over supports.

14. Pour columns, walls, and pilasters to be monolithic

b. Support beam bars on heavy beam bolsters.

a. Support top slab bars with continuous high chairs.

d. Support WWR in slab-on-grade properly at the mid-depth

15. All bar steel and WWR shall be properly supported and held accurately in

c. Support footing and grade beam bottom reinforcing on concrete

of the slab. Hooking and pulling up mesh after concrete has

size of WWR reinforcement. Place slab on a 15 mil. vapor barrier over

19. Where slabs-on-grade make an abrupt change in direction, such as at doors

opening extending 2 feet past the opening, unless noted otherwise. Do

not provide or cut any openings or sleeves in slabs or walls other than

those shown on the Structural Drawings, unless approved by the Structural

and corners or ends of walls, provide 1-#4 by 4 feet across the reentrant

started to take its initial set is prohibited.

18. Interior slabs-on-grade: Reference Drawings for thickness of slab and

20. Openings in slabs and walls: Provide 2 - #5 extra bars each side of

place as recommended by the Concrete Reinforcing Steel Institute, except

bricks, concrete blocks, or mounds of poured concrete. Do not use

any other support materials without the approval of the Engineer.

a free draining granular sub-base as recommended by the geotechnical engineer.

that maximum spacing of any bar or welded wire fabric support shall be

A. GENERAL clarification. B. DESIGN AISC 2. Design Loads: c. Seismic capacities: a. Active (Ka) b. At-Rest (Ko) c. Passive (Kp) C. EARTHWORK D. CONCRETE c. Framed Slabs: bars cold. noted otherwise. to weather. lapped corner bars. Lap WWR a minimum of 9". Reference Typical Details for column splice requirements. 13. Top and bottom bars in continuous footings shall run continuous through multiple spans, where possible. Otherwise, top bars shall splice within the middle 1/3 span and bottom bars shall splice (by lapping 3'-0)

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GENERAL NOTES
                                                                                              E. MASONRY
                                                                                                    1. Concrete masonry units (CMU): ASTM C 90, minimum net area
1. These notes shall be read in conjunction with the Specifications and the
                                                                                                           compressive strength of 2800 psi for type M or S mortar
     Drawings. In the event of a conflict, notify the Architect for
                                                                                                           and 3050 psi for Type N mortar.
                                                                                                    2. Mortar: Portland cement and lime, and proportioned in
  Before executing anything herein shown, examine actual job conditions.
                                                                                                          accordance with ASTM C 270 for the following types:
     Report any discrepancy, dimensional or otherwise, between architectural
                                                                                                            Type N - for all walls above grade
     and structural Drawings and any other error, omission, or difficulty
                                                                                                             Type M - for all walls below grade, in contact with earth
     affecting the work to the Architect and to the Structural Engineer for
                                                                                                     3. f'm = 2000 psi - hollow units.
                                                                                                    4. Concrete Masonry shall be laid in running (common) bond.
 3. Any condition encountered in the existing structural system which is
     different from that indicated in Drawings or which might create a failure
                                                                                                    5. Provide mortar bed on webs between grouted cells and
     or hazard shall be brought to the immediate attention of the Architect.
                                                                                                          hollow cells.
 4. The Owner or his Representative reserves the right to inspect any
                                                                                                    6. Grout: ASTM C 476, 2,500 psi minimum 28-day compressive
     material, fabrication, or workmanship at any time in field or shop for
     conformance to the Specifications and Drawings.
                                                                                                    7. Concrete Masonry below finished floor shall be normal weight
5. All details and sections are intended to be typical and shall be
                                                                                                          units and shall have all cells fully grouted. Concrete Masonry
     construed to apply to any similar situation elsewhere, except where a
                                                                                                          above finished floor shall be light weight units and shall be
     different detail is shown.
                                                                                                          grouted as specified.
 6. All concrete and cmu alls shall be temporarily braced until floor and roof
                                                                                                    8. Grout all vertical cells and spaces containing reinforcing
     decks have been installed and all connections between these elements have
                                                                                                          bars (as detailed) bond beams, and lintels.
     been made. The contractor is responsible for the design of the bracing.
                                                                                                    9. Vertically reinforce walls as shown on the "CMU wall schedule".
 7. The contractor is responsible for structural integrity and stability of
     existing structures during demolition and new construction.
                                                                                                          In addition, reinforce vertically at each corner, 2 cells at ends
                                                                                                          of walls, 2 cells each side of control joints and openings.
                                                                                                     10. Horizontally provide continuous bond beam with 2 #5 minimum
                                                                                                          for 12" CMU; (1) #5 minimum for 8" or 6" CMU at floor/roof,
1. Codes, specifications and standards (latest editions, U.N.O.)
                                                                                                          8'-0" above floors and top of wall, unless noted otherwise.
     a. All design and construction shall conform to the International
                                                                                                          Provide #5 corner bar for each horizontal bond beam bar at all
          Building Code (2018) as amended and adopted by the City of
                                                                                                          wall corners.
          Lee's Summit, Missouri.
                                                                                                    11. Place reinforcement prior to grouting. Hold vertical reinforcement
     b. All construction shall comply with the provisions of the following
                                                                                                          in position with rebar positioner wire bond hot dip galvanized
          codes, specifications and standards, except where noted to the
                                                                                                          3401 for single bars and 3402 for double bars, or equivalent
          contrary on drawings and specifications or where more stringent
                                                                                                          (min. 2 each lift).
          requirements are specified or shown:
                                                                                                     12. Provide horizontal joint reinforcement as indicated on the
          MCIB "Specifications for Concrete Work"
          ACI 117 "Standard Specifications for Tolerance for Concrete
                                                                                                          drawings and specifications, at a minimum provide at 16"o.c.
                    Construction and Materials"
                                                                                                     13. Lap joint reinforcement a minimum of 6 in.
          ACI 301 "Specifications for Structural Concrete for Buildings"
                                                                                                    14. In no case shall shores and forms at lintels be removed until it
                                                                                                          is certain that the masonry has hardened sufficiently to carry its
         ACI 318 "Building Code Requirements for Reinforced Concrete"
                                                                                                          own weight and all other reasonable temporary loads that may be
         ACI 530 "Building Code Requirements for Masonry Structures"
                   "Minimum Design Loads for Buildings and Other Structures"
                                                                                                          placed on it during construction.
                   "Load and Resistance Factor Design (LRFD) Specification
                                                                                                    15. Do not wet concrete masonry units, except saw cutting.
                                                                                                    16. Do not use calcium chloride.
                    for Structural Steel Buildings"
                                                                                                    17. Do not use masonry cement.
                    "Specifications for the Design of Cold-Formed Steel
                                                                                                    18. Install temporary bracing at all CMU walls. Do not remove temporary
                    Structural Members"
                    "Specifications, Load Tables, and Weight Tables for
                                                                                                          bracing until wall is permanently braced by connection to the roof
                                                                                                          and floor structures.
                     Steel Joist and Joist Girders"
                                                                                                    19. Provide cleanout openings at bottom of cells to be grouted when
                    "Steel Deck Manual for Floor Decks and Roof Decks"
                                                                                                          grout pour exceeds 5'-0" in height. Remove all overhanging mortar
          AWS D1.1 "Structural Welding Code - Steel"
                                                                                                          or obstructions and any debris from inside such cell walls.
     a. Future Roof - Snow (incl. rain on snow)
                 Flat Roof Snow Load, Pf
                                                    24 psf
                                                    1.00
                 - Snow Exposure Factor, Ce
                                                                                              F. STEEL
                 Snow Importance Factor, Is
                                                    1.20
                                                    1.00
                 Thermal Factor, Ct
                                                                                                   1. Structural steel:
                                                                                                        a. Wide Flange sections
                                                                                                                                                    ASTM A 992
                 - Basic Wind Speed (3 second gust), V 130 mph
                                                                                                             WT shapes
                                                                                                                                                    ASTM A 992
                - Risk Category
                                                                                                                                                    ASTM A 36
                                                                                                        c. Channels, Angles and Plates
               - Wind Exposure
                                                                                                        d. HSS (Round and Rectangle)
                                                                                                                                                    ASTM A 500, Grade B
                 Internal Pressure Coefficient
                                                  0.18
                                                                                                         e. Pipes (Standard, X and XX)
                                                                                                                                                    ASTM A 501
                                                                                                        Beam and column connections shall be as shown on plans.
                 Risk Category
                                                                                                     Except where specifically detailed, single plate and/or eccentric
                 - Seismic Design Category
                                                                                                        connections shall not be used without supporting calculations from the
                - Seismic Importance Factor, Ie
                                                                                                        fabricator showing adequate capacity. The calculations shall be made by
                - Spectral Response Acceleration, Ss 0.099g
                                                                                                        a Structural Engineer registered in the State of Missouri.
                 - Spectral Response Acceleration, S1 0.068g
                                                                                                    4. High Strength Bolts (steel-to-steel connections): ASTM A 325N.
                 - Spectral Response Coefficient, Sds 0.086g
                                                                                                        snug tightened, bearing type.
                 Spectral Response Coefficient, Sdl 0.068g
                                                                                                    5. Anchor bolts: ASTM F1554 Grade 36
                - Site Class
                                                                                                   6. Welded connections: AWS Standards and Specifications using E70xx
                - Basic Seismic-Force-Resisting System: Dual Systems With
                                                                                                        electrodes, unless noted otherwise.
                                                       Intermediate reinforced
                                                                                                   7. Ends of beams which have copes to the extent that allowable shear or
                                                       concrete moment frames
                                                                                                        bending stress of steel is exceeded shall have web plates of sufficient
                                                       w/ ordinary reinforced
                                                                                                          ize welded to the beam to reduce such stresses
                                                       concrete shear walls
                                                                                                   8. Provide holes required for securing other work to structural steel
                 Seismic Response Coefficient, Cs 0.023
                                                                                                        framing, and for passage of other work through steel framing members, as
                - Response Modification Factor, R
                                                                                                        shown on final shop drawings.
                 Analysis Procedure
                                                     Equivalent Lateral Force
                                                                                                    9. Do not flame cut holes or enlarge holes by burning.
     d. Roof Live Load
                                                     30 psf
                                                                                                    10. Set structural frames accurately to lines and elevations indicated.
     e. Floor Live Load
                                                     100 psf
                                                                                                        Align and adjust various members forming apart of a complete frame or
3. Foundations are designed for the following net allowable bearing
                                                                                                        structure before permanently fastening. Perform necessary adjustments
                                                                                                        to compensate for discrepancies in elevations and alignment.
     a. Drilled Pier on limestone
                                                   50,000 psf
                                                                                                    11. Provide temporary shoring and bracing members with connections of
 4. Foundations and retaining walls have been designed for the following
                                                                                                        sufficient strength to bear imposed loads. Remove temporary members and
     equivalent fluid pressures:
                                                                                                        connections when permanent members are in place and final connections are
                                                     40 pcf
                                                                                                        made. Provide temporary guy line to achieve proper alignment of
                                                     60 pcf
                                                                                                        structure as erection proceeds.
                                                                                                    12. Clean bearing surfaces of bond-reducing materials and roughen to improve
                                                     260 pcf
                                                                                                        bond to surfaces. Clean bottom surface of base plates.
                                                                                                    13. Grout plates are prohibited. Tighten anchor bolts after supported
                                                                                                        members have been positioned and plumbed. Do not remove wedges or shims,
                                                                                                        but if protruding, cut off flush with edge of base plate prior to packing
     Refer to specification for access to geotechnical report.
                                                                                                   14. Nonshrink grout: CRD-621 Type A, premixed, nonmetallic, noncorrosive,
     Foundation design is based on a soils investigation by Alpha - Omega Geotech
 3. Refer to Drawings and Specifications for details of fill and compaction
                                                                                                        nonstaining.
                                                                                                    15. The physical and structural properties listed by Dietrich Industries,
                                                                                                        Inc. for light gage metal framing shall be considered the minimum
 4. Foundation wall backfill shall not be unbalanced by more than two (2)
     feet on either side at any time or placed before the interior floors
                                                                                                        permitted for all framing members. Any substitutions must be approved
     and shear walls are placed.
                                                                                                        in writing ten (10) days prior to ordering materials, by the Architect
5. At stepped footings, place the lower footing first and run footing a
                                                                                                        and/or Engineer of Record.
     minimum of 1 foot under upper footing.
 6. Clean footing excavations immediately before concrete is placed to remove
     all material softened or loosened.
                                                                                              G. METAL DECK
  Place footings against undisturbed earth (i.e. bottom & sides).
 8. All perimeter footings and footings in unheated portions of the building
                                                                                                   1. Roof deck: 1-1/2" galvanized wide rib deck with the following minimum
     should extend a minimum of 3'-0" below final grade.
                                                                                                        properties:
                                                                                                            Minimum gage
                                                                                                            Moment of Inertia 0.201 in 4
                                                                                                            Section Modulus 0.234 in 3
                                                                                                    2. Roof deck: 3" galvanized wide rib deck with the following
1. Concrete used in the Work shall have the following minimum 28-day
                                                                                                        properties:
     ultimate compressive strengths:
                                                                                                            Minimum gage
     a. Drilled Piers, Footings, Grade Beams
                                                                                                             Moment of Inertia 0.848 in 4
           Interior Slabs-On-Grade:
                                                                                                             Section Modulus 0.501 in 3
                                                6000 psi
     b. Columns and Concrete Walls:
                                                                                                    3. Composite floor deck: 1-1/2" galvanized with the
                                                4500 psi
                                                                                                        following minimum properties:
     Portland Cement: ASTM C 150, Type 1.
                                                                                                            Minimum gage
     Water-reducing admixtures: ASTM C 494.
                                                                                                              moment of inertia 0.282 in 4
     Normal Weight Aggregates: ASTM C 33.
                                                                                                             Section Modulus 0.315 in 3
 5. In case of integral construction, higher strength and lighter weight
                                                                                                        Roof deck shall be attached to supports to resist a net uplift of 30 PSF.
                                                                                                     . The roof deck has been designed as a diaphragm. Weld deck to all supports and around
  6. Air entrain all exterior concrete (admixture: ASTM C 260).
                                                                                                        perimeter with 5/8" dia. puddle welds @ 12"o.c. and provide (3) #10 tek screw side
    Do not use calcium chloride admixtures under any circumstances.
                                                                                                         laps between supports for 1/2'' deck.
 8. Reinforcing bars: ASTM A 615 Specifications, Grade 60, deformed. Bend
                                                                                                        Weld deck to all supports and around perimeter with 5/8" dia. welds @ 8"o.c. and
                                                                                                        provide (3) #10 tek screw side laps between supports for 3" deck.
 9. Welded wire reinforcing (WWR): ASTM A 185.
                                                                                                   6. Provide 2-1/2'' \times 2-1/2'' \times 1/4'' angles as required to support deck at
 10. Anchor bolts: Refer to "Steel" notes. Accurately locate anchor bolts
                                                                                                        columns, ends of beams, around openings, etc. Except as noted otherwise.
     with templates, and hold securely in position prior to and while placing
     concrete. Protect anchor bolts from construction activity until the
                                                                                              F. POST-INSTALLED ANCHORS
     structure above is in place. Inserting anchor bolts into partially
     hardened concrete is prohibited.
                                                                                                   1. Except where indicated on the drawings, post-installed anchors shall consist of
 11. Maintain minimum concrete coverage for reinforcing as indicated, unless
                                                                                                        the following anchor types:
                                                                                                    a. Anchorage to concrete and grouted cmu walls.
     a. 3 in. clear where concrete is deposited directly against earth.
                                                                                                      i. Adhesive anchors shall have been tested in accordance with ACI 355.4 and/or
     b. 2 in. clear where concrete is exposed to earth or weather but
                                                                                                          ICC-ES AC308 for cracked concrete and seismic applications. Adhesive anchors
          poured against forms for bars larger than #5.
                                                                                                          shall be installed by a certified adhesive anchor installer Where designated
     c. 1-1/2 in. clear where concrete is exposed to earth or weather, but
                                                                                                          on the contract documents. Pre-approved products include:
          poured against forms for bars #5 or smaller.
                                                                                                          1. Hilti HIT-HY 200 SAFE SET System with Hilti HIT-Z Rod per ICC ESR-3187.
     d. 3/4 in. clear for slabs and walls formed above grade not exposed
                                                                                                           2. Hilti HIT-HY 200 SAFE SET System with Hilti hollow drill bit system with
                                                                                                            HAS-E threaded rod per ICC ESR-3187
     e. 1-1/2 in. clear for beam and columns formed above grade and not
                                                                                                          3. Hilti HIT-HY 200 SAFE SET System without Hilti hollow drill bit system
 12. Lap all bars at splices in accordance with ACI 318, but not less than 48
                                                                                                            with HAS-E threaded rod per ICC ESR-3187. Follow manufacturer recommended
     bar diameters nor less than 18 inches unless noted otherwise. All
                                                                                                            hole cleaning practice for this option.
     horizontal wall bars shall be developed at corners either by bending not
                                                                                                          4. Simpson Strong-Tie SET-XP adhesive anchoring system per ICC ESR-2508.
     less than 18 inches around corners or with properly placed hooked and
```

5. Anchor capacity used in design shall be based on the technical data published by Hilti, Simpson, or such other method as approved by the Structural Engineer of Record. Substitution requests for alternate products must be approved in writing by the Structural Engineer of record prior to use. contractor shall provide calculations demonstrating that the substituted product is capable of achieving the performance values of the specified product. Substitutions will be evaluated by their having an ICC ESR showing compliance with the relevant building code for seismic uses, load resistance, installation category, and availability of comprehensive installation instructions. Adhesive anchor evaluation will also consider creep, in-service temperature and installation temperature. 6. The contractor shall arrange for an anchor manufacturer's representative to provide onsite installation training for all of their anchoring products specified. The Structural Engineer of Record must receive documented confirmation that all of the contractor's personnel who install anchors are trained prior to the commencement of 7. Anchor capacity is dependent upon spacing between adjacent anchors and proximity of anchors to edge of concrete. Install anchors in accordance with spacing and edge clearances indicated on the drawings. 8. If a specific epoxy adhesive anchoring system is noted in a particular detail of this constructino drawings, other alternative product options listed above in item 1 shall not apply. G. LIGHT GAUGE STRUCTURAL STEEL FRAMING 1. The contractor is responsible for the design of all structural light gauge steel framing and connections between them and the other structural members. Submit design calculations and drawings, sealed by an engineer licensed in the state of the project location, for review by the architect/ structural engineer of record. H. GLAZING SYSTEM 1. The contractor is responsible for the design of all glazing system and connections between them and the other structural members. Submit design calculation sand drawings, sealed by an engineer licensed in the state state of the project location, for review by the architect/ structural engineer of H. CONSTRUCTION 1. Provide adequate shoring or bracing during construction to resist forces such as wind and unbalanced loading due to construction. 2. Protect existing building as required until all new construction is 3. Verify all dimensions of or to existing construction. Any variation from that shown on plans shall be brought to the attention of the Architect/Engineer before proceeding. 4. Haul off and properly dispose of all material demolished from the site unless specifically directed otherwise by the Owner. 5. Field verify the location and depth (or height) of all utilities prior to beginning construction in order to provide adequate clearances and to insure noninterruption of service.

6. Before core drilling any holes, locate the reinforcing steel in the

7. Cut openings in existing concrete slabs and walls with a power saw to

8. Core drill corners of openings in existing concrete slabs and walls prior

to saw cutting. Size of core shall be sufficient to prevent saw overrun.

9. Contact engineer for details to fix damaged/missing anchorbolts, misplaced

10. During welding or any other construction activity that generates sparks or

intense heat, the contractor shall provide adequate fire protection to the

remove combustible materials from areas of welding and sparks.

provide fire proof blankets and shields to contain sparks where

the Structural Engineer. Do not overcut any holes.

existing structure and contents. as a minimum:

CONCRETE MASONRY UNIT

EXTERIOR INSULATION AND FINISH SYSTEM

COLUMN

CONCRETE

CONNECTION

CONSTRUCTION

**EXPANSION JOINT** 

CONTINUOUS

DIAMETER

**ELEVATION** 

EACH WAY

FAR SIDE

FOOTING

GAGE

FOUNDATION

FINISHED FLOOR

GYPSUM BOARD

HORIZONTAL

INFORMATION

JOIST GIRDER

JOINT

POUNDS

ISOLATION

GENERAL CONTRACTOR

HEADED STUD ANCHOR

JOIST BEARING ELEVATION

KIPS PER SQUARE INCH

LONG LEG HORIZONTAL

MECHANICAL ELECTRICAL PLUMBING

LONG LEG VERTICAL

LONGITUDINAL

MECHANICAL

MANUFACTURER

MISCELLANEOUS

MASONRY OPENING

MAXIMUM

MINIMUM

METAL

PLATE

QUANTITY

REFER TO

REQUIRED

REVERSE

REINFORCING

ROUGH OPENING

STEEL DECK INSTITUTE

STEEL JOIST INSTITUTE

SLAB ON GRADE

SPECIFICATIONS

TOP OF CMU WALL

TOP OF BOND BEAM TOP AND BOTTOM THICKNESS

STRUCTURAL

**ROOF TOP UNIT** 

SCHEDULE

SIMILAR

NUMBER

NEAR SIDE

NOT TO SCALE

**OUTSIDE DIAMETER** 

OPPOSITE HAND

**OUTSTANDING LEG** 

POWDER ACTUATED FASTENER

POUNDS PER CUBIC FOOT

POUNDS PER LINEAR FOOT

PREMOLDED EXPANSION JOINT

POUNDS PER SQUARE FOOT

POUNDS PER SQUARE INCH

ON CENTER

**EQUAL** 

CMU

CONC

CONN

CONST

CONT

EIFS

GYP BD

INFO

LLV

MAX

MECH

MEP

MISC

OSL

PCF

QTY

REINF

REQD

REV

RO

SDI

SIM

SJI

SOG

SPECS

STRUC

T/CMU

RTU

SCHED

ii. Screw anchors shall have been tested in accordance with ACI 355.2 and/or

1. Hilti KWIK HUS EZ screw anchors per ICC ESR-3027.

To be used in concrete and grouted cmu walls.

b. Anchorage to Masonry Hollow Cells and Brick

products include:

i Adhesive Anchors to Use:

required installation torque.

ICC-ES AC193 for cracked concrete and seismic applications. Pre-approved

(For interior applications only, not approved for exterior application)

Anchor element shall be Hilti HAS-E continuously threaded Rod. The appropriate

Anchor element shall be continuously threaded Rod. The appropriate size stainless

1. Hilti Hit-HY 70 Masonry Adhesive anchoring system per ICC ESR-3342. Steel

2. Install anchors per the manufacturer instructions, as included in the anchor

cutting steel. Do not cut existing concrete reinforcing steel. If, while

3. Drill holes for wedge-type expansion anchors using a bit incapable of

drilling, reinforcing steel is encountered, notify the Structural

Engineer for approval of new location. Clean and patch the abandoned hole with grout. Always follow manufacturer's written instructions.

4. Where epoxy anchors are indicated to be installed at "reduced installation

torque" on these drawings, follow above referenced ICC ESR reports to determine

size screen tube shall be used per adhesive manufacturer's recommendation

2. Simpson Stong-Tie AT Masonry Adhesive anchoring system per ICC ESR-3342. Steel

steel screen tube shall be used per adhesive manufacturer's recommendation.

prevent vibration and damage of surrounding structure.

concrete reinforcing and damaged/missing masonry dowels.

combustible materials cannot be removed.

existing concrete with R-meter. Relocate the hole to avoid cutting any

rebars. Do not drill holes through existing rebars unless acceptable to

- provide a fire safety observer with a fire extinguisher on both the roof and below the roof during welding near the roof structure. **ABBREVIATION LEGEND** DEFINITION ABBR ABBR DEFINITION ANCHOR BOLT AMERICAN CONCRETE INSTITUTE TOP OF CONCRETE ABOVE FINISHED FLOOR TOF TOP OF FOOTING AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION TOGB TOP OF GRADE BEAM AMERICAN IRON AND STEEL INSTITUTE AISI TOP OF MASONRY ARCH ARCHITECTURAL TOP OF PAVING ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS | TOS TOP OF STEEL AMERICAN WELDING SOCIETY **TRANS** TRANSVERSE TYP TYPICAL BOND BEAM UNO BLOCK LINTEL UNLESS NOTED OTHERWISE **VERT** BOTTOM OF VERTICAL BOS **BOTTOM OF STEEL** WIDTH WORK POINT BEARING CONTRACTION JOINT CENTER LINE CLEAR

## SPECIAL INSPECTION AND TESTING

1. The following tests and inspection shall be performed by an independent inspection agency employed by the owner and approved by the structural engineer and the building official Test and inspection reports shall be submitted to the owner, architect, structural engineer, and building official. Special inspection shall conform to Chapter 17 of the 2018 International Building Code.

## Classification of Work Requiring Special Inspections

· Fire-Resistant Penetrations and Joints

 Excavation and Filling Structural Welding Verification of Soils • High Strength Bolting Placement of Reinforcing Steel Steel Frame Inspection Placement of Reinforced Concrete Seismic Resistance • Inspection of Structural Steel Fabricator Testing of Reinforced Concrete Bolts Installed in Concrete Sprayed Fine-Resistant Materials

# REQUIRED SPECIAL INSPECTIONS AND TEST OF SOILS

Structural Masonry

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING	PERIODICALLY DURING
	TASK LISTED	TASK LISTED
Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	-	Х
Verify excavations are extended to proper depth and have reached proper material.	-	X
Perform classification and testing of fill materials.	-	Х
Verify use of proper materials, densities and lift thickness during placement and compaction of compacted fill.	Х	-
<ol> <li>Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.</li> </ol>	-	Х
Verify materials below drilled piers are adequate to achieve the design bearing capacity.	-	X
7. Drilled Piers		X

# REQUIRED VERIFICATION AND INSPECTION OF CONCRETE STRUCTURE

TYPE	CONTINUOUS	PERIODIC
Inspect reinforcement, including prestressing tendons, and verify placement.	-	Х
2. Inspect anchors cast in concrete.	-	X
3. Inspect anchors post-installed in hardened concrete members. a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. b. Mechanical anchors and adhesive anchors not defined in 3.a.	X	-
4. Verify use of required design mix.	-	Х
5. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	Х	-
6. Inspect concrete and shotcrete placement for proper application techniques.	X	-
7. Verify maintenance of specified curing temperature and techniques.	Х	-

## MINIMUM SPECIAL INSPECTION REQUIREMENTS OF STRUCTURAL CMU WALLS LEVEL C QUALITY ASSURANCE

MINIM	MUM SPECIAL INSPECTION	ı

Inspection Task	Frequ	ency
·	Continuous	Periodic
. As masonry construction begins, verify that the following are in compliance:		
Proportions of site-prepared mortar     and grout		Х
b. Grade, type, and size of reinforcement connectors, anchor bolts		Х
c. Sample panel construction	Х	
2. Prior to grouting, verify that the following are in compliance:		
a. Grout space	Х	
b. Placement of reinforcement, connectors, and anchor bolts	Х	
c. Proportions of site-prepared grout		X
3. Verify compliance of the following during construction:		
Materials and procedures with the approved submittals		Х
b. Placement of masonry units and mortar joint construction		Х
c. Placement of grout	Х	
d. Size and location of structural members		Х
e. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction	Х	
f. Welding of reinforcement	Х	
g. Preparation, construction, and protection of masonry during cold weather (temperature below 40°F (4.4°C)) or hot weather (temperature above 90°F (32.2°C))	Х	
Observe preparation of grout specimens, mortar specimens, and/or prisms.	Х	

## REGUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

VERIFICATON AND INSPECTION	Continuous	Periodic
Material verification of high-strength bolts, nuts, and washers:		
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	-	X
b. Manufacturer's certificate of compliance required.	-	Х
2. Inspection of high-strength bolting:		
a. Snug-tight joints	-	Χ
b. Pretensioned and slip-critical joints using turn-of-nut with matchmarking, twist-off bolt or direct tension indicator methods of installation.	-	X
c. Pretensioned and slip-critical joints using turn-of-nut without matchmaking or calibrated wrench methods of installation.	Х	-
3. Material verification of structural steel and cold-formed steel deck:		
a. For structural steel, identification markings to conform to     AISC 360	-	Х
b. For other steel, identification markings to conform to ASTM standard specified in the approved construction documents.	-	Х
c. Manufacturer's certified test reports.	-	Х
4. Material verification of weld filler materials:		
a. Identification markings to conform to AWS specification in the construction documents.	-	Х
b. Manufacturer's certificate of compliance required.	-	Х
5. Inspection of welding:		
a. Structural steel and cold-formed steel deck:		
Complete and partial joint penetration groove welds.	Х	-
2. Multi-pass fillet welds	Х	-
3. Single-pass fillet welds > 5/16"	X	-
4. Plug and slot welds.	Х	-
5. Single-pass fillet welds < 5/16"	-	Х
6. Floor and roof deck welds.		Х
6. Inspection of steel frame joint details for compliance.		
a. Details such as bracing and stiffening.	_	Х
b. Member locations.	-	X
c. Application of joint details at each connection.	-	Х

#### REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
Material verification of cold formed steel deck:		
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	-	X
b. Manufacturer's certified test reports.	-	X
2. Inspection of welding:		
a. Cold formed steel deck:		
(1) Floor and roof deck welds.	-	X
b. Reinforcing steel:		
(1) Verification of weldability of reinforcing steel other than ASTM A706.	-	X
(2) Reinforcing steel resisting flexural and axial forces in immediate and special moment frames, and boundary elements special structural walls of concrete and shear reinforcement.	Х	-
(3) Shear reinforcement.	X	-
(4) Other reinforcing steel.	Х	-
3. Tectum Deck Attachment to Structure:		
a. Welding	-	X
b. Bolting/anchoring	-	X

### REQUIRED VERIFICATION AND INSPECTION OF SPRAYED FIRE-RESISTANT MATERIALS AND FIRE-RESISTANT PENETRATIONS AND JOINT

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
Condition of substrates	-	X
2. Thickness of application	-	Χ
3. Density in pounds per cubic foot	-	Χ
4. Bond strength adhesion/cohesion	-	Χ
5. Condition of finished application	-	X
6. Penetration firestop's	-	Χ
7. Fire-resistant joint system	-	X
8. Floor to wall intersections	-	Х

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Missouri: #000396 MEP CONSULTANT

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Kansas City, MO 64108 816.842.8437

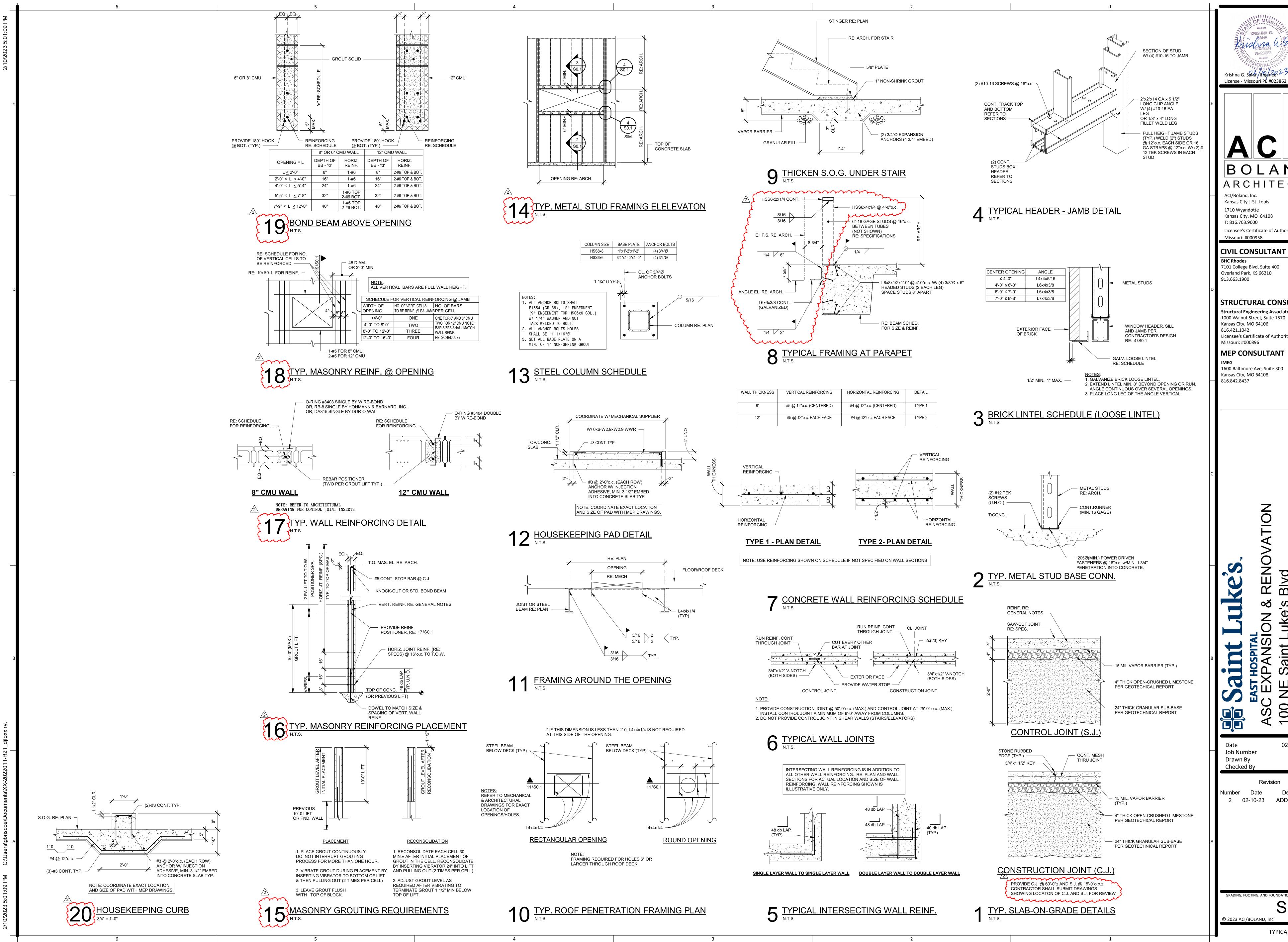
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02/07/2023 3-21037 Job Number Drawn By

Checked By Revision

02-10-23 ADDENDUM #2

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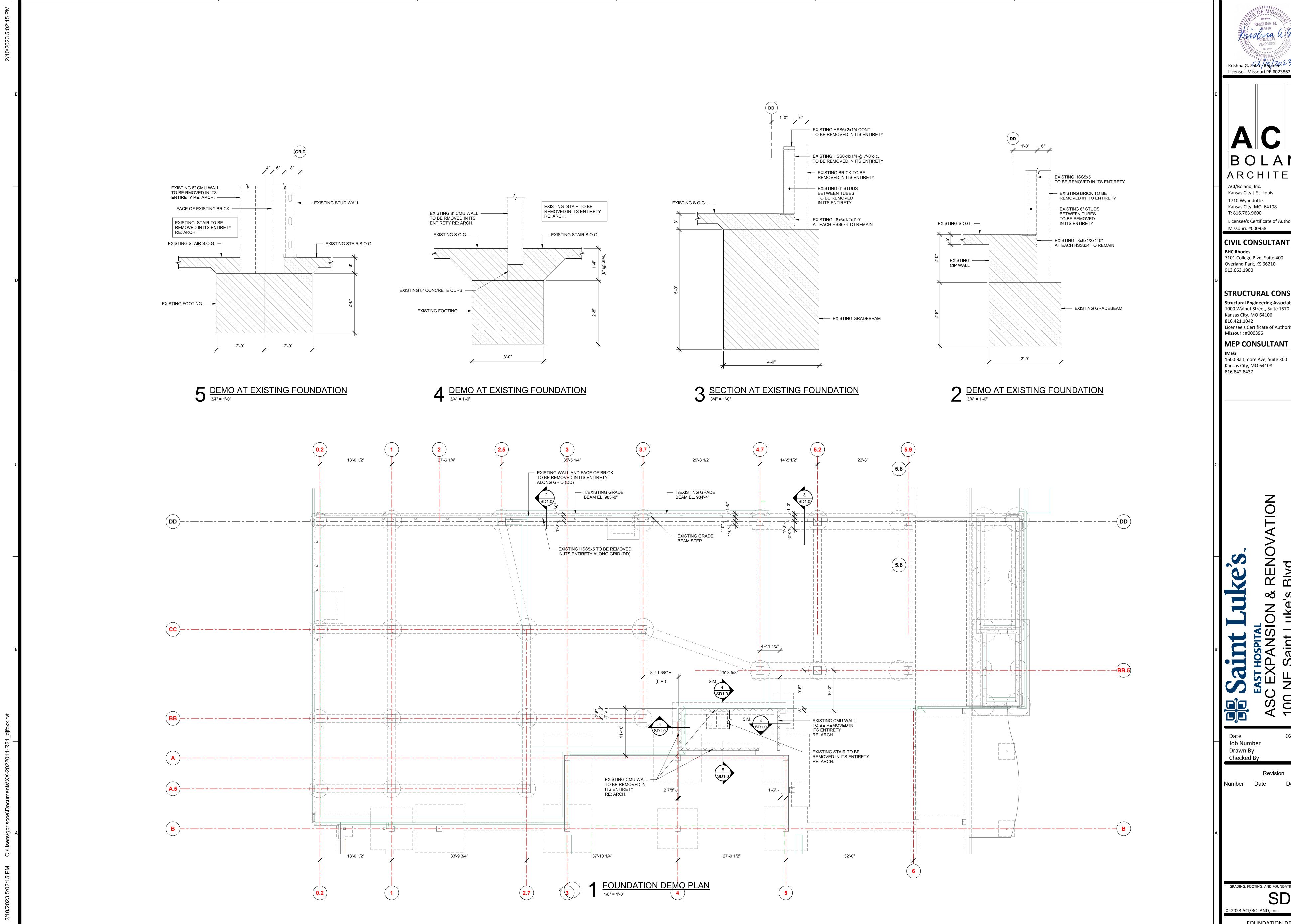
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Blvd 4086

02/07/2023 3-21037 Author Checker

Description 02-10-23 ADDENDUM #2

TYPICAL DETAILS



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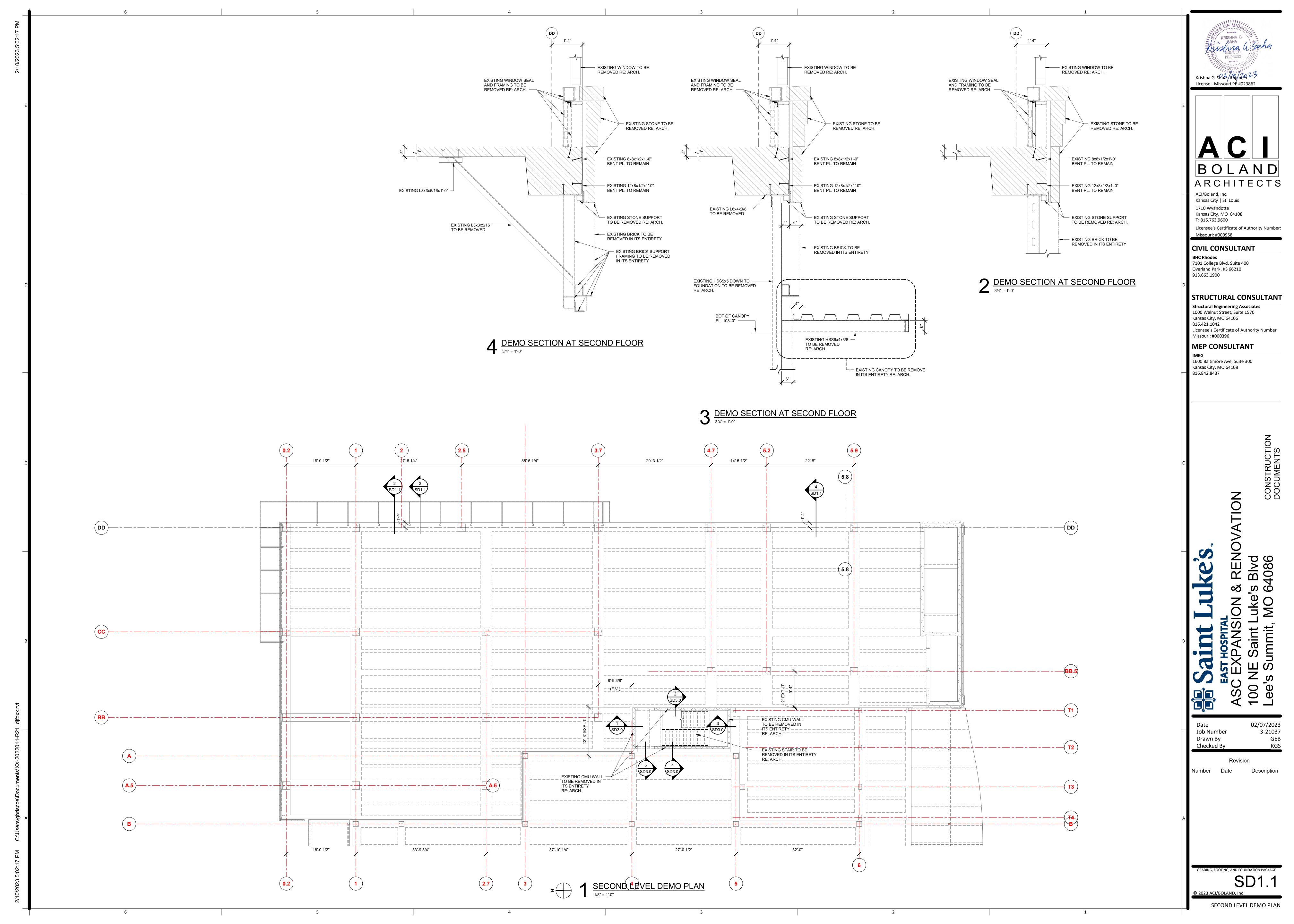
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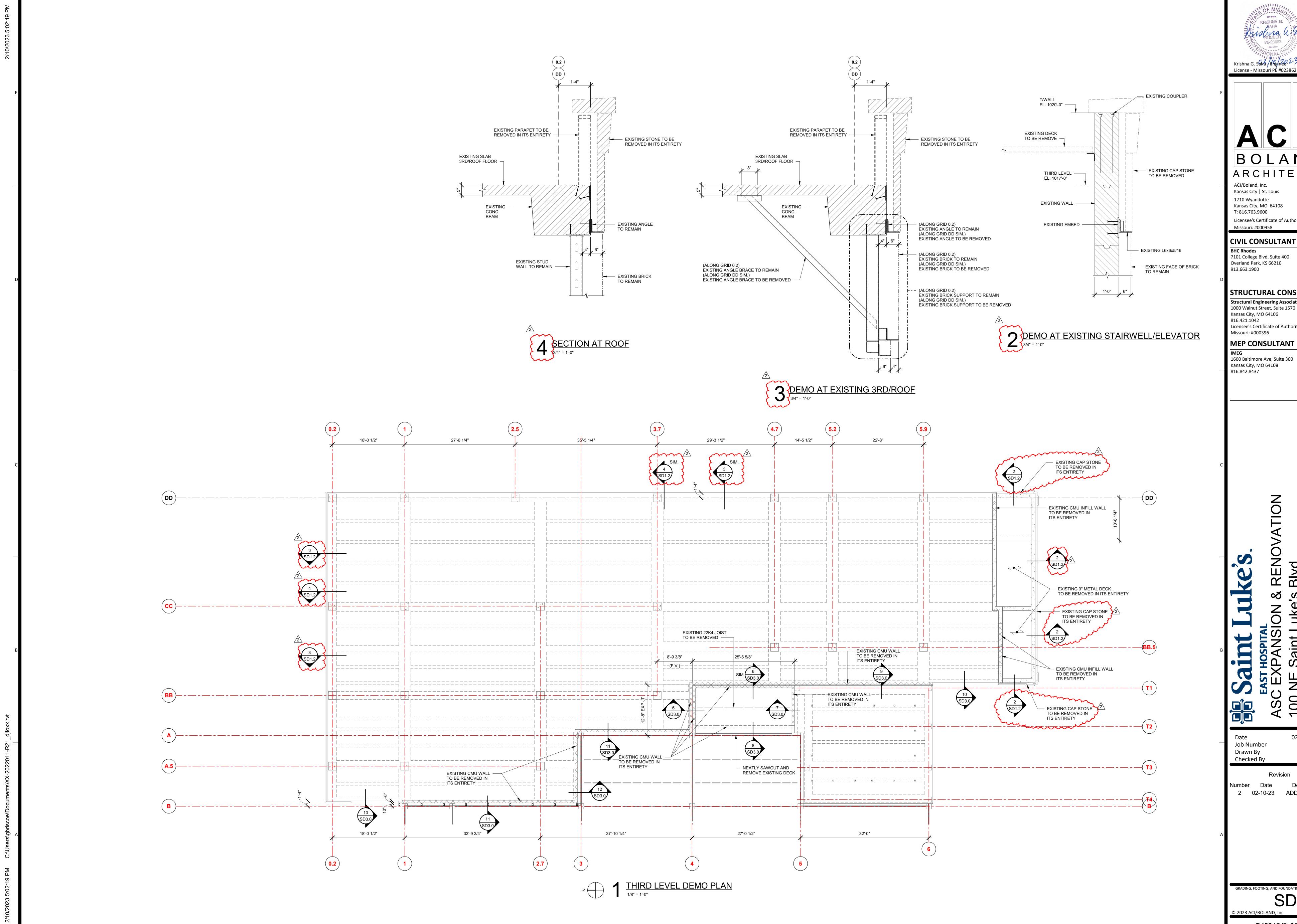
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FOUNDATION DEMO PLAN







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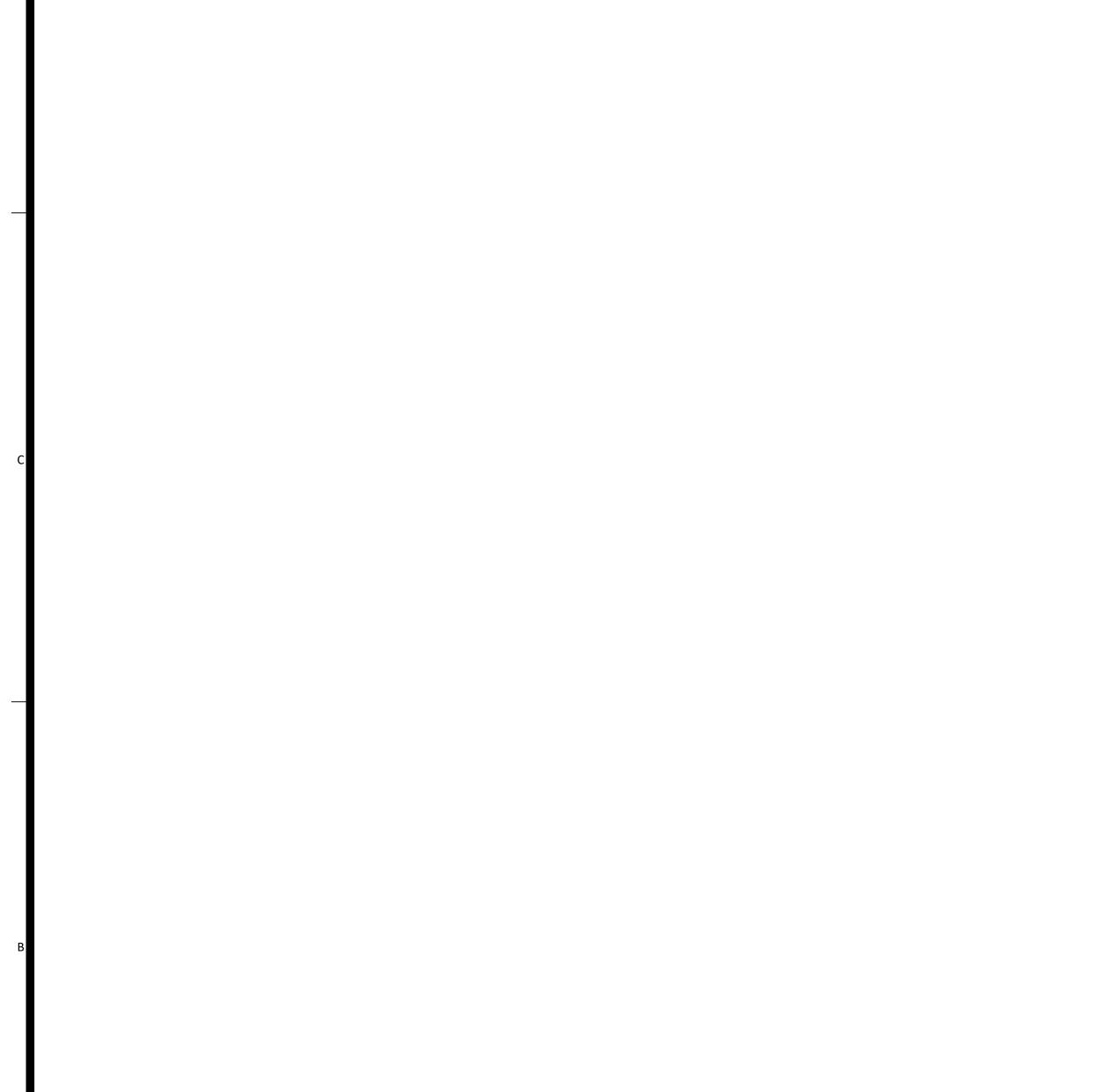
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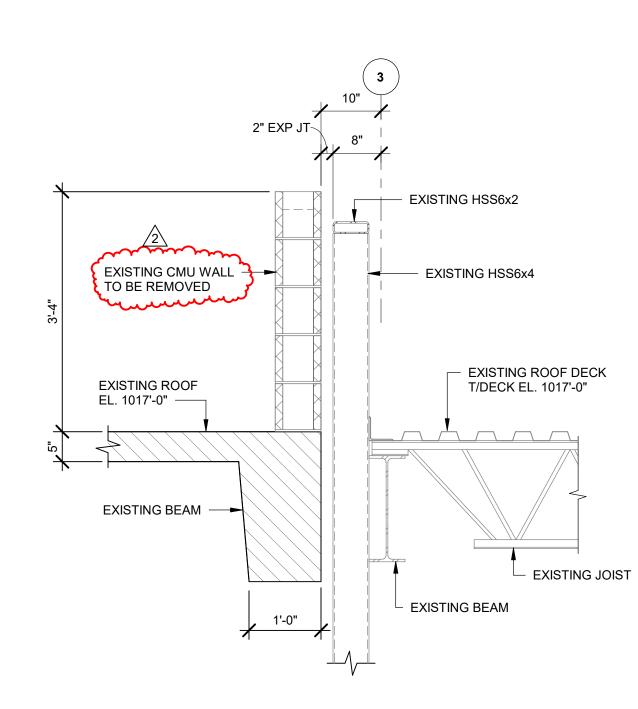
816.842.8437

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2 02-10-23 ADDENDUM #2

THIRD LEVEL DEMO PLAN

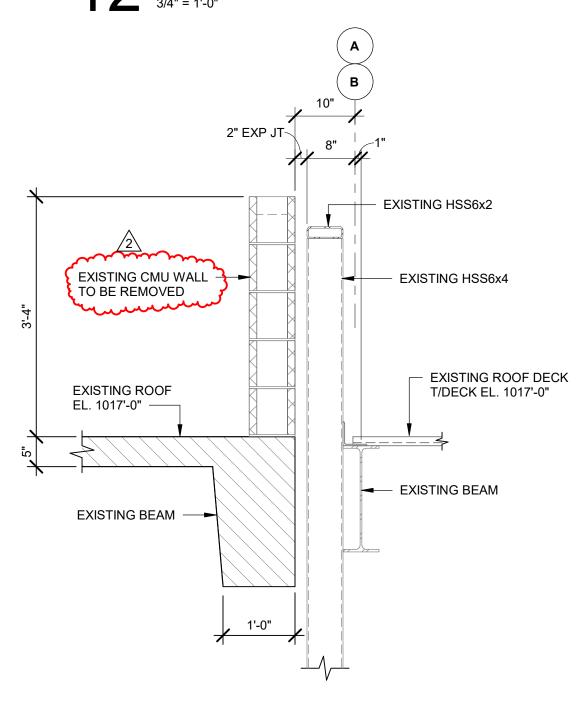






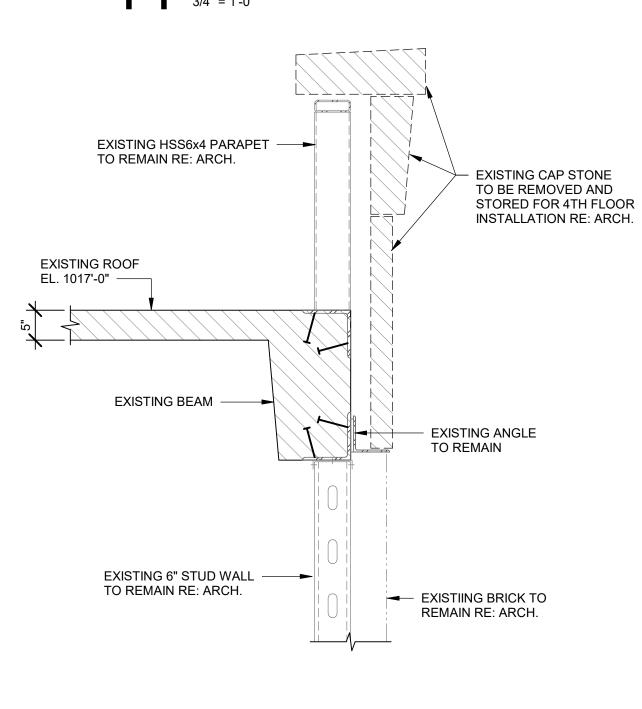
12 DEMO AT EXISTING ROOF

3/4" = 1'-0"

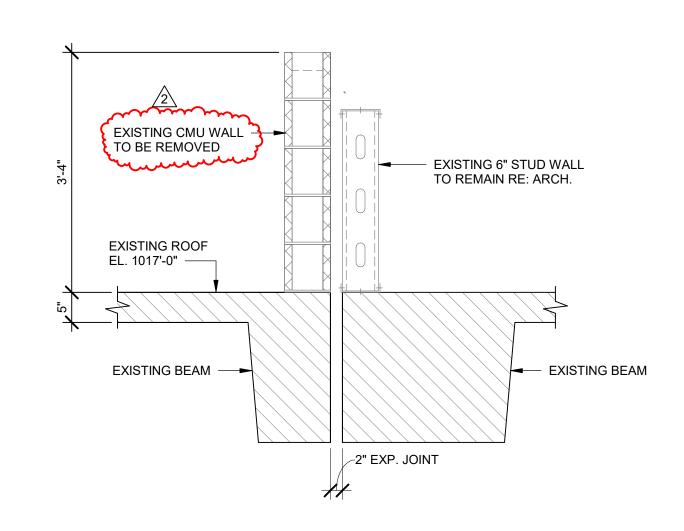


1 1 DEMO AT EXISTING ROOF

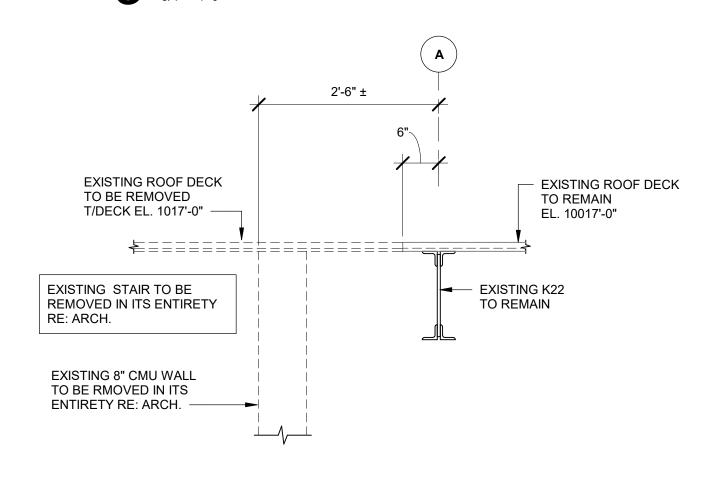
3/4" = 1'-0"



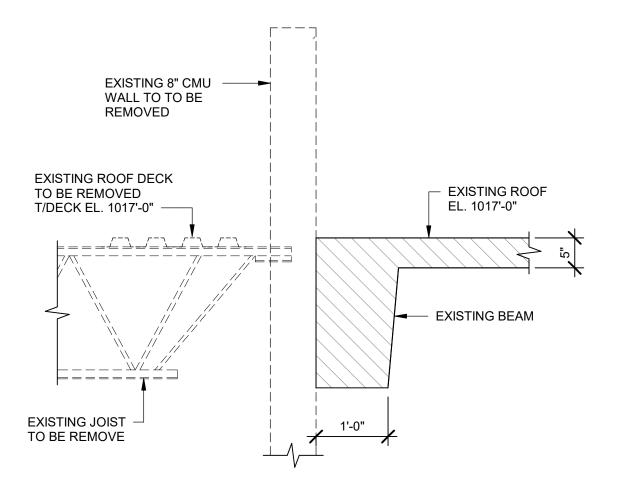
 $10 \frac{\text{DEMO AT EXISTNG ROOF}}{3/4" = 1'-0"}$ 



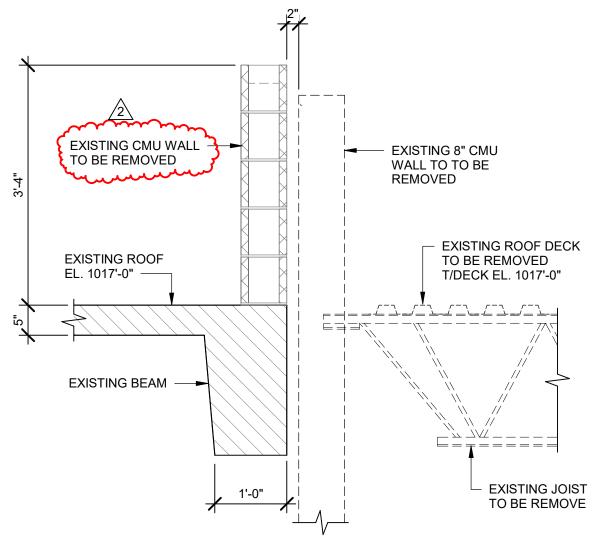
9 DEMO AT EXISTING STAIRWELL 3/4" = 1'-0"



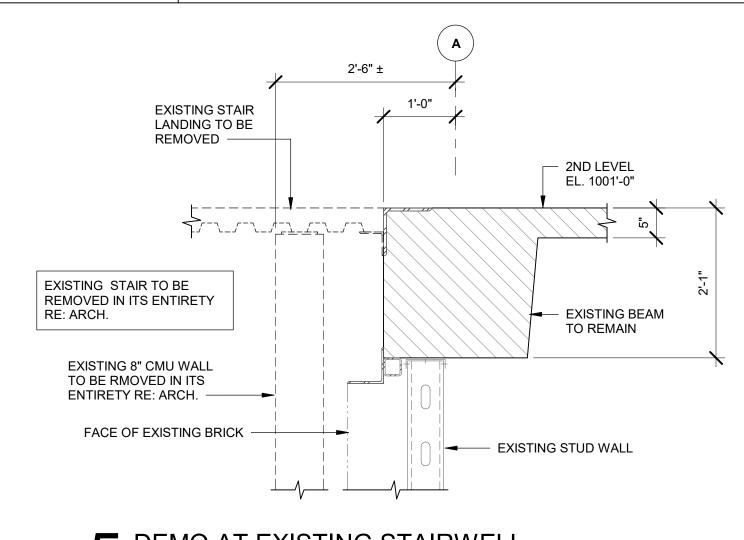
B DEMO AT EXISTING STAIRWELL
3/4" = 1'-0"



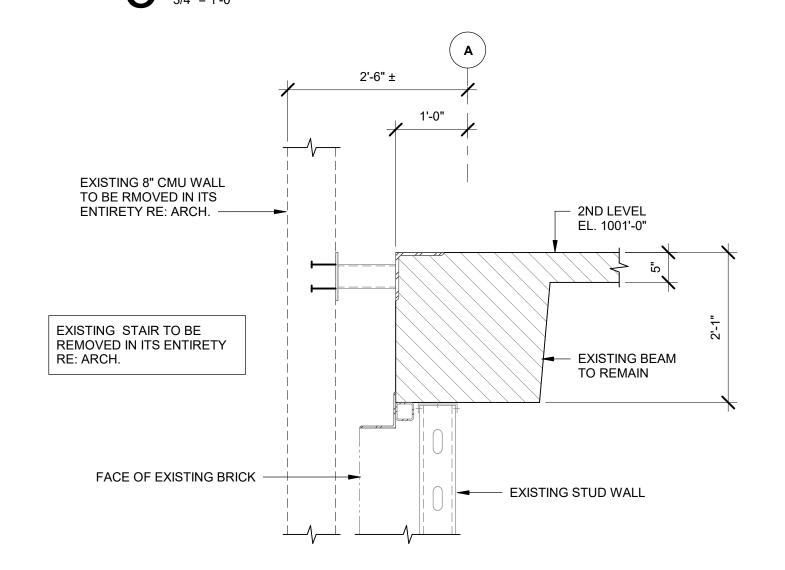
7 DEMO AT EXISTING STAIRWELL
3/4" = 1'-0"



6 DEMO AT EXISTING STAIRWELL
3/4" = 1'-0"

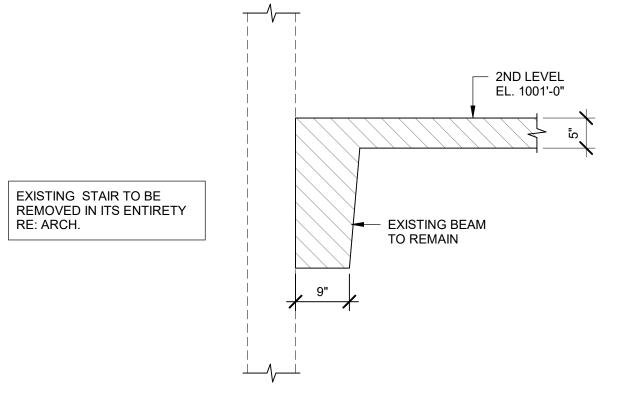


5 DEMO AT EXISTING STAIRWELL
3/4" = 1'-0"

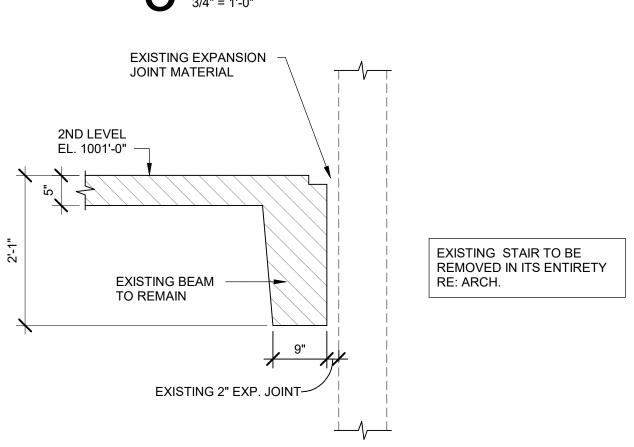


4 DEMO AT EXISTING STAIRWELL

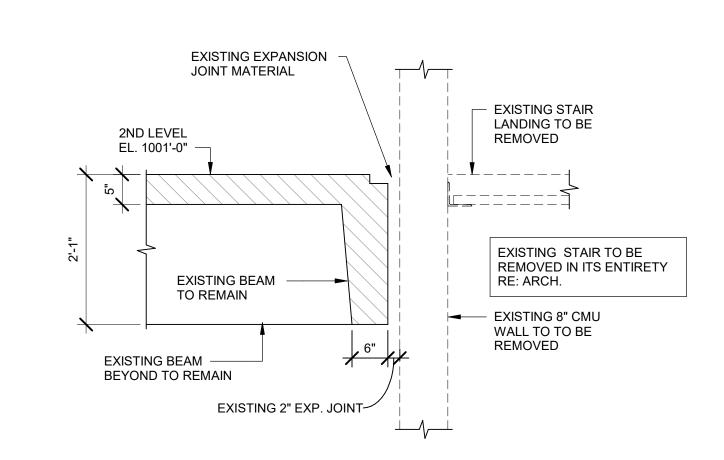
3/4" = 1'-0"



3 DEMO AT EXISTING STAIRWELL
3/4" = 1'-0"



2 DEMO AT EXISTING STAIRWELL
3/4" = 1'-0"



DEMO AT EXISTING STAIRWELL

3/4" = 1'-0"

Saint Luke's

EAST HOSPITAL

SC EXPANSION & RENOVATION

ON NE Saint Luke's Blvd

ee's Summit, MO 64086

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Kansas City | St. Louis

Kansas City, MO 64108

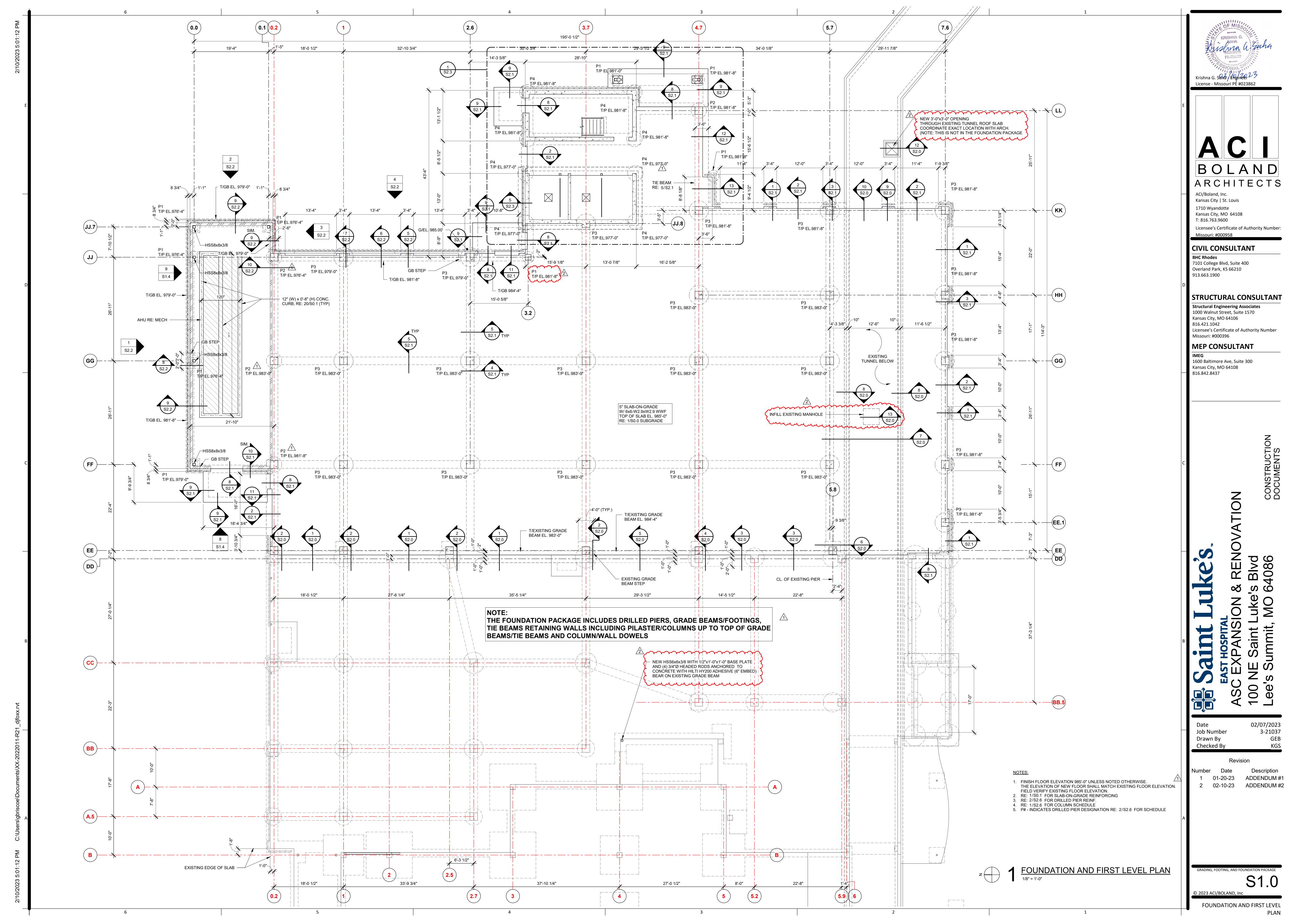
Date 02/07/2023
Job Number 3-21037
Drawn By GEB
Checked By KGS

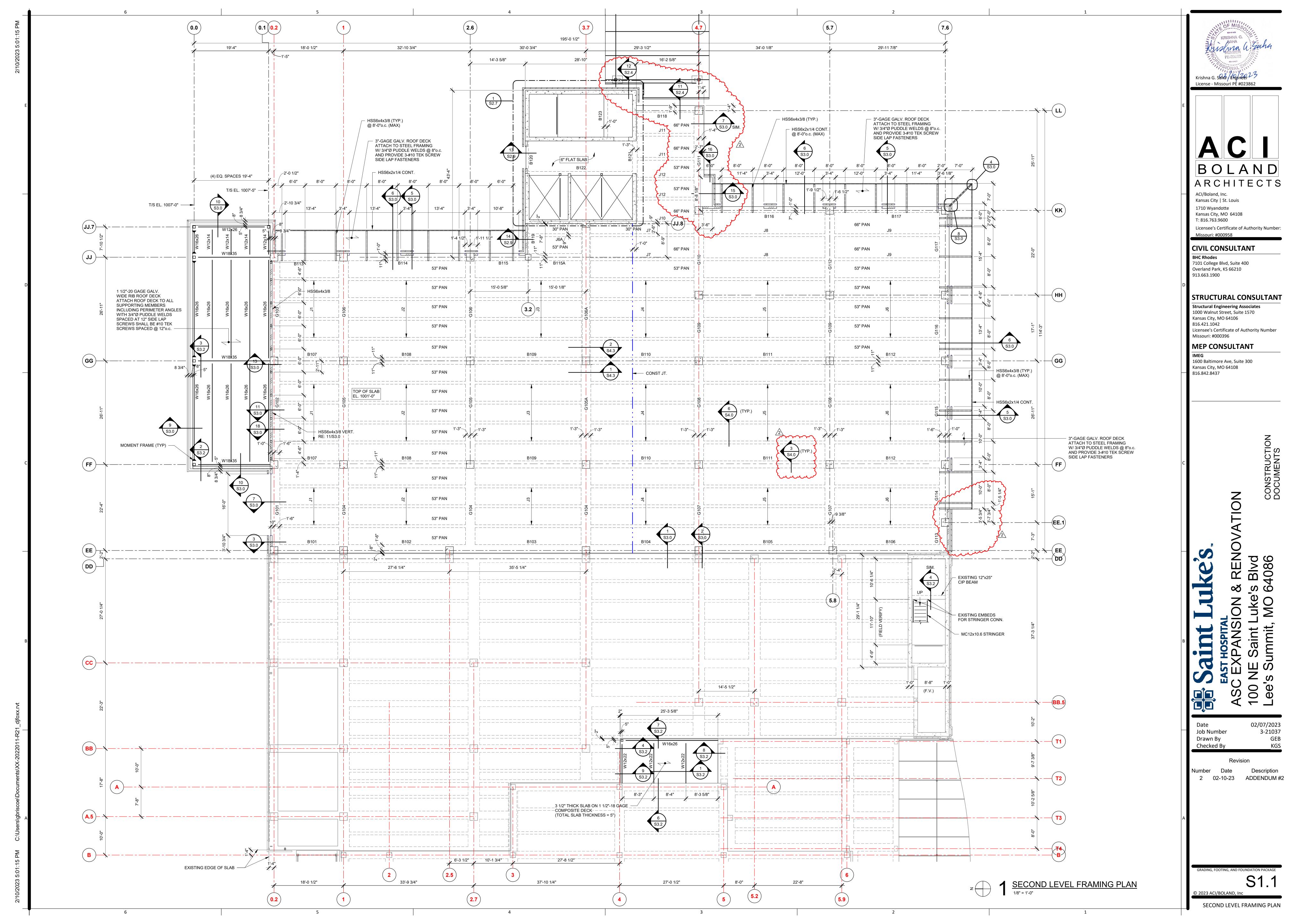
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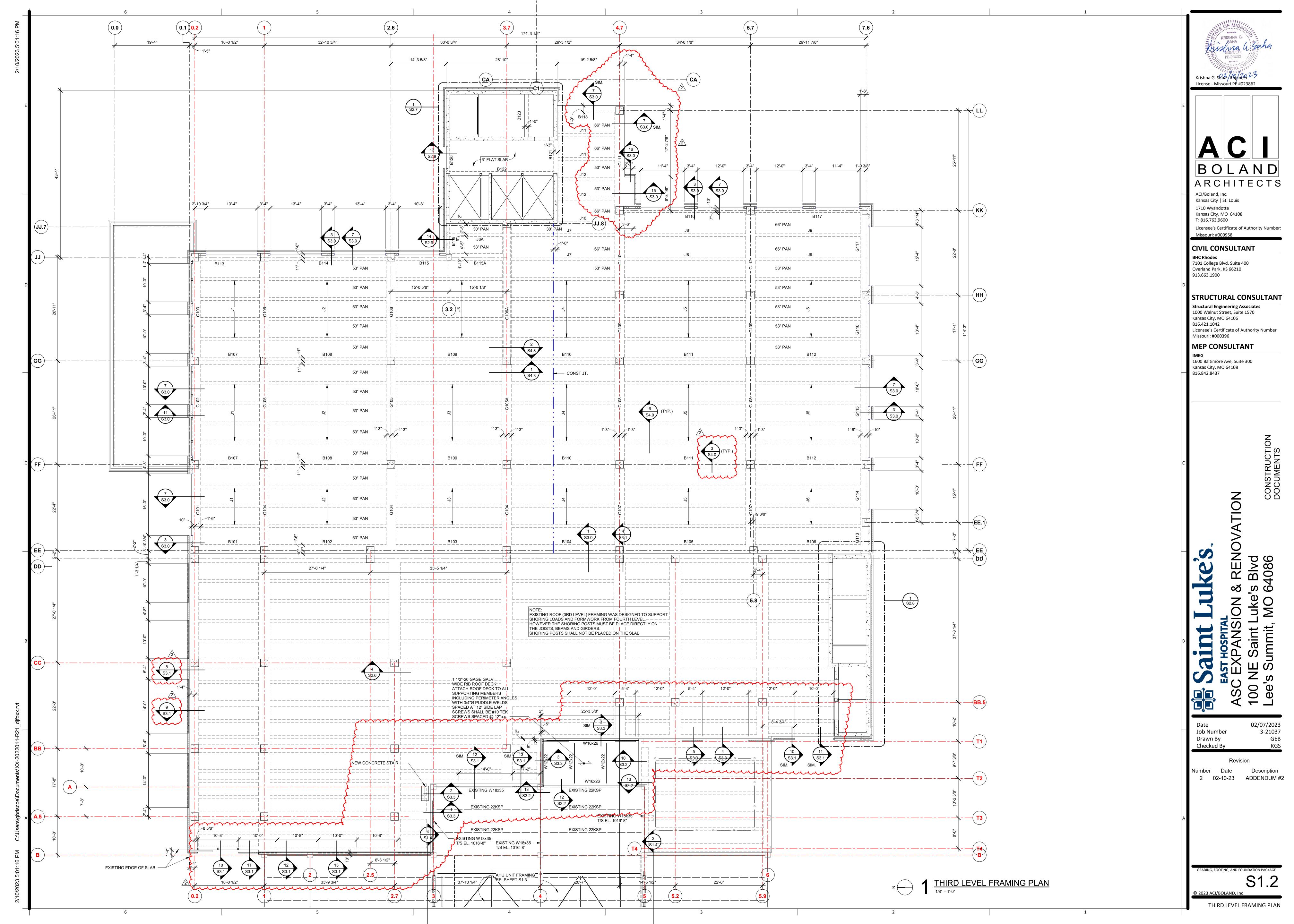
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2 02-10-23 ADDENDUM #2

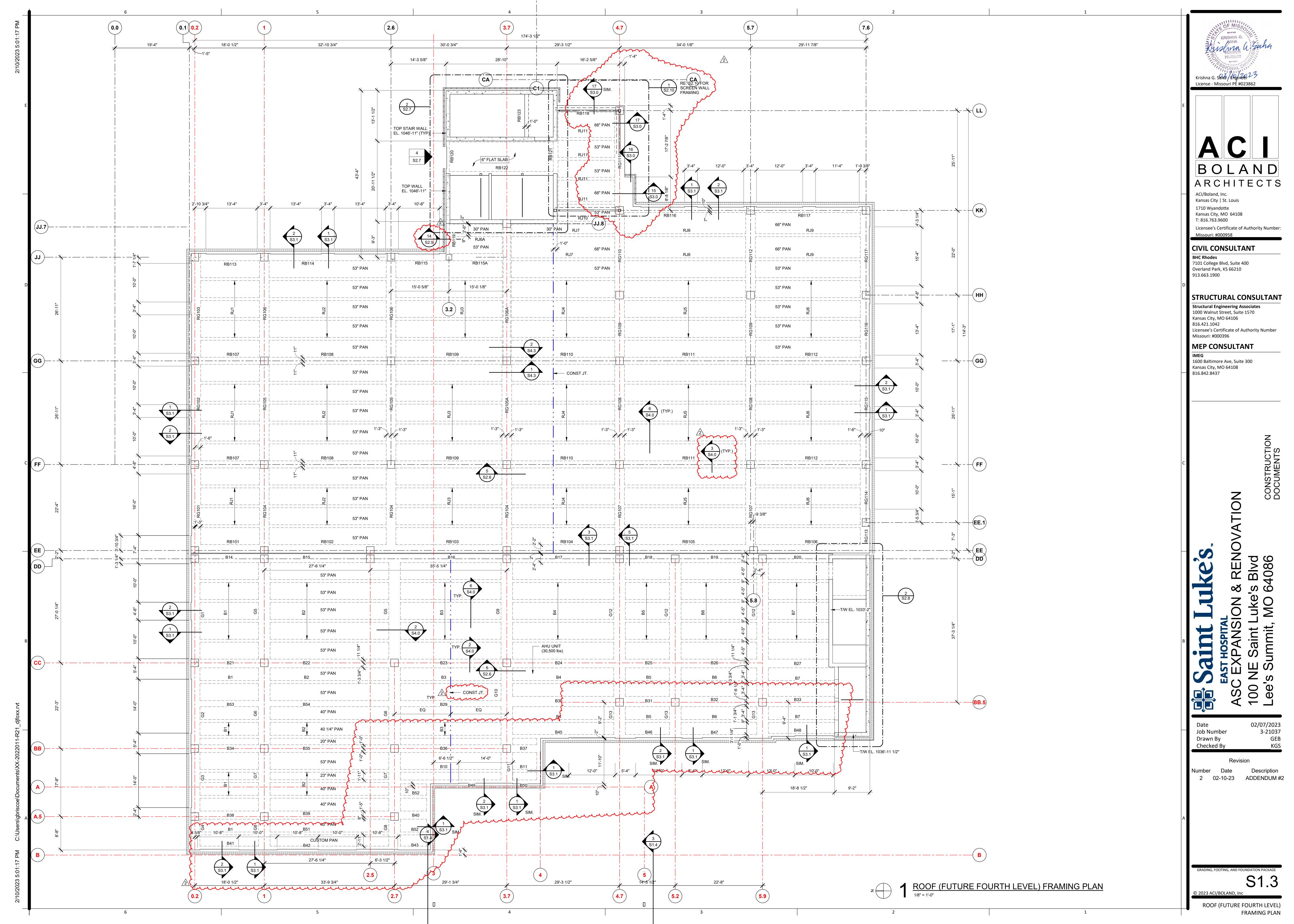
GRADING, FOOTING, AND FOUNDATION PACKAGE SD3.0

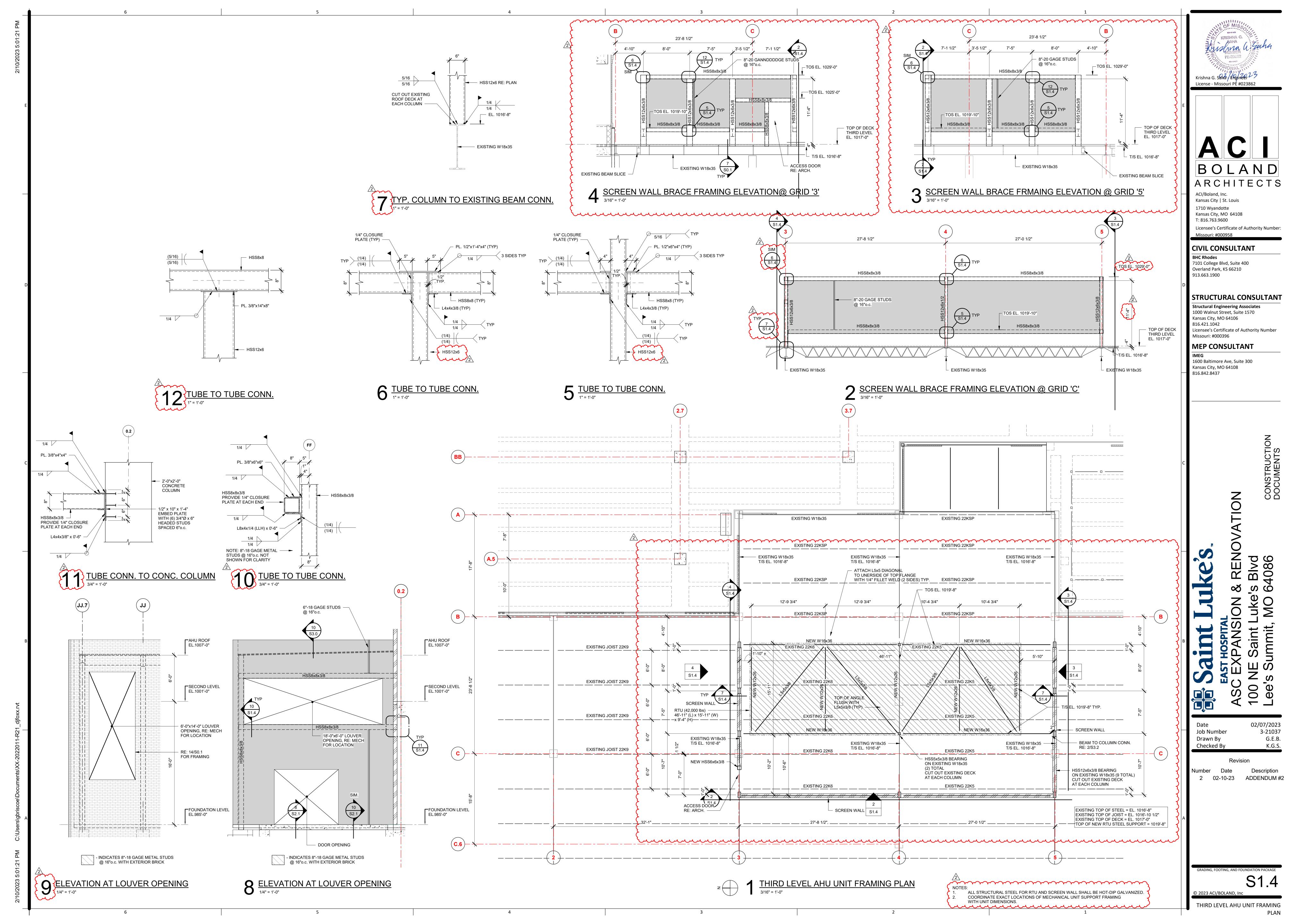
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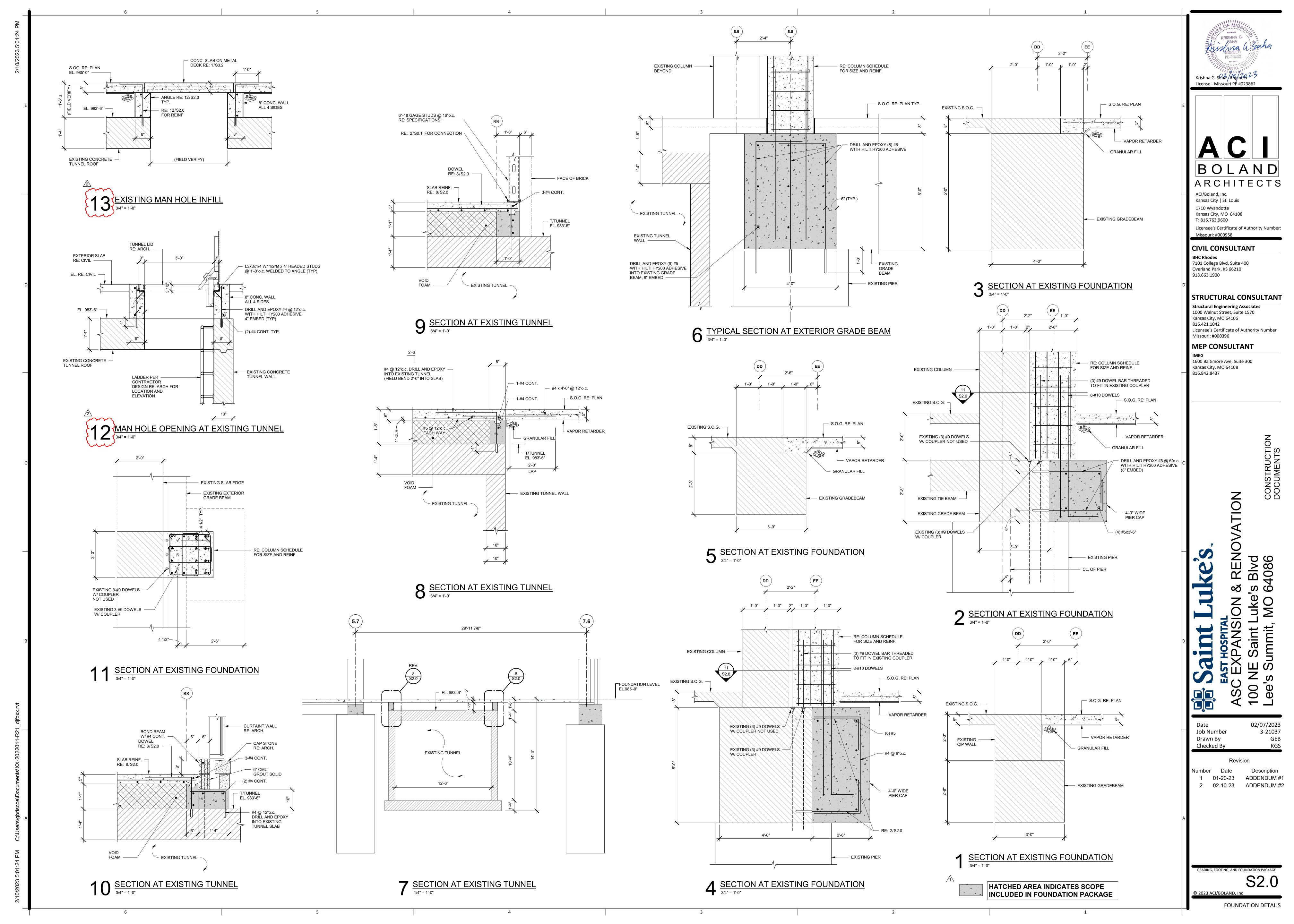


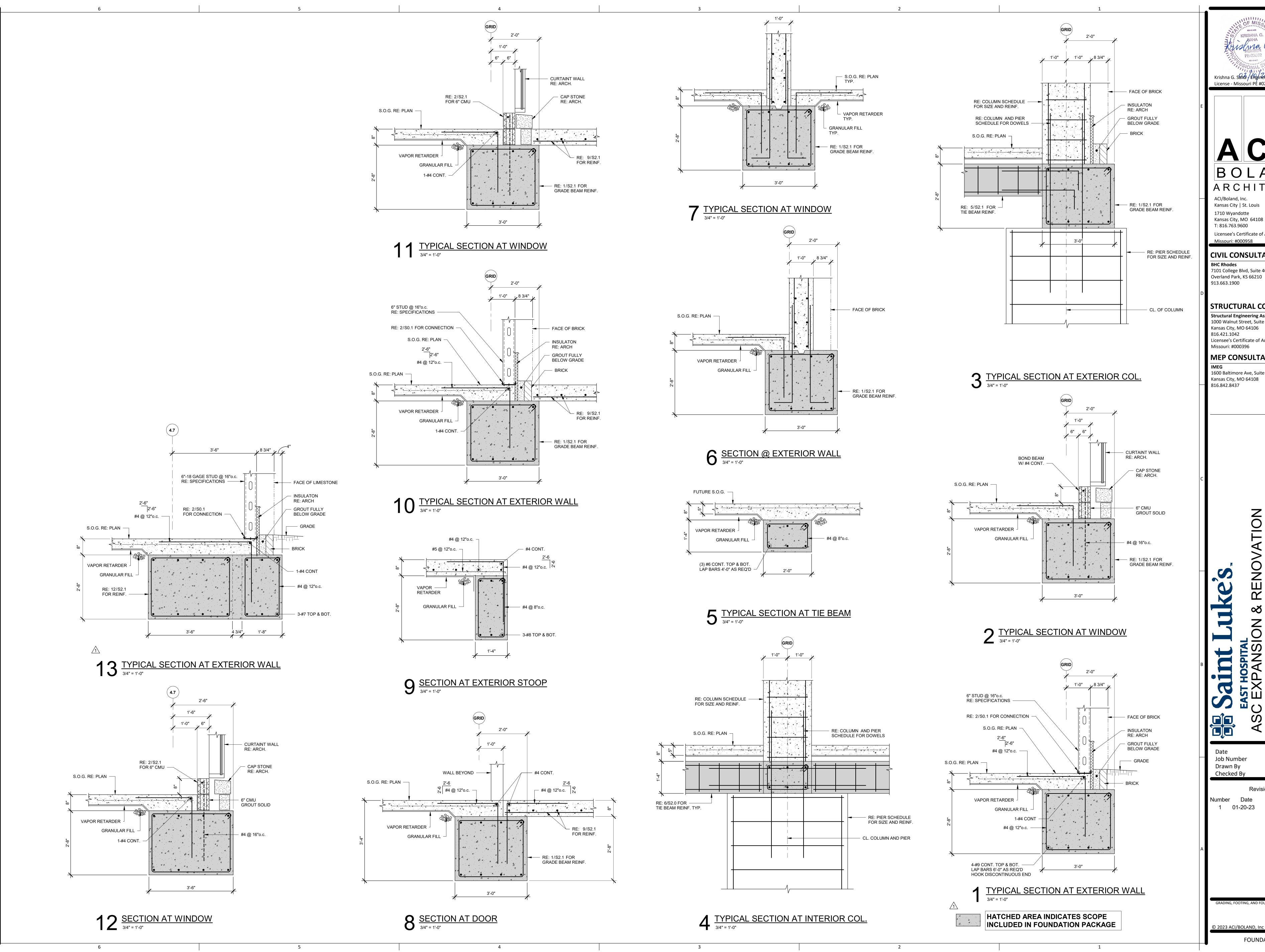












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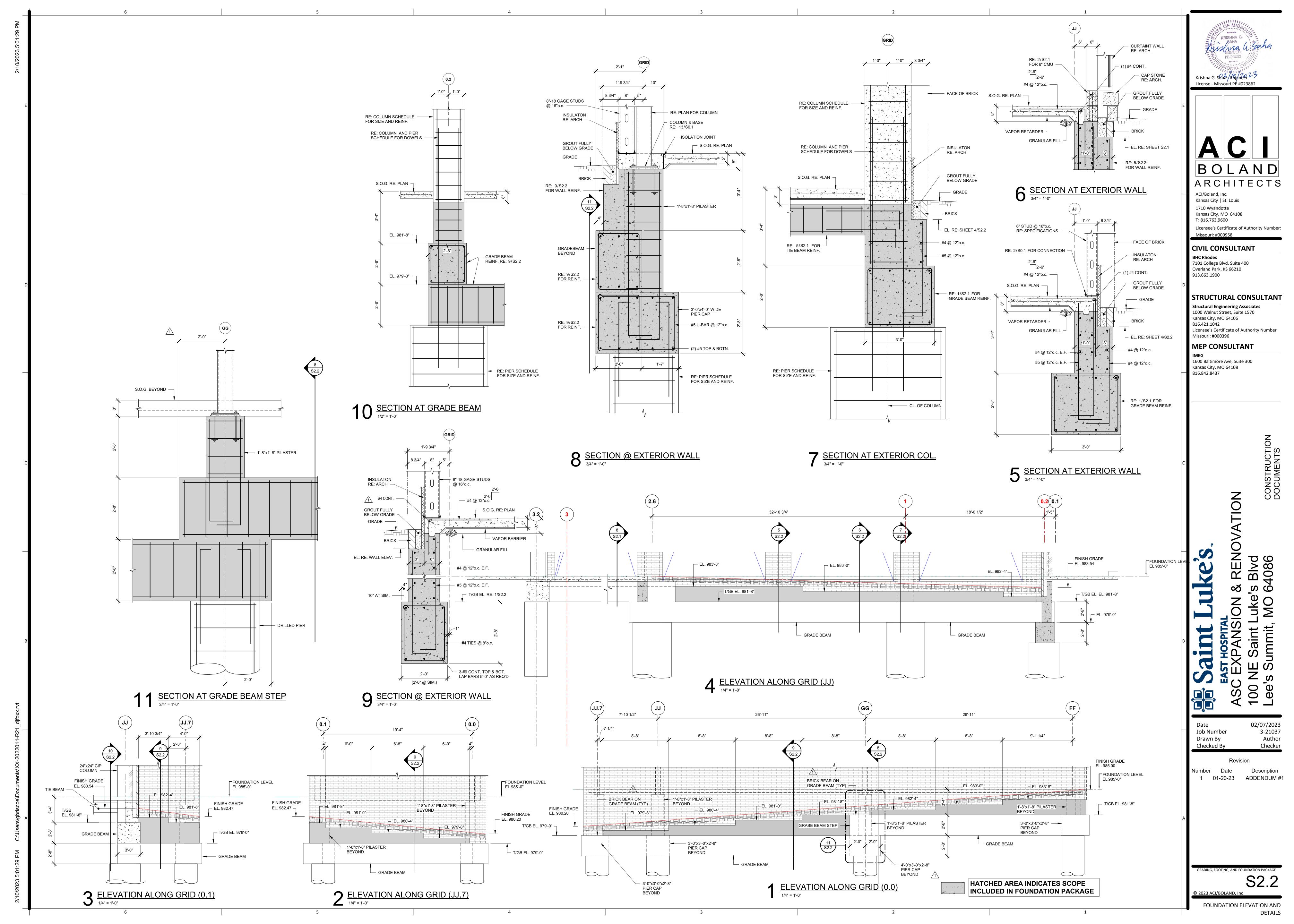
CONSTRUCTION DOCUMENTS

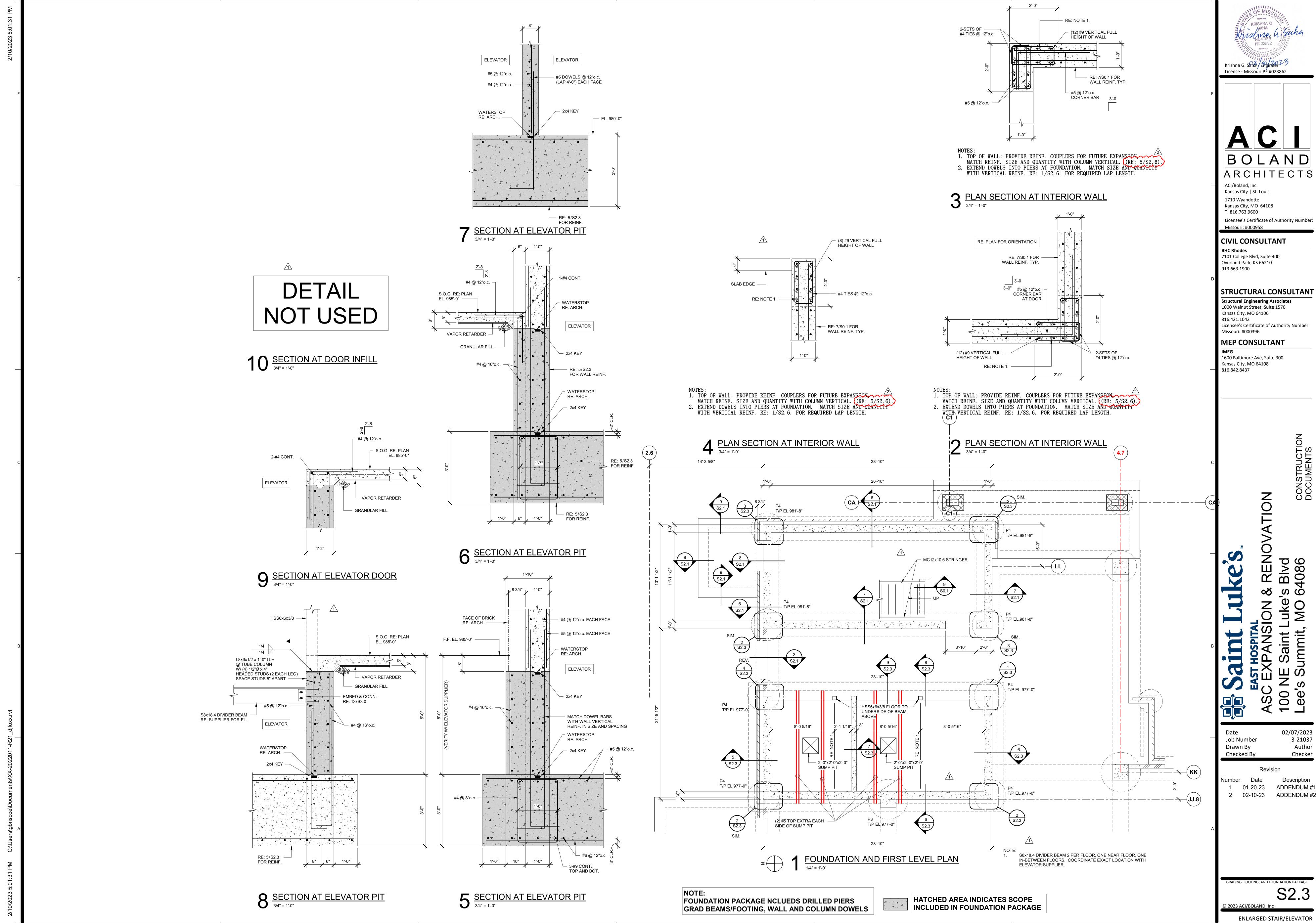
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02/07/2023 3-21037 GEB Job Number Drawn By Checked By

umber Date Description
1 01-20-23 ADDENDUM #1

FOUNDATION DETAILS

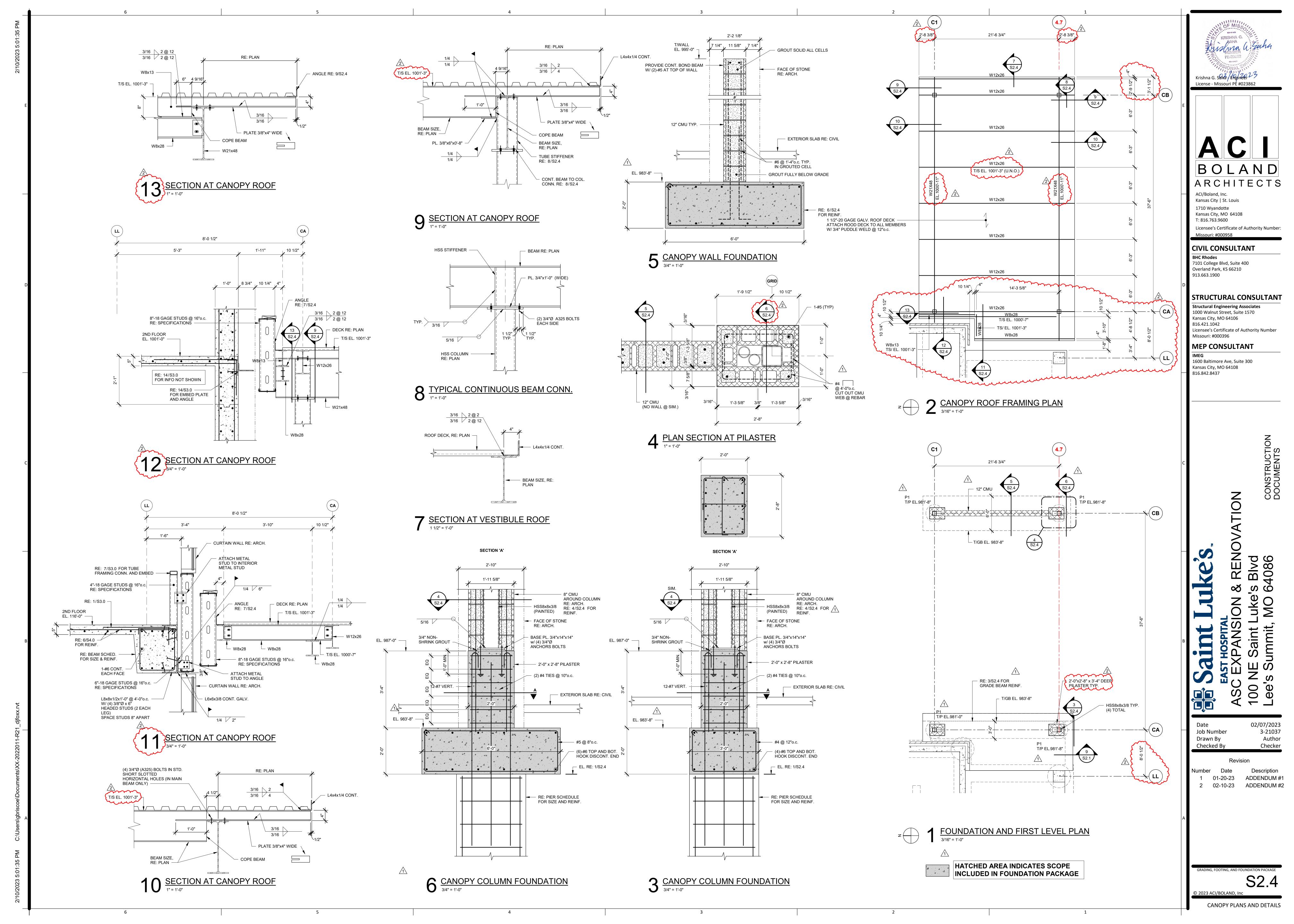


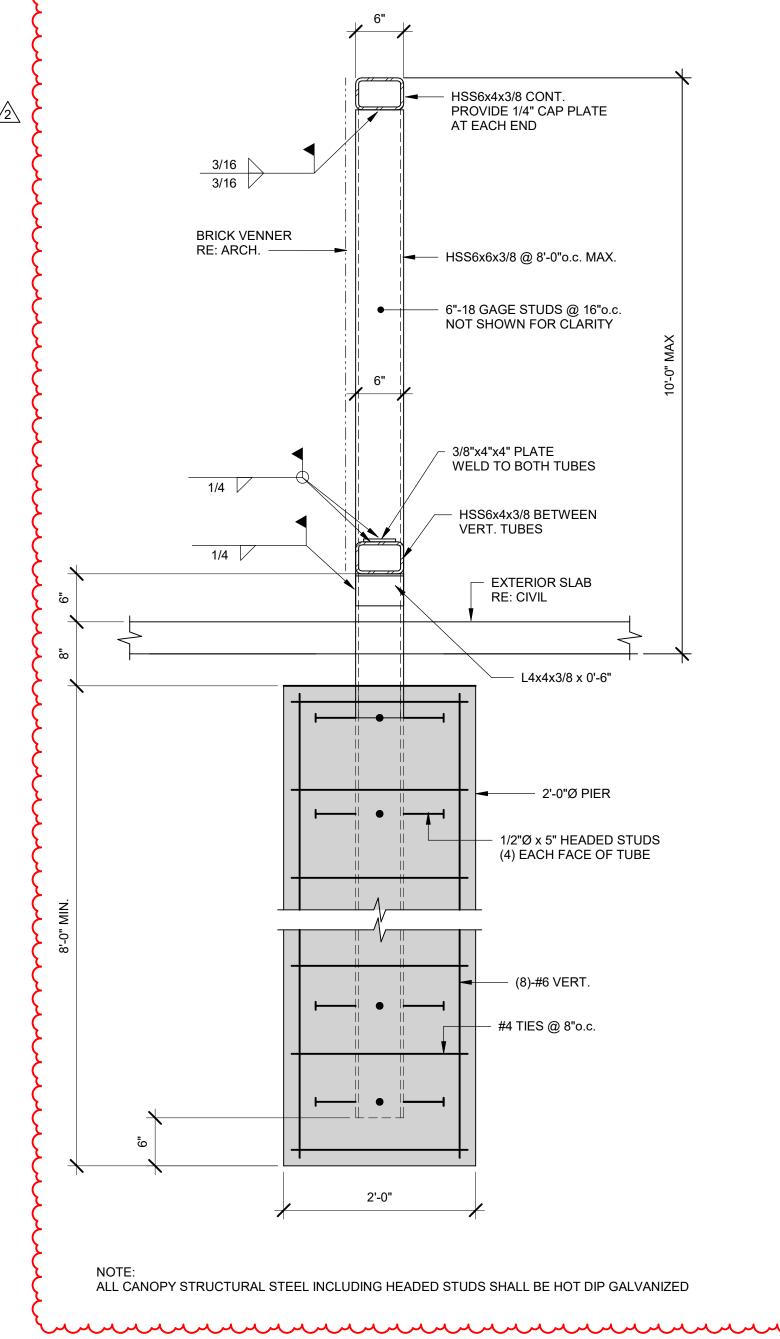


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ADDENDUM #1 ADDENDUM #2

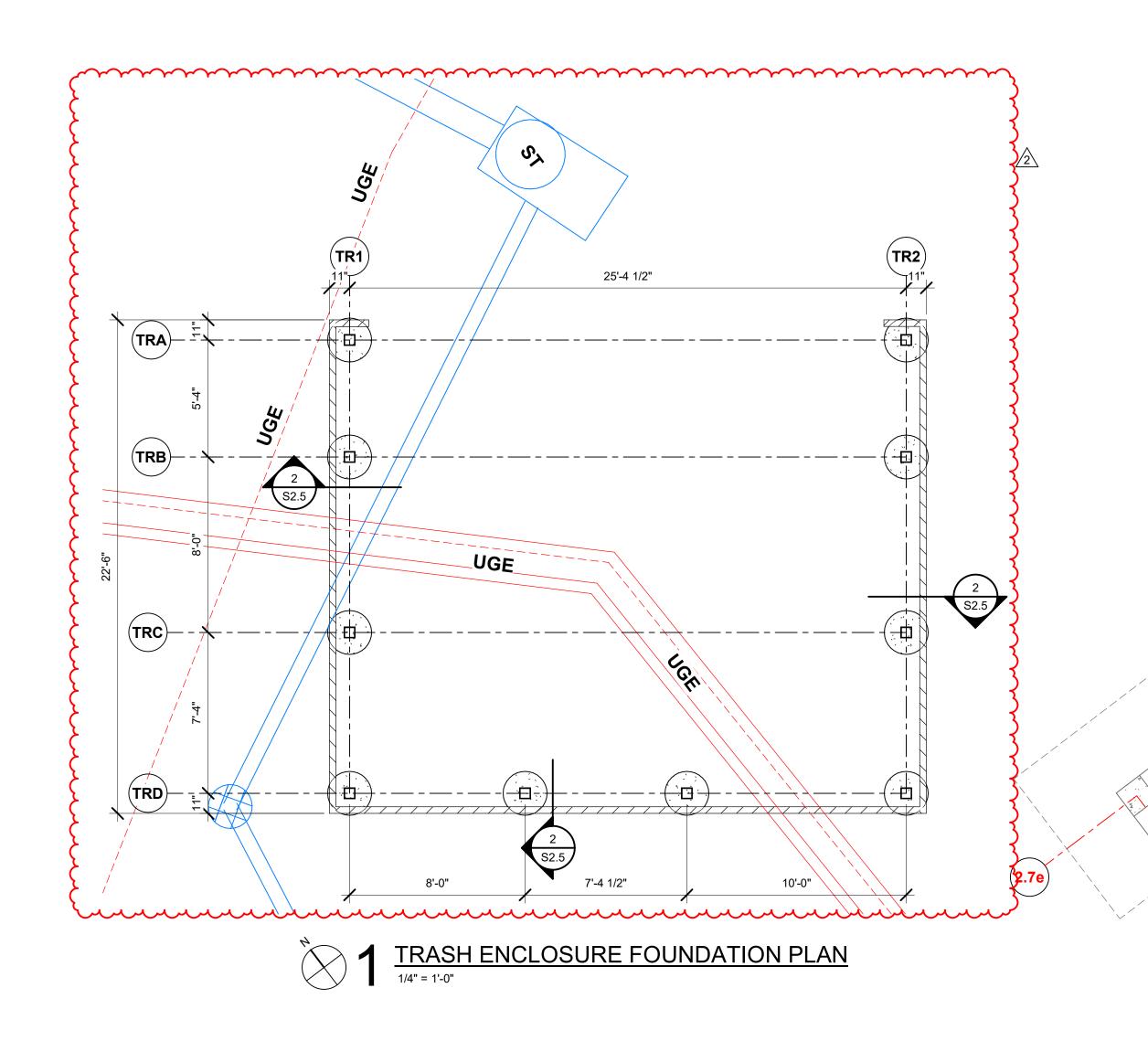
PLANS AND DETAILS





2 SECTION AT SCREEN WALL

1" = 1'-0"



HATCHED AREA INDICATES SCOPE INCLUDED IN FOUNDATION PACKAGE

Krishna G. Sana / Engineer License - Missouri PE #023862

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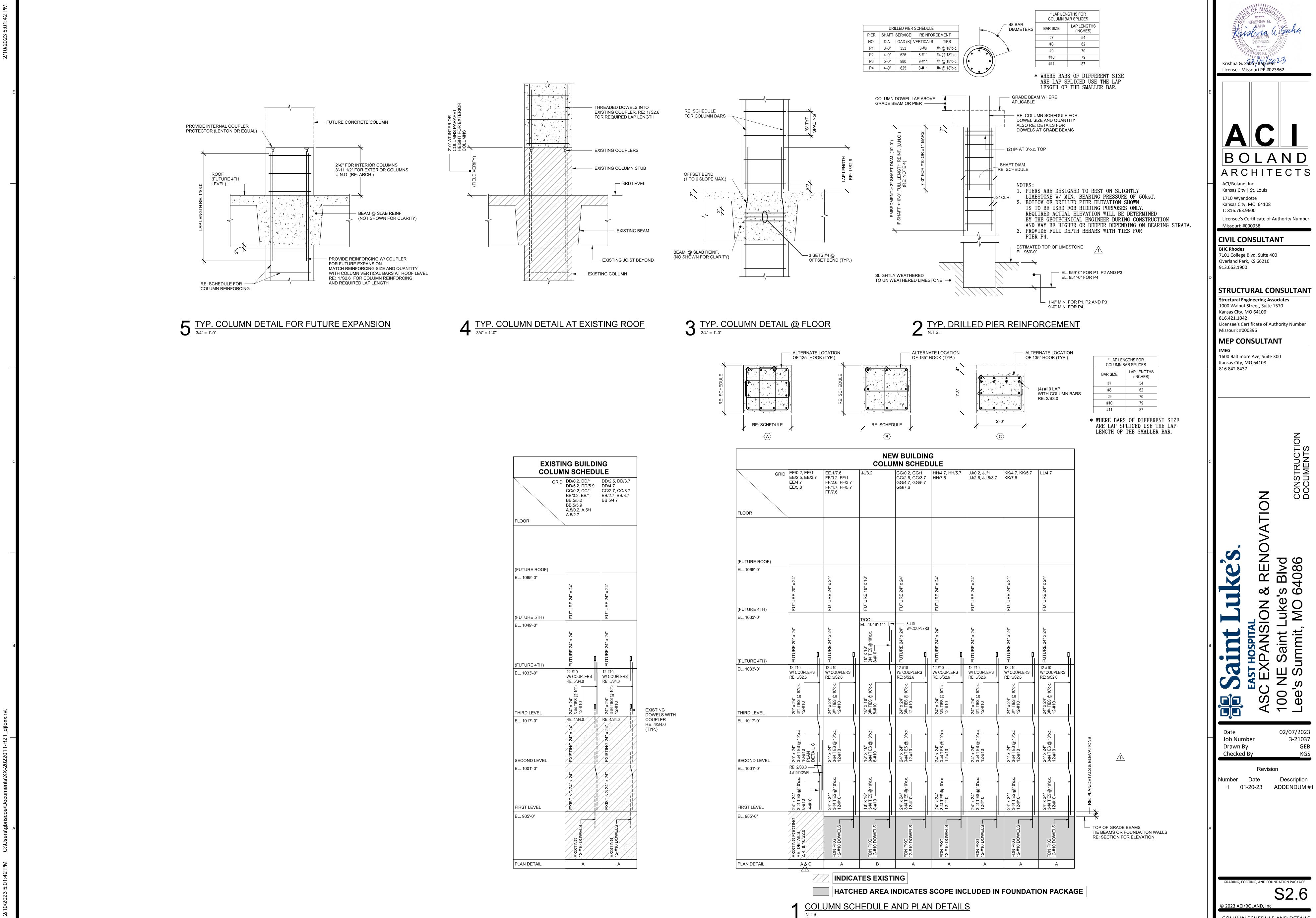
lumber Date Description
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2 02-10-23 ADDENDUM #2

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H

TRASH ENCLOSURE PLAN AND

DETAILS



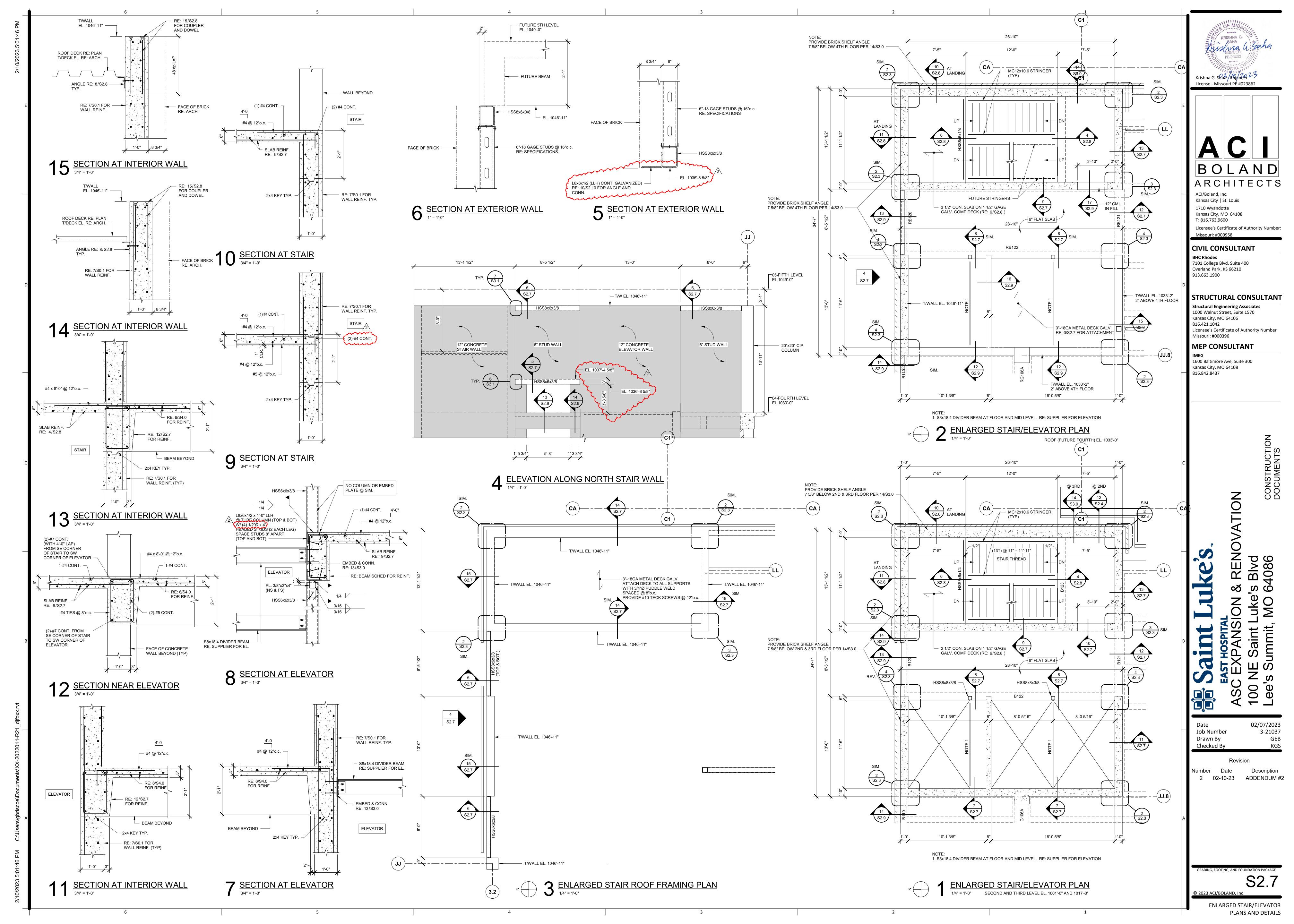
COLUMN SCHEDULE AND DETAILS

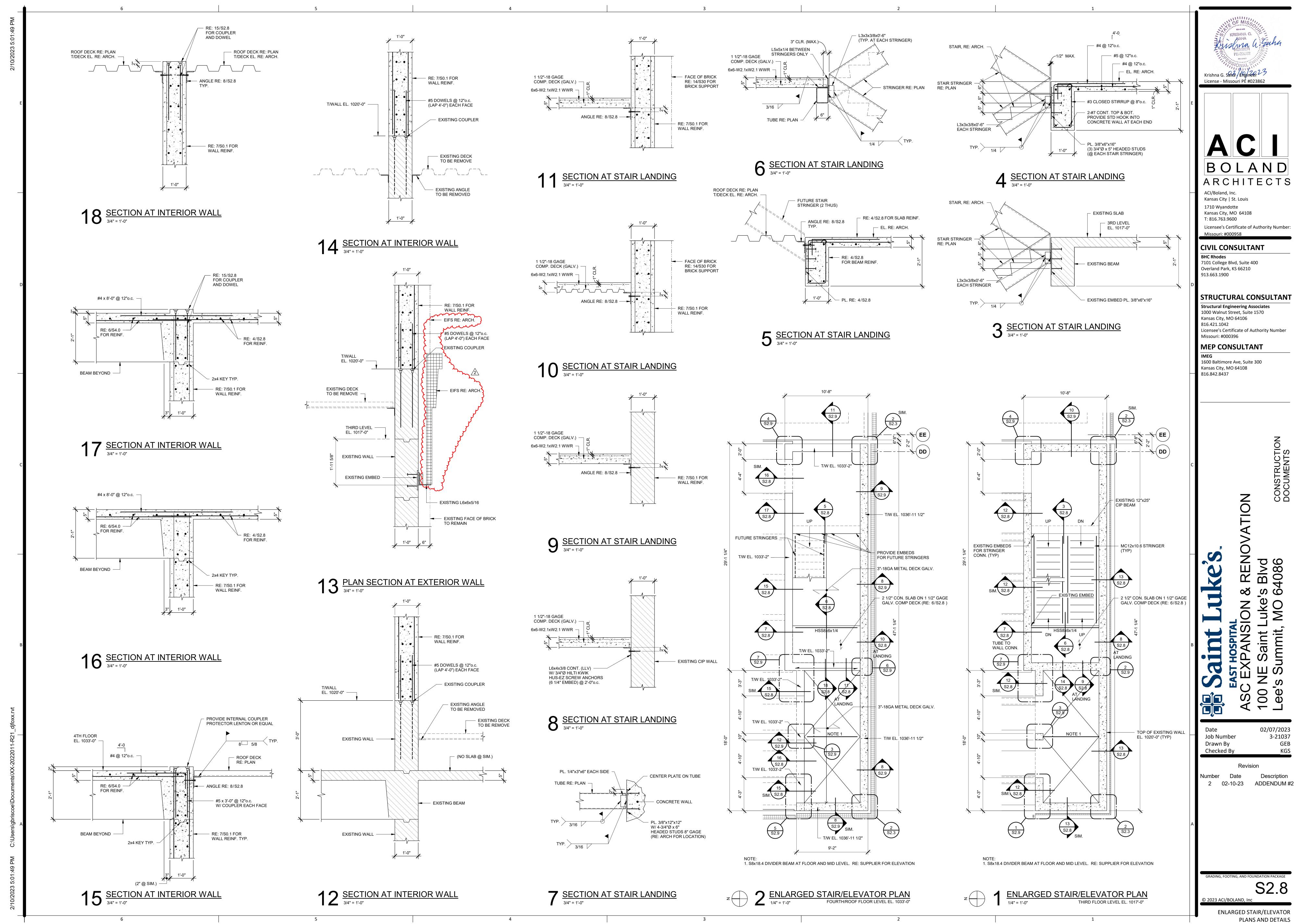
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02/07/2023 3-21037

Description

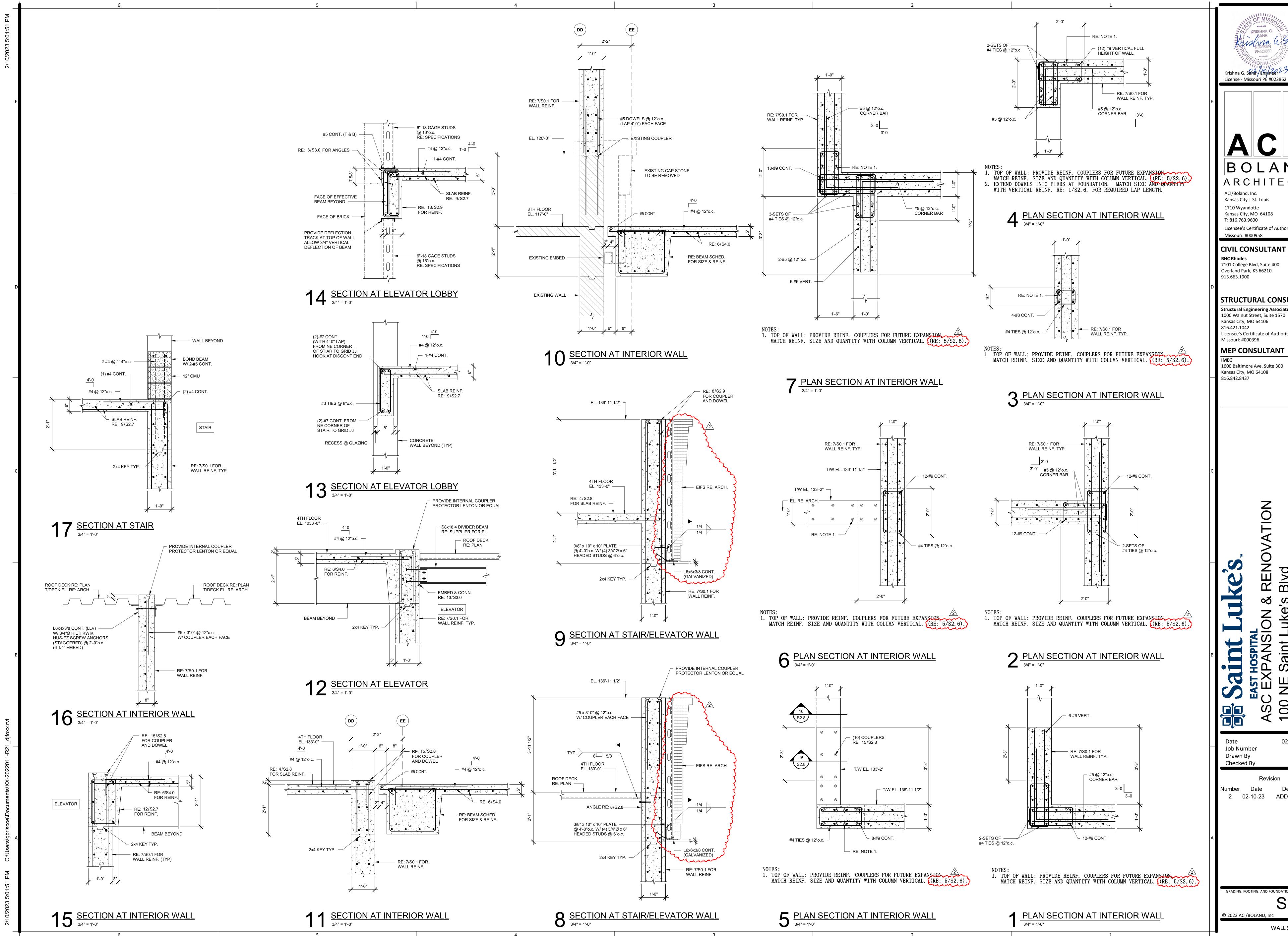
GEB





ENLARGED STAIR/ELEVATOR

PLANS AND DETAILS



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Overland Park, KS 66210

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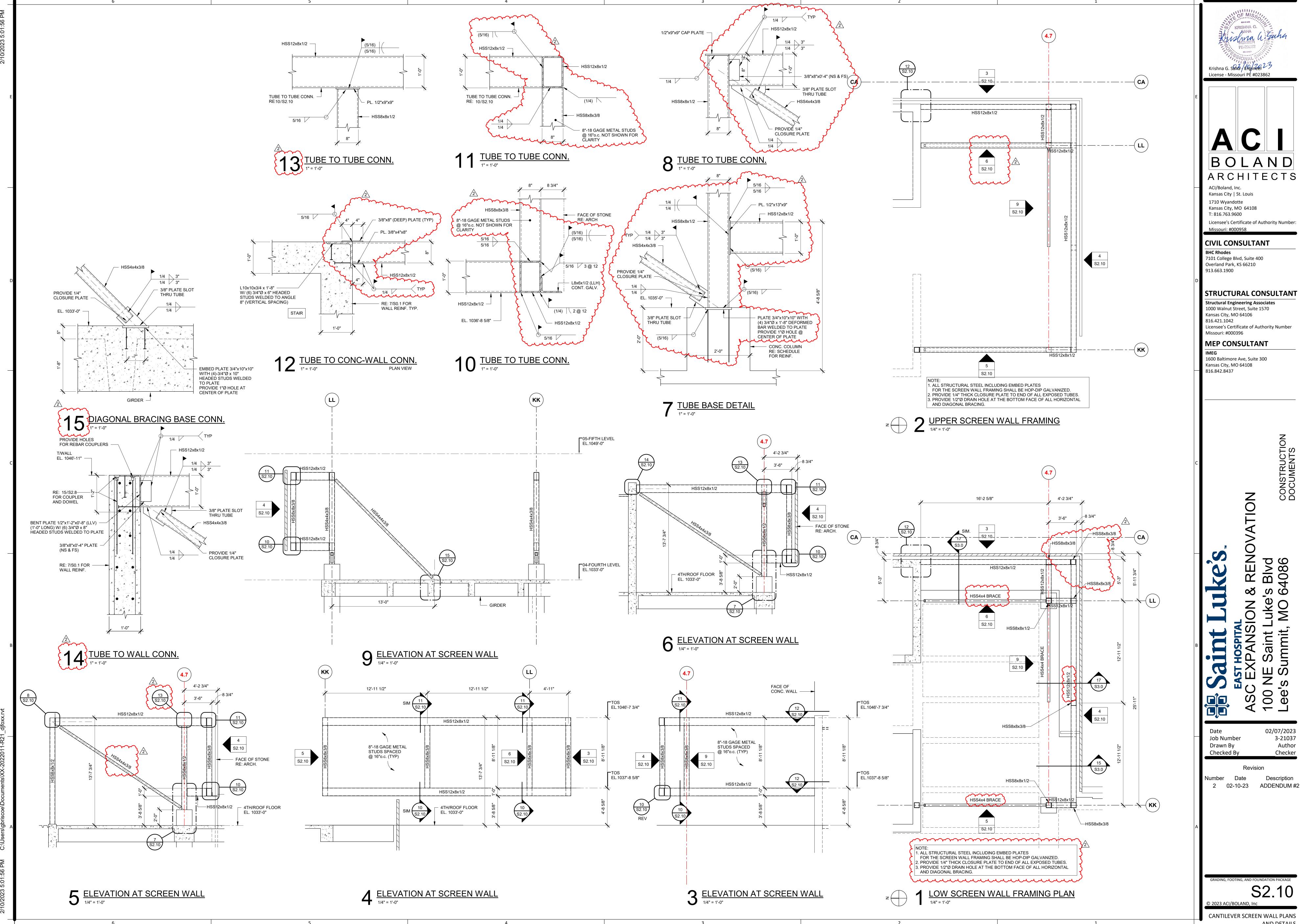
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02-10-23 ADDENDUM #2

WALL SECTIONS

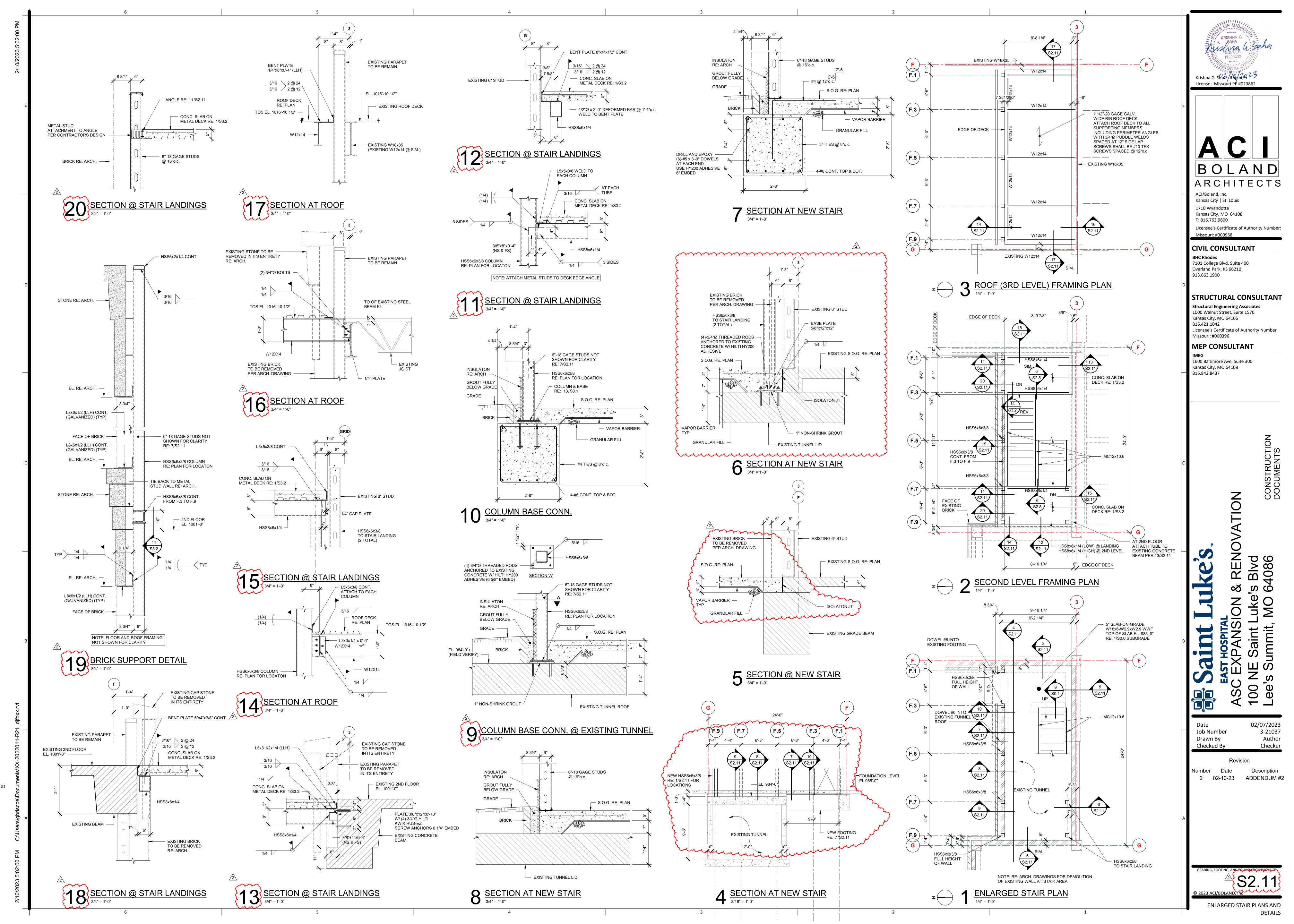


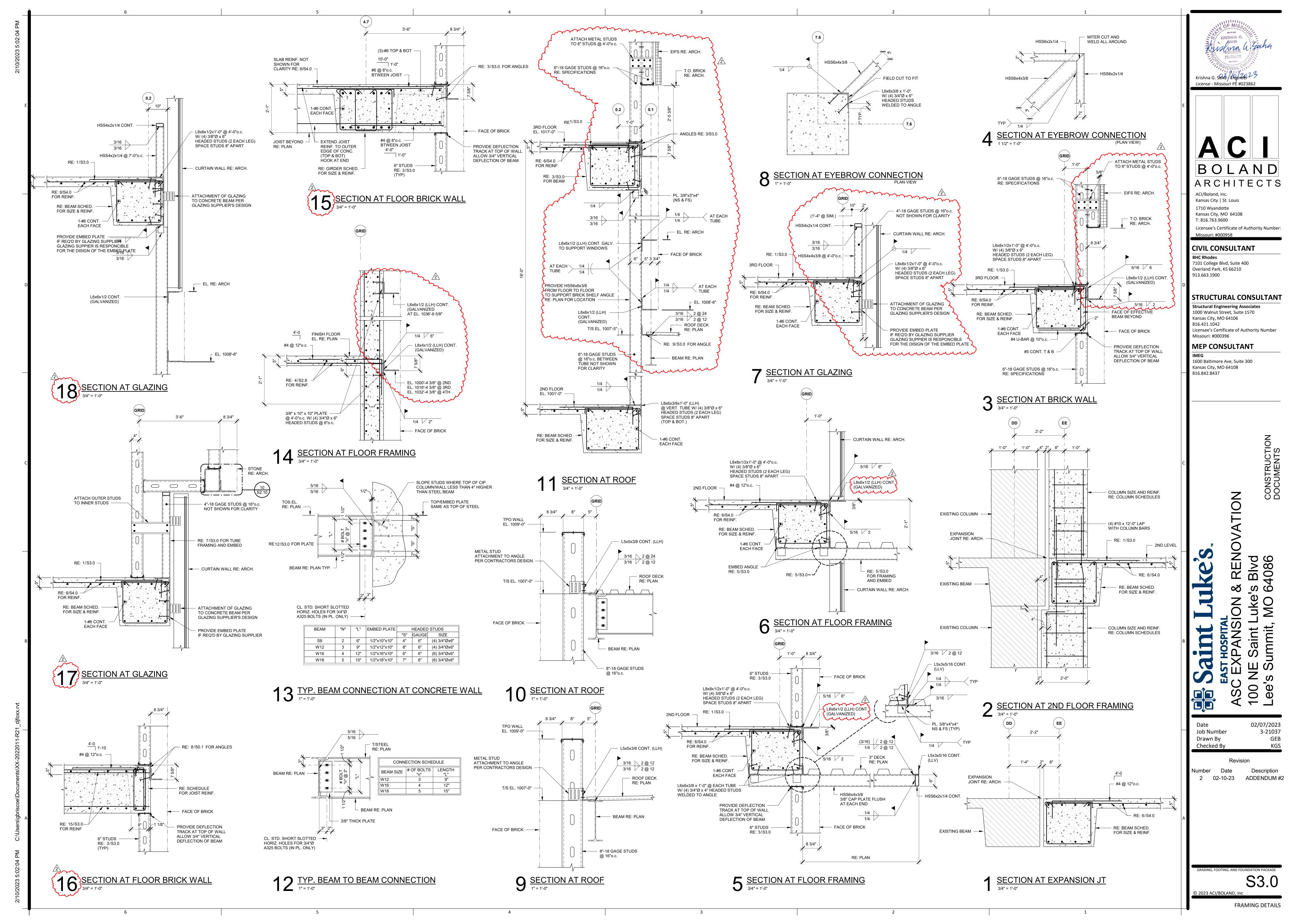
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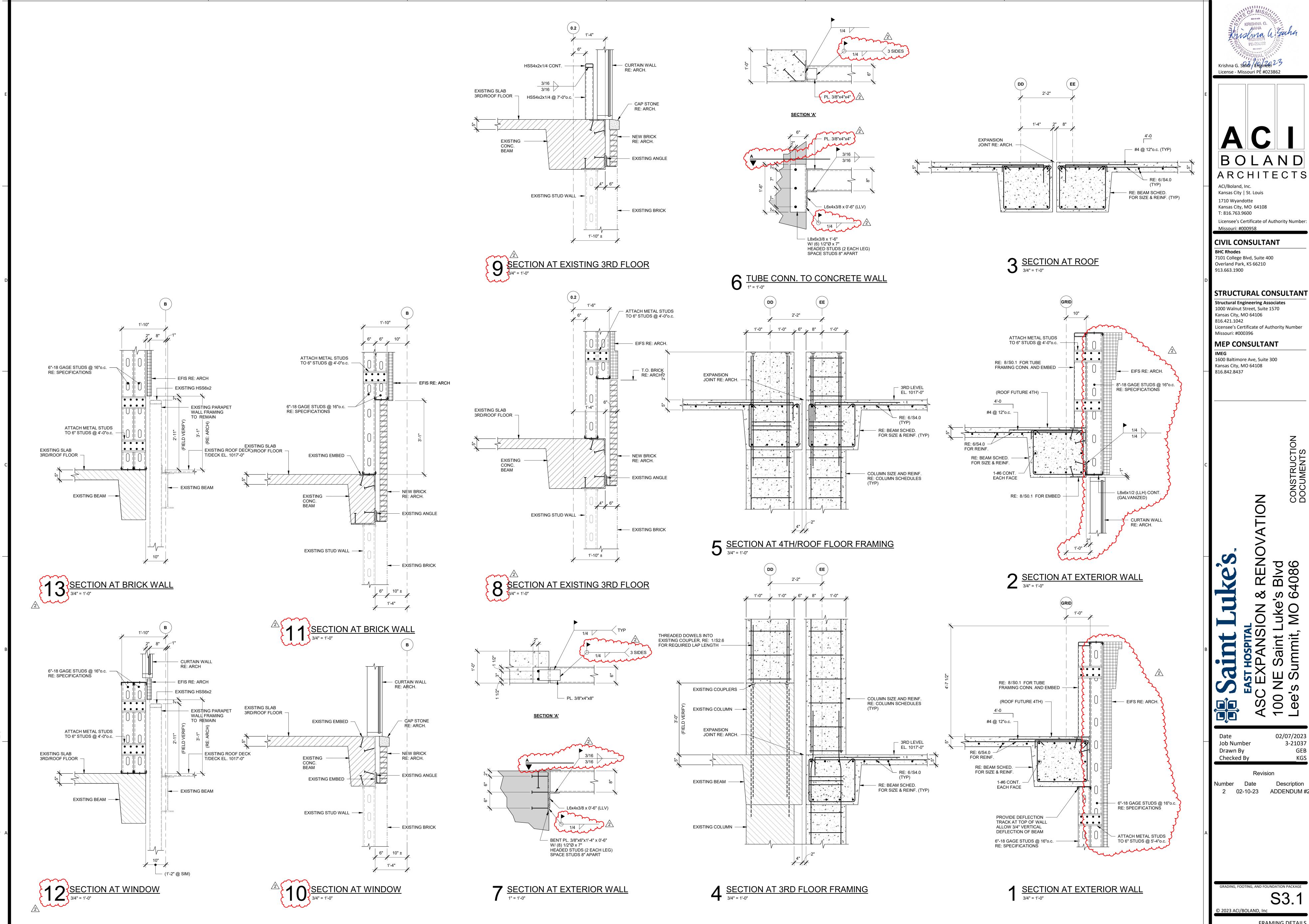
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AND DETAILS







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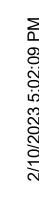
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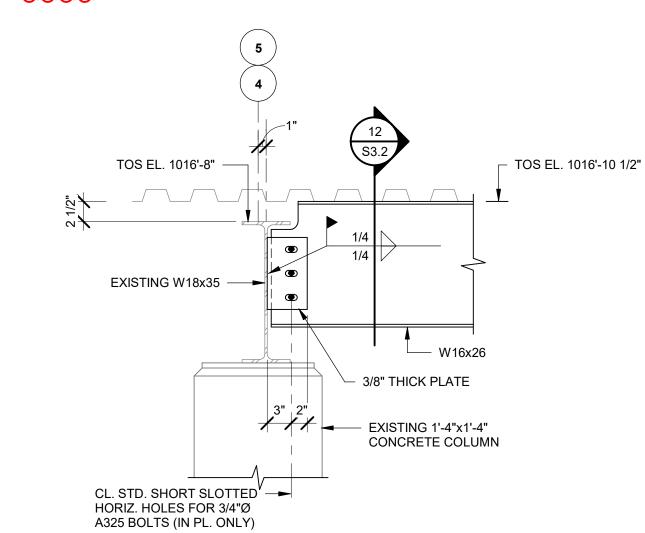
Description 2 02-10-23 ADDENDUM #2

FRAMING DETAILS

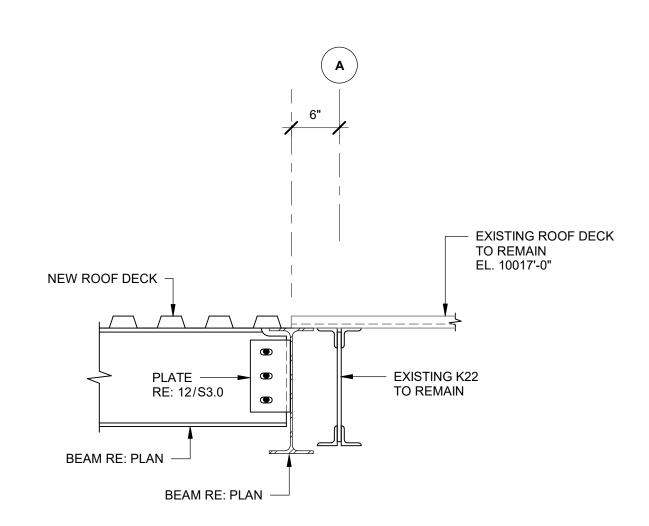


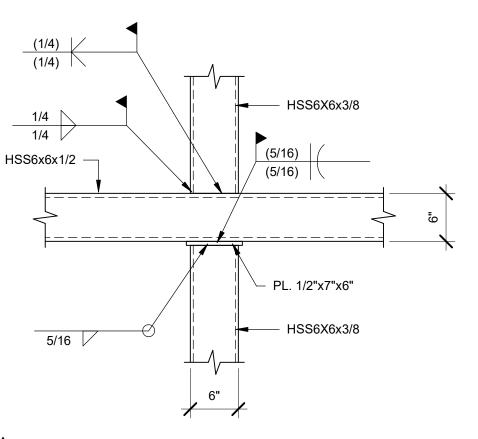
HSS6x6x3/8 RE: PLAN — PL. 3/8"x4"x4" - TUBE RE: ELEVATION (1/4) 1/4" CAP PLATE FLUSH WITH TUBE L4x4x3/8 x 0'-6"

14 TUBE TO TUBE CONN.

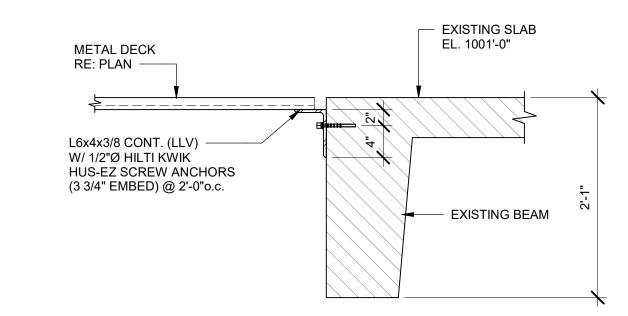


13 NEW BEAM TO EXISTING BEAM



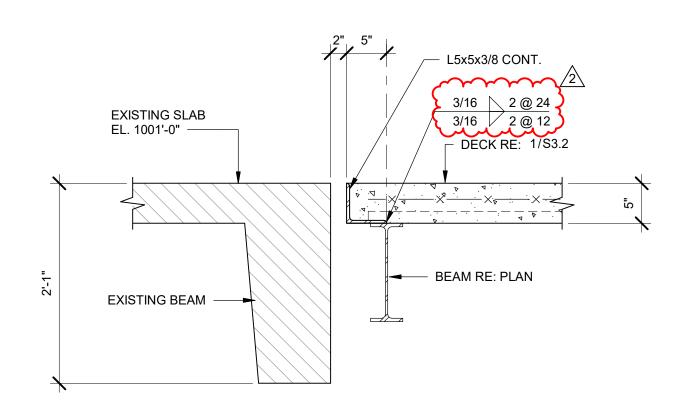


COLUMN SPLICE DETAIL

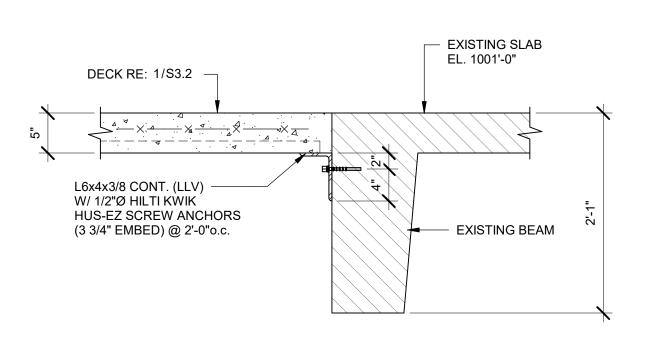


10 SECTION AT STAIR INFILL

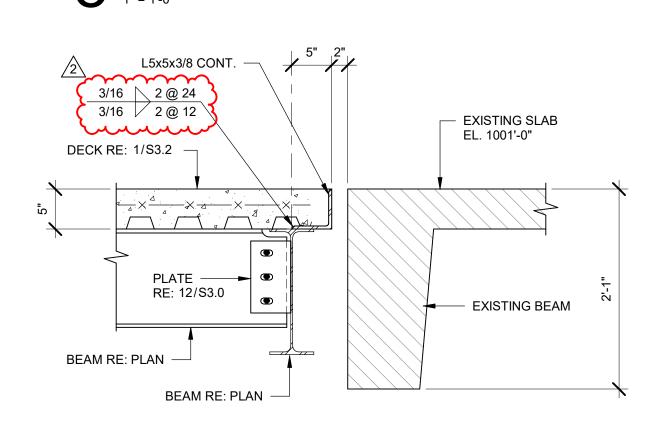
1" = 1'-0"



9 SECTION AT STAIR INFILL
1" = 1'-0"

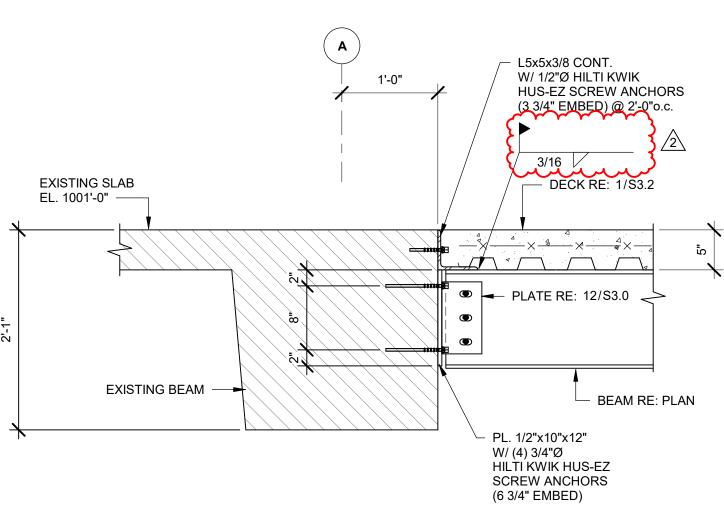


8 SECTION AT STAIR INFILL
1" = 1'-0"



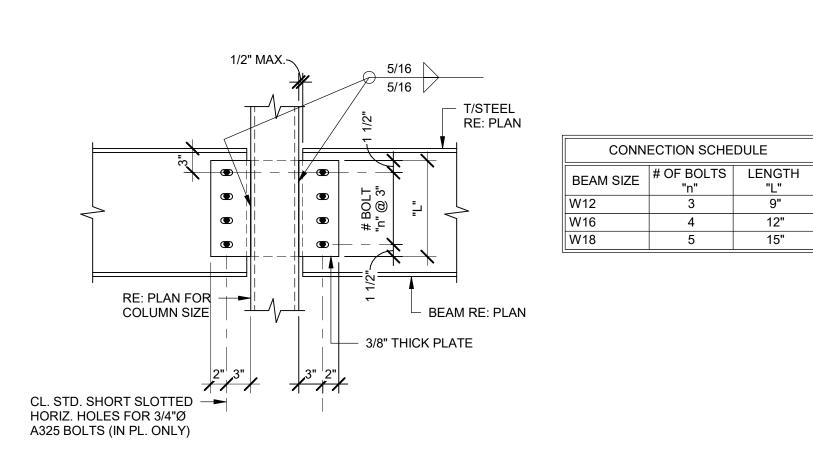
7 SECTION AT STAIR INFILL

1" = 1'-0"

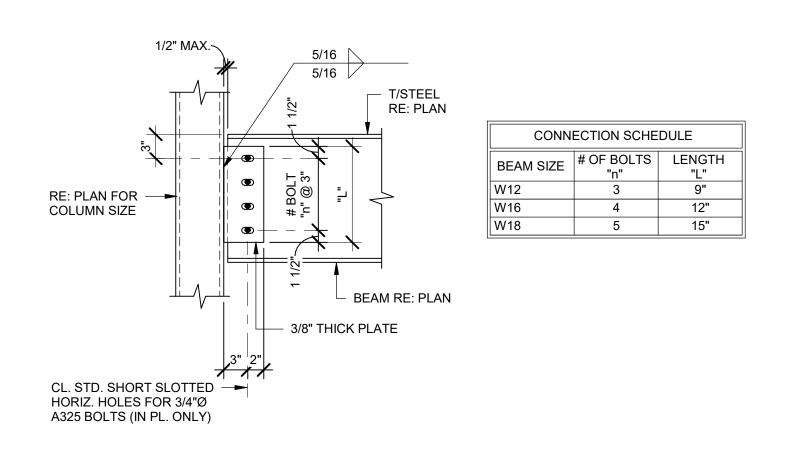


6 SECTION AT STAIR INFILL

1" = 1'-0"

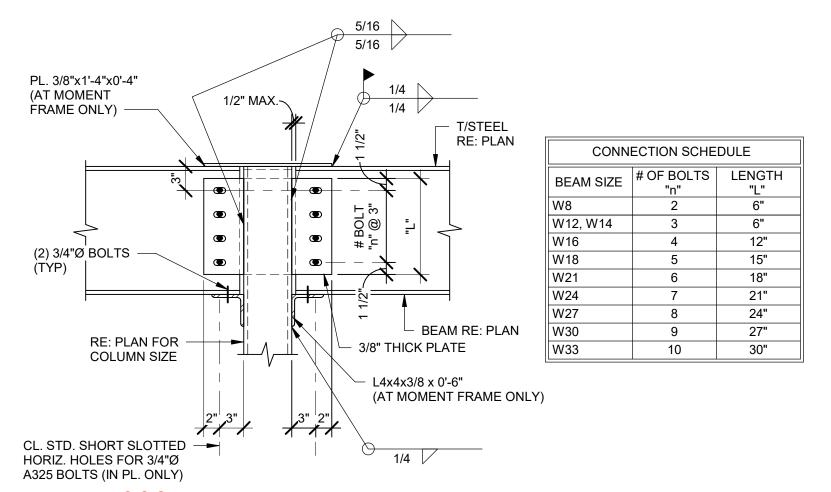


5 TYP. BEAM TO COLUMN CONNECTION 1" = 1'-0"

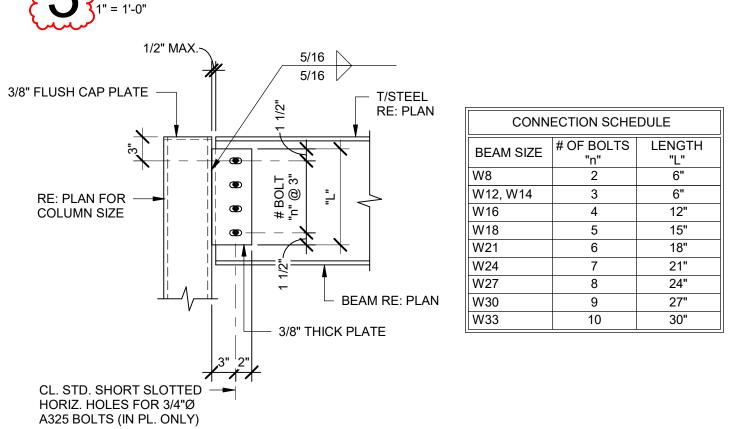


TYP. BEAM TO COLUMN CONNECTION

1" = 1'-0"

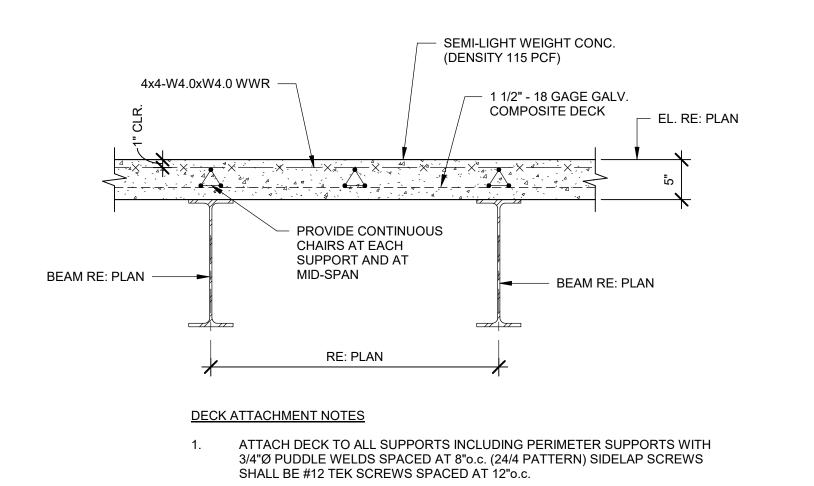


TYP. BEAM TO COLUMN CONNECTION (MOMENT FRAME)



2 TYP. BEAM TO COLUMN CONNECTION

1" = 1'-0"



SECTION AT STAIR INFILL



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1600 Baltimore Ave, Suite 300 Kansas City, MO 64108 816.842.8437

CONSTRUCTION
DOCUMENTS

uke's Blvd MO 64086

02/07/2023 3-21037 Job Number Author Drawn By

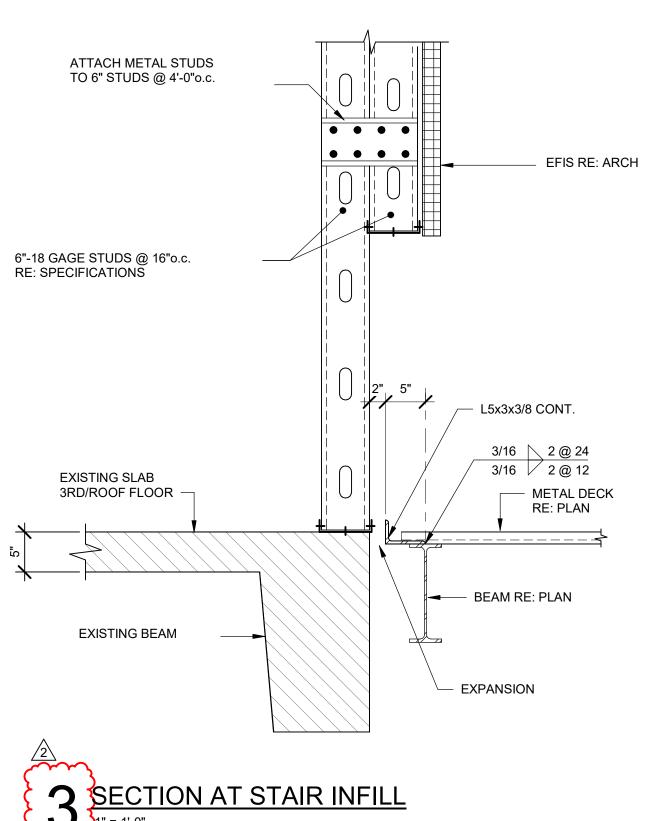
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Description 02-10-23 ADDENDUM #2

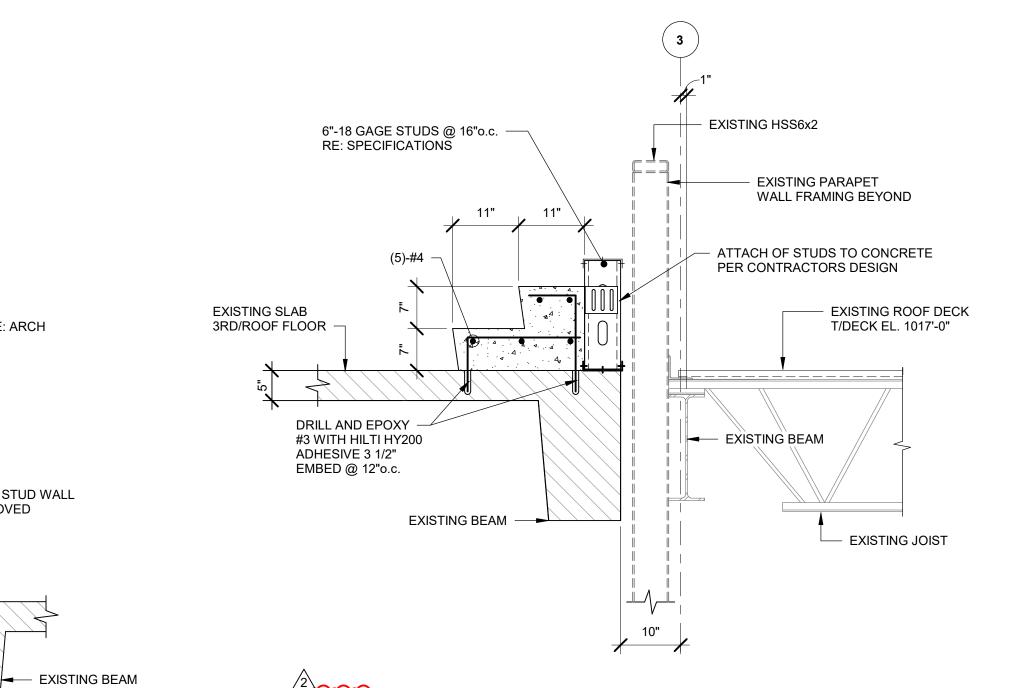
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FRAMING DETAILS





3 SECTION AT STAIR INFILL



5 SECTION AT 3RD FLOOR
3/4" = 1'-0"

- EFIS RE: ARCH

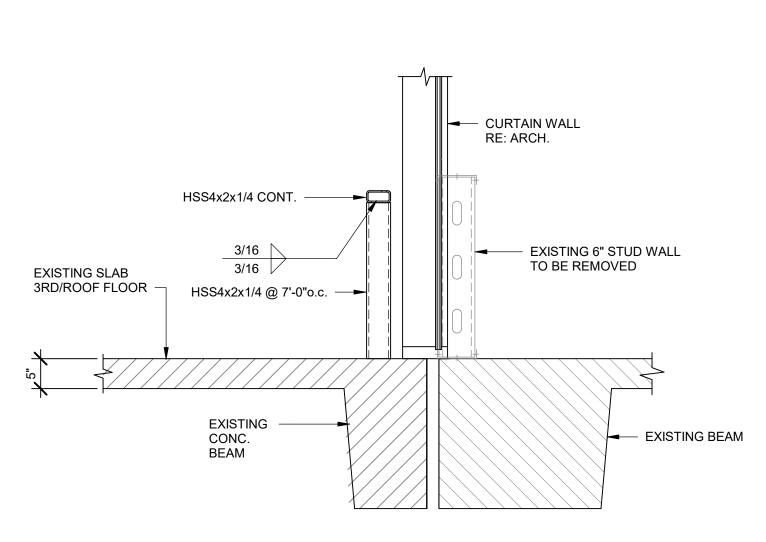
EXISTING 6" STUD WALL TO BE REMOVED

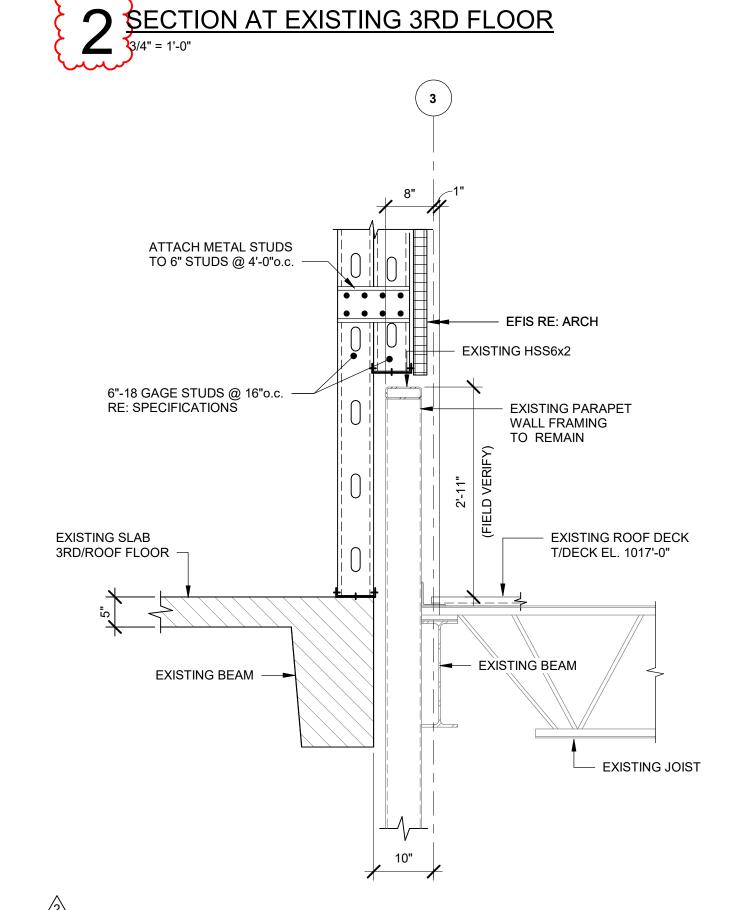
ATTACH METAL STUDS TO 6" STUDS @ 4'-0"o.c.

6"-18 GAGE STUDS @ 16"o.c. -RE: SPECIFICATIONS

EXISTING CONC. BEAM

EXISTING SLAB 3RD/ROOF FLOOR







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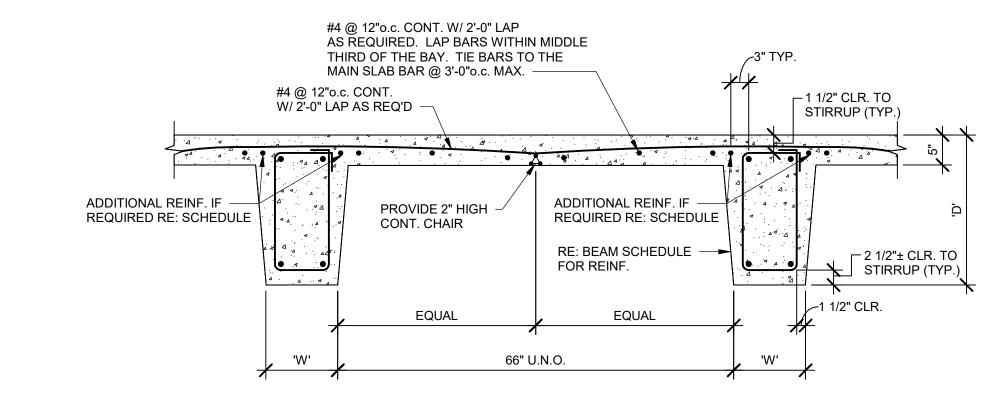
Number Date Description 2 02-10-23 ADDENDUM #2

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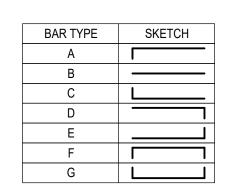
FRAMING DETAILS

BEAM	SIZE		EXISTING BUILDI	NG CONCRETE BEAM S		JLE COMMENTS	BEAM	SIZE		EXISTING BUILD	ING CO	NCRETE BEAM SO		JLE COMMENTS
		DEPTH	LONGITUDINAL REINFORCING  2 - #7 x 14'-6" Top at Grid 0.2  2 - #9 x 24'-0" Top at Grid 1	TYPE SPACING EA. END  D 20 - #3 Total  B 1 at 2"o.c.	TYPE		MARK		DEPTH	LONGITUDINAL REINFORCING  4 - #9 x 20'-0" Top at Grid 5.2  4 - #9 x 20'-6" Bottom	TYPE B B	SPACING EA. END  24 - #4 Total  1 at 2"o.c.	TYPE	J. J
B1	9"	25"	2 - # 7 x 23'-6" Bottom	E 9 at 10"o.c.	S5		B25	27"	25"	4- #9x 20-0 Bullotti	Ь	10 at 5"o.c. 1 at 10"o.c.	S2	
			2 - #6 x 20'-0" Top at Midspan 2 - #9 x 24'-0" Top at Grid 2.7	B 38 - #3 Total B 1 at 2"o.c.						4 - # 7 x 15'-0" Top at Midspan 4 - # 9 x 16'-0" Top at Grid 5.9	B B	34 - #4 Total 1 at 2"o.c.		
B2	9"	25"	2 - #9 x 40'-0" Bottom	B 18 at 10"o.c.	S5		B26	27"	25"	4 - #9 x 29'-0" Bottom	В	10 at 5"o.c. 6 at 10"o.c.	S2	
			2 - # 6 x 17'-6" Top at Midspan 2 - # 9 x 20'-0" Top at Grid 3.7	B 32 - #3 Total B 1 at 2"o.c.						4 - #8 x 18'-0" Top at Concrete Wall 4 - #9 x 24'-0" Bottom	A C	32 - #4 Total 1 at 2"o.c.		
В3	9"	25"	2 - #8 x 35'-6" Bottom	B 15 at 10"o.c.	S5		B27	27"	25"			10 at 5"o.c. 5 at 10"o.c.	S2	
			2 - # 6 x 19'-6" Top at Midspan 2 - # 8 x 20'-0" Top at Grid 4.7	B 32 - #3 Total B 1 at 2"o.c.						NOTHOED				
B4	9"	25"	2 - #8 x 35'-6" Bottom	B 15 at 10"o.c.	S5		B28			NOT USED				
			2 - #8 x 20'-0" Top at Grid 5.2 2 - #7 x 20'-6" Bottom	B 14 - #3 Total B 1 at 2"o.c.						3 - # 7 x 17'-6" Top at Midspan 3 - # 10 x 20'-0" Top at Grid 3.7	B B	42 - #4 Total 1 at 2"o.c.		
B5	9"	25"		6 at 10"o.c.	S5		B29	19"	25"	3 - # 9 x 35'-6" Bottom	В	10 at 5"o.c. 10 at 10"o.c.	S2	
D0	011	05"	2 - #6 x 15'-0" Top at Midspan 2 - #8 x 16'-0" Top at Grid 5.9	B 24 - #3 Total B 1 at 2"o.c.	0.5		B00	2011	2511	2 - # 10 x 13'-0" Top at Grid 3.7 4 - # 7 x 19'-6" Top at Midspan	D B	42 - #4 Total 1 at 2"o.c.		2 - #9 and 2 - #10 Bars with hooks are to be placed at Grid 3.7 on south side of beam to account for
B6	9"	25"	2 - # 7 x 29'-0" Bottom	B 11 at 10"o.c.	S5		B30	32"	25"	4 - #10 x 20'-0"       Top at Grid 4.7         2 - #9 x 35'-6"       Bottom         3 - #9 x 35'-6"       Bottom	B E B	10 at 5"o.c. 10 at 10"o.c.	S3	beam offset.
B7	9"	25"	2 - #7 x 18'-0" Top at Concrete Wall 2 - #7 x 24'-0" Bottom	A 22 - #3 Total C 1 at 2"o.c. 10 at 10"o.c.	0.5		P24	32"	25"	4 - # 10 x 20'-0" Top at Grid 5.2 4 - # 9 x 20'-6" Bottom	B B	24 - #4 Total 1 at 2"o.c. 10 at 5"o.c.	S3	
Β <i>t</i>	9	23		10 at 10 0.c.	S5		B31	32	23			1 at 10"o.c.	33	
B8			NOT USED				B32	32"	25"	4 - # 7 x 15'-0" Top at Midspan 4 - # 10 x 16'-0" Top at Grid 5.9 4 - # 9 x 29'-0" Bottom	B B B	34 - #4 Total 1 at 2"o.c. 10 at 5"o.c.	S3	
			THO F GGEB									6 at 10"o.c.		
B9			NOT USED				B33	32"	25"	4 - #8 x 18'-0" Top at East End 4 - #9 x 24'-0" Bottom	A C	32 - #4 Total 1 at 2"o.c. 10 at 5"o.c.	S3	
												5 at 10"o.c.		
B10	9"	25"	2 - # 6 x 17'-6" Top at Midspan 2 - # 8 x 41'-0" Bottom	B 32 - #3 Total B 1 at 2"o.c. 15 at 10"o.c.	S5	Extend Bottom Bars Into B11	B34	24"	25"	4 -       # 8 x       14'-6"       Top at Grid 0.2         4 -       # 9 x       24'-0"       Top at Grid 1         4 -       # 9 x       23'-6"       Bottom	D B E	30 - #4 Total 1 at 2"o.c. 10 at 5"o.c.	S2	
												4 at 10"o.c.		
B11	9"	25"	2 - # 9 x 20'-0" Top at West End	A 9 - #3 Total 1 at 2"o.c. 8 at 10"o.c.	S5	Stirrups are spaced from Grid 3.7 only	B35	24"	25"	4 -       # 7 x       20'-0"       Top at Midspan         4 -       # 9 x       24'-0"       Top at Grid 2.7         4 -       # 9 x       40'-0"       Bottom	B B B	48 - #4 Total 1 at 2"o.c. 10 at 5"o.c.	S2	
												13 at 10"o.c.		
B12			NOT USED				B36	24"	25"	4 - # 7 x 17'-6" Top at Midspan 4 - # 9 x 41'-0" Bottom	B B	42 - #4 Total 1 at 2"o.c. 10 at 5"o.c.	S2	Extend Bottom Bars Into B37
												10 at 10"o.c.		
B13			NOT USED				B37	24"	25"	4 - #9 x 20'-0" Top at West End	A	14 - #4 Total 1 at 2"o.c. 10 at 5"o.c.	S2	Stirrups are spaced from Grid 3.7 only
			4 #0 v 44 C!	D 30 - #4 Total						4 #0 v 44 C!! Top of Crid 0 0		3 at 10"o.c. 30 - #4 Total		
B14	28"	25"	4 -       # 9 x       14'-6"       Top at Grid 0.2         4 -       # 10 x       24'-0"       Top at Grid 1         4 -       # 9 x       24'-0"       Bottom	D 30 - #4 Total  B 1 at 2"o.c.  E 10 at 5"o.c.  4 at 10"o.c.	S3		B38	25"	25"	4 -       # 8 x       14'-6"       Top at Grid 0.2         4 -       # 9 x       24'-0"       Top at Grid 1         4 -       # 9 x       23'-6"       Bottom	D B E	1 at 2"o.c. 10 at 5"o.c. 4 at 10"o.c.	S2	
			4 - # 7 x 12'-0" Top at Midspan	B 42 - #4 Total						4 - # 7 x 20'-0" Top at Midspan	В	48 - #4 Total		Extend Bottom Bars Into B40
B15	28"	25"	4 - # 11 x 28'-0" Top at Grid 2.5 2 - # 11 x 18'-0" Top at Grid 2.5 4 - # 9 x 34'-0" Bottom	B 1 at 2"o.c. B 11 at 5"o.c. B 9 at 10"o.c.	S3		B39	25"	25"	4 - #9 x 46'-0" Bottom	В	1 at 2"o.c. 10 at 5"o.c. 13 at 10"o.c.	S2	
			4 - # 7 x 20'-0" Top at Midspan	B 54 - #4 Total						4 - # 9 x 23'-0" Top at West End	A	15 - #4 Total		Stirrups are spaced from Grid 2.7 only
B16	28"	25"	5 - # 11 x 24'-0" Top at Grid 3.7 4 - # 11 x 42'-0" Bottom	B 1 at 2"o.c. B 14 at 5"o.c. 12 at 10"o.c.	S3		B40	25"	25"			1 at 2"o.c. 10 at 5"o.c. 4 at 10"o.c.	S2	
			4 - # 7 x 17'-6" Top at Midspan	B 42 - #4 Total			2	****	<b>\</b>	2 - # 7 x 14'-6" Top at Grid 0.2	D	20 - #4 Total		Extend #8 x 24'-0" into B42
B17	28"	25"	4 - # 10 x 20'-0" Top at Grid 4.7 4 - # 9 x 35'-6" Bottom	B 1 at 2"o.c. B 10 at 5"o.c. 10 at 10"o.c.	S3		B41	12" 10" @	1	2 - #7 x 14'-6" Top at Grid 1 1 - #9 x 24'-0" Top at Grid 1 1 - #8 x 24'-0" Bottom	A B E	1 at 2"o.c. 9 at 10"o.c.	S2	
			4 - # 10 x 20'-0" Top at Grid 5.2	B 24 - #4 Total			}	RECESS	<b>\</b>	1 - #8 x 21'-0" Bottom  2 - #7 x 14'-6" Top at Grid 1	D D	38 - #4 Total		Extend Bottom Bars into B43
B18	28"	25"	4 - # 9 x 20'-6" Bottom	B 1 at 2"o.c. 10 at 5"o.c. 1 at 10"o.c.	S3		B42	12" 10" @ RECESS	25"	2 - # 6 x 20'-0" Top at Midspan 2 - # 10 x 46'-2" Bottom	B E	1 at 2"o.c. 18 at 8"o.c.	S2	
			4 - # 7 x 15'-0" Top at Midspan 4 - # 10 x 16'-0" Top at Grid 5.9	B 34 - #4 Total B 1 at 2"o.c.			\ \{\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\		3	2 - # 9 x 23'-0" Top at West End	A	10 - #4 Total 1 at 2"o.c.		Stirrups are spaced from Grid 2.7 only
B19	28"	25"	4 - # 9 x 29'-0" Bottom	B 10 at 5"o.c. 6 at 10"o.c.	S3		B43	12" 10" @ RECESS	<b>3</b> 25"			9 at 8"o.c.	S2	
			4 - # 9 x 16'-6" Top at Concrete Wall 4 - # 9 x 22'-6" Bottom	A 30 - #4 Total C 1 at 2"o.c.			{	····	3	NOTUSED				
B20	28"	25"		10 at 5"o.c. 4 at 10"o.c.	S3		B44	12" 10" @ RECESS		NOT USED				
			4 - #8 x 14'-6" Top at Grid 0.2 4 - #9 x 24'-0" Top at Grid 1	D 30 - #4 Total B 1 at 2"o.c.			2	~~	<b>\</b>	1 - #7 x 12'-0" Top at Grid 3.7 2 - #6 x 19'-6" Top at Midspan	D B	32 - #4 Total 1 at 2"o.c.		
B21	27"	25"	4 - #9 x 24'-0" Bottom	E 10 at 5"o.c. 4 at 10"o.c.	S2		B45	12" 10" @ RECESS	<i>)</i>	2 - #9 x 20'-0" Top at Grid 4.7 2 - #9 x 35'-6" Bottom	B B	15 at 10"o.c.	S2	
			4 - # 7 x 20'-0" Top at Midspan 4 - # 9 x 24'-0" Top at Grid 2.7	B 48 - #4 Total B 1 at 2"o.c.					3	2 - # 9 x 20'-0" Top at Grid 5.2 2 - # 8 x 20'-6" Bottom	B B	14 - #4 Total 1 at 2"o.c.		
B22	27"	25"	4 - #9 x 40'-0" Bottom	B 10 at 5"o.c. 13 at 10"o.c.	S2		B46 (	12" 10" @ RECESS	<b>3</b> 25"			6 at 5"o.c.	S2	
			4 - #7 x 17'-6" Top at Midspan 4 - #9 x 20'-0" Top at Grid 3.7	B 42 - #4 Total B 1 at 2"o.c.			}	10"	}	2 - #6 x 15'-0" Top at Midspan 2 - #7 x 20'-0" Top at Grid 5.9	B A	24 - #4 Total 1 at 2"o.c.		
B23	27"	25"	4 - # 9 x 35'-6" Bottom	B 10 at 5"o.c. 10 at 10"o.c.	S2		B47	12" 10" @ RECESS	25"	2 - # 9 x 29'-0" Bottom	С	11 at 10"o.c.	S2	
P24	27"	25"	4 - #7 x 19'-6" Top at Midspan 4 - #9 x 20'-0" Top at Grid 4.7	B 42 - #4 Total B 1 at 2"o.c. B 10 at 5"o.c	co.		P40	10"	<b>)</b>	2 - #7 x 15'-0" Top at Concrete Wall 2 - #7 x 15'-0" Top at Grid 5.9 1 - #9 x 22'-0" Bottom	A D	22 - #4 Total 1 at 2"o.c.	60	
B24	27"	25"	4 - # 9 x 35'-6" Bottom	B 10 at 5"o.c. 10 at 10"o.c.	S2		B48	12" 10" @ RECESS	25"	1 - #9 x 22'-0" Bottom 1 - #9 x 22'-0" Bottom	C E	10 at 10"o.c.	S2	
				7 DEAM COLIEDIU	_				ر ا		1			I

7 BEAM SCHEDULE

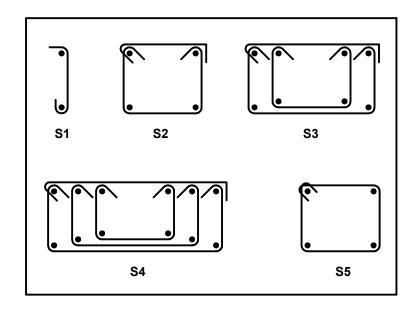


6 TYPICAL BEAM/SLAB SECTION
3/4" = 1'-0"



5 BEAM/SLAB BAR TYPE DIAGRAM

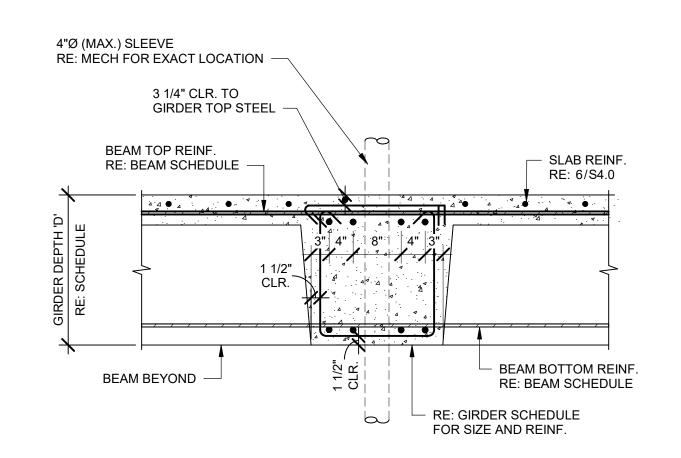
3/4" = 1'-0"



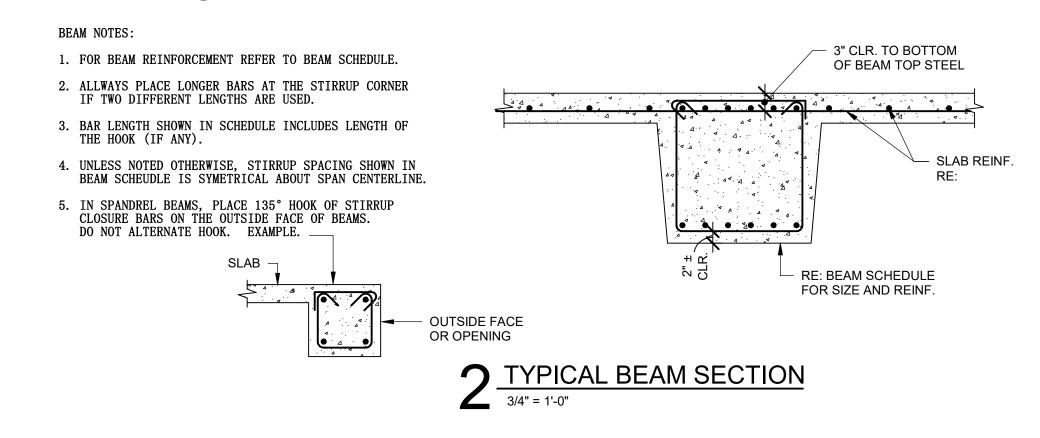
SEE TYPICAL DETAILS FOR PLACEMENT.
 HOOK SHOWN ARE STANDARD HOOK LENGTHS PER ACI-318.

4 BEAM/GIRDER STIRRUP TYPE DIAGRAM

3/4" = 1'-0"



3 TYPICAL GIRDER SECTION @ SINGLE STIRRUPS



CANTILEVER **EQUAL** STANDARD HOOK (TYP.) CENTERED ON THE SPAN 3" MAX. STIRRUP SPACING STIRRUP SPACING
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TYPICAL BEAM/GIRDER ELEVATION

3/4" = 1'-0"

License - Missouri PÉ #023862

BOLAND ARCHITECTS

ACI/Boland, Inc. Kansas City | St. Louis 1710 Wyandotte Kansas City, MO 64108 T: 816.763.9600 Licensee's Certificate of Authority Number:

**CIVIL CONSULTANT** 

Missouri: #000958

**BHC Rhodes** 7101 College Blvd, Suite 400 Overland Park, KS 66210 913.663.1900

STRUCTURAL CONSULTANT Structural Engineering Associates 1000 Walnut Street, Suite 1570 Kansas City, MO 64106 816.421.1042 Licensee's Certificate of Authority Number

Missouri: #000396 MEP CONSULTANT

1600 Baltimore Ave, Suite 300 Kansas City, MO 64108

816.842.8437

Blvd 4086

02/07/2023 3-21037 Job Number GEB Drawn By Checked By

Revision

Description

2 02-10-23 ADDENDUM #2

**S4.0** 

© 2023 ACI/BOLAND, Inc BEAM SCHEDULE AND DETAILS

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			1	XISTING BUILDII	NG CON	1				T		1		BEAM	SCHEDULE (2ND		D FLOOR)
И	SIZE	DEDTII		ORCING	TVDE	STIRRUP CONFIGURA		COMMENTS	BEAM	SIZE	DEDTU	REINFO		TVDE	STIRRUP CONFIGURAT		
K	WIDTH	DEPTH	LONGITUDINAL 1 - #7 x 14'-0"	Top @ Grid 2.7	TYPE D	SPACING EA. END  32 - #4 Total	TYPE	Extend Bottom Bars into B50	MARK	WIDTH	DEPTH	LONGITUDINAL 4 - #8 x 14'-0"	Top @ Grid 0.2	TYPE A	SPACING EA. END #4	TYPE	
	12" 10" @ RECESS 4TH	25"	2 - #6 x 17'-6" 2 - #10 x 41'-0"	Top @ Midspan Bottom	B B	1 @ 2"o.c. 15 @ 10"o.c.	S2		B101	26"	25"	5 - #9 x 24'-0" 4 - #7 x 24'-0"	Top @ Grid 1 Bot @ Grid 0.2	B C	1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c.	S5	
8	7111	}	2 - # 9 x 20'-0"	Top @ West End	A	9 - #4 Total		Stirrups are spaced from Grid 3.7 only				4 - #7 x 20'-0"	Top @ Mid-Span	В	#4		
	12" 10" @ RECESS 4TH	25"				1 @ 2"o.c. 8 @ 10"o.c.	S2		B102	26"	25"	5 - #9 x 26'-0" 4 - #8 x 34'-0"	Top @ Grid 2.5 Bot @ Mid-Span	B B	1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c.	S5	
1	~~~		2 - #6 x 20'-0"	Top @ Midspan	В	38 - #3 Total		Extend Bottom Bars into B52				4 - # 7 x 20'-0"	Top @ Mid-Span	В	#4		
	9"	25"	2 - #10 x 46'-0"	Bottom	В	1 @ 2"o.c. 18 @ 10"o.c.	S5		B103	26"	25"	5 - #9 x 26'-0" 4 - #9 x 42'-0"	Top @ Grid 3.7 Bot @ Mid-Span	ВВВ	1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c.	S5	
+			2 - # 9 x 23'-0"	Top @ West End	A	10 - #3 Total		Stirrups are spaced from Grid 2.7 only				4 - # 7 x 16'-0"	Top @ Mid-Span	В	#4		
	9"	25"				1 @ 2"o.c. 9 @ 10"o.c.	S5		B104	26"	25"	5 - #9 x 24'-0" 4 - #8 x 34'-0"	Top @ Grid 4.7 Bot @ Mid-Span	В	1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c.	S5	
		25								20	23						
			3 - #8 x 14'-6" 3 - #10 x 24'-0"	Top @ Grid 0.2 Top @ Grid 1	D B	30 - #4 Total 1 @ 2"o.c.						4 - #7 x 18'-0" 5 - #9 x 24'-0"	Top @ Mid-Span Top @ Grid 5.7	B B	#4 1 @ 2"o.c. 10 @ 5"o.c.		
	19"	25"	3 - #10 x 24'-0"	Bottom	E	10 @ 5"o.c. 4 @ 10"o.c.	S2		B105	26"	25"	4 - #8 x 40'-0"	Bot @ Mid-Span	В	Rest @ 10"o.c.	S5	
1			3 - #7 x 20'-0" 3 - #10 x 24'-0"	Top @ Midspan Top @ Grid 2.7	B B	48 - #4 Total 1 @ 2"o.c.						4 - #7 x 24'-0" 4 - #8 x 34'-0"	Top @ Grid 7.6 Bot @ Grid 7.6	D E	#4 1 @ 2"o.c. 10 @ 5"o.c.		
	19"	25"	3 - # 10 x 40'-0"	Bottom	В	10 @ 5"o.c. 13 @ 10"o.c.	S2		B106	26"	25"	4- #0X 34-0	Dot @ Ond 7.0	L	Rest @ 10"o.c.	S5	
												4 - #8 x 14'-0"	Top @ Grid 0.2	A	#4		
									B107	22"	25"	5 - #9 x 24'-0" 4 - #8 x 24'-0"	Top @ Grid 1 Bot @ Grid 0.2	B C	1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c.	S5 -	
												4 - # 7 x 18'-0"	Top @ Mid-Span	В	#4		
									B108	22"	25"	5 - #9 x 24'-0" 4 - #8 x 38'-0"	Top @ Grid 2.5 Bot @ Mid-Span	ВВ	1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c.	S5	
												4 - #7 x 14'-0"	Top @ Mid-Span	В	#4		
									B109	22"	25"	5 - #9 x 24'-0" 4 - #8 x 34'-0"	Top @ Grid 3.7 Bot @ Mid-Span	B B	1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c.	S5	
												4 - #7 x 14'-0"	Top @ Mid-Span	В	#4	-	
									D440	00"	05"	5 - # 9 x 24'-0"	Top @ Grid 4.7	В	1 @ 2"o.c. 10 @ 5"o.c.	S5	
									B110	22"	25"	4 - #8 x 34'-0"	Bot @ Mid-Span	В	Rest @ 10"o.c.	55	
												4 - #7 x 18'-0" 5 - #9 x 24'-0"	Top @ Mid-Span Top @ Grid 5.7	ВВ	#4 1 @ 2"o.c. 10 @ 5"o.c.	-	
									B111	22"	25"	4 - #8 x 38'-0"	Bot @ Mid-Span	В	Rest @ 10"o.c.	S5	
												4 - #8 x 24'-0"	Top @ Grid 7.6	D	#4		
									B112	22"	25"	4 - #8 x 34'-0"	Bot @ Grid 7.6	E	1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c.	S5	
												4 - #8 x 14'-0"	Top @ Grid 0.2	A	#4		
									B113	23"	25"	5 - #9 x 24'-0" 4 - #8 x 24'-0"	Top @ Grid 1 Bot @ Grid 0.2	B C	1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c.	S5	

NEW BUILDING CONCRETE BEAM SCHEDULE (ROOF/FUTURE 4TH FLOOR)			RD FLOOR)	BEAM SCHEDULE (2ND AND 3I	DING CONCRETE	NEW BUILE			
SIZE REINFORCING STIRRUP CONFIGURATION COMMENTS WIDTH DEPTH LONGITUDINAL REINFORCING TYPE SPACING EA. END TYPE		BEAM MARK	COMMENTS	STIRRUP CONFIGURATION  TYPE SPACING EA. END TYPE	IFORCING AL REINFORCING		DEPTH	SIZE WIDTH	BEAM MARK
4 - #8 x 14'-0" Top @ Grid 0.2 A #4  5 - #9 x 24'-0" Top @ Grid 1 B 1 @ 2"o.c. 10 @ 5"o.c.  4 - # 7 x 24'-0" Bot @ Grid 0.2 C Rest @ 10"o.c. S5		RB101		A #4  B 1 @ 2"o.c. 10 @ 5"o.c.  C Rest @ 10"o.c. S5	Top @ Grid 0.2 Top @ Grid 1 Bot @ Grid 0.2	4 - #8 x 14'-0" 5 - #9 x 24'-0" 4 - #7 x 24'-0"		26"	B101
4 - #7 x 20'-0" Top @ Mid-Span B #4 5 - #9 x 26'-0" Top @ Grid 2.5 B 1 @ 2"o.c. 10 @ 5"o.c. 4 - #8 x 34'-0" Bot @ Mid-Span B Rest @ 10"o.c. S5	25"	RB102		B #4 B 1 @ 2"o.c. 10 @ 5"o.c. B Rest @ 10"o.c. S5	Top @ Mid-Span Top @ Grid 2.5 Bot @ Mid-Span	4 - #7 x 20'-0" 5 - #9 x 26'-0" 4 - #8 x 34'-0"		26"	B102
4 - #7 x 20'-0" Top @ Mid-Span B #4 5 - #9 x 26'-0" Top @ Grid 3.7 B 1 @ 2"o.c. 10 @ 5"o.c. 4 - #9 x 42'-0" Bot @ Mid-Span B Rest @ 10"o.c. S5		RB103		B #4 B 1 @ 2"o.c. 10 @ 5"o.c. B Rest @ 10"o.c. S5	Top @ Mid-Span Top @ Grid 3.7 Bot @ Mid-Span	4 - #7 x 20'-0" 5 - #9 x 26'-0" 4 - #9 x 42'-0"		26"	B103
4 - #7 x 16'-0" Top @ Mid-Span B #4 5 - #9 x 24'-0" Top @ Grid 4.7 B 1 @ 2"o.c. 10 @ 5"o.c. 4 - #8 x 34'-0" Bot @ Mid-Span B Rest @ 10"o.c. S5	25"	RB104		B #4 B 1 @ 2"o.c. 10 @ 5"o.c. B Rest @ 10"o.c. S5	Top @ Mid-Span Top @ Grid 4.7 Bot @ Mid-Span	4 - #7 x 16'-0" 5 - #9 x 24'-0" 4 - #8 x 34'-0"		26"	B104
4 - #7 x 18'-0" Top @ Mid-Span B #4 5 - #9 x 24'-0" Top @ Grid 5.7 B 1 @ 2"o.c. 10 @ 5"o.c. 25" 4 - #8 x 40'-0" Bot @ Mid-Span B Rest @ 10"o.c. S5	25"	RB105		B #4 B 1 @ 2"o.c. 10 @ 5"o.c. B Rest @ 10"o.c. S5	Top @ Mid-Span Top @ Grid 5.7 Bot @ Mid-Span	4 - #7 x 18'-0" 5 - #9 x 24'-0" 4 - #8 x 40'-0"		26"	B105
4 - #8 x 24'-0" Top @ Grid 7.6 D #4 4 - #8 x 34'-0" Bot @ Grid 7.6 E 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5	25"	RB106		D #4 E 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5	Top @ Grid 7.6 Bot @ Grid 7.6	4 - #7 x 24'-0" 4 - #8 x 34'-0"		26"	B106
4 - #8 x 14'-0" Top @ Grid 0.2 A #4  5 - #9 x 24'-0" Top @ Grid 1 B 1 @ 2"o.c. 10 @ 5"o.c.  4 - #8 x 24'-0" Bot @ Grid 0.2 C Rest @ 10"o.c. S5	25"	RB107		A #4 B 1 @ 2"o.c. 10 @ 5"o.c. C Rest @ 10"o.c. S5	Top @ Grid 0.2 Top @ Grid 1 Bot @ Grid 0.2	4 - #8 x 14'-0" 5 - #9 x 24'-0" 4 - #8 x 24'-0"		22"	B107
4 - # 7 x 18'-0" Top @ Mid-Span B #4 5 - # 9 x 24'-0" Top @ Grid 2.5 B 1 @ 2"o.c. 10 @ 5"o.c. 4 - # 8 x 38'-0" Bot @ Mid-Span B Rest @ 10"o.c. S5		RB108		B #4 B 1 @ 2"o.c. 10 @ 5"o.c. B Rest @ 10"o.c. S5	Top @ Mid-Span Top @ Grid 2.5 Bot @ Mid-Span	4 - #7 x 18'-0" 5 - #9 x 24'-0" 4 - #8 x 38'-0"	25"	22"	B108
4 - #7 x 14'-0"       Top @ Mid-Span       B #4         5 - #9 x 24'-0"       Top @ Grid 3.7       B 1 @ 2"o.c. 10 @ 5"o.c.         4 - #8 x 34'-0"       Bot @ Mid-Span       B Rest @ 10"o.c.		RB109		B #4 B 1 @ 2"o.c. 10 @ 5"o.c. B Rest @ 10"o.c. S5	Top @ Mid-Span Top @ Grid 3.7 Bot @ Mid-Span	4 - #7 x 14'-0" 5 - #9 x 24'-0" 4 - #8 x 34'-0"	25"	22"	B109
4 - #7 x 14'-0" Top @ Mid-Span B #4 5 - #9 x 24'-0" Top @ Grid 4.7 B 1 @ 2"o.c. 10 @ 5"o.c. 4 - #8 x 34'-0" Bot @ Mid-Span B Rest @ 10"o.c. S5	25"	RB110		B #4 B 1 @ 2"o.c. 10 @ 5"o.c. B Rest @ 10"o.c. S5	Top @ Mid-Span Top @ Grid 4.7 Bot @ Mid-Span	4 - #7 x 14'-0" 5 - #9 x 24'-0" 4 - #8 x 34'-0"		22"	B110
4 - #7 x 18'-0" Top @ Mid-Span B #4 5 - #9 x 24'-0" Top @ Grid 5.7 B 1 @ 2"o.c. 10 @ 5"o.c. 4 - #8 x 38'-0" Bot @ Mid-Span B Rest @ 10"o.c. S5	25"	RB111		B #4 B 1 @ 2"o.c. 10 @ 5"o.c. B Rest @ 10"o.c. S5	Top @ Mid-Span Top @ Grid 5.7 Bot @ Mid-Span	4 - #7 x 18'-0" 5 - #9 x 24'-0" 4 - #8 x 38'-0"	25"	22"	B111
4 - #8 x 24'-0" Top @ Grid 7.6 D #4 4 - #8 x 34'-0" Bot @ Grid 7.6 E 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5		RB112		D #4 E 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5	Top @ Grid 7.6 Bot @ Grid 7.6	4 - #8 x 24'-0" 4 - #8 x 34'-0"	25"	22"	B112
	23" 25" 21" @ RECESS			A #4 B 1 @ 2"o.c. 10 @ 5"o.c. C Rest @ 10"o.c. S5	Top @ Grid 0.2 Top @ Grid 1 Bot @ Grid 0.2	4 - #8 x 14'-0" 5 - #9 x 24'-0" 4 - #8 x 24'-0"		23" 21" @ RECESS	B113
	23" 25" 21" @ RECESS			B #4 B 1 @ 2"o.c. 10 @ 5"o.c. B Rest @ 10"o.c. S5	Top @ Mid-Span Top @ Grid 2.5 Bot @ Mid-Span	4 - #7 x 18'-0" 5 - #9 x 24'-0" 4 - #8 x 38'-0"		23" 21" @ RECESS	B114
SEE RB115A FOR REINF. #4  23" 25" Rest @ 10"o.c. S5  21" @ SEE RB115A FOR REINF. #5		RB115		#4 1 @ 2"o.c. 10 @ 5"o.c.  Rest @ 10"o.c.  \$5	NF.	SEE B115A FOR REINF	25"	3RD 23" 21" @ RECESS	B115
22" 25" 4 - # 7 x 24'-0" Top @ 3.7 D #4 4 - # 9 x 38'-0" Bottom B 1 @ 2"o.c. 10 @ 5"o.c.  Center Btwn Grid 2.7 and 3.7 Rest @ 10"o.c. S5		RB115A		D #4 B 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5	Top @ 3.7 Bottom	4 - #7 x 24'-0" 4 - #9 x 38'-0" Center Btwn Grid 2.7 an	25"	3RD 22"	B115A
4 - #8 x 14'-0"     Top @ Grid 4.7     A #4       4 - #7 x 20'-0"     Top @ Mid-Span     B 1 @ 2"o.c. 10 @ 5"o.c.       19" 25"     4 - #10 x 24'-0"     Top @ Grid 5.7     B Rest @ 10"o.c.       17" @ RECESS     4 - #10 x 40'-0"     Bot @ Grid 4.7     C		RB116		A #4 B 1 @ 2"o.c. 10 @ 5"o.c. B Rest @ 10"o.c. S5	Top @ Grid 4.7 Top @ Mid-Span Top @ Grid 5.7 Bot @ Grid 4.7	4 - #8 x 14'-0" 4 - #7 x 20'-0" 4 - #10 x 24'-0" 4 - #10 x 40'-0"	25"	19" 17" @ RECESS	B116
4 - #7 x 14'-0"     Top @ Mid-Span     B #4       4 - #8 x 14'-0"     Top @ Grid 7.6     D 1 @ 2"o.c. 10 @ 5"o.c.       19" 25"     4 - #10 x 36'-0"     Bot @ Grid 7.6     E Rest @ 10"o.c.       17" @     S5	19" 25"	RB117		B #4 D 1 @ 2"o.c. 10 @ 5"o.c. E Rest @ 10"o.c. S5	Top @ Mid-Span Top @ Grid 7.6 Bot @ Grid 7.6	4 - #7 x 14'-0" 4 - #8 x 14'-0" 4 - #10 x 36'-0"		3RD 19" 17" @ RECESS	B117
21" 25" TOP Each End (4'-0" LAP) A D #4 4 - # 7 x 10'-8" Bottom B 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5	21" 25"	RB118		A D #4 B 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5	TOP Each End (4'-0" LAP)  Bottom	4 - # 7 x 4 - # 7 x 10'-8"		3RD	B118
RE: 15/S2.7 FOR REINF.		RB119		#4 1 @ 2"o.c. 10 @ 5"o.c.  Rest @ 10"o.c.  \$55	NF.	RE: 15/S2.7 FOR REINI	25"	10"	B119
RE: 14/S2.7 FOR REINF. #4  10" 25" Rest @ 10"o.c. 10 @ 5"o.c.  Rest @ 10"o.c. S5	l l	RB120		#4 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5	NF.	RE: 14/S2.7 FOR REINI	25"	10" 8" @ RECESS	B120
RE: 12/S2.7 FOR REINF. #4  15" 25" Rest @ 10"o.c. S5		RB121		#4 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5	NF.	RE: 12/S2.7 FOR REINI	25"	15"	B121
12" 25" Top @ Each End (4'-0" Lap) A B #4 3 - #9 x 26'-6" Bottom B 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5	12" 25"	RB122		A D #4 B 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5	Top @ Each End (4'-0" Lap) Bottom	3 - #7x - 3 - #9x 26'-6"		12"	B122
12" 25" Top @ Each End (4'-0" Lap) A B #4 2 - #7 x 12'-8" Bottom B 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5	12" 25"	RB123		A D #4 B 1 @ 2"o.c. 10 @ 5"o.c. Rest @ 10"o.c. S5	Top @ Each End (4'-0" Lap)  Bottom	2 - #7x - 2 - #7x 12'-8"	L	12"	B123
2 - # 7 x 12'-8" Bottom B 1 @ 2"o.c. 10 @ 5"o.c.	12" 25"	RB123		B 1 @ 2"o.c. 10 @ 5"o.c.				12"	B123



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Kansas City, MO 64108 816.842.8437

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Number Date Description 2 02-10-23 ADDENDUM #2

© 2023 ACI/BOLAND, Inc BEAM SCHEDULE

BEAM SCHEDULE

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MARK	WIDTH	DEPTH			+	SPACING EA. END	TYPE		MARK	WIDTH	DEPTH		SPACING EA. END TYP	<u>'E</u>
			2 - #6 x 11'-0" 2 - #8 x 24'-0"	Top @ Grid 0.2 Top @ Grid 1	A B	#3 1 @ 2"o.c.	-					2 - #6 x 11'-0" Top @ Grid 0.2 A 2 - #8 x 24'-0" Top @ Grid 1 B	#3 1 @ 2"o.c.	
J1	9"	25"	2 - #7 x 21'-0"	Bot	В	Rest @ 10"o.c.	S5		RJ1	9"	25"	2 - #7 x 21'-0" Bot B	Rest @ 10"o.c. St	5
							_							
			2 - #6 x 15'-0"	Top @ Mid-Span	В	#3						2 - #6 x 15'-0" Top @ Mid-Span B	#3	
			2 - #9 x 24'-0"	Top @ Grid 2.5	В	1 @ 2"o.c.	1					2 - #9 x 24'-0" Top @ Grid 2.5 B	1 @ 2"o.c.	
J2	9"	25"	2 - #8 x 38'-0"	Bot @ Mid-Span	В	Rest @ 10"o.c.	S5		RJ2	9"	25"	2 - #8 x 38'-0" Bot @ Mid-Span B	Rest @ 10"o.c.	ز
							_							
			2 - #6 x 15'-0"	Top @ Mid-Span	В	#3					1	2 - #6 x 15'-0" Top @ Mid-Span B	#3	
			2 - #8 x 24'-0"	Top @ Grid 3.7	В	1 @ 2"o.c.	-					2 - #8 x 24'-0" Top @ Grid 3.7 B	1 @ 2"o.c.	
J3	9"	25"	2 - #8 x 34'-0"	Bot @ Mid-Span	В	Rest @ 10"o.c.	S5		RJ3	9"	25"	2 - #8 x 34'-0" Bot @ Mid-Span B	Rest @ 10"o.c. St	į
							-							
							-							
			2 - #6 x 15'-0"	Top @ Mid-Span	В	#3						2 - #6 x 15'-0" Top @ Mid-Span B	#3	
			2 - # 9 x 24'-0"	Top @ Grid 4.7	В	1 @ 2"o.c.						2 - # 9 x 24'-0" Top @ Grid 4.7 B	1 @ 2"o.c.	
J4	9"	25"	2 - #8 x 34'-0"	Bot @ Mid-Span	В	Rest @ 10"o.c.	S5		RJ4	9"	25"	2 - #8 x 34'-0" Bot @ Mid-Span B	Rest @ 10"o.c. St	,
							_							
							-							
			2 - #6 x 18'-0"	Top @ Mid-Span	В	#3						2 - #6 x 18'-0" Top @ Mid-Span B	#3	
J5	9"	25"	2 - # 9 x 24'-0"	Top @ Grid 5.7	В	1 @ 2"o.c.	_		RJ5	9"	25"	2 - # 10 x 24'-0" Top @ Grid 5.7 B	1 @ 2"o.c.	
33	9	23	2 - # 8 x 38'-0"	Bot @ Mid-Span	В	Rest @ 10"o.c.	S5		1133	9	23	2 - #8 x 38'-0" Bot @ Mid-Span B	Rest @ 10"o.c. St	,
							_							
							-							
			2 - #6 x 24'-0"	Top @ Grid 7.6	D	#3						2 - # 6 x 24'-0" Top @ Grid 7.6 D	#3	
J6	9"	25"	2 - #8 x 34'-0"	Bot @ Mid-Span	В	1 @ 2"o.c.	0.5		RJ6	9"	25"	2 - #8 x 34'-0" Bot @ Mid-Span B	1 @ 2"o.c.	_
	ŭ	20				Rest @ 10"o.c.	S5		1.00				Rest @ 10"o.c. St	
							1							
			2 - #6 x 8'-0"	Top @ Grid 3.2	Α	#3	_					2 - # 6 x 8'-0" Top @ Grid 3.2 A	#3	
J6A	9"	25"	2 - #7 x 18'-0"	Bot @ Mid-Span	В	1 @ 2"o.c.	S5		RJ6A	9"	25"	2 - #7 x 18'-0" Bot @ Mid-Span B	1 @ 2"o.c. Rest @ 10"o.c.	=
						Rest @ 10"o.c.	_ 33						Rest @ 10"o.c. St	
							1							
			2 - #7 x 24'-0"	Top @ Grid 3.7	A	#3	-					2 - #7 x 24'-0" Top @ Grid 3.7 A	#3	
J7	9"	25"	2 - #6 x 12'-0" 2 - #10 x 24'-0"	Top @ Mid-Span Top @ Grid 4.7	B B	1 @ 2"o.c. Rest @ 10"o.c.	S5		RJ7	9"	25"	2 - #6 x 12'-0"       Top @ Mid-Span       B         2 - #10 x 24'-0"       Top @ Grid 4.7       B	1 @ 2"o.c. Rest @ 10"o.c.	5
			2 - #9 x 34'-0"	Bot @ Mid-Span	В	1000.0.	- 00					2 - #9 x 34'-0" Bot @ Mid-Span B	11031 @ 10 0.0.	
							]							
				T. O.M. 1.0								- 10 Miles		
			2 - #6 x 18'-0" 2 - #10 x 24'-0"	Top @ Mid-Span Top @ Grid 5.7	B B	#3 1 @ 2"o.c.	-					2 - #6 x 18'-0" Top @ Mid-Span B 2 - #10 x 24'-0" Top @ Grid 5.7 B	#3 1 @ 2"o.c.	
J8	9"	25"	2 - #9 x 38'-0"	Bot @ Mid-Span	В	Rest @ 10"o.c.	S5		RJ8	9"	25"	2 - #9 x 38'-0" Bot @ Mid-Span B	Rest @ 10"o.c. St	5
			2 - #6 x 24'-0"	Top @ Grid 7.6	D	#3						2 - #6 x 24'-0" Top @ Grid 7.6 D	#3	
10	Oll	05"	2 - #9 x 34'-0"	Bot @ Mid-Span	В	1 @ 2"o.c.	1		D 10	9"	05"	2 - #9 x 34'-0" Bot @ Mid-Span B	1 @ 2"o.c.	
J9	9"	25"				Rest @ 10"o.c.	S5		RJ9	9"	25"		Rest @ 10"o.c. St	j
							4							
							-							
			2 - #6	Top @ Each End		#3					1	2 - # 6 Top @ Each End	#3	
J10	9"	25"		With 3'-0" Lap @ Mid-Span	A, D	1 @ 2"o.c.	]		RJ10	9"	25"	With 3'-0" Lap @ Mid-Span A, D	1 @ 2"o.c.	
	<b>-</b>		2 - #7 x 18'-0"	Bottom	В	Rest @ 10"o.c.	S5		1.010			2 - #7 x 18'-0" Bottom B	Rest @ 10"o.c. St	,
							_							
							-							
			2 - #6	Top @ Each End	A, D	#3	]					2 - # 6 Top @ Each End A, D	#3	
J11	9"	25"		With 3'-0" Lap @ Mid-Span	+	1 @ 2"o.c.	_		RJ11	9"	25"	With 3'-0" Lap @ Mid-Span	1 @ 2"o.c.	
			2 - #7 x 18'-0"	Bottom	В	Rest @ 10"o.c.	S5					2 - #7 x 18'-0" Bottom B	Rest @ 10"o.c. St	
	_	_					1_							
~~~	~~~	~~~		<del></del>	<b></b>		~~~		T	$\sim$	~~~		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
			2 - #7	Top @ Each End	A, D			EXTEND TOP AND BOTTOM BAR TO				2 - # 7 Top @ Each End A, D	#3	EXTEND TOP AND BOTTOM BAR TO
J12	9"	25"	2 - #7 x 20'-0"	With 3'-6" Lap @ Mid-Span Hook South End		1 @ 2"o.c. Rest @ 10"o.c.	S5	SOUTH EDGE OF SLAB, RE: 15/S3.0	RJ12	9"	25"	With 3'-6" Lap @ Mid-Span  2 - #7 x 20'-0" Hook South End E	1 @ 2"o.c. Rest @ 10"o.c.	SOUTH EDGE OF SLAB, RE: 15/S3.0
			2- π/X 2U-U	HOUN SOUTH EHR	<u> </u>	11031 (W 10 0.0.	1 33					2 - #1 x 20 -0 HOUR SOULH EHU E	11001 (# 10 0.0.	
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			<u>IST SCHEDUL</u>	F										
		, <u>50</u>		<u></u>										

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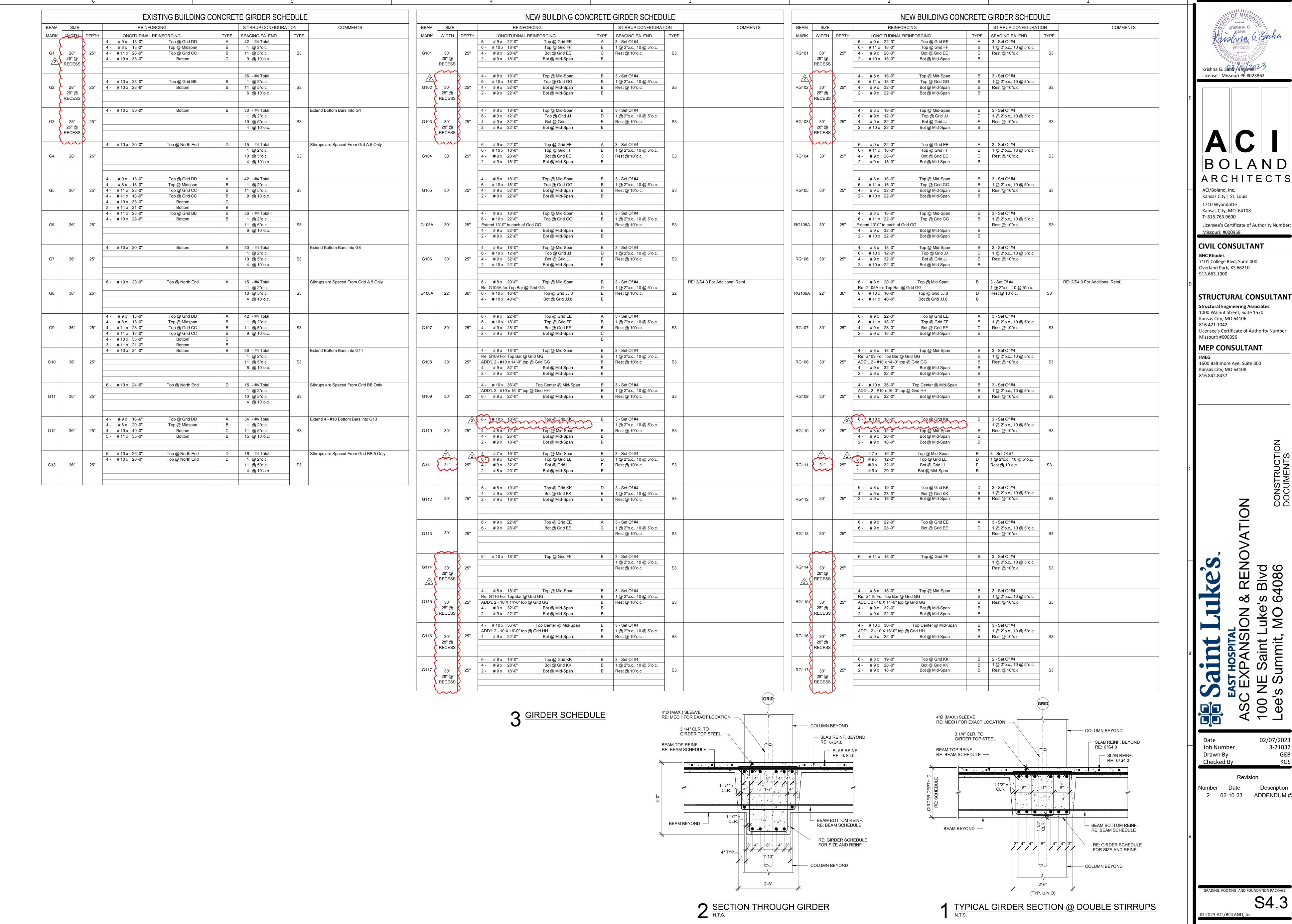
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