

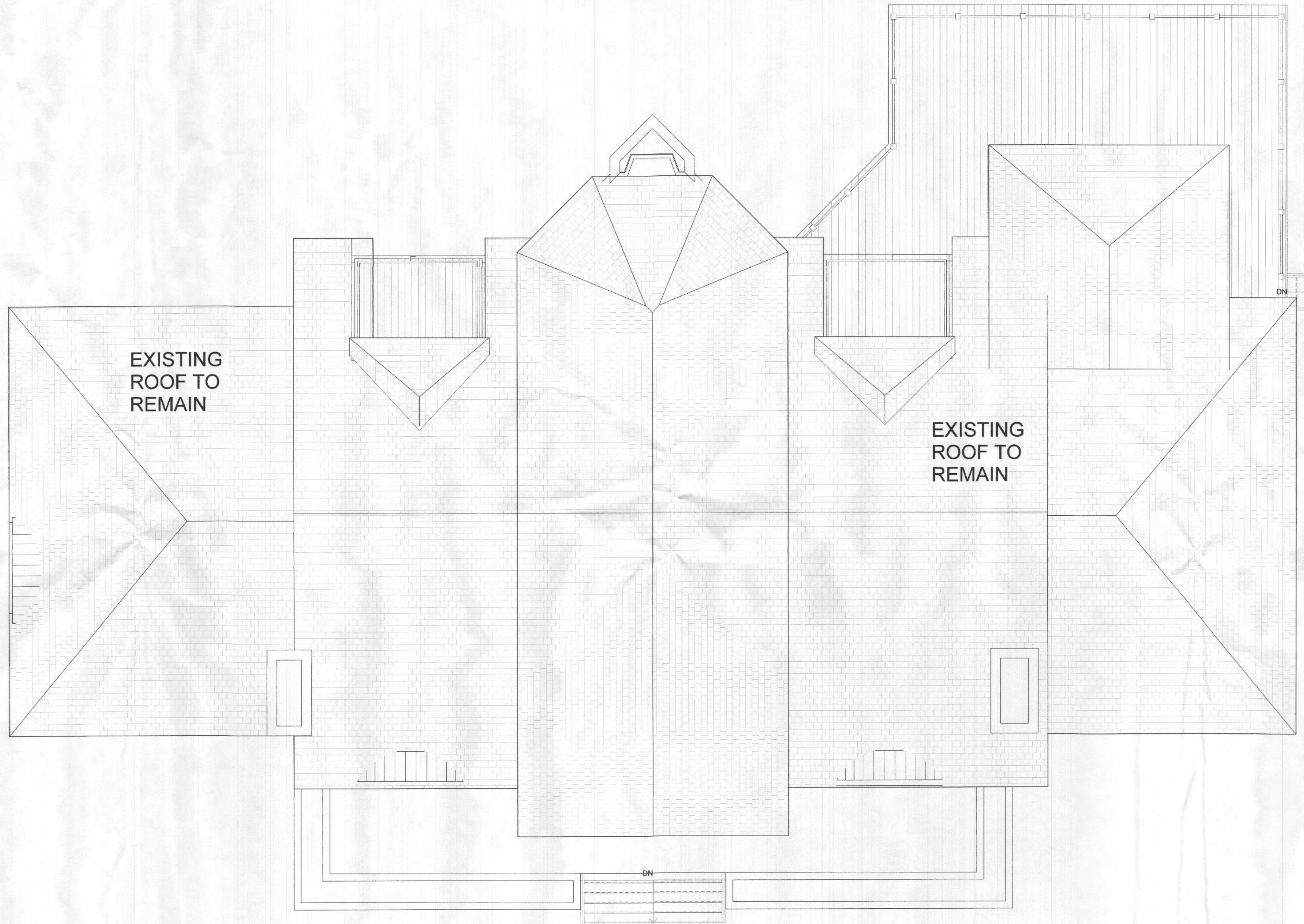


THE SHEPHERD COMPANY

Architecture,
Engineering and
Construction
Management

312 Marshall Avenue
Suite 1010 Laurel, MD 20707
U.S.A.
T: +1 (202) 848-8275

Written dimensions on these drawings shall have precedence over scale dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job and this office must be notified of any variation from the dimensions and conditions shown by these drawings.



INTERIOR RENOVATIONS
11085 GAITHER FARM ROAD,
ELLCOTT CITY, MD 21042

Issued	Date
Floor Plan	010/10/2
	1

PROFESSIONAL CERTIFICATION I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.

Permit Stamp

EXISTING ROOF PLAN

A-103

STRUCTURAL PACKAGE

CLIENT:- AKIN AJUWON

ADDRESS :- 11085 GAITHER FARM, ELLICOTT CITY, MD 21042

BUILDING CODES

THE GOVERNING CODE IS INTERNATIONAL RESIDENTIAL CODE (IRC)-2018 EDITION/INTERNATIONAL BUILDING IBC-2018 AND/OR LOCAL COUNTY CODE AMENDMENTS AND/OR ORDINANCES.

ANY REVISION INITIATED BY THE OWNER, GENERAL CONTRACTOR AND/OR THE SUBCONTRACTOR THAT DIRECTLY INFLUENCES OR CHANGES STRUCTURAL ELEMENTS INCLUDING, BUT NOT LIMITED TO FLOOR JOIST, BEAM OR HEADER SPANS, WALL HEIGHTS, BEAM OR HEADER SIZES, RELOCATION OF BEARING WALLS, FOOTING SIZES, ETC. AS INDICATED ON THESE DRAWINGS, SOIL & STRUCTURE CONSULTING, INC. SHALL BE NOTIFIED IN WRITING INDICATING THE PROPOSED CHANGES FOR REVIEW. ANY REQUIRED REVIEW, CALCULATION, AND/OR DRAWING MODIFICATION NECESSARY TO ACCURATELY REPRESENT THE PROPOSED CHANGES SHALL BE CHARGED AS AN ADDITIONAL SERVICE. THESE DRAWINGS ARE NOT TO BE SCALED FOR CONSTRUCTION PURPOSES. DIMENSIONS NOTED TAKE PRECEDENCE OVER SCALE.

NO INSPECTION(S) WILL BE MADE BY SOIL & STRUCTURE CONSULTING, INC. UNLESS A COUNTY APPROVED SET OF PLANS IS PRESENT AT THE JOB SITE WHERE REQUIRED BY LOCAL AUTHORITIES.

ALL DIMENSIONS SHOWN ARE TO FACE OF STUD (F.O.S.), UNLESS OTHERWISE NOTED. DIMENSIONAL ADJUSTMENTS MAY INCLUDE, BUT ARE NOT LIMITED TO: CENTER LINE (CL), FACE OF CONCRETE (F.O.C.) AND FACE OF MASONRY (F.O.M.)

COMMENCEMENT OF WORK BY THE CONTRACTOR AND/OR ANY SUBCONTRACTOR SHALL INDICATE A KNOWLEDGE AND ACCEPTANCE OF ALL CONDITIONS DESCRIBED IN THESE CONSTRUCTION DOCUMENTS WHICH COULD AFFECT THEIR WORK.

CONSTRUCTION CLASSIFICATION TYPE - 5B USE GROUP CLASSIFICATION - R-5

ALL 3", 3 1/2", AND 4" DIAMETER STEEL COLUMNS ARE DESIGNED TO OUTER DIAMETER MEASUREMENT, 11 GA. WITH A MIN. STEEL YIELD STRENGTH OF 36,000 PSI AND CONFORMING TO ASTM A513 STEEL.

ALL MECH., ELECTRICAL AND PLUMBING ARE TO BE INSTALLED PER IMC, IEC & IRC 2018 CODE.

THESE PLANS HAVE BEEN DESIGNED TO COMPLY WITH THE INTERNATIONAL RESIDENTIAL CODE 2018

DESIGN LOADS

GRAVITY LOAD

ROOF LIVE LOAD = 30 PSF
 ROOF DEAD LOAD = 17 PSF
 FLOOR DEAD LOAD = 10 PSF
 FLOOR LIVE LOAD = 30 PSF @ SLEEPING AREAS
 = 40 PSF @ ALL OTHERS

DECK/STAIR LIVE LOAD = 50 PSF
 DECK/STAIR DEAD LOAD = 10 PSF

GROUND SNOW LOAD (Pg) = 25 PSF
 EXPOSURE FACTOR (Ce) = 1.00
 THERMAL FACTOR (Ci) = 1.00
 IMPORTANCE FACTOR (I) = 1.00
 FLAT ROOF SNOW LOAD (Pt) = 21 PSF

SNOW DRIFT CALCULATIONS PER ASCE7-16.
 ALL LIVE LOADS AS PER TABLE 4-1, ASCE 7-16

ALLOWABLE DEFLECTION FACTOR FOR

ROOF / FLOOR / DECK
 LIVE LOAD = L/360
 TOTAL LOAD = L/240

WIND LOAD

FASTEST MILE WIND SPEED = 115 MPH (PER FIGURE 26.5-1, ASCE7-16)
 EXPOSURE = B

CONCRETE

ALL CONCRETE FOR FOOTINGS, FOUNDATION WALLS, RETAINING WALLS, AND FLOOR SLABS ON GRADE SHALL ATTAIN A MINIMUM 28-DAY ULTIMATE COMPRESSIVE STRENGTH AS FOLLOWS:

BASEMENT/FOUNDATION WALLS : 3,000 PSI FOOTINGS : 3,000 PSI
 BASEMENT SLABS : 3,000 PSI SLAB EXPOSED TO WEATHER : 3,500 PSI

ALL CONCRETE EXPOSED TO THE WEATHER AND SUBJECT TO FREEZING AND THAWING IN A MOIST WET CONDITION OR DEICING CHEMICALS SHALL BE AIR ENTRAINED, THE TOTAL AIR CONTENT (PERCENT BY VOLUME OF CONCRETE) SHALL NOT BE LESS THAN 5 PERCENT (5%) OR MORE THAN 7 PERCENT (7%) W/ f'c AT 28 DAYS : 3,500 PSI & MAXIMUM WATER CEMENT RATIO OF 0.45.

ALL CONSTRUCTION JOINTS SHALL BE ROUGHENED AND KEYS PROVIDED WHERE REQUIRED OR INDICATED ON THE DRAWINGS. CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE DRAWINGS, MAY BE PROPOSED BY THE CONTRACTOR. HOWEVER, THE LOCATIONS ARE SUBJECT TO REVIEW BY THE ARCHITECT AND/OR STRUCTURAL ENGINEER. ALL VERTICAL CONSTRUCTION, CONTROL AND CONTRACTION JOINTS SHALL LIE IN TRUE VERTICAL PLANE.

ALL FORMWORK AND PLACING OF CONCRETE SHALL BE PLUMB, LEVEL, AND SQUARE. THE STRUCTURAL ENGINEER SHALL REVIEW AND APPROVE ANY PROPOSED FORMWORK DESIGN DIFFERENT FROM INDUSTRY STANDARD PRACTICES.

FOUNDATIONS & FOUNDATION WALLS

STRUCTURAL CONCRETE FOOTINGS (INCLUDING RETAINING WALLS) ARE DESIGNED FOR 1500 PSF ALLOWABLE SOIL BEARING PRESSURE AS INDICATED ON THE DRAWINGS. CONCRETE FOOTINGS SHALL NOT BE POURED UNTIL THE ALLOWABLE SOIL BEARING PRESSURES ARE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER OR BUILDING INSPECTOR. IN ABSENCE OF SOIL REPORT, THE BASEMENT WALLS & RETAINING WALLS SHALL BE DESIGNED FOR 60 PCF LATERAL EARTH PRESSURE.

SPREAD FOOTINGS SHALL EXTEND MINIMUM 1'-0" INTO UNDISTURBED SOIL, OR SHALL BE FOUNDED IN GRANULAR FILL. FOOTINGS SHALL EXTEND MINIMUM 30" FROST DEPTH (OR 24" WHERE ALLOWED/APPLICABLE PER COUNTY/CITY REQUIREMENTS) BELOW THE EXTERIOR FINISH GRADE OR TO BEARING SOIL WHICHEVER IS GREATER. FINAL FOOTING ELEVATIONS TO BE VERIFIED BY THE GEOTECHNICAL ENGINEER. ELEVATIONS AT THE TOP OF FOOTINGS SHALL NOT BE HIGHER THAN THOSE INDICATED ON THE CIVIL, ARCHITECTURAL OR STRUCTURAL DRAWINGS.

REINFORCING STEEL

ALL REINFORCING STEEL SHALL BE ASTM A-615, GRADE 60. ALL REINFORCING BAR DIMENSIONS SHOWN ON THE DRAWINGS ARE TO THE CENTER LINE OF BARS, UNLESS OTHERWISE NOTED. ALL CONCRETE AND REINFORCING STEEL SHALL BE FURNISHED, FABRICATED AND ERECTED IN ACCORDANCE WITH ACI STANDARD BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE STRUCTURES, (ACI 318-14). REINFORCED STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315).

UNLESS OTHERWISE INDICATED ON THE DRAWINGS, THE CLEAR CONCRETE COVER PROVIDED FOR REINFORCEMENT SHALL BE:

- A. CAST AGAINST EARTH AND PERMANENTLY EXPOSED TO EARTH : 3"
- B. EXPOSED TO EARTH OR WEATHER #6 THROUGH #18 BARS : 2"
#5 BARS AND SMALLER : 1.5"
- C. NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND (SLABS AND WALLS) : 0.75"
- D. BEAMS, GIRDERS, COLUMNS, PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS : 1.5"

STEEL REINFORCING REQUIREMENTS IN CONCRETE FLOOR SLABS SHALL BE AS REQUIRED BY CODE AND/OR LOCAL JURISDICTIONS, OR PER SITE CONDITIONS.

STRUCTURAL LUMBER

STRUCTURAL LUMBER SHALL BE IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (NDS) 2018 EDITION, PUBLISHED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION. ALL STRUCTURAL FRAME MEMBERS SHALL BE ONE OF THE FOLLOWING MINIMUM VALUES. UNLESS OTHERWISE NOTED:

TYPE OF WOOD	Fb	Ft	Fv	Fc _⊥	Fc _∥	E	Emin.
HEM FIR #2	850	525	150	405	1300	1,300,000	470,000
SPF #1/#2	875	450	135	425	1150	1,400,000	510,000
SPF STUD GRADE	675	350	135	425	725	1,200,000	440,000
SP #2 (2" TO 4" WIDE)	1100	675	175	585	1450	1,400,000	510,000
SP #2 (5" TO 6" WIDE)	1000	600	175	565	1400	1,400,000	510,000
MICROLAM LVL GRADE = 2.0E	2600	-	285	750	2510	2,000,000	-
PARALLAM PSL GRADE = 2.0E	2900	-	290	750	2900	2,000,000	-

NOTATIONS

Fb ALLOWABLE BENDING IN psi
 Ft ALLOWABLE TENSION (parallel to grain) IN psi
 Fv ALLOWABLE SHEAR (parallel to grain) IN psi
 Fc_⊥ ALLOWABLE COMPRESSION (perpendicular to grain) IN psi
 Fc_∥ ALLOWABLE COMPRESSION (parallel to grain) IN psi
 E MODULUS OF ELASTICITY IN psi
 Emin. MODULUS OF ELASTICITY IN psi

PROVIDE 3/4" TONGUE AND GROOVE PLYWOOD (APA RATED STRUD-1-FLOOR) GLUED AND NAILED TO THE FLOOR JOISTS TO MEET THE AMERICAN PLYWOOD ASSOCIATION (APA) APPROVED GLUED FLOOR SYSTEM, UNLESS OTHERWISE SPECIFIED.

LUMBER EXPOSED TO THE ELEMENTS, INCLUDING BUT NOT LIMITED TO: POSTS, BEAMS, DECKING, DECK, FRAMING LEDGERS, ETC. SHALL BE PRESSURE TREATED PER IRC SECTION R317. ALL FASTENERS SHALL BE PER IRC SECTION R317.3.

REQUIRED POST SIZES FROM POINT LOADS AT GIRDER TRUSS BEAM AND/OR HEADER END LOCATIONS SHALL BE CONTINUOUS, BEARING ONTO BEAMS OR CONTINUOUS TO FOOTINGS AS INDICATED. PROVIDE SQUASH BLOCKS BETWEEN FLOOR FRAMING AS NECESSARY OR REQUIRED.

STRUCTURAL CONNECTORS INDICATED ON THESE DOCUMENTS SHALL BE PROVIDED BY SIMPSON STRONG-TIE COMPANY, INC. PROVIDE JOIST HANGERS AT EACH END OF ALL FLOOR JOISTS, AND/OR BEAMS FLUSH WITH ADJACENT BEAMS, HEADERS. PROVIDE COLUMN CAPS AND POST BASES AT ALL STRUCTURAL LOAD BEARING WOOD BEAMS, INCLUDING EXTERIOR DECKS.

STRUCTURAL MEMBERS INDICATED ARE REQUIRED MINIMUM SIZES AND MAY BE INCREASED TO ALIGN WITH ADJACENT FRAMING MEMBERS AS NECESSARY OR REQUIRED WITHOUT ADDITIONAL STRUCTURAL ENGINEERING AT THE GENERAL CONTRACTOR/OWNER'S DISCRETION.

STRUCTURAL LUMBER (CONTD.)

FLUSH BEAMS INDICATED MAY BE DROPPED AT THE GENERAL CONTRACTOR/OWNER'S DISCRETION. VERIFY AND COORDINATE WITH ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR COMPATIBILITY PRIOR TO INSTALLATION.

LAMINATED VENEER LUMBER (LVL) AND PARALLEL STRAND LUMBER (PSL) LEVEL BY WEYERHAEUSER IF THE SPECIFIED MATERIAL IS SUBSTITUTED WITH ANOTHER PRODUCT IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SUBSTITUTED PRODUCT STRUCTURALLY MEETS OR EXCEEDS THE ORIGINALLY SPECIFIED PRODUCT. NOTCHES IN THE TOP AND BOTTOM OF DIMENSIONAL LUMBER JOISTS SHALL NOT EXCEED 1/6 OF THE DEPTH OF THE JOIST, AND SHALL NOT BE LOCATED IN THE MIDDLE ONE THIRD (1/3) OF THE SPAN. NOTCHES AT THE JOIST ENDS SHALL NOT EXCEED 1/4 OF THE JOIST DEPTH. HOLES THROUGH THE JOISTS SHALL NOT BE WITHIN 2" OF THE TOP AND BOTTOM OF THE JOIST. THE HOLE DIAMETER SHALL NOT EXCEED 1/3 OF THE JOIST DEPTH.

ALL WOOD SHALL BE MINIMUM 6" ABOVE FINISH GRADE, OR SHALL BE PRESSURE TREATED.

STRUCTURAL STEEL

ALL STEEL SHALL BE ASTM, A-441 MINIMUM, Fy=50 KSI UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL CONNECTIONS SHALL BE WELDED OR BOLTED. SHOP AND FIELD FASTENERS SHALL BE ASTM A-325 HSB (HIGH STRENGTH BOLTS). IN FRICTION TYPE CONNECTIONS USE "TURN-OF-NUT" METHOD IN TIGHTENING ALL BOLTS. HOLES SHALL NOT BE CUT THROUGH BEAMS UNLESS INDICATED OR APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE STANDARD ANGLE WALL ANCHORS FOR BEAMS RESTING ON MASONRY.

STEEL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST AISC MANUAL. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:-

- WB AND SMALLER BEAMS : A36 (Fy = 36 KSI)
- OTHER BEAM AND COLUMNS : A572-GR50 (Fy = 50 KSI)
- STEEL PLATE, CHANNELS AND ANGLES : A36 (Fy = 36 KSI)
- STRUCTURAL PIPES AND TUBES : A500-GRADE "B" (Fy = 46 KSI)
- ANCHOR BOLTS : A307
- HIGH STRENGTH BOLTS : A325

BOLTED CONNECTIONS TO USE A325-TYPE N, HIGH STRENGTH BOLTS IN BEARING TYPE CONNECTIONS TIGHTENED TO A SNUG TIGHT CONDITION IN ACCORDANCE WITH RCSC SPECIFICATIONS.

BOLTS IN MOMENT CONNECTIONS AND WIND RESISTING FRAMES SHALL BE ASTM A325-TYPE SC (SLIP CRITICAL). SLIP CRITICAL CONNECTIONS SHALL HAVE CONTACT SURFACES MEETING CLASS A SURFACE CONDITIONS BOLTS SHALL BE TENSIONED.

SHOP CONNECTIONS TO BE WELDED OR BOLTED. FIELD CONNECTIONS TO BE BOLTED UNLESS OTHERWISE SHOWN. BOLT HOLES TO BE STANDARD ROUND HOLES (d+1/16") UNLESS OTHERWISE NOTED. SHORT SLOTS SHALL BE PERMITTED NORMAL TO THE LOAD DIRECTION IN SLIP CRITICAL AND BEARING TYPE CONNECTIONS AS PER AISC REQUIREMENTS.

ALL WELDING WORK SHALL BE PERFORMED PER SPECIFICATIONS AND GUIDELINES OF AMERICAN WELDING SOCIETY.

NAILING SCHEDULE

REFER IRC 2018, TABLE R602.3(1) FOR FASTENER SCHEDULE

HANGER SCHEDULE

HANGER SCHEDULE - MANUFACTURER: SIMPSON STRONGTIE

TOP MOUNT HANGER (SEE NOTE 1)		FACE MOUNT HANGER (SEE NOTE 1)	
JOIST/BEAM SIZE	HANGER TYPE	JOIST/BEAM SIZE	HANGER TYPE
ALL SAWN LUMBER U.N.O.	SIMPSON HUTF	ALL SAWN LUMBER U.N.O.	SIMPSON HU
2x6 THRU 2x16	SIMPSON LB	2x6 THRU 2x10	SIMPSON LUS
2-2x6 THRU 2-2x14	SIMPSON HUSTF	2-2x6 THRU 2-2x10	SIMPSON LUS
4x6 THRU 4x14	SIMPSON HUSTF	4x6 THRU 4x16	SIMPSON HHUS
ALL 1-JOIST U.N.O.	SIMPSON LBV	ALL 1-JOIST U.N.O.	SIMPSON MIU
SINGLE 1-JOIST TO WOOD BEAM 3/8" THRU 16 DEEP	SIMPSON ITS	SINGLE 1-JOIST TO WOOD BEAM 3/8" THRU 16 DEEP	SIMPSON IUS
ALL PSL/LVL/LSL BEAMS U.N.O.	SIMPSON HGLTV	ALL PSL/LVL/LSL BEAMS U.N.O.	SIMPSON HGU
3/8" AND 5/4" PSL/LVL/LSL UP TO 1 1/8" DEEP	SIMPSON GLTV	3/8" AND 5/4" PSL/LVL/LSL UP TO 1 1/8" DEEP	SIMPSON MGU

NOTES:

- PROVIDE TOP MOUNT HANGERS. FACE MOUNT HANGERS SHALL BE ALLOWED ONLY WHERE SPECIFICALLY INDICATED ON THE PLANS OR DETAILS
- PROVIDE SKEWED, SLOPED HANGERS AS REQ'D.

DRAWING INDEX

SHEET NO.	DESCRIPTION
S000	PROJECT NOTES
S001	PARTIAL REMEDIAL FIRST FLOOR FRAMING & FOUNDATION PLAN
S002	PARTIAL REMEDIAL SECOND FLOOR FRAMING PLAN
S003	PARTIAL REMEDIAL ROOF FRAMING PLAN
S004	DETAILS



I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO 36980 EXPIRATION DATE 03-16-2023

REVISIONS	BY

1888 PRESTON WHITE DRIVE, SUITE 104
 RESTON, VA 20191
 (703) 991-8911 (703) 995-4860 FAX
 www.sollandstructure.com

SOIL & STRUCTURE CONSULTING, INC.
 STRUCTURAL - GEOTECHNICAL - CIVIL

ADDRESS:-
 11085 GAITHER FARM,
 ELLICOTT CITY, MD 21042

CLIENT:-
 AKIN AJUWON

PROJECT NOTES

DATE : 25 AUG 2021
 SCALE : AS NOTED
 DRAWN : ANDY
 JOB : #2792
 SHEET :

S000

