

ALL DIMENSIONS, SITE
CONDITIONS & CODES ARE TO
BE VERIFIED BEFORE CONSTR.
BEGINS. ONCE CONSTR. HAS
BEGUN MURPHY GARNOW
DESIGN GROUP, INC. WILL NOT
ASSUME ANY LIABILITY FOR
ANY EXPENSES ASSOCIATED
WITH ERRORS & OMMISIONS.

MURPHY GARNOW DESIGN GROUP, INC.

HEREBY EXPRESSLY RESERVES ITS COPYRIGHT AND

5

MURPHY GARNOW DESIGN GROUP, I 1140-300 KILDAIRE FARM ROAD CARY, NORTH CAROLINA 27511 (919) 481-9115 FAX; (919) 481-6970

DRAWN BY: TWG DATE: 2-22-10 FILE NAME: 157-2-2625

REVISIONS

1-6-11 TWG PLAN

4-3-14 TWG PLAN

1-23-15 TWG ELEV.

4-17-15 TWG ELEV.

7-10-15 TWG ORIG. CHG.

© COPYRIGHT 2015 MURPHY GARNOW DESIGN GROUP, INC. ALL RIGHTS RESERVED

HOUSE NAME:
MACGREGOR IB=SL

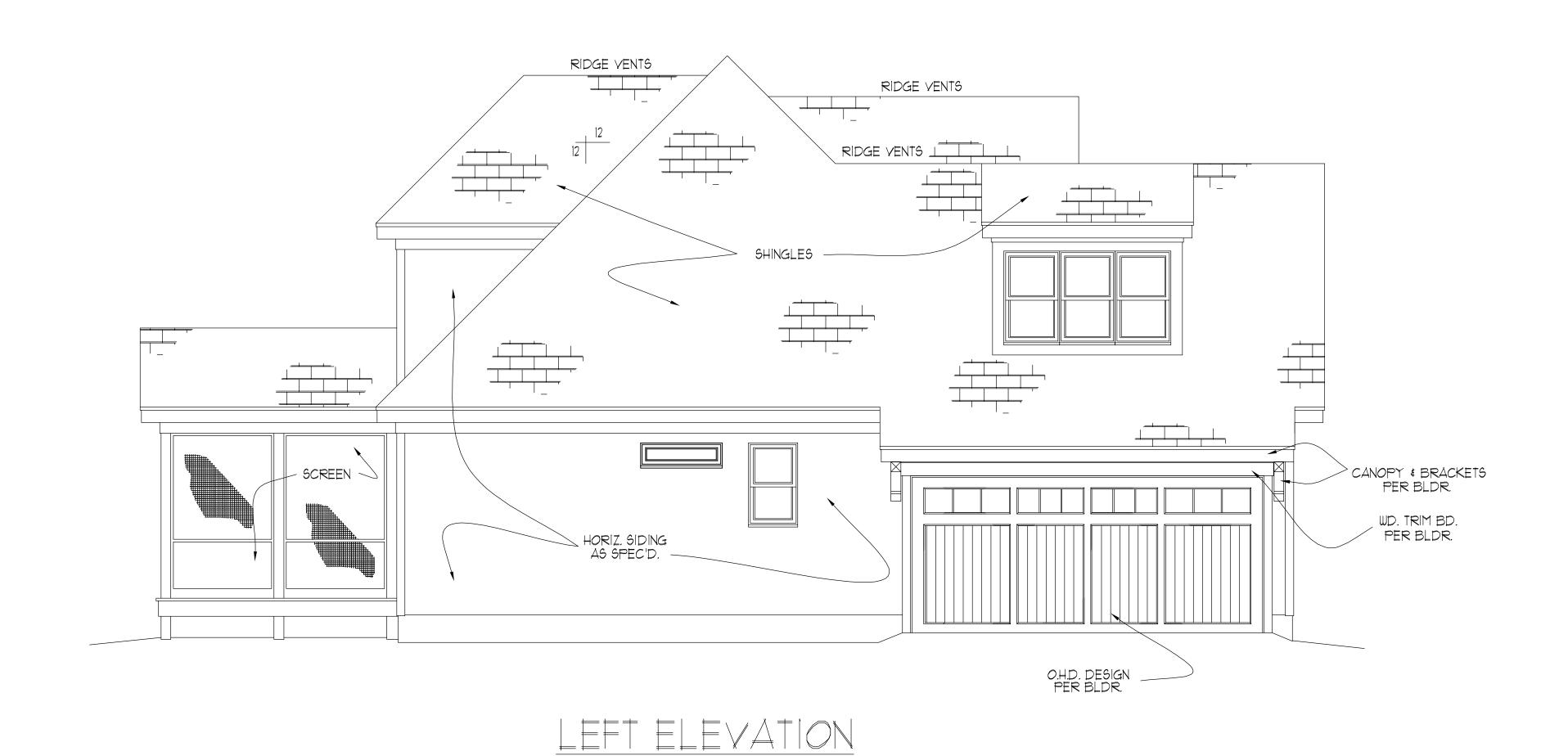
HOUSE NUMBER: 157-2-2625

## 

STEPS PER GRADE \$ CODE

—— LINE OF RAIL PER CODE / GRADE

— STONE \_ AS SPEC'D.



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

NOT

MURPHY GARNOW DESIGN GROUP, INC.
HEREBY EXPRESSLY RESERVES ITS COPYRIGHT AND
OTHER PROPERTY RIGHTS TO THESE PLANS. THESE
PLANS ARE TO BE USED FOR THE CONSTRUCTION OF
(ONE) RESIDENCE ONLY, ANY OTHER USE, CHANGE
AND/OR REPRODUCTION IN ANY FORM WILL RENDER
THESE PLANS FRAUDULENT.

ALL DIMENSIONS, SITE
CONDITIONS & CODES ARE TO
BE VERIFIED BEFORE CONSTR.
BEGINS. ONCE CONSTR. HAS
BEGUN MURPHY GARNOW
DESIGN GROUP, INC. WILL NOT
ASSUME ANY LIABILITY FOR
ANY EXPENSES ASSOCIATED
WITH ERRORS & OMMISIONS.

MURPHY GARNOW DESIGN GROUP, INC 1140-300 KILDAIRE FARM ROAD CARY, NORTH CAROLINA 27511

DRAWN BY: TWG

DATE: 2-22-10

FILE NAME: 157-2-2625

REVISIONS

1-6-11 TWG PLAN

4-3-14 TWG PLAN

1-23-15 TWG ELEV.

4-17-15 TWG ELEV.

7-10-15 TWG ORIG. CHG.

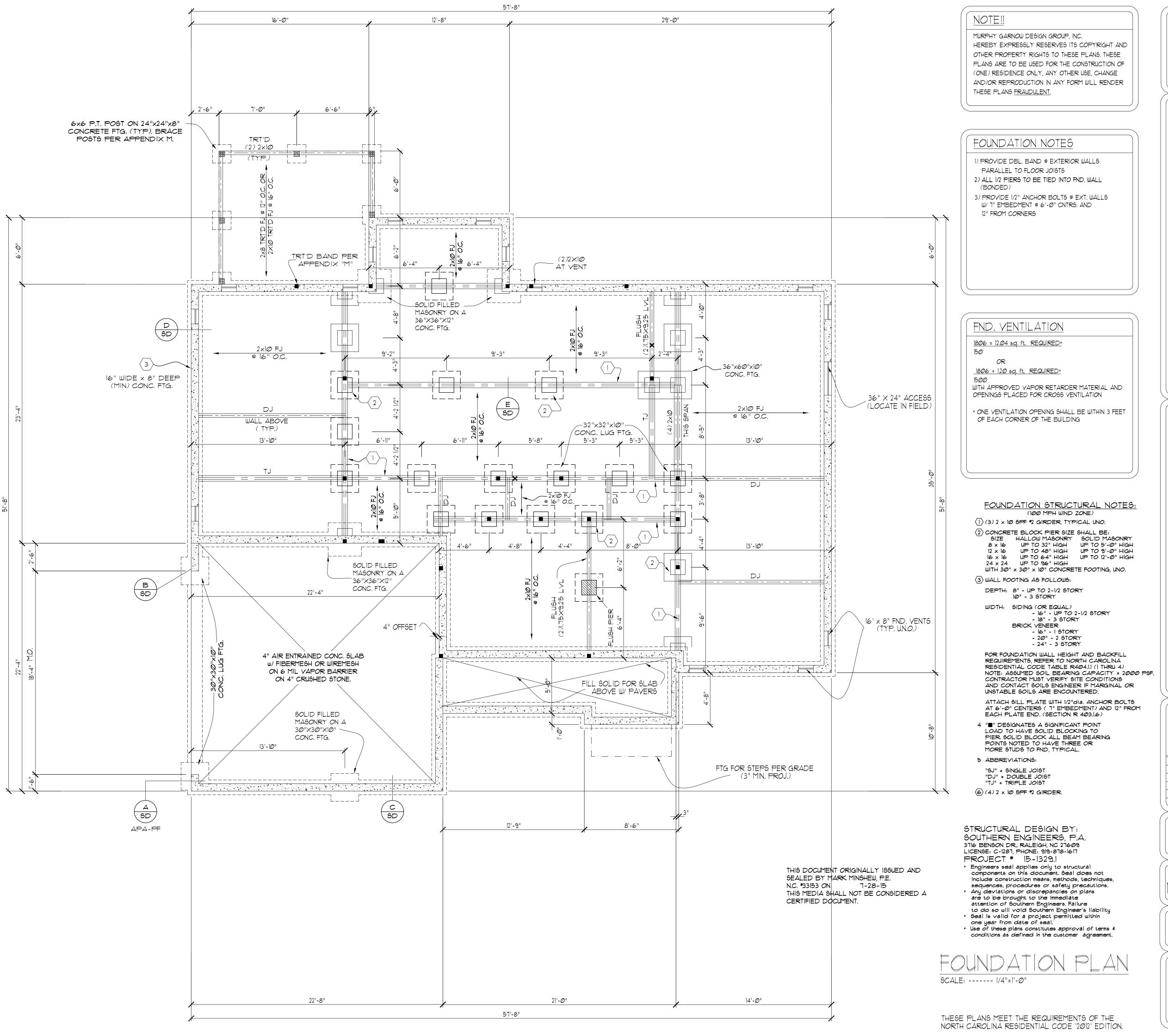
© COPYRIGHT 2015 MURPHY GARNOW DESIGN GROUP, INC. ALL RIGHTS RESERVED

HOUSE NAME:
MACGREGOR IB=SL

HOUSE NUMBER: 157 = 2 = 2625

PAGE NUMBER:

2 0 = 8



ALL DIMENSIONS, SITE
CONDITIONS & CODES ARE TO
BE VERIFIED BEFORE CONSTR.
BEGINS. ONCE CONSTR. HAS
BEGUN MURPHY GARNOW
DESIGN GROUP, INC. WILL NOT
ASSUME ANY LIABILITY FOR
ANY EXPENSES ASSOCIATED

ANY EXPENSES ASSOCIATED
WITH ERRORS & OMMISIONS.

GARNOW DESIGN GROUP,
1140-300 KILDAIRE FARM ROAD
CARY, NORTH CAROLINA 27511

MURPHY

RAWN BY: TWG ATE: 2-22

\_\_

DRAWN BY: TWG

DATE: 2-22-10

FILE NAME: 157-2-2625

REVISIONS

7-6-11 TWG PLAN

4-3-14 TWG PLAN

1-23-15 TWG ELEV.

4-17-15 TWG ELEV.

7-10-15 TWG ORIG. CHG.

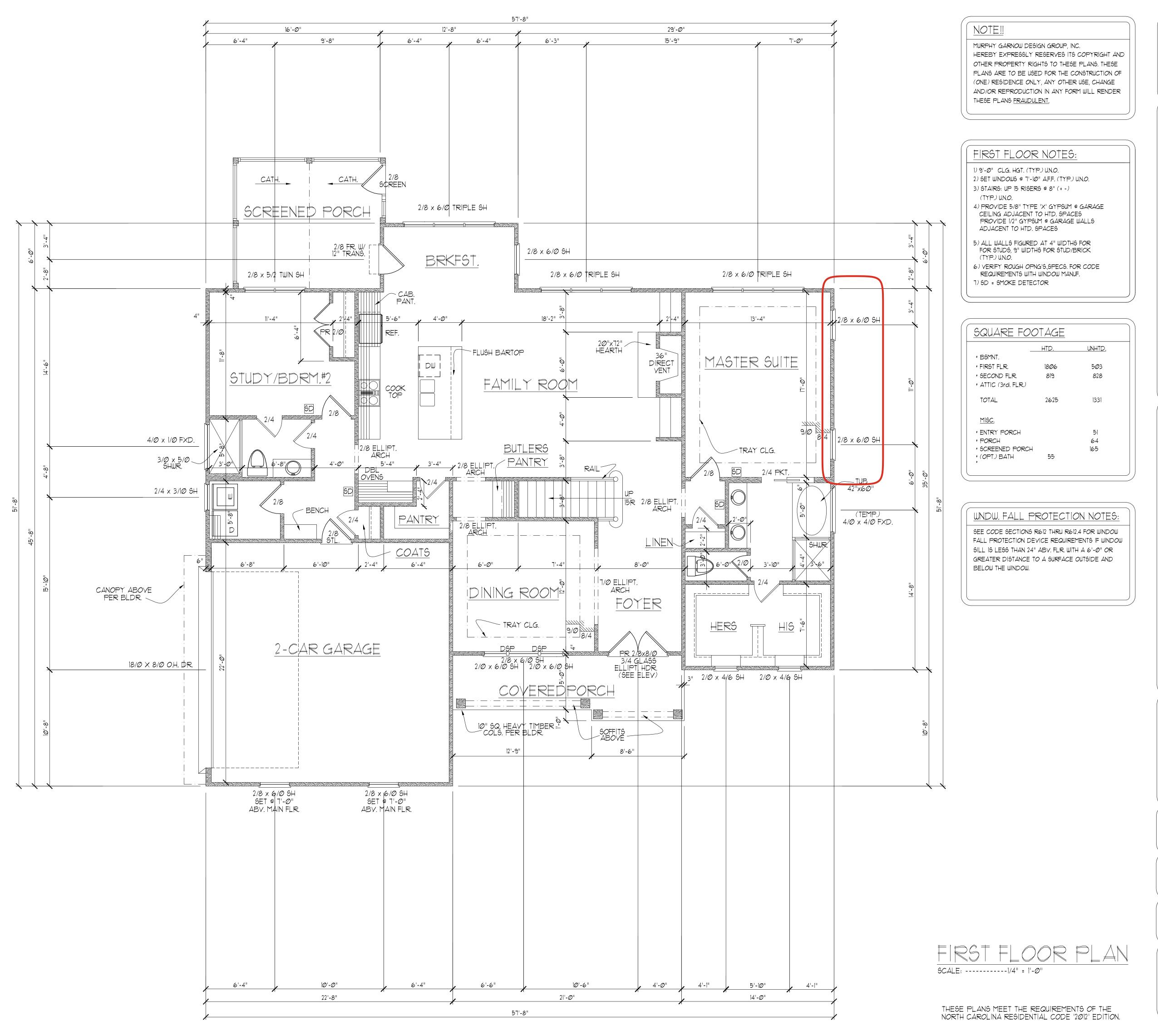
© COPYRIGHT 2015 MURPHY GARNOW DESIGN GROUP, INC. ALL RIGHTS RESERVED

HOUSE NAME:
MACGREGOR IB-SL

HOUSE NUMBER: 157 = 2 = 2625

PAGE NUMBER:

3 0 = 8



ALL DIMENSIONS, SITE CONDITIONS & CODES ARE TO BE VERIFIED BEFORE CONSTR. BEGINS, ONCE CONSTR. HAS BEGUN MURPHY GARNOW

DESIGN GROUP, INC. WILL NOT ASSUME ANY LIABILITY FOR ANY EXPENSES ASSOCIATED WITH ERRORS & OMMISIONS.

MURPHY GARNOW DESIGN GROUP, INC

 $\mathbb{O}$ # # 

DRAWN BY: TWG DATE: 2-22-10

FILE NAME: 157-2-2625

REVISIONS

1-6-11 TWG PLAN

4-3-14 TWG PLAN

1-23-15 TWG ELEV.

4-17-15 TWG ELEV.

1-10-15 TWG ORIG. CHG.

© COPYRIGHT 2015 MURPHY GARNOW DESIGN GROUP, INC. ALL RIGHTS RESERVED

HOUSE NAME: MACGREGOR IB-SL

HOUSE NUMBER: 157-2-2625

MURPHY GARNOW DESIGN GROUP, INC. HEREBY EXPRESSLY RESERVES ITS COPYRIGHT AND OTHER PROPERTY RIGHTS TO THESE PLANS. THESE PLANS ARE TO BE USED FOR THE CONSTRUCTION OF (ONE) RESIDENCE ONLY, ANY OTHER USE, CHANGE AND/OR REPRODUCTION IN ANY FORM WILL RENDER THESE PLANS FRAUDULENT.

## SECOND FLOOR NOTES:

1) 9'-Ø" CLG. HGT. (TYP.) U.N.O.

- 2) SET WINDOWS @ 7'-4' A.F.F. (TYP.) U.N.O.
- 3) STAIRS: UP 15 RISERS @ 8" (+ -) (TYP.) U.N.O.
- 4) ALL WALLS FIGURED AT 4" WIDTHS FOR FOR STUD/BRICK
- (TYP.) U.N.O.
- 5) VERIFY ROUGH OPNG'S,SPECS. FOR CODE REQUIREMENTS WITH WINDOW MANUF. 6) SD = SMOKE DETECTOR

ALL DIMENSIONS, SITE
CONDITIONS & CODES ARE TO
BE VERIFIED BEFORE CONSTR.
BEGINS. ONCE CONSTR. HAS
BEGUN MURPHY GARNOW DESIGN GROUP, INC. WILL NOT ASSUME ANY LIABILITY FOR ANY EXPENSES ASSOCIATED WITH ERRORS & OMMISIONS.

MURPHY GARNOW DESIGN GROUP, INC

# 

DRAWN BY: TWG DATE: 2-22-10

FILE NAME: 157-2-2625

REVISIONS

7-6-11 TWG PLAN

4-3-14 TWG PLAN

1-23-15 TWG ELEV.

4-17-15 TWG ELEV.

7-10-15 TWG ORIG. CHG.

© COPYRIGHT 2015 MURPHY GARNOW DESIGN GROUP, INC. ALL RIGHTS RESERVED

HOUSE NAME: MACGREGOR IB-SL

HOUSE NUMBER: 157-2-2625

PAGE NUMBER:

THESE PLANS MEET THE REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE '2012' EDITION.

SECOND FLOOR PLAN

SCALE: -----1/4" = 1'-Ø"

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 AND FOOTINGS. 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

2) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA STATE RESIDENTIAL CODE - 2012 EDITION (2003 IRC), 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 (R3Ø1.4) (LISTED AS: LIVE LOAD, DEAD LOAD, DEFLECTION LIMIT) 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 WITH OUT PERMANENT STAIR: (20 PSF, 10 PSF, L/360) ATTIC WITH OUT STORAGE: (10 PSF, 10 PSF, L/240) STAIRS: (40 PSF, --, L/360) EXTERIOR BALCONIES: (60 PSF, 10 PSF, L/360) DECKS: (40 PSF, 10 PSF, L/360) GUARDRAILS AND HANDRAILS: (200 LBS) PASSENGER VEHICLE GARAGES: (50 PSF, 10 PSF, L/360) FIRE ESCAPES: (40 PSF, 10 PSF, L/360) SNOW: (20 PSF) WIND LOAD: (BASED ON 100 MPH WIND VELOCITY)

4) WALL BRACING: WALLS SHALL BE BRACED ACCORDING TO R602.10- CODE AND COMMENTARY FOR 2012 NC RESIDENTIAL CODE (FINAL 03-06-2013; EFFECTIVE DATE SEPTEMBER 1, 2013). NOTE THAT THE BRACING AS SPECIFIED ON THE PLANS IS BASED ON THE PRESCRIPTIVE BRACING REQUIREMENTS OF THE CODE AND SHALL BE VERIFIED AND/OR APPROVED BY THE CODE OFFICIAL

5) 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.

6) 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

7) ALL FRAMING LUMBER SHALL BE SPF \*2 (Fb = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP # 2 (Fb=975 PSI). PLATE MATERIAL MAY BE SPF # 3 OR SYP #3 (Fc(perp) = 425 PSI -

8) ALL WOODEN BEAMS AND HEADERS SHALL HAVE THE FOLLOWING END SUPPORTS: (1) 2x4 STUD COLUMN FOR 6'-0" MAX. BEAM SPAN (UNO), (2) 2X4 STUDS FOR BEAM SPAN GREATER THAN 6'-0" (UNO).

9) L.V.L. SHALL BE LAMINATED VENEER LUMBER: Fb=2600 PSI, Fv=285 PSI, E=1,900,000 PSI. P.S.L. SHALL BE PARALLEL STRAND LUMBER: Fb=2900 PSI, Fv=290 PSI, E=2,000,000 PSI. L.S.L. SHALL BE LAMINATED STRAND LUMBER: Fb=2250 PSI, Fv=400 PSI, E=1,550,000 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.

10) ALL ROOF TRUSS AND 1-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND 1-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 PROVIDED 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.

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

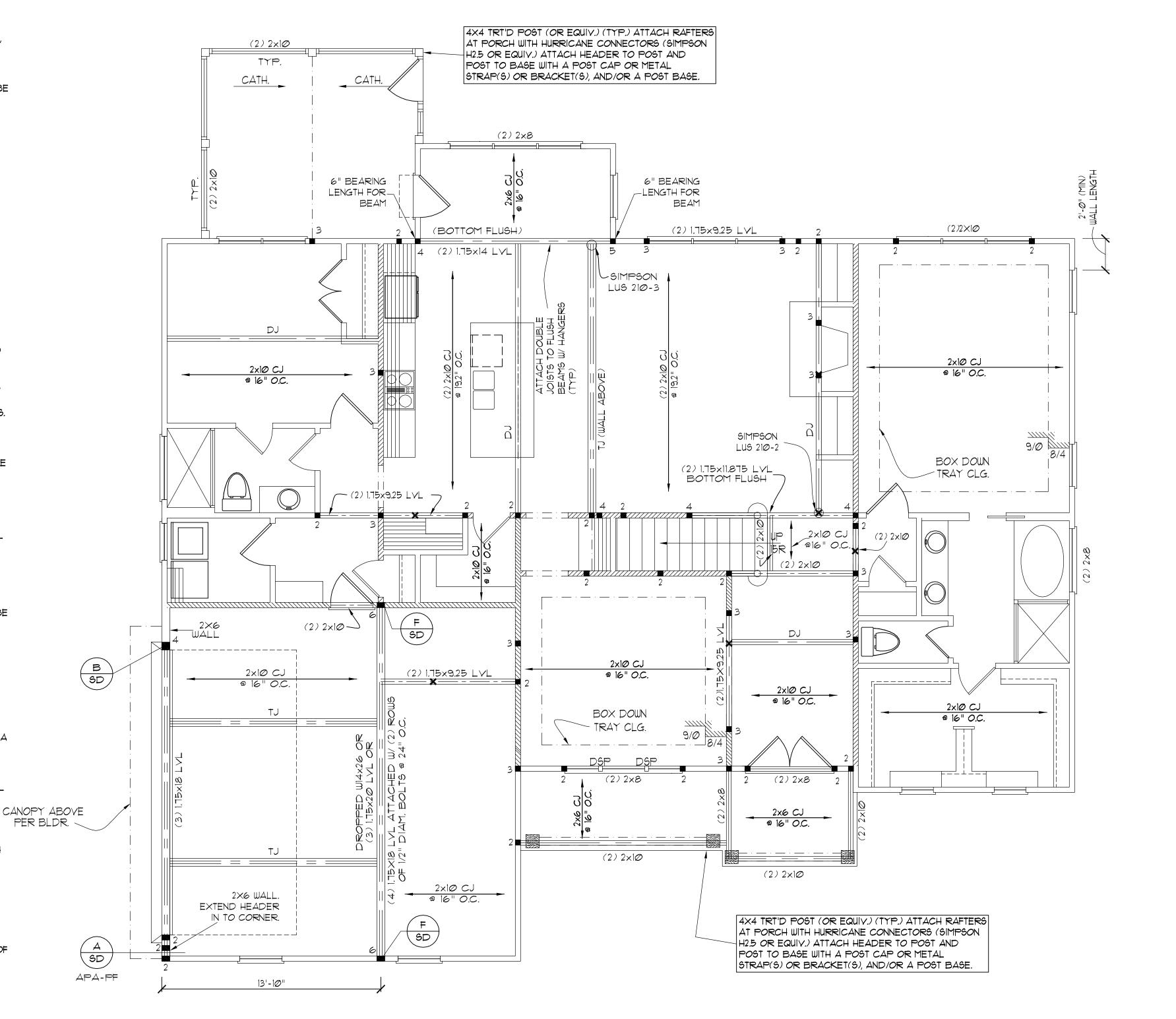
13) FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A3Ø7) WITH WASHERS PLACED UNDER THE THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" O.C. (MAX), AND STAGGERED AT THE TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.

14) BRICK LINTELS 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 YERTICAL FOR SPANS UP TO 9'-0" (UNO).

15) THE POSITIVE AND NEGATIVE DESIGN PRESSURE FOR DOORS AND WINDOWS FOR A MEAN ROOF HEIGHT OF 35 FEET OR LESS SHALL BE 25 PSF. THE POSITIVE AND NEGATIVE DESIGN PRESSURES REQUIRED FOR ANY ROOF OR WALL CLADDING APPLICATION NOT SPECIFICALLY ADDRESSED IN THE NORTH CAROLINA STATE RESIDENTIAL CODE - 2012 EDITION SHALL BE AS FOLLOWS:

45.4 PSF - 2.25:12 PITCH OR LESS 34.8 PSF - 2.25:12 TO 7:12 PITCH 21 PSF - 7:12 TO 12:12 PITCH <u>WALLS</u> 24.1 PSF - WALLS

STRUCTURAL COMPONENTS AS SPECIFICALLY STATED.



THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY MARK MINSHEW, P.E. N.C. #33153 ON THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.

MURPHY GARNOW DESIGN GROUP, INC. HEREBY EXPRESSLY RESERVES ITS COPYRIGHT AND OTHER PROPERTY RIGHTS TO THESE PLANS. THESE PLANS ARE TO BE USED FOR THE CONSTRUCTION OF (ONE) RESIDENCE ONLY, ANY OTHER USE, CHANGE AND/OR REPRODUCTION IN ANY FORM WILL RENDER THESE PLANS FRAUDULENT.

ALL DIMENSIONS, SITE CONDITIONS & CODES ARE TO BE VERIFIED BEFORE CONSTR. BEGINS. ONCE CONSTR. HAS BEGUN MURPHY GARNOW DESIGN GROUP, INC. WILL NOT ASSUME ANY LIABILITY FOR ANY EXPENSES ASSOCIATED WITH ERRORS & OMMISIONS.

**GARNOW** 

ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE (2) 2×6 (MIN), UNLESS NOTED OTHERWISE. THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN.

HEADER AND COLUMN NOTES

WALL BRACING NOTES: (100 MPH) I. WALL BRACING ANALYSIS BASED ON R602.10 - CODE AND COMMENTARY FOR 2012 NC RESIDENTIAL CODE (FINAL 03-06-2013: EFFECTIVE DATE SEPTEMBER 1, 2013).

2. NOTE THAT THE WALL BRACING AMOUNT PROVIDED ON THE PLANS (DETAILS AND SPECIFICATIONS) IS GREATER THAN THE AMOUNT OF WALL BRACING REQUIRED BY THE CODE. SEE NOTES BELOW FOR DETAILS AND SPECIFICATIONS FOR WALL BRACING.

3. BRACING METHOD AND TYPE: CONTINUOUS SHEATHING PER SECTION R602.10.3 USING WSP (WOOD STRUCTURAL PANEL SHEATHING).

4. EXTERIOR WALL SHEATHING: SHEATH EXTERIOR WALLS WITH 1/4." WSP (WOOD STRUCTURAL PANEL) SHEATHING AND ATTACH 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. (WSP SHEATHING SHALL EXTEND TO UPPERMOST DOUBLE BEARING PLATE). BLOCK AT ROOF PER R602.10.5.5.

5. MINIMUM WALL LENGTHS ARE BASED ON TABLE R602.10.1 AND ARE TO BE LOCATED AS SPECIFIED IN SECTION R602.10.3.2.

6. HOLD-DOWN DEVICE (NOTED AS "HD" ON PLANS) SHALL BE AN 800 POUND CAPACITY ASSEMBLY AS NOTED ON PLANS. SEE DETAILS FOR HD ASSEMBLY.

1. INTERIOR BRACED WALL: (NOTED AS "IBW" ON PLANS) ATTACH 1/2" GYPSUM BOARD (U.N.O.) 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. INTERIOR BRACED WALLS SHALL BE CONNECTED AS DESCRIBED IN R602.10.5.4 AND FIGURES CR602.10.5.4(1) AND CR602.10.5.4(2).

> FILE NAME: 157-2-2625 REVISIONS 7-6-11 TWG PLAN

DATE:

DRAWN BY: TWG

2-22-10

-

STRUCTURAL DESIGN BY: MURPHY GARNOW DESIGN SOUTHERN ENGINEERS, P.A. 3716 BENSON DR., RALEIGH, NC 27609 LICENSE: C-1287, PHONE: 919-878-1617 PROJECT # 15-1329.1

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

\* Engineers seal applies only to structural

Seal is valid for a project permitted within one year from date of seal. Use of these plans constitutes approval of terms \$

FIRST FLOOR CEILING STRUCTURAL PLAN

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

THESE PLANS MEET THE REQUIREMENTS OF THE

NORTH CAROLINA RESIDENTIAL CODE '2012' EDITION.

1-8-11 TWG PLAN 4-3-14 TWG PLAN 1-23-15 TWG ELEV. 4-17-15 TWG ELEV. 7-10-15 TWG ORIG. CHG. © COPYRIGHT 2015

GROUP, INC. ALL RIGHTS RESERVED HOUSE NAME:

MACGREGOR IB-S!

HOUSE NUMBER: 157 - 2 - 2625

MURPHY GARNOW DESIGN GROUP, INC. HEREBY EXPRESSLY RESERVES ITS COPYRIGHT AND OTHER PROPERTY RIGHTS TO THESE PLANS. THESE PLANS ARE TO BE USED FOR THE CONSTRUCTION OF (ONE) RESIDENCE ONLY, ANY OTHER USE, CHANGE AND/OR REPRODUCTION IN ANY FORM WILL RENDER THESE PLANS FRAUDULENT.

ALL DIMENSIONS, SITE CONDITIONS & CODES ARE TO BE VERIFIED BEFORE CONSTR. BEGINS. ONCE CONSTR. HAS BEGUN MURPHY GARNOW DESIGN GROUP, INC. WILL NOT ASSUME ANY LIABILITY FOR ANY EXPENSES ASSOCIATED WITH ERRORS & OMMISIONS.

GARNOW DESIGN GROUP, MURPHY

> #

DRAWN BY: TWG

DATE: 2-22-10 FILE NAME: 157-2-2625

REVISIONS

7-6-11 TWG PLAN

4-3-14 TWG PLAN

1-23-15 TWG ELEV.

4-17-15 TWG ELEV.

7-10-15 TWG ORIG. CHG

© COPYRIGHT 2015 MURPHY GARNOW DESIGN GROUP, INC. ALL RIGHTS RESERVED

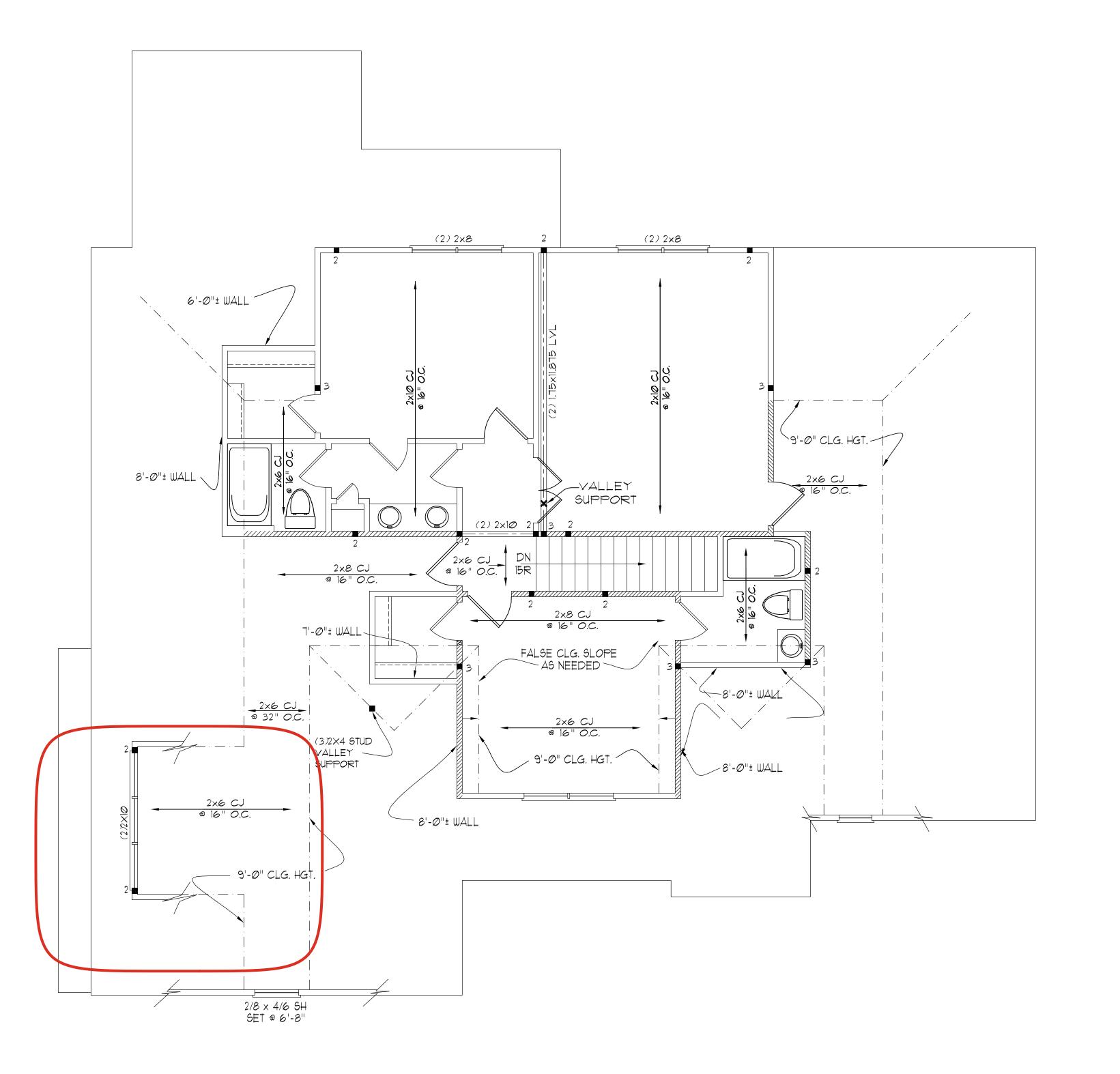
HOUSE NAME:

MACGREGOR IB-SL

HOUSE NUMBER:

157-2-2625

PAGE NUMBER:



HEADER AND COLUMN NOTES

· ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE (2) 2x6 (MIN), UNLESS NOTED OTHERWISE. - THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN.

WALL BRACING NOTES: (100 MPH) I. WALL BRACING ANALYSIS BASED ON R602.10 - CODE AND COMMENTARY FOR 2012 NC RESIDENTIAL CODE (FINAL 03-06-2013: EFFECTIVE DATE SEPTEMBER 1, 2013).

2. NOTE THAT THE WALL BRACING AMOUNT PROVIDED ON THE PLANS (DETAILS AND SPECIFICATIONS) IS GREATER THAN THE AMOUNT OF WALL BRACING REQUIRED BY THE CODE. SEE NOTES BELOW FOR DETAILS AND SPECIFICATIONS FOR WALL BRACING.

3. BRACING METHOD AND TYPE: CONTINUOUS SHEATHING PER SECTION R602.10.3 USING WSP (WOOD STRUCTURAL PANEL SHEATHING).

4. EXTERIOR WALL SHEATHING: SHEATH EXTERIOR WALLS WITH 1/6" WSP (WOOD STRUCTURAL PANEL) SHEATHING AND ATTACH 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. (WSP SHEATHING SHALL EXTEND TO UPPERMOST DOUBLE BEARING PLATE). BLOCK AT ROOF PER R602.10.5.5.

5. MINIMUM WALL LENGTHS ARE BASED ON TABLE R602.10.1 AND ARE TO BE LOCATED AS SPECIFIED IN SECTION R602.10.3.2.

6. HOLD-DOWN DEVICE (NOTED AS "HD" ON PLANS) SHALL BE AN 800 POUND CAPACITY ASSEMBLY AS NOTED ON PLANS. SEE DETAILS FOR HD ASSEMBLY.

1. INTERIOR BRACED WALL: (NOTED AS "IBW" ON PLANS) ATTACH 1/2" GYPSUM BOARD (U.N.O.) 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. INTERIOR BRACED WALLS SHALL BE CONNECTED AS DESCRIBED IN R602.10.5.4 AND FIGURES CR602.10.5.4(1) AND CR602.10.5.4(2).

THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY MARK MINSHEW, P.E. N.C. \*33153 ON 7-28-15 THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.

SOUTHERN ENGINEERS, P.A. 3716 BENSON DR, RALEIGH, NC 27609 LICENSE: C-1287, PHONE: 919-878-1617 PROJECT # 15-1329.1 \* 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

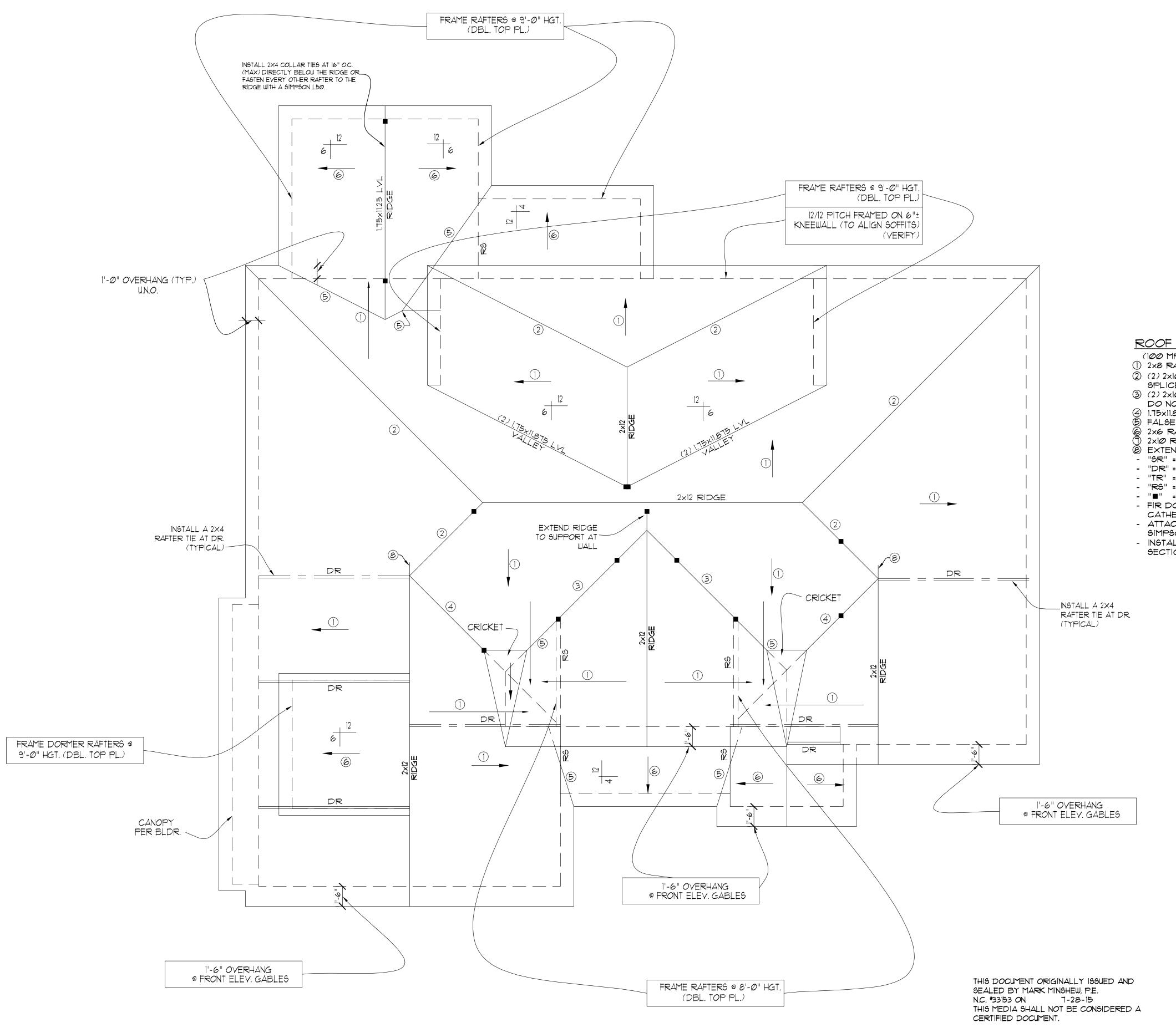
STRUCTURAL DESIGN BY:

- 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 a project permitted within one year from date of seal.
- Use of these plans constitutes approval of terms \$
   conditions as defined in the customer agreement.

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

THESE PLANS MEET THE REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE '2012' EDITION.



MURPHY GARNOW DESIGN GROUP, INC. HEREBY EXPRESSLY RESERVES ITS COPYRIGHT AND OTHER PROPERTY RIGHTS TO THESE PLANS. THESE PLANS ARE TO BE USED FOR THE CONSTRUCTION OF (ONE) RESIDENCE ONLY, ANY OTHER USE, CHANGE AND/OR REPRODUCTION IN ANY FORM WILL RENDER THESE PLANS FRAUDULENT.

ROOF FRAMING NOTES:

- 1) ALLROOF PITCHES TO BE 12/12 (TYP.) UN.O. 2) PROVIDE 2x4 COLLAR BEAMS EVERYOTHER RAFTER (TYP.)
- 3) PROVIDE "HURRICANE CLIPS" AT ALL VALLEYS AND OPPPOSING DBL. RAFTERS
- 4) PROVIDE DBL. HEADERS ABD TRIMMERS AT ALL ROOF OPENINGS (EX: DORMERS, SKYLIGHTS, CHIMNEYS,ETC.)
- 5) 2x8 RAFTERS @ CATH. OR VAULTED CLGS. TO BE FURRED DOWN OR USE DEEPER RAFTERS (VERIFY BRNG. HGT.) FOR PROPER INSULATION PER CODE
- 6) VERIFY ALL RAFTER BRNG. HGTS. BEFORE CONSTR. HAS BEGUN

## ROOF FRAMING NOTES:

(100 MPH WIND ZONE)

- 1 2x8 RAFTERS @ 16" O.C. WITH 2X10 RIDGE, UN.O. 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 1.75×11.875 LVL VALLEY
- ) FALSE FRAME VALLEY ON 2×10 FLAT PLATE
- ) 2x6 RAFTERS @ 16" O.C. W/ 2x8 RIDGE, UNO. ) 2×10 RAFTERS @ 16" O.C. W/ 2×12 RIDGE, UNO. 8 EXTEND RIDGE 12" BEYOND INTERSECTION
- "SR" = SINGLE RAFTER - "DR" = DOUBLE RAFTER
- "TR" = TRIPLE RAFTER
- "RS" = ROOF SUPPORT FOR RAFTER SPLICE - "■" = (3) STUD OR 4x4 POST FOR ROOF SUPPORT
- FIR DOWN 2x8 RAFTERS OR USE 2x10 AT
- CATHEDRAL CEILINGS
- ATTACH VAULTED RAFTERS WITH HURRICANE CLIPS: SIMPSON "H-2.5A" OR EQUIVALENT

- INSTALL RAFTER TIES AND COLLAR TIES PER SECTION R802.3.1 OF THE 2012 NC RESIDENTIAL CODE.

> STRUCTURAL DESIGN BY: SOUTHERN ENGINEERS, P.A. 3716 BENSON DR., RALEIGH, NC 27609 LICENSE: C-1287, PHONE: 919-878-1617 PROJECT # 15-1329.1

- \* 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 a project permitted within one year from blaze of seal.
- Use of these plans constitutes approval of terms \$
   conditions as defined in the customer agreement.

## ROOF FRAMING PLAN

THESE PLANS MEET THE REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE '2012' EDITION.

ALL DIMENSIONS, SITE CONDITIONS & CODES ARE TO BE VERIFIED BEFORE CONSTR. BEGINS. ONCE CONSTR. HAS BEGUN MURPHY GARNOW DESIGN GROUP, INC. WILL NOT ASSUME ANY LIABILITY FOR ANY EXPENSES ASSOCIATED WITH ERRORS & OMMISIONS.

GARNOW

DRAWN BY: TWG 2-22-10

FILE NAME: 157-2-2625

REVISIONS

1-6-11 TWG PLAN

4-3-14 TWG PLAN

1-23-15 TWG ELEV.

4-17-15 TWG ELEV.

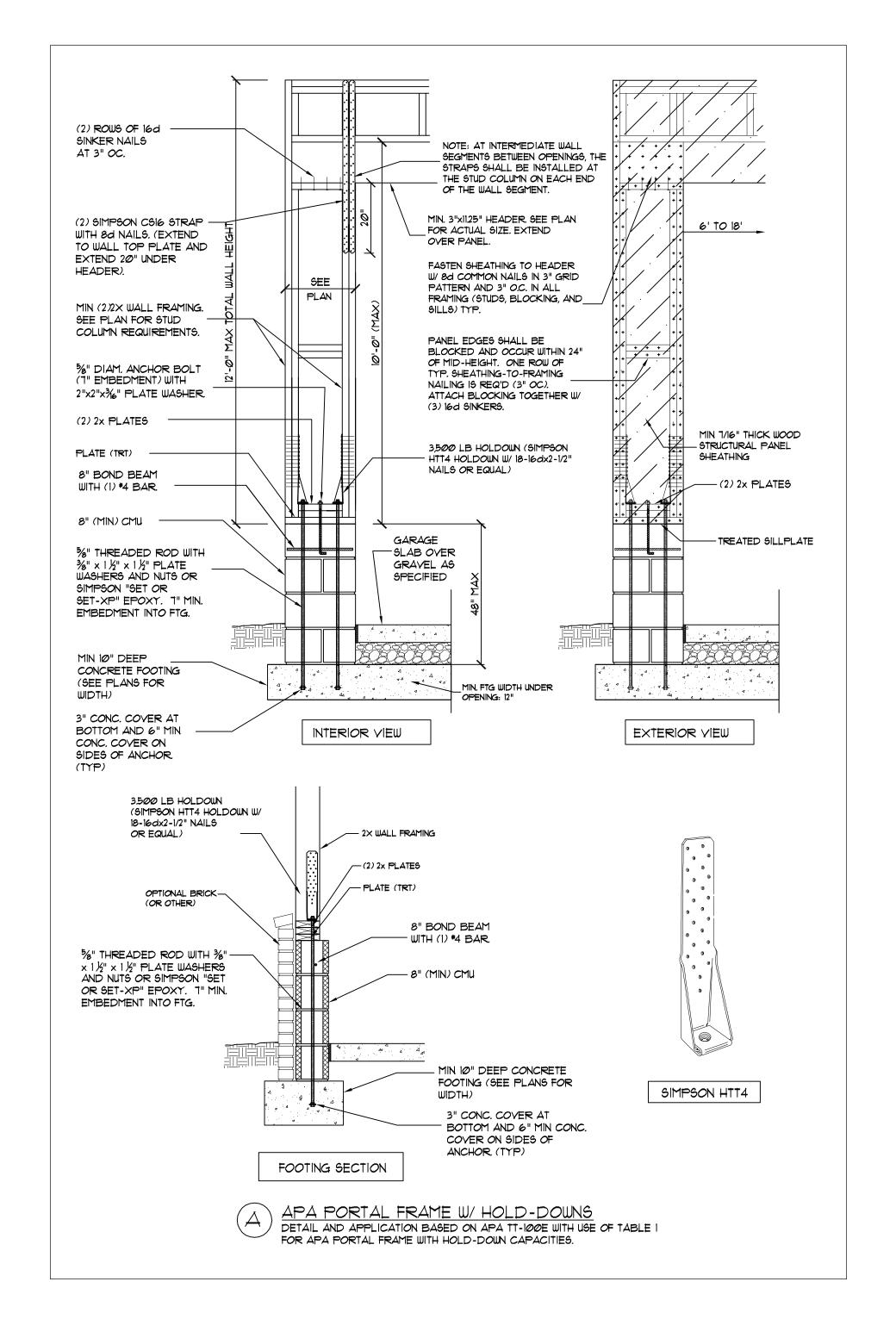
7-10-15 TWG ORIG. CHG.

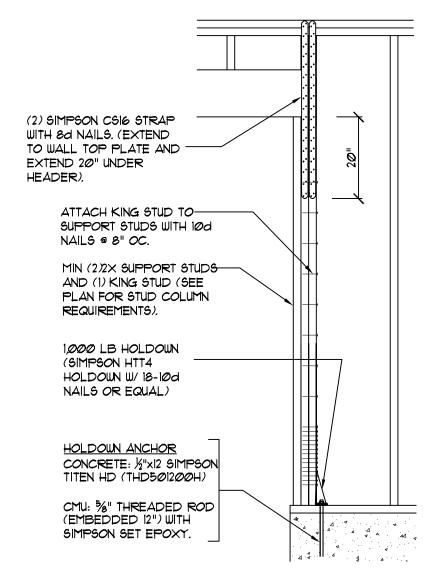
© COPYRIGHT 2015 MURPHY GARNOW DESIGN GROUP, INC. ALL RIGHTS RESERVED

HOUSE NAME: MACGREGOR IB-SL

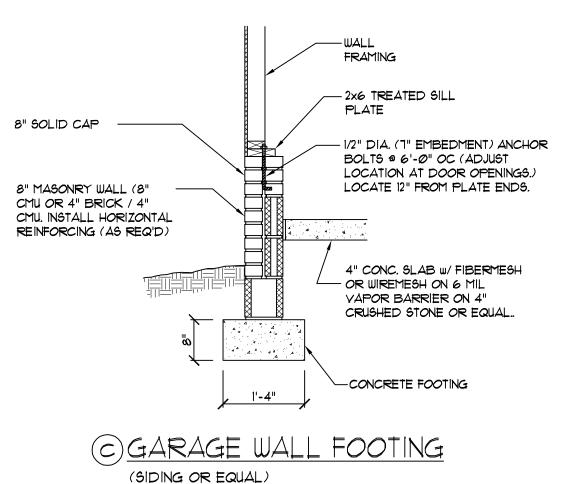
HOUSE NUMBER: 157-2-2625



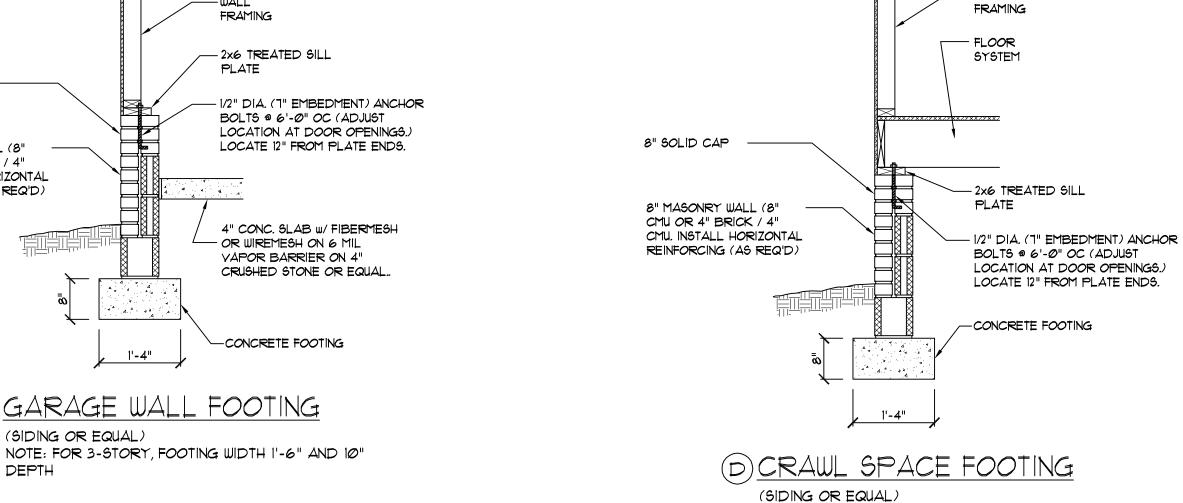


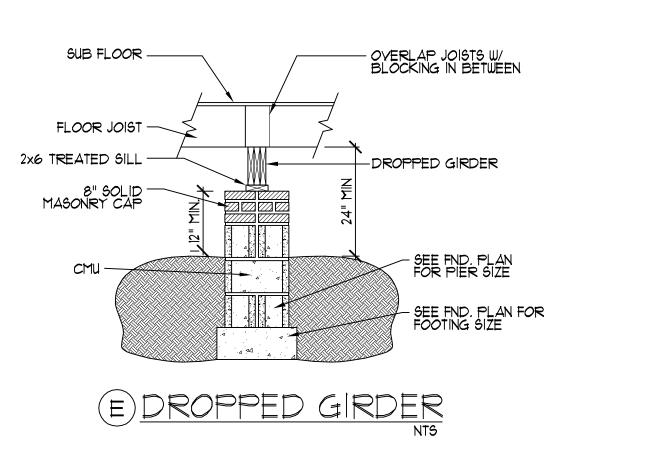


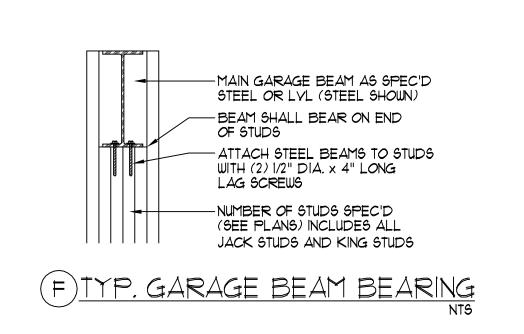
END CONDITION DETAIL (FOR USE WITH SINGLE APA PORTAL FRAME CONDITION) DETAIL AND APPLICATION BASED ON APA TT-100E WITH USE OF TABLE I FOR APA PORTAL FRAME WITH HOLD-DOWN CAPACITIES.



DEPTH







THIS DOCUMENT ORIGINALLY ISSUED AND

CERTIFIED DOCUMENT.

SEALED BY MARK MINSHEW, P.E.

THIS MEDIA SHALL NOT BE CONSIDERED A

N.C. \*33153 ON 7-28-15

STRUCTURAL DESIGN BY: SOUTHERN ENGINEERS, P.A. 3716 BENSON DR., RALEIGH, NC 27609 LICENSE: C-1287, PHONE: 919-878-1617 PROJECT # 15-1329.1 \* Engineers seal applies only to structural

NOTE: FOR 3-STORY, FOOTING WIDTH 1'-6" AND 10"

- 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 a project permitted within one year from date of seal. \* Use of these plans constitutes approval of terms \$

conditions as defined in the customer agreement.

STRUCTURAL DETAILS

ALL DIMENSIONS, SITE CONDITIONS & CODES ARE TO BE VERIFIED BEFORE CONSTR. BEGINS. ONCE CONSTR. HAS BEGUN MURPHY GARNOW DESIGN GROUP, INC. WILL NOT ASSUME ANY LIABILITY FOR ANY EXPENSES ASSOCIATED WITH ERRORS & OMMISIONS.

PESIGN GROUP, GARNOW MURPHY

> \_\_\_

DRAWN BY: TWG 2-22-10 FILE NAME: 157-2-2625 REVISIONS

7-6-11 TWG PLAN

4-3-14 TWG PLAN

1-23-15 TWG ELEV.

4-17-15 TWG ELEV.

7-10-15 TWG ORIG. CHG.

© COPYRIGHT 2015 MURPHY GARNOW DESIGN GROUP, INC. ALL RIGHTS RESERVED

HOUSE NAME: MACGREGOR IB-SL

> HOUSE NUMBER: 157-2-2625