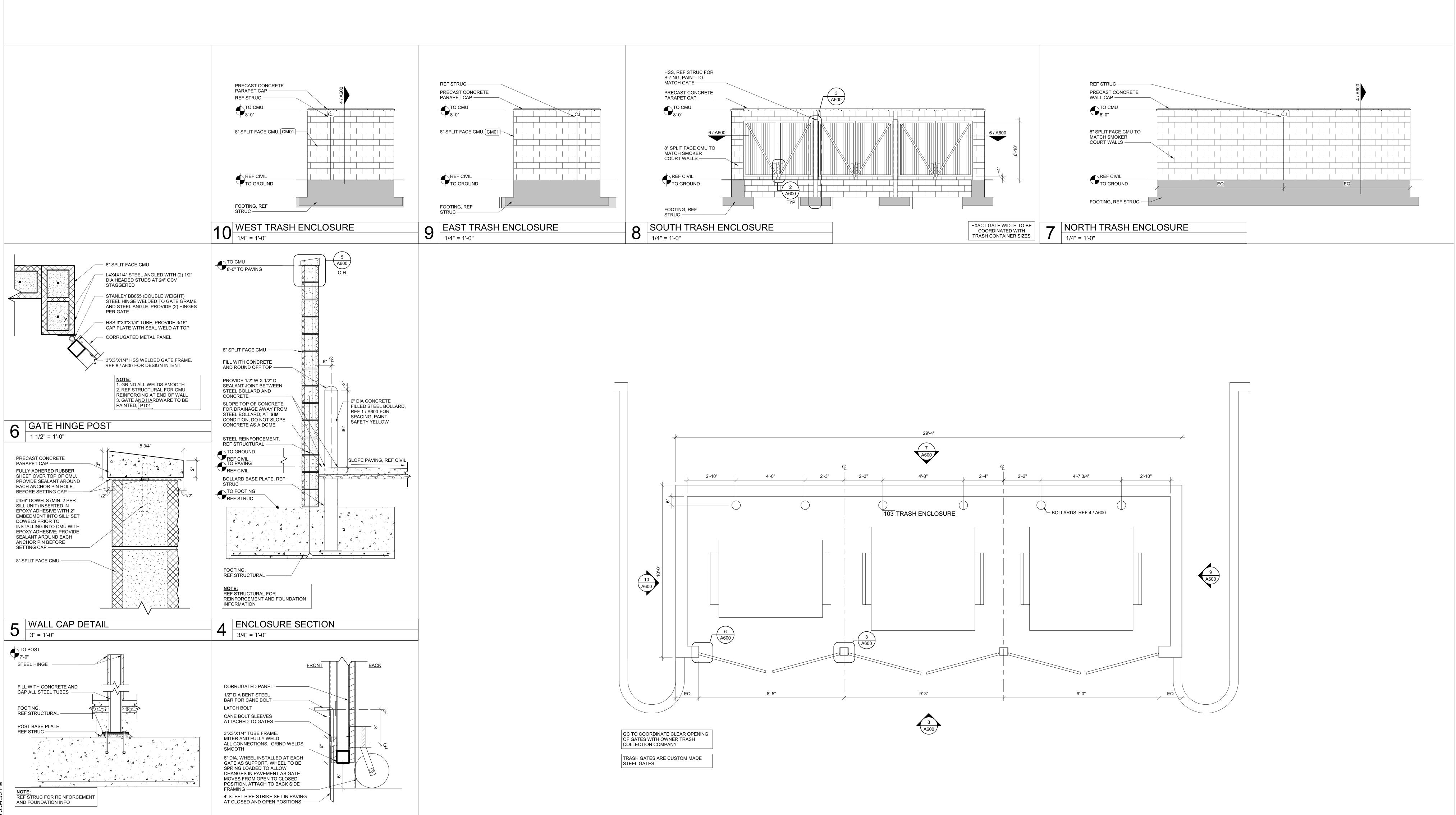






TRASH ENCLOSURE PLAN AND DETAILS

BRR ORIGINAL PRINTED ON RECYCLED PAPER



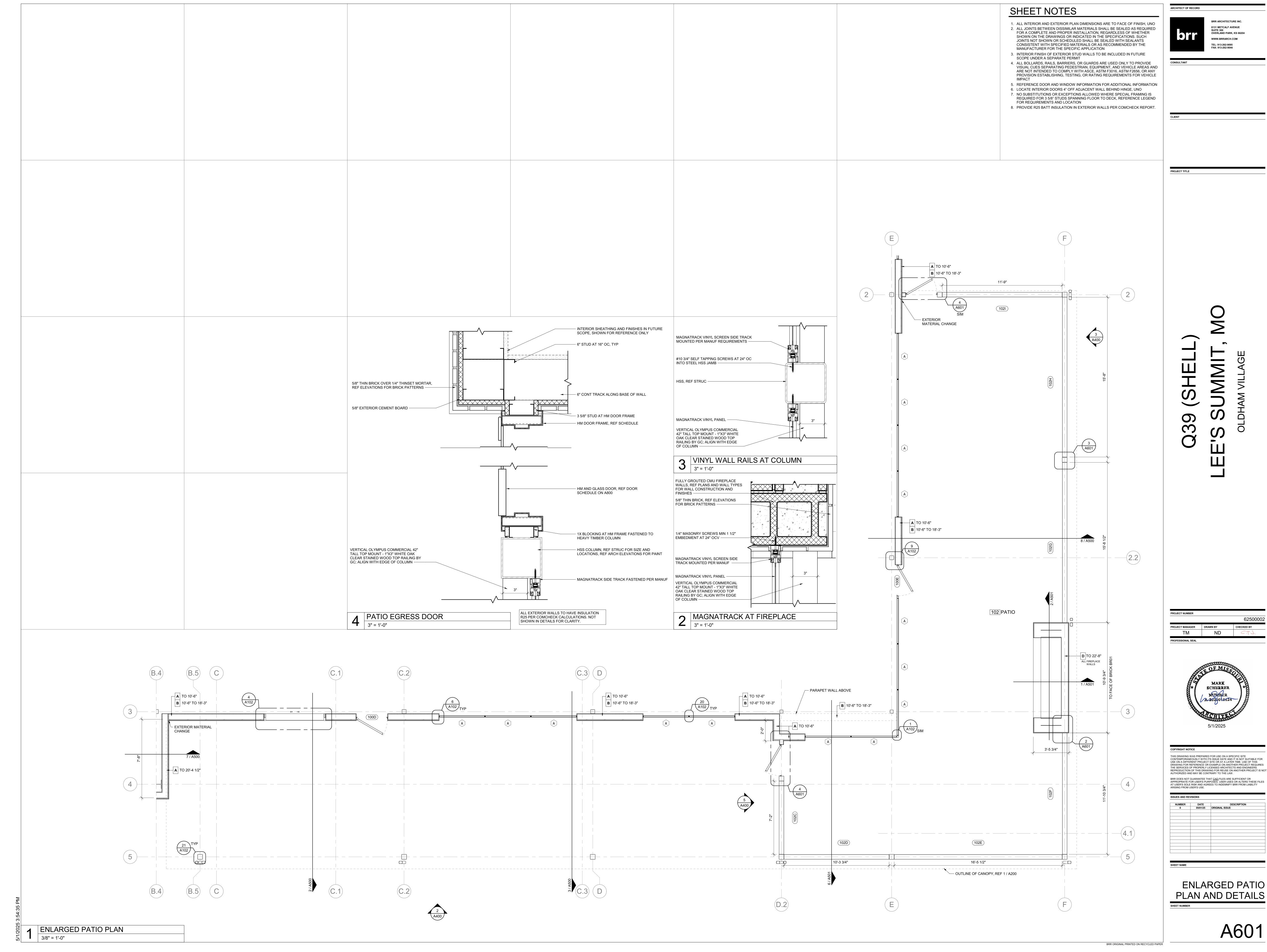
3 | CENTER POST | 3/4" = 1'-0"

3/4" = 1'-0"

2 GATE CANE BOLT
1 1/2" = 1'-0"

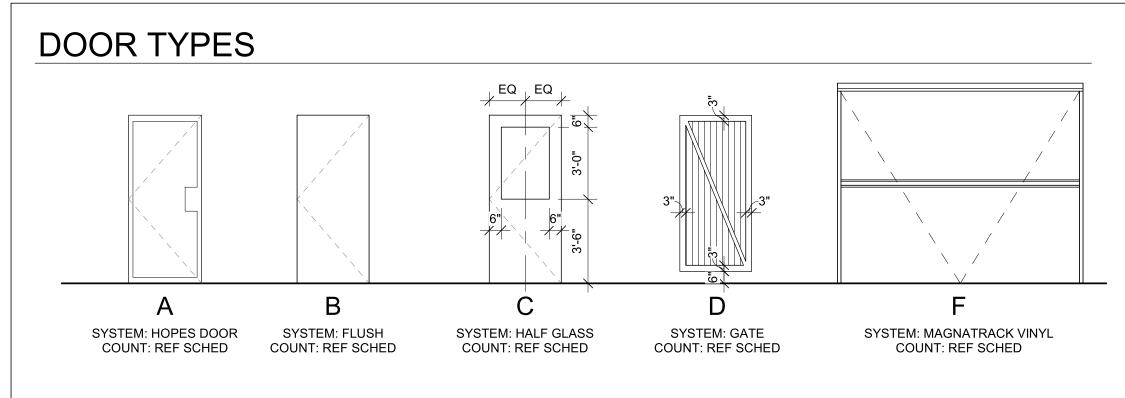
TRASH ENCLOSURE PLAN

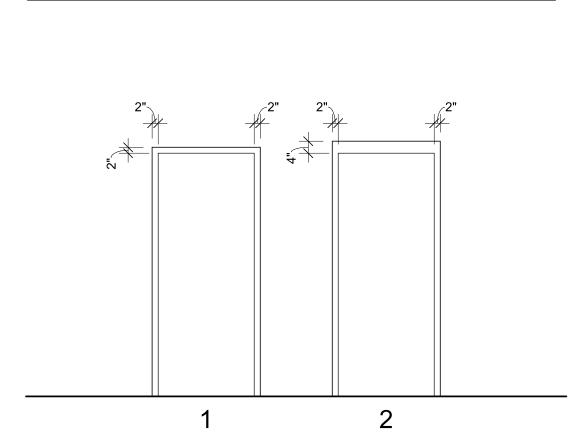
1/2" = 1'-0"



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

**ENLARGED PATIO** 





WINE	DOW TYPES	3		
10'-3 1/4" 1'-6" 6'-6" 2'-3 1/4"	4'-6"	6'-0"	REF ELEVATION 2'-6"  "G. G, C. G. G. G, C. G.	2" 6'-2" 2"
IN I	SYSTEM: FIXED COUNT: REF SCHED	B SYSTEM: QUICKSERV COUNT: REF SCHED	C SYSTEM: FIXED COUNT: REF SCHED	SYSTEM: FIXED COUNT: REF SCHED

FRAME TYPES	HA	۱
	QTY	
	SET 1.0	0
	2	2 0
2" 2" 2"	1	
	1	S
	1	ا I F
	2	_
	2	2 F
	2	2 /
	2	2 /
	1	
	1	F
		2 8
	1	1
	SET 2.0	n
1 2		Ī
<b>'</b>	1	-
		C
		I F
	1	S

QTY	ITEM	MANUFACTURER	MODEL
SET 1.0		DEMICO	OEMWW IDA
	CONTINUOUS HINGES SURFACE VERT. ROD EXIT,	PEMKO ASSA ABLOY	CFMXXXHD1 7170LBR AU627F 630
'	NIGHTLATCH	ASSA ABLUT	7 170LBR A0027F 030
1	SURFACE VERT. ROD EXIT,	ASSA ABLOY	7170 LBR EO 630
	EXIT ONLY	0.4005115	0.43/4.4.1/=3/44/43/4.100
	RIM CYLINDER	SARGENT	34XLA KEYWAY US3
2	SURF OVERHEAD STOP W/ HOLD OPEN	NORTON RIXSON	9-X26 689
2	PARALLEL HEAVY DUTY	ASSA ABLOY	PRO4400 689
	OFFSET ARM SURFACE		
2	CLOSER ARMOR PLATE	ROCKWOOD	K1050 34"X1" LDW C
2	ARMOR PLATE	ROCKWOOD	BEV US32D
2	ASTRAGAL	PEMKO	18041CNB
	GASKETING	PEMKO	2891APK
	RAIN GUARD	PENKO	346A
	SWEEP THRESHOLD	PEMKO PEMKO	3452ANB 2005AT
<u>'</u>	THICESTICED	FLIVINO	2003A1
SET 2.0			
1	CONTINUOUS HINGE	PEMKO	
1	RIM EXIT DEVICE,	ASSA ABLOY	
1	CLASSROOM	CADCENT	
	RIM CYLINDER SURF OVERHEAD STOP W/	SARGENT NORTON RIXSON	
_ '	HOLD OPEN		
1	PARALLEL HEAVY DUTY	ASSA ABLOY	
	OFFSET ARM SURFACE CLOSER		
1	ARMOR PLATE	ROCKWOOD	
1	GASKETING	PEMKO	
	RAIN GUARD	PEMKO	
	SWEEP	PEMKO	
ı	THRESHOLD	PEMKO	
SET 3.0			
3	HINGE, FULL MORTISE	MCKINNEY	TA2714 4-1/2"X4-1/2"
	CTODEDOOM OD CLOSET	ACCA ADLOV	US26D
'	STOREROOM OR CLOSET LOCK	ASSA ABLOY	AU 4705LN SARGENT LA 626
1	SURF OVERHEAD STOP	NORTON RIXSON	9-X36
3	SILENCER	ROCKWOOD	608/609 RKW
SET 4.0			
	HINGE, FULL MORTISE	MCKINNEY	TA2714 4-1/2"X4-1/2"
	,		US26D
	PASSAGE LATCH	ASSA ABLOY	AU 4701LN 626
	WALL STOP	ROCKWOOD	400/403
3	SILENCER	ROCKWOOD	608/609 RKW
SET 5.0			
2	PIVOT SET	NORTON RIXSON	147 622
	INTERMEDIATE PIVOT	NORTON RIXSON	M19 622
1	CONCEALED VERT. ROD EXIT, EXIT ONLY	ASSA ABLOY	7220 EO BSP
1	CONCEALED VERT. ROD EXIT,	ASSA ARLOY	7220 121NL BSP
1	NIGHTLATCH	,	LES LETINE DOF
	RIM CYLINDER	SARGENT	34XLA KEYWAY BSP
2	DOOR PULL	ROCKWOOD	RM3311-48 MTG-TYP
2	PARALLEL SURFACE CLOSER	ASSA ARI OV	1XHD BSP 4430 BSP
2	W/ HOLD OPEN AND STOP	, CO, CADLOT	1 100 001
	ARM	DELUCE	1001175-1-
	ASTRAGAL	PEMKO	18041BSPNB
	GASKETING RAIN GUARD	PEMKO PEMKO	2891BSPPK 346BSP
	SWEEP	PEMKO	3452BSPNB
	THRESHOLD	PEMKO	2005BSPT
SET 6.0	PIVOT SET	NODTON DIVOON	147 622
	INTERMEDIATE PIVOT	NORTON RIXSON NORTON RIXSON	147 622 M19 622
	RIM EXIT DEVICE,	ASSA ABLOY	7200 121NL BSP
	NIGHTLATCH		
	RIM CYLINDER	SARGENT	34XLA KEYWAY BSP
1	DOOR PULL	ROCKWOOD	RM3311-48 MTG-TYP
1	PARALLEL SURFACE CLOSER	ASSA ABLOY	4430 BSP
•	W/ HOLD OPEN AND STOP		
	ARM	DEMICO	0004D0DD14
	GASKETING RAIN GUARD	PEMKO	2891BSPPK 346BSP
	SWEEP	PEMKO PEMKO	346BSP 3452BSPNB
	THRESHOLD	PEMKO	2005BSPT
·			
SET 7.0	I	1447 222	No == = ::
	PIVOT SET	147 622	NORTON RIXSON
1	INTERMEDIATE PIVOT	M19 622	NORTON RIXSON
	PUSH PLATE	RM1020H BSP	ROCKWOOD

1 PARALLEL SURFACE CLOSER 4430 BSP

W/ HOLD OPEN AND STOP ARM

1 DOOR PULL

1 GASKETING

1 RAIN GUARD 1 SWEEP 1 THRESHOLD

2 HINGE 1 GATE CLOSER

4 HINGE 2 GATE CLOSER

CONT BOTTOM TRACK —

FASTENERS AT 12" OC -

2 STUD HEADER
1 1/2" = 1'-0"

FASTENERS, TYP —

ASSA ABLOY

PEMKO PEMKO PEMKO PEMKO

1XHD BSP

2891BSPPK

3452BSPNB 2005BSPT

RM3311-48 MTG-TYPE ROCKWOOD

D&D TECHNOLOGIES CI3520 D&D TECHNOLOGIES 72108423

D&D TECHNOLOGIES CI3520 D&D TECHNOLOGIES 72108423

# DOOR SCHEDULE

					DOOR				FRAME			
					DIMENSIONS	3						
				OVERALL	LEAF							
MARK	ROOM	TYPE	QUANTITY	WIDTH	WIDTH	HEIGHT	MATERIAL	TYPE	MATERIAL	HARDWARE	NOTE	DET
100A	RESTAURANT INTERIOR	CC	PR	6'-0"	3'-0"	7'-0"	HOLLOW METAL	1	HOLLOW METAL	1	1	1/A8
100B	RESTAURANT INTERIOR	Α	1	3'-1"	3'-0"	8'-0"	STEEL/GLASS	1	STEEL	6	3	A10
100C	RESTAURANT INTERIOR	AA	PR	6'-2"	3'-0"	8'-0"	STEEL/GLASS	1	STEEL	5	1, 3	A10
100D	RESTAURANT INTERIOR	Α	1	3'-1"	3'-0"	8'-0"	STEEL/GLASS	1	STEEL	6	3	A10
100E	RESTAURANT INTERIOR	Α	1	3'-1"	3'-0"	8'-0"	STEEL/GLASS	1	STEEL	6	3	A10
100F	RESTAURANT INTERIOR	Α	1	3'-1"		8'-0"	STEEL/GLASS	1	STEEL	6	3	A10
102A	PATIO	Α	1	3'-1"	3'-0"	8'-0"	STEEL/GLASS	1	STEEL	7	4	4/A6
102B	PATIO	Α	1	3'-1"	3'-0"	8'-0"	STEEL/GLASS	1	STEEL	7	4	4/A6
114A	BBQ SMOKER COURT	С	1	3'-0"	3'-0"	7'-0"	HOLLOW METAL	1	HOLLOW METAL	2		1/A8
114B	BBQ SMOKER COURT	DD	PR	6'-0"	3'-0"	10'-0"	HOLLOW METAL	-	-	9	1,5	6/A6
114C	BBQ SMOKER COURT	D	1	4'-0"	4'-0"	10'-0"	HOLLOW METAL	-	-	8	5	6/A6
125A	PLUMBING	В	1	3'-0"	3'-0"	7'-0"	HOLLOW METAL	1	HOLLOW METAL	3		1/A8
126A	ELECTRICAL	В	1	3'-0"	3'-0"	7'-0"	HOLLOW METAL	1	HOLLOW METAL	4		1/A8

## MAGNATRACK SCHEDULE\*

					DOOR			FRAME		
				DIMEN	ISIONS					
MARK	ROOM	TYPE	QUANTITY	LEAF WIDTH	HEIGHT	MATERIAL	TYPE	MATERIAL	HARDWARE	NOTE
102C	PATIO	F	1	7'-0"	10'-0"	VINYL	-	-		2
102D	PATIO	F	1	10'-1"	9'-7"	VINYL	-	-		2
102E	PATIO	F	1	15'-10"	9'-7"	VINYL	-	-		2
102F	PATIO	F	1	11'-8"	10'-0"	VINYL	-	-		2
102G	PATIO	F	1	15'-3"	9'-7"	VINYL	-	-		2
102H	PATIO	F	1	15'-0"	9'-7"	VINYL	-	-		2
102I	PATIO	F	1	11'-0"	10'-0"	VINYL	-	-		2

## \*GC TO FIELD VERIFY DIMENSIONS BEFORE ORDERING MAGNATRACK

	WINDOW	SCHEDULE
--	--------	----------

TYPE	MANUFACTURER	MODEL	QTY	WIDTH	HEIGHT	NOTES
Α	HOPE'S WINDOWS	CUSTOM	25	4'-6"	10'-6"	LANDMARK175
В	QUIKSERV CORP.	IF-BPSC-7241	1	6'-0 1/2"	3'-5 1/2"	DARK BRONZE ANODIZED
С	HOPE'S WINDOWS	CUSTOM	6	3'-1"	2'-6"	TRANSOM PANEL; LANDMARK 175
D	HOPE'S WINDOWS	CUSTOM	1	6'-1"	2'-6"	TRANSOM PANEL; LANDMARK 175

## SCHEDULE NOTES

- 1. GC TO ADJUST HARDWARE SET QUANTITY FOR LOCATIONS WHERE OPENING CALLS FOR A PAIR OF DOORS
- 2. COMMERCIAL ROLL DOWN VINYL DOOR BY MAGNATRACK, REF MANUFACTURER FOR MORE INFORMATION
- THERMALLY BROKEN FRAME, FULL GASKETED, LOCKABLE DOOR WITH PANIC HARDWARE, REF HARDWARE SCHEDULE
- 4. LOCKABLE WITH A KEY ONLY, NO THUMB TURN 5. DOOR TYPE D IS A CUSTOM MADE STEEL GATES TO MATCH TRASH ENCLOSURE DOORS

# DOOR NOTES

- 1. FINAL KEYING BY CLIENT, COORDINATE WITH CM
- 2. SCHEDULED WIDTH AND HEIGHT INDICATE DOOR SIZE 3. PROVIDE COMMERICAL GRADE XCLUDER DOOR SWEEP (HEIGHT MAY VERY) AT BOTTOM OF ALL EXISTING EXTERIOR DOORS. CONFIRM ALL DOOR LOCATIONS WITH CLIENT
- 4. PROVIDE FULLY THROATED DOOR FRAMES ALL LOCATIONS, UNO 5. PROVIDE 1 3/4" DOOR THICKNESS, UNO
- 6. GC TO PROVIDE CLOSER LATCH AND WHEELS FOR CHAINLINK SWING GATES THAT ARE WIDER THAN 4'-0"

## **GLAZING NOTES**

1. PROVIDE TEMPERED GLAZING ALL LOCATIONS, UNO 2. CENTER GLAZING SYSTEMS ON WALL DEPTH, UNO 3. 1/4" GLASS THICKNESS, UNO

## HARDWARE NOTES

1. INSTALL HARDWARE IN COMPLIANCE WITH ADA REGULATIONS

ARCHITECT OF RECORD

PROJECT TITLE

BRR ARCHITECTURE INC.

8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

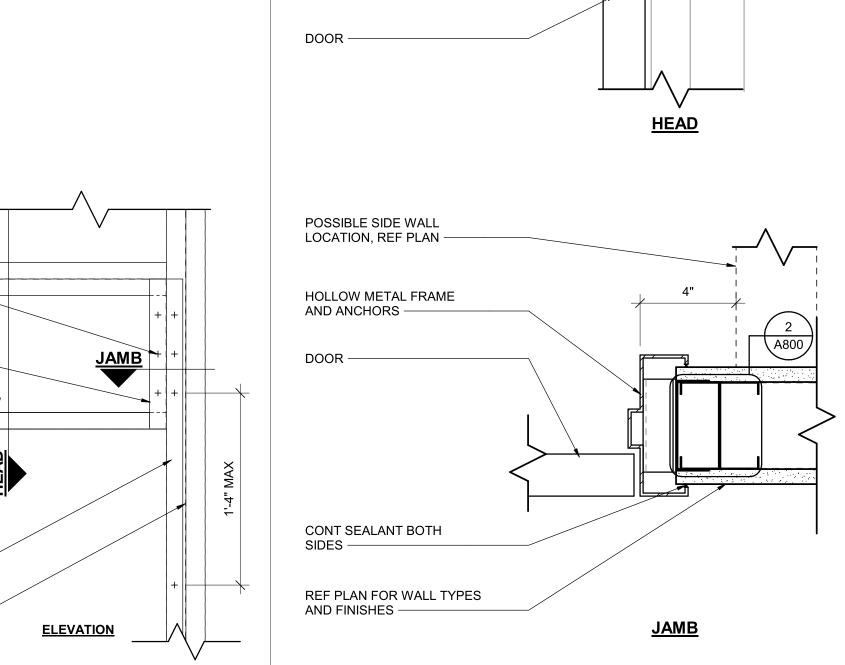
WWW.BRRARCH.COM

TEL: 913-262-9095 FAX: 913-262-9044

DOUBLE STUD JAMBS — FRAMING NOTES FASTENERS AT 16" OCV — REF PLAN FOR WALL TYPES AND FINISHES ---- CFS HEADERS TO BE ENGINEERED, COORDINATED, AND SUPPLIED BY OTHERS, TYP FASTENERS, TYP —— TRACK TO MATCH HEIGHT OF CONT SEALANT BOTH SIDES -HEADER ASSEMBLY HOLLOW METAL FRAME ----FASTENERS BETWEEN HEADER AND JAMBS (6) EQUALLY SPACED — ` ´ DOOR — TRACK FROM FACE OF SLAB TO TOP OF HEADER — REF PLANS FOR WALL TYPES WALL ABOVE, REF PLANS FOR POSSIBLE SIDE WALL WALL TYPES AND FINISHES — AND FINISHES — LOCATION, REF PLAN — CONT BOTTOM TRACK — FASTENERS (3) PER LEG — FASTENER AT EACH VERTICAL STUD — TRACK TO MATCH HEIGHT OF HEADER CONT TOP TRACK -CONT STUD HEADERS -

METAL STUD HEADER ————

DOUBLE STUD JAMBS -



FRAME AT HM

3" = 1'-0"

DOOR AND WINDOW

SCHERRER

THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

62500002

TM

A800

COPIES OF PUBLICATIONS REFERENCED IN THESE GENERAL STRUCTURAL NOTES ARE AVAILABLE FOR REVIEW AT SCHAEFER. CONTRACTORS UNFAMILIAR WITH THESE PUBLICATIONS MUST REVIEW THEM PRIOR TO CONSTRUCTION.

GOVERNING CODE 2018 INTERNATIONAL BUILDING CODE (REFERENCES ASCE-7 16) WITH THE CITY OF LEE'S

4 PSF

2 PSF

3 PSF

3 PSF

4 PSF

38 PSF MIN

40 PSF MIN

DETAILED FOR SEISMIC RESISTANCE

= 0.036

= 10 KIP

= ELFP

### **DESIGN LOADS**

SUMMIT AMMENDMENTS.

1. ROOF LOAD. A. MINIMUM COMBINATION OF WIND LOAD, LIVE LOAD, RAIN LOAD, OR SNOW LOAD ((Pf OR Pm) B. ROOF MEMBRANE & INSULATION C. METAL DECK

D. JOIST FRAMING LOAD E. SPRINKLERS F. DUCTS, LIGHTS, MISC. MECHANICAL G CEILING TOTAL LOAD ON JOISTS

G. BEAM/JOIST GIRDER LOAD

H. TOTAL ON BEAMS/JOIST GIRDERS \*FLAT ROOF SNOW LOAD, P<sub>F</sub> = 14 PSF GROUND SNOW, Pa = 20 PSF SNOW LOAD IMPORTANCE FACTOR, Is = 1.0 SNOW EXPOSURE FACTOR, C<sub>e</sub> = 1.0 SNOW LOAD THERMAL FACTOR,  $C_t = 1.0$ 

MINIMUM SNOW LOAD,  $P_m = 20 PSF$ 

SEE SNOW DRIFT PLAN FOR DRIFT LOADS (Pd). SPECIFIED DRIFT LOADS (Pd) SHALL BE COMBINED WITH FLAT ROOF SNOW LOAD (Pt) OR SLOPED ROOF SNOW LOAD (Ps) FOR TOTAL SNOW LOADING AT DRIFT CONDITIONS

SECONDARY ROOF DRAINAGE VIA SCUPPERS OR OVERFLOW DRAINS SHALL BE PROVIDED IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODE AND ASCE 7 SECONDARY ROOF DRAINAGE SHALL BE DESIGNED BY OTHERS TO LIMIT THE TOTAL DEPTH OF WATER (STATIC HEAD + HYDRAULIC HEAD OVER SECONDARY ROOF DRAINS) TO 5" MAXIMUM ABOVE THE ROOF MEMBRANE AT THE PRIMARY ROOF DRAIN.

COORDINATE ROOF FRAMING WITH FINAL SELECTION OF ROOF SUPPORTED MECHANICAL EQUIPMENT AND ASSOCIATED OPENINGS. ITEMS TO BE COORDINATED INCLUDE SIZE, LOCATION, TOTAL WEIGHT, WEIGHT DISTRIBUTION, AND SUPPORT FRAME

### WIND LOAD (PER ASCE 7):

A. BASIC DESIGN WIND SPEED, V= 109 MPH 3. ALLOWABLE STRESS DESIGN WIND SPEED, V<sub>ASD</sub> = 85 MPH

RISK CATEGORY = II WIND EXPOSURE = C (ALL WIND DIRECTIONS)

INTERNAL PRESSURE COEFFICIENT, GCpi = +0.18, -0.18 DESIGN PRESSURES FOR EXTERIOR COMPONENT AND CLADDING ITEMS NOT SPECIFICALLY DESIGNED BY THE ENGINEER OF RECORD: SEE TYPICAL COMPONENT AND CLADDING WIND PRESSURE TABLE.

### SEISMIC LOAD

A. SEISMIC RISK CATEGORY B. SEISMIC IMPORTANCE FACTOR, Ie = 1.0 C. MAPPED SPECTRAL RESPONSE ACCELERATION FACTOR AT SHORT PERIOD, Ss D. MAPPED SPECTRAL RESPONSE ACCELERATION FACTOR AT 1 SECOND, S<sub>1</sub>

E. SITE CLASS F. DESIGN SPECTRAL RESPONSE ACCELERATION FACTOR AT SHORT PERIOD, SDS G. DESIGN SPECTRAL RESPONSE ACCELERATION FACTOR AT 1 SECOND PERIOD, S<sub>D1</sub> H. SEISMIC DESIGN CATEGORY = STEEL MOMENT FRAMES NOT SPECIFICALLY

I. BASIC SEISMIC FORCE RESISTING SYSTEM J. RESPONSE MODIFICATION COEFFICIENT, R K. SEISMIC RESPONSE COEFFICIENT, CS

L. DESIGN BASE SHEAR M. ANALYSIS PROCEDURE USED

## **CONSTRUCTION AND SAFETY**

. CONTRACTOR SHALL BRACE ENTIRE STRUCTURE AS REQUIRED TO MAINTAIN STABILITY UNTIL COMPLETE AND FUNCTIONING AS THE DESIGNED UNIT.

ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY CONTRACTOR. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND IS

NOT LIMITED TO NORMAL WORKING HOURS. WHEN ON SITE, THE ENGINEER IS

RESPONSIBLE FOR HIS/HER OWN SAFETY BUT HAS NO RESPONSIBILITY FOR THE SAFETY OF OTHER PERSONNEL OR SAFETY CONDITIONS AT THE SITE. PRIOR TO COMMENCEMENT OF STEEL ERECTION, CONTRACTOR MUST PROVIDE THE STEEL ERECTOR WRITTEN NOTIFICATION THAT THE CONCRETE IN THE FOOTINGS, PIERS AND WALLS OR THE MORTAR IN THE MASONRY PIERS AND WALLS HAS ATTAINED EITHER 75 PERCENT OF THE INTENDED MINIMUM COMPRESSIVE DESIGN STRENGTH OR

SUFFICIENT STRENGTH TO SUPPORT THE LOADS IMPOSED DURING STEEL ERECTION.

ANCHOR RODS AND FOUNDATION DOWELS SHALL NOT BE REPAIRED, REPLACED OR FIELD-MODIFIED WITHOUT THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF

## LATERAL LOAD RESISTING SYSTEM

1. THE LATERAL LOAD RESISTING SYSTEM CONSISTS OF THE FOLLOWING ELEMENTS:

A. METAL ROOF DECK DIAPHRAGM THROUGHOUT B. STEEL MOMENT NOT DETAILED FOR SEISMIC RESISTANCE AROUND THE FOLLOWING LOCATIONS: i. ON COLUMN LINE 1, BETWEEN COLUMN LINES C.3 AND D.1

### ii. ON COLUMN LINE A.1, BETWEEN COLUMN LINES 1 AND 1.2 iii. ON COLUMN LINE 4, BETWEEN COLUMN LINES B.3 AND B.4 iv. ON COLUMN LINE E, BETWEEN COLUMN LINES 1 AND 1.1

## **FOUNDATIONS**

FOUNDATION DESIGN IS BASED UPON RECOMMENDATIONS DESCRIBED IN THE GEOTECHNICAL ENGINEER'S REPORT BY ALPHA-OMEGA GEOTECH, DATED 4/17/25. THE GEOTECHNICAL ENGINEER'S REPORT IS AVAILABLE UPON REQUEST. A. ALL FOOTINGS SHALL BEAR ON LEVEL (WITHIN 1 IN 12) UNDISTURBED SOIL OR

APPROVED ENGINEERED FILL. FOUNDATIONS HAVE BEEN DESIGNED FOR A MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF BELOW STRIP FOOTINGS AND 2400 PSF BELOW ISOLATED COLUMN FOOTINGS.

ALL AREAS WITHIN THE FOOTPRINT OF THE BUILDING, INCLUDING UTILITY TRENCHES, MUST BE FREE OF ANY WET AND/OR SOFT AREAS PRIOR TO PLACEMENT OF FILL

MATERIAL OR SLAB. CONTRACTOR SHALL CONTACT UTILITY COMPANIES FOR LOCATING UNDERGROUND

SERVICES AND IS RESPONSIBLE FOR THEIR PROTECTION AND SUPPORT. 4. FILL MATERIALS: ALL FILL MATERIALS SHALL BE APPROVED BY A GEOTECHNICAL

ENGINEER, INCLUDING THE SUITABILITY OF ALL EXCAVATED ON-SITE SOILS FOR RE-USE. MATERIAL SHALL NOT BE PLACED ON FROZEN GROUND.

A. CONTROLLED LOW STRENGTH MATERIAL (CLSM): SELF LEVELING AND SELF COMPACTING CEMENTITIOUS MATERIAL WITH AN UNCONFINED COMPRESSIVE STRENGTH BETWEEN 50 PSI AND 150 PSI.

B. WELL GRADED GRANULAR MATERIAL: WELL GRADED MIXTURE OF CRUSHED GRAVEL, CRUSHED STONE, AND SAND PER ASTM D294 WITH AT LEAST 95 PERCENT PASSING A 1 1/2" SIEVE AND NOT MORE THAN 8 PERCENT PASSING A NO. 200 SIEVE.

C. FREE DRAINING GRANULAR FILL: NARROWLY GRADED MIXTURE OF CRUSHED STONE PER ASTM D448 WITH COARSE AGGREGATE GRADING SIZE 67 WITH 100 PERCENT PASSING A 1 INCH SIEVE AND NO MORE THAN 5 PERCENT PASSING A NO. 4

D. IMPERVIOUS FILL: LEAN CLAYEY GRAVEL AND SAND MIXTURE CAPABLE OF COMPACTING TO A DENSE STATE.

FOUNDATION ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES AND MAY VARY TO SUIT SUB-SURFACE SOIL CONDITION. ELEVATION AND BEARING STRATA SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE. PROVIDE ENGINEERED FILL OR CLSM UNDER FOUNDATIONS AT SOFT SPOTS AND FOR EXTENDING EXCAVATION TO ADEQUATE BEARING MATERIAL. INSTALL FOUNDATIONS AT DESIGNED ELEVATIONS

FROST DEPTH IS 36 INCHES BELOW GRADE. BOTTOM OF FOOTINGS, MAT FOUNDATIONS AND GRADE BEAMS THAT ARE NOT PART OF AN INSULATED FROST PROTECTED FOUNDATION SYSTEM AND ARE NOT WITHIN CONDITIONED SPACE MUST BE BELOW SPECIFIED MINIMUM FROST DEPTH AS MEASURED FROM EXTERIOR GRADE. MAINTAIN SPECIFIED T/FDN ELEVATIONS AND THICKEN FOOTING OR PLACE ON CLSM AS

FOUNDATIONS MAY BE PLACED WITHOUT SIDE FORMS IF EXCAVATED WALLS STAND APPROXIMATELY VERTICAL 3. LATERAL SOIL PRESSURES: LATERAL EARTH PRESSURES INDICATED BELOW DO NOT INCLUDE HYDROSTATIC OR COMPACTION PRESSURES DURING BACKFILL OPERATIONS.

COMPACT USING HAND-OPERATED TAMPERS ONLY. A. CANTILEVERED RETAINING WALLS (ACTIVE PRESSURE): 55 PCF EQUIVALENT FLUID PRESSURE, TRIANGULAR DISTRIBUTION + SURCHARGÉ, RECTANGULAR

WALLS SHALL HAVE ADEQUATE DRAINAGE TO PREVENT HYDROSTATIC PRESSURES.

9. BACKFILL AGAINST WALLS:

## A. INTERIOR FACE OF SHALLOW FOUNDATIONS WALLS:

TO DAYLIGHT OR TO SUMP

TO DAYLIGHT OR TO SUMP

i. CLSM OR IMPERVIOUS FILL (COMPACTED IN 6" LIFTS TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY AND WITHIN +/- 3% OPTIMUM MOISTURE CONTENT). OR ii. WELL GRADED GRANULAR MATERIAL (COMPACTED IN 6" LIFTS TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY AND WITHIN +/- 2% OPTIMUM MOISTURE CONTENT); AT THE BOTTOM OF THE GRANULAR BACKFILL PLACE A 4"

B. EXTERIOR FACE OF SHALLOW FOUNDATION WALLS: i. CLSM OR IMPERVIOUS FILL (COMPACTED IN 6" LIFTS TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY AND WITHIN +/- 3% OPTIMUM MOISTURE

CONTENT), OR ii. WELL GRADED GRANULAR MATERIAL (COMPACTED IN 6" LIFTS TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY AND WITHIN +/- 2% OPTIMUM MOISTURE CONTENT): AT THE BOTTOM OF THE GRANULAR BACKFILL PLACE A 4" DIAMETER PERFORATED FOUNDATION DRAIN PIPE. PROVIDE A POSITIVE SLOPE

DIAMETER PERFORATED FOUNDATION DRAIN PIPE. PROVIDE A POSITIVE SLOPE

PROCTOR MAXIMUM DRY DENSITY WITHIN +/- 3% OPTIMUM MOISTURE CONTENT. 11. FILL BELOW FLOOR SLABS: A. SUBGRADE: PROOF ROLL TOP 24" OF SUBGRADE BELOW INTERIOR SLAB TO 95%

STANDARD PROCTOR MAXIMUM DRY DENSITY WITHIN +/- 2% OPTIMUM MOISTURE CONTENT PRIOR TO PLACEMENT OF BASE COURSE. B. BASE COURSE: 4" OF CLEAN, OPEN GRADED CRUSHED LIMESTONE.

12. FILL AT UTILITY TRENCHES BELOW FOOTINGS, EXCAVATED PRIOR TO FOOTING CONSTRUCTION. A. BACKFILL TRENCHES UNDER FOOTINGS AND WITHIN 18 INCHES OF BOTTOM OF

FOOTINGS WITH CLSM TO THE BOTTOM OF FOOTING ELEVATION. B. BACKFILL TRENCHES EXCAVATED UNDER FOOTINGS AND MORE THAN 18 INCHES BELOW BOTTOM OF FOOTINGS WITH CLSM OR OTHER FILL MATERIAL APPROVED BY

GEOTECHNICAL ENGINEER. 13. FILL AT UTILITY TRENCHES BELOW FOOTINGS, EXCAVATED AFTER FOOTING CONSTRUCTION.

A. BACKFILL TRENCHES EXCAVATED UNDER EXISTING FOOTINGS WITH CLSM TO THE BOTTOM OF FOOTING ELEVATION.

14. SEAL UTILITY TRENCH AT THE EXTERIOR FOUNDATION WALL BY USING A COMPACTED IMPERVIOUS FILL OR CLSM TO CREATE A DAM TO PREVENT ENTRY OF WATER.

A. EXCAVATIONS IN THE VICINITY OF EXISTING FOUNDATIONS SHALL BE PERMITTED

EXCAVATION IS ABOVE A LINE WITH SLOPE OF 2 HORIZONTAL TO 1 VERTICAL

WITHOUT ANY SPECIAL MEASURES AS LONG AS THE BOTTOM NEAR EDGE OF THE

EXTENDING OUTWARD AND DOWNWARD FROM THE NEAREST BOTTOM CORNER OF

15. FINISHED GRADE SHALL SLOPE AWAY FROM THE PERIMETER FOUNDATION 16. EXCAVATIONS:

THE EXISTING FOUNDATION. 17. UTILITY TRENCHES PARALLEL TO FOOTINGS AND WITH PIPES BELOW THE BOTTOM OF FOOTING ELEVATION MUST BE LOCATED SO THAT THE SLOPE BETWEEN THE PIPE INVERT ELEVATION AND THE NEAREST BOTTOM CORNER OF THE FOOTING IS A MINIMUM OF 2 HORIZONTAL TO 1 VERTICAL.

### CAST-IN-PLACE CONCRETE

1. CONCRETE MIXTURES: REFER TO CONCRETE MIXTURE REQUIREMENTS TABLE FOR CONCRETE MIX INFORMATION.

2. CONCRETE MATERIALS: A CEMENTITIOUS MATERIALS

i. PORTLAND CEMENT: ASTM C150, TYPE I OR TYPE II. ii. BLENDED HYDRAULIC CEMENT: ASTM C595, TYPE IL, PORTLAND LIMESTONE

iii. FLY ASH: ASTM C618, CLASS F OR C. FLY ASH SHALL NOT EXCEED 25% OF TOTAL CEMENTITIOUS CONTENT BY MASS. iv. GROUND GRANULATED BLAST FURNACE SLAG: ASTM C989, GRADE 100 OR 120. OMBINATION SLAG AND FLY ASH SHALL NOT EXCEED 50% OF TOTAL CEMENTITIOUS CONTENT BY MASS.

B. AGGREGATES:

NORMAL WEIGHT AGGREGATES: ASTM C33, COARSE GRADED. ii. LIGHTWEIGHT AGGREGATES: ASTM C330. . ADMIXTURES: ADMIXTURES CONTAINING CHLORIDE ARE NOT PERMITTED IN REINFORCED CONCRETE OR CONCRETE CONTAINING METALS.

PLASTICIZING ADMIXTURE: ASTM C1017. iii. AIR ENTRAINING ADMIXTURE: ASTM C260. D. WATER: ASTM C94 AND POTABLE

WATER REDUCING ADMIXTURE: ASTM C494.

3. DETAILING REQUIREMENTS

A. CONTRACTION JOINTS IN SLABS ON GROUND SHALL NOT EXCEED A LENGTH TO WIDTH RATIO OF 1.5:1. SEE PLAN FOR MAXIMUM JOINT SPACING.

B. CONSTRUCTION JOINTS IN SLABS ON GROUND MAY BE LOCATED AT ANY CONTRACTION JOINT LOCATION. SEE DRAWINGS FOR TYPICAL DETAILS. C. PROVIDE 3/4" CHAMFER AT CORNERS OF EXPOSED CONCRETE.

D. WHERE BRITTLE FLOOR FINISHES ARE TO BE APPLIED TO FLOOR SLABS, COORDINATE CONTRACTION JOINT LOCATIONS WITH FLOOR FINISH JOINT LOCATIONS AND ARCHITECT

E. PROVIDE CONTRACTION/CONSTRUCTION JOINTS IN CONCRETE WALLS AT A MAXIMUM SPACING OF TWICE THE HEIGHT OF THE WALL ABOVE THE TOP OF FOOTING. MAXIMUM JOINT SPACING SHALL NOT EXCEED 24 FT. CONTRACTION JOINTS SHALL HAVE A 1-1/2" DEEP BY 3/4" WIDE TAPERED REVEAL EACH SIDE OF THE WALL. AT CONTRACTION JOINTS, EVERY OTHER HORIZONTAL BAR SHALL BE CUT BACK 1-1/2" FROM THE CONTRACTION JOINT. CONSTRUCTION JOINTS SHALL BE FORMED SIMILAR TO CONTRACTION JOINTS. AT CONSTRUCTION JOINTS, ALL HORIZONTAL STEEL SHALL BE DISCONTINUOUS AND A DOWEL BAR OF SIZE AND SPACING TO MATCH THE HORIZONTAL REINFORCING SHALL BE EMBEDDED A MINIMUM OF 40 BAR DIAMETERS EACH SIDE OF THE CONSTRUCTION JOINT. SEE ARCHITECTURAL DRAWINGS FOR ARCHITECTURAL JOINT TREATMENT.

CONCRETE UNLESS EFFECTIVELY COATED TO PREVENT ALUMINUM-CONCRETE REACTION OR ELECTROLYTIC ACTION BETWEEN ALUMINUM AND STEEL. G. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR VAPOR BARRIER

F. CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL

REQUIREMENTS. VAPOR BARRIER, WHERE REQUIRED, SHALL BE PLACED OVER GRANULAR BASE.

4. CONCRETE PLACEMENT A. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL CONCRETE STRENGTH HAS REACHED 0.75 f'c AND A MINIMUM OF 7 DAYS.

B. ROUGHENED SURFACES, WHERE INDICATED, SHALL EITHER BE: i. ROUGHENED TO A FULL AMPLITUDE OF APPROXIMATELY 1/4" AND BE CLEAN AND FREE OF LAITANCE ii. FORMED BY EXPANDED METAL LEAVE-IN-PLACE MESH. SUBMIT PRODUCT

INFORMATION FOR APPROVAL. 5. PERFORMANCE

A. CONCRETE WORK IN COLD WEATHER SHALL CONFORM TO ALL REQUIREMENTS OF ACI 306.1-90 "STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING" AND ACI 306R-16 "GUIDE TO COLD WEATHER CONCRETING".

B. CONCRETE WORK IN HOT WEATHER SHALL CONFORM TO ALL REQUIREMENTS OF ACI 305.1-14 "SPECIFICATION FOR HOT WEATHER CONCRETING" AND ACI 305R-10 "GUIDE TO HOT WEATHER CONCRETING". THE AIR TEMPERATURE, RELATIVE HUMIDITY, CONCRETE TEMPERATURE, AND WIND SPEED SHALL BE ENTERED INTO NOMOGRAPH FIGURE 4.2 IN ACI 305R-10 TO DETERMINE IF PRECAUTIONS AGAINST PLASTIC SHRINKAGE ARE REQUIRED.

C. TOLERANCES: CONFORM TO ACI 117-14

D. IF CONCRETE ARRIVES AT THE POINT OF DELIVERY WITH A SLUMP BELOW THAT WHICH WILL RESULT IN THE SPECIFIED SLUMP AT THE POINT OF PLACEMENT AND IS UNSUITABLE FOR PLACING AT THAT SLUMP, THE SLUMP MAY BE ADJUSTED ONCE ONLY TO THE REQUIRED VALUE BY ADDING WATER UP TO THE AMOUNT ALLOWED IN THE ACCEPTED MIXTURE PROPORTIONS. ADDITION OF WATER SHALL BE IN ACCORDANCE WITH ASTM C94. DO NOT EXCEED THE SPECIFIED WATER-CEMENTITIOUS MATERIAL RATIO OR SLUMP IN THE APPROVED MIX DESIGN. DO NOT ADD WATER TO CONCRETE DELIVERED IN EQUIPMENT NOT ACCEPTABLE FOR MIXING. AFTER PLASTICIZING OR WATER REDUCING ADMIXTURES ARE ADDED TO THE CONCRETE AT THE SITE TO ACHIEVE FLOWABLE CONCRETE, DO NOT ADD WATER TO THE CONCRETE. MEASURE SLUMP (AND AIR CONTENT OF AIR ENTRAINED CONCRETE), AFTER SLUMP ADJUSTMENT, TO VERIFY COMPLIANCE WITH SPECIFIED REQUIREMENTS.

E. SLUMP SHALL BE MEASURED PRIOR TO THE ADDITION OF ADMIXTURES AND AFTER THE ADDITION OF ADMIXTURES.

F. INTERIOR SLAB FINISHING AND CURING FINISH: MACHINE TROWEL FINISH FLOOR SLAB UNLESS NOTED OTHERWISE. ii. CURING: "CURE AND SEAL" LIQUID MEMBRANE FORMING CURING COMPOUND (ASTM C1315, TYPE 1, CLASS A, VOC COMPLIANT) OR MOISTURE-RETAINING COVER (ASTM C171) POLYETHYLENE FILM OR CURING PAPER CONSISTING OF TWO LAYERS OF FIBERED KRAFT PAPER LAMINATED WITH DOUBLE COATING OF ASPHALT

G. FLOOR SLAB-ON-GRADE SHALL CONFORM TO THE FOLLOWING SURFACE PROFILE TOLERANCES PER ASTM E-1155 AND ACI 117-14 (Ff = FLOOR FLATNESS, FI = FLOOR i. SPECIFIED OVERALL VALUE Ff = 25, FI = 20 ii. MINIMUM LOCAL VALUE Ff = 17, FI = 15

6. SUBMITTALS:

A. CONSTRUCTION JOINT LAYOUT

B. CONCRETE MIX DESIGNS: CONCRETE MIX DESIGNS INCLUDING PRODUCT DATA FOR ALL CONSTITUENTS AND ADMIXTURES SHALL BE SUBMITTED FOR EACH TYPE OF CONCRETE TO THE STRUCTURAL ENGINEER FOR APPROVAL IN ACCORDANCE WITH ACI 301-16 FIELD TEST DATA OR TRIAL MIXTURES. SUBMITTAL DATA MUST INCLUDE FIELD TEST DATA FROM AT LEAST 10 TESTS OR A THREE POINT CURVE GENERATED USING TRIAL MIXTURES.

C. PRODUCT DATA FOR CURING MATERIALS

7. QUALITY ASSURANCE

A. CONCRETE WORK AND TESTING, AS PERFORMED BY "QUALIFIED FIELD TESTING TECHNICIANS" AND "QUALIFIED LABORATORY TECHNICIANS", SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301-16, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS". EXCEPT AS MODIFIED BY THE SUPPLEMENTAL REQUIREMENTS ABOVE. REPORTS FROM TESTS REQUIRED BY SECTION 1.6 OF ACI 301-16 SHALL BE SUBMITTED TO STRUCTURAL ENGINEER, ARCHITECT, OWNER, CONTRACTOR, CONCRETE SUPPLIER, AND BUILDING OFFICIAL.

## **CONCRETE REINFORCING**

MATERIALS

4. PERFORMANCE

A. DEFORMED BARS: ASTM A615, OR ASTM A706, GRADE 60. ASTM A706 DEFORMED BARS ARE REQUIRED FOR ALL WELDED REINFORCING

2. REINFORCING DEVELOPMENT AND LAP SPLICES (UNLESS OTHERWISE NOTED) A. SEE REINFORCING BAR DEVELOPMENT TABLES FOR REQUIRED DEVELOPMENT AND LAP SPLICE LENGTHS. 3. DETAILING REQUIREMENTS

A. AT SLAB AND WALL OPENING CORNERS AND REENTRANT CORNERS, PROVIDE (1) #5

BAR IN EACH FACE PARALLEL TO EACH EDGE EXTENDING A MINIMUM OF 2'-0" PAST

EDGE OF OPENING. THIS STEEL MAY BE OMITTED IF TYPICAL WALL STEEL EXCEEDS THIS MINIMUM REQUIREMENT. B. SEE PLAN FOR INTERIOR SLAB ON GROUND REINFORCEMENT. LOCATE REINFORCEMENT 2" CLEAR BELOW TOP OF SLAB.

SUPPORTING REINFORCEMENT. 10. ENGINEERED FILL BENEATH FOOTINGS: MINIMUM COMPACTION 98% STANDARD

B. REINFORCING BARS SHALL HAVE CLEAR COVER AS INDICATED ON THE DRAWINGS. WHERE NOT INDICATED, PROVIDE MINIMUM CLEAR COVER PER ACI-318.

C. REINFORCING BARS SHALL BE FREE OF DIRT AND FORM RELEASE AGENTS.

SUBMITTALS A. SHOP DRAWINGS FOR REINFORCING STEEL (COMPLY WITH ACI SP-066):

A. COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR PLACING AND

<u>MASONRY</u> 1. CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATIONS FOR MASONRY STRUCTURES" (TMS 602-16), EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THESE CONTRACT DOCUMENTS.

2. COMPRESSIVE STRENGTH SHALL BE DETERMINED FOR EACH TYPE OF MASONRY BY THE UNIT STRENGTH METHOD.

A. CONCRETE MASONRY: f'm = 2000 PSI AT 28 DAYS. 3. SUBMITTALS SHALL BE MADE FOR THE FOLLOWING:

A. COLD WEATHER CONSTRUCTION PROCEDURE. B. HOT WEATHER CONSTRUCTION PROCEDURE. C. MANUFACTURERS LITERATURE FOR:

HORIZONTAL JOINT REINFORCING REINFORCING STEEL POSITIONERS iii. MOVEMENT JOINT MATERIALS. iv. TIES & ANCHORS.

D. SHOP DRAWINGS SHOWING: i. DETAILS OF STEEL REINFORCING. ii. LINTELS.

MASONRY UNIT

ii. REINFORCING STEEL. PROPORTIONS OF MATERIAL IN ACCORDANCE WITH REFERENCED SPECIFICATIONS MORTAR. ii. GROUT.

## 4. MATERIALS

A. CONCRETE MASONRY UNITS: ASTM C90 TYPE I. BELOW GRADE: NORMAL WEIGHT AGGREGATE PER ASTM C33.

E. MANUFACTURERS CERTIFICATE OF COMPLIANCE FOR SPECIFIED:

. ABOVE GRADE: NORMAL WEIGHT AGGREGATE PER ASTM C33. B. FACING BRICK: ASTM C216 GRADE SW. COLOR AND SIZE AS NOTED ON THE ARCHITECTURAL DRAWINGS.

C. MORTAR: ASTM C270 ALL MASONRY UNLESS NOTED OTHERWISE: TYPE S ABOVE GRADE VENEER: TYPE N D. PORTLAND CEMENT-LIME MORTAR:

i. PORTLAND CEMENT: TYPE I.

ii. HYDRATED LIME: TYPE S. E. MASONRY CEMENT MORTAR IS PERMITTED.

PSI AT 28 DAYS. G. REINFORCING STEEL: ASTM A615, ASTM A706, OR ASTM A996, 60 KSI YIELD. H. HORIZONTAL JOINT REINFORCING FOR SINGLE WYTHE CONCRETE MASONRY: ASTM

F. GROUT: ASTM C476. SLUMP 8" TO 11". MINIMUM COMPRESSIVE STRENGTH = 2000

A951 9 GAGE LADDER TYPE. HOT DIPPED GALVANIZED PER ASTM A153 CLASS B.

CONCRETE MASONRY. LAP HORIZONTAL JOINT REINFORCING 6" MINIMUM. HORIZONTAL JOINT REINFORCING SHALL BE DISCONTINUOUS ACROSS MOVEMENT BRICK VENEER ANCHORS FOR METAL STUD AND WOOD STUD BACKUP: HOHMANN 8 BARNARD HB-213 OR WIRE-BOND RJ-711 WITH 3/16" DIAMETER PINTLE. HOT-DIPPED GALVANIZED PER ASTM A153 CLASS B. VERTICAL DISTANCE BETWEEN HORIZONTAL

PINTLE WIRE AND CLIP PLATE SHALL NOT EXCEED 1 1/4 INCH. (FLAT CORRUGATED

PLACE HORIZONTAL JOINT REINFORCING AT 16" CENTERS VERTICALLY FOR

TIES ARE NOT PERMITTED.) PROVIDE BRICK VENEER ANCHORS WITH MAXIMUM HORIZONTAL SPACING OF 24" AND MAXIMUM VERTICAL SPACING OF 16". BRICK VENEER ANCHORS SHALL BE EMBEDDED 2" MINIMUM INTO BRICK. SCREWS FOR METAL STUD ANCHORAGE SHALL BE HEX HEAD SELF-DRILLING SELF TAPPING WITH MILD SHANK AND HARDENED TIP WITH ORGANIC-POLYMER COATING AND NEOPRENE OR EPDM WASHER, MINIMUM #10 SIZE. ACCEPTABLE PRODUCTS ARE ELCO DRIL-FLEX WITH STALGARD FINISH AND ITW BUILDEX TEKS SELECT WITH CLIMASEAL FINISH. (STAINLESS STEEL AND COPPER-COATED SCREWS ARE NOT PERMITTED.) SUBSTITUTES COMPLYING WITH AC118 MAY BE

5. MORTAR PROPORTIONS MUST BE ACCURATELY MEASURED PRIOR TO MIXING. ADD CEMENT TO MIX IN FULL BAG QUANTITIES. MEASURE SAND IN BOX WITH VOLUME OF ONE CUBIC FOOT AS OFTEN AS NECESSARY TO MAINTAIN CONSISTENT PROPORTIONS AND AT LEAST ONCE DAILY AND EVERY 4 HOURS OF MIXING.

7. PROVIDE PREFABRICATED "L" AND "T" SHAPED HORIZONTAL JOINT REINFORCING AT WALL INTERSECTIONS.

8. RUNNING BOND PATTERN SHALL BE USED FOR ALL MASONRY WORK UNLESS

6. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND SPECIFICATIONS OF FIRE RATED

OTHERWISE NOTED. 9. PROVIDE MOVEMENT (CONTROL AND EXPANSION) JOINTS IN WALLS WHERE INDICATED ON ARCHITECTURAL DRAWINGS. BOND BEAMS SHALL BE DISCONTINUOUS ACROSS MOVEMENT JOINTS UNLESS NOTED OTHERWISE:

A. MOVEMENT JOINTS IN CONCRETE BLOCK: SASH BLOCK UNIT WITH PREFORMED SHEAR KEY. CAULK BOTH FACES. ALTERNATE DETAILS FOR CONTROL JOINTS MAY BE ACCEPTABLE -- SUBMIT DETAILS FOR APPROVAL.

CONTROL JOINTS. 10. UNLESS NOTED OTHERWISE ON PLANS, UNDER LINTELS, BEARING PLATES, BEAMS, ETC.; FILL CELLS WITH GROUT, 3 COURSES MINIMUM BELOW BEARING. 11. UNLESS NOTED OTHERWISE ON PLANS, LINTELS SHALL HAVE 8" MINIMUM END BEARING. 12. ALL REINFORCING STEEL SHALL BE SUPPORTED AND FASTENED TO APPROVED POSITIONERS LOCATED AT 192 BAR DIAMETERS MAXIMUM SPACING AND WITH A MINIMUM OF TWO POSITIONERS PER GROUT POUR (ONE NEAR THE BOTTOM AND ONE NEAR THE TOP) TO PREVENT DISPLACEMENT DURING THE PLACEMENT OF GROUT.

B. PROVIDE BUILDING PAPER BOND BREAK BELOW LINTEL BEARING ADJACENT TO

13. GROUT ALL CELLS BELOW GRADE SOLID. 14. PROVIDE REINFORCING BAR SPLICES AS SPECIFIED IN THE FOLLOWING TABLE. BAR SPLICE COUPLERS MAY BE CONSIDERED AS A SUBSTITUTE, SUBMIT MANUFACTURER'S DATA PRIOR TO INSTALLATION.

BAR SIZE

## STRUCTURAL STEEL

1. MATERIALS (UNLESS NOTED OTHERWISE):

A. W AND WT SHAPES: ASTM A992, Fy = 50 KSI

B. C AND MC SHAPES (DEPTH ≥ 8 INCHES): ASTM A992, Fy = 50 KSI C. C AND MC SHAPES (DEPTH < 8 INCHES): ASTM A36, Fy = 36 KSI

D. L SHAPES: ASTM A572, GRADE 50, Fy = 50 KSI E. PLATES AND BARS (THICKNESS ≤ 4 INCHES): ASTM A572, GRADE 50, Fy = 50 KSI

F. PLATES AND BARS (THICKNESS > 4 INCHES): ASTM A36, Fy = 36 KSI G. HSS SHAPES: ASTM A500, GRADE C, Fy = 50 KSI H. BOLTS: ASTM F3125, GRADE A325-N, 3/4" DIAMETER (UNLESS NOTED OTHERWISE)

I. ANCHOR RODS (TYPICAL): ASTM F1554, GRADE 36 J. WELDS: AWS E70XX, LOW HYDROGEN ELECTRODES, FILLER METALS WITH SPECIFIED MIN CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS AT 40 DEGREES FAHRENHEIT SHALL BE USED IN THE FOLLOWING JOINTS OR WHERE OTHERWISE

INDICATED CJP WELDS OF ROLLED SHAPES WITH FLANGE THICKNESS EXCEEDING 2 INCHES CJP WELDS OF PLATES WITH THICKNESS EXCEEDING 2 INCHES iii. CJP WELDS IN "T" AND CORNER JOINTS WITH STEEL BACKING LEFT IN PLACE

K. NON-SHRINK NON-METALLIC GROUT: CRD-C-621 AND ASTM C1107 FOR INTERIOR AND EXTERIOR APPLICATIONS. FLUID TYPE i. LIMIT GYPSUM CONTENT TO 1.5% MAXIMUM AT EXTERIOR APPLICATIONS. 2. ALL DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO AISC SPECIFICATIONS FOR "DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL

FOR BUILDINGS", AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", LATEST EDITION 3. FABRICATOR QUALIFICATIONS: STRUCTURAL STEEL FABRICATOR SHALL PARTICIPATE IN THE AISC QUALITY CERTIFICATION PROGRAM, AND SHALL BE DESIGNATED AS AN AISC-

4. SUBMITTALS A. STRUCTURAL STEEL SHOP DRAWINGS

CERTIFIED PLANT, CATEGORY STD.

5. CONNECTIONS:

B. DELEGATED CONNECTION DESIGN SUBMITTAL(S): FOR STRUCTURAL-STEEL CONNECTIONS INDICATED TO COMPLY WITH DESIGN LOADS, INCLUDE THE FOLLOWING DOCUMENTS SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE THE PROJECT IS LOCATED IN AND RESPONSIBLE FOR THEIR PREPARATION: SUBSTANTIATING CONNECTION INFORMATION (INCLUDING COMPREHENSIVE

LETTER STATING THAT CONNECTIONS DETAILED IN THE SHOP DRAWINGS ARE IN

CONFORMANCE WITH THE DESIGN COMPLETED BY A LICENSED ENGINEER WORKING FOR THE FABRICATOR. . MISC. METAL SHOP DRAWINGS (STAIRS, RAILINGS AND LADDERS INCLUDING ATTACHMENT TO THE PRIMARY STRUCTURE), INCLUDING ANALYSIS DATA, SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

DETERMINED USING (LRFD) LOAD COMBINATIONS. 3. PROJECT INCLUDES CONNECTIONS DESIGNED BY THE STRUCTURAL ENGINEER OF RECORD (AISC 303-16, OPTION 1) AND CONNECTIONS DESIGNATED TO BE DESIGNED BY A LICENSED ENGINEER WORKING FOR THE FABRICATOR (AISC 303-16, OPTION 3).

A. CONNECTIONS SHALL BE DESIGNED BY A LICENSED ENGINEER WORKING FOR THE

FABRICATOR (AISC 303-22, OPTION 3), UNLESS NOTED OTHERWISE, CONNECTIONS

SHALL BE DESIGNED FOR THE LOADS AND FORCES PROVIDED IN THE STRUCTURAL

DRAWINGS. CONNECTIONS LOADS AND FORCES PROVIDED IN THE DRAWINGS WERE

i. CONNECTIONS DESIGNED BY THE FABRICATOR'S ENGINEER: CONNECTIONS SHALL BE DESIGNED BY A LICENSED ENGINEER WORKING FOR THE FABRICATOR WHERE CONNECTION LOADS AND FORCES ARE PROVIDED IN THE STRUCTURAL DRAWINGS, UNLESS NOTED OTHERWISE. CONNECTION LOADS AND FORCES PROVIDED IN THE DRAWINGS WERE DETERMINED USING (LRFD) LOAD COMBINATIONS.

COLUMN STIFFENERS, WEB DOUBLER PLATES, BEAM BEARING STIFFENERS, AND ALL OTHER MEMBER REINFORCEMENT AT CONNECTION LOCATIONS SHALL BE DESIGNED BY A LICENSED ENGINEER WORKING FOR THE FABRICATOR. SCHEMATIC DETAILS FOR MEMBER REINFORCEMENT AT CONNECTIONS LOCATIONS ARE PROVIDED IN THE STRUCTURAL DRAWINGS. DETAILS IDENTIFY MEMBER REINFORCEMENT LIMITATIONS AND PROVIDE SUFFICIENT INFORMATION FOR DETERMINATION OF ACCURATE BIDDING QUANTITIES.

D. BOLTED CONNECTIONS ARE TO BE INSTALLED SNUG TIGHT OR PRETENSIONED UNLESS OTHERWISE NOTED i. PRETENSIONED BOLTS SHALL USE DIRECT-TENSION INDICATING WASHERS

(ASTM F959) OR TENSION-CONTROL, HIGH-STRENGTH BOLT-NUT-WASHER

ÀSSEMBLIES (ASTM F 1852). E. FIELD CONNECTIONS SHALL BE BOLTED EXCEPT WHERE WELDED CONNECTIONS ARE INDICATED ON THE STRUCTURAL DRAWINGS.

F. WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS

i. HEADED STUD SHEAR CONNECTORS SHALL BE WELDED WITH AUTOMATICALLY TIMED STUD WELDING EQUIPMENT. FILLET WELDS ARE NOT PERMITTED. 6. PAINT AND PROTECTION:

A. STEEL SURFACES UNLESS NOTED OTHERWISE:TO BE PAINTED: PREPARE SURFACES PER SSPC-SP3 "POWER TOOL CLEANING" AND PAINT WITH FABRICATOR'S STANDARD PRIME COAT i. DO NOT PAINT PORTIONS OF MEMBERS TO BE ENCASED IN CONCRETE. TO RECEIVE FIREPROOFING, OR TO RECEIVE COMPOSITE SHEAR CONNECTORS

PAINT WITH MATCHING SHOP PRIME COAT. B. MEMBERS EXPOSED TO WEATHER IN FINISHED STRUCTURE, LOOSE LINTELS, AND RELIEVING ANGLES i. HOT DIP GALVANIZE PER ASTM A123 AFTER FABRICATION. COATING WEIGHT PER PARAGRAPH 5.1 OF ASTM A123 AND A153. FABRICATE ASSEMBLIES PER ASTM A143, A384, AND A385. AFTER ERECTION, REPAIR DAMAGED AREAS AND WELDS MADE AFTER GALVANIZING IN ACCORDANCE WITH ASTM A780 WITH ORGANIC ZINC RICH PAINT COMPLYING WITH DOD-P-21035 OR MIL-P-26915, MULTIPLE COATS TO DRY FILM THICKNESS OF 4 MILS. FILL EXPOSED VENT AND DRAIN HOLES, NOT INDICATED AS WEEP HOLES, BY PLUGGING WITH ZINC

ii. IMMEDIATELY AFTER ERECTION, CLEAN EXPOSED AREAS WHERE PRIMER IS

DAMAGED OR MISSING, PREPARE SURFACES BY SSPC-SP2 OR SSPC-SP3, AND

SOLDER AND FILING OFF SMOOTH. ii. PREPARE SURFACES PER SSPC-SP6 "COMMERCIAL BLAST CLEANING". PAINT WITH ZINC RICH URETHANE PRIMER WITH NOT LESS THAN 80% ZINC IN DRIED FILM (TNEMEC SERIES 94-H20) WITH A DRY FILM THICKNESS OF 2.5 TO 3.5 MILS FINISH PAINT WITH 2 COATS OF ALIPHATIC ACRYLIC POLYURETHANE (TNEMEC SERIES 1095). COORDINATE COLOR SELECTION WITH ARCHITECT. SUBSTITUTES MAY BE CONSIDERED. SUBMIT MANUFACTURER'S DATA PRIOR TO SURFACE PREPARATION

MEMBERS ENCASED IN CONCRETE: PROVIDE 3" MINIMUM CONCRETE COVER FOR ALL STEEL BELOW GRADE.

7. A VERTICAL STABILIZER PLATE MUST BE PROVIDED ON EACH COLUMN FOR STEEL JOISTS. THE STABILIZER PLATE SHALL BE A MINIMUM OF 6-INCHES X 6-INCHES, SHALL EXTEND A MINIMUM OF 3-INCHES BELOW THE BOTTOM OF THE BOTTOM CHORD, AND SHALL EXTEND A MINIMUM OF 1-INCH ABOVE THE TOP OF THE BOTTOM CHORD. THE PLATE IS REQUIRED TO HAVE A 13/16-INCH DIAMETER HOLE TO PROVIDE AN ATTACHING POINT FOR GUYING CABLES.

8. AT COLUMNS, BEAMS FRAMING INTO THE OPPOSITE SIDES OF THE SAME GIRDER OR COLUMN WEB SHALL HAVE EITHER ERECTION SEAT ANGLES OR SHALL HAVE SHEAR ONNECTIONS THAT ALLOW ERECTION OF EACH BEAM INDEPENDENTLY WITH AT LEAST ONE NON-COMMON BOLT.

9. PERIMETER COLUMN SPLICES SHALL BE LOCATED A MINIMUM OF 48 INCHES ABOVE FINISHED FLOOR. 10. WHERE JOISTS BEAR ON STEEL BEARING PLATES AND COLUMN CAP PLATES, FABRICATOR SHALL VERIFY THAT SUPPORTING ELEMENTS ARE WIDER THAN THE JOIST SEAT SUCH THAT SPECIFIED FILLET WELDS CAN BE INSTALLED. WHERE FABRICATOR FINDS SUPPORTING ELEMENTS ARE NOT WIDER THAN JOIST SEAT, FABRICATOR SHALL

### STEEL JOISTS

CONTACT ENGINEER FOR DIRECTION.

REQUIREMENTS OF THE LATEST EDITION OF THE SPECIFICATIONS ADOPTED BY THE STEEL JOIST INSTITUTE 2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW BY ENGINEER.

1. THE DESIGN, FABRICATION, AND ERECTION OF STEEL JOISTS SHALL CONFORM TO THE

FABRICATION SHALL NOT BEGIN PRIOR TO SHOP DRAWING APPROVAL BY ENGINEER. 3. JOIST MANUFACTURER SHALL DESIGN THE JOISTS FOR A NET UPLIFT OF 11 PSF (ASD). JOIST MANUFACTURER SHALL PROVIDE ADDITIONAL BRIDGING AS REQUIRED TO BRACE JOISTS SUBJECT TO NET UPLIFT. 4. CONNECTIONS:

A. K-SERIES JOISTS: WELD EACH SIDE OF JOIST SEAT TO SUPPORTING STEEL WITH 2 1/2 INCHES OF 1/8 INCH FILLET WELD.

B. K-JOISTS AT COLUMNS AND K-JOISTS IN BAYS OF 40 FEET AND LONGER TO HAVE (2)

1/2" DIAMETER A307 ERECTION BOLTS. ERECTION BOLTS ARE NOT REQUIRED WHERE

JOISTS AND BRIDGING HAVE BEEN PRE-ASSEMBLED INTO PANELS. 5. JOISTS SHALL HAVE MINIMUM BRIDGING AS REQUIRED BY THE SJI AND AS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS. ALL BRIDGING RUNS AND DETAILS SHALL BE SHOWN ON JOIST SHOP DRAWINGS. FOR JOIST SPANS EXCEEDING OSHA TABLES A AND B FROM SUBPART R-STEEL ERECTION 1926.757, INSTALL A LINE OF BOLTED X-BRIDGING NEAR MID-SPAN PRIOR TO SLACKING HOIST LINES. FOR JOISTS BETWEEN 60 FEET AND 100 FEET, TWO LINES OF BOLTED X-BRIDGING SHALL BE INSTALLED NEAR THE THIRD POINTS OF THE JOIST PRIOR TO SLACKING HOIST LINES.

6. PLACE ADDITIONAL X-BRIDGING AT THE END OF EACH HORIZONTAL BRIDGING RUN IN LAST SPACE BETWEEN JOISTS. 7. NO MODIFICATION THAT AFFECTS THE STRENGTH OF A JOIST SHALL BE MADE WITHOUT THE APPROVAL OF THE PROJECT STRUCTURAL ENGINEER OF RECORD. 8. WHERE JOISTS DO NOT CONNECT DIRECTLY TO THE COLUMN CAP PLATE, AT THE JOIST CLOSEST TO EACH COLUMN, PROVIDE DIAGONAL L2X2X3/16. ANGLE SHALL BE WELDED TO TOP OF COLUMN OR TO BOTTOM FLANGE OF BEAM AND TO THE FIRST TOP CHORD

9. EXTEND BOTTOM CHORD OF ALL JOISTS AT OR NEAREST COLUMN LOCATIONS TO LAP WITH STABILIZER PLATE 10. UNLESS NOTED OTHERWISE, K-SERIES JOISTS SHALL HAVE 2 ½" DEEP SEATS. PROVIDE MATCHING HEIGHT SEATS ON SHORT SPAN JOISTS WHICH HAVE COMMON BEARING

PANEL POINT OF JOIST WITH 2 INCH OF 1/8 INCH FILLET EACH END. ANGLE SHALL BE

WITH LONG SPAN AND DEEP LONG SPAN JOISTS. 11. PROVIDE SLOPING JOIST SEATS WHERE THE SLOPE EXCEEDS 1/4" PER FOOT.

SUPPLIED BY THE STRUCTURAL STEEL FABRICATOR.

<u>STEEL DECKING</u> 1. THE DESIGN, FABRICATION, AND ERECTION OF ALL STEEL DECK SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE SPECIFICATIONS OF THE STEEL

A. ROOF DECK: SEE PLAN AND METAL DECK SCHEDULE FOR SIZE, GAGE, MIN Fy, AND REQUIRED SUPPORT FASTENERS AND SIDELAP FASTENERS. PAINTED WITH STANDARD SHOP COAT.

FABRICATION SHALL NOT BEGIN PRIOR TO SHOP DRAWING APPROVAL BY ENGINEER.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW BY ENGINEER.

SCREWS (ASTM C1513) MANUFACTURED FROM CARBON STEEL (ASTM A510, MIN GRADE 1018). ZINC PLATING SHALL MEET MINIMUM CORROSION RESISTANCE REQUIREMENTS OF ASTM F1941. 4. METAL DECK SHALL BE PROVIDED TO RUN CONTINUOUS OVER AT LEAST 3 SPANS

B. SELF DRILLING SCREWS (SDS): HEX WASHER HEAD SELF-DRILLING TAPPING

EXCEPT AS NOTED OTHERWISE. 5. CONNECT METAL DECK TO STRUCTURAL MEMBERS, INCLUDING PERIMETER ANGLES. 6. MINIMUM METAL DECK END BEARING ON SUPPORTS = 1 1/2".

7. LAP ENDS OF ROOF DECK 4" MINIMUM. 8. WELDING OF METAL DECK SHALL BE IN ACCORDANCE WITH AWS D1.3-08.

# **COLD-FORMED METAL FRAMING**

 MATERIALS: A. STRUCTURAL FRAMING MEMBERS 54 MILS (16 GAGE) & HEAVIER: ASTM A1003 & C955, Fy MINIMUM, AS REQUIRED FOR STRUCTURAL PERFORMANCE = 50 KSI. G60

GALVANIZED COATING (TYPICAL UNO). B. STRUCTURAL FRAMING MEMBERS 43 MILS (18 GAGE) & LIGHTER: ASTM A1003 & C955. Fy MINIMUM = 33 KSI, G60 GALVANIZED COATING (TYPICAL UNO). C. COLD-FORMED STEEL STUDS FOR BRICK VENEER BACKUP: 43 MILS (18 GAGE)

E. STRAP BRACING: Fy MINIMUM, AS REQUIRED FOR STRUCTURAL PERFORMANCE = 50 KSI. SIZE & GAGE AS INDICATED, ASTM A1003 & C955, G60 GALVANIZED COATING. F. SELF DRILLING SCREWS (SDS): i. HEX OR PHILLIPS WASHER HEAD SELF-DRILLING TAPPING SCREWS (ASTM C1513)

D. ALL TRACK & BRIDGING: Fy = 33 KSI MINIMUM, ASTM A1003 & C955, G60 GALVANIZED

MANUFACTURED FROM CARBON STEEL (ASTM A 510, MIN GRADE 1018), ZINC

PLATING SHALL MEET MINIMUM CORROSION RESISTANCE REQUIREMENTS OF

ASTM F1941. SIZE AND SPACING TO BE DETERMINED BY SPECIALTY ENGINEER G. WELDING ELECTRODES: E60XX

MINIMUM THICKNESS. G90 GALVANIZED COATING.

2. DESIGN SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS: A. AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) S100-16 "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS". B. AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) \$200-12 "STANDARD FOR COLD-

AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) \$213-07 / \$1-09 "STANDARD FOR COLD-FORMED STEEL FRAMING — LATERAL DESIGN" D. AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) AISI S212-07 "STANDARD FOR COLD-FORMED STEEL FRAMING — HEADER DESIGN", LATEST EDITION.

E. AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) S211-07 / S1-12 "STANDARD FOR

F. AMERICAN WELDING SOCIETY (A.W.S.) D.1.3, 2011 "STRUCTURAL WELDING CODE-

COLD-FORMED STEEL FRAMING — WALL STUD DESIGN", LATEST EDITION.

SHEET STEEL." 3. WORK SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS:

FORMED STEEL FRAMING — GENERAL PROVISIONS"

A. AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) "STANDARD FOR COLD-FORMED STEEL FRAMING — GENERAL PROVISIONS", LATEST EDITION.

B. AMERICAN WELDING SOCIETY (A.W.S.) [D.1.3, 2011] "STRUCTURAL WELDING CODE-

4. DEFLECTION LIMITS. DESIGN FRAMING SYSTEMS TO WITHSTAND SPECIFIED DESIGN LOADS WITHOUT DEFLECTIONS GREATER THAN THE FOLLOWING:

A. EXTERIOR NON-LOAD-BEARING FRAMING: HORIZONTAL DEFLECTION OF H/240 OF THE WALL HEIGHT.

WALL HEIGHT UNDER A HORIZONTAL LOAD OF 5 LBF/SQ. FT. C. CEILING JOIST FRAMING: VERTICAL DEFLECTION OF L/480 FOR LIVE LOADS AND L/240 FOR TOTAL LOADS OF THE SPAN.

B. INTERIOR NON-LOAD-BEARING FRAMING: HORIZONTAL DEFLECTION OF H/240 OF THE

5. DESIGN FRAMING SYSTEMS TO PROVIDE FOR MOVEMENT OF FRAMING MEMBERS LOCATED OUTSIDE THE INSULATED BUILDING ENVELOPE WITHOUT DAMAGE OR OVERSTRESSING, SHEATHING FAILURE, CONNECTION FAILURE, UNDUE STRAIN ON FASTENERS AND ANCHORS. OR OTHER DETRIMENTAL EFFECTS WHEN SUBJECT TO A MAXIMUM AMBIENT TEMPERATURE CHANGE OF 120 DEG F

6. DESIGN FRAMING SYSTEM TO MAINTAIN CLEARANCES AT OPENINGS, TO ALLOW FOR CONSTRUCTION TOLERANCES, AND TO ACCOMMODATE DISPLACEMENT OF PRIMARY **BUILDING STRUCTURE AS FOLLOWS:** 

A. UPWARD AND DOWNWARD MOVEMENT OF1 INCHES. DESIGN EXTERIOR NON-LOAD-BEARING WALL FRAMING TO ACCOMMODATE HORIZONTAL

DEFLECTION WITHOUT REGARD FOR CONTRIBUTION OF SHEATHING MATERIALS. 8. SUBMITTALS:

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT

B. DELEGATED DESIGN SUBMITTAL SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE THE PROJECT IS LOCATED IN AND RESPONSIBLE FOR THEIR PREPARATION INCLUDING COMPREHENSIVE ANALYSIS DATA AND SHOP DRAWINGS INCLUDING THE FOLLOWING:

CROSS-SECTIONS, PLANS AND/OR ELEVATIONS DEPICTING COMPONENT

LAYOUT, SIZE AND LOCATION. ii. CONNECTION DETAILS SHOWING FASTENER TYPES AND LOCATIONS, WELD SIZE, LENGTHS AND LOCATIONS INCLUDING ATTACHMENTS TO ADJOINING WORK. iii. SIZE AND LOCATION OF ALL BRIDGING AND BRACING.

9. CUT ALL FRAMING COMPONENTS SO THEY FIT SQUARELY TOGETHER. STUDS MUST

BEAR TIGHT AGAINST TRACK WEB. MEMBERS SHALL BE HELD POSITIVELY IN PLACE

UNTIL PROPERLY FASTENED. BRACE WALL COMPONENTS AS REQUIRED DURING

ERECTION TO PREVENT RACKING AND DISTORTION. 10. PRIOR TO THE START OF INSTALLATION OF COLD-FORMED STEEL FRAMING SYSTEMS, MEET AT THE PROJECT SITE WITH THE INSTALLERS OF OTHER WORK INCLUDING DOOR AND WINDOW FRAMES, MECHANICAL, STRUCTURAL AND ELECTRICAL WORK. REVIEW

AREAS OF POTENTIAL INTERFERENCE AND CONFLICTS AND COORDINATE LAYOUT AND SUPPORT PROVISIONS FOR INTERACTING WORK. 11. FASTEN EACH STUD AT EACH FLOOR LEVEL, HORIZONTAL GIRT AND ROOF LEVEL,

UNLESS NOTED OTHERWISE ON DRAWINGS. 12. ALL WELDED CONNECTIONS SHALL BE MADE BY WELDERS CERTIFIED FOR WELDING MEMBERS OF GAGE BEING USED PER AWS D.1.3-11. 13. ERECTION TOLERANCES. FABRICATE AN ERECT ASSEMBLIES LEVEL, PLUMB, AND TRUE TO LINE TO A MAXIMUM ALLOWABLE VARIATION OF 1/8 INCH IN 10 FEET AND AS

A. SPACING: SPACE INDIVIDUAL FRAMING MEMBERS NO MORE THAN PLUS OR MINUS 1/8 INCH FROM PLAN LOCATION. CUMULATIVE ERROR SHALL NOT EXCEED MINIMUM FASTENING REQUIREMENTS OF SHEATHING OR OTHER FINISHING MATERIALS. B. SQUARENESS: FABRICATE EACH COLD-FORMED STEEL FRAMING ASSEMBLY TO A

## **WOOD - SHEATHING**

INSTALLATION.

MATERIALS: A. WALL SHEATHING (TYPICAL): 5/8" APA SPAN RATING 24/16 WALL SHEATHING

A. SCREW SHEATHING TO COLD FORMED METAL FRAMING WITH SELF DRILLING

1. INSTALLATION: INSTALL ANCHORS PER EVALUATION REPORT AND MANUFACTURER'S

CONNECTIONS TO EXISTING REINFORCED CONCRETE OR MASONRY: PRIOR TO

DRILLING, VERIFY LOCATIONS OF EXISTING REINFORCING BARS USING A REBAR

MAXIMUM OUT-OF-SQUARE TOLERANCE OF 1/8 INCH.

2. SHEATHING INSTALLATION:

PRINTED INSTALLATION INSTRUCTIONS (MPII).

INTERMEDIATE SUPPORTS UNLESS NOTED OTHERWISE. FOR SUPPORTING FRAMING 54 MILS (16 GAGE) AND LESS, USE NO. 8 SELF DRILLING SCREWS, FOR SUPPORTING FRAMING GREATER THAN 54 MILS (16 GAGE), USE NO. 10 SELF DRILLING SCREWS. POST INSTALLED ANCHORS

SCREWS AT 6 INCHES ON CENTER AT PANEL EDGES AND 12 INCHES ON CENTER AT

DETECTOR. NOTIFY ENGINEER PRIOR TO INSTALLATION IF ANCHOR LOCATIONS CONFLICT WITH EXISTING REINFORCING BARS. DO NOT DRILL THROUGH REINFORCING 3. TESTING AND INSPECTION: REFER TO EVALUATION REPORTS FOR ADDITIONAL TESTING AND INSPECTION REQUIREMENTS. SUBSTITUTIONS: SUBSTITUTIONS COMPLYING WITH SPECIFIED ACCEPTANCE CRITERIA

MAY BE CONSIDERED. SUBMIT EVALUATION REPORT DEMONSTRATING COMPLIANCE

5. ADHESIVE ANCHORS: A. ANCHOR RODS: HILTI "HAS-V-36" ASTM F1554. GRADE 36 UNLESS NOTED OTHERWISE. SIZE AND EMBEDMENT AS INDICATED ON DRAWINGS.

WITH GOVERNING CODE AND SPECIFIED ACCEPTANCE CRITERIA PRIOR TO

SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA ICC-ES AC308 AND ACI 355.4 FOR USE IN CRACKED CONCRETE MAY BE CONSIDERED. C. ADHESIVE IN GROUT FILLED CONCRETE MASONRY: HILTI "HIT-HY 270" ADHESIVE ANCHOR SYSTEM (EVALUATION REPORT: ICC-ES ESR-4143). SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA ICC-ES AC58 FOR USE IN GROUT FILLED

CONCRETE MASONRY WALLS MAY BE CONSIDERED.

FOR USE IN CRACKED CONCRETE MAY BE CONSIDERED.

ESR-3814)HILTI "HIT-RE 100" EPOXY (EVALUATION REPORT: ICC-ES ESR-3829).

B. ADHESIVE IN CONCRETE: HILTI "HIT-RE 500 V3" EPOXY (EVALUATION REPORT: ICC-ES

DATE OF INSTALLATION. 6. EXPANSION ANCHORS: A. ANCHORAGE TO CONCRETE: HILTI "KWIK BOLT TZ2 CARBON STEEL" (EVALUATION REPORT: ICC-ES ESR-4266) HILTI "KWIK BOLT 1 CARBON STEEL" (EVALUATION REPORT: IAPMO-ER-678). SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA

D. VERIFY THAT THE SHELF LIFE OF THE ADHESIVE HAS NOT BEEN EXCEEDED ON THE

ICC-ES AC193 AND ACI 355.2 FOR USE IN CRACKED CONCRETE MAY BE CONSIDERED.

B. ANCHORAGE TO GROUT FILLED CONCRETE MASONRY: HILTI "KWIK BOLT TZ2 CARBON STEEL" (EVALUATION REPORT: ICC-ES ESR-4561). SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA ICC-ES AC01 (INCLUDING SEISMIC TESTS) FOR EXPANSION ANCHORS IN MASONRY ELEMENTS MAY BE CONSIDERED. 7. SCREW ANCHORS

A. ANCHORAGE TO CONCRETE: HILTI "KH-EZ" (EVALUATION REPORT: ICC-ES ESR-3027).

B. ANCHORAGE TO GROUT FILLED CONCRETE MASONRY: HILTI "KH-EZ" (EVALUATION

SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA ICC-ES AC193 AND ACI 355.2

### REPORT: ICC-ES ESR-3056). SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA ICC-ES AC106 (INCLUDING SEISMIC TESTS) FOR SCREW ANCHORS IN MASONRY ELEMENTS MAY BE CONSIDERED

PRINTED INSTRUCTIONS (MPII)

POWER-ACTUATED FASTENERS (PAF)

INSTALLATION: INSTALL FASTENERS PER EVALUATION REPORT AND MANUFACTURER'S

SUBSTITUTIONS: SUBSTITUTIONS COMPLYING WITH ICC-ES ACCEPTANCE CRITERIA AC

70 MAY BE CONSIDERED. SUBMIT EVALUATION REPORT DEMONSTRATING GREATER OR

i. 0.157" DIAMETER NAIL (TYP UNO): HILTI "X-U" NAIL (ICC-ESR-2269) OR HILTI "X-P"

REPORT TO PROVIDE MINIMUM REQUIRED PENETRATION THROUGH STEEL.

i. 0.157" DIAMETER NAIL: HILTI "X-U" NAIL (ICC-ESR-2269). DETERMINE FASTENER

NAIL (ICC-ESR-2269). DETERMINE FASTENER LENGTH IN ACCORDANCE WITH ICC

ACCEPTANCE CRITERIA PRIOR TO INSTALLATION. FASTENING WOOD FRAMING AND COLD FORMED METAL FRAMING TRACKS AND A. FASTENING TO STRUCTURAL STEEL:

EQUAL CAPACITY, AND COMPLIANCE WITH GOVERNING CODE AND SPECIFIED

LENGTH IN ACCORDANCE WITH ICC REPORT TO PROVIDE A MINIMUM 1 1/4"

4. FASTENING METAL DECK TO STRUCTURAL STEEL: SEE "METAL DECK" GENERAL

STRENGTH PRIOR TO FASTENER INSTALLATION):

B. FASTENING TO CONCRETE (CONCRETE MUST ACHIEVE SPECIFIED DESIGN

### STRUCTURAL NOTES. SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS ARE REQUIRED BY SECTION 1704 OF THE REFERENCED BUILDING CODE. THE INTENT OF SPECIAL INSPECTIONS IS TO VERIFY THE COMPLIANCE OF MATERIALS, INSTALLATION, FABRICATION, ERECTION AND/OR PLACEMENT OF COMPONENTS WITH THE COMPLETED SET OF CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. IT IS THE RESPONSIBILITY OF ALL PARTIES INVOLVED TO BECOME FAMILIAR WITH THE SPECIAL INSPECTION REQUIREMENTS SET FORTH IN CHAPTER 17 OF THE REFERENCED BUILDING CODE. SPECIAL INSPECTIONS SHALL BE PROVIDED BY THE OWNER OR THE OWNER'S AGENT AND SHALL NOT BE CONSIDERED IN THE SCOPE OF WORK OF THE CONTRACTOR.

HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 106.1 AND 1704 OF THE REFERENCED BUILDING CODE. SEE OTHERS FOR SPECIAL INSPECTION REQUIREMENTS FOR NON-STRUCTURAL WORK. THE SPECIAL INSPECTOR(S) SHALL COORDINATE WITH THE OWNER, CONTRACTORS, AND DESIGN PROFESSIONALS AND SCHEDULE ALL INSPECTIONS ACCORDINGLY.

A. THE FOLLOWING SCHEDULE OF SPECIAL INSPECTIONS FOR STRUCTURAL WORK

	SYMBOL LEGEND	
SYMBOL	DESCRIPTION	REFERENCE
0	COLUMN LINE DESIGNATION	
0	FACE OF BUILDING	
Ln	LINTEL MARK	
n	FOOTING MARK	
BPn	BASE PLATE MARK	
Kn	KEYNOTE MARK	
	STEP T/FTG	
<del>•</del>	ELEVATION INDICATION	
D-n	DECK MARK	

	ABBREVIATIONS
NAME	DESCRIPTION
AFF =	ABOVE FINISHED FLOOR ELEVATION
ARCH =	ARCHITECT
B/ =	BOTTOM OF
BLDG =	BUILDING
BOD =	BOTTOM OF DECK
BOT =	ВОТТОМ
BRG =	BEARING
CFS =	COLD-FORMED STEEL
CJ =	CONTRACTION JOINT
CJP =	COMPLETE JOINT PENETRATION
CL =	CENTER LINE
CLR =	CLEAR
CLSM =	CONTROLLED LOW STRENGTH MATERIAL
CMU =	CONCRETE MASONRY UNIT
COL =	COLUMN
CONC =	CONCRETE
CONT =	CONTINUOUS
DEG or ° =	
DIA or ø =	DIAMETER
EA =	EACH
EF =	EACH FACE
EL =	ELEVATION
EMB =	EMBEDMENT
EOD =	EDGE OF DECK
EOS =	EDGE OF SLAB
EQ =	EQUAL
EXIST =	EXISTING
EXP =	EXPANSION
FDN =	FOUNDATION
FS =	FAR SIDE
FTG =	FOOTING
GA =	GAGE
GALV =	GALVANIZED
GALV = GT =	GIRDER TRUSS
HORIZ =	HORIZONTAL
JST BRG =	JOIST BEARING
Ld =	TENSION DEVELOPMENT LENGTH OF REINFORCING BAR IN CONCRETE
Ld-CMU =	TENSION DEVELOPMENT LENGTH OF
Lu-OIVIU -	REINFORCING BAR IN GROUTED CMU
Ldc =	COMPRESSION DEVELOPMENT LENGTH OF
_~~ <b>~</b>	REINFORCING BAR IN CONCRETE
LDH =	LONG DIMENSION HORIZONTAL
Ldh =	HOOKED BAR TENSION DEVELOPMENT
	LENGTH OF REINFORCING BAR IN
	CONCRETE
LDV =	LONG DIMENSION VERTICAL
LLH =	LONG LEG HORIZONTAL
LLV =	LONG LEG VERTICAL
Ls =	LAP SPLICE LENGTH OF REINFORCING BAR
	IN CONCRETE
Ls-CMU =	LAP SPLICE LENGTH OF REINFORCING BAR
	IN GROUTED CMU
Lsc =	COMPRESSION LAP SPLICE LENGTH OF
	REINFORCING BAR IN CONCRETE
LSL =	LAMINATED STRAND LUMBER
LVL =	LAMINATED VENEER LUMBER
MCJ =	MASONRY CONTROL JOINT
MFR =	MANUFACTURER
NS =	NEAR SIDE
oc =	ON CENTER
OPNG =	OPENING
OPP =	OPPOSITE
P/T =	POST-TENSION
PAF =	POWER-ACTUATED FASTENER
PE =	PRE-ENGINEERED
PEMB =	PRE-ENGINEERED METAL BUILDING
PJP =	PARTIAL JOINT PENETRATION
PL =	PLATE
PSL =	PARALLEL STRAND LUMBER
PT =	PRESSURE TREATED
RD =	ROOF DRAIN
REINF =	REINFORCING
REINF = RTU =	
	ROOF TOP UNIT
SDS =	SELF DRILLING SCREWS
SIM =	SIMILAR
SL =	STEP LEDGE
SOMD =	SLAB ON METAL DECK
	SPACE or SPACES
SPA =	
	SECONDARY ROOF DRAIN
SPA = SRD =	SECONDARY ROOF DRAIN STIFFENER
SPA = SRD = STIFF =	
SPA = SRD = STIFF =	STIFFENER
SPA = SRD = STIFF = STL = STW =	STIFFENER STEEL
SPA = SRD = STIFF = STL = STW = T/ =	STIFFENER STEEL STEP TOP OF WALL
SPA = SRD = STIFF = STL =	STIFFENER STEEL STEP TOP OF WALL TOP OF
SPA = SRD = STIFF = STL = STW = T/ = UNO = VB =	STIFFENER STEEL STEP TOP OF WALL TOP OF UNLESS NOTED OTHERWISE VERTICAL BRACING
SPA = SRD = STIFF = STL = STW = T/ = UNO = VB = VERT =	STIFFENER STEEL STEP TOP OF WALL TOP OF UNLESS NOTED OTHERWISE VERTICAL BRACING VERTICAL
SPA = SRD = STIFF = STL = STW = T/ = UNO = VB =	STIFFENER STEEL STEP TOP OF WALL TOP OF UNLESS NOTED OTHERWISE VERTICAL BRACING

WP = WORK POINT

TRUCTURAL ENGINEERS 800.542.3302 schaefer-inc.com Ischaefer COPYRIGHT © 2025
THIS DOCUMENT IS THE PRODUCT AND EXCLUSIVE

CONSENT OF SCHAEFER Schaefer Project Number: 24-1921

ARCHITECT OF RECORD

BRR ARCHITECTURE INC

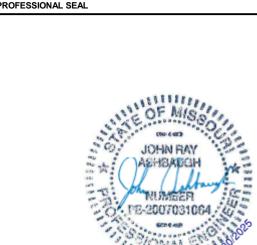
8131 METCALF AVENUE

WWW.BRRARCH.COM

TEL: 913-262-9095

FAX: 913-262-9044

OVERLAND PARK, KS 6620



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

05/01/25 ORIGINAL ISSUE

NOR THE INFORMATION IT CONTAINS MAY BE COPIED OR USED FOR ANY OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS PREPARED, WITHOUT THE WRITTEN

Item	Sub Item / Scope		Extent		Agency Qualifications	Comments
n-Plant Special nspections	Fabrication and implementation procedures: In addition to special inspections provided on site, provide special inspections indicated below on the premises of fabricator's shop. Verify that the fabricator maintains detailed fabrication and quality control procedures.	Observe	Perform	X	As Noted Below	Special inspections on the premises of the fabricators shop are not required provided the fabricator is an <i>Approved Fabricator</i> in accordance with section 1704.2. Fabricator is required to submit documentation/certification that they are an <i>Approved Fabricator</i> .
. Fabricator and prector documents	Verify reports and certificates as listed in AISC 360, chapter N, paragraph 3.2 for compliance with construction documents		Х		Schaefer Submittal Review	an pproved rabineator.
. Material erification of tructural steel	Verify material in shop and field inspection		Х		Testing Agency	
8. Embedments	Verify diameter, grade, type, length, embedment. See Table 1705.3 for anchors		Х		Testing Agency	
Verify compliance with construction locuments	Verify member locations, braces, stiffeners, and application of joint details at each connection comply with construction documents		X		Testing Agency	
5.4-1. Visual Welding	Welder qualifications records and continuity records.		Х			
nspection Tasks Before Welding:	<ul><li>2. Welding procedure specifications (WPS) available</li><li>3. Manufacturer certifications for welding</li></ul>		X			
	consumables available.  4. Material Identification (type/grade)	X	X			
	5. Welder identification system (The fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified. Stamps, if used, shall be the low-stress type.)	X				
	6. Fit up of Groove Welds (Including Joint Geometry): Inspection shall include Joint preparation, Dimensions (alignment, root opening, roof face, and bevel), Cleanliness (condition of steel surfaces), Tacking (tack weld quality and location), Backing type and fit (if applitable) CJP Groove Welds of HSS T-, K-, Y-, and K-joints (Including Joint Geometry): Inspection shall include Joint preparation, Dimensions (alignment, root opening, roof face, and bevel), Cleanliness (condition of steel surfaces), Tacking (tack weld quality and location), Backing type and fit (if applicable)	X	X		Testing Agency AWS - Certified Welding Inspector	
	Configuration and finish of access holes	Х				
	9. Fit-up of Fillet Welds: Inspection shall include: Dimensions (alignment, root opening, roof face, and bevel), Cleanliness (condition of steel surfaces), Tacking (tack weld quality and location)	X				
	Check welding equipment.     Control and Handling of Welding Consumables:      Declaring and Evapoure control	X				
nspection - nspection Tasks During Welding:	Packaging and Exposure control)  2. No welding over cracked tack welds.	X				
	<ul> <li>3. Environmental Conditions: Wind speed within limits, and Precipitation and temperature.</li> <li>4. WPS Followed: Observe Settings on welding equipment, Travel speed, Selected welding materials, Shielding gas type/flow rate, Preheat applied,</li> </ul>	X			Testing Agency AWS - Certified	
	Interpass temperature maintained (min and max), and Proper position (F,V,F,OH)  5. Welding Techniques: Interpass and final cleaning, Each pass within profile limitations, Each pass meets quality requirements.  6. Placement and installation of steel headed stud	X			Welding Inspector	
5.4-3. Visual Welding	anchors.	X	X			
nspection Tasks Ifter Welding	3. Welds meet visual acceptance criteria: Crack prohibition, Weld/base-metal fusion, Crater cross section, Weld profiles, Weld size, Undercut, Porosity.		X			
	<ul><li>4. Arc strikes:</li><li>5. k-area</li><li>6. Weld access holes in rolled heavy shapes and</li></ul>		X		Testing Agency AWS - Certified Welding Inspector	
	built-up heavy shapes 7. Backing Removed and weld tabs removal (if required):		X		<b>.</b>	
	Repair Activities:  Document acceptance or rejection of welded joint or		X			
	member  No prohibited welds have been added without the approval of the EOR	X	X			
5.5 Non-destructive esting of Welds	b. CJP Groove Welds: Ultrasonic testing shall be performed on 100 percent of CJP groove welds subject to transversely applied tension loading in butt, T- and corner joints, in materials 5/16 in thick or greater. Ultrasonic testing in materials less than 5/16 in thick is not required. Reduction of Rate of		X		Testing Agency	Perform NDT for both in field and shop welds.
	Ultrasonic Testing is permitted if the conditions of AISC 360-16 Appendix N.5.e are met.  c. Weld Joints Subjected to Fatigue: Welded joints requiring weld soundness to be established by Radiographic or Ultrasonic Inspections. Reduction			X	AWS - Certified Welding Inspector	Perform NDT for both in field and shop welds.
.6-1. Inspection of	rate is prohibited.  1. Manufacturer's certifications available for fastener		X		Testing Agency	
Bolting: Inspection asks Prior to Bolting	materials.  2. Fasteners marked in accordance with ASTM requirements	X			Testing Agency  Testing Agency	
	3. Proper fasteners selected for the joint detail (grade, type, and bolt length if threads are excluded	X			Testing Agency	
	from shear plane).  4. Proper bolting procedure selected for joint detail.	X			Testing Agency	
	5. Connecting elements: Verify elements are fabricated properly, including the appropriate faying surface condition and hole preparation, if specified, meets the applicable requirements	X			Testing Agency	
	<ul><li>6. Pre-installation verification testing conducted for fastener assemblies and methods used</li><li>7. Proper storage provided for bolts, nuts, washers,</li></ul>	X			Testing Agency	
6.6-2. Inspection of	and other fastener components  1. Fastener assemblies, of suitable condition, placed	X			Testing Agency	
Solting: Inspection asks During Bolting	in all holes and washers (if required) are properly positioned  2. Joint brought to the snug tight condition prior to	X			Testing Agency	
	the pretensioning operation  3. Fastener component not turned by the wrench prevented from rotating  4. Bolts are pretensioned in accordance with the	X			Testing Agency Testing Agency	
i.6-3. Inspection of	RCSC specification, progressing systematically from most rigid point toward free edges  1. Document accepted and rejected connections:	X			Testing Agency	
Solting: Inspection asks After Bolting			X		Testing Agency	

			Extent	Agency	
Item	Sub Item / Scope	Observe	Perform N/A	Qualifications	Comments
1. Inspection Tasks Prior to Deck Placement	a. Verify compliance of materials (deck and all deck accessories) with construction documents, including profiles, material, properties, and base metal thickness		X	Testing Agency	
	b. Document acceptance or rejection of deck and deck accessories		X		
<ol><li>Inspection Tasks</li><li>After Deck Placement</li></ol>	a. Verify compliance of deck and all deck accessories     installation with construction documents		X	Testing Agency	
	b. Verify deck materials are represented by the mill certifications that comply with the construction documents		X		
	c. Document acceptance or rejection of installation of deck and deck accessories		X		
3. Inspection Prior to Welding	a. Welding procedure specifications (WPS) available	X		_	
TTOIGHING	b. Manufacturer certifications for welding consumables available	Х		Testing Agency AWS Certified	
	c. Material Identification (type/grade)	X		Welding Inspector	
	d. Check Welding Equipment	X			
4. Inspection Tasks During Welding	a. Use of qualified welders.	Х			
	b. Control and handling of welding consumables.	X		Testing Agency	
	c. Environmental conditions	Х		I I	
	d. WPS followed	X		Welding Inspector	
5. Inspection Tasks After Welding	a. Verify size and location of welds, including support, sidelap, and perimeter welds.		X		
-	b. Weld meets visual inspection criteria.		X	Testing Agency	
	c. Verify repair activities.		X	Welding Inspector	
	d. Document acceptance or rejection of welds		X	Testing Agency AWS Certified Welding Inspector  Testing Agency AWS Certified Welding Inspector  Testing Agency AWS Certified Welding Inspector	
6. Inspection Tasks Prior to Mechanical	a. Manufacturer installation instructions are available for mechanical fasteners.	Х			
Fastening	b. Proper tools are available for fastener installation	Х		Testing Agency	
	c. Proper storage for mechanical fasteners	X			
7. Inspection Tasks	a. Fasteners are positioned as required	X			
During Mechanical Fastening	b. Fasteners are installed in accordance with manufacturer's instructions	Χ		Testing Agency	
8. Inspection Tasks	a. Check spacing, type, and installation of support fasteners		X		
After Mechanical Fastening	b. Check spacing, type, and installation of sidelap fasteners		X	]	
-	c. Check spacing, type, and installation of perimeter fasteners		X	Testing Agency	
	d. Verify repair activities		X		
	e. Document acceptance or rejection of mechanical fasteners		X	1	

	SCHEDULE OF SPECIAL IN OPEN WEB STEEL JO					3
H	Out there / Ocean		Extent		Agency	Comments
Item	Sub Item / Scope	Cont.	Periodic	N/A	Qualifications	
Installation of open-web steel joists and joist girders:	a. End Connections - Welding or Bolting. Reference SJI Specifications listed in IBC 2207.1		Х		Testing Agency AWS Certified Welding Inspector	
	b. Bridging - horizontal or diagonal		X			
	b.1. Standard bridging. Reference SJI Specifications listed in IBC 2207.1		X		Testing Agency	
	b.2. Bridging that differs from the SJI specifications listed in Section 2207.1		X			

	SCHEDULE OF SPECIAL	INSPE	ECTION	I SER	VICES - 1705.6 SOI	LS
ltom	Culp Hom / Coope		Extent		Agency	Comments
Item	Sub Item / Scope	Cont.	Periodic	N/A	Qualifications	Comments
Bearing Materials	Verify materials below shallow foundations are adequate to achieve the design bearing capacity.		X		Testing Agency Under supervision of Licensed Geotechnical Engineer	
2. Excavations	Verify excavations are extended to proper depth and have reached proper material		X		Testing Agency Under supervision of Licensed Geotechnical Engineer	
3. Fill Classification	Perform classification and testing of compacted fill materials		X		Testing Agency Under supervision of Licensed Geotechnical Engineer	
4. Placement and Fill Compaction	Verify use of proper materials, densities, and lift thicknesses during placement and compaction of compacted fill	X			Testing Agency Under supervision of Licensed Geotechnical Engineer	
5. Subgrade	Prior to placement of compacted fill, inspect subgrade and verify that the site has been prepared properly		X		Testing Agency Under supervision of Licensed Geotechnical Engineer	

			Extent		Agency	
Item	Sub Item / Scope	Cont.	Periodic	N/A	Qualifications	Comments
In-Plant Special Inspections (Precast Concrete)	Fabrication and implementation procedures: In addition to special inspections provided on site, provide special inspections indicated below on the premises of fabricator's shop. Verify that the fabricator maintains detailed fabrication and quality control procedures.			X	As Noted Below	Special inspections on the preof the fabricator's shop are not required provided the fabricator <i>Approved Fabricator</i> in account section 1704.2.5.1. Fabrication to submit documentation/certification the
1. Reinforcing steel	a. Mild Reinforcing Steel: Inspect size, spacing, cover, positioning and grade of reinforcing steel: Verify that reinforcing bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. Verify that bars are adequately tied and supported on chairs or bolsters. Verify welded wire fabric is supported per construction documents. Reference ACI 318: 20, 25.2, 25.3, 26.6-1-26.6-3, and IBC 1908.4.  b. Prestress Steel: Inspect size, spacing, cover, and position of		X		Testing Agency	are an <i>Approved Fabricator</i> .
2. Welding of	prestressing tendons:  a. Verify weldability of reinforcing bars other than ASTM A706. Reference			X	Testing Agency	
Reinforcing Steel	ACI 318: 26.6.4 and AWS D1.4			Х	Testing Agency	
	b. Inspect single pass fillet welds, maximum 5/16"  c. Inspect all other welds	X		X	Testing Agency AWS - Certified Welding Inspector Testing Agency AWS - Certified Welding Inspector	
3. Cast in Place Anchor Rods	Inspect size, position and embedment of cast in place bolts and anchor rods. Inspect concrete placement and consolidation around anchors. Reference ACI 318: 17.8.2		X		Testing Agency	
4. Post Installed Anchors (Anchors installed in Hardened Concrete)	a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. Inspect type and size of anchor, concrete type and compressive strength, hole cleaning procedures, anchor embedment, anchor spacing and edge distances, and tightening torque (where applicable). Reference ACI 318: 17.8.2.4	X			Testing Agency	Reference evaluation report (id in project general notes) for actinspection scope required by manufacturer.
	b. Mechanical anchors and adhesive anchors not defined in 4.a. Inspect type and size of anchor, concrete type and compressive strength, hole cleaning procedures, anchor embedment, anchor spacing and edge distances, and tightening torque (where applicable). Reference ACI 318:		X		Testing Agency	
5. Mix Design	P76.20 concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.		X		Testing Agency	
6. Sampling and Testing of Concrete	At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests as required by construction documents, and determine the temperature of concrete. Reference ASTM C 172, ASTM C31, ACI 318 19, 26.4.3, 26.4.4, and IBC 1904.1, 1904.2, 1908.2, 1908.3	X			Testing Agency	
7. Concrete and Shotcrete Placement	Inspect concrete and shotcrete placement for proper application techniques. Reference ACI 318: 26.5 and IBC 1908.6, 1908.7, and 1908.8. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.	X			Testing Agency	
8. Curing and Protection	Inspect for maintenance of specified curing temperature and techniques. Inspect cold weather and hot weather protection procedures as applicable. Reference ACI 318: 26.5.3-26.5.5 and IBC 1908.9.		X		Testing Agency	
9. Prestressed (Post-tensioned) Concrete	a. Application of Prestressing Forces: Inspect placement, stressing, grouting and protection of post-tensioning tendons. Verify that tendons are correctly positioned, supported, tied and wrapped. Record tendon elongations. Reference ACI 318: 26.10.2			X	Testing Agency	
	b. Grouting of Bonded Prestressing Tendons in the Seismic-Force Resisting System: Reference ACI 318: 26.10.1			X	Testing Agency	
10. Precast Concrete Erection	Inspect erection of precast concrete including member configuration, connections, welding and grouting. Reference ACI 318: Ch 26.9			Х	Testing Agency	
	Verify concrete strength prior to the removal of shores and forms from beams and structural slabs and prior to the stressing of tendons in post-tensioned concrete. Reference ACI 318: 26.10.2 & 26.11.11.2		X		Testing Agency	
12. Formwork	Inspect formwork for shape, location and dimensions of the concrete		X			

ltom	Sub Item / Scope		Extent		Agency	Comments
Item	Sub item / Scope	Cont.	Periodic	N/A	Qualifications	Comments
Minimum Verification	Prior to construction, verification of compliance of submittals (TMS 602 Art.1.5)	Х			Schaefer Submittal Review	Required
Requirements	Prior to construction, verification of f'm and f'AAC, except where specifically exempted by the code (TMS 602 Art.1.4b)		x		Schaefer Submittal Review	Required
	During Construction, verification of slump flow and Visual Stability Index (VIS) when self-consolidating grout is delivered to the project site. (TMS 602: Art 1.5 &1.6.3)		x		Testing Agency	Not Required
	During construction, verification of f'm and f'aac for every 5,000 sq. ft. (TMS 602 Art.1.4b)			Х	Testing Agency	Not Required
	During construction, verification of proportions of materials as delivered to the project site for premixed or preblended mortar, prestressing grout, and grout other than self-consolidating grout. (TMS 602 Art.1.4b)			X	Testing Agency	Required
As masonry construction	a. Proportions of Site-Prepared Mortar (TMS 602 Art. 2.1, 2.6A & 2.6C)		X		Testing Agency	
the following are in	b. Grade and size of prestressing tendons and anchorages (TMS 602 Art.2.4B & 2.4H)			Χ	Testing Agency	
compliance:	c. Placement of reinforcement, connectors and anchor bolts. (TMS 602 Art.3.4 & 3.6A)		X		Testing Agency	
	d. Prestressing technique (TMS 602 Art.3.6B)			Χ	Testing Agency	
	e. Properties of thin-bed mortar for AAC masonry (TMS 602 Art.2.1 C.1)			Χ	Testing Agency	Continuous for the first 5000 soft, and Periodic after
	f. Sample panel construction (TMS 602 Art.1.6D)		X		Testing Agency	
Grouting, verify that the following	a. Grout Space: Verify grout space is clean. (TMS 602: Art 3.2D and 3.2F)		X		Testing Agency	
	b. Placement of prestressing tendons and anchorages (TMS 602 Art. 2.4 & 3.6)			Χ	Testing Agency	
	c. Placement of reinforcement, connectors and anchor bolts. (TMS 602 Art. 3.2E & 3.4)		X		Testing Agency	
	d. Proportions of site-prepared grout and prestressing grout for bonded tendons. (TMS 602 Art. 2.6B & 2.4G.1.b)			Χ	Testing Agency	
3. Verify compliance with	a. Materials and procedures with the approved submittals (TMS 602 Art. 1.5)		X		Testing Agency	
the following during construction:	b. Placement of masonry units and mortar joint construction (TMS 602 Art. 3.3B)		X		Testing Agency	
	c Size and Location of structural members (TMS 602 Art. 3.3F)		X		Testing Agency	
	d. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction (TMS 402 Sec. 1.2.1€, 6.2.1 & 6.3.1)		X		Testing Agency	
	e. Welding of reinforcement (TMS 402 Sec 6.1.6.1.2)			Χ	Testing Agency	
	f. Preparation, construction, and protection of masonry during cold weather (temperature below 40F) or hot weather (temperature above 90F). (TMS 602 Art. 1.8C & 1.8D)		X		Testing Agency	
	g. Application and measurement of prestressing force (TMS 602 Art.3.6 B)			X	Testing Agency	
	h1. Placement of grout is in compliance (TMS 602 Art. 3.5)	Χ			Testing Agency	
	h2. Placement of prestressing grout for bonded tendons is in compliance (TMS 602 Art. 3.5 & 3.6C)			X	Testing Agency	
	i. Placement of AAC masonry units and construction of thin- bed mortar joints (TMS 602 Art. 3.3B.9 & 3.3F.1.b)			X	Testing Agency	Continuous for the first 5000 soft, and Periodic after
4.	Observe preparation of grout specimens, mortar specimens, and/or prisms. (TMS 602: Art 1.4)			Х	Testing Agency (compliance with ASTM C1093)	

structural engineers 800.542.3302 schaefer-inc.com

COPYRIGHT © 2025

THIS DOCUMENT IS THE PRODUCT AND EXCLUSIVE
PROPERTY OF SCHAEFER. NEITHER THE DOCUMENT
NOR THE INFORMATION IT CONTAINS MAY BE COPIED OR
USED FOR ANY OTHER THAN THE SPECIFIC PURPOSE
FOR WHICH IT WAS PREPARED, WITHOUT THE WRITTEN
CONSENT OF SCHAEFER

Schaefer Project Number: 24-1921

COPYRIGHT NOTICE

ISSUES AND REVISIONS

THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

 NUMBER
 DATE
 DESCRIPTION

 0
 05/01/25
 ORIGINAL ISSUE

ARCHITECT OF RECORD

8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

S002

SPECIAL

2025 8:15:29 AN

efer Project Number: 24-1921

BRR ORIGINAL PRINTED ON RECYCLED PAPER

		CC	NCRE	ETE M	IXTUR	E RE	QUIREMENTS					
CONCRETE	<u> </u>				XPOSURE CLASS		MINIMUM fc AT 28	MAXIMUM		MINIMUM CEMENTITIOUS		
CLASS	DESCR	RIPTION	F	S	W	C	DAYS (PSI)	w/c RATIO	AIR CONTENT	MATERIAL (LB/CY)		REMARKS
Α	FOOTINGS		F0	S0	W0	C0	3000					
В	FOUNDATION WALLS		F2	S0	W0	C1	4500	0.45	6% ±1.5%			
C1	INTERIOR SLABS-ON-GROUND		F0	S0	W0	C0	4000		3% MAX	540		

CONCRETE MIXTURE NOTES:

A. PROVIDE MIX DESIGNS IN ACCORDANCE WITH ACI 301-16 FOR SPECIFIED EXPOSURE CLASS AND AGGREGATE.

B. NOMINAL MAX AGGREGATE SIZE = 3/4" UNLESS OTHERWISE NOTED C. ALL CONCRETE SHALL BE NORMAL WEIGHT UNLESS OTHERWISE NOTED

					S	CHEDULE OF	TENSION DE	VELOPMENT	AND LAP SPL	ICE LENGTHS							
FOOTINGS (f'c	= 3000PSI)					<b>FOUNDATION</b>	WALLS (f'c = 450	0PSI)				INTERIOR SLA	BS-ON-GROUND	(f'c = 4000PSI)			
	Lo	b	Ls	3			L	_d	L	S			L	d	L	S	
BAR SIZE	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	Ldh	BAR SIZE	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	Ldh	BAR SIZE	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	Ldh
	(in)	(in)	(in)	(in)	(in)		(in)	(in)	(in)	(in)	(in)		(in)	(in)	(in)	(in)	(in)
#3	17	22	22	28	9	#3	12	12	16	16	7	#3	12	12	16	16	8
#4	22	29	29	38	11	#4	12	14	16	19	9	#4	12	15	16	20	10
#5	28	36	36	47	14	#5	14	18	18	23	12	#5	15	19	19	25	12
#6	33	43	43	56	17	#6	17	21	21	28	14	#6	18	23	23	29	15
#7	48	63	63	81	20	#7	24	31	31	40	16	#7	25	33	33	43	17
#8	55	72	72	93	22	#8	27	35	35	46	18	#8	29	37	37	49	19
#9	62	81	81	105	25	#9	34	44	44	57	21	#9	36	46	46	60	22
#10	70	91	91	118	28	#10	42	54	54	70	23	#10	44	57	57	74	25
#11	78	101	101	131	31	#11	50	65	65	84	26	#11	53	68	68	89	27
#14	93	121	121	157	38	#14	68	88	88	115	31	#14	72	94	94	122	33
LAP AND DEVI	ELOPMENT TABLE	E CRITERIA:				LAP AND DEVI	<b>ELOPMENT TABL</b>	<u>E CRITERIA:</u>				LAP AND DEVE	LOPMENT TABL	E CRITERIA:			
A. GRADE 60 L	INCOATED REINFO	ORCING STEEL				A. GRADE 60 U	NCOATED REINF	ORCING STEEL	_			A. GRADE 60 U	NCOATED REINF	ORCING STEEL			
i. FOR EPC	XY COATED: MUL	TIPLY Ld, Ls B	1.5; Ldh BY 1.2			i. FOR EPO	XY COATED: MUI	LTIPLY Ld, Ls B`	Y 1.5; Ldh BY 1.2			i. FOR EPOXY COATED: MULTIPLY Ld, Ls BY 1.5; Ldh BY 1.2					
B. NORMAL WE	EIGHT CONCRETE					B. NORMAL WE	EIGHT CONCRETI	E				B. NORMAL WEIGHT CONCRETE					
i. FOR LIGI	HTWEIGHT CONCF	RETE: MULTIPL	Y Ld, Ls, Ldh BY 1.	.33		i. FOR LIGH	ITWEIGHT CONC	RETE: MULTIPL	Y Ld, Ls, Ldh BY 1	.33		i. FOR LIGH	ITWEIGHT CONC	RETE: MULTIPL	Y Ld, Ls, Ldh BY 1	.33	
C. CLEAR COV	ER GREATER THA	AN db				C. 2" MIN CLEA	R COVER					C. 2" MIN CLEA	R COVER				
D. MIN 2*db CL	EAR SPACING BE	TWEEN BARS				D. 4" MIN CLEA	R SPACING BET\	WEEN BARS				D. 4" MIN CLEA	R SPACING BETV	VEEN BARS			
FOR BARS TH	AT DO NOT MEET	THE CLEAR CO	OVER OR CLEAR	SPACING INDICA	ATED:	FOR BARS TH	AT DO NOT MEET	THE CLEAR C	OVER OR CLEAR	SPACING INDICA	ATED:	FOR BARS TH	AT DO NOT MEET	THE CLEAR CO	OVER OR CLEAR	SPACING INDICA	ATED:
#6 AND SMALL	.ER: Ld = 66 BAR D	IAMETERS; Ls	= 86 BAR DIAMET	ERS		#6 AND SMALL	ER: Ld = 54 BAR I	DIAMETERS; Ls	= 70 BAR DIAMET	ERS		#6 AND SMALL	ER: Ld = 57 BAR D	DIAMETERS; Ls	= 74 BAR DIAMET	ERS	
#7 AND LARGE	R: Ld = 83 BAR DI	AMETERS; Ls =	107 BAR DIAMET	ERS		#7 AND LARGE	R: Ld = 68 BAR D	IAMETERS; Ls =	88 BAR DIAMETE	RS		#7 AND LARGE	R: Ld = 72 BAR DI	AMETERS; Ls =	93 BAR DIAMETE	RS	
FOR TOP BAR	S MULTIPLY BY 1.3	3				FOR TOP BARS	S MULTIPLY BY 1	.3				FOR TOP BARS	MULTIPLY BY 1.3	3			
MINIMUM Ld Al	ND Ls = 12"					MINIMUM Ld Af	ND Ls = 12"					MINIMUM Ld Al	ND Ls = 12"				

**LAP AND DEVELOPMENT TABLE NOTES & DEFINITIONS:** 

A. TOP BARS = HORIZ BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS

B. db = BAR DIAMETER

C. s = CENTER-TO-CENTER BAR SPACING

D. Ath = TOTAL AREA OF TIES OR STIRRUPS CONFINING HOOKED BARS

E. Ahs = TOTAL AREA OF HOOKED BARS BEING DEVELOPED F. WHERE BARS OF DIFFERENT SIZES ARE SPLICED, Ls FOR THE LARGER BAR SHALL BE USED

G. ALL TENSION SPLICES SHALL BE CLASS B, UNLESS NOTED OTHERWISE H. Ldh VALUES FOR #11 BARS AND SMALLER MAY BE REDUCED AS FOLLOWS (PER ACI 318-14)

i. MULTIPLY BY 0.70 FOR (1) OR (2) (1) SIDE COVER ≥ 2 1/2"

(2) 90° HOOKS WITH COVER ON BAR EXTENSION BEYOND HOOK ≥ 2"

ii. MULTIPLY BY 0.80 FOR (3), (4), or (5)

(3) 90° HOOKS ENCLOSED ALONG Ldh WITHIN TIES OR STIRRUPS AT s ≤ 3db

(4) 90° HOOKS ENCLOSED ALONG THE BAR EXTENSION WITHIN TIES OR STIRRUPS AT s ≤ 3db (5) 180° HOOKS ENCLOSED ALONG Ldh WITHIN TIES OR STIRRUPS AT s ≤ 3db

iii. Ldh SHALL NOT BE LESS THAN THE LARGER OF 8db OR 6" WITH REDUCTIONS APPLIED

ARCHITECT OF RECORD

BRR ARCHITECTURE INC.

8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

WWW.BRRARCH.COM

TEL: 913-262-9095 FAX: 913-262-9044

62910099 PROJECT MANAGER DRAWN BY CHECKED BY

Approver Author PROFESSIONAL SEAL



COPYRIG	HT NOTICE			
CONTEM USE ON A DRAWING THE SER REPROD	PORANEOUSLY V A DIFFERENT PRO B FOR REFERENC VICES OF PROPE	/ITH ITS ISSU DJECT SITE O DE OR EXAMI RLY LICENSE DRAWING FO	JSE ON A SPECIFI JE DATE AND IT IS JE AT A LATER TIMPLE ON ANOTHER ED ARCHITECTS A JER REUSE ON ANOTHE INTERNATION TO THE LAW.	NOT SUITAB ME. USE OF T PROJECT RE ND ENGINEE
APPROPI AT USER	RIATE FOR USER'	S PURPOSES AGREES TO	OFILES ARE SUFF B. USER USES OR DINDEMNIFY BRR	ALTERS THE

NUMBER	DATE	DESCRIPTION
0	05/01/25	ORIGINAL ISSUE

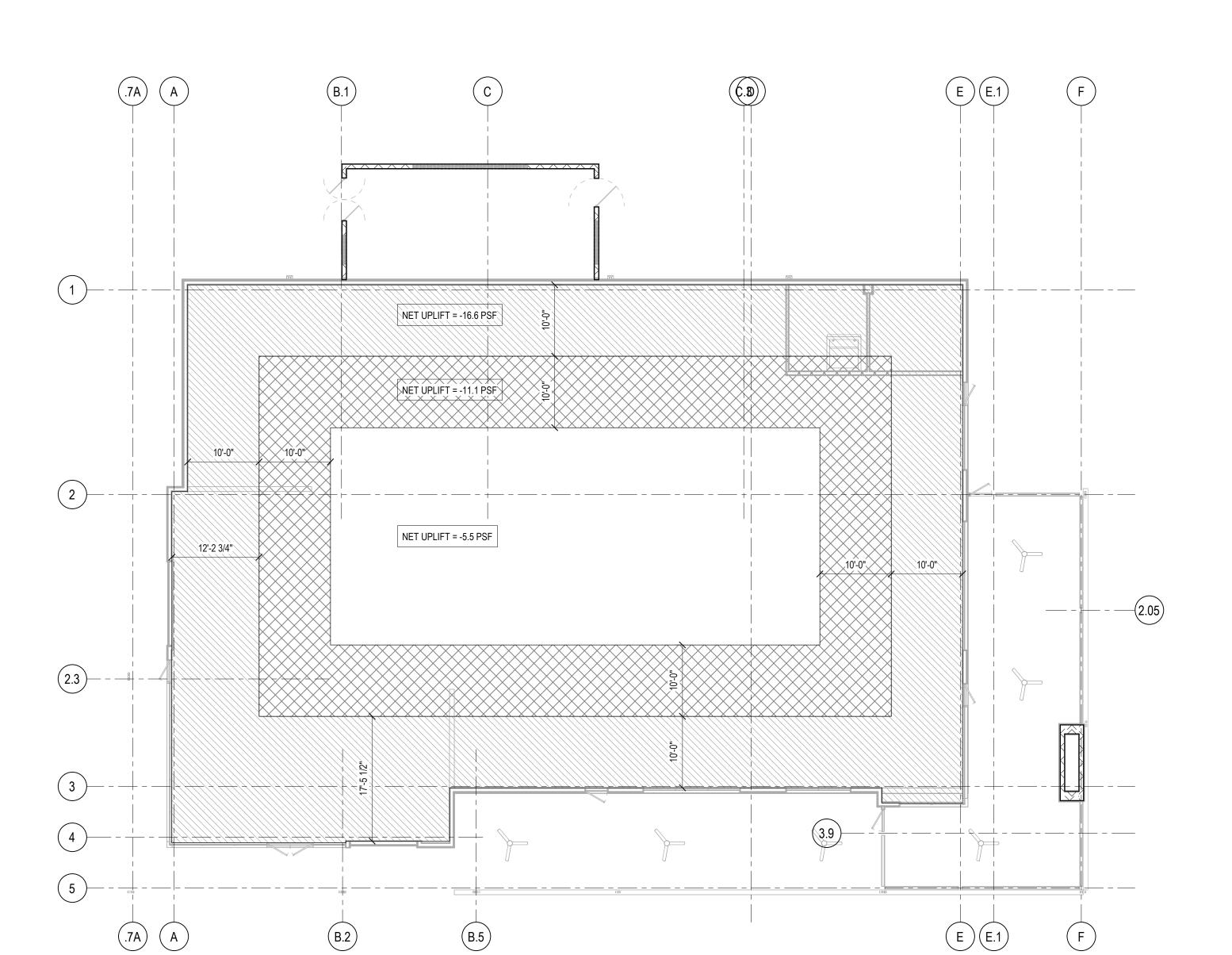
CONCRETE TABLES

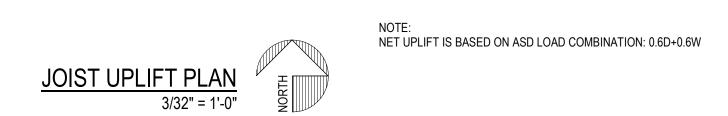
COPYRIGHT © 2025

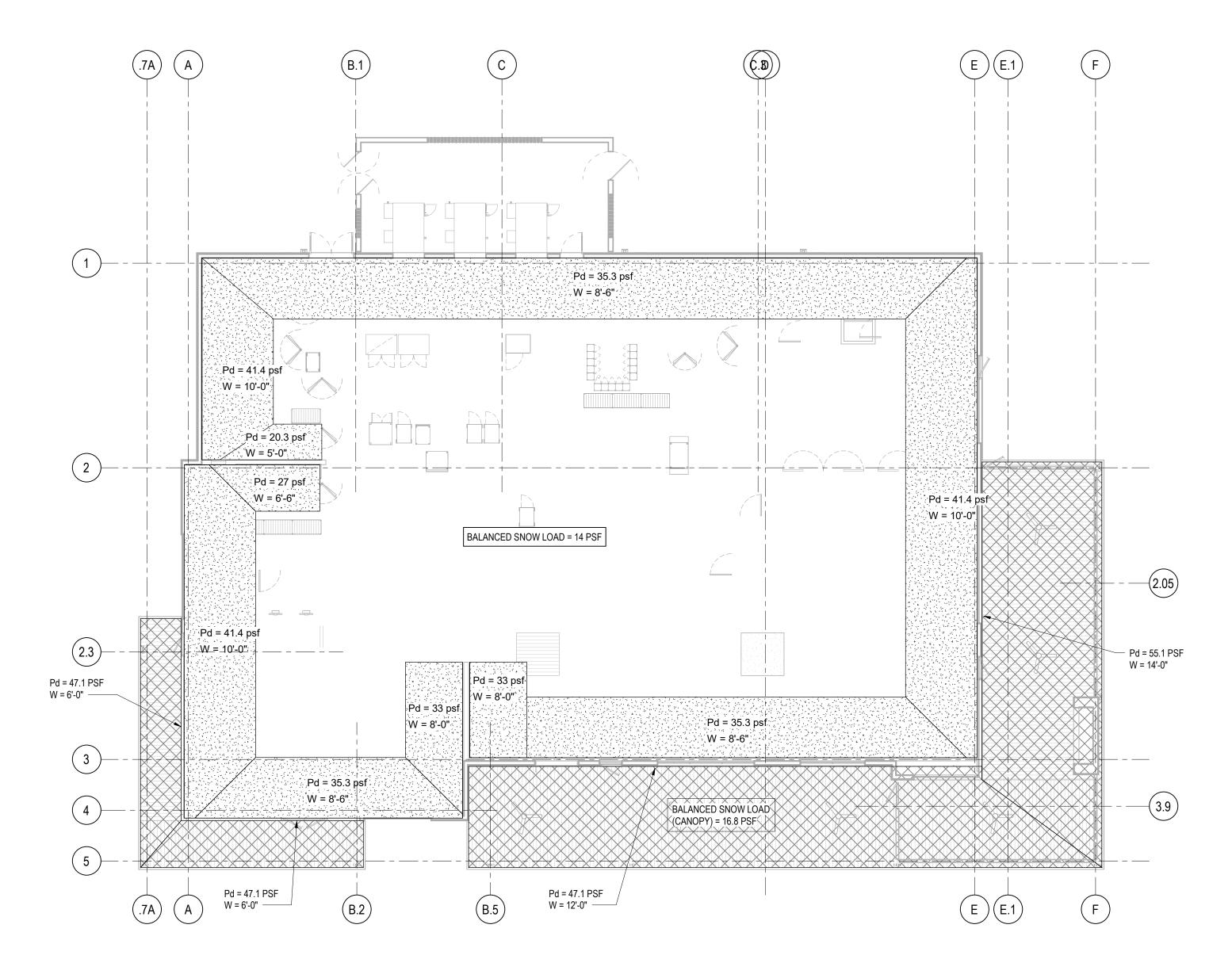
THIS DOCUMENT IS THE PRODUCT AND EXCLUSIVE PROPERTY OF SCHAEFER. NEITHER THE DOCUMENT NOR THE INFORMATION IT CONTAINS MAY BE COPIED OR USED FOR ANY OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS PREPARED, WITHOUT THE WRITTEN CONSENT OF SCHAEFER Schaefer Project Number: 24-1921

STRUCTURAL ENGINEERS

schæfer





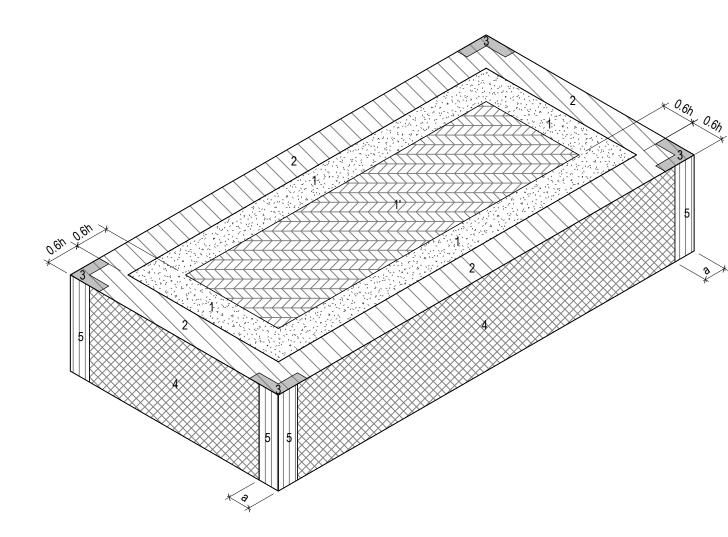




NOTES:

1. HATCHED PATTERNS INDICATE DRIFTED SNOW PRESSURES OCCURRING IN A TRIANGULAR SHAPE, BEGINNING @ FACE OF WALL @ MAX PRESSURE & EXTENDING INWARD TOWARD BLDG CENTER @ BALANCED SNOW PRESSURE.

2. HATCHED DRIFTED SNOW PRESSURES ARE ON TOP OF & ADDITIVE TO BALANCED SNOW PRESSURES.



# ASCE7-16 WIND ZONE ISOMETRIC

a = 4'-0"

NOTE:

1. APPLY HIGH ROOF LOADS TO THE SHADED PORTION OF THE LOWER ROOF.

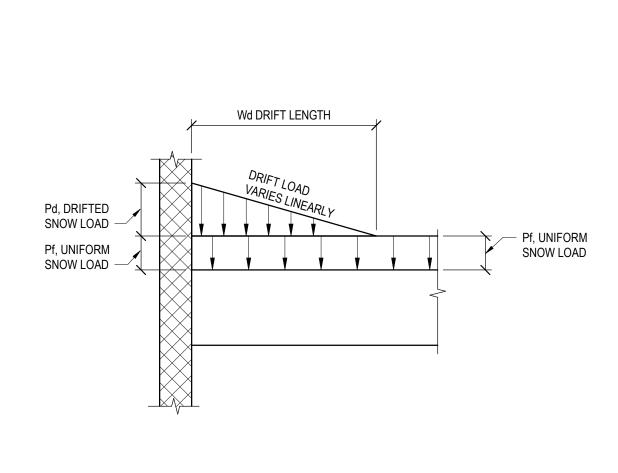
2. APPLY POSITIVE WALL PRESSURES TO THE SHADED PORTION OF THE LOWER ROOF.

3. ISOMETRIC VIEW SHOWS GENERAL SIZE AND LOCATION OF WALL ZONES ONLY. SEE PLAN FOR SPECIFIC ROOF PRESSURE ZONES. TYPE 5 WALL ZONES OCCUR AT BUILDING CORNERS WITH A TYPE 3 ROOF ZONE AS SHOWN ON THE ROOF PLAN VIEW.

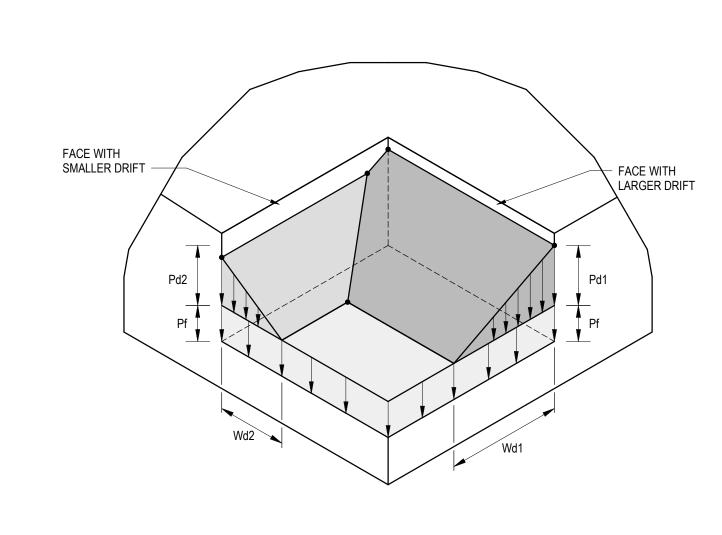
4. WIND LOADS SHOWN ARE ULTIMATE (1.0WL)

ROOF			SURI	ACE PR	ESSURE	(psf)				
AREA	10 sf	20 sf	50 sf	100 sf	200 sf	350 sf	500 sf	1000 sf		
NEGATIVE ZONE 1	-40.5	-37.8	-34.3	-31.6	-28.9	-26.8	-25.4	-25.4		
NEGATIVE ZONE 1	-23.3	-23.3	-23.3	-23.3	-20.0	-17.4	-16.0	-16.0		
NEGATIVE ZONE 2	-53.4	-50.0	-45.4	-42.0	-38.6	-35.8	-34.0	-34.0		
NEGATIVE ZONE 3	-53.4	-50.0	-45.4	-42.0	-38.6	-35.8	-34.0	-34.0		
POSITIVE ZONE 1 & 1	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0		
POSITIVE ZONES 2 & 3	23.3	22.2	20.9	19.8	18.8	18.0	17.4	17.4		
OVERHANG ZONE 1&1	-36.6	-36.0	-35.1	-34.5	-28.9	-24.4	-21.5	-21.5		
OVERHANG ZONE 2	-49.5	-44.9	-38.9	-34.3	-29.7	-26.0	-23.7	-23.7		
OVERHANG ZONE 3	-49.5	-44.9	-38.9	-34.3	-29.7	-26.0	-23.7	-23.7		
PARAPET		SURFACE PRESSURE (psf)								
AREA	10 sf	20 sf	50 sf	100 sf	200 sf	500 sf				
CASE A: ZONE 2	72.2	67.5	61.4	56.7	52.0	45.8				
ZONE 3	72.2	67.5	61.4	56.7	52.0	45.8	]			
20112 0		10-	27.0	25.5	-33.3	-30.5				
CASE B: INTERIOR ZONE	: -42.7	-40.5	-37.6	-35.5	-55.5	-30.5				

WALL		SURF	FACE PR	<b>ESSURE</b>	(psf)
	AREA	10 sf	100 sf	200 sf	500 sf
	NEGATIVE ZONE 4	-25.2	-21.8	-20.7	-19.4
	NEGATIVE ZONE 5	-31.0	-24.2	-22.1	-19.4
	POSITIVE ZONE 4 & 5	23.3	19.8	18.8	17.4



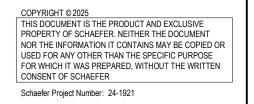
DRIFTED SNOW LOAD LEGEND NTS



TYPICAL ADJACENT DRIFTS AT CORNER DETAIL

NTS





BRR ARCHITECTURE INC.

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044

ARCHITECT OF RECORD

ELIENT

PROJECT TITLE

SUMMIT, MO

PROJECT NUMBER

62910099

PROJECT MANAGER DRAWN BY CHECKED BY

DDA GJB



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

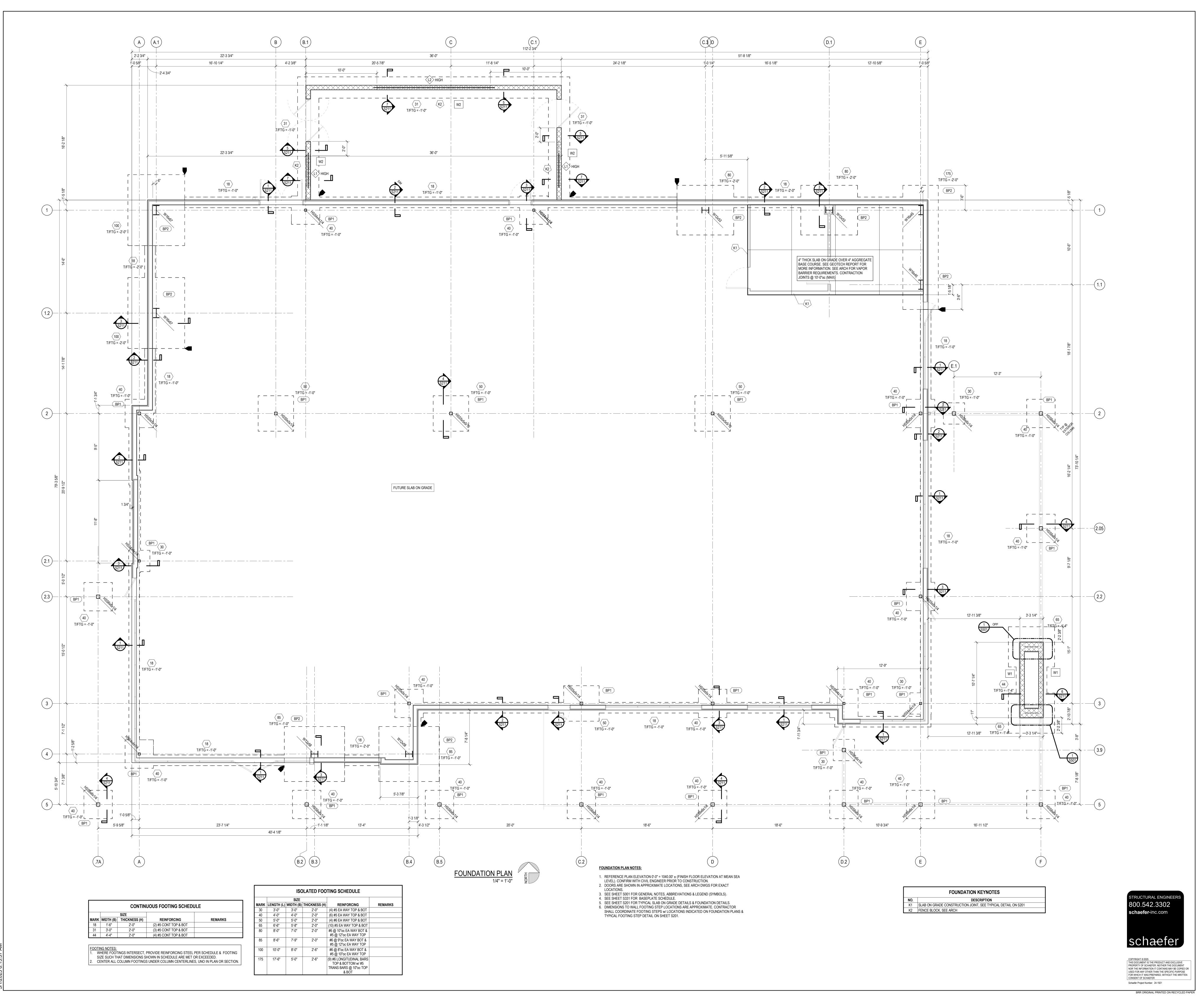
BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

LOADING DIAPHRAGMS

S004



BRR ARCHITECTURE INC.

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044

LEE'S SUMMIT, N

ROJECT NUMBER
629100
ROJECT MANAGER DRAWN BY CHECKED BY
DDA GJB
ROFESSIONAL SEAL



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE
CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR
USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS
DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES
THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT
AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR
APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES
AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY
ARISING FROM USER'S USE.

ISSUES AND REVISIONS

NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

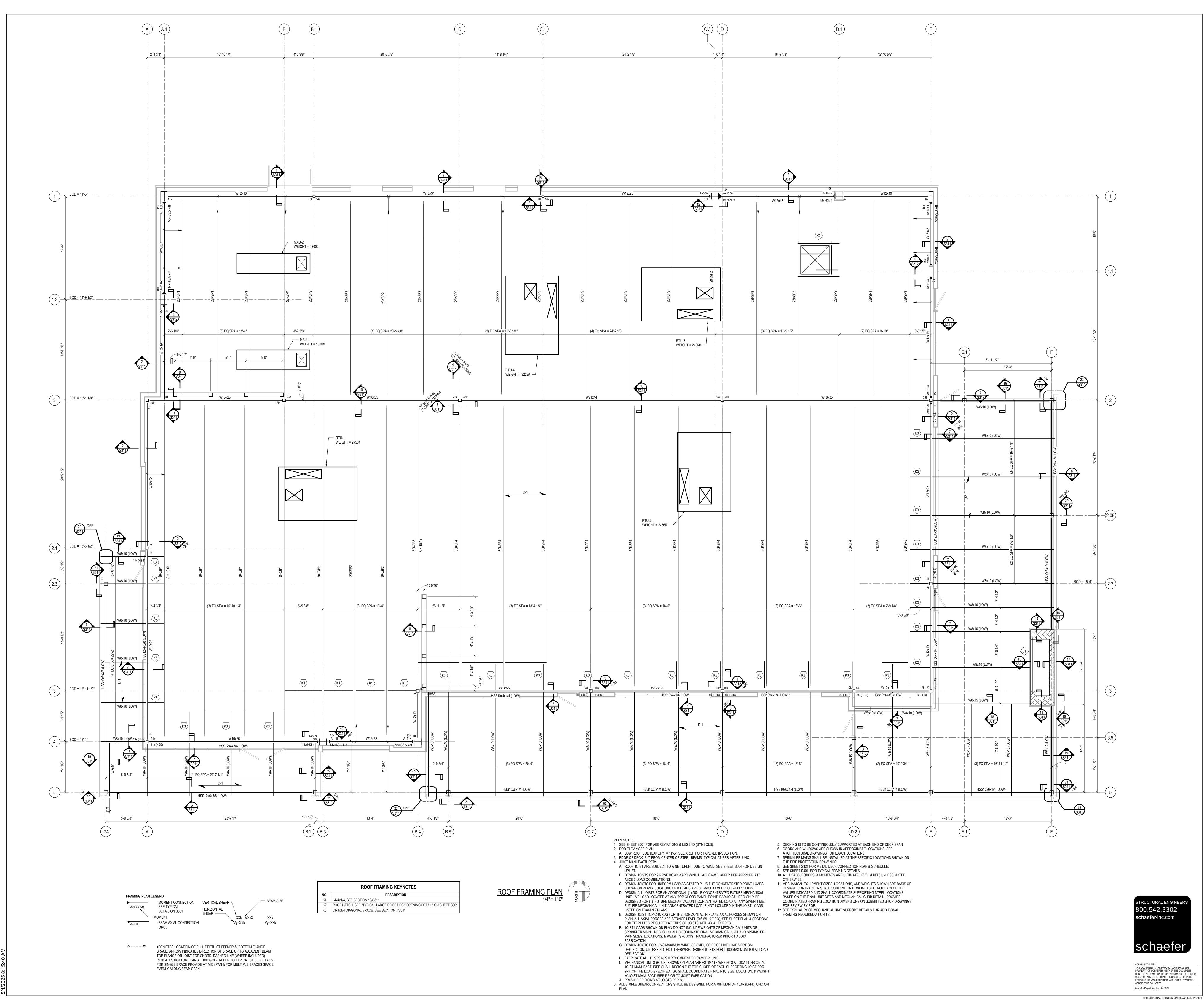
ISSUES AND REVISIONS

NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

FOUNDATION PLAN

S10<sup>-</sup>



Q39 (SHELL) E'S SUMMIT, MO

OJECT NUMBER
62910
OJECT MANAGER DRAWN BY CHECKED BY
DDA GJB
OFESSIONAL SEAL



COPYRIGHT NOTICE

THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE
CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR
USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS
DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES
THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT
AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR
APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES
AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY
ARISING FROM USER'S USE.

ARISING FROM USER'S USE.

ISSUES AND REVISIONS

NUMBER DATE DESCRIPTION

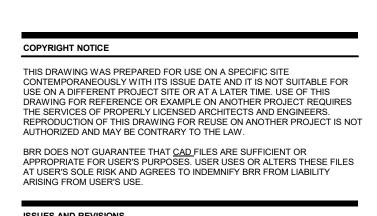
0 05/01/25 ORIGINAL ISSUE

ROOF FRAMING PLA

S102

ARCHITECT OF RECORD





ARISING FROM USER'S USE.

ISSUES AND REVISIONS

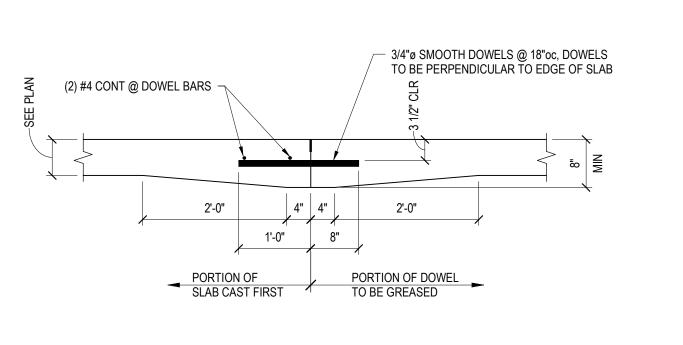
NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

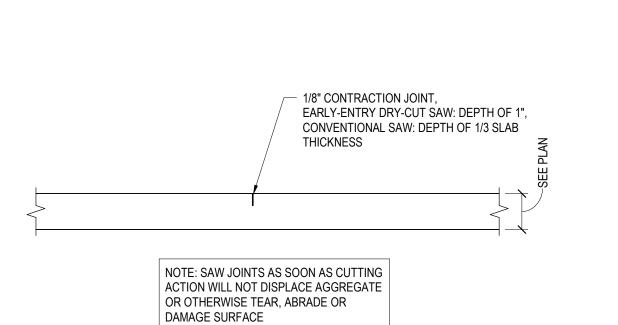
TYPICAL FOUNDATION

FOUNDATIO
DETAILS & SECTION
SHEET NUMBER



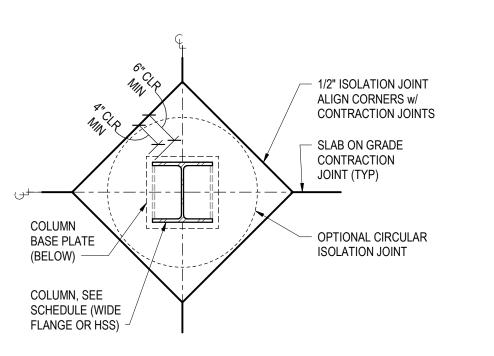


SLAB ON GRADE TYPICAL CONSTRUCTION JOINT



SLAB ON GRADE TYPICAL CONTRACTION JOINT

TYPICAL COLUMN BOX OUT ISOLATION JOINT

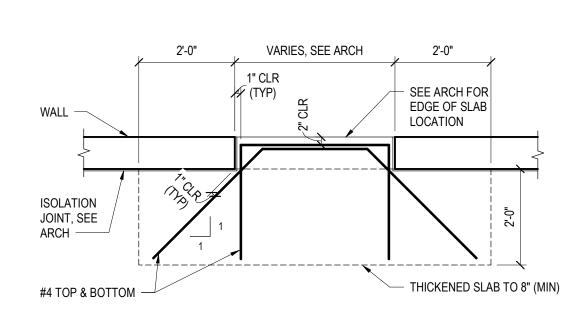


TYPICAL CONCRETE COLUMN
BOX OUT ISOLATION JOINT AT EDGE OF SLAB

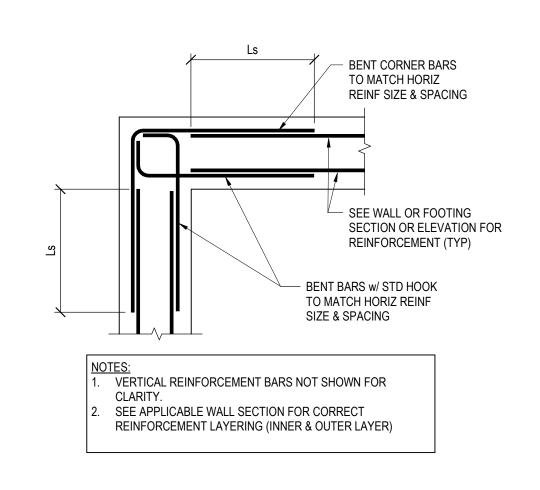
COLUMN BASE PLATE (BELOW) -

COLUMN, SEE SCHEDULE (WIDE

FLANGE OR HSS) —



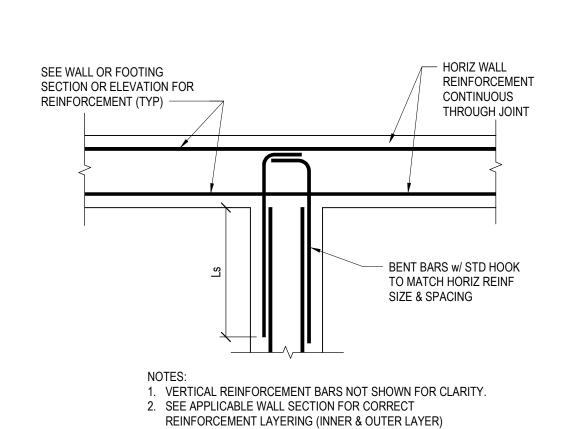
ONCRETE COLUMN
N JOINT AT EDGE OF SLAB
TYPICAL SLAB ON GRADE AT DOOR THRESHOLD



TYPICAL CONCRETE WALL & FOOTING CORNER

REINFORCEMENT DETAIL

AT DOUBLE CURTAIN OF STEEL



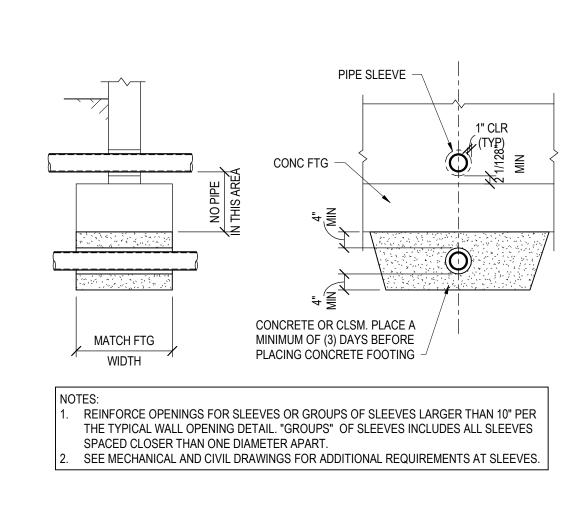
TYPICAL CONCRETE WALL & FOOTING

INTERSECTION

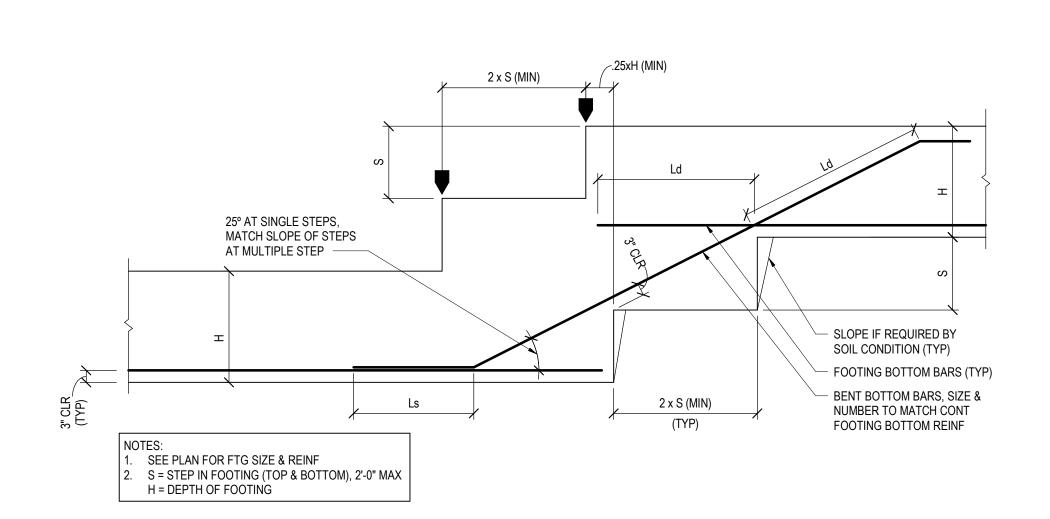
REINFORCEMENT DETAIL

AT DOUBLE CURTAIN OF STEEL

NTS



TYPICAL PIPE SLEEVE THROUGH STRIP FOOTING



— SLAB ON GRADE CONTRACTION

— ISOLATION JOINT

ALIGN CORNERS w/ CONTRACTION JOINTS

JOINT (TYP)

TYPICAL STEP IN FOOTING

structural engineers
800.542.3302
schaefer-inc.com

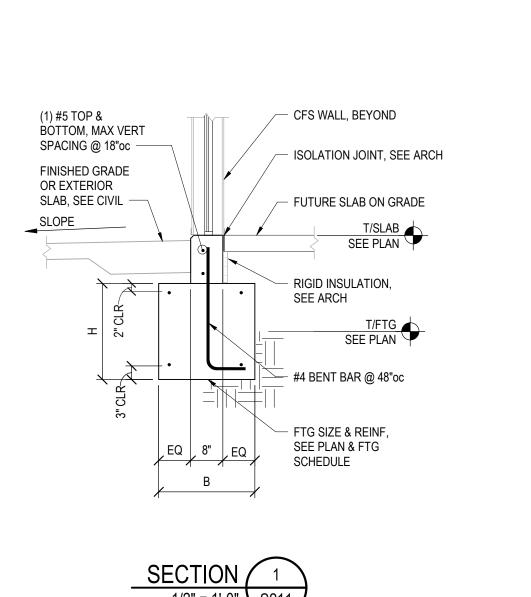
COPYRIGHT © 2025

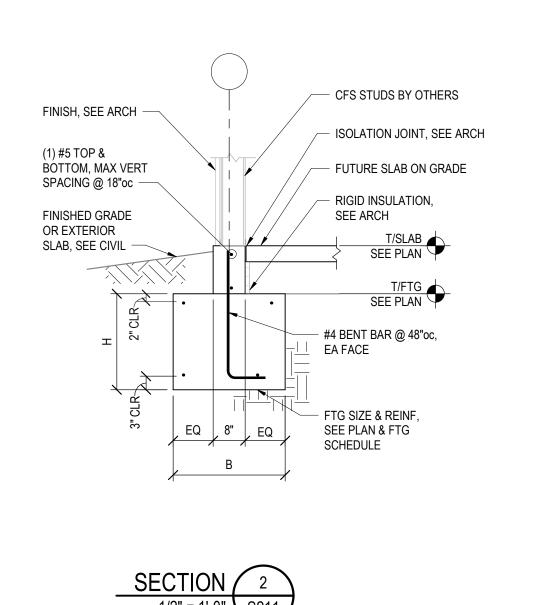
THIS DOCUMENT IS THE PRODUCT AND EXCLUSIVE
PROPERTY OF SCHAEFER. NEITHER THE DOCUMENT
NOR THE INFORMATION IT CONTAINS MAY BE COPIED OR
USED FOR ANY OTHER THAN THE SPECIFIC PURPOSE
FOR WHICH IT WAS PREPARED, WITHOUT THE WRITTEN
CONSENT OF SCHAEFER

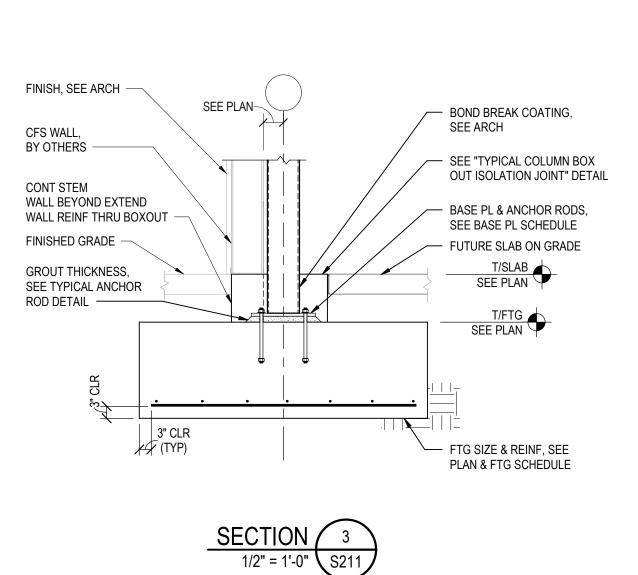
Schaefer Project Number: 24-1921

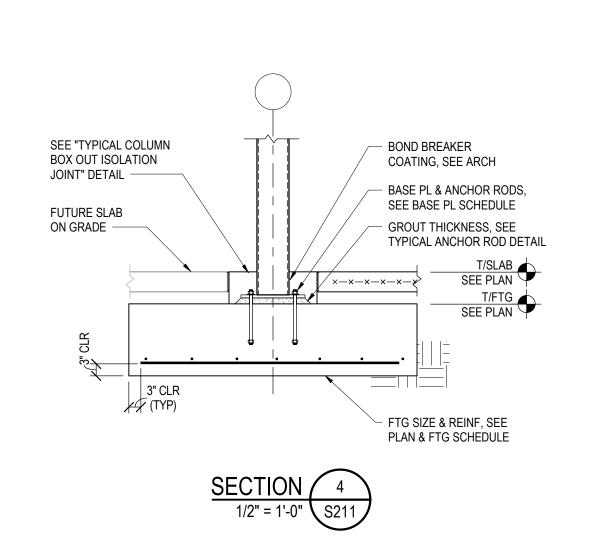
BRR ORIGINAL PRINTED ON RECYCLED PAPER

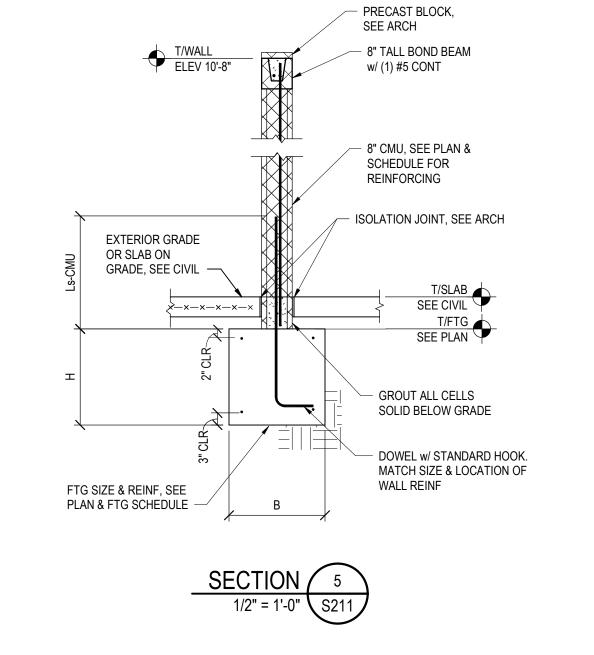
0.4.0 0.40

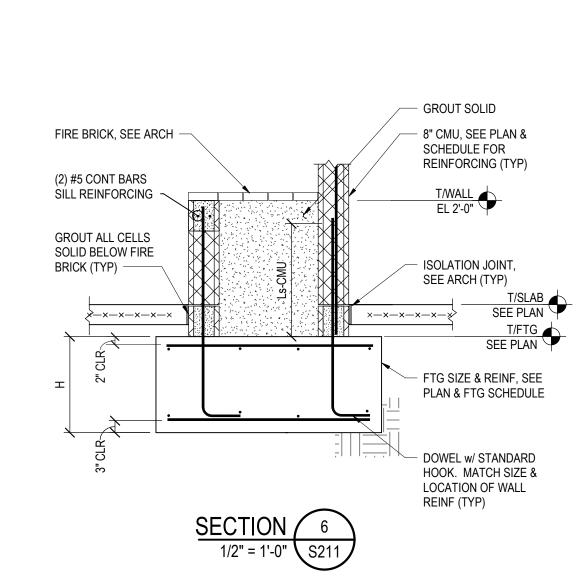


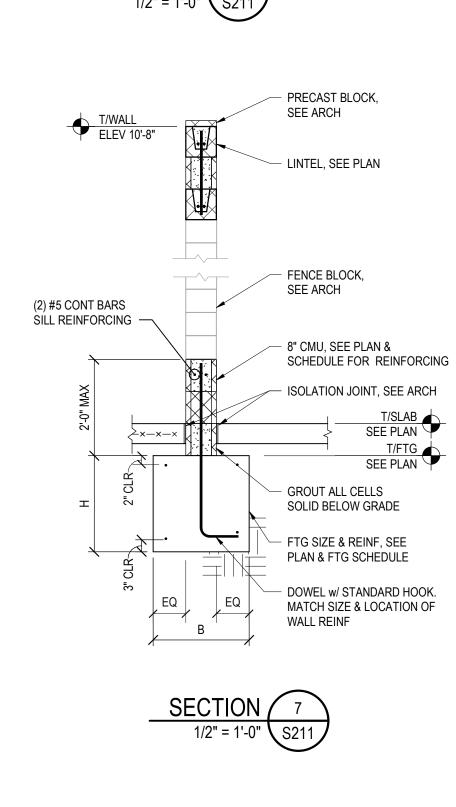












ARCHITECT OF RECORD

BRR ARCHITECTURE INC.

WWW.BRRARCH.COM

TEL: 913-262-9095 FAX: 913-262-9044

8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

62910099 DDA



CONTEMPORANI USE ON A DIFFEI DRAWING FOR F THE SERVICES O REPRODUCTION	EOUSLY WITH I' RENT PROJECT REFERENCE OR DF PROPERLY L I OF THIS DRAW	D FOR USE ON A SPECIFIC SITE TS ISSUE DATE AND IT IS NOT SUITABLE FOR SITE OR AT A LATER TIME. USE OF THIS EXAMPLE ON ANOTHER PROJECT REQUIRE: ICENSED ARCHITECTS AND ENGINEERS. ING FOR REUSE ON ANOTHER PROJECT IS N TRARY TO THE LAW.
APPROPRIATE F AT USER'S SOLE ARISING FROM L	OR USER'S PUF ERISK AND AGR USER'S USE.	IAT <u>CAD</u> FILES ARE SUFFICIENT OR RPOSES. USER USES OR ALTERS THESE FILE EES TO INDEMNIFY BRR FROM LIABILITY
ISSUES AND REV		
NUMBER 0	DATE 05/01/25	DESCRIPTION ORIGINAL ISSUE
-		

**FOUNDATION** 

DETAILS & SECTIONS
SHEET NUMBER schaefer

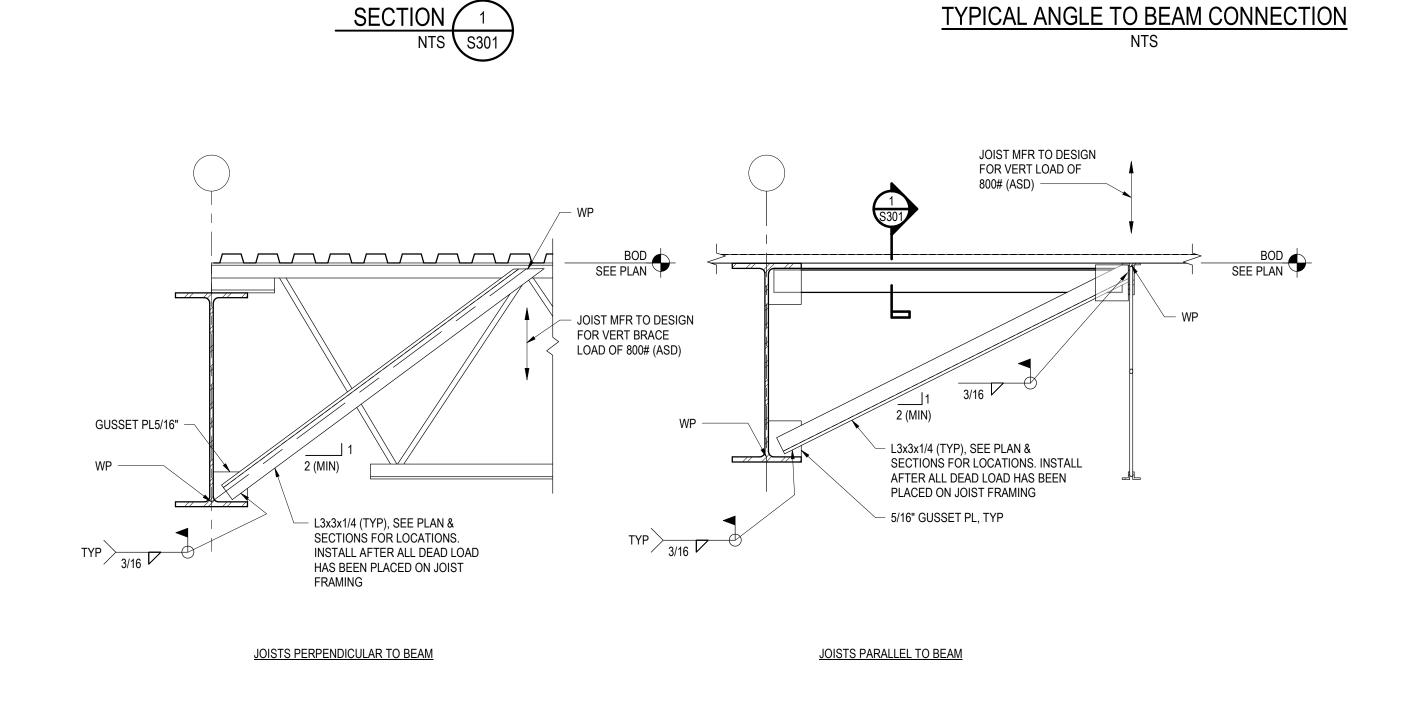
COPYRIGHT © 2025

THIS DOCUMENT IS THE PRODUCT AND EXCLUSIVE PROPERTY OF SCHAEFER. NEITHER THE DOCUMENT NOR THE INFORMATION IT CONTAINS MAY BE COPIED OR USED FOR ANY OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS PREPARED, WITHOUT THE WRITTEN CONSENT OF SCHAEFER Schaefer Project Number: 24-1921

STRUCTURAL ENGINEERS

800.542.3302

CONNECTION (WELDED)
3/4" = 1'-0"



— SIDE LAP FASTENERS

PER DECK SCHEDULE, TYP @

- 16GAx9"xCONT PLATE

**CONDITION B** HIGH FLUTE @ ANGLE

NOTE: OPENINGS LESS THAN 6" IN

REQUIRE ADDITIONAL REINFORCING SCHEDULE

TYPICAL SMALL ROOF DECK OPENING DETAIL

FOR OPENINGS ≤ 12"

NTS

FASTENER PER

SCHEDULE @ 9"oc

METAL DECK

CONDITION A LOW FLUTE @ ANGLE

THE LONGEST DIRECTION DO NOT

- 54 MIL (16 GA) PL w/ FASTENERS

MATCH TYPICAL SIDE LAP

FASTENER PER

METAL DECK

SCHEDULE @ 9"oc —

FASTENERS, SEE METAL DECK

@ EA FLUTE & 8" oc MAX AROUND PERIMETER. FASTENERS TO

TOP CHORD PANEL POINT

CONCENTRATED LOADS

- JOIST WEB

CONCENTRATED

- L1 1/2x1 1/2x3/16 EA SIDE AT -

TYPICAL SUPPORT OF CONCENTRATED

LOADS NOT AT JOIST PANEL POINTS

3/16 1 1/2

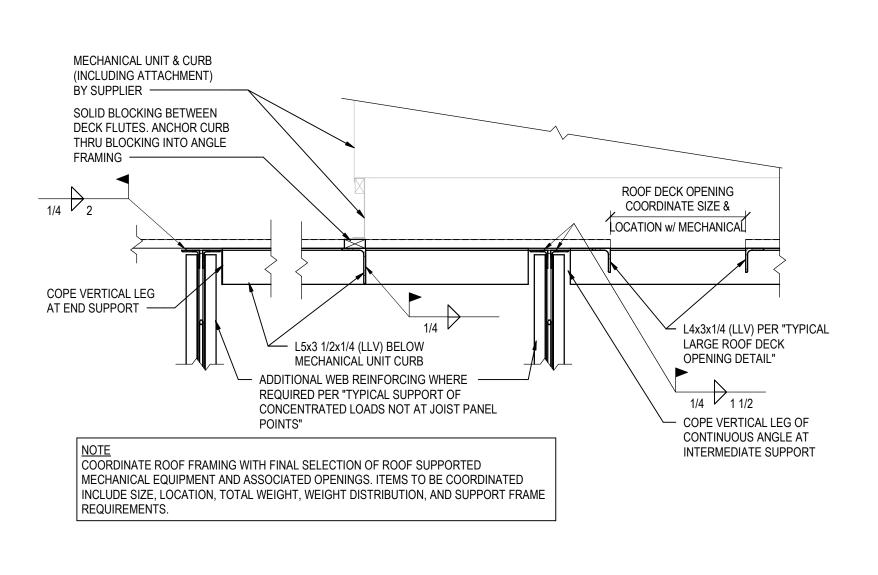
CONCENTRATED

- TOP CHORD

BOTTOM CHORD

PANEL POINT

LOAD



TYPICAL BEAM BOTTOM FLANGE BRACING

TYPICAL ROOF MECHANICAL UNIT SUPPORT -



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

05/01/25 ORIGINAL ISSUE

TYPICAL FRAMING

PROJECT NUMBER

DDA

PROFESSIONAL SEAL

ISSUES AND REVISIONS

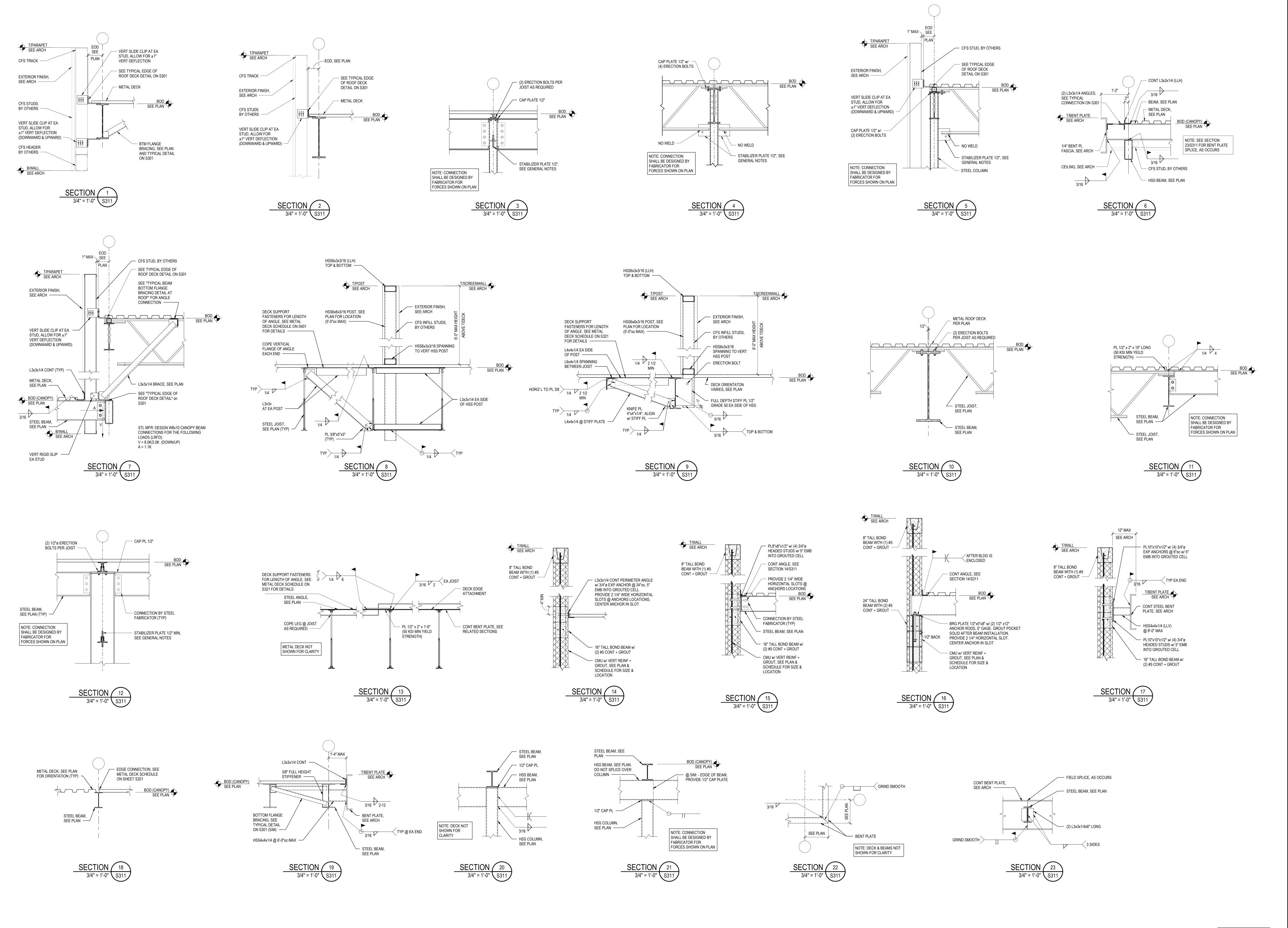
62910099

ARCHITECT OF RECORD

BRR ARCHITECTURE INC.

8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

WWW.BRRARCH.COM TEL: 913-262-9095 FAX: 913-262-9044





S

PROJECT NUMBER 62910099 CHECKED BY PROJECT MANAGER DRAWN BY DDA GJB PROFESSIONAL SEAL



COPYRIGHT NOTICE THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE. ISSUES AND REVISIONS 05/01/25 ORIGINAL ISSUE

FRAMING DETAILS & SECTIONS

COPYRIGHT © 2025
THIS DOCUMENT IS THE PRODUCT AND EXCLUSIVE
PROPERTY OF SCHAEFER. NEITHER THE DOCUMENT
NOR THE INFORMATION IT CONTAINS MAY BE COPIED OR
USED FOR ANY OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS PREPARED, WITHOUT THE WRITTEN

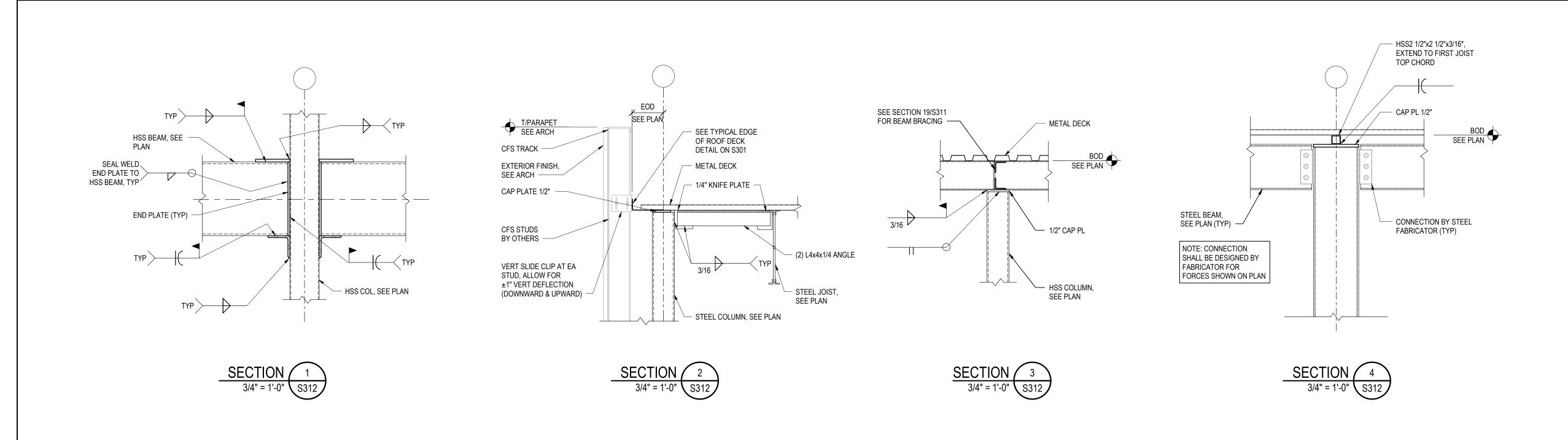
STRUCTURAL ENGINEERS

800.542.3302

schaefer

BRR ORIGINAL PRINTED ON RECYCLED PAPER

CONSENT OF SCHAEFER Schaefer Project Number: 24-1921





ECT TITLE

LEE'S SUMMIT, MC

PROJECT NUMBER

62910099

PROJECT MANAGER DRAWN BY CHECKED BY

DDA GJB



COPYRIGHT NOTICE	
CONTEMPORANEOU USE ON A DIFFEREN DRAWING FOR REF THE SERVICES OF F REPRODUCTION OF	S PREPARED FOR USE ON A SPECIFIC SITE ISLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLIT PROJECT SITE OR AT A LATER TIME. USE OF THE RENCE OR EXAMPLE ON ANOTHER PROJECT REPOPERLY LICENSED ARCHITECTS AND ENGINEER THIS DRAWING FOR REUSE ON ANOTHER PROJE IAY BE CONTRARY TO THE LAW.
APPROPRIATE FOR	NRANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR USER'S PURPOSES. USER USES OR ALTERS THES SK AND AGREES TO INDEMNIFY BRR FROM LIABILI R'S USE.

ISSUES AND REVISIONS

NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

SHEET NAME

FRAMING DETAILS & SECTIONS

COPYRIGHT © 2025

THIS DOCUMENT IS THE PRODUCT AND EXCLUSIVE PROPERTY OF SCHAEFER. NEITHER THE DOCUMENT NOR THE INFORMATION IT CONTAINS MAY BE COPIED OR USED FOR ANY OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS PREPARED, WITHOUT THE WRITTEN CONSENT OF SCHAEFER

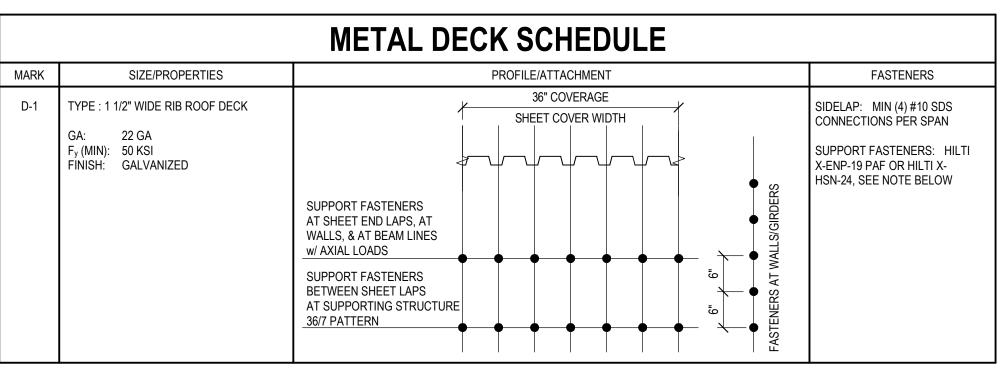
Schaefer Project Number: 24-1921

BRR ORIGINAL PRINTED ON RECYCLED PAPER

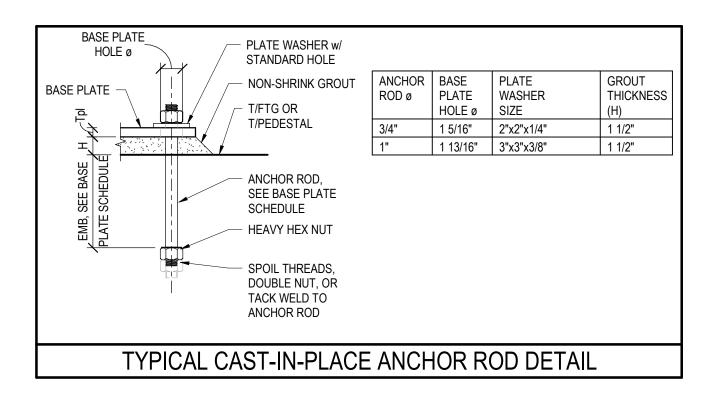
STRUCTURAL ENGINEERS 800.542.3302

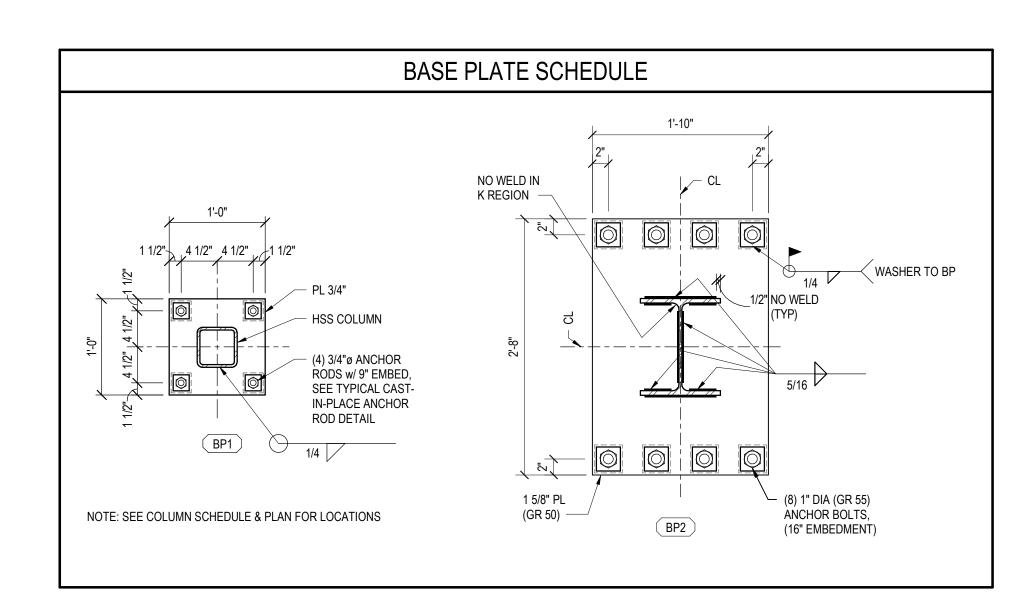
schaefer

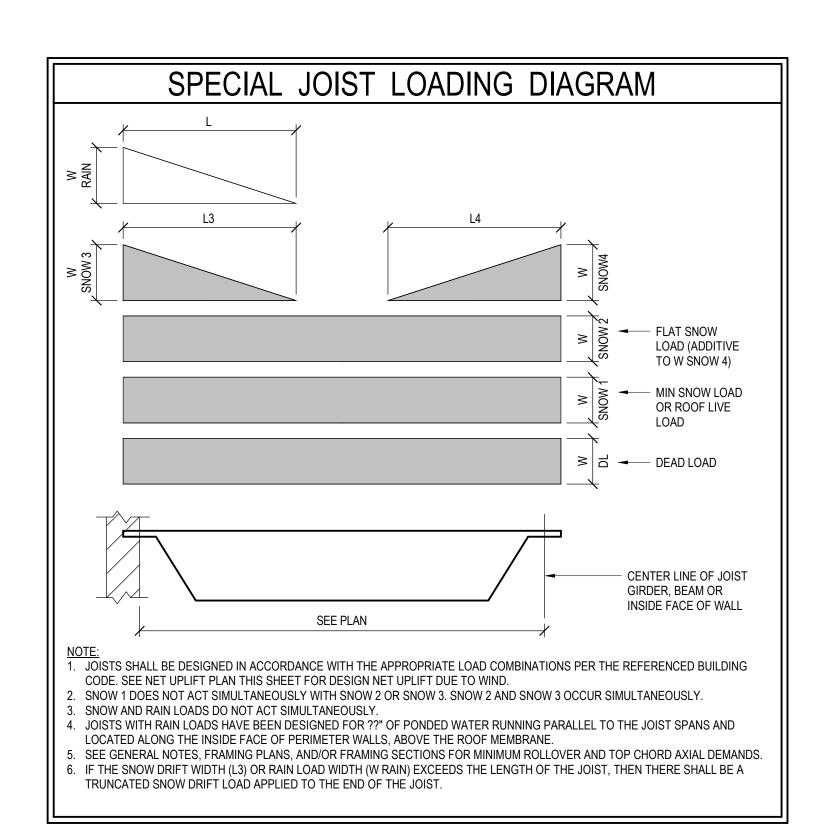
RODUCT AND EXCLUSIVE
NEITHER THE DOCUMENT
CONTAINS MAY BE COPIED OR
IN THE SPECIFIC PURPOSE
RED, WITHOUT THE WRITTEN



NOTE: GC TO COORDINATE DECK SUPPORT FASTENERS BASED ON SUPPORT MEMBER THICKNESS: SUPPORT MEMBER THICKNESS 1/8" TO 3/8" THICK: HILTI X-HSN-24 SUPPORT MEMBER THICKNESS ≥ 1/4" THICK: HILTI X-ENP-19







JOIST MARK	W DL (PLF)	W SNOW 1 (PLF)	W SNOW 2 (PLF)	W SNOW 3 (PLF)	SNOW L3 (FT)	W SNOW 4 (PLF)	SNOW L4 (FT)	W RAIN (PLF)	RAIN L (FT)	Imin (in^4)
28KSP1	86	96	114	181	8'-6"	98	5'-0"	-	-	-
28KSP2	123	138	96	242	8'-6"	-	_	_	-	-
28KSP3	86	114	68	172	8'-6"	-	_	-	-	-
30KSP1	100	110	77	195	8'-6"	148	6'-0"			
30KSP2	89	99	69	174	8'-6"	-	-	-	-	-
30KSP3	95	186	74	44	2'-0"	-	_	-	-	-
30KSP4	112	124	87	218	8'-6"	-	_	-	-	-
30KSP5	100	110	77	195	8'-6"	-	_	-	-	-

ARCHITECT OF RECORD

BRR ARCHITECTURE INC.

8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

WWW.BRRARCH.COM

TEL: 913-262-9095 FAX: 913-262-9044

PROFESSIONAL SEAL



COPYRIGHT NOTICE THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

ISSUES AND REVISIONS DATE DES 05/01/25 ORIGINAL ISSUE 

STEEL SCHEDULES

COPYRIGHT © 2025

THIS DOCUMENT IS THE PRODUCT AND EXCLUSIVE PROPERTY OF SCHAEFER. NEITHER THE DOCUMENT NOR THE INFORMATION IT CONTAINS MAY BE COPIED OR USED FOR ANY OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS PREPARED, WITHOUT THE WRITTEN CONSENT OF SCHAEFER Schaefer Project Number: 24-1921

STRUCTURAL ENGINEERS

schaefer

800.542.3302 schaefer-inc.com

— BOND BEAM w/ (2) #4 + GROUT (TYP)

— 8" CMU w/ #5 VERT BAR @ 32"oc CENTERED

EQ

— 4'-0" WIDE x2'-0" THICK FOOTING w/ (7) #5 BARS BOT & #5 @ 10"oc TRANS BAR. EXTEND FOOTING 1'-0" PAST SIGN ON EACH END

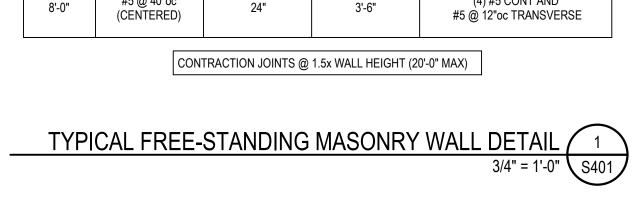


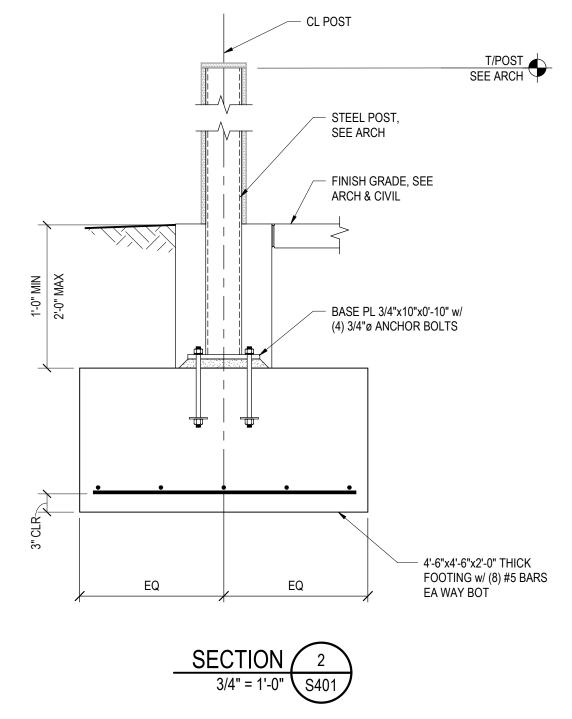
COPYRIGHT NOTICE			
CONTEMPORANEO USE ON A DIFFEREI DRAWING FOR REF THE SERVICES OF I	JSLY WITH ITS ISSU NT PROJECT SITE O ERENCE OR EXAMP PROPERLY LICENSE THIS DRAWING FO	JSE ON A SPECIFIC SITI JE DATE AND IT IS NOT DR AT A LATER TIME. US DE ON ANOTHER PRO. ED ARCHITECTS AND EN DR REUSE ON ANOTHER TO THE LAW.	SUITAB SE OF T ECT RE IGINEE
APPROPRIATE FOR	USER'S PURPOSES SK AND AGREES TO	<u>O</u> FILES ARE SUFFICIEN B. USER USES OR ALTE DINDEMNIFY BRR FROM	RS THE

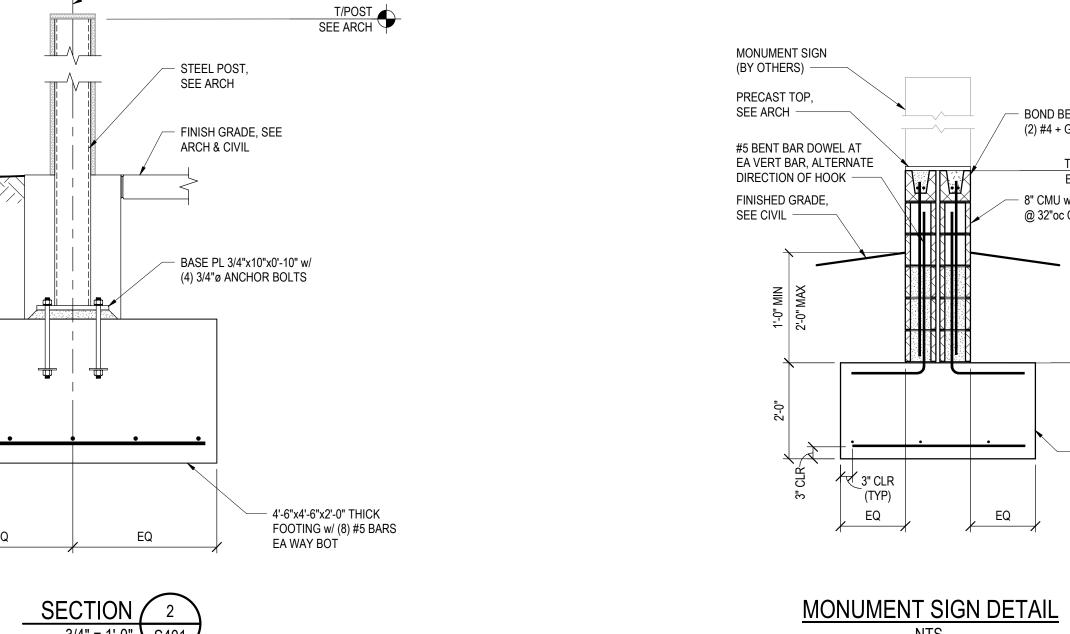
	RISK AND AGR	POSES. USER USES OR ALTERS T EES TO INDEMNIFY BRR FROM LIA
KISING FROM U	SER'S USE.	
SUES AND REV	ISIONS	
NUMBER	DATE	DESCRIPTION
0	05/01/25	ORIGINAL ISSUE

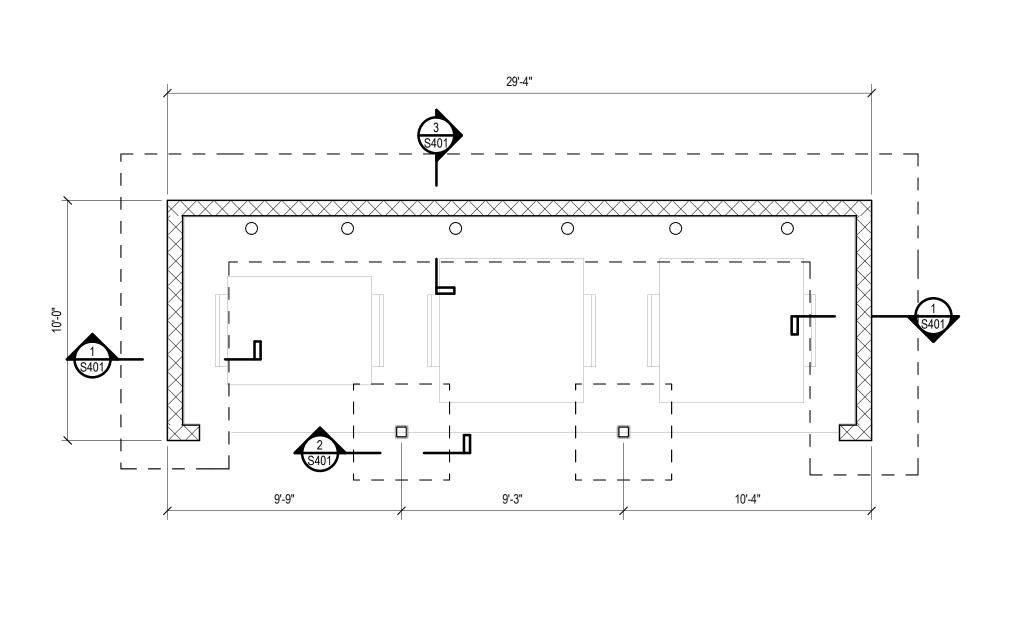
SITE DETAILS

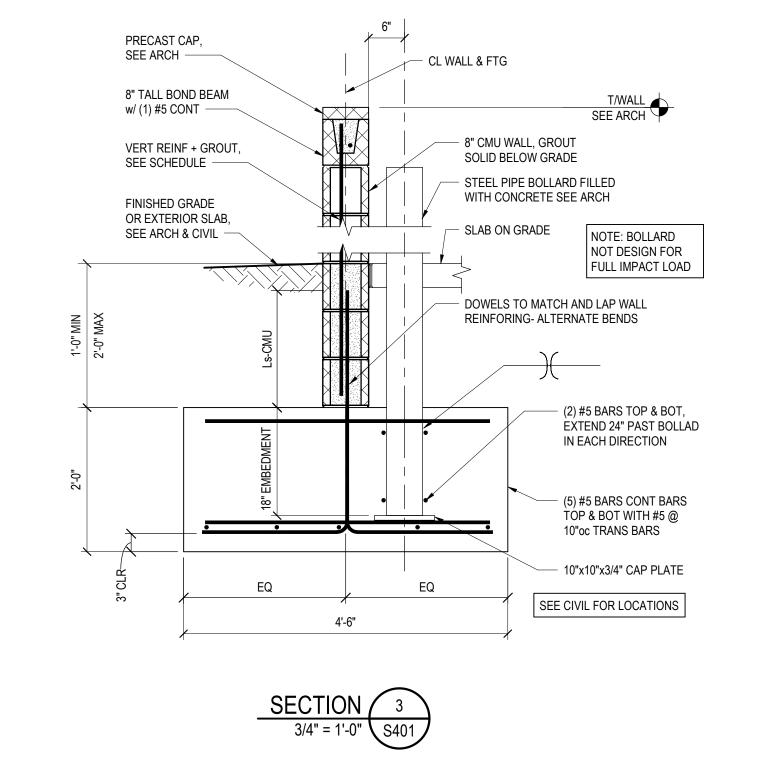
PRECAST CAP, SEE ARCH CL WALL & FTG 8" TALL BOND BEAM w/ (1) #5 CONT VERT REINF + GROUT, SEE SCHEDULE 8" CMU WALL, GROUT SOLID BELOW GRADE FINISHED GRADE OR EXTERIOR SLAB, SEE ARCH & CIVIL SLAB ON GRADE DOWELS TO MATCH AND LAP WALL REINFORING-ALTERNATE BENDS FTG SIZE & REINF, SEE SCHEDULE SEE CIVIL FOR LOCATIONS WALL REINF FOOTING SIZE & REINF VERT "D" DEPTH "B" WIDTH LONGITUDINAL REINF #5 @ 40"oc (CENTERED) (4) #5 CONT AND #5 @ 12"oc TRANSVERSE

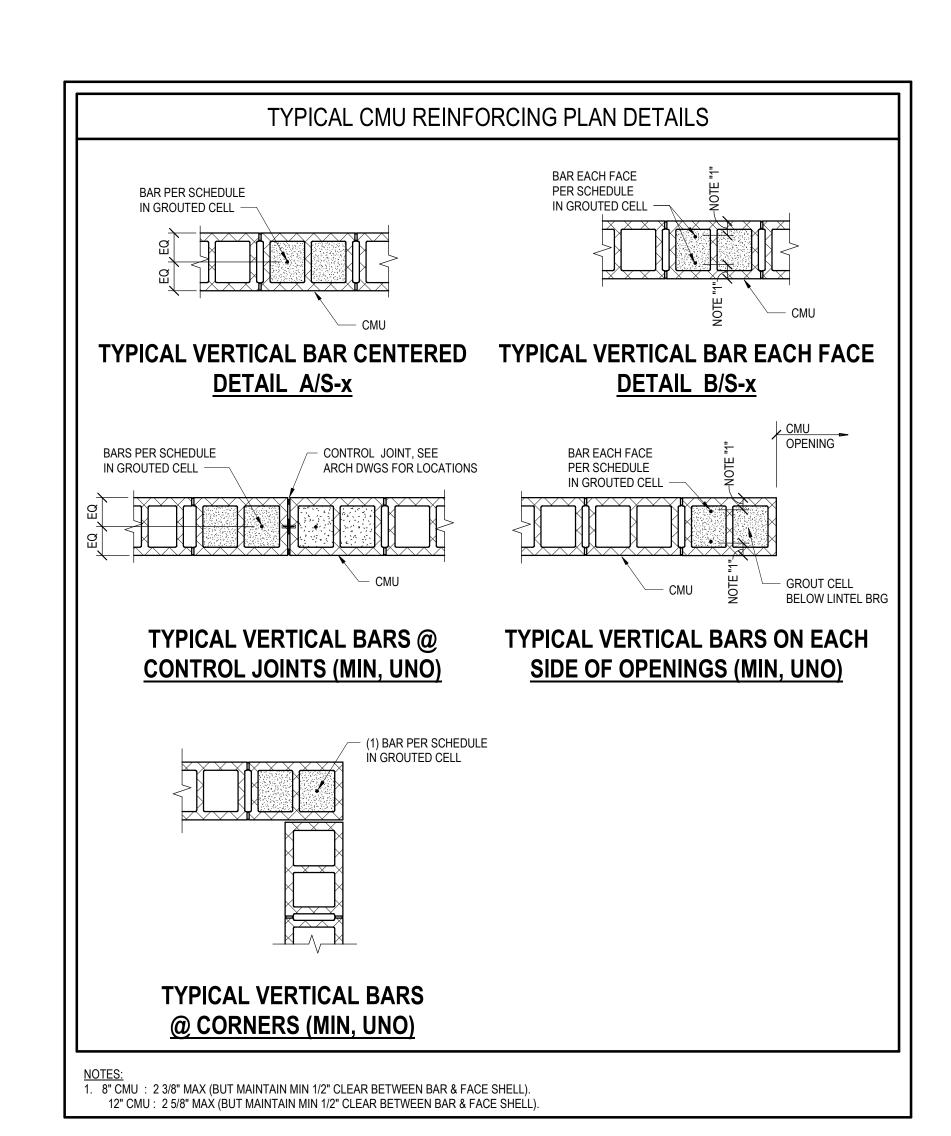


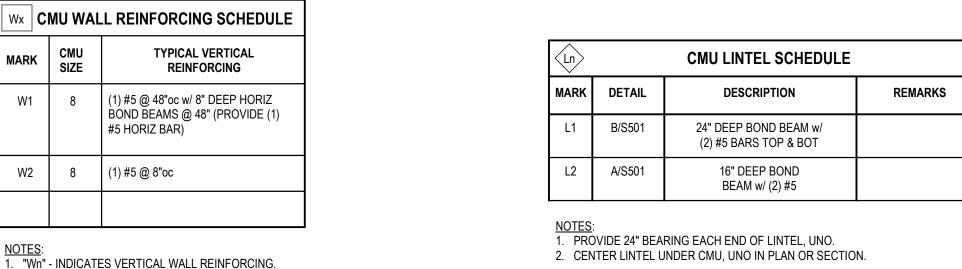








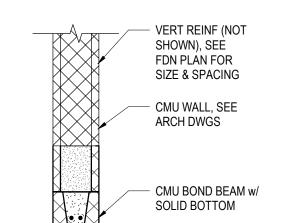


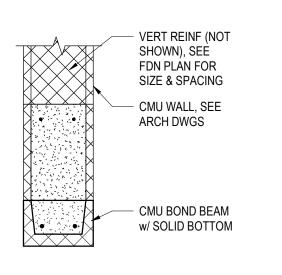


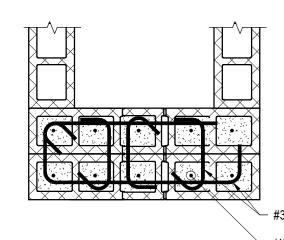
NOTES:						
	- INDICATE	S VERTICAL	WALL REINF	ORCING.		
2. SOLII	D GROUT A	ALL CELLS CO	ONTAINING R	EINFORCING.		
3. REIN	FORCING T	TO BE PLACE	D IN CENTER	OF GROUTED	CELL UNLESS	
NOTE	ED OTHER	WISE.				
<ol><li>EXTE</li></ol>	ND REINF	ORCING FRO	M PLAN LEVE	EL SHOWN DO	WN TO LEVEL B	ELOW
AND	LAP PER S	CHEDULE IN	MASONRY S	ECTION OF GE	NERAL	
STRU	JCTURAL N	IOTES. EXTE	ND DOWEL O	R BENT BAR C	OUT OF CONCRE	TE
WALL	OR FOOT	'ING TO PRO	/IDE LAP WIT	H EACH CMU \	VERTICAL	
REIN	FORCING I	BAR.				
5. ALL V	VALLS NO	T NOTED WIT	H "Wn" ON PL	.AN, USE WALL	_ REINFORCEME	ENT
MADI	Z \N/1					

MARK W1.

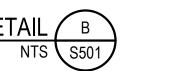
TEL SCHEDULE	
CRIPTION	REMARKS
BOND BEAM w/ RS TOP & BOT	
EEP BOND /I w/ (2) #5	
	-



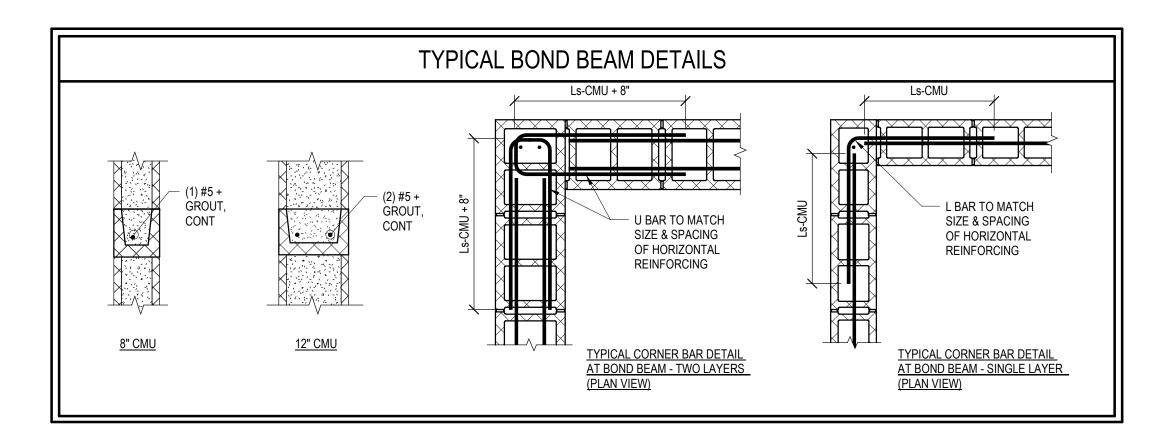




— (1) #5 VERT IN EA CELL (CENTERED), GROUT EACH CELL SOLID







CMU WALL KEYNOTES:

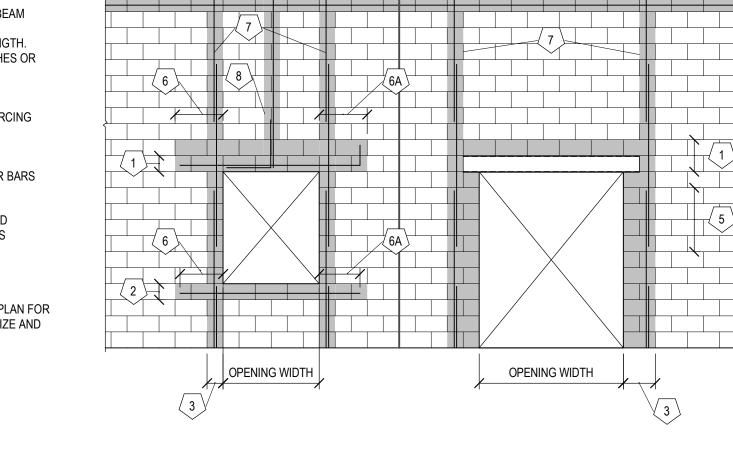
1. SEE LINTEL SCHEDULE FOR LINTELS ABOVE OPENINGS. SEE PLAN FOR LINTEL MARKS.

2. PROVIDE (1) #5 SILL REINFORCING AT OPENINGS. 3. FOR JAMB REINFORCING AT OPENINGS, SEE DETAIL CALLED OUT ON PLAN OR "TYPICAL VERTICAL BARS ON EACH SIDE OF OPENINGS" ON THIS DRAWING. 4. SEE RELATING WALL SECTIONS AND ELEVATIONS FOR BOND BEAM

LOCATIONS AND REINFORCING. 5. SEE CMU WALL REINFORCING SCHEDULE FOR LAP SPLICE LENGTH. 6. EXTEND HORIZONTAL REINFORCING THE GREATER OF 24 INCHES OR 40 BAR DIAMETERS BEYOND FACE OF OPENING. A. WHERE BARS ARE UNABLE TO EXTEND FULL LENGTH, TERMINATE BARS WITH STANDARD HOOK. 7. AT OPENINGS IN EXTERIOR WALLS, EXTEND VERTCAL REINFORCING TO TOP OF WALL. AT OPENINGS IN INTERIOR WALLS, EXTEND

VERTICAL REINFORCING BEYOND FLOOR ABOVE EQUAL TO VERTICAL SPLICE LENGTH OR TO TOP OF WALL. 8. TYPICAL WALL REINFORCING ABOVE OPENINGS HAVE CORNER BARS (30 Db EA LEG) LAPPED AND TIED WITH HORIZONTAL LINTEL 9. SEE FOUNDATION PLANS FOR CONTROL JOINT LOCATIONS AND "TYPICAL VERTICAL BARS @ CONTROL JOINTS" DETAIL ON THIS DRAWING.

TYPICAL WALL NOTES:
TYPICAL WALL REINFORCING NOT SHOWN FOR CLARITY. SEE PLAN FOR MARKS AND SCHEDULE FOR TYPICAL GROUT, REINFORCING SIZE AND



TYPICAL MASONRY ELEVATION

62910099 DDA PROFESSIONAL SEAL

ARCHITECT OF RECORD

BRR ARCHITECTURE INC.

WWW.BRRARCH.COM TEL: 913-262-9095 FAX: 913-262-9044

8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204



COPYR	GHT NOTICE			
CONTE USE ON DRAWI THE SE REPRO	I A DIFFERENT PROJ NG FOR REFERENCE RVICES OF PROPER	TH ITS ISSUE DA ECT SITE OR AT OR EXAMPLE O LY LICENSED AR RAWING FOR RE	TE AND IT IS NOT SUITA A LATER TIME. USE OF IN ANOTHER PROJECT I CCHITECTS AND ENGINE SUSE ON ANOTHER PRO	THIS REQUIRE ERS.
APPRO	PRIATE FOR USER'S	PURPOSES. USE AGREES TO INDI	ES ARE SUFFICIENT OR ER USES OR ALTERS TH EMNIFY BRR FROM LIAB	

MASONRY SCHEDULES AND **DETAILS** 

COPYRIGHT © 2025

THIS DOCUMENT IS THE PRODUCT AND EXCLUSIVE PROPERTY OF SCHAEFER. NEITHER THE DOCUMENT NOR THE INFORMATION IT CONTAINS MAY BE COPIED OR USED FOR ANY OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS PREPARED, WITHOUT THE WRITTEN CONSENT OF SCHAEFER Schaefer Project Number: 24-1921

STRUCTURAL ENGINEERS

800.542.3302

schaefer

(B.5) (C)

(B.1)(B.3)

BRR ARCHITECTURE INC. 8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204 WWW.BRRARCH.COM TEL: 913-262-9095 FAX: 913-262-9044

Kansas City, Missouri 64108 Fax: 816.221.1429

COPYRIGHT © 2025 LANKFORD|FENDLER+ ASSOCIATES, INC. L|F+a|Project|No. 25.7674.00



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

(M05) GEH-3

FLOOR PLAN -MECHANICAL

BRR ARCHITECTURE INC.

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044

CONSULTANT

Fender

+ 8\$\$0ciates

1730 Walnut Street

Kansas City, Missouri 64108 Fax: 816.221.1411

Kansas City, Missouri 64108 Fax: 816.221.1429

COPYRIGHT © 2025 LANKFORD | FENDLER+ ASSOCIATES, INC.

L | F + a Project No. 25.7674.00

EE'S SUMMIT, MO

PROJECT NUMBER

6291009

PROJECT MANAGER DRAWN BY CHECKED BY

AVM EDG



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

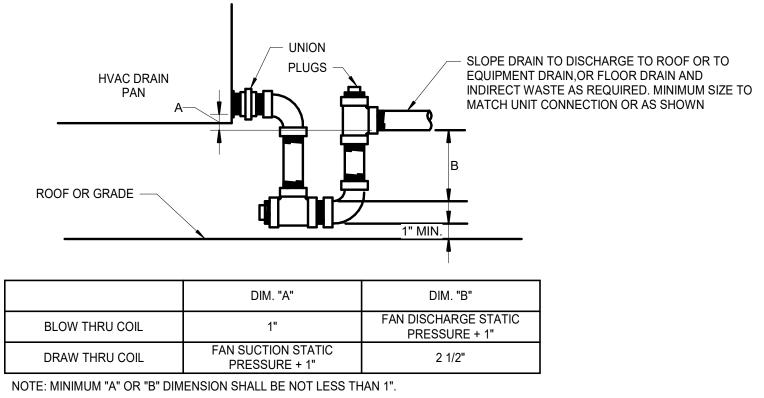
NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

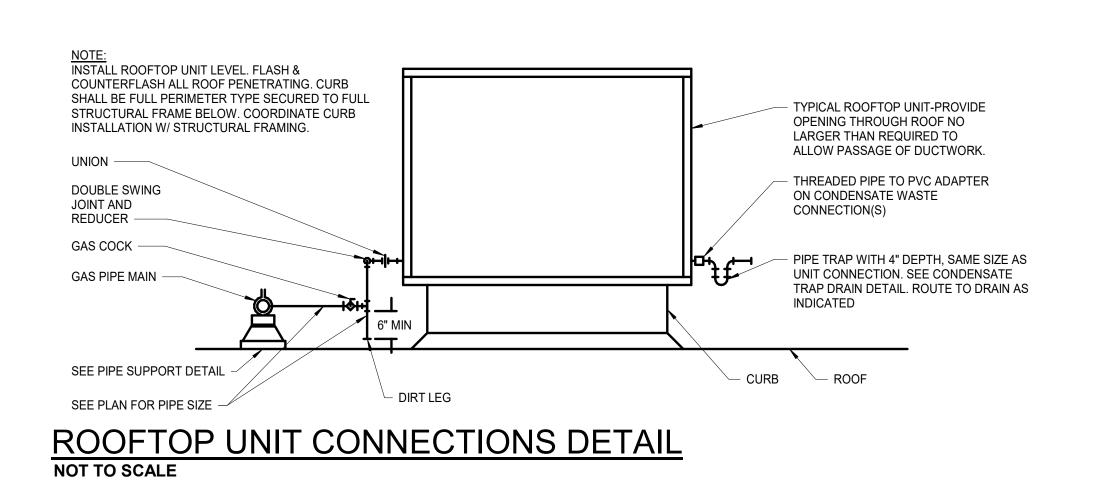
ROOF PLAN -MECHANICAL

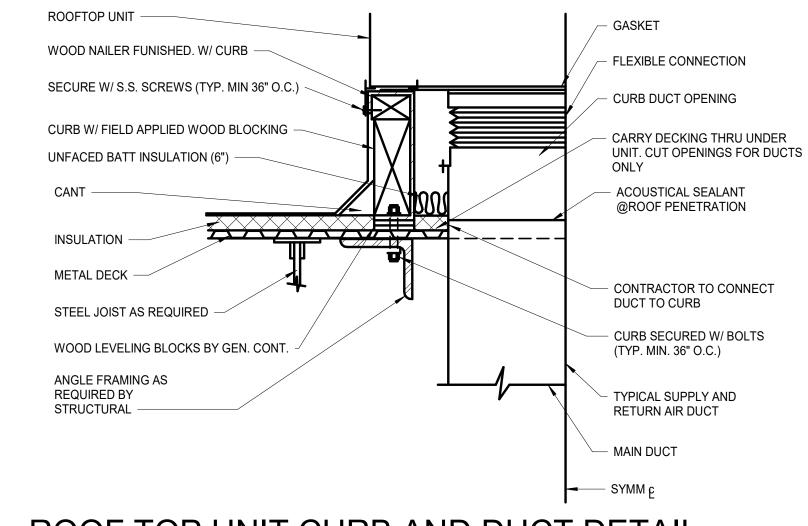
BRR ORIGINAL PRINTED ON RECYCLED PAPER

M200



DRAINABLE HVAC CONDENSATE TRAP DETAIL NOT TO SCALE





ROOF TOP UNIT CURB AND DUCT DETAIL NOT TO SCALE

GENERAL NOTES (TYPICAL ALL SHEETS)

A MECHANICAL CONTRACTOR IS RESPONSIBLE TO SEE THAT WORK MEETS A

CONFLICTS.

A. MECHANICAL CONTRACTOR IS RESPONSIBLE TO SEE THAT WORK MEETS AND IS IN ACCORDANCE WITH ALL REQUIREMENTS OF FEDERAL, STATE, AND LOCAL LAWS AND CODES AND/OR REQUIREMENTS, INCLUDING HEALTH CODES AND BUILDING OWNER.

 B. CUTTING AND PATCHING OF FLOORS, WALLS, CEILING, ETC., REQUIRED IN STRICT ACCORDANCE WITH THE RULES AND REGULATIONS OF THE ARCHITECT'S AND/OR BUILDING OWNER.

REQUIREMENTS.

C. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION TO AVOID ROUTING

D. MECHANICAL CONTRACTOR SHALL PROVIDE NEW FILTERS ON ALL AIR HANDLING EQUIPMENT PRIOR TO BALANCING. PROVIDE TEMPORARY FILTERS ON RETURN AIR OPENINGS DURING CONSTRUCTION.

E. INSTALL ELASTOMERIC JOINT SEALER AROUND ALL DUCTS, PIPES, ETC. PASSING THRU INTERIOR NON-RATED CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, AND CONCRETE FLOOR/ROOF SLABS. FOR FIRE RATED INTERIOR CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, AND CONCRETE FLOOR/ROOF SLABS SEAL ALL DUCTS, PIPES, ETC. INSTALL FIRESTOP MATERIALS IN ALL GAPS PRIOR TO SEALANT APPLICATION. INSTALL SEALER ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

F. UPON REQUEST FOR ELECTRONIC FILES, CONTRACTOR SHALL FILL OUT, SIGN AND RETURN ELECTRONIC MEDIA RELEASE FORM FROM ENGINEER AND PROVIDE PAYMENT FOR FEES STIPULATED ON ELECTRONIC MEDIA RELEASE FORM. UPON RECEIPT OF COMPLETED RELEASE FORM AND PAYMENT, ELECTRONIC FILES WILL BE RELEASED.

G. ALL CABLE TIES FOR LOW VOLTAGE SYSTEMS LOCATED IN PLENUMS UTILIZED FOR AIR MOVEMENT THAT ARE NOT INSTALLED IN CONDUIT SHALL BE 25/50 FLAME AND SMOKE RATED, HELLERMANN TYTON T50R2C2UL OR EQUIVALENT.

H. THERMOSTAT COVERS SHALL BE WHITE IN COLOR UNLESS OTHERWISE NOTED.
THERMOSTATS/SENSORS SHALL BE INSTALLED AND CALIBRATED PRIOR TO TEST AND BALANCE.

FIRE STOPPING REQUIREMENTS

CONTRACTOR TO PROVIDE FIRESTOPPING AT ALL FIRE RATED ASSEMBLIES MEETING THE MANUFACTURER'S FIRESTOPPING U.L. LISTED DETAILS AND INSTRUCTIONS PER LOCAL CODES AND JURISDICTIONS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING LOCATIONS WITH ARCHITECTURAL FIRE RATINGS ON PLANS OR AS REQUIRED.

## MECHANICAL SYMBOLS

NEW DUCTWORK

SUPPLY DUCT

RETURN DUCT

SUPPLY DIFFUSER

RETURN GRILLE

SUPPLY DUCT DOWN

SUPPLY DUCT UP

RETURN DUCT DOWN

RETURN DUCT UP

THERMOSTAT

? EQUIPMENT TYPE AND DESIGNATION

TYPE MARK: (S\_) SUPPLY, (R\_) RETURN, (E\_) EXHAUST DIFFUSER OR GRILLE TYPE MARK AND CFM

CFM
CONNECT TO EXISTING

+ BSSOCIATES

1730 Walnut Street

Kansas City, Missouri 64108

COPYRIGHT © 2025 LANKFORD | FENDLER+ ASSOCIATES, INC.

L | F + a Project No. 25.7674.00

ARCHITECT OF RECORD

BRR ARCHITECTURE INC.

8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

WWW.BRRARCH.COM

TEL: 913-262-9095 FAX: 913-262-9044

TITLE

EE'S SUMMIT, MO

ROJECT NUMBER

62910099
PROJECT MANAGER DRAWN BY CHECKED BY

AVM EDG

PROFESSIONAL SEAL



COPYRIGHT NOTICE

THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE
CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR
USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS
DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES
THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT
AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR
APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES
AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY
ARISING FROM USER'S USE.

NUMBER DATE DESCRI
0 05/01/25 ORIGINAL ISSUE

MECHANICAL DETAILS, GEN. NOTES, & SYMBOLS

N 4000

025 4-22-47 PM

### 2.0 STANDARDS, REGULATIONS AND CODES:

Work shall comply with the edition of the applicable standards, regulations and codes currently in force of all Federal, State and local authorities having jurisdiction. Where quantities, sizes, or other requirements indicated on the drawings or herein specified are in excess of the standard or code requirements, the specifications and/or drawings shall govern. In the absence of other applicable local codes, acceptable to the Architect/Engineer, the International Set of Codes and the National Electrical Code shall apply to this work.

B. The Contractor shall comply with rules and regulations of public utilities and municipal departments affected by connections of services. The Contractor shall pay all fees associated there with.

C. The Contractor shall be licensed to perform associated work in the municipality in which the project is located. All products and types of construction shall meet or exceed the latest edition of applicable standards of manufacturer, testing, performance and installation.

E. Where indicated or required, comply with all provisions of the ADA and/or the ABA Accessibility Guidelines. Where indicated or required, comply with all applicable provisions of energy and ventilation codes in force at the

local jurisdiction. 3.0 GRAPHIC REPRESENTATION AND JOB CONDITIONS: The Contract Documents shall serve as working drawings for the general layout of the various items of equipment;

are diagrammatic unless specifically dimensioned, and do not necessarily indicate every required item. The contractor shall include all necessary components and accessories as required for a complete working system whether so specifically indicated or not. B. Architectural and Structural drawings take precedence over all other drawings in the representation of the general construction work; any conflicts shall be resolved prior to commencing work. Failure to do so shall not be

considered a basis for the granting of additional compensation. Arrange work in a neat, well organized manner. Coordinate work with other trades involved, prior to commencing

work. Sub-contractors shall work together to resolve any conflicts of space or routing. 4.0 GUARANTEES/WARRANTY:

A. The Contractor shall guarantee/warranty all work performed, including labor, materials and equipment furnished under this contract, against defects in materials and workmanship for a minimum period of one year from the date of the Owner's Representative Final Acceptance of the work. Provide extended warranties as noted in each section or specified for specific products.

### WORKMANSHIP:

A. All work performed under this Contract shall provide a neat and "workmanlike" appearance when completed, to the satisfaction of the Owner's Representative. The complete installation shall function as designed and intended with respect to efficiency, capacity, and noise level, etc.

6.0 LOCAL CONDITIONS:

A. The Contractor shall carefully examine and become thoroughly familiar with local conditions, existing installations and all other conditions which may affect associated work. The Contractor shall locate all existing utilities and protect them during the execution of the work.

B. The Contractor shall carefully examine all contract documents including project drawings and specifications to become familiar with the type of construction, materials, and equipment to be used for all work and how it will affect the installation of this contract.

C. By the act of submitting a bid, the Contractor will be deemed to have made such examination, to have accepted such conditions, to have made allowance therefore, and included all costs in his proposal. Failure to determine existing conditions will not be considered a basis for the granting of additional compensation.

7.0 OPERATION DURING CONSTRUCTION:

A. The Contractor is responsible for the installation and operation, service and maintenance of all new equipment during construction and prior to acceptance by the Owner of the completed project. Warranty periods shall not commence until final acceptance by the Owner or Owner Representative.

B. The Contractor shall provide, at his own expense, all temporary utilities required to provide for and protect the work and as necessary to maintain an adequate work force.

C. The Contractor shall arrange for and provide, at his own expense, temporary heating and cooling as necessary for prosecution of the work. Permanent air handling, heating and cooling equipment shall not be used for temporary heating and cooling unless pre-approved by the owner or his representative.

SAFETY REGULATIONS:

A. All work shall be performed in compliance with all applicable governing safety regulations, including OSHA regulations. Provide safety lights, guards and signs required.

9.0 HOUSEKEEPING:

A. The Contractor shall be responsible for keeping stocks of material and equipment stored on the premises in a neat B. The Contactor shall clean and maintain their specific portions of the work on a daily basis or as specified in the

C. The Contractor shall remove from the premises all waste material present as a result of his work.

10.0 SUBSTITUTIONS:

A. Materials, products and equipment described in the Bidding Documents established a standard of quality to be met by any proposed substitution.

B. Contractor's bids shall be based on the material identified or specified in the contract documents. Any proposals for substitution shall be made in writing to the Architect/Engineer with all supporting documentation, allowing adequate time for appropriate action. The products of other manufacturers may be accepted, if in the opinion of the Architect/Engineer, the substitute material is of quality as good or better than the material specified, and will serve with equal efficiency and dependability the purpose for which the items specified were intended. The burden of proof of equality is entirely upon the proposer.

C. Refer to Division 1 requirements for additional substitution procedures.

D. Wherever substitutions alter the design or space requirements, the Contractor shall be responsible for confirming all substituted equipment and materials fit within the allocated space while maintaining code required access and clearance. He shall include all associated cost items of the revised design and of construction work required by his or other trades affected by the proposed substitution.

11.0 SHOP DRAWINGS AND PRODUCT DATA:

A. The checking of shop drawings is a gratuitous assistance and in no way relieves the Contractor of responsibility for deviations from the Contract Documents. The Contractor shall submit project shop drawings electronically in PDF format, unless indicated otherwise.

B. Shop drawings and catalog data on all major items of equipment and apparatus, and such other illustrative materials as may be considered necessary by the Owner's Representative shall be submitted by the Contractor in adequate time to prevent delay and changes during construction.

C. Refer to Architectural Documents for additional shop drawing submission procedures.

12.0 PROJECT CLOSEOUT DOCUMENTATION

A. Operating and Maintenance Brochure:

1. On completion of the project, the Contractor shall provide project manuals electronically (PDF format unless otherwise instructed) containing complete product information for all installed or provided equipment and components including cut sheets, parts lists, wiring and installation diagrams, operating, service and lubrication instructions. Provide manufacturer guarantee and warranty certificates.

B. Record Drawings:

1. On completion of the project, the Contractor shall provide record drawings with all field changes clearly and neatly noted. The original routing and layout shall be clearly marked out. References to other

documents, drawings, addenda, RFI's or otherwise for additional information shall not be accepted.

2. The Contractor shall submit record drawings electronically in PDF format (unless otherwise instructed).

3. Refer to Architectural Documents for additional record drawing submission procedures.

13.0 SITE WORK AND CONDITIONS:

A. The Contractor shall do all necessary excavating and backfilling for the installation of associated work. After the piping or conduit has been installed, tested and approved, the trenches shall be backfilled to grade with compacted sand, gravel or AB-3 material or other material as required by local authorities. Compact to 85% density for unpaved areas, 95% density for paved area or under slabs. B. All water bearing piping shall be 48" minimum below grade, all gas piping shall be 24" minimum below grade,

unless instructed otherwise. C. Roads, alleys, street, sidewalks and utilities damaged during this work shall be restored to the satisfaction of

Owner's Representative and authorities having jurisdiction. D. Where subsidence is measurable or observable at excavation during general project warranty period, remove surface, add backfill material, compact, and replace surface treatment. Restore appearance of surface to match

14.0 FOUNDATIONS AND SUPPORTS:

A. The Contractor shall provide concrete bases, hangers and foundations for all machinery and equipment specified or shown in this contract, including fans, air conditioning units, water heaters, pumps, motors, electrical gear, etc., unless specifically noted otherwise.

B. All hangers, brackets, clamps, etc., shall be of standard weight steel. Perforated strap hangers shall not be used in any work. When two (2) or more pipes or conduits are run parallel, or where ducts interfere with the proper location of hangers, they may be supported on trapeze hangers. Other hangers shall be hinged ring malleable iron, by Grinnell or Fee and Mason or approved equal with rods and hanger adjusters for adequate size to carry the loads imposed. All piping, ductwork and conduit systems shall each be independently supported from other systems and from equipment so that no weight is born by equipment.

equipment from the building structure. Provide flexible connectors where indicated and at all rotating equipment and for equipment mounted on vibration isolators.

C. The Contractor shall take all precautions against excessive noise or vibration by isolating the various items of

15.0 CUTTING AND PATCHING:

A. All necessary cutting, drilling and patching shall be provided by this Contractor. Structural members shall not be disturbed without prior approval of the Structural Engineer and/or the Owner's Representative. All areas and surfaces disturbed by work performed under this Contract shall be neatly repaired and refinished to the condition of adjoining surfaces in a manner suitable to the Owner's Representative.

16.0 SLEEVES AND ESCUTCHEONS:

A. Penetrations thru walls and floors shall be as detailed.

B. Where not otherwise shown, penetrations shall conform to the following:

on grade, cast iron or steel pipe sleeves shall be used.

1. Where pipes or conduits pass through interior partitions, galvanized steel pipe sleeves or galvanized steel sheet sleeves shall be used. Where pipes or conduits pass thru concrete floors and walls, walls below grade or exterior walls and slabs

Sleeves through interior non-rated walls, including walls indicated as sound partitions, shall be packed with fiberglass or mineral wool and caulked.

D. Sleeves below grade, in exterior walls or thru slabs on grade shall have mechanical link seals, Thunder line or Penetrations of fire rated construction shall be made with a UL listed fire penetration assembly suitable for the rating at each location. Where required, sleeves through fire rated structure shall be fire barrier caulked with putty strip or sheet by 3M, Hilti or acceptable equal.

Provide steel (dry locations) or brass (damp locations) escutcheons to completely cover pipe penetration holes in floors, walls, or ceilings. Provide pipe escutcheons with nickel or chrome finish for occupied areas, prime paint finish for unoccupied areas, brass for exterior.

17.0 MOTORS, CONTROLS AND FIRE ALARM INTERFACE:

A. All motors furnished under this specification shall be recognized manufacturer and of adequate capacity for the loads involved. All motors shall conform to the standards of manufacturer and performance of the National Electrical Manufacturers Association as shown in their latest publications.

All motors 3/4 hp and above shall be high efficiency. Provide ECM motors where indicated. Any motor indicated for use with Variable Frequency Drives (VFD) shall be specifically designed for compatibility.

Disconnects and motor starters for equipment shall be by the Electrical Contractor unless furnished integral with the equipment or as otherwise indicated. Installation shall be by the Electrical Contractor except for devices factory installed and shipped with equipment. Provide manual or magnetic starters with necessary auxiliary contacts to accomplish the specified or required sequence of operation.

D. All temperature controls unless noted otherwise shall be the responsibility of the Mechanical Contractor.

E. If no sequence of operation is included, submit a proposed sequence to the Engineer for approval. All fire alarm devices including duct smoke detector and shut down/interlock wiring shall be the responsibility of the Electrical or Fire Alarm Contractor otherwise noted.

18.0 PIPING IN ELECTRICAL ROOMS:

No piping except specifically noted otherwise will be permitted in Electrical Rooms or Data Rooms including Server Rooms and IT Closets. In rooms where piping is indicated over or near electrical equipment, a suitable galvanized sheet metal pan or gutter piped to the drainage system shall be provided.

END OF SECTION

230 100 HEATING, VENTILATION AND AIR CONDITIONING

1.0 SCOPE: A. The work included under this contract consists of providing all labor, materials, tools, transportation, services, etc., necessary to complete the installation of the heating, ventilating, and air conditioning systems and other items herein listed and as described in these specifications, as illustrated in the accompanying drawings or as directed

2.0 SHEET METAL: Ductwork shall be new prime grade galvanized steel sheets constructed per ASHRAE and SMACNA Standards. Duct system(s) installation shall be in accordance with SMACNA Duct Construction Standards Manual and industry

standards. Provide round or rectangular duct as indicated. Provide Duct System(s), including all necessary components such as dampers, turning vanes, offsets and takeoffs, etc. required by the project (whether shown or not), which shall be fabricated and installed for maximum efficiency and to minimize pressure drops and objectionable sound and to provide for complete

B. Fabricate for the pressure and SMACNA seal class required by the application.

All duct sizes shown are free area size and do not include liner.

1. Up thru 2" WG pressure – rectangular – Class 24, round - Class 12. Seal class minimum requirements are:

Leakage class minimum requirements are:

Up thru 2" WG pressure - class A for all duct joints.

Duct sealant shall have 25/50 flame and smoke rating with a static pressure class of 10" WG, mold and mildew resistant. Sealant shall be installed per manufacturer instructions. Sealant for concealed ductwork shall be an externally applied solvent or water based joint and seam

sealant with or without tape. Ductwork exposed to view shall be sealed with clear silicone or have gasketed joints. Exposed rectangular flanged duct joints shall have gasketed joints. Exposed round ducts shall have joints with EPDM gaskets in groove, O-ring seals or flanged with neoprene gaskets. Where sealant beads are used, they shall be minimized or concealed, smooth and uniform with any excess sealant trimmed flush with duct and 4. Spiral lock seams and gasketed duct joints are exempted from other sealant requirements.

D. Duct Finishes

Concealed ductwork shall be manufacturer's standard mill finished. Ductwork that is indicated or required to be field painted shall have paint grip finish. Ductwork that will remain exposed to view shall be furnished without marks, markers, shipping identification or other tags located on exterior duct surfaces, no exceptions. Any ductwork so installed shall be removed at contractor expense. Protect exposed ductwork from dents, scratches or other damage during construction. Wipe down and thoroughly clean all exposed duct, fittings and accessories.

Round or oval duct shall be factory built of galvanized steel, suitable for pressure class required or indicated. Snap lock duct and fittings shall be used for low pressure/velocity applications only. Fittings shall have 1.5 times diameter centerline radius. Spiral duct may be used for any pressure/velocity class. Spiral duct shall be Semco or acceptable equal by McGill Airflow or Lindab.

Single wall, 2.0" WG minimum. Round or oval duct joints shall be Ductmate quick sleeve, slip joint, welded or flanged.

3.0 DUCTWORK ACCESSORIES: A. Duct splits, elbows and reducing fittings shall be fabricated per SMACNA standards. "Ductmate" or acceptable

equal flanged and gasketed joint systems are approved. 4.0 DUCT SUPPORTS AND ROUTING

 A. Hangers and Supports. Ductwork shall be supported in accordance with all SMACNA standards including support methods, sizes All hanger and support parts shall be galvanized steel for non-corrosive environments or stainless steel for corrosive or damp environments.

Provide sheetmetal straps, adjustable hangers, clamps, channels, rods, flexible connectors, supplementary steel, etc. as required for proper support of all ductwork. Trapeze may be used for support of single or multiple ducts. Provide accompanying attachments including bolts and nuts, sheetmetal screws Upper attachments shall be manufactured items specific to the applicable structure. Include concrete inserts, wedge type drilled in inserts, steel beam and joist clamps, plates, rods, clips, straps and brackets

Ductwork shall be routed as shown on drawings, parallel to building lines unless otherwise shown, coordinated with building structure and other trades. Adjust ductwork routing and elevations with necessary offsets to accommodate beams and other obstructions.

5.0 HEATING AND AIR CONDITIONING UNITS:

as required by the application.

A. Air conditioning units shall be as scheduled or by acceptable equal. Units shall be standard catalogued products

B. Should an alternate manufacturer's equipment be provided that differs in size, weight or configuration from the manufacturer listed as the basis of design, the contractor shall reimburse the architect and engineer for all costs associated with modifying the construction documents to accommodate the alternate manufacturer's equipment. The contractor also shall be responsible for all costs associated with modification to electrical, plumbing, mechanical and structural systems from the original construction documents to accommodate alternate equipment. Packaged Units:

with the appropriate approval or certification by AGA, ARI and UL. Efficiencies shall conform to ASHRAE 90

Packaged outdoor units shall be roof or ground mounted, vertical or horizontal discharge, with cooling and/or heating components of characteristics and capacities scheduled. Unit shall have direct or belt drive forward curve or airfoil supply fan, cooling coil with copper tubes and aluminum fins, insulated coil drain pan. Compressors shall be manufacturer's standard with crankcase heaters and vibration isolators and five (5) year warranty, electric coil or gas fired burner and heat exchanger with 10 year warranty as indicated. Accessories shall include suction line accumulators, service valves, sight glass and strainerdryer, as required for a complete operating system. Provide with filters, enthalpy economizers, relief or power exhaust, controls, hinged access doors, condenser coil hail guards, condenser coil cottonwood filters, mounting curb and duct flex connectors and other accessories as indicated or required. Furnish 10 year heat exchanger for gas fired units. Packaged units shall be Lennox or acceptable equal by Carrier, York, Trane, Daikin.

D. Provide units with manufacturer's standard control package. Controls to include factory wired terminals with overload devices and transformers as required. Unit safety control to include high-low pressure switches, fan relays, short cycle safety and internal pressure relief, gas controls with hi limit and anti- cycle protection.

E. Provide unit accessories as noted on drawings and as required for a complete operating system.

F. Mount units to provide the required service, access and airflow space.

6.0 MAKE-UP AIR UNIT

A. Provide tempered make-up air unit including direct gas-fired heater with all accessories as scheduled including intake hood, filters, curb as scheduled. Units shall be Greenheck, Accurex, or owner acceptable equal.

7.0 MISCELLANEOUS MECHANICAL EQUIPMENT: A. Provide miscellaneous heating equipment with controls and all accessories as scheduled. Heating equipment

 Unit Heaters: electric. a. Electric units shall be Markel, Q'Mark, Trane, Vulcan or acceptable equal.

A. Provide filters in air intake to each units A/C system with size and number of filters standard with air unit manufacturer. Provide 1" and/or 2" thick to suit equipment requirements, hi-velocity, throw-a-way MERV 8 filters, Camfil 30/30 or acceptable equal by American Air Filter, Airguard, Air Filters, Inc., Purolator. Filters shall be new

and clean at time of Owner's acceptance. Supply extra set of filters for each unit. CONTROLS AND LOW VOLTAGE SYSTEMS:

A. All temperature controls unless otherwise noted shall be the responsibility of the Mechanical Contractor.

B. Controls system shall be electric/electronic with stand-alone programmable digital thermostats. Provide control installation to accomplish the indicated or required sequence of operation including thermostats/ sensors, controllers, actuators, wiring, piping and tubing, software, graphics and other components as required for

a complete operating system. Where no sequence is indicated, contractor shall submit a proposed sequence for

D. Devices exposed to view and mounted in finished spaces shall be white in color unless otherwise noted or directed. E. All occupant adjustable devices shall be mounted in accordance with ADA and ADAAG requirements.

10.0 PIPE AND FITTINGS: Condensate drain piping:

1. PVC Pipe – Schedule 40 with solvent cement joints. PVC not permitted in plenums used for supply or Provide with plugged tee cleanouts unless otherwise accessible for cleaning. Trap all air unit condensate drains with deep traps. Condensate drain piping:

a. Outdoor units shall discharge indirectly to grade or to primary roof drains or gutters or as otherwise indicated on drawings and shall be in accordance with local codes. Condensate shall not drain to overflow roof drains. Condensate pipe sizing: Minimum condensate pipe size shall be 3/4".

Piping for individual units shall be as specified by manufacturer or a minimum of the unit connection

1-1/2"

Install manufacturer supplied condensate lift pumps and pipe discharge adaptors where indicated d. Common or manifold condensate system shall be minimum size as follows: Equipment Capacity, Tons 3-1/2 to 20 21-90 1-1/4"

11.0 PIPE SUPPORTS AND ROUTING:

A. Hangers and Supports.

Piping shall be supported in accordance with industry standards including support methods, sizes and spacing. All supports shall conform to MSS SP58 and Fed Spec WW-H-171E and A-A-1192A.

Pipe Slopes: Install hangers and supports to provide indicated or required pipe slopes to provide for drainage and venting. Deflection: Maximum pipe deflections and stresses as allowed by ANSI B31 are not exceeded. Each piping system shall be independently supported with no piping bearing on another and installed such that no weight of piping is borne by the equipment. Space hangers and supports within maximum piping span length indicated in MSS SP-58. Install building

attachments at required locations for proper piping support.

corrosive or damp environments.

connectors, supplementary steel, etc., as required for proper support of all pipe lines. Trapeze may be used for support of multiple pipes. Provide accompanying attachments including bolts and nuts, sheetmetal screws or rivets suitable for application Provide copper plated, plastic coated or felt lined hangers where required to prevent electrolysis or abrasion on copper or plastic piping systems. Upper attachments shall be manufactured items specific to the applicable structure. Include concrete inserts, wedge type drilled in inserts, steel beam and joist clamps, plates, rods, clips, straps and brackets as required by the application. Hangers shall be designed to allow for expansion and contraction of pipe lines and shall be of adequate

Provide adjustable hangers, inserts, brackets, rolls, clamps, channels, rods, guides, anchors, flexible

size to permit covering when required. Provide protective saddles and blocking where supporting insulated piping to prevent crushing insulation. All hanger and support parts shall be galvanized steel for non-corrosive environments or stainless steel for

B. Routing.

Piping shall be routed as shown on drawings, parallel to building lines unless otherwise shown, coordinated with building structure and other trades. Adjust pipe routing and drop locations with necessary pipe offsets or changes in elevation to accommodate beams and other obstructions.

INSULATION:

A. Ductwork

a. Line low velocity rectangular sheetmetal supply ductwork and return ducts, with mat faced 3 lb. density fiberglass or textile liner with anti-microbial coating. Apply with mastic and pins with erosion protection on all exposed edges.

Rectangular supply and return air ducts - 1" thick liner. Outside Air ducts in any location – No liner permitted in any circumstance. Under no circumstance shall ductwork conveying kitchen hood makeup air or exhaust be

13.0 FOUNDATIONS AND VIBRATION ISOLATION: A. Foundations: Provide fabricated supports for all equipment. Mount on 4" concrete housekeeping pads where

Provide flexible connections at all motor driven equipment, where shown and where required to hold transmitted noise and vibration to an acceptable minimum at piping and duct connections.

Duct flexible connection shall be Durodyne non-combustible, 22 ounce (minimum) polymer coated woven fabric or Equipment Vibration Isolation: All motor driven equipment shall be furnished with isolating mountings. Motors

shall be mounted on resilient bases, spring or rubber supports as recommended by the manufacturer. Isolators shall be Amber Booth or acceptable equal by Kinetics, Mason Industries, Vibration Eliminator Co. 14.0 SLEEVES AND SEALS, FLASHINGS, ROOF PIPE SUPPORTS AND UV PROTECTION:

A. Flash all pipes and vents extending through roof. Flashing details shall be in accordance with roof manufacturer's Roof pipe supports shall be prefabricated with UV resistant rubber base, unistrut channel and pipe clamp, length and height for consistent pipe elevation to suit application. Mi-Fab C6 series or acceptable equal.

Equipment labels shall be provided for all mechanical equipment and shall be self adhesive engraved plastic, blue

with white lettering, sized, minimum 1-1/2" high, and located for viewing from ground or floor level. Label shall

C. Plastic piping without UV inhibiters which is exposed to UV radiation from sunlight shall be protected by coating with a UV resistant paint. EQUIPMENT LABELS:

indicate drawing designation or unique equipment number. 16.0 CLEANING: A. New Work

1. Clean air system by operating at least three hours prior to final acceptance with temporary filters. Remove all filters and replace with clean. END OF SECTION

220 100 **PLUMBING** 

1.0 SCOPE: A. The work included under this contract consists of providing all labor, materials, tools, transportation, services, etc., necessary to complete the installation and to provide complete working systems of the Plumbing Systems, including hot and cold water, waste and vent, storm drainage, fixtures, equipment and other items described in these specifications, as

B. Extend piping systems as indicated on contract documents or to point of connection as follows:

illustrated in the accompanying drawings or as directed by the Architect/Engineer.

 5'-0" from exterior building wall lines. DOMESTIC WATER SERVICE AND SYSTEMS.

A. Contractor shall verify water service availability, including size and available pressure to service the building.

The pressure provided to fixtures within the building shall not exceed that allowed by local code or shall not exceed 80 PSIG. Provide pressure regulator(s) as required to limit the maximum pressure. PIPING, FITTINGS AND VALVES:

A. Provide hot and cold-water supply to each and every fixture, piece of equipment and to systems where makeup water is

B. Provide service valves at each main riser and as required by code.

C. Provide service valves for each item of equipment, at branch piping, fixture groups, individual fixtures and elsewhere as indicated or required. Provide balance valves, strainers, check valves and other valves as indicated or required by the

D. Provide a union or flanged connection between each item of equipment and its service valve. Copper to ferrous pipe connections shall have isolation coupling, flange or union. E. Domestic cold water underground -

1. Pipes, copper -- type "K", soft temper, wrought copper fittings, silver solder joints, 1/2" through 3". a. Under slab water piping shall be installed in sand fill and shall be jointless where possible or joints

minimized. Required joints shall be made with lead free silver solder. 2. Water piping installed exterior to the building shall be a minimum of 48" below grade.

F. Domestic water, interior, above ground –

2-1/2" and Smaller - Type "L" hard temper copper, wrought or cast copper fittings, Lead free 95/5 or Eagle Hard Silvabrite or "CB" solder joints, or roll grooved mechanical joints or pressure seal joint fittings

2. Provide valves where indicated on the drawings, where required by code, or required for service.

a. 1/4 turn Service –

1/2" thru 2" - Nibco 585-66-LF bronze lead free, 600 PSIG, full port, stainless steel ball and stem. 2) 2" thru 12", Nibco LD-2110 lead free, 200 PSIG, lug style, EPDM seals, ductile iron butterfly with nickel plated ductile disk. 3) Provide isolation valves where indicated on drawing, including at branches, terminations, each

 b. Check, Strainers and Miscellaneous – 1) Check – 1/2" thru 2" – Nibco 480-Y-LF lead free, 200 PSIG, PTFE seats, spring loaded, resilient

disc, spring loaded inline non-slam check valve, in pump discharge.

piece of equipment and elsewhere as required by code.

3. Water service back flow preventers shall be reduced pressure type, lead free unless otherwise indicated. a. Up thru 2" - Watts LF-009, lead free bronze body with ball valves, ASSE 1013/AWWA C511 and USC compliant.

Securely anchor and support piping, valves and fittings, with adequate provisions for expansion and contraction. Grade lines, free of traps, to low point at cut-off and drain valve.

G. Natural Gas --Pipe above ground:

> a. 2" and smaller – Schedule 40 black steel piping with threaded fittings. 2-1/2" and larger – Schedule 40 black steel piping with welded fittings. . 4" and smaller – Schedule 40 black steel pipe with pressure seal steel fittings. Viega Megapress XL, Apollo PowerPress or equal.

Pipe below ground: Schedule 40 black steel with a 3 layer factory coating of epoxy, adhesive and polyethylene, threaded or welded fittings. Joints shall have a cover kit of epoxy paint, adhesive and heat shrink PE Sleeves.

All underground steel piping and/or fittings shall be cathodically protected.

Natural gas piping installed exterior to the building shall be a minimum of 36" below grade and shall be installed with a tracer wire above the pipe, terminated in an accessible location or shall be installed Natural gas piping shall not be permitted to be installed interior under slab.

e. Underground gas piping shall rise above grade before entering any enclosed structure. Valves & Connectors:

Shutoff Service -1/2" thru 1" - Nibco GB-1A, brass body, chrome plated brass ball, PTFE seats, screwed ends, 5 PSIG per CGA, lever handle. 1/2" thru 2" – Nordstrom 142, iron lubricated tapered plug valve, 200 PSIG, threaded ends. 2" thru 5" – Nordstrum 143, iron lubricated tapered plug valve, 200 PSIG, flanged ends. Connections to each piece of equipment or appliances shall be made with gas cock, dirt leg and union.

Appliance connections may be made with UL listed appliance connectors with union ends. Regulator, 3/4" thru 1-1/2" - Fisher type S, spring loaded diaphragm, 1.5" WC to 2.5 PSIG discharged pressure, threaded, vented to atmosphere. Regulator, 1/2" thru 2" - Maxitrol 235L, spring loaded diaphragm, 2 PSIG Maximum inlet, 7" to 11" WC outlet, threaded, vent limited. e. Flex Connectors, Metraflex GASCT 300 series stainless steel braided hose with carbon steel threaded

Natural gas piping in return air plenum, where permitted shall be either installed in vented fabricated enclosure;

5. Paint exterior natural gas piping with corrosion inhibiting paint, color to be selected. H. Sanitary sewer, vent, interior --

Pipe – Standard weight cast iron hubless with no-hub shielded mechanical joints; solid wall schedule 40 PVC, ABS with solvent cement joints; vents may be galvanized malleable iron Plastic piping shall not be allowed in return air plenums

Floor or equipment drains shall be provided at all locations where equipment is indirect wasted. Floor drains shall be provided outside all ADA showers for roll-in applications or where there is no threshold. All gravity drainage shall be graded per code but not less than 1/8" per foot unless noted otherwise, except that piping sizes up thru 2-1/2" shall be sloped at 1/4" per foot. Piping sizes up thru 4" to be sloped at 1/4" per foot

All gravity drainage shall be graded per code but not less than 1/8" per foot unless noted otherwise, except that

Provide cleanout at the base of each stack or riser, at ends of runs greater than 100', each 135° aggregate change of

 Sanitary sewer, vent, below grade --Pipe – Standard weight cast iron hubless with no-hub heavy duty mechanical joint fittings; solid wall schedule 40

J. Sanitary sewer, exterior --

piping sizes up thru 2-1/2" shall be sloped at 1/4" per foot. Piping sizes up thru 4" to be sloped at 1/4" per foot where possible and where required by local codes. Vents below grade shall be 2" minimum size and shall be sloped up in direction of flow.

1. Pipe -- Cast or ductile iron service weight, with compression gaskets; ABS, PVC with solvent cement joints. CLEANOUTS, TEST TEES, TRAPS AND TRAP SEALS:

direction in horizontal piping, where indicated on the drawings or as required by code. Plugs, extra heavy cast brass, screwed. Scoriated tops in unfinished areas, carpet markets in carpet floors, tile top in tile floors, stainless steel cover in finished walls. Cleanouts shall be the same size as pipe up to 4" diameter, 4" cleanouts for larger pipe unless otherwise noted. Cleanouts outside the building extend to grade and terminate with extra heavy soil pipe cleanout set in 12" square

sleeved and vented; or welded or one piece.

where possible and where required by local codes.

Vents shall be sloped upward in direction of flow.

VC, ABS with solvent cement joints.

B. Provide test tees at base of risers and elsewhere as required by code.

Rectorseal SS series or acceptable equal.

C. All traps shall be deep seal type with liquid seal not less than specified by code.

Where trap primers are not specified provide all floor and hub drains with trap seal with EPDM or silicone diaphragm. conforming to requirements of ASSE 1072 or 1017.2. Provent Proset Series SG22 or TG22. Sioux Chief series 835

5.0 SLEEVES AND SEALS, FLASHINGS, ROOF PIPE SUPPORTS AND UV PROTECTION: A. Flash all pipes and vents extending through roof. Flashing details shall be in accordance with roof manufacturer's

B. Continuous roof piping penetrations shall be made weather tight, conform to roof manufacturer warranty. Penetrations shall be as detailed on drawings. Roof pipe supports shall be prefabricated with UV resistant rubber base, unistrut channel and pipe clamp, length and eight for consistent pipe elevation to suit application. Mi-Fab C6 series or acceptable equal.

with UL listing requirements. Sleeves shall be galvanized steel pipe, sheet steel or cast iron. Penetrations of below grade structures and slabs on grade shall be water proofed with mechanical link seal system, Thunder Line or acceptable Plastic piping without UV inhibiters which is exposed to UV radiation from sunlight shall be protected by coating with a UV

D. Provide sleeves where piping penetrations are required thru partitions, concrete floors, concrete slabs on or below grade

or foundation walls. Where penetrations are through fire rated assemblies, sleeves shall be fire stopped in accordance

distributing supply or waste so as to make possible the backflow or back-siphonage of polluted water into the potable water supply system. Where the possibility of back-siphonage exists, water supply to the fixture shall be introduced through a suitable backflow preventer device suitable for the hazard protected. Installed backflow preventers must be approved through the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research. 1. They may be an air gap, anti-syphon valve, atmospheric vacuum breaker, pressure vacuum breaker, double

A. No plumbing device or piping shall be installed which will provide cross-connection or interconnection between a

check, reduced pressure backflow preventer or as otherwise required by the authority having jurisdiction.

INTERCEPTORS A. Interceptors shall include the following applications:

6.0 CROSS- CONNECTIONS AND INTERCONNECTIONS:

Grease

B. Provide interceptors according to manufacturer listing and requirements. C. Interceptors and accessories shall be installed and inspected per manufacturer and local jurisdiction requirements.

Provide engineered hydromechanical interceptors as scheduled, sized for the connected load per code or per manufacturers sizing requirements to meet their listings. Interceptors shall be engineered polymer and shall be complete with all required accessories including integral flow control devices, access risers and gas tight access cover, manway risers, hold down straps, support structures, inspection port. Interceptor to be vented in accordance with code. Install in accordance with manufacturer requirements. Schier or acceptable equal.

Engineered hydromechanical polymer interceptors shall be installed and tested in accordance with manufacturer

equirements. Provide vacuum testing of installed units. Meet all preparation and vacuum testing requirements of

F. Provide interceptors with all required accessories including but not limited to:

manufacturer, performed in accordance with all local jurisdiction requirements.

Inlets, outlets, vents, flow control devices, riser tubes, manhole covers, hold down devices, inspection and pump

ARCHITECT OF RECORD

1730 Walnut Street

BRR ARCHITECTURE INC

8131 METCALF AVENUE

WWW.BRRARCH.COM

TEL: 913-262-9095

FAX: 913-262-9044

Kansas City, Missouri 64108 Fax: 816.221.1429

 $L \mid F+a \text{ Project No. } 25.7674.00$ 

OVERLAND PARK, KS 66204

THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR

USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES

AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT

62910099

BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

1. Cold water piping insulation: 1" fiber glass sectional pipe covering with universal vapor barrier jacket. At Contractor's option, Armacell AP Armaflex unicellular insulation or acceptable equal with 25/50 flame and smoke rating with equal thermal performance may be substituted for fiberglass products.

D. Seal all joints on cold water insulation to maintain vapor barrier.

Insulation shall run continuously thru hangers and supports without interruption.

PIPE SUPPORTS AND ROUTING: A. Hangers and Supports

8.0 INSULATION:

Piping shall be supported in accordance with industry standards including support methods, sizes and spacing. ll supports and installation shall conform to MSS SP58 and 69 and Fed Spec WW-H-171E and A-A-1192A. Pipe Slopes: Install hangers and supports to provide indicated or required pipe slopes to provide for drainage and

Deflection: Maximum pipe deflections and stresses as allowed by ANSI B31 are not exceeded. Each piping system shall be independently supported with no piping bearing on another and installed such that no weight of piping is borne by the equipment. Provide adjustable hangers, inserts, brackets, rolls, clamps, channels, rods, guides, anchors, flexible connectors,

supplementary steel, etc., as required for proper support of all pipe lines. Trapeze may be used for support of multiple pipes. Provide accompanying attachments including bolts and nuts, sheetmetal screws or rivets suitable Upper attachments shall be manufactured items specific to the applicable structure. Include concrete inserts, wedge type drilled in inserts, steel beam and joist clamps, plates, rods, clips, straps and brackets as required by

Hangers shall be designed to allow for expansion and contraction of pipe lines and shall be of adequate size to permit covering when required. Provide protective saddles and blocking where supporting insulated piping to prevent crushing insulation.

Piping shall be routed as shown on drawings, parallel to building lines unless otherwise shown, coordinated with building structure and other trades. Adjust pipe routing and drop locations with necessary pipe offsets or changes in elevation to accommodate beams and other obstructions.

10.0 EQUIPMENT AND PIPE LABELS: A. Equipment labels shall be provided for all plumbing equipment and shall be self-adhesive engraved plastic, blue with

Pipe labels for domestic water, waste, vent and gas piping shall be preprinted, color-coded, with 1-1/2" lettering indicating service, and showing flow direction, locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and locations as follows:

white lettering, sized, minimum 1-1/2" high, and located for viewing from ground or floor level. Label shall indicate drawing

Near each valve and control device. Near penetrations through walls, floors, ceilings, and inaccessible enclosures. Near major equipment items and other points of origination and termination.

Warning labels shall be self-adhesive engraved plastic or preprinted plastic as required by application with white lettering on red background provided at locations as required by code or where hazards to personnel exist.

11.0 MISCELLANEOUS

designation or unique equipment number.

A. Indirect wastes shall discharge full size thru an air gap to a floor, equipment drain, sanitary floor sink or hub drain. The floor or equipment drain grate shall be fitted with a funnel, the sanitary floor sink shall have a partial grate or the grate shall be omitted. Drains shall be located so they are accessible and not a tripping hazard. B. Provide escutcheons at all penetrations of exposed walls and ceilings. Escutcheons shall be chrome plated brass in occupied areas, prime paint finish for unoccupied areas unless otherwise noted. Escutcheons for exterior or moist areas

12.0 PROTECTION OF WORK

A. Protection

shall be brass.

Protect and cover piping and fixture waste and water openings to prevent entry of dirt and debris. Cover and protect fixtures and plumbing equipment to prevent damage.

A. Soil, waste and vent piping testing:

Initial Piping Water Test: Fill with water to the top of the highest point of the system extending through roof. Systems may be tested in whole or part. The system shall remain leak free under test for a minimum period of a. Gravity Drain Test: Either 10' water column or at a pressure not less than 10% above that the piping will be subjected to during nominal operation

Final Piping Test: The completed system(s) shall be visually inspected to determine compliance with all codes and standards. Where required by the building official, the completed system shall be smoke tested with all traps water filled and system pressured to 1" WC for a minimum period of fifteen (15) minutes.

B. Water and gas line testing:

Water piping shall be purged and tested with compressed air or water at 50 PSIG above the operating pressure but not to exceed the pressure rating of piping system materials for a period of 2 hours with no measurable Natural gas lines shall be inspected and blown out with dry compressed air or nitrogen to purge of debris and tested at 1-1/2 times the operating pressure or a minimum of 25 PSIG pressure with no measurable pressure drop. All test procedures including duration of test shall be in accordance with NFPA 54 and the International Fuel

C. After successful testing, sterilize water system with an approved solution in accordance with local health officials. D. Contractor to submit all test data and other documentation for record.

14.0 FIXTURE BRANCH PIPING:

A. Fixture branch and connection sizes shall be as shown in the plumbing fixture schedule on the drawings and not less than Minimum waste or vent size below slab on grade shall be 2".

15.0 PLUMBING FIXTURES:

Refer to plumbing fixture schedule for plumbing fixtures and accessories. Include all fittings and accessories as required B. Where required for ADA compliance, provide lavatory and sink offset drain and tailpiece assembly.

16.0 FIXTURE AND ACCESSORY MANUFACTURERS:

A. Fixtures, equipment and accessories are specified by manufacturer's numbers as to the type and quality required.

B. Specified manufacturers and approved equal manufacturers are as follows: APPROVED EQUAL MANUFACTURERS

FIXTURE, ITEM OR EQUIPMENT Waste Fittings

Stephens, Watts J R Smith, Sioux Chief, Wade, Watts, Zurn, Josam Drains and Drainage Products Woodford, J R Smith, Josam, Zurn, Prier Brass **END OF SECTION** 

Dearborn Brass, McGuire, ProFlo, Jones

A. Fire protection shall be governed by all applicable provisions of the Contract Document. B. Provide a complete and operational fire protection system as required by NFPA, systems shall include:

210 100

Wet sprinkler system -- NFPA 13. Dry or pre-action sprinkler system – NFPA 13. Private Fire Service Mains – NFPA 24. Wet chemical fire suppression system – NFPA 17A.

Systems shall be compliant with NFPA 70, 72, FM and UL as applicable.

All fire protection components shall be UL and FM approved devices where applicable as required by NFPA. Upon completion of the work, system acceptance testing shall be performed by the sprinkler contractor in

accordance with requirements of NFPA. Perform all flushing and testing of the system including pressure and flow tests and testing of all electrical, controls and safety components. Provide permanent identification of all valves, piping, electrical components and equipment in accordance with

F. Contractor shall provide spare sprinklers in cabinet as required by NFPA. Upon completion of the project, the fire protection contractor shall furnish 'Record' documentation including plans, equipment data sheets for all component and testing results as required by NFPA.

WET AND DRY SPRINKLER AND STANDPIPE SYSTEMS

Systems shall be in accordance with NFPA 13 and complete in every respect to provide complete coverage of all areas in the building, or throughout the area of work as indicated. Sprinkler system shall be hydraulically designed Sprinkler system shall be a delegated design, and contractor shall be responsible for layout and design of the fire

sprinkler system. Submit all necessary documentation (plans, calculations, cut sheet literature and flow tests) and obtain necessary permits for approval and installation of the system. Provide PE or NICET stamp, as required by the Authority Having Jurisdiction, on submittal drawings. As required by application, system shall include but not be limited to pipe and hangers, sprinklers, valves, inspector

tests, fire department connection, audible and visible alarms, pressure, flow and tamper switches, gauges, deluge valves, control panels, wiring, hose valves, etc. System shall extend from point of connection 5' from building wall lines. Service entrance piping shall be in accordance with NFPA 24 including installation, testing and flushing.

Sprinkler system service entrance. Underground fire main – Provide new 6" minimum fire protection main outside the building and extended

to the fire protection water service in the sprinkler riser room. Backflow preventer – provide new Double Detector Check Valve Assembly. Provide new fire sprinkler riser(s) system control valve with tamper switches and manifolded riser with isolation valves for each wet and dry sprinkler system. All valves shall be provided with tamper switches.

Where required to prevent freezing of the system, provide dry sidewall or pendant sprinklers, an approved dry sprinkler system with air compressor and nitrogen generation system, or a UL-listed anti-freeze system with fill station. Include all necessary components including isolation and control valves, alarm devices and related items for a complete working system.

3.0 PIPING, FITTING AND VALVES:

A. Fire protection underground -

b. Check –

1) 2-1/2" thru 12"

1. Pipe -- Class 50 molded ductile iron pipe, cement mortar lined, with ductile fittings and mechanical compression joints, 3" and larger. PE pipe and fittings with minimum thickness equivalent to Class 150 and Molded PE Fittings: PE buttfusion type, made to match PE pipe dimensions and class.

PVC pipe and fittings - AWWA C900 or UL 1285, Class 150 and Class 200, with bell end with gasket, and with spigot end with PVC Fittings with bell-and-spigot or double-bell ends. Include elastomeric gasket in

 B. Fire protection piping and components above ground -Pipe –

E. Provide new sprinkler piping and sprinklers throughout area of work.

a. 2" and smaller – Schedule 40, black steel, malleable iron threaded, flanged or welded fittings; roll or cut groove mechanical joints with wrought or forged steel fittings or roll grooved end couplings. b. 1-1/2" and larger – Schedule 10, black steel; roll groove mechanical joints with roll grooved end c. Contractor to match existing building piping material standards.

Sprinkler piping shall be independently supported from all other systems, no other system or component may bear on any sprinkler pipe or support. In accordance with NFPA 25 or where required by local authority, sprinkler piping shall not be subjected to external loads by materials either hung from or resting

Valves – Nibco T-104-0 Bronze, UL and FM approved OS&Y Gate, 175 PSIG. 2) 2-1/2" thru 12" a) Nibco F607-OTS Cast Iron, UL and FM approved OS&Y Gate, 175 PSIG.

a) Nibco F-908W, Cast Iron Horizontal Swing, Bolted Bonnet, UL and FM approved, c. Double Check Detector Assembly – 1) 3" thru 10" a) Watts 757DCDA-OSY, stainless steel double check assembly with OS&Y shutoff

valves, detector meter, UL and FM approved. d. Sectional Zone Valves – Nibco T-104-0 Bronze, UL and FM approved OS&Y Gate, 175 PSIG. Provide with

tamper and flow switches. Sprinklers may be supplied by UL 2443 listed 1" minimum 304 stainless steel (braided or unbraided corrugated) 175 PSIG rated flexible hoses with all associated UL listed fittings, threaded ends, brackets

and other attachments, 6' maximum length. Victaulic Vic-Flex or acceptable equivalent. Auxiliary Drains shall be provided in accordance with NFPA 13 at all system low points for complete system drainage. Provide signage indicating all drain locations. 4.0 SPRINKLERS

Provide quick response sprinklers including replacement sprinklers, standard response, extended coverage or dry Replace existing non-compliant sprinklers as required by application. Sprinklers older than 50 years shall be

removed and replaced with new, or a representative sample from each area shall be tested per NFPA 25. Sprinklers shall be of the following styles, subject to application.

Recessed chrome plated brass with 2-piece adjustable escutcheon in gypsum and lay-in tile ceilings. Pendant chrome plated brass with escutcheon in gypsum and lay-in tile ceilings. Concealed brass with painted flat concealer plates in gypsum and lay-in tile ceiling. Upright brass in unfinished areas. Provide wire cage in areas subject to damage.

Upright chrome plated brass in finished areas with exposed structure. Where not otherwise indicated, sprinkler type, style, appearance and coverage to match existing. Any sprinklers removed shall be replaced with new sprinklers.

Locate sprinklers at center of 2 x 2 lay-in tiles or 2 x 2 portion of 2 x 4 lay-in tiles. Align sprinklers in a row when in gypsum board ceilings. All location tolerances shall be +/- 1/2". Refer to reflected ceiling plans for coordination with lights, diffusers, exit signs, etc.

Install sprinklers above combustible ceilings in concealed combustible space per NFPA 13-8.15. Install sprinklers above and below all cloud ceilings in accordance with NFPA 13 8.15.24. Install sprinklers above ceilings where spaces have ceilings that are lower than the rest of the area, the space above the lower ceiling shall be sprinklered unless it complies with the rules of 8.15.1.2 for allowable unsprinklered concealed spaces. The sprinkler system shall extend beyond the lower ceiling as required by NFPA 13 and be designed in accordance with 8.15.23.3.

**END OF SECTION** 

15.0 FIRE ALARM SYSTEM:

260 100

ELECTRICAL

a. Electrical service and distribution system revisions.

Systems of conduit, conductors, and boxes

Power service to the various motors.

Complete lighting and power systems.

. All systems, wiring and conduit as required.

Rough-in and final connection to equipment furnished by others.

A. The work included under this contract consists of the furnishing of all labor, materials, tools, transportation,

services, etc., necessary to complete the installation of the electrical systems and other items herein listed, all

as directed by the Architect or Engineer, which work is comprised of, but not limited to the following principal

2. Control wiring and electrical installation and connections for items in other contracts as may be listed in the

5. All cable ties for low voltage cable systems located in plenums utilized for air movement that are not

Raceway wiring systems shall be concealed in all finished parts of the building, where possible. Where the

raceways are exposed, they shall be run parallel with the building walls in a neat and workmanlike manner.

Should it appear necessary to expose any conduit or wiring in finished spaces, it shall be brought to the

Architect's attention immediately and this Contractor shall rearrange associated work as directed to facilitate an

Contractor is responsible to provide liaison with electrical and communication companies. The Contractor shall

provide and install all required equipment and connect as required to complete an operating service to the

All electrical conductors are to be installed in metal raceways, unless specifically specified or noted otherwise.

Galvanized steel or intermediate steel conduit as permitted by code. No conduit smaller than 3/4" to be used.

Use set screw Provide flexible conduit connection for final connection to each motor not to exceed 3' in length

and recessed lighting fixtures not to exceed 6' in length. Provide pull wires in all empty conduit systems. Identify

terminus of each pull wire. All exposed raceways shall be installed with runs parallel and/or perpendicular with

building walls. Fasten all rigid/non-flexible conduit every 8' and 2' from each box. Conduit shall be EMT where

not subject to mechanical damage as permitted by National Electric Code (N.E.C.). EMT connectors and

couplings 4" and smaller shall be compression type. Type MC Cable with ground wire is allowed in concealed

spaces only, behind walls and above ceiling. Fasten all MC and or FMC every 4.5' feet and within 12" inches of

Conduit bushings shall be provided and installed inside all disconnects, pull boxes, panelboards, switchboard

Schedule 40 PVC conduit may be used for underground installation and where permitted by National Electric

Electrical conductors, soft annealed copper with conductivity 98% of that of pure, stranded copper, 90 degree -

600V insulation and equal to General Cable Company. Wire and cable for all feeders, subfeeders, motor circuits

and high ambient location type shall be THHN. All other branch circuit wiring shall be type XHHN or THHN.

• Contractor shall use the following color designations and be consistent throughout the project. Color

For conductors larger than #4, Field-Applied, Color-Coding Conductor Tape can be applied in half-lapped turns for a minimum distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply

last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings. When using black insulated conductors, contractor shall color-code conductor inside all pullbox

b. Feeders: Copper for feeders smaller than No. 4 AWG; copper or aluminum for feeders No. 4 AWG and

c. Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspaces: Type THHN, single conductors in

d. Feeders Concealed below Slabs-on-Grade, and Underground: Type THWN-2, single conductors in

g. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN, single conductors in raceway.

h. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THWN-2, single

Ground all electrical apparatus in accordance with N.E.C. and as specified herein. Provide a separate grounding conductor for all lighting, receptacle and equipment circuits. All cabinets, switchboards, equipment

cases, motor frames, interior metal cold water piping systems, and system neutral conductors shall be effectively

grounded. Use solderless pressure type connectors, no perforated strap connectors will be allowed. Ensure

Flush or surface mounted as indicated on drawings. Provide where shown on drawings and where required by

General Electric, Appleton, Steel City or Raco hot dipped galvanized steel boxes, or equal. Install at terminal

of each conduit run, each outlet, or device. Provide size, type and design to suit structural conditions. Adequate

to accommodate size and number of raceways, conductors, device or fixture served. Provide plaster rings or

covers on boxes where required on exposed work, use approved cast ferrous alloy outlet, junction boxes and

fittings. Fixture or device cover shall completely conceal the size outlet box used. Install 3/8" fixture stud for

lighting fixtures where required. Locate ceiling outlets to work with architectural features as directed. Switches

installed 48" above floor on strike side of door as finally hung. Receptacles and telephone outlets, 18" above

Panel boards are as indicated on the drawings. Main lugs only unless noted or specified otherwise. Provide

typewritten schedule of circuits in index cardholder. Provide with hinged door and hinged cover. All circuit

breakers shall be bolt-on molded case and have positive "trip" indication. Breakers used on existing panels shall match existing units and shall be labeled to have positive "trip" indication. Breakers shall be labeled to

indicate suite number and use. Panelboards shall be ABB(General Electric), Square D, Siemens or Eaton/Cutler Hammer. All single pole circuit breakers shall be 'switch duty rated'. Panelboards shall be fully

Heavy duty NEMA type 'HD' - same manufacturer as panelboards. Plastic nameplate properly engraved with name of equipment served, secured to switch cover. Fuses shall be Bussmann of sizes and types scheduled.

This Contractor to provide all necessary conduit, boxes and supports to equipment furnished by Owner and as

Outlets, adhesive film label, machine printed clear background with black letters, by thermal transfer or

equivalent process. Minimum letter height shall be 1/4 inch. Face plate shall be labeled with panel and circuit

Interior equipment self-adhesive, engraved, laminated acrylic or melamine label: adhesive backed, with white

Exterior equipment: Stenciled or engraved, laminated acrylic or melamine label: punched or drilled for screw

A. Contractor shall label each and every j-box above ceiling with a permanent marker with panel and circuit

finished floor unless otherwise noted. Verify all outlet locations on job with Architect.

indicated on drawings. Provide a disconnect switch and starter if required.

letters on a dark-gray background. Minimum letter height shall be 3/8 inch (10 mm).

Comply with NEMA ST 20, and list and label as complying with UL 1561.

2. Finish: Comply with NEMA 250 for indoor corrosion protection.

F. Manufacturers: Square-D, Siemens, ABB/GE or Eaton/Cutler Hammer.

steel cover plates to mate and match device for each outlet.

mounting. White letters on a black background. Minimum letter height shall be 1 inch (25 mm).

1. Core and coil shall be encapsulated within resin compound, sealing out moisture and air.

Taps for transformers 25 KVA and larger: Two 2.5 percent taps above and two 2.5 percent taps below normal

Duplex receptacles shall be Hubbell #5352-X grounding type, 20A., 125V.; G.F.C.I. shall be Hubbell GF-5352 X, 20A., 125V.; duplex, G.F.C.I. TYPE. Isolated ground receptacles shall be orange in color, Hubbell IG-5352, 20A, 125V, duplex. Isolated ground receptacles shall be equipped with a Hubbell IGP-8 plate, orange in color inscribed "Isolated Ground". Wall toggle switches shall be Hubbell Number 1221-X and Number 1223-X for single pole and three way types respectively. Other switch, receptacle, and outlet device variations shall be by Hubbell of "Spec. Grade" quality. Equivalent devices of P & S or Leviton will be acceptable in lieu of the above listed devices. Contractor to verify color of devices with Architect before purchase. Provide brushed stainless

This Contractor shall furnish and install complete, unless otherwise specified, a lighting fixture on each and every lighting outlet shown on the drawings of each type scheduled by letter and description. All fixtures shall be equipped with lamps as scheduled or specified herein. All fixtures installed in suspended ceilings must be

securely fastened to framing members per NEC 410-36b and local seismic code requirements.

continuous bond where flexible conduit is used. Provide bonding jumper inside all flexible conduit. Grounding

f. Exposed Branch Circuits, Including in Crawlspaces: Type THHN, single conductors in raceway.

larger. Conductors shall be solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

c. Branch Circuits: Copper. Solid for No. 12 AWG and smaller; stranded for No. 10 AWG and larger.

designation for switch legs and or travelers: Violet, Pink or Purple may be used.

a. Feeders: Copper; solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

d. Power-Limited Fire Alarm and Control: Solid for No. 12 AWG and smaller.

Conductor insulation and multi-conductor cable application and wiring methods:

e. Feeders Concealed in Concrete: Type THHN, single conductors in raceway.

a. Service Entrance: Type THWN-2, single conductors in raceway.

b. Exposed Feeders: Type THHN, single conductors in raceway.

conduit termination, excluding final connections to motors and lighting fixtures.

or similar type equipment and where permitted by National Electric Code (N.E.C.).

Minimum wire size shall be #12 gauge AWG. Control wiring may be #14 gauge.

B. For conductors #4 or small use the following color-code:

or similar type enclosures.

conductors in raceway.

6.0 CABINETS, JUNCTION AND PULL BOXES:

per N.E.C. 250, and any local requirements.

rated. Series rated panels are not permitted.

10.0 MOTOR AND CONTROL WIRING AND CONNECTIONS:

Make splices at junction boxes, pull boxes, or outlet boxes only.

code. Construct of cold gauge steel for flush surface mounting.

4.0 GROUNDING:

5.0 SPLICE AND TAPS:

7.0 OUTLET BOXES:

8.0 PANELBOARDS:

9.0 DISCONNECT SWITCHES:

12.0 TRANSFORMERS:

13.0 WIRING DEVICES:

14.0 LIGHTING FIXTURES:

B. Cores: One leg per phase.

C. Coil Material: Aluminum.

D. Enclosure: Ventilated, NEMA 250, type,

Finish Color: Gray.

208Y/120V, 1-phase: black, red, white.

208Y/120V, 3-phase: black, red, blue, white.

Green shall be used for ground wire conductor.

480Y/277V, 3-phase: brown, orange, yellow, gray.

approved installation. Contractor to coordinate with mechanical trades to avoid ductwork and piping.

installed in conduit shall be 25/50 flame and smoke rated, Hellermann Tyton T50R2C2UL or equivalent.

3. Empty conduit and boxes for future installation of telephone wiring and miscellaneous systems.

1.0 SCOPE:

2.0 RACEWAYS:

3.0 WIRES AND CABLES:

Electrical system for light and power:

Switches and panel boards.

d. Receptacles and wiring devices.

e. Lighting fixtures and lamps.

Fire alarm system shall be a delegated design, contractor shall be responsible for layout and design of the fire alarm system. Submit all necessary documentation including stamped and signed drawings to the authority having jurisdiction and obtain necessary permits for approval and installation of the system prior to submitting

> Engineer's drawings showing fire alarm devices are schematic, and only provide code intent, coordination, and all devices may not be indicated. Final layout shall be provided by the Fire Alarm contractor. Fire alarm contractor shall become the Designer of Record as such, the contractor shall be responsible to verify device layouts comply with all applicable codes and shall include in bid all cost associated with additional devices should they be required. Final layout shall be coordinated with the architect and plans.

Contractor shall include in bid all cost associated with Fire alarm modifications.

Contractor shall provide a complete fire alarm system with intelligent addressable devices. Systems shall be non-coded fire alarm protective type system. Fire alarm audible and visual devices shall be placed throughout the facility. Manual pull stations shall be located at each exterior exit and stairwell per code requirements. Heat/smoke detectors for mechanical equipment shall be interlocked and connected to alarm system in accordance with NFPA 90A and 96. Water flow devices, tamper devices and elevator capture shall be per NFPA and local code requirements.

All detection devices shall be addressable, non-coded fire alarm protective type matching base building type and style. Overall system shall utilize the following:

1. Fire alarm speakers and strobes shall be located throughout the facility per code requirements. 2. Manual pull stations shall be located at each exterior exit and stairwell and be per code requirements. 3. System signal wire shall be type THHN in conduit or shall be UL listed plenum cable.

F. All new equipment shall be ADA compliant, be by one manufacturer, and warranted for a minimum of one year. END OF SECTION

**SECTION 260573** OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY

PART 1 - GENERAL

A. Section includes a computer-based, fault-current study to determine the minimum interrupting capacity of circuit

B. The AIC ratings indicated on the Drawings are preliminary and will be finalized based on the results of the fault current study. Equipment AIC ratings for furnished equipment shall be as required by the results of the fault current study at no additional cost.

Section includes computer-based, overcurrent protective device coordination studies to determine overcurrent protective devices and to determine overcurrent protective device settings for selective tripping.

D. Section includes a computer-based, arc-flash study to determine the arc-flash hazard distance and the incident energy to which personnel could be exposed during work on or near electrical equipment.

The study shall be performed by a professional engineer employed by the manufacturer of the switchboards and panelboards furnished for the project. The report shall be submitted with the manufacturers name, logo and standard letterhead. A study performed by a third-party engineer that is not employed by the manufacturer will not be accepted.

F. Overcurrent protective device coordination study must be completed and accepted prior to ordering associated equipment so that device ratings can be coordinated and modified as required. Product data submittals for switchboards, panelboards and overcurrent protection devices received prior to receiving the overcurrent protective device study will be rejected and returned. Product data submittals for switchboards, panelboards and overcurrent protection devices will not be returned until the coordination study has been reviewed and accepted by the Engineer.

1.1 SCOPE

A. The study shall originate at the utility service entrance and include the distribution system that serves the equipment included in the project scope. The study shall include the equipment indicated in the Riser / One Line Diagrams included in the Construction Documents.

1.2 DEFINITIONS

A. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed and salvaged, or removed and reinstalled. Existing to remain items shall remain functional throughout the construction period.

B. Field Adjusting Agency: An independent electrical testing agency with full-time employees and the capability to adjust devices and conduct testing indicated and that is a member company of NETA.

C. OCPD: Overcurrent Protective Device

D. One-Line Diagram: A diagram that shows, by means of single lines and graphic symbols, the course of an electric circuit or system of circuits and the component devices or parts used therein. Sometimes also referred as "Single Line Diagram" or "Electrical Riser Diagram".

Power System Analysis Software Developer: An entity that commercially develops, maintains, and distributes computer software used for power system studies.

F. Power Systems Analysis Specialist: Professional engineer in charge of performing the study and documenting

recommendations, licensed in the state where Project is located. G. Protective Device: A device that senses when an abnormal current flow exists and then removes the affected

portion of the circuit from the system. H. SCCR: Short-circuit current rating.

I. Service: The conductors and equipment for delivering electric energy from the serving utility to the wiring system of the premises served.

1.3 SUBMITTALS

A. Product Data: For computer software program to be used for studies;

B. Qualification Data: For coordination-study specialist; For Field Adjusting Agency Study Report Submittal: Study input data, including completed computer program input data sheets; Short-circuit analysis study and equipment evaluation report; Coordination-study analysis along with recommended OCPD settings report; Arc flash hazard analysis study; Study output data, tables, and related information; Study recommendations; Include the short-circuit study, overcurrent protective device coordination study, and arc flash study into a complete combined report.

1.4 CLOSEOUT SUBMITTALS

maintenance manuals; Final report after any noted corrections; Provide maintenance procedures in equipment manuals according to requirements in NFPA 70E.

A. Operation and Maintenance Data: For overcurrent protective devices to include in emergency, operation, and

1.5 QUALITY ASSURANCE

A. Study shall be performed using commercially developed and distributed software designed specifically for power

B. Software algorithms shall comply with requirements of standards and guides specified in this Section.

C. Manual calculations are unacceptable.

D. Coordination Study Specialist Qualifications: An organization experienced in the application of computer software used for studies, having performed successful studies of similar magnitude on electrical distribution systems using similar devices. Professional engineer, licensed in the state where Project is located, shall be responsible for the study. All elements of the study shall be performed under the direct supervision and control of this professional engineer. The professional engineer shall be employed by the manufacturer of the switchboards and panelboards furnished for the project. The report shall be submitted with the manufacturers name, logo and standard letterhead. A study performed by a third-party engineer that is not employed by the manufacturer will not be accepted.

E. Comply with IEEE 399 for general study procedures.

F. Comply with IEEE 242 for short-circuit currents and coordination time intervals. G. Comply with IEEE 1584 and NFPA 70E for arc-flash hazard calculations.

PART 2 - PRODUCTS

2.1 SHORT-CIRCUIT STUDY REPORT CONTENTS

A. Executive summary of study findings.

B. Study descriptions, purpose, basis, and scope. Include case descriptions, definition of terms, and guide for

C. One-line diagram of modeled power system.

D. Comments and recommendations for system improvements or revisions in a written document, separate from

Evaluate equipment and protective devices and compare to available short-circuit currents. Verify that equipment

withstand ratings exceed available short-circuit current at equipment installation locations.

F. Tabulations of circuit breaker, fuse, and other protective device ratings versus calculated short-circuit duties. Short-Circuit Study Input Data: One-line diagram of system being studied; Power sources available;

Manufacturer, model, and interrupting rating of protective devices; Conductors; Transformer data. H. Short-Circuit Study Output Reports: Low-Voltage Fault Report; Momentary Duty Report; Interrupting Duty

2.2 COORDINATION STUDY REPORT CONTENTS

A. Executive summary of study findings. B. Study descriptions, purpose, basis, and scope. Include case descriptions, definition of terms, and guide for

C. One-line diagram of modeled power system.

D. Protective Device Coordination Study: Report recommended settings of protective devices, ready to be applied in the field. Use manufacturer's data sheets for recording the recommended setting of overcurrent protective

E. Time-Current Coordination Curves: Determine settings of overcurrent protective devices to achieve selective coordination. Graphically illustrate that adequate time separation exists between devices installed in series, including power utility company's upstream devices. Prepare separate sets of curves for the switching schemes and for emergency periods where the power source is local generation.

2.3 ARC-FLASH STUDY REPORT CONTENT

A. Executive summary of study findings.

B. Study descriptions, purpose, basis, and scope. Include case descriptions, definition of terms, and guide for interpretation of results.

C. One-line diagram, showing the following: OCPD, conductors, transformers, motor and generators, switchgear, switchboard, motor-control center, panelboard designations, and ratings.

D. Arc-Flash Study Output Reports: Interrupting Duty Report E. Incident Energy and Flash Protection Boundary Calculations:

F. Fault study input data, case descriptions, and fault-current calculations including a definition of terms and guide for interpretation of computer printout.

2.4 ARC-FLASH WARNING LABELS

Label shall have an orange header with the wording, "WARNING, ARC-FLASH HAZARD," and shall include the following information taken directly from the arc-flash hazard analysis: Location designation; Nominal voltage; Protection boundaries; Arc flash PPE category; Required minimum arc rating of PPE in Cal/cm squared; Available incident energy; Working distance; Engineering report number, revision number, and issue date.

B. Labels shall be machine printed, with no field-applied markings.

1730 Walnut Street Kansas City, Missouri 64108 Fax: 816.221.1429  $L \mid F+a \text{ Project No. } 25.7674.00$ 

BRR ARCHITECTURE INC

8131 METCALF AVENUE

WWW.BRRARCH.COM TEL: 913-262-9095

FAX: 913-262-9044

OVERLAND PARK, KS 66204

ARCHITECT OF RECORD

62910099 EDG PROFESSIONAL SEAL



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

### PART 3 - EXECUTION

- 3.1 POWER SYSTEM DATA
- A. Obtain all data necessary for conduct of the study.
- B. Gather and tabulate the required input data to support the study. Record data on a Record Document copy of one-line diagram. Comply with recommendations in IEEE 551 as to the amount of detail that is required to be acquired in the field. Field data gathering shall be under direct supervision and control of the engineer in charge of performing the study, and shall be by the engineer or its representative who holds NETA ETT-Certified Technician Level III or NICET Electrical Power Testing Level III certification.
- 3.2 SHORT-CIRCUIT STUDY
- Perform study following the general study procedures contained in IEEE 399.
- B. Calculate short-circuit currents according to IEEE 551.
- C. Base study on device characteristics supplied by device manufacturer.
- D. Extent of electrical power system to be studied is indicated on Drawings.
- E. Begin short-circuit current analysis at the service, extending down to system overcurrent protective devices to where fault current is 10 kA or less.
- F. Study electrical distribution system from normal and alternate power sources throughout electrical distribution system for Project. Study all cases of system-switching configurations and alternate operations that could result in maximum fault conditions.
- G. Include the ac fault-current decay from induction motors, synchronous motors, and asynchronous generators and apply to low- and medium-voltage, three-phase ac systems. Also account for the fault-current dc decrement to address asymmetrical requirements of interrupting equipment.
- H. Calculate short-circuit momentary and interrupting duties for a three-phase bolted fault and a single line-to-ground fault at each equipment indicated on one-line diagram.
  I. Include in the report identification of any protective device applied outside its capacity.
- 3.3 COORDINATION STUDY
- A. Comply with IEEE 242 for calculating short-circuit currents and determining coordination time intervals.
- B. Comply with IEEE 399 for general study procedures.
- C. Base study on device characteristics supplied by device manufacturer.
- D. Extent of electrical power system to be studied is indicated on Drawings.
- E. Begin analysis at the service, extending down to system overcurrent protective devices where fault current is 10
- F. Study electrical distribution system from normal and alternate power sources throughout electrical distribution system for Project. Study all cases of system-switching configurations and alternate operations that could result in maximum fault conditions.
- G. Transformer Primary Overcurrent Protective Devices:
- H. Motor Protection: Select protection for low-voltage motors according to IEEE 242 and NFPA 70.
- I. Conductor Protection: Protect cables against damage from fault currents according to ICEA P-32-382, ICEA P-45-482, and protection recommendations in IEEE 242. Demonstrate that equipment withstands the maximum short-circuit current for a time equivalent to the tripping time of the primary relay protection or total clearing time of the fuse. To determine temperatures that damage insulation, use curves from cable manufacturers or from listed standards indicating conductor size and short-circuit current.
- J. Generator Protection: Select protection according to manufacturer's written instructions and to IEEE 242.
   K. Include the ac fault-current decay from induction motors, synchronous motors, and asynchronous generators and apply to low- and medium-voltage, three-phase ac systems. Also account for fault-current dc decrement, to
- address asymmetrical requirements of interrupting equipment.

  L. Calculate short-circuit momentary and interrupting duties for a three-phase bolted fault and a single line-to-
- ground fault at each equipment indicated on one-line diagram.

  M. Protective Device Evaluation: Evaluate equipment and protective devices and compare to short-circuit ratings;

  Adequacy of equipment bus bars to withstand short-circuit stresses: Any application of series-rated devices shall
- M. Protective Device Evaluation: Evaluate equipment and protective devices and compare to short-circuit ratings; Adequacy of equipment bus bars to withstand short-circuit stresses; Any application of series-rated devices shall be recertified, complying with requirements in NFPA 70; Include in the report identification of any protective device applied outside its capacity.
- 3.4 ARC-FLASH HAZARD ANALYSIS
- A. Comply with NFPA 70E and its Annex D for hazard analysis study.
- B. Preparatory Studies: Perform the Short-Circuit and Protective Device Coordination studies prior to starting the Arc-Flash Hazard Analysis.
- C. Calculate maximum and minimum contributions of fault-current size.
- D. Calculate the arc-flash protection boundary and incident energy at locations in electrical distribution system where personnel could perform work on energized parts.
- E. Calculate the limited, restricted, and prohibited approach boundaries for each location.
- F. Incident energy calculations shall consider the accumulation of energy over time when performing arc-flash calculations on buses with multiple sources. Iterative calculations shall take into account the changing current contributions, as the sources are interrupted or decremented with time.
- G. Arc-flash energy shall generally be reported for the maximum of line or load side of a circuit breaker.
- H. Base arc-flash calculations on actual overcurrent protective device clearing time. Cap maximum clearing time at two seconds based on IEEE 1584, Section B.1.2.
- 3.5 FIELD ADJUSTING
- Adjust relay and protective device settings according to recommended settings provided by the coordination study.
- B. Make minor modifications to equipment as required to accomplish compliance with short-circuit and protective device coordination studies.
- C. Testing and adjusting shall be by a full-time employee of the Field Adjusting Agency, who holds NETA ETT-Certified Technician Level III or NICET Electrical Power Testing Level III certification. Perform each visual and mechanical inspection and electrical test stated in NETA ATS. Certify compliance with test parameters. Perform NETA tests and inspections for all adjustable overcurrent protective devices.
- 3.6 ARC FLASH LABELING
- A. Apply arc-flash label on the front cover and on side or rear covers with accessible live parts and hinged doors or removable plates for each equipment included in the study. Base arc-flash label data on highest values
- B. Each piece of equipment listed below shall have an arc-flash label applied to it: Motor-control center; Low-voltage switchboard; Switchgear; Low voltage transformers; Panelboards; Safety switches; Control panel; Automatic Transfer Switch; Generator.
- C. Note on record Drawings the location of equipment where the personnel could be exposed to arc-flash hazard during their work. Indicate arc-flash energy. Indicate protection level required.
- 3.7 APPLICATION OF WARNING LABELS
- A. Install arc-flash warning labels under the direct supervision and control of Power System Analysis Specialist.
- 3.8 DEMONSTRATION
- A. Engage Power Systems Analysis Specialist to train Owner's maintenance personnel.
- B. Acquaint personnel in fundamentals of operating the power system in normal and emergency modes.
- C. Hand-out and explain the coordination study objectives, study descriptions, purpose, basis, and scope. Include case descriptions, definition of terms, and guide for interpreting time-current coordination curves.
- D. For Owner's maintenance staff certified as NETA ETT-Certified Technicians Level III or NICET Electrical Power Testing Level III Technicians, teach how to adjust, operate, and maintain overcurrent protective device settings.
   E. Inform of the potential arc-flash hazards associated with working on energized equipment and the significance of
- arc-flash warning labels.

  END OF SECTION

BRR ARCHITECTURE INC.

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044

CONSULTANT

Fender

+ 8\$\$0CIBLE\$

1730 Walnut Street

Kansas City, Missouri 64108

COPYRIGHT © 2025 LANKFORD | FENDLER+ ASSOCIATES, INC.

L | F+a Project No. 25.7674.00

ECT TITLE

LEE'S SUMMIT, MO

PROJECT NUMBER

PROJECT MANAGER DRAWN BY CH

PROFESSIONAL SEAL

NUMBER PE-2009005130

THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE
CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR
USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS
DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES
THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT
AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR
APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES
AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY
ARISING FROM USER'S USE.

ISSUES AND REVISIONS

NUMBER DATE DESCRIPTION

NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

SPECIFICATION

MEP102

ROO	FTOP U	NIT S	CHE	EDU	LE																										
				MIN	EXT.		FAN						COOLING						HEATING-GA	<b>NS</b>							ELE	CTRICAL			
MARK NO.	MANUFACTURER	MODEL	AIRFLOW CFM	O.A.	S.P.	FAN HP	DRIVE	RPM	AMB.	EDB	EWB	LDB	LWB	TOTAL	SENS.	STAGES	EER OR	INPUT	OUTPUT	STACES	NOTES	VOLT	DUASE	U <b>7</b>	ΕLA	MCA	MOCB	DISCONNECT	CIRCUIT TO	BRANCH CIRCUIT	T <sub>NO</sub>
			"	CFM	(IN W.G.)		TYPE		(°F)	(°F)	(°F)	(°F)	(°F)	MBH	MBH	STAGES	SEER	MBH	МВН	STAGES		VOLI	PHASE	HZ	FLA	MCA	IVIOCE	DISCONNECT	PANEL	TAG / SIZE	NO
RTU-1	LENNOX	LGM180U5M	6000	1800	0.8	5	BELT	868	95	80	67	58.2	56.9	181.8	132.7	3	12 EER	360	292	2	1-8	480	3	60	35.8	37	40	INTEGRAL	HDP	3/4" C. (4) #8, (1) #10 G.	
RTU-2	LENNOX	LGM156U5M	5000	1500	0.8	3	BELT	786	95	80	67	57	56.3	159.9	116.8	3	12 EER	260	211	2	1-8	480	3	60	30.7	31	35	INTEGRAL	HDP	3/4" C. (4) #8, (1) #10 G.	
RTU-3	LENNOX	LGM156U5M	5000	1500	0.8	3	BELT	786	95	80	67	57	56.3	159.9	116.8	3	12 EER	260	211	2	1-8	480	3	60	30.7	31	35	INTEGRAL	HDP	3/4" C. (4) #8, (1) #10 G.	
RTU-4	LENNOX	LGM240U5M	8000	2400	0.8	7.5	BELT	1015	95	80	67	57.9	56.6	249	179.3	4	12 FER	360	292	2	1-8	480	3	60	47.9	50	60	INTEGRAL	HDP	3/4" C. (4) #4. (1) #10 G.	Τ

NOTES: 1. PROVIDE WITH WALL MOUNTED 24/7 PROGRAMMABLE THERMOSTAT WITH HUMIDITY CONTROL AND REMOTE TEMPERATURE/HUMIDITY SENSOR, COTTONWOOD FILTERS SUCH AS AIR SOLUTION COMPANY MEDIUM DUTY COMMERCIAL GRADE FILTERS, HINGED ACCESS PANELS, DISCONNECT SWITCH, CONDENSATE DRAIN TRAP, AND DRAIN PAN OVERFLOW SWITCH TO SHUT DOWN UNIT IF DRAIN BECOMES CLOGGED.

2. PROVIDE WITH HOT GAS REHEAT.

3. PROVIDE WITH ECONOMIZER WITH DIFFERENTIAL ENTHALPY CONTROL. INCLUDE WITH BAROMETRIC RELIEF DAMPER UNLESS NOT REQUIRED FOR UNITS EQUIPPED WITH POWERED EXHAUST.

4. PROVIDE WITH POWERED EXHAUST.

5. PROVIDE WITH MULTI-SPEED SUPPLY FAN TO VARY FAN SPEED WITH COMPRESSOR STAGING ON UNITS WITH 2 STAGES OF COOLING. ADJUST OUTSIDE AIR DAMPER MINIMUM POSITION FOR HIGH AND LOW FAN SPEEDS.

6. PROVIDE WITH UNIT MOUNTED GFCI OUTLET WITH WEATHERPROOF COVER. OUTLET TO BE FIELD POWERED/WIRED FROM BUILDING POWER 7. PROVIDE WITH ROOF CURB OF HEIGHT REQUIRED TO HAVE THE TOP OF THE CURB A MINIMUM OF 8" ABOVE THE TOP OF THE ROOF SURFACE, OR MINIMUM CURB HEIGHT OF 18", WHICHEVER IS GREATER.

8. UNIT TO BE CONFIGURED FOR DOWNFLOW DISCHARGE.

			AUDEL 014/	EXT.						coo	LING					HEATING-GA	S							ELE	CTRICAL			
MARK NO.	MANUFACTURER	MODEL	AIRFLOW CFM	S.P.	FAN HP	RPM	AMB.	EDB	EWB	LDB	LWB	TOTAL	SENS.	STACES	INPUT	OUTPUT	STAGES	NOTES	VOLT	DUASE	U <b>7</b>	EI A	MCA	МОСР	DISCONNECT	CIRCUIT TO	BRANCH CIRCUIT	NOTES
			<b>0</b> 1	(IN W.G.)			(°F)	(°F)	(°F)	(°F)	(°F)	МВН	MBH	STAGES	MBH	MBH	SIAGES		VOLI	PHASE	HZ	FLA	IVICA	WICCE	DISCONNECT	PANEL	TAG / SIZE	NOTES
MAU-1	ACCUREX	XDGX-P116-H12-MF-10	4400	0.5	3	2008	100	99.1	80	72.9	72.9	127.7	113.3	1	335.2	308.4	VARIABLE	1,2	480	3	60	20.2	25.2	40	INTEGRAL	HDP	3/4" C. (4) #8, (1) #10 G.	-
MAU-2	ACCUREX	XDGX-P116-H12-MF-10	4400	0.5	3	2008	100	99.1	80	72.9	72.9	127.7	113.3	1	335.2	308.4	VARIABLE	1,2	480	3	60	20.2	25.2	40	INTEGRAL	HDP	3/4" C. (4) #8, (1) #10 G.	-

2. PROVIDE WITH ROOF CURB OF HEIGHT REQUIRED TO HAVE THE TOP OF THE CURB A MINIMUM OF 8" ABOVE THE TOP OF THE ROOF SURFACE, OR MINIMUM CURB HEIGHT OF 18", WHICHEVER IS GREATER.

			HEATING (NATURAL GAS)	CLEARAN	CE TO COME	BUSTIBLES	NOTES						ELEC	TRICAL			
MARK	MANUFACTURER	MODEL	INPUT	ENDS	ABOVE	BELOW	NOTES	VOLT	PHASE	HZ	FLA	MCA	МОСР	DISCONNECT	CIRCUIT TO	BRANCH CIRCUIT	NOTES
			(MBH)	(IN.)	(IN.)	(IN.)		VOLI	PHASE	ΠZ	FLA	IVICA	IVIOCE	DISCONNECT	PANEL	TAG / SIZE	NOTES
GEH-1	SUNSTAR	SGL50-N7	50	14	17	48	1,2,3	120	1	60	0.4	1	15	20A/1P TOGGLE	P1	2 #12, #12G, 3/4"C	-
GEH-2	SUNSTAR	SGL50-N7	50	14	17	48	1,2,3	120	1	60	0.4	1	15	20A/1P TOGGLE	P1	2 #12, #12G, 3/4"C	-
GEH-3	SUNSTAR	SGL50-N7	50	14	17	48	1,2,3	120	1	60	0.4	1	15	20A/1P TOGGLE	P1	2 #12, #12G, 3/4"C	-
GEH-4	SUNSTAR	SGL50-N7	50	14	17	48	1,2,3	120	1	60	0.4	1	15	20A/1P TOGGLE	P1	2 #12, #12G, 3/4"C	-
GEH-5	SUNSTAR	SGL50-N7	50	14	17	48	1,2,3	120	1	60	0.4	1	15	20A/1P TOGGLE	P1	2 #12, #12G, 3/4"C	-
																	1
NOTES:	PROVIDE WITH MAI	NUFACTUREF	R'S MASTER CONTRO	LLER WITH	60 MINUTE T	IMER AND IL	LUMINATED	NOTES:	A.	•	•	•		-	-		

3 POSITION FLUSH-MOUNT SWITCH. 2. PROVIDE WITH HEAT SHIELD FOR REDUCED CLEARANCE REQUIREMENTS.

3. PROVIDE WALL / CEILING TELESCOPIC ADJUSTABLE MOUNTING BRACKET KIT.

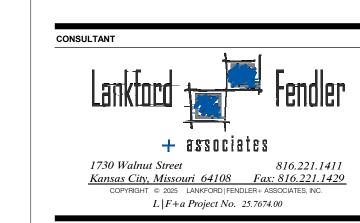
LINIT	<b>HEATER SCHEDULE</b>
	HEATER SCHEDULE

	·				HEATING	(ELEC.)					·	·	ELE	ECTRICAL			
MARK NO.	MANUFACTURER	MODEL	TYPE	AIRFLOW (CFM)	OUTPUT	INPUT	NOTES	VOLT	PHASE	HZ	FLA	MCA	MOCP	DISCONNECT	CIRCUIT TO	BRANCH CIRCUIT	NOTES
				(3)	(MBH)	(KW*)		VOLI	PHASE	П	FLA	IVICA	IVIOCE	DISCONNECT	PANEL	TAG / SIZE	NOTES
UH-1	BERKO	HUHAA527	HORIZONTAL	350	17	5	1,2,3	277	1	60	18.0	22.6	25	INTEGRAL	L	3/4" C. (4) #10, (1) #10 G.	-
UH-2	BERKO	HUHAA527	HORIZONTAL	350	17	5	1,2,3	277	1	60	18.0	22.6	25	INTEGRAL	L	3/4" C. (4) #10, (1) #10 G.	-
NOTES:	1. PROVIDE WITH DIS	CONNECT SV	WITCH.					NOTES:	A.								
	2. PROVIDE WITH INT	ERGRAL THE	RMOSTAT.														

3. PROVIDE WITH WALL HANGING KIT.

\*HEATING KW IS NET CAPACITY AT VOLTAGE AND PHASE INDICATED.

ARCHITECT OF RECORD 8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204 TEL: 913-262-9095 FAX: 913-262-9044



62910099



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

## FLOOR PLAN NOTES

- P01 PROVIDE NEW 2" RPZ BACKFLOW PREVENTER, WATTS LF009 OR EQUAL. ROUTE WASTE FROM AIR-GAP FITTING TO FLOOR DRAIN AND INDIRECT WASTE.

  P02 PROVIDE NEW 1" DOUBLE CHECK BFP, WATTS LF007 OR EQUAL. VALVE AND CAP FOR
- FUTURE CONNECTION TO IRRIGATION SYSTEM.

  P03 VALVE AND CAP 2" COLD WATER FOR FUTURE CONNECTION.
- P06 NEW GAS METER BY UTILITY. PROVIDE ALL FITTINGS AND ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION/CONNECTION PER UTILITY STANDARDS. COORDINATE FINAL GAS LOAD WITH UTILITY PRIOR TO CONSTRUCTION.

  P07 ROUTE GAS PIPING DOWN BELOW GRADE.
- P07 ROUTE GAS PIPING DOWN BELOW GRADE.

  P08 PROVIDE INLINE PRESSURE REGULATOR INLET: 2PSI, OUTLET: 8"WC.
- P09 CONNECT TO FIREPLACE WITH GAS COCK, DIRT LEG, AND UNION AND/OR APPLIANCE CONNECTOR IN ACCESSIBLE LOCATION. PROVIDE ELECTRONIC SOLENOID VALVE INTERLOCKED WITH EMERGENCY STOP BUTTON. RE: ELECTRICAL SHEETS FOR LOCATION.

  P10 ROUTE GAS PIPING OVER BELOW GRADE AND CONNECT TO FIRE TABLE WITH GAS COCK, DIRT LEG, AND UNION AND/OR APPLIANCE CONNECTOR IN ACCESSIBLE LOCATION.



BRR ARCHITECTURE INC.

WWW.BRRARCH.COM

TEL: 913-262-9095 FAX: 913-262-9044

8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

ARCHITECT OF RECORD

LEE'S SUMMIT, MO

ECT NUMBER
62910099
ECT MANAGER DRAWN BY CHECKED BY
Approver Author
ESSIONAL SEAL



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

ISSUES AND REVISIONS

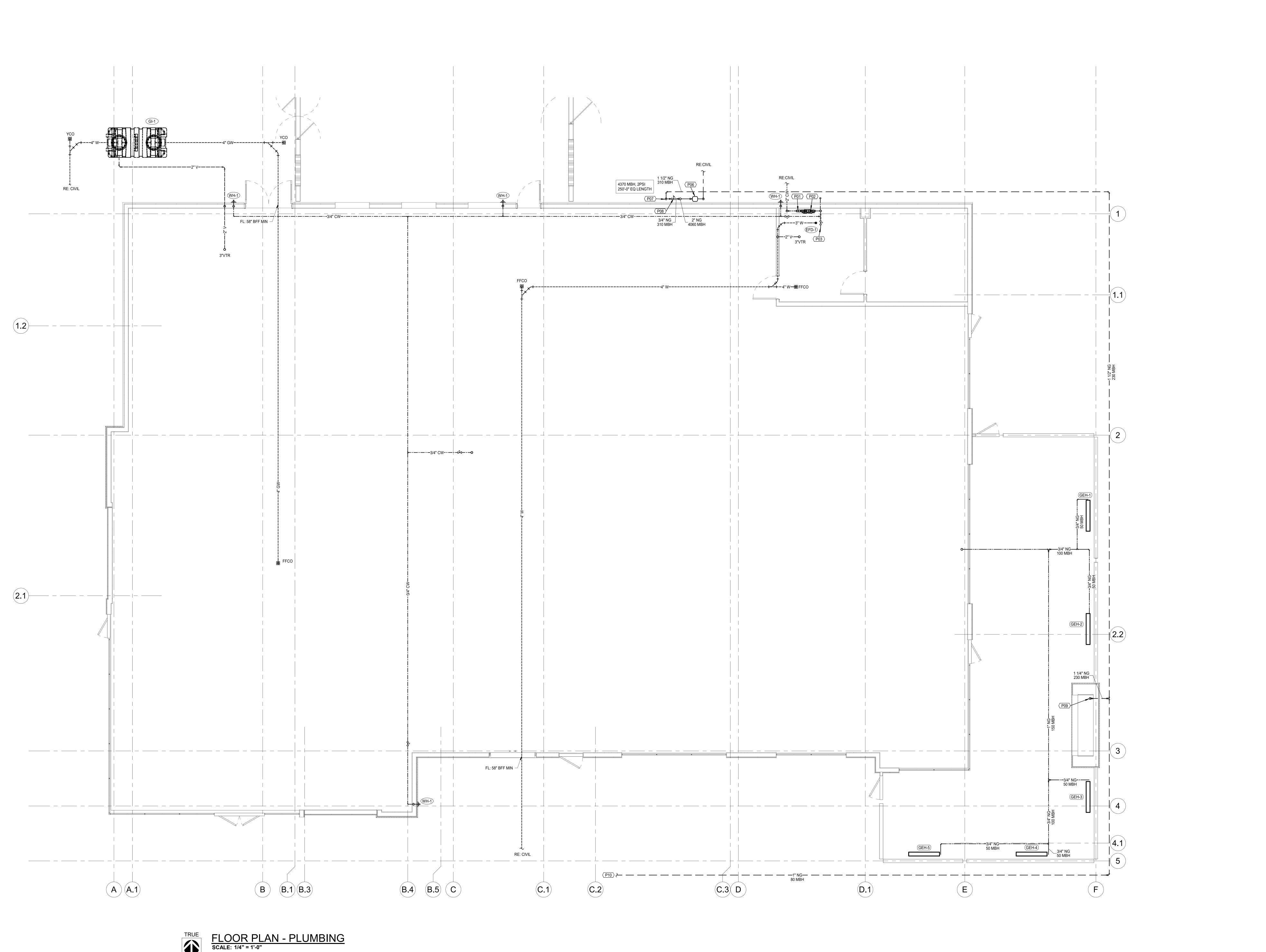
NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

BRR ORIGINAL PRINTED ON RECYCLED PAPER

FLOOR PLAN -PLUMBING

P10



BRR ARCHITECTURE INC.

8131 METCALF AVENUE
SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044

Fender

+ 8\$\$0ciates

1730 Walnut Street

Kansas City, Missouri 64108

COPYRIGHT © 2025 LANKFORD | FENDLER+ ASSOCIATES, INC.

L | F+a Project No. 25.7674.00

LEE'S SUMMIT, MC

OJECT NUMBER

62910099

OJECT MANAGER DRAWN BY CHECKED BY

Approver Author



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE
CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR
USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS
DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES
THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT
AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR
APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES
AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY
ARISING FROM USER'S USE.

ISSUES AND REVISIONS

NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

NUMBER DATE DESCRIPTION

0 05/01/25 ORIGINAL ISSUE

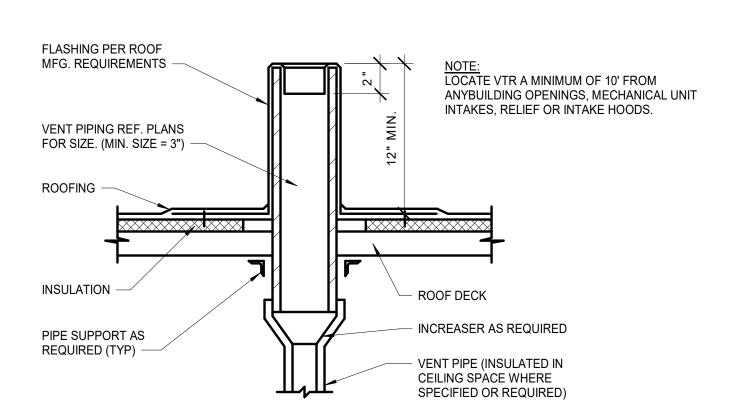
ROOF PLAN -PLUMBING

BRR ORIGINAL PRINTED ON RECYCLED PAPER

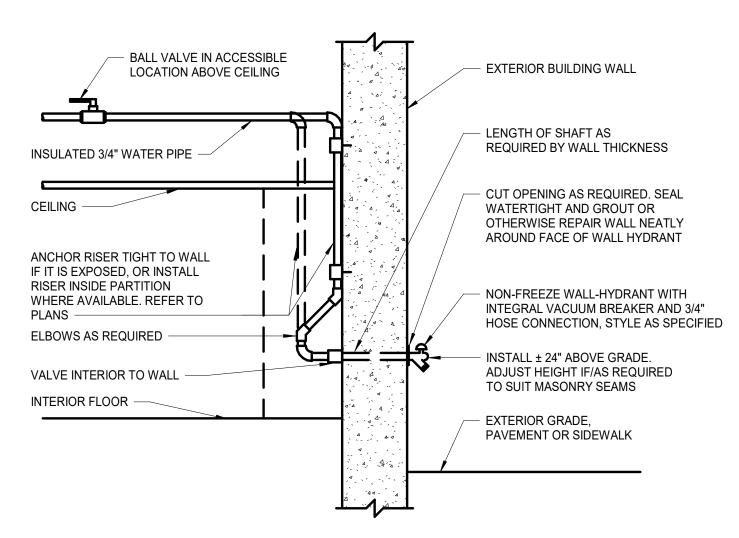
P200

ADIC NO	FIVELINE TYPE	MANUEACTURER	MODELNO	DECORIDATION	MIN	IMUM CO	NNECTION	SIZE
ARK NO.	FIXTURE TYPE	MANUFACTURER	MODEL NO.	DESCRIPTION	cw	HW	WASTE	VENT
EFD-1	EQUIPMENT FLOOR DRAIN	J.R. SMITH	2210Y	MEDIUM CAPACITY, MEDIUM DUTY DUCO CAST IRON BODY, SEDIMENT BUCKET AND GRATE, NO HUB OUTLET. PROVIDE WITH 6" X 4" OVAL FUNNEL WHERE DRAIN RECEIVES INDIRECT WASTE [AND TRAP PRIMER CONNECTION].	-	-	3"	2"
WH-1	WALL HYDRANT	WOODFORD	67	EXPOSED, FREEZELESS WALL HYDRANT, CHROME PLATED BRASS, 3/4" INLET AND HOSE CONNECTION, INTEGRAL ASSE DOUBLE CHECK BACKFLOW PREVENTER, LOOSE KEY, STEM LENGTH AS REQUIRED.	3/4"	-	-	-
RH-1	ROOF HYDRANT	WOODFORD	SRH-MS	DRAINABLE, FREEZELESS BRASS ROOF HYDRANT, 3/4" INLET AND 3/4" HOSE CONNECTION, ASSE DOUBLE	3/4"	_	_	T _
TXII-1	NOOF ITEDIAM	WOODI OND	SIXI FINIS	CHECK BACKFLOW PREVENTER, DIVERTER, AUTOMATIC DRAINING, PAIL HOOK, LEVER ACTUATOR WITH GALVANIZED STEEL ROD AND ONE PIECE PLUNGER, CAST IRON MOUNTING SUPPORT AND UNDER DECK FLANGE WITH WEATHER PROOF BOOT ASSEMBLY.	3/4	-	_	_

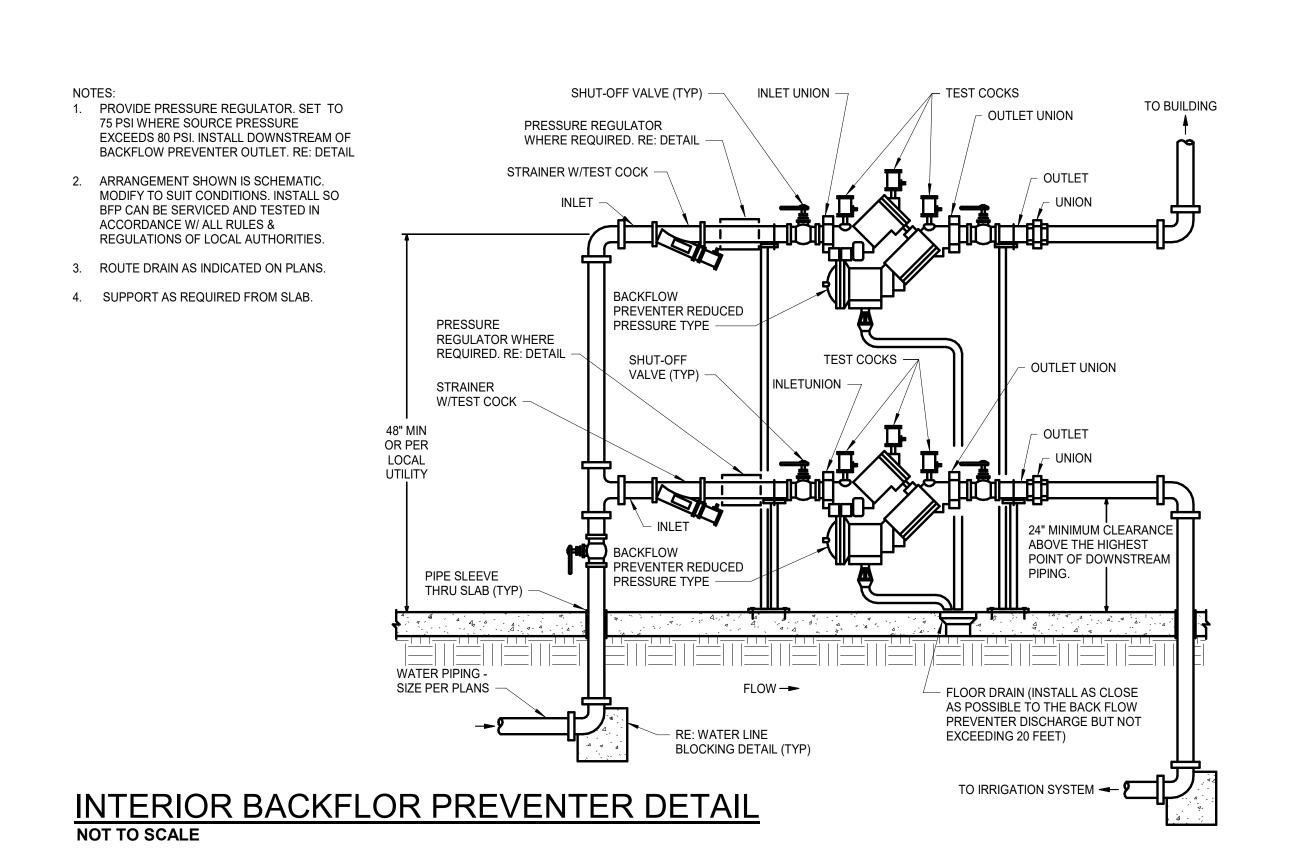
GRI	EAS	SE INTER	CEP	TOR SCHE	DULE							
MARK NO.		MANUFACTURER	MODEL NO.	MATERIAL	INSTALLATION	LIQUID CAPACITY (GAL)	GREASE CAPACITY (LBS)	FLOW RATE (GPM)	INLET/ OUTLET SIZE	COVER TYPE	MAX OPERATING TEMP (°F)	NOTES
GI-1		SCHIER	GB-500	ENGINEERED POLYETHYLENE	BELOW GRADE	510	3,048	100	4"	GAS/WATER TIGHT	140	1,2,3
NOTES:	1. 2. 3.	PROVIDE HIGH-WATER	ANCHOR KIT	RS AS REQUIRED TO MEET GRA WHERE INTERCEPTOR IS INSTA	LLED IN AREA SUSC		IGH WATER 1	ABLE.				



# VENT THRU ROOF DETAIL NOT TO SCALE



NON-FREEZE WALL HYDRANT DETAIL NOT TO SCALE



TAG	FIXTURE	CONNECTED LOAD
		(MBH)
	MECHANICAL EQUIPMENT	
RTU-1	ROOF TOP UNIT	360
RTU-2	ROOF TOP UNIT	260
RTU-3	ROOF TOP UNIT	260
RTU-4	ROOF TOP UNIT	360
MAU-1	MAKEUP AIR UNIT	336
MAU-2	MAKEUP AIR UNIT	336
GEH-1	RADIANT HEATER	50
GEH-2	RADIANT HEATER	50
GEH-3	RADIANT HEATER	50
GEH-4	RADIANT HEATER	50
GEH-5	RADIANT HEATER	50
	MECHANICAL EQUIPMENT TOTAL:	2162
	PLUMBING EQUIPMENT	400
-	(FUTURE) WATER HEATER	199
-	(FUTURE) WATER HEATER	199
	PLUMBING EQUIPMENT TOTAL:	398
	KITCHEN EQUIPMENT	
-	FUTURE	1500
	KITCHEN EQUIPMENT TOTAL:	1500
	MISC EQUIPMENT	
	FIRE TABLE	80
	FIREPLACE	230
	MISC EQUIPMENT TOTAL:	310
	TOTAL GAS LOAD	4370

SET PRESSURE REGULATORS TO 8" W.C. OR AS REQUIRED BY EQMT MANUFACTURER.

## GENERAL NOTES (TYPICAL ALL SHEETS)

A. PLUMBING CONTRACTOR IS RESPONSIBLE TO SEE THAT WORK MEETS AND IS IN ACCORDANCE WITH ALL REQUIREMENTS OF FEDERAL, STATE, AND LOCAL LAWS AND CODES AND/OR REQUIREMENTS, INCLUDING HEALTH CODES AND BUILDING OWNER.

B. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION TO AVOID ROUTING CONFLICTS.C. INSTALL ELASTOMERIC JOINT SEALER AROUND ALL PIPES PASSING THRU INTERIOR NON- RATED

CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, AND CONCRETE FLOOR/ROOF SLABS. FOR FIRE RATED INTERIOR CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, AND CONCRETE FLOOR/ROOF SLABS SEAL ALL PIPES. INSTALL FIRESTOP MATERIALS IN ALL GAPS PRIOR TO SEALANT APPLICATION. INSTALL SEALER ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

D. PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTION TO ALL EQUIPMENT BY OTHERS. VERIFY CONNECTIONS SIZES AND REQUIREMENTS.
E. PLUMBING CONTRACTOR SHALL PROVIDE PRO-SET SYSTEMS 'TRAP GUARD' IN ALL FLOOR DRAIN TRAPS WITHIN PROJECT SCOPE OF WORK.

F. PLUMBING CONTRACTOR SHALL VERIFY WALL THICKNESS WITH ARCHITECT PRIOR TO ORDERING FREEZE PROOF WALL HYDRANTS.
 G. UPON REQUEST FOR ELECTRONIC FILES, CONTRACTOR SHALL FILL OUT, SIGN AND RETURN ELECTRONIC MEDIA RELEASE FORM FROM ENGINEER AND PROVIDE PAYMENT FOR FEES

STIPULATED ON ELECTRONIC MEDIA RELEASE FORM. UPON RECEIPT OF COMPLETED RELEASE

H. ALL CABLE TIES FOR LOW VOLTAGE SYSTEMS LOCATED IN PLENUMS UTILIZED FOR AIR MOVEMENT THAT ARE NOT INSTALLED IN CONDUIT SHALL BE 25/50 FLAME AND SMOKE RATED, HELLERMANN TYTON T50 R2C2UL OR EQUIVALENT.

FORM AND PAYMENT, ELECTRONIC FILES WILL BE RELEASED.

FIRE STOPPING REQUIREMENTS

CONTRACTOR TO PROVIDE FIRESTOPPING AT ALL FIRE RATED ASSEMBLIES MEETING THE MANUFACTURER'S FIRESTOPPING U.L. LISTED DETAILS AND INSTRUCTIONS PER LOCAL CODES AND JURISDICTIONS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING LOCATIONS WITH ARCHITECTURAL FIRE RATINGS ON PLANS OR AS REQUIRED.

## PLUMBING SYMBOLS

———— EXISTING TO REMAIN

	NEW PIPING
	CW - COLD WATER
	NG - NATURAL GAS
	V - SANITARY VENT ABOVE GRD./FLOOR ABOVE
	V - SANITARY VENT BELOW GROUND
	W - SANITARY WASTE BELOW GROUND
	GW - GREASE WASTE ABOVE GRD./FLOOR ABO
	GW - GREASE WASTE BELOW GROUND
н∳н	GAS SHUT-OFF COCK
M	SHUT-OFF VALVE
A	PRESSURE REGULATOR
	FLOOR DRAIN
→ ~	PIPE DROP/ PIPE RISE
<del></del>	BOTTOM OUTLET TEE
<b>─</b>	TOP OUTLET TEE
WH O	WALL HYDRANT

WALL CLEANOUT

VTR 🔘

FINISHED FLOOR CLEANOUT

EQUIPMENT TYPE AND DESIGNATION

PLUMBING FIXTURE TYPE AND DESIGNATION

VENT THROUGH ROOF

Q39 (SHELL) E'S SUMMIT, N

ARCHITECT OF RECORD

1730 Walnut Street

BRR ARCHITECTURE INC.

8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204

WWW.BRRARCH.COM

TEL: 913-262-9095 FAX: 913-262-9044

Kansas City, Missouri 64108 Fax: 816.221.1429

COPYRIGHT © 2025 LANKFORD|FENDLER+ ASSOCIATES, INC.

L|F+a Project No. 25.7674.00

PROJECT NUMBER

62910099

PROJECT MANAGER DRAWN BY CHECKED BY

Approver Author

PROFESSIONAL SEAL



COPYRIGHT NOTICE

THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT CAD FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

ARISING FROM USER'S USE.

SSUES AND REVISIONS

NUMBER DATE DESCRIPTION
0 05/01/25 ORIGINAL ISSUE

PLUMBING SCHEDULES, GEN. NOTES, & SYMBOLS

 $D \Delta \Delta C$ 

## SITE PLAN NOTES

- 1. REFERENCE RISER DIAGRAM FOR ADDITIONAL INFORMATION.
- REFERENCE MANUFACTURER SPECIFICATIONS PRIOR TO INSTALLATION OF POLE MOUNTED LIGHT FIXTURE. REFERENCE LIGHT POLE BASE ON SHEET E003. CONFIRM FINISH COLOR WITH OWNER PRIOR TO ORDERING.
- 3. LIGHT FIXTURES SHALL BE INSTALLED IN GENERAL LOCATION SHOWN. COORDINATE WITH OTHER TRADES PRIOR TO INSTALL.
- 4. REFERENCE SHEET E200 FOR CIRCUITING OF BUILDING MOUNTED FIXTURES.
- 5. REFERENCE LIGHT FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION. 6. ROUTE HOMERUN THROUGH LIGHTING CONTROL RELAY PANEL AS INDICATED. REFER TO SCHEDULES FOR ADDITIONAL INFORMATION.
- 7. PROVIDE NEMA 3R TOGGLE DISCONNECT SWITCH FOR MONUMENT SIGN. VERIFY EXACT
- LOCATION AND POWER REQUIREMENTS WITH SIGNAGE VENDOR PRIOR TO INSTALL. 8. VERIFY MONUMENT SIGN POWER REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN. CALCULATE PROPER CONDUCTOR SIZE REQUIRED TAKING VOLTAGE DROP INTO
- PROVIDE POWER CONNECTION TO FIRE PIT. PROVIDE EPO AND CONTROL WIRING AS REQUIRED.

ARCHITECT OF RECORD BRR ARCHITECTURE INC. 8131 METCALF AVENUE

SUITE 300 OVERLAND PARK, KS 66204 WWW.BRRARCH.COM TEL: 913-262-9095 FAX: 913-262-9044

+ associates 1730 Walnut Street Kansas City, Missouri 64108 1915 Frederick Avenue, St. Joseph, Missouri 64501 Phone: 816.221.1411 | Fax: 816.221.1429

LANKFORD | FENDLER + ASSOCIATES, CONSULTING ENGINEERS, INC.



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

+ associates

1730 Walnut Street Kansas City, Missouri 64108
1915 Frederick Avenue, St. Joseph, Missouri 64501

Phone: 816.221.1411 | Fax: 816.221.1429

LANKFORD | FENDLER + ASSOCIATES, CONSULTING ENGINEERS, INC.
COPYRIGHT © 2024 Project No. 25.7674.00

COA No. 2006001168

BRR ORIGINAL PRINTED ON RECYCLED PAPER

SITE PLAN -ELECTRICAL

SITE PLAN NOTES

PHOTOMETRICS ARE CALCULATED REFERENCING IES FILES FROM SPECIFIED LIGHT FIXTURES. LIGHT FIXTURE ALTERNATES OR CHANGES TO MOUNTING HEIGHTS MAY DIFFER IN PHOTOMETRIC SUMMARY AND SHALL BE CALCULATED AS REQUIRED.

CALCULATION SUMMARY											
	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MII				
MAIN PARKING LOT	ILLUMINANCE	FOOTCANDLES	3.83	9.3	0.8	4.79	11.63				
SOUTH PARKING LOT	ILLUMINANCE	FOOTCANDLES	2.78	4.8	1.4	1.99	3.43				
PROPERTY LINE - MAIN PROPERTY	ILLUMINANCE	FOOTCANDLES	0.86	3.0	0.0						
PROPERTY LINE - SOUTH PARKING	ILLUMINANCE	FOOTCANDLES	1.12	2.3	0.1	11.20	23.00				

ARCHITECT OF RECORD BRR ARCHITECTURE INC. 8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204 WWW.BRRARCH.COM TEL: 913-262-9095 FAX: 913-262-9044

+ associates

1730 Walnut Street Kansas City, Missouri 64108 1915 Frederick Avenue, St. Joseph, Missouri 64501

Phone: 816.221.1411 | Fax: 816.221.1429

LANKFORD | FENDLER + ASSOCIATES, CONSULTING ENGINEERS, INC.



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

SITE PLAN -

+ associates

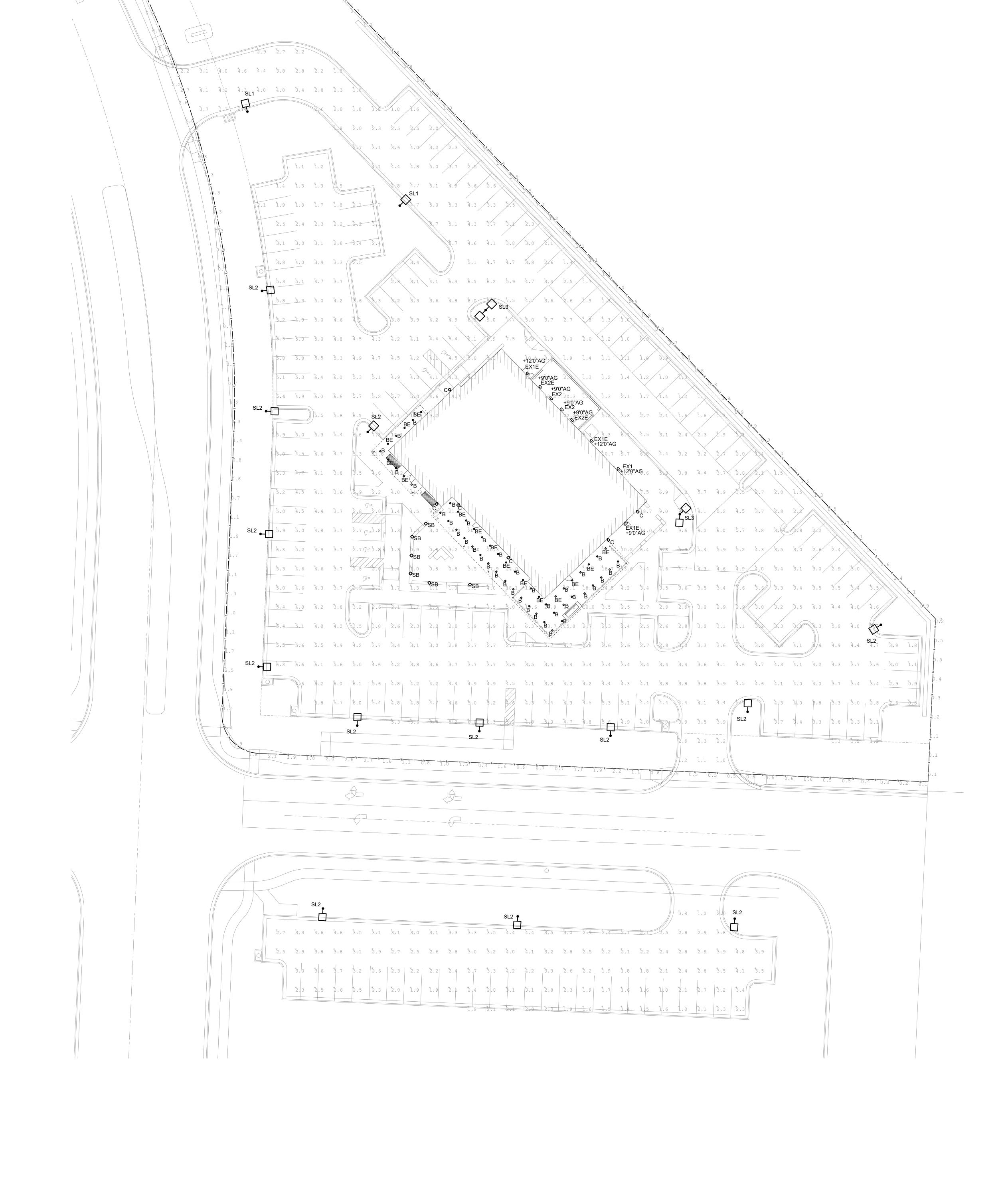
1730 Walnut Street Kansas City, Missouri 64108 1915 Frederick Avenue, St. Joseph, Missouri 64501

Phone: 816.221.1411 | Fax: 816.221.1429

LANKFORD | FENDLER + ASSOCIATES, CONSULTING ENGINEERS, INC.

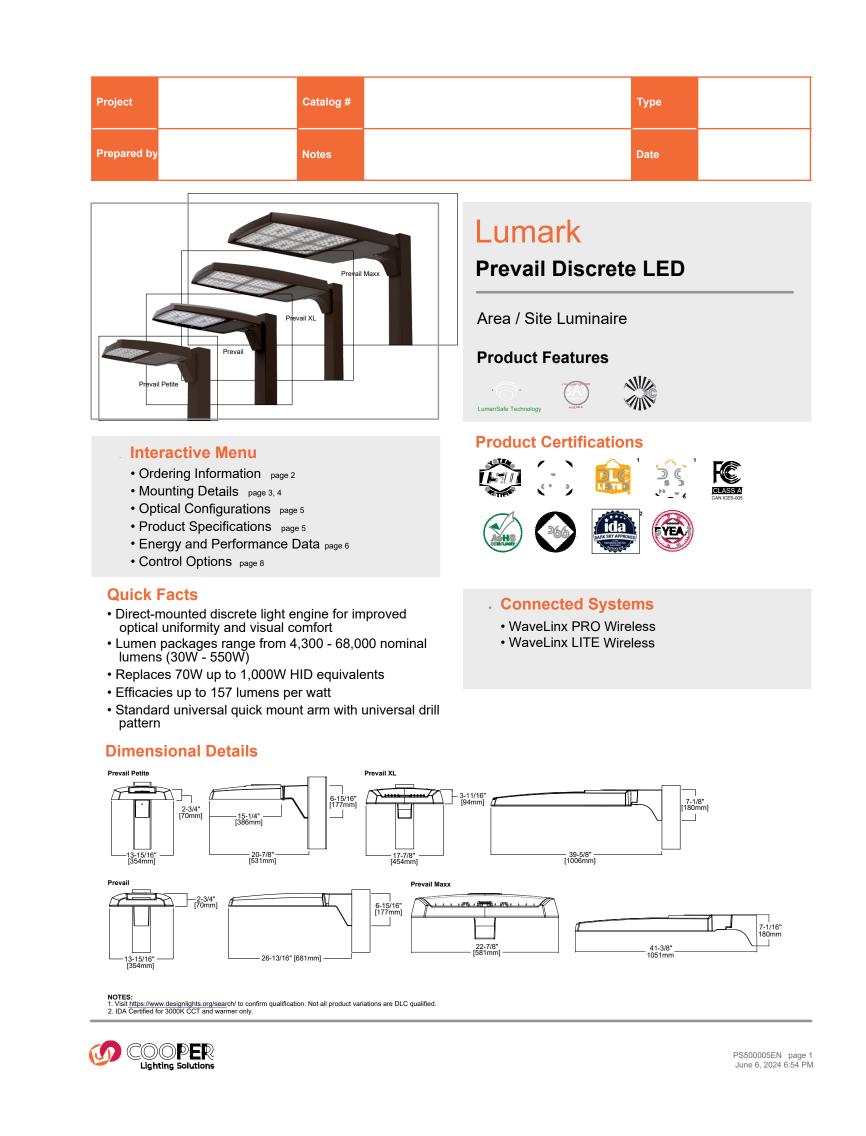
COPYRIGHT © 2024 Project No. 25.7674.00

COA No. 2006001168



SITE LIGHT POLE BASE DETAIL
NO SCALE





SUITE 300
OVERLAND PARK, KS 66204
WWW.BRRARCH.COM
TEL: 913-262-9095
FAX: 913-262-9044

CONSULTANT

Fendler

+ BSSDCiates

1730 Walnut Street Kansas City, Missouri 64108
1915 Frederick Avenue, St. Joseph, Missouri 64501

Phone: 816.221.1411 | Fax: 816.221.1429
LANKFORD | FENDLER + ASSOCIATES, CONSULTING ENGINEERS, INC.

BRR ARCHITECTURE INC.

JECT TITLE

ARCHITECT OF RECORD

CASS (SHELL) E'S SUMMIT, MC

PROJECT NUMBER

62910099

PROJECT MANAGER DRAWN BY CHECKED BY

Approver Author



COPYRIGHT NOTICE

THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

NUMBER DATE DESCRIPTION
0 04/04/25 90% REVIEW SET

SCHEDULES,
DETAILS & SPECS

E003

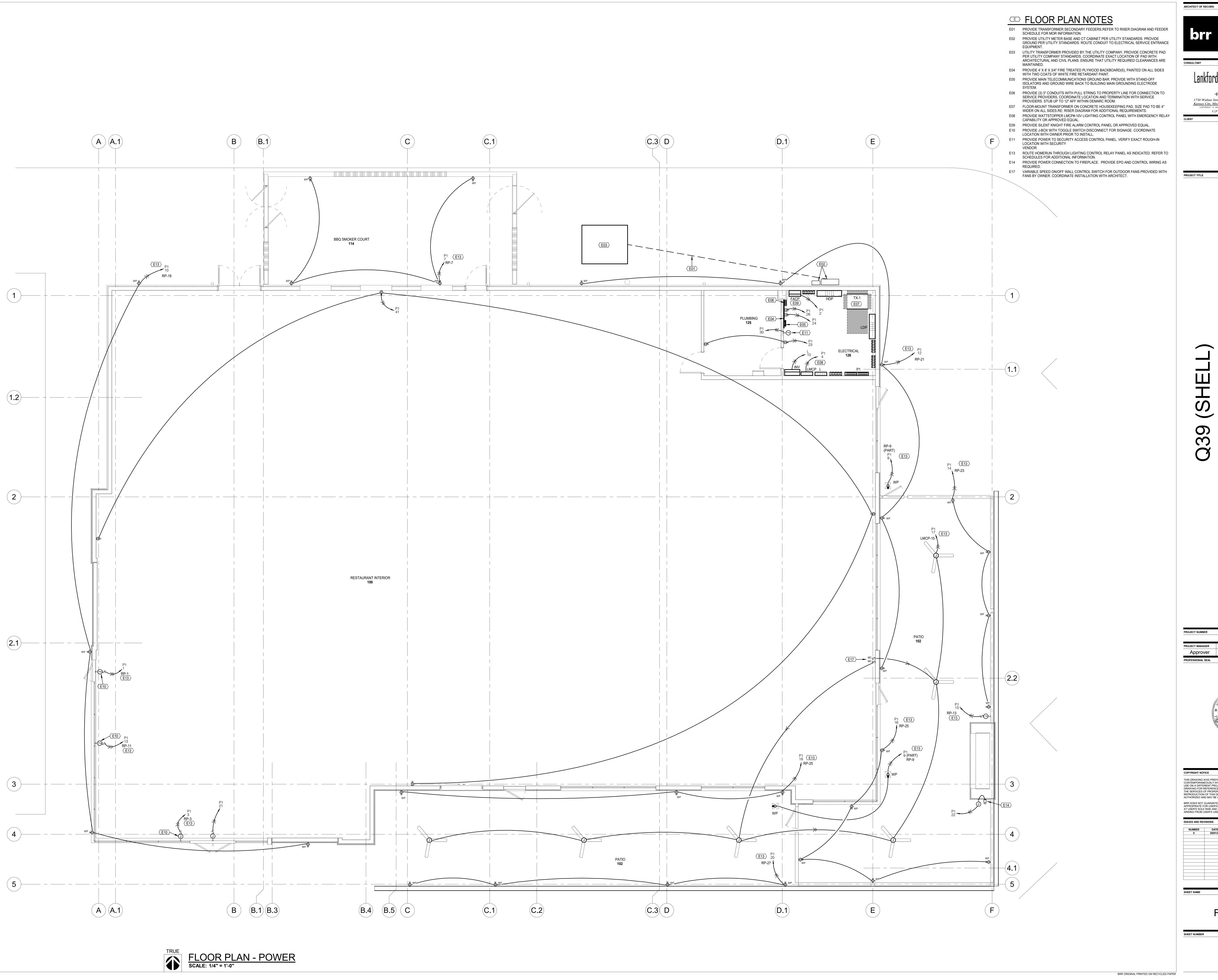
+ associates

1730 Walnut Street Kansas City, Missouri 64108
1915 Frederick Avenue, St. Joseph, Missouri 64501

Phone: 816.221.1411 | Fax: 816.221.1429

LANKFORD | FENDLER + ASSOCIATES, CONSULTING ENGINEERS, INC.
COPYRIGHT ② 2024 Project No. 25.7674.00

COA No. 2006001168



BRR ARCHITECTURE INC. 8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204 WWW.BRRARCH.COM TEL: 913-262-9095 FAX: 913-262-9044

1730 Walnut Street 



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

FLOOR PLAN -POWER

E100

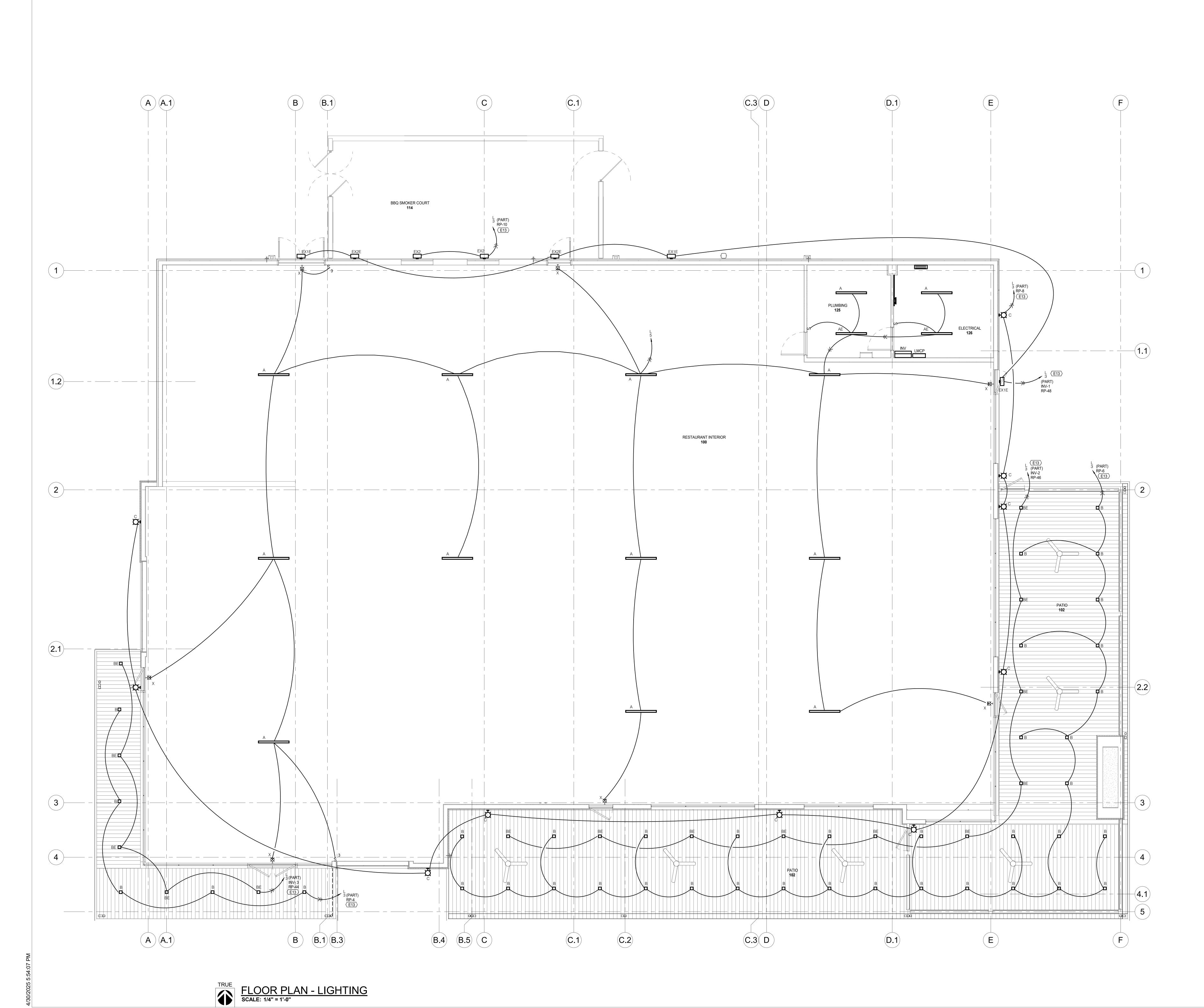


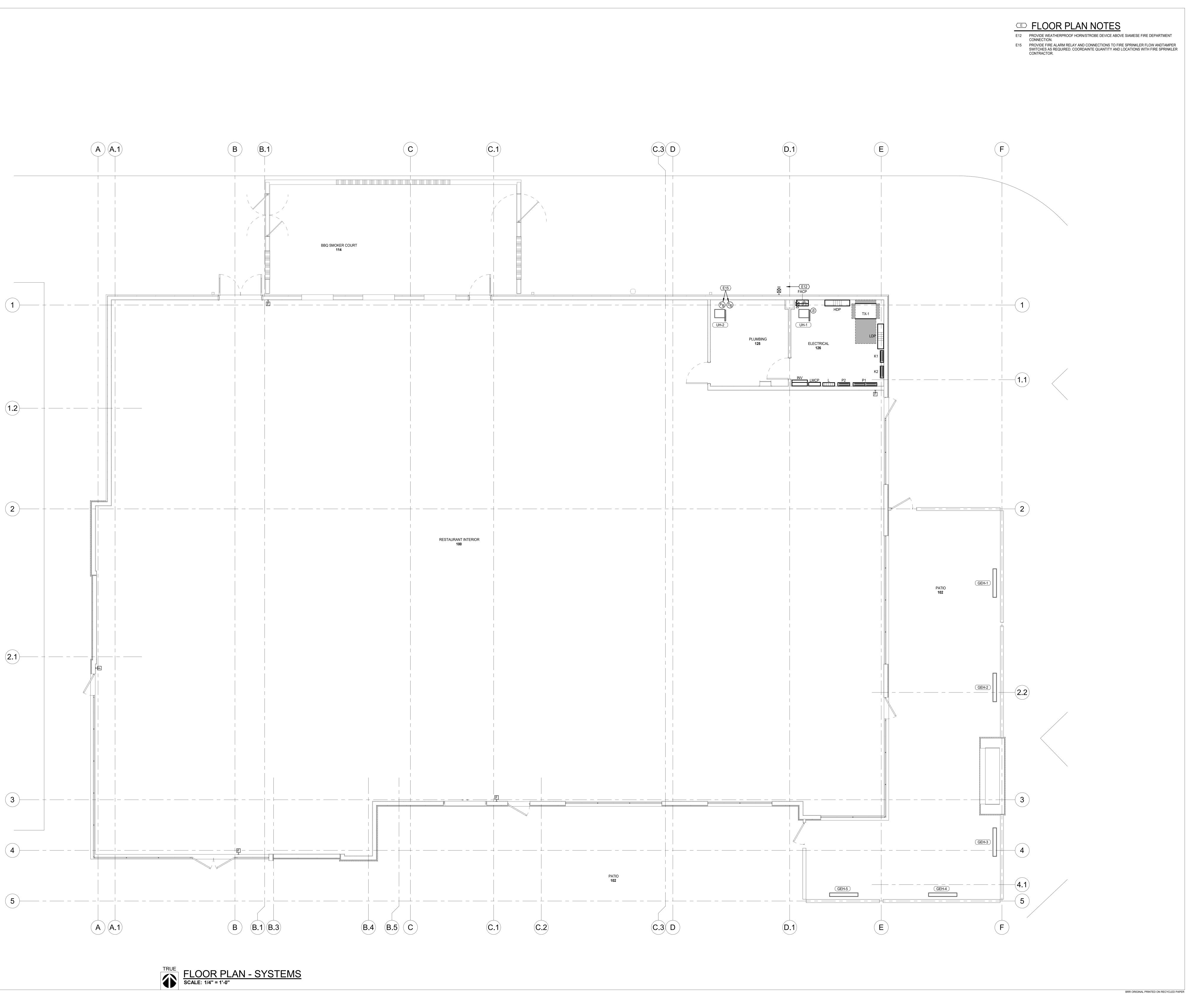
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

BRR ORIGINAL PRINTED ON RECYCLED PAPER

FLOOR PLAN -LIGHTING

E200





BRR ARCHITECTURE INC. 8131 METCALF AVENUE SUITE 300 OVERLAND PARK, KS 66204 WWW.BRRARCH.COM TEL: 913-262-9095 FAX: 913-262-9044

ARCHITECT OF RECORD



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

FLOOR PLAN -SYSTEMS



COPYRIGHT NOTICE

THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

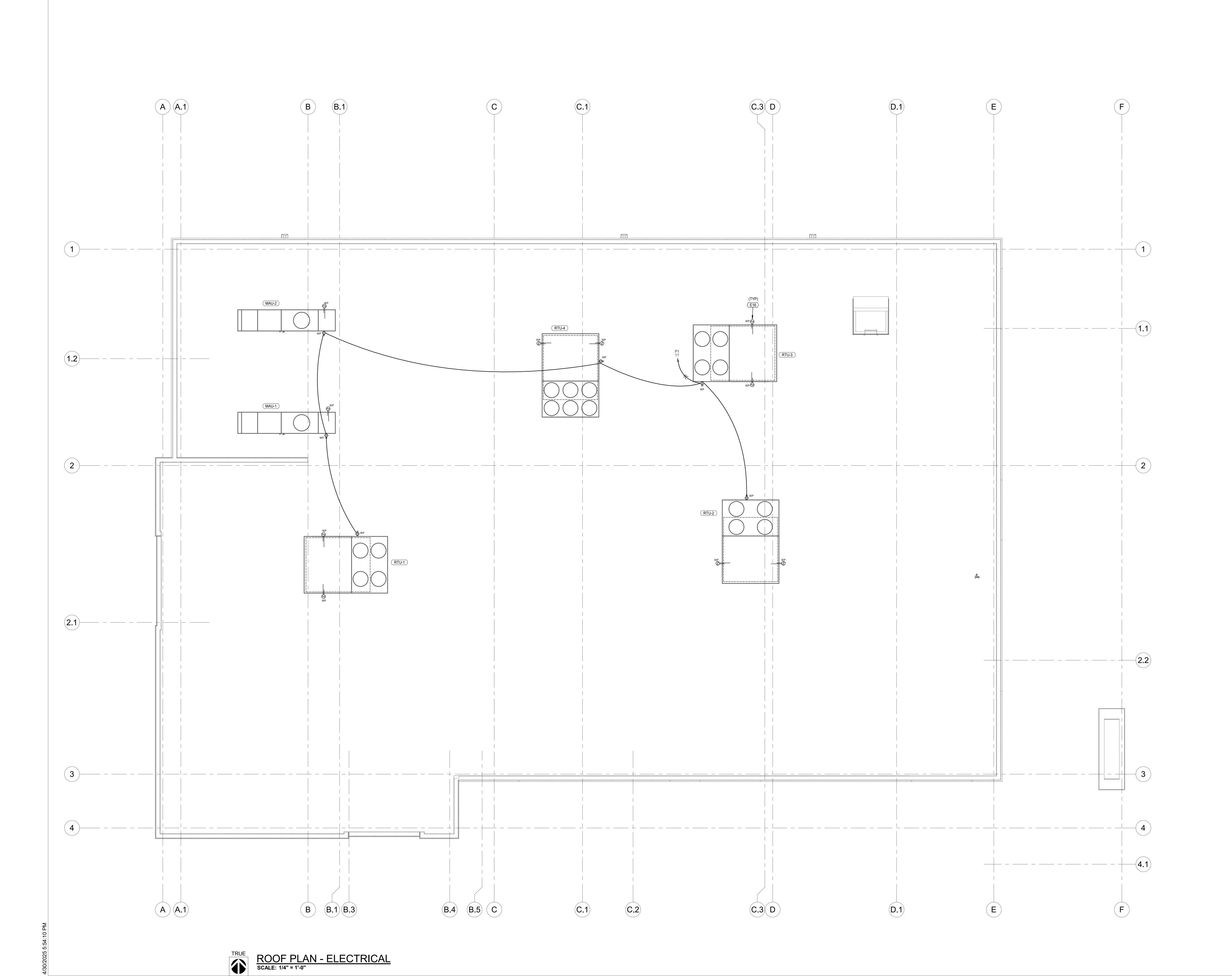
ISSUES AND REVISIONS

NUMBER DATE DESCRIPTION
0 05/01/25 ORIGINAL ISSUE

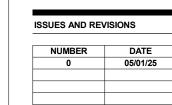
BRR ORIGINAL PRINTED ON RECYCLED PAPER

ROOF PLAN -ELECTRICAL

E400



ARCHITECT OF RECORD



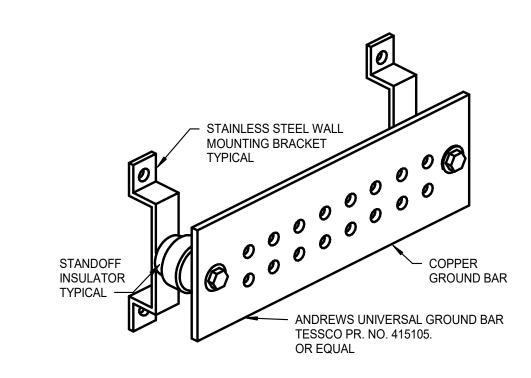
BRR ORIGINAL PRINTED ON RECYCLED PAPER

ELECTRICAL DETAILS

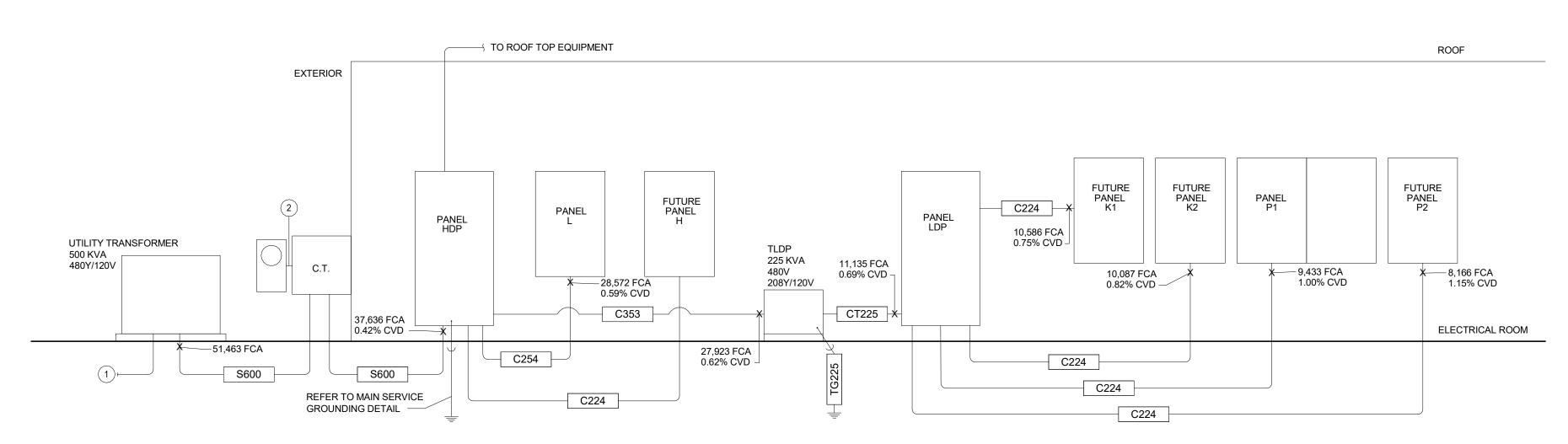
•, •••••• TO MAIN WATER PIPE.

CONNECT AHEAD OF MAIN
SHUT OFF VALVE ─ GROUNDING PLATE LOCATED IN CATV/TV ROOM PER PLAN TO BUILDING STEEL -- GROUNDING PLATE LOCATED
IN COMMUNICATION ROOM PER PLAN MAIN ELECTRICAL GROUND BUS GROUND WIRE SIZE PER NEC 250. (TYP) (3) COPPER CLAD -GROUND ROD TYPICAL, 5/8"x10' GROUND WIRE
TO PANELBOARD.
SIZE AS NOTED CONCRETE ENCASED ELECTRODE (UFER) NOTE:
1. ALL WIRING SHALL BE TYPE THHN/THWN.
2. MAIN GROUP RODS ARE TO BE LOCATED AT SERVICE ENTRANCE WITH SIZE AND QUANTITY PER SPECIFICATIONS. PER NEC 250-52(3)





MAIN TELECOMMUNICATIONS GROUND BAR DETAIL NOT TO SCALE



ELECTRICAL RISER DIAGRAM NOT TO SCALE

## **® RISER NOTES**

PROVIDE 4" CONDUIT(S) FOR UTILITY PRIMARY AS REQUIRED BY THE UTILITY COMPANY. PRIMARY CONDUCTORS PROVIDED BY UTILITY. COORDINATE EXACT ROUTING WITH CIVIL AND UTILITY COMPANY.

2. 1-1/4" CONDUIT.

			3-WIRE W/ GROUND						4-WIRE W/ GROUND			
CIRCUIT	TAG	NUMBER	PHASE / NEUTRAL	EQUIPMENT	CONDUIT	NEC SIZE	TAG	NUMBER	PHASE / NEUTRAL	EQUIPMENT	CONDUIT	NEC SIZE
AMPS	NAME	SETS	CONDUCTORS	GROUND	SIZE	EMT/PVC/RGS	NAME	SETS	CONDUCTORS	GROUND	SIZE	EMT/PVC/RGS
225	C223	1	3 #4/0	#4	2"	2"/2"/2"	C224	1	4 #4/0	#4	2.5"	2.5"/2.5"/2.5"
250	C253	1	3 #250	#4	2.5"	2"/2"/2"	C254	1	4 #250	#4	2.5"	2.5"/2.5"/2.5"
350	C353	1	3 #500	#3	3.5"	2.5"/3"/3"	C354	1	4 #500	#3	3.5"	3"/3.5"/3"
	TRANSFORM	MER SECONDA	ARY FEEDERS									
700	CT225	3	4 #250	#2/0	3"	2.5"/2.5"/2.5"						
	SERVICE EN	TRANCE CON	IDUCTORS									
600	S600	2	4 #350	-	4"	2.5"/3"/3"						
	MISC FEEDE	ER DESCRIPTI	ONS									
	TG225	1	N/A	#2/0	0.75"	0.75"/0.75"/0.75"	TRANSFORM	MER GROUND				
<u>)TES:</u> SIZE BDA		AND CIDCUIT		NDCLIIT DDE AVEC	/ FLICE 017E AA							
SIZE BRA TAG NAN REFER TO MINIMUM CONDUC VERIFY A	ME MAY BE US O THE SPECIF SIZE REQUIR TOR SIZES AF AND ADJUST O TOR SIZES AF	ED AS AN ADD CICATIONS AND ED MAY BE LA RE BASED UPC CONDUIT SIZE RE BASED UPC	S ACCORDING TO THE ODITIONAL REFERENCE. D GENERAL NOTES FOR ARGER THAN SHOWN IN DIN TYPE THHN/THWN CO AS REQUIRED FOR OTHOM 100 FEET OR LESS IN IRED FOR VOLTAGE DRO	MINIMUM CONDL THIS SCHEDULE. ONDUCTORS WITH IER TYPES OF CO LENGTH. IF ONE	IIT SIZE REQUIR I EMT OR SCHE NDUIT.	REMENTS. DULE 40 PVC CONDUI	т.					

ELECTRICAL RISER DIAGRAM NOTE: UTILITY TRANSFORMER DESIGN CRITERIA: 500 KVA, PAD MOUNT UTILITY TRANSFORMER SECONDARY VOLTAGE: 480Y/277V, 3-PHASE, 4-WIRE UTILITY TRANSFORMER IMPEDANCE: 1.30% Z. MAXIMUM AVAILABLE FAULT CURRENT AT UTILITY TRANSFORMER SECONDARY IS 51,463 AMPS. FAULT CURRENT WAS OBTAINED BASED ON THE MAXIMUM LET THROUGH CURRENT OF A TRANSFORMER WITH THE ABOVE CRITERIA.

	PANELBOARD	D LDP										
	BUS AMPS: 800A				SCCR:	22k A	F	ULLY RATED		TYPE:	BRANCH CIRCUIT PANELBOARD	
	MAIN SIZE / TYPE: 700A	MCB			NEMA TYPE:	1		MAI	NUFA	CTURER:	SQUARE D	
	VOLTS/PHASE: 208Y/120\	/, 3PH, 4W			MOUNTING:	SURFACE			MFG	MODEL:	I-LINE	
	SECTION: 1				LOCATION:	ELECTRICAL	L		С	PTIONS:		
CKT#	CIRCUIT DECRIPTION	СВ	Р	LOAD	Α	В	С	LOAD	Р	СВ	CIRCUIT DECRIPTION	
		AMPS		VA	VA	VA	VA	VA		AMPS		
1				6,360	6,360			0				
3	PANEL P1	200	3	5,360		5,360	]	0	3	200	PANEL K1	
5				5,705			5,705	0				
7				0	0			0				
9	PANEL P2	200	3	0		0		0	3	200	PANEL K2	
11				0		7	0	0				
13				0	0		1	0			00.05 0.07	
15	SPACE ONLY	225	3	0		0		0	3	225	SPACE ONLY	-
17 19				0	0	1	0	0				
21	SPACE ONLY	225	3	0	U	0	1	0	3	225	SPACE ONLY	-
23	OF AGE GIVET	223	"	0	-		0	0	"	220	OF AGE ONE!	
25				0	0	1		0				
27	SPACE ONLY	225	3	0		0	]	0	3	225	SPACE ONLY	
29				0			0	0	1			
31				0	0	]		0				
33	SPACE ONLY	225	3	0		0	]	0	3	225	SPACE ONLY	
35	_			0			0	0				
37				0	0			0				
39	SPACE ONLY	225	3	0		0		0	3	225	SPACE ONLY	
41				0			0	0				
		PER PHASE	CON	NECTED - VA	6,360	5,360	5,705				TOTAL CONNECTED - VA 17,42	5
	Р	ER PHASE CO	NNEC	CTED - AMPS	53	45	48				TOTAL CONNECTED - AMPS 48	
	NOTES:							_			TOTAL DEMAND - VA 19,60	0
											NEC TOTAL DEMAND - AMPS 54	

\*REFER TO THE BRANCH CIRCUIT COPPER CONDUCTOR AND CONDUIT SIZING CHART FOR SIZING BRANCH CIRCUITS OF 100A OR LESS

\*REFER TO THE BRANCH CIRCUIT COPPER CONDUCTOR AND CONDUIT SIZING CHART FOR SIZING BRANCH CIRCUITS OF 100A OR LESS

SPD = SURGE PROTECTIVE DEVICE

		BUS AMPS: 250A MAIN SIZE / TYPE: MLO VOLTS/PHASE: 480Y/277\ SECTION: 1	V, 3PH, 4W			SCCR: NEMA TYPE: MOUNTING:	1		FULLY RATED MA	NUFAC MFG			
-	CKT#	CIRCUIT DECRIPTION	СВ	Р	LOAD	A	В	С	LOAD	Р	СВ	CIRCUIT DECRIPTION	CKT#
			AMPS		VA	VA	VA	VA	VA		AMPS		
5	1	LTG - SITE POLES	20	1	688	1,376			688	1	20	LTG - SITE POLES	2
>	3	LTG - SMKRS / CANOPY / SCNCES	20	1	1,429		2,289		860	1	20	LTG - SITE POLES	4
Ī	5	LTG - RR / BOH / TEMP	20	1	495			1,011	516	1	20	LTG - SITE POLES	6
>	7	LTG - SITE POLES	20	1	516	696	]		180	1	20	LTG - SITE BOLLARDS	8
	9	RELAY PANEL "RP"	20	1	200		950		750	1	20	LTG - INVERTER	10
	11	UH-1	25	1	5,000		<u>,                                    </u>	5,000	0			SPACE ONLY	12
	13	UH-2	25	1	5,000	5,000			0			SPACE ONLY	14
ļ	15	SPARE	20	1	0		0		0			SPACE ONLY	16
-	17	SPARE	20	1	0		, [	0	0			SPACE ONLY	18
-	19	SPARE	20	1	0	0			0			SPACE ONLY	20
ŀ	21	SPARE	20	1	0		0		0			SPACE ONLY	22
ŀ	23 25	SPARE SPACE ONLY	20	1	0	0	, լ	0	0			SPACE ONLY SPACE ONLY	24 26
-	25 27	SPACE ONLY			0	0	0		0			SPACE ONLY	28
ŀ	29	SPACE ONLY			0	_	0	0	0			SPACE ONLY	30
ŀ	31	SPACE ONLY			0	0	, l	U	0			SPACE ONLY	32
ŀ	33	SPACE ONLY			0	-	0		0			SPACE ONLY	34
ŀ	35	SPACE ONLY			0		0	0	0			SPACE ONLY	36
ŀ	37	SPACE ONLY			0	0	1 L		0			SPACE ONLY	38
ŀ	39	SPACE ONLY			0		0		0			SPACE ONLY	40
ŀ	41	SPACE ONLY			0	+		0	0			SPACE ONLY	42
ŀ		1	PER PHASE	CONN	IECTED - VA	7,072	3,239	6,011				TOTAL CONNECTED - VA 16,322	
		Р	ER PHASE CO				12	22	1			TOTAL CONNECTED - AMPS 20	-
		NOTES:							_			TOTAL DEMAND - VA 20,165	
		RP# = CONTROL LIGHTING CIRCUIT WIT	H RFI AY PANI	=I AS	INDICATED							NEC TOTAL DEMAND - AMPS 24	
		SPD = SURGE PROTECTIVE DEVICE		,								THE OTHER PRINTED FROM S	

	BUS AMPS: 225A				SCCR:		F	ULLY RATED			BRANCH CIRCUIT PANELBOARD	)	
	MAIN SIZE / TYPE: MLO				NEMA TYPE:			MA			SQUARE D		
	VOLTS/PHASE: 208Y/120	V, 3PH, 4W			MOUNTING:		_	MFG MODEL: NQ OPTIONS: SPD					
	SECTION: 1			_		ELEC ROOM							
KT#	CIRCUIT DECRIPTION	CB AMPS	Р	LOAD VA	A VA	B VA	C VA	LOAD VA	P	CB AMPS	CIRCUIT DECRIPTION		CK
1	PWR - WEST DOOR SIGN	20	1	1,200	1.200			0	1	20	PWR - FACP		1
3	PWR - S. MAIN ENTRANCE SIGN	20	1	1,200	.,	1,200	1	0	1	20	PWR - LMCP		
5	PWR - MONUMENT SIGN SOUTH	20	1	1,200		,	1,700	500	1	20	PWR - FIRE PIT		
7	RCPT - SMOKER CONV.	20	1	720	960	]	,	240	1	15	GEH-1,2,3,4,5		
9	RCPT - EXTERIOR CAFÉ LIGHTS	20	1	540		1,260	1	720	1	20	RCPT - FRONT BUILDING CONV.		-
11	RCPT - ROOF TOP	20	1	900		1,200	1,800	900	1	20	RCPT - NE BLDG CONV.		٠
13	PWR - WEST WALL SIGN	20	1	1,200	1.920	1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	720	1	20	RCPT - PATIO CONV. 1		٠
15	PWR - FIRE PLACE SIGN	20	1	1,200	1,0=0	2,100	1	900	1	20	RCPT - PATIO CONV. 2		٠
17	RCPT - PATIO FANS	20	1	25		,	565	540	1	20	RCPT - PATIO CONV. 3		
19	PWR - MONUMENT SIGN NORTH	20	1	1,200	1,920	]		720	1	20	RCPT - PATIO CONV. 4		
21	PWR - AUTO DOOR	20	1	600	.,020	800	1	200	1	20	PWR - FIRE PLACE		
23	RCPT - ELEC/MECH CONV.	20	1	360			720	360	1	20	RCPT - PHONEBOARD 1		
25	SPARE	20	1	0	360	1	120	360	1	20	RCPT - PHONEBOARD 2		
27	SPARE	20	1	0	000	0	1	0	1	20	SPARE		
29	SPARE	20	1	0		0	200	200	1	20	PWR - SECURITY		
31	SPARE	20	1	0	0	1	200	0	1	20	SPARE		
33	SPARE	20	1	0		0	1	0	1	20	SPARE		
35	SPARE	20	1	0		0	0	0	1	20	SPARE		
37	SPARE	20	1	0	0	1		0	1	20	SPARE		
39				0	0	0	1	0			SPARE		
	SPARE RCPT - TEMP	20	1			0	720	0	1	20	SPARE		4
41 ECTIO	1 1	20	1	720			120	0	1	20	SPARE		4
43	SPARE	20	1	0	0		1	0	1	20	SPARE		4
45	SPARE	20	1	0		0		0	1	20	SPARE		- 4
47	SPARE	20	1	0		1	0	0	1	20	SPARE		- 4
49	SPARE	20	1	0	0		1	0	1	20	SPARE		
51	SPARE	20	1	0		0		0	1	20	SPARE		
53	SPARE	20	1	0		1	0	0	1	20	SPARE		
55	SPARE	20	1	0	0		1	0	1	20	SPARE		
57	SPARE	20	1	0		0		0	1	20	SPARE		
59	SPARE	20	1	0		1	0	0	1	20	SPARE		(
61	SPARE	20	1	0	0		1	0	1	20	SPARE		-
63	SPARE	20	1	0		0		0	1	20	SPARE		(
65	SPARE	20	1	0		1	0	0	1	20	SPARE		(
67	SPARE	20	1	0	0		1	0	1	20	SPARE		- (
69	SPARE	20	1	0		0		0	1	20	SPARE		
71	SPARE	20	1	0		1	0	0	1	20	SPARE		
73	SPARE	20	1	0	0		-	0	1	20	SPARE		
75	SPARE	20	1	0		0		0	1	20	SPARE		
77	SPARE	20	1	0			0	0	1	20	SPARE		
79	SPARE	20	1	0	0			0	1	20	SPARE		8
81	SPARE	20	1	0		0		0	1	20	SPARE		3
83	SPARE	20	1	0			0	0	1	20	SPARE		8
		PER PHASE		-	6,360	5,360	5,705				TOTAL CONNECTED - VA	17,425	4
		PER PHASE CO	ININEC	IED - AMPS	53	45	48	]			TOTAL CONNECTED - AMPS	48	-
	NOTES:										TOTAL DEMAND - VA	19,600	_
	RP# = CONTROL LIGHTING CIRCUIT WI	TH RELAY PAN	EL AS	INDICATED							NEC TOTAL DEMAND - AMPS	54	╛
	HL = HANDLE LOCK ON/OFF												
	SPD = SURGE PROTECTIVE DEVICE												
	GF = GROUND FAULT CIRCUIT INTERRU	JPTFR											

BRANCH CIRCUIT COPPER CONDUCTOR  AND CONDUIT SIZING CHART												
OVERCURRENT PROTECTION DEVICE RATING (AMPS)	REQUIRED CONDUCTOR SIZE	EQUIPMENT GROUNDING CONDUCTOR SIZE	SINGLE PHASE 2 WIRE + GND. CONDUIT SIZE	SINGLE PHASE 3 WIRE + GND. CONDUIT SIZE	THREE PHASE 3 WIRE + GND. CONDUIT SIZE	THREE PHASE 4 WIRE + GND. CONDUIT SIZE						
15	12 AWG	12 AWG	3/4"	3/4"	3/4"	3/4"						
20	12 AWG	12 AWG	3/4"	3/4"	3/4"	3/4"						
25	10 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"						
30	10 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"						
35	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"						
40	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"						
45	6 AWG	10 AWG	3/4"	3/4"	3/4"	1"						
50	6 AWG	10 AWG	3/4"	3/4"	3/4"	1"						
60	4 AWG	10 AWG	1"	1"	1"	1-1/4"						
70	4 AWG	8 AWG	1"	1"	1"	1-1/4"						
80	3 AWG	8 AWG	1"	1-1/4"	1-1/4"	1-1/4"						
90	2 AWG	8 AWG	1"	1-1/4"	1-1/4"	1-1/4"						
100	1 AWG	8 AWG	1-1/4"	1-1/2"	1-1/2"	1-1/2"						

\* = UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL BRANCH CIRCUITS AND FEEDERS TO BE PROVIDED WITH A NEUTRAL WIRE. \* = ALL CONDUCTORS SIZED ON THE POWER RISER DIAGRAM OR IN BRANCH CIRCUIT CONDUCTOR TABLE ARE BASED ON 3 CURRENT CARRYING CONDUCTORS IN A RACEWAY OR CABLE. CONDUCTORS SHALL BE DERATED IN ACCORDANCE WITH THE NEC IF 4 OR MORE CONDUCTORS ARE PLACED IN A RACEWAY OR CABLE.

	BUS AMPS: 225A MAIN SIZE / TYPE: MLO VOLTS/PHASE: 208Y/120\	/, 3PH, 4W			SCCR: NEMA TYPE: MOUNTING:	1 SURFACE		FULLY RATED MA	NUFAC MFG	TURER: MODEL:		
	SECTION: 1			_		ELEC ROOM				PTIONS:		1
Т#	CIRCUIT DECRIPTION	CB AMPS	Р	LOAD VA	A VA	B VA	C VA	LOAD VA	P	CB AMPS	CIRCUIT DECRIPTION	CKT#
	PWR - WEST DOOR SIGN	20	1	1,200	1,200			0	1	20	PWR - FACP	2
_	PWR - S. MAIN ENTRANCE SIGN	20	1	1,200	1,200	1,200		0	1	20	PWR - LMCP	4
_	PWR - MONUMENT SIGN SOUTH	20	1	1,200		1,200	1,700	500	1	20	PWR - FIRE PIT	6
	RCPT - SMOKER CONV.	20	1	720	960	1	1,700	240	1	15	GEH-1,2,3,4,5	8
	RCPT - EXTERIOR CAFÉ LIGHTS	20	1	540		1,260		720	1	20	RCPT - FRONT BUILDING CONV.	10
1	RCPT - ROOF TOP	20	1	900		1,200	1,800	900	1	20	RCPT - NE BLDG CONV.	12
3	PWR - WEST WALL SIGN	20	1	1,200	1,920	1	1,000	720	1	20	RCPT - PATIO CONV. 1	14
5	PWR - FIRE PLACE SIGN	20	1	1,200	1,020	2,100		900	1	20	RCPT - PATIO CONV. 2	16
,	RCPT - PATIO FANS	20	1	25		2,100	565	540	1	20	RCPT - PATIO CONV. 3	18
	PWR - MONUMENT SIGN NORTH	20	1	1,200	1.920	1	303	720	1	20	RCPT - PATIO CONV. 4	20
	PWR - AUTO DOOR	20	1	600	1,320	800		200	1	20	PWR - FIRE PLACE	22
3	RCPT - ELEC/MECH CONV.	20	1	360		800	720	360	1	20	RCPT - PHONEBOARD 1	24
;	SPARE	20	1	0	360	, L	720	360		20	RCPT - PHONEBOARD 2	26
	SPARE	20	1	0	300	0		0	1	20	SPARE	28
)		20				0	200	200	1	20	PWR - SECURITY	
	SPARE		1	0	0	, L	200		1			30
	SPARE	20	1	0	0			0	1	20	SPARE	32
	SPARE	20	1	0		0		0	1	20	SPARE	34
5	SPARE	20	1	0		, L	0	0	1	20	SPARE	36
_	SPARE	20	1	0	0			0	1	20	SPARE	38
_	SPARE	20	1	0		0		0	1	20	SPARE	40
1	RCPT - TEMP	20	1	720			720	0	1	20	SPARE	42
1OIT						1					T	
3	SPARE	20	1	0	0			0	1	20	SPARE	44
_	SPARE	20	1	0		0		0	1	20	SPARE	46
_	SPARE	20	1	0		, L	0	0	1	20	SPARE	48
)	SPARE	20	1	0	0			0	1	20	SPARE	50
	SPARE	20	1	0		0		0	1	20	SPARE	52
1	SPARE	20	1	0		,	0	0	1	20	SPARE	54
	SPARE	20	1	0	0			0	1	20	SPARE	56
	SPARE	20	1	0		0		0	1	20	SPARE	58
	SPARE	20	1	0			0	0	1	20	SPARE	60
	SPARE	20	1	0	0			0	1	20	SPARE	62
3	SPARE	20	1	0		0		0	1	20	SPARE	64
5	SPARE	20	1	0			0	0	1	20	SPARE	66
·	SPARE	20	1	0	0	]		0	1	20	SPARE	68
	SPARE	20	1	0		0		0	1	20	SPARE	70
	SPARE	20	1	0		`	0	0	1	20	SPARE	72
	SPARE	20	1	0	0	]		0	1	20	SPARE	74
,	SPARE	20	1	0		0		0	1	20	SPARE	76
	SPARE	20	1	0			0	0	1	20	SPARE	78
	SPARE	20	1	0	0	]		0	1	20	SPARE	80
	SPARE	20	1	0		0		0	1	20	SPARE	82
_	SPARE	20	1	0			0	0	1	20	SPARE	84
	· · · · ·				0.000	5.000						1
		PER PHASE	CONN	LC   LD - VA	6,360	5,360	5,705				TOTAL CONNECTED - VA 17,425	1
	_	ED DUI 6 = 6 = 1		TED		45	40				TOTAL COMMECTED 11100	1
	P NOTES:	ER PHASE CO	NNEC	TED - AMPS	53	45	48				TOTAL CONNECTED - AMPS 48 TOTAL DEMAND - VA 19,600	

<u> </u>	BRANCH CIRCUIT COPPER CONDUCTOR												
AND CONDUIT SIZING CHART													
OVERCURRENT PROTECTION DEVICE RATING (AMPS)	REQUIRED CONDUCTOR SIZE	EQUIPMENT GROUNDING CONDUCTOR SIZE	SINGLE PHASE 2 WIRE + GND. CONDUIT SIZE	SINGLE PHASE 3 WIRE + GND. CONDUIT SIZE	THREE PHASE 3 WIRE + GND. CONDUIT SIZE	THREE PHASE 4 WIRE + GND. CONDUIT SIZE							
15	12 AWG	12 AWG	3/4"	3/4"	3/4"	3/4"							
20	12 AWG	12 AWG	3/4"	3/4"	3/4"	3/4"							
25	10 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"							
30	10 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"							
35	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"							
40	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"							
45	6 AWG	10 AWG	3/4"	3/4"	3/4"	1"							
50	6 AWG	10 AWG	3/4"	3/4"	3/4"	1"							
60	4 AWG	10 AWG	1"	1"	1"	1-1/4"							
70	4 AWG	8 AWG	1"	1"	1"	1-1/4"							
80	3 AWG	8 AWG	1"	1-1/4"	1-1/4"	1-1/4"							
90	2 AWG	8 AWG	1"	1-1/4"	1-1/4"	1-1/4"							
100	1 AWG	8 AWG	1-1/4"	1-1/2"	1-1/2"	1-1/2"							

	INVERTER: INV									
	POWER RATING (VA/W): 750									
	INPUT VOLTAGE (V): 277									
	OUTPUT VOLTAGE (V): 277									
	MANUFACTURER / MODEL: MULE - CEPS-M									
	APPROVED EQUIVALENT MYERS - ILLUMINAT	OR LV								
	LOCATION: ELECTRICAL ROOM									
	NORMAL POWER SOURCE: L-20									
CKT			СВ		LOAD					
#	LOAD DESCRIPTION	LOAD TYPE	AMPS	Р	VA	NOTE				
1	LTG - WALL PACKS	NORMALLY ON	10	1	224					
2	LTG - PATIO CANOPY	NORMALLY ON	10	1	200					
3	LTG - FRONT CANOPY	NORMALLY ON	10	1	100					
4	SPARE	NORMALLY ON	10	1						
5 6	SPARE SPARE	NORMALLY ON NORMALLY ON	10	1						
	SPARE			·		1,,,				
		TOTAL	CONNECT		524	VA				
				SPARE %	226 30	VA %				
			•	SPARE %	30	90				
	GENERAL: UL 924 LISTED,									
	INPUT FUSE AND BATTERY FUSE PROTE	ECTION								
	FIELD SELECTABLE VOLTAGE									
	90 MINUTE RUNTUME									
	STANDARD WARRANTY 3 YEARS									
	SELF TEST AND DIAGNOSTICS.									
	WALL MOUNTED CABINET									
	WALL MOUNTED CABINET MANUFACTURER STARTUP AND TRAININ	NG								
		NG								
	MANUFACTURER STARTUP AND TRAININ	NG								

### GENERAL NOTES (TYPICAL ALL SHEETS) ELECTRICAL SYMBOLS

A. REFER TO ARCHITECTURAL DETAILS AND ELEVATIONS FOR COORDINATION OF LOCATION

C. PROVIDE UPDATED, TYPEWRITTEN PANELBOARD DIRECTORY FOR EACH PANELBOARD

D. CONTRACTOR TO REFERENCE BRANCH CIRCUIT COPPER CONDUCTOR AND CONDUIT SIZING CHART FOR SIZING OF BRANCH CIRCUITS AND OR FEEDERS AT OR BELOW

E. SUPPORT ALL LIGHT FIXTURES WITH A MINIMUM OF (4) 12 GA. HANGER WIRES TO

G. DISCONNECTS FOR MECHANICAL EQUIPMENT ARE PROVIDED BY OTHERS. UNLESS

H. THE FOLLOWING FACTORS SHALL BE USED TO DETERMINE PANELBOARD CAPACITY:

I. LIGHTING INDICATED ABOVE EXIT DISCHARGE DOOR IS FOR MEANS OF EGRESS

J. CONDUIT SHALL BE USED FOR CONDUCTORS WHERE REQUIRED BY N.E.C.

M. PROVIDE HOUSE KEEPING PAD FOR ALL FLOOR MOUNTED EQUIPMENT.

K. OUTLETS INSTALLED IN FIRE RATED ASSEMBLES SHALL BE SEPARATED BY A

L. CONTRACTOR SHALL PROVIDE FIRE RATED ENCLOSURES AROUND ALL ROUGH-IN

BOXES, PANELS ETC. THAT ARE LOCATED IN FIRE RATED WALLS AND SHALL FIRE CAULK ALL OPENING IN RATED ASSEMBLES PER MANUFACTURERS RECOMMENDATIONS PER

N. INSTALL FIRE ALARM DEVICES THAT COMPLY WITH APPLICABLE CODES. INCLUDING BUT NOT LIMITED TO THE NFPA, UL, ADA, IBC OR ANY OTHER AUTHORITIES HAVING

O. CONTRACTOR MAY WIRE SO FIRST GFI OUTLET PROTECTS ALL DOWN STREAM OUTLETS.

P. WHERE THE DRAWINGS INDICATE DEDICATED CIRCUITRY WITH NO SHARED NEUTRALS,

Q. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR REQUIREMENTS AND LOCATIONS. ELECTRICAL SYSTEMS SHALL BE DESIGNED TO TAKE ADVANTAGE OF

THE CONTRACTOR SHALL NOT INSTALL MULTI-WIRE BRANCH CIRCUITS WITH A COMMON

FIRE STOPPING REQUIREMENTS

CONTRACTOR TO PROVIDE FIRESTOPPING AT ALL FIRE RATED ASSEMBLIES MEETING THE MANUFACTURER'S

FIRESTOPPING U.L. LISTED DETAILS AND INSTRUCTIONS PER LOCAL CODES AND JURISDICTIONS. CONTRACTOR IS

RESPONSIBLE FOR COORDINATING LOCATIONS WITH ARCHITECTURAL FIRE RATINGS ON PLANS OR AS REQUIRED.

100% LIGHTING, 100% MOTOR LOADS, 100% OF FIRST 10,000 & 50% THERE AFTER FOR ALL

F. CONNECT EXIT AND EMERGENCY LIGHTS TO HOT LEG, NOT SWITCH LEG.

B. REFER TO ARCHITECTURAL PLANS FOR DETAIL OF ALL CONDUIT THRU ROOF

OF ALL WIRING DEVICES BEFORE ROUGH-IN OF J-BOXES.

WHICH CIRCUITS HAVE BEEN ADDED TO OR MODIFIED.

STRUCTURE ABOVE.

NOTED OTHERWISE.

ILLUMINATION PER IBC 1006.1.

FIRE RATED ASSEMBLES.

HORIZONTAL DISTANCE OF NOT LESS THAN 24".

UTILITY COMPANY'S REBATE PROGRAM.

OTHER LOADS.

	BRANCH CIRCUIT CONCEALED IN CEILING OR WALL, ARROWS INDICATED HOMERUNS TO PANEL, ALL CONDUCTORS ARE NOTED IN PANEL SCHEDULE PHASE CONDUCTORS NEUTRAL CONDUCTORS GROUND CONDUCTORS
LP1-10	PANEL - BREAKER NUMBER (IDENTIFICATION)
1,3 OR 1,3,5	INDICATES X,X= 2-POLE C.B. OR X,X,X= 3-POLE C.B.
<del>→     ► ► ►</del> 5 3 1	HOMERUN INDICATED LIKE THIS INDICATES THREE SEPARATE CIRCUITS
<b>.</b>	CONDUIT CONCEALED IN CEILING OR WALL WITH THREE CONDUCTORS: 1-PHASE, 1-NEUTRAL, 1-GROUND WIRE, MINIMUM NO.12 WIRE UNLESS OTHERWISE SPECIFIED ON PLANS
	CONDUIT RUN UNDERGROUND OR CONCEALED IN

CONDUIT RUN UNDERGROUND OR CONCEALED IN FLOOR SLAB GROUNDING CONDUCTOR, MINIMUM NO. 12 WIRE EXCEPT AS NOTED TIME OR TIME EXIT SIGN, SINGLE FACED, ARROWS AS SHOW ON PLANS, SHADED SIDE(S) INDICATES FACE SIDE(S) OF EXIT

EXIT SIGN, DOUBLE FACED, ARROWS AS SHOW ON DRAWING, SHADED SIDE(S) INDICATES FACE SIDE(S) OF EXIT OR CEILING OR WALL MOUNTED EMERGENCY LIGHTING UNIT WITH INTEGRAL BATTERY AND UNIT MOUNTED HEADS

RECESSED CEILING LIGHT FIXTURE WALL MOUNTED LIGHT FIXTURE, SIZE AND TYPE AS NOTED

├── LED STRIP FIXTURE

208Y/120V OR 120/240V PANELBOARD (SURFACE), TOP MOUNTED 6'-0" AFF 480/277V PANELBOARD (SURFACE), TOP MOUNTED 6'-0" AFF

POLE MOUNTED LIGHT FIXTURE, SIZE AND TYPE AS NOTED

DISTRIBUTION PANEL (SURFACE OR FLOOR MOUNTED) SURFACE MOUNTED EQUIPMENT, TYPE AS INDICATED ON PLANS DISCONNECT SWITCH, SIZE AND TYPE AS NOTED, TOP MOUNTED 5'-0" AFF

SINGLE POLE SWITCH, +3'-10" AFF TO CENTERLINE OF DEVICE BOX THREE-WAY SWITCH, +3'-10" AFF TO CENTERLINE OF DEVICE BOX PHOTO CELL, SIZE AND TYPE AS NOTED SWITCH DESIGNATION

INDICATES RECEPTACLE ABOVE COUTERTOP. RE: PLANS DUPLEX RECEPTACLE, +1'-6" AFF OR AS NOTED DUPLEX RECEPTACLE W/GROUND FAULT PROTECTION,+ 1'-6" AFF OR AS NOTED

GFI DUPLEX RECEPTACLE WITH WEATHERPROOF PLATE, HEIGHT AS NOTED DOUBLE DUPLEX RECEPTACLE, +1'-6" AFF OR AS NOTED CEILING MOUNTED RECEPTACLE

⊢ U OR U WALL OR CEILING MOUNTED JUNCTION BOX FIRE ALARM MANUAL PULL STATION, +3'-10" AFF SPRINKLER ALARM SYSTEM FLOW SWITCH SPRINKLER ALARM SYSTEM TAMPER SWITCH FIRE ALARM EXTERIOR/INTERIOR BELL, SIZE AND TYPE AS NOTED FIRE AND SMOKE DAMPER; 120V, 1PH THERMOSTAT OUTLET BOX WITH 3/4"C STUBBED UP OUT OF BOX TO

ABOVE ACCESSIBLE CEILING, THERMOSTAT AND WIRING BY OTHERS, +4'-0" AFF OR AS NOTED INDICATES WIRING DEVICE ABOVE, RE: DRAWING MECHANICAL EQUIPMENT CALL OUT

XX-X ELECTRICAL EQUIPMENT PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR +3'-10" HEIGHT TO CENTERLINE OF OUTLET BOX ABOVE FINISHED FLOOR ROOFTOP UNIT DESIGNATION EXHAUST FAN DESIGNATION

PUMP DESIGNATION ABOVE FINISHED FLOOR FIRE ALARM ABOVE GRADE

		LOCATIO CONTROL POWER SOURC									: WATTSTOPPER : LMCP				
#	SOURCE PANEL - CKT	LOAD DESCRIPTION	CONTROL SCHEDULE	LOAD TYPE	DIMMING	VOLTAGE	P	P	VOLTAGE	DIMMING	LOAD TYPE	CONTROL SCHEDULE	LOAD DESCRIPTION	SOURCE PANEL - CKT	
1	P1-1	PWR - WEST DOOR SIGN	а	NORMAL	NO	120	1	1	277	0-10V	NORMAL	b	LTG - SITE POLES	L-1	_
3	P1-3	PWR - S. MAIN ENTRANCE SIGN	а	NORMAL	NO	120	1	1	277	0-10V	NORMAL	f	LTG - CANOPY ENTRANCE	L-3	
5	P1-5	PWR - MONUMENT SIGN SOUTH	а	NORMAL	NO	120	1	1	277	0-10V	NORMAL	g	LTG - CANOPY PATIO	L-3	
7	P1-7	RCPT - SMOKER CONV.	е	NORMAL	NO	120	1	1	277	0-10V	NORMAL	h	LTG - SCONCES	L-3	
9	P1-9	RCPT - EXTERIOR CAFÉ LIGHTS	С	NORMAL	NO	120	1	1	277	0-10V	NORMAL	j	LTG - WALL PACKS	L-3	
11	P1-13	PWR - WEST WALL SIGN	а	NORMAL	NO	120	1	1	277	0-10V	NORMAL	b	LTG - SITE POLES	L-2	
13	P1-15	PWR - FIRE PLACE SIGN	a	NORMAL	NO	120	1	1	277	0-10V	NORMAL	b	LTG - SITE POLES	L-4	
15	P1-17	RCPT - PATIO FANS	d	NORMAL	NO	120	1	1	277	0-10V	NORMAL	b	LTG - SITE POLES	L-6	
17	P1-19	PWR - MONUMENT SIGN NORTH	a	NORMAL	NO	120	1	1	277	0-10V	NORMAL	b	LTG - SITE POLES	L-7	Т
19	P1-10	RCPT - FRONT BUILDING CONV.	е	NORMAL	NO	120	1	1	277	NO	NORMAL	b	LTG - SITE BOLLARDS	L-8	Т
21	P1-12	RCPT - NE BLDG CONV.	е	NORMAL	NO	120	1	1	277	NO	NORMAL		SPARE		
23	P1-14	RCPT - PATIO CONV. 1	е	NORMAL	NO	120	1	1	277	NO	NORMAL		SPARE		_
	1		1		1	1			1		1	'		<u>'</u>	_
25	P1-16	RCPT - PATIO CONV. 2	е	NORMAL	NO	120	1	1	277	NO	NORMAL		SPARE		_
27	P1-18	RCPT - PATIO CONV. 3	e	NORMAL	NO	120	1	1	277	NO	NORMAL		SPARE		_
29	P1-20	RCPT - PATIO CONV. 4	е	NORMAL	NO	120	1	1	277	NO	NORMAL		SPARE		
31		SPARE		NORMAL	NO	120	1	1	277	NO	NORMAL		SPARE		_
33		SPARE		NORMAL	NO	120	1	1	277	NO	NORMAL		SPACE ONLY		_
35		SPARE		NORMAL	NO	120	1	1	277	NO	NORMAL		SPACE ONLY		_
37		SPARE		NORMAL	NO	120	1	1	277	NO	NORMAL		SPACE ONLY		_
39		SPARE		NORMAL	NO	120	1	1	277	NO	NORMAL		SPACE ONLY		_
41		SPARE		NORMAL	NO	120	1	1	277	NO	NORMAL		SPACE ONLY		_
43		SPARE		NORMAL	NO	120	1	1	277	0-10V	EMERGENCY		LTG - CANOPY ENTRANCE		
45		SPARE		NORMAL	NO	120	1	1	277	0-10V	EMERGENCY		LTG - CANOPY PATIO		
47		SPARE		NORMAL	NO	120	1	1	277	0-10V	EMERGENCY		LTG - WALL PACKS		
	PI UI FI NOTES: VI PO	ROGRAMMABLE SCHEDULE PER RELAY OR CUST HYSICALLY SEPARATED LOW VOLTAGE COMPAR  924 LISTED EMERGENCY CONTROL BYPASS, CO RE ALARM SYSTEM CONTACTS TO FORCE LIGHT  8 = PROVIDE VOLTAGE BARRIER BETWEEN NORM  C = LOAD CONTROLLED VIA PHOTOCELL  C = LOAD CONTROLLED VIA TIMECLOCK	TMENT, DIMMING PROT INTACTS MONITORING ING CONTROL SYSTEM	OCOLS AS INDICATE ATS-1 EMERGENCY INTO EMERGENCY L	D, GENERATOR SOUF		OFF OVI	ERRIDE	WITH POSITION	INDICATION,					
CC	c. d. e. f. g.	EXTERIOR - SIGNAGE EXTERIOR - SITE LIGHTING EXTERIOR - CAFÉ LIGHTS EXTERIOR - PATIO FANS EXTERIOR - CONV. EXTERIOR - CANOPY ENTRANCE EXTERIOR - CANOPY PATIO EXTERIOR - SCONCES		TC/PC TC/PC, PROGRAM ( TC/PC, PROGRAM ( TC TC TC TC/PC, PROGRAM ( TC/PC, PROGRAM ( TC/PC, PROGRAM (	CIRCUIT SUCH THA CIRCUIT SUCH THA CIRCUIT SUCH THA	T FIXTURES TUI T FIXTURES DIN T FIXTURES DIN	RN OFF 1 TO 30% 1 TO 30%	1 HOUR	AFTER BUSINES AFTER BUSINE AFTER BUSINE	ESS CLOSES. ESS CLOSES.	CLOSES. CONFIRM WI	TH OWNER			

TYPE	MANUFACTURER MODEL #	LAMPS	WATTS VOLTS	VA	DIMMING PROTOCOL	_ DESCRIPTION	NOTES
Α	HE WILLIAMS	LED				4' SUSPENDED LED STRIP. DIE FORMED C.R.S. HOUSING. WHITE POLYESTER POWEDER COAT. PAINTED AFTER FABRICATION.	
(AE)	75-4-L50/835-VBY-2-DRV-UNV	3500K	33	36.7	N/A	Y-HANGERS WITH CHAINS.	
	(-EM/10WLP) OR EQUAL BY LITHONIA	5,000 LUMENS	120/277		N/A	E = 10 WATT EMERGENCY BATTERY CAPABLE OF 90 MINUTE RUN TIME.	
В	LITHONIA	LED				6" SQUARE DOWNLIGHT. BLACK SEMI-SPECULAR TRIM WITH BLACK FLANGE, STEEL MOUNTING/PLASTER FRAME.	
(BE)	LDN6SQ-27/15-LS6-BR-LSS-TRBL-MVOLT-GZ1	2700K	18	20.0	1%	HINGED ACCESS COVERS AND SPRING LATCHES.	
, ,	OR EQUAL BY COOPER LIGHTING HALO	1500 LUMENS	277		0-10V	E = EMERGNCY INVERTER POWER	
С	VISUAL COMFORT	LED				17" ALUMINUM AND BRASS EXTERIOR CYLINDER WALL SCONCE WITH UP/DOWN LIGHTING.	
(CE)	SLOWS290-27-NB	2700K	10.6	11.8	1%	0-10V DIMMING, 2700K COLOR TEMPERATURE, 887 LUMEN OUPUT, 90 CRI.	
		887 LUMENS	277		0-10V	_	
		90CRI					
SB	DECORATIVE LIT COLUMN/BOLLARD	LED				LED SITE DECORATIVE COLUMN OR BOLLARD LIGHT FIXTURE.	
	SELECTED BY ARCHITECT/OWNER	4000K	30	33.3	10%	0-10V DIMMING, 4000K COLOR TEMPERATURE, 90 CRI.	
		2,000 LUMENS	277		0-10V	_	
						CONFIRM FINISH COLOR WITH ARCHITECT PRIOR TO ORDERING.	
SL1	COOPER LIGHITNG	LED				LED SITE LIGHTING FIXTURE. TYPE T3 DISTRIBUTION.	
	PRV-XL-PA3A-740-H-T3-SA-XX	4000K	172	191.1	10%	PROVIDE WITH 20' TALL, 5" SQUARE STEEL POLE. UNITED LIGHTING STANDARDS "RPSQ-20-5-11" OR EQUAL.	
	OR EQUAL BY LITHONIA	24,621 LUMENS	277		0-10V	CONFIRM POLE WIND RATING WITH POLE MANUFACTURER PRIOR TO ORDERING.	
						CONFIRM FINISH COLOR WITH ARCHITECT PRIOR TO ORDERING.	
SL2	COOPER LIGHITNG	LED				LED SITE LIGHTING FIXTURE. TYPE T4W DISTRIBUTION.	
	PRV-XL-PA3A-740-H-T4W-SA-XX	4000K	172	191.1	10%	PROVIDE WITH 20' TALL, 5" SQUARE STEEL POLE. UNITED LIGHTING STANDARDS "RPSQ-20-5-11" OR EQUAL.	
	OR EQUAL BY LITHONIA	24,325 LUMENS	277		0-10V	CONFIRM POLE WIND RATING WITH POLE MANUFACTURER PRIOR TO ORDERING.	
						CONFIRM FINISH COLOR WITH ARCHITECT PRIOR TO ORDERING.	
SL3	COOPER LIGHITNG	LED				DOUBLE HEAD LED SITE LIGHTING FIXTURE. TYPE T4W DISTRIBUTION.	
	PRV-XL-PA3A-740-H-T4W-SA-XX	4000K	172	191.1	10%	PROVIDE WITH 20' TALL, 5" SQUARE STEEL POLE. UNITED LIGHTING STANDARDS "RPSQ-20-5-11" OR EQUAL.	
	OR EQUAL BY LITHONIA	24,325 LUMENS	277		0-10V	CONFIRM POLE WIND RATING WITH POLE MANUFACTURER PRIOR TO ORDERING.	
						CONFIRM FINISH COLOR WITH ARCHITECT PRIOR TO ORDERING.	
SL4	COOPER LIGHITNG	LED				LED SITE LIGHTING FIXTURE. TYPE 5WQ DISTRIBUTION.	
	PRV-XL-PA3A-740-H-5WQ-SA-XX	4000K	172	191.1	10%	PROVIDE WITH 20' TALL, 5" SQUARE STEEL POLE. UNITED LIGHTING STANDARDS "RPSQ-20-5-11" OR EQUAL.	
	OR EQUAL BY LITHONIA	25,453 LUMENS	277		0-10V	CONFIRM POLE WIND RATING WITH POLE MANUFACTURER PRIOR TO ORDERING.	
						CONFIRM FINISH COLOR WITH ARCHITECT PRIOR TO ORDERING.	
EX1	HE WILLIAMS	LED				EXTERIOR WALL PACK. DIE CAST ALUMINUM ENCLOSURE IN DARK BRONZE POWDER COAT FINISH WITH TFT DISTRIBUTION	
(EX1E)	VWPH-L60/740-TFT-DBZ-CGL-DIM-UNV	3500K	49	54.4	10%	AND CLEAR GLASS LENS.	
	OR EQUAL BY LITHONIA	6,000 LUMENS	277		0-10V	E = EMERGNCY INVERTER POWER	
EX2	HE WILLIAMS	LED				EXTERIOR WALL PACK. DIE CAST ALUMINUM ENCLOSURE IN DARK BRONZE POWDER COAT FINISH WITH T2 DISTRIBUTION	
(EX2E)	VWPH-L30/740-T2-DBZ-CGL-DIM-UNV	3500K	27	30.0	10%	AND CLEAR GLASS LENS.	
	OR EQUAL BY LITHONIA	3,000 LUMENS	277		0-10V	E = EMERGNCY INVERTER POWER	
Х	MULE	LED				UNIVERSAL MOUNT INJECTION MOLDED, UV-STABLE THERMOPLASTIC, IMPACT, SCRATCH, FADE, AND CORROSION	
	MX-B-R-U		5	5.6	N/A	RESISTANT UNIBODY HOUSING. WHITE FINISH WITH RED LETTERING. FACES AND DIRECTIONS PER PLAN WITH TOOL-LESS,	
			120/277		N/A	SNAP-IN DESIGN BATTERY BACK UP.	
INV	MULE	N/A				750 VA/W EMERGENCY LIGHTING INVERTER SYSTEM. (3) 10 AMP CIRCUIT BREAKERS. UL 924.	
	CEPS-M-4-W-1-B-10-03		5	5.6	N/A		
			277		N/A	_	

SPECIFIC NOTES:

THE LIGHTING DESIGN FOR THIS PROJECT IS BASED UPON THE MANUFACTURERS SPECIFIED. IF AN ADDITIONAL SUBSTITUTION IS DESIRED BY THE CONTRACTOR, A SUBSTITUTION REQUEST SUBMITTAL MUST BE PROVIDED AS FOLLOWS:

S1. SUBSTITUTION REQUEST MUST BE RECEIVED BY THE ENGINEER IN WRITING 10 DAYS PRIOR TO BID. FAILURE TO SUBMIT CONSTITUTES A GUARANTEE TO SUPPLY THE SPECIFIED FIXTURES. S2. INFORMATION IS TO BE SUPPLIED COMPARING PHOTOMETRY, (WITH FLOOR PLANS INDICATING POINT BY POINT CALCULATIONS)

DIMENSIONS, MATERIAL COMPOSITION, FINISH, VISUAL APPEARANCE AS WELL AS THE "CONTRACTOR NET" PRICING. SAMPLES ARE TO BE PROVIDED UPON REQUEST. S3. GREAT CARE, TIME AND EXPENSE HAVE BEEN USED TO PROVIDE OUR CLIENT WITH THE LIGHTING AND CONTROLS SYSTEM. THEREFORE, FOR EACH AND EVERY TYPE OF FIXTURE OFFERED AS AN UNSOLICITED ALTERNATE, A \$500.00 FEE WILL BE CHARGED TO THE CONTRACTOR FOR REVIEW OF THE ALTERNATE FIXTURE. THIS CHARGE IS IN NO WAY A GUARANTEE OF APPROVAL, BUT IS SOLELY TO COMPENSATE

THE ENGINEER FOR TIME SPENT VALIDATING EQUALITY AND COMPATIBILITY WITH THE PROJECT REQUIREMENTS. THIS REIMBURSEMENT MUST BE RECEIVED BY THE ENGINEER PRIOR TO ANY REVIEW COMMENCING. S4. PACKAGING OF LIGHT FIXTURES WILL NOT BE CONSIDERED OR APPROVED. S5. MANUFACTURER'S REPRESENTATIVE AGENTS SHALL BE ALLOWED TO OFFER MINI-LOT PRICING FOR SPECIFIED LIGHTING FIXTURES. S6. LIGHTING CONTROLS PRICING SHALL BE COMPLETELY SEPARATE OF ANY LIGHT FIXTURE PRICING. ANY LIGHTING CONTROLS PRICING THAT

IS SUBMITTED WITH LIGHT FIXTURE PRICING (UNIT OR MINI-LOT) WILL BE IMMEDIATELY REJECTED IN ITS ENTIRETY.

GENERAL NOTE: G1. ELECTRICAL CONTRACTOR SHALL VERIFY CEILING TYPE PRIOR TO ORDERING ANY LIGHT FIXTURES. G2. ELECTRICAL CONTRACTOR SHALL COORDINATE DIMMING DRIVERS/BALLASTS WITH DIMMING SWITCHES/SYSTEMS AND SHALL INCLUDE ALL REQUIRED CONTROL WIRING.

62910099 Approver Author

PROFESSIONAL SEAL

ARCHITECT OF RECORD

1730 Walnut Street

BRR ARCHITECTURE INC. 8131 METCALF AVENUE

OVERLAND PARK, KS 66204

WWW.BRRARCH.COM

TEL: 913-262-9095 FAX: 913-262-9044

Kansas City, Missouri 64108 Fax: 816.221.1429

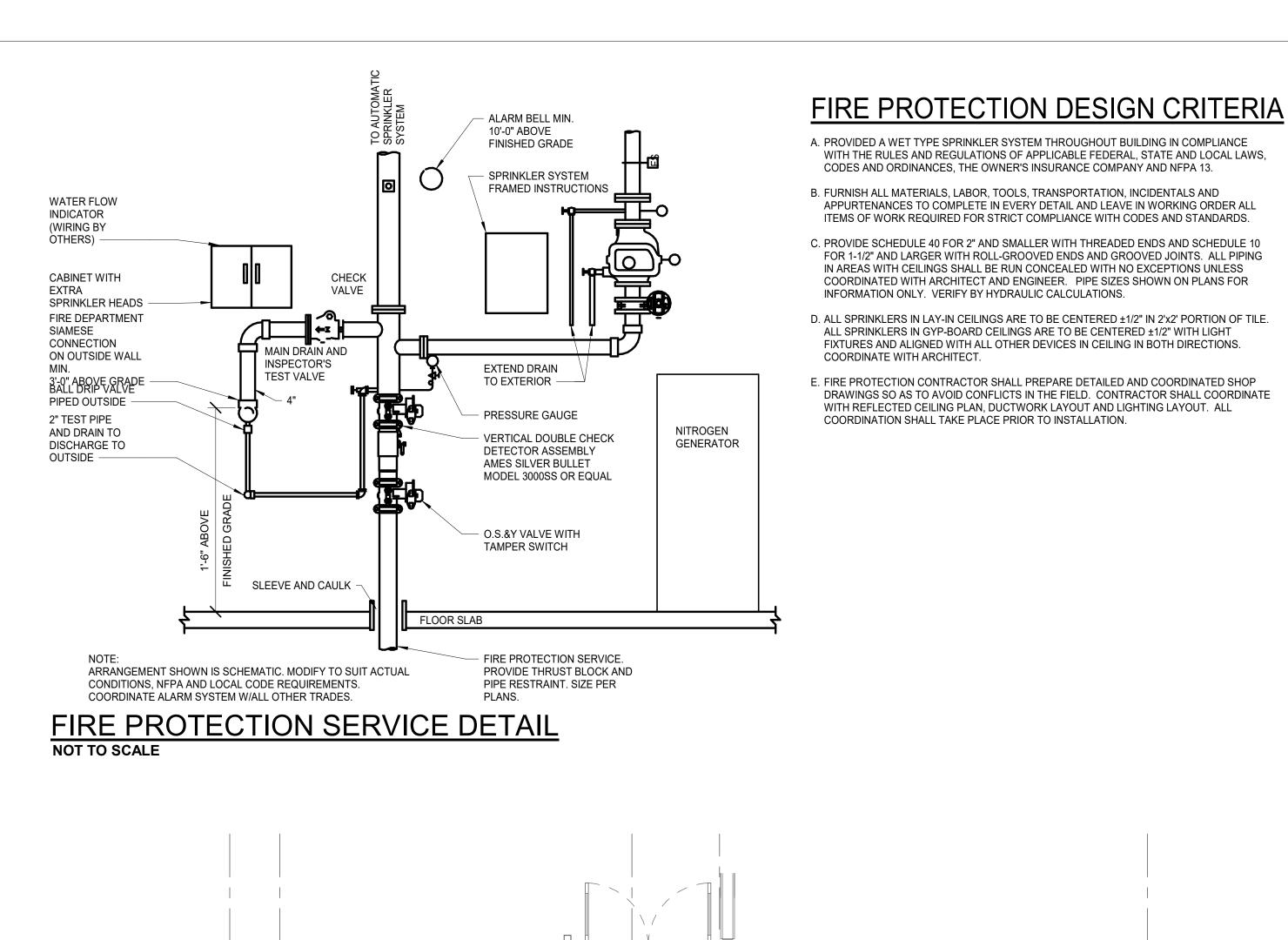
L|F+a Project No. 25.7674.00



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.

REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT ALITHOPIZED AND MAY BE CONTRADY TO THE LAW. AUTHORIZED AND MAY BE CONTRARY TO THE LAW. BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

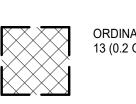
ELECTRICAL SCHEDULES, GEN.



- A. PROVIDED A WET TYPE SPRINKLER SYSTEM THROUGHOUT BUILDING IN COMPLIANCE F. CONTRACTOR SHALL FILE ALL DRAWINGS, PAY ALL FEES AND OBTAIN PERMITS AND WITH THE RULES AND REGULATIONS OF APPLICABLE FEDERAL, STATE AND LOCAL LAWS, CERTIFICATES OF INSPECTIONS RELATIVE TO THIS WORK.
- CODES AND ORDINANCES, THE OWNER'S INSURANCE COMPANY AND NFPA 13. G. CONTRACTOR SHALL OBTAIN CURRENT FIRE HYDRANT FLOW TEST DATA AND USE FOR B. FURNISH ALL MATERIALS, LABOR, TOOLS, TRANSPORTATION, INCIDENTALS AND SYSTEM HYDRAULIC CALCULATIONS. USE DATA TO DESIGN SYSTEMS ACCORDINGLY APPURTENANCES TO COMPLETE IN EVERY DETAIL AND LEAVE IN WORKING ORDER ALL BASED ON AVERAGE NUMBERS PLUS 10% SAFETY.
- ITEMS OF WORK REQUIRED FOR STRICT COMPLIANCE WITH CODES AND STANDARDS. H. PREPARE AND SUBMIT SHOP DRAWINGS, PRODUCT DATA AND HYDRAULIC CALCULATIONS C. PROVIDE SCHEDULE 40 FOR 2" AND SMALLER WITH THREADED ENDS AND SCHEDULE 10 AS REQUIRED. ALL INFORMATION SHOWN ON FIRE PROTECTION DRAWINGS SHALL BE FOR 1-1/2" AND LARGER WITH ROLL-GROOVED ENDS AND GROOVED JOINTS. ALL PIPING INCLUDED ON THE SHOP DRAWINGS.
- I. CONTRACTOR TO BE RESPONSIBLE FOR MAKING FINAL COORDINATION WITH STRUCTURE COORDINATED WITH ARCHITECT AND ENGINEER. PIPE SIZES SHOWN ON PLANS FOR AND ALL OTHER TRADES PRIOR TO SUBMITTING SHOP DRAWINGS. ALL ELEVATIONS OF PIPE MUST BE SHOWN ON SHOP DRAWINGS. D. ALL SPRINKLERS IN LAY-IN CEILINGS ARE TO BE CENTERED ±1/2" IN 2'x2' PORTION OF TILE. ALL SPRINKLERS IN GYP-BOARD CEILINGS ARE TO BE CENTERED ±1/2" WITH LIGHT J. ALL SPRINKLERS AND PIPING SHALL BE PROTECTED FROM FREEZING. USE DRY
  - ENCLOSURES, CANOPIES, AND PORCHES. K. NFPA 13 - 2016 ED - 7.1.5 A SINGLE AIR VENT WITH A CONNECTION SHALL BE PROVIDED ON EACH WET PIPE SYSTEM. THE AIR VENT SHALL BE LOCATED NEAR A HIGH POINT IN THE SYSTEM TO ALLOW AIR TO BE REMOVED FROM THAT PORTION OF THE SYSTEM BY ONE OF THE FOLLOWING METHODS: MANUAL VALVE, MINIMUM 1/2 (15MM) SIZE; OR AUTOMATIC

SIDEWALL SPRINKLERS OR DRY PIPE SYSTEM FOR VESTIBULES, ALCOVES, TRASH

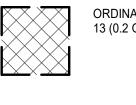
- L. PROVIDE AUXILIARY DRAINS AS REQUIRED BY NFPA 13. COORDINATE LOCATIONS WITH OWNER. AUXILIARY DRAINS MUST BE SHOWN ON SHOP DRAWINGS.
- FIRE PROTECTION LEGEND PROVIDE PROPER COVERAGE PER FPA 13 AND LOCAL AUTHORITIES. REFER TO REFLECTED CEILING PLANS FOR COORDINATION WITH LIGHTS, DIFFUSERS, EXIT SIGNS, ETC. M. PROVIDE AUXILIARY DRAINS AS REQUIRED BY NFPA 13. COORDINATE LOCATIONS WITH OWNER. AUXILIARY DRAINS MUST BE SHOWN ON SHOP DRAWINGS.
- N. SPRINKLER SYSTEM SHALL BE TESTED AND DRAINED PER NFPA STANDARDS AND LOCAL AND STATE AUTHORITY HAVING JURISDICTION.COMPLETED CONTRACTOR MATERIAL TEST CERTIFICATES SHALL BE FORWARDED TO OWNER. O. FIRE SPRINKLER CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH FIRE ALARM PANEL AND SUPERVISION OF NEW SPRINKLER TAMPER AND FLOW SWITCHES.
- P. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. Q. SPRINKLER HEAD PLACEMENT SHALL BE OUT OF THE SWING AREA OF DOORS TO AVOID CONFLICT WITH TALL DOORS.
- - ORDINARY HAZARD GROUP 1 PROVIDE PROPER COVERAGE PER NFPA 13 (0.15 GPM PER 1500 SF) PLUS 250 GPM HOSE STREAM ALLOWANCE.



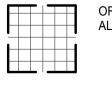
ORDINARY HAZARD GROUP 2 - PROVIDE PROPER COVERAGE PER NFPA 13 (0.2 GPM PER 1500 SF) PLUS 250 GPM HOSE STREAM ALLOWANCE.

LIGHT HAZARD - PROVIDE PROPER COVERAGE PER NFPA 13 (0.1 GPM

PER 1500 SF) PLUS 100 GPM HOSE STREAM ALLOWANCE.



ORDINARY HAZARD GROUP 2 - PROVIDE DRY PENDENT SPRINKLERS FOR ALL WALK-IN COOLERS AND FREEZERS.



PROVIDE DRY PENDENT CONCEALER-TYPE SPRINKLERS FROM DRY PIPE SYSTEM WITH NITROGEN GENERATOR, DRY SIDEWALL SPRINKLERS, OR UL LISTED ANTIFREEZE SYSTEM TO PROTECT BENEATH NON-COMBUSTIBLE CANOPY IN ACCORDANCE WITH NFPA 13.

## F FLOOR PLAN NOTES

- FP01 6" UNDERGROUND FIRE LINE TO BUILDING. CONNECT FIVE FEET FROM BUILDING EXTERIOR WALL. SLEEVE EXTERIOR WALL AND PROVIDE THRUST PROTECTION PER NFPA
- FP02 6" SPRINKLER RISER, 6" DOUBLE DETECTOR CHECK BACKFLOW PREVENTER, FLOW AND TAMPER SWITCHES, 2 INCH MAIN DRAIN EXTENDED TO OUTSIDE.
- FP03 SIAMESE FIRE DEPARTMENT CONNECTION. PROVIDE HORN/STROBE ABOVE. FP04 DO NOT RUN SPRINKLER PIPING OVER ELECTRICAL EQUIPMENT. MAINTAIN 3' CLEARANCE IN FRONT OF PANELS.

SUITE 300 OVERLAND PARK, KS 66204 WWW.BRRARCH.COM TEL: 913-262-9095 FAX: 913-262-9044

ARCHITECT OF RECORD

1730 Walnut Street Kansas City, Missouri 64108 Fax: 816.221.1429 L|F+a Project No. 25.7674.00

BRR ARCHITECTURE INC.

8131 METCALF AVENUE



THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE CONTEMPORANEOUSLY WITH ITS ISSUE DATE AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT ALITHORIZED AND MAY BE CONTRARY TO THE LAW BRR DOES NOT GUARANTEE THAT <u>CAD</u> FILES ARE SUFFICIENT OR APPROPRIATE FOR USER'S PURPOSES. USER USES OR ALTERS THESE FILES AT USER'S SOLE RISK AND AGREES TO INDEMNIFY BRR FROM LIABILITY ARISING FROM USER'S USE.

FLOOR PLAN - FIRE

PROTECTION

