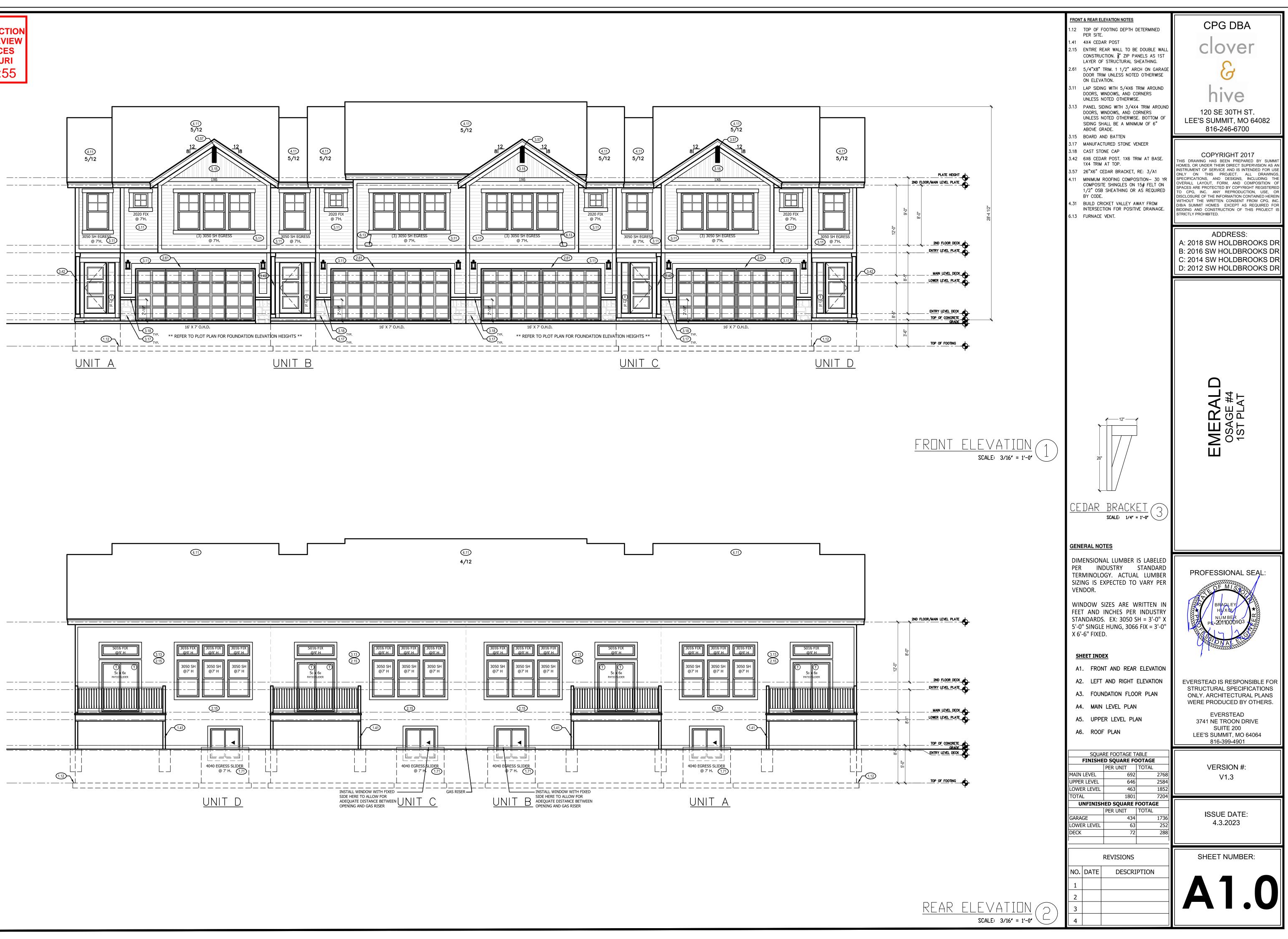
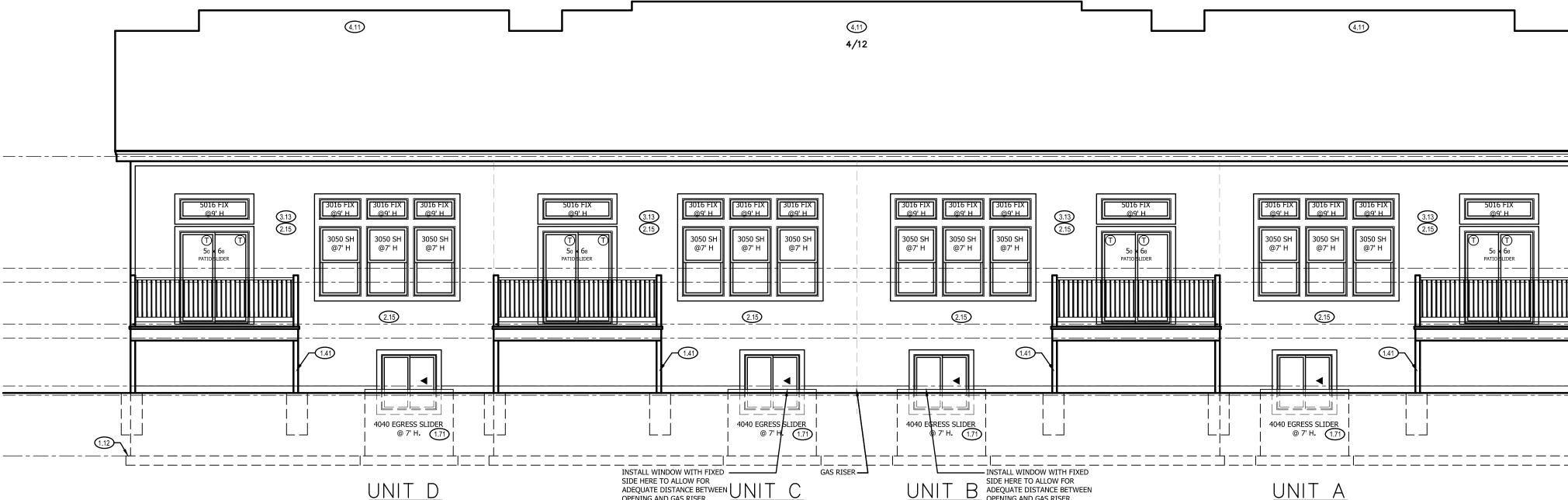
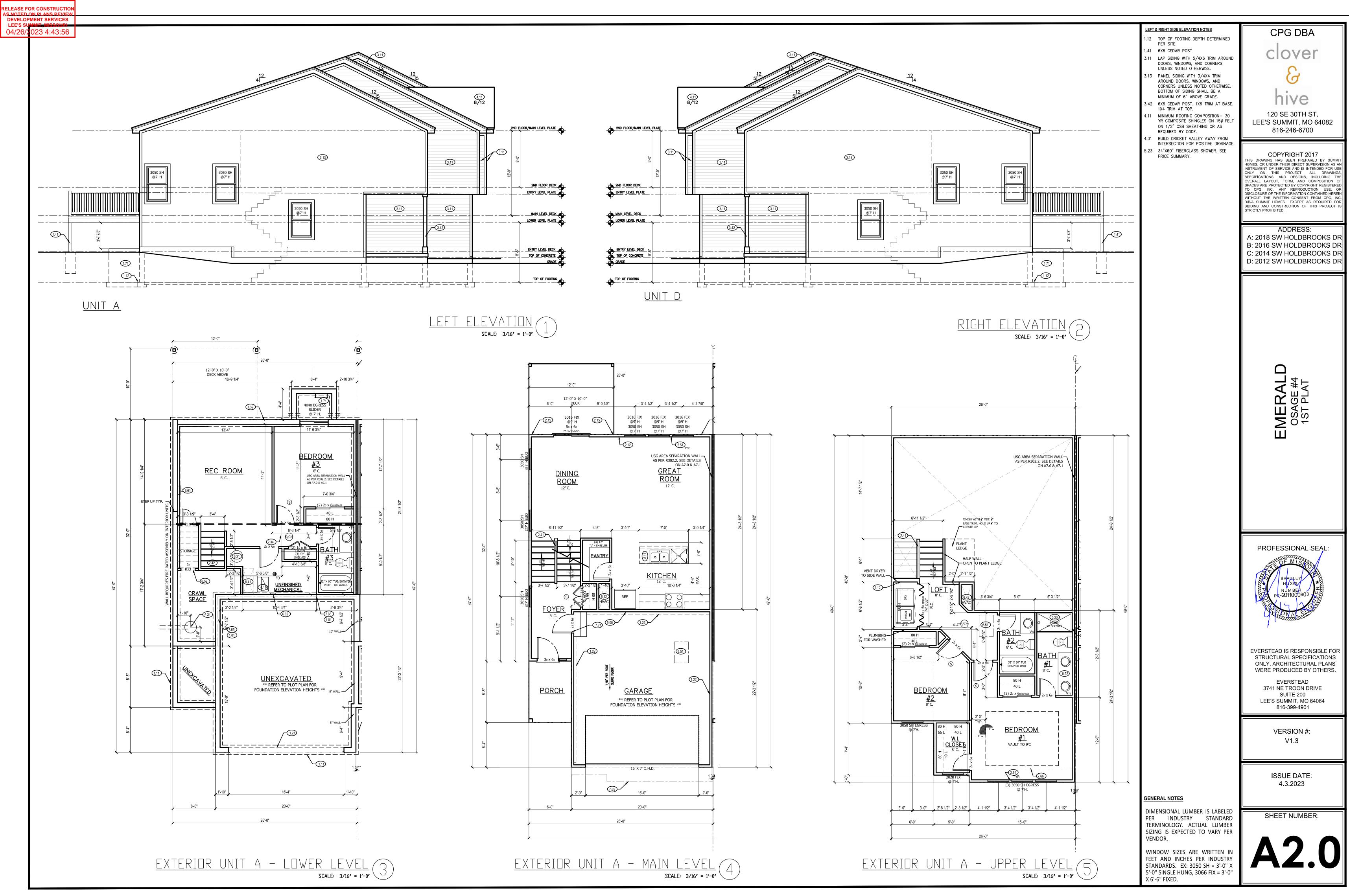
RELEASE FOR CONSTRUCTION **AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES** LEE'S SUMMIT, MISSOURI 04/26/2023 4:43:55

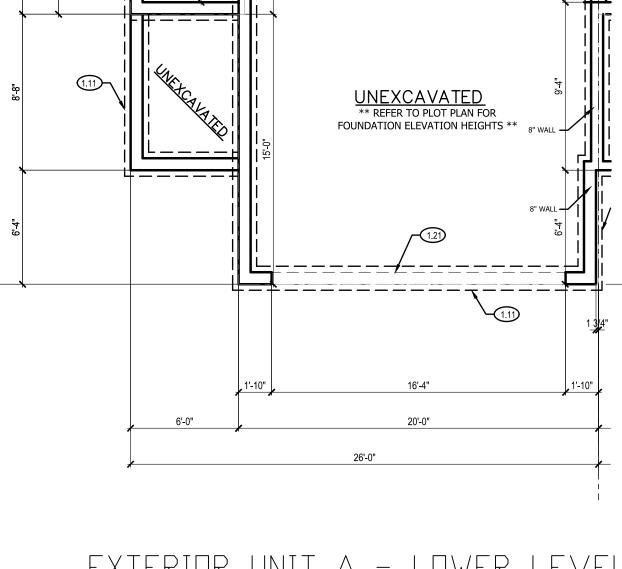


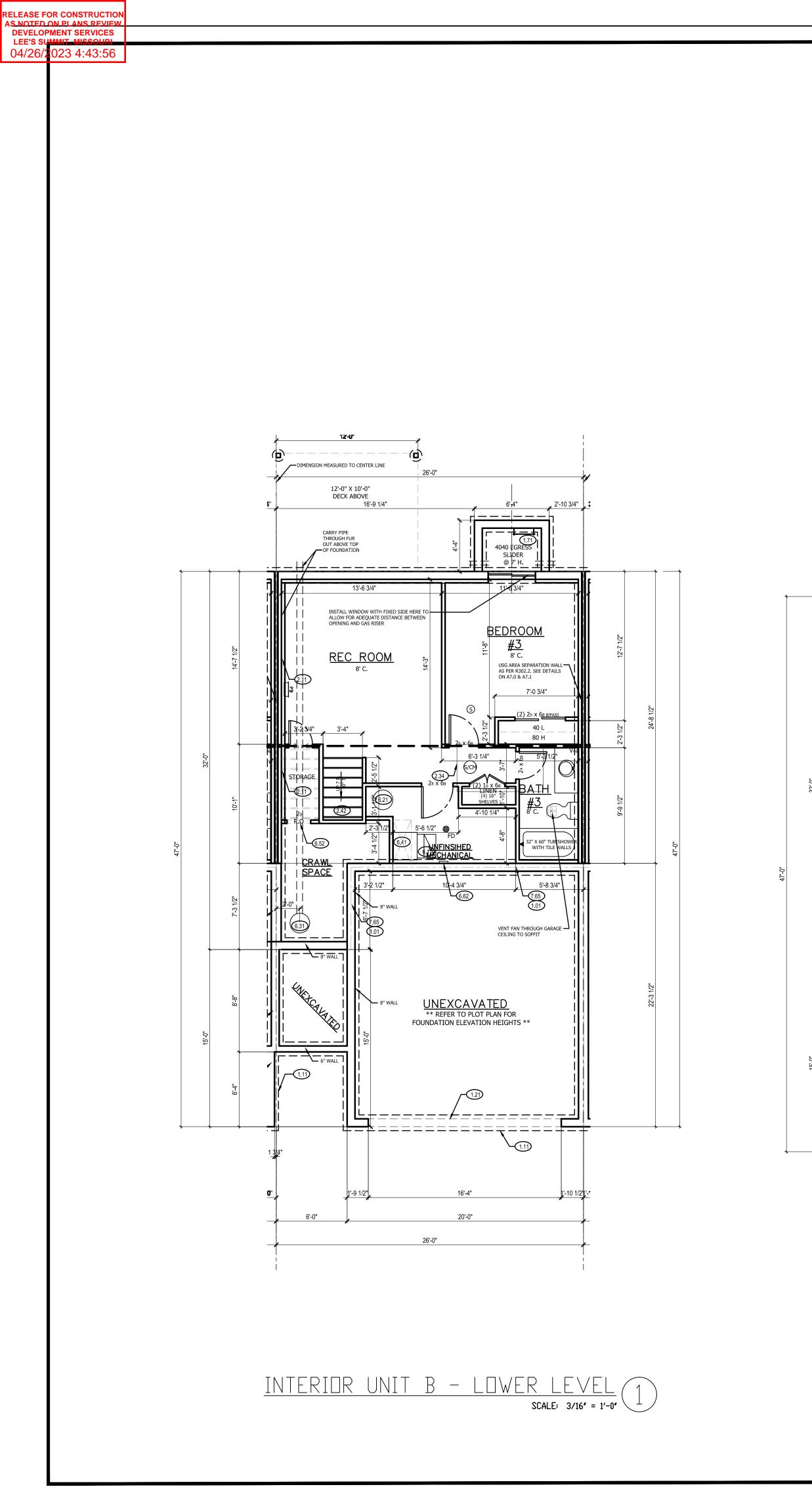


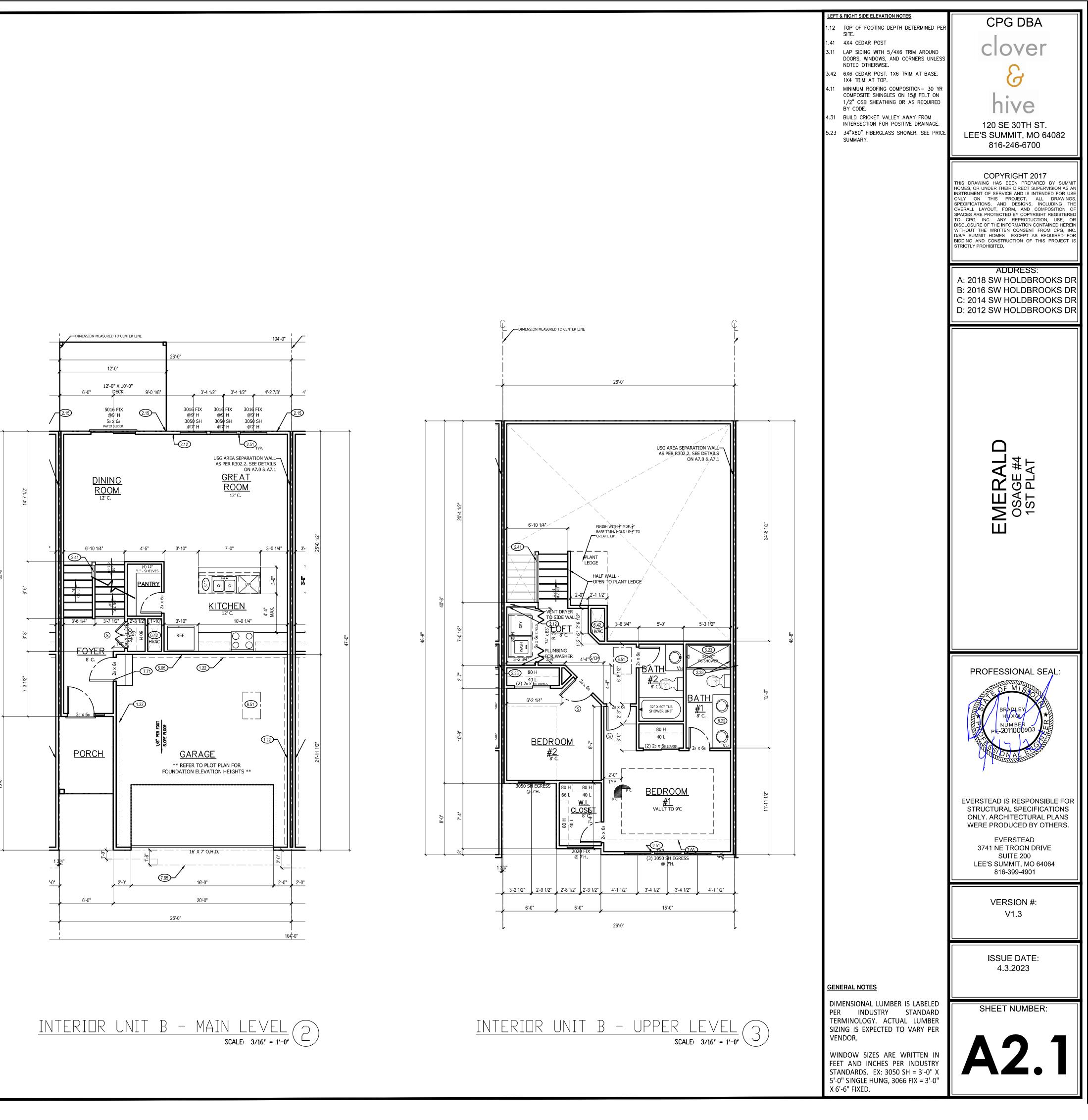
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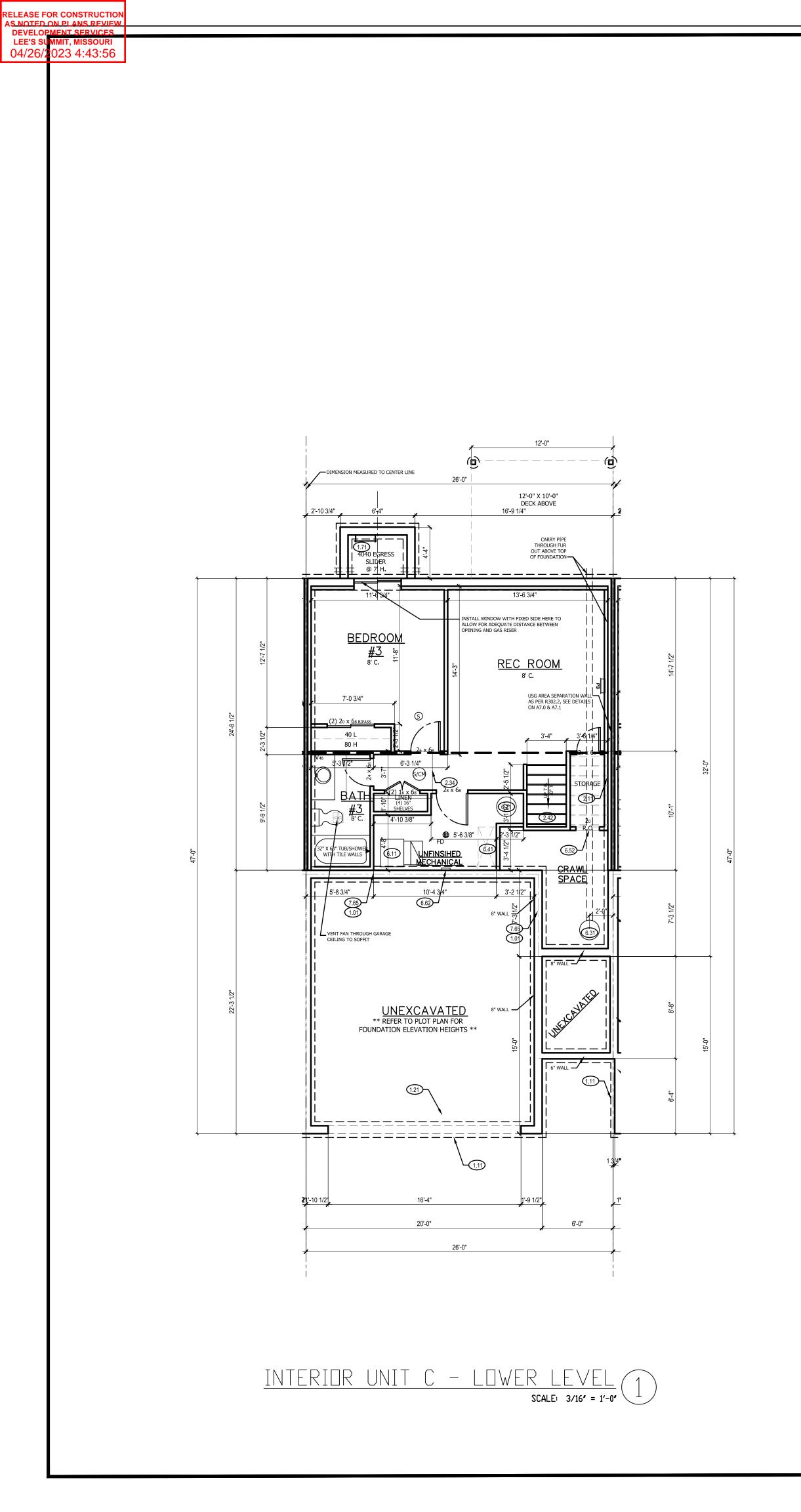
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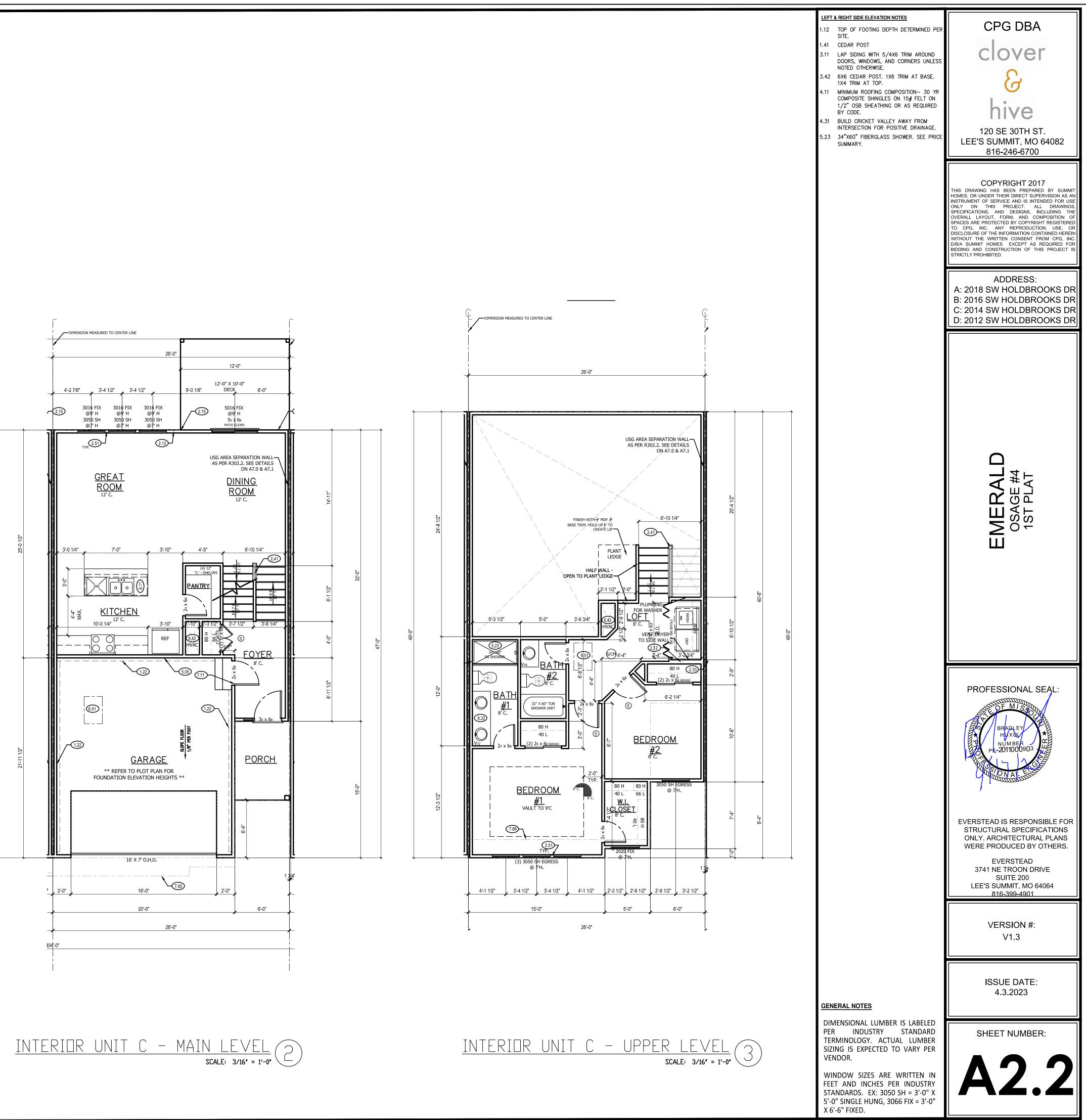


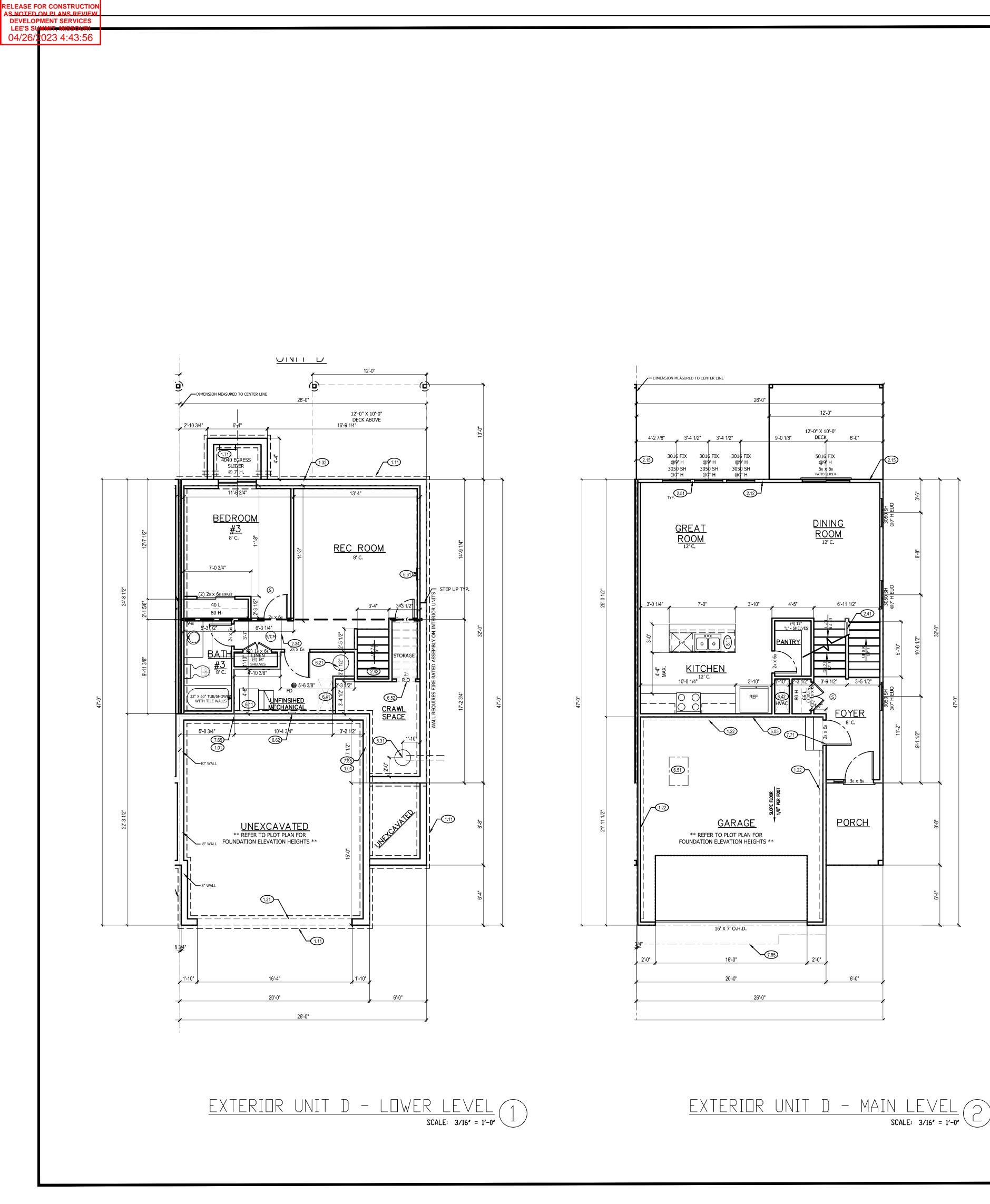


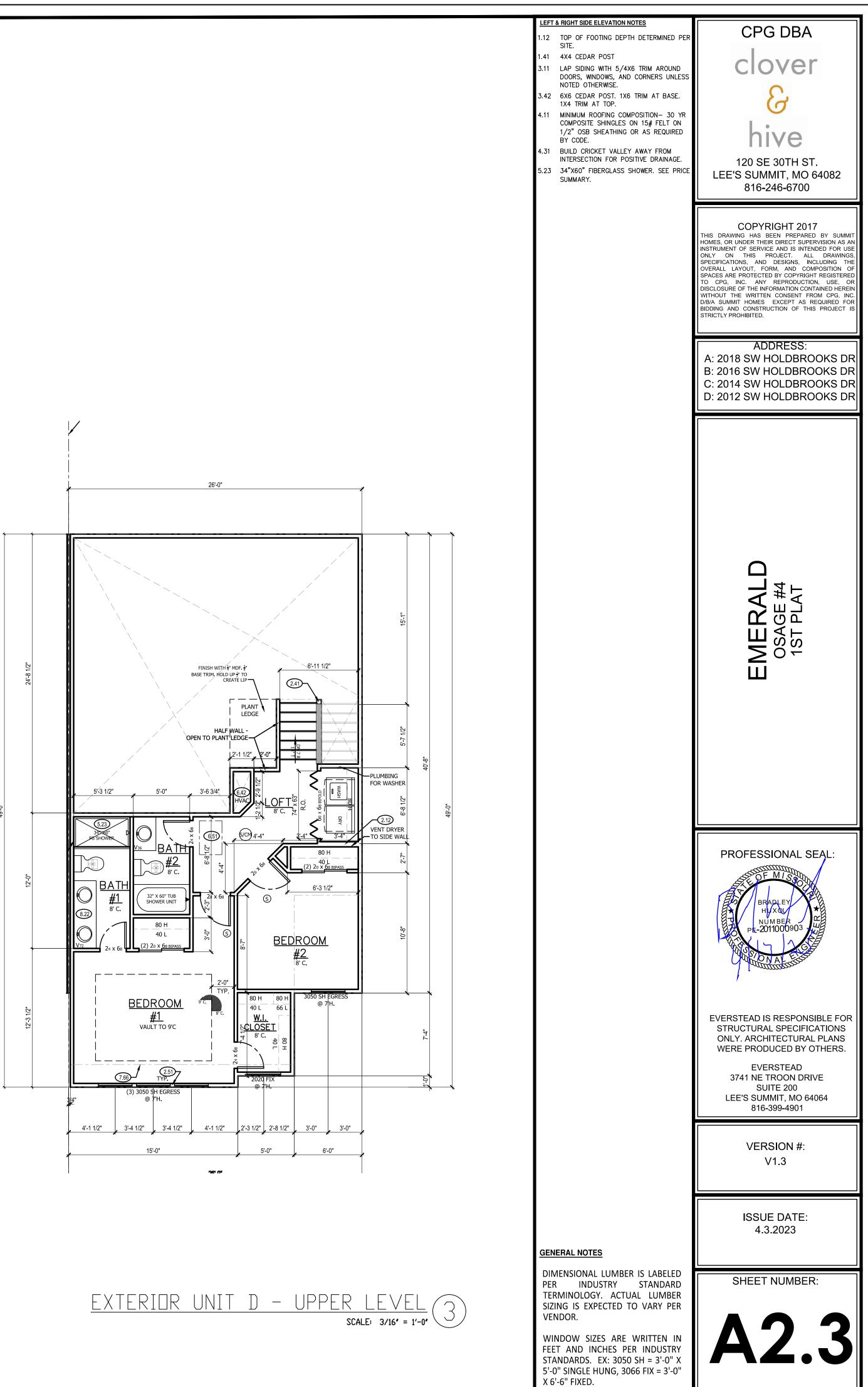




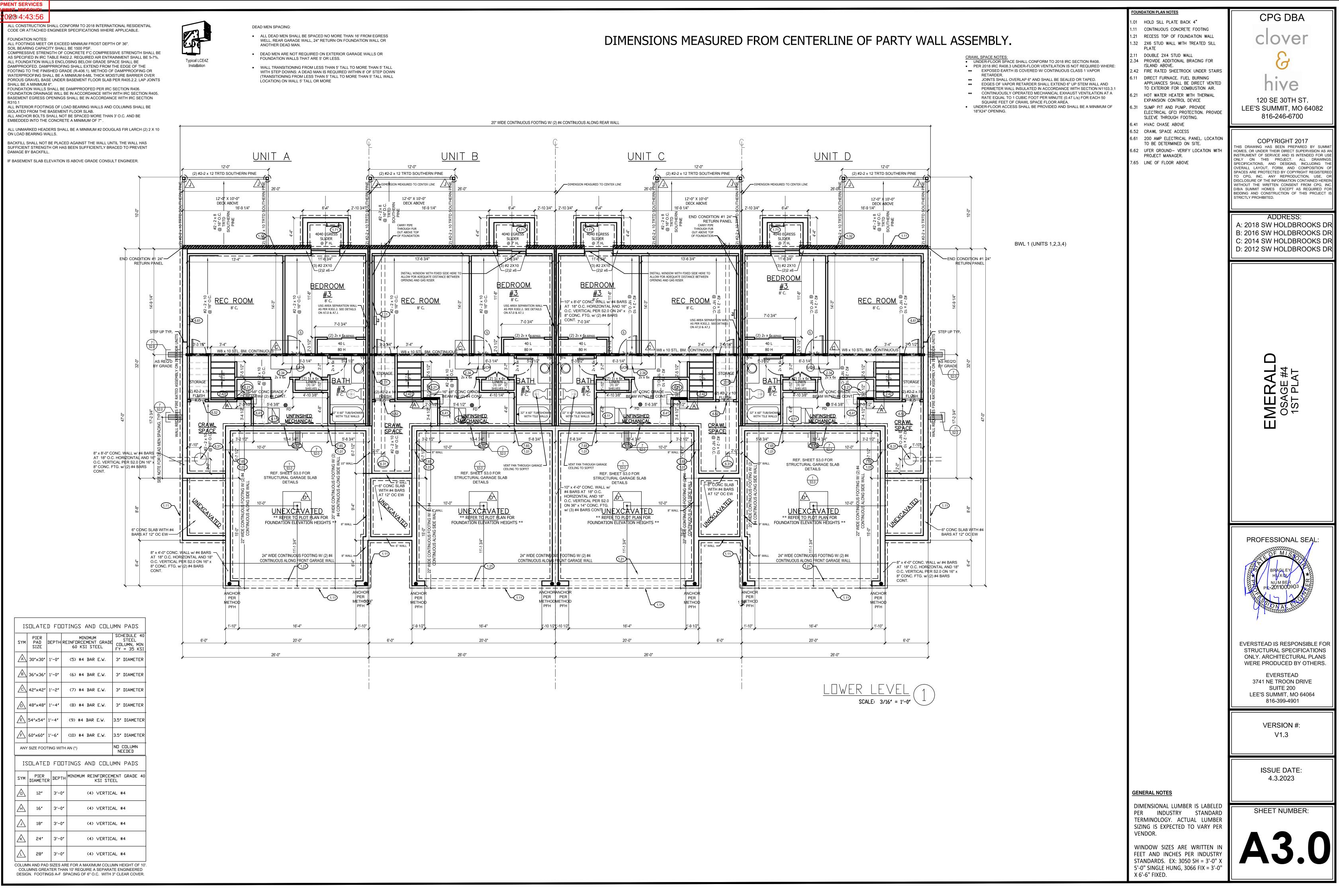




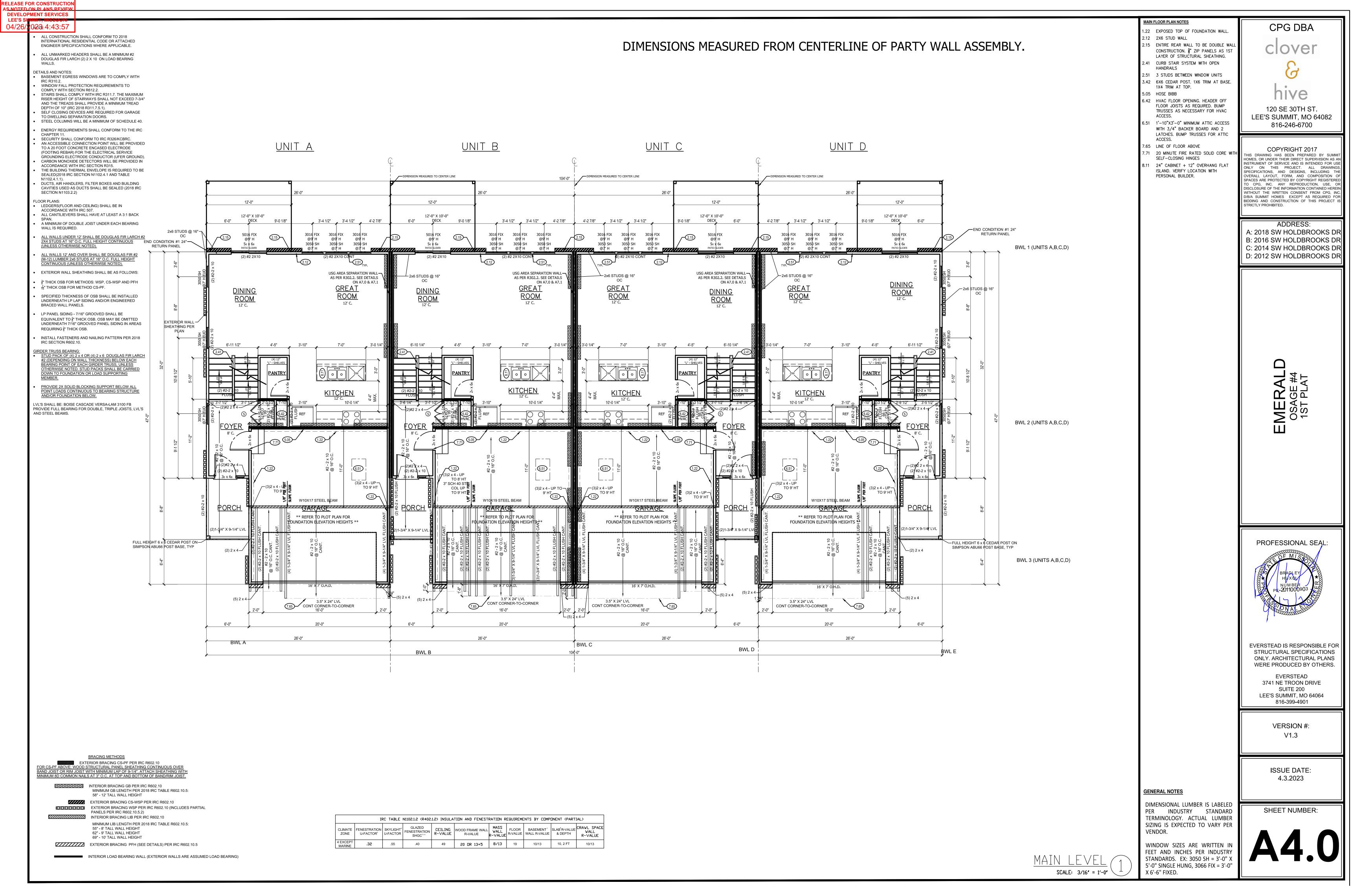




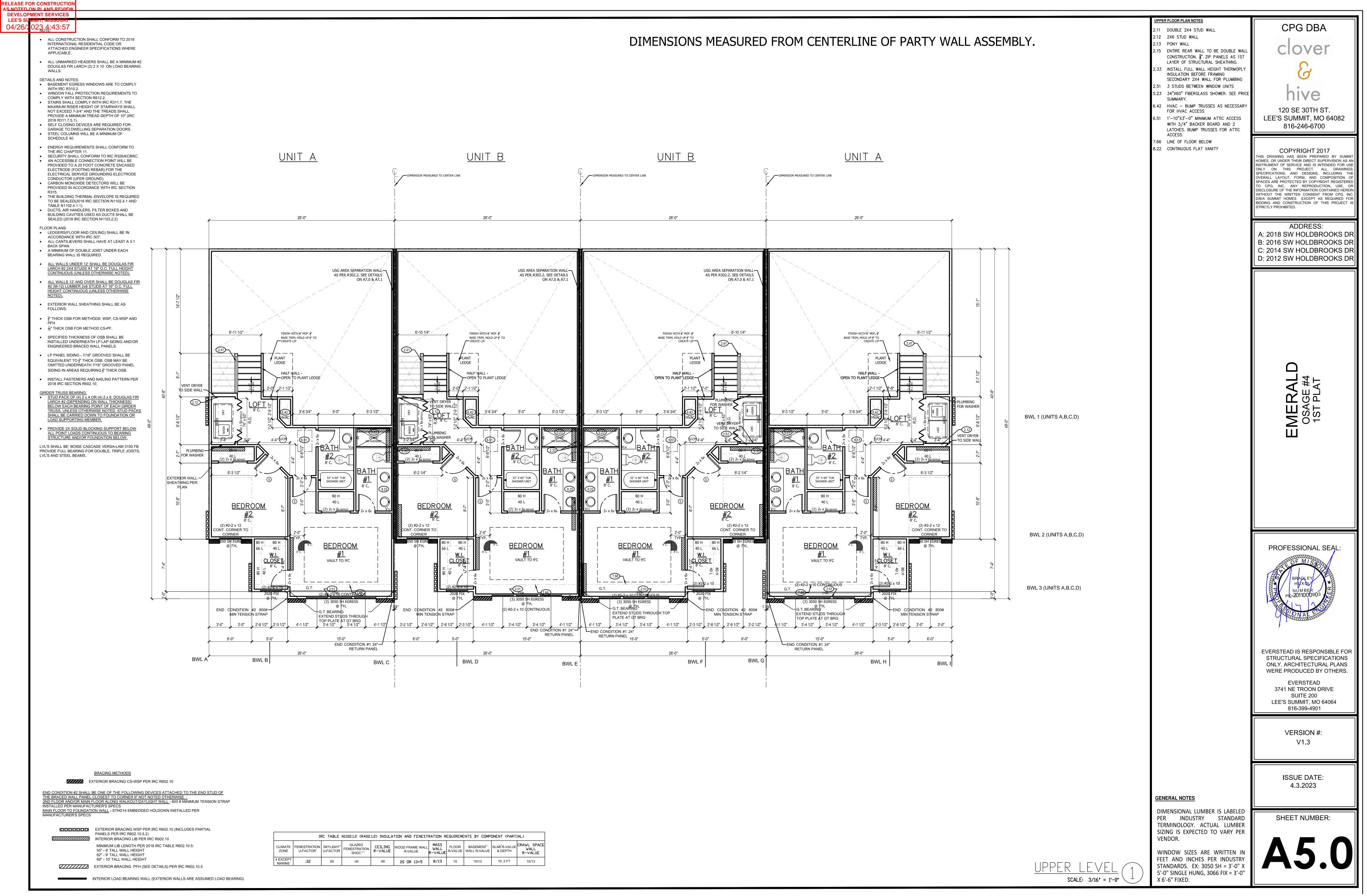
RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SI 04/2 023 4:43:56



IS	SOLATE	D FO		GS	AND	COLL	JMN	PADS
SYM	PIER PAD SIZE	DEPTH		ORCE	NIMUM EMENT SI STI	GRADE	СП	HEDULE 40 STEEL LUMN, MIN = 35 KSI
	30″×30″	1′-0″	(5)) #4	BAR	E.W.	3″	DIAMETER
ß	36 " ×36 "	1'-0"	(6)) #4	BAR	E.W.	3″	DIAMETER
\bigtriangleup	42 " ×42 "	1′-2 ″	(7)) #4	BAR	E.W.	3″	DIAMETER
\bigtriangleup	48″×48″	1'-4″	(8)) #4	BAR	E.W.	3″	DIAMETER
Æ	54″×54″	1'-4"	(9)	#4	BAR	E.W.	3.5″	DIAMETER
F	60 " ×60"	1′-6″	(10)	# 4	BAR	E.W.	3.5″	DIAMETER
ANY	SIZE FOO	TING WI	TH AN ('	*)				
IS	OLATE	D FO		32	AND	COLL	IMN	PADS
SYM	PIER DIAMETE		THMIN	IMUM		NFORCEM		GRADE 40
	12″	3'-1	0″		(4)	VERTIC	AL ‡	ŧ4
	16″	3'-1	0″	(4) VERTICA			AL ‡	ŧ4
	18″	3'-1	D#	(4) VERTICA			AL ‡	ŧ4
A	24″	3'-1	D#	(4) VERTICA			AL ‡	ŧ4
	28″	3'-1	D ″		(4)	VERTIC	AL ‡	ŧ4
COLUN	IN AND PAI	D SIZES	ARE FC				MN H	EIGHT OF 10



) FENESTRATION REQUIREMENTS BY COMPONENT (PARTIAL)								
AME WALL	MASS WALL R-VALUE	FLOOR R-VALUE		SLAB R-VALUE	CRAWL SPACE WALL R-VALUE			
R 13+5	8/13	19	10/13	10, 2 FT	10/13			



	TL	C TABLE		I'S) INSOLA	TILIN AND FENEST			INIS D
CLIMATE ZONE	FENESTRATION U-FACTOR⁵	SKYLIGHT⁵ U-FACTOR	GLAZED FENESTRATION SHGC ^{b, #}	CEILING R-∨ALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASE WALL F
4 EXCEPT MARINE	.32	.55	.40	49	20 DR 13+5	8/13	19	10

(COMPONENT (PARTIAL)						
MENT [°] -VALUE	SLAB [®] R-VALUE & DEPTH	CRAWL SPACE WALL R-VALUE				
/13	10, 2 FT	10/13				

AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

04/26/2023 4:43:57

- TRUSS ROOF NOTES: (BY OTHERS) 1) DESIGNED FOR LIGHT ROOF COVERING TOP CHORD: LIVE LOAD/SNOW LOAD (PSF): 25
- DEAD LOAD (PSF): BOTTOM CHORD: DEAD LOAD(PSF): 10 2) ALL EXTERIOR AND/OR LOAD BEARING WALL HEADERS
- SHALL BE MIN. (2) #2 2 x 10 UNLESS OTHERWISE NOTED.
- CONSULT ENGINEER IF TRUSSES BEAR ON INTERIOR WALLS SHOWN AS NON-LOAD BEARING ON APPROVED PRINTS.
 ROOF IS ENGINEERED TO COMPLY WITH IRC 802
- = ROOF TRUSS FRAMING DIRECTION "G.T." = GIRDER TRUSS LOCATION

= INTERIOR LOAD BEARING WALL NOTE:

ALL CONSTRUCTION SHALL CONFORM TO 2018 INTERNATIONAL RESIDENTIAL CODE OR ATTACHED ENGINEER SPECIFICATIONS WHERE APPLICABLE.

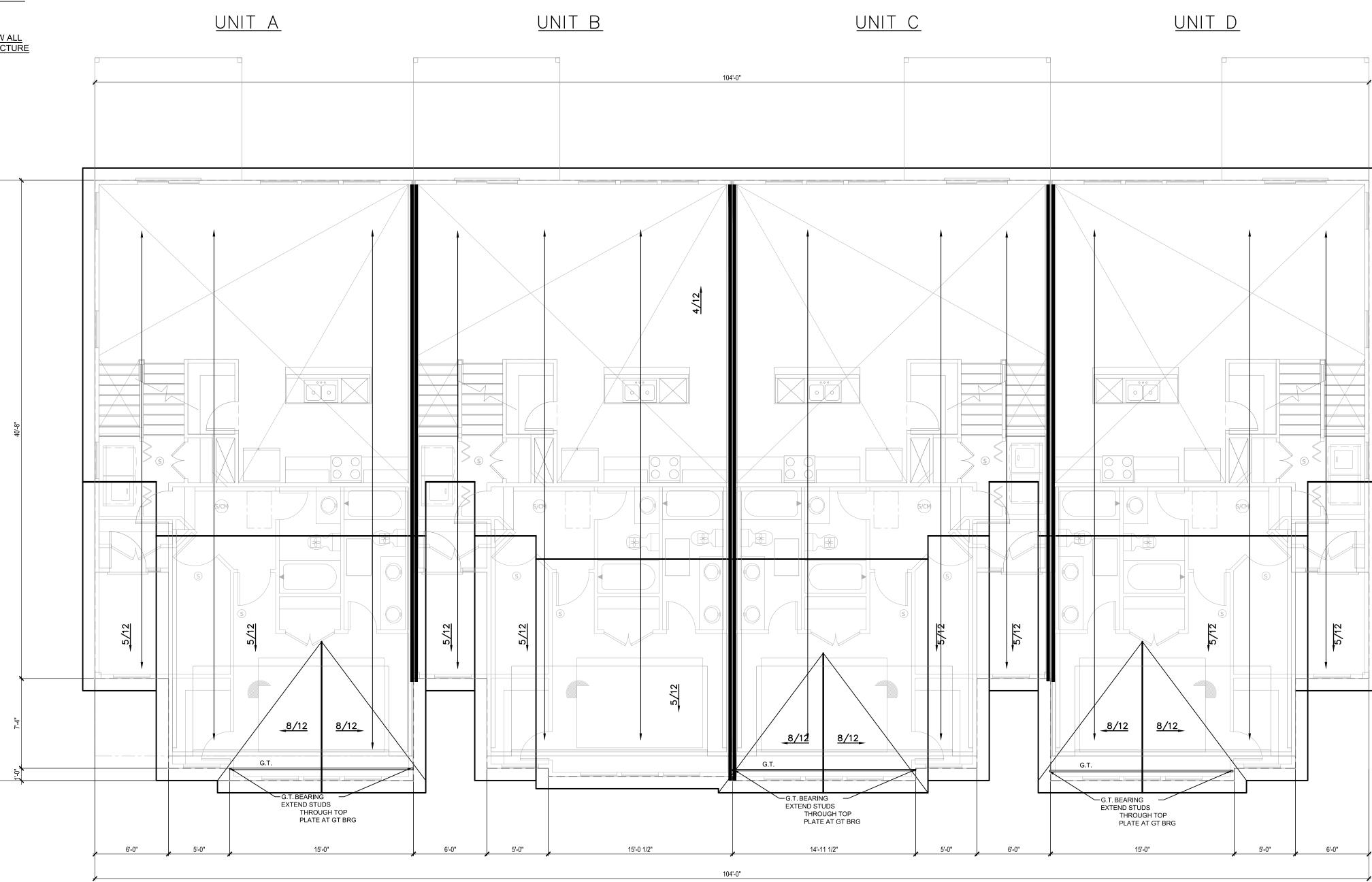
ROOF: ROOF IS DESIGNED FOR 20 PSF SNOW LOAD.

WOOD TRUSSES SHALL BE IN ACCORDANCE WITH IRC SECTION R802.10. CEILING JOIST OR RAFTER TIE CONNECTIONS BETWEEN RAFTERS, RIDGE BEAM, REQUIRED COLLAR TIES OR RIDGE STRAPS SHALL COMPLY WITH DETAILS AND IRC SECTION R802, R802.3, R802.3.1, R802.11.

GIRDER TRUSS BEARING:

MIN. STUD PACK OF (4) 2 x 4 OR (4) 2 x 6 DOUGLAS FIR LARCH #2 (DEPENDING ON WALL THICKNESS) BELOW EACH BEARING POINT OF EACH GIRDER TRUSS, UNLESS OTHERWISE NOTED. STUD PACKS SHALL BE CARRIED DOWN TO FOUNDATION OR LOAD SUPPORTING MEMBER.

PROVIDE 2X SOLID BLOCKING SUPPORT BELOW ALL POINT LOADS CONTINUOUS TO BEARING STRUCTURE AND/OR FOUNDATION BELOW.

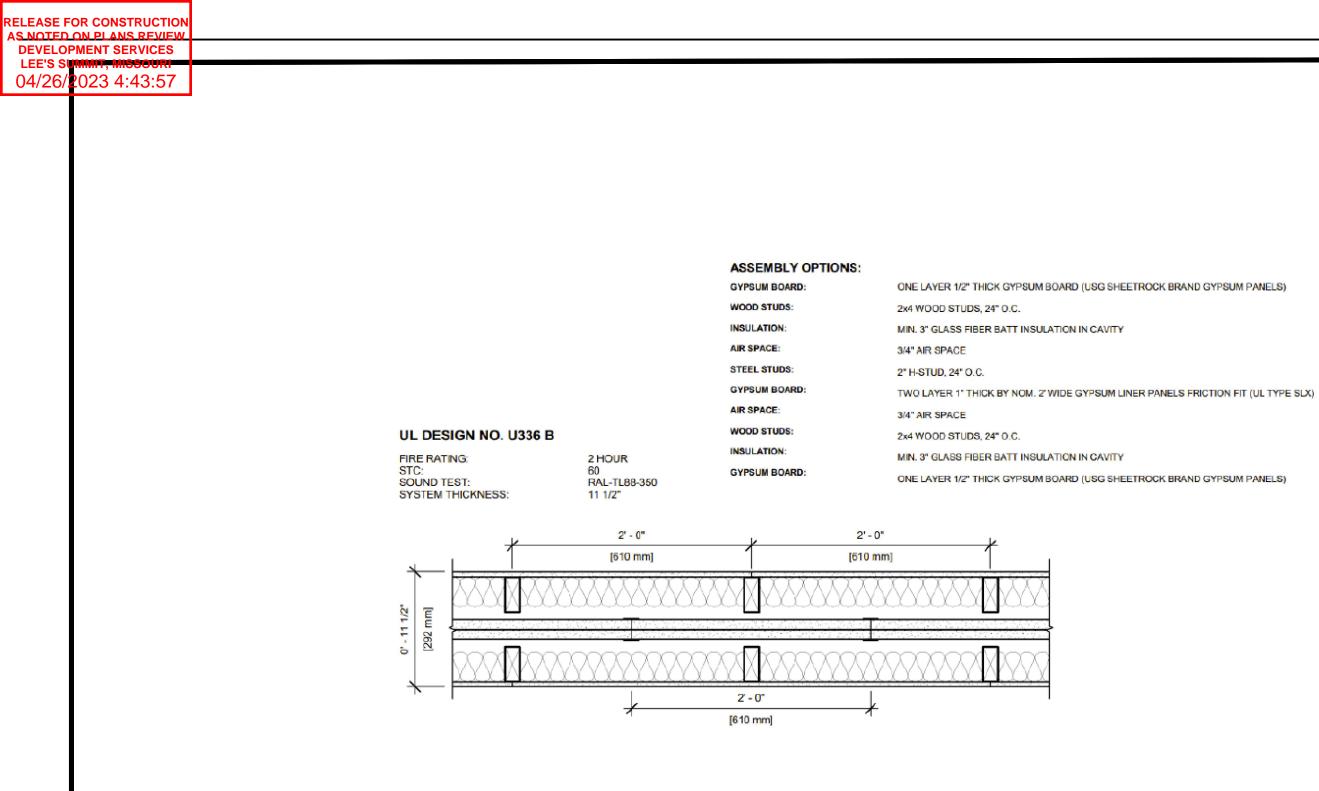


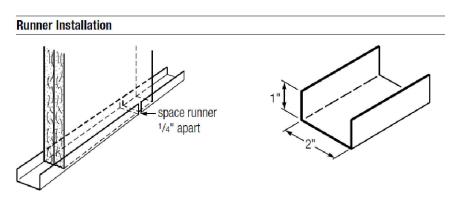
ROOF PLAN NOTES CPG DBA MINIMUM ROOFING COMPOSITION- 30 YR COMPOSITE SHINGLES ON 15# FELT ON 1/2" OSB SHEATHING OR AS REQUIRED clover BY CODE. 4.31 BUILD CRICKET VALLEY AWAY FROM INTERSECTION FOR POSITIVE DRAINAGE. 0 G . hive 120 SE 30TH ST. LEE'S SUMMIT, MO 64082 816-246-6700 COPYRIGHT 2017 THIS DRAWING HAS BEEN PREPARED BY SUMMIT HOMES, OR UNDER THEIR DIRECT SUPERVISION AS AN INSTRUMENT OF SERVICE AND IS INTENDED FOR USE ONLY ON THIS PROJECT. ALL DRAWINGS, SPECIFICATIONS, AND DESIGNS, INCLUDING THE OVERALL LAYOUT, FORM, AND COMPOSITION OF SPACES ARE PROTECTED BY COPYRIGHT REGISTERED TO CPG, INC. ANY REPRODUCTION, USE, OR DISCLOSURE OF THE INFORMATION CONTAINED HEREIN WITHOUT THE WRITTEN CONSENT FROM CPG, INC D/B/A SUMMIT HOMES EXCEPT AS REQUIRED FOR BIDDING AND CONSTRUCTION OF THIS PROJECT I STRICTLY PROHIBITED. ADDRESS: A: 2018 SW HOLDBROOKS DR B: 2016 SW HOLDBROOKS DR C: 2014 SW HOLDBROOKS DR D: 2012 SW HOLDBROOKS DR EMERALD OSAGE #4 1ST PLAT PROFESSIONAL SEAL: NUMBER -20110009 EVERSTEAD IS RESPONSIBLE FOR STRUCTURAL SPECIFICATIONS ONLY. ARCHITECTURAL PLANS WERE PRODUCED BY OTHERS. EVERSTEAD 3741 NE TROON DRIVE SUITE 200 LEE'S SUMMIT, MO 64064 816-399-4901 VERSION #: V1.3 ISSUE DATE: 4.3.2023 **GENERAL NOTES** DIMENSIONAL LUMBER IS LABELED SHEET NUMBER: PER INDUSTRY STANDARD TERMINOLOGY. ACTUAL LUMBER SIZING IS EXPECTED TO VARY PER

 $R \square \square F$ SCALE: 3/16" = 1'-0"

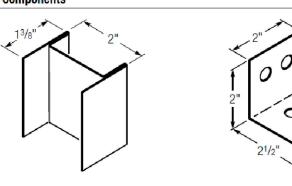
WINDOW SIZES ARE WRITTEN IN FEET AND INCHES PER INDUSTRY STANDARDS. EX: 3050 SH = 3'-0" X 5'-0" SINGLE HUNG, 3066 FIX = 3'-0" X 6'-6" FIXED.

VENDOR.

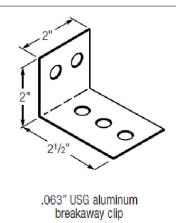


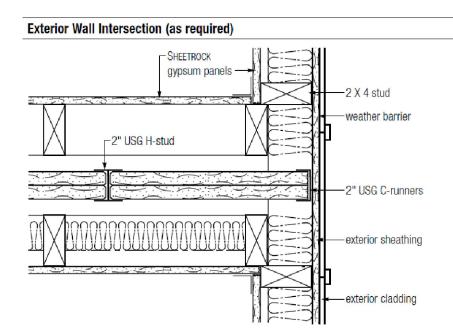


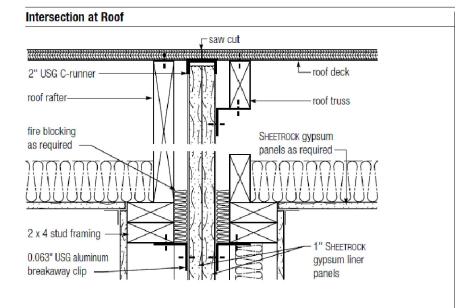
USG C-runner

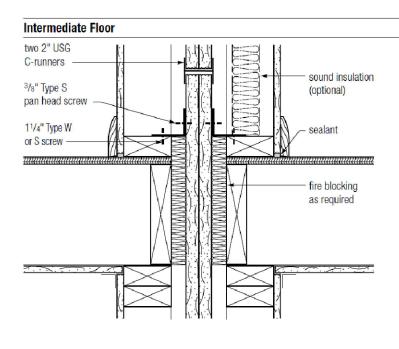


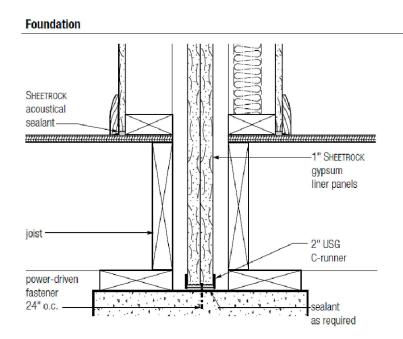
USG H-stud



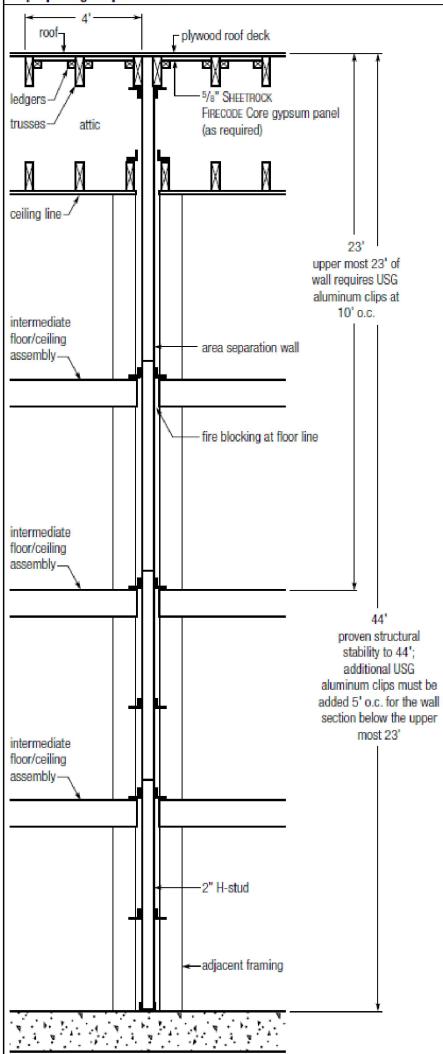








Clip Spacing Requirements



Typical Area Separation Wall

Assembly

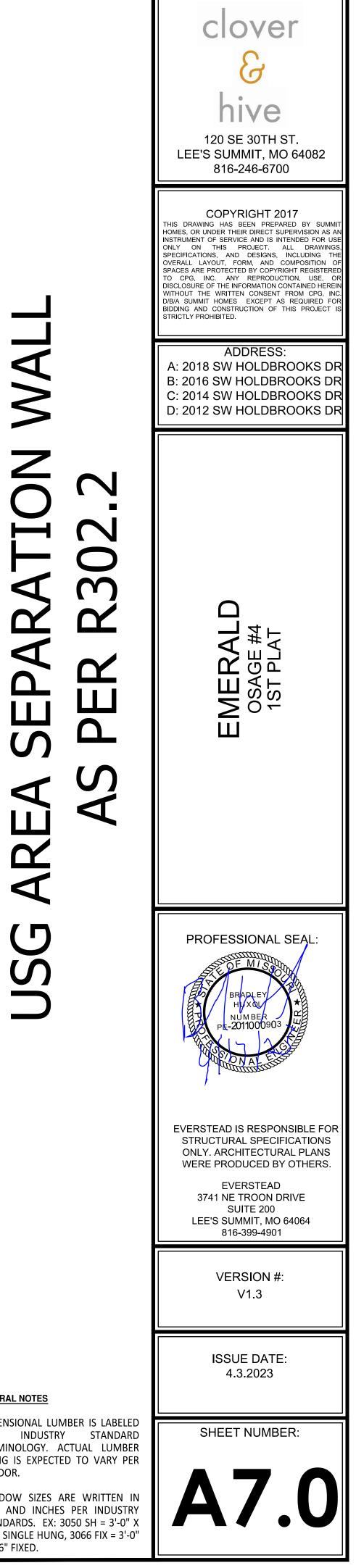
2 x 4 stud framing

SHEETROCK® brand gypsum panels (as required) 1" Sheetrock® brand gypsum liner panels, or SHEETROCK® brand Mold Tough® liner panels or Sheetrock® brand glass-mat liner panels sound batts min. 3/4" airspace between 2" area separation wall and wood framing 2" H-studs 24" o.c. 2" USG C-runners USG aluminum breakaway clip fire blocking as required fire blocking as required









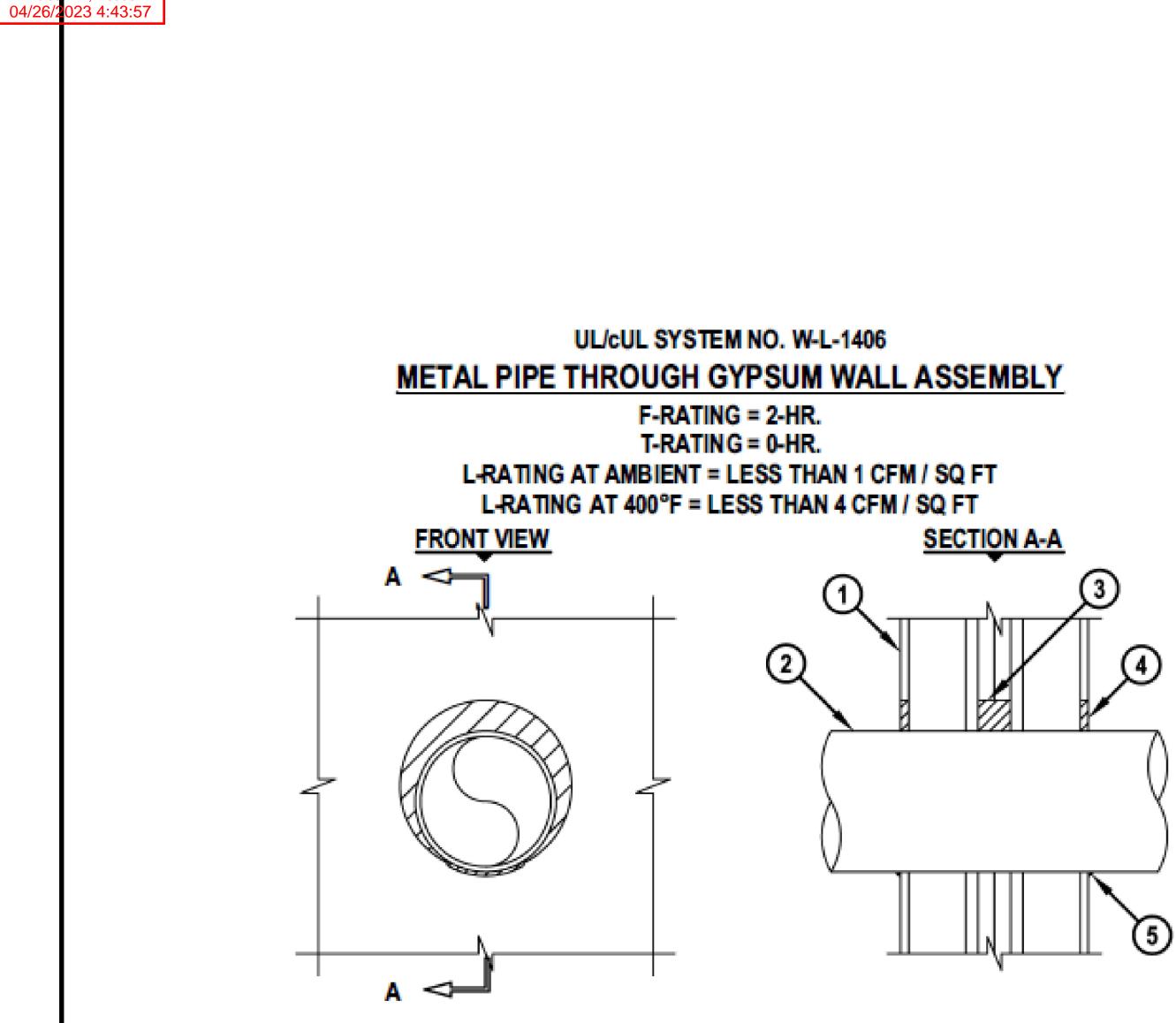
CPG DBA

PARTY WALL DETAIL $\frac{1}{N.T.S.}$ SCALE:

GENERAL NOTES

DIMENSIONAL LUMBER IS LABELED PER INDUSTRY STANDARD TERMINOLOGY. ACTUAL LUMBER SIZING IS EXPECTED TO VARY PER VENDOR.

WINDOW SIZES ARE WRITTEN IN FEET AND INCHES PER INDUSTRY STANDARDS. EX: 3050 SH = 3'-0" X 5'-0" SINGLE HUNG, 3066 FIX = 3'-0" X 6'-6" FIXED.



RELEASE FOR CONSTRUCTION S NOTED ON PLANS REVI DEVELOPMENT SERVICES

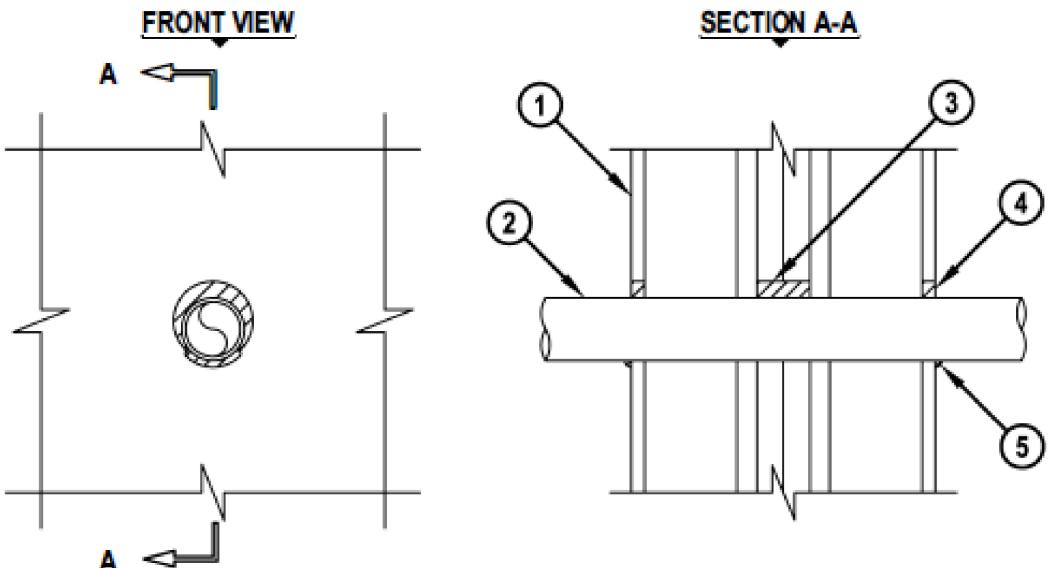
- 1. GYPSUM WALL ASSEMBLY (UL/CUL CLASSIFIED U300 SERIES) (2-HR. FIRE-RATING) CONSISTING OF THE FOLLOWING :
 - A. NOMINAL 2 x 4 STUDS SPACED MAXIMUM 24" OC.
 - B. STEEL "H" SHAPED STUDS SPACED MAXIMUM 24" OC.
 - C. TWO LAYERS 1" GYPSUM SHAFT LINER PANELS.
 - D. MINIMUM 1/2" THICK GYPSUM WALLBOARD.

2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :

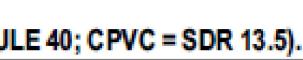
- A. MAXIMUM 8" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 5 OR HEAVIER).
- B. MAXIMUM 8" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
- C. MAXIMUM 4" NOMINAL DIAMETER COPPER PIPE OR TUBING.
- D. MAXIMUM 6" NOMINAL DIAMETER STEEL CONDUIT.
- E. MAXIMUM 4" NOMINAL DIAMETER EMT.
- 3. MINIMUM 2" DEPTH FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED WITHIN GYPSUM SHAFT LINER PANELS.
- 4. MINIMUM 1/2" DEPTH FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED FLUSH WITH OUTER SURFACES OF GYPSUM WALLBOARD.
- 5. MINIMUM 1/4" BEAD FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT AT OUTER SURFACE OF GYPSUM WALLBOARD.

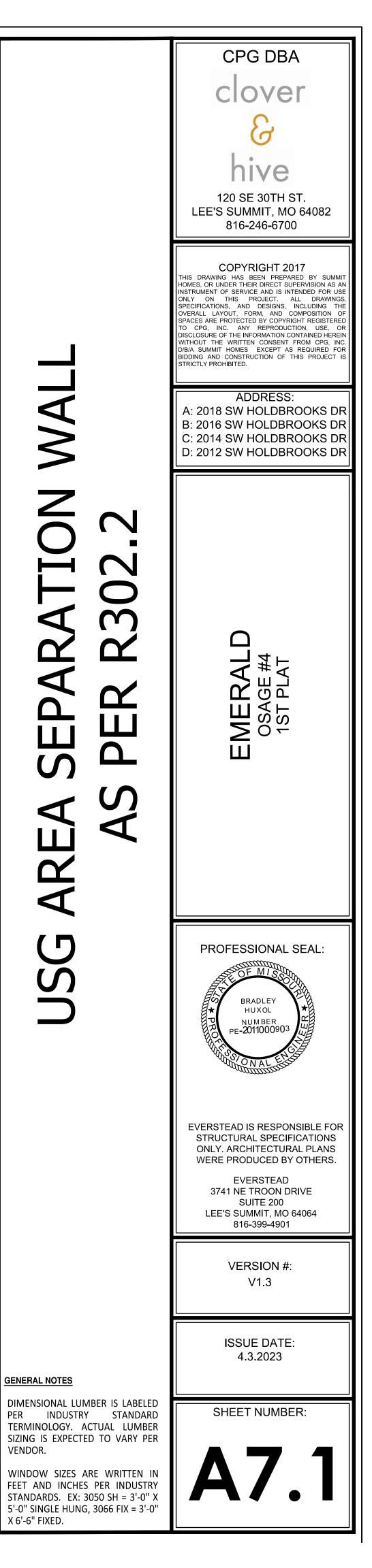
NOTES : 1. MAXIMUM DIAMETER OF OPENING = 10-1/2". 2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1-7/8".

UL SYSTEM NO. W-L-2472 PLASTIC PIPE THROUGH GYPSUM WALL ASSEMBLY F-RATING = 2-HR. T-RATING = 2-HR.



- 1. GYPSUM WALL ASSEMBLY (UL CLASSIFIED U300 SERIES) (2-HR. FIRE-RATING) CONSISTING OF THE FOLLOWING :
 - A. NOMINAL 2 x 4 STUDS SPACED MAXIMUM 24" OC.
 - B. STEEL "H" SHAPED STUDS SPACED MAXIMUM 24" OC.
 - C. TWO LAYERS 1" GYPSUM SHAFT LINER PANELS.
 - D. MINIMUM 1/2" THICK GYPSUM WALLBOARD.
- 2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
 - A. MAXIMUM 2" NOMINAL DIAMETER PVC PLASTIC PIPE (CELLULAR OR SOLID CORE). B. MAXIMUM 2" NOMINAL DIAMETER CPVC PLASTIC PIPE (CLOSED PIPING SYSTEM ONLY).
 - C. MAXIMUM 2" NOMINAL DIAMETER RNC-PVC CONDUIT.
- 3. MINIMUM 2" DEPTH FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED WITHIN GYPSUM SHAFT LINER PANELS.
- 4. MINIMUM 1/2" DEPTH FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED FLUSH WITH OUTER SURFACES OF GYPSUM WALLBOARD.
- 5. MINIMUM 1/4" BEAD FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT AT OUTER SURFACE OF GYPSUM WALLBOARD.
- NOTES : 1. MAXIMUM DIAMETER OF OPENING = 3". ANNULAR SPACE = MINIMUM 0", MAXIMUM 5/8". CLOSED OR VENTED PIPING SYSTEM (PVC, RNC = SCHEDULE 40; CPVC = SDR 13.5).





RELEASE FOR CONSTRUCTIO

GENERAL NOTES

PLANS SHALL COMPLY WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC) WITH AMENDMENTS AS ADOPTED BY THE APPROPRIATE GOVERNING JURISDICTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IF ANY CHANGES OR DEVIATIONS FROM THE PLAN ARE MADE DURING CONSTRUCTION. THE ENGINEER OF RECORD MAY REQUIRE REVISED DRAWING OR CALCULATIONS AT ITS DISCRETION.

IF DISCREPANCIES ARE IDENTIFIED THE MOST CONSERVATIVE SPECIFICATION SHALL APPLY.

LOADING

DEAD		
LIGHT ROOF	10 PSF	
HEAVY ROOF	+10 PSF	(CONCRETE, SLATE, TILE)
ROOF + CEILING (NO STORAGE)	15 PSF	
ROOF + CEILING (STORAGE)	20 PSF	
CEILING JOISTS (STORAGE)	10 PSF	
EXTERIOR BACONIES / DECK	10 PSF	
INTERIOR FLOOR (MAIN FLOOR)	15 PSF	
INTERIOR FLOOR (UPPER FLOORS)	10 PSF	
8" THICK MASONRY WALL	80 PSF	
6" THICK MASONRY WALL	85 PSF	
EXTERIOR LIGHT FRAMED WOOD WALLS	15 PSF	
INTERIOR LIGHT FRAMED WOOD WALLS	10 PSF*	
*(INTERIOR WALLS IN	NCLUDED IN	15 PSF DEAD LOAD)
LIVE		

<u></u>		
ROOF LIVE LOAD	20 PSF	
FLOOR LIVE LOAD	40 PSF	(HABITABLE)
GARAGE	50 PSF	
STORAGE	20 PSF	(UN-INHABITABLE)
GUARDRAIL		
CONTINUOUS LINEAR	50 PLF	
MAXIMUM POINTLOAD	200 LBS	
SNOW		
GROUND SNOW LOAD	20 PSF	
WIND		

ULTIMATE DESIGN WIND SPEED VELOCITY 115 MPH EXPOSURE CATEGORY

SOIL AND SITE ASSUMPTIONS:

FOUNDATION DESIGN ASSUME A MINIMUM SOIL BEARING PRESSURE FOR THE SITE OF 1,500 PSF. CONTRACTOR TO VISUALLY INSPECT SITE OR PROVIDE GEOTECHNICAL INVESTIGATION TO VERIFY MINIMUM ACCEPTABLE SOIL CONDITIONS SW, SP, SM, SC, GM, AND GX AS DEFINED PER IRC TABLE R301.5. THE CONTRACTOR IS RESPONSIBLE FOR ANY SOIL CONDITION THAT DOES NOT MEET THE MINIMUM REQUIREMENTS AND CONTACTING THE ENGINEER OF RECORD.

- PROVIDE A MINIMUM SOIL COVER OF <u>36 INCHES MEASURED FROM THE BOTTOM OF CONCRETE ON</u> ALL FOUNDATIONS.
- ACCESSORY STRUCTURES WITH AN EAVE HEIGHT LESS THAN 10'-0" AND AN AREA LESS THAN 600 FT MAT PROVIDE A MINIMUM SOIL COVER OF 12 INCHES MEASURED FROM THE BOTTOM OF CONCRETE.
- 4. SITE GRADING SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM THE STRUCTURE AT A MINIMUM OF 0.5%.
- 5. LATERAL SOIL PRESSURES
- ACTIVE 30 PSF AT-REST 60 PSF
- PASSIVE 150 PSF

FOUNDATION NOTES:

FOUNDATION ANCHORAGE (IRC 403.1.6)

SILL PLATES SHALL BE BOLTED TO THE FOUNDATION WALL WITH A MINIMUM 1/2" DIAMETER ANCHOR BOLTS EMBEDDER AT LEAST 7" INTO THE CONCRETE. BOLTS SHALL BE SPACED NO GREATER THAN 6' 0.C. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PLATE SECTION, WITH A BOLT PLACED WITHIN 12" AND NOT CLOSER THAN 7 BOLT DIAMETERS, OF THE END OF EACH PLATE SECTION. A PROPERLY SIZED NUT AND WASHER SHALL BE TIGHTENED ON EACH BOLT TO THE PLATE, (NOTE: 7" EMBEDMENT + 1-1/2" SILL PLATE + 3/4" FOR NUT AND WASHER EXCEEDS A 9" LONG BOLT.)

WALL BRACING METHODS PER IRC R602 MAY REQUIRE ADDITIONAL ANCHORAGE.

CONCRETE SLABS PLACED ON FILL MATERIAL WHICH EXCEEDS 24" OF COMPACTED GRANULATED MATERIAL (SAND OR GRAVEL) OR 8" OF EARTH: THIS MAY OCCUR AT GARAGE FLOOR FILLS. OR OVER EXCAVATED AREAS UNDER FLOOR SLABS. THE DESIGN AND INSTALLATION DETAILS IN THIS DOCUMENT (WHERE APPLICABLE BASED ON SIZE AND SPACING LIMITATIONS) MAY BE USED IN LIEU OF PROVIDING A SEPARATE DESIGN. STRUCTURAL SLABS EXCEEDING THE SPANS AND CONDITIONS OF THE APPROVED DETAILS SHALL BE DESIGNED BY A

SLABS AT MAX 4' OVER-DIG ADJACENT TO FOUNDATION WALL: WHERE SOIL IS EXCAVATED FOR A MAXIMUM DIMENSION OF 4' HORIZONTALLY ADJACENT TO A FOUNDATION WALL, THE STANDARD OVER-DIG DETAIL MAY BE USED IN LIEU OF A COMPLETE STRUCTURAL SLAB. SEE "TYPICAL FOOTING/FOUNDATION WALL/STANDARD SLAB AT MAX 4' OVER-DIG DIAGRAM FOR DETAILS.

VAPOR RETARDER / BARRIER (IRC R506.2.3)

PROFESSIONAL ENGINEER.

A 6 MIL POLYETHYLENE OR APPROVED VAPOR RETARDER WITH JOINTS LAPPED A MINIMUM OF 6" IS REQUIRED BETWEEN THE CONCRETE FLOOR SLAB AND THE BASE COURSE OR PREPARED SUBGRADE, (NOT REQUIRED FOR GARAGE SLABS OR DETACHED ACCESSORY BUILDINGS)

FOUNDATION AND LOT GRADING (IRC R401.3)

GRADES SHALL BE SLOPED AWAY FROM THE FOUNDATION A MINIMUM OF 6" IN THE FIRST 10'. ALTERNATE APPROACHES MAY BE APPROVED IF THE ALTERNATE DESIGN IS EQUIVALENT IN EFFECTIVENESS AND PERFORMANCE, AND PROVIDES FOR POSITIVE SITE DRAINAGE.

IRC R403.1.4

- THE BOTTOM OF ALL FOOTINGS SHALL EXTEND NOT LESS THAN 36" BELOW GRADE FOR FROST
- PROTECTION. FOOTINGS FOR FREESTANDING ACCESSORY STRUCTURES WITH AN AREA OF 600 SF OR LESS AND AN EAVE HEIGHT OF 10' OR LESS SHALL EXTEND BELOW GRADE A MINIMUM OF 12".

FOOTINGS:

MASONRY OR CONCRETE FOOTINGS, OR APPROVED STRUCTURAL SYSTEM TO SAFELY SUPPORT THE IMPOSED LOADS AND SHALL BE SIZED AND REINFORCED IN ACCORDANCE WITH THIS STANDARD OR THE STRUCTURE AND FROM ONE LEVEL TO THE NEXT. THE CONTINUOUS TRANSITIONS BETWEEN FOOTINGS AT DIFFERENT LEVELS ENCLOSING USABLE SPACE SHALL BE MADE BY APPROVED SOLID JUMPS OR SUPPORT SYSTEMS TO PROVIDE SAFE SUPPORT OF THE STRUCTURE. SEE "TYPICAL FOOTING/FOUNDATION WALLS/STANDARD SLAB AT MAXIMUM 4" OVER-DIG AND "FOOTING JUMP" DIAGRAMS FOR MORE DETAIL (PER KC, MO STANDARDS)

<u>CONCRETE</u>

- 1. ALL CONCRETE CONSTRUCTION SHOULD CONFORM TO ACI 318-11 AND THE 2018 INTERNATIONAL RESIDENTIAL CODE.
- 2. THE MINIMUM CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE AS SPECIFIED IN IRC TABLE R402.2.
- 3. CONCRETE MIX TO UTILIZE A MAXIMUM WATER-CEMENT MATERIALS RATIO OF 0.45 FOR ALL APPLICATIONS. ALL CONCRETE TO HAVE MAXIMUM 0.10 PERCENT WATER SOLUBLE CHLORIDE CONTENT BY WEIGHT OF CEMENT. ADMIXTURES SHALL NOT CONTAIN ANY CHLORIDES.
- 4. CONCRETE POURED AGAINST AN EXISTING SURGACE SHOULD BE ROUGHENED TO A MINIMUM 1/4 INCH AMPLITUDE.
- 5. REBAR CLEAR DISTANCE SHALL BE AS FOLLOWS: -CAST AGAINST AND PERMANENT CONTACT WITH GROUND3 IN -EXPOSED TO WEATHER OR IN CONTACT WITH GROUND - NOT EXPOSED TO WEATHER OR GROUND
- 6. CONCRETE MIX DESIGN SHALL BE 6% (±1%) AIR-ENTRAINED FOR GARAGE SLABS, FOOTINGS, WALLS, OR FLATWORK EXPOSED TO WEATHER.
- 7. SHORING AND RESHORING: BEFORE CONCRETE STRENGTH REACHES 70% OF STRENGTH DETERMINED BY CYLINDERS OR 28
- DAYS -SHORING MAY NOT BE REMOVED SOONER THAN RECOMMENDED BY ASTM 374-04 SECTION 3.7.2.3.

MINIMUM STANDARDS

CONCRETE SHALL BE 6% (± 1%) AIR-ENTRAINED FOR GARAGE SLABS AND FOR ALL LOCATION'S FOOTINGS, WALLS OR FLATWORK WHERE EXPOSED TO WEATHER. REBAR SHALL BE MINIMUM 60 KSI UNLESS NOTED OTHERWISE. REINFORCING BAR SHALL BE GRADE 60 MINIMUM.

CONCRETE REINFORCEMENT STEEL

- 1. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
- 2. SMOOTH BARS OR WELDED WIRE FABRIC SHALL CONFORM TO ASTM 185.
- 3. ALL REBAR LAP SPLICES SHALL BE CLASS B LAP SPLICES AS SHOWN ON THE LAP SPLICE SCHEDULE.
- 4. DEVELOPMENT LENGTH NOTED IS EQUAL TO 80% OF THE LENGTH NOTED IN THE LAP SPLICE SCHEDULE.
- 5. 90% HOOK SHOWN IN DRAWINGS SHALL BE STANDARD PER ACI 318-14 -STRAIGHT EXTENSION LENGTH = $12x Ø_{BAR}$ -BEND DIAMETER = $12XØ_{BAR}$
- 6. LAP SPLICE SCHEDULE (SEE TABLE 1.1)
- 7. HOOKED DOWELS:
- REINFORCING AND EXTENDED TO 3" CLEAR FROM BOTTOM OF FOUNDATION
- 8. PROVIDE 2 #5 BARS AROUND PERIMETER OF ALL SUSPENDED SLABS
- HOOK
- 10. TOP AND BOTTOM HORIZONTAL REINFORCING SHALL BE PLACED 1-1/2" TO 2" FROM THE TOP AND BOTTOM OF THE WALL

FOOTNOTES:

- 1. WALL HEIGHT IS MEASURED FROM THE TOP OF THE WALL TO THE TOP OF THE FLOOR SLAB.
- 2. VERTICAL REINFORCEMENT FOR CONCRETE WALLS THAT ARE NOT FULL HEIGHT AND FOR REINFORCEMENT SPACED 24" O.C. MAY BE PLACED IN THE MIDDLE OF THE WALL. OTHER WALLS SHALL HAVE VERTICAL REINFORCEMENT PLACE AS FOLLOWS:
- A. 8" WALL MINIMUM 5" FROM THE OUTSIDE FACE. B. 10" WALL - MINIMUM 6-3/4" FROM THE OUTSIDE FACE. C. EXTEND BARS TO WITHIN 8" OF THE TOP OF THE WALL.
- 3. HORIZONTAL REINFORCEMENT:
- A. ONE BAR SHALL BE PLACED WITHIN 12" OF THE TOP OF THE WALL.
- BEHIND THE VERTICAL REINFORCEMENT (I.E. 2" TOWARD THE INSIDE).
- CORNERS.
- 5. AT MASONRY LEDGES THE MINIMUM WALL THICKNESS SHALL BE 3-1/2". LEDGES SHALL NOT EXCEED
- BRACED RETURN WALLS. WALL LENGTH SHALL BE MEASURED USING INSIDE THE SHORTEST DIMENSION BETWEEN INTERSECTING WALLS (SEE TYPICAL DEAD MAN SECTION).

NORMAL WEIGHT CONCRETE LAP SPLICE SCHEDULE, IN							
BAR	TOP	BARS	OTHEF	RBARS			
SIZE	CASE 1	CASE 2	CASE 1	CASE 2			
#3	28	42	22	32			
#4	37	56	29	43			
#5	47	70	36	54			
#6	56	84	43	64			

<u>TABLE 1.1</u>

EXTERIOR WALLS, BEARING WALLS, COLUMN AND PIERS SHALL BE SUPPORTED ON CONTINUOUS SOLID SHALL BE ENGINEERED DESIGN. FOOTINGS UNDER FOUNDATION WALLS SHALL BE CONTINUOUS AROUND

2 IN 1.5 IN

-SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS

7.1. HOOKED DOWELS FROM FOUNDATIONS TO WALL SHALL BE PROVIDED TO MATCH VERTICAL WALL 7.2. HOOKED DOWELS MATCH SLAB REINFORCING FROM SLAB TO WALLS OR SLAB TO FOUNDATION

9. HORIZONTAL WALL REINFORCING SHALL TERMINATE AT THE END OF THE WALL WITH A STANDARD

B. OTHER BARS SHALL BE EQUALLY SPACED WITH SPACING NOT TO EXCEED 24" O.C. C. HORIZONTAL BARS SHOULD BE AS CLOSE TO THE TENSION FACE AS POSSIBLE (INTERIOR); AND D. SUPPLEMENTAL REINFORCEMENT AT CORNERS - PLACE 1 #4 REBAR 48" LONG AT 45 DEGREE ANGLE AT CORNERS OF OPENINGS. PLACE REINFORCEMENT WITHIN 6" OF THE EDGE OF INSIDE

4. REINFORCEMENT SHALL BE LAPPED A MINIMUM 24" AT ENDS, SPLICES, AND AROUND CORNERS.

A DEPTH OF MORE THAN 24" BELOW THE TOP OF THE WALL FOR WALL THICKNESS LESS THAN 4" PROVIDE #4 BARS AT MAXIMUM 24" O.C. TO WITHIN 8" OF THE TOP OF THE WALL.

6. STRAIGHT WALLS MORE THAN 5' TALL AND MORE THAN 16' LONG SHALL BE PROVIDED WITH EXTERIOR

STEEL DECK - SUSPENDED SLABS

1. STEEL DECK QUALITY, FABRICATION, DELIVERY, INSTALLATION AND ATTACHMENT SHALL COMPLY WITH THE PROVISIONS OF THE STEEL DECK INSTITUTE, SDI.

STEEL ROOF DECK SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON CONSTRUCTION DRAWINGS:

- WIDE RIB CONFIGURATION
- 1.5" DEPTH
- 24GA DESIGN THICKNESS • MAXIMUM SINGLE SPAN OF 4'-8" OR CONTINUOUS SPAN OF 5'-10"
- GALVANIZE PER ASTM A653 OR SHOP PRIME PER ASTM A1008
- ATTACH STEEL ROOF DECK TO SUPPORTS WITH #12 TEK AT 18" O.C.
- ATTACH STEEL ROOF DECK SIDELAPS WITH #10 TEK OR CRIMP/BUTTON PUNCH AT 36" O.C. OR MID-SPAN, WHICHEVER IS SMALLER
- 3. CONTRACTOR AND/OR DECK MANUFACTURER SHALL FURNISH ALL NECESSARY DECK CLOSURE ACCESSORIES TO PROVIDE A FINISHED SURFACE FOR THE APPLICATION OF ROOF INSULATION AND ROOF COVERING.
- 4. STEEL FLOOR DECK SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON CONSTRUCTION DRAWINGS:

TEEL DECK - SUSPENDED SLABS STEEL DECK QUALITY, FABRICATION, DELIVERY, INSTALLATION AND ATTACHMENT SHALL COMPLY WITH THE PROVISIONS OF THE STEEL DECK INSTITUTE, SDI. CONTRACTOR AND/OR DECK MANUFACTURER SHALL FURNISH ALL NECESSARY DECK CLOSURE

- ACCESSORIES TO PROVIDE A FINISHED SURFACE FOR THE APPLICATION OF ROOF INSULATION AND ROOF **COVERING** STEEL FLOOR DECK SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON CONSTRUCTION DRAWINGS:
 - 2" COMPOSITE DECK WITH 6" TOTAL SLAB THICKNESS 19GA DESIGN THICKNESS
 - MAXIMUM SINGLE SPAN DURING CONSTRUCTION OF 8', 2 SPAN OF 10'-1", OR 3 SPAN OF 10'-5". MAXIMUM SPAN SHALL NOT EXCEED 12.5'. • PROVIDE W2.1xW2.1 WELDED WIRE MESH OR #4 @ 12" O.C. EACH WAY. PROVIDE 2" REBAR
 - COVER MEASURED FROM TOP OF THE SLAB
 - GALVANIZE PER ASTM A653 MINIMUM BEARING LENGTH AT EDGE SUPPORTS IS 2"
 - MINIMUM BEARING LENGTH AT INTERIOR SUPPORTS IS 4"
 - ATTACH STEEL COMPOSITE FLOOR DECK TO SUPPORTS WITH 5/8" ARC PUDDLE WELDS AT 12" O.C. MECHANICAL FASTENERS EITHER POWDER ACTUATED, PNEUMATICALLY DRIVEN, OR SCREWS MAY BE USED IN LIEU OF WELDING PROVIDED THEY ARE APPROVED. • ATTACH STEEL ROOF DECK SIDELAPS WITH #10 TEK OR CRIMP/BUTTON PUNCH AT 36" O.C. OR

MID-SPAN, WHICHEVER IS SMALLER. CONTRACTOR AND/OR DECK MANUFACTURER SHALL FURNISH ALL NECESSARY POUR STOPS, COLUMN CLOSURES, END PLATES, AND COVER PLATES AS NEEDED.

STRUCTURAL STEEL

- 1. STEEL DESIGN, FABRICATION, AND ERECTION SHALL CONFORM WITH AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- 2. STEEL GRADE AND SPECIFICATION SHALL BE AS FOLLOWS: HOLLOW STRUCTURAL SECTIONS: ASTM A500 (Fy = 46 KSI) ASTM A36 (Fy = 36 KSI) CHANNELS, PLATES AND ANGLES: WIDE FLANGES: ASTM A992 (Fy = 50 KSI) COLUMNS: ASTM A53 GR. B (Fy= 35 KSI) ANCHOR RODS ASTM F1554 (Fy = 36 KSI)
- 3. BOLTS SHALL CONFORM TO ASTM A307
- WELDING SHALL CONFORM TO THE AWS CODES FOR BUILDING CONSTRUCTION. WELDING SHALL BE PERFORMED IN ACCORDANCE TO WELDING PROCEDURE SPECIFICATION (WPS) AS REQUIRED IN AWS D1.1 THE WPS VARIABLES SHALL BE WITHIN THE PARAMETERS ESTABLISHED BY THE FILLER-METAL MANUFACTURER.
- WELDS SHALL USE E70XX ELECTRODES AND A MINIMUM OR 3/16" SIZE UNLESS NOTED OTHERWISE.
- 6. ALL WELDS SPECIFIED AS FIELD WELDS MAY BE SHOP WELDED AT THE CONTRACTOR'S OPTION IF ERECTION CAN STILL BE EXECUTED.

<u>GLAZING</u>

- WALLS.

ABOVE.

GARAGES:

- BALANCE SYSTEM.
- PER R302.5.1.

STAIRWAYS:

1. GLAZING IN HAZARDOUS LOCATIONS AS IDENTIFIED IN IRC R308.4 SHALL BE OF APPROVED SAFETY GLAZING MATERIALS; GLASS IN STORM DOORS; INDIVIDUAL FIXED OR OPENABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24" ARCH OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS WITHIN 60" OF THE FLOOR; WALLS ENCLOSING STAIRWAYS AND LANDINGS WHERE THE GLAZING IS WITHIN 60" OF THE TOP OR BOTTOM OF THE STAIR; ENCLOSURES FOR SPAS, TUBS, SHOWERS, AND WHIRLPOOLS; GLAZING IN FIXED OR OPENABLE PANELS EXCEEDING 8 SF AND WHOSE BOTTOM EDGE IS LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36".

1. PROVIDE ONE WINDOW FROM EACH BEDROOM THAT HAS A MINIMUM OPENABLE AREA OF 5.7 SF WITH A MINIMUM OPENABLE HEIGHT OF 24" AND WIDTH OF 21"

FRAMING NOTES:

ENERGY REQUIREMENTS:

AS REQUIRED PER M1503.6.

1. LIGHTING FIXTURES PENETRATING THE THERMAL ENVELOPE SHALL BE IC-RATED, LEAKAGE RATED, AND SEALED TO THE GYPSUM WALLBOARD AS REQUIRED PER IRC N1102.4.4.

2. PROGRAMMABLE THERMOSTATS SHALL BE INSTALLED AS REQUIRED PER N1103.1.1.

3. AIR HANDLERS SHALL BE RATED FOR MAXIMUM 2% AIR LEAKAGE RATE PER N1103.3.2.1.

4. BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS.

5. HOT WATER PIPES SHALL BE INSULATED AS REQUIRED PER N1103.4.

6. ALL EXHAUST FANS SHALL TERMINATE TO THE BUILDING EXTERIOR AS REQUIRED PER IRC M1504.3. 7. MAKEUP AIR SYSTEMS SHALL BE INSTALLED FOR KITCHEN EXHAUST HOODS THAT EXCEED 400 CFM

8. AN AIR HANDLING SYSTEM SHALL NOT SERVE BOTH THE LIVING SPACE AND THE GARAGE PER M1601.6 ENERGY CONSERVATION.

1. THE GARAGE FLOOR SHALL SLOPE TOWARDS THE GARAGE DOORWAYS.

2. DOORS BETWEEN THE GARAGE AND THE DWELLING - MINIMUM 1-3/8" SOLID CORE OR HONEY COMBED STEEL DOOR OR 20 MINUTE FIRE RATED.

3. THE GARAGE SHALL BE SEPARATED FROM THE DWELLING AND IT'S ATTIC AREAS BY A MINIMUM 5/8" GYPSUM BOARD APPLIED TO THE GARAGE SIDE WHERE A FLOOR/CEILING SPACE IS PROVIDED

4. THE GARAGE COLUMNS AND BEAMS SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED WITH 5/8" GYPSUM BOARD OR EQUIVALENT. WHERE HABITABLE SPACE OCCURS ABOVE THE GARAGE THE FLOOR CEILING ASSEMBLY SHALL BE PROTECTED WITH A MINIMUM PS TYPE "X" GYPSUM BOARD ON THE GARAGE CEILING.

5. GARAGE DOOR AND FRAME - THE "H" FRAME FOR THE ATTACHMENT OF THE TRACK AND COUNTER BALANCE SHALL CONSIST OF THE FOLLOWING 2x6 VERTICAL JAMBS RUNNING FROM THE FLOOR TO CEILING, ATTACHED WITH 1-3/4"x0.120" NAILS AT 7" O.C. STAGGERED WITH (7) 3-1/4"x0.120" NAILS THROUGH THE JAMB INTO THE HEADER. A MINIMUM OF 2x8 HEADER FOR ATTACHMENT OF COUNTER

6. SELF CLOSING DEVICES SHALL BE INSTALLED FOR GARAGE AND/OR DWELLING SEPARATION DOORS

7. GARAGE VEHICLE DOORS AND FRAMES SHALL BE DESIGNED AND INSTALLED TO MEET THE 90 MPH WIND LOAD REQUIREMENTS OF DASMA 108 AND ASTM E330-96 (IRC 301.2.1).

1. STAIRWAYS SHALL PROVIDE A MAXIMUM 7-3/4" RISE AND A MINIMUM 10" RUN.

2. PROVIDE GUARD RAILS BETWEEN 36" GUARD RAILS ON THE OPEN SIDES OF RAISED FLOORS, PORCHES AND BALCONIES; MINIMUM 34" GUARD RAILS ON THE OPEN SIDES OF STAIRWAYS LOCATED MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW.

3. GUARD RAIL ENCLOSURES SHALL HAVE INTERMEDIATE RAILS OF ORNAMENTAL PATTERNS THAT DO NOT ALLOW PASSAGE OF A SPHERE 4" IN DIAMETER.

4. EACH STAIRWAY OF THREE OR MORE RISERS SHALL PROVIDE A CONTINUOUS HANDRAIL ON AT LEAST ONE SIDE BETWEEN 34" AND 38" ABOVE THE NOSING OF THE TREADS.

5. HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION OF 1-1/4" TO 2-5/8" OR OTHER APPROVED GRASPABLE SHAPE PER IRC R311.5.6.

6. MINIMUM 6'-8" OF HEADROOM CLEARANCE IS REQUIRED IN STAIRWAYS.

7. ENCLOSED ACCESSIBLE SPACE UNDER STAIRWAYS SHALL HAVE WALLS AND THE UNDERSIDE OF THE STAIR AND LANDING PROTECTED WITH 1/2" GYPSUM BOARD ON ENCLOSURE SIDE PER IRC R311.2.2.

2. WINDOW FALL PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH R312.2.

EMERGENCY EGRESS AND RESCUE

2. BASEMENT EGRESS TO MEET THE REQUIREMENTS OF IRC R310.

3. PROVIDE SMOKE ALARMS IN EACH SLEEPING ROOM, OUTSIDE OF EACH SLEEPING AREA AND ON EACH FLOOR INCLUDING BASEMENTS. ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE DWELLING.

4. CARBON MONOXIDE DETECTORS SHALL BE INSTALLED AS REQUIRED PER R315.

1. ALL LUMBER SIZES ARE DOUGLAS FIR-LARCH #2 UNLESS OTHERWISE NOTED.

2. ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR LARCH (2) 2x10 ON LOAD BEARING

3. ALL HEADER/BEAMS TO BEAR ON A MINIMUM OF (2) 2x4 POSTS UNLESS NOTED OTHERWISE.

4. DOUBLE JOIST UNDER INTERIOR NON-LOAD BEARING WALLS.

5. CANTILEVERS, OVER BEAMS, AND DOOR JAMBS SHALL BE BLOCKED

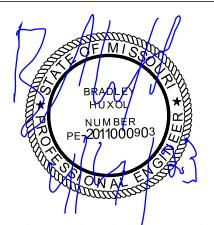
6. ANY WOOD MEMBERS IN CONTACT WITH CONCRETE OR MASONRY (OR THE FURRING THEY ARE ATTACHED TO) SHALL BE OF DECAY RESISTANT MATERIAL.

7. INTERIOR NON LOAD BEARING WALLS SHALL BE ISOLATED FROM THE FLOOR FRAMING ABOVE UNLESS THE INTERIOR NON LOAD BEARING WALL RESTS DIRECTLY ON A FOOTING.

LVL STRENGTH SHALL BE VERSA-LAM 3100 Fb UNLESS NOTED OTHERWISE.

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SHEET #

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ITEM	DESCRIPTION OF BUILDING	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION			FLOOR		
	ELEMENTS	ROOF	SPACING AND LOCATION	21	JOST TO SILL, TOP PLATE OR	4-8D BOX (2-1/2" X 0.113"); OR 3-8D COMMON (2-1/2" X 0.131"); OR	тог	NAIL
1	BLOCKING BETWEEN CEILING	4-8D BOX (2-1/2"x0.113") OR 3-8D COMMON (2-1/2" x 0.131"); OR	TOE NAIL	21	GIRDER	3-10D BOX (3" X 0.128"); OR 3-3" X 0.131" NAILS		
	JOISTS OR RAFTERS TO TOP PLATE	3-10D BOX (3" x 0.128"); OR 3-3" x 0.131" NAILS		21 JOST TO SILL, TOP PLATE OR GIRDER 4-80 BOX (2-1/2* X 0.113* 3-100 BOX (5* X 0.124*) (3-100 BOX (5* X 0.124*) BOCOMMON (2-1/2* X 0.113* BOCOMMON (2-1/2* X 0.113* BOCOMMON (2-1/2* X 0.113* JOIST 22 RIM JOST, BAND JOIST OR BLOCKING TO SILL OR TOP PLATE (ROOF APPLICATIONS ALSO) BD BOX (2-1/2* X 0.113* BO BOX (2-1/2* X 0.113* JOIST 23 1*x6* SUBFLOOR OR LESS TO EACH JOIST B-80 BOX (2-1/2* X 0.113* BO BOX (2-1/2* X 0.113* JOIST 24 2* SUBFLOOR TO JOIST OR GIRDER 8 ROOF) 3-160 BOX (3-1/2* X 0.13* BO BOX (2-1/2* X 0.13* JOIST 25 2* PLANKS (PLANK & BEAM - FLOOR 8 ROOF) 3-160 BOX (3-1/2* X 0.13* JOIST OR JOIST 2-160 COMMON (3-1/2*X 0.13* JOIST NALS) 26 BAND OR RIM JOIST TO JOIST 4 BOX (3* X 0.13*); NALS 3-160 BOX (3-1/2* X 0.13* JOIST NALS) 27 BUILT-UP GIRDERS AND BEAMS, 2* LUMBER LAYERS 100 BOX (3* X 0.128*); O 3-3*X 0.13*) NALS 28 LEDGER STRIP SUPPORTING JOIST 2-100 BOX (3* X 0.128*); O 3-3*X 0.13*) NALS 29 BRIDGING OR BLOCKING TO JOIST 2-100 BOX (3* X 0.128*); O 3-3*X 0.13*) NALS 30 3/8* - 1/2* BOX (3* X 0.13*); A 3-100 BOX (3* X 0.13*); A-100 BOX (3* X 0.13*);		4" O.C. ⁻	TOE NAIL	
2	CEILING JOSTS TO TOP PLATE	4-8D BOX (2-1/2"x0.113") OR 3-8D COMMON (2-1/2" x 0.131"); OR 3-10D BOX (3" x 0.128"); OR 3-3" x 0.131" NAILS	PER JOIST, TOE NAIL	22		10D BOX (3" X 0.128"); OR	6" O.C. ⁻	TOE NAIL
3	CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER LAPS OVER PARTITIONS		FACE NAIL	23		2-8D COMMON (2-1/2" X 0.131"); OR 3-10D BOX (3" X 0.128"); OR 2 STAPLES, 1" CROWN, 16 GA, 1-3/4" LONG	FACE	ENAIL
4	CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT)	TABLE R802.5.2	FACE NAIL		Γ		l	
5	COLLAR TIE TO RAFTER, FACE NAIL OR 1-1/4"x20 GAGE RIDGE STRAP TO RAFTER	4-10D BOX (3" X 0.128"); OR 3-10D COMMON (3" X 0.148"); OR 4-3" X 0.131" NAILS	FACE NAIL EACH RAFTER			2-16D COMMON (3-1/2"x0.162")) FACE NAIL RING, FACE NAIL
6	RAFTER OR ROOF TRUSS TO PLATE	3-16d BOX NAILS (3-1/2"x0.135") OR 3-10d COMMON NAILS (3"x0.148"); OR 4-10D BOX (3" X .128"); OR 4-3" X 0.131" NAILS	2 TOE NAILS ON ONE SIDE AND 1 TOE NAIL ON OPPOSITE SIDE OF EACH RAFTER OR TRUSS					
	ROOF RAFTERS TO RIDGE, VALLEY	4-16D (3-1/2"x0.135") ; OR 3-10D COMMON (3" X 0.148"); OR 4-10D BOX (3" X 0.128"); OR 4-3" X0.131" NAILS	TOE NAIL			4-3" X 0.131" NAILS ; OR 4-3" X 14 GA. STAPLES, 7/16" CROWN 20D COMMON (4" X 0.192"); OR NAIL EACH I		FOLLOWS: 32" O.C. M AND STAGGERED
7	OR HIP RAFTERS OR ROOF RAFTER TO MINIMUM 2" RIDGE BEAM	3-16d BOX NAILS (3-1/2"x0.135") OR 2-16D COMMON NAILS (3-1/2"x0.162"); OR 3-10D BOX (3" X .128"); OR 3-3" X 0.131" NAILS	END NAIL	27			24" O.C. FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES FACE NAIL AT ENDS AND AT EACH SPLICE	
	r	WALL						
8	STUD TO STUD (NOT AT BRACED WALL PANELS)	16D COMMON (3-1/2" X 0.162") 10d BOX (3"x0.128"); OR 3" X 0.131" NAILS	24" O.C. FACE NAIL 16" O.C. FACE NAIL	28		3-16D COMMON (3-1/2" X 0.162"); OR 4-10D BOX (3" X 0.128"); OR	AT EACH JOIST OR	RAFTER, FACE NAI
	STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL	16D BOX (3-1/2"x0.135"); OR 3" X 0.131" NAILS	12" O.C. FACE NAIL			2-10D BOX (3" X 0.128"); OR 2-8D		
9	CORNERS (AT BRACED WALL PANELS)	16D COMMON (3-1/2" X 0.162")	16" O.C. FACE NAIL	29			EACH END), TOE NAIL
10	BUILT-UP HEADER (2" TO 2" HEADER WITH ¹ / ₂ " SPACER)	16D COMMON (3-1/2"x0.162") 16D BOX (3-1/2" X 0.135)	16" O.C. ALONG EACH EDGE FACE NAIL 12" ALONG EACH EDGE FACE NAIL		DESCRIPTION OF BUILDING		SPACING OF	FASTENERS
11	CONTINUOUS HEADER TO STUD	5-8D BOX (2-1/2" X 0.113"); OR 4-8D COMMON (2-1/2" X 0.131"); OR 4-10D BOX (3" X 0.128")	TOENAIL		ELEMENTS	ELEMENTS NUMBER AND TYPE OF FASTENER 6d COMMON (2"x0.113") NAILS (SUBFLOOR,		INTERMEDIAT SUPPORTS (IN
		16D COMMON (3-1/2" X 0.162")	16" O.C. FACE NAIL	SE NAIL ITEM DESCRIPTION OF BUILDING ELEMENTS 30 3/8" - 1/2" 6d W, 8d RS				
12	TOP PLATE TO TOP PLATE	10d BOX (3"x0.128"); OR 3" X 0.131" NAILS	12" O.C. FACE NAIL	30	3/8" - 1/2"	, , , , , , , , , , , , , , , , , , ,	6	12
13	DOUBLE TOP PLATE SPLICE	8-16D COMMON(3-1/2" X 0.162"); OR 12-16D BOX (3-1/2" X 0.135"); OR 12-10D BOX (3" X 0.128"); OR	FACE NAIL ON EACH SIDE OF END JOINT (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)	31	19/32"-1"	8d COMMON NAIL (2-1/2"x0.131"); OR RSRS-01 (2-3/8" X 0.113") NAIL (ROOF)	6	12
			,	32	1-1/8" - 1-1.4"	8D (2-1/2"x0.131") DEFORMED NAIL	6	12
14	JOIST, BAND JOIST OR BLOCKING	, ,			EMDESCRIPTION OF BUILDING ELEMENTSNUMBER AND TYPE OF FASTENER303/8" - 1/2"6d COMMON (2"x0.113") NAILS (SUBFLOOR, WALL) 8d COMMON (2-1/2"x0.131") NAIL (ROOF); OR RSRS-01 (2-38" X 0.113") NAIL (ROOF)3119/32"-1"8d COMMON NAIL (2-1/2"x0.131"); OR RSRS-01 (2-3/8" X 0.113") NAIL (ROOF)321-1/8" - 1-1.4"10d COMMON (3"x0.148") NAIL OR 8D (2-1/2"x0.131") DEFORMED NAILOTHER WALL SHEATHING1/2" STRUCTURAL CELLULOSIC1-1/2" GALVANIZED ROOFING NAIL, 7/16" HEAD DIAMETER, OR 1-1/4" LONG 16 GAL	I	L	
45	BOTTOM PLATE TO JOIST, RIM	3" X 0.131" NAILS 3-16d BOX NAILS (3-1/2"x0.135") OR	3 EACH 16" O.C. FACE NAIL	33			3	6
	BRACED WALL PANELS)	4-3" X 0.131" NAILS 4-8D BOX (2-1/2"x0.113") OR 3-16D BOX (3-1/2" x 0.135"); OR	4 EACH 16" O.C. FACE NAIL	34		1-3/4" GALVANIZED ROOFING NAIL, 7/16" HEAD DIAMETER, OR 1-1/2" LONG 16 GA STAPLE WITH $\frac{7}{16}$ " OR 1" CROWN	3	6
16	PANELS) BUILT-UP HEADER (2" TO 2" HEADER WITH 1" SPACER) CONTINUOUS HEADER TO STUD TOP PLATE TO TOP PLATE DOUBLE TOP PLATE SPLICE BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS) BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST BLOCKING (AT BRACED WALL PANELS) TOP OR BOTTOM PLATE TO STUD	4-8D COMMON (2-1/2" X 0.131"); OR 4-10D BOX (3" x 0.128"); OR 4-3" x 0.131" NAILS	TOE NAIL	35	1/2" GYPSUM SHEATHING	1-1/2" GALVANIZED ROOFING NAIL; STAPLE GALVANIZED, 1-1/2" LONG; 1-1/4" SCREWS, TYPE "W" OR "S"	7	7
12-10D BOX (3" X 0.128"); OR 12-3" X 0.131" NAILSSIDE OF END JOINT)14BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)16D COMMON (3-1/2" X 0.162")16" O.C. FACE NAIL15BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST BLOCKING (AT BRACED WALL PANELS)3-16d BOX NAILS (3-1/2"x0.135") OR 3-16d BOX NAILS (3-1/2"x0.135") OR 2-16D COMMON (3-1/2"x0.135") OR 2-16D COMMON (3-1/2"x0.135") OR 2-16D COMMON (3-1/2"x0.135") OR 2-16D COMMON (3-1/2"x0.135"); OR 4-3" X 0.131" NAILS3 EACH 16" O.C. FACE NAIL 2 EACH 16" O.C. FACE NAIL 4-3" X 0.131" NAILS15BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST BLOCKING (AT BRACED WALL PANELS)3-16d BOX NAILS (3-1/2"x0.135") OR 2-16D COMMON (3-1/2"x0.135"); OR 4-3" X 0.131" NAILS3 EACH 16" O.C. FACE NAIL 4-3" X 0.131" NAILS16WALL PANELS)4-8D BOX (2-1/2"x0.113") OR 3-16D BOX (3-1/2" x 0.135"); OR 4-8D COMMON (2-1/2" X 0.131"); OR 4-8D COMMON (2-1/2" X 0.131"); OR 4-10D BOX (3" x 0.128"); ORTOE NAIL	36	5/8" GYPSUM SHEATHING	1-3/4" GALVANIZED ROOFING NAIL; STAPLE GALVANIZED, 1-5/8" LONG; 1-5/8" SCREWS,	7	7			
		3-10D BOX (3" X 0.128"); OR				L PANELS, COMBINATION SUBFLOOR UN	NDERLAYMENT TO F	RAMING
17	TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	2-16D COMMON (3-1/2" X 0.162"); OR 3-3" X 0.131" NAILS	FACE NAIL	37	3/4" AND LESS	6D DEFORMED (2"x0.120") NAIL OR 8D COMMON (2-1/2"x0.131") NAIL	6	12
18	1" BRACE TO EACH STUD AND PLATE	3-8D BOX (2-1/2" X 0.113"); OR 2-8D COMMON (2-1/2" X 0.131"); OR 2-10D BOX (3" X 0.128"); OR	FACE NAIL			8D COMMON (2-1/2"x0.131") NAIL OR 8D DEFORMED (2-1/2"x0.120") NAIL 10D COMMON (3"x0.148") NAIL OR	6	12
19	1"x6" SHEATHING TO EACH BEARING	2 STAPLES 1-3/4" 3-8D BOX (2-1/2" X 0.113"); OR 2-8D COMMON (2-1/2" X 0.131"); OR 2-10D BOX (3" X 0.128"); OR 2 STAPLES, 1" CROWN, 16 GA, 1-3/4" LONG	FACE NAIL	39	1-1/8" - 1-1/4"	8D DEFORMED (2-1/2"x0.120") NAIL	6	12
20	1"x8" AND WIDER SHEATHING TO EACH BEARING	3-8D BOX (2-1/2" X 0.113"); OR 3-8D COMMON (2-1/2" X 0.131"); OR 3-10D BOX (3" X 0.128"); OR 3 STAPLES, 1" CROWN, 16 GA, 1-3/4" LONG WIDER THAN 1" X 8" 4-8D BOX (2-1/2" X 0.113"); OR 3-8D COMMON (2-1/2" X 0.131"); OR 3-10D BOX (3" X 0.128"); OR 4 STAPLES, 1" CROWN, 16 GA, 1-3/4" LONG	FACE NAIL		-	TABLE R507.2.1 PLACEMENT OF LAG SCR LEDGERS AND BAND MINIMUM END AND EDGE DISTANCES AND	JOISTS	

TABLE R507/2 FASTENER SPACING FOR	A SOUTHERN PINE		LEDGER 2" NOMIN DEAD LOAD = 10 P		PRUCE-PINE-FIR BA	AND JOIST (DECK LI	VE LOAD = 40PSF,
JOIST SPAN	6' AND LESS	6'1 TO 8'	8'1 TO 10'	10'1 TO 12'	12'1 TO 14'	14'1 TO 16'	16'1 TO 18'
CONNECTION DETAILS		ON CENTER SPACING OF FASTENERS					
1/2" DIAMETER LAG SCREW WITH 15/32" MAX SHEATHING	30	23	18	15	13	11	10
1/2" DIAMETER BOLT WITH 15/32" MAX SHEATHING	36	36	34	29	24	21	19
1/2" DIAMETER BOLT WITH 15/32" MAX SHEATHING AND 1/2" STACKED WASHERS	36	36	29	24	21	18	16

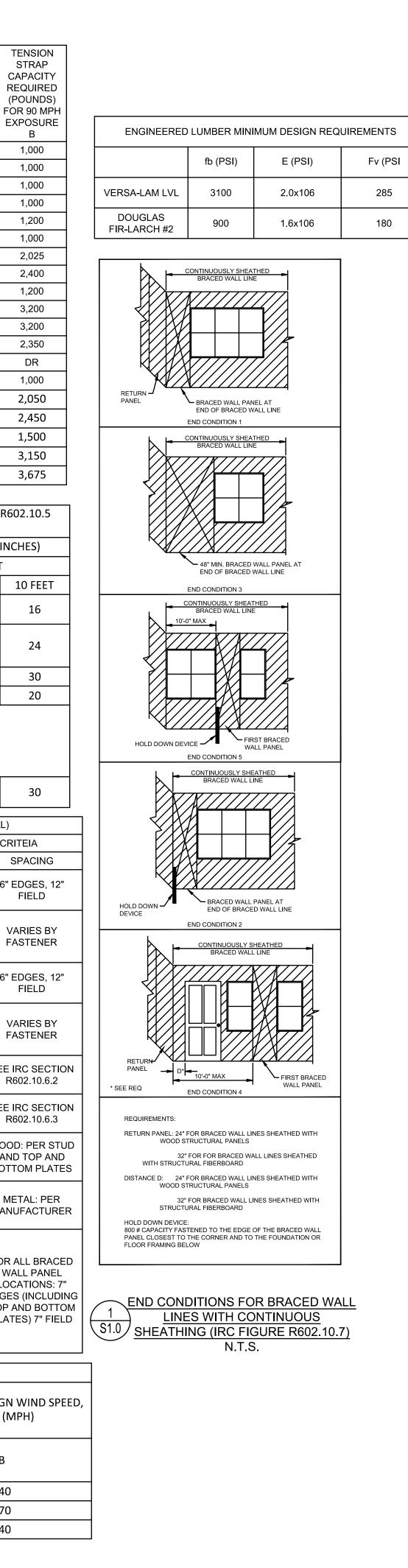
MINIMUM WALL STUD FRAMING NOMINAL SIZE AND GRADE	MAXIMUM PONY WALL HEIGHT (FEET)	MAXIMUM TOTAL WALL HEIGHT (FEET)	MAXIMUM OPENING WIDTH (FEET)	(F) E
	0	10	18	
			9	
	1	10	16	
			18	
			9	
	2	10	16	
2x4 NO 2 GRADE			18	
			9	
	2	12	16	
			18	
			9	
	4	12	16	
			18	
			9	
	2	12	16	
2x6 STUD			18	
GRADE			9	
	4	12	16	
			18	

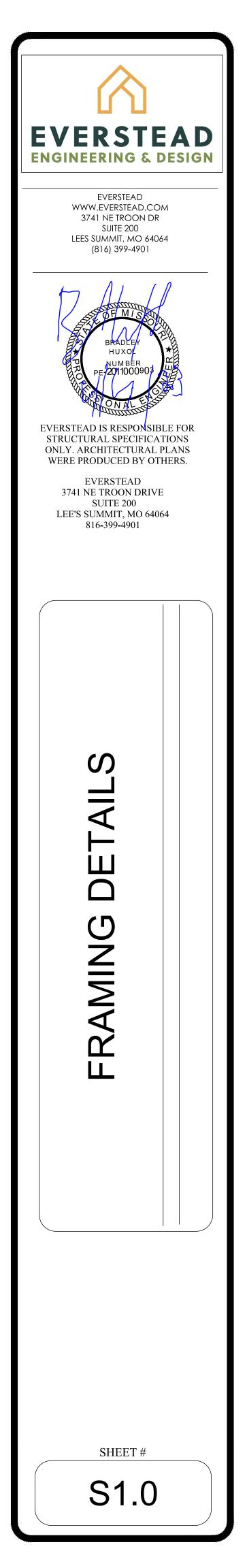
MINIMUM LENGTH OF BRACED WALL PANELS TABLE R (PARTIAL)						
		MININ	1UM LENGTH (IN		
MI	ETHOD		WALL HEIGHT	Γ		
		8 FEET	9 FEET			
PFH	SUPPORTING ROOF ONLY	16	16			
	SUPPORTING ONE STORY AND ROOF	24	24			
	PFG	24	27			
(CS-PF	16	18			
CS-WSP	ADJACENT CLEAR OPENING HEIGHT (INCHES)					
	LESS THAN OR EQUAL TO 64	24	27			

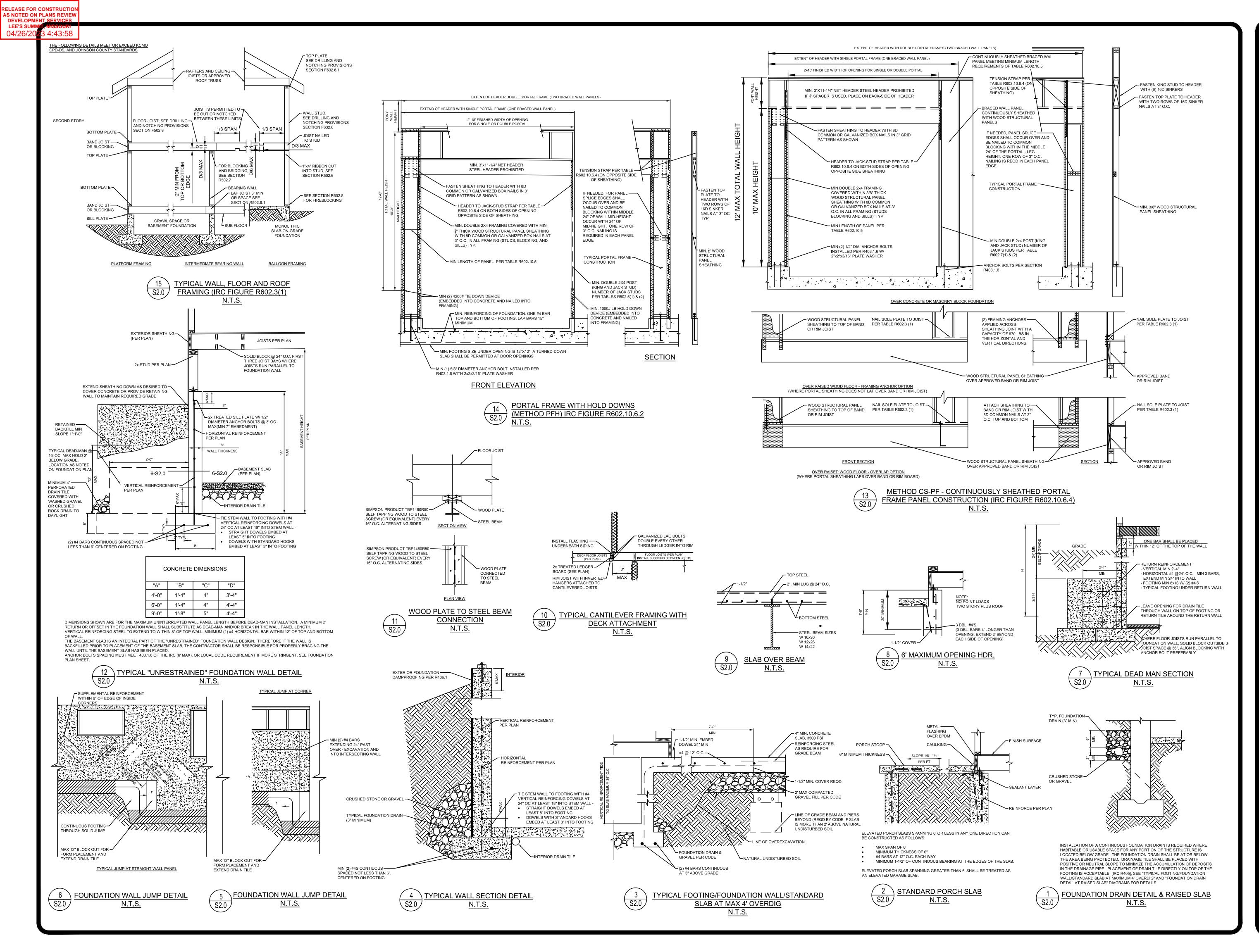
BRACING METHODS TABLE R602.10.4 (PARTIAL)						
METHODS,	MINIMUM	CONNECTION CF				
MATERIAL	THICKNESS	FASTENERS				
WSP - WOOD		EXTERIOR SHEATHING PER TABLE R602.3(3)	6"			
STRUCTURAL PANEL	3/8	INTERIOR SHEATHING PER TABLE R602.3(1) OR R602.3(2)	V F			
		EXERIOR SHEATHING PER TABLE R602.3(3)	6"			
SHEATHED WOOD STRUCTURAL PANEL	3/8	INTERIOR SHEATHING PER TABLE R602.3(1) OR R602.3(2)	V F			
PFH - PORTAL FRAME WITH HOLD DOWNS	3/8	SEE IRC SECTION R602.10.6.2	SEE R			
PFG - PORTAL FRAME AT GARAGE	3/8	SEE IRC SECTION R602.10.6.3	SEE R			
LIB	1x4 WOOD OR APPROVED METAL STRAPS AT 45 TO 60	WOOD: 2-8d COMMON NAILS OR 3-8d NAILS	WOC AN BOT			
LET-IN-BRACING	DEGREE ANGLES FOR MAX 16" STUD SPACING	METAL STRAP: PER MANUFACTURER	M MAN			
GB-GYPSUM	1/2	NAILS OR SCREWS PER TABLE R602.3(1) FOR EXTERIOR LOCATIONS	FOR W LO			
BOARD	172	NAILS OR SCREWS PER TABLE R702.3.5 FOR INTERIOR LOCATIONS	EDGE TOP PLA ⁻			

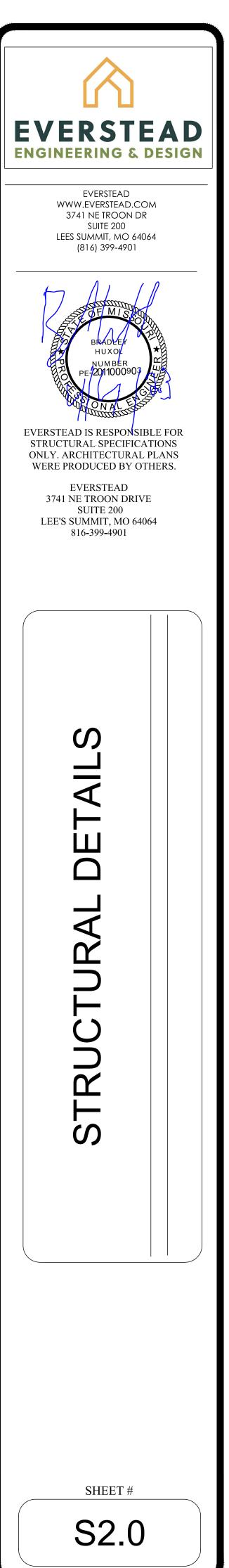
TABLE R507.2.1 PLACEMENT OF LAG SCREWS AND BOLTS IN DECK LEDGERS AND BAND JOISTS					
MINIMUM END AND EDGE DISTANCES AND SPACING BETWEEN ROWS (INCHES)					
	TOP EDGE	BOTTOM EDGE	ENDS	ROW SPACING	
LEDGER	2	1/4	2	1-5/8	
BAND JOIST	3/4	2	2	1-5/8	

REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES IRC TABLE 602.3(3) (PA						02.3(3) (PARTIAL)	
MINIMU	MINIMUM NAIL		MINIMUM NOMINAL PANEL	MAX WALL STUD			ULTIMATE DESIGN V V ULT (M
SIZE	PENETRATION (IN)	PANEL SPAN RATING	THICKNESS (IN)	SPACING	EDGES (IN O.C.)	FIELD (IN O.C.)	В
6d COMMON	1.5	24/0	3/8	16	6	12	140
8d COMMON	1.75	24/16	7/16	16	6	12	170
				24	6	12	140

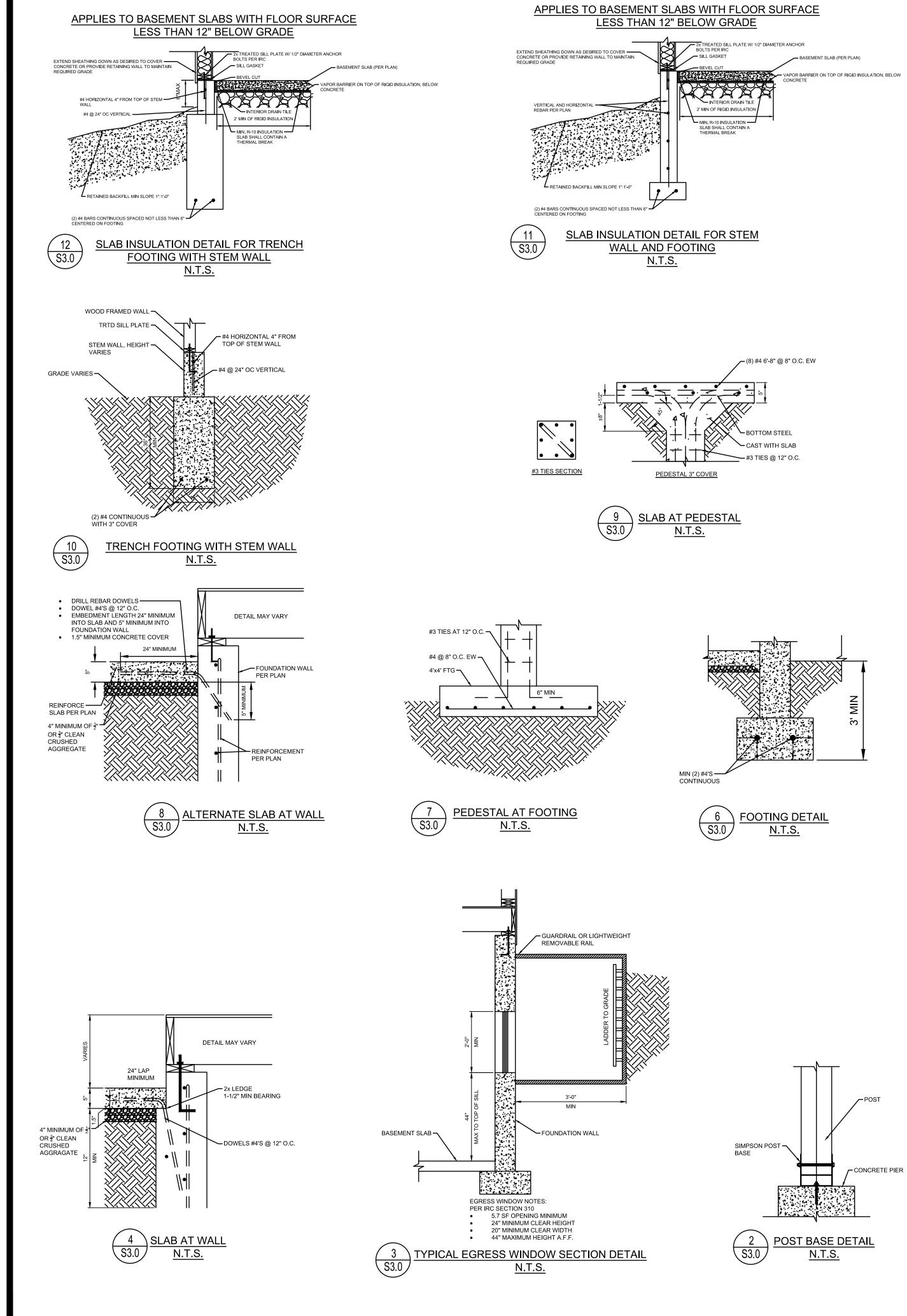


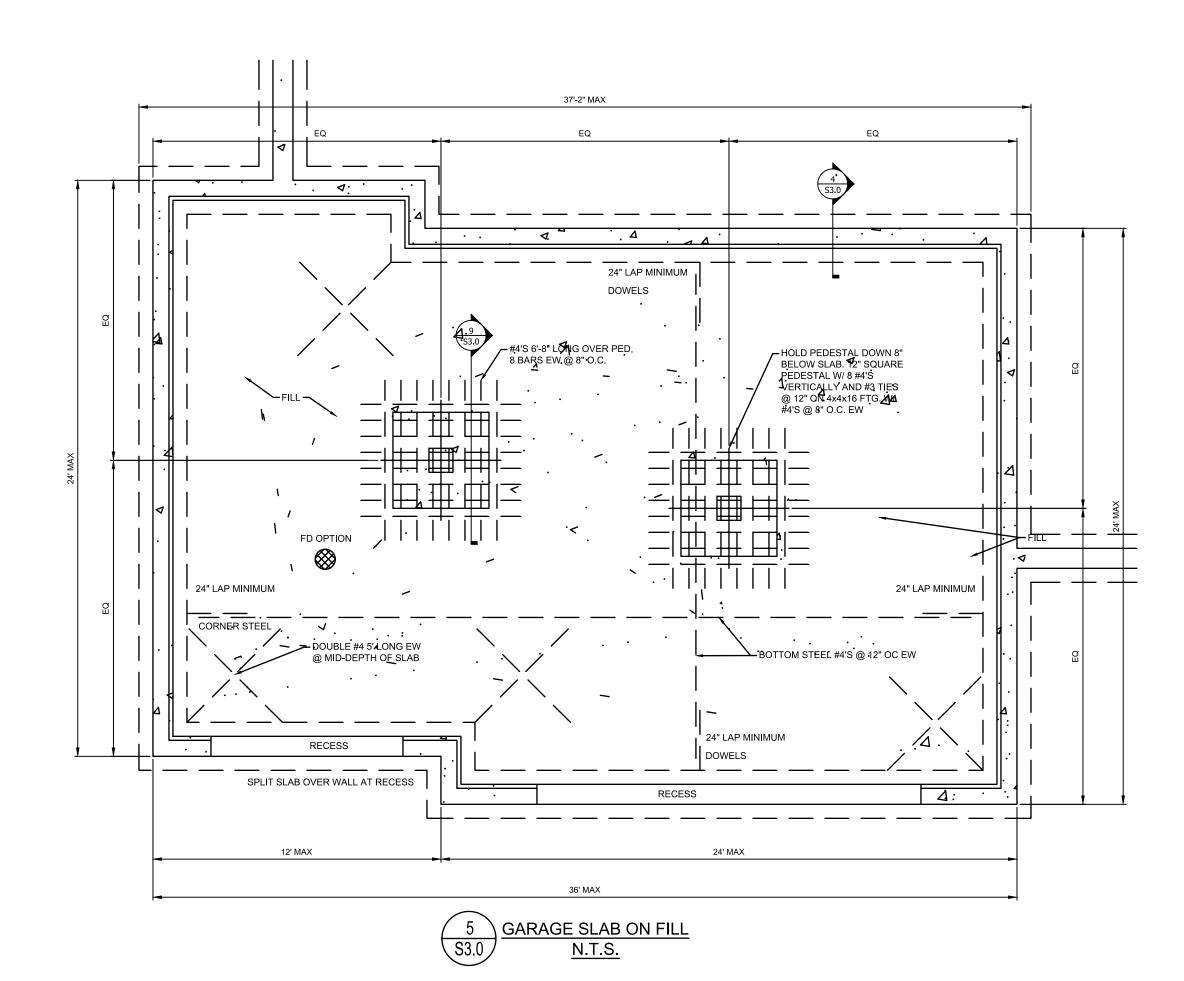




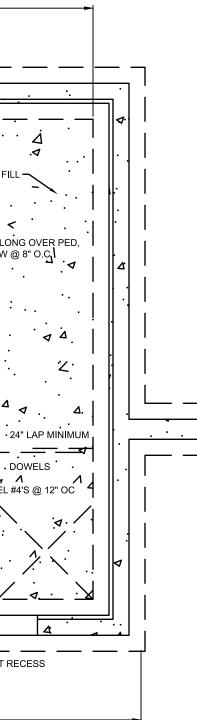


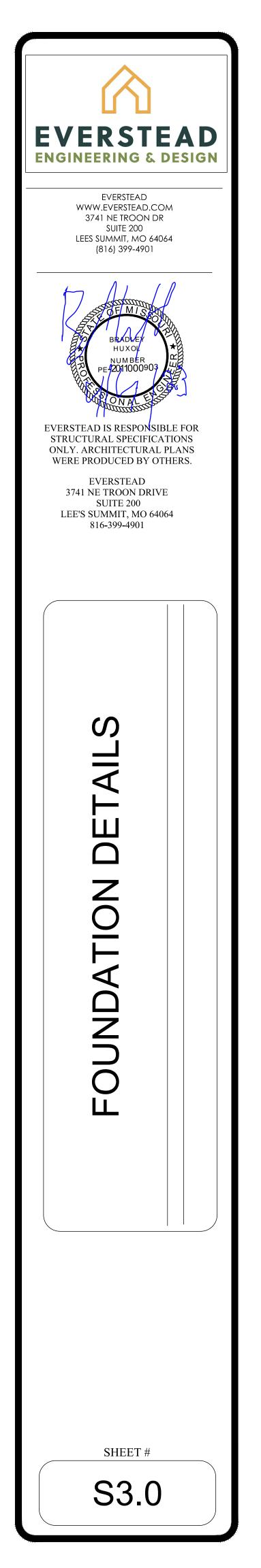






20' MAX $\frac{4}{53.0}$ <u>, · · ·</u>2 <u>_____</u><u>A .</u> 24" LAP MINIMUM DOWELS HOLD PEDESTAL DOWN 8" -BELOW SLAB. 12" SQUARE PEDESTAL W/ 8 #4'S VERTICALLY AND #3 TIES 4'S 6'-8" LONG OVER PED, @ 12" ON 4x4x16 FTG. W/ < 8 BAARS EW @ 8" O.C**, I** #4'S @ 8" O.C. EW FD OPTION 24" LAP MINIMUM **4** ·· A . DOWELS DOWELS Λ. - 1 BOTTOM STEEL #4'S @ 12" OC CORNER STEEL DOUBLE+#4 5' LONG EW @ MID-DEPTH OE SLAB 24" LAP MINIMUM DOWELS RECESS _____ SPLIT SLAB OVER WALL AT RECESS 12' MAX 24' MAX GARAGE SLAB ON FILL <u>S3.0</u> <u>N.T.S.</u>





RELEASE FOR CONSTRUCTIO

HELIX REQUIREMENTS:

- FOUNDATION WALL SHALL NOT EXCEED 9' HEIGHT.
- DEAD MAN SHALL BE A MAXIMUM 3'8" FROM TOP OF FOUNDATION WALL ELSE HELIX NOT PERMITTED.
- ALL CONCRETE SHALL BE REINFORCED WITH HELIX MICRO REBAR ALONG WITH ANY ADDITIONAL REBAR AS NOTED:
- 9.0 LB/CUBIC YARD DOSAGE OF HELIX 5-25.
- VERIFY DOSAGE AT FORM INSPECTION.
- SEE MIXING REQUIREMENTS ON THIS PAGE. MINIMUM 3000 PSI FOOTING COMPRESSIVE STRENGTH
- MINIMUM 3000 PSI WALL COMPRESSIVE CONCRETE STRENGTH.
- AIR ENTRAINED BETWEEN 5-7% OF CONCRETE VOLUME. GRADE 60 REINFORCING STEEL UNLESS OTHERWISE NOTED.
- LAP SPLICES 24" MINIMUM.
- ASSUMED 1500 PSF SOIL BEARING.
- WALL SHALL BE BACK-FILLED WITH CLEAN, LEAN CLAY, OR BETTER, LOW VOLUME CHANGE MATERIAL. ON-SITE MATERIAL MAY BE USED IF DEEMED ACCEPTABLE BY THE GEOTECHNICAL ENGINEER.

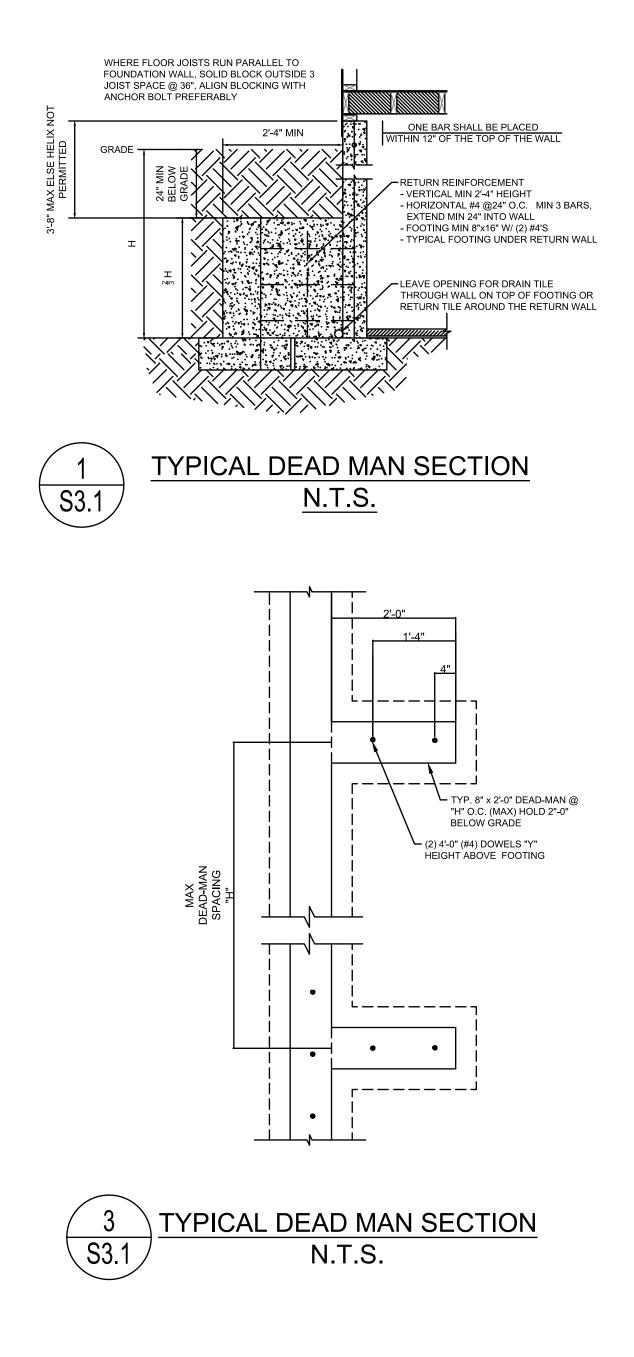
HELIX ALTERNATE DESIGN NOT VALID IF ANY ONE OF THE FOLLOWING CONDITIONS ARE MET:

• NON-UNIFORM FOOTING SUPPORT (IE. CAST IN PLACE PIERS, PUSH PILES). • DAYLIGHT WALLS EXCEEDING 6' TALL FOR A LENGTH GREATER THAN 6'.

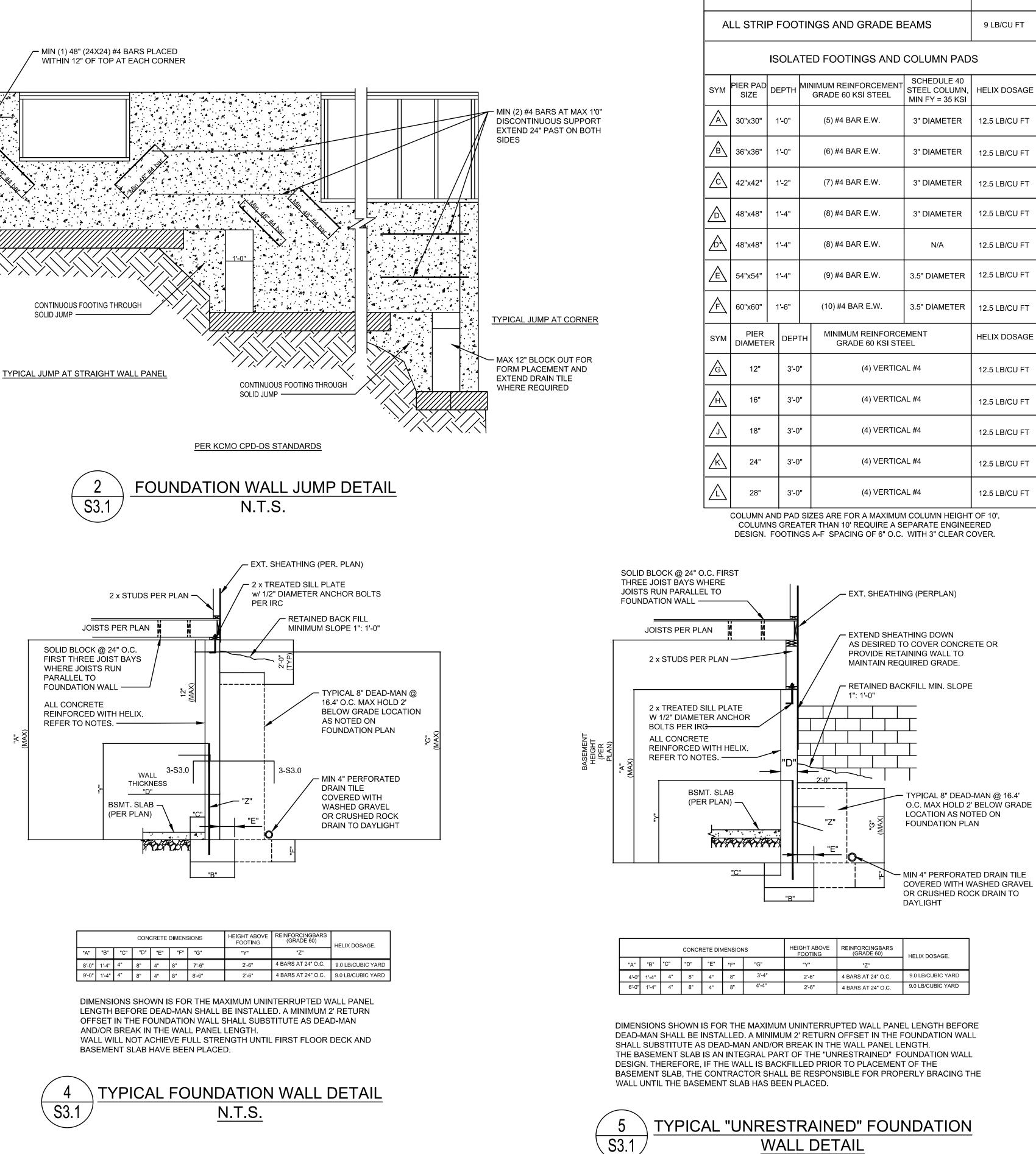
HELIX DOSING INSTRUCTIONS:

MIXING SHOULD BE DONE ACCORDANCE WITH ASTM C94 AND THE MIXING INSTRUCTIONS BELOW. THE DOSAGES OF HELIX ADDED TO THE MIX SHOULD BE NOTED ON THE BATCH DOCUMENTATION IN ACCORDANCE WITH UNIFORM EVALUATION SERVICE ER 279 SECTION 5.15. VERIFIED USING PROCEDURE IN ER 279 APPENDIX A.

A SLUMP OF 125 MM OR 5" OR HIGHER WILL FACILITATE STRIKE OFF. A SLUMP OF LESS THAN 4" IS NOT RECOMMENDED AS THIS WILL PREVENT SURFACE SEGREGATION OF THE CEMENT AND FINES FROM THE AGGREGATE AND HELIX. SLUMP SHOULD BE MEASURED ON THE INITIAL LOAD AND ADJUSTMENTS MADE WITH A WATER REDUCER OR PLASTICIZER (NOT WATER).







HELIX FOOTING TABLE							HELIX DOSAGE	
LL STRIP FOOTINGS AND GRADE BEAMS						9 LB/CU FT		
	ISOLATED FOOTINGS AND COLUMN PADS							
	PIER PAD SIZE	DE	EPTH		NIMUM REINFORCEMENT GRADE 60 KSI STEEL	SCHEDULE 40 STEEL COLUMN, MIN FY = 35 KSI	HELIX DOSAGE	
	30"x30"	1	'-0"		(5) #4 BAR E.W.	3" DIAMETER	12.5 LB/CU FT	
	36"x36"	1	'-0"		(6) #4 BAR E.W.	3" DIAMETER	12.5 LB/CU FT	
	42"x42"	1	'-2"		(7) #4 BAR E.W.	3" DIAMETER	12.5 LB/CU FT	
	48"x48"	1	'-4"		(8) #4 BAR E.W.	3" DIAMETER	12.5 LB/CU FT	
	48"x48"	1	'-4"	(8) #4 BAR E.W.		N/A	12.5 LB/CU FT	
	54"x54"	1	1'-4"		(9) #4 BAR E.W.	3.5" DIAMETER	12.5 LB/CU FT	
	60"x60"	1	1'-6"		(10) #4 BAR E.W.	3.5" DIAMETER	12.5 LB/CU FT	
	PIER DIAMETER		DEP	TH MINIMUM REINFORCE GRADE 60 KSI STE			HELIX DOSAGE	
	12"	12" 3'-0		"	(4) VERTICAL #4		12.5 LB/CU FT	
-	16"	16" 3'-0		, ''	(4) VERTICAL #4		12.5 LB/CU FT	
	18"		3'-0"		(4) VERTICAL #4		12.5 LB/CU FT	
_	24"		3'-0"		(4) VERTICAL #4		12.5 LB/CU FT	
	28"	3'-0" (4) VERTICAL #4		12.5 LB/CU FT				

NSIONS		HEIGHT ABOVE FOOTING	REINFORCINGBARS (GRADE 60)	HELIX DOSAGE.	
"F"	"G"	"Y"	"Z"		
8"	3'-4"	2'-6"	4 BARS AT 24" O.C.	9.0 LB/CUBIC YARD	
8"	4'-4"	2'-6"	4 BARS AT 24" O.C.	9.0 LB/CUBIC YARD	

WALL DETAIL N.T.S

EVERSTEAD ENGINEERING & DESIG everstead www.everstead.com 3741 NE TROON DR SUITE 200 LEES SUMMIT, MO 64064 (816) 399-4901

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SHEET #

S3.1