

FRONT & REAR ELEVATION NOTES

1.12 TOP OF FOOTING DEPTH DETERMINED PER SITE.

1.41 6X6 CEDAR POST

1.71 CONCRETE WINDOW WELL FOR EGRESS WITH LADDER. PROVED SLEEVE THROUGH WALL FOR FOUNDATION DRAIN. TOP OF WINDOW WELL TO BE 3" BELOW TOP OF FOUNDATION.

2.62 DOUBLED 1X8" LP SMART TRIM. 1 1/2" ARCH ON GARAGE DOOR TRIM UNLESS NOTED OTHERWISE ON ELEVATION.

- 3.11 LP SMART PANEL LAP SIDING WITH 5/4X6 LP SMART TRIM AROUND DOORS, WINDOWS, AND CORNERS UNLESS NOTED OTHERWISE.
- 3.13 LP SMART PANEL SIDING WITH 3/4X4 LP SMART TRIM AROUND DOORS, WINDOWS, AND CORNERS UNLESS NOTED OTHERWISE. BOTTOM OF SIDING SHALL BE A MINIMUM OF 6" ABOVE GRADE.
- 3.15 LP SMART BOARD AND BATTEN..
- 3.42 (2) 6X6 CEDAR POSTS. 1X6 TRIM AT BASE. 1X4 TRIM AT TOP. SPACE 10" O.C.
- 3.57 26"X11" CEDAR BRACKET, RE: 3/A1
- 4.00 COVERING WILL HAVE 1 ROOF VENT AND 4 SOFFIT
- 4.11 MINIMUM ROOFING COMPOSITION— 30 YR COMPOSITE SHINGLES ON 15# FELT ON 1/2" OSB SHEATHING OR AS REQUIRED BY CODE.
- 4.13 STANDING SEAM METAL ROOF. INSTALL PER CODES AND MANUFACTURER'S RECOMMENDATION.
- 4.31 BUILD CRICKET VALLEY AWAY FROM INTERSECTION FOR POSITIVE DRAINAGE.

**CPG DBA SUMMIT** 

120 SE 30TH ST. LEE'S SUMMIT, MO 64082 816-246-6700

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RESIDENTIAL ENGINEERING SERVICES, LLC 600 SW JEFFERSON SUITE 300 LEE'S SUMMIT, MO 64063 816-399-4901

FOR STRUCTURAL SPECIFICATIONS

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

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.

- A1. FRONT AND REAR ELEVATION
- A2. LEFT AND RIGHT ELEVATION
- A3. FOUNDATION FLOOR PLAN
- A4. MAIN LEVEL PLAN
- A5. UPPER LEVEL PLAN
- A6. ROOF PLAN

FINISHED	
MAIN FLOOR	1230
UPPER LEVEL	1438
FINISHED STAIRS TO LOWER LEVEL	36
TOTAL	2704
UNFINISHED	
LOWER LEVEL - UNFINISHED	1102
COVERED PATIO	144
CARACE	600

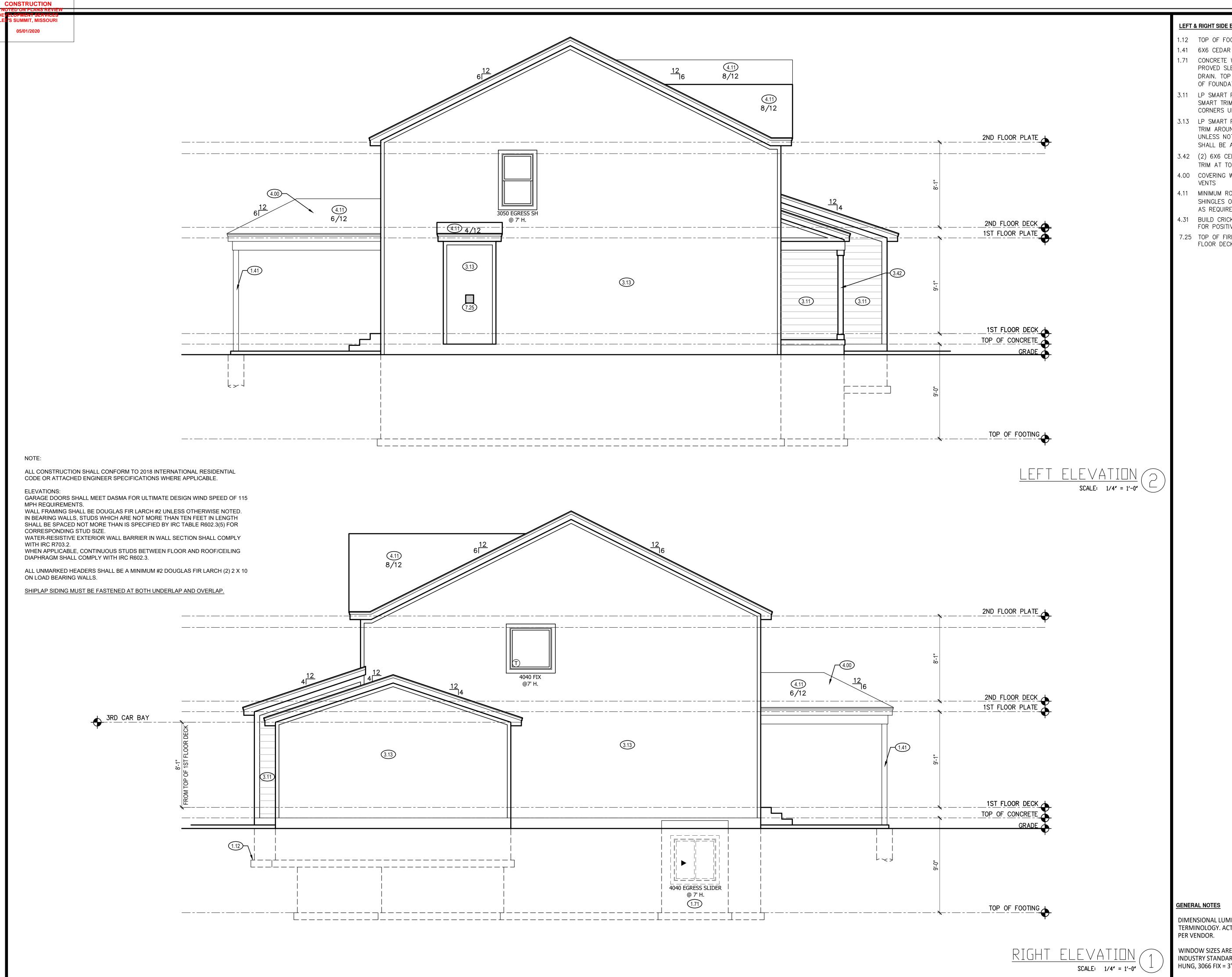
DRAWN BY:

S. SCARBO

ENGINEER	TRUSS	I-JOIST
RES	WHEELER	N/A

ISSUE DATE:
4.13.20

REVISIONS					
NO.	DATE	DESCRIPTION			
$\overline{\Lambda}$					
2					
$\sqrt{3}$					
4					



**RELEASE FOR** 

**LEFT & RIGHT SIDE ELEVATION NOTES** 

- 1.12 TOP OF FOOTING DEPTH DETERMINED PER SITE.
- 1.41 6X6 CEDAR POST
- 1.71 CONCRETE WINDOW WELL FOR EGRESS WITH LADDER. PROVED SLEEVE THROUGH WALL FOR FOUNDATION DRAIN. TOP OF WINDOW WELL TO BE 3" BELOW TOP OF FOUNDATION.
- 3.11 LP SMART PANEL LAP SIDING WITH 5/4X6 LP SMART TRIM AROUND DOORS, WINDOWS, AND CORNERS UNLESS NOTED OTHERWISE.
- 3.13 LP SMART PANEL SIDING WITH 3/4X4 LP SMART TRIM AROUND DOORS, WINDOWS, AND CORNERS UNLESS NOTED OTHERWISE. BOTTOM OF SIDING SHALL BE A MINIMUM OF 6" ABOVE GRADE
- 3.42 (2) 6X6 CEDAR POSTS. 1X6 TRIM AT BASE. 1X4 TRIM AT TOP. SPACE 10" O.C.
- 4.00 COVERING WILL HAVE 1 ROOF VENT AND 4 SOFFIT
- 4.11 MINIMUM ROOFING COMPOSITION— 30 YR COMPOSITE SHINGLES ON 15# FELT ON 1/2" OSB SHEATHING OR AS REQUIRED BY CODE.
- 4.31 BUILD CRICKET VALLEY AWAY FROM INTERSECTION FOR POSITIVE DRAINAGE.
- 7.25 TOP OF FIREPLACE VENT TO BE 3'-8" ABOVE FIRST FLOOR DECK.

**CPG DBA** 



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600 SW JEFFERSON SUITE 300 LEE'S SUMMIT, MO 64063 816-399-4901

> DRAWN BY: S. SCARBO

ISSUE DATE: 4.13.20

SHEET NUMBER:

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

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 SUMMIT. MISSOURI NOTE: 50'-0" \_ALL\_CONSTRUCTION SHALL CONFORM TO 2018 INTERNATIONAL RESIDENTIAL CODE OR 40'-0" 10'-0" ATTACHED ENGINEER SPECIFICATIONS WHERE APPLICABLE. 12'-0" 12'-2 1/2" 15'-9 1/2" ALL FOOTINGS MEET OR EXCEED MINIMUM FROST DEPTH OF 36". SOIL BEARING CAPACITY SHALL BE 2000 PSF. COMPRESSIVE STRENGTH OF CONCRETE F'C COMPRESSIVE STRENGTH SHALL BE AS SPECIFIED IN IRC TABLE R402.2. REQUIRED AIR ENTRAINMENT SHALL BE 5-7%. ALL FOUNDATION WALLS ENCLOSING BELOW GRADE SPACE SHALL BE DAMPPROOFED DAMPPRROFING SHALL EXTEND FROM THE EDGE OF THE FOOTING TO THE FINISHED GRADE (R-406.1). METHOD OF DAMPPROOFING OR WATERPROOFING SHALL BE A MINIMUM 6-MIL THICK MOISTURE BARRIER OVER POROUS GRAVEL BASE UNDER BASEMENT FLOOR SLAB PER R405.2.2. LAP JOINTS SHALL BE A MINIMUM 6". FOUNDATION WALLS SHALL BE DAMPPROOFED PER IRC SECTION R406. 12' X 12' FOUNDATION DRAINAGE WILL BE IN ACCORDANCE WITH WITH IRC SECTION R405. COVERED PATIO ABOVE BASEMENT EGRESS OPENINGS SHALL BE IN ACCORDANCE WITH IRC SECTION R310.1 ALL INTERIOR FOOTINGS OF LOAD BEARING WALLS AND COLUMNS SHALL BE ISOLATED FROM 18" WIDE CONTINUOUS FOOTING W/ (2) #4 THE BASEMENT FLOOR SLAB. CONTINUOUS ALONG REAR WALL ALL ANCHOR BOLTS SHALL NOT BE SPACED MORE THAN 6' O.C. AND BE EMBEDDED INTO THE CONCRETE A MINIMUM OF 7". 14'-0" 14'-0" ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR LARCH (2) 2 X 10 ON LOAD BEARING WALLS. 5'-8" 20'-3 1/2" BACKFILL SHALL NOT BE PLACED AGAINST THE WALL UNTIL THE WALL HAS SUFFICIENT STRENGTH OR HAS BEEN SUFFICIENTLY BRACED TO PREVENT DAMAGE BY BACKFILL. #2 - 2 x 10 @ 16" O.C. UNFINISHED (2) #2-2 x 10 24" x 8" CONC GRADE BEAMw/ (2) #4 CONT. SOLID BLOCKING BETWEEN JOISTS AT 48" O.C. EXTEND BLOCKING ONE JOIST #2 - 2 x 10 BAY PAST EACH SIDE OF ISLAND ABOVE ∥¦@ 16" O.C. W10X39 STEEL BEAM TYPICAL STHD14RJ CORNER INSTALLATION -2 16" 12'-9 3/4" W10X30 STEEL BEAM 8" x 9'-0" CONC. WALL w/ #4 BARS AT 18" O.C. HORIZONTAL AND 12" O.C. VERTICAL PER S2.0 ON 16" x 8" CONC. FTG. WITH (2) #4 BARS CONT. 10'-2" ×O REF. SHEET S3.0 FOR UNEXCAVATED STRUCTURAL GARAGE SLAB (@ # *|* TYPICAL STHD14RJ MID-WALL INSTALLATION DETAILS . \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ ISOLATED FOOTINGS AND COLUMN PADS 10'-0" MINIMUM STEEL \_\_\_\_\_ |SYM| PAD |DEPTH|REINFORCEMENT GRADE| 10'-2" C□LUMN, MIN SIZE 40 KSI STEEL FY = 36KSIHOLDOWN DEVICE − 8" x 4'-0" CONC. WALL w/ #4 BARS | A | 30"×30" | 1'-0" BARS AT 12" OC EW (5) #4 BAR E.W. 3" DIAMETER AT 18" O.C. HORIZONTAL AND 36" O.C. VERTICAL PER S2.0 ØN 16" x -4' WIDE X 4'-4" LONG X -(2) #4 BAR 5' LONG AT 8" CONC. FTG. w/ (2) #4 BARS 16" DEEP FOOTING W/ UNEXCAVATED SLAB MID- DEPTH /B\|36"×36"| 1'-0" | (6) #4 BAR E.W. 3" DIAMETER (2) #4 @ 6" OC EW FOOTING W/ 16" LONG L\_\_\_\_\_\_\_\_\_ X 12" WIDE PEDESTAL (7) #4 BAR E.W. 3" DIAMETER \_ \_ \_ \_ \_ -HOLDOWN DEVICE (8) #4 BAR E.W. 3" DIAMETER /n\ |48"×48"| 1'-4" | ∕Ďіж |48″×48″| 1′−4″ | (8) #4 BAR E.W. ANCHOR ANCHOR PER PER ∕E∖|54″×54″| 1′−4″ | (9) #4 BAR E.W. 3.5" DIAMETER **МЕТНО** METHOD PFH PFH 16'-4" 8'-4" /F\|60"×60"|1'-6"| (10) #4 BAR E.W. |3.5" DIAMETER 20'-0" 20'-0" 10'-0" ISOLATED FOOTINGS AND COLUMN PADS DEPTH MINIMUM REINFORCEMENT GRADE 40 50'-0" PIER SYM DIAMETER KSI STEEL 12" (4) VERTICAL #4 16" (4) VERTICAL #4 PER VENDOR. 18" (4) VERTICAL #4 24" 3'-0" (4) VERTICAL #4

28"

3'-0"

COLUMN AND PAD SIZES ARE FOR A MAXIMUM COLUMN HEIGHT OF 10'.

COLUMNS GREATER THAN 10' REQUIRE A SEPARATE ENGINEERED

DESIGN. FOOTINGS A-F SPACING OF 6" O.C. WITH 3" CLEAR COVER.

(4) VERTICAL #4

SCALE: 1/4" = 1'-0"

#### **FOUNDATION PLAN NOTES**

- 1.11 CONTINUOUS CONCRETE FOOTING
- 1.21 RECESS TOP OF FOUNDATION WALL
- 1.31 2X4 STUD WALL WITH TREATED SILL PLATE
- 1.32 2X6 STUD WALL WITH TREATED SILL PLATE
- 1.71 CONCRETE WINDOW WELL FOR EGRESS WITH LADDER. PROVED SLEEVE THROUGH WALL FOR FOUNDATION DRAIN. TOP OF WINDOW WELL TO BE 3" BELOW TOP OF FOUNDATION.
- 2.32 INSULATE CANTILEVER AS REQUIRED PRIOR TO BLOCKING
- 2.34 PROVIDE ADDITIONAL BRACING FOR ISLAND ABOVE. 2.42 FIRE RATED SHEETROCK UNDER STAIRS
- 5.51 DRAIN LINE ONLY FOR FUTURE USE. LOCATION TO BE MARKED WITH REBAR AND CUT FLUSH TO FLOOR
- 6.11 DIRECT FURNACE. FUEL BURNING APPLIANCES SHALL BE DIRECT VENTED TO EXTERIOR FOR COMBUSTION
- 6.21 HOT WATER HEATER WITH THERMAL EXPANSION CONTROL DEVICE
- 6.31 SUMP PIT AND PUMP. PROVIDE ELECTRICAL GFCI PROTECTION. PROVIDE SLEEVE THROUGH FOOTING.
- 6.41 HVAC CHASE ABOVE 6.61 200 AMP ELECTRICAL PANEL. LOCATION TO BE
- DETERMINED ON SITE.
- 6.62 UFER GROUND- VERIFY LOCATION WITH PROJECT MANAGER.
- 7.65 LINE OF FLOOR ABOVE

**CPG DBA** 

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816-399-4901

DRAWN BY:

S. SCARBO

## **GENERAL NOTES**

BACK WATER VALVES REQUIRED ON ALL BASEMENT PLUMBING FIXTURES. PROVIDE MEANS OF CONTROLLING PRESSURE CAUSED BY THERMAL EXPANSION.

ALL SILLS & SLEEPERS SUPPORTED ON CONCRETE OR MASONRY SHALL BE OF DECAY-RESISTANT MATERIALS.

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

ALL INTERIOR NON-LOAD BEARING, NON-BRACED, NON-CABINET WALLS ARE ALLOWED AT 24" O.C.

SMOKE AND CARBON MONOXIDE DETECTORS SHOW ON PLANS ARE TO BE CONSIDERED RECOMMENDATIONS ONLY. FINAL PLACEMENT IS TO BE DETERMINED BY MUNICIPAL REQUIREMENTS.

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.

ISSUE DATE: 4.13.20

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

ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR LARCH (2) 2 X 10 ON LOAD BEARING WALLS.

DETAILS AND NOTES:

BASEMENT EGRESS WINDOWS ARE TO COMPLY WITH IRC

WINDOW FALL PROTECTION REQUIREMENTS TO COMPLY WITH SECTION R612.2. STAIRS SHALL COMPLY WITH IRC R311.7. THE MAXIMUM RISER HEIGHT OF STAIRWAYS SHALL NOT EXCEED 7-3/4" AND THE TREADS SHALL PROVIDE A MINIMUM TREAD DEPTH OF 10" (IRC 2018 R311.7.5.1). SELF CLOSING DEVICES ARE REQUIRED FOR GARAGE TO

DWELLING SEPARATION DOORS. STEEL COLUMNS WILL BE A MINIMUM OF SCHEDULE 40.

ENERGY REQUIREMENTS SHALL CONFORM TO THE IRC

SECURITY SHALL CONFORM TO IRC R326/KCBRC. AN ACCESSIBLE CONNECTION POINT WILL BE PROVIDED TO A 20 FOOT CONCRETE ENCASED ELECTRODE (FOOTING REBAR) FOR THE ELECTRICAL SERVICE GROUNDING ELECTRODE CONDUCTOR (UFER GROUND). CARBON MONOXIDE DETECTORS WILL BE PROVIDED IN ACCORDANCE WITH IRC SECTION R315. THE BUILDING THERMAL ENVELOPE IS REQUIRED TO BE SEALED(2018 IRC SECTION N1102.4.1 AND TABLE N1102.4.1.1). DUCTS, AIR HANDLERS, FILTER BOXES AND BUILDING CAVITIES USED AS DUCTS SHALL BE SEALED (2018 IRC

SECTION N1103.2.2)

LEDGERS(FLOOR AND CEILING) SHALL BE IN ACCORDANCE WITH IRC 507. ALL CANTILIEVERS SHALL HAVE AT LEAST A 3:1 BACK SPAN. A MINIMUM OF DOUBLE JOIST UNDER EACH BEARING WALL

ALL WALLS UNDER 12' SHALL BE DOUGLAS FIR LARCH #2 2X4 STUDS AT 16" O.C. FULL HEIGHT CONTINUOUS (UNLESS <u>OTHERWISE NOTED).</u>

ALL WALLS 12' AND OVER SHALL BE DOUGLAS FIR #2 (M-12) LUMBER 2x6 STUDS AT 16" O.C. FULL HEIGHT CONTINUOUS (UNLESS OTHERWISE NOTED).

APA SIMPLIFIED WALL BRACING (SYSTEM REPORT SR102-D)

METHOD SHALL BE CS-WSP WITH INCREASED SHEATHING THICKNESS (PERFORMANCE CATEGORY).

WSP SHEATHING SHALL BE RATED SHEATHING MINIMUM  $\frac{7}{16}$  PERFORMANCE CATEGORY MEETING REQUIREMENTS OF DEPARTMENT OF COMMERCE DOC PS1 OR PS2 (VOLUNTARY PRODUCT STANDARDS).

PS2-10 TABLE D1 RECOMMENDED THICKNESS LABELING FOR PANELS: 7 PERFORMANCE CATEGORY-MINIMUM THICKNESS OF .406 INCHES (10.32 MM) MAXIMUM THICKNESS .469 INCHES (11.91 MM)

RECOMMENDED THICKNESS LABEL - THICKNESS .418 IN.

NAIL SIZE SHALL BE 8D HAVING A DIAMETER OF .131" AND LENGTH OF 2.5".

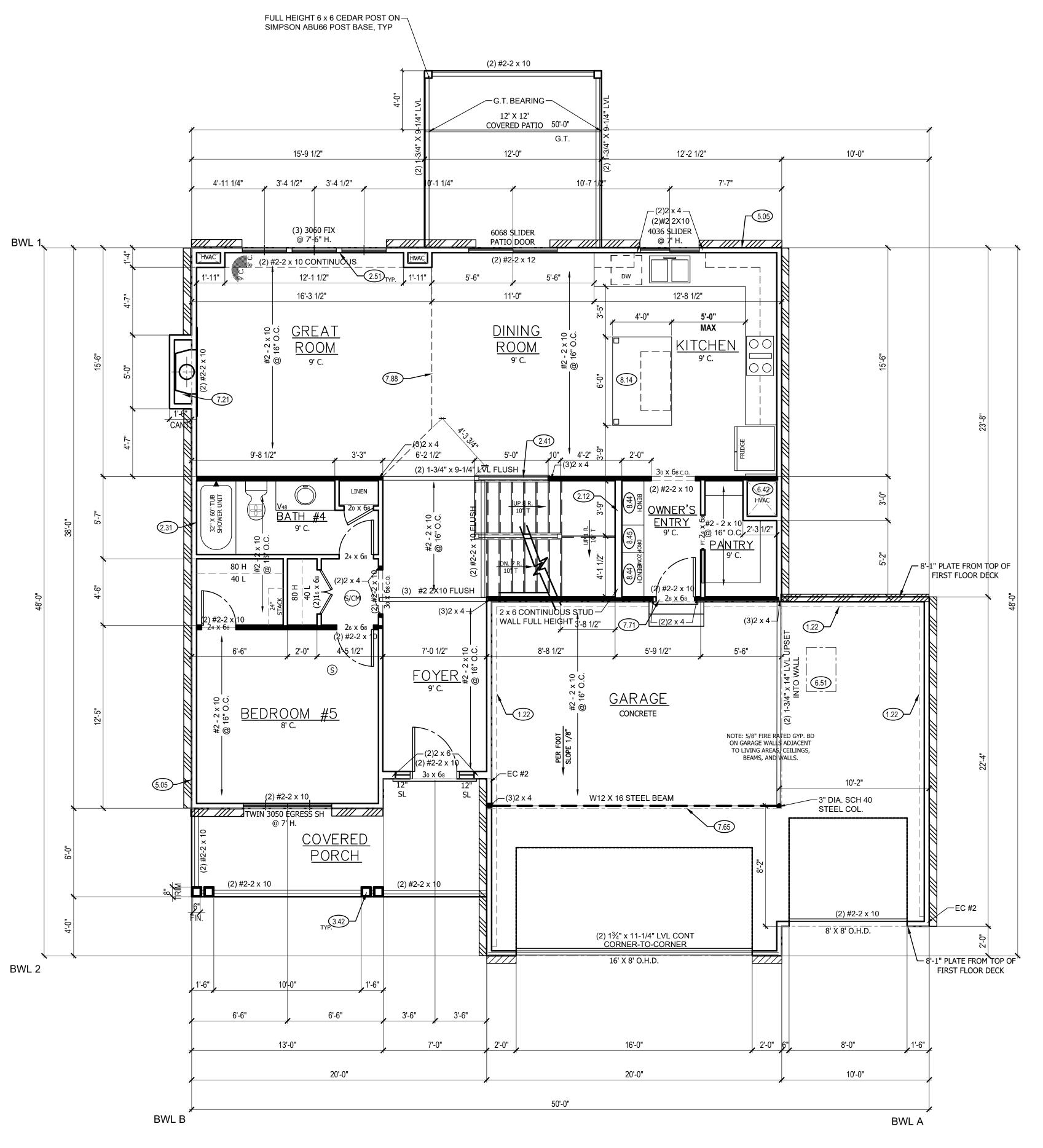
CLOSER NAILING SCHEDULE ON FIRST STORY OF 2ND STORY SHEATHING SHALL BE INSTALLED WITH A MINIMUM 8D COMMON NAILS SPACED AT 4" OC AT PANEL EDGES AND AT 12" OC OVER INTERMEDIATE

FOR SINGLE STORY OR TOP OF TWO OR THREE STORY BUILDINGS, SHEATHING MAY BE INSTALLED WITH 8D COMMON NAILS SPACED AT 6" OC AT PANEL EDGES AND 12" AT INTERMEDIATE SUPPORTS.

SHEATHING SHALL BE INSTALLED OVER ALL AREAS EXCLUDING WINDOWS AND DOORS AND INCLUDING GABLE ENDS.

ALL HORIZONTAL PANEL JOINTS SHALL OCCUR OVER AND BE NAILED TO COMMON FRAMING OR BLOCKING WITH AN APPROPRIATE PANEL EDGE-NAILING SCHEDULE IN ACCORDANCE WITH IRC R602.10.10.

INTERIOR FINISH OF EXTERIOR WALLS SHALL BE MINIMUM <sup>1</sup>/<sub>2</sub>" GYPSUM BOARD INSTALLED ON THE INTERIOR SIDE FASTENED IN ACCORDANCE WITH IRC TABLE R702.3.5.(NOT REQUIRED ON CS-WSP PANELS ADJACENT TO CS-G OR CS-PF PANELS)



EXTERIOR BRACING METHOD CS-WSP AND INTERIOR METHOD GB ON INTERIOR FINISH OF EXTERIOR WALLS PER SPECS

INTERIOR WALL BRACING NOT REQUIRED ON INTERIOR WALLS

MANUFACTURER'S SPECS

EC#2 - END CONDITION #2 SHALL BE ONE OF THE FOLLOWING DEVICES ATTACHED TO THE END STUD OF THE BRACED WALL PANEL CLOSEST TO CORNER IF NOT NOTED OTHERWISE: 2ND FLOOR AND/OR MAIN FLOOR ALONG WALKOUT/DAYLIGHT WALL - 800 # MINIMUM TENSION STRAP INSTALLED PER MANUFACTURER'S SPECS MAIN FLOOR TO FOUNDATION WALL - STHD14 EMBEDDED HOLDOWN INSTALLED PER

INTERIOR LOAD BEARING WALL (EXTERIOR WALLS ARE ASSUMED LOAD BEARING)

EXTERIOR BRACING PFH PER IRC R602.10.5

IRC TABLE N1102.1.2 (R402.1.2) INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT (PARTIAL) BASEMENT® | SLAB®R-VALUE | CRAWL SPACE CEILING WOOD FRAME WALL WALL GLAZED FENESTRATION R-VALUE CLIMATE | FENESTRATION | SKYLIGHT FLOOR R-VALUE | R-VALUE | WALL R-VALUE | & DEPTH U-FACTOR U-FACTOR R-VALUE SHGC b, e R-VALUE 4 EXCEPT 20 OR 13+5 | 8/13 | 19 | .32 .55 10, 2 FT 10/13 10/13 MARINE

SCALE: 1/4'' = 1'-0''

MAIN FLOOR PLAN NOTES

1.22 EXPOSED TOP OF FOUNDATION WALL. 2.12 2X6 STUD WALL

BLOCKING

5.05 HOSE BIBB

2.31 SIX SIDED TUB ASSEMBLY INCLUDING THERMOPLY ON EXTERIOR WALL TO 2" ABOVE TOP OF TUB DECK OR

TUB/SHOWER UNIT 2.32 INSULATE CANTILEVER AS REQUIRED PRIOR TO

2.41 CURB STAIR SYSTEM WITH OPEN HANDRAILS

2.51 3 STUDS BETWEEN WINDOW UNITS

3.42 (2) 6X6 CEDAR POSTS. 1X6 TRIM AT BASE. 1X4 TRIM AT TOP. SPACE 10" O.C.

6.42 HVAC - BUMP TRUSSES AS NECESSARY FOR HVAC ACCESS.

6.51 1'-10"X3'-0" MINIMUM ATTIC ACCESS WITH 3/4" BACKER BOARD AND 2 LATCHES. BUMP TRUSSES FOR ATTIC ACCESS.

7.21 DIRECT VENT FIREPLACE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. FIREPLACE PLATFORM DIMENSIONS 7  $\frac{3}{4}$ " TALL, 37" WIDE, 16" DEEP. INSTALL INSULATION AND AIR BARRIER BEHIND PLATFORM.

7.65 LINE OF FLOOR ABOVE

7.71 20 MINUTE FIRE RATED SOLID CORE WITH SELF-CLOSING HINGES

7.88 CHANGE IN FLOORING MATERIAL

8.14 24" CABINET + 24" OVERHANG WITH LEGS. VERIFY LOCATION WITH PERSONAL BUILDER.

8.44 BENCH WITH COAT HOOKS

**GENERAL NOTES** 

PROTECTION.

OTHERWISE.

WINDOWS TO COMPLY WITH IRC R312.2 FOR FALL

ALL INTERIOR NON-LOAD BEARING, NON-BRACED, NON-CABINET WALLS ARE ALLOWED AT 24" O.C.

TRUSSES UNLESS NOTED OTHERWISE.

INSULATION SURROUND.

REQUIREMENTS.

ALL EXTERIOR WALLS, INTERIOR BEARING WALLS, AND

INTERIOR BRACED WALLS ARE AT 16" O.C. UNLESS NOTED

ROOF AND CEILING FRAMING ARE PRE-ENGINEERED WOOD

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

HVAC DUCTWORK RUNNING THROUGH THE ATTIC SPACE

PROVIDE BLOCKING AT ALL CEILING JUMPS FOR INSULATION.

SMOKE AND CARBON MONOXIDE DETECTORS SHOW ON PLANS ARE TO BE CONSIDERED RECOMMENDATIONS ONLY. FINAL

2X6 EXTERIOR WALL OVER 12' SHALL BE DOUGLAS FIR #2.

PLACEMENT IS TO BE DETERMINED BY MUNICIPAL

HUNG, 3066 FIX = 3'-0" X 6'-6" FIXED.

WINDOW SIZES ARE WRITTEN IN FEET AND INCHES PER

INDUSTRY STANDARDS. EX: 3050 SH = 3'-0" X 5'-0" SINGLE

SHALL BE HUNG FROM ABOVE TO ALLOW COMPLETE

8.45 DROP ZONE/CHARGING STATION

**CPG DBA** 

**SUMMIT** 

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LEE'S SUMMIT, MO 64082

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LEE'S SUMMIT, MO 64063 816-399-4901

DRAWN BY:

S. SCARBO

ISSUE DATE: 4.13.20

NOTE:

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

ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR LARCH (2) 2 X 10 ON LOAD BEARING WALLS.

DETAILS AND NOTES: BASEMENT EGRESS WINDOWS ARE TO COMPLY WITH IRC

WINDOW FALL PROTECTION REQUIREMENTS TO COMPLY

WITH SECTION R612.2. STAIRS SHALL COMPLY WITH IRC R311.7. THE MAXIMUM RISER HEIGHT OF STAIRWAYS SHALL NOT EXCEED 7-3/4" AND THE TREADS SHALL PROVIDE A MINIMUM TREAD DEPTH OF 10" (IRC 2018 R311.7.5.1).

SELF CLOSING DEVICES ARE REQUIRED FOR GARAGE TO DWELLING SEPARATION DOORS. STEEL COLUMNS WILL BE A MINIMUM OF SCHEDULE 40.

ENERGY REQUIREMENTS SHALL CONFORM TO THE IRC

CHAPTER 11. SECURITY SHALL CONFORM TO IRC R326/KCBRC. AN ACCESSIBLE CONNECTION POINT WILL BE PROVIDED TO A 20 FOOT CONCRETE ENCASED ELECTRODE (FOOTING REBAR) FOR THE ELECTRICAL SERVICE GROUNDING ELECTRODE CONDUCTOR (UFER GROUND). CARBON MONOXIDE DETECTORS WILL BE PROVIDED IN ACCORDANCE WITH IRC SECTION R315. THE BUILDING THERMAL ENVELOPE IS REQUIRED TO BE SEALED(2018 IRC SECTION N1102.4.1 AND TABLE N1102.4.1.1). DUCTS, AIR HANDLERS, FILTER BOXES AND BUILDING CAVITIES USED AS DUCTS SHALL BE SEALED (2018 IRC

SECTION N1103.2.2)

LEDGERS(FLOOR AND CEILING) SHALL BE IN ACCORDANCE

ALL CANTILIEVERS SHALL HAVE AT LEAST A 3:1 BACK SPAN. A MINIMUM OF DOUBLE JOIST UNDER EACH BEARING WALL IS REQUIRED.

LL WALLS UNDER 12' SHALL BE DOUGLAS FIR LARCH #2 2X4 STUDS AT 16" O.C. FULL HEIGHT CONTINUOUS (UNLESS

ALL WALLS 12' AND OVER SHALL BE DOUGLAS FIR #2 (M-12) LUMBER 2x6 STUDS AT 16" O.C. FULL HEIGHT CONTINUOUS (UNLESS OTHERWISE NOTED).

#### APA SIMPLIFIED WALL BRACING (SYSTEM REPORT SR102-D)

METHOD SHALL BE CS-WSP WITH INCREASED SHEATHING THICKNESS (PERFORMANCE CATEGORY). WSP SHEATHING SHALL BE RATED SHEATHING MINIMUM TO PERFORMANCE CATEGORY MEETING REQUIREMENTS OF DEPARTMENT OF COMMERCE

PS2-10 TABLE D1 RECOMMENDED THICKNESS LABELING FOR PANELS:

7 PERFORMANCE CATEGORY MINIMUM THICKNESS OF .406 INCHES (10.32 MM) MAXIMUM THICKNESS .469 INCHES (11.91 MM) RECOMMENDED THICKNESS LABEL - THICKNESS .418 IN.

DOC PS1 OR PS2 (VOLUNTARY PRODUCT STANDARDS).

NAIL SIZE SHALL BE 8D HAVING A DIAMETER OF .131" AND LENGTH OF 2.5".

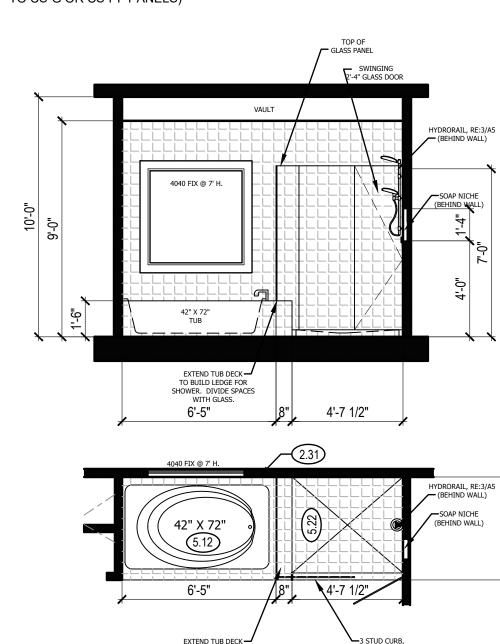
CLOSER NAILING SCHEDULE ON FIRST STORY OF 2ND STORY SPACED AT 4" OC AT PANEL EDGES AND AT 12" OC OVER INTERMEDIATE

FOR SINGLE STORY OR TOP OF TWO OR THREE STORY BUILDINGS, SHEATHING MAY BE INSTALLED WITH 8D COMMON NAILS SPACED AT 6" OC AT PANEL EDGES AND 12" AT INTERMEDIATE SUPPORTS.

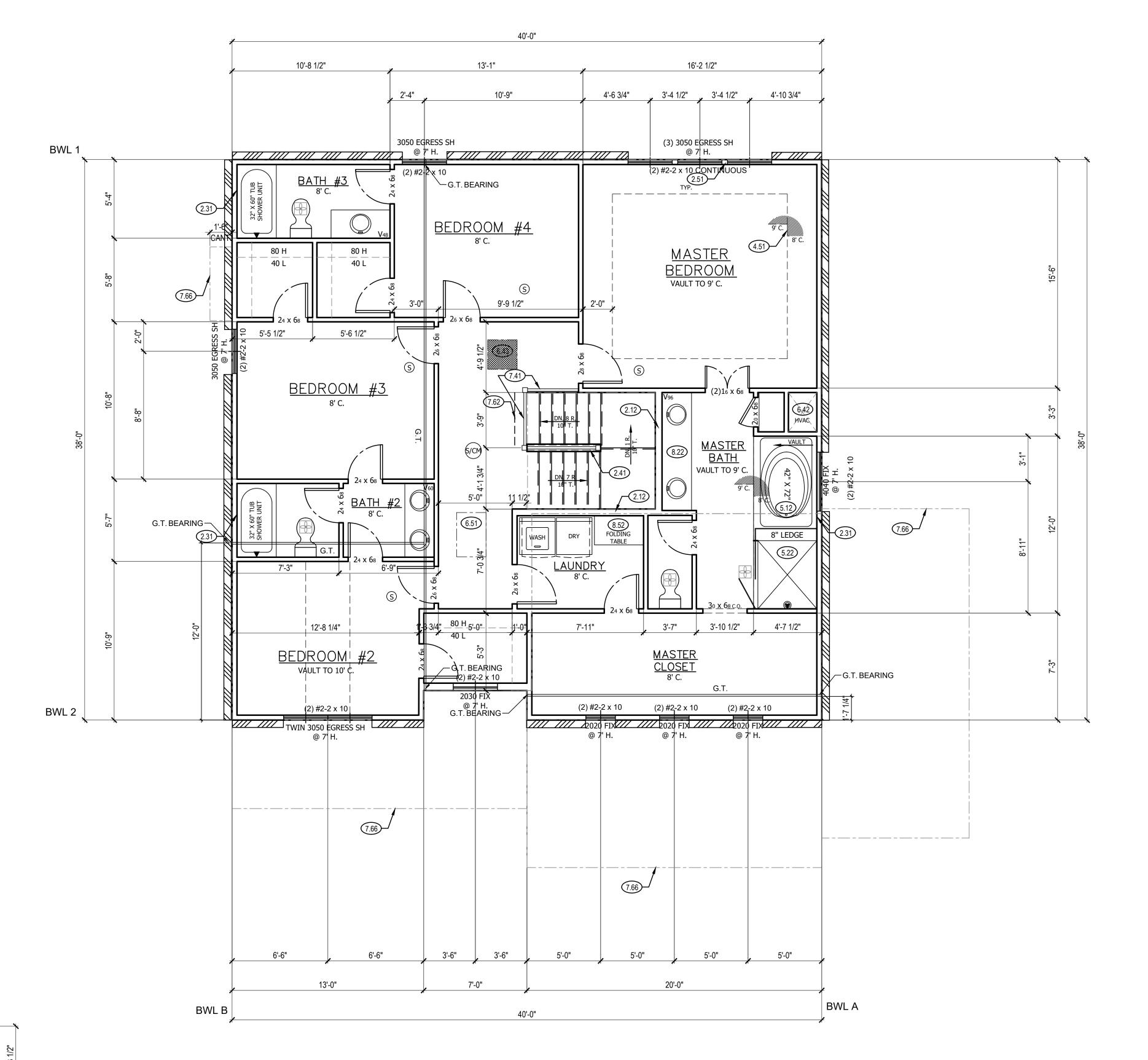
SHEATHING SHALL BE INSTALLED OVER ALL AREAS EXCLUDING WINDOWS AND DOORS AND INCLUDING GABLE ENDS.

ALL HORIZONTAL PANEL JOINTS SHALL OCCUR OVER AND BE NAILED TO COMMON FRAMING OR BLOCKING WITH AN APPROPRIATE PANEL EDGE-NAILING SCHEDULE IN ACCORDANCE WITH IRC R602.10.10.

INTERIOR FINISH OF EXTERIOR WALLS SHALL BE MINIMUM  $\frac{1}{2}$ " GYPSUM BOARD INSTALLED ON THE INTERIOR SIDE FASTENED IN ACCORDANCE WITH IRC TABLE R702.3.5.(NOT REQUIRED ON CS-WSP PANELS ADJACENT TO CS-G OR CS-PF PANELS)



SHOWER. DIVIDE SPACES



EXTERIOR BRACING METHOD CS-WSP AND INTERIOR METHOD GB ON INTERIOR FINISH OF EXTERIOR WALLS PER SPECS

INTERIOR WALL BRACING NOT REQUIRED ON INTERIOR WALLS

MANUFACTURER'S SPECS

EC#2 - END CONDITION #2 SHALL BE ONE OF THE FOLLOWING DEVICES ATTACHED TO THE END STUD OF THE BRACED WALL PANEL CLOSEST TO CORNER IF NOT NOTED OTHERWISE: 2ND FLOOR AND/OR MAIN FLOOR ALONG WALKOUT/DAYLIGHT WALL - 800 # MINIMUM TENSION STRAP INSTALLED PER MANUFACTURER'S SPECS MAIN FLOOR TO FOUNDATION WALL - STHD14 EMBEDDED HOLDOWN INSTALLED PER

INTERIOR LOAD BEARING WALL (EXTERIOR WALLS ARE ASSUMED LOAD BEARING)

IRC TABLE N1102.1.2 (R402.1.2) INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT (PARTIAL) MASS | FLOOR | BASEMENT | SLAB R-VALUE | CRAWL SPACE CEILING WOOD FRAME WALL WALL CLIMATE FENESTRATION SKYLIGHT FENESTRATION CEILING FOR SHOCK R-VALUE | WALL R-VALUE | & DEPTH R-VALUE SHGC b, e R-VALUE 4 EXCEPT 10, 2 FT .32 8/13 19 10/13 20 OR 13+5 MARINE

SCALE: 1/4'' = 1'-0''

UPPER FLOOR PLAN NOTES

2.12 2X6 STUD WALL 2.31 SIX SIDED TUB ASSEMBLY INCLUDING THERMOPLY ON EXTERIOR WALL TO 2" ABOVE TOP OF TUB DECK OR

TUB/SHOWER UNIT 2.41 CURB STAIR SYSTEM WITH OPEN HANDRAILS

2.51 3 STUDS BETWEEN WINDOW UNITS

4.51 SINGLE BOX VAULT

5.12 TUB: SEE PLAN FOR DETAILS.

5.22 TILE BASE WITH TILE WALLS. SEE DETAIL. 6.42 HVAC - BUMP TRUSSES AS NECESSARY FOR HVAC

ACCESS. 6.43 RETURN REGISTER

6.51 1'-10"X3'-0" MINIMUM ATTIC ACCESS WITH 3/4" BACKER BOARD AND 2 LATCHES. BUMP TRUSSES FOR ATTIC ACCESS.

7.41 OPEN HANDRAILS

7.62 DASHED LINE REPRESENTS STAIRS BELOW

7.66 LINE OF FLOOR BELOW

8.22 CONTINUOUS FLAT VANITY

8.52 FOLDING TABLE

**CPG DBA SUMMIT** 

120 SE 30TH ST. LEE'S SUMMIT, MO 64082 816-246-6700

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SHOWER HEADS. ONNECT HAND HELD UNIT AT BOTTOM OF RAIL AND STATIC UNIT PROFESSIONAL SEAL AT TOP OF RAIL.

HYDRORAIL SHOWER SYSTEM

HYDRORAIL

SYSTEM PER

MANUFACTURE REOUIREMENTS

ONE VALVE, TWO

# **GENERAL NOTES**

REQUIREMENTS.

WINDOWS TO COMPLY WITH IRC R312.2 FOR FALL PROTECTION.

ALL EXTERIOR WALLS, INTERIOR BEARING WALLS, AND INTERIOR BRACED WALLS ARE AT 16" O.C. UNLESS NOTED OTHERWISE.

ALL INTERIOR NON-LOAD BEARING, NON-BRACED, NON-CABINET WALLS ARE ALLOWED AT 24" O.C.

ROOF AND CEILING FRAMING ARE PRE-ENGINEERED WOOD TRUSSES UNLESS NOTED OTHERWISE.

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

HVAC DUCTWORK RUNNING THROUGH THE ATTIC SPACE SHALL BE HUNG FROM ABOVE TO ALLOW COMPLETE INSULATION SURROUND.

PROVIDE BLOCKING AT ALL CEILING JUMPS FOR INSULATION.

2X6 EXTERIOR WALL OVER 12' SHALL BE DOUGLAS FIR #2.

SMOKE AND CARBON MONOXIDE DETECTORS SHOW ON PLANS ARE TO BE CONSIDERED RECOMMENDATIONS ONLY. FINAL PLACEMENT IS TO BE DETERMINED BY MUNICIPAL

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.

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816-399-4901

NUMBER PE-201/000903

DRAWN BY: S. SCARBO

ISSUE DATE: 4.13.20

TRUSS ROOF NOTES: (BY OTHERS)

1) DESIGNED FOR LIGHT ROOF COVERING
TOP CHORD:

LIVE LOAD/SNOW LOAD (PSF): 25
DEAD LOAD (PSF): 10
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.
 3) CONSULT ENGINEER IF TRUSSES BEAR ON INTERIOR WALLS

SHOWN AS NON-LOAD BEARING ON APPROVED PRINTS.

4) 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.

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

6) ROOF IS ENGINEERED TO COMPLY WITH IRC 802

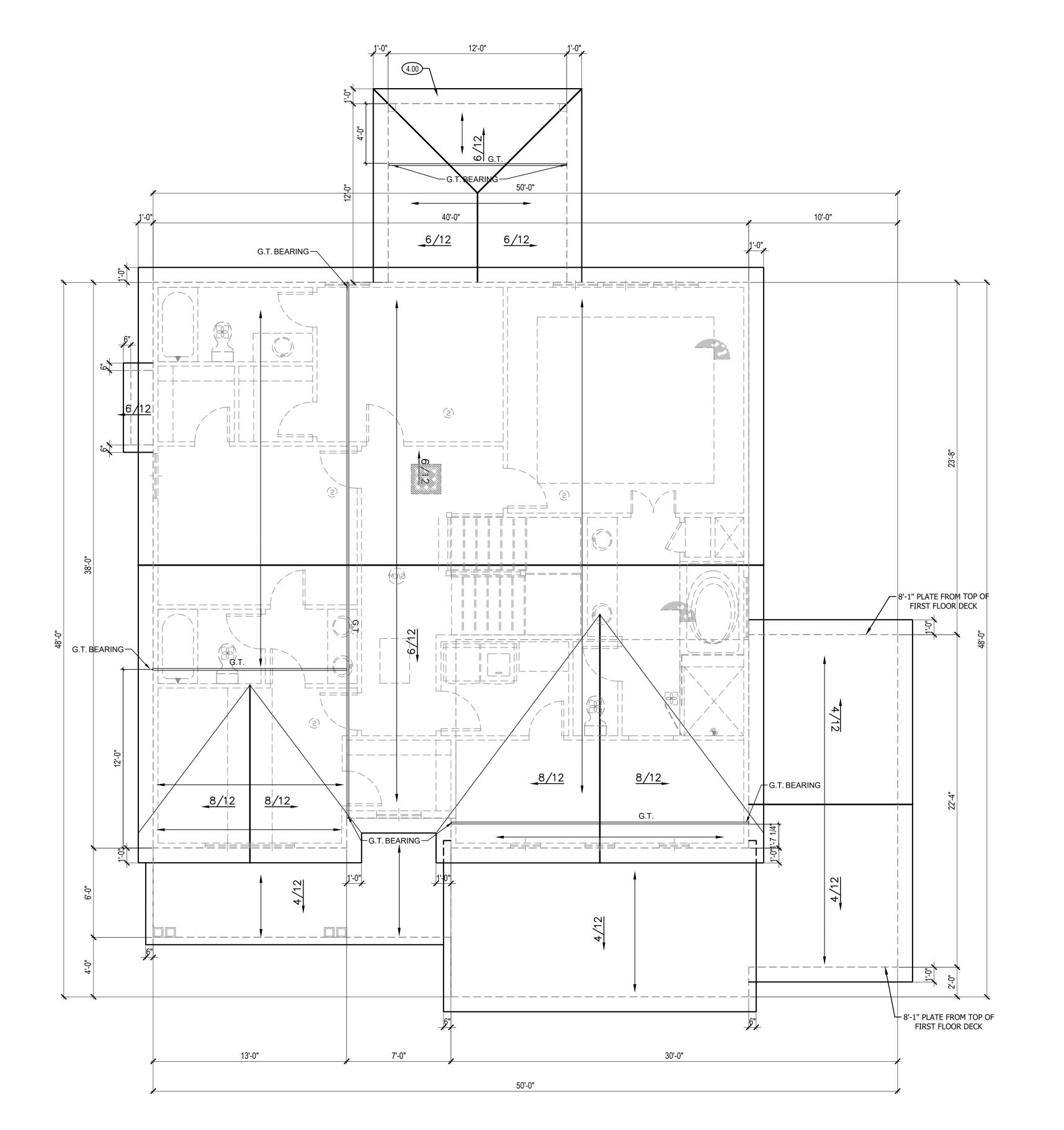
= ROOF TRUSS FRAMING DIRECTION
"G.T." = GIRDER TRUSS LOCATION
= INTERIOR LOAD BEARING WALL

#### OTE:

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.



#### **ROOF PLAN NOTES**

- 4.00 COVERING WILL HAVE 1 ROOF VENT AND 4 SOFFIT
- 4.11 MINIMUM ROOFING COMPOSITION— 30 YR COMPOSITE SHINGLES ON 15# FELT ON 1/2" OSB SHEATHING OR AS REQUIRED BY CODE.
- 4.31 BUILD CRICKET VALLEY AWAY FROM INTERSECTION FOR POSITIVE DRAINAGE.



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CANTERBURY
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## **GENERAL NOTES**

ROOF AND CEILING FRAMING ARE PRE-ENGINEERED ROOF

ASPHALT SHINGLES MIN 2/12. FLASH ALL PENETRATIONS AND INTERSECTIONS.

VENT EACH ENCLOSED ATTIC SPACE. NET AREA OPENING = 1/50TH OF VENTED AREA OR 1/300TH IF 580% OF VENTING NEAR TOP.

BUILD CRICKET VALLEY AWAY FROM INTERSECTION FOR POSITIVE DRAINAGE. SEE FRAMING SPECIFICATIONS FOR

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

HVAC DUCTWORK RUNNING THROUGH ATTIC SHALL BE HUNG FROM ABOVE TO ALLOW COMPLETE INSULATION SURROUND.

PROVIDE BLOCKING AT ALL CEILING JUMPS FOR INSULATION

PROVIDE FOAM INSULATION AT EXTERIOR WHERE MAIN LEVEL ROOF LINE MEETS UPPER LEVEL WALLS.

ISSUE DATE:

4.13.20

DRAWN BY:

S. SCARBO

SHEET NUMBER:

A6.0



#### 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**

LIGHT ROOF	10 PSF	
HEAVY ROOF	+10 PSF	(CONCRETE, SLATE, TILI
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	INCLUDED IN	15 PSF DEAD LOAD)

LIVE		
ROOF LIVE LOAD FLOOR LIVE LOAD GARAGE	15 PSF 40 PSF 50 PSF	(HABITABLE)
STORAGE GUARDRAII	20 PSF	(UN-INHABITABLE)
CONTINUOUS LINEAR MAXIMUM POINTLOAD	50 PLD 200 LBS	
SNOW		
GROUND SNOW LOAD	20 PSF	
WIND		
ULTIMATE DESIGN WIND SPEED VELOCITY	115 MPH	

### SOIL AND SITE ASSUMPTIONS:

EXPOSURE CATEGORY

- FOUNDATION DESIGN ASSUME A MINIMUM SOIL BEARING PRESSURE FOR THE SITE OF 2,000 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 FT2 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
- 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 T 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
- 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:**

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

#### **CONCRETE**

- 1. ALL CONCRETE CONSTRUCTION SHOULD CONFORM TO ACI 318-11 AND THE 2018 INTERNATIONAL
- 2. THE MINIMUM CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE AS SPECIFIED IN IRC TABLE
- 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: -SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS BEFORE CONCRETE STRENGTH REACHES 70% OF STRENGTH DETERMINED BY CYLINDERS OR 28

-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 40 KSI UNLESS NOTED OTHERWISE. REINFORCING BAR SHALL BE GRADE 40 MINIMUM.

### CONCRETE REINFORCEMENT STEEL

- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 40.
- 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 =  $12x\emptyset_{BAR}$ -BEND DIAMETER =  $12XØ_{BAR}$
- 6. LAP SPLICE SCHEDULE (SEE TABLE 1.1)

## HOOKED DOWELS:

- 7.1. HOOKED DOWELS FROM FOUNDATIONS TO WALL SHALL BE PROVIDED TO MATCH VERTICAL WALL
- REINFORCING AND EXTENDED TO 3" CLEAR FROM BOTTOM OF FOUNDATION 7.2. HOOKED DOWELS MATCH SLAB REINFORCING FROM SLAB TO WALLS OR SLAB TO FOUNDATION
- 8. PROVIDE 2 #5 BARS AROUND PERIMETER OF ALL SUSPENDED SLABS
- 9. HORIZONTAL WALL REINFORCING SHALL TERMINATE AT THE END OF THE WALL WITH A STANDARD
- 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.
- 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 BEHIND THE VERTICAL REINFORCEMENT (I.E. 2" TOWARD THE INSIDE).
- 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.
- 5. AT MASONRY LEDGES THE MINIMUM WALL THICKNESS SHALL BE 3-1/2". LEDGES SHALL NOT EXCEED 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 BRACED RETURN WALLS. WALL LENGTH SHALL BE MEASURED USING INSIDE THE SHORTEST DIMENSION BETWEEN INTERSECTING WALLS (SEE TYPICAL DEAD MAN SECTION).

## TABLE 1.1

	NORMAL WEIGHT CONCRETE LAP SPLICE SCHEDULE, IN				
BAR TOP BARS		BARS	OTHER	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	

### 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
- 4. STEEL FLOOR DECK SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON CONSTRUCTION DRAWINGS:
- 2" COMPOSITE DECK WITH 6" TOTAL SLAB THICKNESS 22GA DESIGN THICKNESS MAXIMUM SINGLE SPAN DURING CONSTRUCTION OF 6'-1" OR CONTINUOUS SHORED SPAN OF
- MAXIMUM SPAN SHALL NOT EXCEED 12'-6"
- 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"

COLUMN CLOSURES, END PLATES, AND COVER PLATES AS NEEDED.

- 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.
- 5. CONTRACTOR AND/OR DECK MANUFACTURER SHALL FURNISH ALL NECESSARY POUR STOPS,

## STRUCTURAL STEEL

- STEEL DESIGN, FABRICATION, AND ERECTION SHALL CONFORM WITH AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- 2. STEEL GRADE AND SPECIFICATION SHALL BE AS FOLLOWS: 2.1. HOLLOW STRUCTURAL SECTIONS: ASTM A500 (Fy = 46 KSI) CHANNELS, PLATES, ANGLES, WIDE FLANGES, ADN COLUMNS: ASTM A36 (Fy = 36 KSI)
- 2.3. ANCHOR RODS:

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.

### **ENERGY REQUIREMENTS:**

- 1. LIGHTING FIXTURES PENETRATING THE THERMAL ENVELOPE SHALL BE IC-RATED, LEAKAGE RATED, AND SEALED TO THE GYPSUM WALLBOARD AS REQUIRED PER N1102.4.4.'
- 2. PROGRAMMABLE THERMOSTATS SHALL BE INSTALLED AS REQUIRED PER N1103.2.2.1.
- 3. AIR HANDLERS SHALL BE RATED FOR MAXIMUM 2% AIR LEAKAGE RATE PER N1103.2.2.1.
- 4. BUILDING CAVITIES USED AS RETURN AIR PLENUMS SHALL BE SEALED TO PREVENT LEAKAGE ACROSS THE THERMAL ENVELOPE AS REQUIRED PER N1103.2.3.
- 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 M1507.2
- 7. MAKEUP AIR SYSTEMS SHALL BE INSTALLED FOR KITCHEN EXHAUST HOODS THAT EXCEED 400 CFM AS REQUIRED PER M1503.4.
- 8. BUILDING CAVITIES IN A THERMAL ENVELOPE WALL SHALL NOT BE USED AS RETURN AIR PLENUMS UNLESS THE REQUIRED INSULATION BARRIER IS MAINTAINED PER M1601.1.1.
- 9. AN AIR HANDLING SYSTEM SHALL NOT SERVE BOTH THE LIVING SPACE AND THE GARAGE PER M1601.6 ENERGY CONSERVATION.

- 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 PER R302.5.1.
- 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).

ASTM F1554 (Fy = 36 KSI)

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

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

- 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.
- 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.

# **GLAZING**

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

## EMERGENCY EGRESS AND RESCUE

- 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"
- 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.

## FRAMING NOTES:

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



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SHEET#

ITEM	DESCRIPTION OF BUILDING	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
IIEIVI	ELEMENTS		SPACING AND LOCATION
		ROOF	
	BLOCKING BETWEEN CEILING	4-8D BOX (2-1/2"x0.113") OR 3-8D COMMON (2-1/2" x 0.131"); OR	
1	JOISTS OR RAFTERS TO TOP PLATE	3-10D BOX (3" x 0.128"); OR	TOE NAIL
		3-3" x 0.131" NAILS	
2	CELLING LOCAS TO TOP DI ATE	4-8D BOX (2-1/2"x0.113") OR 3-8D COMMON (2-1/2" x 0.131"); OR	PER JOIST, TOE NAIL
2	CEILING JOSTS TO TOP PLATE	3-10D BOX (3" x 0.128"); OR 3-3" x 0.131" NAILS	PER JOIST, TOE NAIL
	CEILING JOISTS NOT ATTACHED TO	4-10D BOX (3" X 0.128"); OR	
3	PARALLEL RAFTER LAPS OVER	3-16D COMMON (3-1/2" X 0.162"); OR	FACE NAIL
	PARTITIONS	4-3" X 0.131" NAILS	
4	CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT)	TABLE R802.5.2	FACE NAIL
	COLLAR TIE TO RAFTER, FACE NAIL	4-10D BOX (3" X 0.128"); OR	
5	OR 1-1/4"x20 GAGE RIDGE STRAP TO RAFTER	3-10D COMMON (3" X 0.148"); OR 4-3" X 0.131" NAILS	FACE NAIL EACH RAFTER
	TOTALLER	3-16d BOX NAILS (3-1/2"x0.135") OR	O TOE MAIL O ON ONE OIDE AND 4 TOE MAIL
6	RAFTER OR ROOF TRUSS TO PLATE	3-10d COMMON NAILS (3"x0.148"); OR	2 TOE NAILS ON ONE SIDE AND 1 TOE NAII ON OPPOSITE SIDE OF EACH RAFTER OR
		4-10D BOX (3" X .128"); OR 4-3" X 0.131" NAILS	TRUSS
		4-16D (3-1/2"x0.135") ; OR	
		3-10D COMMON (3" X 0.148"); OR 4-10D BOX (3" X 0.128"); OR	TOE NAIL
7	ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS OR ROOF RAFTER	4-3" X0.131" NAILS	
,	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	END NAIL
		3-3" X 0.131" NAILS	
	I	WALL	04100 5105 1111
8	STUD TO STUD (NOT AT BRACED	16D COMMON (3-1/2" X 0.162") 10d BOX (3"x0.128"); OR	24" O.C. FACE NAIL
	WALL PANELS)	3" X 0.131" NAILS	16" O.C. FACE NAIL
	STUD TO STUD AND ABUTTING	16D BOX (3-1/2"x0.135"); OR	12" O.C. FACE NAIL
9	STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL	3" X 0.131" NAILS	
PANELS)		16D COMMON (3-1/2" X 0.162")	16" O.C. FACE NAIL
10	BUILT-UP HEADER (2" TO 2" HEADER WITH ½" SPACER)	16D COMMON (3-1/2"x0.162")	16" O.C. ALONG EACH EDGE FACE NAIL
	TIERBERT WITT 2 STROETLY	16D BOX (3-1/2" X 0.135) 5-8D BOX (2-1/2" X 0.113"); OR	12" ALONG EACH EDGE FACE NAIL
11	CONTINUOUS HEADER TO STUD	4-8D COMMON (2-1/2" X 0.131"); OR	TOENAIL
		4-10D BOX (3" X 0.128")	
12	TOP PLATE TO TOP PLATE	16D COMMON (3-1/2" X 0.162")	16" O.C. FACE NAIL
12		10d BOX (3"x0.128"); OR 3" X 0.131" NAILS	12" O.C. FACE NAIL
		8-16D COMMON(3-1/2" X 0.162"); OR	FACE NAIL ON EACH SIDE OF END JOINT
13	DOUBLE TOP PLATE SPLICE	12-16D BOX (3-1/2" X 0.135"); OR 12-10D BOX (3" X 0.128"); OR	(MINIMUM 24" LAP SPLICE LENGTH EACH
		12-3" X 0.131" NAILS	SIDE OF END JOINT)
4.4	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING	16D COMMON (3-1/2" X 0.162")	16" O.C. FACE NAIL
14	(NOT AT BRACED WALL PANELS)	16D BOX (3-1/2"x0.135"); OR 3" X 0.131" NAILS	12" O.C. FACE NAIL
	BOTTOM PLATE TO JOIST, RIM	3-16d BOX NAILS (3-1/2"x0.135") OR	3 EACH 16" O.C. FACE NAIL
15	JOIST, BAND JOIST BLOCKING (AT BRACED WALL PANELS)	2-16D COMMON (3-1/2"x0.162"); OR 4-3" X 0.131" NAILS	2 EACH 16" O.C. FACE NAIL 4 EACH 16" O.C. FACE NAIL
		4-8D BOX (2-1/2"x0.113") OR	4 EAGIT TO C.C. FACE NAIL
		3-16D BOX (3-1/2" x 0.135"); OR	TOT NAIL
		4-8D COMMON (2-1/2" X 0.131"); OR 4-10D BOX (3" x 0.128"); OR	TOE NAIL
16	TOP OR BOTTOM PLATE TO STUD	4-3" x 0.131" NAILS	
		3-16D BOX (3-1/2" x 0.135"); OR 2-16D COMMON (3-1/2" X 0.162"); OR	
		3-10D BOX (3" x 0.128"); OR 3-3" x 0.131" NAILS	END NAIL
		3-10D BOX (3" X 0.128"); OR	
17	TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	2-16D COMMON (3-1/2" X 0.162"); OR	FACE NAIL
		3-3" X 0.131" NAILS 3-8D BOX (2-1/2" X 0.113"); OR	
1" BRACE TO EACH STUD AND		2-8D COMMON (2-1/2" X 0.131"); OR	FACE NAIL
	PLATE	2-10D BOX (3" X 0.128"); OR 2 STAPLES 1-3/4"	TAGE WILL
		3-8D BOX (2-1/2" X 0.113"); OR	
19	1"x6" SHEATHING TO EACH BEARING	2-8D COMMON (2-1/2" X 0.131"); OR 2-10D BOX (3" X 0.128"); OR	FACE NAIL
	DEARING	2 STAPLES, 1" CROWN, 16 GA, 1-3/4" LONG	
		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	
	1"x8" AND WIDER SHEATHING TO EACH BEARING	3 STAPLES, 1" CROWN, 16 GA, 1-3/4" LONG	
20		WIDER THAN 1" X 8" 4-8D BOX (2-1/2" X 0.113"); OR	FACE NAIL
		3-8D COMMON (2-1/2" X 0.131"); OR	

		C TABLE R602.3(1) (SEE IRC FOR FOOT)		
		FLOOR		
21	JOST TO SILL, TOP PLATE OR GIRDER	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 3-3" X 0.131" NAILS	TOE NAIL	
	RIM JOIST, BAND JOIST OR	8d BOX (2-1/2"x0.113")	4" O.C. T	TOE NAIL
22	BLOCKING TO SILL OR TOP PLATE (ROOF APPLICATIONS ALSO)	8D COMMON (2-1/2" X 0.131"); OR 10D BOX (3" X 0.128"); OR 3" X 0.131" NAILS	6" O.C. TOE NAIL	
23	1"x6" SUBFLOOR OR LESS TO EACH JOIST	3-8D BOX (2-1/2" X 0.113"); OR 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 NAIL	
		FLOOR		
24	2" SUBFLOOR TO JOIST OR GIRDER	3-16D BOX (3-1/2" X 0.135"); OR 2-16D COMMON (3-1/2"x0.162")	BLIND AND	FACE NAIL
25	2" PLANKS (PLANK & BEAM - FLOOR & ROOF)	3-16D BOX (3-1/2" X 0.135"); OR 2-16D COMMON (3-1/2"x0.162")	AT EACH BEAR	ING, FACE NAIL
26	BAND OR RIM JOIST TO JOIST	3-16D COMMON (3-1/2" X 0.162"); OR 4-10 BOX (3" X 0.128"); OR 4-3" X 0.131" NAILS ; OR 4-3" X 14 GA. STAPLES, <sup>7</sup> / <sub>16</sub> " CROWN	END	NAIL
		20D COMMON (4" X 0.192"); OR	NAIL EACH LAYER AS F TOP END AND BOTTOM	
27	BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	10D BOX (3" X 0.128"); OR 3" X 0.131" NAILS	24" O.C. FACE NAIL AT STAGGERED ON OPPO	
		AND: 2-20D COMMON (4" X 0.192"); OR 3-10D BOX (3" X 0.128"); OR 3-3" X 0.131" NAILS	FACE NAIL AT ENDS AN	ND AT EACH SPLIC
28	LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	4-16D BOX (3-1/2" X 0.135"); OR 3-16D COMMON (3-1/2" X 0.162"); OR 4-10D BOX (3" X 0.128"); OR 4-3" X 0.131" NAILS	AT EACH JOIST OR RAFTER, FACE N	
29	BRIDGING OR BLOCKING TO JOIST	2-10D BOX (3" X 0.128"); OR 2-8D COMMON (2-1/2" X 0.131"; OR 2-3" X 0.131") NAILS	EACH END, TOE NAIL	
	DESCRIPTION OF BUILDING	TION OF BUILDING	SPACING OF	FASTENERS
ITEM	ELEMENTS	NUMBER AND TYPE OF FASTENER	EDGES (IN)	INTERMEDIA SUPPORTS (I
30	3/8" - 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)	6 12	
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"	10d COMMON (3"x0.148") NAIL OR 8D (2-1/2"x0.131") DEFORMED NAIL	6	12
		OTHER WALL SHEATHING		
33	1/2" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	1-1/2" GALVANIZED ROOFING NAIL, 7/16" HEAD DIAMETER, OR 1-1/4" LONG 16 GA. STAPLE WITH $\frac{7}{16}$ " OR 1" CROWN	3 6	
34	25/32" STRUCTURAL CELLULOSTIC FIBERBOARD SHEATHING	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	
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	
36	5/8" GYPSUM SHEATHING	1-3/4" GALVANIZED ROOFING NAIL; STAPLE GALVANIZED, 1-5/8" LONG; 1-5/8" SCREWS, TYPE "W" OR "S"	7	7
	WOOD STRUCTURA	L PANELS, COMBINATION SUBFLOOR U	NDERLAYMENT TO FE	RAMING
37	3/4" AND LESS	6D DEFORMED (2"x0.120") NAIL OR 8D COMMON (2-1/2"x0.131") NAIL	6 12	
38	7/8" - 1"	8D COMMON (2-1/2"x0.131") NAIL OR 8D DEFORMED (2-1/2"x0.120") NAIL	6 12	
		10D COMMON (3"x0.148") NAIL OR		

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

METHODS,	MINIMUM	CONNECTION CRITEIA	
MATERIAL	THICKNESS	FASTENERS	SPACING
WSP - WOOD		EXTERIOR SHEATHING PER TABLE R602.3(3)	6" EDGES, 12" FIELD
STRUCTURAL PANEL	3/8	INTERIOR SHEATHING PER TABLE R602.3(1) OR R602.3(2)	VARIES BY FASTENER
CS-WSP CONTINUOUSLY		EXERIOR SHEATHING PER TABLE R602.3(3)	6" EDGES, 12" FIELD
SHEATHED WOOD STRUCTURAL PANEL	3/8	INTERIOR SHEATHING PER TABLE R602.3(1) OR R602.3(2)	VARIES BY FASTENER
PFH - PORTAL FRAME WITH HOLD DOWNS	3/8	SEE IRC SECTION R602.10.6.2	SEE IRC SECTION R602.10.6.2
PFG - PORTAL FRAME AT GARAGE	3/8	SEE IRC SECTION R602.10.6.3	SEE IRC SECTION R602.10.6.3
LIB	1x4 WOOD OR APPROVED METAL STRAPS AT 45 TO 60	WOOD: 2-8d COMMON NAILS OR 3-8d NAILS	WOOD: PER STUD AND TOP AND BOTTOM PLATES
LET-IN-BRACING	DEGREE ANGLES FOR MAX 16" STUD SPACING	METAL STRAP: PER MANUFACTURER	METAL: PER MANUFACTURER
GB-GYPSUM	1/2	NAILS OR SCREWS PER TABLE R602.3(1) FOR EXTERIOR LOCATIONS	FOR ALL BRACED WALL PANEL LOCATIONS: 7"
BOARD	.,	NAILS OR	EDGES (INCLUDING

	WIDTH (FEET)	(POUNDS) FOR 90 MPH					
		EXPOSURE B		UIREMENTS			
	18	1,000			fl- (DOI)	E (DOI)	F. (DO)
	9	1,000			fb (PSI)	E (PSI)	Fv (PSI
	16	1,000		VERSA-LAM LVL	3100	2.0x106	285
1	18	1,000		VERON EN INITERE		2.07.100	200
	9	1,200		DOUGLAS FIR-LARCH #2	900	1.6x106	180
	16	1,000		TIIV-LAIKOTT#2			
1			1				

CONTINUOUSLY SHEATHED
BRACED WALL LINE

STRAP

2,025

2,400

1,200

3,200

3,200

2,350

DR 1,000

2,050

2,450

1,500

3,150

3,675

10 FEET

24

30

20

TOP AND BOTTOM

PLATES) 7" FIELD

SCREWS PER

TABLE R702.3.5

FOR INTERIOR LOCATIONS

MAXIMUM | CAPACITY

OPENING | REQUIRED

18

9

16

18

9

16 18

9

16

18

9

16 18

MINIMUM LENGTH (INCHES)

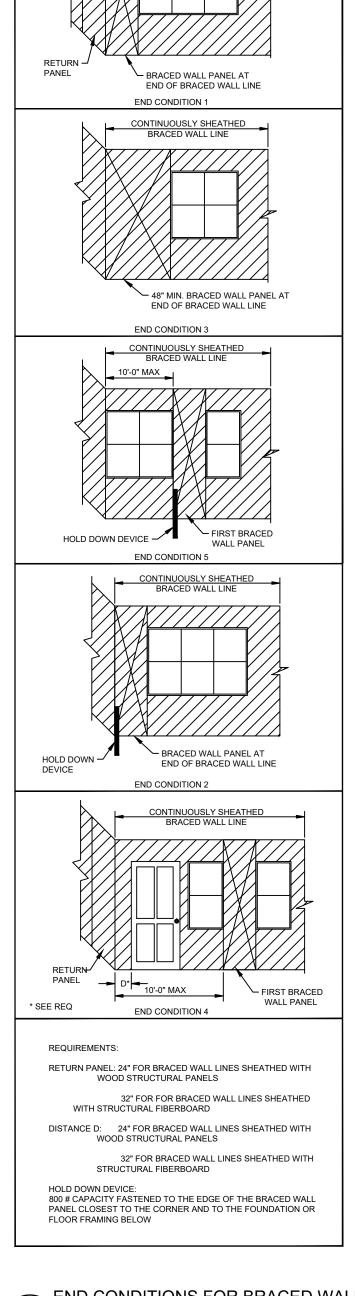
WALL HEIGHT

24

27

18

8 FEET 9 FEET





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AMIN

END CONDITIONS FOR BRACED WALL LINES WITH CONTINUOUS S1.0 SHEATHING (IRC FIGURE R602.10.7)

DECK DEAD LOAD = 10 PSF)										
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'			

TABLE R507/2 FASTENER SPACING FOR A SOUTHERN PINE OR HEM-FIR DECK LEDGER 2" NOMINAL SOLID SAWN SPRUCE-PINE-FIR BAND JOIST (DECK LIVE LOAD = 40PSF,

3-10D BOX (3" X 0.128"); OR

4 STAPLES, 1" CROWN, 16 GA.., 1-3/4" LONG

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	

REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES IRC TABLE 602.3(3) (PARTIAL)								
MINIMUM NAIL  SIZE PENETRATION (IN)		MINIMUM WOOD STRUCTURAL	MINIMUM NOMINAL PANEL THICKNESS (IN)	MAX WALL STUD SPACING	PANEL NAIL SPACING		ULTIMATE DESIGN WIND SPEED, V ULT (MPH)	
		PANEL SPAN RATING			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	
80 COMMON				24	6	12	140	

MINIMUM

STUD

NOMINAL SIZE AND

GRADE

2x4 NO 2

GRADE

2x6 STUD GRADE

METHOD

PFG

CS-PF

CS-WSP

SUPPORTING **ROOF ONLY** SUPPORTING ONE STORY

AND ROOF

ADJACENT CLEAR

OPENING

HEIGHT

(INCHES) LESS THAN OR EQUAL TO 64

MAXIMUM PONY

(FEET)

0

FRAMING | WALL HEIGHT | TOTAL WALL

MAXIMUM

HEIGHT (FEET)

10

12

12

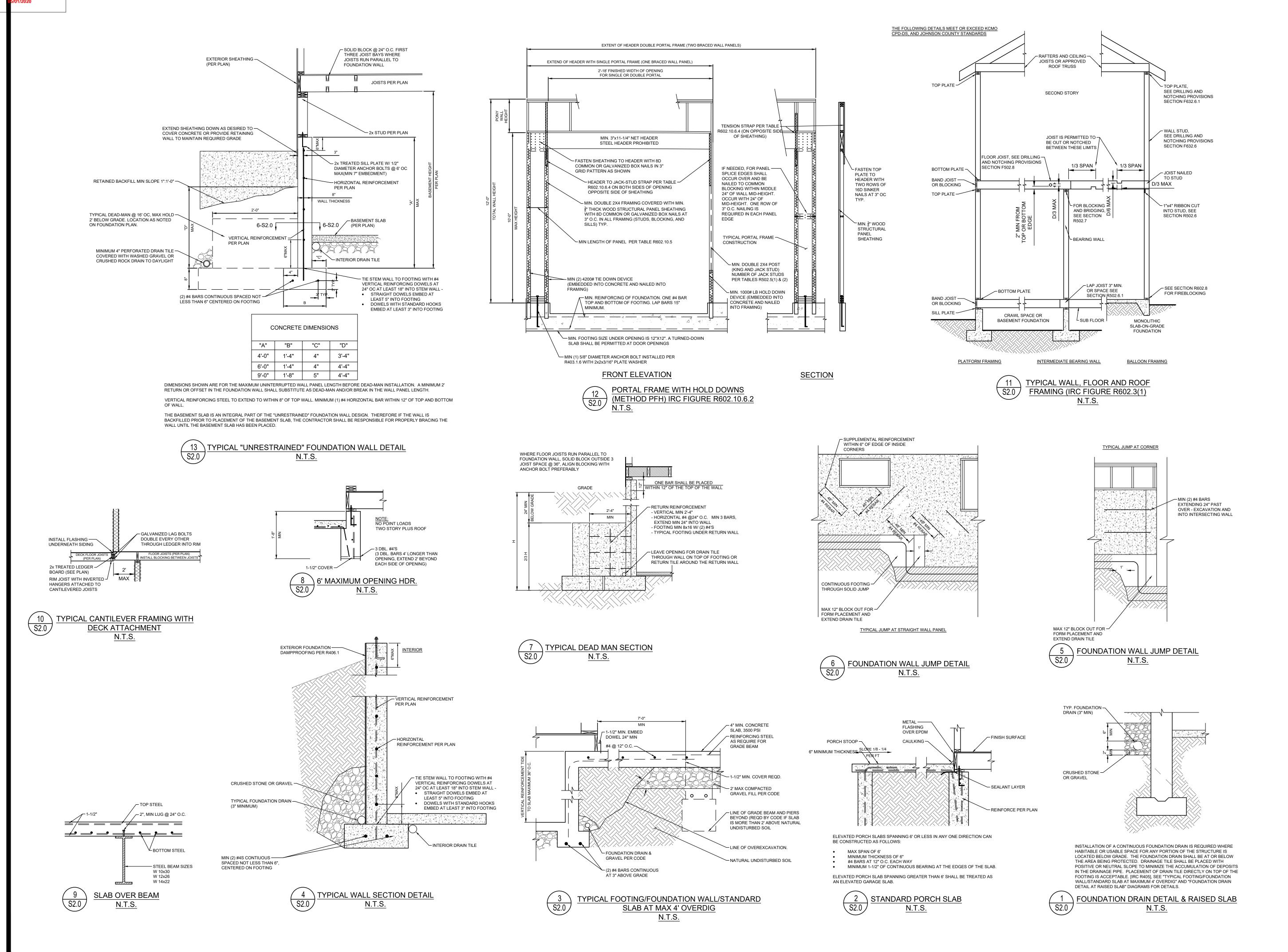
MINIMUM LENGTH OF BRACED WALL PANELS TABLE R602.10.5 (PARTIAL)

24

16

BRACING METHODS TABLE R602.10.4 (PARTIAL)

SHEET#





RESIDENTIAL ENGINEERING SERVICES, LLC WWW.RES-KC.COM 600 SW JEFFERSON ST SUITE 300 LEES SUMMIT, MO 64063 (816) 399-4901



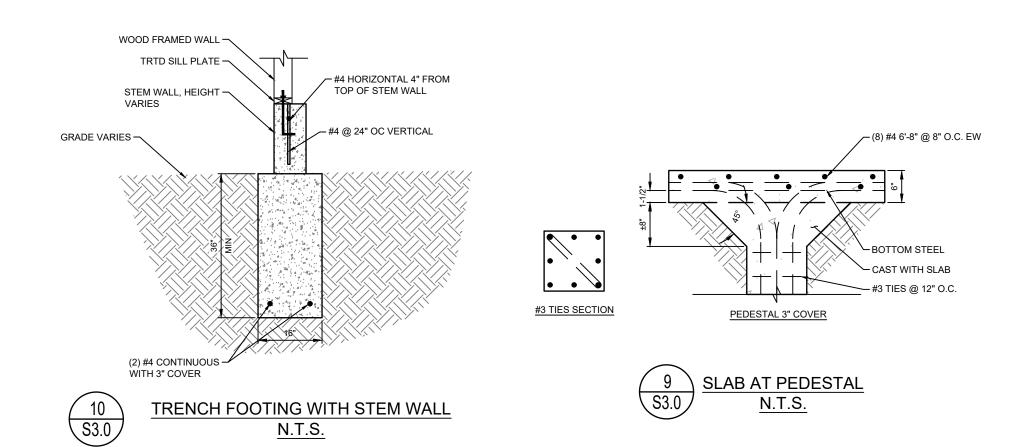
STRUCTURAL DETAILS

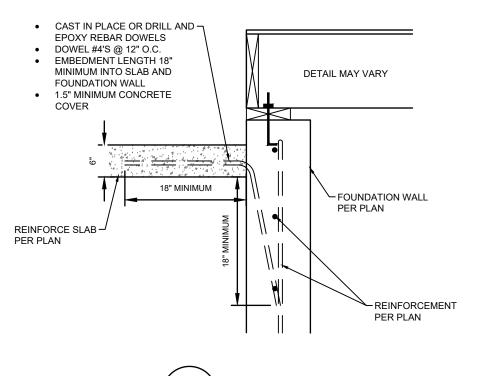
SHEET #

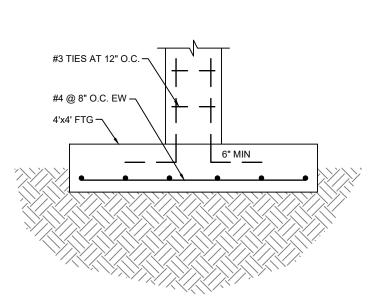
S2.0

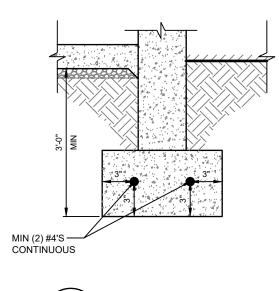


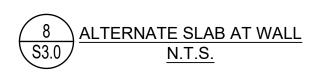
#### THE FOLLOWING DETAILS MEET OR EXCEED KCMO CPD-DS, AND JOHNSON COUNTY STANDARDS





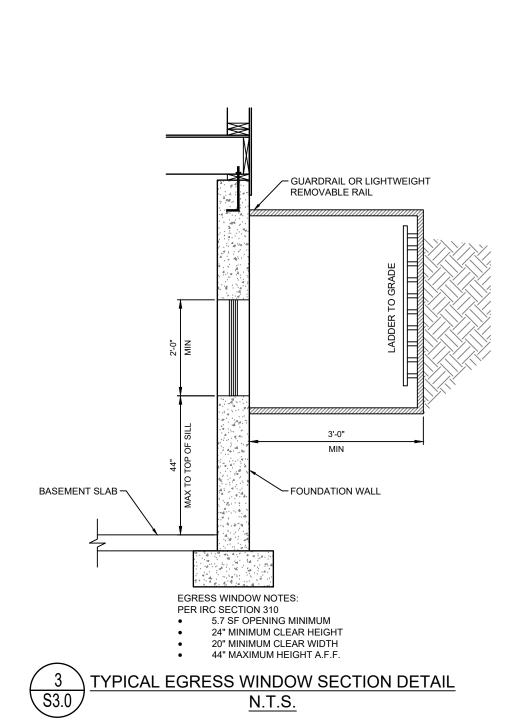


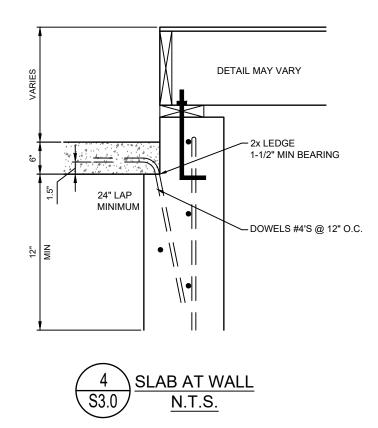


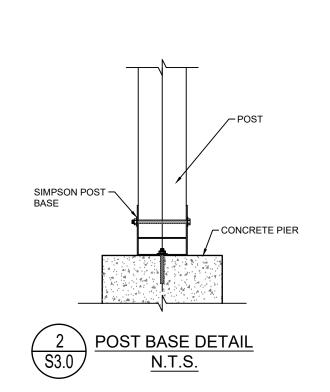


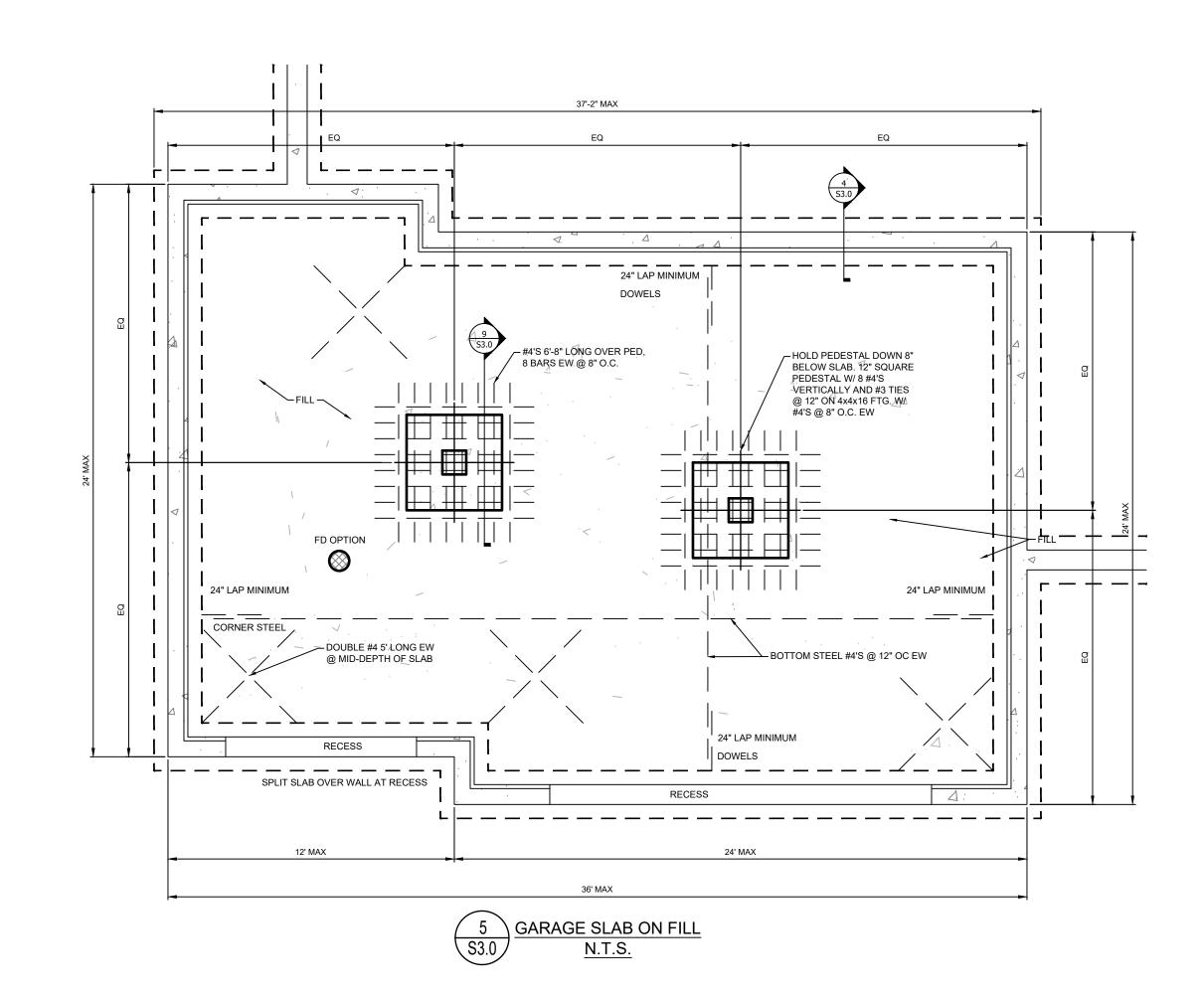
7 PEDESTAL AT FOOTING N.T.S.

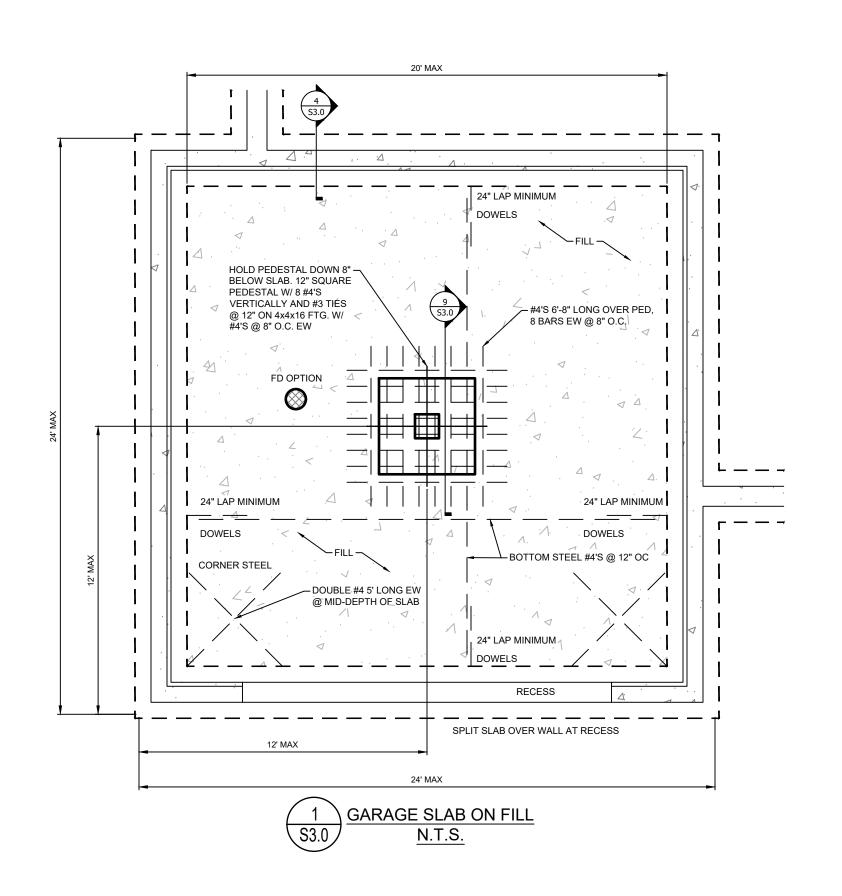














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FOUNDATION DETAILS

SHEET #

S3.0