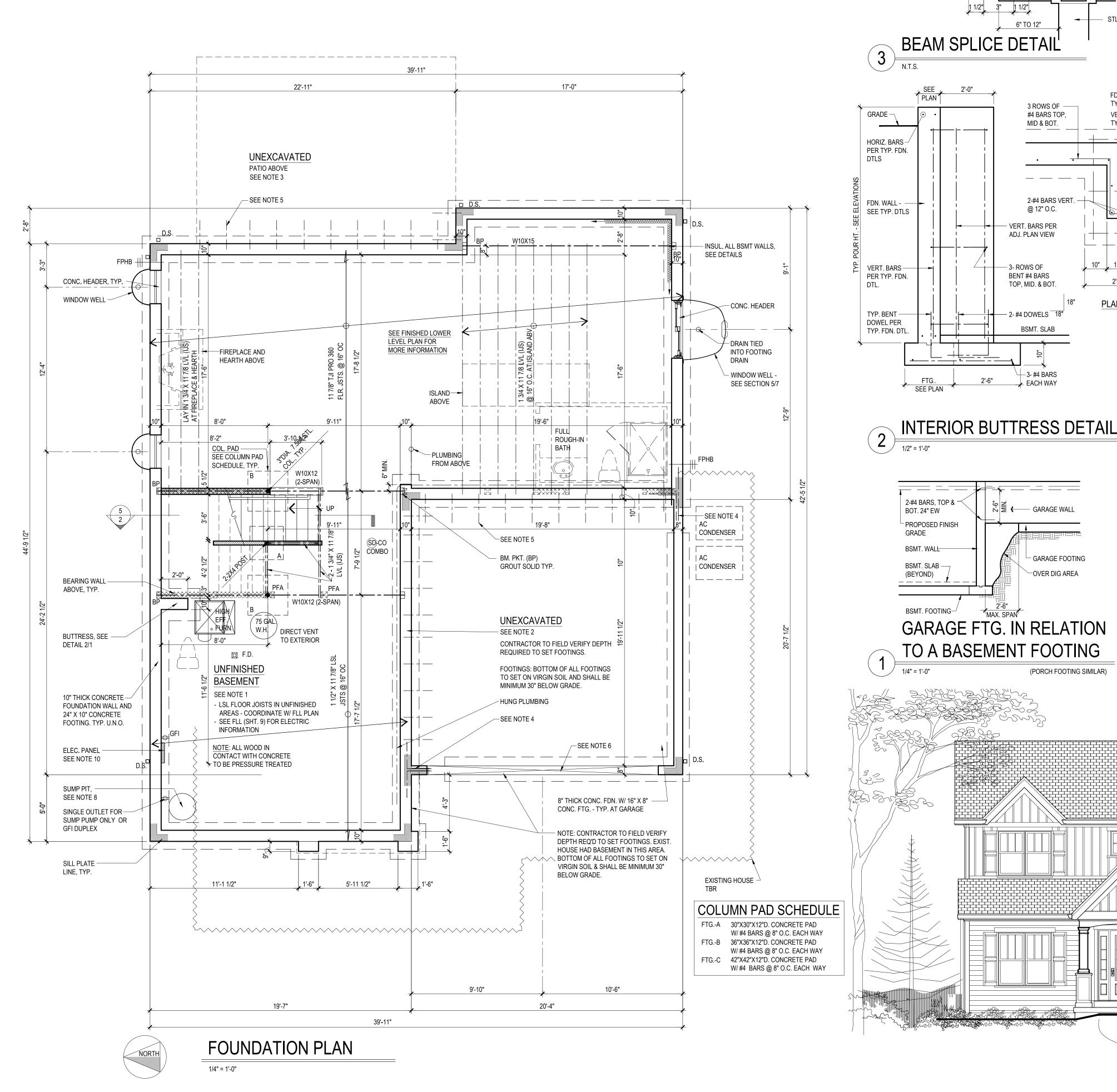


Douglas Properties

NEW RESIDENCE AT: 28 Midpark Lane Ladue, MO 63124

ARCHITECT SITE PLAN



FOUNDATION DRAWING NOTES

STL. CAP PLATE LARGE

BEAM FLANGE

FDN. WALL - SEE -

VERT. BARS PER

3- #4 BARS

EACH WAY

TYP. FDN. DTL. -

PLAN VIEW

TYP. DTLS

3 ROWS OF -

#4 BARS TOP,

2-#4 BARS VERT.

@ 12" O.C.

- VERT. BARS PER

ADJ. PLAN VIEW

- 3- ROWS OF

BENT #4 BARS

TOP, MID. & BOT.

- 2- #4 DOWELS 18"

--- 3- #4 BARS

🗼 EACH WAY

Ş Z ← GARAGE WALL

OVER DIG AREA

(PORCH FOOTING SIMILAR)

MID & BOT.

STL. COL.

ENOUGH TO WRAP AROUND

 \sim STL. BEAM SEE $\stackrel{\sim}{-}$

\ PLAN

6"X6"X 1/4" STEEL

STEEL BOLTS W/

PLATES W/(4)-3/4"Ø

WASHERS (A325 BOLTS)

- 1. BASEMENT SLAB: 3-1/2" CONCRETE SLAB OVER 6 MIL. VAPOR BARRIER (LAP JOINTS MIN. 6" AND SEAL) OVER MIN. 4" GRAVEL OR CRUSHED STONE (SLOPE TO FLOOR DRAIN). 2. GARAGE SLAB: 4" CONCRETE SLAB WITH FIBERMESH REINFORCING OVER 6 MIL. VAPOR
- BARRIER (LAP JOINTS MIN. 6" AND SEAL) OVER MIN. 4" GRAVEL OR CRUSHED STONE (SLOPE TO GARAGE DOOR MINIMUM 4" U.N.O.). 3. EXTERIOR PORCH/PATIO SLABS: 4" CONCRETE SLAB WITH 6"X6" W1.4XW1.4 WWF OVER
- MIN. 4" GRAVEL OR CRUSHED STONE. SLOPE AWAY FROM FOUNDATION WITH EDGES TURNED DOWN BELOW GRADE MINIMUM 12" OR TO TOP OF FOUNDATION WALL. 4. (2) #4 BARS TOP, MIDDLE, AND BOTTOM, 24" EA. WAY. TYP. AT ALL INTERSECTING WALLS.

6. HOLD DOWN TOP OF FOUNDATION WALL AT DOOR TO RECEIVE CONCRETE SLAB

- 5. #4 BARS AT 24" O.C. DOWEL INTO FOUNDATION WALL AND BEND 24" INTO CONCRETE SLAB. TYPICAL AT EXTERIOR PORCH SLABS AND GARAGE SLAB (ADJACENT TO BASEMENT FOUNDATION WALL).
- 7. FOOTINGS AND PIERS: BOTTOM OF FOOTINGS TO BE MINIMUM 30" BELOW GRADE. PIERS TO EXTEND MIN. 24" INTO SOLID, UNDISTURBED SOIL AND MIN. 30" BELOW GRADE.
- 8. DRAINAGE SYSTEM SHALL DISCHARGE BY GRAVITY TO DAYLIGHT OR BE CONNECTED TO AN APPROVED SUMP (MIN. 24" IN DIAMETER OR 20 INCHES SQUARE AND SHALL EXTEND MIN. 24 INCHES BELOW THE BOTTOM OF THE BASEMENT FLOOR. SUMP SHALL HAVE A FITTED COVER. PROVIDE PUMP IF DRAINAGE SYSTEM IS CONNECTED TO SUMP PIT.
- OR TO CREATE A NUISANCE TO ADJOINING PROPERTIES IS PROHIBITED. 9. CLASS "B" U.L. APPROVED HVAC FLUE (SIZED BY HVAC CONTRACTOR) AT GAS FURNACE

DISCHARGING TO OR WITHIN 10' OF A SIDEWALK, DRIVEWAY, STREET, PROPERTY LINE,

- AND WATER HEATER. PROVIDE MINIMUM 2" CLEARANCE. 10. ELECTRICAL PANEL: (200 AMP. MINIMUM / 600 AMP. MAXIMUM) TO BE SIZED AND LOCATED BY ELECTRICAL CONTRACTOR.
- 11. STEEL COLUMNS SHALL BE SCHEDULE 40, SIZED PER PLAN. ALL COLUMNS SHALL HAVE A CAP AND BASE. ADJUSTABLE COLUMNS PERMITTED UNLESS NOTED TO BE FIXED. 12. MINIMUM OF (2) #5 REINFORCING BARS SHALL BE PROVIDE AROUND ALL WINDOW AND DOOR OPENINGS IN PLAIN CONCRETE FOUNDATION AND BASEMENT WALLS. BARS SHALL
- EXTEND A MINIMUM OF 24" BEYOND THE CORNERS OF THE OPENINGS. 13. CONTRACTOR SHALL NOT BACKFILL UNTIL CONCRETE FOUNDATION HAS CURED FOR A MINIMUM OF 7 DAYS.
- 14. UNFINISHED BASEMENTS SHALL BE INSULATED TO MIN. R-10. SEE GENERAL NOTES AND

MECHANICAL: GAS APPLIANCES LOCATED IN SPACES WHERE THE VOLUME IS LESS THAN 50 CUBIC FEET PER 1,000 BTU/HR. INPUT RATING, SHALL HAVE COMBUSTION AIR PROVIDED. MECHANICAL CONTRACTOR SHALL CALCULATE. SPECIFY, AND COORDINATE WITH G.C. ALL ADDITIONAL COMBUSTION AIR AS REQUIRED BY THE MECHANICAL CODE AND LOCAL JURISDICTIONS. LOUVERED DOORS SHALL BE PERMITTED BY THE ARCHITECT IF CALLED OUT ON THE PLANS (VERIFY WITH OWNER). IF ADDITIONAL COMBUSTION AIR IS REQUIRED, MECHANICAL CONTRACTOR SHALL PROVIDE THE FOLLOWING: USING INSIDE AIR: PROVIDE 1 SQ. IN. PER 1000BTU/HR. IN HIGH AND LOW OPENINGS.

MINIMUM OPENING SIZE 100 SQ. IN. USING OUTSIDE AIR: PROVIDE 1 SQ. IN. PER 4,000 BTU/HR. (1 SQ. IN. PER 2,000 BTU/HR. IF

DUCTED HORIZONTAL OPENING).

HIGH CEILINGS ARE IMPORTANT TO THE OWNER. COORDINATE DUCTWORK ARRANGEMENTS WITH OWNER BEFORE INSTALLING. RUN DRYWALL DIRECTLY BELOW STEEL BEAM AND DO NOT DROP DOWN LOWER THAN THIS POINT.

PLUMBING CONTRACTOR TO LOCATE PLUMBING PIPING AND PLUMBING STACKS TO AVOID CONFLICT WITH FINISH BASEMENT PLAN AND TO AVOID CONFLICT WITH FUTURE FINISH WORK THAT MAY OCCUR IN UNFINISHED BASEMENT AREAS. REVIEW LOCATION OF PLUMBING STACKS WITH OWNER.

LIST OF SHEETS

- 1. FOUNDATION PLAN 2. FIRST FLOOR PLAN AND STAIR SECTION 3. SECOND FLOOR PLAN AND ROOF PLAN 4. FRONT AND LEFT SIDE ELEVATION
- REAR AND RIGHT SIDE ELEVATION 6. ELECTRIC PLANS 7. SECTIONS & DETAILS
- 8. BRACING PLANS & DETAILS 9. FINISHED LOWER LEVEL PLAN 10. GENERAL NOTES

WALL FILL / BRICK BRG. WALL BRG. FROM ABV WALL BRACING POST & HEADER == GIRDER TRUSS □ MTL. HANGER

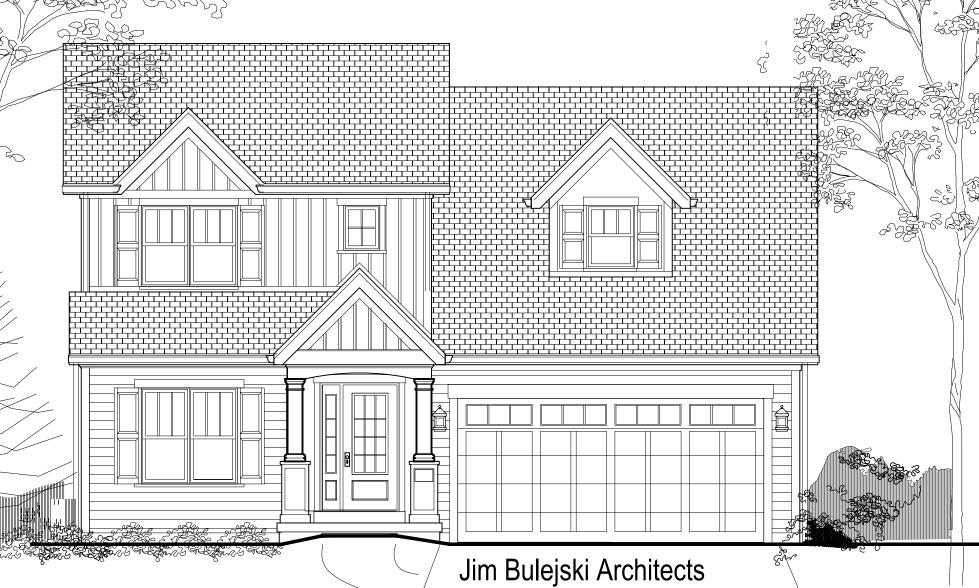
LEGEND

BUILDING CODE INFORMATION:

LADUE, MISSOURI 2015 INTERNATIONAL RESIDENTIAL CODE BUILDING: PLUMBING: 2015 INTERNATIONAL PLUMBING CODE 2015 INTERNATIONAL MECHANICAL CODE MECHANICAL: ELECTRICAL: 2008 NATIONAL ELECTRIC CODE 2015 INTERNATIONAL FIRE CODE

28 Midpark Ladue, MO

OUNDATION PLAN

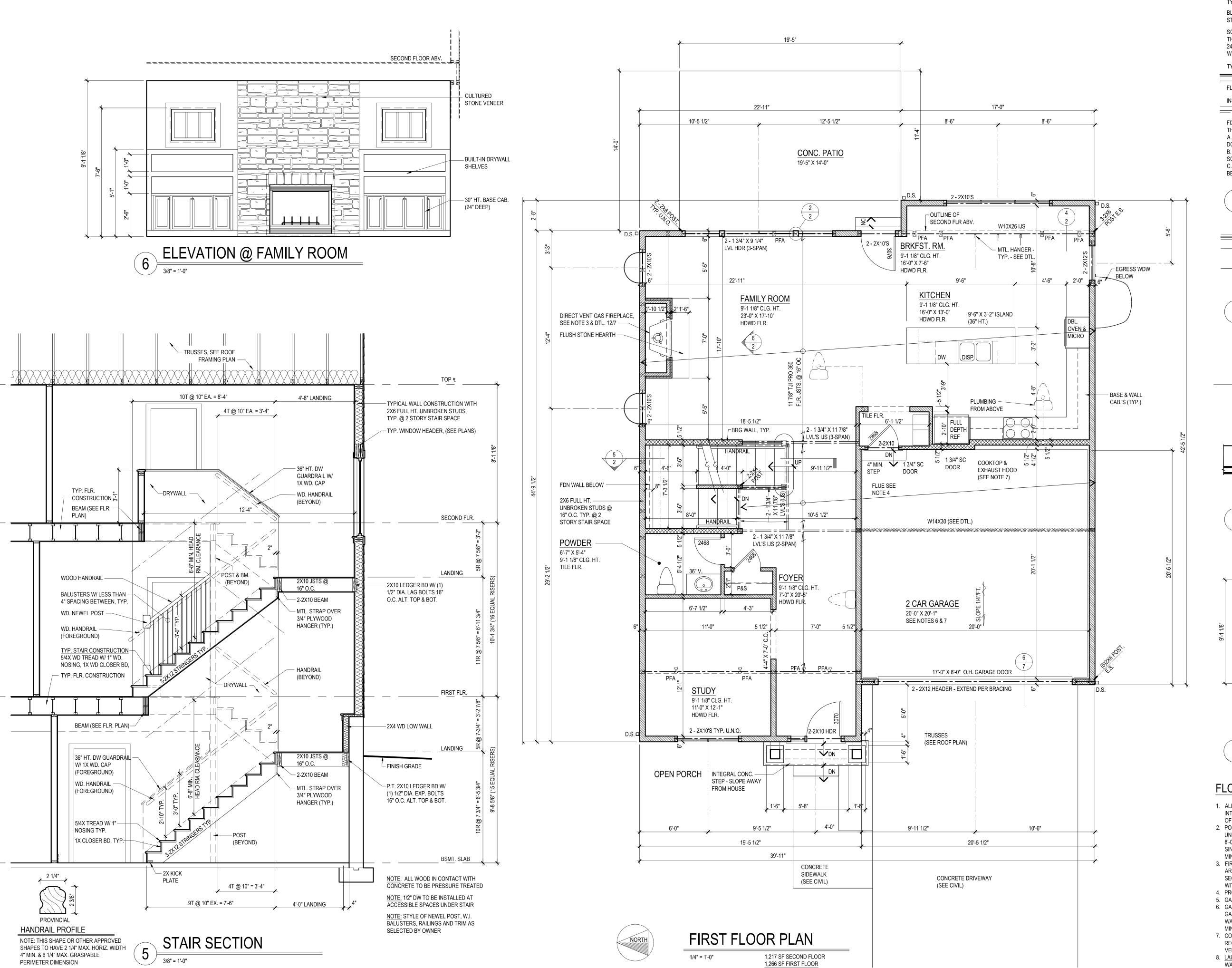


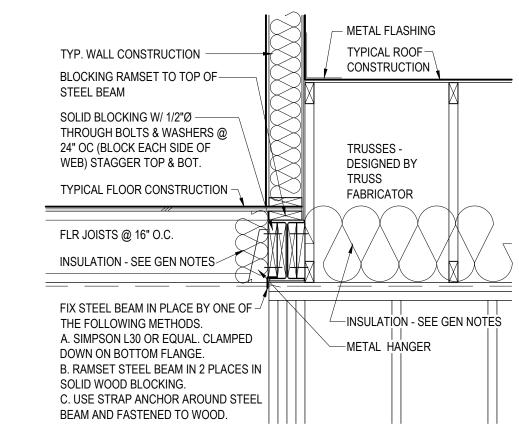
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JIM BULEJSKI ARCHITECTS

Properties

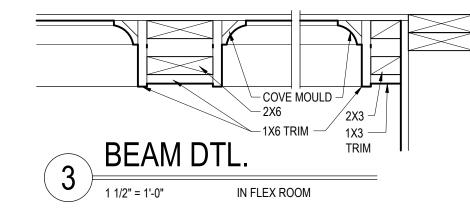
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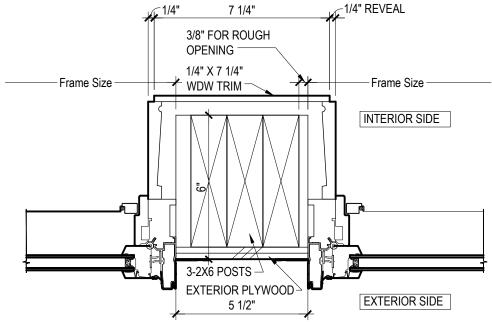
28 Midpark Ladue, MO

Douglas

STL. BEAM - IN JOIST SPACE

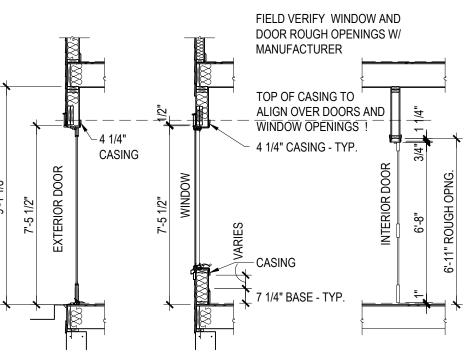
3/4" = 1'-0"





5 1/2" WDW MULL SECTION

3" = 1'-0" HORIZONTAL SECTION



WDW / DOOR HEAD & TRIM RELATIONSHIP DTL.

9'-1 1/8" CEILING HT. 7'-6" NOMINAL HEAD HT.

FLOOR PLAN DRAWING NOTES

- ALL INTERIOR WALLS TO BE 3 1/2" (2X4 STUDS), UNLESS NOTED OTHERWISE (U.N.O.). ALL INTERIOR DIMENSIONS ARE TO FACE OF STUD. ALL EXTERIOR DIMENSIONS ARE TO FACE OF SHEATHING (U.N.O.).
- 2. POST INDICATED SHALL BE MINIMUM (2) 2X WALL THICKNESS, GLUED AND NAILED, UNLESS NOTED OTHERWISE. EXCEPTION: POSTS CARRYING MINIMAL LOADS, LESS THAN 8'-0" IN HEIGHT AND SUPPORTING HEADERS SPANNING 3'-0" OR LESS MAY CONSIST OF A SINGLE 2X CRIPPLE AND (1) FULL HT. UNBROKEN STUD UNLESS NOTED OTHERWISE. MINIMUM HEADER SIZE (2) 2X10'S GLUED AND NAILED.
- MINIMUM HEADER SIZE (2) 2X10'S GLUED AND NAILED.

 3. FIREPLACE: HEATILATOR CALIBER CD4236 (36" VIEWING AREA) OR CD4842 (42" VIEWING AREA) DIRECT VENT GAS PRE-FABRICATED FIREPLACE OR AS SELECTED BY OWNER (SEE SECTION). SURROUND, MANTLE, AND HEARTH TO BE SELECTED BY OWNER. COORD. WITH MFR. FOR MIN. ROUGH-IN DIMENSIONS, HEARTH WIDTH, AND EXTENSION.
- WITH MFR. FOR MIN. ROUGH-IN DIMENSIONS, HEARTH WIDTH, AND EXTENSION.

 4. PROVIDE 2" MINIMUM CLEARANCE TO COMBUSTIBLES AT ALL GAS FLUES, TYPICAL.

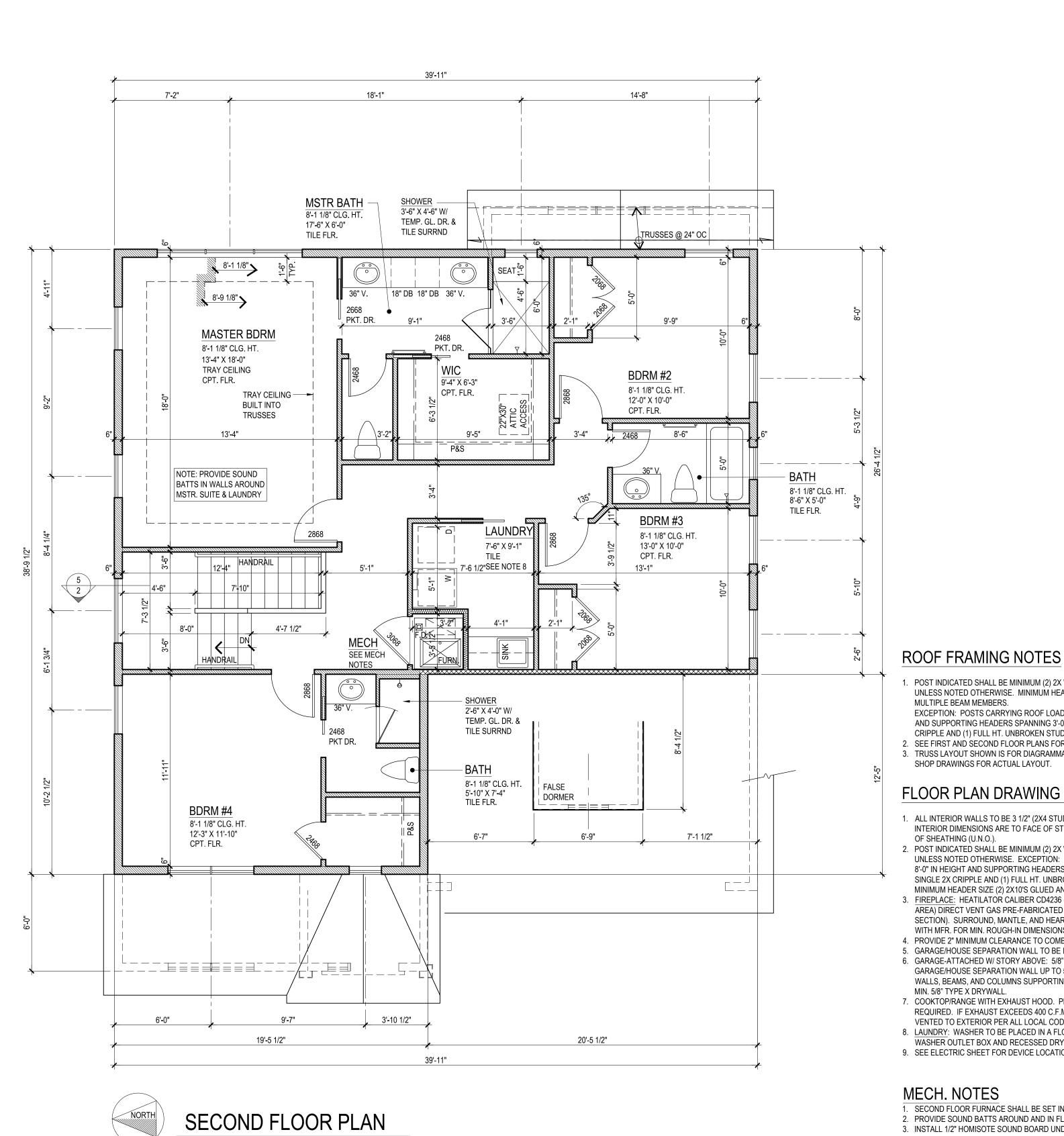
 5. GARAGE/HOUSE SEPARATION WALL TO BE INSULATED MINIMUM R-13.

 6. GARAGE-ATTACHED W/ STORY ABOVE: 5/8" TYPE X DRYWALL ON GARAGE SIDE OF
- GARAGE-ATTACHED W/ STORY ABOVE: 5/8" TYPE X DRYWALL ON GARAGE SIDE OF GARAGE/HOUSE SEPARATION WALL UP TO 5/8" TYPE X DRYWALL CEILING. ALL BEARING WALLS, BEAMS, AND COLUMNS SUPPORTING THE FLOOR/CEILING ASSEMBLY TO HAVE MIN. 5/8" TYPE X DRYWALL.
 COOKTOP/RANGE WITH EXHAUST HOOD. PROVIDE GAS AND/OR ELECTRIC HOOKUPS AS
- REQUIRED. IF EXHAUST EXCEEDS 400 C.F.M., PROVIDE MAKE-UP AIR. ALL EXHAUST TO BE VENTED TO EXTERIOR PER ALL LOCAL CODES.

 8. LAUNDRY: WASHER TO BE PLACED IN A FLOOD SAVER WITH DRAIN. PROVIDE IN-WALL
- WASHER OUTLET BOX AND RECESSED DRYER VENT BOX. DRYER TO VENT TO EXTERIOR.

 9. SEE ELECTRIC SHEET FOR DEVICE LOCATIONS.

Of 10



Properties Douglas

1. POST INDICATED SHALL BE MINIMUM (2) 2X WALL THICKNESS, GLUED AND NAILED, UNLESS NOTED OTHERWISE. MINIMUM HEADER SIZE (2) 2X10'S. GLUE AND NAIL ALL MULTIPLE BEAM MEMBERS. EXCEPTION: POSTS CARRYING ROOF LOADS ONLY AND NOT EXCEEDING 8'-1" IN HEIGHT AND SUPPORTING HEADERS SPANNING 3'-0" OR LESS MAY CONSIST OF A SINGLE 2X CRIPPLE AND (1) FULL HT. UNBROKEN STUD UNLESS NOTED OTHERWISE.

2. SEE FIRST AND SECOND FLOOR PLANS FOR INTERIOR CEILING CONDITIONS. 3. TRUSS LAYOUT SHOWN IS FOR DIAGRAMMATIC PURPOSES ONLY. SEE MANUFACTURER'S SHOP DRAWINGS FOR ACTUAL LAYOUT.

FLOOR PLAN DRAWING NOTES

- 1. ALL INTERIOR WALLS TO BE 3 1/2" (2X4 STUDS), UNLESS NOTED OTHERWISE (U.N.O.). ALL INTERIOR DIMENSIONS ARE TO FACE OF STUD. ALL EXTERIOR DIMENSIONS ARE TO FACE OF SHEATHING (U.N.O.).
- 2. POST INDICATED SHALL BE MINIMUM (2) 2X WALL THICKNESS, GLUED AND NAILED, UNLESS NOTED OTHERWISE. EXCEPTION: POSTS CARRYING MINIMAL LOADS, LESS THAN 8'-0" IN HEIGHT AND SUPPORTING HEADERS SPANNING 3'-0" OR LESS MAY CONSIST OF A SINGLE 2X CRIPPLE AND (1) FULL HT. UNBROKEN STUD UNLESS NOTED OTHERWISE.
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- WITH MFR. FOR MIN. ROUGH-IN DIMENSIONS, HEARTH WIDTH, AND EXTENSION. 4. PROVIDE 2" MINIMUM CLEARANCE TO COMBUSTIBLES AT ALL GAS FLUES, TYPICAL. 5. GARAGE/HOUSE SEPARATION WALL TO BE INSULATED MINIMUM R-13. 6. GARAGE-ATTACHED W/ STORY ABOVE: 5/8" TYPE X DRYWALL ON GARAGE SIDE OF
- GARAGE/HOUSE SEPARATION WALL UP TO 5/8" TYPE X DRYWALL CEILING. ALL BEARING WALLS, BEAMS, AND COLUMNS SUPPORTING THE FLOOR/CEILING ASSEMBLY TO HAVE MIN. 5/8" TYPE X DRYWALL. 7. COOKTOP/RANGE WITH EXHAUST HOOD. PROVIDE GAS AND/OR ELECTRIC HOOKUPS AS
- REQUIRED. IF EXHAUST EXCEEDS 400 C.F.M., PROVIDE MAKE-UP AIR. ALL EXHAUST TO BE VENTED TO EXTERIOR PER ALL LOCAL CODES.
- 8. LAUNDRY: WASHER TO BE PLACED IN A FLOOD SAVER WITH DRAIN. PROVIDE IN-WALL WASHER OUTLET BOX AND RECESSED DRYER VENT BOX. DRYER TO VENT TO EXTERIOR. 9. SEE ELECTRIC SHEET FOR DEVICE LOCATIONS.

MECH. NOTES

- 1. SECOND FLOOR FURNACE SHALL BE SET IN OVERFLOW DRAIN PAN.
- 2. PROVIDE SOUND BATTS AROUND AND IN FLOOR BELOW FURN. RM. 3. INSTALL 1/2" HOMISOTE SOUND BOARD UNDER DRYWALL AND WEATHER STRIP DOOR
- FOR SOUND CONTROL. 4. MECHANICAL CONTRACTOR TO SUPPLY COMBUSTION AIR. (NO LOUVER) 5. DO NOT INSTALL SUPPLY OR RETURN VENTS IN SHARED BEDROOM / MECHANICAL ROOM
- ENERGY CONSERVATION REQUIRED WITH COMBUSTION / VENTILATION OUTSIDE AIR:
- SOLID, SELF-CLOSING WEATHERSTRIPPED DOOR - R-13 INSULATION AT INTERIOR WALLS
- R-19 INSULATION AT FLOOR/CEILING - WRAPPED, INSULATED DUCTS
- STOPPED WALL PENETRATIONS

SECOND

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Lane 63124 28 Midpark Ladue, MO

JIM BULEJSKI ARCHITECTS

OVERFRAME FALSE DORMER ANCHOR SILL PLATE'S OF FALSE — DORMER THROUGH SHEATHING, HĘADĘF INTO SÓLID BLOCKING

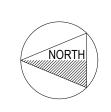
2-1 3/4" X 9 1/4" LVL'S

BUILT INTO TRUSSES

CONTINUOUS P.T. 2X10 LEDGER-

BD W/ (1) 1/2" DIA. LAG BOLTS @

16" O.C. ALT. TOP & BOT.



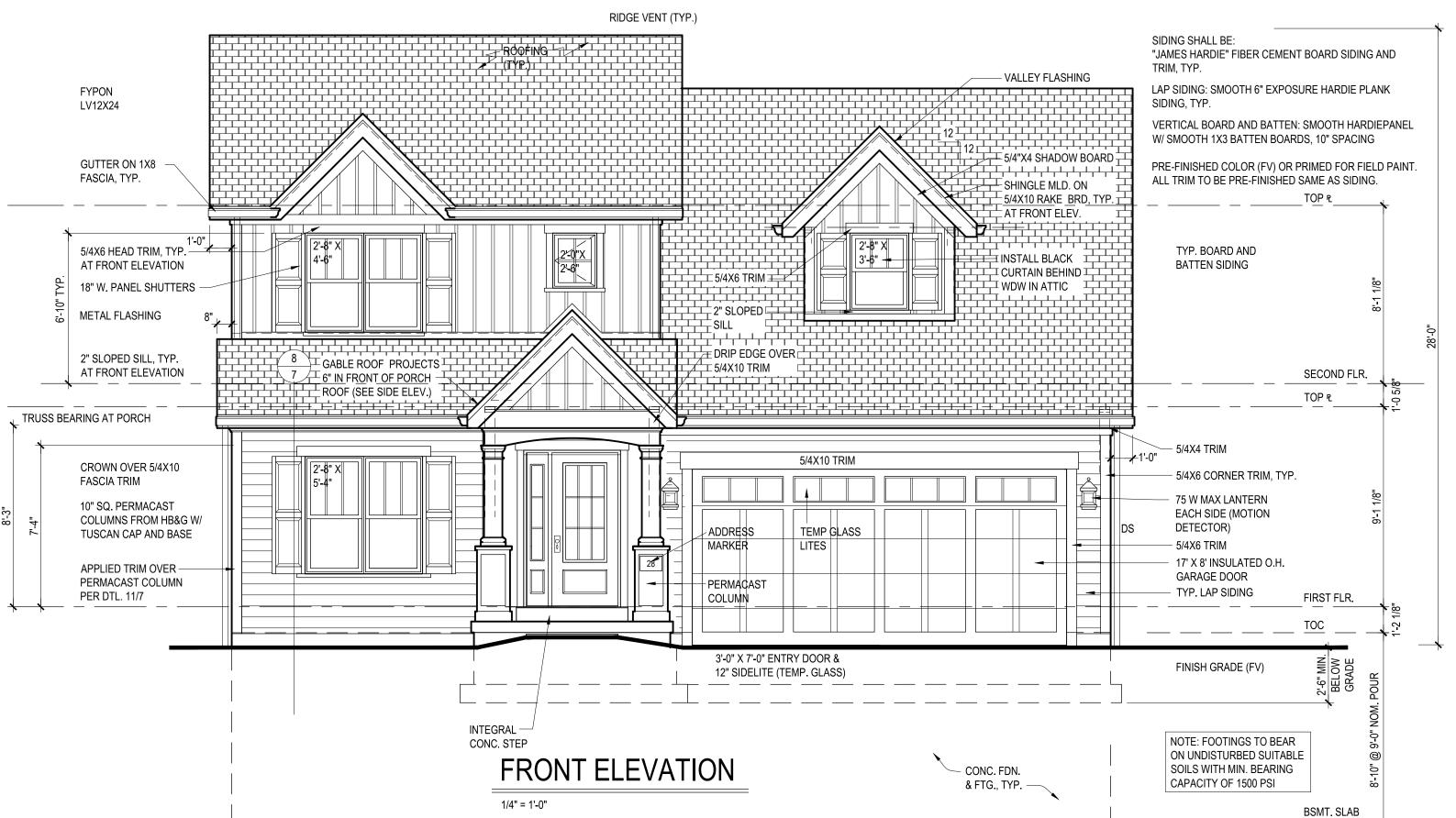
OVERFRAME GABLE

ROOF / FRAMING PLAN

3 - 1 3/4" X 11 1/4" LVL'S HEADER -

EXTEND PER BRACING

GABLE END TRUSS



ELEVATION DRAWING NOTES

- 1. SLOPE GRADE AWAY FROM FOUNDATION MINIMUM 1"/FT. FOR A DISTANCE OF 8'-0" OR TO
- 2. FOOTINGS AND PIERS: BOTTOM OF ALL FOOTINGS TO SET ON SOLID, UNDISTURBED SOIL
- PIERS TO EXTEND MINIMUM 24" INTO SOLID, UNDISTURBED SOIL. BOTH SHALL BE MINIMUM 30" BELOW GRADE.
- 3. ROOF FLASHING: PROVIDE CORROSION-RESISTANT METAL FLASHING AT ALL ROOF VALLEYS, WALL AND CHIMNEY INTERSECTIONS, PORCHES, DECKS, ETC. ROLLED ROOFING OR (2) LAYERS OF TYPE 1 UNDERLAYMENT MAY BE SUBSTITUTED FOR ELASHING AT THE ROOF VALLEY PROVIDED THE SHINGLES ARE INTERLACED.
- FLASHING AT THE ROOF VALLEY PROVIDED THE SHINGLES ARE INTERLACED.

 4. GENERAL CONTRACTOR SHALL CONFIRM USE OF ALL TRIM ACCESSORIES AND MODEL NUMBERS WITH SUPPLIER BEFORE ORDERING.
- 8. WINDOW SIZES ARE GENERIC. WINDOW TYPE: ALUMINUM CLAD EXTERIOR, WOOD INTERIOR. INTERIOR: PRIMED/STAINED. EXTERIOR: BLACK/WHITE.
- 9. EGRESS WINDOW REQUIREMENTS:
- (COMPLY WITH IRC 2015 SECTION R310)

 44" MAX. SILL HT. A.F.F. AT BASEMENT WINDOWS
- 44 MAX. SILL HT. A.F.F. AT BASEMENT WINDOWS
 MIN. NET CLEAR OPENING OF 5.7 S.F. (5 S.F. ALLOWED AT GRADE FLOOR OPENINGS)
 MIN. OPENING HEIGHT = 24" NET CLEAR
- MIN. OPENING WIDTH = 20" NET CLEAR
 CONTRACTOR SHALL SUBMIT MANUFACTURER'S DATA WITH PERMIT DOCUMENTS TO
 SHOW THAT EGRESS WINDOWS MEET THESE REQUIREMENTS.
- 10. WINDOW OPENING REQUIREMENTS: (COMPLY WITH IRC 2015 SECTION R312)
- (COMPLY WITH IRC 2015 SECTION R312)
 FOR WINDOWS WITH SILLS LESS THAN 24" ABOVE THE FLOOR AND MORE THAN 72"
 ABOVE GRADE, LIMIT WINDOW OPENINGS TO PROHIBIT PASSAGE OF 4" SPHERE.
 PROVIDE MECHANISM TO ALLOW FOR EMERGENCY ESCAPE.

7

JIM BULEJSKI ARCHITECTS

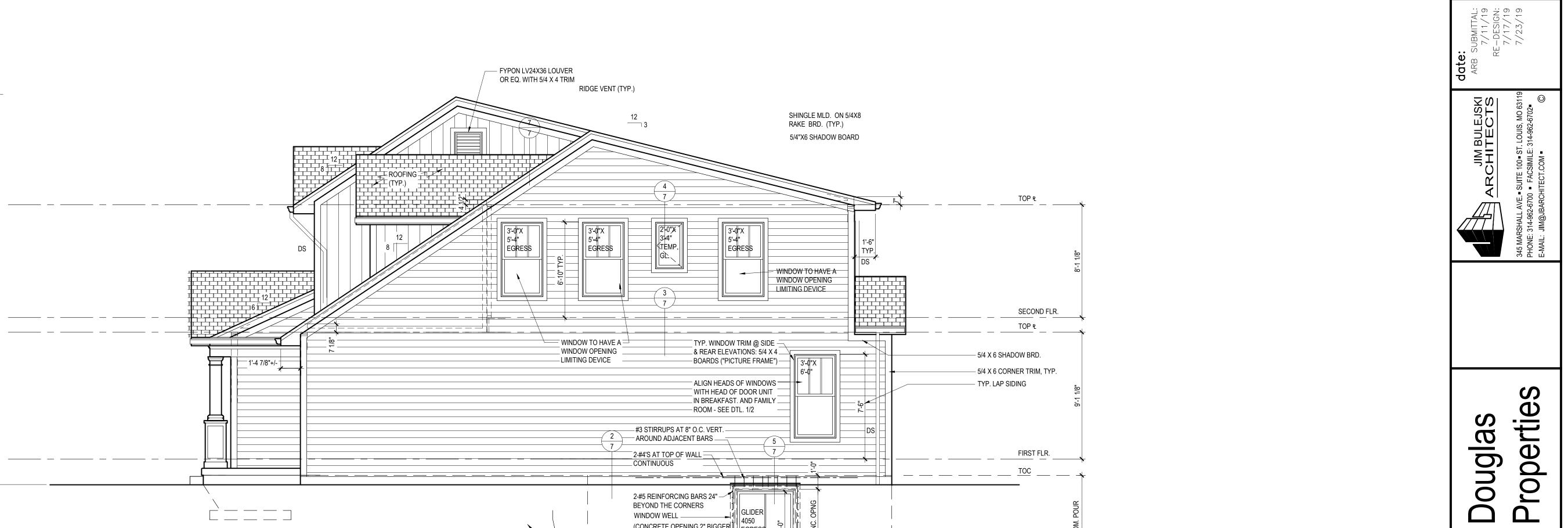
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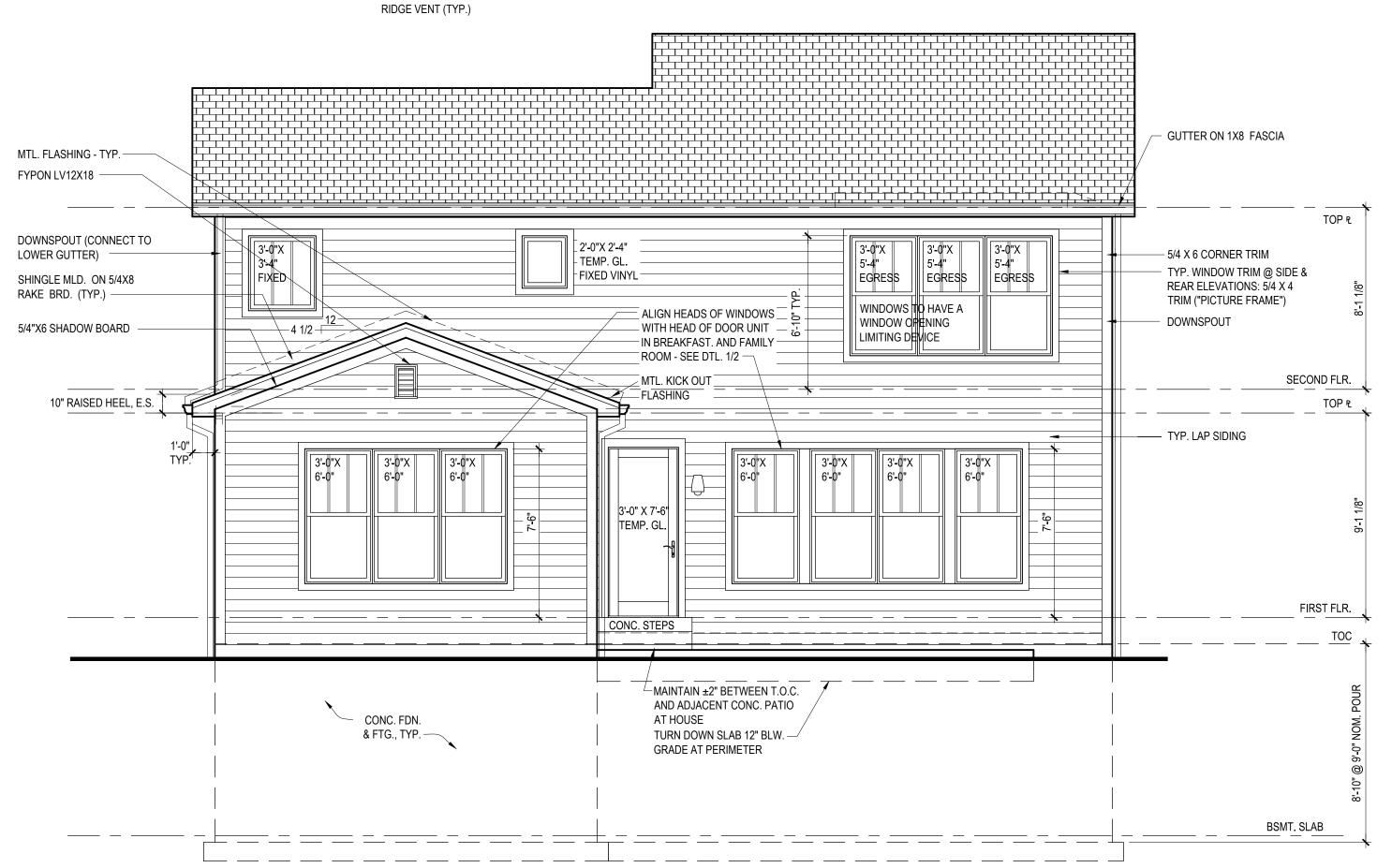
Lane 63124

28 Midpark Ladue, MO (

ELEVATIONS

Douglas





2-#5 REINFORCING BARS 24" -BEYOND THE CORNERS

THAN WINDOW FRAME AND

INSERT 2X PT WOOD NAILER)

FOUNDATION NOTE 12

CONC. FDN.

REAR ELEVATION

1/4" = 1'-0"

CONTRACTOR TO FIELD VERIFY DEPTH REQUIRED TO SET FOOTINGS.

FOOTINGS: BOTTOM OF ALL FOOTINGS TO SET ON VIRGIN SOIL AND

RIGHT SIDE ELEVATION

EXISTING HOUSE REMOVED HAD BASEMENT IN THIS AREA. SEE

FOUNDATION PLAN.

SHALL BE MINIMUM 30" BELOW GRADE.

1/4" = 1'-0"

(CONCRETE OPENING 2" BIGGER

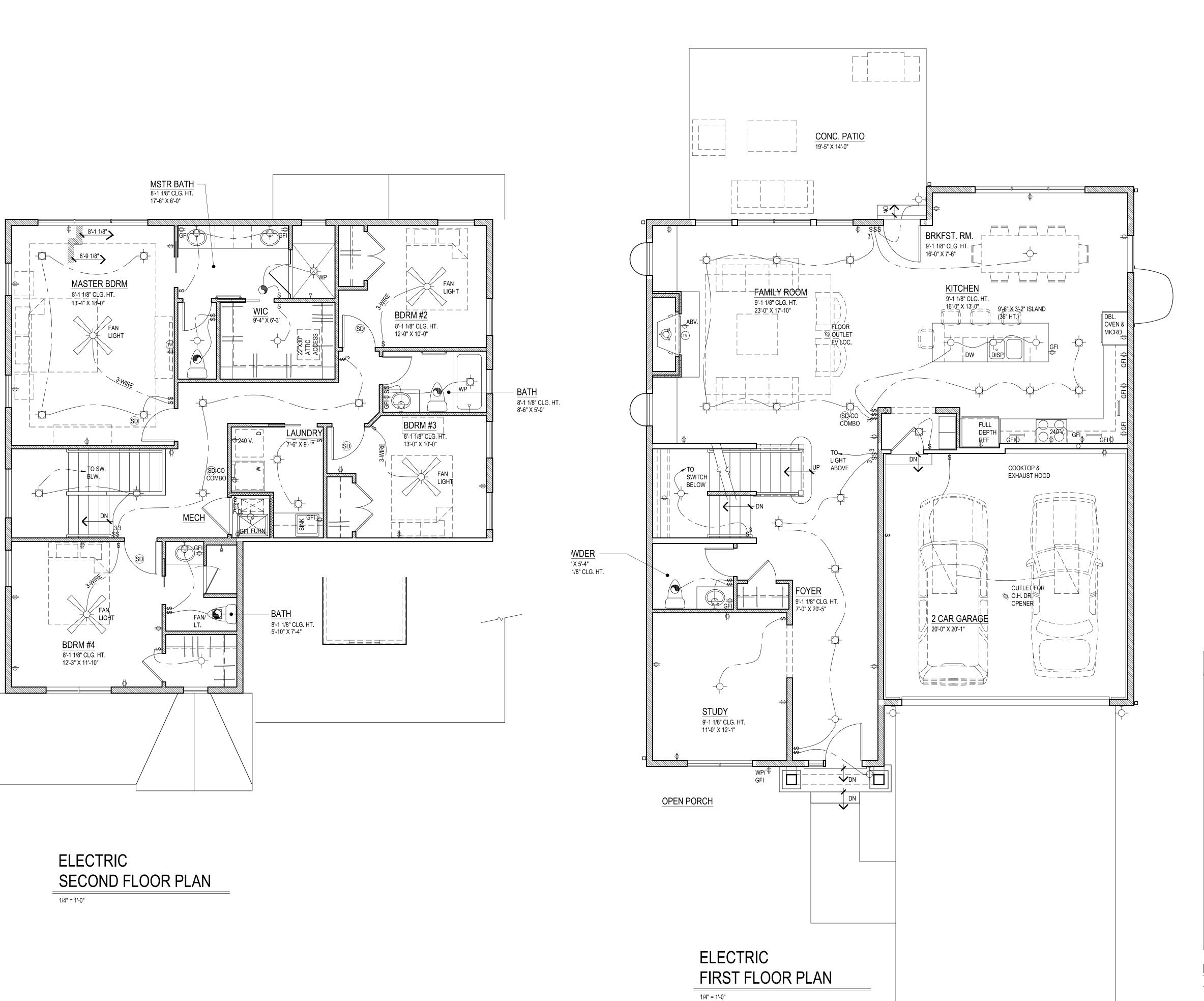
ELEVATION DRAWING NOTES

BSMT. SLAB

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- VALLEYS, WALL AND CHIMNEY INTERSECTIONS, PORCHES, DECKS, ETC. ROLLED ROOFING OR (2) LAYERS OF TYPE 1 UNDERLAYMENT MAY BE SUBSTITUTED FOR
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- NUMBERS WITH SUPPLIER BEFORE ORDERING. 8. WINDOW SIZES ARE GENERIC. WINDOW TYPE: ALUMINUM CLAD EXTERIOR, WOOD
- INTERIOR. INTERIOR: PRIMED/STAINED. EXTERIOR: BLACK/WHITE. 9. EGRESS WINDOW REQUIREMENTS:
- (COMPLY WITH IRC 2015 SECTION R310) 44" MAX. SILL HT. A.F.F. AT BASEMENT WINDOWS
- MIN. NET CLEAR OPENING OF 5.7 S.F. (5 S.F. ALLOWED AT GRADE FLOOR OPENINGS) MIN. OPENING HEIGHT = 24" NET CLEAR • MIN. OPENING WIDTH = 20" NET CLEAR
- CONTRACTOR SHALL SUBMIT MANUFACTURER'S DATA WITH PERMIT DOCUMENTS TO SHOW THAT EGRESS WINDOWS MEET THESE REQUIREMENTS.
- 10. WINDOW OPENING REQUIREMENTS: (COMPLY WITH IRC 2015 SECTION R312)
- FOR WINDOWS WITH SILLS LESS THAN 24" ABOVE THE FLOOR AND MORE THAN 72" ABOVE GRADE, LIMIT WINDOW OPENINGS TO PROHIBIT PASSAGE OF 4" SPHERE.
- PROVIDE MECHANISM TO ALLOW FOR EMERGENCY ESCAPE.

Lane 63124

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Properties Douglas

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ELECTRIC PLAN DRAWING NOTES

ELECTRICAL SYMBOLS

UNDER CAB. INCANDESCENT

CLICK STRIP

BRACKET MOUNT

CEILING MOUNT

RECESSED CAN

RECESSED WALL

FLUORESCENT

FLOOD LIGHT

PULL CHAIN LIGHT

SMOKE DETECTOR

CARBON MONOXIDE CO

LIGHT

LIGHT

DUPLEX OUTLET WATER PROOF (WP)

INTERRUPTER (GFI)

GROUND FAULT

FOURPLEX

SPECIALTY OUTLET

PHONE

SWITCH DIMMER (D)

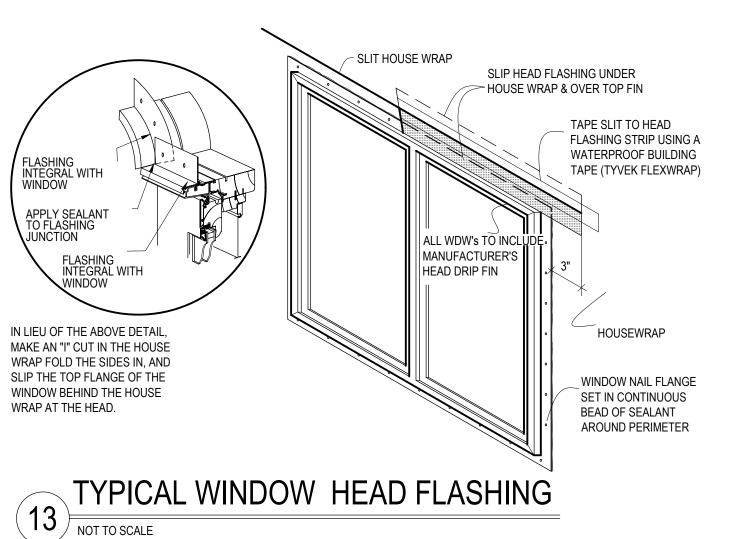
CABLE TV OUTLET

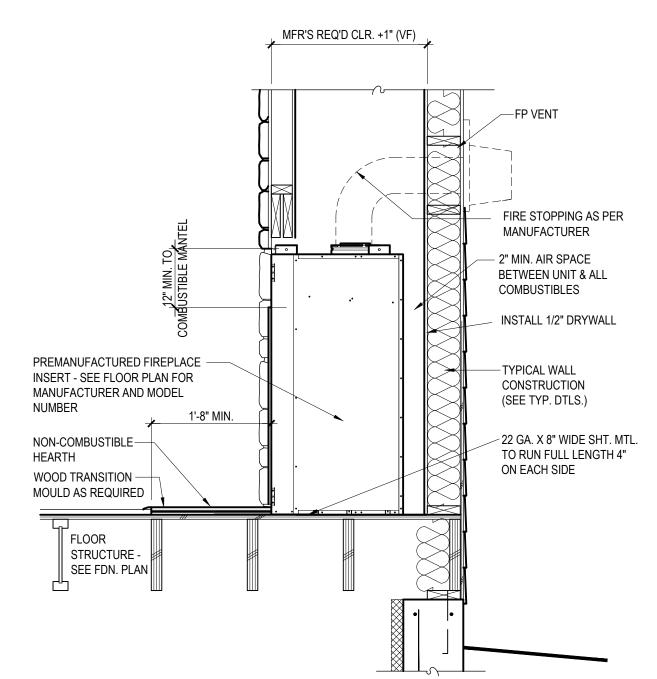
EXHAUST FAN/ MOTOR

COMPUTER NETWORK
PORT/ INTERNET ACCESS

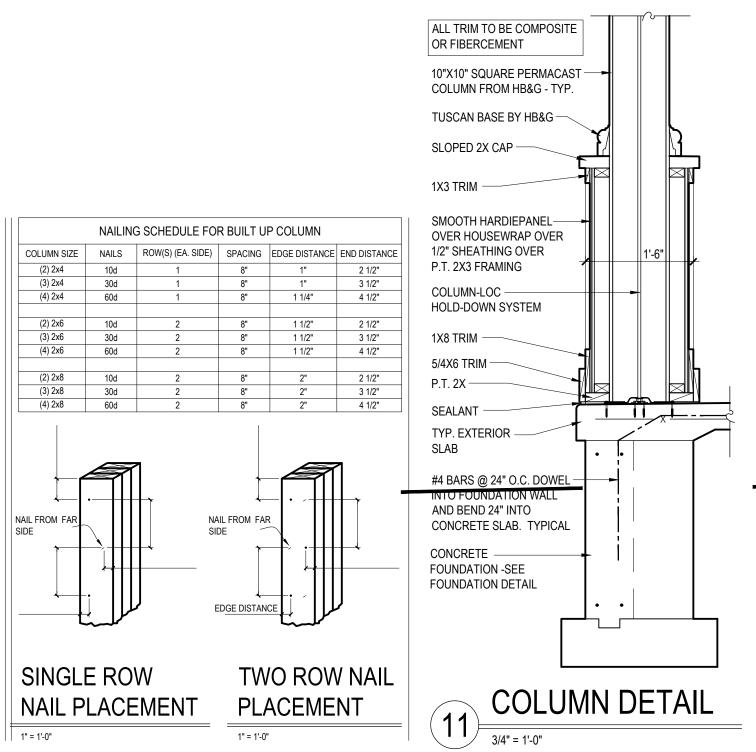
CEILING FAN W/ LIGHT

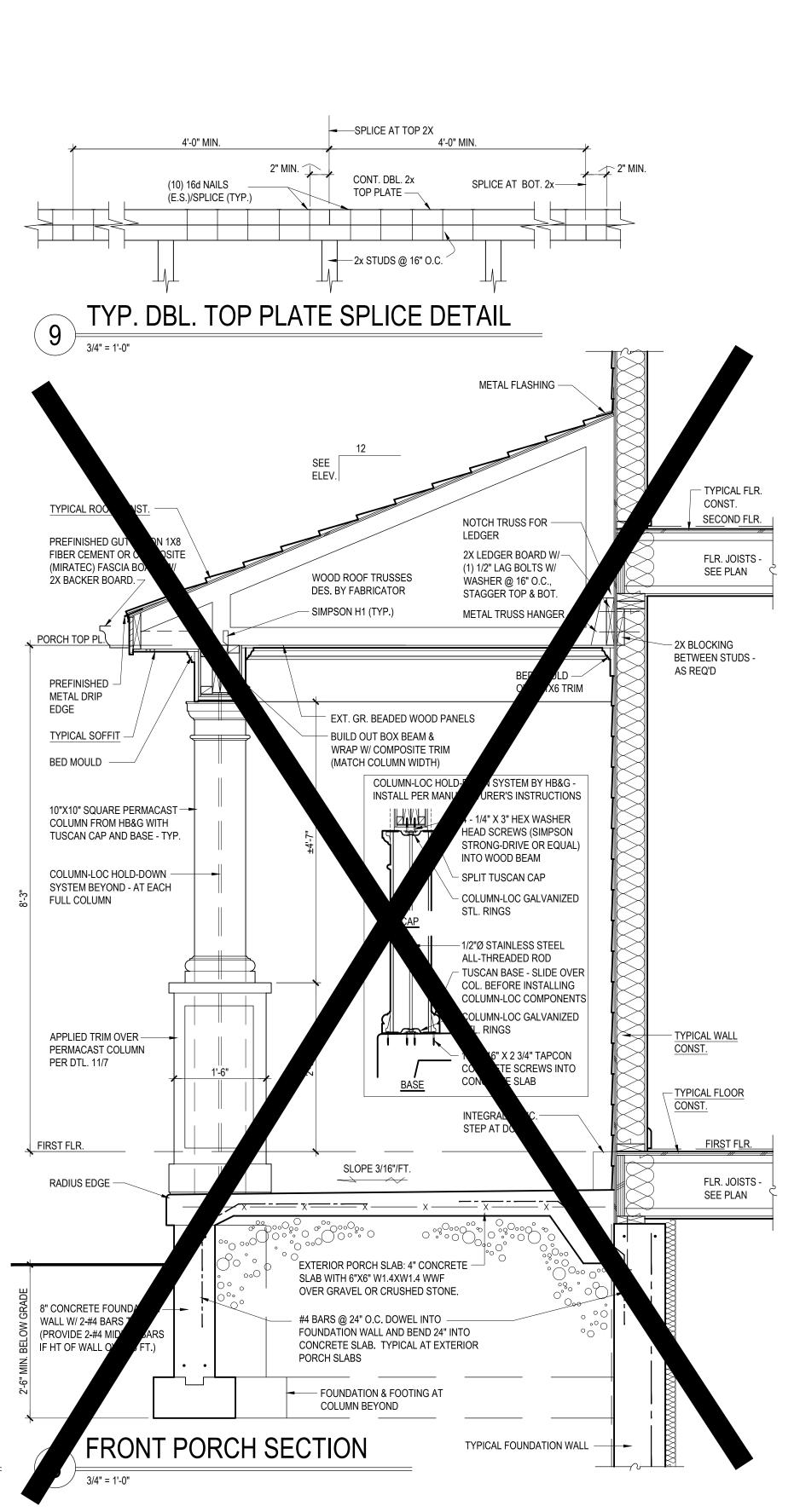
NOTE: HOME RUN ALL RG6 AND CAT. 6 TO ONE SPOT IN BSMT. AND LABEL. PROVIDE ROUGH-IN FOR FUTURE DSS.
 COMPUTER NETWORK PORT TO RECEIVE THE FOLLOWING: (1) RG6 COAX CABLE, (2) CAT. 6 FOR PHONE/INTERNET ACCESS, MODEM, AND NETWORK

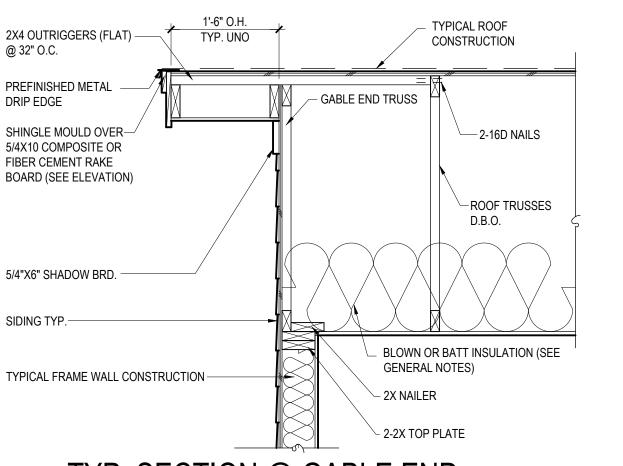




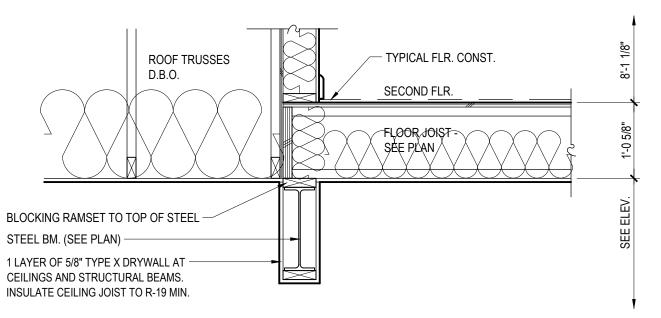




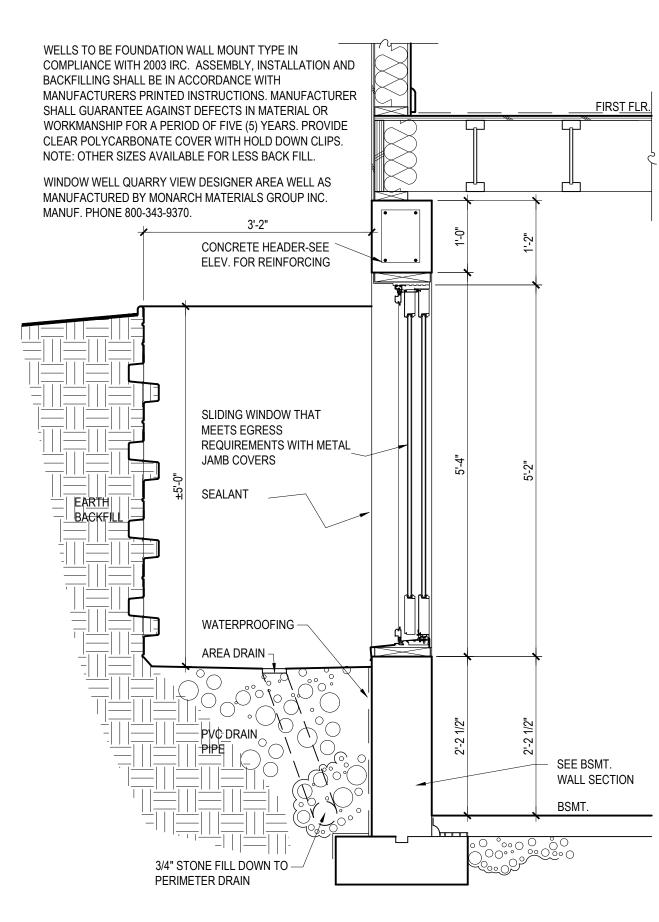




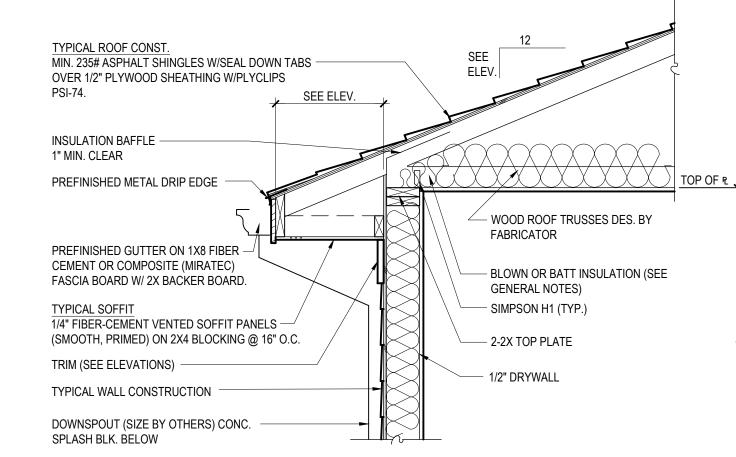
TYP. SECTION @ GABLE END



TYP. SECTION @ GARAGE STEEL BM.

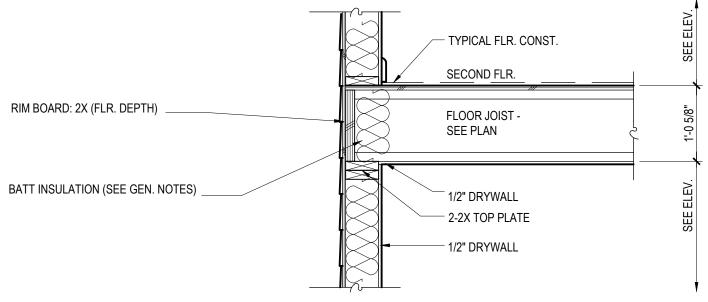


WINDOW WELL SECTION 3/4" = 1'-0"

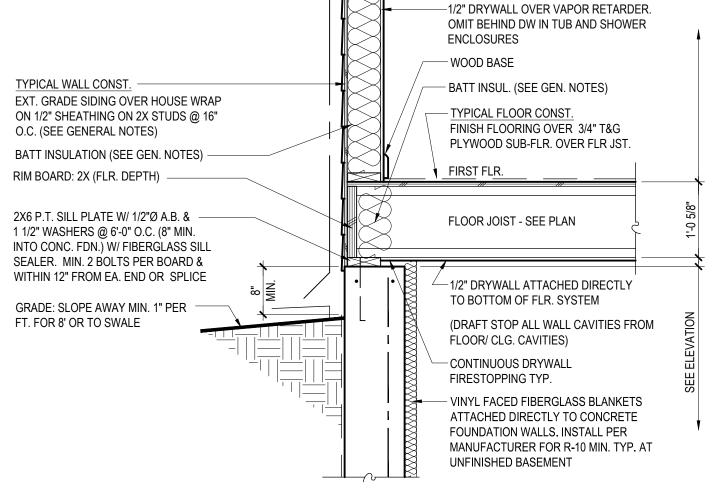


TYPICAL SECTION @ ROOF - FRAME

SCALE 3/4" = 1'-0"



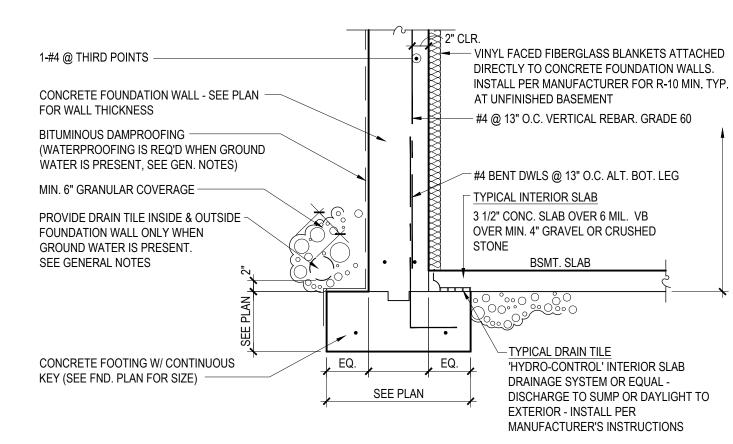
TYP. SECTION @ SECOND FLR.-FRAME



SEE OPT. FLL WALL SECTIONS FOR

ADDITIONAL INFORMATION

TYP. SECTION @ FIRST FLR. - FRAME



TYP. SECTION @ BSMT. FOUNDATION

3/4" = 1'-0"

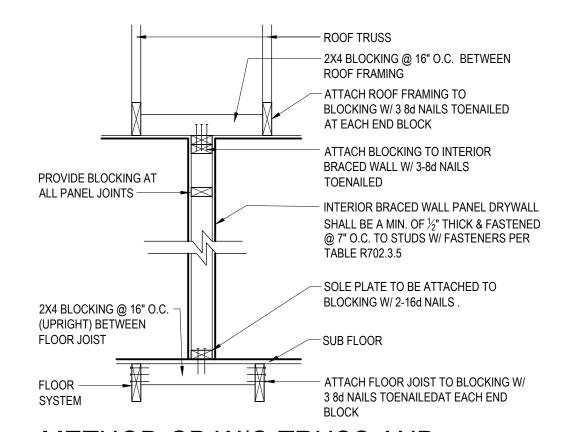
JIM BULEJSKI RCHITECTS

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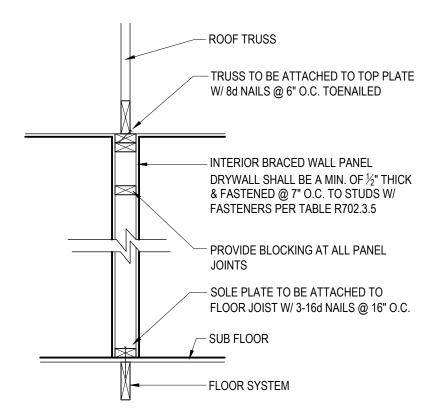
Lane 63124 28 Midpark Ladue, MO

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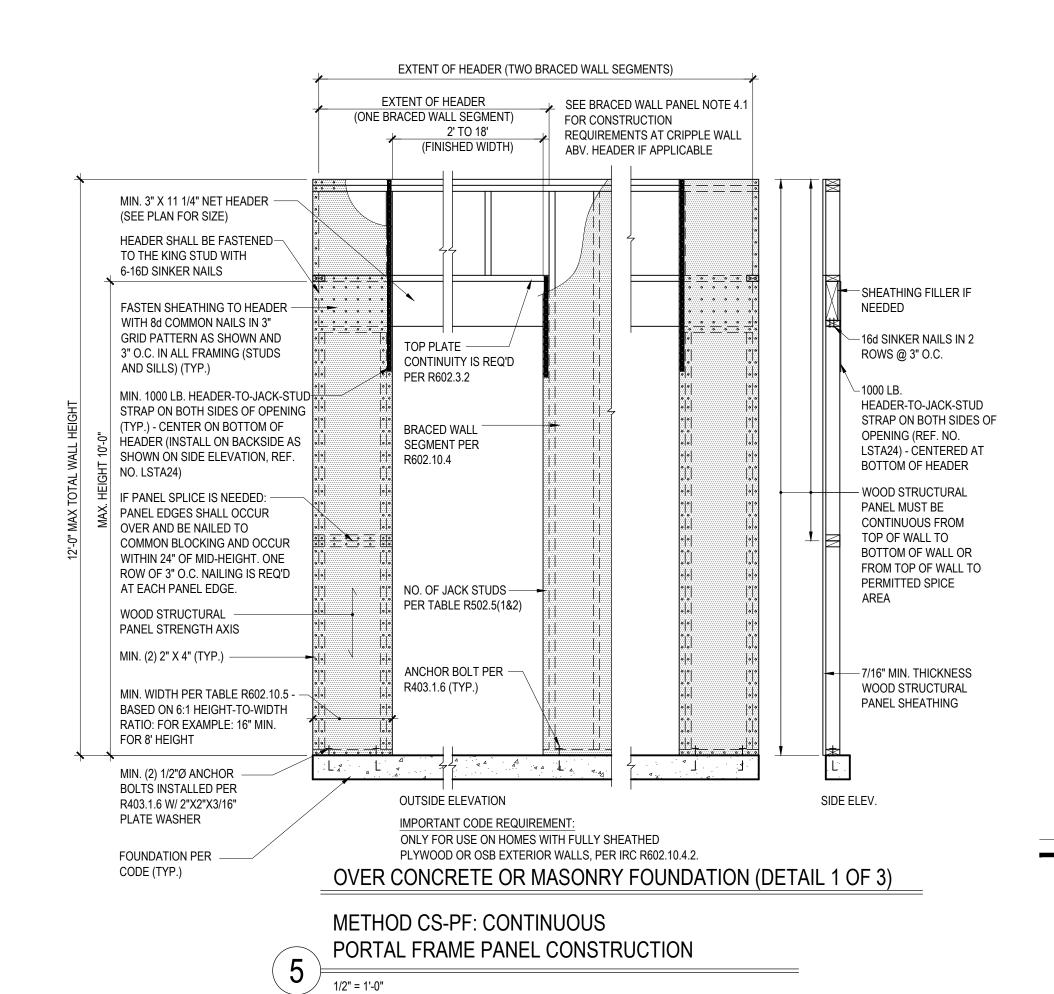
METHOD GB PERPENDICULAR W/ TRUSS AND JOIST



METHOD GB W/O TRUSS AND JOIST OFFSET ABOVE AND BELOW



METHOD GB W/ TRUSS AND JOIST DIRECTLY ABOVE AND BELOW 3/4" = 1'-0"



800# HOLD DOWN DEVICE: FIRST FLOOR: CAST IN PLACE: SIMPSON LSTHD8 / LSTHD8RJ - INSTALL **DURING FOUNDATION POUR - EMBED IN** CONCRETE FOUNDATION

SIMPSON HTT4 - INSTALL USING SIMPSON ACRYLIC TIE ADHESIVE (SET-XP) & 5/8"Ø A36 THREADED RODS (OR EQUAL) U.N.O. 5/8"Ø BOLTS SHALL BE EMBEDDED MIN. 6"

SECOND FLOOR: MSTA36 - INSTALL PER MANUFACTURER'S INSTRUCTIONS - CENTER STRAP ON FLOOR DIAPHRAGM - FASTEN TO STUD PACK ABOVE AND BELOW.

LEGEND: BRACED WALL LINE BWP BRACED WALL PANEL (METHOD CS-WSP U.N.O.)

> GENERAL NOTES: PER IRC 2015 SECTION R.602.10 WALL BRACING CATEGORY: C WALL BRACING METHOD: CS-WSP PORTAL FRAME METHOD: CS-PF SEE BRACING DETAILS THIS SHEET SEE PLANS FOR STRUCTURE

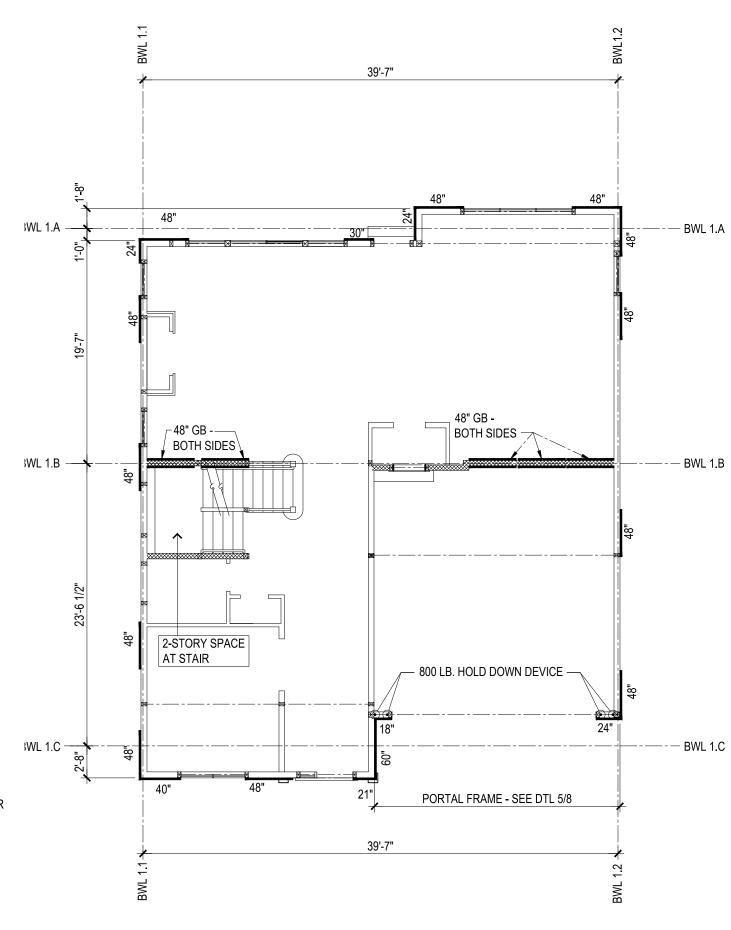
BWL 2.A + 300 LB. HOLD — DOWN DEVICE IN LIEU OF 24" BWP @ ` CORNER BWL 2.B → BWL 2.C 18'-11" 20'-6"

SECOND FLR. - WALL BRACING

GENERAL NOTES: PER IRC 2015 SECTION R.602.10 WALL BRACING CATEGORY: C WALL BRACING METHOD: CS-WSP PORTAL FRAME METHOD: CS-PF SEE BRACING DETAILS THIS SHEET

SEE PLANS FOR STRUCTURE

1/8" = 1'-0"



FIRST FLR. - WALL BRACING

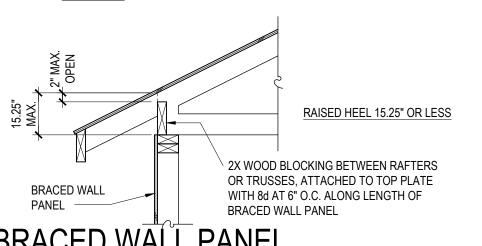
BRACED WALL PANEL NOTES

- 1. NEW CONSTRUCTION TO BE BRACED USING CONTINUOUS SHEATHING AS PRESCRIBED IN IRC2015 R602.10.3. CONTINUOUS SHEATHING METHODS REQUIRE STRUCTURAL PANEL SHEATHING TO BE USED ON ALL SHEATHABLE SURFACES ON ONE SIDE OF A BRACED WALL LINE INCLUDING AREAS ABOVE AND BELOW OPENINGS AND GABLE END WALLS. BRACED WALL PANELS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ONE OF THE METHODS IN TABLE R602.10.4.1.
- 1.1. BRACED WALL PANELS ALONG A BRACED WALL LINE WITH CONTINUOUS SHEATHING SHALL BE FULL-HEIGHT WITH A LENGTH BASED ON THE ADJACENT CLEAR OPENING HEIGHT IN ACCORDANCE WITH TABLE R602.10.4.2 AND FIGURE R602.10.4.2.
- 24-INCH WOOD STRUCTURAL PANEL CORNER RETURN SHALL BE PROVIDED AT BOTH ENDS OF A BRACED WALL LINE WITH CONTINUOUS SHEATHING IN ACCORDANCE WITH FIG. R602.10.4.4(1) AND FIG. R602.10.4.4(2) - SEE DETAILS 1/8 AND 2/8. IN LIEU OF THE CORNER RETURN, A HOLD-DOWN DEVICE WITH A MINIMUM UPLIFT DESIGN VALUE OF 800 POUNDS SHALL BE FASTENED TO THE CORNER STUD AND TO THE FOUNDATION OR FRAMING BELOW IN ACCORDANCE WITH FIG. R602.10.4.4.(3)
- SHEATHING SHALL NOT EXCEED THE VALUES IN TABLE R602.3(3). WOOD STRUCTURAL PANEL WALL SHEATHING SHALL BE ATTACHED TO FRAMING IN ACCORDANCE WITH TABLE R602.3(1) OR TABLE R602.3(3). WOOD STRUCTURAL PANELS MARKED EXPOSURE 1 OR EXTERIOR ARE CONSIDERED WATER-REPELLENT SHEATHING UNDER 2009 IRC. THE MINIMUM DESIRED TO BE EMPLOYED, AS ADDITIONAL CALCULATIONS AND DELINEATION ON THE CONSTRUCTION DOCUMENTS WILL BE REQUIRED. STRUCTURAL ENGINEERING BY OUTSIDE
- ABV. THE INTERIOR BRACED WALL LINE OR THE FLR./ROOF FRAMING ABV. THE INTERIOR BRACED WALL LINE IS PERPENDICULAR TO THE WALL, ADD 2X4 BLOCKING AT 16" O.C. BETWEEN THE FLR./ROOF FRAMING. THE BLOCKING SHALL BE ATTACHED TO THE FLR./ROOF FRAMING W/ 3-8d NAILS TOENAILED AT EA. END OF THE BLOCK. EA. BLOCK SHALL BE ONLY (ENTIRE WALL LINE NOT REQUIRED TO BE BLOCKED). SEE DETAILS 6, 7 & 8, SHT. 8.
- 3.1. SOLE PLATES OF INTERIOR BRACED WALLS SHALL BE ATTACHED TO A FLR. JST./TRUSS LOCATED DIRECTLY BELOW THE WALL WITH 3-16d NAILS AT 6" O.C.. WHERE THE CLG. OR FLR. JSTS./TRUSS IS NOT LOCATED DIRECTLY BELOW THE INTERIOR BRACED WALL LINE OR THE FLR. FRAMING BELOW THE INTERIOR BRACED WALL PANEL IS PERPENDICULAR TO THE WALL, ADD 2X4 BLOCKING AT 16" O.C. BETWEEN THE FLR. FRAMING. THE BLOCKING SHALL BE ATTACHED TO THE FLOOR FRAMING W/ 3-8d NAILS TOENAILED AT EA. END OF THE BLOCK.
- 4. METHOD CS-PF: CONTINUOUS PORTAL FRAME BRACED WALL PANELS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FIGURE R602.10.4.1.1. SEE DETAIL 5/8. SEE IRC2015 SECTION R602.10.4.1.1 AND TABLE R602.10.4.1.1.
- THE STRAP SHALL BE CONNECTED TO EA. WALL OR GABLE TRUSS W/ 9-16d NAILS FOR A TOTAL OF 18-16d NAILS IN THE ENTIRE STRAP. STRAPS TO BE LOCATED AT EA. END OF THE CONNECTED WALLS OR WALL AND GABLE TRUSS WHERE SPACE ALLOWS FOR THE 10" LENGTH OF STRAP, 4' MAX, ON CENTER STRAP SPACING, THE STRAPS SHALL NOT BE BENT HORIZONTALLY TO ACCOMMODATE WOOD FRAMING. IF APPLICABLE NAILERS SHOULD BE ADDED TO ONE OF THE WALLS OR GABLE END USING A MINIMUM OF 9-16d NAILS TO CREATE THE VERTICAL PLANE NEEDED TO MOUNT THE STRAP.
- 5. EXTERIOR BRACED WALL PANELS SHALL BE CONNECTED TO ROOF FRAMING AS FOLLOWS
- 5.1. PARALLEL RAFTERS OR ROOF TRUSSES SHALL BE ATTACHED TO THE TOP PLATES OF BRACED WALL PANELS IN ACCORDANCE WITH TABLE R602.3(1)
- 5.2. WHERE THE DISTANCE BETWEEN THE TOP OF RAFTERS OR ROOF TRUSSES AND PERPENDICULAR TOP PLATES (RAISED HEEL) IS 15 1/4 INCHES (387 MM) OR LESS, RAFTERS OR ROOF TRUSSES SHALL BE CONNECTED TO THE TOP PLATES OF BRACED WALL PANELS WITH BLOCKING IN ACCORDANCE WITH FIGURE R602.10.6.2(1) AND ATTACHED IN ACCORDANCE WITH TABLE R602.3(1).
- 5.3. WHERE THE DISTANCE BETWEEN THE TOP OF RAFTERS OR ROOF TRUSSES AND PERPENDICULAR TOP PLATES (RAISED HEEL) EXCEEDS 15 1/4 INCHES (387 MM), PERPENDICULAR RAFTERS OR ROOF TRUSSES SHALL BE CONNECTED TO THE TOP PLATES OF BRACED WALL PANELS IN ACCORDANCE WITH DETAIL 4/8.

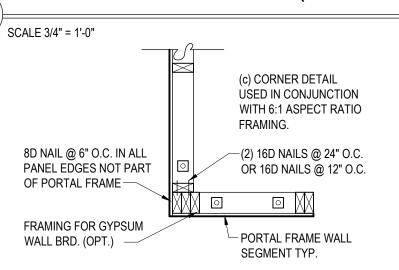
			SECON	D FLOC	אס אנ	CING C	ALGULA	TIONS (CER IA	DLE KO	02.10.3(1))	
BRACED WALL	BWL SPACING	CING STORY LOCATION	METHOD CS-WSP	ADJUSTMENT FACTORS PER TABLE R602.10.3(2)							TOTAL	TOTAL	NOTES
LINE (BWL)				ITEM 1	ITEM 2	ITEM 3	ITEM 4	ITEM 5	ITEM 6	ITEM 7	REQ'D	PROVIDED	
BWL-2.1	39'-7"	2 OF 2	6'-0"	1.00	1.00	0.90	1.30	N/A	N/A	N/A	7'-0"	15'-6"	
BWL-2.2	20'-6"	2 OF 2	3'-6"	1.00	1.00	0.90	1.30	N/A	N/A	N/A	4'-1"	8'-0"	
BWL-2.3	39'-7"	2 OF 2	6'-0"	1.00	1.00	0.90	1.30	N/A	N/A	N/A	7'-0"	9'-8"	
BWL-2.A	38'-6"	2 OF 2	6'-0"	1.00	1.00	0.90	1.30	N/A	N/A	N/A	7'-0"	12'-2"	
BWL-2.B	36'-2"	2 OF 2	5'-6"	1.00	1.00	0.90	1.30	N/A	N/A	N/A	6'-5"	8'-0"	
BWL-2.C	38'-6"	2 OF 2	6'-0"	1.00	1.00	0.90	1.30	N/A	N/A	N/A	7'-0"	10'-2"	

FIRST FLOOR BRACING CALCULATIONS (PER TABLE R602.10.3(1))													
BRACED WALL LINE (BWL)	BWL SPACING STORY LOCATION		METHOD CS-WSP	ADJUSTMENT FACTORS PER TABLE R602.10.3(2)							TOTAL REQ'D	TOTAL PROVIDED	NOTES
LIIVE (DVVE)		LOCATION	03-7735	ITEM 1	ITEM 2	ITEM 3	ITEM 4	ITEM 5	ITEM 6	ITEM 7	REQU	FROVIDED	
BWL-1.1	39'-7"	1 OF 2	11'-6"	1.00	1.00	0.95	1.00	N/A	N/A	N/A	10'-11"	18'-0"	
BWL-1.2	39'-7"	1 OF 2	11'-6"	1.00	1.00	0.95	1.00	N/A	N/A	N/A	10'-11"	16'	
BWL-1.A	19'-7"	1 OF 2	6'-6"	1.00	1.00	0.95	1.30	N/A	N/A	N/A	8'-0"	14'-6"	
BWL-1.B	23'-6"	1 OF 2	14'-8"	1.00	1.00	0.95	1.30	N/A	N/A	N/A	18'-2"	20'-0"	METHOD GB
BWL-1.C	23'-6"	1 OF 2	7'-6"	1.00	1.00	0.95	1.30	N/A	N/A	N/A	9'-3"	14'-4"	PORTAL FRAME BWP LENGTH MULTIPLIED BY 1.5 (PER TABLE R602.10.5)

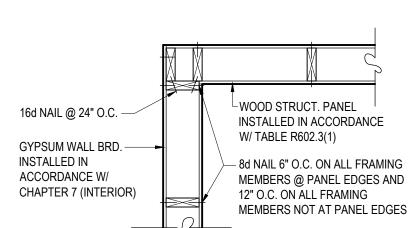
BRACING CALCULATIONS FOOTNOTES: CS-PF PANELS CONTRIBUTE 1.5 X ACTUAL LENGTH PER R602.10.3.4 METHOD GB BWP LENGTH: SINGLE SIDED = 1/2 LENGTH; DOUBLE SIDED = LENGTH



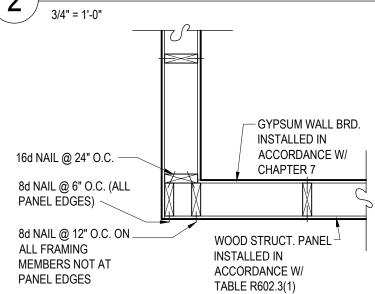
BRACED WALL PANEL CONNECTION TO PERPENDICULAR RAFTERS / TRUSSES (CS-WSP)



CORNER DETAIL AT BRACED WALL (CS-WSP)



INSIDE CORNER DETAIL (CS-WSP)

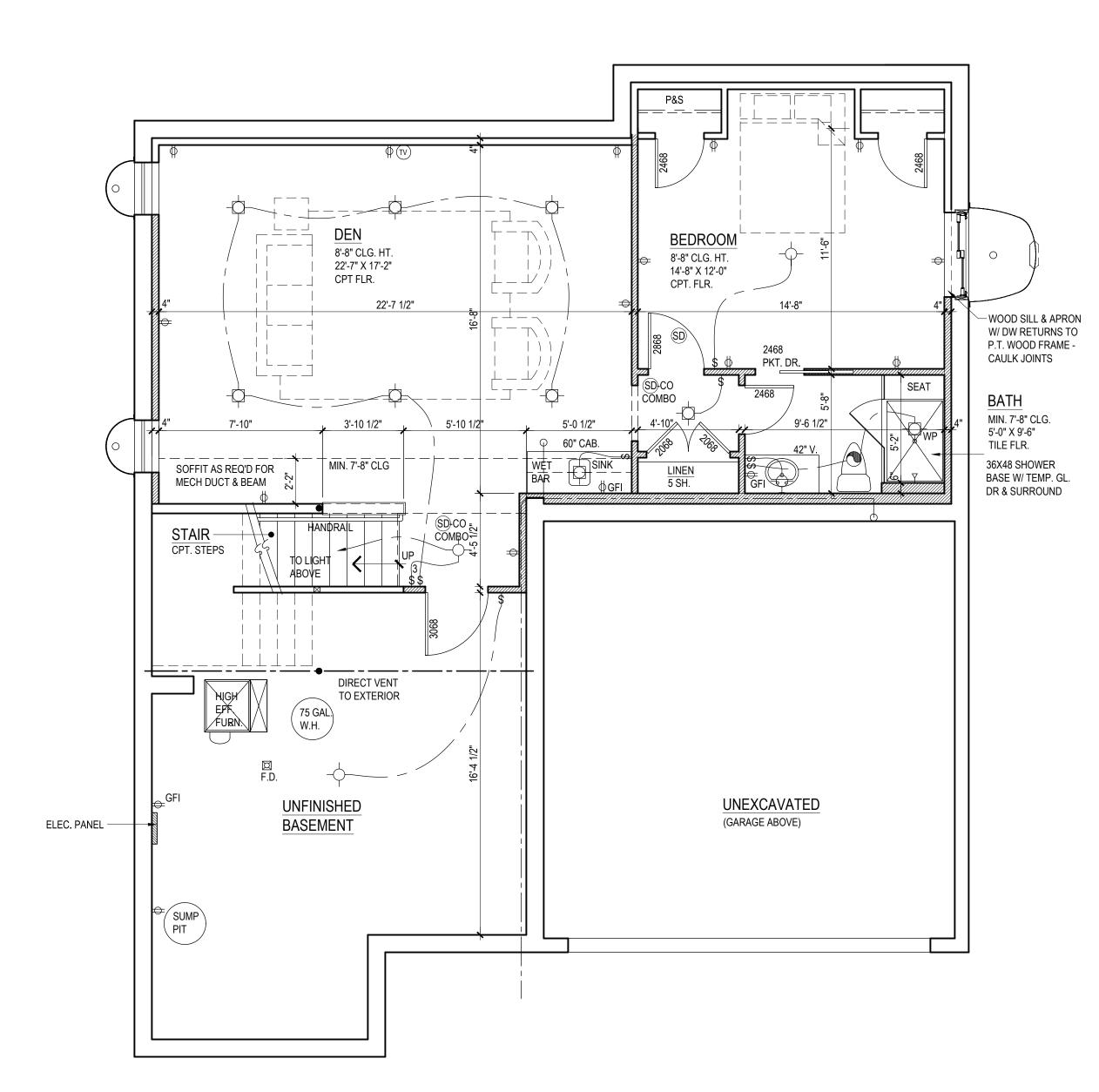


OUTSIDE CORNER DETAIL (CS-WSP)

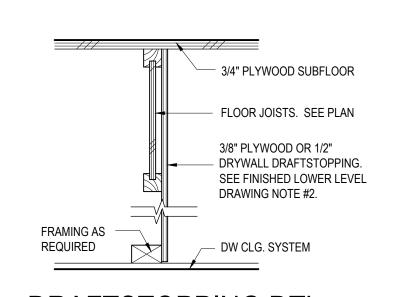
Lane 63124 28 Midpark Ladue, MO

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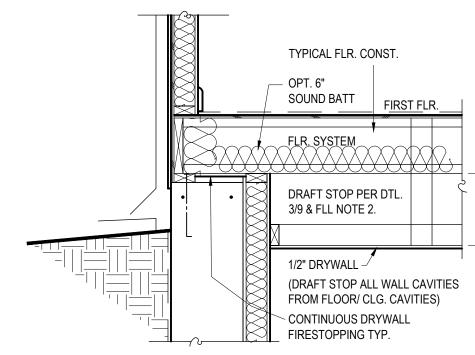
BRACING





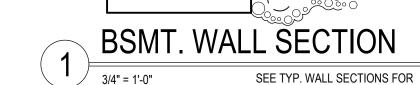


DRAFTSTOPPING DTL.



BSMT. WALL SECTION -DROPPED CLG.

SEE TYP. WALL SECTIONS FOR ADDITIONAL INFORMATION TYPICAL FLR. CONST. SOUND BATT FIRST FLR. FLR. SYSTEM 1/2" DRYWALL ATTACHED
DIRECTLY TO BOTTOM OF FLR. SYSTEM (DRAFT STOP ALL WALL CAVITIES FROM FLOOR/ CLG. CAVITIES) CONTINUOUS DRYWALL FIRESTOPPING TYP. BATT INSULATION (SEE GEN. NOTES) BATT INSULATION (SEE GEN. NOTES) P.T. 2X SILL PLATE -WOOD BASE BSMT. SLAB



FINISHED LOWER LEVEL DRAWING NOTES

1. ALL INTERIOR WALLS TO BE 3 1/2 " (2X4 STUDS), UNLESS NOTED OTHERWISE (UNO). (OPTIONAL LIGHT GAGE STEEL STUDS)

ADDITIONAL INFORMATION

- USE PRESSURE TREATED SILL PLATES OR STEEL TRACKS. 2. DRAFTSTOPPING: CEILINGS SUSPENDED BELOW WOOD JOISTS OR ATTACHED DIRECTLY TO
- WOOD FLOOR TRUSSES SHALL BE DRAFT STOPPED AT MAXIMUM 1000 S.F. INTERVALS PARALLEL TO MAIN FRAMING MEMBERS. SEE DETAIL THIS SHEET.
- 3. CEILING HEIGHTS TO BE DETERMINED BY EXTENT OF DUCTWORK, STEEL BEAMS, ETC. (7'-0" MIN. CEILING HEIGHT)
- 4. FURR DOWN CEILING, IF REQUIRED, TO CLEAR BEAMS, DUCTWORK, WIRES, PIPES, ETC.,
- UNLESS NOTE OTHERWISE. 5. SET ALL CEILING AS HIGH AS POSSIBLE. PROVIDE ACCESS PANELS TO UTILITIES, CLEANOUTS
- ETC. IN FINISHED AREAS. VERIFY METHOD WITH OWNER.
- 6. MAINTAIN REQUIRED CLEARANCES AROUND FURNACES AND WATER HEATERS. 7. VENT BATHROOM EXHAUST FAN TO EXTERIOR.
- 8. ADJUST LOCATIONS OF RECESSED LIGHT FIXTURES IF REQUIRED FOR FRAMING MEMBERS, DUCTWORK, ETC. REVIEW ALTERNATE LOCATIONS WITH OWNER.

MECHANICAL: GAS APPLIANCES LOCATED IN SPACES WHERE THE VOLUME IS LESS THAN 50 CUBIC FEET PER 1,000 BTU/HR. INPUT RATING, SHALL HAVE COMBUSTION AIR PROVIDED. MECHANICAL CONTRACTOR SHALL CALCULATE, SPECIFY AND COORDINATE WITH GC ALL ADDITIONAL COMBUSTION AIR AS REQUIRED BY THE MECHANICAL CODE AND LOCAL JURIDICTIONS. LOUVERED DOORS SHALL BE PERMITTED BY THE ARCHITECT IF CALLED OUT ON THE PLANS. VERIFY WITH OWNER. IF ADDITIONAL COMBUSTION AIR IS REQUIRED MC SHALL PROVIDE THE FOLLOWING: USING INSIDE AIR: PROVIDE 1 SQ. IN. PER 1000BTU/HR. IN HIGH AND LOW OPENINGS. MIN. OPENING SIZE 100 SQ. IN.

USING OUTSIDE AIR: PROVIDE 1 SQ. IN. PER 4,000 BTU/HR. (1 SQ. IN. PER 2,000 BTU/HR. IF DUCTED HORIZONTAL OPENING)

ENERGY CONSERVATION REQUIRED WITH COMBUSTION / VENTILATION OUTSIDE AIR:

- SOLID, SELF-CLOSING WEATHERSTRIPPED DOOR -R-13 INSULATION AT INTERIOR WALLS -R-19 INSULATION AT FLOOR/CEILING -WRAPPED, INSULATED DUCTS

-STOPPED WALL PENETRATIONS

JIM BULEJSKI ARCHITECTS

Examination of Documents and Project Site: Contractors warrant they have carefully examined the drawings, read the specifications and visited the site (to verify, topography, site restrictions existing conditions) and that his bid includes all items necessary to perform the work. Prior to beginning the work, promptly notify the architect of any discrepancies or errors discovered in the documents. Do not scale drawings. Follow written dimensions only. Only written

interpretations or documented changes from the architect are binding. Architect will not be responsible for oral instruction. Codes & Permits: All work shall be done in accordance with all applicable local codes, ordinances, state and federal codes. Notify architect immediately of any inconsistencies. Contractor shall bear correction cost if he knowingly performs any work contrary to the regulations. Building and fire district permit approval

Copyright: These plans are the sole and absolute property of the Architects. Any use, copying or reproducing of these plans without the express written consent of Jim Bulejski Architects is illegal. The architect takes no responsibility for work that does not bear his seal and signature.

Certain materials and equipment are specified by manufacture or trade name to establish minimum standards of quality and performance and not for the purpose of limiting competition. Material suppliers and phone numbers may be included as a convenience and purchase may be made through any competent source. Base bid shall include products specified unless the owner or architect approves the proposed substitution. Contractor suggesting substitutions shall include cost differences. Contractor shall take full responsibility and bear all cost associated with any affect these substitutions have on other trades or on construction in general. Contractor shall strictly adhere to manufacturers installation instructions.

The Contractors shall indemnify, protect, defend and save, and hold harmless the Owner and Architect from and against any and all claims, demands, liability, and costs, including attorney's fee, arising from injury to persons during the life of this contract.

In the event of the happening of anything, liability for which is herein assumed by either the contractor or the owner or the architect, the contractors agree to notify the architect and owner in writing which notice shall forthwith give the details as to the happening.

performed in this contract. The contractor shall, include in this contract, provisions to correct "within reason" any defects (settlement, shrinkage, door or window adjustments needed) in the work which may appear within twelve months after the date of Final Payment to the contractor or within such longer period of time as may be prescribed by law. The contractor shall not be responsible for general maintenance or to compensate for homeowners neglect. The contractor and his subcontractor's warrant that all materials and equipment shall be new, unless otherwise specified, and that work shall be of good quality and free of defects. In addition, the contractor shall assume full responsibility for any damage to the building and its contents caused by defects or improper installation of equipment or materials. Provide owner with receipts and warranty information on all items that carry a manufacturer's warranty.

Commencement of work by any trade indicates acceptance of previous work by others to be suitable for proper application of a subcontractor's work unless the owner is given a written notice of damage or defective workmanship and the possible effects upon the succeeding work. It is the responsibility of each subcontractor to notify the general contractor and architect of any problem before beginning construction.

The architect and the architect's employees and consultants shall have no responsibility for the discovery, presence, handling, removal, or disposal of, or exposure of persons to hazardous materials in any form at the project site, including, but not limited to asbestos, asbestos products, polychlorinated biphenyl (PCB) or other toxic substances

General contractors responsibility includes and is not limited to the following:

Verify and coordinate all openings & inserts for mechanical, plumbing and electrical work as required for their installation and per drawings. Provide all necessary temporary bracing, shoring, guying, or other means to avoid excessive stresses and to hold structural elements in place. Shall be responsible for damage to owner's or other's property done by him or individuals in the contractor's employ, or through negligence.

- 2.1 <u>Flood plain</u>: Basement floor elevation must be above 100 year flood plain. low sill must be minimum 2 feet above flood plain elevation.
- 2.2 Soil bearing capacity: General Contractor to hire a soils engineer licensed in the state of Missouri for soil testing, the owner shall be required to pick up the cost of these services. The architect shall be informed of the engineer's written recommendations and shall review prior to the work proceeding. If less than 1500 psf. soil bearing capacity, redesign may be required. All footings and column pads shall bear on virgin soil. The architect and owner
- shall be notified during excavation if additional excavation is required. 2.3 Finish Grading: Finished grades at the bldg. to be a min. of 6" below top of foundation for wood frame and 4" below for wood frame with brick veneer. All wood framing members that rest on top of the foundation located less than 8 inches above the exposed ground and all other wood less than 6
- inches from the ground shall be pressure treated. Grade shall slope away from foundation a minimum of a 6" drop within the first 10' or to a swale. 2.5 <u>Existing Topsoil:</u> Carefully scrape up in areas of new construction only. Stockpile topsoil on site in area that does not disturb any existing trees, and
- 2.7 <u>Backfill and fill:</u> Backfill shall be free of all tree roots, large rocks construction debris.
- 2.11 <u>Termite Treatment:</u> "Termidor". Treat below all slabs, entry pads, porches, and on the outside face of all foundation walls to include dirt just outside foundations. Furnish written warranty for 5-year period from treatment date signed by applicator.
- 2.12 <u>Drain tile:</u> 4" (Agricultural drain tile) Black corrugated performed with filter fabric drain tile. Install drain tile all around house, see details on plans. Provide owner with an optional price to connect downspouts to a separate under ground drainage system.
- 2.13 Concrete Driveway: 4" thick concrete with 10/10 wire mesh using 6 sack meramec gravel concrete over 3" to 4" of 1"minus crushed compacted rock. Wood or carpet float finish and broom finish at steep driveways exceeding 5%. Round all edges 1/4" radius. Provide 1/4" per foot crown slope UNO. No
- 2.14 Concrete Patio or Walkway: 4" concrete walk with 6" x 6" W1.4 x @ 1.4 WWF over minimum 4" crushed stone. Slope to drain water. 2.14 Exposed Aggregate Patio or Walkway: 4" concrete walk with 6" x 6" W1.4 x @ 1.4 WWF over minimum 4" crushed stone. Finish shall be exposed
- aggregate using Meramec River gravel. Verify selection of exposed aggregate finish with owner. Round all edges 1/4" radius. Slope to drain water.
- 2.15 <u>Concrete Expansion/Control Joints:</u> At drives and walks 1/2' expansion joints with premolded filler at maximum 15 ft OC. and at building junctures. Control joints to be 1/4" wide at least 1" deep at maximum 6 feet OC.

DIVISION 3 - CONCRETE

- 3.1 Compressive strength of concrete at 28 days shall be minimum: a. 2500 psi – basement slabs.
- b. 3000 psi foundation, basement walls, footings, and piers. c. 3500 psi - porches, walks, patios, steps, garage slabs, and driveways.
- 3.2 All concrete shall be air-entrained in accordance with IRC 3.3 <u>Admixtures</u> used must conform with IRC and be approved by the architect.
- 3.4 <u>Footings & piers</u>: must be a minimum of 2'-6" below finished grade and bear on undisturbed soil or prepared fill. Exterior footings & piers shall extend a minimum of 12" into undisturbed soil and at least 30" below finished grade.
- 3.5 <u>Vertical Reinforcing</u>: for foundation walls to be derived from 2015 IRC table 404.1.2(8).
- 3.6 <u>Horizontal Reinforcing</u>: per 2015 IRC table 404.1.2(1).

redistribute on site during finish grading.

- 3.7 Basement walls and floors shall be treated to provide resistance to the infiltration of water and properly reinforced to withstand water pressure as necessary per R406.2
- 3.8 Provide construction, isolation, and control joints as indicated or required. Locate joints so as to not impair strength or appearance of structure. 3.9 Protect concrete from weather extremes during mixing, placing and curing. In cold weather comply with ACI 306; in hot weather comply with ACI 305.
- 3.10 Interior concrete: Finish surface by troweling to a uniform texture and appearance.

Includes masonry fireplaces and masonry on exterior of house.

4.1 General Masonry: 1" min. air space between veneer and sheathing. Brick veneer shall be anchored to the supporting wall with corrosion resistant corrugated sheet metal wall ties with min. 22 gage by 7/8" ties (or 2 piece hot dipped galvanized) placed not more than 24" on center horizontally and vertically and shall support no more than 2.67 square feet of wall area. Construct a sample panel at the job site for owner's approval before ordering.

Provide flashing and weepholes at least 3/16" in diameter spaced less than 24" apart over all wall openings and at foundations, typical. Provide ASPHALT COATED COPPER FLASHING OR PEEL AND STICK FLASHING (min. 16" wide sheets) and weeps (min. 3/16") at max. 24" OC. over all wall openings and at foundations typical. Provide Tyvek House Wrap over sheathing, behind veneer.

DIVISION 5 - STRUCTURAL STEEL

- 5.1 Steel to be minimum A36 grade steel. All steel beams minimum 3" bearing to be grouted solid into beam pockets with "non-shrink" grout. All steel beams, columns, and lintels to be shop primed. Use steel Shims, Typ.
- 5.2 Provide steel angle at all masonry openings (U.N.O.). Verify size with architect if not indicated. Minimum 8" bearing onto masonry. 5.3 Minimum column size shall be 3" diameter schedule 40 columns. (See plans for each size.) All reinforcing steel shall be grade 60. Bolts A03
- 5.4 All steel beams terminating at steel post shall run completely (full bearing) over top of steel post.

DIVISION 6 - WOOD FRAMING

6.1 Materials & Descriptions:

Floor joists: to be grade-marked minimum 1000/1150 fb (2x12's) or 1050/1208 fb (2x10's) single member use / repetitive, unless noted otherwise. (substructure exposed to exterior - pressure treated, use cedar or other exterior grade wood for finish surfaces). Sill plates: 2x6 Pressure Treated installed over fiberglass sill sealer. Grout level as required

Stairs shall be designed for a 40 psf live load or 300 lb. concentrated load on 4 sq. inches at mid span of a tread; whichever produces the greater stress and deflections. Stair winders must have 9" minimum tread depth at a point not more than 12" from the narrow end and be at least 6" in depth

Posts: (2) 2x to be interpreted as (2) 2x "cripples", glued and nailed, plus minimum (1) full height unbroken stud. all posts to be blocked solid to top of structure below. studs used as posts to be spruce-pine-fir. minimum post size 2-2x wall thickness, typical under all beams and headers uno. Exception: posts caring minimal loads, less than 8'-0" in height and supporting headers spanning 3'-0" or less may consist of a

single 2x cripple and (1) full ht. unbroken stud unless noted otherwise. Interior partitions; Minimum 2x4 studs at 16" OC., UNO. All framing to be 16" OC. typical UNO.

Headers: minimum 2-2x10's glued and nailed unless noted otherwise.Typical at all doors and windows. Glue and nail all beams together. Subfloor: APA Rated Sturd-I-Floor or Avantec, 24"0C (23/32") ¾" nom., Exposure 1, (Plywood only) glued and nailed. (using ring shanks) to joists. Do not use ring shanks on I joist.

Exterior Wall Sheathing: APA rated sheathing exposure 1, span rating 24/16, (7/16" OSB) or 32/16, (15/32" plywood) 1/2" nominal. Use plywood under EIFS not OSB! Bracing shall comply with IRC.

Roof Sheathing; APA Rated Sheathing, Exposure 1, span rating 32/16, (15/32" plywood) ½" nom. w/ plyclips. Laminated Strand Lumber: LSL 1.55E, 2250 psi "Timberstrand" beams as manufactured by Truss Joist Corporation or approved equal.

<u>Laminated Veneer Lumber:</u> LVL 1.9E, fb 2600 psi "Micro-lam" beams as manufactured by Truss Joist Corporation or approved equal. Parallel Strand Lumber: PSL 2.0E, fb 2900 psi "Parallam" beams as manufactured by Truss Joist Corporation or approved equal. T & G Wood Bead Board Ceiling: Standard available 1x6 (23/32) Tongue & Grove with "V" groove at each joint on each side, surfaced one

the truss. All fasteners (nails, bolts, hangers, flashing, etc.) that come into direct contact with ACQ Preservative Treated Wood to be hot

side in cedar or pine. Typical where noted on plans (Back prime before installation at exterior use) Nailing: Nailing and Fastening of floor, wall, and roof assemblies shall be fastened in accordance with tables R602.3(1) through R602.3(4) gypsum sheathing shall be fastened in accordance with table R602.3(1) rafter/ceiling joist systems shall be nailed to the top plate of the wall in accordance with table R602.3(1). Trusses shall be nailed to the top plate of the wall with 3-16d nails toe nailed without splitting the end of

Interior Millwork: As detailed on plans -Match existing. Provide base shoe mold at all wood or tile floors. Flat jambs shall be 🗓 thick min., wall caps, bookcase shelving, and window sills shall be minimum 5/4" thick, UNO. Install trim with minimum number of joints. Cope inside corners and returns. Miter and glue corners. Scarf end-to-end joints.

Shelving: Closet shelving in pantries shall be solid White Melamine Shelves. Clothes closets shall be vinyl coated wire pole and shelf system indicated as P&S) UNO. Linen closets shall be 5 vinyl wire shelves, typical.

Shelving: Closet shelving "Custom Closets" shall be by allowance.

Exposed Exterior Materials to be approved exterior grade. Typical. Exterior metal connectors shall be galvanized. 6.3 Fireblocking: Top and bottom of all conventional, double stud, furred spaces, and staggered stud frame walls are to be fireblocked vertically at the

- ceiling and floor levels and horizontally at intervals not exceeding 10'. Fireblocking required at all soffits and dropped ceilings. Mid-span wall blocking shall be required on all exterior and interior walls. Fireblocking required between stairway stringers at the top and bottom of the run. Enclosed accessible spaces under stairs shall have walls and clg. clad with ½ " dw. Fireblocking required around vent, pipe, and duct penetrations of ceilings and floors. All spaces between the chimney and the floors and ceilings shall be fireblocked (1" depth of batt or blanket of mineral wool or glass fiber supported by strips of metal or metal lath).
- 6.4 <u>Draftstopping</u>: Ceilings suspended below wood joists or attached directly to wood floor trusses shall be draftstopped at 1000 sq. ft. intervals and
- parallel to main framing members. Access Openings: a 22" x 30" min. access opening required for attic areas which exceed 30 sf and have a clear height over 30". Install in a hallway or other accessible location with 30" minimum headroom above the opening. A 16" x 24" minimum wall access opening is required for crawl spaces. Coordinate opening size required when an appliance is located in attic or crawl space. Access panels to be weatherstripped and insulated to be
- equivalent to surrounding surfaces 6.6 <u>Deck Doors</u>; Securely barricade doors until deck is built and approved, typical.
- 6.7 Double Floor Joists around stair openings, fireplace hearths, at corners of cantilevered bays and under parallel partitions (typical at all openings, uno). Bearing partitions and post shall be unbroken (run continuous) from bearing to structure below.
- Cutting, Notching, and/or Boring holes on wood beams, joists, rafters, or studs shall not exceed the limitations noted in sections R502.8, R602, and R802.7. Reinforcement of studs shall be done in accordance with IRC. Notches and holes in top plates, bottom plates and mid-span fireblocking shall be properly sealed with fire caulking or other methods as approved by the Code Official. Install 1x4 each side of steel beam nailed to floor joist, or ramset 2x4 to top of beam and toe nail joist, or block solid between joist over beam. NOTE: Framing crew shall review HVAC layout drawings provided by heating contractor and thicken walls where required for ductwork. Do not cut out
- 6.9 <u>Cabinet supplier</u> to field measure area of work after rough framing to assure exact fit of cabinets and free operation of all doors and drawers. Scribe
- cabinets to wall as required. Handrails: shall not project more than 4 1/2" into required stairway width. Handrails at straight run stairs to be continuous. Handrail shall have circular cross section with minimum diameter of 1 1/4" but not more than 2", or other approved shapes having a maximum allowable horizontal width of 2 1/4", maximum graspable perimeter dimension of 6 1/4", and a minimum 4" graspable perimeter dimension. Handrail ends shall return to the wall or
- General contractor shall provide owner with post construction walk through at approximately eleven months after construction is complete to review the work Guards: along open-sided stairs with a total rise more than 30" shall be a minimum of 34"in height above the leading edge of the tread and minimum of 8.10 36" in height at the stair landings. Minimum 36" high guards shall be provided along balconies, areaways, mezzanines and open-sided walking surfaces where the difference in floor levels is more than 30". Open guards shall have intermediate vertical balusters spaced less than 4" apart.
 - 6.11 Roof Over Framing: Minimum 2x6 at 16"oc (max. 10'-0" span) UNO, with 2x sill plate anchored through roof sheathing into solid blocking -- or -- truss the over framing where possible. cut openings in sheathing to vent to attic.
 - Trusses to be designed by others and shall comply with 2009 IRC, ANSI/AF&PA NDS-2001, and ANSI / TPI 1-2002 as the design standards. Fabricator's Responsibilities include but are not limited to designing all connections and truss to truss connections. All trusses must be designed to resist horizontal thrust. No horizontal thrust shall be applied to any walls. All trusses to be two (2) point bearing unless noted otherwise. Trusses to be designed to minimize total deflection. Compound deflection must be taken into account when designing truss system. Total Load Deflection of truss system not to exceed 1/360. Scissor Trusses with horizontal movement greater than 1/2" to be anchored with TC simpson anchors on one end, or
 - Truss supplier to provide shop drawings, product data for all truss components, stress diagrams (which have been signed and sealed by a structural engineer licensed to practice structural engineering in missouri) and a truss layout plan showing all truss locations, hangers, connectors, spacing, pitch, girders and cross bracing. Fabricator shall coordinate his work with the architectural/structural plans and notify the architect of variations prior to fabrication. General contractor is responsible for checking and coordinating truss drawings. General contractor shall submit truss drawings to the architect for review for general conformance with the construction documents. All variations
 - must be brought to the attention and approved by the architect b. All roof framing shall be designed to support the following minimums:
 - Top chord of trusses snow load 20 lb. per sq. ft., approx. 10 lb. per sq ft. dead load or roof rafter: use actual dead load. (note: dead load must include 2 layers of roofing) Ceiling joists or use a live load of 20 lb. per sq. ft when there is attic storage. Bottom chord of trusses: use 10 lb per sq. ft. live load where there is no attic storage.

dead load-use actual dead load

DIVISION 7 - THERMAL AND MOISTURE Construction shall comply with "International Energy Conservation Code" & the IRC (Prescriptive Method). Per N1101.14, Builder to provide a permanent certificate to be posted on or in the electric panel (not to obstruct other labeling). Certificate to include: predominant R-values in ceiling/roof, walls, foundation and ducts; U-factors for fenestration; solar heat gain coefficient of fenestration; types & efficiencies of heating, cooling and service water

Dampproofing / Waterproofed walls that retain earth and enclose interior spaces shall be waterproofed or dampproofed depending on the presence or non-presence of groundwater. An evaluation of the soil for the presence or absence of ground water is required prior to pouring concrete. No Groundwater Present: Provide perforated drain pipe inside or outside of foundation. Drainage system shall discharge by gravity to daylight or be connected to an approved

sump. Walls shall be dampproofed with a bituminous material, 3 lb. per sq. yd. of acrylic modified cement, 1/8" coat of surface bonding mortar, or by any of the materials permitted for wall waterproofing Groundwater Present - Provide perforated drain pipe both inside and outside of foundation. Drainage system shall discharge by gravity to daylight or be connected to an approved sump. Foundation to be "waterproofed" with approved system per manufacturer's instruction in accordance with R406.2.

waterproofing to be applied from the top of the footing to the finished grade. All joints in walls and floors to be water tight. ROOFING: Provide and install the roofing shown on the drawings and everything required to complete a good weather tight roof installation that qualifies for the manufacturers warranty. (Verify final color selections with owner.)

Roofing shall be: Match existing asphalt shingles General Roofing: Asphalt shingles shall not be installed on roof slopes below (2:12). (verify with manuf.) Class A, B, or C roofing shall be required where the edge of the roof is less than 3' to the property line. Felt Underlayment: Minimum type | Per ASTM D226-97A or type | Per ASTM D4869-88(1993)E (commonly called 15# asphalt felt).

Slopes of 2:12 to less than 4:12 shall be protected with two layers of underlayment. Apply a 19" strip of underlayment felt parallel with and starting at the eaves, fastened sufficiently to hold into place. Starting at the eave, apply 36" wide sheets of underlayment. Successive 36" wide sheets of underlayment shall overlap the previous 36" wide sheet by 19". All underlayment shall be fastened sufficiently to hold into place. slopes equaling or exceeding 4:12 shall be protected with one layer of underlayment. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2", fastened sufficiently to hold in place. End laps shall be offset by 6'

Asphalt Roll Roofing: installed on roofs of less than 3:12 slope, apply parallel to the eaves. It shall not be installed on roof slopes below 1:12. minimum roof slope 1/4:12 with approved low-slope roof covering materials. I<u>ce and Water Shield</u>: is required under shingles/roofing of 2 layers of type 1 underlayment cemented together or an approved waterproofing membrane extending from the edge of the eave to at least 24" (measured horiz.) inside the exterior wall line where the roof slope is greater than or equal to 4:12 and the eave overhang is less than 12" (measured horizontally) from the sheathing to the outside face of the gutter board, or where the roof slope is less than 4:12 and greater than or equal to 2:12.

Roof Flashing: provide corrosion-resistant flashing at all wall and roof intersections, changes in roof slope or direction, around all roof openings, intersections with chimneys, intersection of exterior walls and porches and decks, etc. Installed per SMACNA. Valley flashing shall be installed per

Metal flashing shall be 26 gauge-galvanized steel. Upgrade to min 16 oz. copper flashing where noted on drawings. Rolled roofing or two (2) layers of Type 1 underlayment may be substituted for flashing at the roof valley provided the shingles are interlaced. Underlayment substituted for valley flashing shall be installed to extend at least 18" beyond a roof valley or hip from either direction. Flashing at

Ridge Vents OmniRidge By Lomanco 7.3 <u>GUTTERS & DOWNSPOUTS:</u> All gutters and downspouts to be sized and located by others, and be installed per "SMACNA" recommendations. Verify all downspout locations with owner. Gutters shall be seamless minimum 5" (EDIT 6") prefinished aluminum gutters (with leaf screens), well sealed and watertight, with oversized downspouts. Verify color with owner. Install downspouts as indicated on plans if shown with at least 1 downspout per 25' gutter run. Downspouts shall discharge to "splash blocks" directed away from foundation. Provide owner with optional price to connect downspouts to, separate 4" dia. Non-perforated underground drainage system, which is connected to storm sewer if allowed by municipality (verify), or "day lighted".

Install screened end caps where drain tile discharges to daylight. Gutters and downspouts required on roof overhangs less than 36". Insulation to have an R-value identification mark or installer to provide certification. Certification to include: insulation type, manufacturer, R-value of insulation in each element of the building thermal envelope. For blown or sprayed insulation (fiberglass or cellulose), certification to include: initial installed thickness, settled thickness, settled R-value, installed density, coverage area and number of bags installed. At blown or sprayed roof/ceiling insulation, the thickness of insulation shall be written in inches on markers, affixed to the trusses facing the attic opening, that are installed at least one for every 300 sq. ft. throughout the attic.

<u>Thermal Requirements:</u> (R-Values indicated must be obtained by only the insulation material used, not by the total system). roof/ceiling min. R-49 Blown (R-38 if 100% of ceiling satisfies, uncompressed R-38 over top pl. @ eaves) wood frame walls & band joists/boards min. R-20 (2x6) R-22 BATT COMPRESSED TO 5 1/2" / BIB (BLOWN IN BLANKET)

floor over over unheated crawl space or garage min. R-19 Min. min. R-13 (full height) finished concrete basement FDN. walls unfinished concrete basement FDN. walls min. R-10 min. R-10 (min. 2' depth)

min. R-10 General: OPTION TO PROVIDE AN AIR SEAL PACKAGE. Voids in corners, headers, and all exterior wall framing, shall be filled completely. Insulation above ceilings shall not clog space designed for ventilation (Min. 1"). Insulation to be installed following installation of Owens Corning EnergyComplete Sealant System. EnergyComplete to be installed in following locations: top & bottom of each wall cavity where exterior sheathing meets framing & at vertical framing where there is a joint in sheathing; interior face of top plate on all exterior walls & interior walls with attic above; bottom plate and subfloor on exterior walls; around electrical wires & boxes, plumbing pipes, ductwork or any other penetrations between floors; around windows and

7.5 Sound batts: 3 1/2", Certainteed sound control batts or approved equal. Install around all upper level bathroom drain lines where they pass through finished areas of the house

doors; all rim joists, including between foundation wall and sill plate, rim joist and sill plate, and rim joist and subfloor; any other penetrations on

7.6 <u>Caulking and Sealants</u>: Exterior joints around windows and door frames, between wall and penetrations for utility service through walls, floors and roof and all other openings in the exterior envelope shall be sealed in an approved manner. Weather stripping is required on all exterior windows and doors. Corrosion resistant flashing is required at the top and sides of all exterior doors and windows and at the intersection of all masonry and frame construction. Sill seal is required at foundation

Sealant used shall be <u>Vulkem 116</u> as manufactured by Tremco. 7.7 <u>Sheet Metal and Flashing (other than roof flashing)</u>: shall be: minimum 26-gauge aluminum with baked on enamel finish where exposed. Comply with "Architectural Sheet Metal Manual" by SMACNA.

7.8 <u>Waterproof Membrane</u>: Manufacture; Pasco (or approved equal) installed per manufacturers recommendations with preformed corners. Showers or steam room w/ tile; 40 mil (red) shower pan liner 7.9 <u>Vapor Retarder</u>: is required on the warm side of the insulation of all exterior frame elements. Vapor retarder shall be integral with Kraft faced batts meeting ASTM-96. (polyethylene vapor barriers should not be used in ceiling or walls.) Install 6-mil poly vapor barrier under concrete slab. Use large sheets of material, thus eliminating most joints. A vapor retarder shall not be installed under water-resistant gypsum backer board in shower or

7.10 Weather- Resistant Sheathing Paper (asphalt saturated felt 14# per square otherwise known as type I felt, Tyvek, Typar, or other approved weather resistant material) shall be installed under siding and brick/stone veneer listed in table R703.4.

7.15 Attic Ventilation: (net free) area is to be at least 1/150 of the area served. Two remote vents required for each attic/space (minimum). Exception: required ventilation area may be reduced to 1/300 where a vapor retarder having a transmission rate not exceeding 1 perm is provided on the conditioned side of the insulation, or if the gable or ridge vents are located in the upper 1/3 of the attic or enclosed rafter space and provide 50% to 80% of the required vent area with the balance of the required vent area is supplied by eave or cornice vents. Enclosed attic, rafter and crawl space areas may be ventilated by a mechanical exhaust and supply air system of .02 CFM/sq. ft. of horizontal area.

The ventilation systems shall operate continuously Unfinished Basement Ventilation: and utility rooms require natural ventilation (net openable area) at the ratio of 1% of the square footage floor area served. Mechanical ventilation with outdoor air (not recirculated air) in accordance with the mechanical code may be substituted at a rate of .05 CFM/sq.

7.16 Air Leakage: The building thermal envelope shall be durably sealed to limit infiltration. The following shall be caulked, gasketed, weatherstripped or

openings between window and door assemblies and their respective jambs and framing; utility penetrations; dropped ceilings or chases adjacent to the thermal envelope; knee walls; walls and ceiling separating the garage from conditioned spaces; behind tubs and showers on exterior walls; attic access openings; rim joists junction; other sources of infiltration. A blower door test is required to prove building tightness.(NOT IN CLAYTON)

DIVISION 8 - WINDOWS AND DOORS

All fenestration (windows, doors, and skylights) U-factors shall be in accordance with NRFC 100 and labeled and certified by the manufacturer. Windows: all windows shall have a maximum U value of .35.

8.3 Window Wells: serving a basement emergency escape and rescue shall be a minimum of 9 square feet in horizontal area with a minimum horizontal projection width of 36". The well shall also be large enough to allow the window to be fully opened. Wells with a vertical depth greater than 44 inches shall have a permanent ladder or steps. The ladder, if applicable, shall be at least 12" wide, project a minimum of 3" from the wall and have rungs spaced not more than 18" on center vertically. Structural calculations not required on window wells that have an ICC-ES research report addressing the

8.5 Glazing installed in the following locations shall be tested and labeled in accordance with CPSC 16 CFR part 1201 Standard as a Type I or II category. 1. Glazing in doors and any portion of a building wall enclosing bathtubs, showers, indoor or outdoor pools which is located 60" or less, measured

horizontally, from the water's edge and less than 60" vertically above a standing surface. 2. Any glazing material adjacent to a door if the nearest vertical edge of the glazing material is within a 24" arc of either vertical edge of the door in a closed position and if the bottom edge of the glazing material is less than 60" above the floor. Exceptions: Where there is an intervening wall or barrier to prevent a person from striking the glazing while approaching the door., Glazing adjacent to a door serving a closet or storage area 3' or less in depth., Decorative glass

3. Safety Glazing is required for fixed or operable panels that meet all of the following:

a.) individual pane greater than 9 sq. ft. and; b.) bottom edge less than 18" above floor and;

c.) top edge more than 36" above floor and;

d.) walking surface within 36" horizontally 4. All doors <u>Exception</u>: decorative glass Door Locks: with thumb turns on the inside are permitted. All means of egress doors shall be readily operable from the side which egress is to be

locked from the inside.

9.1 Drywall: Drywall installation must be in accordance with the Gypsum Association recommended practices for thickness, fastening and taping on correct stud spacing. Fire rated drywall assemblies shall be installed in accordance with approved test assemblies. Drywall to be fastened in accordance with

Use water resistant gypsum backer board in damp areas of bath rooms next to sinks and around toilets. Do <u>not</u> apply over a vapor barrier.

made without the use of a key or special knowledge or effort. Inside key operation is permitted provided the key cannot be removed from the lock when

Underlayment at Tile Walls and other Tile surfaces shall be 1/2" cementitious board such as "Durock" or "Wonderboard" underlayment on all walls to receive tile finish in shower and tub conpartments within 2 ft of fixture. (Follow manufacturer's recommendations carefully.) All drywall shall all be 1/2" thick with smooth finish and screw applied UNO. Edit Use 5/8" thick drywall on ceiling framing/trusses spaced 24" OC. Screw and glue to ceiling. This installer shall not damage vapor barrier. Appropriate drywall corner beads shall protect exposed drywall corners. Use USG Sheetrock Brand paperfaced metal drywall bead and trim or equal to resist edge cracking.

<u>Ceiling shall be smooth, no texture unless noted otherwise, see finish schedule.</u> 9.2 <u>Underlayment at Tile Walls</u>: and other Tile surfaces shall be 1/2" cementitious board such as "Durock" or "Wonderboard" underlayment on all walls to receive tile finish in shower and tub conpartments within 2 ft of fixture. (Follow manufacturer's recommendations carefully.)

9.4 Interior Finish Materials shall not have a flame spread rating exceeding 200 or a smoke development index exceeding 450. Batt insulation including the vapor retarder, shall not be left exposed in basements unless the material has a flame spread rating of 25 or less and a smoke development rating of

All foam plastic insulation shall be separated from the interior of the building by a thermal barrier of ½" gypsum wallboard. Exceptions: 1. Foam plastic having a maximum thickness of ½" when used as siding backer board may be separated from the interior of the building by not less 16.5 than 2" of mineral fiber insulation instead of the thermal barrier. 2. Foam plastic within an attic or crawl space may be protected by 1 1/2-inch thick mineral fiber insulation, 1/4-inch-thick wood structural panel,

3/8-inch thick particleboard or hardboard, 3/8-inch gypsum wallboard, or corrosion-resistant steel having a base metal thickness of 0.016 inch each instead of the thermal barrier. All foam plastics shall have a flame spread rating of 75 or less and a smoke development rating of 450 or PAINTING: shall be done using highest quality Porter Paints, Benjamin Moore, or equal paint approved by the owner. Owner will pick a variety of interior

colors. Verify all color selections with owner. Painting shall include finishing all built-in custom millwork cabinets that are not pre-finished. Painted interior woodwork and doors shall be painted with minimum one prime coat and two finish coats of oil based semi-gloss enamel. All woodwork and doors shall be sanded smooth before painting or staining. Interior drywall shall be sprayed or rolled with acrylic latex. Use Porter Paints #426 Drywall sealer, and two coats minimum of "Vinyl Suede" or equal.

If drywall is sprayed, then the second spraying shall be back rolled. Exterior doors and garage doors shall be painted with two coats an acrylic semi gloss. Any exposed wood on the exterior of the house shall be primed and backprimed before installation; then painted with two coats of acrylic semi-gloss paint. Painting contractor shall spray paint black the inside of the areas where return air grills are mounted on stud spaces so that studs are not visible. Paint all steel beams and columns. External Painting/Caulk: Paint all woodwork, painted metals, shutters, painted louvers and equipment boxes. Do not paint prefinished materials. 9.7 Flooring: (Carpet, hardwood, and tile) shall be selected by owner from allowance for labor and materials. Install per manufacturer recommendations. Tile

floors shall include control joints at doorways and as required. Install wood floor grilles in wood floors to match. Coordinate with Mechanical contractor. See also division 6 for vinyl floor underlayment specification. Tile flooring underlayment shall be by flooring contractor. Underlayment at Tile or Stone Floor: 1/2" "Durock" or "Wonderboard" underlayment (over subfloor) on all floors to receive tile floor finish. Include 3/4" cement board underlayment below tile floors with tiles larger than 12". (Follow manufacturer's recommendations carefully for floor finish.) NON-COMBUSTIBLE FIREPLACE HEARTH & SURROUND: shall be selected by owner from allowance for labor and materials. Install per manufacturers

DIVISION 10 - SPECIALTIES 10.1 Medicine cabinets, grab bars towel bars, and bath accessories: shall be selected by owners based on an allowance, and installed by contractor. 10.3 Shower Doors and Glass Surrounds and Mirrors: shall be selected by the owner based on a labor and materials allowance.

DIVISION 12 -FURNISHINGS

12.1 Kitchen cabinets and vanities: shall be selected by owner based on allowance, and shall be installed by contractor. Cabinet and countertop suppliers shall field measure for all cabinets before ordering, and coordinate all appliance selections with cabinet sizes. 12.2 <u>Counter Tops:</u> shall be selected by owner based on allowance. Contractor shall provide for installation of cultured marble and plastic laminate

countertops. Allowance for stone, tile and solid surface tops shall include both labor and materials.

13.1 <u>Pre-fab Fireplace Unit</u>: Note that framing carpenters and general contractor shall carefully review pre-fab fireplace unit installation instructions before 16.15 <u>Tamper Resistant receptacles</u> shall be provided in areas specified by code framing enclosure for fireplace, and before installing unit. Comply carefully with all manufacturers instructions, fire stopping requirements (including local fire stopping requirements) and clearances. Fire stop all chases with non-combustible fire stops wherever chases exceed 8'-0" in height. Do not alter or modify the fireplace or its components under any circumstances. Any modification or alteration of the fireplace system, including but not limited to the fireplace, chimney components and accessories, may void the warranty, listings and approvals of this system and could result in an unsafe and potentially dangerous installation. Fireplace units shall be equipped with an exterior air supply to assure proper fuel combustion. The air duct serving the exterior air intake and the interior air outlet shall be listed and installed in accordance with the manufacturer's installation instructions. The cross sectional area of the passageway shall be a minimum of 6 sq. in. but not more than 55 sq. in. unless otherwise noted in the installation instructions. The exterior air intake (covered with a corrosion resistant screen of 1/4" mesh) may draw air from a naturally ventilated crawl space or attic. The interior air outlet may be located in the back or sides of the fireplace chamber or within 24 in. of the firebox opening on or near the floor. The interior air outlet shall be closable and designed to prevent burning material from dropping into a concealed combustible space. Exterior air intakes shall be installed below the level of the base of the firebox when the interior air inlet is installed inside the fireplace chamber.

P15.1 Work shall consist of all services typically known as "design/build" and shall include the furnishing of construction documents, as required, materials, labor, equipment and tools to install a complete and operable system of plumbing and sewering. Install per all local codes and ordinances.

P15.2 <u>Lead-Free Solder</u> is required on all copper water supply piping. P15.3 Supply piping shall be type M hard copper above ground with lead free solder. Sewer, soil, and vent piping shall be schedule 40 PVC or other locally approved. All joints in PVC drains shall have primer and PVC solvent cement as per county code. Maintain minimum 1/4" per foot slope on all drains. All fixtures shall be properly trapped and vented. Install individual shutoffs on all plumbing fixtures. Pressure test all plumbing lines before closing in walls. Install steel protection plates in front of plumbing supply lines so that drywall nails or screws cannot puncture lines.

Separately valve each riser; locate at an accessible place. Install air chambers as required by Local Code. Block all lines and risers as necessary to prevent noise or vibration when water is turned on or off. Water service pipe and the building sewer are to be minimum 10'-0" apart, horizontally. P15.6 <u>Basement Areaway Drains</u> and foundation drain tiles are <u>not</u> to be connected to a sanitary sewer. Downspouts are not to be connected to a sanitary sewer. Note that the water service pipe and the building sewer are to be a minimum of 10'-0" apart horizontally. May be connected to the storm water server if permitted by municipality (verify).

P15.7 <u>Window Areaway Drains</u> less than 10 square feet in area shall be served by a 2" pipe drained to daylight or a sump pit served by an approved pump installation. Window areaway drains 10 square feet or greater but less than 100 square feet in area shall be served by a 3" pipe drained in the same manor. Areaways greater than 100 square feet require the drain to be sized in accordance with Table 11-2 of the Plumbing Code. The presence of a cover over the areaway does not negate the need for a drain.

P15.8 Hose Bibbs are to be freeze-proof or shall include, a main shut off valve (with drain) in the basement space. (protected from back flow in accordance with P2902 of IRC 2003 P15.9 <u>Icemaker Water Lines:</u> Provide at Refrigerator in kitchen.

are connected to steel. Piping shall be free of waterhammer, mechanical shock arrestors. Test all soil, waste, vent piping, and water lines. Vent Stacks: shall run to rear slope of roof. Flashing: Pipes passing through the roof shall be flashed with four-pound sheet lead. Flashing shall extend twelve (12) inches from the pipe underneath roofing material in all directions and shall have a lead collar extending from flashing up and around outside of, carried over and turned

Install proper sound attenuation around soil pipes and as required. Plumbing subcontractor shall do trenching. Provide dialectic unions where copper lines

down into top of pipe. P15.15 <u>Plumbing Fixtures</u>: Plumbing fixtures shall be by allowance. (includes sinks, tubs, toilets, faucets, drains, shower heads, controls and valves in baths. Fittings and accessories shall be included in the plumber's bid. Provide shutoff valves at all supply lines. Verify all final plumbing selections with owner before ordering. Verify the heights of all showerheads in showers with owner before installing. Floor drains shall be cast iron with filter grate. Contractor shall construct a cement board tub deck at all drop in tub configurations and provide access panel for whirlpool equipment as required. Hot water pipes shall be insulated to min. R-3.

M15.1 Work shall consist of all services typically known as "Design/Build", and shall include the furnishing of construction documents, specifications and all materials, labor, equipment, and tools required to provide a complete and operable system of heating, ventilating, and air conditioning. All "HVAC" equipment and ductwork to comply with all local codes and ordinances, and to be installed per SMACNA recommendations M15.2 Heating and Air-Conditioning Plans shall indicate furnace location, type (fan assisted induced draft or natural draft), source of combustion air (if

applicable), flue sizes, duct layout and diffuser locations. A section detail shall be provided showing all gas appliances, flue sizes, connectors, lengths, heights, and clearance dimensions. Underground ductwork shall be rated for underground use. Underground metallic ducts without an approved protective coating shall be encased in 2" minimum of concrete. M15.2 <u>Equipment:</u> 90% efficiency (10 SEER VS. 13 SEER) air handling units as required w/ fresh air intake from exterior. Verify location of A.C. unit's outdoors with owner, and place on concrete pads. Review locations of all thermostats with owner before installing, thermostats shall be programmable. Provide and install all registers, operable dampers, thermostats, relays, filters, dampers, access panels as required,

condensate piping and sound control. Coordinate wood floor grilles with wood floor manufacture. Balance and adjust system. All floor registers shall

have operable dampers. This contractor must guarantee his own work, so furnace and air conditioner sizes, heat loss and gain calculations, and details

are the responsibility of this contractor. M15.3 Approved vent systems for appliances shall be sized, installed and terminated per manufacturer's installation instructions.

otherwise sealed with an air barrier material, suitable film or solid material: all joints, seams and penetrations; site-built windows, doors and skylights; M15.5 Combustion Air for Gas Appliances located in rooms or spaces whose volume is less than 50 cubic feet/1000 btu/hr. input rating shall have combustion and ventilation air provided in accordance with the following: Using inside air: 1 sq. in. of free area shall be provided/1000 btu/hr. each opening. Openings shall not be less than 100 sq. inches of free area. One opening shall be provided within 12" of the ceiling and one within 12" of the floor, no common ducts permitted. Combustion air may not be obtained from

Using outside air: One opening shall be provided within 12" of the ceiling with a net free area of 1 sq. in/3000 btu/hr.

M15.6 Appliances shall not be installed in a bedroom, bathroom or a storage closet. Exceptions: The appliance is a direct vent unit obtaining all combustion air directly from outdoors, or; 2. The appliance is installed in a closet is used solely for appliances, the closet door is self-closing, solid and weather stripped, and combustion air is provided from outdoors.

M15.7 Minimum appliance clearance from combustibles is 18 inches, unless the <u>listed</u> manufacturer's installation instructions allow an alternate clearance dimension. A minimum of 30 inches of clearance is required at the front of the appliance for service. M15.8 Thermostats used for heating and cooling shall be capable of being set from 55 f. to 85 f., and shall be capable of operating the systems heating and cooling sequences. At least one thermostat shall be provided for HVAC system/zone. Thermostat shall be programmable for a daily schedule to

M15.9 Each gas appliance shall have a gas shutoff valve and ground joint union. A sediment trap is required at each appliance or group of appliances. Gas piping shall be labeled at intervals of no more than 5 feet. Exception: black steel pipe does not need to be labeled. M15.10 Clothes Dryer Exhaust shall be independent of all other systems, and exhaust to the exterior through smooth, 4" min. diameter duct. indicate the duct run on the plans. The maximum developed length of the duct shall be 25' (obtained by deducting 5' for each 90° bend and 2.5' for each 45° bend to the

Exception: The maximum developed length may be extended to 55' if clearly labeled cleanouts are provided immediately after the 2nd elbow and at least every 15' of developed length thereafter.

M15.11 <u>Exhaust Fans</u>: Bathrooms shall exhaust 50 cfm minimum to the exterior. It is <u>not</u> permissible to discharge exhaust to the attic.

maintain different temperature set points at different times of day.

length of the straight runs).

Exception: 1. half-baths without a tub or shower may exhaust to the attic. 2. half-baths without a tub or shower may substitute a window w/ openable area of at least 4% of the floor area for an exhaust system. Kitchen ranges shall have a listed hood or downdraft exhausted to the exterior with a 100 cfm fan (intermittent use), or a 25 cfm fan (continuous use) Alternately, a listed and labeled recirculating ductless range hood installed in accordance with manufacturer's installation instructions (if equipped with the filtration system for grease removing and odor control) is not required to discharge outdoors. Makeup air shall be provided during the operation of kitchen exhaust systems in excess of 400 cfm (St. Louis County allows 600 cfm) exhaust flow. The amount of makeup air shall be approximately equal to the amount of exhaust air. Makeup air shall be provided by gravity or mechanical means or both. The exhaust and makeup air systems shall be

automatically controlled to ensure makeup air is provided whenever the exhaust system is in operation. M15.12 <u>Duct Insulation and Sealing</u>: Supply and return ducts in attics shall be insulated to min. R-8, all other ducts min. R-6 (exception: ducts completely inside the building thermal envelope). All ducts, air handlers, and filter boxes to be sealed to comply with mechanical code. Ducts shall be pressure tested per code. BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS.

16.1 Work shall consist of all services typically known as "Design/Build", and shall include the furnishings of construction documents as required, materials,

labor, equipment and tools, to provide a complete and operable system of electric, power, and lighting. 16.2 All work to be installed in accordance with the all local codes, rules and ordinances. All materials to be used shall be approved by (U.L.) Underwriters

16.3 All wiring from panel to house shall be copper. 16.4 Panel Board to be circuit breaker type electrical panels. Panels shall not be installed in bathrooms or clothes closets. Lighting is required in the vicinity of the electrical panel. Electrical panels in new construction shall not be installed in areas with less than 6'-6" headroom. A minimum clearance of 3'-0" deep and 30" wide is required in front of electrical panels. Counters and cabinets cannot be installed under the electrical panel Electrical contractor to verify size required during bidding. Final electrical panel shall be sized by electrical contractor and included in electrical base bid. Electric service shall run underground to the house. Fill out circuit breaker panel directory by room or equipment name. All wiring from panel to

Grounding: If the underground metal water pipe is used as the grounding electrode, the connection must be made to the pipe within 5'-0" of the point of entrance to the building. A supplemental grounding electrode shall be provided as specified in NEC sections 250-50 and 250-53. receptacle outlets for ranges and clothes dryers must be a 3-pole with ground type.

Smoke Detectors: U.L. listed smoke detectors shall be located on each floor level in the vicinity of all bedroom entrance doors (bedroom hallway) and within each bedroom. Locate bedroom hallway detector upstream from any return air grille, if applicable. Floor levels that do not contain bedrooms shall have the detector located at the ceiling near the stairway. When more than one detector is required within the dwelling unit, the detectors shall be interconnected so that activation of one alarm will activate al alarms throughout the dwelling unit.

The smoke detectors shall be ac powered and have battery backup. The installation shall also meet NFPA 72-96 07. 16.6b <u>Carbon Monoxide Detectors:</u> U.L. listed carbon monoxide detectors shall be located outside of sleeping areas, in the immediate vicinity of the sleeping areas, if the dwelling unit contains a fuel-fired appliance or has an attached or basement garage.

16.7 At least one Lighting Device is required in each attic, crawl space, basement, or utility room that is used for storage or contains heating, air conditioning, or other equipment requiring servicing. locate light switch at point of entry. All wires leading to electrical outlets and switches on walls in unfinished areas shall be in conduit. 16.8 Ground Fault Circuit-Interruption protection shall be provided for all 125 volt, single phase, 15 and 20 ampere receptacles installed in bathrooms, garages (except ceiling receptacle for door opener), outdoors (including inside screened enclosures), unfinished basement areas and crawl spaces except

serve the counter top surfaces of a wet bar that are located within 6'-0" of the outside edge of the wet bar sink. 16.9 <u>Kitchen and dining area counter top receptacles</u> shall be supplied by at least 2 different 20 amp circuits, receptacles installed face-up in counter work-surface are prohibited, at least one receptacle shall be installed to serve each island or peninsula counter space that is 24" x 12" or greater, at

for laundry circuit and single receptacle dedicated to sump pumps. Receptacles intended to serve kitchen counter top surfaces, receptacles intended to

least 1 receptacle in laundry area supplied by a dedicated 20 ampere branch circuit. 16.10 Interior Stairways are to be provided with a minimum of 10 footcandles of light measured at every tread nosing. All exterior stairways serving the dwelling to have a minimum of 1 footcandle measured on the tread runs. Interior stairways shall have lighting controls at each floor level. Switches must be operable from the top and bottom of the stairway without traversing any step of the stairway. All exterior stairways serving the dwelling shall have lighting controlled by controls inside the dwelling or

Unfinished Storage Lighting: At least 1 lighting outlet and one receptacle are required in each attic, crawl space, basement or utility room that is used for storage or contains heating, air-conditioning or other equipment requiring servicing. The light switch shall be located at the point of entry. 16.12 Lighting in Clothes Closets: Fixtures must have enclosed lamps. incandescent fixtures require 12" minimum clearances to storage and fluorescent fixtures

16.13 <u>Fixtures at Bathtubs</u>: No parts of hanging fixtures, track lighting and ceiling paddle fans shall be installed within 3'-0" horizontally of a bathtub, measured from the outside edge of the tub and 8'-0" vertically from the top of the tub rim. Receptacles shall not be installed within a bathtub or

16.14 Arc-Fault Circuit Interruption protection shall be provided for all circuits supplying power to family rooms, dining rooms, living rooms, parlors, libraries dens, bedrooms, sunrooms recreation rooms closets, hallways and similar rooms. 16.16 Install wiring for special items as shown on plans, including but not limited to wiring for whirlpool tub, central vacuum system and all appliances and

16.17 <u>Light fixtures</u>: Recessed light fixtures to be type "I.C." Recessed lights and to be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering. Recessed lighting in thermal envelope to be air sealed. Heat lights, exhaust fans (which shall be extra quiet units), and ceiling fans shall be selected by owner based on allowance, but installed by electrical contractor. Verify all fixture types with owner before ordering. A

16.18 Electrician and Owner to walk though project prior to installation and confirm location of all electrical devices including but not limited to switches (confirm dimmers), light fixtures, outlets and telephones 16.19 <u>Telephone:</u> Rough in telephone wiring and receptacles as indicated on drawings using cat. 6e. Telephone lines to the house shall run underground. All

minimum 50% of the lamps in permanently installed lighting fixtures shall be high-efficiency lamps.

box. All runs shall be home run to basement. Provide outlet at cable entrance for power booster if required.

runs shall be home run to basement

CLIMATIC AND GEOGRAPHICAL DESIGN CRITERIA WIND DESIGN SUBJECT TO DAMAGE FROM WEATHER FROST TERMITE WINTER ICE SHIELD FLOOD MEAN CLIMATE GROUND | WIND | TOPO-SEISMIC SNOW SPEED GRAPHICAL DESIGN ING DESIGN UNDER- HAZARDS FREEZING ANNUAL ZONE (MPH) EFFECTS TEMP. LAYMENT DEPTH REQUIRED YES, CH. 410 OF OLIVETTE CODE 2°F SEVERE 30" YES | 1500 DAYS | 54°F | 4A

TYPIC <i>A</i>	AL ABBREVIATIONS						
4 .	-ABOVE	DN.	-DOWN	HDWD	-HARDWOOD	REF	-REFRIGERATOR
4.F.F.	-ABOVE FINISHED FLOOR	DR.	-DOOR	HT	-HEIGHT	REQ'D.	-REQUIRED
4HU	-AIR HANDLING UNIT	D.S.	-DOWNSPOUT	HWH	-HOT WATER HEATER	RV	-ROOF VENT
ALUM.	-ALUMINUM	DTL.	-DETAIL	IJS	-IN JOIST SPACE	SA	-SUPPLY AIR
ALT.	-ALTERNATE	DW	-DRYWALL	INSUL	-INSULATION	STRUCT	TSTRUCTURAL
ASPH.	-ASPHALT	DW. OP	NG. – DRYWALL OPENING	ITS	-IN TRUSS SPACE	ST'L.	-STEEL
3M.	-BEAM	EA	-EACH	JST.	-JOIST	S.D.	-SMOKE DETECTOR
3P.	-BEAM POCKET	EJ	-EXPANSION JOINT	LVL	-LAMINATED VENEER LUMBER	S.F.	-SQUARE FEET
BRG.	-BEARING	ELEC.	-ELECTRIC/ELECTRICAL	LIN.	-LINEN	SH	-SHELF/SHELVES
BRK.	-BRICK	ELEV.	-ELEVATION	LNDRY	-LAUNDRY	SHT	-SHEET
BRKT.	-BRACKET	EQ.	-EQUAL	LT.	-LIGHT	SPEC.	-SPECIFICATIONS
BRD.	-BOARD	EQUIP	-EQUIPMENT	MAS.	-MASONRY	SW.	-SWITCH
BLK.	-BLOCK	E.S.	-EACH SIDE	MAT'L.	-MATERIAL	T.J.I.	-TRUSS JOIST INCORPORATED
30T.	-BOTTOM	EXIST.	-EXISTING	MAX.	-MAXIMUM	T.K.	-TEMPERED GLASS
AB.	-CABINET	EXT.	-EXTERIOR	MECH.	-MECHANICAL	T&G	-TONGUE AND GROOVE
. J.	-CONTROL JOINT/CEILING JOISTS	EXH.	-EXHAUST	MIN.	-MINIMUM	TEMP	-TEMPERED
Ē	-CENTERLINE	FD	-FLOOR DRAIN	MISC.	-MISCELLANEOUS	T.B.R.	-TO BE REMOVED
LG.	-CEILING	F.J.	-FLOOR JOISTS	M.O.	-MASONRY OPENING	TV	-TELEVISION
MU	-CONCRETE MASONRY UNIT	FLR.	-FLOOR	MTL.	-METAL	TYP.	-TYPICAL
.0.	-CASED OPENING	FDN.	-FOUNDATION	N/A	-NOT APPLICABLE	T.O.C.	-TOP OF CONCRETE
ONC.	-CONCRETE	F.P.	-FIREPLACE	N.I.C.	-NOT IN CONTRACT	T.0.P.	-TOP OF PLATE
ONT.	-CONTINUOUS	FPHB	-FREEZE-PROOF HOSE BIBB	N.T.S.	-NOT TO SCALE	U.C.	-UNDER CABINET
ONT.	-CONTINUOUS	FTG.	-FOOTING	O.C.	-ON CENTER	UL	-UNDERWRITER'S LABORATORY
ONST.	-CONSTRUCTION	FURN.	-FURNACE	OPT.	-OPTIONAL	U.N.O.	-UNLESS NOTED OTHERWISE
.S.	-CORNER SET	F.V.	-FIELD VERIFY	0.H.	-OVERHEAD, OVERHANG	W	-WASHER
ORR.	-CORRIDOR	GA.	-GAGE	PFA	-POST FROM ABOVE	W/	-WITH
PT.	-CARPET	GEN.	-GENERAL	ዊ	-PLATE	W.I.C.	-WALK-IN CLOSET
T	-CERAMIC TILE	GFI	-GROUND FAULT INTERRUPTER	PKT.	-POCKET	WD	-W00D
)	-DRYER	GL.	-GLASS	P&S	-POLE AND SHELF	WDW	-WINDOW
).B.	-DRAWER BASE	G&N	-GLUE AND NAIL	P.S.L.	-PARALLEL STRAND LUMBER	W/0	-WITHOUT
BL.	-DOUBLE	GR.	-GRADE	P.T.	-PRESSURE TREATED	V.	-VANITY V.
)B0	-DESIGNED BY OTHERS	GRAN.	-GRANULAR FILL	R.R.	-ROOF RAFTER	VB	-VAPOR BARRIER
IM.	-DIMENSION	HDR	-HEADER	R.H.	-RAISED HEEL	WP	-WATERPROOF
	DIODOG	1	LIGHT HANDS AN	۱	DET. 1011 11D	I	

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16.20 <u>Cable TV</u>: Rough in Cable TV as indicated on drawings. Cable used shall consist of: (1 cat.6e's, and 1 RG6 wires, quad shield). Terminate in 4" electric

WWF -WELDED WIRE FABRIC

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