GENERAL NOTES AND SPECIFICATIONS (SUBSEQUENT NOTES ON REMAINING SHEETS)

IT IS THE BUILDERS/CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL REQUIRED CODES, BOTH STATE AND LOCAL, ARE FOLLOWED. NOTES IDENTIFIED IN THIS DRAWING PACKAGE ARE MEANT AS REFERENCE MATERIAL ONLY, AND ANY CONTENT (TABLES, IMAGES, FIGURES, OR OTHERWISE) NOTED IN THIS DRAWING PACKAGE MUST BE REFERENCED/VERIFIED IN THE MICHIGAN RESIDENTIAL CODE BOOK, AND WITH LOCAL BUILDING DEPARTMENT(S). NOT ALL 2015 MICHIGAN RESIDENTIAL CODE WORDING MAY BE INCLUDED UNDER EACH SECTION REFERENCED IN THIS DRAWING PACKAGE.
CONTENT INCLUDED IN THIS DRAWING PACKAGE EXCERPTED FROM: MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS. 2015 MICHIGAN RESIDENTIAL CODE. INTERNATIONAL CODE COUNCIL INC, 2015
THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY WORK KNOWINGLY PERFORMED CONTRARY TO SUCH LAWS, ORDINANCES, OR REGULATIONS. THE CONTRACTOR SHALL ALSO PERFORM COORDINATION WITH ALL UTILITIES AND STATE SERVICE AUTHORITIES.
WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE GENERAL CONTRACTOR SHALL VERIFY AND IS RESPONSIBLE FOR ALL DIMENSIONS (INCLUDING ROUGH OPENINGS) AND CONDITIONS ON THE JOB AND MUST NOTIFY OAKBRIDGE DEVELOPMENT LLC OF ANY VARIATIONS FROM THESE DRAWINGS.
OAKBRIDGE DEVELOPMENT LLC SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, ACTS OR OMISSIONS OF THE CONTRACTOR OR SUBCONTRACTOR, OR FAILURE OF ANY OF THEM TO CARRY OUT WORK IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS. AND DEFECT DISCOVERED IN THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF OAKBRIDGE DEVELOPMENT LLC BY WRITTEN NOTICE BEFORE PROCEEDING WITH WORK. REASONABLE TIME NOT ALLOWED OAKBRIDGE DEVELOPMENT LLC TO CORRECT THE DEFECT SHALL PLACE THE BURDEN OF COST AND LIABILITY FROM SUCH DEFECT UPON THE CONTRACTOR.

ADHERE TO SECTION R314 - SMOKE ALARMS

R314.1 GENERAL. SMOKE ALARMS SHALL COMPLY WITH NFPA 72 AND SECTION R314.
R314.3 LOCATION. SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:
1. IN EACH SLEEPING ROOM.
2. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
3. ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS AND HABITABLE ATTICS BUT NOT INCLUDING CRAWLSPACES AND UNINHABITABLE ATTICS.

R314.3.3 EQUIPMENT REQUIREMENTS. BUILDER TO ADHERE TO 2015 MICHIGAN RESIDENTIAL CODE'S INSTALLATION, POWER SOURCE, AND AUDIBLE ALARM NOTIFICATION REQUIREMENTS.
R314.4 INTERCONNECTION. WHERE MORE THAN 1 SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING UNIT IN ACCORDANCE WITH SECTION R314.3, THE ALARM DEVICES SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF 1 ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT.
R314.6 POWER SOURCE. SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHERE SUCH WIRING IS SERVED FROM A COMMERCIAL SOURCE AND, WHERE PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM A BATTERY.

ADHERE TO SECTION R315 - CARBON MONOXIDE ALARMS

R315.1 GENERAL. CARBON MONOXIDE ALARMS SHALL COMPLY WITH SECTION R315.
R315.2.1 NEW CONSTRUCTION. FOR NEW CONSTRUCTION, CARBON MONOXIDE ALARMS SHALL BE PROVIDED IN DWELLING UNITS.
R315.5 POWER SOURCE. CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHERE SUCH WIRING IS SERVED FROM A COMMERCIAL SOURCE AND, WHERE PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM A BATTERY.
R315.6.2 LOCATION. CARBON MONOXIDE DETECTORS SHALL BE INSTALLED IN THE LOCATIONS SPECIFIED IN SECTION R315.3.

SECTION R302 - FIRE-RESISTANT CONSTRUCTION

R302.1 EXTERIOR WALLS. CONSTRUCTION, PROJECTIONS, OPENINGS AND PENETRATIONS OF EXTERIOR WALLS OF DWELLINGS AND ACCESSORY BUILDINGS SHALL COMPLY WITH TABLE R302.1(1)
R302.5 DWELLING-GARAGE OPENING AND PENETRATION PROTECTION. OPENINGS AND PENETRATIONS THROUGH THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE IN ACCORDANCE WITH SECTIONS **R302.5.1 THROUGH R302.5.3.**
R302.6 DWELLING-GARAGE FIRE SEPARATION. THE GARAGE SHALL BE SEPARATED AS REQUIRED BY TABLE R302.6. OPENINGS IN GARAGE WALLS SHALL COMPLY WITH SECTION R302.5. ATTACHMENT OF GYPSUM BOARD SHALL COMPLY WITH TABLE R702.3.5.
R302.11 FIREBLOCKING. IN COMBUSTIBLE CONSTRUCTION, FIREBLOCKING SHALL BE PROVIDED TO CUT OFF BOTH VERTICAL AND HORIZONTAL CONCEALED DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE.
R302.12 DRAFTSTOPPING. IN COMBUSTIBLE CONSTRUCTION WHERE THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR-CEILING ASSEMBLY, DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1,000 SQUARE FEET (92.9 M2). DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS.

SECTION R506 - CONCRETE FLOORS (ON GROUND)

R506.1 GENERAL. CONCRETE SLAB-ON-GROUND FLOORS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THIS SECTION OR ACI 332. FLOORS SHALL BE A MINIMUM 31/2 INCHES (89 MM) THICK (FOR EXPANSIVE SOILS, SEE SECTION R403.1.8). THE SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE SHALL BE AS SET FORTH IN SECTION R402.2.
R506.2 SITE PREPARATION. THE AREA WITHIN THE FOUNDATION WALLS SHALL HAVE ALL VEGETATION, TOP SOIL AND FOREIGN MATERIAL REMOVED, AND ADHERE TO SECTIONS; R506.2.1 FILL, R506.2.2 BASE, R506.2.3 VAPOR RETARDER, AND R506.2.4 REINFORCEMENT SUPPORT.

SECTION N1102 - BUILDING THERMAL ENVELOPE

N1102.1 (R402.1) GENERAL (PRESCRIPTIVE). THE BUILDING THERMAL ENVELOPE SHALL MEET THE REQUIREMENTS OF SECTIONS N1102.1.1 THROUGH N1102.1.4.
N1102.1.1 (R402.1.1) INSULATION AND FENESTRATION CRITERIA. THE BUILDING THERMAL ENVELOPE SHALL MEET THE REQUIREMENTS OF TABLE N1102.1.1 BASED ON THE CLIMATE ZONE SPECIFIED IN SECTION N1101.10. N1102.1, INSULATION SHALL MEET THE SPECIFIC REQUIREMENTS OF SECTIONS N1102.2.1 THROUGH N1102.2.12.
N1102.2.1 (R402.2.1) CEILINGS WITH ATTIC SPACES. WHEN SECTION N1102.1.1 WOULD REQUIRE R-38 IN THE CEILING, R-30 SHALL BE DEEMED TO SATISFY THE REQUIREMENT FOR R-38 WHEREVER THE FULL HEIGHT OF UNCOMPRESSED R-30 INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVES. SIMILARLY, R-38 SHALL BE DEEMED TO SATISFY THE REQUIREMENT FOR R-49 WHEREVER THE FULL HEIGHT OF UNCOMPRESSED R-38 INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVES. THIS REDUCTION SHALL NOT APPLY TO THE U-FACTOR ALTERNATIVE APPROACH IN SECTION N1102.1.3 AND THE TOTAL UA ALTERNATIVE IN SECTION N1102.1.4.
N1102.2.2 (R402.2.2) CEILINGS WITHOUT ATTIC SPACES. WHERE SECTION N1102.1.1 WOULD REQUIRE INSULATION LEVELS ABOVE R-30 AND THE DESIGN OF THE ROOF/CEILING ASSEMBLY DOES NOT ALLOW SUFFICIENT SPACE FOR THE REQUIRED INSULATION, THE MINIMUM REQUIRED INSULATION FOR SUCH ROOF/CEILING ASSEMBLIES SHALL BE R-30. THIS REDUCTION OF INSULATION FROM THE REQUIREMENTS OF SECTION N1102.1.1 SHALL BE LIMITED TO 500 SQUARE FEET (46 M2) OR 20 PERCENT OF THE TOTAL INSULATED CEILING AREA, WHICHEVER IS LESS. THIS REDUCTION SHALL NOT APPLY TO THE U-FACTOR ALTERNATIVE APPROACH IN SECTION N1102.1.3 AND THE TOTAL UA ALTERNATIVE IN SECTION N1102.1.4.
N1102.2.3 (R402.2.3) EAVE BAFFLE. FOR AIR PERMEABLE INSULATIONS IN VENTED ATTICS, A BAFFLE SHALL BE INSTALLED ADJACENT TO SOFFIT AND EAVE VENTS. BAFFLES SHALL MAINTAIN AN OPENING EQUAL OR GREATER THAN THE SIZE OF THE VENT. THE BAFFLE SHALL EXTEND OVER THE TOP OF THE ATTIC INSULATION.
N1102.4 (R402.4) AIR LEAKAGE. THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS N1102.4.1 THROUGH N1102.4.4. R 408.30541D
N1102.4.1 (R402.4.1) BUILDING THERMAL ENVELOPE. THE BUILDING THERMAL ENVELOPE SHALL COMPLY WITH SECTIONS N1102.4.1.1 AND N1102.4.1.2. R 408.30541D
N1102.4.4 (R402.4.4) RECESSED LIGHTING (MANDATORY). RECESSED LUMINAIRES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO LIMIT AIR LEAKAGE BETWEEN CONDITIONED AND UNCONDITIONED SPACES. ALL RECESSED LUMINAIRES SHALL BE IC-RATED AND LABELED AS HAVING AN AIR LEAKAGE RATE NOT MORE THAN 2.0 CFM (0.944 L/S). ALL RECESSED LUMINAIRES SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND THE INTERIOR WALL OR CEILING COVERING. R 408.30541D

SECTION R1006 - EXTERIOR AIR SUPPLY

R1006.1 EXTERIOR AIR. FACTORY-BUILT OR MASONRY FIREPLACES COVERED IN THIS CHAPTER SHALL BE EQUIPPED WITH AN EXTERIOR AIR SUPPLY TO ENSURE PROPER FUEL COMBUSTION UNLESS THE ROOM IS MECHANICALLY VENTILATED AND CONTROLLED SO THAT THE INDOOR PRESSURE IS NEUTRAL OR POSITIVE.
R1006.1.1 FACTORY-BUILT FIREPLACES. EXTERIOR COMBUSTION AIR DUCTS FOR FACTORY-BUILT FIREPLACES SHALL BE A LISTED COMPONENT OF THE FIREPLACE AND SHALL BE INSTALLED IN ACCORDANCE WITH THE FIREPLACE MANUFACTURER'S INSTRUCTIONS.
R1006.1.2 MASONRY FIREPLACES. LISTED COMBUSTION AIR DUCTS FOR MASONRY FIREPLACES SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF THEIR LISTING AND THE MANUFACTURER'S INSTRUCTIONS.
R1006.2 EXTERIOR AIR INTAKE. THE EXTERIOR AIR INTAKE SHALL BE CAPABLE OF SUPPLYING ALL COMBUSTION AIR FROM THE EXTERIOR OF THE DWELLING OR FROM SPACES WITHIN THE DWELLING VENTILATED WITH OUTDOOR AIR SUCH AS NONMECHANICALLY VENTILATED CRAWL OR ATTIC SPACES. THE EXTERIOR AIR INTAKE SHALL NOT BE LOCATED WITHIN THE GARAGE OR BASEMENT OF THE DWELLING. THE EXTERIOR AIR INTAKE, FOR OTHER THAN LISTED FACTORY-BUILT FIREPLACES, SHALL NOT BE LOCATED AT AN ELEVATION HIGHER THAN THE FIREBOX. THE EXTERIOR AIR INTAKE SHALL BE COVERED WITH A CORROSION-RESISTANT SCREEN OF 1/4-INCH (6.4 MM) MESH.
R1006.3 CLEARANCE. UNLISTED COMBUSTION AIR DUCTS SHALL BE INSTALLED WITH A MINIMUM 1-INCH (25 MM) CLEARANCE TO COMBUSTIBLES FOR ALL PARTS OF THE DUCT WITHIN 5 FEET (1524 MM) OF THE DUCT OUTLET.
R1006.4 PASSAGEWAY. THE COMBUSTION AIR PASSAGEWAY SHALL BE NOT LESS THAN 6 SQUARE INCHES (3870 MM2) AND NOT MORE THAN 55 SQUARE INCHES (0.035 M2), EXCEPT THAT COMBUSTION AIR SYSTEMS FOR LISTED FIREPLACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FIREPLACE MANUFACTURER'S INSTRUCTIONS.
R1006.5 OUTLET. THE EXTERIOR AIR OUTLET SHALL BE LOCATED IN THE BACK OR SIDE OF THE FIREBOX CHAMBER OR SHALL BE LOCATED OUTSIDE OF THE FIREBOX, AT THE LEVEL OF THE HEARTH AND NOT GREATER THAN 24 INCHES (610 MM) FROM THE FIREBOX OPENING. THE OUTLET SHALL BE CLOSABLE AND DESIGNED TO PREVENT BURNING MATERIAL FROM DROPPING INTO CONCEALED COMBUSTIBLE SPACES

RANGE HOODS & EXHAUST

M1503.1 GENERAL. RANGE HOODS SHALL DISCHARGE TO THE OUTDOORS THROUGH A DUCT. THE DUCT SERVING THE HOOD SHALL HAVE A SMOOTH INTERIOR SURFACE, SHALL BE AIR TIGHT, SHALL BE EQUIPPED WITH A BACK-DRAFT DAMPER AND SHALL BE INDEPENDENT OF ALL OTHER EXHAUST SYSTEMS. DUCTS SERVING RANGE HOODS SHALL NOT TERMINATE IN AN ATTIC OR CRAWL SPACE OR AREAS INSIDE THE BUILDING.
M1503.2 DUCT MATERIAL. DUCTS SERVING RANGE HOODS SHALL BE CONSTRUCTED OF GALVANIZED STEEL, STAINLESS STEEL OR COPPER.
M1503.3 KITCHEN EXHAUST RATES. WHERE DOMESTIC KITCHEN COOKING APPLIANCES ARE EQUIPPED WITH DUCTED RANGE HOODS OR DOWN-DRAFT EXHAUST SYSTEMS, THE FANS SHALL BE SIZED IN ACCORDANCE WITH SECTION M1507.4.
M1503.4 MAKEUP AIR REQUIRED. EXHAUST HOOD SYSTEMS CAPABLE OF EXHAUSTING IN EXCESS OF 400 CUBIC FEET PER MINUTE (0.19 M3/S) SHALL BE MECHANICALLY OR NATURALLY PROVIDED WITH MAKEUP AIR AT A RATE APPROXIMATELY EQUAL TO THE EXHAUST AIR RATE. SUCH MAKEUP AIR SYSTEMS SHALL BE EQUIPPED WITH NOT LESS THAN ONE DAMPER. EACH DAMPER SHALL BE A GRAVITY DAMPER OR AN ELECTRICALLY OPERATED DAMPER THAT AUTOMATICALLY OPENS WHEN THE EXHAUST SYSTEM OPERATES. DAMPERS SHALL BE ACCESSIBLE FOR INSPECTION, SERVICE, REPAIR AND REPLACEMENT WITHOUT REMOVING PERMANENT CONSTRUCTION OR ANY OTHER DUCTS NOT CONNECTED TO THE DAMPER BEING INSPECTED, SERVICED, REPAIRED OR REPLACED.
M1503.4.1 LOCATION. KITCHEN EXHAUST MAKEUP AIR SHALL BE DISCHARGED INTO THE SAME ROOM IN WHICH THE EXHAUST SYSTEM IS LOCATED OR INTO ROOMS OR DUCT SYSTEMS THAT COMMUNICATE THROUGH ONE OR MORE PERMANENT OPENINGS WITH THE ROOM IN WHICH SUCH EXHAUST SYSTEM IS LOCATED. SUCH PERMANENT OPENINGS SHALL HAVE A NET CROSS-SECTIONAL AREA NOT LESS THAN THE REQUIRED AREA OF THE MAKEUP AIR SUPPLY OPENINGS.

CLOTHES DRYER EXHAUST

G2439.1 (614.1) INSTALLATION. CLOTHES DRYERS SHALL BE EXHAUSTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. DRYER EXHAUST SYSTEMS SHALL BE INDEPENDENT OF ALL OTHER SYSTEMS AND SHALL CONVEY THE MOISTURE AND ANY PRODUCTS OF COMBUSTION TO THE OUTSIDE OF THE BUILDING.
G2439.2 (614.2) DUCT PENETRATIONS. DUCTS THAT EXHAUST CLOTHES DRYERS SHALL NOT PENETRATE OR BE LOCATED WITHIN ANY FIREBLOCKING, DRAFTSTOPPING OR ANY WALL, FLOOR/CEILING OR OTHER ASSEMBLY REQUIRED BY THIS CODE TO BE FIRE-RESISTANCE RATED, UNLESS SUCH DUCT IS CONSTRUCTED OF GALVANIZED STEEL OR ALUMINUM OF THE THICKNESS SPECIFIED IN THE MECHANICAL PROVISIONS OF THIS CODE AND THE FIRE-RESISTANCE RATING IS MAINTAINED IN ACCORDANCE WITH THIS CODE. FIRE DAMPERS SHALL NOT BE INSTALLED IN CLOTHES DRYER EXHAUST DUCT SYSTEMS.
G2439.3 (614.4) EXHAUST INSTALLATION. EXHAUST DUCTS FOR CLOTHES DRYERS SHALL TERMINATE ON THE OUTSIDE OF THE BUILDING AND SHALL BE EQUIPPED WITH A BACKDRAFT DAMPER. SCREENS SHALL NOT BE INSTALLED AT THE DUCT TERMINATION. DUCTS SHALL NOT BE CONNECTED OR INSTALLED WITH SHEET METAL SCREWS OR OTHER FASTENERS THAT WILL OBSTRUCT THE FLOW. CLOTHES DRYER EXHAUST DUCTS SHALL NOT BE CONNECTED TO A VENT CONNECTOR, VENT OR CHIMNEY. CLOTHES DRYER EXHAUST DUCTS SHALL NOT EXTEND INTO OR THROUGH DUCTS OR PLENUMS.

PROJECT INFORMATION

OWNERS:	ZALESKI FAMILY
CLASSIFICATION USE GROUP:	SINGLE FAMILY R12.5

PROJECT SITE DATA

ADDRESS:	6413 ALDEN DRIVE, WEST BLOOMFIELD, MI 48324
LEGAL:	LOT 10, GREEN LAKE MANOR A SUBDIVISION OF PART OF SECTION 9, T.2N., R.9 E., WEST BLOOMFIELD TWP., OAKLAND COUNTY MICHIGAN, AS RECORDED IN LIBER 60 OF PLATS, PAGE 29A OCR.
PROPERTY SIZE:	16,194 SF (0.36 ACRE)
PARCEL NUMBER:	18-08-401-018
PROPOSED 1ST FLOOR:	2620 SF
PROPOSED 2ND FLOOR:	868 SF
TOTAL CONDITIONED SPACE:	3488 SF
UNCONDITIONED STORAGE:	167 SF
GARAGE:	769 SF

FRONT OF HOME

BACK OF HOME

OAKBRIDGE DEVELOPMENT SAMPLE

SHEET TITLE:
ISOMETRIC VIEW, PROJECT INFORMATION AND NOTES

PROJECT DESCRIPTION:
PERSONAL INFORMATION REMOVED FROM THIS TITLE BLOCK FOR SAMPLE REVIEW

OAKBRIDGE DEVELOPMENT LLC
White Lake, MI 48383
OakArch.com Info@OakArch.com

DATE:	PAPER:	SHEET:
XX.XX.XX	ARCH D	A-1

FRAMING NOTES:

SECTION R502 - WOOD FLOOR FRAMING

R502.1 GENERAL. WOOD AND WOOD-BASED PRODUCTS USED FOR LOAD-SUPPORTING PURPOSES SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THIS SECTION.
R502.1.2 PREFABRICATED WOOD I-JOISTS. STRUCTURAL CAPACITIES AND DESIGN PROVISIONS FOR PREFABRICATED WOOD I-JOISTS SHALL BE ESTABLISHED AND MONITORED IN ACCORDANCE WITH ASTM D5055.
R502.1.3 STRUCTURAL GLUED LAMINATED TIMBERS. GLUED LAMINATED TIMBERS SHALL BE MANUFACTURED AND IDENTIFIED AS REQUIRED IN ANSI/AITC A190.1 AND ASTM D3737.
R502.1.5 STRUCTURAL COMPOSITE LUMBER. STRUCTURAL CAPACITIES FOR STRUCTURAL COMPOSITE LUMBER SHALL BE ESTABLISHED AND MONITORED IN ACCORDANCE WITH ASTM D5456.
R502.1.6 CROSS-LAMINATED TIMBER. CROSS-LAMINATED TIMBER SHALL BE MANUFACTURED AND IDENTIFIED AS REQUIRED BY ANSI/APA PRG 320.
R502.1.7 ENGINEERED WOOD RIM BOARD. ENGINEERED WOOD RIM BOARDS SHALL CONFORM TO ANSI/APA PRR 410 OR SHALL BE EVALUATED IN ACCORDANCE WITH ASTM D7672. STRUCTURAL CAPACITIES SHALL BE IN ACCORDANCE WITH ANSI/APA PRR 410 OR ESTABLISHED IN ACCORDANCE WITH ASTM D7672.
R502.2 DESIGN AND CONSTRUCTION. FLOORS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THIS CHAPTER, FIGURE R502.2 AND SECTIONS R317 AND R318 OR IN ACCORDANCE WITH ANSI AWC NDS.
R502.3 ALLOWABLE JOIST SPANS. SPANS FOR FLOOR JOISTS SHALL BE IN ACCORDANCE WITH TABLES R502.3.1(1) AND R502.3.1(2). FOR OTHER GRADES AND SPECIES AND FOR OTHER LOADING CONDITIONS, REFER TO THE AWC STJR.
R502.4 JOISTS UNDER BEARING PARTITIONS. JOISTS UNDER PARALLEL BEARING PARTITIONS SHALL BE OF ADEQUATE SIZE TO SUPPORT THE LOAD. DOUBLE JOISTS, SIZED TO ADEQUATELY SUPPORT THE LOAD, THAT ARE SEPARATED TO PERMIT THE INSTALLATION OF PIPING OR VENTS SHALL BE FULL DEPTH SOLID BLOCKED WITH LUMBER NOT LESS THAN 2 INCHES (51 MM) IN NOMINAL THICKNESS SPACED NOT MORE THAN 4 FEET (1219 MM) ON CENTER. BEARING PARTITIONS PERPENDICULAR TO JOISTS SHALL NOT BE OFFSET FROM SUPPORTING GIRDERS, WALLS OR PARTITIONS MORE THAN THE JOIST DEPTH UNLESS SUCH JOISTS ARE OF SUFFICIENT SIZE TO CARRY THE ADDITIONAL LOAD.
R502.5 ALLOWABLE GIRDER AND HEADER SPANS. THE ALLOWABLE SPANS OF GIRDERS AND HEADERS FABRICATED OF DIMENSION LUMBER SHALL NOT EXCEED THE VALUES SET FORTH IN TABLES R602.7(1), R602.7(2) AND R602.7(3).
R502.6 BEARING. THE ENDS OF EACH JOIST, BEAM OR GIRDER SHALL HAVE NOT LESS THAN 11/2 INCHES (38 MM) OF BEARING ON WOOD OR METAL AND NOT LESS THAN 3 INCHES (76 MM) ON MASONRY OR CONCRETE EXCEPT WHERE SUPPORTED ON A 1-INCH BY 4-INCH (25 MM BY 102 MM) RIBBON STRIP AND NAILED TO THE ADJACENT STUD OR BY THE USE OF APPROVED JOIST HANGERS. THE BEARING ON MASONRY OR CONCRETE SHALL BE DIRECT, OR A SILL PLATE OF 2-INCH-MINIMUM (51 MM) NOMINAL THICKNESS SHALL BE PROVIDED UNDER THE JOIST, BEAM OR GIRDER.
R502.7 LATERAL RESTRAINT AT SUPPORTS. JOISTS SHALL BE SUPPORTED LATERALLY AT THE ENDS BY FULL-DEPTH SOLID BLOCKING NOT LESS THAN 2 INCHES (51 MM) NOMINAL IN THICKNESS; OR BY ATTACHMENT TO A FULL-DEPTH HEADER, BAND OR RIM JOIST, OR TO AN ADJOINING STUD OR SHALL BE OTHERWISE PROVIDED WITH LATERAL SUPPORT TO PREVENT ROTATION. EXCEPTIONS: 1. TRUSSES, STRUCTURAL COMPOSITE LUMBER, STRUCTURAL GLUED-LAMINATED MEMBERS AND I-JOISTS SHALL BE SUPPORTED LATERALLY AS REQUIRED BY THE MANUFACTURER'S RECOMMENDATIONS.
R502.9 FASTENING. FLOOR FRAMING SHALL BE NAILED IN ACCORDANCE WITH TABLE R602.3(1). WHERE POSTS AND BEAM OR GIRDER CONSTRUCTION IS USED TO SUPPORT FLOOR FRAMING, POSITIVE CONNECTIONS SHALL BE PROVIDED TO ENSURE AGAINST UPLIFT AND LATERAL DISPLACEMENT.
R502.10 FRAMING OF OPENINGS. OPENINGS IN FLOOR FRAMING SHALL BE FRAMED WITH A HEADER AND TRIMMER JOISTS. WHERE THE HEADER JOIST SPAN DOES NOT EXCEED 4 FEET (1219 MM), THE HEADER JOIST SHALL BE A SINGLE MEMBER THE SAME SIZE AS THE FLOOR JOIST. SINGLE TRIMMER JOISTS SHALL BE USED TO CARRY A SINGLE HEADER JOIST THAT IS LOCATED WITHIN 3 FEET (914 MM) OF THE TRIMMER JOIST BEARING. WHERE THE HEADER JOIST SPAN EXCEEDS 4 FEET (1219 MM), THE TRIMMER JOISTS AND THE HEADER JOIST SHALL BE DOUBLED AND OF SUFFICIENT CROSS SECTION TO SUPPORT THE FLOOR JOISTS FRAMING INTO THE HEADER.
R502.11 WOOD TRUSSES. R502.11.1 DESIGN. WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH APPROVED ENGINEERING PRACTICE. THE DESIGN AND MANUFACTURE OF METAL-PLATE-CONNECTED WOOD TRUSSES SHALL COMPLY WITH ANSI/TPI 1. THE TRUSS DESIGN DRAWINGS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL WHERE REQUIRED BY THE STATUTES OF THE JURISDICTION IN WHICH THE PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH SECTION R106.1.
R502.11.2 BRACING. TRUSSES SHALL BE BRACED TO PREVENT ROTATION AND PROVIDE LATERAL STABILITY IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE CONSTRUCTION DOCUMENTS FOR THE BUILDING AND ON THE INDIVIDUAL TRUSS DESIGN DRAWINGS
R502.11.4 TRUSS DESIGN DRAWINGS. TRUSS DESIGN DRAWINGS, PREPARED IN COMPLIANCE WITH SECTION R502.11.1, SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND APPROVED PRIOR TO INSTALLATION.
R502.12 DRAFTSTOPPING REQUIRED. DRAFTSTOPPING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION R302.12.
R502.13 FIREBLOCKING REQUIRED. FIREBLOCKING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION R302.11

SECTION R503 - FLOOR SHEATHING

R503.1 LUMBER SHEATHING. MAXIMUM ALLOWABLE SPANS FOR LUMBER USED AS FLOOR SHEATHING SHALL CONFORM TO TABLES R503.1, R503.2.1.1(1) AND R503.2.1.1(2).

SECTION R602 - WOOD WALL FRAMING

R602.1 GENERAL. WOOD AND WOOD-BASED PRODUCTS USED FOR LOAD-SUPPORTING PURPOSES SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THIS SECTION.
R602.2 GRADE. STUDS SHALL BE A MINIMUM NO. 3, STANDARD OR STUD GRADE LUMBER.
R602.3 DESIGN AND CONSTRUCTION. EXTERIOR WALLS OF WOOD-FRAME CONSTRUCTION SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THIS CHAPTER AND FIGURES R602.3(1) AND R602.3(2), OR IN ACCORDANCE WITH AWC NDS. COMPONENTS OF EXTERIOR WALLS SHALL BE FASTENED IN ACCORDANCE WITH TABLES **R602.3(1) THROUGH R602.3(4).** WALL SHEATHING SHALL BE FASTENED DIRECTLY TO FRAMING MEMBERS AND, WHERE PLACED ON THE EXTERIOR SIDE OF AN EXTERIOR WALL, SHALL BE CAPABLE OF RESISTING THE WIND PRESSURES LISTED IN TABLE R301.2(2) ADJUSTED FOR HEIGHT AND EXPOSURE USING TABLE R301.2(3) AND SHALL CONFORM TO THE REQUIREMENTS OF TABLE R602.3(3). WALL SHEATHING USED ONLY FOR EXTERIOR WALL COVERING PURPOSES SHALL COMPLY WITH SECTION R703. STUDS SHALL BE CONTINUOUS FROM SUPPORT AT THE SOLE PLATE TO A SUPPORT AT THE TOP PLATE TO RESIST LOADS PERPENDICULAR TO THE WALL. THE SUPPORT SHALL BE A FOUNDATION OR FLOOR, CEILING OR ROOF DIAPHRAGM OR SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. NOTE: FASTENING SCHEDULE MUST BE ADHERED TO BY FRAMING COMPANY/CREW.
R602.4 INTERIOR LOAD-BEARING WALLS. INTERIOR LOAD-BEARING WALLS SHALL BE CONSTRUCTED, FRAMED AND FIRE-BLOCKED AS SPECIFIED FOR EXTERIOR WALLS.
R602.7.2 RIM BOARD HEADERS. RIM BOARD HEADER SIZE, MATERIAL AND SPAN SHALL BE IN ACCORDANCE WITH TABLE R602.7(1). RIM BOARD HEADERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FIGURE R602.7.2 AND SHALL BE SUPPORTED AT EACH END BY FULL-HEIGHT STUDS.
R602.7.5 SUPPORTS FOR HEADERS. HEADERS SHALL BE SUPPORTED ON EACH END WITH ONE OR MORE JACK STUDS OR WITH APPROVED FRAMING ANCHORS IN ACCORDANCE WITH TABLE R602.7(1) OR R602.7(2). THE FULL-HEIGHT STUD ADJACENT TO EACH END OF THE HEADER SHALL BE END NAILED TO EACH END OF THE HEADER WITH FOUR-16D NAILS (3.5 INCHES × 0.135 INCHES). THE MINIMUM NUMBER OF FULL-HEIGHT STUDS AT EACH END OF A HEADER SHALL BE IN ACCORDANCE WITH TABLE R602.7.5.
R602.8 FIREBLOCKING REQUIRED. FIREBLOCKING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION R302.11.
R602.9 CRIPPLE WALLS. CRIPPLE WALLS WITH A STUD HEIGHT LESS THAN 14 INCHES (356 MM) SHALL BE CONTINUOUSLY SHEATHED ON ONE SIDE WITH WOOD STRUCTURAL PANELS FASTENED TO BOTH THE TOP AND BOTTOM PLATES IN ACCORDANCE WITH TABLE R602.3(1), OR THE CRIPPLE WALLS SHALL BE CONSTRUCTED OF SOLID BLOCKING.

R802.10 WOOD TRUSSES.

R802.10.1 TRUSS DESIGN DRAWINGS. TRUSS DESIGN DRAWINGS, PREPARED IN CONFORMANCE WITH SECTION R802.10.1, SHALL BE PROVIDED TO THE BUILDING OFFICIAL AND APPROVED PRIOR TO INSTALLATION. THE TRUSS DESIGN DATA SHEET, FIGURE R802.10.1, MAY BE PROVIDED TO THE BUILDING OFFICIAL AT THE TIME OF PERMIT APPLICATION, AS AN ALTERNATIVE TO DESIGN DRAWINGS AS PERMITTED IN SECTION R106.1.4.
R802.10.2 DESIGN. WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. THE DESIGN AND MANUFACTURE OF METAL-PLATE-CONNECTED WOOD TRUSSES SHALL COMPLY WITH ANSI/TPI 1. THE TRUSS DESIGN DRAWINGS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL WHERE REQUIRED BY THE STATUTES OF THE *JURISDICTION* IN WHICH THE PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH SECTION R106.1.
R802.10.3 BRACING. TRUSSES SHALL BE BRACED TO PREVENT ROTATION AND PROVIDE LATERAL STABILITY IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE *CONSTRUCTION DOCUMENTS* FOR THE BUILDING AND ON THE INDIVIDUAL TRUSS DESIGN DRAWINGS. IN THE ABSENCE OF SPECIFIC BRACING REQUIREMENTS, TRUSSES SHALL BE BRACED IN ACCORDANCE WITH ACCEPTED INDUSTRY PRACTICE SUCH AS THE SBCA *BUILDING COMPONENT SAFETY INFORMATION (BCSI) GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES.*
R802.10.4 ALTERATIONS TO TRUSSES. TRUSS MEMBERS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED OR OTHERWISE ALTERED IN ANY WAY WITHOUT THE APPROVAL OF A REGISTERED *DESIGN PROFESSIONAL.*
R802.11 ROOF TIE-DOWN.
R802.11.1 UPLIFT RESISTANCE. ROOF ASSEMBLIES SHALL HAVE UPLIFT RESISTANCE IN ACCORDANCE WITH SECTIONS R802.11.1.1 AND R802.11.1.2.
THIS STRUCTURE SHALL BE ADEQUATELY BRACED FOR WIND LOADS UNTIL THE ROOF, FLOOR AND WALLS HAVE BEEN PERMANENTLY FRAMED TOGETHER AND SHEATHED.

SECTION R803 - ROOF SHEATHING

R803.1 LUMBER SHEATHING. ALLOWABLE SPANS FOR LUMBER USED AS ROOF SHEATHING SHALL CONFORM TO TABLE R803.1. SPACED LUMBER SHEATHING FOR WOOD SHINGLE AND SHAKE ROOFING SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS R905.7 AND R905.8. SPACED LUMBER SHEATHING IS NOT ALLOWED IN SEISMIC DESIGN CATEGORY D2.

SECTION R807 - ATTIC ACCESS

R807.1 ATTIC ACCESS. BUILDINGS WITH COMBUSTIBLE CEILING OR ROOF CONSTRUCTION SHALL HAVE AN *ATTIC* ACCESS OPENING TO *ATTIC* AREAS THAT HAVE A VERTICAL HEIGHT OF 30 INCHES (762 MM) OR GREATER OVER AN AREA OF NOT LESS THAN 30 SQUARE FEET (2.8 M2). THE ROUGH-FRAMED OPENING SHALL BE NOT LESS THAN 22 INCHES BY 30 INCHES (559 MM BY 762 MM) AND SHALL BE LOCATED IN A HALLWAY OR OTHER READILY ACCESSIBLE LOCATION. SEE SECTION M1305.1.3 FOR ACCESS REQUIREMENTS WHERE MECHANICAL *EQUIPMENT* IS LOCATED IN *ATTICS.*

SECTION R703 - EXTERIOR COVERING

R703.1 GENERAL. EXTERIOR WALLS SHALL PROVIDE THE BUILDING WITH A WEATHER-RESISTANT EXTERIOR WALL ENVELOPE. THE EXTERIOR WALL ENVELOPE SHALL INCLUDE FLASHING AS DESCRIBED IN SECTION R703.4.
R703.1.1 WATER RESISTANCE. THE EXTERIOR WALL ENVELOPE SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT PREVENTS THE ACCUMULATION OF WATER WITHIN THE WALL ASSEMBLY BY PROVIDING A WATER-RESISTANT BARRIER BEHIND THE EXTERIOR VENEER AS REQUIRED BY SECTION R703.2 AND A MEANS OF DRAINING TO THE EXTERIOR WATER THAT ENTERS THE ASSEMBLY. PROTECTION AGAINST CONDENSATION IN THE EXTERIOR WALL ASSEMBLY SHALL BE PROVIDED IN ACCORDANCE WITH SECTION R702.7 OF THIS CODE.
R703.1.2 WIND RESISTANCE. WALL COVERINGS, BACKING MATERIALS AND THEIR ATTACHMENTS SHALL BE CAPABLE OF RESISTING WIND LOADS IN ACCORDANCE WITH TABLES R301.2(2) AND R301.2(3). WIND-PRESSURE RESISTANCE OF THE SIDING AND BACKING MATERIALS SHALL BE DETERMINED BY ASTM E330 OR OTHER APPLICABLE STANDARD TEST METHODS. WHERE WIND-PRESSURE RESISTANCE IS DETERMINED BY DESIGN ANALYSIS, DATA FROM APPROVED DESIGN STANDARDS AND ANALYSIS CONFORMING TO GENERALLY ACCEPTED ENGINEERING PRACTICE SHALL BE USED TO EVALUATE THE SIDING AND BACKING MATERIAL AND ITS FASTENING.
R703.2 WATER-RESISTIVE BARRIER. ONE LAYER OF NO. 15 ASPHALT FELT, FREE FROM HOLES AND BREAKS, COMPLYING WITH ASTM D226 FOR TYPE 1 FELT OR OTHER APPROVED WATER-RESISTIVE BARRIER SHALL BE APPLIED OVER STUDS OR SHEATHING OF ALL EXTERIOR WALLS. SUCH FELT OR MATERIAL SHALL BE APPLIED HORIZONTALLY, WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2 INCHES (51 MM). WHERE JOINTS OCCUR, FELT SHALL BE LAPPED NOT LESS THAN 6 INCHES (152 MM). THE FELT OR OTHER APPROVED MATERIAL SHALL BE CONTINUOUS TO THE TOP OF WALLS AND TERMINATED AT PENETRATIONS AND BUILDING APPENDAGES IN A MANNER TO MEET THE REQUIREMENTS OF THE EXTERIOR WALL ENVELOPE AS DESCRIBED IN SECTION R703.1. THE WATER-RESISTIVE BARRIER IS NOT REQUIRED FOR DETACHED ACCESSORY BUILDINGS.
R703.3 NOMINAL THICKNESS AND ATTACHMENTS. THE NOMINAL THICKNESS AND ATTACHMENT OF EXTERIOR WALL COVERINGS SHALL BE IN ACCORDANCE WITH TABLE R703.3(1), THE WALL COVERING MATERIAL REQUIREMENTS OF THIS SECTION, AND THE WALL COVERING MANUFACTURER'S INSTALLATION INSTRUCTIONS. CLADDING ATTACHMENT OVER FOAM SHEATHING SHALL COMPLY WITH THE ADDITIONAL REQUIREMENTS AND LIMITATIONS OF SECTIONS R703.15 THROUGH R703.17. FASTENERS FOR EXTERIOR WALL COVERINGS ATTACHED TO WOOD FRAMING SHALL BE IN ACCORDANCE WITH SECTION R703.3.2 AND TABLE R703.3(1). TABLE R703.3(1) USING SCREW FASTENERS SUBSTITUTED FOR THE NAILS SPECIFIED IN ACCORDANCE WITH TABLE R703.3(2), OR AN APPROVED DESIGN.
R703.4 FLASHING. APPROVED CORROSION-RESISTANT FLASHING SHALL BE APPLIED SHINGLE-FASHION IN A MANNER TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OR PENETRATION OF WATER TO THE BUILDING STRUCTURAL FRAMING COMPONENTS. SELF-ADHERED MEMBRANES USED AS FLASHING SHALL COMPLY WITH AAMA 711. FLUID-APPLIED MEMBRANES USED AS FLASHING IN EXTERIOR WALLS SHALL COMPLY WITH AAMA 714. THE FLASHING SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL FINISH. APPROVED CORROSION-RESISTANT FLASHINGS SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS:
1. EXTERIOR WINDOW AND DOOR OPENINGS. FLASHING AT EXTERIOR WINDOW AND DOOR OPENINGS SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL FINISH OR TO THE WATER-RESISTIVE BARRIER COMPLYING WITH SECTION 703.2 FOR SUBSEQUENT DRAINAGE. MECHANICALLY ATTACHED FLEXIBLE FLASHINGS SHALL COMPLY WITH AAMA 712. FLASHING AT EXTERIOR WINDOW AND DOOR OPENINGS SHALL BE INSTALLED IN ACCORDANCE WITH ONE OR MORE OF THE FOLLOWING:
1.1. THE FENESTRATION MANUFACTURER'S INSTALLATION AND FLASHING INSTRUCTIONS, OR FOR APPLICATIONS NOT ADDRESSED IN THE FENESTRATION MANUFACTURER'S INSTRUCTIONS, IN ACCORDANCE WITH THE FLASHING MANUFACTURER'S INSTRUCTIONS. WHERE FLASHING INSTRUCTIONS OR DETAILS ARE NOT PROVIDED, PAN FLASHING SHALL BE INSTALLED AT THE SILL OF EXTERIOR WINDOW AND DOOR OPENINGS. PAN FLASHING SHALL BE SEALED OR SLOPED IN SUCH A MANNER AS TO DIRECT WATER TO THE SURFACE OF THE EXTERIOR WALL FINISH OR TO THE WATERRESISTIVE BARRIER FOR SUBSEQUENT DRAINAGE. OPENINGS USING PAN FLASHING SHALL INCORPORATE FLASHING OR PROTECTION AT THE HEAD AND SIDES.
1.2. IN ACCORDANCE WITH THE FLASHING DESIGN OR METHOD OF A REGISTERED DESIGN PROFESSIONAL.
1.3. IN ACCORDANCE WITH OTHER APPROVED METHODS.
2. AT THE INTERSECTION OF CHIMNEYS OR OTHER MASONRY CONSTRUCTION WITH FRAME OR STUCCO WALLS, WITH PROJECTING LIPS ON BOTH SIDES UNDER STUCCO COPINGS.
3. UNDER AND AT THE ENDS OF MASONRY, WOOD OR METAL COPINGS AND SILLS.
4. CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM.
5. WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH TO A WALL OR FLOOR ASSEMBLY OF WOOD-FRAME CONSTRUCTION.
6. AT WALL AND ROOF INTERSECTIONS.
7. AT BUILT-IN GUTTERS.
R703.5 WOOD, HARDBOARD AND WOOD STRUCTURAL PANEL SIDING. WOOD, HARDBOARD, AND WOOD STRUCTURAL PANEL SIDING SHALL BE INSTALLED IN ACCORDANCE WITH THIS SECTION AND TABLE R703.3. HARDBOARD SIDING SHALL COMPLY WITH CPA/ANSI A135.6. HARDBOARD SIDING USED AS ARCHITECTURAL TRIM SHALL COMPLY WITH CPA/ANSI A 135.7.
R703.5.1 VERTICAL WOOD SIDING. WOOD SIDING APPLIED VERTICALLY SHALL BE NAILED TO HORIZONTAL NAILING STRIPS OR BLOCKING SET NOT MORE THAN 24 INCHES (610 MM) ON CENTER.
R703.5.2 PANEL SIDING. 3/8-INCH (9.5 MM) WOOD STRUCTURAL PANEL SIDING SHALL NOT BE APPLIED DIRECTLY TO STUDS SPACED MORE THAN 16 INCHES (406 MM) ON CENTER WHERE LONG DIMENSION IS PARALLEL TO STUDS. WOOD STRUCTURAL PANEL SIDING 7/16 INCH (11.1 MM) OR THINNER SHALL NOT BE APPLIED DIRECTLY TO STUDS SPACED MORE THAN 24 INCHES (610 MM) ON CENTER. THE STUD SPACING SHALL NOT EXCEED THE PANEL SPAN RATING PROVIDED BY THE MANUFACTURER UNLESS THE PANELS ARE INSTALLED WITH THE FACE GRAIN PERPENDICULAR TO THE STUDS OR OVER SHEATHING APPROVED FOR THAT STUD SPACING. JOINTS IN WOOD, HARDBOARD OR WOOD STRUCTURAL PANEL SIDING SHALL BE MADE AS FOLLOWS UNLESS OTHERWISE APPROVED. VERTICAL JOINTS IN PANEL SIDING SHALL OCCUR OVER FRAMING MEMBERS, UNLESS WOOD OR WOOD STRUCTURAL PANEL SHEATHING IS USED, AND SHALL BE SHIPLAPPED OR COVERED WITH A BATTEN. HORIZONTAL JOINTS IN PANEL SIDING SHALL BE LAPPED NOT LESS
THAN 1 INCH (25 MM) OR SHALL BE SHIPLAPPED OR FLASHED WITH Z-FLASHING AND OCCUR OVER SOLID BLOCKING, WOOD OR WOOD STRUCTURAL PANEL SHEATHING.
R703.5.3 HORIZONTAL WOOD SIDING. HORIZONTAL LAP SIDING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE THERE ARE NO RECOMMENDATIONS THE SIDING SHALL BE LAPPED NOT LESS THAN 1 INCH (25 MM), OR 1/2 INCH (12.7 MM) IF RABBETED, AND SHALL HAVE THE ENDS CAULKED, COVERED WITH A BATTEN OR SEALED AND INSTALLED OVER A STRIP OF FLASHING.

WINDOWS/DOORS/EGRESS

SECTION R303 - LIGHT, VENTILATION AND HEATING

R303.1 HABITABLE ROOMS. HABITABLE ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN 8 PERCENT OF THE FLOOR AREA OF SUCH ROOMS. NATURAL *VENTILATION* SHALL BE THROUGH WINDOWS, SKYLIGHTS, DOORS, LOUVERS OR OTHER *APPROVED* OPENINGS TO THE OUTDOOR AIR. THE OPENABLE AREA TO THE OUTDOORS SHALL BE NOT LESS THAN 4 PERCENT OF THE FLOOR AREA BEING VENTILATED.

WINDOW NOTES AND FALL PROTECTION

R312.1 GUARDS. *GUARDS* SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS R312.1.1 THROUGH R312.1.4.
R312.2 WINDOW FALL PROTECTION. WINDOW FALL PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS R312.2.1 WINDOW SILLS AND R312.2.2 WINDOW OPENING CONTROL DEVICES.
SECTION R308 - GLAZING MUST ADHERE TO; R308.4.5 GLAZING AND WET SURFACES, R308.4.6 GLAZING ADJACENT TO STAIRS AND RAMPS, AND R308.4.7 GLAZING ADJACENT TO THE BOTTOM STAIR LANDING.
SECTION R310 -EMERGENCY ESCAPE AND RESCUE OPENINGS
R310.1 EMERGENCY ESCAPE AND RESCUE OPENING REQUIRED. *BASEMENTS, HABITABLE ATTICS* AND EVERY SLEEPING ROOM SHALL HAVE NOT LESS THAN ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING.
R310.2.1 MINIMUM OPENING AREA. EMERGENCY AND ESCAPE RESCUE OPENINGS SHALL HAVE A NET CLEAR OPENING OF NOT LESS THAN 5.7 SQUARE FEET (0.530 M2). THE NET CLEAR HEIGHT OPENING SHALL BE NOT LESS THAN 24 INCHES (610 MM) AND THE NET CLEAR WIDTH SHALL BE NOT LESS THAN 20 INCHES (508 MM). EXCEPTION: *GRADE* FLOOR OR BELOW *GRADE* OPENINGS SHALL HAVE A NET CLEAR OPENING OF NOT LESS THAN 5 SQUARE FEET (0.465 M2).
R310.2.2 WINDOW SILL HEIGHT. WHERE A WINDOW IS PROVIDED AS THE EMERGENCY ESCAPE AND RESCUE OPENING, IT SHALL HAVE A SILL HEIGHT OF NOT MORE THAN 44 INCHES (1118 MM) ABOVE THE FLOOR; WHERE THE SILL HEIGHT IS BELOW *GRADE,* IT SHALL BE PROVIDED WITH A WINDOW WELL IN ACCORDANCE WITH SECTION R310.2.3.
R310.2.3 WINDOW WELLS. THE HORIZONTAL AREA OF THE WINDOW WELL SHALL BE NOT LESS THAN 9 SQUARE FEET (0.9 M2), WITH A HORIZONTAL PROJECTION AND WIDTH OF NOT LESS THAN 36 INCHES (914 MM). THE AREA OF THE WINDOW WELL SHALL ALLOW THE EMERGENCY ESCAPE AND RESCUE OPENING TO BE FULLY OPENED. MUST ADHERE TO SECTION R310.2.3.1 LADDER AND STEPS.

SECTION R311 - MEANS OF EGRESS

R311.1 MEANS OF EGRESS. *DWELLINGS* SHALL BE PROVIDED WITH A MEANS OF EGRESS IN ACCORDANCE WITH THIS SECTION. THE MEANS OF EGRESS SHALL PROVIDE A CONTINUOUS AND UNOBSTRUCTED PATH OF VERTICAL AND HORIZONTAL EGRESS TRAVEL FROM ALL PORTIONS OF THE *DWELLING* TO THE REQUIRED EGRESS DOOR WITHOUT REQUIRING TRAVEL THROUGH A GARAGE.
R311.2 DOOR TYPE AND SIZE. THE REQUIRED EXIT DOOR SHALL BE A SIDE-HINGED DOOR NOT LESS THAN 3 FEET (914 MM) IN WIDTH AND 6 FEET, 8 INCHES (2032 MM) IN HEIGHT.
R311.3 FLOORS AND LANDINGS AT EXTERIOR DOORS. THERE SHALL BE A LANDING OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE WIDTH OF EACH LANDING SHALL BE NOT LESS THAN THE DOOR SERVED. EVERY LANDING SHALL HAVE A DIMENSION OF NOT LESS THAN 36 INCHES (914 MM) MEASURED IN THE DIRECTION OF TRAVEL.
R311.6 HALLWAYS. THE WIDTH OF A HALLWAY SHALL BE NOT LESS THAN 3 FEET (914 MM).
R312.2 WINDOW FALL PROTECTION.

ELECTRICAL NOTES

SECTION N1104 - ELECTRICAL POWER AND LIGHTING SYSTEMS (MANDATORY)
N1104.1 (R404.1) LIGHTING EQUIPMENT (MANDATORY). A MINIMUM OF 75 PERCENT OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS OR A MINIMUM OF 75 PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH-EFFICACY LAMPS.
N1104.1.1 (R404.1.1) LIGHTING EQUIPMENT (MANDATORY). FUEL GAS LIGHTING SYSTEMS SHALL NOT HAVE CONTINUOUSLY BURNING PILOT LIGHTS.

SECTION G2410 (309) ELECTRICAL
G2410.1 (309.1) GROUNDING. GAS PIPING SHALL NOT BE USED AS A GROUNDING ELECTRODE.
G2410.2 (309.2) CONNECTIONS. ELECTRICAL CONNECTIONS BETWEEN APPLIANCES AND THE BUILDING WIRING, INCLUDING THE GROUNDING OF THE APPLIANCES, SHALL CONFORM TO CHAPTERS 34 THROUGH 43.
SECTION G2411 (310)
ELECTRICAL BONDING
G2411.1 (310.1) PIPE AND TUBING OTHER THAN CSST. EACH ABOVE-GROUND PORTION OF A GAS PIPING SYSTEM OTHER THAN CORRUGATED STAINLESS STEEL TUBING (CSST) THAT IS LIKELY TO BECOME ENERGIZED SHALL BE ELECTRICALLY CONTINUOUS AND BONDED TO AN EFFECTIVE GROUND-FAULT CURRENT PATH. GAS PIPING OTHER THAN CSST SHALL BE CONSIDERED TO BE BONDED WHERE IT IS CONNECTED TO APPLIANCES THAT ARE CONNECTED TO THE EQUIPMENT GROUNDING CONDUCTOR OF THE CIRCUIT SUPPLYING THAT APPLIANCE.
SECTION E3901
RECEPTACLE OUTLETS
E3901.1 GENERAL. *OUTLETS FOR RECEPTACLES RATED AT 125 VOLTS, 15- AND 20-AMPERES SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS E3901.2 THROUGH E3901.11. RECEPTACLE OUTLETS REQUIRED BY THIS SECTION SHALL BE IN ADDITION TO ANY RECEPTACLE THAT IS:*
1 PART OF A LUMINAIRE OR APPLIANCE;
2 LOCATED WITHIN CABINETS OR CUPBOARDS;
3 CONTROLLED BY A WALL SWITCH IN ACCORDANCE WITH SECTION E3903.2, EXCEPTION 1; OR
4. LOCATED OVER 5.5 FEET (1676 MM) ABOVE THE FLOOR.
SECTION E3902
GROUND-FAULT AND ARC-FAULT CIRCUIT INTERRUPTER PROTECTION
E3902.1 BATHROOM RECEPTACLES. 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN BATHROOMS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. [210.8(A)(1)]
E3902.2 GARAGE AND ACCESSORY BUILDING RECEPTACLES. 125-VOLT, SINGLE-PHASE, 15- OR 20-AMPERE RECEPTACLES INSTALLED IN GARAGES AND GRADE-LEVEL PORTIONS OF UNFINISHED ACCESSORY BUILDINGS USED FOR STORAGE OR WORK AREAS SHALL HAVE GROUNDFAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. [210.8(A)(2)]
E3902.3 OUTDOOR RECEPTACLES. 125-VOLT, SINGLE-PHASE, 15- AN 20-AMPERE RECEPTACLES INSTALLED OUTDOORS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. [210.8(A)(3)]
EXCEPTION: RECEPTACLES AS COVERED IN SECTION E4101.7. [210.8(A)(3) EXCEPTION]
E3902.5 UNFINISHED BASEMENT RECEPTACLES. 125-VOLT, SINGLEPHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN UNFINISHED BASEMENTS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. FOR PURPOSES OF THIS SECTION, UNFINISHED BASEMENTS ARE DEFINED AS PORTIONS OR AREAS OF THE BASEMENT NOT INTENDED AS HABITABLE ROOMS AND LIMITED TO STORAGE AREAS, WORK AREAS, AND SIMILAR AREAS. [210.8(A)(5)]
EXCEPTION: A RECEPTACLE SUPPLYING ONLY A PERMANENTLY INSTALLED FIRE ALARM OR BURGLAR ALARM SYSTEM. RECEPTACLES INSTALLED IN ACCORDANCE WITH THIS EXCEPTION SHALL NOT BE CONSIDERED AS MEETING THE REQUIREMENT OF SECTION E3901.9. [210.8(A)(5) EXCEPTION]
E3902.6 KITCHEN RECEPTACLES. 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES THAT SERVE COUNTERTOP SURFACES SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. [210.8(A)(6)]
E3902.7 SINK RECEPTACLES. 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES THAT ARE LOCATED WITHIN 6 FEET (1829 MM) OF THE OUTSIDE EDGE OF A SINK SHALL HAVE GROUND-FAULT CIRCUIT- INTERRUPTER PROTECTION FOR PERSONNEL. RECEPTACLE OUTLETS SHALL NOT BE INSTALLED IN A FACE-UP POSITION IN THE WORK SURFACES OR COUNTERTOPS. [210.8(A)(7)]
E3902.8 BATHTUB OR SHOWER STALL RECEPTACLES. 125-VOLT, SINGLE PHASE, 15- AND 20-AMPERE RECEPTACLES THAT ARE LOCATED WITHIN 6 FEET (1829 MM) OF THE OUTSIDE EDGE OF A BATHTUB OR SHOWER STALL SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL. [210.8(A)(8)]
E3902.9 LAUNDRY AREAS. 125-VOLT, SINGLE-PHASE, 15- AND 20- AMPERE RECEPTACLES INSTALLED IN LAUNDRY AREAS SHALL HAVE GROUNDFAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL. [210.8(A)(9)]
E3902.10 KITCHEN DISHWASHER BRANCH CIRCUIT. GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION SHALL BE PROVIDED FOR OUTLETS THAT SUPPLY DISHWASHERS IN DWELLING UNIT LOCATIONS. [210.8(D)]
E3902.13 ELECTRICALLY HEATED FLOORS. GROUND-FAULT CIRCUITINTERRUPTER PROTECTION FOR PERSONNEL SHALL BE PROVIDED FOR ELECTRICALLY HEATED FLOORS IN BATHROOMS, KITCHENS AND IN HYDROMASSAGE BATHTUB, SPA AND HOT TUB LOCATIONS. [424.44(G)]
E3902.14 LOCATION OF GROUND-FAULT CIRCUIT INTERRUPTERS. GROUND-FAULT CIRCUIT INTERRUPTERS SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION. [210.8(A)]

CONCRETE-ENCASED ELECTRODE

MUST CONSIST OF AT LEAST 20 FT OF EITHER OF THE FOLLOWING [250.52(A)(3)]:
1) ONE OR MORE OF BARE, ZINC-GALVANIZED, OR OTHERWISE ELECTRICALLY CONDUCTIVE STEEL REINFORCING BARS OF NOT LESS THAN ½ IN. DIAMETER, MECHANICALLY CONNECTED TOGETHER BY STEEL TIE WIRES, WELDING, OR OTHER EFFECTIVE MEANS, TO CREATE A 20 FT OR GREATER LENGTH.
2) BARE COPPER CONDUCTOR NOT SMALLER THAN 4 AWG. [250.66(B)]
THE REINFORCING BARS OR BARE COPPER CONDUCTOR MUST BE ENCASED BY AT LEAST 2 IN. OF CONCRETE LOCATED HORIZONTALLY NEAR THE BOTTOM OF A CONCRETE FOOTING OR VERTICALLY WITHIN A CONCRETE FOUNDATION THAT'S IN DIRECT CONTACT WITH THE EARTH.
IF MULTIPLE CONCRETE-ENCASED ELECTRODES ARE PRESENT AT A BUILDING/STRUCTURE, ONLY ONE IS REQUIRED TO SERVE AS A GROUNDING ELECTRODE.
CONCRETE CONTAINING INSULATION, VAPOR BARRIERS, FILMS, OR SIMILAR ITEMS SEPARATING IT FROM THE EARTH ISN'T CONSIDERED TO BE IN "DIRECT CONTACT" WITH THE EARTH.

ELECTRICAL NOTES:

1 ELECTRICAL RECEPTACLES IN BATHROOMS, KITCHENS AND GARAGES SHALL BE G.F.I. ORG.F.I.C. PER NATIONAL ELECTRICAL CODE REQUIREMENTS.
2 PROVIDE ONE SMOKE DETECTOR IN EACH ROOM AND ONE IN EACH CORRIDOR ACCESSING BEDROOMS. CONNECT SMOKE DETECTORS TO HOUSE POWER AND INTER-CONNECT SMOKE DETECTORS SO THAT, WHEN ANY ONE IS TRIPPED, THEY ALL WILL SOUND. PROVIDE BATTERY BACKUP FOR ALL UNITS.
3 CIRCUITS SHALL BE VERIFIED WITH HOME OWNER PRIOR TO WIRE INSTALLATION.
4 FINAL SWITCHES FOR TIMERS AND DIMMERS SHALL BE VERIFIED WITH HOME OWNER.
5 FIXTURES TO BE SELECTED BY HOME OWNER.

DATA / CABLE:
LOCATION OF SECURITY PANELS & CABLE TO BE APPROVED BY HOME OWNER.

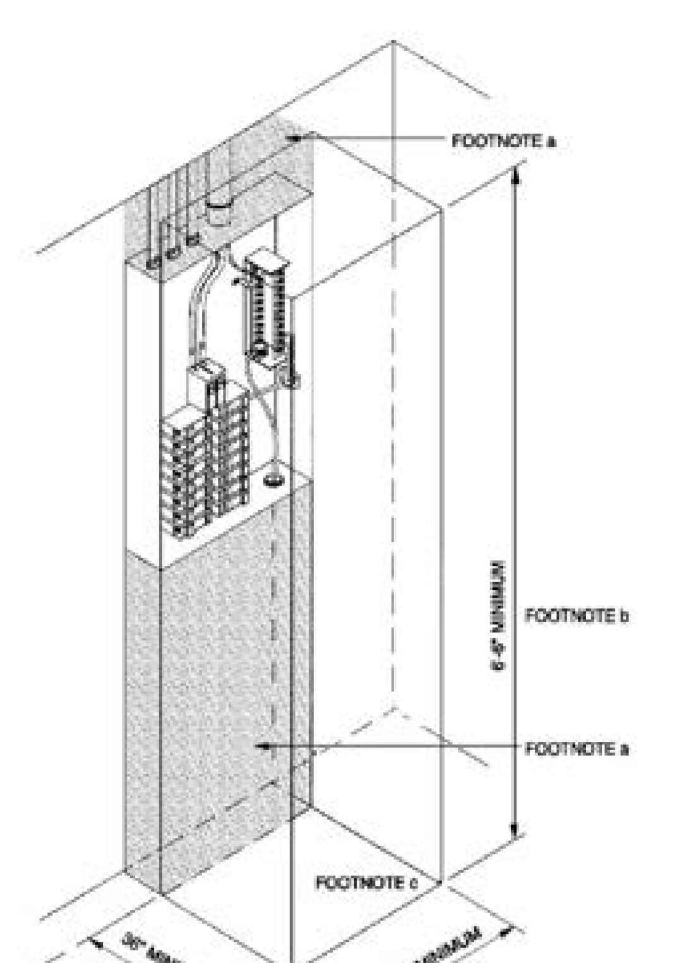

TABLE E3702.14 (Table 210.24)
BRANCH-CIRCUIT REQUIREMENTS-SUMMARY[a, b]

	CIRCUIT RATING		
	15 amp	20 amp	30 amp
Conductors: Minimum size (AWG) circuit conductors	14	12	10
Maximum overcurrent-protection device rating Ampere rating	15	20	30
Outlet devices: Lampholders permitted Receptacle rating (amperes)	Any type 15 maximum	Any type 15 or 20	N/A 30
Maximum load (amperes)	15	20	30

a. These gages are for copper conductors.
b. N/A means not allowed.

FOOTNOTE FOR ELECTRICAL IMAGE:
FOR SI: 1 INCH = 25.4 MM, 1 FOOT = 304.8 MM.
A. EQUIPMENT, PIPING AND DUCTS FOREIGN TO THE ELECTRICAL INSTALLATION SHALL NOT BE PLACED IN THE SHADED AREAS EXTENDING FROM THE FLOOR TO A HEIGHT OF 6 FEET ABOVE THE PANELBOARD ENCLOSURE, OR TO THE STRUCTURAL CEILING, WHICHEVER IS LOWER.
B. THE WORKING SPACE SHALL BE CLEAR AND UNOBSTRUCTED FROM THE FLOOR TO A HEIGHT OF 6.5 FEET OR THE HEIGHT OF THE EQUIPMENT, WHICHEVER IS GREATER.
C. THE WORKING SPACE SHALL NOT BE DESIGNATED FOR STORAGE.
D. PANELBOARDS, SERVICE EQUIPMENT AND SIMILAR ENCLOSURES SHALL NOT BE LOCATED IN BATHROOMS, TOILET ROOMS, CLOTHES CLOSETS OR OVER THE STEPS OF A STAIRWAY.
E. SUCH WORK SPACES SHALL BE PROVIDED WITH ARTIFICIAL LIGHTING WHERE LOCATED INDOORS AND SHALL NOT BE CONTROLLED BY AUTOMATIC MEANS ONLY.

OAKBRIDGE DEVELOPMENT SAMPLE

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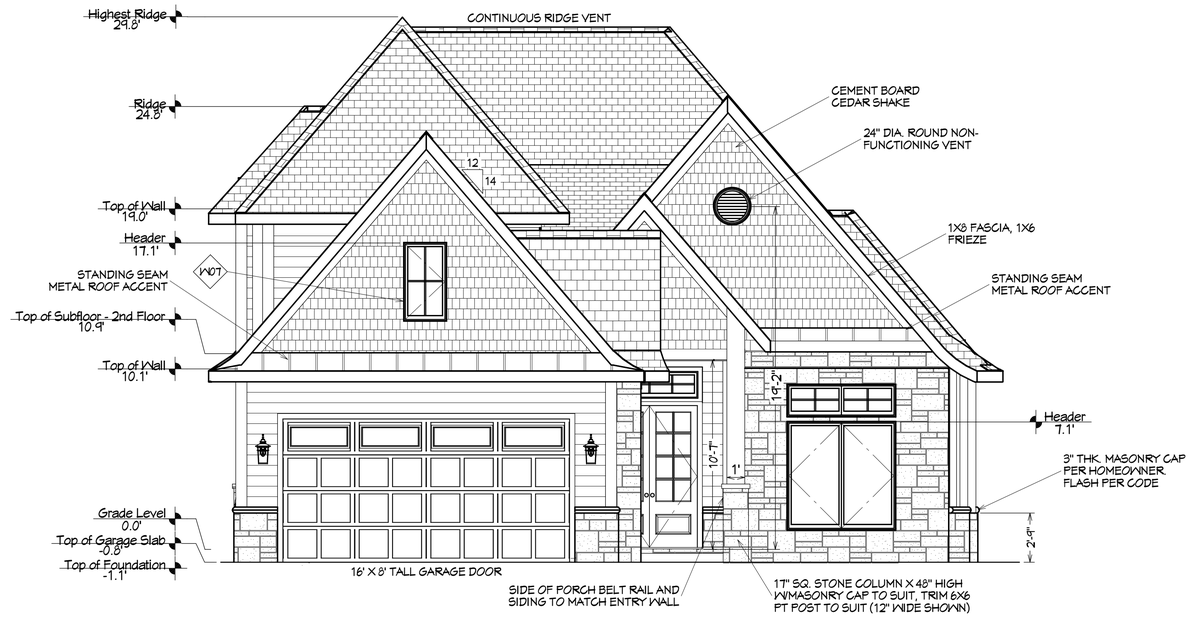
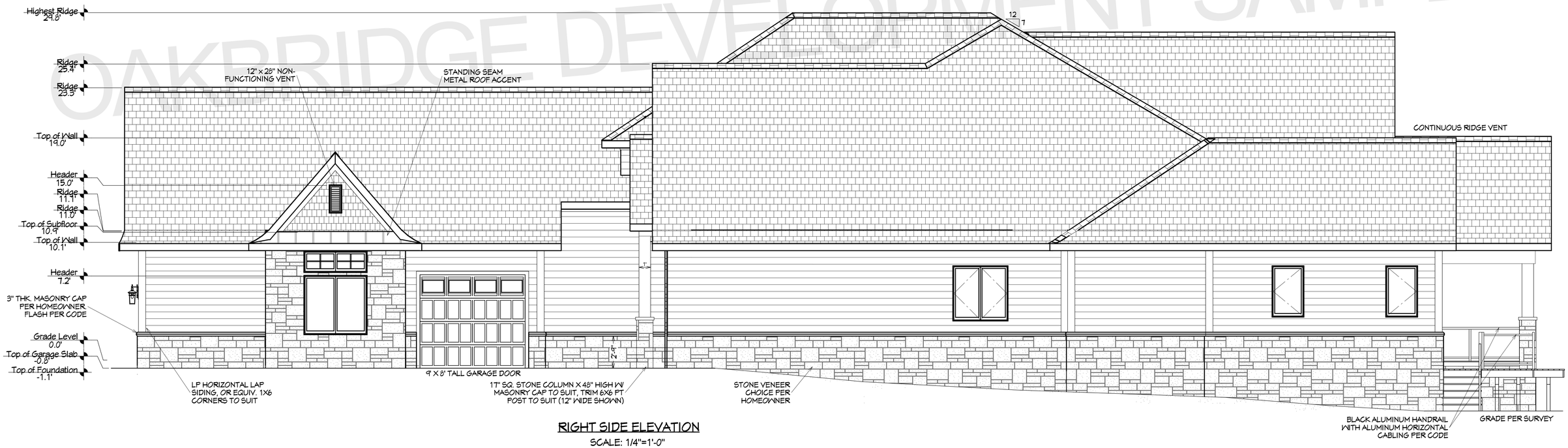


FRONT ELEVATION

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



RIGHT SIDE ELEVATION

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

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White Lake, MI 48383
OakArch.com Info@OakArch.com

DATE:	PAPER:	SHEET:
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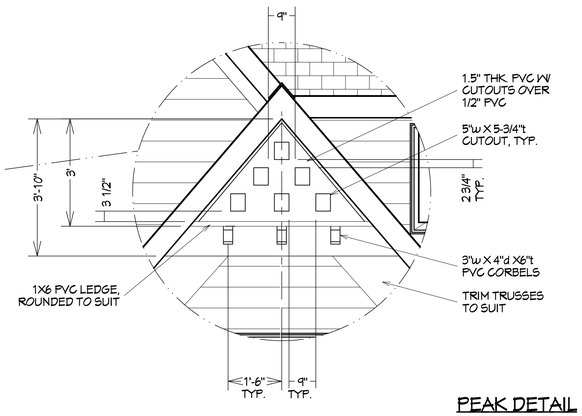
REAR ELEVATION

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



PEAK DETAIL

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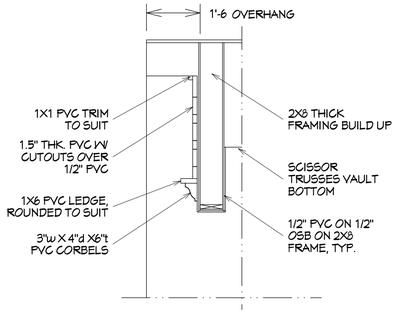

LEFT SIDE ELEVATION

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

OAKBRIDGE DEVELOPMENT SAMPLE

SHEET TITLE:

REAR ELEVATION AND LEFT SIDE ELEVATION

PROJECT DESCRIPTION:

PERSONAL INFORMATION REMOVED FROM THIS TITLE BLOCK FOR SAMPLE REVIEW

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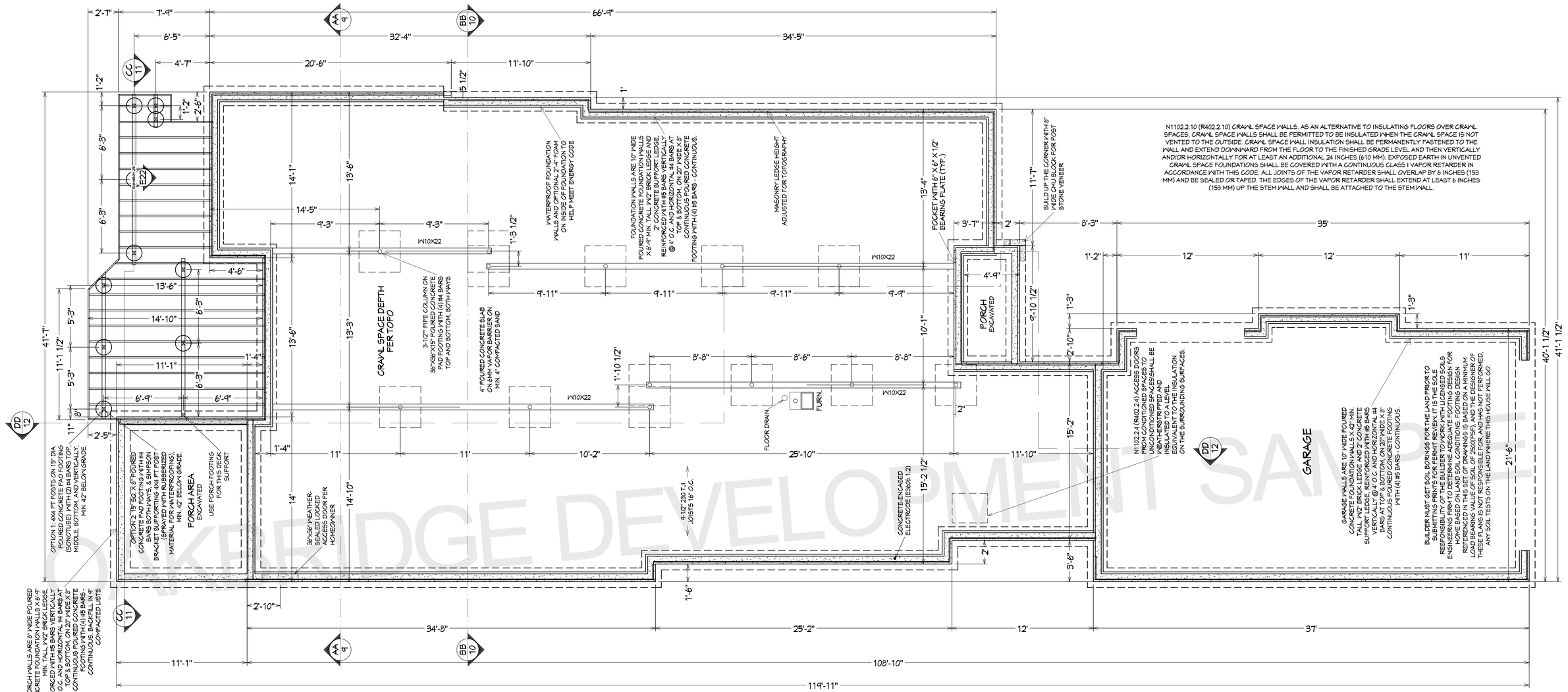

FOUNDATION
SCALE: 1/4"=1'-0"

OAKBRIDGE DEVELOPMENT SAMPLE

FOUNDATION NOTES:
ALL FOOTINGS TO REST ON CLEAN, FIRM UNDISTURBED SOIL. STEP FOOTINGS A REQUIRED TO MAINTAIN REQUIRED DEPTH BELOW FINISH GRADES.
INFILTRATION, ALL OPENINGS IN THE EXT. BLDG. ENVELOPE SHALL BE SEALED AGAINST AIR INFILTRATION. THE FOLLOWING AREAS MUST BE SEALED.
- JOINTS AROUND WINDOW AND DOOR FRAMES
- JOINTS BETWEEN WALL CAVITY AND WINDOWDR. FME.
- JOINTS BETWEEN WALL AND FOUNDATION
- JOINTS BETWEEN WALL AND ROOF
- JOINTS BETWEEN WALL PANELS
- UTILITY PENETRATIONS THROUGH EXTERIOR WALLS

R401.2 REQUIREMENTS. FOUNDATION CONSTRUCTION SHALL BE CAPABLE OF ACCOMMODATING ALL LOADS IN ACCORDANCE WITH SECTION R301 AND OF TRANSMITTING THE RESULTING LOADS TO THE SUPPORTING SOIL. FILL SOILS THAT SUPPORT FOOTINGS AND FOUNDATIONS SHALL BE DESIGNED, INSTALLED AND TESTED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. GRAVEL FILL USED AS FOOTINGS FOR WOOD AND PRECAST CONCRETE FOUNDATIONS SHALL COMPLY WITH SECTION R403.
R401.4 SOIL TESTS. 2015 MICHIGAN RESIDENTIAL CODE STATES: WHERE QUANTIFIABLE DATA CREATED BY ACCEPTED SOIL SCIENCE METHODOLOGIES INDICATE EXPANSIVE, COMPRESSIBLE, SHIFTING OR OTHER QUESTIONABLE SOIL CHARACTERISTICS ARE LIKELY TO BE PRESENT, THE BUILDING OFFICIAL SHALL DETERMINE WHETHER TO REQUIRE A SOIL TEST TO DETERMINE THE SOIL'S CHARACTERISTICS AT A PARTICULAR LOCATION. THIS TEST SHALL BE DONE BY AN APPROVED AGENCY USING AN APPROVED METHOD.
THIS HOME DESIGN STATES: IT IS THE SOLE RESPONSIBILITY OF THE BUILDER TO WORK WITH LICENSED SOILS ENGINEERING FIRM TO DETERMINE ADEQUATE FOOTING DESIGN FOR HOME BASED ON LAND SOIL CONDITIONS. FOOTING DESIGN REFERENCED IN THIS SET OF DRAWINGS IS BASED ON A MINIMUM LOAD BEARING VALUE OF SOIL OF 2500(PSF), AND THE DESIGNER OF THESE PLANS IS NOT RESPONSIBLE FOR, AND HAS NOT PERFORMED, ANY SOIL TESTS ON THE LAND WHERE THIS HOUSE WILL GO.

SECTION R403 - FOOTINGS

R403.1 GENERAL. ALL EXTERIOR WALLS SHALL BE SUPPORTED ON CONTINUOUS SOLID OR FULLY GROUTED MASONRY OR CONCRETE FOOTINGS, CRUSHED STONE FOOTINGS, WOOD FOUNDATIONS, OR OTHER APPROVED STRUCTURAL SYSTEMS WHICH SHALL BE OF SUFFICIENT DESIGN TO ACCOMMODATE ALL LOADS ACCORDING TO SECTION R301 AND TO TRANSMIT THE RESULTING LOADS TO THE SOIL WITHIN THE LIMITATIONS AS DETERMINED FROM THE CHARACTER OF THE SOIL. FOOTINGS SHALL BE SUPPORTED ON UNDISTURBED NATURAL SOILS OR ENGINEERED FILL. CONCRETE FOOTING SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R403 OR IN ACCORDANCE WITH ACI 332.
R403.1.6 FOUNDATION ANCHORAGE. WOOD SILL PLATES AND WOOD WALLS SUPPORTED DIRECTLY ON CONTINUOUS FOUNDATIONS SHALL BE ANCHORED TO THE FOUNDATION IN ACCORDANCE WITH THIS SECTION. WOOD SOLE PLATES SHALL BE ANCHORED TO THE FOUNDATION WITH MINIMUM 1/2-INCHDIAMETER (12.7 MM) ANCHOR BOLTS SPACED A MAXIMUM OF 6 FEET (1829 MM) ON CENTER OR APPROVED ANCHORS OR ANCHOR STRAPS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2-INCH-DIAMETER (12.7 MM) ANCHOR BOLTS. BOLTS SHALL EXTEND A MINIMUM OF 7 INCHES (178 MM) INTO CONCRETE OR GROUTED CELLS OF CONCRETE MASONRY UNITS. THE BOLTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE WIDTH OF THE PLATE. A NUT AND WASHER SHALL BE TIGHTENED ON EACH ANCHOR BOLT. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PLATE SECTION WITH ONE BOLT LOCATED NOT MORE THAN 12 INCHES (305 MM) OR LESS THAN SEVEN BOLT DIAMETERS FROM EACH END OF THE PLATE SECTION. SILL PLATES AND SOLE PLATES SHALL BE PROTECTED AGAINST DECAY AND TERMITES WHERE REQUIRED BY SECTIONS R317 AND R318.

SECTION R404 - FOUNDATION AND RETAINING WALLS

R404.1 CONCRETE AND MASONRY FOUNDATION WALLS. CONCRETE FOUNDATION WALLS SHALL BE SELECTED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404.1.3. MASONRY FOUNDATION WALLS SHALL BE SELECTED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404.1.2.
R404.1.3 CONCRETE FOUNDATION WALLS. CONCRETE FOUNDATION WALLS THAT SUPPORT LIGHT-FRAME WALLS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THIS SECTION, ACI 318, ACI 332 OR PCA 100.

FOUNDATION NOTES (CONTINUED):
R404.1.3.1 CONCRETE CROSS-SECTION. CONCRETE WALLS CONSTRUCTED IN ACCORDANCE WITH THIS CODE SHALL COMPLY WITH THE SHAPES AND MINIMUM CONCRETE CROSS-SECTIONAL DIMENSIONS REQUIRED BY TABLE R608.3. OTHER TYPES OF FORMING SYSTEMS RESULTING IN CONCRETE WALLS NOT IN COMPLIANCE WITH THIS SECTION AND TABLE R608.3 SHALL BE DESIGNED IN ACCORDANCE WITH ACI 318.
R404.1.3.2 REINFORCEMENT FOR FOUNDATION WALLS.
CONCRETE FOUNDATION WALLS SHALL BE LATERALLY SUPPORTED AT THE TOP AND BOTTOM. HORIZONTAL REINFORCEMENT SHALL BE PROVIDED IN ACCORDANCE WITH TABLE R404.1.2(1). VERTICAL REINFORCEMENT SHALL BE PROVIDED IN ACCORDANCE WITH TABLE R404.1.2(2), R404.1.2(3), R404.1.2(4), R404.1.2(5), R404.1.2(6), R404.1.2(7) OR R404.1.2(8). VERTICAL REINFORCEMENT FOR FLAT BASEMENT WALLS RETAINING 4 FEET (1219 MM) OR MORE OF UNBALANCED BACKFILL IS PERMITTED TO BE DETERMINED IN ACCORDANCE WITH TABLE R404.1.2(9).
R404.1.3.3.7.1 STEEL REINFORCEMENT. STEEL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A615, A706, OR A996. ASTM A996 BARS PRODUCED FROM RAIL STEEL SHALL BE TYPE R.
R404.1.3.3.7.2 LOCATION OF REINFORCEMENT IN WALL. THE CENTER OF VERTICAL REINFORCEMENT IN BASEMENT WALLS DETERMINED FROM TABLES R404.1.2(2) THROUGH R404.1.2(7) SHALL BE LOCATED AT THE CENTERLINE OF THE WALL. VERTICAL REINFORCEMENT IN BASEMENT WALLS DETERMINED FROM TABLE R404.1.2(9) SHALL BE LOCATED TO PROVIDE A MAXIMUM COVER OF 1 1/4 INCHES (32 MM) MEASURED FROM THE INSIDE FACE OF THE WALL. REGARDLESS OF THE TABLE USED TO DETERMINE VERTICAL WALL REINFORCEMENT, THE CENTER OF THE STEEL SHALL NOT VARY FROM THE SPECIFIED LOCATION BY MORE THAN THE GREATER OF 10 PERCENT OF THE WALL THICKNESS AND 3/8 INCH (10 MM). HORIZONTAL AND VERTICAL REINFORCEMENT SHALL BE LOCATED IN FOUNDATION WALLS TO PROVIDE THE MINIMUM COVER REQUIRED BY SECTION R404.1.3.3.7.4.
R404.1.6 HEIGHT ABOVE FINISHED GRADE. CONCRETE AND MASONRY FOUNDATION WALLS SHALL EXTEND ABOVE THE FINISHED GRADE ADJACENT TO THE FOUNDATION AT ALL POINTS A MINIMUM OF 4 INCHES (102 MM) WHERE MASONRY VENEER IS USED AND A MINIMUM OF 6 INCHES (152 MM) ELSEWHERE.
R404.1.7 BACKFILL PLACEMENT. BACKFILL SHALL NOT BE PLACED AGAINST THE WALL UNTIL THE WALL HAS SUFFICIENT STRENGTH AND HAS BEEN ANCHORED TO THE FLOOR ABOVE, OR HAS BEEN SUFFICIENTLY BRACED TO PREVENT DAMAGE BY THE BACKFILL. NOTE: GARAGE POURED WALLS SHALL ONLY BE BACKFILLED UP TO 9'-0" (WITH SUFFICIENT BRACING) PRIOR TO 100% COMPLETE INSTALLATION AND TIE-IN OF KERKSTA PRECAST INC FLOOR PANEL INSTALLATION BY KERKSTA PRECAST INC.

SECTION R405 - FOUNDATION DRAINAGE

R405.1 CONCRETE OR MASONRY FOUNDATIONS. DRAINS SHALL BE PROVIDED AROUND CONCRETE OR MASONRY FOUNDATIONS THAT RETAIN EARTH AND ENCLOSE HABITABLE OR USABLE SPACES LOCATED BELOW GRADE. DRAINAGE TILES, GRAVEL OR CRUSHED STONE DRAINS, PERFORATED PIPE OR OTHER APPROVED SYSTEMS OR MATERIALS SHALL BE INSTALLED AT OR BELOW THE AREA TO BE PROTECTED AND SHALL DISCHARGE BY GRAVITY OR MECHANICAL MEANS INTO AN APPROVED DRAINAGE SYSTEM.

SECTION R406 - FOUNDATION WATERPROOFING AND DAMPPROOFING

R406.1 CONCRETE AND MASONRY FOUNDATION DAMP-PROOFING. EXCEPT WHERE REQUIRED BY SECTION R406.2 TO BE WATERPROOFED, FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND FLOORS BELOW GRADE SHALL BE DAMP-PROOFED.
R406.2 CONCRETE AND MASONRY FOUNDATION WATERPROOFING. IN AREAS WHERE A HIGH WATER TABLE OR OTHER SEVERE SOIL-WATER CONDITIONS ARE KNOWN TO EXIST, EXTERIOR FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND FLOORS BELOW GRADE SHALL BE WATERPROOFED.

GRADING NOTES:
1 CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES.
2 PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING.
3 FINAL GRADE TO CONVEY SURFACE DRAINAGE TOWARD ROCK CHANNELS AND DISPERSION TRENCHES.
4 AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL AND STRIPPED OF TOPSOIL.
5 PLACE FILL SLOPES WITH A GRADIENT STEEPER THAT 3:1 IN LIFTS NOT TO EXCEED 8 INCHES, AND MAKE SURE EACH LIFT IS PROPERLY COMPACTED.

EROSION CONTROL NOTES:
1 INSTALL SILT FENCE PRIOR TO ANY EXCAVATION OR CONSTRUCTION
2 MINIMIZE SITE DISTURBANCE BY TIGHT CONTROL OF EXCAVATION LIMITS.
3 ALL EXPOSED SOIL SHALL BE MULCHED WITH STRAW OR WOOD CHIPS TO MINIMIZE SOIL EROSION. NO SOIL SHALL BE LEFT IN AN EXPOSED CONDITION. IT IS RECOMMENDED THAT THE CONTRACTOR MAINTAIN A STOCK PILE OF THIS MATERIAL ON SITE FOR QUICK APPLICATION.
4 HYDROSEED WITH A WOOD CELLULOSE FIBER MULCH APPLIED AT A RATE OF 2,000#/ACRE. USE AN ORGANIC TACKIFIER AT NO LESS THAN 150 #/ACRE OR PER MANUFACTURE'S RECOMMENDATION IF HIGHER. APPLICATION OF TACKIFIER SHALL BE HEAVIER AT EDGES, IN VALLEYS AND AT CRESTS OF BANKS AND OTHER AREAS WHERE SEED CAN BE MOVED BY WIND OR WATER.
5 DISPERSION TRENCHES SHALL OVERFLOW ONTO NATIVE UNDISTURBED GROUND. NO SITE DISTURBANCE BELOW TRENCHES.

SHEET TITLE: FOUNDATION PLAN

PROJECT DESCRIPTION: PERSONAL INFORMATION REMOVED FROM THIS TITLE BLOCK FOR SAMPLE REVIEW

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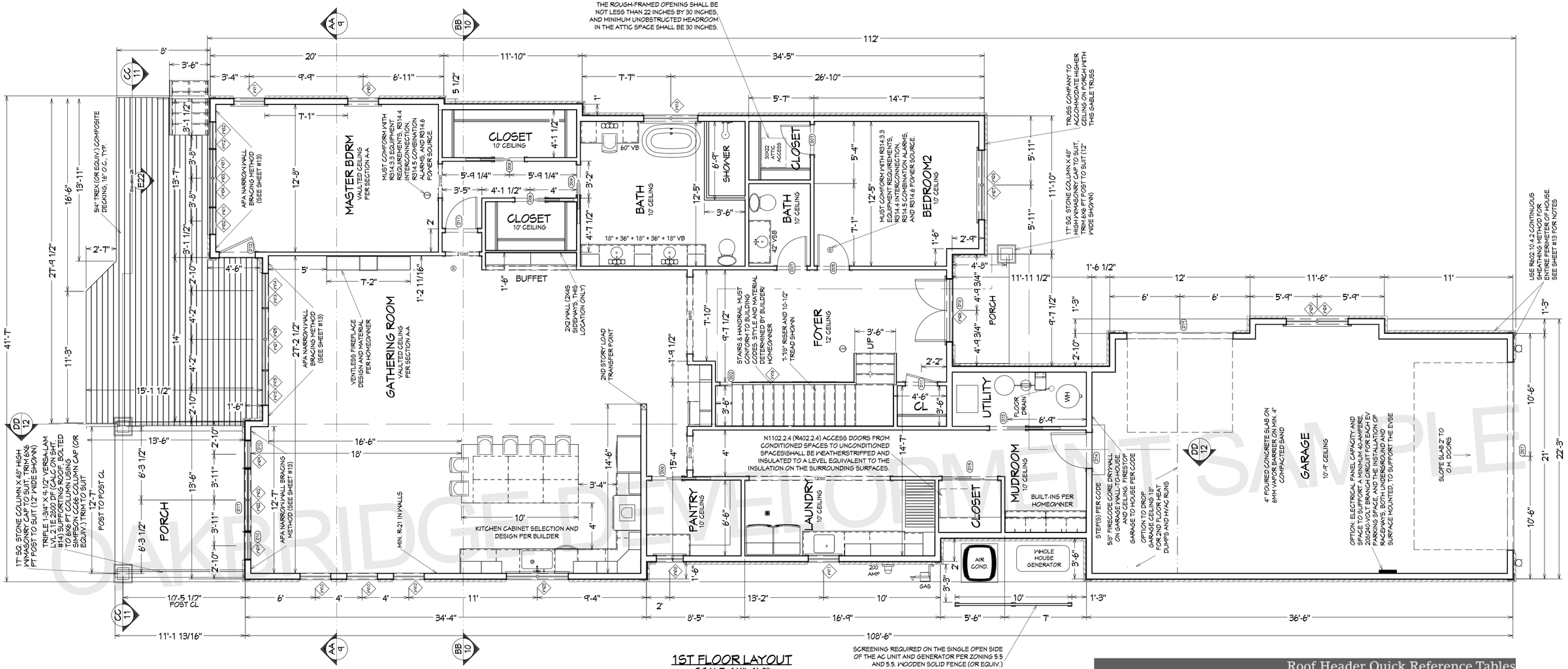

1ST FLOOR LAYOUT

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

OAKBRIDGE DEVELOPMENT SAMPLE

WINDOW SCHEDULE

NUMBER	QTY	FLOOR	SIZE	WIDTH	HEIGHT	R/O	EGRESS	DESCRIPTION	HEADER	TOP
W01	1	1	2460SC	28 "	72 "	29"X73"		SINGLE CASEMENT-HR	2X6X32" (2)	84"
W02	1	1	5419DC	64 "	21 "	65"X22"		DOUBLE FIXED	1 3/4X11 7/8X68" (2)	106"
W03	1	2	2036SC	24 "	42 "	25"X43"		SINGLE CASEMENT-HR	2X6X28" (2)	84"
W04	1	2	2430SC	28 "	36 "	29"X37"		SINGLE CASEMENT-HR	2X6X32" (2)	84"
W05	1	2	2438SC	28 "	44 "	29"X45"	YES	SINGLE CASEMENT-HL	2X6X32" (2)	84"
W06	1	2	2438SC	28 "	44 "	29"X45"	YES	SINGLE CASEMENT-HR	2X6X32" (2)	84"
W07	1	2	2444SC	28 "	52 "	29"X53"		SINGLE CASEMENT-HR	2X6X32" (2)	84"
W08	1	1	2448SC	28 "	56 "	29"X57"		SINGLE CASEMENT-HR	2X6X32" (2)	96"
W09	2	1	2419FX	28 "	21 "	29"X22"		FIXED GLASS	1 3/4X11 7/8X32" (2)	106"
W10	3	1	2820FX	32 "	24 "	33"X25"		FIXED GLASS	2X6X36" (2)	96"
W11	2	1	2844SC	32 "	52 "	33"X53"		SINGLE CASEMENT-HR	2X6X36" (2)	96"
W12	1	1	2460SC	28 "	72 "	29"X73"		SINGLE CASEMENT-HL	2X6X32" (2)	84"
W13	2	1	3019FX	36 "	21 "	37"X22"		FIXED GLASS	1 3/4X11 7/8X40" (2)	105"
W14	1	1	3060SC	36 "	72 "	37"X73"		SINGLE CASEMENT-HL	2X6X40" (2)	84"
W15	1	1	3060SC	36 "	72 "	37"X73"		SINGLE CASEMENT-HR	2X6X40" (2)	84"
W16	1	1	3068FX	36 "	80 "	37"X81"		STAIR INTERIOR BAR AREA	2X6X40" (2)	80"
W17	1	2	3636FX	42 "	42 "	43"X43"		FIXED GLASS-CT	2X6X46" (2)	96 9/16"
W18	1	1	4848DC	56 "	56 "	57"X57"		DOUBLE CASEMENT-LHL/RHR	2X8X60" (2)	96"
W19	1	2	4848DC	56 "	56 "	57"X57"		DOUBLE CASEMENT-LHL/RHR	2X8X60" (2)	84"
W20	1	2	4848DC	56 "	56 "	57"X57"	YES	DOUBLE CASEMENT-LHL/RHR	2X8X60" (2)	84"
W21	1	1	5419DC	64 "	21 "	65"X22"		DOUBLE FIXED	1 3/4X11 7/8X68" (2)	105"
W22	1	1	5426DC	64 "	30 "	65"X31"		DOUBLE FIXED	2X8X69" (2)	148"
W23	1	1	5448DC	64 "	56 "	65"X57"		DOUBLE CASEMENT-LHL/RHR	2X8X69" (2)	96"
W24	1	1	5450DC	64 "	60 "	65"X61"		DOUBLE CASEMENT	2X8X69" (2)	98"
W25	1	1	5460DC	64 "	72 "	65"X73"		DOUBLE CASEMENT	2X8X69" (2)	84"
W26	1	1	5516FX	65 "	18 "	66"X19"		FIXED GLASS	2X8X66" (2)	119"
W27	1	1	6019DC	72 "	21 "	73"X22"		DOUBLE FIXED	2X10XT6" (2)	110"
W28	1	1	6060DC	72 "	72 "	73"X73"	YES	DOUBLE CASEMENT-LHL/RHR	2X10XT6" (2)	85"
W29	1	1	5419DC	64 "	21 "	65"X22"		DOUBLE FIXED	2X8X69" (2)	120"
W30	1	1	2844SC	32 "	52 "	33"X53"		SINGLE CASEMENT-HL	2X6X36" (2)	96"
W31	1	1	5060DC	60 "	72 "	61"X73"	YES	DOUBLE CASEMENT	2X8X64" (2)	84"
W32	2	1	2419FX	28 "	21 "	29"X22"		FIXED GLASS	1 3/4X11 7/8X32" (2)	105"
W33	1	1	5019DC	60 "	21 "	61"X22"		DOUBLE FIXED	1 3/4X11 7/8X64" (2)	105"
W34	1	1	5026DC	60 "	30 "	61"X31"		DOUBLE FIXED	2X8X64" (2)	148"

WINDOW AND DOOR SCHEDULES SHOULD ONLY BE USED FOR REFERENCE, WITH FINAL SELECTIONS, AND RELATED R/Os DETERMINED BY THE BUILDER, HOMEOWNER, AND SUPPLIER. WINDOWS AND DOORS CAN BE COMBINED INTO MULLED UNITS, BUT THIS PLAN SHOWS INDIVIDUAL UNITS TO HELP THE WINDOW COMPANY IDENTIFY INDIVIDUAL SIZES.

DOOR SCHEDULE

NUMBER	QTY	FLOOR	SIZE	WIDTH	HEIGHT	R/O	DESCRIPTION	HEADER
D01	1	1	16080	192 "	96 "	194"X99"	GARAGE-NEWPORT STYLELINE III 8'	1 3/4X14X200" (2)
D02	1	1	2668 R IN	30 "	80 "	32"X82 1/2"	HINGED-GLASS PANEL	2X6X35" (2)
D03	1	2	2668 R IN	30 "	80 "	32"X82 1/2"	HINGED-6801 CRAFTSMAN ONE LITE II	2X6X35" (2)
D04	1	1	2680 L	30 "	96 "	61 1/4"X98 1/2"	POCKET-6801 CRAFTSMAN ONE LITE II	2X6X64 1/4" (2)
D05	1	1	2880 L IN	32 "	96 "	34"X98 1/2"	HINGED-6801 CRAFTSMAN ONE LITE II	2X6X37" (2)
D06	3	1	2680 R	30 "	96 "	61 1/4"X98 1/2"	POCKET-6801 CRAFTSMAN ONE LITE II	2X6X64 1/4" (2)
D07	2	1	2680 R IN	30 "	96 "	32"X98 1/2"	HINGED-6801 CRAFTSMAN ONE LITE II	2X6X35" (2)
D08	1	2	2868 L IN	32 "	80 "	34"X82 1/2"	EXT. FIRE RESISTANT	2X6X37" (2)
D09	1	2	2868 R IN	32 "	80 "	34"X82 1/2"	HINGED-6801 CRAFTSMAN ONE LITE II	2X6X37" (2)
D10	2	1	2410 EX	28 "	84 "	30"X87"	EXT. FIXED-GLASS PANEL	2X6X33" (2)
D11	2	1	2880 R IN	32 "	96 "	34"X98 1/2"	HINGED-6801 CRAFTSMAN ONE LITE II	2X6X37" (2)
D12	1	1	3080 L EX	36 "	96 "	38"X99"	EXT. HINGED-GLASS PANEL	2X6X41" (2)
D13	1	1	3080 R	36 "	96 "	73 1/4"X98 1/2"	POCKET-6801 CRAFTSMAN ONE LITE II	2X6XT6 1/4" (2)
D14	1	1	3080 R EX	36 "	96 "	38"X99"	EXT. HINGED-DOOR P04	2X6X41" (2)
D15	1	1	4880 L IN	56 "	96 "	58"X98 1/2"	SLIDER-6801 CRAFTSMAN ONE LITE II	2X8X61" (2)
D16	1	2	5068 L/R	60 "	80 "	62"X82 1/2"	4 DR. BIFOLD-6175 CRAFTSMAN ONE LITE	2X8X65" (2)
D17	1	1	5470 EX	64 "	84 "	66"X87"	EXT. 1+1-PANEL SLIDER-GLASS PANEL	2X8X69" (2)
D18	1	1	5480 L/R EX	64 "	96 "	66"X99"	EXT. DOUBLE HINGED- 508 FRENCH	2X8X69" (2)
D19	1	1	9080	108 "	96 "	110"X99"	GARAGE-NEWPORT STYLELINE III 8'	1 3/4X11 7/8X116" (2)
D20	2	2	2868 L IN	32 "	80 "	34"X82 1/2"	HINGED-6801 CRAFTSMAN ONE LITE II	2X6X37" (2)

DIMENSIONS STUD TO STUD

Roof Header Quick Reference Tables

For roof loads:

- For simple span headers only (headers with a support at each end).
- Roof loads include a 2' overhang.
- Minimum bearing length is 3", 4-1/2" bearing length is required where **bold**.
- Read notes and instructions for quick reference tables on page 3.

ROOF: 40 PSF LIVE, 15 PSF DEAD, 11.5% SNOW

Beam Span (ft)	Beam Width	Span Carried By Beam (ft)					
		20	22	24	26	28	30
8	3-1/2"	7-1/4*	7-1/4*	7-1/4*	7-1/4*	7-1/4*	7-1/4*
	5-1/4"	7-1/4*	7-1/4*	7-1/4*	7-1/4*	7-1/4*	7-1/4*
10	3-1/2"	9-1/4*	9-1/4*	9-1/4*	9-1/4*	9-1/4*	9-1/4*
	5-1/4"	7-1/4*	7-1/4*	7-1/4*	7-1/4*	7-1/4*	7-1/4*
12	3-1/2"	9-1/4*	9-1/4*	9-1/4*	9-1/2"	11-1/4"	11-1/4"
	5-1/4"	9-1/4*	9-1/4*	9-1/4*	9-1/4*	9-1/4*	9-1/4*
14	3-1/2"	11-1/4"	11-1/4"	11-1/4"	11-1/4"	11-7/8"	11-7/8"
	5-1/4"	9-1/4*	9-1/4*	9-1/2"	11-1/4"	11-1/4"	11-1/4"
16	3-1/2"	11-7/8"	14"	14"	14"	14"	14"
	5-1/4"	11-1/4"	11-1/4"	11-1/4"	11-1/4"	11-1/4"	11-7/8"
18	3-1/2"	14"	14"	16"	16"	16"	16"
	5-1/4"	11-7/8"	11-7/8"	14"	14"	14"	14"

SHEET TITLE:

1ST FLOOR PLAN AND WINDOW/DOOR TABLES

PROJECT DESCRIPTION:

PERSONAL INFORMATION REMOVED FROM THIS TITLE BLOCK FOR SAMPLE REVIEW

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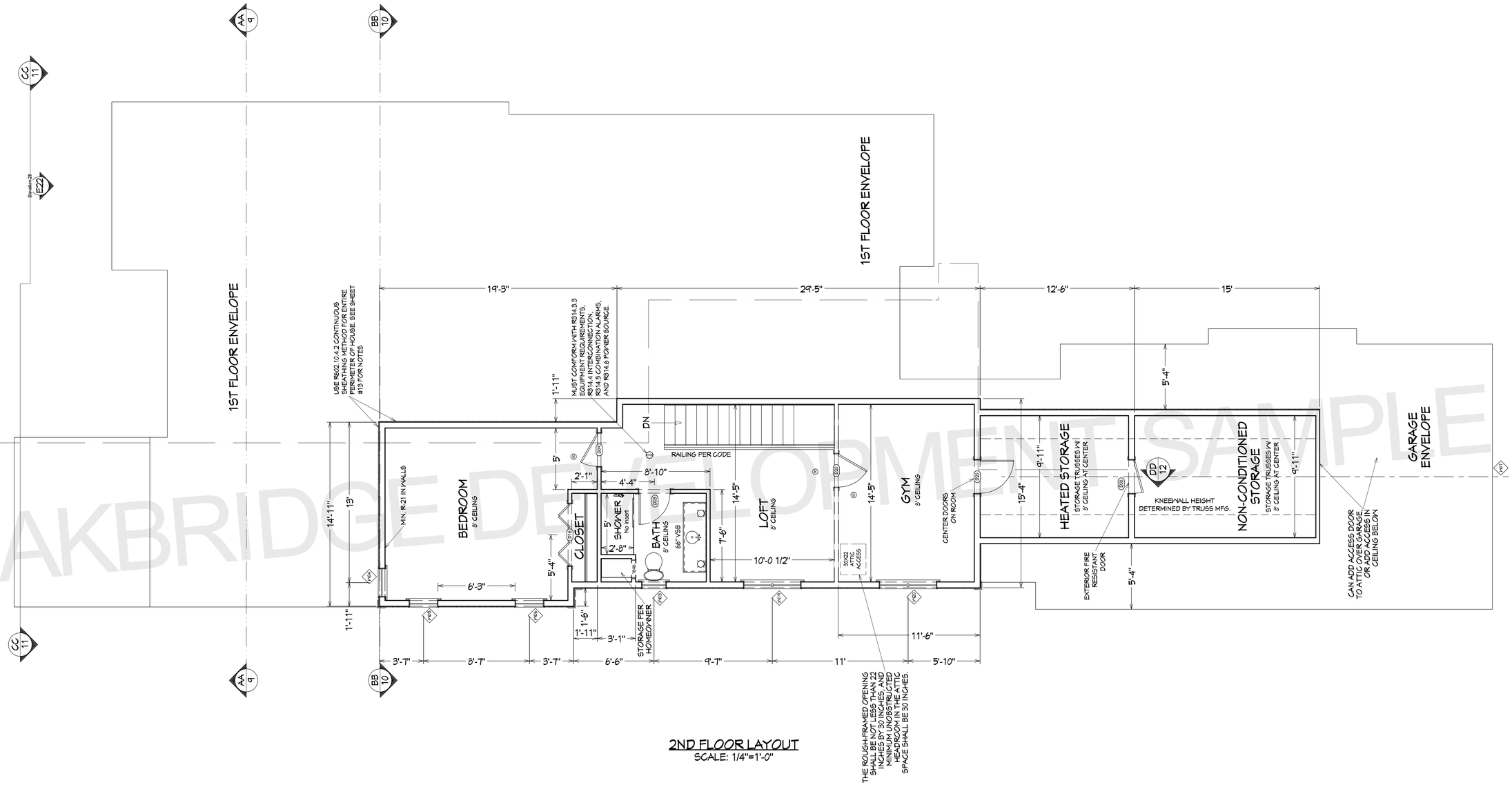

2ND FLOOR LAYOUT
SCALE: 1/4"=1'-0"

OAKBRIDGE DEVELOPMENT SAMPLE

DIMENSIONS STUD TO STUD

SHEET TITLE:
2ND FLOOR PLAN

PROJECT DESCRIPTION:
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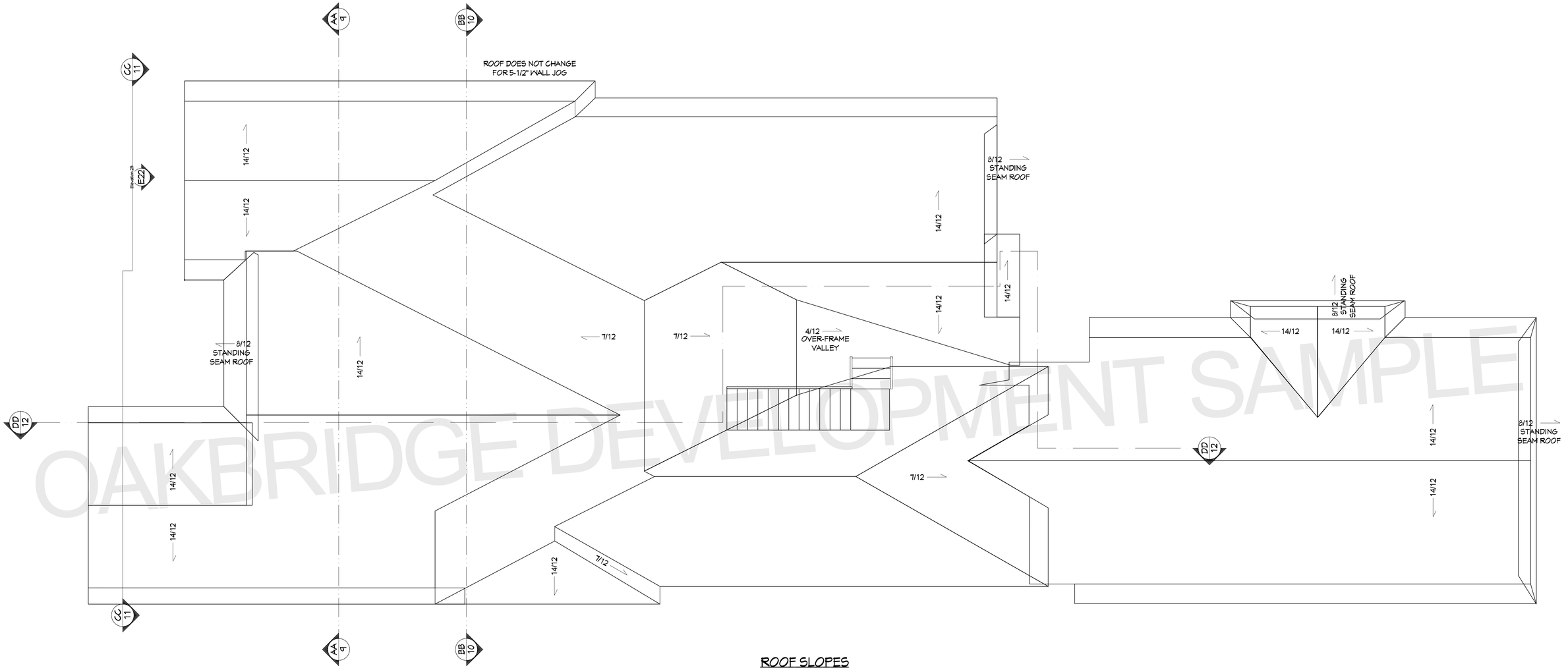

ROOF SLOPES
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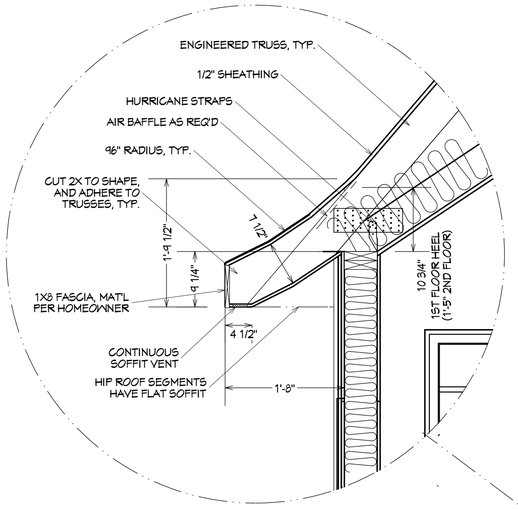

RAFTER TAILS DETAILS

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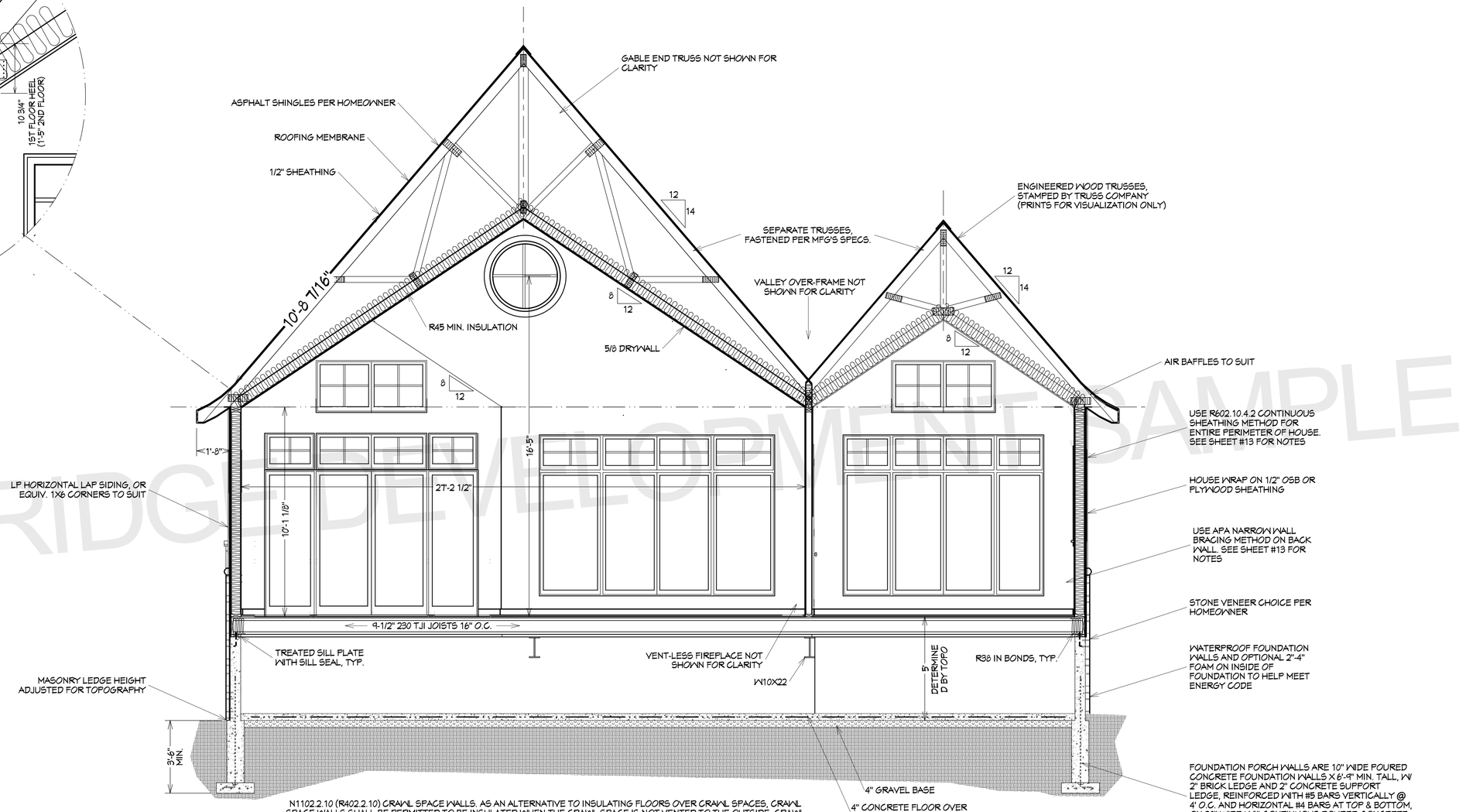

N1102.2.10 (R402.2.10) CRAWL SPACE WALLS. AS AN ALTERNATIVE TO INSULATING FLOORS OVER CRAWL SPACES, CRAWL SPACE WALLS SHALL BE PERMITTED TO BE INSULATED WHEN THE CRAWL SPACE IS NOT VENTED TO THE OUTSIDE. CRAWL SPACE WALL INSULATION SHALL BE PERMANENTLY FASTENED TO THE WALL AND EXTEND DOWNWARD FROM THE FLOOR TO THE FINISHED GRADE LEVEL AND THEN VERTICALLY AND/OR HORIZONTALLY FOR AT LEAST AN ADDITIONAL 24 INCHES (610 MM). EXPOSED EARTH IN UNVENTED CRAWL SPACE FOUNDATIONS SHALL BE COVERED WITH A CONTINUOUS CLASS I VAPOR RETARDER IN ACCORDANCE WITH THIS CODE. ALL JOINTS OF THE VAPOR RETARDER SHALL OVERLAP BY 6 INCHES (153 MM) AND BE SEALED OR TAPED. THE EDGES OF THE VAPOR RETARDER SHALL EXTEND AT LEAST 6 INCHES (153 MM) UP THE STEM WALL AND SHALL BE ATTACHED TO THE STEM WALL.

SECTION A-A

SCALE: 3/8"=1'-0"

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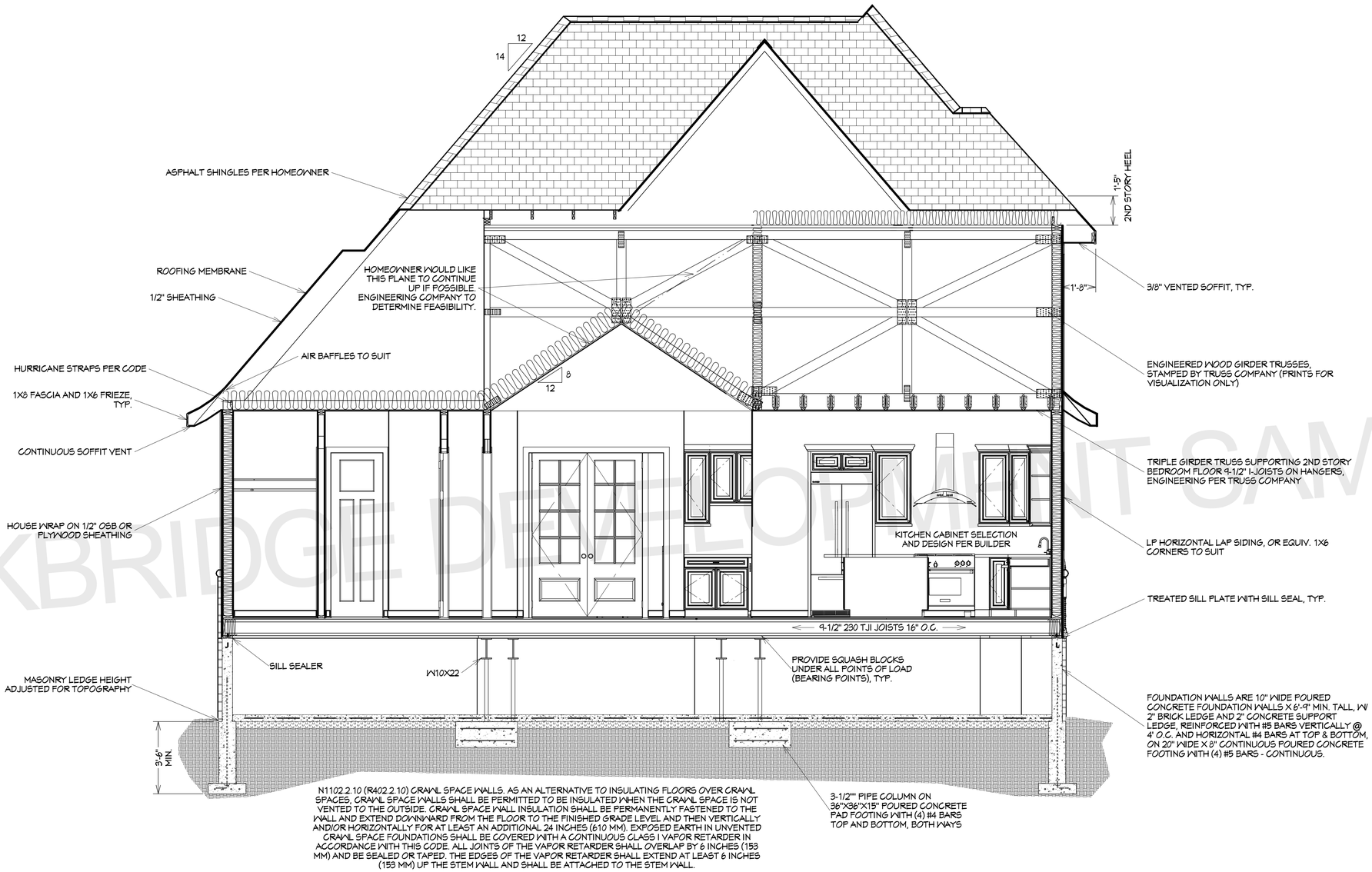

N1102.2.10 (R402.2.10) CRAWL SPACE WALLS. AS AN ALTERNATIVE TO INSULATING FLOORS OVER CRAWL SPACES, CRAWL SPACE WALLS SHALL BE PERMITTED TO BE INSULATED WHEN THE CRAWL SPACE IS NOT VENTED TO THE OUTSIDE. CRAWL SPACE WALL INSULATION SHALL BE PERMANENTLY FASTENED TO THE WALL AND EXTEND DOWNWARD FROM THE FLOOR TO THE FINISHED GRADE LEVEL AND THEN VERTICALLY AND/OR HORIZONTALLY FOR AT LEAST AN ADDITIONAL 24 INCHES (610 MM). EXPOSED EARTH IN UNVENTED CRAWL SPACE FOUNDATIONS SHALL BE COVERED WITH A CONTINUOUS CLASS I VAPOR RETARDER IN ACCORDANCE WITH THIS CODE. ALL JOINTS OF THE VAPOR RETARDER SHALL OVERLAP BY 6 INCHES (153 MM) AND BE SEALED OR TAPED. THE EDGES OF THE VAPOR RETARDER SHALL EXTEND AT LEAST 6 INCHES (153 MM) UP THE STEM WALL AND SHALL BE ATTACHED TO THE STEM WALL.

SECTION B-B

SCALE: 3/8"=1'-0"

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SECTION R507 - EXTERIOR DECKS

R507.1 DECKS. WOOD-FRAMED DECKS SHALL BE IN ACCORDANCE WITH THIS SECTION OR SECTION R301 FOR MATERIALS AND CONDITIONS NOT PRESCRIBED HEREIN. WHERE SUPPORTED BY ATTACHMENT TO AN EXTERIOR WALL, DECKS SHALL BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE AND DESIGNED FOR BOTH VERTICAL AND LATERAL LOADS. SUCH ATTACHMENT SHALL NOT BE ACCOMPLISHED BY THE USE OF TOENAILS OR NAILS SUBJECT TO WITHDRAWAL.
R507.2 DECK LEDGER CONNECTION TO BAND JOIST. DECK LEDGER CONNECTIONS TO BAND JOISTS SHALL BE IN ACCORDANCE WITH THIS SECTION.
R507.2.1 LEDGER DETAILS. DECK LEDGERS INSTALLED IN ACCORDANCE WITH SECTION R507.2 SHALL BE A MINIMUM 2-INCH BY 8- INCH NOMINAL, PRESSURE-PRESERVATIVETREATED SOUTHERN PINE, INCISED PRESSURE-PRESERVATIVE-TREATED HEM-FIR, OR APPROVED, NATURALLY DURABLE, NO. 2 GRADE OR BETTER LUMBER.
R507.2.2 BAND JOIST DETAILS. BAND JOISTS ATTACHED BY A LEDGER IN ACCORDANCE WITH SECTION R507.2 SHALL BE A MINIMUM 2-INCH-NOMINAL, SOLID-SAWN, SPRUCE-PINE-FIR LUMBER OR A MINIMUM 1-INCH BY 9-1/2-INCH DIMENSIONAL, DOUGLAS FIR, LAMINATED VENEER LUMBER. BAND JOISTS ATTACHED BY A LEDGER IN ACCORDANCE WITH SECTION R507.2 SHALL BE FULLY SUPPORTED BY A WALL OR SILL PLATE BELOW.
R507.2.3 LEDGER TO BAND JOIST FASTENER DETAILS. FASTENERS USED IN DECK LEDGER CONNECTIONS IN ACCORDANCE WITH TABLE R507.2 SHALL BE HOT-DIPPED GALVANIZED OR STAINLESS STEEL AND SHALL BE INSTALLED IN ACCORDANCE WITH TABLE R507.2.1 AND FIGURES R507.2.1(1) AND R507.2.1(2).
R507.2.4 FLASHING. AN APPROVED CORROSION-RESISTANT FLASHING AS REQUIRED BY SECTION R703.8 SHALL BE INSTALLED ABOVE THE ATTACHED LEDGER AS SHOWN IN FIGURE R507.2.1(2) OR AS APPROVED. R408.30523A
R507.3 PLASTIC COMPOSITE DECK BOARDS, STAIR TREADS, GUARDS, OR HANDRAILS. PLASTIC COMPOSITE EXTERIOR DECK BOARDS, STAIR TREADS, GUARDS AND HANDRAILS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM D7032 AND THE REQUIREMENTS OF SECTION 507.3. 507.3.5 INSTALLATION OF PLASTIC COMPOSITES. PLASTIC COMPOSITE DECK BOARDS, STAIR TREADS, GUARDS AND HANDRAILS SHALL BE INSTALLED IN ACCORDANCE WITH THIS CODE AND THE MANUFACTURER'S INSTRUCTIONS.
R507.4 DECKING. MAXIMUM ALLOWABLE SPACING FOR JOISTS SUPPORTING DECKING SHALL BE IN ACCORDANCE WITH TABLE R507.4. WOOD DECKING SHALL BE ATTACHED TO EACH SUPPORTING MEMBER WITH NOT LESS THAN (2) 8D THREADED NAILS OR (2) NO. 8 WOOD SCREWS.
R507.5 DECK JOISTS. MAXIMUM ALLOWABLE SPANS FOR WOOD DECK JOISTS, AS SHOWN IN FIGURE R507.5, SHALL BE IN ACCORDANCE WITH TABLE R507.5. DECK JOISTS SHALL BE PERMITTED TO CANTILEVER NOT GREATER THAN ONE-FOURTH OF THE ACTUAL, ADJACENT JOIST SPAN.
R507.5.1 LATERAL RESTRAINT AT SUPPORTS. JOIST ENDS AND BEARING LOCATIONS SHALL BE PROVIDED WITH LATERAL RESTRAINT TO PREVENT ROTATION. WHERE LATERAL RESTRAINT IS PROVIDED BY JOIST HANGERS OR BLOCKING BETWEEN JOISTS, THEIR DEPTH SHALL EQUAL NOT LESS THAN 60 PERCENT OF THE JOIST DEPTH. WHERE LATERAL RESTRAINT IS PROVIDED BY RIM JOISTS, THEY SHALL BE SECURED TO THE END OF EACH JOIST WITH NOT LESS THAN (3) 10D NAILS OR (3) NO.10 3-INCH LONG WOOD SCREWS.
R507.6 DECK BEAMS. MAXIMUM ALLOWABLE SPANS FOR WOOD DECK BEAMS, AS SHOWN IN FIGURE R507.6, SHALL BE IN ACCORDANCE WITH TABLE R507.6. BEAM PLIES SHALL BE FASTENED WITH TWO ROWS OF 10D NAILS MINIMUM AT 16 INCHES ON CENTER ALONG EACH EDGE. BEAMS SHALL BE PERMITTED TO CANTILEVER AT EACH END UP TO ONE-FOURTH OF THE ACTUAL BEAM SPAN. SPLICES OF MULTISPAN BEAMS SHALL BE LOCATED AT INTERIOR POST LOCATIONS.
R507.7 DECK JOIST AND DECK BEAM BEARING. THE ENDS OF EACH JOIST AND BEAM SHALL HAVE NOT LESS THAN 1-1/2 INCHES OF BEARING ON WOOD OR METAL AND NOT LESS THAN 3 INCHES ON CONCRETE OR MASONRY FOR THE ENTIRE WIDTH OF THE BEAM. JOIST FRAMING INTO THE SIDE OF A LEDGER BOARD OR BEAM SHALL BE SUPPORTED BY APPROVED JOIST HANGERS. JOISTS BEARING ON A BEAM SHALL BE CONNECTED TO THE BEAM TO RESIST LATERAL DISPLACEMENT.
R507.7.1 DECK POST TO DECK BEAM. DECK BEAMS SHALL BE ATTACHED TO DECK POSTS IN ACCORDANCE WITH FIGURE R507.7.1 OR BY OTHER EQUIVALENT MEANS CAPABLE TO RESIST LATERAL DISPLACEMENT. MANUFACTURED POST-TO-BEAM CONNECTORS SHALL BE SIZED FOR THE POST AND BEAM SIZES. ALL BOLTS SHALL HAVE WASHERS UNDER THE HEAD AND NUT.
R507.8 DECK POSTS. FOR SINGLE-LEVEL WOOD-FRAMED DECKS WITH BEAMS SIZED IN ACCORDANCE WITH TABLE R507.6, DECK POST SIZE SHALL BE IN ACCORDANCE WITH TABLE R507.8.
R507.8.1 DECK POST TO DECK FOOTING. POSTS SHALL BEAR ON FOOTINGS IN ACCORDANCE WITH SECTION R403 AND FIGURE R507.8.1. POSTS SHALL BE RESTRAINED TO PREVENT LATERAL DISPLACEMENT AT THE BOTTOM SUPPORT. SUCH LATERAL RESTRAINT SHALL BE PROVIDED BY MANUFACTURED CONNECTORS INSTALLED IN ACCORDANCE WITH SECTION R507 AND THE MANUFACTURERS' INSTRUCTIONS OR A MINIMUM POST EMBEDMENT OF 12 INCHES (305 MM) IN SURROUNDING SOILS OR CONCRETE PIERS.

SECTION C-C
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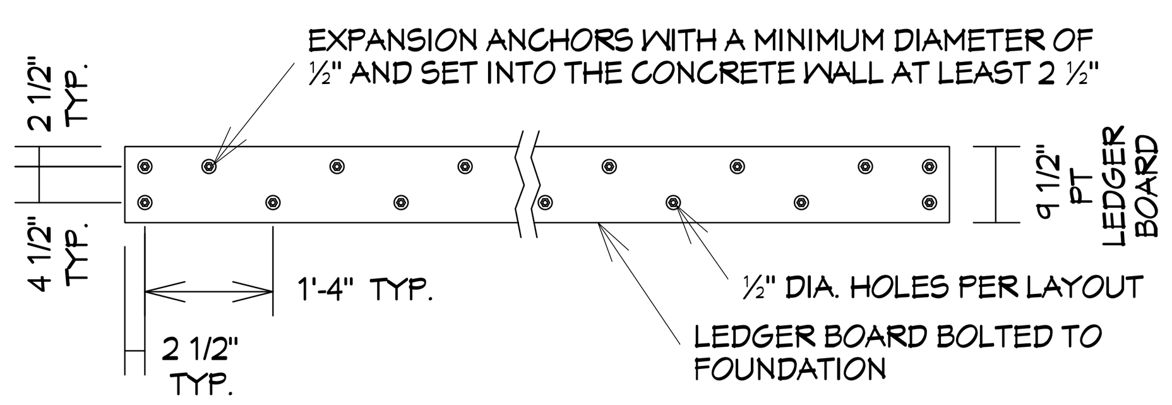

DECK LEDGER FASTENING GUIDE
2015 MICHIGAN RESIDENTIAL CODE. INTERNATIONAL CODE COUNCIL INC, 2015
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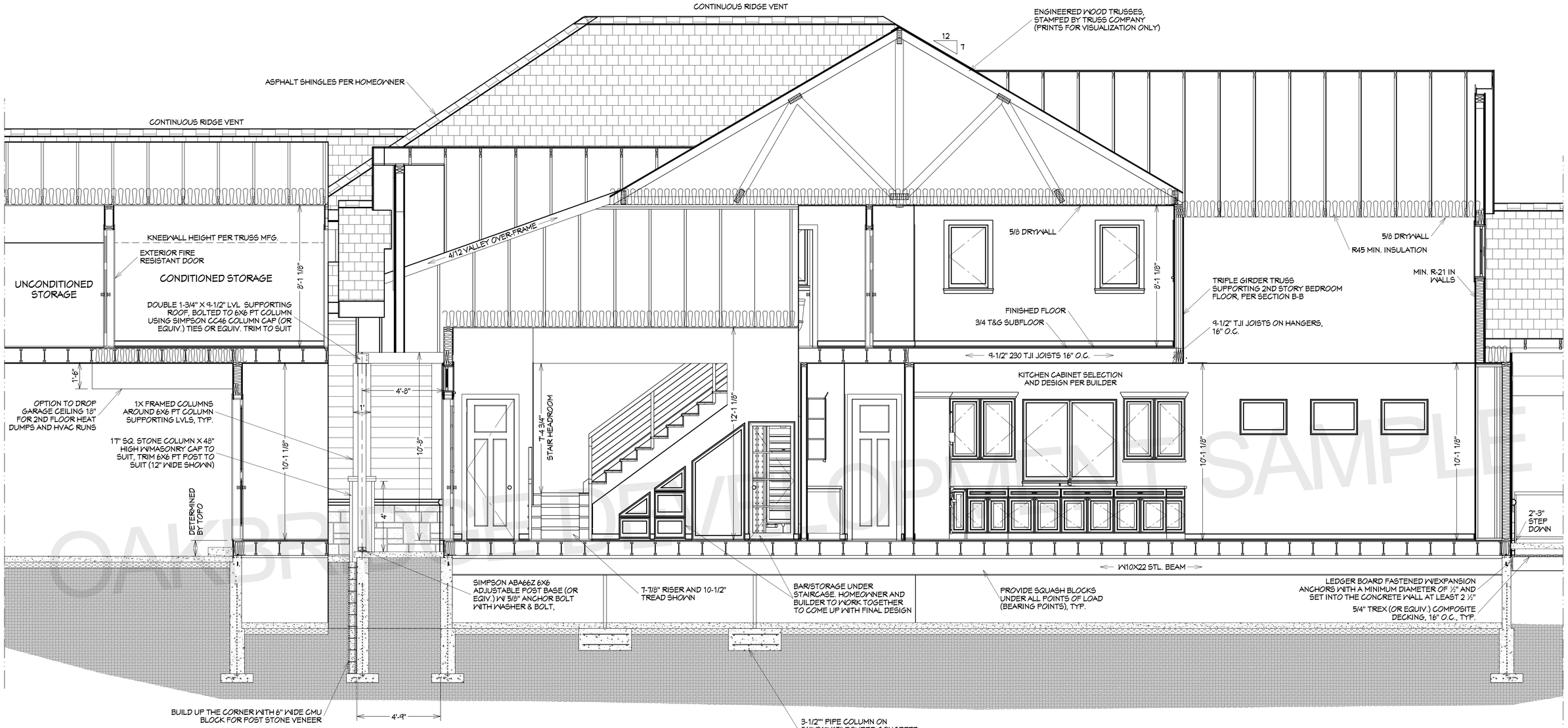

OAKBRIDGE DEVELOPMENT SAMPLE

SECTION D-D

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STAIR NOTES:

R311.7.1 WIDTH. STAIRWAYS SHALL BE NOT LESS THAN 36 INCHES (914 MM) IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. HANDRAILS SHALL NOT PROJECT MORE THAN 41/2 INCHES (114 MM) ON EITHER SIDE OF THE STAIRWAY AND THE CLEAR WIDTH OF THE STAIRWAY AT AND BELOW THE HANDRAIL HEIGHT, INCLUDING TREADS AND LANDINGS, SHALL BE NOT LESS THAN 311/2 INCHES (787 MM) WHERE A HANDRAIL IS INSTALLED ON ONE SIDE AND 27 INCHES (648 MM) WHERE HANDRAILS ARE PROVIDED ON BOTH SIDES.
R311.7.2 HEADROOM. THE HEADROOM IN STAIRWAYS SHALL BE NOT LESS THAN 6 FEET 8 INCHES (2032 MM) MEASURED VERTICALLY FROM THE SLOPED LINE ADJOINING THE TREAD NOSING OR FROM THE FLOOR SURFACE OF THE LANDING OR PLATFORM ON THAT PORTION OF THE STAIRWAY.
R311.7.3 VERTICAL RISE. A FLIGHT OF STAIRS SHALL NOT HAVE A VERTICAL RISE LARGER THAN 147 INCHES (3734 MM) BETWEEN FLOOR LEVELS OR LANDINGS.
R311.7.4.1 RISER HEIGHT. THE MAXIMUM RISER HEIGHT SHALL BE 81/4 INCHES (210 MM). THE RISER SHALL BE MEASURED VERTICALLY BETWEEN LEADING EDGES OF THE ADJACENT TREADS. THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM) R 408.30519
R311.7.4.2 TREAD DEPTH. THE MINIMUM TREAD DEPTH SHALL BE 9 INCHES (229 MM). THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE. THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM). WINDER TREADS SHALL HAVE A MINIMUM TREAD DEPTH OF 10 INCHES (254 MM) MEASURED AS ABOVE AT A POINT 12 INCHES (305 MM) FROM THE SIDE WHERE THE TREADS ARE NARROWER. WINDER TREADS SHALL HAVE A MINIMUM TREAD DEPTH OF 6 INCHES (152 MM) AT ANY POINT. WITHIN ANY FLIGHT OF STAIRS, THE GREATEST WINDER TREAD DEPTH AT THE 12-INCH (305 MM) WALK LINE SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM). R 408.30519
R311.7.5 STAIR TREADS AND RISERS. STAIR TREADS AND RISERS SHALL MEET THE REQUIREMENTS OF THIS SECTION. FOR THE PURPOSES OF THIS SECTION, DIMENSIONS AND DIMENSIONED SURFACES SHALL BE EXCLUSIVE OF CARPETS, RUGS OR RUNNERS.
R311.7.5.1 RISERS. THE RISER HEIGHT SHALL BE NOT MORE THAN 73/4 INCHES (196 MM). THE RISER SHALL BE MEASURED VERTICALLY BETWEEN LEADING EDGES OF THE ADJACENT TREADS. THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM). RISERS SHALL BE VERTICAL OR SLOPED FROM THE UNDERSIDE OF THE NOSING OF THE TREAD ABOVE AT AN ANGLE NOT MORE THAN 30 DEGREES (0.51 RAD) FROM THE VERTICAL. OPEN RISERS ARE PERMITTED PROVIDED THAT THE OPENINGS LOCATED MORE THAN 30 INCHES (762 MM), AS MEASURED VERTICALLY, TO THE FLOOR OR GRADE BELOW DO NOT PERMIT THE PASSAGE OF A 4-INCH-DIAMETER (102 MM) SPHERE.
R311.7.5.2 TREADS. THE TREAD DEPTH SHALL BE NOT LESS THAN 10 INCHES (254 MM). THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE. THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM).
R311.7.5.3 NOSINGS. THE RADIUS OF CURVATURE AT THE NOSING SHALL BE NOT GREATER THAN 9/16 INCH (14 MM). A NOSING PROJECTION NOT LESS THAN 3/4 INCH (19 MM) AND NOT MORE THAN 11/4 INCHES (32 MM) SHALL BE PROVIDED ON STAIRWAYS WITH SOLID RISERS. THE GREATEST NOSING PROJECTION SHALL NOT EXCEED THE SMALLEST NOSING PROJECTION BY MORE THAN 3/8 INCH (9.5 MM) BETWEEN TWO STORIES, INCLUDING THE NOSING AT THE LEVEL OF FLOORS AND LANDINGS. BEVELING OF NOSINGS SHALL NOT EXCEED 1/2 INCH (12.7 MM). EXCEPTION: A NOSING PROJECTION IS NOT REQUIRED WHERE THE TREAD DEPTH IS NOT LESS THAN 11 INCHES (279 MM).
R311.7.6 LANDINGS FOR STAIRWAYS. THERE SHALL BE A FLOOR OR LANDING AT THE TOP AND BOTTOM OF EACH STAIRWAY. THE WIDTH PERPENDICULAR TO THE DIRECTION OF TRAVEL SHALL BE NOT LESS THAN THE WIDTH OF THE FLIGHT SERVED. LANDINGS OF SHAPES OTHER THAN SQUARE OR RECTANGULAR SHALL BE PERMITTED PROVIDED THAT THE DEPTH AT THE WALK LINE AND THE TOTAL AREA IS NOT LESS THAN THAT OF A QUARTER CIRCLE WITH A RADIUS EQUAL TO THE REQUIRED LANDING WIDTH. WHERE THE STAIRWAY HAS A STRAIGHT RUN, THE DEPTH IN THE DIRECTION OF TRAVEL SHALL BE NOT LESS THAN 36 INCHES (914 MM).
R311.7.8 HANDRAILS. HANDRAILS SHALL BE PROVIDED ON NOT LESS THAN ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT WITH FOUR OR MORE RISERS.
R311.7.8.1 HEIGHT. HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE NOT LESS THAN 34 INCHES (864 MM) AND NOT MORE THAN 38 INCHES (965 MM). EXCEPTIONS: 1. THE USE OF A VOLUTE, TURNOUT OR STARTING EASING SHALL BE ALLOWED OVER THE LOWEST TREAD. 2. WHERE HANDRAIL FITTINGS OR BENDINGS ARE USED TO PROVIDE CONTINUOUS TRANSITION BETWEEN FLIGHTS, TRANSITIONS AT WINDER TREADS, THE TRANSITION FROM HANDRAIL TO GUARD, OR USED AT THE START OF A FLIGHT, THE HANDRAIL HEIGHT AT THE FITTINGS OR BENDINGS SHALL BE PERMITTED TO EXCEED 38 INCHES (956 MM).
R311.7.8.2 CONTINUITY. HANDRAILS FOR STAIRWAYS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT, FROM A POINT DIRECTLY ABOVE THE TOP RISER OF THE FLIGHT TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT. HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS. HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 11/2 INCHES (38 MM) BETWEEN THE WALL AND THE HANDRAILS. EXCEPTIONS: 1. HANDRAILS SHALL BE PERMITTED TO BE INTERRUPTED BY A NEWEL POST AT THE TURN. 2. THE USE OF A VOLUTE, TURNOUT, STARTING EASING OR STARTING NEWEL SHALL BE ALLOWED OVER THE LOWEST TREAD.
R311.7.8.3 GRIP-SIZE. PLEASE REVIEW 2015 MICHIGAN RESIDENTIAL CODE FOR COMPLETE RULES.

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WALL BRACING

R602.10 WALL BRACING. BUILDINGS SHALL BE BRACED IN ACCORDANCE WITH THIS SECTION OR, WHEN APPLICABLE, SECTION R602.12. WHERE A BUILDING, OR PORTION THEREOF, DOES NOT COMPLY WITH ONE OR MORE OF THE BRACING REQUIREMENTS IN THIS SECTION, THOSE PORTIONS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTION R301.1.

R602.10.1 BRACED WALL LINES. FOR THE PURPOSE OF DETERMINING THE AMOUNT AND LOCATION OF BRACING REQUIRED IN EACH STORY LEVEL OF A BUILDING, BRACED WALL LINES SHALL BE DESIGNATED AS STRAIGHT LINES IN THE BUILDING PLAN PLACED IN ACCORDANCE WITH THIS SECTION.

R602.10.2 BRACED WALL PANELS. BRACED WALL PANELS SHALL BE FULL-HEIGHT SECTIONS OF WALL THAT SHALL NOT HAVE VERTICAL OR HORIZONTAL OFFSETS. BRACED WALL PANELS SHALL BE CONSTRUCTED AND PLACED ALONG A BRACED WALL LINE IN ACCORDANCE WITH THIS SECTION AND THE BRACING METHODS SPECIFIED IN SECTION R602.10.4.

R602.10.3 REQUIRED LENGTH OF BRACING. THE REQUIRED LENGTH OF BRACING ALONG EACH BRACED WALL LINE SHALL BE REFERENCED IN THE 2015 MICHIGAN RESIDENTIAL CODE

R602.10.4 CONSTRUCTION METHODS FOR BRACED WALL PANELS. INTERMITTENT AND CONTINUOUSLY SHEATHED BRACED WALL PANELS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THIS SECTION AND THE METHODS LISTED IN TABLE R602.10.4.

TABLE R602.10.4 - PORTAL FRAME WITH HOLD-DOWNS (PFH)
THIS HOME DESIGN UTILIZES THE APA NARROW WALL BRACING METHOD (RECOGNIZED BY IRC SUPPLEMENT IN SECTION R602.10.6.2) ON THE LAKESIDE EXTERIOR OF THE HOME (BACK OF HOME)

R602.10.4.2 CONTINUOUS SHEATHING METHODS. CONTINUOUS SHEATHING METHODS REQUIRE STRUCTURAL PANEL SHEATHING TO BE USED ON ALL SHEATHABLE SURFACES ON ONE SIDE OF A BRACED WALL LINE INCLUDING AREAS ABOVE AND BELOW OPENINGS AND GABLE END WALLS AND SHALL MEET THE REQUIREMENTS OF SECTION R602.10.7.

R602.10.5 MINIMUM LENGTH OF A BRACED WALL PANEL. THE MINIMUM LENGTH OF A BRACED WALL PANEL SHALL COMPLY WITH TABLE R602.10.5. FOR METHODS CS-WSP AND CS-SFB, THE MINIMUM PANEL LENGTH SHALL BE BASED ON THE ADJACENT CLEAR OPENING HEIGHT IN ACCORDANCE WITH TABLE R602.10.5 AND FIGURE R602.10.5. WHERE A PANEL HAS AN OPENING ON EITHER SIDE OF DIFFERING HEIGHTS, THE TALLER OPENING HEIGHT SHALL BE USED TO DETERMINE THE PANEL LENGTH.

R602.12.2 SHEATHING MATERIALS. THE FOLLOWING SHEATHING MATERIALS INSTALLED ON THE EXTERIOR SIDE OF EXTERIOR WALLS SHALL BE USED TO CONSTRUCT A BRACING UNIT AS DEFINED IN SECTION R602.12.3

R602.12.3 BRACING UNIT. A BRACING UNIT SHALL BE A FULL-HEIGHT SHEATHED SEGMENT OF THE EXTERIOR WALL WITHOUT OPENINGS OR VERTICAL OR HORIZONTAL OFFSETS AND A MINIMUM LENGTH AS SPECIFIED HEREIN. INTERIOR WALLS SHALL NOT CONTRIBUTE TOWARD THE AMOUNT OF REQUIRED BRACING. MIXING OF ITEMS 1 AND 2 IS PROHIBITED ON THE SAME STORY.

1 WHERE ALL FRAMED PORTIONS OF ALL EXTERIOR WALLS ARE SHEATHED IN ACCORDANCE WITH SECTION R602.12.2, INCLUDING WALL AREAS BETWEEN BRACING UNITS, ABOVE AND BELOW OPENINGS AND ON GABLE END WALLS, THE MINIMUM LENGTH OF A BRACING UNIT SHALL BE 3 FEET (914 MM).

2 WHERE THE EXTERIOR WALLS ARE BRACED WITH SHEATHING PANELS IN ACCORDANCE WITH SECTION R602.12.2 AND AREAS BETWEEN BRACING UNITS ARE COVERED WITH OTHER MATERIALS, THE MINIMUM LENGTH OF A BRACING UNIT SHALL BE 4 FEET (1219MM).

R602.12.4 NUMBER OF BRACING UNITS. EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE, AS SHOWN IN FIGURE R602.12.1, SHALL HAVE, AT A MINIMUM, THE NUMBER OF BRACING UNITS IN ACCORDANCE WITH TABLE R602.12.4 PLACED ON THE PARALLEL EXTERIOR WALLS FACING THE SIDE OF THE RECTANGLE. BRACING UNITS SHALL THEN BE PLACED USING THE DISTRIBUTION REQUIREMENTS SPECIFIED IN SECTION R602.12.5.

R602.12.5 DISTRIBUTION OF BRACING UNITS. THE PLACEMENT OF BRACING UNITS ON EXTERIOR WALLS SHALL MEET ALL OF THE FOLLOWING REQUIREMENTS AS SHOWN IN FIGURE R602.12.5.

1 A BRACING UNIT SHALL BEGIN NOT MORE THAN 12 FEET (3658 MM) FROM ANY WALL CORNER.

2 THE DISTANCE BETWEEN ADJACENT EDGES OF BRACING UNITS SHALL BE NOT GREATER THAN 20 FEET (6096 MM).

3 SEGMENTS OF WALL GREATER THAN 8 FEET (2438 MM) IN LENGTH SHALL HAVE NOT LESS THAN ONE BRACING UNIT.

R602.12.6 NARROW PANELS. THE BRACING METHODS REFERENCED IN SECTION R602.10 AND SPECIFIED IN SECTIONS R602.12.6.1 THROUGH R602.12.6.3 SHALL BE PERMITTED WHEN USING SIMPLIFIED WALL BRACING R602.12.6.1 METHOD CS-G. BRACED WALL PANELS CONSTRUCTED AS METHOD CS-G IN ACCORDANCE WITH TABLES R602.10.4 AND R602.10.5 SHALL BE PERMITTED FOR ONE-STORY GARAGES WHERE ALL FRAMED PORTIONS OF ALL EXTERIOR WALLS ARE SHEATHED WITH WOOD STRUCTURAL PANELS. EACH CS-G PANEL SHALL BE EQUIVALENT TO 0.5 OF A BRACING UNIT. SEGMENTS OF WALL THAT INCLUDE A METHOD CS-G PANEL SHALL MEET THE REQUIREMENTS OF SECTION R602.10.4.2.

R602.12.7 LATERAL SUPPORT. FOR BRACING UNITS LOCATED ALONG THE EAVES, THE VERTICAL DISTANCE FROM THE OUTSIDE EDGE OF THE TOP WALL PLATE TO THE ROOF SHEATHING ABOVE SHALL NOT EXCEED 9.25 INCHES (235 MM) AT THE LOCATION OF A BRACING UNIT UNLESS LATERAL SUPPORT IS PROVIDED IN ACCORDANCE WITH SECTION R602.10.8.2.

R602.12.8 STEM WALLS. MASONRY STEM WALLS WITH A HEIGHT AND LENGTH OF 48 INCHES (1219 MM) OR LESS SUPPORTING A BRACING UNIT OR A METHOD GS-G, GS-PF OR PFG BRACED WALL PANEL SHALL BE CONSTRUCTED IN ACCORDANCE WITH FIGURE R602.10.8. CONCRETE STEM WALLS WITH A LENGTH OF 48 INCHES (1219 MM) OR LESS, GREATER THAN 12 INCHES (305 MM) TALL AND LESS THAN 8 INCHES (152 MM) THICK SHALL BE REINFORCED SIZED AND LOCATED IN ACCORDANCE WITH FIGURE R602.10.9

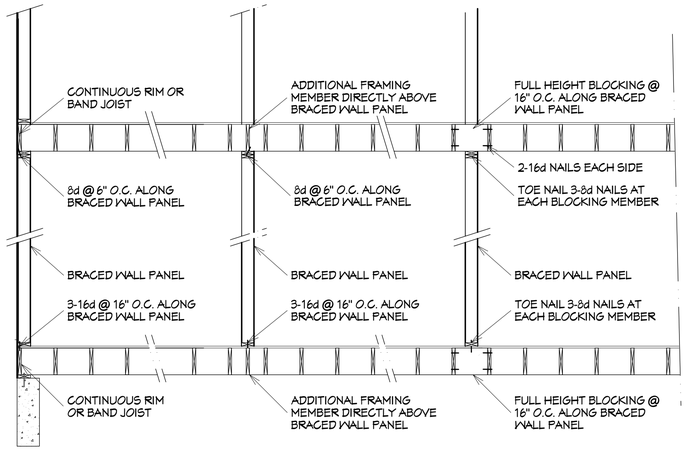


FIGURE R602.10.8(1) BRACED WALL PANEL CONNECTION WHEN PERPENDICULAR TO FLOOR/CEILING FRAMING

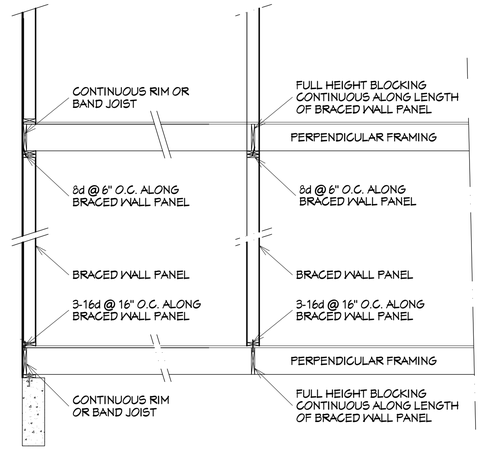


FIGURE R602.10.8(2) BRACED WALL PANEL CONNECTION WHEN PARALLEL TO FLOOR/CEILING FRAMING

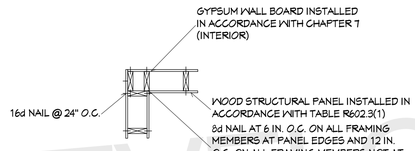


FIGURE R602.10.5 - CORNER FRAMING INSIDE CORNER DETAIL

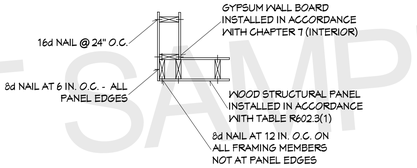
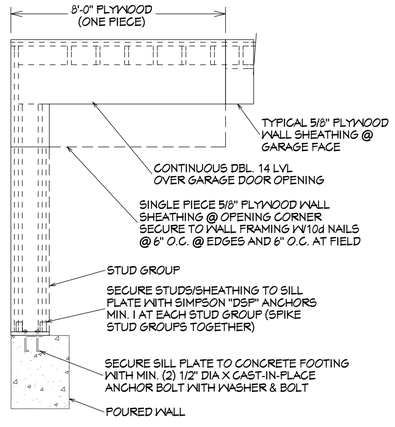
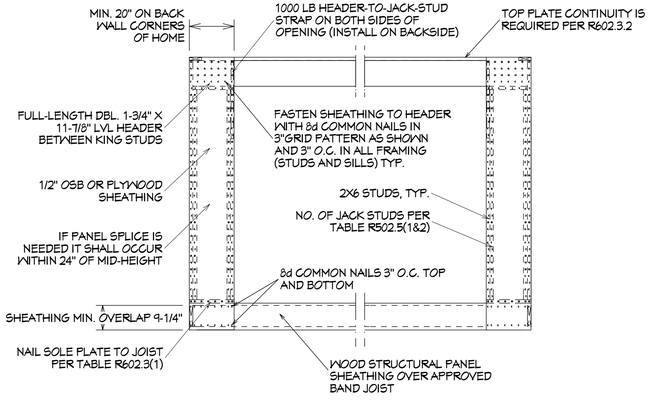


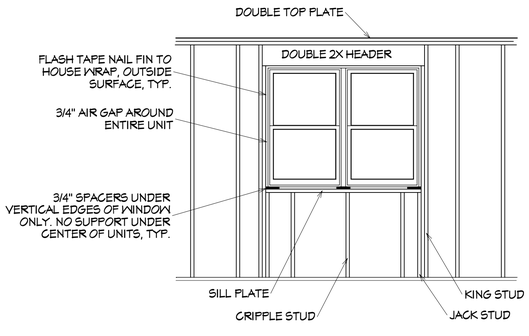
FIGURE R602.10.5 - CORNER FRAMING OUTSIDE CORNER DETAIL



GARAGE DOOR OPENING SHEAR WALL



APA NARROW WALL BRACING METHOD
(RECOGNIZED BY IRC SUPPLEMENT IN SECTION R602.10.6.2



WINDOW FRAMING DETAIL

OAKBRIDGE DEVELOPMENT SAMPLE

SHEET TITLE: BRACED WALL PANELS, SHEAR PANELS, AND CONSTRUCTION NOTES

PROJECT DESCRIPTION: PERSONAL INFORMATION REMOVED FROM THIS TITLE BLOCK FOR SAMPLE REVIEW

OAKBRIDGE DEVELOPMENT LLC
White Lake, MI 48383
OakArch.com Info@OakArch.com

DATE:	PAPER:	SHEET:
XX.XX.XX	ARCH D	A-13

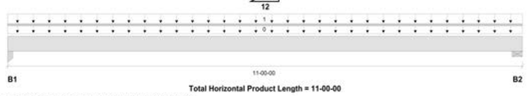
Triple 1-3/4" x 9-1/2" VERSA-LAM® LVL 2.1E 2800 DF

PASSED

RB01 (Roof Wall Header)

BC CALC® Member Report — Dry | 1 span | No cant. — December 27, 2022 13:33:28
Build 8435
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name:
Description: Alden Drive Rear Porch Beam Calc
Specifier:
Designer: Michael Philp
Company: OakBridge Development LLC



Total Horizontal Product Length = 11-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 5-1/2"		742 / 0	2680 / 0		
B2, 3-1/2"		719 / 0	2600 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-00-00	Top		13				00-00-00
1	Porch Roof Load	Unf. Area (lb/ft²)	L	00-00-00	11-00-00	Top		10	40			12-00-00

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	8245 ft-lbs	58.8%	115%	4	05-07-00
End Shear	2656 lbs	24.4%	115%	4	01-03-00
Total Load Deflection	L/563 (0.221")	31.9%	n/a	4	05-07-00
Live Load Deflection	L/719 (0.173")	33.4%	n/a	5	05-07-00
Max Defl.	0.221"	22.1%	n/a	4	05-07-00
Span / Depth	13.1				

Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Column	5-1/2" x 5-1/4"	3422 lbs	14.4%	15.8%	Southern Pine
B2	Wall/Plate	3-1/2" x 5-1/4"	3319 lbs	32.0%	24.1%	Southern Pine

Cautions

For roof members with slope (1/4)/12 or less final design must ensure that ponding instability will not occur.
For roof members with slope (1/2)/12 or less final design must account for Rain-on-Snow surcharge load.

Notes

Design meets Code minimum (L/180) Total load deflection criteria.
Design meets Code minimum (L/240) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design based on Dry Service Condition.
BC CALC® analysis is based on IBC 2009.

Triple 1-3/4" x 9-1/2" VERSA-LAM® LVL 2.1E 2800 DF

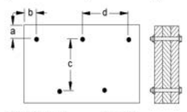
PASSED

RB01 (Roof Wall Header)

BC CALC® Member Report — Dry | 1 span | No cant. — December 27, 2022 13:33:28
Build 8435
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name:
Description: Alden Drive Rear Porch Beam Calc
Specifier:
Designer: Michael Philp
Company: OakBridge Development LLC

Connection Diagram: Full Length of Member



a minimum = 2" c = 5-1/2"
b minimum = 2-1/2" d = 24"

Calculated Side Load = 0.0 lb/ft
Bolts are assumed to be Grade A307 or Grade 2 or higher.
Connectors are: 1/2 in. Staggered Through Bolt

BEAM CALCULATIONS FOR REAR PORCH
SOURCE: BOISE CASCADE BC-CALC

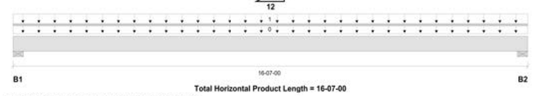
Double 1-3/4" x 14" VERSA-LAM® LVL 2.1E 2800 DF

PASSED

RB01(1) (Roof Wall Header)

BC CALC® Member Report — Dry | 1 span | No cant. — December 27, 2022 13:32:43
Build 8435
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name:
Description: Alden Drive Garage Header Beam Calc
Specifier:
Designer: Michael Philp
Company: OakBridge Development LLC



Total Horizontal Product Length = 16-07-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"		270 / 0	663 / 0		
B2, 3-1/2"		270 / 0	663 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	16-07-00	Top		13				00-00-00
1	Front Garage Header	Unf. Area (lb/ft²)	L	00-00-00	16-07-00	Top		10	40			02-00-00

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	3659 ft-lbs	39.3%	115%	4	08-03-08
End Shear	769 lbs	7.2%	115%	4	01-05-08
Total Load Deflection	L/999 (0.11")	n/a	n/a	4	08-03-08
Live Load Deflection	L/999 (0.078")	n/a	n/a	5	08-03-08
Max Defl.	0.11"	n/a	n/a	4	08-03-08
Span / Depth	13.8				

Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	3-1/2" x 3-1/2"	934 lbs	13.5%	10.2%	Southern Pine
B2	Wall/Plate	3-1/2" x 3-1/2"	934 lbs	13.5%	10.2%	Southern Pine

Cautions

For roof members with slope (1/4)/12 or less final design must ensure that ponding instability will not occur.
For roof members with slope (1/2)/12 or less final design must account for Rain-on-Snow surcharge load.

Notes

Design meets Code minimum (L/180) Total load deflection criteria.
Design meets Code minimum (L/240) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design based on Dry Service Condition.
BC CALC® analysis is based on IBC 2009.

Double 1-3/4" x 14" VERSA-LAM® LVL 2.1E 2800 DF

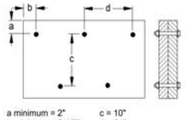
PASSED

RB01(1) (Roof Wall Header)

BC CALC® Member Report — Dry | 1 span | No cant. — December 27, 2022 13:32:43
Build 8435
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name:
Description: Alden Drive Garage Header Beam Calc
Specifier:
Designer: Michael Philp
Company: OakBridge Development LLC

Connection Diagram: Full Length of Member



a minimum = 2" c = 10"
b minimum = 2-1/2" d = 24"

Calculated Side Load = 0.0 lb/ft
Bolts are assumed to be Grade A307 or Grade 2 or higher.
Connectors are: 1/2 in. Staggered Through Bolt

BEAM CALCULATIONS FOR LARGER GARAGE DOOR
SOURCE: BOISE CASCADE BC-CALC

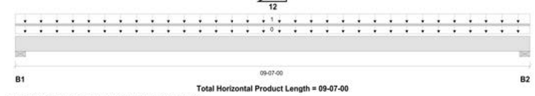
Double 1-3/4" x 11-7/8" VERSA-LAM® LVL 2.1E 2800 DF

PASSED

RB01(2) (Roof Wall Header)

BC CALC® Member Report — Dry | 1 span | No cant. — December 27, 2022 13:39:01
Build 8435
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name:
Description: Alden Drive Smaller Garge Beam Calc
Specifier:
Designer: Michael Philp
Company: OakBridge Development LLC



Total Horizontal Product Length = 09-07-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"		554 / 0	2013 / 0		
B2, 3-1/2"		554 / 0	2013 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	09-07-00	Top		11				00-00-00
1	Porch Roof Load	Unf. Area (lb/ft²)	L	00-00-00	09-07-00	Top		10	40			10-06-00

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	5575 ft-lbs	41.5%	115%	4	04-09-08
End Shear	1880 lbs	20.7%	115%	4	01-03-06
Total Load Deflection	L/999 (0.096")	n/a	n/a	4	04-09-08
Live Load Deflection	L/999 (0.075")	n/a	n/a	5	04-09-08
Max Defl.	0.096"	n/a	n/a	4	04-09-08
Span / Depth	9.2				

Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	3-1/2" x 3-1/2"	2567 lbs	37.1%	27.9%	Southern Pine
B2	Wall/Plate	3-1/2" x 3-1/2"	2567 lbs	37.1%	27.9%	Southern Pine

Cautions

For roof members with slope (1/4)/12 or less final design must ensure that ponding instability will not occur.
For roof members with slope (1/2)/12 or less final design must account for Rain-on-Snow surcharge load.

Notes

Design meets Code minimum (L/180) Total load deflection criteria.
Design meets Code minimum (L/240) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design based on Dry Service Condition.
BC CALC® analysis is based on IBC 2009.

Double 1-3/4" x 11-7/8" VERSA-LAM® LVL 2.1E 2800 DF

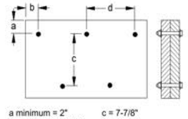
PASSED

RB01(2) (Roof Wall Header)

BC CALC® Member Report — Dry | 1 span | No cant. — December 27, 2022 13:39:01
Build 8435
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name:
Description: Alden Drive Smaller Garge Beam Calc
Specifier:
Designer: Michael Philp
Company: OakBridge Development LLC

Connection Diagram: Full Length of Member



a minimum = 2" c = 7-7/8"
b minimum = 2-1/2" d = 24"

Calculated Side Load = 0.0 lb/ft
Bolts are assumed to be Grade A307 or Grade 2 or higher.
Connectors are: 1/2 in. Staggered Through Bolt

BEAM CALCULATIONS FOR SMALLER GARAGE DOOR
SOURCE: BOISE CASCADE BC-CALC

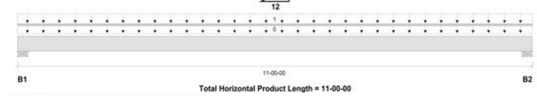
Double 1-3/4" x 11-7/8" VERSA-LAM® LVL 2.1E 2800 DF

PASSED

RB01(1) (Roof Wall Header)

BC CALC® Member Report — Dry | 1 span | No cant. — December 29, 2022 00:28:07
Build 8435
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name: BC CALC Project
Description: Alden Drive Rear Door/Window Beam Calc
Specifier:
Designer: Michael Philp
Company: OakBridge Development LLC



Total Horizontal Product Length = 11-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"		600 / 0	2167 / 0		
B2, 5-1/2"		618 / 0	2233 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-00-00	Top		11				00-00-00
1	Porch Roof Load	Unf. Area (lb/ft²)	L	00-00-00	11-00-00	Top		10	40			10-00-00

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	6871 ft-lbs	57.1%	115%	4	05-05-00
End Shear	2112 lbs	23.3%	115%	4	01-03-06
Total Load Deflection	L/842 (0.148")	21.4%	n/a	4	05-05-00
Live Load Deflection	L/999 (0.116")	n/a	n/a	5	05-05-00
Max Defl.	0.148"	14.8%	n/a	4	05-05-00
Span / Depth	10.5				

Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	3-1/2" x 3-1/2"	2766 lbs	n/a	30.1%	Unspecified
B2	Wall/Plate	5-1/2" x 3-1/2"	2851 lbs	26.2%	19.7%	Southern Pine

Cautions

For roof members with slope (1/4)/12 or less final design must ensure that ponding instability will not occur.
For roof members with slope (1/2)/12 or less final design must account for Rain-on-Snow surcharge load.

Notes

Design meets Code minimum (L/180) Total load deflection criteria.
Design meets Code minimum (L/240) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design based on Dry Service Condition.
BC CALC® analysis is based on IBC 2009.

Double 1-3/4" x 11-7/8" VERSA-LAM® LVL 2.1E 2800 DF

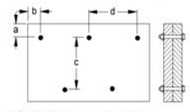
PASSED

RB01(1) (Roof Wall Header)

BC CALC® Member Report — Dry | 1 span | No cant. — December 29, 2022 00:28:07
Build 8435
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name: BC CALC Project
Description: Alden Drive Rear Door/Window Beam Calc
Specifier:
Designer: Michael Philp
Company: OakBridge Development LLC

Connection Diagram: Full Length of Member



a minimum = 2" c = 7-7/8"
b minimum = 2-1/2" d = 24"

Calculated Side Load = 0.0 lb/ft
Bolts are assumed to be Grade A307 or Grade 2 or higher.
Connectors are: 1/2 in. Staggered Through Bolt

BEAM CALCULATIONS FOR BACK WALL (WORSE CASE SCENARIO)
SOURCE: BOISE CASCADE BC-CALC

OAKBRIDGE DEVELOPMENT SAMPLE

SHEET TITLE:
LVL LOAD CALCULATIONS FOR BOTH GARAGE DOOR HEADERS AND PORCH ROOF SUPPORTS

PROJECT DESCRIPTION:
PERSONAL INFORMATION REMOVED FROM THIS TITLE BLOCK FOR SAMPLE REVIEW

OAKBRIDGE DEVELOPMENT LLC
White Lake, MI 48383
OakArch.com Info@OakArch.com

DATE:	PAPER:	SHEET:
XX.XX.XX	ARCH D	A-14