# Gustafson Residence

1215 South Cortina Point

Huntsville, Weber County Utah

GOVERNING CODE:

2015 IRC/2018 IBC

ACTUAL CONSTRUCTION WILL COMPLY WITH APPLICABLE LOCAL ORDINANCES AND BUILDING CODES.


DESIGNER : Highland Group Building Design Inc. (801) 277-4433

STRUCTURAL : Focus Engineering (801) 352-0075

CONTRACTOR : Magleby Construction (801) 785-9998


### TABLE M1506.2 DUCT LENGTH

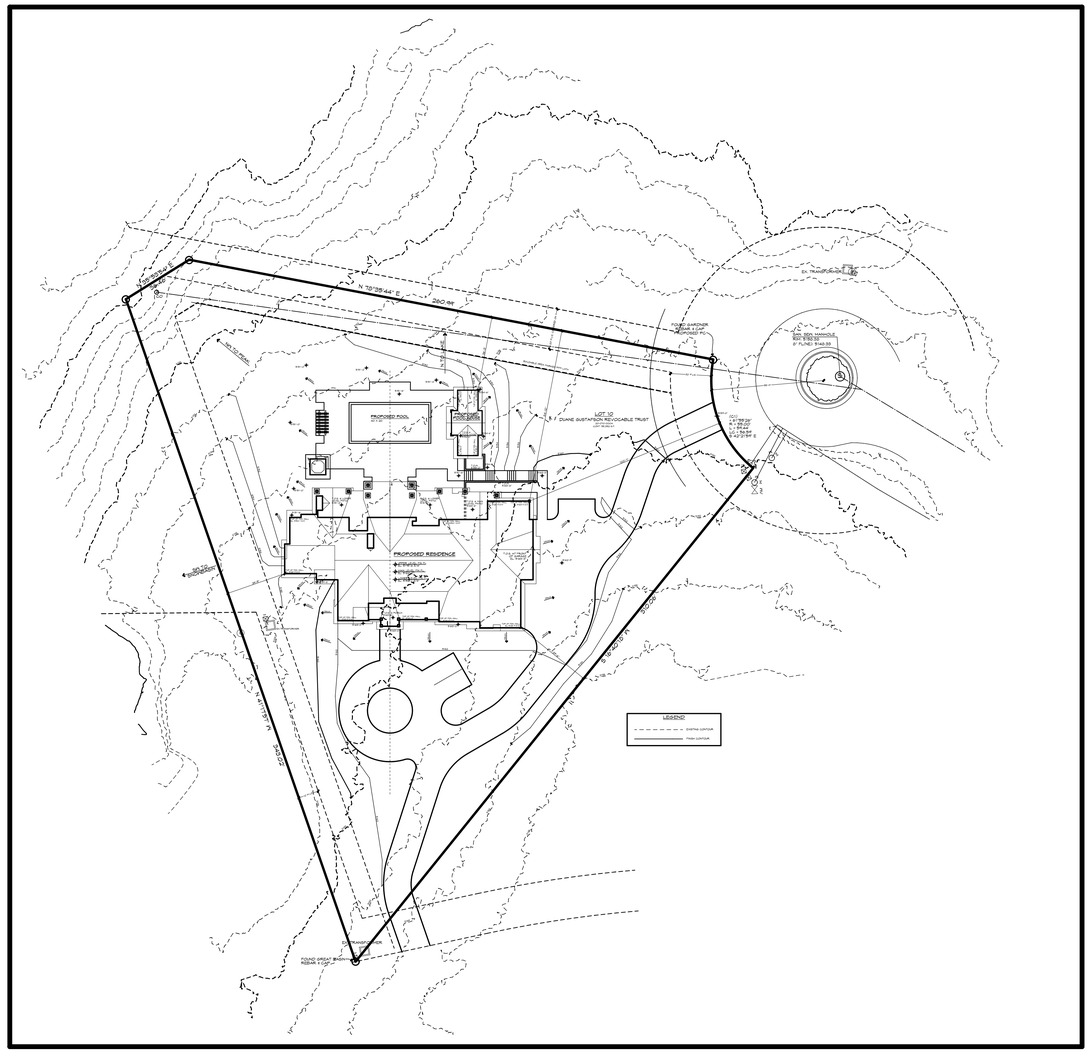
| DUCT TYPE | FLEX DUCT | | | | | | | | SMOOTH-WALL DUCT | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fan airflow rating (CFM @ 0.25 inch wc[a]) | 50 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 50 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| Diameter[b] (inches) | Maximum length[c,d,e] (feet) | | | | | | | | | | | | | | | |
| 3 | X | X | X | X | X | X | X | X | 5 | X | X | X | X | X | X | X |
| 4 | 56 | 4 | X | X | X | X | X | X | 114 | 31 | 10 | X | X | X | X | X |
| 5 | NL | 81 | 42 | 16 | 2 | X | X | X | NL | 152 | 91 | 51 | 28 | 4 | X | X |
| 6 | NL | NL | 158 | 91 | 55 | 18 | 1 | X | NL | NL | NL | 168 | 112 | 53 | 25 | 9 |
| 7 | NL | NL | NL | NL | 161 | 78 | 40 | 19 | NL | NL | NL | NL | NL | 148 | 88 | 54 |
| 8 and above | NL | NL | NL | NL | NL | 189 | 111 | 69 | NL | NL | NL | NL | NL | NL | 198 | 133 |

For SI: 1 foot= 304.8 mm.
a. Fan airflow rating shall be in accordance with ANSI/AMCA 210-ANSI/ASHRAE 51.
b. For noncircular ducts, calculate the diameter as four times the cross-sectional area divided by the perimeter.
c. This table assumes that elbows are not used. Fifteen feet of allowable duct length shall be deducted for each elbow installed in the duct run.
d. NL= no limit on duct length of this size.
e. X= not allowed. Any length of duct of this size with assumed turns and fittings will exceed the rated pressure drop.



### INDEX OF DRAWINGS





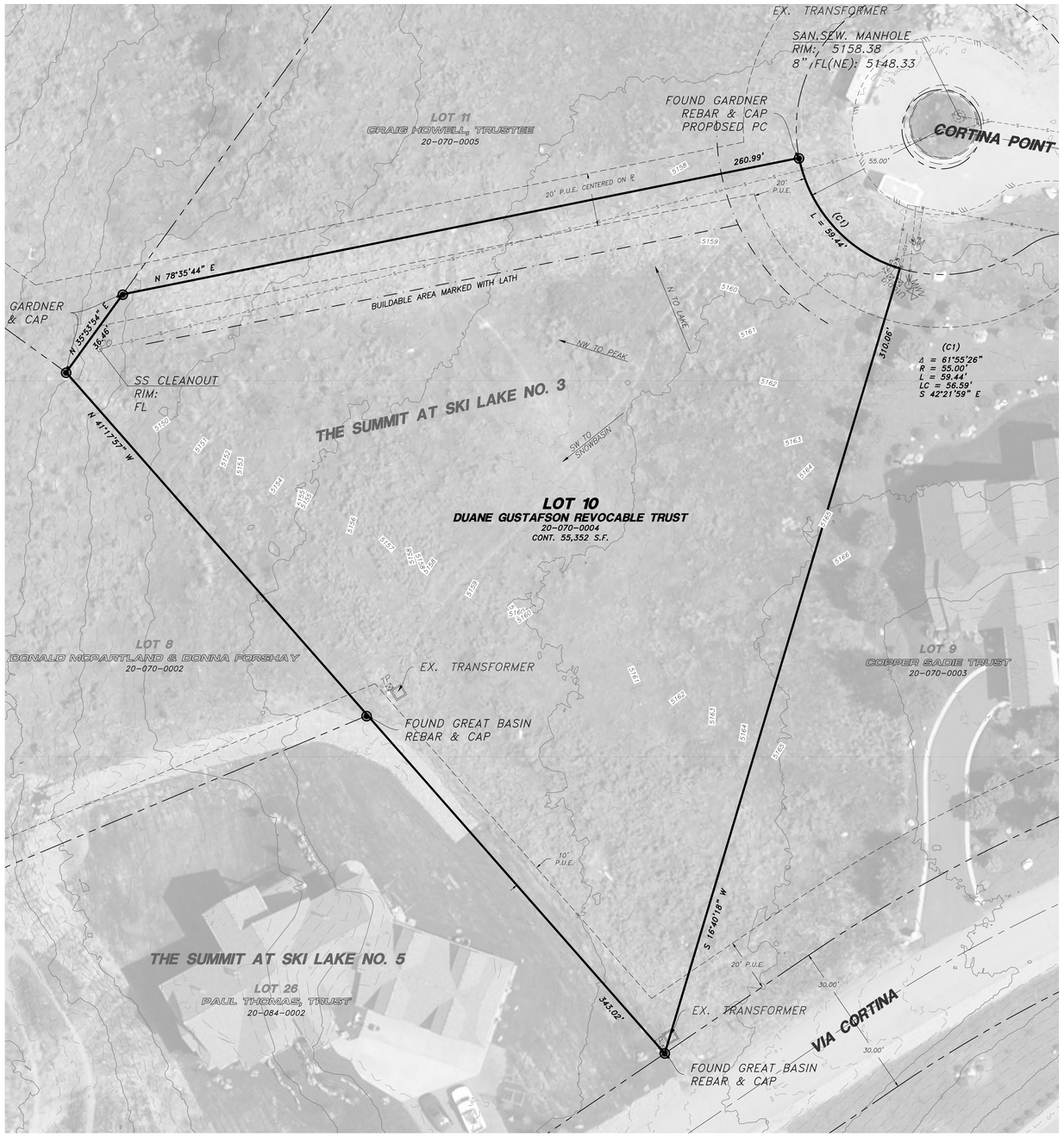

HIGHLAND GROUP

DRAWN BY: BS
PROJECT ENG: FOCUS
DATE: 4-29-21
REV.:

4471 SOUTH HIGHLAND DRIVE SALT LAKE CITY, UTAH 84124 (801) 277-4433

SHEET

Gustafson Residence




SCALE: Horiz. 1" = 20'

0 20 40

Scale in Feet

## LEGEND

| | |
|---|---|
| Subject Property Line | Telephone Pedestal |
| Secondary Property Line | Fire Hydrant |
| Centerline | Water Meter |
| Easement/Right-of-Way Line | Water Valve |
| Section Line | Sewer Manhole |
| Existing 5.0' Contour | Power Pole |
| Existing 1.0' Contour | Tree Line Perimeter |
| Fence Line | Set 24"x5/8" Rebar with Cap |
| Storm Drain Existing | Found rebar set by others |
| Water Line Existing | Street Monument |
| Sewer Line Existing | Section Corner |
| Power Line Existing | |
| Telephone Line Existing | |
| Gas Line Existing | |
| Fiber Optic Line Existing | |
| Edge of Asphalt Paving | |
| Existing Curb and Gutter | |

NOTICE!

EXISTING UTILITIES ARE SHOWN ON PLANS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE ENGINEER BEARS NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR SHOWN INCORRECTLY.

AVOID CUTTING UNDERGROUND UTILITIES. IT'S COSTLY.

Call BEFORE YOU Dig

1-800-662-4111
UNDERGROUND SERVICE

### Engineer's Notice To Contractors

*The existence and location of any underground utility pipes or structures shown on these plans were obtained from available information provided by others. The locations shown are approximate and shall be confirmed in the field by the contractor, so that any necessary adjustment can be made in alignment and/or grade of the proposed improvement. The contractor is required to contact the utility companies and take due precautionary measure to protect any utility lines shown, and any other lines obtained by the contractors research, and others not of record or not shown on these plans.*

| No. | Date | By | Revision |
|---|---|---|---|


HANSEN & ASSOCIATES, INC.
Consulting Engineers and Land Surveyors
538 North Main Street, Brigham, Utah 84302
Visit us at www.hansenassociates.net
Brigham City (435) 723-3491 (801) 399-4905 (435) 752-8272
Ogden
Logan
Celebrating over 60 Years of Business

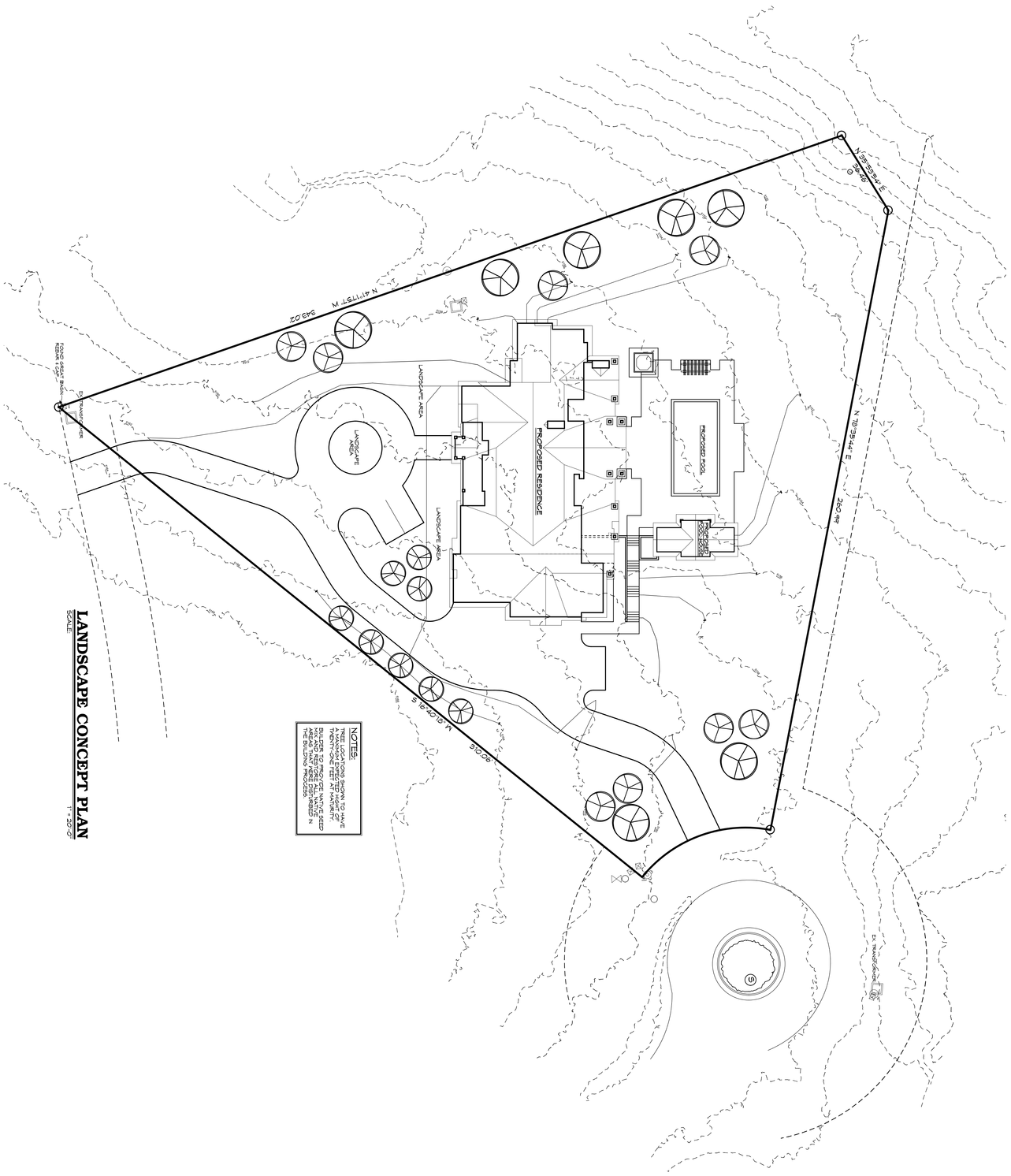

Drawn By: RS Date: 10/13/20
Designed By:
Checked By:
Approved By:
Scale: 1" = 20'
Drawing File: 20-3-269r16.dwg
JOB NUMBER: 20-3-269

EXISTING SITE PLAN AND TOPOGRAPHY FOR

# MAGELBY CONSTRUCTION

1215 SOUTH CORTINA POINT
HUNTSVILLE, WEBER COUNTY, UTAH
A PART OF THE NORTHWEST QUARTER OF SECTION 24
TOWNSHIP 6 NORTH, RANGE 1 EAST, S.L.B.&M.

Sheet 1 of 1 Sheets




## LANDSCAPE CONCEPT PLAN

SCALE 1" = 20'-0"

SHEET

L100

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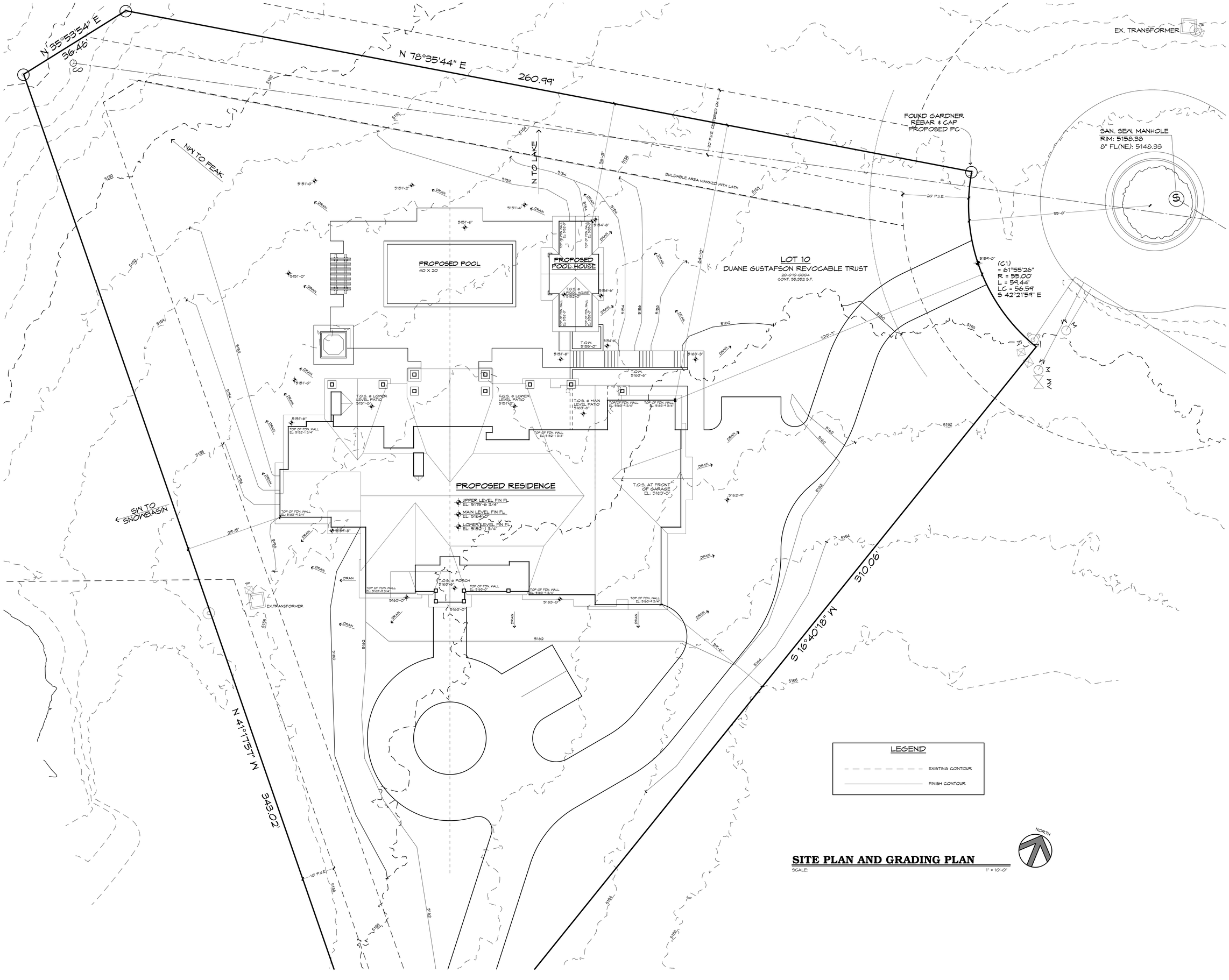


**SITE PLAN AND GRADING PLAN**

SCALE: 1" = 10'-0"

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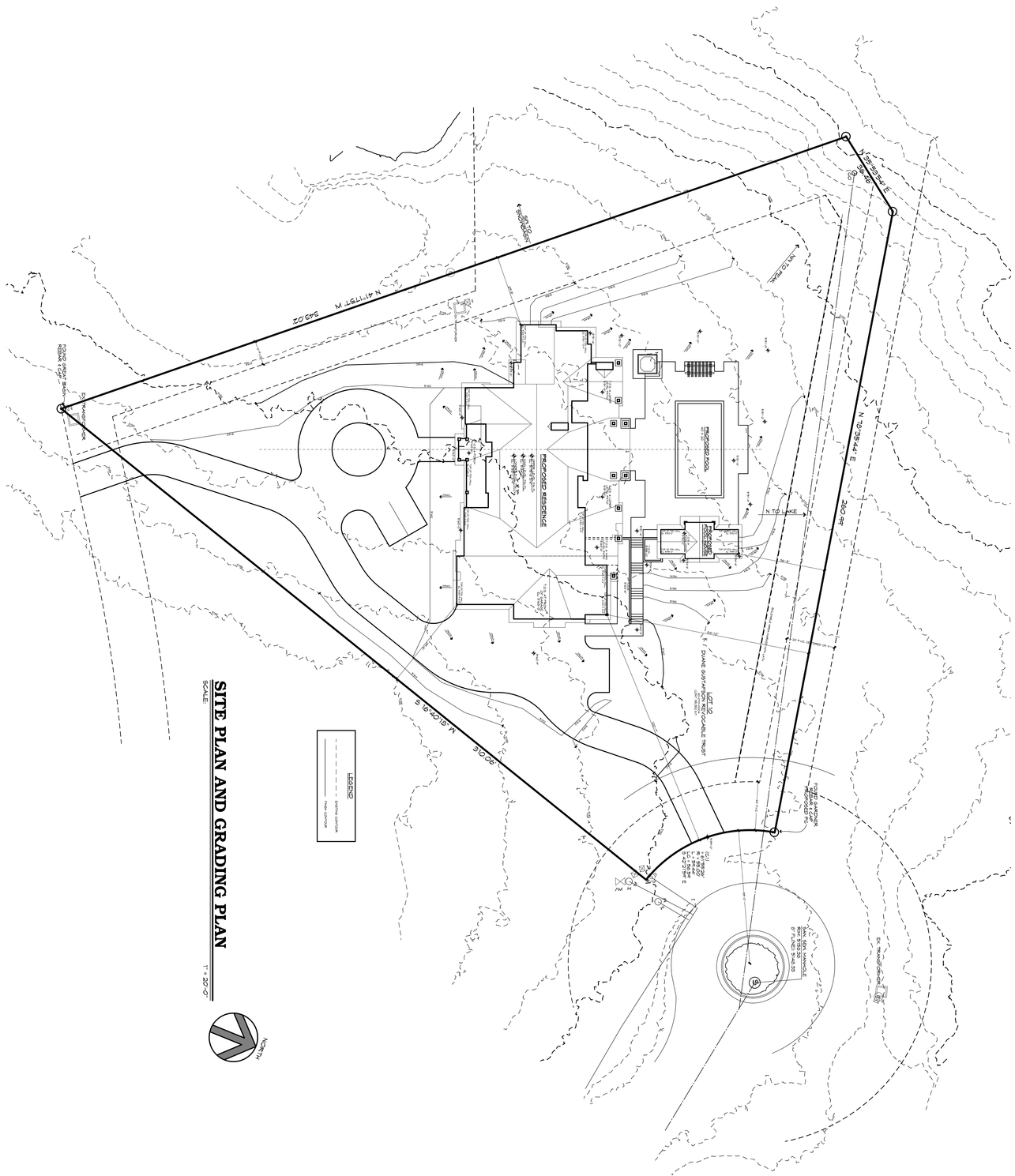
SHEET 1




SHEET
1A

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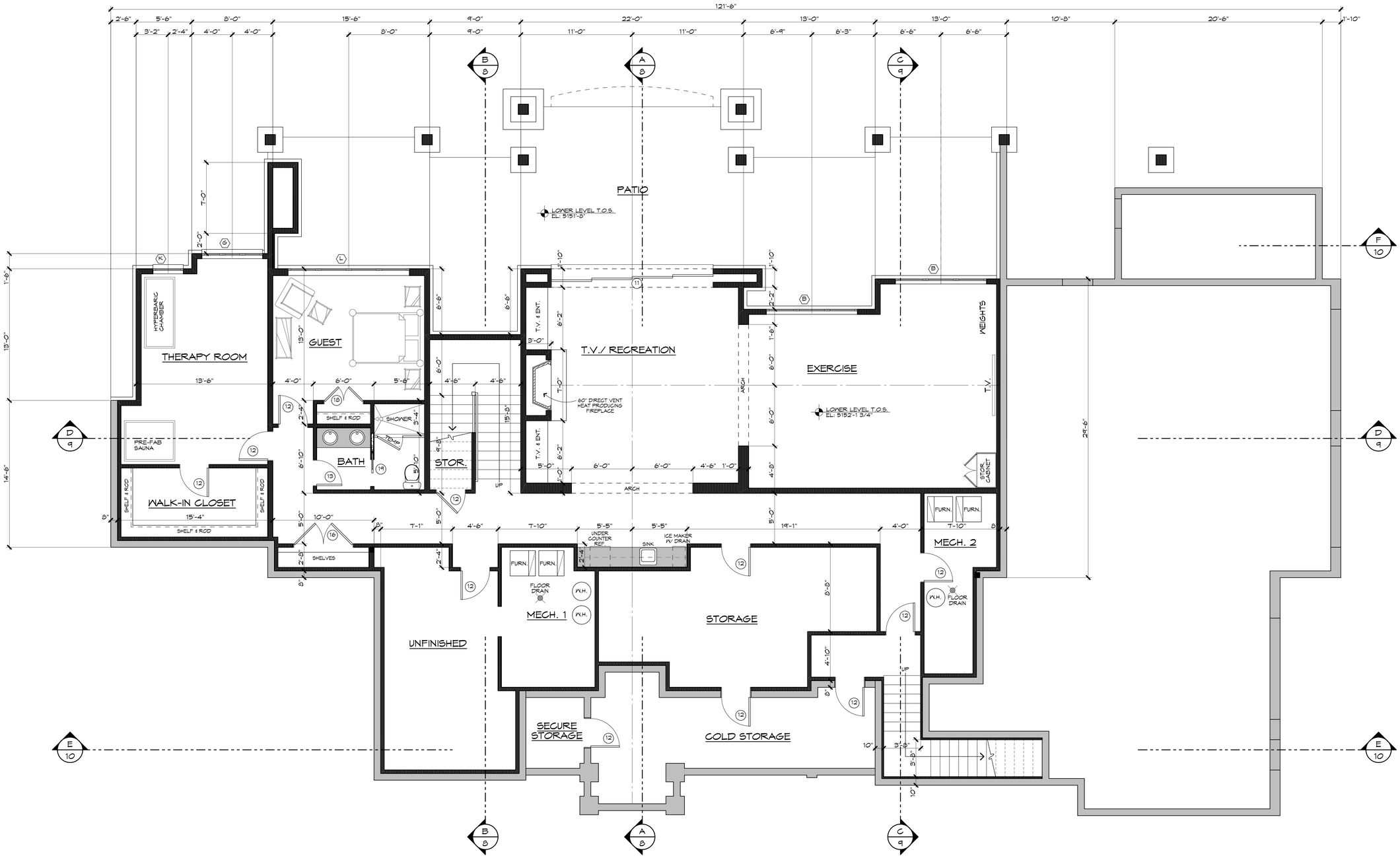


**LOWER LEVEL FLOOR PLAN**

2,268 FIN. SQ. FT.
1,198 UNFIN./MECH./STOR. SQ. FT.

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

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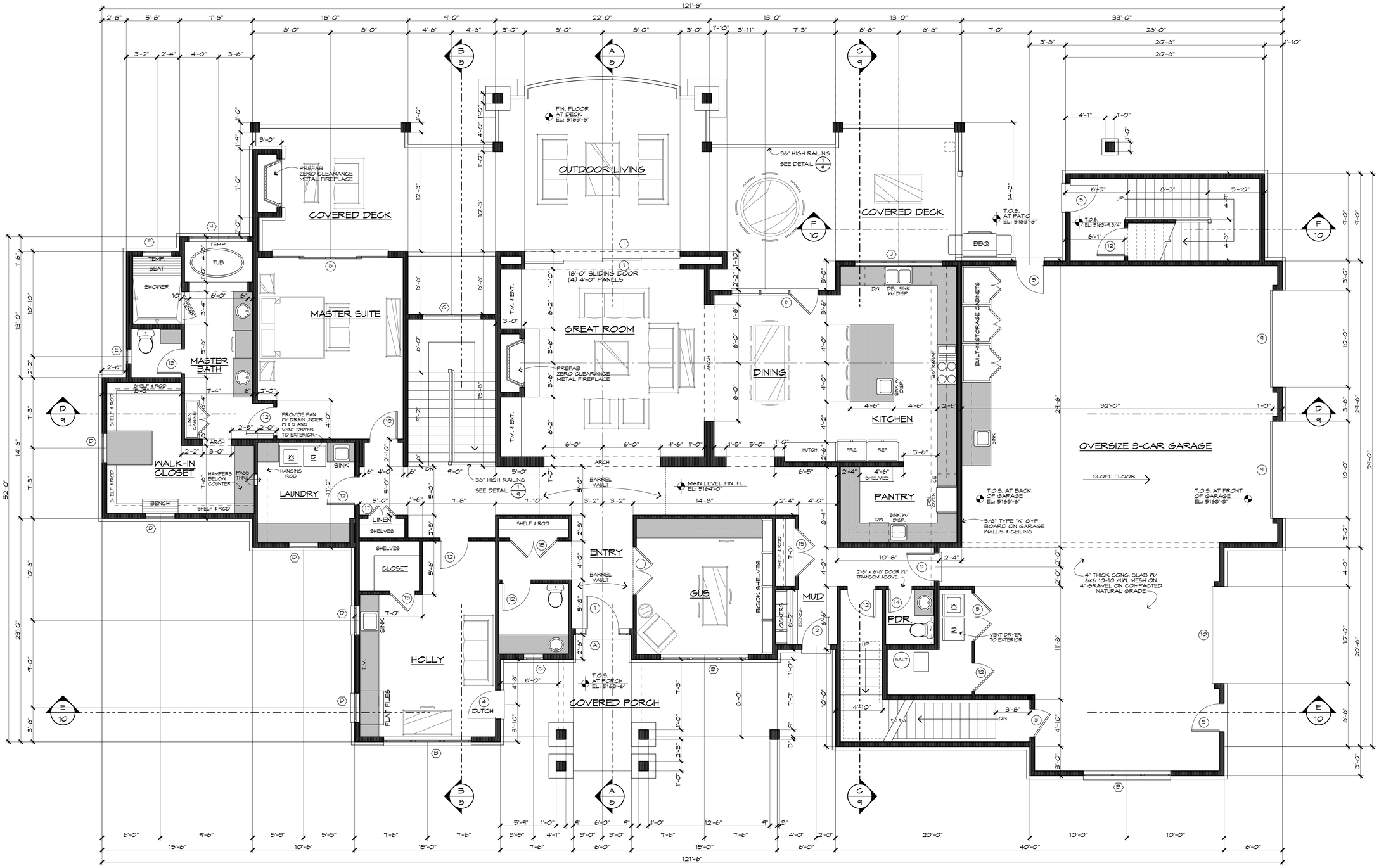
SHEET 2




## MAIN LEVEL FLOOR PLAN

3051 SQ. FT.

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

0 4 8 8 12 16

NORTH

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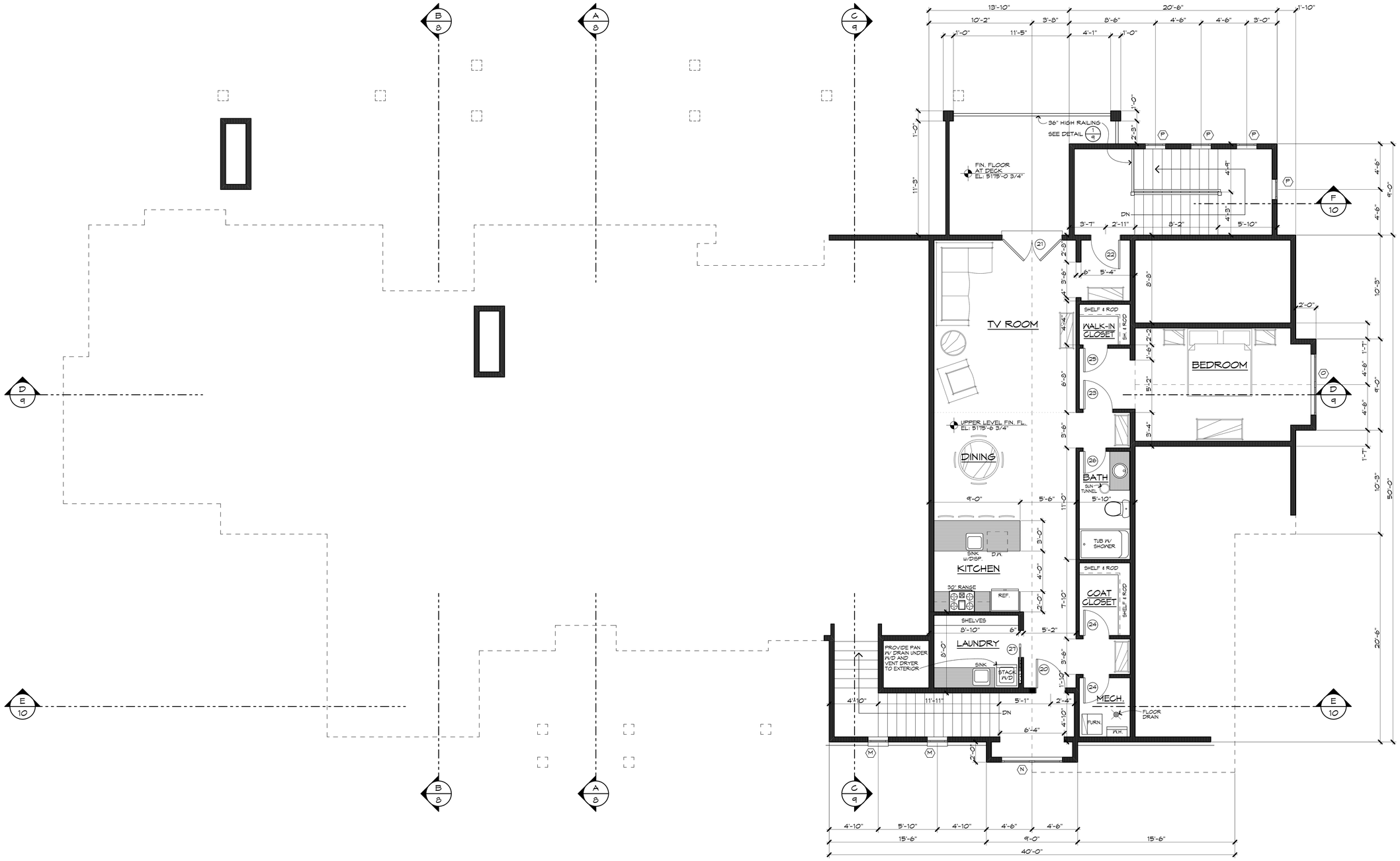
SHEET 3




## UPPER LEVEL FLOOR PLAN

1500 SQ. FT

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

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SHEET 4


**FRONT ELEVATION**

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


**RIGHT SIDE ELEVATION**

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

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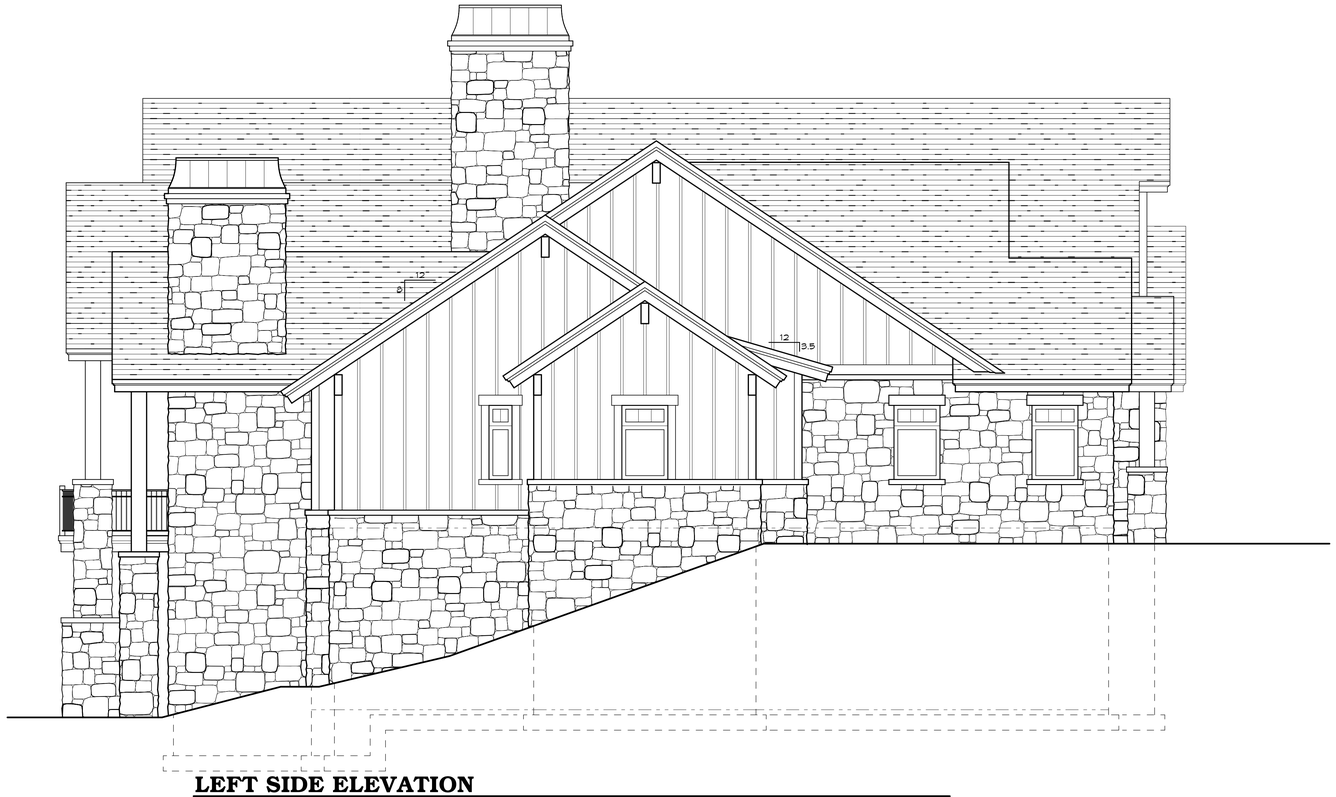
Gustafson Residence

SHEET 5


**REAR ELEVATION**

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




**LEFT SIDE ELEVATION**

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

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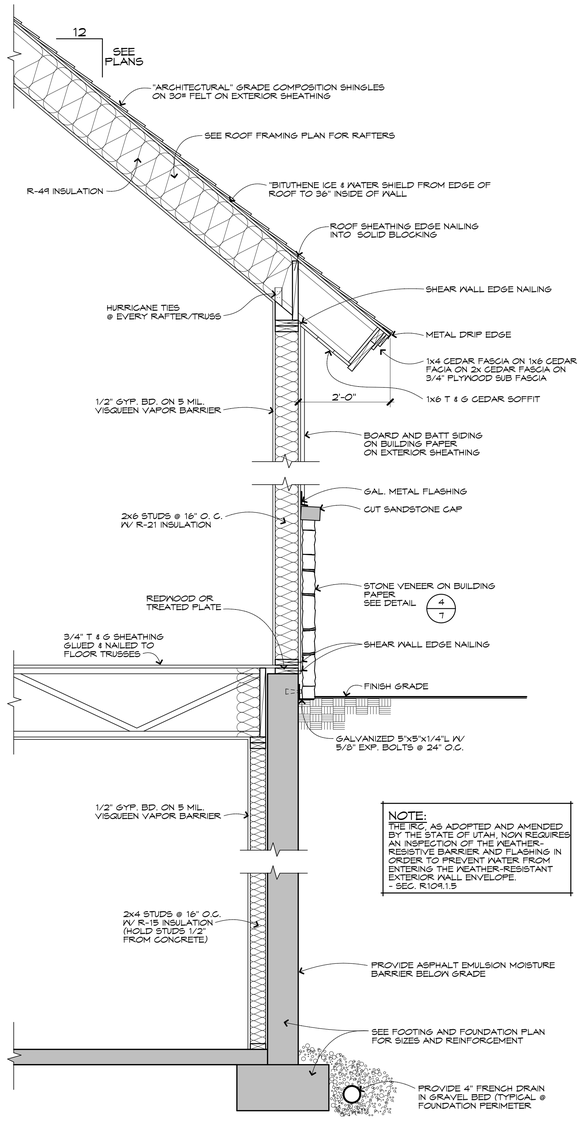
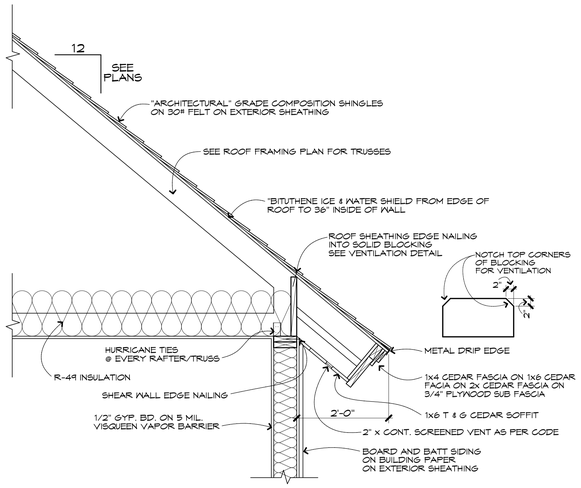
SHEET 6




NOTE:
THE IRC, AS ADOPTED AND AMENDED BY THE STATE OF UTAH, NOW REQUIRES AN INSPECTION OF THE WEATHER-RESISTIVE BARRIER AND FLASHING IN ORDER TO PREVENT WATER FROM ENTERING THE WEATHER-RESISTANT EXTERIOR WALL ENVELOPE.
- SEC. R104.1.5

## TYPICAL WALL SECTION 1/7

SCALE: 3/4" = 1'-0"




## TYPICAL WALL SECTION 2/7

SCALE: 3/4" = 1'-0"

## DOOR SCHEDULE

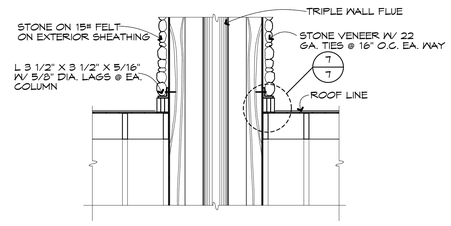
| MARK | WIDTH | HEIGHT | MATERIAL | TYPE | REMARKS |
|---|---|---|---|---|---|
| 1 | 5'-6" | 8'-0" | WOOD/ GLASS | ENTRY | 3'-6"x8'-0" SOLID CORE EXT. DOOR W/ 1'-0"x 8'-0" (TEMP.) SIDE LIGHT EACH SIDE - SEE FRONT ELEV. |
| 2 | 3'-0" | 8'-0" | WOOD/ GLASS | ENTRY | SOLID CORE EXT. DOOR W/ HALF GLASS (TEMP.) - SEE FRONT ELEV. |
| 3 | 3'-0" | 8'-0" | WOOD | PANELED | SOLID CORE EXT. DOOR. 20 MIN. FIRE RATING W/ SELF CLOSER |
| 4 | 3'-0" | 8'-0" | WOOD/ GLASS | DUTCH DOOR | SOLID CORE EXT. DOOR W/ GLASS AT UPPER DOOR. (TEMP.) |
| 5 | 3'-0" | 8'-0" | WOOD | PANELED | SOLID CORE EXT. DOOR |
| 6 | 9'-0" | 8'-0" | WOOD/ GLASS | PATIO | TEMP. (3) 3'-0"x8'-0" DOOR PANELS FIX./FIX./ACTIVE - SEE PLANS |
| 7 | 16'-0" | 9'-0" | WOOD/ GLASS | SLIDING | TEMP. (4) 4'-0"x9'-0" DOOR PANELS - SEE PLANS |
| 8 | 12'-0" | 8'-0" | WOOD/ GLASS | SLIDING | TEMP. (4) 3'-0"x8'-0" DOOR PANELS - SEE PLANS |
| 9 | 10'-0" | 9'-0" | WOOD/ GLASS | GARAGE | TEMP. - OVERHEAD GARAGE DOOR W/ ROUND TOP |
| 10 | 10'-0" | 9'-0" | WOOD/ GLASS | GARAGE | TEMP. - OVERHEAD GARAGE DOOR |
| 11 | 16'-0" | 8'-0" | WOOD/ GLASS | SLIDING | TEMP. (4) 4'-0"x8'-0" DOOR PANELS - SEE PLANS |
| 12 | 3'-0" | 8'-0" | WOOD | PANELED | SOLID CORE INT. DOOR |
| 13 | 2'-8" | 8'-0" | WOOD | PANELED | SOLID CORE INT. DOOR |
| 14 | 2'-6" | 8'-0" | WOOD/ GLASS | PANELED | 2'-6"x6'-8" SOLID CORE INT. DOOR W/ 2'-8"x1'-4" TRANSOM (AWNING) |
| 15 | 5'-0" | 8'-0" | WOOD | FRENCH | (2) 2'-6"x8'-0" SOLID CORE INTERIOR DOORS |
| 16 | 6'-0" | 8'-0" | WOOD | FRENCH | (2) 3'-0"x8'-0" SOLID CORE INTERIOR DOORS |
| 17 | 3'-0" | 8'-0" | WOOD | FRENCH | (2) 1'-6"x8'-0" SOLID CORE INTERIOR DOORS |
| 18 | 4'-0" | 8'-0" | WOOD | FRENCH | (2) 2'-0"x8'-0" SOLID CORE INTERIOR DOORS |
| 19 | 2'-8" | 8'-0" | WOOD | POCKET | SOLID CORE INT. DOOR |
| 20 | 3'-0" | 8'-0" | WOOD/ GLASS | PANELED | 3'-0"x6'-8" SOLID CORE EXT. DOOR W/ HALF GLASS (TEMP.) W/3'-0"x1'-4" TRANSOM (AWNING) |
| 21 | 6'-0" | 8'-0" | WOOD/ GLASS | FRENCH | TEMP. (2) 3'-0"x8'-0" DOOR PANELS |
| 22 | 3'-0" | 6'-8" | WOOD | PANELED | SOLID CORE EXT. DOOR |
| 23 | 3'-0" | 6'-8" | WOOD | PANELED | SOLID CORE INT. DOOR |
| 24 | 2'-8" | 6'-8" | WOOD | PANELED | SOLID CORE INT. DOOR |
| 25 | 2'-6" | 6'-8" | WOOD | PANELED | SOLID CORE INT. DOOR |
| 26 | 2'-4" | 6'-8" | WOOD | PANELED | SOLID CORE INT. DOOR |
| 27 | 2'-8" | 6'-8" | WOOD | POCKET | SOLID CORE INT. DOOR |

## WINDOW SCHEDULE

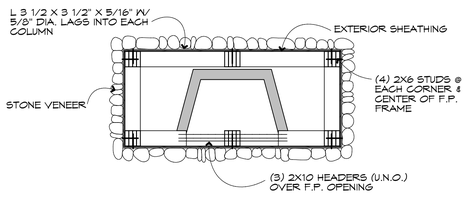
| MARK | WIDTH | HEIGHT | MATERIAL | | TYPE | | REMARKS |
|---|---|---|---|---|---|---|---|
| | | | ALUMINUM CLAD | WOOD | INSULATED | | |
| A | 5'-6" | VARIES | | | | | EYEBROW WINDOW SEE FRONT ELEVATION |
| B | 9'-0" | 6'-4" | | | | | (3) 3'-0"x5'-0" CASE./FIX./CASE. W/ (3) 3'-0"x1'-4" TRANSOMS |
| C | 2'-0" | 4'-10" | | | | | 2'-0"x3'-6" CASEMENT W/ 2'-0"x1'-4" TRANSOM |
| D | 3'-0" | 4'-10" | | | | | 3'-0"x3'-6" CASEMENT W/ 3'-0"x1'-4" TRANSOM |
| E | 1'-6" | 4'-10" | | | | | 1'-6"x3'-6" CASEMENT W/ 1'-6"x1'-4" TRANSOM |
| F | 3'-0" | 2'-0" | | | | | CASEMENT |
| G | 6'-0" | 6'-4" | | | | | 6'-0"x5'-0" DOUBLE CASEMENT W/ (2) 3'-0"x1'-4" TRANSOMS |
| H | 6'-0" | 5'-10" | | | | | 6'-0"x4'-6" DOUBLE CASEMENT W/ (2) 3'-0"x1'-4" TRANSOMS |
| I | 16'-0" | VARIES | | | | | EYEBROW WINDOW SEE REAR ELEVATION |
| J | 9'-0" | 4'-4" | | | | | (3) 3'-0"x3'-0" CASE./FIX./CASE. W/ (3) 3'-0"x1'-4" TRANSOMS |
| K | 3'-0" | 6'-4" | | | | | 3'-0"x5'-0" CASEMENT W/ 3'-0"x1'-4" TRANSOM |
| L | 12'-0" | 6'-4" | | | | | (4) 3'-0"x5'-0" CASE./FIX./FIX./CASE. W/ (4) 3'-0"x1'-4" TRANSOMS |
| M | 2'-0" | 5'-4" | | | | | 2'-0"x4'-0" CASEMENT W/ 2'-0"x1'-4" TRANSOM |
| N | 6'-0" | 5'-4" | | | | | 6'-0"x4'-0" DOUBLE CASEMENT W/ (2) 3'-0"x1'-4" TRANSOMS |
| O | 6'-0" | 4'-10" | | | | | 6'-0"x3'-6" DOUBLE CASEMENT W/ (2) 3'-0"x1'-4" TRANSOMS |
| P | 2'-0" | 4'-4" | ✓ | | ✓ | | 2'-0"x3'-0" CASEMENT W/ 2'-0"x1'-4" TRANSOM |

## DOOR & WINDOW NOTES

1. BEDROOM WINDOW SILLS FINISHED MUST BE WITHIN 44" OF THE FLOOR AND PROVIDE MINIMUM CLEAR OPENINGS OF 5.7 SQ. FEET WITH HEIGHT DIMENSION NOT LESS THAN 24" AND WIDTH DIMENSION NOT LESS THAN 20"
-IRC R310.1-R310.1.4
2. ALL WINDOWS TO HAVE A U-VALUE OF .32 OR BETTER. (TABLE N1102.1)
3. GLAZING USED IN DOORS AND PANELS OF SHOWERS AND BATHTUB ENCLOSURES AND WALLS ENCLOSING THESE COMPARTMENTS SHALL BE TEMPERED.
-IRC TABLE R308.3
4. TEMPERED GLASS SHALL BE PROVIDED IN: FRAMELESS GLASS DOORS, GLASS IN DOORS, GLASS WITHIN A 24" ARCH OF DOORS, GLAZING LESS THAN 60" ABOVE A WALKING SURFACE THAT IS WITHIN 5 FT OF STAIRS, OR GLAZING WITHIN 5 FT OF SPAS OR POOLS. CERTAIN FIXED GLASS PANELS, AND SIMILAR GLAZED OPENINGS SUBJECT TO HUMAN IMPACT. -IRC R308.
5. WINDOW WELLS TO PROVIDE A MINIMUM NET CLEAR OPENING OF 9 SQ. FT. WITH A MINIMUM DIMENSION OF 36 INCHES. PROVIDE A PERMANENT LADDER IF WINDOW WELL IS MORE THAT 44" DEEP. IRC R310.2

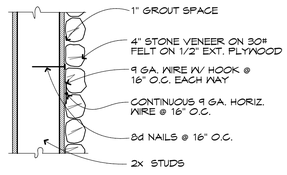



## CROSS SECTION



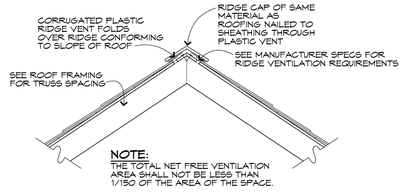

## F.P. CHIMNEY DETAIL 3/7

SCALE: 1/2"=1'-0"



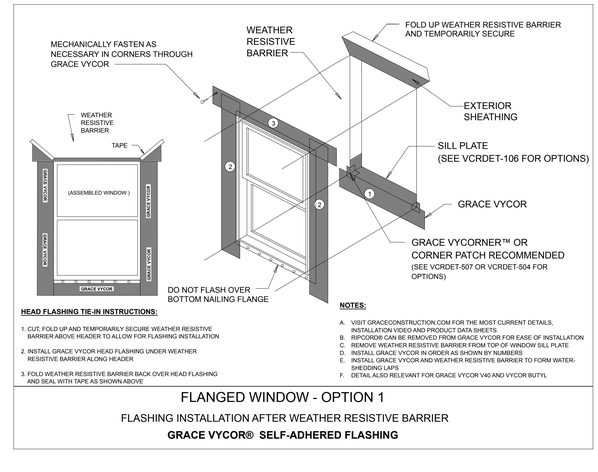

## STONE ATTACHMENT DETAIL 4/7

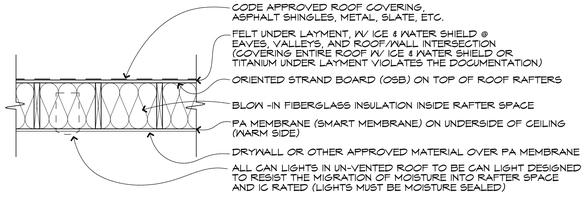
SCALE: 1 1/2" = 1'-0"




## RIDGE VENT DETAIL 5/7

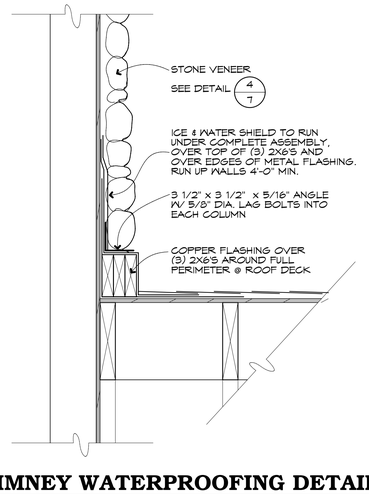
SCALE: NO SCALE



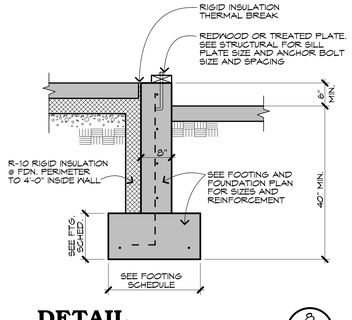

## UN-VENTED CATHEDRAL CEILING DETAIL 6/7

SCALE: 3/4" = 1'-0"




## CHIMNEY WATERPROOFING DETAIL 7/7

SCALE: 1 1/2" = 1'-0"




## DETAIL 8/7

SCALE: 3/4"=1'-0"

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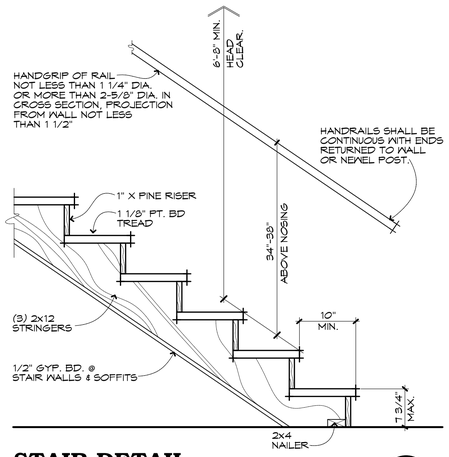
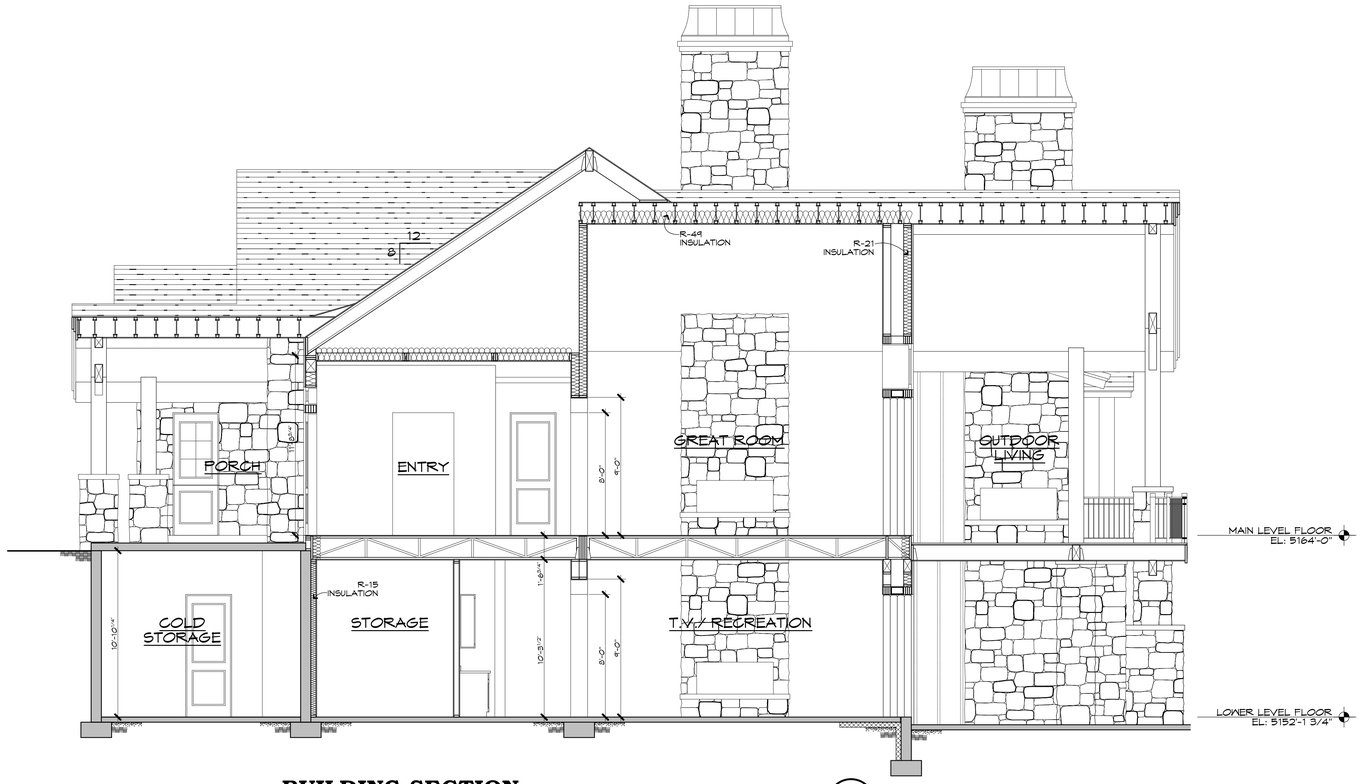
SHEET 7



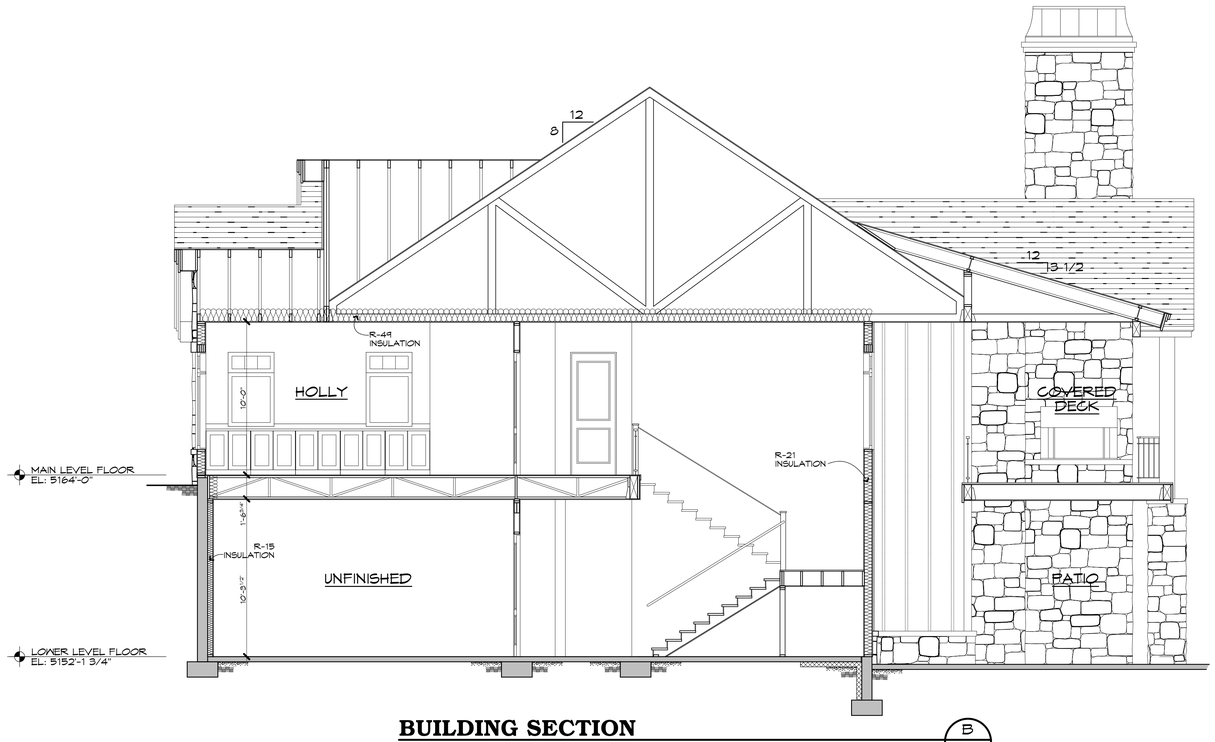

## STAIR DETAIL

SCALE: 1" = 1'-0" (1/8)




## BUILDING SECTION

SCALE: 1/4" = 1'-0" (A/8)




## BUILDING SECTION

SCALE: 1/4" = 1'-0" (B/8)

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PROJECT ENG. FOCUS
DATE: 4-29-21
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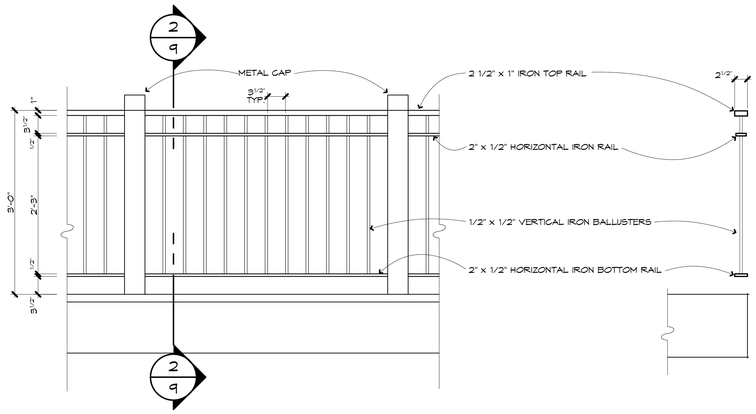
SHEET 8




**TYPICAL RAILING DETAIL** 1/9

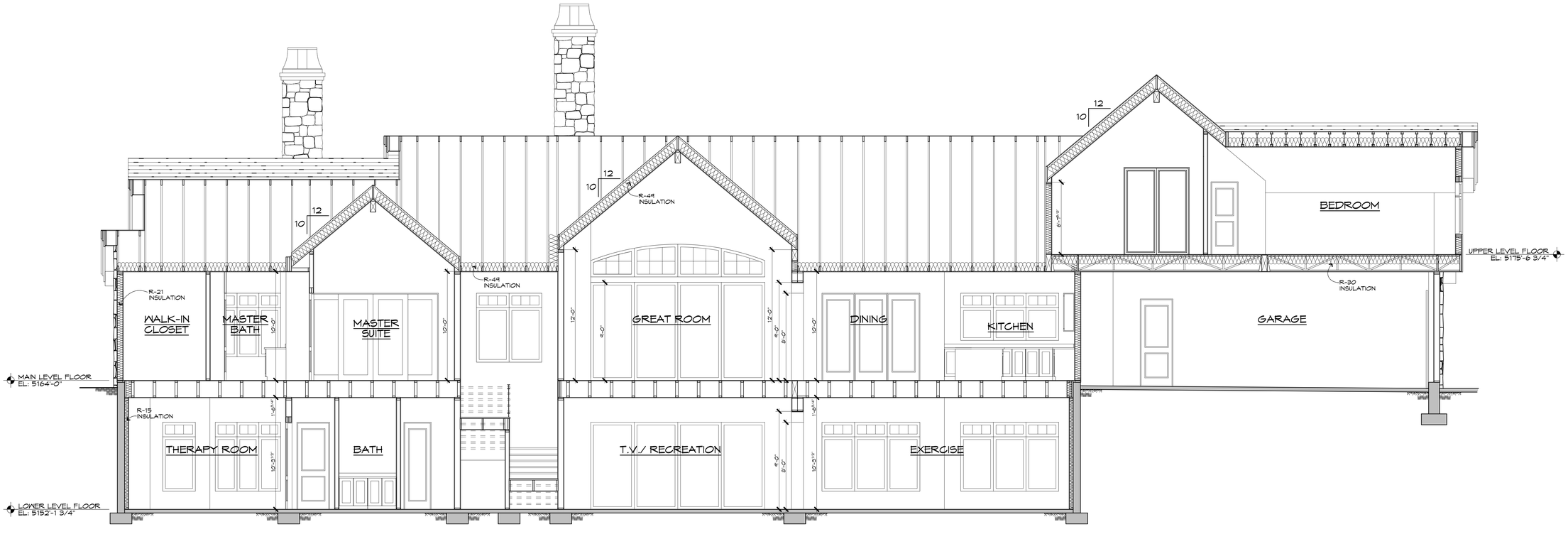
SCALE: 1" = 1'-0"

**RAILING SECTION** 2/9

SCALE: 1" = 1'-0"


**BUILDING SECTION** C/9

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




**BUILDING SECTION** D/9

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

HIGHLAND GROUP

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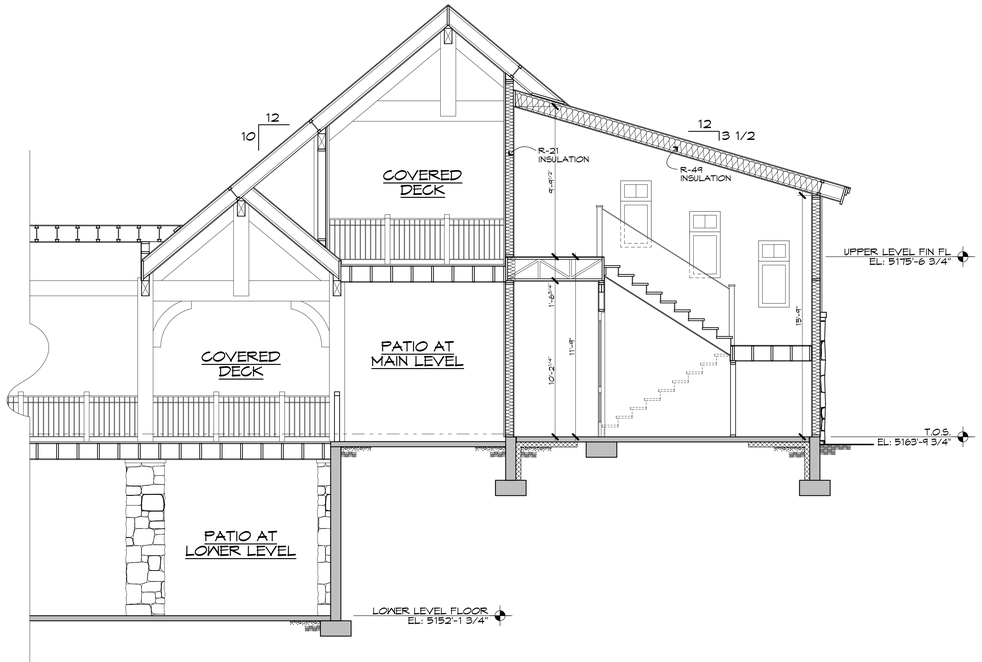
SHEET 9


**BUILDING SECTION** E/10

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




**BUILDING SECTION** F/10

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

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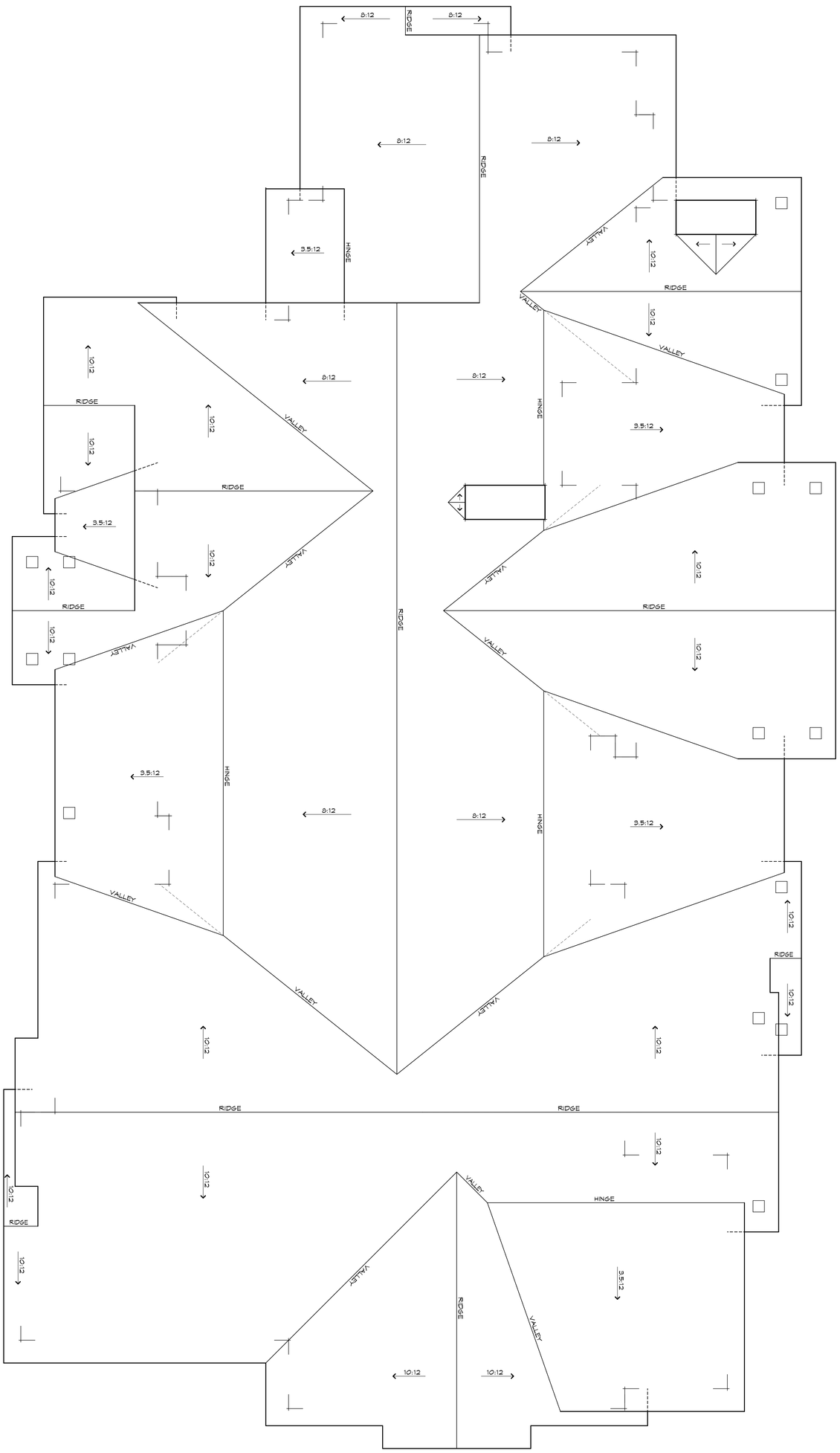
SHEET 10




## ROOF PLAN

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

SHEET 11

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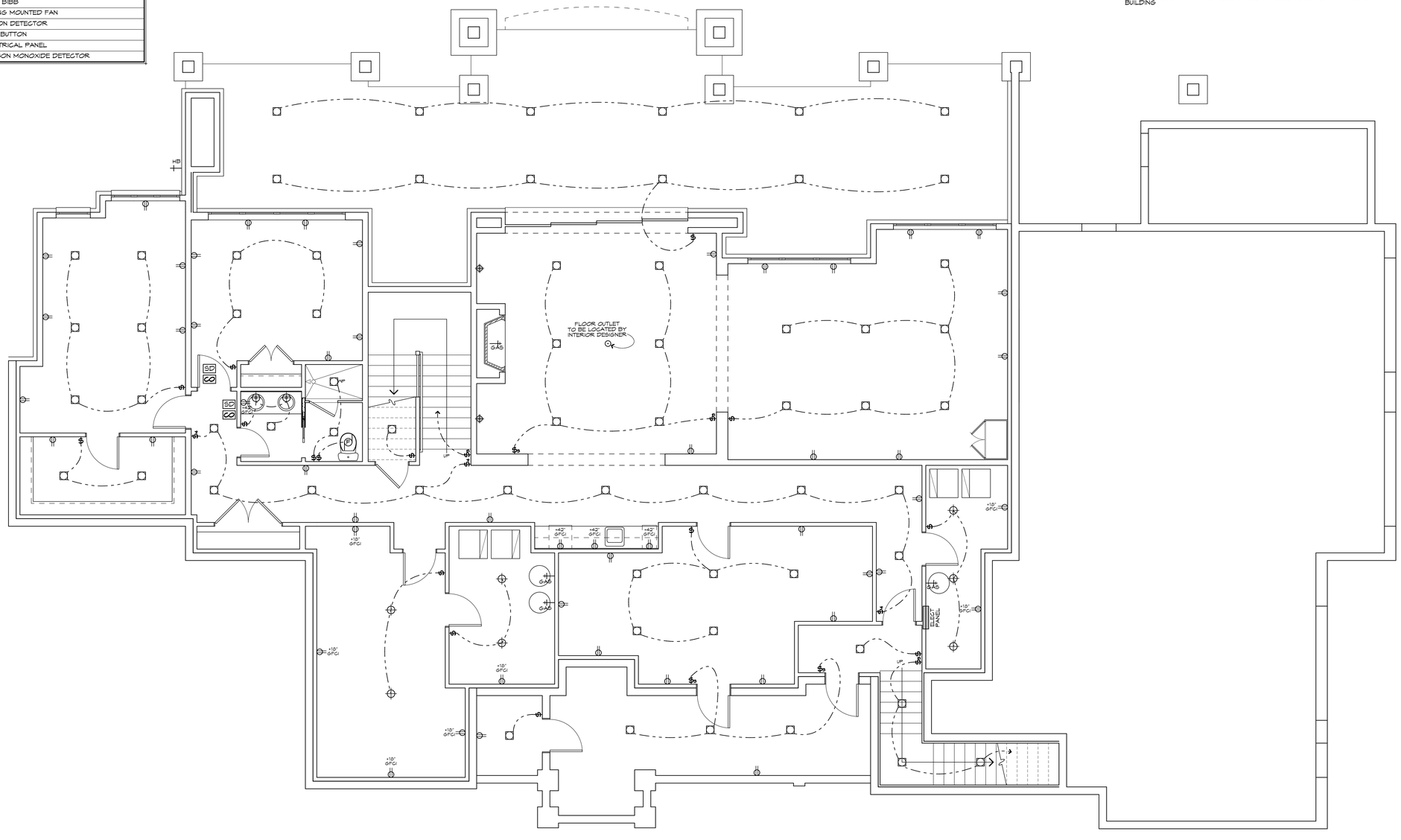
## SYMBOL LEGEND

| SYMBOL | DESCRIPTION |
|---|---|
| | 110 VOLT OUTLET |
| | 110 VOLT FOURPLEX |
| | 220 VOLT OUTLET |
| | FLOOR OUTLET |
| | SWITCHED OUTLET |
| S | SWITCH |
| S3 | 3-WAY SWITCH |
| Sm | MOTION DETECTOR SWITCH |
| Sd | DIMMER SWITCH |
| | T.V. JACK |
| | TELEPHONE JACK |
| | CEILING MOUNTED FIXTURE |
| | WALL MOUNTED FIXTURE |
| | RECESSED CAN FIXTURE |
| | RECESSED CAN HALOGEN |
| | ADJUSTABLE CAN FIXTURE |
| | RECESSED STAIR FIXTURE |
| | L.V. HALOGEN "HOCKEY PUCK" |
| | 2 TUBE FLUORESCENT FIXTURE |
| | SURFACE MOUNTED FLUORESCENT FIXTURE |
| | TRACK LIGHTING |
| | EXHAUST FAN |
| | SMOKE DETECTOR |
| | DOOR CHIME |
| | GAS BIBB |
| | HOSE BIBB |
| | CEILING MOUNTED FAN |
| | MOTION DETECTOR |
| | PUSH BUTTON |
| | ELECTRICAL PANEL |
| | CARBON MONOXIDE DETECTOR |

## ELECTRICAL NOTES

1. LIGHTS IN CLOSETS TO MEET IRC E4003.12
2. ELECTRICAL PANELS TO COMPLY WITH IRC E3405.2 30" CLEARANCE MIN. WIDTH AND 6'-6" FLOOR TO HEAD ROOM.
3. KEEP GAS AND ELECTRICAL METERS IN AN AREA THAT IS PROTECTED FROM SNOW AND ICE.
4. ALL SMOKE DETECTORS SHALL BE HARD WIRED AND HAVE BATTERY BACKUP, & BE INTERCONNECTED IN ACCORDANCE W/ IRC R314
5. PROVIDE ONE MULTI-FUNCTION SWITCH TO COVER FULL FUNCTIONS OF FAN.
6. PROVIDE OUTLET BOX THAT IS APPROVED FOR FAN SUPPORT ON ALL CEILING FANS.
7. ALL OUTLETS IN BATHROOMS TO BE +42" AND G.F.I. PROTECTED UNLESS NOTED OTHERWISE.
8. ALL EXTERIOR OUTLETS TO BE +18" G.F.I. AND WATERPROOFED UNLESS NOTED OTHERWISE.
9. PROVIDE G.F.I. PROTECTED OUTLET FOR JETTED TUB MOTOR
10. ALL OUTLETS IN KITCHEN TO BE +42" G.F.I. UNLESS NOTED OTHERWISE.
11. ALL OUTLETS IN GARAGES TO BE +18" AND G.F.I. PROTECTED UNLESS NOTED OTHERWISE.
12. PROVIDE DOOR CHIME AT EACH LEVEL & WIRE TO PUSH BUTTON AT ENTRY.
13. ALL OUTLETS IN UNFINISHED BASEMENTS TO BE +18" AND G.F.I. PROTECTED UNLESS NOTED OTHERWISE.
14. AUTOMATIC GARAGE DOOR OPENERS SHALL BE TESTED IN ACCORDANCE WITH UL325. R309.4
15. CARBON MONOXIDE DETECTORS SHALL BE INSTALLED ON EACH HABITABLE LEVEL OF A DWELLING UNIT EQUIPPED WITH A FUEL BURNING APPLIANCE, IN ACCORDANCE TO R315
16. TAMPER RESISTANT TYPE RECEPTACLE OUTLETS REQUIRED THROUGHOUT BUILDING




**LOWER LEVEL ELECTRICAL & UTILITY PLAN**

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

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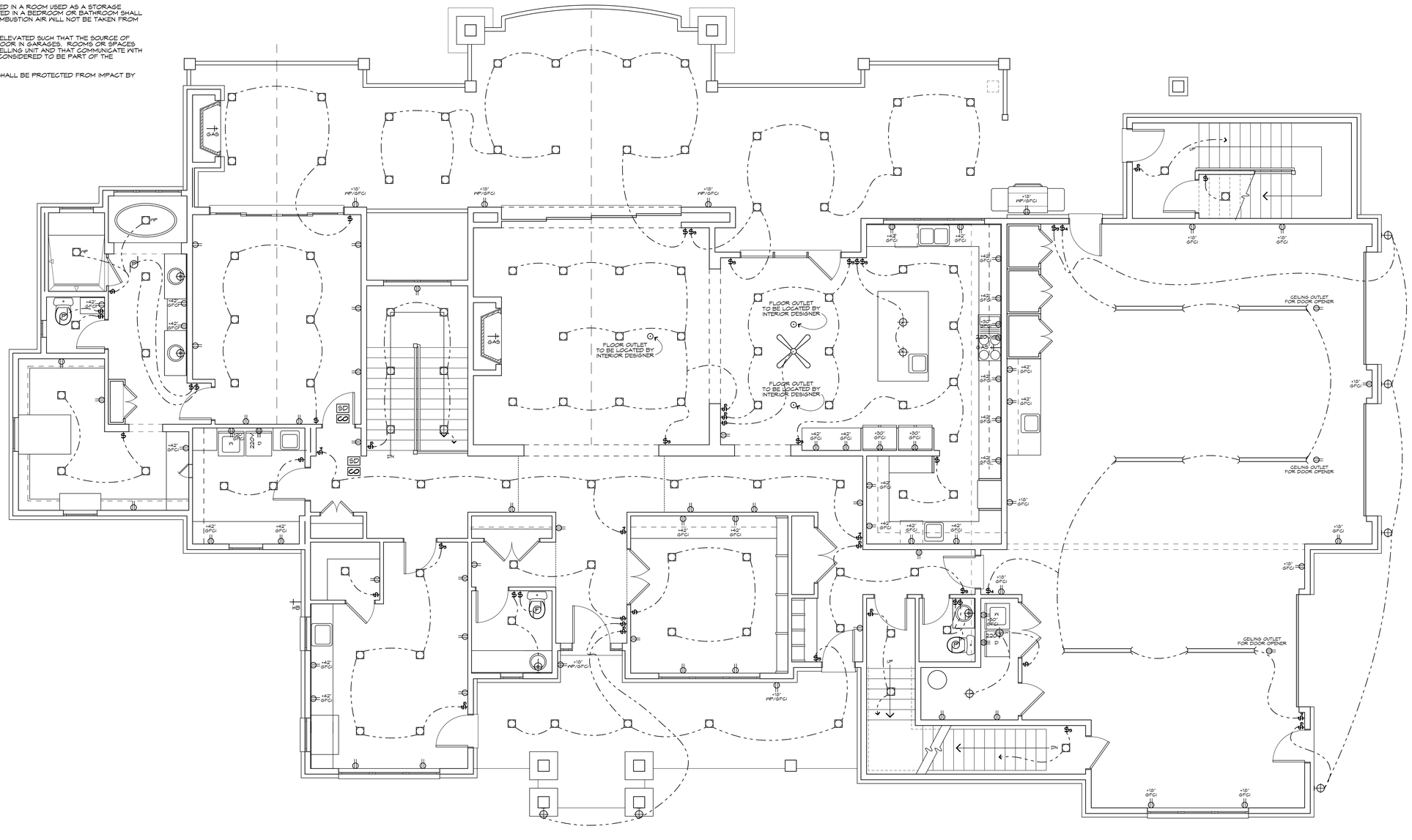
SHEET 12

## MECHANICAL NOTES

1. PROVIDE COMBUSTION AIR FOR ALL GAS APPLIANCES AT A RATE OF 1/2 SQ. INCH PER 1000 BTU'S. COMBUSTION AIR SHALL BE OBTAINED FROM OUTDOORS OR FROM SPACES FREELY COMMUNICATED WITH THE OUTDOORS. COMBUSTION AIR DUCTS SHALL HAVE AN EXTERIOR COVER OF 1/4" SCREEN. TWO SEPARATE COMBUSTION AIR DUCTS SHALL BE PROVIDED. ONE OF THE REQUIRED DUCTS IS TO TERMINATE IN UPPER 1/2 OF THE ROOM 1/4 PER 1000, BTU. THE OTHER IS TO TERMINATE WITHIN 12" OF FLOOR 1/4 1000 BTU. -IRC M1703.1-M1703.6
2. DRYER DUCTS SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS M1502.4.1 THROUGH M1502.4.7.
3. INSULATE HEATING TRUNK AND BRANCH SUPPLY DUCTS IN UNFINISHED AREAS, CRAWL SPACES, ATTICS GARAGES, ETC. . .
4. PROVIDE 30" CLEARANCE FROM RANGE TOP TO COMBUSTIBLE MATERIALS. FOR EXCEPTIONS, SEE INTERNATIONAL MECHANICAL CODE. SIDE CLEARANCE SHALL BE AS SPECIFIED BY PERMANENT MARKING ON THE UNIT. -IRC M1901.1
5. PROVIDE EXPANSION TANK ON CULINARY WATER SYSTEM. IRC P2903.4
6. PROVIDE SEISMIC STRAPS & PRESSURE RELIEF VALVE ON ALL WATER HEATERS.
7. PROVIDE MIN. 30" WORK SPACE IN FRONT OF FURNACE AND MIN. 3" ALONG SIDE AND BACK.
8. GAS LOGS SHALL BE PROVIDED WITH A SHUT-OFF VALVE LOCATED OUTSIDE OF THE FIREBOX AND WITHIN 6' OF THE APPLIANCE IRC G2420.5. IF GAS LOG LIGHTERS ARE USED, FLUE MUST BE PERMANENTLY BLOCKED OPEN. ALL GAS LOG LIGHTERS, AND/OR GAS FIREPLACES REQUIRE OUTSIDE COMBUSTION AIR. ALL FLUES MUST EQUAL 1 SQ. INCH OF PERMANENTLY BLOCKED OPEN AREA PER 1000 BTU'S. ALL ROOMS WHERE GAS LOGS, LOG LIGHTER, OR FIREPLACES ARE INSTALLED MUST EQUAL 50 CUBIC FEET OF VOLUME PER 1000 BTU FOR EVERY PIECE OF EQUIPMENT IN ADDITION TO THE REQUIRED OUTSIDE AIR. IRC M1702.1
9. PROVIDE VENTILATION SYSTEM IN BATHROOMS/WATER CLOSET COMPARTMENTS, CAPABLE OF PRODUCING EXHAUST RATES IN ACCORDANCE WITH SECTION M1507. EXHAUST AIR FROM THE SPACE SHALL BE EXHAUSTED DIRECTLY TO THE OUTDOORS.
10. PROVIDE A COMFORT HEATING SYSTEM CAPABLE OF MAINTAINING 68 DEGREES AT A POINT 36" ABOVE THE FLOOR IN ALL ROOMS.
11. FUEL-BURNING APPLIANCES, INCLUDING FIREPLACES, ARE NOT PERMITTED TO BE INSTALLED IN SLEEPING ROOMS, BATHROOMS, OR TOILET ROOMS UNLESS THE APPLIANCES ARE DIRECT VENT APPLIANCES.
12. FUEL-FIRED WATER HEATERS SHALL NOT BE INSTALLED IN A ROOM USED AS A STORAGE CLOSET. NON-DIRECT-VENT WATER HEATERS LOCATED IN A BEDROOM OR BATHROOM SHALL BE INSTALLED IN A SEALED ENCLOSURE SO THAT COMBUSTION AIR WILL NOT BE TAKEN FROM THE LIVING SPACE. IRC M2005.2
13. APPLIANCES HAVING AN IGNITION SOURCE SHALL BE ELEVATED SUCH THAT THE SOURCE OF IGNITION IS NOT LESS THAN 18 INCHES ABOVE THE FLOOR IN GARAGES, ROOMS OR SPACES THAT ARE NOT PART OF THE LIVING SPACE OF A DWELLING UNIT AND THAT COMMUNICATE WITH A PRIVATE GARAGE THROUGH OPENINGS SHALL BE CONSIDERED TO BE PART OF THE GARAGE. IRC M1307.3
14. APPLIANCES LOCATED IN A GARAGE OR CARPORT SHALL BE PROTECTED FROM IMPACT BY AUTOMOBILES. IRC M1307.3.1

## PLUMBING NOTES

1. HOSE BIBBS TO BE NON-FREEZE, BACK FLOW PREVENTER TYPE.
2. WATER CLOSETS TO HAVE A FLOW RATE OF 1.6 GALLONS OR LESS PER FLUSH. IRC P2903.2
3. SHOWER HEADS TO HAVE A FLOW RATE OF 2.5 GALLONS PER MINUTE OR LESS. IRC P2903.2
4. SHOWERS SHALL BE FINISHED TO A HEIGHT OF NOT LESS THAN 72 INCHES ABOVE THE FLOOR. MATERIAL SHALL BE NON-ABSORBENT -IRC R307.2
5. ALL PLUMBING VENTS THROUGH THE ROOF TO BE SIZED ACCORDING TO P3113.1
6. PROVIDE A FLOOR DRAIN BY THE WATER HEATER. IF WATER HEATER OR STEAM SHOWER EQUIPMENT IS LOCATED ON A WOOD FLOOR, PROVIDE A METAL PAN. IRC P2801.6
7. BATHROOM EXHAUST FAN DUCTS MUST CONTINUE AND DISCHARGE DIRECTLY OUTSIDE THE STRUCTURE. CLOSE PROXIMITY TO ATTIC VENTS OR TO SOFFIT AREAS ARE SPECIFICALLY PROHIBITED. ALL EXHAUST DUCTS MUS NOW CONNECT TO AN OPENING WITH PROPER SCREEN FOR TERMINATION IN SOFFIT AND WALL AREAS AND TO AN APPROVED THRU THE ROOF DISCHARGE FITTING INSTALLED AS NOT TO BE BLOCKED OR STOPPED BY SNOW OR ICE.
8. BATHTUB AND WHIRLPOOL TUBS MUST HAVE ANTI-SCALD MIXING VALVES LIMITING WATER TEMPERATURE TO 120 DEGREES
9. TUBS AND SHOWERS WITH TILED WALLS REQUIRE CEMENT, FIBER CEMENT OR GLASS MAT GYPSUM BACKERS. GREEN BOARD IS NO LONGER ALLOWED IN ANY APPLICATION.
10. BACKWATER VALVES REQ. UNLESS IT CAN BE ESTABLISHED A FIXTURE IN THE LOWEST LEVEL OF THE HOME IS NOT BELOW THE ELEVATION OF THE UPSTREAM MANHOLE COVER. THIS WILL REQUIRE THE BASEMENT FLOOR TO BE PLUMBED INDEPENDENT FROM THE UPPER FLOORS. BACKWATER VALVES MUST BE ACCESSIBLE.




**MAIN LEVEL ELECTRICAL & UTILITY PLAN**

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

HIGHLAND GROUP

4471 SOUTH HIGHLAND DRIVE SALT LAKE CITY, UTAH 84124 (801) 277-4433

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REV.:

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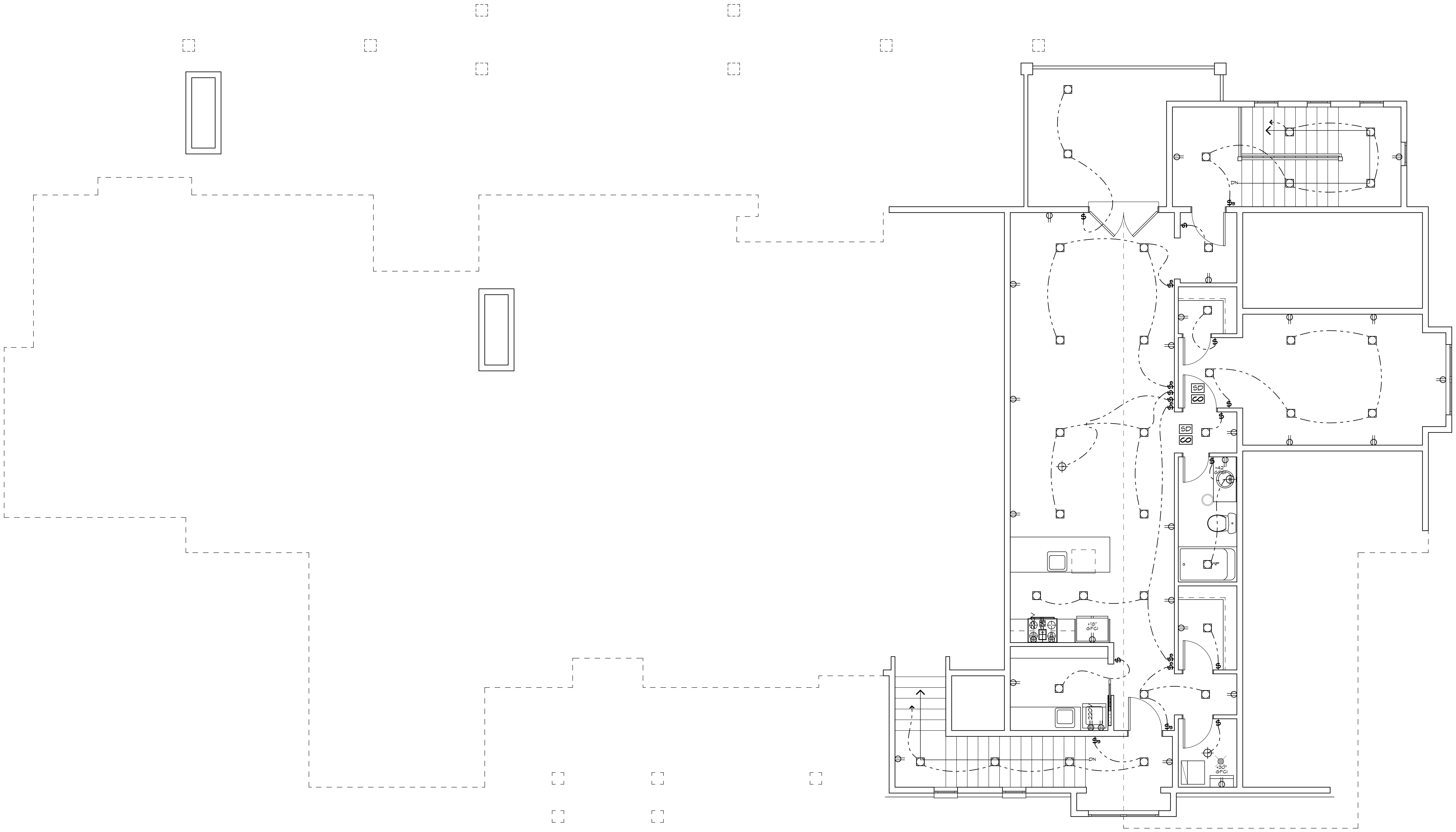
SHEET 13



## UPPER LEVEL ELECTRICAL & UTILITY PLAN

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

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REV:

SHEET
14

## FOUNDATION WALL SCHEDULE

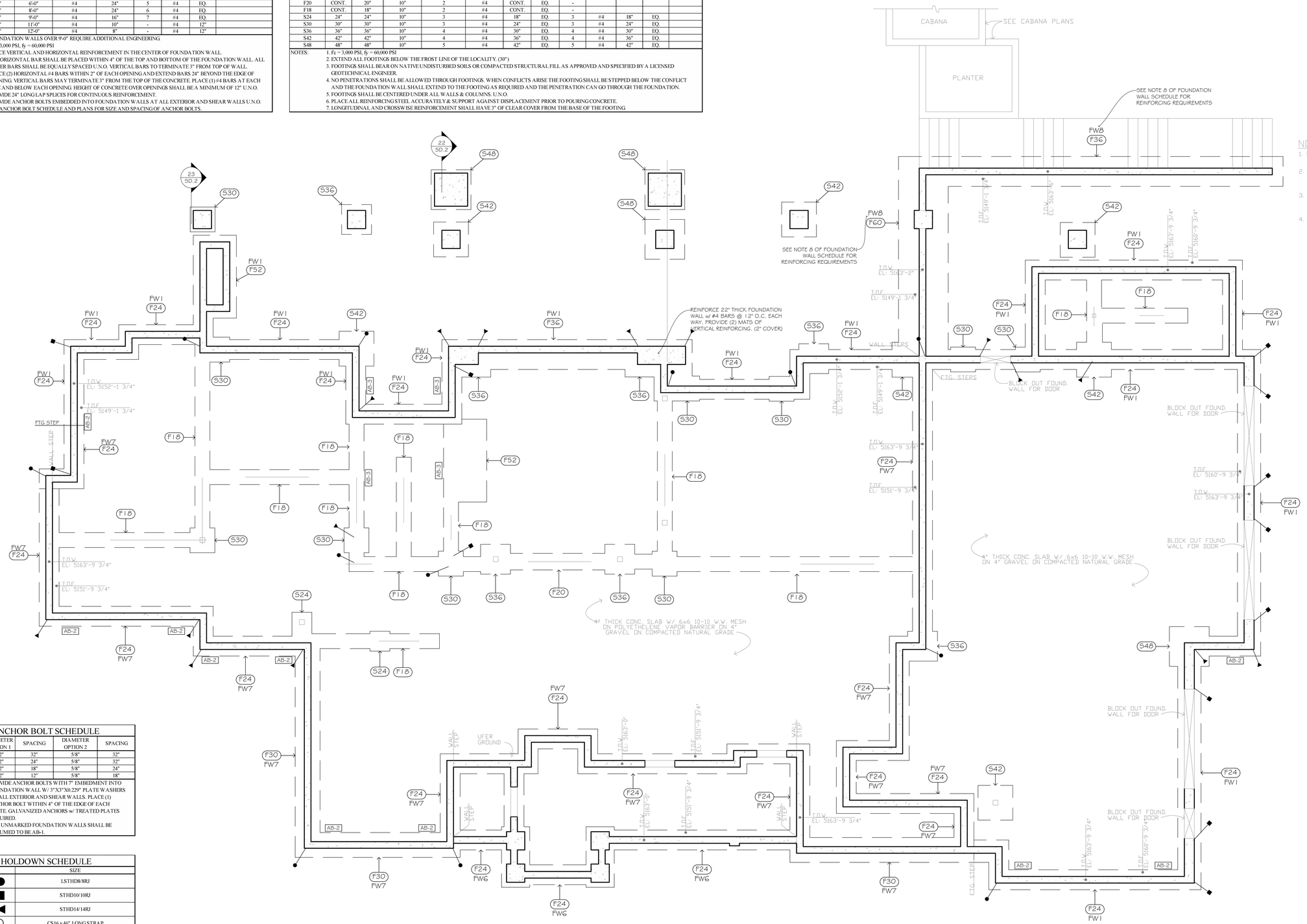
| MARK | THICKNESS | MAX HEIGHT | VERTICAL REINFORCEMENT | | HORIZONTAL REINFORCEMENT | | NOTES |
|---|---|---|---|---|---|---|---|
| | | | SIZE | SPACING | QTY. | SIZE | SPACING | |
| FW1 | 8" | 3'-0" | #4 | 24" | 3 | #4 | EQ. | |
| FW2 | 8" | 4'-0" | #4 | 24" | 4 | #4 | EQ. | |
| FW3 | 8" | 6'-0" | #4 | 24" | 5 | #4 | EQ. | |
| FW4 | 8" | 8'-0" | #4 | 24" | 6 | #4 | EQ. | |
| FW5 | 8" | 9'-0" | #4 | 16" | 7 | #4 | EQ. | |
| FW6 | 8" | 11'-0" | #4 | 10" | - | #4 | 12" | |
| FW7 | 8" | 12'-0" | #4 | 8" | - | #4 | 12" | |

NOTES:
1. FOUNDATION WALLS OVER 9'-0" REQUIRE ADDITIONAL ENGINEERING.
2. fc = 3,000 PSI, fy = 60,000 PSI
3. PLACE VERTICAL AND HORIZONTAL REINFORCEMENT IN THE CENTER OF FOUNDATION WALL.
4. (1) HORIZONTAL BAR SHALL BE PLACED WITHIN 4" OF THE TOP AND BOTTOM OF THE FOUNDATION WALL. ALL OTHER BARS SHALL BE EQUALLY SPACED U.N.O. VERTICAL BARS TO TERMINATE 3" FROM TOP OF WALL.
5. PLACE (2) HORIZONTAL #4 BARS WITHIN 2" OF EACH OPENING AND EXTEND BARS 24" BEYOND THE EDGE OF OPENING. VERTICAL BARS MAY TERMINATE 3" FROM THE TOP OF THE CONCRETE. PLACE (1) #4 BARS AT EACH SIDE AND BELOW EACH OPENING. HEIGHT OF CONCRETE OVER OPENINGS SHALL BE A MINIMUM OF 12" U.N.O.
6. PROVIDE 24" LONG LAP SPLICES FOR CONTINUOUS REINFORCEMENT.
7. PROVIDE ANCHOR BOLTS EMBEDDED INTO FOUNDATION WALLS AT ALL EXTERIOR AND SHEAR WALLS U.N.O. SEE ANCHOR BOLT SCHEDULE AND PLANS FOR SIZE AND SPACING OF ANCHOR BOLTS.

## FOOTING SCHEDULE

| MARK | LENGTH | WIDTH | HEIGHT | CONTINUOUS REINFORCEMENT | | | | CROSSWISE REINFORCEMENT | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | QTY. | SIZE | LENGTH | SPACING | QTY. | SIZE | LENGTH | SPACING | |
| F36 | CONT. | 36" | 10" | 4 | #4 | CONT. | EQ. | - | #5 | 30" | 12" | |
| F30 | CONT. | 30" | 10" | 3 | #4 | CONT. | EQ. | - | #4 | 24" | 12" | |
| F24 | CONT. | 24" | 10" | 3 | #4 | CONT. | EQ. | - | | | | |
| F20 | CONT. | 20" | 10" | 2 | #4 | CONT. | EQ. | - | | | | |
| F18 | CONT. | 18" | 10" | 2 | #4 | CONT. | EQ. | - | | | | |
| S24 | 24" | 24" | 10" | 3 | #4 | 18" | EQ. | 3 | #4 | 18" | EQ. | |
| S30 | 30" | 30" | 10" | 3 | #4 | 24" | EQ. | 3 | #4 | 24" | EQ. | |
| S36 | 36" | 36" | 10" | 4 | #4 | 30" | EQ. | 4 | #4 | 30" | EQ. | |
| S42 | 42" | 42" | 10" | 4 | #4 | 36" | EQ. | 4 | #4 | 36" | EQ. | |
| S48 | 48" | 48" | 10" | 5 | #4 | 42" | EQ. | 5 | #4 | 42" | EQ. | |

NOTES:
1. fc = 3,000 PSI, fy = 60,000 PSI
2. EXTEND ALL FOOTINGS BELOW THE FROST LINE OF THE LOCALITY. (30")
3. FOOTINGS SHALL BEAR ON NATIVE UNDISTURBED SOILS OR COMPACTED STRUCTURAL FILL AS APPROVED AND SPECIFIED BY A LICENSED GEOTECHNICAL ENGINEER.
4. NO PENETRATIONS SHALL BE ALLOWED THROUGH FOOTINGS. WHEN CONFLICTS ARISE THE FOOTING SHALL BE STEPPED BELOW THE CONFLICT AND THE FOUNDATION WALL SHALL EXTEND TO THE FOOTING AS REQUIRED AND THE PENETRATION CAN GO THROUGH THE FOUNDATION.
5. FOOTINGS SHALL BE CENTERED UNDER ALL WALLS & COLUMNS. U.N.O.
6. PLACE ALL REINFORCING STEEL ACCURATELY & SUPPORT AGAINST DISPLACEMENT PRIOR TO POURING CONCRETE.
7. LONGITUDINAL AND CROSSWISE REINFORCEMENT SHALL HAVE 3" OF CLEAR COVER FROM THE BASE OF THE FOOTING.




NOTES:
1. FOOTING TO BEAR 40" MIN. BELOW FINISHED GRADE.
2. SEE LATERAL REINFORCEMENT PLANS FOR ADDITIONAL ANCHORS TO BE CAST INTO FOUNDATION WALLS.
3. SEE EXTERIOR ELEVATIONS FOR FOOTING AND FOUNDATION STEPS & ELEVATIONS IN RELATION TO EXISTING AND FINISH GRADES.
4. CONTRACTOR TO VERIFY ALL FOOTING & FOUNDATION HEIGHTS (IN RELATION TO EXISTING/FINISHED GRADE) PRIOR TO CONSTRUCTION

## ANCHOR BOLT SCHEDULE

| MARK | DIAMETER OPTION 1 | SPACING | DIAMETER OPTION 2 | SPACING |
|---|---|---|---|---|
| AB-1 | 1/2" | 32" | 5/8" | 32" |
| AB-2 | 1/2" | 24" | 5/8" | 32" |
| AB-3 | 1/2" | 18" | 5/8" | 24" |
| AB-4 | 1/2" | 12" | 5/8" | 18" |

NOTES:
1. PROVIDE ANCHOR BOLTS WITH 7" EMBEDMENT INTO FOUNDATION WALL W/ 3"X3"X0.229" PLATE WASHERS AT ALL EXTERIOR AND SHEAR WALLS. PLACE (1) ANCHOR BOLT WITHIN 4" OF THE EDGE OF EACH PLATE. GALVANIZED ANCHORS w/ TREATED PLATES REQUIRED.
2. ALL UNMARKED FOUNDATION WALLS SHALL BE ASSUMED TO BE AB-1.

## HOLDOWN SCHEDULE

| MARK | SIZE |
|---|---|
| ● | LSTHD8/8RJ |
| ■ | STHD10/10RJ |
| ◀ | STHD14/14RJ |
| ○ | CS16 x 46" LONG STRAP |
| □ | MST37 STRAP |
| ◁ | MST48 STRAP |

NOTES:
1. HOLDOWNS SHALL BE INSTALLED ON A MINIMUM OF (2) FULL HEIGHT KING STUDS.
2. SEE DETAILS FOR TYPICAL HOLDOWN INSTALLATION.
3. SEE DETAILS FOR TYPICAL FLOOR TO FLOOR STRAP INSTALLATION.
4. POST-INSTALLED HOLDOWNS MAY BE INSTALLED IN LIEU OF CAST IN PLACE HOLDOWNS PER DETAILS.
5. 16d SINKER NAILS MAY BE SUBSTITUTED WITH 10d COMMON NAILS. MINIMUM NAIL LENGTH = 2 1/2".
6. USE 'RJ' HOLDOWN MODEL AT TYPICAL RIMJOIST APPLICATIONS.
7. FLOOR TO FLOOR STRAPS SHALL BE CENTERED OVER THE FLOOR CAVITY.

FOOTING & FOUNDATION PLAN

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

PROFESSIONAL STRUCTURAL ENGINEER No. 293261 CRAIG R. LYM (04/29/2021) STATE OF UTAH

DRAWN BY: BS
PROJECT ENG: FOCUS
DATE: 4-29-21
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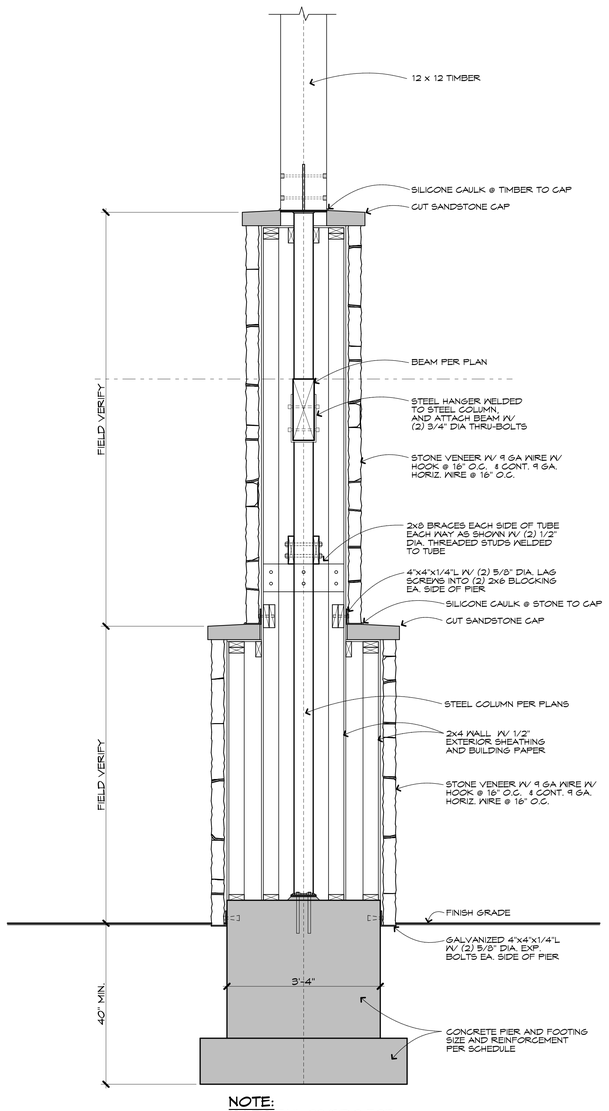
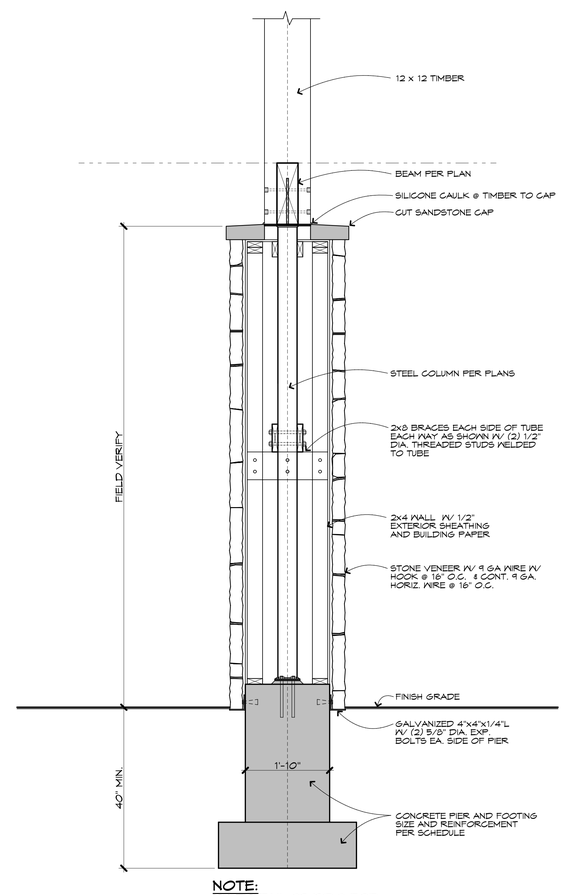
SHEET 15




NOTE:
SEE DETAIL 22/SD.2 FOR ALL STRUCTURAL NOTES

**PIER DETAIL** 1/15a

SCALE: 3/4"=1'-0"




NOTE:
SEE DETAIL 23/SD.2 FOR ALL STRUCTURAL NOTES

**PIER DETAIL** 2/15a

SCALE: 3/4"=1'-0"

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PROJECT ENG: FOCUS
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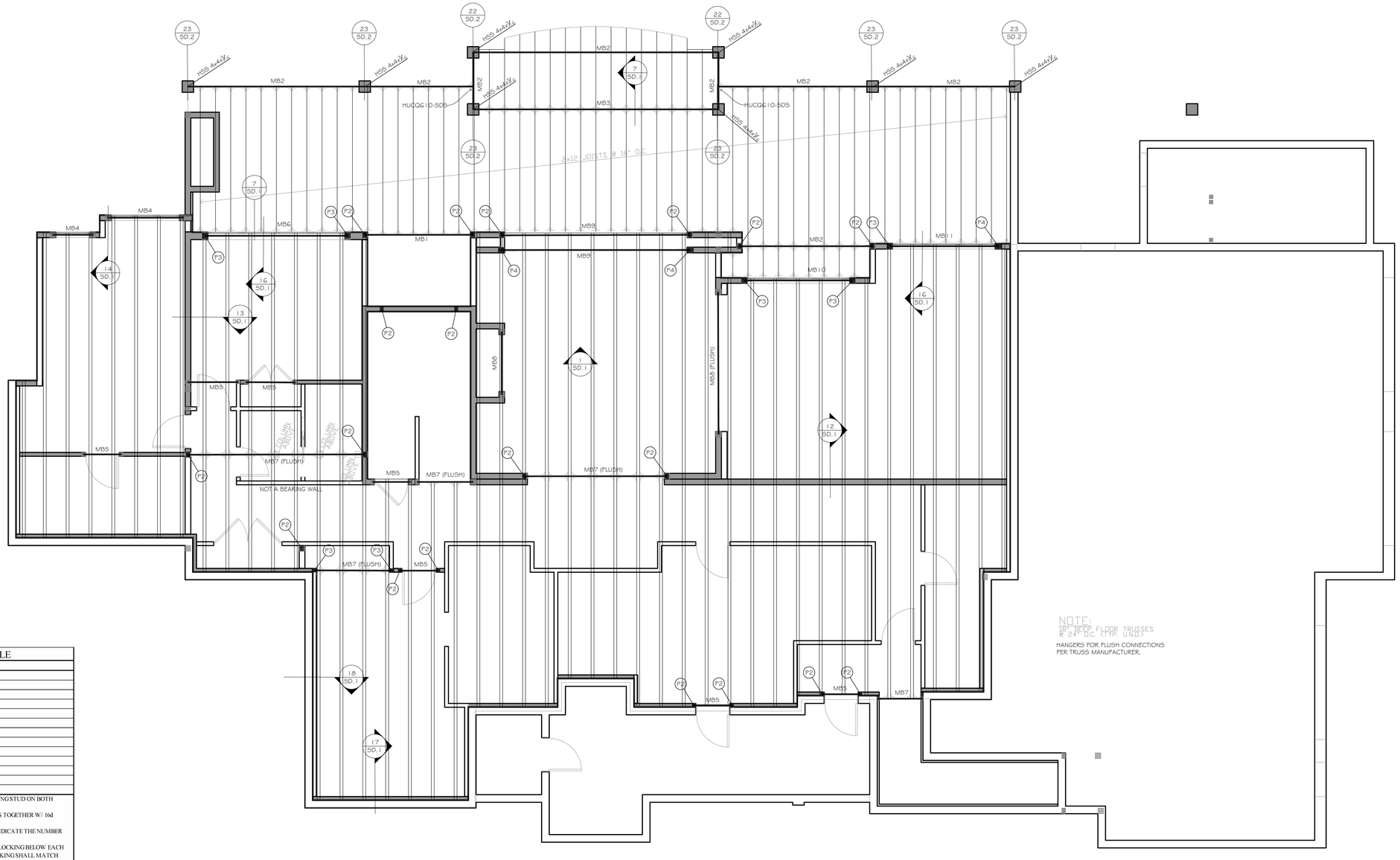
SHEET 15a




## POST SCHEDULE

| MARK | SIZE |
|---|---|
| P1 | (1) 2x |
| P2 | (2) 2x |
| P3 | (3) 2x |
| P4 | (4) 2x |
| P5 | (5) 2x |
| P6 | 4 x 4 |
| P7 | 6 x 6 |
| P8 | 3 1/2" x 3 1/2" PARALLAM POST |
| P9 | 3 1/2" x 5 1/4" PPARALLAM POST |
| P10 | 3 1/2" x 7" PARALLAM POST |
| P11 | 5 1/4" x 5 1/4" PARALLAM POST |
| P12 | 5 1/4" x 7" PARALLAM POST |
| P13 | 7" x 7" PARALLAM POST |

NOTES:

1. INSTALL (1) TRIMMER AND (1) KING STUD ON BOTH SIDES OF EACH OPENING. U.N.O.
2. ATTACH 2X BUILT UP POST PLIES TOGETHER W/ 16d NAILS @ 6" O.C. STAGGERED.
3. POST CALLOUTS AT HEADERS INDICATE THE NUMBER OF TRIMMER STUDS REQUIRED.
4. PROVIDE SOLID 2x SQUASHING BLOCKING BELOW EACH POST AT FLOOR FRAMING. BLOCKING SHALL MATCH DIMENSIONS OF POST ABOVE. PROVIDE POSTS OF EQUAL DIMENSION OR GREATER BELOW SQUASHING BLOCKING AND POSTS ABOVE THROUGH TO FOUNDATION/FOOTING U.N.O. OR UNLESS POST ENDS OVER A BEAM.
5. BUILT-UP 2x POSTS (P2 - P5) SHALL MATCH THE WALL DIMENSION FOR WHICH THEY ARE PLACED.
6. BUILT UP POSTS SHALL BE DF-L #2 GRADE. PARALLAM POSTS SHALL BE 2.0E PSI.
7. POSTS SHALL BE CENTERED BELOW THE BEAMS/POSTS ABOVE FOR WHICH LOADS THE POSTS ARE INTENDED TO CARRY.

## MAIN FLOOR BEAM SCHEDULE

| MARK | QTY. | SIZE | MATERIAL | GRADE |
|---|---|---|---|---|
| MB1 | 3 | 2 x 12 | DIM. LUMBER | DF-L#2 |
| MB2 | 1 | 6 x 14 | TIMBER | DF-L#1 |
| MB3 | 1 | 8 x 18 | TIMBER | DF-L#1 |
| MB4 | 3 | 2 x 10 | DIM. LUMBER | DF-L#2 |
| MB5 | 2 | 2 x 6 | DIM. LUMBER | DF-L#2 |
| MB6 | 3 | 1 3/4" x 11 7/8" | MICROLLAM | 1.9E |
| MB7 | 2 | 1 3/4" x 18" | MICROLLAM | 1.9E |
| MB8 | 2 | 2 x 10 | DIM. LUMBER | DF-L#2 |
| MB9 | 3 | 1 3/4" x 14" | MICROLLAM | 1.9E |
| MB10 | 2 | 1 3/4" x 9 1/2" | MICROLLAM | 1.9E |
| MB11 | 2 | 1 3/4" x 11 7/8" | MICROLLAM | 1.9E |

## GENERAL FRAMING NOTES

1. REFER TO DETAIL SHEET SD 0 FOR GENERAL STRUCTURAL NOTES.
2. ALL DETAILS SHALL APPLY IN SIMILAR/TYPICAL SITUATIONS.
3. ALL STRUCTURAL PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
4. USE (8) 16d NAILS BETWEEN TOP PLATE LAP SPLICES SEE DET. 5/SD.1
5. INTERIOR STUD WALLS SHALL BE 2X4 OR 2X6 (AS PER PLANS) @ 16" O.C. U.N.O.
6. EXTERIOR STUD WALLS SHALL BE 2X6 @ 16" O.C. U.N.O.
7. ALL NAIL FASTENERS SHALL BE COMMON WIRE OR BOX NAILS.
8. SHEAR WALL HOLDOWNS INDICATED ON FLOOR PLANS PERTAIN TO THE BOTTOM OF THE WALLS ON THE PLAN.
9. ROOF FRAMING SHALL BE STICK FRAMED OR PRE-MANUFACTURED TRUSSES AS PER PLANS W/ APA RATED 7/16" OSB OR CDX PLYWOOD W/ 8d NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN PANEL FIELD.
10. FLOOR FRAMING SHALL BE FLOOR JOISTS AS PER PLANS W/APA RATED 3/4" T&G OSB OR CDX PLYWOOD W/ 10d RING SHANK NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN PANEL FIELD
11. ALL WOOD IN DIRECT CONTACT WITH CONCRETE, MASONRY AND/OR THAT IS NOT PERMANENTLY PROTECTED FROM THE ELEMENTS SHALL BE OF A NATURALLY DECAY RESISTANT SPECIES OR PRESERVATIVE TREATED LUMBER.
12. ANY TRUSS OR JOIST LABELED AS A DRAG TRUSS OR DRAG JOIST SHALL RECEIVE ROOF/FLOOR SHEATHING EDGE NAILING PER NOTES 9 & 10 ABOVE.

MAIN LEVEL FLOOR FRAMING PLAN

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

PROFESSIONAL STRUCTURAL ENGINEER
No. 293261
CRAIG R. LYN
04/29/2021
STATE OF UTAH

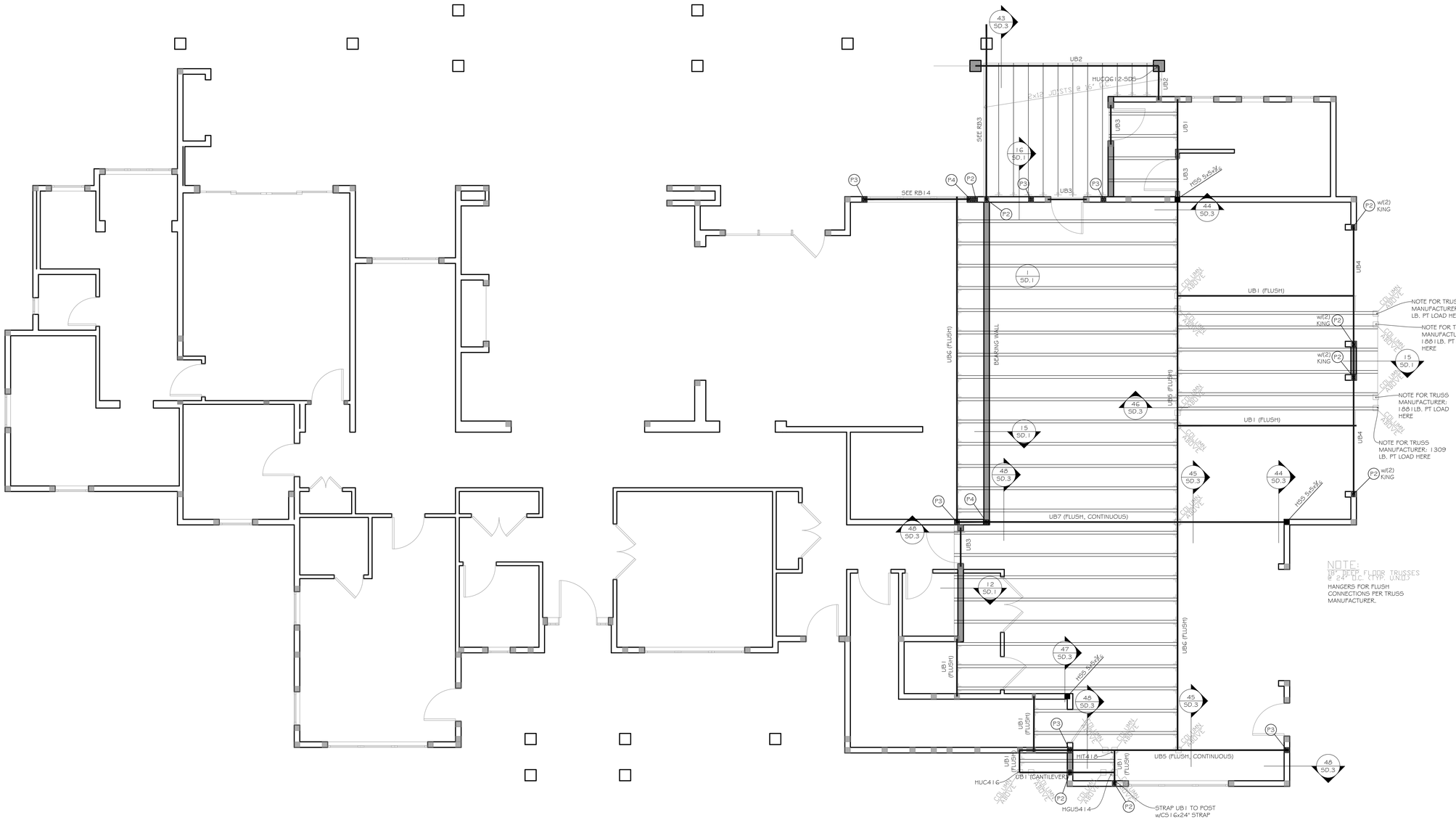
SHEET 16

# Gustafson Residence

HIGHLAND GROUP

4471 SOUTH HIGHLAND DRIVE SALT LAKE CITY, UTAH 84124 (801) 277-4433

DRAWN BY: BS
PROJECT ENG: FOCUS
DATE: 4-29-21
REV.:




## UPPER LEVEL FLOOR FRAMING PLAN

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

### UPPER FLOOR BEAM SCHEDULE

| MARK | QTY. | SIZE | MATERIAL | GRADE |
|---|---|---|---|---|
| UB1 | 2 | 1 3/4" x 18" | MICROLLAM | 1.9E |
| UB2 | 1 | 6 x 16 | TIMBER | DF-L#1 |
| UB3 | 2 | 2 x 6 | DIM. LUMBER | DF-L#2 |
| UB4 | 2 | 1 3/4" x 11 7/8" | MICROLLAM | 1.9E |
| UB5 | 1 | W16X77 | STEEL | A992-50 |
| UB6 | 1 | W16X26 | STEEL | A992-50 |
| UB7 | 1 | W18X97 | STEEL | A992-50 |

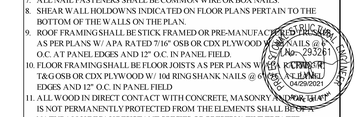
### POST SCHEDULE

| MARK | SIZE |
|---|---|
| P1 | (1) 2x |
| P2 | (2) 2x |
| P3 | (3) 2x |
| P4 | (4) 2x |
| P5 | (5) 2x |
| P6 | 4 x 4 |
| P7 | 6 x 6 |
| P8 | 3 1/2" x 3 1/2" PARALLAM POST |
| P9 | 3 1/2" x 5 1/4" PPARALLAM POST |
| P10 | 3 1/2" x 7" PARALLAM POST |
| P11 | 5 1/4" x 5 1/4" PARALLAM POST |
| P12 | 5 1/4" x 7" PARALLAM POST |
| P13 | 7" x 7" PARALLAM POST |

NOTES:
1. INSTALL (1) TRIMMER AND (1) KING STUD ON BOTH SIDES OF EACH OPENING. U.N.O.
2. ATTACH 2X BUILT UP POST PLIES TOGETHER W/ 16d NAILS @ 6" O.C. STAGGERED.
3. POST CALLOUTS AT HEADERS INDICATE THE NUMBER OF TRIMMER STUDS REQUIRED.
4. PROVIDE SOLID 2x SQUASHING BLOCKING BELOW EACH POST AT FLOOR FRAMING. BLOCKING SHALL MATCH DIMENSIONS OF POST ABOVE. PROVIDE POSTS OF EQUAL DIMENSION OR GREATER BELOW SQUASHING BLOCKING AND POSTS ABOVE THROUGH TO FOUNDATION/FOOTING U.N.O. OR UNLESS POST ENDS OVER A BEAM.
5. BUILT-UP 2x POSTS (P2 - P5) SHALL MATCH THE WALL DIMENSION FOR WHICH THEY ARE PLACED.
6. BUILT UP POSTS SHALL BE DF-L #2 GRADE. PARALLAM POSTS SHALL BE 2.0E PSI.
7. POSTS SHALL BE CENTERED BELOW THE BEAMS/POSTS ABOVE FOR WHICH LOADS THE POSTS ARE INTENDED TO CARRY.

### GENERAL FRAMING NOTES

1. REFER TO DETAIL SHEET SD.0 FOR GENERAL STRUCTURAL NOTES.
2. ALL DETAILS SHALL APPLY IN SIMILAR/TYPICAL SITUATIONS.
3. ALL STRUCTURAL PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURERS SPECIFICATIONS.
4. USE (8) 16d NAILS BETWEEN TOP PLATE LAP SPLICES SEE DET. 5/SD.1
5. INTERIOR STUD WALLS SHALL BE 2X4 OR 2X6 (AS PER PLANS) @ 16" O.C. U.N.O.
6. EXTERIOR STUD WALLS SHALL BE 2X6 @ 16" O.C. U.N.O.
7. ALL NAIL FASTENERS SHALL BE COMMON WIRE OR BOX NAILS.
8. SHEAR WALL HOLDOWNS INDICATED ON FLOOR PLANS PERTAIN TO THE BOTTOM OF THE WALLS ON THE PLAN.
9. ROOF FRAMING SHALL BE STICK FRAMED OR PRE-MANUFACTURED TRUSSES AS PER PLANS W/ APA RATED 7/16" OSB OR CDX PLYWOOD W/ 10d NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN PANEL FIELD.
10. FLOOR FRAMING SHALL BE FLOOR JOISTS AS PER PLANS W/ APA RATED T&G OSB OR CDX PLYWOOD W/ 10d RING SHANK NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN PANEL FIELD.
11. ALL WOOD IN DIRECT CONTACT WITH CONCRETE, MASONRY, AND/OR THAT IS NOT PERMANENTLY PROTECTED FROM THE ELEMENTS SHALL BE OF A NATURALLY DECAY RESISTANT SPECIES OR PRESERVATIVE TREATED LUMBER.
12. ANY TRUSS OR JOIST LABELED AS A DRAG TRUSS OR DRAG JOIST SHALL RECEIVE ROOF/FLOOR SHEATHING EDGE NAILING PER NOTES 9 & 10 ABOVE.




DRAWN BY: BS
PROJECT ENG: FOCUS
DATE: 4-29-21
REV.:

HIGHLAND GROUP

4471 SOUTH HIGHLAND DRIVE SALT LAKE CITY, UTAH 84124 (801) 277-4433

Gustafson Residence

SHEET 17

## GENERAL FRAMING NOTES

1. REFER TO DETAIL SHEET SD.0 FOR GENERAL STRUCTURAL NOTES.
2. ALL DETAILS SHALL APPLY IN SIMILAR/TYPICAL SITUATIONS.
3. ALL STRUCTURAL PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURERS SPECIFICATIONS.
4. USE (8) 16d NAILS BETWEEN TOP PLATE LAP SPLICES SEE DET. 5/SD.1
5. INTERIOR STUD WALLS SHALL BE 2X4 OR 2X6 (AS PER PLANS) @ 16" O.C. U.N.O.
6. EXTERIOR STUD WALLS SHALL BE 2X6 @ 16" O.C. U.N.O.
7. ALL NAIL FASTENERS SHALL BE COMMON WIRE OR BOX NAILS.
8. SHEAR WALL HOLDOWNS INDICATED ON FLOOR PLANS PERTAIN TO THE BOTTOM OF THE WALLS ON THE PLAN.
9. ROOF FRAMING SHALL BE STICK FRAMED OR PRE-MANUFACTURED TRUSSES AS PER PLANS W/ APA RATED 7/16" OSB OR CDX PLYWOOD W/ 8d NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN PANEL FIELD.
10. FLOOR FRAMING SHALL BE FLOOR JOISTS AS PER PLANS W/APA RATED 3/4" T&G OSB OR CDX PLYWOOD W/ 10d RING SHANK NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN PANEL FIELD
11. ALL WOOD IN DIRECT CONTACT WITH CONCRETE, MASONRY AND/OR THAT IS NOT PERMANENTLY PROTECTED FROM THE ELEMENTS SHALL BE OF A NATURALLY DECAYRESISTANT SPECIES OR PRESERVATIVE TREATED LUMBER.
12. ANY TRUSS OR JOIST LABELED AS A DRAG TRUSS OR DRAG JOIST SHALL RECEIVE ROOF/FLOOR SHEATHING EDGE NAILING PER NOTES 9 & 10 ABOVE.

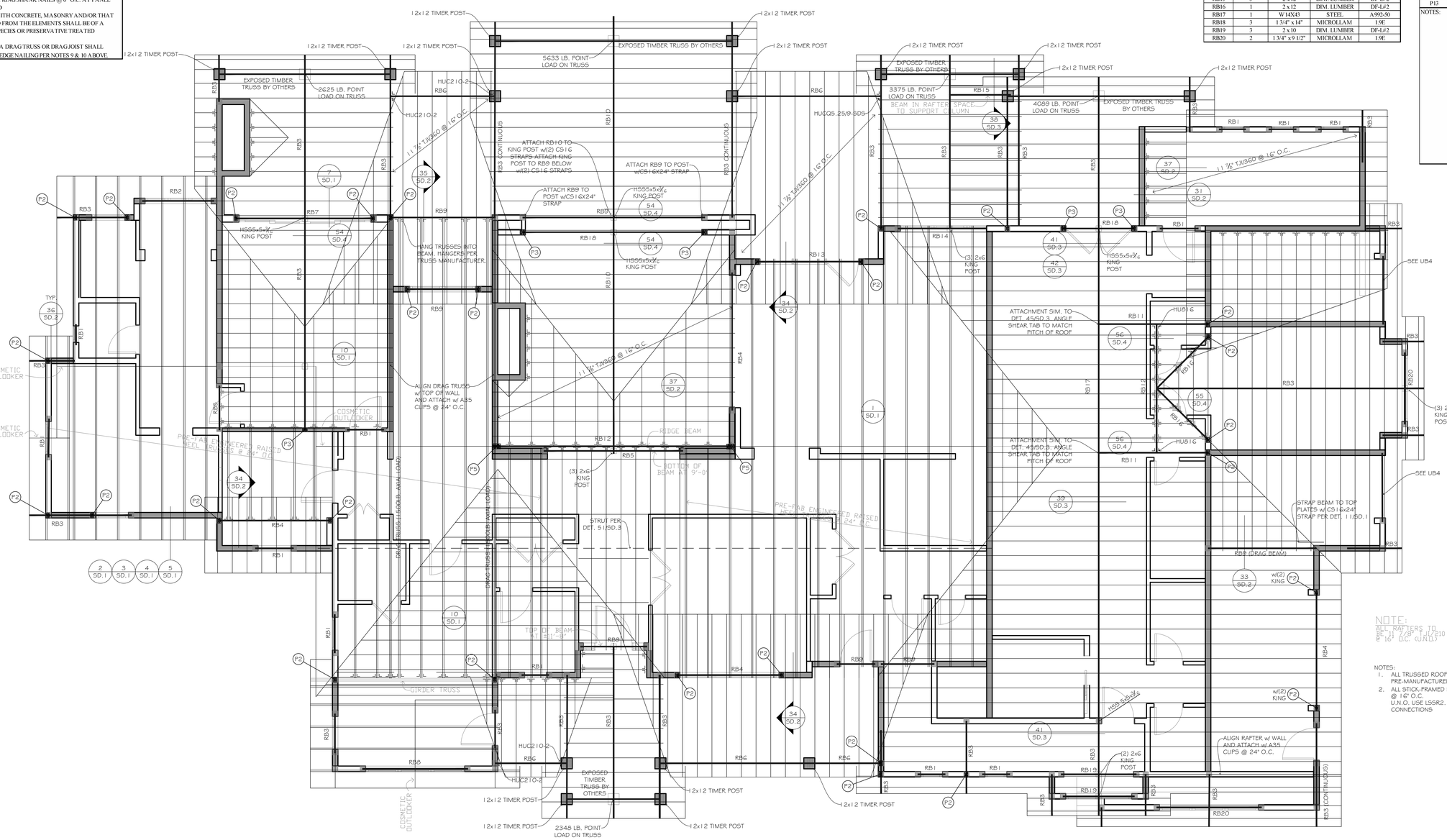
## ROOF BEAM SCHEDULE

| MARK | QTY. | SIZE | MATERIAL | GRADE |
|---|---|---|---|---|
| RB1 | 2 | 2 x 6 | DIM. LUMBER | DF-L#2 |
| RB2 | 3 | 2 x 12 | DIM. LUMBER | DF-L#2 |
| RB3 | 1 | 6 x 16 | TIMBER | DF-L#1 |
| RB4 | 2 | 1 3/4" x 9 1/2" | MICROLAM | 1.9E |
| RB5 | 2 | 1 3/4" x 11 7/8" | MICROLAM | 1.9E |
| RB6 | 1 | 5 1/8" x 10 1/2" | GLULAM | 24F-V4 DF/DF |
| RB7 | 3 | 1 3/4" x 14" | MICROLAM | 1.9E |
| RB8 | 2 | 2 x 8 | DIM. LUMBER | DF-L#2 |
| RB9 | 2 | 1 3/4" x 7 1/4" | MICROLAM | 1.9E |
| RB10 | 1 | 6 x 18 | TIMBER | DF-L#1 |
| RB11 | 1 | W 10X30 | STEEL | A992-50 |
| RB12 | 1 | W 10X22 | STEEL | A992-50 |
| RB13 | 2 | 1 3/4" x 11 7/8" | MICROLAM | 1.9E |
| RB14 | 3 | 1 3/4" x 14" | MICROLAM | 1.9E |
| RB15 | 3 | 2 x 12 | DIM. LUMBER | DF-L#2 |
| RB16 | 1 | 2 x 12 | DIM. LUMBER | DF-L#2 |
| RB17 | 1 | W 14X43 | STEEL | A992-50 |
| RB18 | 3 | 1 3/4" x 14" | MICROLAM | 1.9E |
| RB19 | 3 | 2 x 10 | DIM. LUMBER | DF-L#2 |
| RB20 | 2 | 1 3/4" x 9 1/2" | MICROLAM | 1.9E |

## POST SCHEDULE

| MARK | SIZE |
|---|---|
| P1 | (1) 2x |
| P2 | (2) 2x |
| P3 | (3) 2x |
| P4 | (4) 2x |
| P5 | (5) 2x |
| P6 | 4 x 4 |
| P7 | 6 x 6 |
| P8 | 3 1/2" x 3 1/2" PARALLAM POST |
| P9 | 3 1/2" x 5 1/4" PPARALLAM POST |
| P10 | 3 1/2" x 7" PARALLAM POST |
| P11 | 5 1/4" x 5 1/4" PARALLAM POST |
| P12 | 5 1/4" x 7" PARALLAM POST |
| P13 | 7" x 7" PARALLAM POST |

NOTES:
1. INSTALL (1) TRIMMER AND (1) KING STUD ON BOTH SIDES OF EACH OPENING U.N.O.
2. ATTACH 2X BUILT UP POST PLIES TOGETHER W/ 16d NAILS @ 6" O.C. STAGGERED.
3. POST CALLOUTS AT HEADERS INDICATE THE NUMBER OF TRIMMER STUDS REQUIRED.
4. PROVIDE SOLID 2x SQUASHING BLOCKING BELOW EACH POST AT FLOOR FRAMING. BLOCKING SHALL MATCH DIMENSIONS OF POST ABOVE. PROVIDE POSTS OF EQUAL DIMENSION OR GREATER BELOW SQUASHING BLOCKING AND POSTS ABOVE THROUGH TO FOUNDATION/FOOTING U.N.O. OR UNLESS POST ENDS OVER A BEAM.
5. BUILT-UP 2x POSTS (P2 - P5) SHALL MATCH THE WALL DIMENSION FOR WHICH THEY ARE PLACED.
6. BUILT UP POSTS SHALL BE DF-L #2 GRADE. PARALLAM POSTS SHALL BE 2.0E PSI.
7. POSTS SHALL BE CENTERED BELOW THE BEAMS/POSTS ABOVE FOR WHICH LOADS THE POSTS ARE INTENDED TO CARRY.




NOTES:
1. ALL TRUSSED ROOF FRAMING TO BE PRE-MANUFACTURED TRUSSES @ 24" O.C.
2. ALL STICK-FRAMED ROOF TO BE 11 7/8" TJI/210 @ 16" O.C.
U.N.O. USE LSSR2.12 HANGERS FOR CONNECTIONS

ROOF FRAMING PLAN

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

PROFESSIONAL STRUCTURAL ENGINEER No. 293261 CRAIG R. LYON 04/09/2021 STATE OF UTAH

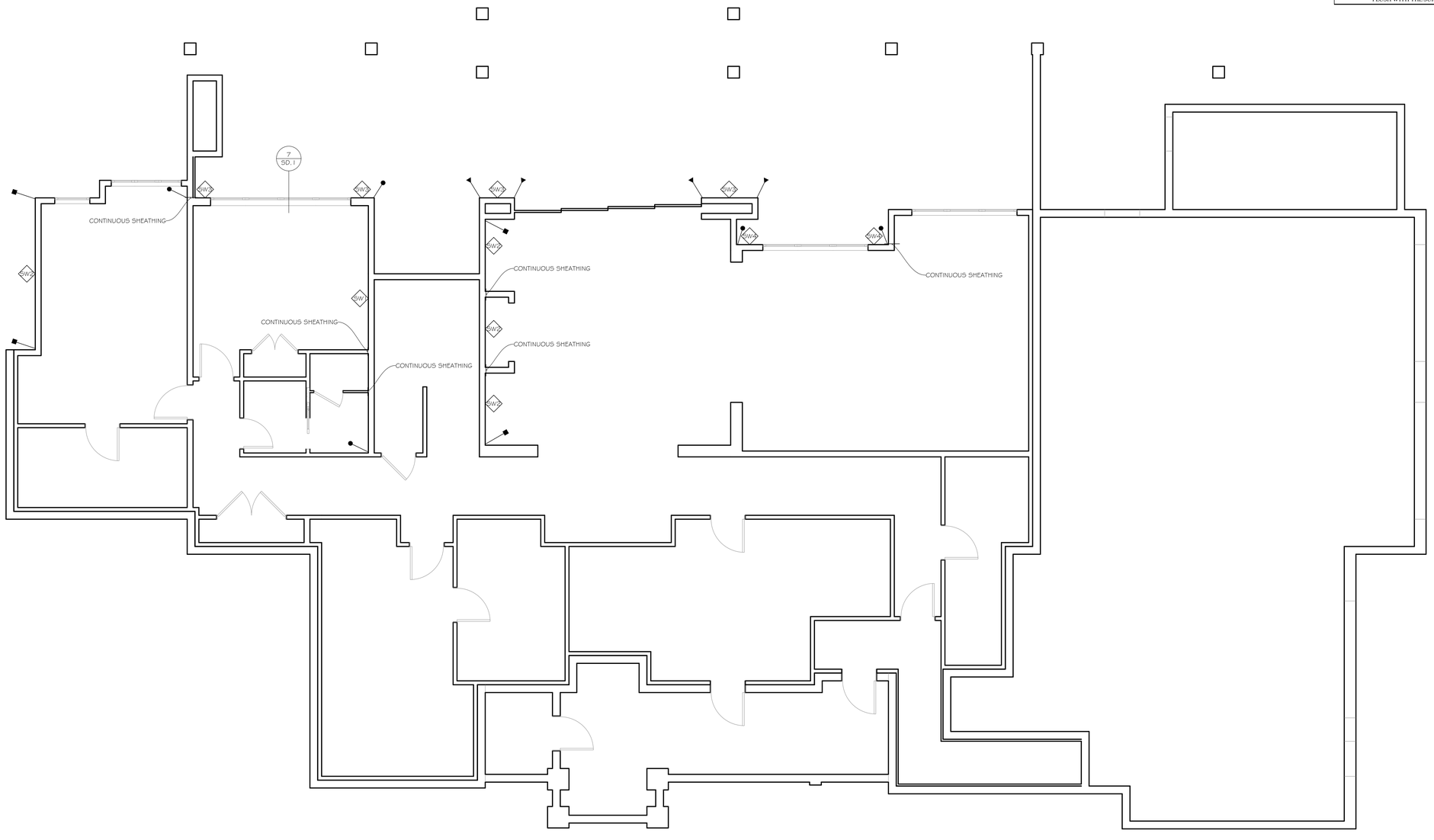
DRAWN BY: BS
PROJECT ENG: FOCUS
DATE: 4-29-21
REV.:

# HIGHLAND GROUP

4471 SOUTH HIGHLAND DRIVE SALT LAKE CITY, UTAH 84124 (801) 277-4433

# Gustafson Residence

SHEET 18




LOWER LEVEL LATERAL REINFORCEMENT PLAN

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

## SHEAR WALL SCHEDULE

| MARK | MATERIAL | 8d NAILS | | 1½" 16ga. STAPLES | | NOTES |
|---|---|---|---|---|---|---|
| | | EDGE | FIELD[1] | EDGE | FIELD | |
| SW1 | 7/16" OSB OR CDX PLYWOOD | 6" | 12" | 3" | 12" | |
| SW2 | 7/16" OSB OR CDX PLYWOOD | 4" | 12" | - | - | |
| SW3 | 7/16" OSB OR CDX PLYWOOD | 3" | 12" | - | - | |
| SW4 | 7/16" OSB OR CDX PLYWOOD | 2" | 12" | - | - | 5 |

NOTES:
1. ALL EXTERIOR SHEATHING NOT DESIGNATED ON THE PLANS AS A SPECIFIC SHEAR WALL (SW1-SW4) SHALL BE SHEATHED AND NAILED/STAPLED AS A SW1.
2. SHEAR WALLS FASTENED TO STUDS THAT ARE SPACED @ 24" O.C. REQUIRE FIELD NAILING @ 6" O.C. IN LIEU OF 12" O.C. AT INTERMEDIATE FRAMING MEMBERS.
3. SOLID BLOCK ALL PANEL EDGES BETWEEN THE BOTTOM PLATE AND DOUBLE TOP PLATE OF ALL WALLS W/ OSB OR CDX PLYWOOD.
4. 1 1/2" 16ga. STAPLES (w/ 7/16" CROWN) ARE ONLY ALLOWED FOR SW1, SW5, SW6 (IF SW5 AND SW6 SHOWN)
5. FOR SW4 OR DOUBLE SIDED SW2 OR SW3 PANELS, THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS SHALL BE MINIMUM 3" NOMINAL OR DOUBLE 2x AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED. IF DOUBLE 2x IS USED, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
6. THE NAILING PATTERNS ABOVE AND BELOW OPENINGS THAT REQUIRE STRAPPED OPENINGS SHALL MATCH THE NAILING PATTERNS SPECIFIED FOR THE SHEAR PANELS ON EITHER SIDE OF THAT OPENING.
7. SHEATHING NAILS SHALL BE COMMON WIRE OR BOX NAILS. THE HEAD OF THE NAIL MUST BE INSTALLED FLUSH WITH THE SURFACE OF THE SHEATHING.

## GENERAL FRAMING NOTES

1. REFER TO DETAIL SHEET SD.0 FOR GENERAL STRUCTURAL NOTES.
2. ALL DETAILS SHALL APPLY IN SIMILAR/TYPICAL SITUATIONS.
3. ALL STRUCTURAL PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
4. USE (9) 16d NAILS BETWEEN TOP PLATE LAP SPLICES SEE DET. 5/SD.1
5. INTERIOR STUD WALLS SHALL BE 2X4 OR 2X6 (AS PER PLANS) @ 16" O.C. U.N.O.
6. EXTERIOR STUD WALLS SHALL BE 2X6 @ 16" O.C. U.N.O.
7. ALL NAIL FASTENERS SHALL BE COMMON WIRE OR BOX NAILS.
8. SHEAR WALL HOLDOWNS INDICATED ON FLOOR PLANS PERTAIN TO THE BOTTOM OF THE WALLS ON THE PLAN.
9. ROOF FRAMING SHALL BE STICK FRAMED OR PRE-MANUFACTURED TRUSSES AS PER PLANS W/ APA RATED 7/16" OSB OR CDX PLYWOOD W/ 8d NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN PANEL FIELD.
10. FLOOR FRAMING SHALL BE FLOOR JOISTS AS PER PLANS W/ APA RATED 3/4" T&G OSB OR CDX PLYWOOD W/ 10d RING SHANK NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN PANEL FIELD
11. ALL WOOD IN DIRECT CONTACT WITH CONCRETE, MASONRY AND/OR THAT IS NOT PERMANENTLY PROTECTED FROM THE ELEMENTS SHALL BE OF A NATURALLY DECAY RESISTANT SPECIES OR PRESERVATIVE TREATED LUMBER.
12. ANY TRUSS OR JOIST LABELED AS A DRAG TRUSS OR DRAG JOIST SHALL RECEIVE ROOF/FLOOR SHEATHING EDGE NAILING PER NOTES 9 & 10 ABOVE.

## HOLDOWN SCHEDULE

| MARK | SIZE |
|---|---|
| ● | LSTHD8/8RJ |
| ■ | STHD10/10RJ |
| ◀ | STHD14/14RJ |
| ○ | CS16 x 46" LONG STRAP |
| □ | MST37 STRAP |
| ◁ | MST60 STRAP |

NOTES:
1. HOLDOWNS SHALL BE INSTALLED ON A MINIMUM OF (2) FULL HEIGHT KING STUDS.
2. SEE DETAILS FOR TYPICAL HOLDOWN INSTALLATION.
3. SEE DETAILS FOR TYPICAL FLOOR TO FLOOR STRAP INSTALLATION.
4. POST-INSTALLED HOLDOWNS MAY BE INSTALLED IN LIEU OF CAST IN PLACE HOLDOWNS PER DETAILS.
5. 16d SINKER NAILS MAY BE SUBSTITUTED WITH 10d COMMON NAILS. MINIMUM NAIL LENGTH = 2 1/2".
6. USE 'RJ' HOLDOWN MODEL AT TYPICAL RIM JOIST APPLICATIONS.
7. FLOOR TO FLOOR STRAPS SHALL BE CENTERED OVER THE FLOOR CAVITY.

PROFESSIONAL STRUCTURAL ENGINEER
No. 293261
CRAIG R. LYN
04/29/2021
STATE OF UTAH

DRAWN BY: BS
PROJECT ENG: FOCUS
DATE: 4-29-21
REV.:

HIGHLAND GROUP

4471 SOUTH HIGHLAND DRIVE SALT LAKE CITY, UTAH 84124 (801) 277-4433

Gustafson Residence

SHEET 19

## SHEAR WALL SCHEDULE

| MARK | MATERIAL | 8d NAILS | | 1½" 16ga. STAPLES | | NOTES |
|---|---|---|---|---|---|---|
| | | EDGE | FIELD[1] | EDGE | FIELD | |
| SW1 | 7/16" OSB OR CDX PLYWOOD | 6" | 12" | 3" | 12" | |
| SW2 | 7/16" OSB OR CDX PLYWOOD | 4" | 12" | - | - | |
| SW3 | 7/16" OSB OR CDX PLYWOOD | 3" | 12" | - | - | |
| SW4 | 7/16" OSB OR CDX PLYWOOD | 2" | 12" | - | - | 5 |

NOTES:
1. ALL EXTERIOR SHEATHING NOT DESIGNATED ON THE PLANS AS A SPECIFIC SHEAR WALL (SW1-SW4) SHALL BE SHEATHED AND NAILED/STAPLED AS A SW1.
2. SHEAR WALLS FASTENED TO STUDS THAT ARE SPACED @ 24" O.C. REQUIRE FIELD NAILING @ 6" O.C. IN LIEU OF 12" O.C. AT INTERMEDIATE FRAMING MEMBERS.
3. SOLID BLOCK ALL PANEL EDGES BETWEEN THE BOTTOM PLATE AND DOUBLE TOP PLATE OF ALL WALLS W/ OSB OR CDX PLYWOOD.
4. 1 1/2" 16ga. STAPLES (w/ 7/16" CROWN) ARE ONLY ALLOWED FOR SW1, SW5, SW6 (IF SW5 AND SW6 SHOWN)
5. FOR SW4 OR DOUBLE SIDED SW2 OR SW3 PANELS, THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS SHALL BE MINIMUM 3" NOMINAL OR DOUBLE 2x AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED. IF DOUBLE 2xIS USED, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
6. THE NAILING PATTERNS ABOVE AND BELOW OPENINGS THAT REQUIRE STRAPPED OPENINGS SHALL MATCH THE NAILING PATTERNS SPECIFIED FOR THE SHEAR PANELS ON EITHER SIDE OF THAT OPENING.
7. SHEATHING NAILS SHALL BE COMMON WIRE OR BOX NAILS. THE HEAD OF THE NAIL MUST BE INSTALLED FLUSH WITH THE SURFACE OF THE SHEATHING.

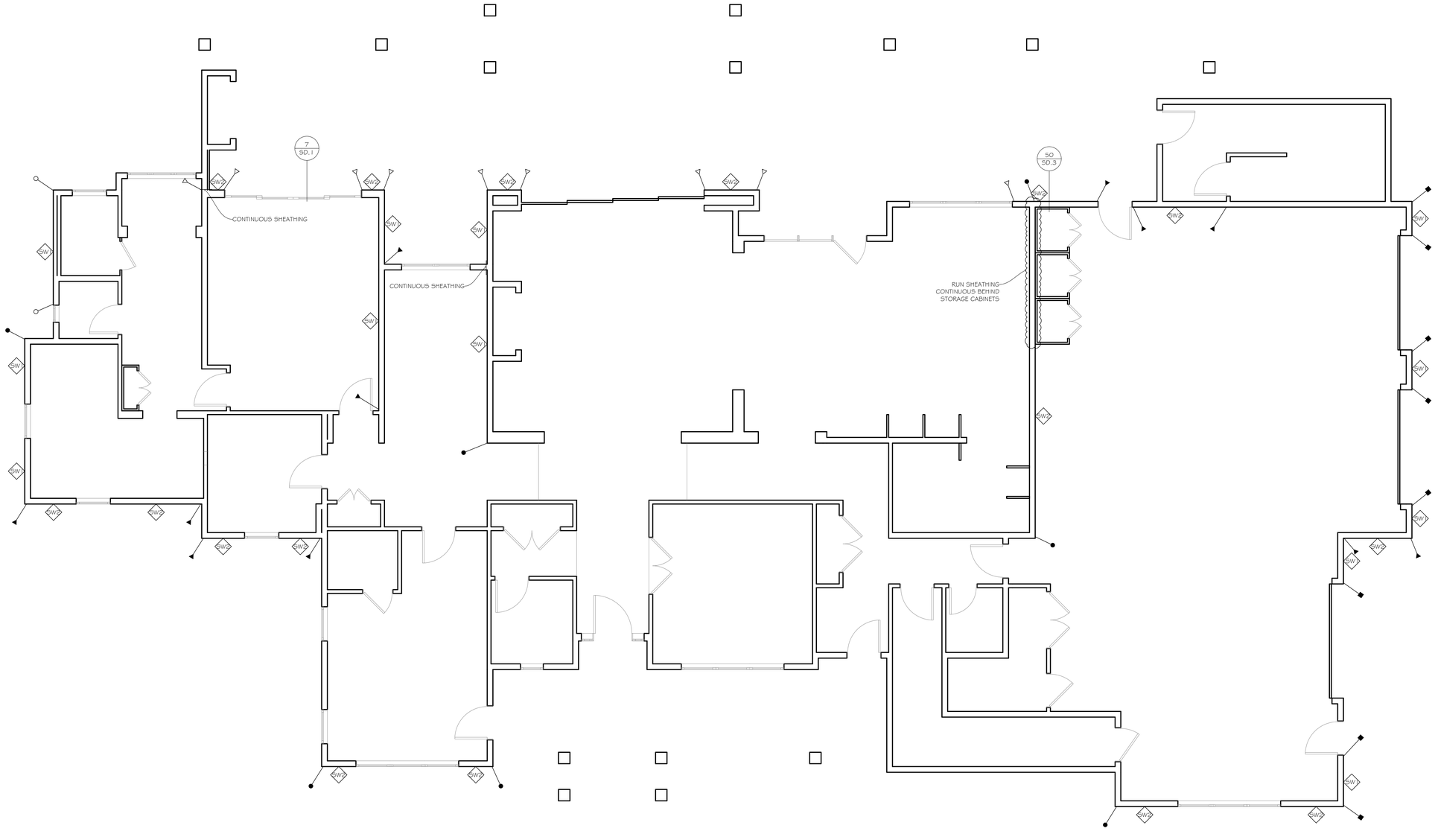
## GENERAL FRAMING NOTES

1. REFER TO DETAIL SHEET SD.0 FOR GENERAL STRUCTURAL NOTES.
2. ALL DETAILS SHALL APPLY IN SIMILAR/TYPICAL SITUATIONS.
3. ALL STRUCTURAL PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
4. USE (9) 16d NAILS BETWEEN TOP PLATE LAP SPLICES SEE DET. 5/SD.1
5. INTERIOR STUD WALLS SHALL BE 2X4 OR 2X6 (AS PER PLANS) @ 16" O.C. U.N.O.
6. EXTERIOR STUD WALLS SHALL BE 2X6 @ 16" O.C. U.N.O.
7. ALL NAIL FASTENERS SHALL BE COMMON WIRE OR BOX NAILS.
8. SHEAR WALL HOLDOWNS INDICATED ON FLOOR PLANS PERTAIN TO THE BOTTOM OF THE WALLS ON THE PLAN.
9. ROOF FRAMING SHALL BE STICK FRAMED OR PRE-MANUFACTURED TRUSSES AS PER PLANS W/ APA RATED 7/16" OSB OR CDX PLYWOOD W/ 8d NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN PANEL FIELD.
10. FLOOR FRAMING SHALL BE FLOOR JOISTS AS PER PLANS W/APA RATED 3/4" T&G OSB OR CDX PLYWOOD W/ 10d RING SHANK NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN PANEL FIELD
11. ALL WOOD IN DIRECT CONTACT WITH CONCRETE, MASONRY AND/OR THAT IS NOT PERMANENTLY PROTECTED FROM THE ELEMENTS SHALL BE OF A NATURALLY DECAY RESISTANT SPECIES OR PRESERVATIVE TREATED LUMBER.
12. ANY TRUSS OR JOIST LABELED AS A DRAG TRUSS OR DRAG JOIST SHALL RECEIVE ROOF/FLOOR SHEATHING EDGE NAILING PER NOTES 9 & 10 ABOVE.

## HOLDOWN SCHEDULE

| MARK | SIZE |
|---|---|
| ● | LSTHD8/8RJ |
| ■ | STHD10/10RJ |
| ◀ | STHD14/14RJ |
| ○ | CS16 x 46" LONG STRAP |
| □ | MST37 STRAP |
| ◁ | MST60 STRAP |

NOTES:
1. HOLDOWNS SHALL BE INSTALLED ON A MINIMUM OF (2) FULL HEIGHT KING STUDS.
2. SEE DETAILS FOR TYPICAL HOLDOWN INSTALLATION.
3. SEE DETAILS FOR TYPICAL FLOOR TO FLOOR STRAP INSTALLATION.
4. POST-INSTALLED HOLDOWNS MAY BE INSTALLED IN LIEU OF CAST IN PLACE HOLDOWNS PER DETAILS.
5. 16d SINKER NAILS MAY BE SUBSTITUTED WITH 16d COMMON NAILS. MINIMUM NAIL LENGTH = 2 1/2".
6. USE 'RJ' HOLDOWN MODEL AT TYPICAL RIMJOIST APPLICATIONS.
7. FLOOR TO FLOOR STRAPS SHALL BE CENTERED OVER THE FLOOR CAVITY.




MAIN LEVEL LATERAL REINFORCEMENT PLAN

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

PROFESSIONAL STRUCTURAL ENGINEER
No. 293261
CRAIG R. LAW
04/29/2021
STATE OF UTAH

DRAWN BY: BS
PROJECT ENG: FOCUS
DATE: 4-29-21
REV.:

HIGHLAND GROUP

4471 SOUTH HIGHLAND DRIVE SALT LAKE CITY, UTAH 84124 (801) 277-4433

Gustafson Residence

SHEET 20

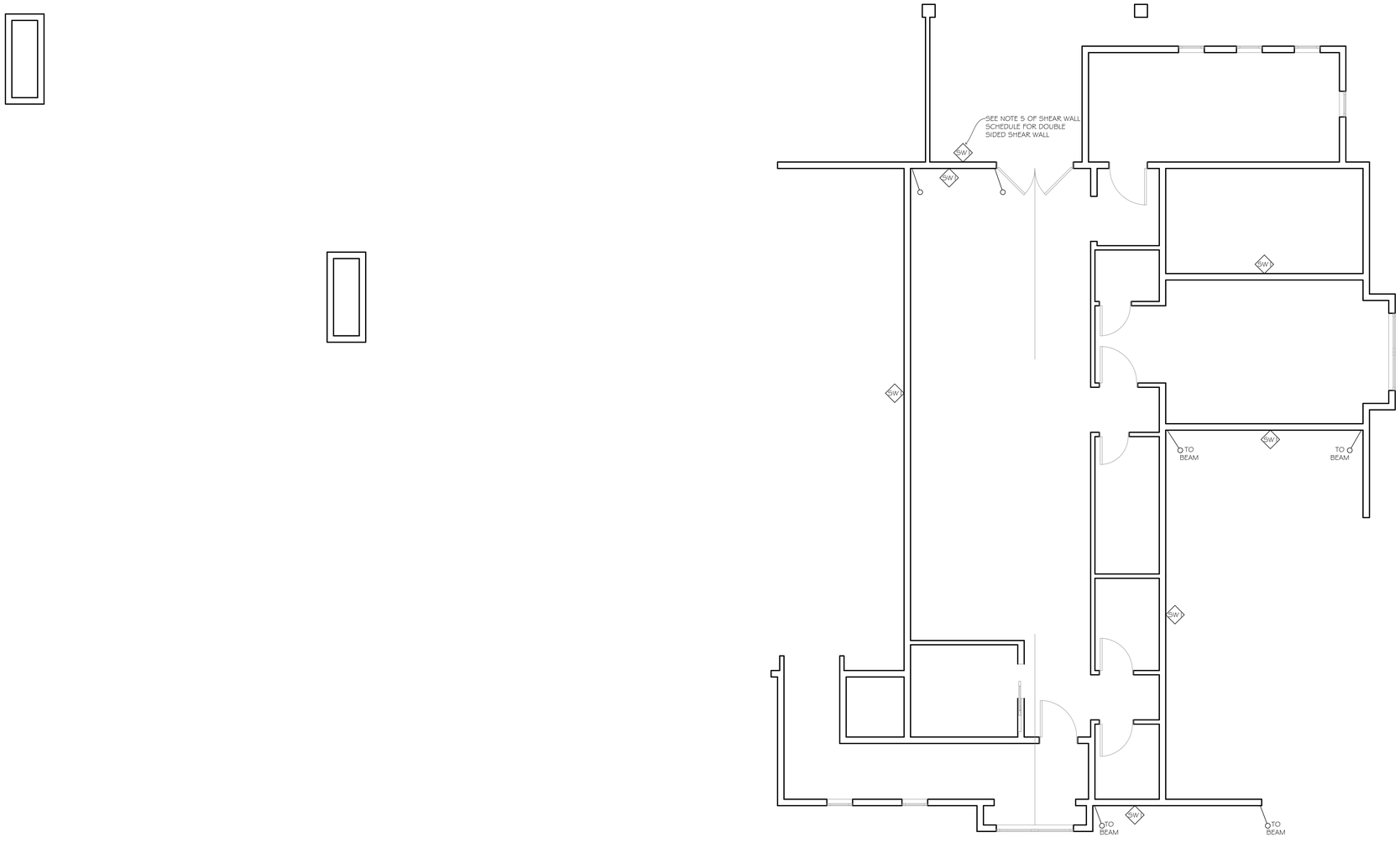
## SHEAR WALL SCHEDULE

| MARK | MATERIAL | 8d NAILS | | 1½" 16ga. STAPLES | | NOTES |
|---|---|---|---|---|---|---|
| | | EDGE | FIELD[1] | EDGE | FIELD | |
| SW1 | 7/16" OSB OR CDX PLYWOOD | 6" | 12" | 3" | 12" | |
| SW2 | 7/16" OSB OR CDX PLYWOOD | 4" | 12" | - | - | |
| SW3 | 7/16" OSB OR CDX PLYWOOD | 3" | 12" | - | - | |
| SW4 | 7/16" OSB OR CDX PLYWOOD | 2" | 12" | - | - | 5 |

NOTES:
1. ALL EXTERIOR SHEATHING NOT DESIGNATED ON THE PLANS AS A SPECIFIC SHEAR WALL (SW1-SW4) SHALL BE SHEATHED AND NAILED/STAPLED AS A SW1.
2. SHEAR WALLS FASTENED TO STUDS THAT ARE SPACED @ 24" O.C. REQUIRE FIELD NAILING @ 6" O.C. IN LIEU OF 12" O.C. AT INTERMEDIATE FRAMING MEMBERS.
3. SOLID BLOCK ALL PANEL EDGES BETWEEN THE BOTTOM PLATE AND DOUBLE TOP PLATE OF ALL WALLS W/ OSB OR CDX PLYWOOD.
4. 1 1/2" 16ga. STAPLES (w/ 7/16" CROWN) ARE ONLY ALLOWED FOR SW1, SW5, SW6 (IF SW5 AND SW6 SHOWN)
5. FOR SW4 OR DOUBLE SIDED SW2 OR SW3 PANELS, THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS SHALL BE MINIMUM 3" NOMINAL OR DOUBLE 2x AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED. IF DOUBLE 2x IS USED, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
6. THE NAILING PATTERNS ABOVE AND BELOW OPENINGS THAT REQUIRE STRAPPED OPENINGS SHALL MATCH THE NAILING PATTERNS SPECIFIED FOR THE SHEAR PANELS ON EITHER SIDE OF THAT OPENING.
7. SHEATHING NAILS SHALL BE COMMON WIRE OR BOX NAILS. THE HEAD OF THE NAIL MUST BE INSTALLED FLUSH WITH THE SURFACE OF THE SHEATHING.

## GENERAL FRAMING NOTES

1. REFER TO DETAIL SHEET SD1.0 FOR GENERAL STRUCTURAL NOTES.
2. ALL DETAILS SHALL APPLY IN SIMILAR/TYPICAL SITUATIONS.
3. ALL STRUCTURAL PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
4. USE (9) 16d NAILS BETWEEN TOP PLATE LAP SPLICES SEE DET. 5/SD.1
5. INTERIOR STUD WALLS SHALL BE 2X4 OR 2X6 (AS PER PLANS) @ 16" O.C. U.N.O.
6. EXTERIOR STUD WALLS SHALL BE 2X6 @ 16" O.C. U.N.O.
7. ALL NAIL FASTENERS SHALL BE COMMON WIRE OR BOX NAILS.
8. SHEAR WALL HOLDOWNS INDICATED ON FLOOR PLANS PERTAIN TO THE BOTTOM OF THE WALLS ON THE PLAN.
9. ROOF FRAMING SHALL BE STICK FRAMED OR PRE-MANUFACTURED TRUSSES AS PER PLANS W/ APA RATED 7/16" OSB OR CDX PLYWOOD W/ 8d NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN PANEL FIELD.
10. FLOOR FRAMING SHALL BE FLOOR JOISTS AS PER PLANS W/ APA RATED 3/4" T&G OSB OR CDX PLYWOOD W/ 10d RING SHANK NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN PANEL FIELD
11. ALL WOOD IN DIRECT CONTACT WITH CONCRETE, MASONRY AND/OR THAT IS NOT PERMANENTLY PROTECTED FROM THE ELEMENTS SHALL BE OF A NATURALLY DECAY RESISTANT SPECIES OR PRESERVATIVE TREATED LUMBER.
12. ANY TRUSS OR JOIST LABELED AS A DRAG TRUSS OR DRAG JOIST SHALL RECEIVE ROOF/FLOOR SHEATHING EDGE NAILING PER NOTES 9 & 10 ABOVE.




## HOLDOWN SCHEDULE

| MARK | SIZE |
|---|---|
| ● | LSTHD8/8RJ |
| ■ | STHD10/10RJ |
| ◀ | STHD14/14RJ |
| ○ | CS16 x 46" LONG STRAP |
| □ | MST37 STRAP |
| ◁ | MST60 STRAP |

NOTES:
1. HOLDOWNS SHALL BE INSTALLED ON A MINIMUM OF (2) FULL HEIGHT KING STUDS.
2. SEE DETAILS FOR TYPICAL HOLDOWN INSTALLATION.
3. SEE DETAILS FOR TYPICAL FLOOR TO FLOOR STRAP INSTALLATION.
4. POST-INSTALLED HOLDOWNS MAY BE INSTALLED IN LIEU OF CAST IN PLACE HOLDOWNS PER DETAILS.
5. 16d SINKER NAILS MAY BE SUBSTITUTED WITH 10d COMMON NAILS. MINIMUM NAIL LENGTH = 2 1/2".
6. USE RP HOLDOWN MODEL AT TYPICAL RIM JOIST APPLICATIONS.
7. FLOOR TO FLOOR STRAPS SHALL BE CENTERED OVER THE FLOOR CAVITY.

UPPER LEVEL LATERAL REINFORCEMENT PLAN

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

PROFESSIONAL STRUCTURAL ENGINEER
No. 293261
CRAIG R. LIMA
04/29/2021
STATE OF UTAH

DRAWN BY: BS
PROJECT ENG: FOCUS
DATE: 4-29-21
REV.:

HIGHLAND GROUP

4471 SOUTH HIGHLAND DRIVE SALT LAKE CITY, UTAH 84124 (801) 277-4433

Gustafson Residence

SHEET 21

# GENERAL STRUCTURAL NOTES

## DESIGN BASIS

GOVERNING DESIGN:

| | |
|---|---|
| BUILDING CODE: | 2018 INTERNATIONAL BUILDING CODE (IBC) |
| RISK CATEGORY: | II |
| DESIGN METHOD: | ASD |

GRAVITY LOAD:

| | |
|---|---|
| • ROOF LIVE LOAD (SNOW): | 65 PSF |
| • ROOF DEAD LOAD: | 15 PSF |
| • FLOOR LIVE LOAD: | 40 PSF |
| • FLOOR DEAD LOAD: | 12 PSF |
| • SOIL BEARING PRESSURE: | 1,500 PSF (ASSUMED) |

LATERAL LOAD:

| | |
|---|---|
| • WIND SPEED: | 115 MPH |
| • EXPOSURE CATEGORY: | C |
| • SEISMIC SITE CLASS: | D |
| • SEISMIC DESIGN CATEGORY: | D |

SEE STRUCTURAL CALCULATIONS FOR ADDITIONAL DESIGN COEFFICIENTS AND INFORMATION.

## GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE 2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), LOCAL AMENDMENTS TO THE THIS CODE, AND/OR ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK PERFORMED.
2. CONSTRUCTION DOCUMENTS ARE VALID FOR A SINGLE USE FOR THE PROJECT LOCATION AND SHALL NOT BE REUSED, COPIED, OR REPRODUCED WITHOUT WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
3. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE METHOD, MEANS AND SEQUENCE OF ALL STRUCTURAL ERECTION UNLESS NOTED OTHERWISE ON THE DRAWINGS. FOCUS ENGINEERING AND SURVEYING IS NOT LIABLE FOR ANY DAMAGES OR INJURIES RESULTING FROM ANY METHODS, MEANS AND SEQUENCES OF STRUCTURAL ERECTION.
4. IF CHANGES OR DISCREPANCIES ARE MADE OR OBSERVED BEFORE, DURING OR AFTER CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY THE ENGINEER OF RECORD PRIOR TO PERFORMING ANY WORK INVOLVED OR RELATED TO THESE CHANGES OR DISCREPANCIES.
5. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR SHALL VERIFY ALL SITE CONDITIONS, EXISTING BUILDINGS OR OTHERWISE, BEFORE BEGINNING WORK INCLUDING, BUT NOT LIMITED TO: SITE CONDITIONS, DIMENSIONS, ELEVATIONS, DOORS, WINDOWS, LOCATION OF INTERIOR AND EXTERIOR WALLS, STAIRS, FINISHES. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCIES OR ANY ITEMS THAT ARE NOT IN AGREEMENT WITH THE CONSTRUCTION DOCUMENTS.
6. STRUCTURAL REQUIREMENTS SPECIFIED IN THE ENGINEERING REPORT AND STRUCTURAL DRAWINGS SHALL SUPERSEDE ANY STRUCTURAL ITEMS ADDRESSED IN THE ARCHITECTURAL PLANS, NOTES, DRAWINGS, OR DETAILS.
7. THE ENGINEERING REPORT AND STRUCTURAL DRAWINGS ONLY PERTAIN TO THE STRUCTURAL ELEMENTS OF THE PROJECT. THE ENGINEER OF RECORD ASSUMES NO LIABILITY FOR NON-STRUCTURAL ITEMS NOR THE LIABILITY FOR THE ACCURACY, COMPLETENESS, AND CODE COMPLIANCE OF ARCHITECTURAL, DRAINAGE, ELECTRICAL, MECHANICAL, SITE CIVIL, AND ANY NON-STRUCTURAL SPECIFICATIONS.
8. APPROVAL BY THE MUNICIPAL INSPECTOR DOES NOT IMPLY APPROVAL BY THE ENGINEER OF RECORD OR COMPLIANCE WITH THE PLANS, SPECIFICATIONS AND CODES. FOCUS ENGINEERING AND SURVEYING IS NOT RESPONSIBLE FOR ANY DAMAGES CAUSED BY OR RELATED TO CHANGES TO THE ORIGINAL DESIGN WITHOUT APPROVAL FROM THE ENGINEER OF RECORD.
9. ANY STRUCTURAL SPECIFICATIONS THAT APPEAR AMBIGUOUS OR UNCLEAR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD FOR CLARITY OR INTERPRETATION.
10. ALL SITE COMPACTED FILL SHALL BE FREE OF ANY ORGANIC MATTER AND PLACED PER THE GEOTECH RECOMMENDATIONS.
11. PROJECT SPECIFIC NOTES AND DETAILS SHALL SUPERSEDE GENERAL NOTES AND DETAILS.
12. THE DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO THE APPLICATION OF THE SHEAR WALLS, ROOF AND FLOOR DIAPHRAGMS AND FINISH MATERIALS. THE GENERAL CONTRACTOR SHALL PROVIDE THE NECESSARY BRACING TO PROVIDE A STABLE WORKING ENVIRONMENT IN COMPLIANCE WITH OSHA STANDARDS PRIOR TO THE APPLICATION OF THE AFOREMENTIONED MATERIALS.
13. ALL SHORING AND BRACING SHALL REMAIN IN PLACE UNTIL ALL PERMANENT MEMBERS ARE PLACED AND FINAL CONNECTORS ARE INSTALLED.
14. OBSERVATION VISITS TO THE SITE BY THE ENGINEER OF RECORD SHALL NOT INCLUDE THE INSPECTION OF THE CONSTRUCTION BRACING AS MENTIONED ABOVE.
16. ANY DIMENSIONS ON STRUCTURAL PLANS ARE FOR REFERENCE ONLY. VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL PLANS.
17. THE GENERAL CONTRACTOR SHALL BECOME FAMILIAR WITH ALL PORTIONS OF THE CONSTRUCTION DOCUMENTS RELATED TO THE SCOPE OF WORK OF THE STRUCTURE, AND INSURE THAT ALL SUBCONTRACTORS ARE FAMILIAR WITH THOSE PORTIONS THAT PERTAIN TO THEIR AREA OF WORK.

## GENERAL FRAMING

(PER NDS)

1. ALL STRUCTURAL LUMBER, SHEATHING, AND TIMBER SHALL BE MARKED BY A COMPETENT AND RELIABLE COMPANY. THE COMPANY, GRADING AND GRADE MARKING SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER OF RECORD.
2. ALL STRUCTURAL TIMBER MEMBERS SHALL BE DOUGLAS FIR-LARCH WITH A 19% MAXIMUM MOISTURE CONTENT OF THE FOLLOWING GRADES U.N.O.:
   - 2X STUD WALLS: STUD GRADE OR BETTER
   - 2X SILL PLATES: STANDARD GRADE OR BETTER
   - 2X JOISTS/RAFTERS: NO. 2
   - 2X BUILT-UP BEAMS/HEADER: NO. 2
   - HEAVY TIMBER: NO. 1
   - POSTS: NO. 2
3. ALL WOOD IN DIRECT CONTACT WITH CONCRETE, MASONRY AND/OR THAT IS NOT PERMANENTLY PROTECTED FROM THE ELEMENTS AND ALL STRUCTURAL LUMBER AND STRUCTURAL SHEATHING THAT IS WITHIN 8" TO EXPOSED GROUND SHALL BE OF A NATURALLY DECAY RESISTANT SPECIES OR PRESERVATIVE TREATED LUMBER.
4. STRUCTURAL MEMBERS MAY NOT BE CUT, NOTCHED OR CHAMFERED UNLESS SPECIFICALLY NOTED, DETAILED OR APPROVED BY THE ENGINEER OF RECORD.
5. FULL-HEIGHT BLOCKING SHALL BE PLACED BETWEEN JOISTS AND RAFTERS AT ALL BEARING LOCATIONS.
6. NO MORE THAN (2) SILL PLATES SHALL BE CONNECTED TO THE FOUNDATION WITH J-BOLTS THROUGH BOTH MEMBERS WITHOUT ADDITIONAL ENGINEERING.
7. BUILT-UP TIMBER BEAMS SHALL BE NAILED TOGETHER WITH (2) ROWS OF 10D NAILS AT 6" O.C.AT EACH FACE. U.N.O.
8. PROVIDE CONTINUOUS BEARING AND SOLID BLOCKING DOWN TO FOUNDATION AT ALL BEARING POINT LOADS.
9. ALL METAL ANCHORS, TIES AND CONNECTORS SHALL BE FROM SIMPSON STRONG-TIE AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS. SUBSTITUTIONS MUST BE PRE-APPROVED IN WRITING BY THE ENGINEER OF RECORD.
10. OSB PLYWOOD FLOOR AND ROOF SHEATHING SHALL BE LAID CONTINUOUS OVER TWO OR MORE FRAMING SPANS WITH THE FACE GRAIN PERPENDICULAR TO THE FRAMING SUPPORTS. STAGGER ALL PLYWOOD JOINTS A MINIMUM OF 4'-0".
11. EXTERIOR WOOD SUPPORTED BY CONCRETE SHALL BE INSTALLED A MINIMUM OF 6" ABOVE EXPOSED EARTH.
12. EXTERIOR WALLS ADJACENT TO VAULTED CEILINGS SHALL BE BALLOON FRAMED WITH CONTINUOUS STUDS TO BOTTOM CHORD OF TRUSS OR RAFTER.
13. ROOF SHEATHING SHALL BE CONTINUOUS UNDERNEATH OVERBUILD FRAMING.
14. DOUBLE TOP PLATES SHALL HAVE A MINIMUM OF 4'-0" LAP SPLICE WITH A MINIMUM OF (8) 16D NAILS PER TOP PLATE SPLICE U.N.O. LAP SPLICES IN THE DOUBLE TOP PLATE SHALL OFFSET BY AT LEAST 4'-0".
15. TOP PLATE BREAKS SHALL OCCUR OVER STUDS.
16. ALL EXTERIOR WALLS SHALL BE SECURED WITH A MINIMUM OF 1/2"x10" ANCHOR BOLTS @ A MAXIMUM OF 32" O.C. SHEAR WALL DESIGN REQUIREMENTS WILL GOVERN IN ALL CASES.
17. ALL HARDWARE SHALL BE INSTALLED AND NAILED PER THE MANUFACTURER'S SPECIFICATIONS.
18. SOLID BLOCK ALL HORIZONTAL JOINTS BETWEEN THE BOTTOM PLATE AND DOUBLE TOP PLATE OF THE WALLS THAT HAVE OSB PLYWOOD.
19. EXTERIOR AND BEARING WALL STUDS ARE PERMITTED TO BE CUT OR NOTCHED WITH A DEPTH NOT TO EXCEED 25% OF THE STUD WIDTH. CUTS AND NOTCHES MAY NOT OCCUR AT THE SAME LOCATION.
20. EXTERIOR AND BEARING WALLS SHALL BE CAPPED WITH DOUBLE 2" NOMINAL THICK TOP PLATES. PROVIDE OVERLAP AT CORNERS AND INTERSECTIONS WITH OTHER PARTITION WALLS.
21. ALL MANUFACTURED WOOD PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
22. SEE MANUFACTURER'S SPECIFICATIONS FOR DRILLING HOLES AND CUTTING NOTCHES AND CHAMFERS.
23. ALL RAFTERS AND JOISTS OVER 3'-0" SHALL BE HANGERED IF NOT SUPPORTED BY BOTTOM BEARING.
24. ALTERNATE ENGINEERED WOOD PRODUCTS MUST BE PRE-APPROVED IN WRITING BY THE ENGINEER OF RECORD PRIOR TO INSTALLATION.
25. ACCEPTABLE MANUFACTURERS OF ENGINEERED WOOD PRODUCTS:
   - WEYERHAUSER I-LEVEL PRODUCTS
   - LOUISIANA PACIFIC PRODUCTS
   - BOISE CASCADE PRODUCTS
   - ALL OTHER MANUFACTURER'S SHALL BE PRE-APPROVED BY THE ENGINEER OF RECORD PRIOR TO INSTALLATION.

28. THE USE OF ANY PRODUCT NOT SPECIFIED IN THE PLANS OR CALCULATIONS SHALL BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO INSTALLATION.

GLULAM
1. GLULAM BEAMS SHALL BE 24F-V4 (SIMPLE SPAN) OR 24F-V8 (CANTILEVERED)
2. MINIMUM DESIGN VALUES:
   - E = 1,800,000 PSI
   - $F_B$ = 2,400 PSI
   - $F_V$ = 265 PSI

MICROLLAM
1. MICROLLAM BEAMS SHALL BE LAMINATED VENEER LUMBER (LVL)
2. MINIMUM DESIGN VALUES:
   - E = 2,000,000 PSI
   - $F_B$= 2,600 PSI
   - $F_V$ = 285 PSI

PARALLAM
1. PARALLAM BEAMS SHALL BE PARALLEL STRAND LUMBER (PSL)
2. MINIMUM DESIGN VALUES:
   - E = 2,200,000 PSI
   - $F_B$ = 2,900 PSI
   - $F_V$= 290 PSI

TIMBERSTRAND
1. TIMBERSTRAND BEAMS SHALL BE LAMINATED STRAND LUMBER (LSL)
2. MINIMUM DESIGN VALUES:
   - E = 1,550,000 PSI
   - $F_B$ = 2,325 PSI
   - $F_V$ = 310 PSI

PREFABRICATED WOOD I-JOIST
1. PREFABRICATED I-JOIST SHALL BE WEYERHAUESER TRUS JOIST TJI SERIES. U.N.O. INSTALL PER MANUFACTURER'S SPECIFICATIONS.

## PRE-ENGINEERED WOOD TRUSSES

(PER IBC 2303.4)

1. TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE CURRENT IBC, LOCAL BUILDING CODES FOR ALL IMPOSED LOADS, INCLUDING LATERAL LOADS, ROOF OVERBUILDS, OVERHEAD DOORS, AND ANY MECHANICAL EQUIPMENT LOADS.
2. ALL CALCULATIONS AND SHOP DRAWINGS SHALL BE CERTIFIED BY A LICENSED ENGINEER IN THE STATE WHERE THE PROJECT WILL BE CONSTRUCTED. THE MANUFACTURER OR GENERAL CONTRACTOR SHALL SUPPLY ALL THE TRUSS CALCULATIONS AND SHOP DRAWINGS TO THE ENGINEER OF RECORD AND THE LOCAL BUILDING OFFICIAL PRIOR TO FABRICATION.
3. TOTAL LOAD DEFLECTIONS SHALL BE LIMITED TO L/240 AND DEFLECTIONS DUE TO LIVE LOADS SHALL BE LIMITED TO L/360.
4. PERMANENT TRUSS BRACING INFORMATION SHALL BE SUPPLIED BY THE TRUSS MANUFACTURER.
5. THE TRUSS MANUFACTURER SHALL ASSUME LIABILITY OF THE DESIGN AND FABRICATION OF THE PRE-ENGINEERED TRUSSES.
6. THE CONTRACTOR SHALL ASSUME LIABILITY FOR THE INSTALLATION OF THE PRE-ENGINEERED TRUSSES AS PER THE MANUFACTURER'S SPECIFICATIONS.
7. ANY DISCREPANCIES BETWEEN THE TRUSS MANUFACTURER'S TRUSS LAYOUT AND THE DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD PRIOR TO THE FABRICATION OF THE TRUSSES.
8. THE TRUSS MANUFACTURER SHALL VERIFY ALL LOADS WITH THE ENGINEER OF RECORD.
9. TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED OR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN APPROVAL FROM THE TRUSS ENGINEER.
10. ALTERATIONS RESULTING IN AN ADDITION OF LOADS TO ANY MEMBER SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE TRUSS ENGINEER.

## CONCRETE

(ACI 318, 2018 IBC CHAPTER 18/19)

1. ALL CONCRETE MATERIALS, QUALITY CONTROL, AND CONSTRUCTION SHALL COMPLY WITH THE LOCAL BUILDING CODES AND ACI 318.
2. WATER SHALL BE POTABLE AND FREE FROM INJURIOUS AMOUNTS OF OIL, ACIDS, SALTS, ORGANIC MATERIALS, ETC.
3. COMPRESSIVE STRENGTH f'c (MINIMUM SPECIFIED AT 28 DAYS):
   - FOOTINGS = 3,000 PSI
   - FOUNDATION = 3,000 PSI
   - SLAB ON GRADE = 4,000 PSI

3. FOOTINGS
   - ALL FOOTINGS SHALL BEAR PAST THE FROST LINE OF THE LOCALITY.
   - WALLS AND COLUMNS SHALL BE CENTERED ON FOOTINGS U.N.O.
   - NO PENETRATIONS ARE ALLOWED THROUGH FOOTINGS.

4. CONCRETE EXPOSED TO FREEZE/THAW CYCLES SHALL CONFORM TO THE MAX WATER/CEMENT RATIOS OF ACI 318-14 TABLE 19.3.2.1 AND SHALL USE AIR ENTRAINMENT PER ACI 318-14 TABLE 19.3.3.1 (IN CONFORMANCE WITH ASTM C260).
5. THE GENERAL CONTRACTOR SHALL PROVIDE A WATERPROOF/ DAMPPROOF MEMBRANE PER THE 2018 IBC SECTION 1805.
6. BACKFILL SHALL NOT BE PLACED AGAINST A FOUNDATION WALL UNTIL THE WALL HAS SUFFICIENT STRENGTH AND IS ANCHORED TO THE FLOOR ABOVE OR IS SUFFICIENTLY BRACED TO PREVENT DAMAGE FROM THE BACKFILL
7. BACKFILL SOIL SHALL BE FREE OF ORGANIC MATERIAL, CONSTRUCTION DEBRIS, COBBLE OR BOULDERS. THE BACKFILL SHALL BE PLACED IN LIFTS AND COMPACTED IN A MANNER THAT DOES NOT DAMAGE THE FOUNDATION WALL OR THE WATERPROOFING/DAMPPROOFING MATERIAL.
8. THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION WALL SHALL HAVE A 5% SLOPE AWAY FROM THE BUILDING FOR A MINIMUM DISTANCE OF 10 FEET MEASURED PERPENDICULAR FROM THE FACE OF THE FOUNDATION WALL.
9. THE THICKNESS OF CONCRETE SLABS ON GRADE FLOORS SHALL NOT BE LESS THAN 3 1/2".
10. ADHESIVE ANCHORS SHALL BE INSTALLED WITH SIMPSON SET-XP EPOXY PER THE MANUFACTURER'S SPECIFICATIONS.
11. REINFORCEMENT STEEL SHALL BE ACCURATELY PLACED AND SUPPORTED AGAINST DISPLACEMENT PRIOR TO CONCRETE POUR.

## FASTENERS

(PER IBC 2303.6, 2304.10)

1. FASTENERS IN ANY TYPE OF PRESERVATIVE-TREATED AND FIRE-RETARDANT TREATED WOOD PRODUCT SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER.
2. SHEATHING FASTENERS SHALL BE DRIVEN SO THE HEAD OR CROWN OF THE NAIL IS FLUSH WITH THE SHEATHING SURFACE.
3. BOLT HOLES SHALL BE DRILLED WITH A BIT 1/32" TO 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER. ALL BOLTS SHALL HAVE STANDARD CUT WASHERS UNDER HEAD AND NUT.
4. ALL NAILS SHALL BE COMMON WIRE.
5. NAILS:
   - 8D = 0.131" X 2.5"
   - 10D = 0.148" X 3.0"
   - 16D = 0.162" X 3.5"
6. STAPLES:
   - 16GA = 1.5 X .4375" CROWN
7. POWER DRIVEN PINS:
   - CONCRETE DRIVE PINS = 0.145" X 2.5" WITH PRE-ASSEMBLED WASHER
8. POST INSTALLED ANCHORS TO CONCRETE USED FOR WIND AND SEISMIC RESISTANCE APPLICATIONS SHALL BE INSTALLED USING HILTI HY-200 EPOXY U.N.O. BOLT HOLES DRILLED FOR EPOXY ANCHORS SHALL BE CLEANED USING BLOW-BRUSH-BLOW STANDARDS AS PER MANUFACTURER SPECIFICATIONS FOR THE EPOXY BEING USED.
9. BOLTS
   - CONNECTOR BOLTS = ASTM A307
   - HIGH STRENGTH BOLTS = ASTM A325
   - ANCHOR BOLTS = ASTM 307 WITH A 3"X3"X0.229" PLATE WASHER EMBEDDED 7" INTO CONCRETE

## STRUCTURAL STEEL

(IBC 2018 CHAPTER 22, AISC 15TH ED.)

1. ALL STRUCTURAL STEEL SHALL BE DESIGNED, FABRICATED AND WELDED IN ACCORDANCE WITH THE CURRENT IBC AND THE CURRENT EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
2. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL CONFORM TO ALL AWS STANDARDS. ALL WELDS SHALL HAVE THE SLAG REMOVED.
3. ALL STRUCTURAL STEEL SHALL BE FABRICATED IN THE SHOP OF A LICENSED FABRICATOR AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
4. STEEL FABRICATOR SHALL FIELD CHECK ALL DIMENSIONS PRIOR TO FABRICATION.
5. STEEL TO STEEL CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS.
6. ALL STEEL EXPOSED TO THE ELEMENTS SHALL BE HOT-DIPPED GALVANIZED OR PROPERLY PRIMED AND PAINTED AFTER FABRICATION.
7. WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, $f_y$ = 50 KSI.
8. PIPE COLUMNS SHALL CONFORM TO ASTM A53 GRADE B.
9. TUBE COLUMNS SHALL CONFORM TO ASTM A500 GRADE C.
10. PLATES, BARS, ANGLES, CHANNELS AND OTHER MISCELLANEOUS STEEL SHAPES SHALL CONFORM TO ASTM A36, $f_y$ = 36 KSI.

## REINFORCING STEEL

1. STEEL REINFORCEMENT SHALL BE FREE FROM MUD, OIL, AND OTHER NON-METALLIC COATINGS THAT DECREASE BONDING CAPACITY AT THE TIME OF INSTALLATION.
2. REINFORCEMENT SHALL BE ACCURATELY PLACED AND ADEQUATELY SUPPORTED BEFORE CONCRETE IS PLACED.
3. ALL SPLICES IN CONTINUOUS REINFORCEMENT SHALL LAP 40 BAR DIAMETERS. U.N.O.
4. COVER
   - CONCRETE PERMANENTLY EXPOSED TO EARTH OR WEATHER: 3"
   - CONCRETE TEMPORARILY EXPOSED TO EARTH OR WEATHER:
     - #5 BAR AND SMALLER: 1 1/2"
     - #6 BAR AND LARGER: 2"
   - CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
     - SLABS AND WALLS, #11 & SMALLER: 3/4"
     - SLABS ON GRADE: CENTER OF SLAB
     - BEAMS, COLUMNS, MAIN REINFORCING/TIES: 1 1/2"
5. $f_y$= 60 KSI

## SOILS

1. FOCUS ENGINEERING & SURVEYING DOES NOT PROVIDE ANY GEOTECHNICAL ENGINEERING SERVICES. ALL GEOTECHNICAL SERVICES ARE TO BE EMPLOYED AT THE EXPENSE OF THE GENERAL CONTRACTOR OR OWNER. FOCUS ENGINEERING & SURVEYING WILL NOT BE LIABLE FOR ANY DAMAGES TO THE STRUCTURE RELATED TO GEOTECHNICAL DEFICIENCIES.
2. IF THE CONTRACTOR FAILS TO PROVIDE FOCUS ENGINEERING & SURVEYING WITH A GEOTECHNICAL INVESTIGATION AT THE TIME A CONTRACT IS MADE, FOCUS ENGINEERING WILL ASSUME AN ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE A MINIMUM ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF. FOCUS ENGINEERING & SURVEYING WILL NOT BE HELD LIABLE FOR ANY STRUCTURAL DAMAGES RELATED TO ANY LACK OF CONFORMANCE BY THE CONTRACTOR TO INSURE THIS MINIMUM ALLOWABLE SOIL BEARING PRESSURE.
3. THE GEOTECHNICAL INVESTIGATION SHALL BE PERFORMED PER THE 2018 IBC SECTION 18.
4. DO NOT PLACE FOOTINGS ON DISTURBED, UNDOCUMENTED FILL, FROZEN SOIL, OR IN PONDED WATER.
5. ALL FOOTINGS, FOUNDATIONS, EXCAVATION, GRADING AND FILL SHALL BE PERFORMED PER THE APPROVED GEOTECHNICAL REPORT.
6. SOIL CONDITIONS SHALL BE OBSERVED PRIOR TO PLACEMENT OF FOOTINGS.
7. AT LOCATIONS WHERE STRUCTURAL FILL IS REQUIRED, FILL SHALL BE PLACED IN 6" LIFTS & COMPACTED AT OPTIMUM MOISTURE CONTENT. REFER TO THE GEOTECHNICAL REPORT FOR DEPTH AND EXTENT OF THE STRUCTURAL FILL.

## MASONRY & STONE VENEER

1. MASONRY VENEER ABOVE OPENINGS SHALL BE SUPPORTED BY A STEEL LINTEL. THE STEEL LINTEL SHALL NOT SUPPORT ANY VERTICAL LOAD OTHER THAN THE DEAD LOAD OF THE MASONRY VENEER ABOVE.
2. LINTELS SHALL HAVE 1" OF BEARING FOR EVERY 1'-0" OF SPAN. BEARING LENGTH SHALL NOT BE LESS THAN 4".
3. VENEER SHALL BE ANCHORED TO THE SUPPORTING WALL FRAMING WITH HOT-DIPPED GALVANIZED HOHMANN & BARNARD DW-10HS METAL ANCHOR TIES. EACH TIE SHALL NOT BE SPACED MORE THAN 16" O.C. VERTICALLY AND HORIZONTALLY.
4. ENGAGE #9 WIRE WITH ANCHOR TIES AT THE CENTER OF VENEER AND EMBEDDED IN THE MORTAR JOINT.

## SPECIAL INSPECTIONS

(IBC CHAPTER 17, ACI 318)

1. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT IBC, LOCAL AMENDMENTS, AND/OR ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK PERFORMED.
2. THE OWNER OR GENERAL CONTRACTOR SHALL EMPLOY APPROVED AGENCIES TO PERFORM SPECIAL INSPECTIONS DURING CONSTRUCTION WHERE SPECIAL INSPECTIONS ARE REQUIRED AT THEIR EXPENSE.
3. THE SPECIAL INSPECTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL AND THE ENGINEER OF RECORD DEMONSTRATING HIS/HER COMPETENCY AND APPROVAL FOR THE INSPECTION.
4. ITEMS THAT REQUIRE SPECIAL INSPECTION:
   - EXISTING SOIL CONDITIONS, FILL PLACEMENT AND LOAD BEARING REQUIREMENTS
   - WOOD SHEAR WALLS, SHEAR PANELS AND DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHORING, AND OTHER FASTENING COMPONENTS FOR LATERAL FORCE RESISTANT SYSTEM, WHERE THE FASTENER SPACING OF THE SHEATHING IS 4" O.C. OR LESS. THIS IS NOT REQUIRED WHENEVER WIND LOADS ON THE STRUCTURE GOVERN LATERAL DESIGN AND THE WIND SPEEDS ARE LESS THAN 120 MPH WITH EXPOSURE CATEGORY B.
   - METAL PLATE CONNECTED WOOD TRUSSES WITH SPANS GREATER THAN 60'-0" OR GREATER IN LENGTH.
   - STRUCTURAL STEEL IN ACCORDANCE WITH AISC 360.
   - POST INSTALLED ADHESIVE ANCHORS.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PROFESSIONAL STRUCTURAL ENGINEER
No. 293261
CRAIG R. LIM
04/29/2021
STATE OF UTAH

# GUSTAFSON RESIDENCE

HUNTSVILLE, UTAH

STRUCTURAL NOTES

REVISION BLOCK

| # | DATE | DESCRIPTION |
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STRUCTURAL NOTES

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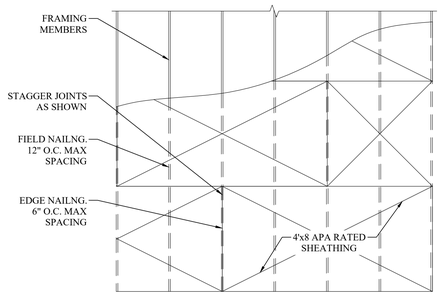
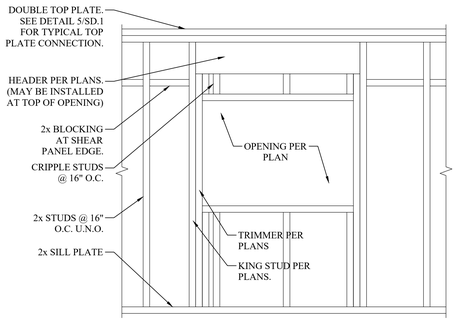
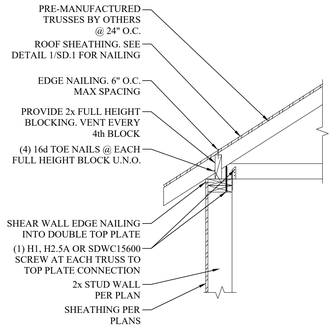
| Scale: | N.T.S. | Drawn: | AB |
| Date: | 4/28/21 | Job #: | 21-7162 |
| Sheet: | SD.0 | | |



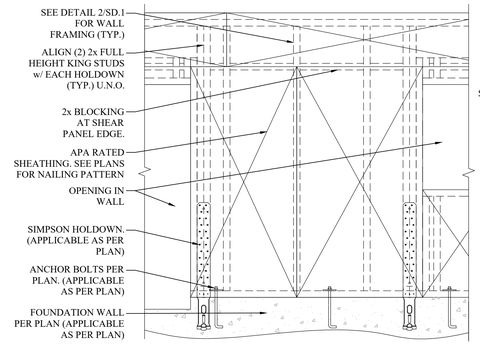

1 TYPICAL HORIZONTAL DIAPHRAGM (UNBLOCKED)



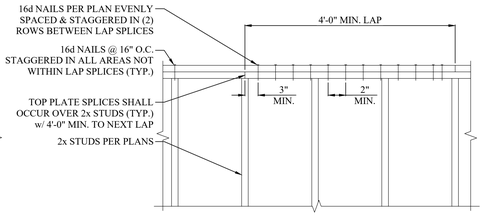

2 TYPICAL WALL FRAMING



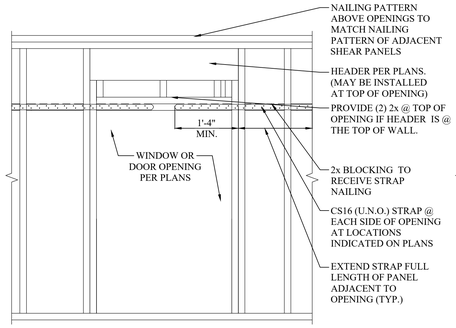

3 TYP. TRUSS TO WALL CONNECTION



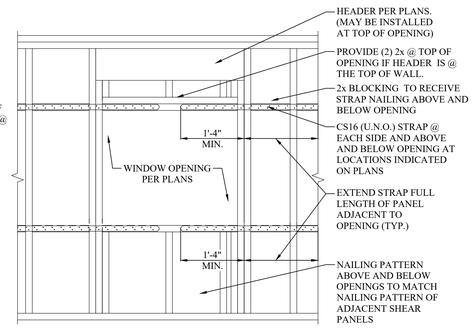

4 TYP. SHEAR WALL CONNECTION



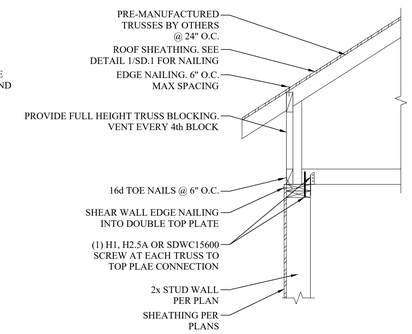

5 TYP. TOP PLATE SPLICE CONNECTION



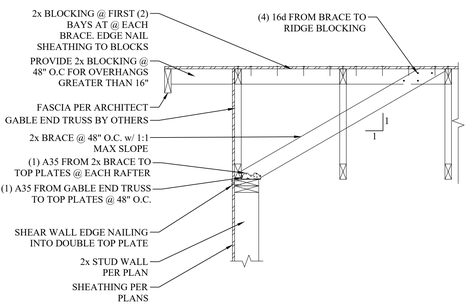

6 STRAPPED OPENING @ HEADER (ONLY REQUIRED AS CALLED ON PLANS)



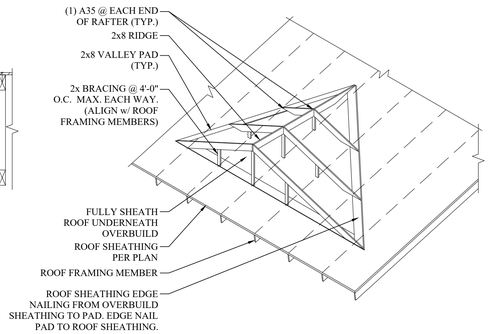

7 STRAPPED OPENING @ HEADER & SILL (ONLY REQUIRED AS CALLED ON PLANS)



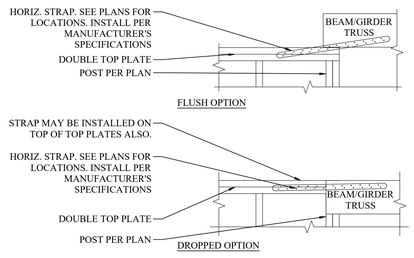

8 TYP. RAISED HEEL TRUSS TO WALL



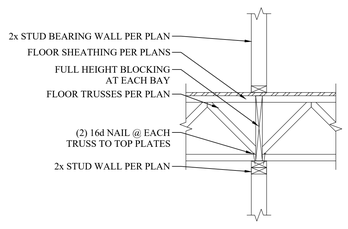

9 TYP. GABLE END TRUSS TO WALL



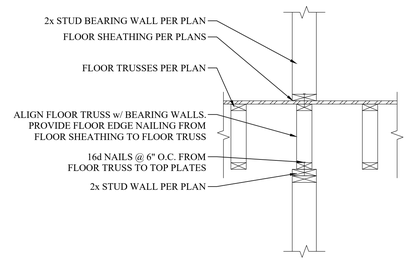

10 TYPICAL OVERBUILD



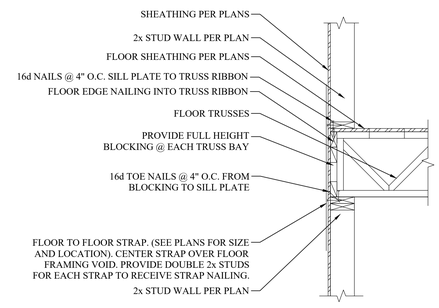

11 HORIZ. STRAP OPTIONS



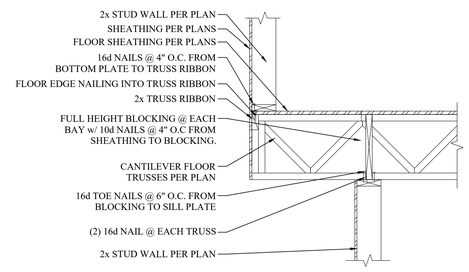

12 TYP. INT. BEARING WALL (TRUSS PERP.)



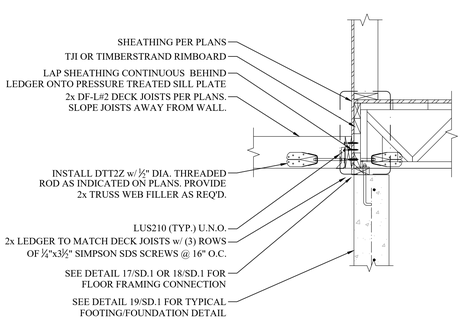

13 TYP. INT. BEARING WALL (TRUSS PARALLEL)



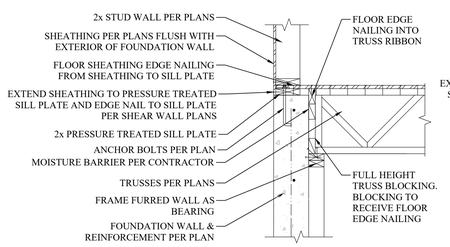

14 TYP. EXTERIOR BEARING WALL



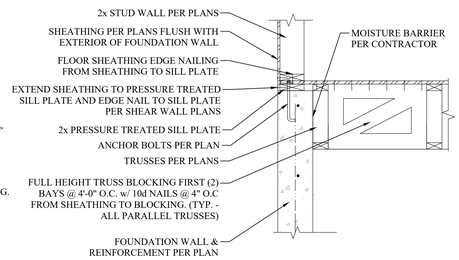

15 TYP. CANTILEVER FLOOR TRUSSES



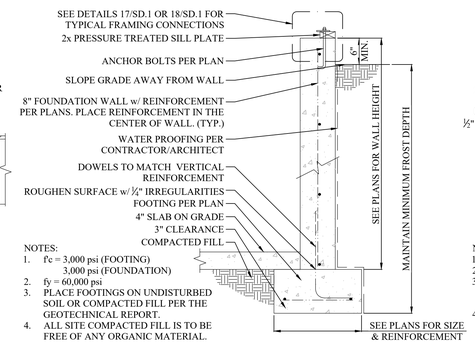

16 TYPICAL DECK CONNECTION




17 TYP. TRUSS TO FDN. WALL (PERP.)

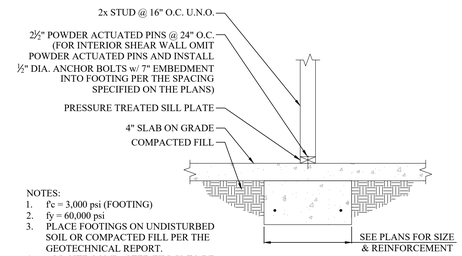



18 TYP. TRUSS TO FDN. WALL (PARALLEL)




NOTES:
1. f'c = 3,000 psi (FOOTING)
   3,000 psi (FOUNDATION)
2. fy = 60,000 psi
3. PLACE FOOTINGS ON UNDISTURBED SOIL OR COMPACTED FILL PER THE GEOTECHNICAL REPORT.
4. ALL SITE COMPACTED FILL IS TO BE FREE OF ANY ORGANIC MATERIAL.

19 TYP. FOOTING & FOUNDATION




NOTES:
1. f'c = 3,000 psi (FOOTING)
2. fy = 60,000 psi
3. PLACE FOOTINGS ON UNDISTURBED SOIL OR COMPACTED FILL PER THE GEOTECHNICAL REPORT.
4. ALL SITE COMPACTED FILL IS TO BE FREE OF ANY ORGANIC MATERIAL.

20 TYP. INTERIOR FOOTING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PROFESSIONAL STRUCTURAL ENGINEER No. 293261 CRAIG R. LIM 04/29/2021 STATE OF UTAH

# GUSTAFSON RESIDENCE
HUNTSVILLE, UTAH
STRUCTURAL DETAILS

| REVISION BLOCK | | |
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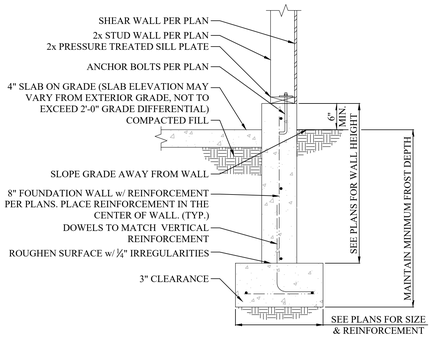
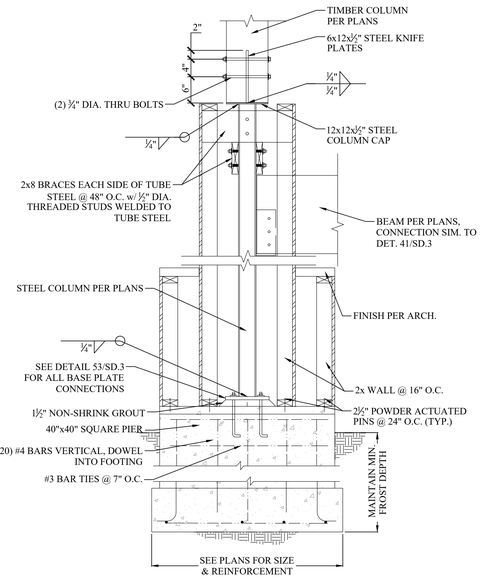
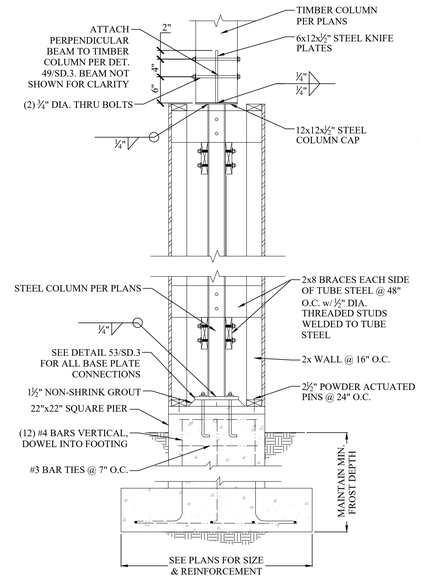
| Sheet: | SD.1 | | |



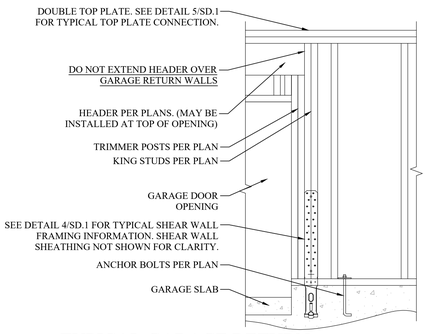

21 TYP. SLAB ON GRADE FOUNDATION



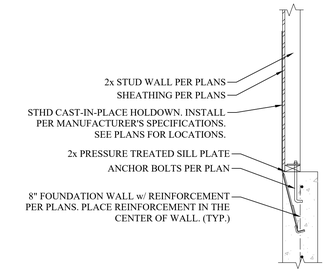

22 LARGE PIER FOUNDATION



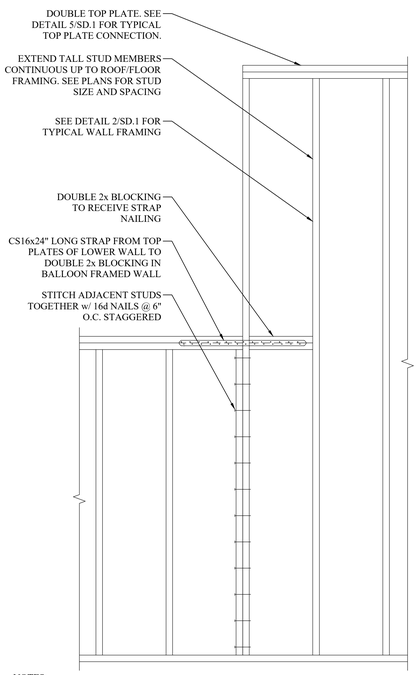

23 TYP. PIER FOUNDATION




24 TYPICAL GARAGE RETURN

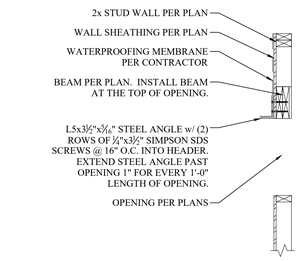



25 TYPICAL STHD HOLDOWN

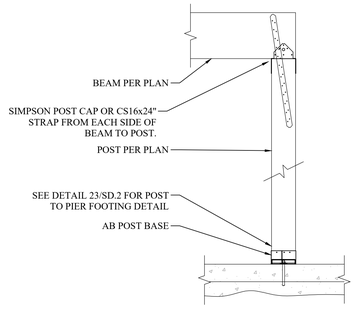



NOTES:
1. ROOF/FLOOR FRAMING NOT SHOWN FOR CLARITY

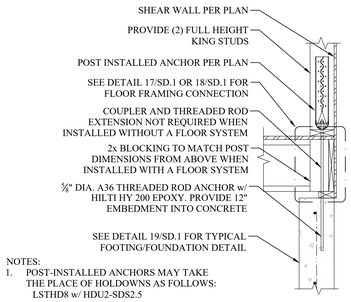
26 TYP. BALLOON FRAMING




27 TYPICAL STEEL LINTEL

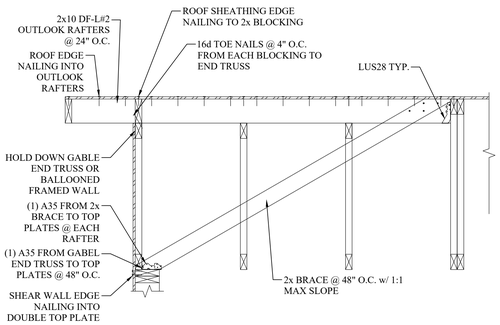



28 TYP. WOOD BEAM TO WOOD POST

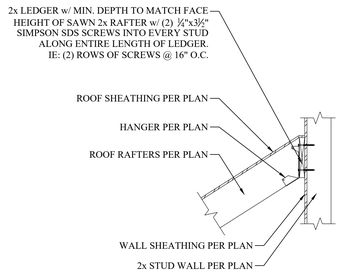



NOTES:
1. POST-INSTALLED ANCHORS MAY TAKE THE PLACE OF HOLDOWNS AS FOLLOWS:
LSTHD8 w/ HDU2-SDS2.5
STHD10 w/ HDU4-SDS2.5

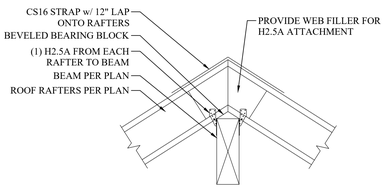
29 TYPICAL POST-INSTALLED HOLDOWN



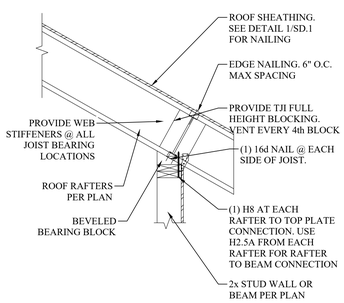

30 TYP. OUTLOOK RAFTERS



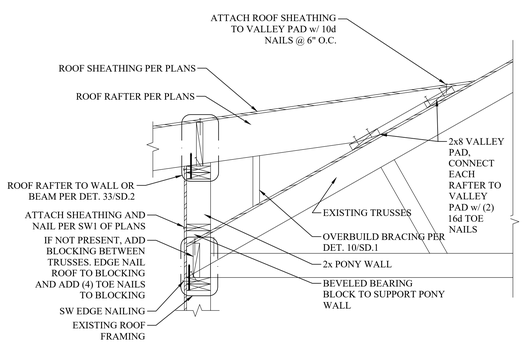

31 TYP. RAFTER TO LEDGER CONNECTION



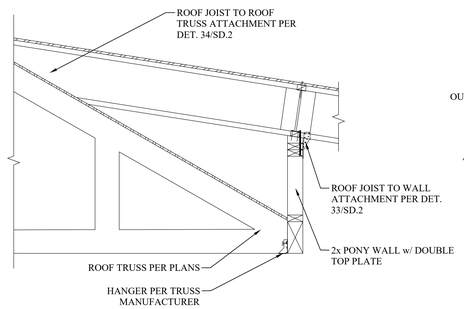

32 ROOF RAFTERS TO RIDGE BEAM



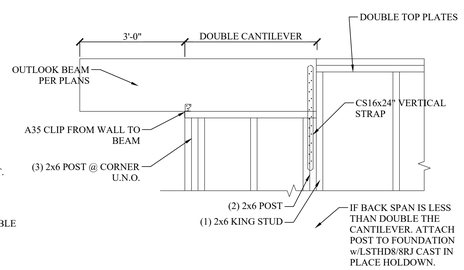

33 RAFTER TO WALL/BEAM (TYPICAL)



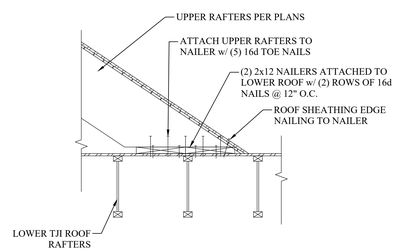

34 RAFTER TO WALL @ PITCH TRANSITION




35 SECTION AT ROOF TO PONY WALL AND BEAM




36 CANTILEVER BEAM TO TOP PLATES




37 RAFTER ABOVE TO LOWER RAFTER

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PROFESSIONAL STRUCTURAL ENGINEER
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CRAIG R. LYM
04/29/2021
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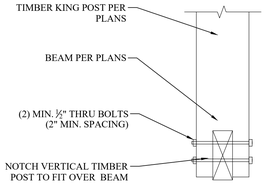
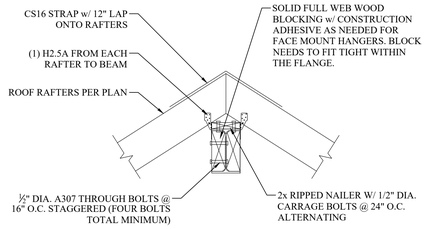
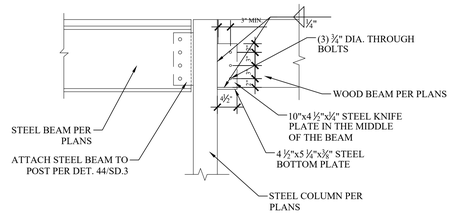


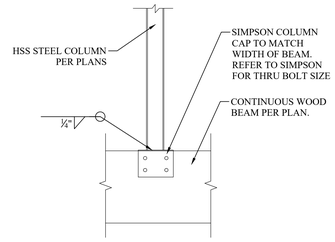

38 TIMBER COLUMN TO BEAM BELOW



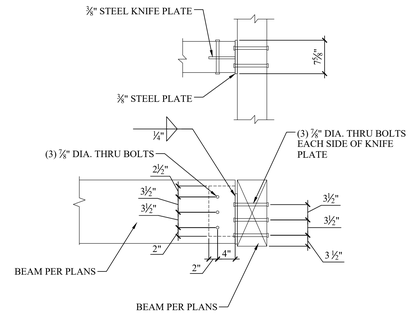

39 ROOF RAFTERS TO STEEL RIDGE BEAM



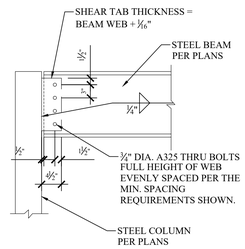

41 RIDGE BEAMS CONNECTION



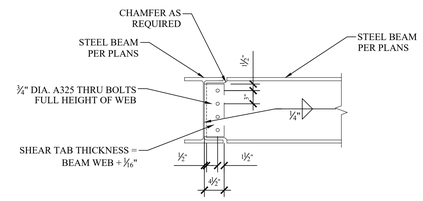

42 STEEL COLUMN TO STEEL BEAM BELOW (TYP.)



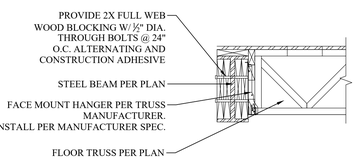

43 TIMBER BEAM TO TIMBER BEAM



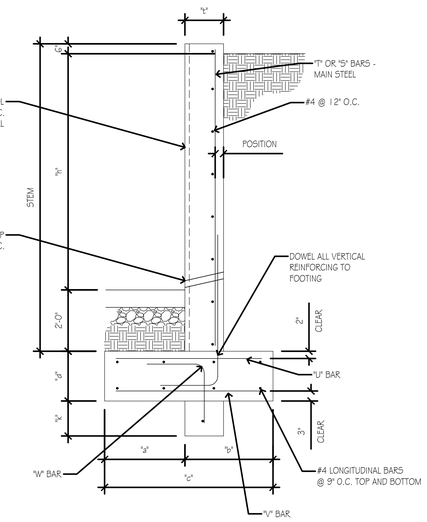

44 STEEL BEAM TO STEEL COLUMN




45 STEEL BEAM TO STEEL BEAM




46 FLOOR TRUSSES TO STEEL BEAM

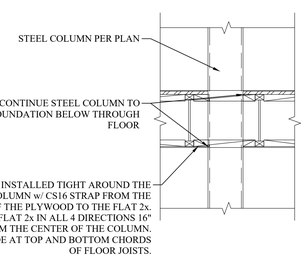



| | DIMENSIONS | | | | | | | WALL REINFORCING | | | FOOTING REINFORCING | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RETAINED HEIGHT "h" | STEM HEIGHT | a | b | c | d | k | t | S | T | POSITION | U | V | W |
| 3'-6" | 6'-0" | 1'-2" | 1'-4" | 2'-6" | 1'2" | - | 8" | #4 @ 12" | - | CENTER | #4 @ 10" | #4 @ 10" | - |

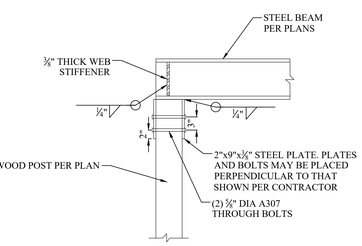
NOTES:

1. ALLOWABLE SOIL BEARING PRESSURE = 1500 PSF, ACTIVE SOIL PRESSURE = 45 PSF/FT.
2. MINIMUM CONCRETE COMPRESSIVE STRENGTH f'c = 3000 PSF.
3. ALL REINFORCING STEEL SHALL BE GRADE 60 AND TIED INTO PLACE PRIOR TO PLACING CONCRETE.
4. OMIT TOP CONTINUOUS REINFORCING BARS WHEN "U" BAR REINFORCING IS NOT REQUIRED.
5. ALL CONCRETE WORK MUST MEET THE REQUIREMENTS OF THE 2015 IBC, ACI 318 AND LOCAL ORDINATES.
6. ALL BARS MUST BE 3" CLEAR FROM GRADE EXCEPT AS SPECIFIED IN NOTE 7.
7. STEM REBAR WITH AN "EDGE" POSITION SHALL BE PLACED 2-1/2" FROM FACE OF CONCRETE ON THE RETAINED SOIL SIDE OF THE WALL.
8. IF DIMENSION OR BAR SPACING IS NOT SPECIFIED IN THE SCHEDULE THEN THAT SPECIFIC BAR OR ITEM IS NOT REQUIRED IN CONSTRUCTION.

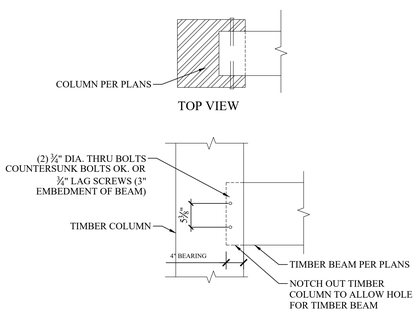
40 CONCRETE RETAINING WALLS



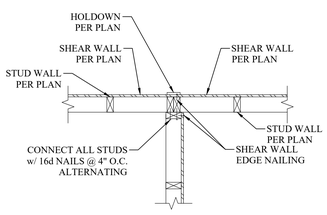

47 CONTINUOUS STEEL COLUMN BRACING



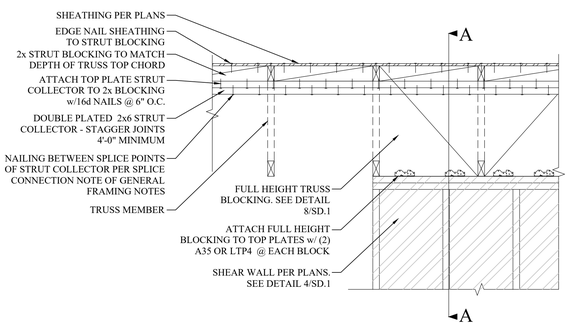

48 STEEL BEAM TO WOOD POST

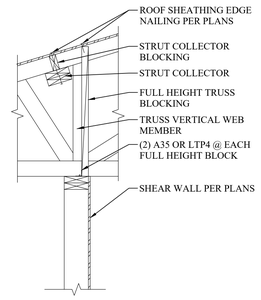



49 TIMBER BEAM TO SIDE OF TIMBER COLUMN



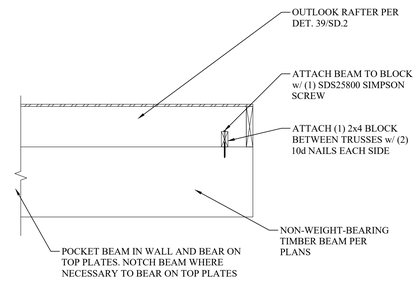

50 HOLDOWN IN CENTER OF WALL



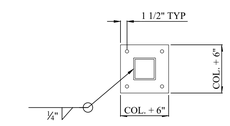




SECTION A-A

51 INTERIOR COLLECTOR STRUT DETAIL

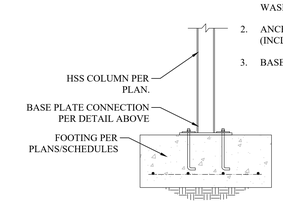



52 FAUX BEAMS TO ROOF ATTACHMENT




BASE PLATE NOTES:

1. INSTALL WITH 3/4" DIA. ANCHOR BOLTS W/ 3" MIN HOOKS. PROJECT BOLTS 3" MIN. ABOVE THE TOP OF THE BASE PLATE. EMBEDMENT SHALL BE 9" MIN. ALL BOLTS SHALL BE INSTALLED WITH HARDENED WASHERS BENEATH THE NUT.
2. ANCHOR BOLTS SHALL NOT BE WELDED (INCLUDING TACK WELDS).
3. BASE PLATE THICKNESS TO BE 3/4" THICK.




53 TYPICAL BASEPLATE OVER SPOT FOOTING

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ENGINEERING AND SURVEYING, LLC
7107 S. HOLDEN STREET
MIDVALE, UTAH 84047 PH: (801) 352-0075
www.focusutah.com

PROFESSIONAL STRUCTURAL ENGINEER
No. 293261
CRAIG R. LIM
04/29/2021
STATE OF UTAH

# GUSTAFSON RESIDENCE
HUNTSVILLE, UTAH
STRUCTURAL DETAILS

REVISION BLOCK

| # | DATE | DESCRIPTION |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
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STRUCTURAL DETAILS

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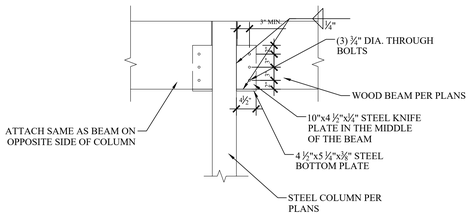
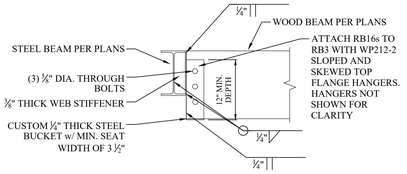
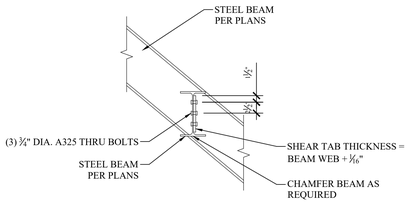
Date: 4/28/21 Job #: 21-7162
Sheet: SD.3




54 RIDGE BEAMS CONNECTION




55 RIDGE BEAM TO STEEL BEAM CONNECTION




56 STEEL BEAM TO SLOPED STEEL BEAM

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4600 WOOD HOLLOW WAY
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| Sheet: SD.4 | |