





Front Elevation 'A'  
 SCALE: 1/4"=1'-0" AT 22'X34' LAYOUT 1/8"=1'-0" AT 11'X17' LAYOUT



Front Elevation 'B'  
 SCALE: 1/4"=1'-0" AT 22'X34' LAYOUT 1/8"=1'-0" AT 11'X17' LAYOUT



Front Elevation 'F'  
 SCALE: 1/4"=1'-0" AT 22'X34' LAYOUT 1/8"=1'-0" AT 11'X17' LAYOUT

NO.	DATE	REVISION
1	04.28.22	

PROFESSIONAL SEAL:

PROJECT TITLE:  
**40' Series**

FOR CONSTRUCTION



CLIENTS NAME:

PROJECT NO: GMD1049  
 SHEET TITLE:  
**QUICK VIEW**

PRINT DATE:  
 January 22, 2021

SHEET NO:  
**0.1**





ATTIC VENT CALCULATION FOR PLAN 'HAYDEN': 1:150 RATIO.

THE NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/50 OF THE AREA OF THE SPACE VENTILATED, PROVIDED THAT AT LEAST 50 PERCENT AND NOT MORE THAN 80 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE THE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS.

EXCEPTIONS:  
 1. ENCLOSED ATTIC/RAFTER SPACES REQUIRING LESS THAN 1 SQ FT OF VENTILATION MAY BE VENTED WITH CONTINUOUS SOFFIT VENTILATION ONLY.  
 2. ENCLOSED ATTIC/RAFTER SPACES OVER UNCONDITIONED SPACE MAY BE VENTED WITH CONTINUOUS SOFFIT VENT ONLY.

GENERAL CONTRACTOR SHALL VERIFY THE NET FREE VENTILATION OF THE VENT PRODUCT SELECTED BY OWNER. VERIFY WITH MANUFACTURER OF HIGH AND LOW VENTS TO BE USED FOR MINIMUM CALCULATED VENTS REQUIRED. THE REQUIRED VENTILATION SHALL BE MAINTAINED. PROVIDE INSULATION STOP SUCH THAT INSULATION DOES NOT OBSTRUCT FREE AIR MOVEMENT AS REQUIRED BY THE BUILDING OFFICIAL.

ALL OVERLAP FRAMED ROOF AREAS SHALL HAVE OPENINGS BETWEEN THE ADJACENT ATTICS IN THE ROOF SHEATHING (AS ALLOWED BY THE STRUCTURAL ENGINEER) TO ALLOW PASSAGE AND ATTIC VENTILATION BETWEEN THE TWO OR ISOLATED ATTIC SPACES SHALL BE VENTED INDEPENDENTLY TO CBC REQUIREMENTS.

PER DEVELOPER, AT ALL CANTILEVERED FLOORS, CANTILEVERED ARCHITECTURAL POP-OUTS, AND ANY DOUBLE FRAMING PROJECTIONS THAT ARE SEPARATED FROM THE VENTING CALCULATIONS SHOWN ABOVE, PROVIDE A CONTINUOUS 2" CORROSION RESISTANT SOFFIT VENT AT UNDERSIDE OF FRAMED ELEMENT.

(PER SECTION R302.2)  
 1 SQUARE INCH VENT FOR EVERY 150 SQUARE INCHES OF CEILING  
 \*144 SQ. IN. = 1 SQ. FT.  
 BLDG. CEILING (SF) X 144 = BLDG (SQ. IN.)  
 BLDG. (SQ. IN.) / 150 = SQ. IN. OF VENT REQUIRED

**ROOF AREA 1 =** 1488 SF  
 1488 SQ. FT. X 144 = 214272 SQ. IN.  
 214272 SQ. IN. / 150 = 1428.48 SQ. IN. OF VENT REQ'D

**ROOF AREA 2 =** 34 SF  
 34 SQ. FT. X 144 = 5616 SQ. IN.  
 5616 SQ. IN. / 150 = 37.44 SQ. IN. OF VENT REQ'D

**ROOF AREA 3 =** 180 SF  
 180 SQ. FT. X 144 = 25420 SQ. IN.  
 25420 SQ. IN. / 150 = 172.80 SQ. IN. OF VENT REQ'D

NOTES:

- ALL ROOF DRAINAGE SHALL BE PIPED TO STREET OR APPROVED DRAINAGE FACILITY.
- DASHED LINES INDICATE WALL BELOW.
- LOCATE GUTTER AND DOWNSPOUTS PER BUILDER.
- PITCHED ROOFS AS NOTED.
- TRUSS MANUFACTURER SHALL SUBMIT STRUCTURAL CALCS AND SHOP DRAWINGS TO THE BUILDER'S GENERAL CONTRACTOR AND BUILDING DEPARTMENT FOR REVIEW PRIOR TO FABRICATIONS.
- ALL PLUMBING VENTS SHALL BE COMBINED INTO A MINIMUM AMOUNT OF ROOF PENETRATIONS. ALL ROOF PENETRATIONS SHALL OCCUR TO THE REAR OF THE MAIN RIDGE.

ATTIC VENT CALCULATION FOR PLAN 'HAYDEN': 1:300 RATIO.

AS AN ALTERNATE TO THE 1/50 RATIO LISTED ABOVE, THE NET FREE CROSS-VENTILATION AREA MAY BE REDUCED TO 1/300 WHEN A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM - IN - WINTER SIDE OF THE CEILING.

GENERAL CONTRACTOR SHALL VERIFY THE NET FREE VENTILATION OF THE VENT PRODUCT SELECTED BY OWNER. VERIFY WITH MANUFACTURER OF HIGH AND LOW VENTS TO BE USED FOR MINIMUM CALCULATED VENTS REQUIRED. THE REQUIRED VENTILATION SHALL BE MAINTAINED. PROVIDE INSULATION STOP SUCH THAT INSULATION DOES NOT OBSTRUCT FREE AIR MOVEMENT AS REQUIRED BY THE BUILDING OFFICIAL.

ALL OVERLAP FRAMED ROOF AREAS SHALL HAVE OPENINGS BETWEEN THE ADJACENT ATTICS IN THE ROOF SHEATHING (AS ALLOWED BY THE STRUCTURAL ENGINEER) TO ALLOW PASSAGE AND ATTIC VENTILATION BETWEEN THE TWO OR ISOLATED ATTIC SPACES SHALL BE VENTED INDEPENDENTLY TO CBC REQUIREMENTS.

PER DEVELOPER, AT ALL CANTILEVERED FLOORS, CANTILEVERED ARCHITECTURAL POP-OUTS, AND ANY DOUBLE FRAMING PROJECTIONS THAT ARE SEPARATED FROM THE VENTING CALCULATIONS SHOWN ABOVE, PROVIDE A CONTINUOUS 2" CORROSION RESISTANT SOFFIT VENT AT UNDERSIDE OF FRAMED ELEMENT.

(PER SECTION R302.2)  
 1 SQUARE INCH VENT FOR EVERY 300 SQUARE INCHES OF CEILING  
 \*144 SQ. IN. = 1 SQ. FT.  
 BLDG. CEILING (SF) X 144 = BLDG (SQ. IN.)  
 BLDG. (SQ. IN.) / 300 = SQ. IN. OF VENT REQUIRED  
 SQ. IN. OF VENT REQUIRED / 2 = 50% AT HIGH & 50% AT LOW.

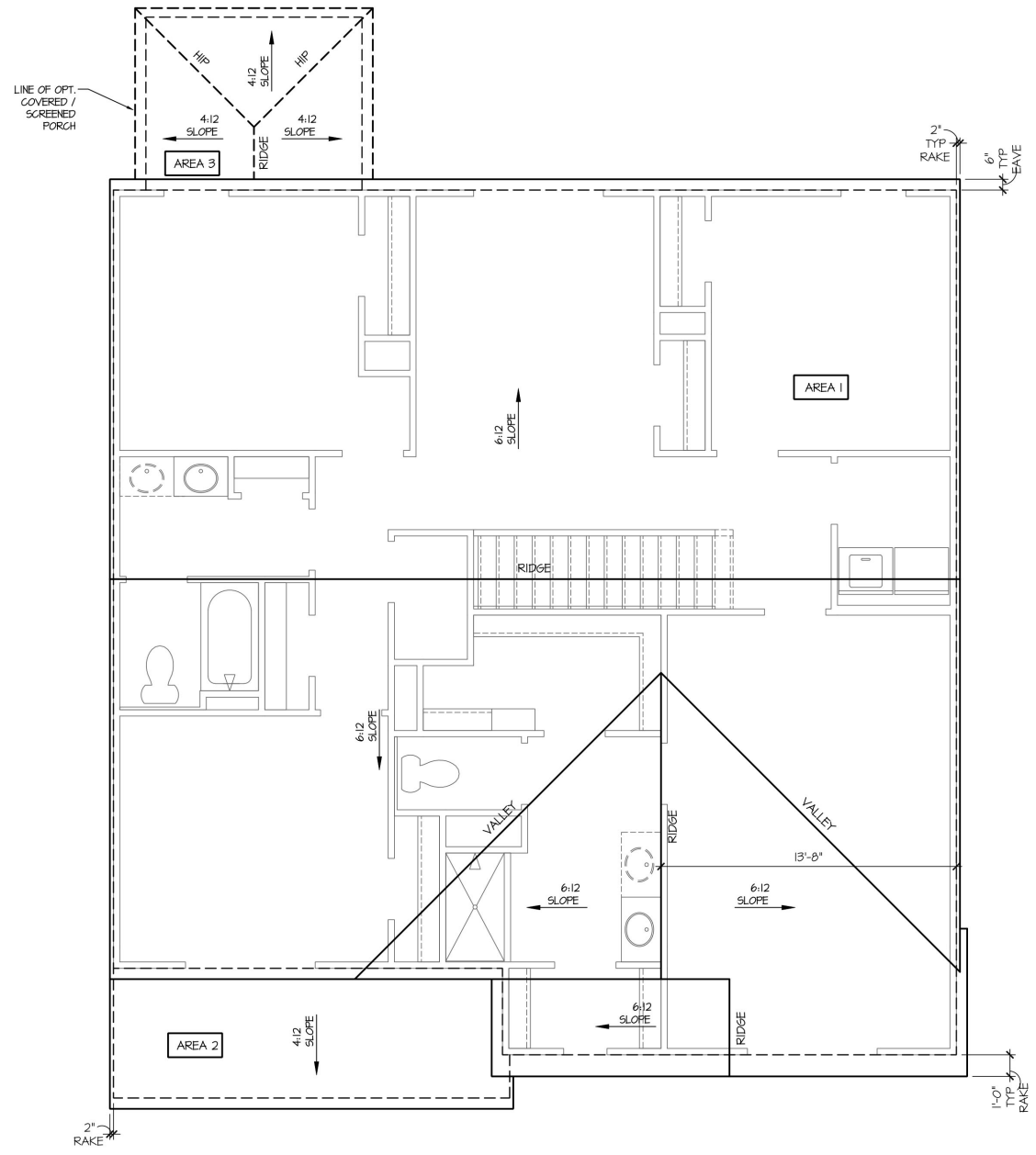
**ROOF AREA 1 =** 1488 SF  
 1488 SQ. FT. X 144 = 214272 SQ. IN.  
 214272 SQ. FT. / 300 = 714.24 SQ. IN. OF VENT REQ'D  
 714.24 SQ. IN. / 2 = 357.12 SQ. IN. OF VENT AT HIGH & 357.12 SQ. IN. OF VENT AT LOW REQUIRED.

**ROOF AREA 2 =** 34 SF  
 34 SQ. FT. X 144 = 5616 SQ. IN.  
 5616 SQ. FT. / 300 = 18.72 SQ. IN. OF VENT REQ'D  
 18.72 SQ. IN. / 2 = 9.36 SQ. IN. OF VENT AT HIGH & 9.36 SQ. IN. OF VENT AT LOW REQUIRED.

**ROOF AREA 3 =** 180 SF  
 180 SQ. FT. X 144 = 25420 SQ. IN.  
 25420 SQ. FT. / 300 = 86.40 SQ. IN. OF VENT REQ'D  
 86.40 SQ. IN. / 2 = 43.20 SQ. IN. OF VENT AT HIGH & 43.20 SQ. IN. OF VENT AT LOW REQUIRED.

BUILDER TO PROVIDE (2) LAYERS OF UNDERLAYMENT AT ANY ROOF W/ A SLOPE FROM 2:12 TO LESS THAN 4:12

AT SINGLE FAMILY DETACHED PLANS:  
 PREFINISHED VENTED SOFFIT AT EAVE PER MANUFACTURER. (VERIFY FIRE SEPARATION DISTANCE FOR SOFFIT PROTECTION PER NRCR SECTION R302.1.1 AND TABLE R302.1)



Roof Plan 'F'

SCALE: 1/4"=1'-0" AT 22'X34' LAYOUT 1/8"=1'-0" AT 11'X11' LAYOUT

NO.	DATE	REVISION
1	04.25.22	

PROFESSIONAL SEAL:

PROJECT TITLE:

40' Series

CLIENTS NAME:



PROJECT NO: GMD17049

SHEET TITLE:  
 'HAYDEN'  
 ROOF PLAN  
 '4EPF-F'

PRINT DATE:  
 January 22, 2021

SHEET NO:  
 1.1 F

FOR CONSTRUCTION



**NOTES:**

- GRADE CONDITIONS MAY VARY FOR INDIVIDUAL SITE FROM THAT SHOWN. BUILDER SHALL VERIFY AND COORDINATE PER ACTUAL SITE CONDITIONS.
- WINDOW HEAD HEIGHTS:  
1ST FLOOR = 6'-8" UN.O. ON ELEVATIONS.  
2ND FLOOR = 7'-0" UN.O. ON ELEVATIONS.
- ROOFING: PITCHED SHINGLES PER DEVELOPER.
- WINDOWS: MANUFACTURER PER DEVELOPER. DIVIDED LITES AS SHOWN ON THE EXTERIOR ELEVATIONS
- ENTRY DOOR: AS SELECTED BY DEVELOPER.
- GARAGE DOORS: AS SELECTED BY DEVELOPER, RAISED PANEL AS SHOWN.
- ALL EXTERIOR MATERIALS TO BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- PROTECTION AGAINST DECAY:  
(ALL PORTIONS OF A PORCH, SCREEN PORCH OR DECK FROM THE BOTTOM OF THE HEADER DOWN, INCLUDING POST, RAILS, PICKETS, STEPS AND FLOOR STRUCTURE.)
- INSULATION: PER TABLE N102.1.2.  
EXTERIOR WALLS: R-15 BATTS MINIMUM. VERIFY  
CEILING WITH ATTIC ABOVE: R-30 BATTS MINIMUM. VERIFY  
FLOOR OVER GARAGE: R-14 BATTS MINIMUM. VERIFY  
ATTIC KNEEWALL: R-14 BATTS MINIMUM. VERIFY  
GRAVL SPACE FLOORING: R-14 BATTS MINIMUM. VERIFY

**KEY NOTES:**

**MASONRY:**

- ADHERED STONE VENEER AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
- MASONRY FULL BRICK AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
- MASONRY FULL STONE AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
- 8" SOLDIER COURSE.
- ROWLOCK COURSE
- N/A

**TYPICALS:**

- CORROSION RESISTANT SCREEN LOUVERED VENTS, SIZE AS NOTED.
- CODE APPROVED TERMINATION CHIMNEY CAP.
- CORROSION RESISTANT ROOF TO WALL FLASHING. CODE COMPLIANT FLASHING PER NCRG R409.2.0.3
- STANDING SEAM METAL ROOF, INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- DECORATIVE WROUGHT IRON. SEE DETAILS.

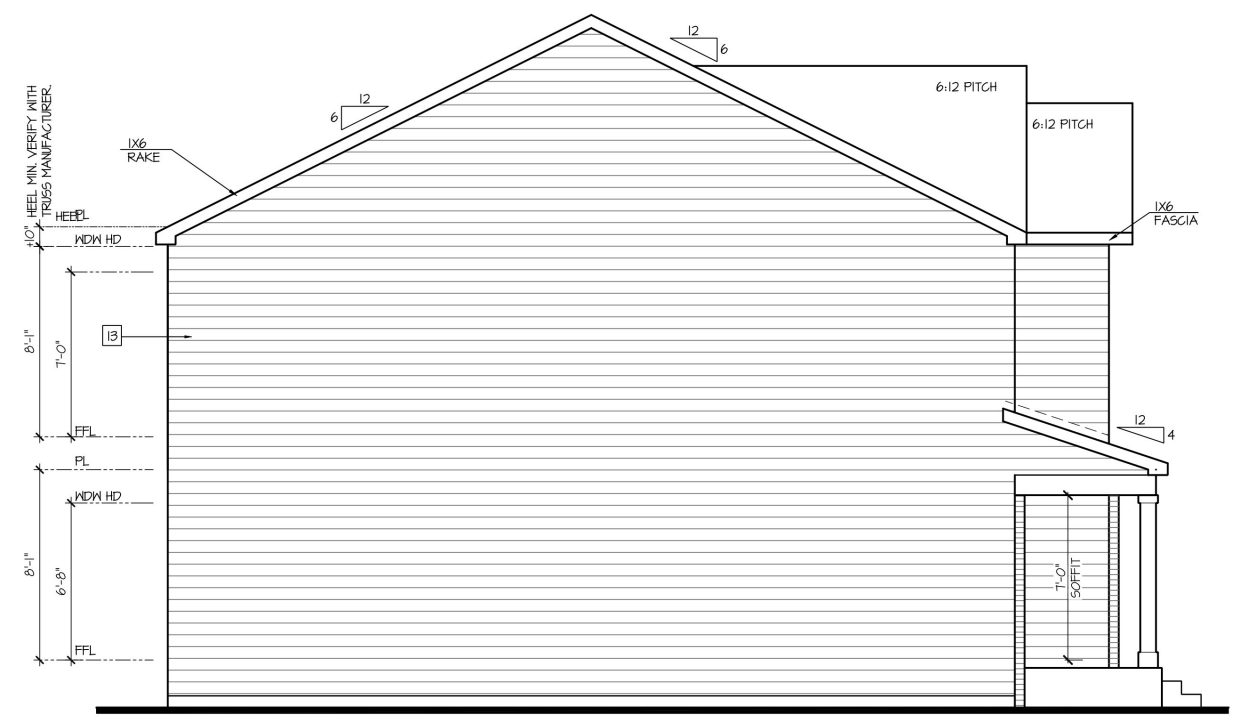
**SIDING:**

- VINYL SHAKE SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER.  
(AT SPECIFIED LOCATIONS:  
FIBER CEMENT SHAKE SIDING PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
- VINYL LAP SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER.  
(AT SPECIFIED LOCATIONS:  
FIBER CEMENT LAP SIDING PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
- VINYL NAVY SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER.  
(AT SPECIFIED LOCATIONS:  
FIBER CEMENT NAVY SIDING PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
- VINYL BOARD AND BATT SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER.  
(AT SPECIFIED LOCATIONS:  
FIBER CEMENT PANEL SIDING W/ 1X3 BATTS AT 12" O.C. PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
- VINYL TRIM SIZE AS NOTED  
(AT SPECIFIC LOCATIONS:  
1X FIBER CEMENT TRIM OR EQUAL, UNO. SIZE AS NOTED
- PLYON SHUTTERS, TYPE AS SHOWN. SIZE AS NOTED.  
(AT SPECIFIC LOCATIONS: FALSE VINYL SHUTTERS, TYPE AS SHOWN. SIZE AS NOTED.)

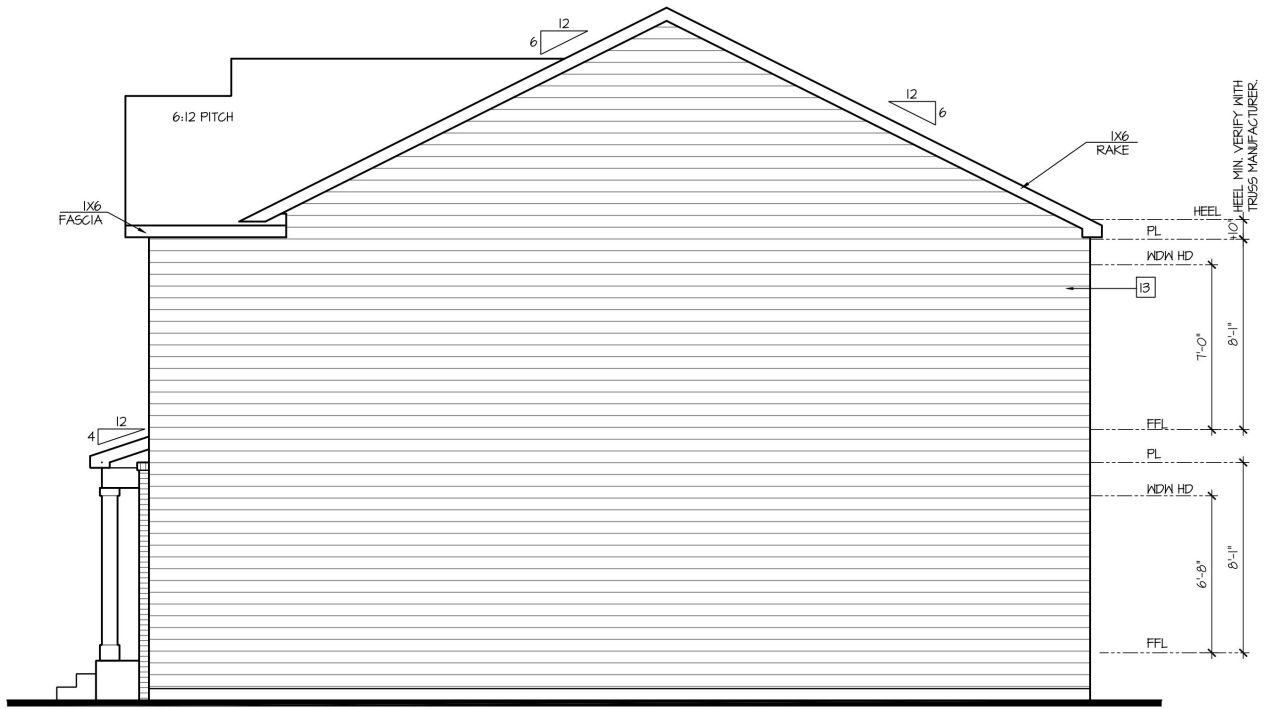
ALL WINDOWS WHOSE OPENING IS LESS THAN 24" ABOVE THE FINISH FLOOR AND WHOSE OPENING IS GREATER THAN 12" ABOVE THE OUTSIDE WALKING SURFACE MUST HAVE WINDOW OPENING LIMITING DEVICES COMPLYING WITH THE NCRG SECTION R312.2.1 AND R312.2.2.

AVAILABLE WITH OPTIONAL  
9'-1" FIRST FLOOR PLATE

NOTES AT OPT 9'-1" PLT:  
- WDW HT SET AT 7'-6"  
- INTERIOR SOFFITS AT 8'-0"  
- EXTERIOR SOFFITS AT 8'-0"



Left Elevation 'F' w/ Opt Crawl Space  
SCALE: 1/4"=1'-0" AT 22'X34" LAYOUT 1/8"=1'-0" AT 11'X11" LAYOUT



Right Elevation 'F' w/ Opt Crawl Space  
SCALE: 1/4"=1'-0" AT 22'X34" LAYOUT 1/8"=1'-0" AT 11'X11" LAYOUT



Rear Elevation 'F' w/ Opt Crawl Space  
SCALE: 1/4"=1'-0" AT 22'X34" LAYOUT 1/8"=1'-0" AT 11'X11" LAYOUT

NO.	DATE:	REVISION:
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PROFESSIONAL SEAL:

PROJECT TITLE:

40' Series

FOR CONSTRUCTION

CLIENTS NAME:



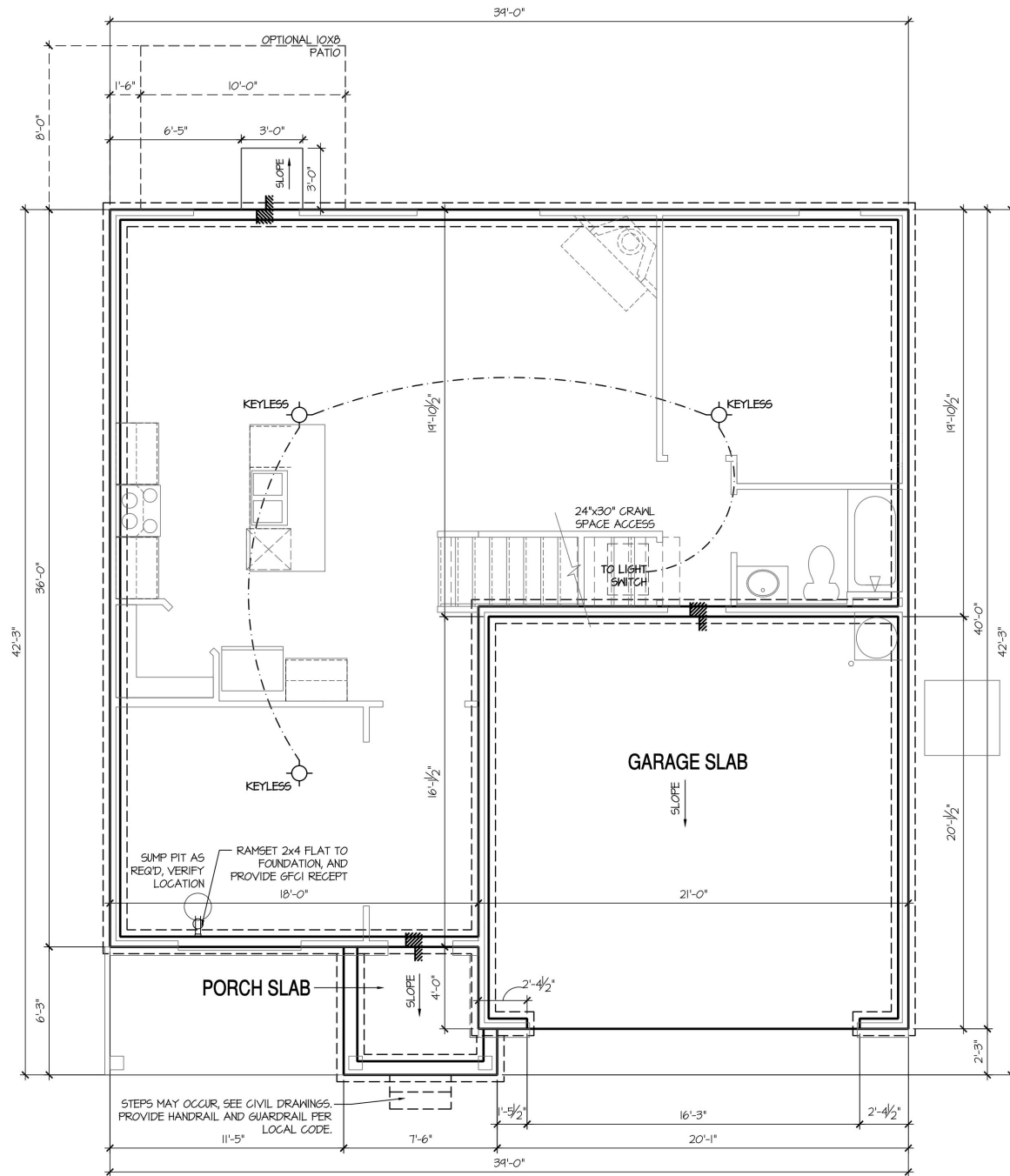
PROJECT NO: GMD1049

SHEET TITLE:  
**'HAYDEN'  
EXTERIOR  
ELEVATIONS  
'4EPF-F'**

PRINT DATE:  
January 22, 2021

SHEET NO:  
**2.1 F**

CRAWL SPACE NOTES NORTH CAROLINA:	KEY NOTES:
<ul style="list-style-type: none"> <li>- REFER TO STRUCTURAL DRAWINGS FOR INFORMATION NOT SHOWN ON THIS PLAN.</li> <li>- FOR ADDITIONAL NOTES SEE GENERAL NOTES ON TITLE SHEET AND DETAILS.</li> <li>- PROVIDE FIREBLOCKING, (PER LOCAL CODES)</li> <li>- ALL ELECTRICAL AND MECHANICAL EQUIPMENT AND METERS ARE SUBJECT TO RELOCATION DUE TO FIELD CONDITIONS, CONTRACTOR TO VERIFY.</li> <li>- VERIFY ALL DOOR THRESHOLD HEIGHTS TO HARD SURFACES, 8 1/4" MAX AT INSWING DOORS, (PER NCRG SECTION R311.3.1)</li> <li>- SLOPE ALL STOOPS AND HARDSCAPE MATERIAL AWAY FROM BUILDING - TYPICAL.</li> <li>- SLOPE GARAGE FLOOR 1/8" PER FOOT TO GARAGE DOOR OPENING.</li> <li>- VERIFY CURB CUT BLOCKOUT WITH GARAGE DOOR MANUFACTURER.</li> <li>- REFER TO CIVIL DRAWINGS FOR FINISH SURFACE ELEVATIONS.</li> <li>- TYP STOOPT AT INSWING/SLIDER DOORS, 36" DEEP BY THE WIDTH OF THE DOOR SERVED, MINIMUM (PER NCRG SECTION R311.3) PROVIDE A SLIP-RESISTANT FINISH.</li> <li>- SOILS TREATMENT: BORACARE TERMITICIDE TO BE APPLIED TO FRAMING PER PRODUCT SPECIFICATIONS. (PROVIDE CHEMICAL TREATMENT FOR PROTECTION FROM TERMITE INVESTIGATION ACCORDING TO LOCAL CODES.)</li> <li>- AT VENTED CRAWL SPACE: APPLY AN APPROVED VAPOR RETARDER OR EQUIVALENT, 6 MIL POLY-VINYL, GROUND COVER OVER FINISH GRADE OR CRAWL SPACE PER NCRG SECTION 40B.2.</li> <li>- PROVIDE VENTS SPACED AROUND PERIMETER TO PROMOTE CROSS VENTILATION AT A RATE OF 1 SF VENT FOR EVERY 1500 SF OF CRAWL FLOOR AREA. ONE VENT MUST BE LOCATED WITHIN 3'-0" OF EACH CORNER OF THE BUILDING AND LOCATED TO ALLOW FOR CROSS VENTILATION. (PER NCRG SECTION R40B.1.1 EXCEPTION)</li> <li>- PROVIDE AN ACCESS OPENING, MINIMUM SIZE OF 18"X24" FOR CRAWL ACCESS. COORDINATE WITH MECHANICAL CONTRACTOR FOR LARGER SIZE REQUIREMENTS IF MECHANICAL EQUIPMENT IS LOCATED IN CRAWL. (PER NCRG SECTION 40B.8)</li> <li>- WOOD CONTACTING CONCRETE OR MASONRY OR LESS THAN CODE REQUIRED SEPARATION TO GRADE SHALL BE PRESSURE TREATED OR FOUNDATION GRADE REDWOOD. SET ALL EXTERIOR WALL SILLS IN MASTIC.</li> </ul>	<ul style="list-style-type: none"> <li>1 LINE OF SLAB ABOVE</li> <li>2 LINE OF FRAMED WALL ABOVE</li> <li>3 16"X8" CRAWL SPACE VENT</li> <li>4 CRAWL SPACE ACCESS PANEL</li> <li>5 A/C CONDENSER PAD. (VERIFY)</li> <li>6 TYPICAL CRAWL FOUNDATION WALL SHALL BE 8" CMU OR A COMBINATION OF 4" CMU WITH NOMINAL 4" BRICK. SEE STRUCTURAL DRAWINGS FOR ALL STRUCTURAL ATTACHMENTS. ALL BLOCK CELLS AND SPACE BETWEEN BLOCK AND BRICK SHALL BE FILLED SOLID WITH CONCRETE. FOUNDATION WALL WITH FULL HEIGHT BRICK VENEER SHALL CONSIST OF 8" CMU WITH NOMINAL 4" BRICK. SEE STRUCTURAL DRAWINGS FOR ALL STRUCTURAL ATTACHMENTS AND BRICK TIE SPACINGS. FILL VOIDS SOLID TO TOP OF CMU WALL. (MUST CONFORM WITH NCRG SECTION R404, TABLE R404.1.1(1) THROUGH R404.1.1(4) AND APPLICABLE SECTIONS OF R606, R607, R608.) VERIFY WITH STRUCTURAL DRAWINGS FOR WALL FOOTING SIZE AND DEPTH.</li> </ul>



Crawl Space Plan 'F'  
 SCALE: 1/4"=1'-0" AT 22'X34' LAYOUT 1/8"=1'-0" AT 11'X11' LAYOUT

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PROJECT TITLE:

40' Series

FOR CONSTRUCTION



PROJECT NO: GMD1049

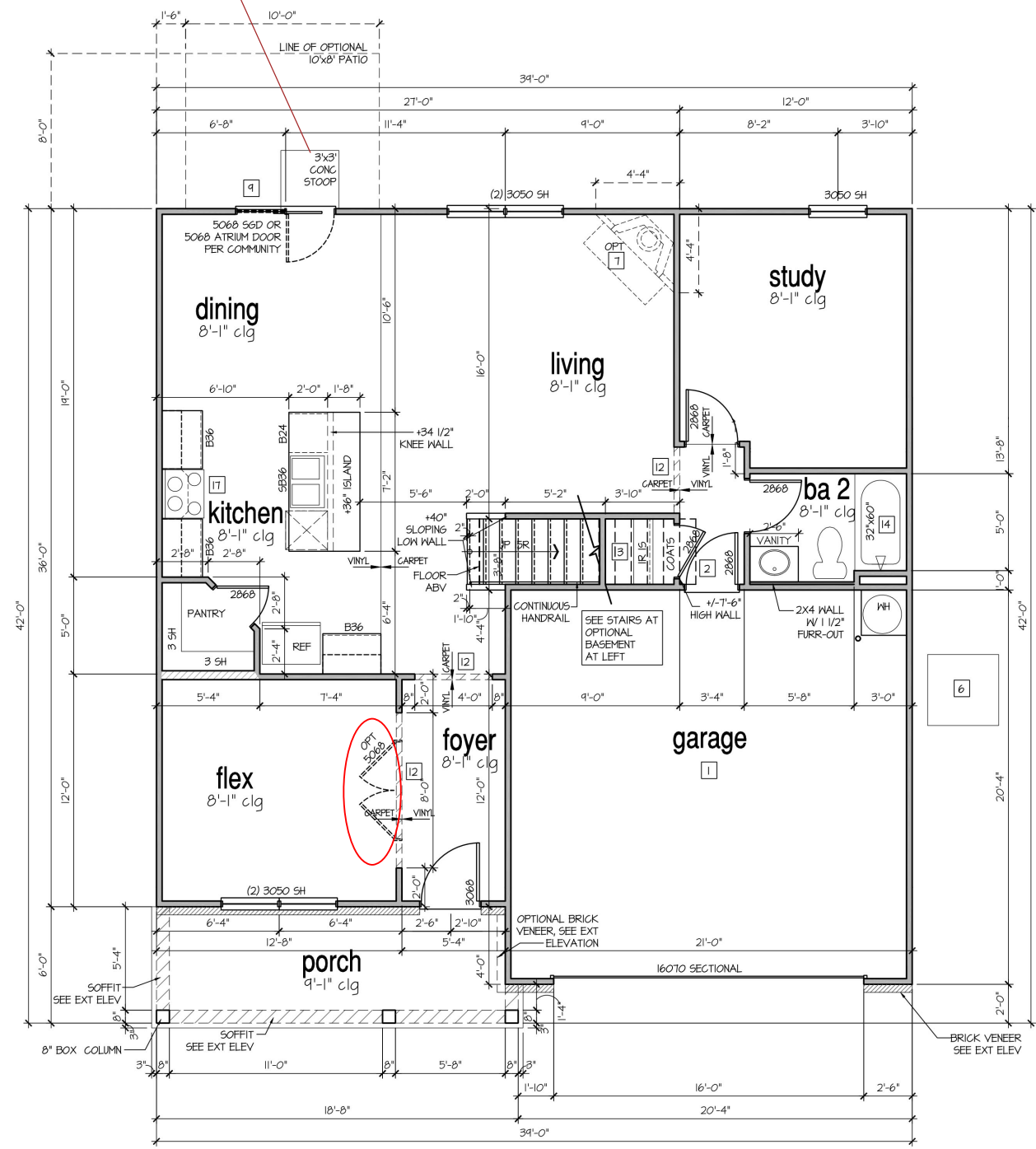
SHEET TITLE:  
**'HAYDEN'  
 CRAWL SPACE  
 PLAN '4EPF-F'**

PRINT DATE:  
 January 22, 2021

SHEET NO:  
**3 CS F**



10'x12' Wood Deck



1st Floor Plan 'F'

SCALE: 1/4"=1'-0" AT 22'x34" LAYOUT 1/8"=1'-0" AT 11'x11" LAYOUT

**8'-9 1/2" STAIR NOTE:**  
(USE 14" T.J. WITH 3/4" PLYWOOD SUBFLOOR)  
15 TREADS AT 10" EACH VERIFY  
16 RISERS AT +/- 7.50" = 120 1/4" TOTAL  
RISE VERIFY

**9'-1" STAIR NOTE:**  
(USE 14" T.J. WITH 3/4" PLYWOOD SUBFLOOR)  
16 TREADS AT 10" EACH VERIFY  
17 RISERS AT +/- 7.21" = 123 3/4" TOTAL  
RISE VERIFY

**8'-1" STAIR NOTE:**  
(USE 14" T.J. WITH 3/4" PLYWOOD SUBFLOOR)  
14 TREADS AT 10" EACH VERIFY  
15 RISERS AT +/- 7.45" = 111 3/4" TOTAL  
RISE VERIFY

- FOR ADDITIONAL NOTES SEE GENERAL NOTES ON TITLE SHEET AND DETAILS.  
- WINDOW HEAD HEIGHTS:  
1ST FLOOR = 6'-8" U.N.O. ON ELEVATIONS.  
2ND FLOOR = 7'-0" U.N.O. ON ELEVATIONS.  
ALL DIMENSIONS TO WINDOWS AND DOORS ARE TO CENTERLINE.

**WALL LEGEND:**

	FULL HEIGHT 2X4 WOOD STUD PARTITION		FULL HEIGHT 2X6 WOOD STUD PARTITION
	BRICK / STONE VENEER		STUD WALL BELOW HEIGHT AND STUD SIZE AS NOTED
	LOH GYPSUM BOARD WALL HEIGHT AND STUD SIZE AS NOTED		DRYWALL OPENING, HEIGHT AS NOTED ON PLAN

**KEY NOTES FOR NORTH CAROLINA:**

- FIRE PROTECTION:**
- 1 HOUSE TO GARAGE FIRE SEPARATION, GARAGE/HOUSE SEPARATION AT VERTICAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 1/2" GYPSUM BOARD. (PER NCRG TABLE R302.6.) GARAGE/HOUSE SEPARATION AT HORIZONTAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD. (PER NCRG TABLE R302.6.)
  - 2 HOUSE TO GARAGE DOOR SEPARATION, PROVIDE 1-3/8" SOLID CORE DOOR OR APPROVED 20 MINUTE RATED DOOR. (PER NCRG SECTION R302.5.1)
  - 3 BENEATH STAIRS AND LANDINGS, 1/2" GYPSUM BOARD ON WALLS AND CEILING OF ENCLOSED ACCESSIBLE AREAS. (PER NCRG SECTION R302.1.) IN CONCEALED SPACES BETWEEN STAIR STRINGERS PROVIDE FIREBLOCKING PER R302.11
  - 4 GAS WATER HEATER ON 18" HIGH PLATFORM. (PER CHAPTER 5 NCRG-PLUMBING)
  - 5 FAU 8'x8' PLATFORM, VERIFY WITH TRUSS MANUFACTURER. (8'-6" MIN CLEAR HEIGHT TO HORIZONTAL MEMBERS, 2'x6" OVER 2'x4" BOTTOM CHORD, OF TRUSS, VERIFY W/ TRUSSES.)
  - 6 A/C CONDENSER PAD. (VERIFY)
  - 7 PRE-FABRICATED METAL FIREPLACE, INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - 8 ATTIC ACCESS LARGE ENOUGH TO REMOVE LARGEST PIECE OF EQUIPMENT BUT NOT LESS THAN 30"x22". FIRE RATED ACCESS AS NOTED. (PER NCRG 807.1.) ATTIC ACCESS LADDER, VERIFY LOCATION AND SIZE WITH TRUSSES. (25 1/2" X 54" SIZE) FOR GARAGE TO ATTIC SEPARATION PER NCRG 302.5.1 EXCEPTION.
  - 9 TEMPERED SAFETY GLASS. (PER NCRG SECTION 308.4)
  - 10 PLYWOOD SHELF ABOVE WITH DRYWALL FINISH OVER. HEIGHT AS NOTED.
  - 11 HALF WALL, HEIGHT AS NOTED.
  - 12 INTERIOR SOFFITS: FFL = 8'-1" U.N.O. SFL = 7'-6" U.N.O. BATHS:
  - 13 SHOWER, TEMPERED GLASS ENCLOSURE.
  - 14 TUB-SHOWER COMBO, TEMPERED GLASS ENCLOSURE.
  - 15 CERAMIC TILE SHOWER AND FLOOR, TEMPERED GLASS ENCLOSURE.
  - 16 ACRYLIC TUB W/ CERAMIC PLATFORM KITCHEN:
  - 17 30" SLIDE-IN ELECTRICAL RANGE W/ HOOD AND MICRO ABV. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - 18 30" GAS COOKTOP AND HOOD. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - 19 ELECTRIC OVEN WITH MICROWAVE OVEN.

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PROFESSIONAL SEAL:

PROJECT TITLE:

40' Series

CLIENTS NAME:



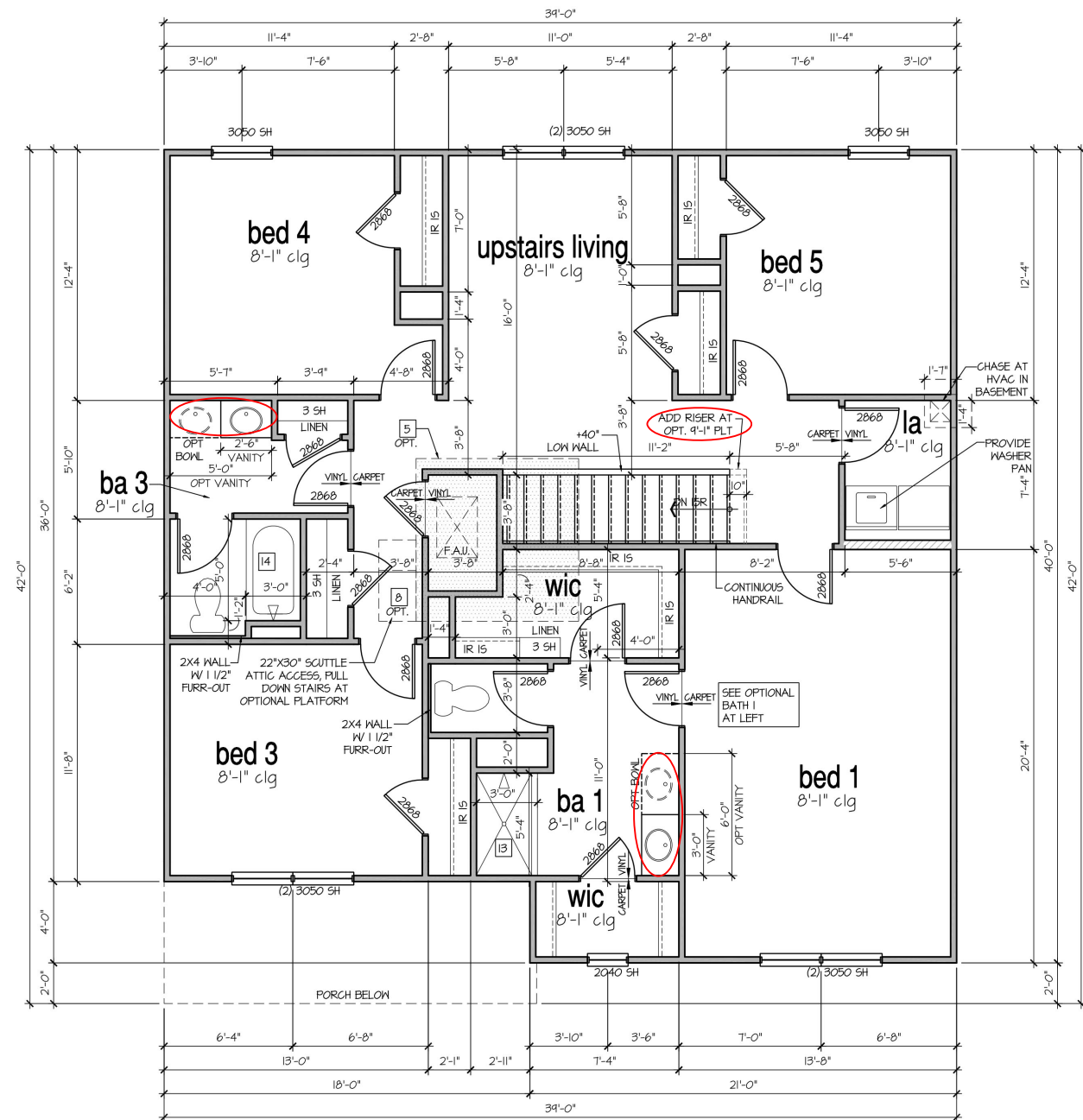
PROJECT NO: GMD1049

SHEET TITLE:  
**'HAYDEN'**  
**1st FLOOR**  
**PLAN '4EPF-F'**

PRINT DATE:  
January 22, 2021

SHEET NO:  
**4 F**

FOR CONSTRUCTION



**2nd Floor Plan 'F'**

SCALE: 1/4"=1'-0" AT 22'x34' LAYOUT 1/8"=1'-0" AT 11'x17' LAYOUT

**9'-1" STAIR NOTE:**  
 (USE 14" T.J. WITH 3/4" PLYWOOD SUBFLOOR)  
 16 TREADS AT 10" EACH VERIFY  
 17 RISERS AT +/- 7.21" = 123 3/4" TOTAL  
 RISE VERIFY

**8'-1" STAIR NOTE:**  
 (USE 14" T.J. WITH 3/4" PLYWOOD SUBFLOOR)  
 14 TREADS AT 10" EACH VERIFY  
 15 RISERS AT +/- 7.45" = 111 3/4" TOTAL  
 RISE VERIFY

- FOR ADDITIONAL NOTES SEE GENERAL NOTES ON TITLE SHEET AND DETAILS.  
 - WINDOW HEAD HEIGHTS:  
 1ST FLOOR = 6'-8" U.N.O. ON ELEVATIONS.  
 2ND FLOOR = 7'-0" U.N.O. ON ELEVATIONS.

ALL DIMENSIONS TO WINDOWS AND DOORS ARE TO CENTERLINE.

**WALL LEGEND:**

	FULL HEIGHT 2X4 WOOD STUD PARTITION		FULL HEIGHT 2X6 WOOD STUD PARTITION
	BRICK / STONE VENEER		STUD WALL BELOW HEIGHT AND STUD SIZE AS NOTED
	LOH GYPSUM BOARD WALL HEIGHT AND STUD SIZE AS NOTED		DRYWALL OPENING HEIGHT AS NOTED ON PLAN

**KEY NOTES FOR NORTH CAROLINA:**

- FIRE PROTECTION:**
- HOUSE TO GARAGE FIRE SEPARATION, GARAGE/HOUSE SEPARATION AT VERTICAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 1/2" GYPSUM BOARD. (PER NCRG TABLE R302.6.) GARAGE/HOUSE SEPARATION AT HORIZONTAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD. (PER NCRG TABLE R302.6.)
  - HOUSE TO GARAGE DOOR SEPARATION, PROVIDE 1-3/8" SOLID CORE DOOR OR APPROVED 20 MINUTE RATED DOOR. (PER NCRG SECTION R302.5.1)
  - BENEATH STAIRS AND LANDINGS, 1/2" GYPSUM BOARD ON WALLS AND CEILING OF ENCLOSED ACCESSIBLE AREAS. (PER NCRG SECTION R302.1.) IN CONCEALED SPACES BETWEEN STAIR STRINGERS PROVIDE FIREBLOCKING PER R302.11
  - GAS WATER HEATER ON 18" HIGH PLATFORM. (PER CHAPTER 5 NCRG-PLUMBING)
  - FAU 8'x8' PLATFORM, VERIFY WITH TRUSS MANUFACTURER. (8'-6" MIN. CLEAR HEIGHT TO HORIZONTAL MEMBERS, 2'x6" OVER 2'x4" BOTTOM CHORD, OF TRUSS, VERIFY W/ TRUSSES.)
  - A/C CONDENSER PAD. (VERIFY)
  - PRE-FABRICATED METAL FIREPLACE, INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - ATTIC ACCESS LARGE ENOUGH TO REMOVE LARGEST PIECE OF EQUIPMENT BUT NOT LESS THAN 30"x22". FIRE RATED ACCESS AS NOTED. (PER NCRG 801.1) ATTIC ACCESS LADDER, VERIFY LOCATION AND SIZE WITH TRUSSES. (25 1/2" X 54" SIZE) FOR GARAGE TO ATTIC SEPARATION PER NCRG 302.5.1 EXCEPTION.
  - TEMPERED SAFETY GLASS. (PER NCRG SECTION 308.4)
  - PLYWOOD SHELF ABOVE WITH DRYWALL FINISH OVER. HEIGHT AS NOTED.
  - INTERIOR SOFFITS: FFL = 8'-1" U.N.O. SFL = 7'-6" U.N.O. BATHS:
  - SHOWER, TEMPERED GLASS ENCLOSURE.
  - TUB-SHOWER COMBO, TEMPERED GLASS ENCLOSURE.
  - CERAMIC TILE SHOWER AND FLOOR, TEMPERED GLASS ENCLOSURE.
  - ACRYLIC TUB W/ CERAMIC PLATFORM KITCHEN:
  - 30" SLIDE-IN ELECTRICAL RANGE W/ HOOD AND MICRO ABV. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - 30" GAS COOKTOP AND HOOD, VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - ELECTRIC OVEN WITH MICROWAVE OVEN.

NO.	DATE	REVISION
1	04.28.22	

PROFESSIONAL SEAL:

PROJECT TITLE:

**40' Series**

CLIENTS NAME:



PROJECT NO: GMD1049

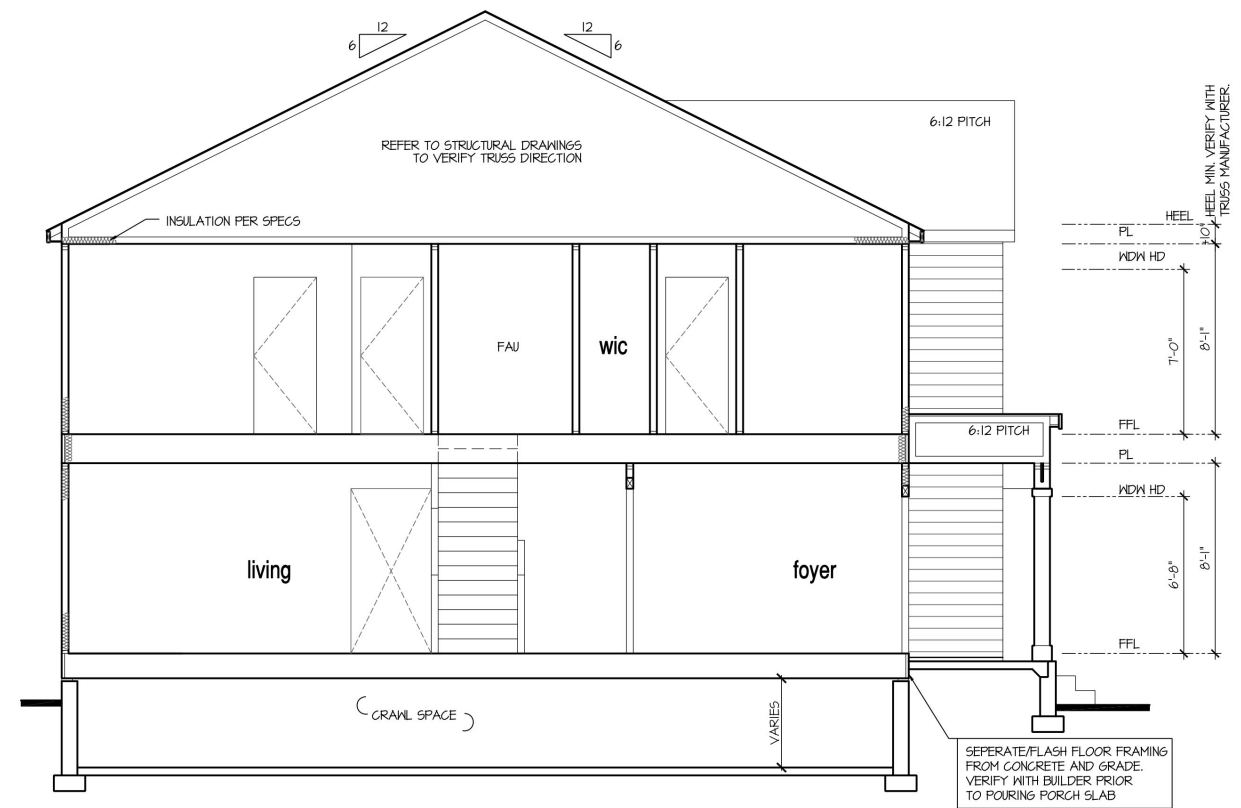
SHEET TITLE:  
**'HAYDEN'  
 2nd FLOOR  
 PLAN '4EPF-F'**

PRINT DATE:  
 January 22, 2021

SHEET NO:  
**5 F**

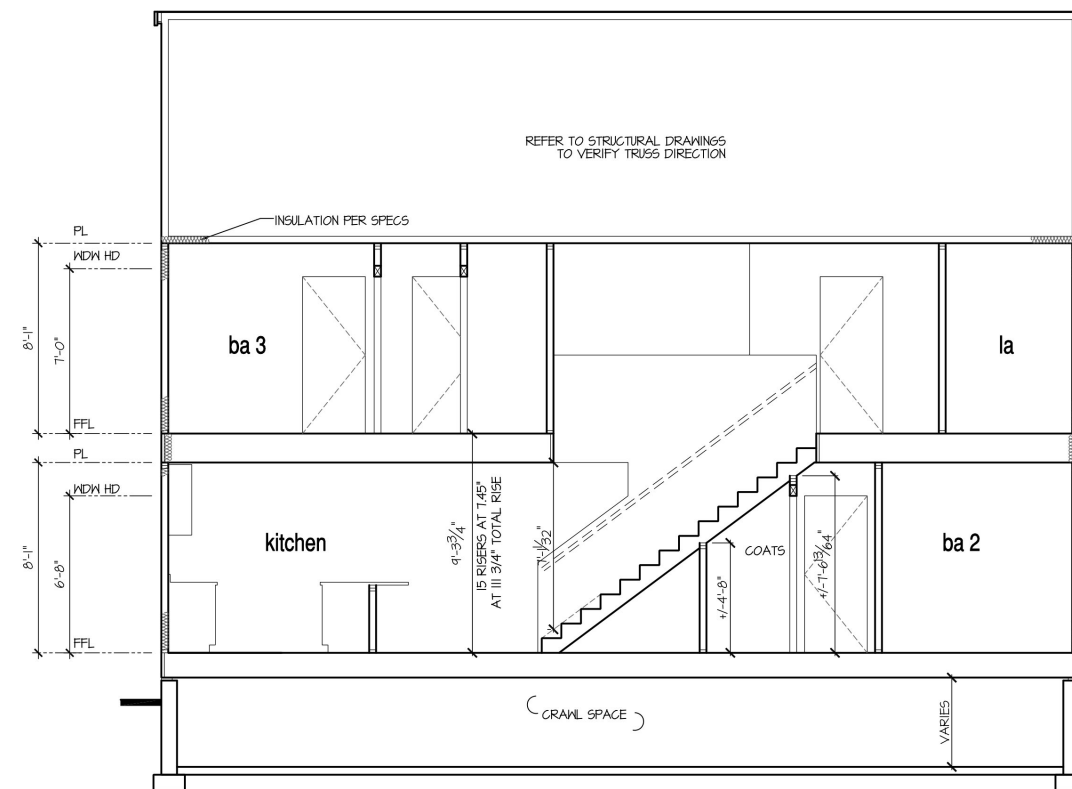
**FOR CONSTRUCTION**





Building Section I at Crawl Space

SCALE: 1/4"=1'-0" AT 22'X34" LAYOUT 1/8"=1'-0" AT 11'X11" LAYOUT



Building Section 2 at Crawl Space

SCALE: 1/4"=1'-0" AT 22'X34" LAYOUT 1/8"=1'-0" AT 11'X11" LAYOUT

**9'-1" STAIR NOTE:**  
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)  
16 TREADS AT 10" EACH VERIFY  
17 RISERS AT +/- 7.27" = 123 3/4" TOTAL RISE VERIFY

**8'-1" STAIR NOTE:**  
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)  
14 TREADS AT 10" EACH VERIFY  
15 RISERS AT +/- 7.45" = 111 3/4" TOTAL RISE VERIFY

**NOTES:**

- REFER TO FLOOR PLAN NOTES FOR TYPICAL FIRE PROTECTION NOTES AND LOCATIONS.
- THESE BUILDING SECTIONS MAY VARY AT ALTERNATE ELEVATION STYLES AND AT "PLAN OPTION" CONDITIONS. REFER TO MAIN FLOOR PLAN AND ALTERNATE FLOOR PLANS FOR INFORMATION NOT SHOWN HERE.
- BUILDING SECTIONS SHOWN HERE DEPICT VOLUME SPACES WITHIN THE STRUCTURE. REFER TO STRUCTURAL DRAWINGS, TRUSS DRAWINGS, STRUCTURAL DETAILS AND CALCULATIONS BY OTHER FOR ALL STRUCTURAL INFO.
- ROOFING: PITCHED SHINGLE ROOF. REFER TO ROOF PLAN FOR TYPICALS.
- WOOD FLOORS, FLOOR SHEATHING OVER FLOOR JOIST. REFER TO STRUCTURAL AND TRUSS DRAWINGS BY OTHERS.
- VERIFY STAIRS MINIMUM AND MAXIMUM REQUIREMENTS FOR CONSTRUCTION CLEARANCES WITH LOCAL CODES.
- INSULATION:  
EXTERIOR WALLS ZONE 3: R-13 BATTS MINIMUM. VERIFY  
EXTERIOR WALLS ZONE 4: R-15 BATTS MINIMUM. VERIFY  
CEILING WITH ATTIC ABOVE COMPRESSED INSULATION: R-30 BATTS MINIMUM. VERIFY  
CEILING WITH ATTIC ABOVE UNCOMPRESSED INSULATION (HEELS IN TRUSSES): R-30 BATTS MINIMUM. VERIFY
- FLOOR OVER GARAGE: R-19 BATTS MINIMUM. VERIFY  
ATTIC KNEEWALL: R-19 BATTS MINIMUM. VERIFY  
CRAWL SPACE FLOORING: R-19 BATTS MINIMUM. VERIFY

PER STATE RESIDENTIAL CODE COMPLIANCE METHOD TO BE DETERMINED BY BUILDER.

WINDOW GLAZING "U" FACTOR: 0.35

NO:	DATE:	REVISION:
1	04.28.22	

PROFESSIONAL SEAL:

PROJECT TITLE:

40' Series

FOR CONSTRUCTION

CLIENTS NAME:

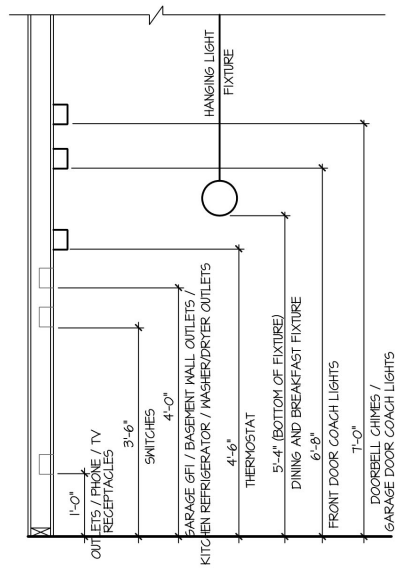


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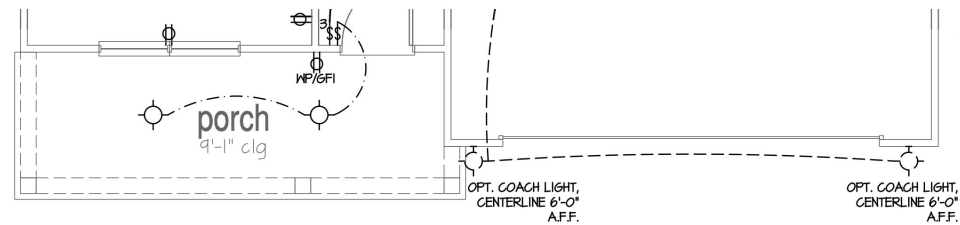
SHEET TITLE:  
**'HAYDEN'  
BUILDING  
SECTIONS**

PRINT DATE:  
January 22, 2021

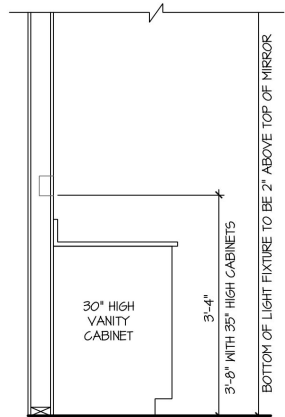
SHEET NO:  
**1.1.2A S**



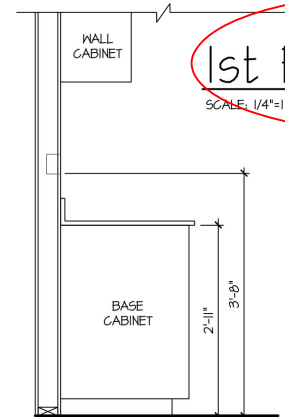
STANDARD ELECTRICAL BOX HEIGHTS



NOTE: SIZE SERVICE PANEL PER BUILDERS SPECIFICATIONS AND LOCAL CODES



SWITCH AND RECEPTACLE BOXES OVER BATH CABINETS



SWITCH AND RECEPTACLE BOXES OVER KITCHEN CABINETS

1st Floor Plan 'B'

SCALE: 1/4"=1'-0" AT 22'X34' LAYOUT 1/8"=1'-0" AT 11'X11' LAYOUT

NOTES:

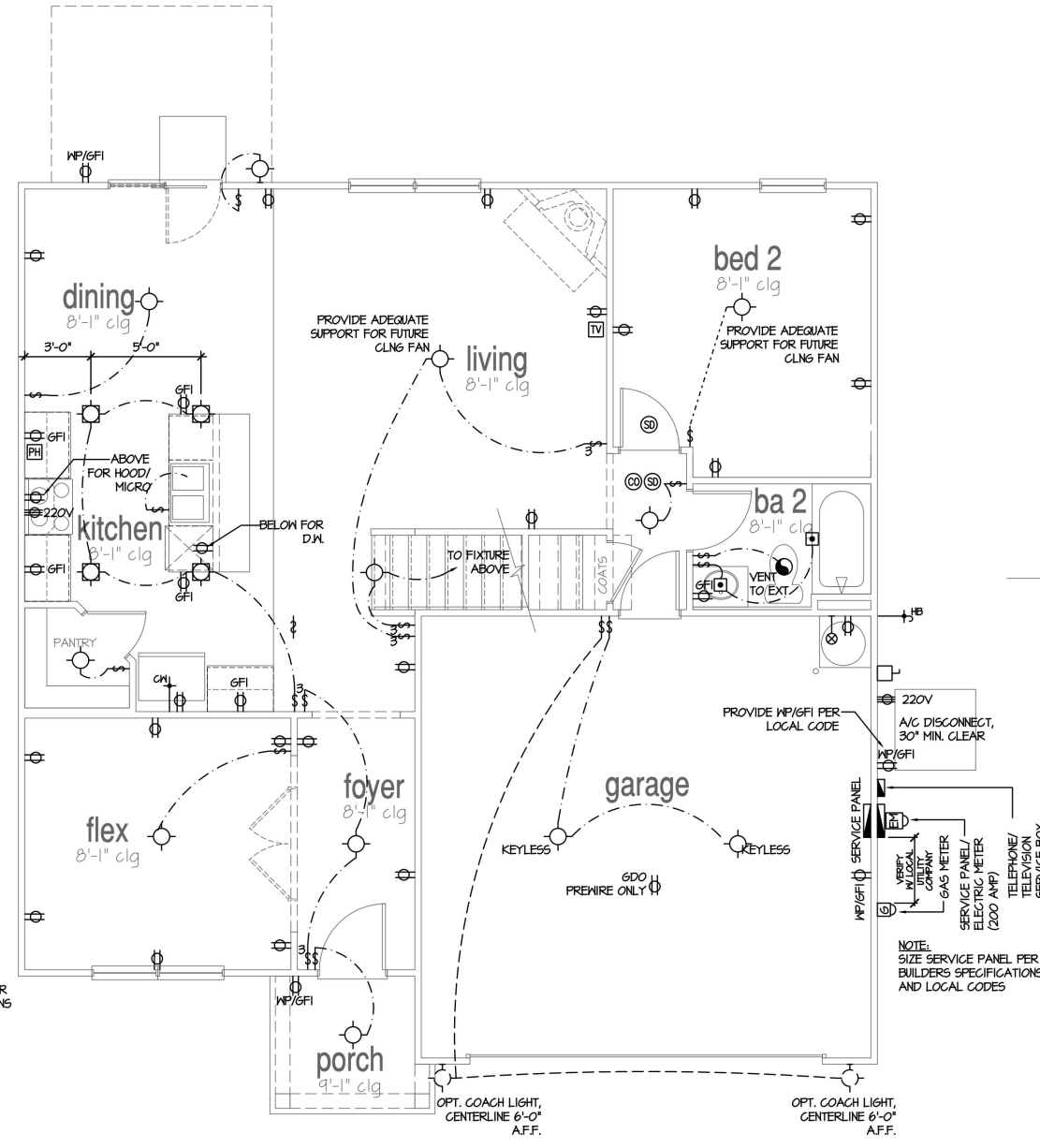
- PROVIDE GROUNDING ELECTRICAL ROD PER LOCAL CODES.
- PROVIDE AND INSTALL ARC FAULT CIRCUIT-INTERRUPTERS (AFCI) AS REQUIRED BY NATIONAL ELECTRICAL CODE (NEC) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
- ALL EXHAUST FANS SHALL HAVE BACKDRAFT DAMPERS.
- FANLIGHTS IN WET/DAMP LOCATIONS SHALL BE LABELED "SUITABLE FOR WET OR DAMP LOCATIONS."
- ELECTRICAL SYSTEMS ARE SHOWN FOR INTENT ONLY. THESE SYSTEMS SHALL BE ENGINEERED BY OTHERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND PLACEMENT.
- PROVIDE AND INSTALL LOCALLY CERTIFIED SMOKE DETECTORS AND CO2 DETECTORS AS REQUIRED BY NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
- PROVIDE AND INSTALL GROUND FAULT CIRCUIT-INTERRUPTERS (GFI) AS REQUIRED BY NATIONAL ELECTRICAL CODE (NEC) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
- ELECTRICAL CONTRACTOR TO PROVIDE REQUIRED DIRECT HOOK-UPS/CUTOFFS.
- HVAC CONTRACTOR TO VERIFY THERMOSTAT LOCATIONS.
- ALL ELECTRICAL AND MECHANICAL EQUIPMENT (FURNACES, A/C UNITS, ELECTRICAL PANELS, SANITARY SUMP PITS, DRAIN TILE SUMP, AND WATER HEATERS) ARE SUBJECT TO RELOCATION DUE TO FIELD CONDITIONS.
- PROVIDE POWER, LIGHT AND SWITCH AS REQUIRED FOR ATTIC FURNACE PER CODE AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

LEGEND:

⊕	DUPLEX OUTLET	⊕	FLUSH-MOUNT LED CEILING FIXTURE	⊕	CHIMES
⊕ MP/GFI	WEATHERPROOF GFI DUPLEX OUTLET	⊕	HANGING FIXTURE	⊕	PUSHBUTTON SWITCH
⊕ GFI	GROUND-FAULT CIRCUIT-INTERRUPTER DUPLEX OUTLET	⊕	FLUSH-MOUNT LED CEILING FIXTURE (PROVIDE CEILING FAN SUPPORT)	⊕	110V SMOKE DETECTOR W/ BATTERY BACKUP
⊕	HALF-SWITCHED DUPLEX OUTLET	⊕	2-LIGHT VANITY FIXTURE	⊕	CO2 DETECTOR
⊕ 220V	220 VOLT OUTLET	⊕	3-LIGHT VANITY FIXTURE	⊕	THERMOSTAT
⊕	REINFORCED JUNCTION BOX	⊕	4-LIGHT VANITY FIXTURE	⊕	TELEPHONE
⊕	WALL SWITCH	⊕	WALL MOUNT FIXTURE	⊕	TELEVISION
⊕ 3	THREE-WAY SWITCH	⊕	EXHAUST FAN (VENT TO EXTERIOR)	⊕	ELECTRIC METER
⊕ 4	FOUR-WAY SWITCH	⊕		⊕	ELECTRIC PANEL
		⊕		⊕	DISCONNECT SWITCH

1st Floor Plan 'A'

SCALE: 1/4"=1'-0" AT 22'X34' LAYOUT 1/8"=1'-0" AT 11'X11' LAYOUT



NOTE: SIZE SERVICE PANEL PER BUILDERS SPECIFICATIONS AND LOCAL CODES

NO:	DATE:	REVISION:
1	04.28.22	

PROFESSIONAL SEAL:

PROJECT TITLE:  
**40' Series**

CLIENTS NAME:



PROJECT NO: GMD1049

SHEET TITLE:  
**'HAYDEN'**  
**1st FLOOR**  
**UTILITY PLAN**

PRINT DATE:  
January 22, 2021

SHEET NO:  
**7**

FOR CONSTRUCTION





DESIGN SPECIFICATIONS:

Construction Type: Commercial  Residential

Applicable Building Codes:

- 2018 North Carolina Residential Building Code with All Local Amendments
• ASCE 7-10: Minimum Design Loads for Buildings and Other Structures

Design Loads:

- 1. Roof Live Loads
11. Conventional 2x ..... 20 PSF
12. Truss ..... 20 PSF
12.1. Attic Truss ..... 60 PSF
2. Roof Dead Loads
2.1. Conventional 2x ..... 10 PSF
2.2. Truss ..... 20 PSF
3. Snow ..... 5 PSF
3.1. Importance Factor ..... 1.0
4. Floor Live Loads
4.1. Typ. Dwelling ..... 40 PSF
4.2. Sleeping Areas ..... 30 PSF
4.3. Decks ..... 40 PSF
4.4. Passenger Garage ..... 50 PSF
5. Floor Dead Loads
5.1. Conventional 2x ..... 10 PSF
5.2. I-Joist ..... 5 PSF
5.3. Floor Truss ..... 5 PSF
6. Ultimate Design Wind Speed (3 sec. gust) ..... 130 MPH
6.1. Exposure ..... B
6.2. Importance Factor ..... 1.0
6.3. Wind Base Shear
6.3.1. Vx =
6.3.2. Vy =

7. Component and Cladding (in PSF)

Table with 5 columns: MEAN ROOF HT., UP TO 30', 30'1"-35', 35'1"-40', 40'1"-45'. Rows for ZONE 1 through ZONE 5.

8. Seismic

- 8.1. Site Class ..... D
8.2. Design Category ..... C
8.3. Importance Factor ..... 1.0
8.4. Seismic Use Group ..... I
8.5. Spectral Response Acceleration
8.5.1. Sm = %g
8.5.2. Sm1 = %g
8.6. Seismic Base Shear
8.6.1. Vx =
8.6.2. Vy =
8.7. Basic Structural System (check one)
[ ] Bearing Wall
[ ] Building Frame
[ ] Moment Frame
[ ] Dual w/ Special Moment Frame
[ ] Dual w/ Intermediate R/C or Special Steel
[ ] Inverted Pericolum
8.8. Arch/Mech Components Anchored ..... No
8.9. Lateral Design Control: Seismic [ ] Wind [x]
9. Assumed Soil Bearing Capacity ..... 2000psf



HAYDEN RH

PROJECT ADDRESS: TBD OWNER: DR Horton, Inc. 8001 Arrowridge Blvd. Charlotte, NC 28213

DESIGNER: GMD Design Group 107 Fountain Brook Circle Suite C Cary, NC 27511

These drawings are to be coordinated with the architectural, mechanical, plumbing, electrical, and civil drawings. This coordination is not the responsibility of the structural engineering of record (SER). Should any discrepancies become apparent, the contractor shall notify SUMMIT Engineering, Laboratory 4 Testing, P.C. before construction begins.

PLAN ABBREVIATIONS:

Table with 3 columns: AB ANCHOR BOLT, AFF ABOVE FINISHED FLOOR, CJ CEILING JOIST, CLR CLEAR, DJ DOUBLE JOIST, D&P DOUBLE STUD POCKET, EE EACH END, EU EACH WAY, NTS NOT TO SCALE, OC ON CENTER, PSF POUNDS PER SQUARE FOOT, PSI POUNDS PER SQUARE INCH, PT PRESSURE TREATED, RS ROOF SUPPORT, SC STUD COLUMN, SJ SINGLE JOIST, SFF SFRUCE PINE FIR, SST SIMPSON STRONG-TIE, SYP SOUTHERN YELLOW PINE, TJ TRIPLE JOIST, TSP TRIPLE STUD POCKET, TYP TYPICAL, UNO UNLESS NOTED OTHERWISE, UWF WELDED WIRE FABRIC

Roof truss and floor joist layouts, and their corresponding loading details, were not provided to SUMMIT Engineering, Laboratory 4 Testing, P.C. (SUMMIT) prior to the initial design. Therefore, truss and joist directions were assumed based on the information provided by DR Horton, Inc. Subsequent plan revisions based on roof truss and floor joist layouts shall be noted in the revision list, indicating the date the layouts were provided. Should any discrepancies become apparent, the contractor shall notify SUMMIT immediately.

SHEET LIST:

Table with 2 columns: Sheet No., Description. Rows include CS1 (Cover Sheet, Specifications, Revisions), S10m (Monolithic Slab Foundation), S10a (Stem Wall Foundation), S10c (Crawl Space Foundation), S10d (Basement Foundation), S20 (Basement Framing Plan), S30 (First Floor Framing Plan), S40 (Second Floor Framing Plan), S50 (Roof Framing Plan), S60 (Basement Bracing Plan), S70 (First Floor Bracing Plan), S80 (Second Floor Bracing Plan)

REVISION LIST:

Table with 4 columns: Revision No., Date, Project No., Description. Rows include 1 (Updated elevation names), 2 (Added stem wall, crawlspace, and basement foundations), 3 (Added OX-15 option and updated OX-15 table framing), 4 (Updated the engineering in the first floor framing)

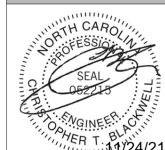
DR HORTON PROJECT SIGN-OFF:

Table with 2 columns: Manager, Signature. Rows for Operations, Operations System, Operations Product Development.



DR Horton, Inc. 8001 Arrowridge Blvd. Charlotte, NC 28213

Hayden RH Coversheet



STRUCTURAL MEMBERS ONLY

DATE: 10/26/21 SCALE: 2/32" 1/4"=1'-0" 1/8"=1'-0" PROJECT: 1 808-10011 DRAWN BY: JCF CHECKED BY: CTB

2269 5/8/19

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

CS1

GENERAL STRUCTURAL NOTES:

- 1. The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering, Laboratory 4 Testing, P.C. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT shall be considered the same entity.
2. The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.
3. The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure. The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur.
4. Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for review before any construction begins. The shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings for dimensions, or for actual field conditions, is not the responsibility of the SER or SUMMIT.
5. Verification of assumed field conditions is not the responsibility of the SER. The contractor shall verify the field conditions for accuracy and report any discrepancies to SUMMIT before construction begins.
6. The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.
7. This structure and all construction shall conform to all applicable sections of the International Residential Code.
8. This structure and all construction shall conform to all applicable sections of local building codes.
9. All structural assemblies are to meet or exceed to requirements of the current local building code.

FOUNDATIONS:

- 1. The structural engineer has not performed a subsurface investigation. Verification of this assumed value is the responsibility of the owner or the contractor. Should any adverse soil condition be encountered the SER must be contacted before proceeding.

- 2. The bottom of all footings shall extend below the frost line for the region in which the structure is to be constructed. However, the bottom of all footings shall be a minimum of 12" below grade.
3. Any fill shall be placed under the direction or recommendation of a licensed professional engineer.
4. The resulting soil shall be compacted to a minimum of 95% maximum dry density.
5. Excavations of footings shall be lined temporarily with a 6 mil polyethylene membrane if placement of concrete does not occur within 24 hours of excavation.
6. No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.

STRUCTURAL STEEL:

- 1. Structural steel shall be fabricated and erected in accordance with the American Institute of Steel Construction "Code of Standard Practice for Steel Buildings and Bridges" and the manual of Steel Construction "Load Resistance Factor Design" latest editions.
2. Structural steel shall receive one coat of shop applied rust-inhibitive paint.
3. All steel shall have a minimum yield stress (Fy) of 36 ksi unless otherwise noted.
4. Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D11. Electrodes for shop and field welding shall be class E70XX. All welding shall be performed by a certified welder per the above standards.

CONCRETE:

- 1. Concrete shall have a normal weight aggregate and a minimum compressive strength (fc) at 28 days of 3000 psi, unless otherwise noted on the plan.
2. Concrete shall be proportioned, mixed, and placed in accordance with the latest editions of ACI 318: "Building Code Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings".
3. Air entrained concrete must be used for all structural elements exposed to freeze/thaw cycles and deicing chemicals. Air entrainment amounts (in percent) shall be within -1% to +2% of target values as follows:
3.1. Footings: 5%
3.2. Exterior Slabs: 5%
4. No admixtures shall be added to any structural concrete without written permission of the SER.

- 5. Concrete slabs-on-grade shall be constructed in accordance with ACI 302.1R-96: "Guide for Concrete Slab and Slab Construction".
6. The concrete slab-on-grade has been designed using a subgrade modulus of k=250 pci and a design loading of 200 psf. The SER is not responsible for differential settlement, slab cracking or other future defects resulting from unreported conditions not in accordance with the above assumptions.
7. Control or saw cut joints shall be spaced in interior slabs-on-grade at a maximum of 15'-0" O.C. and in exterior slabs-on-grade at a maximum of 10'-0" O.C. unless otherwise noted.
8. Control or saw cut joints shall be produced using conventional process within 4 to 12 hours after the slab has been finished.
9. Reinforcing steel may not extend through a control joint. Reinforcing steel may extend through a saw cut joint.
10. All welded wire fabric (WUWF) for concrete slabs-on-grade shall be placed at mid-depth of slab. The WUWF shall be securely supported during the concrete pour.

CONCRETE REINFORCEMENT:

- 1. Florous concrete reinforcement, or fibermesh specified in concrete slabs-on-grade may be used for control of cracking due to shrinkage and thermal expansion/contraction, lowered water migration, an increase in impact capacity, increased abrasion resistance, and residual strength.
2. Fibermesh reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
3. Application of fibermesh per cubic yard of concrete shall equal a minimum of 0.1% by volume (15 pounds per cubic yard).
4. Fibermesh shall comply with ASTM C116, any local building code requirements, and shall meet or exceed the current industry standard.
5. Steel reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
6. Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the latest edition of ACI 318: "Manual of Standard Practice for Detailing Concrete Structures".
7. Horizontal footing and wall reinforcement shall be continuous and shall have 90° bends, or corner bars with the same size/spacing as the horizontal reinforcement with a class B tension splice.
8. Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in masonry shall be a minimum of 48 bar diameters.

- 9. Where reinforcing dowels are required, they shall be equivalent in size and spacing to the vertical reinforcement. The dowel shall extend 48 bar diameters vertically and 20 bar diameters into the footing.
10. Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

WOOD FRAMING:

- 1. Solid saan wood framing members shall conform to the specifications listed in the latest edition of the "National Design Specification for Wood Construction" (NDS). Unless otherwise noted, all wood framing members are designed to be Southern-Yellow-Pine (SYP) #2.
2. LVL or FSL engineered wood shall have the following minimum design values:
2.1. E = 1900000 psi
2.2. Fv = 2600 psi
2.3. Fv = 285 psi
2.4. Fc = 100 psi
3. Wood in contact with concrete, masonry, or earth shall be pressure treated in accordance with AIAFP standard C-15. All other moisture exposed wood shall be treated in accordance with AIAFP standard C-2.
4. Nails shall be common wire nails unless otherwise noted.
5. Lag screws shall conform to ANSI/ASME standard B18.21-1981. Lead holes for lag screws shall be in accordance with NDS specifications.
6. All beams shall have full bearing on supporting framing members unless otherwise noted.

- 1. Exterior and load bearing stud walls are to be 2x4 SYP #2 @ 16" O.C. unless otherwise noted. Studs shall be continuous from the sole plate to the double top plate. Studs shall only be discontinuous at headers for window/door openings. A minimum of one king stud shall be placed at each end of the header. King studs shall be continuous.
2. Individual studs forming a column shall be attached with one 10d nail @ 6" O.C. staggered. The stud column shall be continuous to the foundation or beam. The column shall be properly blocked at all floor levels to ensure proper load transfer.
3. Multi-ply beams shall have each ply attached with (3) 10d nails @ 24" O.C.
4. Four and five ply beams shall be bolted together with (2) rows of 1/2" diameter through bolts staggered @ 16" O.C. unless noted otherwise.

WOOD TRUSSES:

- 1. The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall be for overall compliance with the design documents. The SER shall assume no responsibility for the correctness for the structural design for the wood trusses.
2. The wood trusses shall be designed for all required loadings as specified in the local building code, the ASCE Standard "Minimum Design Loads for Buildings and Other Structures," (ASCE 7-10), and the loading requirements shown on these specifications. The truss drawings shall be coordinated with all other construction documents and provisions provided for loads shown on these drawings including but not limited to HVAC equipment, piping, and architectural fixtures attached to the trusses.
3. The trusses shall be designed, fabricated, and erected in accordance with the latest edition of the "National Design Specification for Wood Construction" (NDS) and "Design Specification for Metal Plate Connected Wood Trusses."
4. The truss manufacturer shall provide adequate bracing information in accordance with "Commentary and Recommendations for Handling, Installing, and Bracing Metal Plate Connected Wood Trusses" (HIB-91). This bracing, both temporary and permanent, shall be shown on the shop drawings. Also, the shop drawings shall show the required attachments for the trusses.
5. Any chords or truss webs shown on these drawings have been shown as a reference only. The final design of the trusses shall be per the manufacturer.

EXTERIOR WOOD FRAMED DECKS:

- 1. Decks are to be framed in accordance with local building codes and as referenced on the structural plans, either through code references or construction details.

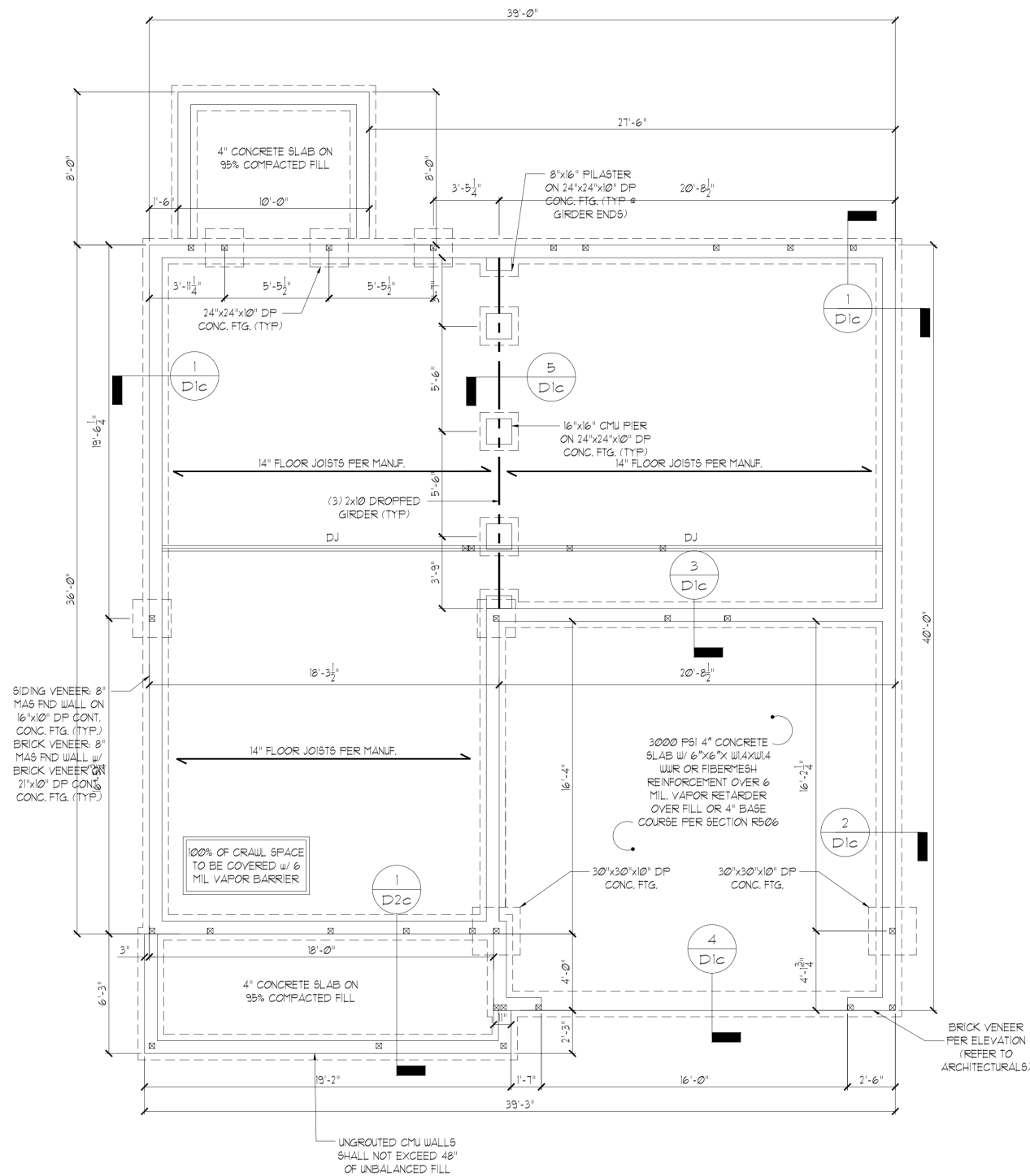
WOOD STRUCTURAL PANELS:

- 1. Fabrication and placement of structural wood sheathing shall be in accordance with the APA Design/Construction Guide "Residential and Commercial," and all other applicable APA standards.
2. All structurally required wood sheathing shall bear the mark of the APA.

- 3. Wood wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information. Sheathing shall be applied with the long direction perpendicular to framing, unless noted otherwise.
4. Roof sheathing shall be APA rated sheathing exposure 1 or 2. Roof sheathing shall be continuous over two supports and attached to its supporting roof framing with (1)-8d CC nail at 6"o/c at panel edges and at 12"o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied with the long direction perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of plywood clips or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
5. Wood floor sheathing shall be APA rated sheathing exposure 1 or 2. Attach sheathing to its supporting framing with (1)-8d CC ringshank nail at 6"o/c at panel edges and at 12"o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of T&G plywood or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
6. Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the APA.

STRUCTURAL FIBERBOARD PANELS:

- 1. Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
2. All structurally required fiberboard sheathing shall bear the mark of the AFA.
3. Fiberboard wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information.
4. Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the AFA.



ELEVATION B/FK

STRUCTURAL MEMBERS ONLY

ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT. SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

CRAWL SPACE FOUNDATION PLAN

SCALE: 1/4"=1'-0" ON 22'x34' OR 1/8"=1'-0" ON 17'x17'



REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION	
			# PANEL EDGES	# INTERMEDIATE SUPPORTS
CS-WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
GB	GYPSON BOARD	1/2"	5d COOLER NAILS** @ 1" O.C.	5d COOLER NAILS** @ 1" O.C.
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
FF	WOOD STRUCTURAL PANEL	7/16"	PER FIGURE R602.10.6.4	PER FIGURE R602.10.6.4

\*\*OR EQUIVALENT PER TABLE R702.3.5

**BRACED WALL NOTES:**

- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 NORTH CAROLINA RESIDENTIAL CODE WITH ALL LOCAL AND STATE AMENDMENTS.
- WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND MAXIMUM WIND SPEEDS UP TO 130 MPH.
- REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
- BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH TABLE R602.10.
- ALL BRACED WALL PANELS SHALL BE FULL WALL HEIGHT AND SHALL NOT EXCEED 10 FEET FOR ISOLATED PANEL METHOD AND 12 FEET FOR CONTINUOUS SHEATHING METHOD WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- MINIMUM PANEL LENGTH SHALL BE PER TABLE R602.10.
- THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD (UNO).
- FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING INFILL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
- FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- A BRACED WALL PANEL SHALL BE LOCATED WITHIN 12 FEET OF EACH END OF A BRACED WALL LINE.
- THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 21 FEET.
- MASONRY OR CONCRETE STEM WALLS w/ A LENGTH OF 40' OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.4.3 OF THE 2018 NCR.
- BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.4.
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.5.
- CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.4.6.
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.1 (UNO) ABBREVIATIONS:

GB = GYPSUM BOARD  
 CS-XXX = CONT. SHEATHED  
 FF = PORTAL FRAME  
 WSP = WOOD STRUCTURAL PANEL  
 ENG = ENGINEERED SOLUTION  
 FF-ENG = ENG. PORTAL FRAME

**GENERAL STRUCTURAL NOTES:**

- CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AND STATE AMENDMENTS.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS. CONTRACTOR SHALL COMPLY WITH THE CONTENTS OF THE DRAWING FOR THIS SPECIFIC PROJECT. ENGINEER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THIS PLAN.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY BRACING REQUIRED TO RESIST ALL FORCES ENCOUNTERED DURING ERECTION.
- PROPERTIES USED IN THE DESIGN ARE AS FOLLOWS:  
 MICROLAM (LVL):  $F_b = 2600$  PSI,  $F_v = 285$  PSI,  $E = 1.9 \times 10^6$  PSI  
 PARALLAM (PSL):  $F_b = 2300$  PSI,  $F_v = 280$  PSI,  $E = 1.25 \times 10^6$  PSI
- ALL WOOD MEMBERS SHALL BE #2 SYP UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP (UNO).
- ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SYP STUD COLUMN AT EACH END UNLESS NOTED OTHERWISE.
- ALL REINFORCING STEEL SHALL BE GRADE 60 BARS CONFORMING TO ASTM A615 AND SHALL HAVE A MINIMUM COVER OF 3".
- CONTRACTOR TO PROVIDED LOOKOUTS WHEN CEILING JOISTS SPAN PERPENDICULAR TO RAFTERS.
- FLITCH BEAMS, 4-PLY LVL'S AND 3-PLY SIDE LOADED LVL'S SHALL BE BOLTED TOGETHER WITH 1/2" DIA. THRU BOLTS SPACED AT 24" O.C. (MAX) STAGGERED OR EQUIVALENT CONNECTIONS PER DETAIL 1/D3f. MIN. EDGE DISTANCE SHALL BE 2" AND (2) BOLTS SHALL BE LOCATED MINIMUM 6" FROM EACH END OF THE BEAM.
- ALL NON-LOAD BEARING HEADERS SHALL BE (1) FLAT 2x4 SYP #2, DROPPED. FOR NON-LOAD BEARING HEADERS EXCEEDING 8'-0" IN WIDTH AND/OR WITH MORE THAN 2'-0" OF CRIPPLE WALL ABOVE, SHALL BE (2) FLAT 2x4 SYP #2, DROPPED. (UNLESS NOTED OTHERWISE)

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR. HORTON COMPLETED/REVISED ON 4/15/21. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

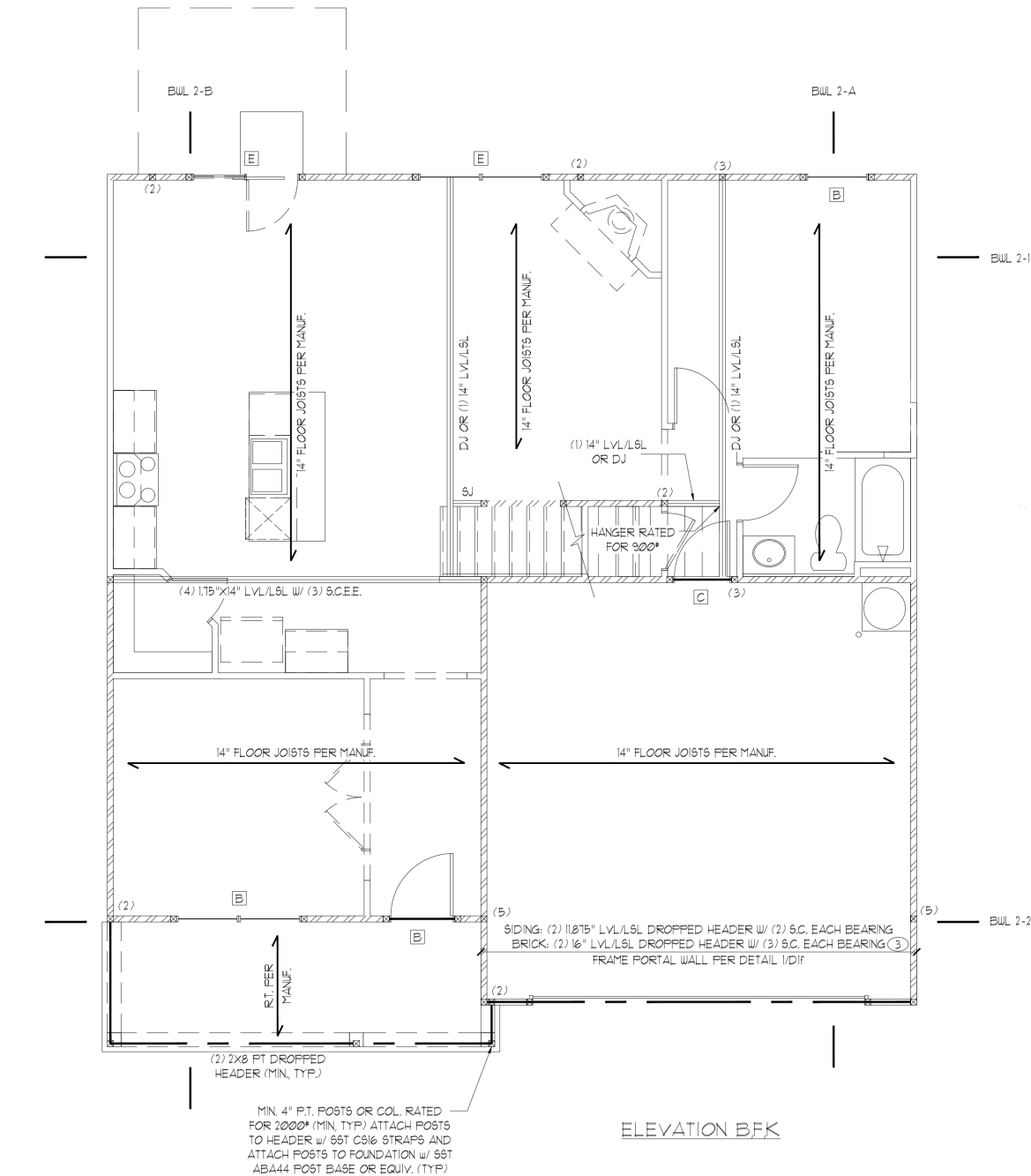
**STRUCTURAL MEMBERS ONLY**

ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT. SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCR.

**FIRST FLOOR FRAMING PLAN**

SCALE: 1/4"=1'-0" OR 22'x34" OR 18'x11'-0" ON 11"x17"



FIRST FLOOR BRACING (FT)		
	CONTINUOUS SHEATHING METHOD	
	REQUIRED	PROVIDED
BUL 1-1	11.6	24.8
BUL 1-2	11.6	15.0
BUL 1-A	11.3	40.0
BUL 1-B	11.3	36.0

HEADER SCHEDULE		
TAG	SIZE	JACKS (EACH END)
A	(2) 2x6	(1)
B	(2) 2x8	(2)
C	(2) 2x10	(2)
D	(2) 2x12	(2)
E	(2) 8-1/4" LVL/LVL	(3)
F	(3) 2x6	(1)
G	(3) 2x8	(2)
H	(3) 2x10	(2)
I	(3) 2x12	(2)

NOTES:  
 1. HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION.  
 2. ALL HEADERS TO BE DROPPED (UNO).  
 3. STUD COLUMNS NOTED ON PLAN OVERRIDE STUD COLUMNS LISTED ABOVE (UNO).

KING STUD SCHEDULE	
MAXIMUM HEADER SPAN	MINIMUM KING STUDS E.E.
4'-0"	(1)
6'-0"	(2)
8'-0"	(2)
10'-0"	(3)
12'-0"	(3)
14'-0"	(3)
16'-0"	(4)
18'-0"	(4)

WALL STUD SCHEDULE (10 FT HEIGHT)				
STUD SIZE	STUD SPACING (O.C.)			
	ROOF ONLY	ROOF & 1 FLOOR	ROOF & 2 FLOORS	NON-LOAD BEARING
2x4	24"	16"	12"	24"
2x6	24"	24"	16"	24"

NOTES:  
 1. BRACED WALLS STUDS SHALL BE A MAX. OF 16" O.C.  
 2. STUDS SUPPORTS OPTIONAL WALK-UP ATTIC SHALL BE SPACED A MAX. OF 16" O.C.  
 3. TWO STORY WALLS SHALL BE FRAMED w/ 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ HORIZ. BLOCKING @ 6'-0" O.C. VERTICALLY.

LINTEL SCHEDULE		
TAG	SIZE	OPENING SIZE
①	L3x3x1/4"	LESS THAN 6'-0"
②	L5x3x1/4"	6'-0" TO 10'-0"
③	L5x3-1/2x5/16"	GREATER THAN 10'-0"
④	L5x3-1/2x5/16" ROLLED OR EQUIV.	ALL ARCHED OPENINGS

SECURE LINTEL TO HEADER w/ (2) 1/2" DIAMETER LAG SCREWS STAGGERED @ 16" O.C. (TYP FOR )  
 ALL HEADERS WHERE BRICK IS USED, TO BE: (UNO)

- SHADED WALLS INDICATED LOAD BEARING WALLS
- NOTE: REDUCE JOIST SPACING UNDER TILE FLOORS, GRANITE COUNTERTOPS AND/OR ISLANDS.
- JOIST & BEAM SIZES SHOWN ARE MINIMUMS. BUILDER MAY INCREASE DEPTH FOR EASE OF CONSTRUCTION.
- NOTE: --- --- DESIGNATES JOIST SUPPORTED LOAD BEARING WALL ABOVE. PROVIDE BLOCKING UNDER JOIST SUPPORTED LOAD BEARING WALL.
- NOTE: MEMBERS NOTED AS PRESSURE TREATED MAY BE FRAMED WITH NON-PRESSURE TREATED LUMBER PROVIDED THE ENTIRETY OF THE MEMBER IS WRAPPED TO PREVENT MOISTURE INTRUSION.
- INSTALL HOLD-DOWNS FOR BRACED WALL END CONDITIONS PER SECTION R602.10.8 & FIG. R602.10.7 OF THE 2018 NCR.
- NOTE: WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST THE CONTINUOUS WIND UPLIFT LOAD PATH IN ACCORDANCE WITH METHOD 3 OF SECTION R602.3.5 OF THE 2018 NCR.



DR. HORTON, INC.  
 8601 Arrowridge Blvd.  
 Charlotte, NC 28215

Hydgen RH  
 First Floor Framing Plan



STRUCTURAL MEMBERS ONLY

DATE: 03/20/21  
 SCALE: 22x34 1/4"=1'-0"  
 18'x11'-0"  
 PROJECT: 1-108-1001  
 DRAWN BY: JCF  
 CHECKED BY: CTB

2269 5/5/21

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION	
			# PANEL EDGES	# INTERMEDIATE SUPPORTS
CS-WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
GB	GYPSON BOARD	1/2"	5d COOLER NAILS** @ 1" O.C.	5d COOLER NAILS** @ 1" O.C.
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
FF	WOOD STRUCTURAL PANEL	7/16"	PER FIGURE R602.10.6.4	PER FIGURE R602.10.6.4

\*\*OR EQUIVALENT PER TABLE R702.3.5

**BRACED WALL NOTES:**

- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 NORTH CAROLINA RESIDENTIAL CODE WITH ALL LOCAL AND STATE AMENDMENTS.
- WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND MAXIMUM WIND SPEEDS UP TO 130 MPH.
- REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
- BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH TABLE R602.10.
- ALL BRACED WALL PANELS SHALL BE FULL WALL HEIGHT AND SHALL NOT EXCEED 10 FEET FOR ISOLATED PANEL METHOD AND 12 FEET FOR CONTINUOUS SHEATHING METHOD WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- MINIMUM PANEL LENGTH SHALL BE PER TABLE R602.10.
- THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD (UNO).
- FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING INFILL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
- FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- A BRACED WALL PANEL SHALL BE LOCATED WITHIN 12 FEET OF EACH END OF A BRACED WALL LINE.
- THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 21 FEET.
- MASONRY OR CONCRETE STEM WALLS w/ A LENGTH OF 40' OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.4.3 OF THE 2018 NCR.
- BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.4.
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.5.
- CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.4.6.
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.1 (UNO) ABBREVIATIONS:

GB = GYPSUM BOARD  
 CS-XXX = CONT. SHEATHED  
 FF = PORTAL FRAME  
 WSP = WOOD STRUCTURAL PANEL  
 ENG = ENGINEERED SOLUTION  
 FF-ENG = ENG. PORTAL FRAME

**GENERAL STRUCTURAL NOTES:**

- CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AND STATE AMENDMENTS.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS. CONTRACTOR SHALL COMPLY WITH THE CONTENTS OF THE DRAWING FOR THIS SPECIFIC PROJECT. ENGINEER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THIS PLAN.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY BRACING REQUIRED TO RESIST ALL FORCES ENCOUNTERED DURING ERECTION.
- PROPERTIES USED IN THE DESIGN ARE AS FOLLOWS:  
 MICROLAM (LVL):  $F_b = 26000$  PSI,  $F_v = 285$  PSI,  $E = 1.9 \times 10^6$  PSI  
 PARALAM (PSL):  $F_b = 23000$  PSI,  $F_v = 290$  PSI,  $E = 1.25 \times 10^6$  PSI
- ALL WOOD MEMBERS SHALL BE #2 SYP UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP (UNO).
- ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SYP STUD COLUMN AT EACH END UNLESS NOTED OTHERWISE.
- ALL REINFORCING STEEL SHALL BE GRADE 60 BARS CONFORMING TO ASTM A615 AND SHALL HAVE A MINIMUM COVER OF 3".
- CONTRACTOR TO PROVIDED LOOKOUTS WHEN CEILING JOISTS SPAN PERPENDICULAR TO RAFTERS.
- FLITCH BEAMS, 4-PLY LVL'S AND 3-PLY SIDE LOADED LVL'S SHALL BE BOLTED TOGETHER WITH 1/2" DIA. THRU BOLTS SPACED AT 24" O.C. (MAX) STAGGERED OR EQUIVALENT CONNECTIONS PER DETAIL 1/D3f. MIN. EDGE DISTANCE SHALL BE 2" AND (2) BOLTS SHALL BE LOCATED MINIMUM 6" FROM EACH END OF THE BEAM.
- ALL NON-LOAD BEARING HEADERS SHALL BE (1) FLAT 2x4 SYP #2, DROPPED. FOR NON-LOAD BEARING HEADERS EXCEEDING 8'-0" IN WIDTH AND/OR WITH MORE THAN 2'-0" OF CRIPPLE WALL ABOVE, SHALL BE (2) FLAT 2x4 SYP #2, DROPPED. (UNLESS NOTED OTHERWISE)

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR. HORTON. COMPLETED/REVISED ON 4/28/21. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

**STRUCTURAL MEMBERS ONLY**

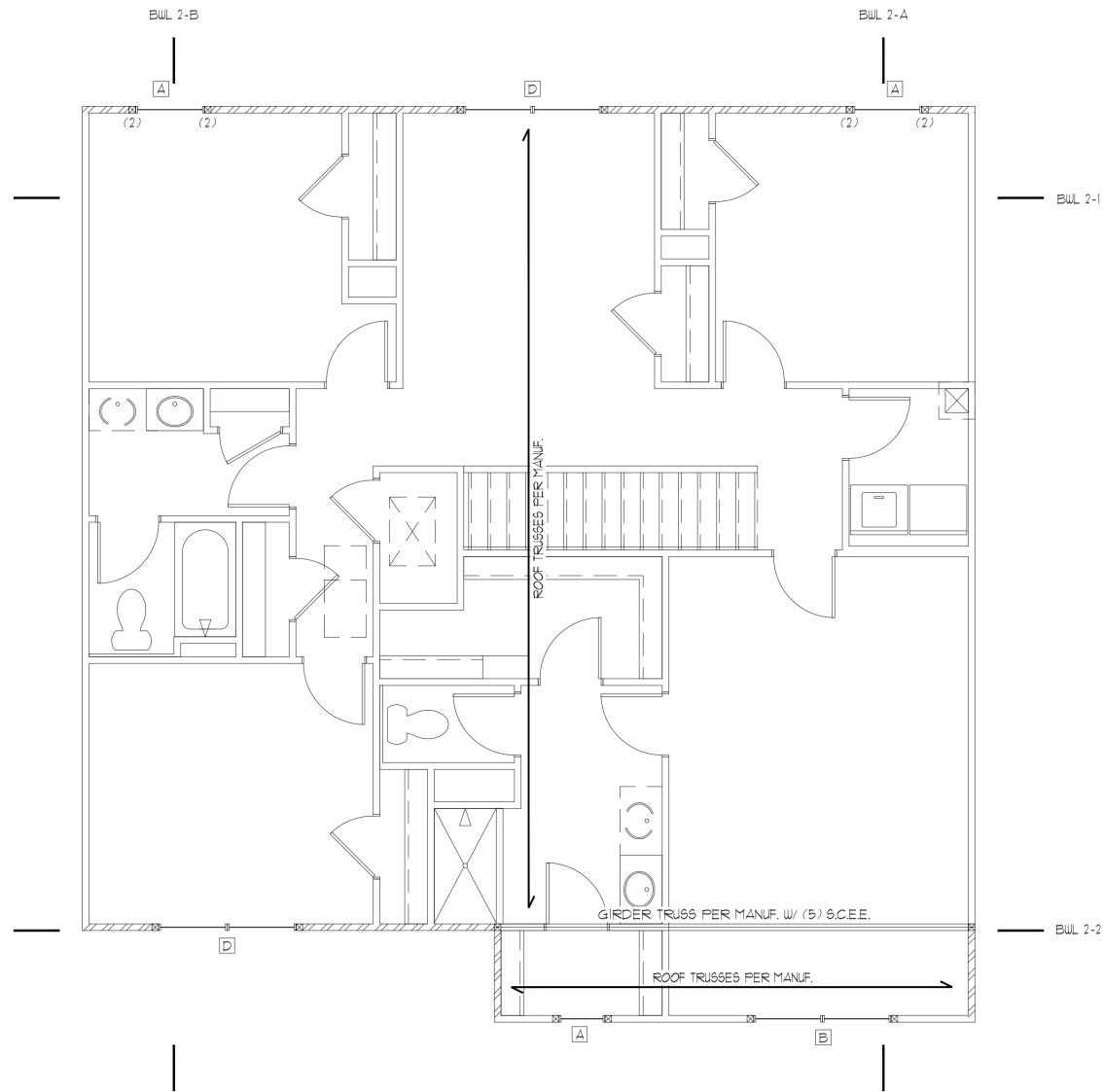
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STRUCTURAL ANALYSIS BASED ON 2018 NCR.

**SECOND FLOOR FRAMING PLAN**

SCALE: 1/4"=1'-0" OR 22"x34" OR 1/8"=1'-0" ON 11"x17"

SECOND FLOOR BRACING (FT)		
	CONTINUOUS SHEATHING METHOD	
	REQUIRED	PROVIDED
BULL 2-1	6.0	21.0
BULL 2-2	6.0	25.0
BULL 2-A	5.8	40.0
BULL 2-B	5.8	36.0



ELEVATION B/FK

HEADER SCHEDULE		
TAG	SIZE	JACKS (EACH END)
A	(2) 2x6	(1)
B	(2) 2x8	(2)
C	(2) 2x10	(2)
D	(2) 2x12	(2)
E	(2) 2-1/4" LSL/LVL	(3)
F	(3) 2x6	(1)
G	(3) 2x8	(2)
H	(3) 2x10	(2)
I	(3) 2x12	(2)

NOTES:  
 1. HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION.  
 2. ALL HEADERS TO BE DROPPED (UNO).  
 3. STUD COLUMNS NOTED ON PLAN OVERRIDE STUD COLUMNS LISTED ABOVE (UNO).

KING STUD SCHEDULE	
MAXIMUM HEADER SPAN	MINIMUM KING STUDS EE
4'-0"	(1)
6'-0"	(2)
8'-0"	(2)
10'-0"	(3)
12'-0"	(3)
14'-0"	(3)
16'-0"	(4)
18'-0"	(4)

WALL STUD SCHEDULE (10 FT HEIGHT)				
STUD SIZE	STUD SPACING (O.C.)			
	ROOF ONLY	ROOF & 1 FLOOR	ROOF & 2 FLOORS	NON-LOAD BEARING
2x4	24"	16"	12"	24"
2x6	24"	24"	16"	24"

NOTES:  
 1. BRACED WALLS STUDS SHALL BE A MAX. OF 16" O.C.  
 2. STUDS SUPPORTS OPTIONAL WALK-UP ATTIC SHALL BE SPACED A MAX. OF 16" O.C.  
 3. TWO STORY WALLS SHALL BE FRAMED w/ 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ HORIZ. BLOCKING @ 6'-0" O.C. VERTICALLY.

LINTEL SCHEDULE		
TAG	SIZE	OPENING SIZE
①	L3x3x1/4"	LESS THAN 6'-0"
②	L5x3x1/4"	6'-0" TO 10'-0"
③	L5x3-1/2x5/16"	GREATER THAN 10'-0"
④	L5x3-1/2x5/16" ROLLED OR EQUIV.	ALL ARCHED OPENINGS

SECURE LINTEL TO HEADER w/ (2) 1/2" DIAMETER LAG SCREWS STAGGERED @ 16" O.C. (TYP FOR ③)  
 ALL HEADERS WHERE BRICK IS USED, TO BE: (UNO)

SHADED WALLS INDICATED LOAD BEARING WALLS

JOIST & BEAM SIZES SHOWN ARE MINIMUMS. BUILDER MAY INCREASE DEPTH FOR EASE OF CONSTRUCTION.

NOTE: MEMBERS NOTED AS PRESSURE TREATED MAY BE FRAMED WITH NON-PRESSURE TREATED LUMBER PROVIDED THE ENTIRETY OF THE MEMBER IS WRAPPED TO PREVENT MOISTURE INTRUSION.

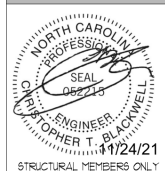
INSTALL HOLD-DOWNS FOR BRACED WALL END CONDITIONS PER SECTION R602.10.8 & FIG. R602.10.1 OF THE 2018 NCR.

NOTE: WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST THE CONTINUOUS WIND UPLIFT LOAD PATH IN ACCORDANCE WITH METHOD 3 OF SECTION R602.3.5 OF THE 2018 NCR.



DR. HORTON, INC.  
 8601 Arrowridge Blvd.  
 Charlotte, NC 28119

Hydrex RH  
 Second Floor Framing Plan



DATE: 10/26/21  
 SCALE: 2x/4 1/4"=1'-0" 1/8"=1'-0"  
 PROJECT: 1 508-1001  
 DRAWN BY: JCF  
 CHECKED BY: CTB

2269 5/5/18

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

MAX. UPLIFT	ROOF TO WALL	FLOOR TO FLOOR	FLOOR TO END
600 LBS	H2.5A	PER WALL SHEATHING & FASTENERS	
1200 LBS	(2) H2.5A	CS16 (END = 11")	DTT2Z
1450 LBS	HT520	CS16 (END = 11")	DTT2Z
2000 LBS	(2) HT520	(2) CS16 (END = 11")	DTT2Z
2900 LBS	(2) HT520	(2) CS16 (END = 11")	HTT4
3685 LBS	LGT3-SD525	MSTC52	HTT4

- ALL PRODUCTS LISTED ARE SIMPSON STRONG-TIE. EQUIVALENT PRODUCTS MAY BE USED PER MANUFACTURER'S SPECIFICATIONS.
- UPLIFT VALUES LISTED ARE FOR 5/16" GRADE MEMBERS.
- REFER TO TRUSS LAYOUT PER MANUF. FOR UPLIFT VALUES AND TRUSS TO TRUSS CONNECTIONS. CONNECTORS SPECIFIED BY TRUSS MANUFACTURER OVERRIDE THOSE LISTED ABOVE.
- CONTACT SUMMIT FOR REQUIRED CONNECTORS WHEN LOADS EXCEED THOSE LISTED ABOVE.

NOTE: 1ST PLY OF ALL SHOWN GIRDER TRUSSES TO ALIGN WITH INSIDE FACE OF WALL (TYP, UNO)

NOTE: ROOF TRUSSES SHALL BE SPACED TO SUPPORT FALSE FRAMED DORMER WALLS (TYP, UNO)

REFER TO DETAIL 5/D2F FOR EYEBROW RETURN OR SHED ROOF FRAMING REQUIREMENTS. (TYP FOR ROOFS PROTRUDING MAXIMUM 24" FROM STRUCTURE)

NOTE: TRUSS UPLIFT LOADS SHALL BE DETERMINED PER TRUSS MANUFACTURER IN ACCORDANCE WITH SECTION R602.11.11. WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST THE WIND UPLIFT LOAD PATH IN ACCORDANCE WITH METHOD 3 OF SECTION R602.3.5 OF THE 2018 NCR. REFER TO BRACED WALL PLANS FOR SHEATHING AND FASTENER REQUIREMENTS.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR. HORTON. COMPLETED/REVISED ON 4/15/21. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

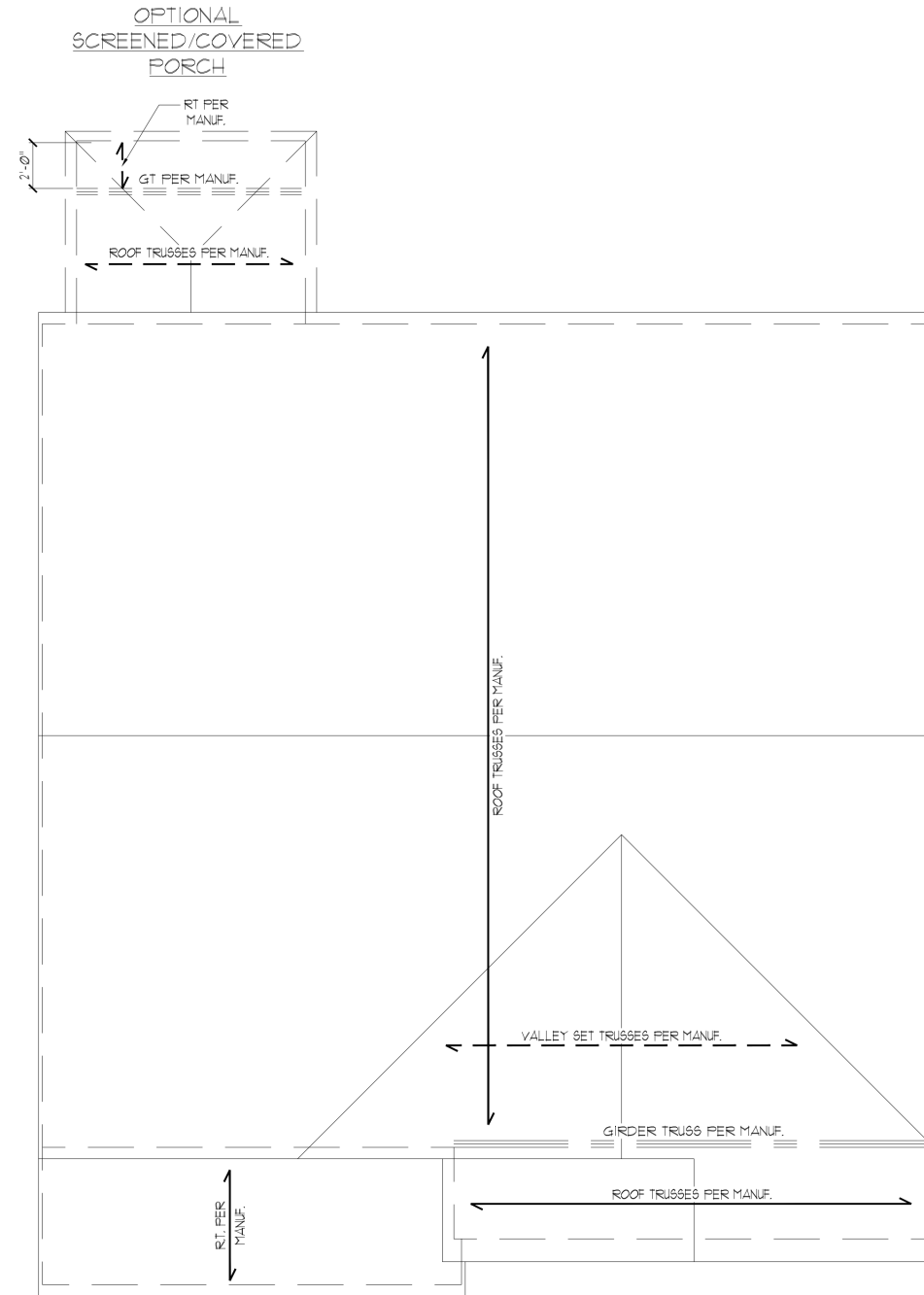
### STRUCTURAL MEMBERS ONLY

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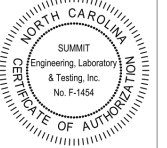
STRUCTURAL ANALYSIS BASED ON 2018 NCR.

### ROOF FRAMING PLAN

SCALE: 1/4"=1'-0" ON 22'x34" OR 1/8"=1'-0" ON 17'x17"

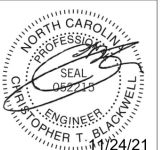


ELEVATION BFK



DR. Horton, Inc.  
2601 Arrowridge Blvd.  
Charlotte, NC 28219

Hydrex RH  
Roof Framing Plan



STRUCTURAL MEMBERS ONLY

DATE: 10/26/21  
SCALE: 22x34 1/4"=1'-0"  
16x17 1/8"=1'-0"  
PROJECT # 508-1001  
DRAWN BY: JCF  
CHECKED BY: CTB

22609 5/5/21

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

55.1



DESIGN SPECIFICATIONS:

Construction Type: Commercial  Residential

Applicable Building Codes:

- 2018 North Carolina Residential Building Code with All Local Amendments
ASCE 1-10, Minimum Design Loads for Buildings and Other Structures

Design Loads:

- 1. Roof Live Loads
11. Conventional 2x 20 PSF
12. Truss 20 PSF
12.1. Attic Truss 60 PSF
2. Roof Dead Loads
21. Conventional 2x 10 PSF
22. Truss 20 PSF
3. Snow 15 PSF
3.1. Importance Factor 1.0
4. Floor Live Loads
4.1. Typ. Dwelling 40 PSF
4.2. Sleeping Areas 30 PSF
4.3. Decks 40 PSF
4.4. Passenger Garage 50 PSF
5. Floor Dead Loads
5.1. Conventional 2x 10 PSF
5.2. 1-Joist 15 PSF
5.3. Floor Truss 15 PSF
6. Ultimate Wind Speed (3 sec. gust) PER PLAN
6.1. Exposure B
6.2. Importance Factor 1.0
6.3.1. Vx = 63.2 Vy =

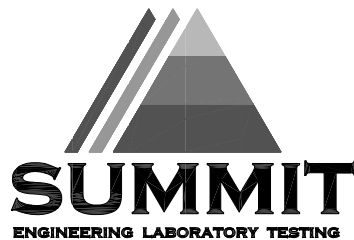
7. Component and Cladding (in PSF)

Table with 5 columns: MEAN ROOF HT., UP TO 30', 30'1"-35', 35'1"-40', 40'1"-45'. Rows for ZONE 1 through ZONE 5.

8. Seismic

- 8.1. Site Class D
8.2. Design Category C
8.3. Importance Factor 1.0
8.4. Seismic Use Group I
8.5. Spectral Response Acceleration
8.5.1. Ss = %g
8.5.2. Sml = %g
8.6. Seismic Base Shear
8.6.1. Vx = 8.6.2. Vy =
8.7. Basic Structural System (check one)
8.8. Arch/Mech Components Anchored No
8.9. Lateral Design Controls: Seismic  Wind

9. Assumed Soil Bearing Capacity 2000psf



STRUCTURAL PLANS PREPARED FOR:

STANDARD DETAILS

PROJECT ADDRESS: TBD OUNER: DR Horton Carolinas Division 8001 Arrowridge Blvd Charlotte, NC 28213

ARCHITECT/DESIGNER: GMD Design Group 1845 Satellite Blvd. Duluth, GA 30091

These drawings are to be coordinated with the architectural, mechanical, plumbing, electrical, and civil drawings. This coordination is not the responsibility of the structural engineering of record (SER). Should any discrepancies become apparent, the contractor shall notify SUMMIT Engineering, Laboratory 4 Testing, P.C. before construction begins.

PLAN ABBREVIATIONS:

Table with 4 columns: ABBREVIATION, DESCRIPTION, ABBREVIATION, DESCRIPTION. Includes items like AFF ABOVE FINISHED FLOOR, CJ CEILING JOIST, CLR CLEAR, etc.

Roof truss and floor joist layouts, and their corresponding loading details, were not provided to SUMMIT Engineering, Laboratory 4 Testing, P.C. (SUMMIT) prior to the initial design. Therefore, truss and joist directions were assumed based on the information provided by DR Horton, Inc. Subsequent plan revisions based on roof truss and floor joist layouts shall be noted in the revision list, indicating the date the layouts were provided. Should any discrepancies become apparent, the contractor shall notify SUMMIT immediately.

SHEET LIST:

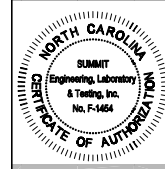
Table with 2 columns: Sheet No., Description. Lists sheets CS1 through D1F.

REVISION LIST:

Table with 4 columns: Revision No., Date, Project No., Description. Lists revisions 1 through 14.

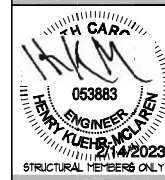
DR HORTON PROJECT SIGN-OFF:

Table with 2 columns: Manager, Signature. Rows for Operations, Operations System, Operations Product Development.



CLIENT: DR Horton Carolina Division 8001 Arrowridge Blvd. Charlotte, NC 28213

PROJECT: Standard Details (OX-15) Coversheet



DRAWING DATE: 05/04/2023 SCALE: 2/24 1/4" = 1'-0" PROJECT: 1508-0068 DRAIN BY: JCF CHECKED BY: BCP

ORIGINAL INFORMATION PROJECT # DATE 15/2021 REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET CS1

GENERAL STRUCTURAL NOTES:

- 1. The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering, Laboratory 4 Testing, P.C. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT shall be considered the same entity.
2. The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.
3. The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure. The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur.
4. Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for review before any construction begins. The shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings for dimensions, or for actual field conditions, is not the responsibility of the SER or SUMMIT.
5. Verification of assumed field conditions is not the responsibility of the SER. The contractor shall verify the field conditions for accuracy and report any discrepancies to SUMMIT before construction begins.
6. The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.
7. This structure and all construction shall conform to all applicable sections of the International Residential Code.
8. This structure and all construction shall conform to all applicable sections of local building codes.
9. All structural assemblies are to meet or exceed to requirements of the current local building code.

FOUNDATIONS:

- 1. The structural engineer has not performed a subsurface investigation. Verification of this assumed value is the responsibility of the owner or the contractor. Should any adverse soil condition be encountered the SER must be contacted before proceeding.

- 2. The bottom of all footings shall extend below the frost line for the region in which the structure is to be constructed. However, the bottom of all footings shall be a minimum of 12" below grade.
3. Any fill shall be placed under the direction or recommendation of a licensed professional engineer.
4. The resulting soil shall be compacted to a minimum of 95% maximum dry density.
5. Excavations of footings shall be lined temporarily with a 6 mil polyethylene membrane if placement of concrete does not occur within 24 hours of excavation.
6. No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.

STRUCTURAL STEEL:

- 1. Structural steel shall be fabricated and erected in accordance with the American Institute of Steel Construction "Code of Standard Practice for Steel Buildings and Bridges" and the manual of Steel Construction "Load Resistance Factor Design" latest editions.
2. Structural steel shall receive one coat of shop applied rust-inhibitive paint.
3. All steel shall have a minimum yield stress (Fy) of 36 ksi unless otherwise noted.
4. Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D11. Electrodes for shop and field welding shall be class E70XX. All welding shall be performed by a certified welder per the above standards.

CONCRETE:

- 1. Concrete shall have a normal weight aggregate and a minimum compressive strength (fc) at 28 days of 3000 psi, unless otherwise noted on the plan.
2. Concrete shall be proportioned, mixed, and placed in accordance with the latest editions of ACI 318: "Building Code Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings".
3. Air entrained concrete must be used for all structural elements exposed to freeze/thaw cycles and deicing chemicals. Air entrainment amounts (in percent) shall be within -1% to +2% of target values as follows:
3.1. Footings: 5%
3.2. Exterior Slabs: 5%
4. No admixtures shall be added to any structural concrete without written permission of the SER.

- 5. Concrete slabs-on-grade shall be constructed in accordance with ACI 302.1R-96: "Guide for Concrete Slab and Slab Construction".
6. The concrete slab-on-grade has been designed using a subgrade modulus of k=250 pci and a design loading of 200 psf. The SER is not responsible for differential settlement, slab cracking or other future defects resulting from unreported conditions not in accordance with the above assumptions.
7. Control or saw cut joints shall be spaced in interior slabs-on-grade at a maximum of 15'-0" O.C. and in exterior slabs-on-grade at a maximum of 10'-0" unless otherwise noted.
8. Control or saw cut joints shall be produced using conventional process within 4 to 12 hours after the slab has been finished.
9. Reinforcing steel may not extend through a control joint. Reinforcing steel may extend through a saw cut joint.
10. All welded wire fabric (WWF) for concrete slabs-on-grade shall be placed at mid-depth of slab. The WWF shall be securely supported during the concrete pour.

CONCRETE REINFORCEMENT:

- 1. Fibrous concrete reinforcement, or fibermesh, specified in concrete slabs-on-grade may be used for control of cracking due to shrinkage and thermal expansion/contraction, lowered water migration, an increase in impact capacity, increased abrasion resistance, and residual strength.
2. Fibermesh reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
3. Application of fibermesh per cubic yard of concrete shall equal a minimum of 0.1% by volume (15 pounds per cubic yard).
4. Fibermesh shall comply with ASTM C116, any local building code requirements, and shall meet or exceed the current industry standard.
5. Steel reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
6. Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the latest edition of ACI 318: "Manual of Standard Practice for Detailing Concrete Structures".
7. Horizontal footing and wall reinforcement shall be continuous and shall have 90° bends, or corner bars with the same size/spacing as the horizontal reinforcement with a class B tension splice.
8. Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in masonry shall be a minimum of 48 bar diameters.

- 9. Where reinforcing dowels are required, they shall be equivalent in size and spacing to the vertical reinforcement. The dowel shall extend 48 bar diameters vertically and 20 bar diameters into the footing.
10. Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

WOOD FRAMING:

- 1. Solid sawn wood framing members shall conform to the specifications listed in the latest edition of the "National Design Specification for Wood Construction" (NDS). Unless otherwise noted, all wood framing members are designed to be Spruce-Yellow-Pine (SYP) #2.
2. LVL or PSL engineered wood shall have the following minimum design values:
2.1. E = 1,900,000 psi
2.2. Fv = 2,600 psi
2.3. Fx = 285 psi
2.4. Fy = 100 psi
3. Wood in contact with concrete, masonry, or earth shall be pressure treated in accordance with AIAA standard C-19. All other moisture exposed wood shall be treated in accordance with AIAA standard C-7.
4. Nails shall use common wire nails unless otherwise noted.
5. Lag screws shall conform to ANSI/ASME standard B18.21-1981. Lead holes for lag screws shall be in accordance with NDS specifications.
6. All beams shall have full bearing on supporting framing members unless otherwise noted.
7. Exterior and load bearing stud walls are to be 2x4 SYP #2 @ 16" O.C. unless otherwise noted. Studs shall be continuous from the sole plate to the double top plate. Studs shall only be discontinuous at headers for window/door openings. A minimum of one king stud shall be placed at each end of the header. King studs shall be continuous.
8. Individual studs forming a column shall be attached with one 10d nail @ 6" O.C. staggered. The stud column shall be continuous to the foundation or beam. The column shall be properly blocked at all floor levels to ensure proper load transfer.
9. Multi-ply beams shall have each ply attached with (3) 10d nails @ 24" O.C.
10. Fitch beams, 4-ply beams and 3-ply side loaded beams shall be bolted together with (2) rows of 1/2" diameter through bolts staggered @ 16" O.C. unless noted otherwise. Min. edge distance shall be 2" and (2) bolts shall be located a min. 6" from each end of the beam.

WOOD TRUSSES:

- 1. The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall review for overall compliance with the design documents. The SER shall assume no responsibility for the correctness for the structural design for the wood trusses.
2. The wood trusses shall be designed for all required loadings as specified in the local building code, the ASCE Standard "Minimum Design Loads for Buildings and Other Structures" (ASCE 1-05), and the loading requirements shown on these specifications. The truss drawings shall be coordinated with all other construction documents and provisions provided for loads shown on these drawings including but not limited to HVAC equipment, piping, and architectural fixtures attached to the trusses.
3. The trusses shall be designed, fabricated, and erected in accordance with the latest edition of the "National Design Specification for Wood Construction" (NDS) and "Design Specification for Metal Plate Connected Wood Trusses."
4. The truss manufacturer shall provide adequate bracing information in accordance with "Commentary and Recommendations for Handling, Installing, and Bracing Metal Plate Connected Wood Trusses" (HIB-3). This bracing, both temporary and permanent, shall be shown on the shop drawings. Also, the shop drawings shall show the required attachments for the trusses.
5. Any chords or truss webs shown on these drawings have been shown as a reference only. The final design of the trusses shall be per the manufacturer.

EXTERIOR WOOD FRAMED DECKS:

- 1. Decks are to be framed in accordance with local building codes and as referenced on the structural plans, either through code references or construction details.

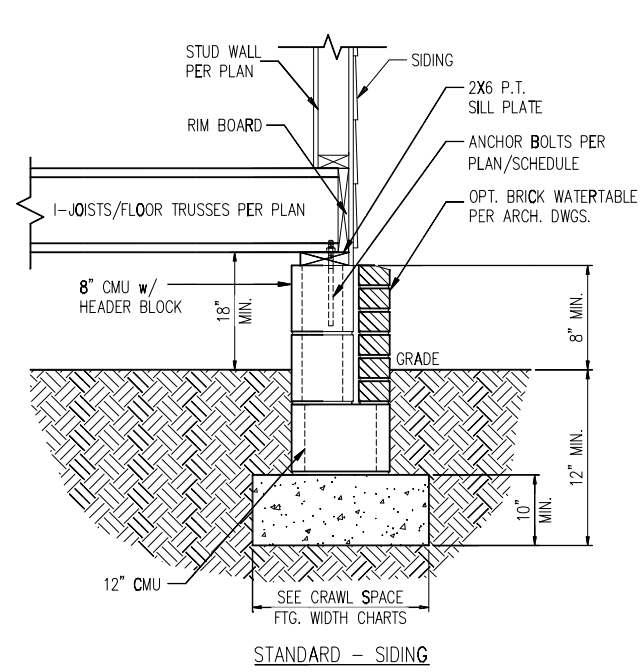
WOOD STRUCTURAL PANELS:

- 1. Fabrication and placement of structural wood sheathing shall be in accordance with the APA Design/Construction Guide "Residential and Commercial," and all other applicable APA standards.
2. All structurally required wood sheathing shall bear the mark of the APA.

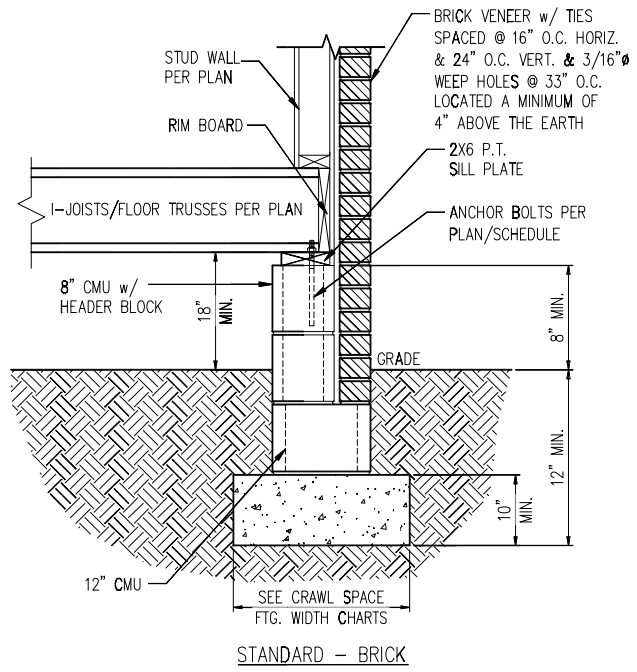
- 3. Wood wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information. Sheathing shall be applied with the long direction perpendicular to framing, unless noted otherwise.
4. Roof sheathing shall be APA rated sheathing exposure 1 or 2. Roof sheathing shall be continuous over two supports and attached to its supporting roof framing with (1)-8d CC nail at 6" o/c at panel edges and at 12" o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied with the long direction perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of plywood clips or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
5. Wood floor sheathing shall be APA rated sheathing exposure 1 or 2. Attach sheathing to its supporting framing with (1)-8d CC ringshank nail at 6" o/c at panel edges and at 12" o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of T&G plywood or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
6. Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the APA.

STRUCTURAL FIBERBOARD PANELS:

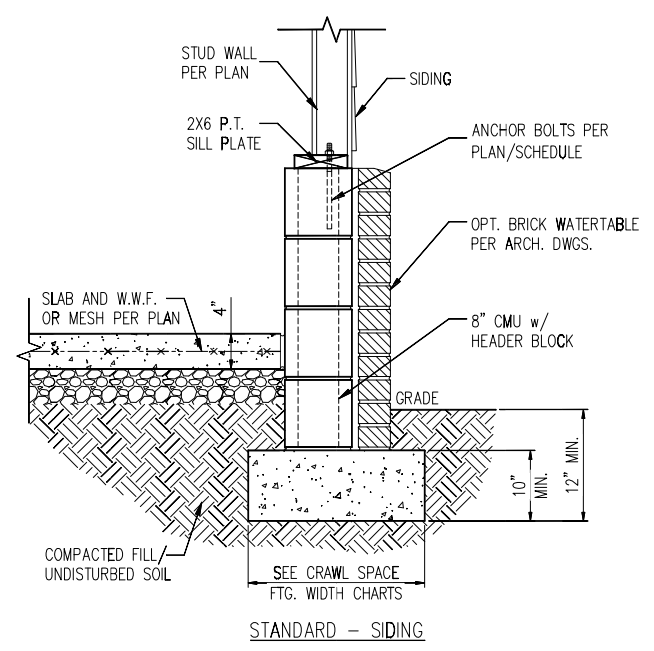
- 1. Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
2. All structurally required fiberboard sheathing shall bear the mark of the AFA.
3. Fiberboard wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information.
4. Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the AFA.



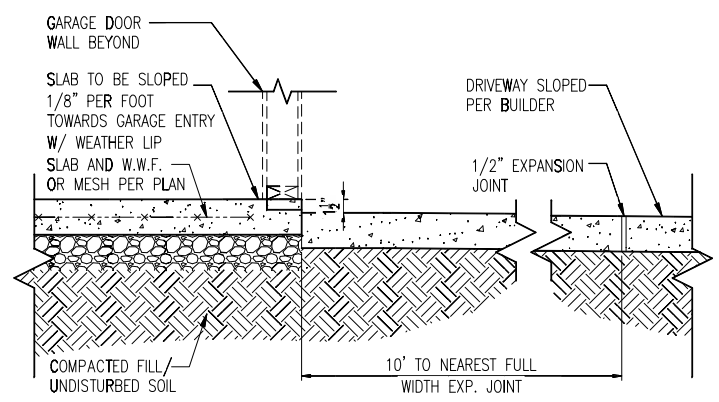
1 TYP. FOUNDATION WALL DETAIL  
D1c N.T.S.



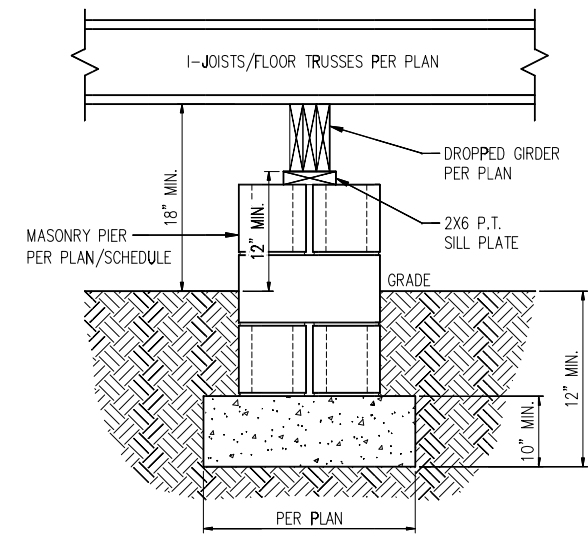
2 TYP. GARAGE CURB DETAIL  
D1c N.T.S.



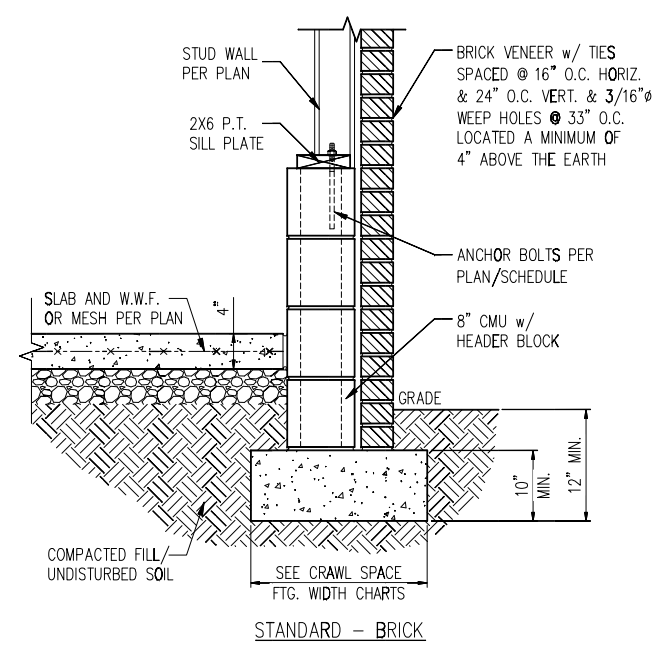
3 HOUSE/GARAGE WALL DETAIL  
D1c N.T.S.



4 SLAB AT GARAGE DOOR  
D1c N.T.S.



5 TYP. PIER & GIRDER DETAIL  
D1c N.T.S.



PIER SIZE AND HEIGHT SCHEDULE

SIZE	HOLLOW	SOLID
8"x16"	UP TO 32" HEIGHT	UP TO 5'-0" HEIGHT
12"x16"	UP TO 48" HEIGHT	UP TO 9'-0" HEIGHT
16"x16"	UP TO 64" HEIGHT	UP TO 12'-0" HEIGHT*
24"x24"	UP TO 96" HEIGHT	UP TO 12'-0" HEIGHT*

\* (4) #4 CONT. REBAR w/ #3 STIRRUPS @ 16" O.C. AND 24" MIN. LAP JOINTS

CRAWL SPACE FOOTING WIDTH

# OF STORIES	WIDTH BASED ON SOIL BEARING CAPACITY		
	1500 PSF	2000 PSF	2500 PSF
1 STORY - STD.	16"	16"	16"
1 STORY - BRICK VENEER	21"*	21"*	21"*
2 STORY - STD.	16"	16"	16"
2 STORY - BRICK VENEER	21"*	21"*	21"*
3 STORY - STD.	23"	18"	18"
3 STORY - BRICK VENEER	32"*	24"*	24"*

\*5" BRICK LEDGE HAS BEEN ADDED TO THE CRAWL SPACE FOOTING WIDTH FOR BRICK SUPPORT

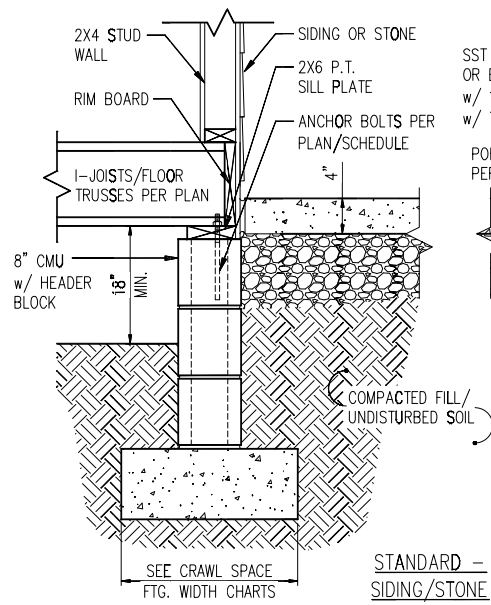
WALL ANCHOR SCHEDULE

TYPE OF ANCHOR	MIN. CONC. EMBEDMENT	SPACING EMBEDMENT	WALL	
			INTERIOR	EXTERIOR
1/2" A307 BOLTS w/ STD. 90° BEND	7"	6'-0"	YES	YES
SST - MAS	4"	5'-0"	NO	YES
HILTI KWIK BOLT KBI 1/2-2-3/4	2-1/4"	6'-0"	YES	NO
1/2" HILTI THREADED ROD w/ HIT HY150 ADHESIVE	7"	6'-0"	YES	YES

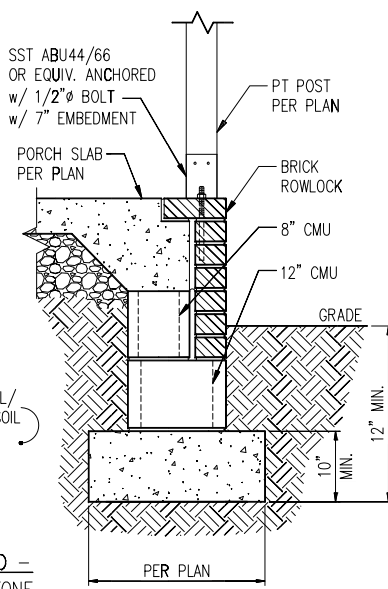
NOTE: INSTALL ALL ANCHORS 12" MAX. FROM ALL BOTTOM PLATE ENDS AND JOINTS.

NOTES:

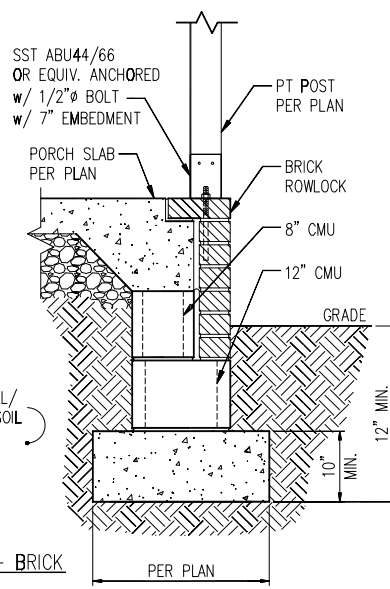
- REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
- PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
- SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
- REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
- REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
- PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCRS



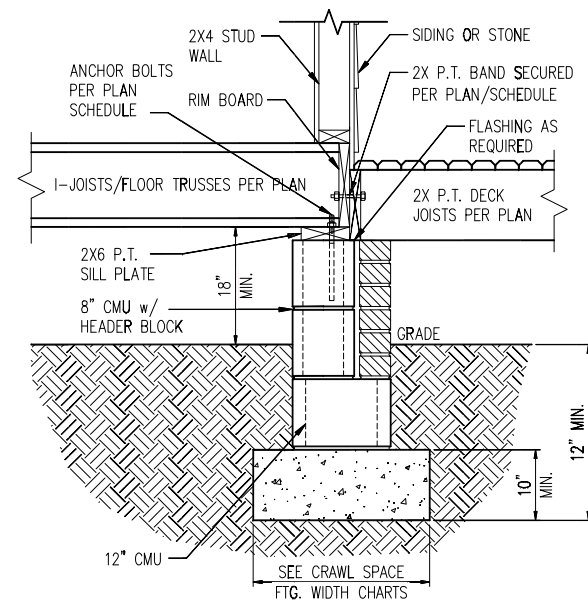
STANDARD - SIDING/STONE



STANDARD - BRICK



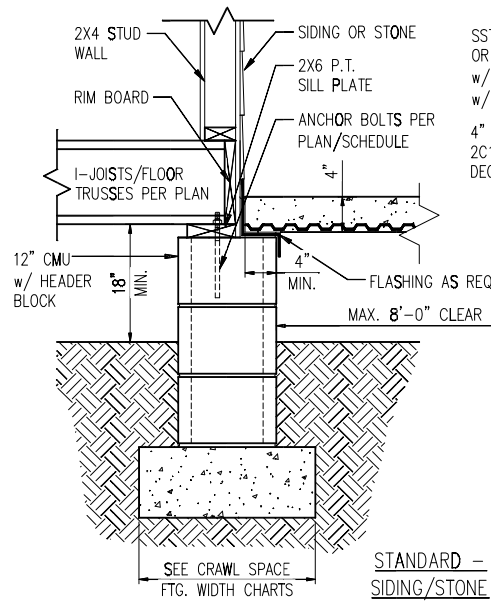
STANDARD - SIDING/STONE



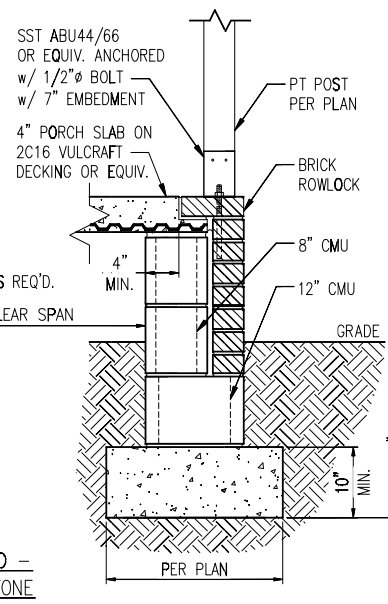
STANDARD - BRICK

1 TYP. FRONT PORCH DETAIL  
D2c N.T.S.

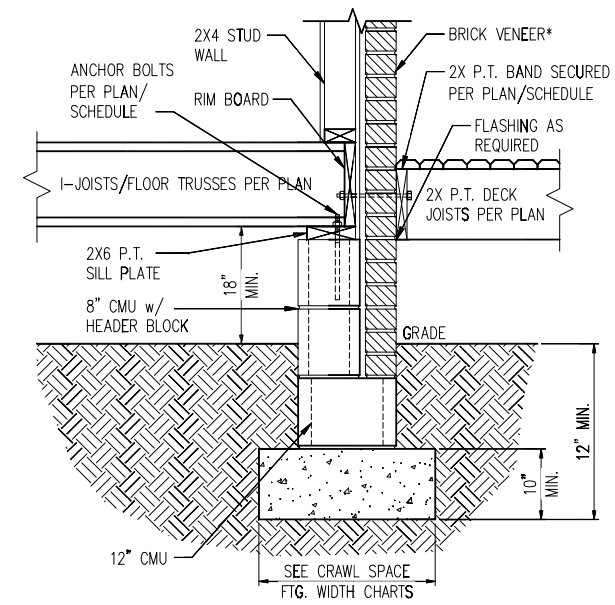
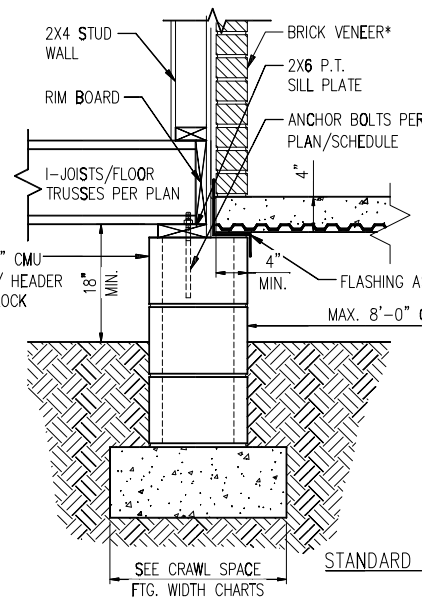
2 DECK ATTACHMENT DETAIL  
D2c N.T.S.



STANDARD - SIDING/STONE



STANDARD - BRICK



3 DECK ATTACHMENT DETAIL W/ BRICK  
D2c N.T.S.

1a FRONT PORCH DETAIL w/ SUSPENDED SLAB  
D2c N.T.S.

DECK ATTACHMENT SCHEDULE (ALL STRUCTURES EXCEPT BRICK)

FASTENERS	MAX. 8'-0" JOIST SPAN	MAX. 16'-0" JOIST SPAN
5/8" GALV. BOLTS w/ NUT & WASHER <sup>a</sup>	(1) @ 3'-6" O.C.	(1) @ 1'-8" O.C.
AND	AND	AND
12d COMMON GALV. NAILS <sup>c</sup>	(2) @ 8" O.C.	(3) @ 6" O.C.

- a. ATTACHMENT INTERPOLATION BETWEEN 8' AND 16' JOIST SPANS IS ALLOWED.
- b. MINIMUM EDGE DISTANCE FOR BOLTS IS 2 1/2".
- c. NAILS MUST PENETRATE THE SUPPORTING STRUCTURE BAND A MINIMUM OF 1 1/2"

DECK ATTACHMENT SCHEDULE (BRICK STRUCTURES)

FASTENERS	MAX. 8'-0" JOIST SPAN	MAX. 16'-0" JOIST SPAN
5/8" GALV. BOLTS w/ NUT & WASHER <sup>b</sup>	(1) @ 2'-4" O.C.	(1) @ 1'-4" O.C.

- a. ATTACHMENT INTERPOLATION BETWEEN 8' AND 16' JOIST SPANS IS ALLOWED.
- b. MINIMUM EDGE DISTANCE FOR BOLTS IS 2 1/2".

CRAWL SPACE FOOTING WIDTH

# OF STORIES	WIDTH BASED ON SOIL BEARING CAPACITY		
	1500 PSF	2000 PSF	2500 PSF
1 STORY - STD.	16"	16"	16"
1 STORY - BRICK VENEER	21"*	21"*	21"*
2 STORY - STD.	16"	16"	16"
2 STORY - BRICK VENEER	21"*	21"*	21"*
3 STORY - STD.	23"	18"	18"
3 STORY - BRICK VENEER	32"*	24"*	24"*

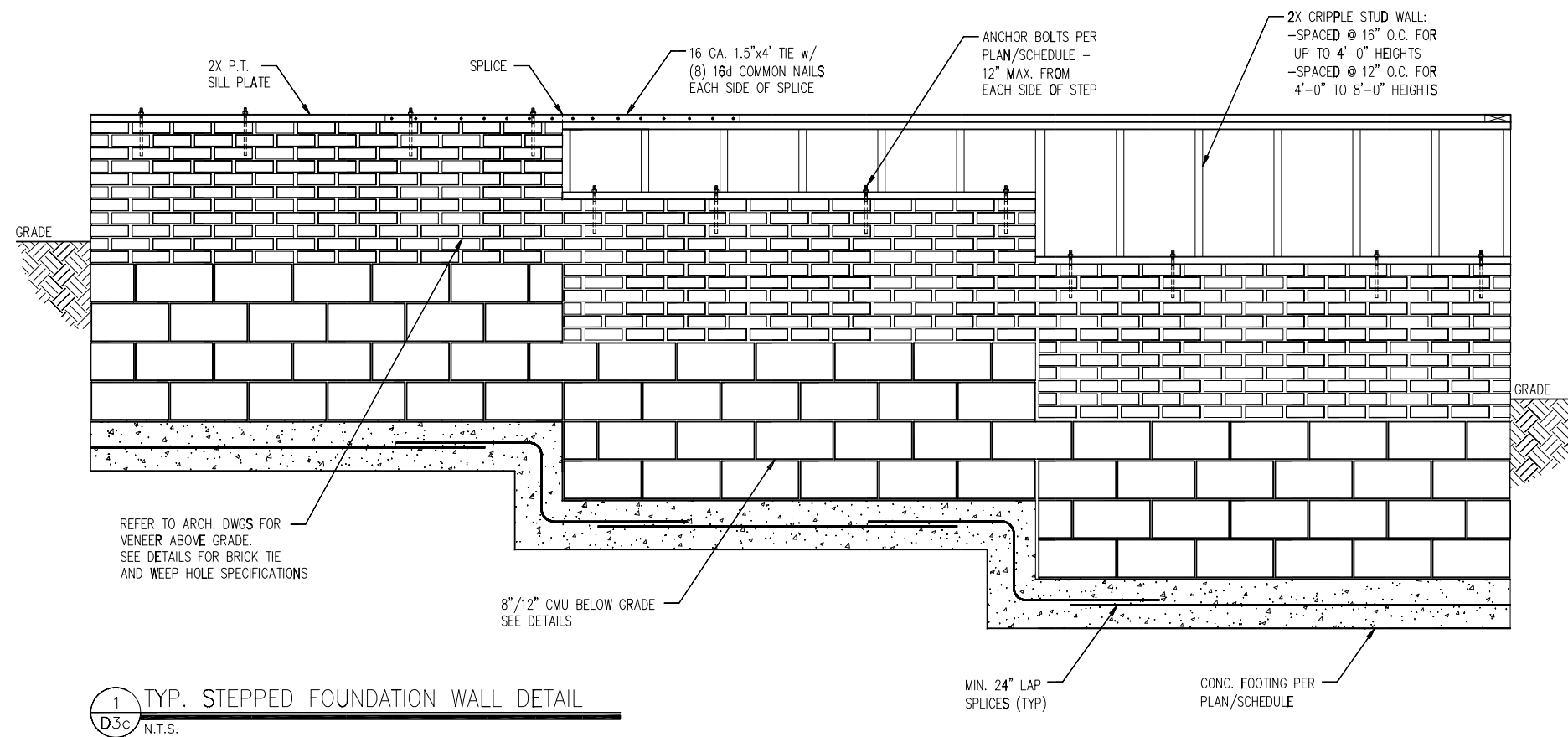
\*5" BRICK LEDGE HAS BEEN ADDED TO THE CRAWL SPACE FOOTING WIDTH FOR BRICK SUPPORT

\*BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT. AND 3/16" Ø WEEP HOLES @ 33" O.C. LOCATED A MINIMUM OF 4" ABOVE THE EARTH

NOTES:

1. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
4. REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
5. REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
6. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCRS





1 TYP. STEPPED FOUNDATION WALL DETAIL  
 D3c N.T.S.

REFER TO ARCH. DWGS FOR VENEER ABOVE GRADE. SEE DETAILS FOR BRICK TIE AND WEEP HOLE SPECIFICATIONS

8" / 12" CMU BELOW GRADE SEE DETAILS

MIN. 24" LAP SPLICES (TYP)

CONC. FOOTING PER PLAN/SCHEDULE

2X CRIPPLE STUD WALL:  
 -SPACED @ 16" O.C. FOR UP TO 4'-0" HEIGHTS  
 -SPACED @ 12" O.C. FOR 4'-0" TO 8'-0" HEIGHTS

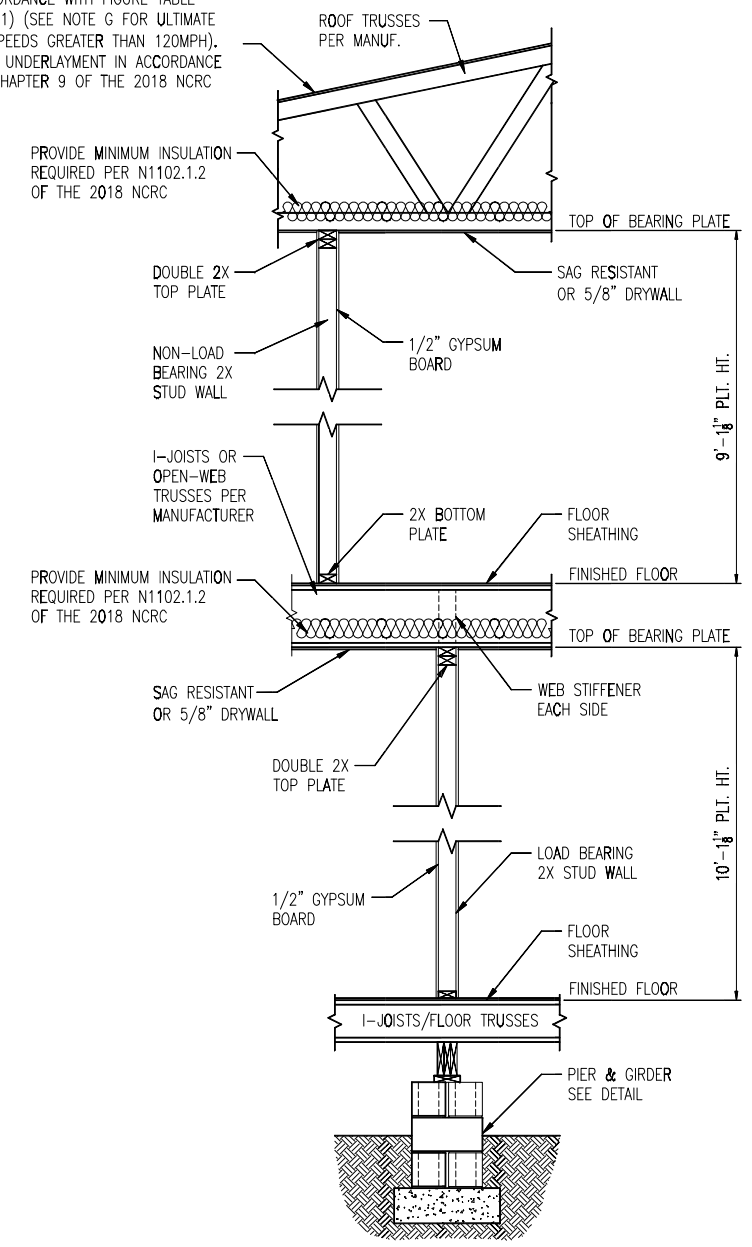
16 GA. 1.5"x4" TIE w/ (8) 16d COMMON NAILS EACH SIDE OF SPLICE

ANCHOR BOLTS PER PLAN/SCHEDULE - 12" MAX. FROM EACH SIDE OF STEP

NOTES:

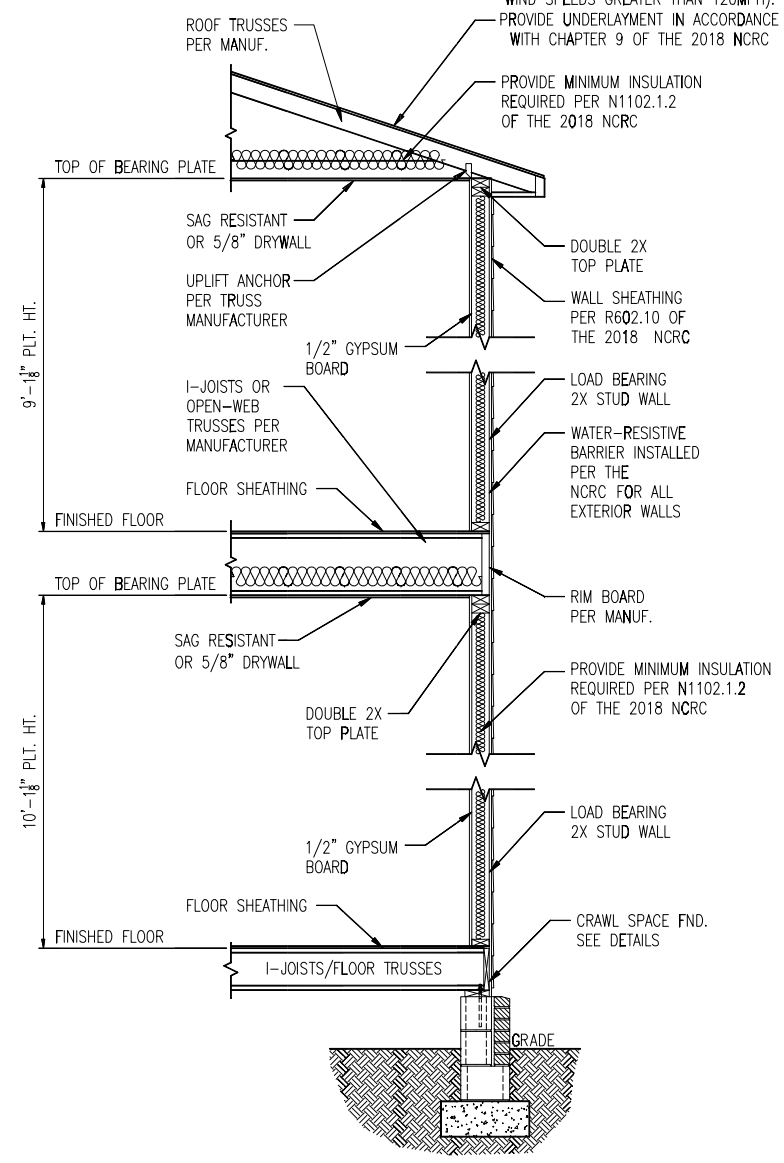
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MIN. 3/8" ROOF SHEATHING SECURED IN ACCORDANCE WITH FIGURE TABLE R602.3(1) (SEE NOTE G FOR ULTIMATE WIND SPEEDS GREATER THAN 120MPH). PROVIDE UNDERLAYMENT IN ACCORDANCE WITH CHAPTER 9 OF THE 2018 NCRC



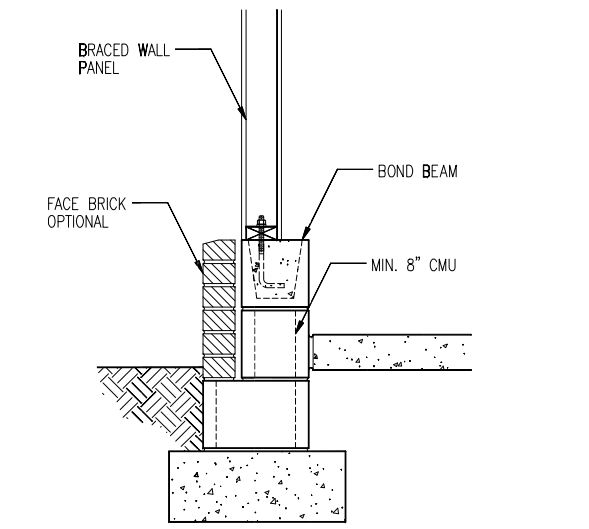
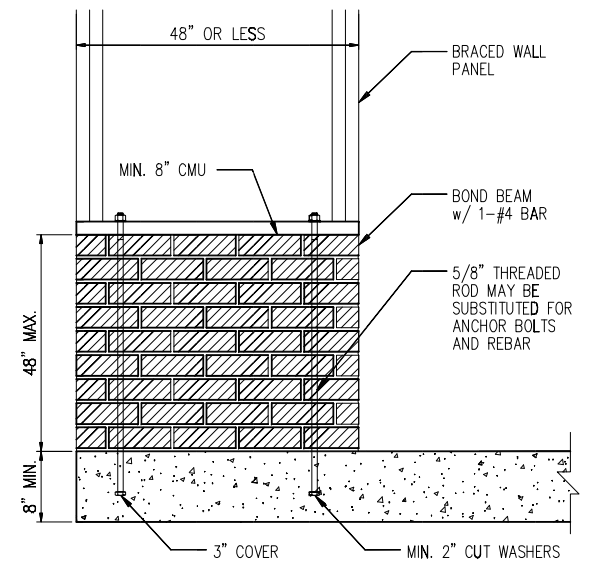
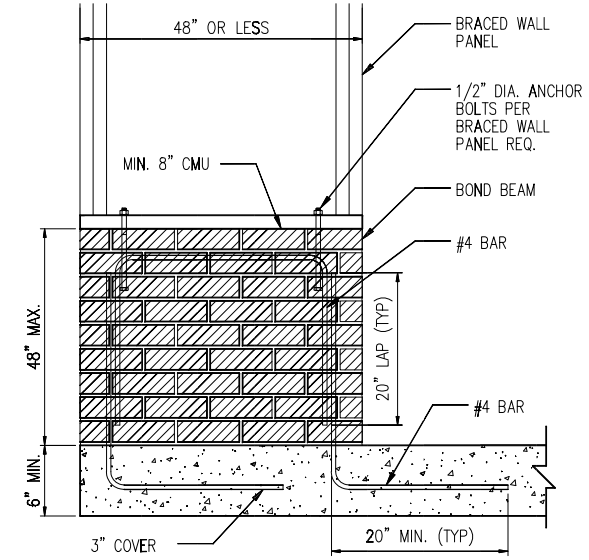
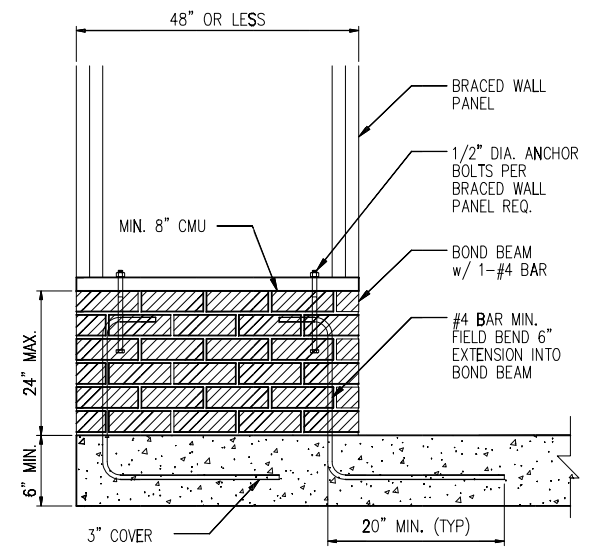
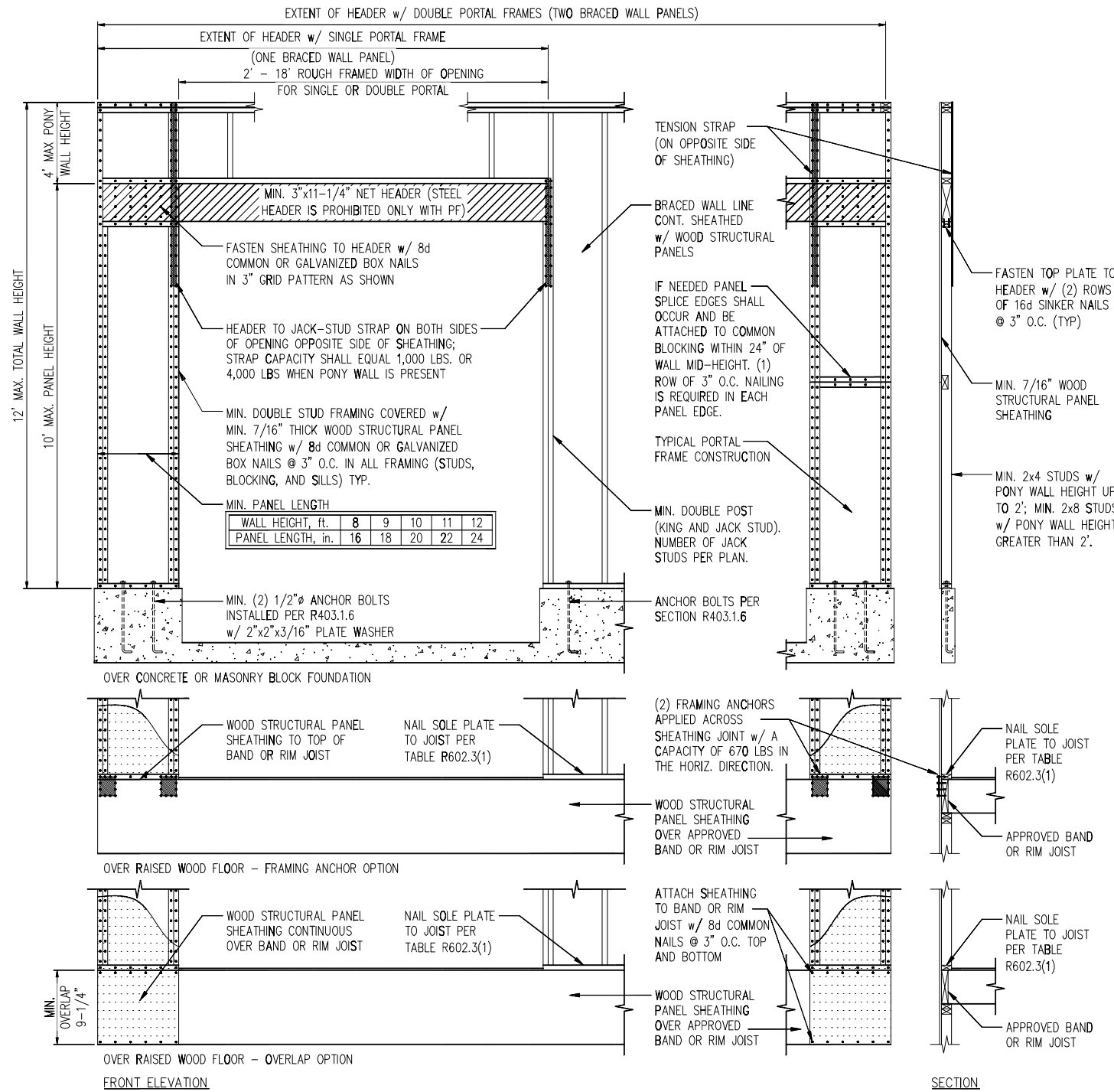
**1** TYP. INTERIOR LOAD BEARING WALL SECTION  
D4c 3/4" = 1'-0"

MIN. 3/8" ROOF SHEATHING SECURED IN ACCORDANCE WITH FIGURE TABLE R602.3(1) (SEE NOTE G FOR ULTIMATE WIND SPEEDS GREATER THAN 120MPH). PROVIDE UNDERLAYMENT IN ACCORDANCE WITH CHAPTER 9 OF THE 2018 NCRC



**2** TYP. EXTERIOR LOAD BEARING WALL SECTION  
D4c 3/4" = 1'-0"  
-SIMILAR w/ BRICK AND STONE  
-BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.  
-MIN. 3/16" Ø WEEP HOLES @ 33" O.C.

- NOTES:
- REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
  - PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
  - SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
  - REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
  - REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
  - PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCRC

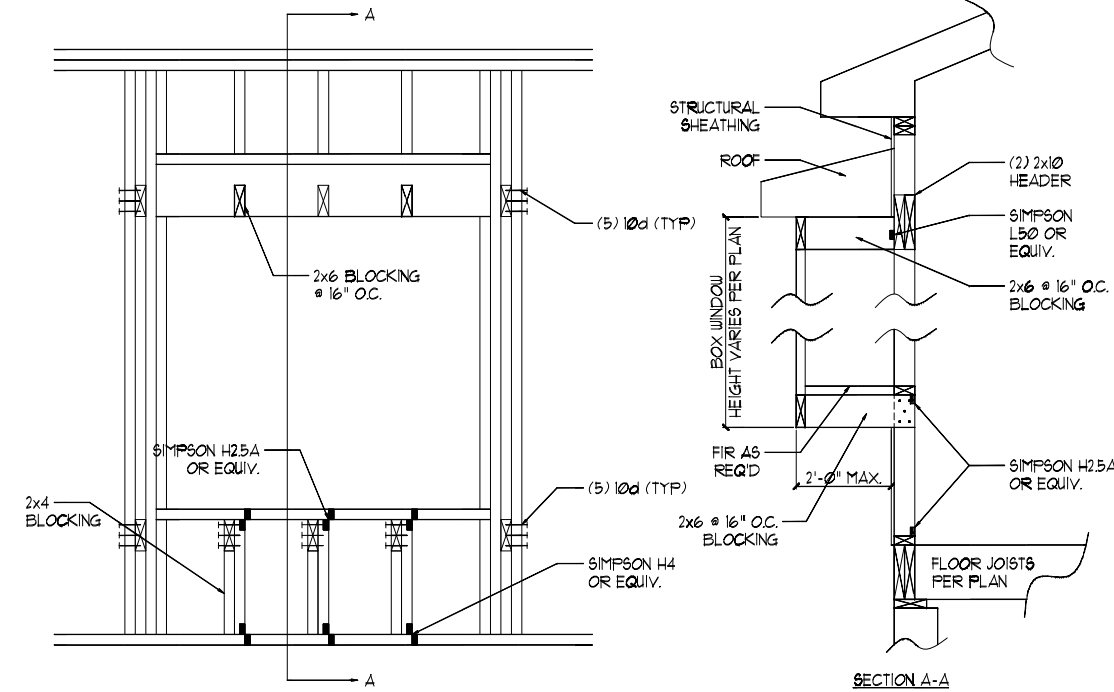
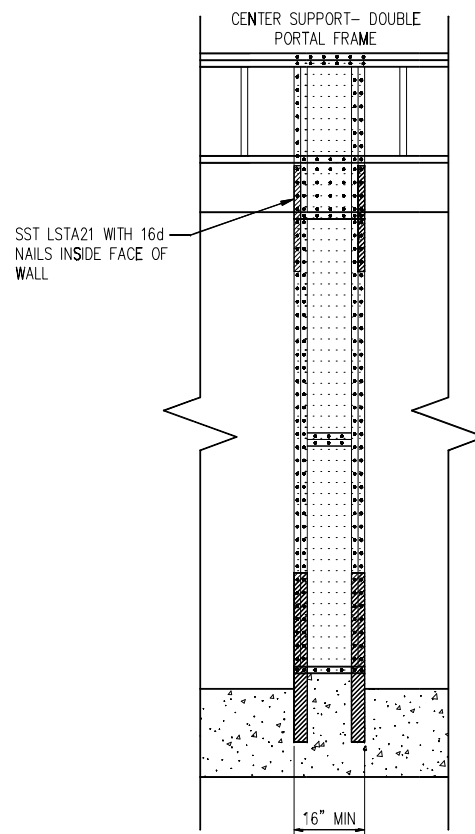
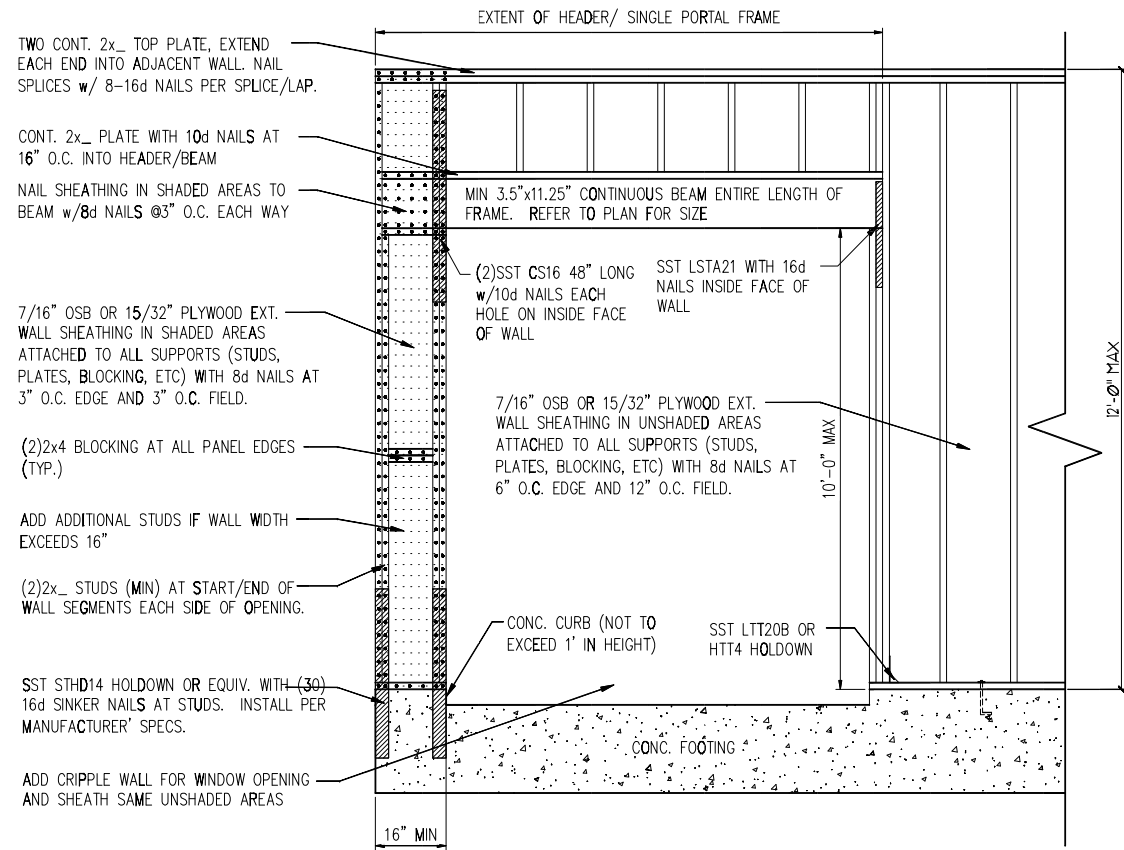


2 MASONRY STEM WALLS SUPPORTING BRACED WALL PANELS  
D1f NTS

NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS

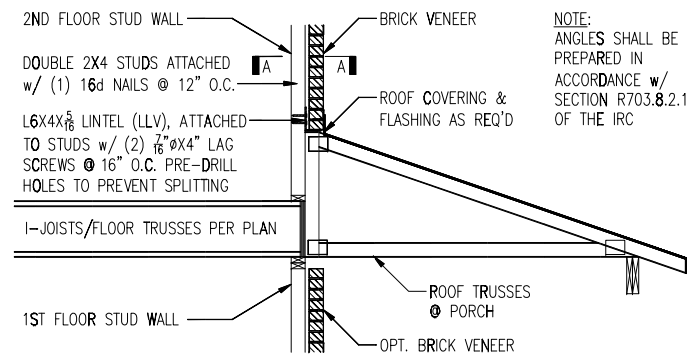
1 METHOD PF: PORTAL FRAME DETAIL  
D1f 3/8" = 1'-0"



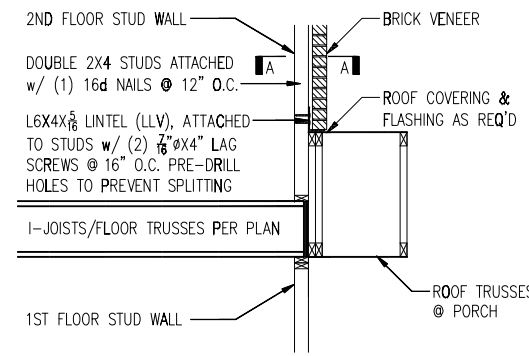


1 METHOD PF: PORTAL FRAME DETAIL w/ HOLD-DOWNS  
D2f 3/4" = 1'-0"

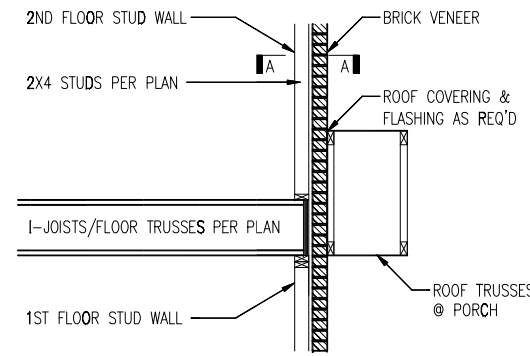
2 BOX WINDOW DETAIL  
D2f N.T.S.



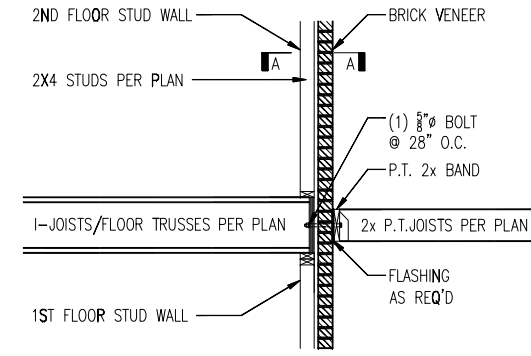
TRUSSES PERPENDICULAR TO STUD WALL



TRUSSES PARALLEL TO STUD WALL

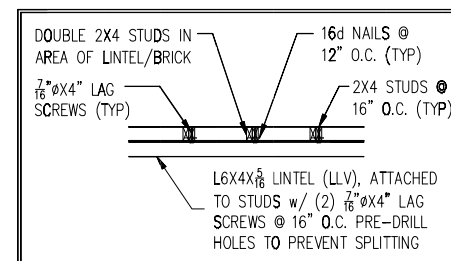


TRUSSES PARALLEL TO STUD WALL w/ CONTINUOUS BRICK VENEER



4 BALCONY JOIST ATTACHMENT  
D2f N.T.S.

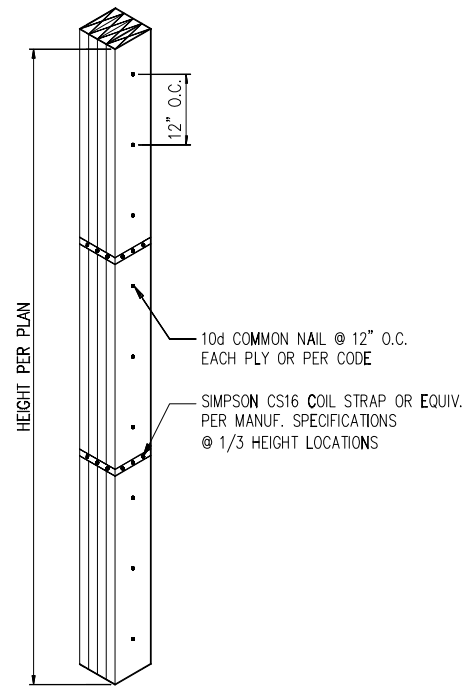
3 BRICK SUPPORT ABOVE STORAGE/PORCH ROOF DETAIL  
D2f N.T.S.



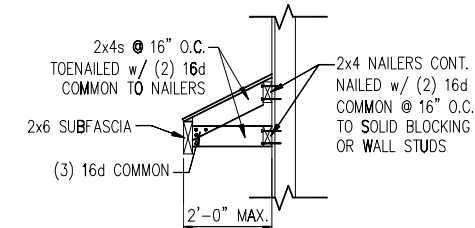
**MINIMUM FASTENING REQUIREMENTS FOR TOP- AND SIDE-LOADED MEMBERS**

FASTENER TYPE	LVL DEPTH	3 1/2" WIDE		5 1/4" WIDE		7" WIDE	
		2-Ply 1 1/4"	3-Ply 1 1/4"	1 3/4" + 3 1/2"	4-Ply 1 1/4"	2-Ply 1 1/4" + 3 1/2"	2-Ply 3 1/2"
10d (0.128" x 3") Nails	7/4" ≤ d < 14"	3 rows @ 12" o.c.	3 rows @ 12" o.c. (ES)	3 rows @ 12" o.c.	-	3 rows @ 12" o.c. (ES)	-
	d ≥ 14"	4 rows @ 12" o.c.	4 rows @ 12" o.c. (ES)	4 rows @ 12" o.c.	-	4 rows @ 12" o.c. (ES)	-
16d (0.162" x 3 1/2") Nails	7/4" ≤ d < 14"	2 rows @ 12" o.c.	2 rows @ 12" o.c. (ES)	2 rows @ 12" o.c.	-	2 rows @ 12" o.c. (ES)	-
	d ≥ 14"	3 rows @ 12" o.c.	3 rows @ 12" o.c. (ES)	3 rows @ 12" o.c.	-	3 rows @ 12" o.c. (ES)	-
1/2" Through Bolts	d ≥ 7 1/4"	2 rows @ 24" o.c.		2 rows @ 24" o.c.		2 rows @ 24" o.c.	
SDS 1/4" x 3 1/2", WS35, 3 3/4" TrussLok		2 rows @ 24" o.c.	1 row @ 24" o.c. (ES)	2 rows @ 24" o.c.	-	2 rows @ 24" o.c. (ES)	-
SDS 1/4" x 6", WS6		-	-	-	2 rows @ 24" o.c. (ES)		-
5" TrussLok		-	2 rows @ 24" o.c.		-	-	-
6 3/4" TrussLok		-	-	-	2 rows @ 24" o.c.		-

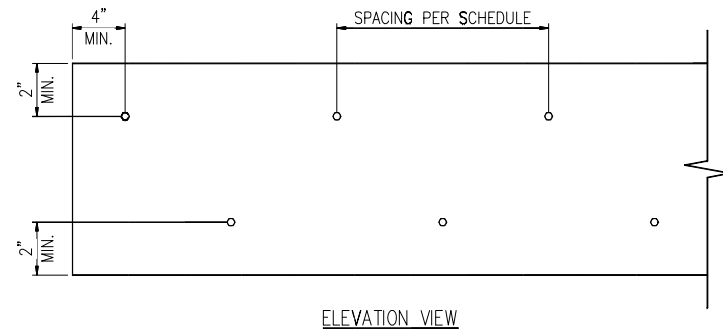
- NOTES:**
- All fasteners must meet the minimum requirements in the table above. Side-loaded multiple-ply members must meet the minimum fastening and side-loading capacity requirements given on page 48.
  - Minimum fastening requirements for depths less than 7/4" require special consideration. Please contact your technical representative.
  - Three general rules for staggering or offsetting for a certain fastener schedule:
    - If staggering or offsetting is not referenced, then none is required;
    - If staggering is referenced, then fasteners installed in adjacent rows on the front side are to be staggered up to one-half the o.c. spacing, but maintaining the fastener clearances above; and
    - If "ES" is referenced, then the fastener schedule must be repeated on each side, with the fasteners on the back side offset up to one-half the o.c. spacing of the front side (whether or not it is staggered).



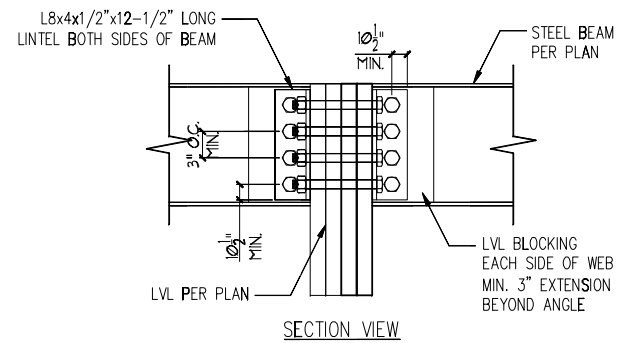
**2 MULTI-PLY STUD CONNECTION DETAIL**  
D3f N.T.S. 4+ PLYS



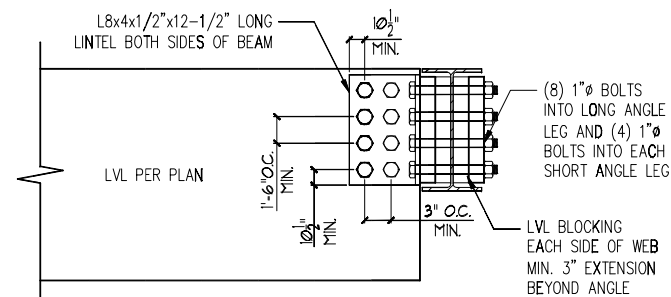
**5 GABLE ROOF RETURN**  
D3f N.T.S.



**1 MULTI-PLY BEAM CONNECTION DETAIL**  
D3f N.T.S.

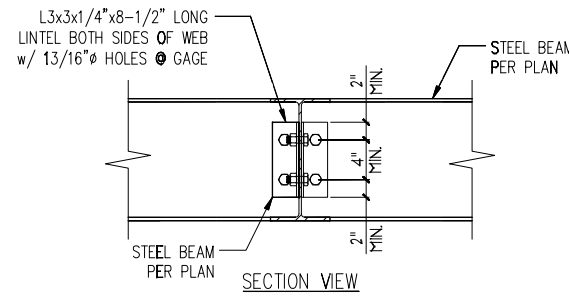


SECTION VIEW

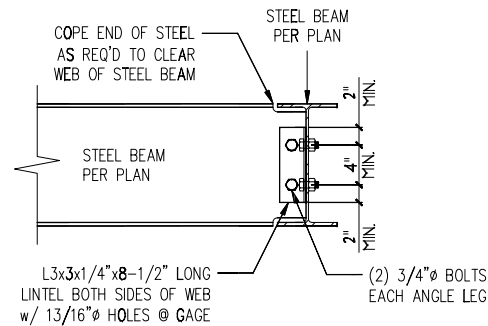


ELEVATION VIEW

**3 LVL TO STEEL DETAIL**  
D3f N.T.S.

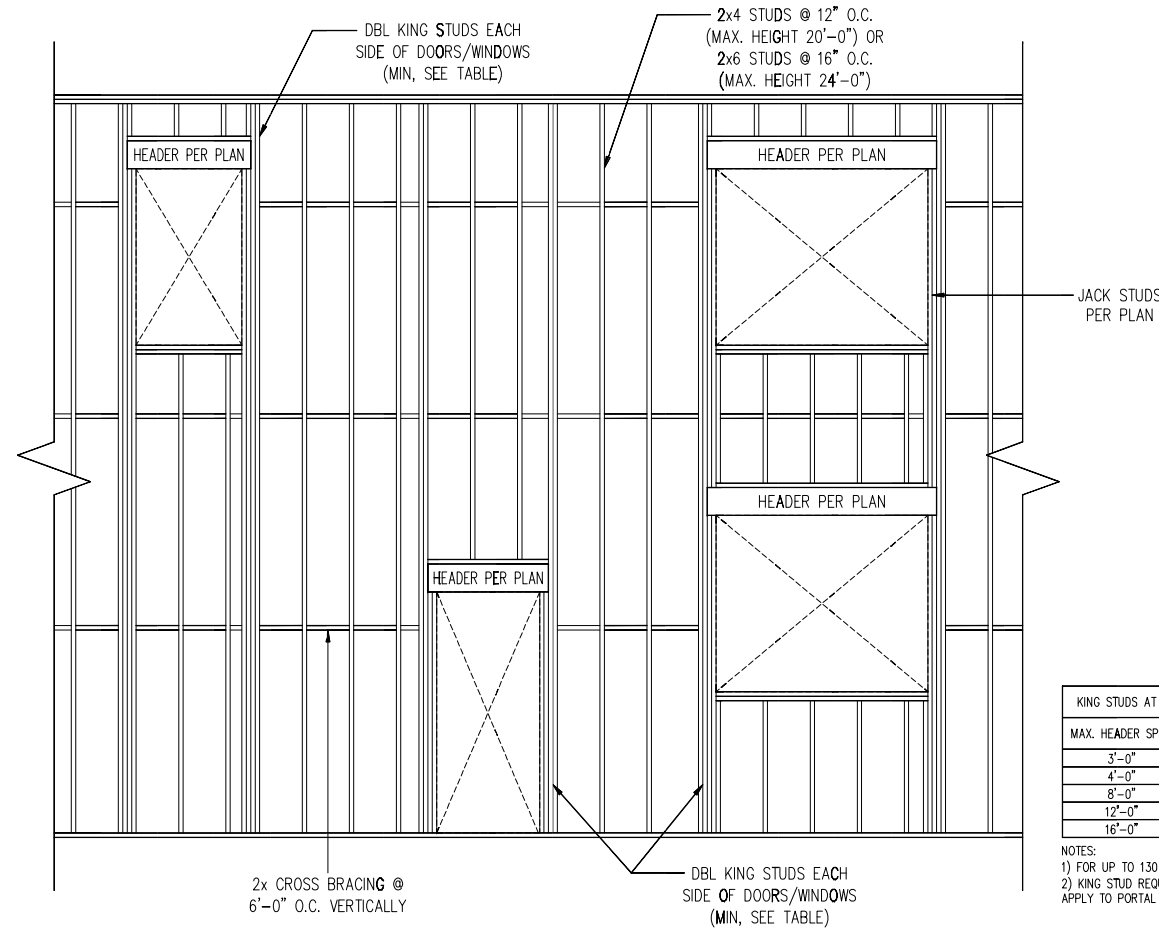


SECTION VIEW



ELEVATION VIEW

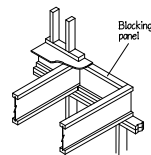
**4 STEEL TO STEEL DETAIL**  
D3f N.T.S.



KING STUDS AT EACH END OF HEADERS	
MAX. HEADER SPAN	STUDS (MIN.)
3'-0"	1
4'-0"	2
8'-0"	3
12'-0"	5
16'-0"	6

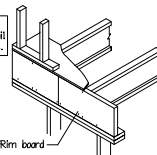
- NOTES:**
- FOR UP TO 130 MPH, EXPOSURE B
  - KING STUD REQUIREMENTS DO NOT APPLY TO PORTAL FRAMED OPENINGS

**6 TYP. BALLOON FRAMING DETAIL**  
D3f N.T.S.



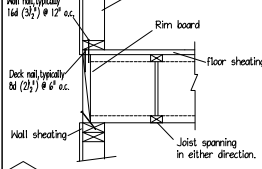
A1

Attach rim board to joist w/1-10d box nail top & bottom of joist.



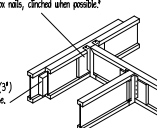
A3

Must have 1 3/4" minimum joist bearing at ends. For information on lateral load capacities refer to literature or load schedule.



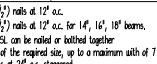
A7

Backer block: Install tight to top flange (tight to bottom flange with face mount hangers), both sides of web with single joist. Attach with 10-10d (#2) box nails, clinched when possible.



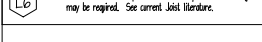
H2

Filler block: Nail with 10-10d (#2) box nails, clinched when possible.



L6

For side-loaded multiple member beams, additional nailing or bolting may be required. See current joist literature.



CONNECTION OF MULTIPLE PIECES OF TOP-LOADED BEAMS

LVL & PSL (1 3/4" Width Pieces)

• Minimum of 2 rows 16d (3/4") nails at 12" o.c.  
 • Minimum of 3 rows 16d (3/4") nails at 12" o.c. for 14", 11", 10" beams.  
 • Multiple pieces of LVL & PSL can be nailed or bolted together to form a header or beam of the required size, up to a maximum width of 7 inches. Minimum of 2 rows 1/2" bolts at 24" o.c. staggered.



ENGINEERED WOOD MATERIAL LIST

DR HORTON  
HAYDEN

2ND FLOOR I-JOIST PLACEMENT PLAN

BASE - ALL ELEVATIONS

MARK	QTY	CUT LENGTH	DESCRIPTION	(Notes)
2	2	2'-0"	2" x 14" BCI 5000	
3	2	3'-0"	2" x 14" BCI 5000	
16a	6	16'-0"	2" x 14" BCI 5000 < 2 >	
20a	20	20'-0"	2" x 14" BCI 5000 < 2 >	
21	4	21'-0"	2" x 14" BCI 5000	
39a	9	39'-0"	2" x 14" BCI 5000 < 2 >	(Total 941')

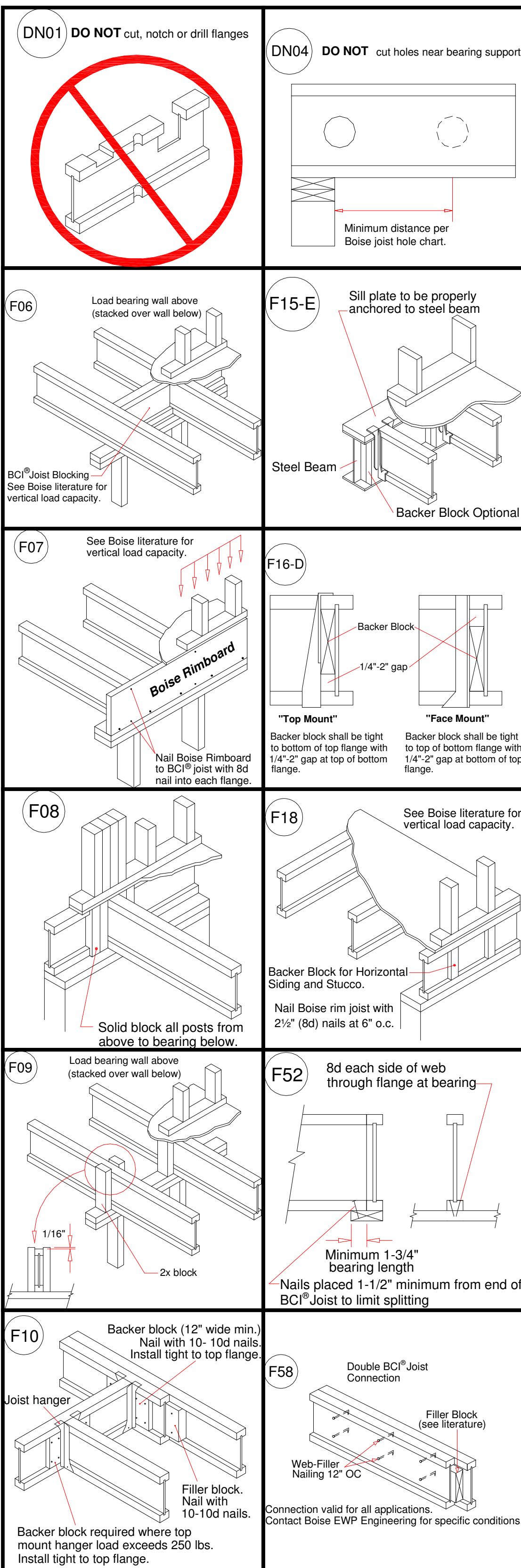
BEAMS AND HEADERS

LVL1	4	20'-0"	1 3/4" x 14" LVL 2.0E (Flush)
------	---	--------	-------------------------------

ACCESSORIES & OTHER MATERIALS (Simpson Hangers)

ITEM	QTY	UNIT	DESCRIPTION
14" Rim	177	LF	1 1/2" x 14" Rim 15 pcs@12' or 12 pcs@16'
BP	6	PCS	14" Blocking Panel [Total 12']
H3c	12	PCS	1US2.06/14 Single Face Mnt Hanger
H4c	3	PCS	1MU4.2B/14 Double Face Mnt Hanger
10CUT14C	70	HOLE	10" Circular Cutout
BCLAYOUT	1	PCS	BCI Placement Layout
BCGUIDE	1	PCS	BCI Installation Guide

SEE MATERIAL LIST FOR DEPTH, SERIES & LENGTH  
 INDICATED I-JOIST  
 INDICATED FIRE-RATED W/FR. LVL  
 INDICATED FLOORPLAN LVL  
 INDICATED PARALLEL PCL  
 INDICATED SQUARE LVL  
 INDICATED SQUARE LVL  
 INDICATES A SECTION FROM THE INSTALLATION GUIDE DETAIL IS ALSO SHOWN ON THIS SHEET  
 LVL/PSL: LOAD BEARING WALL ABOVE  
 BLK: BLOCKING WALL ABOVE  
 EXTRA JOIST ADDED  
 EXTRA JOIST (1) UNDER WALL  
 DOUBLE JOIST (2)  
 TYPICAL JOIST (3)  
 1-JOIST BLOCKING PANEL  
 1/4" OR 1/2" OR 3/4" OR 1" OR 1 1/4" OR 1 1/2" OR 1 3/4" OR 2" OR 2 1/4" OR 2 1/2" OR 3" OR 3 1/2" OR 4" OR 4 1/2" OR 5" OR 5 1/2" OR 6" OR 6 1/2" OR 7" OR 7 1/2" OR 8" OR 8 1/2" OR 9" OR 9 1/2" OR 10" OR 10 1/2" OR 11" OR 11 1/2" OR 12" OR 12 1/2" OR 13" OR 13 1/2" OR 14" OR 14 1/2" OR 15" OR 15 1/2" OR 16" OR 16 1/2" OR 17" OR 17 1/2" OR 18" OR 18 1/2" OR 19" OR 19 1/2" OR 20" OR 20 1/2" OR 21" OR 21 1/2" OR 22" OR 22 1/2" OR 23" OR 23 1/2" OR 24" OR 24 1/2" OR 25" OR 25 1/2" OR 26" OR 26 1/2" OR 27" OR 27 1/2" OR 28" OR 28 1/2" OR 29" OR 29 1/2" OR 30" OR 30 1/2" OR 31" OR 31 1/2" OR 32" OR 32 1/2" OR 33" OR 33 1/2" OR 34" OR 34 1/2" OR 35" OR 35 1/2" OR 36" OR 36 1/2" OR 37" OR 37 1/2" OR 38" OR 38 1/2" OR 39" OR 39 1/2" OR 40" OR 40 1/2" OR 41" OR 41 1/2" OR 42" OR 42 1/2" OR 43" OR 43 1/2" OR 44" OR 44 1/2" OR 45" OR 45 1/2" OR 46" OR 46 1/2" OR 47" OR 47 1/2" OR 48" OR 48 1/2" OR 49" OR 49 1/2" OR 50" OR 50 1/2" OR 51" OR 51 1/2" OR 52" OR 52 1/2" OR 53" OR 53 1/2" OR 54" OR 54 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**GENERAL NOTES & DESIGN ASSUMPTIONS**

ALL DIMENSIONAL DROPPED GIRDERS NOT INCLUDED W EWP PACKAGE  
 ALL CEILING JOISTS ARE 2x8 SPF #2 SPACING PER IRC (UNO)  
 ALL RAFTERS ARE 2x8 SPF #2 SPACING PER IRC (UNO)  
 ALL LOAD HEADERS, NOT SHOWN ON LAYOUT, ARE (2)2x10 SYP #2 (UNO)  
 ALL 2x4, 2x6 & 2x8 ARE SPF #2 (UNO)  
 ALL 2x10 & 2x12 JOISTS ARE SYP #2 (UNO)  
 ALL RIDGES AND HIP RAFTERS ARE 2x10 or 2x12 (UNO)  
 ALL VALLEY RAFTERS ARE 2x12 (UNO)  
 #J = NUMBER OF 2x4 SPF #2 JACK STUDS REQUIRED (LVL POST PT#)

Joist & Rafter Area Loads	Live Load psf	Dead Load psf
Primary Living	40	10
Secondary & Attic Permanent Stairs	30	10
Ceiling - Limited Storage	20	10
Ceiling - No Storage	10	5
Roof - No Ceiling Load	20	10
Flat Roof or Cathedral w/Drywall Ceiling	20	15

**Builders FirstSource**  
 www.bldr.com

**Boise Cascade**  
 7601 BOEING DRIVE  
 GREENSBORO, NC 27409  
 V (336) 884-5454

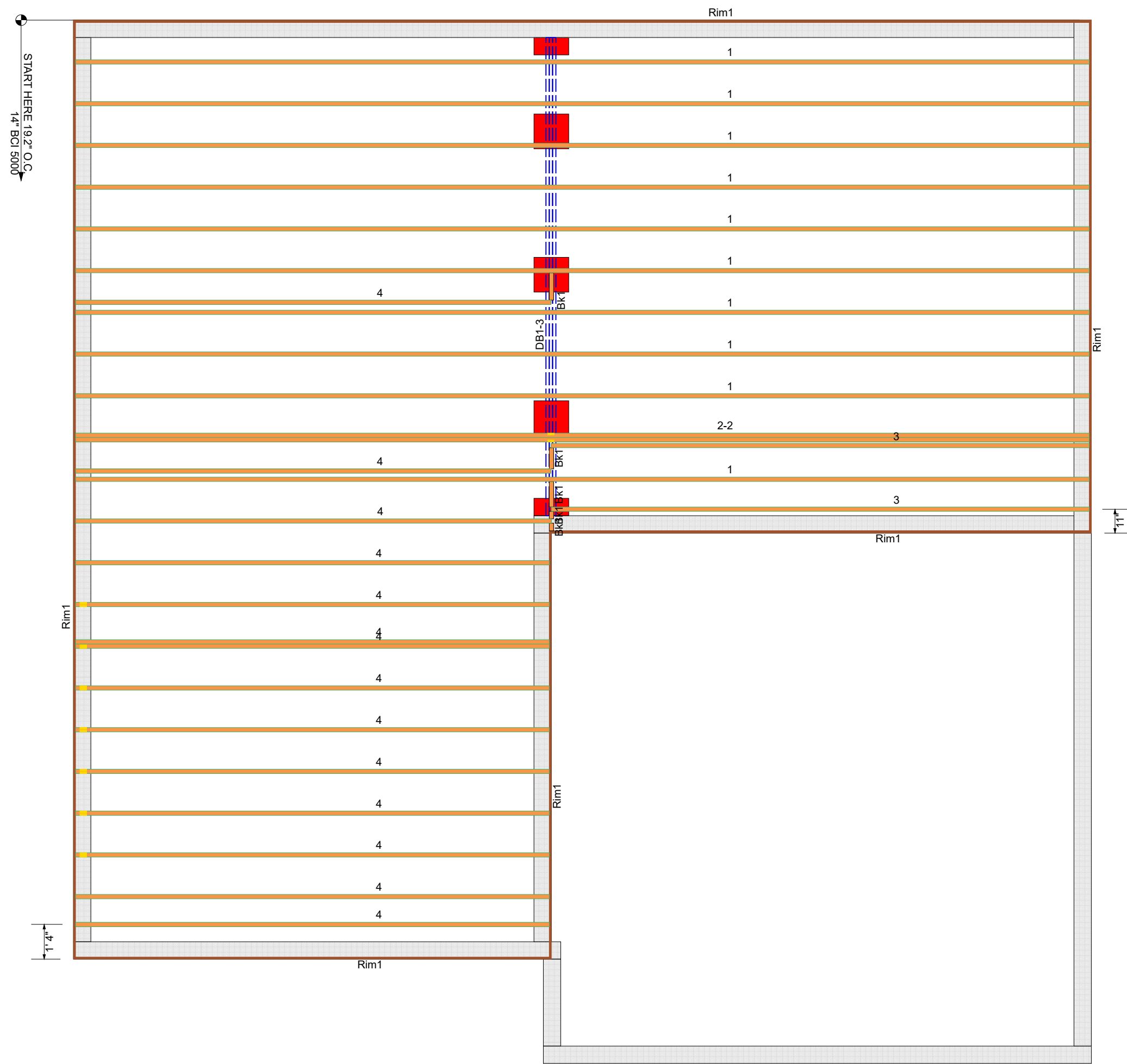
4575 HAMPTON ROAD  
 CLEMMONS, NC 27409  
 V (336) 712-9910

1135 ROBESON STREET  
 FAYETTEVILLE, NC 28305  
 V (910) 485-1111

3189 NC HIGHWAY 5  
 ABERDEEN NC 28315  
 V (910) 944-2516

This layout and associated materials list has been prepared based on project plans and/or information provided to Builders FirstSource (BFS). It remains the responsibility of the builder, architect, designer, or other responsible persons to review this information to assure that it is appropriate, accurate, complete and complies with applicable building codes.

- GENERAL NOTES:**
- 1.) READ THE INSTALLATION GUIDE BEFORE FRAMING.
  - 2.) ALL WALLS SHOWN ARE LOAD BEARING UNLESS NOTED OTHERWISE. WALLS NOT SHOWN ARE CONSIDERED NON-LOAD BEARING.
  - 3.) UNLESS STATED OTHERWISE ALL CEILING & ROOF LOADS BRACE DIRECTLY TO LOAD BEARING WALLS SUPPORTED BY FOUNDATION.
  - 4.) CONTACT BUILDERS FIRSTSOURCE BEFORE MAKING ANY ALTERATIONS OR ADJUSTMENTS...FAILURE TO DO SO MAY RESULT IN COSTLY REPAIRS.



Products				
PlotID	Length	Product	Plies	Net Qty
1	39' 0"	14" BCI® 5000s-1.8	1	10
2-2	39' 0"	14" BCI® 5000s-1.8	2	2
3	21' 0"	14" BCI® 5000s-1.8	1	2
4	19' 0"	14" BCI® 5000s-1.8	1	14
DB1-3	20' 0"	2x10 SP No.2	3	3
Rim1	12' 0"	1" x 14" BC RIM BOARD OSB	1	13
Bk1	4' 0"	14" BCI® 5000s-1.8	1	1

**DR HORTON**  
**HAYDEN MASTER RH**  
 FIRST FLOOR EWP PLACEMENT PLAN

**Builders FirstSource, Central Carolina Markets**  
 DRAWN BY: JOE DAVIS  
 DATE: 9/13/2023  
 JOB NUMBER: 3612889  
 SCALE: 1/4" = 1'

MINIMUM DESIGN DATA  
 LIVE LOAD 40 PSF  
 DEAD LOAD 10 PSF  
 TOTAL LOAD 50 PSF  
 DOL = 100%  
 DEFLECTION CRITERIA  
 L/480 (MINIMUM)

ARCHITECTURAL PLAN DATE  
**XX-XX-XX**

REVISED ARCH. PLAN DATE  
**XX-XX-XX**

**XXXXXXX**

Sheet  
 1 of 2



**General Notes:**

- Per ANSI/TPI 1-2002 all " Truss to Wall" connections are the responsibility of the Building Designer, not the Truss Manufacturer.
- Dimensions are Feet-Inches- Sixteenths.
- Trusses are to be 24" o.c. unless noted otherwise (U.N.O.)
- Trusses are not designed to support brick U.N.O.
- Do not cut or modify trusses without first contacting Builders FirstSource.
- Immediately contact Builders FirstSource if trusses are damaged.

**Connection Notes:**

- All hangers are to be Simpson or equivalent U.N.O.
- Use Manufacturer's specifications for all hanger connections U.N.O.
- Use 10d x 1 1/2" Nails in hanger connections to single ply roof girder trusses.

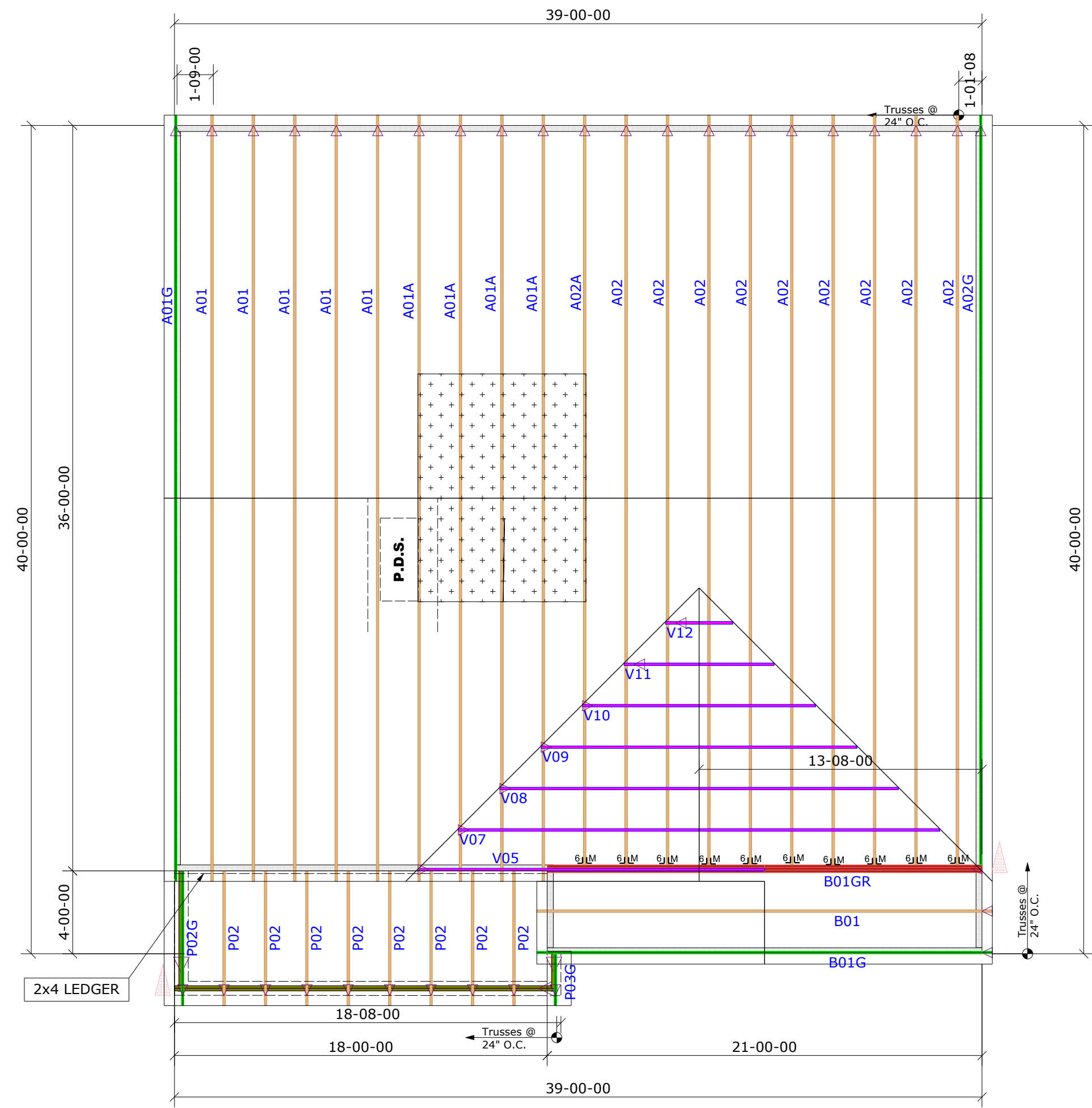
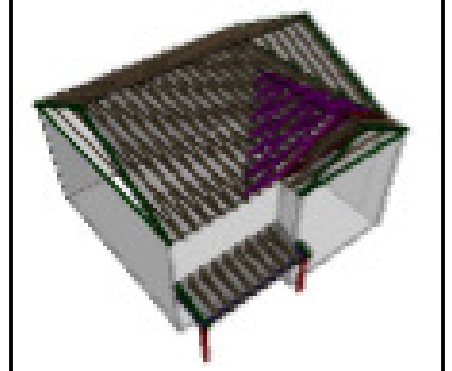
**Floor notes:**

- Shift truss as required to avoid plumbing traps.
- Installation Contractor and/or Field Supervisor are to verify all dimensions, trap locations, and options prior to installation

**Dimension Notes:**

- Drawing not to scale. Do not scale dimensions

△◁▷ LEFT END OF TRUSS AS SHOWN ON TRUSS DETAIL DRAWINGS ARE INDICATED BY TRIANGLE ICONS.



HANGER LIST		ALL TIE DOWNS H10A UNLESS NOTED
10	HTU26	M <sub>10</sub> 16

SPECIAL ITEMS LIST	

MISC MATERIAL	

DR HORTON	
HAYDEN	ELEV: F

MCKAY PLACE	
HARNETT	NC LOT: 21

APPWRIGHT #	
---	

• [OPTION 1]	CODE: IRC 2015
• [OPTION 2]	LOADING:
• [OPTION 3]	T.C.L.L. 40 PSF

DESIGNED BY: HYS	T.C.D.L. 10 PSF
LAYOUT: ---	B.C.L.L. 0 PSF
L/O DATE: 2/28/2024	B.C.D.L. 5 PSF

REVISION HISTORY		WIND:	
REV1:	XX/XX/XX	M.P.H.	120 MPH
REV2:	XX/XX/XX	EXPOSURE CATEGORY	
REV3:	XX/XX/XX	B (WOODED AREAS/OTHERS)	

SALES NO: ---	JOB NO: ---
ACCT NO: ---	

HATCH LEGEND	
	ATTIC ROOM
	VOLUME CEILING
	STICK FRAMING