

RESIDENCE RENOVATION AND ADITION
16119 PATAPSCO OVERLOOK ▪ MT. AIRY ▪ MD ▪ 21771

3 BROTHERS

HOME IMPROVEMENTS

LCC

THESE DRAWINGS WERE DEVELOPED BASED

ON DRAWINGS PROVIDED BY OWNER AND

PREPARED BY JB HOME DESIGN, LLC.



Revisions

Date

Client:

Location:

16119 Patapsco Overlook
Mt Airy, Maryland

Project:

RESIDENCE RENOVATION
AND ADDITION

Drawing Title:

COVER SHEET

Drawn by:

Project No.

031522-A

04/10/2022

04/10/2022 PERMIT SET

Drawing No:

C001

CODE ANALYSIS

CODE: 2018 INTERNATIONAL RESIDENTIAL CODE (IRC)

USE GROUP/MIXED USE

R3

TYPE OF CONSTRUCTION

5B

HEIGHT/No. OF STORIES

27'-0" HIGH
2 STORY

HOUSE TYPE

2 STORY COLONIAL

COVERED MALL (Y/N)

NO

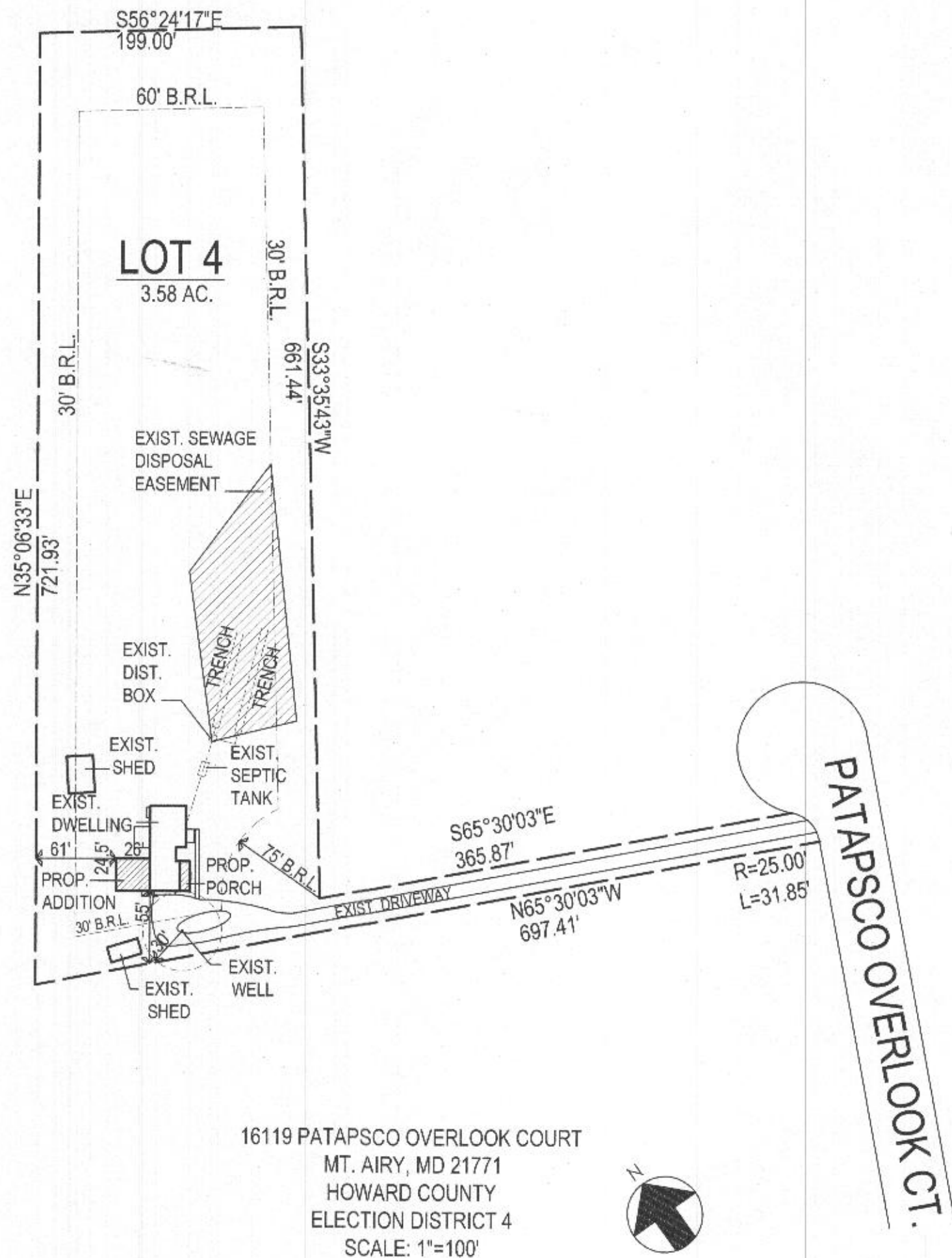
FULLY SPRINKLED (Y/N)

YES

FLOOR AREA TABULATION

	EXISTING	ADDITION
BASEMENT	1,085.05 SQ.FT.	637.00 SQ.FT.
FIRST FLOOR	1,527.35 SQ.FT.	637.00 SQ.FT.
SECOND FLOOR	1,546.65 SQ.FT.	711.50 SQ.FT.
TOTAL AREA	4,159.05 SQ.FT.	1,985.50 SQ.FT.
TOTAL AREA	6,144.55 Q.FT	

SITE PLAN



16119 PATAPSCO OVERLOOK COURT
MT. AIRY, MD 21771
HOWARD COUNTY
ELECTION DISTRICT 4
SCALE: 1"=100'

GENERAL NOTES

- EMERGENCY EGRESS WINDOW SIZES TO CONFORM WITH SECTION R310.2 OF THE 2018 IRC. MAX. SILL HEIGHT OF EMERGENCY EGRESS WINDOWS TO BE 44" A.F.F. (ABOVE FINISH FLOOR).
- MAXIMUM RISER HEIGHT SHALL BE 7 3/4" AND MAX. TREAD 10" FOR ALL STAIRWAYS. HANDRAIL PROJECTION 3 1/2" MAXIMUM PER SECTION R311.7 2018 IRC
- ROOF SHINGLES TO BE INSTALLED PER SECTION R904 2018 IRC
- FIREBLOCKING SHALL BE PROVIDED PER SECTION R302.11 2018 IRC
- ROOF VENTILATION SHALL BE INSTALLED PER SECTION R906 2018 IRC
- GUARDRAIL HEIGHTS TO BE 36" MIN. ACCORDING WITH SECTION R312.1 2018 IRC
- ALL GLAZED AREAS SUBJECT TO HUMAN IMPACT SHALL BE SAFETY GLASS IN CONFORMANCE WITH SECTION R308 OF THE 2018 IRC
- ALL FIREPLACES TO BE U.L. RATED AND INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS AND SECTION G432 (602) 2018 IRC
- ALL FOOTINGS TO EXTENDED AT LEAST 30 INCHES BELOW FINISH GRADE PER 2018 IRC CHAPTER 4
- ALL FRAME BEARING WALLS TO CONFORM WITH SECTION R602 2018 IRC
- PROVIDE WALL BRACING IN ACCORDANCE WITH SECTION R602.10 2018 IRC.
- PROVIDE FOUNDATION ANCHORAGE IN ACCORDANCE WITH SECTION 602.11 2018 IRC.
- SMOKE ALARMS SHALL BE INSTALLED PER SECTION R314, 2018 IRC.
- CARBON MONOXIDE ALARMS SHALL BE INSTALLED PER SECTION R315, 2018 IRC.

ELECTRICAL NOTES

- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
- CIRCUIT NUMBERS SHOWN ARE FOR IDENTIFICATION ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO BALANCE ALL PHASES IN THE PANELBOARD. (BALANCE LOAD).
- SEE MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL MONITORS AND OTHER EQUIPMENT BEFORE ROUGH-IN.
- WHERE WIRE SIZES ARE INDICATED ON THE PLANS FOR INDIVIDUAL CIRCUITS, THE INDICATED WIRE SIZE SHALL APPLY TO THE COMPLETE CIRCUIT UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL VERIFY ALL EQUIPMENT NOT FURNISHED UNDER THIS SECTION BEFORE ROUGH-IN.
- SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF BUILDING EQUIPMENT BEFORE ROUGH-IN.
- CONDUIT AND/OR CABLE RUNS ARE SHOWN SCHEMATICALLY. BUILDING CONDITION WILL DETERMINE ACTUAL RUNS.
- MODULAR METERING EQUIPMENT WHEN USED IN CONJUNCTION WITH STANDARD 10K CIRCUIT BREAKER IN BUILDING LOAD CENTERS, SHALL BE SERIES RATED FOR MINIMUM 22K RMS SYMMETRICAL AMPERES.
- ALL JUNCTION BOXES SHALL BE OF CODED GAUGE AND OF THE SIZE, REQUIRED TO ACCOMMODATE CONSTRUCTION SHOWN.
- THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTION BEFORE ROUGH-IN.
- THE CONTRACTOR SHALL VERIFY WITH THE MANUFACTURER THE EXACT LOCATION OF CONNECTION BOX TO MECHANICAL EQUIPMENT BEFORE ROUGH-IN.
- THE CONTRACTOR SHALL EXTEND WIRING FROM THE JUNCTION BOX, RECEPTACLE, ETC., AND MAKE FINAL CONNECTION TO ALL BUILDING ELECTRICAL CONNECTIONS.
- ALL WORKMANSHIP, MATERIALS AND EQUIPMENT SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF CONSTRUCTION BY THE OWNER.
- LOAD CENTER BE THE CIRCUIT BREAKER TYPE AS MANUFACTURED BY SQUARE D CO., CUTLER HAMMER OR EQUAL.
- THE CONTRACTOR SHALL VISIT EXISTING SITE AND DETERMINE WHICH MATERIALS EFFECT HIS BID
- THE CONTRACTOR SHALL RESTORE ALL SYSTEMS AND AREAS DISTURBED BY HIS WORK TO THE SATISFACTION OF THE OWNER AND DEVELOPER.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND CERTIFICATIONS OF INSPECTIONS INCLUDING THE COST OF SAME IN HIS CONTRACT.
- ALL NEW MATERIALS FURNISHED FOR THIS PROJECT SHALL BE LISTED BY THE UNDERWRITERS LABORATORIES, INC.
- ALL PHOTOCELLS SHALL BE WEATHERPROOFED, SURFACED MOUNTED WITH CORROSION PROOF PLATE AND SHALL BE MANUFACTURED BY TORX OR SIMILAR.
- THE CONTRACTOR MUST ASSURE EQUIPMENT GROUNDING SYSTEM CONTINUITY.
- THERMOSTAT WIRING SHALL BE AS PER DIAGRAM BY UNIT MANUFACTURER. SEE MECHANICAL PLAN FOR EXACT LOCATION.
- ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, AND OTHER RULES AND REGULATIONS OF THE LOCAL ELECTRICAL AND BUILDING CODES.

MEP NOTES

23. ALL WIRING SHALL BE "BX" WITH COPPER GROUND.

24. OUTLETS MOUNTED ON COMMON WALL SHALL NOT BE MOUNTED BACK TO BACK. THEY SHALL BE STAGGERED TO PREVENT SOUND TRANSMISSION.

ELECTRICAL REQUIREMENTS

PANEL BOARD CLEARANCE - 36" DEPTH, 30" WIDTH, CLEAR FLOOR SPACE.

OUTLETS REQUIRED WITHIN 6'-0" EACH SIDE OF ALL DOORS AND OPENINGS, AND 12'-0" THEREAFTER, ON ANY WALL 2'-0" LONG AND LONGER.

FOR WETBARS, ALL KITCHEN COUNTERS, GARAGES AND UNFINISHED AREAS GFCI RECEPTACLES REQUIRED IN ALL BATHROOMS, COUNTER TOP SURFACE.

AT LEAST ONE WALL SWITCH CONTROLLED LIGHTING OUTLET FOR EVERY HABITABLE ROOM, BATHROOM, AND HALLWAY.

ALL STAIRS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE OF AT 850 LUMENS, WHICH WILL FULLY ILLUMINATE ALL TREADS AND LANDING.

LIGHT ACTIVATION-CONTROLS FOR INTERIOR STAIRWAY LIGHTING SHALL BE ACCESSIBLE AT THE TOP AND BOTTOM OF EACH STAIR WITHOUT TRAVERSING ANY STEP OF THE STAIR.

ANY OUTLETS BOXES ARE TO BE 120V, 20 AMP UNLESS OTHERWISE SPECIFIED.

MECHANICAL NOTES

1. FURNISH ALL LABOR, MATERIALS, FIXTURES EQUIPMENT AND SERVICES NECESSARY FOR THE INSTALLATION OF A COMPLETE AND PROPERLY FUNCTIONING H.V.A.C. SYSTEM, PLUMBING SYSTEM, AND ELECTRICAL SYSTEM.

2. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND REGULATIONS, CONSIDERED AS MINIMUM REQUIREMENTS.

3. APPLY FOR AND PAY FOR ALL PERMITS AND CONNECTION FEES REQUIRED FOR THE WORK.

4. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE WORK TO BE DONE AND SHALL EXAMINE THE SITE AND CONSIDER THE CONDITIONS UNDER WHICH HE WILL BE OBLIGED TO OPERATE IN THE PERFORMANCE OF THE CONTRACTED WORK. NO ALLOWANCES SHALL BE MADE SUBSEQUENTLY IN THIS CONNECTION, FOR ANY ERRORS THROUGH NEGLIGENCE ON HIS PART. THE CONTRACTOR IS HEREBY ADVISED THAT HE WILL BE REQUIRED TO OBSERVE ALL RECOMMENDED PRACTICES FOR FIRE AND SAFETY PRECAUTIONS FOR THE PROTECTION OF THE FACILITY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LOCATIONS AND CLEARANCES AND COORDINATE WORK WITH ALL OTHER TRADES PRIOR TO STARTING OF WORK.

5. FOR OTHER DETAILS, THE ARCHITECTURE, STRUCTURAL, HVAC, PLUMBING, ELECTRICAL PLANS AND EXISTING CONSTRUCTION SHALL BE FOLLOWED AND ALL WORK PERFORMED UNDER THIS SPECIFICATION SHALL BE NEATLY FITTED THERETO.

6. ALL DUCTWORK SHALL BE FABRICATED FROM FIELD TAKEN DIMENSIONS AND NOT FROM DRAWINGS. PRIOR TO DUCT FABRICATION, CEILING CLEARANCES SHALL BE VERIFIED WITH ALL ELECTRICAL PLUMBING AND ARCHITECTURAL WORKS.

7. SUBMIT SIX COPIES OF EACH SHOP DRAWINGS FOR THE FOLLOWING: HIGH EFFICIENCY FURNACE, SPLIT SYSTEM COOLING COILS, AIR COOLED CONDENSING UNIT.

8. THERMOSTAT, GRILLES, REGISTERS, DUCTS, TRIMS, PIPES, JOINING METHODS, WATER HEATER, GUY GRAY UNIT, FLOOR DRAINS, BREAKER PANEL, CIRCUIT BREAKERS, SWITCHES, LUMINAIRES, MOTION DETECTORS, DISCONNECT SWITCHES AND OUTLETS.

MECHANICAL REQUIREMENTS

DOOR ACCESS TO WATER HEATER AND/OR FURNACE SHALL BE LARGE ENOUGH TO REMOVE EQUIPMENT BUT NOT LESS THAN 20" WIDE.

UNOBSTRUCTED WORKING SPACE NOT LESS THAN 30" REQ'D.

BATHROOM EXHAUST FANS SHALL PRODUCE AN AIR EXCHANGE EVERY 12 MINUTE AND SHALL BE VENTED DIRECTLY TO THE OUTSIDE COMBUSTION AIR REQUIRED FOR FUEL BURNING APPLIANCES, 50 CUBIC FEET PER 1000 BTU/H, 2 PERMANENT OPENINGS TO ADJACENT SPACES, ONE LOCATED WITH 12" OF CEILING AND ONE 12" FROM FLOOR. EACH OPENINGS SHOULD HAVE FREE AREA EQUAL TO A MIN. OF 1 SQ. IN. PER 100 SQ. IN.

BTU/H RATING OF ALL APPLIANCES, BUT NO LESS THAN 100 SQ. IN. COMBUSTION AIR CAN NOT BE RECEIVED FROM BEDROOMS, BATHROOMS AND TOILET ROOMS.

UNVENTED ARE NOT PERMITTED IN BEDROOMS GAS LOG INSTALLATION INSTRUCTIONS FOR PREFABRICATED FIREPLACES MUST BE MADE AVAILABLE TO THE INSPECTOR.

INFILTRATION CONTROL:

1. EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES, OPENINGS BETWEEN WALLS AND FOUNDATIONS, BETWEEN WALLS AND ROOF AND BETWEEN WALL PANELS, OPENINGS AT PENETRATIONS OF UTILITY SERVICES THRU WALLS, FLOORS, ROOFS AND ALL OTHER SUCH OPENINGS IN THE BUILDING ENVELOPE, INCLUDING ACCESS PANELS INTO UNHEATED SPACES, SHALL BE SEALED, CAULKED, GASKETED OR WEATHER-STRIPPED TO LIMIT AIR INFILTRATION.

2. ALL EXTERIOR DOORS, OTHER THAN FIRE-RATED DOORS, SHALL BE DESIGNED TO LIMIT AIR INFILTRATION AROUND THEIR PERIMETER WHEN IN CLOSED POSITION. DOORS BETWEEN RESIDENCE AND GARAGE ARE NOT CONSIDERED FIRE-RATED AND MUST MEET THE ABOVE REQUIREMENTS.

3. ALL EXTERIOR WINDOWS SHALL BE DESIGNED TO ADMIT AIR INFILTRATION INTO OR FROM THE BUILDING ENVELOPE WHICH SHALL BE SUBSTANTIATED BY TESTING STANDARD ASTM E283-73. SITE BUILT AND MILLWORK SHOP MADE WOODEN SASH ARE EXEMPT FROM TESTING BUT SHALL BE WEATHER-STRIPPED, CAULKED AND MORE TIGHTLY FITTING.

PLUMBING NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE TO THE LOCAL PLUMBING CODE.

2. THE PROVISIONS OF THE CODE SHALL APPLY TO THE ERECTION, INSTALLATION, ALTERATION, REPAIRS, HEALTH, PROPERTY AND PUBLIC WELFARE REGULATING AND CONTROLLING THE DESIGN, CONSTRUCTION, INSTALLATION QUALITY OF MATERIALS, LOCATION, OPERATION AND MAINTENANCE OR USE OF PLUMBING EQUIPMENT AND SYSTEMS.

3. ALL PLUMBING SYSTEMS, MATERIALS AND APPURTENANCES, BOTH EXISTING AND NEW, AND ALL PART THEREOF SHALL BE MAINTAINED IN PROPER CONDITION IN ACCORDANCE WITH THE ORIGINAL DESIGN IN A SAFE AND SANITARY CONDITION. ALL DEVICES OR SAFEGUARDS REQUIRED BY THIS CODE SHALL BE MAINTAINED IN COMPLIANCE WITH THE CODE EDITION UNDER WHICH INSTALLED. THE OWNER OR THE OWNERS DESIGNATED AGENT SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF PLUMBING SYSTEMS, TO DETERMINE COMPLIANCE WITH THIS PROVISION, THE CODE OFFICIAL SHALL HAVE THE AUTHORITY TO REQUIRE ANY PLUMBING SYSTEM TO BE REINSPECTED.

4. MINOR ADDITIONS, ALTERATIONS, RENOVATIONS AND REPAIRS TO EXISTING PLUMBING SYSTEMS SHALL BE PERMITTED IN THE SAME MANNER AND ARRANGEMENT AS IN THE EXISTING SYSTEM, PROVIDED THAT SUCH REPAIRS OR REPLACEMENT ARE NOT HAZARDOUS AND ARE NOT APPROVED.

5. FINAL INSPECTION SHALL BE MADE AFTER THE BUILDING IS COMPLETE. ALL PLUMBING FIXTURES ARE IN PLACE AND PROPERLY CONNECTED, AND THE STRUCTURE IS READY FOR OCCUPANCY. THE HOLDER OF THE PLUMBING SHALL BE RESPONSIBLE FOR THE SCHEDULING OF SUCH INSPECTIONS.

PLUMBING REQUIREMENTS

PLUMBING FIXTURE CLEARANCE:
LAVATORY -21" IN FRONT
WATER CLOSET -18" CENTER TO WALL
WATER CLOSET -21" IN FRONT
SHOWER MIN. SIZE -30"x30"
SHOWER -24" IN FRONT OF OPENING

SHOWERS AND COMBINATION BATHTUB/SHOWER VALVES SHALL BE EQUIPPED WITH PRESSURE-BALANCE THERMOSTATIC MIXING OR COMBINATION PRESSURE-BALANCE/THERMOSTATIC MIXING VALVES WITH HIGH LIMIT STOPS SET AT 120 DEGREES F.

LIST OF DRAWINGS

C001	COVER SHEET
C002	STRUCTURAL NOTES
A001	EXISTING AND DEMO FLOOR PLANS AND ELEVATIONS
A002	FOUNDATION PLANS
A003	FLOOR PLAN
A004	ELEVATION
A005	SECTIONS
A006	THERMAL PLAN
WB001	WALL BRACING
WB002	WALL BRACING

1. GENERAL

A. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE FOLLOWING CODE:IRC 2018; AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES ORDINANCES AND REGULATIONS

B. DESIGN LOADS:

	LIVE LOADS	DEAD LOADS	TOTAL LOADS
ROOF-TRUSSES	30 PSF(SNOW)	7 PSF TOP & 10 PSF BOTTOM	47 PSF
-RAFTERS	30 PSF	12 PSF	42 PSF
SLEEPING ROOMS	40 PSF	10 PSF	50 PSF
OTHER FLOORS	40 PSF	10 PSF	50 PSF
DECKS	40 PSF	50 PSF	100 PSF
GARAGE FLOORS	50 PSF	10 PSF	50 PSF
STAIRS	40 PSF	10 PSF	50 PSF
WIND LOAD:	20 PSF MINIMUM, 115 MPH		
SNOW LOAD	30 PSF		
BACKFILL:	60 PSF EQUIVALENT, UNLESS NOTED OTHERWISE		

MECHANICAL UNITS:

MECHANICAL UNITS AND ANY OTHER EQUIPMENT WITH WEIGHTS SHOWN IN PLAN AND SUPPORTED BY THE STRUCTURE WERE CONSIDERED IN THE DESIGN OF THE STRUCTURE. ANY ADDITIONAL EQUIPMENT NOT SHOWN ON STRUCTURAL DRAWINGS AND HAVING WEIGHT IN EXCESS OF 200 POUNDS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

C. CONTRACTOR SHALL REVIEW & VERIFY ALL FIELD CONDITIONS, DIMENTIONS AND CONTRACT DOCUMENTS PRIOR TO COMMENCING WORK AND SHALL NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR OMISSIONS BEFORE PROCEEDING WITH WORK.

D. THE STRUCTURAL INTEGRITY OF THE BUILDINGS IS DEPENDENT UPON COMPLETION ACCORDING TO PLANS AND SPECIFICATIONS. THE STRUCTURAL ENGINEER ASSUME NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION. THE METHOD OF CONSTRUCTION AND SEQUENCE OF OPERATIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL SUPPLY ANY NECESSARY SHORING BRACING, GUYS, ETC. TO PROPERLY BRACE THE STRUCTURE AGAINST WIND, DEAD AND LIVE LOADS UNTIL THE BUILDING IS COMPLETED ACCORDING TO THE PLANS AND SPECIFICATIONS. CONTRACTOR SHALL NOT PLACE BACK-FILL AGAINST BASEMENT WALLS UNTIL THE FLOOR SYSTEM IS COMPLETELY INSTALLED OR CONTRACTOR HAS PROVIDED ADEQUATE SHORING AND BRACING. ANY QUESTIONS REGARDING TEMPORARY BRACING REQUIREMENTS SHOULD BE FORWARDED TO A STRUCTURAL ENGINEER FOR REVIEW.

E. DO NOT FABRICATE PRIOR TO SHOP DRAWINGS. REVIEW IS LIMITED TO CONFORMANCE WITH THE DESIGN CONCEPT. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR FOR COMPATIBILITY OF ARCHITECTURAL AND STRUCTURAL REQUIREMENTS. NOTIFY ARCHITECT ENGINEER OF ANY CONFLICT PRIOR TO FABRICATION.

F. TRUSS MANUFACTURER TO SUPPLY CONNECTION AND BEARING DETAILS, BRIDGING AND BRACING DETAILS, ERECTION DRAWINGS, NORMAL DIMENSIONS, TRUSS CONFIGURATION, LUMBER GRADE AND SPECIES, AND MAGNITUDES OF FORCES IN ALL MEMBERS. ALL PREFAB TRUSS SHOP-DRAWINGS TO BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS TO BE CONSTRUCTED. THE TRUSS MANUFACTURER MUST SUPPLY ALL PREFABRICATED METAL CONNECTION AND ANCHORAGE HARDWARE AS REQUIRED FOR ALL TRUSSES AND GIRDER TRUSSES, OR SHALL SPECIFY A PREFABRICATED METAL CONNECTOR, IC80 APPROVED, AS MANUFACTURED BY "SIMPSON STRONG THE COMPANY, INC". OR EQUIVALENT.

2. SITE WORKS

A. FOOTING DESIGN IS BASED ON THE FOLLOWING CONDITIONS:
SOIL BEARING CAPACITY: MINIMUM ASSUMED 1,500 PSF, FIELD VERIFY UNDER ALL FOOTING AND SLABS ON GRADE.
WATER TABLE: 2'-0" (MIN). BELOW BOTTOM OF ALL CONCRETE SLABS & FOOTINGS.
SOILS: FOOTINGS, FOUNDATION WALLS & SLABS SHALL NOT BE PLACED ON OR IN MARINE CLAY, PEAT OR OTHER ORGANIC MATERIALS.

B. ALL FOOTINGS SHALL PROJECT AT LEAST 1'-0" INTO UNDISTURBED NATURAL SOIL OR COMPACTED STRUCTURAL FILL. BOTTOM OF FOOTING SHALL EXTEND A MINIMUM OF 2'-6" BELOW FINISH GRADE, OR TO FROST LINE PER LOCAL JURISDICTION. DO NOT PLACE FOOTINGS ON WET OR FROZEN SOIL. WHERE REQUIRED, STEP FOOTINGS IN A RATIO OF 2 HORIZONTAL TO 1 VERTICAL.

C. FOOTING EXCAVATIONS SHALL BE INSPECTED BY THE BUILDING OFFICIAL PRIOR TO POURING CONCRETE.

D. PROVIDE 4" MIN. DRAINTILE AT BOTTOM OF ALL EXTERIOR FOOTINGS AT BASEMENT WALLS. TILE TO BE SET ON 2" GRAVEL BED WITH 6"-8" GRAVEL COVER AND SHOULD DRAIN TO DAYLIGHT OR SUMP PUMP. PROVIDE 2" DRAINTILE AT INTERIOR OF FOOTING AND BLEEDER PIPES THROUGH FOOTING IF REQUIRED BY GEOTECHINAL ENGINEER TO DRAIN WATER UNDER SLAB.

E. PROVIDE FREE DRAINING, GRANULAR BACKFILL WITH A MINIMUM EQUIVALENT FLUID PRESSURE= 60 PSF PER FOOT OF DEPTH AGAINST BASEMENT & RETAINING WALLS. IF BACK-FILL PRESSURE EXCEEDS 60 PSF, THEN WALL MUST BE DESIGNED FOR ACTUAL PRESSURES BY STRUCTURAL ENGINEER.

3. CONCRETE/ FOUNDATIONS

A. ALL REINFORCED CONCRETE TO BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE ACI-00. ALL PLAIN CONCRETE TO CONFORM TO ACI-00 AND ACI-00 GUIDE TO RESIDENTIAL CAST-IN-PLACE CONCRETE CONSTRUCTION.

B. MINIMUM SPECIFIED COMPRESSIVE STRENGHT: F_c @ 28 DAYS.

LOCATION OF CONCRETE	MIN COMP. STRENGTH (F _c)	SLUMP (IN).
BASEMENT WALLS & FND NOT EXPOSED TO WEATHER	2500 PSI (1)	4 + 1
BASEMENTS SLABS & INTERIOR SLABS ON GRADE	2500 PSI (1)	4 + 1
BASEMENT WALLS, FINDS, EXTER, WALLS, & OTHER CONCRETE WORK EXPOSED TO WEATHER	3000 PSI (1)	4 + 1
DRIVEWAYS, CURBS, WALKS, PATIOS, PORCHES, STEPS & STAIRS & UNHEATED GARAGE FLOORS EXPOSED TO WEATHER	3500 PSI (1)	4 + 1

NOTES:

1. CONCRETE IN LOCATIONS WHICH MAYBE SUBJECT TO FREEZING AND THAWING DURING CONSTRUCTION SHALL BE AIR-ENTRAINED.

2. CONCRETE SHALL BE AIR-ENTRAINED.

C. AIR-ENTRAINED: ALL CONCRETE SUBJECTED TO SEVERE WEATHERING POTENTIAL SHALL BE AIR-ENTRAINED AS FOLLOWS:

AGGREGATE SIZE	AIR ENTRAINED%
3/8" -1/2"	7.0
3/4"	6.0
1"	6.0

D. AGGREGATE SHALL CONFORM TO ASTM C33 AND MAY RANGE FROM 3/8 TO 1" IN SIZE.

E. REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60 (60,000 PSI). WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A-185. ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE ACI'S "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" (ACI300). DETAILS OF REINFORCEMENT SHALL CONFORM TO ACI-00 CRSI STANDARDS.

CONCRETE PROTECTION FOR REINFORCEMENT: PROVIDE THE MINIMUM CLEARANCE (COVER) FOR REINFORCEMENT AS FOLLOWS:

FOOTINGS AND OTHER CONCRETE POURED AGAINST EARTH: 3"
FORMED CONCRETE EXPOSED TO EARTH 2"
FORMED CONCRETE NOT EXPOSED TO WEATHER OR EARTH: 1-1/2"
SLABS ON GROUND, UNLESS OTHERWISE NOTED MID-DEPTH

F. SLABS ON GRADE SHALL BE 4" THICK CONCRETE AND REINFORCED WITH 6X6 W14XW1.4 WWF, UNLESS OTHERWISE NOTED ON PLANS. LAP MESH 8" IN EACH DIRECTION. PLACE CONCRETE OVER 6 MIL. POLYETHYLENE VAPOR BARRIER AND 4" MINIMUM OF COARSE AGGREGATE OR AS RECOMMENDED BY SOILS ENGINEER. THE AGGREGATE LAYER SHALL BE PLACED OVER FIRM NATURAL SUBGRADE OR ON COMPACTED AND CONTROLLED FILL. FILL UNDER SLABS SHALL BE COMPACTED IN 8" LAYERS TO 95 PERCENT MAX. DENSITY. USE AIR-ENTRAINED AT ALL EXTERIOR SLABS. POUR SLABS IN ALTERNATE PANELS WITH A MAXIMUM OF 600 SF AND PROVIDE CONTROL AND CONSTRUCTION JOINTS AT 30'-0" MAXIMUM OR AS REQUIRED TO PREVENT UNCONTROLLED CRACKING.

G. PROVIDE 3"x3" CORNER BARS TO MATCH ALL HORIZONTAL REINFORCING IN WALLS AND FOOTINGS. ALL LAPS SHALL BE A MINIMUM OF 36 BAR DIAMETERS. PROVIDE DOWELS BETWEEN ALL FOOTING, WALLS AND PIERS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING.

H. CONCRETE BASEMENT WALLS: WALLS DESIGNATED AS PLAIN CONCRETE SHALL BE REINFORCED WITH #4 REBARS @24" O.C. HORIZONTALLY OR PER LOCAL EQUALS 60 PCF. ALL WINDOW & DOOR OPENINGS SHALL BE REINFORCED WITH CODES, WHICH EVER IS MORE STRINGENT. EQUIVALENT FLUID PRESSURE A MINIMUM OF ¾ BARS AND SHALL EXTEND AT LEAST 24" BEYOND THE CORNERS OF THE OPENINGS.

I. CONCRETE FOOTINGS FOR THE FOLLOWING WALL ARE THE MINIMUM REQUIRED:
A. 8" MASONRY OR CONCRETE WALL-16"x8" DEEP
C. 12" MASONRY OR CONCRETE WALL - 24"x12" DEEP
B. 10" MASONRY OR CONCRETE WALL /20"x10" DEEP
D. MASONRY PIERS AND CHIMNEYS-FOOTINGS SHALL HAVE 6" PROJECTIONS X 12" DEPTH MINIMUM.

WHERE THE DRAWINGS INDICATE A GREATER FOOTING SIZE, THE GREATER THE SIZE SHALL BE USED. FOOTINGS SHALL HAVE MINIMUM 2 #4 BARS CONTINUOUS WITH MASONRY WALLS WHEN FOOTINGS ARE PLACED OVER FILL OR SOIL OF DIFFERENT COMPACTION LEVELS.

STRUCTURAL NOTES

4. MASONRY

A. MATERIALS
HOLLOW CMU: NORMAL WEIGHT; ASTM C-90-85, GRADE IN
FACE BRICK: ASTM C-216-81, SEVERE WEATHER BRICK
STONE VENEER: OWNER APPROVED HIGHEST GRADE LOCAL STONE
CONCRETE BRICK: ASTM C-55-75 TYPE 1, GRADE S
SOLID CMU: NORMAL WEIGHT; ASTM C-145-85, GRADE N
MORTAR: ASTM C270-82, PROPORTION SPECIFICATION MORTAR SHALL CONSIST OF TYPE 1 PORTLAND CEMENT, TYPE S HYDRATED LIME AND APPROVED AGGREGATE.
GROUT: ASTM C476 OR 2560 PSI PEA GRAVEL CONCRETE

B. ALL MASONRY WORK SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF BIA AND NCMA. SPECIFICATION FOR CONCRETE MASONRY CONSTRUCTION (ACI 00)

C. SOLID MASONRY WALL TO HAVE "DUR-O-WALL" (OR APPROVED EQUAL) TRUSS TIES AT 16" O.C. VERTICALLY ABOVE GRADE AND 8" O.C. VERTICALLY BELOW GRADE.

D. BRICK VENNER WALLS TO HAVE NON-CORROSIVE METAL TIES AT 16" O.C. VERTICALLY AND 24" O.C. HORIZONTALLY, AND WEEP HOLES AT 24" O.C. AT BASE FLASHING.

E. LINTELS FOR BRICK VENEER WALLS: PROVIDE MINIMUM 4" BEARING AT EACH OPENINGS
TO 4'-0": 3-1/2"x14"LLV
4'-0 TO 5'-6": 4"x3 1/2"x5/16"LLV
5'-6 TO 7'-6: 5"x3 1/5/16"LLV
7'-6 TO 9'-0": 6"x3-1/2"x5/16"LLV

F. UNLESS OTHERWISE NOTED, 12" MASONRY FOUNDATION WALLS SHALL BE REINFORCED VERTICALLY AND GROUTED SOLID AT REINFORCED CORES AS FOLLOWS:
HEIGHT OF WALL (H) 8'-0" MAXIMUM FROM SLAB TOP OF WALL (H):
-EXTERIOR GRADE = H TO 0.75. #4@24"
-EXTERIOR GRADE = LESS THAN 0.75H.. NONE
-FOR 9'-0" MAXIMUM FROM SLAB TO UNDERSIDE OF JOISTS (H)
-EXTERIOR GRADE = H TO 0.75H.. #6@32"
-EXTERIOR GRADE = 0.75H TO 0.50H.. #5@48"
PLACE REINFORCEMENT 1" CLEAR FROM INSIDE FACE OF TENSION SIDE OF WALL (i.e. INTERIOR SIDE OF WALL)

5. STEEL

A. STRUCTURAL STEEL AND ANGLES SHALL CONFORM TO ASTM A-36. STEEL PIPE SHALL BE ASTM A-501 AND A-63 W/FY=36KSI. TUBE'S SHALL BE A500 GR B WITH FY= 46 KSI. CONNECTIONS SHALL CAPABLE OF SUPPORTING ALLOWABLE UNIFORM LOAD STRESS OF 24KSI. BOLTED FIELD CONNECTION SHALL BE 3/4" DIA. HIGH STRENGHT BOLTS MEETING ASTM SPEC. A-325. PROVIDED WELDED CONNECTIONS TYPICALLY UNLESS OTHERWISE INDICATED.

B. STRUCTURAL STEEL SHALL HAVE MINIMUM STRENGTH, FY= 36KSI

C. WELDS SHALL COMPLY WITH AWS D1. 1-80

D. CONNECTION SHALL BE AISC STANDARD.

E. PROVIDE BASE PLATE FOR ALL STRUCTURAL STEEL BEAMS BEARING ON CONCRETE OR MASONRY.

F. ADJUSTABLE STEEL COLUMNS SHALL MEET OR EXCEED ALLOWABLE LOADS GIVEN FOR CARDINAL MANUFACTURERS "TEL-O-POST". COLUMNS SHALL BE MINIMUM 11 GAUGE, ASTM A513 OR BETTER. COLUMNS SHALL BE CERTIFIED BY BOCA AND SHALL HAVE A MARK INDICATING THE BOCA RESEARCH REPORT NUMBER, THE MANUFACTURE'S NAME, AND DATE OF MANUFACTURE ON EACH COLUMN. COLUMNS SHALL HAVE A MINIMUM 6"x10"x1/4" BEARING PLATE AND SCREW JACK SHALL BE ENCASED IN CONCRETE OR TACK WELDED AFTER INSTALLATION CAPACITY RATING SHOULD BE DESIGNATED ON COLUMN.

6. WOODS

A. JOISTS, HEADERS AND TRIMMERS SHALL BE MINIMUM SPF #1 / #2 HAVING THE FOLLOWING PROPERTIES UNLESS NOTED OTHERWISE:
COMPRESSION PERPENDICULAR TO GRAING "F_c" = 425 PSI
BENDING STRESS "F_b" = 875 PSI
MODULUS OF ELASTICITY "E" = 1,400,000 PSI
HORIZONTAL SHEAR "F_v" =750 PSI

B. EXTERIOR AND BEARING WALL STUDS SHALL BE MINIMUM SPF #1 / #2 HAVING THE FOLLOWING PROPERTIES UNLESS NOTED OTHERWISE:
BENDING STRESS (REPETITIVE MEMBERS) "F_b" = 875 PSI
COMPRESSION PERPENDICULAR TO GRAIN "F_c" = 425 PSI
COMPRESSION PARALLEL TO GRAIN "F_c" = 1150 PSI
MODULUS OF ELASTICITY "E" = 1,400,000 PSI
SEE PLANS FOR SPACING AND SPECIAL REQUIREMENTS.

C. INTERIOR NON-LOAD BEARING WALL STUDS SHALL BE MINIMUM STUD GRADE SPF 2X4'S
COMPRESSION PERPENDICULAR TO GRAIN "F_c" = 565 PSI
MODULUS OF ELASTICITY "E" = 1,600,000 PSI
HORIZONTAL SHEAR "F_v" = 90 PSI
BENDING STRESS "F_b" = 1500, 1250, 1200, 1050, & 975 PSI
FOR 2X4, 2X6, 2X8, 2X10, & 2X12 RESPECTFULLY

D. WALL TOP PLATES AT BEARING LOCATIONS TO E SYP #2MIN. OR OTHER SPECIES HAVING THE FOLLOWING PROPERTIES UNLESS NOTED OTHERWISE:
BENDING STRESS "F_b" = 1500 PSI
COMPRESSION PERPENDICULAR TO GRAIN "F_c" = 565 PSI
HORIZONTAL SHEAR "F_v" = 90 PSI
MODULUS OF ELASTICITY "E" = 1,600,000 PSI
SEE PLANS FOR SPACING AND SPECIAL REQUIREMENTS.

E. ALL 6X6 POSTS SHALL BE HEM FIR #2 SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
BENDING STRESS "F_b" = 850 PSI
COMPRESSION PARALLEL TO GRAIN "F_c" = 575 PSI
COMPRESSION PERPENDICULAR TO GRAIN "F_c" = 375 PSI
MODULUS OF ELASTICITY "E" =1,200,000 PSI

F. LUMBER FOR DECKS SHALL BE MINIMUM #2 SOUTHERN-YELLOW PINE, PRESSURE-TREATED TO 0.40 LB. RETENTION, HAVING THE FOLLOWING PROPERTIES:

COMPRESSION PERPENDICULAR TO GRAIN "F_c" = 565 PSI
MODULUS OF ELASTICITY "E" = 1,600,000 PSI
HORIZONTAL SHEAR "F_v" = 90 PSI
BENDING STRESSES "F_b" = 1500, 1250, 1200, 1050, & 975 PSI
FOR 2X4, 2X6, 2X8, 2X10, & 2X12 RESPECTFULLY

G. LVL'S (LAMINATED VENEER LUMBER) SHALL BE 1-3/4" WIDE, OF THE DEPTH SPECIFIED ON THE PLANS, AND SHALL BE SECURED TOGETHER AS DIRECTED BY THE MANUFACTURER. THEY SHALL HAVE THE FOLLOWING PROPERTIES:

BENDING STRESS "F_b" = 2600 PSI FOR 1' DEPTH, FOR OTHER MULTIPLY BY [12/d] 0.136
HORIZONTAL SHEAR "F_v" =285 PSI
COMPRESSION PERPENDICULAR TO GRAIN "F_c" = 750 PSI
MODULUS OF ELASTICITY "E" = 1,900,000 PSI

H. PSL'S (PARALLEL STRAND LUMBER) SHALL BE OF THE WITH AND DEPTH SPECIFIED ON THE PLANS. THEY SHALL HAVE THE FOLLOWING PROPERTIES:

BENDING STRESS: "F_b" =2900 PSI FOR 1' DEPTH, FOR OTHER MULTIPLY BY [12/d] 0.111
HORIZONTAL SHEAR "F_v" =290 PSI
COMPRESSION PERPENDICULAR TO GRAIN "F_c" = 750 PSI
MODULUS OF ELASTICITY "E" = 2,000,000 PSI

I. FLITCH BEAM SHALL BE SIZED AS INDICATED ON DRAWING, USING #2 HEM-FIR MINIMUM AND A -36 STEEL PLATE. USE TWO ROWS OF 1/2" DIA. THROUGH BOLTS 2" FROM TOP AND BOTTOM; SPACE 16" O.C. AT TOP AND 32" O.C. AT BOTTOM. BEGIN BOLT ROWS AT 6" FROM ENDS

J. ALL STUDS SHALL BE INSTALLED IN ACCORDANCE WITH NF&PA. MEMBERS ARE NOT TO BE DRILLED IN EXCESS OF NDS OR LOCAL CODE REQUIREMENT, WHICH EVER IS MORE STRINGENT. ALL POSTS AND MULTIPLE STUDS SHALL RUN CONTINUOUSLY TO SOLID BEARING ON FOUNDATIONWALLS OR BEAM; PROVIDE SOLID BLOCKING AT FLOORS. STUDS AND JOISTS OR FLOOR TRUSSES SHALL ALIGN AT CANTILEVERS, ABOVE AND BELOW THE JOISTS OR FLOOR TRUSS. WHERE ROOF TRUSSES ARE SPACED AT 24" O.C. AND STUDS ARE 16" O.C., PROVIDE #2 SYP DOUBLE TOP PLATES (WHERE TRUSS LENGHT IS LEES THAN 31') OR PLACE STUD UNDER EACH TRUSS, WITH A TOLERANCE OF NOT MORE THAN 1'.

K. OPEN-WEB TRUSSES: TRUSSES SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH TPI RECOMMENDATIONS TO CARRY ALL LEAD AND LIVE LOADS. LIVE LOAD DEFLECTION SHALL NOT EXCEED L/480 FOR FLOOR TRUSSES AND L/360 FOR ROOF TRUSSES. THE MANUFACTURER SHALL SUPPLY ALL REQUIRED HANGERS, HOLD-DOWN SLIPS, SHEAR PANELS, AND OTHER ENGINEER REGISTERED IN THE STATE WHERE THE JOB IS TO BE BUILT. THE MANUFACTURER SHALL PROVIDE LOAD TEST RESULTS FOR SINGLE-MEMBER SPECIAL HARDWARE. THE MANUFACTURER SHALL SUBMIT ERECTION DRAWINGS ALL TRUSSES SHALL BE INSTALLED AND BRACED IN ACCORDANCE WITH THE AND SHOP DRAWINGS TO THE ENGINEER OR ARCHITECT PRIOR TO FABRICATION; TOP-CHORD-BEARING FLOOR TRUSSES IF REQUIRED BY THE BUILDING OFFICIAL. MANUFACTURER'S INSTRUCTIONS. WHEN A 2 X RIBBON RATHER THAN A FULL-VERTICALLY AND SOLID BLOCKING OR A LADDER TRUSS MUST BE USED TO TRANSFER LOADS FROM FLOOR TO FLOOR.

L. PREFABRICATED FLOOR JOISTS: PREFABRICATED FLOOR JOISTS SHALL BE APPROVED BY A RECOGNIZED TESTING AGENCY. THEY SHALL BE DESIGNED TO CARRY ALL LIVE AND DEAD LOADS WITH THE LIVE LOAD DEFLECTION NOT TO EXCEED L/480 AND L/720 FOR CERAMIC AND TILE FLOORS. THE MANUFACTURER SHALL SUPPLY ALL REQUIRED HANGERS, SHEAR PANELS, BLOCKING ERECTION DRAWINGS TO THE ENGINEER PRIOR TO FABRICATION. ALL PREFABRICATED FLOOR JOISTS SHALL BE INSTALLED AND BRACED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

M. FRAME CHIMNEYS: FRAM CHIMNEYS SHALL BE CONSTRUCTED OF MINIMUM #2 SPF STUDS, MAXIMUM 16" O.C.. USE 2X4'S IF CHIMNEY EXTENDS LESS THAN 8' ABOVE ROOF; OTHERWISE USE 2X5'S. SHEATH WITH 1/2" APA RATED SHEATING CONTINUOUS ACROSS PLATES AND JOISTS; GLUE AND NAIL WITH 8d NAILS @ 6" O.C. SECURE TO ROOF. STUDS MUST BE CONTINUOUS ACROSS ROOF INTERSECTION. CONTRACTOR TO SUBMIT ERECTION DRAWINGS PRIOR TO INSTALLING

N. ADD EXTRA JOIST UNDER FULL HEIGHT WALLS WHERE WALL EXTENDA MORE THAN HALF THE SPAN OF THE JOIST.

O. SHEATHING: ALL EXTERIOR SHEATHING SHALL BE 1/2" APA EXTERIOR RATED PLYWOOD OR OSB.

P. BLOCKING: PROVIDE SOILD BLOCKING @ 4'-0 O.C. AT BASEMENT WALLS WHEN JOISTS ARE PARALLEL TO WALL. EXTEND BLOCKING 3 JOIST MINIMUM

3 BROTHERS

HOME IMPROVEMENTS

LCC

THESE DRAWINGS WERE DEVELOPED BASED ON DRAWINGS PROVIDED BY OWNER AND PREPARED BY JB HOME DESIGN, LLC.



Revisions	
#	Date

Client:

Location:
16119 Patapsco Overlook
Mt Airy, Maryland

Project:
RESIDENCE RENOVATION
AND ADITION

Drawing Title:

STRUCTURAL NOTES

Drawn by

Project No. 031522-A 04/10/2022

04/10/2022 PERMIT SET

Drawing No:

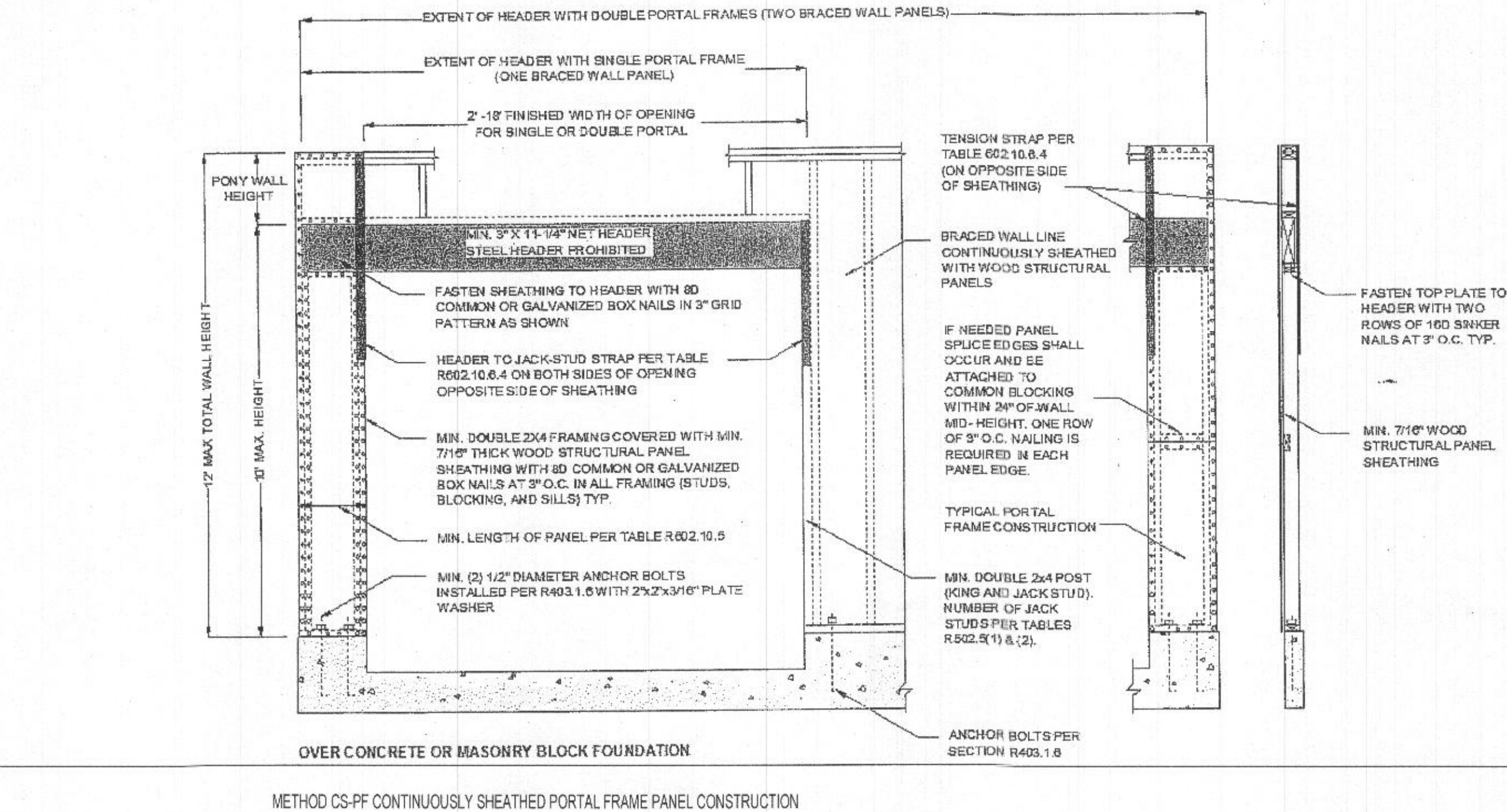
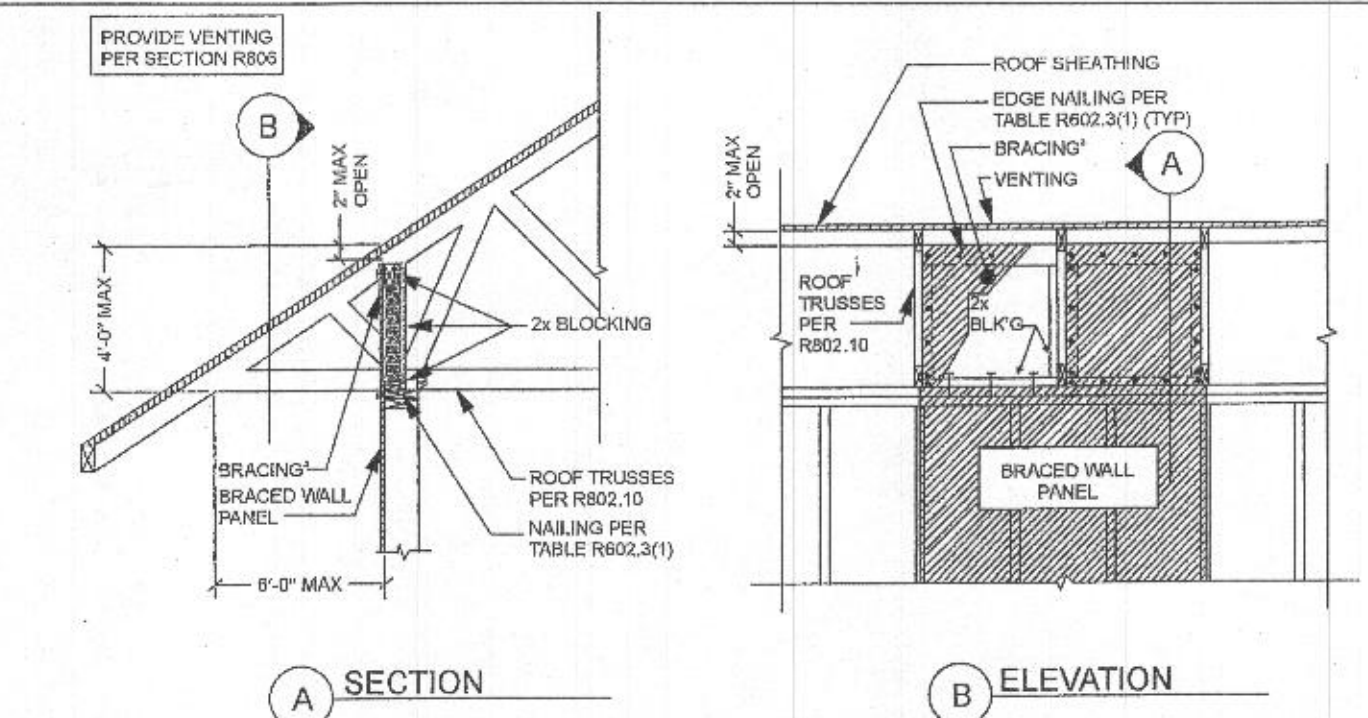
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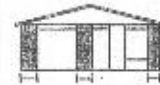
For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 square foot = 0.093 m².

- Listed heights are distances between points of lateral support perpendicular to the plane of the wall. Increases in unsupported height are permitted where justified by analysis.
- Shall not be used in exterior walls.
- A habitable attic assembly supported by 2 × 4 studs is limited to a roof span of 32 feet. Where the roof span exceeds 32 feet, the wall studs shall be increased to 2 × 6 or the studs shall be designed in accordance with accepted engineering practice.

MINIMUM NAIL		MINIMUM WOOD STRUCTURAL PANEL SPAN RATING	MINIMUM NOMINAL PANEL THICKNESS (inches)	MAXIMUM WALL STUD SPACING (inches)	PANEL NAIL SPACING		MAXIMUM WIND SPEED (mph)		
Size	Penetration (inches)				Edges (inches o.c.)	Field (inches o.c.)	Wind exposure category		
							B	C	D
6d Common (2.0" x 0.113")	1.5	24/0	3/8	16	6	12	110	90	85
8d Common (2.5" x 0.131")	1.75	24/16	3/16	16	6	12	130	110	105
				24	6	12	110	90	85

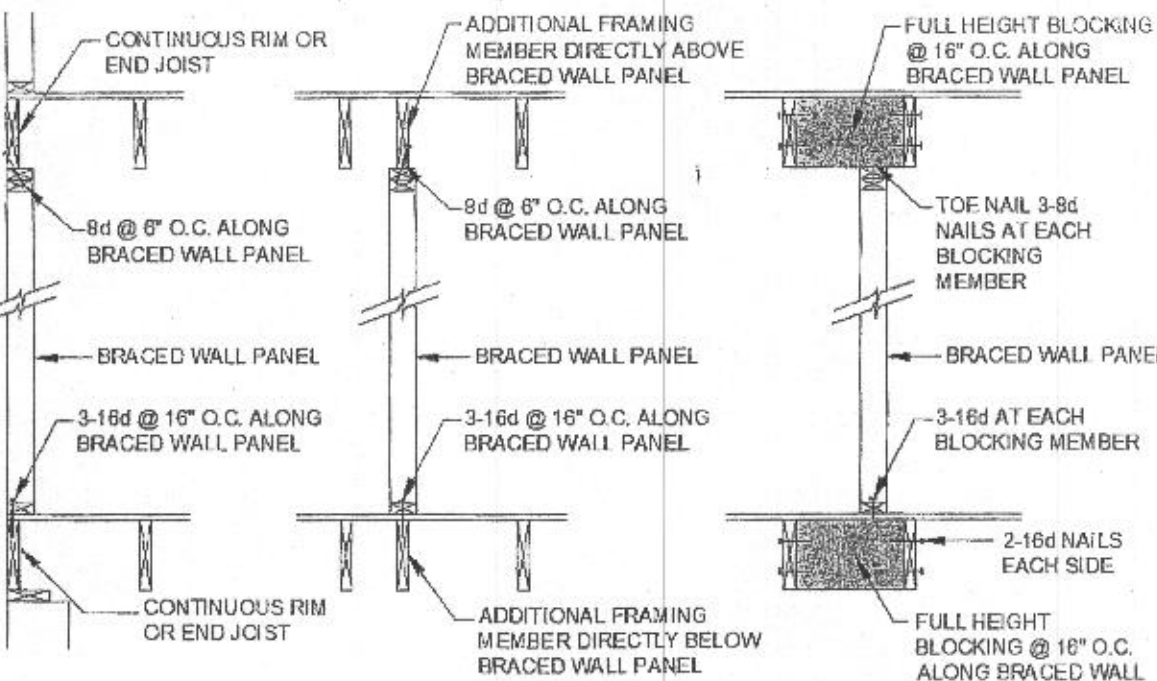
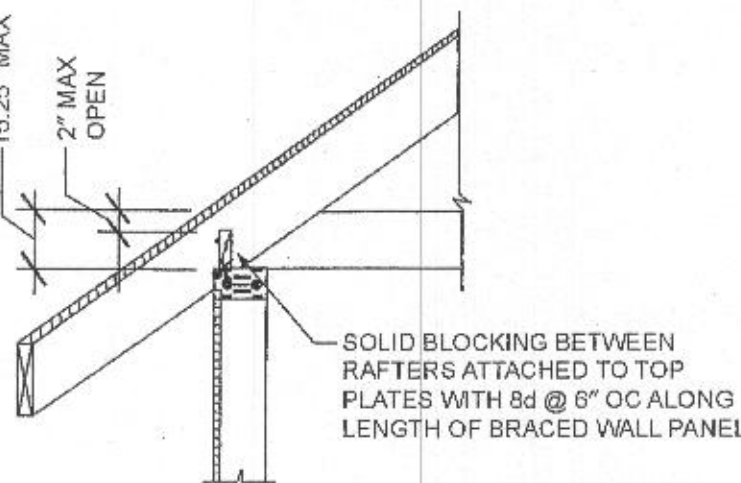
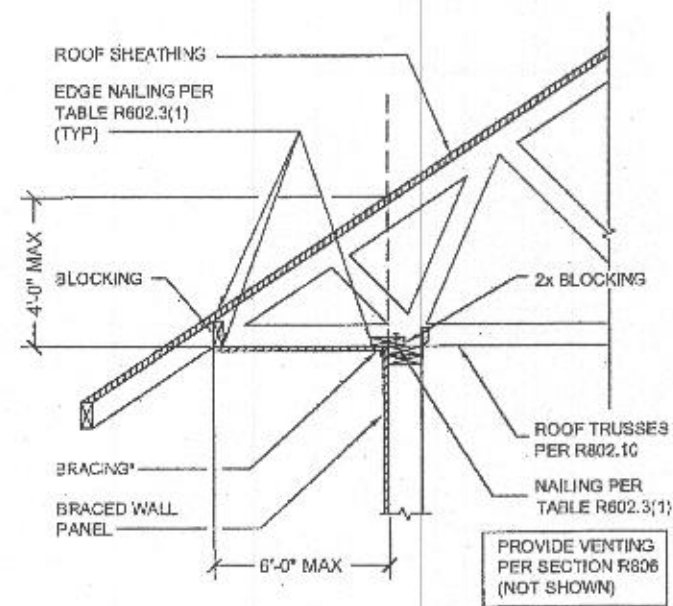
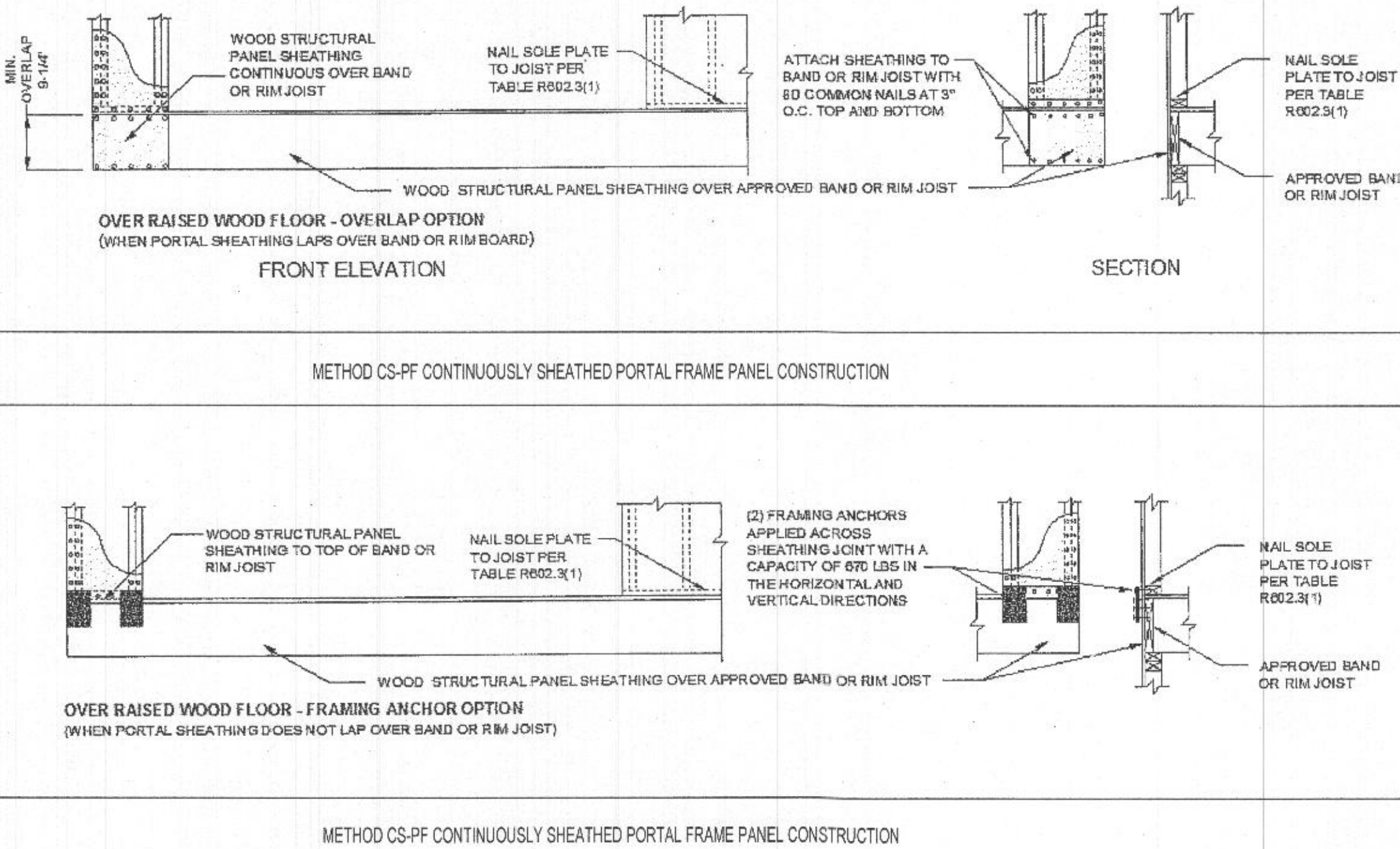
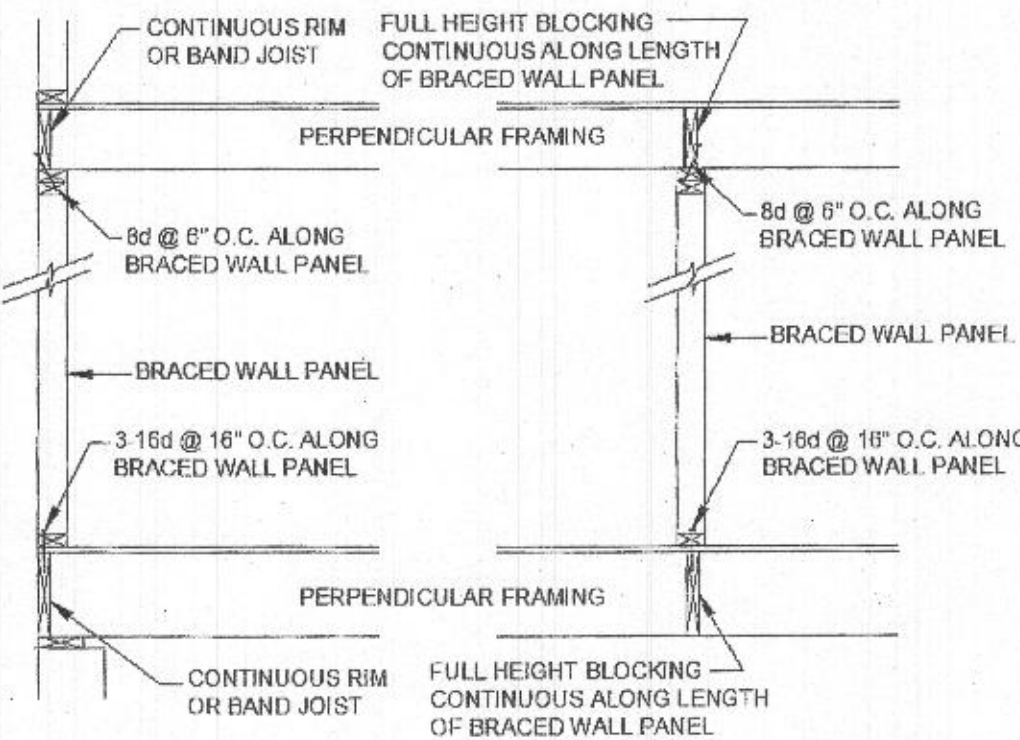
THICKNESS (inch)	GRADE	STUD SPACING (inches)	
		When siding is nailed to studs	When siding is nailed to sheathing
$\frac{3}{4}$	M-1 Exterior glue	16	—
$\frac{1}{2}$	M-2 Exterior glue	16	16



Material, Method	Minimum Thickness	Figure	Connection Criteria*					
			Fasteners	Spacings				
CS-WJP Continuously sheathed wood structural panel	3/8"		Exterior sheathing see Table R602.3(3)	6" spacing (panel edges); 12" spacing (intermediate supports)				
			Interior sheathing see Table R602.3(1) or Table R602.3(2)	Varies by fastener				
a. Adhesive attachment of wall sheathing, including V-hexes G8, shall not be permitted in Seismic Design Categories C, D _s , D, and D _s .								
Minimum length per IRC Table R602.10.5 (TABLE 3.28)	Adjacent clear opening height (in.)	Minimum Length** (in.)						Contributing Length (in.)
		Wall Height						
		8 ft	9 ft	10 ft	11 ft	12 ft		
	< 64	24	27	30	33	36		
	68	26	27	30	33	36		
	72	27	27	30	33	36		
	76	30	29	30	33	36		
	80	32	30	30	33	36		
	84	35	32	32	33	36		
	88	38	35	33	33	36		
	92	43	37	35	35	36		
	96	48	41	38	36	36		
	100		44	40	38	38		
CS-WSP	104		49	43	40	39	Actual ^b	
	108		54	46	43	41		
	112			50	45	43		
	116			55	48	45		
	120			60	52	48		
	124				56	51		
	128				61	54		
	132				66	58		
	136					62		
	140					66		
	144					72		

MINIMUM WALL STUD FRAMING NOMINAL SIZE AND GRADE	MAXIMUM PONY WALL HEIGHT (feet)	MAXIMUM TOTAL WALL HEIGHT (feet)	MAXIMUM OPENING WIDTH (feet)	TENSION STRAP CAPACITY REQUIRED (pounds) ^{a,b}					
				Basic Wind Speed (mph)					
				85	90	100	85	90	100
2 x 4 No. 2 Grade	0	10	18	Exposure B			Exposure C		
				1,000	1,000	1,000	1,000	1,000	1,000
				9	1,000	1,000	1,000	1,000	1,275
			9	1,000	1,000	1,750	1,800	2,325	3,500
			18	1,000	1,200	2,100	2,175	2,725	DR
			9	1,000	1,000	1,025	1,075	1,550	2,500
	2	10	16	1,525	2,025	3,125	3,200	3,900	DR
			18	1,875	2,400	3,575	3,700	DR	DR
			9	1,000	1,200	2,075	2,125	2,750	4,000
			16	2,600	3,200	DR	DR	DR	DR
			18	3,175	3,850	DR	DR	DR	DR
			9	1,775	2,350	3,500	3,550	DR	DR
	4	12	16	4,175	DR	DR	DR	DR	DR
			9	1,000	1,000	1,325	1,375	1,750	2,550
			16	1,650	2,050	2,925	3,000	3,550	DR
			18	2,025	2,450	3,425	3,500	4,100	DR
			9	1,125	1,500	2,225	2,275	2,775	3,800
			16	2,650	3,150	DR	DR	DR	DR
2 x 6 Stud Grade	4	12	18	3,125	3,675	DR	DR	DR	DR

		Wall	
7	Built-up studs-face nail	10d (3" × 0.128")	24" o.c.
8	Abutting studs at intersecting wall corners, face nail	16d (3 3/8" × 0.135")	12" o.c.
9	Built-up header, two pieces with 1/2" spacer	16d (3 3/8" × 0.135")	16" o.c. along each edge
10	Continued header, two pieces	16d (3 3/8" × 0.135")	16" o.c. along each edge
11	Continuous header to stud, toe nail	4-8d (2 1/4" × 0.113")	—
12	Double studs, face nail	10d (3" × 0.128")	24" o.c.
13	Double top plates, face nail	10d (3" × 0.128")	24" o.c.
14	Double top plates, minimum 24-inch offset of end joints, face nail in lapped area	8-16d (3 1/2" × 0.135")	—
15	Sole plate to joist or blocking, face nail	16d (3 3/8" × 0.135")	16" o.c.
16	Sole plate to joist or blocking at braced wall panels	3-16d (3 3/8" × 0.135")	16" o.c.
17	Stud to sole plate, toe nail	3-8d (2 1/4" × 0.113") or 2-16d (3 3/8" × 0.135")	—
18	Top or sole plate to stud, end nail	2-16d (3 3/8" × 0.135")	—
19	Top plates, laps at corners and intersections, face nail	2-10d (3" × 0.128")	—
20	1" brace to each stud and plate, face nail	2-8d (2 1/4" × 0.113") 2 staples 1 1/4"	—
21	1" × 6" sheathing to each bearing, face nail	2-8d (2 1/4" × 0.113") 2 staples 1 1/4"	—
22	1" × 8" sheathing to each bearing, face nail	2-8d (2 1/4" × 0.113") 3 staples 1 1/4"	—
23	Wider than 1" × 8" sheathing to each bearing, face nail	3-8d (2 1/4" × 0.113") 4 staples 1 1/4"	—



**3 BROTHERS
HOME IMPROVEMENTS
LCC**

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ON DRAWINGS PROVIDED BY OWNER AND
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[illegible]

Client

Location: 16119 Patapsco Overlook
Mt Airy, Maryland

Project: RESIDENCE RENOVATION
AND ADITION

Drawing Title:

WALL BRACING

Drawn by

Project No. 031522-A

04/10/2022

04/10/2022 PERMIT SET

Drawing No:

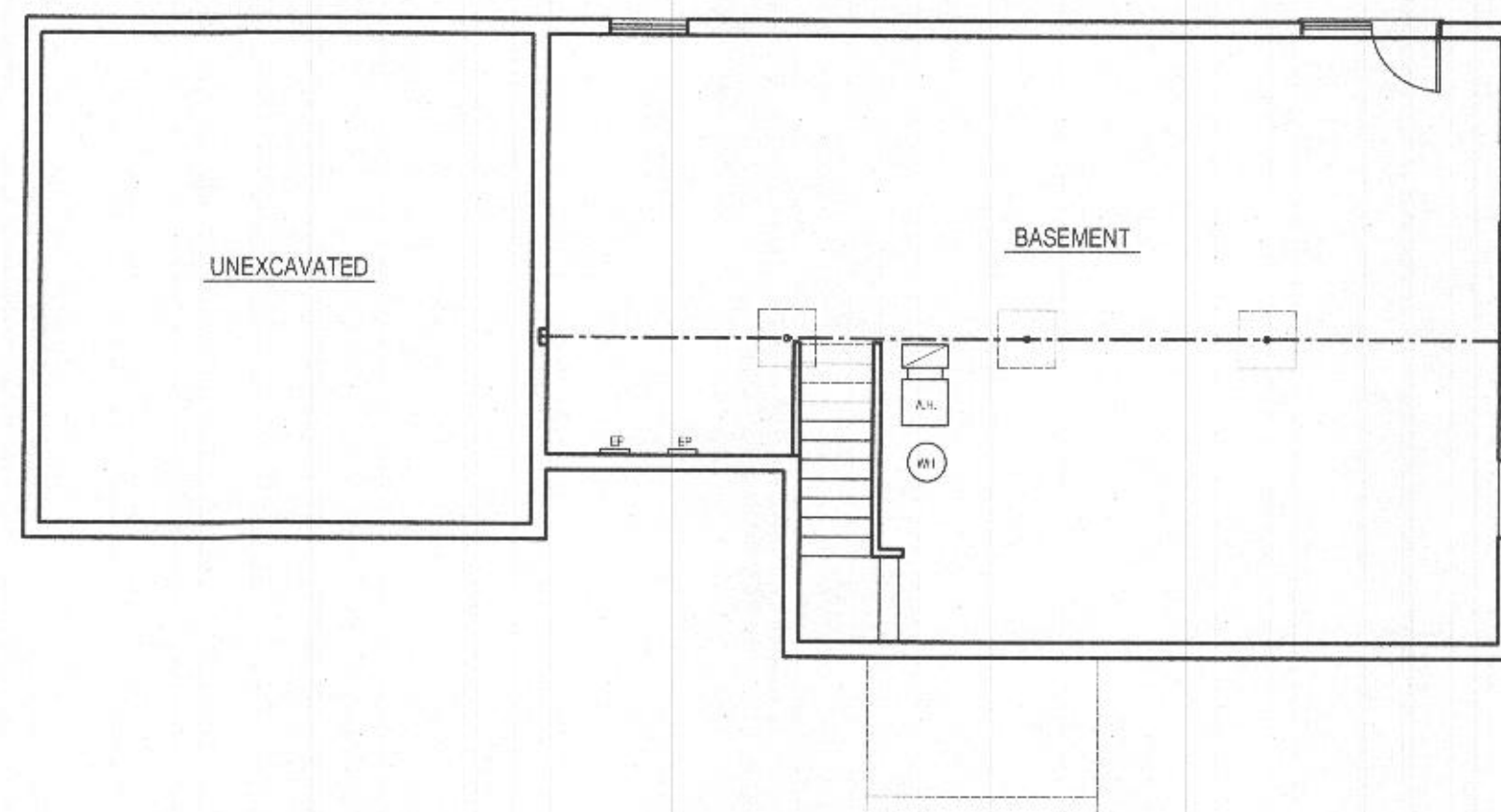
WB002



9 EXIST. RIGHT SIDE ELEVATION
SCALE: 1/8" = 1'-0"



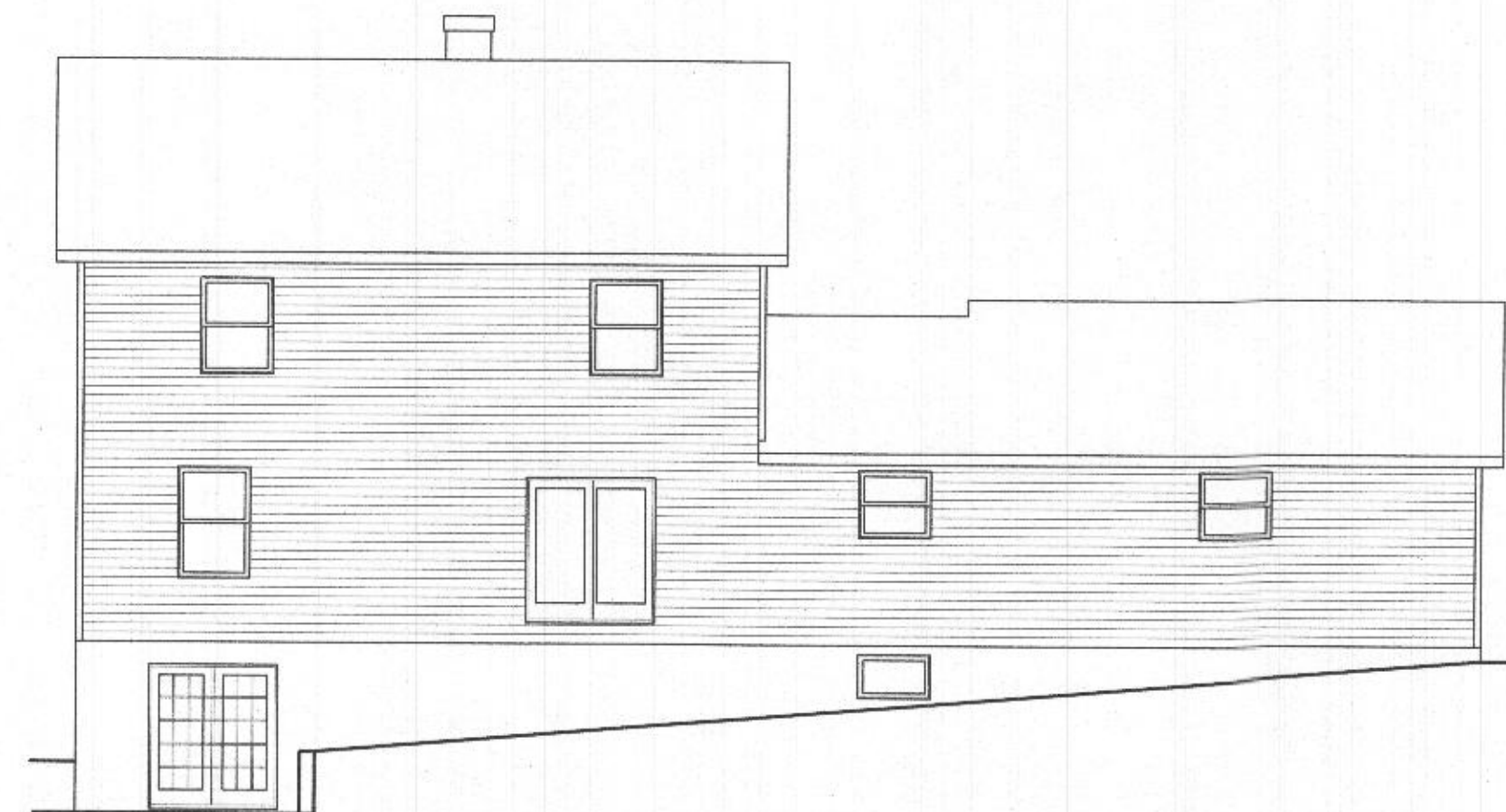
7 EXIST. LEFT SIDE ELEVATION
SCALE: 1/8" = 1'-0"



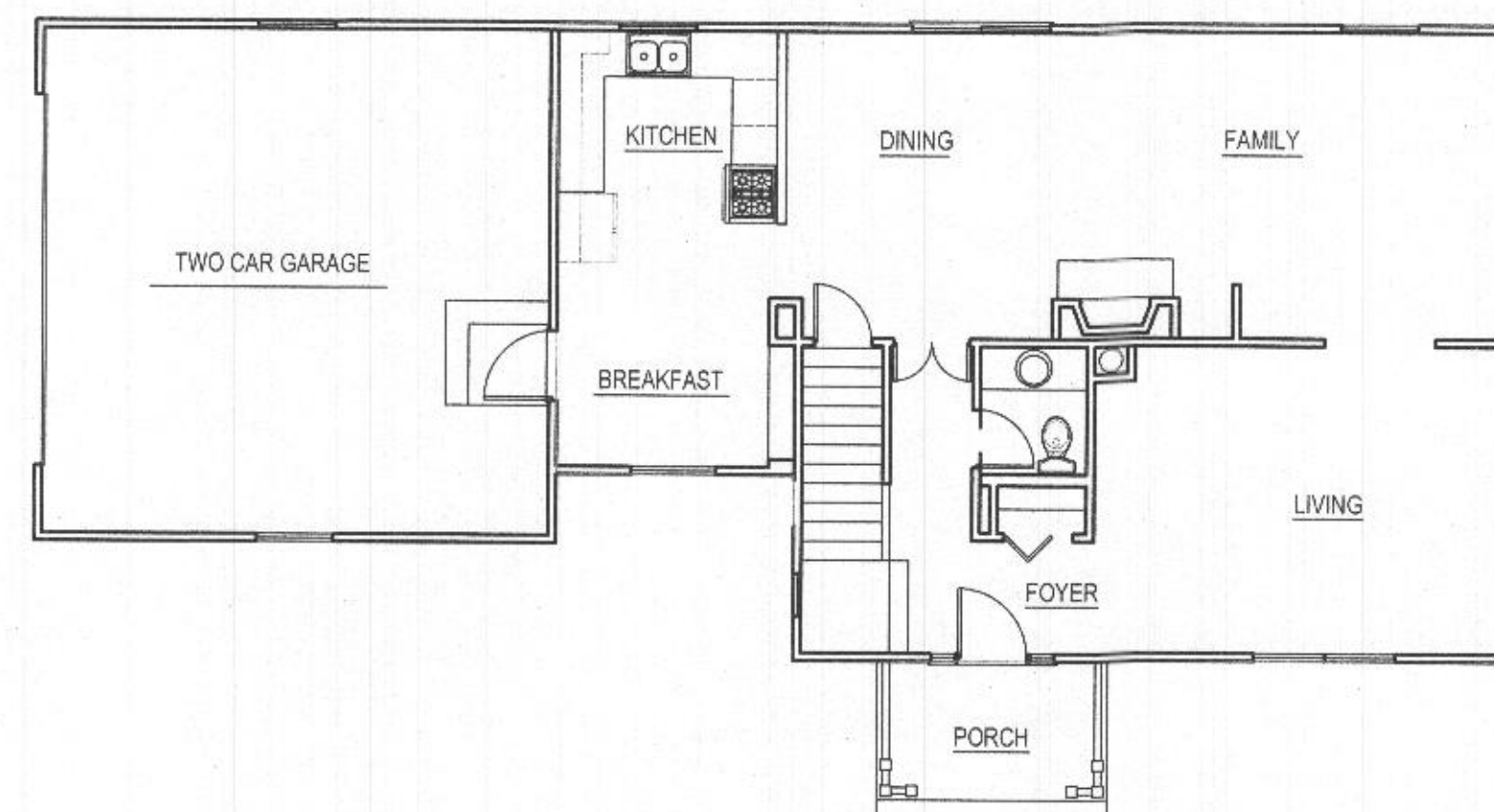
3 EXIST. FOUNDATION PLAN
SCALE: 1/8" = 1'-0"



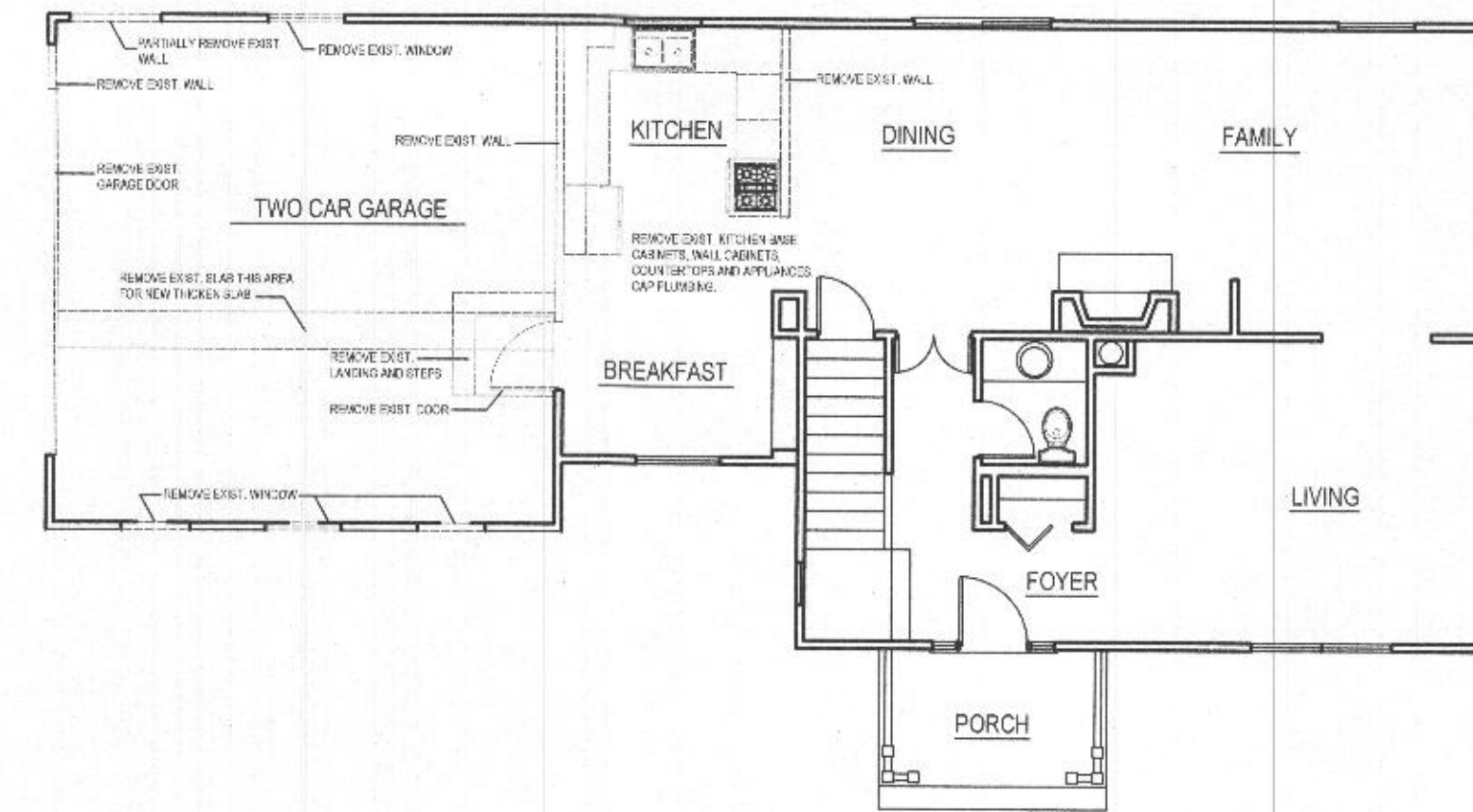
8 EXIST. FRONT ELEVATION
SCALE: 1/8" = 1'-0"



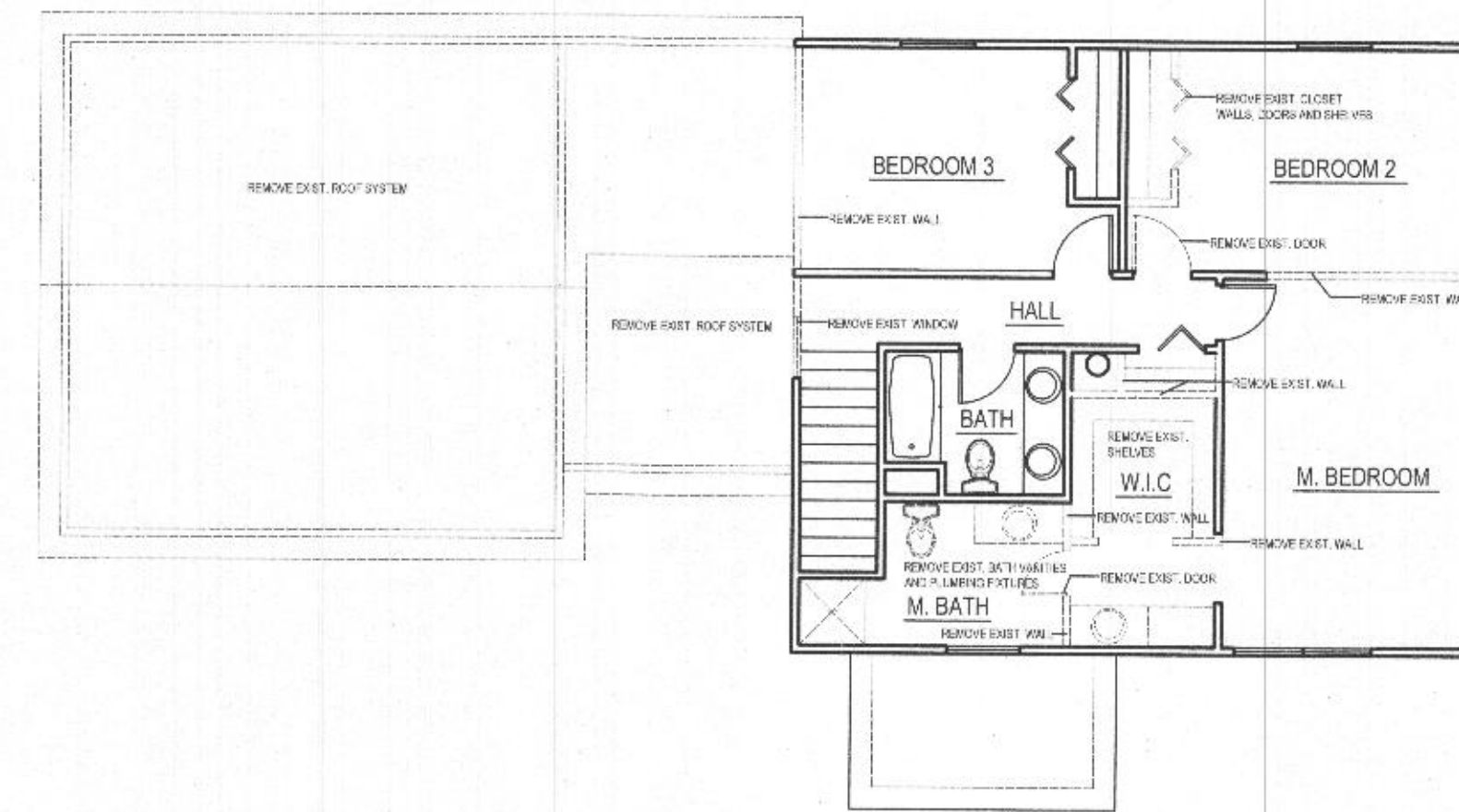
6 EXIST. REAR ELEVATION
SCALE: 1/8" = 1'-0"



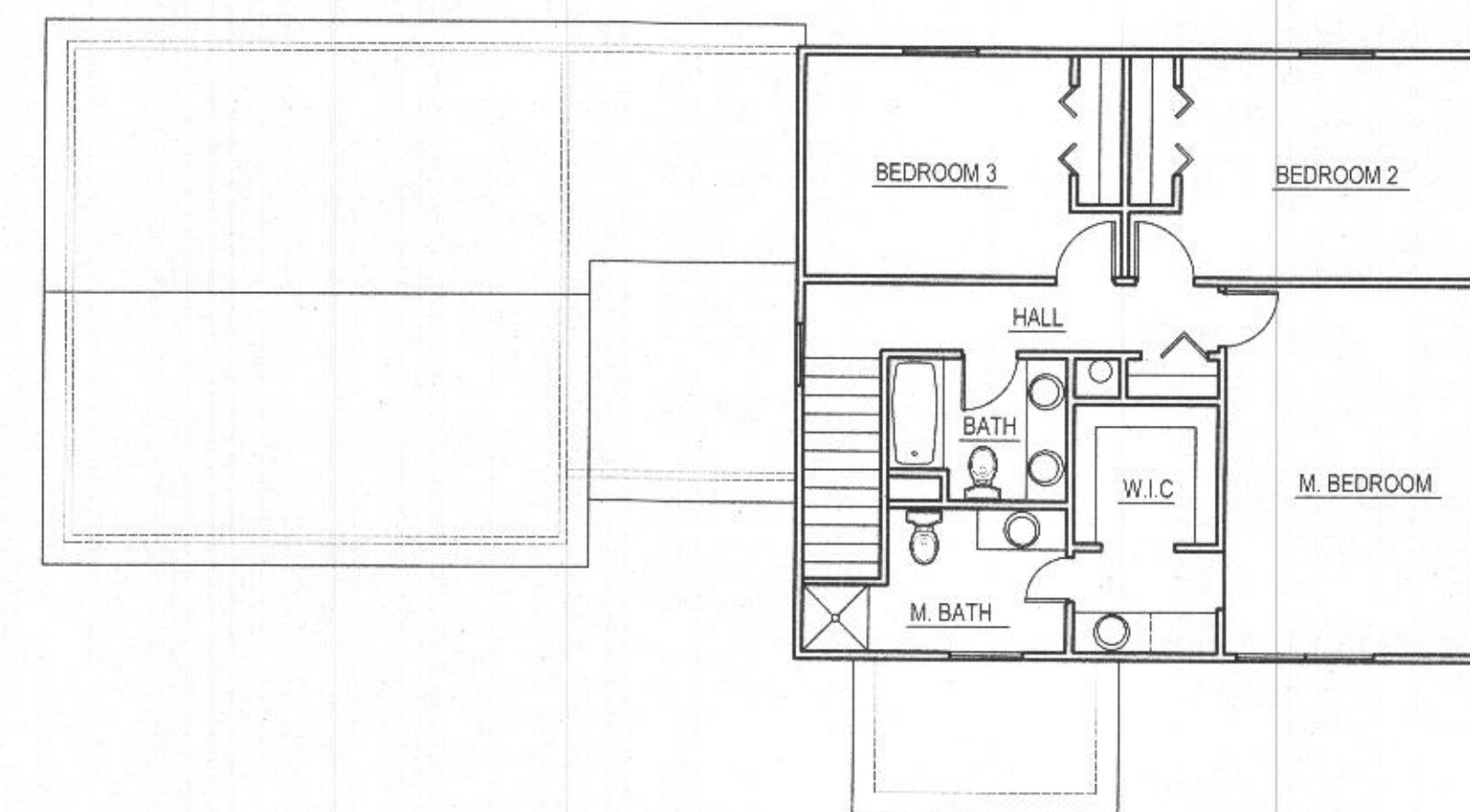
2 EXIST. FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



5 FIRST FLOOR DEMO PLAN
SCALE: 1/8" = 1'-0"



4 SECOND FLOOR DEMO PLAN
SCALE: 1/8" = 1'-0"



1 EXIST. SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

3 BROTHERS
HOME IMPROVEMENTS

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ON DRAWINGS PROVIDED BY OWNER AND
PREPARED BY JB HOME DESIGN, LLC.



Revisions	
#	Date

Client:

Location:
16119 Patapsco Overlook
Mt Airy, Maryland

Project:
RESIDENCE RENOVATION
AND ADITION

Drawing Title:
EXIST. AND DEMO
FLOOR PLANS AND
ELEVATIONS

Drawn by

Project No. 031522-A 04/10/2022

04/10/2022 PERMIT SET

Drawing No:
A001