

ABERDEEN -A, B, C

PLAN ID: 1906 - LEFT HAND - NORTH CAROLINA

| DATE: | REVISION: |
|------------|-------------------------------|
| 09/20/2017 | INITIAL RELEASE OF PLANS |
| 10/20/2017 | CLIENT REVISIONS |
| 11/01/2017 | REVISED PLATE HEIGHT TO 9'-1" |
| 02/07/2018 | ELECTRICAL REVISIONS |
| 09/05/2018 | CLIENT REVISIONS |
| 11/14/2018 | CLIENT REVISIONS |
| 01/09/2019 | REVISED CODE REFERENCES |
| 11/14/2018 | CLIENT REVISIONS |
| 12/03/2019 | CLIENT REVISIONS |
| 12/13/2019 | CLIENT REVISIONS |
| 02/28/2020 | CLIENT REVISIONS |

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REVIEWERS STAMP LOCATION



MODEL 'ABERDEEN' SQUARE FOOTAGES

| AREA | ELEV 'A' | ELEV 'B' | ELEV 'C' |
|----------------|----------|----------|----------|
| 1st FLOOR | 1902 SF | 1902 SF | 1902 SF |
| TOTAL LIVING | 1902 SF | 1902 SF | 1902 SF |
| GARAGE | 450 SF | 450 SF | 450 SF |
| PORCH | 27 SF | 27 SF | 27 SF |
| COVERED PORCH | 110 SF | 110 SF | 110 SF |
| OPT. 2nd FLOOR | +531 SF | +531 SF | +531 SF |

Express HOMES
D.R. HORTON
America's Builder

COVERSHEET

'ABERDEEN'

PLAN REV DATE

02.28.20

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SHEET NUMBER

CS



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



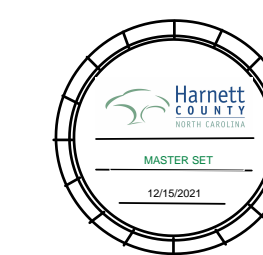
Front Elevation 'C'

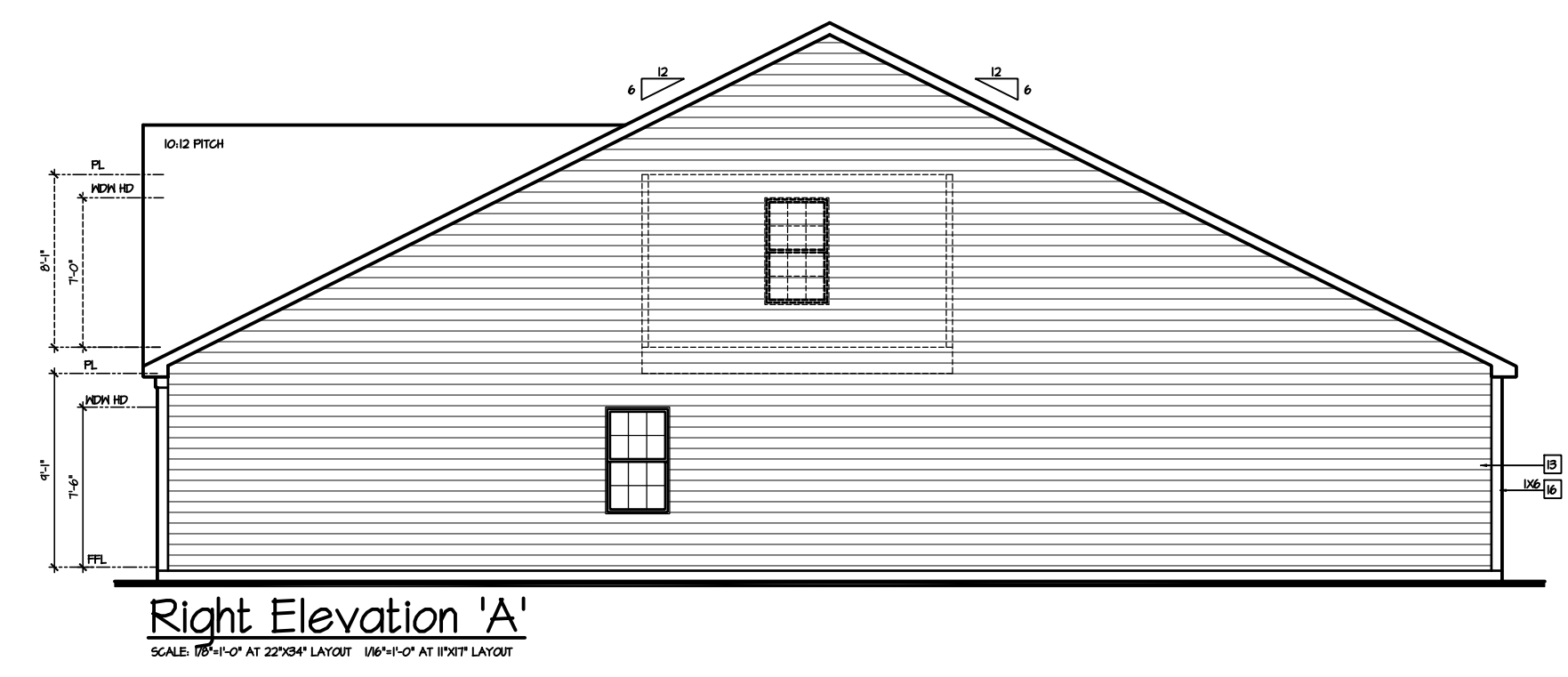
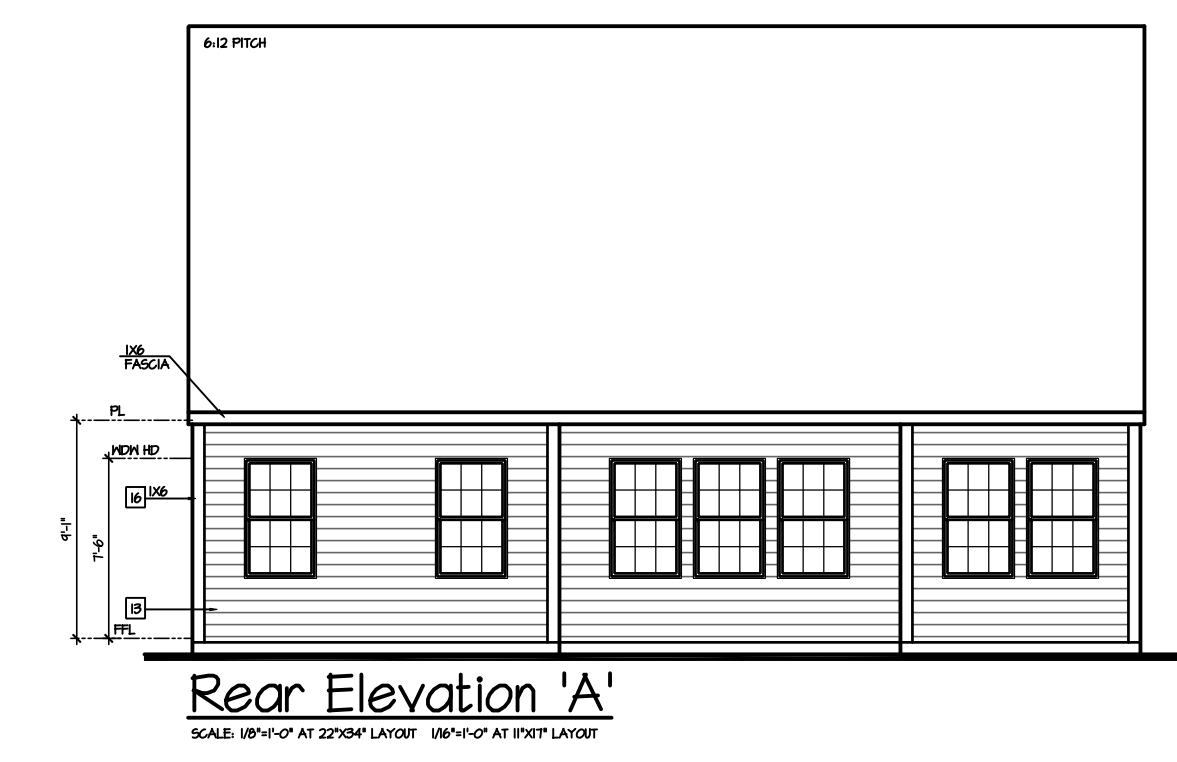
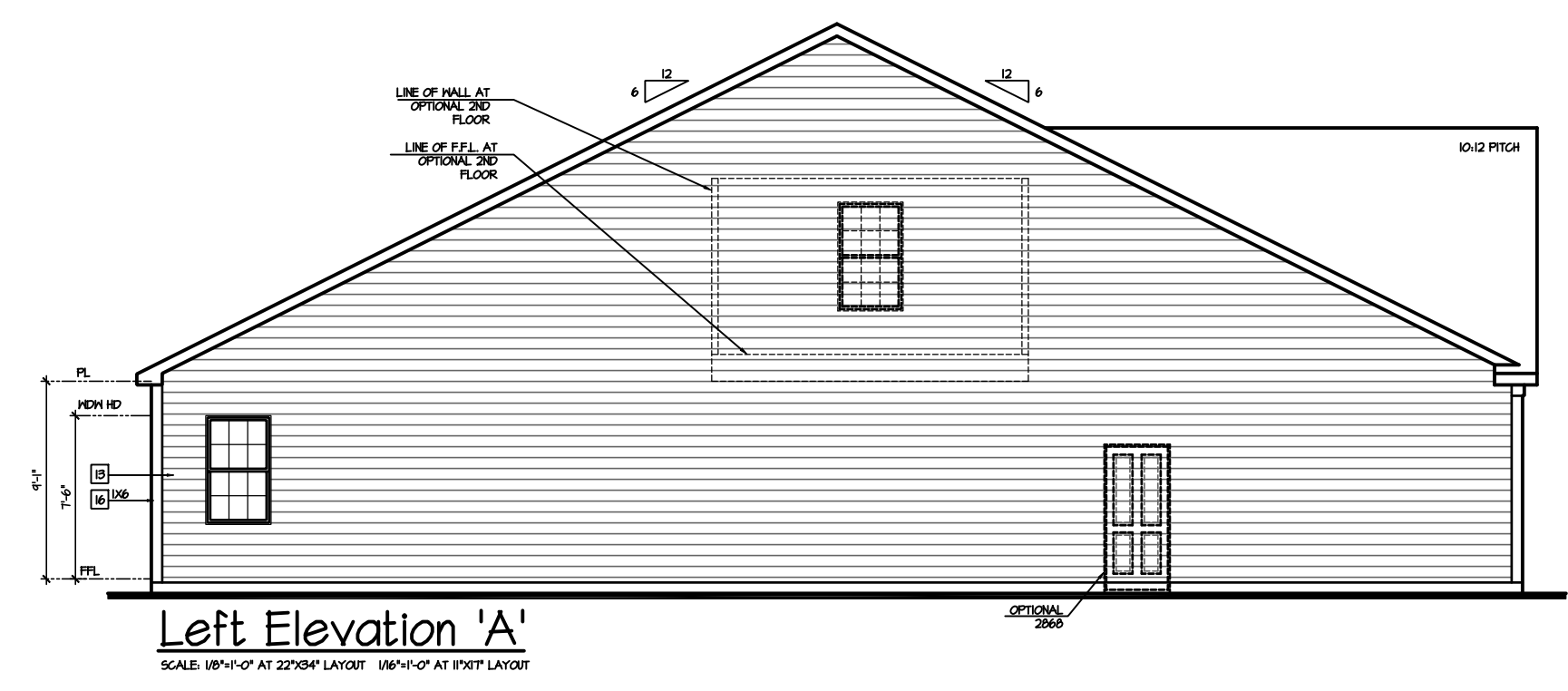
SCALE: 1/4"=1'-0" AT 22'X34" LAYOUT 1/8"=1'-0" AT 11'X17" LAYOUT

| | |
|------------|------------|
| QUICK VIEW | 'ABERDEEN' |
|------------|------------|

| | |
|---------------|----------|
| PLAN REV DATE | 02.28.20 |
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| SHEET NUMBER | |
| 0 | |





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 = T-6" U.N.O. ON ELEVATIONS.
2ND FLOOR = T-0" U.N.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 BATT'S MINIMUM. VERIFY
CEILING WITH ATTIC ABOVE: R-30 BATT'S MINIMUM. VERIFY
FLOOR OVER GARAGE: R-14 BATT'S MINIMUM. VERIFY
ATTIC KNEEWALL: R-14 BATT'S MINIMUM. VERIFY
CRAWL SPACE FLOORING: R-14 BATT'S 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

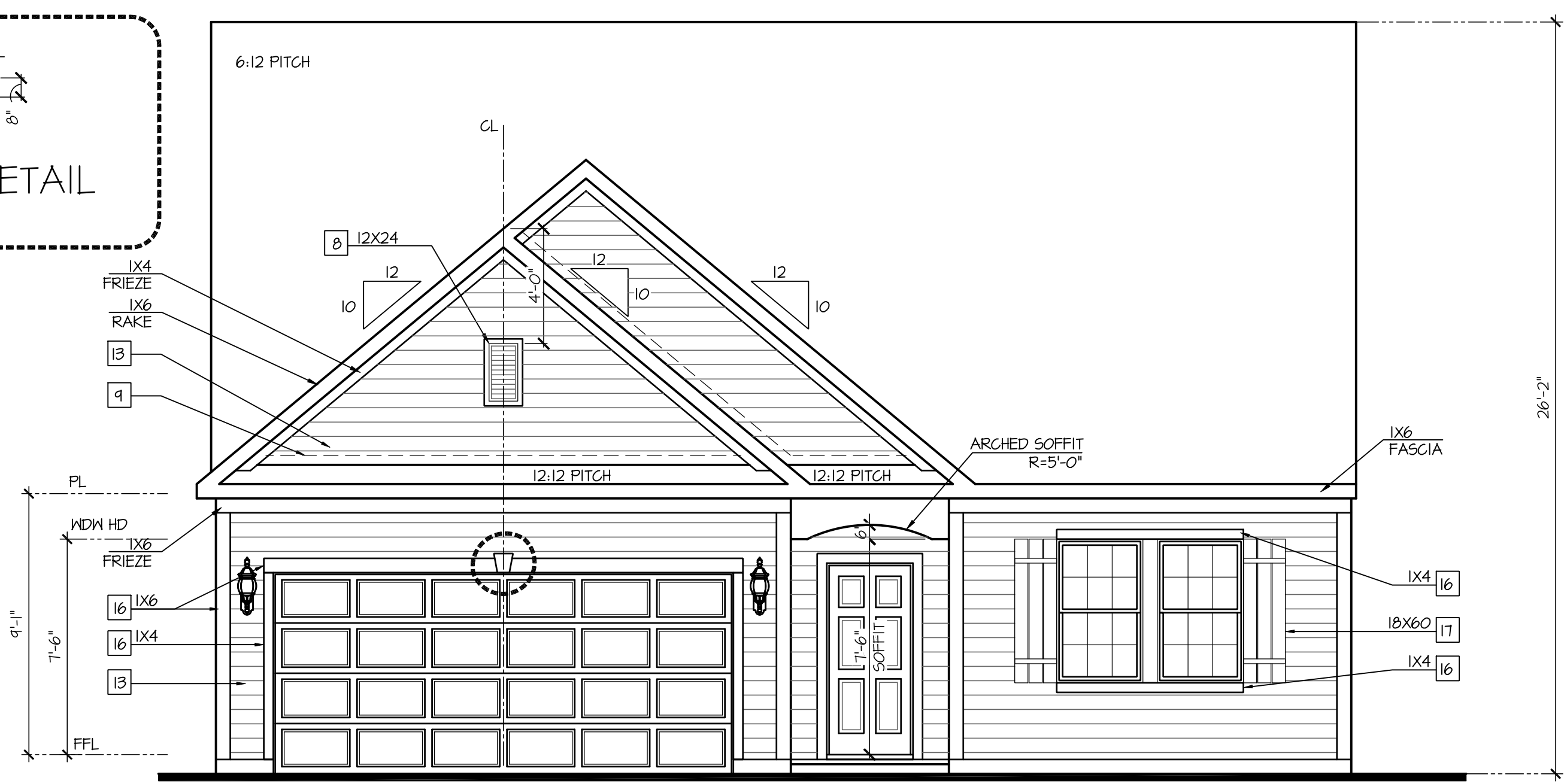
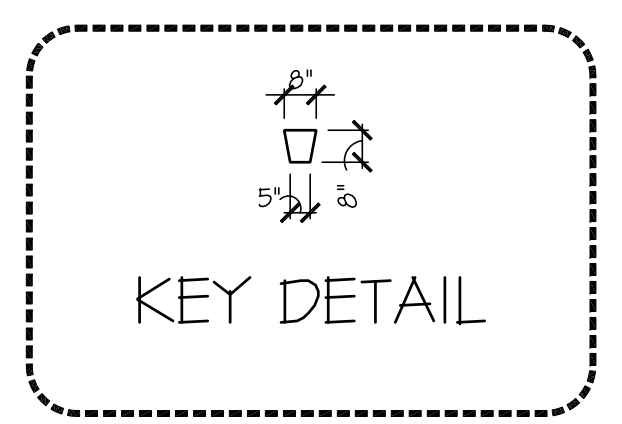
TYPICALS:

- CORROSION RESISTANT SCREEN LOUVERED VENTS, SIZE AS NOTED.
- CODE APPROVED TERMINATION CHIMNEY CAP.
- CORROSION RESISTANT ROOF TO WALL FLASHING. CODE COMPLIANT FLASHING PER NCRG R405.2.8.3
- 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 WAVY SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS: FIBER CEMENT WAVY 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 BATT'S 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, U.N.O. SIZE AS NOTED)
- FYPON SHUTTERS, TYPE AS SHOWN, SIZE AS NOTED. (AT SPECIFIC LOCATIONS: FALSE VINYL SHUTTERS, TYPE AS SHOWN, SIZE AS NOTED.)

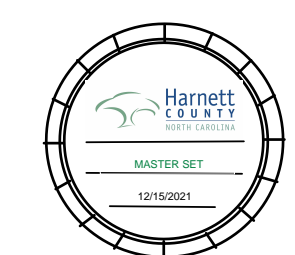
VENEER CALCULATIONS:
HARDBOARD = 335.50 FT
MASONRY = 0.50 FT
MASONRY % = 0%



ELEVATIONS
'ABERDEEN'

PLAN REV DATE
02.28.20

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1A



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

N.C. ATTIC VENT CALCULATION FOR MODEL 'ABERDEEN': 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 90 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 VENTILATING PROVIDED BY EAVE OR CORNICE VENTS.

EXCEPTIONS:
 1. ENCLOSED ATTIC/RAFTER SPACES REQUIRING LESS THAN 150 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 SIGHT 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.

NOTES:

- ALL ROOF DRAINAGE SHALL BE PIPED TO STREET OR APPROVED DRAINAGE FACILITY.
- DASHED LINES INDICATE SHALL BE BELOW.
- LOCATE GUTTER AND DOWNSPOUTS PER BUILDER.
- PITCHED ROOFS AS NOTED.

(PER NCRC SECTION R306.2)
 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
 SQ. IN. OF VENT REQUIRED / 2 = 50% AT HIGH & 50% AT LOW.

ROOF AREA A: = 1344 SF
 1344 SQ. FT. X 144 = 193536 SQ. IN.
 193536 SQ. IN. / 150 = 129024 SQ. IN. OF VENT REQ'D
 129024 SQ. IN. / 2 = 64512 SQ. IN.
 64512 SQ. IN. OF VENT AT HIGH & 64512 SQ. IN. OF VENT AT LOW REQUIRED.

N.C. ATTIC VENT CALCULATION FOR MODEL 'ABERDEEN': 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.

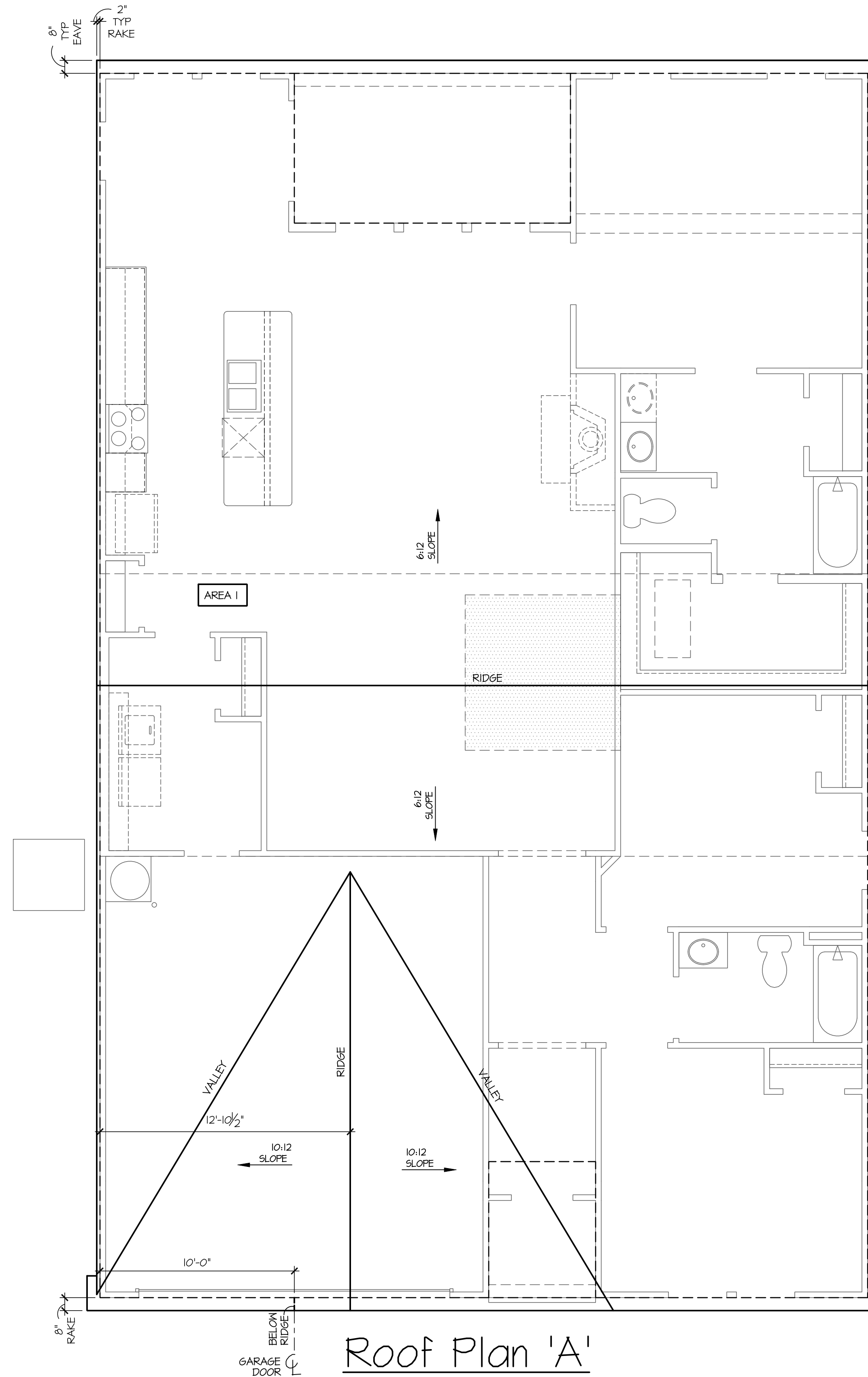
GENERAL CONTRACTOR SHALL VERIFY THE NET FREE VENTILATION OF THE VENT PRODUCT SELECTED BY OWNER. VERIFY WITH MANUFACTURER OF HIGH AND LOW VENTS TO BE USED FOR MINIMUM CALCULATED VENTS REQUIRED. THE REQUIRED VENTILATION SHALL BE MAINTAINED. PROVIDE INSULATION STOP SIGHT THAT INSULATION DOES NOT OBSTRUCT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

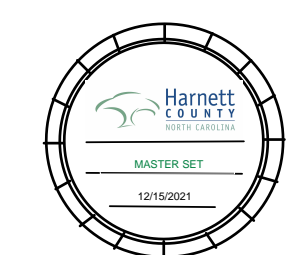
(PER NCRC SECTION R306.2)
 1 SQUARE INCH VENT FOR EVERY 300 SQUARE INCHES OF CEILING
 *144 SQ. IN. = 1 SQ. FT.
 BLDG. CEILING (SF) X 144 = BLDG (SQ. IN.)
 BLDG. (SQ. IN.) / 300 = SQ. IN. OF VENT REQUIRED
 SQ. IN. OF VENT REQUIRED / 2 = 50% AT HIGH & 50% AT LOW.

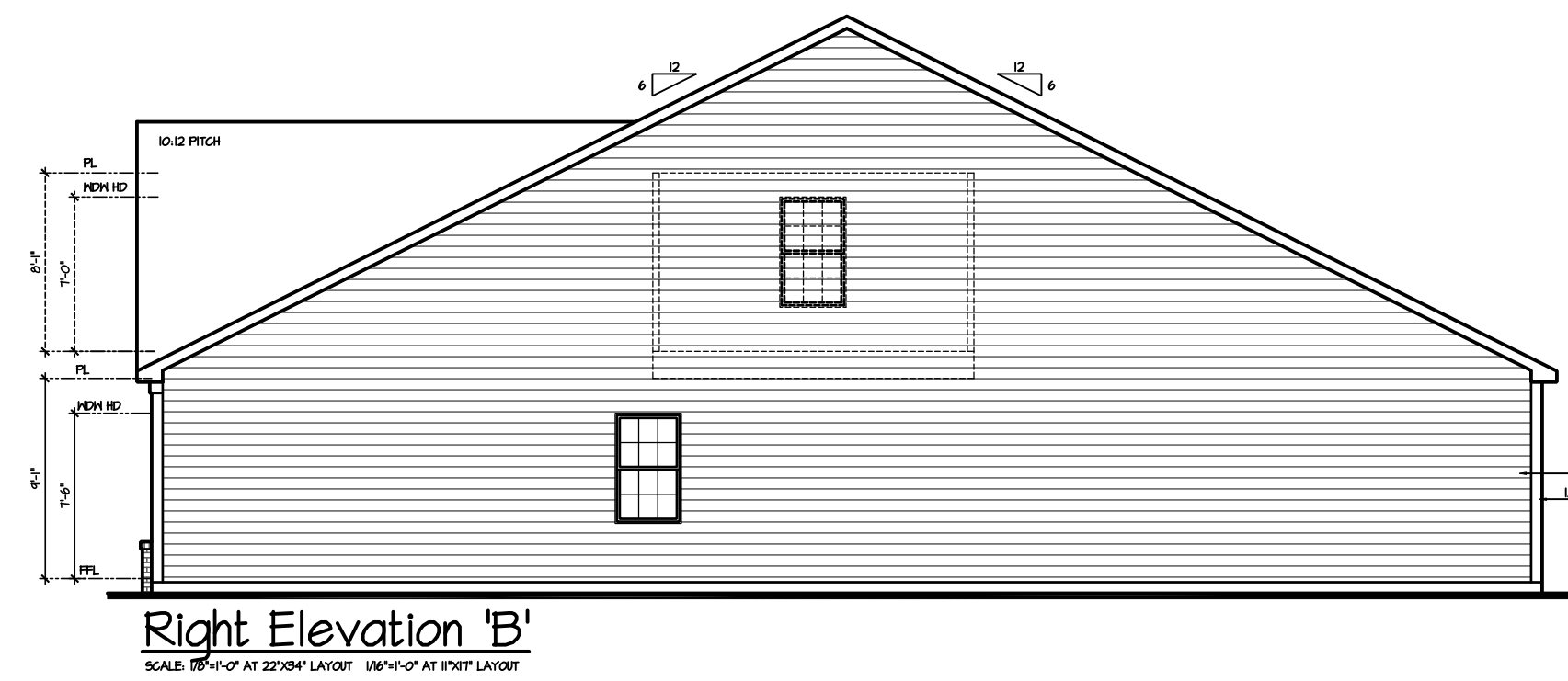
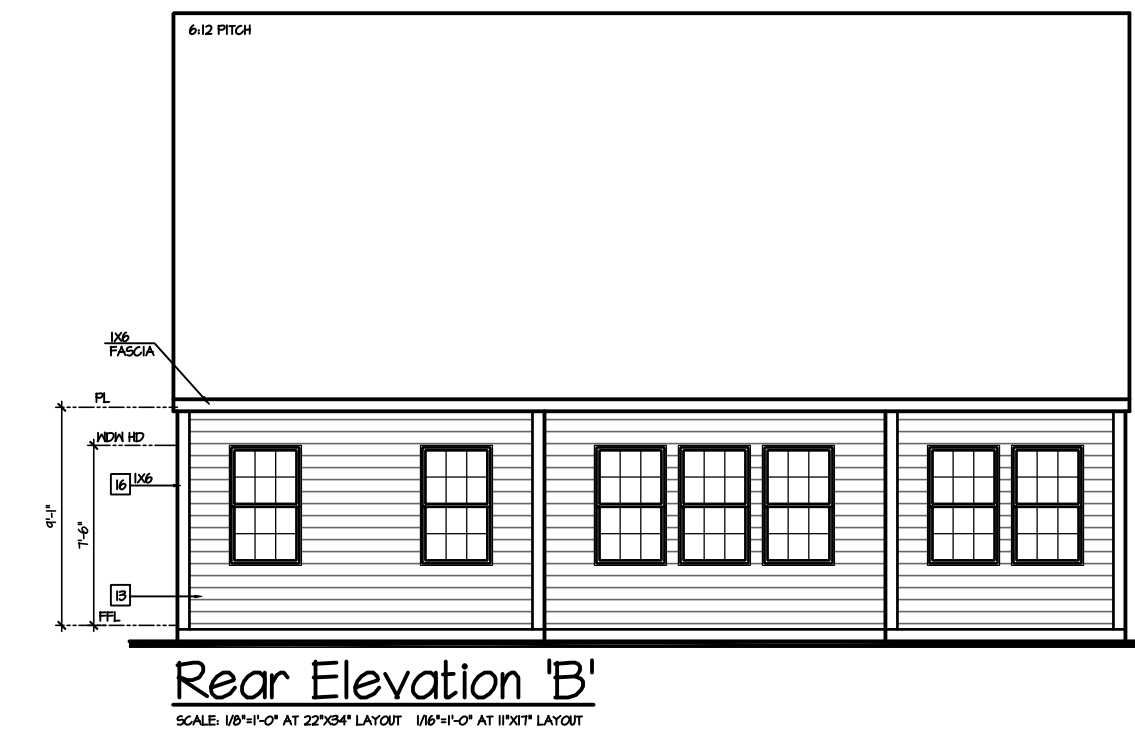
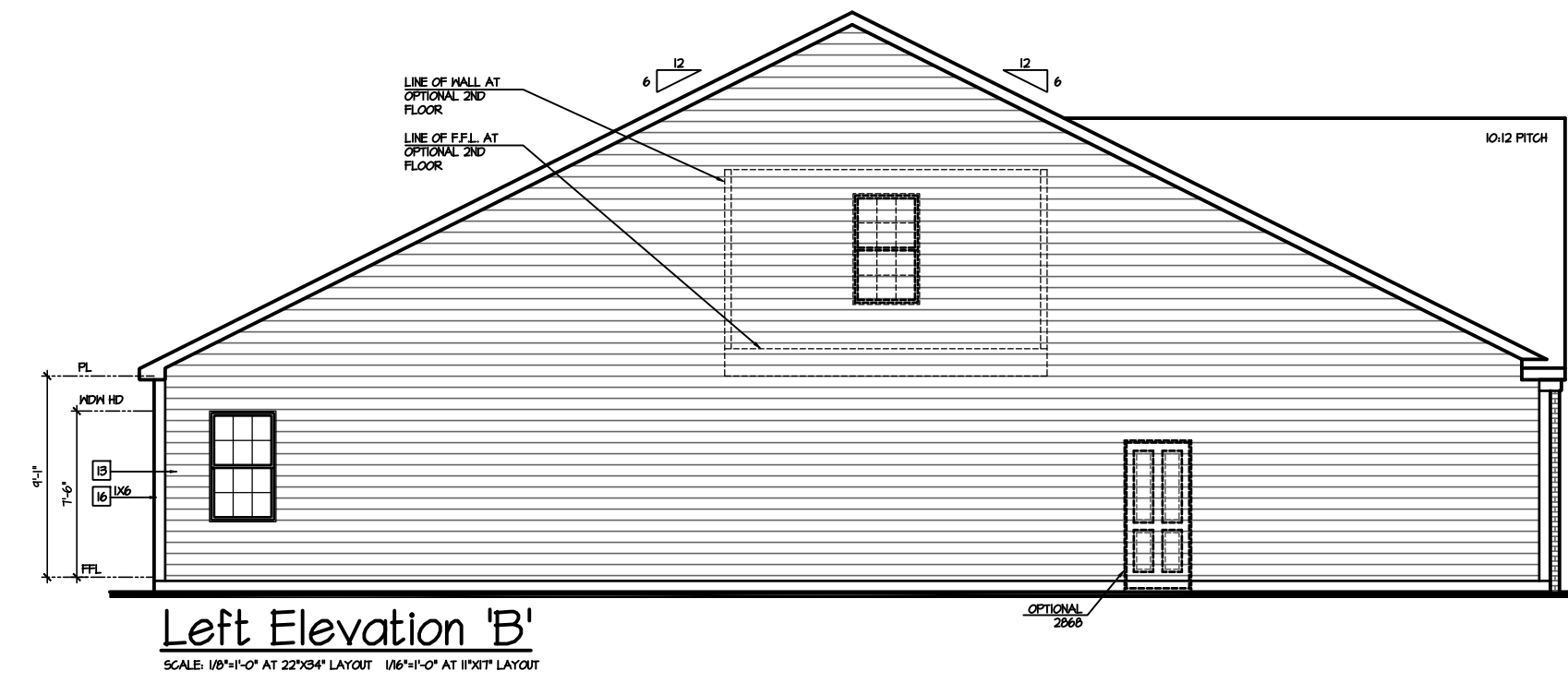
ROOF AREA A: = 1344 SF
 1344 SQ. FT. X 144 = 193536 SQ. IN.
 193536 SQ. IN. / 300 = 64512 SQ. IN. OF VENT REQ'D
 64512 SQ. IN. / 2 = 32256 SQ. IN.
 32256 SQ. IN. OF VENT AT HIGH & 32256 SQ. IN. OF VENT AT LOW REQUIRED.



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

TRUSS MANUFACTURE TO VERIFY HEELS PER COMMUNITY STANDARDS, BUILDER TO VERIFY PRIOR TO CONSTRUCTION





NOTES:

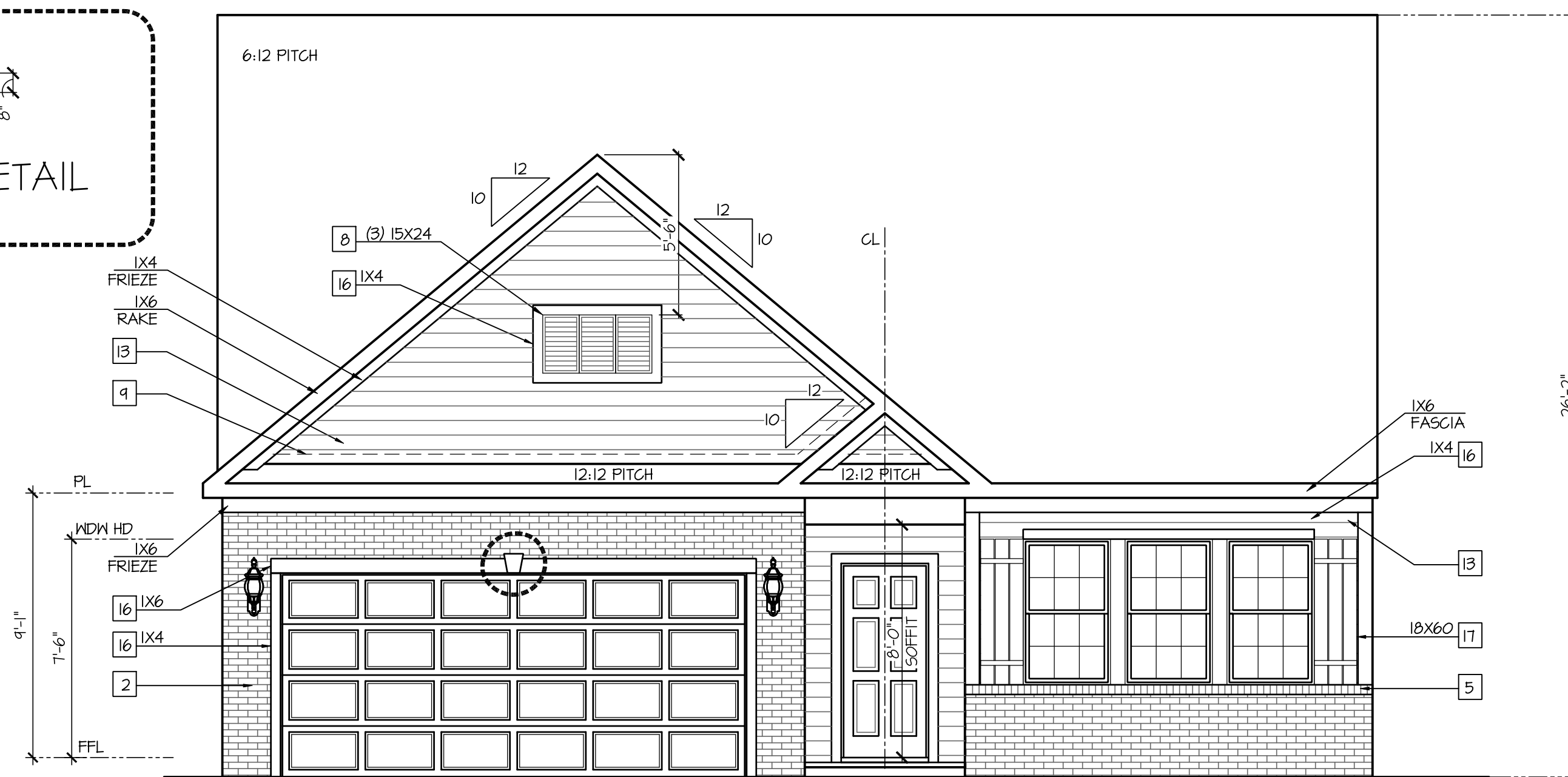
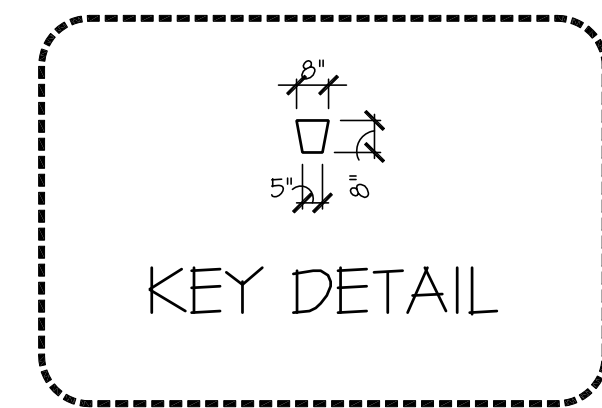
- GRADE CONDITIONS MAY VARY FOR INDIVIDUAL SITE FROM THAT SHOWN. BUILDER SHALL VERIFY AND COORDINATE PER ACTUAL SITE CONDITIONS.
- WINDOW HEAD HEIGHTS:
 1ST FLOOR = T-6" UNO. ON ELEVATIONS.
 2ND FLOOR = T-0" UNO. ON ELEVATIONS.
- ROOFING: PITCHED SHINGLES PER DEVELOPER.
- WINDOWS: MANUFACTURER PER DEVELOPER. 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 N1021.2.
 EXTERIOR WALLS: R-15 BATT'S MINIMUM. VERIFY
 CEILING WITH ATTIC ABOVE: R-30 BATT'S MINIMUM. VERIFY
 FLOOR OVER GARAGE: R-14 BATT'S MINIMUM. VERIFY
 ATTIC KNEEWALL: R-14 BATT'S MINIMUM. VERIFY
 CRAWL SPACE FLOORING: R-14 BATT'S MINIMUM. VERIFY

KEY NOTES:

- MASONRY:**
- 1 ADHERED STONE VENEER AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
 - 2 MASONRY FULL BRICK AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
 - 3 MASONRY FULL STONE AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
 - 4 8" SOLDIER COURSE.
 - 5 ROWLOCK COURSE
- TYPICALS:**
- 7 CORROSION RESISTANT SCREEN LOUVERED VENTS, SIZE AS NOTED.
 - 8 CODE APPROVED TERMINATION CHIMNEY CAP.
 - 9 CORROSION RESISTANT ROOF TO WALL FLASHING. CODE COMPLIANT FLASHING PER NCR 9405.2.8.3
 - 10 STANDING SEAM METAL ROOF, INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - 11 DECORATIVE WROUGHT IRON. SEE DETAILS.
- SIDING:**
- 12 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.)
 - 13 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.)
 - 14 VINYL WAVY SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS: FIBER CEMENT WAVY SIDING PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
 - 15 VINYL BOARD AND BATT SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS: FIBER CEMENT PANEL SIDING W/ 1X3 BATT'S AT 12" O.C. PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
 - 16 VINYL TRIM SIZE AS NOTED (AT SPECIFIC LOCATIONS: 1X FIBER CEMENT TRIM OR EQUAL, UNO. SIZE AS NOTED)
 - 17 FYPON 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 NRC SECTION E312.1 AND E312.2.

VENEER CALCULATIONS:
 HARDBOARD = 205 SQ. FT.
 MASONRY = 124 SQ. FT.
 MASONRY % = 38%



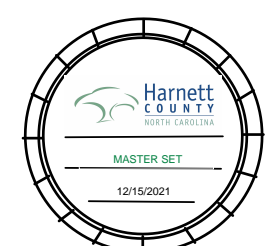
Front Elevation 'B'

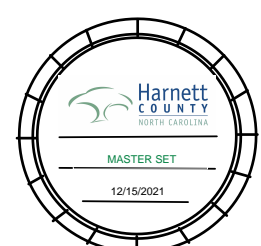
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ELEVATIONS
 'ABERDEEN'

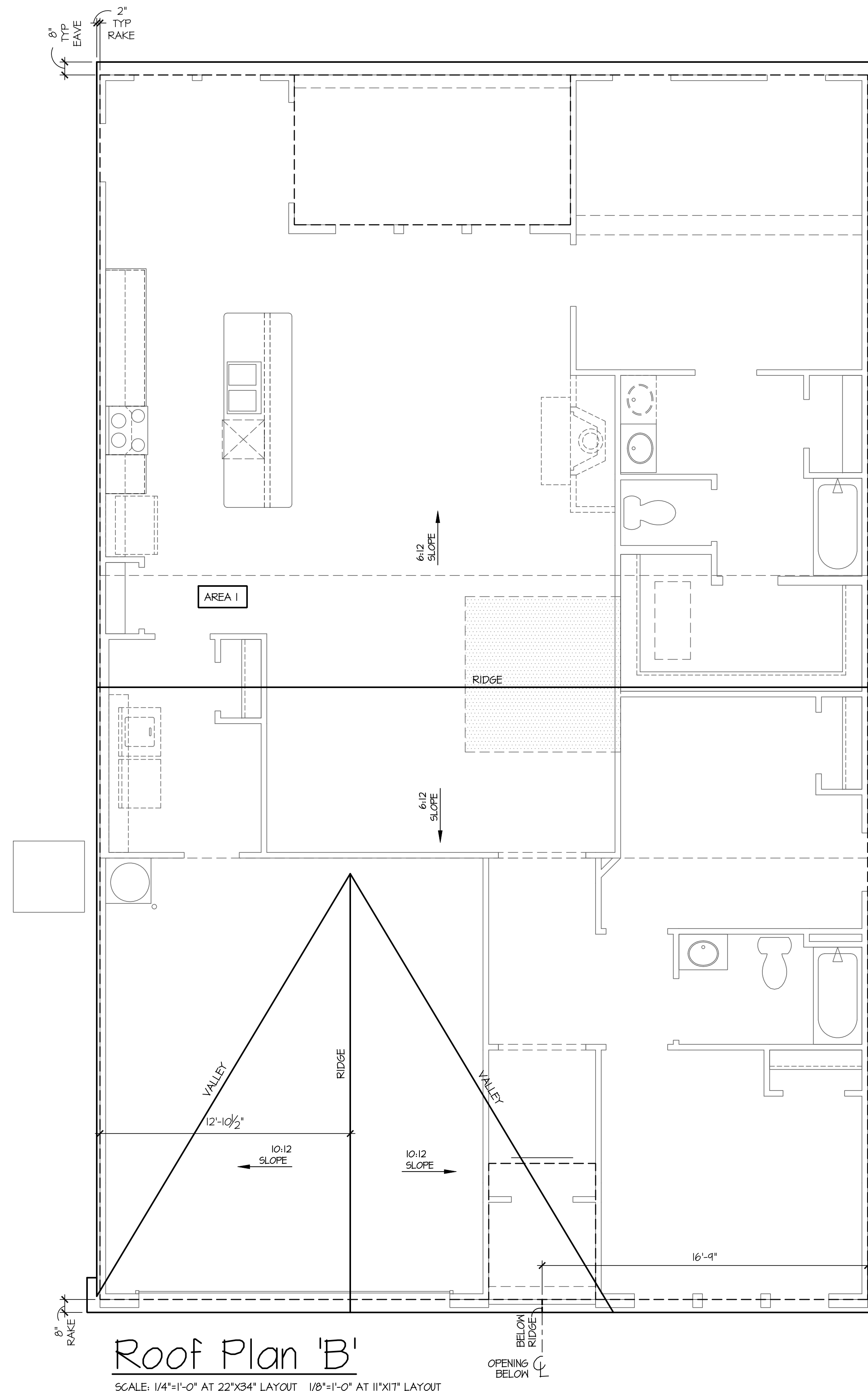
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TRUSS MANUFACTURE TO VERIFY HEELS PER COMMUNITY STANDARDS, BUILDER TO VERIFY PRIOR TO CONSTRUCTION



Roof Plan 'B'

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

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

N.C ATTIC VENT CALCULATION FOR MODEL 'ABERDEEN': 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 90 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 150 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 SUGAR 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.

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.

(PER NCRC SECTION R306.2)

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
 SQ. IN. OF VENT REQUIRED / 2 = 50% AT HIGH & 50% AT LOW.

ROOF AREA 1: = 1344 SF

1344 SQ. FT. X 144 = 193536 SQ. IN.
 193536 SQ. IN. / 150 = 129024 SQ. IN. OF VENT REQ'D
 129024 SQ. IN. / 2 = 64512 SQ. IN.
 64512 SQ. IN. OF VENT AT HIGH & 64512 SQ. IN. OF VENT AT LOW REQUIRED.

N.C ATTIC VENT CALCULATION FOR MODEL 'ABERDEEN': 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 SUGAR 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.

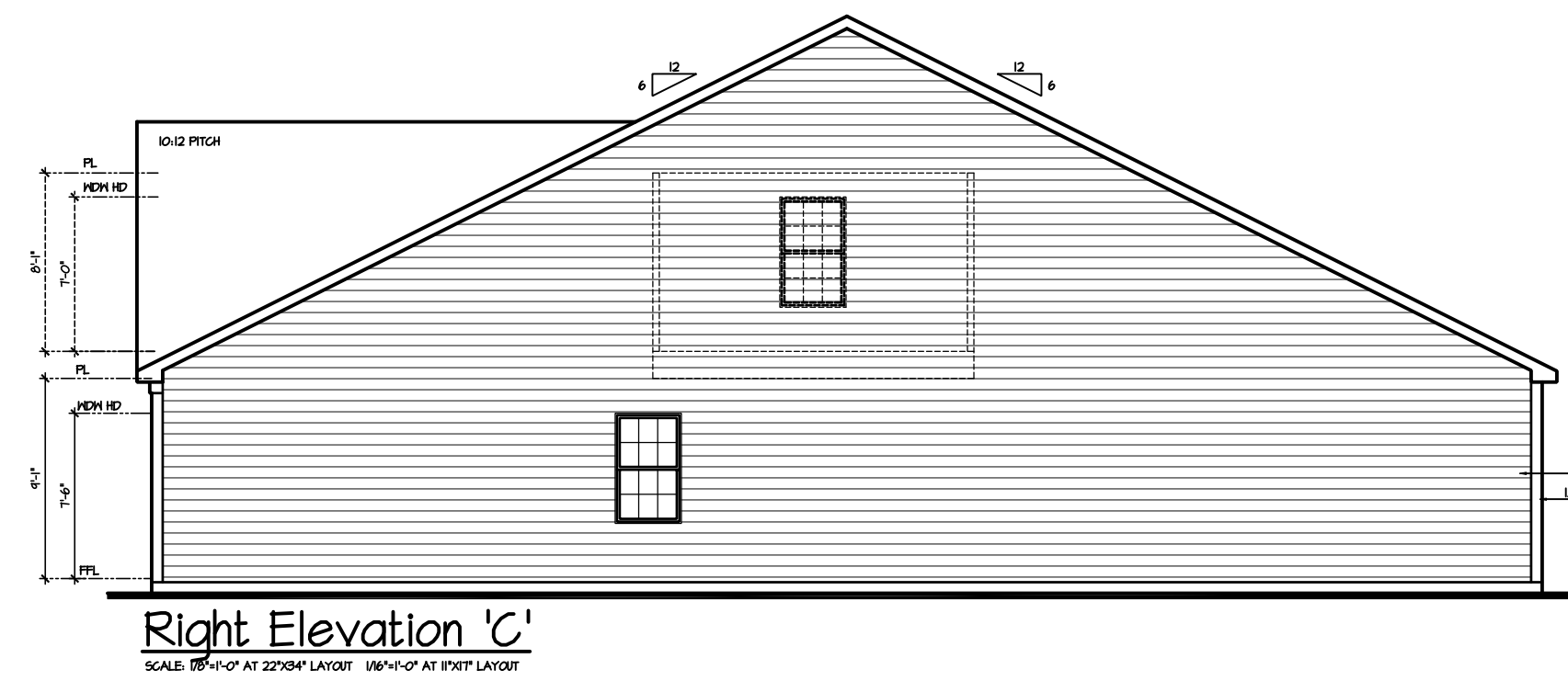
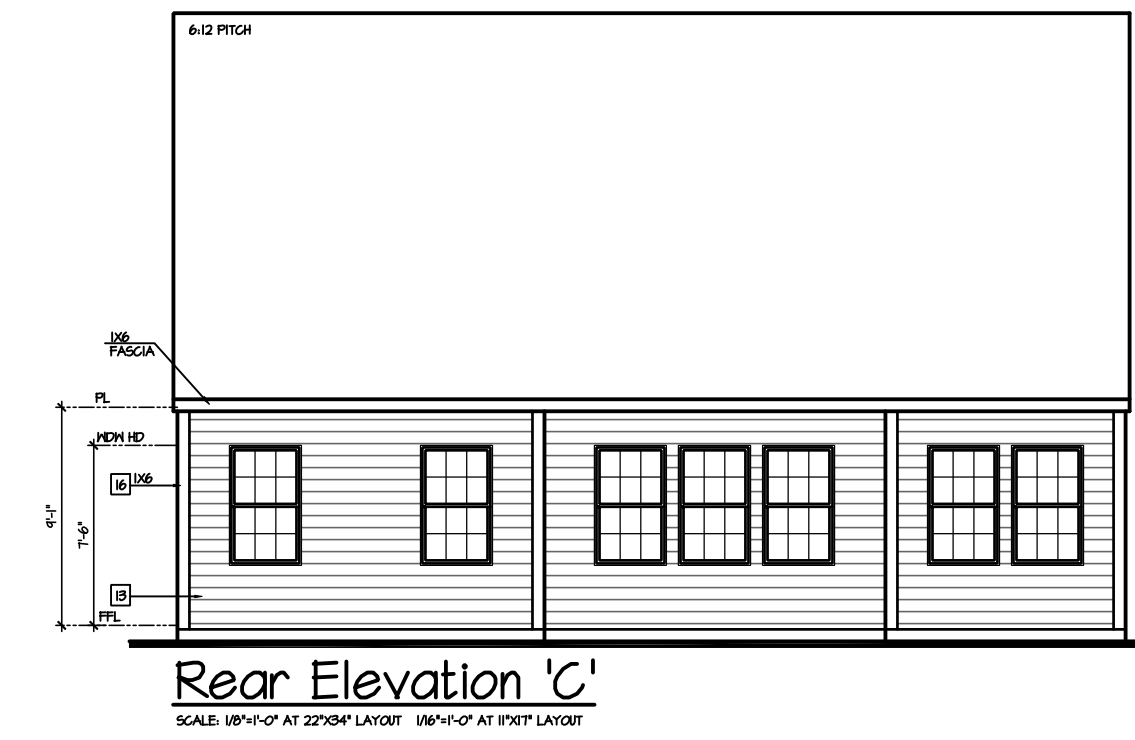
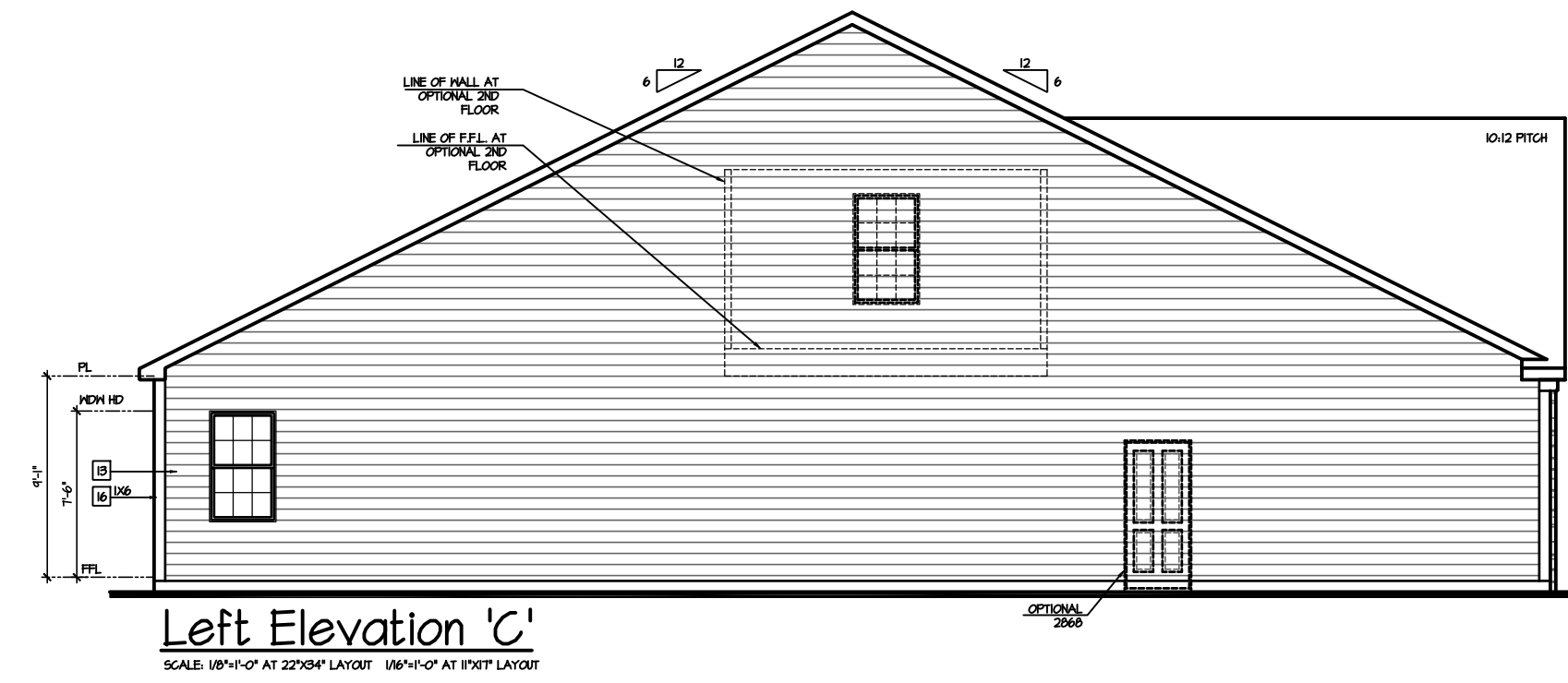
PER DEVELOPER, AT ALL CANTILEVERED FLOORS, CANTILEVERED ARCHITECTURAL POP-OUTS, AND ANY DOUBLE FRAMING PROJECTIONS THAT ARE SEPARATED FROM THE VENTING CALCULATIONS SHOWN ABOVE, PROVIDE A CONTINUOUS 2" CORROSION RESISTANT SOFFIT VENT AT UNDERSIDE OF FRAMED ELEMENT.

(PER NCRC SECTION R306.2)

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: = 1344 SF

1344 SQ. FT. X 144 = 193536 SQ. IN.
 193536 SQ. IN. / 300 = 64512 SQ. IN. OF VENT REQ'D
 64512 SQ. IN. / 2 = 32256 SQ. IN.
 32256 SQ. IN. OF VENT AT HIGH & 32256 SQ. IN. OF VENT AT LOW REQUIRED.



NOTES:

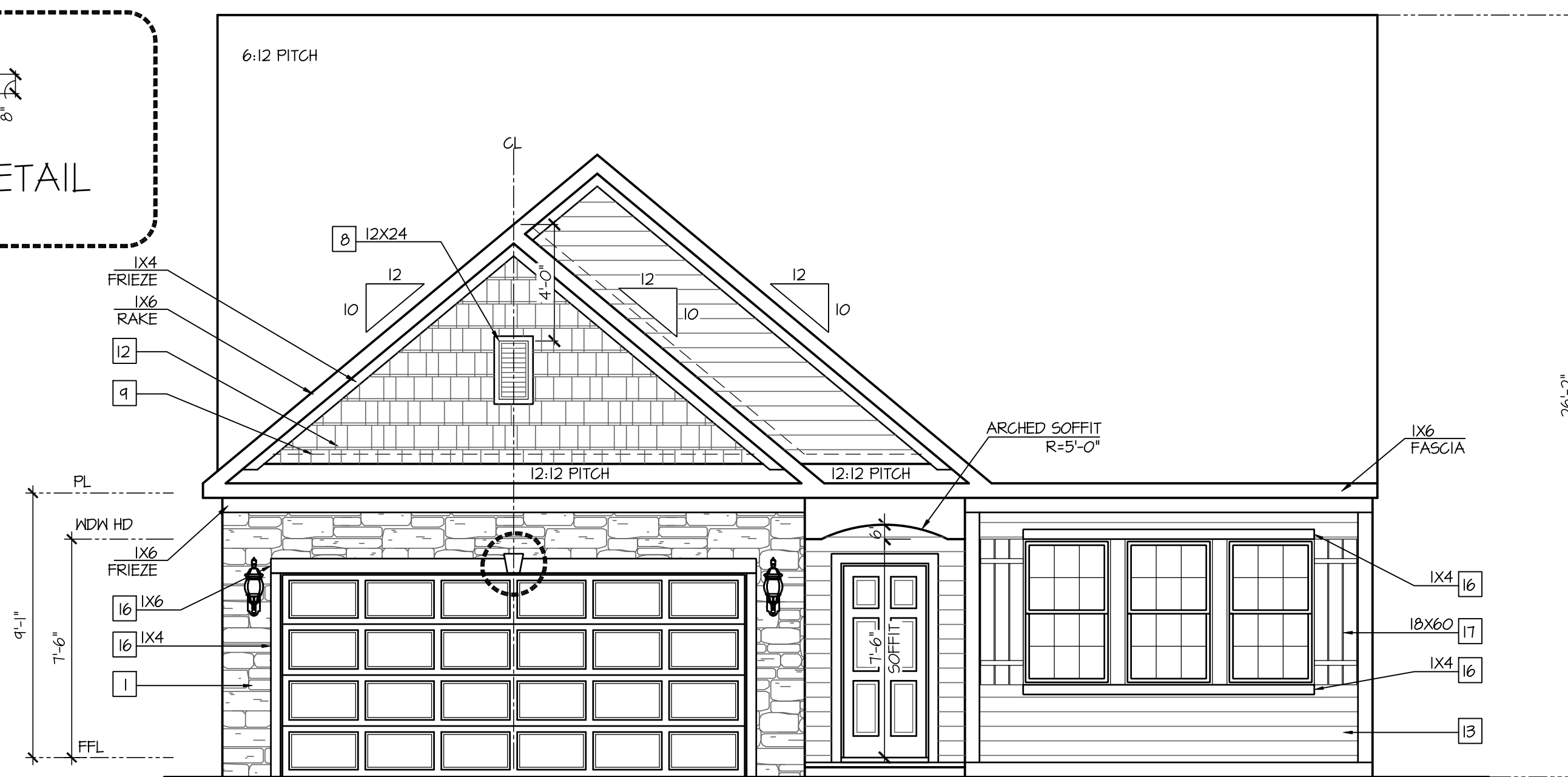
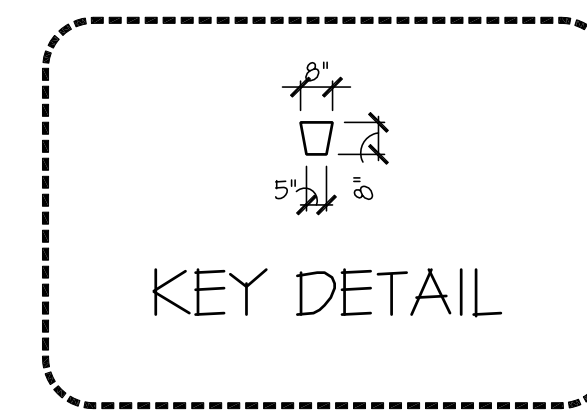
- GRADE CONDITIONS MAY VARY FOR INDIVIDUAL SITE FROM THAT SHOWN. BUILDER SHALL VERIFY AND COORDINATE PER ACTUAL SITE CONDITIONS.
- WINDOW HEAD HEIGHTS:
 1ST FLOOR = T-6" UNO. ON ELEVATIONS.
 2ND FLOOR = T-0" UNO. ON ELEVATIONS.
- ROOFING: PITCHED SHINGLES PER DEVELOPER.
- WINDOWS: MANUFACTURER PER DEVELOPER. 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 N1021.2.
 EXTERIOR WALLS: R-15 BATT'S MINIMUM. VERIFY
 CEILING WITH ATTIC ABOVE: R-30 BATT'S MINIMUM. VERIFY
 FLOOR OVER GARAGE: R-14 BATT'S MINIMUM. VERIFY
 ATTIC KNEEWALL: R-14 BATT'S MINIMUM. VERIFY
 CRAWL SPACE FLOORING: R-14 BATT'S MINIMUM. VERIFY

KEY NOTES:

- MASONRY:**
- 1 ADHERED STONE VENEER AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
 - 2 MASONRY FULL BRICK AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
 - 3 MASONRY FULL STONE AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
 - 4 8" SOLDIER COURSE.
 - 5 ROWLOCK COURSE
- TYPICALS:**
- 7 CORROSION RESISTANT SCREEN LOUVERED VENTS, SIZE AS NOTED.
 - 8 CODE APPROVED TERMINATION CHIMNEY CAP.
 - 9 CORROSION RESISTANT ROOF TO WALL FLASHING. CODE COMPLIANT FLASHING PER NCRG R405.2.8.3
 - 10 STANDING SEAM METAL ROOF, INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - 11 DECORATIVE WROUGHT IRON. SEE DETAILS.
- SIDING:**
- 12 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.)
 - 13 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.)
 - 14 VINYL WAVY SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS: FIBER CEMENT WAVY SIDING PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
 - 15 VINYL BOARD AND BATT SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS: FIBER CEMENT PANEL SIDING W/ 1X3 BATT'S AT 12" O.C. PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
 - 16 VINYL TRIM SIZE AS NOTED (AT SPECIFIC LOCATIONS: 1X FIBER CEMENT TRIM OR EQUAL, UNO. SIZE AS NOTED)
 - 17 FYPON 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 E312.1 AND E312.2.

VENEER CALCULATIONS:
 HARDBOARD = 244 SQ FT
 MASONRY = 80 SQ FT
 MASONRY % = 25%



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

ELEVATIONS
 'ABERDEEN'

PLAN REV DATE
 02.28.20

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 SHEET NUMBER
1C



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

N.C ATTIC VENT CALCULATION FOR MODEL 'ABERDEEN': 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 90 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 150 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-SMALL 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.

NOTES:

- ALL ROOF DRAINAGE SHALL BE PIPED TO STREET OR APPROVED DRAINAGE FACILITY.
- DASHED LINES INDICATE SHALL BE BELOW.
- LOCATE GUTTER AND DOWNSPOUTS PER BUILDER.
- PITCHED ROOFS AS NOTED.

(PER NCRC SECTION R306.2)

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
 SQ. IN. OF VENT REQUIRED / 2 = 50% AT HIGH & 50% AT LOW.

ROOF AREA II = 1344 SF

1344 SQ. FT. X 144 = 193536 SQ. IN.
 193536 SQ. IN. / 150 = 129024 SQ. IN. OF VENT REQ'D
 129024 SQ. IN. / 2 = 64512 SQ. IN.
 64512 SQ. IN. OF VENT AT HIGH & 64512 SQ. IN. OF VENT AT LOW REQUIRED.

N.C ATTIC VENT CALCULATION FOR MODEL 'ABERDEEN': 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-SMALL 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.

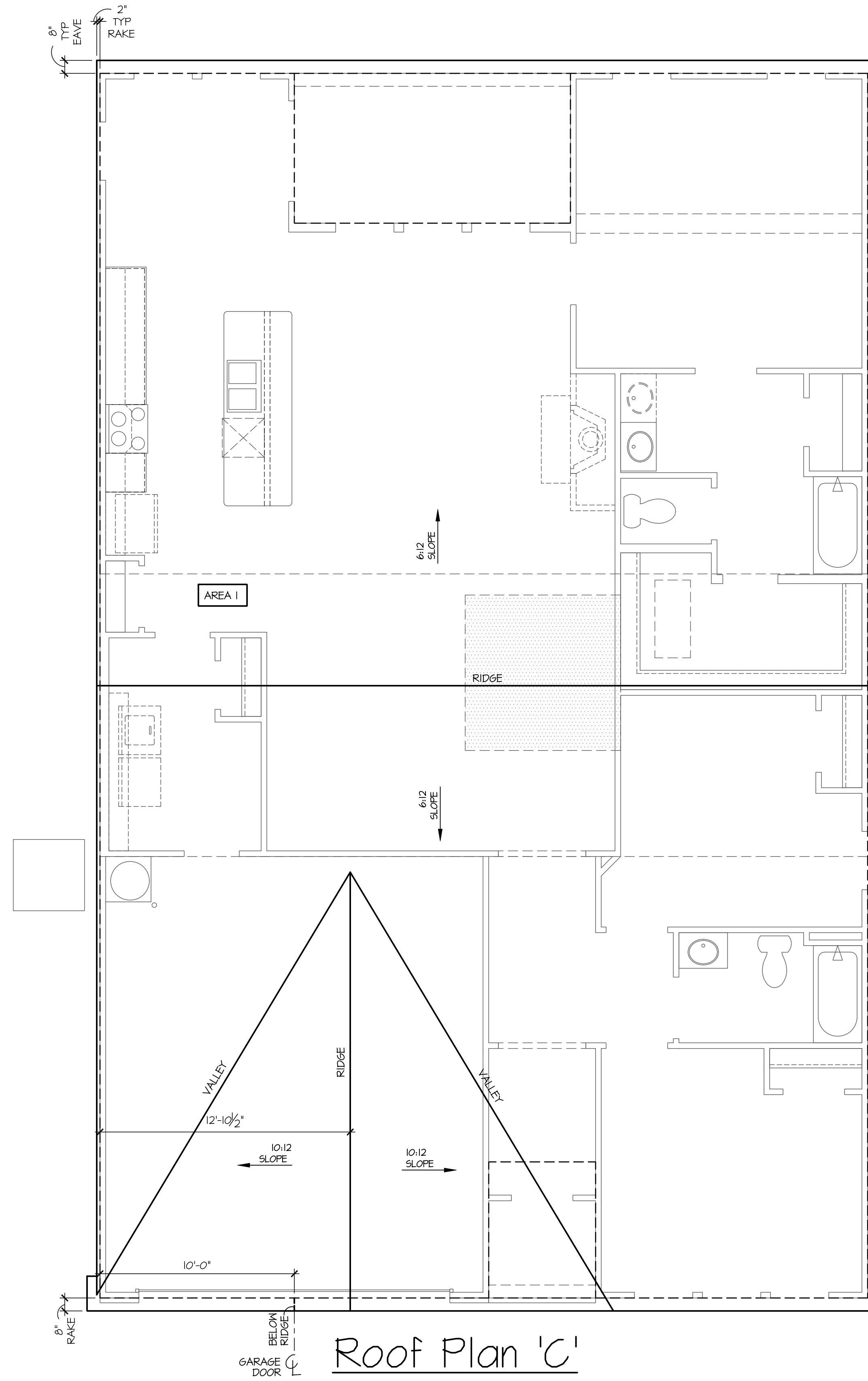
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 BLDG. (SQ. IN.) / 300 = SQ. IN. OF VENT REQUIRED
 SQ. IN. OF VENT REQUIRED / 2 = 50% AT HIGH & 50% AT LOW.

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 64512 SQ. IN. / 2 = 32256 SQ. IN.
 32256 SQ. IN. OF VENT AT HIGH & 32256 SQ. IN. OF VENT AT LOW REQUIRED.



Roof Plan 'C'

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

TRUSS MANUFACTURE TO VERIFY HEELS PER COMMUNITY STANDARDS, BUILDER TO VERIFY PRIOR TO CONSTRUCTION



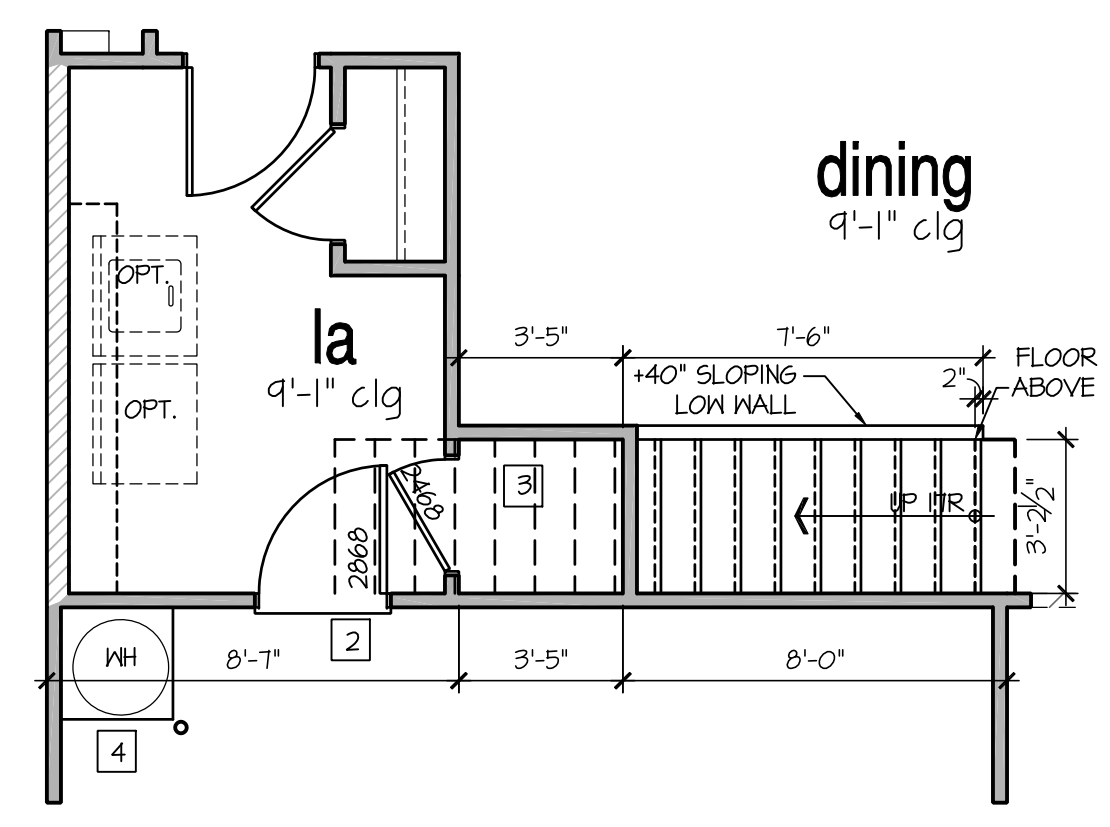
9'-1" STAIR NOTE:
 (USE 14" T.J.I WITH 3/4" PLYWOOD SUBFLOOR)
 16 TREADS AT 10" EACH VERIFY
 17 RISERS AT +/- 7.21" = 123 3/4" TOTAL
 RISE VERIFY

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

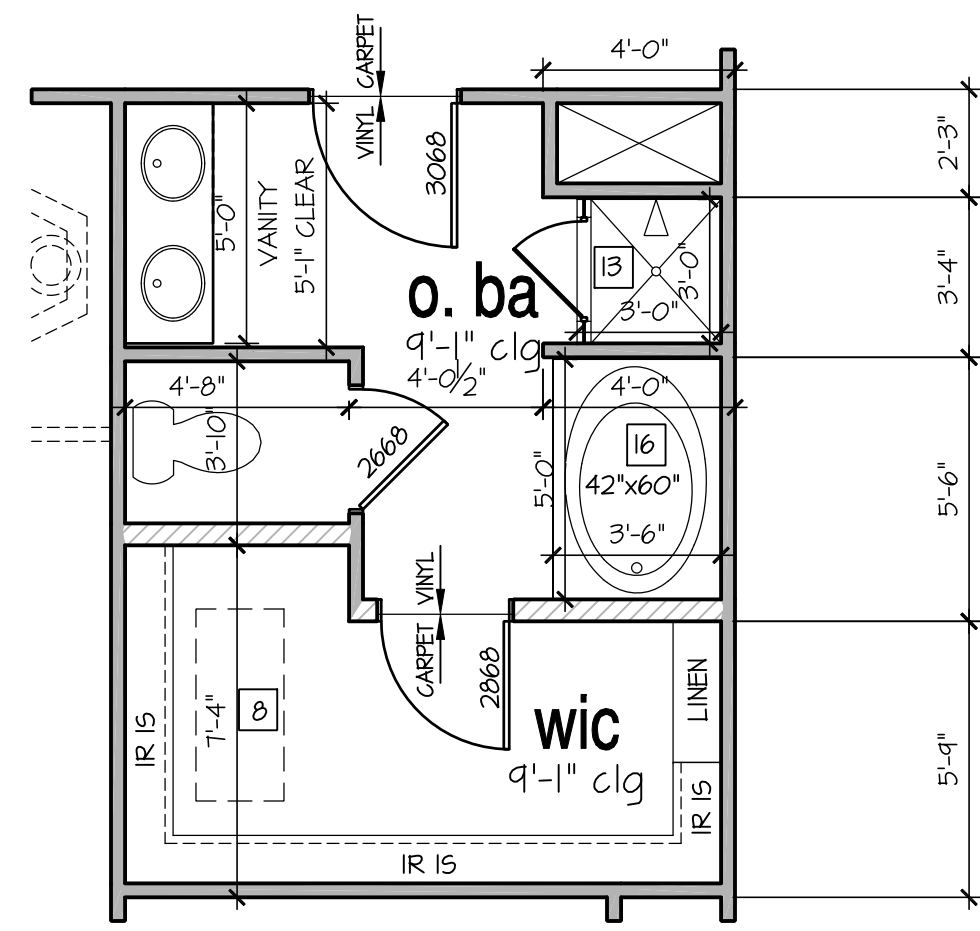
WALL LEGEND:

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

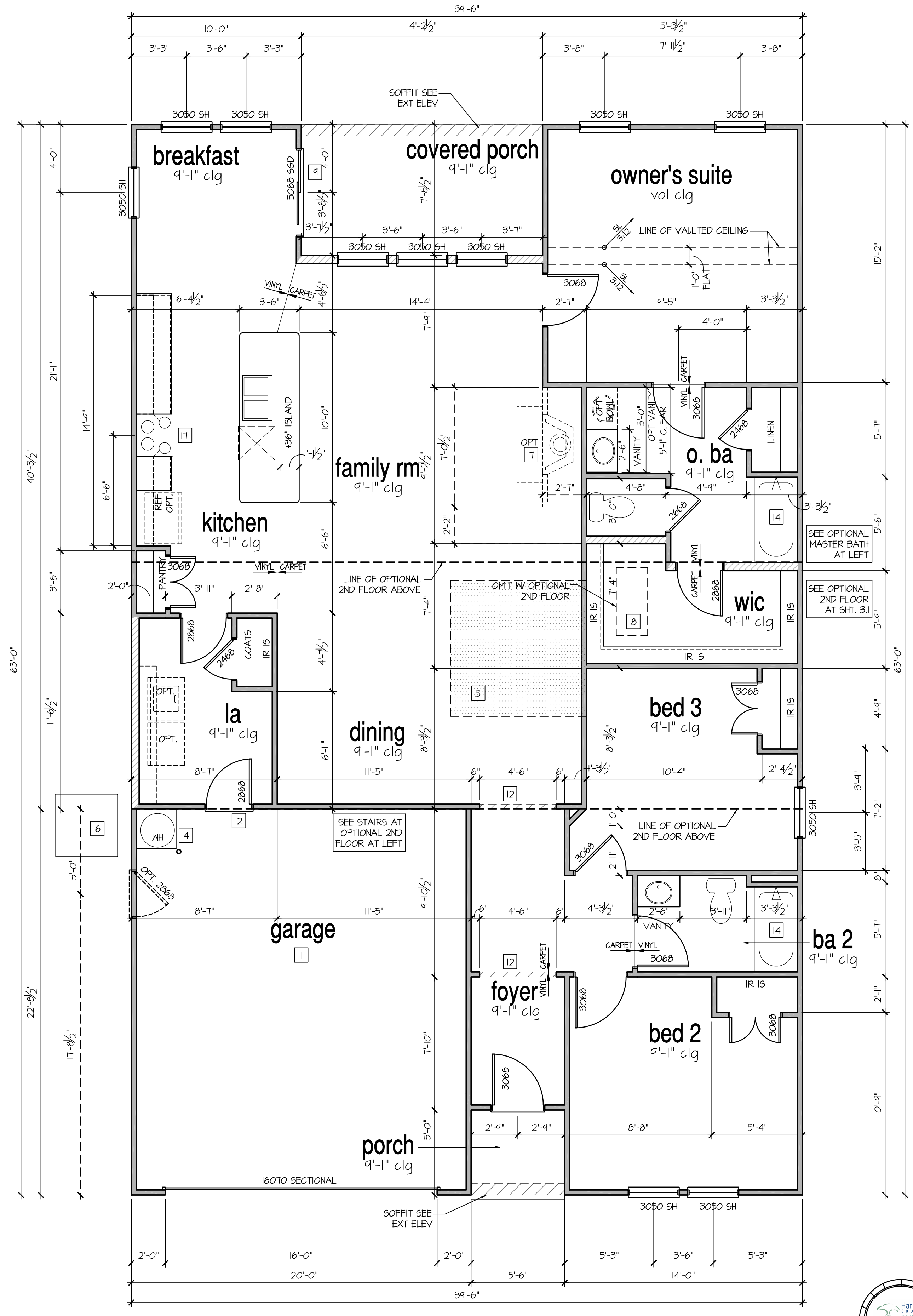
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 - GAS WATER HEATER ON 18" HIGH PLATFORM (PER CHAPTER 5 NCR-PLUMBING) (AT SPECIFIC LOCATIONS; ELECTRIC WATER HEATER PER LOCAL CODES)
 - OPTIONAL ATTIC LOCATION:
 (A) 8'x8' PLATFORM U.N.O. VERIFY WITH TRUSS MANUFACTURER. (6'-6" MIN. CLEAR HEIGHT TO 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"x20". FIRE RATED ACCESS AS NOTED. (PER NCR SECTION R801.) ATTIC ACCESS LADDER, VERIFY LOCATION AND SIZE WITH TRUSSES. (25 1/2" X 54" SIZE) TYPICALS:
 - TEMPERED SAFETY GLASS. (PER NCR SECTION 308.4.)
 - PLYWOOD SHELF ABOVE WITH DRYWALL FINISH OVER. HEIGHT AS NOTED.
 - HALF WALL, HEIGHT AS NOTED.
 - INTERIOR SOFFITS: FFL = 8'-0" U.N.O. SFL = 7'-6" U.N.O.
- BATHS:**
- ACRYLIC SHOWER PAN W/ VIKRELL SURROUND, SIZE AS DIMENSIONED
 - 30"x60" TUB/SHOWER PAN W/ VIKRELL SURROUND
 - N/A
 - 42"x60" ACRYLIC ALCOVE TUB KITCHEN:
 - 30" SLIDE-IN ELECTRICAL RANGE W/ HOOD VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - 30" GAS COOKTOP AND HOOD. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - ELECTRIC OVEN WITH MICROWAVE OVEN.



Stairs At Opt. 2nd Floor
 SCALE: 1/4"=1'-0" AT 22"x34" LAYOUT 1/8"=1'-0" AT 11"x11" LAYOUT



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



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



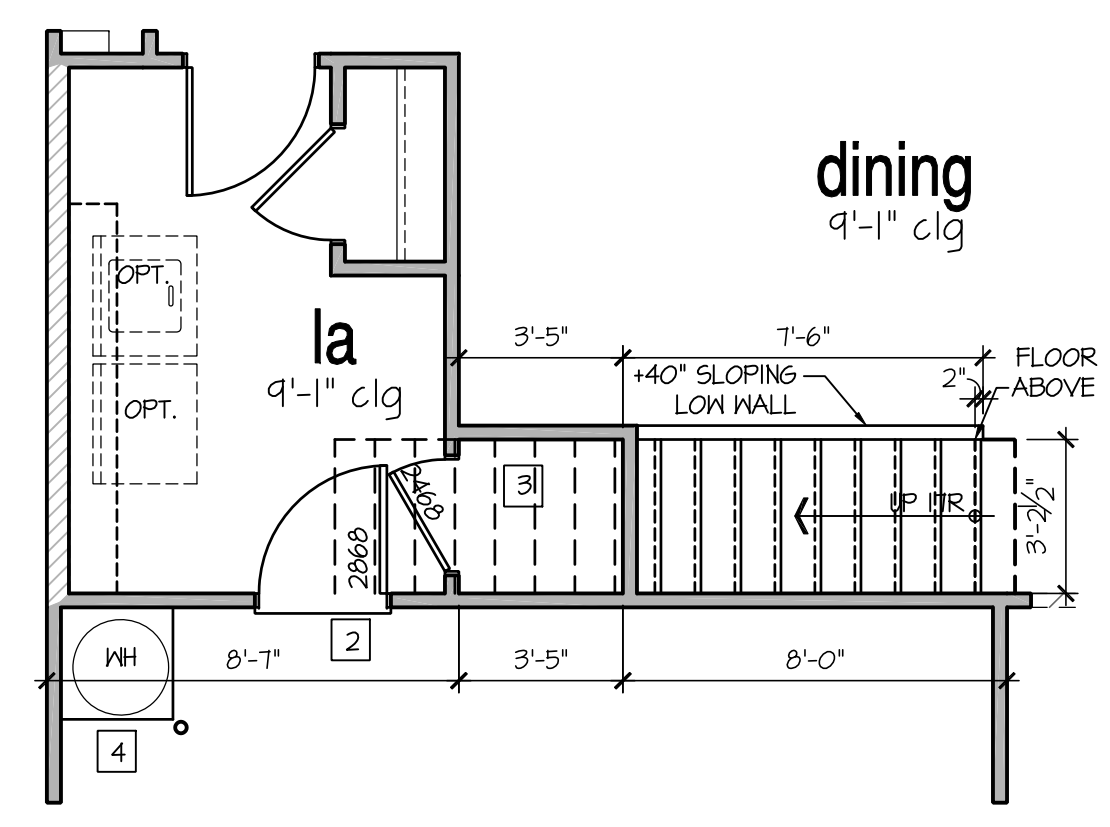
9'-1" STAIR NOTE:
 (USE 14" T.J.I WITH 3/4" PLYWOOD SUBFLOOR)
 16 TREADS AT 10" EACH VERIFY
 17 RISERS AT +/- 7.21" = 123 3/4" TOTAL
 RISE VERIFY

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 1ST FLOOR = 7'-6" U.N.O. ON ELEVATIONS.
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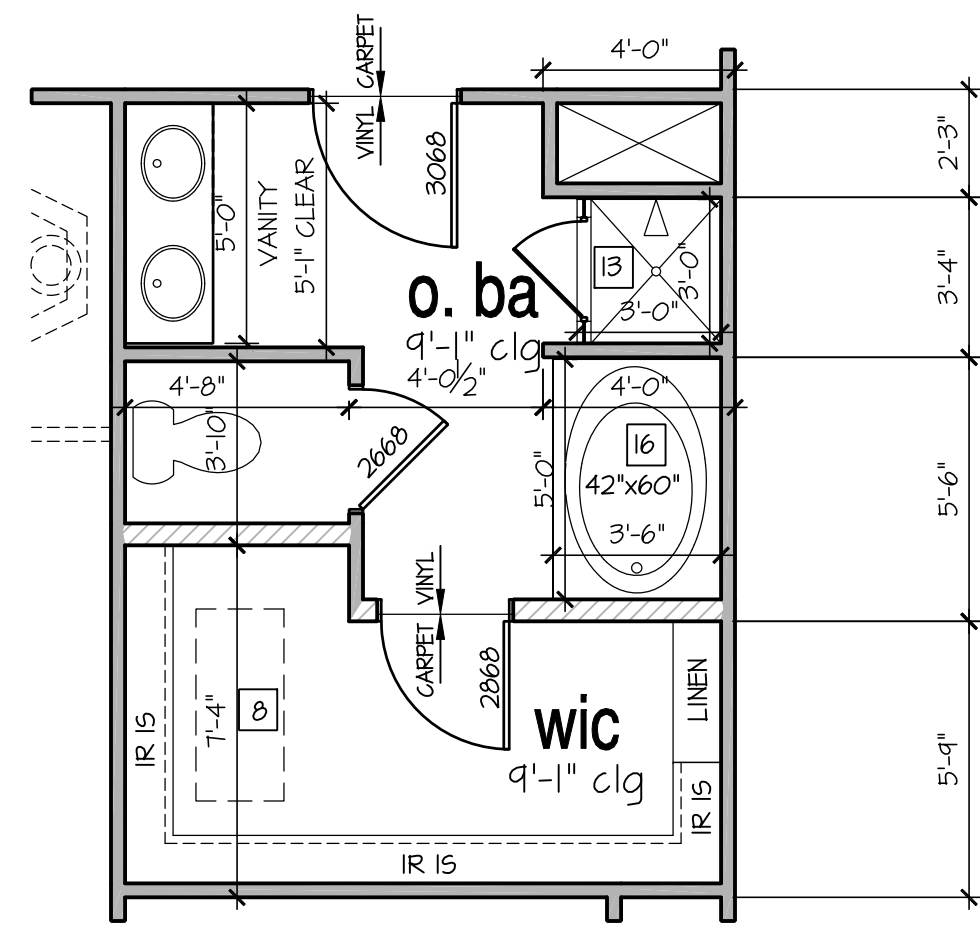
WALL LEGEND:

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

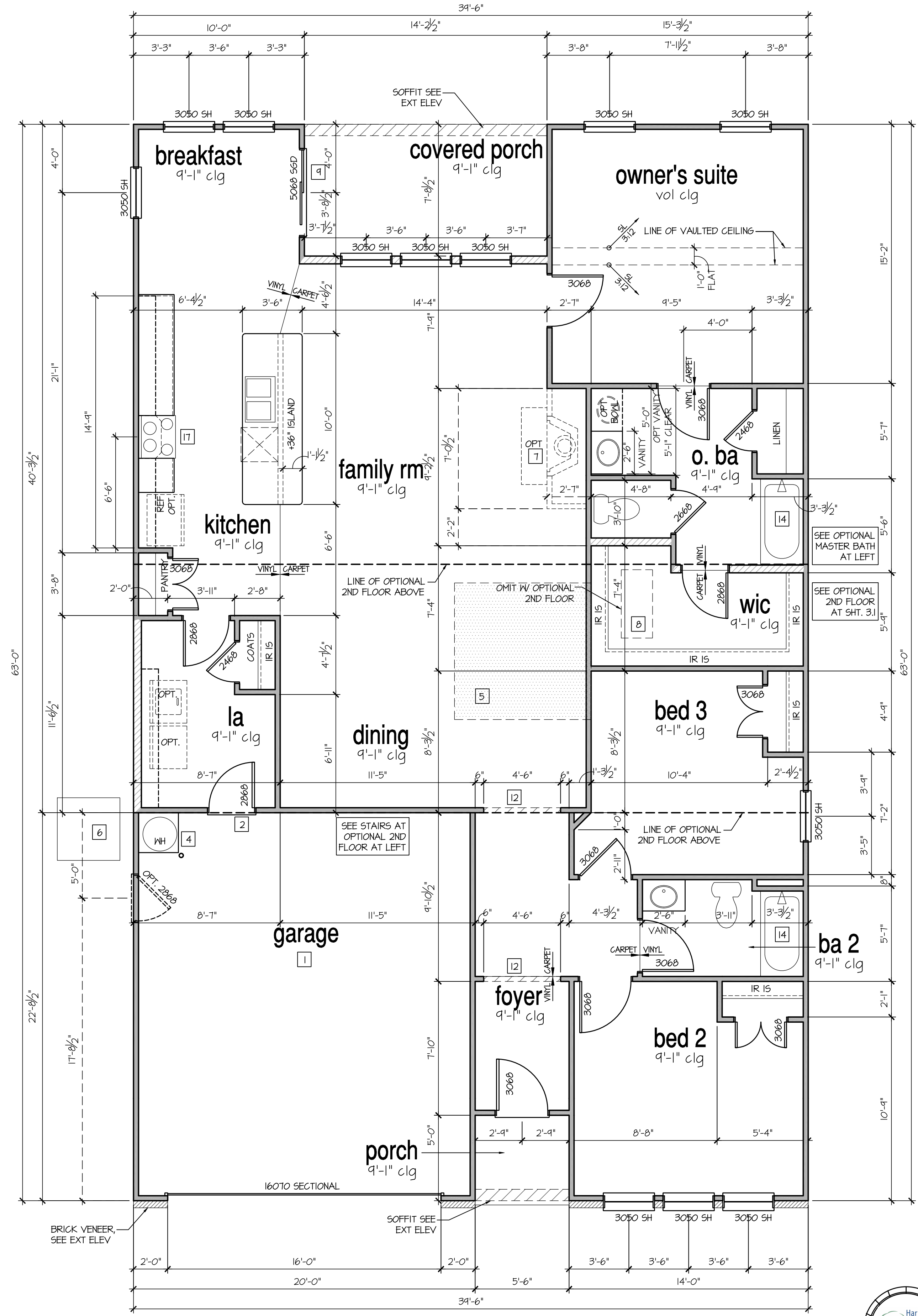
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 - A/C CONDENSER PAD. (VERIFY)
 - PRE-FABRICATED METAL FIREPLACE. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
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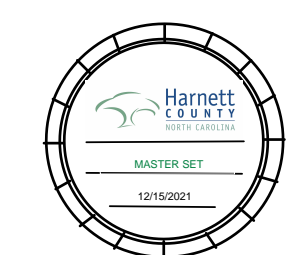
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Opt. Master Bath
 SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X11" LAYOUT



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



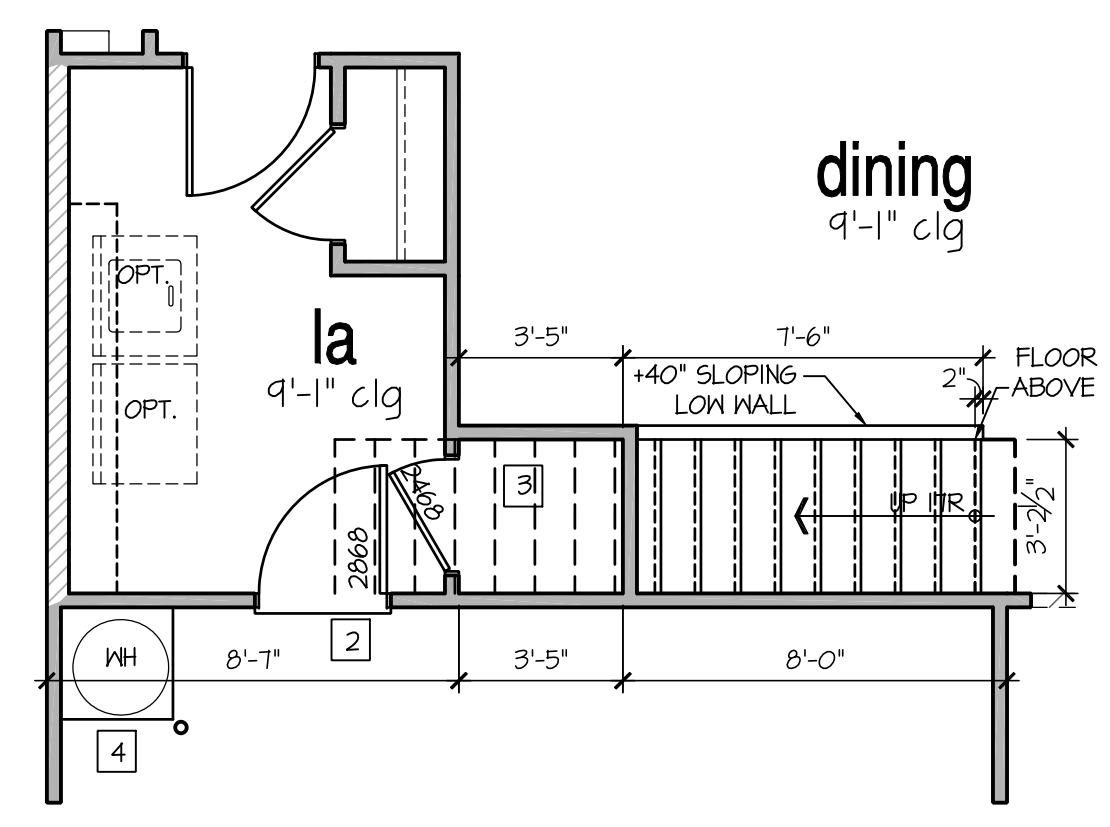
9'-1" STAIR NOTE:
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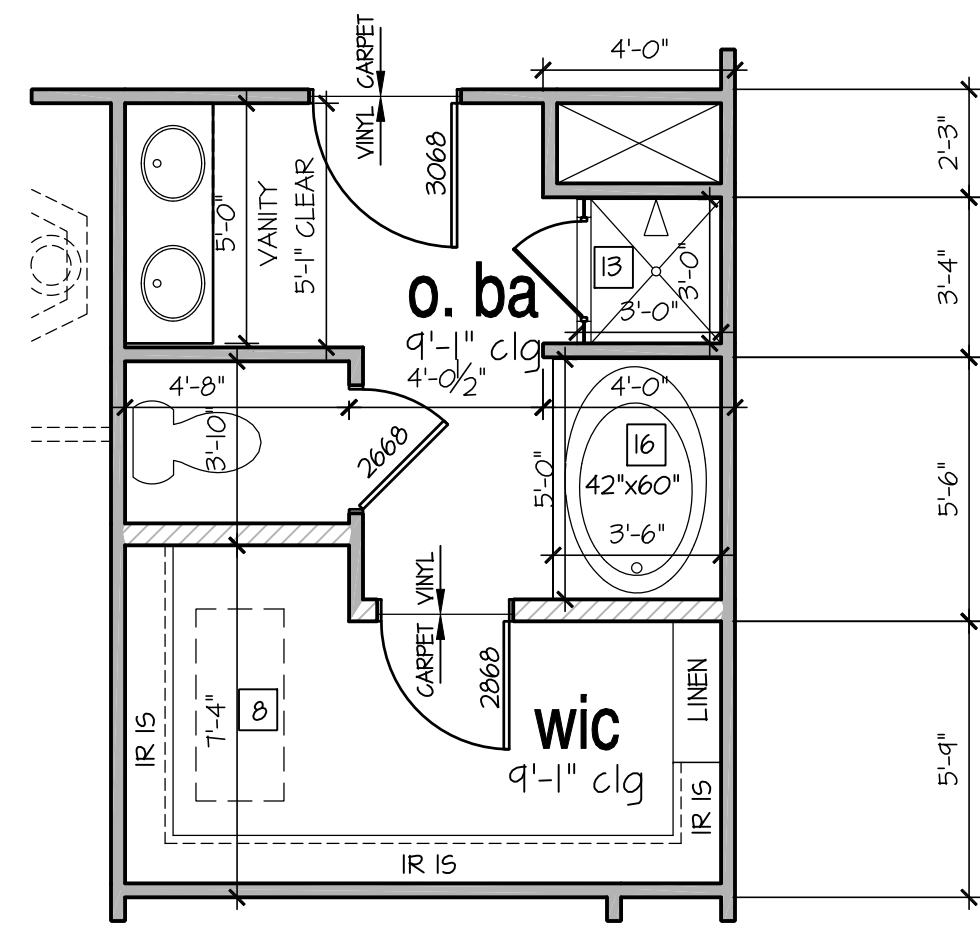
WALL LEGEND:

| | |
|--|---|
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| | BRICK / STONE VENEER |
| | STUD WALL BELOW HEIGHT AND STUD SIZE AS NOTED |
| | LOW GYPSUM BOARD WALL HEIGHT AND STUD SIZE AS NOTED |
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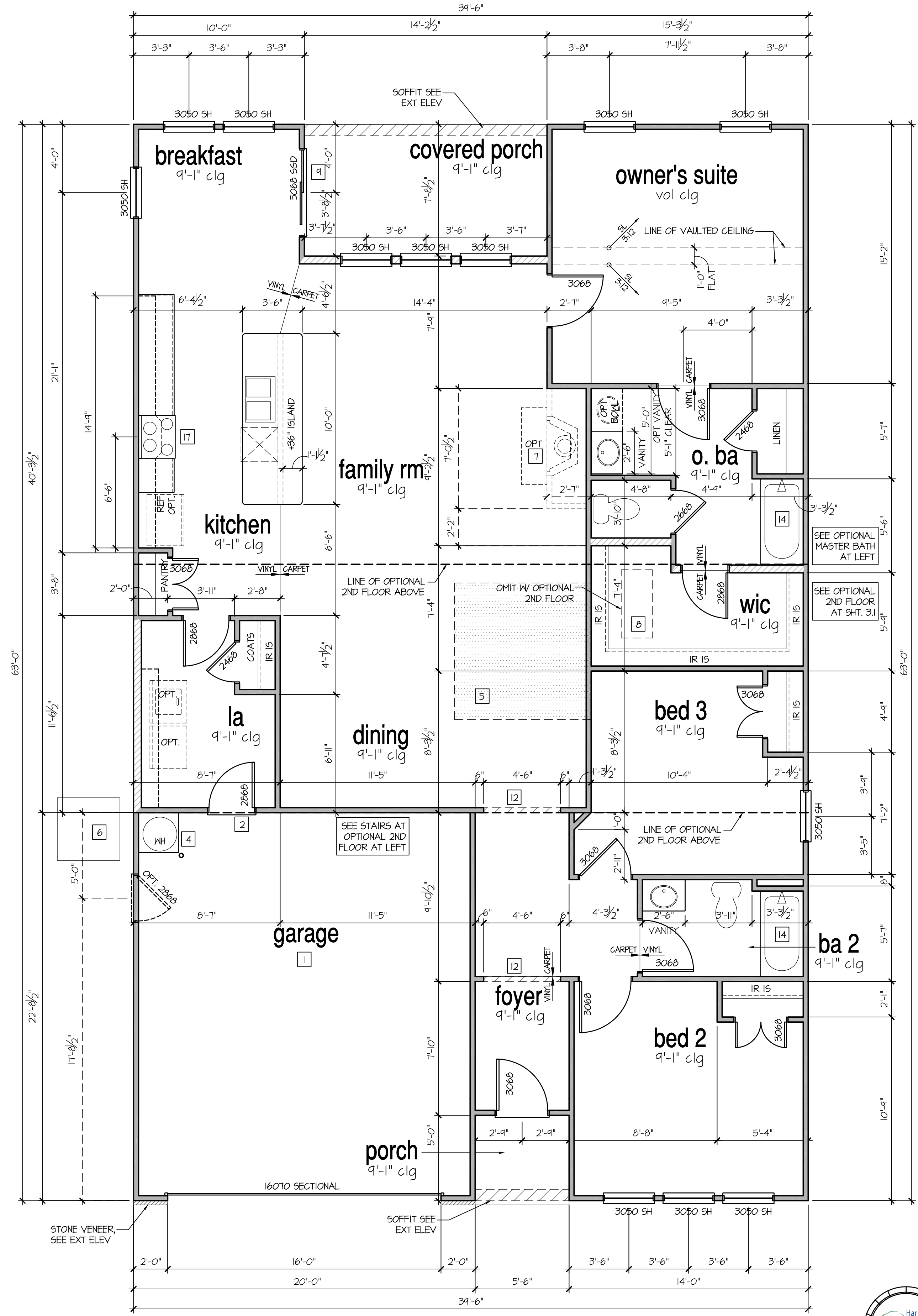
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 - 30"x60" TUB/SHOWER PAN W/ VIKRELL SURROUND
 - N/A
 - 42"x60" ACRYLIC ALCOVE TUB
- KITCHEN:**
- 30" SLIDE-IN ELECTRICAL RANGE W/ HOOD VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - 30" GAS COOKTOP AND HOOD. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - ELECTRIC OVEN WITH MICROWAVE OVEN.



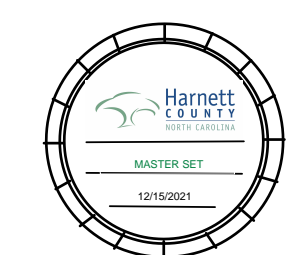
Stairs At Opt. 2nd Floor
 SCALE: 1/4"=1'-0" AT 22"x34" LAYOUT 1/8"=1'-0" AT 11"x11" LAYOUT



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



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

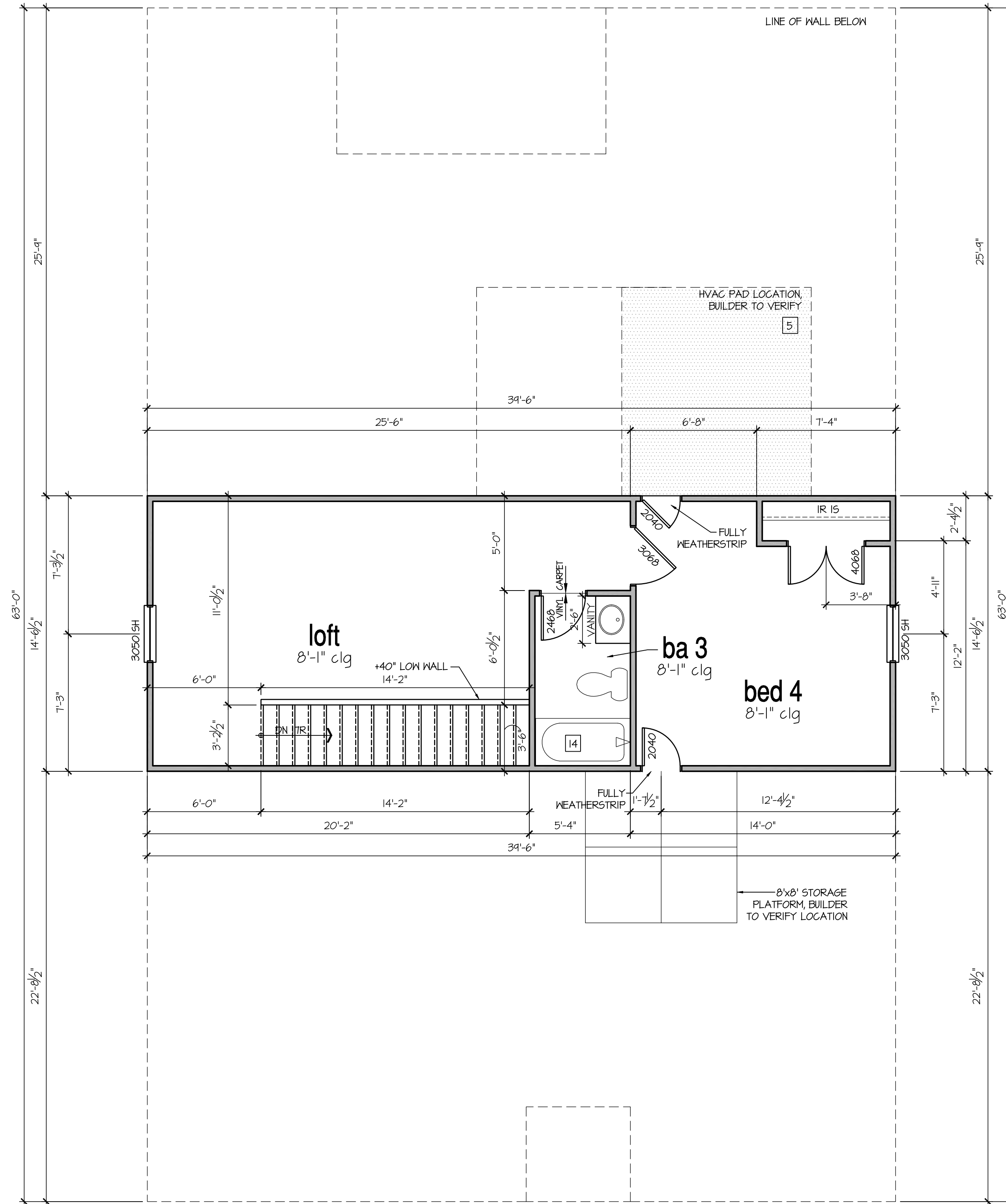
- FOR ADDITIONAL NOTES SEE GENERAL NOTES ON TITLE SHEET AND DETAILS.
 - WINDOW HEAD HEIGHTS:
 1ST FLOOR = 7'-6" U.N.O. ON ELEVATIONS.
 2ND FLOOR = 7'-0" U.N.O. ON ELEVATIONS.
 ALL DIMENSIONS TO WINDOWS AND DOORS ARE TO CENTERLINE.

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 |
| | LOW GYPSUM BOARD WALL HEIGHT AND STUD SIZE AS NOTED | | DRYWALL OPENING HEIGHT AS NOTED ON PLAN. |

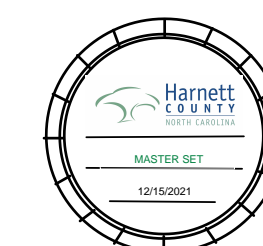
KEY NOTES FOR NORTH CAROLINA:

- 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 NRC TABLE R302.6.) GARAGE/HOUSE SEPARATION AT HORIZONTAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD. (PER NRC TABLE R302.6.)
 - HOUSE TO GARAGE DOOR SEPARATION. PROVIDE 1-3/8" SOLID CORE DOOR OR APPROVED 20 MINUTE RATED DOOR. (PER NRC SECTION R302.5.1.)
 - BENEATH STAIRS AND LANDINGS. 1/2" GYPSUM BOARD ON WALLS AND CEILING OF ENCLOSED ACCESSIBLE AREAS. (PER NRC SECTION R302.1.) IN CONCEALED SPACES BETWEEN STAIR STRINGERS PROVIDE FIREBLOCKING PER R302.11 MEPS.
 - GAS WATER HEATER ON 18" HIGH PLATFORM (PER CHAPTER 5 NRC-PLUMBING) (AT SPECIFIC LOCATIONS; ELECTRIC WATER HEATER PER LOCAL CODES)
 - OPTIONAL ATTIC LOCATION:
 5.1 8'x8' PLATFORM U.N.O. VERIFY WITH TRUSS MANUFACTURER. (6'-6" MIN. CLEAR HEIGHT TO HORIZONTAL MEMBERS, 2"x6" OVER 2"x4" BOTTOM CHORD, OF TRUSS, VERIFY W/ TRUSSES.)
 5.2 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"x20". FIRE RATED ACCESS AS NOTED. (PER NRC SECTION R807.) ATTIC ACCESS LADDER, VERIFY LOCATION AND SIZE WITH TRUSSES. (25 1/2" X 54" SIZE) TYPICALS:
 - TEMPERED SAFETY GLASS. (PER NRC SECTION 308.4)
 - PLYWOOD SHELF ABOVE WITH DRYWALL FINISH OVER. HEIGHT AS NOTED.
 - HALF WALL, HEIGHT AS NOTED.
 - INTERIOR SOFFITS: FFL = 8'-0" U.N.O. SFL = 7'-6" U.N.O.
- BATHS:**
- ACRYLIC SHOWER PAN W/ VIKRELL SURROUND, SIZE AS DIMENSIONED
 - 30"x60" TUB/SHOWER PAN W/ VIKRELL SURROUND
 - N/A
 - 42"x60" ACRYLIC ALCOVE TUB
- KITCHEN:**
- 30" SLIDE-IN ELECTRICAL RANGE W/ HOOD VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - 30" GAS COOKTOP AND HOOD VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - ELECTRIC OVEN WITH MICROWAVE OVEN.



2nd Floor Plan

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



FLOOR PLANS

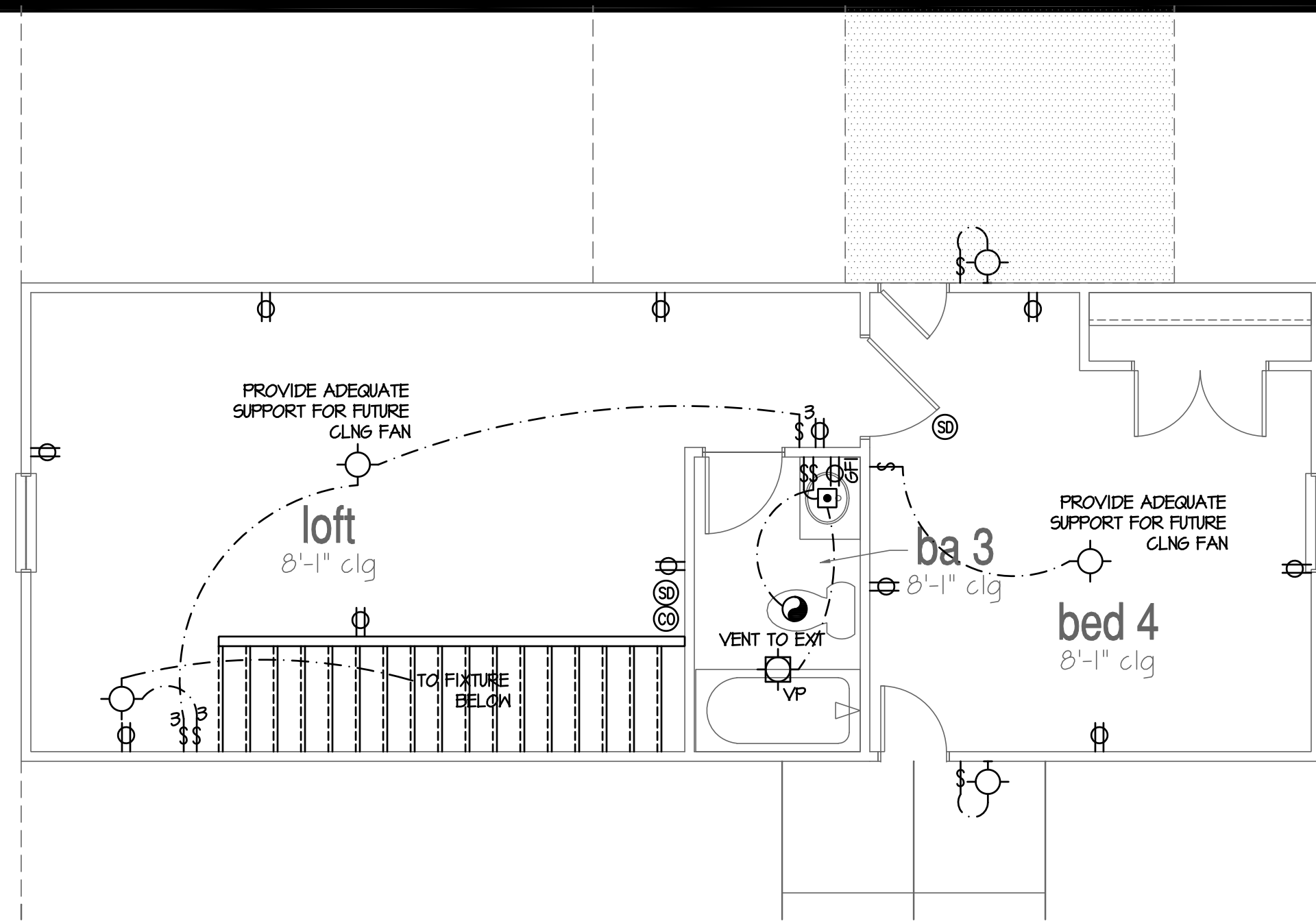
'ABERDEEN'

PLAN REV DATE

02.28.20

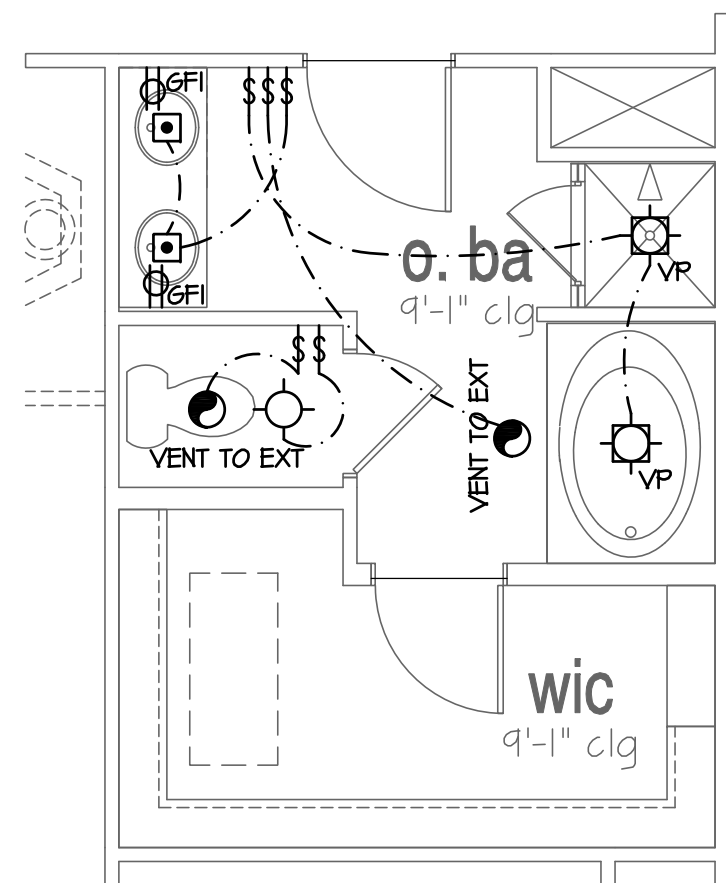
COPYRIGHT PROPERTY OF DR. HORTON NOT TO BE REPRODUCED
 SHEET NUMBER

3.1



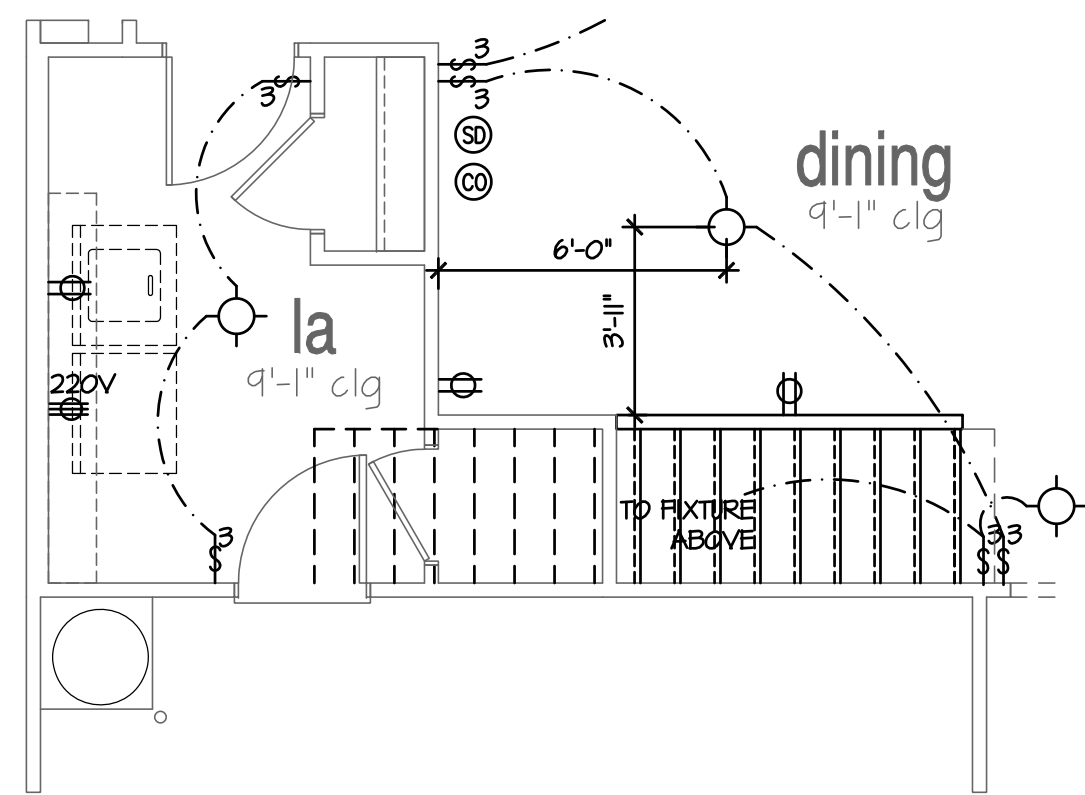
2nd Floor Plan

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



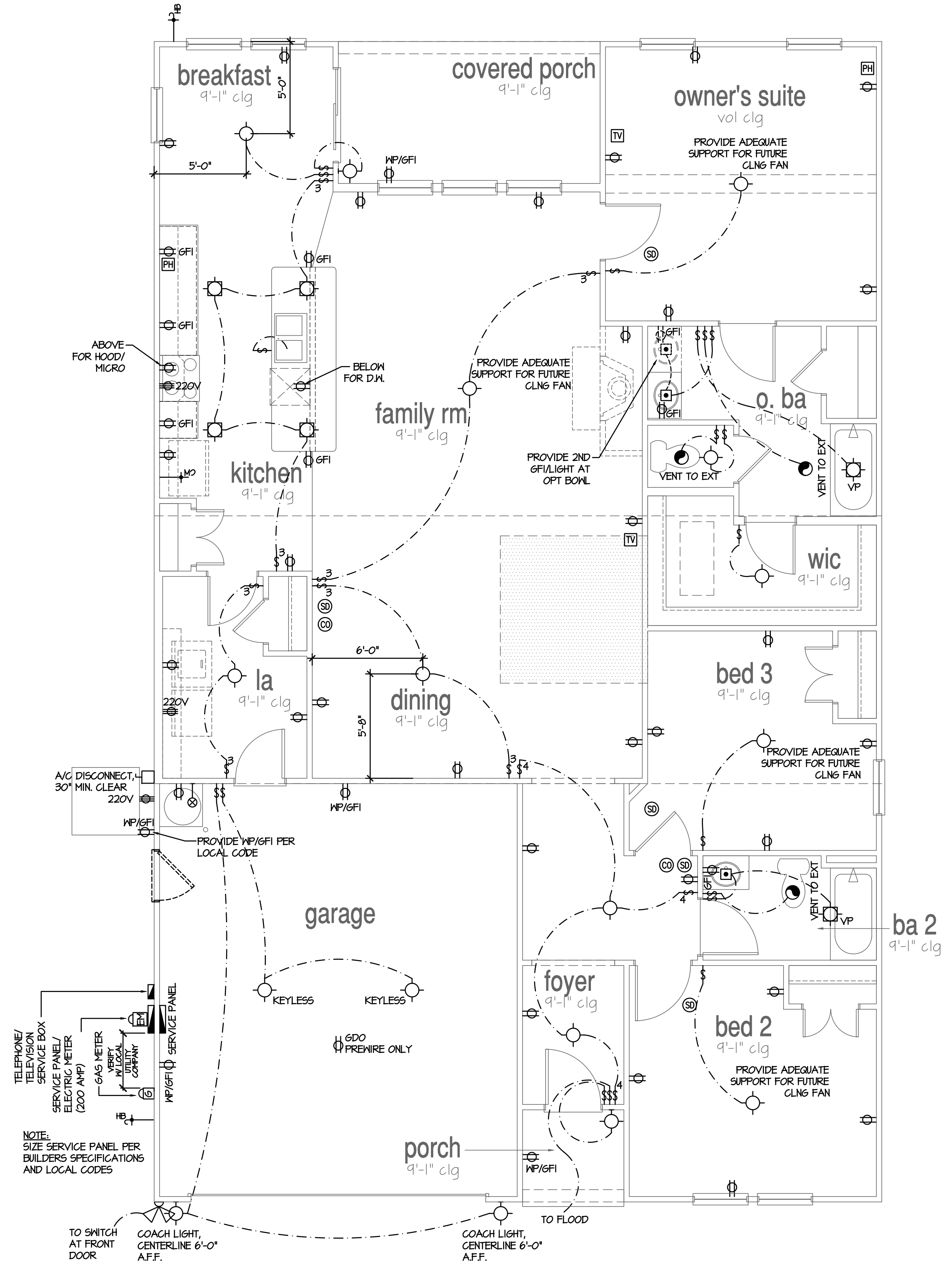
Opt. Master Bath

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



Stairs At Opt. 2nd Floor

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



1st Floor Plan 'A'

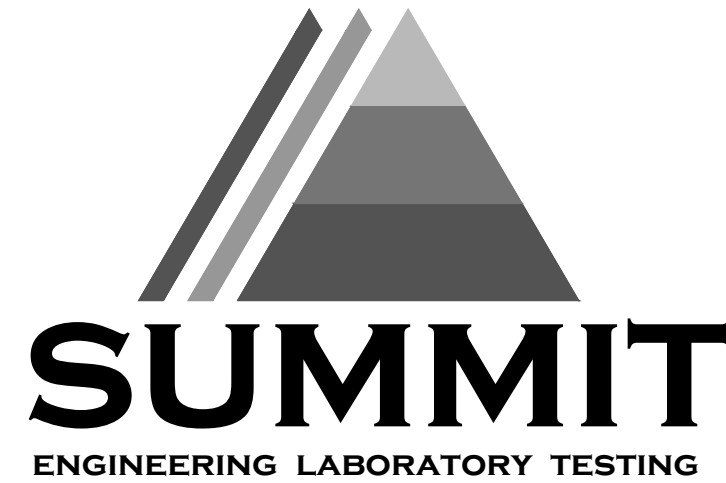
SCALE: 1/4"=1'-0" AT 22'X34" LAYOUT 1/8"=1'-0" AT 11'X11" LAYOUT

- 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 NET/DAMP LOCATIONS SHALL BE LABELED "SUITABLE FOR NET 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 | ⊕ | CEILING MOUNTED INCANDESCENT LIGHT FIXTURE |
| ⊕MP/GFI | WEATHERPROOF GFI DUPLEX OUTLET | ⊕ | WALL MOUNTED INCANDESCENT LIGHT FIXTURE |
| ⊕GFI | GROUND-FAULT CIRCUIT-INTERRUPTER DUPLEX OUTLET | ⊕ | RECESSED INCANDESCENT LIGHT FIXTURE (VP) = VAPOR PROOF |
| ⊕ | HALF-SWITCHED DUPLEX OUTLET | ⊕ | CEILING MOUNTED LED LIGHT FIXTURE (VP) = VAPOR PROOF |
| ⊕220V | 220 VOLT OUTLET | ⊕ | EXHAUST FAN (VENT TO EXTERIOR) |
| ⊕ | REINFORCED JUNCTION BOX | ⊕ | EXHAUST FANLIGHT COMBINATION (VENT TO EXTERIOR) |
| ⊕ | WALL SWITCH | ⊕ | FLUORESCENT LIGHT FIXTURE |
| ⊕3 | THREE-WAY SWITCH | ⊕ | TECH HUB SYSTEM |
| ⊕4 | FOUR-WAY SWITCH | ⊕ | CEILING FAN (PROVIDE ADEQUATE SUPPORT) |
| ⊕ | CHIMES | ⊕ | CEILING FAN WITH INCANDESCENT LIGHT FIXTURE (PROVIDE ADEQUATE SUPPORT) |
| ⊕ | PUSHBUTTON SWITCH | ⊕ | GAS SUPPLY WITH VALVE |
| ⊕ | 110V SMOKE ALARM W/ BATTERY BACKUP | ⊕ | HOSE BIBB |
| ⊕ | 110V SMOKE ALARM CO2 DETECTOR COMBO | ⊕ | 1/4" WATER STUB OUT |
| ⊕ | THERMOSTAT | ⊕ | WALL SCONCE |
| ⊕ | TELEPHONE | | |
| ⊕ | TELEVISION | | |
| ⊕ | ELECTRIC METER | | |
| ⊕ | ELECTRIC PANEL | | |
| ⊕ | DISCONNECT SWITCH | | |





STRUCTURAL PLANS PREPARED FOR:

ABERDEEN

PROJECT ADDRESS: TBD
OWNER: DR Horton, Inc.
800 Arrowledge 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 & Testing, P.C. before construction begins.

PLAN ABBREVIATIONS:

Table with 4 columns: Abbreviation, Description, and Notes. Includes items like AB ANCHOR BOLT, AFF ABOVE FINISHED FLOOR, CJ CEILING JOIST, etc.

Roof truss and floor joist layouts, and their corresponding loading details, were not provided to SUMMIT Engineering, Laboratory & 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. and Description. Lists sheets CSI through 65D and their corresponding descriptions like Cover Sheet, Monolithic Slab Foundation, etc.

REVISION LIST:

Table with 4 columns: Revision No., Date, Project No., and Description. Lists revisions 1 through 9 with details on slab notes, framing, and sheathing.

DR HORTON PROJECT SIGN-OFF:

Table for sign-off with columns for Manager, Operations, Operations System, and Operations Product Development, each with a signature line.

DESIGN SPECIFICATIONS:

Construction Type: Commercial [] Residential [x]

- 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
1.1. Conventional 2x 20 PSF
1.2. Truss 20 PSF
1.2.1. Attic Truss 60 PSF
2. Roof Dead Loads
2.1. Conventional 2x 10 PSF
2.2. Truss 20 PSF
3. Snow
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 15 PSF
5.3. Floor Truss 15 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., ZONE 1, ZONE 2, ZONE 3, ZONE 4, ZONE 5. Lists wind speed ranges for different roof heights and zones.

- 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. Sms = %g
8.5.2. Smi = %g
8.6. Seismic Base Shear
8.6.1. Vx =
8.6.2. Vy =
8.7. Basic Structural System (check one)
[x] Bearing Wall
[] Building Frame
[] Moment Frame
[] Dual w/ Special Moment Frame
[] Dual w/ Intermediate R/C or Special Steel
[] Inverted Penulium
8.8. Arch/Mech Components Anchored No
8.9. Lateral Design Control: Seismic [] Wind [x]
9. Assumed Soil Bearing Capacity 2000psf

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 & 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 E10XX. 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-06: "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 C1116, 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 Southern-Yellow-Pine (SYP) #2 or Southern-Spruce Pine (SPF) #2, LVL or FSL, engineered wood shall have the following minimum design values:
2.1. E = 1300000 psi
2.2. Fb = 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 AWPA standard C-15. All other moisture exposed wood shall be treated in accordance with AWPA 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.
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. 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.

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.

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.

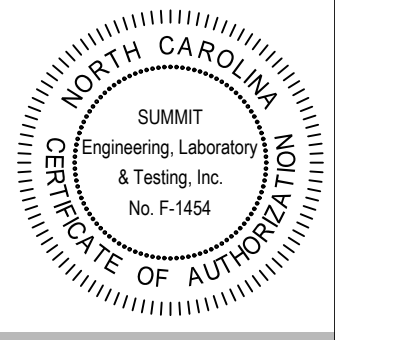
WOOD STRUCTURAL PANELS:

- 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.

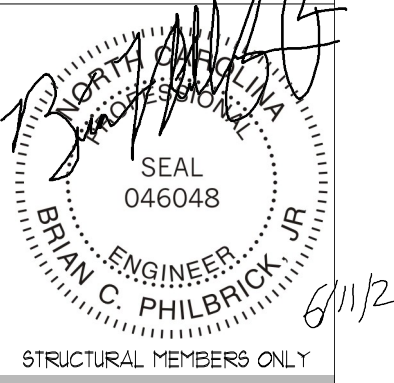
STRUCTURAL FIBERBOARD PANELS:

- 1. Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable APA standards.
2. All structurally required fiberboard sheathing shall bear the mark of the APA.
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 APA.



CLIENT: DR Horton, Inc.
800 Arrowledge Blvd.
Charlotte, NC 28273

PROJECT: Aberdeen - LH
Cover sheet



STRUCTURAL MEMBERS ONLY
DRAWING:
DATE: 06/15/2011
SCALE: 23x4 1/4" x 18" x 1/4"
PROJECT #: 52870899
DRAWN BY: JY
CHECKED BY: BCP
ORIGINAL INFORMATION:
PROJECT #: 108993 DATE: 09/26/2011
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS
SHEET: CSI

FOUNDATION NOTES:

- FOUNDATIONS TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
- STRUCTURAL CONCRETE TO BE $F_c = 3000$ PSI, PREPARED AND PLACED IN ACCORDANCE WITH ACI STANDARD 318.
- FOOTINGS TO BE PLACED ON UNDISTURBED EARTH, BEARING A MINIMUM OF 12" BELOW ADJACENT FINISHED GRADE, OR AS OTHERWISE DIRECTED BY THE CODE ENFORCEMENT OFFICIAL.
- FOOTING SIZES BASED ON A PRESUMPTIVE SOIL BEARING CAPACITY OF 2000 PSF. CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE SUITABILITY OF THE SITE SOIL CONDITIONS AT THE TIME OF CONSTRUCTION.
- FOOTINGS AND PIERS SHALL BE CENTERED UNDER THEIR RESPECTIVE ELEMENTS. PROVIDE 2" MINIMUM FOOTING PROJECTION FROM THE FACE OF MASONRY.
- MAXIMUM DEPTH OF UNBALANCED FILL AGAINST MASONRY WALLS TO BE AS SPECIFIED IN SECTION R404.1 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
- FILASTERS TO BE BONDED TO PERIMETER FOUNDATION WALL.
- PROVIDE FOUNDATION WATERPROOFING, AND DRAIN WITH POSITIVE SLOPE TO OUTLET AS REQUIRED BY SITE CONDITIONS.
- PROVIDED PERIMETER INSULATION FOR ALL FOUNDATIONS PER 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
- CORBEL FOUNDATION WALL AS REQUIRED TO ACCOMMODATE BRICK VENEERS.
- CRAWL SPACE TO BE GRADED LEVEL, AND CLEARED OF ALL DEBRIS.
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.16. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- ABBREVIATIONS:

| | |
|-------------------|--------------------|
| DJ = DOUBLE JOIST | SJ = SINGLE JOIST |
| GT = GIRDER TRUSS | FT = FLOOR TRUSS |
| SC = STUD COLUMN | DR = DOUBLE RAFTER |
| EE = EACH END | TR = TRIPLE RAFTER |
| TJ = TRIPLE JOIST | OC = ON CENTER |
| CL = CENTER LINE | PL = POINT LOAD |

- ALL PIERS TO BE 16"x16" MASONRY AND ALL FILASTERS TO BE 8"x16" MASONRY, TYPICAL. (UNO)
- WALL FOOTINGS TO BE CONTINUOUS CONCRETE. SIZES PER STRUCTURAL PLAN.
- A FOUNDATION EXCAVATION OBSERVATION SHOULD BE CONDUCTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER OR HIS QUALIFIED REPRESENTATIVE. IF ISOLATED AREAS OF YIELDING MATERIALS AND/OR POTENTIALLY EXPANSIVE SOILS ARE OBSERVED IN THE FOOTING EXCAVATIONS AT THE TIME OF CONSTRUCTION, SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. MUST BE PROVIDED THE OPPORTUNITY TO REVIEW THE FOOTING DESIGN PRIOR TO CONCRETE PLACEMENT.
- ALL FOOTINGS & SLABS ARE TO BEAR ON UNDISTURBED SOIL OR 95% COMPACTED FILL, VERIFIED BY ENGINEER OR CODE OFFICIAL.

REFER TO BRACED WALL PLAN FOR PANEL LOCATIONS AND ANY REQUIRED HOLD-DOWNS. ADDITIONAL INFORMATION PER SECTION R602.10.3 AND FIGURES R602.10.6.5, R602.10.1, R602.10.3(1) AND R602.10.3(2) OF THE 2018 IRC

NOTE: ALL EXTERIOR FOUNDATION DIMENSIONS ARE TO FRAMING AND NOT BRICK VENEER UNO

NOTE: A 4" CRUSHED STONE BASE COURSE IS NOT REQUIRED WHEN SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP 1 PER TABLE R403.1

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON COMPLETED/REVISED ON 2/28/20. 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.

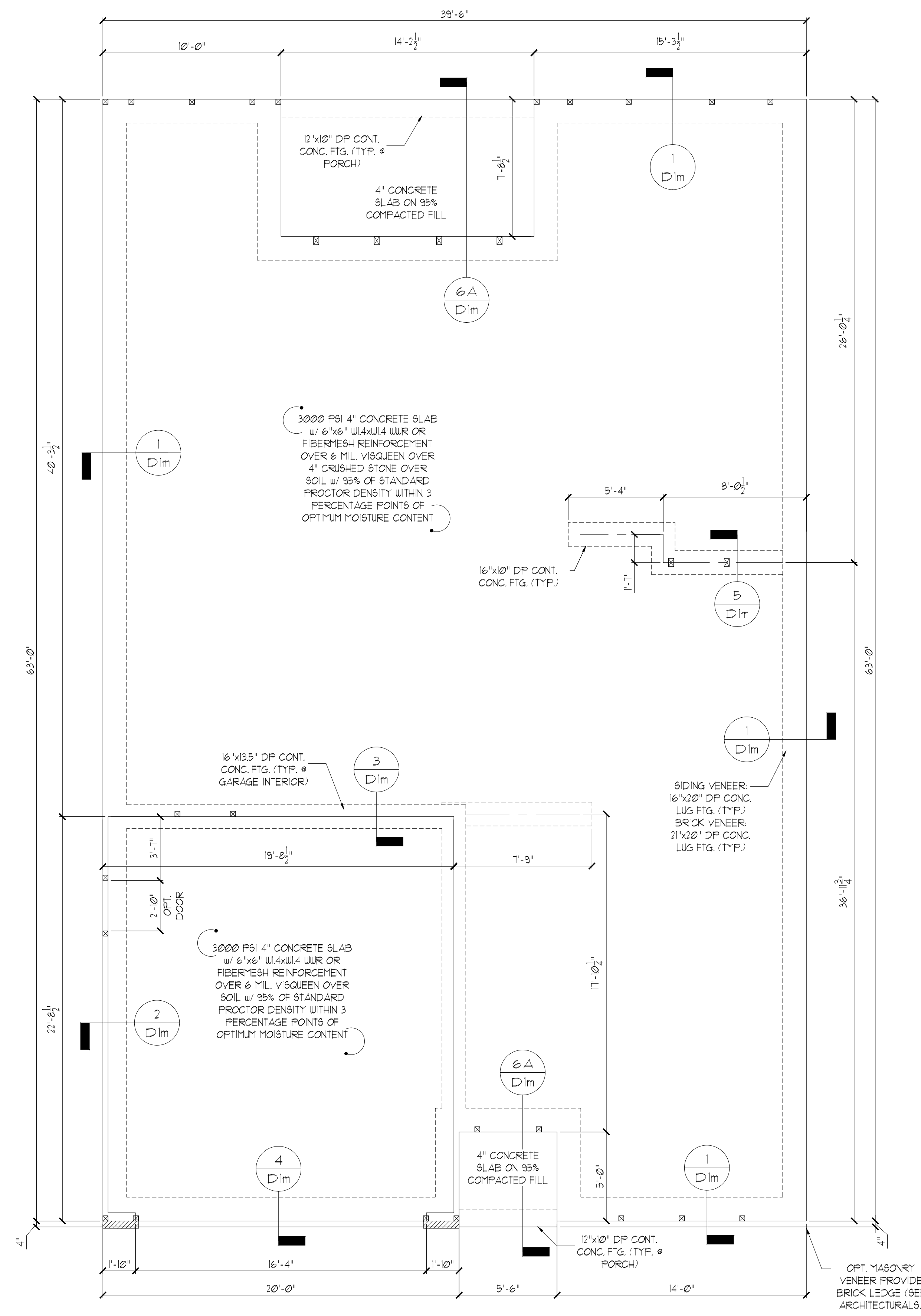
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STRUCTURAL ANALYSIS BASED ON 2018 NCRS.

MONOLITHIC SLAB FOUNDATION PLAN

SCALE: 1/4"=1'-0" ON 22'x34" OR 1/8"=1'-0" ON 11'x11"



MONOSLAB FOUNDATION PLAN - ELEVATION ABC

CLIENT:
DR Horton, Inc.
800 Arrowridge Blvd.
Charlotte, NC 28273

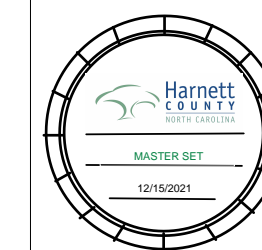
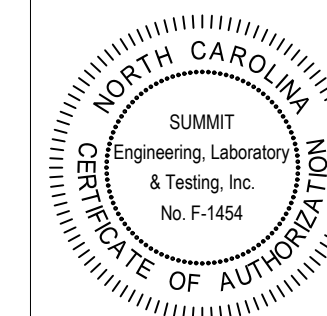
PROJECT: LH
Abendson - LH
Monolithic Slab Foundation

SEAL
046048
C. PHILBRICK, P.E.
8/11/21

STRUCTURAL MEMBERS ONLY
DRAWING
DATE: 06/25/2021
SCALE: 22x34 1/4"=1'-0"
1/8"=1'-0"
PROJECT # 52870099
DRAWN BY: JV
CHECKED BY: BCP

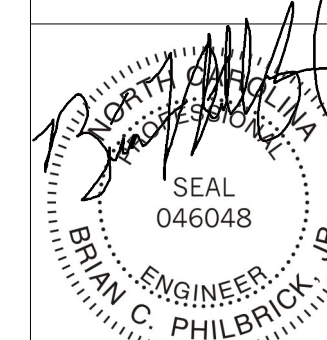
ORIGINAL INFORMATION
PROJECT # 52870099
DATE 06/25/2021
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
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CLIENT:
DR Horton, Inc.
800 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT:
Abendson - LH
Monolithic Slab Foundation



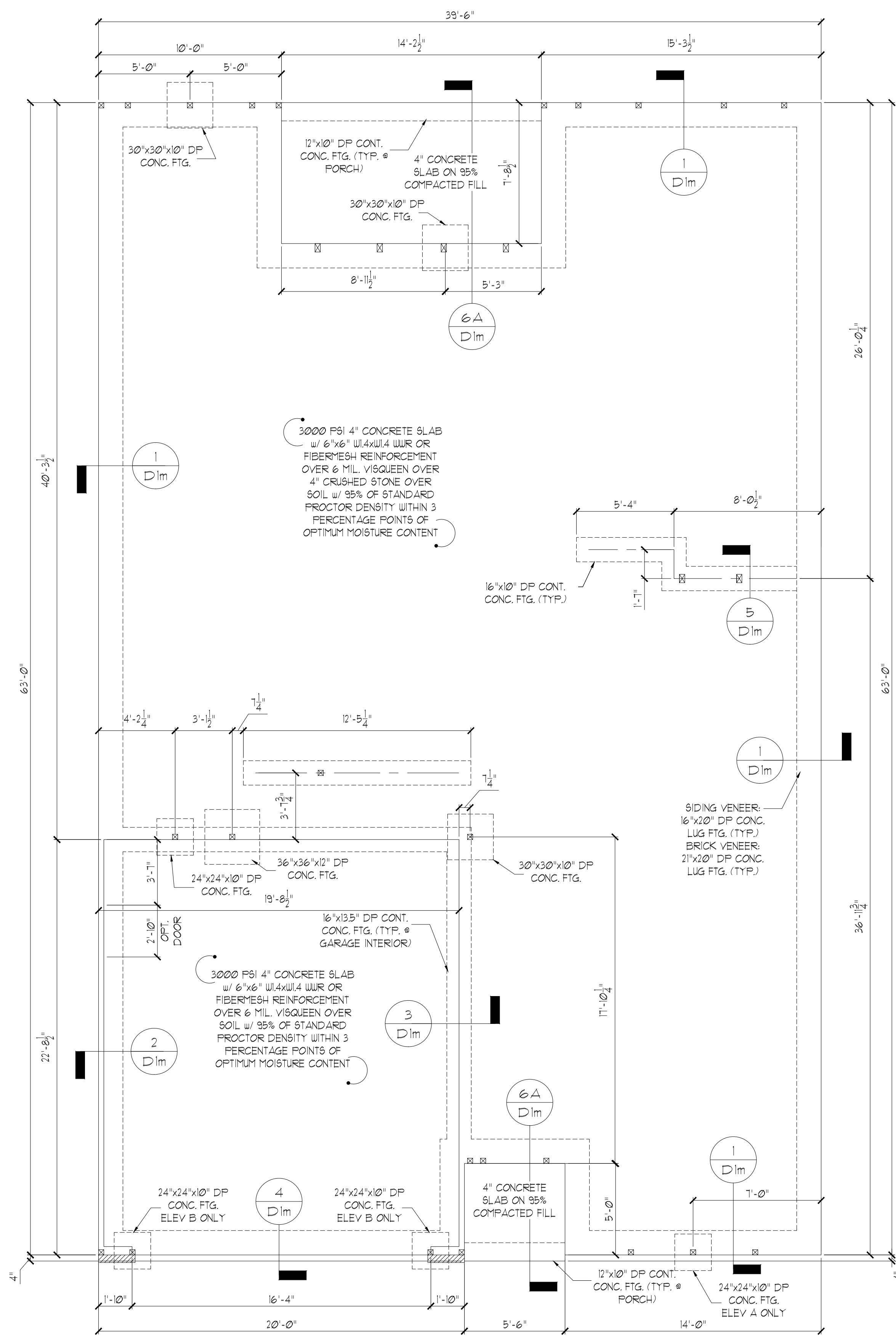
STRUCTURAL MEMBERS ONLY

DRAWING
DATE: 06/25/2021
SCALE: 22x4 1/4" x 11" x 11"
PROJECT # 52870099
DRAWN BY: JV
CHECKED BY: BCP

ORIGINAL INFORMATION
PROJECT # 52870099
DATE 06/25/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

MONOLITHIC SLAB FOUNDATION PLAN

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

MONOSLAB FOUNDATION PLAN - ELEVATION ABC
WITH OPT. SECOND FLOOR

FOUNDATION NOTES:

- FOUNDATIONS TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
- STRUCTURAL CONCRETE TO BE F_c = 3000 PSI, PREPARED AND PLACED IN ACCORDANCE WITH ACI STANDARD 318.
- FOOTINGS TO BE PLACED ON UNDISTURBED EARTH, BEARING A MINIMUM OF 1" BELOW ADJACENT FINISHED GRADE, OR AS OTHERWISE DIRECTED BY THE CODE ENFORCEMENT OFFICIAL.
- FOOTING SIZES BASED ON A PRESUMPTIVE SOIL BEARING CAPACITY OF 2000 PSF. CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE SUITABILITY OF THE SITE SOIL CONDITIONS AT THE TIME OF CONSTRUCTION.
- FOOTINGS AND PIERS SHALL BE CENTERED UNDER THEIR RESPECTIVE ELEMENTS. PROVIDE 2" MINIMUM FOOTING PROJECTION FROM THE FACE OF MASONRY.
- MAXIMUM DEPTH OF UNBALANCED FILL AGAINST MASONRY WALLS TO BE AS SPECIFIED IN SECTION R404.1 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
- PILASTERS TO BE BONDED TO PERIMETER FOUNDATION WALL.
- PROVIDE FOUNDATION WATERPROOFING, AND DRAIN WITH POSITIVE SLOPE TO OUTLET AS REQUIRED BY SITE CONDITIONS.
- PROVIDED PERIMETER INSULATION FOR ALL FOUNDATIONS PER 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
- CORBEL FOUNDATION WALL AS REQUIRED TO ACCOMMODATE BRICK VENEERS.
- CRAWL SPACE TO BE GRADED LEVEL, AND CLEARED OF ALL DEBRIS.
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.16. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- ABBREVIATIONS:

| | |
|-------------------|--------------------|
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| SC = STUD COLUMN | DR = DOUBLE RAFTER |
| EE = EACH END | TR = TRIPLE RAFTER |
| TJ = TRIPLE JOIST | OC = ON CENTER |
| CL = CENTER LINE | PL = POINT LOAD |

- ALL PIERS TO BE 16"x16" MASONRY AND ALL PILASTERS TO BE 8"x16" MASONRY, TYPICAL. (UNO)
- WALL FOOTINGS TO BE CONTINUOUS CONCRETE, SIZES PER STRUCTURAL PLAN.
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- ALL FOOTINGS & SLABS ARE TO BEAR ON UNDISTURBED SOIL OR 95% COMPACTED FILL, VERIFIED BY ENGINEER OR CODE OFFICIAL.

REFER TO BRACED WALL PLAN FOR PANEL LOCATIONS AND ANY REQUIRED HOLDDOWNS. ADDITIONAL INFORMATION PER SECTION R602.10.3 AND FIGURES R602.10.6.3, R602.10.7, R602.10.8(1) AND R602.10.8(2) OF THE 2015 IRC

NOTE: ALL EXTERIOR FOUNDATION DIMENSIONS ARE TO FRAMING AND NOT BRICK VENEER, UNO

NOTE: A 4" CRUSHED STONE BASE COURSE IS NOT REQUIRED WHEN SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP 1 PER TABLE R405.1

REINFORCE GARAGE PORTAL WALLS PER FIGURE R602.10.9 OF THE 2015 IRC.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON. COMPLETED/REVISED ON 2/28/20. 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.

DECK FLOOR JOISTS SHALL BE SPACED AT MAX. 12" ON CENTER WHEN DECKING INSTALLED DIAGONALLY

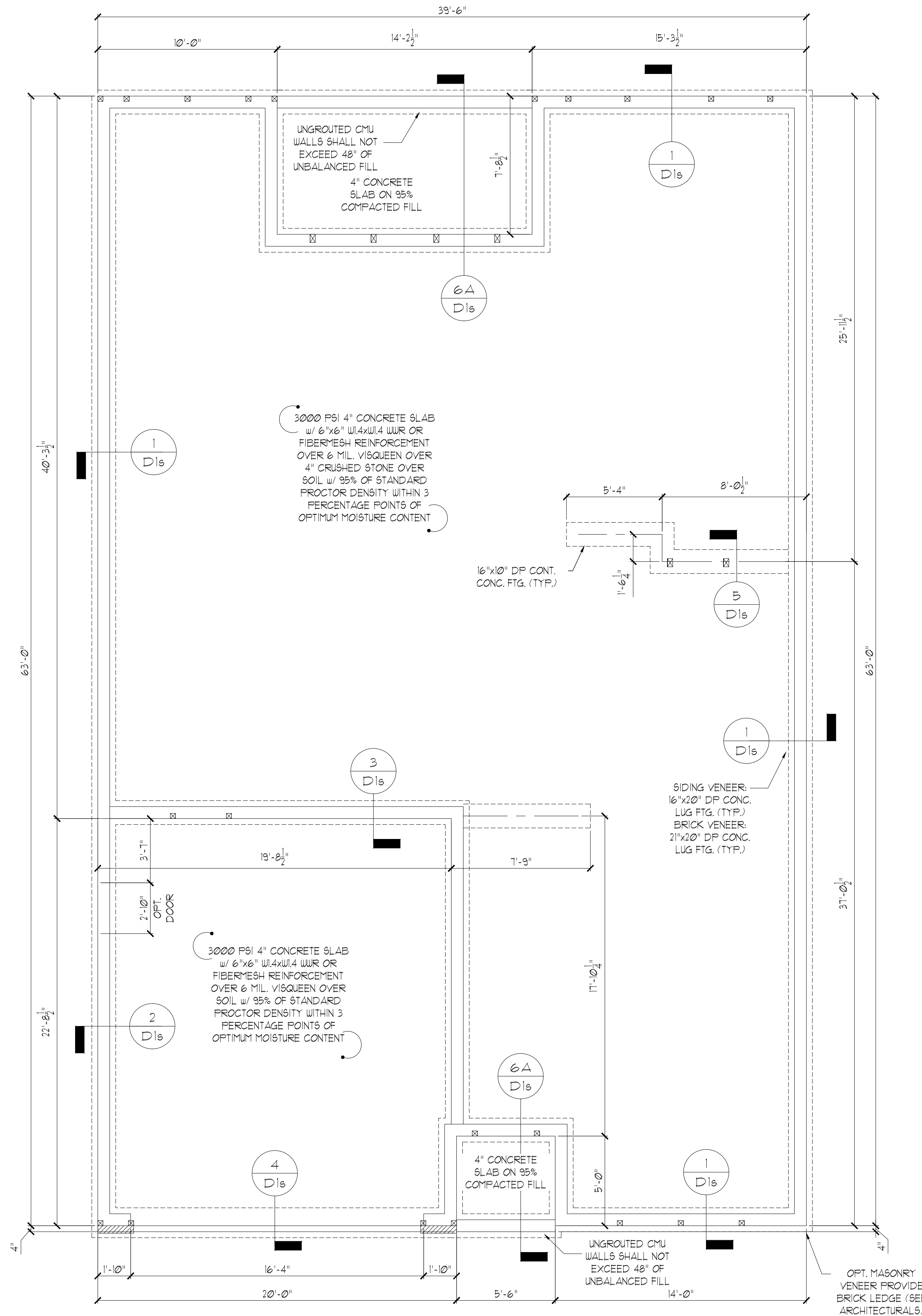
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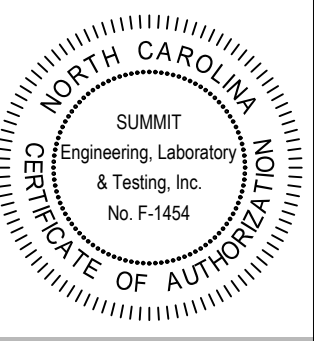
STRUCTURAL ANALYSIS BASED ON 2018 NCR.

STEM WALL FOUNDATION PLAN

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

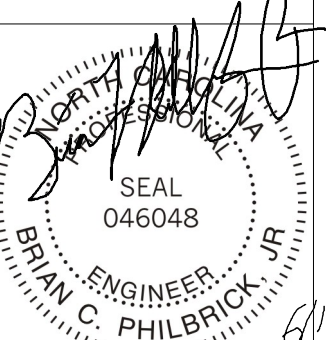


STEM WALL FOUNDATION PLAN - ELEVATION ABC



CLIENT:
DR Horton, Inc.
800 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT: LH
Abendson - LH
Stem Wall Foundation



STRUCTURAL MEMBERS ONLY

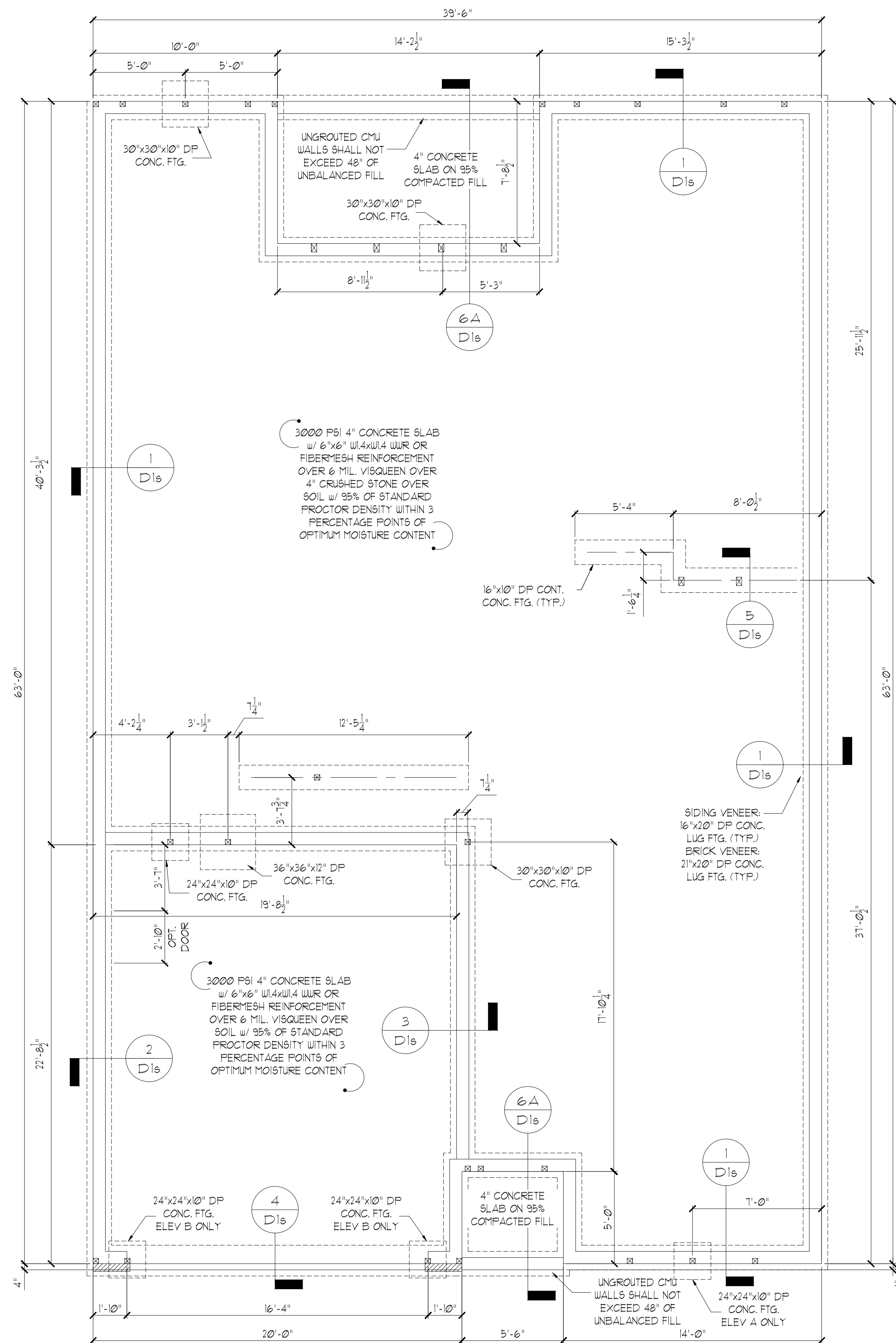
DRAWING
DATE: 06/15/2021
SCALE: 22x34 1/4"=1'-0"
1/8"=1'-0"
PROJECT # 52870099
DRAWN BY: JV
CHECKED BY: BCP

ORIGINAL INFORMATION
PROJECT # 52870099
DATE 06/15/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

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THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON. COMPLETED/REVISED ON 2/22/20. 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 NCRC.

STEM WALL FOUNDATION PLAN

SCALE: 1/4"=1'-0" ON 22"x34" OR 1/8"=1'-0" ON 11"x11"

STEM WALL FOUNDATION PLAN - ELEVATION ABC

WITH OPT. SECOND FLOOR

| 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 | GYP-SUM 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 | 1/16" | PER FIGURE R602.10.6.4 | PER FIGURE R602.10.6.4 |

**OR EQUIVALENT PER TABLE R102.3.5

GENERAL STRUCTURAL NOTES:

- CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL 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:
MICROLLAM (LVL): $F_u = 2600$ PSI, $F_v = 285$ PSI, $E = 1.9 \times 10^6$ PSI
PARALLAM (PSL): $F_u = 2900$ PSI, $F_v = 290$ PSI, $E = 1.25 \times 10^6$ PSI
- ALL WOOD MEMBERS SHALL BE #2 SYP #2 SFF UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP #2 SFF (UNO).
- ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SYP #2 SFF 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".
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.1.6, MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- CONTRACTOR TO PROVIDE LOOKOUTS WHEN CEILING JOISTS SPAN PERPENDICULAR TO RAFTERS.
- FLITCH BEAMS, 4-PLY LVLS AND 3-PLY SIDE LOADED LVLS SHALL BE BOLTED TOGETHER WITH 1/2" DIA. THRU BOLTS SPACED AT 24" O.C. (MAX) STAGGERED OR EQUIVALENT CONNECTIONS PER DETAIL 11D31. 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 SFF #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 SFF #2, DROPPED. (UNLESS NOTED OTHERWISE.)
- ABBREVIATIONS:

- | | |
|-------------------|--------------------|
| DJ = DOUBLE JOIST | SJ = SINGLE JOIST |
| GT = GIRDER TRUSS | FT = FLOOR TRUSS |
| SC = STUD COLUMN | DR = DOUBLE RAFTER |
| EE = EACH END | TR = TRIPLE RAFTER |
| TJ = TRIPLE JOIST | OC = ON CENTER |
| CL = CENTER LINE | PL = POINT LOAD |

NOTE:
----- DESIGNATES JOIST SUPPORTED LOAD BEARING WALL ABOVE. PROVIDE BLOCKING UNDER JOIST SUPPORTED LOAD BEARING WALL.

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

INSTALL ANY REQUIRED HOLD-DOWNS PER SECTION R602.10.5 AND FIGURES R602.10.6.5, R602.10.7, R602.10.8(1) AND R602.10.8(2) OF THE 2018 IRC

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

NOTE: REDUCE JOIST SPACING UNDER TILE FLOORS, GRANITE COUNTERTOPS AND/OR ISLANDS.

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STRUCTURAL MEMBERS ONLY

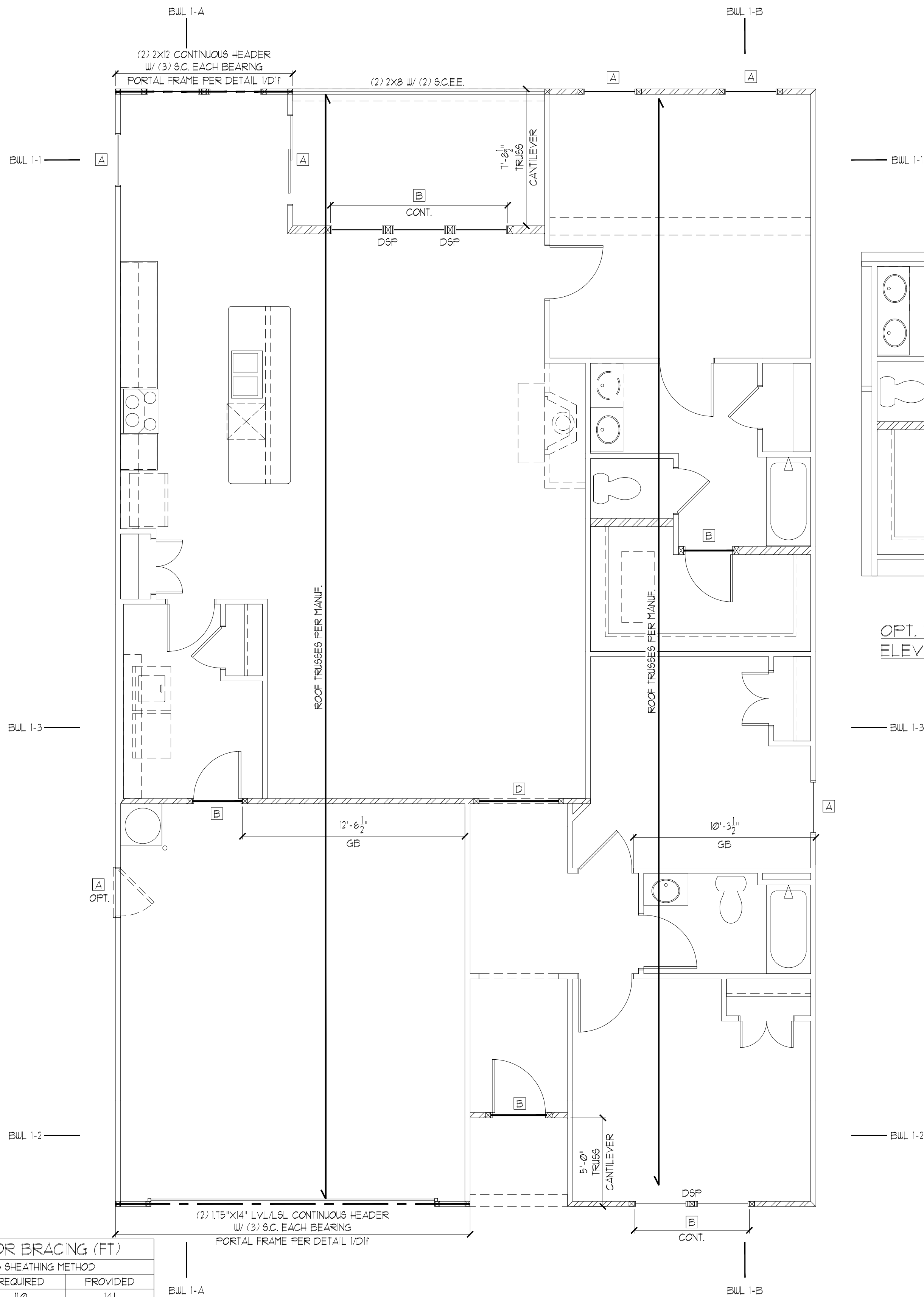
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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR FRAMING PLAN

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

| FIRST FLOOR BRACING (FT) | | |
|--------------------------|-----------------------------|----------|
| | CONTINUOUS SHEATHING METHOD | |
| | REQUIRED | PROVIDED |
| BULL 1-1 | 11.0 | 14.1 |
| BULL 1-2 | 8.0 | 13.0 |
| BULL 1-3 | 11.0 | 11.4 |
| BULL 1-A | 8.4 | 60.0 |
| BULL 1-B | 8.4 | 60.0 |



FIRST FLOOR FRAMING PLAN - ELEVATION A

| 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) 3-1/4" L8L/LVL | (3) |
| F | (3) 2x6 | (1) |
| G | (3) 2x8 | (2) |
| H | (3) 2x10 | (2) |
| I | (3) 2x12 | (2) |

HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION. ALL HEADERS TO BE DROPPED UNLESS NOTED OTHERWISE. SC NOTED ON PLAN OVERRIDE SC LISTED ABOVE.

| LINTEL SCHEDULE | | |
|-----------------|----------------------------------|---------------------|
| TAG | SIZE | OPENING SIZE |
| 1 | L3x3x1/4" | LESS THAN 6'-0" |
| 2 | L5x3x1/4" | 6'-0" TO 10'-0" |
| 3 | L5x3-1/2"x5/16" | GREATER THAN 10'-0" |
| 4 | L5x3-1/2"x5/16" 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: 1 (UNO)

| WALL STUD SCHEDULE | |
|--|--|
| 1ST & 2ND FLOOR LOAD BEARING STUDS: | 2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C. |
| 1ST FLOOR LOAD BEARING STUDS w/ WALK-UP ATTIC: | 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. |
| BASEMENT LOAD BEARING STUDS: | 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. |
| NON-LOAD BEARING STUDS (ALL FLOORS): | 2x4 STUDS @ 24" O.C. |
| TWO STORY WALLS: | 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY |

| KING STUD REQUIREMENTS | |
|------------------------|------------------|
| OPENING WIDTH | KINGS (EACH END) |
| LESS THAN 3'-0" | (1) |
| 3'-0" TO 4'-0" | (2) |
| 4'-0" TO 6'-0" | (3) |
| 6'-0" TO 12'-0" | (5) |
| 12'-0" TO 16'-0" | (6) |

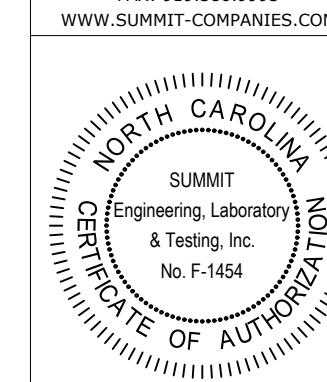
KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS

OPT. DELUXE OWNER BATH ELEVATION ABC

BRACED WALL NOTES:

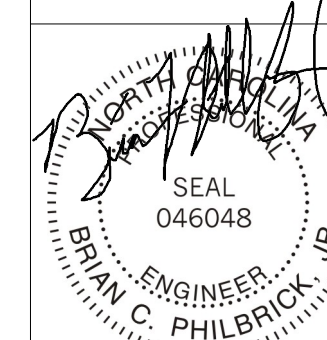
- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 INTERNATIONAL RESIDENTIAL CODE AS ALLOWED PER SECTION R602.10 OF THE 2018 NC RESIDENTIAL CODE.
- WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
- REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
- BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH IRC TABLE R602.10.4.
- 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 R602.10.5.
- 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 INFL AREA 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 10 FEET OF EACH END OF A BRACED WALL LINE.
- THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 10 FEET.
- MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.9 OF THE 2018 IRC.
- BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8.
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8.2 AND FIGURES R602.10.8(1)&(2)&(3).
- CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.11.
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.6.4 (UNO)
- ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
- ABBREVIATIONS:

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



CLIENT:
DR Horton, Inc.
800 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT: LH
Aberdeen - LH
First Floor Framing Plan



STRUCTURAL MEMBERS ONLY

DRAWING DATE: 06/15/2011
SCALE: 1/4"=1'-0" ON 22'x34" OR 1/8"=1'-0" ON 17'x17"
PROJECT # 52870099
DRAWN BY: JV
CHECKED BY: BCP

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET 53.0

| 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 | GYP SUM 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. |
| PF | WOOD STRUCTURAL PANEL | 1/16" | PER FIGURE R602.10.6.4 | PER FIGURE R602.10.6.4 |

**OR EQUIVALENT PER TABLE R102.3.5

GENERAL STRUCTURAL NOTES:

- CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL 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:
MICROLLAM (LVL): $F_b = 2600$ PSI, $F_v = 285$ PSI, $E = 1.9 \times 10^6$ PSI
PARALLAM (PSL): $F_b = 2900$ PSI, $F_v = 290$ PSI, $E = 1.25 \times 10^6$ PSI
- ALL WOOD MEMBERS SHALL BE #2 SYP/#2 SFF UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP/#2 SFF (UNO).
- ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SYP/#2 SFF 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".
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R402.1.6. MINIMUM 1/2" DIA BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- CONTRACTOR TO PROVIDE LOOKOUTS WHEN CEILING JOISTS SPAN PERPENDICULAR TO RAFTERS.
- FLITCH BEAMS, 4-PLY LVLs AND 3-PLY 9/16" LOADED LVLs SHALL BE BOLTED TOGETHER WITH 1/2" DIA THRU BOLTS SPACED AT 24" O.C. (MAX) STAGGERED OR EQUIVALENT CONNECTIONS PER DETAIL 1/D/3. 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 SFF #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 SFF #2, DROPPED. (UNLESS NOTED OTHERWISE)
- ABBREVIATIONS:

- DJ = DOUBLE JOIST
- GT = GIRDER TRUSS
- SC = STUD COLUMN
- EE = EACH END
- TJ = TRIPLE JOIST
- CL = CENTER LINE
- SJ = SINGLE JOIST
- FT = FLOOR TRUSS
- DR = DOUBLE RAFTER
- TR = TRIPLE RAFTER
- OC = ON CENTER
- PL = POINT LOAD

NOTE:
----- DESIGNATES JOIST SUPPORTED LOAD BEARING WALL ABOVE. PROVIDE BLOCKING UNDER JOIST SUPPORTED LOAD BEARING WALL.

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

INSTALL ANY REQUIRED HOLD-DOWNS PER SECTION R602.10.8 AND FIGURES R602.10.6.5, R602.10.7, R602.10.8(1) AND R602.10.8(2) OF THE 2018 IRC

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

NOTE: REDUCE JOIST SPACING UNDER TILE FLOORS, GRANITE COUNTERTOPS AND/OR ISLANDS.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON COMPLETED/REVISED ON 1/28/20. 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

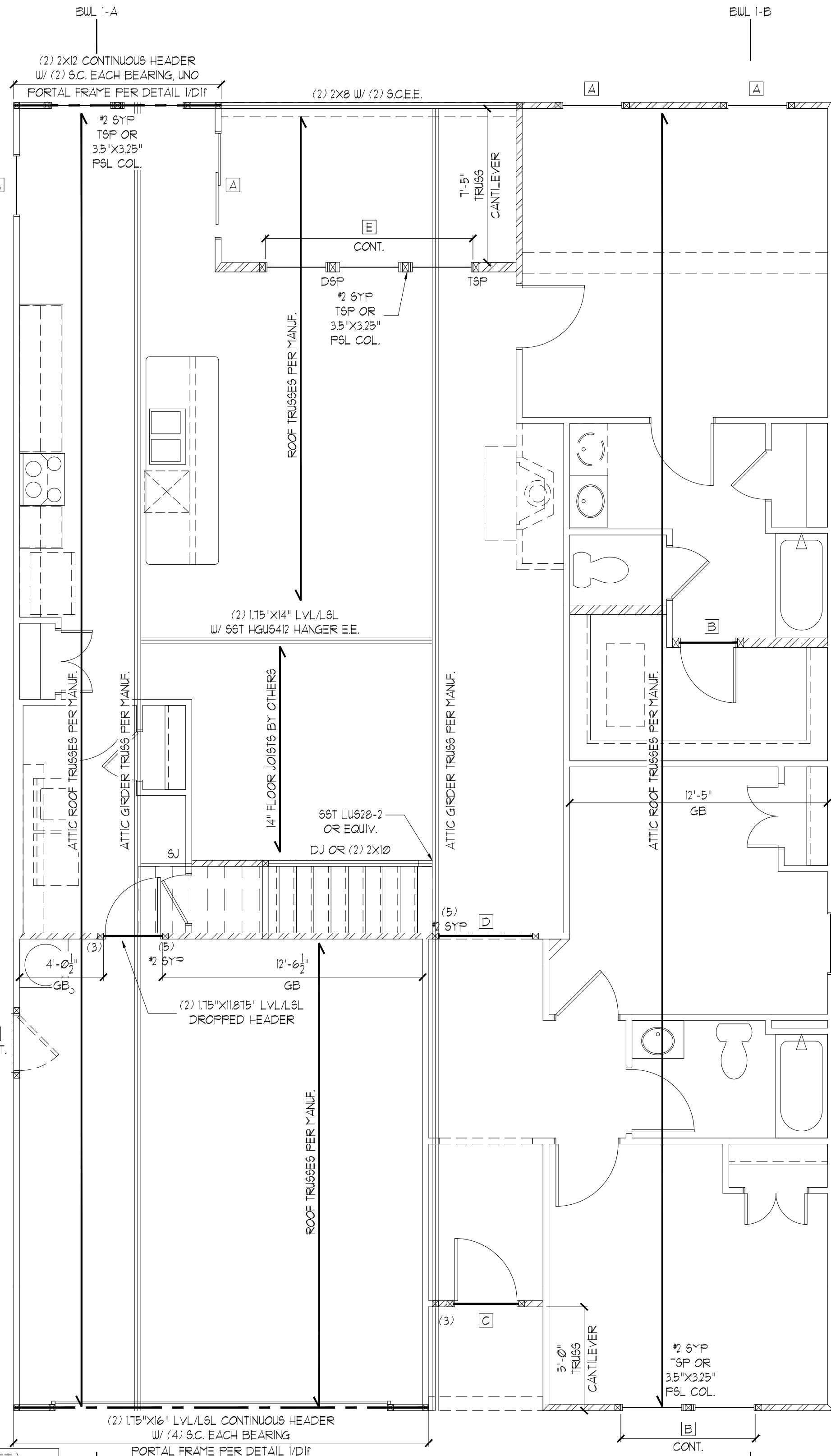
ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT. SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & 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" ON 22"x34" OR 1/8"=1'-0" ON 11"x17"

| FIRST FLOOR BRACING (FT) | | |
|--------------------------|-----------------------------|----------|
| | CONTINUOUS SHEATHING METHOD | |
| | REQUIRED | PROVIDED |
| BULL 1-1 | 11.0 | 14.1 |
| BULL 1-2 | 8.0 | 11.0 |
| BULL 1-3 | 11.0 | 14.5 |
| BULL 1-A | 8.4 | 6.00 |
| BULL 1-B | 8.4 | 6.00 |



FIRST FLOOR FRAMING PLAN - ELEVATION A WITH OPT. SECOND FLOOR

| 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) 3-1/4" LSL/LVL | (3) |
| F | (3) 2x6 | (1) |
| G | (3) 2x8 | (2) |
| H | (3) 2x10 | (2) |
| I | (3) 2x12 | (2) |

HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION. ALL HEADERS TO BE DROPPED UNLESS NOTED OTHERWISE. SC NOTED ON PLAN OVERRIDES SC LISTED ABOVE.

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

SECURE LINTEL TO HEADER w/ (2) 1/2" DIAMETER LAG SCREWS STAGGERED @ 16" O.C. (TYF FOR (3))

ALL HEADERS WHERE BRICK IS USED, TO BE (1) (UNO)

| WALL STUD SCHEDULE | |
|--|--|
| 1ST & 2ND FLOOR LOAD BEARING STUDS: | 2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C. |
| 1ST FLOOR LOAD BEARING STUDS w/ WALK-UP ATTIC: | 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. |
| BASEMENT LOAD BEARING STUDS: | 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. |
| NON-LOAD BEARING STUDS (ALL FLOORS): | 2x4 STUDS @ 24" O.C. |
| TWO STORY WALLS: | 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY |

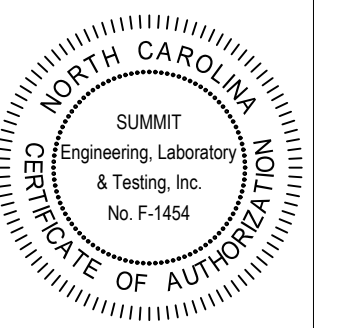
| KING STUD REQUIREMENTS | |
|------------------------|------------------|
| OPENING WIDTH | KINGS (EACH END) |
| LESS THAN 3'-0" | (1) |
| 3'-0" TO 4'-0" | (2) |
| 4'-0" TO 8'-0" | (3) |
| 8'-0" TO 12'-0" | (5) |
| 12'-0" TO 16'-0" | (6) |

KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS

BRACED WALL NOTES:

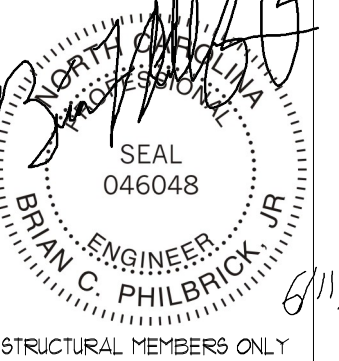
- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 INTERNATIONAL RESIDENTIAL CODE AS ALLOWED PER SECTION R602.10 OF THE 2018 NC RESIDENTIAL CODE.
- WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
- REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
- BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH IRC TABLE R602.10.4.
- 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 R602.10.5.
- THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYP SUM BOARD (UNO).
- FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING INTRILL 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 10 FEET OF EACH END OF A BRACED WALL LINE.
- THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 20 FEET.
- MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.9 OF THE 2018 IRC.
- BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8.2 AND FIGURES R602.10.8(1)&(2)&(3).
- CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.11
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.6.4 (UNO)
- ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
- ABBREVIATIONS:

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



CLIENT:
DR Horton, Inc.
800 Arrounidge Blvd.
Charlotte, NC 28273

PROJECT: LH
Aberdeen - LH
First Floor Framing Plan



STRUCTURAL MEMBERS ONLY

| | |
|---------------------|----------------------------------|
| DATE: 06/15/2021 | SCALE: 1/2"=1'-0" INT 1/8"=1'-0" |
| PROJECT #: 53870099 | DRAWN BY: JV |
| CHECKED BY: BCP | |

ORIGINAL INFORMATION
PROJECT #: 53870099 DATE: 09/05/2011

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET 53.2

| 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 | GYPSONUM BOARD | 1/2" | 5d COOLER NAILS @ 1" O.C. | 5d COOLER NAILS @ 1" O.C. | |
| ENG-16 | FIBROUS LAMINATED STRUCTURAL SHEATHING | 1/2" | 3/8" CROWN X 1-1/2" LEG STAPLES @ 3" O.C. | 3/8" CROWN X 1-1/2" LEG STAPLES @ 3" O.C. | |
| ENG-FF | FIBROUS LAMINATED STRUCTURAL SHEATHING | 1/2" | FER DETAIL 3/D4f | FER DETAIL 3/D4f | |

GENERAL STRUCTURAL NOTES:

- CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL 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:
MICROLLAM (LVL): $F_b = 2600$ PSI, $F_v = 285$ PSI, $E = 1.9 \times 10^6$ PSI
PARALLAM (PSL): $F_b = 2900$ PSI, $F_v = 290$ PSI, $E = 1.25 \times 10^6$ PSI
- ALL WOOD MEMBERS SHALL BE #2 SYP #2 SFF UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP #2 SFF (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".
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.1.6. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- CONTRACTOR TO PROVIDE LOOKOUTS WHEN CEILING JOISTS SPAN PERPENDICULAR TO RAFTERS.
- FLITCH BEAMS, 4-PLY LVLs AND 3-PLY SIDE LOADED LVLs 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 SFF #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 SFF #2, DROPPED. (UNLESS NOTED OTHERWISE)
- ABBREVIATIONS:

DJ = DOUBLE JOIST SJ = SINGLE JOIST
GT = GIRDER TRUSS FT = FLOOR TRUSS
SC = STUD COLUMN DR = DOUBLE RAFTER
EE = EACH END TR = TRIPLE RAFTER
TJ = TRIPLE JOIST OC = ON CENTER
CL = CENTER LINE PL = POINT LOAD

NOTE: DESIGNATES JOIST SUPPORTED LOAD BEARING WALL ABOVE. PROVIDE BLOCKING UNDER JOIST SUPPORTED LOAD BEARING WALL.

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

INSTALL ANY REQUIRED HOLDDOWNS PER SECTION R602.10.8 AND FIGURES R602.10.6.5, R602.10.7, R602.10.8(1) AND R602.10.8(2) OF THE 2015 IRC

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

NOTE: REDUCE JOIST SPACING UNDER TILE FLOORS, GRANITE COUNTERTOPS AND/OR ISLANDS.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON COMPLETED/REVISED ON 2/28/20. 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.

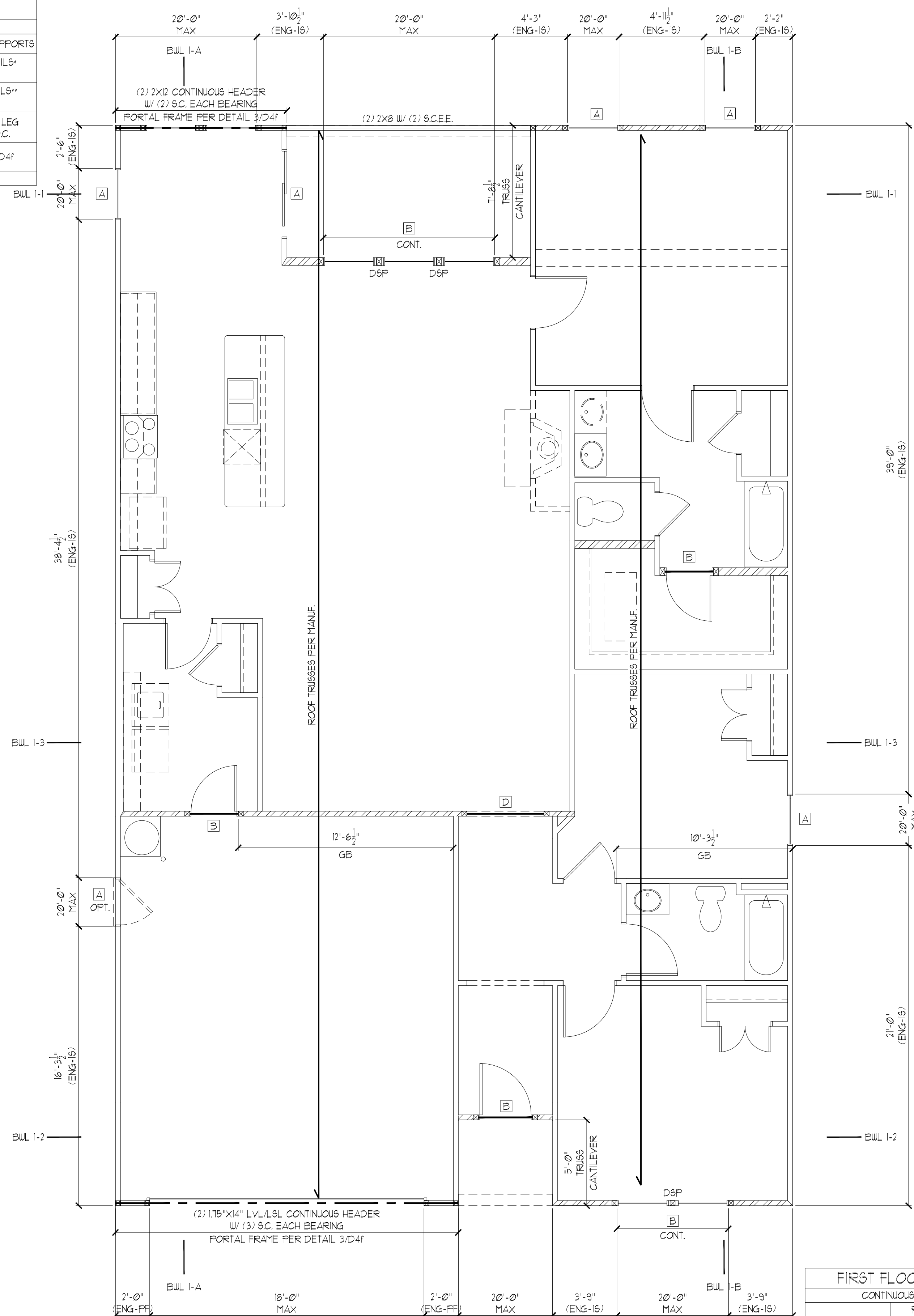
STRUCTURAL MEMBERS ONLY

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 NCRC.

FIRST FLOOR FRAMING PLAN

SCALE: 1/4"=1'-0" ON 22'x34" OR 1/8"=1'-0" ON 11"x11"



FIRST FLOOR FRAMING PLAN - ELEVATION A
OX-16 STRUCTURAL INSULATED SHEATHING OPTION

| | FIRST FLOOR BRACING (FT) | |
|---------|--------------------------|----------|
| | REQUIRED | PROVIDED |
| BUL 1-1 | 11.0 | 14.1 |
| BUL 1-2 | 8.0 | 13.0 |
| BUL 1-3 | 11.0 | 11.4 |
| BUL 1-A | 8.4 | 6.0 |
| BUL 1-B | 8.4 | 6.0 |

| 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) 9-1/4" LSL/LVL | (3) |
| F | (3) 2x6 | (1) |
| G | (3) 2x8 | (2) |
| H | (3) 2x10 | (2) |
| I | (3) 2x12 | (2) |

HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION. ALL HEADERS TO BE DROPPED UNLESS NOTED OTHERWISE. SC NOTED ON PLAN OVERRIDE SC LISTED ABOVE.

| LINTEL SCHEDULE | | |
|-----------------|-----------------|---------------------|
| TAG | SIZE | OPENING SIZE |
| | L3x3x1/4" | LESS THAN 6'-0" |
| | L5x3x1/4" | 6'-0" TO 10'-0" |
| | L5x3-1/2"x5/16" | GREATER THAN 10'-0" |
| | L5x3-1/2"x5/16" | 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)

| WALL STUD SCHEDULE | | |
|--|--|--|
| 1ST & 2ND FLOOR LOAD BEARING STUDS: | | |
| 2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C. | 1ST FLOOR LOAD BEARING STUDS w/ WALK-UP ATTIC: | |
| 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. | BASEMENT LOAD BEARING STUDS: | |
| 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. | NON-LOAD BEARING STUDS (ALL FLOORS): | |
| 2x4 STUDS @ 24" O.C. | TWO STORY WALLS: | |
| 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY | | |

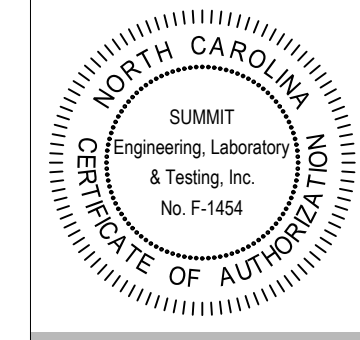
| KING STUD REQUIREMENTS | |
|------------------------|------------------|
| OPENING WIDTH | KING6 (EACH END) |
| LESS THAN 3'-0" | (1) |
| 3'-0" TO 4'-0" | (2) |
| 4'-0" TO 8'-0" | (3) |
| 8'-0" TO 12'-0" | (5) |
| 12'-0" TO 16'-0" | (6) |

KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS

BRACED WALL NOTES:

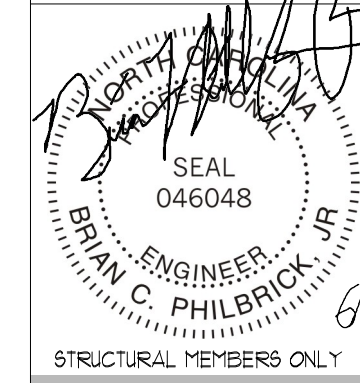
- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2015 INTERNATIONAL RESIDENTIAL CODE AS ALLOWED PER SECTION R602.10 OF THE 2018 NC RESIDENTIAL CODE.
- WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
- REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
- BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH IRC TABLE R602.10.4.
- 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 R602.10.5.
- THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSONUM 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 10 FEET OF EACH END OF A BRACED WALL LINE.
- THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 20 FEET.
- MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.9 OF THE 2015 IRC.
- BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8.2 AND FIGURES R602.10.8.1(1)&(2)&(3).
- CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.11
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.6.4 (UNO)
- ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS. ABBREVIATIONS:

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



CLIENT:
DR Horton, Inc.
800 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT: LH
Aberdeen - LH
First Floor Framing Plan



DRAWING DATE: 06/15/2021
SCALE: 1/4"=1'-0" ON 22'x34" OR 1/8"=1'-0" ON 11"x11"
PROJECT # 52870099
DRAWN BY: JV
CHECKED BY: BCP

ORIGINAL INFORMATION PROJECT # 10099 DATE 09/05/2021
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

| REQUIRED BRACED WALL PANEL CONNECTIONS | | | | |
|--|--|----------------|---|---|
| METHOD | MATERIAL | MIN. THICKNESS | REQUIRED CONNECTION | |
| | | | # PANEL EDGES | # INTERMEDIATE SUPPORTS |
| C5-WSP | WOOD STRUCTURAL PANEL | 3/8" | 6d COMMON NAILS @ 6" O.C. | 6d COMMON NAILS @ 12" O.C. |
| GB | GYP SUM BOARD | 1/2" | 5d COOLER NAILS** @ 1" O.C. | 5d COOLER NAILS** @ 1" O.C. |
| ENG-15 | FIBROUS LAMINATED STRUCTURAL SHEATHING | 1/2" | 1 1/8" CROWN X 1-1/8" LEG STAPLES @ 3" O.C. | 1 1/8" CROWN X 1-1/8" LEG STAPLES @ 3" O.C. |
| ENG-FF | FIBROUS LAMINATED STRUCTURAL SHEATHING | 1/2" | PER DETAIL 3/D4F | PER DETAIL 3/D4F |

GENERAL STRUCTURAL NOTES:

- CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL 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 (FSL): $F_b = 2900$ PSI, $F_v = 290$ PSI, $E = 1.25 \times 10^6$ PSI
- ALL WOOD MEMBERS SHALL BE #2 SYP/#3 SYP UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP/#3 SYP UNLESS NOTED ON PLAN.
- 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".
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE SECTION R403.16. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- 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/#3 SYP OR 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/#3 SYP OR DROPPED. (UNLESS NOTED OTHERWISE)
- ABBREVIATIONS:

DJ = DOUBLE JOIST SJ = SINGLE JOIST
GT = GIRDER TRUSS FT = FLOOR TRUSS
SC = STUD COLUMN DR = DOUBLE RAFTER
EE = EACH END TR = TRIPLE RAFTER
TJ = TRIPLE JOIST OC = ON CENTER
CL = CENTER LINE PL = POINT LOAD

NOTE: DESIGNATES JOIST SUPPORTED LOAD BEARING WALL ABOVE. PROVIDE BLOCKING UNDER JOIST SUPPORTED LOAD BEARING WALL.

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

INSTALL ANY REQUIRED HOLD-DOWNS PER SECTION R602.10.2 AND FIGURES R602.10.6.5, R602.10.1, R602.10.2(1) AND R602.10.2(2) OF THE 2015 IRC

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

NOTE: REDUCE JOIST SPACING UNDER TILE FLOORS, GRANITE COUNTERTOPS AND/OR ISLANDS.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON COMPLETED/REVISED ON 2/28/20. 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.

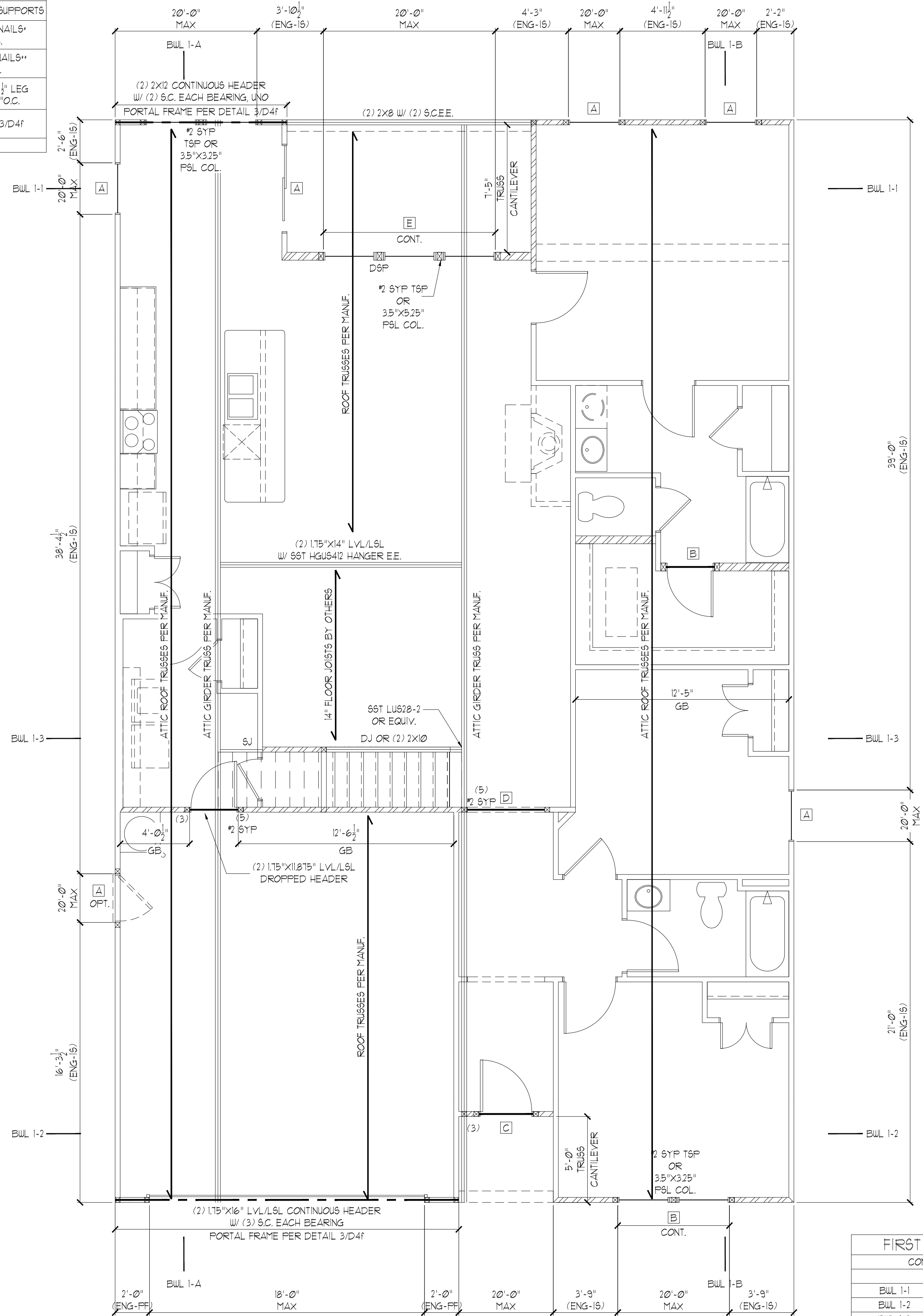
STRUCTURAL MEMBERS ONLY

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 NCRC.

FIRST FLOOR FRAMING PLAN

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



FIRST FLOOR FRAMING PLAN - ELEVATION A WITH OPT. SECOND FLOOR

OX-15 STRUCTURAL INSULATED SHEATHING OPTION

| | CONTINUOUS SHEATHING METHOD | |
|---------|-----------------------------|----------|
| | REQUIRED | PROVIDED |
| BUL 1-1 | 11.0 | 14.1 |
| BUL 1-2 | 8.0 | 13.0 |
| BUL 1-3 | 11.0 | 11.4 |
| BUL 1-A | 8.4 | 6.00 |
| BUL 1-B | 8.4 | 6.00 |

| 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) 9-1/4" LSL/LVL | (3) |
| F | (3) 2x6 | (1) |
| G | (3) 2x8 | (2) |
| H | (3) 2x10 | (2) |
| I | (3) 2x12 | (2) |

HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION. ALL HEADERS TO BE DROPPED UNLESS NOTED OTHERWISE. SC NOTED ON PLAN OVERRIDE SC LISTED ABOVE.

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

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)

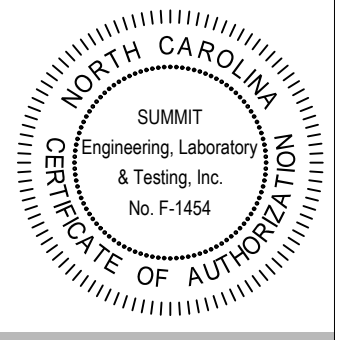
| WALL STUD SCHEDULE | | |
|--|--|--|
| 1ST & 2ND FLOOR LOAD BEARING STUDS: | | |
| 2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C. | | |
| 1ST FLOOR LOAD BEARING STUDS w/ WALK-UP ATTIC: | | |
| 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. | | |
| BASEMENT LOAD BEARING STUDS: | | |
| 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. | | |
| NON-LOAD BEARING STUDS (ALL FLOORS): | | |
| 2x4 STUDS @ 24" O.C. | | |
| TWO STORY WALLS: | | |
| 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY | | |

| KING STUD REQUIREMENTS | |
|------------------------|-------------------|
| OPENING WIDTH | KING'S (EACH END) |
| LESS THAN 3'-0" | (1) |
| 3'-0" TO 4'-0" | (2) |
| 4'-0" TO 8'-0" | (3) |
| 8'-0" TO 12'-0" | (5) |
| 12'-0" TO 16'-0" | (6) |

KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS

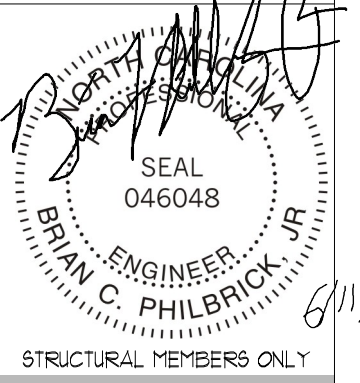
- BRACED WALL NOTES:
- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2015 INTERNATIONAL RESIDENTIAL CODE AS ALLOWED PER SECTION R602.10 OF THE 2015 NC RESIDENTIAL CODE.
 - WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
 - REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
 - BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH IRC TABLE R602.10.4.
 - 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 R602.10.5.
 - THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYP SUM 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 10 FEET OF EACH END OF A BRACED WALL LINE.
 - THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 20 FEET.
 - MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.9 OF THE 2015 IRC.
 - BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8
 - BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8.2 AND FIGURES R602.10.8.1(1)&(2)&(3).
 - CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.11
 - PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.6.4 (UNO)
 - ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
 - ABBREVIATIONS:

GB = GYP SUM BOARD WSP = WOOD STRUCTURAL PANEL
C5-XXX = CONT. SHEATHED ENG = ENGINEERED SOLUTION
FF = PORTAL FRAME FF-ENG = ENG. PORTAL FRAME



CLIENT: DR Horton, Inc. 800 Arrowridge Blvd. Charlotte, NC 28273

PROJECT: LH First Floor Framing Plan



DATE: 06/15/2011
SCALE: 22x34 1/4"=1'-0" 18"x17"=1'-0"
PROJECT: 52870099
DRAWN BY: JV
CHECKED BY: BCP

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

| 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 | GYP SUM BOARD | 1/2" | 5d COOLER NAILS @ 7" O.C. | 5d COOLER NAILS @ 7" 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 R102.3.5

GENERAL STRUCTURAL NOTES:

- CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL 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:
MICRO LAM (LVL): $F_b = 2600$ PSI, $F_v = 225$ PSI, $E = 1.9 \times 10^6$ PSI
PARALLAM (PSL): $F_b = 2300$ PSI, $F_v = 230$ PSI, $E = 1.25 \times 10^6$ PSI
- ALL WOOD MEMBERS SHALL BE #1 SYP #2 SFF UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #1 SYP #2 SFF (UNO).
- ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SYP #2 SFF 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".
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.1.6. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- CONTRACTOR TO PROVIDE 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/D3. 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 SFF #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 SFF #2, DROPPED. (UNLESS NOTED OTHERWISE)
- ABBREVIATIONS:

DJ = DOUBLE JOIST SJ = SINGLE JOIST
GT = GIRDER TRUSS FT = FLOOR TRUSS
SC = STUD COLUMN DR = DOUBLE RAFTER
EE = EACH END TR = TRIPLE RAFTER
TJ = TRIPLE JOIST OC = ON CENTER
CL = CENTER LINE PL = POINT LOAD

NOTE:
----- DESIGNATES JOIST SUPPORTED LOAD BEARING WALL ABOVE. PROVIDE BLOCKING UNDER JOIST SUPPORTED LOAD BEARING WALL.

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

INSTALL ANY REQUIRED HOLDDOWNS PER SECTION R602.10.8 AND FIGURES R602.10.6.5, R602.10.7, R602.10.8(1) AND R602.10.8(2) OF THE 2015 IRC

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

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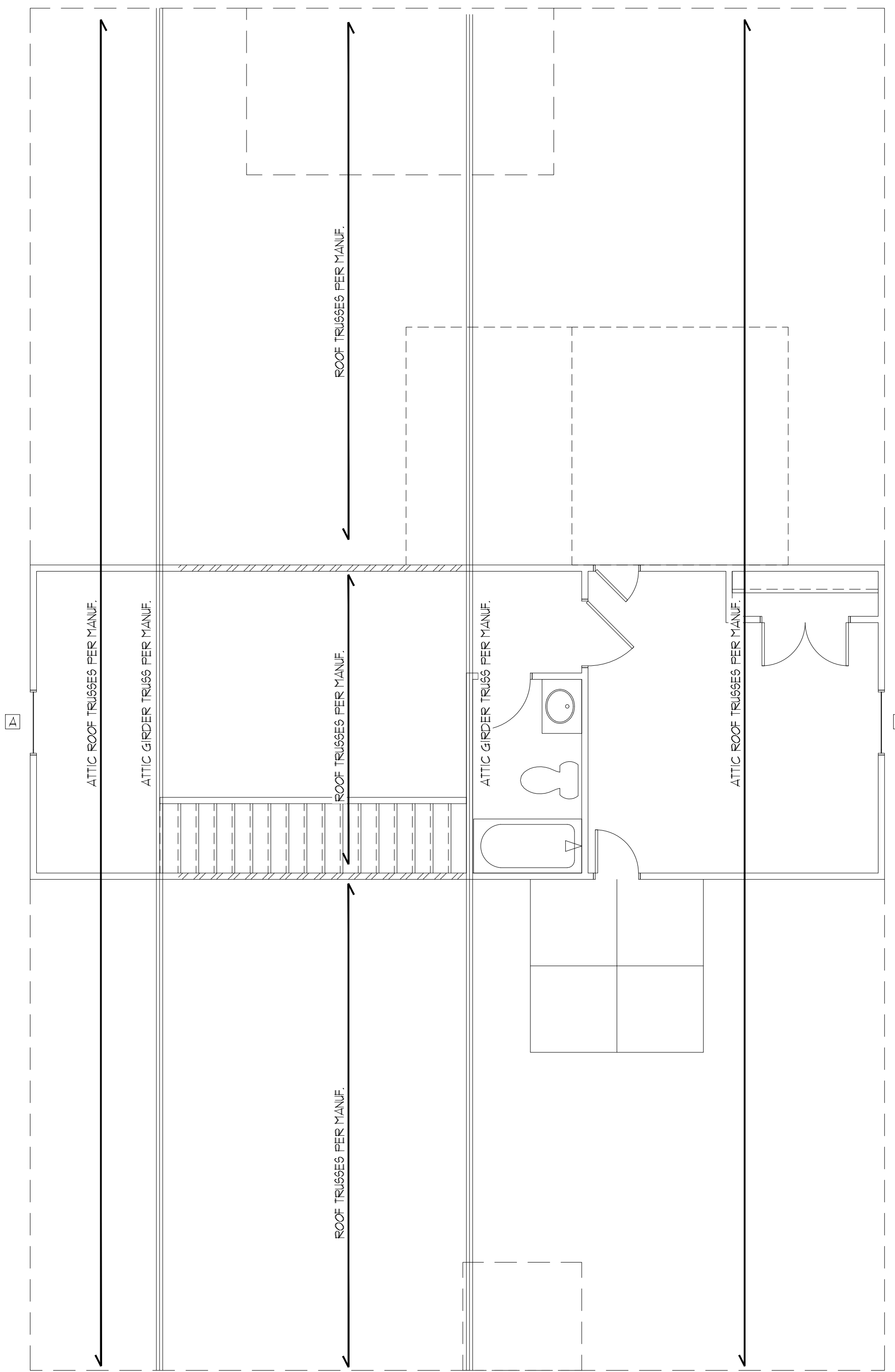
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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

SECOND FLOOR FRAMING PLAN

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



OPT. SECOND FLOOR FRAMING PLAN - ELEVATION ABC

| 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) 9-1/4" LSL/LVL | (3) |
| F | (3) 2x6 | (1) |
| G | (3) 2x8 | (2) |
| H | (3) 2x10 | (2) |
| I | (3) 2x12 | (2) |

HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION. ALL HEADERS TO BE DROPPED UNLESS NOTED OTHERWISE. SC NOTED ON PLAN OVERRIDE SC LISTED ABOVE.

| LINTEL SCHEDULE | | |
|-----------------|----------------------------------|---------------------|
| TAG | SIZE | OPENING SIZE |
| ① | L3x3x1/4" | LESS THAN 6'-0" |
| ② | L5x3x1/4" | 6'-0" TO 10'-0" |
| ③ | L5x3-1/2"x5/16" | GREATER THAN 10'-0" |
| ④ | L5x3-1/2"x5/16" 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: ① (UNO)

| WALL STUD SCHEDULE | |
|--|--|
| 1ST & 2ND FLOOR LOAD BEARING STUDS: | 2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C. |
| 1ST FLOOR LOAD BEARING STUDS w/ WALK-UP ATTIC: | 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. |
| BASEMENT LOAD BEARING STUDS: | 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. |
| NON-LOAD BEARING STUDS (ALL FLOORS): | 2x4 STUDS @ 24" O.C. |
| TWO STORY WALLS: | 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY |

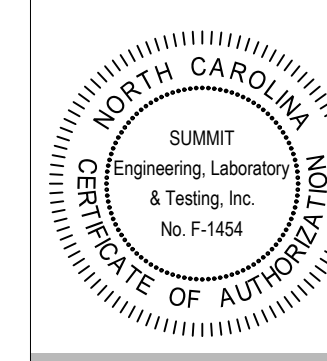
| KING STUD REQUIREMENTS | |
|------------------------|-------------------|
| OPENING WIDTH | KING'S (EACH END) |
| LESS THAN 3'-0" | (1) |
| 3'-0" TO 4'-0" | (2) |
| 4'-0" TO 8'-0" | (3) |
| 8'-0" TO 12'-0" | (5) |
| 12'-0" TO 16'-0" | (6) |

KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS

BRACED WALL NOTES:

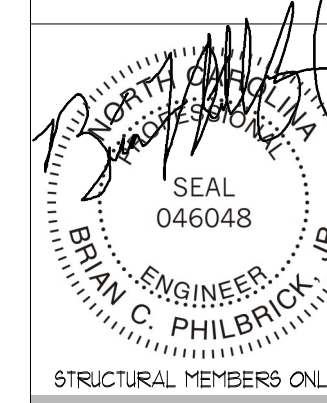
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- WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
- REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
- BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH IRC TABLE R602.10.4.
- ALL BRACED 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 R602.10.5.
- 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 10 FEET OF EACH END OF A BRACED WALL LINE.
- THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 20 FEET.
- MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.9 OF THE 2015 IRC.
- BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8.2 AND FIGURES R602.10.8(1)&(2)&(3).
- CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.11
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.6.4 (UNO)
- ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
- ABBREVIATIONS:

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



CLIENT:
DR Horton, Inc.
8000 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT: LH
Aberdeen - LH
Second Floor Framing Plan



STRUCTURAL MEMBERS ONLY
DRAWING
DATE: 06/15/2021
SCALE: 22x4 1/4"=1'-0"
11x17 1/8"=1'-0"
PROJECT # 52870099
DRAWN BY: JV
CHECKED BY: BCP
ORIGINAL INFORMATION
PROJECT # 100293 DATE 06/05/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
54.0

| 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 | GYP SUM BOARD | 1/2" | 5d COOLER NAILS** @ 7" O.C. | 5d COOLER NAILS** @ 7" O.C. |
| ENG-IS | FIBROUS LAMINATED STRUCTURAL SHEATHING | 1/2" | 1 1/2" CROWN X 1-1/2" LEG STAPLES @3" O.C. | 1 1/2" CROWN X 1-1/2" LEG STAPLES @3" O.C. |
| ENG-PF | FIBROUS LAMINATED STRUCTURAL SHEATHING | 1/2" | PER DETAIL 3/D4f | PER DETAIL 3/D4f |

*BASED ON 16" O.C. STUD SPACING **OR EQUIVALENT PER TABLE R102.3.5

GENERAL STRUCTURAL NOTES:

- CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL 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:
MICRO-LAM (LVL): $F_b = 2600$ PSI, $F_v = 285$ PSI, $E = 1.9 \times 10^6$ PSI
PARALLAM (PSL): $F_b = 2300$ PSI, $F_v = 230$ PSI, $E = 1.25 \times 10^6$ PSI
- ALL WOOD MEMBERS SHALL BE #2 SYP #2 SFF UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP #2 SFF (UNO).
- ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SYP #2 SFF 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".
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.16. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- CONTRACTOR TO PROVIDE 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 SFF #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 SFF #2, DROPPED, (UNLESS NOTED OTHERWISE)
- ABBREVIATIONS:

- | | |
|-------------------|--------------------|
| DJ = DOUBLE JOIST | SJ = SINGLE JOIST |
| GT = GIRDER TRUSS | FT = FLOOR TRUSS |
| SC = STUD COLUMN | DR = DOUBLE RAFTER |
| EE = EACH END | TR = TRIPLE RAFTER |
| TJ = TRIPLE JOIST | OC = ON CENTER |
| CL = CENTER LINE | PL = POINT LOAD |

NOTE: DESIGNATES JOIST SUPPORTED LOAD BEARING WALL ABOVE. PROVIDE BLOCKING UNDER JOIST SUPPORTED LOAD BEARING WALL.

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

INSTALL ANY REQUIRED HOLDINGS PER SECTION R602.10.2 AND FIGURES R602.10.6.5, R602.10.7, R602.10.8(1) AND R602.10.8(2) OF THE 2018 IRC

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

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON COMPLETED/REVISED ON 2/28/20. 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.

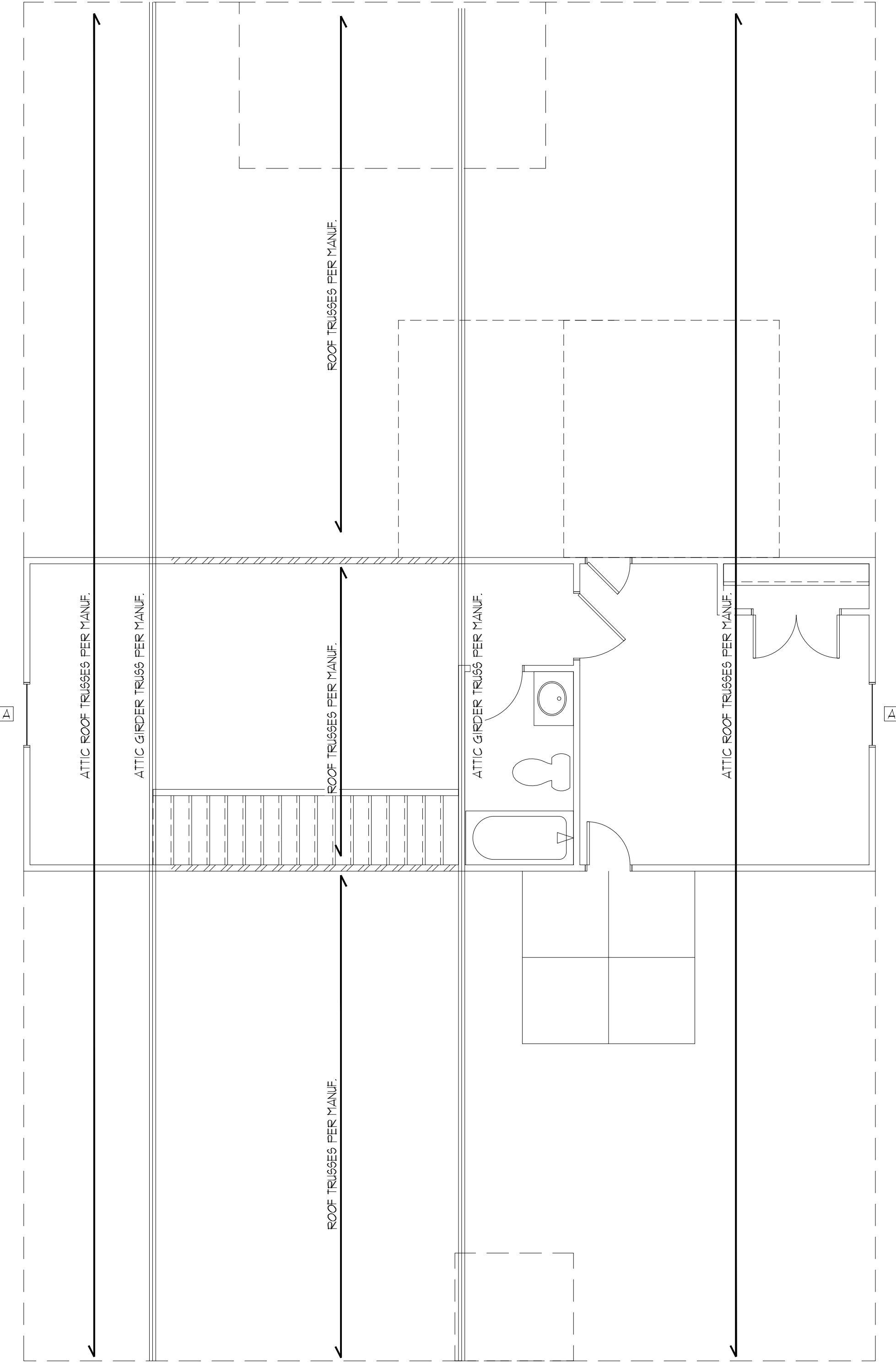
STRUCTURAL MEMBERS ONLY

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. C.

SECOND FLOOR FRAMING PLAN

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



OPT. SECOND FLOOR FRAMING PLAN - ELEVATION ABC

OX-16 STRUCTURAL INSULATED SHEATHING OPTION

| 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) 3-1/4" LSL/LVL | (3) |
| F | (3) 2x6 | (1) |
| G | (3) 2x8 | (2) |
| H | (3) 2x10 | (2) |
| I | (3) 2x12 | (2) |

HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION. ALL HEADERS TO BE DROPPED UNLESS NOTED OTHERWISE. SC NOTED ON PLAN OVERRIDE SC LISTED ABOVE.

| LINTEL SCHEDULE | | |
|-----------------|----------------------------------|---------------------|
| TAG | SIZE | OPENING SIZE |
| | L3x3x1/4" | LESS THAN 6'-0" |
| | L5x3x1/4" | 6'-0" TO 10'-0" |
| | L5x3-1/2"x5/16" | GREATER THAN 10'-0" |
| | L5x3-1/2"x5/16" 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)

WALL STUD SCHEDULE

- 1ST & 2ND FLOOR LOAD BEARING STUDS:
2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C.
1ST FLOOR LOAD BEARING STUDS w/ WALK-UP ATTIC:
2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C.
BASEMENT LOAD BEARING STUDS:
2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C.
NON-LOAD BEARING STUDS (ALL FLOORS):
2x4 STUDS @ 24" O.C.
TWO STORY WALLS:
2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY

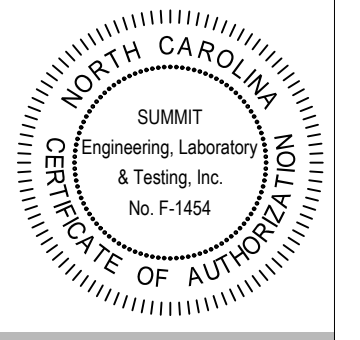
| KING STUD REQUIREMENTS | |
|------------------------|------------------|
| OPENING WIDTH | KINGS (EACH END) |
| LESS THAN 3'-0" | (1) |
| 3'-0" TO 4'-0" | (2) |
| 4'-0" TO 8'-0" | (3) |
| 8'-0" TO 12'-0" | (5) |
| 12'-0" TO 16'-0" | (6) |

KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS

BRACED WALL NOTES:

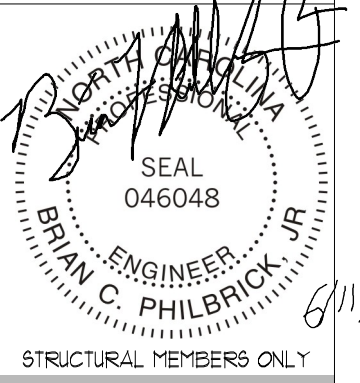
- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 INTERNATIONAL RESIDENTIAL CODE AS ALLOWED PER SECTION R602.10 OF THE 2018 NC RESIDENTIAL CODE.
- WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
- REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
- BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH IRC TABLE R602.10.4.
- 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 R602.10.5.
- 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 10 FEET OF EACH END OF A BRACED WALL LINE.
- THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 20 FEET.
- MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.3 OF THE 2018 IRC.
- BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.2.
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.2.2 AND FIGURES R602.10.2(1)&(2)&(3).
- CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10(1).
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.6.4 (UNO)
- ON SCHEMATIC SHADDED WALLS INDICATE BRACED WALL PANELS.
- ABBREVIATIONS:

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



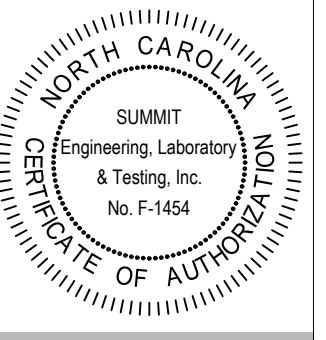
CLIENT:
DR Horton, Inc.
800 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT: LH
Aberdeen
Second Floor Framing Plan



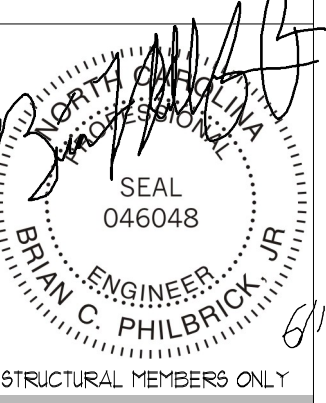
DATE: 06/15/2021
SCALE: 22x4 1/4"=1'-0" / 11"=1'-0"
PROJECT # 52870099
DRAWN BY: JV
CHECKED BY: BCP

ORIGINAL INFORMATION
PROJECT # 100099 DATE 06/05/2021
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS



CLIENT:
 DR Horton, Inc.
 8000 Arrowridge Blvd.
 Charlotte, NC 28273

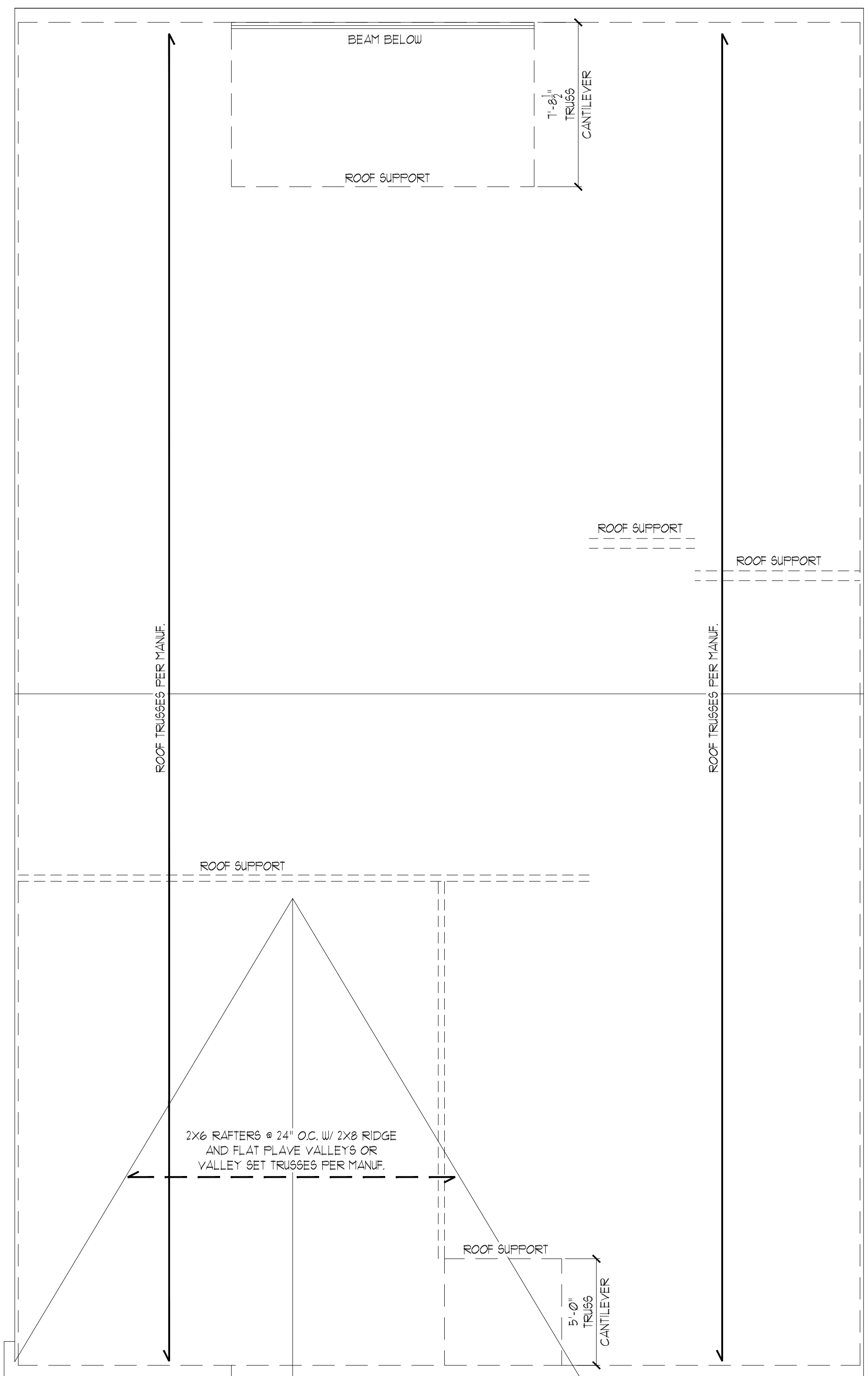
PROJECT: LH
 Aberdeen - LH
 Roof Framing Plan



DATE: 06/25/2011
 SCALE: 22x34 1/4"=1'-0"
 1/8"=1'-0"
 PROJECT # 52870099
 DRAWN BY: JV
 CHECKED BY: BCP

ORIGINAL INFORMATION
 PROJECT # 100299 DATE 06/05/2011
 REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
 55.0



ROOF FRAMING PLAN - ELEVATION ABC

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON COMPLETED/REVISED ON 2/28/20. 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.

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

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

STRUCTURAL MEMBERS ONLY

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

ROOF FRAMING PLAN

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

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON COMPLETED/REVISED ON 2/28/20. 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.

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)

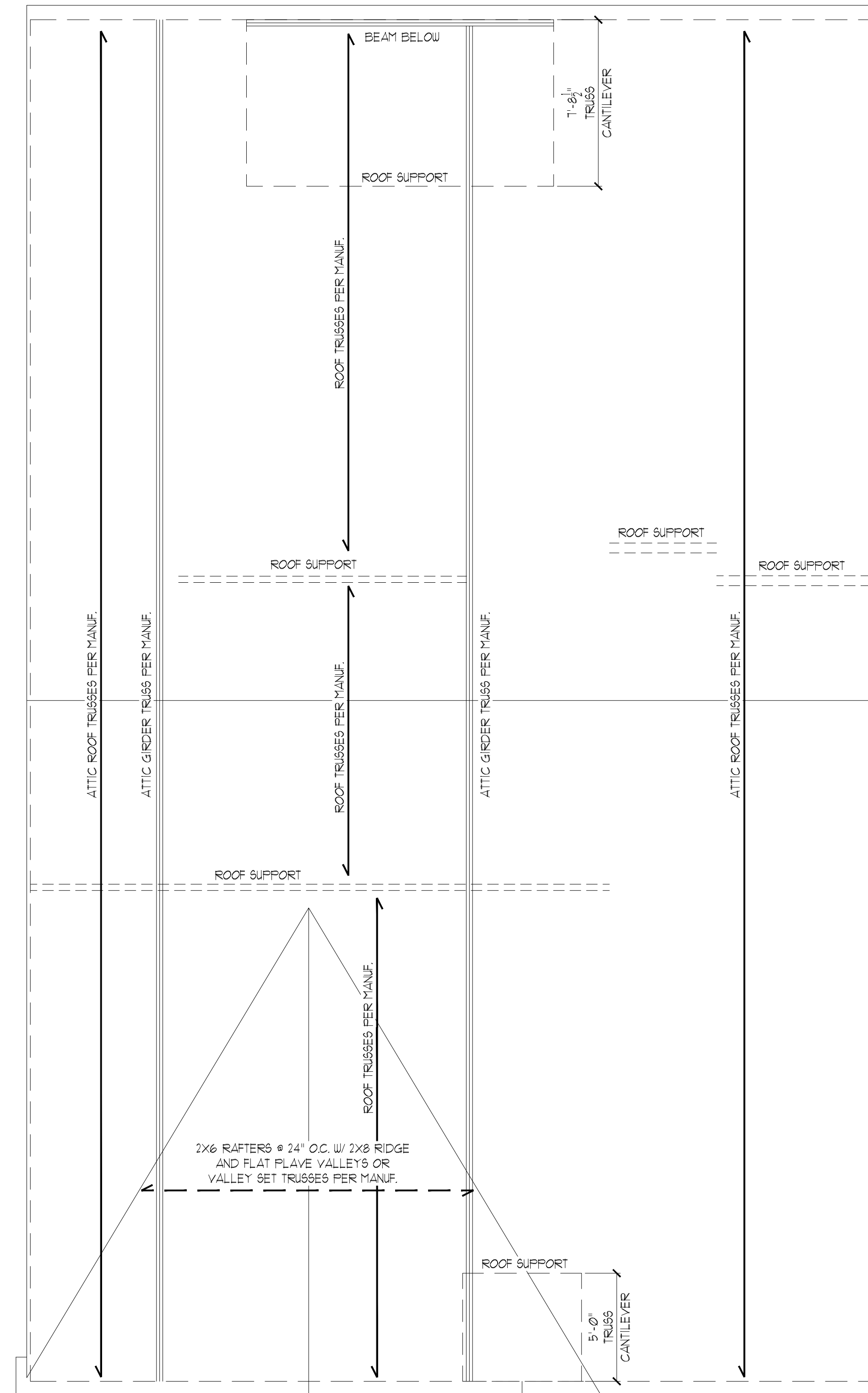
STRUCTURAL MEMBERS ONLY

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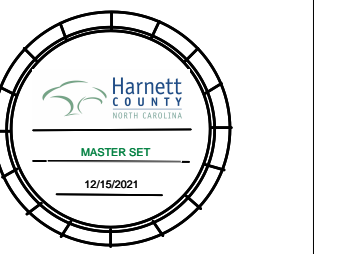
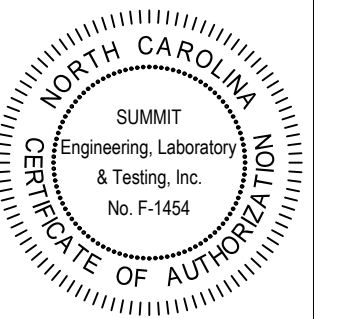
STRUCTURAL ANALYSIS BASED ON 2018 NCR. C.

ROOF FRAMING PLAN

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

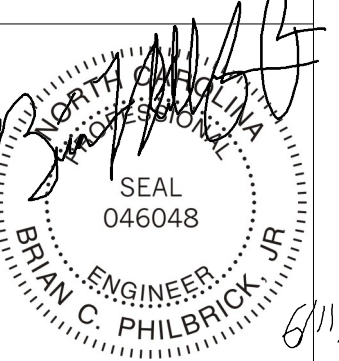


ROOF FRAMING PLAN - ELEVATION ABC
WITH OPT. SECOND FLOOR



CLIENT:
DR Horton, Inc.
800 Aronridge Blvd.
Charlotte, NC 28273

PROJECT:
Abundant - LH
Roof Framing Plan



STRUCTURAL MEMBERS ONLY

DRAWING
DATE: 06/15/2011
SCALE: 22x34 1/4"=1'-0"
11x17 1/8"=1'-0"
PROJECT # 52870099
DRAWN BY: JV
CHECKED BY: BCP

ORIGINAL INFORMATION
PROJECT # 100293 DATE 06/05/2011
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 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
21. Conventional 2x _____ 10 PSF
22. Truss _____ 20 PSF
3. Snow _____ 15 PSF
3.1 Importance Factor _____ 1.0
4. Floor Live Loads
41. Typ. Dwelling _____ 40 PSF
42. Sleeping Areas _____ 30 PSF
43. Decks _____ 40 PSF
44. Passenger Garage _____ 50 PSF
5. Floor Dead Loads
51. Conventional 2x _____ 10 PSF
52. 1-Joist _____ 15 PSF
53. Floor Truss _____ 15 PSF
6. Ultimate Wind Speed (3 sec. gust) _____ FER PLAN
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 Sm = %g
8.6. Seismic Base Shear
8.6.1 Vx =
8.6.2 Vy =
8.7. Basic Structural System (check one)
[X] Bearing Wall
[] Building Frame
[] Moment Frame
[] Dual w/ Special Moment Frame
[] Dual w/ Intermediate R/C or Special Steel
[] Inverted Pendulum
8.8. Arch/Mech Components Anchored _____ No
8.9. Lateral Design Control: Seismic [] Wind [X]
9. Assumed Soil Bearing Capacity _____ 2000psf



STRUCTURAL PLANS PREPARED FOR:

STANDARD DETAILS

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

ARCHITECT/DESIGNER:

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 & Testing, P.C. before construction begins.

PLAN ABBREVIATIONS:

Table with 3 columns: ABBREVIATION, DESCRIPTION, FULL NAME. Includes entries like AFF ABOVE FINISHED FLOOR, CJ CEILING JOIST, etc.

Roof truss and floor joist layouts, and their corresponding loading details, were not provided to SUMMIT Engineering, Laboratory & 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:

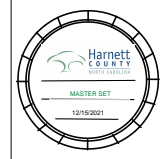
Table with 2 columns: Sheet No., Description. Lists sheets CS1 through D1F.

REVISION LIST:

Table with 4 columns: Revision No., Date, Project No., Description. Lists revisions 1 through 9.

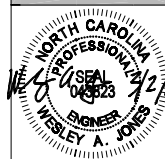
DR HORTON PROJECT SIGN-OFF:

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



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

PROJECT: Standard Details
Cover Sheet



STRUCTURAL MEMBERS ONLY

DRAWN: DATE: 3/27/20
SCALE: 2/24" = 1'
PROJECT: P-301-10R
CHECKED BY: JAU

ORIGINAL INFORMATION: PROJECT #: DATE: 1/16/2017

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 & 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 (WUF) for concrete slabs-on-grade shall be placed at mid-depth of slab. The WUF shall be securely supported during the concrete pour.

CONCRETE REINFORCEMENT:

- 1. Fibrous concrete reinforcement, or fibersh, 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. Fibersh reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
3. Application of fibersh per cubic yard of concrete shall equal a minimum of 0.1% by volume (15 pounds per cubic yard).
4. Fibersh 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 = 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 AIA/PA standard C-15. All other moisture exposed wood shall be treated in accordance with AIA/PA standard C-2.
4. Nails shall be common wire nails unless otherwise noted.
5. Lag screws shall conform to ANSI/ASME standard B82.1-1981. 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 1/2" 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) 1/2" 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 7-05), 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." 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-9). 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.
4. 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.

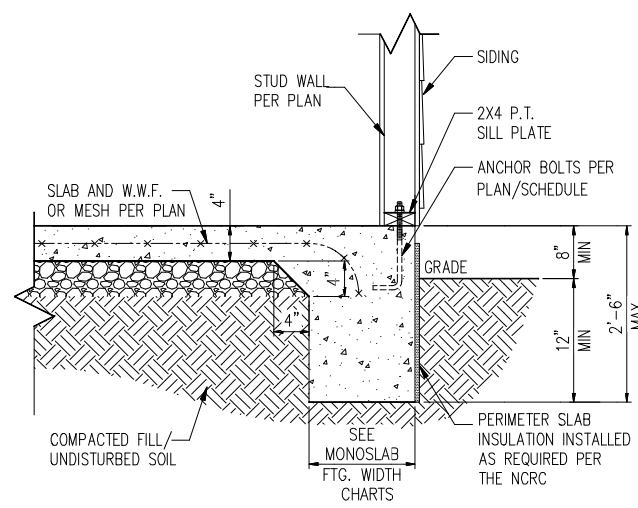
WOOD STRUCTURAL PANELS:

- 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.

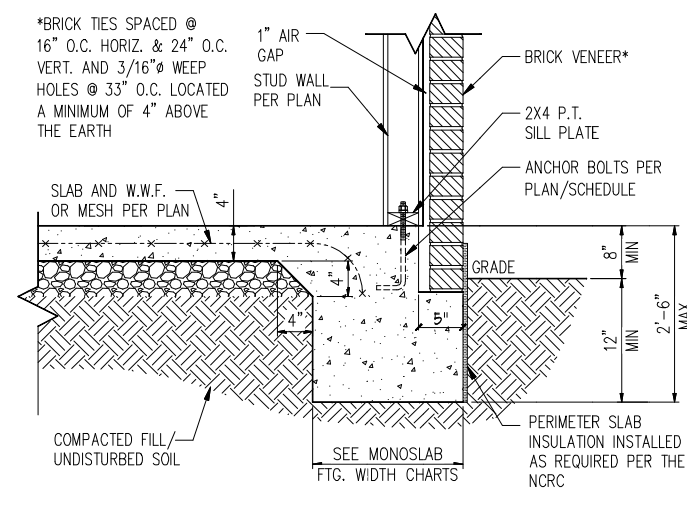
- 3. Wood wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information. Sheathing shall be applied with the long direction perpendicular to framing, unless noted otherwise.
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:

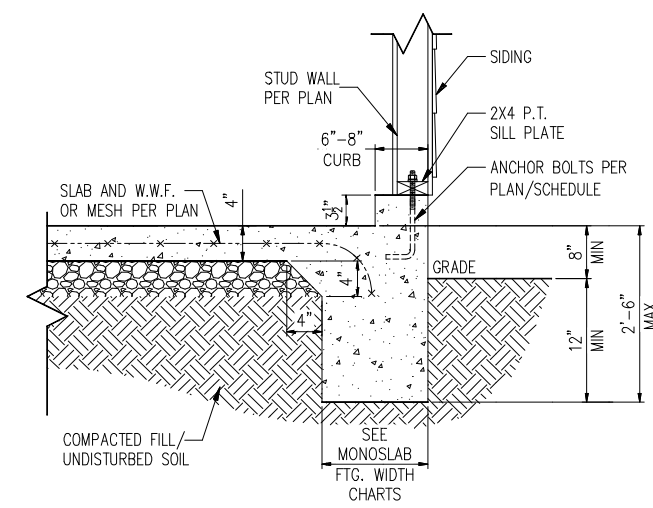
- 1. Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
2. All structurally required fiberboard sheathing shall bear the mark of the AFA.
3. Fiberboard wall sheathing shall comply with the requirements of local building codes for the 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.



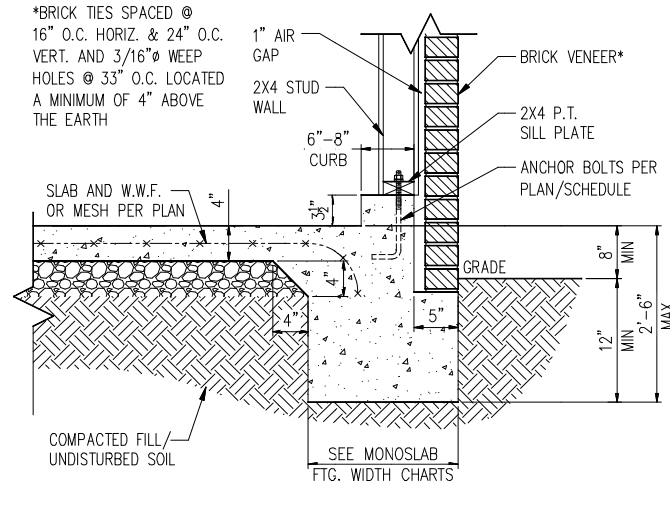
STANDARD - SIDING



STANDARD - BRICK



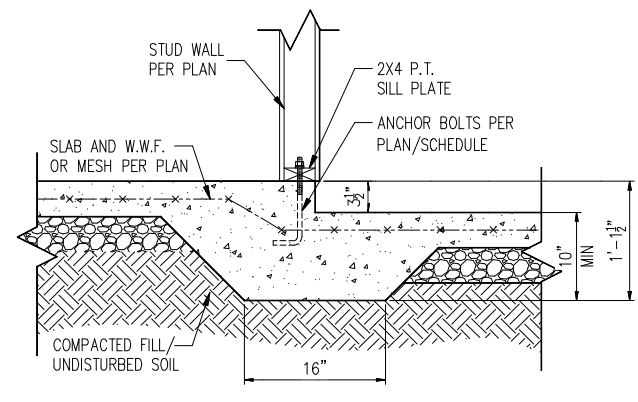
STANDARD - SIDING



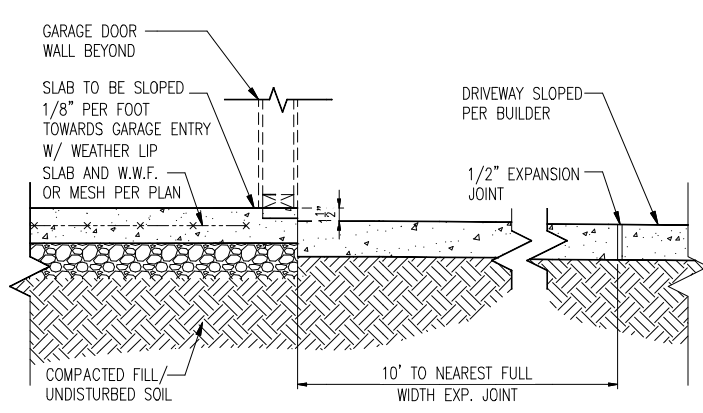
STANDARD - BRICK

1 TYP. SLAB DETAIL
D1m N.T.S.

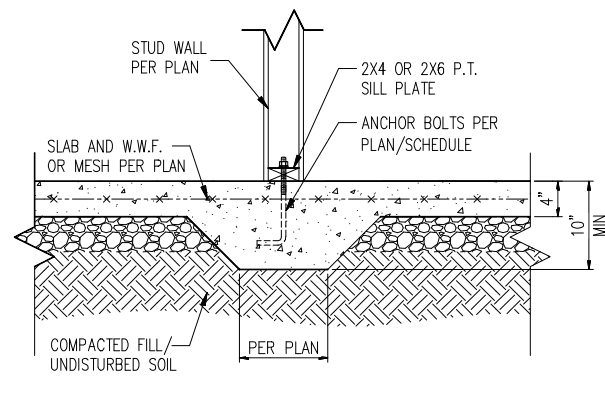
2 TYP. GARAGE CURB DETAIL
D1m N.T.S.



3 STEP IN GARAGE
D1m N.T.S.



4 SLAB AT GARAGE DOOR
D1m N.T.S.

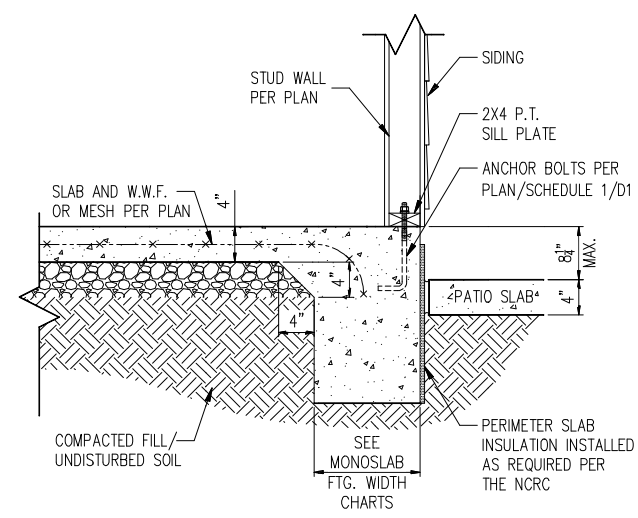


5 TYP. THICKENED SLAB DETAIL
D1m N.T.S.

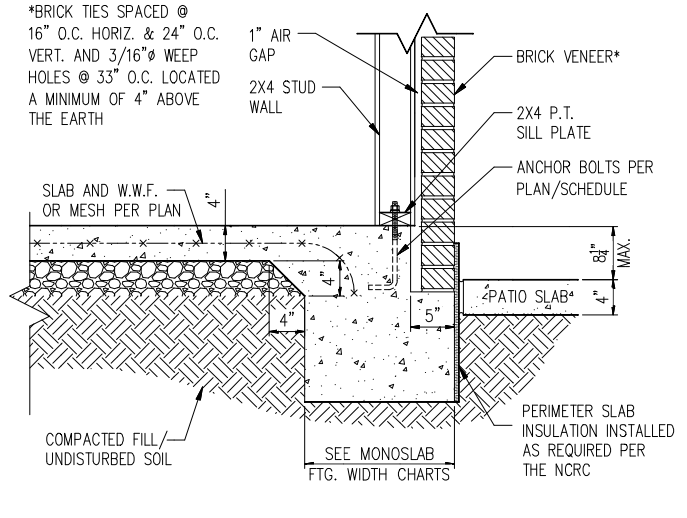
MONOLITHIC FOOTING WIDTH

| # 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" |

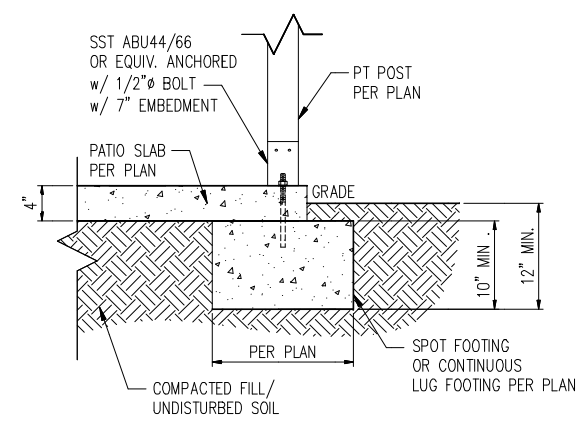
*5" BRICK LEDGE HAS BEEN ADDED TO THE MONOLITHIC FOOTING WIDTH FOR BRICK SUPPORT



STANDARD - SIDING



STANDARD - BRICK



6A COVERED PATIO DETAIL
D1m N.T.S.

6 PATIO SLAB DETAIL
D1m N.T.S.

WALL ANCHOR SCHEDULE

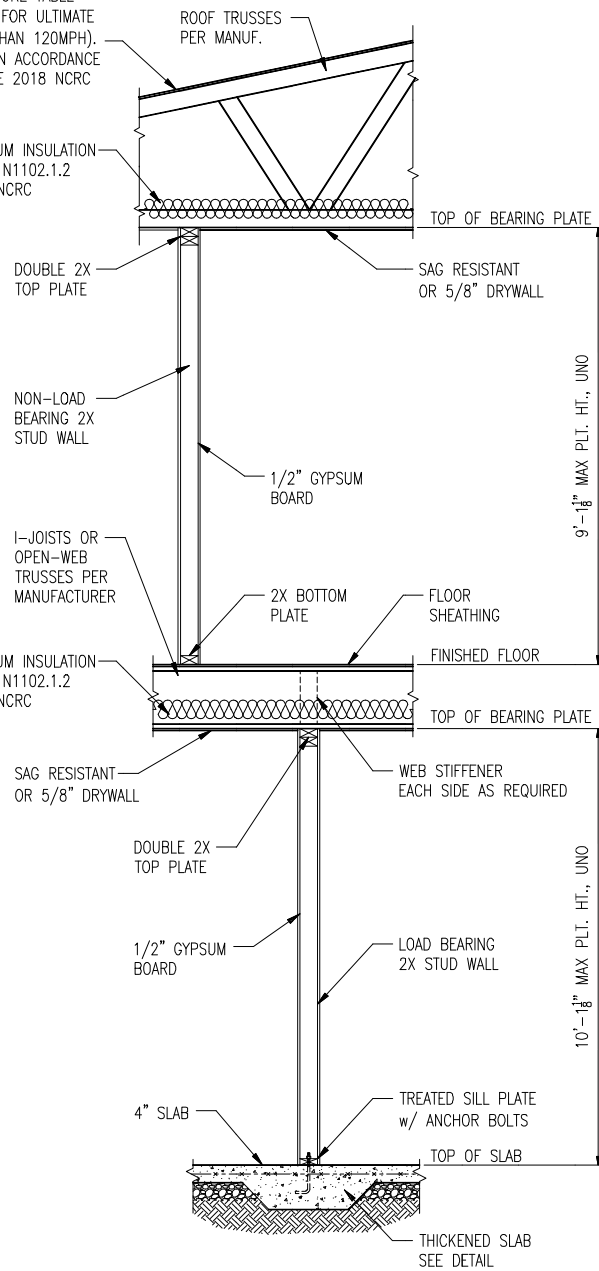
| TYPE OF ANCHOR | MIN. CONC. EMBEDMENT | SPACING EMBEDMENT | INTERIOR WALL | EXTERIOR WALL |
|---|----------------------|-------------------|---------------|---------------|
| 1/2" A307 BOLTS w/ STD. 90° BEND | 7" | 6'-0" | YES | YES |
| SST - MAS | 4" | 5'-0" | NO | YES |
| HILTI KWIK BOLT KBI 1/2-2-3/4 | 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 N102.1.2 OF THE 2018 NCR

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

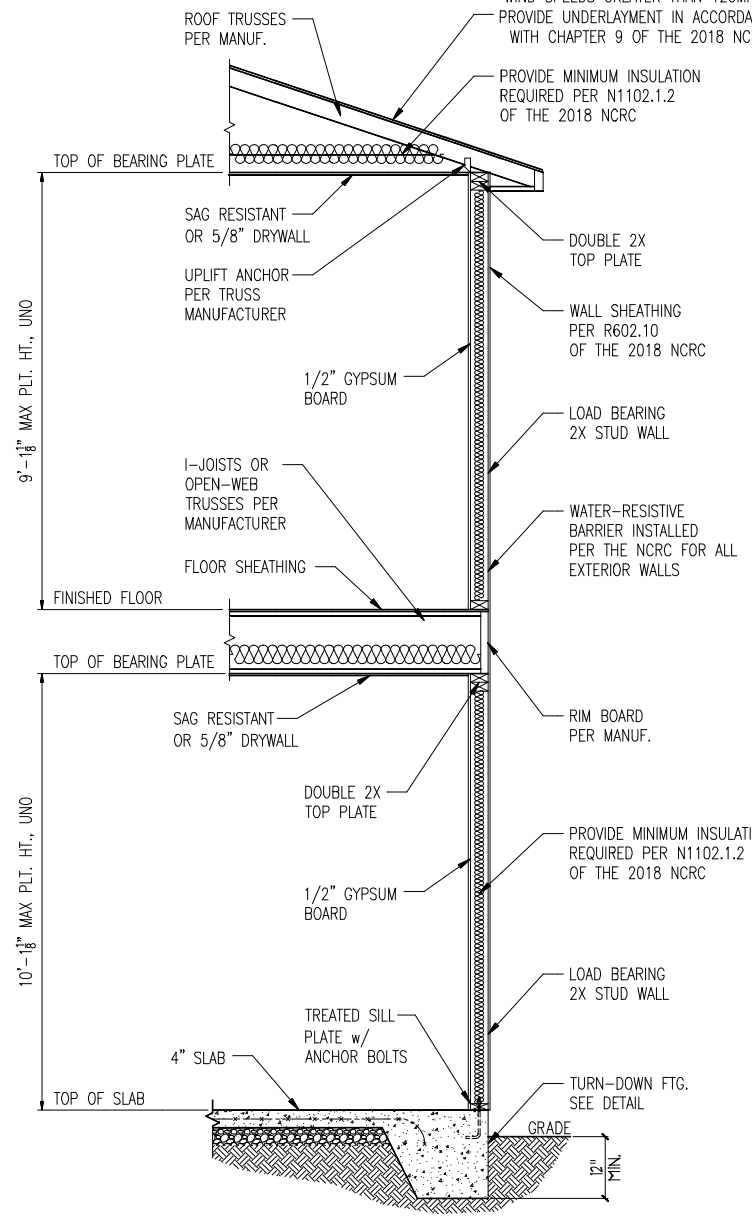
PROVIDE MINIMUM INSULATION REQUIRED PER N1102.1.2 OF THE 2018 NCRC



1 TYP. INTERIOR LOAD BEARING WALL SECTION
D2m N.T.S.

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

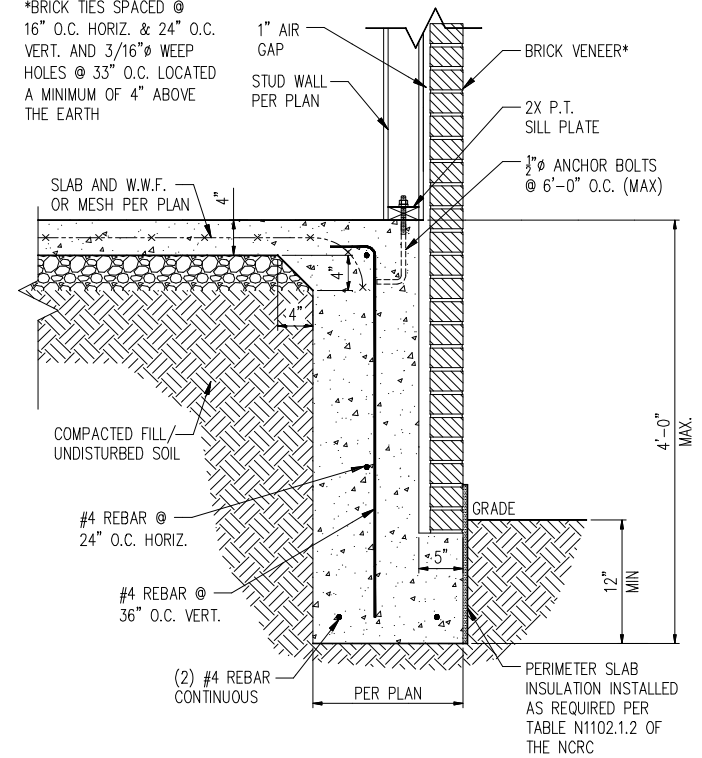
PROVIDE MINIMUM INSULATION REQUIRED PER N1102.1.2 OF THE 2018 NCRC



2 TYP. EXTERIOR LOAD BEARING WALL SECTION
D2m N.T.S.

-SIMILAR w/ BRICK AND STONE
-BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.
-MIN. 3/16" WEEP HOLES @ 33" O.C.

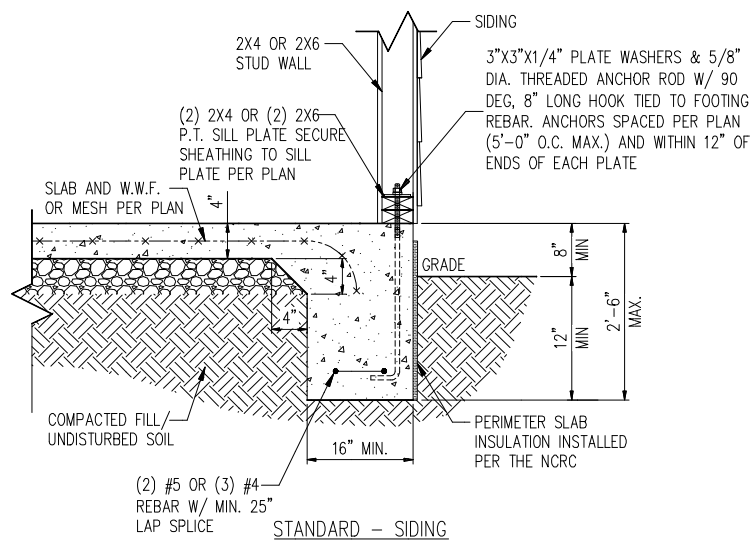
*BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT. AND 3/16" WEEP HOLES @ 33" O.C. LOCATED A MINIMUM OF 4" ABOVE THE EARTH



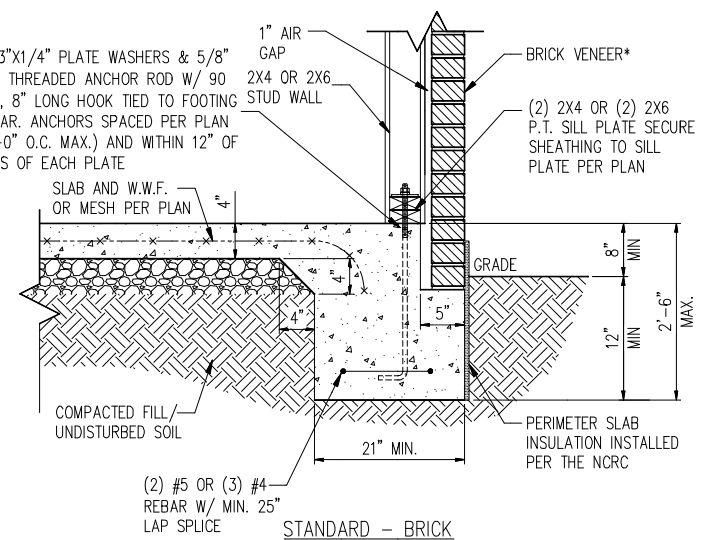
3 TALL SLAB DETAIL
D2m N.T.S.

NOTES:

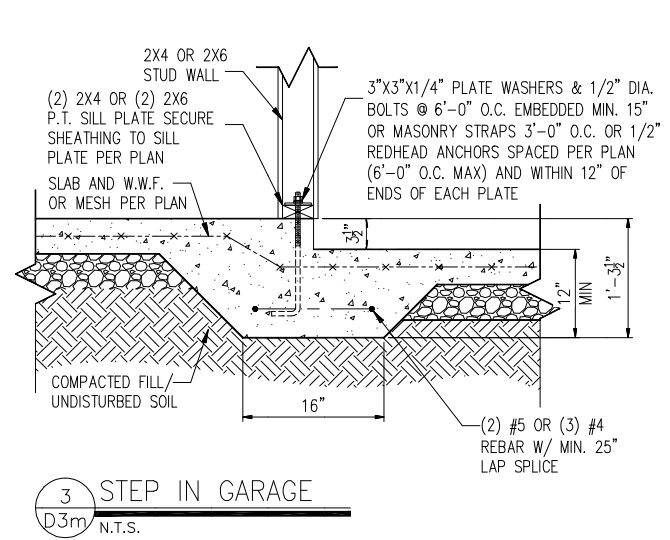
- REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
- PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
- SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
- REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, 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



1 TYP. SLAB DETAIL
D3m N.T.S.

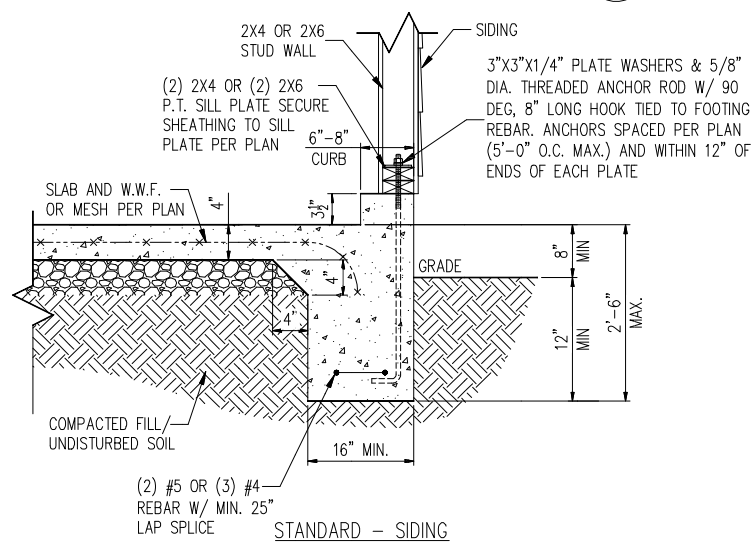


STANDARD - BRICK

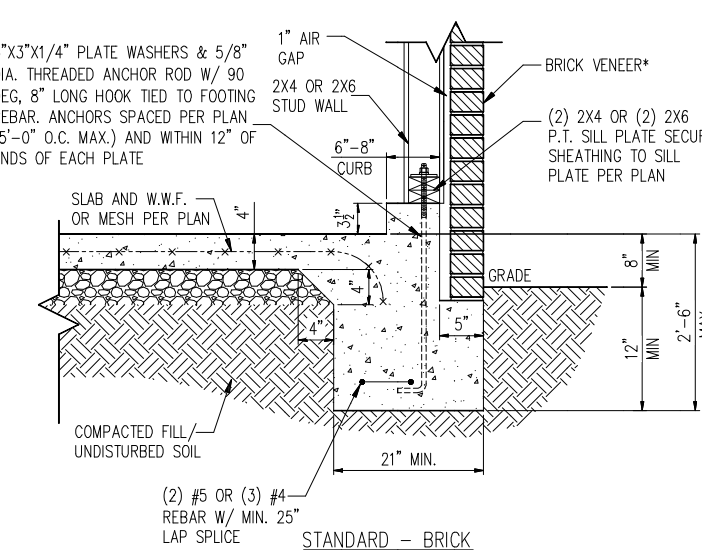


3 STEP IN GARAGE
D3m N.T.S.

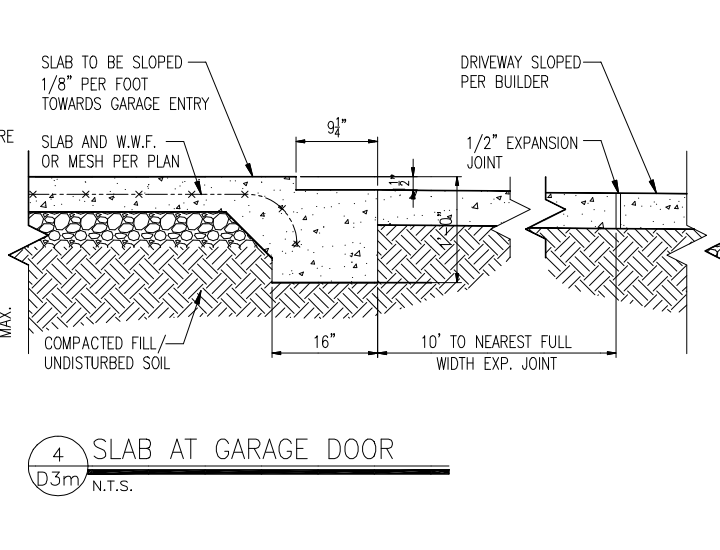
*BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT. AND 3/16" Ø WEEP HOLES @ 33" O.C. LOCATED A MINIMUM OF 4" ABOVE THE EARTH



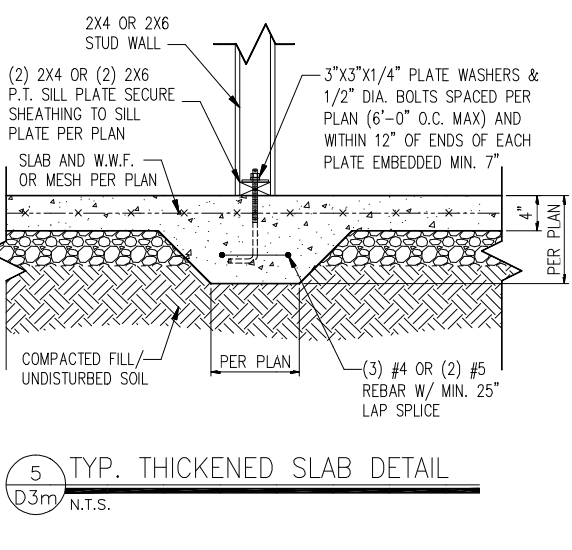
2 TYP. GARAGE CURB DETAIL
D3m N.T.S.



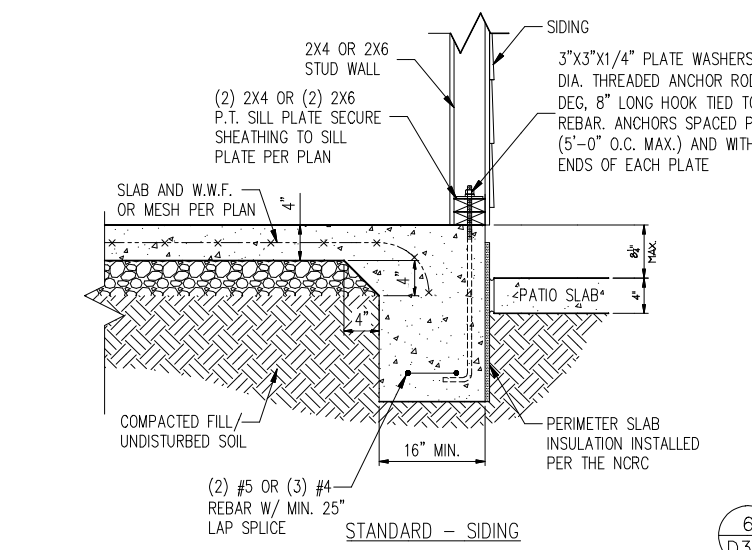
STANDARD - BRICK



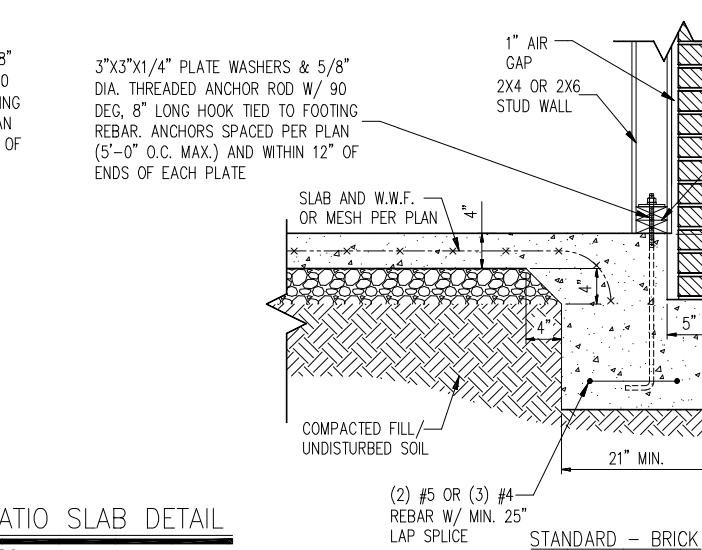
4 SLAB AT GARAGE DOOR
D3m N.T.S.



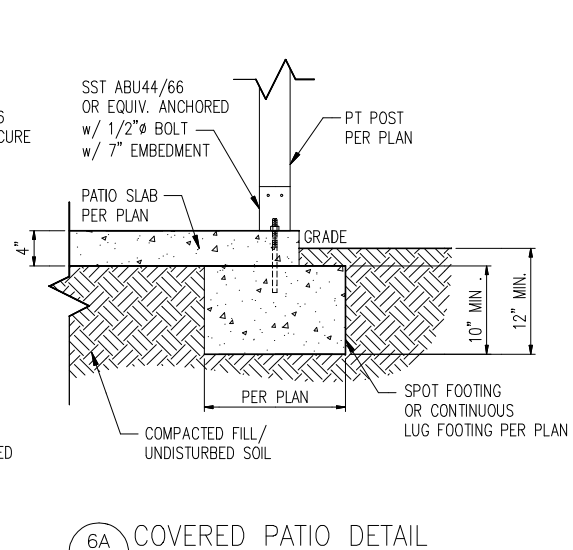
5 TYP. THICKENED SLAB DETAIL
D3m N.T.S.



6 PATIO SLAB DETAIL
D3m N.T.S.

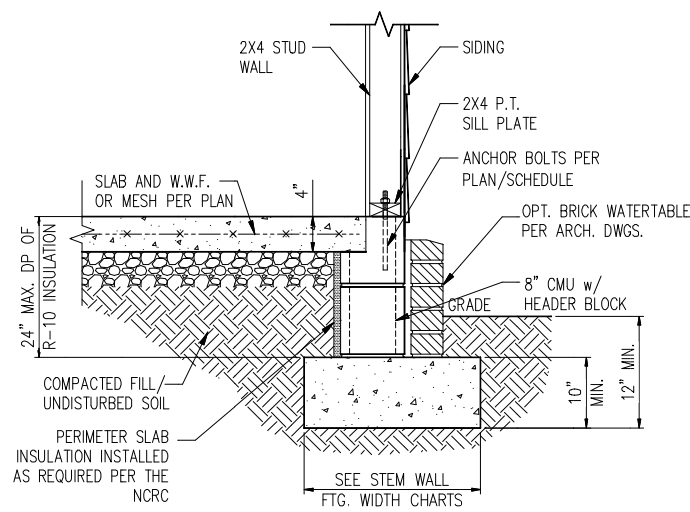


STANDARD - BRICK

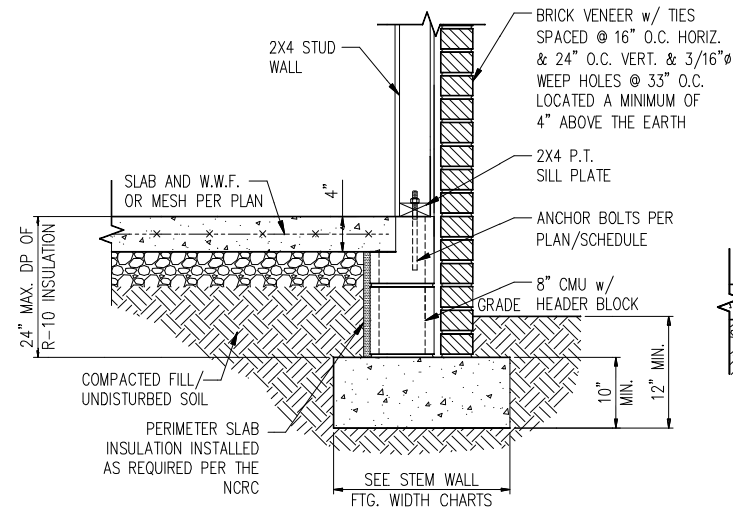


6A COVERED PATIO DETAIL
D3m N.T.S.

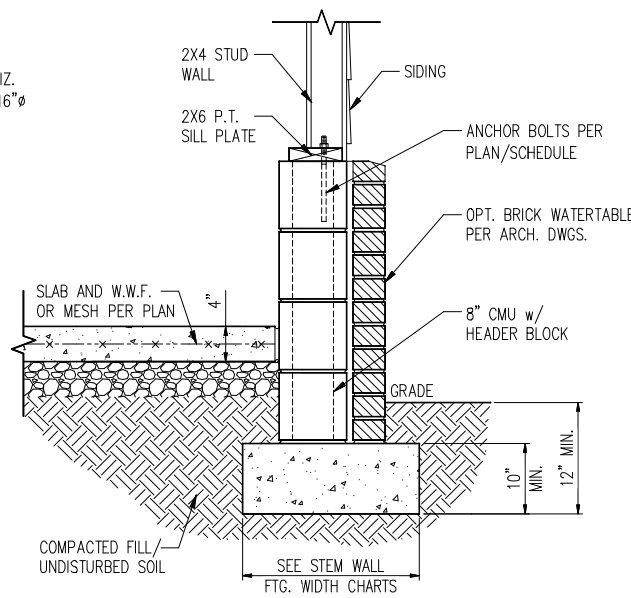
- NOTES:
1. APPLICABLE FOR WIND ZONES UP TO 150 MPH
 2. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
 3. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
 4. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
 5. REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
 6. REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
 7. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE NCRC



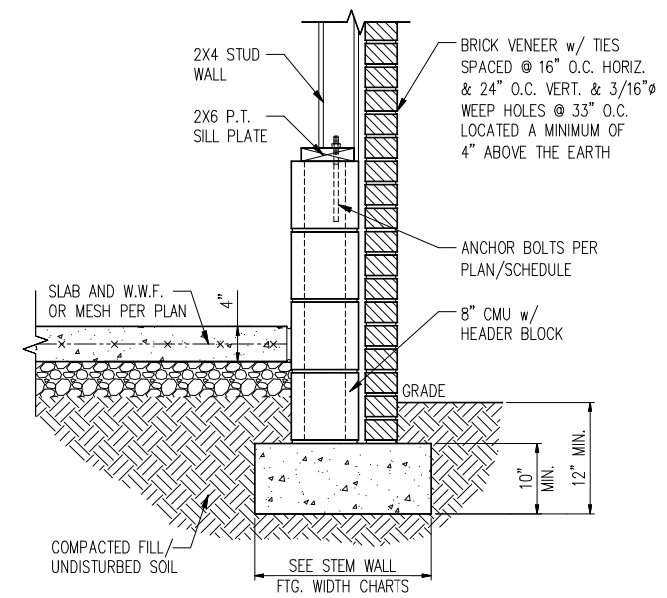
STANDARD - SIDING



STANDARD - BRICK



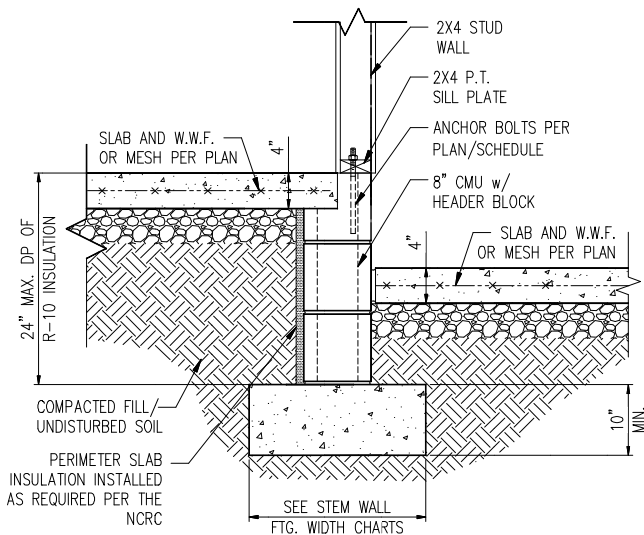
STANDARD - SIDING



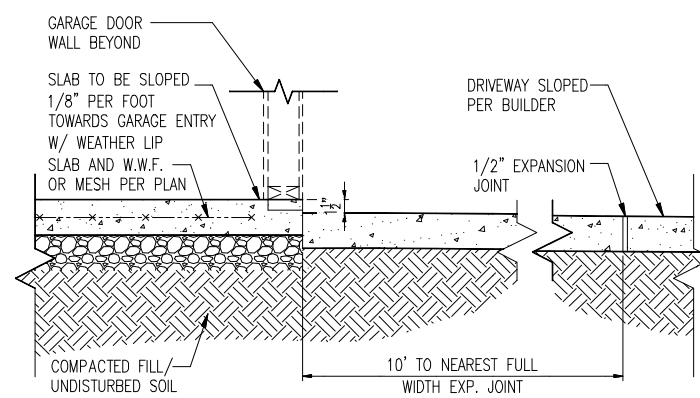
STANDARD - BRICK

1 TYP. STEM WALL DETAIL
D1s N.T.S.

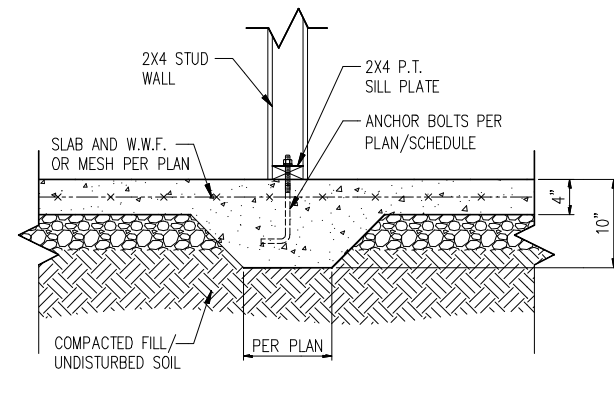
2 TYP. GARAGE CURB DETAIL
D1s N.T.S.



3 HOUSE/GARAGE WALL DETAIL
D1s N.T.S.



4 SLAB AT GARAGE DOOR
D1s N.T.S.



5 TYP. THICKENED SLAB DETAIL
D1s N.T.S.

*BRICK TIES SPACED @ 16\"/>

STEM WALL FOOTING WIDTH

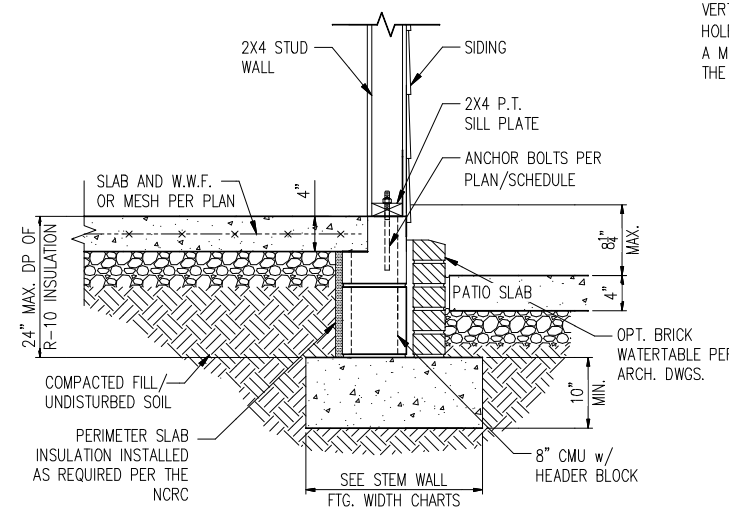
| # OF STORIES | 1500 PSF | 2000 PSF | 2500 PSF |
|------------------------|----------|----------|----------|
| 1 STORY - STD. | 16" | 16" | 16" |
| 1 STORY - BRICK VENEER | 21" | 21" | 21" |
| 2 STORY - STD. | 16" | 16" | 16" |
| 2 STORY - BRICK VENEER | 21" | 21" | 21" |
| 3 STORY - STD. | 23" | 18" | 18" |
| 3 STORY - BRICK VENEER | 32" | 24" | 24" |

*5" BRICK LEDGE HAS BEEN ADDED TO THE STEM WALL FOOTING WIDTH FOR BRICK SUPPORT

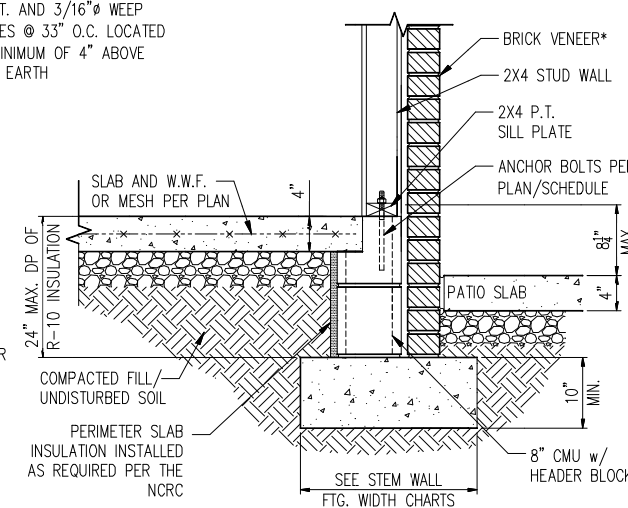
WALL ANCHOR SCHEDULE

| TYPE OF ANCHOR | MIN. CONC. EMBEDMENT | SPACING EMBEDMENT | INTERIOR WALL | EXTERIOR WALL |
|---|----------------------|-------------------|---------------|---------------|
| 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.

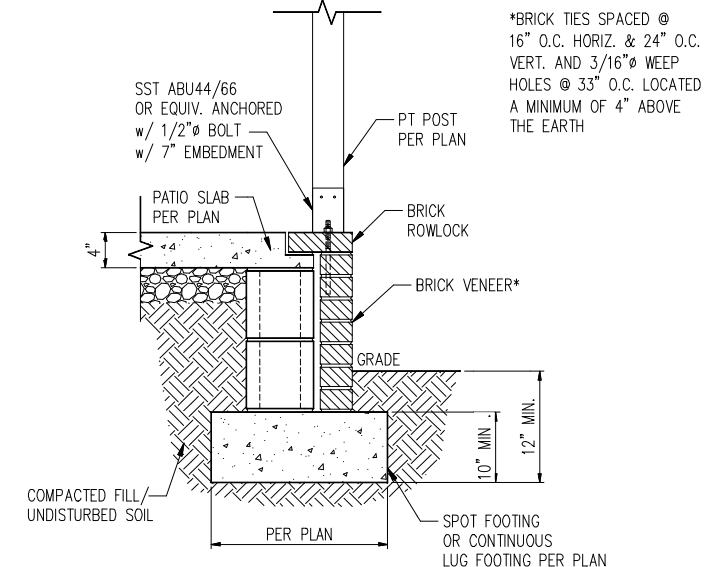


STANDARD - SIDING



STANDARD - BRICK

6 PORCH SLAB DETAIL
D1s N.T.S.

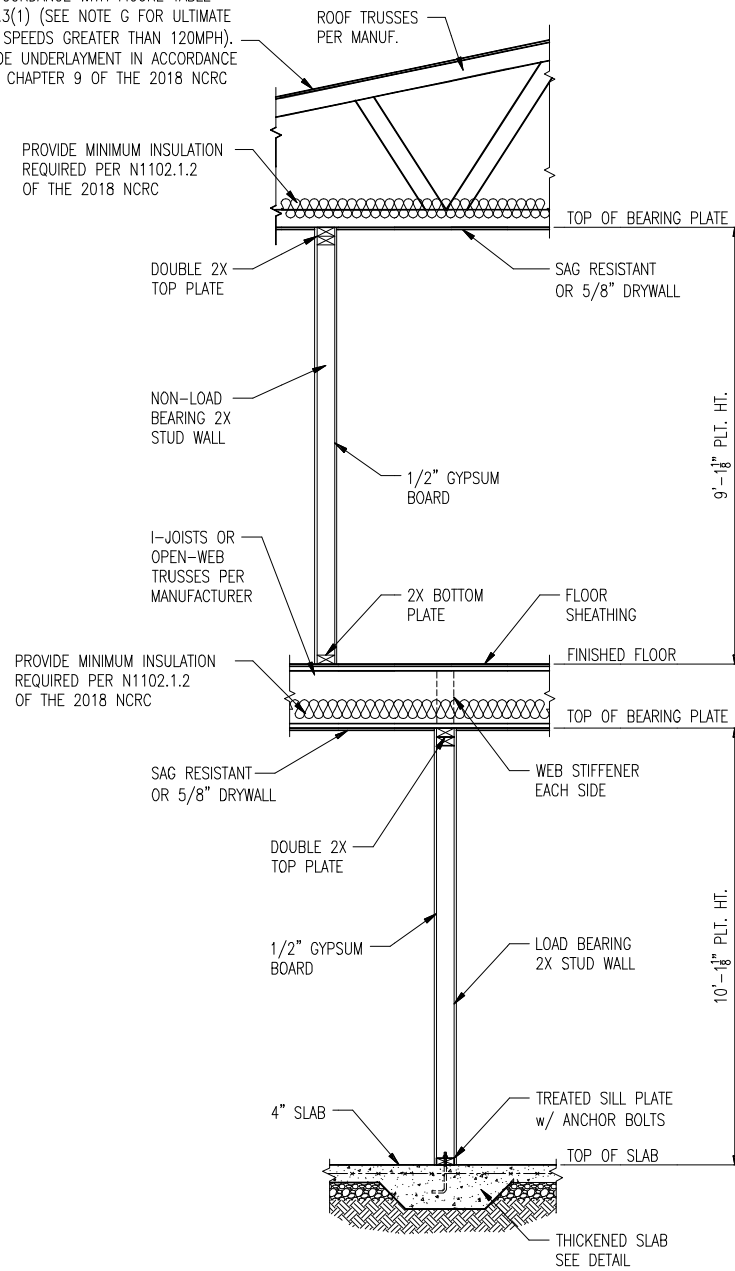


6A COVERED PORCH DETAIL
D1s N.T.S.

- 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

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

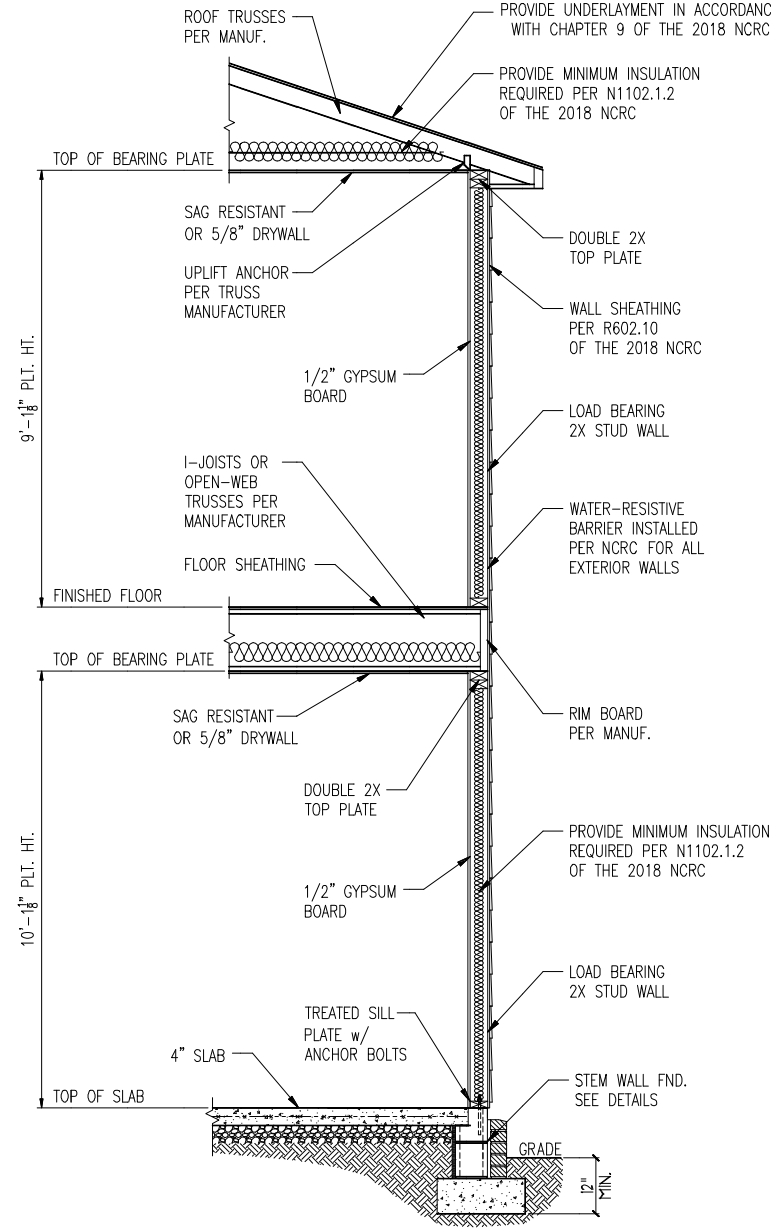
PROVIDE MINIMUM INSULATION REQUIRED PER N1102.1.2 OF THE 2018 NCRC



1 TYP. INTERIOR LOAD BEARING WALL SECTION
D2s N.T.S.

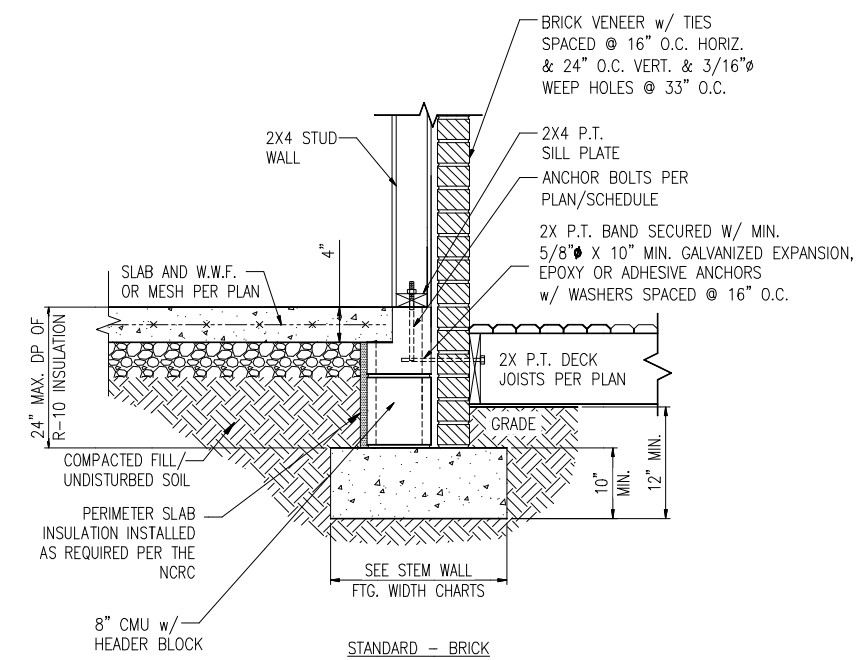
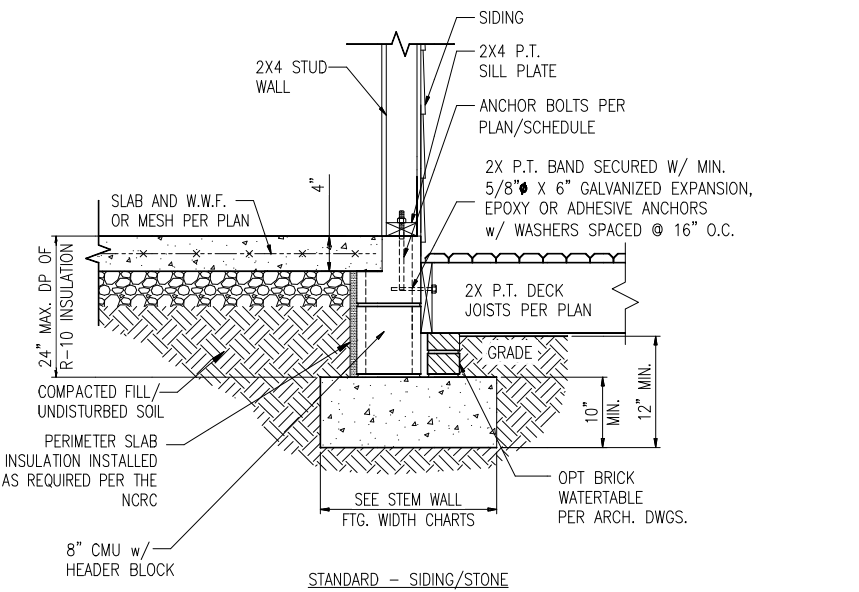
MIN. 3/8" ROOF SHEATHING SECURED IN ACCORDANCE WITH FIGURE TABLE R602.3(1) (SEE NOTE G FOR ULTIMATE WIND SPEEDS GREATER THAN 120MPH). PROVIDE UNDERLAYMENT IN ACCORDANCE WITH CHAPTER 9 OF THE 2018 NCRC

PROVIDE MINIMUM INSULATION REQUIRED PER N1102.1.2 OF THE 2018 NCRC



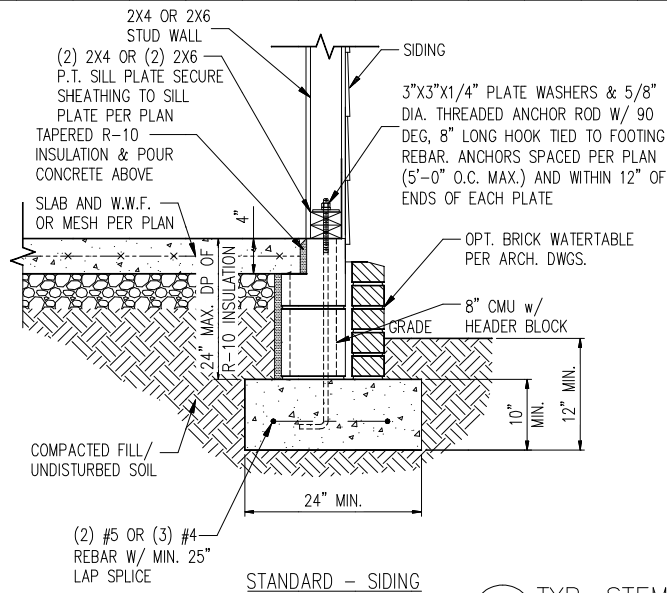
2 TYP. EXTERIOR LOAD BEARING WALL SECTION
D2s N.T.S.

-SIMILAR w/ BRICK AND STONE
-BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.
-MIN. 3/16" WEEP HOLES @ 33" O.C.

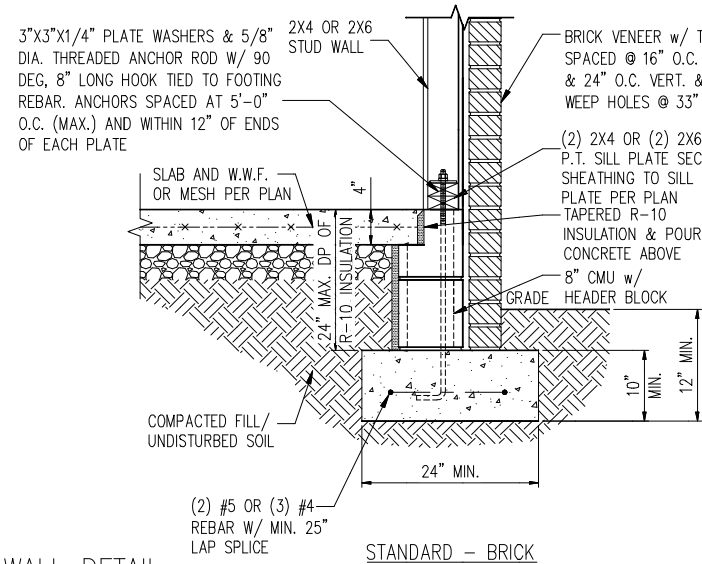


3 DECK ATTACHMENT DETAIL - STEM WALL
D2s N.T.S.

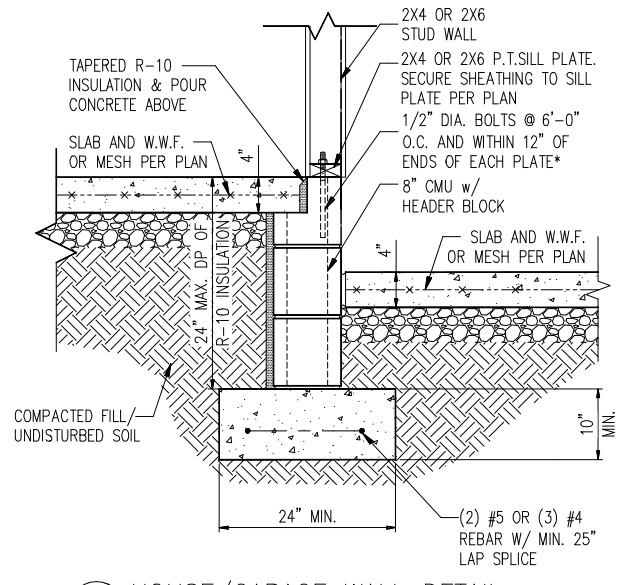
- NOTES:
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 - PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
 - SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
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 - PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCRC



1 TYP. STEM WALL DETAIL
D3s N.T.S.

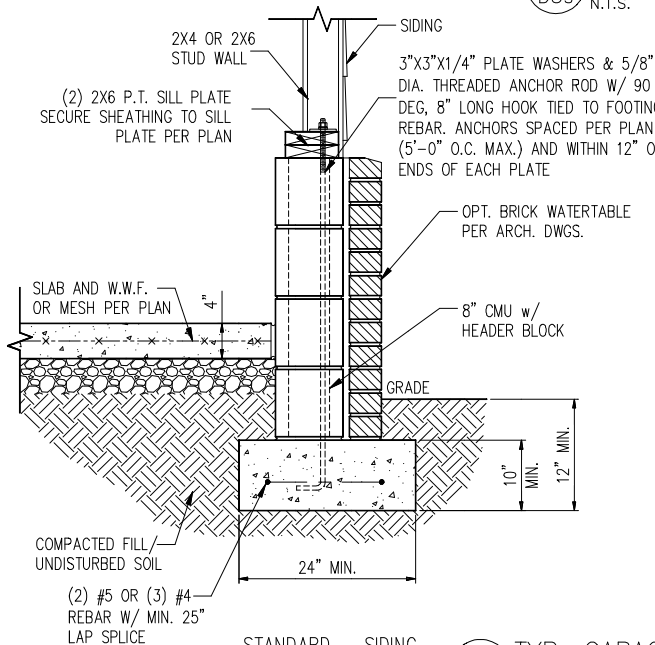


2 TYP. STEM WALL DETAIL
D3s N.T.S.

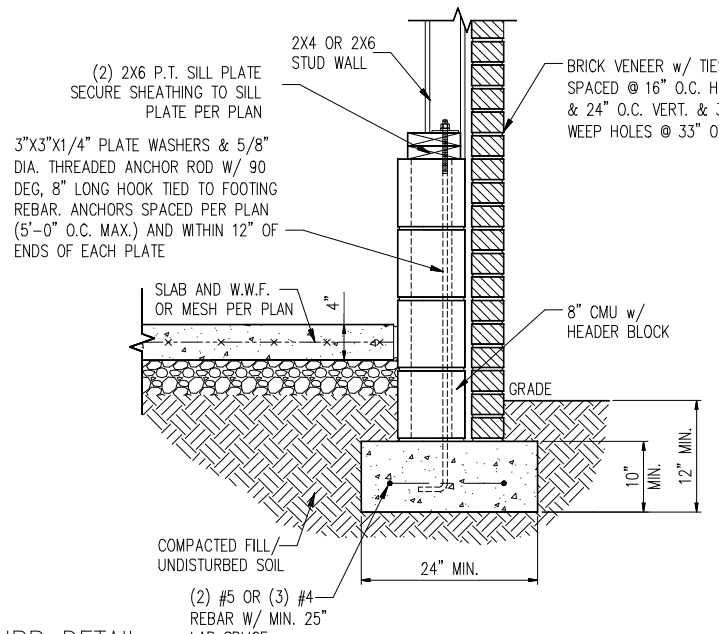


3 HOUSE/GARAGE WALL DETAIL
D3s N.T.S.

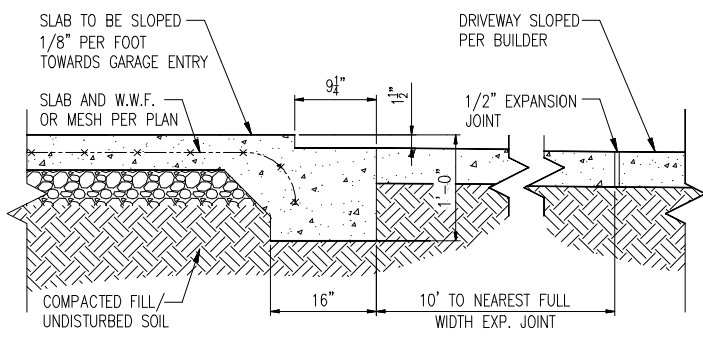
*IF INTERIOR GARAGE WALL IS BEING USED AS A BRACED WALL PANEL/BEARING WALL - DOUBLE 2X6 P.T. SILL PLATE W/ 5/8" DIA. THREADED ANCHOR ROD W/ 90 DEG., 8" LONG HOOK TIED TO FOOTING REBAR. ANCHORS SPACED PER PLAN (8'-0" O.C. MAX.) AND WITHIN 12" OF ENDS OF EACH PLATE SECTION. FILL CELLS SOLID W/ 3000 PSI CONCRETE



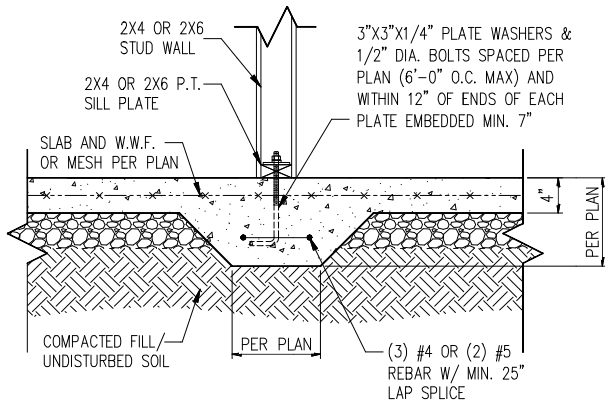
4 TYP. GARAGE CURB DETAIL
D3s N.T.S.



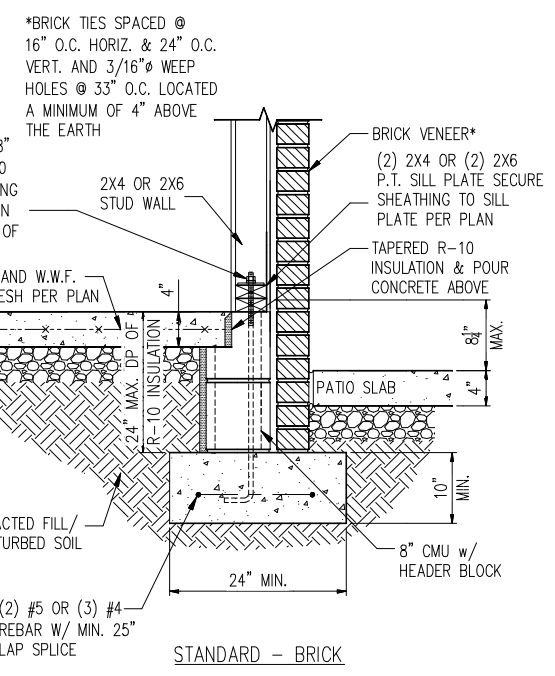
5 TYP. GARAGE CURB DETAIL
D3s N.T.S.



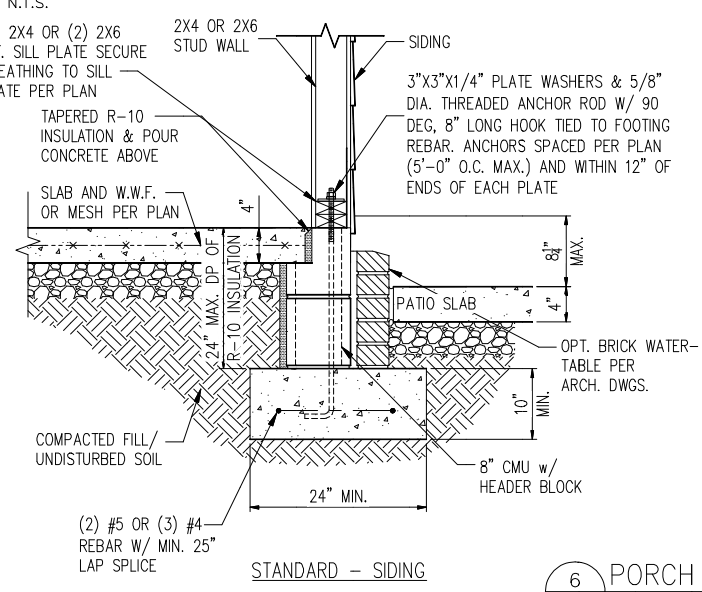
6 SLAB AT GARAGE DOOR
D3s N.T.S.



7 TYP. THICKENED SLAB DETAIL
D3s N.T.S.



8 PORCH SLAB DETAIL
D3s N.T.S.

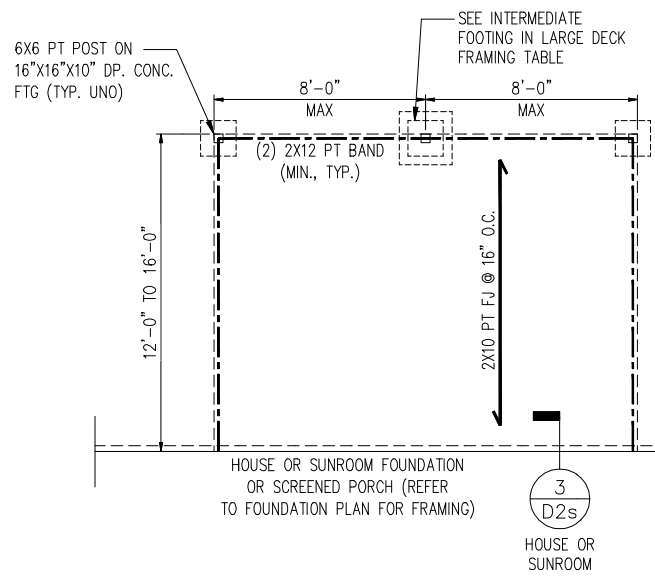


9 TYP. GARAGE CURB DETAIL
D3s N.T.S.

*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. APPLICABLE FOR WIND ZONES UP TO 150 MPH
 2. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
 3. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
 4. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
 5. REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
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 7. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE NCRC

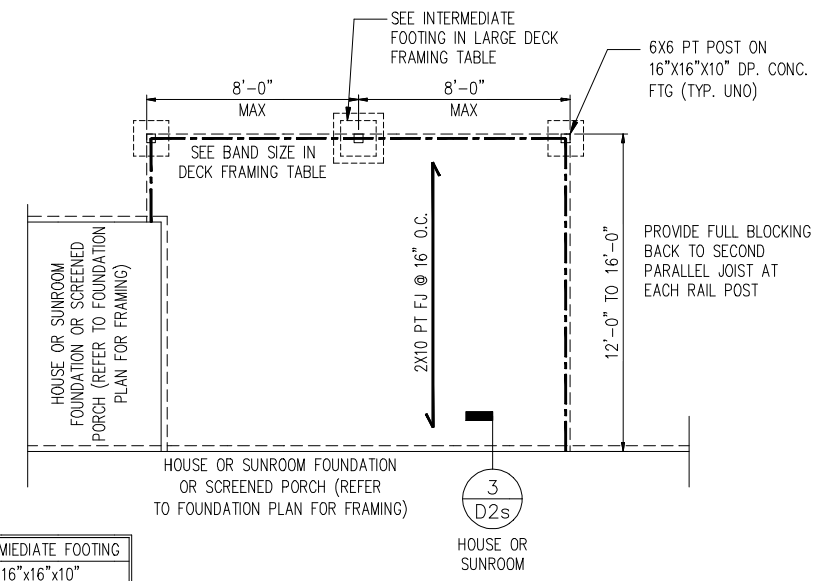
NOTE: BRACE POSTS PER CODE



PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

LARGE DECK FRAMING

| | INTERMEDIATE FOOTING |
|---------------------|----------------------|
| STANDARD | 16"x16"x10" |
| W/ 8'x8' GRILL DECK | 24"x24"x10" |



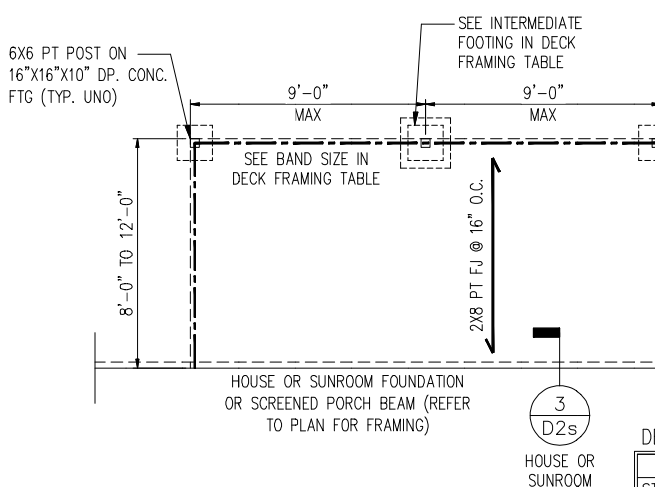
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. LARGE REAR DECK PLAN

TYP. LARGE SIDE DECK PLAN

N.T.S.

N.T.S.

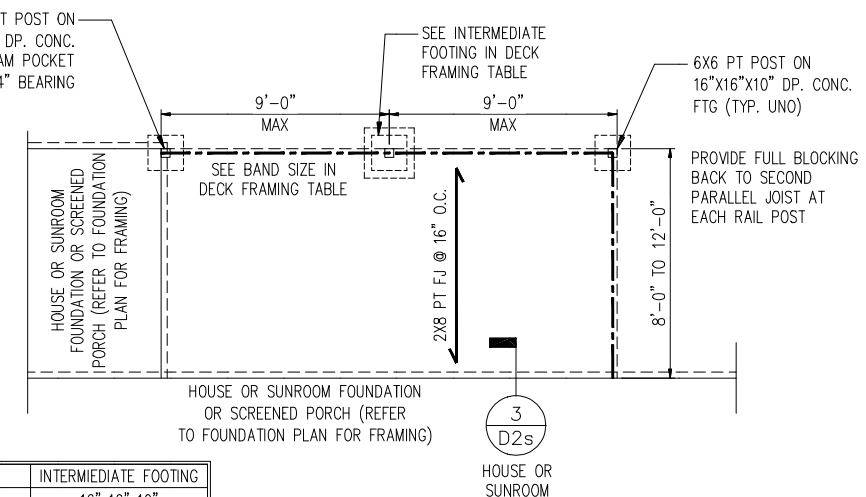


PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

DECK FRAMING

| | BAND SIZE* | INTERMEDIATE FOOTING |
|---------------------|------------|----------------------|
| STANDARD | (2) 2x10 | 16"x16"x10" |
| W/ 8'x8' GRILL DECK | (3) 2x10 | 24"x24"x10" |

* SOUTHERN PINE #2 PT LUMBER



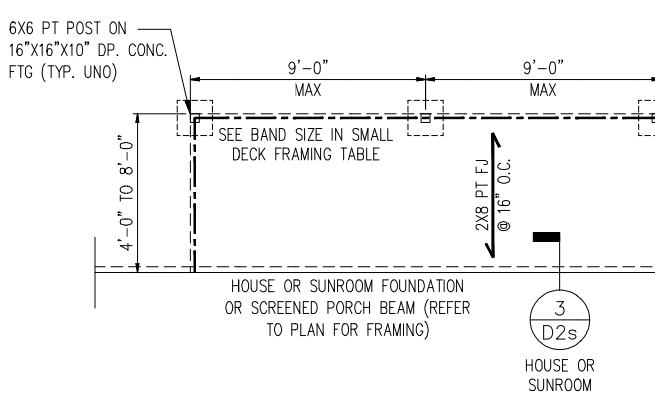
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. REAR DECK PLAN

TYP. SIDE DECK PLAN

N.T.S.

N.T.S.

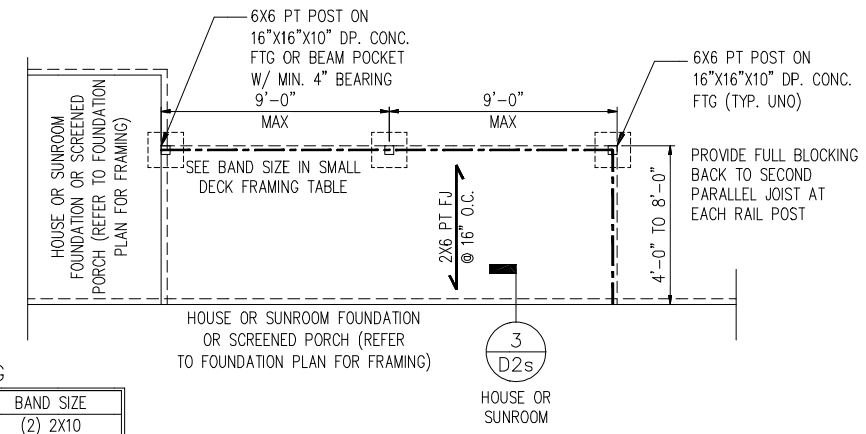


PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

SMALL DECK FRAMING

| | BAND SIZE |
|---------------------|-----------|
| STANDARD | (2) 2x10 |
| W/ 8'x8' GRILL DECK | (3) 2x10 |

* SOUTHERN PINE #2 PT LUMBER



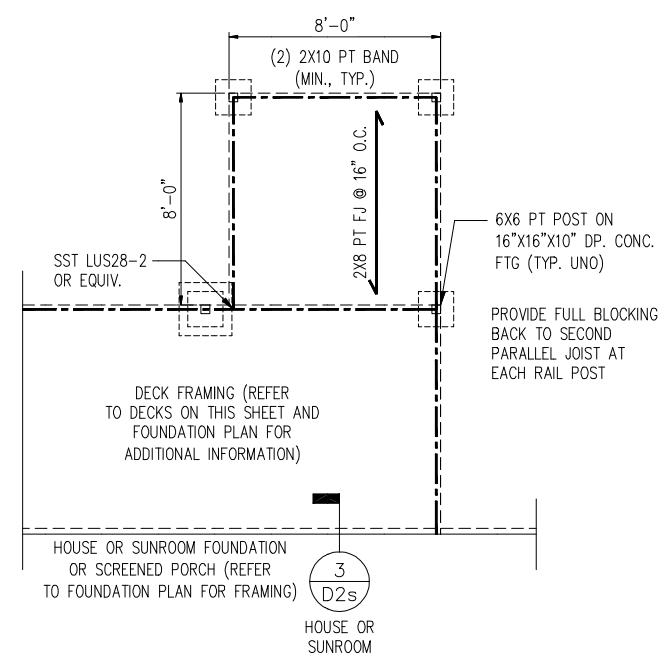
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. SMALL REAR DECK PLAN

TYP. SMALL SIDE DECK PLAN

N.T.S.

N.T.S.



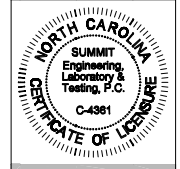
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. DECK PLAN W/ 8'x8' GRILL DECK

N.T.S.

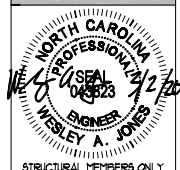
NOTES:

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CLIENT: DR Horton Carolina Division, 2801 Arroyo Drive, Charlotte, NC 28219

PROJECT: Standard Details, Stem Wall Foundation Details

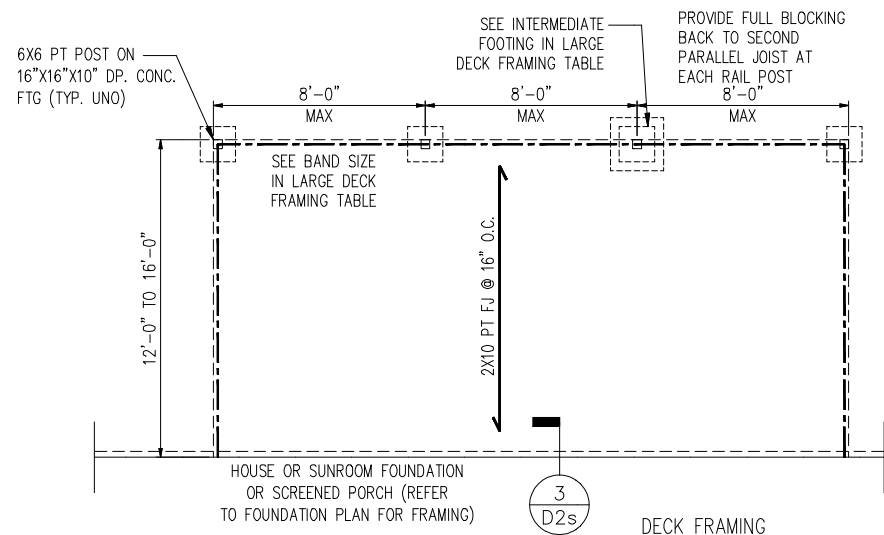


STRUCTURAL MEMBERS ONLY

DRAWING: DATE: 02/28, SCALE: 2/8" = 1'-0", PROJECT: P-1901-WR, DRAWN BY: LAG, CHECKED BY: LAJ

ORIGINAL INFORMATION: PROJECT #, DATE 1/30/21

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

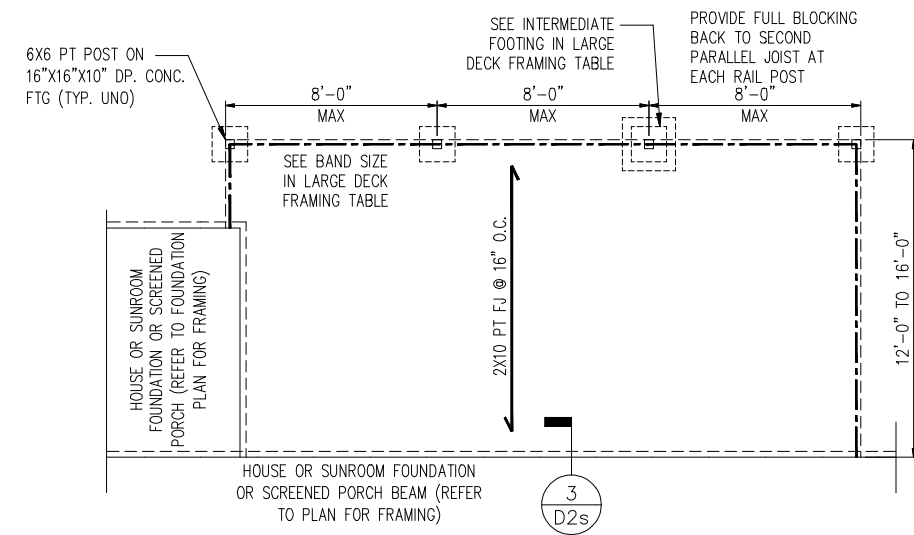


TYP. LARGE REAR DECK PLAN

N.T.S.

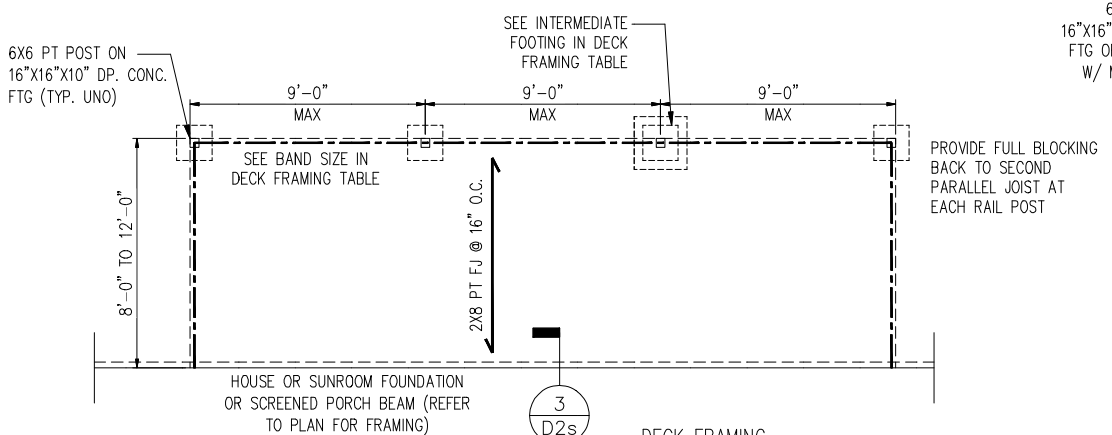
| | BAND SIZE* | INTERMEDIATE FOOTING |
|---------------------|------------|----------------------|
| STANDARD | (2) 2X12 | 16"x16"x10" |
| W/ 8'X8' GRILL DECK | (3) 2X12 | 24"x24"x10" |

* SOUTHERN PINE #2 PT LUMBER



TYP. LARGE SIDE DECK PLAN

N.T.S.

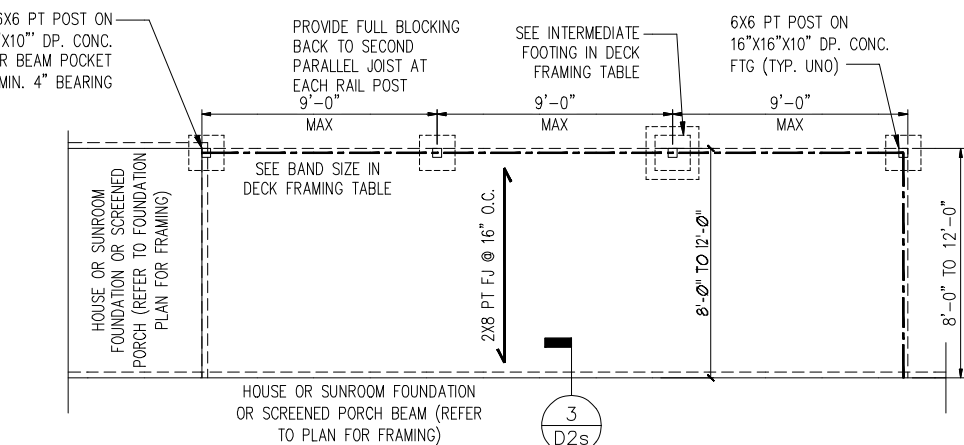


TYP. REAR DECK PLAN

N.T.S.

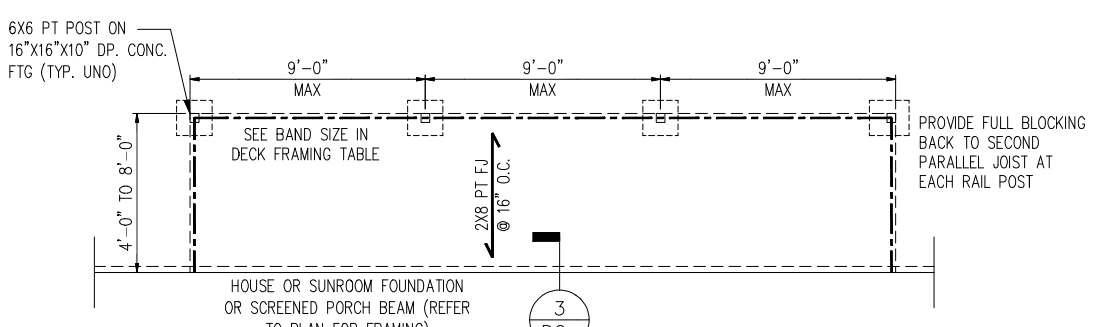
| | BAND SIZE* | INTERMEDIATE FOOTING |
|---------------------|------------|----------------------|
| STANDARD | (2) 2X10 | 18"x18"x10" |
| W/ 8'X8' GRILL DECK | (3) 2X10 | 24"x24"x10" |

* SOUTHERN PINE #2 PT LUMBER



TYP. REAR DECK PLAN

N.T.S.

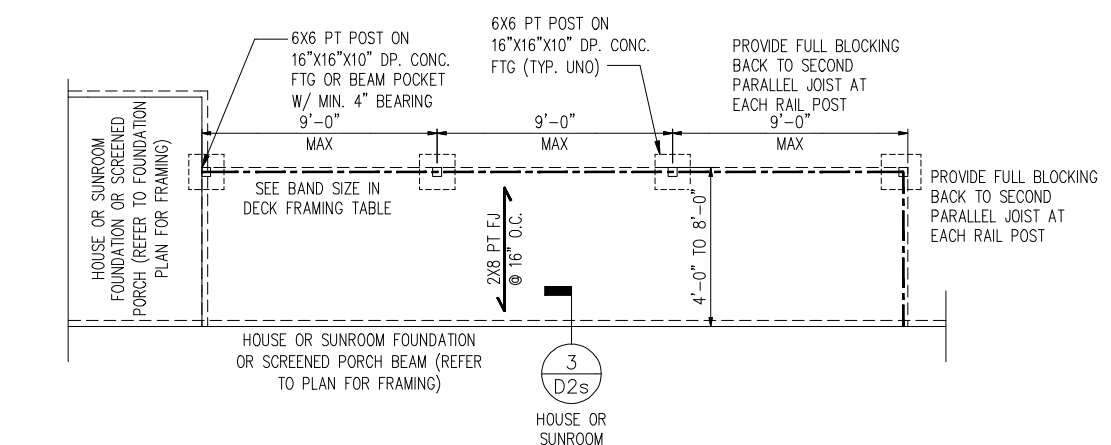


TYP. SMALL REAR DECK PLAN

N.T.S.

| | BAND SIZE |
|---------------------|-----------|
| STANDARD | (2) 2X10 |
| W/ 8'X8' GRILL DECK | (3) 2X10 |

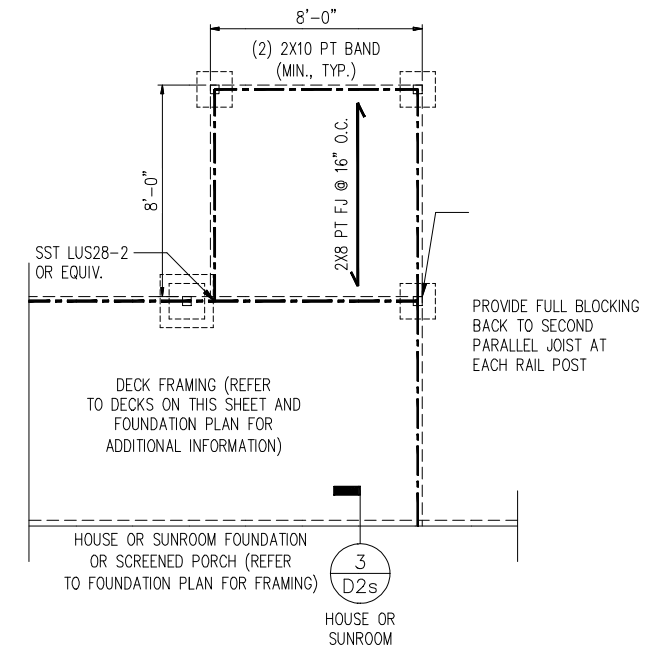
* SOUTHERN PINE #2 PT LUMBER



TYP. SMALL REAR DECK PLAN

N.T.S.

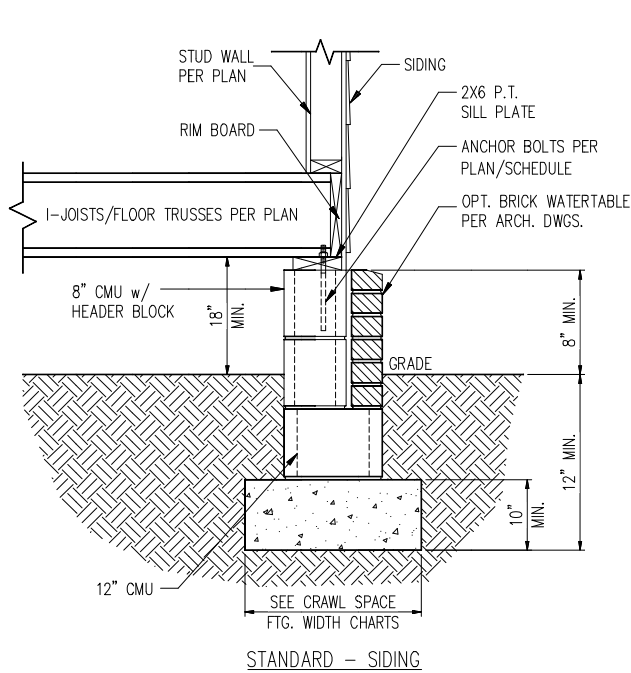
NOTE: BRACE POSTS PER CODE



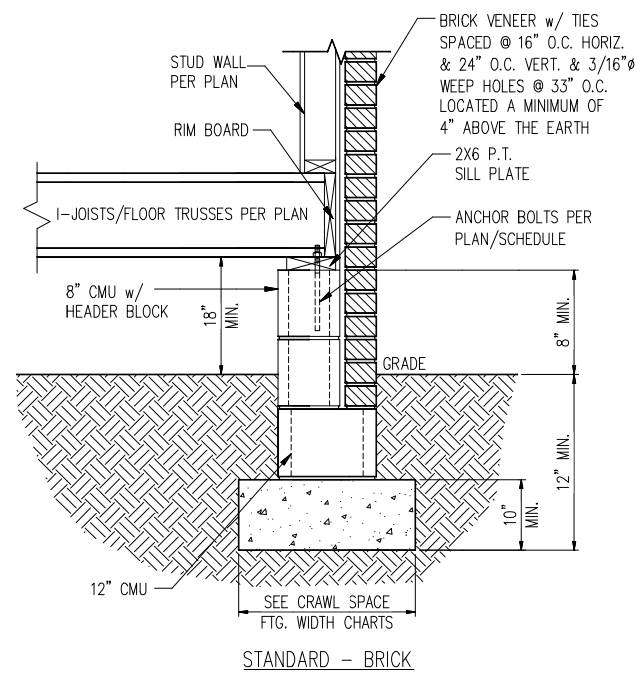
TYP. DECK PLAN W/ 8'X8' GRILL DECK

N.T.S.

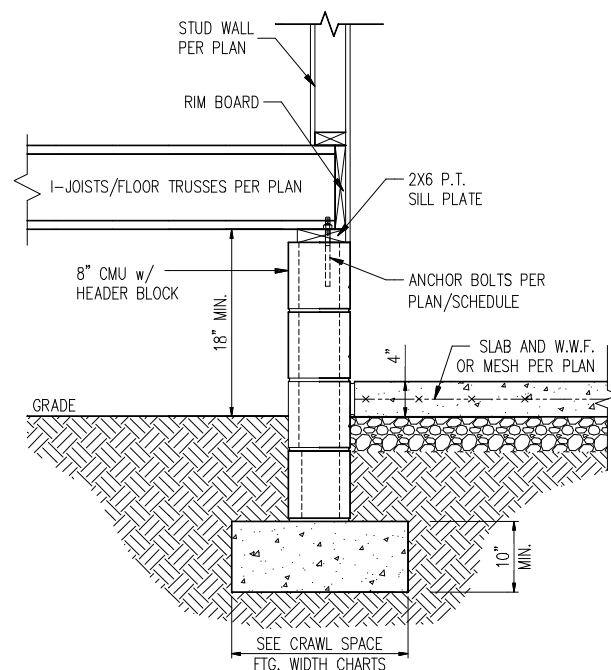
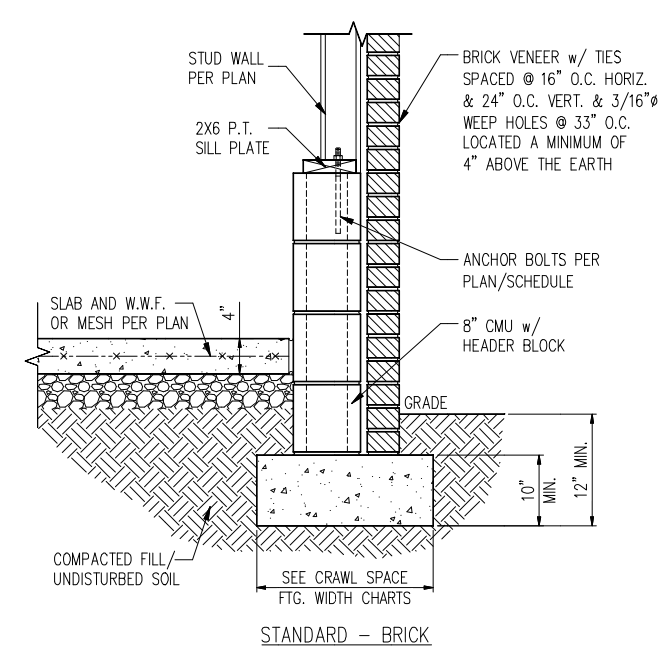
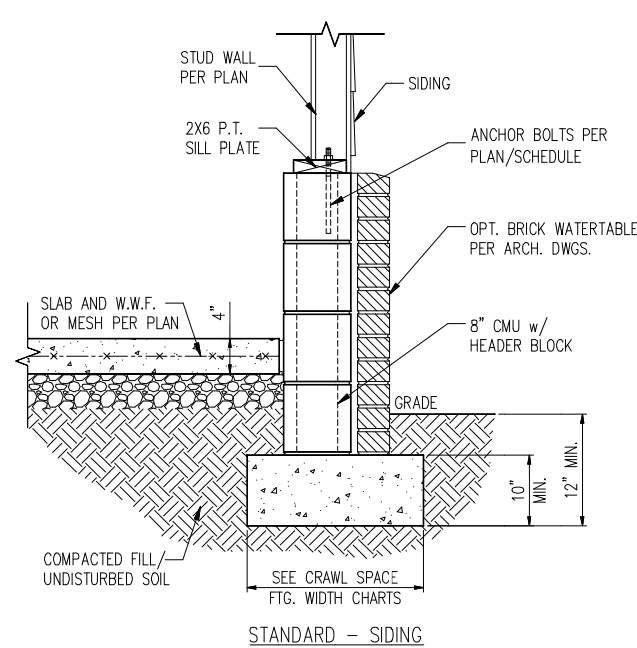
- NOTES:
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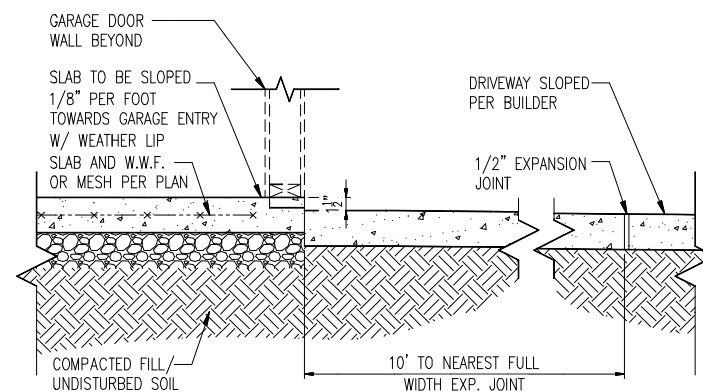
1 TYP. FOUNDATION WALL DETAIL
D1c N.T.S.



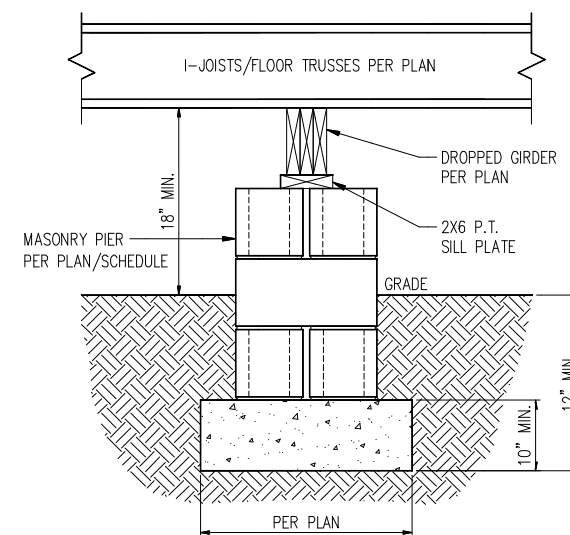
2 TYP. GARAGE CURB DETAIL
D1c N.T.S.



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

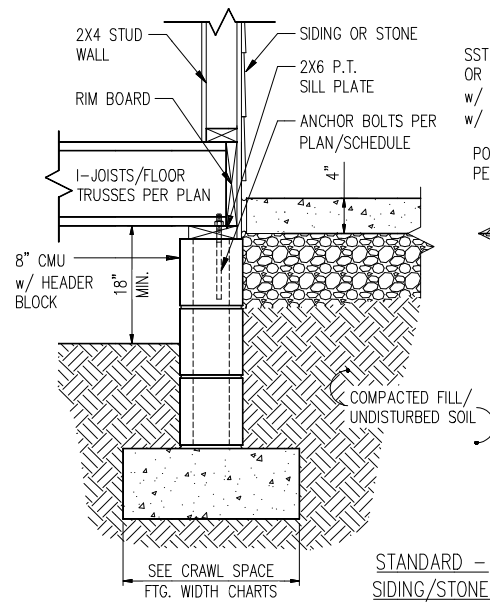
WALL ANCHOR SCHEDULE

| TYPE OF ANCHOR | MIN. CONC. EMBEDMENT | SPACING EMBEDMENT | INTERIOR WALL | EXTERIOR WALL |
|---|----------------------|-------------------|---------------|---------------|
| 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 |

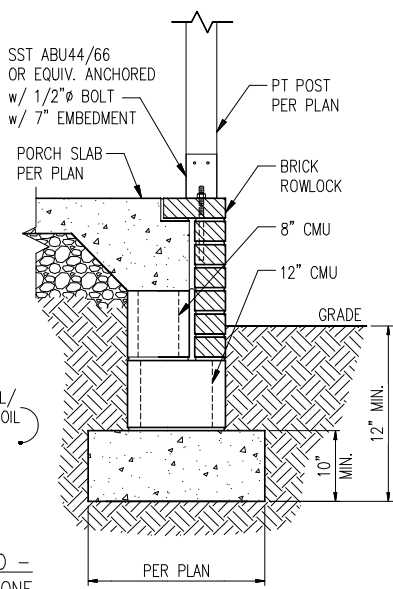
NOTE: INSTALL ALL ANCHORS 12" MAX. FROM ALL BOTTOM PLATE ENDS AND JOINTS.

NOTES:

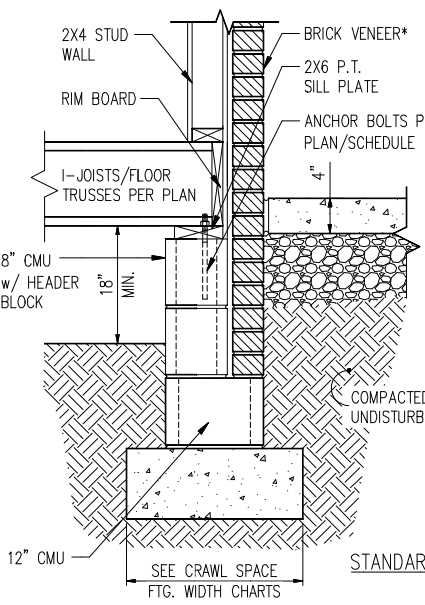
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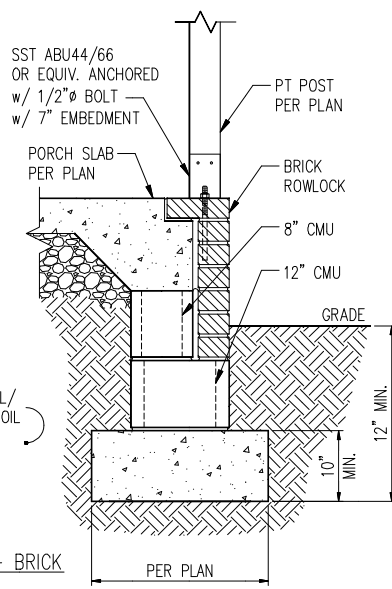
STANDARD - SIDING/STONE



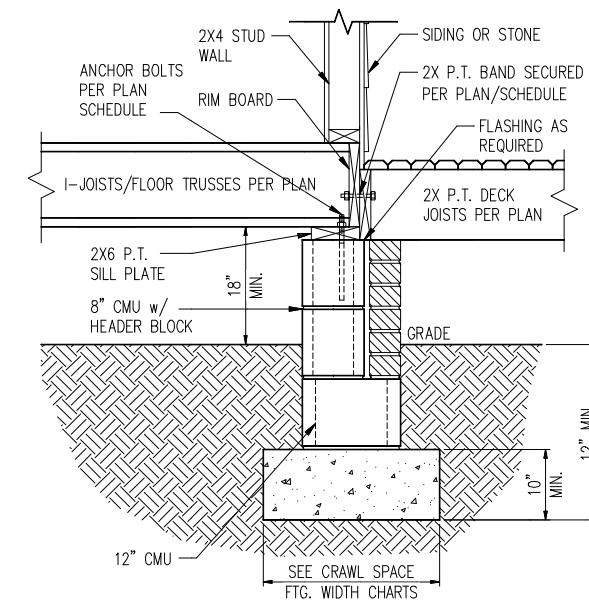
STANDARD - BRICK



STANDARD - SIDING/STONE



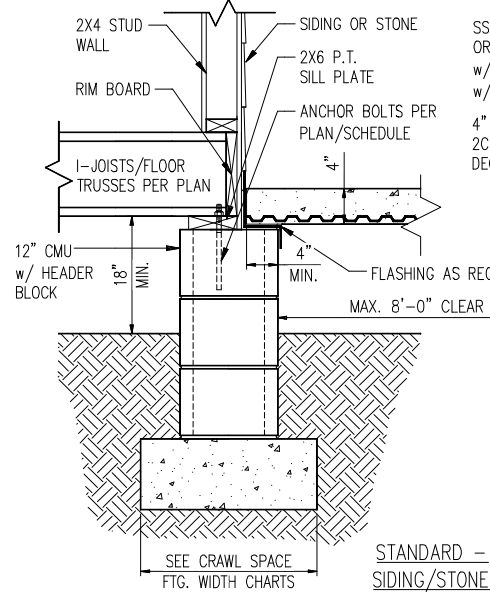
STANDARD - BRICK



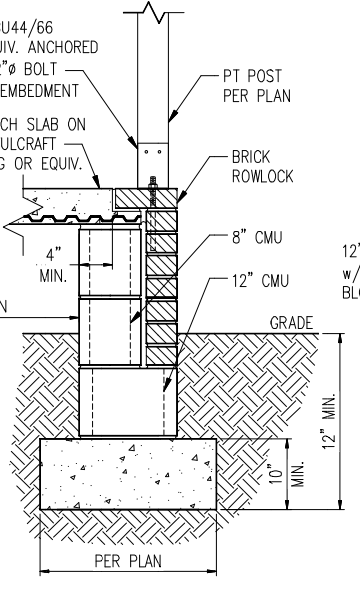
STANDARD - BRICK

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

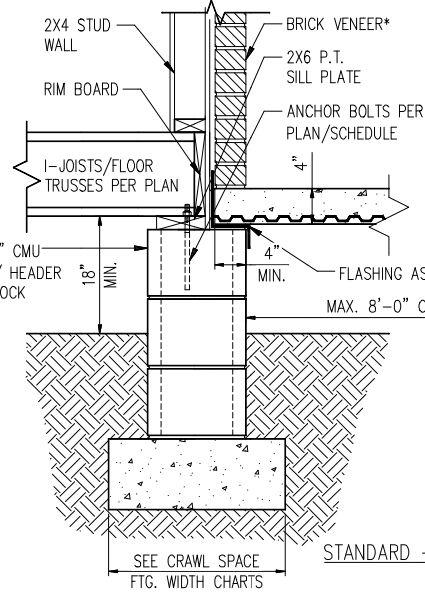
2 DECK ATTACHMENT DETAIL
D2c N.T.S.



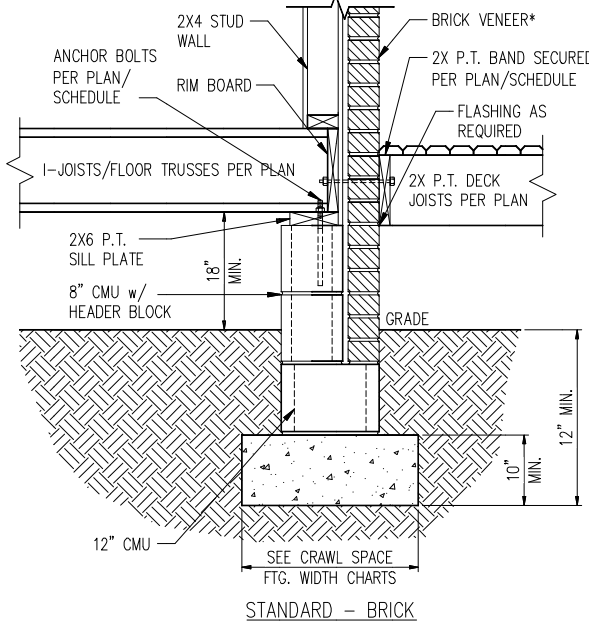
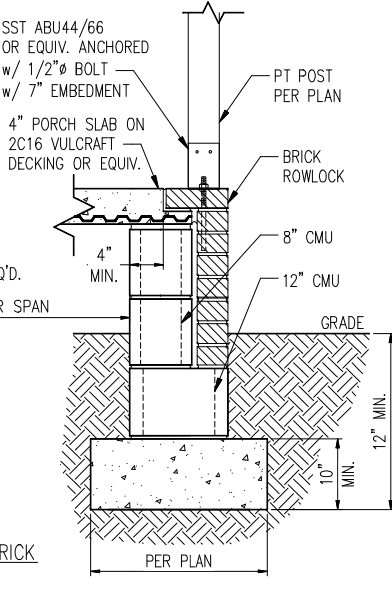
STANDARD - SIDING/STONE



STANDARD - BRICK



STANDARD - BRICK



STANDARD - BRICK

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

3 DECK ATTACHMENT DETAIL W/ BRICK
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 ^b | (1) @ 3'-6" O.C. | (1) @ 1'-8" O.C. |
| AND | AND | AND |
| 12d COMMON GALV. NAILS ^c | (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".
- 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 ^b | (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".

CRAWL SPACE FOOTING WIDTH

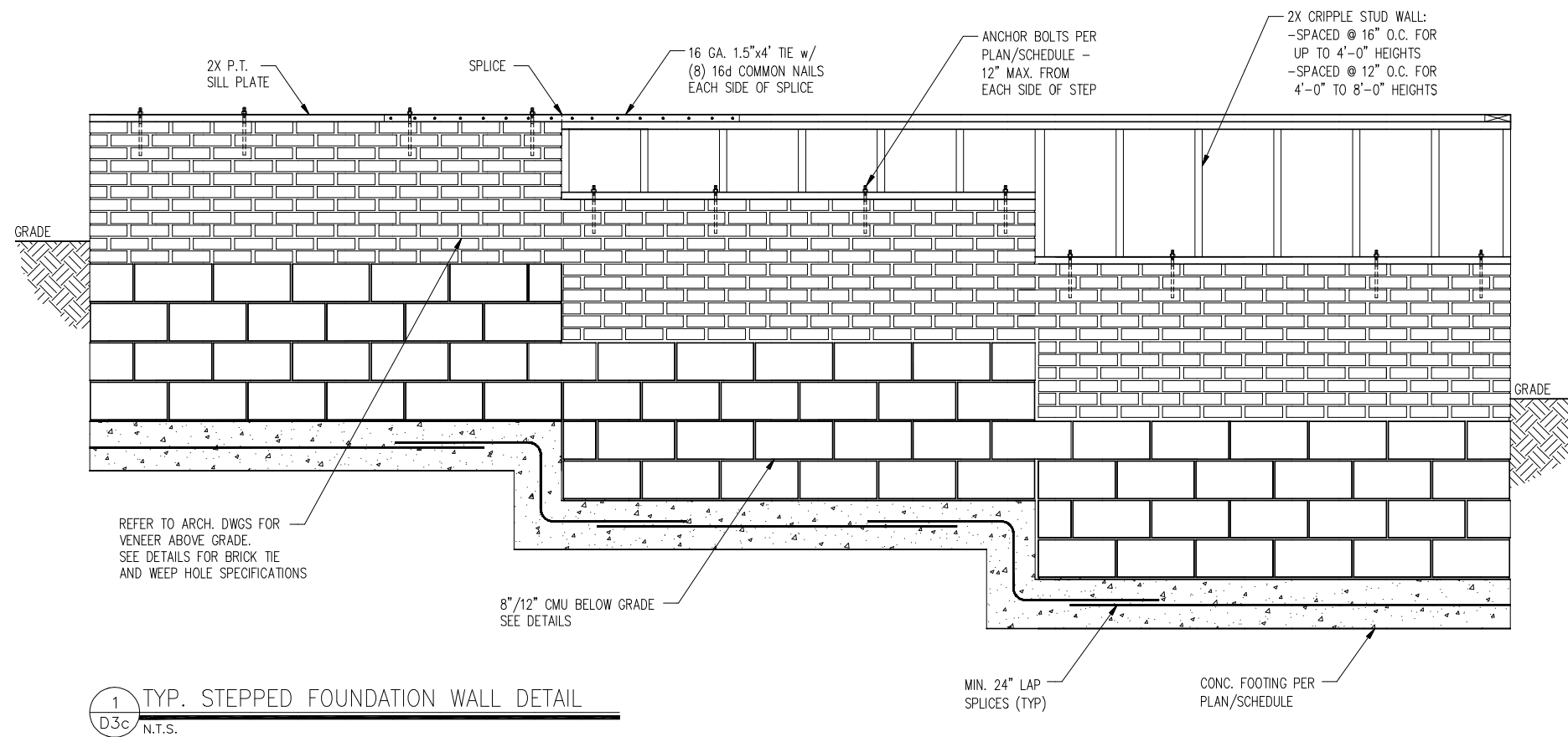
| # OF STORIES | WIDTH BASED ON SOIL BEARING CAPACITY | | |
|------------------------|--------------------------------------|----------|----------|
| | 1500 PSF | 2000 PSF | 2500 PSF |
| 1 STORY - STD. | 16" | 16" | 16" |
| 1 STORY - BRICK VENEER | 21"* | 21"* | 21"* |
| 2 STORY - STD. | 16" | 16" | 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 N102.1.2 OF THE 2018 NCR



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

- 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 NCR

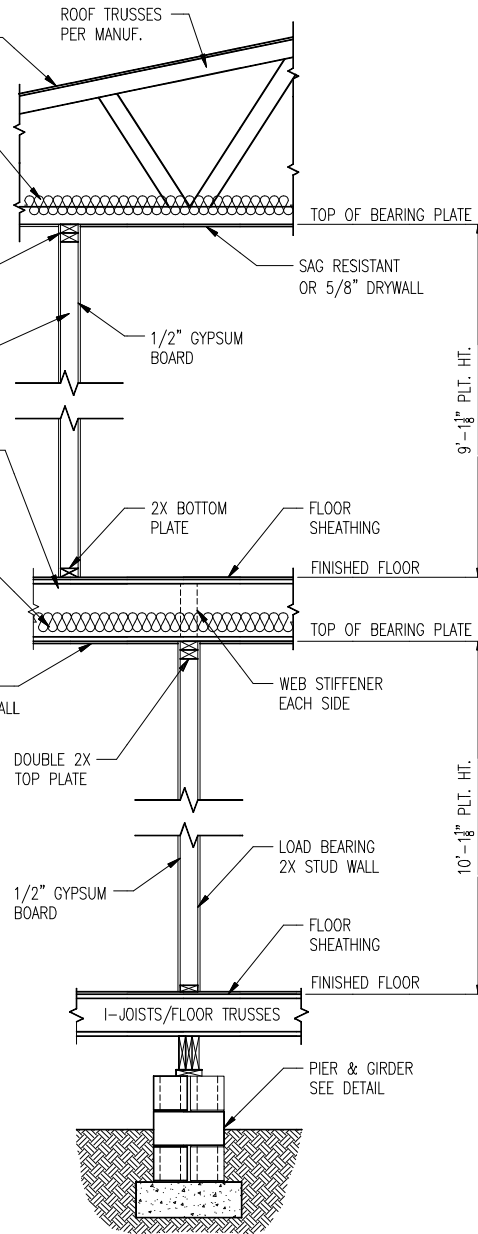
MIN. 3/8" ROOF SHEATHING SECURED IN ACCORDANCE WITH FIGURE TABLE R602.3(1) (SEE NOTE G FOR ULTIMATE WIND SPEEDS GREATER THAN 120MPH). PROVIDE UNDERLAYMENT IN ACCORDANCE WITH CHAPTER 9 OF THE 2018 NCRC

PROVIDE MINIMUM INSULATION REQUIRED PER N1102.1.2 OF THE 2018 NCRC

DOUBLE 2X TOP PLATE
NON-LOAD BEARING 2X STUD WALL

PROVIDE MINIMUM INSULATION REQUIRED PER N1102.1.2 OF THE 2018 NCRC

SAG RESISTANT OR 5/8" DRYWALL
DOUBLE 2X TOP PLATE
1/2" GYPSUM BOARD



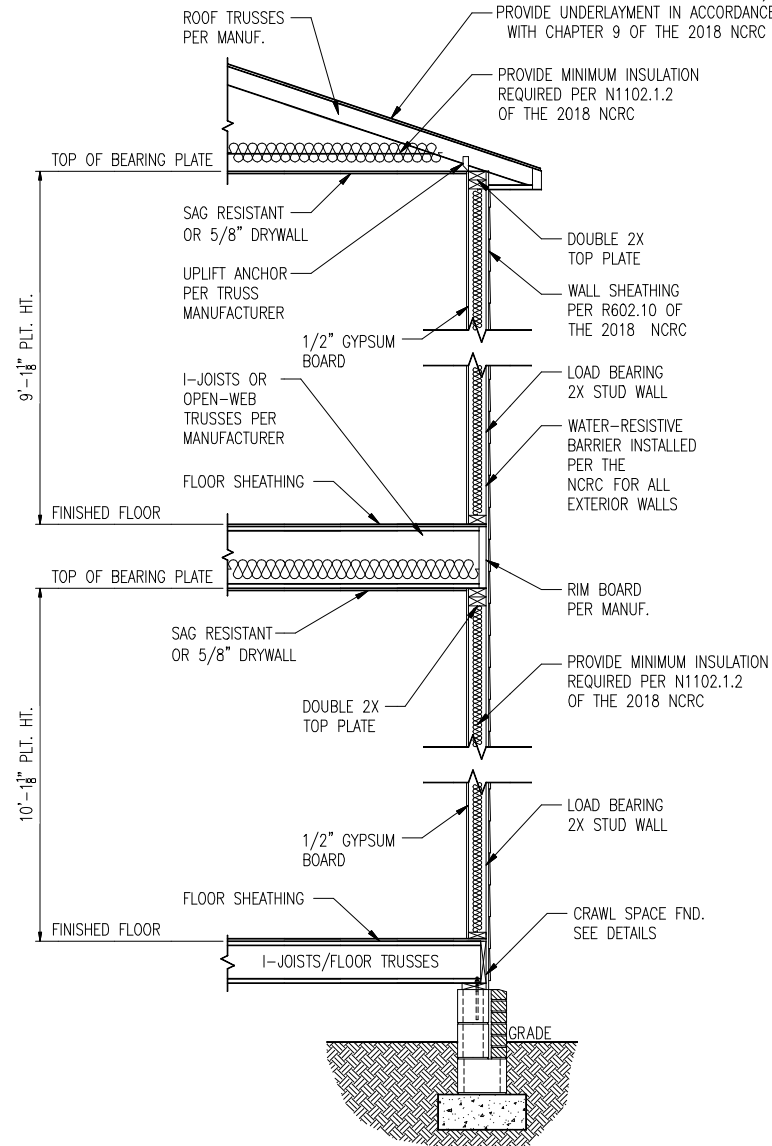
1 TYP. INTERIOR LOAD BEARING WALL SECTION
D4c 3/4" = 1'-0"

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

PROVIDE MINIMUM INSULATION REQUIRED PER N1102.1.2 OF THE 2018 NCRC

SAG RESISTANT OR 5/8" DRYWALL
UPLIFT ANCHOR PER TRUSS MANUFACTURER
1/2" GYPSUM BOARD
I-JOISTS OR OPEN-WEB TRUSSES PER MANUFACTURER
FLOOR SHEATHING

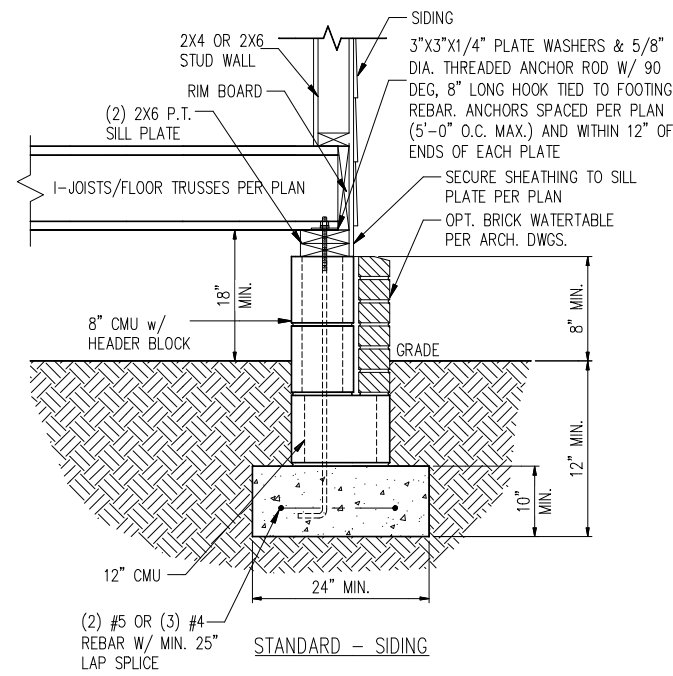
SAG RESISTANT OR 5/8" DRYWALL
DOUBLE 2X TOP PLATE
1/2" GYPSUM BOARD
LOAD BEARING 2X STUD WALL
FLOOR SHEATHING



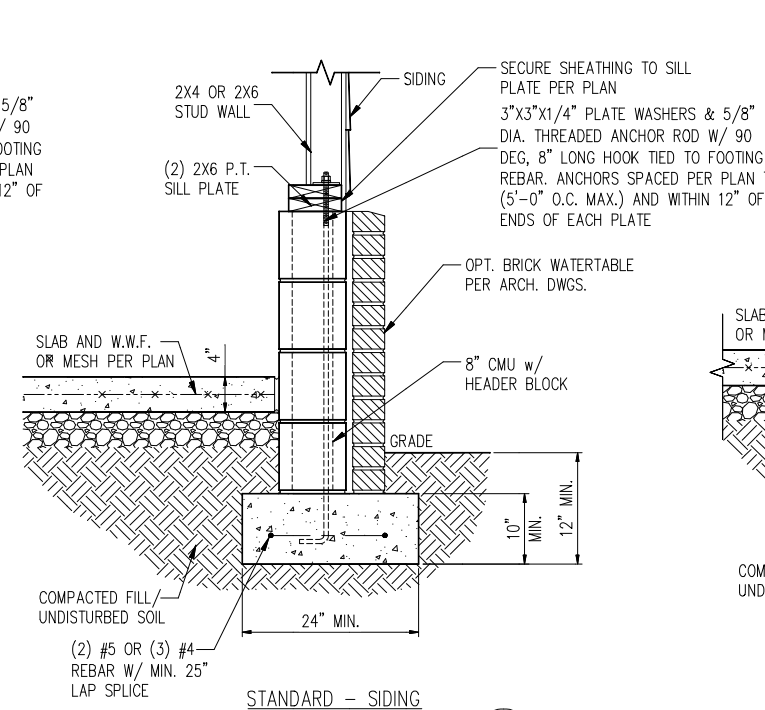
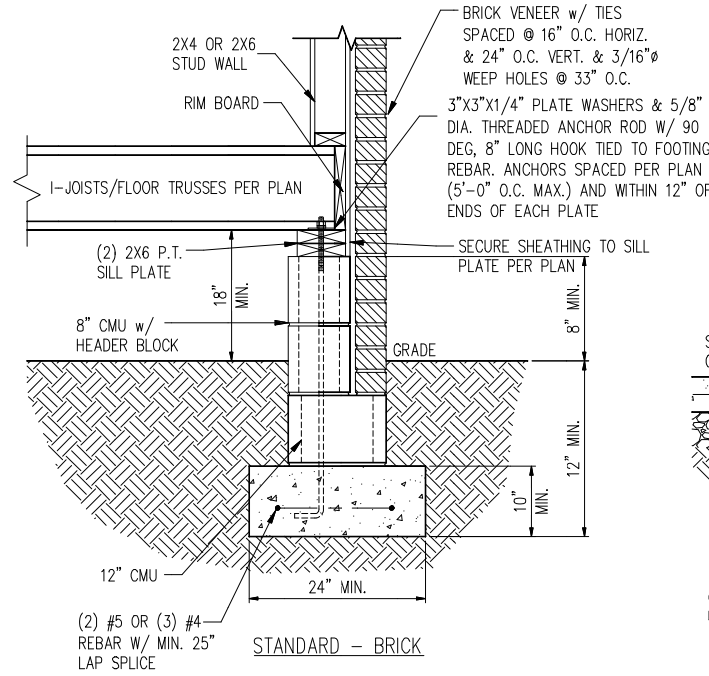
2 TYP. EXTERIOR LOAD BEARING WALL SECTION
D4c 3/4" = 1'-0"
-SIMILAR w/ BRICK AND STONE
-BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.
-MIN. 3/16" WEEP HOLES @ 33" O.C.

NOTES:

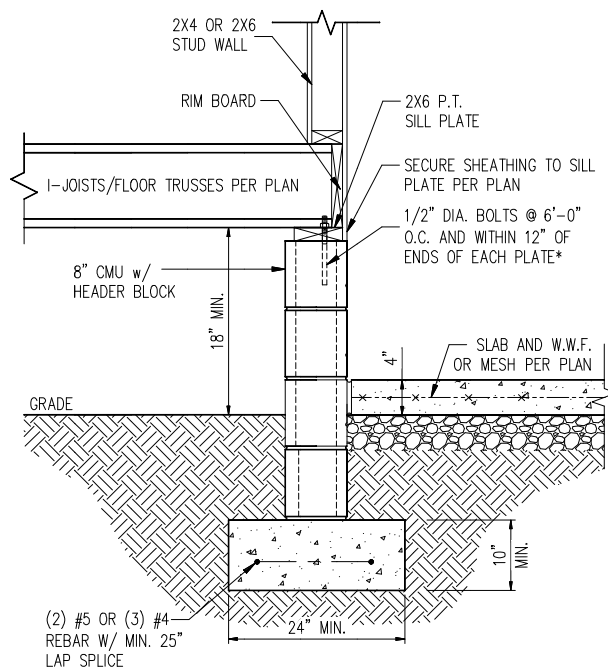
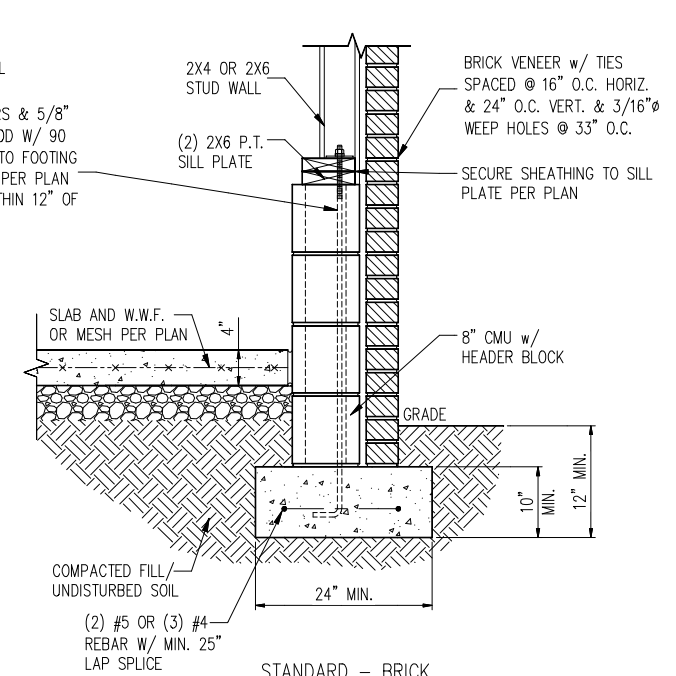
- REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
- PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
- SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
- REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, 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



1 TYP. FOUNDATION WALL DETAIL
D5c N.T.S.

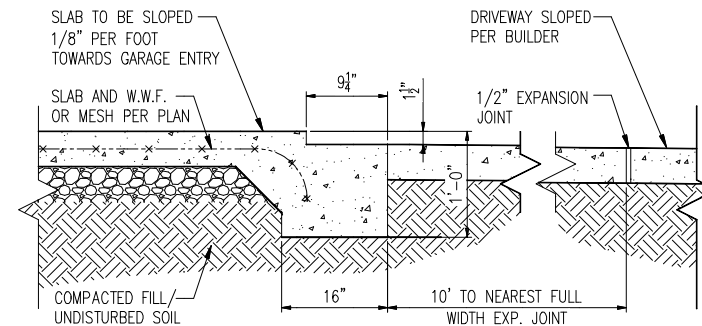


2 TYP. GARAGE CURB DETAIL
D5c N.T.S.

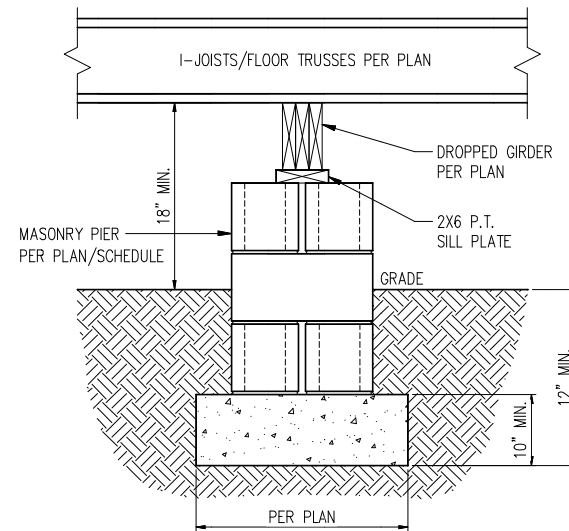


3 HOUSE/GARAGE WALL DETAIL
D5c N.T.S.

*IF INTERIOR GARAGE WALL IS BEING USED AS A BRACED WALL PANEL/BEARING WALL - DOUBLE 2X6 P.T. SILL PLATE W/ 5/8\"/>



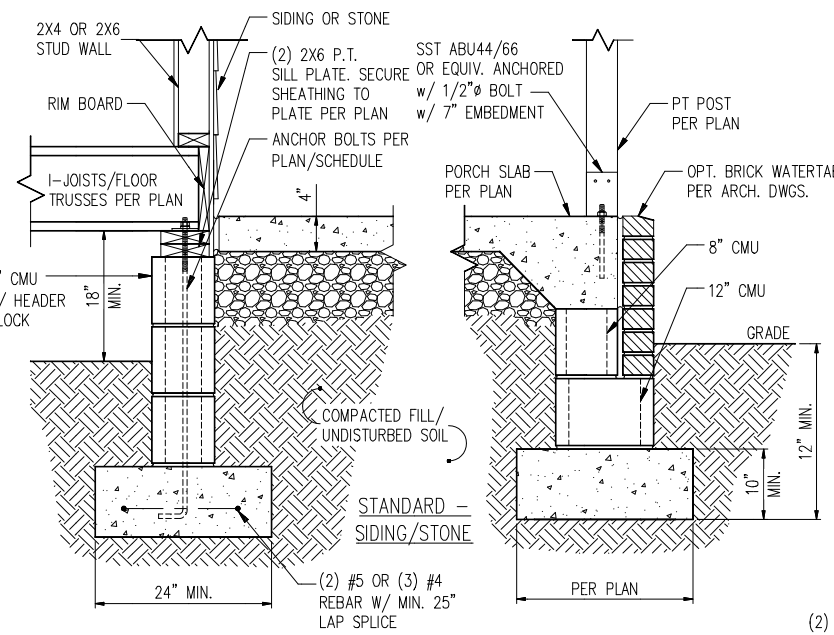
4 SLAB AT GARAGE DOOR
D5c N.T.S.



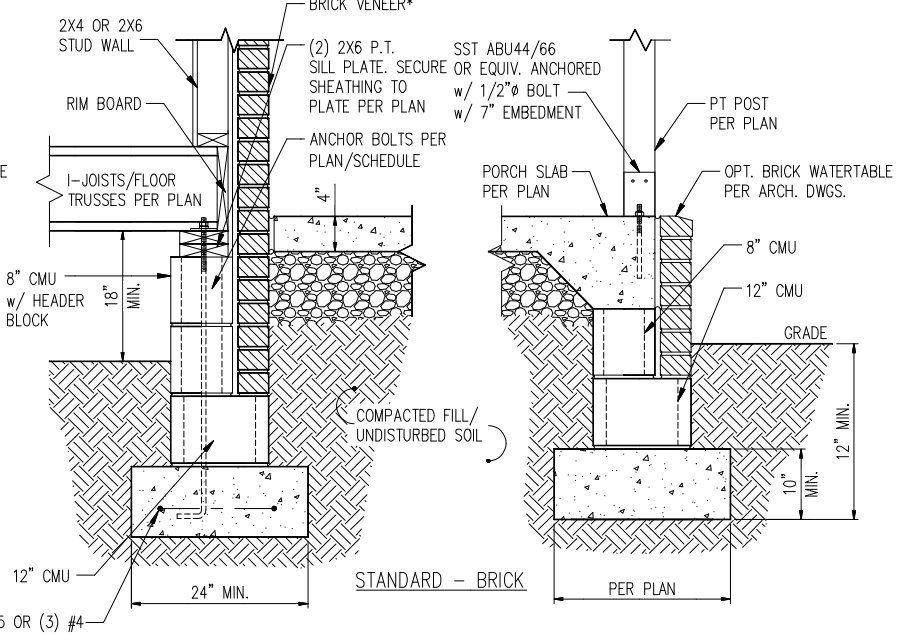
6 TYP. PIER & GIRDER DETAIL
D5c N.T.S.

NOTES:

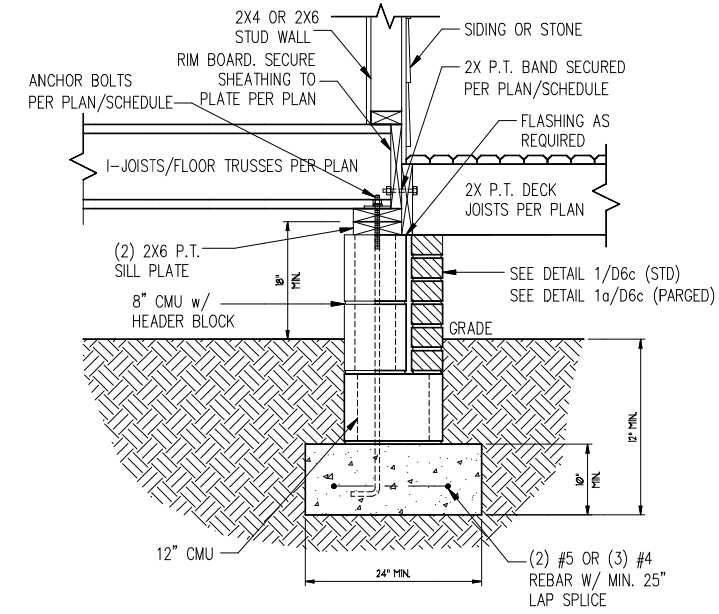
1. APPLICABLE FOR WIND ZONES UP TO 150 MPH
2. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
3. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
4. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
5. REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
6. REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
7. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE NCRC



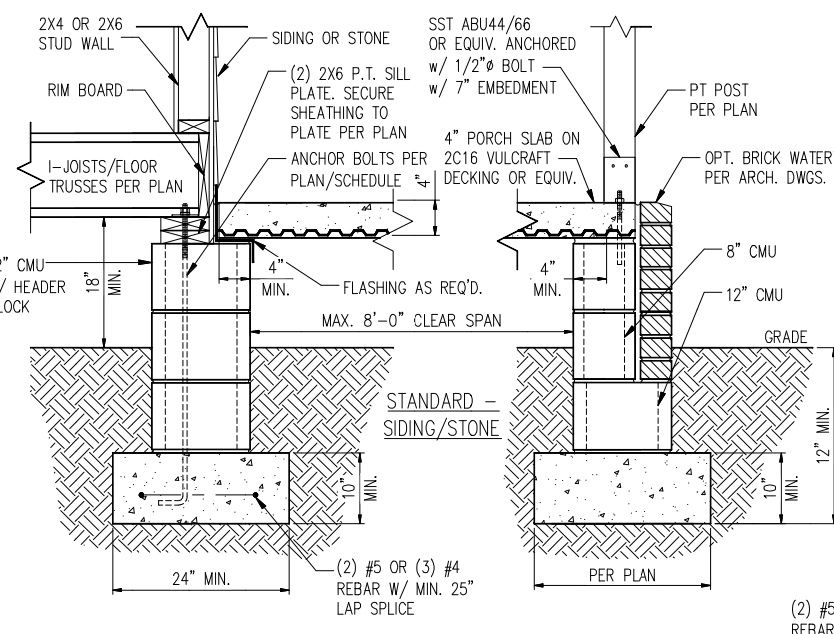
1 TYP. FRONT PORCH DETAIL
 D6c N.T.S.



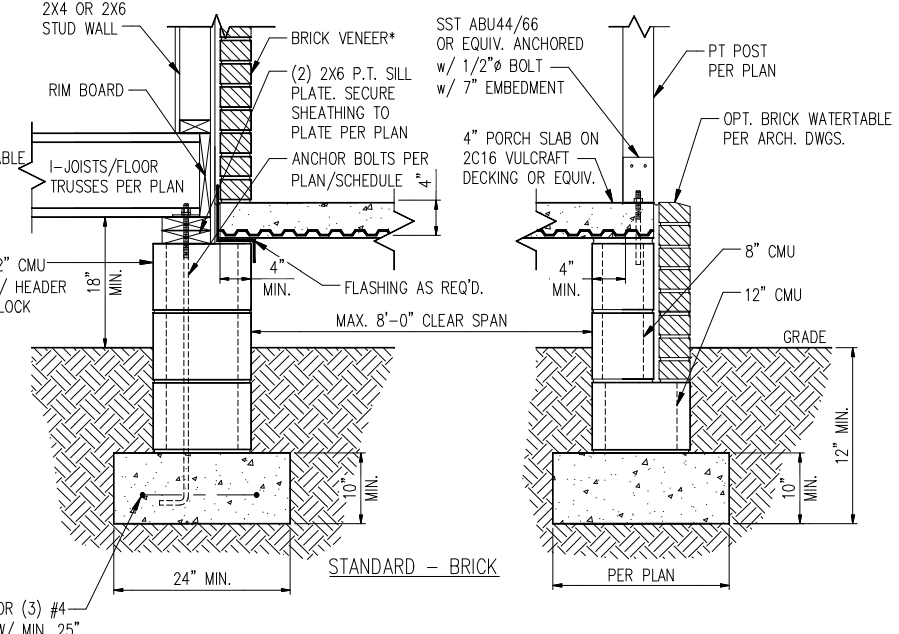
STANDARD - BRICK
 (2) #5 OR (3) #4 REBAR W/ MIN. 25" LAP SPLICE



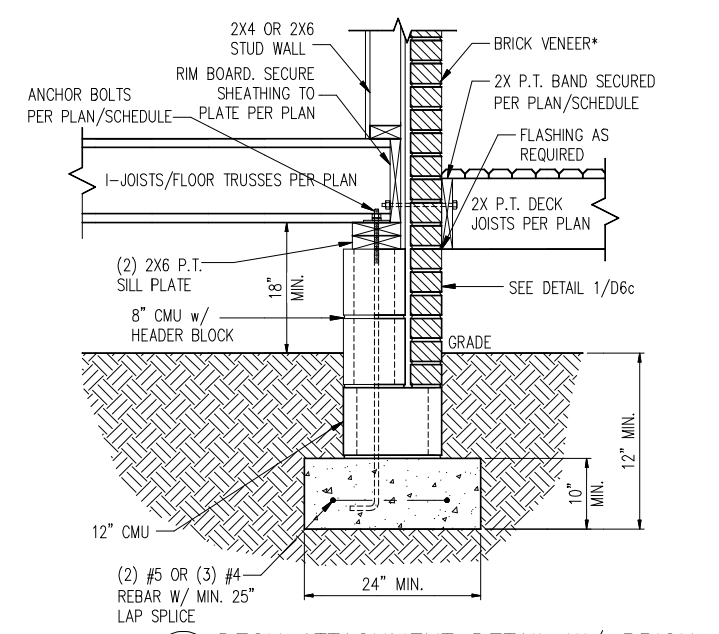
2 DECK ATTACHMENT DETAIL
 D6c N.T.S.



1a FRONT PORCH DETAIL w/ SUSPENDED SLAB
 D6c N.T.S.



STANDARD - BRICK
 (2) #5 OR (3) #4 REBAR W/ MIN. 25" LAP SPLICE



3 DECK ATTACHMENT DETAIL W/ BRICK
 D6c 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 ^b | (1) @ 3'-6" O.C. | (1) @ 1'-8" O.C. |
| AND | AND | AND |
| 12d COMMON GALV. NAILS ^c | (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)

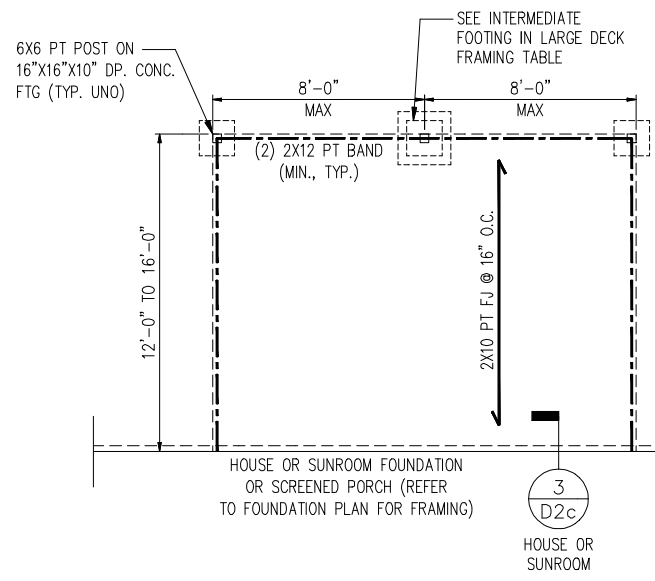
| FASTENERS | MAX. 8'-0" JOIST SPAN | MAX. 16'-0" JOIST SPAN |
|---|-----------------------|------------------------|
| 5/8" GALV. BOLTS w/ NUT & WASHER ^b | (1) @ 2'-4" O.C. | (1) @ 1'-4" O.C. |

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

*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. APPLICABLE FOR WIND ZONES UP TO 150 MPH
 2. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
 3. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
 4. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
 5. REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
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 7. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE NCRC

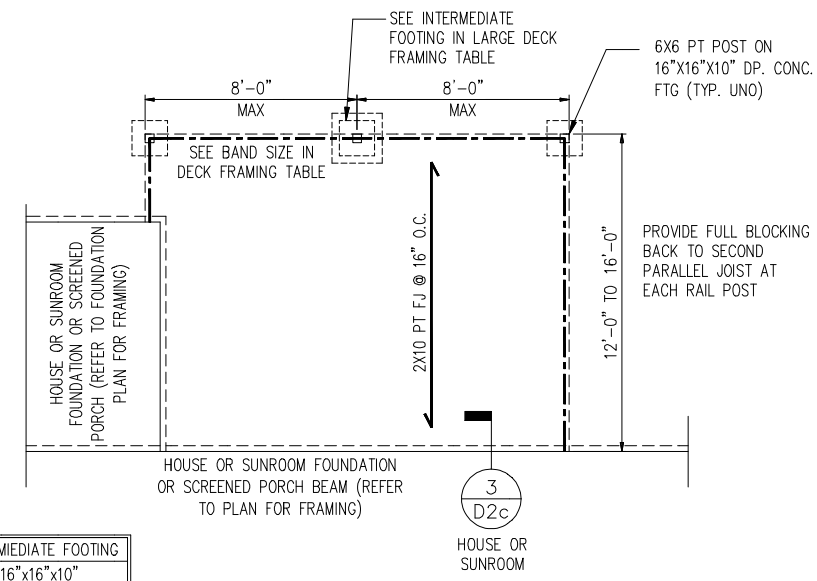
NOTE: BRACE POSTS PER CODE



PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

LARGE DECK FRAMING

| | INTERMEDIATE FOOTING |
|---------------------|----------------------|
| STANDARD | 16"x16"x10" |
| W/ 8'X8' GRILL DECK | 24"x24"x10" |



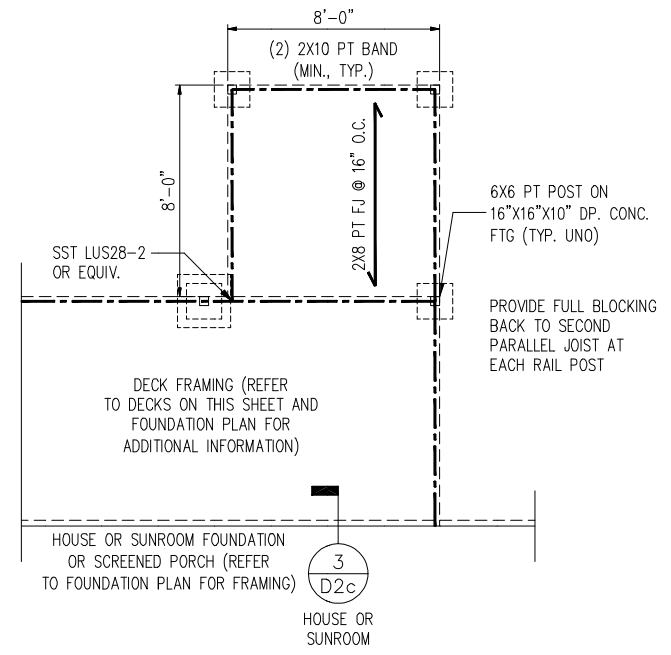
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. LARGE SIDE DECK PLAN

N.T.S.

TYP. LARGE REAR DECK PLAN

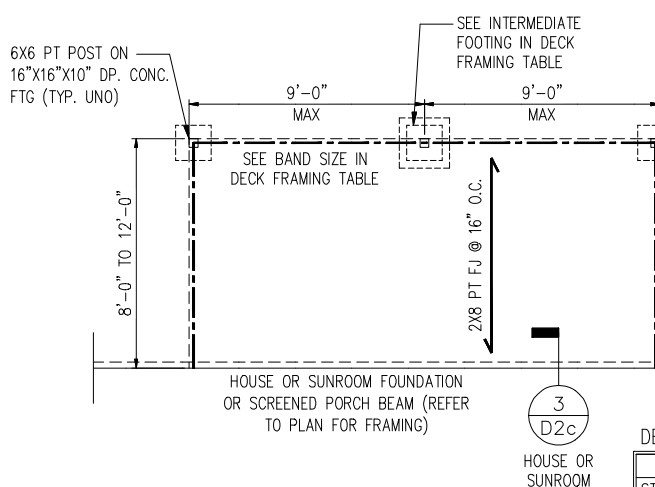
N.T.S.



PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. DECK PLAN W/ 8'X8' GRILL DECK

N.T.S.

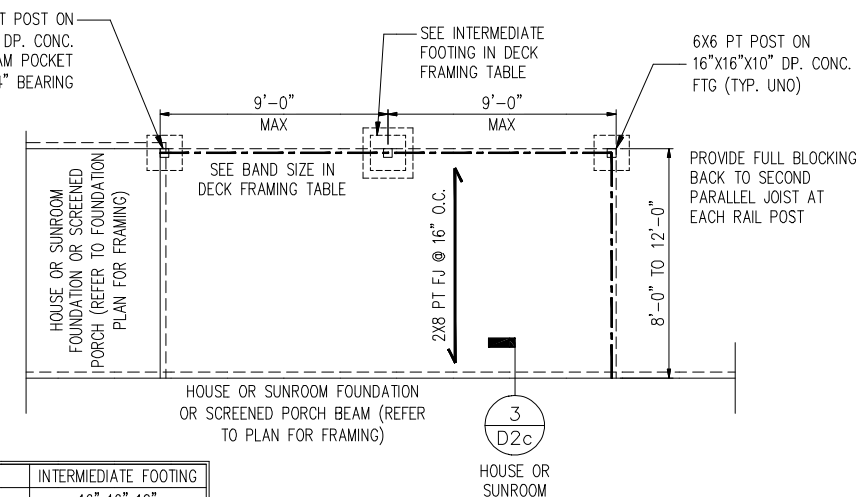


PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

DECK FRAMING

| | BAND SIZE* | INTERMEDIATE FOOTING |
|---------------------|------------|----------------------|
| STANDARD | (2) 2X10 | 16"x16"x10" |
| W/ 8'X8' GRILL DECK | (3) 2X10 | 24"x24"x10" |

* SOUTHERN PINE #2 PT LUMBER



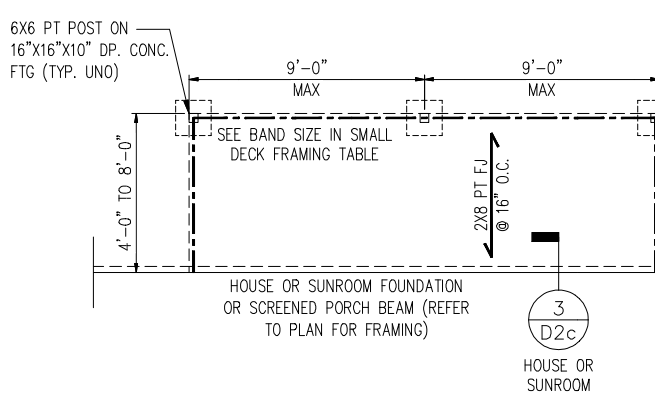
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. SIDE DECK PLAN

N.T.S.

TYP. REAR DECK PLAN

N.T.S.

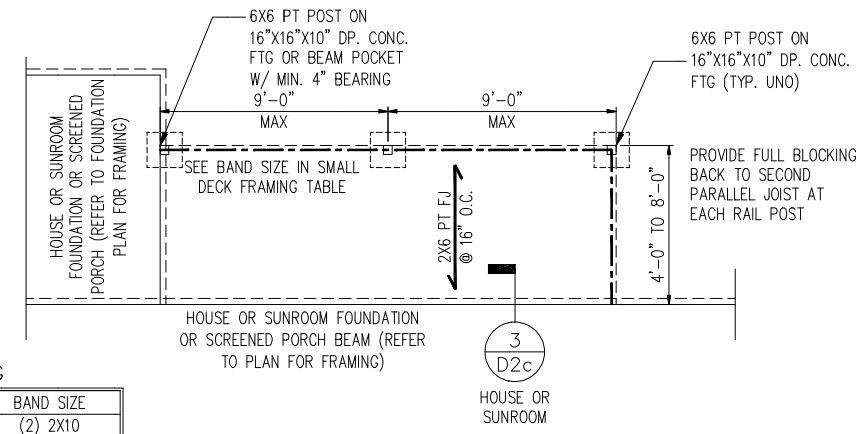


PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

SMALL DECK FRAMING

| | BAND SIZE |
|---------------------|-----------|
| STANDARD | (2) 2X10 |
| W/ 8'X8' GRILL DECK | (3) 2X10 |

* SOUTHERN PINE #2 PT LUMBER



PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

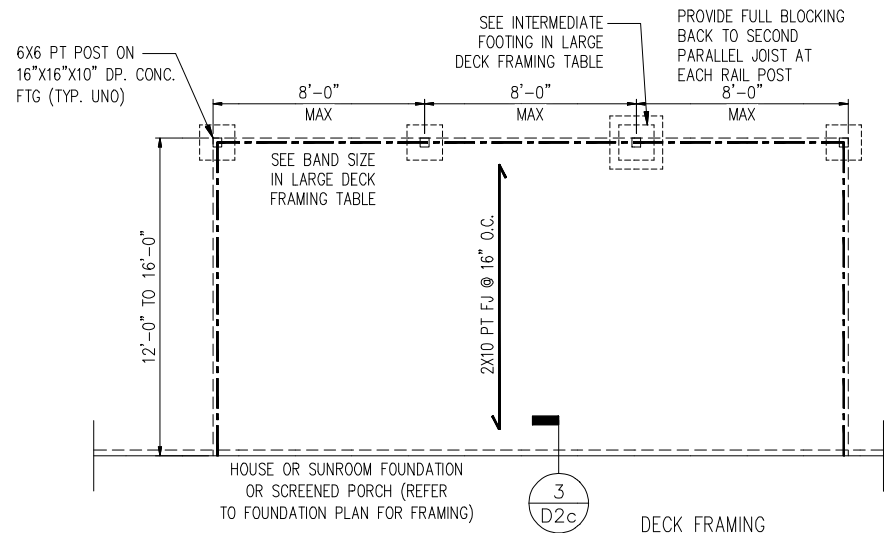
TYP. SMALL SIDE DECK PLAN

N.T.S.

TYP. SMALL REAR DECK PLAN

N.T.S.

- 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 N102.1.2 OF THE 2018 NCR

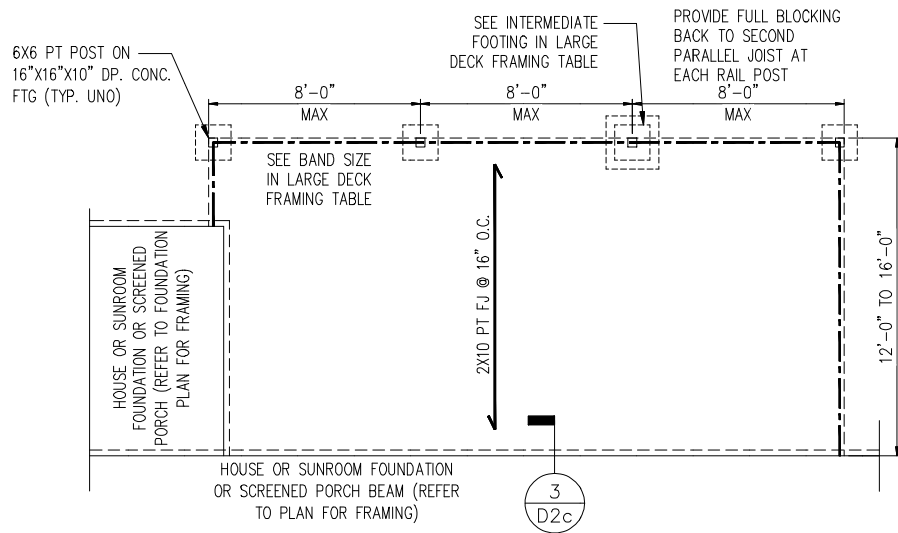


TYP. LARGE REAR DECK PLAN

N.T.S.

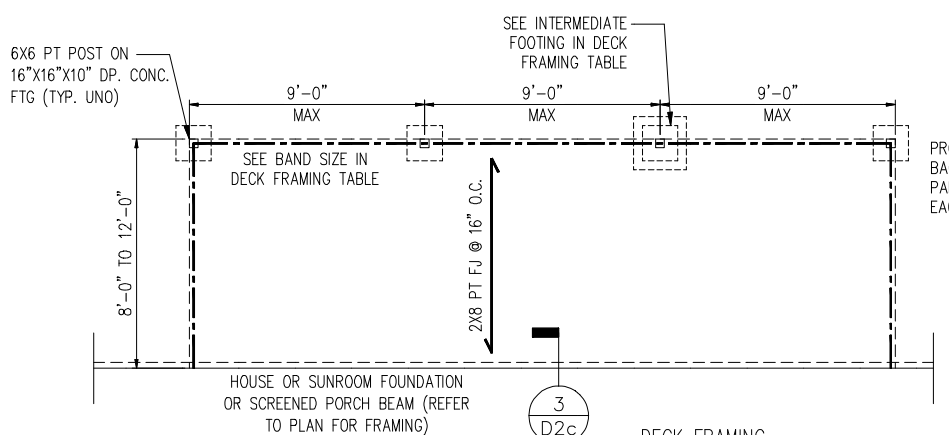
| DECK FRAMING | | |
|---------------------|------------|----------------------|
| | BAND SIZE* | INTERMEDIATE FOOTING |
| STANDARD | (2) 2X12 | 16"x16"x10" |
| W/ 8'X8' GRILL DECK | (3) 2X12 | 24"x24"x10" |

* SOUTHERN PINE #2 PT LUMBER



TYP. LARGE SIDE DECK PLAN

N.T.S.

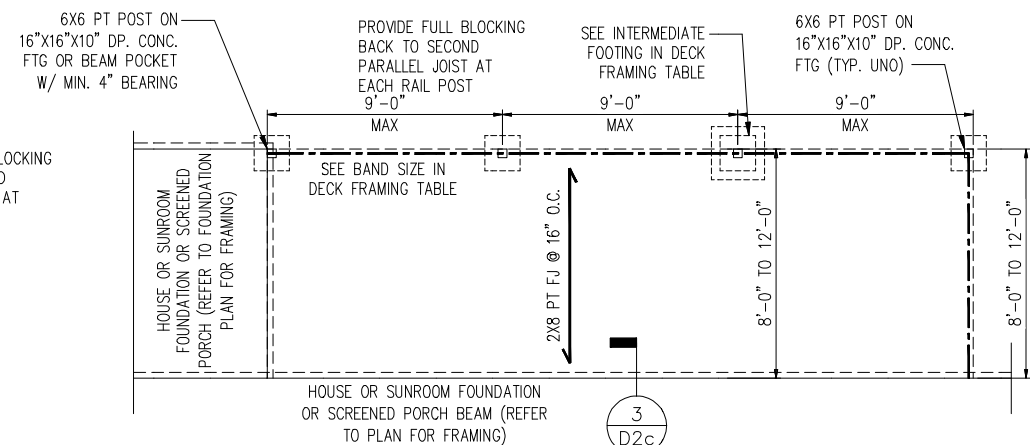


TYP. REAR DECK PLAN

N.T.S.

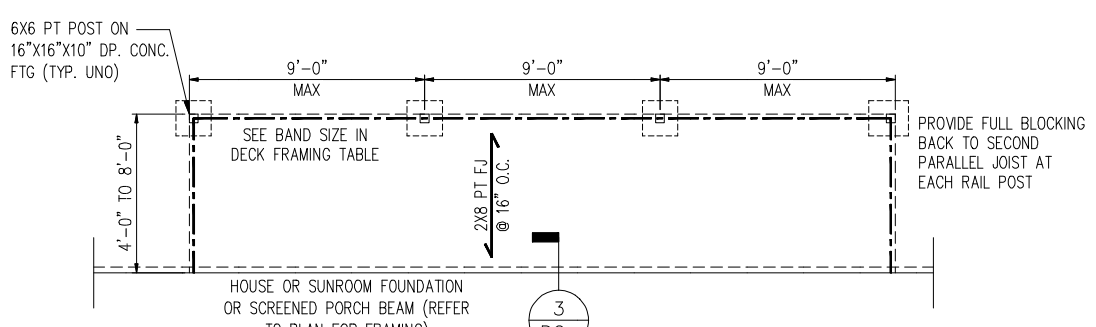
| DECK FRAMING | | |
|---------------------|------------|----------------------|
| | BAND SIZE* | INTERMEDIATE FOOTING |
| STANDARD | (2) 2X10 | 16"x16"x10" |
| W/ 8'X8' GRILL DECK | (3) 2X10 | 24"x24"x10" |

* SOUTHERN PINE #2 PT LUMBER



TYP. REAR DECK PLAN

N.T.S.

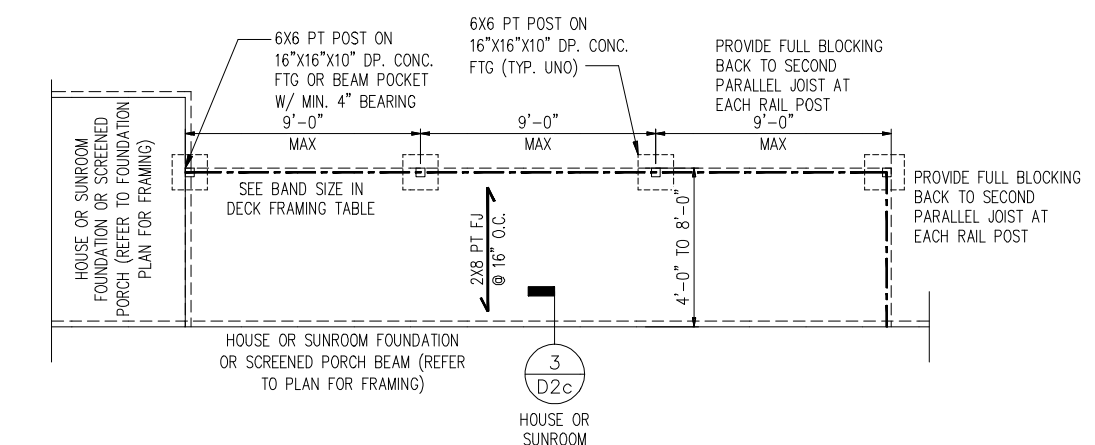


TYP. SMALL REAR DECK PLAN

N.T.S.

| SMALL DECK FRAMING | |
|---------------------|-----------|
| | BAND SIZE |
| STANDARD | (2) 2X10 |
| W/ 8'X8' GRILL DECK | (3) 2X10 |

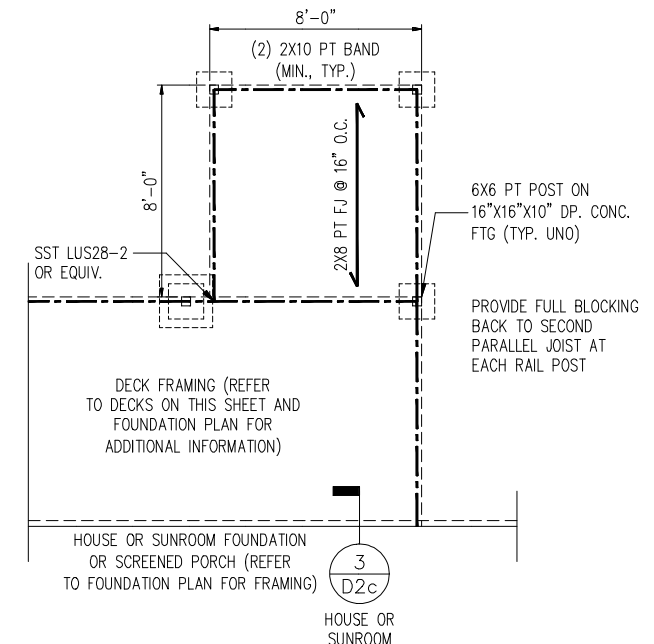
* SOUTHERN PINE #2 PT LUMBER



TYP. SMALL REAR DECK PLAN

N.T.S.

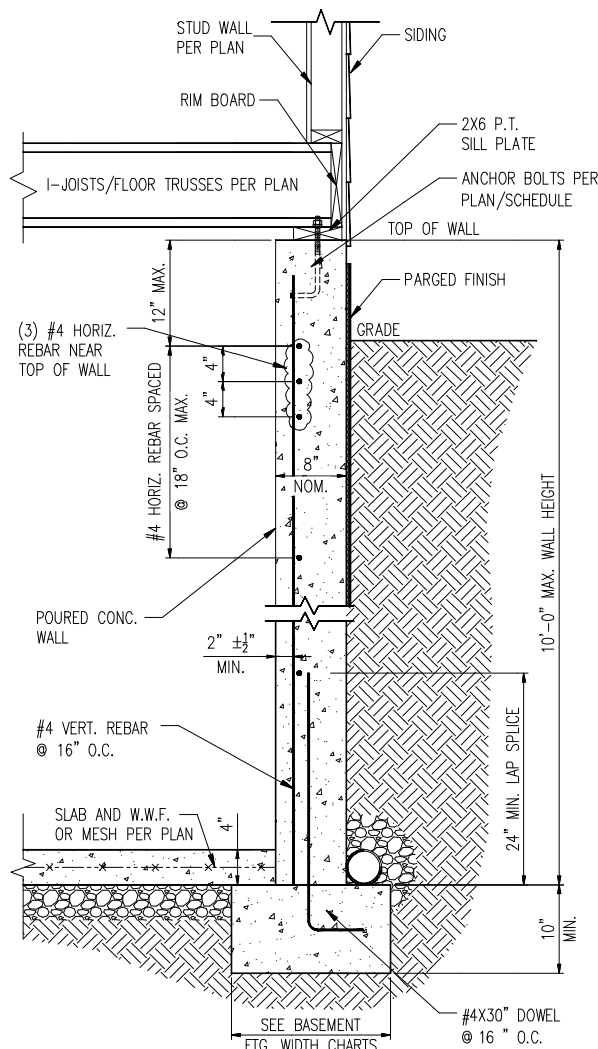
NOTE: BRACE POSTS PER CODE



TYP. DECK PLAN W/ 8'X8' GRILL DECK

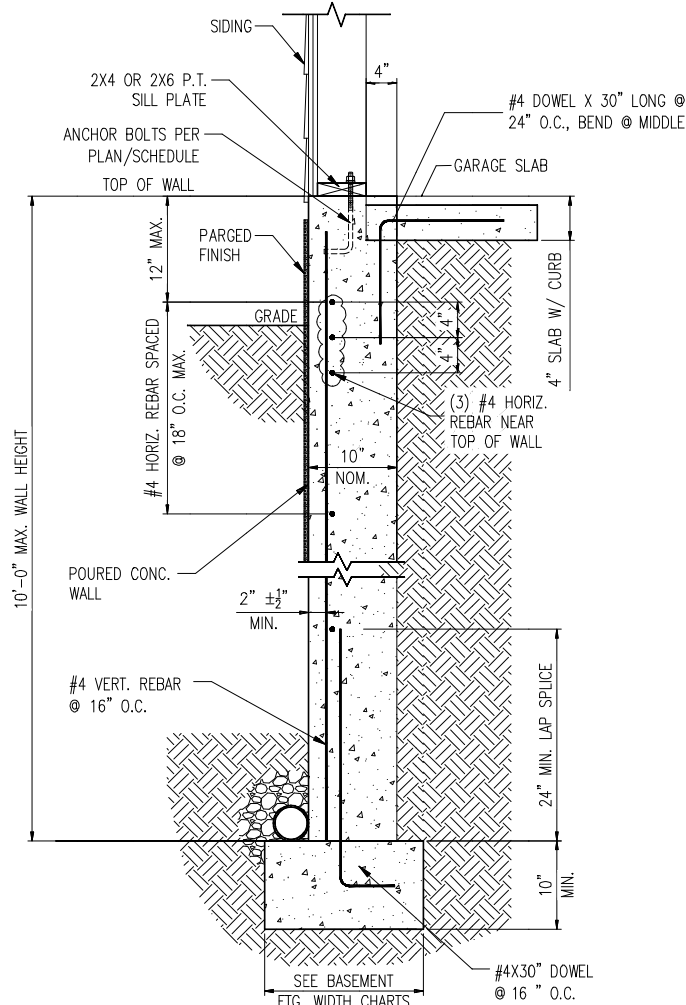
N.T.S.

- 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 N102.1.2 OF THE 2018 NCR



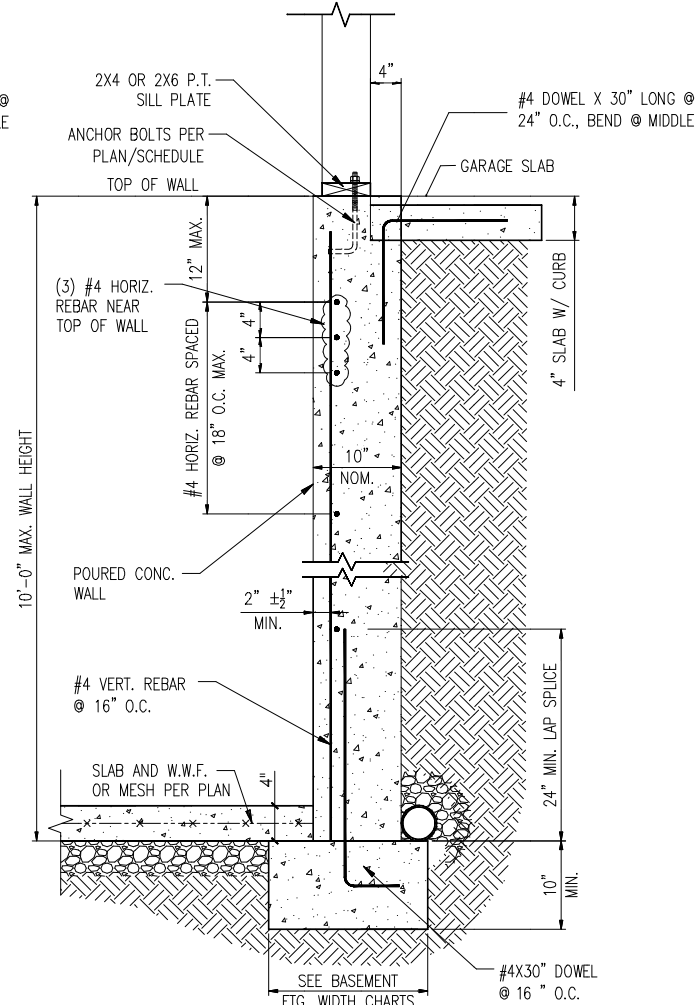
STANDARD - SIDING

1 TYP. BASEMENT FOUNDATION WALL DETAIL
D1b N.T.S.



TYP. BASEMENT FOUNDATION WALL DETAIL AT GARAGE EXTERIOR

2 D1b N.T.S.



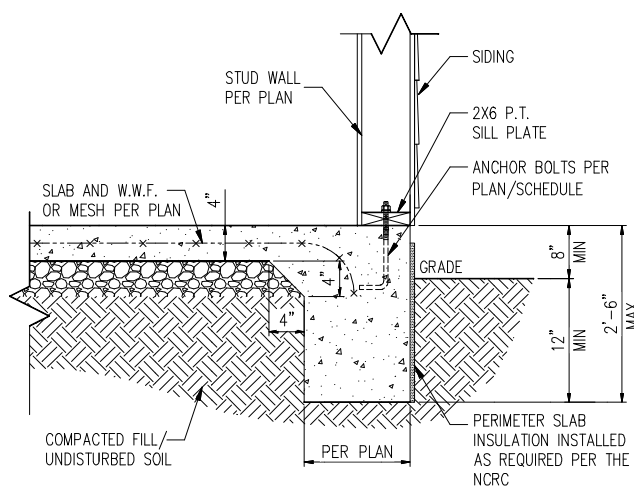
TYP. BASEMENT FOUNDATION WALL DETAIL AT GARAGE INTERIOR

3 D1b N.T.S.

WALL ANCHOR SCHEDULE

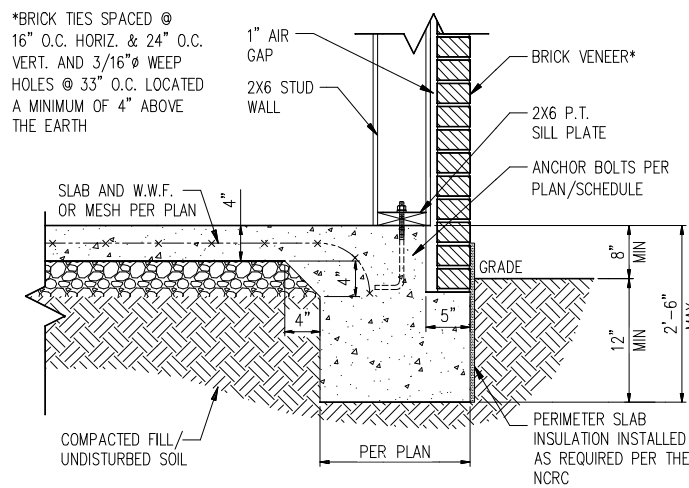
| TYPE OF ANCHOR | MIN. CONC. EMBEDMENT | SPACING EMBEDMENT | INTERIOR WALL | EXTERIOR WALL |
|---|----------------------|-------------------|---------------|---------------|
| 1/2" A307 BOLTS w/ STD. 90° BEND | 7" | 6'-0" | YES | YES |
| SST - MAS | 4" | 5'-0" | NO | YES |
| HILTI KWIK BOLT KBI 1/2-2-3/4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



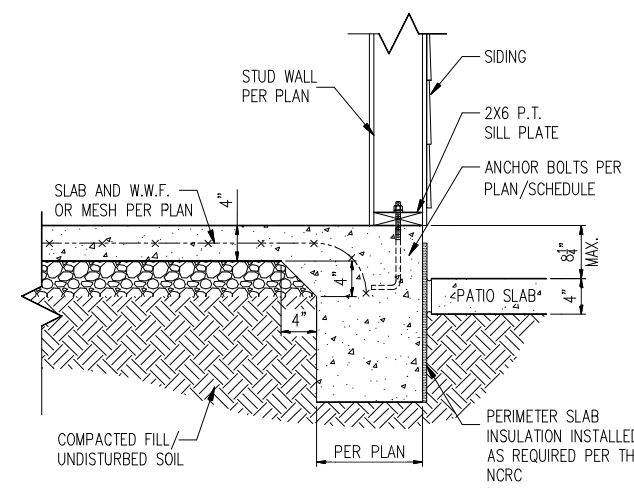
STANDARD - SIDING

4 TYP. SLAB DETAIL @ WALK-OUT
D1b N.T.S.



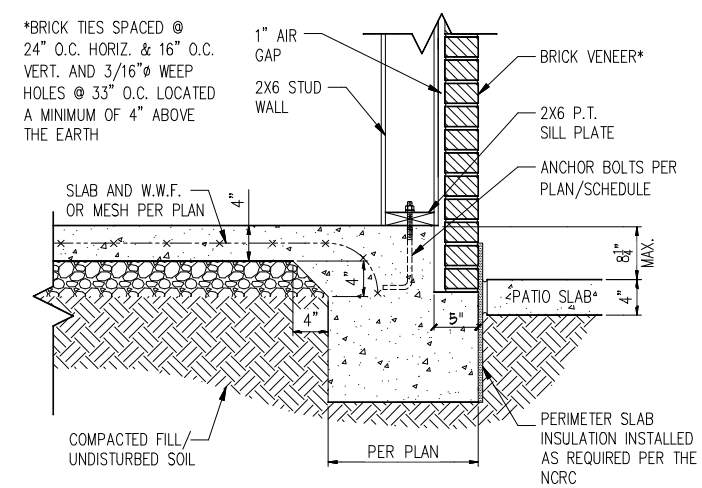
STANDARD - BRICK

4A TYP. SLAB DETAIL @ WALK-OUT W/ BRICK VENEER
D1b N.T.S.



STANDARD - SIDING

5 PATIO SLAB DETAIL @ WALK-OUT
D1b N.T.S.

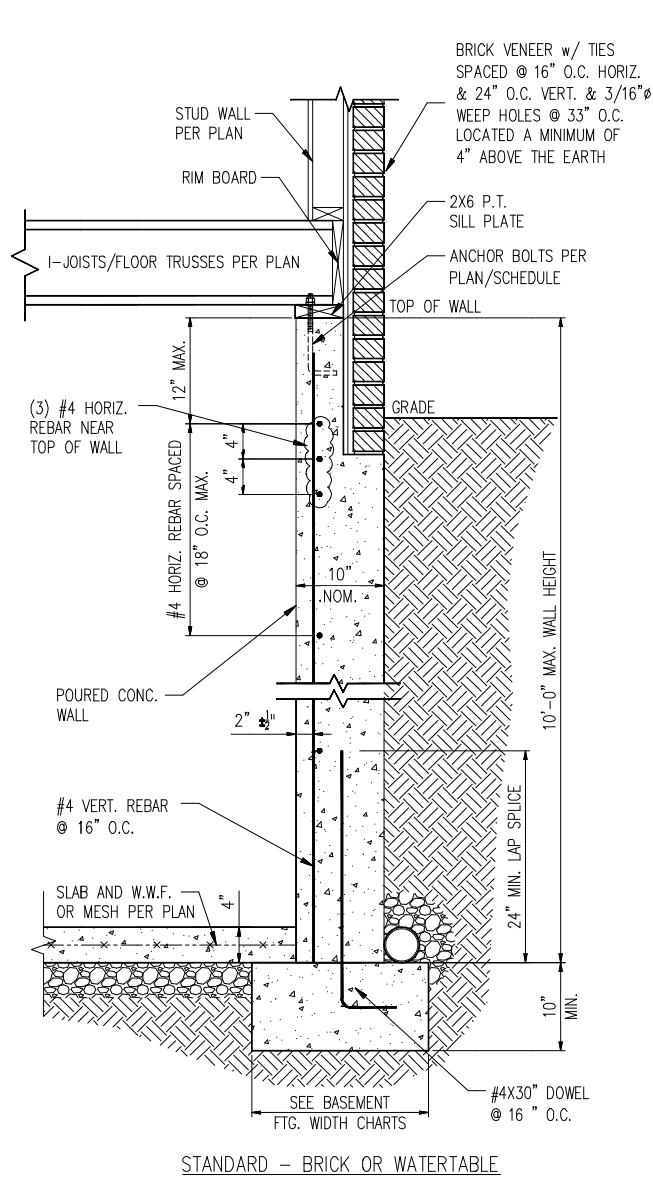


STANDARD - BRICK

5A PATIO SLAB DETAIL @ WALK-OUT W/ BRICK VENEER
D1b N.T.S.

NOTES:

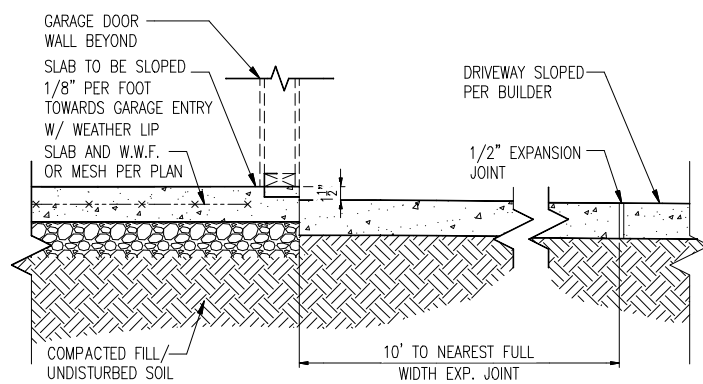
1. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
4. REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
5. REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
6. ASSUMED EQUIVALENT FLUID PRESSURE (EFP) OF 45 PCF. WHEN HIGHER VALUES ARE PRESENT, ADDITIONAL DESIGN REQUIRED.
7. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCR
8. SEE LATEST VERSION OF SUPERIOR WALL BUILDER GUIDELINE BOOKLET FOR ALL SITE PREPARATION, WALL INSTALLATION AND CONNECTION REQUIREMENTS WHEN SUPERIOR WALL BASEMENT FOUNDATION IS USED



STANDARD - BRICK OR WATERTABLE

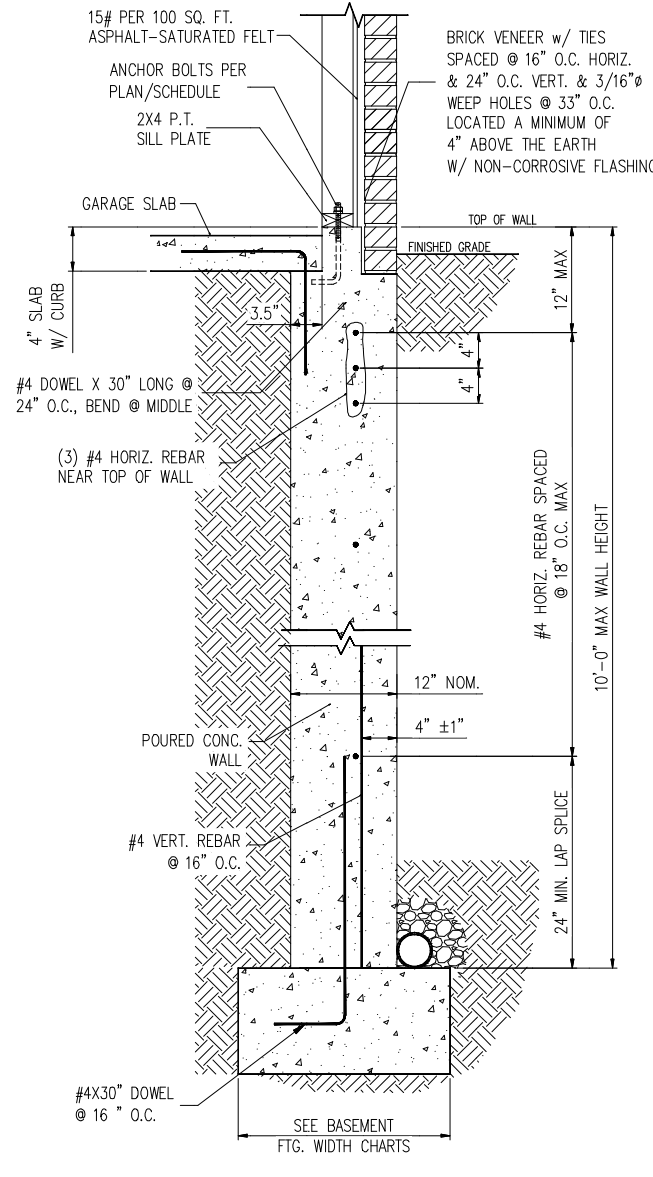
1 TYP. BASEMENT FOUNDATION WALL DETAIL W/ BRICK VENEER

D2b N.T.S.



3 SLAB AT GARAGE DOOR

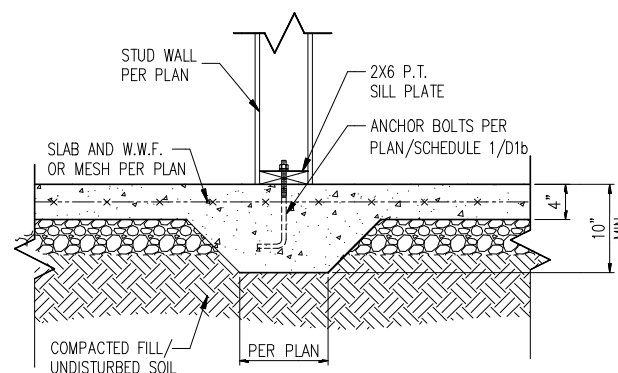
D2b N.T.S.



STANDARD - BRICK OR WATERTABLE

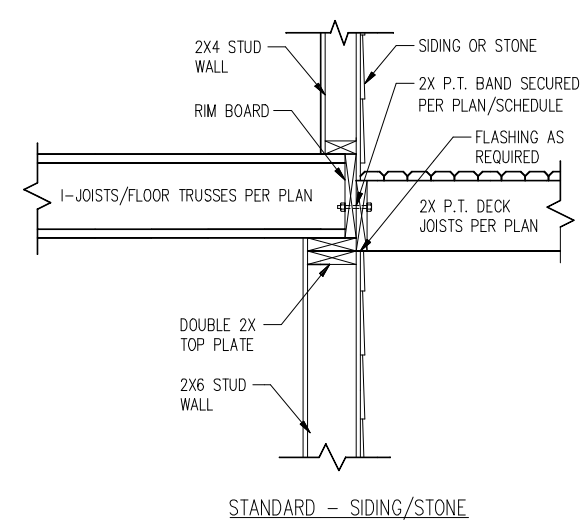
2 TYP. BASEMENT FOUNDATION WALL DETAIL W/ BRICK VENEER AT GARAGE EXTERIOR

D2b N.T.S.



4 TYP. THICKENED SLAB DETAIL

D2b N.T.S.

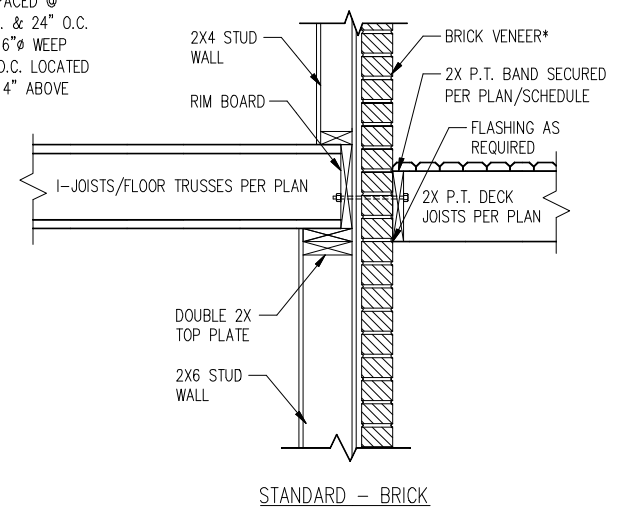


STANDARD - SIDING/STONE

5 DECK ATTACHMENT DETAIL

D2b N.T.S.

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



STANDARD - BRICK

6 DECK ATTACHMENT DETAIL W/ BRICK

D2b N.T.S.

BASEMENT FOOTING WIDTH

| # OF STORIES | WIDTH BASED ON SOIL BEARING CAPACITY | | |
|------------------------|--------------------------------------|----------|----------|
| | 1500 PSF | 2000 PSF | 2500 PSF |
| 1 STORY - STD. | 18" | 18" | 18" |
| 1 STORY - BRICK VENEER | 24"* | 24"* | 24"* |
| 2 STORY - STD. | 22" | 18" | 18" |
| 2 STORY - BRICK VENEER | 28"* | 24"* | 24"* |

*5" BRICK LEDGE HAS BEEN ADDED TO THE BASEMENT FOOTING WIDTH FOR BRICK SUPPORT

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 ^b AND 12d COMMON GALV. NAILS ^c | (1) @ 3'-6" O.C. AND (2) @ 8" 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)

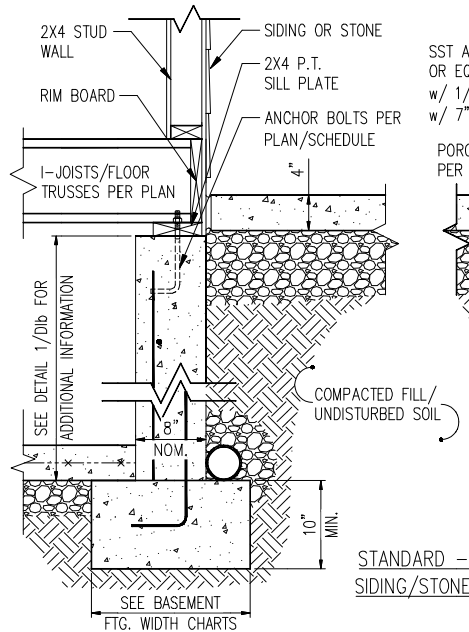
| FASTENERS | MAX. 8'-0" JOIST SPAN | MAX. 16'-0" JOIST SPAN |
|-----------|---|------------------------|
| | 5/8" GALV. BOLTS w/ NUT & WASHER ^b | (1) @ 2'-4" O.C. |

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

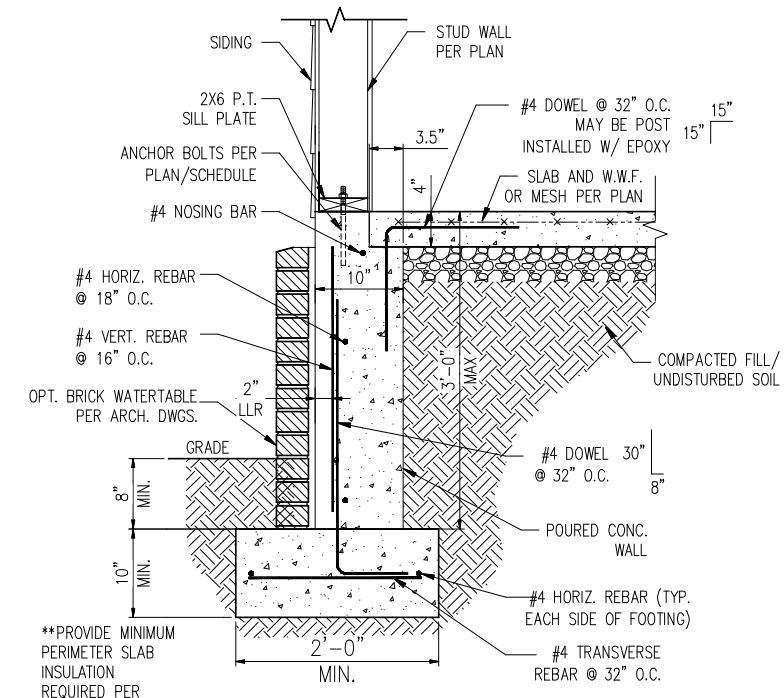
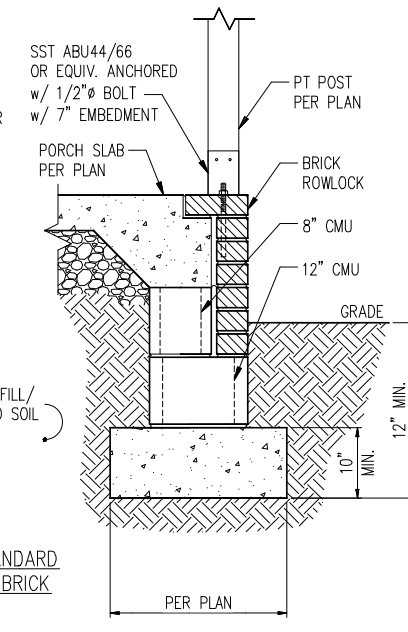
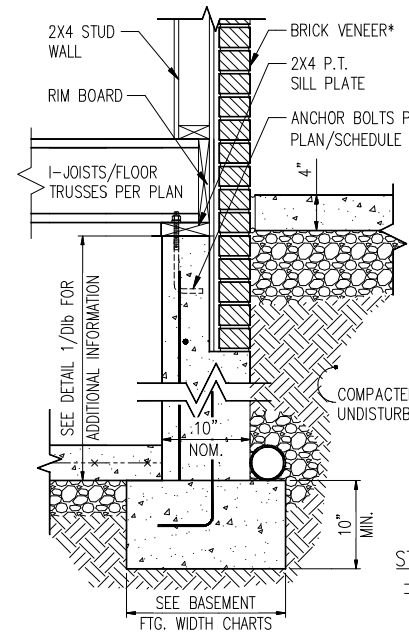
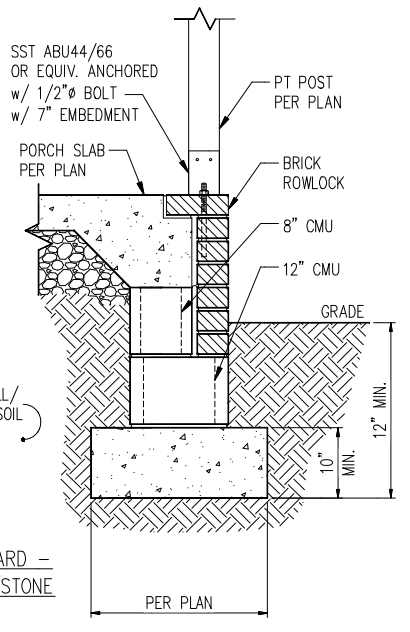
NOTES:

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. ASSUMED EQUIVALENT FLUID PRESSURE (EFP) OF 45 PCF. WHEN HIGHER VALUES ARE PRESENT, ADDITIONAL DESIGN REQUIRED.
7. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCRS
8. SEE LATEST VERSION OF SUPERIOR WALL BUILDER GUIDELINE BOOKLET FOR ALL SITE PREPARATION, WALL INSTALLATION AND CONNECTION REQUIREMENTS WHEN SUPERIOR WALL BASEMENT FOUNDATION IS USED

*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

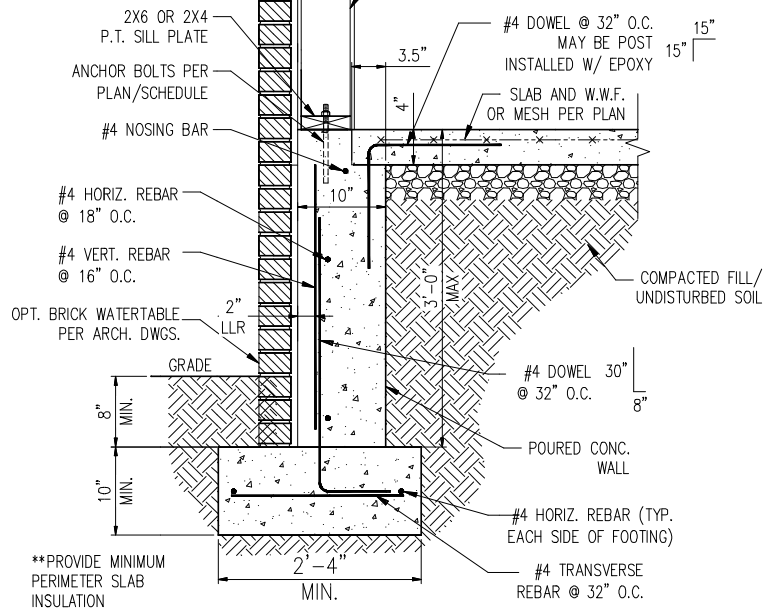


1 TYP. FRONT PORCH DETAIL
 D3b N.T.S.

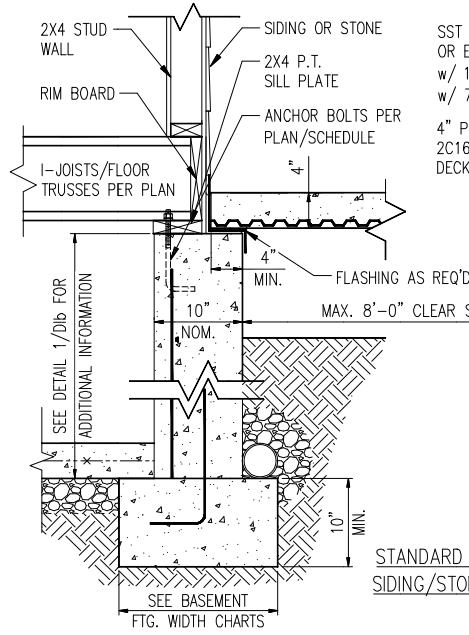


2 TALL WALKOUT FOOTING
 D3b N.T.S.

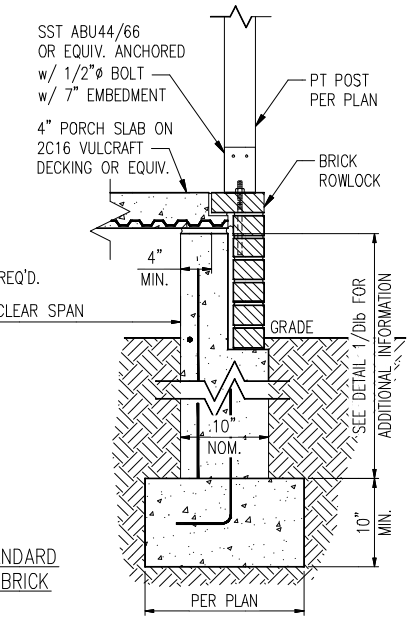
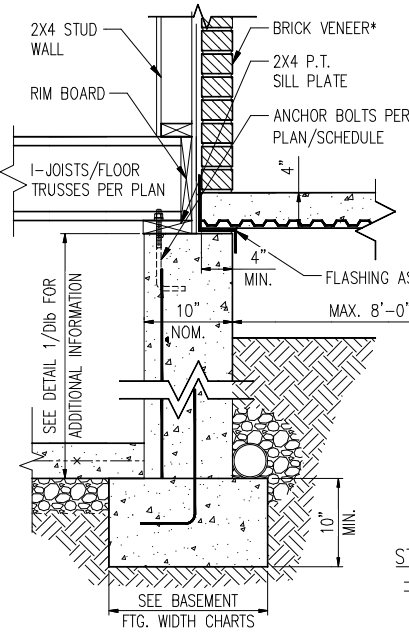
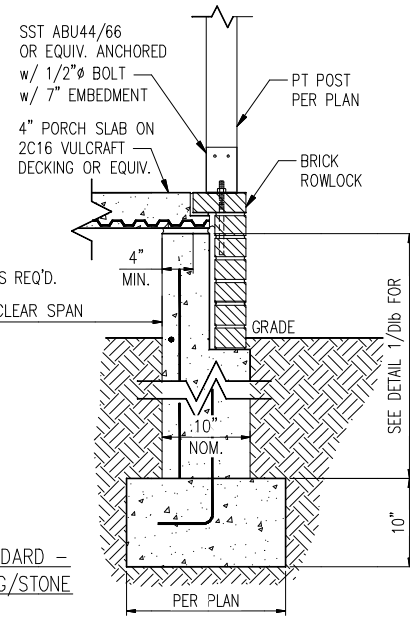
BRICK VENEER w/ TIES
 SPACED @ 16" O.C. HORIZ.
 & 24" O.C. VERT. & 3/16" Ø
 WEEP HOLES @ 33" O.C.
 LOCATED A MINIMUM OF
 4" ABOVE THE EARTH



TALL WALKOUT FOOTING WITH BRICK
 2A D3b N.T.S.



1a FRONT PORCH DETAIL w/ SUSPENDED SLAB
 D3b N.T.S.



WALL ANCHOR SCHEDULE

| TYPE OF ANCHOR | MIN. CONC. EMBEDMENT | SPACING EMBEDMENT | INTERIOR WALL | EXTERIOR WALL |
|---|----------------------|-------------------|---------------|---------------|
| 1/2" Ø 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" Ø HILTI THREADED ROD w/ HIT HY200 ADHESIVE | 7" | 6'-0" | YES | YES |

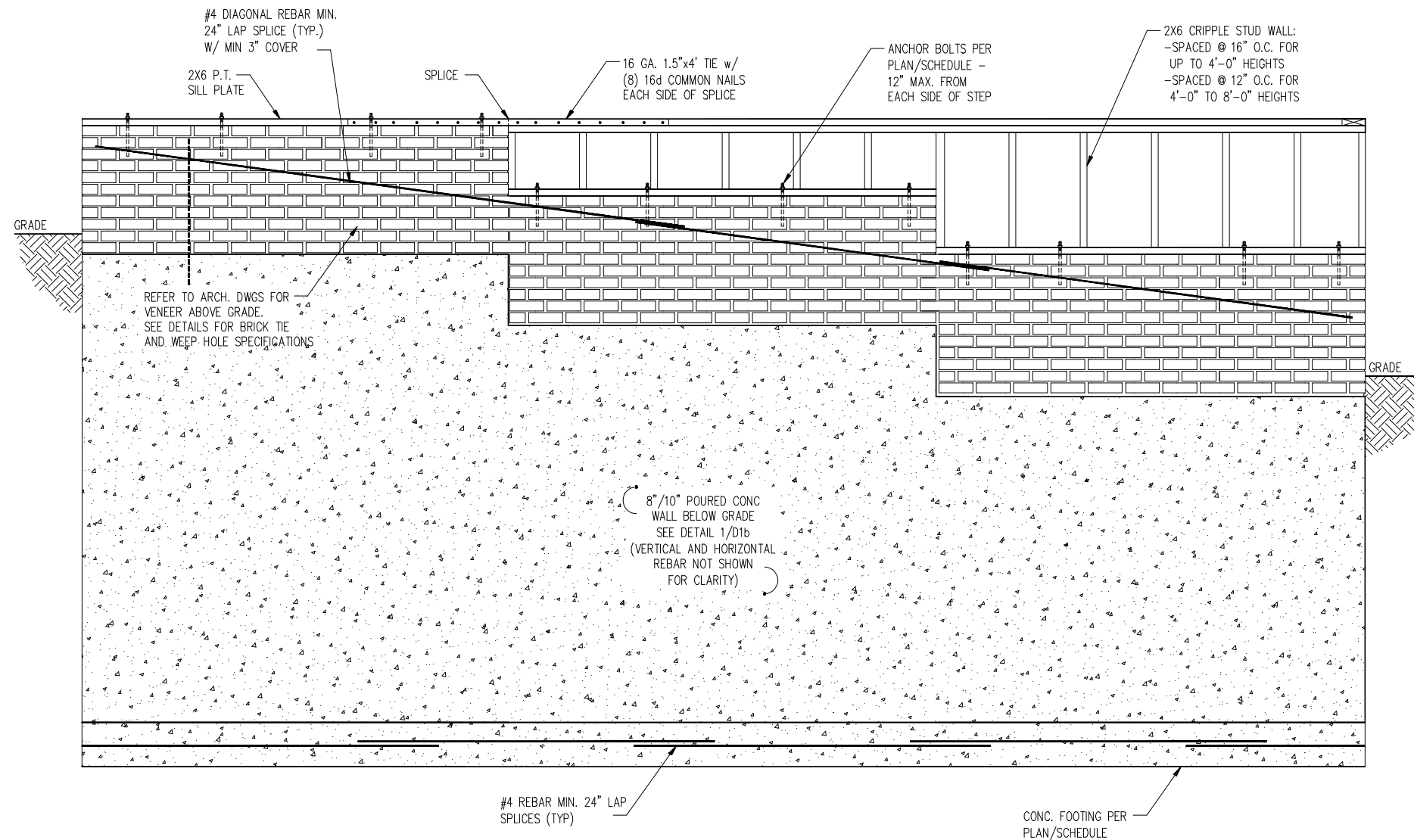
NOTE: INSTALL ALL ANCHORS 12" MAX. FROM ALL BOTTOM PLATE ENDS AND JOINTS.

BASEMENT FOOTING WIDTH

| # OF STORIES | WIDTH BASED ON SOIL BEARING CAPACITY | | |
|------------------------|--------------------------------------|----------|----------|
| | 1500 PSF | 2000 PSF | 2500 PSF |
| 1 STORY - STD. | 18" | 18" | 18" |
| 1 STORY - BRICK VENEER | 24" | 24" | 24" |
| 2 STORY - STD. | 22" | 18" | 18" |
| 2 STORY - BRICK VENEER | 28" | 24" | 24" |

*5" BRICK LEDGE HAS BEEN ADDED TO THE BASEMENT FOOTING THIS CHART DOES NOT APPLY TO TALL WALKOUT, REFER TO DETAILS

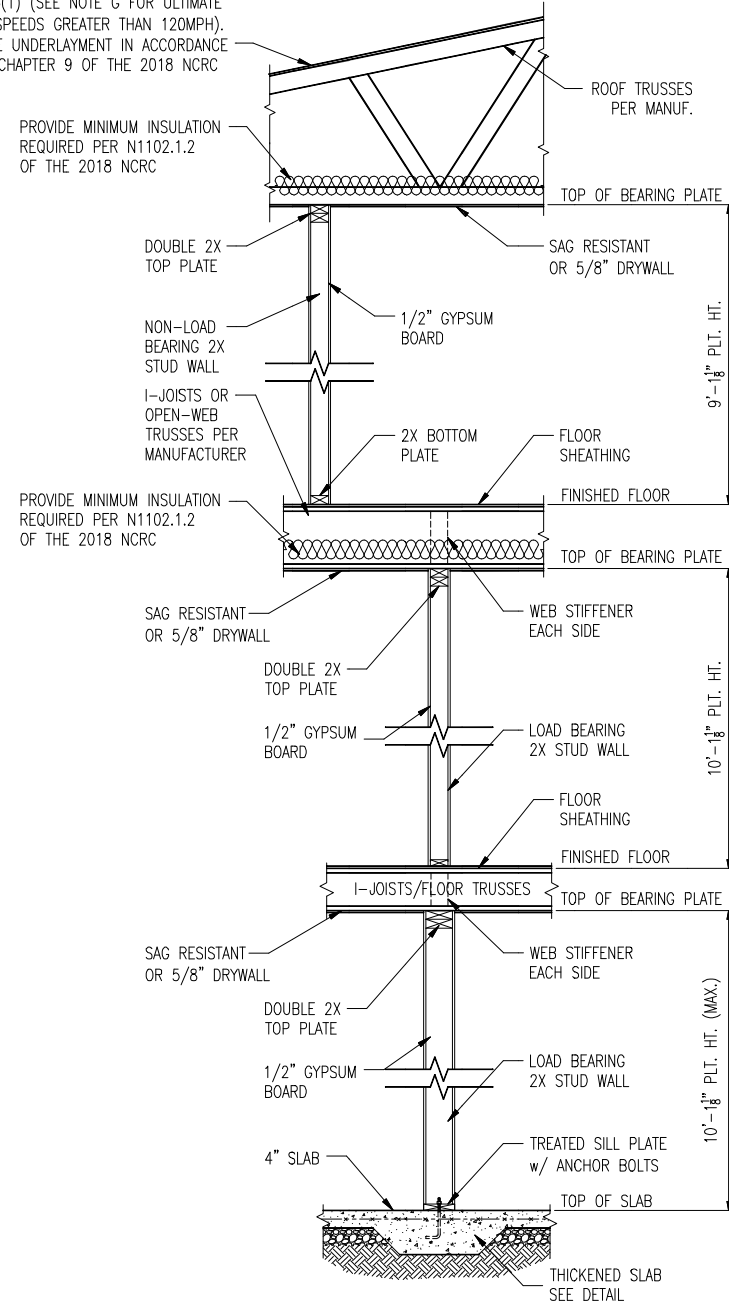
- NOTES:**
- REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
 - PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
 - SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
 - REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
 - REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
 - ASSUMED EQUIVALENT FLUID PRESSURE (EFP) OF 45 PCF. WHEN HIGHER VALUES ARE PRESENT, ADDITIONAL DESIGN REQUIRED.
 - PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCR
 - SEE LATEST VERSION OF SUPERIOR WALL BUILDER GUIDELINE BOOKLET FOR ALL SITE PREPARATION, WALL INSTALLATION AND CONNECTION REQUIREMENTS WHEN SUPERIOR WALL BASEMENT FOUNDATION IS USED



1 TYP. STEPPED FOUNDATION WALL DETAIL
 D4b N.T.S.

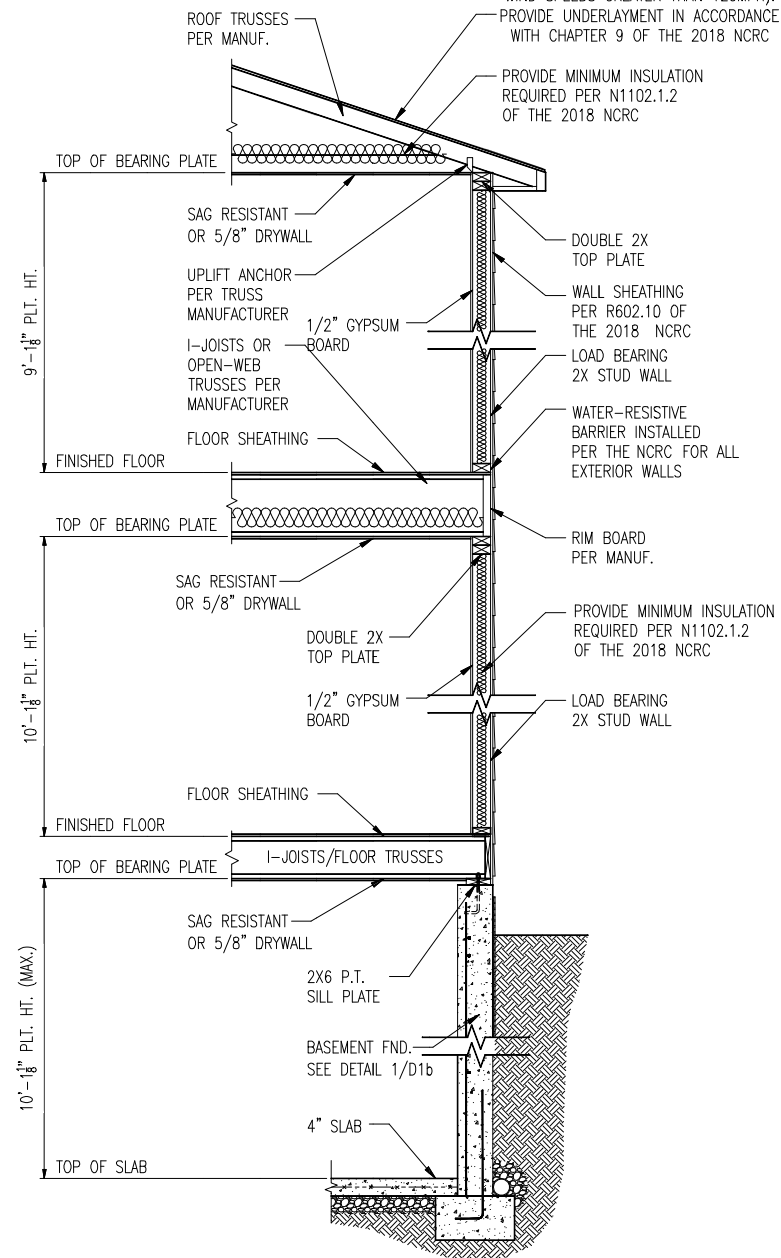
- NOTES:
1. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
 2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
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 8. SEE LATEST VERSION OF SUPERIOR WALL BUILDER GUIDELINE BOOKLET FOR ALL SITE PREPARATION, WALL INSTALLATION AND CONNECTION REQUIREMENTS WHEN SUPERIOR WALL BASEMENT FOUNDATION IS USED

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
D5b N.T.S

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

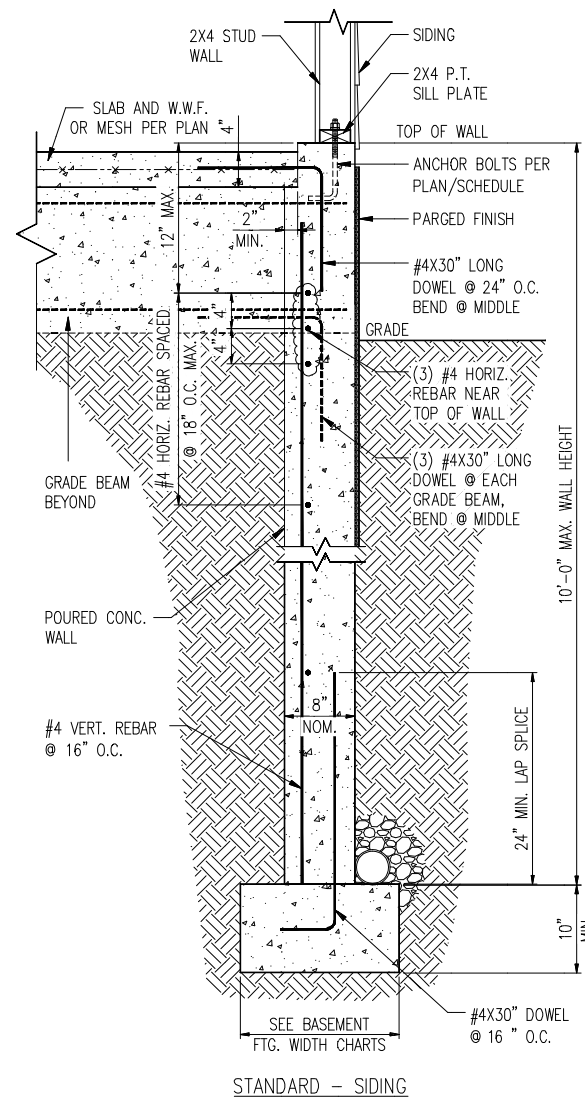


2 TYP. EXTERIOR LOAD BEARING WALL SECTION
D5b N.T.S

-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.

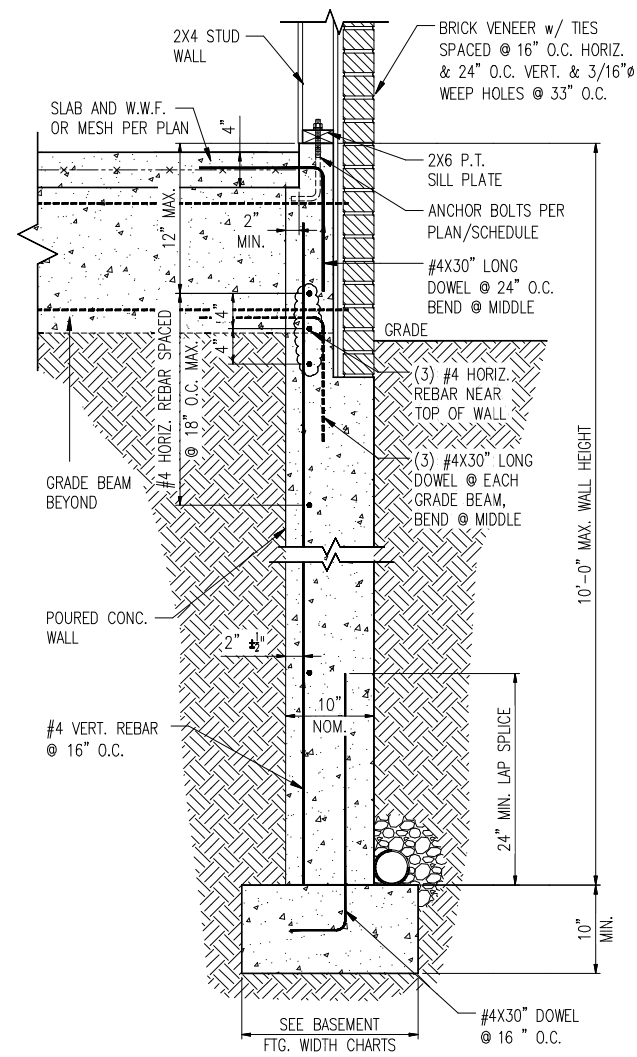
NOTES:

- REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
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- PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCRC
- SEE LATEST VERSION OF SUPERIOR WALL BUILDER GUIDELINE BOOKLET FOR ALL SITE PREPARATION, WALL INSTALLATION AND CONNECTION REQUIREMENTS WHEN SUPERIOR WALL BASEMENT FOUNDATION IS USED

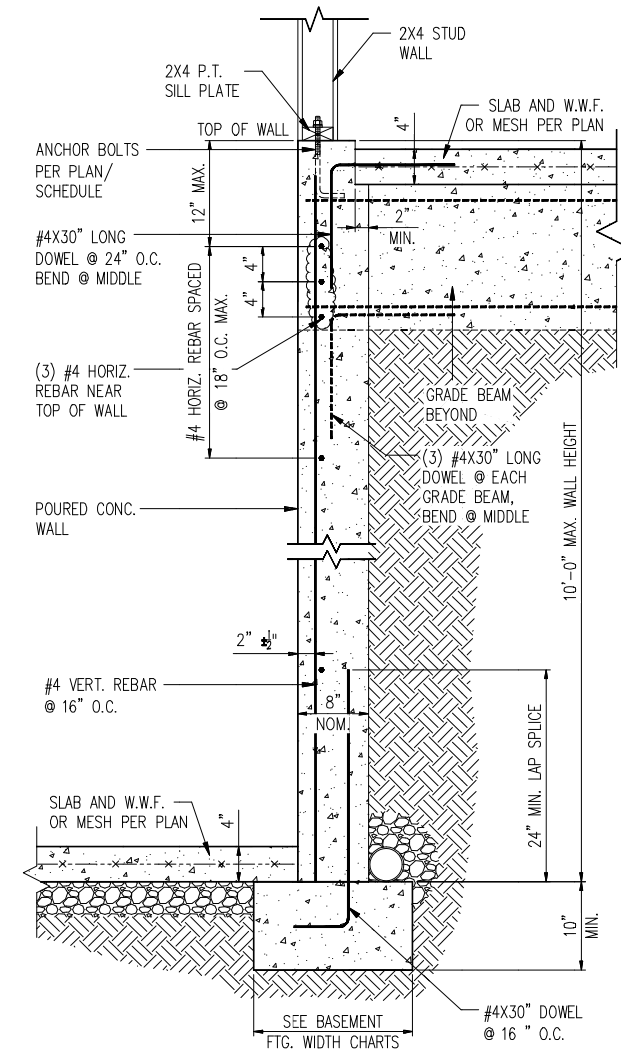


STANDARD - SIDING

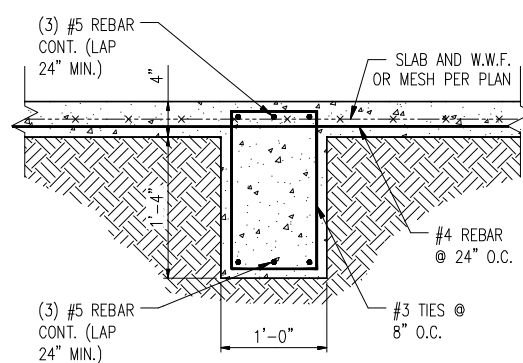
1 TYP. GARAGE FOUNDATION WALL DETAIL W/ GRADE BEAMS
D6b 3/4" = 1'-0"



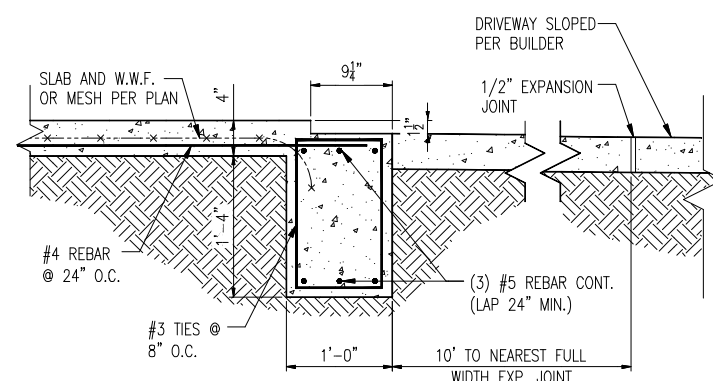
2 TYP. GARAGE FOUNDATION WALL DETAIL W/ BRICK VENEER AND GRADE BEAMS
D6b 3/4" = 1'-0"



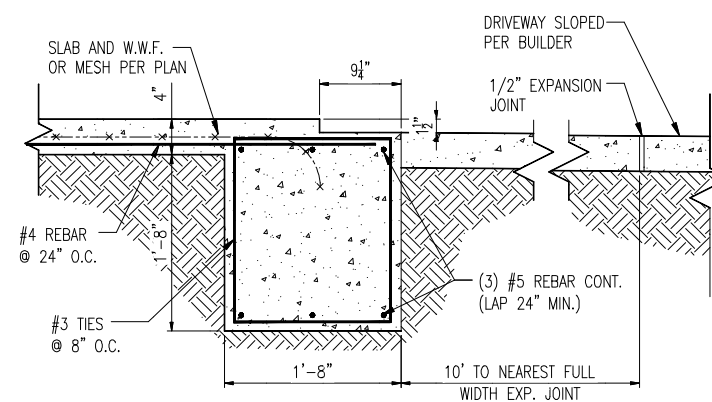
3 HOUSE/GARAGE WALL DETAIL W/ GRADE BEAMS
D6b 3/4" = 1'-0"



4 TYP. INTERIOR GARAGE GRADE BEAM
D6b 3/4" = 1'-0"



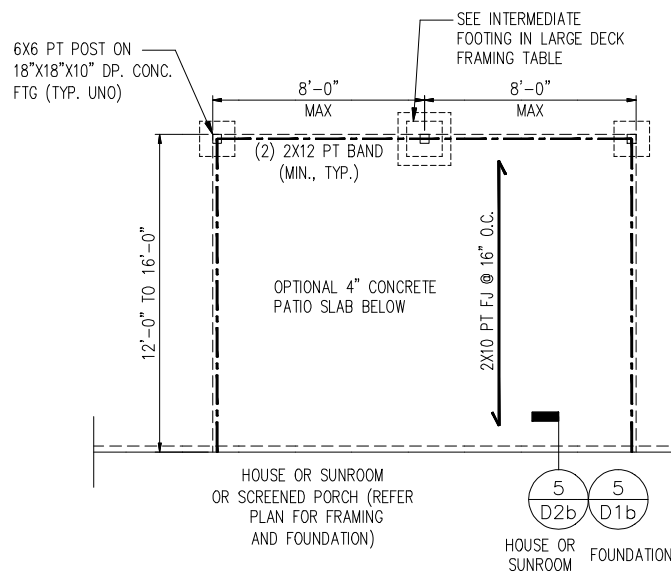
5 GRADE BEAM AT GARAGE DOOR
D6b 3/4" = 1'-0"



6 GRADE BEAM AT GARAGE DOOR ENLARGED FOR ADDITIONAL LOADS
D6b 3/4" = 1'-0"

- NOTES:
1. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
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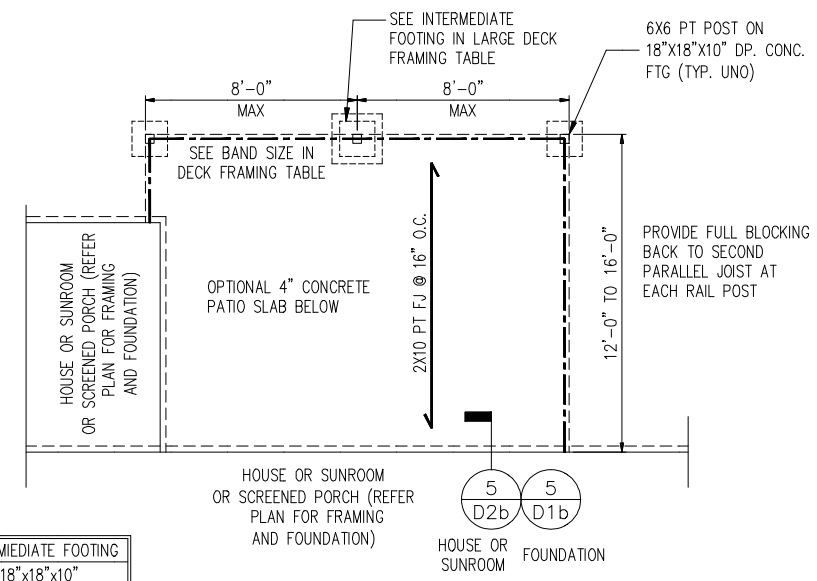
NOTE: BRACE POSTS PER CODE



PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

LARGE DECK FRAMING

| | INTERMEDIATE FOOTING |
|---------------------|----------------------|
| STANDARD | 18"x18"x10" |
| W/ 8'X8' GRILL DECK | 24"x24"x10" |



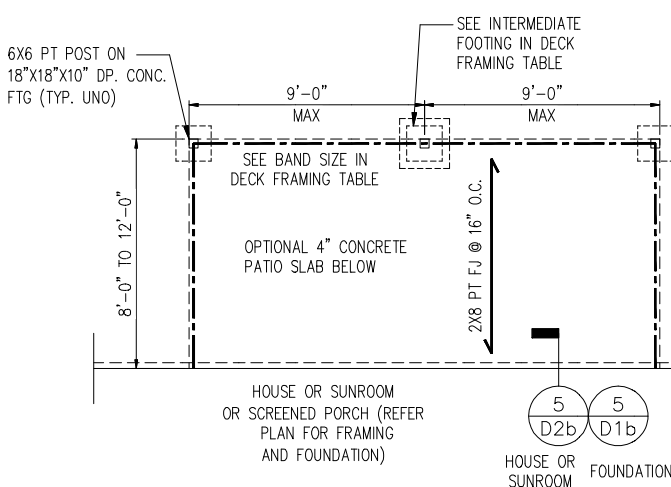
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. LARGE SIDE DECK PLAN

N.T.S.

TYP. LARGE REAR DECK PLAN

N.T.S.

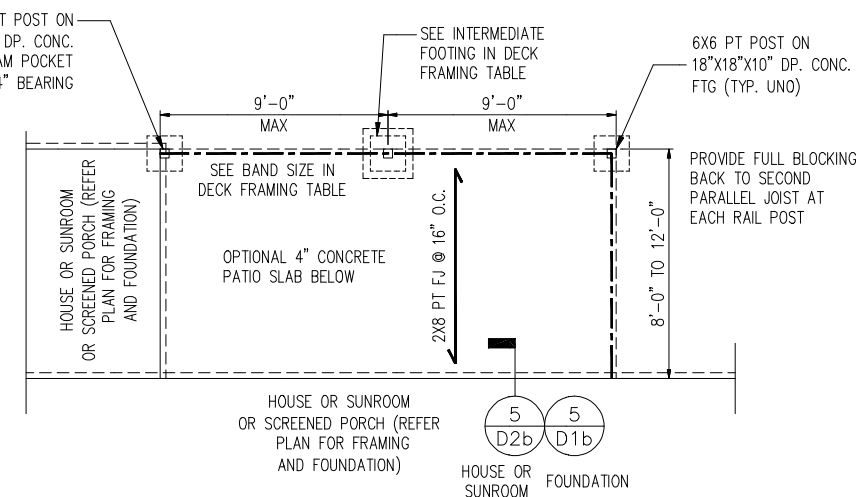


PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

DECK FRAMING

| | BAND SIZE* | INTERMEDIATE FOOTING |
|---------------------|------------|----------------------|
| STANDARD | (2) 2X10 | 18"x18"x10" |
| W/ 8'X8' GRILL DECK | (3) 2X10 | 24"x24"x10" |

* SOUTHERN PINE #2 PT LUMBER



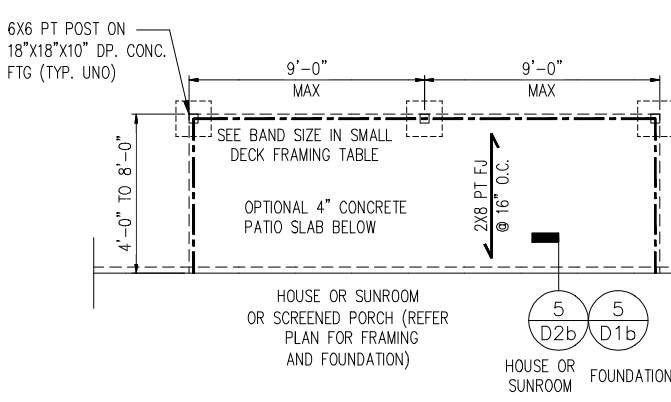
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. SIDE DECK PLAN

N.T.S.

TYP. REAR DECK PLAN

N.T.S.

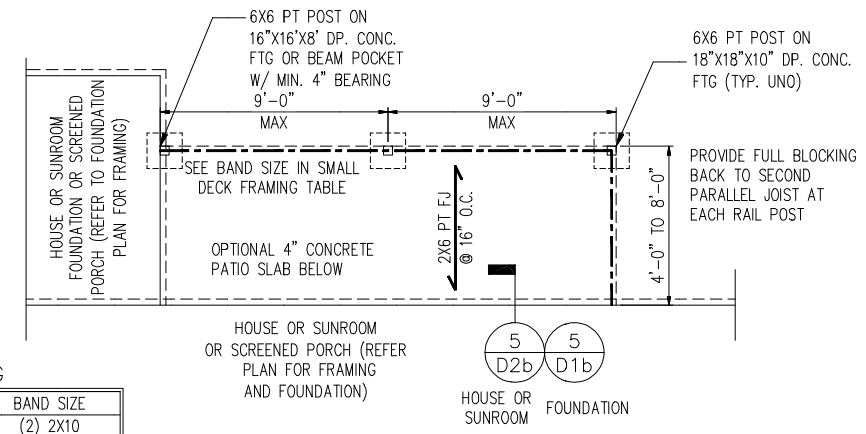


PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

SMALL DECK FRAMING

| | BAND SIZE |
|---------------------|-----------|
| STANDARD | (2) 2X10 |
| W/ 8'X8' GRILL DECK | (3) 2X10 |

* SOUTHERN PINE #2 PT LUMBER



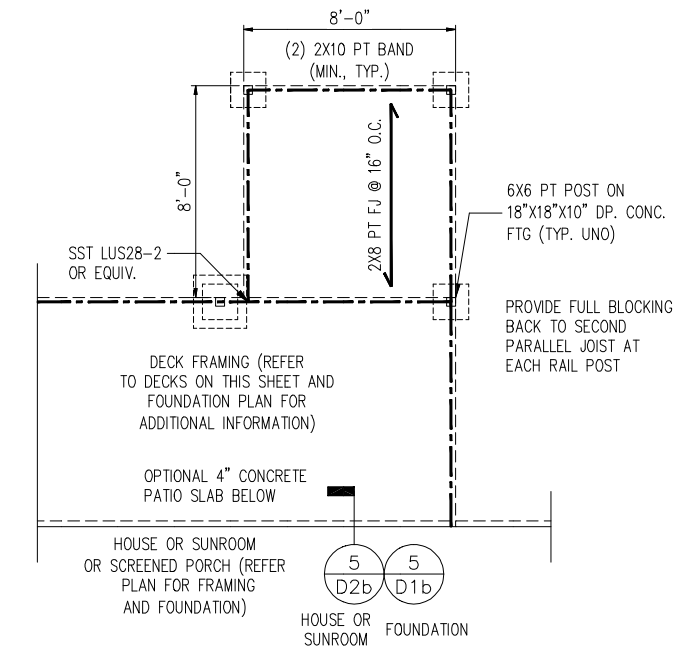
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. SMALL SIDE DECK PLAN

N.T.S.

TYP. SMALL REAR DECK PLAN

N.T.S.

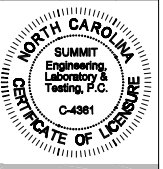


PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. DECK PLAN W/ 8'X8' GRILL DECK

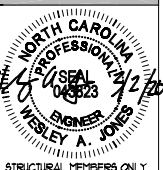
N.T.S.

- NOTES:
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 - PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
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 - PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N102.1.2 OF THE 2018 NCRS



CLIENT: DR Horton Carolina Division, 2601 Arroyo Drive, Charlotte, NC 28219

PROJECT: Standard Details, Basement Foundation Details



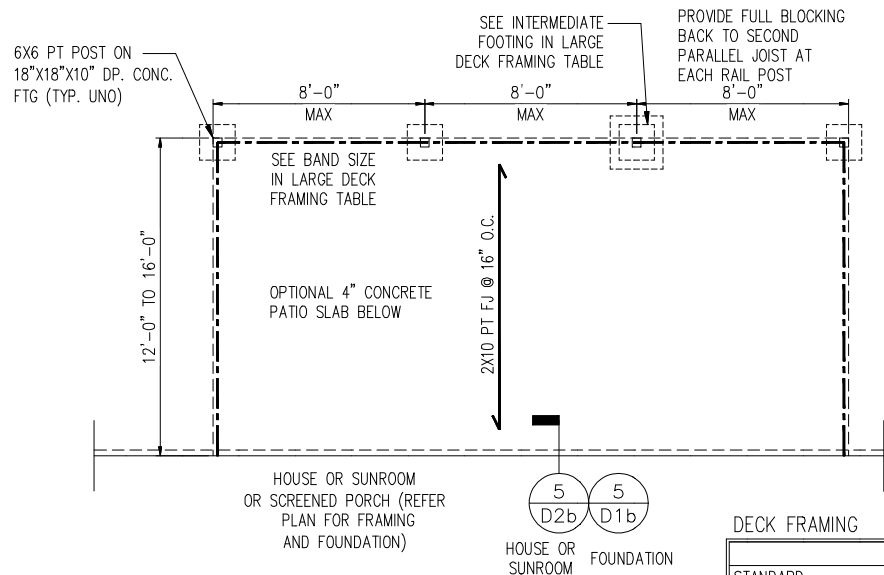
STRUCTURAL MEMBERS ONLY

DRAWING: DATE: 5/2/20, SCALE: 3/8"=1'-0", PROJECT: P-1901-WR, DRAIN BY: LAG, CHECKED BY: LAJ

ORIGINAL INFORMATION: PROJECT #, DATE, 1/3/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

8-SHEET, D7b



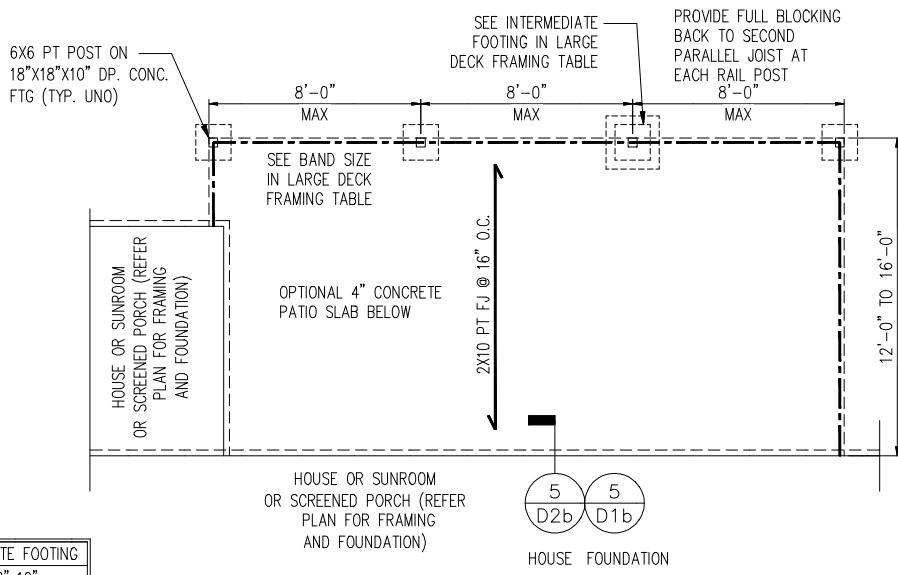
DECK FRAMING

| | BAND SIZE* | INTERMEDIATE FOOTING |
|---------------------|------------|----------------------|
| STANDARD | (2) 2X12 | 18"x18"x10" |
| W/ 8'X8' GRILL DECK | (3) 2X12 | 24"x24"x10" |

* SOUTHERN PINE #2 PT LUMBER

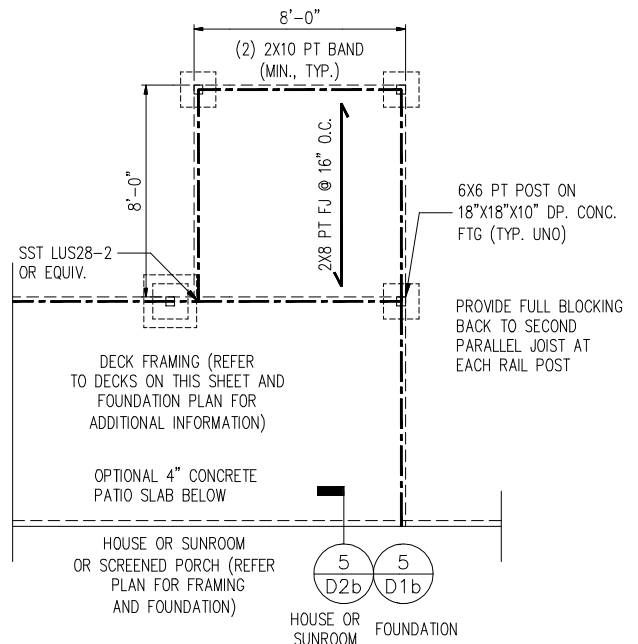
TYP. LARGE REAR DECK PLAN

N.T.S.



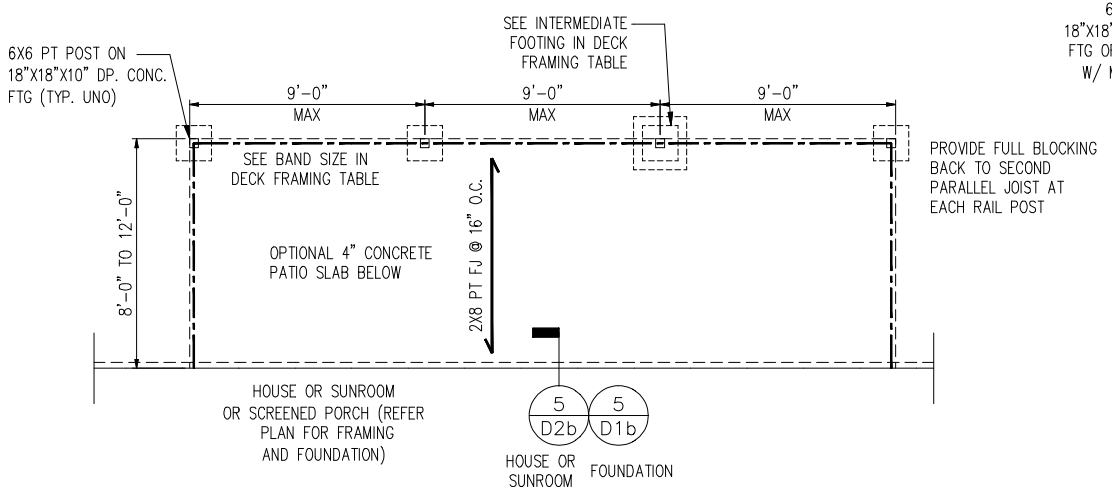
TYP. LARGE SIDE DECK PLAN

N.T.S.



TYP. DECK PLAN W/ 8'X8' GRILL DECK

N.T.S.



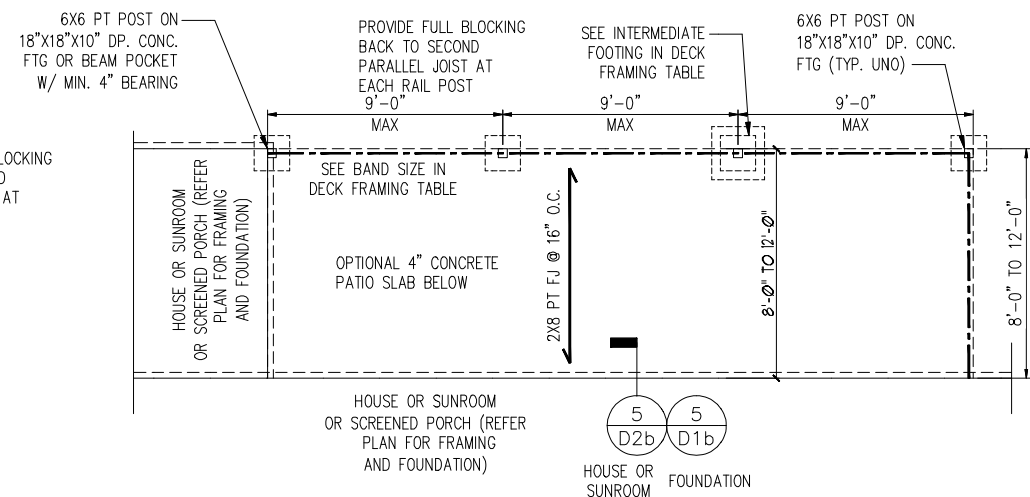
DECK FRAMING

| | BAND SIZE* | INTERMEDIATE FOOTING |
|---------------------|------------|----------------------|
| STANDARD | (2) 2X10 | 18"x18"x10" |
| W/ 8'X8' GRILL DECK | (3) 2X10 | 24"x24"x10" |

* SOUTHERN PINE #2 PT LUMBER

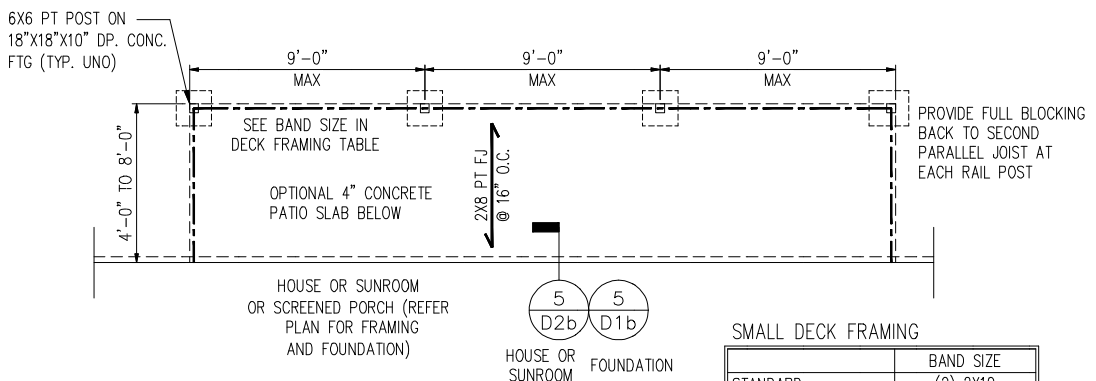
TYP. REAR DECK PLAN

N.T.S.



TYP. REAR DECK PLAN

N.T.S.



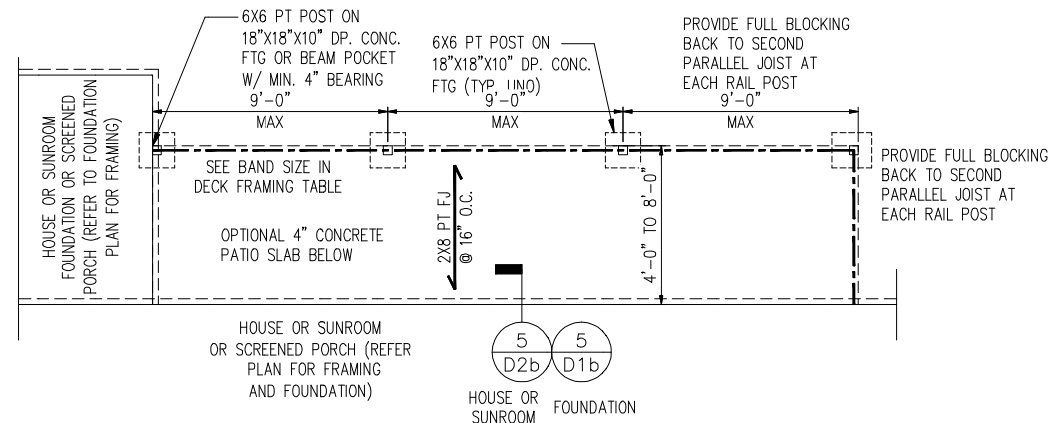
SMALL DECK FRAMING

| | BAND SIZE |
|---------------------|-----------|
| STANDARD | (2) 2X10 |
| W/ 8'X8' GRILL DECK | (3) 2X10 |

* SOUTHERN PINE #2 PT LUMBER

TYP. SMALL REAR DECK PLAN

N.T.S.

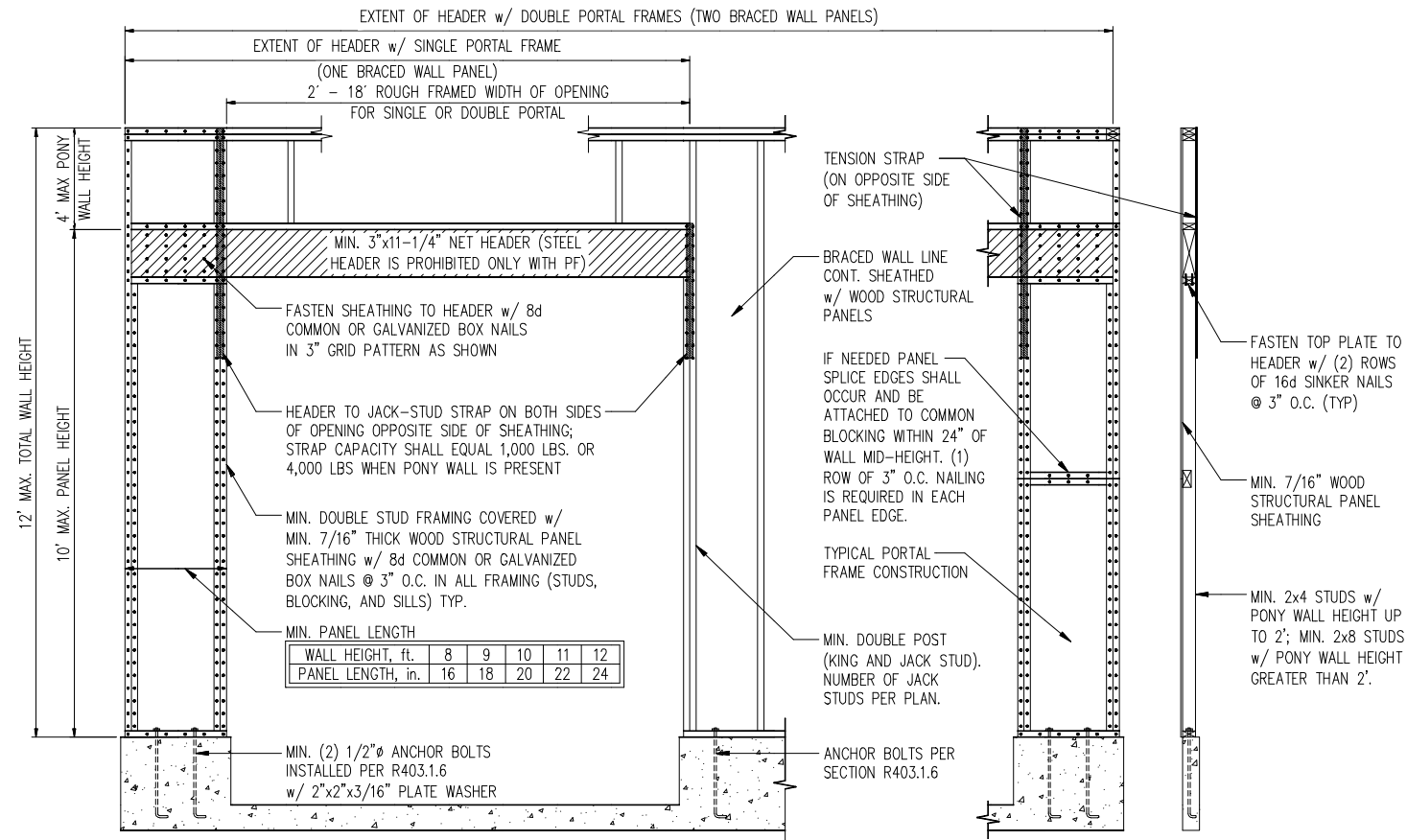


TYP. SMALL REAR DECK PLAN

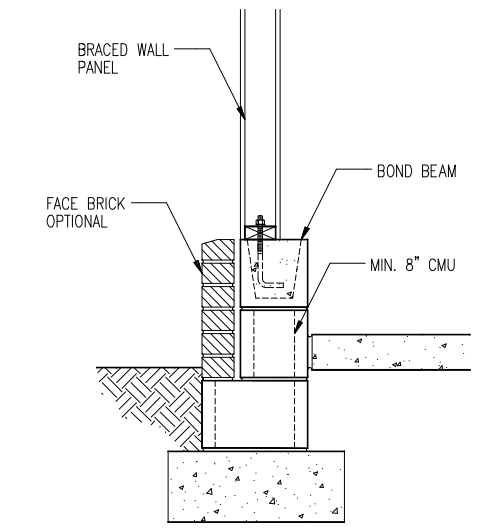
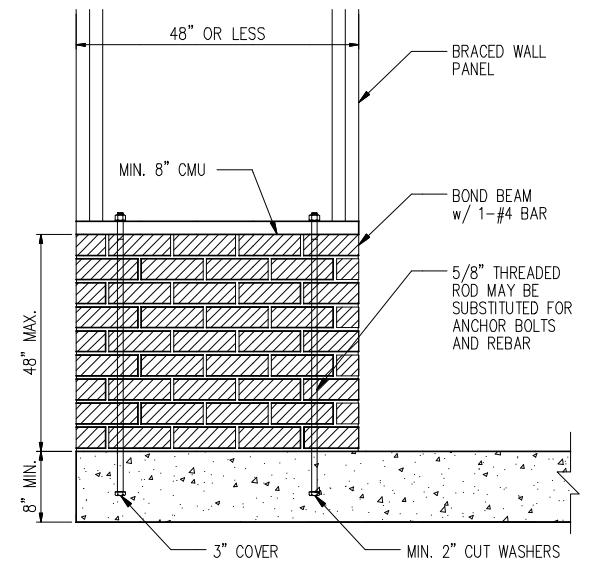
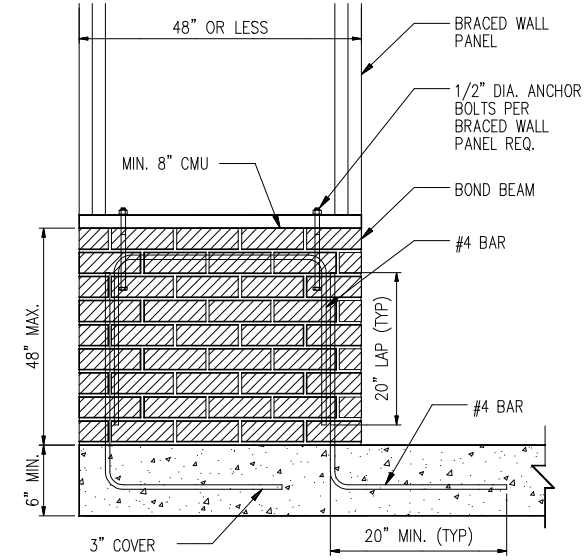
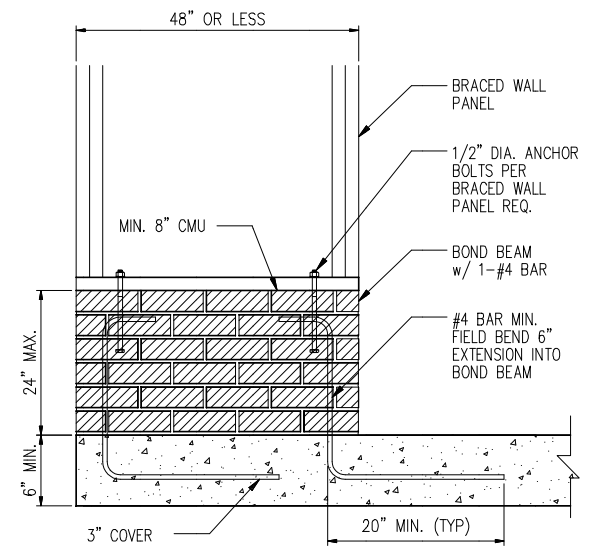
N.T.S.

NOTE: BRACE POSTS PER CODE

- 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 N102.1.2 OF THE 2018 NCR



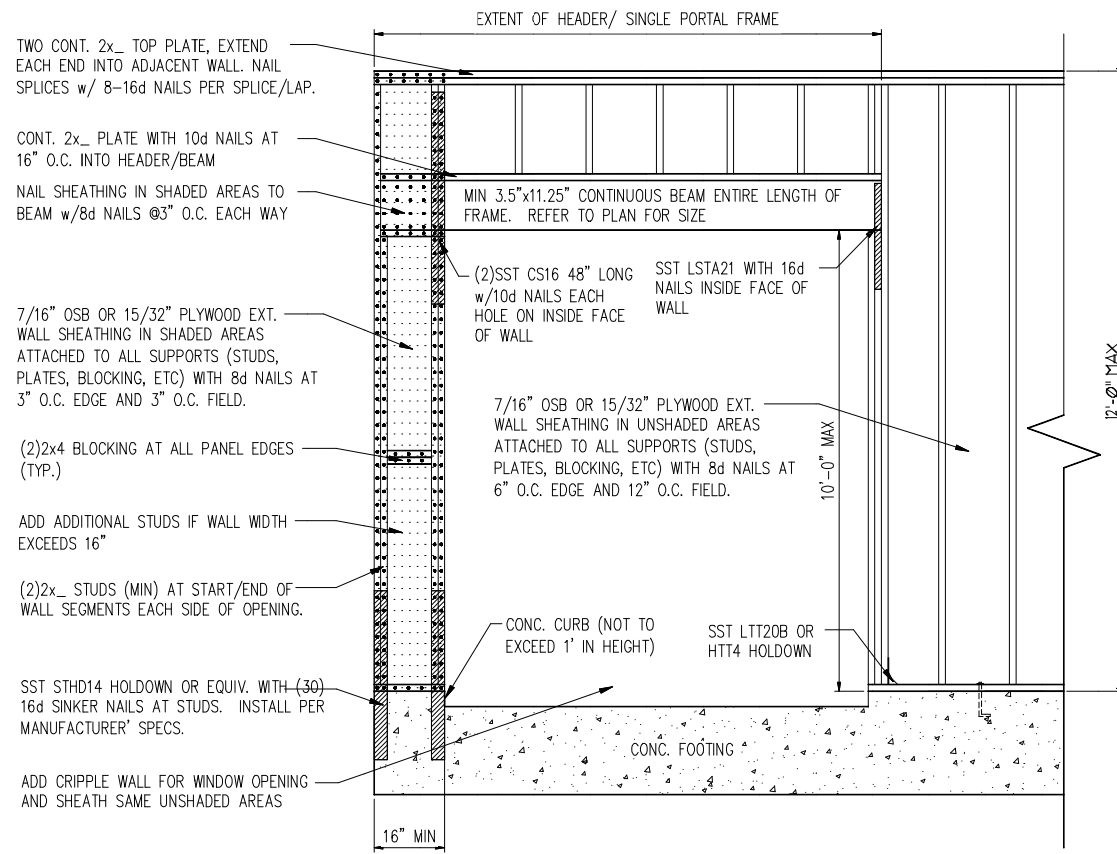
| WALL HEIGHT, ft. | 8 | 9 | 10 | 11 | 12 |
|-------------------|----|----|----|----|----|
| PANEL LENGTH, in. | 16 | 18 | 20 | 22 | 24 |



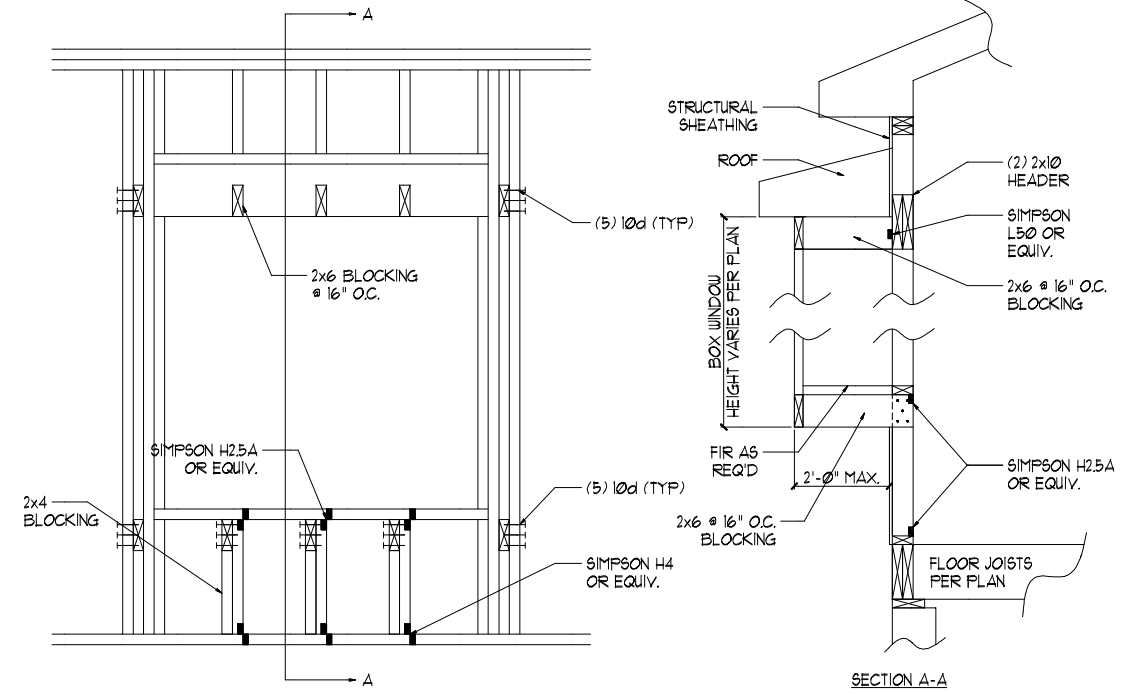
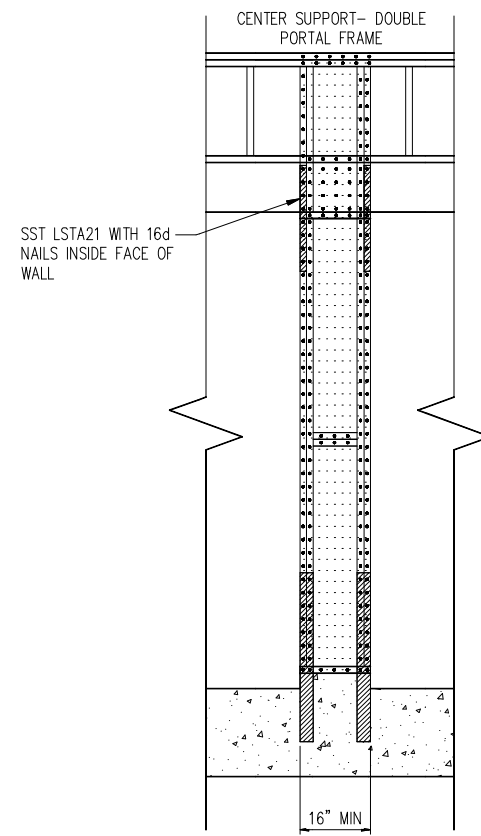
2 MASONRY STEM WALLS SUPPORTING BRACED WALL PANELS
D1f NTS

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

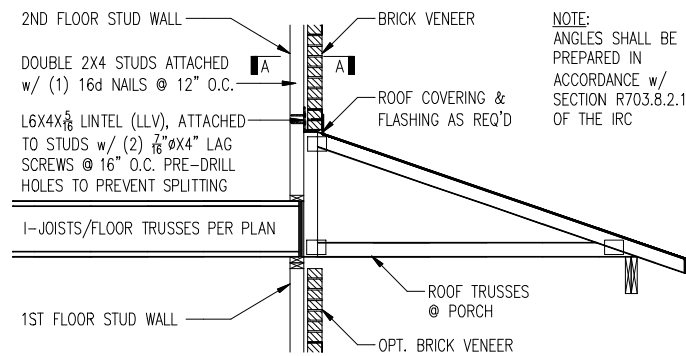
1 METHOD PF: PORTAL FRAME DETAIL
D1f 3/8" = 1'-0"



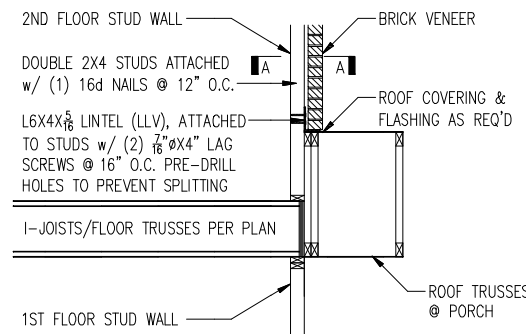
1 METHOD PF: PORTAL FRAME DETAIL w/ HOLD-DOWNS
 D2f 3/4" = 1'-0"



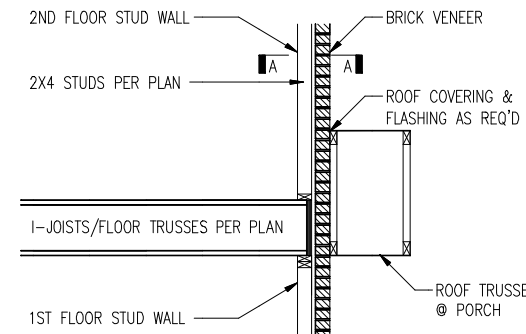
2 BOX WINDOW DETAIL
 D2f N.T.S.



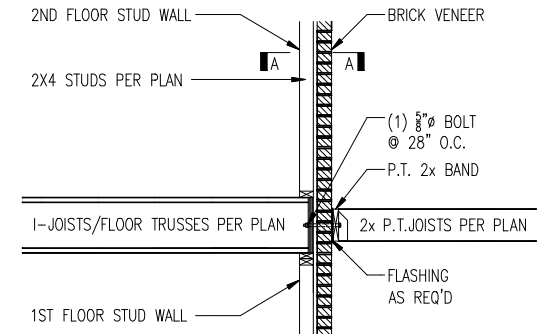
TRUSSES PERPENDICULAR TO STUD WALL



TRUSSES PARALLEL TO STUD WALL

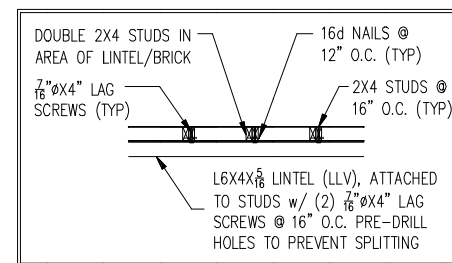


TRUSSES PARALLEL TO STUD WALL
 w/ CONTINUOUS BRICK VENEER

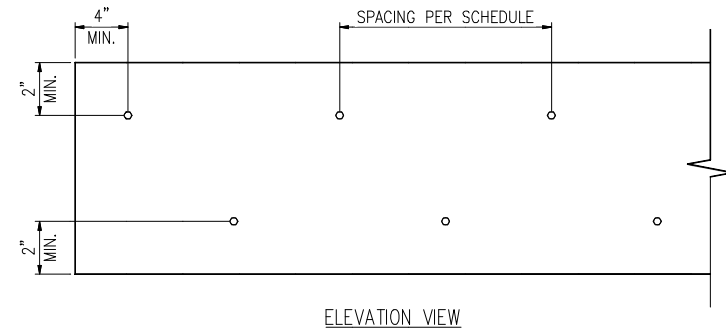


4 BALCONY JOIST ATTACHMENT
 D2f N.T.S.

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



SECTION A-A
 N.T.S.



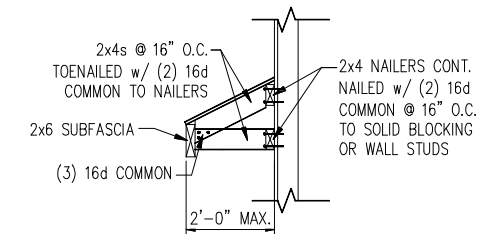
1 MULTI-PLY BEAM CONNECTION DETAIL
D3f N.T.S.

MINIMUM FASTENING REQUIREMENTS FOR TOP- AND SIDE-LOADED MEMBERS

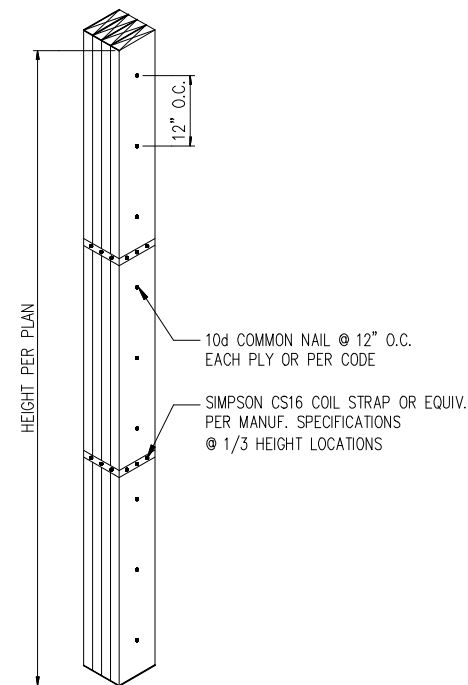
| FASTENER TYPE | LVL DEPTH | 3 1/2" WIDE | | 5 1/2" WIDE | | 7" WIDE | |
|--|----------------|-------------------|------------------------|-------------------|------------------------|------------------------|--------------|
| | | 2-Ply 1 3/4" | 3-Ply 1 3/4" | 1 3/4" + 3 1/2" | 4-Ply 1 3/4" | 2-Ply 1 3/4" + 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) | - |
| | c ≥ 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) | - |
| | c ≥ 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 | | 2 rows @ 24" o.c. | 2 rows @ 24" o.c. | | 2 rows @ 24" o.c. | | |
| SDS 1/4" x 3 1/4", WS35, 3 5/8" TrussLok | d ≥ 7 1/4" | 2 rows @ 24" o.c. | 2 rows @ 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 1/4" TrussLok | | - | - | - | 2 rows @ 24" o.c. | | - |

NOTES:

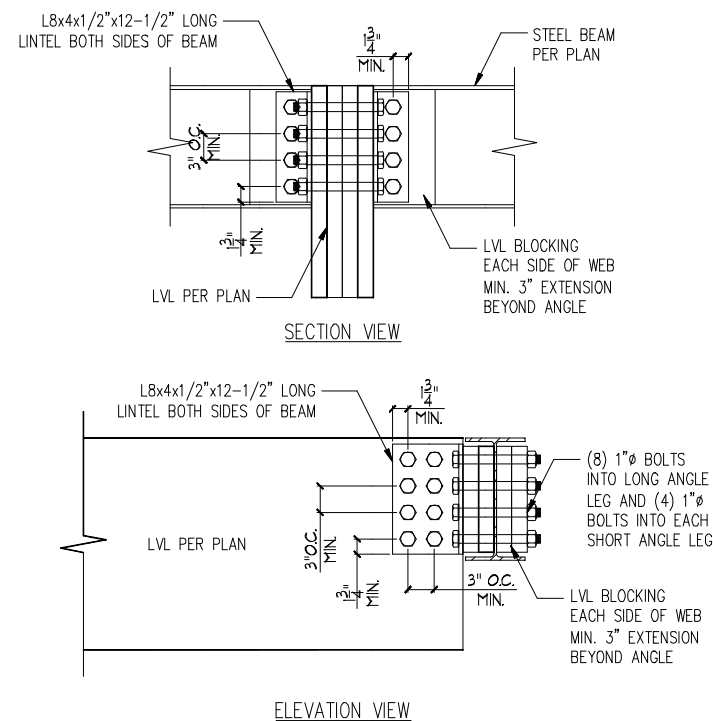
- All fasteners must meet the minimum requirements in the table above. Side-loaded multiple-ply members must meet the minimum fastening and side-loading capacity requirements given on page 48.
- Minimum fastening requirements for depths less than 7 1/4" require special consideration. Please contact your 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).



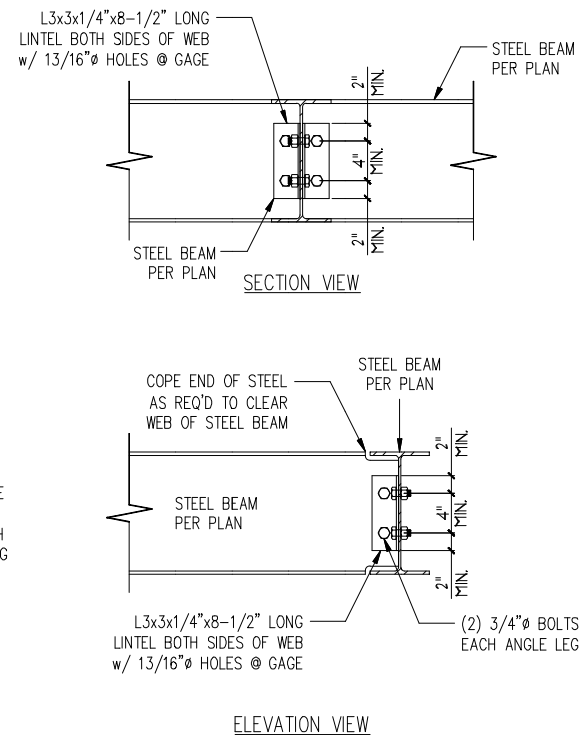
5 GABLE ROOF RETURN
D3f N.T.S.



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



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



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