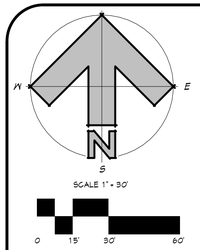


STANDARD NOTES

1. THIS PLAN SHALL BE KEPT ON SITE AT ALL TIMES AND UPDATED TO REFLECT ANY CHANGES.
2. CONCRETE WASTE & WASHOUT WATER FROM MIXING TRUCKS SHALL BE CONTAINED ON SITE, REMOVED FROM THE SITE & PROPERLY DISPOSED. MATERIALS SHOULD NOT ENTER STATE WATERS.
3. CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING TEMPORARY EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION & ESTABLISHING ANY REQUIRED PERMANENT BEST MANAGEMENT PRACTICES (BMPS).
4. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL LOCAL, STATE, AND FEDERAL LAWS & OBTAINING ALL REQUIRED PERMITS.
5. CLEARING OR GRADING SHALL NOT BEGIN UNTIL ALL SEDIMENT CONTROL DEVICES HAVE BEEN INSTALLED.
6. SOIL STABILIZATION MEASURES SHALL BE IN PLACE AND AREAS ARE TO BE REVEGETATED:
   (1) FOR STOCKPILES, IF INACTIVE FOR MORE THAN 30 DAYS
   (2) FOR AREAS OF LAND DISTURBANCE WITHIN ONE GROWING SEASON.
7. BMPS SHALL BE USED, MODIFIED & MAINTAINED WHENEVER NECESSARY TO REFLECT CURRENT CONDITIONS. BMPS SHALL BE INSPECTED WEEKLY & AFTER EVERY PRECIPITATION EVENT. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM BMPS WHEN THE SEDIMENT LEVEL REACHES ½ THE HEIGHT OF THE BMP.
8. EMERGENCY ACCESS MUST BE KEPT OBSTACLE FREE & PASSABLE AT ALL TIMES.
9. FIELD LOCATE ALL UTILITIES PRIOR TO ANY CONSTRUCTION ACTIVITIES.
10. SURVEY INFORMATION PROVIDED BY FOUR POINTS SURVEYING & ENGINEERING, & MODIFIED BY JAKES DRAFTING SERVICE, INC. FOR USE AS A SITE PLAN
11. THE CONTRACTOR SHOULD PROVIDE A CONSTRUCTION SEQUENCING PLAN FOR EXCAVATION, WALL CONSTRUCTION AND BRACING AND BACKFILLING FOR THE STEEPER AND MORE SENSITIVE PORTIONS OF THE SITE PRIOR TO STARTING THE EXCAVATIONS OR CONSTRUCTION.
12. A REGISTERED PROFESSIONAL ENGINEER EXPERIENCED IN SITE PLAN PREPARATION IN THIS GEOGRAPHIC AREA IS RECOMMENDED FOR SITE GRADING AND DRAINAGE PLAN PREPARATION.

NOTES:
-ALL DISTURBED AREAS TO BE REVEGETATED

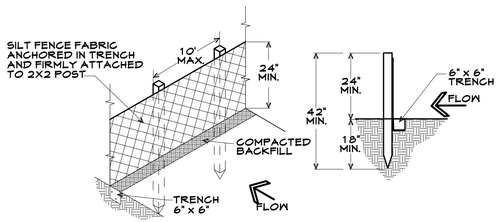
-GRADE AWAY FROM ADDITION 5' @ 2% SLOPE

-ALL CUT/ FILL SLOPES ARE 2:1 MAX UNLESS OTHERWISE NOTED

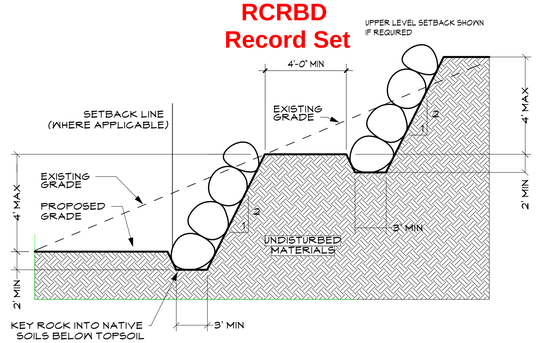
-SEDIMENT CONTROL DEVICES (WATTLES OR SILT FENCE) TO BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY

-THERE ARE NO WATER BODIES, RIVERS, STREAMS, LAKES, RESERVOIRS OR PONDS WITHIN 50' OF THE PROPOSED STRUCTURE

ZONED:	MRE
SETBACKS	50' FRONTAGE, 50' SIDE & REAR
PARCEL ID#:	106302002
STREET ADDRESS:	28300 CR 14
LEGAL DESCRIPTION:	TRACT IN LOT 2, BLACKTAIL MTN ESTATES SUBD, FILING 1



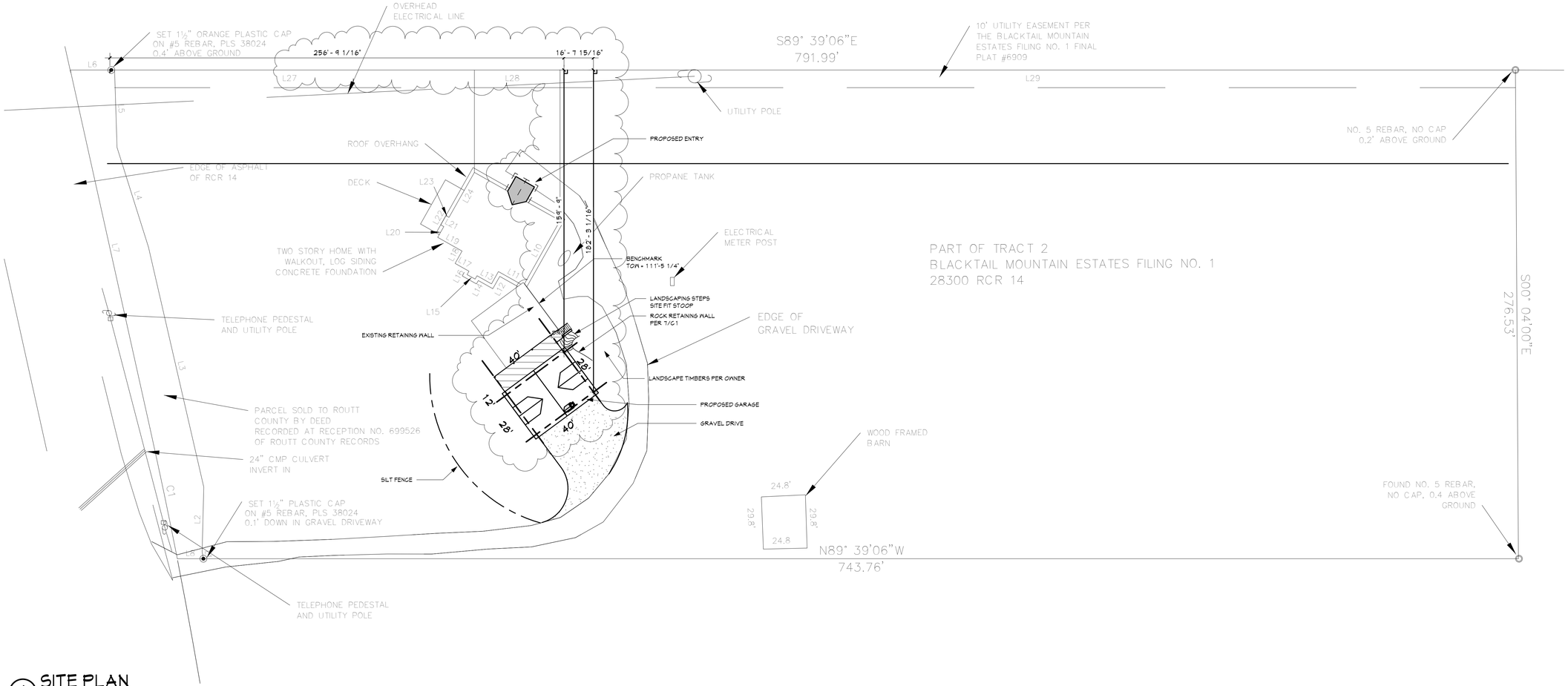
4 SILT FENCE
1" = 1'-0"



7 ROCK RETAINING WALL 1
1" = 1'-0"

RCRBD
Record Set

PJ1884-3
Fire Prevention
In: 08/20/2019
Out: 08/22/2019



1 SITE PLAN
1" = 30'-0"

DRAFTING SERVICE, INC.
P.O. BOX 774121
426 OAK STREET
STEAMBOAT SPRINGS, COLORADO
970.879.1929
FAX 970.879.8709
JAKES@SPRINGSIPS.COM

Jake's™

"STRUCTURE ONLY"

SITE PLAN FOR
the STEPHEN MILES
28300 CR 14
ROUTT COUNTY CO 80477
OWNER/CONTRACTOR 312-961-3392

Job #	15014
File	15014C1
Date	15AUG19
Drawn	VAM
Checked	JMH
Rel'd	10MAY16
Rev'd	15AUG19

Sheet Number
C1
SHEET 1 OF 10

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TABLE R301.2(1) CLIMATIC & GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND DESIGN		SEISMIC DESIGN CATEG	DAMAGE FROM			WINTER DESIGN TEMP	ICE BARRIER REQ'D	FLOOD HAZARD FIRM	AIR FREEZE INDEX	MEAN ANNUAL TEMP
	SPEED (MPH)	TOPO EFFECT		WEATH-ERING	FROST DEPTH	TERMITE					
N/A	115	NO	B	SEVERE	48"	NONE	-15°	YES	4FEB05	2239	40-45 F

LIVE LOADS USED IN DESIGN

ROOF......80 PSF
ATTICS......20 PSF
FLOORS......40 PSF
FLOOR @ SLEEPING ROOMS......30 PSF
PASSENGER VEHICLE GARAGE FLOOR......50 PSF
DECK......80 PSF
PORCH......70 PSF
WIND......EXPOSURE B
MAXIMUM SOIL BEARING PRESSURE......4,000 PSF
MINIMUM DEAD LOAD PRESSURE......600 PSF

DESIGN VALUES FROM SOILS REPORT #05-6850 BY NORTHWEST COLORADO CONSULTANTS, INC., FOR THE ORIGINAL HOUSE ON FILE WITH THE RCRBD AT FILE CB-05-357,357. ALL RECOMMENDATIONS REFERENCED IN THE SOILS REPORT SHALL BE ADHERED TO, UNLESS OTHERWISE NOTED (UON).

REGULATORY REQUIREMENTS

ALL CONSTRUCTION SHALL CONFORM TO THE 2015 INTERNATIONAL RESIDENTIAL CODE (INCLUDING APPENDIX E) AND STANDARDS AS ADOPTED AND/OR AMENDED BY THE ROUTT COUNTY REGIONAL BUILDING DEPARTMENT AND THE FOLLOWING:
2017 NATIONAL ELECTRICAL CODE (NEC) (2018 IRC SPECIFICATIONS ARE NOTED)
2018 INTERNATIONAL RESIDENTIAL CODE APPENDIX Q - TINY HOMES
2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
LOCAL UTILITY REGULATIONS
ALL COUNTY CODES AND ORDINANCES
APPLICABLE PROTECTIVE COVENANTS OF THE SUBDIVISION

ALL WORK EXECUTED IN ANY PUBLIC RIGHT-OF-WAY OR ON PUBLIC PROPERTY SHALL BE COMPLETED ACCORDING TO THE SPECIFICATIONS AND REQUIREMENTS OF THAT GOVERNING BODY.

0. SPECIAL NOTICE

THIS BUILDING WAS PERMITTED AS B-16-79 BUT THAT PERMIT EXPIRED DUE TO NON PAYMENT WITH THYE FIRE DEPARTMENT. THE PERMIT WAS RESURRECTED ON JUNE 25, 2019 USING THE ORIGINAL PLANS FOR A GARAGE AND UNFINISHED AREA AND DECK ABOVE, BUT WERE "REDLINED" TO COMPLY WITH THE 2019 I-CODES. THESE PLANS AND SPECIFICATIONS ARE FOR A FINISHED UPPER LEVEL MANCAVE AND MINOR REVISIONS REQUIRED.

PLEASE ALSO NOTES THAT THE BUILDING AREA CALCULATIONS ON THE ORIGINAL PLANS WERE IN ERROR AND HAVE BEEN UPDATED. THE ORIGINAL GARAGE WAS STATED AS BEING 624 SF BUT IS ACTUALLY 1,140 SF AND THE UNFINISHED AREA WAS STATED AS 565 SF BUT IS ACTUALLY 624 SF AND DECK AREA WAS NOT STATED AT ALL BUT IS ACTUALLY 483 SF.

PERMIT VALUATION SHOULD BE UPDATED TO INCLUDE AN ADDITIONAL 516 SF OF GARAGE, AN ADDITIONAL 59 SF OF UNFINISHED AREA, THE DIFFERENCE TO CONVERT THE UNFINISHED AREA TO FINISHED AND THE ADDITION OF 483 SF OF DECK.

THESE SPECIFICATIONS ARE GENERIC IN NATURE, SOME SECTIONS OR DIVISIONS MAY NOT BE APPLICABLE. SEE SPECIAL CONDITIONS FOR ADDITIONAL INFORMATION.

SPECIAL INSPECTIONS REQUIRED - NONE

1. GENERAL REQUIREMENTS

EVERY ATTEMPT HAS BEEN TAKEN TO AVOID OR ELIMINATE ERRORS DURING THE PREPARATION OF THESE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THESE PLANS WITH ACTUAL FIELD CONDITIONS.

IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE THE INTERFACE BETWEEN ALL TRADES AND SUBCONTRACTORS, SO AS TO PRESENT A COMPLETE AND FINISHED PRODUCT.

ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODES AND ORDINANCES, AS AMENDED, AND SHALL BE DONE TO THE HIGHEST STANDARDS OF CRAFTSMANSHIP BY JOURNEYMEN OF THEIR RESPECTIVE TRADES.

THESE DOCUMENTS DO NOT INCLUDE PROVISIONS FOR JOB SITE SAFETY. JOB SITE SAFETY AND PROTECTION OF ADJACENT PROPERTIES DURING CONSTRUCTION SHALL BE CONTRACTORS RESPONSIBILITY.

ALL CONTRACTORS SHALL CARRY WORKMAN'S COMPENSATION, CONTRACTORS LIABILITY, PERSONAL INJURY AND COMPREHENSIVE AUTOMOBILE AND PROPERTY DAMAGE INSURANCE. GENERAL CONTRACTOR TO CARRY "BUILDERS RISK" INSURANCE. OWNER TO CARRY FIRE INSURANCE ON THE COMPLETED STRUCTURE.

THE GENERAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL BUILDING PERMITS, USE TAX, SALES TAX, AND INSPECTION FEES. SPECIAL INSPECTORS WHEN REQUIRED, SHALL BE EMPLOYED BY THE OWNER, ENGINEER RESPONSIBLE FOR THE DESIGN OR AN AGENT OF THE OWNER, BUT NOT BY THE CONTRACTOR OR ANY OTHER PERSON RESPONSIBLE FOR THE WORK.

ALL MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL BE SUBJECT TO A ONE YEAR WARRANTY.

BUILDINGS SHALL BE PROVIDED WITH APPROVED ADDRESS IDENTIFICATION. THE ADDRESS IDENTIFICATION SHALL BE LEGIBLE AND PLACED IN A POSITION THAT IS VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. ADDRESS IDENTIFICATION CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND. ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. NUMBERS SHALL NOT BE SPELLED OUT. EACH CHARACTER SHALL BE NOT LESS THAN 4 INCHES (102 MM) IN HEIGHT WITH A STROKE WIDTH OF NOT LESS THAN 0.5 INCH (12.7 MM). WHERE REQUIRED BY THE FIRE CODE OFFICIAL, ADDRESS IDENTIFICATION SHALL BE PROVIDED IN ADDITIONAL APPROVED LOCATIONS TO FACILITATE EMERGENCY RESPONSE. WHERE ACCESS IS BY MEANS OF A PRIVATE ROAD AND THE BUILDING ADDRESS CANNOT BE VIEWED FROM THE PUBLIC WAY, A MONUMENT, POLE OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. ADDRESS IDENTIFICATION SHALL BE MAINTAINED. (IRC R319.1)

GENERAL CONTRACTOR IS TO PROVIDE THE OWNER WITH A BOUND COPY OF ALL INSPECTION REPORTS, BUILDING DEPARTMENT CORRESPONDENCE; EQUIPMENT MANUALS, DATED WARRANTIES AND INSTALLATION & MAINTENANCE INSTRUCTIONS; CERTIFICATE OF OCCUPANCY, AND LIEN WAIVERS OR RELEASES FROM ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO FINAL PAYMENT. THE GENERAL CONTRACTOR SHALL FAMILIARIZE THE OWNER WITH THE OPERATION OF ALL EQUIPMENT AND APPLIANCES AND CLEARLY LABEL ALL SAFETY VALVES AND CONTROLS FOR THE MAJOR HOUSE SYSTEMS.

MATERIAL SIZES NOTED ON THE PLANS ARE THE MINIMUM ACCEPTABLE. THE USE OF LARGER SIZE, OR STRONGER MATERIALS IS ACCEPTABLE FOR EASE OF CONSTRUCTION OR AESTHETICS. VERIFY THE USE OF ALL SUBSTITUTED MATERIALS WITH THE ENGINEER OF RECORD AND JAKE'S DRAFTING SERVICE, INC.

2. SITE CONSTRUCTION

CONTRACTOR SHALL PROVIDE NECESSARY LABOR, MATERIALS AND EQUIPMENT TO PERFORM ALL SITE WORK SHOWN OR SPECIFIED IN THESE DOCUMENTS.

FIELD LOCATE ALL UTILITY LINES PRIOR TO ANY CONSTRUCTION ACTIVITY.

STRIP SITE OF EXISTING TOPSOIL AND STOCKPILE FOR RE-USE IN LANDSCAPING. REFER TO SITE PLAN FOR EXTENT OF STRIPPING AND PROPOSED STOCKPILE LOCATION.

THE SLOPE OF CUT OR FILL SURFACES SHALL BE NO STEEPER THAN 2:1 (50% SLOPE). UON

ALL FOOTINGS ARE TO BE PLACED ON FIRM, UNDISTURBED NATURAL SOIL. TOPSOIL, LOOSE NATURAL SOILS, ALL EXISTING FILL MATERIALS WITHIN THE FOUNDATION EXCAVATIONS SHALL BE REMOVED AND THE FOOTINGS EXTENDED DOWN TO MORE COMPETENT EXISTING SOILS. NOTIFY THE SOIL ENGINEER WHEN EXCAVATION IS COMPLETED SO THAT CONDITIONS MAY BE INSPECTED PRIOR TO PLACEMENT OF ANY FILL OR CONCRETE.

WASHED ROCK OR EARTHEN FILL USED TO SUPPORT THE FOUNDATIONS OF ANY BUILDING SHALL BE PLACED IN ACCORDANCE WITH THE SOIL INVESTIGATION REPORT AND ACCEPTED ENGINEERING PRACTICE. A REPORT OF SATISFACTORY PLACEMENT OF FILL, PREPARED BY A QUALIFIED SOIL ENGINEER, SHALL BE REQUIRED. THIS REPORT SHOULD BE PROVIDED TO THE BUILDING INSPECTOR AT THE TIME OF FOOTING INSPECTION.

ALL FOOTING BEARING ELEVATIONS SHOWN ARE ASSUMED. EXACT BEARING ELEVATIONS SHALL BE VERIFIED IN THE FIELD WITH ACTUAL CONDITIONS, BY THE CONTRACTOR, AND WITH THE APPROVAL OF THE ENGINEER AND THE OWNER.

CONCRETE AND MASONRY FOUNDATION WALLS SHALL EXTEND ABOVE THE FINISHED GRADE ADJACENT TO THE FOUNDATION AT ALL POINTS A MINIMUM OF 4" WHERE MASONRY VENEER IS USED AND A MINIMUM OF 6" ELSEWHERE. (IRC R404.1.6)

PROVIDE FOUNDATION PERIMETER DRAINAGE SYSTEM PER IRC SECTION R405 AND DETAILS PROVIDED.

BACKFILL SHALL NOT BE PLACED AGAINST FOUNDATION WALLS UNTIL FLOOR SLABS HAVE BEEN PLACED AND THE WALL HAS SUFFICIENT STRENGTH AND HAS BEEN ANCHORED TO THE FLOOR ABOVE OR HAS BEEN SUFFICIENTLY BRACED TO PREVENT DAMAGE BY THE BACKFILL. (IRC R404.1.7)

EXCEPTION: BRACING IS NOT REQUIRED FOR WALL SUPPORTING LESS THEN 4 FEET OF UNBALANCED BACKFILL.

LOTS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS. THE GRADE SHALL FALL A MINIMUM OF 6 INCHES WITHIN THE FIRST 10 FEET (IRC R401.3).

ALL UTILITY LINES SHALL BE EXTENDED FROM THE BUILDING TO THE UTILITY CONNECTION AS REQUIRED. CO-ORDINATE WITH THE APPROPRIATE UTILITY COMPANY AND BURIED CABLE LOCATION SERVICE AT 800.922.1987 OR 811

ELECTRIC - VERIFY ADEQUATE CAPACITY AND SERVICEABILITY OF THE EXISTING SYSTEM TO SERVICE THIS DETACHED STRUCTURE, R&R AS REQUIRED OR PROVIDE NEW 200 AMP METER PEDESTAL, CO-ORDINATE WITH YAMPA VALLEY ELECTRIC ASSOCIATION, 970.879.1160.

SEWER - FROM 5 FEET OUTSIDE THE FOUNDATION TO SEPTIC TANK TO LEACH FIELD, SEE DESIGN BY OTHERS. FROM "AS-BUILT" INFORMATION AVAILABLE, THIS STRUCTURE WILL BE CLOSE TO AN EXISTING SEWER OUTFALL LINE. EXCAVATOR TO USE CAUTION. NWCC, INC TO VERIFY ADEQUATE CAPACITY AND SERVICABILITY IOF THE EXISTING SYSTEM.

WATER - FROM SHUT OFF VALVE TO EXISTING HOUSE. VERIFY ADEQUATE CAPACITY AND SERVICEABILITY OF THE EXISTING SYSTEM.

TELEPHONE - FROM TELEPHONE BOX TO EXISTING SERVICE PANEL AT EXISTING HOUSE., MAINTAIN 18" MINIMUM COVER.

GAS - FROM POINT OF CONNECTION TO BURIED 1,000 GALLON LPG TANK, SEE SITE PLAN.

CABLE TELEVISION - FROM TELEVISION SERVICE PANEL TO PEDESTAL, CO- ORDINATE WITH COMCAST, 970.879.7970. MAINTAIN 18" MINIMUM COVER. OR TO DISH ANTENNA, CO-ORDINATE WITH SERVICE PROVIDER.

3. CONCRETE

CONTRACTOR SHALL PROVIDE ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO COMPLETE ALL CONCRETE SHOWN OR NOTED IN THESE DOCUMENTS.

AS NOTED IN THE SOILS REPORT, EXPANSIVE SOILS WERE ENCOUNTERED AT THIS SITE. REFER TO THE SOILS REPORT FOR SPECIAL PRECAUTIONS AND CONSTRUCTION DETAILS..

FORMS SHALL RESULT IN A FINAL STRUCTURE THAT CONFORMS TO SHAPES, LINES, AND DIMENSIONS OF THE MEMBERS AS REQUIRED BY THE DESIGN DRAWINGS, AND SPECIFICATIONS.

CENTER ALL FOOTINGS UNDER WALLS OR COLUMNS UNLESS OTHERWISE NOTED ON PLANS.

ALL CONCRETE WORK AND REINFORCEMENT DETAILING SHALL BE IN ACCORDANCE WITH ACI BUILDING CODE 318. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4" CHAMFER.

ALL REINFORCING SHALL BE HIGH STRENGTH DEFORMED BARS CONFORMING TO ASTM A615 AND SHALL BE GRADE 40 MINIMUM OR AS SHOWN ON THE PLANS. ALL REINFORCEMENT SHALL BE COLD BENT UNLESS OTHERWISE PERMITTED BY THE BUILDING OFFICIAL.

PROVIDE CONCRETE ENCASED ELECTRODE (UFER GROUND) PER SECTION E3608.1.2. CO-ORDINATE EXACT REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM 185 AND SHALL BE LAPPED (1) FULL MESH AT SPLICES AND BE TIED TOGETHER.

THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT,
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH = 3"
CONCRETE EXPOSED TO EARTH OR WEATHER = 1-1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND
SLABS, WALLS, JOISTS = 3/4"
BEAMS, COLUMNS = 1-1/2"
DEPTH OF FOOTING ABOVE BOTTOM REINFORCEMENT SHALL BE 6" MINIMUM.

NO SPLICES OF REINFORCEMENT SHALL BE MADE EXCEPT AS DETAILED OR AUTHORIZED BY THE ENGINEER. LAP SPLICES, WHERE PERMITTED, SHALL BE A MINIMUM OF (40) BAR DIAMETERS, UNLESS OTHERWISE NOTED. MAKE ALL BARS CONTINUOUS AROUND CORNERS. PLACE (2) #5 BARS WITH 2'-0" PROJECTION AROUND ALL OPENINGS IN CONCRETE WALLS, SLABS AND BEAMS.

CONTINUOUS TOP AND BOTTOM BARS IN WALLS SHALL BE SPLICED AS FOLLOWS: TOP BARS AT MIDSPAN, BOTTOM BARS AT SUPPORTS.

PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING AT POSITIONS SHOWN ON THE PLANS AND IN ACCORDANCE WITH ACI 318. WHERE PROVIDED IN SLABS ON GROUND, REINFORCEMENT SHALL BE SUPPORTED TO REMAIN IN PLACE FROM THE CENTER TO THE UPPER 1/3 OF THE SLAB FOR THE DURATION OF THE CONCRETE PLACEMENT. (R506.2.4)

3. CONCRETE - CONTINUED

ALL CAST-IN-PLACE CONCRETE SHALL BE MADE WITH TYPE II A PORTLAND CEMENT, FIVE-SACK MIX, WITH 5% MINIMUM TO 7% MAXIMUM ENTRAINED AIR AND 3/4" MAXIMUM STONE AGGREGATE SIZE. CONCRETE SHALL DEVELOP 2,500 PSI COMPRESSIVE STRENGTH IN 28 DAYS FOR BASEMENT SLABS AND WALLS, 3,000 PSI FOR WALLS EXPOSED TO WEATHER AND 3,500 PSI FOR PATIOS, STEPS, GARAGE SLAB AND WEATHER EXPOSED CONCRETE. MATERIALS USED TO PRODUCE CONCRETE AND TESTING THEREOF SHALL COMPLY WITH THE APPLICABLE STANDARDS LISTED IN CHAPTER 3 OF ACI 318 OR ACI 332. CONCRETE SHALL BE PLACED WITH A 4" MAXIMUM SLUM, SHALL NOT BE PLACED ON FROZEN, MUDDY OR SATURATED SOIL AND SHALL BE PROTECTED FROM FREEZING FOR 7 DAYS.

CONCRETE (OTHER THAN HIGH-EARLY-STRENGTH) SHALL BE MAINTAINED ABOVE 50 DEGREES FAHRENHEIT AND IN A MOIST CONDITION FOR AT LEAST THE FIRST SEVEN DAYS AFTER PLACEMENT. HIGH-EARLY STRENGTH CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES FAHRENHEIT AND IN A MOIST CONDITION FOR AT LEAST THE FIRST THREE DAYS. FROZEN MATERIALS OR MATERIALS CONTAINING ICE SHALL NOT BE USED. DURING HOT WEATHER, PROPER ATTENTION SHALL BE GIVEN TO INGREDIENTS, PRODUCTION METHODS, HANDLING, PLACING, PROTECTION AND CURING TO PREVENT EXCESSIVE CONCRETE TEMPERATURES OR WATER EVAPORATION THAT MAY IMPAIR REQUIRED STRENGTH OR SERVICE ABILITY OF THE MEMBER OR STRUCTURE.

NO ADMIXTURES SHALL BE USED WITHOUT APPROVAL BY THE FOUNDATION ENGINEER. WHEN CALCIUM CHLORIDE IS USED AS AN ADMIXTURE, NO GALVANIZED STEEL SHALL BE PLACED INTO CONCRETE AS REINFORCEMENT, INSERTS OR DUCT OR PIPE PENETRATIONS.

DURING COLD WEATHER, PROVIDE TEMPORARY HEAT AS REQUIRED TO PREVENT "FROST DAMAGE" TO ALL FOOTINGS, WALLS, SLABS AND PIERS.

CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE UNLESS SUFFICIENTLY COATED TO PREVENT ALUMINUM-CONCRETE REACTION OR ELECTROLYTIC ACTION BETWEEN ALUMINUM AND STEEL.

CONCRETE SHALL BE THOROUGHLY CONSOLIDATED DURING PLACEMENT AND BE THOROUGHLY WORKED AROUND REINFORCEMENT AND EMBEDDED FIXTURES AND INTO CORNERS OF FORMS.

SLABS, FOOTINGS AND WALLS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE. ANY STOP IN CONCRETE WORK MUST BE MADE AT A THIRD POINT OF SPAN WITH VERTICAL BULKHEADS, DOWELS AND SHEAR KEYS, UNLESS OTHERWISE SHOWN. ALL CONSTRUCTION JOINTS SHALL BE AS DETAILED OR REVIEWED BY THE ENGINEER.

FLOOR SLABS SHALL BE POURED IN WHOLE OR IN CHECKER PATTERN, AVOIDING RE-ENTRANT CORNERS, WITH CONSTRUCTION JOINTS LOCATED UNDER PARTITIONS WHERE PRACTICAL AND WITH NO DIMENSION EXCEEDING THE RECOMMENDATION IN THE SOIL REPORT OF 12 FEET , AND AS SHOWN ON THE PLANS.

CONCRETE FINISH SHALL BE STEEL TROWELED FOR INTERIOR FLOOR SLABS AND BROOM FINISH FOR EXTERIOR WALKS. VERIFY WITH OWNER LOCATION AREA AND EXTENTS OF OPTIONAL 3/8" EXPOSED AGGREGATE SURFACE.

4. MASONRY

CONTRACTOR SHALL PROVIDE NECESSARY LABOR, MATERIALS AND EQUIPMENT TO LAY UP MASONRY AS SHOWN OR SPECIFIED IN THESE DOCUMENTS. ALL WORK SHALL BE PLUMB, SQUARE AND TRUE WITH FILLED JOINTS.

PROVIDE MASONRY RIVER ROCK VENEER WITH SAND STONE CAP AT LOCATIONS NOTED ON PLANS. ADHERED, LIGHT WEIGHT, SYNTHETIC VENEER SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. ANCHORED STONE OR MASONRY VENEER SHALL BE INSTALLED PER IRC SECTION R703.8; TABLE R703.8 AND FIGURE R703.8.

MORTAR FOR USE IN MASONRY CONSTRUCTION SHALL COMPLY WITH ASTM C270. THE TYPE OF MORTAR SHALL BE IN ACCORDANCE WITH SECTIONS R606.2.7 OR R606.2.10 AND SHALL MEET THE PROPORTION SPECIFICATIONS OF TABLE R606.2.7. MASONRY CEMENT SHALL NOT BE USED.

ALL BARS OR MESH SHALL BE COMPLETELY EMBEDDED IN MORTAR OR GROUT. GROUT USED IN MASONRY WALLS AND BLOCK CELLS SHALL BE COARSE GROUT AS DEFINED BY ASTM C476 AND THE PROPORTION SPECIFICATIONS OF TABLE R606.2.11, GROUT SHALL BE CONSOLIDATED BY PUDDLING OR MECHANICAL VIBRATING DURING PLACEMENT.

5. METALS

ALL STRUCTURAL STEEL AND MISCELLANEOUS EMBEDDED ITEMS SHALL CONFORM TO ASTM A36.
ALL BOLTS (INCLUDING ANCHOR BOLTS) SHALL CONFORM TO ASTM A307.
PIPE COLUMNS SHALL CONFORM TO ASTM A53, GRADE B.
TUBE SHAPES SHALL CONFORM TO ASTM 500, GRADE B, 46 KSI YIELD.

STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH LATEST PROVISIONS OF AISC "MANUAL OF STEEL CONSTRUCTION".

ALL SURFACES (INSIDE & OUTSIDE) OF STEEL COLUMNS SHALL BE GIVEN A SHOP COAT OF RUST INHIBITIVE PAINT. EXCEPT FOR CORROSION RESISTANT STEEL (R407.2) STEEL LINTELS SHALL BE SHOP COATED WITH A RUST INHIBITIVE PAINT OR CORROSION RESISTANT COATING (R703.8.3)

WELDING OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH "STRUCTURAL WELDING CODE-STEEL", ANSI/AWS D1.1-90.

MINIMUM WELDS TO BE PER AISC AND/OR AWS, BUT NOT LESS THAN 3/16" CONTINUOUS FILLET UNLESS OTHERWISE NOTED. QUALITY CONTROL SHALL BE PER AWS. USE E70XX ELECTRODES. ALL WELDING TO BE PERFORMED BY CERTIFIED WELDERS, IN AN APPROVED FABRICATOR'S SHOP.

WHEN REQUIRED A QUALIFIED SPECIAL INSPECTOR SHALL OBSERVE ALL FIELD WELDING OF STRUCTURAL MEMBERS OR CONNECTIONS FOR CONFORMANCE WITH THE APPROVED STRUCTURAL DESIGN. THE SPECIAL INSPECTOR SHALL SUBMIT A SIGNED REPORT, STATING CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE REPORT SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT PRIOR TO REQUESTING ROUGH FRAMING INSPECTIONS, OR THE REPORT MAY BE MADE AVAILABLE TO A FIELD INSPECTOR AT THE TIME THE ROUGH FRAMING INSPECTION. SPECIAL INSPECTIONS IF REQUIRED SHALL BE AT THE OWNER'S EXPENSE.

MISCELLANEOUS CLIPS, ANCHORS AND CONNECTORS SHALL BE SIMPSON "STRONG TIE" OR ICBO APPROVED EQUAL, UNLESS OTHERWISE NOTED. REFER TO SIMPSON CATALOG FOR APPROPRIATE NAILING WHEN NOT SPECIFIED ON PLANS. PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

RAMSET PLATES TO BE ATTACHED TO STEEL WITH POWDER ACTUATED 1/8"Ø DRIVEPINS, 1/4" Ø THREADED STUDS WELDED TO STEEL OR 1/4"Ø LAG BOLTS @ 16" OC, STAGGERED. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR POWDER ACTUATED ANCHOR INSTALLATION.

EXPANSION BOLTS SHALL BE "WEG-IT", "REDHEAD" OR APPROVED EQUAL. MINIMUM EMBEDMENT SHALL BE 1-1/2" FOR 1/2" DIAMETER BOLTS AND 2" FOR 5/8" DIAMETER BOLTS. EPOXY GROUTED REBAR OR ANCHOR BOLT CONNECTIONS SHALL BE MADE WITH SIMPSON "EPOXY-TIE" AND PER MANUFACTURER'S INSTRUCTIONS.

ANCHOR BOLTS SHALL BE 1/2" DIAMETER WITH 7" MINIMUM EMBEDMENT AND SUFFICIENT EXPOSED LENGTH FOR CONNECTION OF PLATE OR SILLS PLUS FULL NUT PENETRATION WITH WASHER. ANCHOR BOLTS SHALL BE PLACED AT 4' OC (UON) AND BETWEEN 4"-12" OF PLATE ENDS AND CORNERS. PROVIDE (2) ANCHOR BOLTS (MIN) PER PLATE OR SILL. BOLT SHALL BE LOCATED IN THE MIDDLE 1/3 OF THE WIDTH OF THE PLATE. (IRC R403.1.6)

6. CARPENTRY

CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT TO FRAME UP, SHEATH AND TRIM OUT BUILDING AS SHOWN OR SPECIFIED IN THESE DOCUMENTS.

AS NOTED IN THE SOILS REPORT, EXPANSIVE SOILS WERE ENCOUNTERED AT THIS SITE. ALL INTERIOR NON-BEARING PARTITIONS RESTING ON CONCRETE FLOOR SLABS SHOULD BE PROVIDED WITH A SLIP JOINT AT THE BOTTOM PER FIGURE #_ IN THE SOILS REPORT OR SLIP JOINT DETAIL PROVIDED WITH THESE PLANS.

ALL 2" FRAMING LUMBER SHALL BE STRESS RATED, S-DRY DOUGLAS FIR OR LARCH (DF-L) S4S, #2 OR BETTER. ALL SOLID TIMBER BEAMS AND POSTS SHALL BE S-DRY DOUGLAS FIR OR LARCH (DF-L) S4S, # 1 OR BETTER.

GLUE LAMINATED BEAMS (GL) SHALL BE AITC STRESS RATED TO COMBINATION SYMBOL 24F-V4 FOR SIMPLE SPANS AND 24F-V8 FOR MULTI SPANS AND CANTILEVERS, ARCHITECTURAL APPEARANCE GRADE. THE PORTIONS OF GLU-LAMINATED TIMBERS EXPOSED TO WEATHER AND NOT PROPERLY PROTECTED BY A ROOF, EVE OR SIMILAR COVERING SHALL BE PRESSURE TREATED WITH PRESERVATIVE. (IRC R317.1.5)

PREFABRICATED WOOD MEMBERS SHALL BE OF THE TYPE NOTED ON THE PLANS AND SHALL BE MICRO-LAM (LVL), TIMBERSTRAND (LSL), PARALLAM (PSL), OR TJI AS MANUFACTURED BY TRUS-JOIST MACMILLAN OR APPROVED EQUAL. I-JOISTS AND LAMINATED LUMBER SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.

WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH APPROVED ENGINEERING PRACTICE. THE DESIGN & MANUFACTURE OF METAL PLATE CONNECTED WOOD TRUSSES SHALL COMPLY WITH ANSI/TPI1. THE DESIGN DRAWINGS SHALL BE PREPARED BY A COLORADO REGISTERED PROFESSIONAL ENGINEER. TRUSS DESIGN DRAWINGS SHALL BE PREPARED IN COMPLIANCE WITH IRC SECTION R502.11.1 & R802.10.1 AND SHALL BE PROVIDED TO THE BUILDING OFFICIAL AND APPROVED PRIOR TO INSTALLATION. TRUSS DESIGN DRAWINGS SHALL BE PROVIDED WITH THE SHIPMENT OF TRUSSES DELIVERED TO THE JOB SITE. SEE IRC SECTION R502.11.4 FOR MINIMUM DESIGN REQUIREMENTS AND SPECIFIED INFORMATION. LOAD DURATION FACTOR SHALL BE 1.00. IT IS RECOMMENDED THAT JDS, INC. OR THE ENGINEER OF RECORD REVIEW TRUSS SCHEMATICS PRIOR TO ACCEPTANCE OF THE FABRICATOR'S ORDER.

CUTS, NOTCHES AND HOLES BORED IN TRUSSES, STRUCTURAL COMPOSITE LUMBER, STRUCTURAL GLUE-LAMINATED MEMBERS, CROSS LAMINATED TIMBER MEMBERS OR I-JOISTS ARE PROHIBITED EXCEPT WHERE PERMITTED BY THE MANUFACTURER'S RECOMMENDATIONS OR WHERE THE EFFECTS OF SUCH ALTERATIONS ARE SPECIFICALLY CONSIDERED IN THE DESIGN OF THE MEMBER BY A REGISTERED DESIGN PROFESSIONAL. (R502.8.2)

PLYWOOD SHEATHING SHALL BE STRUCTURAL 1, C-D, EXT-APA FOR ALL USES, MEETING THE MINIMUM APA RATING OR THICKNESS NOTED ON THE PLANS. ROOF AND FLOOR SHEATHING SHALL BE PLACED WITH THE 8'-0" DIMENSION PERPENDICULAR TO THE FRAMING, STAGGER END JOINTS. PLYWOOD FLOOR SHALL BE TONGUE AND GROOVED, AND GLUED AND NAILED AT SUPPORTS. WALL SHEATHING MAY BE PLACED VERTICAL OR HORIZONTALLY WITH ALL HORIZONTAL JOINTS BLOCKED AND EDGE NAILED. NAIL ROOF SHEATHING WITH 8D (PENNY) NAILS AT 6" OC AT THE EDGES AND 12" OC IN THE FIELD. NAIL FLOOR SHEATHING WITH 10D RING SHANKS AT 6" OC AT THE EDGES AND 12" OC IN THE FIELD. HIGH FOOT TRAFFIC AREAS SHALL BE SCREWED AT 6" OC. NAIL WALL SHEATHING WITH 8D (PENNY) NAILS AT 6" OC AT THE EDGES AND 12" OC IN THE FIELD.

STRUCTURAL INSULATED SHEATHING (SIS) SHALL BE ZIP SYSTEM R-SHEATHING R-6AS MANUFACTURED BY HUBER ENGINEERED WOODS. SHEATHING PANELS SHALL BE INSTALLED VERTICALLY W/ ALL JOINTS AND EDGES BACKED BY FRAMING, PER MANUFACTURER'S PUBLISHED INSTALLATION MANUAL AND 1CC-ESR-3373 (SEE ATTACHED). NAILING FOR 16" OC FRAMING TO BE 0.131" Ø SHANKS W/ 1-1/2" MINIMUM PENETRATION INTO STUD, 3" OC @ EDGES & 12" OC FIELD. THIS NAILING PROVIDES 255 PLF ALLOWABLE SHEAR. COUNTERSINKING OF FASTENERS IS ACCEPTABLE. ALL SEAMS & JOINTS BETWEEN BOARDS SHALL BE COVERED W/ ZIP SYSTEM CONSTRUCTION TAPE.

PROVIDE 1X4 CROSS BRIDGING OR 2X_ BLOCKING AT NOT OVER 8' ON CENTER FOR ALL SOLID WOOD JOISTS, UNLESS BOTH EDGES OF THE MEMBER ARE HELD IN LINE. PROVIDE SOLID BLOCKING BETWEEN JOISTS AT ALL SUPPORTS, BEAMS OR BEARING WALLS. PROVIDE SOLID BLOCKING AT 24" OC UNDER ALL PARTITIONS RUNNING PARALLEL TO JOISTS AND AT CENTERLINE OF WALLS RUNNING PERPENDICULAR TO JOISTS. SOLID BLOCKING IN ROOF SYSTEMS SHALL NOT INTERFERE WITH COLD ROOF VENTILATION.

ALL SOLID WOOD OR STEEL COLUMN SUPPORTS SHALL BE CONTINUOUS THROUGH FRAMING AND SHALL BEAR DIRECTLY ON ANOTHER COLUMN OR BEAM OR OTHERWISE TRANSFERRED TO THE FOUNDATION. MULTIPLE STUD COLUMNS MAY BEAR DIRECTLY ON A WALL PLATE IF PROVIDED WITH FULL WIDTH BLOCKING THROUGH FRAMING SYSTEM.

6. CARPENTRY - CONTINUED

DRAFTSTOPPING MATERIALS SHALL BE NOT LESS THAN 1/2 INCH GYPSUM BOARD, 3/8" WOOD STRUCTURAL PANELS OR OTHER APPROVED MATERIALS ADEQUATELY SUPPORTED. DRAFTSTOPPING SHALL BE INSTALLED PARALLEL TO THE FLOOR FRAMING MEMBERS. (IRC R502.12.1 AND R302.12)

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. (R302.11)

FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAMED CONSTRUCTION IN THE FOLLOWING LOCATIONS:

1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS:
1.1. VERTICALLY AT THE CEILING AND FLOOR LEVELS.
1.2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET (3048 MM).
2. AT INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.
3. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R302.7.
4. AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION. THE MATERIAL FILLING THIS ANNULAR SPACE SHALL NOT BE REQUIRED TO MEET THE ASTM E 136 REQUIREMENTS.
5. FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES, SEE SECTION R1003.19.
6. FIREBLOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPARATION.

EXCEPT AS PROVIDED IN SECTION R302.11, ITEM 4, FIREBLOCKING SHALL CONSIST OF THE FOLLOWING MATERIALS. (R302.11.1)

1. TWO-INCH (51 MM) NOMINAL LUMBER.
2. TWO THICKNESSES OF 1-INCH (25.4 MM) NOMINAL LUMBER WITH BROKEN LAP JOINTS.
3. ONE THICKNESS OF 23/32-INCH (18.3 MM) WOOD STRUCTURAL PANELS WITH JOINTS BACKED BY 23/32-INCH (18.3 MM) WOOD STRUCTURAL PANELS.
4. ONE THICKNESS OF 3/4-INCH (19.1 MM) PARTICLEBOARD WITH JOINTS BACKED BY 3/4-INCH (19.1 MM) PARTICLEBOARD.
5. ONE-HALF-INCH (12.7 MM) GYPSUM BOARD.
6. ONE-QUARTER-INCH (6.4 MM) CEMENT-BASED MILLBOARD.
7. BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE.
8. CELLULOSE INSULATION INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E 119 OR UL 263, FOR THE SPECIFIC APPLICATION.

WOOD COLUMNS SHALL BE APPROVED WOOD OF NATURAL DECAY RESISTANCE OR APPROVED PRESSURE PRESERVATIVE TREATED WOOD.

EXCEPTION:
1. COLUMNS EXPOSED TO THE WEATHER OR IN BASEMENTS WHERE SUPPORTED BY CONCRETE PIERS OR METAL PEDESTALS PROJECTING 1 INCH (25 MM) ABOVE A CONCRETE FLOOR OR 6 INCHES (152 MM) ABOVE EXPOSED EARTH AND THE EARTH IS COVERED BY AN APPROVED IMPERVIOUS MOISTURE BARRIER.
2. COLUMNS IN ENCLOSED CRAWL SPACES OR UNEXCAVATED AREAS LOCATED WITHIN THE PERIPHERY OF THE BUILDING WHEN SUPPORTED BY A CONCRETE PIER OR METAL PEDESTAL AT A HEIGHT MORE THAN 8 INCHES (203 MM) FROM EXPOSED EARTH AND THE EARTH IS COVERED BY AN IMPERVIOUS MOISTURE BARRIER.
3. DECK POSTS SUPPORTED BY CONCRETE PIERS OR METAL PEDESTALS PROJECTING NOT LESS THAN 1 INCH (25 MM) ABOVE A CONCRETE FLOOR OR 6 INCHES (152 MM) ABOVE EXPOSED EARTH. (IRC R317.1.4)

SILLS AND SLEEPERS ON A CONCRETE OR MASONRY SLAB WHICH IS IN DIRECT CONTACT WITH THE GROUND UNLESS SEPARATED FROM SUCH SLAB BY AN IMPERVIOUS MOISTURE BARRIER SHALL BE PRESSURE-PRESERVATIVE TREATED WOOD IN ACCORDANCE WITH AWPA U1 OR FOUNDATION REDWOOD. (IRC R317.1)

FASTENERS INCLUDING NUTS AND WASHERS IN PRESSURE PRESERVATIVE & FIRE RETARDANT TREATED WOOD ABOVE GRADE SHALL BE HOT DIPPED ZINC COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. (IRC R317.3.1)

EXCEPTIONS:
1. 1/2" DIAMETER OR GREATER STEEL BOLTS
3. PLAIN CARBON STEEL FASTENERS IN SBX/DOT AND ZINC BORATE PRESERVATIVE-TREATED WOOD IN AN INTERIOR, DRY ENVIRONMENT SHALL BE PERMITTED.

THE ENDS OF EACH JOIST, BEAM OR GIRDER SHALL HAVE NOT LESS THAN 1-1/2 INCHES BEARING ON WOOD OR METAL AND NOT LESS THAN 3 INCHES ON MASONRY OR CONCRETE EXCEPT WHERE SUPPORTED BY THE USE OR APPROVED JOIST HANGERS. JOISTS FRAMING FROM OPPOSITE SIDES OVER A BEARING SUPPORT SHALL LAP A MINIMUM OF 3 INCHES AND BE NAILED TOGETHER W/ A MINIMUM OF (3) 10d FACE NAILS. JOISTS FRAMING INTO THE SIDE OF A BEAM OR GIRDER, SHALL BE SUPPORTED BY APPROVED FRAMING ANCHORS OF THE APPROPRIATE SIZE AND CAPACITY. (IRC R502.6.)

NOTCHES IN SOLID LUMBER JOISTS, RAFTERS OR BEAMS SHALL NOT EXCEED 1/6 OF THE MEMBER DEPTH, SHALL NOT BE LONGER THAN 1/3 OF THE MEMBER DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE 1/3 OF THE SPAN. NOTCHES AT THE ENDS OF THE MEMBER SHALL NOT EXCEED 1/4 OF THE MEMBER DEPTH. THE TENSION SIDE OF MEMBERS 4" OR GREATER SHALL NOT BE NOTCHED EXCEPT AT THE ENDS OF THE MEMBERS. THE DIAMETER OF HOLES BORED OR CUT INTO MEMBERS SHALL NOT EXCEED 1/3 THE DEPTH OF THE MEMBER. HOLES SHALL NOT BE CLOSER THAN 2 INCHES TO THE TOP OR BOTTOM OF THE MEMBER OR TO ANY OTHER HOLE OR NOTCH LOCATED IN THE MEMBER. (IRC R502.8) SEE FIGURE R502.8.

CUTS, NOTCHES AND HOLES BORED IN TRUSSES, STRUCTURAL COMPOSITE LUMBER, STRUCTURAL GLUE LAMINATED MEMBERS, CROSS LAMINATED TIMBER MEMBERS OR I-JOISTS ARE PROHIBITED EXCEPT WHERE PERMITTED BY THE MANUFACTURER'S RECOMMENDATIONS OR WHERE THE EFFECTS OF SUCH ALTERATIONS ARE SPECIFICALLY CONSIDERED IN THE DESIGN OF THE MEMBER BY A REGISTERED PROFESSIONAL ENGINEER. (IRC R502.8.2) (IRC R802.7.2)

OPENINGS IN FLOOR, CEILING AND ROOF FRAMING SHALL BE FRAMED WITH A HEADER AND TRIMMER JOISTS AND SHALL BE DOUBLED OR OF EQUIVALENT CROSS SECTION WHEN THE SPAN OF THE HEADER EXCEEDS 4'. THE ENDS OF HEADER JOISTS MORE THAN 6' LONG SHALL BE SUPPORTED BY FRAMING ANCHORS OR JOIST HANGERS, UNLESS BEARING ON A BEAM, PARTITION OR WALL. (IRC R502.10 & R802.9)

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. (R502.10)

GIRDERS AND BEAMS SHALL HAVE 3" MINIMUM BEARING OR WHEN FRAMED INTO THE SIDE OF A BEAM OR GIRDER, SHALL BE SUPPORTED BY FRAMING ANCHORS OF THE APPROPRIATE SIZE AND CAPACITY. GIRDER AND BEAM END JOINTS SHALL OCCUR OVER SUPPORTS. WHEN A GIRDER OR BEAM IS SPLICED OVER A SUPPORT, AN ADEQUATE TIE SHALL BE PROVIDED.

ENDS OF WOOD GIRDERS OR BEAMS ENTERING EXTERIOR MASONRY OR CONCRETE WALLS SHALL BE PROVIDED WITH A 1/2" AIR SPACE ON TOP, SIDES AND END UNLESS APPROVED WOOD OF NATURAL RESISTANCE TO DECAY OR PRESSURE PRESERVATIVE TREATED WOOD IS USED. (IRC R317.1)

FIELD CUT ENDS, NOTCHES AND DRILLED HOLES OF PRESSURE PRESERVATIVE TREATED WOOD SHALL BE TREATED IN THE FIELD IN ACCORDANCE WITH AWPA M4. (R317.1.1)

JOISTS UNDER PARALLEL BEARING PARTITIONS SHALL BE OF ADEQUATE SIZE TO SUPPORT THE LOAD. DOUBLED JOISTS THAT ARE SEPARATED TO PERMIT THE INSTALLATION OF PIPING OR VENTS SHALL BE FULL DEPTH SOLID BLOCKED WITH 2X_ DIMENSIONAL LUMBER SPACED 4' OC. (IRC R502.4)

EACH END OF A HEADER SHALL HAVE A MINIMUM BEARING LENGTH OF 1-1/2" FOR THE FULL WIDTH OF THE HEADER. LVL HEADERS SHALL HAVE A MINIMUM BEARING LENGTH OF 3" FOR THE FULL WIDTH OF THE HEADER. PROVIDE DOUBLED "KING STUDS" AT ALL OPENINGS OVER 10' WIDE.

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 x 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. (R602.7.5)

ROOF TRUSSES SHALL STACK DIRECTLY OVER WALL STUDS AND FLOOR JOISTS BELOW. (UON) ADDITIONAL STUDS, TRIPLED TOP PLATES OR 2X6 BLOCKING MAY BE REQUIRED IF NOT STACKED OVER WALL STUDS, WHEN PLANS SPECIFY ON "COMMON LAYOUT".

DECK LEDGER SHALL BE INSTALLED PER SECTION R507.2 AND SHALL BE PRESSURE TREATED OR NATURALLY DURABLE #2 OR BETTER. FASTENERS SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL AND INSTALLED IN ACCORDANCE WITH TABLE R507.2 AND FIGURES R507.2.1(1) AND R507.2.1(2).

MINIMUM NAILING SHALL BE AS SPECIFIED IN TABLE R602.3(1) SEE ATTACHED

7. THERMAL AND MOISTURE PROTECTION

CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT TO INSTALL INSULATION, VAPOR BARRIERS & RETARDERS, FLASHINGS, WATERPROOFING AND ROOF COVERING AS DETAILED OR SPECIFIED IN THESE DOCUMENTS.

PROVIDE (2) LAYERS "BARRIER X5" A COMBINATION UNDERSLAB INSULATION (R-5) & VAPOR RETARDER INSTALLED PER MANUFACTURER'S INSTRUCTIONS OR PROVIDE R-10 RIGID FOAM OVER "TU-TUF #4" VAPOR RETARDER INSTALLED PER MANUFACTURER'S INSTRUCTIONS.

PROVIDE FOAM SILL SEALER BETWEEN TOP OF FOUNDATION WALL AND RIM JOIST AND BETWEEN FLOOR SHEATHING & SILL PLATES AT ALL EXTERIOR WALLS.

CLASS I OR II VAPOR RETARDERS ARE REQUIRED ON INTERIOR SIDE OF FRAMED WALLS. (IRC R702.7)

EXCEPTIONS:
1. BASEMENT WALLS
2. BELOW GRADE PORTION OF ANY WALL.

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THE WALL AND CEILING ASSEMBLIES ARE INTENDED TO DRY TO THE INTERIOR. DO NOT INSTALL VAPOR BARRIERS SUCH AS POLYETHYLENE (VISQUENE), FOIL FACED BATT INSULATION OR REFLECTIVE RADIANT BARRIER FOIL INSULATION IN EXTERIOR WALLS AND CEILINGS. KRAFT PAPER FACED BATT INSULATION IS AN ACCEPTABLE VAPOR PERMEABLE RETARDER WHEN SEAMS ARE LAPPED AND TAPED. CERTAINTEED "MEMBRAIN" IS RECOMMENDED AS A "SMART" VAPOR PERMEABLE RETARDER WHEN APPLIED OVER UNFACED BATT INSULATION AND PER MANUFACTURER'S RECOMMENDATIONS..

INSULATION MATERIALS, INCLUDING FACINGS SUCH AS VAPOR RETARDERS OR VAPOR PERMEABLE MEMBRANES SHALL HAVE A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DENSITY NOT TO EXCEED 450. (IRC R302.10)

EXCEPTIONS:
1. WHERE SUCH MATERIALS ARE INSTALLED IN CONCEALED SPACES, THE FLAME SPREAD INDEX AND SMOKE-DEVELOPED INDEX LIMITATIONS DO NOT APPLY TO THE FACINGS, PROVIDED THAT THE FACING IS INSTALLED IN SUBSTANTIAL CONTACT WITH THE UNEXPOSED SURFACE OF THE CEILING, FLOOR OR WALL FINISH.
2. CELLULOSE FIBER LOOSE-FILL INSULATION, THAT IS NOT SPRAY APPLIED, COMPLYING WITH THE REQUIREMENTS OF SECTION R302.10.3, SHALL NOT BE REQUIRED TO MEET THE SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450 AND SHALL BE REQUIRED TO MEET A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450 WHERE TESTED IN ACCORDANCE WITH CAN/ULC S102.2.
3. FOAM PLASTIC INSULATION SHALL COMPLY WITH SECTION R316.

THE VAPOR RETARDER CLASS SHALL BE BASED ON THE MANUFACTURER'S CERTIFIED TESTING OR A TESTED ASSEMBLY. THE FOLLOWING SHALL BE DEEMED TO MEET THE CLASS SPECIFIED: (R702.7.2.)

CLASS I: SHEET POLYETHYLENE, UNPERFORATED ALUMINUM FOIL.
CLASS II: KRAFT-FACED FIBERGLASS BATTS.
CLASS III: LATEX OR ENAMEL PAINT.

FOAM PLASTIC INSULATION SHALL COMPLY WITH IRC R316.1 UNLESS OTHERWISE ALLOWED IN SECTION R316.5 OR R316.6, FOAM PLASTIC SHALL BE SEPARATED FROM THE INTERIOR OF THE BUILDING BY AN APPROVED THERMAL BARRIER OF MINIMUM 1/2 INCH GYPSUM WALLBOARD 23/32", WOOD STRUCTURAL PANEL OR AN APPROVED THERMAL BARRIER. (IRC R316.4)

THE THERMAL BARRIER IS NOT REQUIRED WHEN THE FOAM PLASTIC IS IN A ROOF ASSEMBLY AND SEPARATED FROM THE INTERIOR BY T&G WOOD PLANKS OR WOOD STRUCTURAL PANEL SHEATHING. (IRC R316.5.2)

THE THERMAL BARRIER IS NOT REQUIRED IN ATTICS OR CRAWL SPACES WHEN EACH OF THE FOLLOWING APPLIES:
1. ACCESS IS REQUIRED BY SECTION R807.1 (ATTIC) OR R408.4 (CRAWL SPACE)
2. THE SPACE IS ENTERED ONLY FOR PURPOSES OF REPAIR OR MAINTENANCE.
3. THE FOAM PLASTIC INSULATION HAS BEEN TESTED IN ACCORDANCE WITH SECTION R316.6 OR WHEN THE FOAM PLASTIC INSULATION IS PROTECTED FROM IGNITION USING ONE OF THE FOLLOWING IGNITION BARRIER MATERIALS; 1-1/2" THICK MINERAL FIBER INSULATION; 1/4" THICK WOOD STRUCTURAL PANELS; 3/8" PARTICLE BOARD; 1/4" HARDBOARD, 3/8" GYPSUM WALLBOARD, CORROSION RESISTANT SHEET METAL HAVING A BASE METAL THICKNESS OF NOT LESS THAN .0160, 1-1/2" THICK CELLULOSE INSULATION; 1/4" FIBER CEMENT PANEL, SOFFIT OR BACKER BOARD (IRC R316.5.3 & .4)

THE ABOVE IGNITION BARRIER IS NOT REQUIRED WHERE THE FOAM PLASTIC INSULATION HAS BEEN TESTED IN ACCORDANCE WITH SECTION R316.6

FIBER-CEMENT, FIBER MAT REINFORCED CEMENT, GLASS MAT GYPSUM BACKERS OR FIBER REINFORCED GYPSUM BACKERS INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS SHALL BE USED AS BACKERS FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL PANELS IN SHOWER AREAS.

WATER RESISTANT GYPSUM BACKING BOARD MAY BE USED FOR CEILINGS WHERE FRAMING SPACING DOES NOT EXCEED 12" OC FOR 1/2" THICK OR 16" OC FOR 5/8" THICK GYPSUM WALL BOARD. WATER RESISTANT GYPSUM BOARD SHALL NOT BE INSTALLED OVER A CLASS I OR II VAPOR RETARDER. WATER RESISTANT GYPSUM BACKING BOARD SHALL NOT BE USED WHERE THERE WILL BE DIRECT EXPOSURE TO WATER OR IN AREAS SUBJECT TO CONTINUOUS HIGH HUMIDITY. REGULAR GYPSUM WALLBOARD IS PERMITTED UNDER TILE OR WALL PANELS IN OTHER WALL AND CEILING AREAS WHEN INSTALLED IN ACCORDANCE WITH TABLE R702.3.8.

BALCONIES, LANDINGS, EXTERIOR STAIRWAYS, OCCUPIED ROOFS AND OTHER SIMILAR SURFACES EXPOSED TO WEATHER AND SEALED UNDERNEATH SHALL BE WATERPROOFED AND SLOPED A MINIMUM OF 1/4" PER FOOT FOR DRAINAGE.

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.

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. (R703.1.1)

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: (R703.4)

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 WATER-RESISTIVE BARRIER FOR SUBSEQUENT DRAINAGE. OPENINGS USING PAN FLASHING SHALL INCORPORATE FLASHING OR PROTECTION AT THE HEAD AND SIDES.

SPECIFICATIONS UPDATED TO 2015 IRC

JAKE'S DRAFTING SERVICE, INC.
P.O. BOX 774121
426 OAK STREET
STEAMBOAT SPRINGS, COLORADO
970.879.7929
FAX 970.879.8709
JAKES@SPRINGSIPS.COM

COLORADO REGISTERED PROFESSIONAL ENGINEER
MICHAEL EHRLICH
30669
8-19-2019
"STRUCTURE ONLY"

SPECIFICATIONS FOR
the STEPHEN MILES
28300 CR 14
ROUTT COUNTY CO 80477

Job #	15014
File	15014G10
Date	15AUG19
Drawn	JMH
Checked	JMH
Rel'd	10MAY16
Rev'd	15AUG19

Sheet Number

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7. THERMAL & MOISTURE PROTECTION - CONTINUED

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.

PROVIDE BASE AND CAP, SIDEWALL AND OTHER FLASHINGS AT ALL ROOF AND VERTICAL SURFACE INTERSECTIONS PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. (IRC 905.2.8)

A DRIP EDGE SHALL BE PROVIDED AT EAVES AND RAKE EDGES OF SHINGLE ROOFS. ADJACENT SEGMENTS OF DRIP EDGE SHALL BE OVERLAPPED NOT LESS THAN 2 INCHES (51 MM). DRIP EDGES SHALL EXTEND NOT LESS THAN 1/4 INCH (6.4 MM) BELOW THE ROOF SHEATHING AND EXTEND UP BACK ONTO THE ROOF DECK NOT LESS THAN 2 INCHES (51 MM). DRIP EDGES SHALL BE MECHANICALLY FASTENED TO THE ROOF DECK AT NOT MORE THAN 12 INCHES (305 MM) O.C. WITH FASTENERS AS SPECIFIED IN SECTION R905.2.5. UNDERLAYMENT SHALL BE INSTALLED OVER THE DRIP EDGE ALONG EAVES AND UNDER THE DRIP EDGE ALONG RAKE EDGES. (R905.2.8.5)

ROOF VALLEY LININGS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. OPEN VALLEY LININGS SHALL CONSIST OF NOT LESS THAN 26 GAGE GALVANIZED STEEL, 28 GAGE STAINLESS STEEL OR 0.0216 NOMINAL COLD ROLLED COPPER. LININGS SHALL BE 24" WIDE MINIMUM AND PLACED OVER 36" WIDE LAYER OF ICE AND WATER SHIELD. CLOSED VALLEY LININGS (ASPHALT SHINGLES) SHALL BE A 36" WIDE LAYER OF ICE AND WATER SHIELD. (IRC R905.2.8.2)

PROVIDE GRACE "ICE AND WATER SHIELD" UNDERLAYMENT AS ICE BARRIER, EXCEPT WHEN USING DIRECT APPLIED METAL ROOFING. FOR DIRECT APPLIED METAL ROOFING USE GRACE "ULTRA" UNDERLAYMENT. (IRC 905.2.7.1) IT IS RECOMMENDED THAT THE ENTIRE ROOF BE COVERED.

NATURAL VENTILATION OF ALL HABITABLE ROOMS SHALL BE PROVIDED. THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4 PERCENT OF THE FLOOR AREA BEING VENTILATED (IRC SECTION R303.1)

EXCEPTION 1. AN APPROVED MECHANICAL VENTILATION SYSTEM IS PROVIDED CAPABLE OF PRODUCING 0.35 AIR CHANGES PER HOUR IN THE ROOM OR A WHOLE MECHANICAL VENTILATION SYSTEM IS INSTALLED CAPABLE OF SUPPLYING OUTDOOR VENTILATION AIR PER TABLE M1507.3.3 (1). (IRC R303.1)

ROUTT COUNTY ASSUMES ALL STRUCTURES TO HAVE AN AIR LEAKAGE RATE NOT EXCEEDING 3 AIRCHANGES PER HOUR. THEREFOR, A WHOLE HOUSE MECHANICAL VENTILATION SYSTEM IS REQUIRED IN ACCORDANCE W/ M1507.3

VENTILATION OF BATHROOMS, WATER CLOSET COMPARTMENTS AND SIMILAR ROOMS WITHOUT OPERABLE WINDOW PROVIDING 1.5 SQUARE FEET OPENING, SHALL BE PROVIDED BY A MECHANICAL VENTILATION SYSTEM CAPABLE OF PRODUCING 50 CFM FOR INTERMITTENT USE OR 20 CFM CONTINUOUS VENTILATION. VENTILATION AIR FROM THE SPACE SHALL BE DIRECTLY EXHAUSTED TO THE OUTSIDE. (IRC R303.3) PROVIDE ENERGY-STAR QUALIFIED BATHROOM FANS WITH A RATING OF 1.5 SONES OR LESS WITH TIMER OR HUMIDISTAT CONTROL. SEE PLAN VIEW FOR REQUIRED CFM RATING.

ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATION OPENINGS SHALL HAVE A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. VENTILATION OPENINGS HAVING A LEAST DIMENSION LARGER THAN 1/4 INCH (6.4 MM) SHALL BE PROVIDED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH OR SIMILAR MATERIAL WITH OPENINGS HAVING A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7. REQUIRED VENTILATION OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR. (IRC R806) WHERE EVE OR CORNICE VENTS ARE INSTALLED, INSULATION OR BLOCKING SHALL NOT BLOCK THE AIR FLOW. A MINIMUM OF 1" SHALL BE PROVIDED BETWEEN THE INSULATION AND ROOF SHEATHING. (R806.1)

THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/150 OF THE SPACE BEING VENTILATED EXCEPT THAT A REDUCTION TO 1/300 IS PERMITTED WHEN A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM IN WINTER SIDE OF THE CEILING. (R806.2)

8. DOORS AND WINDOWS

CONTRACTOR SHALL SUPPLY AND INSTALL ALL DOORS, WINDOWS AND GLAZING AS DETAILED, SCHEDULED AND/OR SPECIFIED IN THESE DOCUMENTS.

WINDOWS AND DOORS TO BE SEMCO OR APPROVED EQUAL. GLAZING TO BE 3/4" INSULATING GLASS WITH INSUL LOW-E 366 COATING. UNIT U VALUE TO BE 0.32 MAXIMUM. ALL OPERABLE UNITS TO BE PROVIDED WITH SCREENS. CLAD COLOR PER OWNER. WINDOWS AND DOORS SHALL BE INSTALLED AND FLASHED IN ACCORDANCE WITH THE FENESTRATION MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, WHICH SHALL BE PROVIDED BY THE MANUFACTURER FOR EACH WINDOW OR DOOR AND SECTION R703.4. (R609.1)

WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72" ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING SHALL BE 24" MINIMUM ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. (R312.2.1)

EXCEPTIONS: WINDOWS WHOSE OPENING WILL NOT ALLOW A 4"Ø SPHERE TO PASS OR PROTECTED WITH FALL PROTECTION DEVICES THAT COMPLY WITH ASTM F 2090.

OPENINGS FROM A PRIVATE GARAGE DIRECTLY INTO A ROOM USED FOR SLEEPING PURPOSES SHALL NOT BE PERMITTED. OTHER OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 1-3/8 INCHES (35 MM) IN THICKNESS, SOLID OR HONEYCOMB-CORE STEEL DOORS NOT LESS THAN 1-3/8 INCHES (35 MM) THICK, OR 20-MINUTE FIRE-RATED DOORS, EQUIPPED WITH A SELF-CLOSING DEVICE. (R302.5.1)

ALL HABITABLE ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN 8 PERCENT OF THE FLOOR AREA OF SUCH ROOMS. (IRC R303.1)

EXCEPTION: THE GLAZED AREAS NEED NOT BE PROVIDED IN ROOMS WHERE ARTIFICIAL LIGHT IS PROVIDED CAPABLE OF PRODUCING AN AVERAGE ILLUMINATION OF 6 FOOT CANDLES AT A HEIGHT OF 30" ABOVE THE FLOOR.

HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE NOT LESS THAN ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING. WHERE BASEMENTS CONTAIN ONE OR MORE SLEEPING ROOMS, AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE REQUIRED IN EACH SLEEPING ROOM. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY, OR TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY. (R310.1)

EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE. WINDOW OPENING CONTROL DEVICES COMPLYING WITH ASTM F 2090 SHALL BE PERMITTED FOR USE ON WINDOWS SERVING AS A REQUIRED EMERGENCY ESCAPE AND RESCUE OPENING. (R310.1.1)

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 OPENING DIMENSIONS REQUIRED BY THIS SECTION SHALL BE OBTAINED BY THE NORMAL OPERATION OF THE EMERGENCY ESCAPE AND RESCUE OPENING FROM THE INSIDE. 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) (R310.2.1).

EXCEPTION: GRADE FLOOR OR BELOW GRADE OPENINGS SHALL HAVE A NET CLEAR OPENING OF NOT LESS THAN 5 SQUARE FEET (0.465 M2).

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. (R310.2.2)

8. DOORS & WINDOWS-CONTINUED

BARS, GRILLES, COVERS, SCREENS OR SIMILAR DEVICES ARE PERMITTED TO BE PLACED OVER EMERGENCY ESCAPE AND RESCUE OPENINGS, BULKHEAD ENCLOSURES, OR WINDOW WELLS THAT SERVE SUCH OPENINGS, PROVIDED THAT THE MINIMUM NET CLEAR OPENING SIZE COMPLIES WITH SECTIONS R310.1.1 TO R310.2.3, AND SUCH DEVICES SHALL BE RELEASABLE OR REMOVABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, TOOL, SPECIAL KNOWLEDGE OR FORCE GREATER THAN THAT REQUIRED FOR THE NORMAL OPERATION OF THE ESCAPE AND RESCUE OPENING. (R310.4)

SEE IRC SECTION R308.4 FOR HAZARDOUS LOCATIONS WHERE SAFETY GLAZING IS REQUIRED.

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 VERTICAL HEIGHT SHALL BE MEASURED FROM THE TOP OF THE CEILING FRAMING MEMBERS TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS.

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. WHERE LOCATED IN A WALL, THE OPENING SHALL BE NOT LESS THAN 22 INCHES WIDE BY 30 INCHES HIGH (559 MM WIDE BY 762 MM HIGH). WHERE THE ACCESS IS LOCATED IN A CEILING, MINIMUM UNOBSTRUCTED HEADROOM IN THE ATTIC SPACE SHALL BE 30 INCHES (762 MM) AT SOME POINT ABOVE THE ACCESS MEASURED VERTICALLY FROM THE BOTTOM OF CEILING FRAMING MEMBERS. SEE SECTION M1305.1.3 FOR ACCESS REQUIREMENTS WHERE MECHANICAL EQUIPMENT IS LOCATED IN ATTICS(IRC R807). ACCESS PANELS SHALL BE 30" H X 22" W MINIMUM OR AS REQUIRED TO REMOVE EQUIPMENT WHEN USED TO ACCESS MECHANICAL EQUIPMENT. (IRC M1305.1.3)

9. FINISHES

CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS TO FINISH ROOMS AND BUILDING EXTERIOR AS DETAILED, SCHEDULED AND / OR SPECIFIED IN THESE DOCUMENTS.

ALL CONSTRUCTION ADHESIVES AND CAULK SHOULD BE LOW VOC (<70 G/L).

ROOFING MATERIAL TO BE DIMENSIONAL ASPHALT SHINGLES, COLOR "BLACK". SIDING TO BE SLAB LOG SIDING, 8" WIDE, WESTERN RED CEDAR, STAIN COLOR PER OWNER OR TO MATCH EXISTING HOUSE. TRIM TO BE 1X6 WESTERN RED CEDAR, STAIN COLOR PER OWNER OR TO MATCH EXISTING HOUSE. ADHERED SYNTHETIC/ANCHORED MASONRY STONE VENEER WITH SAND STONE CAP, MATERIAL PER OWNER. ALL FINISHES SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

VERIFY WITH THE OWNER, EXACT FINISHES NOT NOTED OR SPECIFIED HEREIN.

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. THE WALL SEPARATION PROVISIONS OF TABLE R302.6 SHALL NOT APPLY TO GARAGE WALLS THAT ARE PERPENDICULAR TO THE ADJACENT DWELLING UNIT WALL. (R302.6)

THE GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2 INCH GYPSUM BOARD OR ITS EQUIVALENT APPLIED TO THE GARAGE SIDE. GARAGES BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8" TYPE X GYPSUM BOARD OR ITS EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2 INCH GYPSUM BOARD OR ITS EQUIVALENT. GARAGES LOCATED LESS THAN 3 FEET FROM A DWELLING UNIT ON THE SAME LOT SHALL BE PROTECTED WITH NO LESS THAN 1/2 INCH GYPSUM BOARD APPLIED TO THE INTERIOR SIDE OF EXTERIOR WALLS THAT ARE WITHIN THIS AREA. OPENINGS IN THESE WALL ARE REGULATED BY SECTION R302.5. (IRC R302.6)

THE GARAGE WALL SEPARATION PROVISIONS REQUIRED BY R302.6 SHALL NOT APPLY TO GARAGE WALLS THAT ARE PERPENDICULAR TO THE DWELLING UNIT WALLS.

PENETRATIONS THROUGH THE SEPARATION REQUIRED BY SECTION R302.6 SHALL BE PROTECTED BY FILLING THE OPENING AROUND THE PENETRATING ITEM WITH APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME OR PRODUCTS OF COMBUSTION. (IRC R302.11 ITEM 4)

ALL PAINTS AND STAINS SHALL/SHOULD BE LOW VOC (<100 G/L FOR NON-FLAT, <50 G/L FOR FLAT FINISHES) OR ZERO VOC (<5 G/L).

UNLESS OTHERWISE NOTED EXCESS FINISH MATERIALS, PAINT, TRIM, TILE, CARPET, ETC. ARE TO REMAIN ONSITE.

10. SPECIALTIES - NO WORK THIS SECTION

11. EQUIPMENT - NO WORK THIS SECTION

12. DEFENSIBLE SPACE - NO WORK THIS SECTION

13. ENERGY EFFICIENCY - THIS BUILDING IS EXEMPT AS IT CONTAINS NO CONDITIONED SPACE.

THE ROUTT COUNTY REGIONAL BUILDING DEPARTMENT HAS ADOPTED THE 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) AND IRC CHAPTER 11. EITHER CODE MAY BE USED.

PROJECTS SHALL COMPLY WITH ONE OF THE FOLLOWING:

1. SECTIONS N1101.14 THROUGH N1104. PRESCRIPTIVE / UA ALTERNATIVE
2. SECTION N1105 AND THE PROVISIONS OF SECTIONS N1101.14 THROUGH N1104 LABELED "MANDATORY." SIMULATED PERFORMANCE ALTERNATIVE
3. AN ENERGY RATING INDEX (ERI) (HERS) APPROACH IN SECTION N1106.

TABLES N1102.1.2 (R402.1.2) & N1102.1.4 (R402.1.4) FOR CLIMATE ZONE 7

FENESTRATION U FACTOR	SKYLIGHT U FACTOR	CEILINGS R-49	FRAMED WALLS R-20+5 R-13+10	MASS WALLS R-19/21	FLOORS R-38g	BASEMENT WALLS c R-15/R-19	SLAB DEPTH R-10, 4'	WALLS c R-15/19
0.32	0.55	0.026	0.045	0.057	0.028	0.050		0.055

THERE ARE NO REQUIREMENTS FOR SOLAR HEAT GLAZING COEFFICIENTS
a. R-VALUES SHOWN ARE MINIMUMS, U-FACTORS SHOWN ARE MAXIMUMS,
c. THE FIRST R-VALUE IS FOR CONTINUOUS INSULATION, THE SECOND R-VALUE IS FOR CAVITY INSULATION, EITHER SYSTEM MEETS THE REQUIREMENT
d. R-5 SHALL BE ADDED TO THE SLAB EDGE R-VALUE FOR HEATED SLABS
g. OR INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY, R-19 MINIMUM
h. THE FIRST VALUE IS CAVITY INSULATION, THE SECOND VALUE IS CONTINUOUS INSULATION

TO MEET THE PRESCRIPTIVE REQUIREMENTS, THE BUILDING THERMAL ENVELOPE SHALL MEET THE REQUIREMENTS OF SECTIONS N1102.1 THROUGH N1102.1.5.

TO MEET THE TOTAL UA ALTERNATIVE REQUIREMENTS, THE TOTAL BUILDING THERMAL ENVELOPE UA (SUM OF U-FACTOR TIMES ASSEMBLY AREA) IS LESS THAN OR EQUAL TO THE TOTAL UA RESULTING FROM USING THE U-FACTORS IN TABLE N1102.1.4 (MULTIPLIED BY THE SAME ASSEMBLY AREA AS IN THE PROPOSED BUILDING), THE BUILDING SHALL BE CONSIDERED IN COMPLIANCE WITH TABLE N1102.1.2. THE UA CALCULATION SHALL BE DONE USING A METHOD CONSISTENT WITH THE ASHRAE HANDBOOK OF FUNDAMENTALS AND SHALL INCLUDE THE THERMAL BRIDGING EFFECTS OF FRAMING MATERIALS. THE SHGC REQUIREMENTS SHALL BE MET IN ADDITION TO UA COMPLIANCE. SEE ATTACHED RESCHECK COMPLIANCE REPORT.

THE BUILDING THERMAL ENVELOPE IS REPRESENTED ON THE CONSTRUCTION DRAWINGS IN "RED".

INTERIOR DESIGN TEMPERATURES ARE 72° F MAX FOR HEATING AND 75° F FOR COOLING.

THE THICKNESS OF BLOWN IN OR SPRAYED (FIBERGLASS OR CELLULOSE) SHALL BE WRITTEN IN INCHES ON MARKERS WITH NUMBERS 1" TALL. MARKERS SHALL FACE THE ATTIC ACCESS OPENING AND BE PROVIDED FOR EACH 300 SF OF ATTIC AREA. (N1110.1.1)

A PERMANENT CERTIFICATE SHALL BE COMPLETED BY THE BUILDER OR REGISTERED DESIGN PROFESSIONAL AND POSTED ON A WALL IN THE SPACE WHERE THE FURNACE IS LOCATED, A UTILITY ROOM OR AN APPROVED LOCATION INSIDE THE BUILDING. WHERE LOCATED ON AN ELECTRICAL PANEL, THE CERTIFICATE SHALL NOT COVER OR OBSTRUCT THE VISIBILITY OF THE CIRCUIT DIRECTORY LABEL, SERVICE DISCONNECT LABEL OR OTHER REQUIRED LABELS. THE CERTIFICATE SHALL LIST THE PREDOMINANT R-VALUES OF INSULATION INSTALLED IN OR ON CEILING/ROOF, WALLS, FOUNDATION (SLAB, BASEMENT WALL, CRAWL SPACE WALL AND/OR FLOOR) AND DUCTS OUTSIDE CONDITIONED SPACES; U-FACTORS FOR FENESTRATION AND THE SOLAR HEAT GAIN COEFFICIENT (SHGC) OF FENESTRATION, AND THE RESULTS FROM ANY REQUIRED DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TESTING DONE ON THE BUILDING. WHERE THERE IS MORE THAN ONE VALUE FOR EACH COMPONENT, THE CERTIFICATE SHALL LIST THE VALUE COVERING THE LARGEST AREA. THE CERTIFICATE SHALL LIST THE TYPES AND EFFICIENCIES OF HEATING, COOLING AND SERVICE WATER HEATING EQUIPMENT. WHERE A GAS-FIRED UNVENTED ROOM HEATER, ELECTRIC FURNACE, OR BASEBOARD ELECTRIC HEATER IS INSTALLED IN THE RESIDENCE, THE CERTIFICATE SHALL LIST "GAS-FIRED UNVENTED ROOM HEATER," "ELECTRIC FURNACE" OR "BASEBOARD ELECTRIC HEATER," AS APPROPRIATE. AN EFFICIENCY SHALL NOT BE LISTED FOR GAS-FIRED UNVENTED ROOM HEATERS, ELECTRIC FURNACES OR ELECTRIC BASEBOARD HEATERS. (N1101.14)

ACCESS DOORS FROM CONDITIONED SPACES TO UNCONDITIONED SPACES SUCH AS ATTICS AND CRAWL SPACES SHALL BE WEATHERSTRIPPED AND INSULATED TO A LEVEL EQUIVALENT TO THE INSULATION ON THE SURROUNDING SURFACES. ACCESS SHALL BE PROVIDED TO ALL EQUIPMENT THAT PREVENTS DAMAGING OR COMPRESSING THE INSULATION. A WOOD-FRAMED OR EQUIVALENT BAFFLE OR RETAINER IS REQUIRED TO BE PROVIDED WHEN LOOSE-FILL INSULATION IS INSTALLED, THE PURPOSE OF WHICH IS TO PREVENT THE LOOSE-FILL INSULATION FROM SPILLING INTO THE LIVING SPACE WHEN THE ATTIC ACCESS IS OPENED, AND TO PROVIDE A PERMANENT MEANS OF MAINTAINING THE INSTALLED R-VALUE OF THE LOOSE-FILL INSULATION. (N1102.2.4 (R402.2.4))

EXCEPTION: VERTICAL DOORS THAT PROVIDE ACCESS FROM CONDITIONED TO UNCONDITIONED SPACES SHALL BE PERMITTED TO MEET THE FENESTRATION REQUIREMENTS OF TABLE R1102.1.2 BASED ON THE APPLICABLE CLIMATE ZONE SPECIFIED IN CHAPTER 3. FOR ZONE 7 THE U-VALUE IS 0.32 = R-VALUE OF 3.33.

PROVIDE BATTIC DOOR "EZ HATCH ATTIC ACCESS SCUTTLE DOOR" R-42 FOR 22" X 30" OPENING OR "ATTIC PULL DOWN STAIR LADDER COVER" R-50 FOR 22" X 54" LADDERS. INSTALL PER MANUFACTURER'S INSTRUCTIONS. (IECC 402.2.3)

FLOOR FRAMING-CAVITY INSULATION SHALL BE INSTALLED TO MAINTAIN PERMANENT CONTACT WITH THE UNDERSIDE OF THE SUBFLOOR DECKING. (N1102.2.8 (R402.2.8))

EXCEPTION: THE FLOOR FRAMING-CAVITY INSULATION SHALL BE PERMITTED TO BE IN CONTACT WITH THE TOPSIDE OF SHEATHING OR CONTINUOUS INSULATION INSTALLED ON THE BOTTOM SIDE OF FLOOR FRAMING WHERE COMBINED WITH INSULATION THAT MEETS OR EXCEEDS THE MINIMUM WOOD FRAME WALL R-VALUE IN TABLE 1102.1.2 AND THAT EXTENDS FROM THE BOTTOM TO THE TOP OF ALL PERIMETER FLOOR FRAMING MEMBERS.

WALLS ASSOCIATED WITH CONDITIONED BASEMENTS SHALL BE INSULATED FROM THE TOP OF THE BASEMENT WALL DOWN TO THE FOOTING. WALLS ASSOCIATED WITH UNCONDITIONED BASEMENTS SHALL MEET THIS REQUIREMENT UNLESS THE FLOOR OVERHEAD IS INSULATED IN ACCORDANCE WITH SECTIONS N1102.1.2 AND N1102.2.8 (N1102.2.9 (R402.2.9))

13. ENERGY EFFICIENCY - CONTINUED

SLAB-ON-GRADE FLOORS WITH A FLOOR SURFACE LESS THAN 12 INCHES (305 MM) BELOW GRADE SHALL BE INSULATED IN ACCORDANCE WITH TABLE N1102.1.2. THE INSULATION SHALL EXTEND DOWNWARD FROM THE TOP OF THE SLAB ON THE OUTSIDE OR INSIDE OF THE FOUNDATION WALL. INSULATION LOCATED BELOW GRADE SHALL BE EXTENDED THE DISTANCE PROVIDED IN TABLE N1102.1.2 BY ANY COMBINATION OF VERTICAL INSULATION, INSULATION EXTENDING UNDER THE SLAB OR INSULATION EXTENDING OUT FROM THE BUILDING. INSULATION EXTENDING AWAY FROM THE BUILDING SHALL BE PROTECTED BY PAVEMENT OR BY NOT LESS THAN 10 INCHES (254 MM) OF SOIL. THE TOP EDGE OF THE INSULATION INSTALLED BETWEEN THE EXTERIOR WALL AND THE EDGE OF THE INTERIOR SLAB SHALL BE PERMITTED TO BE CUT AT A 45-DEGREE (0.79 RAD) ANGLE AWAY FROM THE EXTERIOR WALL. SLAB-EDGE INSULATION IS NOT REQUIRED IN JURISDICTIONS DESIGNATED BY THE BUILDING OFFICIAL AS HAVING A VERY HEAVY TERMITE INFESTATION. (N1102.2.10 (R402.2.10))

AREA WEIGHTED AVERAGE OF FENESTRATION PRODUCTS SHALL BE PERMITTED TO SATISFY THE U-FACTOR REQUIREMENTS. (N1102.3.1 (R402.3.1))

UP TO 15 SQUARE FEET OF GLAZED FENESTRATION SHALL BE EXEMPT FROM THE U-FACTOR REQUIREMENTS IN SECTION 402.1.1. (N1102.3.3 (R402.3.3))

ONE SIDE-HINGED OPAQUE DOOR ASSEMBLY UP TO 24 SQUARE FEET (2.22 M2) IN AREA IS EXEMPTED FROM THE U-FACTOR REQUIREMENT IN SECTION N1102.1.2. THIS EXEMPTION SHALL NOT APPLY TO THE U-FACTOR ALTERNATIVE APPROACH IN SECTION N1102.1.4 AND THE TOTAL UA ALTERNATIVE IN SECTION N1102.1.5. (N1102.3.4 (R402.3.4))

(MANDATORY). THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS N1102.4.1 THROUGH N1102.4.5. (N1102.4 (R402.4))

THE BUILDING THERMAL ENVELOPE SHALL COMPLY WITH SECTIONS N1102.4.1.1 AND N1102.4.1.2. THE SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION. (N1102.4.1 (R402.4.1))

THE COMPONENTS OF THE BUILDING THERMAL ENVELOPE AS LISTED IN TABLE N1102.4.1.1 SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THE CRITERIA LISTED IN TABLE N1102.4.1.1, AS APPLICABLE TO THE METHOD OF CONSTRUCTION. WHERE REQUIRED BY THE BUILDING OFFICIAL, AN APPROVED THIRD PARTY SHALL INSPECT ALL COMPONENTS AND VERIFY COMPLIANCE. (N1102.4.1.1 (R402.4.1.1))

NEW WOOD-BURNING FIREPLACES SHALL HAVE TIGHT-FITTING FLUE DAMPERS OR DOORS, AND OUTDOOR COMBUSTION AIR. WHERE USING TIGHT-FITTING DOORS ON FACTORY-BUILT FIREPLACES LISTED AND LABELED IN ACCORDANCE WITH UL 127, THE DOORS SHALL BE TESTED AND LISTED FOR THE FIREPLACE. WHERE USING TIGHT-FITTING DOORS ON MASONRY FIREPLACES, THE DOORS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 907. (N1102.4.2 (R402.4.2))

WINDOWS, SKYLIGHTS AND SLIDING GLASS DOORS SHALL HAVE AN AIR INFILTRATION RATE OF NO MORE THAN 0.3 CFM PER SQUARE FOOT (1.5 L/S/M2), AND SWINGING DOORS NO MORE THAN 0.5 CFM PER SQUARE FOOT (2.6 L/S/M2), WHEN TESTED ACCORDING TO NFRC 400 OR AAMA/WDMA/CSA 101/I.S.2/A440 BY AN ACCREDITED, INDEPENDENT LABORATORY AND LISTED AND LABELED BY THE MANUFACTURER. (N1102.4.3 (R402.4.3))

EXCEPTION: SITE-BUILT WINDOWS, SKYLIGHTS AND DOORS.

IN CLIMATE ZONES 3 THROUGH 8, WHERE OPEN COMBUSTION AIR DUCTS PROVIDE COMBUSTION AIR TO OPEN COMBUSTION FUEL-BURNING APPLIANCES, THE APPLIANCES AND COMBUSTION AIR OPENING SHALL BE LOCATED OUTSIDE THE BUILDING THERMAL ENVELOPE OR ENCLOSED IN A ROOM, ISOLATED FROM INSIDE THE THERMAL ENVELOPE. SUCH ROOMS SHALL BE SEALED AND INSULATED IN ACCORDANCE WITH THE ENVELOPE REQUIREMENTS OF TABLE N1102.1.2, WHERE THE WALLS, FLOORS AND CEILINGS SHALL MEET A MINIMUM OF THE BASEMENT WALL R-VALUE REQUIREMENT. THE DOOR INTO THE ROOM SHALL BE FULLY GASKETED AND ANY WATER LINES AND DUCTS IN THE ROOM INSULATED IN ACCORDANCE WITH SECTION N1103. THE COMBUSTION AIR DUCT SHALL BE INSULATED WHERE IT PASSES THROUGH CONDITIONED SPACE TO A MINIMUM OF R-8. (N1102.4.4 (R402.4.4))

EXCEPTIONS:
1. DIRECT VENT APPLIANCES WITH BOTH INTAKE AND EXHAUST PIPES INSTALLED CONTINUOUS TO THE OUTSIDE.
2. FIREPLACES AND STOVES COMPLYING WITH SECTIONS N1102.4.2 AND R1006.

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) WHEN TESTED IN ACCORDANCE WITH ASTM E 283 AT A 1.57 PSF (75 PA) PRESSURE DIFFERENTIAL. ALL RECESSED LUMINAIRES SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND THE INTERIOR WALL OR CEILING COVERING. (N1102.4.5 (R402.4.5))

DUCTS AND AIR HANDLERS SHALL BE IN ACCORDANCE WITH SECTIONS N1103.3.1 THROUGH N1103.3.5. (N1103.3 (R403.3))

(PRESCRIPTIVE). SUPPLY AND RETURN DUCTS IN ATTICS SHALL BE INSULATED TO A MINIMUM OF R-8 WHERE 3 INCHES (76.2 MM) IN DIAMETER AND GREATER AND R-6 WHERE LESS THAN 3 INCHES (76.2 MM) IN DIAMETER. SUPPLY AND RETURN DUCTS IN OTHER PORTIONS OF THE BUILDING SHALL BE INSULATED TO A MINIMUM OF R-6 WHERE 3 INCHES (76.2 MM) IN DIAMETER OR GREATER AND R-4.2 WHERE LESS THAN 3 INCHES (76.2 MM) IN DIAMETER. (N1103.3.1 (R403.3.1))

EXCEPTION: DUCTS OR PORTIONS THEREOF LOCATED COMPLETELY INSIDE THE BUILDING THERMAL ENVELOPE.

(MANDATORY). DUCTS, AIR HANDLERS AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH EITHER THE INTERNATIONAL MECHANICAL CODE OR SECTION M1601.4.1 OF THIS CODE, AS APPLICABLE. (N1103.3.2 (R403.3.2))

EXCEPTIONS:
1. AIR-IMPERMEABLE SPRAY FOAM PRODUCTS SHALL BE PERMITTED TO BE APPLIED WITHOUT ADDITIONAL JOINT SEALS.
2. FOR DUCTS HAVING A STATIC PRESSURE CLASSIFICATION OF LESS THAN 2 INCHES OF WATER COLUMN (500 PA), ADDITIONAL CLOSURE SYSTEMS SHALL NOT BE REQUIRED FOR CONTINUOUSLY WELDED JOINTS AND SEAMS, AND LOCKING-TYPE JOINTS AND SEAMS OF OTHER THAN THE SNAP-LOCK AND BUTTON-LOCK TYPES.

AIR HANDLERS SHALL HAVE A MANUFACTURER'S DESIGNATION FOR AN AIR LEAKAGE OF NO MORE THAN 2 PERCENT OF THE DESIGN AIR FLOW RATE WHEN TESTED IN ACCORDANCE WITH ASHRAE 193. (N1103.3.2.1 (R403.3.2.1))

(MANDATORY). DUCTS SHALL BE PRESSURE TESTED TO DETERMINE AIR LEAKAGE BY ONE OF THE FOLLOWING METHODS: (N1103.3.3 (R403.3.3))

1. ROUGH-IN TEST: TOTAL LEAKAGE SHALL BE MEASURED WITH A PRESSURE DIFFERENTIAL OF 0.1 INCH W.G. (25 PA) ACROSS THE SYSTEM, INCLUDING THE MANUFACTURER'S AIR HANDLER ENCLOSURE IF INSTALLED AT THE TIME OF THE TEST. ALL REGISTERS SHALL BE TAPED OR OTHERWISE SEALED DURING THE TEST.

13. ENERGY EFFICIENCY - CONTINUED

2. POSTCONSTRUCTION TEST: TOTAL LEAKAGE SHALL BE MEASURED WITH A PRESSURE DIFFERENTIAL OF 0.1 INCH W.G. (25 PA) ACROSS THE ENTIRE SYSTEM, INCLUDING THE MANUFACTURER'S AIR HANDLER ENCLOSURE. REGISTERS SHALL BE TAPED OR OTHERWISE SEALED DURING THE TEST.

EXCEPTION: A DUCT AIR LEAKAGE TEST SHALL NOT BE REQUIRED WHERE THE DUCTS AND AIR HANDLERS ARE LOCATED ENTIRELY WITHIN THE BUILDING THERMAL ENVELOPE.

A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL.

(PRESCRIPTIVE). THE TOTAL LEAKAGE OF THE DUCTS, WHERE MEASURED IN ACCORDANCE WITH SECTION R403.3.3, SHALL BE AS FOLLOWS: (N1103.3.4 (R403.3.4))

1. ROUGH-IN TEST: THE TOTAL LEAKAGE SHALL BE LESS THAN OR EQUAL TO 4 CUBIC FEET PER MINUTE (113.3 L/MIN) PER 100 SQUARE FEET (9.29 M2) OF CONDITIONED FLOOR AREA WHERE THE AIR HANDLER IS INSTALLED AT THE TIME OF THE TEST. WHERE THE AIR HANDLER IS NOT INSTALLED AT THE TIME OF THE TEST, THE TOTAL LEAKAGE SHALL BE LESS THAN OR EQUAL TO 3 CUBIC FEET PER MINUTE (85 L/MIN) PER 100 SQUARE FEET (9.29 M2) OF CONDITIONED FLOOR AREA.
2. POSTCONSTRUCTION TEST: TOTAL LEAKAGE SHALL BE LESS THAN OR EQUAL TO 4 CUBIC FEET PER MINUTE (113.3 L/MIN) PER 100 SQUARE FEET (9.29 M2) OF CONDITIONED FLOOR AREA.

(MANDATORY). BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS. (N1103.3.5 (R403.3.5))

MECHANICAL SYSTEM PIPING CAPABLE OF CARRYING FLUIDS ABOVE 105 DEGREES F OR BELOW 55 DEGREES F SHALL BE INSULATED TO R-3 MINIMUM. (N1103.4 (IECC 403.3))

(MANDATORY). HEATED WATER CIRCULATION SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION R1103.5.1.1. HEAT TRACE TEMPERATURE MAINTENANCE SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION R1103.5.1.2. AUTOMATIC CONTROLS, TEMPERATURE SENSORS AND PUMPS SHALL BE ACCESSIBLE. MANUAL CONTROLS SHALL BE READILY ACCESSIBLE. (N1103.5.1 (R403.5.1))

HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SIPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NO DEMAND FOR HOT WATER. (N1103.5.1.1 (R403.5.1.1))

ELECTRIC HEAT TRACE SYSTEMS SHALL COMPLY WITH IEEE 515.1 OR UL 515. CONTROLS FOR SUCH SYSTEMS SHALL AUTOMATICALLY ADJUST THE ENERGY INPUT TO THE HEAT TRACING TO MAINTAIN THE DESIRED WATER TEMPERATURE IN THE PIPING IN ACCORDANCE WITH THE TIMES WHEN HEATED WATER IS USED IN THE OCCUPANCY. (N1103.5.1.2 (R403.5.1.2))

A WATER DISTRIBUTION SYSTEM HAVING ONE OR MORE RECIRCULATION PUMPS THAT PUMP WATER FROM A HEATED WATER SUPPLY PIPE BACK TO THE HEATED WATER SOURCE THROUGH A COLD WATER SUPPLY PIPE SHALL BE A DEMAND RECIRCULATION WATER SYSTEM. PUMPS SHALL HAVE CONTROLS THAT COMPLY WITH BOTH OF THE FOLLOWING: (N1103.5.2 (R403.5.2))

1. THE CONTROL SHALL START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENCE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE.
2. THE CONTROL SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO 104ºF (40ºC).

(PRESCRIPTIVE). INSULATION FOR HOT WATER PIPE WITH A MINIMUM THERMAL RESISTANCE (R-VALUE) OF R-3 SHALL BE APPLIED TO THE FOLLOWING: (N1103.5.3 (R403.5.3))

1. PIPING 3/4 INCH (19 MM) AND LARGER IN NOMINAL DIAMETER.
2. PIPING SERVING MORE THAN ONE DWELLING UNIT.
3. PIPING LOCATED OUTSIDE THE CONDITIONED SPACE.
4. PIPING FROM THE WATER HEATER TO A DISTRIBUTION MANIFOLD.
5. PIPING LOCATED UNDER A FLOOR SLAB.
6. BURIED PIPING.
7. SUPPLY AND RETURN PIPING IN RECIRCULATION SYSTEMS OTHER THAN DEMAND RECIRCULATION SYSTEMS.

(MANDATORY). THE BUILDING SHALL BE PROVIDED WITH VENTILATION THAT MEETS THE REQUIREMENTS OF SECTION M1507 OF THIS CODE OR THE INTERNATIONAL MECHANICAL CODE, AS APPLICABLE, OR WITH OTHER APPROVED MEANS OF VENTILATION. OUTDOOR AIR INTAKES AND EXHAUSTS SHALL HAVE AUTOMATIC OR GRAVITY DAMPERS THAT CLOSE WHEN THE VENTILATION SYSTEM IS NOT OPERATING. (N1103.6 (R403.6))

MECHANICAL VENTILATION SYSTEM FANS SHALL MEET THE EFFICACY REQUIREMENTS OF TABLE N1103.6.1 OF 2.8 CFM/WATT EXCEPT BATH AND UTILITY ROOM FANS OF 1.4 CFM/WATT FOR FANS <90 CFM. (N1103.6.1 (R403.6.1))

EXCEPTION: WHERE MECHANICAL VENTILATION FANS ARE INTEGRAL TO TESTED AND LISTED HVAC EQUIPMENT, THEY SHALL BE POWERED BY AN ELECTRONICALLY COMMUTATED MOTOR.

(MANDATORY). HEATING AND COOLING EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH ACCA MANUAL S BASED ON BUILDING LOADS CALCULATED IN ACCORDANCE WITH ACCA MANUAL J OR OTHER APPROVED HEATING AND COOLING CALCULATION METHODOLOGIES. NEW OR REPLACEMENT HEATING AND COOLING EQUIPMENT SHALL HAVE AN EFFICIENCY RATING EQUAL TO OR GREATER THAN THE MINIMUM REQUIRED BY FEDERAL LAW FOR THE GEOGRAPHIC LOCATION WHERE THE EQUIPMENT IS INSTALLED. (N1103.7 (R403.7))

(MANDATORY). A MINIMUM OF 75% OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH EFFICACY LAMPS AND NOT LESS THAN 75% OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH EFFICACY LAMPS.. (N1104.1(R404.1))

PROVIDE PROGRAMMABLE THERMOSTAT FOR EACH SEPARATE HEATING AND COOLING SYSTEM (N1103.1.2 (R403.1.2))

HOT WATER BOILERS SHALL HAVE AN OUTDOOR SETBACK CONTROL THAT LOWERS THE BOILER WATER TEMPERATURE BASED ON THE OUTDOOR TEMPERATURE (N1103.2 (R403.2))

AS DESIGNED THIS HOUSE WILL COMPLY WITH THE PRESCRIPTIVE PATH, SECTIONS N1101.14-N1104. IF FIELD DECISIONS OR SUBSTITUTIONS ARE MADE RESULTING IN FAILURE TO COMPLY WITH SECTIONS N1101.14-N1104 (PRESCRIPTIVE) THE HOME MUST BE EVALUATED UNDER SECTION N1105, SIMULATED PERFORMANCE ALTERNATIVE PATH (PERFORMANCE) OR SECTION N1106 ENERGY RATING INDEX (COMPLIANCE ALTERNATIVE). A COMPLIANCE REPORT ON THE PROPOSED DESIGN SHALL BE SUBMITTED WITH THE APPLICATION FOR THE BUILDING PERMIT. VERIFICATION OF COMPLIANCE WITH SECTION N1105 OR N1106 SHALL BE COMPETED BY AN APPROVED THIRD PARTY AND THE COMPLIANCE REPORT SHALL BE SUBMITTED WITH THE BUILDING PERMIT APPLICATION.

14. PLUMBING

CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS TO INSTALL ALL PERIMETER STORM DRAINAGE, FLOOR DRAINS, PLUMBING, RELATED FIXTURES, GAS PIPING AND RADON GAS VENT PIPING. ALL WORK SHALL COMPLY WITH IRC PART VI - FUEL GAS, CHAPTER 24 AND PART VII - PLUMBING, CHAPTERS 25 THRU 33, STATE AND LOCAL CODES AND ORDINANCES.

WATER HEATERS SHALL BE LOCATED PER IRC CHAPTER 20. AND SHALL BE INSTALLED IN ACCORDANCE WITH IRC CHAPTERS 25 & 28.
WATER SUPPLY AND DISTRIBUTION SHALL COMPLY WITH IRC CHAPTER 29.
SANITARY DRAINAGE SHALL COMPLY WITH IRC CHAPTER 30.
VENTING SHALL COMPLY WITH IRC CHAPTER 31.
FIXTURE TRAPS SHALL COMPLY WITH IRC CHAPTER 32.
DWELLING FIRE SPRINKLER SYSTEM IF REQUIRED SHALL BE INSTALLED PER CHAPTER 29 SECTION P2904

RCRBD
Record Set

PROVIDE TRUNK AND BRANCH PLUMBING SYSTEM WITH HOT WATER RECIRCULATION LOOP ON RUNS LONGER THAN 30 FEET HORIZONTAL. RECIRCULATION LOOP TO BE DESIGNED FOR GRAVITY FLOW OR PROVIDED WITH A LOW FLOW, HIGH EFFICIENCY, CONTINUOUS DUTY PUMP. OR PROVIDE PARALLEL FLOW (MANIFOLD OR HOME RUN) PIPING SYSTEM USING "PEX" OR APPROVED EQUAL PIPING.

IN BUILDINGS WITH BASMENTS OR SLAB-ON-GRADE CONSTRUCTION WHERE A PASSIVE SUBSLAB DEPRESSURIZATION SYSTEM IS SHOWN ON THE FOUNDATION PLAN, PROVIDE VENT PIPE PER AF103.6.1 OR AF 103.6.2. SEE FIGURE AF102 FOR DETAILS. (AF103.6)

RADON VENT PIPES SHALL BE ACCESSIBLE FOR FUTURE FAN INSTALLATION THROUGH AN ATTIC OR OTHER AREA OUTSIDE THE HABITABLE SPACE. (AF103.8)

EXPOSED OR VISIBLE INTERIOR RADON VENT PIPES SHALL BE IDENTIFIED WITH NOT LESS THAN ONE LABEL ON EACH FLOOR AND IN ACCESSIBLE ATTICS. THE LABEL SHALL READ "RADON REDUCTION SYSTEM". (AF103.9)

WHERE RADON VENT PIPE (VTR) IS PROVIDED, A LOW SONE CONTINUOUS DUTY, CUT IN FAN MAY BE REQUIRED. PROVIDE AMPLE ROOM FOR FAN INSTALLATION & POWER SOURCE PER AF103.12. COORDINATE W/ PLUMBER, MECHANICAL & ELECTRICAL CONTRACTORS.

THE MAXIMUM WATER CONSUMPTION FLOW RATES AND QUANTITIES FOR ALL PLUMBING FIXTURES AND FIXTURE FITTINGS SHALL BE IN ACCORDANCE WITH TABLE P2903.2. HIGH EFFICIENCY TOILETS, WHEN SPECIFIED, SHALL BE DUAL FLUSH OR <1.3 GPF.

A WATER CLOSET LAVATORY OR BIDET SHALL NOT BE SET CLOSER THAN 15" FROM ITS CENTER TO ANY SIDEWALL PARTITION OR VANITY. THE CLEAR SPACE IN FRONT OF THE WATER CLOSET SHALL BE NOT LESS THAN 21" (R307.1 & P2705.1.5). PROVIDE ELONGATED BOWLS UNLESS OTHERWISE NOTED.

SHOWER COMPARTMENTS SHALL HAVE AT LEAST 900 SQUARE INCHES OF INTERIOR CROSS SECTIONAL AREA AND SHALL NOT BE LESS THAN 30" IN MINIMUM DIMENSION. (P2708) SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NON-ABSORBENT SURFACE EXTENDING TO A HEIGHT OF 6'-0" MINIMUM ABOVE THE FLOOR. (R307.2)

PROVIDE CAST-N-PLACE CAST IRON FLOOR DRAINS WITH INTEGRAL SAND TRAP, PIPED @ 1% MINIMUM SLOPE TO DAYLIGHT IN THE GARAGE. DAYLIGHTED END SHALL BE SCREENED AND PROTECTED WITH ROCK RIPRAP. IF EXPANSIVE SOILS ARE PRESENT, DO NOT CONNECT FLOOR DRAIN OUTFALL TO FOUNDATION PERIMETER DRAIN UNTIL 10 FEET AWAY FROM THE FOUNDATION.

PROVIDE FLOOR DRAIN PIPED TO HOUSE SEWER IN ALL MECHANICAL ROOMS CONTAINING BOILERS. DRAIN SHALL BE LOCATED AS NOTED ON PLANS. IF USED AS AN INDIRECT DRAIN RECEPTOR FOR BOILER OR WATER HEATER RELOCATE AS CLOSE AS POSSIBLE TO BOILER OR WATER HEATER.

PROVIDE FLOOR DRAIN PIPED TO HOUSE SEWER IN ALL LAUNDRY ROOM UNLESS WASHING MACHINE IS PLACED IN A WATER TIGHT PAN COMPLYING WITH IRC SECTION P2801.6

WHERE WATER HEATERS OR HOT WATER STORAGE TANKS ARE INSTALLED IN LOCATIONS WHERE LEAKAGE WOULD CAUSE DAMAGE, THE TANK OR WATER HEATER SHALL BE INSTALLED IN A GALVANIZED STEEL PAN PER IRC P2801.6. LISTED PANS SHALL COMPLY WITH CSA LC3. THE PAN SHALL BE DRAINED BY AN INDIRECT WASTE PIPE PER IRC P2801.6.1 AND TERMINATED OVER A SUITABLY LOCATED INDIRECT WASTE RECEPTOR OR EXTENDED TO THE BUILDING EXTERIOR AND TERMINATED BETWEEN 6" AND 24" ABOVE THE ADJACENT GROUND SURFACE PER IRC P2801.6.2.

PROVIDE (2) FROST PROOF HOSE BIBBS AT LOCATIONS NOTED ON THE PLANS.

PROVIDE BARBEQUE GRILL GAS SERVICE LINE WITH SHUT OFF VALVE AT LOCATION NOTED ON THE PLANS.

PROVIDE "WATER BUG" OR OTHER OWNER APPROVED LEAK DETECTOR & SHUT OFF SYSTEM.

APPLIANCES AND EQUIPMENT USED FOR HEATING WATER OR STORING HOT WATER SHALL BE PROTECTED BY A PRV AND TRV OR COMBINATION P/TRV PER IRC SECTION P2803 AND SHALL NOT BE DIRECTLY CONNECTED TO THE DRAINAGE SYSTEM. THE DISCHARGE SHALL BE THROUGH AND AIR GAP TO AN INDIRECT WASTE RECEPTOR OR OTHER APPROVED MEANS (P2803.6.1)

15. MECHANICAL

CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT TO INSTALL VENTILATION, HEATING AND AIR CONDITIONING EQUIPMENT; DUCTING AND ALL RELATED CONTROLS. ALL WORK SHALL COMPLY WITH IRC PART V - MECHANICAL, CHAPTERS 12 THRU 23, STATE AND LOCAL CODES AND ORDINANCES. ALL EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S PRINTED INSTRUCTIONS AND LOCAL CODES AND THE REQUIREMENTS OF IRC CHAPTERS 13 & 14.

THE MECHANICAL SUBCONTRACTORS SHALL BE RESPONSIBLE FOR THE FINAL DESIGN OF THE SYSTEMS AS WELL AS THE EXECUTION OF THE WORK ACCORDING TO ACCEPTED STANDARDS OF ENGINEERING, WORKMANSHIP AND REGULATORY REQUIREMENTS. MECHANICAL CONTRACTORS TO PROVIDE ADDITIONAL DRAWINGS, SPECIFICATIONS AND ENGINEER'S CERTIFICATION AS REQUIRED BY FEDERAL, STATE, OR LOCAL LAWS AND BUILDING DEPARTMENT JURISDICTION.

HEATING AND COOLING EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH SECTION M1401.3, OF THE IRC; ACCA MANUAL J OR OTHER APPROVED METHODOLOGY. (IECC 403.6) MECHANICAL CONTRACTOR TO PROVIDE CALCULATIONS BY DEFERRED SUBMITTAL FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION OF MECHANICAL OR HVAC EQUIPMENT. SEE ATTACHED HEAT LOSS CALCULATIONS.

EXHAUST SYSTEMS SHALL BE INSTALLED PER IRC CHAPTER 15.

DUCT SYSTEMS SERVING HEAT, COOLING AND VENTILATION EQUIPMENT SHALL BE FABRICATED & INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF IRC CHAPTER 16 & ACCA MANUAL D & MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.

SOLID FUEL BURNING APPLIANCES SHALL BE PROVIDED WITH COMBUSTION AIR IN ACCORDANCE WITH THE APPLIANCE MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE REQUIREMENTS FOR COMBUSTION, VENTILATION & DILUTION AIR FOR GAS FIRED APPLIANCES SHALL BE IN ACCORDANCE WITH CHAPTER 24.

FUEL BURNING APPLIANCES SHALL BE VENTED TO THE OUTDOORS IN ACCORDANCE WITH THEIR LISTING AND LABEL AND MANUFACTURER'S INSTALLATION INSTRUCTIONS AND PER IRC CHAPTER 18.

FREE STANDING OR BUILT-IN RANGES SHALL HAVE A VERTICAL CLEARANCE ABOVE THE COOKING TOP OF NOT LESS THAN 30 INCHES. (IRC M1901.1)

BOILERS SHALL BE INSTALLED IN ACCORDANCE WITH IRC CHAPTER 20.
WATER HEATERS SHALL BE INSTALLED IN ACCORDANCE WITH IRC CHAPTER 20.
HYDRONIC PIPING SYSTEMS SHALL BE INSTALLED PER IRC CHAPTER 21.
SOLAR ENERGY SYSTEMS SHALL BE DESIGNED, CONSTRUCTED AND INSTALLED PER IRC CHAPTER 23.
GAS FIRED APPLIANCES SHALL BE VENTED IN ACCORDANCE WITH IRC CHAPTER 24.

(MANDATORY). DUCTS SHALL BE PRESSURE TESTED TO DETERMINE AIR LEAKAGE BY ONE OF THE FOLLOWING METHODS: (N1103.3.3 (R403.3.3))

1. ROUGH-IN TEST: TOTAL LEAKAGE SHALL BE MEASURED WITH A PRESSURE DIFFERENTIAL OF 0.1 INCH W.G. (25 PA) ACROSS THE SYSTEM, INCLUDING THE MANUFACTURER'S AIR HANDLER ENCLOSURE IF INSTALLED AT THE TIME OF THE TEST. ALL REGISTERS SHALL BE TAPED OR OTHERWISE SEALED DURING THE TEST.
2. POSTCONSTRUCTION TEST: TOTAL LEAKAGE SHALL BE MEASURED WITH A PRESSURE DIFFERENTIAL OF 0.1 INCH W.G. (25 PA) ACROSS THE ENTIRE SYSTEM, INCLUDING THE MANUFACTURER'S AIR HANDLER ENCLOSURE. REGISTERS SHALL BE TAPED OR OTHERWISE SEALED DURING THE TEST.

EXCEPTION: A DUCT AIR LEAKAGE TEST SHALL NOT BE REQUIRED WHERE THE DUCTS AND AIR HANDLERS ARE LOCATED ENTIRELY WITHIN THE BUILDING THERMAL ENVELOPE.

SPECIFICATIONS UPDATED TO 2015 IRC

DRAFTING SERVICE, INC.
P.O. BOX 774121
426 OAK STREET
STEAMBOAT SPRINGS, COLORADO
970.879.7929
FAX 970.879.8709
JAKES@SPRINGSIPS.COM

Jake's™

COLORADO REGISTERED
MICHAEL EHRLICH
30669
8-19-2019
PROFESSIONAL ENGINEER
"STRUCTURE ONLY"

SPECIFICATIONS FOR
the STEPHEN MILES
28300 CR 14
ROUTT COUNTY CO 80477

Job #	15014
File	15014G20
Date	15AUG19
Drawn	JMH
Checked	JMH
Rel'd	10MAY16
Rev'd	15AUG19

Sheet Number

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15. MECHANICAL - CONTINUED

THE THERMOSTAT CONTROLLING THE PRIMARY HEATING OR COOLING SYSTEM OF THE DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE TO MAINTAIN DIFFERENT TEMPERATURE SET POINTS AT DIFFERENT TIMES OF THE DAY. THIS THERMOSTAT SHALL INCLUDE THE CAPABILITY TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85° F (29°C). THE THERMOSTAT SHALL INITIALLY BE PROGRAMMED BY THE MANUFACTURER WITH A HEATING TEMPERATURE SET POINT NO HIGHER THAN 70°F (21°C) AND A COOLING TEMPERATURE SET POINT NO LOWER THAN 78°F (26°C). (N1103.1.1 (R403.1.1))

HOT WATER BOILERS THAT SUPPLY HEAT TO THE BUILDING THROUGH ONE- OR TWO-PIPE HEATING SYSTEMS SHALL HAVE AN OUTDOOR SETBACK CONTROL THAT LOWERS THE BOILER WATER TEMPERATURE BASED ON THE OUTDOOR TEMPERATURE. (N1103.2 (R403.2))

THIS STRUCTURE AS PROPOSED WILL UTILIZE A RADIANT FLOOR HYDRONIC SYSTEM WITH A BOILER AND SIDE ARM WATER STORAGE TANK AT THE LOWER LEVEL.

HYDRONIC TUBING WILL BE ATTACHED TO REINFORCEMENT AT ALL SLAB ON GRADE LOCATIONS AND OPTIONALLY, ATTACHED TO THE UNDERSIDE OF WOOD FLOOR SHEATHING BETWEEN JOIST. TUBING SHALL BE CROSS LINKED POLYETHYLENE WITH OXYGEN INHIBITOR SUCH AS PEX OR WIRSBRO.

RADIANT FLOOR HEATING SYSTEMS SHALL HAVE A THERMAL BARRIER IN ACCORDANCE WITH SECTIONS M2103.2.1-4.

SLAB ON GRADE APPLICATIONS SHALL HAVE A MINIMUM OF R-5 INSULATION BELOW THE PIPING (IRC M2103.2.1) AND ASPHALT EXPANSION JOINT MATERIAL OR SIMILAR INSULATING MATERIAL WHERE THE HEATED SLAB MEETS A FOUNDATION WALL OR OTHER CONDUCTIVE SLAB. (IRC M2103.3)

SUSPENDED FLOOR APPLICATIONS SHALL HAVE A MINIMUM OF R-11 INSULATION BELOW THE PIPING (IRC M2103.2)

BOILER WILL BE LPG FUELED AND GRAVITY VENTED THROUGH THE ROOF OR DIRECT VENTED THROUGH THE WALL IN THE LOCATION SHOWN ON THE PLANS. BOILER SHALL BE 90% AFUE MINIMUM. BOILER, SIZING AND TUBING LAYOUT DIAGRAMS ARE TO BE PROVIDED BY THE SUPPLIER AND WILL BE REVIEWED BY JAKE'S DRAFTING SERVICE, INC. AT THE OWNER'S OPTION.

PROVIDE AGA APPROVED, GRAVITY DIRECT VENTED, LPG FUELED MODULATING BOILER AT LOCATION NOTED ON PLANS. MECHANICAL CONTRACTOR TO PROVIDE EQUIPMENT SPECIFICATIONS, MAKE-UP AND COMBUSTION AIR REQUIREMENTS. SYSTEM DESIGNED BY OTHERS.

PROVIDE AGA APPROVED, GRAVITY VENTED, ZERO CLEARANCE FREE STANDING STOVE AT THE LOCATION NOTED ON PLANS. APPLIANCE TO BE RATED AS A FURNACE FOR THERMOSTATIC CONTROL.

EVERY CHIMNEY OR FLUE SHALL BE EQUIPPED WITH AN APPROVED SPARK ARRESTOR.

CHIMNEYS SHALL EXTEND AT LEAST 2' ABOVE THE ROOF AND NOT LESS THAN 2' ABOVE ANY PORTION OF THE BUILDING WITHIN 10 FEET.

FUEL FIRED WATER HEATERS SHALL NOT BE INSTALLED IN A ROOM USED AS A STORAGE CLOSET. WATER HEATERS INSTALLED IN A BEDROOM OR BATHROOM SHALL BE INSTALLED IN A SEALED ENCLOSURE SO THAT COMBUSTION AIR WILL NOT BE TAKEN FROM THE LIVING SPACE. DIRECT VENT WATER HEATERS ARE NOT REQUIRED TO BE INSTALLED WITHIN AN ENCLOSURE. (IRC M2005.2)

WHEN THE WINTER DESIGN TEMPERATURE IS BELOW 60 F EVERY DWELLING UNIT SHALL BE PROVIDED WITH HEATING FACILITIES CAPABLE OF MAINTAINING A ROOM TEMPERATURE OF 68 DEGREES F AT A POINT 3' ABOVE THE FLOOR AND 2' FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS AT THE DESIGN TEMPERATURE. (R303.10)

PROVIDE ENERGY-STAR QUALIFIED KITCHEN RANGE HOOD FAN WITH <4 SONE RATING VENTED DIRECTLY TO THE EXTERIOR.

APPLIANCES HAVING AN IGNITION SOURCE SHALL BE ELEVATED SUCH THAT THE IGNITION SOURCE IS NOT LESS THAN 18" ABOVE THE FLOOR IN GARAGES. ROOMS OR SPACES THAT ARE NOT PART OF THE LIVING SPACE OF A DWELLING UNIT THAT COMMUNICATE WITH A PRIVATE GARAGE THROUGH OPENINGS SHALL BE CONSIDERED PART OF THE GARAGE. (M1307.3)

EXCEPTION: APPLIANCES LISTED AS "FLAMMABLE VAPOR-IGNITION RESISTANT"

APPLIANCES SHALL NOT BE INSTALLED IN A LOCATION SUBJECT TO VEHICLE DAMAGE EXCEPT WHEN PROTECTED BY APPROVED BARRIERS. (M1307.3.1)

OPTIONALLY, PROVIDE 40 GALLON, QUICK RECOVERY LPG FUELED, WATER HEATER AT LOCATION SHOWN ON PLANS DIRECT VENTED THROUGH THE WALL. WATER HEATER SHALL BE 59% EFFICIENT MINIMUM. WATER HEATER TO BE R-15 OR BETTER OR WRAP WATER HEATER WITH R-8 MINIMUM INSULATION BLANKET.

THIS BUILDING IS REQUIRED TO HAVE A WHOLE HOUSE VENTILATION SYSTEM PER M1507.3. THE SYSTEM SHALL CONSIST OF ONE OR MORE SUPPLY OR EXHAUST FANS OR A COMBINATION OF SUCH & ASSOCIATED DUCTS & CONTROLS. LOCAL EXHAUST OR SUPPLY FANS ARE PERMITTED TO SERVE SUCH A SYSTEM OUT DOOR AIR DUCTS CONNECTED TO THE RETURN SIDE OF AN AIR HANDLER SHALL BE CONSIDERED AS PROVIDING SUPPLY VENTILATION. SYSTEM SHALL BE PROVIDED WITH CONTROLS THAT ENABLE MANUAL OVERRIDE. SYSTEM SHALL PROVIDE OUTDOOR AIR AT A CONTINUOUS RATE PER TABLE M1507.3.3(1) AND INTERMITTENTLY WITH SIZED PER TABLE M1503.3(2). DO NOT SUPPLY ONLY SYSTEM AS THEY PRESSURIZE THE HOUSE, POTENTIALLY DRIVING MOISTURE INTO WALLS. EXHAUST ONLY SYSTEMS DEPRESSURIZE THE HOUSE DRAWING POLLUTANTS ALONG W/ FRESH AIR INTO THE HOUSE. POLLUTANTS MY BE RADON & MOLD FROM CRAWLSPACES OR BASEMENTS, DUST FROM ATTIC FUMES FROM AN ATTACHED GARAGE OR FLUE GASSES FROM FIREPLACE OR GRAVITY VENTED WATER HEATER OR FURNACES.

OPTIONALLY, PROVIDE HEAT RECOVERY VENTILATOR OR ENERGY RECOVERY VENTILATOR AT LOCATION SHOWN ON PLANS. DUCT ALL BATH AND LAUNDRY ROOM FANS THROUGH THE HRV. DO NOT CONNECT RANGE HOOD OR DOWNDRAFT RANGE THROUGH HRV. HRV TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND LOCAL CODES (M1507.3)

DECORATIVE SHROUDS SHALL NOT BE INSTALLED AT THE TERMINATION OF VENTS EXCEPT WHERE SUCH SHROUDS ARE LISTED AND LABELED FOR USE WITH THE SPECIFIC VENTING SYSTEM AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. (IRC M1804.2.2) OR AS APPROVED BY THE RCRBD.

16. ELECTRICAL

CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT TO INSTALL ALL WIRING AND RELATED FIXTURES. ALL WORK SHALL COMPLY WITH IRC PART VIII - ELECTRICAL, CHAPTERS 33 THRU 41 OF THE 2018 IRC, THE 2017 NEC, STATE AND LOCAL CODES AND ORDINANCES.

THE ELECTRICAL SUBCONTRACTORS SHALL BE RESPONSIBLE FOR THE FINAL DESIGN OF THE SYSTEMS AS WELL AS THE EXECUTION OF THE WORK ACCORDING TO ACCEPTED STANDARDS OF ENGINEERING, WORKMANSHIP AND REGULATORY REQUIREMENTS. ELECTRICAL CONTRACTORS TO PROVIDE ADDITIONAL DRAWINGS, SPECIFICATIONS AND ENGINEERS CERTIFICATION AS REQUIRED BY FEDERAL, STATE, OR LOCAL LAWS AND BUILDING DEPARTMENT JURISDICTION.

VERIFY ADEQUATE CAPACITY AND SERVICABILITY OF THE EXISTING SYSTEM, R&R AS REQUIRED OR PROVIDE 200 AMP PEDESTAL PER DS-4.1.2.MP AT LOCATION NOTED ON THE SITE PLAN OR PER YVEA "REDLINED" LOCATION. PROVIDE 3"SCHEDULE 80 PVC ABOVE GRADE AND SCH 40 PVC BELOW GRADE. CONDUIT TO BE BEDDED WITH 2" MINIMUM CLEAN DIRT OR SAND AND COVERED WITH 4" OF THE SAME MATERIAL. MINIMUM BURY IS 3' PROVIDE ELECTRICAL WARNING TAPE 12" ABOVE THE CONDUIT.

PROVIDE CONCRETE ENCASED ELECTRODE (UFER GROUND) PER IRC SECTION E3608.1.2.

PROVIDE 42 CIRCUIT SERVICE PANEL (OVERCURRENT DEVICE) WITH DISCONNECT, AT THE LOCATION NOTED ON PLANS. PROVIDE 50 AMP, 12 CIRCUIT SUB-PANEL WITH DISCONNECT, SERVICED FROM THE EXISTING HOUSE AT THE LOCATION NOTED ON THE PLANS. SERVICE PANELS SHALL NOT BE LOCATED IN THE VICINITY OF EASILY IGNITABLE MATERIALS, SUCH AS CLOTHES CLOSETS OR IN BATHROOMS. (E3705.7) SERVICE CONDUCTORS AND EQUIPMENT TO BE SIZED PER IRC CHAPTER 36.

A MINIMUM OF (2) 20 AMP BRANCH CIRCUITS SHALL BE PROVIDED TO SERVE RECEPTACLES LOCATED IN THE BAR AREA. THE KITCHEN COUNTER TOP RECEPTACLES SHALL BE SERVED BY NOT LESS THAN (2) 20 AMP SMALL APPLIANCE BRANCH CIRCUITS. (E3703.2)

A MINIMUM OF (1) 20 AMP BRANCH CIRCUIT SHALL BE PROVIDED TO SERVE RECEPTACLES LOCATED IN THE BATHROOM AND SHALL SERVE ONLY RECEPTACLE OUTLETS LOCATED IN THE BATHROOM. (E3703.4)

A MINIMUM OF (1) 20 AMP BRANCH CIRCUIT SHALL BE PROVIDED TO SERVE RECEPTACLES LOCATED IN THE GARAGE AND SHALL SERVE ONLY RECEPTACLE OUTLETS LOCATED IN THE GARAGE. (E3901.9)

RECEPTACLES ABOVE COUNTERS IN KITCHEN AND OTHER SIMILAR AREAS SHALL BE SPACED NOT MORE THAN 4 FEET OC AND WITHIN 2 FEET OF EACH END, INCLUDING ISLANDS AND PENINSULAR. PROVIDE A MINIMUM OF (1) RECEPTACLE PER COUNTER SPACE OF 12 INCHES OR GREATER. (E3901.4)

PROVIDE AT LEAST (1) RECEPTACLE OUTLET IN WEATHER PROOF HOUSING, ACCESSIBLE AT GRADE LEVEL AND NOT MORE THAN 6'-6" ABOVE GRADE AT THE FRONT AND AT THE BACK OF EACH DWELLING. (E3901.7)

ALL 125 VOLT, SINGLE PHASE RECEPTACLES INSTALLED IN BATHROOMS, GARAGES, OUTDOORS, KITCHEN COUNTERTOP SURFACES, DISHWASHER AND WITHIN 6' OF LAUNDRY, UTILITY OR BAR SINKS, (EXCEPT DEDICATED USES) SHALL BE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTED FOR PERSONNEL. (E3902.1-9) RECEPTACLES IN GARAGES TO BE MOUNTED 42" MINIMUM ABOVE FINISHED FLOOR.

ALL BRANCH CIRCUITS INSTALLED IN KITCHEN, FAMILY, DINING, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AND SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A COMBINATION TYPE ARC-FAULT CIRCUIT INTERRUPTER. (E3902.16) BATHS AND GARAGES ARE EXEMPT FROM THIS REQUIREMENT.

LUMINAIRE INSTALLED IN CLOTHES CLOSETS SHALL BE LIMITED TO SURFACE MOUNTED OR RECESSED INCANDESCENT OR LED LUMINAIRES WITH COMPLETELY ENCLOSED LIGHT SOURCES, SURFACE MOUNTED OR RECESSED FLUORESCENT LUMINAIRES AND SURFACE MOUNTED FLUORESCENT OR LED LUMINAIRES IDENTIFIED A SUITABLE FOR INSTALLATION WITHIN THE STORAGE AREA. SURFACE MOUNTED INCANDESCENT OR LED LUMINAIRES SHALL BE MOUNTED ON THE WALL ABOVE THE DOOR OR ON THE CEILING PROVIDED THERE IS A MINIMUM CLEARANCE OF 12 INCHES BETWEEN THE FIXTURE AN THE NEAREST POINT OF A STORAGE SPACE. RECESSED INCANDESCENT, LED OR FLUORESCENT LUMINAIRES SHALL BE INSTALLED IN THE WALL OR ON THE CEILING PROVIDED THERE IS A MINIMUM OF 6 INCHES BETWEEN THE FIXTURE AND THE NEAREST POINT OF A STORAGE AREA. INCANDESCENT FIXTURES WITH OPEN OR PARTIALLY ENCLOSED LAMPS, PENDANT FIXTURES AND LAMP HOLDERS ARE NOT PERMITTED. (E4003.12)

PROVIDE DEDICATED 15 AMP CIRCUIT FOR REFRIGERATORS AND FREEZERS.

SEE DESIGN DRAWINGS BY OTHERS FOR ELECTRIC BASEBOARD SIZES AND LOCATIONS.

PROVIDE 40 GALLON QUICK RECOVERY ELECTRIC WATER HEATER AT LOCATION SHOWN ON PLANS. MINIMUM EFFICIENCY OF ELECTRIC WATER HEATER IS 0.67% (<55 GALLON) WRAP WATER HEATER WITH R7 (MIN) INSULATION BLANKET.

EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED AT THE TOP LANDING OF THE STAIRWAY (R303.8)(E3903.3.1)

SMOKE ALARMS SHALL COMPLY WITH NFPA 72 AND SECTION R314. (R314.1)

SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 217. COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 217 AND UL 2034. (R314.1.1)

SMOKE ALARMS SHALL BE PROVIDED IN ACCORDANCE WITH THIS SECTION. (R314.2)

SMOKE ALARMS SHALL BE PROVIDED IN DWELLING UNITS. (R314.2.1)

WHERE ALTERATIONS OR ADDITIONS REQUIRING A PERMIT OCCUR, OR WHERE ONE OR MORE SLEEPING ROOMS ARE ADDED OR CREATED IN EXISTING DWELLINGS, THE INDIVIDUAL DWELLING UNIT SHALL BE EQUIPPED WITH SMOKE ALARMS LOCATED AS REQUIRED FOR NEW DWELLINGS. (R314.2.2)

EXCEPTIONS:
1. WORK INVOLVING THE EXTERIOR SURFACES OF DWELLINGS, SUCH AS THE REPLACEMENT OF ROOFING OR SIDING, THE ADDITION OR REPLACEMENT OF WINDOWS OR DOORS, OR THE ADDITION OF A PORCH OR DECK, ARE EXEMPT FROM THE REQUIREMENTS OF THIS SECTION.
2. INSTALLATION, ALTERATION OR REPAIRS OF PLUMBING OR MECHANICAL SYSTEMS ARE EXEMPT FROM THE REQUIREMENTS OF THIS SECTION.

SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS: (R314.3)

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 AND NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS. IN DWELLINGS OR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN THE ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL SUFFICE FOR THE ADJACENT LOWER LEVEL PROVIDED THAT THE LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW THE UPPER LEVEL.
4. SMOKE ALARMS SHALL BE INSTALLED NOT LESS THAN 3 FEET (914 MM) HORIZONTALLY FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAINS A BATHTUB OR SHOWER UNLESS THIS WOULD PREVENT PLACEMENT OF A SMOKE ALARM REQUIRED BY SECTION R314.3.

SMOKE ALARMS SHALL NOT BE INSTALLED IN THE FOLLOWING LOCATIONS UNLESS THIS WOULD PREVENT PLACEMENT OF A SMOKE ALARM IN A LOCATION REQUIRED BY SECTION R314.3. (R314.3.1)

1. IONIZATION SMOKE ALARMS SHALL NOT BE INSTALLED LESS THAN 20 FEET (6096 MM) HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.
2. IONIZATION SMOKE ALARMS WITH AN ALARM-SILENCING SWITCH SHALL NOT BE INSTALLED LESS THAN 10 FEET (3048 MM) HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.
3. PHOTOELECTRIC SMOKE ALARMS SHALL NOT BE INSTALLED LESS THAN 6 FEET (1828 MM) HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.

WHERE MORE THAN ONE 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 ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL DWELLING UNIT. PHYSICAL INTERCONNECTION OF SMOKE ALARMS SHALL NOT BE REQUIRED WHERE LISTED WIRELESS ALARMS ARE INSTALLED AND ALL ALARMS SOUND UPON ACTIVATION OF ONE ALARM. (R314.4)

COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL BE PERMITTED TO BE USED IN LIEU OF SMOKE ALARMS. (R314.5)

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. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVERCURRENT PROTECTION. (R314.6)

16. ELECTRICAL - CONTINUED

CARBON MONOXIDE ALARMS SHALL COMPLY WITH SECTION R315. (R315.1)

CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 2034. COMBINATION CARBON MONOXIDE AND SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 2034 AND UL 217. (R315.1.1)

CARBON MONOXIDE ALARMS SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS R315.2.1 AND R315.2.2. (R315.2)

FOR NEW CONSTRUCTION, CARBON MONOXIDE ALARMS SHALL BE PROVIDED IN DWELLING UNITS WHERE EITHER OR BOTH OF THE FOLLOWING CONDITIONS EXIST. (R315.2.1)

1. THE DWELLING UNIT CONTAINS A FUEL-FIRED APPLIANCE.
2. THE DWELLING UNIT HAS AN ATTACHED GARAGE WITH AN OPENING THAT COMMUNICATES WITH THE DWELLING UNIT.

WHERE ALTERATIONS OR ADDITIONS REQUIRING A PERMIT OCCUR, OR WHERE ONE OR MORE SLEEPING ROOMS ARE ADDED OR CREATED IN EXISTING DWELLINGS, THE INDIVIDUAL DWELLING UNIT SHALL BE EQUIPPED WITH CARBON MONOXIDE ALARMS LOCATED AS REQUIRED FOR NEW DWELLINGS. (R315.2.2)

EXCEPTIONS:
1. WORK INVOLVING THE EXTERIOR SURFACES OF DWELLINGS, SUCH AS THE REPLACEMENT OF ROOFING OR SIDING, OR THE ADDITION OR REPLACEMENT OF WINDOWS OR DOORS, OR THE ADDITION OF A PORCH OR DECK, IS EXEMPT FROM THE REQUIREMENTS OF THIS SECTION.
2. INSTALLATION, ALTERATION OR REPAIRS OF PLUMBING OR MECHANICAL SYSTEMS ARE EXEMPT FROM THE REQUIREMENTS OF THIS SECTION.

CARBON MONOXIDE ALARMS IN DWELLING UNITS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS. WHERE A FUEL-BURNING APPLIANCE IS LOCATED WITHIN A BEDROOM OR ITS ATTACHED BATHROOM, A CARBON MONOXIDE ALARM SHALL BE INSTALLED WITHIN THE BEDROOM. (R315.3)

COMBINATION CARBON MONOXIDE AND SMOKE ALARMS SHALL BE PERMITTED TO BE USED IN LIEU OF CARBON MONOXIDE ALARMS. (R315.4)

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. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVERCURRENT PROTECTION. (R315.5)

EXCEPTIONS:
1. CARBON MONOXIDE ALARMS SHALL BE PERMITTED TO BE BATTERY OPERATED WHERE INSTALLED IN BUILDINGS WITHOUT COMMERCIAL POWER.
2. CARBON MONOXIDE ALARMS INSTALLED IN ACCORDANCE WITH SECTION R315.2.2 SHALL BE PERMITTED TO BE BATTERY POWERED.

CARBON MONOXIDE DETECTION SYSTEMS SHALL BE PERMITTED TO BE USED IN LIEU OF CARBON MONOXIDE ALARMS AND SHALL COMPLY WITH SECTIONS R315.6.1 THROUGH R315.6.4. (R315.6)

HOUSEHOLD CARBON MONOXIDE DETECTION SYSTEMS SHALL COMPLY WITH NFPA 720. CARBON MONOXIDE DETECTORS SHALL BE LISTED IN ACCORDANCE WITH UL 2075. (R315.6.1)

CARBON MONOXIDE DETECTORS SHALL BE INSTALLED IN THE LOCATIONS SPECIFIED IN SECTION R315.3. THESE LOCATIONS SUPERSEDE THE LOCATIONS SPECIFIED IN NFPA 720. (R315.6.2)

WHERE A HOUSEHOLD CARBON MONOXIDE DETECTION SYSTEM IS INSTALLED, IT SHALL BECOME A PERMANENT FIXTURE OF THE OCCUPANCY AND OWNED BY THE HOMEOWNER. (R315.6.3)

COMBINATION CARBON MONOXIDE AND SMOKE DETECTORS SHALL BE PERMITTED TO BE INSTALLED IN CARBON MONOXIDE DETECTION SYSTEMS IN LIEU OF CARBON MONOXIDE DETECTORS, PROVIDED THAT THEY ARE LISTED IN ACCORDANCE WITH UL 2075 AND UL 268. (R315.6.4)

EXTERIOR LIGHTING SHALL BE DOWN CAST FIXTURES LIMITED TO 5,500 LUMENS TOTAL. EXTERIOR FLOOD LIGHTS SHALL BE CONTROLLED BY PHOTO SENSOR AND MOTION DETECTOR.

PROVIDE 1"Ø MINIMUM ELECTRICAL CONDUIT FOR FUTURE PHOTOVOLTAIC PANEL INSTALLATION FROM THE ATTIC TO JUNCTION BOX NEAR THE ELECTRICAL PANEL.

SPECIAL NOTICE

ANY DISCREPANCY IN DIMENSIONS AND/OR DRAWINGS AND/OR GRAPHIC REPRESENTATION AND/OR FIELD MEASUREMENTS SHALL BE BROUGHT TO THE ATTENTION OF JAKE'S DRAFTING SERVICE, INC. PRIOR TO THE COMMENCEMENT OF ANY WORK.

ANY DEVIATION FROM THESE PLANS IS EXPRESSLY FORBIDDEN WITHOUT PRIOR WRITTEN NOTIFICATION AND APPROVAL BY JAKE'S DRAFTING SERVICE, INC., AS THE DESIGNER; THE OWNER; THE ENGINEER AND THE GENERAL CONTRACTOR. THESE SPECIFICATIONS ARE GENERAL IN NATURE. SOME DIVISIONS OR SECTIONS MAY NOT BE APPLICABLE.

BUILDERS PLANS

THE CONTRACTOR WARRANTS TO JAKE'S DRAFTING SERVICE, INC. THAT HE POSSESSES THE PARTICULAR COMPETENCE AND SKILL IN CONSTRUCTION NECESSARY TO BUILD THIS PROJECT WITHOUT FULL ENGINEERING AND ARCHITECTURAL SERVICES, AND FOR THE REASON THAT THE CONTRACTOR WISHES TO RELY UPON HIS OWN COMPETENCE. THE CONTRACTOR OR OWNER HAS RESTRICTED JAKE'S DRAFTING SERVICE, INC.'S SCOPE OF PROFESSIONAL SERVICES. IN RELIANCE ON THE CONTRACTOR'S WARRANTY AND AT THE EXPRESS REQUEST OF THE CONTRACTOR OR OWNER, JAKE'S DRAFTING SERVICE, INC. HAS UNDERTAKEN A LIMITED SCOPE OF PROFESSIONAL SERVICES. THE CONSTRUCTION DOCUMENTS PROVIDED BY THE LIMITED SERVICES SHALL BE TERMED "BUILDER'S PLANS" IN RECOGNITION OF THE CONTRACTOR'S SOPHISTICATION. CONSTRUCTION WILL REQUIRE THAT THE CONTRACTOR ADAPT THE "BUILDER'S PLANS" TO THE FIELD CONDITIONS ENCOUNTERED, AND MAKE LOGICAL ADJUSTMENTS IN FIT, FORM, DIMENSION, AND QUANTITY THAT ARE TREATED ONLY GENERALLY BY THE "BUILDER'S PLANS." IN THE EVENT ADDITIONAL DETAILS OR GUIDANCE ARE NEEDED BY THE CONTRACTOR OR OWNER, FOR CONSTRUCTION OF ANY ASPECT OF THE PROJECT, HE SHALL IMMEDIATELY NOTIFY JAKE'S DRAFTING SERVICE, INC. FAILURE TO GIVE A SIMPLE NOTICE SHALL RELIEVE JAKE'S DRAFTING SERVICE, INC. OF RESPONSIBILITY FOR THE CONSEQUENCES.

DUTY OF COOPERATION

RELEASE OF THESE PLANS ANTICIPATES FURTHER COOPERATION AMONG THE OWNER, HIS CONTRACTOR, AND JAKE'S DRAFTING SERVICE, INC. ALTHOUGH JAKE'S DRAFTING SERVICE, INC. AND ITS CONSULTANTS HAVE PERFORMED THEIR SERVICES WITH DUE CARE AND DILIGENCE, THEY CANNOT GUARANTEE PERFECTION. ANY AMBIGUITY OR DISCREPANCY DISCOVERED SHALL BE REPORTED IN WRITING TO JAKE'S DRAFTING SERVICE, INC. IMMEDIATELY AND PRIOR TO THE COMMENCEMENT OF ANY WORK. FAILURE TO COOPERATE BY SIMPLE NOTICE TO JAKE'S DRAFTING SERVICE, INC. SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ALL CONSEQUENCES. CHANGES MADE FROM THE PLANS WITHOUT CONSENT OF JAKE'S DRAFTING SERVICE, INC. ARE UNAUTHORIZED, AND SHALL RELIEVE JAKE'S DRAFTING SERVICE, INC. OF RESPONSIBILITY FOR ALL CONSEQUENCES ARISING OUT OF SUCH CHANGES.

DISCLAIMER

IF JAKE'S DRAFTING SERVICE, INC., AS CLAIMANT OR A DEFENDING PARTY, IS AT ANY TIME A PARTY TO LITIGATION INVOLVING ANY CLAIM RELATED TO WORK CONTAINED IN THESE DRAWINGS, AND SHOULD CLAIMANT NOT PREVAIL SUBSTANTIALLY AGAINST DEFENDING PARTY IN SUCH LITIGATION; ALL LITIGATION EXPENSES, WITNESS FEES, COURT COSTS, AND ATTORNEY'S FEES INCURRED BY THE DEFENDING PARTY IN DEFENDING AGAINST SUCH A CLAIM, SHALL BE PAID BY THE CLAIMANT.

THE DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS PREPARED BY JAKE'S DRAFTING SERVICE, INC., (AS THE DESIGNER,) FOR THIS PROJECT ARE "INSTRUMENTS OF SERVICE", FOR USE SOLELY WITH RESPECT TO THIS PROJECT. JAKE'S DRAFTING SERVICE, INC., (AS THE DESIGNER) SHALL BE DEEMED THE AUTHOR OF THESE DOCUMENTS AND SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT. SUBMISSION OF THESE PLANS AND SPECIFICATIONS, IN PART OR IN WHOLE, BY THE CLIENT OR HIS AGENT FOR BUILDING PERMIT APPLICATION SHALL BE DEEMED AS EVIDENCE OF ACCEPTANCE FOR FINAL PAYMENT OF CONTRACT.

THESE PLANS ARE FOR USE ONLY BY THE CLIENT AND ONLY AT THE SITE IDENTIFIED IN THE TITLE BLOCK.

ANY DUPLICATION, REPRODUCTION OR OTHER USE NOT SPECIFICALLY PERMITTED HEREIN OF THE PLANS, IN PART OR IN WHOLE, IS STRICTLY PROHIBITED UNDER COPYRIGHT LAW.

ENGINEERED DRAWINGS

THE ENGINEERED DESIGN DRAWINGS ARE FOR STRUCTURAL ENGINEERING OF THE HOUSE AND PERMANENT FOUNDATION ONLY. DETACHED RETAINING WALLS ARE NOT PART OF THE ENGINEERED STRUCTURAL DRAWINGS AND ARE BY OTHERS. SLOPE STABILITY, EXCAVATION, SHORING, DRAINAGE, SOILS ISSUES & CONSTRUCTION METHODS ARE NOT INCLUDED AND SHOULD BE ADDRESSED BY AN ENGINEER OR SPECIALIST OF THAT FIELD OF WORK. PROJECT ENGINEERING IS EXCLUDED.

ALL SOILS ISSUES SHOULD BE BROUGHT TO THE ATTENTION OF THE SOILS ENGINEER. THE OWNER OR HIS REPRESENTATIVE ARE RESPONSIBLE FOR FOLLOWING THE SOILS REPORT, CONTACTING THE SOILS ENGINEER AND FOLLOWING THEIR RECOMMENDATIONS AND TO HAVE READ THE SOILS REPORT AND RECOGNIZE THE RISKS AND LIMITATIONS STATED THEREIN.

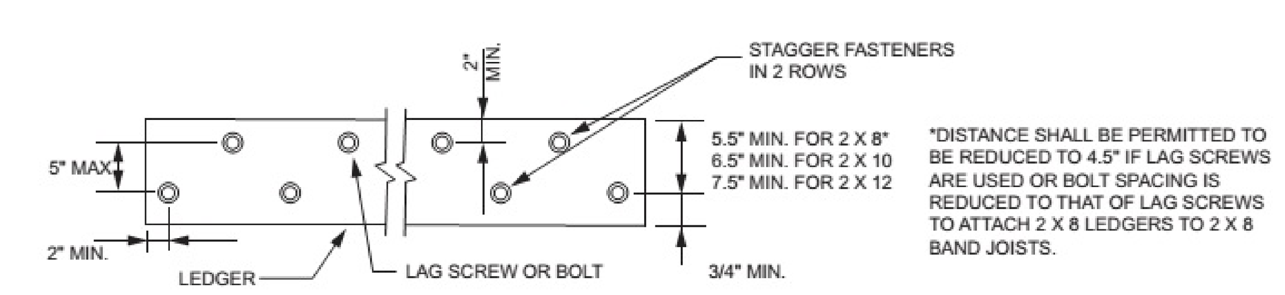
CONTACT THE SOILS ENGINEER AT TIME OF EXCAVATION TO VERIFY THAT ALL STRUCTURAL CONCRETE IS PLACED ON SUITABLE BEARING MATERIAL.

TABLE N1102.4.1.1 (402.4.1.1) AIR BARRIER AND INSULATION INSTALLATION

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA
GENERAL REQUIREMENTS	A CONTINUOUS AIR BARRIER SHALL BE INSTALLED IN THE BUILDING ENVELOPE. THE EXTERIOR THERMAL ENVELOPE CONTAINS A CONTINUOUS AIR BARRIER. BREAKS OR JOINTS IN THE AIR BARRIER SHALL BE SEALED.	AIR-PERMEABLE INSULATION SHALL NOT BE USED AS A SEALING MATERIAL.
CEILING/ATTIC	THE AIR BARRIER IN ANY DROPPED CEILING/SOFFIT SHALL BE ALIGNED WITH THE INSULATION AND ANY GAPS IN THE AIR BARRIER SEALED. ACCESS OPENINGS, DROP DOWN STAIRS OR KNEE WALL DOORS TO UNCONDITIONED ATTIC SPACES SHALL BE SEALED.	THE INSULATION IN ANY DROPPED CEILING/SOFFIT SHALL BE ALIGNED WITH THE AIR BARRIER.
WALLS	THE JUNCTION OF THE FOUNDATION AND SILL PLATE SHALL BE SEALED. THE JUNCTION OF THE TOP PLATE AND THE TOP OF EXTERIOR WALLS SHALL BE SEALED. KNEE WALLS SHALL BE SEALED.	CAVITIES WITHIN CORNERS AND HEADERS OF FRAME WALLS SHALL BE INSULATED BY COMPLETELY FILLING THE CAVITY WITH A MATERIAL HAVING A THERMAL RESISTANCE OF R-3 PER INCH MINIMUM. EXTERIOR THERMAL ENVELOPE INSULATION FOR FRAMED WALLS SHALL BE INSTALLED IN SUBSTANTIAL CONTACT AND CONTINUOUS ALIGNMENT WITH THE AIR BARRIER.
WINDOWS, SKYLIGHTS AND DOORS	THE SPACE BETWEEN WINDOW/DOOR JAMBS AND FRAMING, AND SKYLIGHTS AND FRAMING SHALL BE SEALED.	
RIM JOISTS	RIM JOISTS SHALL INCLUDE THE AIR BARRIER.	RIM JOISTS SHALL BE INSULATED.
FLOORS (INCLUDING ABOVE GARAGE AND CANTILEVERED FLOORS)	THE AIR BARRIER SHALL BE INSTALLED AT ANY EXPOSED EDGE OF INSULATION.	FLOOR FRAMING CAVITY INSULATION SHALL BE INSTALLED TO MAINTAIN PERMANENT CONTACT WITH THE UNDERSIDE OF SUBFLOOR DECKING, OR FLOOR FRAMING CAVITY INSULATION SHALL BE PERMITTED TO BE IN CONTACT WITH THE TOP SIDE OF SHEATHING, OR CONTINUOUS INSULATION INSTALLED ON THE UNDERSIDE OF FLOOR FRAMING; AND EXTENDS FROM THE BOTTOM TO THE TOP OF ALL PERIMETER FLOOR FRAMING MEMBERS.
CRAWL SPACE WALLS	EXPOSED EARTH IN UNVENTED CRAWL SPACES SHALL BE COVERED WITH A CLASS I VAPOR RETARDER WITH OVERLAPPING JOINTS TAPED.	WHERE PROVIDED INSTEAD OF FLOOR INSULATION, INSULATION SHALL BE PERMANENTLY ATTACHED TO THE CRAWL SPACE WALLS.
SHAFTS, PENETRATIONS	DUCT SHAFTS, UTILITY PENETRATIONS, AND FLUE SHAFTS OPENING TO EXTERIOR OR UNCONDITIONED SPACE SHALL BE SEALED.	
NARROW CAVITIES		BATTS IN NARROW CAVITIES SHALL BE CUT TO FIT, OR NARROW CAVITIES SHALL BE FILLED BY INSULATION THAT ON INSTALLATION READILY CONFORMS TO THE AVAILABLE CAVITY SPACE.
GARAGE SEPARATION	AIR SEALING SHALL BE PROVIDED BETWEEN THE GARAGE AND CONDITIONED SPACES.	
RECESSED LIGHTING	RECESSED LIGHT FIXTURES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO THE DRYWALL.	RECESSED LIGHT FIXTURES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE AIR TIGHT AND IC RATED.
PLUMBING AND WIRING		BATT INSULATION SHALL BE CUT NEATLY TO FIT AROUND WIRING AND PLUMBING IN EXTERIOR WALLS, OR INSULATION THAT ON INSTALLATION READILY CONFORMS TO AVAILABLE SPACE SHALL EXTEND BEHIND PIPING AND WIRING.
SHOWER/TUB ON EXTERIOR WALL	THE AIR BARRIER INSTALLED AT EXTERIOR WALLS ADJACENT TO SHOWERS AND TUBS SHALL SEPARATE THEM FROM THE SHOWERS AND TUBS.	EXTERIOR WALLS ADJACENT TO SHOWERS AND TUBS SHALL BE INSULATED.
ELECTRICAL/PHONE BOX ON EXTERIOR WALLS	THE AIR BARRIER SHALL BE INSTALLED BEHIND ELECTRICAL OR COMMUNICATION BOXES OR AIR-SEALED BOXES SHALL BE INSTALLED.	
HVAC REGISTER BOOTS	HVAC REGISTER BOOTS THAT PENETRATE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO THE SUBFLOOR OR DRYWALL.	
CONCEALED SPRINKLERS	WHEN REQUIRED TO BE SEALED, CONCEALED FIRE SPRINKLERS SHALL ONLY BE SEALED IN A MANNER THAT IS RECOMMENDED BY THE MANUFACTURER. CAULKING OR OTHER ADHESIVE SEALANTS SHALL NOT BE USED TO FILL VOIDS BETWEEN FIRE SPRINKLER COVER PLATES AND WALLS OR CEILINGS.	

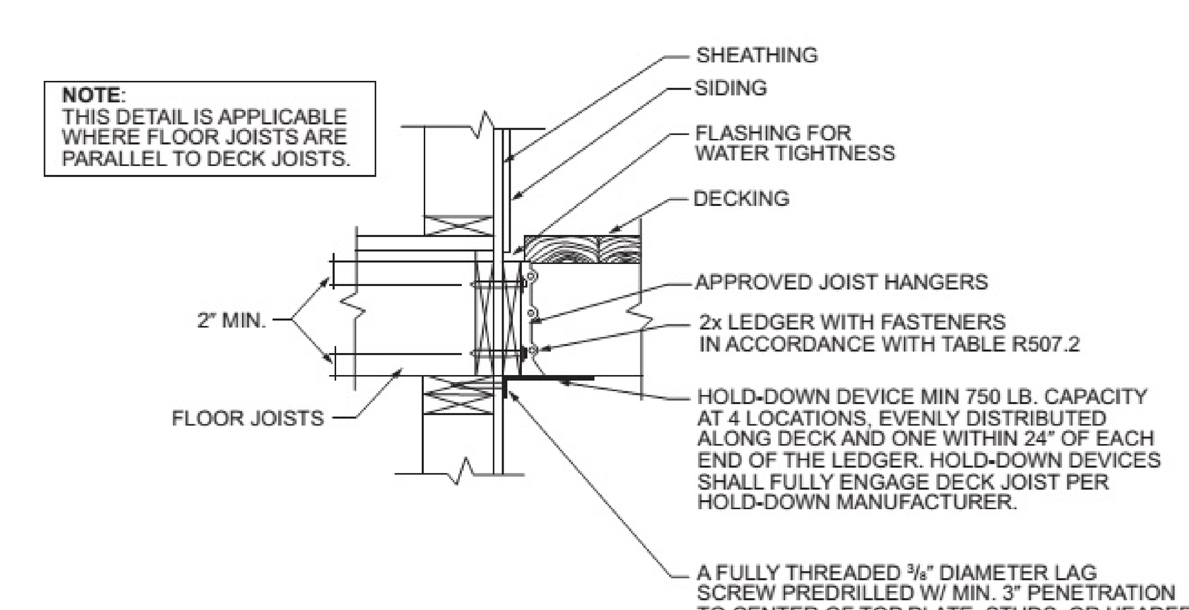
a. In addition, inspection of log walls shall be in accordance with the provisions of ICC 400.

RCRBD
Record Set



For SI: 1 inch = 25.4 mm.

FIGURE R507.2.1(1) PLACEMENT OF LAG SCREWS AND BOLTS IN LEDGERS



For SI: 1 inch = 25.4 mm.

FIGURE R507.2.1(2) PLACEMENT OF LAG SCREWS AND BOLTS IN BAND JOISTS

SPECIFICATIONS UPDATED TO 2015 IRC

TABLE R602.3(1) FASTENING SCHEDULE

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a, b, c]	SPACING AND LOCATION
	Roof		
1	Blocking between ceiling joists or rafters to top plate	4-8d box (2 1/2" × 0.113") or 3-8d common (2 1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Toe nail
2	Ceiling joists to top plate	4-8d box (2 1/2" × 0.113"); or 3-8d common (2 1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Per joist, toe nail
3	Ceiling joist not attached to parallel rafter, laps over partitions [see Sections R802.3.1, R802.3.2 and Table R802.5.1(9)]	4-10d box (3" × 0.128"); or 3-16d common (3 1/2" × 0.162"); or 4-3" × 0.131" nails	Face nail
4	Ceiling joist attached to parallel rafter (heel joint) [see Sections R802.3.1 and R802.3.2 and Table R802.5.1(9)]	Table R802.5.1(9)	Face nail
5	Collar tie to rafter, face nail or 1 1/4" × 20 ga. ridge strap to rafter	4-10d box (3" × 0.128"); or 3-10d common (3" × 0.148"); or 4-3" × 0.131" nails	Face nail each rafter
6	Rafter or roof truss to plate	3-16d box nails (3 1/2" × 0.135"); or 3-10d common nails (3" × 0.148"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss[i]
7	Roof rafters to ridge, valley or hip rafters or roof rafter to minimum 2" ridge beam	4-16d (3 1/2" × 0.135"); or 3-10d common (3 1/2" × 0.148"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	Toe nail
		3-16d box 3 1/2" × 0.135"); or 2-16d common (3 1/2" × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	End nail
	Wall		
8	Stud to stud (not at braced wall panels)	16d common (3 1/2" × 0.162")	24" o.c. face nail
		10d box (3" × 0.128"); or 3" × 0.131" nails	16" o.c. face nail
9	Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d box (3 1/2" × 0.135"); or 3" × 0.131" nails	12" o.c. face nail
		16d common (3 1/2" × 0.162")	16" o.c. face nail
10	Built-up header (2" to 2" header with 1/2" spacer)	16d common (3 1/2" × 0.162")	16" o.c. each edge face nail
		16d box (3 1/2" × 0.135")	12" o.c. each edge face nail
11	Continuous header to stud	5-8d box (2 1/2" × 0.113"); or 4-8d common (2 1/2" × 0.131"); or 4-10d box (3" × 0.128")	Toe nail
12	Top plate to top plate	16d common (3 1/2" × 0.162")	16" o.c. face nail
		10d box (3" × 0.128"); or 3" × 0.131" nails	12" o.c. face nail
13	Double top plate splice for SDCs A-D2 with seismic braced wall line spacing < 25'	8-16d common (3 1/2" × 0.162"); or 12-16d box (3 1/2" × 0.135"); or 12-10d box (3" × 0.128"); or 12-3" × 0.131" nails	Face nail on each side of end joint (minimum 24" lap splice length each side of end joint)
	Double top plate splice SDCs D0, D1, or D2; and braced wall line spacing ≥25'	12-16d (3 1/2" × 0.135")	

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a, b, c]	SPACING AND LOCATION
14	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d common (3 1/2" × 0.162")	16" o.c. face nail
		16d box (3 1/2" × 0.135"); or 3" × 0.131" nails	12" o.c. face nail
15	Bottom plate to joist, rim joist, band joist or blocking (at braced wall panel)	3-16d box (3 1/2" × 0.135"); or 2-16d common (3 1/2" × 0.162"); or 4-3" × 0.131" nails	3 each 16" o.c. face nail 2 each 16" o.c. face nail 4 each 16" o.c. face nail
16	Top or bottom plate to stud	4-8d box (2 1/2" × 0.113"); or 3-16d box (3 1/2" × 0.135"); or 4-8d common (2 1/2" × 0.131"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	Toe nail
		3-16d box (3 1/2" × 0.135"); or 2-16d common (3 1/2" × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	End nail
17	Top plates, laps at corners and intersections	3-10d box (3" × 0.128"); or 2-16d common (3 1/2" × 0.162"); or 3-3" × 0.131" nails	Face nail
18	1" brace to each stud and plate	3-8d box (2 1/2" × 0.113"); or 2-8d common (2 1/2" × 0.131"); or 2-10d box (3" × 0.128"); or 2 staples 1 3/4"	Face nail
19	1" × 6" sheathing to each bearing	3-8d box (2 1/2" × 0.113"); or 2-8d common (2 1/2" × 0.131"); or 2-10d box (3" × 0.128"); or 2 staples, 1" crown, 16 ga., 1 3/4" long	Face nail
20	1" × 8" and wider sheathing to each bearing	3-8d box (2 1/2" × 0.113"); or 3-8d common (2 1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 3 staples, 1" crown, 16 ga., 1 3/4" long Wider than 1" × 8" 4-8d box (2 1/2" × 0.113"); or 3-8d common (2 1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 4 staples, 1" crown, 16 ga., 1 3/4" long	Face nail
	Floor		
21	Joist to sill, top plate or girder	4-8d box (2 1/2" × 0.113"); or 3-8d common (2 1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Toe nail
22	Rim joist, band joist or blocking to sill or top plate (roof applications also)	8d box (2 1/2" × 0.113")	4" o.c. toe nail
		8d common (2 1/2" × 0.131"); or 10d box (3" × 0.128"); or 3" × 0.131" nails	6" o.c. toe nail
23	1" × 6" subfloor or less to each joist	3-8d box (2 1/2" × 0.113"); or 2-8d common (2 1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 2 staples, 1" crown, 16 ga., 1 3/4" long	Face nail

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a, b, c]	SPACING AND LOCATION
	Floor		
24	2" subfloor to joist or girder	3-16d box (3 1/2" × 0.135"); or 2-16d common (3 1/2" × 0.162")	Blind and face nail
25	2" planks (plank & beam—floor & roof)	3-16d box (3 1/2" × 0.135"); or 2-16d common (3 1/2" × 0.162")	At each bearing, face nail
26	Band or rim joist to joist	3-16d common (3 1/2" × 0.162") 4-10 box (3" × 0.128"), or 4-3" × 0.131" nails; or 4-3" × 14 ga. staples, 7/16" crown	End nail
27	Built-up girders and beams, 2-inch lumber layers	20d common (4" × 0.192"); or	Nail each layer as follows: 32" o.c. at top and bottom and staggered.
		10d box (3" × 0.128"); or 3" × 0.131" nails	24" o.c. face nail at top and bottom staggered on opposite sides
		And: 2-20d common (4" × 0.192"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Face nail at ends and at each splice
28	Ledger strip supporting joists or rafters	4-16d box (3 1/2" × 0.135"); or 3-16d common (3 1/2" × 0.162"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	At each joist or rafter, face nail
29	Bridging to joist	2-10d (3" × 0.128")	Each end, toe nail

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a, b, c]	SPACING OF FASTENERS: Edges (inches)[h]	SPACING OF FASTENERS: Intermediate supports[c, e] (inches)
	Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing [see Table R602.3(3) for wood structural panel *exterior* wall sheathing to wall framing]			
30	3/8" – 1/2"	6d common (2" × 0.113") nail (subfloor, wall)[j] 8d common (2 1/2" × 0.131") nail (roof)	6	12[f]
31	19/32" – 1"	8d common nail (2 1/2" × 0.131")	6	12[f]
32	1 1/8" – 1 1/4"	10d common (3" × 0.148") nail; or 8d (2 1/2" × 0.131") deformed nail	6	12
	Other wall sheathing[g]			
33	1/2" structural cellulosic fiberboard sheathing	1 1/2" galvanized roofing nail, 7/16" head diameter, or 1" crown staple 16 ga., 1 1/4" long	3	6
34	25/32" structural cellulosic fiberboard sheathing	1 3/4" galvanized roofing nail, 7/16" head diameter, or 1" crown staple 16 ga., 1 1/4" long	3	6
35	1/2" gypsum sheathing[d]	1 1/2" galvanized roofing nail; staple galvanized, 1 1/2" long; 1 1/4" screws, Type W or S	7	7
36	5/8" gypsum sheathing[d]	1 3/4" galvanized roofing nail; staple galvanized, 1 5/8" long; 1 5/8" screws, Type W or S	7	7
	Wood structural panels, combination subfloor underlayment to framing			
37	3/4" and less	6d deformed (2" × 0.120") nail; or 8d common (2 1/2" × 0.131") nail	6	12
38	7/8" – 1"	8d common (2 1/2" × 0.131") nail; or 8d deformed (2 1/2" × 0.120") nail	6	12
39	1 1/8" – 1 1/4"	10d common (3" × 0.148") nail; or 8d deformed (2 1/2" × 0.120") nail	6	12

FOR SI: 1 INCH = 25.4 MM, 1 FOOT = 304.8 MM, 1 MILE PER HOUR = 0.447 M/S; 1 KSI = 6.895 MPA.
A. NAILS ARE SMOOTH-COMMON, BOX OR DEFORMED SHANKS EXCEPT WHERE OTHERWISE STATED. NAILS USED FOR FRAMING AND SHEATHING CONNECTIONS SHALL HAVE MINIMUM AVERAGE BENDING YIELD STRENGTHS AS SHOWN: 80 KSI FOR SHANK DIAMETER OF 0.192 INCH (20D COMMON NAIL), 90 KSI FOR SHANK DIAMETERS LARGER THAN 0.142 INCH BUT NOT LARGER THAN 0.177 INCH, AND 100 KSI FOR SHANK DIAMETERS OF 0.142 INCH OR LESS.
B. STAPLES ARE 16 GAGE WIRE AND HAVE A MINIMUM 7/16-INCH ON DIAMETER CROWN WIDTH.
C. NAILS SHALL BE SPACED AT NOT MORE THAN 6 INCHES ON CENTER AT ALL SUPPORTS WHERE SPANS ARE 48 INCHES OR GREATER.
D. FOUR-FOOT BY 8-FOOT OR 4-FOOT BY 9-FOOT PANELS SHALL BE APPLIED VERTICALLY.
E. SPACING OF FASTENERS NOT INCLUDED IN THIS TABLE SHALL BE BASED ON TABLE R602.3(2).
F. WHERE THE ULTIMATE DESIGN WIND SPEED IS 130 MPH OR LESS, NAILS FOR ATTACHING WOOD STRUCTURAL PANEL ROOF SHEATHING TO GABLE END WALL FRAMING SHALL BE SPACED 6 INCHES ON CENTER. WHERE THE ULTIMATE DESIGN WIND SPEED IS GREATER THAN 130 MPH, NAILS FOR ATTACHING PANEL ROOF SHEATHING TO INTERMEDIATE SUPPORTS SHALL BE SPACED 6 INCHES ON CENTER FOR MINIMUM 48-INCH DISTANCE FROM RIDGES, EAVES AND GABLE END WALLS; AND 4 INCHES ON CENTER TO GABLE END WALL FRAMING.
G. GYPSUM SHEATHING SHALL CONFORM TO ASTM C 1396 AND SHALL BE INSTALLED IN ACCORDANCE WITH GA 253. FIBERBOARD SHEATHING SHALL CONFORM TO ASTM C 208.
H. SPACING OF FASTENERS ON FLOOR SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND REQUIRED BLOCKING AND AT FLOOR PERIMETERS ONLY. SPACING OF FASTENERS ON ROOF SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND REQUIRED BLOCKING. BLOCKING OF ROOF OR FLOOR SHEATHING PANEL EDGES PERPENDICULAR TO THE FRAMING MEMBERS NEED NOT BE PROVIDED EXCEPT AS REQUIRED BY OTHER PROVISIONS OF THIS CODE. FLOOR PERIMETER SHALL BE SUPPORTED BY FRAMING MEMBERS OR SOLID BLOCKING.
I. WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE, PROVIDE TWO TOE NAILS ON ONE SIDE OF THE RAFTER AND TOE NAILS FROM THE CEILING JOIST TO TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE. THE TOE NAIL ON THE OPPOSITE SIDE OF THE RAFTER SHALL NOT BE REQUIRED.

DRAFTING SERVICE, INC.
P.O. BOX 774121
426 OAK STREET
STEAMBOAT SPRINGS, COLORADO
970.879.7929
FAX 970.879.8709
JAKES@SPRINGSIPS.COM

COLORADO REGISTERED
MICHAEL EHRLICH
30669
8-19-2019
PROFESSIONAL ENGINEER
"STRUCTURE ONLY"

SPECIFICATIONS FOR
the STEPHEN MILES
28300 CR 14
ROUTT COUNTY CO 80477

Job #	15014
File	15014G30
Date	15AUG19
Drawn	JMH
Checked	JMH
Rel'd	10MAY16
Rev'd	15AUG19

Sheet Number

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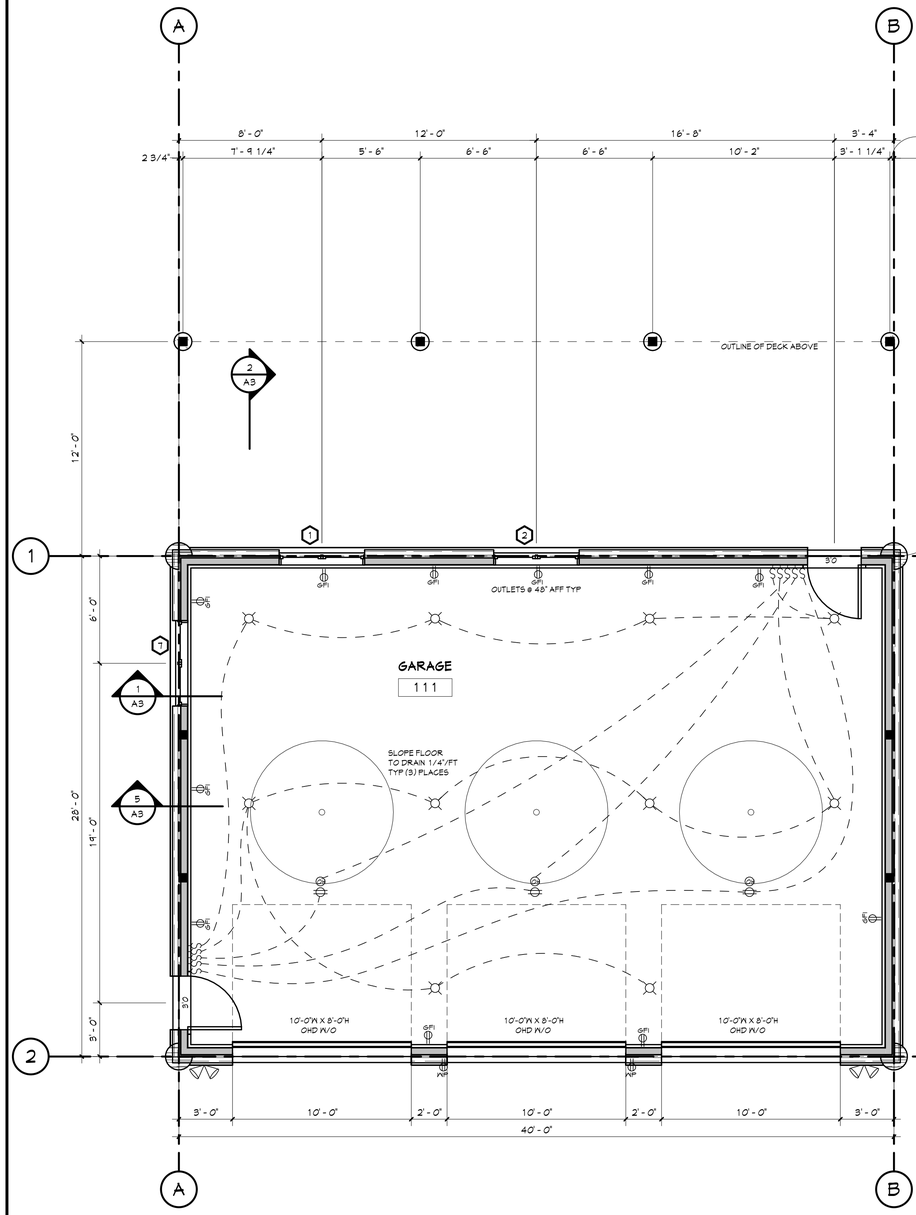
WINDOW SCHEDULE

No.	LEVEL	MODEL No.	COUNT	ROUGH WIDTH	ROUGH HEIGHT	HEAD HEIGHT	U-VALUE	GLAZING AREA-SF	VENTING AREA-SF	AREA
1	TOS	CG2848-2	1	4' - 9 7/8"	4' - 0 1/2"	8' - 0 1/2"	.30	13.6	13.8	19.49 SF
2	TOS	CG2848-2	1	4' - 9 7/8"	4' - 0 1/2"	8' - 0 1/2"	.30	13.6	13.8	19.49 SF
7	TOS	CG2848-2	1	4' - 9 7/8"	4' - 0 1/2"	8' - 0 1/2"	.30	13.6	13.8	19.49 SF
8	UPPER LEVEL	AG3624-11	1	3' - 0 1/2"	2' - 0 1/2"	6' - 11"	.30	3.9	3.8	6.21 SF
9	UPPER LEVEL	CG2848-2	1	4' - 9 7/8"	4' - 0 1/2"	6' - 11"	.29	13.6	13.8	19.49 SF
10	UPPER LEVEL	CG2836-2	1	4' - 9 7/8"	3' - 1 3/16"	6' - 11"	.30	10	10.2	14.95 SF
11	UPPER LEVEL	CF5D12070-4	1	12' - 0 3/4"	6' - 11"	6' - 11"	.29	63.1	37.4	83.43 SF
Grand total: 7								131.4 SF	106.6 SF	182.56 SF

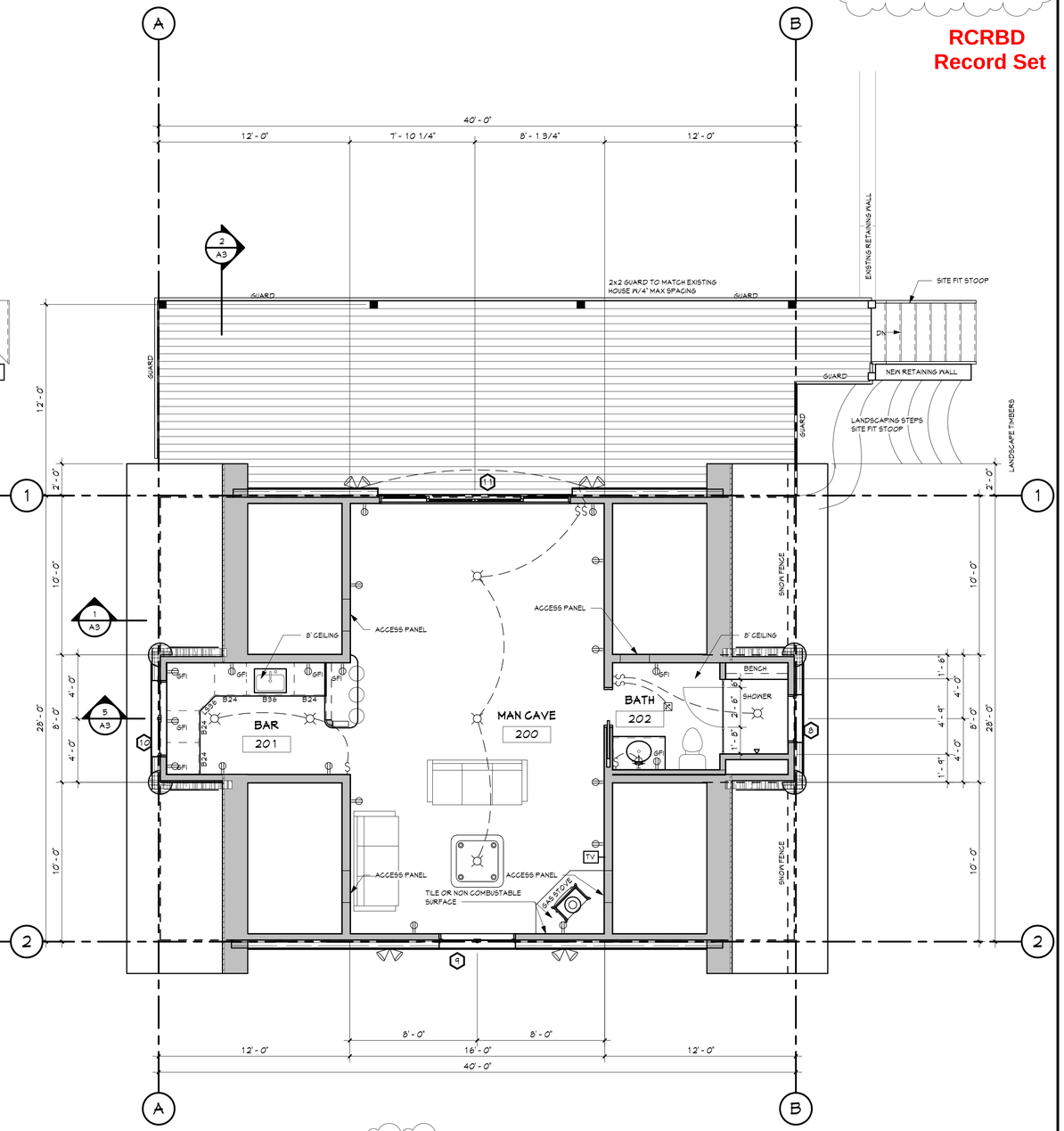
NOTES:
ALL WINDOWS & DOORS ARE SEMCO, SEMIGLAD, 3/4"& NO GRILLS IN AIRSPACE.
LOW E-366/ EA(I-84) 3/4MM AIR GLAZING. OPTIGNALLY TRIPLE PANE WINDOWS MAY BE SUBSTITUTED-SEE ATTACHED WINDOW SCHEDULE
ALL OPERABLE WINDOWS & DOORS TO BE SUPPLIED W/ SCREENS
CLADDING COLOR PER OWNR
U-VALUES NOTED ARE MAXIMUM, ACTUAL VALUES VARY BETWEEN 0.21-0.30
ITEMS 4,5,6 DELETED
ITEM 8 REVISED FROM CG2848-2 TO AG3624-11
ITEM 11 ADDED

CONSTRUCTION TYPE :	VB
OCCUPANCY :	R3, U1
BUILDING AREAS	
LOWER LEVEL FINISHED :	SQ FT
MAIN LEVEL FINISHED :	SQ FT
UPPER LEVEL FINISHED :	565 SQ FT PERMITTED 624 ACTUAL
UNFINISHED AREA :	SQ FT
TOTAL :	SQ FT
GARAGE :	624 SQ FT PERMITTED 1140 ACTUAL
CARPORT :	SQ FT
DECKS :	508 SQ FT
PORCHES :	SQ FT

RCRBD
Record Set



4 FLOOR PLAN (REVISED)
1/4" = 1'-0"



5 UPPER LEVEL FLOOR PLAN (WAS UNFINISHED)
1/4" = 1'-0"

ALL FRAMED SURFACES THIS LEVEL TO BE 5/8" TYPE 'X' GYPSUM

DRAFTING SERVICE, INC.
P O BOX 774121
426 OAK STREET
STEAMBOAT SPRINGS, COLORADO
970.879.1929
FAX 970.879.8709
JAKES@SPRINGSIPS.COM

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FLOOR PLAN & LEGENDS FOR
the STEPHEN MILES
28300 CR 14
ROUTT COUNTY CO 80477
OWNER/ CONTRACTOR 312-961-3392

Job #	15014
File	15014A1
Date	15AUG19
Drawn	VMM
Checked	JMH
Rel'd	10MAY16
Rev'd	15AUG19

Sheet Number
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SHEET 5 OF 10

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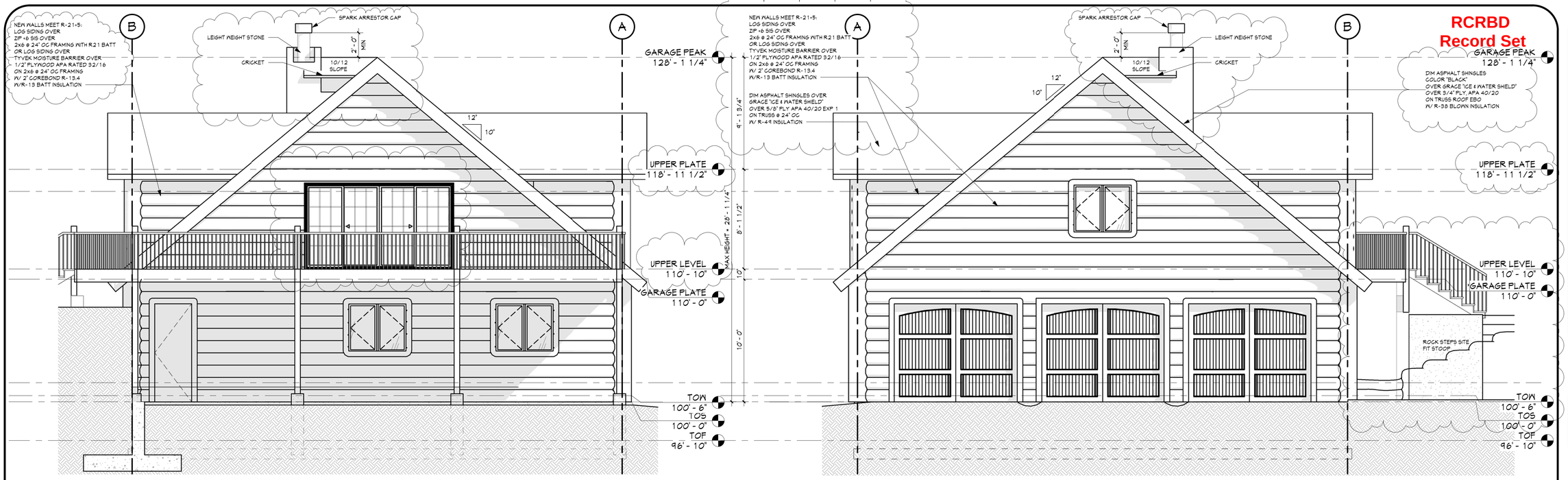

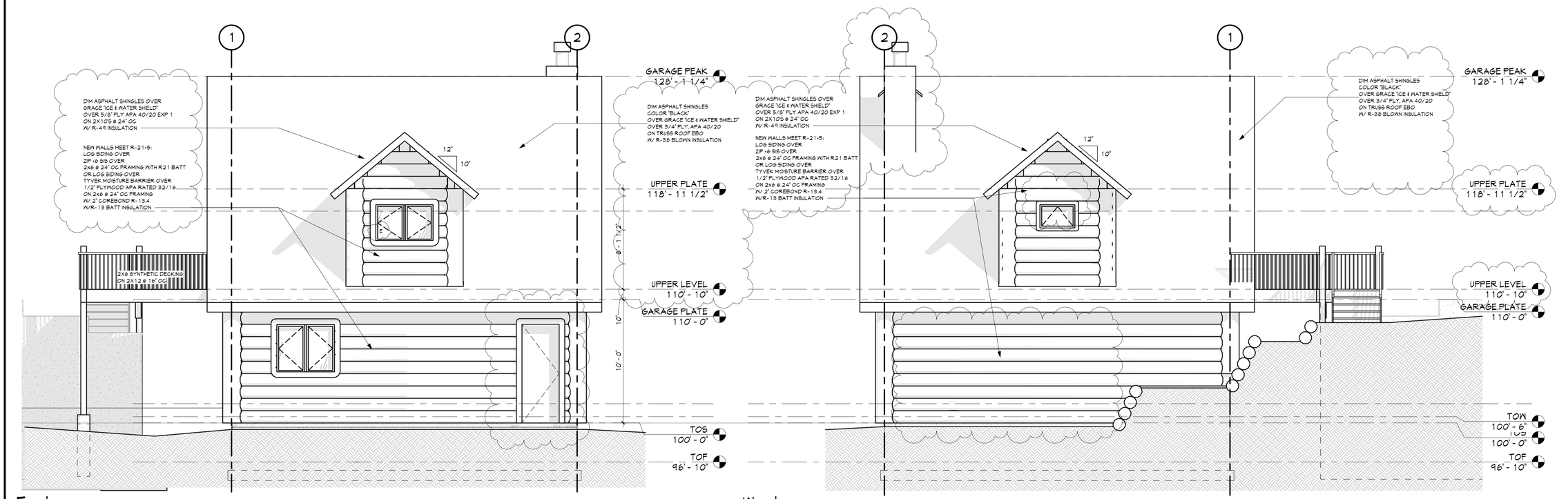

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DRAFTING SERVICE, INC.
P.O. BOX 774121
426 OAK STREET
STEAMBOAT SPRINGS, COLORADO
970.879.1929
FAX 970.879.8709
JAKES@SPRINGSIPS.COM

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ELEVATIONS FOR
the STEPHEN MILES
28300 CR 14
ROUTT COUNTY CO 80477
OWNER/CONTRACTOR 312-961-3392

Job #	15014
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Sheet Number
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SHEET 6 OF 10

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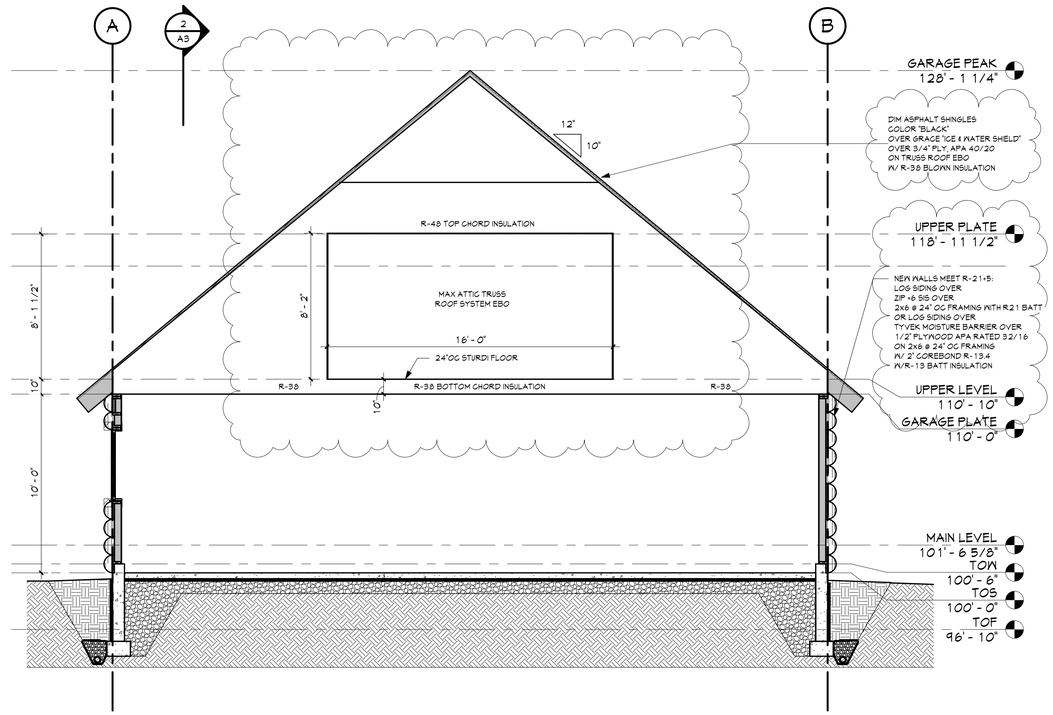
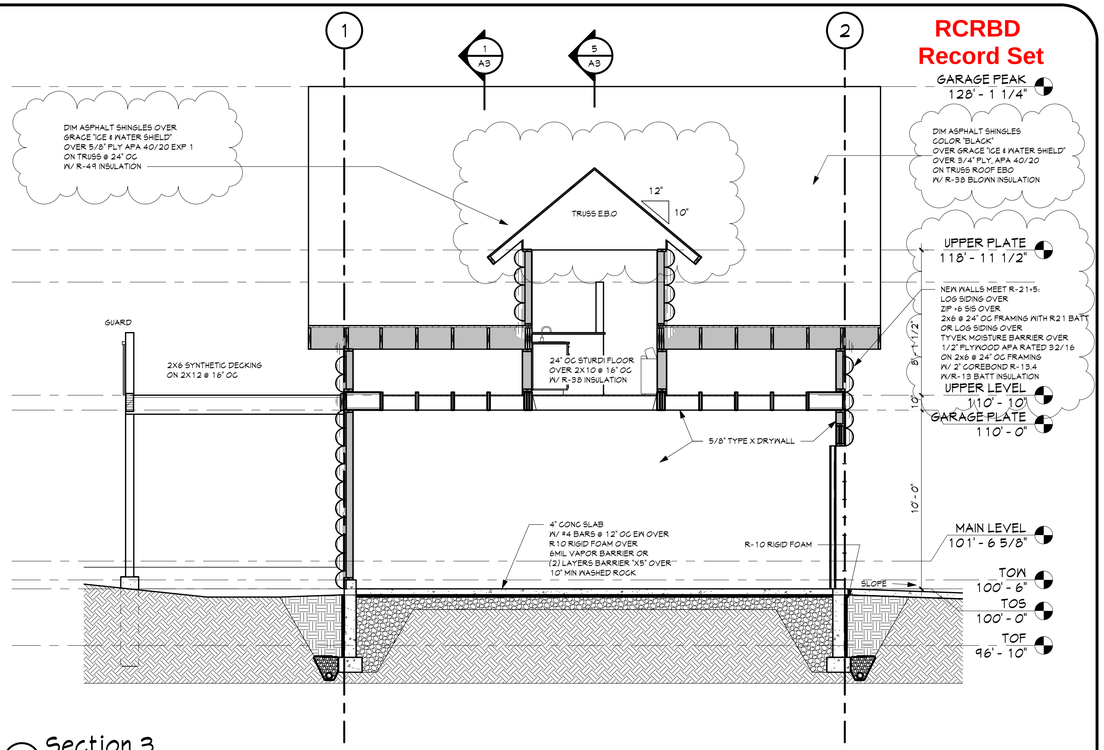


1 Section 2
1/4" = 1'-0"



2 Section 3
1/4" = 1'-0"

RCRBD Record Set

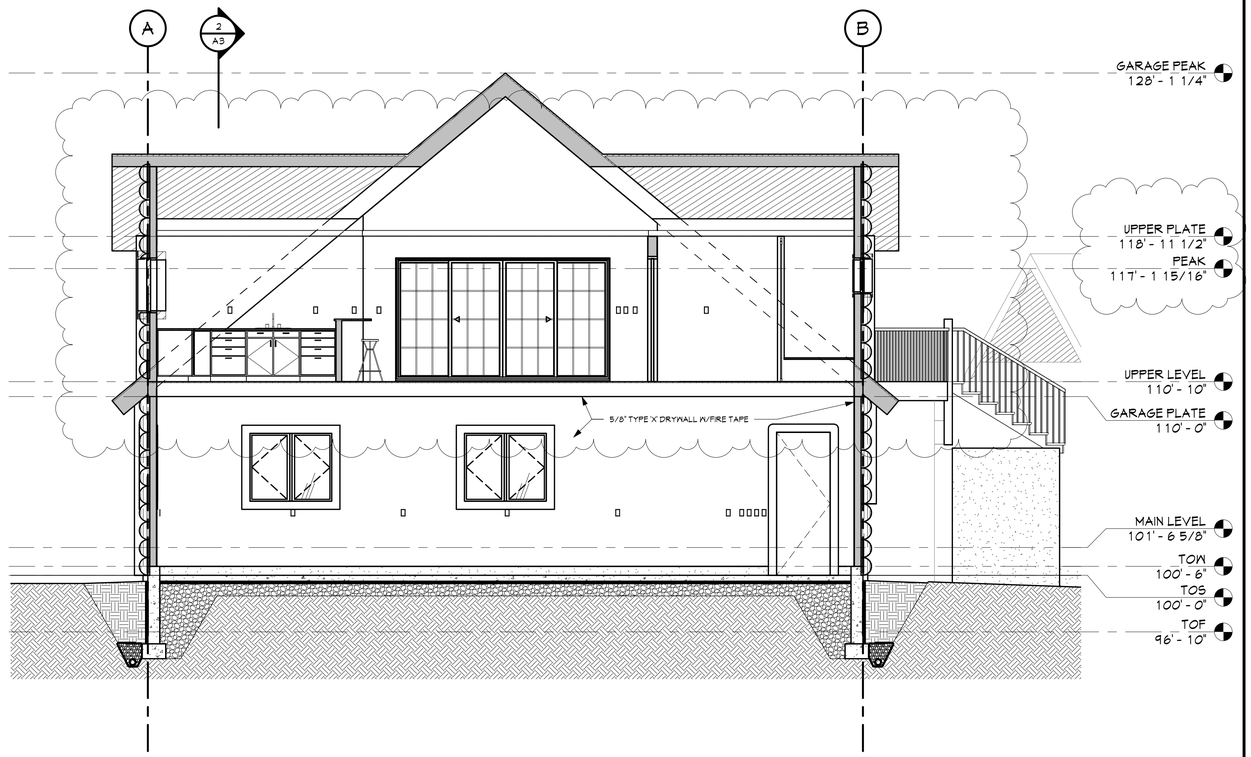
FINISH SCHEDULE						
No.	ROOM	FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING FINISH	COMMENTS
111	GARAGE	CONCRETE	VINYLE	5/8" TYPE "X" GYP	5/8" TYPE "X" GYP	
200	MAN CAVE	HARDWOOD	WOOD	1/2" GYPSUM	1/2" GYPSUM	
201	BAR	TILE	TILE			
202	BATH	TILE	TILE			
203	ATTIC	24" OC STRUDI FLOOR	NONE			

ELECTRICAL LEGEND

METER	METER W/ DISCONNECT
1/200A 42C	SERVICE PANEL, SIZE AS NOTED
	110 VAC DUPLEX RECEPTACLE
	110 VAC DUPLEX RECEPTACLE, BOTTOM HALF SWITCHED
GFI	110 VAC DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTER
WP	110 VAC DUPLEX RECEPTACLE, GFIC PROTECTED, WEATHERPROOF
REF	110 VAC DUPLEX RECEPTACLE, REFRIGERATOR OR DEDICATED
ARC	110 VAC DUPLEX RECEPTACLE, ARC-FAULT PROTECTED
	220 VAC RECEPTACLE, AMPERAGE NOTED
	PLUG MOULD
	SWITCH
3	3 WAY SWITCH
4	4 WAY SWITCH
D	DIMMER SWITCH
M	SWITCH, MOMENTARY
WP	SWITCH, WATER PROOF
T	SWITCH, TIMED
	EXHAUST FAN, CFM NOTED, VENT TO OUTSIDE, W/ DAMPER
M	LIGHT/ EXHAUST FAN UNIT
	FLUORESCENT FIXTURE
	RECESSED FIXTURE
	SURFACE MOUNT FIXTURE, DECORATIVE
	WALL MOUNT FIXTURE, DECORATIVE
	RECESSED FIXTURE, WALL WASH
	TRACK LIGHT
	SMOKE DETECTOR
S	CARBON MONOXIDE DETECTOR
C	TELEPHONE JACK
	TELEVISION JACK
TV	MULTI MEDIA JACK
MM	THERMOSTAT
T	OVERHEAD DOOR OPERATOR
OH	PHOTO CELL W/ MOTION DETECTOR

LIST OF ABBREVIATIONS

A/K/A	ALSO KNOWN AS
&	AND
@	AT
± OR APPROX	APPROXIMATELY
Ø	DIAMETER
EBO	ENGINEERED BY OTHERS
FOC	FACE OF CONCRETE
FOS	FACE OF STUD OR FRAMING
FT	FOOT / FEE
FFE	FINISH FLOOR ELEVATION
H	HEIGHT
IN	INCH (ES)
LVL	LAMINATED-VENEER LUMBER
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
#	NUMBER
OC	ON CENTER
# OR LB	POUNDS
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT OR CCA	PRESSURE TREATED
REBAR	REINFORGING STEEL
REQ'D	REQUIRED
R.N.R.	REGOMMENDED NOT REQUIRED
OR SQ FT	SQUARE FOOT / FEET
T&G	TONGUE AND GROOVE
T/B	TOP AND BOTTOM
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
W	WIDTH
W/	WITH
WWM	WELDED WIRE MESH
()	QUANTITY



5 Section 4
1/4" = 1'-0"

DRAFTING SERVICE, INC.
P.O. BOX 774121
426 OAK STREET
STEAMBOAT SPRINGS, COLORADO
970.879.1929
FAX 970.879.8709
JAKES@SPRINGSIPS.COM

Jake's™

COLORADO REGISTERED
MICHAEL EHRLICH
30669
8-19-2019
PROFESSIONAL ENGINEER
"STRUCTURE ONLY"

TYPICAL SECTIONS, LEGENDS & SCHEDULES FOR
the STEPHEN MILES
28300 CR 14
ROUTT COUNTY CO 80477
OWNER/ CONTRACTOR 312-961-3392

Job #	15014
File	15014A3
Date	15AUG19
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Sheet Number
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SHEET 7 OF 10

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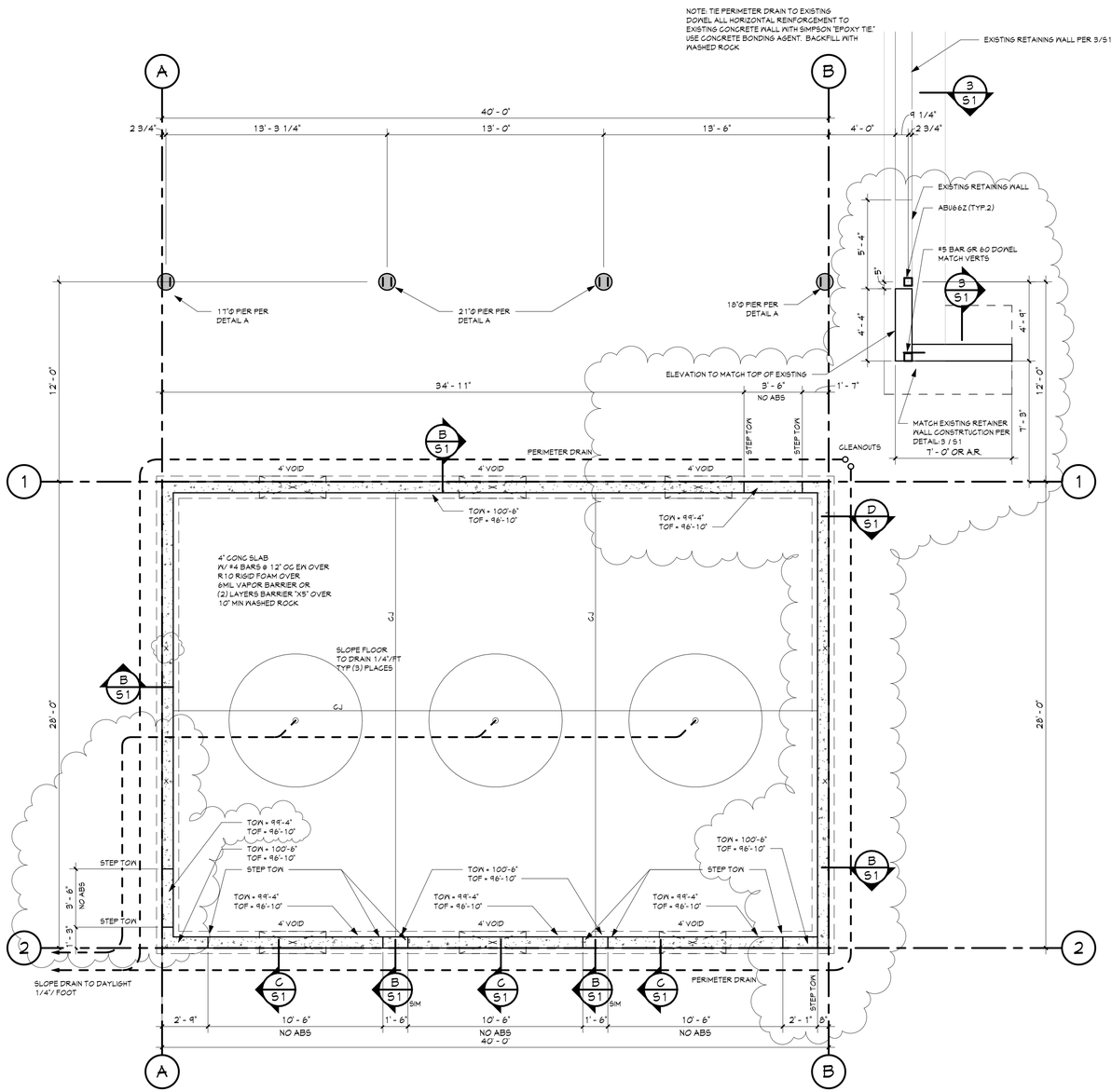
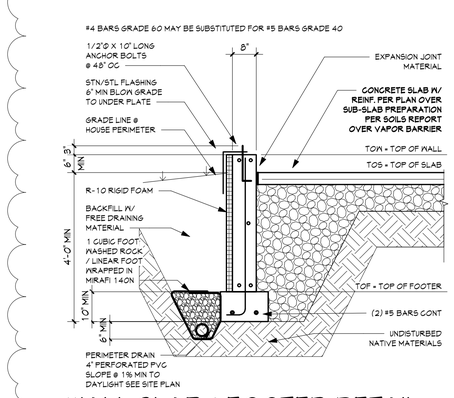


1 FOUNDATION PLAN
1/4" = 1'-0"

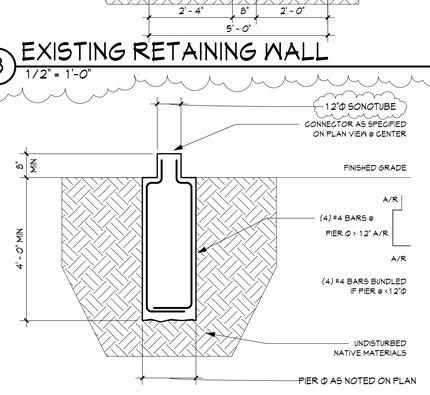


WALL SLAB & FOOTER DETAIL
1/2" = 1'-0"

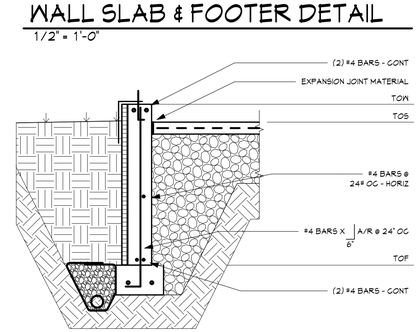
3 EXISTING RETAINING WALL
1/2" = 1'-0"

B FROST WALL W/ SLAB
1/2" = 1'-0"

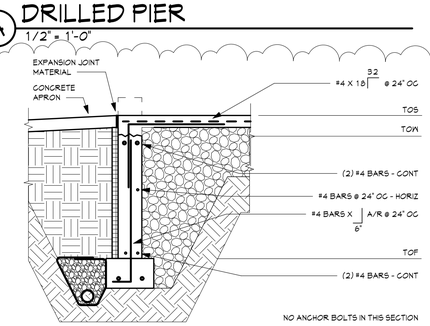
C POUR OVER WALL
1/2" = 1'-0"



A DRILLED PIER
1/2" = 1'-0"



D TRANSITION WALL
1/2" = 1'-0"



PLACE ALL VOID FORMS AT LOCATIONS NOTED ON PLAN VIEW IN BOTTOM OF FORMS, MAINTAINS CLEARANCES NOTED VOID FORMS MAY ALSO BE PLACED BELOW FOOTING OR WALL

V VOID FORM DETAIL
1" = 1'-0"

DRAFTING SERVICE, INC.
P.O. BOX 774121
426 OAK STREET
STEAMBOAT SPRINGS, COLORADO
970.879.1929
FAX 970.879.8709
JAKES@SPRINGSIPS.COM

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COLORADO REGISTERED MICHAEL EHRLICH 30669 8-19-2019 PROFESSIONAL ENGINEER
"STRUCTURE ONLY"

FOUNDATION PLANS & DETAILS FOR
the STEPHEN MILES
28500 CR 14
ROUTT COUNTY CO 80477
OWNER/CONTRACTOR 312-961-3392

Job #	15014
File	1501451
Date	15AUG19
Drawn	VNM
Checked	JMH
Rel'd	10MAY16
Rev'd	15AUG19

Sheet Number
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SHEET 8 OF 10

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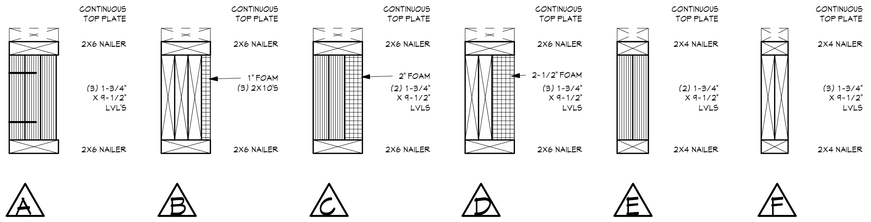
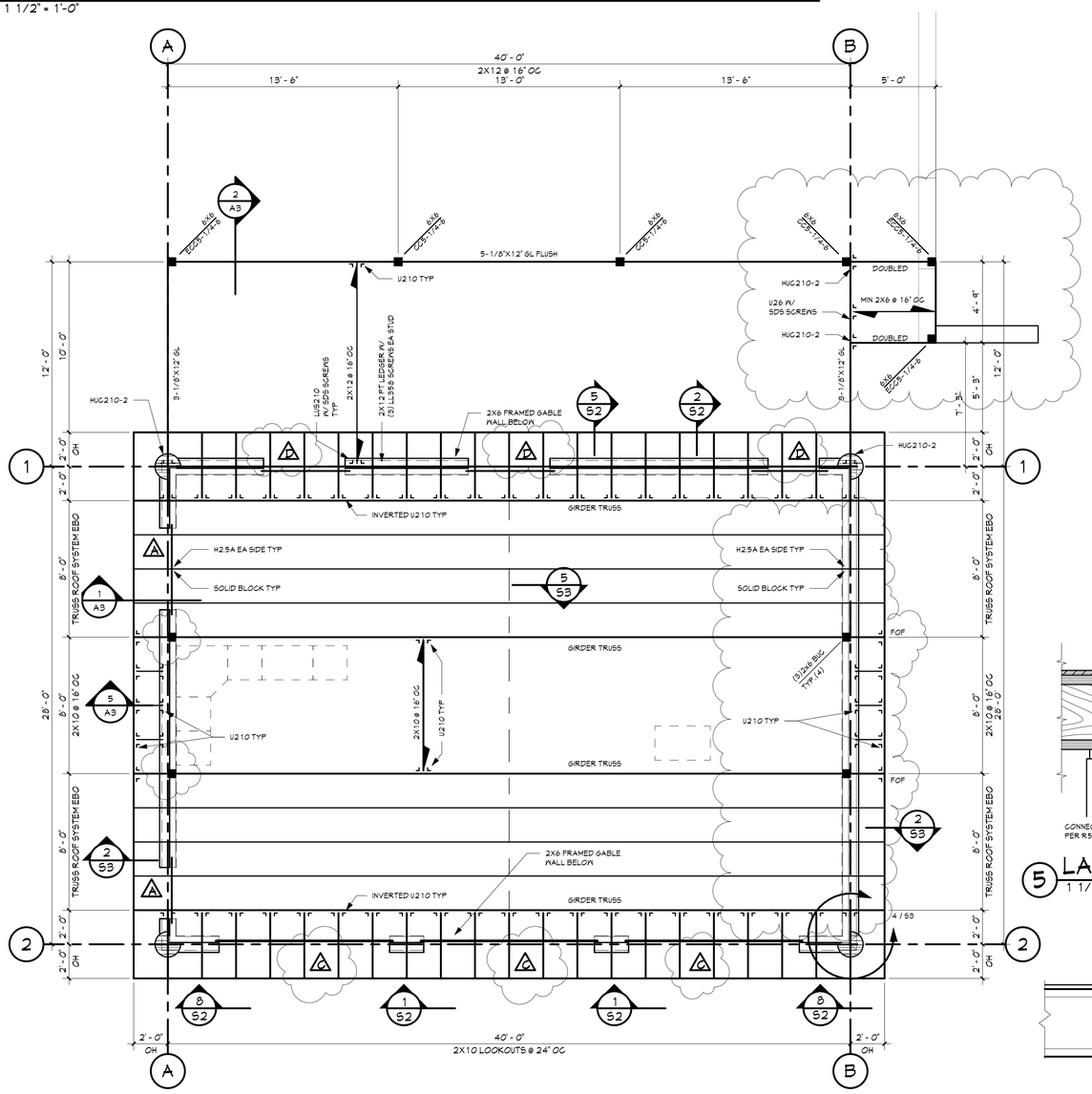


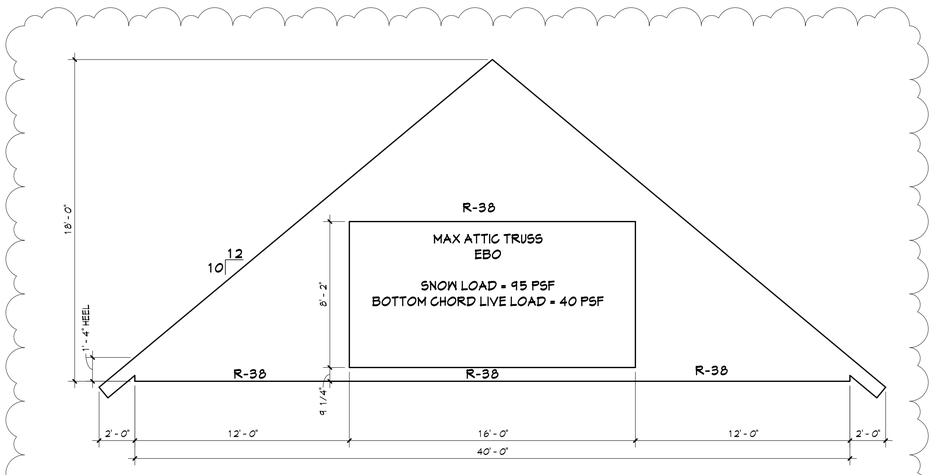
NAIL MULTIPLE PLYS W/ (2) ROWS 16d COMMON @ 12" OC
LVL HEADERS REQUIRE DOUBLED TRIMMERS OR PER PLAN
LVL HEADERS 10'-0" OR GREATER REQUIRE DOUBLED KINGSTUDS
LARGER LVL'S MAY REQUIRED AS NOTED ON PLAN VIEW

4 TYPICAL HEADER DETAILS
1 1/2" = 1'-0"

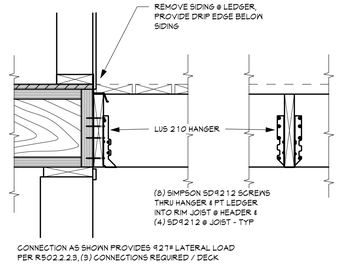


3 FRAMING PLAN
1/4" = 1'-0"

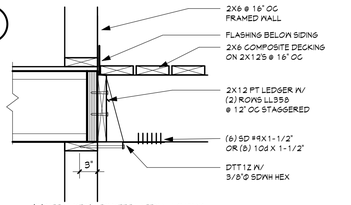
TYPICAL UON
SHEATH ROOF W/ 5/8" PLY APA 40/20 EXP 1
SHEATH DECKS W/ 2X6 SYNTHETIC DECKING, RANDOM LAYOUT
SHEATH FLOORS W/ 24" OC STURDI FLOOR



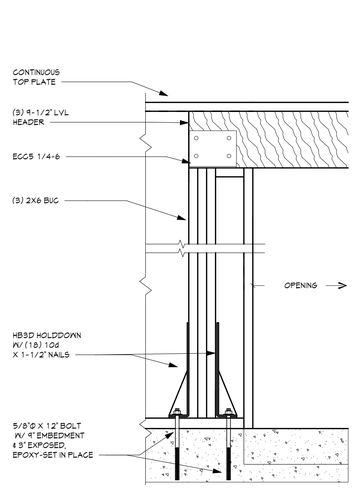
6 TRUSS
1/4" = 1'-0"



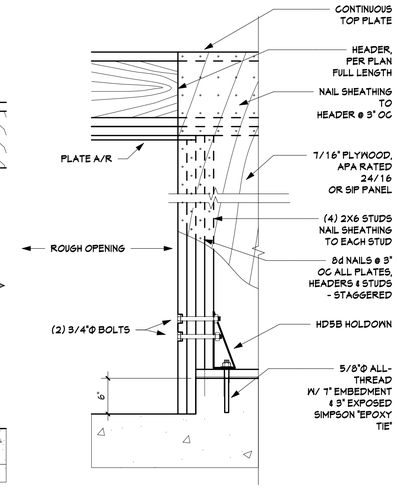
5 LATERAL LOAD DETAIL
1 1/2" = 1'-0"



2 DECK LEDGER DETAIL
1" = 1'-0"



1 COLUMN HOLD DOWN
1" = 1'-0"



8 LATERAL RESTRAINT
1" = 1'-0"

RCRBD
Record Set

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STEAMBOAT SPRINGS, COLORADO
970.879.1929
FAX 970.879.8709
JAKES@SPRINGSIPS.COM

Jake's

COLORADO REGISTERED
MICHAEL EHALICH
30669
8-19-2019
PROFESSIONAL ENGINEER
"STRUCTURE ONLY"

ROOF & DECK FRAMING PLAN FOR
the STEPHEN MILES
28300 CR 14
ROUTT COUNTY CO 80477
OWNER/ CONTRACTOR 312-961-3392

Job #	15014
File	1501452
Date	15AUG19
Drawn	VAM
Checked	JMH
Rel'd	10MAY16
Rev'd	15AUG19

Sheet Number
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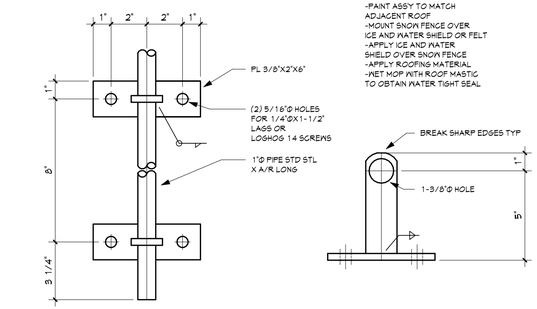
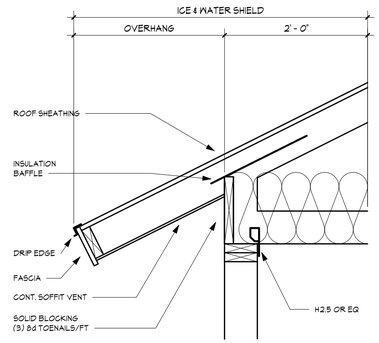
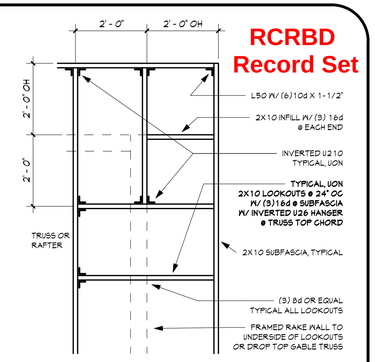


6 SNOW FENCE
3" = 1'-0"

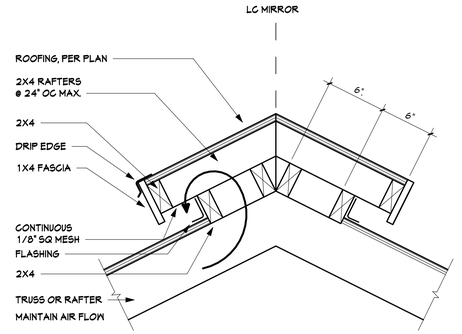


2 SOFFIT VENT DETAIL
1" = 1'-0"

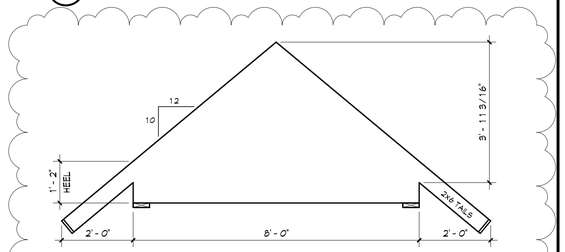


4 TYPICAL CORNER DETAIL
1/2" = 1'-0"

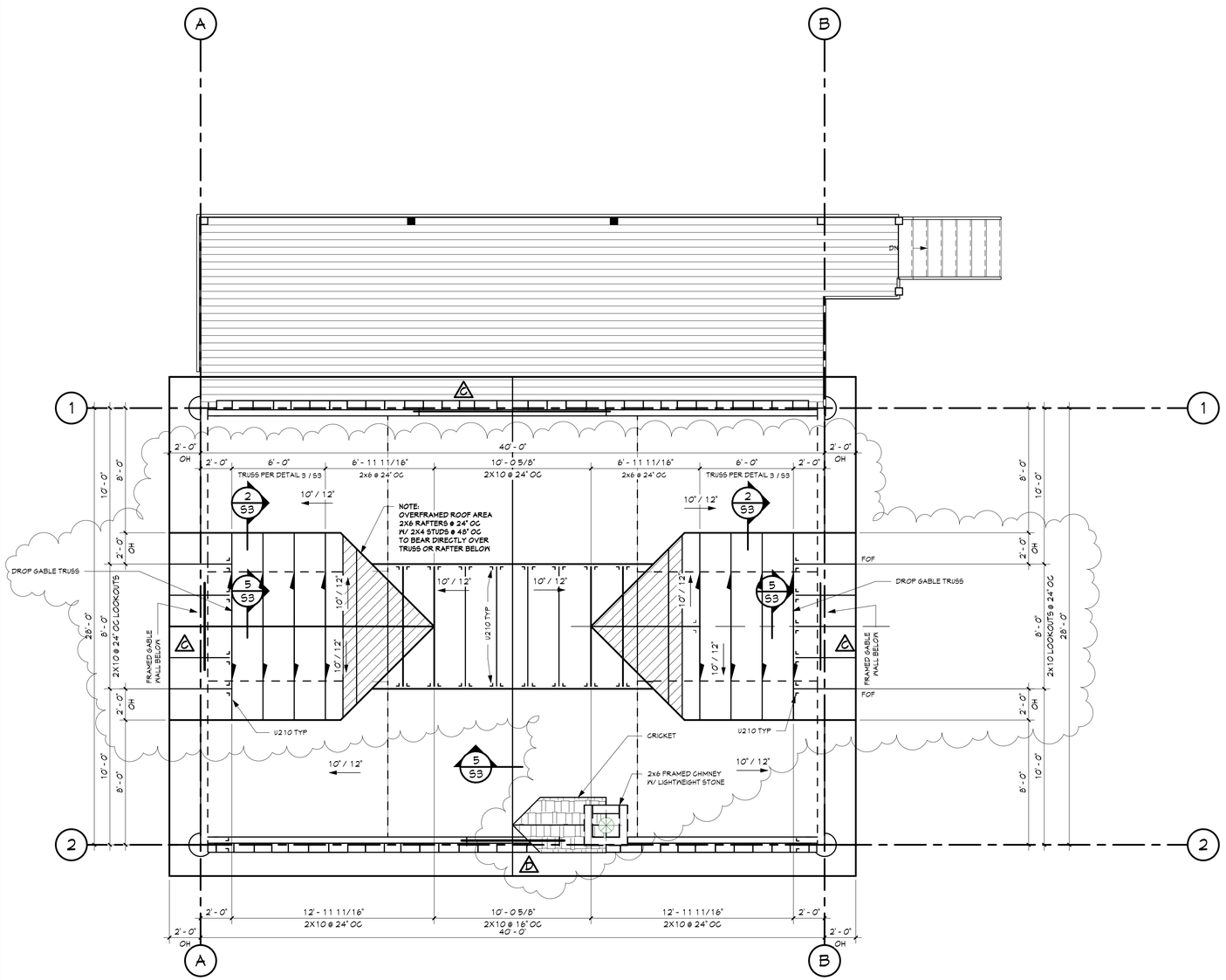
RCRBD Record Set



5 DOGHOUSE RIDGE VENT DETAIL
1 1/2" = 1'-0"



3 DORMER TRUSS
1/2" = 1'-0"



1 DORMER FRAMING PLAN
1/4" = 1'-0"

TYPICAL UON
SHEATH ROOF W/ 5/8" PLY APA 40/20 EXP 1

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UPPER ROOF FRAMING PLAN FOR
the STEPHEN MILES
28300 CR 14
ROUTT COUNTY CO 80477
OWNER/ CONTRACTOR 312-961-8892

Job #	15014
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SHEET 10 OF 10

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