

MATERIALS AND SPECIFICATIONS

DIVISION 1: GENERAL REQUIREMENTS

INSTRUCTIONS TO BIDDERS

All bidders, including Subcontractors, submitting proposals for this work shall first examine the site and all conditions thereon and/or therein. All proposals shall take into consideration all such conditions that may affect the work under this contract. Failure to examine the site will not relieve the successful bidder from necessity to provide work that may be required to complete the work without additional cost to the Owner.

GENERAL CONDITIONS

The "General Conditions of the Contract for Construction", Standard Form of the American Institute of Architects, Form A-201, latest edition, are hereby, except as the same may be inconsistent herewith, made a part of this specification. Subcontractors shall be required to maintain workmen's compensation for all employees at the site of this project.

TEMPORARY FACILITIES

Contractor shall provide and pay for temporary electrical power, heat, water, and sanitary toilet.

PERMITS

General Contractor shall apply for Building Permit and Fire Department Permit. General Contractor shall include in his bid, the cost of these permits. Plumbing, Mechanical, Electrical and Sprinkler Contractors shall apply for and pay for all permits required for their respective contracts.

DIVISION 2: SITE WORK

See Drawings by Cochran Engineering, for all site work, including clearing, grading, drainage, excavation, backfill, retaining walls, compaction, walks, paving and entrances, striping and utilities.

LANDSCAPING: By Owner - See drawings by Cochran Engineering.

DIVISION 3: CONCRETE

See Site Plan (for paving specifications) and Structural Drawings.

Install vapor barrier and perimeter foundation insulation, furnished under Division 7, and anchor bolts for steel columns, furnished under Division 13.

Quality Control: Standard included by reference: Except as otherwise specified, the following publications of the American Concrete Institute are hereby incorporated in this specification: "Specifications for Structural Concrete for Buildings" (ACI 301) "Building Code Requirements for Reinforced Concrete" (ACI 318) "Recommended Practice for Selecting Proportions for Concrete" (ACI 613, 613A) "Recommended Practice for Measuring, Mixing, and Placing Concrete" (ACI 614) "Recommended Practice for Winter Concreting Methods" (ACI 604) "Recommended Practice for Concrete Formwork" (ACI 347)

MATERIALS: Concrete: shall be furnished by a concrete mixing plant, conforming to ASTM C-115. Fine aggregate shall be crushed stone or gravel having hard durable, uncoated particles, ranging in size from 1" down to 1/4". All concrete for footings, foundations, walls to have a minimum compressive strength of 3500 psi at 28 days, slump shall not exceed 4", min. of 6 sacks of cement per yard. Use air-entrained admixture for all concrete exposed to freezing and thawing. Concrete for paving, walks, curbs, shall have a min. compressive strength of 4000 psi, min. of 6 sacks of cement per yard. Reinforcement: For walls, footings, shall be standard intermediate grade deformed bars of sizes shown, ASTM A615 billet steel, Grade 60. Fabric for slabs shall be welded wire mesh conforming to ASTM A185 "Welded Steel Wire Fabric for Concrete Reinforcement". Expansion Joints: 1/2" thick asphalt saturated Celotex expansion joint material. Expansion joints shall be provided in walks, paving and curbs at 20'-0" o.c.max. Use filler material with top 1/2" cut off, then fill this section with caulking material designed for expansion joints. Control joints in walks (tooled joints) shall be max. of 5'-0" o.c. See Structural for building slab joints. Metal Accessories: Spacers, chairs, ties, and other devices necessary for properly placing, spacing, supporting and fastening reinforcing steel shall be HICO Corp. of America, or equal. Granular Fill: shall be graded from 3/8" to 1-1/2" for gravel, 1-1/2" minus for crushed rock. Sand shall be clean, sharp sand. Construction Joints: 22 gauge formed tongue and groove joint No. 95 by Heckmann, #8165 by Vulcan, or equal. Option for saw cut joints.

FINISHES: Floor areas shall have smooth steel trowel finish. Walks shall be screeded, floated and steel troweled to a uniform surface and then be lightly broomed before final set. Exposed edge of slab, and curbs, shall have rubbed finish. Expansion joints shall be provided in walks and curbs at 20'-0" o.c. max. Control joints in walks (tooled joints) shall be max. of 5'-0" o.c. See Structural for building slab joints.

DIVISION 5: METALS

STRUCTURAL STEEL: See Structural Drawings and calculations for specifications.

DIVISION 7: THERMAL AND MOISTURE PROTECTION

BUILDING INSULATION: Insulation in exterior metal stud walls to be 6" fiberglass batts, unfaced R-19, by Owens-Corning or equal. All insulation to have flame spread rating of 25 or less and smoke developed rating of 450 or less.

DAMP PROOFING: Furnish vapor barrier under slab, to be installed under Division 3, to be 6 mil. polyethylene film, "Moistop-2" by Sisalkraft, "Nervastral Seal Pruf H-D", "Vapor Champ", or "Fly-Bar Plus" by Glass Kraft, Inc.

CAULKING: Polysulfide caulking compound, color to match adjacent surface, non-staining, waterproof, as manufactured by Pecora, Dow, 3M, DAP, A. C. Meadows, or approved equal. Install in accordance with manufacturer's instructions with caulking gun. Backup materials required, shall be installed before caulking begins.

SHEET METAL WORK: Metal coping, scuppers and downspouts to be 24-ga. prefinished metal, color by Owner. Concealed flashing, gutters & downspouts to be 24 ga. galvanized steel. Exposed metal to be prefinished, color by Owner. Nails and fasteners to be non-corrosive.

MEMBRANE ROOF: Roofing System: Single ply membrane roofing shall be ULTRAPLY TPO, 60 mil, by Firestone Building Products. Fully adhered, class "A" UL rating, over 6" ISO 95+, polyisocyanurate, rigid insulation, R-30, ASTM E-84. Include splice tape, seam flashing, wall flashing material, penetration collars, etc. All installation to be in strict accordance with manufacturer's specifications and recommendations. Seams: Seal all seams, ends and roof penetrations. Parapet Flashing: Same as roofing - base coat adhered to wall surface with steep asphalt. Warranty: Provide written, 20 year warranty.

"NICHHA" EXTERIOR PANELS AND TRIM: Nichiha USA, Inc. or equal. Roughsawn Series: 5/8" thickness, 18"(H) x 120"(L) panels. Color - Espresso. Corner Trim: 18"(H) x 3-1/2" returns. Color - Espresso. Fasteners to be non-corrosive nails.

EXTERIOR INSULATION FINISH SYSTEM: Furnish and install EIFS. Submit a sample area for approval by owner prior to commencing work. SUPPLIER: Dryfit Outsulation Plus, with water barrier, by Ceiling Supply, 120 Boulder Industrial Drive, Bridgeton, Missouri, (314) 739-6800. ADHESIVE: Genesis Adhesive. INSULATION BOARD: Expanded polystyrene board, 1" to 4" thick, 120 lbs/cubic foot density (min), U value of 0.21 or better per inch. Type I class A, less than 25 flame spread. BASE COAT: Genesis. FABRIC: 4 glass fiber reinforcing mesh. FINISH: Dryvit exterior ready-mixed 100% acrylic wall coating, Sandpebble #04, White. Equal systems by Senergy or Sto Finish Systems, will be accepted. EIFS must be constructed such that it meets the performance characteristics required in ASTM E 2568.

DIVISION 8: DOORS, WINDOWS AND GLASS

STOREFRONT: Storefront frames, 4 1/2" x 2", anodized, bronze finish, by Kawneer, 16451 center glazed or approved equal. Supply 5 year written warranty.

STOREFRONT DOORS: Narrow style 250 - LCN 4641 closer, 1/2" maximum threshold, type "8" push-pull.

STEEL DOOR AND FRAMES: Manufacturers: Pioneer Industries, Inc., Steelcraft, Ceco, Mesker, Amweld, or other as approved by Architect. Door Frames: 16 gauge cold rolled steel. Frames shall be factory primed and shall have three jamb anchors for each side of each frame, for masonry or wood studs as applicable. Exterior Frames: 16 ga. cold rolled steel, mitered & welded at corners, dripcap. Interior Frames: 16 ga. knock-down type. Doors: 18 gauge cold rolled steel, flush with vertical stiffeners not over 6" apart and top and bottom edges reinforced horizontally by steel channels. Joints at edges of door shall be continuously welded. Doors shall be sound deadened by filling core with mineral wool insulation. Doors shall be thoroughly cleaned of grease and other impurities, filled flush and given two coats of baked-on rust resistant metallic primer. Doors and frames shall be mortised and reinforced at factory for hardware. Exterior doors to have weatherstripping per hardware spec. Interior doors to be prepared for (3) rubber silencers on strike side of jamb (Under Hardware).

GLAZING: Glass shall be by L.O.F. Glass Co., Pittsburgh Plate Glass Co., or ASG Co. Storefront Glazing: 2 layers 1/4" thick annealed plate glass (tempered where required), with 1/2" air space hermetically sealed with black metal edge - Low E. Guarantees and Warranties: At the completion of the glazing, prove the installation watertight by spraying all joints with a garden hose with nozzle set for maximum pressure. Provide additional caulking or sealant, or reset glass as necessary to effect a watertight job.

HARDWARE: Quality: All hardware shall be commercial standard grade. Products: by Russwin, Hager, Baldwin, Maverick Industries, Simplex, Stanley, Reece, Schalgie, LCN. Hinges and closers to be sized for door size and use, as per manufacturer's recommendations. Finish: Locks, interior hinges to have US26D. Weatherstripping: Exterior door frames, and thresholds shall be weatherstripped to provide a maximum infiltration rate of 11 CFM per linear foot in a 25 mph wind measured in accordance with applicable ANSI standards. All exterior doors to have thresholds and metal door bottom. Door Stops: Floor type where applicable.

Keying: See Hardware Schedule, Sheet A1.

DIVISION 9: FINISHES

NOTE: All wall and ceiling finishes shall have flame spread rating of 200 or less, and smoke developed rating of 450 or less.

GYPSUM WALLBOARD: Products: by National Gypsum "Gold Bond", or U. S. Gypsum Co, bevel edge. See drawings for type and thickness. Fasteners: GWB-54, 1-5/8" long, annular ring shank nails, ASTM C-380, or 1-1/4" USG type IV screws for wood, 1" type S screws for metal. Joints, Corners: Joint compound shall be ready mixed, joint tape shall be cross fibered, perforated, feather edged. Corner beads shall be galvanized steel, roll-formed. Allow each application of compound to dry, then sand if necessary. All wallboard exposed, shall be smooth and ready for painting or wallcovering. Water Resistant Gypsum backer board is required in Utility Room and must conform to ASTM C 630 or C 1178.

LIGHT GAUGE METAL FRAMING: Products: by Dietrich Industries, Inc. or approved equal. Studs: ASTM C645, 0.0119" minimum thickness of base metal, unless otherwise indicated. Depth: 6" unless noted otherwise. Runners: Match studs, type recommended by stud manufacturer for floor and ceiling support of studs and for vertical abutment of gypsum board work at other work.

STRUCTURAL STUDS: Exterior walls: 6", 16 gauge CSJ, 33 ksi.

PAINTING: Materials: Paint by following manufacturers: Benjamin Moore, Devco, Glidden, Olympic, Pratt and Lambert, Pittsburgh Paint Co, or Sherwin-Williams. Shellac, turpentine, thinner, etc. shall be pure, without adulterations, and used only as specified by manufacturer. Workmanship: All surfaces to be painted shall be clean and free of dirt, dust or grit before painting is started. Painting shall not be done when there is sweeping or excessive dust in the air. All pitch streaks, resin spots, etc., shall be cleaned and touched up with shellac before painting. Putty all nail holes, cracks, etc., in woodwork after the first coat is applied. Where the prime coat does not dry to a uniform sheen over the entire surface, spot prime before applying finish coats. All materials shall be evenly spread and flowed on without runs, or excessive brush marks. Colors to be selected by owner.

PAINT SCHEDULE: Exterior Metal: 1 coat rust-inhibitive primer (if surface is not pre-primed), 2 coats exterior enamel. Gypsum Board Walls: two coats semi-gloss enamel, unless noted otherwise. Interior Metal: two coats of semi-gloss enamel. Miscellaneous: unfinished surfaces not specified above, except prefinished items, mill finished aluminum, stainless steel and natural finish materials, shall be painted to match colors of adjacent surface.

BUILDING INFORMATION

BUILDING CODE: 2015 INTERNATIONAL BUILDING CODE
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL PLUMBING CODE
2014 NATIONAL ELECTRICAL CODE
2009 ICG/ANSI A111 - ACCESSIBILITY

USE GROUP: M (MERCANTILE), B (BUSINESS)

CONSTRUCTION TYPE: II B UNPROTECTED

BUILDING HEIGHT:
ALLOWABLE: 1 STORY, 55'-0"
ACTUAL: 1 STORY, 21'-0"

BUILDING AREA:
ALLOWABLE: 12,500 SQUARE FEET
ACTUAL: 12,000 SQUARE FEET

OCCUPANCY: 12,000 / 100 = 120

IF ANY TENANT APPLIES FOR USE GROUP A-2, FOLLOWING SHALL BE REQUIRED ON TENANT FINISH DRAWINGS:

DEMISING WALLS SHALL BE 2 HOUR RATED. WALLS SHALL BE CONSIDERED AS FIRE BARRIER WALLS, AND EXTEND TO UNDERSIDE OF ROOF SHEATHING.

IF AREA IS OVER 5,000 SQUARE FEET OR OCCUPANCY LOAD IS 100 OR MORE, SPACE SHALL HAVE AUTOMATIC SPRINKLER SYSTEM IN ADDITION TO 2 HOUR WALLS.

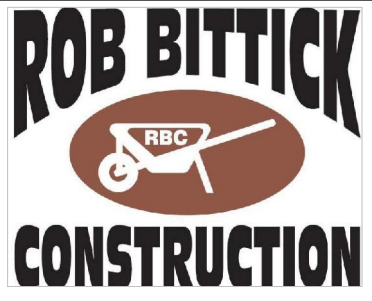
CERTIFICATION BLOCK:

I HEREBY CERTIFY THAT THESE PLANS AND SPECIFICATIONS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLY WITH ALL APPLICABLE CODES. I AM A DULY REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MISSOURI AS SIGNIFIED BY MY HAND AND SEAL.



SOLE PROPRIETOR

1529 S. Old Highway 94
Suite 201
St. Charles, MO 63303
(636) 946-6949



423 Clark Street
St. Charles, MO 63301
314-486-2721



December 13, 2024

INDEX OF DRAWINGS:

CIVIL:
SEE DRAWINGS BY COCHRAN ENGINEERING

ARCHITECTURAL
A0 SPECIFICATIONS AND COVER SHEET
A1 FLOOR PLANS, SCHEDULE, NOTES AND DETAIL
A2 EXTERIOR ELEVATIONS
A3 TYPICAL LEASE SPACE AND REFLECTED CEILING PLAN
A4 WALL SECTIONS AND DETAILS
A5 WALL SECTIONS AND DETAILS

STRUCTURAL:
S1 FOUNDATION PLAN, DETAILS AND NOTES
S2 ROOF FRAMING PLAN AND NOTES

MECHANICAL:
M1 MECHANICAL PLAN AND NOTES

ELECTRICAL:
E1 ELECTRICAL PLAN, DETAILS AND NOTES

PLUMBING:
P1 PLUMBING PLAN AND NOTES

PROPOSED RETAIL CENTER FOR:
EMPIREE LLC
TECHNOLOGY DRIVE & WELDON SPRING ROAD
OFALLON, MISSOURI

SHEET TITLE:
COVER SHEET AND SPECIFICATIONS

DATE: October 18, 2024

REVISIONS	BY
△ December 13, 2024	KSW

PROJECT. NO.: 24044

SHEET NO.
A0

© COPYRIGHT 2024
JACK D. WHALEY, ARCHITECT

EMPIREE, LLC
O'Fallon, Missouri



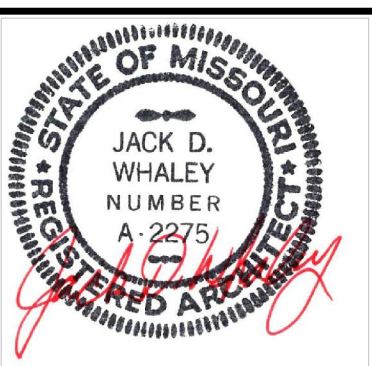


SOLE PROPRIETOR

1529 S. Old Highway 94
Suite 201
St. Charles, MO 63303
(636) 946-6949



423 Clark Street
St. Charles, MO 63301
314-486-2721



December 13, 2024

PROPOSED RETAIL CENTER FOR:
EMPIRE LLC
TECHNOLOGY DRIVE & WELDON SPRING ROAD
OFALLON, MISSOURI

SHEET TITLE:
FLOOR PLAN, SCHEDULE,
NOTES AND DETAIL

DATE: October 18, 2024

REVISIONS BY

December 13, 2024 KSW

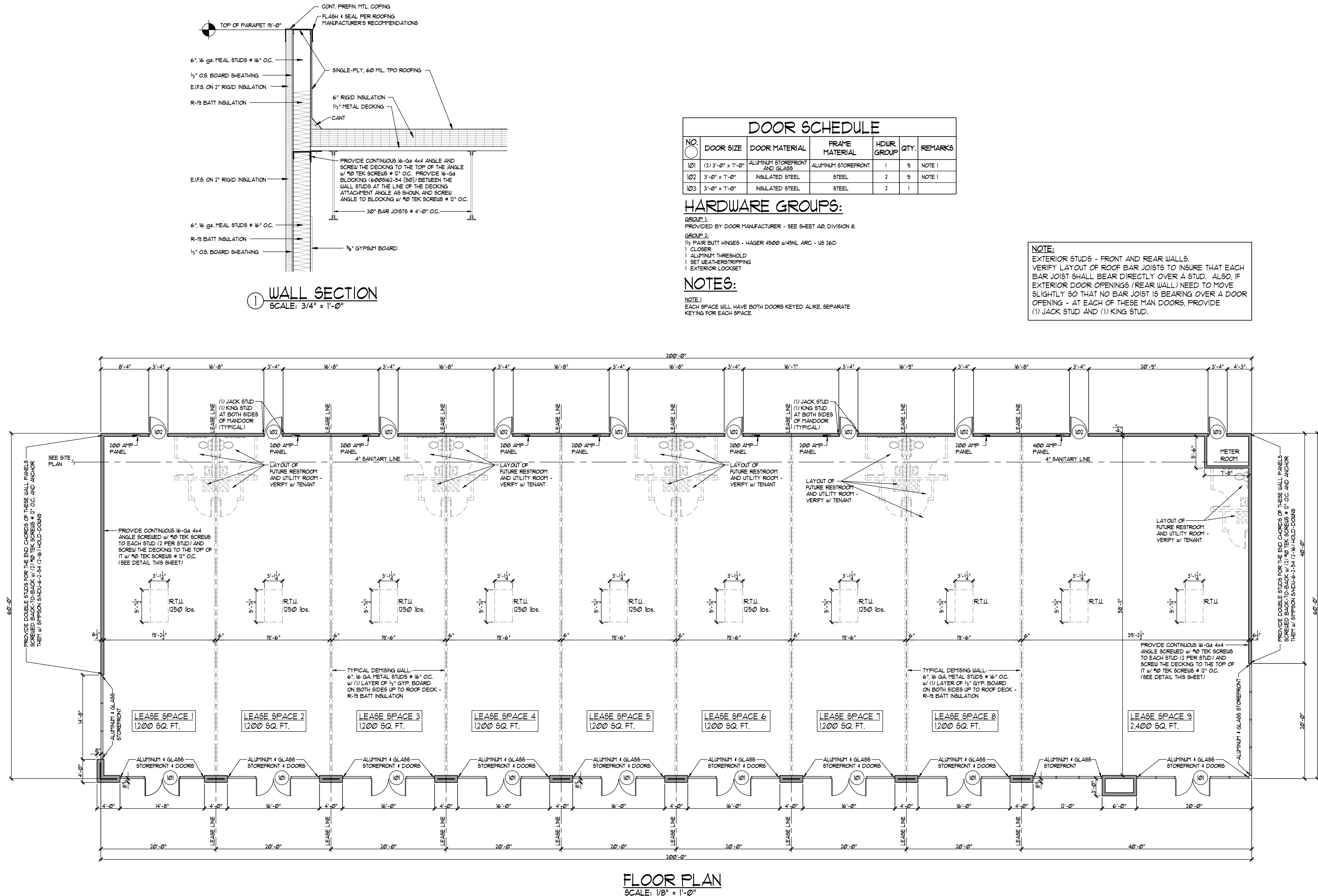
NO CHANGES

PROJECT NO: 24044

SHEET NO.

A1

© COPYRIGHT 2024
JACK D. WHALEY, ARCHITECT



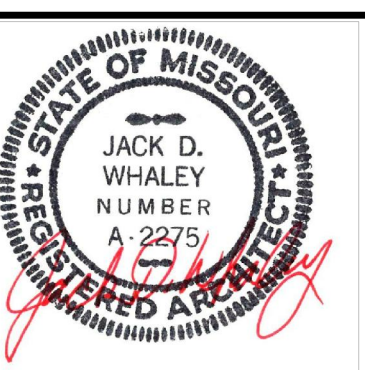


SOLE PROPRIETOR

1529 S. Old Highway 94
Suite 201
St. Charles, MO 63303
(636) 946-6949



423 Clark Street
St. Charles, MO 63301
314-486-2721



December 13, 2024

PROPOSED RETAIL CENTER FOR:
EMPIRE LLC
TECHNOLOGY DRIVE & WELDON SPRING ROAD
OFALLON, MISSOURI

SHEET TITLE:
EXTERIOR ELEVATIONS

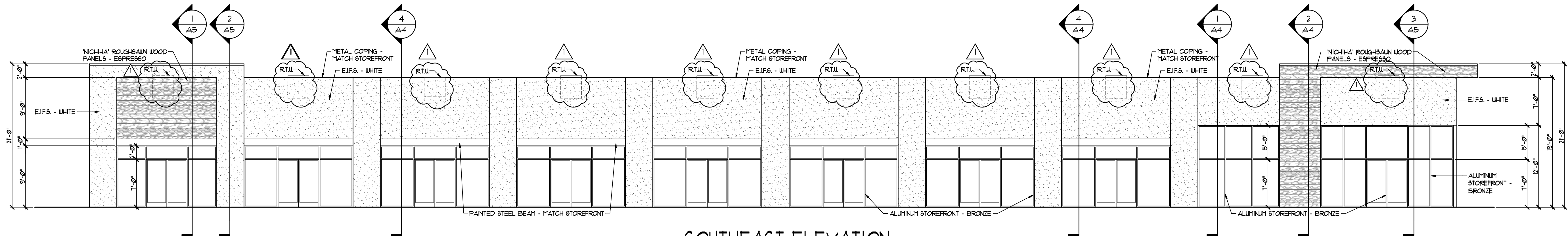
DATE: October 18, 2024

REVISIONS	BY
△ December 13, 2024	KSW

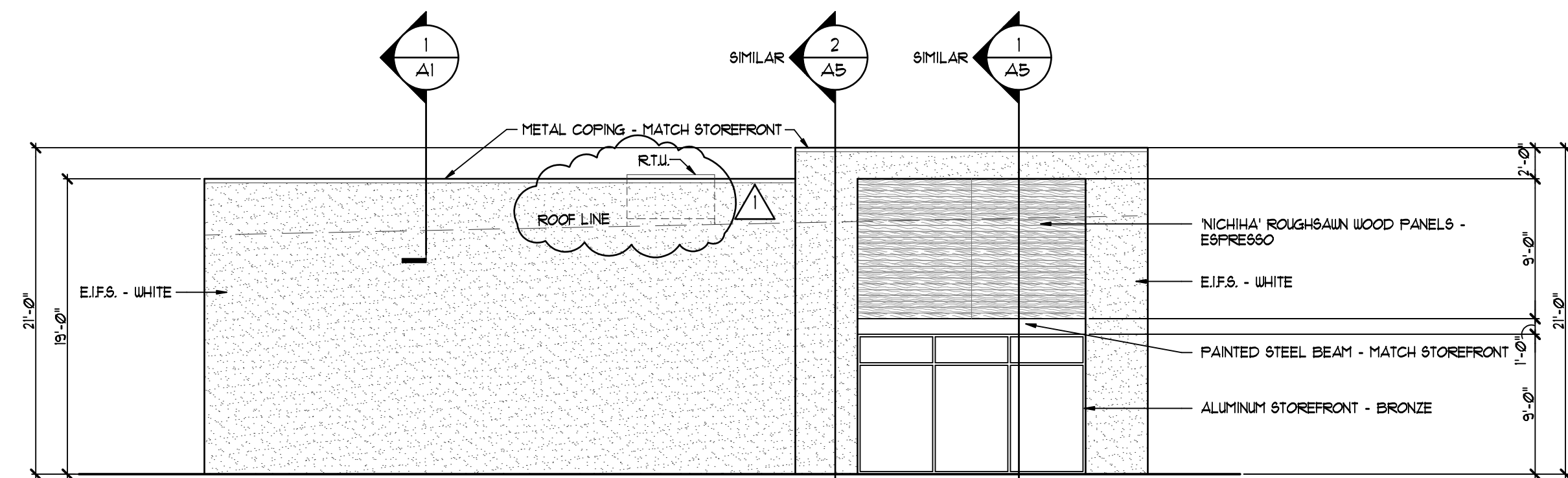
PROJECT NO.: 24044

SHEET NO.
A2

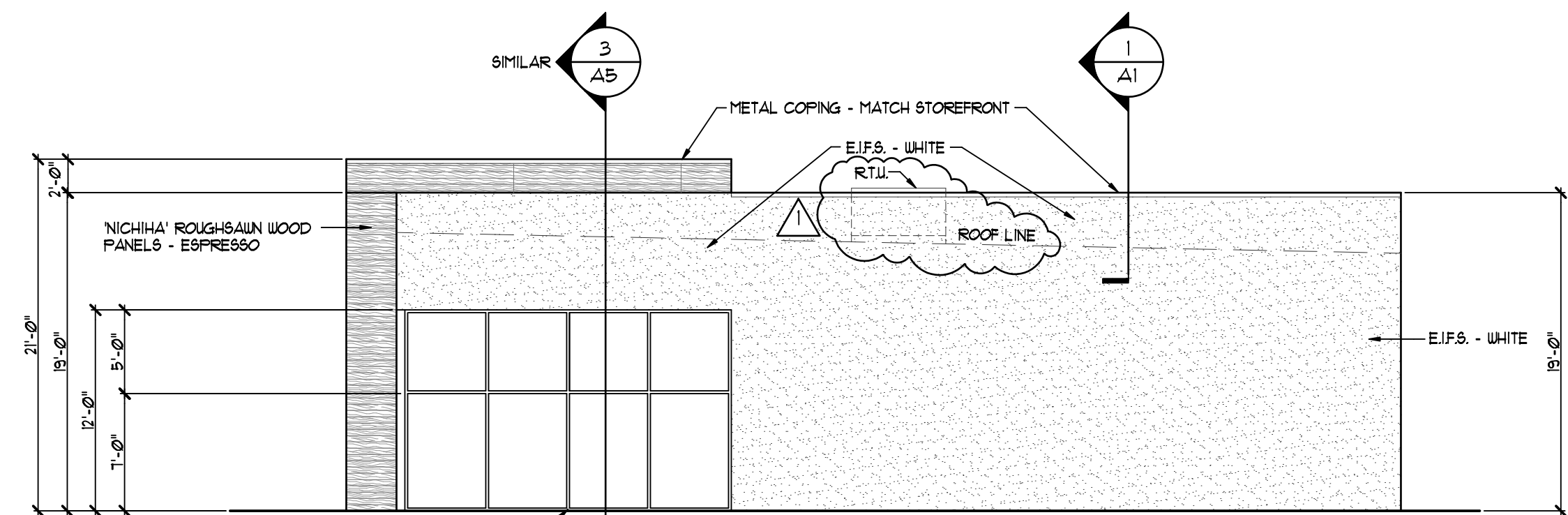
© COPYRIGHT 2024
JACK D. WHALEY, ARCHITECT



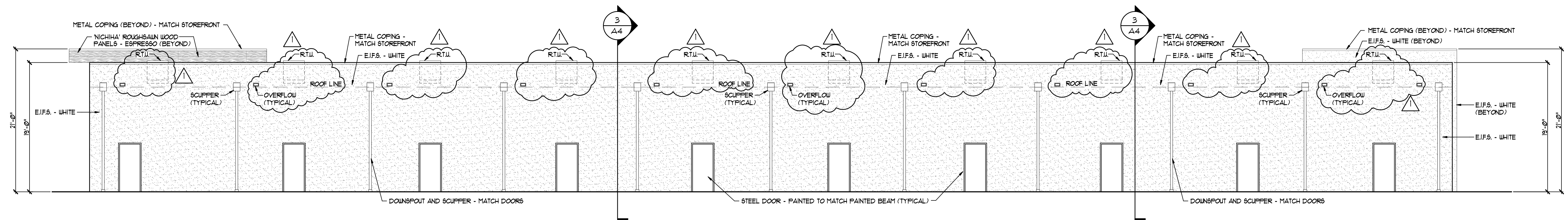
SOUTHEAST ELEVATION
SCALE: 1/8" = 1'-0"



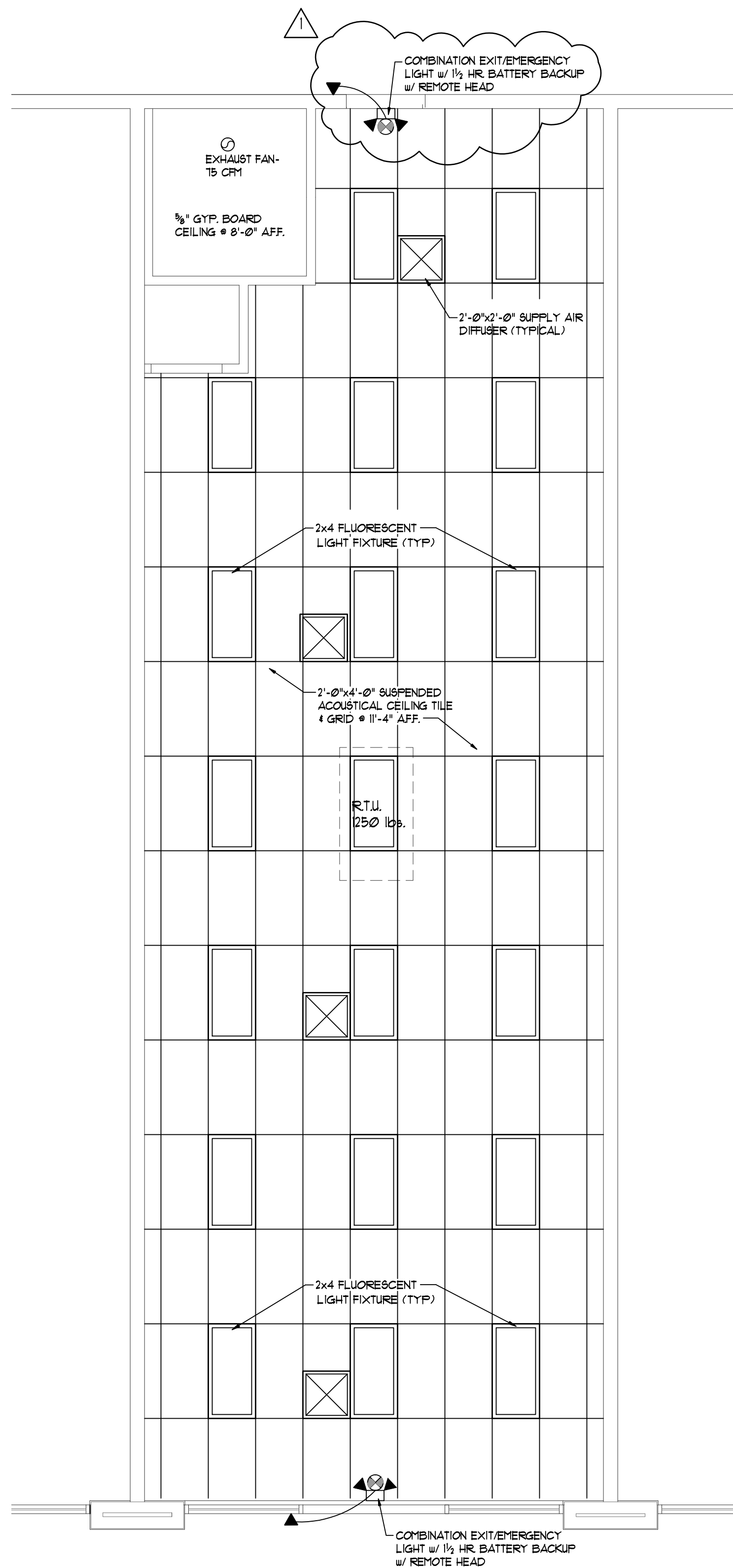
SOUTHWEST ELEVATION
SCALE: 1/8" = 1'-0"



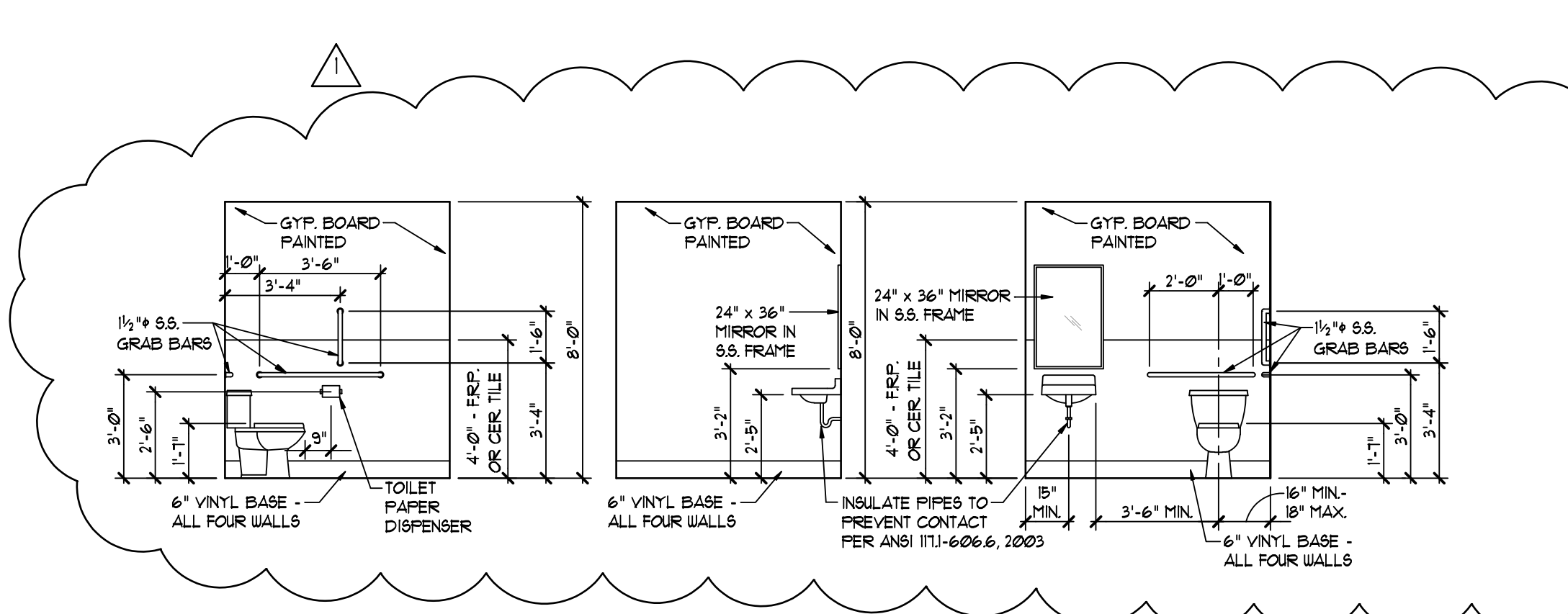
NORTHEAST ELEVATION
SCALE: 1/8" = 1'-0"



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



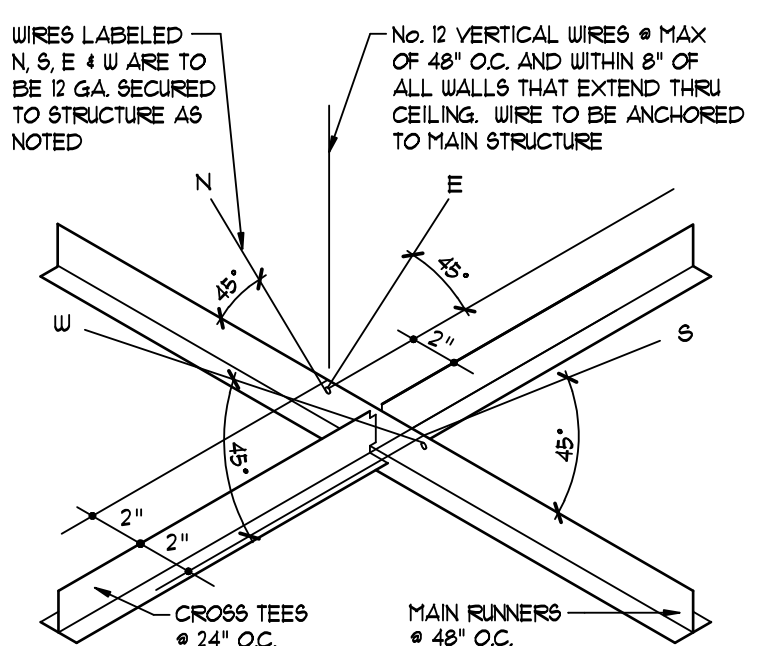
TYPICAL REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"



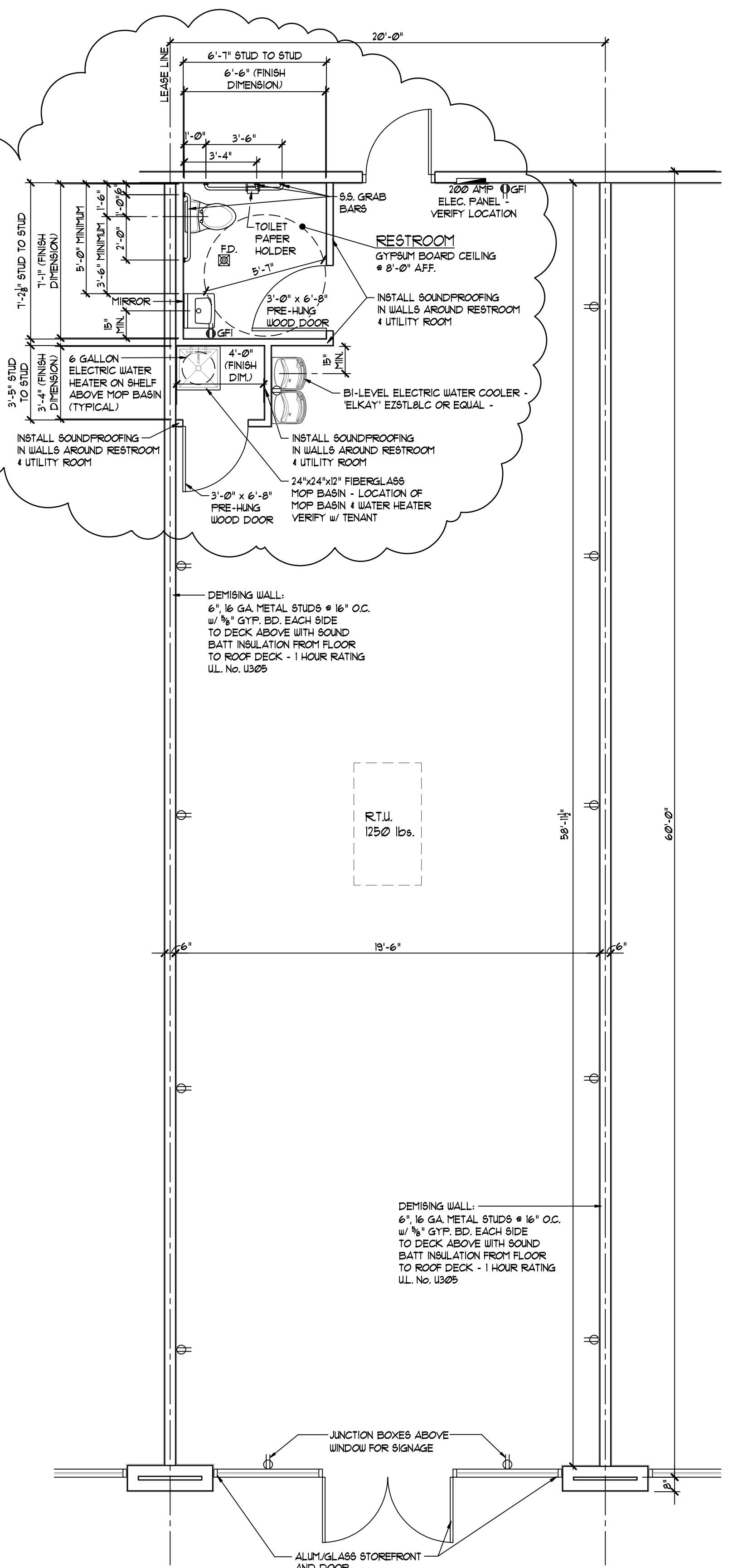
TYPICAL RESTROOM ELEVATIONS
SCALE: 1/4" = 1'-0"

SEISMIC BRACING NOTES:

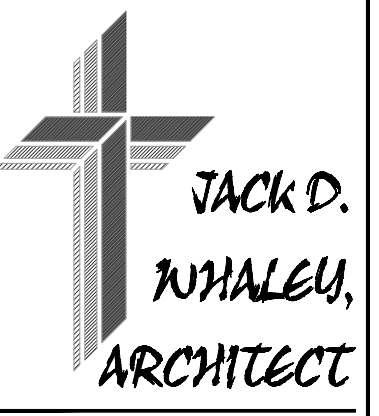
1. CEILING SUSPENSION SYSTEM TO BE INSTALLED AS SHOWN ON DETAIL, IN STRICT ACCORDANCE WITH CISCA (REF. 36 - 17), LATEST EDITION, "STANDARD RECOMMENDED PRACTICE FOR APPLICATION OF CEILING SUSPENSION SYSTEMS FOR ACOUSTICAL TILE AND LAY-IN PANELS".
2. SPLAYED RESTRAINT WIRES SHALL BE NO. 12 GAGE. HORIZONTAL RESTRAINTS AS DETAILED ADJACENT, SHALL BE MAX. OF 12'-0" O.C. IN BOTH DIRECTIONS. WIRES N AND S ARE IN SAME VERTICAL PLANE AS MAIN RUNNER, AND WIRES E AND W ARE IN VERTICAL PLANES PERPENDICULAR TO MAIN RUNNER. FIRST POINT OF HORIZONTAL RESTRAINTS SHALL BE LESS THAN 4'-0" FROM WALLS IN BOTH DIRECTIONS. NOTE THAT THESE HORIZONTAL RESTRAINTS ARE NOT REQUIRED IN SPACES LESS THAN 1000 SQ. FT. WHERE SURROUNDING WALLS CONNECT DIRECTLY TO MAIN STRUCTURE ABOVE.
3. MAIN VERTICAL WIRES, #48" O.C. SHALL BE NO. 12 GAGE, WITH MINIMUM OF 3 TURNS IN 1 1/2", ANCHORED TO MAIN STRUCTURE WITH ANCHORS THAT MEET REQUIREMENTS OF SEISMIC RESTRAINT.
4. MAIN RUNNERS AND CROSS TEES SHALL BE ATTACHED TO THE PERIMETER MEMBERS ON TWO ADJACENT WALLS, AND HELD A MINIMUM OF 3/4" CLEAR AWAY FROM TWO REMAINING WALLS, RESTING ON ANGLE, FREE TO SLIDE. AT ALL TERMINAL ENDS OF MAIN RUNNERS AND CROSS TEES, TEH ENDS SHALL BE SUPPORTED INDEPENDENTLY A MAXIMUM OF 8" FROM EACH WALL WITH NO. 12 GAGE WIRE.
5. LIGHT FIXTURES: ALL RECESSED LIGHTING FIXTURES SHALL BE FIRMLY FIXED TO THE SUSPENDED CEILING SYSTEM OR INDEPENDENTLY SUPPORTED. SURFACE MOUNTED LIGHT FIXTURES SHALL BE ATTACHED TO SYSTEM WITH POSITIVE CLAMPING DEVICES THAT COMPLETELY SURROUND THE SUPPORTING MEMBERS. PENDANT-HUNG LIGHT FIXTURES SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE USING NO. 9 GAGE WIRE. ALL ANCHORAGE DEVICES SHALL MEET REQUIREMENTS OF ASTM E-580 FOR LOAD CARRYING CAPACITIES.
6. GRID SYSTEM SHALL BE HEAVY DUTY T-BAR SYSTEM. ALL CROSS TEES SHALL BE CAPABLE OF CARRYING THE DESIGN LOAD WITHOUT EXCEEDING DEFLECTION EQUAL TO 1/360 OF ITS SPAN. WALL ANGLES SHALL BE 2" WIDE. ALTERNATE STANDARD 1/4" WALL ANGLES WITH USG USG ACT-1 CLIPS OR ARMSTRONG CO. BERG CLIPS.



SEISMIC BRACING DETAILS AND NOTES
NO SCALE

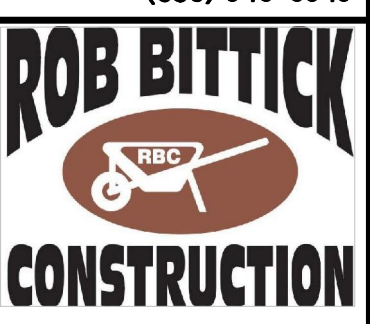


TYPICAL LEASE SPACE
SCALE: 1/4" = 1'-0"

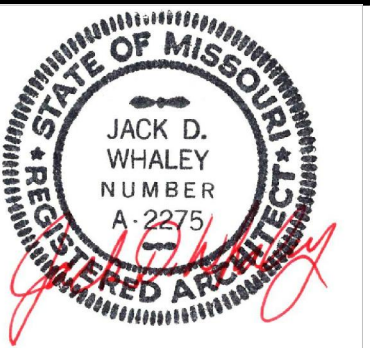


SOLE PROPRIETOR

1529 S. Old Highway 94
Suite 201
St. Charles, MO. 63303
(636) 946-6949



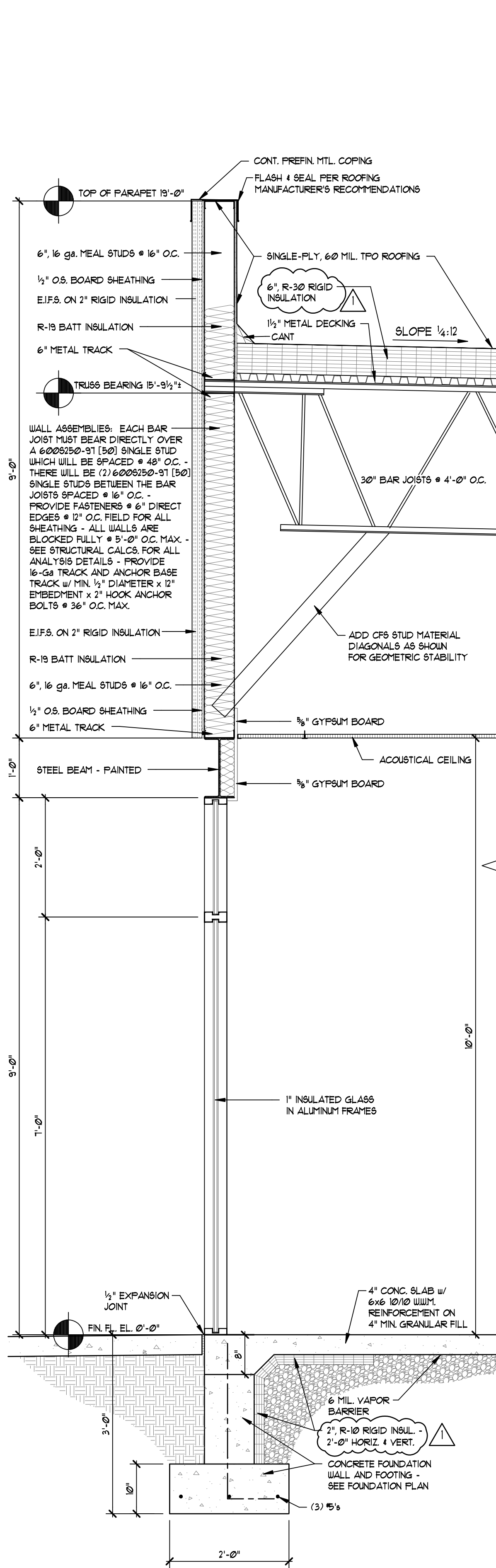
423 Clark Street
St. Charles, MO. 63301
314-486-2721



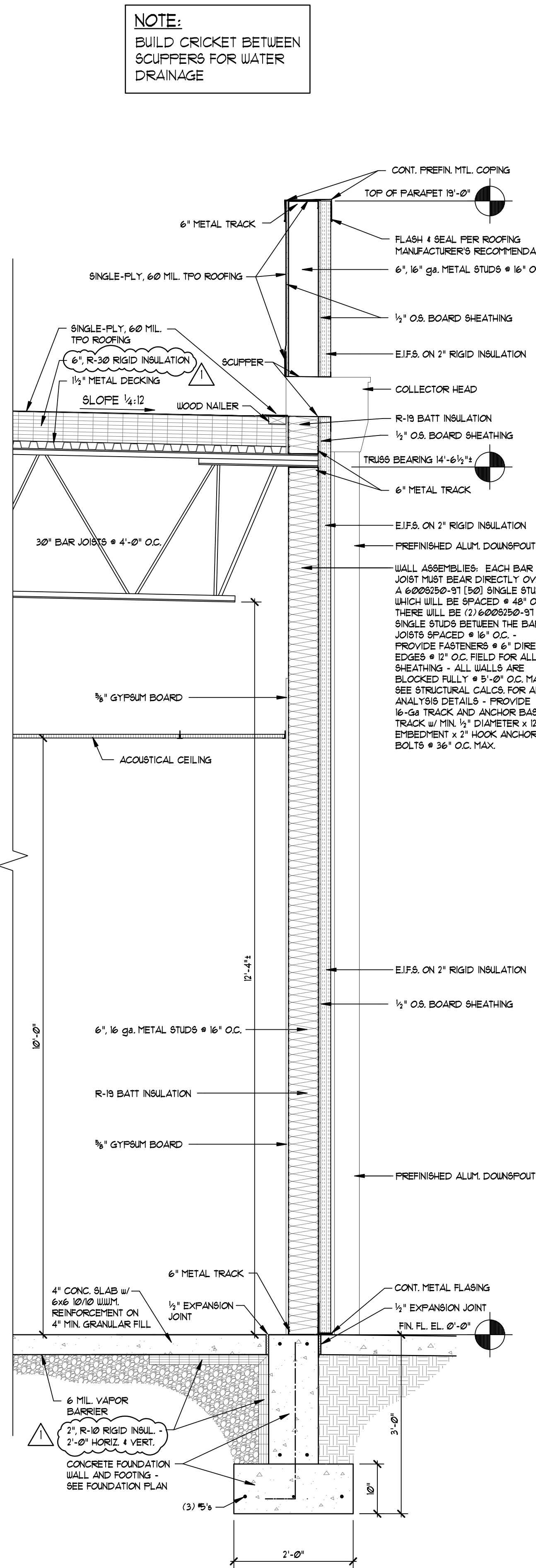
December 13, 2024

PROPOSED RETAIL CENTER FOR:
EMPIREE LLC
TECHNOLOGY DRIVE & WELDON SPRING ROAD
OF FALLON, MISSOURI

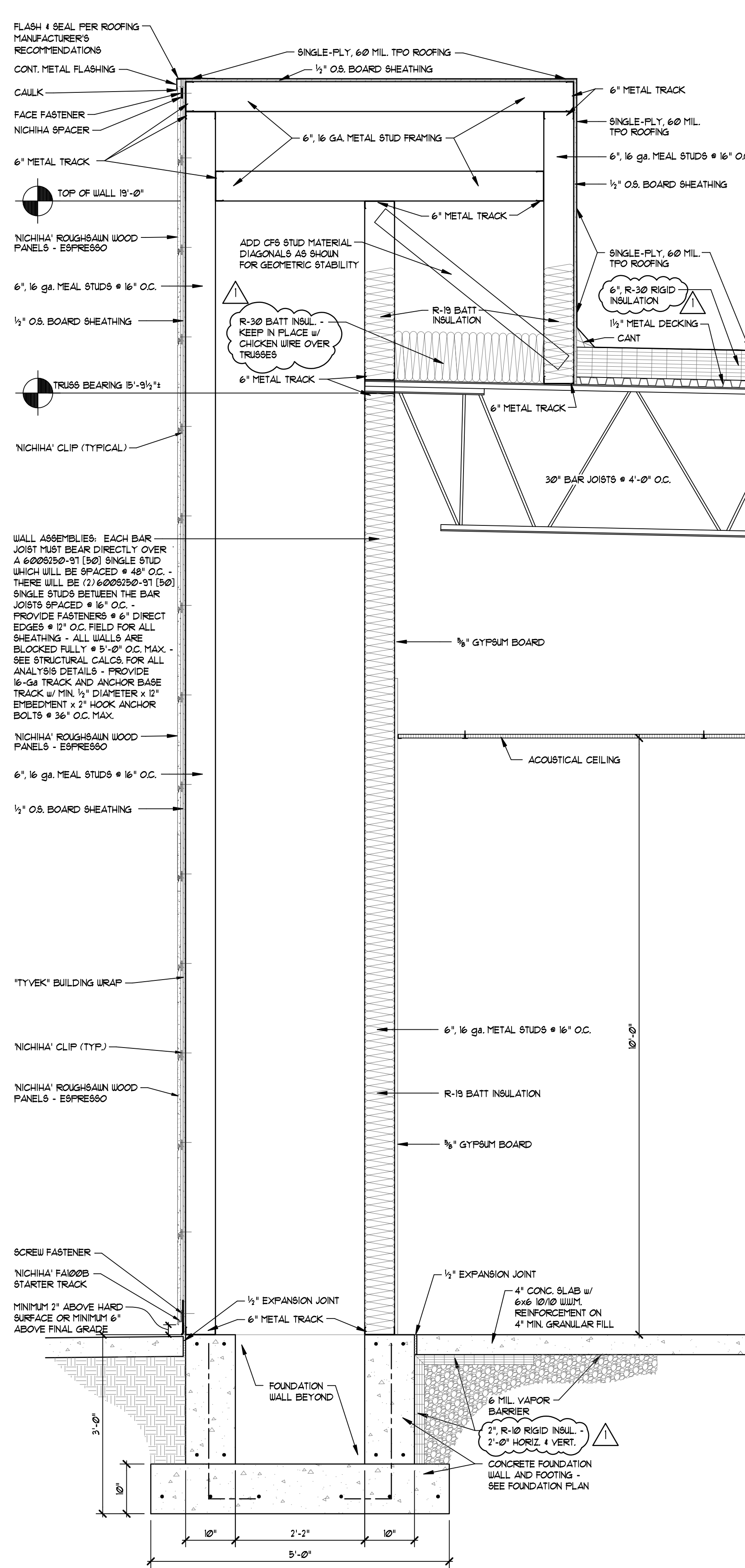
SHEET TITLE: TYPICAL LEASE SPACE & REFLECTED CEILING PLAN	
DATE: October 18, 2024	
REVISIONS	BY
December 13, 2024	KSW
PROJECT NO.: 24044	
SHEET NO. A3	



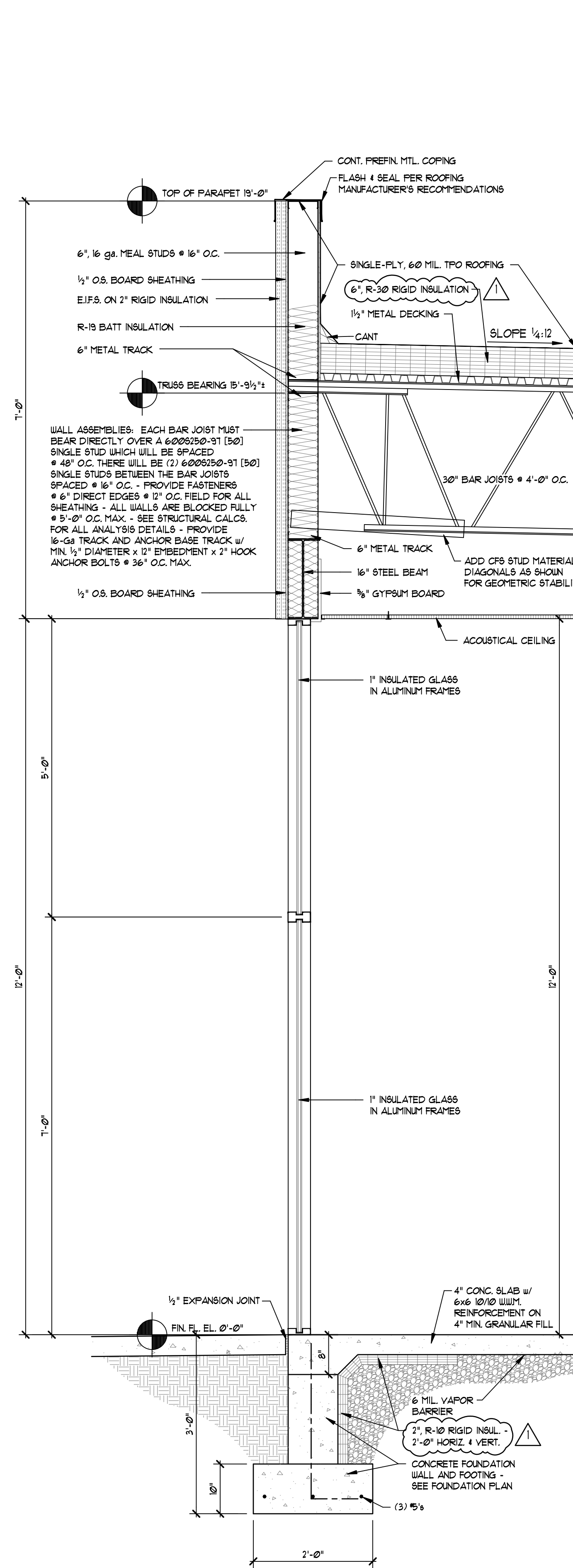
④ WALL SECTION
SCALE: 3/4" = 1'-0"



③ WALL SECTION
SCALE: 3/4" = 1'-0"

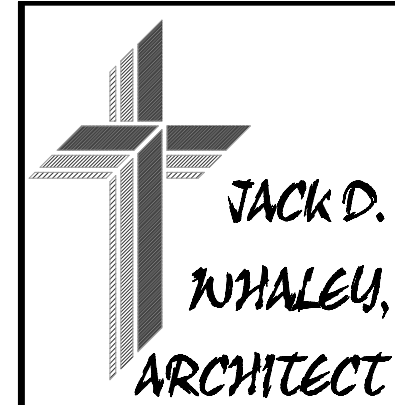


② WALL SECTION
SCALE: 3/4" = 1'-0"



① WALL SECTION
SCALE: 3/4" = 1'-0"

NOTE:
BUILD CRICKET BETWEEN
SCUPPERS FOR WATER
DRAINAGE

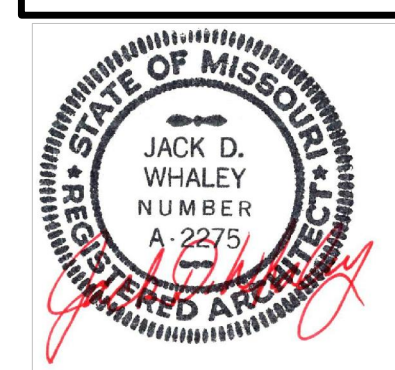


SOLE PROPRIETOR

1529 S. Old Highway 94
Suite 201
St. Charles, MO 63303
(636) 946-6949



423 Clark Street
St. Charles, MO 63301
314-486-2721



December 13, 2024

PROPOSED RETAIL CENTER FOR:
EMPIRE LLC
TECHNOLOGY DRIVE & WELDON SPRING ROAD
OFALLON, MISSOURI

SHEET TITLE:
WALL SECTIONS AND
DETAILS

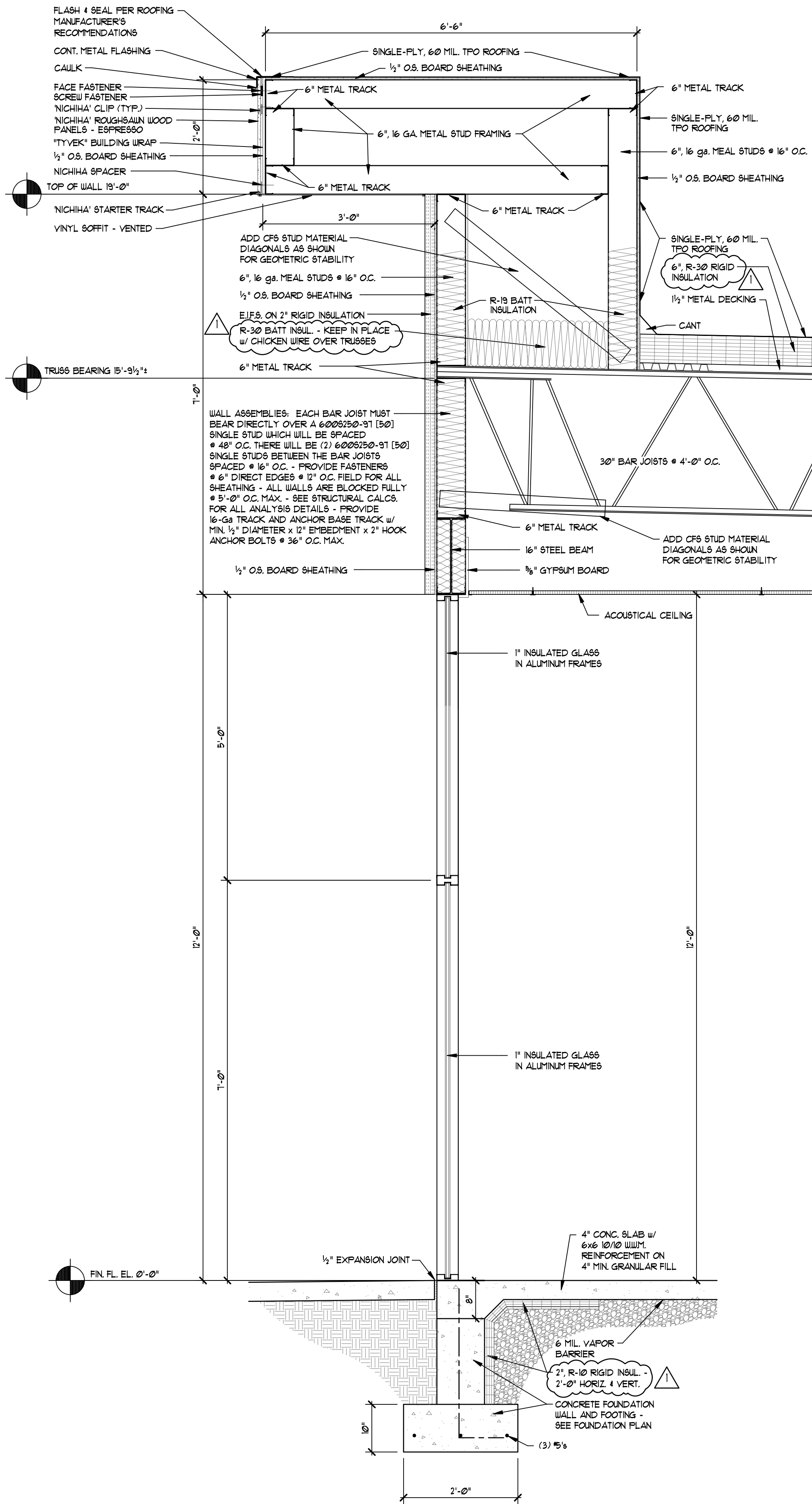
DATE: October 18, 2024

REVISIONS	BY
△ December 13, 2024	KSW

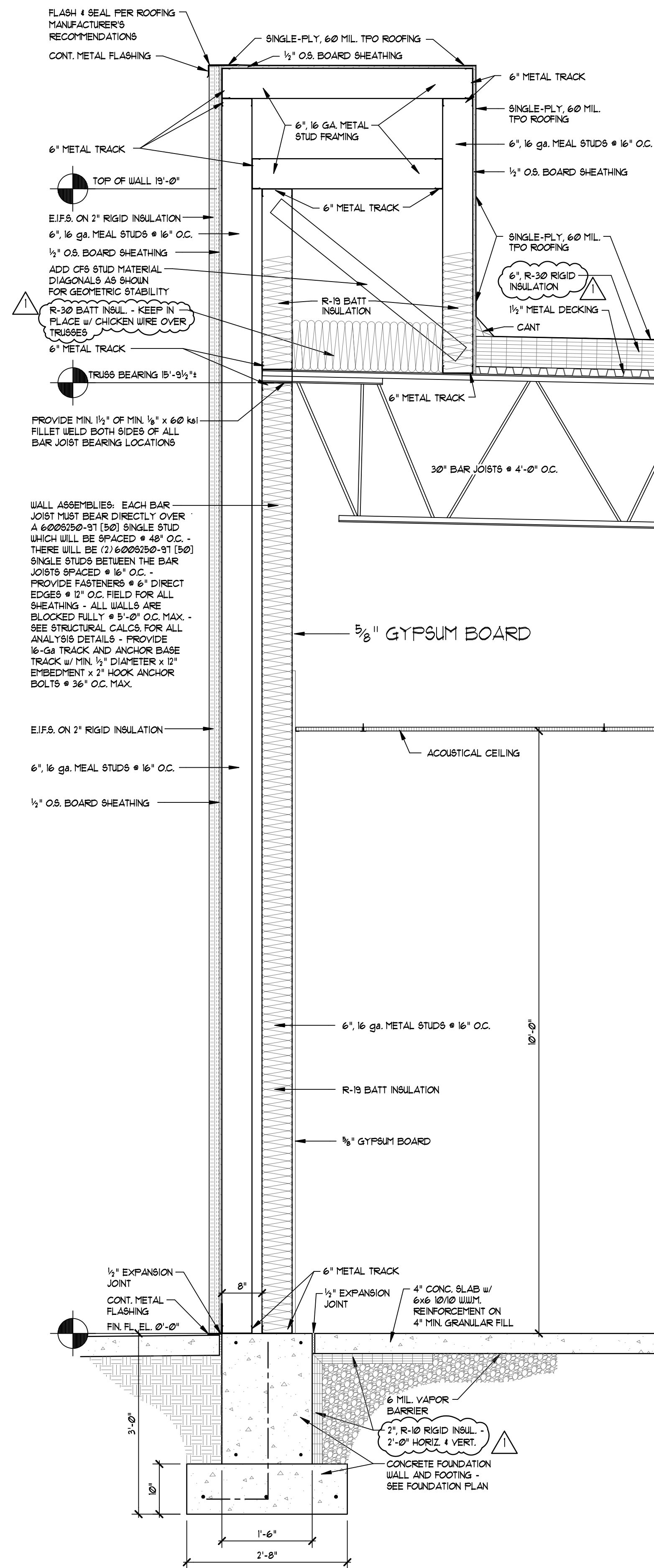
PROJECT NO.: 24044

SHEET NO.

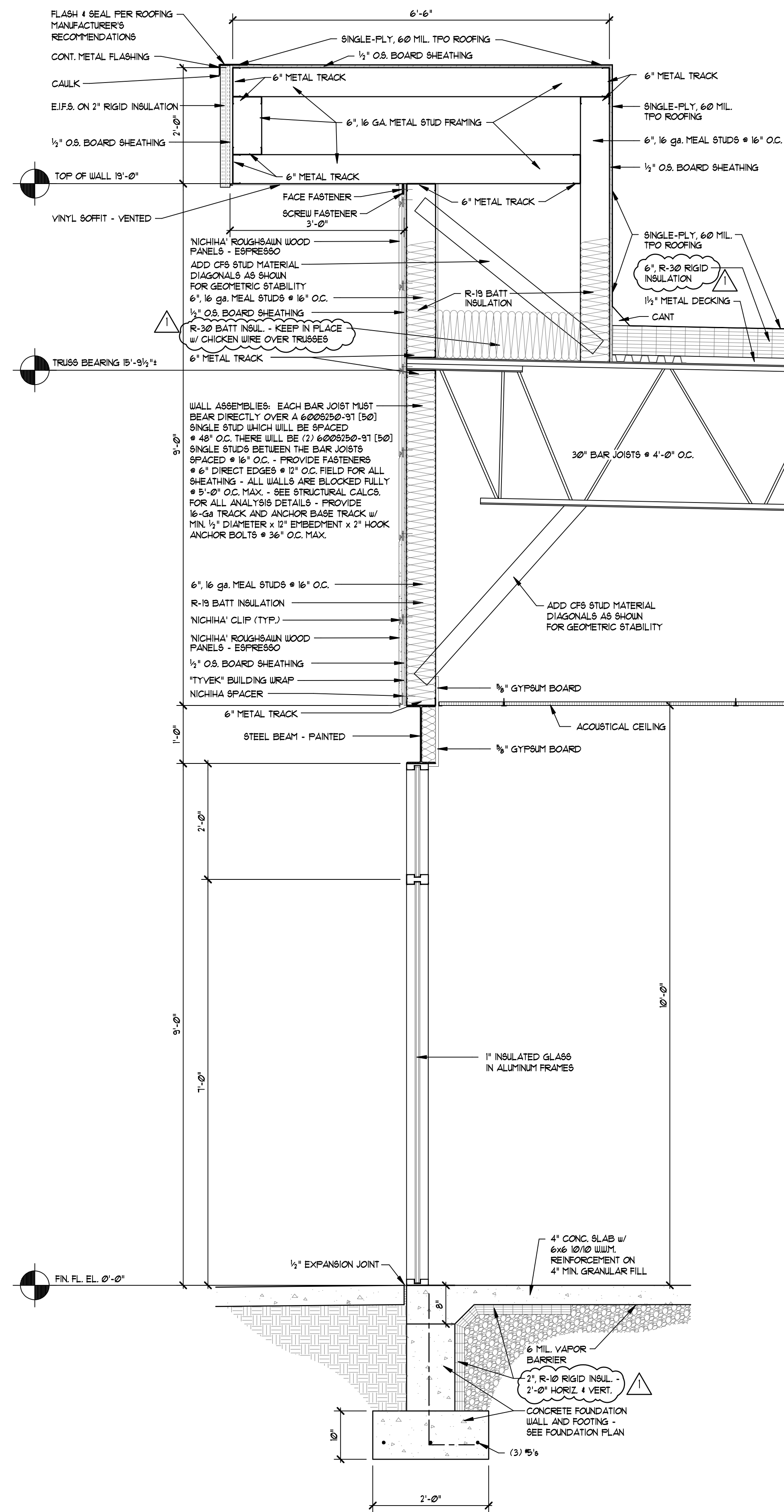
A4



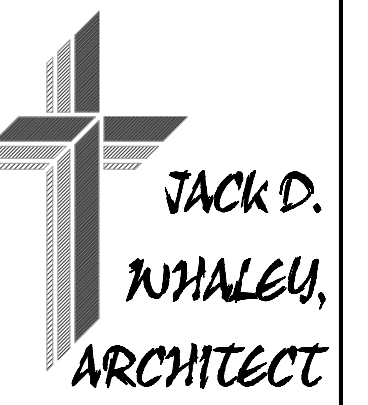
③ WALL SECTION
SCALE: 3/4" = 1'-0"



② WALL SECTION
SCALE: 3/4" = 1'-0"



① WALL SECTION
SCALE: 3/4" = 1'-0"

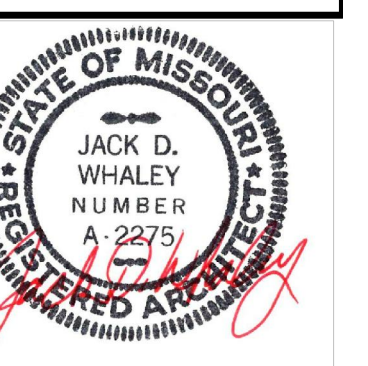


SOLE PROPRIETOR

1529 S. Old Highway 94
Suite 200
St. Charles, MO 63303
(636) 946-6949



423 Clark Street
St. Charles, MO 63301
314-486-2721



December 13, 2024

PROPOSED RETAIL CENTER FOR:
EMPIRE LLC
TECHNOLOGY DRIVE & WELDON SPRING ROAD
OFALLON, MISSOURI

SHEET TITLE:
WALL SECTIONS AND
DETAILS

DATE: October 18, 2024

REVISIONS	BY
△ December 13, 2024	KSW

PROJECT NO.: 24044

SHEET NO.

A5

LAP SPLICE LENGTHS				
CONCRETE 28-DAY COMPRESSIVE STRENGTH - 3,000 PSI				
BAR SIZE	SPACING 6" OR GREATER	OTHER BAR	SPACING LESS THAN 6"	OTHER BAR
3	1'-5"	1'-0"	1'-3"	1'-3"
4	1'-11"	1'-4"	2'-5"	1'-8"
5	2'-5"	1'-9"	3'-0"	2'-2"
6	3'-11"	2'-2"	3'-10"	2'-9"
7	4'-2"	3'-0"	5'-3"	3'-9"
8	5'-6"	3'-11"	6'-10"	4'-11"
9	6'-11"	5'-0"	8'-0"	6'-3"
10	8'-10"	6'-4"	11'-0"	7'-11"
11	10'-10"	7'-9"	13'-7"	9'-8"

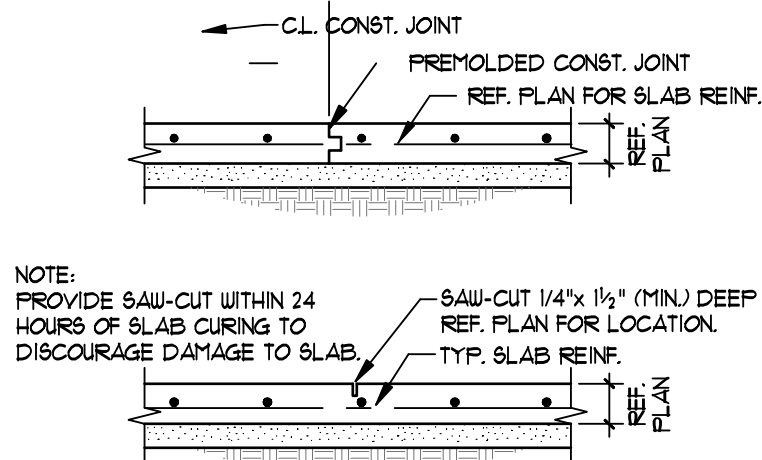
GRADE 60 REINFORCEMENT. MINIMUM LENGTHS SHOWN ABOVE SHALL BE USED UNLESS OTHERWISE NOTED ON THE PLANS. "TOP" BARS ARE HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

EMBEDMENT LENGTHS				
CONCRETE 28-DAY COMPRESSIVE STRENGTH - 3,000 PSI				
BAR SIZE	STRAIGHT BARS		HOOKED BARS	
	"TOP" BAR	OTHER BAR	"TOP" BAR	OTHER BAR
3	1'-1"	1'-0"	0'-8"	0'-8"
4	1'-5"	1'-0"	1'-1"	0'-8"
5	1'-9"	1'-3"	1'-4"	0'-10"
6	2'-3"	1'-7"	1'-10"	1'-11"
7	3'-1"	2'-2"	2'-8"	1'-5"
8	4'-0"	2'-11"	3'-5"	1'-10"
9	5'-1"	3'-8"	4'-5"	2'-4"
10	6'-6"	4'-8"	5'-6"	3'-2"
11	8'-0"	5'-8"	6'-8"	4'-11"

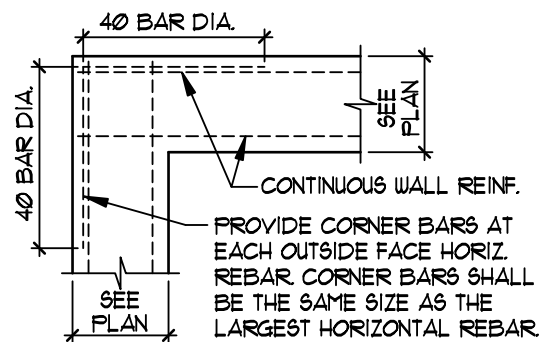
GRADE 60 REINFORCEMENT. MINIMUM LENGTHS SHOWN ABOVE SHALL BE USED UNLESS OTHERWISE NOTED ON THE PLANS. "TOP" BARS ARE HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

GENERAL FOUNDATION NOTES

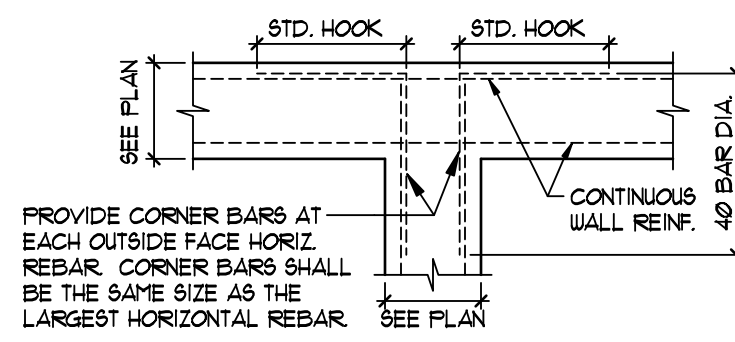
- Foundation design based on spread footings bearing on natural soils or compacted fill at a maximum soil bearing pressure of 2.00 K.S.F. Footing bearing pressure to be field verified by a qualified soils consultant before beginning work.
- Reinforced concrete design and construction to conform to A.C.I. 318-83 with a minimum 3500 p.s.i. concrete strength at (28) days (see specifications) with a minimum of 6 sacks cement per cubic yard. Reinforcing steel to be A-615-60 and conform to A.S.T.M. A-305. Reinforcing steel details per A.C.I. manual. Lap bar splices (24) diameters, (2'-0") minimum, except column splices (36) diameters unless noted. Reinforcing steel protection (to main reinforcing). Bottom of footings and grade beams (3"), sides of grade beams (2"), walls (2") slabs (3/4") unless noted. Concrete slab design and construction to conform to A.C.I. 302-83 with same properties as above, except use 1 sack cement per cubic yard and no more than 6 gallons of water per sack of cement. Place reinforcing mesh in slabs per plan and insure that mesh is in proper location by use of chairs or other devices. Lap mesh one full wire space both ends and sides. Mesh crossing control joints to have every other wire strand cut. Newly poured slabs to be sprayed with a heavy coat of curing compound immediately to retain moisture.
- All fill and backfill under slabs on-grade to be thoroughly compacted by mechanical means to attain 90% minimum compaction as measured by Modified Proctor Test, A.S.T.M. D-1557.
- No opening shall be placed in any structural member until the location has been approved by Structural Engineer. Provide sleeves or boxes for all piping and ducts which penetrate footings, slabs, walls, etc. prior to the pouring of concrete. Cutting holes through hardened concrete not permitted, except by special permission which will be on an individual basis.
- Contractor must verify locations of all construction joints with Engineer if they vary from what is shown on plans. Maximum length of pours shall be limited to 100' for walls and 25' for slabs. (See plan for Floor Joints).
- Structural drawings to be used in conjunction with architectural and mechanical drawings. Any discrepancies between drawings are to be reported to the Architect and Engineer for proper interpretation.
- Anchor Bolts to be set with a template. Do not hand set bolts!
- The following tolerances to be met:
A) Elev. top of concrete + or - 1/4"
B) Foundation for Square - diagonal measurement + or - 1/4"
C) All other dimensions + or 1/4"
- All elevations referenced on drawings are in relation to (+0'-0") = Finish floor elevation. A plus (+) designates above finish floor and a minus (-) designates below finish floor. Examples: (-4'-0") below finish floor elevation.
- Contractor to make a minimum of (4) standard 6" x 12" test cylinders from each days pour or for each days 50 cu. yd. of concrete placed. The cylinders shall be lab tested at 7 and 28 days and the report shall be submitted to the Engineer for approval. Contractor shall also perform a slump test on each truck load of concrete. Slump shall be 2" to 4" maximum. Do not add water at job to cause slump to be exceeded.
- Contractor to verify all B/tg. (bottom of footing elevations) to insure a minimum of 2'-6" below grade for frost walls and footings.
- The Engineer is only responsible for the structure to withstand the assumed design loads specified on the drawing. Any other loadings other than those specified may cause structural damage and the Engineer will not assume any liability for the damage.



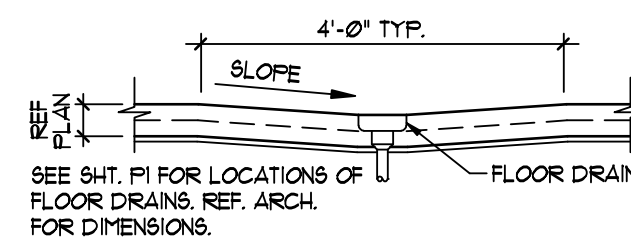
5 SLAB JOINT DETAIL
SCALE: 1/2" = 1'-0"



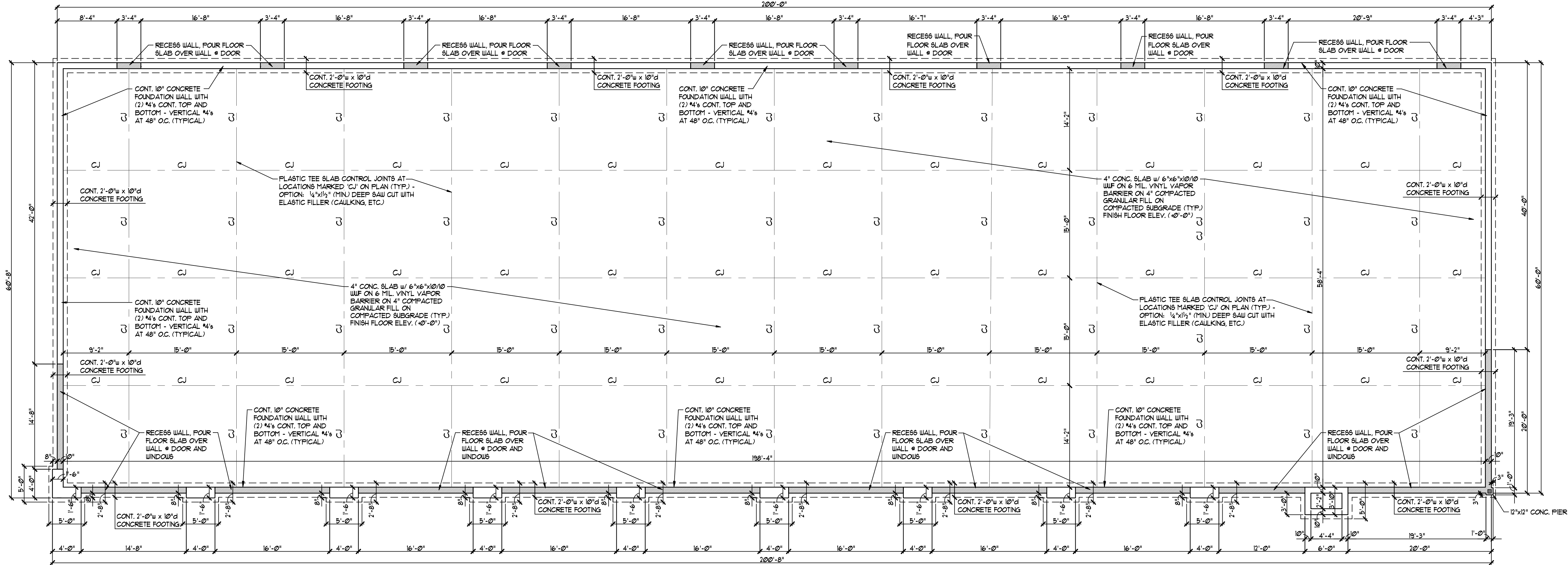
4 CORNER BAR
SCALE: 1/2" = 1'-0"



3 CORNER BAR
SCALE: 1/2" = 1'-0"

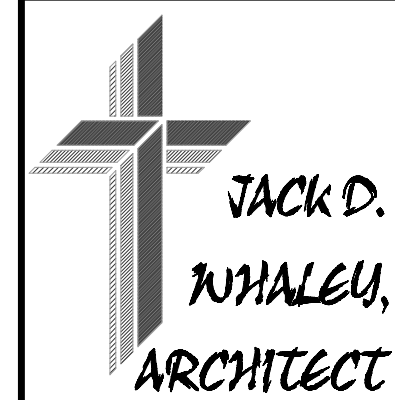


2 FLOOR DRAIN
SCALE: 1/2" = 1'-0"



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

STATEMENT OF SPECIAL INSPECTIONS:
PER 2015 IBC SECTION 1704, SPECIAL INSPECTIONS AND TEST, CONTRACTOR RESPONSIBILITY AND STRUCTURAL OBSERVATION, AND IN ACCORDANCE WITH 2015 IBC TABLE 1705.2.3 THROUGH 1705.2.7, THERE ARE NO ITEMS IN THIS PROJECT THAT REQUIRE CONTINUOUS SPECIAL INSPECTION. THEREFORE NO SPECIAL INSPECTIONS ARE REQUIRED ON THIS PROJECT.



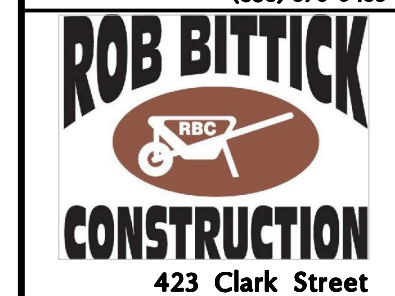
SOLE PROPRIETOR

1529 S. Old Highway 94
Suite 201
St. Charles, MO, 63303
(636) 946-6949

STRAIN
Engineering

Consulting
Structural
Engineer

42 Roland Drive
St. Peters, MO, 63376
(636) 978-9459



December 16, 2024

PROPOSED RETAIL CENTER FOR:
EMPIREE LLC
TECHNOLOGY DRIVE & WELDON SPRING ROAD
OFALLON, MISSOURI

SHEET TITLE:
ROOF FRAMING PLAN
AND NOTES

DATE: October 18, 2024

REVISIONS	BY
1	KSW

PROJECT NO.: 24044

SHEET NO.

S2

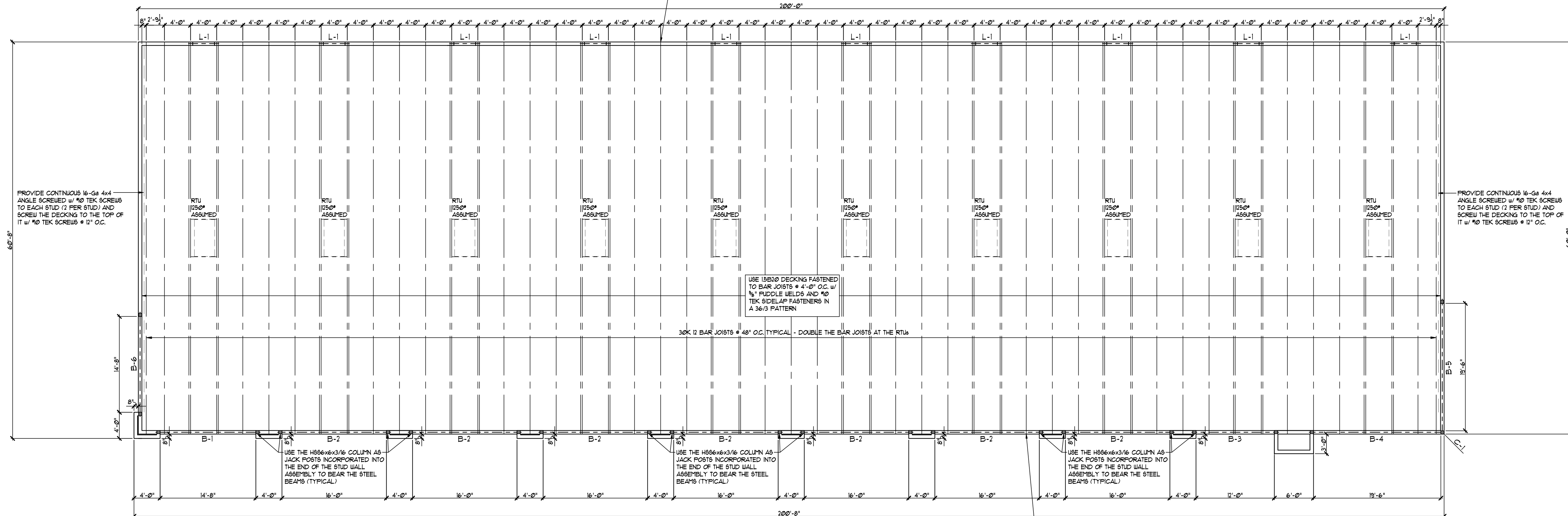
© COPYRIGHT 2024
JACK D. WHALEY, ARCHITECT

GENERAL STRUCTURAL NOTES

- Structural steel design, fabrication, and installation per AISC specs. All Wide Flange structural steel shall be A572M, A-36 steel. All tubular steel sections shall be A572M, A-500, Grade B, Fy=46 ksi. All shop connections riveted or welded. All field connections bolted with high-strength AISC spec. unless noted. (See drawing for special welding provisions. All exposed joints in steel to be seal welded continuous with 1/8" weld. Grind all exposed welds smooth). All welding to conform to AWS Code and be performed by AWS Coded Welders. Furnish dated certificates of welders qualifications. Brace all structural steel with suitable rods cables until all supporting walls and/or slabs are in place and have attained design strength. Bracing to be done in a manner so as not to interfere with masonry or concrete work. Furnish as required bearing plates not specifically shown on drawings. Plate size to limit bearing pressure to (250) p.s.i. on masonry. Furnish 2 (1/2") round anchor bolts minimum 16" long unless shown for all bearing plates. Furnish one coat red oxide primer on all steel.
- Steel fabricator to provide all necessary bearing plates, connections, stiffener plates, beam copings, bolts, etc. as required to provide a completed safe structural system. No additional compensation will be allowed to the fabricator for changes made to the shop drawings by the Engineer to obtain such.
- Brace all walls during construction to prevent damage from earth, wind, water pressure and construction loads until all supporting walls and/or slabs or roof construction are in place and have attained designed strength and are ready to resist loads.
- Contractor to field verify all dimensions and carefully compare them with conditions and other information known with the contract documents before commencing any work. Errors, inconsistencies or omissions shall be reported to the Engineer at once.
 - Roof Loads: Live = 20 PSF Dead = 15 PSF
 - Wind Load: 90 MPH, Exposure 'B'
 - Seismic Loads:
 - Seismic Use Group = II
 - Site Class = D
 - $S_s = 0.60$
 - Site Coefficients = $F_a = 1.32$, $F_v = 2.00$
 - $S_i = 0.18$
 - Structural System = A
 - Response Modification Factor = 6.5
 - Deflection Amplification Factor = 4
 - Analysis Procedure = Equivalent Lateral Force ProcedureThe Engineer is only responsible for the structure to withstand the assumed design loads specified on the drawing. No liability will be assumed for loadings exceeding those shown.

IMPORTANT NOTE:
ALL BAR JOISTS MUST BEAR DIRECTLY OVER ONE OF THE 600S250-91 50 SINGLE STUDS 6" DEEP x 25" WIDE FLANGE x 12-Ga @ 48" O.C. AND CANNOT BEAR OVER A REAR WALL HEADER

NOTE:
VERIFY EXACT OPENING SIZE FOR RTUs



ROOF FRAMING PLAN

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

INTEL SCHEDULE

L-1 - 600S162-54 [33] (2) BOXED w/ WEB STIFFENERS
- OPTION TO USE W8x10

BEAM SCHEDULE

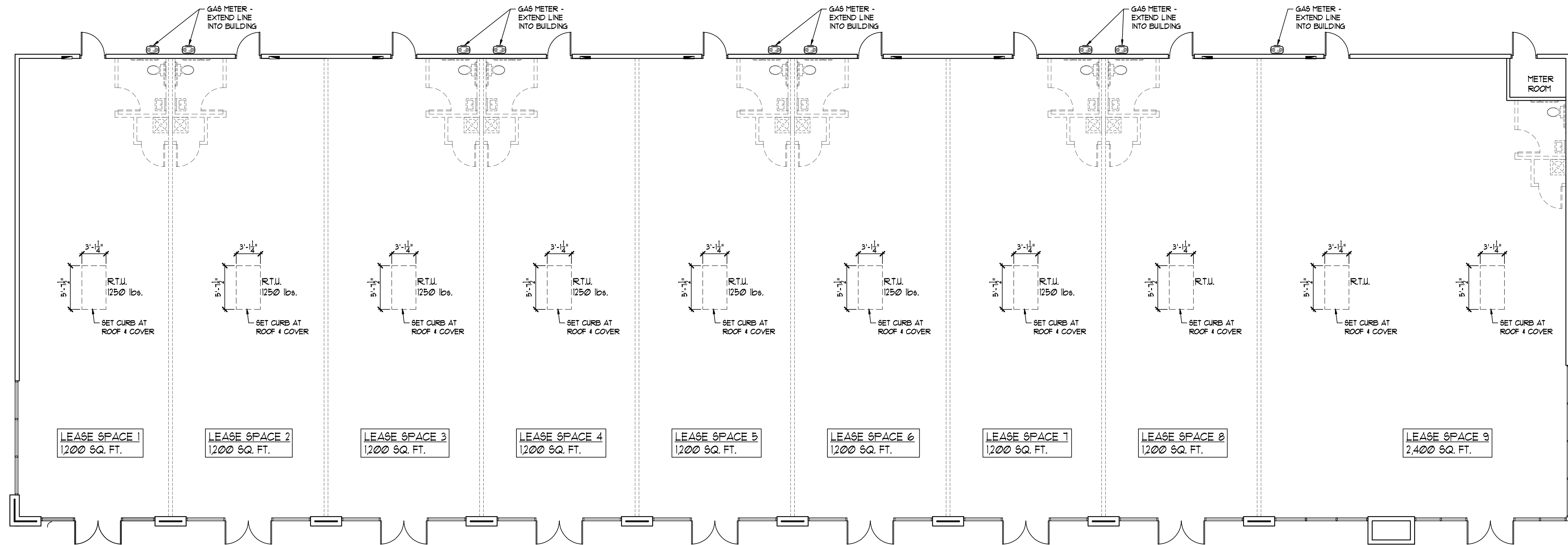
B-1 - W 12x22
B-2 - W 12x26
B-3 - W 12x16
B-4 - W 12x31
B-5 - W 12x26
B-6 - W 12x14

COLUMN SCHEDULE

C-1 - 6" x 6" x 3/16" TUBE STEEL w/ 12"x12" 1/2 BASE PLATE w/ (4) 1/2" ANCHORS
OR
- PREFABRICATED ADJUSTABLE STEEL PIPE COLUMN ASSEMBLY w/ A MIN. ICC-ES LOAD RATING OF 25,000-lb

IMPORTANT NOTE:
ALL BAR JOISTS MUST BEAR DIRECTLY OVER ONE OF THE 600S250-91 50 SINGLE STUDS 6" DEEP x 25" WIDE FLANGE x 12-Ga @ 48" O.C. AND CANNOT BEAR OVER A REAR WALL HEADER

STATEMENT OF SPECIAL INSPECTIONS:
PER 2015 IBC SECTION 1104, SPECIAL INSPECTIONS AND TEST, CONTRACTOR RESPONSIBILITY AND STRUCTURAL OBSERVATION, AND IN ACCORDANCE WITH 2015 IBC TABLES 1105.2.3 THROUGH 1105.13.1, THERE ARE NO ITEMS IN THIS PROJECT THAT REQUIRE CONTINUOUS SPECIAL INSPECTION. THEREFORE NO SPECIAL INSPECTIONS ARE REQUIRED ON THIS PROJECT.



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

DIVISION 15B: HEATING, VENTILATING AND AIR CONDITIONING

HVAC Drawings, Specifications and Calculations. Comply with all Federal, State and local requirements, codes, rules and ordinances governing work under this contract, and obtain all permits and pay fees for same as required. Verify requirements with all utility companies governing work.

DRAWINGS: Locations shown are approximate. Refer to the architectural plans for measurements in the placement of equipment, fixtures, outlets, etc. Where the locations are not clear, obtain the exact location from Owner and verify in field. The plans do not give exact details as to elevation and locations of various pipes, fittings, ducts, conduit, etc., and do not show all offsets and other installation details which may be required. See drawings for equipment schedules.

CONDENSATE DRAINS: Condensate drains and/or auxiliary drain piping shall be galvanized steel or copper pipe. Provide tee and plug at changes in direction. Where local code permits, PVC may be used for condensate piping.

DUCTWORK: Build in accordance with requirements of SMACNA and ASHRAE. Furnish and install all new supply, return and ventilation ductwork as shown, together with splitters, deflectors, dampers, etc. Construct this work of new galvanized prime grade steel sheets. The gauges of metal to be used and the construction and bracing of joints shall be in accordance with SMACNA AND the ASHRAE Guide recommendations. Flexible duct may be used on diffuser take-off and duct runs not exceeding 14'-0" in length, and shall run as straight and direct as possible, without any right angles or "S" bends.

DUCT INSULATION: Insulate exterior of all metal main supply and return ducts with 1" thick fiberglass, 3/4" density, blanket insulation with foil backing and U.L. label. Insulation to be Owens-Corning taped with 2" wide vapor barrier pressure sensitive tape. Interior duct insulation may be used - increase duct size accordingly.

FIRE DAMPERS: Furnish and install in the air distribution system, at location shown on the drawings and/or where required by code, fire dampers constructed and tested in accordance with U.L. Safety Standard 555.

GRILLES, REGISTERS AND DIFFUSERS: All return air grilles, exhaust air grilles, supply air diffusers, of sizes, capacities, etc., as indicated on the drawings. Each diffuser and register shall have opposed blade volume control dampers, with flush locking device, removable key operated. Grilles, registers and diffusers shall be set with rubber or felt gaskets. All devices under this heading are scheduled on sheet M2, by Titus. Equal products by Carnes, Barber-Coleman, Kreuger or Metalair.

TEMPERATURE CONTROLS: Systems shall be low voltage (24 volts) electric type. Apparatus shall consist of all necessary thermostats, limit controls, safety devices, switches, transformers, relays, line and low voltage wiring, conduit, etc., together with all accessories necessary for the complete control of all equipment under this division. Thermostats shall be programmable type. All controls, devices, etc., are to be the product of a single manufacturer: Barber-Coleman, Johnson Service Co., Minneapolis Honeywell Co., Power Regulator Co., or Temperature Control Systems. All control and interlock wiring shall be furnished and installed by the Temperature Control subcontractor. All electrical power wiring to HVAC Equipment, starters and disconnect switches, etc., and wiring from power sources to control panel boards shall be furnished and installed by the Electrical Contractor.

REFRIGERANT PIPING: Type L seamless hard copper, wrapped with 1/2" foamed neoprene insulation. Charge and test system for leaks and proper evacuation prior to charging. Do not exceed Manufacturer's Recommended Charge Schedule.

RESTROOM EXHAUST FANS: All airflow ratings are to be tested and certified in accordance with AMCA Standard 210. Sound levels shall be tested and certified in accordance with AMCA Standards 300, 301 and 302.

OPERATOR'S MANUAL AND DIAGRAMS: Prepare a manual describing the proper maintenance and operation of the new systems. This manual shall not consist of standard factory printed instructions, although these may be included, but shall be prepared to describe this particular project. Owner's representative shall be instructed in the proper operation and maintenance of the system, including control system, by qualified representative of the HVAC Contractor.

GUARANTEE: Materials and workmanship shall be guaranteed for one year from date of completion. In addition, motor compressors shall bear a non-prorated 5 year factory warranty.

NATURAL GAS PIPING: Black steel, Schedule 40 suitable for painting without prior preparation. Pipe shall be prime coated for enamel finish. For above ground installations, all fittings to be joined with Teflon Tape Seal or other suitable seal, in conformance with practices of AGA and NFPA 54. Fittings: Malleable iron, standard weight, black, screwed fittings. Testing: In accordance with local requirements. If none exist, gas piping shall be filled with compressed air to 150 psi and held for a period of four hours. Each joint shall be checked by liquid soap or special liquid chemical for leaks.



JACK D.
WHALEY,
ARCHITECT

SOLE PROPRIETOR

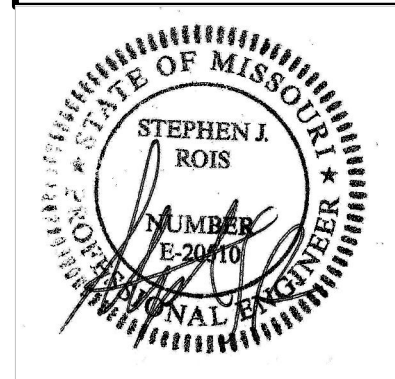
1529 S. Old Highway 94
Suite 201
St. Charles, MO. 63303
(636) 946-6949

ROB BITTICK
CONSTRUCTION

423 Clark Street
St. Charles, MO 63301
314-486-2721

Stephen J. Rois
Engineer

405 Biltmore Drive
Fenton, MO 63026
(314) 753-9246



December 13, 2024

PROPOSED RETAIL CENTER FOR:
EMPIREE LLC
TECHNOLOGY DRIVE & WELDON SPRING ROAD
OFALLON, MISSOURI

SHEET TITLE: MECHANICAL PLAN AND NOTES	
DATE: October 18, 2024	
REVISIONS	BY
December 13, 2024	KSW
PROJECT NO.:	24044
SHEET NO.	M1



JACK D.
WHALEY,
ARCHITECT

SOLE PROPRIETOR

1529 S. Old Highway 94 Suite 201
St. Charles, MO 63303
(636) 946-6949

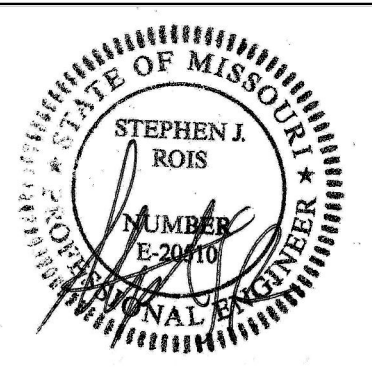


CONSTRUCTION

423 Clark Street
St. Charles, MO 63301
314-486-2721

Stephen J. Rois
Engineer

405 Biltmore Drive
Fenton, MO 63026
(314) 753-9246



December 13, 2024

PROPOSED RETAIL CENTER FOR:
EMPIRE LLC
TECHNOLOGY DRIVE & WELDON SPRING ROAD
OFALLON, MISSOURI

SHEET TITLE:
ELECTRICAL PLAN
DETAILS AND NOTES

DATE: October 18, 2024

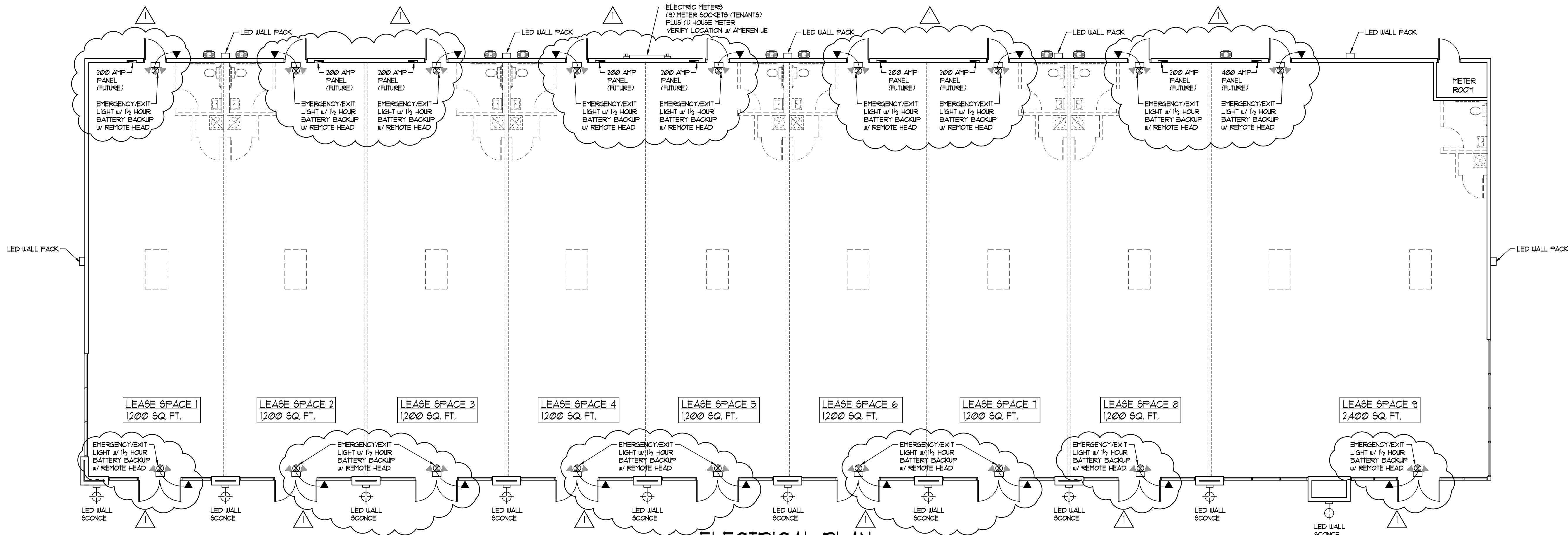
REVISIONS	BY
1	KSW

PROJECT NO.: 24044

SHEET NO.

E1

© COPYRIGHT 2024
JACK D. WHALEY, ARCHITECT



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

ELECTRICAL

Electrical Drawings, Schedules and Specifications.

All work shall be performed by skilled electricians in accordance with the best practices of the trade, meeting the requirements of the National Electric Code, applicable Federal, State and local codes and the requirements of the Power Co. furnishing the services. Pay for and obtain necessary construction permits and certificates of inspection.

Perform all necessary excavating and backfilling required of this installation. All excavations below the bottom of footings shall be backfilled with 2000 psi concrete. Where ditches are cut for outside conduit, replace and tamp the earth in 12" layers and leave the ground level and equal to original condition.

DRAWINGS: Drawings are diagrammatic and are not intended to show all details of the work. All outlets must be accurately located, particularly appliance outlets, which shall be located from dimensions furnished by suppliers of equipment. Coordinate work with the work of other trades.

SERVICE: See plans for size of service, voltage, phase, cycle, number of wire. Verify electrical service available at the job site. New service connection shall be underground from Power Co. transformer to service entrance. Include cost of all service connections and meter charges, and furnish as part of the base bid.

MATERIALS:

Panelboards: Shall be bolt in circuit breaker type. The panel shall be suitable for service entrance equipment and labeled as such. Cabinets shall be code-gage, galvanized steel. All panelboards shall be Square D, or equal. At the completion of this installation, type the circuit designations on the directory cards and leave in card holder provided inside cabinet doors.

Conduit and Fittings: All wiring shall be run in conduit. All conduit within building structure shall be run overhead in attic space unless otherwise indicated on plans. Where required, conduit placed in concrete or run underground, shall be rigid PVC conduit. For under floor installations, rigid PVC conduit shall be run below, not in, the slab. Conduit exposed or run in masonry walls above grade may be EMT where allowed by code, if not allowed, rigid PVC conduit and fittings shall be used.

Wire and Cables: All wires and cables shall be soft-drawn copper rated 600 volts, type THW. Wires in fixture raceways or heating units shall be type THHN. No wire smaller than #12 AWG shall be used for lighting or power circuits. Stranded cable shall be used for #8 AWG and larger. Aluminum wiring substitution, per N.E.C., is acceptable for the service and single load feeders.

Grounding: The conduit system shall be grounded in accordance with Article 250 of the National Electric Code.

Local Switches: Totally enclosed type rated at 20 amps, 120/277 volts, by Bryant, Pass & Seymour, Hubbell, Leviton or Sierra. Color - Ivory unless noted otherwise.

Receptacles: Duplex receptacles shall be by same manufacturer and same color as switches. Each shall be grounding type devices, rated 20 amps, 125 volts. Refer to the drawings for special outlets.

Fixtures: All fixtures shown on schedule shall be furnished and installed, complete with all mounting accessories, lamps and tubes.

Telephone: Install 3/4" conduit from telephone service board to outlets inside building. Telephone company to bring service into building as noted on drawings in conduit furnished by Electrical Contractor. Furnish and install service entrance fittings. Electrical Contractor to coordinate with Telephone Company and shall wire system inside building, and notify Telephone Company of requirements for IT.

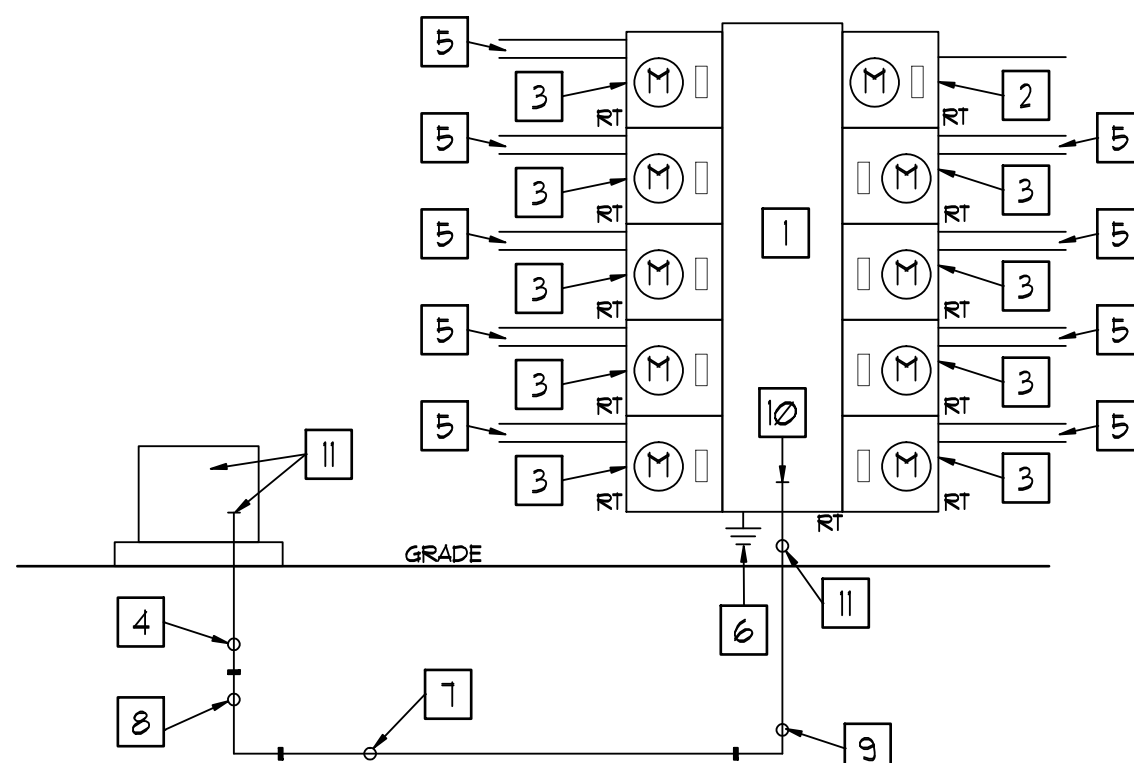
Service Disconnect Switches: Sizes noted on drawings, shall be type MD, normal duty, quick-break, quick-make, in NEMA Type 1 general purpose enclosures for interior locations, and NEMA Type 3R raintight enclosures for exterior locations.

Circuit Breakers and/or Fuses: Furnish and install a complete set of circuit breakers and fuses for all equipment including equipment furnished and installed by others. Fuses shall be Busman "Fusetron" or equal. A complete set of spare fuses shall be turned over to Owner upon completion of work.

TESTS: Make all necessary tests to insure that the entire installation is free from improper grounds and from shorted and/or open circuits. Voltage, current, and rotation tests shall be made before any motors are placed in operation. All loads must be balanced across phases. Check to see that all lights work and are controlled by switches indicated on drawings, or directed by Owner, or by breakers.

GUARANTEE: Furnish a written guarantee that all work executed under this section is free from defects of materials and workmanship for a period of one year from date of final acceptance, and that repair and/or replacement of any defective work and all damages caused thereby which may occur during the term of the aforementioned guarantee, will be made at no expense to the Owner.

TEMPORARY POWER: Provide at job site adequate 120/240 volt, single phase power outlets for temporary construction power as required. Temporary lighting shall be maintained in all areas of the building until permanent power sources have been energized. See Division 1 of these specifications.



POWER RISER DIAGRAM
SCALE: No Scale

ELECTRICAL NOTES THIS SHEET

- ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL RAINIGHT 120/208V, 3Ø SERVICE ENTRANCE TYPE TERMINAL CABINETS SUITABLE FOR PLUG-IN BRANCH METER UNITS. PROVIDE 100 AMP METER CENTER w/ 100 AMP / 3Ø MAIN BREAKER.
- ADD 100 AMP, 1Ø METER SOCKET AT LOAD CENTER FOR PUBLIC SERVICE.
- ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL A RAINIGHT 120/208V, 3Ø PLUG-IN METER SOCKET FOR TENANT PANELBOARD. 200 AMP, 120/208V, 3Ø MAIN CIRCUIT BREAKER, EXCEPT FOR TENANT LEASE SPACE 3, THAT WILL HAVE A 400 AMP, 120/208V, 3Ø MAIN CIRCUIT BREAKER.
- ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL RIGID PVC CONDUITS FOR SERVICE ENTRANCE WIRING.
- ELECTRICAL CONTRACTOR TO INSTALL RIGID PVC CONDUIT INTO BUILDING FOR FUTURE CONNECTION TO TENANT SPACE.
- ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL 3-1/2Ø, 1-1/2 BARE COPPER GROUND WIRE PER THE 2015 EDITION OF THE NATIONAL ELECTRICAL CODE, SECTION 250. GROUND TO FOOTING STEEL (BUILDING).
- ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL 3 SETS OF WIRING IN (3) SETS OF (3) 350KCM IN (2) 3" RIGID PVC CONDUITS, TO TERMINAL CABINET.
- ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL SER CABLE.
- ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL RIGID PVC CONDUIT ELBOWS PER AMEREN UE CO. REQUIREMENTS.
- ELECTRICAL CONTRACTOR TO TERMINATE SERVICE ENTRANCE WIRING IN THE SERVICE ENTRANCE TERMINAL CABINET AS REQUIRED.
- VERIFY LOCATION AND TYPE OF TRANSFORMER, AND CONNECTION REQUIREMENTS WITH AMEREN UE CO.
- ALL WORK TO BE DONE PER LOCAL CODE AND NEC 2014 EDITION.



SOLE PROPRIETOR

1529 S. Old Highway 94
Suite 201
St. Charles, MO. 63303
(636) 946-6949



423 Clark Street
St. Charles, MO 63301
314-486-2721

Stephen J. Rois
Engineer

405 Biltmore Drive



December 13, 2024

PROPOSED RETAIL CENTER FOR:
EMPIREE LLC
TECHNOLOGY DRIVE & WELDON SPRING ROAD
OFALLON, MISSOURI

SHEET TITLE:
PLUMBING PLAN
AND NOTES

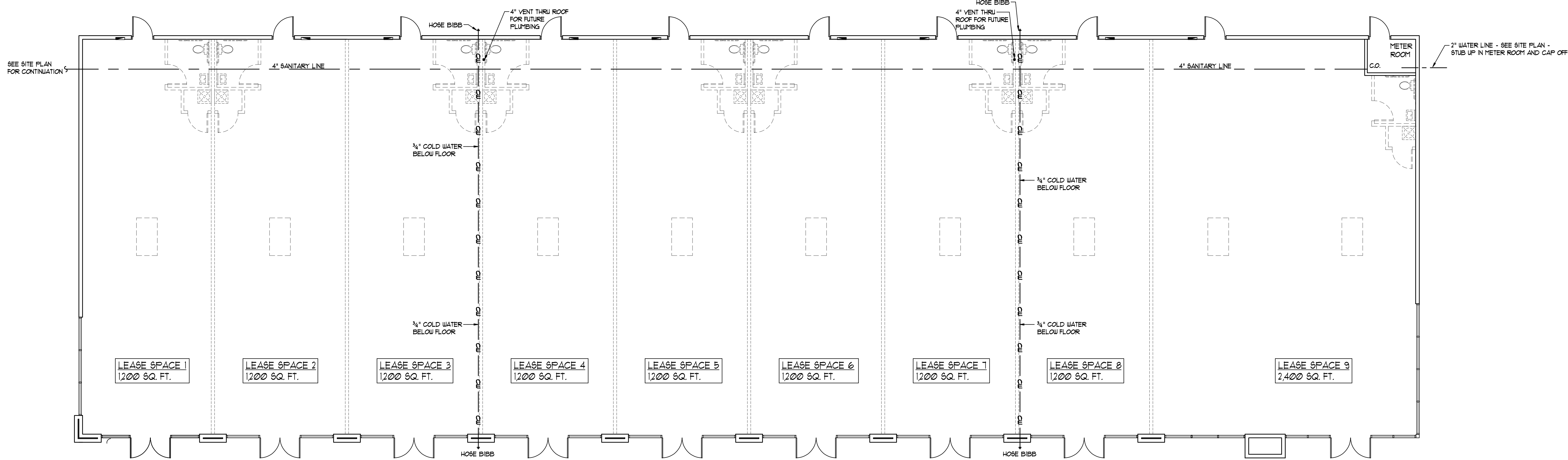
DATE: October 18, 2024

REVISIONS	BY
December 13, 2024	KSW

PROJECT NO.: 24044

SHEET NO.
P1

© COPYRIGHT 2024
JACK D. WHALEY, ARCHITECT



PLUMBING PLAN

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

PLUMBING NOTES:

Plumbing Drawings and Specifications.
Comply with all Federal, State and local requirements, codes, rules and ordinances governing work under plumbing, and obtain all permits and pay fees for same as required. Verify requirements with all utility companies governing work.

Perform all necessary excavating and backfilling required for this installation. Prepare a proper bed of sand or gravel or equivalent in rock screenings so as to eliminate shimming and void spaces under any of the utility service pipes. Bending of any hard pipe will not be permitted. Where a change in direction is necessary on pressure pipes, compatible couplings shall be used and may not exceed 5 deg. deviation in any direction. All excavation below the bottom of footing shall be backfilled with 2000 psi concrete. Other backfill shall consist of 2 - 3 inches of sand or rock screenings and earth to a final level equal to its original condition.

DRAWINGS: The Plumbing plans are diagrammatic only and are not intended to show all fittings and details of the work. The location of the piping runs are approximate and the Contractor must make any necessary changes in the piping runs, etc., at no additional cost to the Owner. Equipment outlet locations are critical and must be located according to information from the suppliers.

WATER PIPE: Underground - Type K soft temper copper, no joints. Connect to existing water service. Above ground - Type L hard drawn copper with sweat type wrought copper fittings. Joints shall be cleaned and deburred, soldered with lead-free solder. Option: Viega PEX tubing, cross-linked polyethylene, with Viega PEX polymer fittings (Blue PEX - Cold, Red PEX - Hot). Air chambers shall be installed at all fixture units, not less than 12" in length, terminated with cap. Install Hydro-pneumatic shock absorber on building side of cut off main water valve. Josam No. 75003. Furnish and install water pressure reducing valve with integral strainer - Watts No. USB or equal. Pressure setting to be 80 psi to 100 psi maximum. When required by Utility Company. Contractor shall install backflow preventer to meet requirements of Utility Co., Health Department and Federal requirements.

Testing: The water supply piping shall be tested before the plumbing fixtures are connected, by filling the entire system with potable water and applying hydrostatic pressure of 100 psi and allowing to stand for not less than four hours at this pressure.

Insulation: Insulate all hot and cold water piping in building and to frost line depth. Material: 1/2" thick Armatex U.L. labeled, or Fiberglass 25 with ASI/SSL foil/Vinyl jacket. Cover pipe and fittings.

SOIL, WASTE AND VENT PIPING:
Interior above slab: Schedule 40 PVC or ABS plastic with solvent welded joints.
Exterior and below slab: Schedule 40 PVC plastic with solvent welded joints.
Cleanouts: Exterior cleanouts shall be brought to the finished grade and installed in a 12" x 12" x 6" concrete pad level with finished grade, furnished by this contractor. Cleanout shall have recessed socket. If area is paved, cleanouts shall be flush with finished paving. Located at a maximum of 50' intervals and at all change in direction of soil and waste lines.
Escutcheons: Provide chrome plated escutcheons on all pipes passing through walls, floors, or ceilings of finished rooms. Escutcheons to be installed with set-screws.
TESTING: Drainage and vent piping shall be tested before the plumbing fixtures are installed by capping the openings and filling the entire system with water and allowing it to stand thus filled not less than one hour. Inspect water level to determine if piping is tight.

