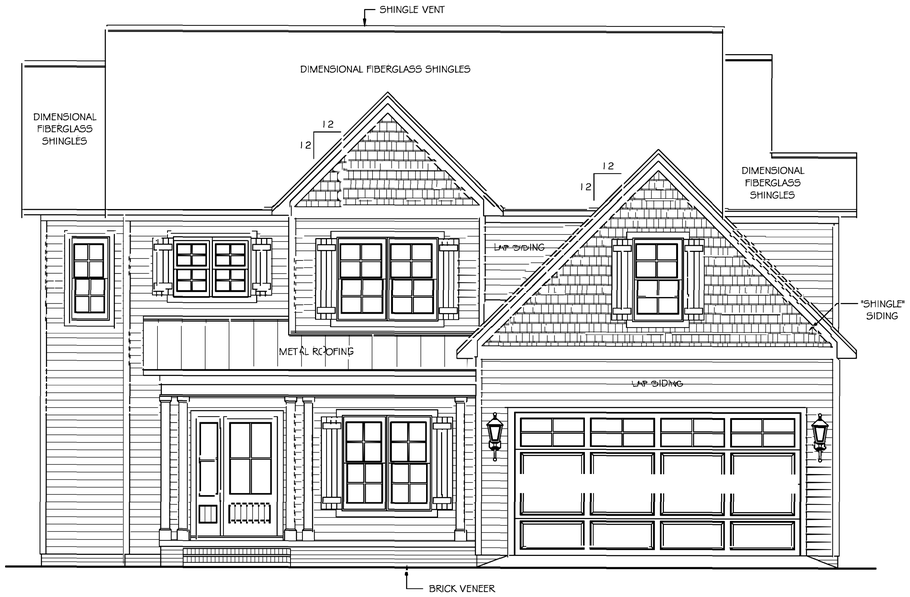
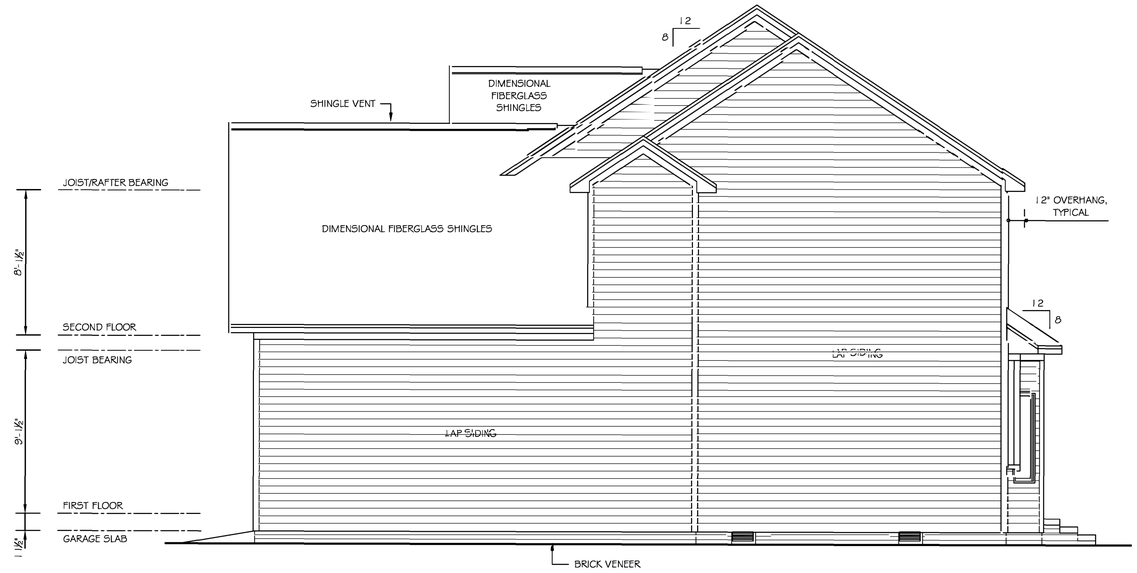


FRONT ELEVATION

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

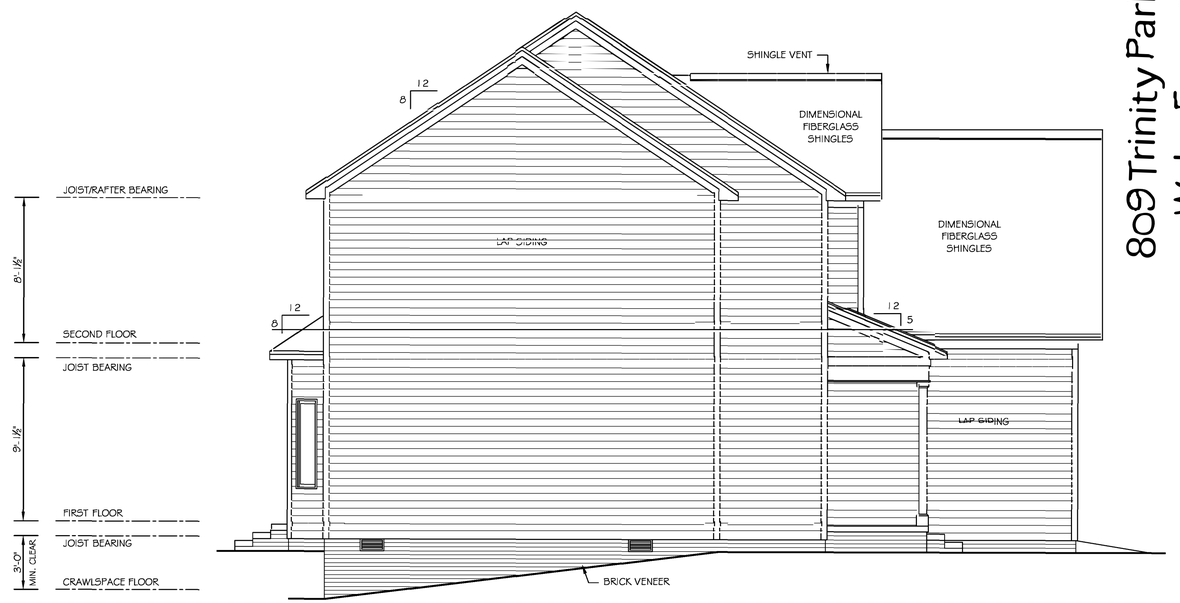


RIGHT SIDE ELEVATION

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

REAR ELEVATION

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



LEFT SIDE ELEVATION

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

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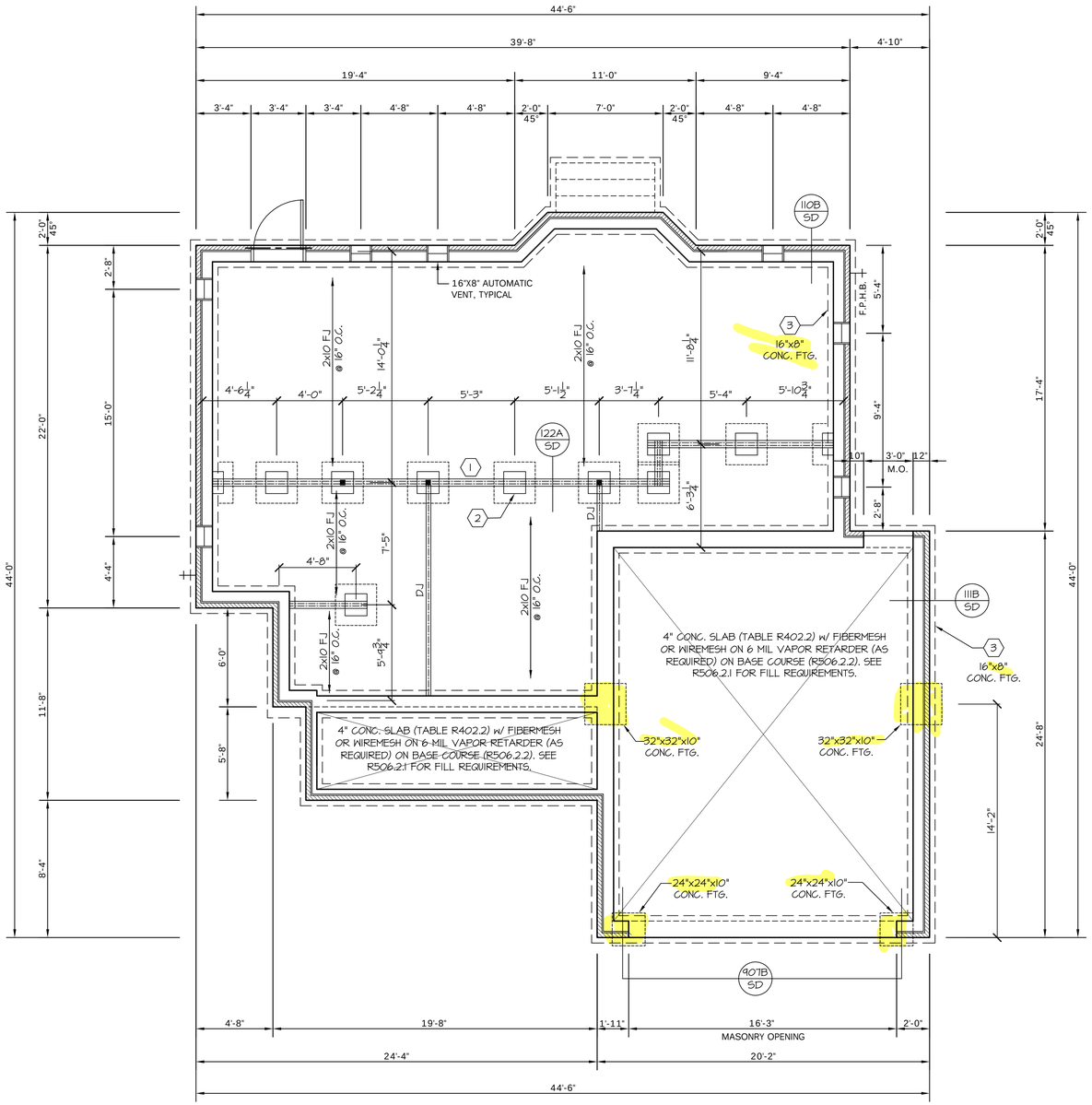
DATE: 4/9/21

PROJECT NO: 307-20

SHEET NO. A-5
6 OF 7



FOUNDATION STRUCTURAL NOTES

NC (2018 NCRC): Wind: 115-120 mph - CRAWL

1. (3)2x10 SYP#2 OR SPF#2 GIRDER, TYPICAL UNO.
2. CONCRETE BLOCK PIER SIZE SHALL BE:

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

- WITH 30" x 30" x 10" CONCRETE FOOTING, UNO.

3. WALL FOOTING AS FOLLOWS
   - DEPTH: 8" - UP TO 2 STORY
     10" - 3 STORY
   - WIDTH:
   - SIDING: 16" - UP TO 2 STORY
     20" - 3 STORY
   - BRICK: 16" - 1 STORY
     20" - 2 STORY
     24" - 3 STORY
- FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO CODE TABLE R404.1.1 (1 THRU 4) NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

4. (4) 2x10 SPF #2 OR SYP #2 GIRDER
5. (2) 1.75x9.25 LVL OR LSL GIRDER
6. (3) 1.75x9.25 LVL OR LSL GIRDER
7. "■" DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FND, TYPICAL.
8. ABBREVIATIONS:
   - "SJ" = SINGLE JOIST
   - "DJ" = DOUBLE JOIST
   - "TJ" = TRIPLE JOIST
9. ADJUST SUBFLOOR THICKNESS OR JOIST SPACING AS REQ'D FOR FLOOR FINISH MATERIALS.

FOUNDATION STRUCTURAL PLAN

SCALE: ¼"=1'-0"

REFER TO "SD" SHEET(S) FOR STANDARD DETAILS AND STRUCTURAL NOTES

NORTH CAROLINA PROFESSIONAL SEAL 16073 ENGINEER JAMES H. HERMAN

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Phone: (919) 878-1617
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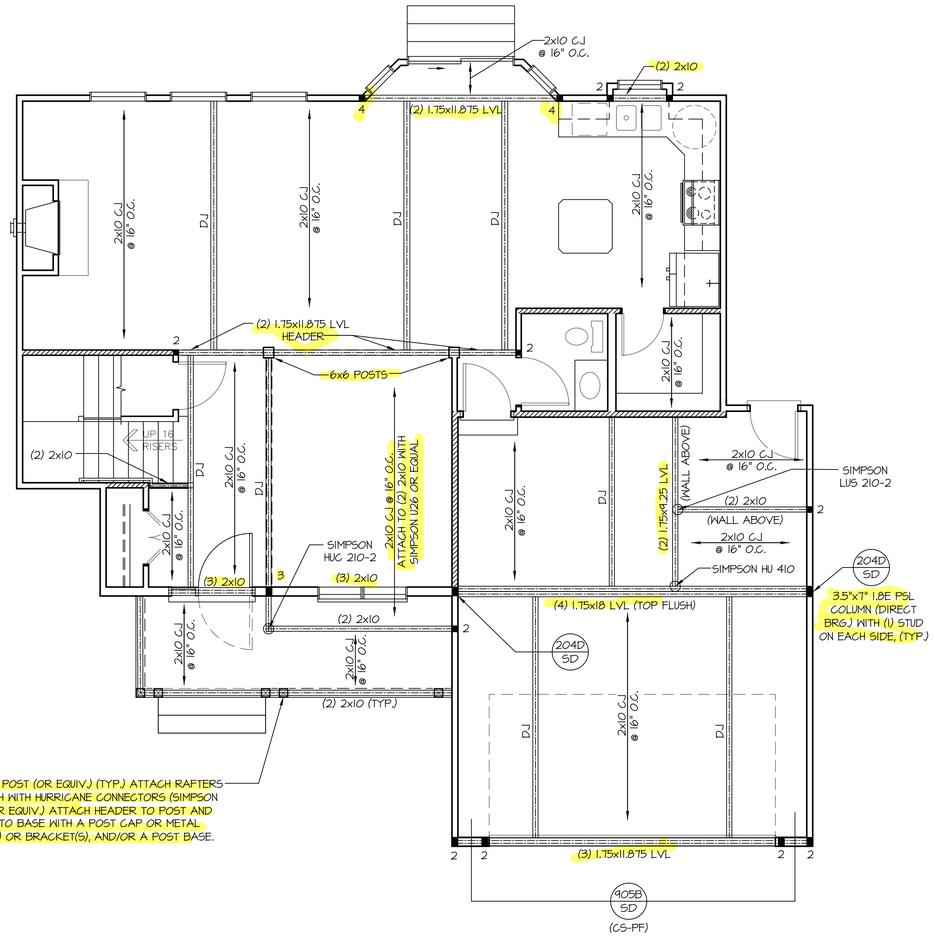
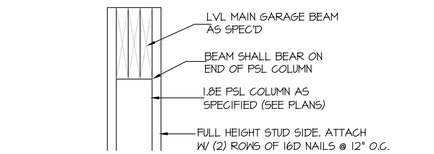
Lot 2 Trinity Park

SOLID ROCK CUSTOM BUILDERS

S-1





204D SD TYP. GARAGE BEAM BEARING
NTS

HEADER/BEAM & COLUMN NOTES

1. ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2)2x10 (4" WALL) OR (3)2x10 (6" WALL) WITH (1) SUPPORT STUD, UNLESS NOTED OTHERWISE.

2. THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN. THE NUMBER OF KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS SHALL BE ACCORDING TO ITEM "d" IN TABLE R602.3(5) OR AS BELOW PER NCDOI COMMENTARY "KING STUDS AT WALL OPENINGS" REVISED 1-9-2020:
   - UP TO 3' SPAN: (1) KING STUD
   - OVER 3' UP TO 6' SPAN: (2) KING STUDS
   - OVER 6' UP TO 9' SPAN: (3) KING STUDS
   - OVER 9' UP TO 12' SPAN: (4) KING STUDS
   - OVER 12' UP TO 15' SPAN: (5) KING STUDS

LVL CONNECTION LEGEND

1. (2) PLY 1.75" BEAMS:
   - (3) 10d NAILS @ 12" OC OR
   - (2) SDW22338 (OR EQUAL) @ 16" OC

2. (3) PLY 1.75" BEAMS:
   - (2) SDW22500 (OR EQUAL) @ 16" OC

3. (4) PLY 1.75" BEAMS:
   - (2) SDW22634 (OR EQUAL) @ 16" OC

FRAMING NOTES

NC (2018 NCRC): Wind: 115-120 mph

1. BRACING METHOD AND TYPE: CONTINUOUSLY SHEATHED WSP: GS-WSP. NOTE THAT THE WALL BRACING AMOUNT PROVIDED ON THE PLANS (DETAILS AND SPECIFICATIONS) IS GREATER THAN THE AMOUNT OF WALL BRACING REQUIRED BY SECTION R602.10 OF THE CODE. SEE NOTES BELOW FOR DETAILS AND SPECIFICATIONS FOR WALL BRACING AND WALL FRAMING.

2. EXTERIOR WALL SHEATHING: WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANEL SHEATHING (WSP) (EXPOSURE B: 7/16", EXPOSURE C: 15/32"). SHEATHING SHALL BE ATTACHED WITH 8d NAILS AT A 6"/12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES.

3. WSP SHEATHING SHALL EXTEND TO THE UPPERMOST DOUBLE BEARING PLATE. BLOCK AT ROOF PER SECTION R602.10.4.5 AND ATTACH BRACED WALLS PER CODE. WSP SHEATHING BETWEEN FLOORS SHALL BE SPLICED ALONG CONTINUOUS BAND OR THE WSP SHEATHING MAY BE SPLICED ACROSS STUDS (CONTINUOUS ACROSS FLOOR SYSTEM) WITH BLOCKING AT PANEL EDGES. (MINIMUM 12" BEYOND FLOOR BREAK) OR OTHER APPROVED METHOD.

4. "HD" = HOLDOWN: HOLD-DOWN DEVICE (NOTED AS "HD" ON PLANS) SHALL BE AN 800 POUND CAPACITY ASSEMBLY AS NOTED ON PLANS. SEE DETAILS FOR HD ASSEMBLY.
   - **GROUND/FIRST FLOOR: USE "HD HOLD-DOWN DETAIL" ON SD SHEET (OR EQUIV.)
   - **UPPER FLOORS: ATTACH BASE OF KING STUD WITH A SIMPSON CS22 STRAP DOWN ACROSS THE BAND AND DOWN TO A STUD BELOW OR HEADER BELOW. EXTEND STRAP 1' MIN ALONG EACH STUD (OR HEADER) AND ATTACH EACH END W/ (1) 8d NAILS.

5. INTERIOR BRACED WALL: (NOTED AS "IBW" ON PLANS) ATTACH 1/2" GYPSUM BOARD (GB) ON EACH SIDE OF WALL WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS.

6. INTERIOR BRACED WALL-WOOD STRUCTURAL PANEL: (NOTED AS "IBW-WSP" ON PLANS). ATTACH ONE SIDE WITH 7/16" WSP SHEATHING WITH 8d NAILS AT A 6"/12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES. ATTACH GB OVER WSP AS REQUIRED. ATTACH OPPOSITE SIDE WITH 1/2" GB WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 7" OC ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS.

FIRST FLOOR STRUCTURAL PLAN

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

REFER TO "SD" SHEET(S) FOR STANDARD DETAILS AND STRUCTURAL NOTES

PROJECT # 21-2515

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16073 S. H. HERMAN

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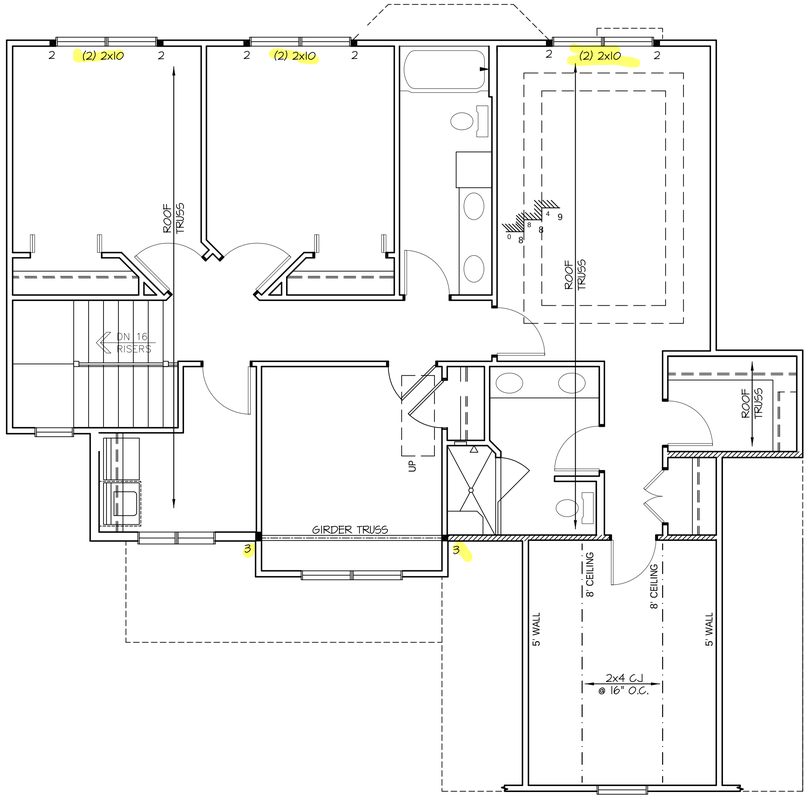
S-2



HEADER/BEAM & COLUMN NOTES

1. ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2)2x10 (4" WALL) OR (3)2x10 (6" WALL) WITH (1) SUPPORT STUD, UNLESS NOTED OTHERWISE.

2. THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN. THE NUMBER OF KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS SHALL BE ACCORDING TO ITEM "d" IN TABLE R602.3(5) OR AS BELOW PER NCDOI COMMENTARY "KING STUDS AT WALL OPENINGS" REVISED 1-9-2020:
   - UP TO 3' SPAN: (1) KING STUD
   - OVER 3' UP TO 6' SPAN: (2) KING STUDS
   - OVER 6' UP TO 9' SPAN: (3) KING STUDS
   - OVER 9' UP TO 12' SPAN: (4) KING STUDS
   - OVER 12' UP TO 15' SPAN: (5) KING STUDS

TRUSS SYSTEM REQUIREMENTS

NC (2018 NCRC): Wind: 115-120 mph

1. TRUSS SYSTEM LAYOUTS (PLACEMENT PLANS) SHALL BE DESIGNED IN ACCORDANCE WITH SEALED STRUCTURAL PLANS. ANY NEED TO CHANGE TRUSSES SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.

2. TRUSS SCHEMATICS (PROFILES) SHALL BE PREPARED AND SEALED BY TRUSS MANUFACTURER.

3. ALL TRUSSES SHALL BE DESIGNED FOR BEARING ON SPF #2 OR #3 PLATES OR LEDGERS (UNO).

4. ALL REQUIRED ANCHORS FOR TRUSSES DUE TO UPLIFT OR BEARING SHALL MEET THE REQUIREMENTS AS SPECIFIED ON THE TRUSS SCHEMATICS.

SECOND FLOOR STRUCTURAL PLAN

SCALE: ¼"=1'-0"

REFER TO "SD" SHEET(S) FOR STANDARD DETAILS AND STRUCTURAL NOTES

NORTH CAROLINA PROFESSIONAL SEAL 16073 ENGINEER JAMES W. HERMAN

PROJECT # 21-2515

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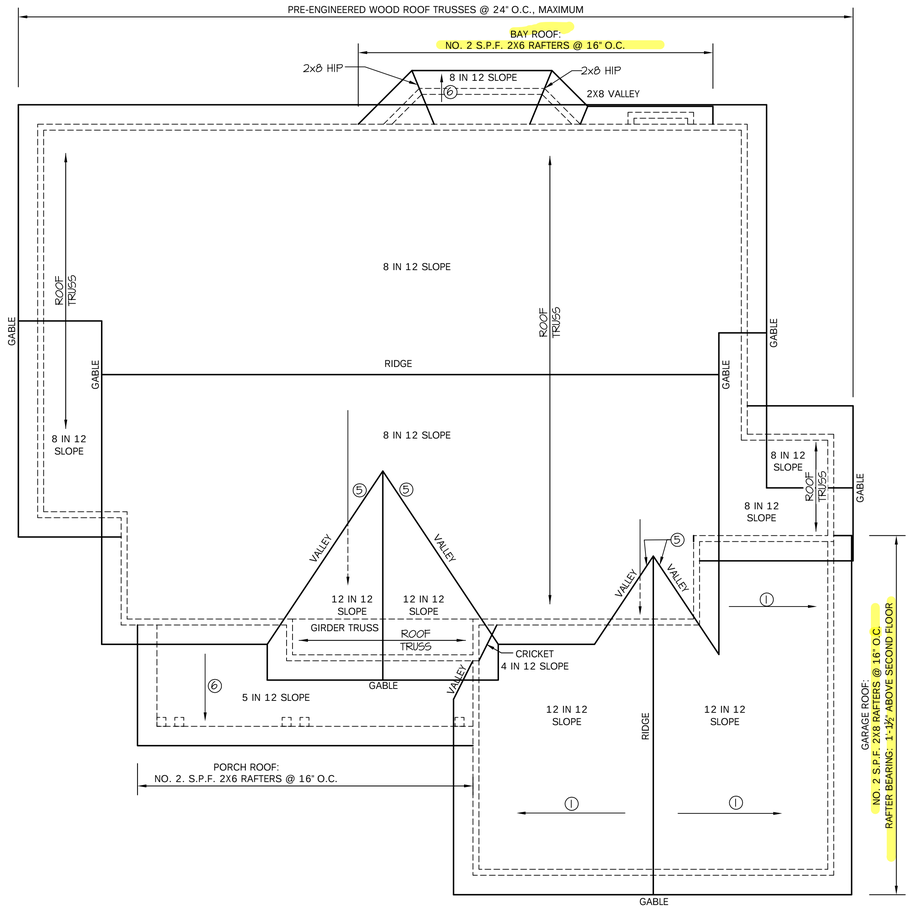
S-3



ROOF FRAMING NOTES:

NC (2018 NCRC): Wind: 115-120 mph

1. 2x8 RAFTERS @ 16" O.C. WITH 2x10 RIDGE, UNO.
2. (2) 2x10 OR 1.75x11.875 LVL HIP. (2) 2x10 HIPS MAY BE SPLICED WITH A MIN. 6'-0" OVERLAP AT CENTER
3. (2) 2x10 OR 1.75x9.25 LVL VALLEY. DO NOT SPLICE VALLEYS
4. 1.75x11.875 LVL OR (2)1.75x9.25 LVL VALLEY
5. FALSE FRAME VALLEY ON 2x10 FLAT PLATE
6. 2x6 RAFTERS @ 16" O.C. W/ 2x8 RIDGE, UNO.
7. 2x10 RAFTERS @ 16" O.C. W/ 2x12 RIDGE, UNO.
8. EXTEND RIDGE 12" BEYOND INTERSECTION

- "SR" = SINGLE RAFTER
- "DR" = DOUBLE RAFTER
- "TR" = TRIPLE RAFTER
- "RS" = ROOF SUPPORT
- "■" = (3) STUD OR 4x4 POST FOR ROOF SUPPORT (USE 2X6 STUDS OR 6X6 POST FOR SUPPORT OVER 10'-0" IN HEIGHT)
- ATTACH VAULTED RAFTERS WITH HURRICANE CLIPS: SIMPSON "H-2.5A" OR EQUIVALENT. TIES TO BE INSTALLED ON THE OUTSIDE FACE OF FRAMING.
- INSTALL RAFTER TIES AND COLLAR TIES PER SECTION R802.3.1 OF THE 2018 NC RESIDENTIAL CODE.

TRUSS SYSTEM REQUIREMENTS

NC (2018 NCRC): Wind: 115-120 mph

1. TRUSS SYSTEM LAYOUTS (PLACEMENT PLANS) SHALL BE DESIGNED IN ACCORDANCE WITH SEALED STRUCTURAL PLANS. ANY NEED TO CHANGE TRUSSES SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.
2. TRUSS SCHEMATICS (PROFILES) SHALL BE PREPARED AND SEALED BY TRUSS MANUFACTURER.
3. ALL TRUSSES SHALL BE DESIGNED FOR BEARING ON SPF #2 OR #3 PLATES OR LEDGERS (UNO).
4. ALL REQUIRED ANCHORS FOR TRUSSES DUE TO UPLIFT OR BEARING SHALL MEET THE REQUIREMENTS AS SPECIFIED ON THE TRUSS SCHEMATICS.

ROOF STRUCTURAL PLAN

SCALE: ¼"=1'-0"

REFER TO "SD" SHEET(S) FOR STANDARD DETAILS AND STRUCTURAL NOTES

NORTH CAROLINA PROFESSIONAL SEAL 16073 ENGINEER JAMES N. HERMAN 4-8-22

PROJECT # 21-2515

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S-4

STRUCTURAL NOTES

NC (2018 NCRC): Wind: 115-120 mph

1. ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM, FOOTING, AND PILING SYSTEM. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM. ALL REQUIREMENTS FOR PROFESSIONAL CERTIFICATION SHALL BE PROVIDED BY THE APPROPRIATE PROFESSIONAL. SOUTHERN ENGINEERS, P.A. CERTIFIES ONLY THE STRUCTURAL COMPONENTS AS SPECIFICALLY STATED.

2. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE 2018 NC RESIDENTIAL CODE, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK, NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "CONSTRUCTION REVIEW" SERVICES ARE NOT PART OF OUR CONTRACT. ALL MEMBERS SHALL BE FRAMED ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.

3. DESIGN LOADS (LISTED AS: LIVE LOAD, DEAD LOAD, DEFLECTION)
   - ROOMS OTHER THAN SLEEPING ROOMS: (40 PSF, 10 PSF, L/360)
   - SLEEPING ROOMS: (30 PSF, 10 PSF, L/360)
   - ATTIC WITH PERMANENT STAIR: (40 PSF, 10 PSF, L/360)
   - ATTIC WITHOUT PERMANENT STAIR: (20 PSF, 10 PSF, L/360)
   - ATTIC WITHOUT STORAGE: (10 PSF, 10 PSF, L/240)
   - STAIRS: (40 PSF, 10 PSF, L/360)
   - EXTERIOR BALCONIES: (60 PSF, 10 PSF, L/360)
   - DECKS: (40 PSF, 10 PSF, L/360)
   - GUARDRAILS AND HANDRAILS: (200 LBS)
   - PASSSENGER VEHICLE GARAGES: (50 PSF, 10 PSF, L/360)
   - FIRE ESCAPES: (40 PSF, 10 PSF, L/360)
   - SNOW: (20 PSF)

4. WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANELS. SEE FRAMING NOTES FOR THICKNESS AND NAILING REQUIREMENTS.

5. SEE APPENDIX M (DCA6) FOR EXTERIOR DECK REQUIREMENTS INCLUDING ATTACHMENTS FOR LATERAL LOADS.

6. CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIR ENTRAINED PER TABLE 402.2. ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP. CONTROL JOINTS IN SLABS SHALL BE SPACED ON A GRID OF +-30 TIMES THE DEPTH (D). CONTROL JOINTS SHALL BE SAWCUT TO A DEPTH OF 1/D. (I.E. 4" CONCRETE SLABS SHALL HAVE ¼" DEEP CONTROL JOINTS SAWCUT IN SLAB ON A +-10'-0" x +-10'-0" GRID).

7. ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE STRUCTUAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED. THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE, AND SHALL BE GRADED SO AS TO DRAINSURFACE WATER AWAY FROM FOUNDATION WALLS.

8. ALL FRAMING LUMBER SHALL BE SPF #2 (Fb = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP # 2. PLATE MATERIAL MAY BE SPF # 3 OR SYP #3 (Fc(perp) = 425 PSI - MIN).

9. L.V.L. SHALL BE LAMINATED VENEER LUMBER: Fb=2600 PSI, Fv=285 PSI, E=1.9x10 PSI.
   - 9.1. P.S.L. SHALL BE PARALLEL STRAND LUMBER: Fb=2900 PSI, Fv=290 PSI, E=2.0x10 PSI.
   - 9.2. L.S.L. SHALL BE LAMINATED STRAND LUMBER: Fb=2250 PSI, Fv=400 PSI, E=1.55x10 PSI.
   - INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.

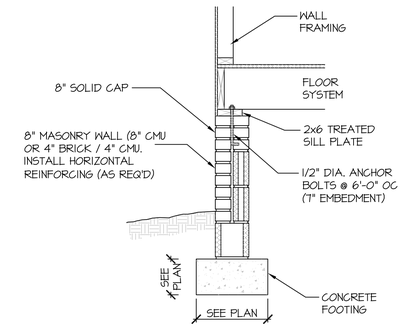
10. ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURE'S SPECIFICATIONS. ANY CHANGE IN TRUSS OR I-JOIST LAYOUT SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.

11. ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. ALL STEEL TUBING SHALL BE ASTM A500. LAP ALL REBAR SPLICES 30 BAR DIAMETERS.

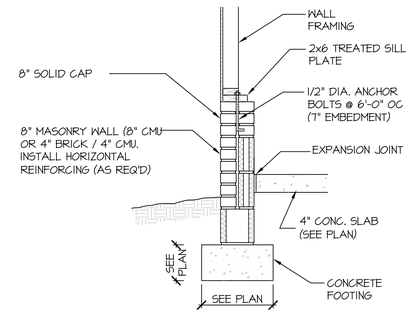
12. REBAR SHALL BE DEFORMED STEEL, ASTM615, GRADE 60.

13. FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A325) WITH WASHERS PLACED UNDER THE THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" O.C. (MAX), AND STAGGERED AT THE TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.

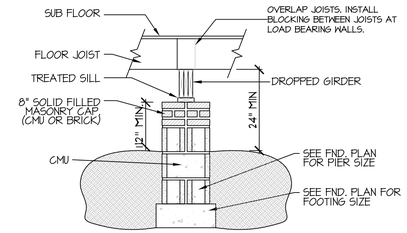
14. BRICK LINTELS (WHEN REQUIRED) SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 9'-0". SEE PLANS FOR SPANS OVER 9'-0". SEE ALSO SECTION R703.8.3 LINTELS.



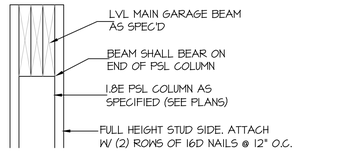
115-120 MPH | 110B SD — CRAWL SPACE FOOTING
(SIDING W/ BRICK SKIRT)



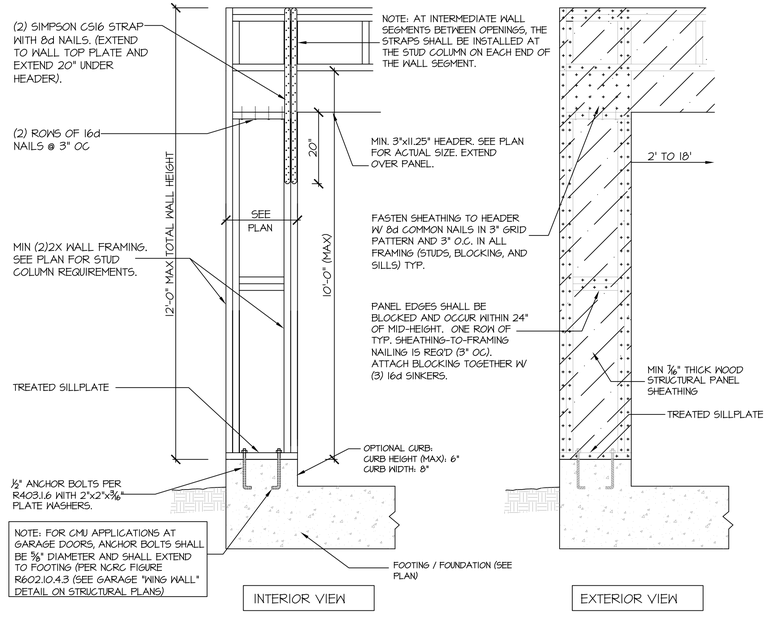
115-120 MPH | 111B SD — GARAGE WALL FOOTING
(SIDING W/ BRICK SKIRT)



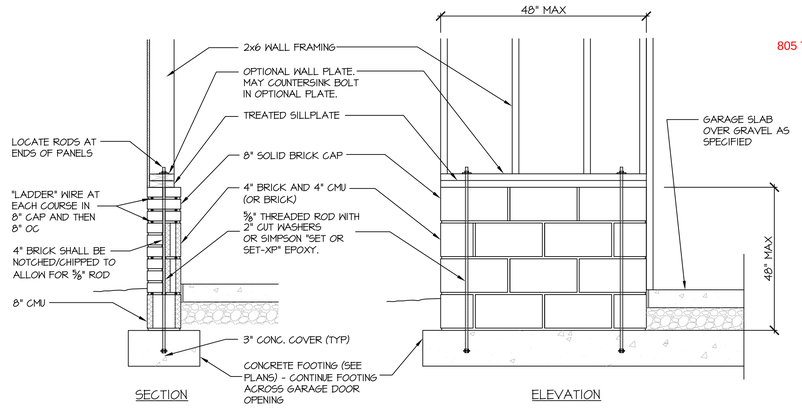
122A SD — DROPPED GIRDER
NTS



204D SD — TYP. GARAGE BEAM BEARING
NTS



905B SD — CS-PF: CONTINUOUS PORTAL FRAME CONSTRUCTION
DETAIL AND APPLICATION BASED ON NCRC FIGURE R602.10.1 - PORTAL FRAME CONSTRUCTION



907B SD — GARAGE 'WING WALL' REINFORCING
PER IRC FIGURE R602.10.4.3

NORTH CAROLINA PROFESSIONAL SEAL 16073 ENGINEER JAMES N. HERMAN

805 Trinity Park Dr

Structural Review Only
Town of Wake Forest
APPROVED
(2/08/2022
Larry Rochelle

PROJECT # 21-2515

Engineers 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 Southern Engineers. Failure to do so will void Southern Engineer's liability.
Seal is valid for projects permitted one year from date of seal.
Use of these plans constitutes approval of terms & conditions as defined in the customer agreement.

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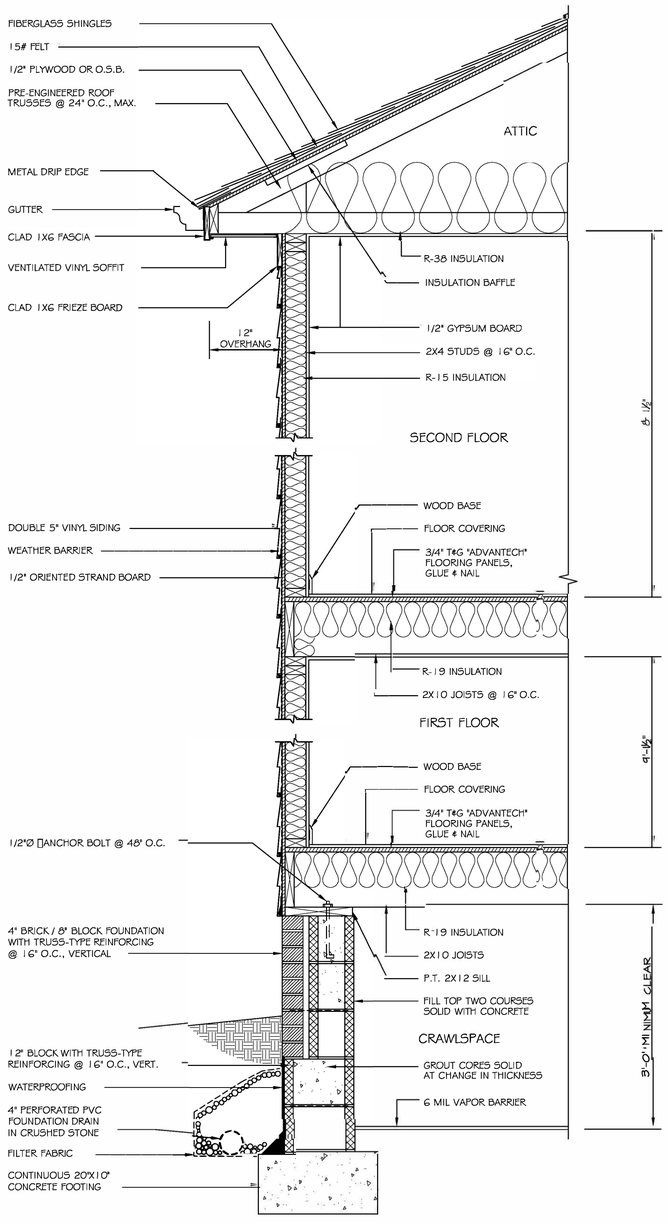
SD



1 / A-1 WALL SECTION

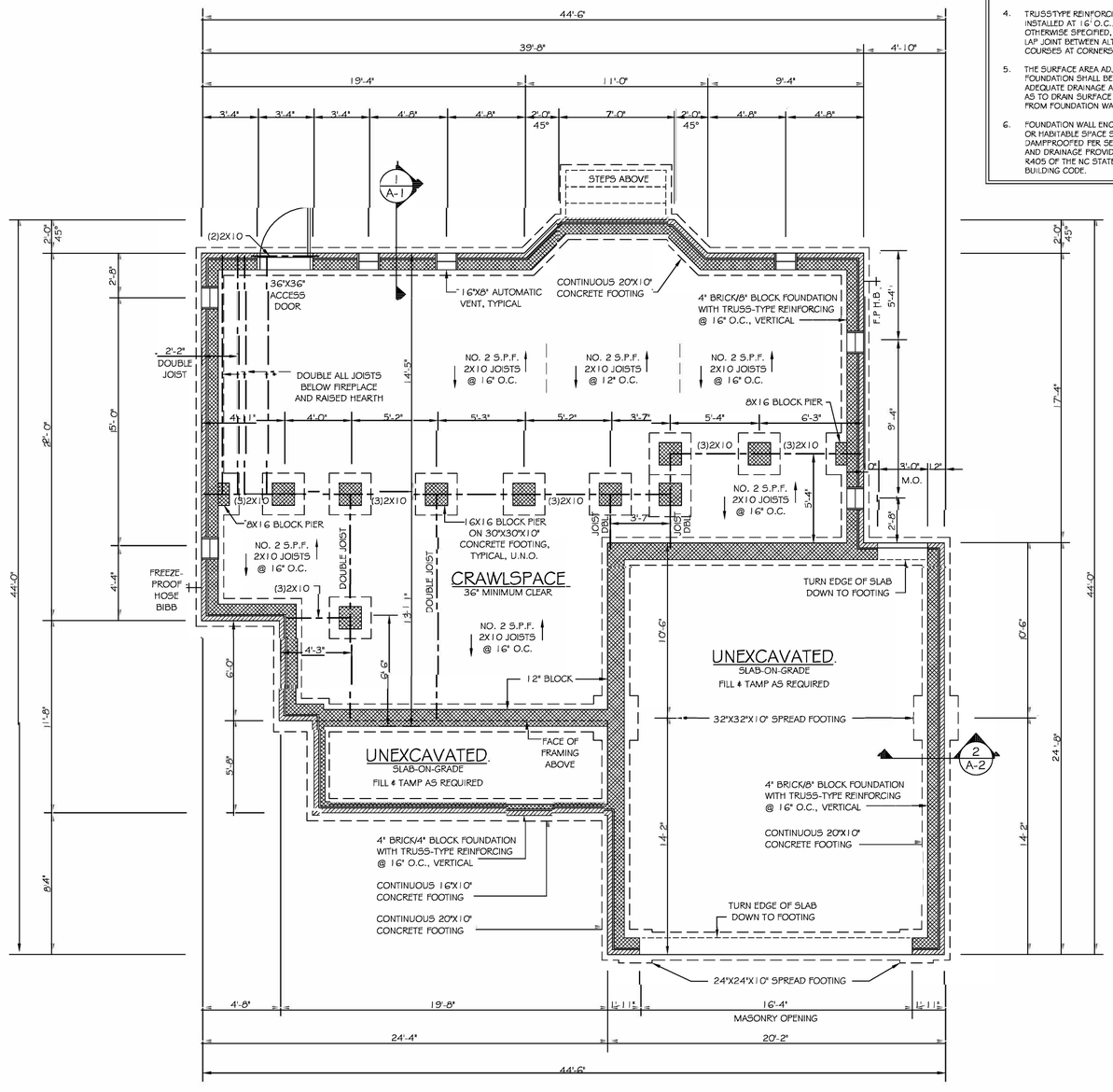
AT HOUSE

SCALE: 1"=1'-0"

REFER TO STRUCTURAL DRAWINGS
BY SOUTHERN ENGINEERS, P.A.
PROJECT #21-2515

FOUNDATION NOTES

1. ASSUMED SOIL BEARING CAPACITY: 2000 PSF. WHERE FILL IS REQUIRED BELOW SLABS AND INTERIOR FOOTINGS, COMPACT SOIL TO 95% STD. PROCTOR.
2. ALL FOOTINGS SHALL BE 20"X10", UNLESS NOTED OTHERWISE.
3. ALL CONCRETE SHALL BE 3000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED.
4. TRUSS TYPE REINFORCING SHALL BE INSTALLED AT 16' O.C., VERTICAL, UNLESS OTHERWISE SPECIFIED, AND MUST ALWAYS LAP JOINT BETWEEN ALTERNATING BLOCK COURSES AT CORNERS.
5. THE SURFACE AREA ADJACENT TO THE FOUNDATION SHALL BE PROVIDED WITH ADEQUATE DRAINAGE AND GRADED SO AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.
6. FOUNDATION WALL ENCLOSING USABLE OR HABITABLE SPACE SHALL BE DAMPPROOFED PER SECTION R406 AND DRAINAGE PROVIDED PER SECTION R405 OF THE NC STATE RESIDENTIAL BUILDING CODE.



WALL LEGEND

NON-LOAD BRG. STUD WALLS		CONCRETE BLOCK	
EXTERIOR AND LOAD-BEARING STUD WALLS		BRICK VENEER	
		MANUFACTURED STONE VENEER	

WALL BRACE PANEL, 48" UNLESS OTHERWISE NOTED

NOTE: ACCESS AND VENTILATION IN CRAWLSPACE SHALL BE VERIFIED BY CONTRACTOR IN ACCORDANCE WITH SITE CONDITIONS

NOTE: LOCATION OF HVAC AND WATER HEATER TO BE DETERMINED BY CONTRACTOR

FOUNDATION PLAN

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

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Lot 2

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PROJECT NO: 307-20

SHEET NO. A-1

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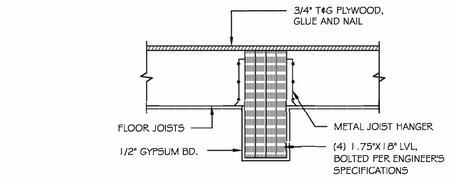
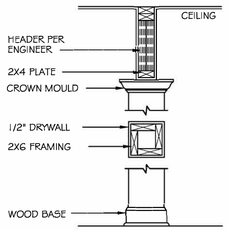
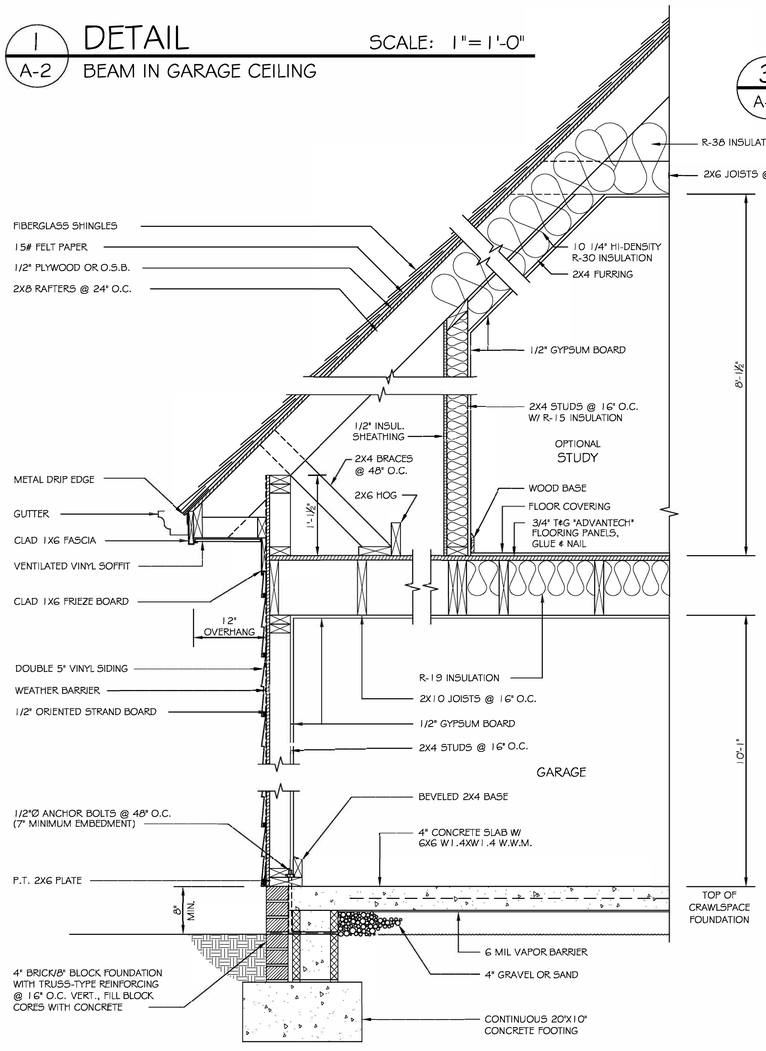




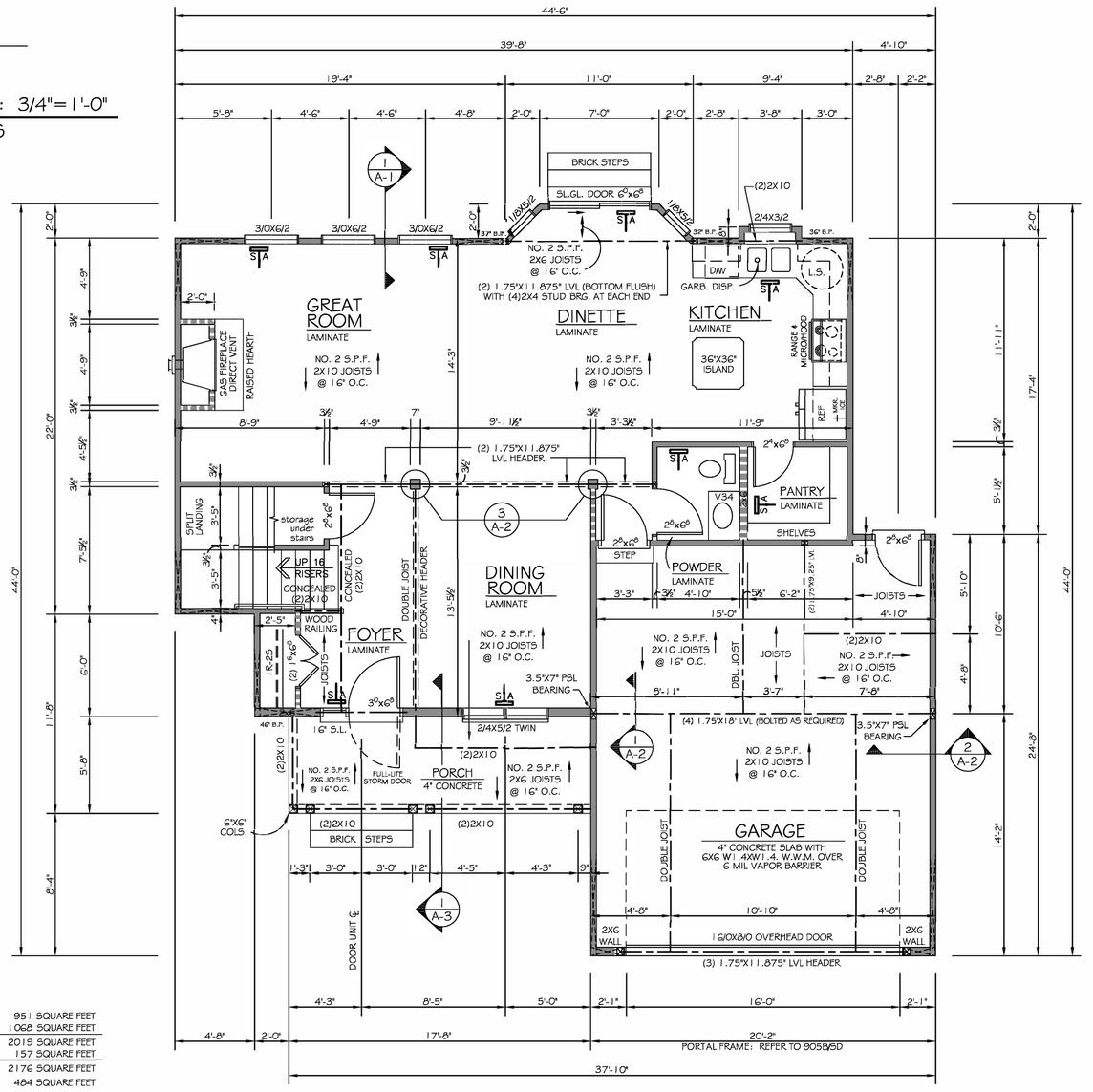
1 / A-2 DETAIL — BEAM IN GARAGE CEILING — SCALE: 1"=1'-0"

3 / A-2 DETAIL — INTERIOR COLUMNS — SCALE: 3/4"=1'-0"



2 / A-2 WALL SECTION — AT GARAGE — SCALE: 1"=1'-0"

REFER TO STRUCTURAL DRAWINGS
BY SOUTHERN ENGINEERS, P.A.
PROJECT #21-2515



FIRST FLOOR	951 SQUARE FEET
SECOND FLOOR	1068 SQUARE FEET
TOTAL HEATED (BASE)	2019 SQUARE FEET
OPTIONAL STUDY	157 SQUARE FEET
TOTAL HEATED (OPT.)	2176 SQUARE FEET
GARAGE	484 SQUARE FEET
PORCH	100 SQUARE FEET

WALL LEGEND

- NON-LOAD BRG. STUD WALLS
- EXTERIOR AND LOAD-BEARING STUD WALLS
- WALL BRACE PANEL, 48" UNLESS OTHERWISE NOTED
- CONCRETE BLOCK
- BRICK VENEER
- MANUFACTURED STONE VENEER

NOTE: DOUBLE HUNG WINDOWS SHOWN.... SIZES ARE NOMINAL SASH DIMENSIONS (i.e. 2/8X4/6 = 2'-8" X 4'-6" SASH)
VERIFY WITH WINDOW MANUFACTURER THAT BEDROOM WINDOWS COMPLY WITH SECTION R310.1 EGRESS REQUIREMENTS

FIRST FLOOR PLAN — 951 SQUARE FEET HEATED — SCALE: 1/4"=1'-0"

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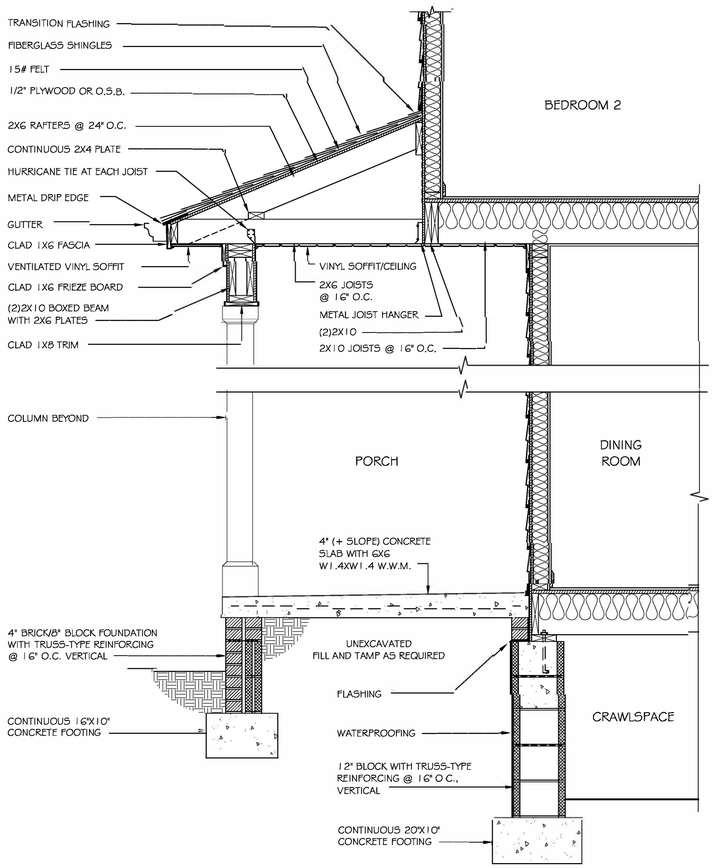
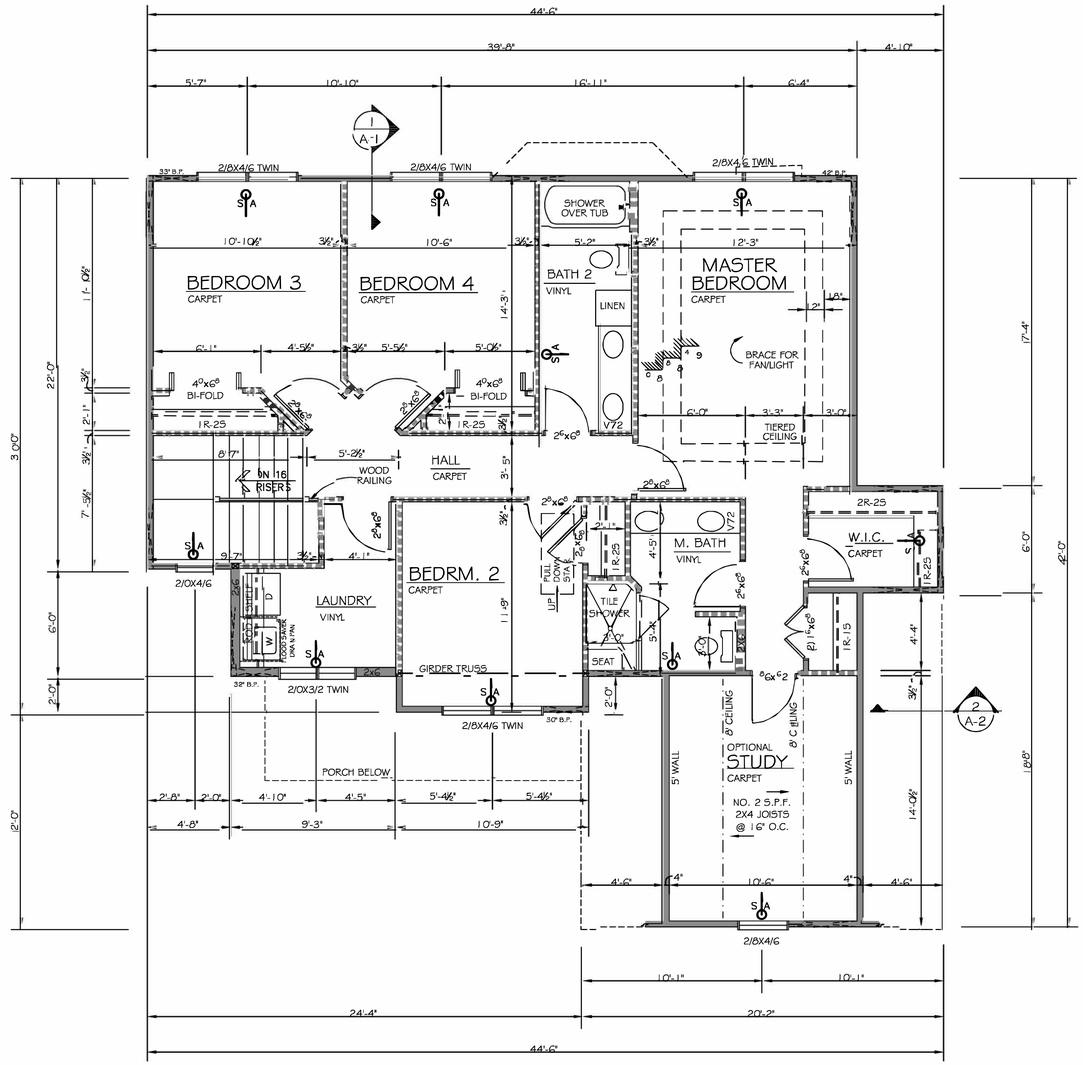
SHEET NO. A-2
3 OF 7



1 / A-3 SECTION AT PORCH

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

REFER TO STRUCTURAL DRAWINGS
BY SOUTHERN ENGINEERS, P.A.
PROJECT #21-2515



WALL LEGEND

- NON-LOAD BRG. STUD WALLS
- EXTERIOR AND LOAD-BEARING STUD WALLS
- WALL BRACE PANEL, 48" UNLESS OTHERWISE NOTED
- CONCRETE BLOCK
- BRICK VENEER
- MANUFACTURED STONE VENEER

NOTE: DOUBLE HUNG WINDOWS SHOWN.... SIZES ARE NOMINAL SASH DIMENSIONS (i.e. 2/8X4/6 = 2'-8" X 4'-6" SASH)

VERIFY WITH WINDOW MANUFACTURER THAT BEDROOM WINDOWS COMPLY WITH SECTION R310.1 EGRESS REQUIREMENTS

SECOND FLOOR PLAN

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

1068 SQUARE FEET HEATED (+ 157 SQ.FT. OPTIONAL STUDY)

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NORTH CAROLINA

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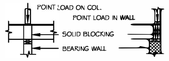
4 OF 7

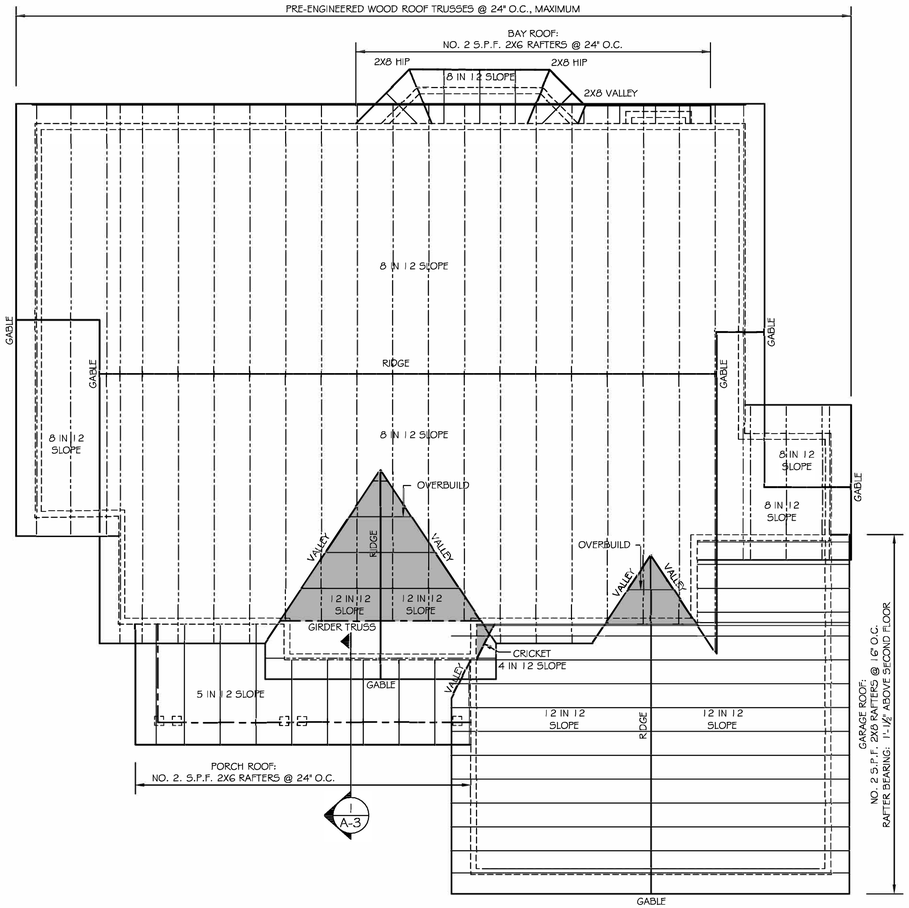
FRAMING NOTES

1. FRAMING PLANS ARE DIAGRAMMATIC IN NATURE AND NOT INTENDED TO SHOW EXACT NUMBER OR LOCATION OF MEMBERS, UNLESS SO NOTED.
2. FLOOR JOISTS, CEILING JOISTS, HEADERS, GIRDERS AND RAFTERS SHALL BE NO. 2 (OR BETTER) SPRUCE-PINE-FIR (S.P.F.), UNLESS NOTED OTHERWISE.
3. JOISTS SHALL BE DOUBLED UNDER PARALLEL PARTITIONS. WHERE PARTITIONS FALL BETWEEN JOISTS, 2X4 LADDERS @ 16" O.C. MUST BE PLACED PERPENDICULAR TO THE JOISTS TO SUPPORT THE PLYWOOD DECKING. 2X4s MAY BE SUPPORTED USING HANGERS OR LEDGERS.
4. INSTALL ONE ROW OF BRIDGING IN JOIST SPANS BETWEEN 8' AND 12', TWO ROWS IN JOISTS SPANS OF 12' OR MORE.
5. STUDS SHALL BE SPRUCE, "STUD" GRADE, OR BETTER. STUD SPACING SHALL BE 16" O.C. FOR FIRST AND SECOND FLOORS, UNLESS NOTED OTHERWISE. LOAD BEARING WALLS IN BASEMENT LEVELS SHALL BE 2X4s AT 12" O.C. OR 2X6s AT 16" O.C. (INTERIOR); 2X6s AT 16" O.C. (EXTERIOR), UNLESS NOTED OTHERWISE.
6. 1.75" LVL's SPECIFIED BASED ON THE FOLLOWING DESIGN VALUES: Fb=2600 PSI; E=1,800,000 PSI; Fv=285 lbs.; Ft=1555 PSI; Fcl=2325 PSI; Fc=750 PSI. FASTEN, NAIL OR BOLT MULTIPLE LVL's TOGETHER PER THE MANUFACTURE'S REQUIREMENTS.
7. BEARING UNDER LVL's SHALL BE 3 STUDS (MIN.). BEARING UNDER STEEL BEAMS SHALL BE 5 STUDS (MIN.), UNLESS NOTED OTHERWISE. BEARING UNDER CONVENTIONAL LUMBER BEAMS, GIRDERS AND HEADERS SHALL BE IN ACCORDANCE WITH TABLES R502.5(1) AND R502.5(2).
8. ALL POINT LOADS FROM BEAMS, GIRDERS AND BRACES MUST HAVE CONTINUOUS BLOCKING AND JACK STUDS CARRIED THROUGH ALL CONSTRUCTION TO THE FOUNDATION OR SUPPORTING BEAM BELOW.



9. HEADERS, BEAMS, AND GIRDERS SHALL BE INSTALLED IN ACCORDANCE WITH TABLES R602.7(1), R602.7(2) AND R602-7(3) OF THE NORTH CAROLINA STATE RESIDENTIAL BUILDING CODE, BUT IN NO CASE SHALL HEADER BE LESS THAN 2-2X10.
10. EXTERIOR WALLS SHALL BE BRACED WITH CONTINUOUS ½" (NOMINAL) STRUCTURAL PANEL SHEATHING (CS-WSP). BRACED WALL LINES SHALL UTILIZE BRACED WALL PANELS CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10. AN END AND RETURN WOOD STRUCTURAL PANEL OF A MINIMUM 24" SHALL BE PROVIDED AT CORNERS AT BOTH ENDS OF A BRACED WALL LINE IN ACCORDANCE WITH FIGURE 602.10.3(4)a. BRACED WALL LINES SHALL BE CONNECTED TO STRUCTURE BELOW AND ABOVE IN ACCORDANCE WITH SECTIONS R403.1.6 AND R602.10.5. PER TABLE R602.10.1, ALL VERTICAL JOINTS OF PANEL SHEATHING SHALL OCCUR OVER, AND BE FASTENED TO COMMON STUDS. HORIZONTAL JOINTS IN BRACED WALL PANELS SHALL OCCUR OVER, AND BE FASTENED TO COMMON BLOCKING OF A MINIMUM 1½" THICKNESS. (HORIZONTAL BLOCKING IS NOT REQUIRED IN WALL SECTIONS NOT COUNTED AS BRACED WALL PANELS.)
11. COMPONENTS OF EXTERIOR WALLS SHALL BE FASTENED IN ACCORDANCE WITH TABLES R602.3(1) OR R602.3(2) OF NC STATE RESIDENTIAL BUILDING CODE
12. ALL FRAMING IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE.
13. RAFTERS SHALL BE SPLICED ONLY WHEN NECESSARY BECAUSE OF LENGTH. SPLICES, WHEN NECESSARY, SHALL BE MADE ONLY ABOVE KNEE WALLS OR SUPPORTS AS SHOWN ON THE DRAWINGS.
14. ALL ROOF TRUSSES SHALL BE ENGINEERED BY THE MANUFACTURER IN STRICT ACCORDANCE WITH NC STATE RESIDENTIAL BUILDING CODE AND THE STANDARDS OF THE TRUSS PLATE INSTITUTE.
15. ROOF TRUSSES SHALL BE HANDLED, SET AND BRACED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

REFER TO STRUCTURAL DRAWINGS
BY SOUTHERN ENGINEERS, P.A.
PROJECT #21-2515



ROOF PLAN

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

TRUSS NOTE

ROOF PLAN IS SCHEMATIC ONLY. ACTUAL TRUSS DESIGN, LAYOUT AND LOCATIONS SHALL BE DETERMINED BY TRUSS MANUFACTURERS ENGINEER. WHERE ANY BEARING POINTS CHANGE OR ARE NOT AS SHOWN, THEY SHALL BE VERIFIED BY TRUSS MANUFACTURERS ENGINEER OR THE TRUSS DESIGN PACKAGE SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO STARTING CONSTRUCTION.

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ELECTRICAL SYMBOLS

ELECTRIC PANEL	RECESSED LIGHT
SINGLE POLE SWITCH, MOUNT 48" A.F.F.	FLUORESCENT OR STRIP LED FIXTURE, APPROXIMATELY TO SCALE
THREE-WAY SWITCH, MOUNT 48" A.F.F.	TRACK LIGHTING, APPROX. TO SCALE
$ FOUR-WAY SWITCH, MOUNT 48" A.F.F.	EXTERIOR WEATHERPROOF FLOODLIGHT
$3 DIMMER SWITCH, MOUNT 48" A.F.F.	CF = CEILING FAN
$4 VARIABLE SPEED FAN SWITCH, MOUNT 48" A.F.F.	CF/L = CEILING FAN WITH LIGHT
$D CEILING MOUNTED LIGHT FIXTURE	EXHAUST FAN
$F WALL MOUNTED LIGHT FIXTURE	EXHAUST FAN/LIGHT COMBINATION

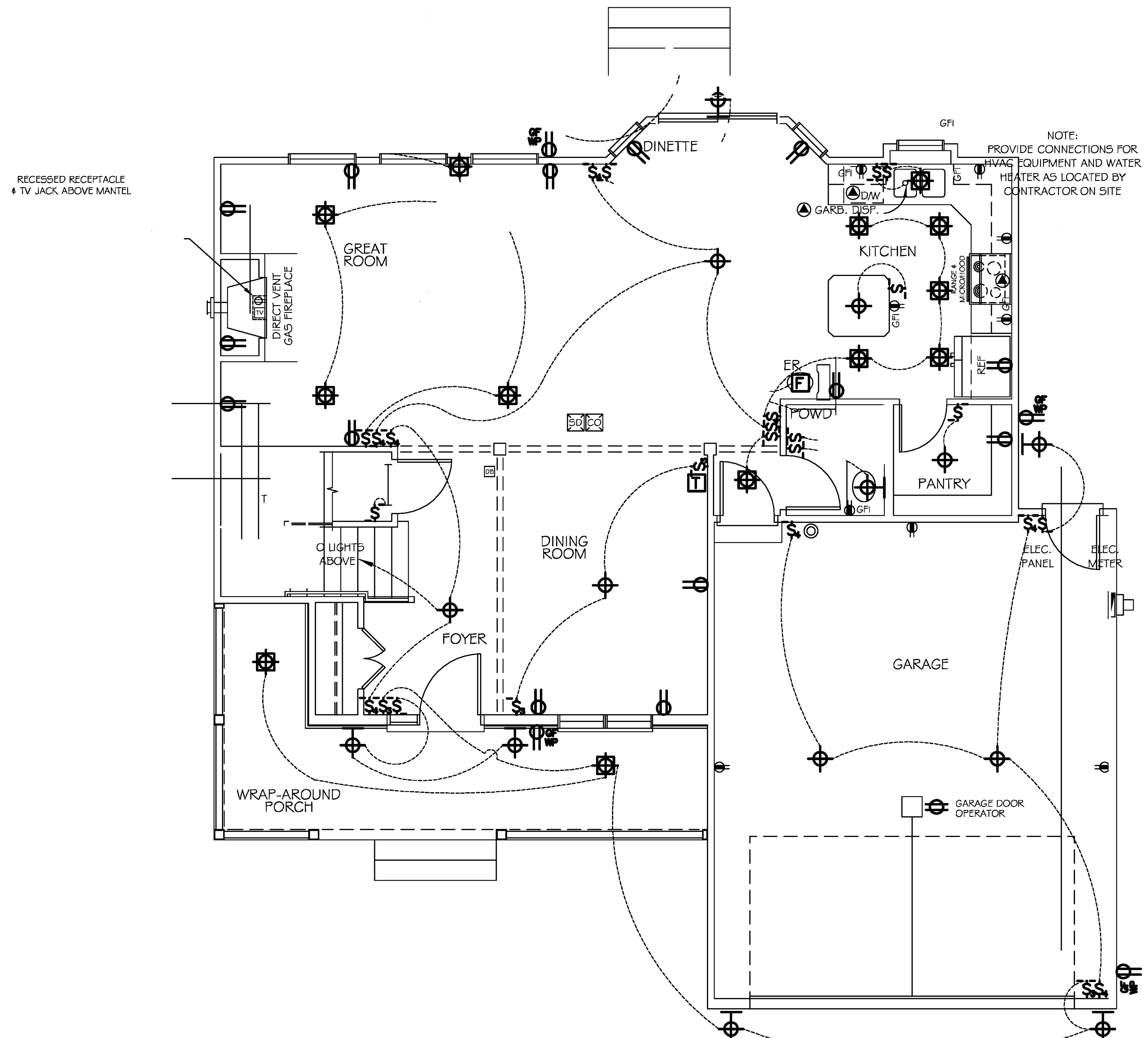
DUPLEX RECEPTACLE, MOUNT 18" A.F.F.	TELEPHONE RECEPTACLE, MOUNT 18" A.F.F.
DUPLEX RECEPTACLE, COUNTER HT. OR 48" A.F.F.	TELEPHONE RECEPTACLE, MOUNT 48" A.F.F.
SW SPLIT WIRED RECEPT. (UPPER OUTLET SWITCHED)	FLOOR TELEPHONE RECEPTACLE
FLOOR RECEPTACLE	TV TELEVISION OUTLET, MOUNT 18" A.F.F.
GF GROUND FAULT INTERRUPTER RECEPT. OR CIRCUIT	DB DOOR BELL/CHIME
WP WEATHERPROOF RECEPT., 18" A.F.F. (OR GRADE)	V CENTRAL VACUUM INLET
	GARAGE DOOR OPERATOR PUSH-BUTTON

SD	SMOKE DETECTOR
CO	CARBON MONOXIDE DETECTOR
	SPECIAL OUTLET OR EQUIPMENT CONNECTION CLOTHES DRYER CONDENSER UNIT COOKTOP ELECTRIC WATER HEATER HEAT/VENTILATION/AC AIR HANDLER OVENS RANGE WATER HEATER ETC.

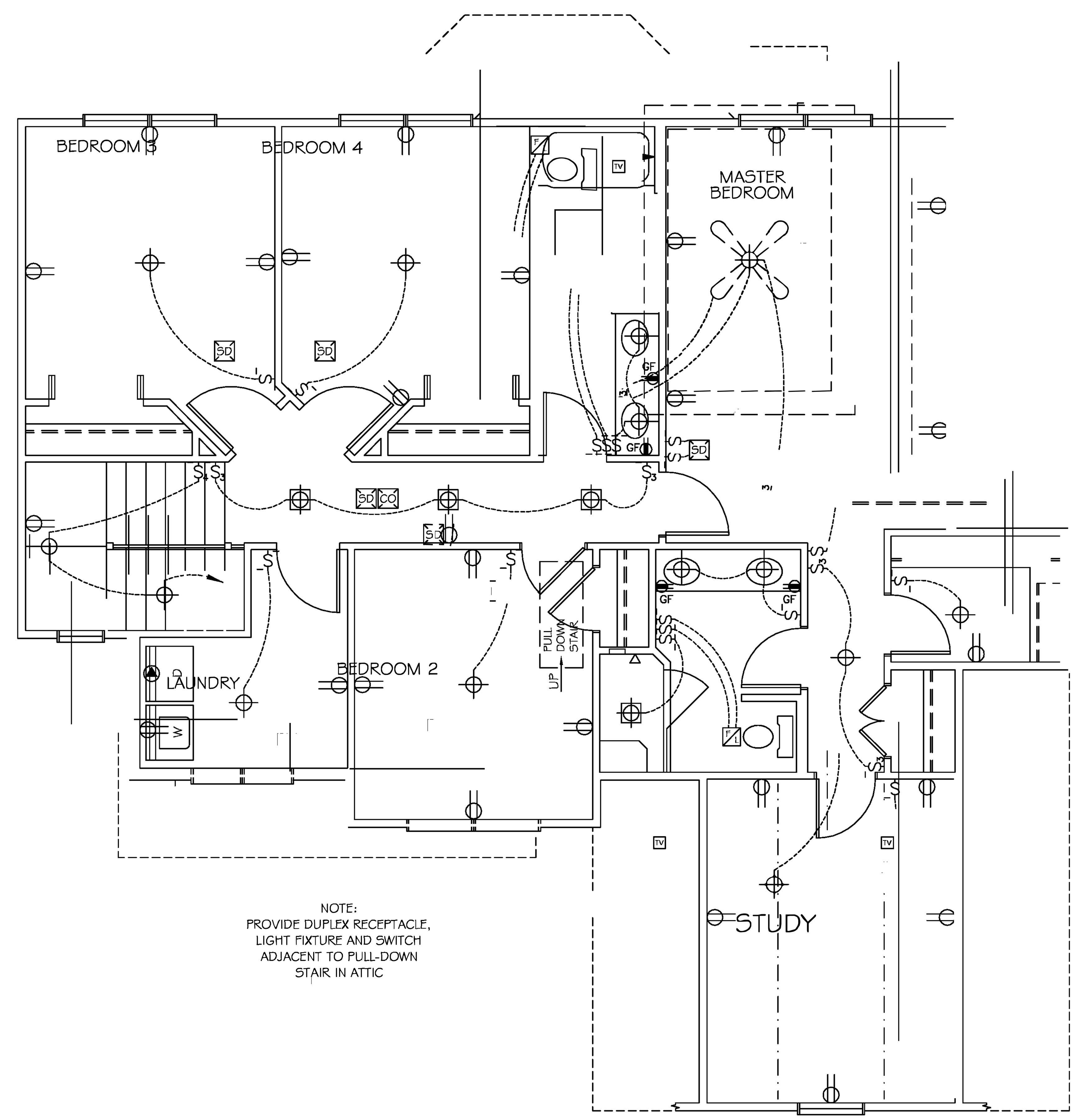
GROUND-FAULT PROTECTION NOTE

PROVIDE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION AS FOLLOWS:

1. ALL BATHROOM RECEPTACLES.
2. ALL GARAGE RECEPTACLES.
3. ALL EXTERIOR RECEPTACLES.
4. ALL KITCHEN COUNTER RECEPTACLES WITHIN 6 FEET OF A SINK.



FIRST FLOOR PLAN ELECTRICAL SCALE: 1/4"=1'-0"



SECOND FLOOR PLAN ELECTRICAL SCALE: 1/4"=1'-0"

805 Trinity Park Dr, Wake Forest, Lot 2

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C NOVER, NC 28613

[redacted]

A NEW RESIDENCE ON TRINITY PARK LOT #1
SOLID ROCK CUSTOM BUILDERS, LLC
3984 OAKSTONE PLACE DENVER NORTH CAROLINA

[redacted]

DATE:

PROJECT NO: 307-20

SHEET NO. E-1

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