

NEW CONSTRUCTION FOR

TAKE 5 OIL CHANGE

400 NE M STATE ROUTE 291 LEE'S SUMMIT, MISSOURI 64086

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GENERAL NOTES:

- THE GENERAL CONTRACTOR IS RESPONSIBLE TO SUPPLY ALL SUBCONTRACTORS WITH CONSTRUCTION DRAWINGS 1. AND SPECIFICATIONS NECESSARY TO BID AND/OR CONSTRUCT THIS PROJECT.
- ALL DIMENSIONS ON THE FLOOR PLANS, UNLESS OTHERWISE NOTED, ARE TAKEN FROM FACES OF STUDS OF 2. EXTERIOR WALLS AND INTERIOR WALLS.
- THE OWNER SHALL BE RESPONSIBLE FOR NOTIFYING THE GENERAL CONTRACTOR OF ANY ADDITIONAL ITEMS TO 3. BE INSTALLED THAT ARE NOT SHOWN ON THE DRAWINGS.
- ANY PENETRATIONS OF, OR MODIFICATIONS TO CONCRETE MUST BE COORDINATED WITH ARCHITECT PRIOR TO 4 CONSTRUCTION.
- IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO INSURE THE SAFETY OF THE PUBLIC AND/OR WORK PERSONS ON THE JOB AND TO PREVENT ACCIDENTS OR INJURY TO ANY PERSON ON, ABOUT OR ADJACENT TO THE PREMISES, THE CONTRACTOR SHALL COMPLY WITH ALL LAWS. ORDINANCES, CODES, RULES AND REGULATIONS RELATIVE TO SAFETY AND THE PREVENTION OF ACCIDENTS
- WHETHER OR NOT SPECIFICALLY INDICATED ON THE DRAWINGS, ALL CONTRACTORS SHALL BE RESPONSIBLE FOR 6. REMOVING OR DEMOLISHING EXISTING CONSTRUCTION (INCLUDING UTILITIES) WHICH WILL INTERFERE WITH NEW WORK.
- 7. PRIOR TO THE SHUT-DOWN OR TYING INTO ANY UTILITY, APPROVAL SHALL BE OBTAINED FROM THE OWNER'S REPRESENTATIVE.
- COORDINATE WITH OWNER'S REPRESENTATIVE, LOCATION OF CONTRACTORS' EQUIPMENT AND MATERIAL STORAGE. ALL MECHANICAL WORK SHALL BE PERFORMED BY A LICENSED MECHANICAL CONTRACTOR AND IN ACCORDANCE 9.
- WITH ALL APPLICABLE CODES AND STANDARDS.
- ALL PLUMBING WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR ALL IN ACCORDANCE WITH 10. ALL APPLICABLE CODES AND STANDARDS.
- 11. ALL ELECTRICAL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR AND IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
- 12. ALL STRUCTURAL FRAMING WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.

	SYME	BOLS	LEGEND:			
XXX	ROOM NUMBER		DETAIL TAG	X	KEY NOTE	
XXX	DOOR NUMBER			P-X	PARTITION TAG	н
$\langle \mathbf{X} \rangle$	WINDOW TAG	X	PHOTO TAG			••
XX	COLUMN GRID TAG	X	KEY NOTE			
X:AX.XX	ELEVATION TAG	X	KEY NOTE			
X:AX.XX	SECTION TAG	×	KEY NOTE			

OCCUPANCY CLASSIFICATION: S1 REPAR GARAGE IBC: NFPA: TYPE OF CONSTRUCTION: NUMBER OF STORIES: BUILDING HEIGHT: TOTAL BUILDING AREA: OCCUPANCY LOAD:

PROJECT DESCRIPTION:

This project involves:

New site work and a wood framed building for a Take 5 Oil change center. Proper adherence to all state and local codes and provisions shall be followed.

CIVIL

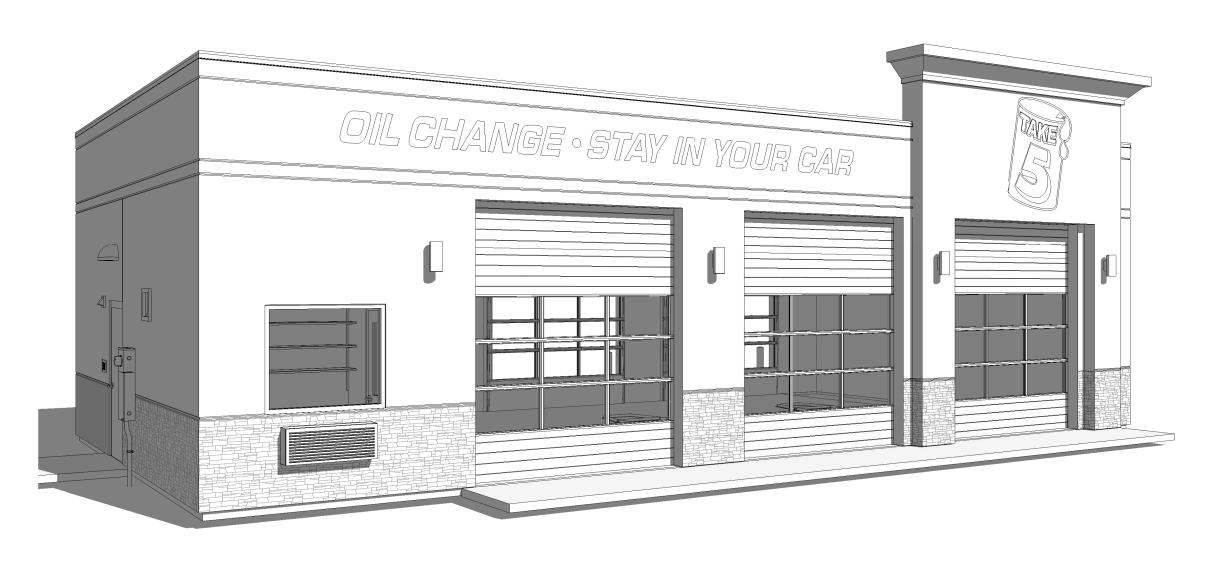
High Tide Consultants, LLC

434 Columbia Street - Suite 200A Covington, LA 70433 P 985.446.1110 Ext: 1005 hightidela.com Contact: Richard "Ricky" Galloway, P.E. ricky@hightidela.com C 985.227.5462

MECHANICAL (3) M2.00 Mechanical Schedules and Details MP1.00 Mechanical/ Plumbing Specifications

PLUMBING (2) P1.00Plumbing PlanP2.00Plumbing Schedules and Details

SIGNAGE (1) Colored Signage Package



(2) Take 5 Perspective

PROJECT INFORMATION:

VB 1 STORY 20'-0" 1,415 S.F. 14 (S-1 = 100 sq ft/ person)

APPLICABLE BUILDING CODES AND STANDARDS:

- International Building Code 2018 Edition •
- International Mechanical Code 2018 Edition
- International Plumbing Code 2018 Edition
- International Fuel Gas Code 2018 Edition
- International Fire Code 2018 Edition
- Americans with Disabilities Act Accessibility Guidelines (ADA-AG September 1994)
- ICC/ANSI A117.1-2009 as amended and adopted by the City of Lee's Summit

PROFESSIONAL OF RECORD

Fusion Architects

3488 Brentwood Drive, Suite 101 Baton Rouge, LA 70809 P 225.766.4848 F 225.766.4724

Contact: Matt Daigrepont, AIA matt@fusionbcb.com

DEVELOPER / OWNER

Driven Assets LLC

6335 Markita Avenue TX, Dallas 75214

Contact: Hank Hopkins hank@drivenassets.com

CONSULTANTS:

LANDSCAPE

McKnight Landscape Architects

688 S. Foster Drive, Suite 101 Baton Rouge, LA 70806 P 225.924.1265 F 225.709.0748 Mcknight-LA.com Contact: Wesley Wilkerson PLA, ASLA wes@mcknight-la.com

STRUCTURAL

Salas O'Brien

541 Julia St., Suite 200 New Orleans, LA, 70124 P 225.266.0619 salasobrien.com Contact: Brad Carville, PE brad.carville@salasobrien.com

MECHANICAL **ELECTRICAL & PLUMBING**

Thompson Luke & Assoc. LLC

BRICK

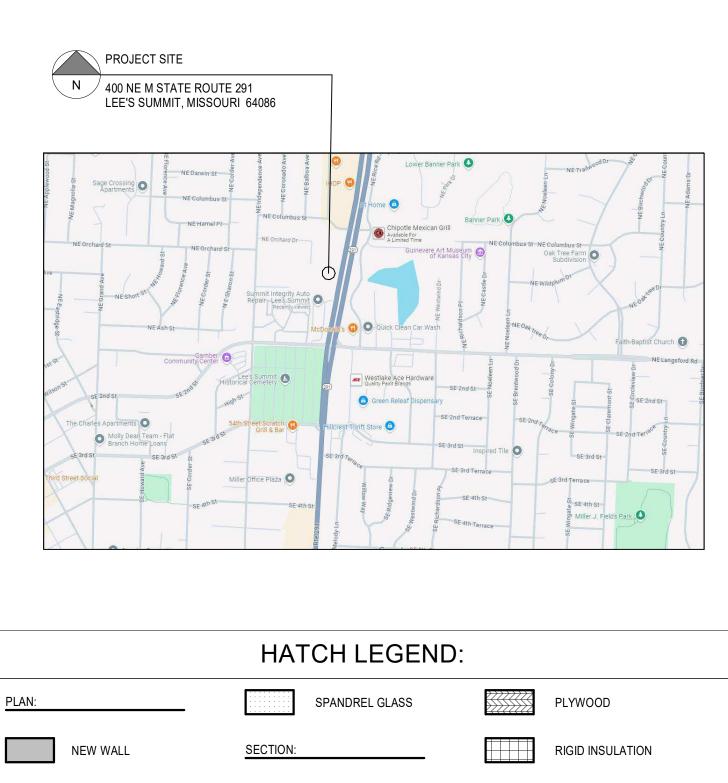
GYP. BD./STUCCO

CLEAR GLASS

ELEVATION:

10705 Rieger Road - Suite 101 Baton Rouge, LA 70809 P 225.293.9474 www.tlaeng.com Contact: Kyle Baudoin, E.I. Kyle@tlaeng.com

VICINITY MAP:



 \boxtimes

STEEL

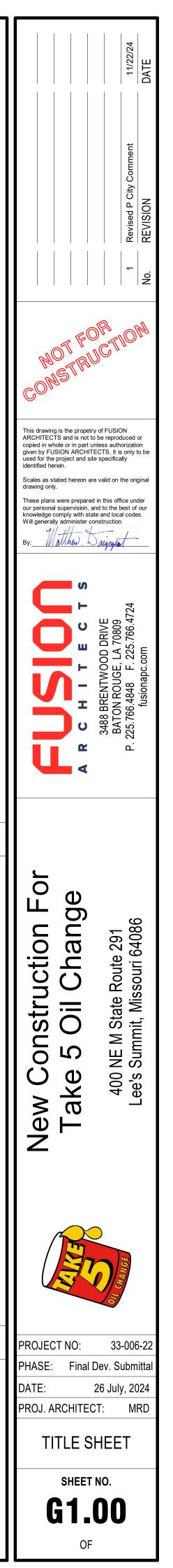
BRICK

C.M.U.

CONCRETE

GYP. BD./ M.D.F./ SAND

EARTH



Take 5 Oil Change Specifications:

SHOP DRAWINGS

Review of Shop Drawings by the Architect will be for general compliance with Contract Documents. No responsibility will be assumed by the Architect for correctness of dimensions, quantities, or details. The contractor shall check and verify all field measurements. The contractor and each separate contractor shall submit with such promptness as to cause no delay in their own work or in that of any other contract, Shop or Setting Drawings and schedules required for the work of the various trades. The Architect's review of such Drawings or schedules shall not relieve the Contractor from responsibility for deviations from Drawings or Specifications, unless he has in writing called the Architect's attention to such deviations at the time of submission, and secured Architect's written approval nor shall it relieve him from responsibility for errors in Shop Drawings or schedules.

CONTRACTOR'S RESPONSIBILITIES

Review Shop Drawings, project data and samples prior to submission.

- Field measurements

Coordinate each submittal with requirements of work and of Contract Documents. Contractor's responsibility for deviations his Consulting Engineer's stamp and initials indicating review.

PROJECT/SITE CONDITIONS

- Site Information: Data on indicated subsurface conditions are not intended as representations or warranties of accuracy or continuity between soil borings. It is expressly understood that Owner will not be responsible for interpretations or conclusions drawn therefrom by Contractor. Data is made available for convenience of Contractor. Geotechnical Report is available from the owner for this project.
- Additional test borings and other exploratory operations may be made by Contractor at no cost to Owner. Existing Utilities: Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate
- means of protection during earthwork operations. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult utility owner
- immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner. Protection of Persons and Property: Barricade open excavations occurring as part of this work and post with warning
- liahts. Operate warning lights as recommended by authorities having jurisdiction.
- Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral G
- movement, undermining, washout and other hazards created by earthwork operations. All utilities shall be located and known before the start of construction. The contractor shall hold a meeting with all sub н contractors and understand where all electrical lines are located (overhead and underground). No work shall be done in proximity to electrical powerlines without written consent from the local utility company and city. All governing codes shall be understood for work around utility lines.

TERMITE CONTROL

Provide soil treatment for termite control. Provide a written warranty period for 5 years against subterranean termites and Formosan termites. Soil treatment shall be with:

Chloropyrifos ("Dursban TC"); 1.0 percent in water emulsion. Permathrin ("Dragnet"); 0.5 percent in water emulsion.

Under slab-on-grade, treat soil before concrete slabs are placed, including all sidewalks, drives, and paving within 30 feet of the building, using the following rates of application:

Apply 4 gallons of chemical solution per 10 lin. ft. to soil in critical areas under slab, including entire inside perimeter inside of foundation walls, along both sides of interior partition walls, around plumbing pipes and electric conduit penetrating slab, and around interior column footers.

Apply one gallon of chemical solution per 10 sq. ft. as an overall treatment under slab and attached slab areas where fill is soil or unwashed gravel. Apply 1-1/2 gallons of chemical solution to areas where fill is washed gravel or other coarse absorbent material.

CULTURED STONE

"Cultured Stone" by Boral Brick. Provide all samples to owner for approval. See building elevations for wainscot. "Limestone – Bucks County" version shown on project. Verify with owner and provide samples of all colors.

- Compressive Strength: Not less than 1800 psi (12.4 MPa) average for 5 specimens and not less than 2100 psi
- (14.4 MPa) for individual specimen when tested in accordance with ASTM C 39 & ASTM C 192. Bond Between Manufactured Masonry Unit, Mortar and Backing: Not less than 50 psi (345 kPa) when tested in
- accordance with ASTM C 482 using Type S mortar.
- Thermal Resistance: R-value of not less than 0.355 per inch (25.4 mm) of thickness when tested in accordance with ASTM C 177. Freeze/Thaw: No disintegration and less than 3 percent weight loss when tested in accordance with ASTM C 67.
- Water Absorption: Tested in accordance with UBC 15-5 9-22% depending on density value. Unit Weight: Not more than 15 psf (73 kg/m2) saturated.
- Surface Burning Characteristics: Not more than the following when tested in accordance with UL 723: Flamespread: 25. а.
 - Smoke Development: 450. UV Stable - Mineral oxide pigments.
- Provide matching corners to fit.
- Strike all joints flushed, standard ¹/₂" tooled. 10.
- Seal all joints at wall openings and penetrations with a sealant approved for use with masonry products. 11 12. Flashing: coordinate with flashing used on job.

WOOD AND ROUGH CARPENTRY

Lumber conforming to National Forest Products Association "National Design Specification for Stress-grade Lumber and It's Fastenings", 1971. Grades conforming to lumber manufacturing association Stress Grading Rules and Graded and Trade

Softwood plywood shall be identified with the APA grade-tradesmark of the American Plywood Association and meet the

marked by producing mill and grading association.

MATERIALS

Roof Blocking: #2SYP – Borate treated Members in contact with moisture or concrete - #2SYP borate treated

Roof Decking: 5/8" OSB plywood fastened with 8d ring shank nails @ 6" o.c. on edges & intermediate supports, 4" o.c. at any gables. Follow all guidelines and engineering requirements by the roof truss manufacturer, which shall supersede these specifications.

Wood studs: 2x6 No. 2 southern yellow pine with no finger joints.

Wall sheathing:

Exterior side: 7/16" o.s.b. wall sheathing full blocked, 8d common nails o.c. edge, 12" o.c. field. Interior side: ½" cdx plywood with three coats of paint. (B/C grade). Fasten at 12" o.c. field.

requirements of Product Standard PS 1-74 for Softwood Plywood/Construction and Industrial.

Sole plate: 2x6 borate treated, anchored with 5/8" x 14" anchor bolts (galvanized). 3"x3"X1/4" steel washer @ 32" o.c. & 8" from corners. All components to be galvanized.

Garage door openings: Use garage door portal frames by Simpson Strong Tie, each opening shall have Simpson Strong Tie STHD14 with LSTA21 straps at headers. Provide review by Simpson Strong Tie system engineering.

ACCESSORIES

Nails, spikes and staples: Galvanized for exterior locations, high humidity locations and treated wood; plain finish for other interior locations.

Other Framing Members: Install miscellaneous blocking, furring, nailing strips and framing. Install members true, plumb and level. Secure in place. Space miscellaneous framing and furring at 16" o.c., unless shown otherwise. Perform all work to the highest standard of the carpentry trade. All work shall be coordinated with other trades to provide the proper integration and fits between crafts. Provide proper machinery and tools of the trade so that fashioning of lumber and fits between materials shall be of the highest standards of the trade.

INSULATION

Separate all conditioned spaced from non-conditioned spaces with insulation. Use full cavity insulation in all locations shown in plans. Comply with fire-resistance, flammability and insurance ratings indicated, and comply with regulations as interpreted by governing authorities. Provide paper faced insulation by one of the following manufacturer's and use the thickness to match studs widths as shown in plans: Owen's corning, Knauf, and Johns Manville. Poly Iso Board over roofing – see modified bitumen specification.

UNDER SLAB VAPOR BARRIER

installation recommendations.

FLASHING AND SHEET METAL

Parapet and Copings: 24 ga pre coated galvalume metal with continuous 30 mil nevestral under parapet. Minimum lengths of parapets shall be 8 feet. Seams are to be standing lock and flat lock type, except corners. Fabricate corners minimum 18" x 18", mitered, soldered, or welded, and sealed as one piece. Hem exposed edges of flashing on udnersides by ½". Follow all guidelines of SMACNA for sheet metal detailing. Provide samples from the manufacturer's full range of colors. Sheet metal by Berridge, All STO flashing and masonry shall have 16 oz. copper, separate from other metals with nevestral. All openings shall be coated with Tyvek's fluid applied water barrier system.

SBS ROOFING

shield over osb plywood and turn up full length on parapets.

Insulation: Place rigid polyisocyanurate foam board with an aged R value of 5.6 per inch. Provide a minimum of 3 inches with ASTM E84 for flame spread. Maintain positive drainage throughout. Provide a cover board by the SBS manufacturer, not less than 1/2".

Base sheet: Modified Sopra G 28 lb glass base sheet

Base Ply: elastophene sanded

Top Ply: Elastophene Granules FR

Base Ply flashing: Sopralene Flam 180

Asphalt Primer: Elastocol 500

Meet all wind uplift requirements to meet local and state codes in the area. Clean roof of all debris and have inspections approved by manufacturer's representatives for acceptance and warranty.

EIFS System

The system shall be based upon Drvvit's Outsulation MD System and finish system. All expansion joints shall be no more than 20' o.c. and locations determined in the shop drawing phase. Prior to applying Dryvit Outsulation Plus MD System, wall opening shall be treated with Dryvit Aquaflash system, baskstop flash & fill and flashing tape. The outsulation shall be bheld back from adjoining materials around openings and penetrations such as windows, doors, and mechanical equipment by a minimum of ¾" for sealant application. The dryvit system shall be a minimum of 8" above finished grade.

correct vapor retarder system and follow Dryvit Publication DS153. All flashing, screeds, and joint material shall be zinc coated.

Base coat: Primus DM or Genesis DM

Reinforcing mesh: glass fiber fabric treated for compatibility with other system materials. Mesh must meet ASTM E 2098.

Finish: smooth finish with Hydrophobic (HDP): 100% acrylic coating with integral color and texture: "Sandblast HDP" product. Provide coating to prevent algae growth and water staining. All EPS shapes and boards shall be coated on site utilizing the same materials. The insulation board shall part of the Dryvit system and manufactured by Dryvit. The EPS shall be separated from the building by a minimum 15-minute thermal barrier. Installation must be by a qualified Dryvit installer with a minimum of 5 years of experience with the product. Dryvit systems shall provide a written moisture drainage and limited material warranty against defective material before substantial completion. Follow all installation instructions provided by the manufacturer. Equal qualified manufacturer: STO Systems

STEEL DOORS AND FRAMES

Doors and frames by Ceco Doors, Steelcraft, or Amweld

Interior doors: cold rolled18 ga seamless construction – G-90 Galvanized with primer coat.

Exterior doors: cold rolled 16 ga seamless construction – G-90 Galvanized with primer coat.

Include door silencers, reinforcing in frames, jamb anchors, and stainless steel hinges. Hinge & pivot reinforcements - 7 gauge, 1.25"X10" minimum. Reinforcements for flush bolts, closers, surface mounted hardware, hold open arms, surface panics devices all 12 guage. Provide door sweeps and weatherstripping at all exterior doors. Provide drip edge at head of exterior door frames. All door hardware by Assa Abloy. Provide keying cores as required by owner with a master and grand master. See plans for garage doors by Clopay.

PAINTING

All metal primer: Kem kromik Universal metal primer

All finish coat on metal: Sherwin Williams industrial enamel B-54 series (2 coats).

Concrete sealer: H&C concrete sealer

INTERIOR SIGNAGE

(Designed based on Best HC300 ADA system) Size: 6" x 8" Pictogram 5/8" copy raised 1/32", 3/8" wide raised border and ½" radius corners, 1/8" thick plate, screw mounting, color selected from standard selections. Graphic ADA and sex symbol

Raised Lettering for each room (follow room names in plans), include braille lettering

TOILET AND BATH ACCESSORIES

Insert manufacturer's product designation and manufacturer's name for each product that complies with requirements. Retain one of five subparagraphs below or insert requirements to suit project. As shown in plans. Grab Bars: 36"x42" stainless steel, 6806 Bobrick or model #812 bradley. Provide blocking in wall for grab bar mounting. **Mirror Unit:** one per lavatory: 18"x36" Bradly 780 series, stainless steel angle framed mirror. **Toilet Paper Dispenser:** Stainless steel Bobrick model # 2888 Soap dispensers and waste dispensers by owner.

MISCELLANEOUS ACCESSORIES

Three wall hung fire extinguishers See plans for sign package

Verify:

- Field construction criteria
- Catalog numbers and similar data

in submittals from requirements of Contract Documents is not relieved by Architect's review of submittals, unless Architect gives written acceptance of specific deviations. Notify Architect in writing at time of submission of deviations in submittals from requirements of Contract Documents. Do not begin work which requires submittals, until submittals are received with Architect's or

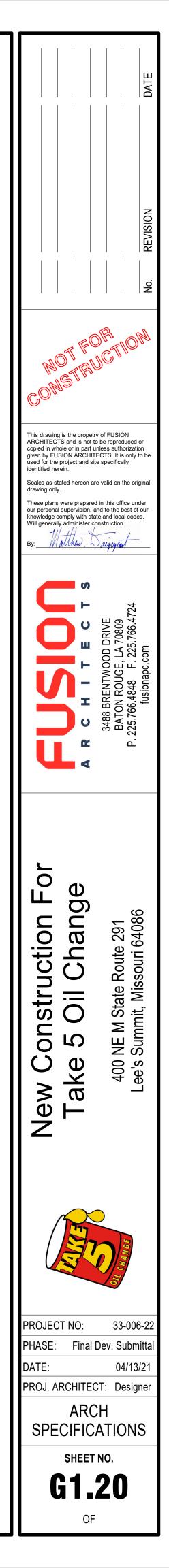
Vapor Barrier must be WVTR less than .008 as tested by ASTM E96. ASTM E 1745 Class A (Plastics), .012 perms or lower. Approved Products: Stego (15 mil), WR Meadows (15 mil) At service pits (depressions in slab more than 12": use bentonite geotextile waterproofing by Volclay, Miraclay, or paraseal. All barriers shall be taped and seams overlapped by the manufacturers

System: Soprema (basis of design) or Johns Manville complete system with 20 ndl warranty.

Base Layer: 5/8" osb plwood with ring shank nail attachment, see wood and rough carpentry section. Place 40 mil ice and water

Vapor retarders: Use Tyvek's system applicable for installation with Dryvit. The contractor shall receive written approval for the

Interior finish coats: Sherwin Williams ProMar 200 interior latex, semi gloss



Structural Spec Cast In Place Concrete:

SECTION 03 33 00 - CAST-IN-PLACE CONCRETE

This Section uses the term "Architect." Change this term to match that used to identify the design professional as defined in the General and Supplementary Conditions. Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have

changed. GENERAL PART 1 -

1.1 RELATED DOCUMENTS Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following: Grade Beams

Slabs-On-Grade 1.3 DEFINITIONS

Definition in paragraph below refers to those materials that make up the cementitious component of the water-cementitious materials

Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements. 1.4 SUBMITTALS

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

Indicate amounts of mixing water to be withheld for later addition at Project site. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.

Delete first paragraph and subparagraph below if not required. D. Formwork Shop Drawings: Prepared by or under the supervision of a gualified professional engineer detailing fabrication.

assembly, and support of formwork.

Delete subparagraph below if no shoring and reshoring are required. Retain paragraph below if procedures for welder certification are retained in "Quality Assurance" Article.

Coordinate paragraph below with qualification requirements in Division 1 Section "Quality Requirements" and as supplemented in "Quality Assurance" Article. Qualification Data: For testing agency.

Delete paragraph and subparagraph below if material test reports are not required. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:

Retain option in subparagraph below if retaining service record data with "Normal-Weight Aggregates" Paragraph in Part 2 "Concrete

Materials" Article. Addregate

Delete paragraph and subparagraphs below if material certificates are not required. G. Material Certificates: For each of the following, signed by manufacturers:

Edit list to suit Project.

- Cementitious materials.
- Admixtures.
- Form materials and form-release agents. Steel reinforcement and accessories.
- Waterstops.
- Curing compounds
- Floor and slab treatments.
- Bonding agents.
- Adhesives. Vapor retarders.
- 11 Semirigid joint fille
- 12. Joint-filler strips.

13. Repair materials Retain paragraph below if Contractor engages testing agency for measuring floor surface flatness and levelness. Retain paragraph below if Contractor is responsible for field quality-control testing and inspections other than special inspections. Field quality-control test and inspection reports.

Delete paragraph below if no preinstallation conference.

1.5 QUALITY ASSURANCE

Delete first paragraph below if not required. See Division 1 Section "Quality Requirements" for general installer qualifications. Verify availability of qualified personnel with a local ACI chapter or concrete contractors. These desirable programs may have limited grass-roots penetration

Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

Delete subparagraph below if not required. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities." Retain paragraph below if Contractor or manufacturer selects testing agency for concrete mixture design, material test reports, or field quality control. Retain option if field quality-control testing agency employed by Contractor must be approved by authorities having jurisdiction

Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated, as documented according to ASTM E 548. Retain subparagraph below, required by ACI 301 and ASTM C 31/C 31M, if emphasis is needed. ASTM C 1077 notes relevant field or laboratory technician certification by ACI, NRMCA, and PCA, or the National Institute for Certification in Engineering Technologies may demonstrate evidence of competence.

Retain subparagraph below if requiring minimum qualifications for laboratory personnel performing testing and for laboratory supervisor D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's

plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer. Delete first paragraph below if no welding. Retain "Welding certificates" Paragraph in "Submittals" Article if retaining below. AWS states that welding qualifications remain in effect indefinitely unless welding personnel have not welded for more than six months or there is a specific reason to question their ability.

ACI Publications: Comply with the following unless modified by requirements in the Contract Documents: Retain second option in first subparagraph below if ACI 301, Section 7, for structural lightweight concrete is applicable.

ACI 301, "Specification for Structural Concrete," Sections 1 through 5.

ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

F. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

Delete paragraph and subparagraphs below if not required. If retaining, indicate location, concrete type, and other details of mockups on Drawings or by inserts. Revise wording if only one mockup is required or if mockup of concrete in another location in a building is required.

Revise size of panel in subparagraph below if required. Panel for slab-on-grade may need to be enlarged if powered riding trowels will be used and if it could be a portion of the floor slab.

1.6 DELIVERY, STORAGE, AND HANDLING

Retain option in first paragraph below if zinc- or epoxy-coated steel reinforcement is required.

Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage. Waterstops: Store waterstops under cover to protect from moisture, sunlight, dirt, oil, and other contaminants.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

See Editing Instruction No. 1 in the Evaluations for cautions about naming manufacturers and products.

Edit this Article with other Part 2 articles in which manufacturers and products, or manufacturers only, are named. See Division 1 Section "Product Requirements" for an explanation of the terms "Available Products," "Products," "Available Manufacturers," and "Manufacturers" and the effect these terms have on "Comparable Product" and "Product Substitution" requirements. A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

Products: Subject to compliance with requirements, provide one of the products specified.

Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified. 2.2 FORM-FACING MATERIALS

Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints. Plywood, metal, or other approved panel materials.

Retain subparagraph above if generic specification is enough; revise if necessary. Retain subparagraph below if plywood selection is required. If Finnish overlaid birch plywood is required, add below and delete DOC PS 1 and other four choices of plywood. B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

Forms in first paragraph below leave joint impressions in spiral or straight lines. Limit types of forms if a particular pattern of joint is required. Different release treatments of forms also affect appearance of as-cast surfaces. Retain void forms, sometimes called "carton forms," in paragraph below if required for expansive soils or block outs.

C. Void Forms: Biodegradable paper surface, treated for moisture resistance, structurally sufficient to support weight of plastic concrete and other superimposed loads. Delete first paragraph below if chamfering is not permitted.

- Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch (19 by 19 mm), minimum.
- Rustication Strips: Wood, metal, PVC, or rubber strips, kerfed for ease of form removal.
- Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

Formulate form-release agent with rust inhibitor for steel form-facing materials.

Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

Delete or revise three subparagraphs below to suit Project.

2.3 STEEL REINFORCEMENT Delete or revise this Article to suit steel reinforcement requirements.

Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

Retain paragraph below for reinforcement that is welded or if added ductility is sought. Retain paragraph below for galvanized steel reinforcement. Select type of reinforcement from first set of options and zinc coating

class from second set. Class I has at least 50 percent more zinc weight than Class II. B. Plain-Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from as-drawn steel wire into flat sheets. Water-Reducing Admixture: ASTM C 494/C 494M, Type A. Retarding Admixture: ASTM C 494/C 494M, Type B. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M. Type F. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.

conventionally reinforced concrete exposed to view as a final product. Shrinkage Inhibiting Admixture (SRA): SRA shall be Master LIFE SRA 20 manufactured by BASF Corporation or approved equal. Dosage rate shall bein accordance with the manufacturer's recommendations for the designated usage with a maximum shrinkage allowance of 0.025% but not less than 1.5gal/yd.

Retain paragraph and subparagraphs below if set-accelerating corrosion inhibitors are required. Set-accelerating products are usually calcium nitrite-based admixtures and comply with ASTM C 494/C 494M, Type C. tain paragraph and subparagraphs below if corrosion inhibitors that do not affect concrete setting time are required. Retain paragraph and subparagraphs below for integrally colored concrete. Add other admixtures, such as integral waterproofing admixtures, if required. 2.7 WATERSTOPS

If subparagraphs titled "Available Products," "Products," "Available Manufacturers," or "Manufacturers" are retained in this Article, coordinate with Part 2 "Manufacturers" Article. Retain "Available" for nonproprietary and delete for semiproprietary specifications. Retain one of three paragraphs and associated subparagraphs below if flexible waterstops produced from rubber, thermoplastic

elastomer rubber, or PVC are required. A. Self-Expanding Rubber Strip Waterstops: Manufactured rectangular or trapezoidal strip, bentonite-free hydrophilic polymer modified chloroprene rubber, for adhesive bonding to concrete, 3/8 by 3/4 inch (10 by 19 mm). Products:

Deneef Construction Chemicals; Swellseal. Mitsubishi International Corporation; Adeka Ultra Seal. Progress Unlimited, Inc.; Superstop.

2.8 VAPOR RETARDERS

Products:

If subparagraphs titled "Available Products" or "Products" are retained in this Article, coordinate with Part 2 "Manufacturers" Article. Retain "Available" for nonproprietary and delete for semiproprietary specifications. and mixing requirements from ASTM C 94/C 94M to Project-site mixing. Retain one of three paragraphs and associated subparagraphs below if plastic water vapor retarders are required. ASTM E 1745 PART 3 - EXECUTION sets three performance classes for plastic water vapor retarders: Classes A, B, and C. The water-vapor permeance value is the 3.1 FORMWORK same for each class. Class A sets the highest tensile-strength and puncture-resistance requirements, while Class C sets the lowest. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic Thickness is not governed by ASTM E 1745. loads, and construction loads that might be applied, until structure can support such loads. Form vertical faces of all footings, stem walls and pilasters.

Plastic Vapor Retarder: URefer to architectural specifications. Retain option in paragraph below if generic polyethylene is permitted. Minimum thickness recommended by ACI 302.1R for polyethylene film used as a vapor retarder is 10 mils (0.25 mm). Delete two paragraphs below if not using a granular course over vapor retarder. Products are based on ACI 302.1R descriptions of granular materials.

Retain paragraph below for a "crusher-run" course at least 4 inches (100 mm) thick. 2.9 CURING MATERIALS

If subparagraphs titled "Available Products" or "Products" are retained in this Article, coordinate with Part 2 "Manufacturers" Article. Retain "Available" for nonproprietary and delete for semiproprietary specifications. Evaporation retarder in paragraph below temporarily reduces moisture loss from concrete surfaces awaiting finishing in hot, dry, and windy conditions. Evaporation retarders are not curing compounds. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

a.	Axim Concrete Technologies;
b.	Burke by Edoco; BurkeFilm.
C.	ChemMasters; Spray-Film.
d.	Conspec Marketing & Manufac
e.	Dayton Superior Corporation; §
f.	Euclid Chemical Company (Th
g.	Kaufman Products, Inc.; Vapor
h.	Lambert Corporation; Lambco
i.	L&M Construction Chemicals,
j.	MBT Protection and Repair, Di
k.	Meadows, W. R., Inc.; Sealtigh
Ι.	Metalcrete Industries; Waterho
m.	Nox-Crete Products Group, Kir
n.	Sika Corporation, Inc.; SikaFiln
о.	Symons Corporation, a Dayton
р.	Unitex; Pro-Film.
q.	US Mix Products Company; US
r.	Vexcon Chemicals, Inc.; Certi-

Select curing aids and materials from remaining paragraphs. Water: Potable.

Retain paragraph and subparagraphs below if a dissipating-type, waterborne, membrane-forming curing compound is required. Although the EPA mandates maximum VOC emissions of 350 g/L for curing compounds, verify VOC emission limits of authorities having jurisdiction. If slow breakdown of curing membrane could interfere with bonding of floor coverings, retain removal subparagraph in "Concrete Protecting and Curing" Article in Part 3. Retain paragraph and subparagraphs below if a nondissipating-type, waterborne, membrane-forming curing compound with minimal solids content is required. Although the EPA mandates maximum VOC emissions of 350 g/L for curing compounds, verify VOC emission limits of authorities having jurisdiction. Retain option if applicable C. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, nondissipating, certified by curing compound manufacturer to not interfere with bonding of floor coverings. Verify with manufacturer that selected products have been tested against interference with bonding of floor covering.

Product	S:
a.	Anti-Hydro International, Inc.; AH Clear Cure
b.	Burke by Edoco; Spartan Cote WB II.
С.	ChemMasters; Safe-Cure & Seal 20.
d.	Conspec Marketing & Manufacturing Co., In
e.	Dayton Superior Corporation; Safe Cure and
f.	Euclid Chemical Company (The); Aqua Cure
g.	Kaufman Products, Inc.; Cure & Seal 309 Er
h.	Lambert Corporation; Glazecote Sealer-20.
i.	L&M Construction Chemicals, Inc.; Dress &
j.	Meadows, W. R., Inc.; Vocomp-20.
k.	Metalcrete Industries; Metcure.
Ι.	Nox-Crete Products Group, Kinsman Corpo
m.	Symons Corporation, a Dayton Superior Con
n.	Tamms Industries, Inc.; Clearseal WB 150.
0.	Unitex; Hydro Seal.
р.	US Mix Products Company; US Spec Hydra
q.	Vexcon Chemicals, Inc.; Starseal 309.

2.4 REINFORCEMENT ACCESSORIES

and free of burrs.

protected steel wire or CRSI Class 2 stainless-steel bar supports. Add mechanical splices and connections for steel reinforcement here if required. 2.5 CONCRETE MATERIALS A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project: Select type and color of portland cement from options in subparagraph below.

1. Portland Cement: ASTM C 150, Type I/II, gray. Supplement with the following at contractor's discretion: with waterproofing or roofing membrane flashings. Select supplementary cementing materials from two subparagraphs below if permitted. Ready-mix concrete manufacturer blends Reglets: Fabricate reglets of not less than 0.0217-inch- (0.55-mm-) thick, galvanized steel sheet. Temporarily fill or cover these materials with portland cement. Fly ash, slag, or pozzolanic materials may slow rate of concrete strengthening and affect color face opening of reglet to prevent intrusion of concrete or debris. uniformity. Availability of Class F fly ash predominates over Class C fly ash. Dovetail Anchor Slots: Hot-dip galvanized steel sheet, not less than 0.0336 inch (0.85 mm) thick, with bent tab anchors. Fly Ash: ASTM C 618, Class F.

Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120. Retain subparagraph below if factory-blended hydraulic cement is permitted; verify availability of options before specifying. Fly ash, slag, or pozzolanic materials in the nonportland cement part of blended hydraulic cement may slow rate of concrete strengthening and affect color uniformity

Silica fume below is most often used in high-strength concrete and in special applications such as bridge decks to enhance durability laboratory trial mixtures. by lowering permeability of concrete. ACI 301 identifies silica fume as a cementitious material. Limit the water-cementitious materials (w/cm) ratio in concrete for floors to receive moisture-sensitive flooring to no higher Select class of aggregate from options in paragraph below or revise to suit Project. ASTM C 33 limits deleterious substances in than 0.45. coarse aggregate depending on climate severity and in-service location of concrete. Classes in first set of options are ASTM C 33 Retain paragraph and subparagraphs below if limiting percentage of cementitious material that can replace portland cement. Neither default classes for concrete exposed to weather for Severe, Moderate, and Negligible weathering regions, respectively. Revise first ACI 301 nor ACI 318 (ACI 318M) limit amount of cementitious material that can replace portland cement unless concrete is exposed two options to Class 4S or 4M if concrete will be exposed to frequent wetting. Retain last option if damage caused by concrete to deicing chemicals. Identify parts of building or structure affected by these limits unless extending them to all concrete. expansion from alkali silica or alkali carbonate reactions is anticipated. Cementitious Materials: Percentages, by weight, of cementitious materials other than portland cement in concrete shall be Normal-Weight Aggregates: ASTM C 33, Class 3M coarse aggregate or better, graded. Provide aggregates from a single determined by the concrete supplier to maximize the amount of recycled material in the concrete while controlling workability, setting time, rate of strength gain, and other properties to facilitate construction operations. source Percentages in subparagraphs below repeat ACI 301 limits for concrete exposed to deicing chemicals. Revise to suit Project. Select coarse-aggregate size from three options in subparagraph below; add gradation requirements if preferred. Aggregate size

limits relate to spacing of steel reinforcement, depth of slab, or thickness of concrete member. Maximum Coarse-Aggregate Size: Per ACI 318 limitations related to spacing of steel reinforcement, depth of slab or thickness of concrete member. Retain subparagraph below if optional restriction for fine aggregate in ASTM C 33 is required.

C. Lightweight Aggregate: ASTM C 330, 1/2-inch nominal maximum aggregate size.

D.

Air-Entraining Admixture: ASTM C 260.

containing calcium chloride.

Water: ASTM C 94/C 94M and potable. 2.6 ADMIXTURES

Add other products for dowels or dowel sleeves if required. These include circular and rectangular plastic dowel sleeves, square dowels, and plastic-surfaced or reinforced-paper-covered dowels. Joint Dowel Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), plain-steel bars, cut bars true to length with ends square

Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:

Delete or revise three subparagraphs below to suit Project. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-

Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

Retain first paragraph below if using lightweight aggregate for structural lightweight concrete. Select size limit from four options

If subparagraphs titled "Available Products," "Products," "Available Manufacturers," or "Manufacturers" are retained in this Article, coordinate with Part 2 "Manufacturers" Article. Retain "Available" for nonproprietary and delete for semiproprietary specifications.

Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures

Select one or more chemical admixtures from six subparagraphs below.

Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II. Micro Fiber Reinforcement required at all

Cimfilm.

cturing Co., Inc., a Dayton Superior Company; Aquafilm. Sure Film

he); Eucobar. or Aid.

Skin. Inc.; E-Con.

Div. of ChemRex; Confilm. ht Evapre.

insman Corporation; Monofilm.

n Superior Company; Finishing Aid.

IS Spec Monofilm ER Vex EnvioAssist.

AH Clear Cure WB WB II.

eal 20. cturing Co., Inc., a Dayton Superior Company; Cure and Seal WB.

Safe Cure and Seal (J-18).

e); Aqua Cure VOX. & Seal 309 Emulsion.

te Sealer-20.

Inc.; Dress & Seal WB.

nsman Corporation; Cure & Seal 150E. Superior Company; Cure & Seal 18 Percent E.

S Spec Hydrasheen 15 percent

Retain paragraph and subparagraphs below if a nondissipating-type, waterborne, membrane-forming curing compound with a higher solids content is required. This product will partially seal the concrete. Although the EPA mandates maximum VOC emissions of 350 g/L for curing compounds, verify VOC emission limits of authorities having jurisdiction. Retain option if applicable. 2.10 RELATED MATERIALS Select one or all options in paragraph below. Joint-filler strips are used in floor isolation joints.

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or selfexpanding cork Select one of two options in paragraph below if semirigid joint filler is required to fill joints and support edges of trafficked contraction

and construction joints Semirigid Joint Filler: Two-component, semirigid, 100 percent solids, per ASTM D 2240. Bonding agent in first paragraph below may be used directly from container or as an admixture in cement or sand-cement slurries

and rubbing grout. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene. Retain first paragraph below if reglets are not specified elsewhere. Coordinate product requirements with Division 7 Section "Sheet Metal Flashing and Trim" or "Manufactured Roof Specialties" or in other Sections where reglets are supplied as auxiliary products

Temporarily fill or cover face opening of slots to prevent intrusion of concrete or debris. 2.11 CONCRETE MIXTURES, GENERAL Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field

test data, or both, according to ACI 301. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on

Cementitious materials other than portland cement shall make up a minimum of 15 percent of the total cementitious materials in any mix.

2. Limit cementitious materials other than portland cement to no more than 20 percent of the total cementitious materials in floor slabs to receive moisture-sensitive flooring.

Delete three subparagraphs below if no silica fume is permitted. Limits of silica fume alone or in combination with other cementitious materials below are based on ACI 301 and ACI 318 (ACI 318M). Retain appropriate option in first paragraph below for chloride limits. Identify portions of building with different limits if required.

Percentages below repeat ACI 301 limits, respectively, for prestressed (post-tensioned) concrete, reinforced concrete exposed to chloride, reinforced concrete that will not be dry or protected from moisture, and reinforced concrete that will be dry or protected from moisture. ACI 301 and ACI 318 (ACI 318M) express this percentage by weight of cement, not cementitious material. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent by weight of cement.

Admixtures: Use admixtures according to manufacturer's written instructions. Delete or revise four subparagraphs below to suit Project.

Use water-reducing, high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workabilitv 2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse

placement conditions. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.

Interior and Exterior structural concrete slabs exposed to view as a final product (including sealed concrete) shall 4. contain a Shrinkage Reducing Admixture (SRA) and microfiber reinforcement. Add locations and dosage of corrosion-inhibiting admixture to subparagraph below if required.

2.12 CONCRETE MIXTURES FOR BUILDING ELEMENTS This Article contains examples of building elements that often need different concrete mixtures. Revise, consolidate, or add other

building elements if more concrete mixtures are required. Refer to the Structural Notes on the Structural Drawings for Usage, Concrete 28-day Compressive Strength, Slump, Air Content, and Maximum Aggregate Size.

Select strength from five options in subparagraph below or revise to suit Project. Coordinate compressive strength with watercementitious materials ratio if concrete will be subject to special exposure conditions or sulfate exposure as identified in ACI 318 (ACI 318M).

Retain one or more of first three subparagraphs below. Percentages in options in first two subparagraphs are default air contents required by ACI 301 for severe exposure. Air Content: Insert water-cementitious materials ratio here if elevated slabs will be subject to special exposure conditions.

Delete subparagraph below if no steel-fiber reinforcement. Indicate location, on Drawings, of concrete using steel fiber. Revise application rate to suit Project. Delete paragraph and subparagraphs below if normal-weight structural concrete is used. Coordinate requirements with lightweight

aggregate supplier, structural engineer, and, if applicable, UL design limits. Retain first paragraph and subparagraphs below for concrete toppings or concrete underbeds on a base concrete slab or on structural precast concrete

2.13 FABRICATING REINFORCEMENT

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

2.14 CONCRETE MIXING Retain option in paragraph below if steel or synthetic fibers are required.

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

When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes. Delete paragraph and subparagraphs below if Project-site mixing is not permitted. ACI 301 applies measuring, batching,

reinforcement.

A. Place an

3.2 EMBEDDED ITEMS

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

Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows: D. Select surface classes, usually two or more, from two subparagraphs below. See discussion in "Formwork" Article in the

Evaluations. Coordinate with rough- and smooth-form finishes in "Finishing Formed Surfaces" Article. Class A, 1/8 inch (3.2 mm) for smooth-formed finished surfaces.

Class B, 1/4 inch (6 mm) for rough-formed finished surfaces.

Construct forms tight enough to prevent loss of concrete mortar. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates

where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.

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

requirements for installing embedded items, if any, that are part of the Work.

Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds. H. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

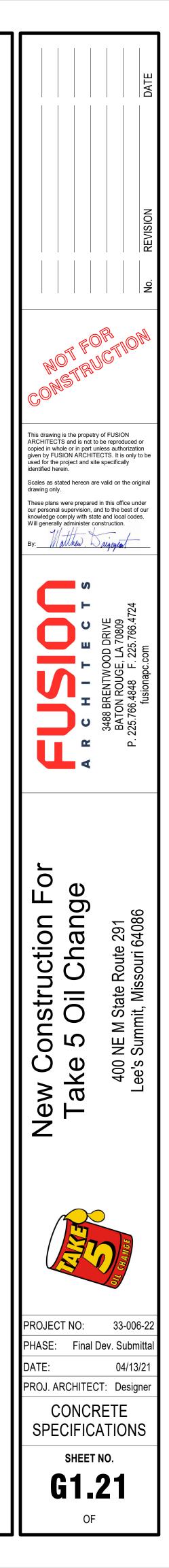
Retain one of two options in first paragraph below. ACI 301 requires chamfers, unless otherwise specified.

Chamfer exterior corners and edges of permanently exposed concrete. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work.

Determine sizes and locations from trades providing such items. K. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before

placing concrete. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing

Specify embedded items and anchorage devices for other work attached to or supported by cast-in-place concrete. Add specific



Structural Spec Rough Carpentry:

SECTION 06 10 00

ROUGH CARPENTRY This Section uses the term "Architect." Change this term to match that used to identify the design professional as defined in the General and Supplementary Conditions.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed. PART 1 -GENERAL 1.1 RELATED DOCUMENTS Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section. 1.2 SUMMARY This Section includes the following: Adjust list below to suit Project. Framing with dimension lumber. Retain first subparagraph below for timber incidental to conventional framing. For extensive timber framing, use Division 6 Section "Heavy Timber Construction." 2. Framing with engineered wood products. Delete first subparagraph below if bases and curbs are exclusively metal. Wood blocking and nailers. Wood furring. Wood sleepers. Plywood backing panels. Related Sections include the following: List below only products and construction that the reader might expect to find in this Section but are specified elsewhere. Borate treatment in Section referenced in first subparagraph below may be an acceptable substitute for borate-treated wood specified in this Section. Delete if borate treatment is specified in this Section. Division 2 Section "Termite Control" for site application of borate treatment to wood framing. Division 6 Section "Sheathing." Division 6 Section "Metal-Plate-Connected Wood Trusses." Division 6 Section "Wood Deck" 1.3 DEFINITIONS Delete first paragraph below if no exposed framing. Exposed Framing: Framing not concealed by other construction. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension. Delete first paragraph below if no timber Timber: Lumber of 5 inches nominal or greater in least dimension. Delete paragraph and list below if lumber grading agencies are not referenced with products. Lumber grading agencies, and the abbreviations used to reference them, include the following:

Coordinate list below with product lists; delete those not required. See Evaluations. NeLMA: Northeastern Lumber Manufacturers' Association.

- NLGA: National Lumber Grades Authority.
- RIS: Redwood Inspection Service.
- SPIB: The Southern Pine Inspection Bureau. WCLIB: West Coast Lumber Inspection Bureau.
- WWPA: Western Wood Products Association.
- 1.4 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating

plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained Delete subparagraph below if fire-retardant-treated wood is not required. Delete first subparagraph below if not applicable.

2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was

reduced to levels specified before shipment to Project site. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.

4. For fire-retardant treatments specified to be High-Temperature (HT) type, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.

Include copies of warranties from chemical treatment manufacturers for each type of treatment.

Delete first paragraph below if no exposed framing or if fastener patterns are shown on Drawings. Retain paragraph below if applicable; delete if species and grade are indicated for each use.

B. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review. Insert specific model code organization in paragraph below or revise if report must be from another source.

C. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:

- Edit list below to retain only those products retained in Part 2. Wood-preservative-treated wood.
 - Engineered wood products
 - Fire-retardant-treated wood
 - Power-driven fasteners.
 - Powder-actuated fasteners.
 - Expansion anchors Metal framing anchors.

1.5 QUALITY ASSURANCE

Source Limitations for Engineered Wood Products: Obtain each type of engineered wood product through one source from

a single manufacturer. Paragraph and subparagraphs below may be retained to specify lumber and other wood products made from certified wood for LEED Credit MR 7, which requires that a minimum of 50 percent of wood-based materials be certified. An alternative method of meeting LEED Credit MR 7 requirement is to retain requirement in Division 1 Section "LEED Requirements" that gives Contractor

option and responsibility for determining how LEED Credit MR 7 requirement will be met. B. Forest Certification: For the following wood products, provide materials produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria":

Coordinate list below with products retained in Part 2. Delete items not required to be made from certified wood; verify that certified wood is available for each item before retaining.

- Dimension lumber framing. Laminated veneer lumber
- Parallel-strand lumber.

Miscellaneous lumber.

1.6 DELIVERY, STORAGE, AND HANDLING Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and

under covering

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

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

1. Factory mark each piece of lumber with grade stamp of grading agency. Select only first option in subparagraph below if authorities having jurisdiction require grade stamps on all materials.

In DOC PS 20, dressed sizes of green lumber are larger than dry lumber.

Revise subparagraph below if rough lumber is acceptable for all work. 2. Provide dressed lumber, S4S, unless otherwise indicated

Delete paragraph and subparagraph below if engineered wood products are not used.

B. Engineered Wood Products: Provide engineered wood products acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project. Allowable Design Stresses: Provide engineered wood products with allowable design stresses, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical

data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

Delete this Article if not applicable. See Evaluations for discussion of formulations. Preservative Treatment by Pressure Process: AWPA C2.

See Evaluations for information about treatment chemicals.

Preservative Chemicals: Acceptable to authorities having jurisdiction.

Delete subparagraph below if no exposed framing or if considered unnecessary.

Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.

Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review. Select only first option in subparagraph below if authorities having jurisdiction require quality mark on all materials.

Select first option in paragraph below and delete subparagraphs if total treatment is required; otherwise, select second option and retain appropriate subparagraphs.

Application: Treat the following:

Retain subparagraph below if Project includes wood adjacent to roofing or waterproofing.

Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing. Retain applicable items below. Insert other items that require treatment but are not likely to be indicated on Drawings.

Wood sills, sleepers, blocking, and similar concealed members in contact with masonry or concrete. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 FIRE-RETARDANT-TREATED MATERIALS Delete this Article if not applicable. Use Exterior type for exterior locations and where indicated.

approved for use indicated by adhesive manufacturer. Retain subparagraph below if low-emitting materials are required for LEED Credit EQ 4.1. VOC limit is that for multipurpose Delete first subparagraph below if not applicable. Revise description of locations to suit Project requirements. Use Interior Type A, High Temperature (HT) for enclosed roof framing, framing in attic spaces, and where indicated. construction adhesives in South Coast Air Quality Management District Rule #1168. Use adhesives that have a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D Use Interior Type A, unless otherwise indicated. (EPA Method 24). Identify fire-retardant-treated wood with appropriate classification marking of testing and inspecting agency acceptable to Treatment below is for exposed ends of posts and beams, not for treating cuts in preservative-treated lumber. authorities having jurisdiction.

Select only first option in subparagraph below if authorities having jurisdiction require classification marking on all materials. 1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece. Delete or revise paragraph below if no exposed framing or if staining will hide colorants. C. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not bleed through,

contain colorants, or otherwise adversely affect finishes. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to Α Select first option in paragraph below and delete subparagraphs if all wood is required to be fire-retardant treated; otherwise, select other construction: scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, and similar supports to comply with second option and retain appropriate subparagraphs. requirements for attaching other construction. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated. Application: Treat items indicated on Drawings. Edit list below suit local code and Project. Delete paragraph below if engineered wood products are not used. 2.4 DIMENSION LUMBER FRAMING Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written

thickness is often shipped green. See Evaluations. Maximum Moisture Content: 19 percent.

First 10 paragraphs below provide several choices for specifying different categories of framing. Edit to retain no more than four paragraphs (usually two or three), and select paragraph titles so that together they describe all the framing required. For simple projects, two paragraphs titled "Interior Partitions" and "Framing Other Than Interior Partitions" might be retained; for other projects three paragraphs titled "Non-Load-Bearing Interior Partitions," "Exterior and Load-Bearing Walls," and "Joists, Rafters, and Other Framing Not Listed Above" might be retained. If retaining titles that refer to non-load-bearing or load-bearing construction, indicate load-bearing walls and framing on Drawings. In each paragraph where grade designations are used, grades are listed in order of

decreasing quality (and cost). Non-Load-Bearing Interior Walls: Grade and species per plans. Delete paragraph above or below. Select one of three options for grade in either paragraph. If retaining paragraph below, select one of three options for grade or revise to suit Project; verify with structural requirements. Exterior and Load-Bearing Walls: Grade and species per plans. Edit list below; usually retain all species that meet requirements except those not available in Project's location. Species groups are listed in order of decreasing strength (extreme fiber in bending). Paragraph below is an example for machine stress-rated lumber that can be used instead of paragraph above. If retaining, select

available. 2.5 ENGINEERED WOOD PRODUCTS

Paragraphs and subparagraphs in this Article are examples of descriptive and property requirements based on product data of various manufacturers. Verify that current products comply or revise. See Evaluations. Retain option in paragraph below if lowemitting materials are required for LEED Credit EQ 4.4. Laminated-veneer lumber usually contains no urea formaldehyde. Laminated-Veneer Lumber: Structural composite lumber made from wood veneers with grain primarily parallel to member lengths, evaluated and monitored according to ASTM D 5456 and manufactured with an exterior-type adhesive complying with ASTM D 2559.

See Editing Instruction No. 1 in the Evaluations for cautions about naming manufacturers and products. Retain one of first two subparagraphs and list of manufacturers below. See Division 1 Section "Product Requirements." Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include but ot limited to, the following: with requirements, provide products by one of the following:

porated in	nto the Work include, but are not
Manu	facturers: Subject to compliance
a.	Boise Cascade Corporation.
b.	RedBuilt
C.	Finnforest USA.
d.	Georgia-Pacific.
e.	Louisiana-Pacific Corporation.
f.	Pacific Woodtech Corporation
g.	Roseburg Forest Products Co
ĥ	Weldwood of Canada Limited

Weyerhaeuser Company.

Extreme Fiber Stress in Bending, Edgewise: Refer to Drawings. Modulus of Elasticity, Edgewise: Refer to Drawings required for LEED Credit EQ 4.4. Structural composite lumber usually contains no urea formaldehyde. member lengths, evaluated and monitored according to ASTM D 5456 and manufactured with an exterior-type adhesive complying with ASTM D 2559. subparagraphs and list of manufacturers below. See Division 1 Section "Product Requirements." incorporated into the Work include, but are not limited to, the following: Manufacturers: Subject to compliance with requirements, provide products by one of the following: Weverhaeuser Company. Extreme Fiber Stress in Bending, Edgewise: Refer to Drawings. Modulus of Elasticity, Edgewise: Refer to Drawings. ert other properties of paralleld lumber here if critical 2.6 MISCELLANEOUS LUMBER following Blocking Nailers Cants Delete any or all of three items below if not required. 4. Furring. В. content of any species. for untreated support and attachment items. Select 15 percent if required and available. Delete first paragraph below if not acceptable provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose. defects that will interfere with attachment of other work. nails and damage to paneling PLYWOOD BACKING PANELS indicated, not less than 1/2-inch nominal thickness. 2.8 FASTENERS Α. manufacture. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153. Nails, Brads, and Staples: ASTM F 1667. Standard in first paragraph below covers power-driven staples, nails, P-nails, and allied fasteners. Power-Driven Fasteners: NES NER-272. Wood Screws: ASME B18.6.1. Lag Bolts: ASME B18.2.1. service conditions after verifying availability of thicker coatings. 2.9 METAL FRAMING ANCHORS incorporated into the Work include, but are not limited to, the following: Manufacturers: Subject to compliance with requirements, provide products by one of the following: proc

Duolo	of Boolgin i roduoto. Oubjeet to compliant
oducts by on	e of the following:
1.	Alpine Engineered Products, Inc.
2.	Cleveland Steel Specialty Co.
3.	Harlen Metal Products, Inc.
4.	KC Metals Products, Inc.
5.	Simpson Strong-Tie Co., Inc.
6.	Southeastern Metals Manufacturing Co.
7.	USP Structural Connectors.

If retaining first option in first paragraph below, indicate design loads for metal framing anchors on Drawings. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653, G60 coating designation. 1. Use for interior locations where stainless steel is not indicated. Paragraph above is typical for most manufacturers and is suitable for most applications. Delete paragraph and subparagraph below if not required. Type 304 is usually standard for stainless steel; Type 316 gives better corrosion resistance for exposed applications

in coastal environments.

12 paragraphs below are examples only. Revise to suit Project or delete all if "Basis-of-Design Products" Paragraph is used and they are not needed to provide salient characteristics for products.

testing agency

General: Comply with performance requirements in AWPA C20 (lumber) and AWPA C27 (plywood). Exterior type is suitable for both exterior and interior applications. Interior type is only for interior applications. See Evaluations.

Select one of five options in paragraph below, or delete paragraph if green lumber is acceptable in all thicknesses. Verify availability of lumber with 15 percent maximum moisture content before retaining. Lumber more than 2 inches nominal (38 mm actual) in

one of two titles and select or insert a grade to suit structural requirements of Project. Three grades listed are most commonly

Weldwood of Canada Limited; Subsidiary of International Paper Corporation.

Insert other properties of laminated veneer lumber here if critical. Retain option in paragraph below if low-emitting materials are Parallel-Strand Lumber: Structural composite lumber made from wood strand elements with grain primarily parallel to

See Editing Instruction No. 1 in the Evaluations for cautions about naming manufacturers and products. Retain one of first two

Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be

General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the

Delete subparagraph below if prefabricated metal units are used. Prefabricated metal units may still require blocking or nailers. Delete subparagraph below if roof membrane used does not require cants or if cants of another material are used.

For items of dimension lumber size, provide Standard, Stud, or No. 3 grade lumber with 19 percent maximum moisture Delete paragraph above or below. Select one of two options for grade in either paragraph. 19 percent moisture is usually adequate

C. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other

For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over

Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, in thickness indicated or, if not

General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and

Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency. 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5. Subparagraph above and below are examples only. Above protects against corrosion in an indoor atmosphere; revise to suit other

See Editing Instruction No. 1 in the Evaluations for cautions about naming manufacturers and products. If naming manufacturers or products, retain one of three subparagraphs and list of manufacturers below. Refer to Division 1 Section "Product Requirements." Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be

Basis-of-Design Products: Subject to compliance with requirements, provide products indicated on Drawings or comparable

2.10 MISCELLANEOUS MATERIALS

Sill-Sealer Gaskets: Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; or closed-cell neoprene foam, selected from manufacturer's standard widths to suit width of sill members indicated. Adhesives for Gluing Furring and Sleepers to Concrete or Masonry: Formulation complying with ASTM D 3498 that is В.

C. Water-Repellent Preservative: NWWDA-tested and -accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chloropyrifos as its active ingredient. PART 3 - EXECUTION

3.1 INSTALLATION. GENERAL

instructions. Delete first paragraph below if metal framing anchors are not used.

Metal Framing Anchors: Install metal framing to comply with manufacturer's written instructions.

- Do not splice structural members between supports, unless otherwise indicated. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
- Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches o.c. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated on Drawings.

Delete first subparagraph below if no furred walls. Η. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

- Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber. Use inorganic boron for items that are continuously protected from liquid water.
- Use copper naphthenate for items not continuously protected from liquid water.

Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following: If retaining subparagraph below, verify that this is acceptable to authorities having jurisdiction. Also retain one of the other subparagraphs that references a model code fastener schedule complying with local requirements. Fasteners covered by NES NER-272 are manufactured by member companies of the International Staple. Nail and Tool Association.

NES NER-272 for power-driven fasteners.

Retain one of six subparagraphs below, with or without subparagraph above, as required to comply with requirements of Project and local codes.

Table 2306.1, "Fastening Schedule," in SBCCI's Standard Building Code. 2. Revise paragraph below to include other kinds of nails if required.

Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where K. opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood: do not countersink nail heads, unless otherwise indicated. Delete paragraph and subparagraphs below if no exposed framing.

Indicate locations of other fasteners, such as wood screws, bolts, and lag screws, on Drawings.

3.2 WOOD BLOCKING, AND NAILER INSTALLATION

Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved. B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise

indicated.

Retain paragraph below for conventional, not veneer, plaster. Insert other specific requirements as needed for work.

3.3 WOOD FURRING INSTALLATION

Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work. Retain applicable types from two paragraphs below; revise if closer spacing is required for material fastened. B. Furring to Receive Plywood or Hardboard Paneling: Install 1-by-3-inch nominal-size furring horizontally and vertically at 24 inches o.c.

Furring to Receive Gypsum Board: Install 1-by-2-inch nominal-size furring vertically at 16 inches o.c. C. If framing is minor in scope and importance, delete remaining framing installation articles. Review framing requirements for compliance with local building code

3.4 WALL AND PARTITION FRAMING INSTALLATION

General: Provide single bottom plate and double top plates using members of 2-inch nominal thickness whose widths equal that of studs, except single top plate may be used for non-load-bearing partitions. Fasten plates to supporting construction, unless otherwise indicated.

Select one of two stud sizes and one of four spacings in subparagraph below; third and fourth stud spacings are for metric module. Β. Construct corners and intersections with three or more studs. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs.

Support headers on jamb studs. Two subparagraphs below refer to load-bearing and non-load-bearing construction. Designate load-bearing walls on Drawings if retaining this distinction.

For non-load-bearing partitions, provide double-jamb studs and headers of depth indicated.

Retain subparagraph above or below if applicable. Revise if single-jamb studs are acceptable. For load-bearing walls, provide double-jamb studs for openings 60 inches and less in width, and triple-jamb studs

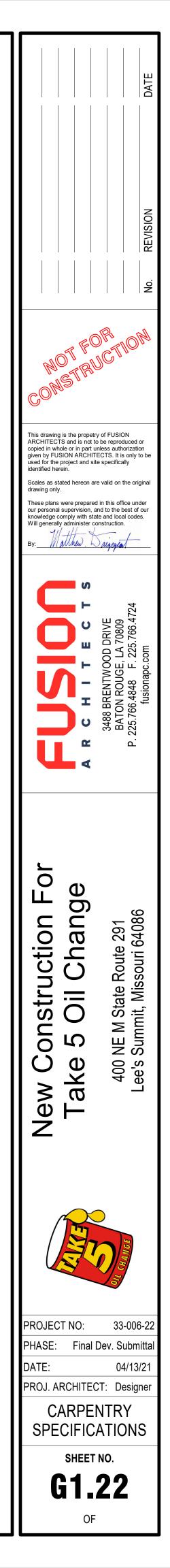
for wider openings. Provide headers of depth indicated Retain paragraph below unless sheathing provides required bracing. If retaining second option below, indicate locations on Drawings. Change "bracing" to "wind bracing," "seismic bracing," etc., to match term used in code, where applicable.

Insert requirements for framing gables, bays, and other special conditions or show on Drawings. 3.5 PROTECTION

Delete this Article if site-applied boron treatment is specified in Division 2 Section "Termite Control."

Delete paragraph below if option allowing inorganic boron treatment is not retained in Part 2. A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated

wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label. Retain paragraph below instead of above if boron-treated wood is not used, but borate treatment of wood that has become wet is used to help prevent mold and mildew. Delete if site-applied boron treatment is specified in Division 2 Section "Termite Control." B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label. END OF SECTION 06 10 00



Structural Spec Sheathing:

SECTION 06 16 00

WOOD SHEA	THING
Verify that Se	ction titles referenced in this Section are correct for this Project's Specifications; Section titles may have
changed.	
PART 1 -	GENERAL
1.1 RELA	TED DOCUMENTS
A. Drawi	ngs and general provisions of the Contract, including General and Supplementary Conditions and Division 01
Specification S	Sections, apply to this Section.
1.2 SUM	MARY
A. This S	Section includes the following:
Adjust list belo	w to suit Project.
1.	Wall sheathing.

Floor sheathing. Roof sheathing

Related Sections include the following:

List below only products and construction that the reader might expect to find in this Section but are specified elsewhere. Division 01 Section "Sustainable Design Requirements" for additional LEED requirements. Division 06 Section "Rough Carpentry" for plywood backing panels.

1.3 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating

plant that treated plywood complies with requirements. Indicate type of preservative used and net amount of preservative retained Delete subparagraph below if fire-retardant-treated plywood is not required.

2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Include physical properties of treated materials. Delete first subparagraph below if not applicable.

For fire-retardant treatments specified to be High-Temperature (HT) type, include physical properties of treated plywood both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5516.

4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

Retain subparagraph below if applicable.

6. For building wrap, include data on air-/moisture-infiltration protection based on testing according to referenced standards.

LEED Submittals

Retain subparagraph below if low-emitting materials are required for LEED Credit EQ 4.1; coordinate with requirements selected in Part 2 for construction adhesive

Credit EQ 4.1: Manufacturers' product data for construction adhesive, including printed statement of VOC content. Retain subparagraph below if low-emitting materials are required for LEED Credit EQ 4.4. Credit EQ 4.4: Composite wood manufacturer's product data for each composite wood product used on the interior of building indicating that bonding agent used contains no urea formaldehyde.

Retain subparagraph below and "Forest Certification" Paragraph in "Quality Assurance" Article if wood products are required to be certified for LEED Credit MR 7, which requires that a minimum of 50 percent of wood-based materials be certified. Credit MR 7: Certificates of chain-of-custody signed by manufacturers certifying that products specified to be made from certified wood were made from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria." Include evidence that mill is certified for chain-of-custody by an FSC-accredited

certification body

Insert specific model code organization in paragraph below or revise if report must be from another source. C. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project: Edit list below to retain only those products retained in Part 2.

Preservative-treated plywood.

Fire-retardant-treated plywood.

Foam-plastic sheathing.

Building wrap. 1.4 QUALITY ASSURANCE

Retain paragraph and subparagraph below for fire-rated assemblies.

A. Fire-Test-Response Characteristics: For assemblies with fire-resistance ratings, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.

Indicate design designations of specific assemblies on Drawings.

Paragraph and subparagraphs below may be retained to specify wood products made from certified wood for LEED Credit MR 7. which requires that a minimum of 50 percent of wood-based materials be certified. An alternative method of meeting LEED Credit MR 7 requirement is to retain requirement in Division 01 Section "Sustainable Design Requirements" that gives Contractor option and responsibility for determining how LEED Credit MR 7 requirement will be met. B. Forest Certification: For the following wood products, provide materials produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria": Coordinate list below with products retained in Part 2. Delete items not required to be made from certified wood; verify that certified wood is available for each item before retaining. Plvwood. Oriented strand board. Fiberboard wall sheathing. Particleboard underlaymer Hardboard underlayment. 1.5 DELIVERY, STORAGE, AND HANDLING A. Stack plywood and other panels flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings. PART 2 - PRODUCTS 2.1 WOOD PANEL PRODUCTS, GENERAL Select one of two options in paragraph below: usually the second. DOC PS 2 is a performance-based standard that does not include requirements for grades of veneers. Second option includes phrase ", unless otherwise indicated" to allow for underlayment that is specified to comply with DOC PS 1 because a minimum face veneer grade is required; delete if phrase is not needed. A. Plywood: Either DOC PS 1 or DOC PS 2, unless otherwise indicated. Delete paragraph below if oriented strand board is not used. Oriented Strand Board: DOC PS 2. Retain first paragraph below if a minimum thickness is shown on Drawings. Thickness: As needed to comply with requirements specified, but not less than thickness indicated. Factory mark panels to indicate compliance with applicable standard. 2.2 PRESERVATIVE-TREATED PLYWOOD Delete this Article if not applicable. See Evaluations for discussion of formulations. Preservative Treatment by Pressure Process: AWPA C9. See Evaluations for information about treatment chemicals. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction. D. Select first option in paragraph below and delete others if total treatment is required; otherwise, select second option with or without third option Application: Treat all plywood, in contact with masonry or concrete or used with roofing, flashing, vapor barriers, and waterproofing 2.3 FIRE-RETARDANT-TREATED PLYWOOD Delete this Article if not applicable. General: Comply with performance requirements in AWPA C27. Use treatment that does not promote corrosion of metal fasteners. Exterior type is suitable for both exterior and interior applications. Interior type is suitable for interior applications only. See Evaluations. Use Exterior type for exterior locations and where indicated. Delete first subparagraph below if not applicable. Revise description of locations to suit Project. Use Interior Type A, High Temperature (HT) for roof sheathing and where indicated. Use Interior Type A, unless otherwise indicated. B. Kiln-dry material after treatment to a maximum moisture content of 15 percent. Do not use material that is warped or does not comply with requirements for untreated material. Identify fire-retardant-treated plywood with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction. Select first option in paragraph below and delete subparagraphs if all wood is required to be fire-retardant treated; otherwise, select second option and applicable subparagraphs. Application: Treat plywood indicated on Drawings, and the following: Edit list below to suit local code and Project. Roof and wall sheathing within 48 inches of fire party walls. Roof sheathing Subflooring and underlayment for raised platforms. 2.4 WALL SHEATHING If retaining paragraph below, select one of four options. Structural I provides increased racking resistance. See Evaluations for

information about durability classifications of plywood. Plywood Wall Sheathing: Exposure 1, Structural I sheathing.

Select one of four options in subparagraph below. 1. Span Rating: Not less than 16/0.

If retaining subparagraph below, usually select first option for studs 16 inches (406 mm) o.c., second option for studs 24 inches (610 mm) o.c. Select third option for more stringent requirement. 2. Nominal Thickness: Not less than 1/2 inch.

If retaining paragraph below, select one of two options. Structural I provides increased racking resistance. See Evaluations for information about durability classifications of oriented strand board. Oriented-Strand-Board Wall Sheathing: Exposure 1, Structural I sheathing.

Select one of five options in subparagraph below.

Span Rating: Not less than 16/0.

If retaining subparagraph below, usually select first option for studs 16 inches (406 mm) o.c., second option for studs 24 inches (610 mm) o.c. Select third option for more stringent requirement. 2. Nominal Thickness: Not less than 1/2 inch.

Paper-Surfaced Gypsum Wall Sheathing: ASTM C 79/C 79M or ASTM C 1396/C 1396M, gypsum sheathing; with water-C. resistant-treated core and with water-repellent paper bonded to core's face, back, and long edges. See Editing Instruction No. 1 in the Evaluations for cautions about naming manufacturers and products. Retain one of first two subparagraphs and list of manufacturers below. See Division 01 Section "Product Requirements."

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following: Manufacturers: Subject to compliance with requirements, provide products by one of the following: American Gypsum. LaFarge North America Inc. G-P Gypsum Corporation. National Gypsum Company. Temple-Inland Forest Products Corporation. United States Gypsum Co. Type and Thickness: Regular, thickness per the Drawings. 3. Tongue-and-groove edge is only available for regular, 24-by-96-inch (610-by-2438-mm) boards. Verify availability of SI (metric) module with manufacturers selected. 4. Edge and End Configuration: Square ends; Square. 24-by-96-inch (610-by-2438-mm) size is only available for regular boards with tongue-and-groove long edges. Special-order lengths are available from some manufacturers but only in large quantities. SI (metric) module dimensions are not readily obtainable; verify availability by special order with manufacturers selected. Boards 48 inches (1219 mm) or 1200 mm wide can be installed horizontally but are usually installed vertically; horizontal square edges must be protected by a weather-resistant barrier or must be sealed. 5. Size: 24 by 96 inches for horizontal; 48 by 96 inches for vertical installation. Only G-P Gypsum produces glass-mat gypsum sheathing board. 2.5 ROOF SHEATHING If retaining paragraph below, select one of four options. Structural I provides increased racking resistance. See Evaluations for information about durability classifications of plywood. Plywood Roof Sheathing: Exterior, Structural I sheathing. Span Rating: Not less than 32/16. Nominal Thickness: Not less than 15/32 inch (11.9 mm). If retaining paragraph below, select one of two options. Structural I provides increased racking resistance. See Evaluations for information about durability classifications of oriented strand board. Oriented-Strand-Board Roof Sheathing: Exposure 1, Structural I sheathing. Span Rating: Not less than 32/16. If retaining subparagraph below, usually select first option for spans of 16 inches (406 mm), second option for spans of 24 inches (610 mm). Select third option for more stringent requirement. Nominal Thickness: Not less than 15/32 inch. 2.6 FLOORING For resilient flooring, APA recommends separate subflooring and underlayment rather than single-layer floor. See Evaluations for information about durability classifications of plywood. For resilient flooring, APA recommends separate subflooring and underlayment rather than single-layer floor. See Evaluations for information about durability classifications of oriented strand board. If retaining paragraph below, select one of four options. Structural I provides increased racking resistance. For resilient flooring, APA recommends separate subflooring and underlayment rather than single-layer floor. See Evaluations for information about durability classifications of plywood. A. Plywood Subflooring: Exterior, Structural I single-floor panels or sheathing. Select one of first five options and possibly one of last three options in subparagraph below. 1. Span Rating: Not less than 24" o.c. If retaining subparagraph below, usually select first option for spans of 16 inches (406 mm); second option for spans of 24 inches (610 mm). For more stringent requirement, select second option for spans of 16 inches (406 mm) or third option for spans of 24 inches (610 mm). 2. Nominal Thickness: Not less than 23/32 inch. If retaining paragraph below, select one of two options. Structural I provides increased racking resistance. For resilient flooring, APA recommends separate subflooring and underlayment rather than single-layer floor. See Evaluations for information about durability classifications of oriented strand board. B. Oriented-Strand-Board Subflooring: Exposure 1, Structural I sheathing single-floor panels or sheathing. Select one of first five options and one of last four options in subparagraph below. 1. Span Rating: Not less than 24" o.c. If retaining subparagraph below, usually select first option for spans of 16 inches (406 mm); second option for spans of 24 inches (610 mm). For more stringent requirement, select second option for spans of 16 inches (406 mm) or third option for spans of 24 inches (610 mm). Nominal Thickness: Not less than 23/32 inch. 2. If retaining paragraph below, verify acceptability with floor covering manufacturers. Select second option if low-emitting materials are required for LEED Credit EQ 4.4, which prohibits composite wood products containing urea formaldehyde. 2.7 FASTENERS Α. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture. For roof and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M. Nails, Brads, and Staples: ASTM F 1667. Standard in first paragraph below covers power-driven staples, nails, P-nails, and allied fasteners. Power-Driven Fasteners: NES NER-272. Wood Screws: ASME B18.6.1. MISCELLANEOUS MATERIALS According to APA, only certain solvent-based glues are suitable for nonveneer panels with sealed surfaces and ends. Adhesives for Field Gluing Panels to Framing: Formulation complying with APA AFG-01 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels. Retain subparagraph below if low-emitting materials are required for LEED Credit EQ 4.1. VOC limit is that for multipurpose construction adhesives in South Coast Air Quality Management District Rule #1168. Use adhesives that have a VOC content of 70 or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24). PART 3 - EXECUTION INSTALLATION, GENERAL Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction, unless otherwise indicated C. Securely attach to substrate by fastening as indicated, complying with the following: NES NER-272 for power-driven fasteners. Retain one of six subparagraphs below, with or without subparagraph above, to comply with requirements of Project and local codes. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code." Table 23-II-B-1, "Nailing Schedule," and Table 23-II-B-2, "Wood Structural Panel Roof Sheathing Nailing Schedule," in ICBO's "Uniform Building Code." Table 2305.2, "Fastening Schedule," in BOCA's "BOCA National Building Code." Table 2306.1, "Fastening Schedule," in SBCCI's "Standard Building Code." Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's "International Residential Code for One- and Two-Family Dwellings." Table 602.3(1), "Fastener Schedule for Structural Members," and Table 602.3(2), "Alternate Attachments," in ICC's "International One- and Two-Family Dwelling Code." Retain first paragraph below if wood framing is used. Revise to indicate other kinds of nails if required. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood. Coordinate wall and roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast. 3.2 WOOD STRUCTURAL PANEL INSTALLATION General: Comply with applicable recommendations in APA Form No. E30S, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated. Fastening Methods: Fasten panels as indicated below: Delete fastening methods not required. Coordinate with building code requirements. Flooring: Glue and nail to wood framing. Screw to cold-formed metal framing. Space panels 1/8 inch apart at edges and ends. 2. Wall and Roof Sheathing: A continuous bead of glue applied to framing at edges of wall sheathing panels will help seal panel joints so sheathing will function as an air barrier. Nail to wood framing. Screw to cold-formed metal framing. Space panels 1/8 inch apart at edges and ends. 3.3 GYPSUM SHEATHING INSTALLATION Comply with GA-253 and with manufacturer's written instructions.

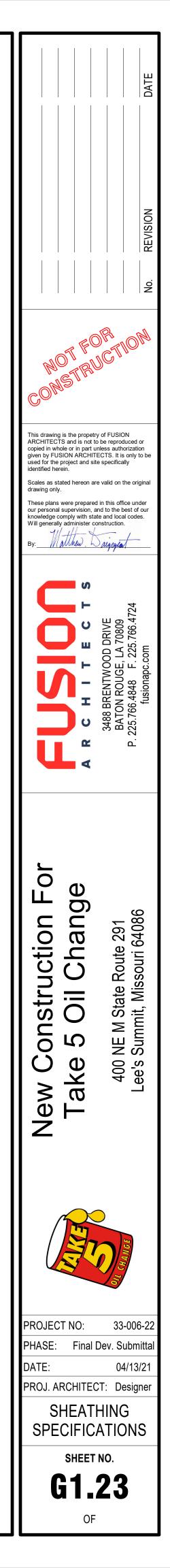
Retain applicable subparagraph(s) below or insert requirements to suit Project. Fasten gypsum sheathing to wood framing with nails or screws. Fasten gypsum sheathing to cold-formed metal framing with screws. Install boards with a 3/8-inch gap where non-load-bearing construction abuts structural elements. Install boards with a 1/4-inch gap where they abut masonry or similar materials that might retain moisture, to prevent wicking. Apply fasteners so heads bear tightly against face of sheathing boards but do not cut into facing. Revise first paragraph below if horizontally installed boards do not have tongue-and-groove edges. Horizontal Installation: Install sheathing with V-grooved edge down and tongue edge up. Interlock tongue with groove to bring long edges in contact with edges of adjacent boards without forcing. Abut ends of boards over centers of studs, and stagger end joints of adjacent boards not less than one stud spacing. Attach boards at perimeter and within field of board to each steel stud. Space fasteners per Drawings and set back a minimum of 3/8 inch from edges and ends of boards. Retain subparagraph above or below. Delete below if not applicable or not permitted. For sheathing under stucco cladding, boards may be initially tacked in place with screws if overlying self-furring 2. metal lath is screw-attached through sheathing to studs immediately after sheathing is installed. Vertical Installation: Install board vertical edges centered over studs. Abut ends and edges of each board with those of

adjacent boards. Attach boards at perimeter and within field of board to each stud. 1. Space fasteners per Drawings and set back a minimum of 3/8 inch from edges and ends of boards. Retain subparagraph above or below. Delete below if not applicable or not permitted. 2. For sheathing under stucco cladding, boards may be initially tacked in place with screws if overlying self-furring

resistant sheathing paper will be installed to comply with requirements for incorporating it into final assembly.

END OF SECTION

Paper-Surfaced Gypsum Sheathing: Protect sheathing by covering exposed exterior surface of sheathing with weather-Insert requirements for removing protection if it does not become part of final assembly. Paragraph above assumes that weather-



Structural Metal Plate Connected Wood Trusses:

METAL-PLATE-CONNECTED WOOD TRUSSES This Section uses the term "Architect." Change this term to match that used to identify the design professional as defined in the General and Supplementary Conditions. Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed. PART 1 -GENERAL 1.1 RELATED DOCUMENTS Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section. 1.2 SUMMARY This Section includes the following: Adjust list below to suit Project. Wood roof trusses Wood girder trusses. Wood truss bracing. Metal truss accessories Related Sections include the following: List below only products and construction that the reader might expect to find in this Section but are specified elsewhere. Borate treatment in Section referenced in first subparagraph below may be an acceptable substitute for borate-treated wood specified in this Section. Delete if borate treatment is specified in this Section. Division 2 Section "Termite Control" for site application of borate treatment to wood trusses. Division 6 Section "Wood Decking." Division 6 Section "Sheathing" for roof sheathing. Retain paragraph below if an allowance is specified for permanent bracing. If retaining below, indicate in Division 1 Section "Allowances" that allowance includes installation as well as materials. Delete if bracing is shown on Drawings. C. Allowances: Provide wood truss bracing under the Metal-Plate-Connected Truss Bracing Allowance as specified in Division 1 Section "Allowances." 1.3 DEFINITIONS Retain abbreviations and terms that remain after this Section has been edited. A. Metal-Plate-Connected Wood Trusses: Planar structural units consisting of metal-plate-connected members fabricated from dimension lumber and cut and assembled before delivery to Project site. Metal-Plate-Connected Timber Trusses: Planar structural units consisting of metal-plate-connected members fabricated from timber and cut and assembled before delivery to Project site. TPI: Truss Plate Institute, Inc. Delete paragraph and list below if lumber grading agencies are not referenced with products. D. Lumber grading agencies, and the abbreviations used to reference them. include the following: Coordinate list below with product lists; delete those not required. See Evaluations. NeLMA: Northeastern Lumber Manufacturers' Association. NLGA: National Lumber Grades Authority. SPIB: The Southern Pine Inspection Bureau. WCLIB: West Coast Lumber Inspection Bureau. WWPA: Western Wood Products Association. 1.4 PERFORMANCE REQUIREMENTS Retain this Article if delegating any part of design responsibility for trusses to fabricator. Coordinate with Part 2. Insert other performance and design criteria below to suit Project or add to Drawings. AIA Document A201 requires Owner or Architect to specify performance and design criteria to be satisfied. A. Structural Performance: Provide metal-plate-connected wood trusses capable of withstanding design loads within limits and under conditions indicated. Comply with requirements in TPI 1 unless more stringent requirements are specified below. Tabulate minimum load requirements here or on Drawings. Revise first subparagraph below when design loads are included here. Include applicable live, dead, snow, collateral, seismic, wind, and uplift loads, and load combinations. Design Loads: As indicated. Maximum Deflection Under Design Loads: Select deflection limits from options in subparagraph below or insert others as appropriate for floor, roof, and ceiling materials. a. Roof Trusses: Vertical deflection of 1/240 of span. Insert a subparagraph for horizontal (longitudinal) deflection limits of scissor trusses if they are used. 1.5 SUBMITTALS A. Product Data: For metal-plate connectors, metal truss accessories, and fasteners. Delete subparagraph below if preservative-treated wood is not required. Shop Drawings: Prepared by or under the supervision of a qualified professional engineer. Show fabrication and installation details for trusses Show location, pitch, span, camber, configuration, and spacing for each type of truss required. Indicate sizes, stress grades, and species of lumber and timber. According to TPI 1, building designer is responsible for design of "permanent lateral bracing as specified by the truss designer, to prevent buckling of the individual truss members due to design loads." This bracing must be anticipated and detailed on Drawings, subject to possible revision when truss Shop Drawings are received, or an Allowance for it must be included in the Contract Sum if a Change Order is to be avoided. See Evaluations. Indicate locations of permanent bracing required to prevent buckling of individual truss members due to design 3. loads. Indicate type, size, material, finish, design values, orientation, and location of metal connector plates. Show splice details and bearing details. Retain subparagraph below if products are required to withstand specific design loads and design responsibilities have been delegated to Contractor or if structural data are required as another way to verify products' compliance with performance requirements. Professional engineer qualifications are specified in Division 1 Section "Quality Requirements." For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation. Retain paragraph and subparagraph below and "Forest Certification" Paragraph in "Quality Assurance" Article if wood for trusses is required to be certified for LEED Credit MR 7, which requires that a minimum of 50 percent of wood-based materials be certified. Retain paragraph below if certificates are required by authorities having jurisdiction. C. Product Certificates: For metal-plate-connected wood trusses, signed by officer of truss fabricating firm. Coordinate paragraph below with qualification requirements in Division 1 Section "Quality Requirements" and as supplemented in "Quality Assurance" Article. Qualification Data: For Fabricator and Installer Retain paragraph below if applicable; delete if species and grade are indicated for each use. E. Material Certificates: For dimension lumber and timber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review. Insert specific model code organization in paragraph below or revise if report must be from another source. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project: Edit list below to retain only those products retained in Part 2. Metal-plate connectors. Metal truss accessories 1.6 QUALITY ASSURANCE Metal Connector-Plate Manufacturer Qualifications: A manufacturer that is a member of TPI and that complies with qualitycontrol procedures in TPI 1 for manufacture of connector plates. Delete first subparagraph below if truss design is not delegated to manufacturer. Manufacturer's responsibilities include providing professional engineering services needed to assume engineering responsibility

Engineering Responsibility: Preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer TPI 1 added specific requirements for fabricator quality-assurance programs in the 2002 version, but does not require third-party

inspection. Verify that local truss fabricators participate in third-party inspection programs; many do not. Fabricator Qualifications: Shop that participates in a recognized quality-assurance program that complies with qualitycontrol procedures in TPI 1 and that involves third-party inspection by an independent testing and inspecting agency acceptable to Architect and authorities having jurisdiction. Source Limitations for Connector Plates: Obtain metal connector plates from a single manufacturer.

Comply with applicable requirements and recommendations of the following publications: TPI publications below are listed by title without alphanumeric designations in which the number represents year of issue. Designations in effect when this Section was updated appear in "Referenced Standards" Article in the Evaluations. TPI 1, "National Design Standard for Metal Plate Connected Wood Truss Construction." TPI DSB, "Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses." TPI HIB, "Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses Wood Structural Design Standard: Comply with applicable requirements in AF&PA's "National Design Specifications for Wood Construction" and its "Supplement." Retain paragraph below if wood for trusses is required to be certified for LEED Credit MR 7, which requires that a minimum of 50 percent of wood-based materials be certified. See Evaluations. Forest Certification: Provide metal-plate-connected wood trusses produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria." 1.7 DELIVERY, STORAGE, AND HANDLING Handle and store trusses to comply with recommendations of TPI HIB, "Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses." Store trusses flat, off of ground, and adequately supported to prevent lateral bending. Protect trusses from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings. Inspect trusses showing discoloration, corrosion, or other evidence of deterioration. Discard and replace trusses that are damaged or defective. 1.8 COORDINATION Time delivery and erection of trusses to avoid extended on-site storage and to avoid delaying progress of other trades whose work must follow erection of trusses. PART 2 - PRODUCTS 2.1 DIMENSION LUMBER A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber

that complies with the applicable rules of any rules writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated. Factory mark each piece of lumber with grade stamp of grading agency. Delete first subparagraph below if authorities having jurisdiction require grade stamps on all materials.

2. Provide dressed lumber, S4S.

Select one of two options in subparagraph below. Verify availability of lumber with 15 percent maximum moisture content before retaining Provide dry lumber with 19 percent maximum moisture content at time of dressing

Retain one of first three paragraphs and associated subparagraphs below. Usually retain first if truss fabricator provides truss design. First gives truss fabricator the greatest flexibility in lumber selection, but can only be used if fabricator provides truss design.

Grade and Species: For truss chord and web members, provide dimension lumber of any species, graded visually or Delete paragraph below if option allowing inorganic boron treatment is not retained in Part 2 or if wood-preservative-treated lumber is mechanically, and capable of supporting required loads without exceeding allowable design values according to AF&PA's "National Design Specifications for Wood Construction" and its "Supplement." not used Retain first paragraph below instead of above if boron-treated wood is not used, but borate treatment of wood that has become wet is Retain paragraph and applicable subparagraphs below if truss designs are shown on Drawings and if specifying lumber by grade used to help prevent mold and mildew. Delete if site-applied boron treatment is specified in Division 2 Section "Termite Control." and species. If fabricator provides truss design, below can also be retained instead of paragraph above to specify minimum Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label. B. Repair damaged galvanized coatings on exposed surfaces with galvanized repair paint according to ASTM A 780 and

acceptable grades. Verify availability of selections. Retain first paragraph below if truss fabricator designs trusses and requirement for minimum chord sizes is needed to provide stiffer members for nailing

C. Permanent Bracing: Provide wood bracing that complies with requirements for miscellaneous lumber in Division 6 Section manufacturer's written instructions. "Rough Carpentry." Retain paragraph and subparagraph below if an added corrosion-resistant coating of metal connector plates is required. 2.2 TIMBER C. Protective Coating: Clean and prepare exposed surfaces of metal connector plates. Brush apply primer, when part of

Delete this Article if not applicable. Preservative treatment is usually limited to wood exposed in wet and humid locations or coating system, and one coat of protective coating. geographical areas where termite infestation is extensive. See the Evaluations in Division 6 Section "Rough Carpentry" for Apply materials to provide minimum dry film thickness recommended by coating system manufacturer. END OF SECTION 06 17 60 discussion of treatment chemicals; some treatment chemicals increase rate of corrosion of galvanized truss plates. A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated. Factory mark each piece of lumber with grade stamp of grading agency.

Delete first subparagraph below if authorities having jurisdiction require grade stamps on all materials. 2. Provide dressed lumber, S4S. Select one of two options in subparagraph below. Verify availability of lumber with 15 percent maximum moisture content before retaining Provide dry lumber with 19 percent maximum moisture content at time of dressing.

Retain one of first three paragraphs and associated subparagraphs below. Usually retain first if truss fabricator provides truss design. First gives truss fabricator the greatest flexibility in lumber selection, but can only be used if fabricator provides truss design. Grade and Species: For truss chord and web members, provide dimension lumber of any species, graded visually or mechanically, and capable of supporting required loads without exceeding allowable design values according to AF&PA's "National Design Specifications for Wood Construction" and its "Supplement." Retain paragraph and applicable subparagraphs below if truss designs are shown on Drawings and if specifying lumber by grade and species. If fabricator provides truss design, below can also be retained instead of paragraph above to specify minimum acceptable grades. Verify availability of selections. Retain first paragraph below if truss fabricator designs trusses and requirement for minimum chord sizes is needed to provide stiffer members for nailing Permanent Bracing: Provide wood bracing that complies with requirements for miscellaneous lumber in Division 6 Section

"Rough Carpentry."

2.3 METAL CONNECTOR PLATES and list of manufacturers below See paragraph

aphs and	list of manufacturers below. See Divisior
Manufa	cturers: Subject to compliance with requi
1.	Alpine Engineered Products, Inc.
2.	Cherokee Metal Products, Inc.; Masengi
3.	CompuTrus, Inc.
4.	Eagle Metal Products.
5.	Jager Building Systems, Inc.
6.	MiTek Industries, Inc.; a subsidiary of Be
7.	Robbins Engineering, Inc.
-	

TEE-LOK Corporation; a subsidiary of Berkshire Hathaway Inc. Truswal Systems Corporation. General: Fabricate connector plates to comply with TPI 1 Retain one or more of two paragraphs and associated subparagraph below.

C. Hot-Dip Galvanized Steel Sheet: ASTM A 653/A 653M; Structural Steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G60 (Z180) coating designation; and not less than 0.036 inch (0.9 mm) thick. Use for interior locations where for dimensional lumber and timber trusses.

Type 304 stainless steel is usually standard; Type 316 gives better corrosion resistance for exposed applications in coastal environments.

2.4 FASTENERS General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and Α. manufacture

Nails, Brads, and Staples: ASTM F 1667. Standard in paragraph below covers power-driven staples, nails, P-nails, and allied fasteners. Power-Driven Fasteners: NES NER-272. Delete remaining fastener types not required. Screws may be needed to assemble multi-ply girder trusses; bolts are generally only

required for fastening to masonry or steel, expansion anchors for fastening to masonry. Wood Screws: ASME B18.6.1. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563

(ASTM A 563M) hex nuts and, where indicated, flat washers, Use for exposed timber trusses 2.5 METAL TRUSS ACCESSORIES

See Editing Instruction No. 1 in the Evaluations for cautions about naming manufacturers and products. If naming manufacturers or products, retain one of three paragraphs and list of manufacturers below. Refer to Division 1 Section "Product Requirements." A. Basis-of-Design Products: Subject to compliance with requirements, provide products indicated on Drawings or comparable products by one of the following: Cleveland Steel Special

1.	Cleveland Steel Specialty Co.
2.	Harlen Metal Products, Inc.
3.	KC Metals Products, Inc.
4.	Simpson Strong-Tie Co., Inc.
Б	Southeastern Metals Manufacturing Co

Southeastern Metals Manufacturing Co., Inc. USP Structural Connectors.

If retaining first option in first paragraph below, indicate design loads for metal truss accessories on Drawings. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those of basis-of-design products. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating

designation

Paragraph above is typical for most manufacturers and is suitable for most applications. Delete paragraph and subparagraph below if not required. Type 304 is usually standard for stainless steel; Type 316 gives better corrosion resistance for exposed applications in coastal environments.

First five paragraphs below are examples only. Revise to suit Project or delete all if "Basis-of-Design Products" Paragraph is used and they are not needed to provide salient characteristics for products. First paragraph below, including option, is based on Simpson Strong-Tie's "H-2." Truss Tie-Downs (Hurricane or Seismic Ties): Bent strap tie for fastening roof trusses to wall studs below, 2-1/4 inches (57 D. mm) wide by 0.062 inch (1.6 mm) thick. Tie fits over top of truss and fastens to both sides of truss, top plates, and one side of stud

Description in paragraph above is based on Simpson Strong-Tie's "H-7"; paragraph below, on Simpson Strong-Tie's "H-15." Roof Truss Clips: Angle clips for bracing bottom chord of roof trusses at non-load-bearing walls, 1-1/4 inches (32 mm) wide by 0.050 inch (1.3 mm) thick. Clip is fastened to truss through slotted holes to allow for truss deflection. Description in paragraph below is based on MiTek's "Stabilizer." Roof Truss Bracing/Spacers: U-shaped channels, 1-1/2 inches (38 mm) wide by 1 inch (25 mm) deep by 0.040 inch (1.0 mm) thick, made to fit between 2 adjacent trusses and accurately space them apart, and with tabs having metal teeth for fastening to trusses.

2.6 MISCELLANEOUS MATERIALS

Galvanizing Repair Paint: SSPC-Paint 20, with dry film containing a minimum of 94 percent zinc dust by weight. Retain paragraph below if protective coating of exposed face of connectors is required (for galvanized plates used with chemically treated wood or in unusual environmental conditions or exposed to weather). Select one system below or retain both if both are acceptable. Coatings are based on TPI 1 recommendations. Consider using stainless-steel connector plates instead. 2.7 FABRICATION

Cut truss members to accurate lengths, angles, and sizes to produce close-fitting joints. Fabricate metal connector plates to sizes, configurations, thicknesses, and anchorage details required to withstand design

loads for types of joint designs indicated. Assemble truss members in design configuration indicated; use jigs or other means to ensure uniformity and accuracy of assembly with joints closely fitted to comply with tolerances in TPI 1. Position members to produce design camber indicated. Manufacturing tolerances permitted by TPI 1 vary according to length and height of trusses as follows. Length: 1/2 inch (13 mm) up to 30 feet (9.14 m) long, thereafter 3/4 inch (19 mm). Height: 1/4 inch (6.4 mm) up to 60 inches (1524 mm) high, thereafter 1/2 inch

(13 mm). Fabricate wood trusses within manufacturing tolerances in TPI 1. Connect truss members by metal connector plates located and securely embedded simultaneously in both sides of wood members by air or hydraulic press.

PART 3 - EXECUTION

3.1 INSTALLATION

Install wood trusses only after supporting construction is in place and is braced and secured. If trusses are delivered to Project site in more than one piece, assemble trusses before installing.

members or joints by out-of-plane bending or other causes. Install and brace trusses according to TPI recommendations and as indicated. Install trusses plumb, square, and true to line and securely fasten to supporting construction.

Space trusses as indicated, adjust and align trusses in location before permanently fastening. Anchor trusses securely at bearing points; use metal truss tie-downs or floor truss hangers as applicable. Install fasteners through each fastener hole in truss accessories according to manufacturer's fastening schedules and written instructions. Retain first paragraph and subparagraph below if built-up girder trusses are required. TPI 1 states it is truss designer's responsibility to design truss-to-girder connection.

Securely connect each truss ply required for forming built-up girder trusses. Anchor trusses to girder trusses as indicated. Install and fasten permanent bracing during truss erection and before construction loads are applied. Anchor ends of permanent bracing where terminating at walls or beams.

Install bracing to comply with Division 6 Section "Rough Carpentry." Retain subparagraph below if floor trusses are required. TPI 1 permits out-of-plumb tolerance of the lesser of D/50 or 2 inches (50 mm) maximum. Out-of-plane tolerances or bow is limited to the lesser of L/200 or 2 inches (50 mm) maximum. Location variances of 1/4 inch (6.4 mm) and a top-chord bearing gap of 1/2 inch (13 mm) for parallel-chord trusses are also permitted. Install wood trusses within installation tolerances in TPI 1.

Do not cut or remove truss members. Replace wood trusses that are damaged or do not meet requirements

Do not alter trusses in field.

See Editing Instruction No. 1 in the Evaluations for cautions about naming manufacturers and products. Retain one of first two on 1 Section "Product Requirements."

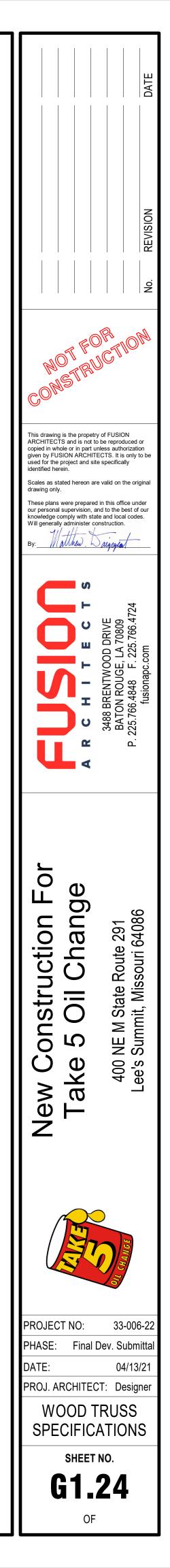
uirements, provide products by one of the following:

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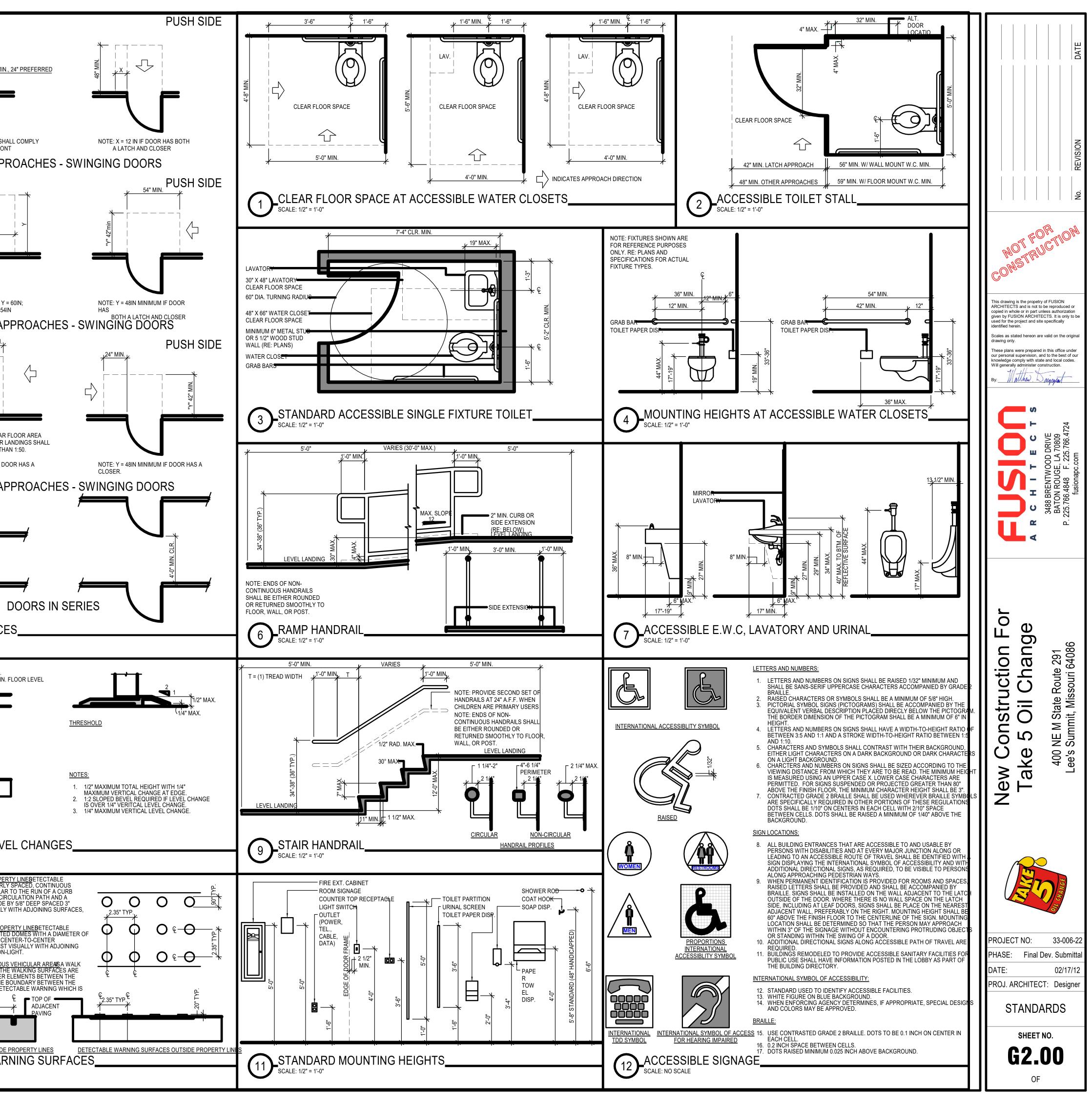
Berkshire Hathaway Inc

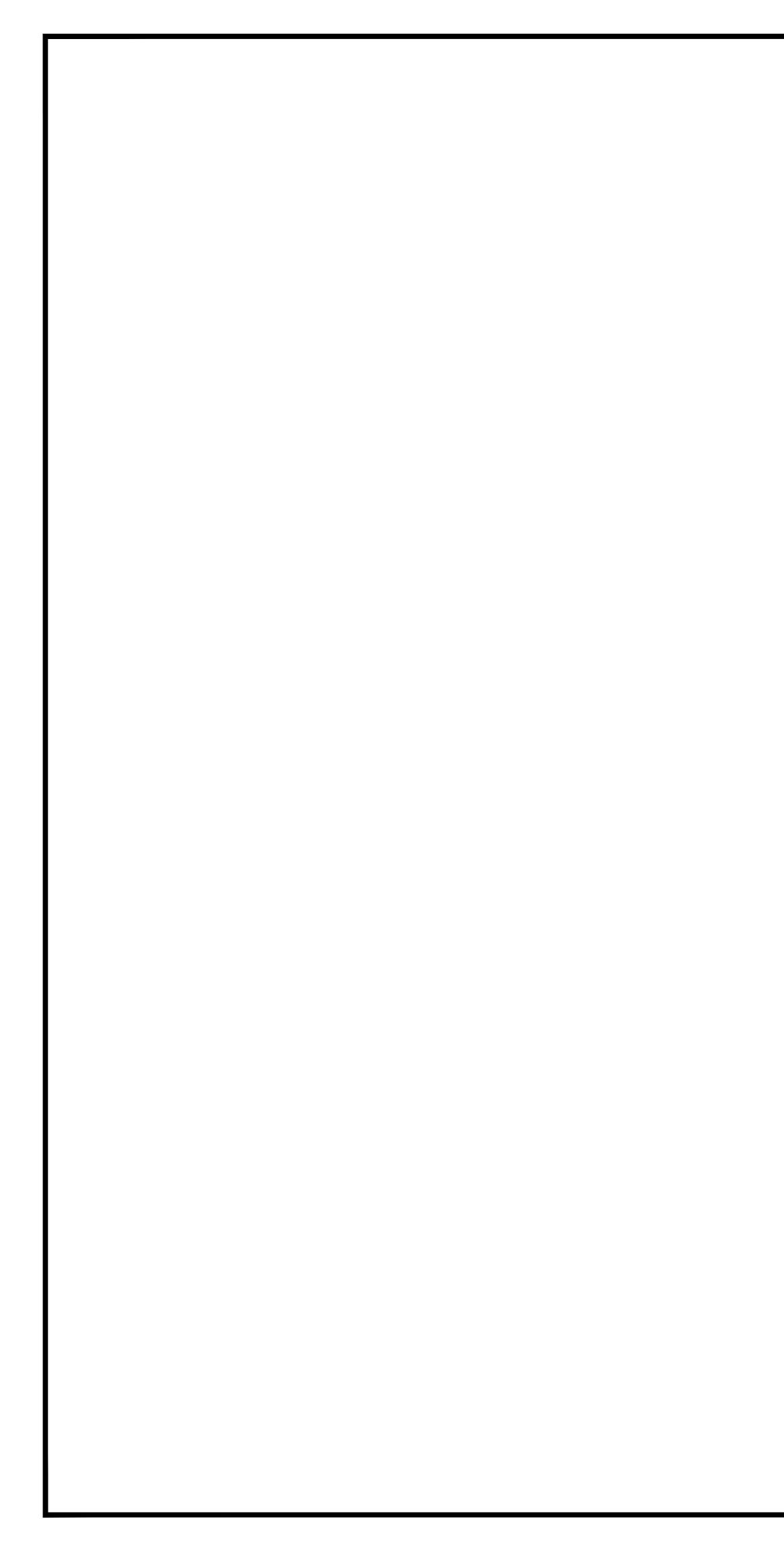
Hoist trusses in place by lifting equipment suited to sizes and types of trusses required, exercising care not to damage truss

3.2 REPAIRS AND PROTECTION



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	ACOU.	ACOUSTIC	FHC	FIRE HOSE CABINET	PL.	PLASTER	
	ADD.	ADDITION or ADDENDUM	FL	FLOOR	PLAS.	PLASTIC	
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	F.C.	FAN COIL	O.H.	OVER HANG	WD.	WOOD	74
F.E. FIRE EXTINGUISHER OAI OUTSIDE AIR INTAKE		FIRE EXTINGUISHER	OAI	OUTSIDE AIR INTAKE	i i		(10) SCALE: 3" = 1'-0"





PROPOSED **TAKE 5 OIL CHANGE**

RTE 291 @ SE LANGSFORD RD LEE'S SUMMIT, MISSOURI



VICINITY MAP N.T.S

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NOTE:

- THIS PROJECT IS TO BE CONSTRUCTED WITHIN THE JURISDICTIONAL BOUNDARIES OF THE CITY OF LEE'S SUMMIT, MO.
- UNLESS OTHERWISE NOTED ALL IMPROVEMENTS SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT, MO STANDARD SPECIFICATIONS AND DRAWINGS.

DRIVEN ASSETS, LLC 2101 PEARL STREET BOULDER, CO 80302

SHEET INDEX

COVER SURVEY	COVER SHEET
ES-1	EROSION CONTROL PLAN
ES-2	EROSION CONTROL DETAILS
C-1	SITE PLAN
<u>2-1.1</u>	JOINT LAYOUT PLAN
C-2	GRADING PLAN
<u>C-2.1</u>	PROFILES
C-2.2	DETENTION BASIN PLAN
C-3	UTILITY PLAN
C-4.1	SITE DETAILS
C-4.2	SITE DETAILS
C-4.3	SITE DETAILS
C-4.4	DRAINAGE DETAILS
C-4.5	DRAINAGE DETAILS
C-4.6	SEWER DETAILS
C-4.7	UTILITY DETAILS
C-4.8	UTILITY DETAILS
C-4.9	UTILITY DETAILS

CAPE

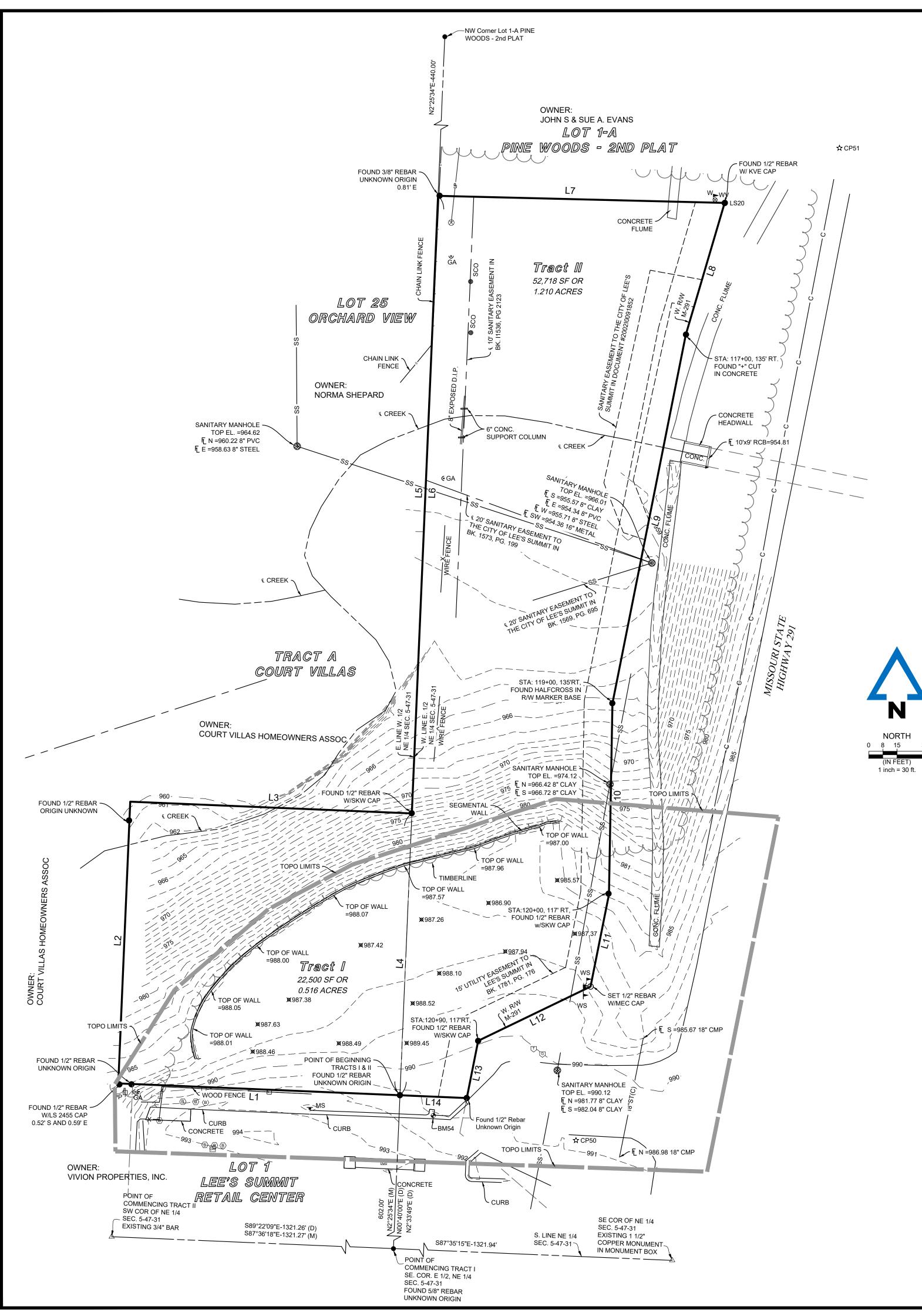
-1.0	LANDSCAPE PLAN
-1.2	LANDSCAPE DETAILS

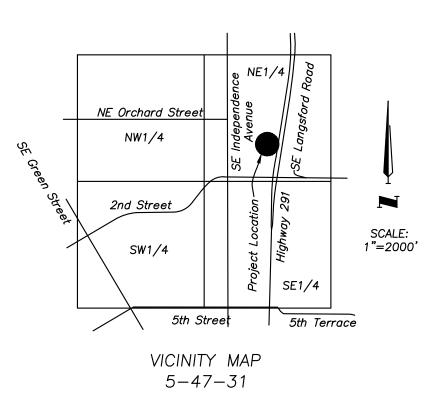
DEVELOPER



HIGH TIDE CONSULTANTS LLC 20NSULTANTS LLC 434 N. COLUMBIA ST, SUITE 200A COVINGTON, LA 70433 www.hightidela.com
STANF A C C M S C
PROPOSED TAKE 5 LEE'S SUMMIT, MISSOURI FOR DRIVEN ASSETS, LLC 2101 PEARL STREET BOULDER, CO 80302
DRAWN KRG CHECKED RCG ISSUED DATE 07/30/2024 ISSUED FOR PERMITTING PROJECT NO. 22-218 FILE 22-218 COVER SHEET COVER

REVISION





LEGEND

GA	= GUY ANCHOR
r MS	= METAL SIGN

- ФРР = POWER POLE
- SSMH = SANITARY SEWER MANHOLE
- = SECTION CORNER = SEWER CLEAN OUT SCO 🛇
- ► W = WATER MARKER
- = WATER VALVE ⊗ WV
- ► WS = WOOD SIGN = BOLLARD

(B)

GM

Ø

- = GAS METER
- = LIGHT POLE w/CONC. BASE

PROJECT CONTROL POINTS TABLE				
CP#	NORTHING	EASTING	ELEV.	DESCRIPTION
50	1002321.14'	2828279.79'	990.78'	CP 50
51	1002848.95'	2828419.99'	979.14'	CP 51
52	1001994.38'	2828211.00'	997.15'	CP 52
53	1002195.40'	2828248.41'	994.99'	BM 53
54	1002334.35'	2828203.90'	991.66'	BM 54

LINE TABLE		
LINE NO.	BEARING	DISTANCE
L1	N87°36'18"W (M) N89°22'09"E (D)	150.00'
L2	N2°25'34"E (M) N00°40'00"E (D)	150.00'
L3	S89°22'09"E (D) S87°36'18"E (M)	150.00'
L4	N00°40'00"E (D) N2°25'34"E (M)	150.00'
L5	N2°33'49"E (D) N2°25'34"E (M)	328.79'
L6	N2°33'49"E (D) N2°25'34"E (M)	478.79'
L7	S88°27'48"E (D) S88°36'03"E (M)	152.53'
L8	S16°24'21"W (M) S16°32'36"W (D)	73.03'
L9	11°15'42"W (M) S11°23'57"W (D)	200.00'
L10	S1°11'44"W (D) S1°03'29"W (M)	101.61'
L11	S11°15'42"W (M) S11°23'57"W (D)	50.00'
L12	S64°13'25"W (M) S64°21'40"W (D)	66.40'
L13	S11°15'42"W (M) S11°23'57"W (D)	31.03'
L14	N87°34'58"W (M) N87°26'43"W (D)	35.61'

N

NORTH

1 inch = 30 ft.

1/2" IRON BAR WITH SKW TRAVERSE CAP

CP 52

1. NORTH 3.0 FEET TO THE SOUTH EDGE OF AN ASPHALT ENTRANCE. 2. SOUTHWEST 8.5 FEET TO THE WEST CURB RETURN. 3. SOUTHEAST 24.0 FEET TO THE SOUTH END OF AN 18"CMP. CP 51

1/2" IRON BAR WITH SKW CAP 1. EAST 10.50 FEET TO THE WEST EDGE OF HIGHWAY 291. 2. WEST 15.5 FEET TO THE EAST EDGE OF A CONCRETE FLUME.

MAG & SHINER IN THE TOP OF A CURB AT THE NORTH END OF YELLOW NO PARKING. 1. WEST 28.0 FEET TO THE EAST END OF AN ISLAND.

2. EAST 41.8 FEET TO THE WEST EDGE OF HIGHWAY 291. 3. SOUTH 36.8 FEET TO A FIRE HYDRANT. **BENCHMARK 53** ELEV.: 994.99

SET + CUT THE NORTH BOLT TOP FLANGE OF A FIRE HYDRANT ±150' SOUTHEAST OF THE SOUTHEAST CORNER OF THIS SURVEY.

BENCHMARK 54 ELEV.: 991.62 EXISTING SQUARE CUT ON BACK OF CURB 50'± EAST NORTHEAST OF THE NORTHEAST CORNER OF MEINEKE ON THE NORTH SIDE DRIVE AT THE FLUME.



UTILITY WARNING

TOPOGRAPHIC SURVEY

SURVEY PREPARED FOR DRIVEN ASSETS, LLC 2101 PEARL STREET BOULDER, CO. 80302 TODD MINIS, MANAGING PARNTER todd@drivenassets.com

SURVEY NOTES

1. INFORMATION AS SHOWN FOR UNDERGROUND UTILITIES HAS BEEN COMPILED FROM THE RECORDS OF VARIOUS UTILITY COMPANIES CONCERNED, AND AS MARKED IN THE FIELD BY THE MISSOURI ONE CALL SYSTEM, 1 (800) 344-7483. WHEN PRECISE LOCATIONS OF UNDERGROUND UTILITIES ARE NEEDED PRIOR TO EXCAVATION OR CONNECTIONS, THE VARIOUS UTILITY COMPANIES CONCERNED ARE TO FURNISH A CREW TO POINT OUT THE LOCATIONS AT THE JOB SITE. Missouri One Call Ticket #232351453.

- 3. CONTOURS SHOWN HEREON ARE 1 FOOT INTERVALS AND BASED NAVD88.
- 4. BASIS OF BEARINGS: MISSOURI STATE PLANE, WEST ZONE.
- 5. CLASS OF SURVEY: URBAN
- 6. WE HAVE REVIEWED THE "FLOOD INSURANCE RATE MAP", COMMUNITY PANEL NO. 29095C0436G HAVING AN EFFECTIVE JANUARY 20, 2017 AS PUBLISHED BY FEDERAL EMERGENCY MANAGEMENT AGENCY. OUR REVIEW OF THIS MAP INDICATES THAT THIS PARCEL OF LAND LIES WITHIN ZONE X OTHER FLOOD AREAS, WHICH IS "AREAS OF 0.2%; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE: AND AREAS PROTECTED BY LEVEES FORM 1% ANNUAL CHANCE FLOOD."

LEGAL DESCRIPTION PER TITLE COMMITMENT

TRACT I:

THE SOUTH 150 FEET OF THE EAST 150 FEET OF THE NORTH 300 FEET OF THE SOUTH 902 FEET OF THE EAST 880 FEET OF THE WEST ONE HALF OF THE NORTHEAST QUARTER OF SECTION 5. TOWNSHIP 47. RANGE 31. IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF SAID SECTION 5, TOWNSHIP 47, RANGE 31; THENCE SOUTH 89 DEGREES, 22 MINUTES, 09 SECONDS EAST ALONG THE SOUTH LINE OF THE WEST ONE HALF OF SAID QUARTER SECTION, A DISTANCE OF 1321.26 FEET TO THE SOUTHEAST CORNER OF SAID WEST ONE HALF; THENCE NORTH 00 DEGREES, 40 MINUTES, 00 SECONDS EAST ALONG THE EAST LINE OF SAID WEST ONE HALF, A DISTANCE OF 602.00 FEET TO THE POINT OF BEGINNING; THENCE NORTH 89 DEGREES, 22 MINUTES, 09 SECONDS EAST, PARALLEL WITH THE SOUTH LINE OF SAID WEST ONE HALF, A DISTANCE OF 150.00 FEET; THENCE NORTH 00 DEGREES, 40 MINUTES, 00 SECONDS EAST, PARALLEL WITH THE EAST LINE OF SAID WEST ONE HALF, A DISTANCE OF 150.00 FEET; THENCE SOUTH 89 DEGREES, 22 MINUTES, 09 SECONDS EAST, PARALLEL WITH THE SOUTH LINE OF SAID WEST ONE HALF, A DISTANCE OF 150.00 FEET TO A POINT ON THE EAST LINE OF SAID WEST ONE HALF; THENCE SOUTH 00 DEGREES, 40 MINUTES, 00 SECONDS WEST ALONG SAID EAST LINE, A DISTANCE OF 150.00 FEET TO THE POINT OF BEGINNING.

TRACT II:

COMMENCING AT THE SOUTHWEST CORNER OF THE EAST 1/2 OF THE NORTHEAST 1/4 OF SECTION 5, TOWNSHIP 47, RANGE 31, LEE'S SUMMIT, JACKSON COUNTY, MISSOURI; THENCE ALONG THE WEST LINE OF SAID 1/2 OF 1/4 SECTION NORTH 2 DEGREES, 33 MINUTES, 49 SECONDS EAST 602 FEET TO THE TRUE POINT OF BEGINNING OF THIS TRACT; THENCE ALONG SAID WEST LINE NORTH 2 DEGREES, 33 MINUTES, 49 SECONDS EAST 478.79 FEET; THENCE SOUTH 88 DEGREES, 27 MINUTES, 48 SECONDS EAST 152.53 FEET TO A POINT ON THE WEST LINE OF THE RIGHT-OF-WAY OF M-291; THENCE ALONG SAID RIGHT-OF-WAY LINE AS FOLLOWS; SOUTH 16 DEGREES, 32 MINUTES, 36 SECONDS WEST 73.03 FEET TO A POINT 135 FEET OPPOSITE CENTER LINE STATION 117+00; THENCE SOUTH 11 DEGREES, 23 MINUTES, 57 SECONDS WEST 200 FEET TO A POINT 135 FEET OPPOSITE CENTER LINE STATION 119+00: THENCE SOUTH 1 DEGREE, 11 MINUTES, 44 SECONDS WEST 101.61 FEET TO A POINT 117 FEET OPPOSITE CENTER LINE STATION 120+00; THENCE PARALLEL TO SAID CENTER LINE SOUTH 11 DEGREES, 23 MINUTES, 57 SECONDS WEST 50 FEET: THENCE SOUTH 64 DEGREES, 21 MINUTES, 40 SECONDS WEST 66.40 FEET TO A POINT 170 FEET OPPOSITE CENTER LINE STATION 120+90; THENCE PARALLEL TO SAID CENTER LINE SOUTH 11 DEGREES, 23 MINUTES, 57 SECONDS WEST 31.03 FEET; THENCE LEAVING SAID RIGHT-OF-WAY NORTH 87 DEGREES, 26 MINUTES, 43 SECONDS WEST 35.61 FEET TO THE TRUE POINT OF BEGINNING

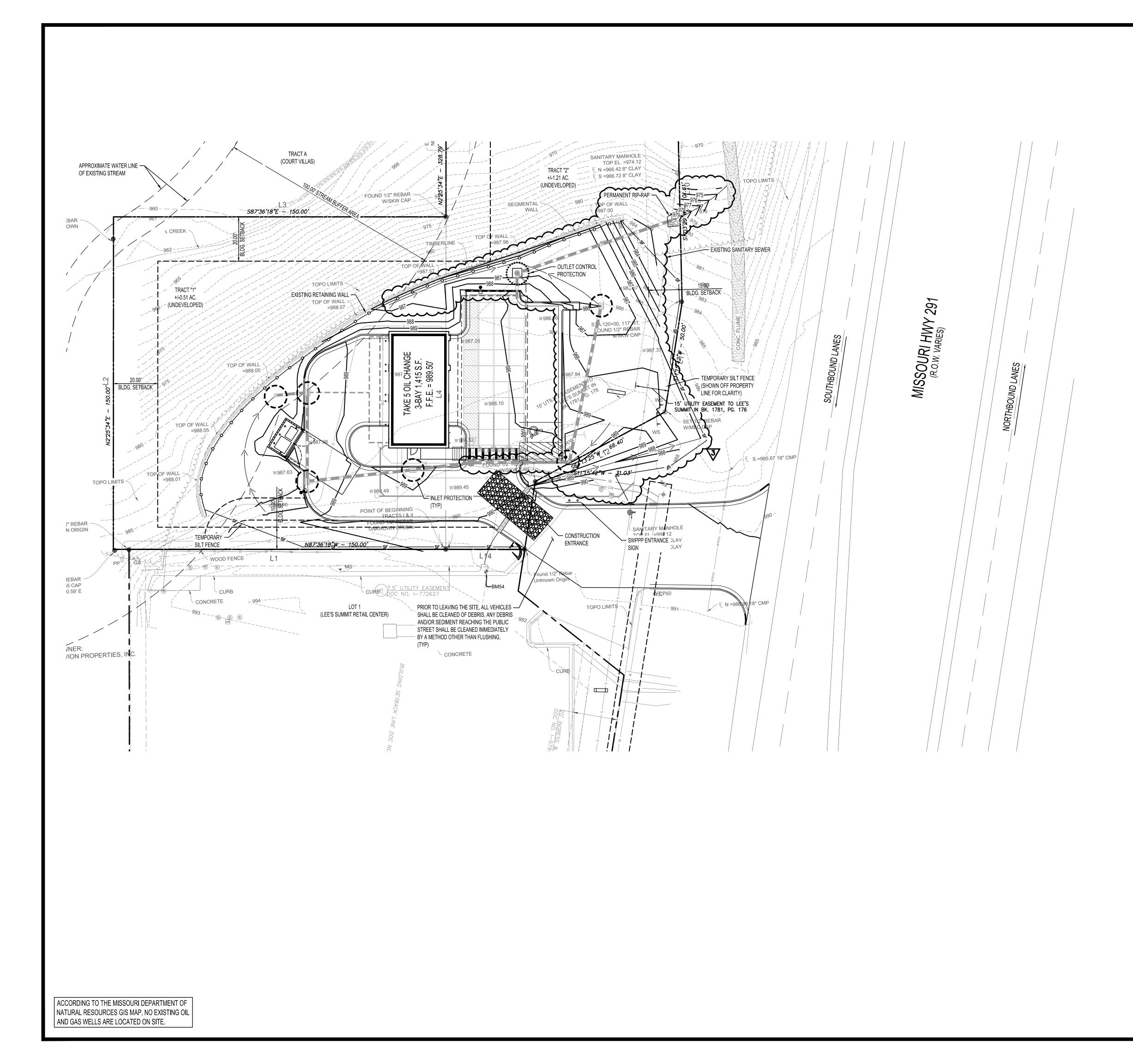
THE UTILITIES DEPICTED ON THIS DOCUMENT HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

REVISIONS LEE'S SUMMIT, JACKSON CO. MISSOUIR SEC. 5-T47-R31 2023001249-000 9/13/2023



J.BURNETTE SURVEYOR S.WHITAKER CREW CHIEF SHEET NO 01/01

ENGINEER



EROSION CONTROL NOTES:

- SEDIMENT AND EROSION CONTROL FACILITIES AND STORM DRAINAGE FACILITIES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION.
 CONTRACTOR SHALL MAINTAIN EROSION CONTROL FACILITIES DURING THE ENTIRE
- CONSTRUCTION PERIOD. FACILITIES ARE NOT TO BE REMOVED UNTIL COMPLETION OF THE PROJECT.
 ADDITIONAL EROSION CONTROL BMP'S MAY BE REQUIRED AS DEEMED NECESSARY BY
- GOVERNING AUTHORITIES. 4. SILT FENCES SHALL BE CLEANED OR REPLACED WHEN SILT BUILDS UP TO $\frac{1}{2}$ THE HEIGHT
- OF THE FENCE. 5. EROSION CONTROL MEASURES ARE TO BE INSPECTED WEEKLY AND AFTER EACH
- RAINFALL AND REPAIRED AS NECESSARY.
 ALL GRADED AREAS SHALL BE STABILIZED WITH A PERMANENT FAST GROWING COVER AND/OR MULCH UPON COMPLETION OF GRADING OPERATIONS. COMPLETION OF GRADING OPERATIONS DOES NOT MEAN AT THE END OF THE PROJECT. AS SOON AS FINAL GRADES ARE ESTABLISHED IN AN UNPAVED AREA, THE CONTRACTOR SHALL STABILIZE WITH A TEMPORARY GRASS OR PERMANENT SOD. IF A TEMPORARY GRASS IS APPLIED, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO APPLY A PERMANENT SEED OR SOD AT THE PROPER TIME OF YEAR.
- FILL SLOPES SHOULD BE PLANTED AS SOON AS AN AREA OF THE SITE IS BROUGHT TO FINAL GRADE. SURFACE RUNOFF SHALL BE INTERCEPTED AT THE TOP OF TEMPORARY AND PERMANENT SLOPES DURING CONSTRUCTION SO THAT WATER IS NOT ALLOWED TO FLOW OVER THE SLOPE FACE.
- 8. THE GENERAL CONTRACTOR AND THE GRADING CONTRACTOR SHALL REVIEW THEIR GRADING SEQUENCE TO INSURE THAT THE LEAST AMOUNT OF LAND POSSIBLE AT ANY ONE TIME IS DISTURBED WITHOUT PERMANENT STABILIZATION.
- 9. CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION ENTRANCES PRIOR TO ANY EARTHWORK OPERATIONS.
 10. CONTRACTOR SHALL MAINTAIN SILT FENCE FOR THE DURATION OF THE PROJECT UNTIL
- ACCEPTED BY THE OWNER AT NO EXPENSE TO OWNER. 11. CONTRACTOR SHALL INSPECT ON A DAILY BASIS FOR NEEDED REMOVAL OF ANY
- ACCUMULATED SILTS, DEBRIS, OR REPAIR OF DAMAGED SILT FENCE AT NO ADDITIONAL EXPENSE TO OWNER.PRIOR TO CONSTRUCTION, THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN
- HEREON SHALL BE IN PLACE. CLEARING AND GRUBBING OPERATIONS WILL BE ENGAGED
 IN ONLY AS NECESSARY TO ALLOW THE PLACEMENT OF EROSION AND SEDIMENT
 CONTROL MEASURES AS SHOWN HEREON UNTIL ALL SUCH MEASURES ARE IN PLACE.
 13. THE CONTRACTOR SHALL OBTAIN AND COMPLY WITH ALL MISSOURI DEPT. OF NATURAL
- THE CONTRACTOR SHALL OBTAIN AND COMPLY WITH ALL MISSOURI DEPT. OF NATURAL RESOURCES/NPDES STORM WATER GENERAL PERMIT REQUIREMENTS THROUGHOUT THE DURATION OF CONSTRUCTION.
 CONTRACTOR SHALL UPDATE MAP AS NEEDED DURING CONSTRUCTION TO INDICATE
- LOCATIONS OF PORTABLE TOILETS, MATERIAL STORAGE AREAS, CONCRETE WASHOUTS, ETC. AND TO DOCUMENT BMP INSTALLATION AND CHANGES.

BMP MAINTENANCE EROSION NOTES:

ALL MEASURES STATED ON THIS SITE MAP SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION & SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, & REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

- INLET PROTECTION DEVICES & BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
 ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS
- ALE SEEDED AREAS SHALL BE CHECKED REGOLARET TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, & RESEEDED AS NEEDED.
 SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF
- THE HEIGHT OF THE SILT FENCE.
 4. THE CONSTRUCTION ENTRANCE / EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
- THE TEMPORARY PARKING & STORAGE AREA PROVIDED BY CONTRACTOR SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING & STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
- PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS. ANY DEBRIS &/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

EROSION CONTROL LEGEND

CONSTRUCTION ENTRANCE

INLET PROTECTION

OUTLET CONTROL PROTECTION

TEMPORARY SILT FENCE

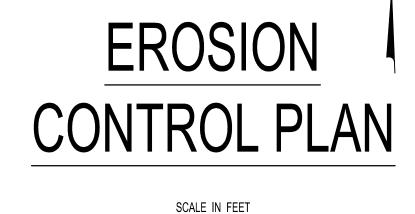
PERMANENT RIP-RAP

STORM DRAIN PIPE

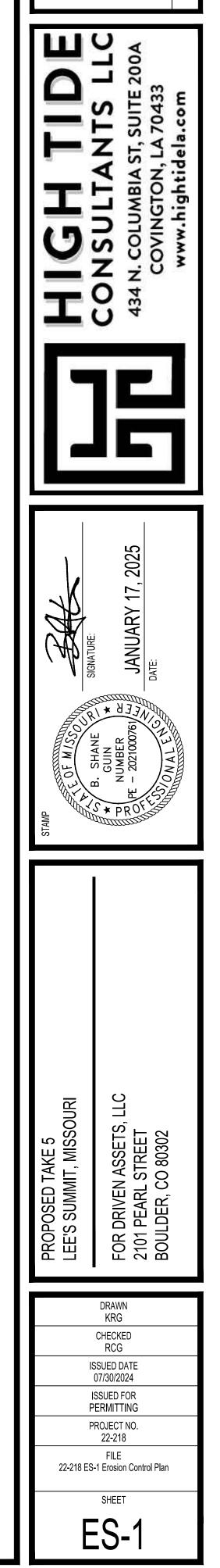
REFER TO SURVEY SHEETS FOR

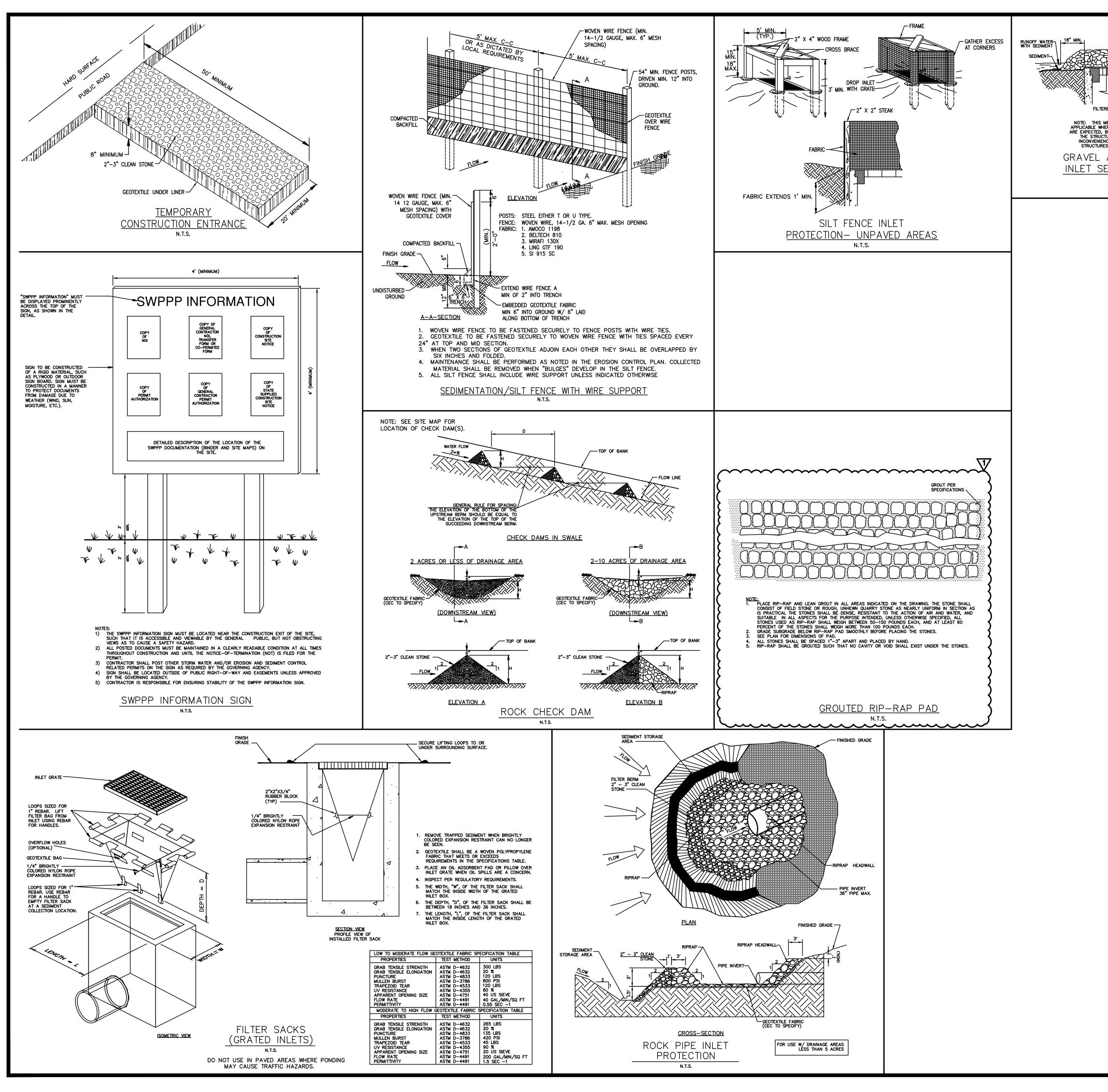
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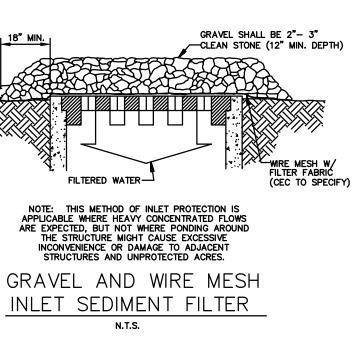




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REVISED PER CITYKRG31/17/2025
REVISED PER CITYKRG







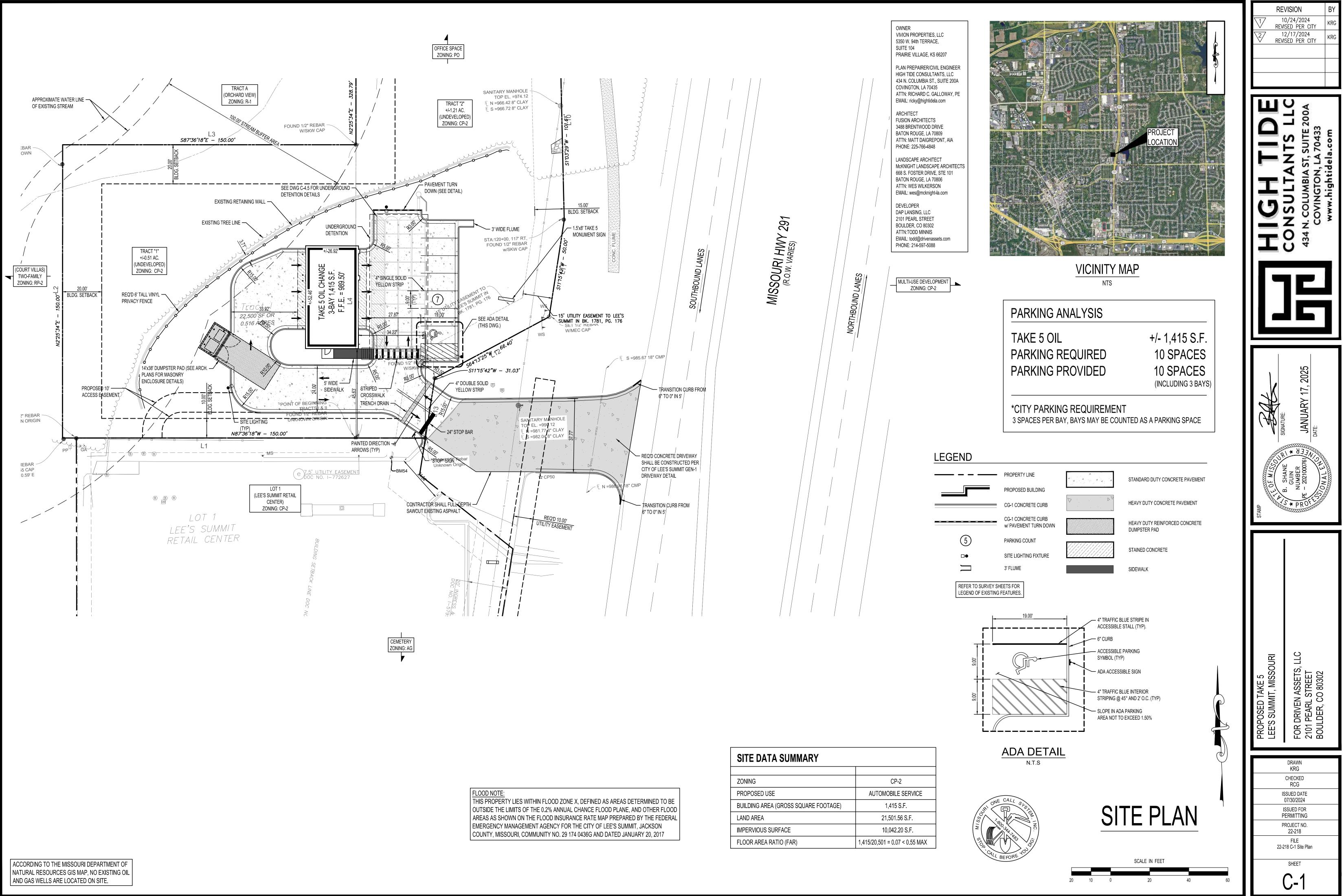
HOH TIDE	CONSULIANTS LLC 434 N. COLUMBIA ST, SUITE 200A COVINGTON, LA 70433 www.hightidela.com
STAMP STAMP A F OF M/SSOUND B. SHANE JUNE SIGNATURE:	PE - 2021000761 Level Date: Date: Date: D
PROPOSED TAKE 5 LEE'S SUMMIT, MISSOURI	FOR DRIVEN ASSETS, LLC 2101 PEARL STREET BOULDER, CO 80302
IS (IS PI PI	DRAWN KRG CHECKED RCG SUED DATE D7/30/2024 SSUED FOR ERMITTING ROJECT NO. 22-218 FILE 218 C-4 Details SHEET SHEET SHEET

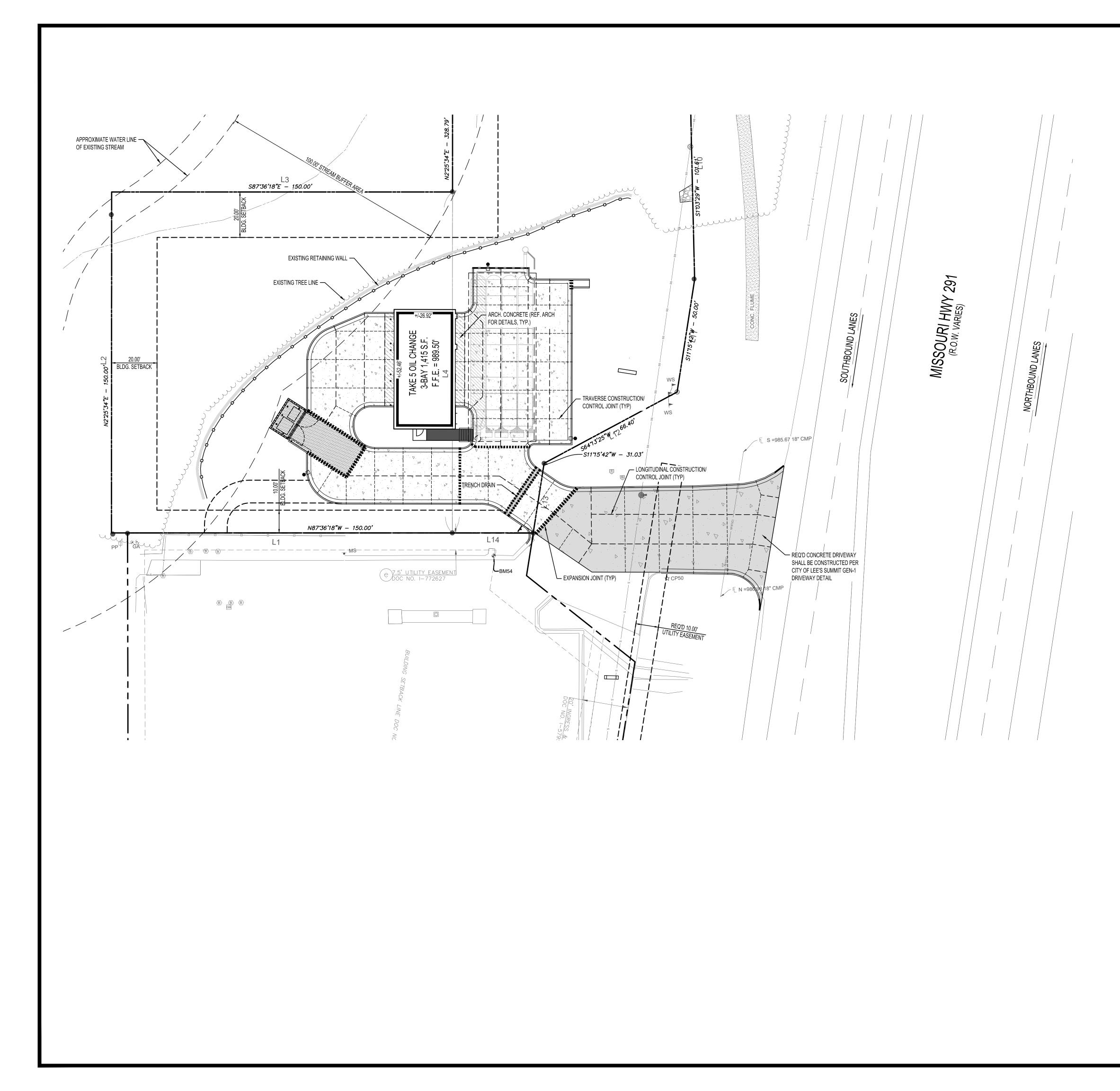
REVISION

10/24/2024

REVISED PER CITY

EROSION CONTROL DETAILS





GENERAL PAVING NOTES

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY OF LEE'S SUMMIT AND MODOTD REGULATIONS

REVISION

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2025

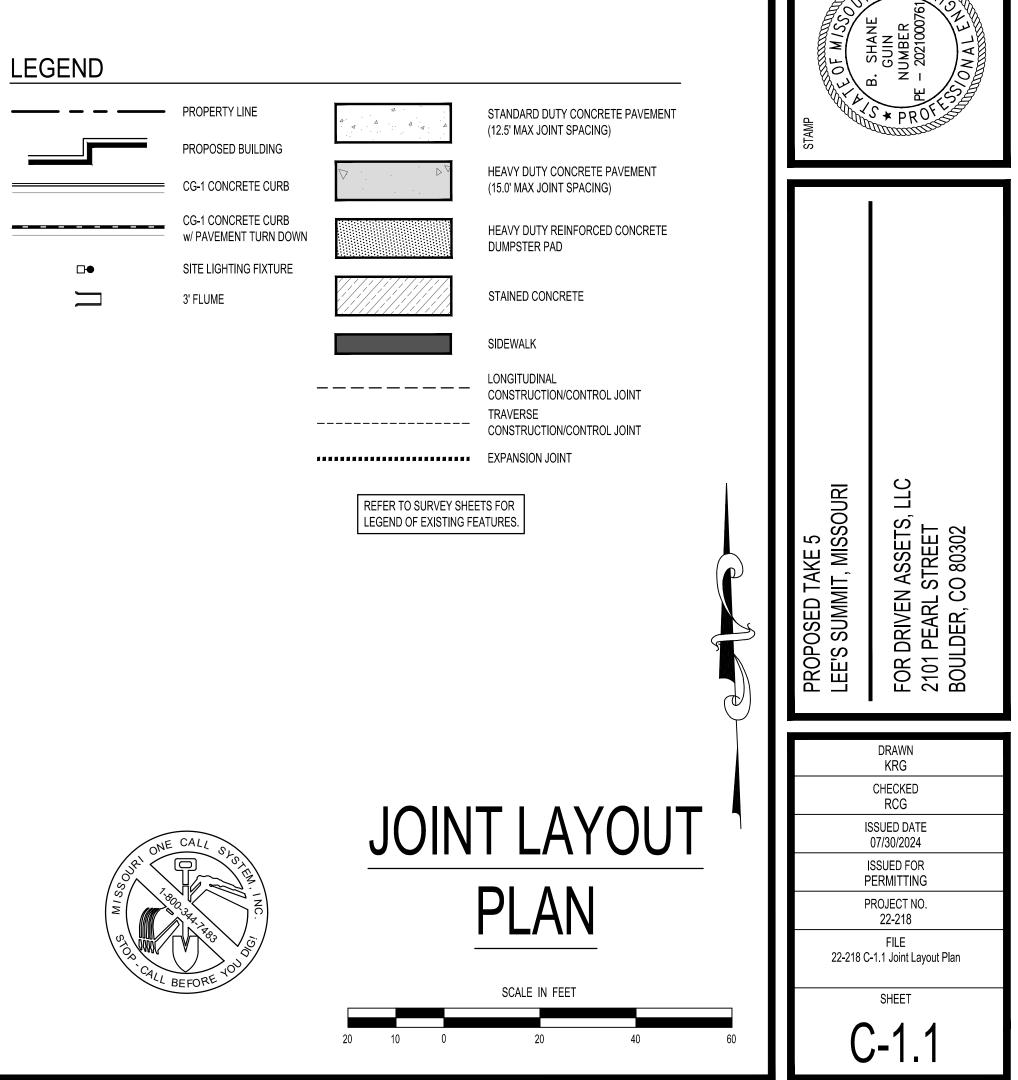
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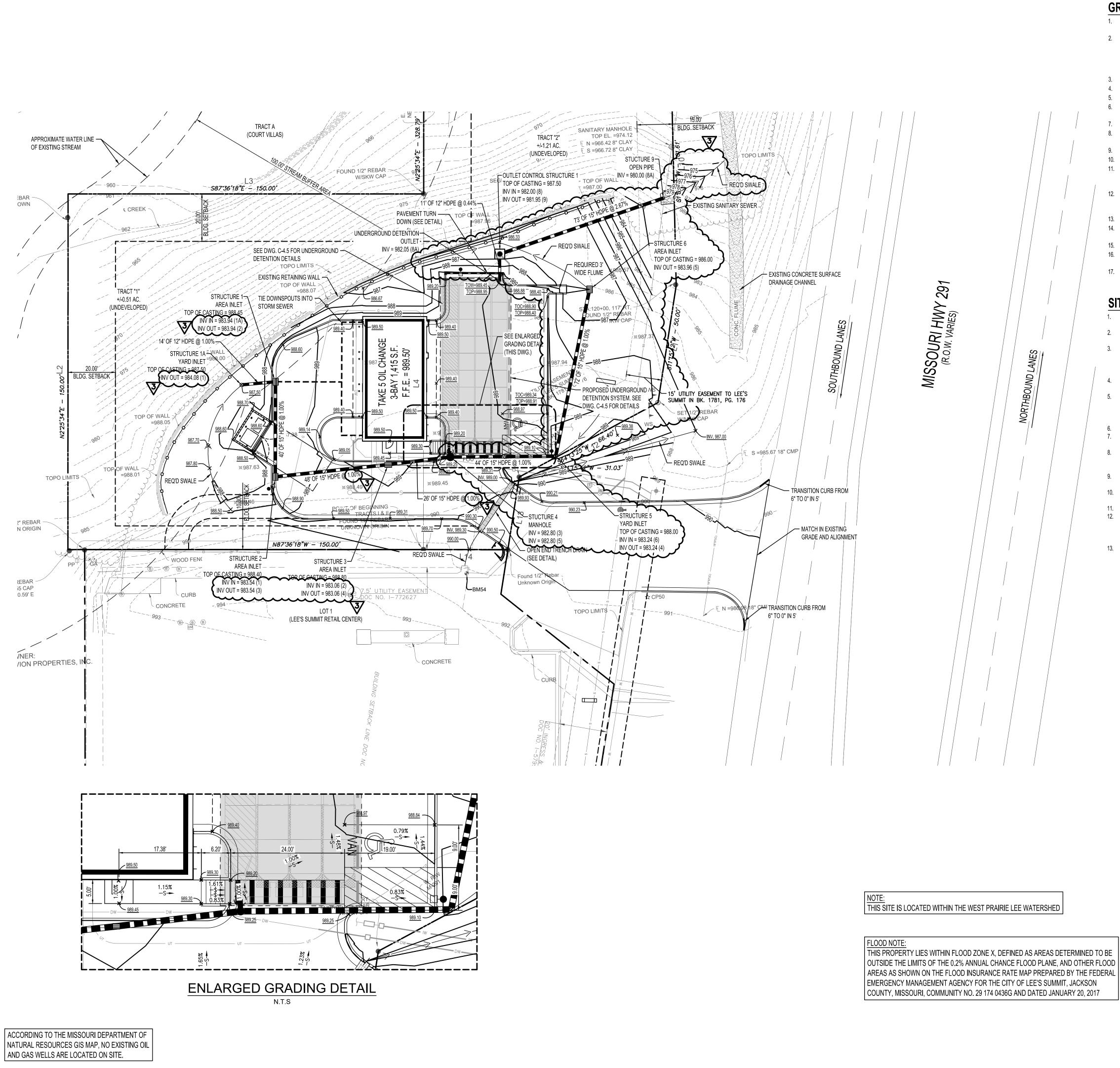
JANUARY

- AND CODES AND O.S.H.A. STANDARDS.
 2. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, PRECISE BUILDING DIMENSIONS AND EXACT
- BUILDING UTILITY ENTRANCE LOCATIONS.CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING BENCHMARK.
- 4. ALL NECESSARY PERMITS AND APPROVALS FROM AGENCIES GOVERNING THE CONSTRUCTION OF THIS
- WORK SHALL BE SECURED PRIOR TO BEGINNING CONSTRUCTION.
 5. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL AREAS INDICATED TO REMAIN
 UNDIGITURED OD TO PERMAN AN DUFFERD ALL PROPERTY CONTRACTOR AND DEPLACING ALL DING DAMAGE
- UNDISTURBED OR TO REMAIN AS BUFFERS, ALL PROPERTY CORNERS, AND REPLACING ALL PINS DAMAGED OR ELIMINATED DURING CONSTRUCTION.
 6. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OR DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION OF THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OR DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION.
- CONSTRUCTION SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC.
 REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS.
 ANY WORK IN THE RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH MISSOURI DEPARTMENT
- OF TRANSPORTATION AND DEVELOPMENT'S STANDARD DRAWINGS AND SPECIFICATIONS.
 8. PAVEMENT JOINTS SHOWN HEREIN ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE PAVEMENT JOINT DETAILS PROVIDED IN THE DETAIL SHEETS.
- PAVEMENT JOINTS SHALL BE SAWCUT AS SOON AS THE CONCRETE HAS REACHED SUFFICIENT STRENGTH TO SUPPORT THE SAWING EQUIPMENT AND TEARING OF CONCRETE DOES NOT OCCUR.
- 10. JOINTS SHALL BE SEALED WITH APPROVED EXTERIOR PAVEMENT JOINT SEALANTS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. JOINTS SHALL BE CELAN AND DRY PRIOR TO THE APPLICATION OF THE SEALANT.
- 11. CONSTRUCT EXPANSION, WEAKENED PLANE CONTROL (CONTRACTION), AND CONSTRUCTION JOINTS STRAIGHT WITH FACE PERPENDICULAR TO THE CONCRETE SURFACE.

JOINT LAYOUT NOTES

- 1. A SUGGESTED JOINT LAYOUT PLAN HAS BEEN PROVIDED. THE CONTRACTOR SHALL ADJUST THE JOINT
- LAYOUT AS REQUIRED TO MEET ALL SPACING REQUIREMENTS AND ADJUST TO CONSTRUCTION SEQUENCING.
 TRANSVERSE JOINTS SHALL BE PLACED PERPENDICULAR TO THE LONGITUDINAL JOINTS SHOWN AT A SPACING NO LARGER THAN 1.3 TIMES THE SPACING OF THE LONGITUDINAL JOINT. FOR EXAMPLE, IF THE SPACING BETWEEN THE LONGITUDINAL JOINTS IS 10 FEET, THE MAXIMUM SPACING FOR THE ASSOCIATED TRANSVERSE JOINT SHALL BE 13 FEET.
- 3. IN THE AREAS WITH HORIZONTAL CURVES, THE LONGITUDINAL JOINTS SHALL BE TRUE OFFSETS OF THE CURVES. THE TRANSVERSE JOINTS SHALL BE RADIAL TO THAT HORIZONTAL CURVE. SEE THE LAYOUT SHOWN AND APPLY THE SAME PRINCIPAL TO THE REMAINDER OF THE SITE.
- WHERE JOINTS DO NOT FALL PERPENDICULAR TO A PAVEMENT EDGE, A TWO FOOT MINIMUM LENGTH OF JOINT SHALL BE TURNED PERPENDICULAR TO THE PAVEMENT EDGE TO AVOID "POINTS" IN PANELS.
- 5. SMOOTH BARS IN RACKS SHALL BE HORIZONTAL AND PERPENDICULAR TO THE JOINT.
- 6. CRACKED PANELS OR SPALLS AT JOINT OR PAVEMENT EDGES SHALL BE REPAIRED OR THE PANEL COMPLETELY REMOVED AND REPLACED AT THE COMPLETE DISCRETION OF THE ENGINEER. THE GENERAL LOGIC TO BE USED BY THE ENGINEER FOLLOWS FAA ADVISORY CIRCULAR 150-5370-10F DATED 9/30/2011 UNDER SECTIONS 501-4.19 AND 501-4.20 BUT THE FINAL CRITERIA IS LEFT UP TO THE ENGINEER. ANY REQUIRED REPAIRS INCLUDING COMPLETE REMOVAL OF THE PANEL SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
- 7. REFER TO PAVING DETAIL SHEET FOR JOINT DETAILS.
- 8. JOINTS SHALL BE 90° AT THE FACE OF CURB.
- NO PANEL SHALL BE SMALLER THAN 4' IN ANY DIRECTION. FOR RECTANGULAR PANELS, THE LENGTH OF THE LONG SIDE SHALL NOT EXCEED TWICE THE LENGTH OF THE SHORT SIDE.
 ANOLD INDESOURAD OUTPEOURAD
- AVOID IRREGULAR SHAPES.
 USE SELF LEVELING SILICONE SEALANT. COLOR TO MATCH PAVEMENT.
- ALL EARTHWORK, SITE PREPARATION, AND PAVEMENT CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS.
- 13. JOINT LAYOUT SHALL BE ADJUSTED IN THE FIELD AS NECESSARY TO ACCOMMODATE EXACT LOCATIONS OF STRUCTURES INCLUDING MANHOLES, CATCH BASINS, FLUMES, STOOPS, ETC.





GRADING NOTES

CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING FEATURES, INCLUDING REMOVAL OF ANY EXISTING UTILITIES UNLESS OTHERWISE NOTED ON THE PLANS. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY LIMITS.

2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

3. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.

4. PRECAST STRUCTURES MAY BE USED AT CONTRACTORS OPTION. 5. EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.

6. IF ANY EXISTING STRUCTURES SHOWN TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.

ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT. 8. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".

9. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.

CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.

11. TOPOGRAPHIC INFORMATION IS TAKEN FROM A TOPOGRAPHIC SURVEY BY MCCLURE. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.

12. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS ESTABLISHED.

13. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME. 14. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARD OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES.

15. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.

16. ALL PIPES AND STRUCTURES WITHIN THE STREET RIGHT-OF-WAY SHALL BE PER MISSOURI DEPARTMENT OF TRANSPORTATION STANDARDS & SPECIFICATIONS, LATEST EDITION AND MODOT STANDARD DETAILS.

17. DRAINAGE STRUCTURES SHALL BE PRECAST OR CAST-IN-PLACE CONCRETE IN ACCORDANCE WITH SPECIFICATIONS PROVIDED. REFER TO DETAIL SHEETS FOR DETAILS OF AREA INLETS AND MANHOLES. ALL INLET FRAMES AND GRATES SHALL BE VULCAN FOUNDRY CORP. CATALOG # V-4863 OR EQUAL.

SITE AND PAD PREPARATION NOTES

1. ALL EARTHWORK, PAD AND SITE PREPARATION SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING SERVICES REPORT PREPARED BY TERRACON CONSULTANTS, INC., DATED NOVEMBER 2, 2023, TERRACON PROJECT NO. 02225258. THE CONTRACTOR SHALL OBTAIN A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER, BECOME FAMILIAR WITH THE REPORT AND RECOMMENDATIONS

AND SHALL FOLLOW THE RECOMMENDATIONS AND REQUIREMENTS OF THE REPORT. SITE PREPARATION SHALL INCLUDE THE STRIPPING OF EXISTING PAVEMENT SECTIONS, VEGETATION, ORGANICS, SILTY SOILS, AND LOOSE, SOFT OR

OTHERWISE UNSUITABLE MATERIAL. COMPLETE STRIPPING OF THE ROOT MAT SHALL BE PERFORMED IN THE PROPOSED BUILDING AND PAVEMENT AREAS. STRIPPED MATERIALS CONSISTING OF VEGETATION AND ORGANIC MATERIALS SHALL BE WASTED OFF SITE. THE ACTUAL STRIPPING AND UNDERCUTTING DEPTHS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION. THE SOILS WITHIN THE PLANNED BUILDING AREA SHALL BE FURTHER UNDERCUT AS NECESSARY TO ACCOMMODATE PLACEMENT OF THE RECOMMENDED

24-INCH THICK LVC LAYER BELOW FLOOR SLABS. THE UNDERCUT AREAS SHALL EXTEND A MINIMUM OF 5 FEET LATERALLY OUTSIDE THE BUILDING WALL LINES. FOLLOWING INITIAL STRIPPING AND ANY NECESSARY UNDERCUTTING, THE EXPOSED SOILS SHALL BE PROOFROLLED. A TERRACON REPRESENTATIVE SHOULD OBSERVE THE PROOFROLLING. PROOFROLLING CAN BE ACCOMPLISHED USING A LOADED TANDEM-AXLE DUMP TRUCK WITH A GROSS WEIGHT OF AT LEAST 20 TONS, OR SIMILARLY LOADED EQUIPMENT. AREAS THAT DISPLAY EXCESSIVE DEFLECTION (PUMPING) OR RUTTING DURING PROOFROLL OPERATIONS SHOULD BE IMPROVED BY SCARIFICATION/COMPACTION OR BY REMOVAL AND REPLACEMENT WITH ENGINEERED FILL

SEE GEOTECHNICAL REPORT FOR FILL MATERIAL TYPES, ACCEPTABLE LOCATION FOR PLACEMENT, AND FILL COMPACTION REQUIREMENTS. ALL GRADES MUST PROVIDE EFFECTIVE DRAINAGE AWAY FROM THE BUILDING DURING AND AFTER CONSTRUCTION AND SHOULD BE MAINTAINED THROUGHOUT THE LIFE OF THE STRUCTURE.

THE CONSTRUCTION PHASE DRAINAGE SHOULD BE CONSIDERED IN THE DEVELOPMENT OF THE PROJECT OVERALL GRADING AND DRAINAGE PLAN. THE POSSIBLE POOR DRAINAGE CONDITIONS CAN LEAD TO INSTABILITY IN THE AREAS AROUND THE BUILDING AND HAMPER CONSTRUCTION PROGRESS. THE SITE GRADING AND GENERAL CONTRACTOR SHOULD CONSIDER THEIR MEANS AND METHODS TO MAINTAIN DRAINAGE DURING THE CONSTRUCTION PHASE. EXPOSED SUBGRADES SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE SO THAT SATURATION OF THE SUBGRADES IS AVOIDED. SURFACE WATER SHALL NOT BE PERMITTED TO ACCUMULATE ON THE SITE.

10. UPON COMPLETION OF FILLING AND GRADING, CARE SHOULD BE TAKEN TO MAINTAIN THE SUBGRADE WATER CONTENT PRIOR TO CONSTRUCTION OF FLOOR SI ABS 11. CONSTRUCTION TRAFFIC OVER THE COMPLETED SUBGRADES SHOULD BE AVOIDED TO THE EXTENT PRACTICAL

12. THE SITE SHOULD ALSO BE GRADED TO PREVENT PONDING OF SURFACE WATER ON THE PREPARED SUBGRADES OR IN EXCAVATIONS. WATER COLLECTING OVER, OR ADJACENT TO, CONSTRUCTION AREAS SHOULD BE REMOVED. IF THE SUBGRADE DESICCATES, SATURATES, OR IS DISTURBED, THE AFFECTED MATERIAL SHOULD BE REMOVED, OR THE MATERIALS SHOULD BE SCARIFIED, MOISTURE CONDITIONED, AND RECOMPACTED, PRIOR TO FLOOR SLAB CONSTRUCTION.

13. AS A MINIMUM, EXCAVATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH OSHA 29 CFR, PART 1926, SUBPART P, "EXCAVATIONS" AND ITS APPENDICES, AND IN ACCORDANCE WITH ANY APPLICABLE LOCAL, AND/OR STATE REGULATIONS.

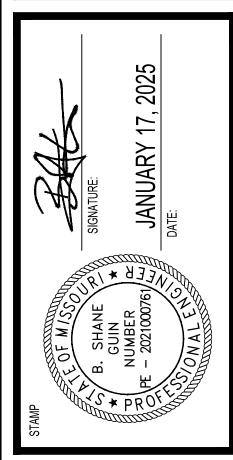
> SEE TERRACON GEOTECHNICAL REPORT DATED 11/2/2023 FOR ALL SITE AND PAD PREPARATION REQUIREMENTS.

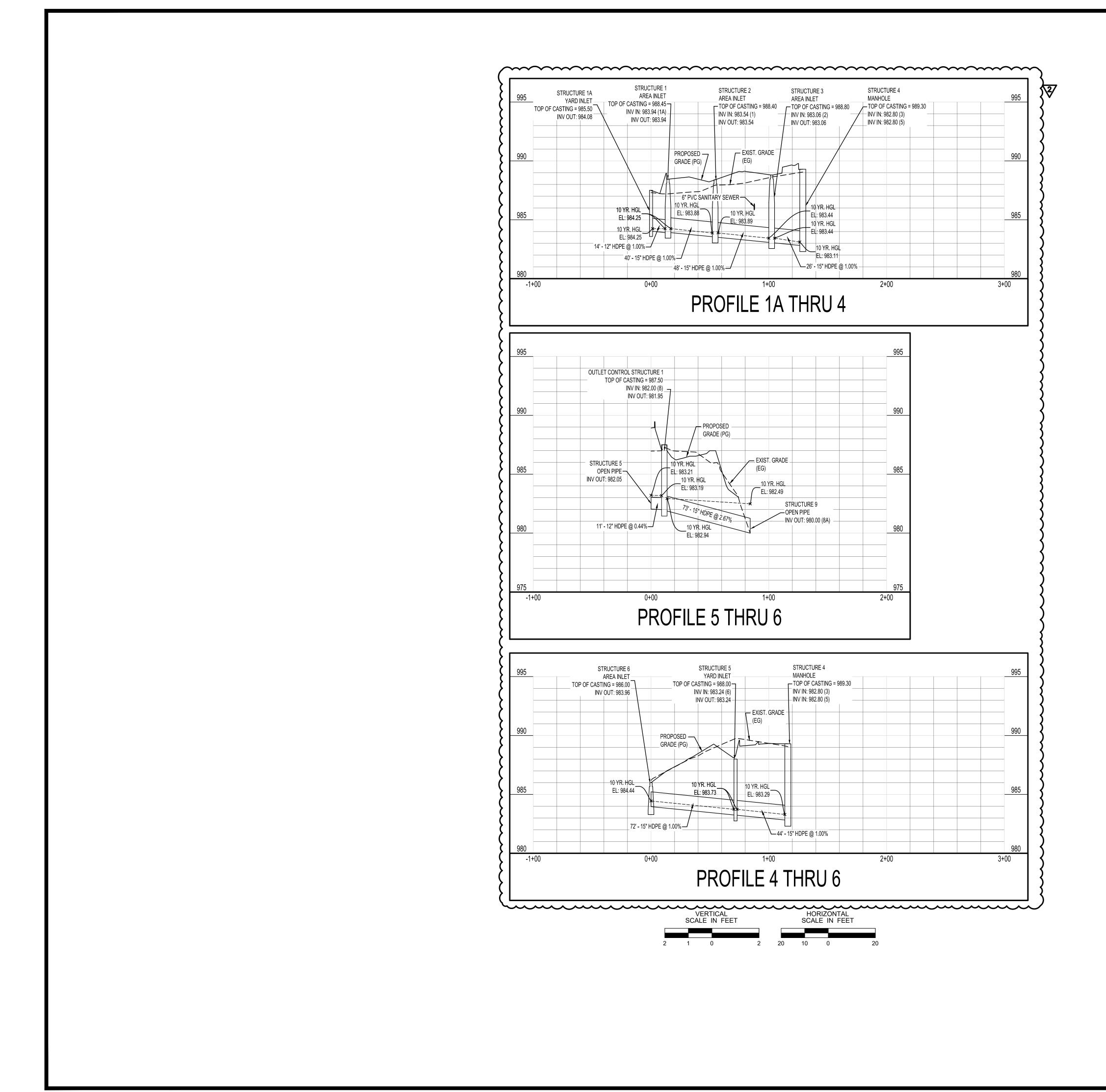
LEGEND - PROPOSED IMPROVEMENTS

	PROPERTY LINE		CONTOUR			
	PROPOSED BUILDING	★ 900.00' TOP = TOP OF PAVEMENT TOW = TOP OF WALL	SPOT ELEVATION			
	CG-1 CONCRETE CURB CG-1 CONCRETE CURB W/ PAVEMENT TURN DOWN STORM DRAIN PIPE DOWNSPOUT COLLECTOR N-12 PIPE (12" TRUNK W/ 8" LATERAL CONNECTIONS)	TOW = TOP OF WALL TOC = TOP OF CURB -S DW 	SLOPE ARROW DOMESTIC WATER LINE SANITARY SEWER LINE GAS LINE UNDERGROUND		PROPOSED TAKE 5 LEE'S SUMMIT, MISSOURI	FOR DRIVEN ASSETS, LLC 2101 PEARL STREET BOULDER, CO 80302
	AREA INLET 3' FLUME	UT UE	TELEPHONE LINE		PROP(LEE'S	FOR I 2101 BOUL
<u>HP/GB</u>	HIGH POINT / GRADE BREAK					DRAWN
REFER TO SURVEY SHE LEGEND OF EXISTING F						CHECKED RCG SSUED DATE
ONE CALL SL	\mathbf{N}					07/30/2024
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or Job Call BEFORE 40				-	22-218	FILE 3 C-2 Grading Plan
BEFOR	20 10	SCALE IN F	EET 40	60		sheet C-2

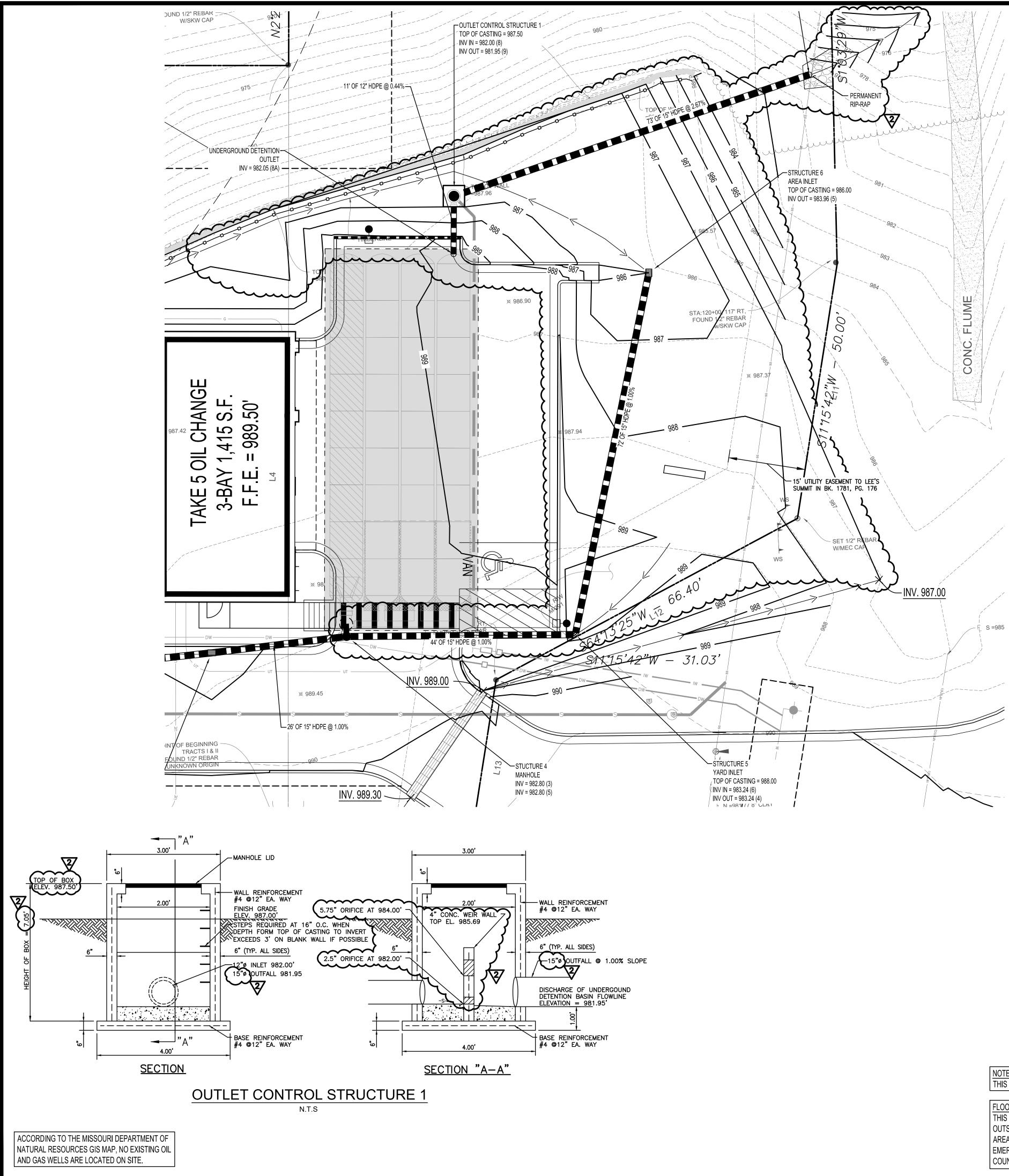
	REVISION	BY
$\sqrt{1}$	10/24/2024 REVISED PER CITY	KRG
2/	12/16/2024 REVISED PER CITY	KRG
3	1/17/2025 REVISED PER CITY	KRG







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	CONSULIANTS LLC 434 N. COLUMBIA ST, SUITE 200A COVINGTON, LA 70433	www.hightidela.com
STAMP E OF MISSORY B SLANE BODY SIGNATURE:	PE - 2021000761 LE BATE: DATE: DATE: DATE: DATE:	WINNEL IN
PROPOSED TAKE 5 LEE'S SUMMIT, MISSOURI	FOR DRIVEN ASSETS, LLC 2101 PEARL STREET BOULDER, CO 80302	
ہ۔ P ا	DRAWN KRG CHECKED RCG SUED DATE 10/24/2024 SSUED FOR ERMITTING ROJECT NO. 22-218 FILE -218 X-Layout SHEET C-22.1	

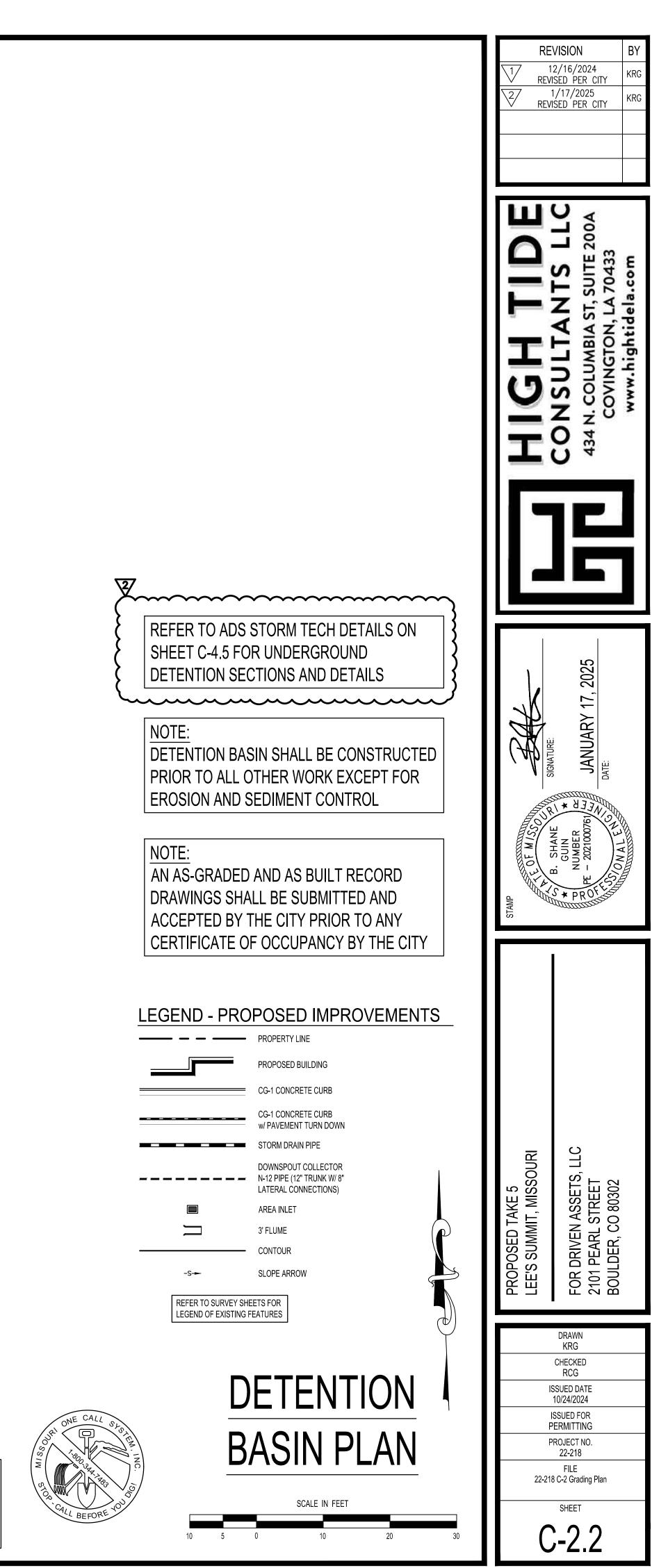


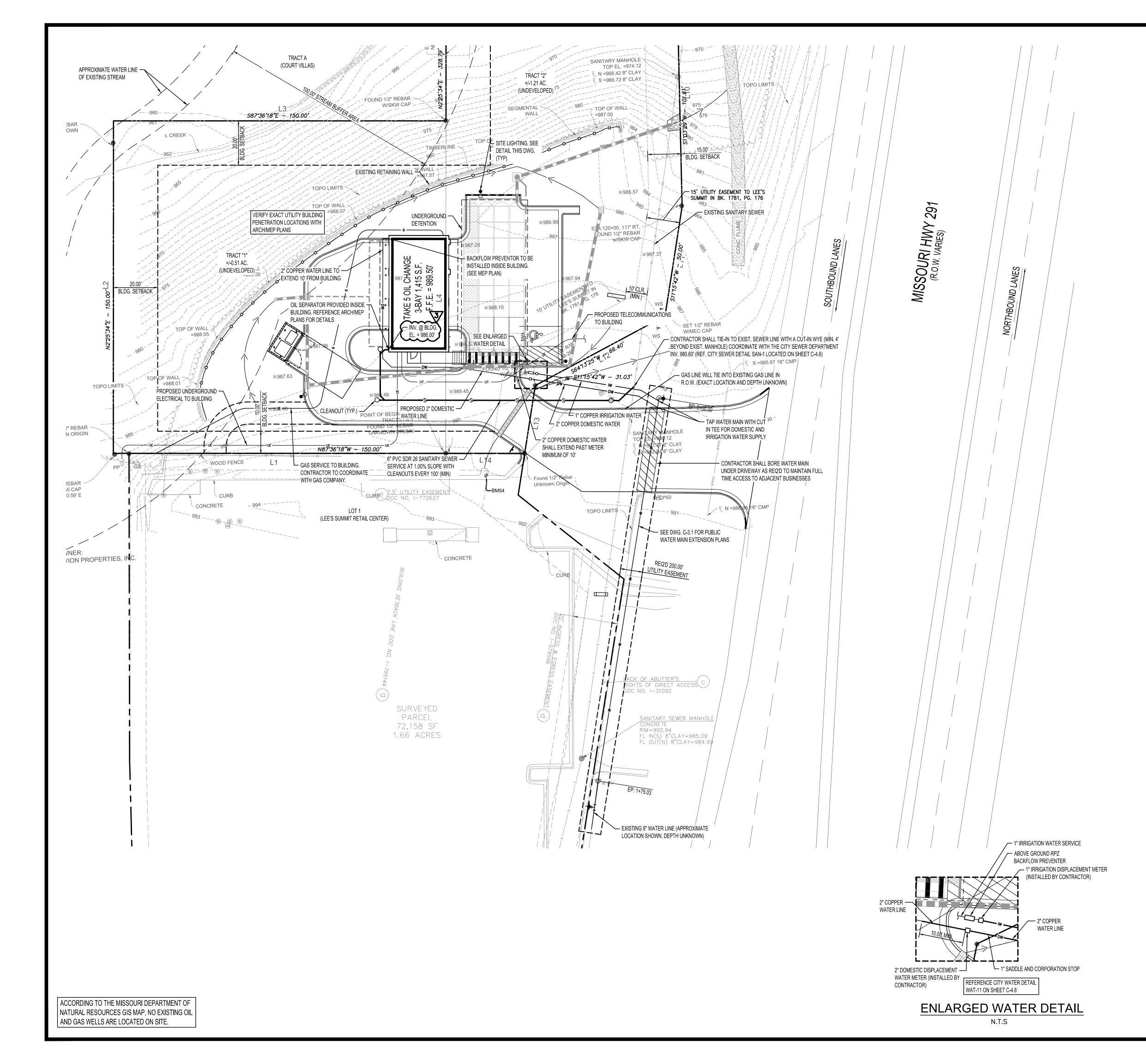
NOTE:

THIS SITE IS LOCATED WITHIN THE WEST PRAIRIE LEE WATERSHED

FLOOD NOTE:

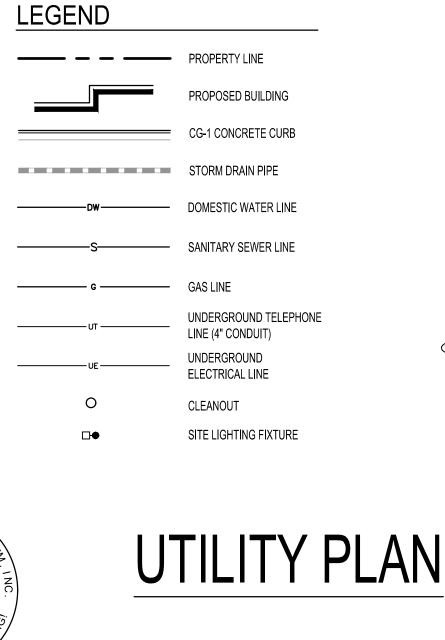
THIS PROPERTY LIES WITHIN FLOOD ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE LIMITS OF THE 0.2% ANNUAL CHANCE FLOOD PLANE, AND OTHER FLOOI AREAS AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, COMMUNITY NO. 29 174 0436G AND DATED JANUARY 20, 2017





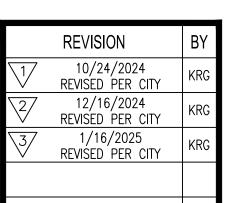
UTILITY NOTES

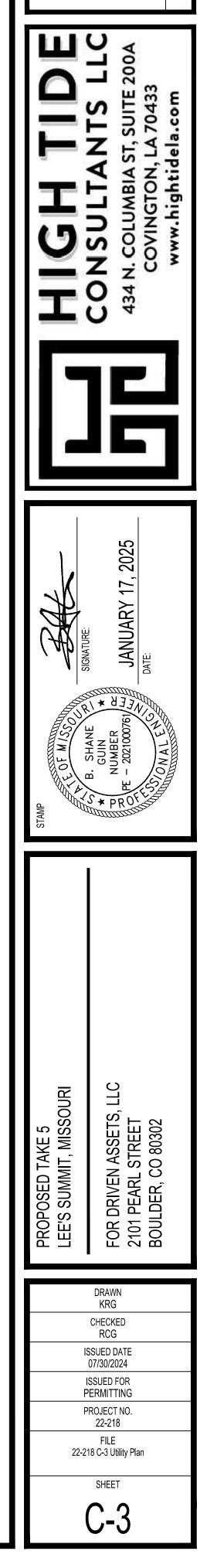
- 1. ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
- 2. ALL SEWER UTILITY WORK SHALL BE DONE TO THE CITY OF LEE'S SUMMIT STANDARDS AND SPECIFICATIONS. ALL WATER UTILITY WORK SHALL BE DONE TO LEE'S SUMMIT WATER UTILITIES STANDARDS AND SPECIFICATIONS. ALL ELECTRICAL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL STANDARDS AND SPECIFICATIONS. ALL GAS UTILITY WORK SHALL BE DONE TO LOCAL GAS STANDARDS AND SPECIFICATIONS.
- CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- 4. SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
 6" PVC SCHEDULE 40
- 5. WATER LINES SHALL BE AS FOLLOWS:
- WATER SERVICE LINES GREATER THAN 1", BUT LESS THAN 4"
- A. FROM THE CITY'S MAIN TO THE CURB VALVE SHALL BE FLEXIBLE OR RIGID TYPE "K" COPPER.
 B. FROM THE CURB VALVE TO 10' BEYOND THE METER WELL SHALL BE FLEXIBLE OR RIGID TYPE "K" OR "L" COPPER. ALSO, COPPER MUST BE USED OUTSIDE THE BUILDING WALL OF THE PREMISES SERVED, A MINIMUM OF 10'
- 6. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
- 7. ON COPPER WATER SERVICE LINE, JOINTS (EXCLUDING JOINTS ON PRE-PURCHASED "METER SETTER") SHALL BE FLARED, COMPRESSION, OR BRAZED. USE OF ANY OTHER TYPE OF JOINT IS PROHIBITED, UNLESS SPECIFICALLY AUTHORIZED IN WRITING BY THE CITY.
- 8. ALL WATER AND SANITARY SEWER UTILITIES SHOULD MAINTAIN A MINIMUM TEN (10') OF HORIZONTAL SEPARATION OR, WHEN CROSSING, 18" OF VERTICAL SEPARATION (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).
- 9. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 4'-0" COVER ON ALL WATERLINES.
- 10. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATER LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50).
- 11. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
- 12. TOPS OF EXISTING MANHOLES SHALL BE ADJUSTED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS. IN UNPAVED AREAS, EXISTING MANHOLE TOPS SHALL BE 6" ABOVE FINISHED GROUND ELEVATIONS AND CONTAIN WATER TIGHT LIDS.
- 13. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
- REFER TO ARCHITECTURAL AND MEP DRAWINGS FOR EXACT BUILDING TIE-IN LOCATIONS OF ALL UTILITIES.
 CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
- 16. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- 17. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES. THIS AND THE FINAL CONNECTIONS OF THE SERVICE SHALL BE COMPLETED 30 DAYS PRIOR TO BUILDING OCCUPANCY.
- 18. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
- 19. REFER TO BUILDING PLANS FOR SITE LIGHTING ELECTRICAL PLAN.
- CONTRACTOR SHALL COORDINATE WITH THE CITY OF LEE'S SUMMIT PUBLIC WORKS FOR TIE-IN LOCATIONS TO PUBLIC UTILITIES PRIOR TO COMMENCEMENT OF WORK.
 EXISTING PUBLIC WATER LINE SHOWN IS BASED ON APPROXIMATE LOCATION PER MAP PROVIDED BY LEE'S
- SUMMIT WATER UTILITIES, EXACT SIZE AND LOCATION SHALL BE VERIFIED PRIOR TO START OF CONSTRUCTION. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
- 22. TOPOGRAPHIC INFORMATION IS TAKEN FROM A TOPOGRAPHIC SURVEY BY McCLURE DATED 13 SEPTEMBER 2023. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.

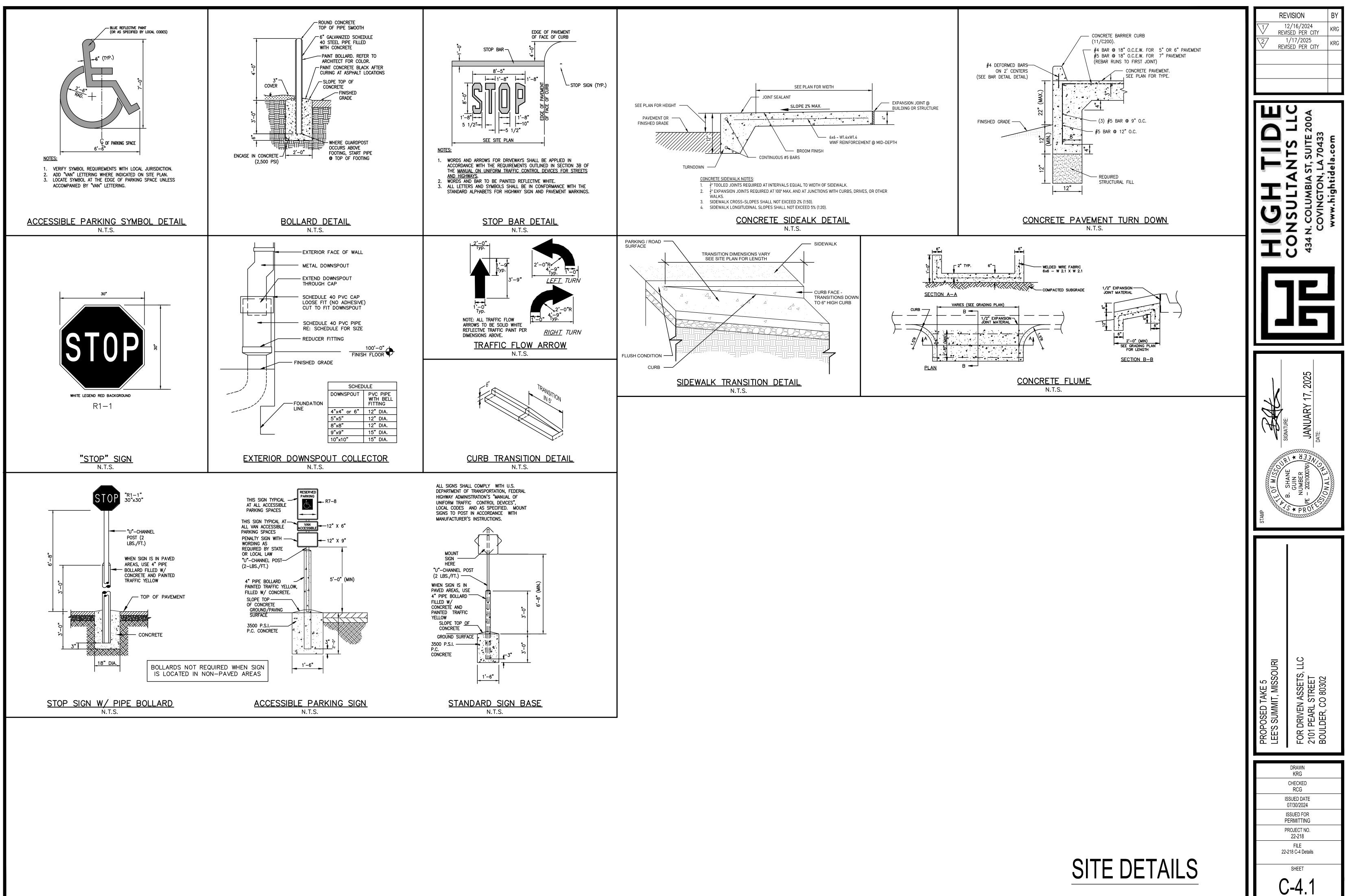


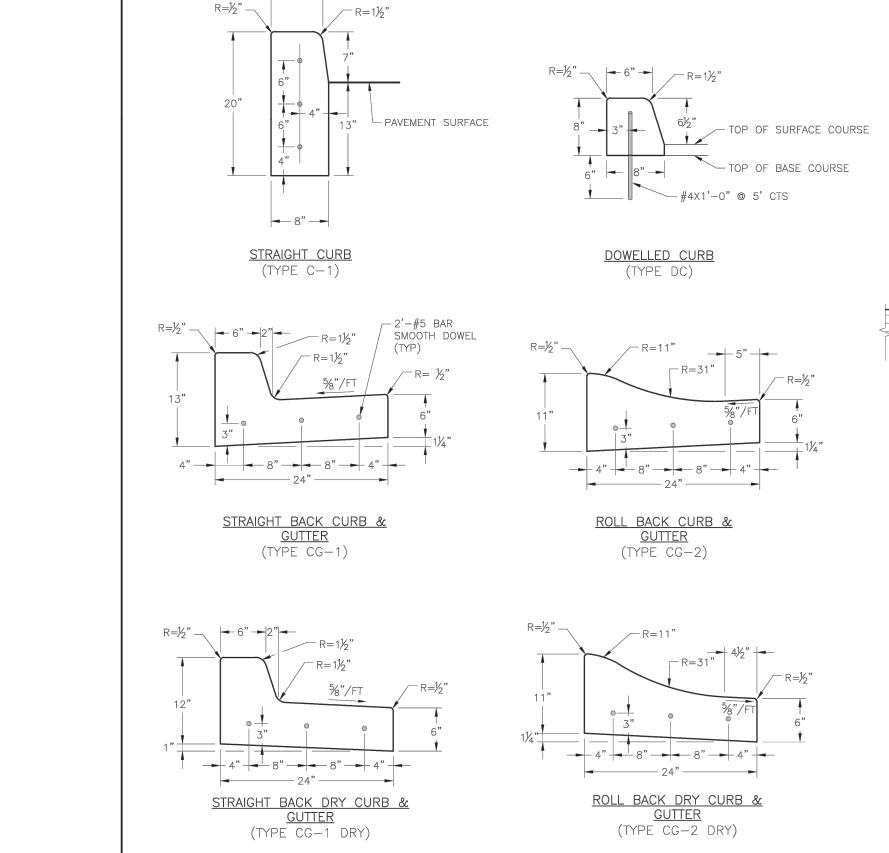


			SCALE IN FEET	
20	10	0	20	40









<u>TABLE 1</u>

PAVEMENT THICKNESS	SMOOTH DOWEL BARS			MINIMUM JOINT DEPTH
"T" (IN)	SIZE Ø (IN)	LENGTH (IN)	SPACING (IN)	" D " (IN)
5"	1/2"	12"	18"	1 1/2"
6"	3/4"	14"	12"	1 3/4"
7"	1"	16"	12"	2"
8"	1 1/4"	18"	12"	3"
9"	1 1/4"	18"	12"	3"
10"	1 1/4"	18"	12"	3 1/4"

1. JOINTS SHALL BE SAWCUT AS SOON AS THE CONCRETE HAS REACHED SUFFICIENT STRENGTH TO SUPPORT THE SAWING EQUIPMENT AND TEARING OF CONCRETE DOES NOT OCCUR.

2. GEOTEXTILE FABRIC SHALL BE CONSTRUCTED OF NON-WOVEN POLYPROPYLENE FIBERS RESISTANT TO CHEMICAL ATTACK, MILDEW, AND ROT. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A GEOTEXTILE MATERIAL SUBMITTAL FOR APPROVAL.

3. CONSTRUCT EXPANSION, WEAKENED PLANE CONTROL (CONTRACTION), AND CONSTRUCTION JOINTS STRAIGHT WITH FACE PERPENDICULAR TO CONCRETE SURFACE.

4. CONSTRUCT CONTROL JOINTS FOR DEPTH EQUAL TO AT LEAST 1/4 OF THE CONCRETE THICKNESS AS FOLLOWS:

A. FORM TOOLED JOINTS IN FRESH CONCRETE BY GROOVING TOP WITH RECOMMENDED TOOL AND FINISHING EDGE WITH JOINTER. B. FORM SAWED JOINTS USING POWERED SAWS EQUIPPED WITH SHATTERPROOF ABRASIVE OR DIAMOND RIMMED BLADES. CUT JOINTS INTO HARDENED CONCRETE AS SOON AS SURFACE WILL NOT BE TORN, ABRADED, OR OTHERWISE DAMAGED BY CUTTING ACTION.

5. CONSTRUCTION JOINTS: PLACE CONSTRUCTION JOINTS AT END OF PLACEMENTS AND AT LOCATIONS WHERE PLACEMENTS OPERATIONS ARE STOPPED FOR PERIOD OF MORE THAN 1/2 HOUR, EXCEPT WHERE SUCH PLACEMENTS TERMINATE AT EXPANSION JOINTS. CONSTRUCT JOINTS IN ACCORDANCE WITH DETAILS.

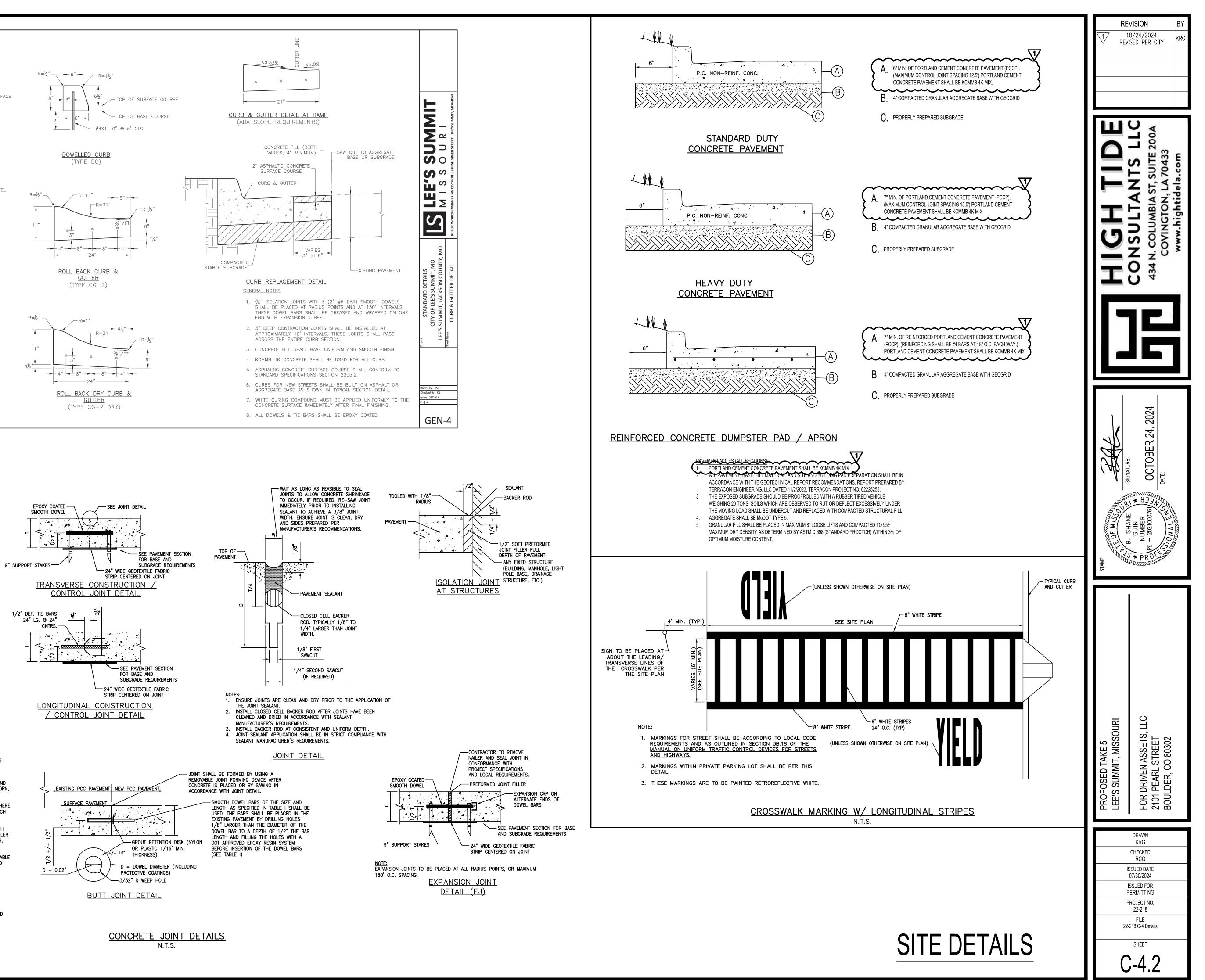
6. EXPANSION JOINTS: LOCATE EXPANSION JOINTS AT MAXIMUM OF 180'-O" ON CENTERS, MAXIMUM EACH WAY UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS. PROVIDE PRE-MOLDED JOINT FILLER FOR EXPANSION JOINTS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, SIDEWALKS, AND OTHER FIXED OBJECTS.

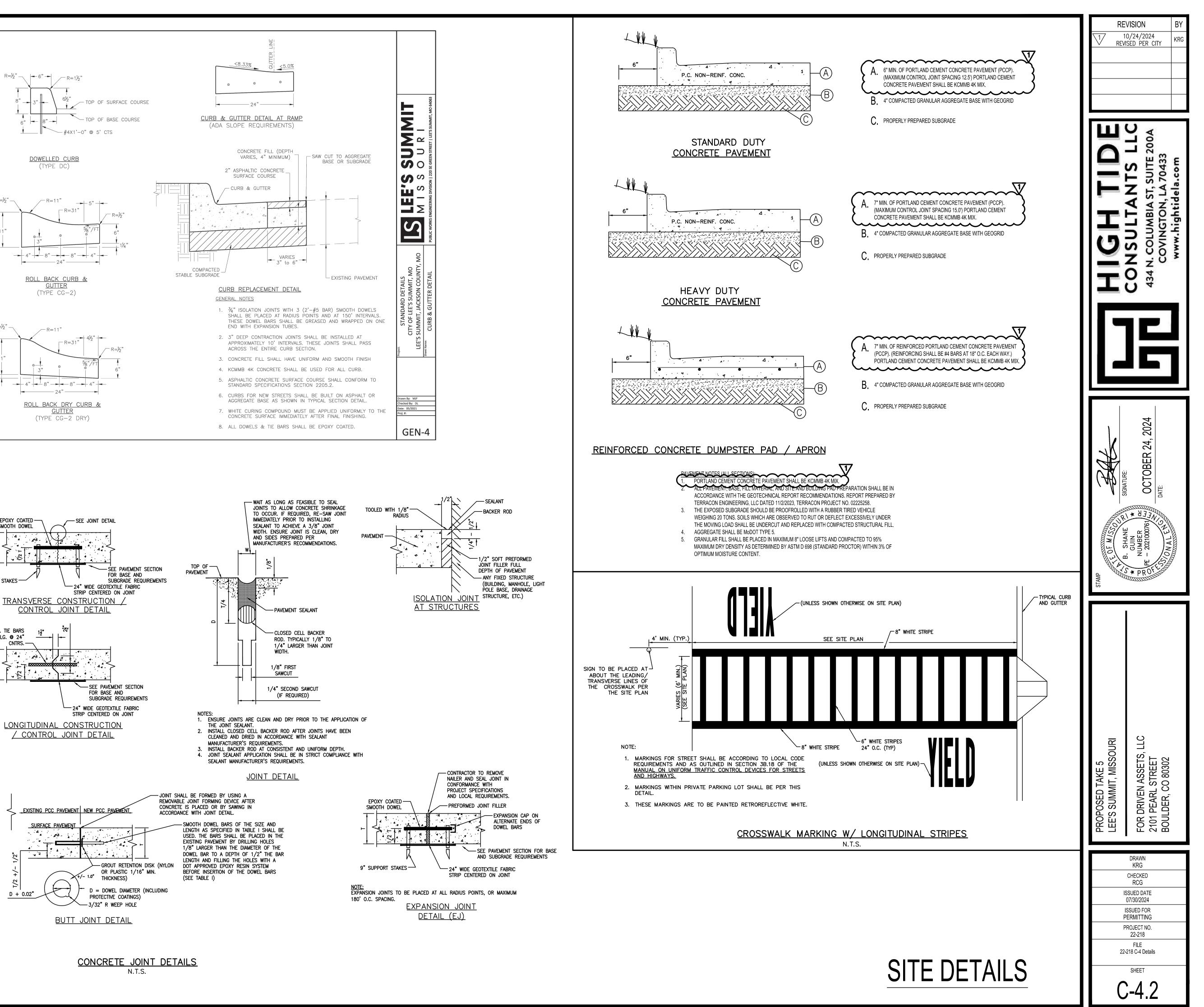
7. BUTT JOINTS: FOR JOINTS AGAINST EXISTING PAVEMENT, PLACE DOWELS OF THE SIZE INDICATED IN TABLE 1 INTO HOLES DRILLED INTO CENTER OF EXISTING SLAB. EPOXY DOWELS INTO HOLES WITH APPROVED EPOXY COMPOUND. PLACE DOWELS PRIOR TO CONCRETE PLACEMENT FOR NEW CONCRETE. DOWEL SPACING TO BE AS INDICATED IN TABLE 1. SAW JOINTS AND FILL WITH JOINT SEALER.

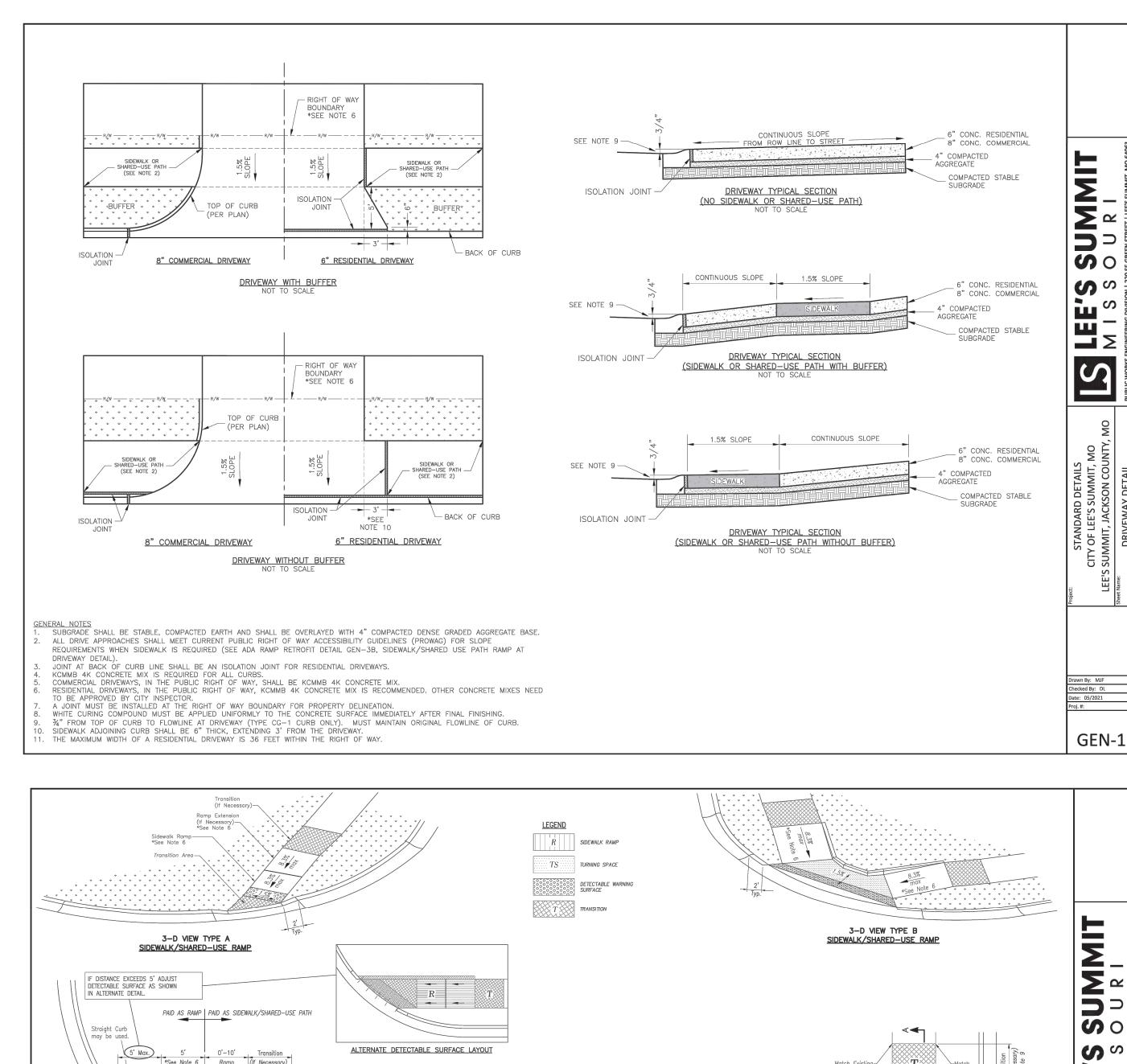
8. JOINT FILLERS: EXTEND JOINT FILLERS FULL WIDTH AND DEPTH OF JOINT, AND NOT LESS THAN 1/2-INCH OR MORE THAN 1-INCH BELOW FINISHED SURFACE WHERE JOINT SEALER IS INDICATED. FURNISH JOINT FILLERS IN 1 PIECE LENGTHS FOR FULL WIDTH BEING PLACED, WHEREVER POSSIBLE. WHERE MORE THAN 1 LENGTH IS REQUIRED LACE OR CLIP JOINT FILLER SECTIONS TOGETHER.

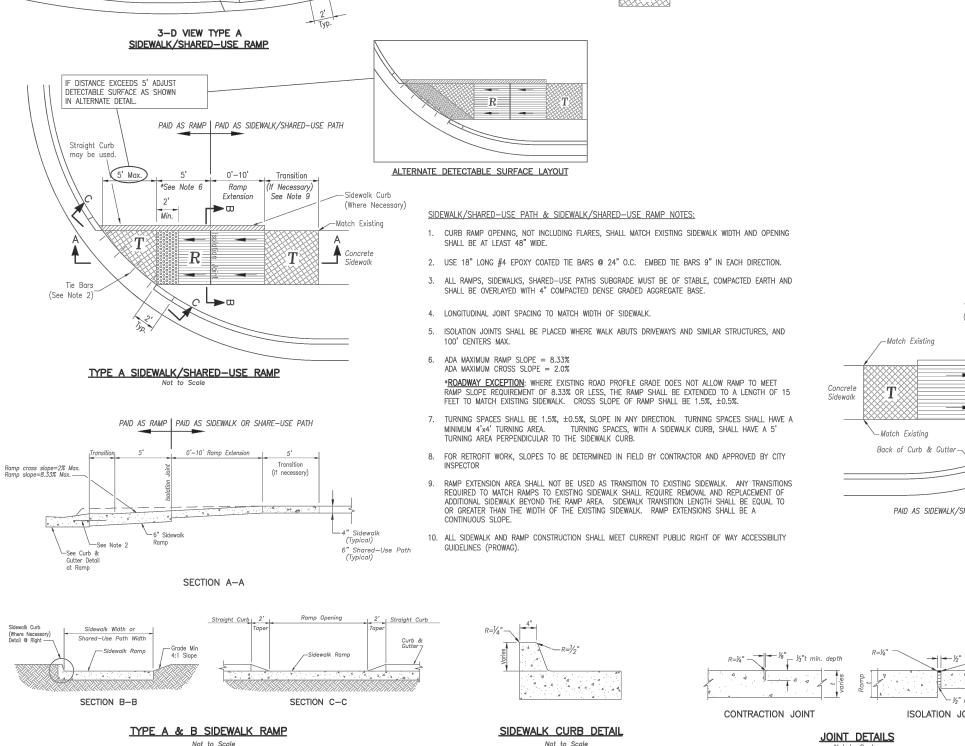
9. JOINT SEALANTS: JOINTS SHALL BE SEALED WITH APPROVED EXTERIOR PAVEMENT JOINT SEALANTS AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

10. DOWELS SHALL NOT BE PLACED CLOSER THAN 12" TO A JOINT INTERSECTION.



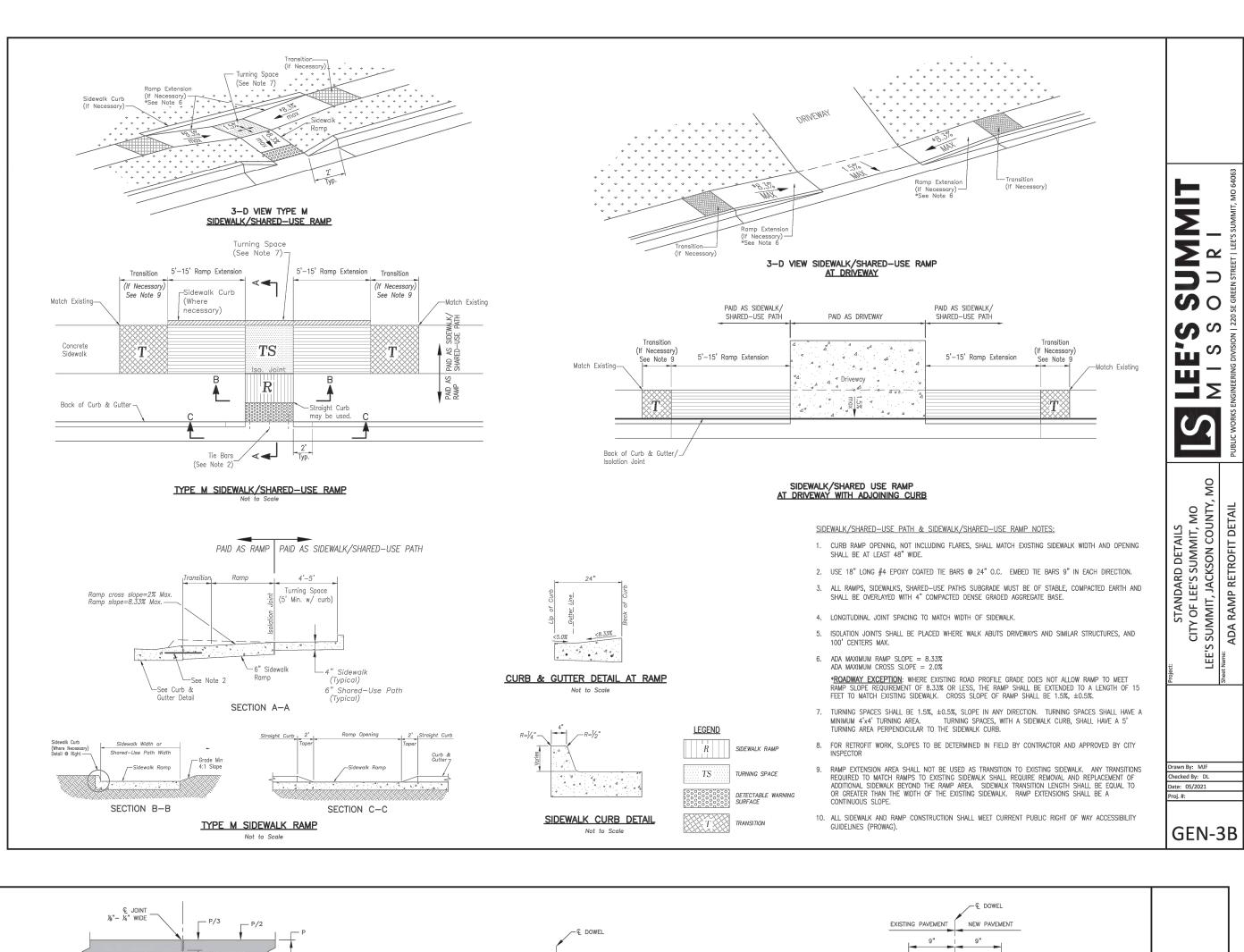


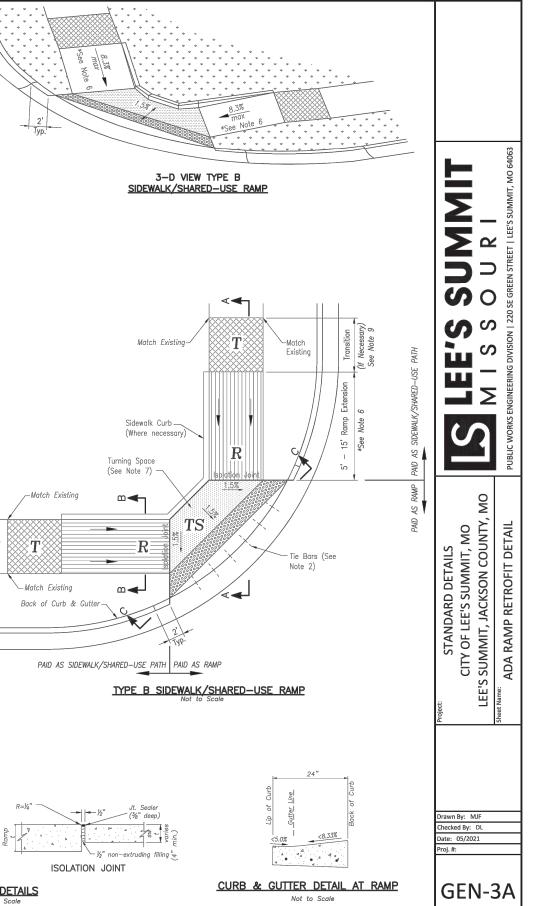


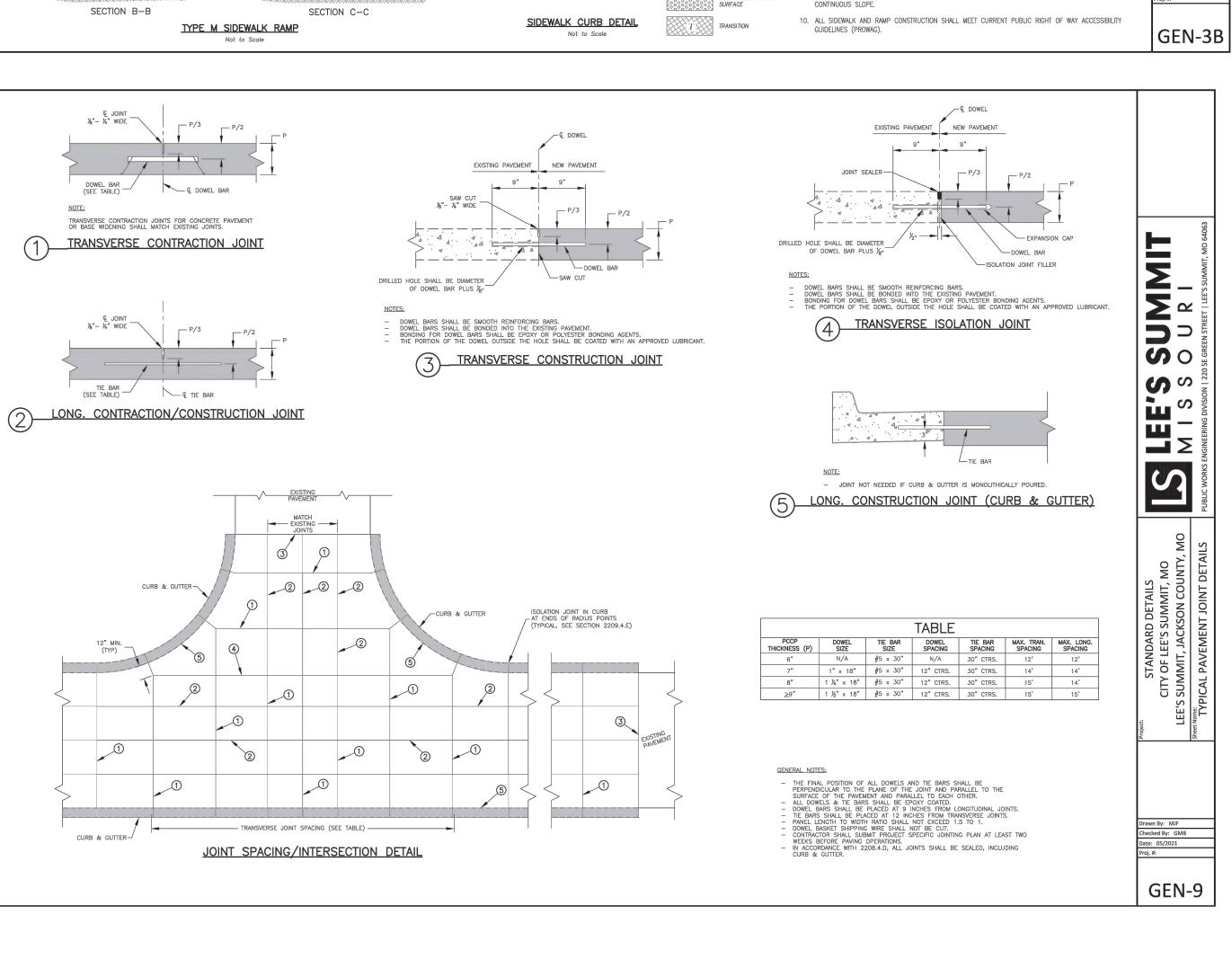


Not to Scale

Not to Scale

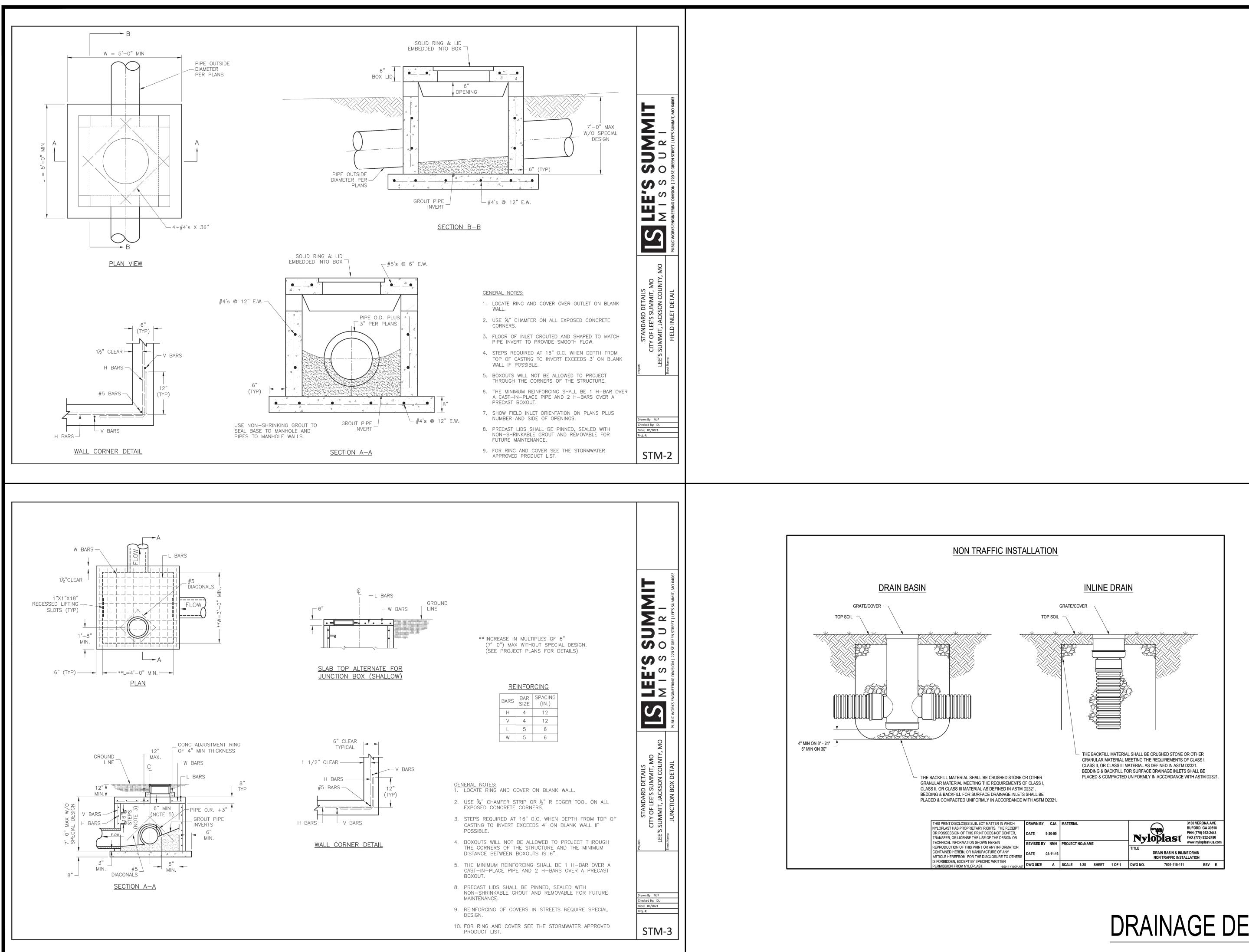


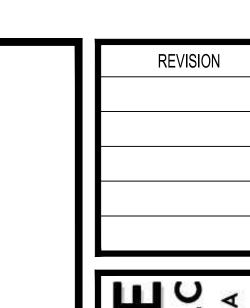


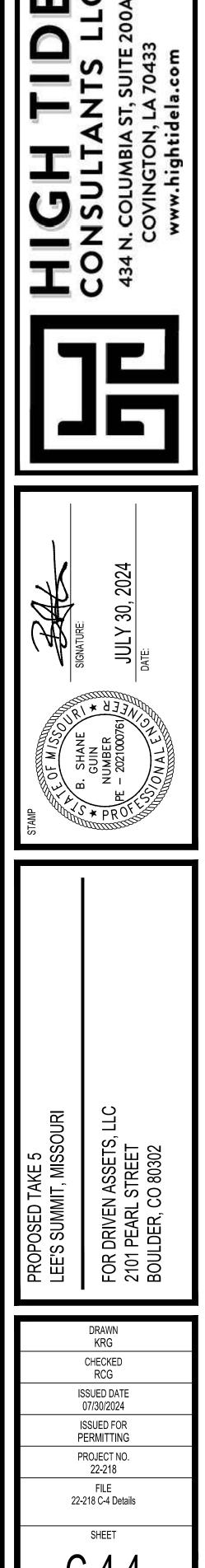






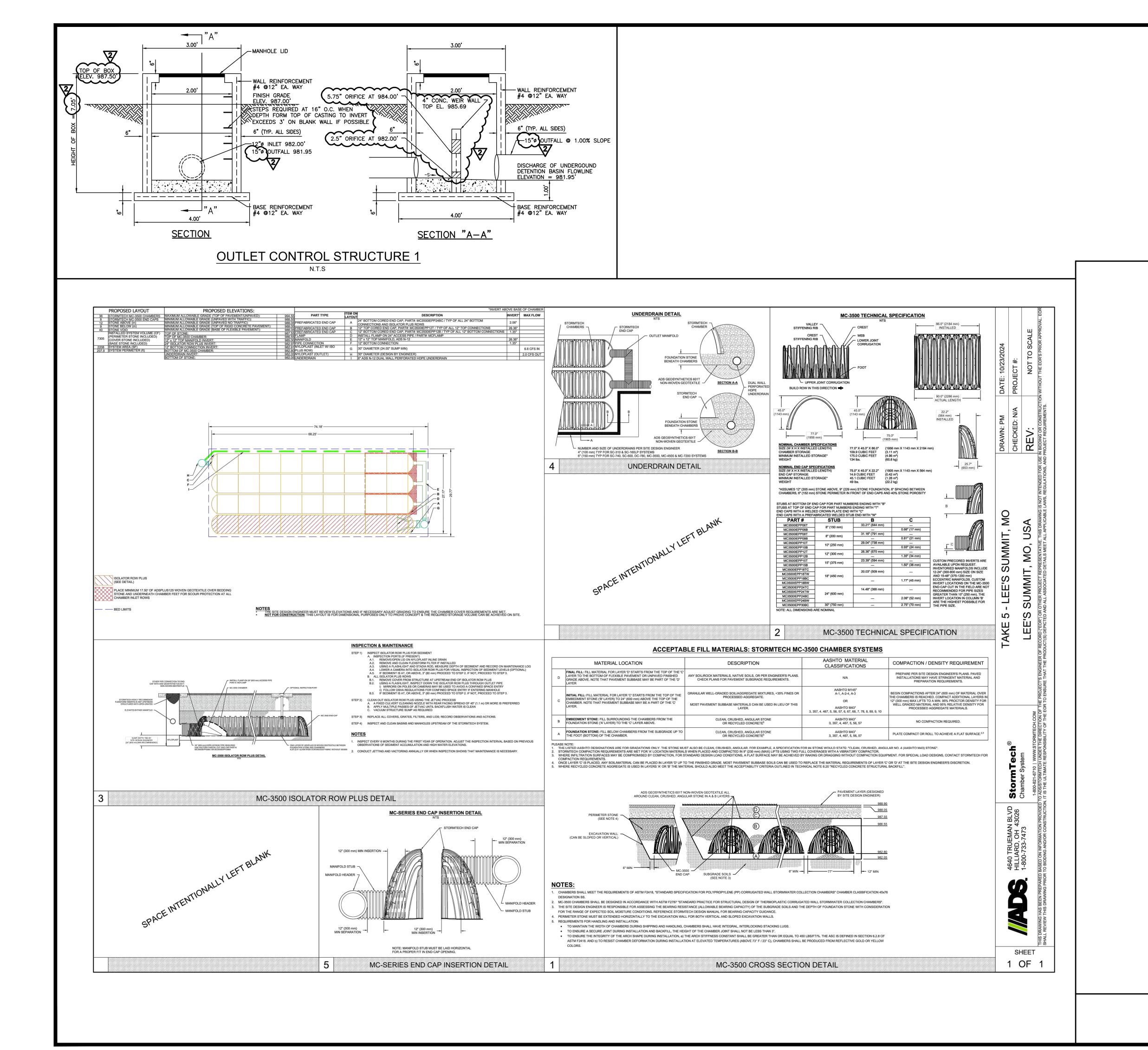


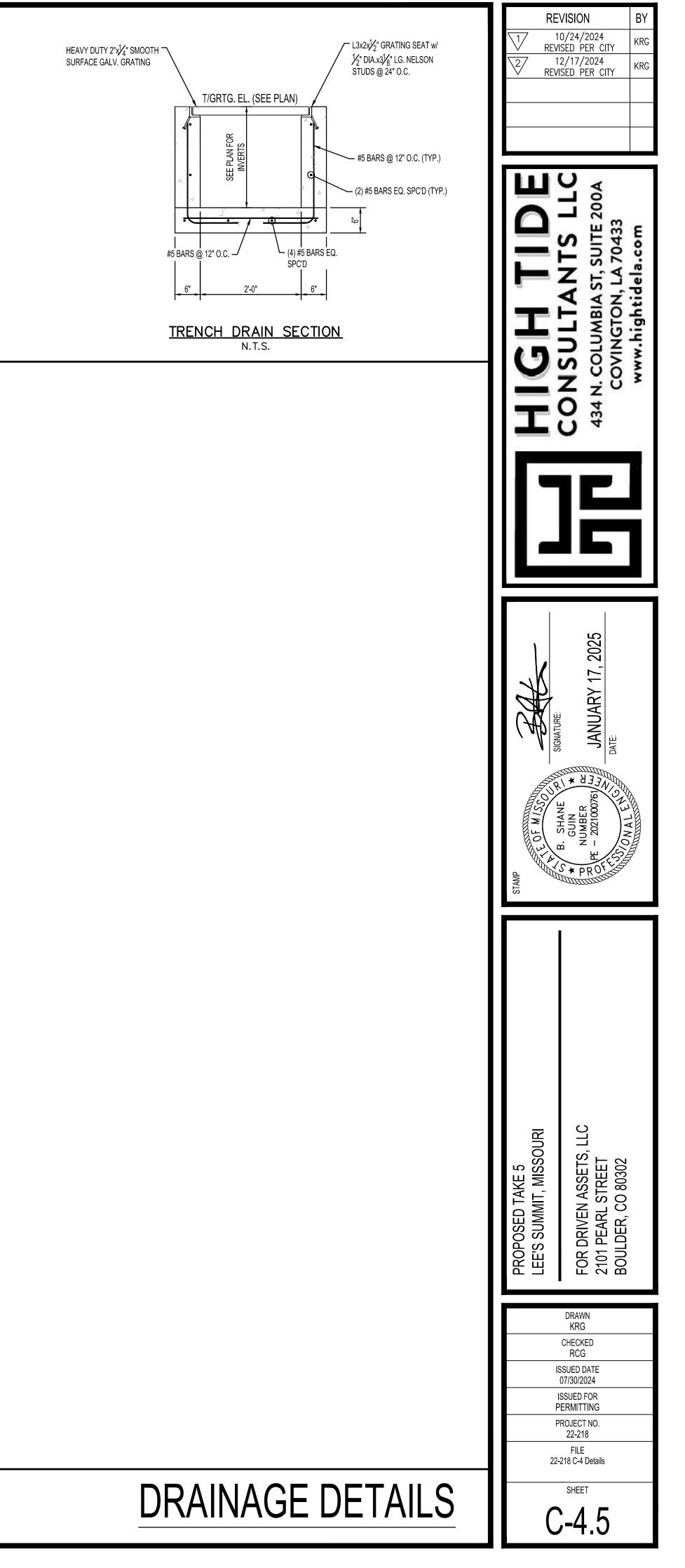


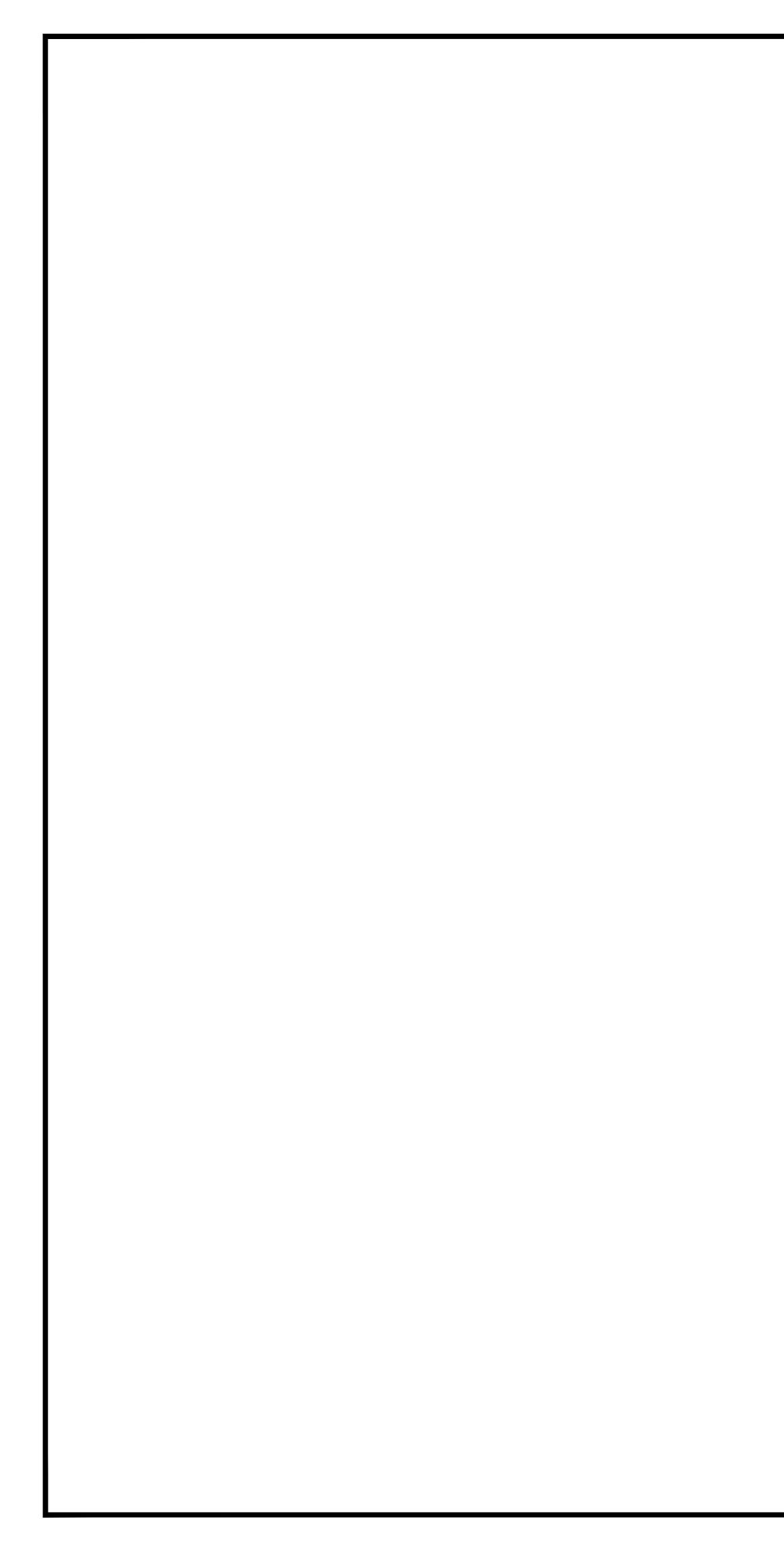


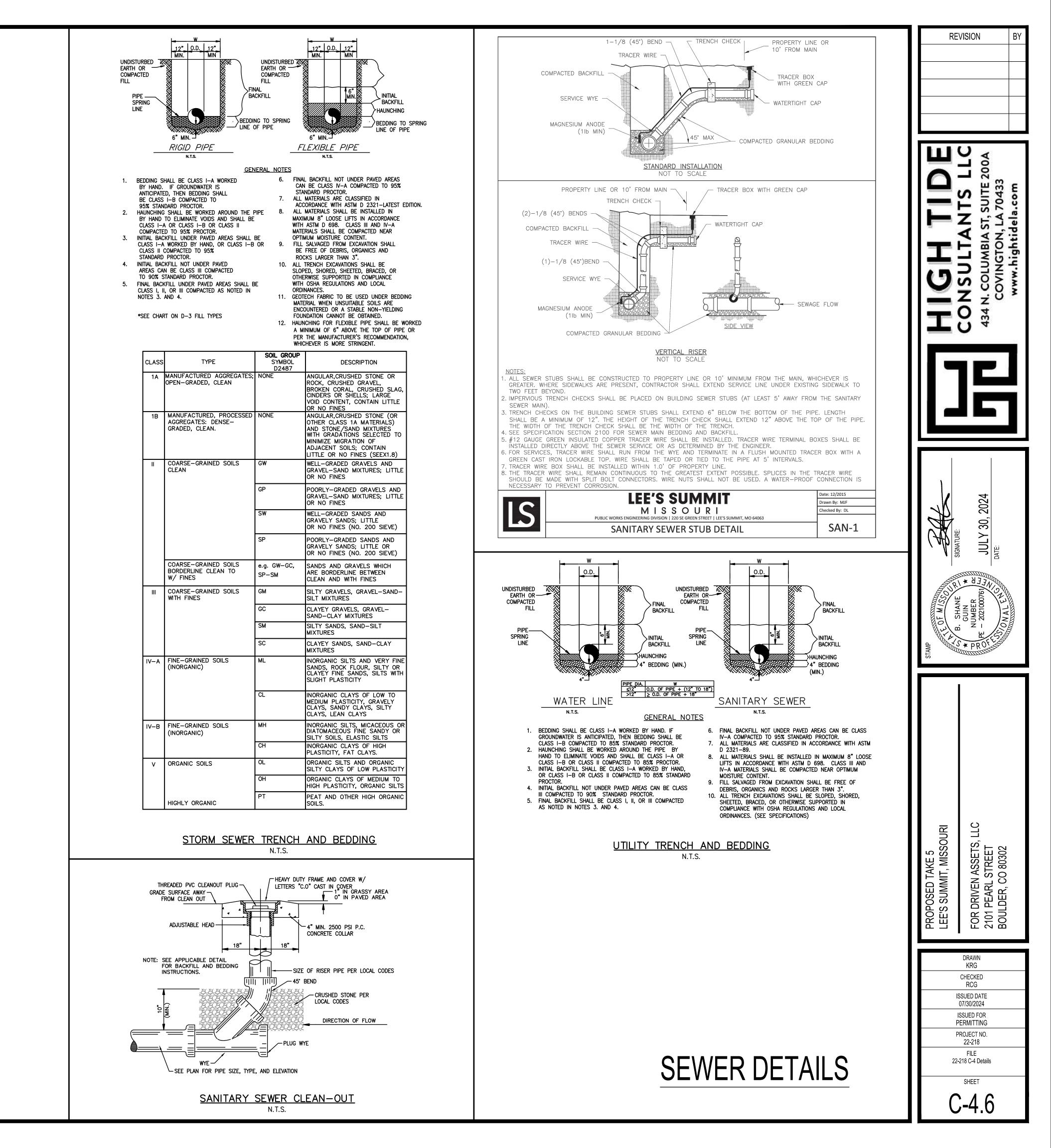
6-4.4

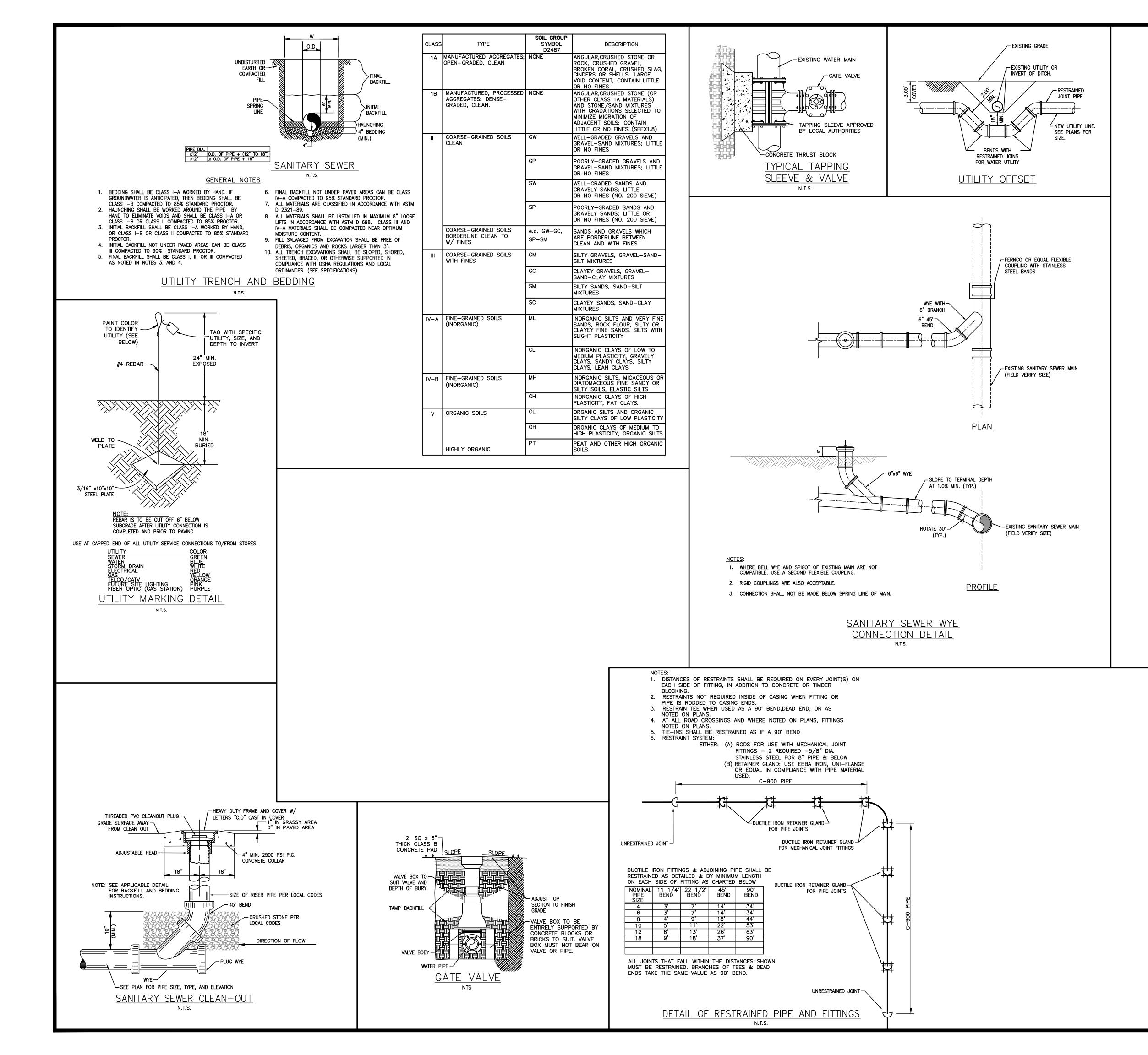
DRAINAGE DETAILS



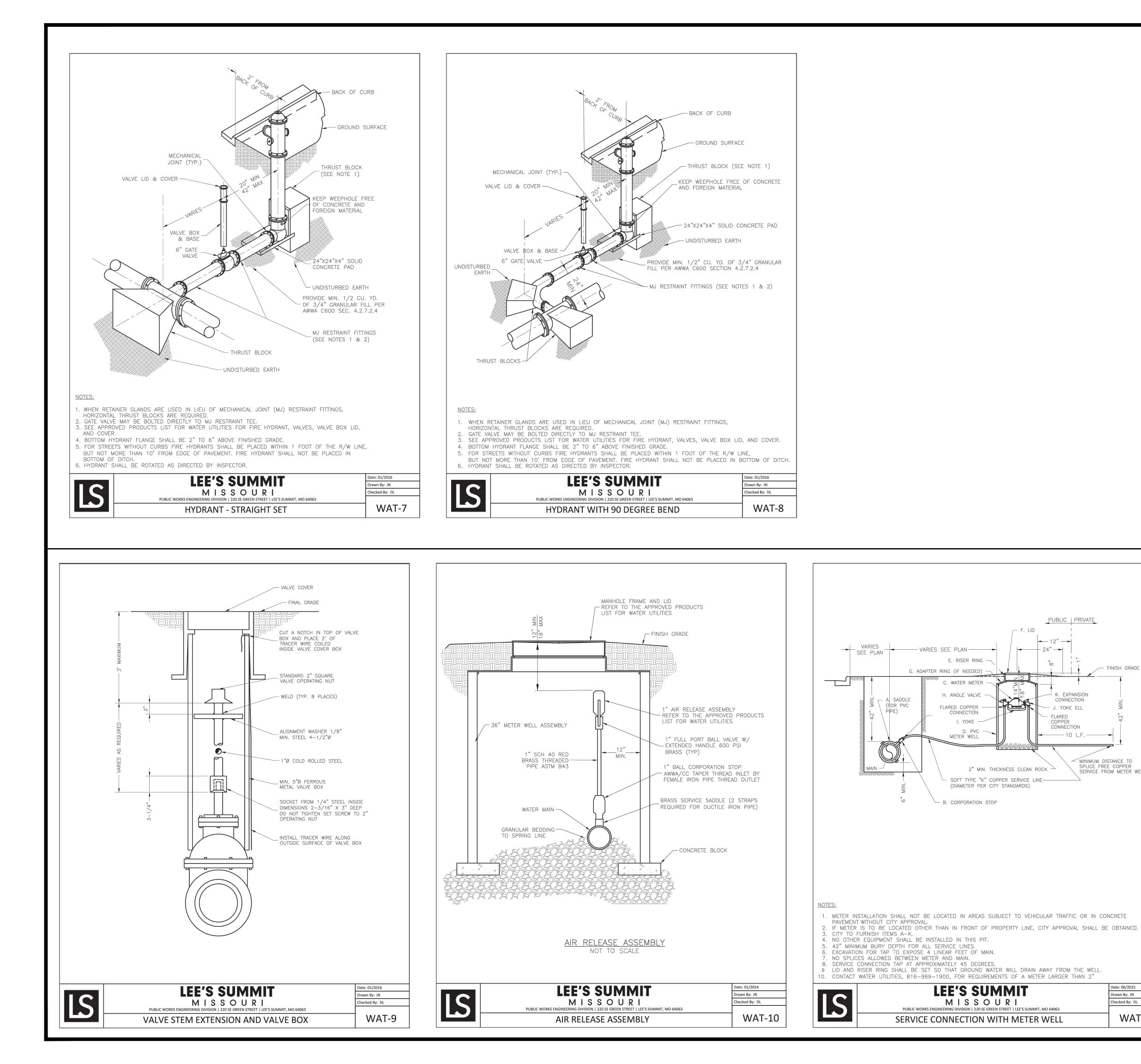




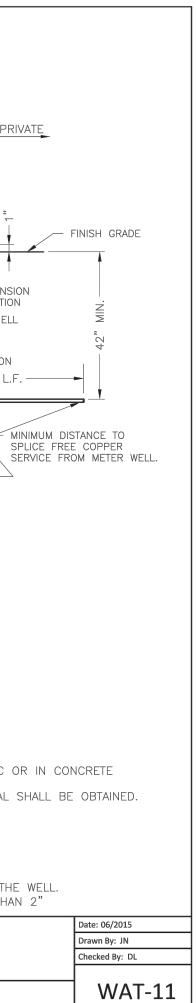




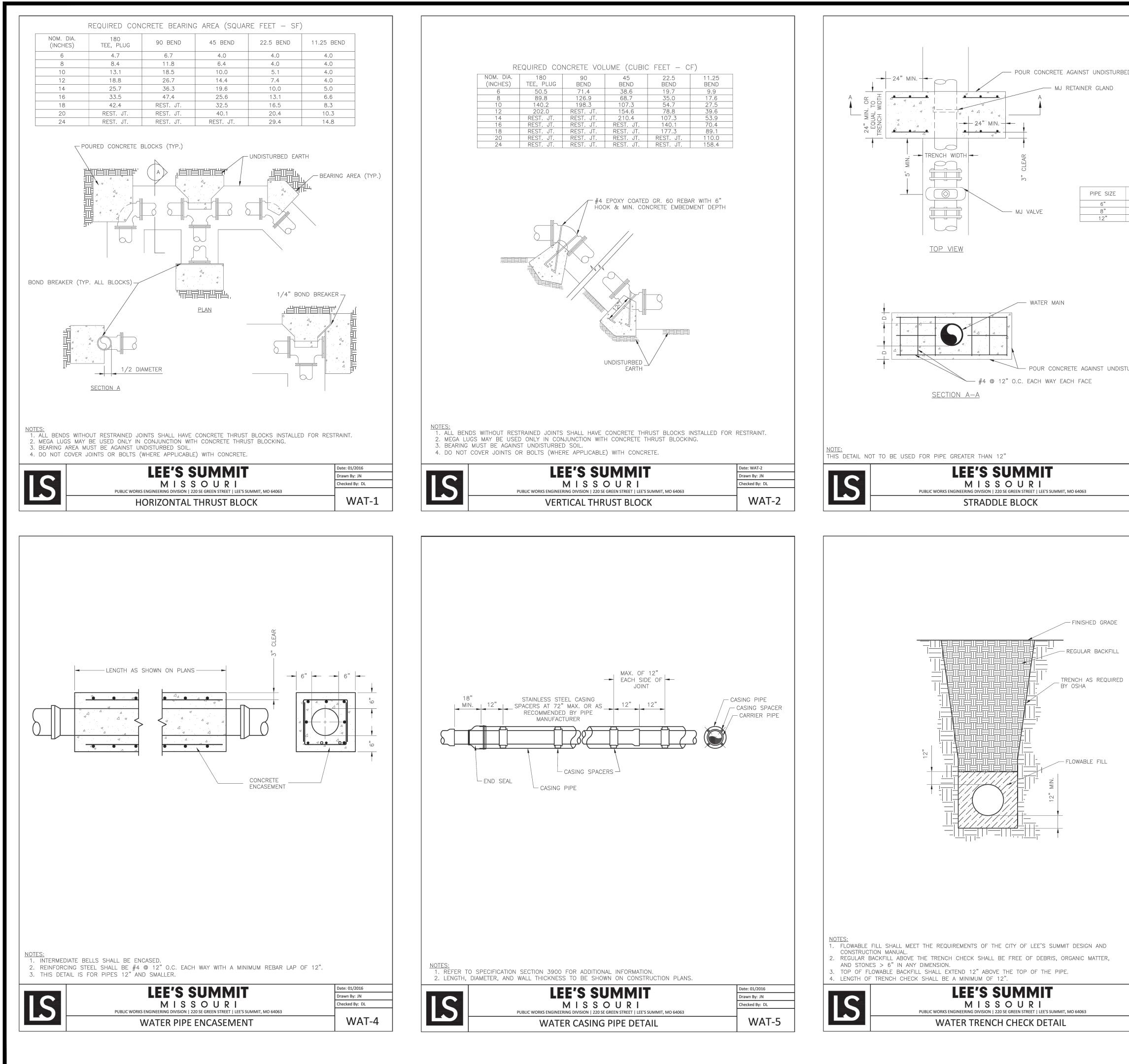
	RE	VISION BY
		CONSULTANTS LLC 434 N. COLUMBIA ST, SUITE 200A COVINGTON, LA 70433 www.hightidela.com
	STAMP STAMP STAMP STAMP STAMP STAMP STAMP STAMP	DULY 30, 2024
	PROPOSED TAKE 5 LEE'S SUMMIT, MISSOURI	FOR DRIVEN ASSETS, LLC 2101 PEARL STREET BOULDER, CO 80302
UTILITY DETAILS	F F 22	DRAWN KRG CHECKED RCG SSUED DATE 07/30/2024 ISSUED FOR PERMITTING PROJECT NO. 22-218 FILE -218 C-4 Details SHEET C-4 Details



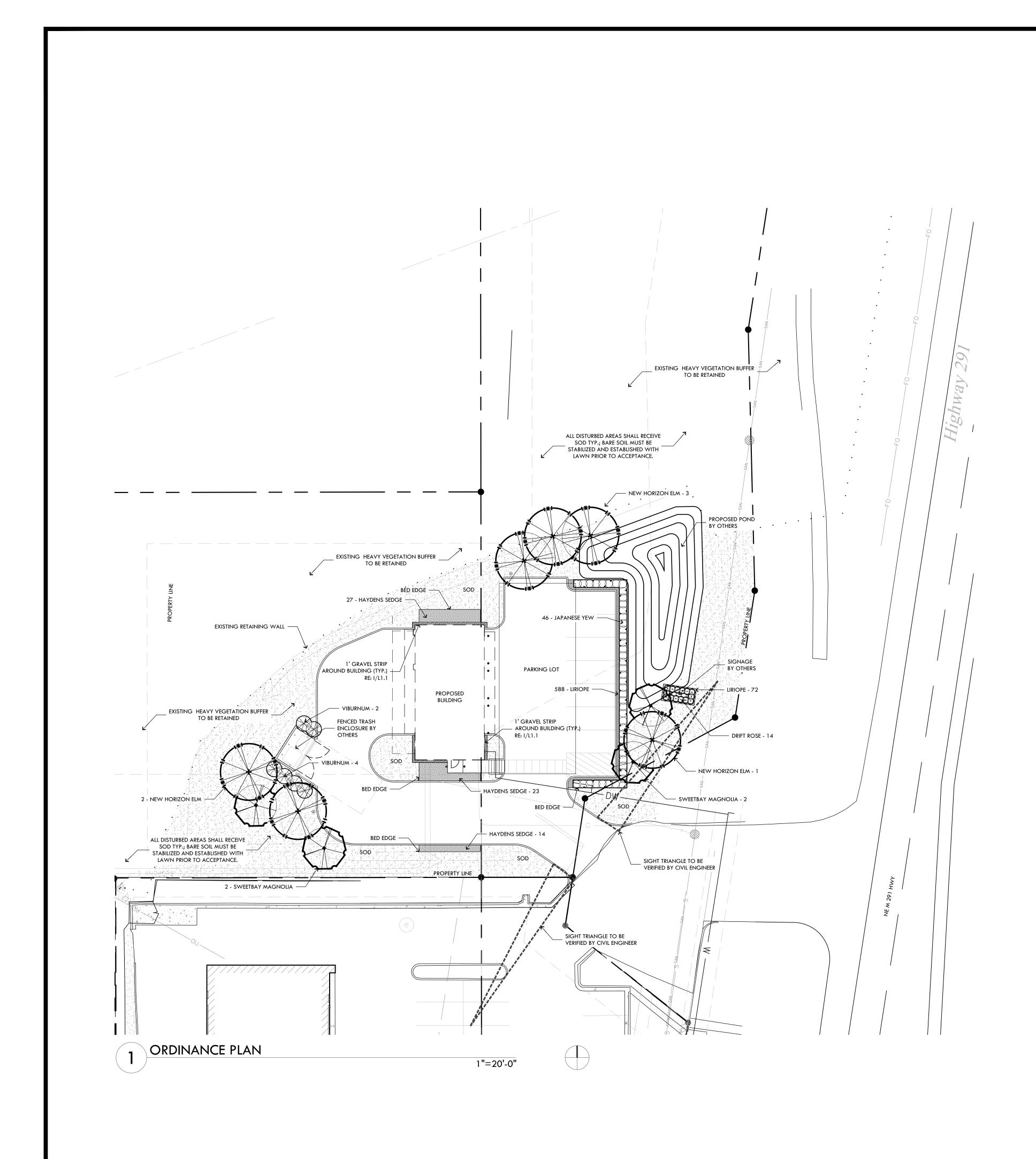
REVISION BY
HIGH TIDE CONSULTANTS LLC 234 N. COLUMBIA ST, SUITE 200A COVINGTON, LA 70433 www.hightidela.com
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PROPOSED TAKE 5 LEE'S SUMMIT, MISSOURI FOR DRIVEN ASSETS, LLC 2101 PEARL STREET BOULDER, CO 80302
DRAWN KRG CHECKED RCG ISSUED DATE 07/30/2024 ISSUED FOR PERMITTING PROJECT NO. 22-218 FILE 22-218 C-4 Details SHEET C-4_8



UTI	LITY	DE	TAILS



D EARTH		REVISION B	(
"D" MIN. 4" 7" 15"		HIGH TIDE CONSULTANTS LLC CONNGTON, LA 70433 www.hightidela.com	1
URBED EARTH			
Date: 01/2016 Drawn By: JN Checked By: DL WAT-3		SIGNATURE: SIGNATURE: JULY 30, 2024 DATE:	
		STAMP STAMP]
		PROPOSED TAKE 5 LEE'S SUMMIT, MISSOURI FOR DRIVEN ASSETS, LLC 2101 PEARL STREET BOULDER, CO 80302	
Date: 01/2016 Drawn By: JN Checked By: DL		DRAWN KRG CHECKED RCG ISSUED DATE 07/30/2024 ISSUED FOR PERMITTING PROJECT NO. 22-218	
WAT-6	UTILITY DETAILS	FILE 22-218 C-4 Details SHEET C-4.9	



LANDSCAPE MATERIALS AND PLANTS LIST			
QUANTITY	PLANT / MATERIAL NAME AND DESCRIPTION		
832	Bed Preparation (square feet) 6" planting soil over 8" loosened topsoil. Mix top 4" of topsoil with first 3" of imported planting soil.		
AS NEEDED	Hardwood Mulch, shredded (square feet) 3" thick layer in all planting areas and 2x root ball diameter ring around all trees		
272	Metal Edging (linear feet) $\frac{1}{8}$ " x 4" aluminum edging color black; install between planting and gravel border		
63	Gravel Border (square feet) $\frac{1}{2}$ " - 1" river rock. 3" deep layer over non-woven filter fabric		
880	Lawn - Turf Type Fescue (square yards) certified weed and pest free		
14	Drift Rose 'Popcorn' (Rosa 'Novarospop') 3 gallon container, 15"-18" spread, dense and compact growth habit		
660	Liriope (Liriope muscari) 4" Container, 4"-6" height and spread, full container 4 per square foot		
6	New Horizon Elm (Ulmus davidiana var. japonicus x Ulmus pumilia) 45 gallon container, 12'-14' height, 5'-7' spread, 2 ½"-3" caliper, straight trunk, heavily branched, heavy canopy		
4	Sweetbay Magnolia 'Green Shadow'; (Magnolia virginiana 'Green Shadow') 7'-8' height, 4'-5' spread, standard, 1"caliper, heavily branched		
6	Viburnum (Viburnum rhytidophylloides 'Allegheny') 5 gallon container, 3' height, dense foliage, full container		
46	Japanese Yew (Podocarpus macrophyllus) 5 gallon container, 18" height, 18" spread, dense and compact growth habit, strong central leader		
64	'Hayden's Sedge' Carex haydenii 3 gallon container, 7"- 8" height, 12" - 18" spread at base, full container, heavy and active foliage, planted 24" o.c.		

NOTE OWNER'S REPRESENTATIVE SHALL REVIEW LANDSCAPING FOLLOWING INSTALLATION TO CERTIFY COMPLIANCE WITH APPROVED PLAN.

LANDSCAPE ORDINANCE STANDARDS

- 1. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL FINAL GRADE WITH THE LANDSCAPE ARCHITECT AND OR DESIGN TEAM PRIOR TO COMPLETION.
- 2. LOCATION AND PLACEMENT OF ALL PLANT MATERIAL SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- 3. THE LOCATION OF ALL UTILITIES ARE APPROXIMATE, THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION OPERATIONS.
- 4. REFER TO CIVIL DRAWINGS FOR ALL GRADING AND BERMING, EROSION CONTROL, STORM DRAINAGE, UTILITIES AND SITE LAYOUT.
- 5. PLANT QUANTITIES ARE FOR INFORMATION ONLY DRAWING SHALL PREVAIL IF CONFLICT OCCURS. CONTRACTOR IS RESPONSIBLE FOR CALCULATING OWN QUANTITIES AND BID ACCORDINGLY.
- 6. THE CONTRACTOR IS TO NOTIFY LANDSCAPE ARCHITECT AFTER STAKING IS COMPLETE AND BEFORE PLANT PITS ARE EXCAVATED. PROVIDE PHOTOGRAPHS.
- 7. TREE LOCATIONS IN AREAS ADJACENT TO DRIVES, WALKS, WALLS AND LIGHT FIXTURES MAY BE FIELD ADJUSTED AS APPROVED BY LANDSCAPE ARCHITECT.
- 8. THE CONTRACTOR SHALL REPORT SUBSURFACE SOIL OR DRAINAGE PROBLEMS TO THE LANDSCAPE ARCHITECT.
- 9. THE PLAN IS SUBJECT TO CHANGES BASED ON PLANT SIZE AND MATERIAL AVAILABILITY. ALL CHANGES OR SUBSTITUTIONS MUST BE APPROVED BY THE CITY OF LEE'S SUMMIT, MISSOURI AND THE LANDSCAPE ARCHITECT.
- 10. ALUMINUM LANDSCAPE EDGING TO BE USED ON ALL LANDSCAPE BEDS ABUTTING TURF AREAS AS NOTED ON LANDSCAPE PLANS/LEGEND.
- 11. LANDSCAPE CONTRACTOR IS TO BE RESPONSIBLE FOR WATERING ALL PLANT MATERIAL UNTIL THE TIME THAT A PERMANENT WATER SOURCE IS READY.
- 12. THE CONTRACTOR SHALL SHOW PROOF OF PROCUREMENT, SOURCES, QUANTITIES AND VARIETIES FOR ALL SHRUBS, PERENNIALS ORNAMENTAL GRASSES AND ANNUALS WITHIN 21 DAYS FOLLOWING THE AWARD OF THE CONTRACT.
- 13. CONTRACTOR SHALL PROVIDE FULL MAINTENANCE FOR NEWLY LANDSCAPED AREAS FOR A PERIOD OF 30 DAYS AFTER THE DATE OF FINAL ACCEPTANCE. AT THE END OF THE MAINTENANCE PERIOD, A HEALTHY, WELL-ROOTED, EVEN-COLORED, VIABLE TURF AND LANDSCAPED AREA MUST BE ESTABLISHED. THE LANDSCAPED AREAS SHALL BE FREE OF WEEDS, OPEN JOINTS, BARE AREAS AND SURFACE IRREGULARITIES.
- 14. LANDSCAPE CONTRACTOR SHALL PROVIDE HARDWOOD MULCH SAMPLE TO OWNER FOR APPROVAL.

MCKNIGHT

BATON ROUGE, LOUISIANA 70806 P 225.924.1265 E 225.709.0748 McKnight-LA.com

	668 S. FOSTER DRIVE, SI BATON ROUGE, LOUISIAN P 225.924.1265 (E 225.)
	McKnight-LA.com
LANDSCAPE ORDINANCE CA	LCULATIONS
LEE'S SUMMIT MO DEVELOPMENT CODE, DIVISIO ZONED: CP2	
STREET FRONTAGE (NON RESIDENTIAL ZONE)	

A. 1 TREE PER 30 L.F. OF STREET FRONTAGE REQUIRED: 5 TREES

PROVIDED: 5 TREES B. 20' WIDE LANDSCAPE STRIP TO SEPARATE PARKING AREA FROM THE STREET.

- PROVIDED: 20' LANDSCAPE STRIP
- C. 1 SHRUB FOR EACH 20' OF STREET FRONTAGE REQUIRED: 7 SHRUBS PROVIDED: 14 SHRUBS (NEAR SIGNAGE)

OPEN YARD AREA

LOT CONTAINS A LARGE CONSERVATION AREA THAT WILL REMAIN. CALCULATIONS BELOW ARE BASED ON CLEARED PORTION OF THE LOT; 23,670 SQUARE FEET.

- A. 2 SHURBS PER 5,000 SQUARE FEET REQUIRED: 10 SHRUBS PROVIDED: 20 SHRUBS (PROVIDED TO HIDE TRASH ENCLOSURE AND DRIVEWAY)
- B. 1 TREE PER 5,000 SQUARE FEET REQUIRED: 5 TREES

PROVIDED: 5 TREES

PARKING LOT SCREENING

- A. $2\frac{1}{2}$ ' HEIGHT OF SCREENING REQUIRED ALONG THE EDGE OF PARKING LOT CLOSEST TO THE STREET
- B. A HEDGE CONSISTING OF AT LEAST 12 SHRUBS PER 40'. HEDGE MUST BE AT LEAST 18" TALL AT TIME OF PLANTING.
- REQUIRED: 36 SHRUBS (CONTINUOUS HEDGE) PROVIDED: 44 SHRUBS (PROVIDED TO HAVE CONTINUOUS HEDGE AROUND PARKING LOT PER CODE)
- SOUTH & EAST BUFFER (CP2 ADJACENT TO CP2)
- NO REQUIRED BUFFER
- NORTH & WEST BUFFER (CP2 ADJACENT TO RP-2 & RP-4)
- REQUIRED: 20' BUFFER YARD (HEAVY) PROVIDED: EXISTING 30'-100' VEGETATED BUFFER & EXISTING **RETAINING WALL**

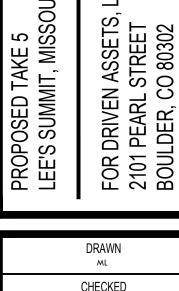
GENERAL PLANTING NOTES

- 1. LOCATE ALL UTILITIES ON SITE PRIOR TO COMMENCING WORK. ANY DAMAGE DONE TO EXISTING OR NEW UTILITIES SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO OWNER.
- 2. PLANTS SHALL BE WELL FORMED, NO. 1 GRADE OR BETTER NURSERY STOCK AND SHALL MEET THE APPLICABLE STANDARDS NOTED HEREIN AND SHALL BE SUBJECT TO REJECTION BY THE LANDSCAPE ARCHITECT.
- 3. STAKE OUT ALL TREE LOCATIONS FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. LOCATE ALL TREES AS SHOWN ON PLAN.
- 4. COORDINATE WORK WITH THE WORK OF OTHER TRADES ON THE SITE.
- 5. ENTIRE SITE SHALL BE GRADED TO FINISH GRADE PRIOR TO SCHEDULING PLANTING INSTALLATION.
- 6. PLANTS SHALL BE SPECIMEN QUALITY, FULL POT AND HEAD, SYMMETRICAL FOLIAGE AND BRANCHING STRUCTURE. SHRUBS SHALL BE FULL TO GROUND.
- 7. PLANT MATERIAL OF THE SAME SPECIES SHALL BE MATCHING IN CHARACTER AND SIZE, OBTAINED FROM THE SAME SOURCE.
- 8. ANY CHANGES IN PLANT MATERIAL SIZE, QUANTITY, SPECIES OR VARIETY MUST BE APPROVED BY THE OWNER AND/OR LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- 9. INSTALLATION MUST BE COMPLIANT WITH LANDSCAPE ORDINANCE STANDARDS.
- 10. SOD ALL AREAS DISTURBED BY CONSTRUCTION.

RYAN McKNIGHT NUMBER PLA-2021009815

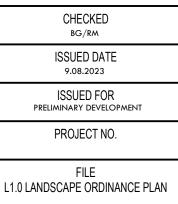
REVISION

REVISION #1

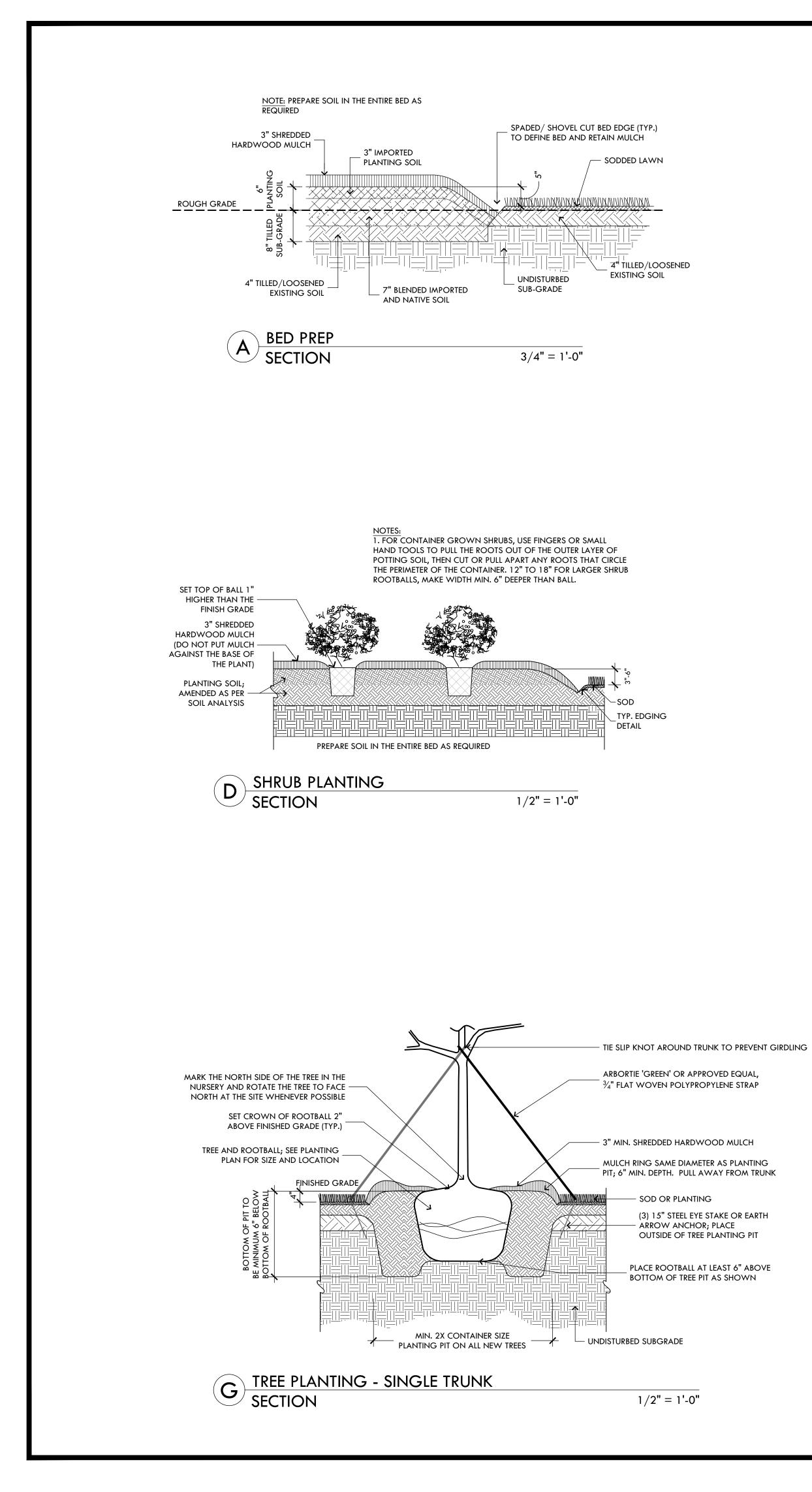


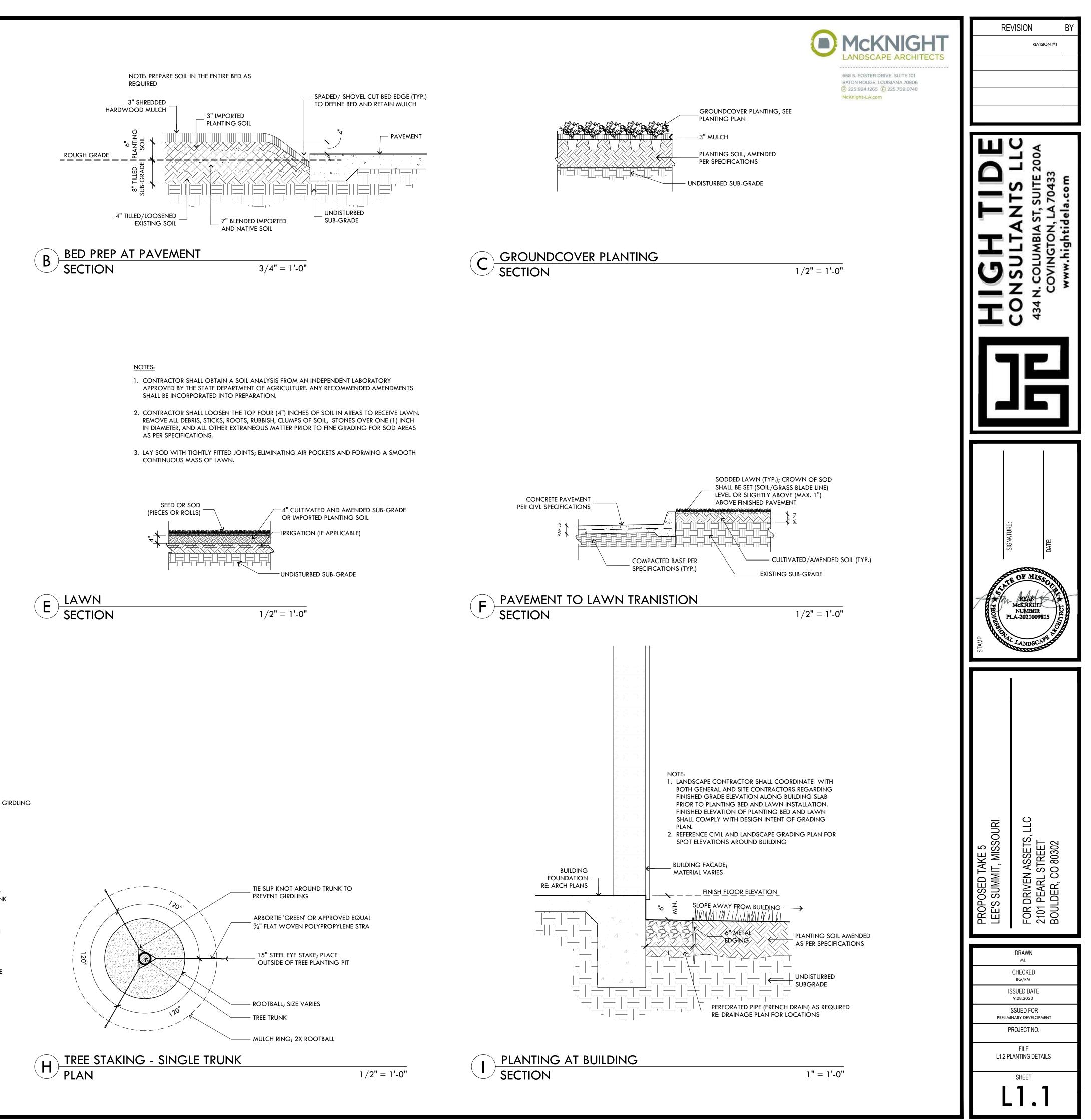
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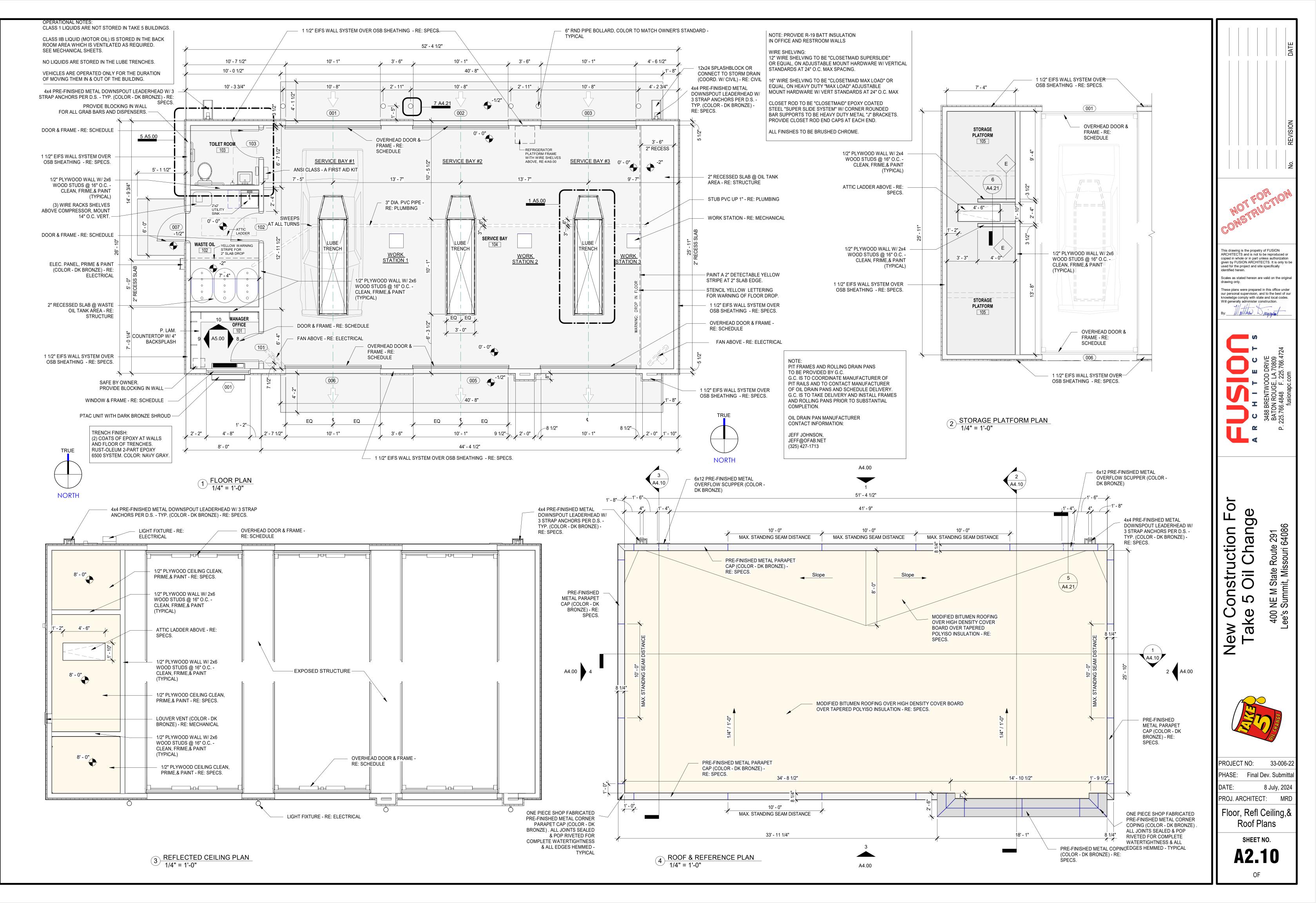
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SHEET







	SCHEDULE - ROOM FINISH (NEW STYLE)																	
		FLR MATL.	BASE		W	ALL			FIN	IISH			CE	EILING				
		ED		NORTH	EAST	SOUTH	WEST	NORTH	EAST	SOUTH	WEST							
No.	ROOM NAME	CONCRETE / SEAL	VINYL	1/2" PLY WD	1/2" PLY WD	1/2" PLY WD	1/2" PLY WD	PAINT	PAINT	PAINT	PAINT	PLY WOOD	FINISH	CEILING HEIGHT		REMARKS		Number
101	MANAGER OFFICE	•	•	•	•	•	•	•	•	•	•	•	PRIME & PAINT	8'- 0"	SMOOTH FINISH. STAINED	B-C PLYWD.	NOTE 1,2,3,4,8,9,10	101
102	WASTE OIL	•	•	•	•	•	•	•	•	●	•	•	PRIME & PAINT	8'- 0"	SMOOTH FINISH. STAINED	B-C PLYWD.	NOTE 1,2,3,4,8,9,10	102
103	TOILET ROOM	•	•	•	•	•	•	•	•	•	•	•	PRIME & PAINT	8'- 0"	SMOOTH FINISH. STAINED	B-C PLYWD.	NOTE 1,2,3,4,8,9,10,11	103
104	SERVICE BAY	•	•	•	•	•	•	•	•	•	•		PRIME & PAINT	EXPOSED STRUCTURE	SMOOTH FINISH. STAINED	B-C PLYWD.	NOTE 1,2,3,4,8,9,10	104
105	STORAGE PLATFORM	•	•	•	•	•	•	•	•	•	•		PRIME & PAINT	EXPOSED STRUCTURE	SMOOTH FINISH. STAINED	B-C PLYWD.	NOTE 1,2,3,4,8,9,10	105

	SCHEDULE - DOOR & FRAME														
	SINGLE /		SIZE		Туре	DOOR	FRAME	DOOR & FRAME		DETAILS					
NO.	PAIR	Width	Height	THICKNESS	Mark	MATERIAL	MATERIAL	FINISH	HEAD	JAMB	SILL	HARDWARE	Fire Rating	Comments	
001	OVERHEAD	10' - 1"	11' - 6"	0' - 2"	В	METAL / GLASS	METAL		11:A3.01	10:A3.01				3 CENTER SECTIONS G	ASS
002	OVERHEAD	10' - 1"	11' - 6"	0' - 2"	В	METAL / GLASS	METAL		11:A3.01	10:A3.01				3 CENTER SECTIONS G	LASS
003	OVERHEAD	10' - 1"	11' - 6"	0' - 2"	В	METAL / GLASS	METAL		11:A3.01	10:A3.01				3 CENTER SECTIONS G	ASS
004	OVERHEAD	10' - 1"	11' - 6"	0' - 2"	В	METAL / GLASS	METAL		9:A3.01	10:A3.01				3 CENTER SECTIONS G	ASS
005	OVERHEAD	10' - 1"	11' - 6"	0' - 2"	В	METAL / GLASS	METAL		11:A3.01	10:A3.01				3 CENTER SECTIONS G	ASS
006	OVERHEAD	10' - 1"	11' - 6"	0' - 2"	В	METAL / GLASS	METAL		11:A3.01	10:A3.01				3 CENTER SECTIONS G	ASS
007	SINGLE	3' - 0"	7' - 0"	0' - 1 3/4"	С	FLUSH H.M.	H.M	PAINT / DK BRONZE EXT & GRAY INT	4:A3.01	5:A3.01	6:A3.01	SET 1	CLOSE	R, LOCKSET, THRESHOLD.	NOTE 1,2,5
101	SINGLE	3' - 0"	7' - 0"	0' - 1 3/4"	А	FLUSH H.M.	H.M	PAINT / DK BRONZE EXT & GRAY INT	7:A3.01	8:A3.01		SET 2	LOCI	KSET, CLOSER	NOTE 1,2,6
102	SINGLE	3' - 0"	7' - 0"	0' - 1 3/4"	В	FLUSH H.M.	H.M	PAINT / DK BRONZE EXT & GRAY INT	7:A3.01	8:A3.01		SET 4	LO	CKSET, CLOSER	NOTE 1,2
103	SINGLE	3' - 0"	7' - 0"	0' - 1 3/4"	В	FLUSH H.M.	H.M	PAINT / DK BRONZE EXT & GRAY INT	7:A3.01	8:A3.01		SET 3	LOCKSET, H	IALF GLASS (TINTED), CLOS	SER NOTE 1,2,4

* ALL METAL DOOR FRAMES TO BE G90

DOOR & WINDOW NOTES:	

NOTE 1. HARDWARE TO BE LEVER ACTION AND MEET ALL ADA REQUIREMENTS.

NOTE 2. HARDWARE TO BE COMMERCIAL GRADE.

NOTE 3. HARDWARE PER MANUF. REQIREMENTS.

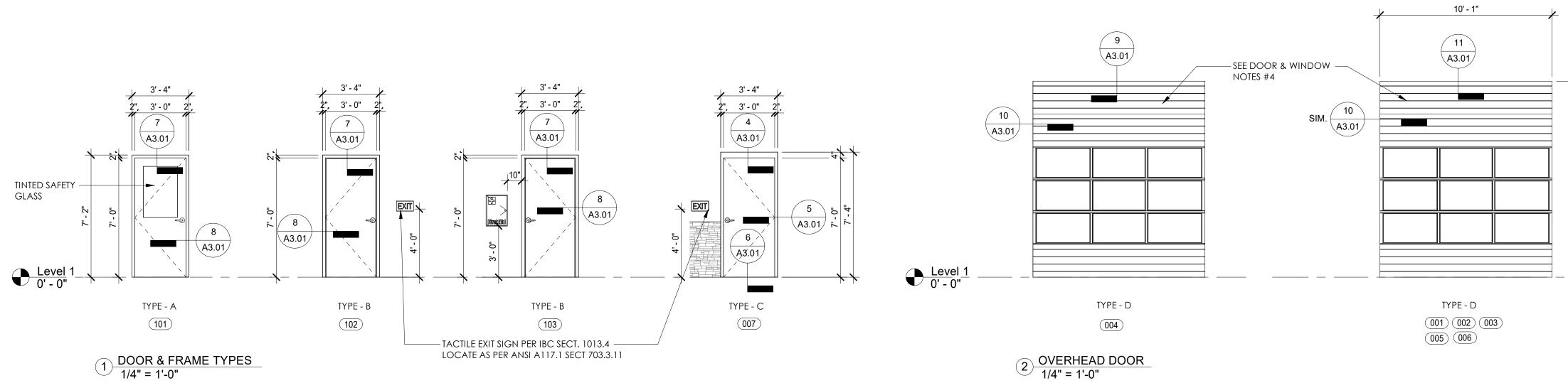
NOTE 4. SAFETY GLAZING TO MEET ANSI Z97.1 CLASS A.

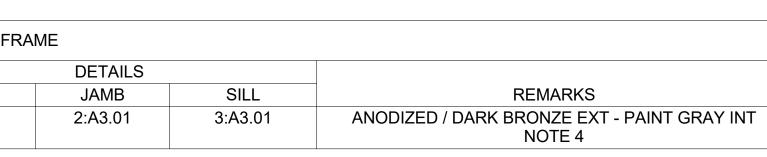
NOTE 5. DARK BRONZE PAINT COLOR TO BE (SW 6076 "TURKISH COFFEE").

NOTE 6. EXTERIOR DOOR WHEN INDICATED ON PLAN 1/A-100

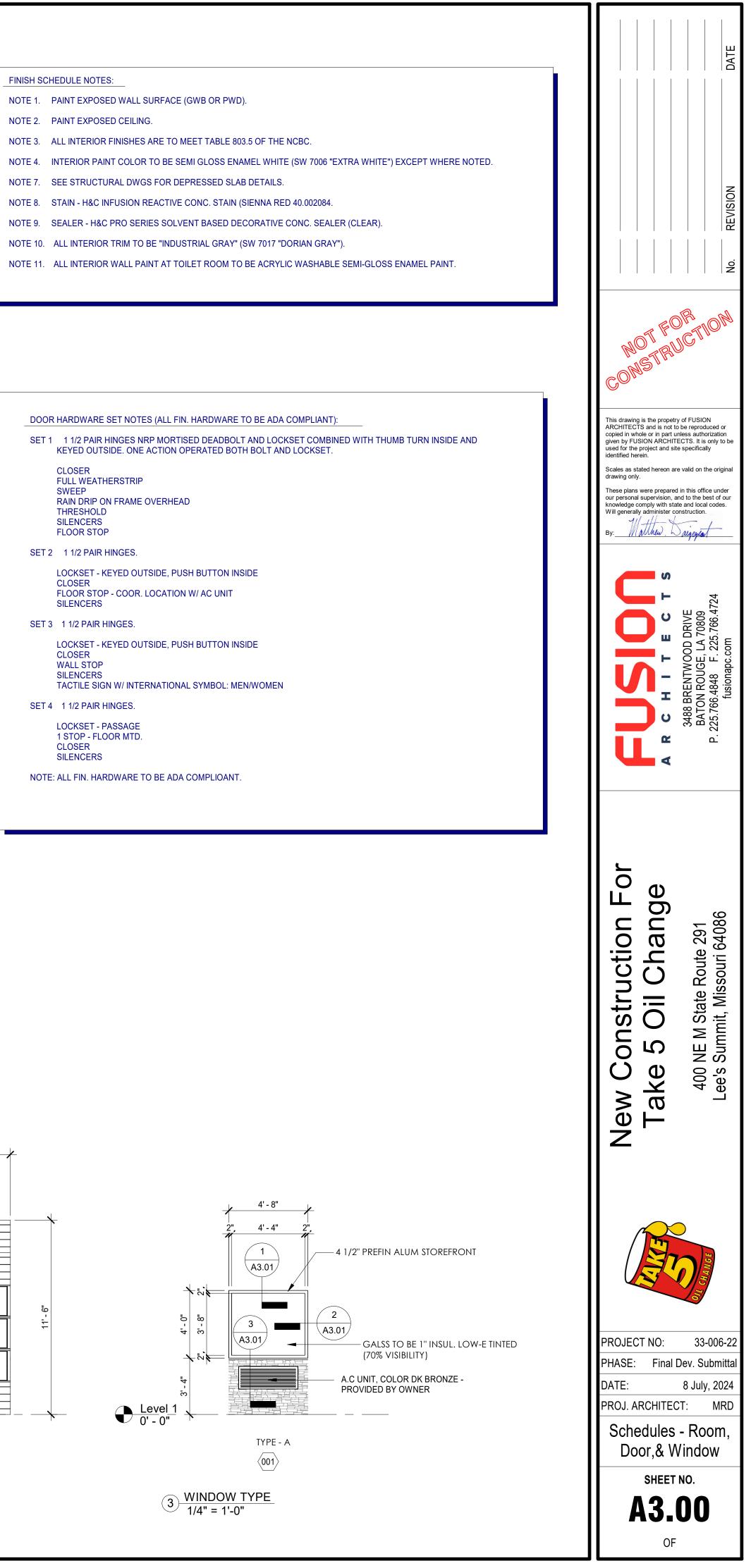
					SCHEDULE -	WINDOW & F
	S	SIZE		F	RAME	
NO.	WIDTH	HEIGHT	GLAZING	Туре	MATERIAL	HEAD
001	4' - 8"	4' - 0"	FIXED GLASS / DOUBLE PANE, LOW-E GLASS, TINTED	А	ALUMINUM	1:A3.01

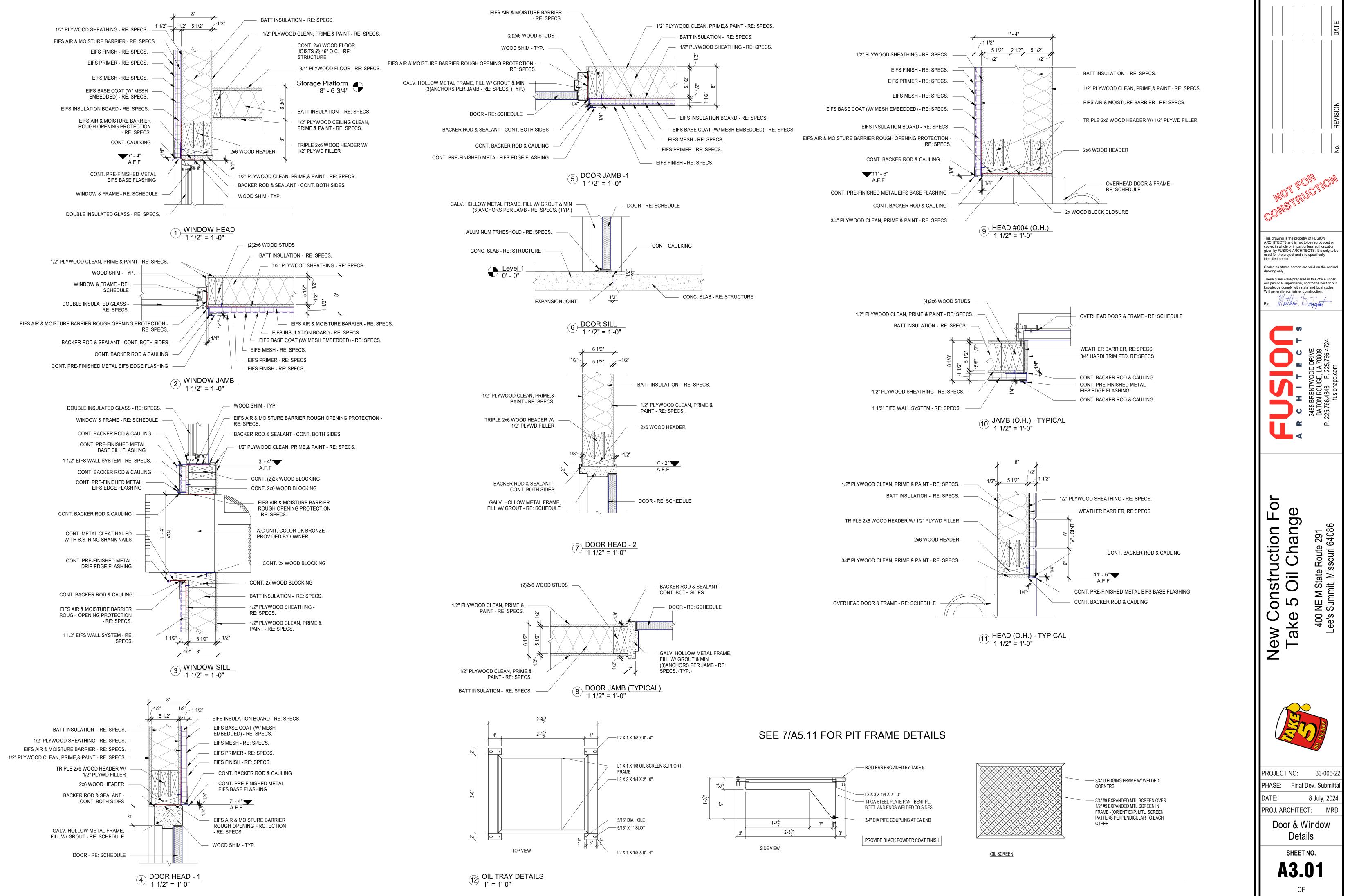
KAWNEER TRIFAB 450 SERIES ALUMINUM STOREFRONT WINDOWS OR OLDCASTLE EQUAL. GLASS TO BE SOLARBRONZE 60.

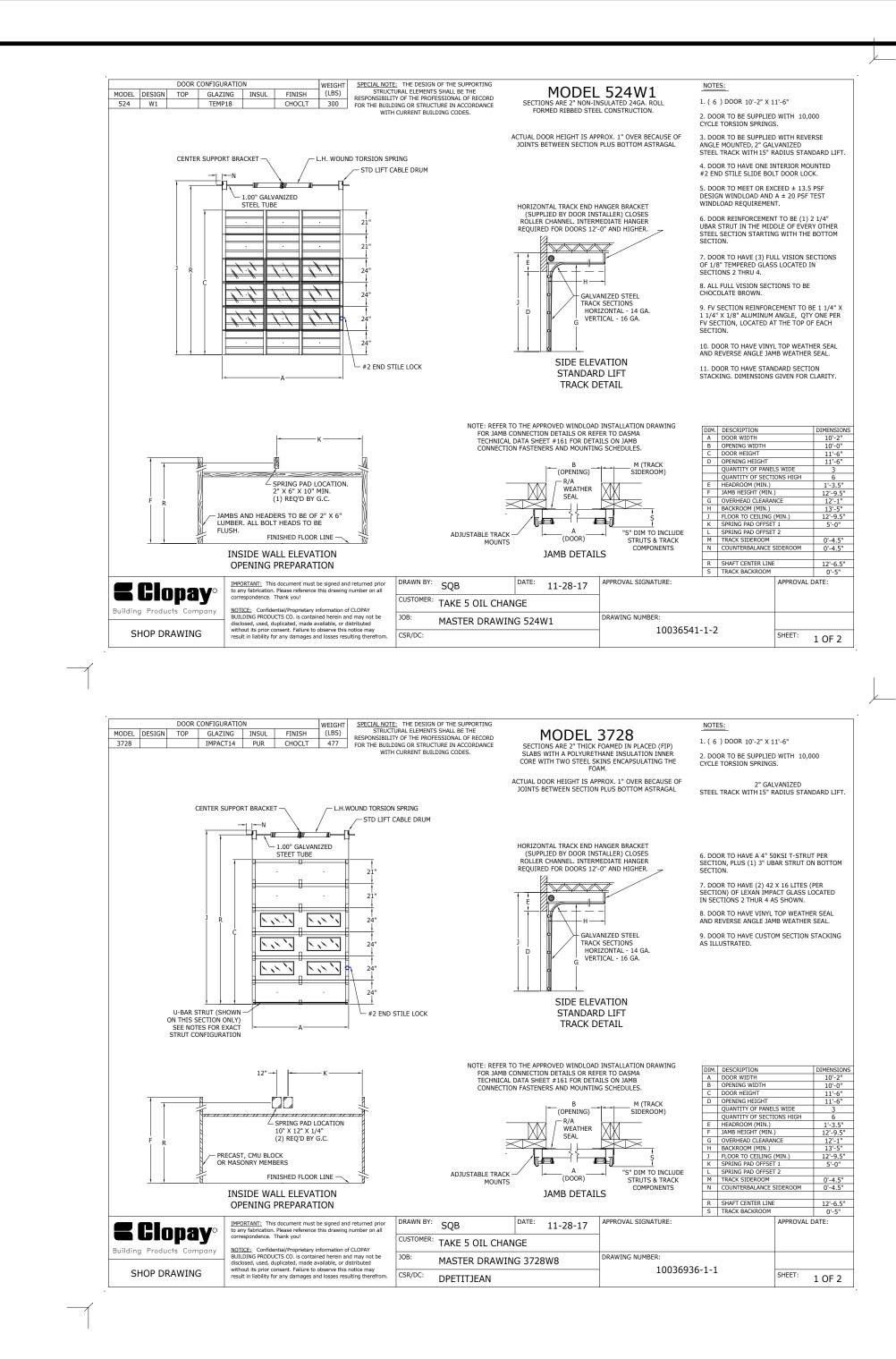


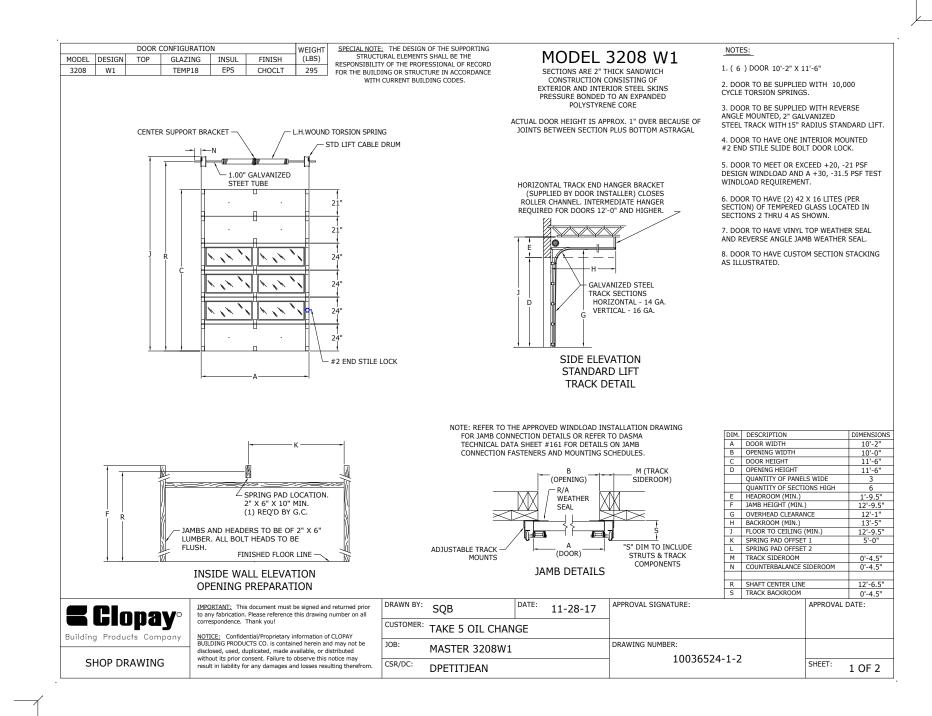


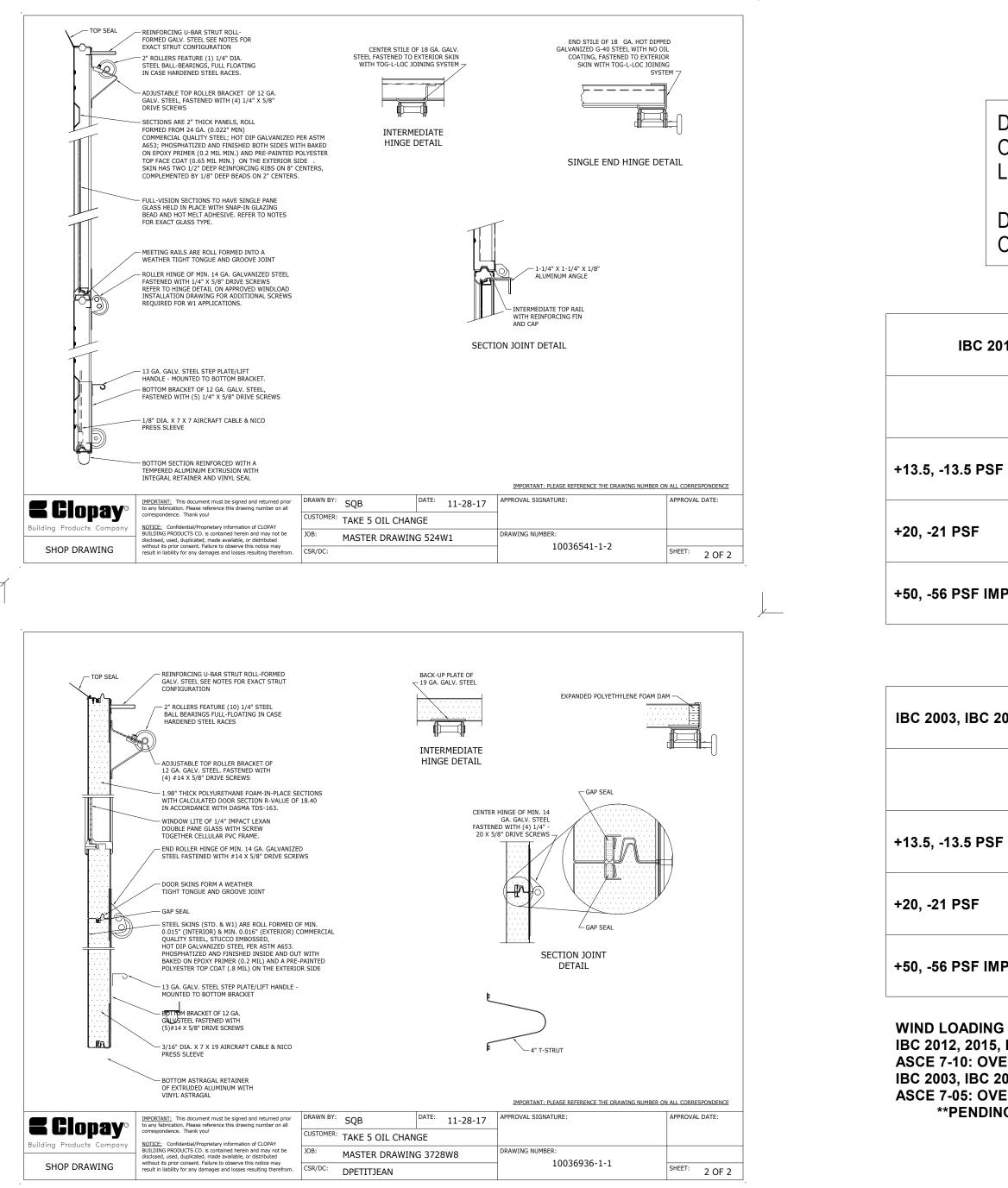


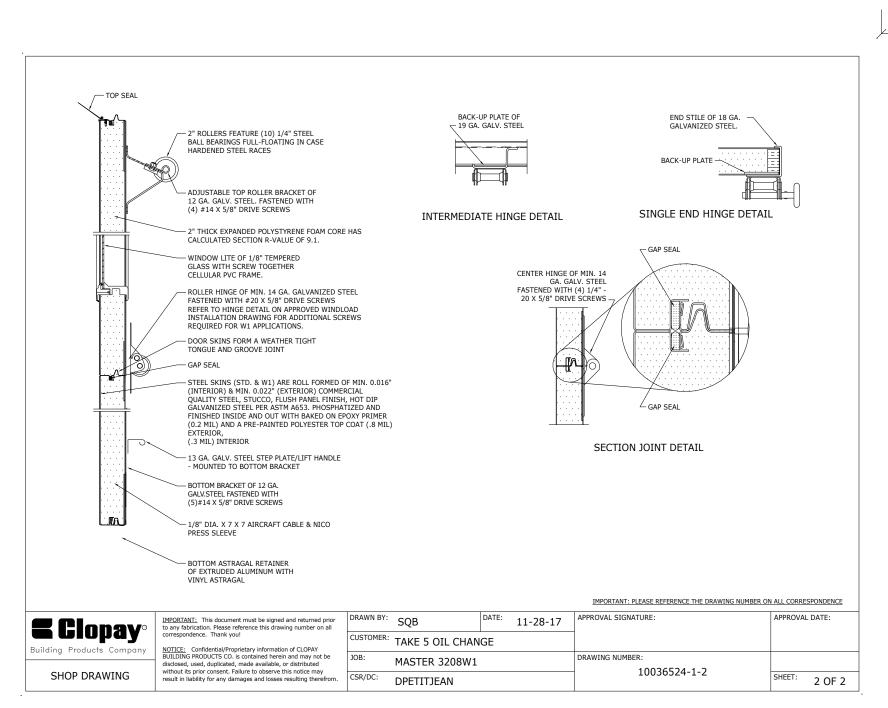












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DESIGNER OF RECORD TO SELECT SPECIFIC OVERHEAD DOOR MODEL BASED ON LOCAL WIND LOAD / CODE REQUIREMENTS.

DELETE ALL OTHER OVERHEAD DOORS SHOWN ON THIS SHEET.

IBC 2012, IBC 2015, MIAMI DADE COUNTY **, FBC** WIND ENFORCED AREAS

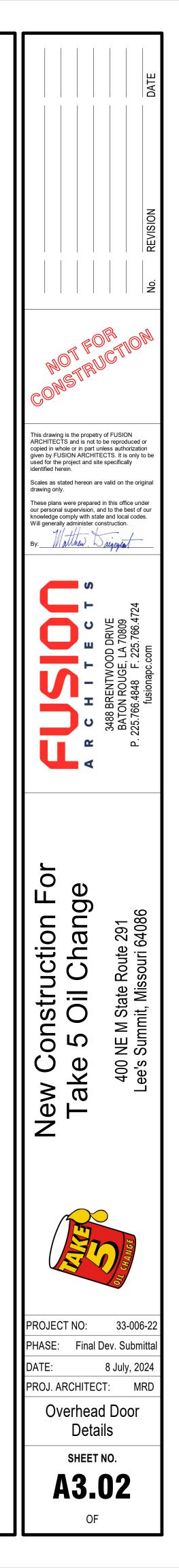
	MODEL	COST PER 6 DOOR	COST PER 8 DOOR	ASCE 7-10 EXP B	ASCE 7-10 EXP C
F	524W1	NOTE 1		0-121 MPH	0-128 MPH
	3208W1	NOTE 1		121-139 MPH	109-139 MPH
IPACT	3728W6	NOTE 1		140-246 MPH	140-227 MPH

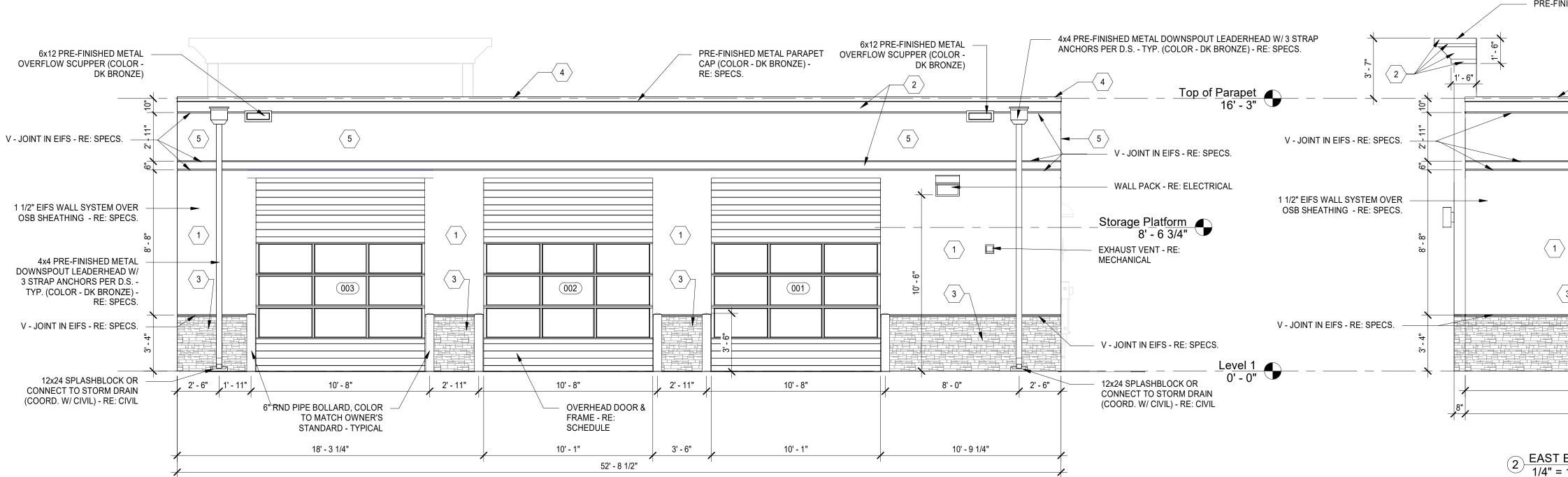
IBC 2003, IBC 2006, IBC 2009, TEXAS DEPARTMENT OF INSURANCE** WIND ENFORCED AREAS

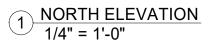
	MODEL	COST PER 6 DOOR	COST PER 8 DOOR	ASCE 7-10 EXP B	ASCE 7-10 EXP C
=	524W1	NOTE 1		0-93 MPH	0-83 MPH
	3208W1	NOTE 1		93-116 MPH	84-104 MPH
РАСТ	3728W6	NOTE 1		117-190 MPH	105-170 MPH

WIND LOADING - IMPACT GLAZING REQUIREMENTS IBC 2012, 2015, FBC, SC BC, MIAMI DADE COUNTY ASCE 7-10: OVER 140 MPH OR OVER 130MPH WITHIN 1 MILE OF COAST IBC 2003, IBC 2006, IBC 2009, TEXAS DEPARTMENT OF INSURANCE ASCE 7-05: OVER 120 MPH OR OVER 110 MPH WITHIN 1 MILE OF COAST **PENDING RESPECTIVE PRODUCT APPROVALS

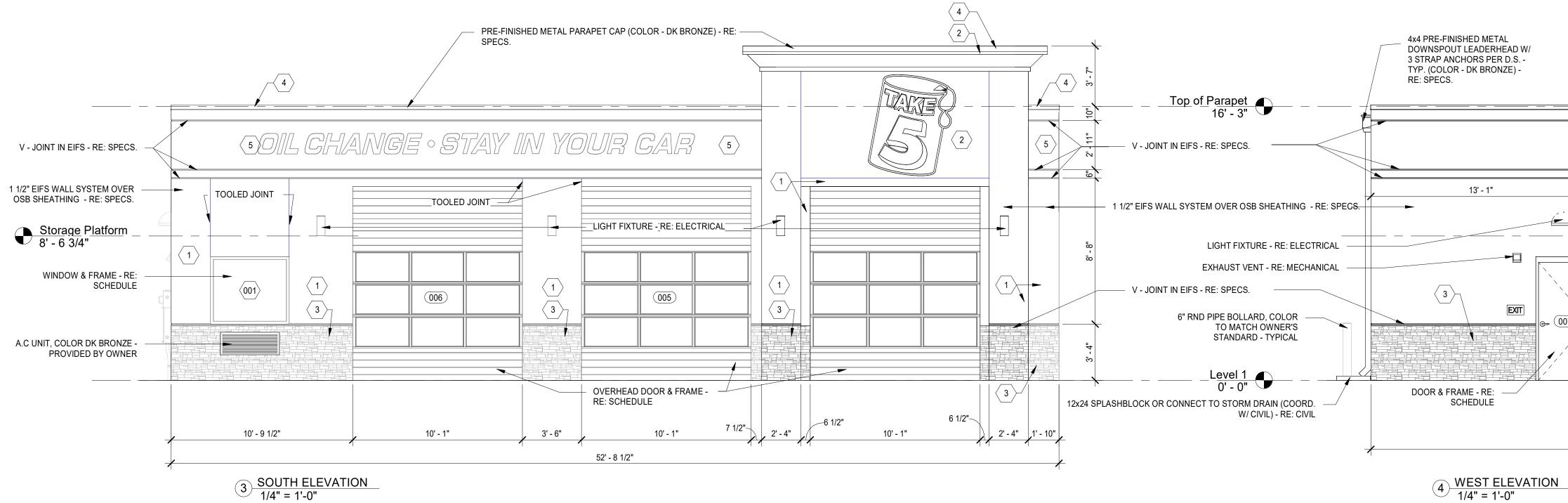
> NOTE 1: COST OF DOORS SET BY VENDOR AND TAKE 5



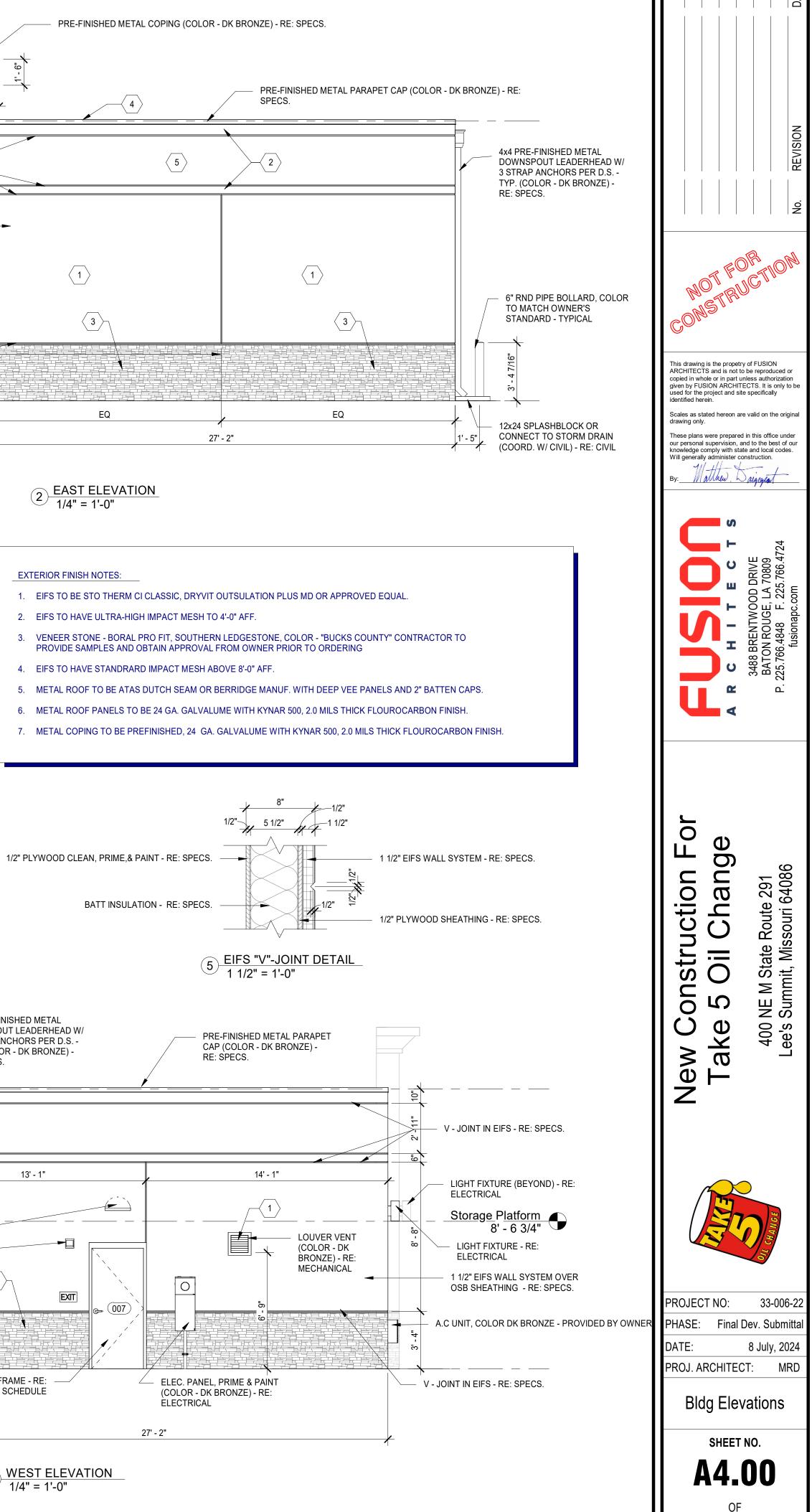


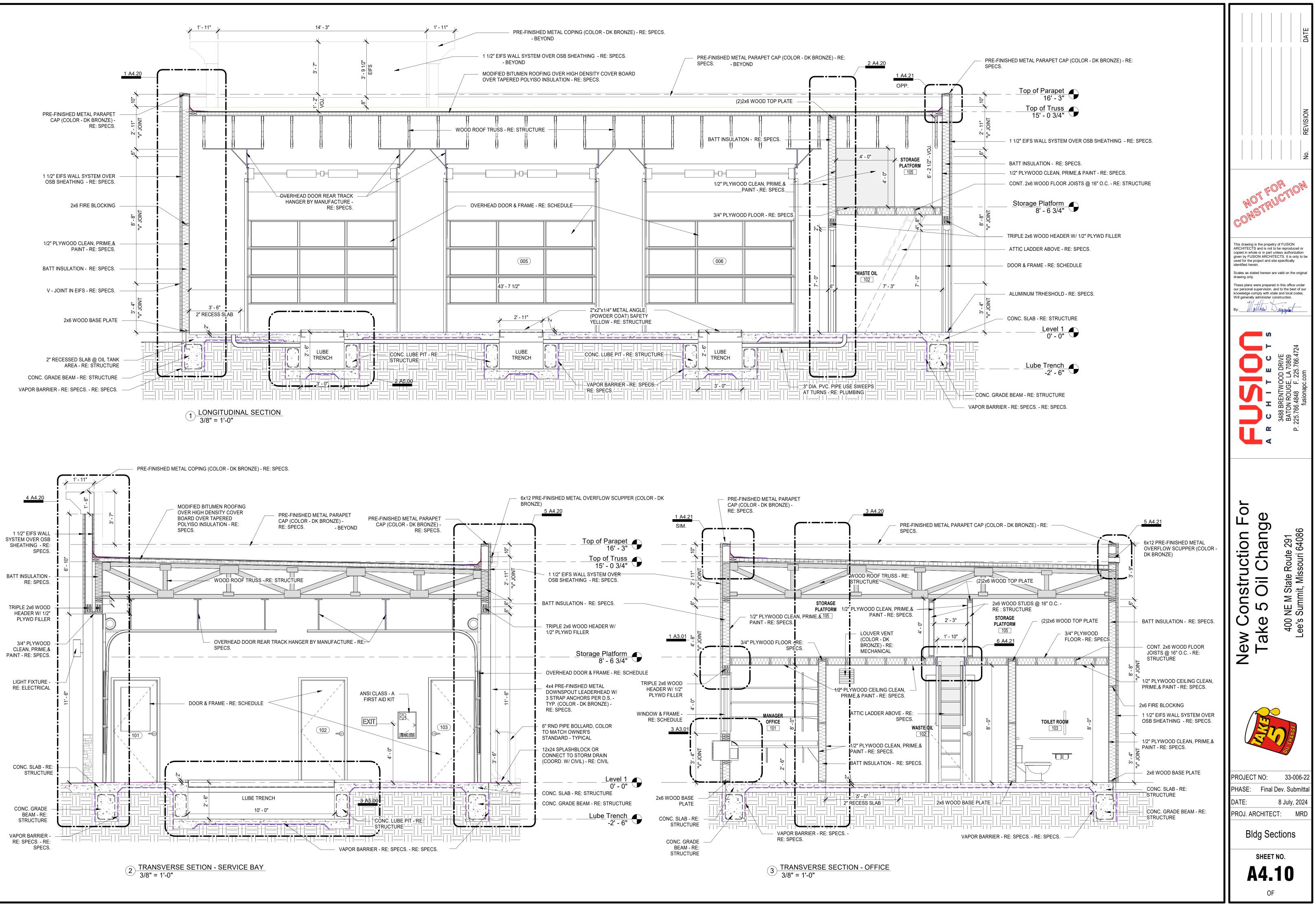


EXTERIOR FINISH SCHEDULE							
NO.	AREA	COATS	COLOR	FINISH			
	S OR STUCCO MAIN COLOR	SEE SPECIFICATION & MANUFACTURER'S REQ'MENTS	MATCH SW COLOR #7693, STONEBRIAR	FINISH TO MATCH STO "MEDIUM SAND" OR DRYVIT "SANDPEBBLE FINE"			
2 EIF	S OR STUCCO ACCENT BAND AND FACE	SEE SPECIFICATION & MANUFACTURER'S REQ'MENTS	MATCH SW COLOR #7678, COTTAGE CREAM	FINISH TO MATCH STO "FINE SAND" OR DRYVIT "SANDBLAST"			
EIF	S OR STUCCO CORNICE						
(3) CU	ILTERED STONE WAINSCOT	SEE SPECIFICATION & MANUFACTURER'S REQ'MENTS	VERIFY COLOR WITH OWNER	VERIFY COLOR WITH OWNER			
(4) CO	PING	SEE SPECIFICATION & MANUFACTURER'S REQ'MENTS	MATCH SW COLOR #6871, POSITIVE RED	FINISH TO BE KYNAR 500 PREFINISHED			
5 EIF	S OR STUCCO SECONDARY COLOR	SEE SPECIFICATION & MANUFACTURER'S REQ'MENTS	MATCH SW COLOR #6871, POSITIVE RED	FINISH TO MATCH STO "MEDIUM SAND" OR DRYVIT "SANDPEBBLE FINE"			
6							
7 ΒΟ	DLLARDS	SEE SPECIFICATION & MANUFACTURER'S REQ'MENTS	MATCH SW COLOR #6871, POSITIVE RED				

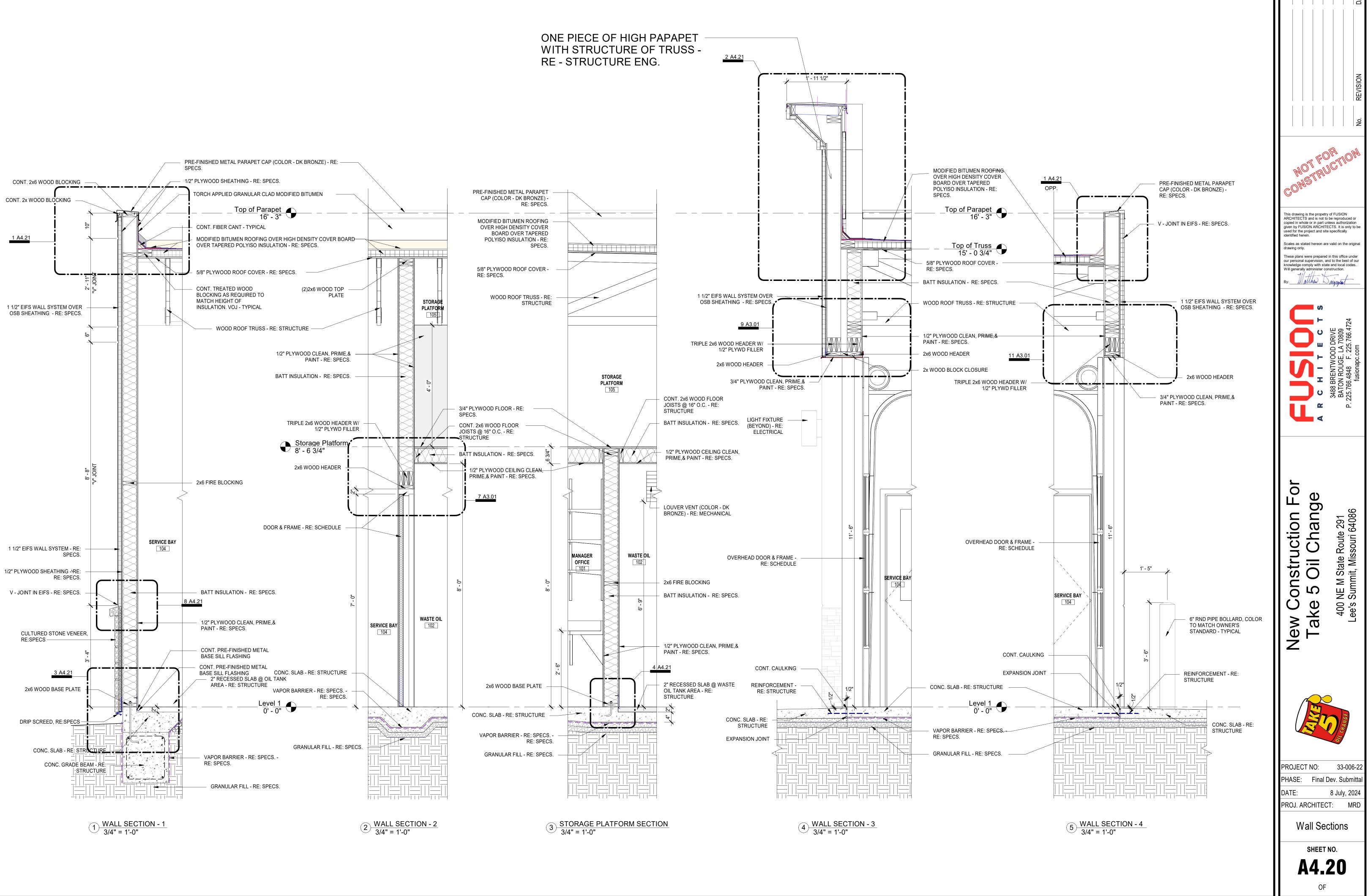


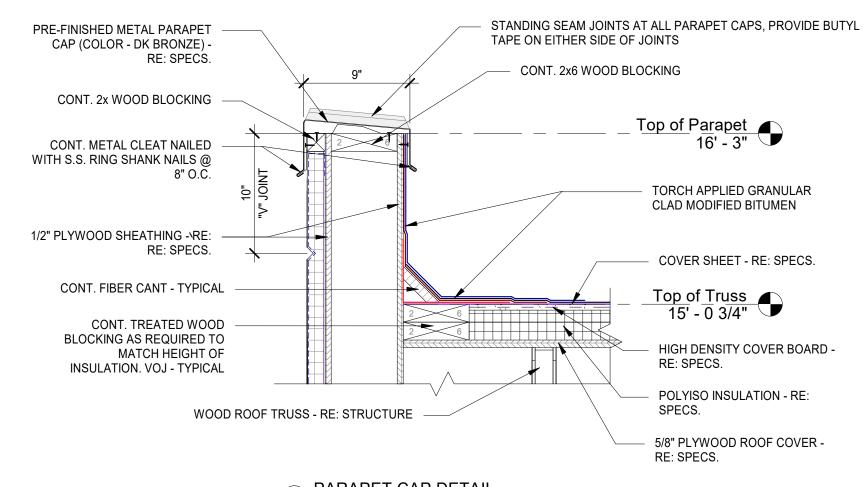
_	EXT	ERIOR FINISH N
	1.	EIFS TO BE STO
	2.	EIFS TO HAVE U
	3.	VENEER STONE PROVIDE SAMP
	4.	EIFS TO HAVE S
	5.	METAL ROOF T
	6.	METAL ROOF P
	7.	METAL COPING

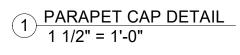


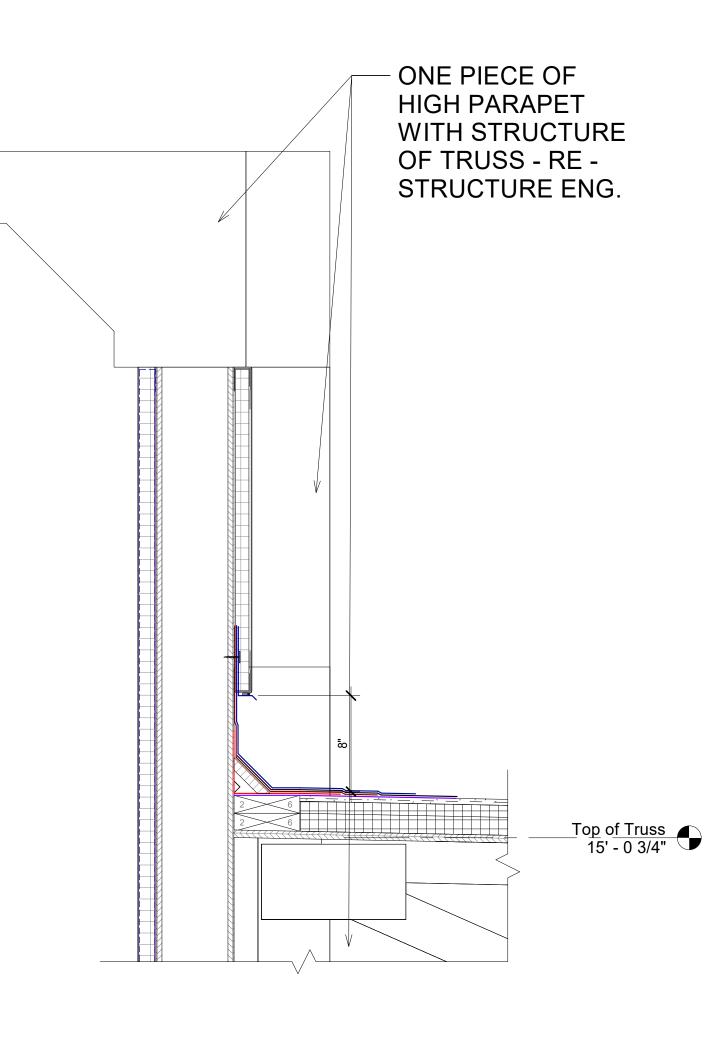




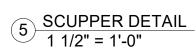


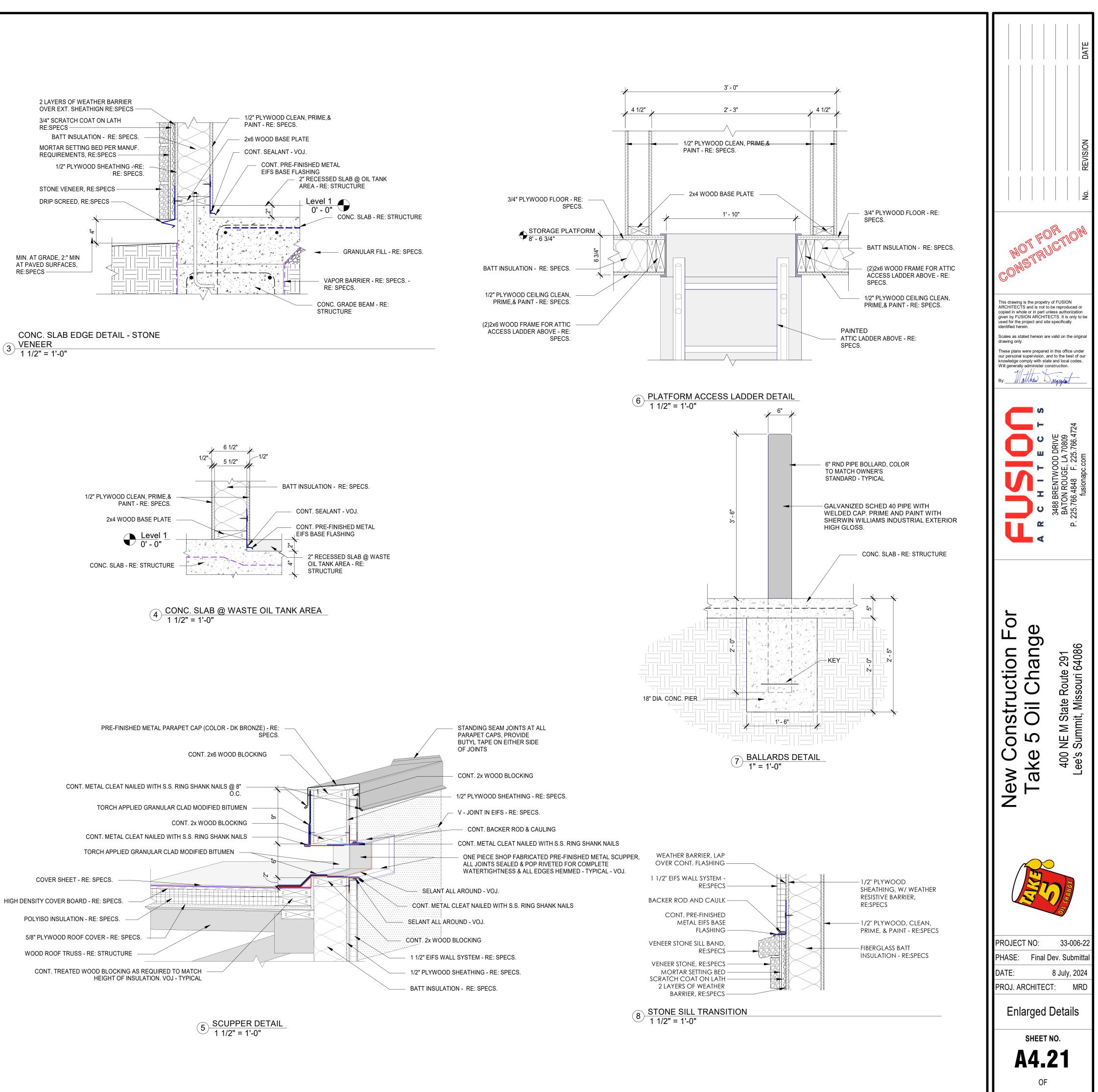


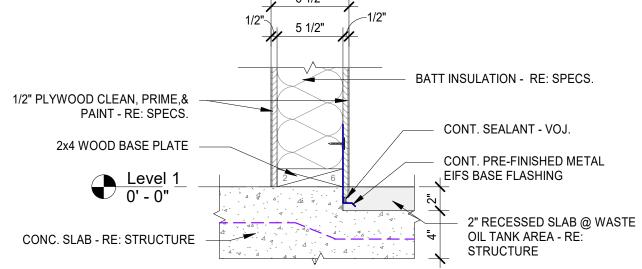




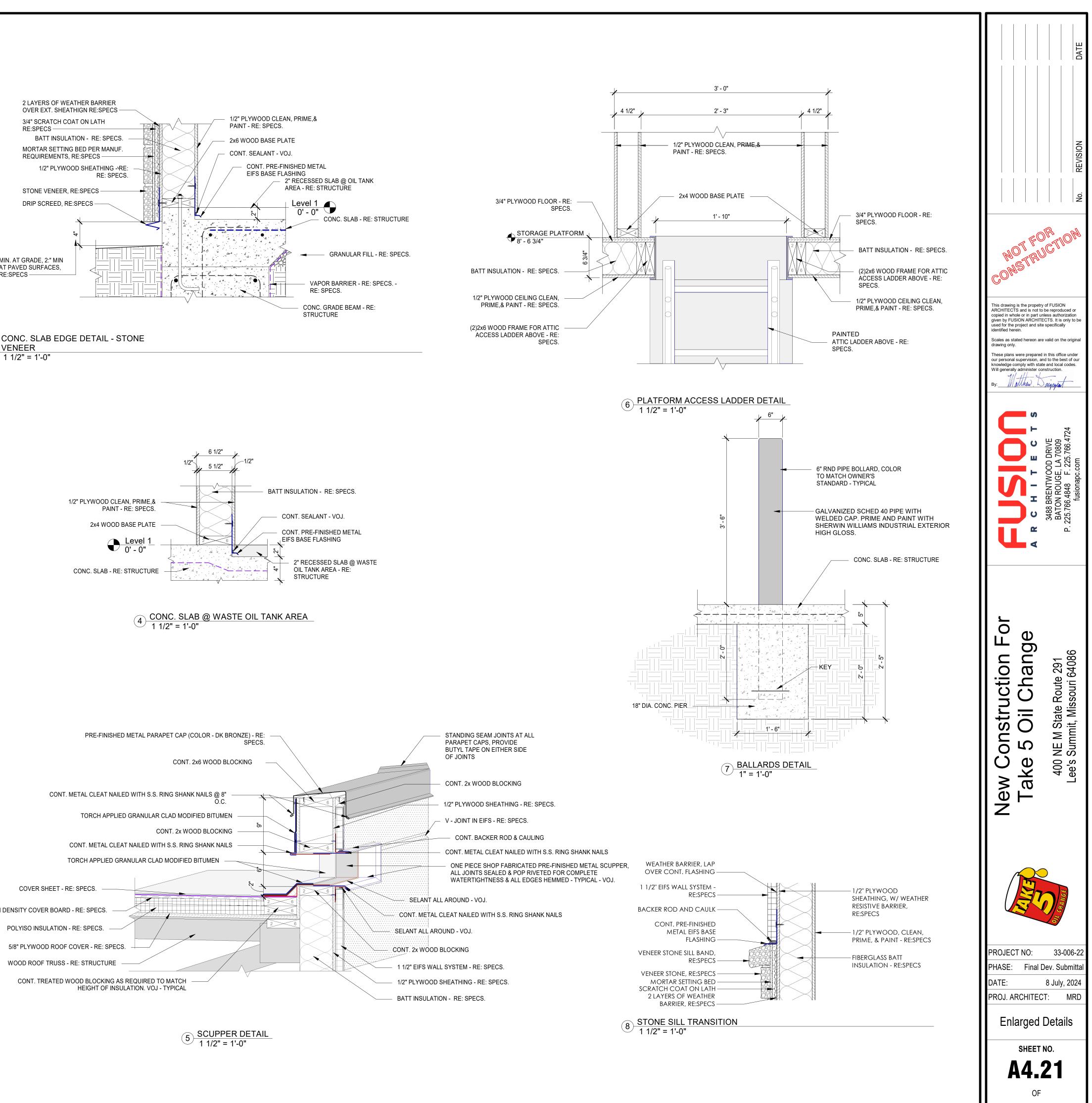
2 PARAPET COPING DETAIL 1 1/2" = 1'-0"

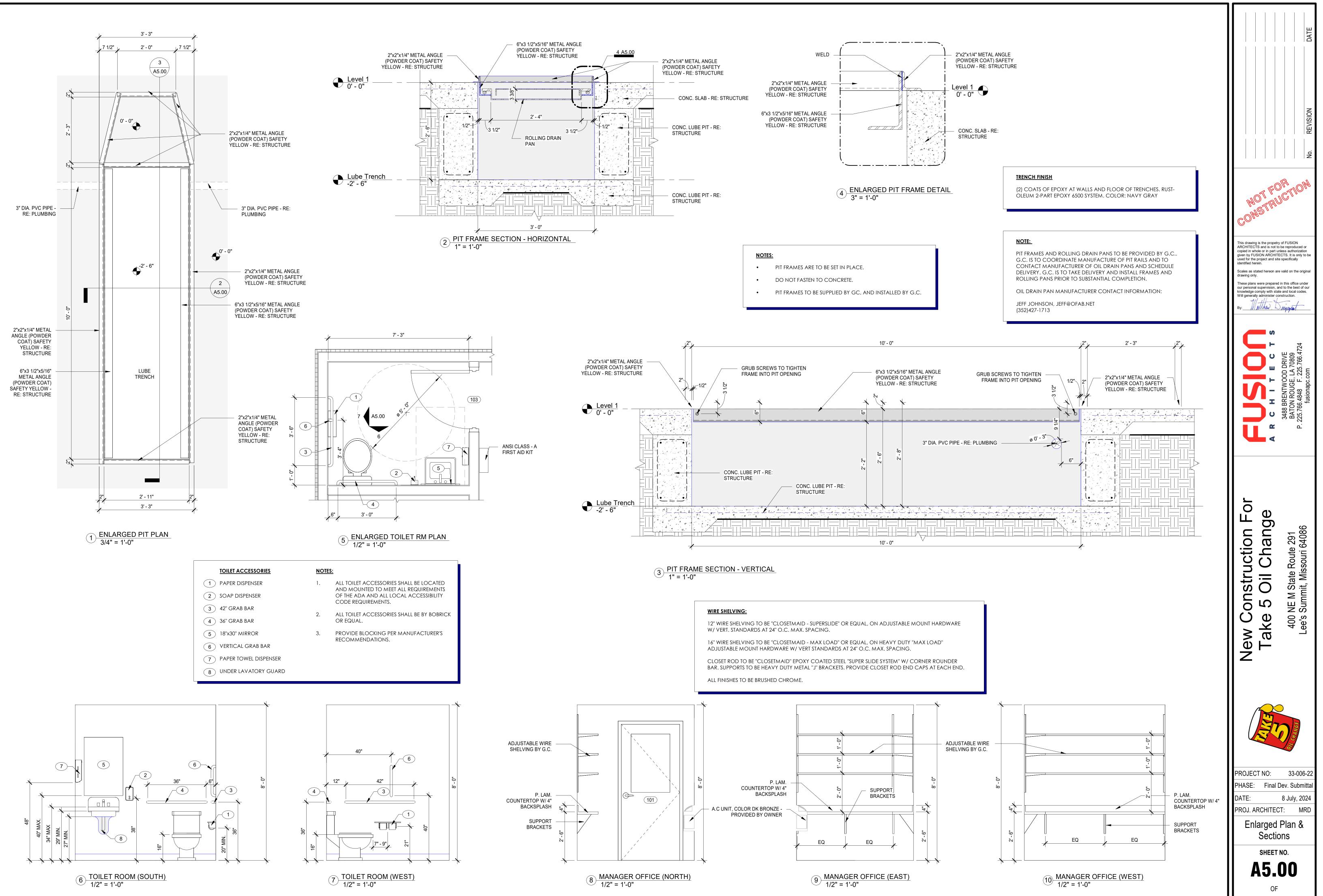


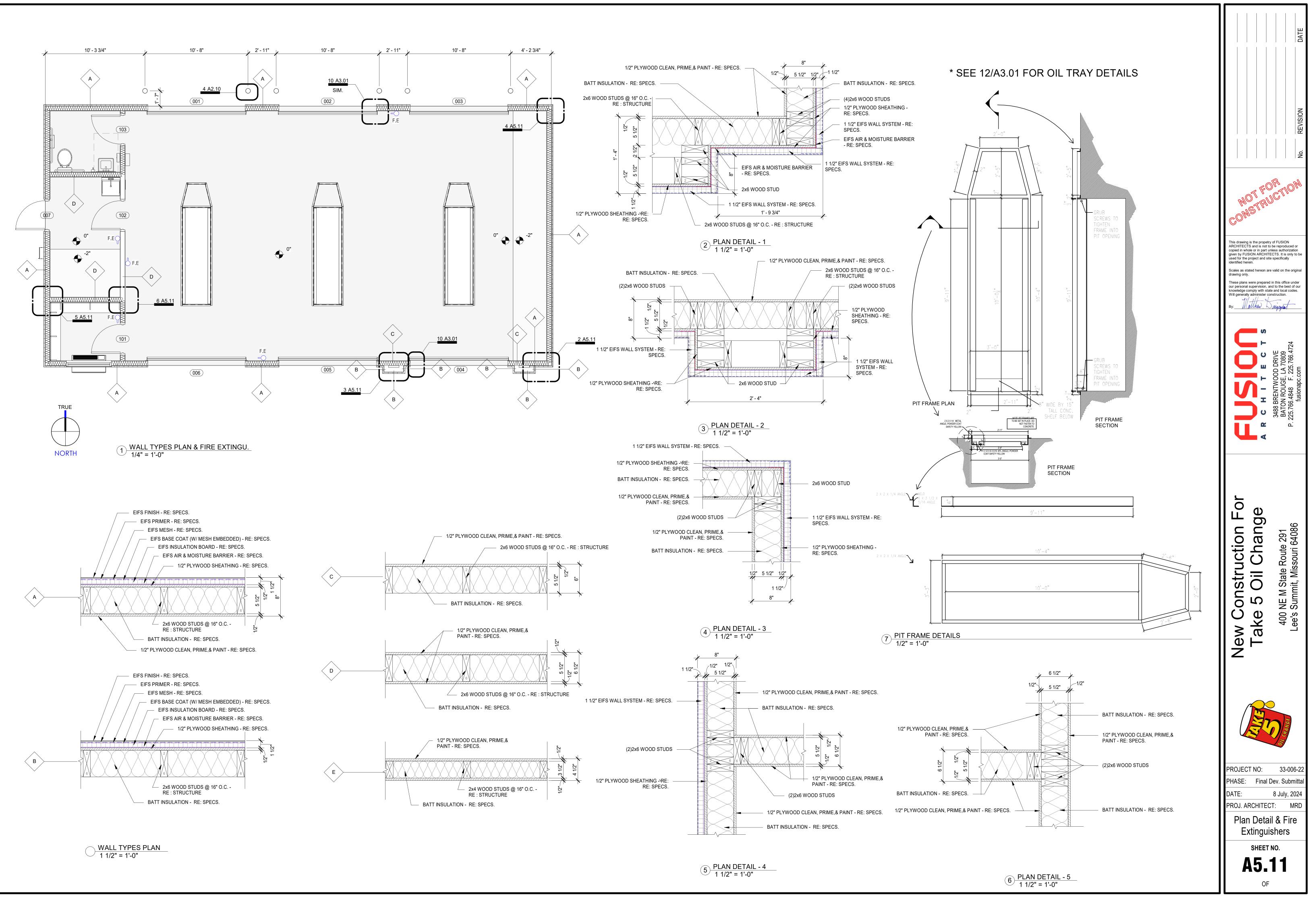


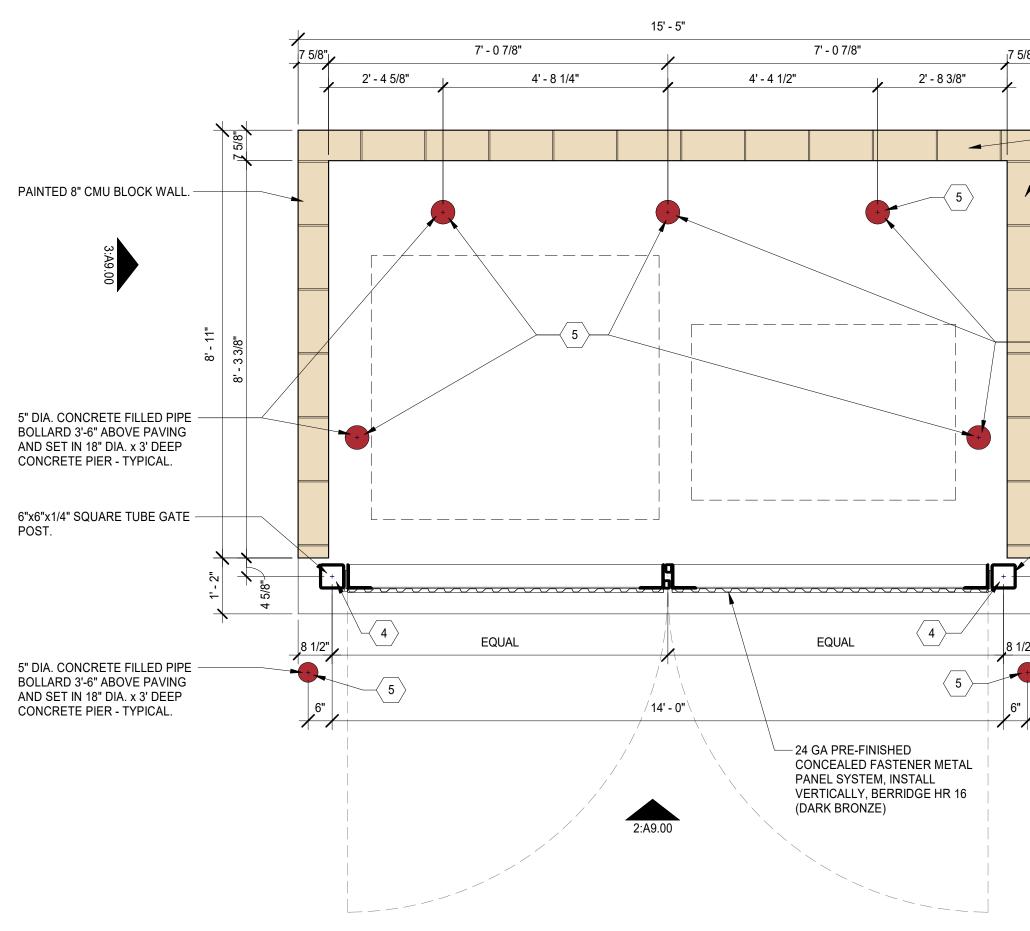




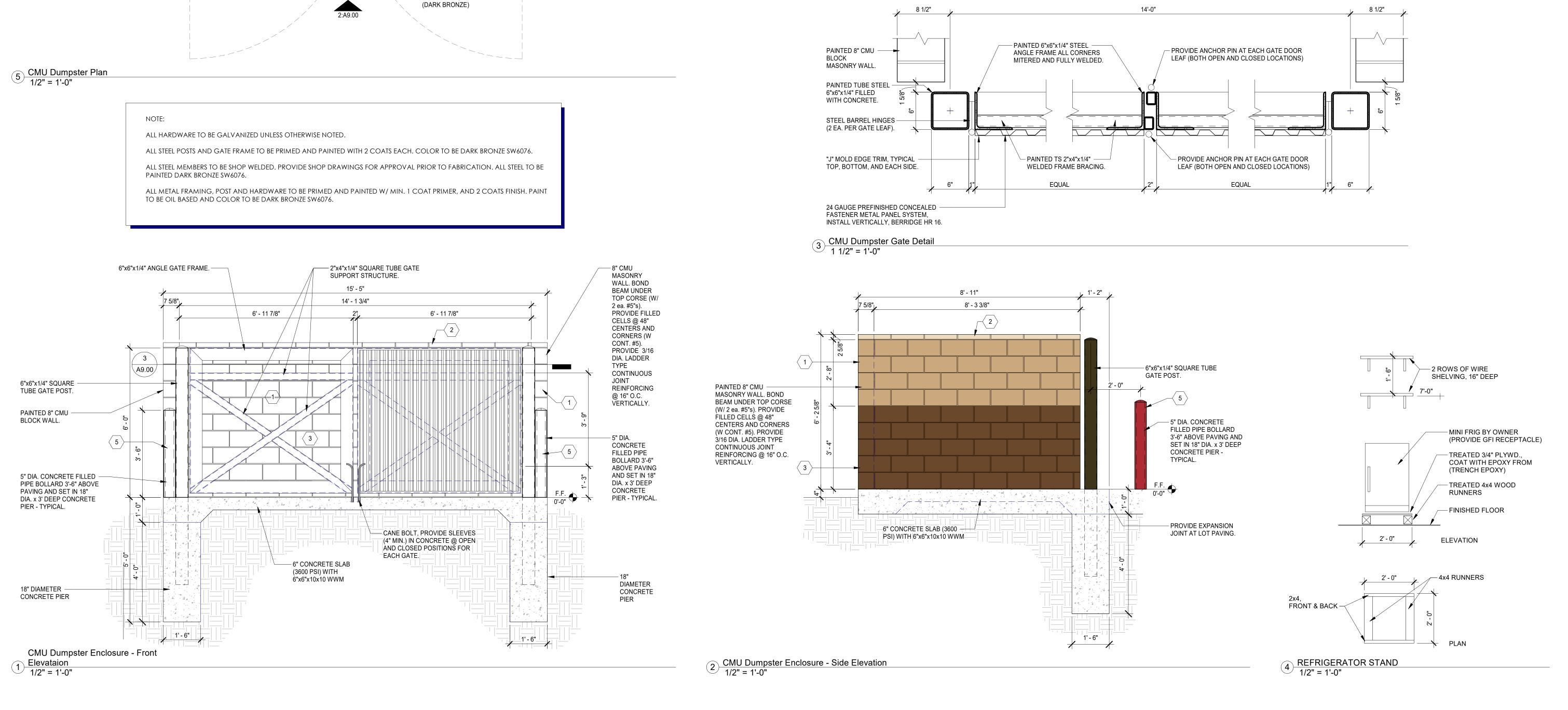








ALL STEEL POSTS AND GATE FRAME TO BE PRIMED AND PAINTED WITH 2 COATS EACH. COLOR TO BE DARK BRONZE SW6076.



- 8" CMU MASONRY WALL. BOND BEAM UNDER TOP CORSE (W/ 2 ea. #5"s). PROVIDE FILLED CELLS @ 48" CENTERS AND CORNERS (W CONT. #5). PROVIDE 3/16 DIA. LADDER TYPE CONTINUOUS JOINT REINFORCING @ 16" O.C. VERTIC ALLY.

- 5" DIA. CONCRETE FILLED PIPE BOLLARD 3'-6" ABOVE PAVING AND SET IN 18" DIA. x 3' DEEP CONCRETE PIER - TYPICAL.

- 6"x6"x1/4" SQUARE TUBE GATE POST.

- SYSTEMS ARE DIVIDED INTO 2 SEPARATE PROCESSES.
- 1. USED OIL -AFTER A TAKE 5 TECHNICIAN DIRECTS AND GUIDES THE CUSTOMER OVER A SHALLOW TRENCH THE USED OIL IS DRAINED INTO A ROLLING DRAIN PAN THAT IS POSITIONED UNDER THE VEHICLE. THE OIL FILTER IS ALSO CHANGED ABOVE THE DRAIN PAN. WHEN NECESSARY, THE DRAIN PANS ARE EMPTIED TO DESIGNATED OIL TANKS VIA 3/2" GASOLINE-RATED HOSE, ROUTED THROUGH CHASES TO THE STORAGE ROOM. THE HOSES ARE CONNECTED VIA A VACUUM DIAPHRAGM PUMP, SO THE SYSTEM IS TOTALLY NON-PRESSURIZED. 100% OF TAKE 5'S USED OIL AND OIL FILTERS ARE RECLAIMED AND RECYCLED BY OSHA CERTIFIED USED OIL RECYCLING COMPANIES.
- 2. NEW OIL -WE STORE NEW BULK OILS IN RHINO GRAVITY FEED SYSTEMS INSIDE THE BAY AREAS. THESE SYSTEMS HAVE NO PUMPS OR PRESSURE, ARE APPROVED BY OSHA AND DOT, AND ARE LOCATED WITHIN A RECESSED AREA WITHIN THE SHOP. TAKE 5 ALSO CARRIES A MINIMUM AMOUNT OF RETAIL BOTTLED OILS FOR SPECIALTY VEHICLES AS NECESSARY.

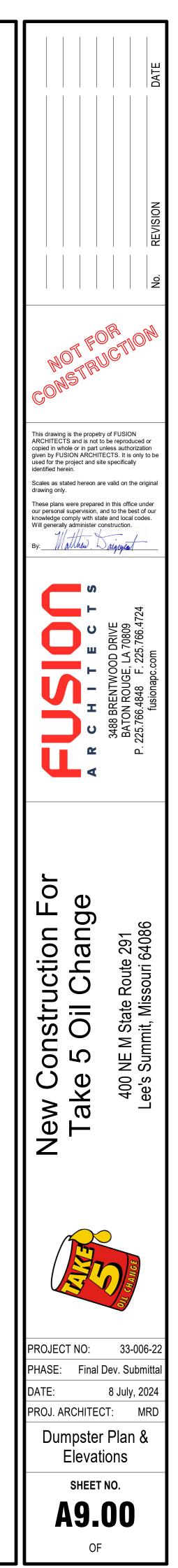
NOTES ·

3.

- TYPE OF LIQUIDS BEING STORED ARE CLASS IIIB LUBRICANTS ONLY. 1.
- ALL TANKS ARE ABOVE GROUND, SINGLE WALL. 3 ARE STEEL AND 12 ARE HIGH-DENSITY POLYETHYLENE.
 - VOLUME OF TANKS: (3) WASTE OIL TANKS OF APPROXIMATELY 330 GALLONS EACH (9) NEW OIL RHINO TANKS OF 120 GALLONS EACH
 - (4) NEW OIL RHINO TANKS OF 220 GALLONS EACH
- 10' X 3' X 30", YIELDING A TOTAL EXTRA VOLUME OF 1,683 GALLONS, IN ADDITION TO THE RECESSED AREAS WHERE THE TANKS ARE LOCATED.
- TAKE 5 DOES NOT INCORPORATE DRAINS IN THEIR SHOP, SHALLOW TRENCH, OR STORAGE AREAS. THE ONLY DRAIN IN A TAKE 5 IS LOCATED IN THE RESTROOM. 4.
- WE MOP OUR FLOORS, RINSING THE MOP IN A MOP SINK THAT IS CONNECTED DIRECTLY TO AN OIL SEPARATOR.
- 6. THE OIL SEPARATOR IS CLEANED/EMPTIED/MAINTAINED BY THE OSHA CERTIFIED RECYCLING COMPANY THAT COLLECTS AND RECYCLES THE USED OIL.
- SOME TANKS ARE PLACED ON SHOP FLOOR BETWEEN BAYS.

TAKE 5 OIL CHANGE, LLC STORAGE SYSTEM REVIEW

FOR CONTAINMENT - BULK TANKS ARE PLACED WITHIN RECESSED AREAS. THE RECESSED AREAS ARE CONNECTED VIA 3" CHASES TO THE SHALLOW TRENCHES, PROVIDING SECONDARY CONTAMINATION. EACH TRENCH MEASURES



	ABBRE	STRUCTURAL [
A.B. ADDL	ANCHOR BOLT ADDITIONAL	LBS LDG	POUNDS LANDING	1. STRUCTURAL DESIGN STANDARDS:
ADJ. ADH.	ADJACENT ADHESIVE	LLH LLV	LONG LEG HORIZONTAL LONG LEG VERTICAL	2021 INTERNATIONAL BUILDING CODE LOCAL AMENDMENTS TO BUILDING CODE
AFF	ABOVE FINISH FLOOR	LSH	LONG SIDE HORIZONTAL	ASCE 7-10
ALT. ARCH.	ALTERNATE ARCHITECT	LSV LT	LONG SIDE VERTICAL LIGHT	2. STRUCTURAL DESIGN LOADS:
3.L.	BRICK LEDGE	LVL LW	LEVEL LIGHT WEIGHT	RISK CATEGORY
LDG M	BUILDING BEAM	MAT.	MATERIAL	LIVE LOADS:
3.O.D. 80TT.	BOTTOM OF DECK BOTTOM	MAX. MECH.	MAXIMUM MECHANICAL	PUBLIC AREAS MEZZANINES/PLATFORMS
RG	BEARING	MEZZ.	MEZZANINE	ROOF
WN	BETWEEN	MFR MID.	MANUFACTURER MIDDLE	DEAD LOADS:
ANT. IP	CANTILEVER CAST IN PLACE	MIN. MISC.	MINIMUM MISCELLANEOUS	PLYWOOD DECKING CEILING/MECHANICAL
.J. .L.	CONSTRUCTION JOINT	M.L.	MATCH LINE	TRUSSES
R	CENTERLINE CLEAR	MTL	METAL	MISCELLANEOUS PARTITIONS
MU .O.	CONCRETE MASONRY UNIT CUT OFF	(N) NIC	NEW NOT IN CONTRACT	(NOTE: ALL DEAD LOADS ARE APPROXIMATE. CO LOADS W/ EOR FOR FABRICATED ITEMS).
DL.(S) DMP.	COLUMN(S) COMPOSITE	NO. N.S.	NUMBER NEAR SIDE	SNOW LOAD:
DNC.	CONCRETE	NSG	NON-SHRINK GROUT	GROUND SNOW LOAD, Pg
ONNX ONST.	CONNECTION CONSTRUCTION	NTS NW	NOT TO SCALE NORMAL WEIGHT	IMPORTANCE FACTOR, IS EXPOSURE FACTOR, Ce
DNT. DNTR.	CONTINUOUS CONTRACTOR	O.C.	ON CENTER	THERMAL FACTOR, Ct (NOTE: ROOF PARAPET DRIFT LOADS & UNBALA
TR	CENTER	O.D.	OUTSIDE DIAMETER	FOR EACH BUILDING SECTION W/ ABOVE PARAM
.В.	DROPPED BEAM	0.F. 0.H.	OUTSIDE FACE OPPOSITE HAND	PER ASCE 7 FOR DESIGN OF PRE-FABRICATED T REFER TO ROOF FRAMING PLAN FOR SNOW DRI
.B.A. BL	DEFORMED BAR ANCHOR DOUBLE	OPNG	OPENING	WIND LOAD:
ET./DTL.	DETAIL	P.A.F.	POWDER ACTUATED FASTENERS PARALLEL	BASIC WIND SPEED, V3S
EMO. OR (D) FL	DEMOLISH DOUGLAS FIR-LARCH	PARA. PC	PRECAST	IMPORTANCE FACTOR, Iw EXPOSURE CATEGORY
A. AG.	DIAMETER DIAGONAL	PCF PEMB	POUNDS PER CUBIC FOOT PRE-ENGINEERED METAL BUILDING	GUST & INTERNAL PRESSURE, GC _{pi} DIRECTIONALITY FACTOR, K _D
IM. IR.	DIMENSIONAL DIRECTION	PERIM. PERP.	PERIMETER PERPENDICULAR	TOPOGRAFIC FACTOR, KZT
ISC.	DISCONTINUOUS	PJ	PANEL JOINT	ELEVATION FACTOR, Ke (REFER TO ROOF FRAMING PLAN FOR COMPON
WGS WL(S)	DRAWINGS DOWEL(S)	PL PLY.	PLATE PLYWOOD	SEISMIC LOAD:
A.	EACH	PREFAB. PSF	PRE-FABRICATED POUNDS PER SQUARE FOOT	SITE CLASS SEISMIC DESIGN CATEGORY
.F.	EACH FACE	PSI	POUNDS PER SQUARE INCH	IMPORTANCE FACTOR, IE
J. 	EXPANSION JOINT ELEVATION	PT PTRN	POST-TENSIONED PENETRATION	Ss S1
EV. 1BED.	ELEVATOR EMBEDMENT	R	REMAINDER OR RADIUS	Sds Sd1
NGR	ENGINEER	REF.	REFER TO OR REFERENCE	SEISMIC FORCE-RESISTING SYSTEM
ຊ. W.	EQUAL EACH WAY	REINF. REQD	REINFORCEMENT/REINFORCE REQUIRED	
IST. OR (E) P.	EXISTING EXPANSION	RTU	ROOF TOP UNIT	
ΩT.	EXTERIOR	S.A. S.B.	STUD ANCHOR STRAP BEAM	
DN		SCHED.	SCHEDULE	
=. =.E.	FINISH FLOOR FINISH FLOOR ELEVATION	SECT. SHT	SECTION - SHEET	
_R STN	FLOOR FASTEN	SHR. SIM.	SHRINKAGE SIMILAR	SUBMITTA
S.		Univi.		
	FAR SIDE	S.O.G.	SLAB-ON-GROUND	
G	FAR SIDE FEET FOOTING	SPA. SPEC.	SPACING SPECIFICATION	1. SHOP DRAWINGS SHALL BE PREPARED FOR ALL STRUCTUF
G	FAR SIDE FEET	SPA.	SPACING	RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE
tg .V. A.	FAR SIDE FEET FOOTING FIELD VERIFY GAGE	SPA. SPEC. SS STD STIFF.	SPACING SPECIFICATION STAINLESS STEEL STANDARD STIFFENER	RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE AGREEMENT WITH THE LATEST CONSTRUCTION DOCUMEN
G /. A. ALV. EOTECH.	FAR SIDE FEET FOOTING FIELD VERIFY GAGE GALVANIZE GEOTECHNICAL	SPA. SPEC. SS STD STIFF. STL SW	SPACING SPECIFICATION STAINLESS STEEL STANDARD STIFFENER STEEL SHEAR WALL	 RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE AGREEMENT WITH THE LATEST CONSTRUCTION DOCUMEN 2. CONTRACTOR SHALL ALLOW TWO WEEKS FOR THE ENGINE SUBMITTALS WHICH DO NOT REFLECT THE CONTRACTOR'S
G V. ALV. EOTECH. R.	FAR SIDE FEET FOOTING FIELD VERIFY GAGE GALVANIZE	SPA. SPEC. SS STD STIFF. STL	SPACING SPECIFICATION STAINLESS STEEL STANDARD STIFFENER STEEL	RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE AGREEMENT WITH THE LATEST CONSTRUCTION DOCUMEN2. CONTRACTOR SHALL ALLOW TWO WEEKS FOR THE ENGINE
G V. ALV. EOTECH. R. T.	FAR SIDE FEET FOOTING FIELD VERIFY GAGE GALVANIZE GEOTECHNICAL GRADE GIRDER TRUSS	SPA. SPEC. SS STD STIFF. STL SW SYM. SYP	SPACING SPECIFICATION STAINLESS STEEL STANDARD STIFFENER STEEL SHEAR WALL SYMETRICAL SOUTHERN YELLOW PINE	 RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE AGREEMENT WITH THE LATEST CONSTRUCTION DOCUMEN 2. CONTRACTOR SHALL ALLOW TWO WEEKS FOR THE ENGINE SUBMITTALS WHICH DO NOT REFLECT THE CONTRACTOR'S APPEAR TO HAVE BEEN REVIEWED BY THE CONTRACTOR W
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rg V. A. ALV. EOTECH. R. T. AS DR K DRIZ. R SS F D. FO. T.	FAR SIDE FEET FOOTING FIELD VERIFY GAGE GALVANIZE GEOTECHNICAL GRADE GIRDER TRUSS HEADED ANCHOR STUD HEADER HIGH HOOK HORIZONTAL HARD ROCK HOLLOW STEEL SECTION HEIGHT INSIDE DIAMETER INSIDE DIAMETER INSIDE FACE INCH INFORMATION INTERIOR	SPA. SPEC. SS STD STIFF. STL SW SYM. SYP T&B TEMP. TEN. TERM. TERM. THK T.O. T.O.C. T.O.F. T.O.P. T.O.S. TS	SPACING SPECIFICATION STAINLESS STEEL STANDARD STIFFENER STEEL SHEAR WALL SYMETRICAL SOUTHERN YELLOW PINE TOP AND BOTTOM TEMPERATURE TENSION TERMINATE THICKNESS TOP OF TOP OF CONCRETE TOP OF FOOTING TOP OF FOOTING TOP OF STEEL / TOP OF SLAB TUBE STEEL	 RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE AGREEMENT WITH THE LATEST CONSTRUCTION DOCUMEN CONTRACTOR SHALL ALLOW TWO WEEKS FOR THE ENGINE SUBMITTALS WHICH DO NOT REFLECT THE CONTRACTOR'S APPEAR TO HAVE BEEN REVIEWED BY THE CONTRACTOR W CONTRACTOR SHALL BE RESPONSIBLE FOR DELAYS CAUSI INCORRECT SHOP DRAWINGS. OMISSION FROM THE SHOP DRAWINGS OF ANY REQUIREM THE SHOP DRAWINGS DURING REVIEW SHALL NOT RELIEVE THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS REVIEWED AND RETURNED. APPROVAL IS FOR GENERAL C DOCUMENTS ONLY. APPROVAL ASSUMES NO RESPONSIBIL CONDITIONS THAT PERTAIN TO FABRICATION AND INSTALL/ OF CONSTRUCTION. APPROVAL OF A SPECIFIC ITEM SHALL WHICH THE ITEM IS A COMPONENT. CALCULATION REVIEW CHECK OF THE CALCULATIONS. ALL ITEMS DEVIATING FROM THE STRUCTURAL DRAWINGS OF DRAWINGS SHALL BE CLOUDED.
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	STRUCTURAL DESIGN	SYMBOL KEY		
		SYMBOL	DESCRIPTION	
1.	STRUCTURAL DESIGN STANDARDS: 2021 INTERNATIONAL BUILDING CODE LOCAL AMENDMENTS TO BUILDING CODE	A	GRIDLINE IDENTIFIER	1. THE DRAWINGS AND SPECIFIC UNLESS NOTED OTHERWISE. METHODS MEET THE REQUIR
2.	ASCE 7-10 STRUCTURAL DESIGN LOADS: RISK CATEGORY II	EA	EXISTING GRIDLINE IDENTIFIER	 ALL DETAILS AND SECTIONS A SIMILAR SITUATION ELSEWHE RESPONSES TO QUESTIONS A DIRECTIVES PROVIDED IN ANY PROCESS ARE INTENDED TO
	LIVE LOADS: PUBLIC AREAS 100 psf MEZZANINES/PLATFORMS 100 psf ROOF 20 psf	DTL #	DETAIL MARKER	TO REPRESENT A CHANGE IN IS PROVIDED WITH DETAILED FABRICATING, OR INSTALLING
	DEAD LOADS: PLYWOOD DECKING 3 psf/in. CEILING/MECHANICAL 5 psf TRUSSES 3 psf	DTL #	ELEVATION MARKER	 THE CONTRACTOR SHALL BE INCLUDING LAGGING, SHORIN UTILITIES IN ACCORDANCE W IT IS THE CONTRACTOR'S RES
	MISCELLANEOUS 2 psf PARTITIONS 5 psf (NOTE: ALL DEAD LOADS ARE APPROXIMATE. CONTRACTOR TO COORDINATE FINAL DEAD LOADS W/ EOR FOR FABRICATED ITEMS).	- ← - <u>F.F. EL.</u>	FINISH FLOOR ELEVATION MARKER	COMPONENTS OF THE CONT ARCHITECTURAL AND ALL OT CHASES, DUCTS, OPENINGS, DETAILS NOT SHOWN ON THE VERIFIED WITH THE ARCHITEC
	SNOW LOAD: GROUND SNOW LOAD, Pg 20 psf IMPORTANCE FACTOR, Is 1.0 EXPOSURE FACTOR, Ce 1.0	TOP OR BOTT.	SPOT ELEVATION MARKER	DISCREPANCY BETWEEN THE CONSULTANTS OR ANY ERRC STRUCTURAL ENGINEER FOR
	THERMAL FACTOR, Ct 1.0 (NOTE: ROOF PARAPET DRIFT LOADS & UNBALANCED SNOW LOADS TO BE CALCULATED FOR EACH BUILDING SECTION W/ ABOVE PARAMETERS & EACH SECTIONS PROPERTIES PER ASCE 7 FOR DESIGN OF PRE-FABRICATED TRUSSES AFFECTED BY SNOW LOADS). REFER TO ROOF FRAMING PLAN FOR SNOW DRIFT LOADING DIAGRAM.	WP	WORK POINT MARKER	6. THE DESIGN LOADS LISTED IN CONSTRUCTION. THE GENEF LOADS, MATERIAL STORAGE, ELEMENTS OF THE STRUCTU DESIGN OF TEMPORARY BRAY SUPERVISION OF A LICENSED
		Step Up Step Down with Slope Slope Down	ELEVATION CHANGE IN SLAB OR DECK	STRUCTURAL DRAWINGS ARE DURING CONSTRUCTION. 7. SPECIAL INSPECTIONS SHALL VISITS BY THE ENGINEER SHO DEFECTS IN THE WORK OF TH UNLESS SPECIFICALLY CONTI
	(REFER TO ROOF FRAMING PLAN FOR COMPONENTS & CLADDING PRESSURES CHART) SEISMIC LOAD: SITE CLASS SEISMIC DESIGN CATEGORY B		DECK OR SLAB SPAN DIRECTION	8. STRUCTURAL MEMBERS AND FOR THE WEIGHT OF THE UNI OR QUANTITY OF UNITS SHAL OF STRUCTURAL MEMBERS C
	IMPORTANCE FACTOR, I _E 1.0 Ss 0.100 S1 0.068 SDS 0.087 SD1 0.068 SEISMIC FORCE-RESISTING SYSTEM LIGHT-FRAMED WOOD WALL SHEATHED W/		MASONRY WALL WINDOW IN MASONRY WALL	 9. NOTICE IN WRITING OF ANY P STRUCTURE AS REQUIRED BY 10. DIMENSIONS SHOWN IN STRU REFER TO ARCHITECTURAL D DRAWINGS.
	WOOD STRUCTURAL PANELS (R=6.5)		DOOR IN MASONRY WALL	11. THESE PLANS MUST BE SUBN CONSTRUCTION.
		COLUMN MARK	CONCRETE COLUMN	12. IT IS THE RESPONSIBILITY OF ADDENDA AND TO SUBMIT SU PRIOR TO THE SUBMITTAL OF ERECTION IN THE FIELD.
	SUBMITTALS SHOP DRAWINGS SHALL BE PREPARED FOR ALL STRUCTURAL COMPONENTS. IT SHALL BE THE	columistic Bast Pt	STEEL COLUMN	13. THE CONTRACTOR IS RESPON FOUNDATION AND SUPERSTF START OF THE RELEVANT WO SUBCONTRACTORS, FABRICA SHALL BE REVIEW OF WORK S
1.	RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST CONSTRUCTION DOCUMENTS.			INFORMATION OF RESPONSIE DESIGN ISSUES, CLARIFICATIO APPROPRIATE BY THE CONTR
2.	CONTRACTOR SHALL ALLOW TWO WEEKS FOR THE ENGINEER'S REVIEW OF EACH SUBMITTAL. SUBMITTALS WHICH DO NOT REFLECT THE CONTRACTOR'S APPROVAL, SIGNATURE AND DATE, OR DO NOT APPEAR TO HAVE BEEN REVIEWED BY THE CONTRACTOR WILL BE RETURNED WITHOUT REVIEW. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELAYS CAUSED BY REJECTION OF INADEQUATE OR INCORRECT SHOP DRAWINGS.	10P, 20P, 30P, 53P, 66P XXSP	STANDARD PAN WIDTH SKIP PAN WIDTH	14. THE ROOF STRUCTURE AND I THAT SUFFICIENT DRAINAGE RESPONSIBILITY OF THE BUIL FUNCTIONS AS INTENDED.
3.	OMISSION FROM THE SHOP DRAWINGS OF ANY REQUIREMENTS AND/OR CORRECTIONS/COMMENTS ON THE SHOP DRAWINGS DURING REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS EVEN IF THE SHOP DRAWINGS HAVE BEEN REVIEWED AND RETURNED. APPROVAL IS FOR GENERAL COMPLIANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS ONLY. APPROVAL ASSUMES NO RESPONSIBILITY FOR DIMENSIONS, QUANTITIES AND	BEAM SIZE WXXxXX (X) C=X" NO. OF HEADED STUDS REACTION R=XK CAMBER (SERVICE LOAD)	STEEL BEAM	
	CONDITIONS THAT PERTAIN TO FABRICATION AND INSTALLATION OR FOR PROCESSES AND TECHNIQUES OF CONSTRUCTION. APPROVAL OF A SPECIFIC ITEM SHALL NOT INCLUDE APPROVAL OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. CALCULATION REVIEW AND COMMENTS DO NOT INFER A DETAILED CHECK OF THE CALCULATIONS.	BEAM SIZE WXXXXX MOMENT CONNX MOMENT CONNX	STEEL BEAM MOMENT CONNX	GE
4.	ALL ITEMS DEVIATING FROM THE STRUCTURAL DRAWINGS OR FROM PREVIOUSLY SUBMITTED SHOP DRAWINGS SHALL BE CLOUDED.	\$ \$	STEEL BEAM SPLICE	1. FOUNDATION DESIGN AND
5.	THE USE OF REPRODUCTIONS OR ELECTRONIC FILES OF THE STRUCTURAL DRAWINGS FOR THE PREPARATION OF SHOP DRAWINGS IS NOT ACCEPTABLE WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER OF RECORD. IF SUCH AUTHORIZATION IS OBTAINED, DO NOT SUBMIT SHOP DRAWINGS WITH THE CONTRACT DOCUMENTS TITLE BLOCK AND/OR THE SEAL OF THE REGISTERED ENGINEER OF RECORD AFFIXED. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION OF THE RESPONSIBLE ENGINEER IS AN OFFENSE OF THE ENGINEERING PRACTICING ACT.	VERTICAL BRACE	VERTICAL STEEL BRACE - REF. ELEVATION	IN THE FOLLOWING GEOTE GEOTECHNICAL CON REPORT NUMBER: 02 REPORT DATE: 11/02/ SYSTEM TYPE: CONV
6.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED DESIGN OF CERTAIN ITEMS, REFERRED TO AS DEFERRED. DOCUMENTS FOR DEFERRED SHOP DRAWINGS, INCLUDING CALCULATIONS, SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW FOR GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS.			VOID FORM DEPTH: N MOISTURE RETARDE 2. THE CONTRACTOR MUST R FAMILIAR WITH SITE AND SI
7.	DELEGATED STRUCTURAL DESIGN AND DEFERRED SUBMITTALS INCLUDE: 1. PREFABRICATED WOOD TRUSSES			FOUNDATION CONSTRUCT DOCUMENTS AND THE GEO A QUALIFIED GEOTECHNIC
8.	THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE ENGINEER OF RECORD AND THE BUILDING OFFICIAL.			

GENERAL NOTES

ICATIONS DO NOT INDICATE THE MEANS AND METHODS OF CONSTRUCTION THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL MEANS AND REMENTS OF THE LATEST OSHA REGULATIONS.

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ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY ERE, EXCEPT WHERE A DIFFERENT DETAIL OR SECTION IS SHOWN.

AND RFI'S, COMMENTS MADE DURING THE REVIEW OF SUBMITTALS, AND Y FORM BY THE ENGINEER TO THE CONTRACTOR DURING THE CONSTRUCTION BE CLARIFICATIONS OF THE CONTRACT DOCUMENTS AND ARE NOT INTENDED N COST OF THE PROJECT TO THE OWNER UNLESS A CHANGE ORDER REQUEST PRICING INFORMATION TO THE ARCHITECT BEFORE PURCHASING, DETAILING, G ANY COMPONENT RELATED TO SUCH CLARIFICATIONS AND CORRECTIONS.

E SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES IF APPLICABLE, ING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND VITH THE LOCAL BUILDING DEPARTMENT.

SPONSIBILITY TO ASSEMBLE AND COORDINATE THE REQUIREMENTS OF ALL FRACT DOCUMENTS AND VERIFY EXISTING CONDITIONS OF THE SITE. REF. THER TRADES DOCUMENTS FOR SIZE AND LOCATION OF PIPES, VENTS, DEPRESSIONS, RECESSES, SLOPES, BLOCKOUTS, CURBS, EMBEDMENTS, AND ESE STRUCTURAL DRAWINGS. ALL DIMENSIONS ARE TO BE CHECKED AND CTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL REPORT ANY ESE DOCUMENTS AND THOSE OF THE ARCHITECT AND ALL PROJECT OR, OMISSION OR DIFFICULTY AFFECTING HIS WORK TO THE ARCHITECT AND R REVIEW.

N THE STRUCTURAL DESIGN CRITERIA SHALL NOT BE EXCEEDED DURING RAL CONTRACTOR SHALL MAKE ADEQUATE PROVISIONS FOR CONSTRUCTION , TEMPORARY BRACING, SHORING AND FORMWORK AS REQUIRED TO KEEP ALL IRE PLUMB AND IN TRUE ALIGNMENT DURING ALL PHASES OF CONSTRUCTION. ACING AND SHORING SHOULD BE PROPERLY DESIGNED UNDER THE D STRUCTURAL ENGINEER. PERMANENT BRACING MEMBERS SHOWN ON E REQUIRED FOR THE COMPLETED STRUCTURE AND MAY NOT BE ADEQUATE

L BE DONE BY A QUALIFIED, INDEPENDENT INSPECTION COMPANY. JOB SITE OULD BE CONSIDERED A PERIODIC CHECK TO INFORM THE OWNER OF HE CONTRACTOR AND DO NOT CONSTITUTE, OR SUBSTITUTE, INSPECTIONS FRACTED FOR.

) FOUNDATIONS SUPPORTING MECHANICAL EQUIPMENT HAVE BEEN DESIGNED ITS SHOWN IN THE STRUCTURAL DRAWINGS. ANY CHANGES IN SIZE, WEIGHT, LL BE REPORTED TO THE ARCHITECT PRIOR TO FABRICATION OR INSTALLATION OR RELATED MATERIALS.

PROPOSED SUBSTITUTIONS OR ANY PROPOSED DEVIATIONS TO THE Y THESE DOCUMENTS SHALL BE SUBMITTED WITH A CURRENT ICC REPORT.

UCTURAL PLANS, SECTIONS, AND DETAILS TAKE PRECEDENT OVER SCALE. RAWINGS FOR ALL DIMENSIONS NOT INDICATED IN THE STRUCTURAL

MITTED TO THE GEOTECHNICAL ENGINEER FOR REVIEW PRIOR TO

THE CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST UCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS F SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND

NSIBLE FOR ARRANGING PRECONSTRUCTION MEETINGS FOR THE RUCTURE ELEMENTS WITH A MINIMUM OF TWO WEEKS OF NOTICE PRIOR TO DRK. ATTENDEES SHALL INCLUDE THE CONTRACTORS, APPROPRIATE ATORS, INSPECTORS, ARCHITECT/ENGINEERS. ON THE MEETING AGENDA SCOPE, PROJECT SCHEDULE OF THE ELEMENT IN QUESTION, CONTACT IBLE PARTIES, INSPECTION POINTS, REVIEW OF MATERIALS AND ANY SPECIAL IONS TESTING AND ACCEPTANCE, AND ANY OTHER TOPICS DEEMED RACTOR OR THE ARCHITECT.

ITS SUPPORTING ELEMENTS HAVE BEEN DESIGNED WITH THE ASSUMPTION HAS BEEN PROVIDED TO PREVENT ANY PONDING OF WATER. IT IS THE LDING OWNER TO MAINTAIN THE ROOF DRAINAGE SYSTEM SUCH THAT IT

OTECHNICAL REPORT

SUBSURFACE INFORMATION IS BASED ON THE RECOMMENDATIONS GIVEN ECHNICAL INVESTIGATION REPORT:

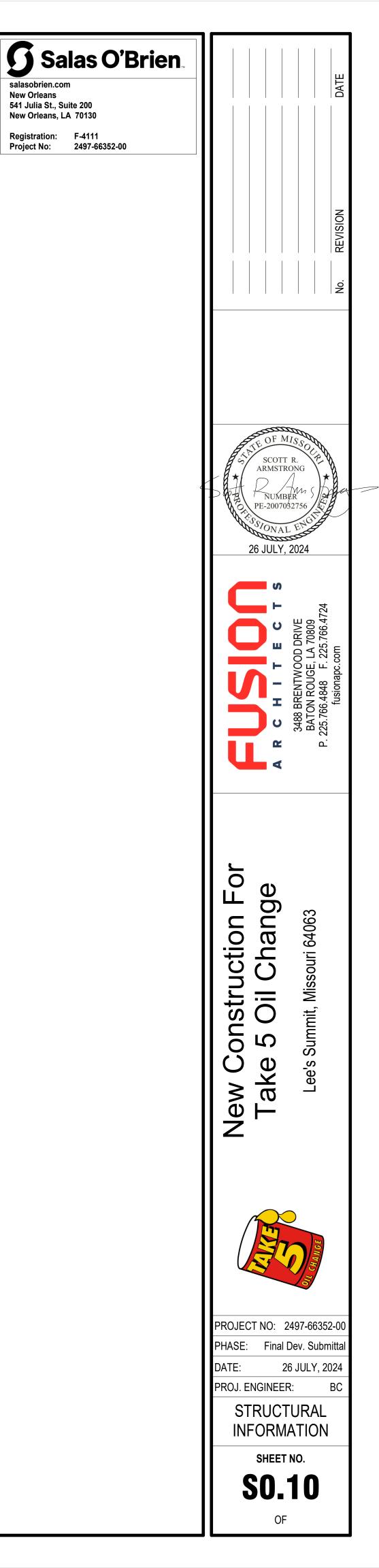
NSULTANT: TERRACON

2225258 2/2023

VENTIONAL SHALLOW FOUNDATION N/A

ER: 15 MIL VAPOR BARRIER

READ THE GEOTECHNICAL INVESTIGATION REPORT AND BE THOROUGHLY SUBGRADE INFORMATION GIVEN THEREIN. ALL SUBGRADE PREPARATION AND TION SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE STRUCTURAL OTECHNICAL REPORT, AND SHALL BE OBSERVED, TESTED, AND APPROVED BY CAL ENGINEER PRIOR TO PROCEEDING WITH FOUNDATION CONSTRUCTION.



SUBGRADE PREPARATION	
 ALL ORGANIC AND DELETERIOUS MATERIAL, AS WELL AS ANY EXISTING PAVING, FOUNDATIONS, OR EXISTING FILL SHALL BE REMOVED FROM THE BUILDING PAD AREA PRIOR TO PLACEMENT OF FILL. SOL BELOW THE BUILDING PAD SHALL BE MOISTURE CONDITIONED AS NOTED BELOW: DEPTH OF NON-EXPANSIVE SOLIC CAP: 2 foot DEPTH OF MOISTURE CONDITIONING: N/A TOTAL DEPTH OF IMPROVED ZONE: VARIES EXTEND CONDITIONING BEYOND BUILDING BY: 5 feet EXTEND CONDITIONING BEYOND BUILDING FILS DEPTH OF MOISTURE CONDITIONING BEYOND BUILDING FILS TOTAL DEPTH OF INDERSENTING PARTICIPATIONS OF PARTICIPATIONS. THE FINAL BUILDING PAD SHALL BE APPROVED BY THE OWNERS GEOTECHNICAL REPRESENTATIVE PRIOR TO POURING CONCRETE. 	 ALL CONCRETE SHALL BE LAB OF THE LATEST EDITION OF "B AND COARSE AGGREGATES SI SHALL BE TYPE I OR II AND SH COMPLY WITH THE FOLLOWIN USAGE GRADE BEAMS SLAB-ON-GROUND CONCRETE PROPORTIONS SH RECORDS FROM THE FACILITY MEET THE REQUIREMENTS OF REFLECTIVE OF THE PERIOD C MATERIAL PROPORTION, PROF CHANGE IN THE APPROVED MI SLUMP AT THE POINT OF PLAC WITH SLUMP AND TEMPERATU CHLORIDES IN ANY ADMIXTUR CONCRETE. FLY ASH SHALL NOT BE USED ALLOWED IN ALL OTHER NON- CLASS F REQUIREMENTS. THE THE CALCULATION OF WATER SUBMITTAL THAT THE USE OF AND MATERIALS THAT WILL BE AIR ENTRAINMENT IN NORMAL TO WEATHER CONDITIONS. AI LIGHTWEIGHT CONCRETE. PE ENTRAIN INTERIOR FLOOR SLA
 EXPANSIVE CLAYS ARE PRESENT AT THIS SITE. THE FOLLOWING PRACTICES SHALL BE FOLLOWED, IN ADDITION TO OTHER MEASURES DESCRIBED IN THE GEOTECHNICAL REPORT, AS A MINIMUM TO PREVENT DAMAGE TO THE STRUCTURE: A. GRADE SOIL AROUND BUILDING AWAY FROM THE BUILDING. EMPLOY APPROPRIATE MEASURES TO PREVENT PONDING OF WATER IN THE BUILDING PAD AREAS. MAINTAIN THE BUILDING PAD AT SPECIFIED MOISTURE CONTENT. PLACE BACKFILL AROUND THE PERIMETER GRADE BEAMS AND OR BASEMENT WALLS IMMEDIATELY AFTER THEY ARE CAST. ANY STANDING WATER BEFORE BACKFILL PLACEMENT MUST BE PUMPED DRY AND THE UNDERLYING SOIL MUST BE RETESTED TO MEET THE REQUIREMENTS OF THE GEOTECHNICAL REPORT. A VOID SHALL BE CONSTRUCTED BELOW ALL STRUCTURAL ELEMENTS SUPPORTED BY PIERS TO SEPARATE THESE ELEMENTS FROM THE SOIL. THE USE OF SIDE RETAINERS IS REQUIRED TO PREVENT SOIL INTRUSION INTO THE VOID AS DESCRIBED IN THE GEOTECHNICAL REPORT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE VOID SHALL BE AS SHOWN IN THE GEOTECHNICAL REPORT NOTES. 	 NON CHLORIDE ACCELERATIN TEMPERATURES BELOW 50 DE THE COMPRESSIVE STRENGTH CONTRACTOR MUST SUBMIT T TO SUBMITTING TO THE ARCH
3. GRADE BEAM & WALL SIDES SHALL BE WOOD-FORMED. EARTH-FORMING IS NOT ALLOWED.	 ALL CONCRETE REINFORCEN REINFORCING STEEL THAT R ABOVE. ALL REINFORCING BARS SHA OTHERWISE ON PLANS OR D UNLESS APPROVED BY THE S WELDED WIRE FABRIC SHALL MESH PLUS TWO INCHES. CONCRETE REINFORCEMENT WITH ACI 315 AND ACI 318.
	6. LAP SPLICES OF CONTINUOU SUPPORTS FOR BOTTOM BA
 ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI STANDARD "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318). MAINTAIN SCHEDULED STRUCTURAL CONCRETE" (ACI 318). MAINTAIN SCHEDULED STRUCTURAL DEPTH OF MEMBERS AS A MINIMUM WHILE FOLLOWING SLOPES AND GRADES SHOWN ON PLANS. ALL CONCRETE THAT WILL BE COLORED OR STAINED MUST BE WET CURED. ALL CONSTRUCTION JOINTS IN BEAMS, JOISTS, SLABS, AND WALLS SHALL BE PROVIDED WITH SHEAR KEYS AS SHOWN IN DETAILS. SUBMIT LOCATIONS OF ALL CONSTRUCTION JOINTS TO ENGINEER FOR REVIEW. HOT WEATHER CONCRETING SHALL CONFORM TO ACI 305 AND COLD WEATHER CONCRETING SHALL CONFORM TO ACI 306. FOUNDATION WALLS (INCLUDING LOADING DOCKS AND ELEVATOR PITS) SHALL HAVE TEMPORARY BRACING BEFORE BACKFILL IS PLACED AGAINST THEM. TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL WALL IS PERMANENTLY BRACED BY FLOOR DIAPHRAGMS (SLAB-ON-GROUND OR STRUCTURED SLAB) THAT HAVE REACHED AT LEAST 75% OF DESIGN STRENGTH, UNLESS NOTED OTHERWISE. GRADE BEAM DIMENSIONS AND/OR LOCATIONS MAY NOT BE ALTERED WITHOUT APPROVAL OF THE ENGINEER OF RECORD. FOUNDATION PENETRATIONS SHALL BE SUBJECT TO APPROVAL BY THE ARCHITECT/ENGINEERF. PROVIDE WATERSTOPS AT ALL BELOW GRADE CONSTRUCTION JOINTS IN CONCRETE ELEMENTS WHERE THERE IS EARTH SUBGRADE AT THE JOINT ON ONE SIDE OF THE CONCRETE MEMBER AND INTERIOR SPACE ON THE OTHER, REGARDLESS OF WHETHER THE WATERSTOP IS SPECIFICALLY INDICATED IN THE DETAIL. PROVIDE WATERSTOPS AT ALL BELOW GRADE CONSTRUCTION JOINTS IN CONCRETE WITHOUT PRIOR WRITTEN APPROVAL FROM THE LOCATIONS INDICATED IN THE DOCUMENTS PRIOR TO CONSTRUCTION. NO CONDUIT, SILEEVE, OR PIPE IS PERMITTED TO BE EMBEDDED IN THE CONCRETE WITHOUT PRIOR WRITTEN APPROVAL, FROM THE LOCATIONS INDICATED IN THE DETAIL. PROVIDE WATERSTOPS AT OTHER LOCATIONS INDICATED IN THE DOCUMENTS PRIOR TO CONSTRUCTION. NO CONDUIT, SILEEVE, OR PIPE IS PERMITTED TO BE EMBEDDED IN	 7. PROVIDE CORNER BARS AT II ACCORDANCE WITH THE TYP HOOK PLACED HORIZONTALI 8. MINIMUM CONCRETE PROTE SECTION 20.6 FOR CONDITIO CONDITIC SLAB-ON- GRADE BI

CONCRETE MIX

BORATORY DESIGNED AND CONTROLLED AND SHALL MEET THE REQUIREMENTS BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318). SAND SHALL MEET THE REQUIREMENTS OF ASTM C-33 OR C-330. PORTLAND CEMENT HALL MEET THE REQUIREMENTS OF ASTM C-150. IN ADDITION, CONCRETE SHALL NG REQUIREMENTS:

28-DAY STRENGTH (PSI)	SLUMP (IN.)	MAX. AGG. SIZE (IN.)
4,000	3-5	1"
3,000	3-5	3/4"

HALL BE ESTABLISHED FROM CONCRETE COMPRESSIVE STRENGTH TEST Y THAT WILL SUPPLY CONCRETE FOR THIS PROJECT. TEST RECORDS SHALL F THE LATEST EDITION OF ACI 318 AND THE SPECIFICATIONS AND SHALL BE OF THE YEAR DURING WHICH THE CONCRETE IS TO BE PLACED. CHANGING DPERTIES, SOURCES, COMBINATIONS, ADDITIONS OR ANYTHING WHICH IS A MIX DESIGN REQUIRES A NEW MIX DESIGN SUBMITTAL.

ACEMENT SHALL NOT EXCEED AMOUNT SPECIFIED. DO NOT PLACE CONCRETE URE OUTSIDE THE LIMITS PROVIDE ON THE APPROVED MIX DESIGNS. USE OF RE IS NOT PERMITTED. SLUMP RANGE DOES NOT APPLY TO SUPERPLASTICIZED

D AS A CONSTITUENT IN ARCHITECTURALLY EXPOSED CONCRETE. FLY ASH IS N-ARCHITECTURALLY EXPOSED CONCRETE. FLY ASH SHALL MEET ASTM C618 IE WEIGHT OF THE FLY ASH SHALL BE ADDED TO THE WEIGHT OF THE CEMENT IN R CEMENT RATIO. THE CONTRACTOR SHALL CONFIRM IN THE MIX DESIGN F FLY ASH WILL NOT INTERFERE WITH THE PERFORMANCE OF OTHER PRODUCTS E IN CONTACT WITH THE CONCRETE.

AL WEIGHT CONCRETE IS REQUIRED ONLY IN CONCRETE PERMANENTLY EXPOSED AIR ENTRAINMENT IS REQUIRED FOR ALL EXPOSURE CONDITIONS FOR ERCENT AIR ENTRAINMENT SHALL BE 6% PLUS/MINUS 1.5%. DO NOT AIR-ABS THAT RECEIVE HAND TROWEL FINISH OR POLISHED CONCRETE.

NG ADMIXTURE MAY BE USED IN CONCRETE SLABS PLACED AT AMBIENT EGREES FAHRENHEIT AT CONTRACTOR'S OPTION.

TH OF GROUT BELOW BASE PLATES SHALL BE AT LEAST 7500 PSI.

THE MIX DESIGN SUBMITTALS TO THE PROJECTS TESTING LABORATORY PRIOR HITECT AND/OR STRUCTURAL ENGINEER.

REINFORCING STEEL

EMENT SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. REQUIRES WELDING SHALL CONFORM TO ASTM A706, WITH GRADES AS SHOWN

ALL BE LAPPED 40 BAR DIAMETERS (2'-0" MINIMUM) AT SPLICES UNLESS NOTED DETAILS. DEVIATIONS IN SPLICE LOCATIONS AND LENGTHS ARE NOT ALLOWED STRUCTURAL ENGINEER OF RECORD.

L CONFORM TO ASTM A185. ALL LAPS IN WELDED WIRE FABRIC SHALL BE ONE

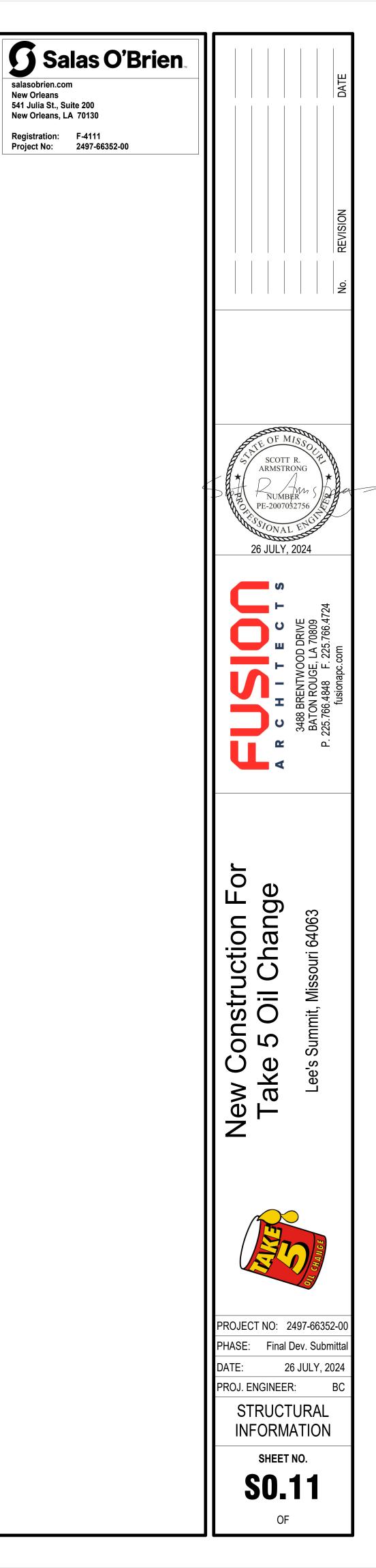
IT AND ACCESSORIES SHALL BE DETAILED AND FABRICATED IN ACCORDANCE

OUS BEAM REINFORCEMENT SHALL BE MADE AT MIDSPAN FOR TOP BARS AND AT ARS.

INTERSECTIONS OF WALLS, GRADE BEAMS AND STRIP FOOTINGS IN PICAL DETAILS. BARS THAT HOOK AT DISCONTINUOUS ENDS SHALL HAVE THE LLY AT EXTERIOR CORNERS IN LIEU OF CORNER BARS.

ECTION FOR REINFORCEMENT SHALL BE AS NOTED BELOW. REFER TO ACI 318 ONS NOT NOTED:

ONDITION	PROTECTION
AB-ON-GROUND	MID-SLAB
RADE BEAMS & WALLS	2 IN. FORMED SIDES
	3 IN. BACKFILLED SIDES



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2 NUMER DURATION VALUE PERTOD IN CONTROL 2 NUMER DURATION 2 NUMER DURATION 2 NUMER DURATION PERTOD IN CONTROL PERTOD IN CONTROL PERTOD IN CONTROL 2 NUMER DURATION 2 NUMER DURATION PERTOD IN CONTROL					OCIATION): #2 SYP Fb	1. TRUSS TO TRUSS MANUFACTURER.
Description Laboration Value Pre-480 are pre-480 are pre-			#2 SYP		2x4 1100 2x6 1000	WOOD LOCATION 3. FRAMING CONNE
CLUB CARLETED TREES CLUB CARLETED			LVL 2.0E	Fv=285 psi	2x10 800	THE GOVERNING SILL PLATES AT THE BU ANCHOR BOLTS WITH 7 (EXCLUDING SHEAR WA POWDER ACTUATED FA
Preside Plants (LTGCRB) Page 4 Pressure			24F-V1 (SP/SP)	Fb(-)=1,450 psi Fv=210 psi Ft=775 psi Fc_=500 psi		SHEATHING AND DECKING 1. FLOOR DECKING WITH 8d NAILS @ PROVIDE STANDA 2. ROOF DECKING T WITH 10d NAILS @
Pe-estimi E-2,000,00 w E-1,000,00 w E-1,000,00 w E-1,000,00 w E-1,000,00 w E-1,000,00 µ E-1,000,000 µ E-1,000,000 µ E-1,000,000 µ E-1,000,000 µ		BEARING PLATES, LEDGERS	#3 SPY	Fv=175 psi Ft=400 psi Fc _L =565 psi		3. EXTERIOR WALL S VERTICAL, ATTACI
Por AND CREATER Processing E = 200,000 part E = 200,000		STUDS AND STUD PACKS	STUD	Fc=850 psi		ST/
PROMETERD LUNGER (PSU) PS - 320 pt P- 3200 pt P- 3200 pt 4 7 2 SULPATES AND OTHER EXEMPTION ALL OPERATION OF MODIFIES EXPOSED TO WEATHER SHULL BE PRESSURE TREATED FOR MODIFIES ESSURE ALL NOT DO MEMBERS EXPOSED TO WEATHER SHULL BE PRESSURE TREATED FOR MODIFIES ESSURE ALL NOT DO MEMBERS EXPOSED TO WEATHER SHULL BE PRESSURE TREATED FOR MODIFIES ESSURE ALL NOT DO MEMBERS EXPOSED TO WEATHER SHULL BE PRESSURE TREATED FOR MODIFIES ESSURE ALL NOT DO MEMBERS AND DO MEMBERS EXPOSED TO WEATHER SHULL BE PRESSURE TREATED FOR MODIFIES ESSURE ALL NOT DO MEMBERS AND PROVED EQUAL AND SHULL BE PRESSURE TREATED FOR MODIFIES ESSURE ALL DO DO MEMBERS AND PROVED EQUAL AND SHULL BE PRESSURE TREATED FOR MODIFIES ESSURE ALL DO ADD MEMBERS AND PROVED EQUAL AND SHULL BE PRESSURE TREATED FOR MODIFIES ESSURE AND PROVED ESSURE ALL NOT DETERMINE AND TREATED TO PROVE THE TREATE AND TREATED THE ACTION OF TREATED TO PROVE AND CALCULATIONS SHALL BE THE SHOLE ALL NOT DETERMINE AND TREATED TO THE ADDITIONAL 1 1 PRESSION ALL BEST THE SHOLE AND AND TREATE TREATE TREATE PRESSION ALL DEST AND TREATES TREATED PROVE THE TREATE THE TREATED FOR MODIFIES TREATED PROFESSIONAL EXAMPLE FOR ALL BE THE TREATE STREATED FOR MODIFIES ESSURE AND TREATED THE ADDITION ALL TREATE TREATED FOR MODIFIES TREATED TRUE TREATED TREATED TO ADDITION ALL TREATED TREATED FOR MODIFIES TREATED FOR MODIFIES TREATED TREATED TREATED TREATED TREATED FOR MODIFIES TREATED FOR MODIFIES TREATED TRUE TREATED TREATED TREATED FOR MODIFIES TREATED FOR MODIFIES TREATED TREATED TREATED TREATED TREATED FOR MODIFIES TREATED FOR MODIFIES TREATED TREATED TREATED TREATED TREATED TREATED TREATED FOR MODIFIES TREATED FOR MODIFIES TREATED TREAT			#2 SYP	Fc=525 psi		
 SILE NATES AND OTHER WOOD MANAGESEN CONTRACT WITH CONCRETE OR MOONRY SHALLES PRESSURE TREATED FOR MOSTURE RESISTANCE. ALL WOOD MEMBERS DYSCED TWAITER SHALLE PRESSURE TREATED FOR MOSTURE RESISTANCE. PREVERTING MOSTURE RESISTANCE. PREVERTING WOOD MEMBERS SHALL AN FAR OR PREVENE EXAMPLE STANDARE ON MOSTURE RESISTANCE. PREVERTING WOOD THE SERVING ALL WOOD MEMBERS DYSCED TO WAITER SHALLES PRESSURE TREATED FOR MOSTURE RESISTANCE. PREVERTING WOOD THE SERVING HAND AND AND AND THE LATEST EDTION OF THE WITHING DESIGN APPROVED BY THE CITY. WOOD THUS SINCE THE UNDER SCIENT STATUTE NET THE TREATS FOR THUS SINCE THE WAITER AND CALCULATIONS SHALL BAR THE SEAL OF A REGISTERIE OF REATING FOR THE STATE OF WHERE THE PROJECT IS LOCKIDE AND SHALLES SHOT THE WATER APPROVAL. COURDONT WOOD STEPS SHOULD REAM STATUS SHOT THE WATER APPROVAL STREAMS AND THUSES HEQUILED AND SHALLES SHOT THE WATER APPROVED STREAMS THE RESIST HOUD REAM STATE OF THE STREAMS THE WAITER THE STREAMS THE RESIST HOUD REAM STREAMS THE WAITER APPROVED AND THAN SHALL MEET THE STREAMS THE RESIST HOUD REAM STREAMS THEW WAITER APPROVED AND THAN SHALL MEET THE STREAMS THE RESIST HOUD REAM STREAMS THEW WAITER APPROVED AND THAN SHALL MEET THE STREAMS THE RESIST HOUD REAM STREAMS THE WAITER APPROVED AND THAN SHALL MEET THE STREAMS THE RESIST HOUD REAM STREAMS THE WAITER APPROVED AND THAN IN SHALL MEET THE STREAMS THE RESIST HOUD RESIST AND THE RESIST OF THE STREAMS SUPPLIER. REAM STREAMS AND TATACHED DIRECTLY TO THE BOTTOM OF THE COOR OR FRAMMS A THE OWNER AND TATACHED MEET AND SHALL MEET THE STREAMS THE RESIST AND TATACHED SHALL RECOMPLIES AND THE TO DO REDONG OF THE STREAMS AND THE RESIST AND TATACHED AND THE RESIST AND THE THE SOURCE THE STREAMS AND THE RESIST AND THE RESIST AND THE TO DO REDONG OF THE STREAMS AND THE DEVERSITY AND THE RESIST AND AND AND AND AND AND AND AND AND AND			PSL 1.8 E	Fc=2,500 psi		3. 1" x 6 4. WIDE
3. PREPARINZED WOOD TRUSSE SHALL BE CANCENAL, MAY AR, OR APPROVE DECUL, AND SHALL BE 3. PREPARINZED WOOD TRUSS CONSTRUCTOR AND CONSTRUCT AND AND CANCENTRATION ACCORDANCE WITH A DIFFERENCE FAMILION OF HANDING AND APPROVED YIE CITY. WOOD CONSTRUCTED WOOD TRUSS CONSTRUCTION OF THE TRUSS RULE INTUTTO: AND APPROVED YIE CITY. WOOD CONSTRUCTED WOOD TRUSS CONSTRUCTION OF THE TRUSS RULE INTUTTO: AND APPROVED YIE CITY. WOOD CONSTRUCTED WOOD TRUSS CONSTRUCTION OF THE TRUSS RULE INTUTO: AND APPROVED YIE CITY. WOOD CONSTRUCTION OF THE CONSTRUCTION OF THE TRUSS RULE INTERVIEW AND AND CANCELATIONS SHALL BUT THE SPACE INCLUED TO THE ADDITION OF FLOOR APPROVE. 4. COMPOSITE WOOD TRUSS CONSTRUCTION OF THE CONSTRUCTION OF THE ADDITION OF FLOOR APPROVE. 5. ALL DEAMS AND TRUSSES SHALL BE TAILE WEICHINGLING CONSTRUCTION OF TAXS. 5. ALL DEAMS AND TRUSSES SHALL BE AND SHALL BE TRUSS RUNCATED ON TAXS. 5. ALL DEAMS AND TRUSSES SHALL BE GARDE STAMPED PEN VIC L. B. RULES. 6. IF A RIGO DELINION ACTINAL SUCH AS SYRUE INDOR IN TOT APPLIED DEPOCITY TO THE BOTTOM OF FLOOR AT TAS FORM OF ANY RULE INCLUMENT FRAMING - PROVIDE DIFTOM YOR TRUST RULE DEPTING 7. RIGO COLLING WAITERALS NOT ATTACHED DIRECTLY TO THE BOTTOM OF FLOOR OR FORMING 7. RIGO COLLING WAITERALS NOT ATTACHED DIRECTLY TO THE BOTTOM OF FLOOR OR FORMING 7. RIGO COLLING WAITERALS NOT ATTACHED DIRECTLY TO THE BOTTOM OF FLOOR OR FORMING 7. RIGO COLLING WAITERALS NOT ATTACHED DIRECTLY TO THE BOTTOM OF FLOOR OR ROOF FRAMING 7. RIGO COLLING WAITERALS NOT ATTACHED DIRECTLY TO THE BOTTOM OF FLOOR OR ROOF FRAMING 7. THANDUNG, INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES THAN 10T - ANG 10T C C 7. RIGO COLLING WAITERALS AND ATTACHED DEPECHANG AND AND FLOOR AND ROOF FRAMING 7. THANDUNG, INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES THAN 10T - ANG 10T C C 7. WOOD STAME TO THE OPTION OF THE DEPTH AND SHALL NOT BE DOCOMON OF ADD TO AND THE PLANE AND AND TO FLOOR AND ROOF FRAMING 7. THANDUNG, INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES THAN 10T - THE R	2.	TREATED FOR MOISTURE RESISTANCE. ALL				6. SOLE SOLE WAL
 COMMOSTE WOOD FEARAS SHALL BE GADE STANED AND WEYERHAUGEN ON EDUMALENT AND SHALL MEET THE STRENGT AND STRENGES CHAILEDE GADE STANED PER WICLE RULES. ALL BEAMS AND TRUSSES SHALL BE GADE STANED PER WICLE RULES. ALL BEAMS AND TRUSSES SHALL BE GADE STANED PER WICLE RULES. FA RICID CELLING MATERIALS, SUCH AS COYPOUND EXAL DEPERTUATION THE BOTTOM OF FLOOR OF ROOF RAMING PROVIDE DEPICITIES FRAMING - PROVIDE BOTTOM CHOOD BRIDGING FIRING SUPPLIER. RICID CELLING MATERIALS NOT ATTACHED DIRECTLY TO THE BOTTOM CHOOD BRIDGING FIRING SUPPLIER. RICID CELLING MATERIALS NOT ATTACHED DIRECTLY TO THE BOTTOM CHOOD BRIDGING PER TRUSS SUPPLIER. RICID CELLING MATERIALS NOT ATTACHED DIRECTLY TO THE BOTTOM CHOOD BRIDGING PER TRUSS SUPPLIER. RICID CELLING MATERIALS NOT ATTACHED DIRECTLY TO THE BOTTOM CHOOD BRIDGING PER TRUSS SUPPLIER. RICID CELLING MATERIALS NOT ATTACHED DIRECTLY TO THE BOTTOM CHOOD FRUGARER RULES. MOTHES SHALL NOT ATTACHED DIRECTLY TO THE BOTTOM OF FLOOR AND ROOF FRAMING MENDERS ARE TO BE SUPPORTED BY CELLING JOISTS AS FOLLOWS: SPANS LESS THAN 10 FT 24 @ 16 O.C. SPANS BETWEEN TO FT & 16 FT 26 @ 17 O.C. SPANS BETWEEN TO FT & 100 CISTS SHALL NOT EXCEED ONE STANL AND THE TRUSS RULE RULE STRENGT OR AND ROOF FRAMING MANDING, INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES' [HIB 91] BY THE TRUSS RULE BY THE GRIERE. NOTTOK DE ODITSS SHALL NOT EXCEED ONE STANL AND THE DOWNED AND FTHE TRUSS RULE BY THE GRIERE STANL DOWNED ONE THE OP OR STRUCTURE THE DOWNED AND THE TRUSS RULE RULE PLANS ON CERTIFIC AND NOT FLOOR AND AND THE DEAL PLANS AND HEADERS AND HEADER AND AND THE DEPTH OF THE DOWNED AND THE DEPTH OF THE DOWNED AND THE TRUSS RULE THE DOWNED AND THE SPAN. THE GRIERERS SHALL BE ANALD AND SHALL NOT RECEDE THER WITH AND MINUMA OF T	3.	DESIGNED, DETAILED, AND FABRICATED IN STANDARD FOR METAL PLATE CONNECTED APPROVED BY THE CITY. WOOD TRUSS SHO PREFABRICATED MEMBERS WITH MARK NU AND CALCULATIONS SHALL BEAR THE SEAL	ACCORDANCE WIT WOOD TRUSS CO DP DRAWINGS SHA MBERS FOR EACH OF A REGISTEREE	TH THE LATEST EDITION (NSTRUCTION" BY THE TH ALL INCLUDE FRAMING P MEMBER TYPE. WOOD O PROFESSIONAL ENGIN	OF THE "NATIONAL DESIGN RUSS PLATE INSTITUTE AND 'LANS SHOWING ALL TRUSS SHOP DRAWINGS EER FROM THE STATE OF	8. STUE 9. DOU 10. DOU DOU
 ALL BEAMS AND TRUSSES SHALL BE GARDE STAMPED PER WICL B. RULES IF A RIGID CEILING MATERIAL SUCH AS GYPSUM BOARD IS NOT APPLIED DIRCTLY TO THE BOTTOM OF FLOOR OR ROOF TRAMINES PROVIDE THE FOLLOWING BRIDGING. LUNGHER FRAMING - PROVIDE FULL-DEPTH BLOCKING AT 13 POINTS OF SPAN. PRE-ENSINEERED TRUSS FRAMING - PROVIDE BOTTOM OF FLOOR OF FLOOR AT 13 POINTS OF SPAN. PRE-ENSINEERED TRUSS FRAMING - PROVIDE BOTTOM OF FLOOR OF ROMONE SUFFLER. RIGID CELING MATERIALS NOT ATTACHED DIRECTLY TO THE BOTTOM OF FLOOR OR ROOF FRAMING MEMBERS ARE TO BE SUPPORTED BY CELING JOISTS AS FOLLOWS. SPANS LESS THAN 10 FT 2M (§) 16 O.C. SPANS BETWEEN 10 FT & 16 FT - 2M (§) 16' O.C. SPANS EXCEEDING 16 FT CONTACT ENGINEER. MANDLING, INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES' (HE91) BY THE TRUSS PLATE INSTITUTE SHALL BE OWNED WITH DURING STORAGE AND INSTALLATION OF FLOOR AND ROOT TRUSSES. NOTCHES ON THE ENDS OF JOISTS SHALL NOT EXCEED ONE FORTH OF THE JOIST DEPTH. HOLES BORED IN JOISTS SHALL NOT EXCEED ONE THRO OF THE OPPH OF THE JOIST NOTCHES IN THE TRUSS PLATE INSTITUTE SHALLE CONNECTING ON STANLES OF THE TOP OR BOTTOM OF PLOOR AND ROOT TRUSSES. NOTCHES ON THE ENDS OF JOISTS SHALL NOT EXCEED ONE FORTH OF THE JOIST DEPTH. HOLES BORED IN JOISTS SHALL NOT EXCEED ONE STINK OT BY IN THE TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED ONE STINK OT BY INTE TO POR DITION OF JOISTS SHALL NOT EXCEED ONE STINK OT BY INTE TO POR DITION OF PLOOR AND THE THEO OF AND THE INSTITUTE CREED ONE STINK OF THE DEPTH AND IN-JOINT ALL INFORM OF THALL TO NOTE THE STINK. THE CREED ONE STINK OF SHALL NOT BE LOATED IN THE MIDDLE THEO OF AND THE OWNERS. HOLES AND NOTCHES IN BEAMS AND HEADERS SHALL BE CALLED AND NALLED TO BETHER WITH A MINING OF THE STINK. THE CREED TO NO DR MORE MEMBERS SHALL BE CALLED AND NALL TO TO ETHER WITH A MINING OF THE STINK OF MONORS SHALL BE NALED PERMITTED UNDERS SHALL NOT BE SUPPORTING LOAD THEORING STUL. DESIN DARA STULES AND T	4.				SHALL MEET THE	
OR ROOF FRAMING, PROVIDE THE FOLLOWING BIDDING: LUMGER FRAMING - PROVIDE BOTTOM CHORD BIDDING PER TRUSS 17. CELL AT 13 POINTS OF SPAN, PRE-ENGINEERED TRUSS FRAMING - PROVIDE BOTTOM CHORD BIDDING PER TRUSS 18. CELL SUPPLIER. 19. RAS 7. RIGID CELLING MATERIALS NOT ATTACHED DIRECTLY TO THE BOTTOM OF PLODE OR ROOF FRAMING 20. TD 8. MEMBERG ARE TO BE SUPPORTED BY CELING, JOSTA SA FOLLOWS: SPANS LESS THAN 10 FT, - 204 @ 16° O.C. 21. T x SPANS BETWEEN 10 FT & 16 FT - 26 @ 16° O.C. SPANS BESTMENT PLATE 22. WID 22. WID 24. BUIL 24. BUIL 24. BUIL 10. THANDLING, INSTALLING A BRACING METAL PLATE CONNECTED WOOD TRUSSES' (HB 91) BY THE TRUSS PLATE 24. BUIL 11. THANDLING, INSTALLING A BRACING METAL PLATE CONNECTED WOOD TRUSSES' (HB 91) BY THE TRUSS PLATE 24. BUIL 12. JOSTS SHALL NOT EXCEED ONE STALL NOT EXCEED ONE FOURTH OF THE JOST DEPTH. HOLES BALL NOT EXCEED ONE STALL AT OF DEPTH AND SHALL NOT THE JOST BOTTOM OF 13. WOTHER STALL NOT EXCEED ONE SHALL NOT EXCEED ONE ROTTOM OF THE JOST SHALL NOT EXCEED ONE SHALL NOT EXCEED ONE SHALL NOT EXCEED ONE SHALL NOT EXCEED ONE STALE TO OF THE JOST MOTHER FOR ANY 25. 21. PLATE 27. JAC 26. MOTTAGL CONTRACTOR SHALL COORDINATE THESE GUIDELINES WITH ALL TRADES 27. JAC 24. BUIL 28. MOLOS OF TWO OF MORE MEMBERS SHALL BE GLUED AND NAILED TOGETHER WITH A MINIMUM OF <	-	ALL BEAMS AND TRUSSES SHALL BE GRADE	E STAMPED PER W			
 RIGID CELLING MATERIALS NOT ATTACHED DIRECTLY TO THE BOTTOM OF FLOOR OR ROOP FRAMING MEMBERS ARE TO BE SUPPORTED BY CELLING JOISTS AS FOLLOWS. SPANS LESS THAN 10 FT - 2x4 @ 16' O.C. SPANS BETWEEN 10 FT & 16 FT - 2x6 @ 16' O.C. SPANS EXCEEDING 16 FT - CONTACT ENGINEER MEMBERS ARE TO BE SUPPORTED BY CELLING JOISTS AS FOLLOWS. SPANS LESS THAN 10 FT - 2x4 @ 16' O.C. THANDLING, INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES' (HIG 01) BY THE TRUSS PLATE INSTITUTE SHALL BE COMPLED WITH DURING STORAGE AND INSTALLATION OF FLOOR AND ROOF TRUSSES. NOTCHES ON THE ENDS OF JOISTS SHALL NOT EXCEED ONE FOURTH OF THE JOIST AND THE DIAMETER OF ANY HOLE SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIAMETER OF ANY HOLE SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIAMETER OF ANY HOLE SHALL NOT DECED ONE SKITH OF THE DEPT HAND SHALL NOT BE LOCATED IN THE MODLE THAN OF JOISTS SHALL NOT BE WITHIN 2 INCHES OF THE EOP OR BOTTOM OF THE JOIST, AND THE DIAMETER OF ANY HOLE SHALL NOT DECED ONE SKITH OF THE DEPTH AND LOCATED IN THE MODLE THAN OF 25. 2' PH HOLES AND NOTCHES IN BEAMS AND HEADERS ARE NOT PERMITTED UNLESS VERIFIED IN WRITING BY THE ENRINEED FO FECORD. BEAMS COMPRISED OF TWO OR MORE MEMBERS SHALL BE GLUED AND NAILED TOGETHER WITH A MINIMUM OF TWO (2) ROWS OF 161 NAUS ATT 12' O.C. BEAMS COMPRISED OF THREE OR MORE MEMBERS SUPPORTING LOAD THROUGH SDE HANGERS SHALL DON THE DEPRADVE WITH ADDITIONAL 1/2' DIAMETER THRU BOLTS AT 18' O.C. STAGGERED TOP AND BOTTOM. SPLICING OF MEMBERS SHALL NOT BE PERMITTED UNLESS SHOWN ON THE PLANS OR VERIFIED IN WRITING BY THE ENGINEER. INSTALL CORNECTIONS ARE MADE. MALL HEAVING ROUTEL FUD FOLLINGS SHALL NOT EVER DE ON THE TRUSS SUPPLER. DOUGLE TOP PLATES SHALL LAP A MINIMUM OF FOUR (4) FEET. SPLICES SHALL COCUR AT CENTER OF SUPPORTING STUD. REFERENCE SHEATHING NOTES BELOW AND ARCHTECTURA	5.			.C.L.B. RULES.		
22 WID 32 SPANS BETWEEN 10 FT & 16 FT - 2x6 @ 16" O.C. SPANS EXCEEDING 16 FT CONTACT ENGINEER. 22 WID 32 SPLICING AND ROOF FRAMING 1. "HANDLING, INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES" (HIB 91) BY THE TRUSS PLATE INSTTUTE SHALL NOT EXCEED ONE THING DOT THE DEPIN FOR THE JOIST, AND THE DIANETER OF ANY HOLES SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIANETER OF ANY HOLES AND NOTCHES IN THE OPEND ONE THE DEPIN OF THE LOST IN OTHEL SIST AND THE DIANETER OF ANY HOLES AND NOTCHES IN THE OR SIST OF THE DEPIN OF THE JOIST, AND THE JOIST, AND THE DIANETER OF ANY HOLES AND NOTCHES IN SHALL NOT EXCEED ONE SINTH OF THE LOST OF THE LOST IN OTHELS IN THE AND OR ANY JOISTS SHALL NOT EXCEED ONE SINTH OF THE DEPIN OF THE LOST OF THE SIST OF ORE SILL OF OR BOTTOM OF JOISTS SHALL NOT EXCEED ONE THING DO' JOISTS SHALL NOT EXCEED ONE HIM FOR THE JOIST, AND THE DIANETER OF ANY HOLES AND NOTCHES IN BEAMS AND HEADERS ARE NOT PERMITTED UNLESS VERIFIED IN WRITING BY THE ENGINEER OF RECORD. SUPPORTING LOAD THROUGH SIDE TOP AND OR MORE MEMBERS SHALL BE GLUED AND NALED TOGETHER WITH ANINUM OF JOIST SHALL NOT BE CREASE OF THREE OF MORE AND MINIMUM OF JOIST SHALL NOT BE PERMITTED UNLESS SHOWN ON THE PLANS OR VERIFIED IN WRITING BY THE ENGINEER. SPLICING OF MEMBERS SHALL BE NAILED PER ABOVE WITH ADDITIONAL 1/2 DIAMETER THRU BOLTS AT 18' O.C. STAGGERED TOP AND BOTTOM. SPLICING OF MEMBERS SHALL BE NAILED TOGETHER WITH ADDITIONAL 1/2 DIAMETER THRU BOLTS AT 18' O.C. STAGGERED TOP AND BOTTOM. SPLICING OF MEMBERS SHALL BE PRINTED UNLESS SHOWN ON THE PLANS OR VERIFIED IN WRITING BY THE ENGINEER. INSTALL MEMBERS THUE, PLUMB AND LEVEL AND PROVIDE ADEQUARE TEMPORARY BRACING AND SHORING UNTLE FINAL FOR MONT. SPLICING OF MEMBERS SHALL AND ADDITION OF FOULDE DY THE RUSS SUPPLER. DOUBLE TOP PLATES SHALL AND AND FOULDE DY THE RUSS SUPLIER. DOUBLE TOP PLATES SHALL ADA AND THE ENDER SUPP		IF A RIGID CEILING MATERIAL SUCH AS GYP OR ROOF FRAMING, PROVIDE THE FOLLOW AT 1/3 POINTS OF SPAN. PRE-ENGINEERED	SUM BOARD IS NO ING BRIDGING: LL	T APPLIED DIRECTLY TO IMBER FRAMING - PROVI	IDE FULL-DEPTH BLOCKING	15. CEIL 16. CON 17. CEIL
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INSTITUTE SHALL BE COMPLIED WITH DURING STORAGE AND INSTALLATION OF FLOOR AND ROOF TRUSSES. 2. NOTCHES ON THE ENDS OF JOISTS SHALL NOT EXCEED ONE FOURTH OF THE JOIST DEPTH. HOLES BORED IN JOISTS SHALL NOT EXCEED ONE THEN OF THE OP OR BOTTOM OF THE JOIST. NOTCHES IN THE TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED ONE SIXTH OF THE DEPTH AND BHALL NOT BE LOCATED IN THE IMBULE THRD OF THE SPAN. THE GENERAL CONTRACTOR SHALL COORDINATE THESE GUIDELINES WITH ALL TRADES. 3. HOLES AND NOTCHES IN BEAMS AND HEADERS ARE NOT PERMITTED UNLESS VERIFIED IN WRITING BY THE ENGINEER OF RECORD. 28. COO 27. JAC 4. BEAMS COMPRISED OF TWO OR MORE MEMBERS SHALL BE GLUED AND NALED TOGETHER WITH A MINIMUM OF TWO (2) ROWS OF 160 NAILS AT 12' O'C. BEAMS COMPRISED OF THREE OR MORE MEMBERS SUPPORTING LOAD THROUGH SIDE HANGERS SHALL BE NAILED PER ABOVE WITH ADDITIONAL 1/2' DIAMETER THRU BOLTS AT 18' 0.C. STAGGERED TOP AND BOTTOM. 30. LED 31. WOO 31. WOO 33. LED 34. INTO 35. SPLICING OF MEMBERS SHALL BE PRAILED PER ABOVE WITH ADDITIONAL 1/2' DIAMETER THRU BOLTS AT 18' 35. SPLICING OF MEMBERS SHALL DE PERMITTED UNLESS SHOWN ON THE PLANS OR VERIFIED IN WRITING BY THE ENGINEER. 31. WOO 32. LED 33. WOLL 34. INTE ENGINEER 5. SPLICING OF MEMBERS SHALL BE NAILED TOGETHER WITH 160 NAILS @ 20' O'C. FOR THE FULL STUD HEIGHT. REFERENCE SHEATHING NOTES ARE MADE. 32. PAN 33. FIBE 34. INTE ENGINEER. 6. INSTALL MEMBERS THUE. FLUMB AND LEVEL AND PROVIDE ADEQUATE TEMPORARY BRACING AND SHORING UNTIL FINAL CONNECTIONS ARE MADE. 32. PAN 34. INTE 34. INTE 35. DOUBLE TOP PLATES SHALL LE NAILED TOGETHER WITH 160 NAILS @ 20' O'C. FOR THE FULL STUD HEIGHT. RECOURDINATED WITH THE TRUSS LAYOUT PROVIDED BY THE TRUSS SUPPLIER. 33. FIBE 34. INTE 34. INTE 34. INTE 34. INTE 34. INTE 34. INTE	6. 7.	IF A RIGID CEILING MATERIAL SUCH AS GYP OR ROOF FRAMING, PROVIDE THE FOLLOW AT 1/3 POINTS OF SPAN. PRE-ENGINEERED SUPPLIER. RIGID CEILING MATERIALS NOT ATTACHED D MEMBERS ARE TO BE SUPPORTED BY CEILI	SUM BOARD IS NO ING BRIDGING: LL TRUSS FRAMING - DIRECTLY TO THE E NG JOISTS AS FOL	T APPLIED DIRECTLY TO IMBER FRAMING - PROVI PROVIDE BOTTOM CHO BOTTOM OF FLOOR OR F LOWS: SPANS LESS TH/	IDE FULL-DEPTH BLOCKING IRD BRIDGING PER TRUSS ROOF FRAMING AN 10 FT 2x4 @ 16" O.C.	15. CEIL 16. CON 17. CEIL 18. CEIL 19. RAFT 20. 1" DI 21. 1" x 8 22. WIDE 23. BUIL
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WOOD FRAMING NOTES

SS AND TRUSS HANGER CONNECTIONS ARE THE RESPONSIBILITY OF THE TRUSS

STAPLES, BOLTS, NUTS WASHERS, ETC. SHALL BE GALVANIZED FOR EXTERIOR OR TREATED ONS; PLAIN FINISH FOR INTERIOR LOCATIONS.

NECTORS SHALL BE SIMPSON "STRONG-TIE" OR APPROVED EQUAL AND SHALL BE APPROVED BY G BUILDING CODE FOR THE APPLICATION INDICATED.

BUILDING EXTERIOR SHALL BE FASTENED TO THE FOUNDATION WITH 1/2" DIAMETER F1554-36 I 7" MIN. EMBED. AND 1" HOOK @ 32" O.C. (MIN. TWO BOLTS PER SILL). INTERIOR SILL PLATES WALLS) SHALL BE ANCHORED WITH 1/2" DIAMETER F1554-36 ANCHOR BOLTS @ 48" O.C. OR FASTENERS: HILTI X-C P8S/SIMPSON STRONG-TIE PDPAWL-287 @ 16" O.C. MAX. REFER TO SHEAR R ANCHORS AT SHEAR WALLS.

G TO BE NOMINAL 3/4" APA RATED EXPOSURE 1 SHEATHING WITH PANEL INDEX 48/24, NAILED @ 6" O.C. AT ALL EDGE SUPPORTS AND 8d NAILS @ 12" O.C. AT ALL INTERMEDIATE SUPPORTS. DARD EDGE CLIPS AT MID-SPAN BETWEEN ALL SUPPORTS.

G TO BE NOMINAL 5/8" APA RATED EXPOSURE 1 OSB SHEATHING WITH PANEL INDEX 24/0, NAILED S @ 6" O.C. AT ALL EDGE SUPPORTS AND 10d NAILS @ 12" O.C. AT ALL INTERMEDIATE SUPPORTS. DARD EDGE CLIPS AT MID-SPAN BETWEEN ALL SUPPORTS.

L SHEATHING TO BE 1/2" OSB SHEATHING. INSTALLED W/ LONG DIMENSION HORIZONTAL OR CHED W/ 10d NAILS @ 6" O.C. AT ALL PANEL EDGES AND @ 6" O.C. AT INTERMEDIATE SUPPORTS.

_ SHEATHING SHALL BE GYPSUM WALLBOARD AS SPECIFIED BY THE ARCHITECT.

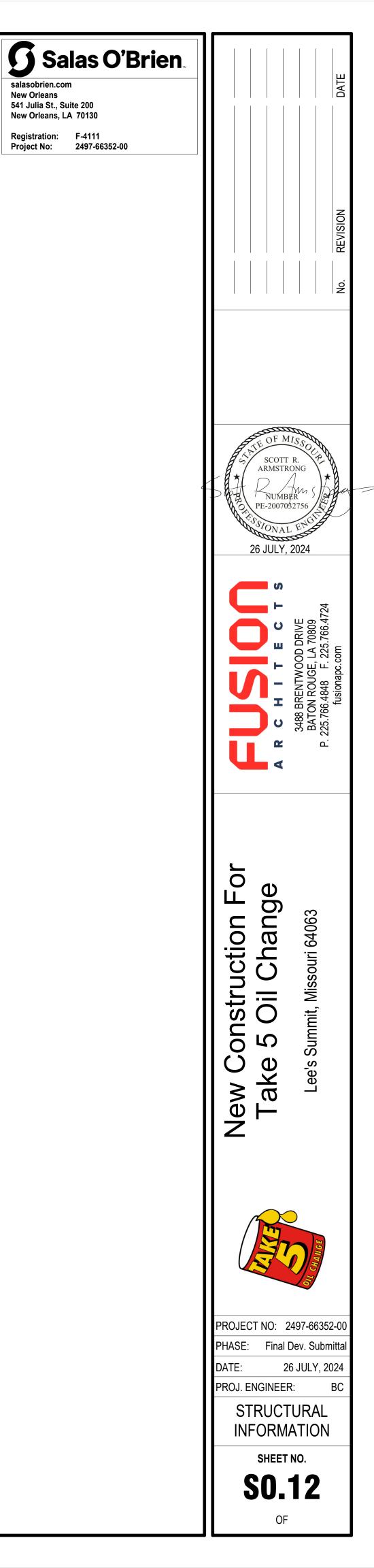
TANDARD FASTENING SCHEDULE

FASTENING	DN; LOCATION
3-8d	LL OR GIRDER; TOENAIL
2-8d	O JOIST; TOENAIL EACH END
2-8d	LOOR OR LESS TO EACH JOIST; FACE NAIL
3-8d	N 1" x 6" SUBFLOOR TO EACH JOIST; FACE NAIL
2-16d	OR TO JOIST OR GIRDER; BLIND AND FACE NAIL
16d @16" O.C.	E TO JOIST OR BLOCKING; TYPICAL FACE NAIL
3-16d PER 16"	E TO JOIST OR BLOCKING AT BRACED
	L; BRACED WALL PANELS
2-16d	TO STUD; END NAIL
ENAIL OR 2-16d END NAIL	DLE PLATE 4-80
16d @ 24" O.C.	UDS; FACE NAIL
16d @ 16" O.C.	OP PLATES; TYPICAL FACE NAIL
8-16d	OP PLATES; LAP SPLICE
JAIL 3-8d	BETWEEN JOISTS OR RAFTERS TO TOP PLATE;
8d @ 6" O.C.	O TOP PLATE; TOENAIL
2-16d	S, LAPS AND INTERSECTIONS; FACE NAIL
16" O.C.	JS HEADER, TWO PIECES; ALONG EDGE
3-8d	ISTS TO PLATE; TOENAIL
4-8d	JS HEADER TO STUD; TOENAIL
3-16d	ISTS, LAPS OVER PARTITIONS; FACE NAIL
3-16d	ISTS TO PARALLEL RAFTERS; FACE NAIL
3-8d	PLATE; TOENAIL
2-8d	L BRACE TO EACH STUD AND PLATE; FACE NAI
2-8d	THING TO EACH BEARING WALL; FACE NAIL
3-8d	N 1" x 8" SHEATHING TO EACH BEARING; FACE N
24" O.C.	ORNER STUDS
20d @ 32" O.C. TOP AND	IRDER AND BEAMS; FACE NAIL
BOTTOM STAGGERED ON	
2-20d AT ENDS AND AT EACH SPLICE	
16d	
3-10d	
NAIL OR 2-16d FACE NAIL	
NAIL OR 2-16d FACE NAIL 3-16d	
	AND JOIST; FACE NAIL
3-16d	RIP; FACE NAIL
	OR, ROOF AND WALL SHEATHING (TO FRAMING
	AND LESS
6dc.k	" TO 3/4"
8d ^d OR 6d ^e	FO 1"
8d ^d OR 6d ^e 8d ^d	
8d ^d OR 6d ^e 8d ^c 10d ^d OR 8d ^e	" TO 1-1/4"
8d ^d OR 6d ^e 8d ^d 10d ^d OR 8d ^e TO FRAMING):	" TO 1-1/4" FLOOR (COMBINATION SUBFLOOR-UNDERLAY!
8dd OR 6de 8dc 8dc 10dd OR 8de TO FRAMING): 6de	" TO 1-1/4" FLOOR (COMBINATION SUBFLOOR-UNDERLAY! AND LESS
8dd OR 6de 8dc 8dc 10dd OR 8de TO FRAMING): 6de 8dc 8de	" TO 1-1/4" FLOOR (COMBINATION SUBFLOOR-UNDERLAY! AND LESS TO 1"
8dd OR 6de 8dc 8dc 10dd OR 8de TO FRAMING): 6de 8dc 8de	" TO 1-1/4" FLOOR (COMBINATION SUBFLOOR-UNDERLAY) AND LESS TO 1" " TO 1-1/4"
8dd OR 6de 10dd OR 8de 10dd OR 8de TO FRAMING): 6de 8de 8de 10dd OR 8de	" TO 1-1/4" FLOOR (COMBINATION SUBFLOOR-UNDERLAY) AND LESS TO 1" " TO 1-1/4"
8dd OR 6de 8dc 8dc 10dd OR 8de TO FRAMING): 6de 8dc 8dc 10dd OR 8de 10dd OR 8de 6de 8de 10dd OR 8de 6de 6de	" TO 1-1/4" FLOOR (COMBINATION SUBFLOOR-UNDERLAY) AND LESS TO 1" " TO 1-1/4"
8dd OR 6de 8dc 8dc 10dd OR 8de TO FRAMING): 6de 8dc 8dc 10dd OR 8de 10dd OR 8de 6de 8de 10dd OR 8de 6de 6de	" TO 1-1/4" FLOOR (COMBINATION SUBFLOOR-UNDERLAY! AND LESS TO 1" " TO 1-1/4" NG (TO FRAMING)
8dc 10dd OR 8de TO FRAMING): 6de 8dc 8de 10dd OR 8de 10dd OR 8de 6df 8df	" TO 1-1/4" FLOOR (COMBINATION SUBFLOOR-UNDERLAY) AND LESS TO 1" " TO 1-1/4" NG (TO FRAMING) AD SHEATHING:9
8d ^d OR 6d ^e 10d ^d OR 8d ^e 10d ^d OR 8d ^e TO FRAMING): 6d ^e 8d ^d 0R 8d ^e 10d ^d OR 8d ^e 6d ^f 8d ^f 6d ^f 8d ^f	" TO 1-1/4" FLOOR (COMBINATION SUBFLOOR-UNDERLAY) AND LESS TO 1" " TO 1-1/4" NG (TO FRAMING) AD SHEATHING:9 NO.
8dd OR 6de 8dc 8dc 10dd OR 8de TO FRAMING): 6de 8dd 00 8 8de 10dd OR 8de 6de 8de 10dd OR 8de 6df 8de 6df 8de 6df 8df 6df 8df	I" TO 1-1/4" FLOOR (COMBINATION SUBFLOOR-UNDERLAY) AND LESS TO 1" I" TO 1-1/4" NG (TO FRAMING) ID SHEATHING:9 NO. 2" NO.
8d ^d OR 6d ^e 8d ^c 8d ^c 10d ^d OR 8d ^e TO FRAMING): 6d ^e 8d ^d 0R 8d ^e 10d ^d OR 8d ^e 6d ^e 8d ^e 10d ^d OR 8d ^e 6d ^f 8d ^f	

- a. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED. REFER TO GOVERNING BUILDING CODE FOR ALLOWABLE STAPLE FASTENING ALTERNATIVES.
- b. NAILS SPACED AT 6" O.C. AT EDGES, 12" O.C. AT INTERMEDIATE SUPPORTS EXCEPT 6" AT SUPPORTS WHERE SPANS ARE 48" OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SHEARWALL NOTES. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
- c. COMMON OR DEFORMED SHANK
- d. COMMON.
- e. DEFORMED SHANK.
- f. CORROSION-RESISTANT SIDING OR CASING NAIL.
- FASTENERS SPACED 3" O.C. AT EXTERIOR EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS.
- h. CORROSION-RESISTANT ROOFING NAILS WITH 7/16" DIAMETER HEAD AND 1-1/2" LENGTH FOR 1/2" SHEATHING AND 1-3/4" LENGTH FOR 25/32" SHEATHING.
- CASING OR FINISH NAILS SPACED 6" ON PANEL EDGES, 12" AT INTERMEDIATE SUPPORTS.
- PANEL SUPPORTS AT 24". CASING OR FINISH NAILS SPACED 6" ON PANEL EDGES, 12" AT INTERMEDIATE SUPPORTS.
- k. FOR ROOF SHEATHING APPLICATIONS, 8d NAILS ARE THE MINIMUM REQUIRED FOR STRUCTURAL PANELS.

WOOD SHRINKAGE CONSIDERATIONS

- 1. WOOD PLATE SHRINKAGE IS TO BE 1/8" PER STORY, TYPICAL.
- 2. ACCOUNT FOR ADDITIONAL 1/8" SETTLEMENT PER STORY ON FRAMING GAPS DUE TO CREEP AND GRAVITY LOADING.
- 3. 4-STORY BUILDINGS ARE ESTIMATED TO SETTLE UP TO 3/4" AT THE UPPERMOST LEVEL.
- 4. ROUGH OPENING HEIGHTS SHALL BE OVERSIZED TO ACCOUNT FOR THE ESTIMATED SETTLEMENT STATED ABOVE.



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Registration: F-4111 Project No: 2497-66352-00

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DESIGNATION	DEPTH		TRUSS LOADING SCHEDULE	TCLL (PSF) BCLL (F	PSF) TCDL (PSF)) BCDL (PSF)	NOTES		
RT		ROOF ASSEMBLY O	VER ROOF SHEATHING	20 0	12		1, 2 & 3		
NOTES									
1. SELF WT OF TRUS			E. REF. ARCH.						
			DF SHEATHING INFORMATION.						
HEDULE							NT	TS	
								LOAD BEARING STUD SCHEDULE	
SHEARWALL SCH								LEVEL EXTERIOR WALL INTERIOR WALL	
ERIOR WALL								1 **2x6 @ 16" O.C. **2x6 @ 16"O.C.	
SW5		ATHING SW4						NOTES 1. ALL EXTERIOR AND CORRIDOR WALLS ARE CONSIDERED TO BE LOAD BEARING	WALLS.
								2. REFER TO SHEET S0.12 FOR STUD SPECIES.	
			NISE ON PLAN. OR MORE INFORMATION ON EACH SHEARWALL					 BALLOON FRAMED WALLS SHALL BE 2x6 @ 12" O.C. NON LOAD BEARING WALLS SHALL BE 2Xs @ 16" O.C. MINIMUM. 	
REQUIRED ON BOTH			0.					5. EXITWAYS ENCLOSES CORRIDORS WIDER THAN 8 FT INCLUDING BOTH ELEVATO	DR LOBBY &
ECEIVE SHEATHING (RECEIVE SHEATHING			NO					CORRIDORS LEADING TO STAIRS.	
NECEIVE SHEATHING		DE OF THE WALL U.I	N.U.						
	WOOD S		EATHING AND ATTACHMENT SCHEDULE						
		DESCRIPTION		SILL NAILING		ANCHORS	TRUSS BLOCK SPACING EVERY 4TH TRUSS SPACE		
VALLBOARD UNBLOC	KED AND FASTEN	ED WITH WALLBOAF	RD 6d NAILS @ 7" O.C. AT ALL PANEL EDGES.	16d @ 16" O.C.	X-CP 72 P8	8 S23 @ 24" O.C.	OR 8'-0" O.C.		
VALLBOARD UNBLOC	KED AND FASTEN	ED WITH WALLBOAF	RD 6d NAILS @ 4" O.C. AT ALL PANEL EDGES	16d @ 12" O.C.	X-CP 72 P8	3 S23 @ 16" O.C.	EVERY 3RD TRUSS SPACE OR 6'-0" O.C.	E	
VALLBOARD BLOCKE	D AND FASTENED	WITH WALLBOARD	6d NAILS @ 4" O.C. AT ALL PANEL EDGES.	16d @ 10" O.C.	X-CP 72 P8	3 S23 @ 16" O.C.	EVERY 3RD TRUSS SPACE OR 6'-0" O.C.	^E 3 STUD SCHEDULE	NTS
									1

5 TRUSS SCH

	SHEARWALL SCHEDULE					
	EXTERIOR WALL	INTERIOR WALL				
LEVEL	SHEATHING	SHEATHING				
1	SW5	SW4				

NOTES 1. ALL SHEARWALL DESIGNA 2. REFER TO WOOD SHEARW

TYPE. 3. ** DENOTES SHEATHING F

4. EXTERIOR WALL SHALL RE

5. DEMISING WALL SHALL RE 6. CORRIDOR WALL SHALL R

	WOOD SHEARWALL SHEATHING AND ATTACHMENT SCHEDULE						
SW #	DESCRIPTION	SILL NAILING	SILL ANCHORS	TRUSS BLOCK SPACING			
SW1	5/8" GYPSUM WALLBOARD UNBLOCKED AND FASTENED WITH WALLBOARD 6d NAILS @ 7" O.C. AT ALL PANEL EDGES.	16d @ 16" O.C.	X-CP 72 P8 S23 @ 24" O.C.	EVERY 4TH TRUSS SPACE OR 8'-0" O.C.			
SW2	5/8" GYPSUM WALLBOARD UNBLOCKED AND FASTENED WITH WALLBOARD 6d NAILS @ 4" O.C. AT ALL PANEL EDGES	16d @ 12" O.C.	X-CP 72 P8 S23 @ 16" O.C.	EVERY 3RD TRUSS SPACE OR 6'-0" O.C.			
SW3	5/8" GYPSUM WALLBOARD BLOCKED AND FASTENED WITH WALLBOARD 6d NAILS @ 4" O.C. AT ALL PANEL EDGES.	16d @ 10" O.C.	X-CP 72 P8 S23 @ 16" O.C.	EVERY 3RD TRUSS SPACE OR 6'-0" O.C.			
SW4	5/8" GYPSUM SHEATHING BLOCKED AND FASTENED WITH WALLBOARD 6d NAILS @ 4" O.C. AT EDGES AND @ 7" O.C. AT INTERMEDIATE SUPPORTS.	2-16d @ 18" O.C.	X-CP 72 P8 S23 @ 12" O.C.	EVERY OTHER TRUSS SPACE OR 4'-0" O.C.			
SW5	15/32" WOOD STRUCTURAL PANEL SHEATHING BLOCKED AND FASTENED WITH 8d NAILS @ 6" O.C AT ALL PANEL EDGES.	2-16d @ 10" O.C.	1/2" F1554-36 @ 48" O.C.	EVERY TRUSS SPACE			
SW6	15/32" WOOD STRUCTURAL PANEL SHEATHING BLOCKED AND FASTENED WITH 10d NAILS @ 6" O.C AT ALL PANEL EDGES.	2-16d @ 8" O.C.	1/2" F1554-36 @ 36" O.C.	EVERY TRUSS SPACE			
SW7	15/32" WOOD STRUCTURAL PANEL SHEATHING BLOCKED AND FASTENED WITH 10d NAILS @ 4" O.C AT ALL PANEL EDGES.	2-16d @ 4" O.C.	1/2" F1554-36 @ 24" O.C.	EVERY TRUSS SPACE(6)			

<u>NOTES</u>

1. ALL THE SHEARWALL TYPES ARE NOT USED, IF THEY ARE NOT MARKED ON SHEARWALL SCHEDULE OR ON PLANS.

2. "BLOCKED" SHEAR WALLS SHALL INCLUDE 2x BLOCKING AT ALL PANEL EDGES.

3. INTERMEDIATE SUPPORTS TO BE FASTENED @ 12" O.C. U.N.O.

4. STRUCTURAL PANELS ARE TO BE GRADE STRUCTRUAL 1.

5. THE X-CP 72 P8 S23 ARE HILTI POWDER ACTUATED FASTENERS WITH INTEGRAL WASHERS.

6. TRUSS BLOCK CAPACITY SHALL BE 1500 LBS

4 SHEARWALL SCHEDULE

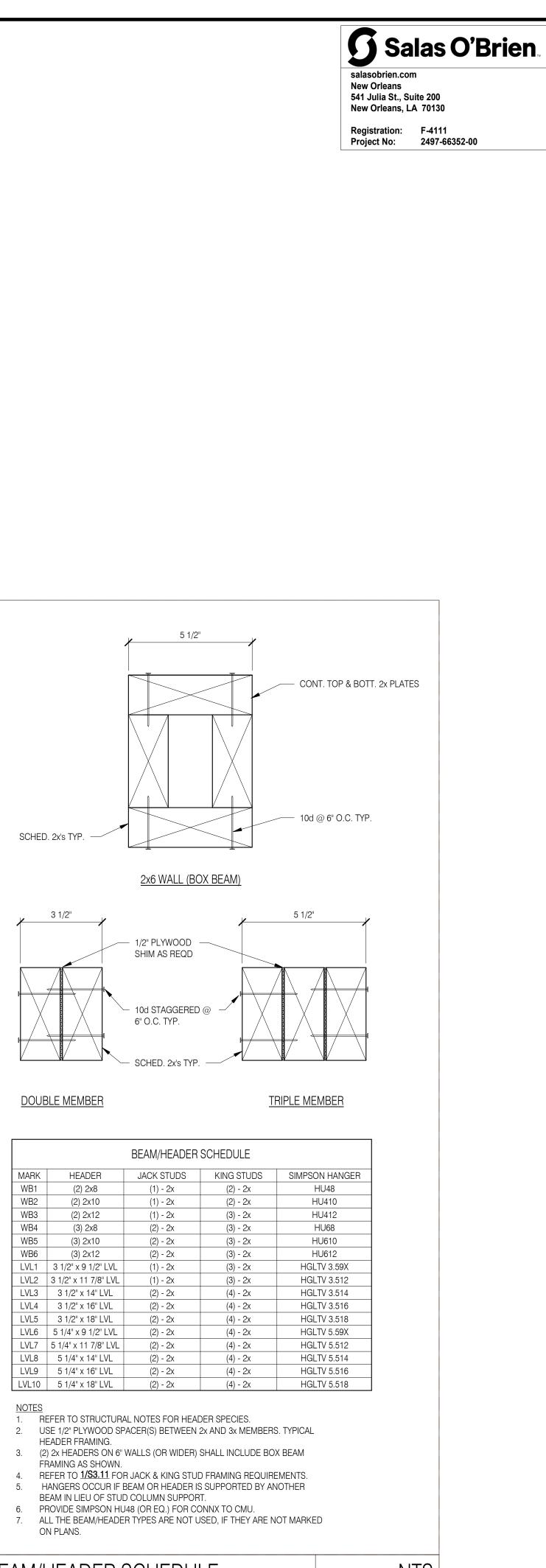
HOLDDOWN AND TENSION TIE SCHEDULE						
MARK	PRODUCT	FASTENERS	ANCHOR	STUDPACK MIN. THICKNESS	ALLOWABLE CAPACITY1	
1	CS20	(14) 0.148x2 1/2 NAILS	N/A	(1) - 2x4	1030	
2	CS16	(22) 0.148x2 1/2 NAILS	N/A	(1) - 2x4	1705	
3	CS14	(30) 0.148x2 1/2 NAILS	N/A	(1) - 2x4	2490	
4	CMST14	(36) 0.148x2 1/2 NAILS	N/A	(2) - 2x4	3531	
5	CMST14	(56) 0.148x2 1/2 NAILS	N/A	(2) - 2x4	5494	
6	CMST14	(66) 0.148x2 1/2 NAILS	N/A	(2) - 2x4	6475	
7	LTTP2	(12) 0.148x2 1/2 NAILS	1/2"	(2) - 2x4	2230	
8	HTT4	(18) 0.148x2 1/2 NAILS	5/8"	(2) - 2x4	3610	
9	HTT5	(26) 0.162x3 NAILS	5/8"	(2) - 2x4	4670	
10	HDU8	(20) 1/4x2 1/2 SDS	7/8"	(3) - 2x4	6970	
11	HDU11	(30) 1/4x2 1/2 SDS	1"	(3) - 2x6	9535	
12	HDU14	(36) 1/4x2 1/2 SDS	1"	(3) - 2x6	10770	

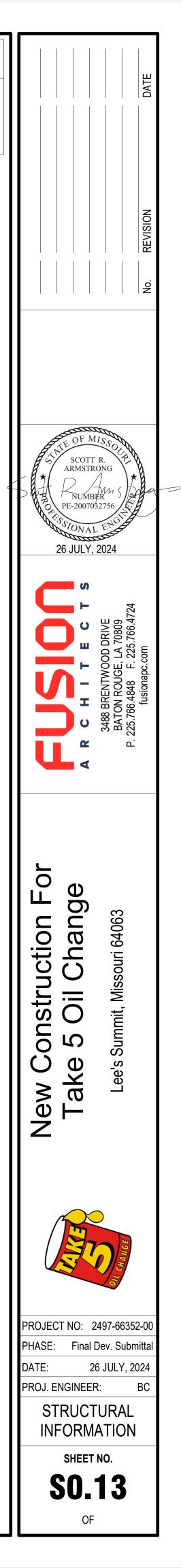
NOTES

1. ALLOWABLE CAPACITIES ARE BASED ON DF/SYP SPECIES.

2. REF. MFR. INSTALLATION GUIDELINES AND NOTES TO ENSURE REQ'D CAPACITIES ARE PROVIDED.

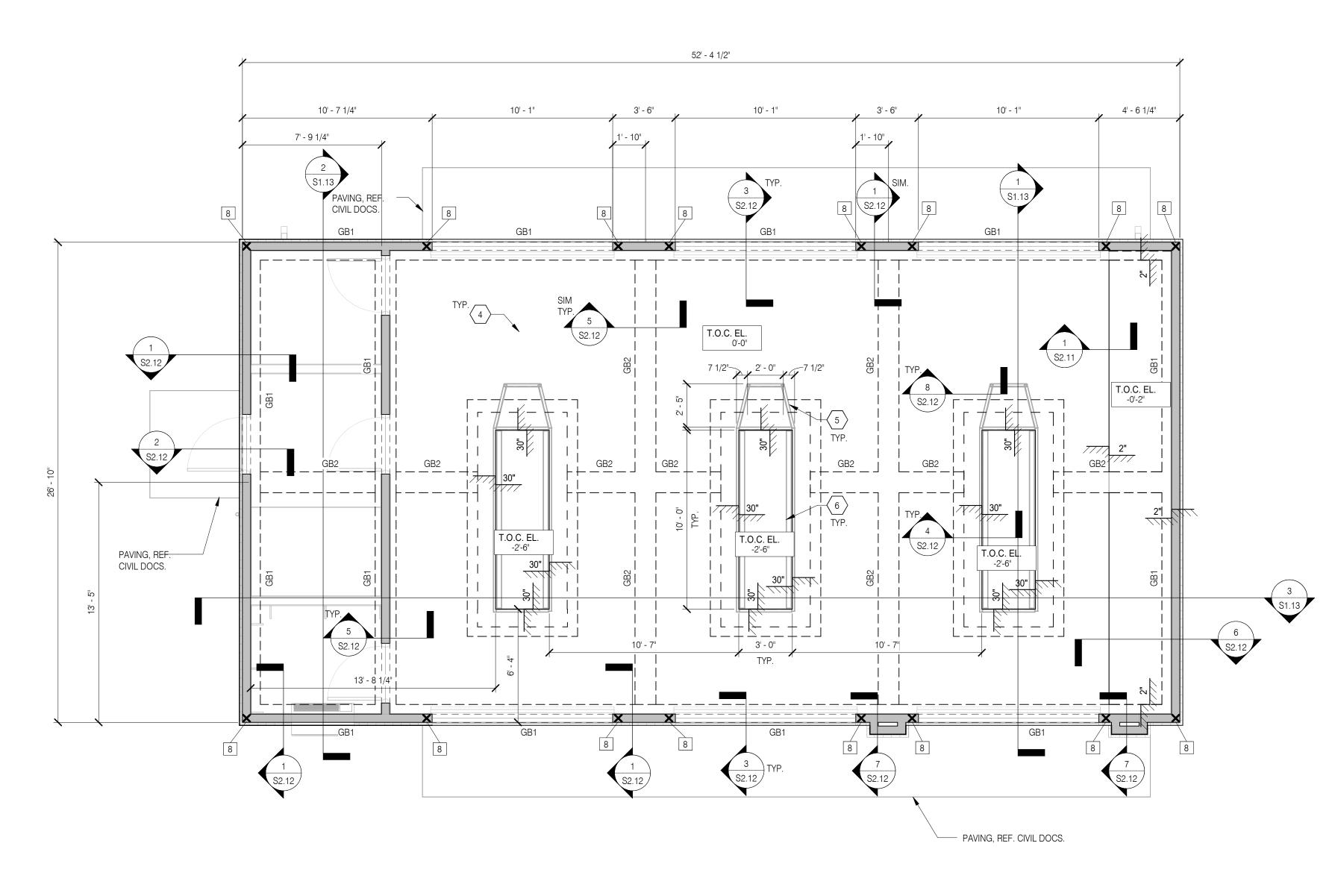
NTS 2 HOLDDOWN SCHEDULE





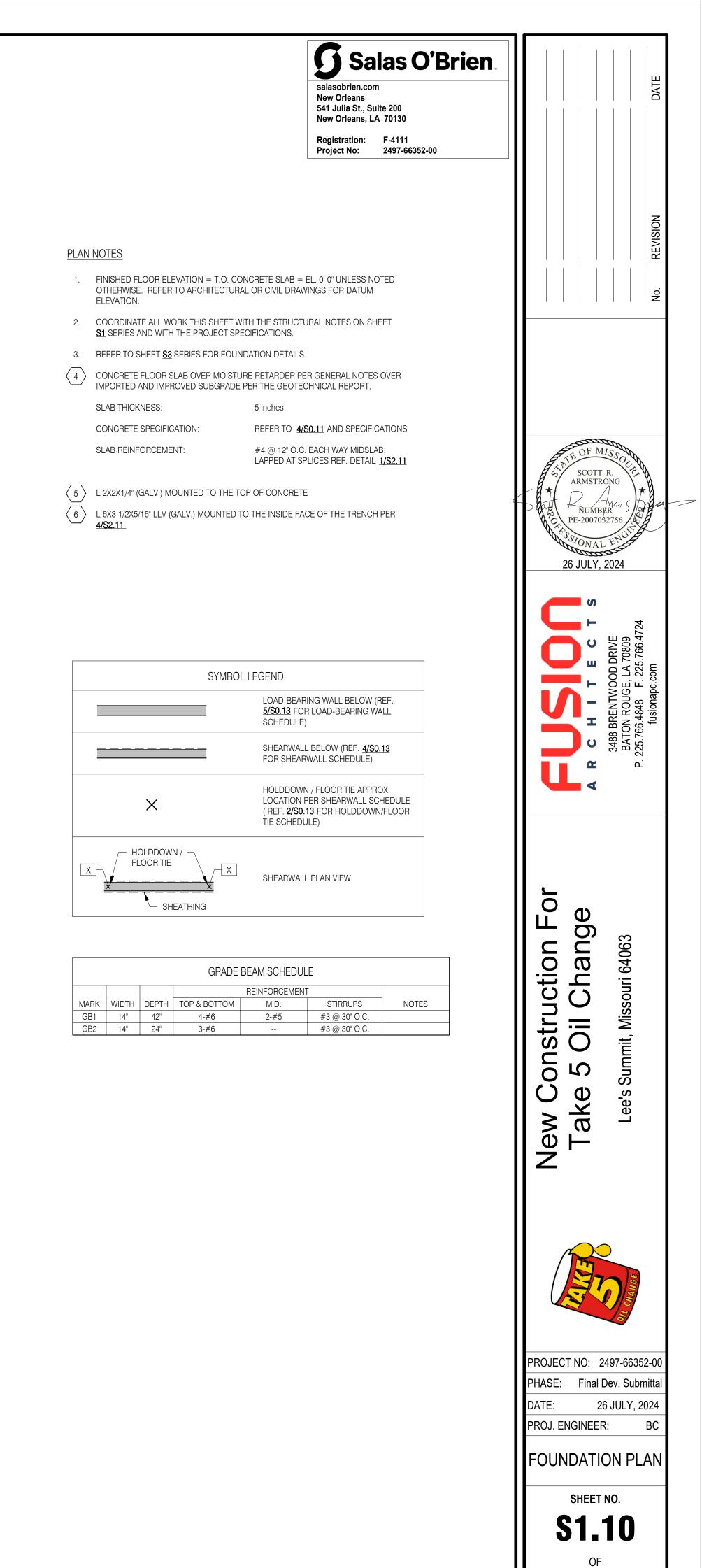
NTS 1 BEAM/HEADER SCHEDULE

NTS

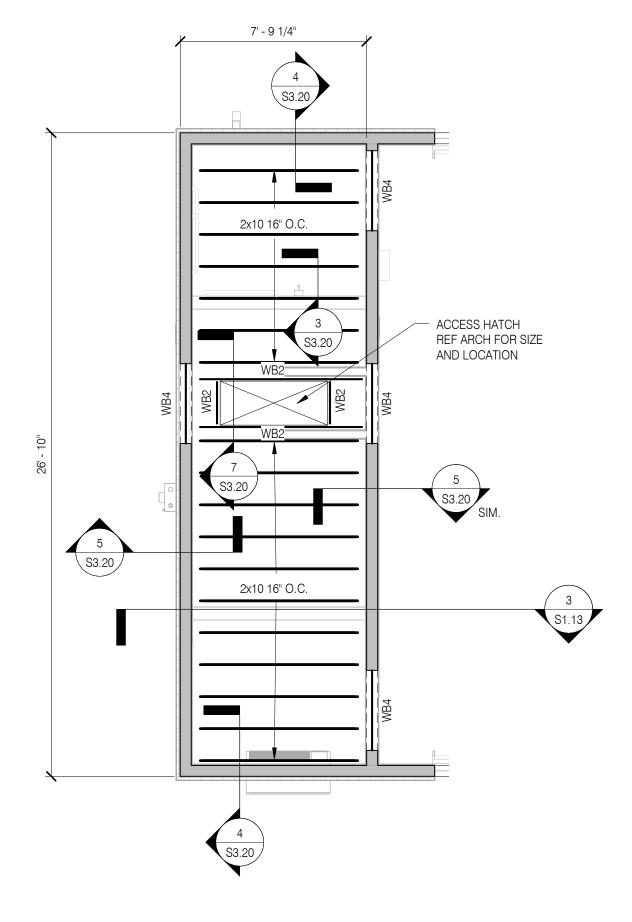




1/4" = 1'-0"









1/4" = 1'-0"

Salas O'Brien salasobrien.com New Orleans 541 Julia St., Suite 200 New Orleans, LA 70130 Registration: F-4111 Project No: 2497-66352-00

PLAN NOTES AND KEY

1. REFER TO SHEET <u>S1</u> SERIES FOR STRUCTURAL INFORMATION, WOOD FRAMING NOTES AND WOOD SCHEDULES AND TYPICAL DETAILS.

1. THE BACKGROUND SHOWN ON THE PLAN IS FOR THE FLOOR BELOW.

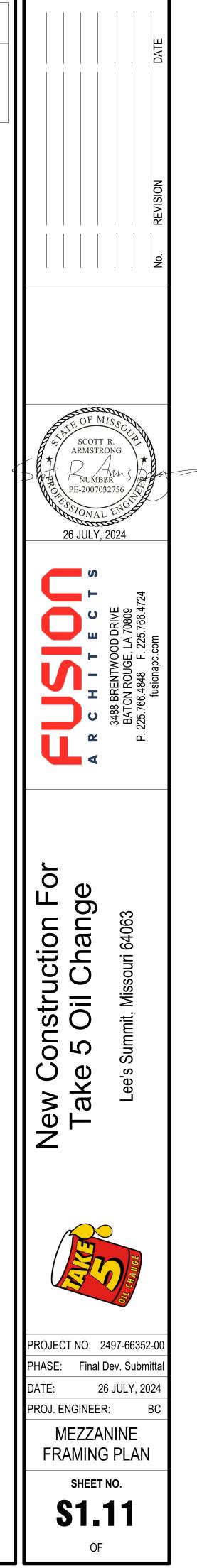
2. ALL EXTERIOR WALLS ARE CONSIDERED LOAD-BEARING WALLS REGARDLESS OF HATCHING.

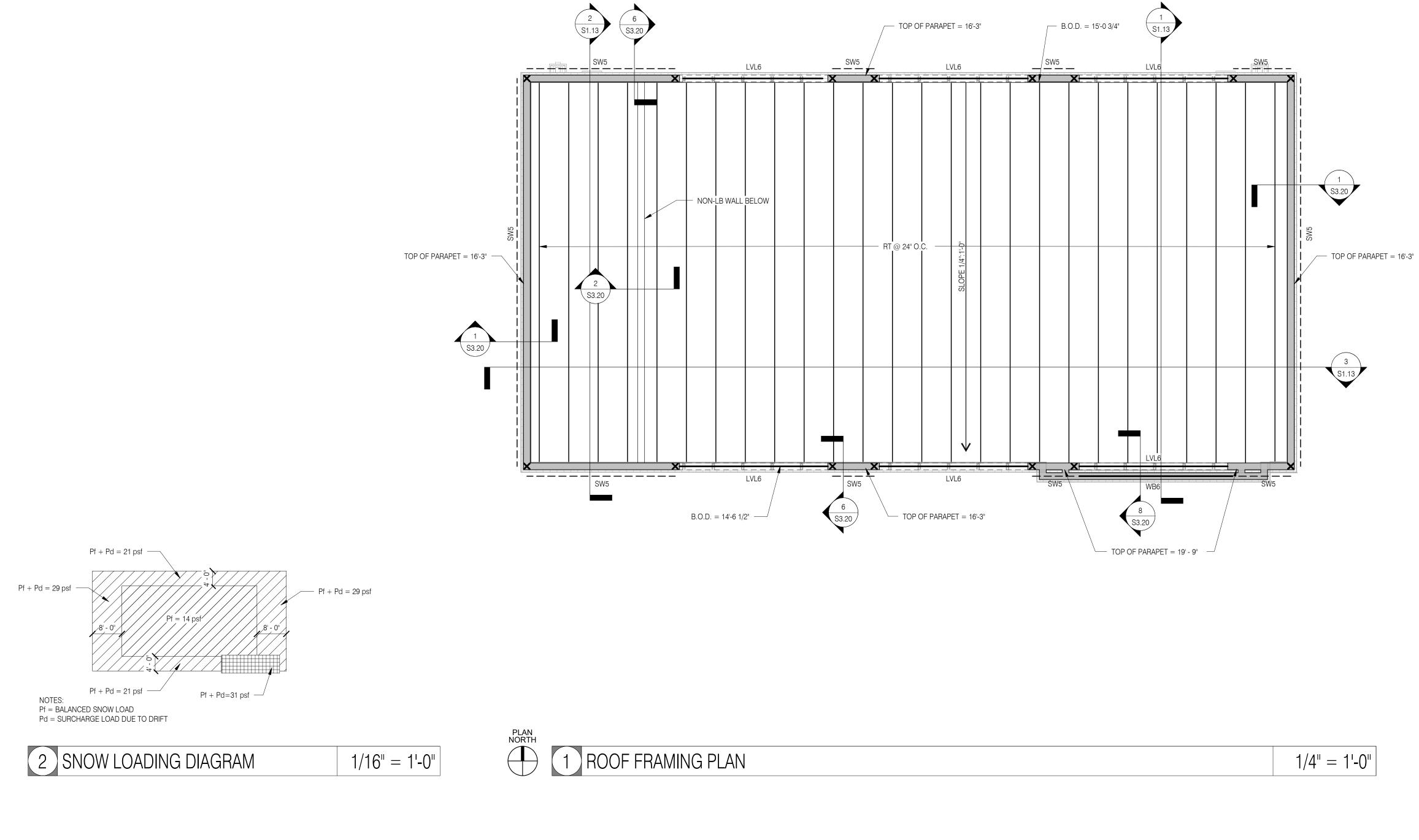
3. PROVIDE 3/4" FLOOR DECK PER WOOD FRAMING NOTES ON SHEET SX.XX ON TOP OF WOOD JOISTS AS NOTED ON THE PLAN.

4. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL CONTROL.

5. BOTTOM OF DECK ELEVATION =8'-0"

SYMBOL LE	GEND
	LOAD-BEARING WALL BELOW (REF. <u>3/S0.13</u> FOR LOAD-BEARING WALL SCHEDULE)
	SHEARWALL BELOW (REF. <u>4/S0.13</u> FOR SHEARWALL SCHEDULE)
×	HOLDDOWN / FLOOR TIE APPROX. LOCATION PER SHEARWALL SCHEDULE (REF. <u>2/S0.13</u> FOR HOLDDOWN/FLOOR TIE SCHEDULE)
X HOLDDOWN / FLOOR TIE X SHEATHING	SHEARWALL PLAN VIEW
	BEAM (REF. <u>1/S0.13</u> FOR BEAM SCHEDULE)
-X LBS DL/X LBS LL	- POINT LOAD FROM ABOVE, SUPPORTED BY THE TRUSS. TRUSS MFR TO INCLUDE THIS LOADING IN TRUSS DESIGN.
	LINE LOAD FROM ABOVE, SUPPORTED BY THE TRUSS. PROVIDE TRUSS BLOCKING DIRECTLY BENEATH LOAD-BEARING WALL. TRUSS MANUFACTURER TO INCLUDE THIS LOADING IN TRUSS DESIGN.





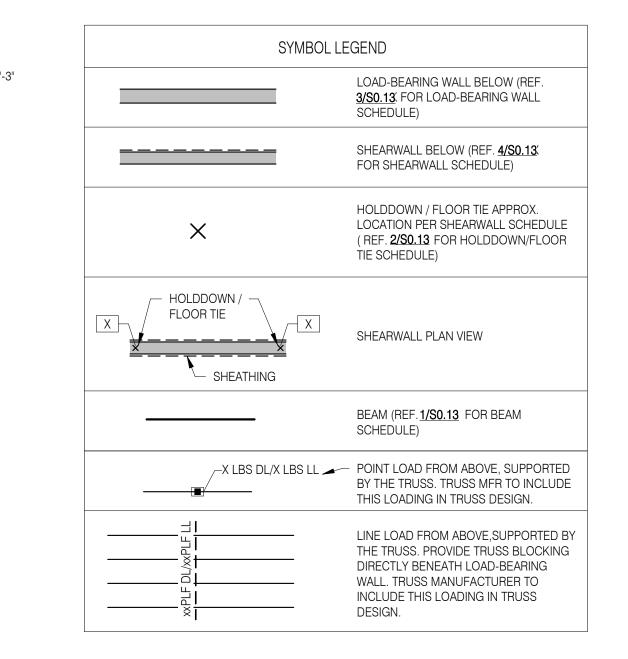
salasobrien.com New Orleans 541 Julia St., Suite 200 New Orleans, LA 70130 Registration: F-4111

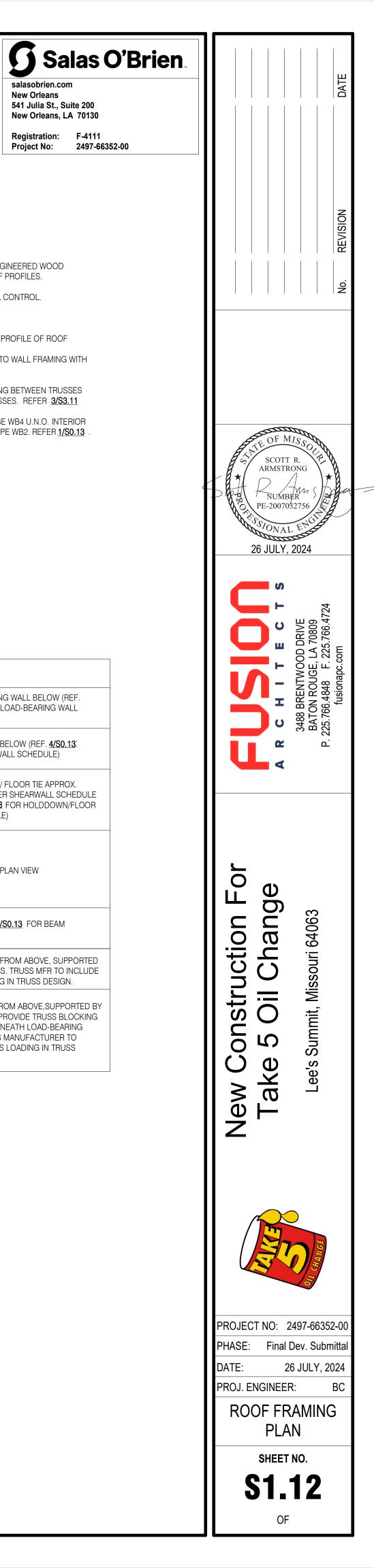
Project No: 2497-66352-00

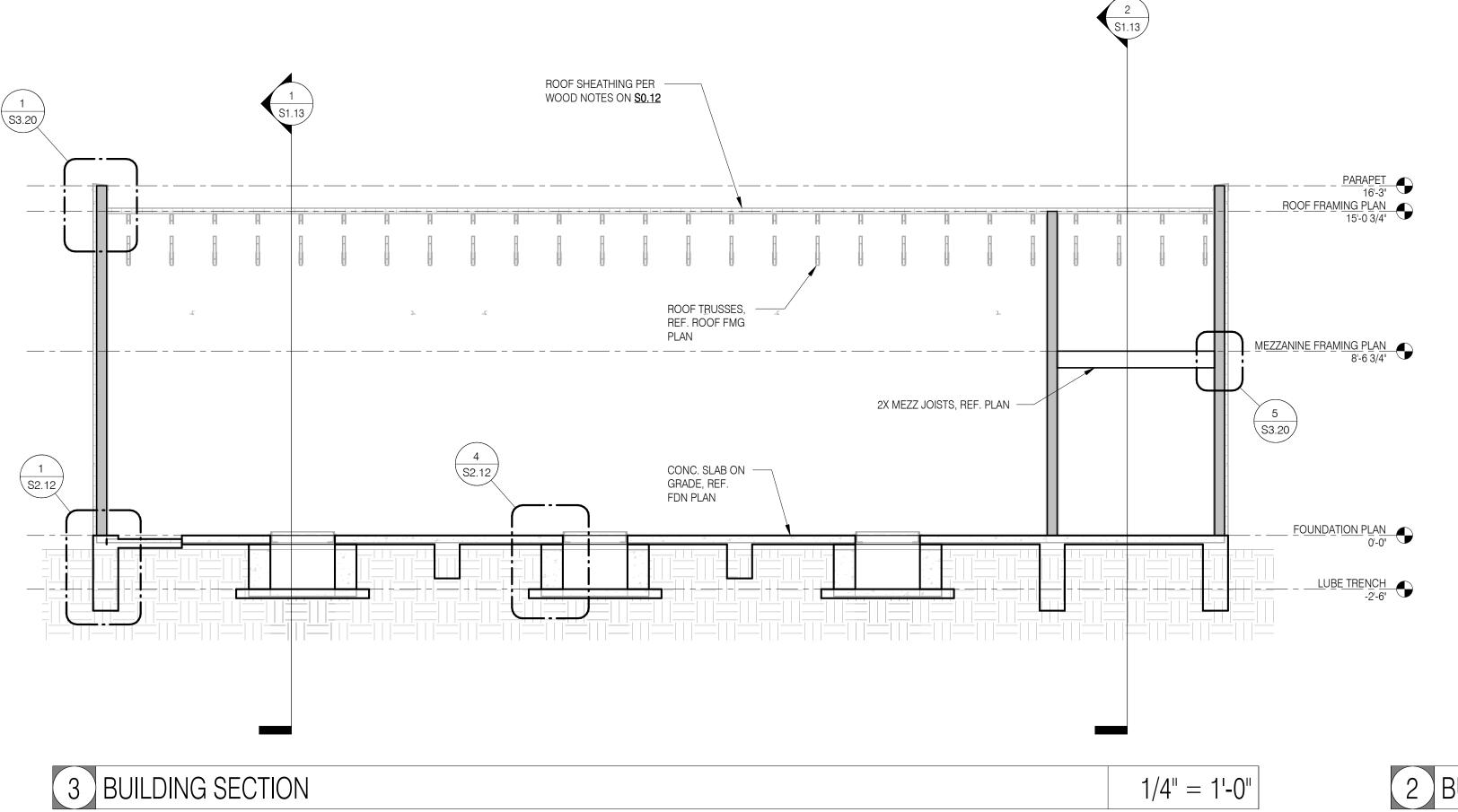
PLAN NOTES AND KEY

1ROOF DECK PER WOOD NOTES ON 1/S0.12OVER PRE-ENGINEERED WOODTRUSSES @ 2'-0"O.C. TYP. U.N.O. REFER ARCH. FOR ROOF PROFILES.

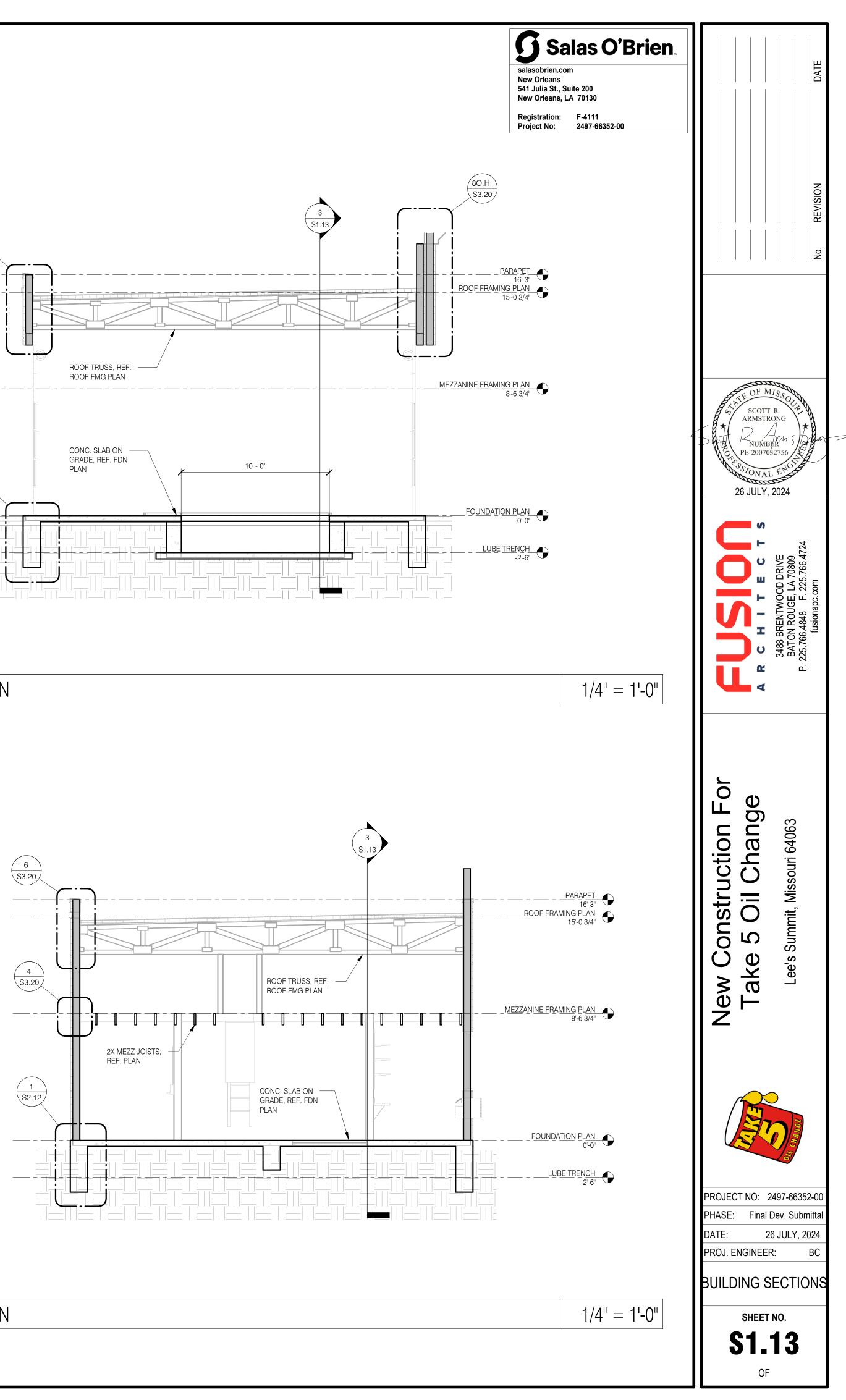
- 2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL CONTROL.
- 3. TRUSS BEARING ELEVATION = 12'-6 1/2"
- 4. ROOF TRUSS TOP CHORDS SHALL BE SLOPED TO MATCH PROFILE OF ROOF
- 5. EACH END OF ALL ROOF TRUSSES SHALL BE ANCHORED TO WALL FRAMING WITH HURRICANE TIES PER DETAILS ON <u>\$3.20</u>
- 6. PROVIDE TRUSS ABOVE SHEAR WALLS. PROVIDE BLOCKING BETWEEN TRUSSES WHERE SHEAR WALL RUNS PERPENDICULAR TO THE TRUSSES. REFER <u>3/S3.11</u>
- 7. ALL EXTERIOR WALL AND CORRIDOR WALL HEADERS TO BE WB4 U.N.O. INTERIOR WALL HEADERS AND BEAMS NOT NOTED ON PLAN ARE TYPE WB2. REFER 1/S0.13.
- 8. G.T. DESIGNATES PRE-FABRICATED GIRDER TRUSS.



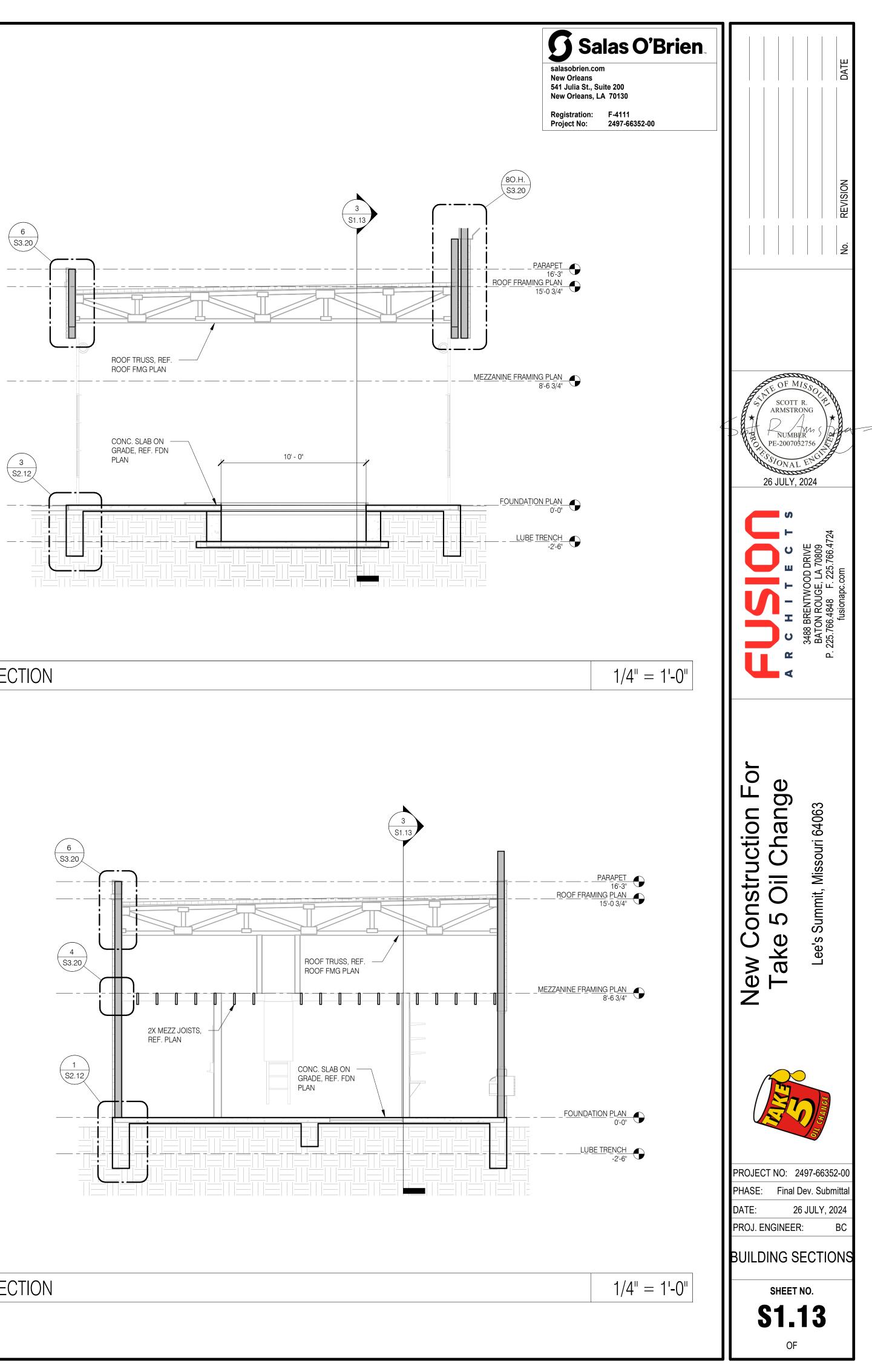


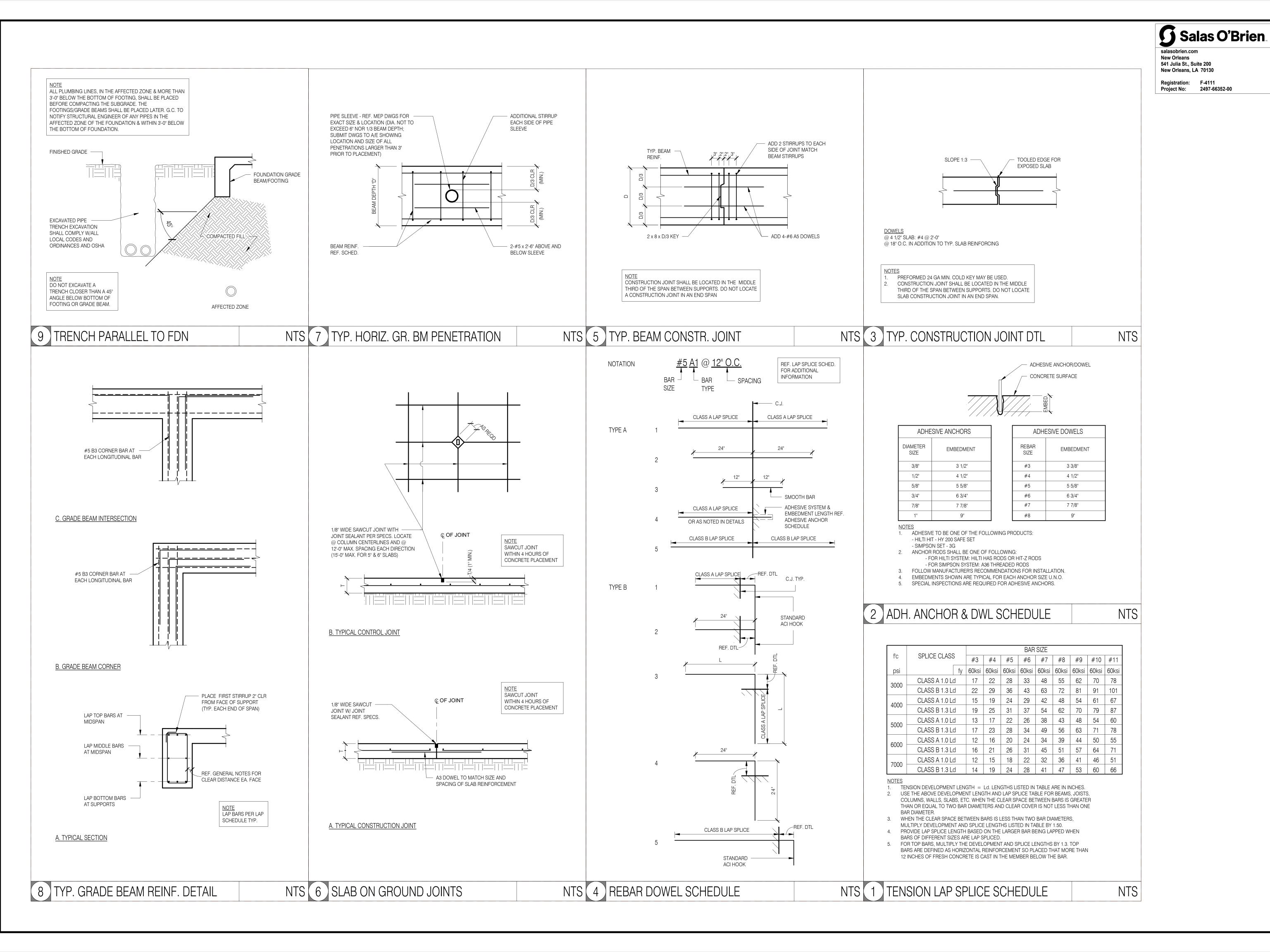






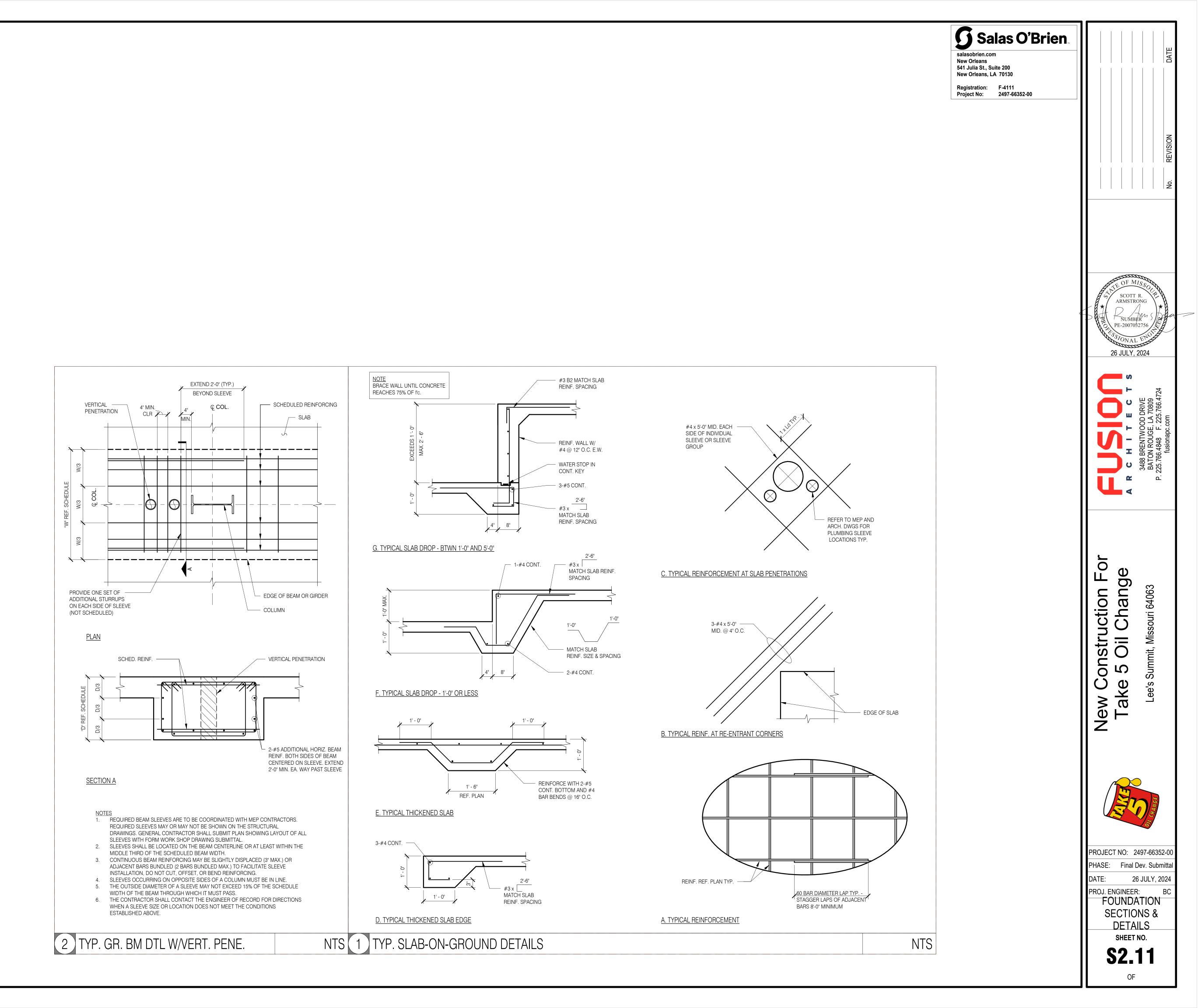


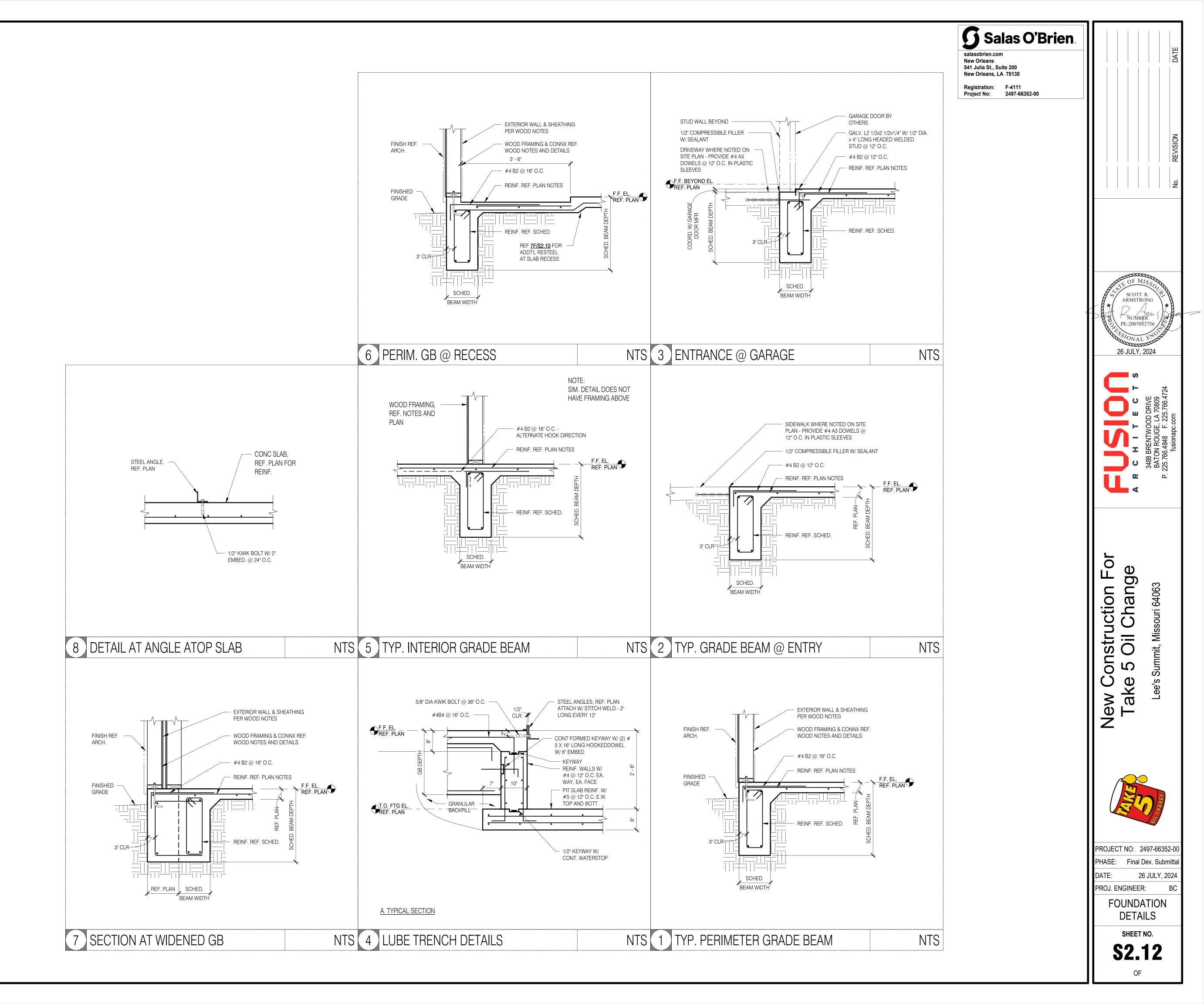


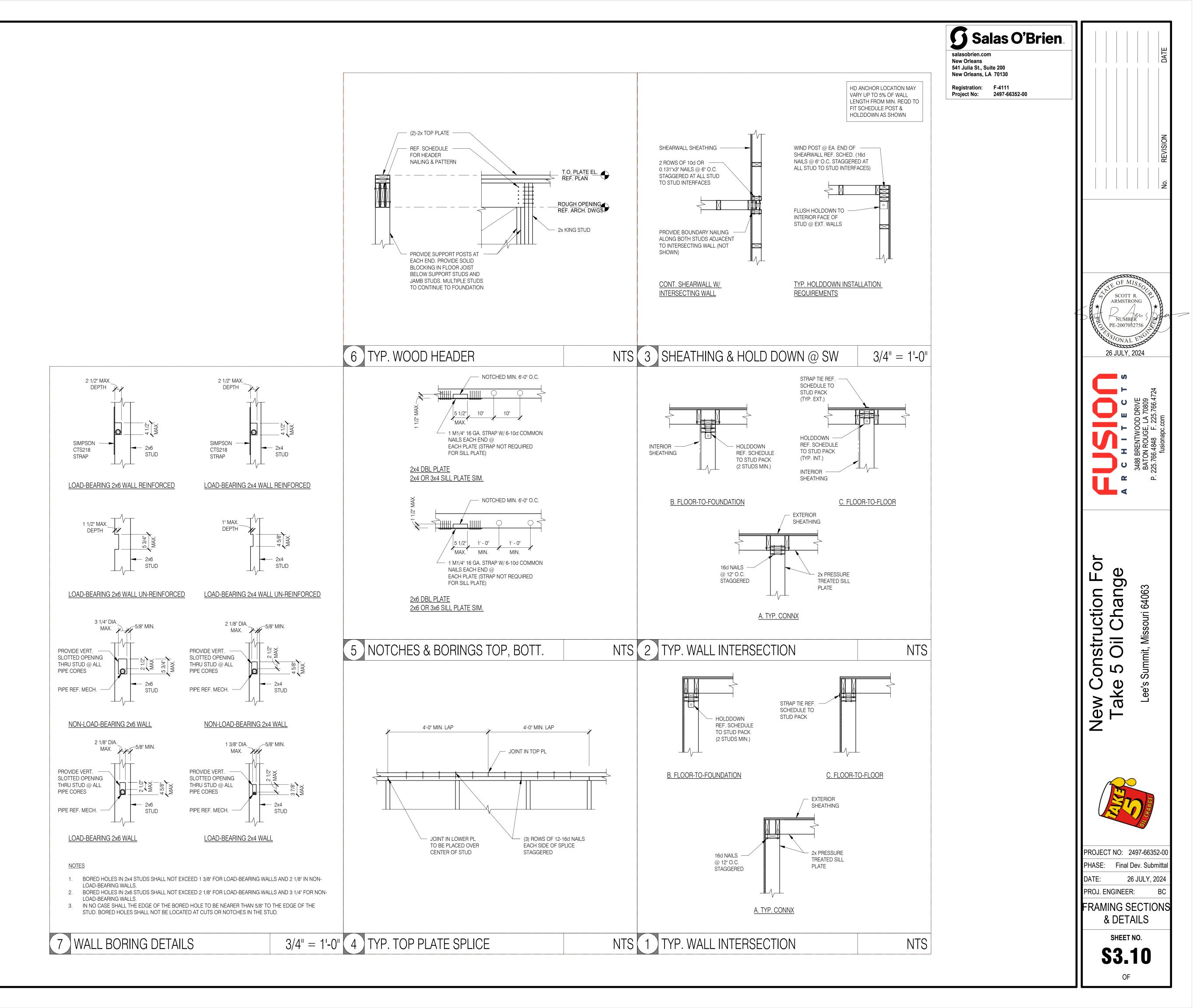


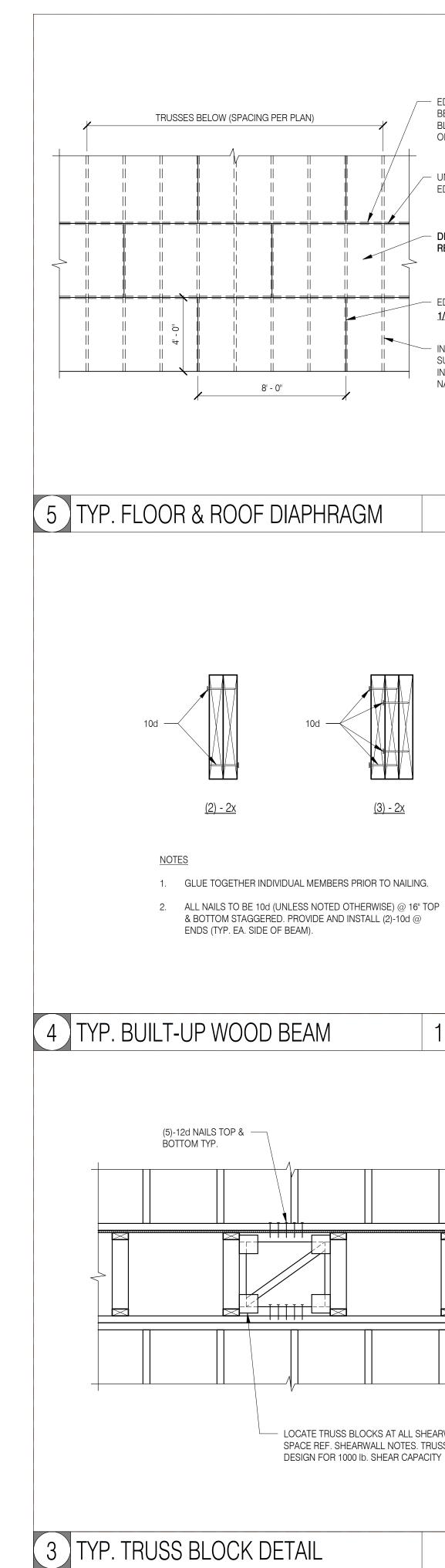
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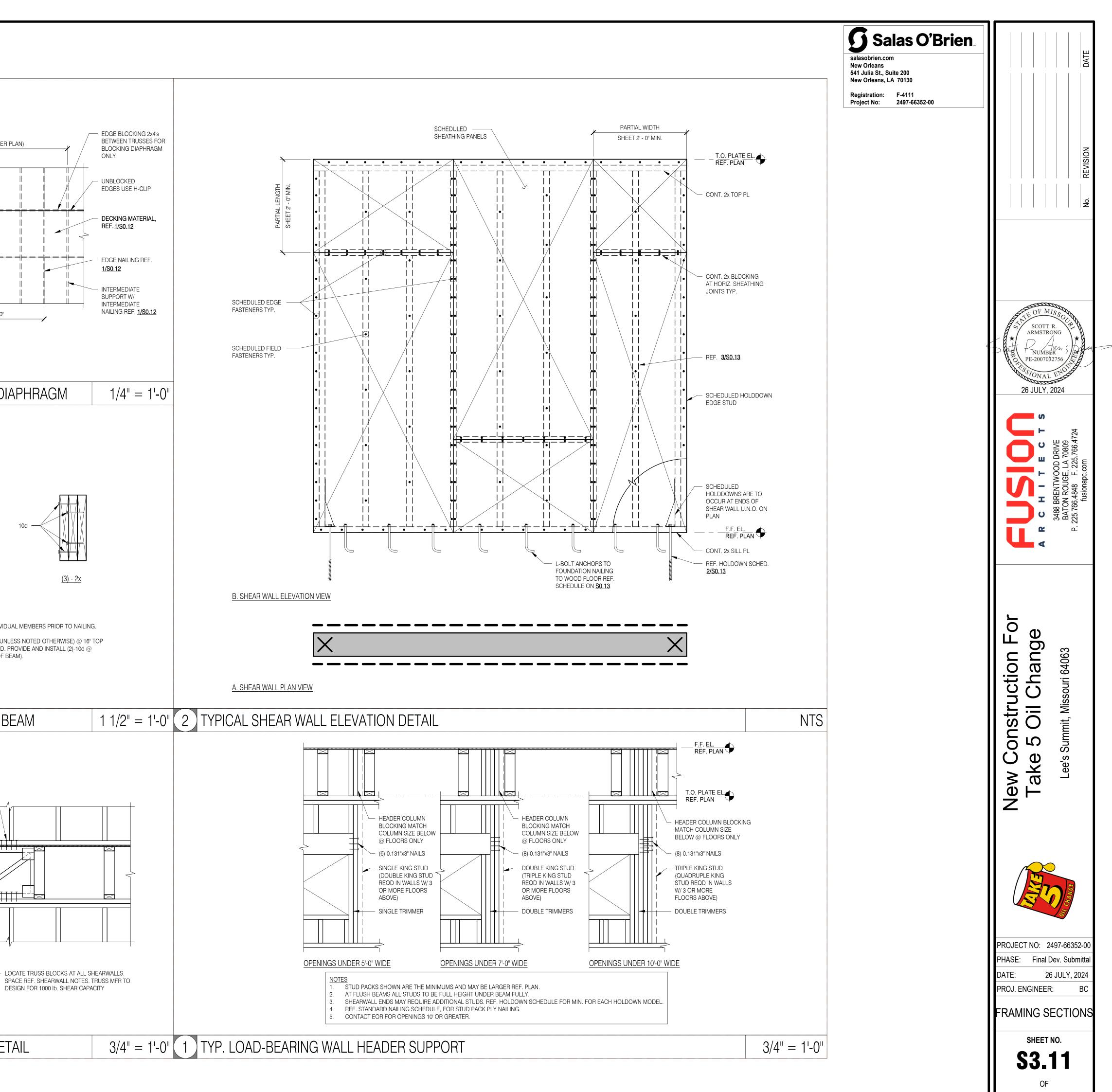
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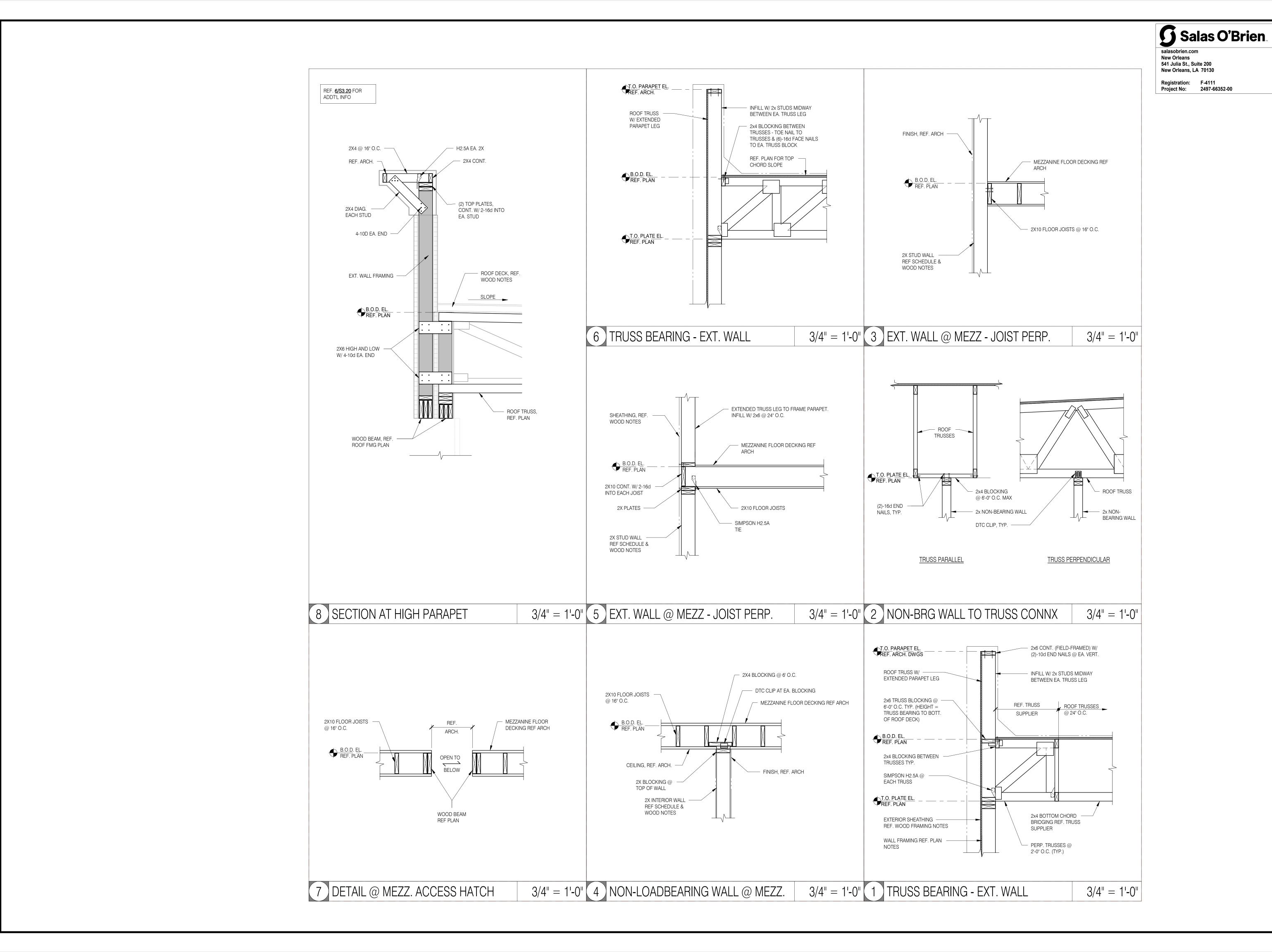


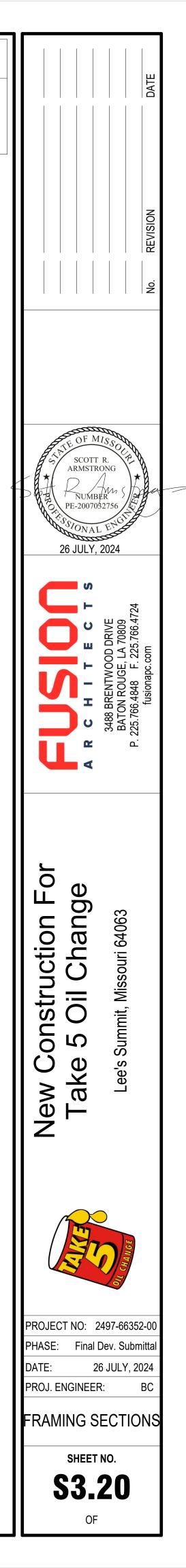


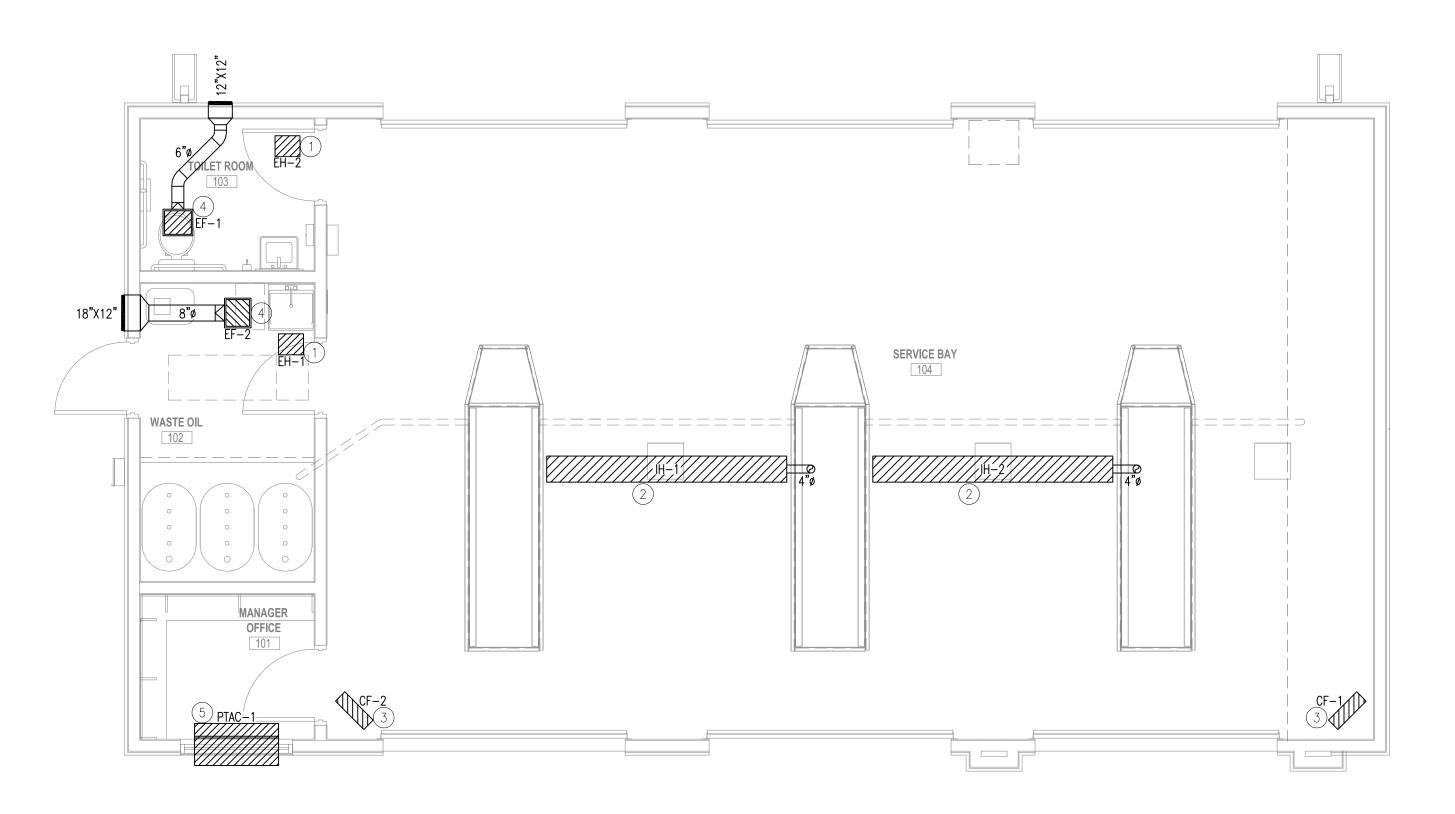












1 MECHANICAL FLOOR PLAN 1/4" = 1'-0"

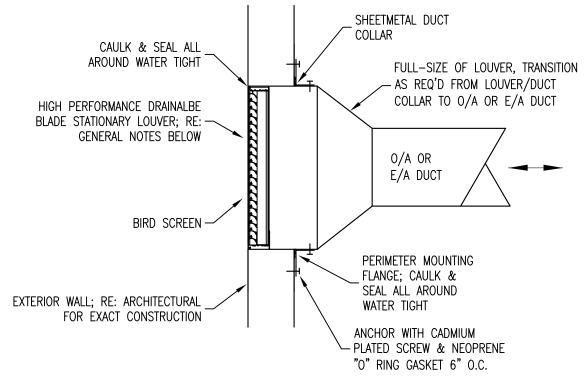
MECHANICAL PLAN NOTES:

- 1 CEILING MOUNTED UNIT HEATER. INSTALL IN STRICT ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS. RE: SCHEDULE.
- 2 INFRARED GAS HEATER SUSPENDED FROM CEILING. PROVIDE GAS PIPING AS REQ'D. COORDINATE WITH PLUMBING PLAN FOR GAS PIPING LOCATION. ROUTE NEW DOUBLE WALL 4"Ø FLUE UP THRU ROOF TO TYPE B ROOF CAP. ROOF PENETRATION SHALL BE SEALED WEATHER TIGHT. INSTALL IN STRICT ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS. RE: SCHEDULE.
- (3) CIRCULATING FAN. INSTALL IN STRICT ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS. COORDINATE WITH ARCHITECT FOR EXACT MOUNTING HEIGHT. RE: SCHEDULE.
- (4) CABINET TYPE EXHAUST FAN, CFMS AS SCHEDULED. CONTRACTOR SHALL ROUTE EXHAUST DUCT, SIZED AS SHOWN, TO EXTERIOR WALL LOUVER, GREENHECK ESD-403 OR APPROVED EQUAL..
- 5 .5 TON PACKAGE TERMINAL AIR CONDITIONER, REFER TO MECHANICAL SCHEDULE. PTAC UNIT SHALL HAVE INTERGRAL CONTROLS AND THERMOSTAT MOUNTED ON INTERIOR FACE OF UNIT. COORDINATE EXACT MOUNTING HEIGHT OF UNIT WITH ARCHITECT PRIOR TO INSTALLATION.

LANDON DAVI BURNST This drawing is the propetry of FUSION ARCHITECTS and is not to be reproduced or copied in whole or in part unless authorization given by FUSION ARCHITECTS. It is only to be used for the project and site specifically identified herein. Scales as stated hereon are valid on the original drawing only. These plans were prepared in this office under our personal supervision, and to the best of our knowledge comply with state and local codes. Will generally administer construction. By: Malhew, Dalgregen New Construction For Take 5 Oil Change Route 291 ssouri 64086 400 NE M State I Lee's Summit, Mis PROJECT NO: 33-006-22 PHASE: Final Dev. Submitta DATE: 26 July, 2024 PROJ. ARCHITECT: MRE MECHANICAL PLAN SHEET NO. M1.00 OF



PTAC SCHE	EDULE											
NOTES:												
1. CAPACITIES		RDANCE WITH ARI STAND) COOLING: 80°F DE	3 / 67°F WB E		DOOR COIL; 95		OUTDOOR COIL	_ AT PUBLISHED N	DMINAL CFM (B) HEATING: 47°F DB	
MARK	NOMINAL TONS	COOLING TOT CAP	MIN STAGES	MIN CAP	VOLTS	PH	FREQ	МСА	МОСР	WEIGHT	ACCEPTABLE MANUFACTURERS	NOTE
PTAC-1	0.5	7200 BTU/H	1	3.0KW	240 V	1	60 Hz	17 A	20 A	-	TRANE PTHE070 OR APPROVED EQUAL	1



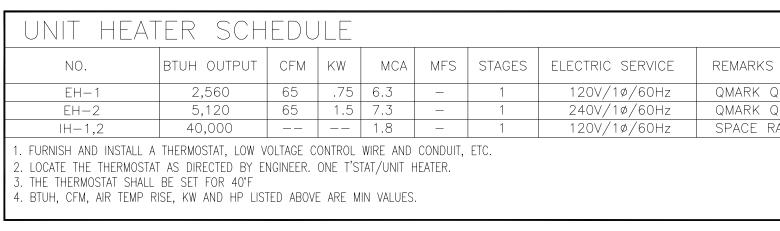
GENERAL NOTES:

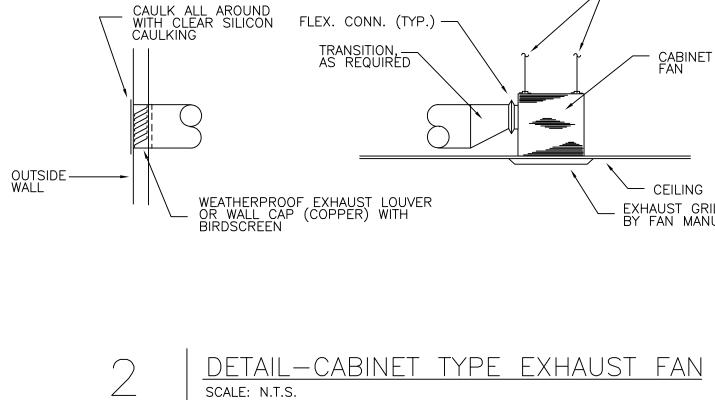
- 1. LOUVER MUST BE WIND-DRIVEN RAIN LOUVER, 5.5" DEEP FRAME, ALUMINUM CONSTRUCTION, AMCA 550 QUALIFIED. LOUVER SHALL BE FURNISHED & INSTALLED WITH A FRAMED, REMOVABLE BIRD SCREEN MOUNTED ON REAR OF LOUVER. REFER TO PLAN FOR LOUVER SIZE(S). COORDINATE EXACT MOUNTING HEIGHT OF LOUVER WITH ARCHITECT, UNLESS OTHERWISE NOTED ON PLANS. 2. REFER TO MANUFACTURER'S INSTALLATION GUIDE & RECOMMENDATIONS FOR EXACT MOUNTING REQUIREMENTS
- OF LOUVER IN EXTERIOR WALL. 3. ALL EXHAUST OUTLETS & AIR INTAKES SHALL BE LOCATED A MINIMUM OF 10'-0" APART, UNLESS OTHERWISE NOTED ON PLANS.

1	DETAIL-EXTERIOR	WALL	LOUVER
I	SCALE: N.T.S.		

PLAN MARK	SERVICE AREA	TYPE	TOTAL CFM	S.P. LOSS IN W.C.	HP/W	FAN RPM	MOTOR RPM	DRIVE TYPE	INLET SONES	FLA	ELECTRIC SERVICE	MANUFACTURERS	NOTES
EF-1	SEE PLAN	CABINET	75	.25	19 W	950		DIRECT	0.8		120/1¢/60	GREENHECK SP-A110 OR APPROVED EQUAL	1,2
EF-2	SEE PLAN	CABINET	150	.25	51 W	1400		DIRECT	2.0		120/1¢/60	GREENHECK SP-A190 OR APPROVED EQUAL	1,2
CF-1,2	SEE PLAN	CIRCULATING	3700		1/8 HP	1200		DIRECT			120/1¢/60	DAYTON 2LY99 OR APPROVED EQUAL	3

FAN SHALL COME WITH GRAVITY TYPE BACKDRAFT DAMPER.
 COORDINATE MOUNTING HEIGHT WITH ARCHITECT.

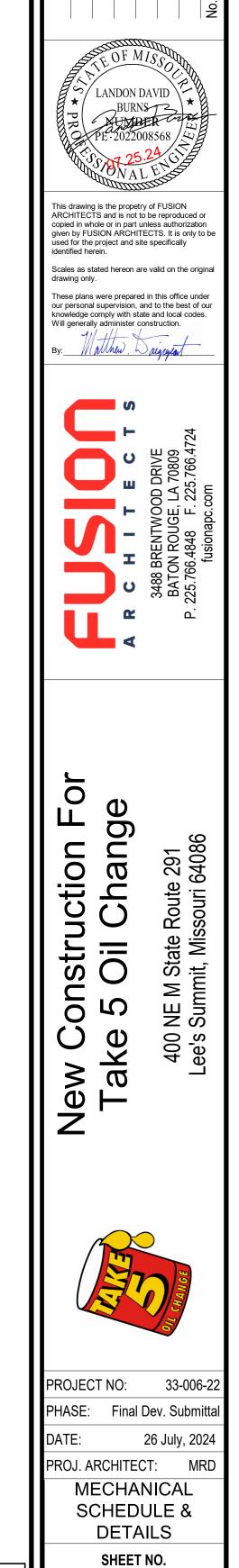




120V/1ø/60Hz

QMARK QCH1151F OR APPROVED EQUAL 240V/1ø/60Hz QMARK QCH1202F OR APPROVED EQUAL 120V/1ø/60Hz SPACE RAY PTS-40-10-N7 OR APPROVED EQUAL

> SUPPORT HANGERS RODS, SECURE TO STRUCTURE AS REQUIRED CABINET TYPE CEILING _ EXHAUST GRILLE FURNISHED BY FAN MANUFACTURER



M2.00

OF

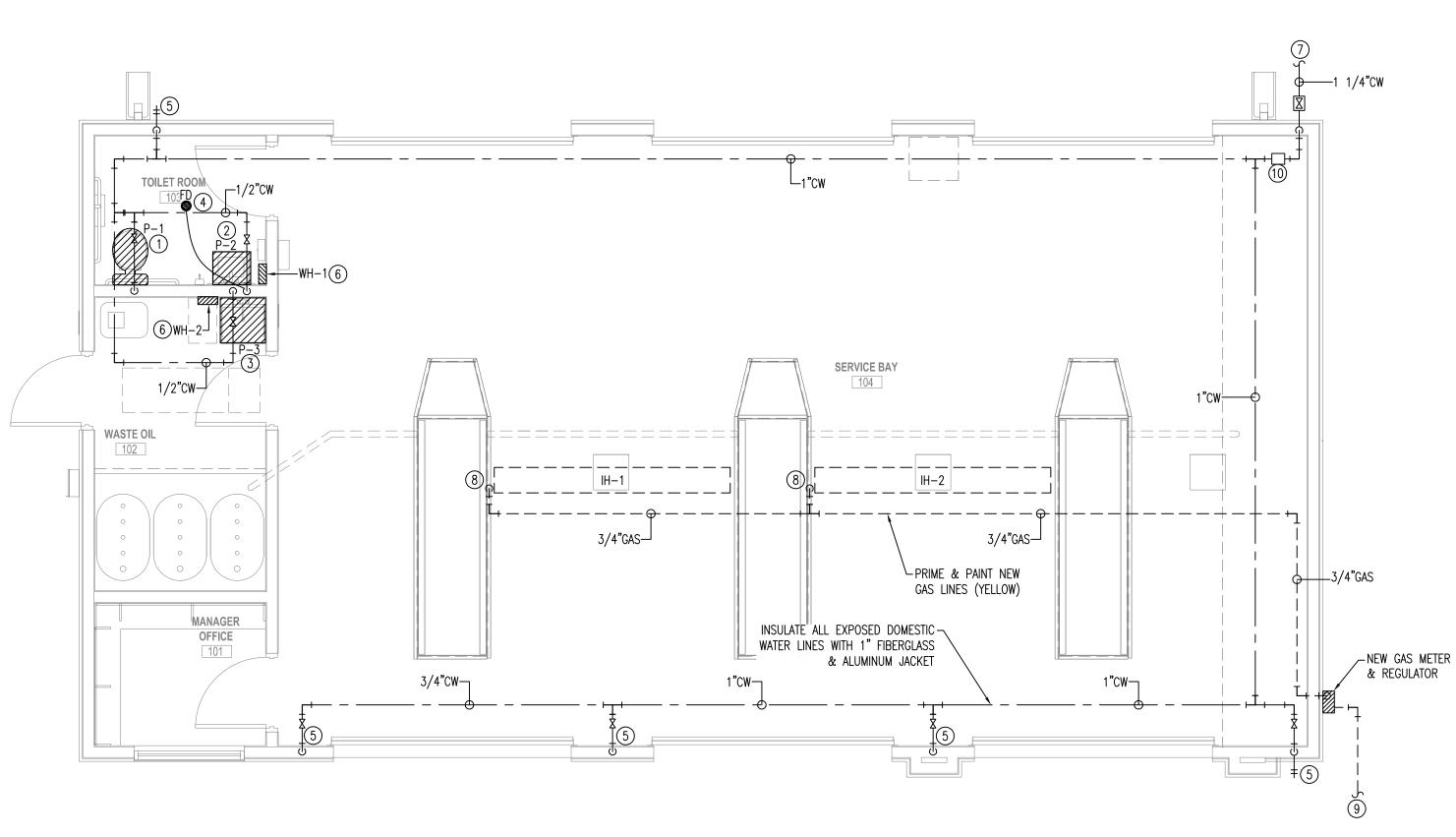


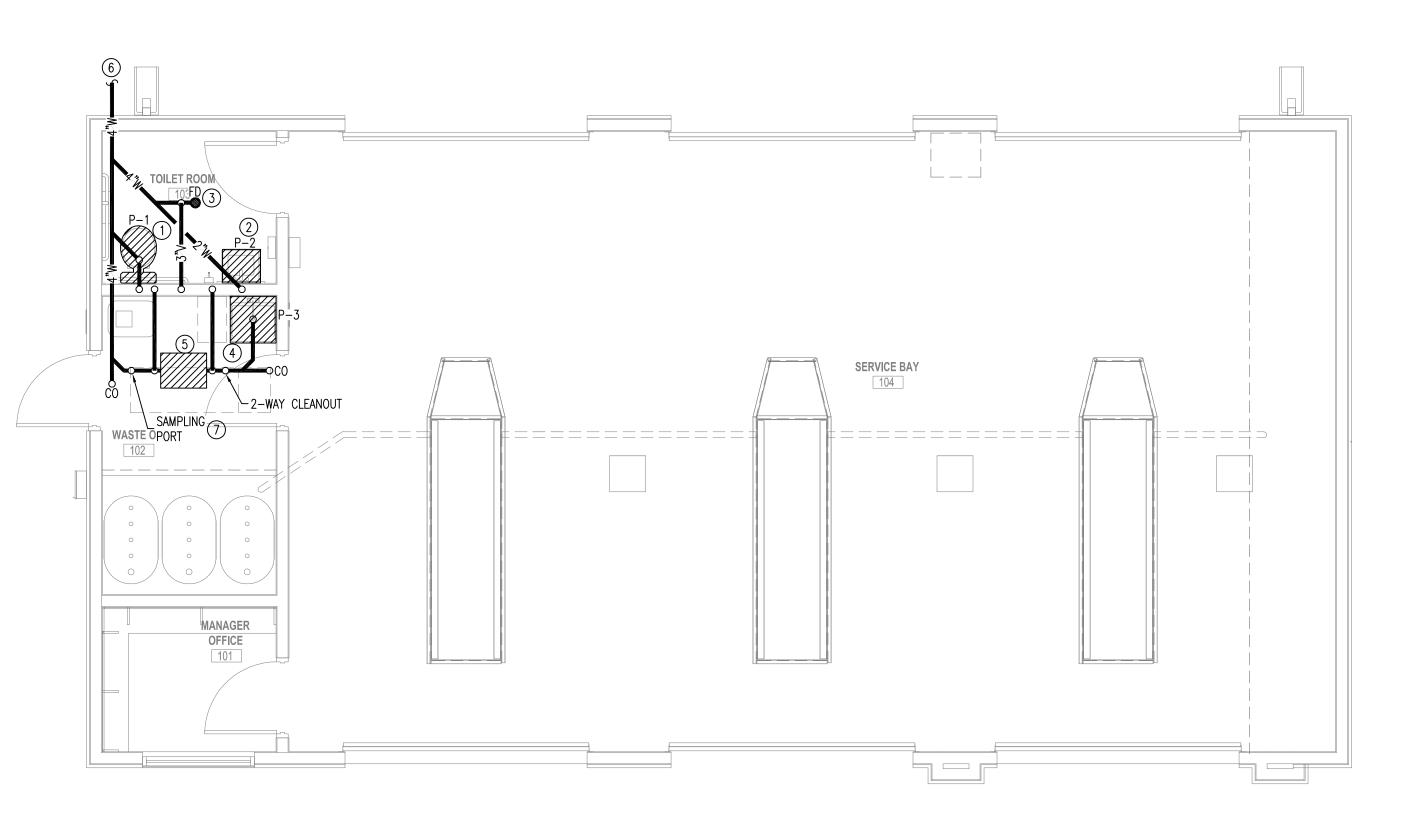
THOMPSON LUKE & ASSOCIATES, L.L.C. 10705 Rieger Road., STE 101 BATON ROUGE, LA 70809 (225)293-9474 TLA PROJECT # 23-138 Frank Saville Thompson - License No. 28854 Landon David Burns - License No. 46484

PLUMBING LEGEND

SYMBOL
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1/2"

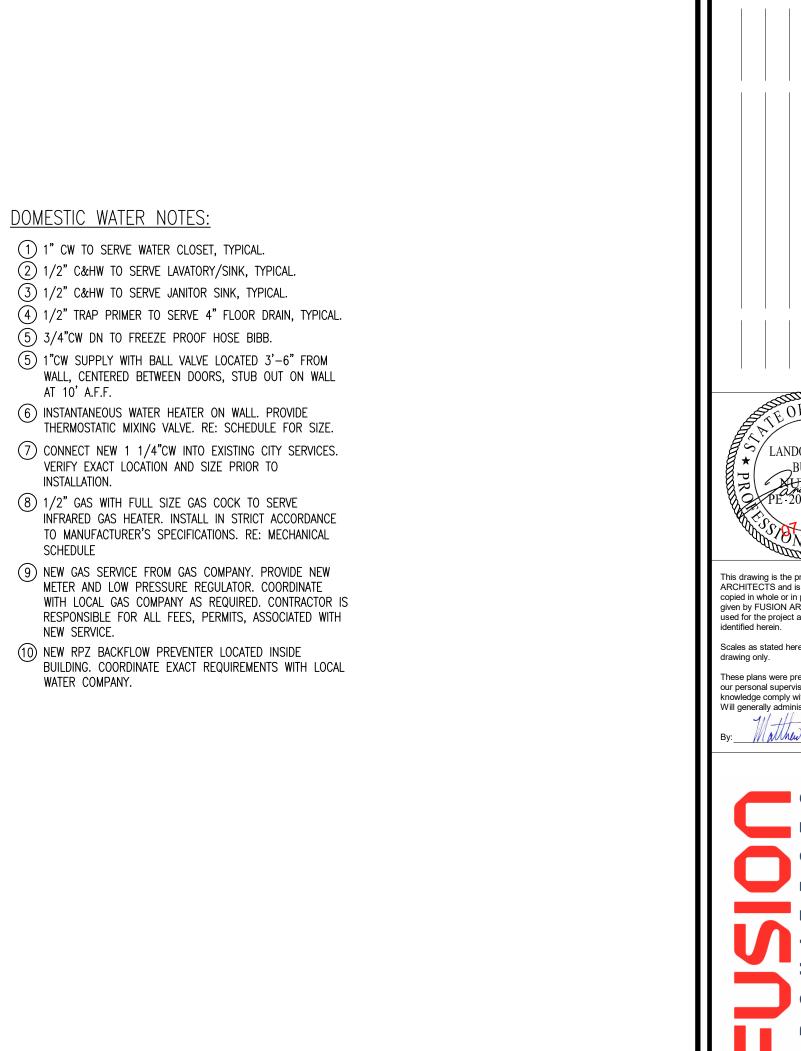
BBREVIATION	DECRYPTION
DCW	DOMESTIC COLD WATER PIPE
DHW	DOMESTIC HOT WATER PIPE
DHWR	DOMESTIC HOT WATER RETURN PIPE
_	FILTER WATER PIPING
_	GATE VALVE (SAME SIZE AS PIPE IF NOT SPECIFICED)
-	PIPE DOWN
-	PIPE UP
-	PIPE TEE
_	PIPE ELL
_	PIPE TEE UP
_	PIPE TEE DOWN
-	FULL SIZE SHUTOFF VALVE, PROVIDE ACCESS PANEL
-	PIPE CONTINUES
SS	SANITARY SEWER PIPE AND SIZE
۷	SANITARY VENT PIPE AND SIZE
GW	GREASE WASTE PIPE AND SIZE
CO	CLEAN OUT
FD	FLOOR DRAIN AND SIZE
-	PLUMBING PLAN NOTE
_	POINT OF CONNECTION
_	PIPE SIZE





1 PLUMBING FLOOR PLAN - DOMESTIC WATER 1/4" = 1'-0"

2 PLUMBING FLOOR PLAN - SANITARY SEWER 1/4" = 1'-0"



# SANITARY SEWER NOTES:

AT 10' A.F.F.

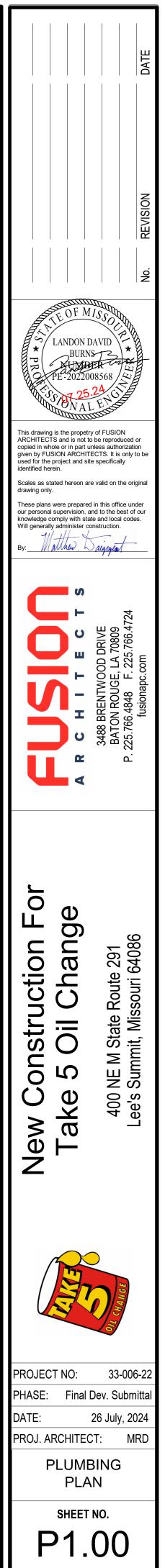
INSTALLATION.

SCHEDULE

NEW SERVICE.

WATER COMPANY.

- (1) 4"W, 3"V TO SERVICE WATER CLOSET, TYPICAL
- (2) 2"W, 2"V TO SERVICE LAVATORY/SINK, TYPICAL
- (3) 4"W, 3"V TO SERVICE 4" FLOOR DRAIN, TYPICAL
- (4) 2"W, 2"V TO SERVICE SINK, TYPICAL
- (5) NEW MIFAB LIL-35-0 OIL INTERCEPTOR. TOP OF OIL INTERCEPTOR SHALL BE FLUSH WITH FINISHED FLOOR. INSTALL IN STRICT ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS. PROVIDE SAMPLING PORT & 2 WAY CLEANOUT AS REQUIRED.
- 6 TIE NEW 4"W INTO EXISTING CITY SERVICE. VERIFY
- EXACT LOCATION AND SIZE PRIOR TO INSTALLATION. (7) SAMPLING PORT SHALL BE SCHIER MODEL SV10 OR APPROVED EQUAL. MAINTAIN MINIMUM OF 18" TO ALLOW FOR SUFFICIENT ACCESS TO COLLECT WASTEWATER SAMPLES.



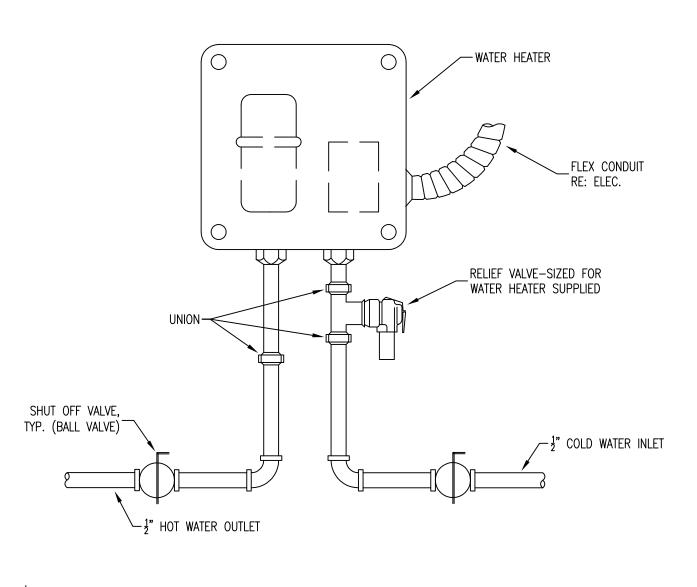
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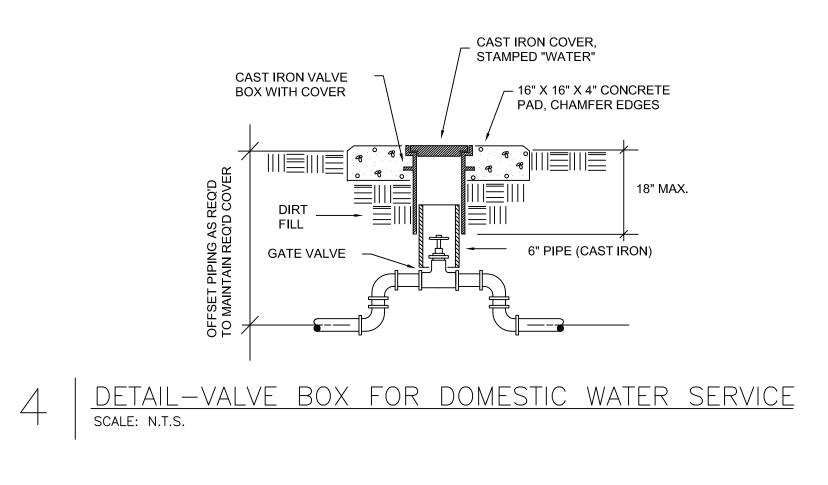
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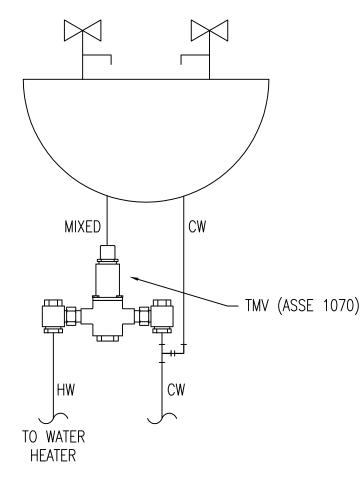
				PLUMBING (	FIXTURE SCHEDULE						
TAG	FIXTURE DESCRIPTION	MANUFACTURER &		]	RIM			CONNECTIO	n size		NOTES
	TIXTORE DESCRIPTION	MODEL NUMBER	SEAT	CARRIER	FAUCET	DRAIN	MISCELLANEOUS	CW HW	SAN. VE	ENT	
P-1	FLOOR MOUNTED WHITE VITREOUS CHINA TANK TYPE WATER CLOSET WITH PRESSURE—ASSISTED SIPHON JET FLUSH ACTION(1.6 GPF); ADA COMPLIANT	AMERICAN STANDARD 2467.016 OR APPROVED EQUAL	BENEKE 527 SS CHURCH 9500 SSC				CLOSET SUPPLY WITH STOP BRASSCRAFT CR1912DL EASTMAN CM12	1/2"	4"	3"	
P-2	20"X18" WHITE VITREOUS CHINA WITH OVERFLOW WALL HUNG LAVATORY WITH 4" CENTER FAUCET HOLES	AMERICAN STANDARD 0355.012 OR APPROVED EQUAL		JAY R. SMITH 0700-Z ZURN Z1231 JOSAM 17100	AMERICAN STANDARD 7385.003 T&S BRASS B-2711 ZURN Z81000-G		1½" CAST BRASS "P" TRAP W∕ CLEAN OUT; ¾" ANGLE STOP SUPPLIES WITH LOOSE KEY STOP	½" ½"	2"	2" ARM THAT	TRACTOR SHALL COORDINATE EXACT CONCEALED SUPPORT WALL CARRIER WITH WALL THICKNESS I LAVATORY OCCURS ON. OVIDE THERMOSTATIC MIXING VALVE.
P-3	24"X24"X12" FLOOR MOUNTED SERVICE SINK W/STAINLESS STEEL CAP ALL SIDES AND STAINLESS STEEL BACKSPLASH	FIAT TSB-3010 OR APPROVED EQUAL			TS BRASS B-0665-BSTP ZURN 843M1-RC	JUST J-15-SS	1½" CAST BRASS "P" TRAP W/ CLEAN OUT; ¾" ANGLE STOP SUPPLIES WITH LOOSE KEY STOP	<i>1</i> /2" <i>1</i> /2"	3"	2 HOSE	VIDE HOSE W/BRACKET TO SUPPORT E & MOP HANGER FOR EASY STORAGE THE MOP OVER SINK.
FD	CAST IRON FLOOR DRAIN WITH ½" TRAP PRIMER CONNECTION AND ADJUSTABLE SQUARE NICKEL BRONZE STRAINER	JAY R. SMITH 2005 OR APPROVED EQUAL							4"		FLOOR DRAINS SHALL BE INSTALLED 1 ½" TRAP PRIMER. SEE PLANS FOR ITARY SEWER AND VENT CONNECTION IS.
F.P.H.B.	¾" FREEZE PROOF HOSE BIBB IN WALL BOX WITH LOOSE KEY	JAY R. SMITH 5519 WOODFORD B65						3⁄4"			

	T,	ANKL	ESS	; EL	ECTRIC	WATER	HEATER SCHEDULE
MARK	ELECTRIC SERVICE	KW	FLA	MIN. GPM		TEMP RISE @ 1.0 GPM	MANUFACTURER
WH-1	120/1¢/60	3.6	30	0.35	49 <b>'</b>	25 <b>'</b>	CHRONOMITE M-30L/120 OR APPROVED EQUAL
WH-2	208/1¢/60	4.16	20	0.35	57 <b>°</b>	28'	CHRONOMITE M-30L/208 OR APPROVED EQUAL
1. Heati	ER MUST COME W	ith isola	TION VAL	ves.	L		







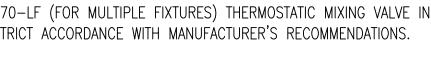


CONTRACTOR SHALL PROVIDE AND INSTALL LEONARD 170-LF OR 270–LF (FOR MULTIPLE FIXTURES) THERMOSTATIC MIXING VALVE IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

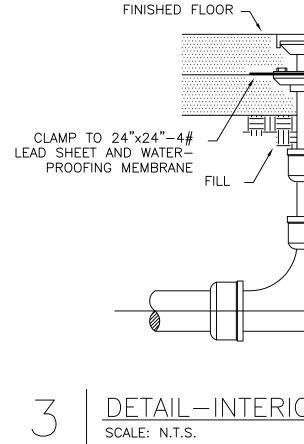
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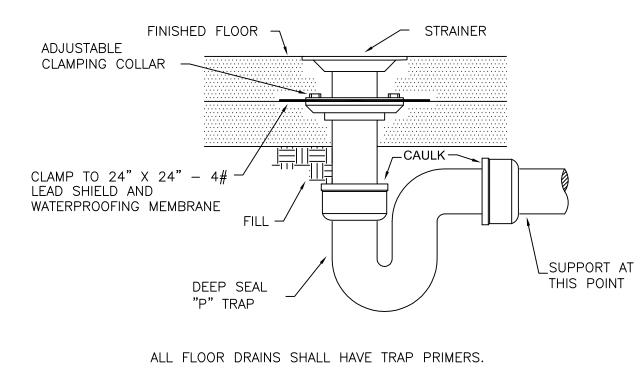
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SCALE: N.T.S.

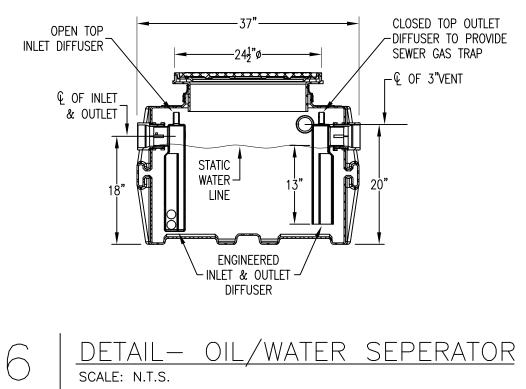


DETAIL- ASSE 1070 TMV scale: n.t.s.



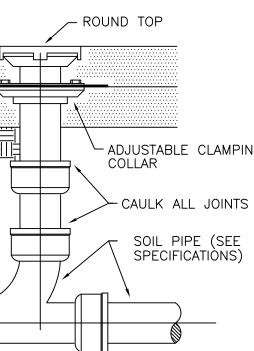


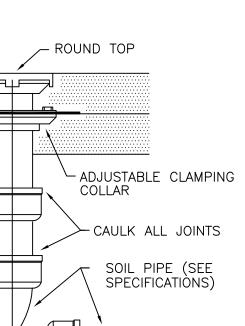
Detail-Floor drain













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# HVAC SPECIFICATIONS

# 15010 BASIC MECHANICAL REQUIREMENTS

# GENERAL REQUIREMENTS

"PROVIDE" MEANS FURNISH AND INSTALL. THIS CONTRACTOR SHALL ALSO INSTALL MATERIALS FURNISHED "BY OTHERS" AND/OR OWNER.

GENERAL REQUIREMENTS SHALL BE INCLUDED AS PART OF THESE SPECIFICATIONS.

CONTRACTOR IS RESPONSIBLE FOR A COMPLETE SYSTEM. ALL EQUIPMENT AND RELATED ITEMS BY HVAC CONTRACTOR UNLESS OTHERWISE NOTED IN THESE SPECIFICATIONS.

IT IS THE INTENT OF THESE CONSTRUCTION DOCUMENTS TO DEPICT ENGINEERED DUCT, PIPE AND EQUIPMENT ARRANGEMENTS THAT MINIMIZE CONFLICTS AND/OR INTERFERENCES WITH STRUCTURES AND OTHER TRADES. FINAL CONSTRUCTION COORDINATION WITH OTHER TRADES TO AVOID SUCH CONFLICTS IS THE RESPONSIBILITY OF THIS HVAC SUBCONTRACTOR.

DIFFERENCES AND/OR CONFLICTS BETWEEN CONTRACT DRAWING AND SPECIFICATION AND SHOP DRAWINGS, SHALL BE CALLED TO THE ENGINEERS ATTENTION.

TRADE NAMES ARE USED TO ESTABLISH QUALITY. SUBSTITUTIONS OF EQUIVALENT QUALITY MAY BE USED IF PRIOR APPROVED BY THE ENGINEER.

# RECORD DRAWINGS

PROVIDE RECORD DRAWINGS SHOWING LOCATIONS OF ALL CHANGES IN EQUIPMENT, PIPING AND DUCT ARRANGEMENTS. DRAWINGS SHALL BE RED PENCIL ON BLUE OR BLACK LINE PRINTS, DETAILS AND SCHEDULES SHALL BE KEPT UP TO DATE ON A DAILY BASIS. THESE DRAWINGS SHALL BE AVAILABLE TO THE BUILDER OR HIS REPRESENTATIVE AT THE JOB SITE.

AT COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT UPDATED PRINTS TO THE BUILDER, BEFORE RECEIPT OF FINAL PAYMENT.

## MATERIALS FURNISHED BY OWNER

WILL BE RECEIVED, CHECKED FOR PROPER ACCESSORIES AND STORED AT THE SITE IN A CONVENIENT LOCATION FOR THE CONTRACTOR. UNLESS OTHERWISE SPECIFIED, ALL EQUIPMENT INDICATED IN THE SPECIFICATIONS, DETAILS, SCHEDULES, AND/OR ON THE DRAWINGS AS "FURNISHED BY OWNER" WILL BE FURNISHED BY OWNER AND INSTALLED BY THE CONTRACTOR. ALL OTHER EQUIPMENT AND MATERIALS SHALL BE PROVIDED BY THE CONTRACTOR.

# CONTRACTOR'S EQUIPMENT STORAGE

EQUIPMENT STORED AT THE SITE SHALL BE ADEQUATELY PROTECTED FROM THE WEATHER.

# START UP

CONTRACTOR TO LUBRICATE BEARINGS AS REQUIRED, INSTALL BELTS AND CHECK FOR PROPER BELT TENSION AND MOTOR ROTATION, INSTALL ALL SAFETY DEVICES, RELIEF VALVES, AND FILTERS. CONNECT ALL DAMPER LINKAGES AND REMOVE ALL SHIPPING HOLD DOWN CLAMPS AND BLOCKING.

## SYSTEM BALANCING

OBTAIN THE SERVICES OF AN INDEPENDENT AIR BALANCE AND TESTING AGENCY WHICH SPECIALIZES IN THE TESTING, AND BALANCING OF HEATING, VENTILATING, AIR CONDITIONING SYSTEMS: TO TEST: ADJUST AND BALANCE ALL SUPPLY, RETURN, AND EXHAUST SYSTEMS.

ALL WORK TO BE PERFORMED IN COMPLETE ACCORDANCE WITH THE ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS FOR FIELD MEASUREMENTS AND INSTRUMENTATION, LATEST ADDITION, THOSE SECTIONS APPLICABLE TO AIR DISTRIBUTION.

# EQUIPMENT SUPPORT

ALL DEVICES AND EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT DEPEND UPON CEILING OR WALL SURFACES FOR THEIR SUPPORT. THEY SHALL BE INCAPABLE OF BEING ROTATED OR DISPLACED. THE SUPPORT ATTACHMENT SHALL ADEQUATELY SUPPORT THE WEIGHT OF THE FIXTURE, DEVICE, OR EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT.

# TOUCH-UP AND COMPLETION

BUILDER WILL PAINT ALL EXTERIOR EXPOSED HVAC EQUIPMENT INCLUDING DUCTS, PIPES, LOUVERS, ETC. WHICH ARE SCRATCHED OR MARRED DURING CONSTRUCTION.

HVAC CONTRACTOR WILL RESPONSIBLE FOR PROTECTING AND KEEPING CLEAN HVAC EQUIPMENT DURING INSTALLATION. HVAC CONTRACTOR TO TEST EACH SYSTEM OR PIECE OF EQUIPMENT INSTALLED AND REPORT TO BUILDER ANY EQUIPMENT DAMAGE OR MALFUNCTION.

# ELECTRICAL WIRING

ELECTRICAL CONTRACTOR (E.C.) SHALL PROVIDE ALL POWER WIRING INCLUDING CONDUIT, WIRE AND CONNECTIONS. ALL STARTERS, FUSES, AND DISCONNECTS BY OTHERS EXCEPT WHERE SPECIFIED AS PART OF PACKAGE EQUIPMENT. STARTERS THAT COME WITH EQUIPMENT SHALL BE AUTOMATIC AND HAVE T.O.L. APPROPRIATE COVERS AND INTERLOCKS. ALL MOTORS LESS THAN 1/2 HP ARE 115/60/1 WITH INTEGRAL THERMAL OVERLOAD UNLESS OTHERWISE SPECIFIED.

ELECTRICAL CONTRACTOR SHALL LABEL ALL REMOVABLE PANELS FOR DISCONNECTS IN EQUIPMENT CABINETS WITH NAMEPLATE FURNISHED BY BUILDER (LABELED "ELECTRICAL SERVICE DISCONNECT LOCATED BEHIND THIS PANEL.")

# SHOP DRAWINGS

SUBMIT TO THE ENGINEER FOR REVIEW IMMEDIATELY AFTER AWARD OF CONTRACT, SIX (6) COPIES OF COMPLETE DESCRIPTIVE INFORMATION AND DIMENSIONAL DATA ON ALL ITEMS OF EQUIPMENT, MATERIALS, AND ACCESSORIES. SUBMIT ALL SHOP DRAWINGS AT ONE TIME. PIECE MEAL SUBMISSION SHALL NOT BE ACCEPTABLE.

"AS BUILT DRAWINGS": CONTRACTOR SHALL BE FURNISHED WITH ONE (1) SET OF BLUE OR BLACK LINE PRINTS, ON WHICH CONTR. SHALL SHOW ANY CHANGES IN THE WORK CAUSED BY UNFORESEEN CIRCUMSTANCES AND THESE DRAWINGS SHALL BE TURNED OVER TO THE ENGINEER IN GOOD ORDER PRIOR TO FINAL ACCEPTANCE OF THE BLDG. ENGINEER IN TURN PREPARE RECORD DRAWINGS FROM INFORMATION FURNISHED BY CONTR.

"PARTS CATALOG": FURNISH TO THE ENGINEER FOR THE OWNER, THREE (3) COMPLETE SETS OF PARTS CATALOGS AND OPERATING INSTRUCTIONS BOUND IN LARGE BINDERS FOR HIS USE. CONTR. SHALL INSTRUCT OWNER'S OPERATOR IN THE PROPER CARE, OPERATION, LUBRICATION, AND MAINTENANCE OF MECHANICAL EQUIPMENT INSTALLED.

MECHANICAL IDENTIFICATION EQUIPMENT STENCILS SHALL IDENTIFY THE TYPE AND SERVICE WITH THE SAME NAMES, NUMBERS, AND/OR LETTERS USED TO IDENTIFY THE EQUIPMENT ON THE DRAWINGS. ALL STARTERS SHALL BE SIMILARLY STENCILED. OMIT IDENTIFICATION OF MINOR HEATING EQUIPMENT LOCATED IN THE ROOM IT SERVES, SUCH AS CONVECTORS, FINNED PIPE, UNIT HEATERS, ETC.

VIBRATION ISOLATORS SCHEDULES.

PIPE INSULATION REFRIGERANT SUCTION & CONDENSATE DRAIN LINES

INSTALL 3/4 INCH ARMAFLEX PER MANUFACTURER'S INSTRUCTIONS. ALL OUTSIDE LINES TO BE PAINTED WITH ARMSTRONG OUTDOOR FINISH. FOR LINES IN CEILING PLENUMS USE 1-1/2 INCH GLASS FIBER WITH INTEGRAL VAPOR BARRIER. MUST HAVE A CONTINUOUS SEALED VAPOR BARRIER ON ALL SUCTION LINES.

HOT AND COLD WATER DOMESTIC PIPING INSULATE ALL HW AND CW PIPING IN EXTERIOR WALLS AND IN ATTIC SPACE W/ 3/4 INCH THK. FIBERGLASS INSULATION WITH FRJ JACKET, ALL JOINTS AND ELBOWS SHALL BE NEATLY MITERED AND SEALED COVERED PVC COVER/JACKET.

SLEEVES

HANGERS AND SUPPORTS HORIZONTAL PIPING ABOVE GRADE: RIGIDLY SUPPORTED ON MALLEABLE IRON SPLIT RING HANGERS; SUPPORTS FOR TWO OR MORE SYSTEMS OF PIPING RUN PARALLEL AND WITH SAME GRADE, TRAPEZE HANGERS MAY BE USED. USE ALL THREADED RODS FOR HANGERS AND SUPPORTS.

MAXIMUM SPACING OF SUPPORTS AND HANGERS FOR HORIZONTAL RUNS OF PIPE: FIVE (5) FEET FOR SOIL, TEN (10) FOR OTHER SOIL PIPE EXCEPT SUPPORT PIPING 1-1/2 INCH AND SMALLER EVERY SIX (6) FEET. PROVIDE GALVANIZED IRON SHIELDS BETWEEN HANGERS AND PIPE COVERING ON INSULATED PIPING. NO STRAP HANGERS OR WIRE WILL BE ACCEPTED.

SET INSERTS IN CONCRETE FOR HANGER RODS AND DUCT HANGERS WHERE APPLICABLE. CONTR. SHALL SUPPORT DUCTWORK IN STRICT ACCORDANCE TO SMACNA STANDARDS,

ACCESS PANELS FACTORY MADE ACCESS DOORS AND FRAMES, PRIME COAT FINISH, SCREWDRIVER LATCH(S) OF SUITABLE SIZE AS REQUIRED. ACCESS PANELS IN RATED CEILING TO HAVE SAME RATING AS CEILING. ACCESS PANELS IN LINED DUCTWORK TO BE DOUBLE WALL TYPE WITH INSULATION SANDWICHED IN BETWEEN, SAME INSULATION VALUE AS ADJACENT DUCTWORK. WHERE VALVES, DAMPERS, CONTROLS, FIRE DAMPERS, SMOKE DAMPERS AND DETECTORS, REHEAT COILS, ETC. ARE CONCEALED IN WALLS OR NON-ACCESSIBLE CEILINGS, INSTALL FACTORY MADE ACCESS DOORS AND FRAMES.

FLOOR, WALL, AND CEILING PLATES (ESCUTCHEONS) WHERE ANY PIPE OR RISERS PASS EXPOSED THROUGH WALLS, PARTITIONS, FLOORS OR CEILING, USE CHROME PLATED FLOOR OR CEILING PLATES. PLATES SHALL BE LARGE ENOUGH TO COMPLETELY CLOSE HOLE AROUND THE PIPES AND BE ROUND WITH THE LEAST DIMENSION NOT LESS THAN 1-1/2" LARGER THAN THE DIAMETER OF THE PIPE. PLATES SHALL BE SECURED IN AN APPROVED MANNER.

CUTTING AND PATCHING CUT ALL OPENINGS AS REQUIRED FOR THE WORK UNDER THIS SECTION. PATCHING SHALL BE DONE BY THE CRAFT WHOSE WORK IS INVOLVED. FURNISH AND INSTALL ALL NECESSARY SLEEVES, THIMBLES, HANGERS, INSERTS, ETC., AT SUCH TIME AND IN SUCH A MANNER SO AS NOT TO DELAY OR INTERFERE WITH WORK OF OTHER TRADES. NO BEAMS OR JOISTS SHALL BE CUT. AFTER RESURFACING HAS BEEN DONE, ANY FURTHER CUTTING, PATCHING AND PAINTING SHALL BE DONE AT THE EXPENSE OF THE CONTRACTOR.

# 15400 PLUMBING

# GENERAL

ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LOUISIANA STATE SANITARY CODE ALONG WITH ALL LOCAL CODES, ORDINANCES, AND REGULATIONS. SLOPE DRAINAGE LINES, 3" AND SMALLER, 1/4" PER FOOT AND LINES 4" AND

LARGER 1/8" PER FOOT. ALL PIPES THRU WALL TO BE EQUIPPED WITH ESCUTCHEONS, CHROME PLATED.

SANITARY SEWER PIPING: ASTM D2556, PVC-DWV, SCHEDULE 40 SEWER PIPE WITH PVC FITTINGS, SOLVENT WELD JOINTS, ASTM D2564, UNLESS OTHERWISE STATED ON PLANS

WATER PIPING: COPPER TUBING, ASTM B88 TYPE "L" SOFT DRAWN (UNDERGROUND) AND TYPE "L" HARD (ABOVE SLAB) DRAWN WITH ANSI/ASME B16.29 WROUGHT COPPER FITTINGS, JOINT SILVER SOLDERED NO JOINTS ALLOWED UNDERGROUND.

# GUARANTEE AND SERVICE

GUARANTEE ALL EQUIPMENT, MATERIALS, AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FOLLOWING DATE OF ACCEPTANCE. GUARANTEE ALL EQUIPMENT CONTAINING ALL RECIPROCATING REFRIGERATION COMPRESSORS FULL FIVE (5) YEARS COVERING COMPRESSORS, LABOR, AND REFRIGERANT. GUARANTEE DOES NOT INCLUDE NORMAL MAINTENANCE ITEMS.

15050 BASIC MATERIALS AND METHODS

INSTALL VIBRATION ISOLATORS AS SHOWN ON DETAILS OR AS NOTED ON

# PIPE SLEEVES: WROUGHT IRON OR STEEL OF SUFFICIENT SIZE FOR PIPING INSTALLATION IN FLOORS, WALLS, BELOW GRADE, AND GRADE BEAMS WHERE PIPING

PASSES THROUGH. PVC MAY ONLY BE USED WHERE SPECIFICALLY NOTED.

REFER TO DUCTWORK SPECIFICATION, THIS SHEET.

CONTRACTOR SHALL PROVE EITHER AIR CHAMBERS (MIN. 18" HIGH) OR SHOCK ABSORBERS AT ALL FIXTURES TO PREVENT WATER HAMMER, APPLIES ALL RISER DIAS.

SUPPORT ALL PIPING W/ CLEVIS TYPE HANGERS, EIGHT (8) FOOT CENTERS. CONTRACTOR SHALL PROVIDE NEW WATER SERVICE. CONTRACTOR SHALL OBTAIN

PRICES FROM LOCAL WATER COMPANY FOR THEIR REQUIRED SERVICES. PRICES SHALL INCLUDE ALL NECESSARY EQUIPMENT, LABOR, ETC. FOR TIE-INS TO MAIN INCLUDING COST OF BUT NOT LIMITED TO ALL METERS, FEES, PERMITS, ETC.

PLUMBING CONTRACTOR SHALL INSTALL AND CONNECT ALL OWNER FURNISHED EQUIP. REQUIRING SERVICES (WATER OR SANITARY WASTE).

CONTRACTOR SHALL PROVIDE NEW SANITARY SEWER SERVICES. CONTRACTOR SHALL COORDINATE WITH CITY-PARISH FOR LOCATION OF TIE-IN ALONG WITH INCLUDING COSTS OF ALL PERMITS, FEES, ETC. IN HIS BID. BEFORE COMMENCING WORK CHECK ALL INVERT ELEVATIONS FOR SEWER CONNECTIONS, CONFIRM INVERTS AND ENSURE THAT THESE CAN BE PROPERLY CONNECTED WITH PROPER SLOPE FOR DRAINAGE.

CONTRACTOR SHALL PROVIDE EXTERIOR CLEANOUTS EVERY 75 FEET AND AT ALL TURNS.

# 15850 AIR HANDLING

# GENERAL

ALL RIGHTS AND LEFTS FOR FAN UNITS SHALL BE DETERMINED BY LOOKING INTO THE AIR OUTLET. CLOCKWISE AND COUNTERCLOCKWISE ROTATION SHALL BE DETERMINED BY VIEWING FROM THE DRIVE SIDE.

# EXHAUST FANS

HVAC CONTRACTOR SHALL FURNISH AND SUPPLY EXHAUST FANS OF TYPE, CAPACITY AND SIZED AS SPECIFIED IN THE EXHAUST FAN EQUIPMENT SCHEDULE.

ALL CABINET TYPE FANS SHALL COME EQUIPPED WITH SPEED CONTROLLERS. ALL ROOF MOUNTED FANS SHALL COME WITH PREFABRICATED ROOF CURBS, REFER TO ARCH. DWGS. FOR ROOF SLOPE.

# 15880 AIR DISTRIBUTION

## DUCTWORK

VERIFY ALL DIMENSIONS. DIMENSIONS SHOWN ARE METAL TO METAL AREAS. ALL DUCTWORK SHALL HAVE MAXIMUM 5% LEAKAGE.

GALVANIZED SHEET METAL DUCTWORK FIRST QUALITY, COLD ROLLED, GALVANIZED, OPEN HEARTH SOFT STEEL SHEETS, CAPABLE OF DOUBLE SEAMING WITHOUT FRACTURE. TRANSVERSE JOINTS ON RECTANGULAR DUCTWORK WITH SLIPS AND DRIVES SHALL HAVE DRIVES BENT OVER AT CORNERS. GAUGES AND JOINT CONNECTORS PER LOCAL CODES, SMACNA, OR ASHRAE RECOMMENDATIONS AND

THE FOLLOWING UNLESS OTHERWISE NOTED. FLEX DUCT WILL BE PERMITTED. FOR RUN-OUTS SHORTER THAN 10 FEET AND THE LAST 4 FEET OF A RUN OUT.

ALL DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT STANDARD, 2 INCH S.P. WITH THE FOLLOWING METAL THICKNESS.

<u>ROUND DUCTS – SNAP LOCK</u>

UP TO 12 DIAMETER #26 GAUGE MINIMUM. 13 INCH TO 18 INCH DIAMETER #24 GAUGE MINIMUM

19 INCH TO 24 INCH DIAMETER #22 GAUGE MINIMUM

SPIRAL LOCK SEAM ROUND DUCTS MAY BE ONE GAUGE LIGHTER THAN GAUGES SHOWN.

RECTANGULAR DUCTS AND PLENUMS

MAXIMUM SIDE UP TO 12 INCH #26 GAUGE MINIMUM MAXIMUM SIDE 13 INCH TO 30 INCH #24 GAUGE MINIMUM MAXIMUM SIDE 31 INCH TO 50 INCH #22 GAUGE MINIMUM MAXIMUM SIDE 51 INCH TO 84 INCH #20 GAUGE MINIMUM MAXIMUM SIDE 85 INCH AND UP #18 GAUGE MINIMUM

AS NOTED ON DRAWINGS #16 GAUGE

FOR GREATER THAN 24 INCHES USE REINFORCEMENT AS LISTED IN LATEST SMACNA LOW PRESSURE SHEET METAL CONSTRUCTION GUIDE, SECURELY HUNG, BRACED AND STIFFENED TO PREVENT BREATHING, RATTLING, VIBRATION AND SAGGING.

DUCT SIZES 19 INCHES WIDE AND LARGER WHICH HAVE MORE THAN 10 SQUARE FEET OF UNBRACED PANEL SHALL BE CROSS BROKEN OR BEADED.

SUPPORT ALL DUCTS IN ACCORDANCE WITH SMACNA, EXCEPT WIRE HANGERS SHALL NOT BE PERMITTED. DUCTS 36 INCHES OR LARGER SHALL HAVE TRAPEZE TYPE HANGERS SUSPENDED WITH THREADED ROD.

SEAL ALL DUCTWORK SERVING SYSTEMS HAVING FANS RATED FOR LESS THAN 2 INCHES STATIC PRESSURE IN ACCORDANCE WITH SMACNA, SEAL CLASS C. ALL TRANSVERSE JOINTS, FITTING CONNECTIONS, AND SQUARE OR RECTANGULAR TO ROUND CONNECTIONS IN DUCTWORK SHALL BE SEALED USING ADHESIVE TYPE SLIPS, DUCT SEALER OR HARD CAST. ROUND TO ROUND CONNECTIONS WITH FIRM FIT AND SEALED, SEAL ALL DUCTWORK SERVING SYSTEMS HAVING FANS RATED FOR 2 INCHES STATIC PRESSURE OR GREATER IN ACCORDANCE WITH SMACNA SEAL CLASS A. ALL TRANSVERSE JOINTS, LONGITUDINAL SEAMS, DUCT WALL PENETRATIONS TO BE SEALED.

BRANCH TAKEOFFS NOT TO EXCEED 45 DEGREES. PROVIDE A VOLUME DAMPER IN EACH AND EVERY BRANCH OF SUPPLY, RETURN AND EXHAUST DUCT. (SEE FLOOR PLANS AND DETAILS).

NO FIBERGLASS DUCT WILL BE ALLOWED ON THIS PROJECT

# CANVAS CONNECTORS

18 OUNCE FIREPROOF CANVAS OR NEOPRENE AT ALL FANS AND HVAC UNITS (EXCEPT ROOF VENTILATORS AND VANE AXIAL FANS WITH COMPANION FLANGES).

## DUCT INSULATION

INSULATION PRODUCTS PER NFPA-90A WITH 25 OR LESS FLAME SPREAD AND 50 OR LESS SMOKE DEVELOPMENT RATINGS. NO PLASTIC LINERS OR COVERS PERMITTED.

FASTENERS SHALL START WITHIN 3 INCHES OF THE UPSTREAM TRANSVERSE EDGES OF THE DUCT LINER AND 3 INCHES FROM THE LONGITUDINAL JOINTS AND SHALL BE SPACED A MINIMUM OF 12 INCHES O.C. AROUND THE PERIMETER OF THE DUCT, EXCEPT THAT THEY MAY BE A MAXIMUM OF 12 INCHES FROM A CORNER BREAK. ELSEWHERE THEY SHALL BE A MAXIMUM OF 18 INCHES O.C. EXCEPT THAT THEY SHALL BE PLACED NOT MORE THAN 6 INCHES FROM A CORNER BREAK.

BALANCING DAMPERS WIDTH OF THE BRACH TAKEOFF. PROVIDE CEILING ACCESS FOR OPERATING DAMPERS. LEAVE ALL DAMPERS OPEN. VOLUME DAMPERS WHERE SHOWN ON DRAWING.

FOR ROUND DUCTS, HART & COOLEY #607 AND #608, OR EQUIVALENT, WITH 2 BEARING POINTS AND HANDLE AND WING NUT ASSEMBLY. BACK DRAFT DAMPERS

INSTALL PER MANUFACTURER'S INSTRUCTIONS. SEE SCHEDULE INTERLOCKED. FELT EDGED BLADE, ADJUSTABLE SPRING LOADED. PREFCO PHL, OR EQUIVALENT.

DUCT ACCESS PANELS

FOR MAINTENANCE, CLEANING, RESETTING, OR EXAMINATION. AIR TIGHT HINGED ACCESS DOORS W/ FELT OR TUBULAR NEOPRENE GASKET. WITH CAM LATCHES (NOT SCREWS). KARP OR EQUIVALENT. INSULATED AT INSULATED DUCTS. **GRILLES AND DIFFUSERS** 

FILTERS FURNISHED W/ ALL AIR HANDLING UNITS AND FURNACES. SEE SCHEDULES. SPARE FILTERS PROVIDED WHERE INDICATED IN SCHEDULE. HVAC CONTRACTOR IS REQ'D DURING AND AT THE COMPLETION OF THE BUILDING CONSTRUCTION TO PROVIDE NEW REPLACEMENT AIR FILTERS OF EQUAL EFFICIENCY AT ALL HVAC UNITS USED DURING CONSTRUCTION.

# DUCT LINER INSULATION

OWENS-CORNING AEROFLEX OR EQUIVALENT MANVILLE LINACOUSTIC OR KNAUF DUCT LINER M FIRE RESISTANT MATTE FACED GLASS FIBER DUCT LINER. 1-1/2 LB DENSITY. CERTIFIED EROSION RESISTANT DUCT LINER FOR DUCT AIR VELOCITIES UNDER 2000 F/P/M. K APPROX. 0.24 AT 50 DEGREES F. DUCT LINERS SHALL BE ADHERED TO THE SHEET METAL WITH A 100% COVERAGE OF ADHESIVE, AND ALL EXPOSED LEADING EDGES AND ALL TRANSVERSE JOINTS COATED WITH ADHESIVE. DUCT LINER SHALL BE CUT TO ASSURE OVERLAPPED AND COMPRESSED LONG-LONGITUDINAL CORNER JOINTS. THE DUCT LINER SHALL BE ADDITIONALLY SECURED WITH MECHANICAL FASTENERS WHICH SHALL COMPRESS THE DUCT LINER SUFFICIENTLY TO HOLD IT FIRMLY IN PLACE. FOR VELOCITIES TO 2000 F/P/M.

# DUCT WRAP INSULATION

OWENS-CORNING FIBERGLASS ALL-SERVICE FACED DUCT WRAP INSULATION, OR EQUAL. INSTALL DUCT WRAP INSULATION WITH FACING OUTSIDE SO THAT TAPE FLAP OVERLAPS INSULATION AND FACING OF ADJACENT PIECE OF DUCT WRAP. INSULATION SHALL BE TIGHTLY BUTTED. IF DUCTS ARE RECTANGULAR, INSTALL SO INSULATION IS NOT EXCESSIVELY COMPRESSED AT DUCT CORNERS. SEAMS SHALL BE STAPLED APPROX. 6 INCHES ON CENTER WITH OUTWARD CLINCHING STAPLES.

SEAL SEAMS WITH PRESSURE-SENSITIVE TAPE MATCHING THE FACING. WHERE RECTANGULAR DUCTS ARE 24 INCHES IN WIDTH OR GREATER, DUCT WRAP INSULATION SHALL BE ADDITIONALLY SECURED TO THE BOTTOM OF THE DUCT WITH MECH. FASTENERS SUCH AS PINS AND SPEED CLIP WASHERS, SPACED ON 18 INCH CENTERS (MAXIMUM) TO PREVENT SAGGING OF INSULATION. ADJACENT SECTIONS OF WRAP INSULATION SHALL BE TIGHTLY BUTTED WITH THE 2 INCH TAPE FLAP OVERLAPPING. SEAL ALL TEARS, PUNCTURES, AND OTHER PENETRATIONS OF THE DUCT WRAP INSULATION FACING WITH TAPE OR MASTIC TO PROVIDE A VAPOR TIGHT SYSTEM.

DUCT INSULATION LOCATION

## EXHAUST DUCTS

WRAP ALL RECTANGULAR AND ROUND EXHAUST DUCTS AND EXHAUST PLENUMS AT ROOF EXHAUST FANS WITH 1-1/2 INCH THICK DUCT WRAP INSULATION. WRAP FOR ENTIRE LENGTH. LINE ALL EXHAUST GRILLE BOOTS WITH 1/2" DUCT LINER.

## SUPPLY AIR DUCTS

WRAP ALL RECTANGULAR SUPPLY AIR DUCTS WITH 2" WRAP. LINEAR DIFFUSER BOOTS W/ 1" THICK DUCT LINER. WRAP ALL ROUND SUPPLY AIR DUCTS AND DUCTS 4" OR LESS IN ANY DIMENSION WITH 2" DUCT WRAP INSULATION.

## RETURN AIR DUCTS

WRAP ALL RECTANGULAR DUCTS WITH 2" DUCT WRAP. GRILLE BOOTS W/ 1" THICK DUCT LINER. INSTALL RETURN GRILLE ACOUSTICAL PLENUMS FURNISHED BY BUILDER. WRAP ALL ROUND DUCTS AND DUCTS 4" OR LESS IN ANY DIMENSION WITH 2" THICK DUCT WRAP INSULATION.

## DUCT ACCESSORIES

TURNING VANES

TURNING VANES TO BE DOUBLE WALL FABRICATED PER SMACNA STANDARDS. VOLUME DAMPERS

### MANUAL VOLUME DAMPERS, FABRICATED PER SMACNA STANDARDS, W/ LOCKING QUADRANT. PROVIDE MULTIBLADE DAMPERS FOR ALL DUCTS 12" DEEP AND LARGER.

ALL GRILLES AND DIFFUSERS SHALL BE AS INDICATED ON THE PLANS AND SHALL BE EQUIPPED W/ OPPOSED BLADE DAMPERS AND HAVE A WHITE BAKED ON ENAMEL FINISH UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS.

# FILTERS

# HVAC CONTROLS

SEQUENCE OF OPERATION

AIR CONDITIONING SYSTEM (TYPICAL): PROVIDE PROGRAMMABLE ROOM TYPE THERMOSTATS TO CYCLE THE CONDENSING UNIT ON THE COOLING CYCLE AND THE HEATING CYCLE. REFER TO SCHEDULE AS REQ'D TO MAINTAIN SPACE CONDITIONS. AIR HANDLING UNIT SHALL BE WIRED FOR AND ELECTRICALLY INTERLOCKED SUCH THAT

THE CONDENSING UNIT MAY NOT RUN NOR THE ELECTRIC HEATER BE ENERGIZED UNLESS THE EVAPORATOR FAN IS OPERATIONAL. THERMOSTAT SHALL BE EQUIPPED WITH "HEAT-OFF-COOL" AND "ON-AUTO" SELECTOR SWITCHES AND SHALL BE WIRED FOR EITHER CONSTANT FAN OPERATION OR AUTOMATIC FAN OPERATION ON BOTH THE HEATING AND COOLING CYCLE. IF AUX. DRAIN PAN FILLS W/ WATER, FLOAT SWITCH SHALL DE-ENERGIZE CONDENSING UNIT.



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PROJECT NO: PHASE: Final DATE: PROJ. ARCHITEC MECHAN PLUME SPECIFIC SHEET	26 July, 2024 CT: MRD NICAL/ BING ATIONS

<ul> <li>IRICAL GENERAL NOTES</li> <li>ROUTE NEW CONDUITS &amp; WIRING CONCEALED IN WALLS &amp; CEILING WHERE POSSIBLE - COORDINATE INSTALLATION OF EXPOSED CONDUIT &amp; WIRING WITH THE ARCHITECT.</li> <li>ELECTRICAL SERVICE TO BE FURNISHED TO NEW HVAC UNITS AS FURNISHED BY THE MECHANCIAL CONTRACTOR.</li> <li>ALL ELECTRICAL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE.</li> <li>BEFORE INSTALLATION, THE ELECTRICAL CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS TO THE ENGINEER FOR REVIEW COVERING PROPOSED LOCATIONS, MOUNTING, AND ROUTING FOR ALL CONDUITS, SERVICES, FITTINGS, GROUND RODS, SUPPORTS, ETC.</li> <li>CONTRACTOR IS RESPONSIBLE FOR OVER-CURRENT PROTECTIVE DEVICE SHORT CIRCUIT, COORDINATION, AND ARC-FLASH STUDIES.</li> <li>MATERIALS AND MANUFACTURERS NOTED ON DRAWINGS ARE TO BE USED AS BASIS OF DESIGN TO ESTABLISH QUALITY AND PERFORMANCE STANDARDS AND SHALL BE PROVIDED AS SPECIFIED. SUBSTITUTIONS WILL BE CONSIDERED WHERE SUFFICIENT PRODUCT INFORMATION IS PROVIDED TO MAKE A PROPER EVALUATION. APPROVAL OF A SUBSTITUTION IS AT THE SOLE DISCRETION OF THE PROPESSIONAL.</li> <li>THE CONTRACTOR SHALL SUBMIT COPIES OF THE PRODUCT DATA, SHOP DRAWINGS, ETC. OF ALL MATERIALS NOTED ON THE DRAWINGS ANL SUBMIT TED PRODUCT DATA, SHOP DRAWINGS, ETC. OF ALL MATERIALS NOTED ON THE DRAWINGS. ALL SUBMIT TED PRODUCT DATA, SHOP DRAWINGS, ETC. SHALL BE MARKED WITH THE NAME OF THE PROJECT AND SHALL BEAR THE STAMP OF APPROVAL OF THE CONTRACTOR AS EVIDENCE THAT THE WATERIAL HAS BEEN CHECKED BY THE CONTRACTOR.</li> <li>BRAWINGS SPECIFICATIONS AND SPECIFICATIONS, AND EQUIPMENT SCHEDULES, THE MOST STRINGENT REQUIREMENT OR QUANTITY SHALL APPLY. NOTIFY THE ARCHITECT/ENGINEER OF ALL CONFLICTS FOR RESOLUTION OR INTERPRETATION.</li> <li>WHERE CONFLICTS EXIST AMONG DRAWINGS, SPECIFICATIONS, AND EQUIPMENT SCHEDULES, THE MOST STRINGENT REQUIREMENT OR QUANTITY SHALL APPLY. NOTIFY THE ARCHITECT/ENGINEER OF ALL CONFLICTS FOR RESOLUTION OR INTERPRETATION.</li> <li>NO EQUIPMENT SHALL BE ORDERED OR INSTALLED UNTIL T</li></ul>			YMBOL LEGEND         POWER PANEL         FUSED SAFETY DISCONNECT SWITH         JUNCTION BOX         JUNCTION BOX FOR MOTORIZED DA         DUPLEX RECEPTACLE         ABOVE-COUNTER DUPLEX RECEPT         GFI DUPLEX RECEPTACLE         ABOVE-COUNTER GFI DUPLEX RECE         QUADRAPLEX RECEPTACLE         ABOVE-COUNTER QUADRAPLEX RECEPTACLE         SPECIAL PURPOSE RECEPTACLE	AMPER ACLE (42" AI EPTACLE	FF)		DUPLEX F QUADRAF DATA OU ROUTER DATA/DA ROUTER DATA/VO TO ROUT VOICE OI ROUTER DATA FLI	TA/POWER FLUSH I RECEPTACLE FLUSH PLEX RECEPTACLE I TLET PROVIDE 3/4" IN OFFICE. TA OUTLET PROVID IN OFFICE. JULET PROVIDE 3/4" IN OFFICE. JSH FLOOR BOX OUNTER DATA OUT V OUTLET	H FLOOR BOX FLUSH FLOOR BOX C. BACK TO E 3/4" C. BACK TO DE 3/4" C. BACK	(WAP) [CT] [ATS] [GEN]	MOTOR WIRELESS ACCESS POI CT CABINET AUTOMATIC TRANSFER MANUAL TRANSFER SW GENERATOR - ABOVE-SLAB CONDUIT BELOW-SLAB CONDUIT	R SWITCH VITCH T
<ul> <li>OR THAT IT WILL COORDINATE WITH OTHER APPROVED ITEMS.</li> <li>OMISSION FROM THIS SHEET OF ANY ITEM SHOWN ELSEWHERE IN THE PLANS DOES NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY FOR ANY ASSOCIATED WORK.</li> <li>COORDINATE INSTALLATION OF NEW ITEMS AND EQUIPMENT WITH THE OWNER'S REPRESENTATIVE AND THE WORK OF OTHER CONTRACTORS. THE CONTRACTOR SHALL INCUR ALL COSTS ASSOCIATED WITH THE RELOCATION OF EQUIPMENT CONFLICTING WITH NEW WORK BY OTHER DISCIPLINES THAT HAS NOT BEEN COORDINATE ALL ASPECTS OF NEW SERVICE WITH UTILITY COMPANY AND INCLUDE ALL COSTS IN BID.</li> <li>WARNING TAPE SHALL BE INSTALLED 12 TO 18 INCHES BELOW GRADE OVER ALL CONDUITS.</li> <li>PROVIDE 1/4" MINIMUM DIAMETER PULL ROPE. PULL ROPE SHALL NOT BE NYLON STRING.</li> <li>FOR SERVICE ENTRANCE CONDUITS, UTILIZE LONG RADIUS (36") CONDUIT BENDS.</li> <li>ALL CONDUIT RISERS FROM UNDERGROUND SHALL HAVE RIGID METAL ELLS AND RISERS.</li> <li>PRIOR TO CONSTRUCTION, VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES. AVOID DISTURBANCE OF EXISTING UTILITIES NOT INCLUDED IN THIS PROJECT.</li> <li>ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR EFFECTIVE THE DAY THE PROJECT IS ACCEPTED BY THE OWNER.</li> <li>ALL CUTTING AND PATCHING OF WALLS AND FLOORS FOR ELECTRICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.</li> <li>PROVIDE CONDUIT SEALS AS REQUIRED WHERE PENETRATING NEC CLASSIFIED AREAS</li> <li>VERIFY EXACT LOCATION, VOLTAGE, PHASE, AMPERAGE, ETC. OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ORDERING ELECTRICAL GEAR.</li> <li>THING GENERAL NOTES</li> </ul>			& SWITCHING SYMBOL         \       2X4 LED FIXTURE; "A" DENOTES         2X2 LED FIXTURE; "A" DENOTES         2X2 LED FIXTURE; "A" DENOTES         DA       LINEAR LED FIXTURE; "A" DENOTES         DOWNLIGHT LED FIXTURE; "A" DENOTES         DOWNLIGHT LED FIXTURE; "A" DENOTES         DOWNLIGHT LED FIXTURE; "A" DENOTES         A       TRACK LED FIXTURE; "A" DENOTES         M       EMERGENCY LIGHTING UNIT         EMIT/EMERGENCY LIGHTING UNIT         SINGLE-SIDED EXIT LIGHT	TYPE TYPE TES TYPE DENOTES TY TES TYPE		C S S ³ S ^D S ^{3D} S ^M S ^O OS	SINGLE PO 3-WAY TO LINEAR SL 3-WAY LIN MOTOR RA WALL MOU	ECTRIC CELL DLE TOGGLE SWITC GGLE SWITCH IDE DIMMER SWITC EAR SLIDE DIMMER ATED TOGGLE SWIT JNT OCCUPANCY SE OUNT OCCUPANCY	H SWITCH CH ENSOR			
<ul> <li>ALL ELECTRICAL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.</li> <li>VERIFY THE EXACT LOCATION OF ALL LIGHTING SWITCHES WITH THE ARCHITECT PRIOR TO ROUGH-IN.</li> <li>VERIFY THE EXACT LOCATION OF ALL LIGHTING FIXTURES WITH THE ARCHITECT URAL REFLECTED CEILING PLAN PRIOR TO ROUGH-IN.</li> <li>ROUTE NEW CONDUIT AND WIRING CONCEALED IN WALLS AND ABOVE CEILING WHERE POSSIBLE - COORDINATE INSTALLATION OF EXPOSED CONDUIT AND WIRING WITH THE ARCHITECT.</li> <li>VERIFY THE EXACT LOCATION OF CEILING MOUNTED OCCUPANCY SENSORS WITH THE MANUFACTURER PRIOR TO INSTALLATION FOR MAXIMUM PERFORMANCE.</li> <li>EMERGENCY FIXTURES AND EXIT FIXTURES SHALL BE CONNECTED TO NEAREST CIRCUIT AHEAD OF SWITCH.</li> <li>WALL MOUNT TYPE "Z" FIXTURES ABOVE DOOR AS SHOWN ON DRAWINGS. COORDINATE WITH ARCHITECT.</li> <li>MOUNT TYPE "EM" FIXTURES 8'-0" AFF UNLESS OTHERWISE NOTED.</li> <li>VERIFY THE CEILING TYPES FOR ALL LIGHT FIXTURES TO BE FLUSH MOUNTED OR SUSPENDED AND ADJUST FIXTURE MOUNTING TYPES IN ACCORDANCE WITH THE CEILING TYPE, AS REQUIRED.</li> <li>ALL VANITY FIXTURES SHALL BE MOUNTED WITH 0'-3" OF SPACE BETWEEN THE BOTTOM OF THE FIXTURE AND THE TOP OF THE MIRROR.</li> <li>VERIFY THE EXACT MOUNTING LOCATION FOR ANY PHOTOELECTRIC CELLS WITH THE ARCHITECT PRIOR TO ROUGH-IN. ALL PHOTOELECTRIC CELLS MUST FACE NORTH.</li> <li>CONTRACTOR SHALL CONFIRM COMPATIBILITY OF ALL LIGHTING CONTROL DEVICES/SWITCHES/DIMMERS WITH LIGHTING FIXTURES AND BALLASTS/DRIVERS PRIOR TO SUBMITTAL.</li> </ul>		5 (1) WP SIGN	DOUBLE-SIDED EXIT LIGHT SINGLE-SIDED DIRECTIONAL EX DOUBLE-SIDED DIRECTIONAL E TION LEGEND KEYNOTE WEATHERPROOF PROVIDE J-BOX AND CONNECTION EXACT ROUGH-IN LOCATION WIT	XIT LIGHT ON FOR EXT TH SIGN VEN	NDOR PRIOF	R TO ROUGH-IN	ABOVE FIN GROUND-F TE N.	OUNT VACANCY SE	٦		NL FIXTURE TO BE BREAKER.	BE DEMOLISHED E ALWAYS ON, SWI
13 COORDINATE LOCATION OF LIGHT FIXTURES IN MECHANICAL ROOMS WITH DIVISION 15/23 PLANNED EQUIPMENT LOCATION AND DUCT INSTALLATION. WALL MOUNT LIGHTS OR PROVIDE PENDANT MOUNTING AS REQUIRED TO ILLUMINATE THE SPACE.	NOTES:	TING FIXTURE S TO BE SELECTED BY ARCHITEC B' LED STRIP LIGHT W PROVIDE SUSPENSION 8' LED STRIP LIGHT W PROVIDE SUSPENSION 4' LED STRIP LIGHT W PROVIDE SUSPENSION 4' LED STRIP LIGHT W	T CRIPTION TH SEMI-FROSTED LENS. HARDWARE AS REQUIRED. TH SEMI-FROSTED LENS. HARDWARE AS REQUIRED. TH SEMI-FROSTED LENS. HARDWARE AS REQUIRED. TH SEMI-FROSTED LENS. HARDWARE AS REQUIRED.		VOLTS UNV UNV UNV	LOAD           125 VA           125 VA           60 VA           60 VA	TEMP.         4,000         4,000         4,000         4,000	LUMENS 14,000 14,000 7,000 7,000	MOUNTIN CEILING/SUSPE CEILING/SUSPE CEILING/SUSPE	IG ENDED ENDED ENDED	MANUFACTURER LITHONIA LIGHTING LITHONIA LIGHTING LITHONIA LIGHTING LITHONIA LIGHTING	ZL1D-L96 ZL1D-L96-14 ZL1D-L44
-		PROVIDE SUSPENSION	HARDWARE AS REQUIRED.				-,000	1080				ZL1D-L40-7

MOTOR
WIRELESS ACCESS POINT
CT CABINET
AUTOMATIC TRANSFER SWITCH
MANUAL TRANSFER SWITCH
GENERATOR



- 1

- 4
- 6 PLYWOOD TO SUPPORT CABLE AND WIRE.
- HAVE WHITE JACKETS.

- E EXISTING TO REMAIN
- D EXISTING TO BE DEMOLISHED
- NL FIXTURE TO BE ALWAYS ON, SWITCHED VIA BREAKER.

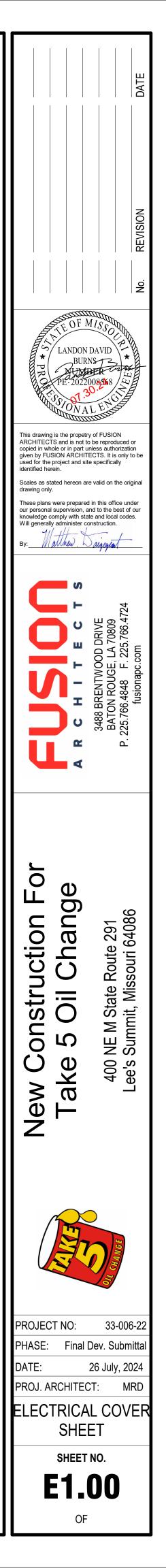
** FINISH TO BE SELECTED BY ARCHITECT										
MARK	DESCRIPTION	LAMPS	VOLTS	LOAD	TEMP.	LUMENS	MOUNTING	MANUFACTURER	CATALOG NO.	COUNT
А	8' LED STRIP LIGHT WITH SEMI-FROSTED LENS. PROVIDE SUSPENSION HARDWARE AS REQUIRED.	LED	UNV	125 VA	4,000	14,000	CEILING/SUSPENDED	LITHONIA LIGHTING	ZL1D-L96-14000LM-FST-MVOLT-35K-80CRI	5
AE	8' LED STRIP LIGHT WITH SEMI-FROSTED LENS. PROVIDE SUSPENSION HARDWARE AS REQUIRED.	LED	UNV	125 VA	4,000	14,000	CEILING/SUSPENDED	LITHONIA LIGHTING	ZL1D-L96-14000LM-FST-MVOLT-35K-80CRI-E7W	3
В	4' LED STRIP LIGHT WITH SEMI-FROSTED LENS. PROVIDE SUSPENSION HARDWARE AS REQUIRED.	LED	UNV	60 VA	4,000	7,000	CEILING/SUSPENDED	LITHONIA LIGHTING	ZL1D-L48-7000LM-FST-MVOLT-35K-80CRI	4
BE	4' LED STRIP LIGHT WITH SEMI-FROSTED LENS. PROVIDE SUSPENSION HARDWARE AS REQUIRED.	LED	UNV	60 VA	4,000	7,000	CEILING/SUSPENDED	LITHONIA LIGHTING	ZL1D-L48-7000LM-FST-MVOLT-35K-80CRI-E7W	1
С	UP/DOWN WET LOCATION LISTED WALL SCONCE	LED	UNV	30 VA	4,000	1080 UP/DOWN	WALL/SURFACE	METEOR	LANCE4-30-408-UNV-NOD-30-15-**-**	4
EM	EMERGENCY LIGHTING UNIT EQUIPMENT WITH TWO ADJUSTABLE LED HEADS. INTEGRAL BATTERY WITH SELF-DIAGNOSTICS.	LED	UNV	2 VA	N/A	N/A	CEILING/WALL	LITHONIA LIGHTING	ELM6L	5
F	EXTERIOR WET LOCATION LISTED WALL PACK	LED	UNV	25 VA	4,000	2,200	WALL/SURFACE	LITHONIA LIGHTING	WSQLED-P1-40K-S2-MVOLT-BBW-**	1
FE	EXTERIOR WET LOCATION LISTED WALL PACK WITH EMERGENCY BATTERY BACKUP	LED	UNV	25 VA	4,000	2,200	WALL/SURFACE	LITHONIA LIGHTING	WSQLED-P1-40K-S2-MVOLT-BBW-**-E10WH	1
G	PARKING LOT FIXTURE ON 25' SSS POLE. PROVIDE ALL MOUNTING HARDWARE AS REQURIED. PROVIDE HOUSESIDE SHEILD	LED	UNV	60 VA	4,000	6,500	25' SSS POLE	LITHONIA LIGHTING	DSX1 LED 12 40K T3M MVOLT HS	3
G1	(2) HEAD PARKING LOT FIXTURE ON 25' SSS POLE. PROVIDE ALL MOUNTING HARDWARE AS REQURIED. PROVIDE HOUSESIDE SHEILD. LOAD AND LUMENS ARE THE TOTAL FOR BOTH HEADS.	LED	UNV	120 VA	4,000	13,000	25' SSS POLE	LITHONIA LIGHTING	DSX1 LED 12 40K T3M MVOLT HS	1
Н	6" LED DOWNLIGHT	LED	UNV	20 VA	3,500	1,500	RECESSED	LITHONIA LIGHTING	LDN6-35K-15-LO6-LSS-MVOLT	1
	COMBO UNIT EXIT SIGN WITH RED LETTERS AND TWO ADJUSTABLE LED HEADS. PROVIDE WITH NUMBER OF FACES AND DIRECTIONAL ARROWS AS INDICATED.	LED	UNV	1 VA	N/A	N/A	WALL/CEILING	LITHONIA LIGHTING	ECR LED	2

PROVIDE 1" CONDUIT AND TWO (2) CAT 6 CABLES AT EACH DATA OUTLET SHOWN. ROUTE TO ABOVE CEILING AND ROUTE TO TELEPHONE BACKBOARD IN IT ROOM. COIL UP 10' OF SLACK FOR TERMINATIONS BY OWNER. 2 OWNER SHALL PROVIDE THE WALL MOUNT DATA RACK, ALL ITEMS INCLUDED IN THE DATA RACK, AND ANY NECESSARY TELEPHONE EQUIPMENT.

3 PLYWOOD FOR BACKBOARDS SHALL BE 0'-1" AC INDOOR GRADE, FIRE RETARDANT, AND PAINTED AS SPECIFIED. COMMON BOND RACKS, PATCH PANELS, CABLE SHIELDS, PROTECTORS, AND THE BUILDING MAIN ELECTRICAL GROUNDING CONDUCTORS SHALL BE, AT MINIMUM, #6 AWG INSULATED AND STRANDED COPPER. FASTENERS SHALL BE RECESSED AND ANCHORED.

5 SUBMIT DIGITAL PHOTOGRAPHS OF ALL TERMINATIONS TO MAIN ELECTRICAL SERVICE GROUNDING MEANS. ALL BACKBOARDS SHALL BE EQUIPPED WITH D-RINGS SPACED AT 1'-0" APART AROUND ALL EDGES OF THE

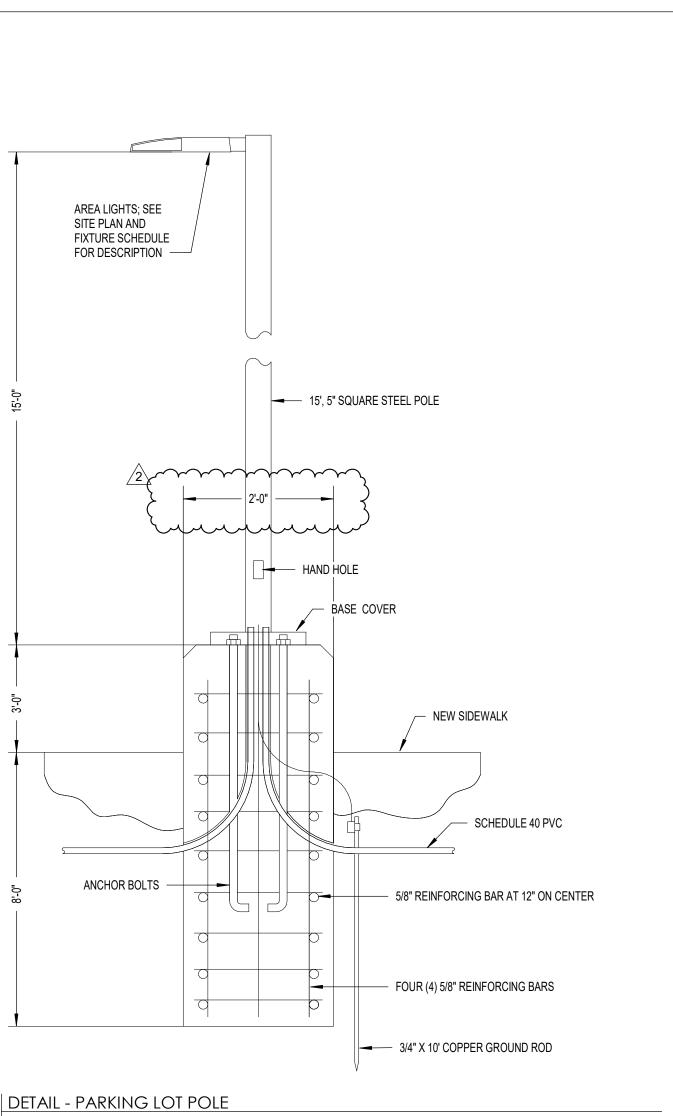
7 CAT 6 CABLES FOR DATA OUTLETS SHALL HAVE BLUE JACKETS AND CAT 6 CABLES FOR VOICE OUTLETS SHALL

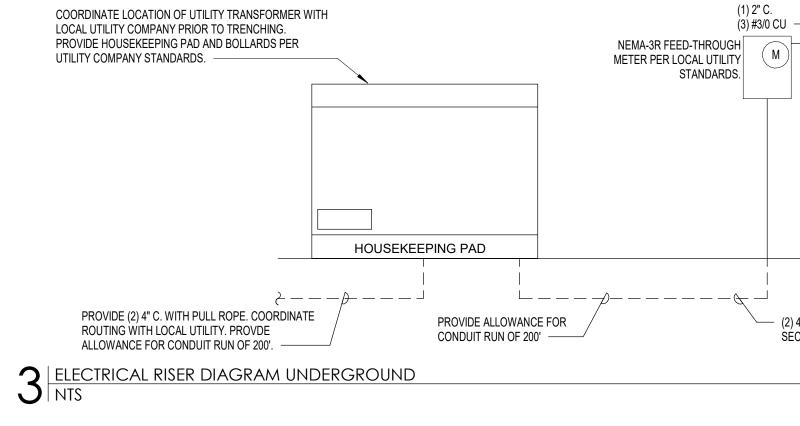




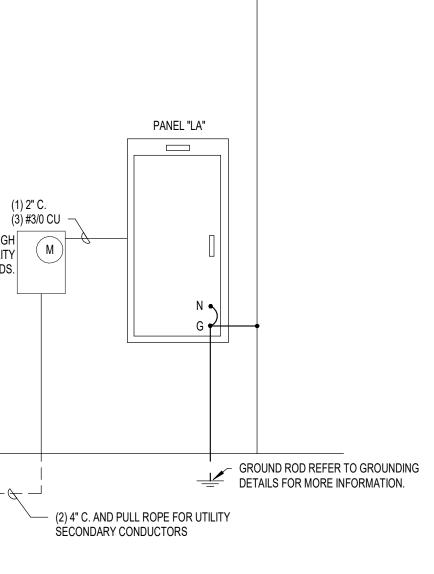




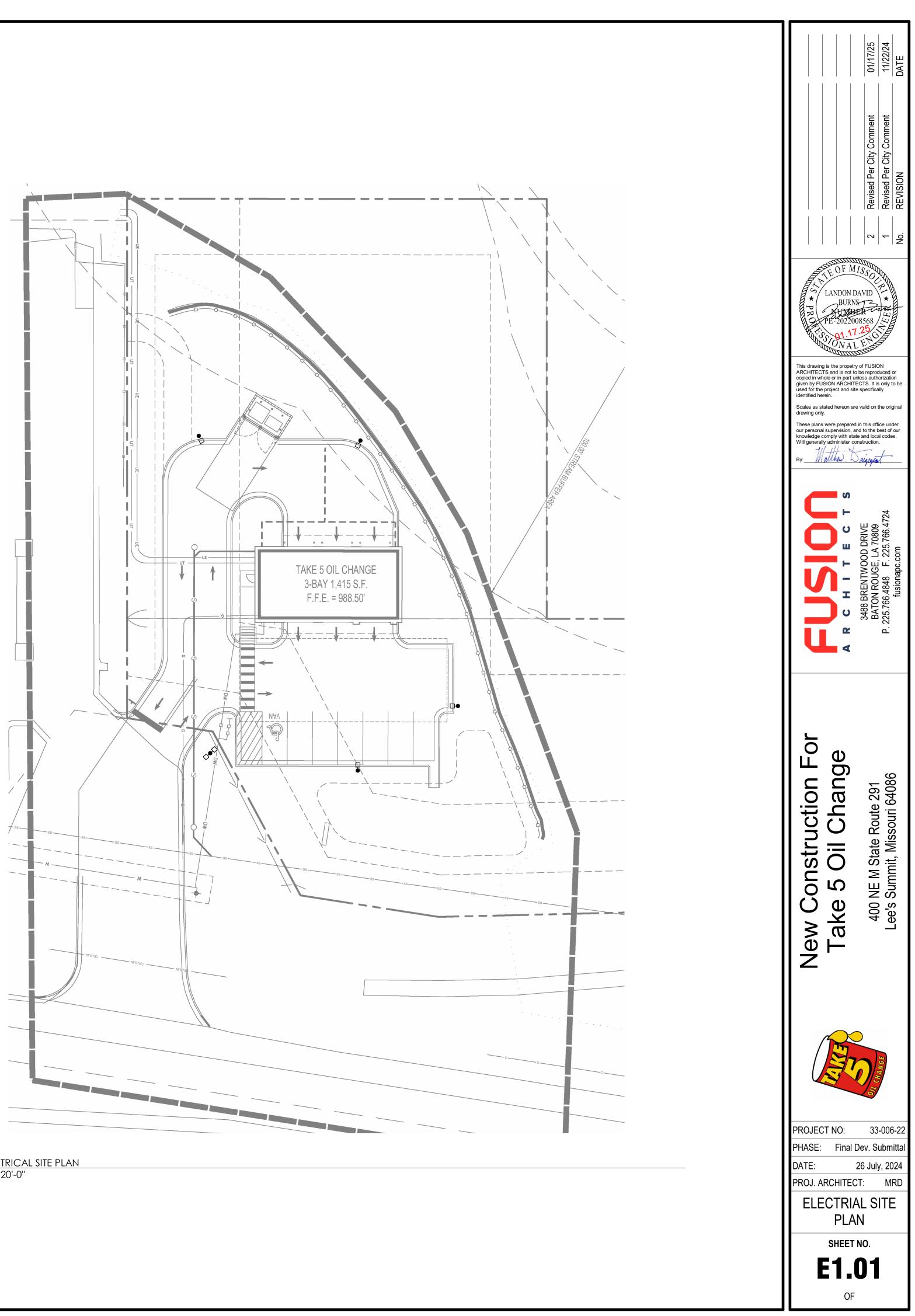








NEW TAKE 5



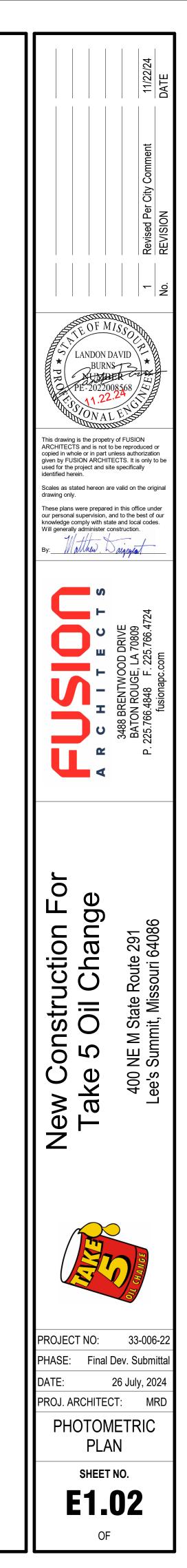
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+0.3  +0.4  +0.5  +0.7  +1.9  +0.9  +1.1  +1.6  +1.8  +1.9  +2.0  +2.4  +2.9  +3.1  +3.9  +3.0  +3.0  +3.0  +3.0  +3.1  +3.2  +3.5  +4.0  +4.5  +4.5  +4.2  +3.8  +3.3  +2.4  +1.7  +1.4  +1.1  +0.9  +0.6  +0.5  +0.3  +0.5  +0.3  +0.5  +0.6  +0.5  +0.3  +0.5  +0.6  +0.5  +0.3  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.5  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6  +0.6
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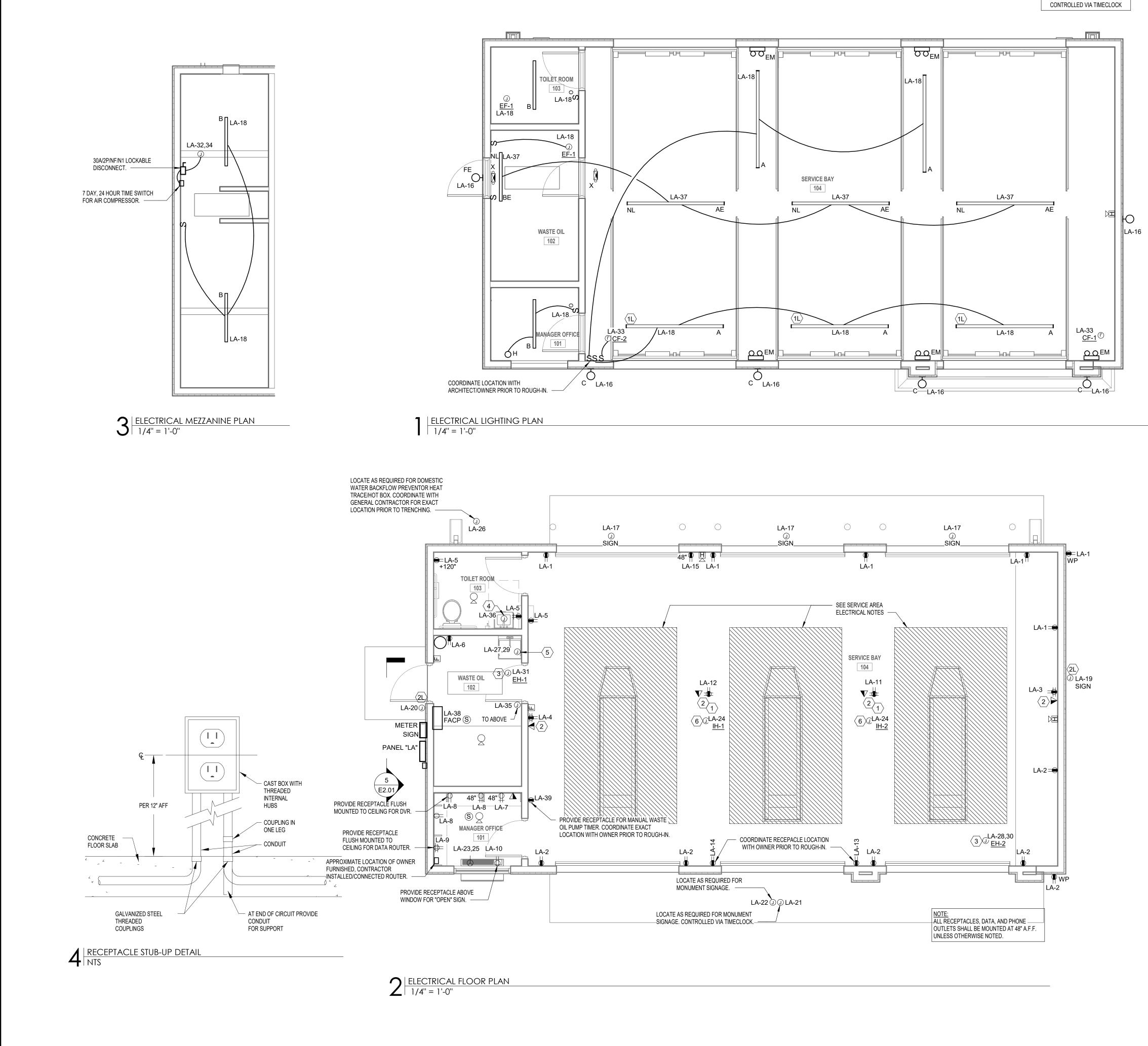
SITE PHOTOMETRIC PLAN

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PHOTOMETRIC PLAN GENERAL NOTES

- 1. ALL CALCULATION POINTS WITHIN THE RED CONTOUR LINE ARE GREATER THAN OR EQUAL TO 1 FC.
- 2. ALL CALCULATION POINTS WITHIN THE GREEN & RED CONTOUR LINE ARE GREATER THAN 0.5 FC AND LOWER THAN 1 FC.





NOTE: OFFICE, RESTROOM AND OIL STORAGE AREAS ARE UNCLASSIFIED SINCE WALLS ARE USED TO EFFECTIVELY CUT OFF/SEPARATE THESE ROOMS FROM AREAS WHERE FLAMMABLE VAPORS ARE LIKELY TO BE RELEASED AND THESE AREAS ARE TYPICALLY OUTSIDE THE 3' HORIZONTAL DISTANCE FROM PIT EDGE.

PROVIDE SEALS IN CONDUIT AND CABLE SYSTEMS PER ARTICLE 501 IN CLASSIFIED AREAS.

ALL ELECTRICAL WORK IN THESE CLASSIFIED AREAS SHALL CONFORM TO ARTICLE 511 FOR CLASS 1 DIVISION 2 LOCATIONS.

HYDROGEN) WILL NOT BE TRANSFERRED.

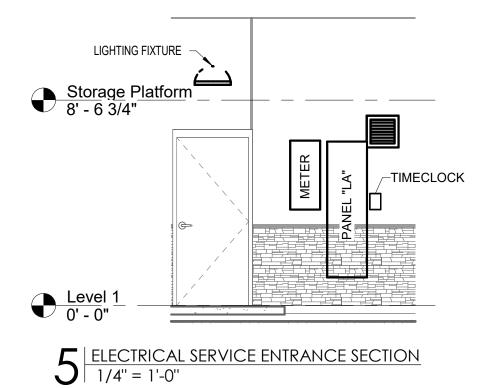
NOTE: CEILING AREAS ARE UNCLASSIFIED SINCE LIGHTER THAN AIR GASSES (SUCH AS NATURAL GAS AND

EDGE OF ANY PIT. 2) PIT AREAS UP TO THE FLOOR LEVEL.

ACCORDING TO NEC ARTICLE 511.3(D) THE FOLLOWING LOCATIONS IN THE SERVICE AREAS SHALL BE CONSIDERED CLASS 1 DIVISION 2 LOCATIONS: 1) FLOOR AREAS UP TO A LEVEL OF 18" ABOVE THE PITS AND EXTENDING A DISTANCE 3' HORIZONTALLY FROM THE

BUILDING IS CONSIDERED A "MINOR REPAIR GARAGE" PER NEC ARTICLE 511.2 FLAMMABLE LIQUIDS HAVING A FLASH POINT BELOW 38°C (100°F) SUCH AS GASOLINE, OR GASEOUS FUELS SUCH AS NATURAL GAS OR HYDROGEN, WILL NOT BE DISPENSED OR TRANSFERRED.

ELECTRICAL NOTES FOR SERVICE BAYS



DIVISION 22 PRIOR TO ROUGH-IN. PROVIDE 30A/2P/NF/N1 DISCONNECT ADJACENT TO HEATER FOR LOCAL MEANS OF DISCONNECT.  $\langle 6 \rangle$  MAKE CONNECTION TO GAS HEATERS FURNISHED AND INSTALLED BY DIVISION 23.

HEATER. COORDINATE EXACT LOCATION WITH

 $\langle 5 \rangle$  LOCATE AS REQUIRED FOR INSTANT WATER

 $\langle 3 \rangle$  COORDINATE ELECTRICAL REQUIREMENTS WITH DIVISION 23 PRIOR TO PURCHASE.  $\langle 4 \rangle$  LOCATE AS REQUIRED FOR INSTANT WATER

DISCONNECT.

HEATER. COORDINATE EXACT LOCATION WITH DIVISION 22 PRIOR TO ROUGH-IN. PROVIDE 30A SPST

HEAVY DUTY TOGGLE SWITCH FOR LOCAL MEANS OF

- PRIOR TO INSTALLATION.
- ROUTER. PROVIDE JUNCTION BOX AT ROUTER. FIELD VERIFY EXACT LOCATION AND CONDUIT ROUTING
- $\langle 2 \rangle$  provide (4) 3/4" C. Back to data router. Provide DEDICATED 3/4" C. FOR EACH DATA RUN BACK TO ROUTER. ROUTE BELOW SLAB AND TURN UP AT

 $\langle$  1  $\rangle$  INSTALL PODIUM DATA JUNCTION BOX ADJACENT TO PODIUM RECEPTACLE. FIELD VERIFY EXACT

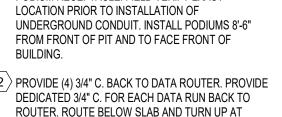
LIGHTING KEYED NOTES:

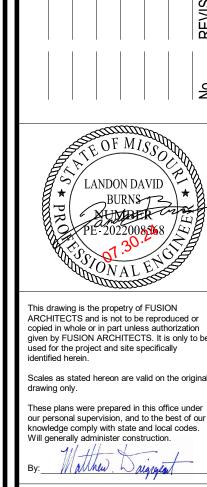
2L SIGNAGE CONTROLLED VIA TIMECLOCK

ELECTRICAL KEYED NOTES:

ALL EXTERIOR LIGHTING SHALL BE

(1L) COORDINATE EXACT LOCATION OF LIGHT FIXTURE WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.









Route ssouri 6 NE Sun



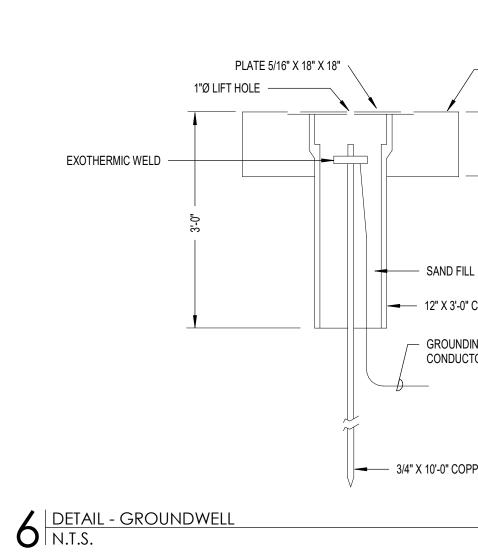


PROJECT NO: 33-006-22 PHASE: Final Dev. Submitta DATE: 26 July, 2024 PROJ. ARCHITECT: MRI

ELECTRICAL PLANS

SHEET NO. **E2.01** 

OF

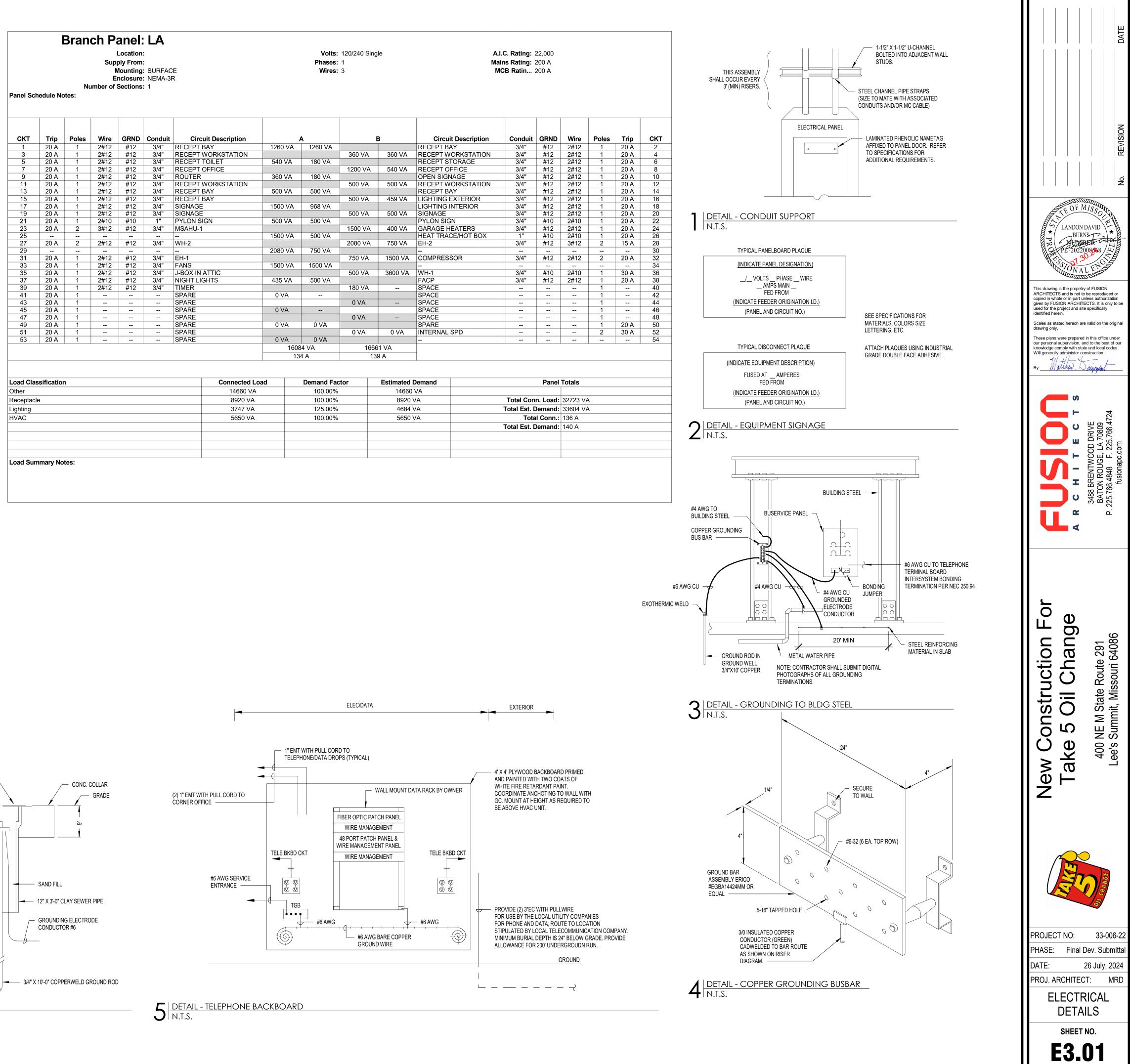


Load Class Other Receptacl ighting

Branch Panel: LA Location: Supply From: Mounting: SURFACE Enclosure: NEMA-3R Number of Sections: 1 Panel Schedule Notes:							Volts: 120/240 Single Phases: 1 Wires: 3			<b>A.I.C. Rating:</b> 22,000 <b>Mains Rating:</b> 200 A <b>MCB Ratin</b> 200 A						
скт	Trip	Poles	Wire	GRND	Conduit	Circuit Description		A		B	Circuit Description	Conduit	GRND	Wire	Poles	Trip
1	20 A	1	2#12	#12	3/4"	RECEPT BAY	1260 VA	1260 VA			RECEPT BAY	3/4"	#12	2#12	1	20 A
3	20 A	1	2#12	#12	3/4"	RECEPT WORKSTATION	1200 VA	1200 VA	360 VA	360 VA	RECEPT WORKSTATION	3/4"	#12	2#12	1	20 A
5	20 A	1	2#12	#12	3/4"	RECEPT TOILET	540 VA	180 VA	000 1/1		RECEPT STORAGE	3/4"	#12	2#12	1	20 A
7	20 A	1	2#12	#12	3/4"	RECEPT OFFICE			1200 VA	540 VA	RECEPT OFFICE	3/4"	#12	2#12	1	20 A
9	20 A	1	2#12	#12	3/4"	ROUTER	360 VA	180 VA			OPEN SIGNAGE	3/4"	#12	2#12	1	20 A
11	20 A	1	2#12	#12	3/4"	RECEPT WORKSTATION			500 VA	500 VA	RECEPT WORKSTATION	3/4"	#12	2#12	1	20 A
13	20 A	1	2#12	#12	3/4"	RECEPT BAY	500 VA	500 VA			RECEPT BAY	3/4"	#12	2#12	1	20 A
15	20 A	1	2#12	#12	3/4"	RECEPT BAY			500 VA	459 VA	LIGHTING EXTERIOR	3/4"	#12	2#12	1	20 A
17	20 A	1	2#12	#12	3/4"	SIGNAGE	1500 VA	968 VA			LIGHTING INTERIOR	3/4"	#12	2#12	1	20 A
19	20 A	1	2#12	#12	3/4"	SIGNAGE			500 VA	500 VA	SIGNAGE	3/4"	#12	2#12	1	20 A
21	20 A	1	2#10	#10	1"	PYLON SIGN	500 VA	500 VA			PYLON SIGN	3/4"	#10	2#10	1	20 A
23	20 A	2	3#12	#12	3/4"	MSAHU-1	4500 \/A	500.1/4	1500 VA	400 VA	GARAGE HEATERS	3/4"	#12	2#12	1	20 A
25 27			 2#12		 3/4"		1500 VA	500 VA	2080 VA	750 VA	HEAT TRACE/HOT BOX	<u>1"</u> 3/4"	#10 #12	2#10 3#12	1 2	20 A 15 A
29	20 A	2	2#12	#12		WH-2	2080 VA	750 VA	2060 VA	750 VA	EH-2		#12	3#1Z		15 A
31	20 A	1	2#12	#12	3/4"	EH-1	2000 VA	730 VA	750 VA	1500 VA	COMPRESSOR	3/4"	#12	2#12	2	20 A
33	20 A	1	2#12	#12	3/4"	FANS	1500 VA	1500 VA	100 17	1000 14			<i>π</i> τ <i>2</i>			
35	20 A	1	2#12	#12	3/4"	J-BOX IN ATTIC			500 VA	3600 VA	WH-1	3/4"	#10	2#10	1	30 A
37	20 A	1	2#12	#12	3/4"	NIGHT LIGHTS	435 VA	500 VA			FACP	3/4"	#12	2#12	1	20 A
39	20 A	1	2#12	#12	3/4"	TIMER			180 VA		SPACE				1	
41	20 A	1				SPARE	0 VA				SPACE				1	
43	20 A	1				SPARE			0 VA		SPACE				1	
45	20 A	1				SPARE	0 VA				SPACE				1	
47	20 A	1				SPARE			0 VA		SPACE				1	
49	20 A	1				SPARE	0 VA	0 VA	0.1/1	0.14	SPARE				1	20 A
51	20 A	1				SPARE	0.1/4	0.1/0	0 VA	0 VA	INTERNAL SPD				2	30 A
53	20 A	1				SPARE	0 VA	0 VA	4000							
								4 VA		61 VA	_					
							13	4 A	13	9 A						

lassification	Connected Load	Demand Factor	Estimated Demand	Panel	Totals	
	14660 VA	100.00%	14660 VA			
acle	8920 VA	100.00%	8920 VA	Total Conn. Load:	32723 VA	
	3747 VA	125.00%	4684 VA	Total Est. Demand:	33604 VA	
	5650 VA	100.00%	5650 VA	Total Conn.:	136 A	
				Total Est. Demand:	140 A	
ummony Notoo						

Load Summary Notes:



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# PART 1.0 GENERAL

- The General Conditions and Supplementary General Conditions are a part of this section of these Specifications. The Contractor is cautioned to read and be thoroughly familiar with all provisions of the General Conditions. These conditions shall be complied with in every aspect. The word "shall" where used, is to be understood, as mandatory and the word "should" as advisory. "May" is used in the permissive sense.
- 1.1 GENERAL CONDITIONS
- 1.2 MINIMUM STANDARDS Applicable rules of the National Electrical Code apply as a minimum standard for this contract, but do not replace or reduce any specific requirement
- 1.3 LAWS, PERMITS AND FEES A. The entire electrical work shall comply with the rules and regulations of the State, including the State Fire Marshal and State Board of Health, whether so shown on plans or not.
- PART 2.0 PRODUCTS

Α.

- 2.1 RACEWAYS AND FITTINGS Raceways permitted on this project shall be hot dipped galvanized rigid steel conduit; electrical metallic tubing (EMT); flexible metallic tubing; and liquidtight flexible metal conduit. All conduits shall be new and shall bear the inspection label of the Underwriter's Laboratories, Inc. Metallic conduit shall be metalized. Non-metallic conduit shall be schedule 40 PVC.
- B. Fittings for conduit shall be an approved type specially designed and manufactured for their purpose. EMT fittings shall be water tight, compression type. Setscrew connector fittings shall not be permitted.
- C. Galvanized conduit furnished in accordance with these specifications shall be of mild steel piping, galvanized inside and outside, and shall conform in all respects to the American Standard Association rigid Steel Conduit Specification C80.1-1959 and Underwriter's Laboratories Specifications.
- 2.2 OUTLET AND SWITCH BOXES Outlet boxes in concealed conduit systems shall be flush mounted. Boxes shall be galvanized steel of sufficient size to accommodate devices shown
- and shall have raised covers where required to meet requirements of NEC Article 314. All boxes shall be stamped, one piece, galvanized steel, of proper size and shape for conduits entering them, and shall be UL listed and NEC approved for the intended use.
- B. Boxes for lighting fixtures shall be 4 inches octagon, not less than 1-1/2 inches deep, with fixtures stud fastened through from back box. Outlet boxes for switches in concealed work shall be standard switch boxes of required number of gangs. Outlet boxes for receptacles, telephone, and communication use in concealed work shall be 4 inch square, not less than 1-1/2 inches deep.
- Boxes are not to be installed back to back in walls. Do not use long, extended boxes that would effectively couple light and sound between adjoining spaces.
- 2.3 WIRE (600 VOLT AND BELOW)
- А All conductors used in the work shall be of soft drawn annealed copper having a conductivity of not less than 98% of that of pure copper. Conductors shall be standard code gauge in size, insulated and shall have insulation rated for use at 600 volts. Unless noted otherwise or specified, insulation shall be type MC, THW, THWN, or THHN for sizes up to and including No. 2 AWG. Insulation for wire sizes larger than No. 2 AWG shall be type THW, XHHW, or THHN. Lighting fixture wire shall be heat resistant type TF (150oC) with 300-volt insulation minimum. Wires shall be of the single conductor type. Sizes No. 8 AWG and larger shall be stranded. Sizes No. 12 thru No. 14 shall be single strand solid copper.
- Throughout the system, all conductors shall be identified as to the phase and voltage of the system by color-coding in accordance with NEC 210.5. Β. Color-coding shall be continuous the full length of the wire with surface printing at regular intervals on all conductors and for neutral conductors.
- 2.4 CIRCUIT BREAKER PANELBOARDS Panelboards shall be sized as shown on the drawings and schedules, and shall be the bolted breaker panelboard type. All panelboard bussing shall be copper. Load centers are not acceptable.
- B. Panel board shall be dead front safety type with main breaker or main lugs, as required by code. Panel boards shall have single, feed through, or double lugs to accommodate feeder conductors. Panel boards with neutrals shall have a neutral buss and a neutral bar insulated from the enclosure for terminating feeder and branch circuit neutral conductors. Each panel board shall have an equipment grounding bar connected to the cabinet for terminating feeder and branch circuit ground conductors.
- C. All breakers shall be bolt on type. Panelboards for 120/208 volt service shall be GE type NLAB, Square D type NQOD, Siemens type CDP_7, Cutler-Hammer POW-R-LINE series, or equal. Panelboards for 480/277 volt service shall be Square D type NEHB, Siemens type Sentron, Cutler-Hammer POW-R-LINE series, or equal.

# 2.5 WIRING DEVICES

Unless otherwise specified, all outlets including voice/data outlets shall be fitted with cover plates. Cover plates shall be standard size, uniform in design and finish for switches, receptacles and other outlets requiring cover plates.

Wiring devices shall be as listed. The color of device shall match color of outlet cover plate. It shall be the responsibility of the Contractor to provide plugs, receptacles, and Β. fittings required for any equipment furnished or installed or connected under the contract. Color as selected by the Architect.

Taggla Switches: 204 120/277/	Levition	P&S	Hubbell	
Toggle Switches: 20A 120/277V Single pole Three-way	1221-l 1223-l	20AC1-I 20AC3-I	1221-l 1223-l	
Duplex Receptacle: 20A, 125V, NEMA 5-20R	5362-1	5362-1	5363-I	
Ground Fault Circuit Interrupter: 20A, 125V, Feed Throug NEMA 5-20R	ıh, 6899-l	2091-S	GF-5362-I	

C. Quad receptacles shall be 20 amp, 125 volt rated, NEMA 5-20R, with two (2) duplex receptacles or single four-plex device.

### 2.6 VOICE & DATA STATION CABLES

Voice and data station wiring shall be Category 6 enhanced (Cat 6e) communications wire and cable. Station Cable shall be four-pair, unshielded, twisted pair, inside-station Α. cable, and shall be constructed of solid 24 gauge annealed copper. Each conductor shall be insulated with a continuous layer of fluorinated ethylene propylene (FEP). The sheath shall be all weather, flame resistant, polyvinyl chloride. Station wire shall be constructed of 4 twisted pair sharing one sheath. Cable shall have Category 6e transmission characteristics as specified by ANSI/EIA/TIA-568-B2.1. Cables routed in air plenum shall have a sheath and conductor insulation constructed of material so as to be classified as type CMP as defined by the NEC 800-3(b)(3). Voice cable shall be GRAY. Data station cables shall be BLUE.

### 2.7 LED LIGHTING

- Lighting fixtures with LED light sources shall meet the following fixture and light source requirements:
- LED Color Temperature Cool White (CW), 5800K nom., CRI > 70
- Line Voltage Universal Voltage 120-277 volts Governmental Standards - LM79 and LM80 Compliant
- Expected Lamp Life LED Life Rating (L70 B10) to be 60,000 hours to 100,000 hours; Defined as time of operation (in hours) to 30% lumen depreciation (i.e. 70% lumen maintenance), derived from Luminaire in-situ temperature measurement testing (i.e. LED chip package temperature (TS) measurement obtained with the LED chip package operating in given luminaire and in a given stabilized ambient environment) under UL1598 environments and directly correlated to LED package manufacturers IESNA LM-80-08 data. Predicted (L70 B10) Limits (@ 25°C luminaire ambient operating environment): Greater than 60,000 hours @ 350mA Drive Current Driver - Components must be fully encased in potting material for moisture resistance, and must comply with IEC and FCC standards
- Surge Protection Surge protection must be provided including separate sure protection built into electronic driver Mechanical - Luminaire LED system components to be low copper aluminum, with high performance heat sink(s) designed specifically for LED luminaires. No active cooling
- features (Fans, etc.). Luminaire configuration must allow for modular upgradability and/or field repair of all electrical components (i.e. LED modules, Driver(s), etc.). Drivers and vertical light bars must be all mounted to a twist-lock tool-less assembly for ease of installation and trouble- shooting.
- Drivers shall be provided with a minimum warranty of 5 years. 8.

### PART 3.0 EXECUTION 3.1 WIRING - GENERAL

- 3.2 CONDUIT MATERIALS AND METHODS
- 3.3 MOUNTING HEIGHTS Communication Outlets - 1'-6" (48" for wall phone).
- 3.4 COMMUNICATIONS WIRING INSTALLATION

- bundles shall not include power wiring or wiring for other low voltage systems (fire alarm, intercom, security, CCTV, etc.).

a different color.

- LIGHTING INSTALLATION 3.5

Unless otherwise specified, all wiring shall be installed in conduit. No wire shall be smaller than No. 12 unless noted otherwise. Wire for each branch circuit shall be of single size and type from the branch circuit protective device the last outlet of the circuit. BX wiring shall not be allowed.

Conduit shall be installed as per NEC and NEMA regulations and the manufacturer's recommendations. Electrical Metallic Tubing shall be used for feeders, branch circuit and communications and control wiring. In places where EMT is permitted, 1/2" through 2" sizes shall be the only sizes permitted. Fittings for EMT shall be the compression ring type fittings. Communications wiring may be installed without conduits above accessible ceilings.

A. Unless otherwise noted on the drawings or required by the Architect, the following mounting heights shall apply: Toggle Switches - 4'-0"; Receptacles - 1'-6";

Unless otherwise specified, all communications systems shall be permanently installed and connected to the wiring system. The systems must be installed according to manufacturer standards and recommendations. Wiring installation shall be tested after completion of installation. Test results and as-built documents will be provided toarchitect in both hard copy and electronic copy, furnished on a CD.

Wiring map/as built documents showing voice and data outlets, device numbers, room locations, and termination locations will be displayed in each wiring closet. Wireless drop wiring shall be punched down on a separate punch down block at the end of the data punch down blocks. The wireless punch down block shall be

Voice and data wiring routed above accessible ceilings shall be supported on J-hooks, and shall be loose bundled using Velcro wraps. Voice and data wire

E. COMMUNICATIONS SYSTEM CABLES ROUTED EXPOSED ABOVE CEILINGS SHALL BE PLENUM RATED.

Unless otherwise specified, lighting fixtures shall be permanently installed and connected to the wiring system. The Contractor shall support each fixture, independently from the building structure. Ceiling framing members shall not be used to support fixtures except in specified areas where ceiling supports for this purpose have been specified elsewhere in these specifications. Each fixture shall have at least two fixture supports. Flexible conduit used for fixture whips shall be at least twelve (12) inches, but not more than 48 inches long.

# LANDON DAVI BURNS This drawing is the propetry of FUSION ARCHITECTS and is not to be reproduced or copied in whole or in part unless authorization given by FUSION ARCHITECTS. It is only to be used for the project and site specifically identified herein. Scales as stated hereon are valid on the original rawing only. These plans were prepared in this office under our personal supervision, and to the best of our knowledge comply with state and local codes. Will generally administer construction. Malhen. Walgreycan Ō Œ Ш Ο Chan onstruction 9291 6408 Route ssouri ( <u>O</u> Ais Mis it St $\geq$ S NE Sun ake $\bigcirc$ 400 ee's New PROJECT NO: 33-006-22 PHASE: Final Dev. Submitta DATE: 26 July, 2024 PROJ. ARCHITECT: MRI

ELECTRICAL **SPECIFICATIONS** 

SHEET NO.

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