

**CONTRACTOR INSURANCES:**

- 1. INSURANCE: BEFORE INITIATING ANY WORK AT SITE, CONTRACTOR(S) SHALL PROVIDE PROOF OF INSURANCE, INCLUDING COMMERCIAL GENERAL LIABILITY, WORKMEN'S COMPENSATION AND AUTOMOBILE LIABILITY. MINIMUM LIMITS SHALL BE AS FOLLOWS:

COMMERCIAL GENERAL LIABILITY	GENERAL AGGREGATE	\$ 1,000,000. <sup>50</sup>
	PRODUCTS - COMP / OP AGGREGATE	\$ 1,000,000. <sup>50</sup>
	EACH OCCURRENCE	\$ 1,000,000. <sup>50</sup>
	FIRE DAMAGE (ANY ONE FIRE)	\$ 100,000. <sup>50</sup>
	MED. EXPENSE (ANY ONE PERSON)	\$ 5,000. <sup>50</sup>
AUTOMOBILE LIABILITY	SINGLE COMBINED LIMIT	\$ 250,000. <sup>50</sup>
WORKMAN'S COMPENSATION		STATUTORY LIMITS
GENERAL "UMBRELLA"		\$ 2,000,000. <sup>50</sup>

- 2. BEFORE CONTRACTOR DOES ANY WORK ON SITE, CERTIFICATES SHALL BE PROVIDED DIRECT FROM THE CONTRACTOR'S AGENT, VERIFYING THAT OWNER AND ARCHITECT ARE NAMED AS "ADDITIONAL NAMED INSURED" ON CONTRACTOR'S LIABILITY AND UMBRELLA POLICIES.
- 3. OWNER AND ARCHITECT SHALL BE GIVEN 30 DAYS NOTICE BEFORE ANY POLICIES EXPIRE. CONTRACTOR SHALL MAINTAIN THIS REQUIREMENT FOR A MIN OF 365 DAYS AFTER FINAL PAYMENT. CERTIFICATES EVIDENCING SUCH COVERAGE AND INCLUSION OF THE OWNER AND ARCHITECT SHALL BE PROVIDED TO BOTH.

**RESIDENTIAL CODES**

- 1. CONTRACTOR(S) SHALL COMMUNICATE WITH THE MUNICIPALITY TO VERIFY REQUIRED TYPES AND FREQUENCY OF INSPECTIONS, AND SHALL SECURE ALL PERMITS, LICENSES, APPROVALS, AND INSPECTIONS REQUIRED DURING THE PROGRESS OF THE WORK.
- 2. ALL CONTRACTORS AND TRADESMEN ARE EXPECTED TO BE CURRENT WITH REGULATORY CODES AND HAVE COPIES ON SITE FOR REFERENCE AS REQUIRED. TO OBTAIN: INTERNATIONAL CODE COUNCIL, PUBLICATIONS, 4051 WEST FLOSSMOOR ROAD, COUNTRY CLUB HILLS, IL 60478-5795, 888-422-7233.
- 3. FOR RESIDENTIAL WORK, THE CODES WHICH APPLY ARE:  
INTERNATIONAL RESIDENTIAL CODE, 2009  
INTERNATIONAL BUILDING CODE, 2009  
ICC ELECTRICAL CODE, 2009 (UTILIZES NATIONAL ELECTRIC CODE STANDARDS)  
INTERNATIONAL ENERGY CONSERVATION CODE, 2009

**FIELD OFFICE AND SITE DOCUMENTS**

- 1. WITH INITIATION OF WORK ON SITE, THE CONTRACTOR SHALL MAINTAIN A FIELD OFFICE. THIS MAY BE AS SIMPLE AS A FOOT LOCKER.
- 2. WHENEVER THE WORK IS IN PROGRESS THE FIELD OFFICE SHALL BE ACCESSIBLE TO THE OWNER & ARCHITECT AND SHALL CONTAIN THE MOST UP TO DATE DOCUMENTS, SUBMITTALS, MATERIALS, AND SHOP DRAWINGS. THE PROJECT DOCUMENTS SHALL BE ORGANIZED, COMPLETE, AND CLEAR.
- 3. AS-BUILT DRAWINGS: THE CONTRACTOR SHALL MAINTAIN ONE RECORD SET OF DOCUMENTS WITH ALL AS-BUILT INFORMATION AND CHANGES, MARKED UP IN RED, WHICH SHOW ANY DIFFERENCES FROM THE ORIGINAL DOCUMENTS. AT COMPLETION OF THE WORK, CONTRACTOR SHALL MAKE THREE (3) XEROX SETS. THESE "AS-BUILT" SETS SHALL BE DISTRIBUTED: 1 SET TO OWNER, 1 SET TO ARCHITECT, 1 SET TO THE GC'S FILE.

**GENERAL NOTES:**

- 1. QUALITY OF WORKMANSHIP AND MATERIALS: THE CONTRACTOR(S) AGREES HE SHALL ENGAGE WORKMEN EXPERT IN THEIR RESPECTIVE TRADES WHOSE WORK SHALL COMPLY WITH THE HIGHEST STANDARDS OF THEIR RESPECTIVE TRADE ASSOCIATIONS. IT IS UNDERSTOOD THE ARCHITECT HAS NOT DETAILLED OR SPECIFIED ALL ASPECTS OF THE WORK WHICH ARE A "COMMONLY UNDERSTOOD CONSTRUCTION PRACTICE". IF INTERPRETATIONS OR CLARIFICATIONS ARE REQUIRED, THE CONTRACTOR(S) SHALL INTERPRETATIONS OR CLARIFICATIONS FROM THE ARCHITECT OR THE OWNER BEFORE PROCEEDING. SECURE SUCH INFORMATION FROM THE ARCHITECT OR THE OWNER BEFORE PROCEEDING.
- 2. PROJECT GUARANTEE: THE CONTRACTOR(S) AND ALL SUBCONTRACTORS UNDER HIS RESPONSIBILITY SHALL GUARANTEE ALL WORKMANSHIP AND INSTALLED MATERIAL FOR A MINIMUM OF ONE YEAR AFTER DATE OF SUBSTANTIAL COMPLETION. WITHIN THE ONE-YEAR GUARANTEE PERIOD, THE CONTRACTOR SHALL REMAIN RESPONSIBLE TO THE OWNER FOR PROMPT AND DILIGENT REPAIR OR REPLACEMENT OF FAILED MATERIALS AND OR WORKMANSHIP. COMPONENTS, EQUIPMENT AND INSTALLATIONS THAT ARE PROTECTED WITH EXTENDED MANUFACTURER'S WARRANTIES SHALL BE IDENTIFIED TO THE OWNER. THE OWNER SHALL RECEIVE RECEIPTS AND VALIDATED WARRANTEE REGISTRATIONS DEMONSTRATING THESE EXTENDED PROTECTIONS. TITLE TO ALL EQUIPMENT AND COMPONENTS WITH WARRANTIES SHALL BE MADE IN THE OWNER'S NAME.
- 3. CONSTRUCTION DEBRIS: ALL CONSTRUCTION MATERIAL DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE GC. DAILY CLEANUP SHALL BE IN CONTAINERS OR DUMPSTERS MAINTAINED BY THE GC. DO NOT BURY OR BURN ANY MATERIAL AT THE SITE.
- 4. SITE SAFETY: THE GENERAL CONTRACTOR GAINS COMPENSATION FOR ORGANIZING AND EXECUTING THE WORK AT THE SITE. THUS, THE GC IS RESPONSIBLE FOR ALL SITE SAFETY PRECAUTIONS AND ALL SITE SUPERVISION.

**PERMITS AND MUNICIPAL APPROVALS:**

- 1. THE CONTRACTOR(S) WILL PREPARE AND APPLY FOR ALL REQUIRED CONSTRUCTION PERMITS, BUILDING AND TRADE. HE SHALL START THE PERMIT PROCESS AND MAINTAIN THE RESPONSIBILITY FOR COORDINATION & INSPECTIONS THROUGHOUT THE PROJECT.
- 2. THE OWNER MAY HAVE INITIATE THE BUILDING PERMIT AND ZONING REVIEW PROCESS. HOWEVER BEFORE INITIATION OF WORK AT SITE, ANY AND ALL PERMIT APPLICATIONS SHALL BE MODIFIED TO SHOW THE CONTRACTOR AS APPLICANT, AND BE ACCOMPANIED BY PROOFS OF INSURANCE AS MAY BE REQUIRED BY THE MUNICIPALITY.
- 3. UNDER THE PENNSYLVANIA UNIFORM CONSTRUCTION CODE, PERMITTING IS A MULTI-PART PROCESS, WITH SECTIONS RELATING TO MAJOR TRADES. BECAUSE ALL PARTS ARE INTER-RELATED, SOME MUNICIPALITIES REQUIRE ALL PARTS BE SUBMITTED AT THE SAME TIME. THIS REQUIRES PLANNING AND COORDINATION BY THE CONTRACTOR(S), AND MAY INCLUDE SEPARATE REVIEWERS (THIRD PARTY) FOR DIFFERENT PARTS, VARIED REQUIREMENTS, FORMS, AND ETC. IT IS THE CONTRACTOR(S) RESPONSIBILITY TO DETERMINE WHAT THIS MUNICIPALITY REQUIRES.
- 4. THE ARCHITECT'S DRAWINGS DESCRIBE THE: A) THE DESIGN INTENT; B) THE STRUCTURAL SYSTEM; C) THE EXTERIOR ENVELOPE; D) AND ENERGY CONSERVATION REQUIREMENTS. IN GENERAL, THE ARCHITECT IS DESCRIBING THE OVERALL BUILDING SHELL, AND LOCATING THE MAJOR FIXTURES AND EQUIPMENT. THE ARCHITECT MAY, OR MAY NOT, INCLUDE PERFORMANCE SPECIFICATIONS FOR OTHER WORK.
- 5. THE CONTRACTOR(S) IS RESPONSIBLE FOR PROVIDING ALL OTHER TRADE INPUT REQUIRED TO COMPLETE THE PERMIT PROCESS. THE ARCHITECT IS NOT PROVIDING DESIGN AND DOCUMENTATION OR INSTALLATION DETAILS FOR PLUMBING, SPRINKLER, HVAC, ELECTRICAL, OR SECURITY SYSTEMS WORK. THE GC MUST ENGAGE QUALITY SUBCONTRACTORS WITH THE EXPERTISE AND CAPABILITY TO PROVIDE ANY DOCUMENTATION (SHOP DRAWINGS, EQUIPMENT SIZING, PLUMBING RISER DIAGRAMS, DESIGN LAYOUTS, HEAT GAIN & HEAT LOSS CALCULATIONS, ELECTRICAL LOAD CALCULATIONS, CATALOG CUT SHEETS, EQUIPMENT ENERGY RATINGS, ETC.) NECESSARY TO SUPPORT THESE PERMIT SECTIONS.

**BEFORE YOU DIG:**

- 1. CALL THE PA "ONE CALL SYSTEM." STOP! BEFORE YOU DIG IT IS MANDATORY TO CALL THE PENNSYLVANIA "ONE CALL SYSTEM." 1-800-242-1776. ALL CONTRACTORS, INCLUDING SUB-CONTRACTORS, SHOULD MAKE THEIR OWN NOTIFICATION. NOTE, THE ONLY PARTY PROTECTED BY THE NOTIFICATION IS THE CALLER.

**DIMENSIONS: DO NOT SCALE DRAWINGS:**

- 1. ALL DIMENSIONS ARE GIVEN TO "FACE OF MASONRY" OR "FACE OF STUD". CHECK ALL DIMENSIONS BEFORE PROCEEDING. FOR "CLEAR" OPENINGS BETWEEN FINISHES, SUBTRACT FINISH THICKNESS FROM DIMENSIONS GIVEN. LOOK FOR THE CORRECT DIMENSIONAL INFORMATION, OR SEEK CLARIFICATION FROM THE ARCHITECT.

**CHANGES:**

- 1. CHANGES: THE ARCHITECT HAS NO AUTHORITY TO MAKE IMPROMPTU CHANGES IN THE FIELD OR BY PHONE. ALL PROPOSED CHANGES OR SUBSTITUTIONS, WITHOUT EXCEPTION, SHALL BE SUBMITTED IN WRITING, WITH SUPPORT MATERIALS, FOR AUTHORIZATION.
- 2. WHEN CHANGES AFFECT THE STRUCTURAL OR BUILDING SHELL, THOSE CHANGES SHALL BE DIRECTED TO THE ARCHITECT PROMPTLY IN WRITING FOR REVIEW AND APPROVAL.

**MEANS OF EGRESS: SPECIAL RESIDENTIAL**

- 1. IN ADDITION TO THE ROOM'S PRIMARY DOOR, ALL HABITABLE BASEMENTS AND SLEEPING ROOMS SHALL HAVE A MINIMUM OF ONE ALTERNATE OPENABLE EMERGENCY ESCAPE AND RESCUE OPENING, GENERALLY AN "EGRESS WINDOW." EACH OPENING SHALL: A) HAVE A MINIMUM NET CLEAR OPEN AREA OF 5.7 SQUARE FEET; B) THE MINIMUM NET CLEAR OPENING HEIGHT SHALL BE 24 INCHES; C) THE MINIMUM NET CLEAR OPENING WIDTH SHALL BE 20 INCHES; D) THE SILL HEIGHT OF THE OPENING SHALL NOT BE MORE THAN 44 INCHES ABOVE THE FLOOR; E) WHEN THE WINDOW IS MORE THAN 72 INCHES ABOVE GRADE, THEN THE INTERIOR STILL HEIGHT SHALL NOT BE LESS THAN 24 INCHES ABOVE FINISHED FLOOR; F) THE OPERATION OF THE EMERGENCY OPENING SHALL NOT REQUIRE ANY SPECIAL HARDWARE OR KEY.
- 2. WHERE A WINDOW PROVIDES THIS EMERGENCY OPENING, PROVIDE THE MANUFACTURER'S CATALOG CUTS VERIFYING THIS REQUIREMENT IS MET.

**RESIDENTIAL STAIRS (STRAIGHT), HANDRAILS, AND GUARDRAILS**

- 1. STAIRWAY WIDTH SHALL NOT BE LESS THAN 36" CLEAR. HANDRAILS SHALL NOT PROJECT MORE THAN 4.5" INTO STAIR. THE MIN. CLEAR WIDTH OF STAIRS BETWEEN HANDRAILS SHALL NOT BE LESS THAN 31.5" WITH ONE HANDRAIL, AND 27" WITH HANDRAILS BOTH SIDES.
- 2. MINIMUM STAIR HEADROOM SHALL NOT BE LESS THAN 80" MEASURED VERTICALLY FROM THE TREAD NOSING. THE SAME APPLIES TO LANDINGS.
- 3. TREAD DEPTH MIN. IS 10" NOSING TO NOSING. STAIR RISER MAX. HEIGHT IS 7.75".
- 4. HANDRAILS HAVING MINIMUM AND MAXIMUM HEIGHTS OF 34 INCHES AND 38 INCHES RESPECTIVELY, MEASURED VERTICALLY FROM THE NOSING OF THE TREADS.
- 5. REQUIRED HANDRAILS SHALL BE CONTINUOUS THE FULL LENGTH OF THE STAIRS FROM A POINT DIRECTLY ABOVE THE TOP AND BOTTOM RISER, AND EXTENDING 12" TOP & BOTTOM. ENDS SHALL BE RETURNED TO THE WALL. PROVIDE NOT LESS THAN 1.5" BETWEEN THE WALL AND THE HANDRAIL.
- 6. HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION WITH A DIAMETER OF 1.25 TO 2 INCHES, OR A NONCIRCULAR CROSS SECTION WITH A PERIMETER DIMENSION OF AT LEAST 4 INCHES BUT NOT MORE THAN 6.25 INCHES AND A LARGEST CROSS-SECTION DIMENSION NOT EXCEEDING 2.25 INCHES, OR THE SHAPE SHALL PROVIDE EQUIVALENT GRASP ABILITY. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8 INCH. SEE CODE FOR ADDITIONAL REQUIREMENTS.
- 7. HANDRAIL DESIGN SHALL BE OF SUFFICIENT STRENGTH TO RESIST A SINGLE CONCENTRATED LOAD OF 200 POUNDS APPLIED IN ANY DIRECTION ALONG THE TOP.

**WOOD FRAMING "BASIC"**

- 1. STANDARDS: ALL ROUGH CARPENTRY TO COMPLY WITH "MANUAL OF HOUSE FRAMING" BY NATIONAL FOREST PRODUCTS ASSOC., THE 2006 ICC RESIDENTIAL CODE, AND WITH RECOMMENDATIONS OF AMERICAN PLYWOOD ASSOC.
- 2. STRUCTURAL LUMBER (WALL STUDS, FLOOR CEILING JOISTS) OF NOMINAL 2" THICKNESS SHALL BE KILN DRIED (MAX. 19% MOISTURE CONTENT) #2 HEA-FIR WITH MIN. FB 1,200.
- 3. ALL FLOORS AND ALL ATTIC ACCESSIBLE CEILING JOISTS SHALL BE "BRIDGED" WITH SOLID BLOCKING, FULL DEPTH, STAGGERED, IF EXISTING DIAGONAL "BRIDGING" IS FOUND, THEN REPLACE WITH SOLID BLOCKING AS DESCRIBED ABOVE.
- 4. SUB-FLOOR DECKS: SHALL BE ADVANTECK, 3/4", TONGUE & GROOVED, COMPOSITE DECKING. GLUE IN PLACE AND SCREW @ 6" O.C. ALONG ALL SHEET PERIMETERS AND 16" O.C. AT INTERIOR FIELD. ALL JOISTS SHALL BE FULLY SUPPORTED.
- 5. LUAN UNDERLAYMENTS SHALL ALL BE CERTIFIED AS FABRICATED WITH EXTERIOR GRADE GLUE.

**FIRESTOPPING**

- 1. INSTALL BEFORE ROUGHING IN OF ANY PLUMBING, ELECTRICAL OR HVAC WORK.
- 2. FIRESTOPPING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE. FIRESTOPPING SHALL BE PROVIDED IN WOOD-FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:  
3. IN CONCEALED SPACES OF STUD WALL AND PARTITIONS, INCLUDING FURRED SPACES AND STUDDED OFF SPACES OF MASONRY OR CONCRETE WALLS, AT THE CEILING AND FLOOR LEVEL;  
4. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, SOFFITS OVER CABINETS, DROP CEILINGS, ETC.  
5. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF RUN;  
6. IN CONCEALED SPACES FORMED BY FLOOR SLEEPERS IN AREAS OF NOT MORE THAN 100 SQ.FT.; OR THE SPACE MAY BE COMPLETELY FILLED WITH NONCOMBUSTIBLE MATERIALS.  
7. AT OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS AND FIREPLACES AT CEILING AND FLOOR LEVELS, WITH NONCOMBUSTIBLE U.L. RATED SYSTEMS AND MATERIALS.  
8. FIRESTOPPING SHALL CONSIST OF 2-INCH NOMINAL LUMBER WITH TIGHT JOINTS, OR TWO THICKNESS OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS, OR ONE THICKNESS OF 23/32-INCH PLYWOOD WITH JOINTS BACKED BY 23/32-INCH PLYWOOD, OR OTHER APPROVED MATERIALS SECURELY FASTENED IN PLACE.  
9. THE INTEGRITY OF ALL FIRESTOPS SHALL BE MAINTAINED AND SHALL NOT BE CONCEALED UNTIL INSPECTED AND APPROVED.

**CAULKING**

- 1. PERMITTED MATERIALS: ALL EXTERIOR CAULKING SHALL BE TWO-PART POLYURETHANE COMPONENT BASED. NO SILICONE CAULKS ARE PERMITTED UNLESS THE APPLICATION IS FOR A "GLASS TO GLASS" ADHESIVE. ALL CAULKS USED IN PREPARATION FOR INTERIOR PAINTING SHALL BE POLYURETHANE OR LATEX, WITH NO SILICONES.  
2. WHERE TO APPLY: CAULKING SHALL BE PROVIDED:  
3. BETWEEN ALL EXTERIOR DISSIMILAR MATERIALS WHERE A MECHANICAL CONNECTION DOES NOT MAKE A WATERTIGHT SEAL.  
4. AROUND THE PERIMETERS OF ALL DOORS AND WINDOWS BETWEEN SURROUNDING FINISH SURFACES.

**WINDOWS:**

- 1. WINDOW SHALL BE SELECTED BY THE OWNER AND GC. THE INSULATION DIFFERENCE BETWEEN DECENT WINDOW MANUFACTURERS IN PRETTY INSIGNIFICANT, THE UNIT MUST MEET THE CODE VALUES SHOWN ELSEWHERE. FOR ALL PRACTICAL THOUGHT, A WINDOW IS A HOLE IN THE WALL.  
2. ARCHITECT'S RECOMMENDATION IS "INTEGRITY" BY MARVIN. NEXT IS BASIC ANDERSEN'S. IT COMES DOWN TO THIS, YOU GET WHAT YOU PAY FOR.  
3. FROM OWNER'S PERSPECTIVE, THE ISSUE IS "FEATURES" AND COLORS. GET WHAT THE OWNER WANTS.

**RADIANT BARRIER**

- 1. RADIANT BARRIERS ARE REFLECTIVE FILMS, PAINTS, MEMBRANES, ETC., WITH THE PURPOSE OF REFLECTING AWAY FROM A SURFACE THE SUN'S RADIANT (HEAT) ENERGY. INSTALLED IN BUILDINGS, MANUFACTURES ARE CLAIMING SIGNIFICANT ENERGY SAVINGS, ESPECIALLY FOR COOLING COSTS. ELECTRIC AIR CONDITIONING IS MORE EXPENSIVE PER "DEGREE CHANGE" THAN HEATING. WHERE MODERN HOUSEHOLD ENVIRONMENTS ARE CONTINUALLY "CONDITIONED" ANNUAL COOLING COSTS MAY EQUAL OR EXCEED HEATING COSTS.  
2. PAINT PRODUCT OPTION: SHERWIN WILLIAMS "E-BARRIER," APPLY PER MANUFACTURER'S RECOMMENDATIONS. DO CAREFUL COORDINATION WITH THE LOCAL REPRESENTATIVE. SURFACE COVERAGE DOES NOT HAVE TO BE PERFECT. ACHIEVE BEST COVERAGE AS IS PRACTICAL. THIS IS A SOFT METALLIC FINISH, AND SPRAY FOAMS WILL ADHERE.  
3. SURFACES TO RECEIVE BARRIER:  
ALL ROOF SHEATHING.  
ALL ATTIC GABLE WALLS, ESPECIALLY SOUTH AND WEST FACING.  
ALL SOUTH AND WEST FACING OCCUPIED ROOM WALLS.

**PLUMBING: WITH PUBLIC WATER AND SANITARY SERVICE**

- 1. PLUMBING SHALL BE DONE IN ACCORDANCE WITH MUNICIPAL STANDARDS AND CODE. VERIFY MUNICIPAL REQUIREMENTS. PLUMBER SHALL COMPLETE HIS PART OF THE BUILDING PERMIT APPLICATION. IF MUNICIPAL REQUIRES PLUMBING RISER DIAGRAMS OR SCHEMATICS THEN PLUMBING CONTRACTOR SHALL PROVIDE.  
2. SCOPE OF WORK IS REPLACE EXISTING WITH SIMILAR FIXTURES IN ESSENTIALLY THE SAME LOCATIONS. SOME MINOR DIMENSIONAL ADJUSTMENTS WILL BE REQUIRED.  
3. ALL SUPPLY PIPING SHALL BE COPPER. PROVIDE FULL 3/4" MAINS ALL THE WAY TO EACH FIXTURE WITH 1/2" RISERS AT INDIVIDUAL FITTINGS AS REQUIRED. PROVIDE SHUT-OFF VALVES FOR EACH FIXTURE SUPPLY.  
4. USE "BALL VALVES" ONLY FOR ABSOLUTELY EVERYTHING, NO GATE TYPE VALVES. TAKE PRECAUTIONS NOT TO LIMIT PRESSURE TO REMOTE LOCATIONS.  
5. PROVIDE "SHOCK" RISERS AT ENDS OF MAINS.  
6. TAKE SPECIAL PRECAUTIONS WITH CUTTING AND PATCHING JOISTS. DO NOT NOTCH JOISTS, DRILL HOLES ONLY IN PROPER LOCATIONS AT CENTER OF JOISTS, SEE CODE AND SEE SPECIFIC DETAILS PROVIDED IN THE ENGINEERED TIMBER CATALOG.  
7. ALL PIPES LOCATED IN EXTERIOR WALLS SHALL BE INSULATED. AFTER INSTALLATION, SEAL THE PASSAGE OF ALL PIPES THROUGH WALL PLATES (TOP AND BOTTOM, INTERIOR OR EXTERIOR WALLS) WITH EXPANDABLE URETHANE FOAM TO PREVENT VERTICAL PASSAGE OF AIR.

**HEATING / COOLING SYSTEM PERFORMANCE SPECIFICATION:**

- 1. GENERAL: HVAC CONTRACTOR SHALL COMPLETE HIS PART OF THE BUILDING PERMIT APPLICATION. IF MUNICIPALITY REQUIRES SCHEMATICS, CALCULATIONS, DIAGRAMS, OR CATALOG CUTS, THEN HVAC CONTRACTOR SHALL PROVIDE.  
2. SUBMITTALS: CONTRACTOR WILL PROVIDE HEAT GAIN AND HEAT LOSS CALCULATIONS. MARK UP THE ARCHITECT'S DRAWINGS TO PROVIDE SIMPLE SCHEMATICS AND CATALOG CUTS OF ALL EQUIPMENT FOR REVIEW AND APPROVAL BEFORE INSTALLATION.  
3. DUCTWORK: ALL DUCTWORK "MAINS" SHALL BE SHEET METAL. BRANCH DUCTWORK IS PREFERRED TO BE SHEET METAL, HOWEVER "FLEX DUCT WILL BE ACCEPTED IN LIMITED RUNS DIRECT TO DIFFUSERS. ALL SHEET METAL DUCTWORK SHALL BE CAPABLE OF FUTURE "CLEANING," THUS IT SHALL NOT BE INTERNALLY "LINED" WITH ANY SOFT MATERIALS.  
4. DUCTWORK: THE IRC ENERGY CONSERVATION CODE NOW REQUIRES THE SEALING OF ALL TRANSVERSE AND LONGITUDINAL DUCT JOINTS TO PREVENT AIR LEAKAGE. USE ROLL PRODUCTS WHICH HAVE VOC FREE BUTAL LAMINATED TO A FACING WHICH HAS A UL 181 LISTING. STANDARD "DUCT TAPE" IS NOT ACCEPTABLE.  
5. THERMOSTATS: IF NEW REQUIRED, PROVIDE LUX MOD# PSPA711. EQUAL BY HONEYWELL. THESE ARE DUAL SETBACK, 7-DAY PROGRAMMABLE, HEATING AND COOLING, WITH BATTERY BACKUP. MAKE SURE CONTROL WIRING FOR BOTH HEATING AND COOLING GETS TO STAT LOCATIONS.  
6. INSULATION OF DUCTWORK: ALL DUCTWORK INSTALLED IN NON-CONDITIONED SPACE SHALL BE WRAPPED WITH FIBERGLASS INSULATION BATTS WITH VAPOR BARRIERS. MIN. INSUL. VALUE SHALL BE R-19.  
7. EXHAUST FANS AND VENTS: ALL VENTS SHALL BE DIRECT TO THE EXTERIOR THROUGH WALL OR ROOF VENT CAPS PROVIDED WITH BACK DRAFT PREVENTION. ALL DUCTWORK SHALL BE METALLIC. NO VENTING INTO ATTICS OR SOFFITS ALLOWED.

**ELECTRICAL SYSTEM NOTES:**

- 1. ALL WORK IN ACCORDANCE WITH THE LOCAL AND NATIONAL ELECTRICAL CODE. ELECTRICAL CONTRACTOR SHALL PROVIDED AN UNDERWRITER'S CERTIFICATE AT THE CONCLUSION OF WORK.  
2. ELECTRICAL CONTRACTOR SHALL COMPLETE HIS PART OF THE BUILDING PERMIT APPLICATION. IF MUNICIPALITY REQUIRES LOAD CALCULATIONS OR DIAGRAMS, THEN ELECTRICAL CONTRACTOR SHALL PROVIDE.  
3. LAMPING: ALL NEW FIXTURES SHALL HAVE THE APPROPRIATE LAMP INSTALLED.  
4. SCOPE OF WORK: IN THE MASTER BATH, ESSENTIALLY REPLACE THE EXISTING FIXTURES AND DEVICES WITH NEW. IN THE CLOSET AREAS, INSTALL NEW.  
5. THE ELECTRICIAN SHALL DO ALL CIRCUIT & LOAD DISTRIBUTION DESIGN. MARK NEW WORK IN THE DISTRIBUTION PANEL. SEPARATE POWER CIRCUITS FROM LIGHTING CIRCUITS. DO NOT MAXIMIZE CIRCUIT CAPACITY. INSTEAD MAXIMIZE CLARITY OF ORGANIZATION FOR THE OWNER. DESIGN CIRCUITS SUCH THAT THERE IS 1 BREAKER PER ROOM FOR POWER, LIGHTING MAY BE MORE THAN A SINGLE ROOM, BUT SHALL BE INTELLIGENT ZONES.  
6. FOR OWNER'S APPROVAL, BEFORE WORK BEGINS, SUBMIT CATALOG CUTS FOR ALL FIXTURES, APPLIANCES, DEVICES, SWITCHES, ETC.  
7. ALL HOLES DRILLED INTO TOP OR BOTTOM WALL PLATES, INTERIOR AND EXTERIOR, SHALL BE SEALED, USE EXPANDABLE FOAM TO PREVENT VERTICAL PASSAGE OF AIR.  
**SMOKE DETECTOR SYSTEM:**

- 1. LOCATIONS SHOWN ARE THE GENERALLY PERCEIVED MINIMUM TO SECURE A BUILDING PERMIT. MANY MUNICIPALITIES HAVE ADDED SPECIAL LOCAL AMENDMENTS NOT PUBLISHED IN THE NATIONAL CODES. THEREFORE, THE LOCAL PLAN REVIEWER MAY REQUIRE ADDITIONAL LOCATIONS AND REQUIREMENTS.  
2. INTERNATIONAL RESIDENTIAL CODE SECTION R313 REQUIRED LOCATIONS: IN EACH SLEEPING ROOM AND OUTSIDE EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, PLUS ONE ON EACH ADDITIONAL STORY.  
3. SYSTEM SPECIFICATIONS: DETECTORS MUST BE HARDWIRED TO A CONSTANT POWER SOURCE AND MUST BE ELECTRONICALLY INTERCONNECTED, SO THAT IF ANY DETECTOR SENDS AN ALARM SIGNAL, THEN ALL DETECTORS SOUND THE ALARM. DETECTORS SHALL HAVE AN EMERGENCY BACKUP POWER SOURCE, GENERALLY BATTERIES. SYSTEMS ARE AVAILABLE USING EITHER 120V DEDICATED LINE VOLTAGE CIRCUITS OR LOW VOLTAGE.  
4. AIR BARRIER: THE ENERGY CONSERVATION CODE NOW REQUIRES AN "AIR BARRIER." THIS IS BECAUSE ONE-THIRD OF HEAT LOSS IS DUE TO INFILTRATION. WHEN STUD CAVITIES ARE FILLED WITH FIBEROUS INSULATION, A WIND SPEED OF AS LITTLE AS 5-MPH CAN INDUCE A CIRCULAR AIR FLOW WITHIN EACH CAVITY ACCELERATING HEAT LOSS AND DRAMATICALLY REDUCING THE ASSUMED R-VALUE. THE LABOR INTENSIVE METHOD OF INSTALLING BATTS ALSO CONTRIBUTES TO LESS THAN PERFECT INSTALLATIONS.

**ELECTRICAL: ROUGH-IN AND PREP FOR ROOF MOUNTED SOLAR PV PANELS:**

- 1. THIS HOUSE HAS A NICE BIG SOUTH FACING FRONT ROOF SLOPE.  
2. SOLAR PHOTOVOLTAIC PANELS (ELECTRICAL) ARE FAST BECOMING AFFORDABLE, AND IT COULD BE PREDICTED SIMPLE "PLUG AND PLAY" SYSTEMS WILL BE AVAILABLE THROUGH HOME IMPROVEMENT STORES IN LESS THAN 5 YEARS.  
3. RECOMMENDED OPTION IS TO ROUGH IN THE CONDUIT NOW TO CREATE THE "PATH" MAKING THIS EASY WHEN THE APPROPRIATE TIME ARRIVES.

DATE	
JULY 13, 2012	
OCT. 05, 2012	
DEC. 01, 2012	
REVISION DESCRIPTION	
START UP	
PROGRESS PRINTING	
UPDATED	
REV. #	

ONLY VALID FOR PERMITS w/ EMBOSSED SEAL & ORIGINAL RED SIGNATURE

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