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 | \$ 1,000,000.00 |
|------------------------------|-----------------------------------|---------------------|
| | PRODUCTS - COMP / OP AGGREGATE | \$ 1,000,000.00 |
| | EACH OCCURRENCE | \$ 1,000,000.00 |
| | FIRE DAMAGE (ANY ONE FIRE) | \$ 100,00.00 |
| | MED. EXPENSE (ANY ONE PERSON) | \$ 5,000.00 |
| AUTOMOBILE LIABILITY | SINGLE COMBINED LIMIT | \$ 250,000.00 |
| WORKMAN'S COMPENSATION | | STATUTORY LIMITS |
| GENERAL "UMBRELLA" | | \$ 2,000,000.00 |

- 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.
- 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 ARE REQUIRED TO BE LICENSED OR REGISTERED WITH THE STATE OF
- 3. ALL CONTRACTORS AND TRADESMEN ARE EXPECTED TO BE CURRENT WITH REGULATORY CODES AND HAVE COPIES FOR REFERENCE AS REQUIRED. TO OBTAIN: SEE THE INTERNATIONAL CODE COUNCIL.
- 4. FOR RESIDENTIAL WORK, THE CODES WHICH APPLY ARE: NEW JERSEY UNIFORM CONSTRUCTION CODE, INCLUDING BY REFERENCE INTERNATIONAL RESIDENTIAL CODE, 2009 ICC ELECTRICAL CODE, 2009 (UTILIZES NATIONAL ELECTRIC CODE STANDARDS) INTERNATIONAL ENERGY CONSERVATION CODE, 2009

AS-BUILT DOCUMENTS

1. 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 6C'S FILE.

GENERAL NOTES, WARRANTEE:

- . 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 DETAILED OR SPECIFIED ALL ASPECTS OF THE WORK WHICH ARE A "COMMONLY UNDERSTOOD CONSTRUCTION PRACTICE". IF INTERPRETATIONS OR CLARIFICATIONS ARE REQUIRED, THE CONTRACTOR(5) SHALL SECURE SUCH INFORMATION FROM THE ARCHITECT OR THE OWNER BEFORE PROCEEDING
- 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.
- 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 IS COMPENSATED 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 WILL PREPARE AND APPLY FOR ALL REQUIRED CONSTRUCTION PERMITS. INCLUDING ZONING, BUILDING, ENERGY CONSERVATION, AND TRADES (PLUMBING, HVAC, ELECTRICAL). CONTRACTOR SHALL START THE PERMIT PROCESS AND MAINTAIN THE RESPONSIBILITY FOR COORDINATION & INSPECTIONS THROUGHOUT THE PROJECT.
- 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.
- 3. THE ARCHITECT'S DRAWINGS DESCRIBE THE: A) THE DESIGN INTENT: B) THE STRUCTURAL SYSTEM; C) THE EXTERIOR ENVELOPE; D) LIFE-SAFETY SYSTEMS, E) AND ENERGY CONSERVATION REQUIREMENTS. IN GENERAL, THE ARCHITECT IS DESCRIBING THE OVERALL BUILDING SHELL, AND LOCATING THE MAJOR FIXTURES AND EQUIPMENT. THE ARCHITECT IS NOT PROVIDING PERFORMANCE SPECIFICATIONS FOR TRADE WORK.
- 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.

FIELD CHANGES:

WHEN CHANGES AFFECT THE STRUCTURAL OR BUILDING SHELL, THOSE CHANGES SHALL BE DIRECTED TO THE ARCHITECT PROMPTLY IN WRITING FOR REVIEW AND APPROVAL.

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
- 2. MINIMUM STAIR HEADROOM SHALL NOT BE LESS THAN 80" MEASURED VERTICALLY FROM THE TREAD NOSING, THE SAME APPLIES TO LANDINGS.
- 3. PROFILE: MATCH THE EXISTING RISER AND TREAD EXACTLY.
- 4. STAIRS SHALL BE DESIGNED TO SUPPORT A UNIFORMLY DISTRIBUTED LIVE LOAD OF 40 PSF, AND/OR THE TREADS SHALL BE ABLE TO SUPPORT A CONCENTRATED LOAD OF 300 POUNDS APPLIED OVER A 4 SQ.INCH AREA, WHICHEVER PRODUCES THE GREATER STRESS.
- 5. LANDINGS: AT THE TOP AND BOTTOM OF STAIRS SHALL BE A LANDING OF EQUAL WIDTH TO THE STAIR SERVED, AND MIN. DEPTH OF 36" MEASURED IN THE DIRECTION OF TRAVEL. A LANDING IS NOT REQUIRED AT THE TOP OF INTERIOR STAIRS, PROVIDED NO DOOR SWINGS OVER THE STAIR.
- 6. HEIGHT OF VERTICAL TRAVEL: NO STAIR SHALL RISE MORE THAN 144" VERTICAL WITHOUT
- 7. HANDRAILS HAVING MINIMUM AND MAXIMUM HEIGHTS OF 34 INCHES AND 38 INCHES RESPECTIVELY, MEASURED VERTICALLY FROM THE NOSING OF THE TREADS, SHALL BE PROVIDED ON AT LEAST ONE SIDE OF STAIRWAYS OF FOUR (4) OR MORE RISERS.
- 8. REQUIRED HANDRAILS SHALL BE CONTINUOUS THE FULL LENGTH OF THE STAIRS FROM A POINT DIRECTLY ABOVE THE TOP AND BOTTOM RISER. ENDS SHALL BE RETURNED TO THE WALL OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS. HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1.5" BETWEEN THE WALL AND THE HANDRAIL
- 9. 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
- 10. GUARDRAILS: PORCHES, STAIR LANDINGS, BALCONIES OR RAISED FLOOR SURFACES LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDRAILS NOT LESS THAN 36 INCHES IN HEIGHT. OPEN SIDES OF STAIRS WITH A TOTAL RISE OF MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDRAILS NOT LESS THAN 34 INCHES IN HEIGHT MEASURED VERTICALLY FROM THE NOSING OF THE TREADS.

- 11. GUARDRAILS SHALL HAVE INTERMEDIATE RAILS (BALUSTRADE) OR ORNAMENTAL CLOSURES WHICH DO NOT ALLOW THROUGH PASSAGE OF AN OBJECT OF 4-INCH DIAMETER OR MORE.
- 12. EXCEPTION: THE TRIANGULAR OPENING FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF A GUARDRAIL AT THE OPEN SIDE OF A STAIRWAY SHALL BE PERMITTED TO BE OF A SIZE THAT A SPHERE 6-INCHES IN DIAMETER CANNOT PASS THROUGH
- 13. HANDRAIL AND GUARDRAIL DESIGN SHALL BE OF SUFFICIENT STRENGTH TO RESIST A SINGLE CONCENTRATED LOAD OF 200 POUNDS APPLIED IN ANY DIRECTION ALONG THE TOP. INFILL BALUSTRADES SHALL BE DESIGNED TO RESIST A HORIZONTALLY APPLIED LOAD OF 50 POUNDS APPLIED ON AN AREA OF 1 SQ.FT., WHERE DEFLECTION OF ALL MEMBERS (HORIZONTAL AND VERTICAL) SHALL BE LIMITED TO L/240.

WOOD FRAMING "BASIC" (FOR SECOND FLOOR ADDITION)

- 1. STANDARDS: ALL ROUGH CARPENTRY TO COMPLY WITH "MANUAL OF HOUSE FRAMING" BY NATIONAL FOREST PRODUCTS ASSOC., THE 2009 ICC RESIDENTIAL CODE, AND WITH RECOMMENDATIONS OF AMERICAN PLYWOOD ASSOC.
- STRUCTURAL LUMBER (WALL STUDS, FLOOR CEILING JOISTS, RAFTERS) OF NOMINAL 2" THICKNESS SHALL BE KILN DRIED (MAX. 19% MOISTURE CONTENT) #2 HEM-FIR WITH MIN.
- 3. ALL WOOD, IN PARTICULAR SILL PLATES, IN CONTACT WITH MASONRY SHALL BE PRESSURE TREATED. ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD TO BE STAINLESS STEEL OR HEAVY HOT DIPPED GALVANIZED.
- 4. PROVIDE TWO (2) FLOOR JOISTS DIRECTLY BELOW PARALLEL WALLS AND PARTITIONS ABOVE. IF WALLS ABOVE ARE CHASES FOR PIPES OR DUCTS, PUT JOISTS EITHER SIDE AND INSTALL SOLID BLOCKING AT 16" O.C. MIN. ALSO, PROVIDE ONE (1) ADDITIONAL JOIST 8" INSIDE OF ROOMS ABOVE TO TAKE FURNITURE AND BOOKCASE LOADS AT ROOM PERIMETERS PARALLEL TO FLOOR FRAMING.
- 5. ALL FLOORS AND ALL CEILING JOISTS SHALL BE "BRIDGED" WITH SOLID BLOCKING, FULL DEPTH, STAGGERED, AS FOLLOWS: SPANS > TO 14', PROVIDE 2 ROWS: SPANS > TO 06', PROVIDE 1 ROW.
- 6. IF EXISTING DIAGONAL "BRIDGING" IS FOUND, THEN REPLACE WITH SOLID BLOCKING AS DESCRIBED ABOVE.
- 7. ALL RAFTERS TO BE SOLIDLY BLOCKED ALONG THE TOP PLATE OF EXTERIOR WALLS. 8. STUDS IN UPPER FLOORS SHALL ALIGN WITH LOWER FLOORS. THIS IS TO ALLOW FOR
- CONTINUITY OF ANCHORAGE WITH STRAPS FROM FLOOR TO FLOOR 9. WALL SHEATHING & WIND BRACING: ALL WALLS SHALL BE COMPLETELY SHEATHED WITH APA RATED, 4-PLY, 1/2 INCH THICK PLYWOOD. VERTICAL SHEATHING JOINTS SHALL BE FULLY SUPPORTED ON STUDS. NAILING, USING 8D COMMON NAILS, ALL AROUND SHEET PERIMETERS SHALL BE 4" O.C., INTERIOR FIELD NAILING SHALL BE 6" O.C. NOTE: NAILS IN
- 10. 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 JOINTS SHALL BE FULLY SUPPORTED.
- 11. ROOF SHEATHING: SHALL BE EXTERIOR GRADE PLYWOOD, MIN. 1/2" THICK WITH RAFTER SPACING OF 16" O.C. SEE NOTES ABOUT RADIANT BARRIERS. NAIL SAME AS WALL SHEATHING. IN LIEU OF SOLID SUPPORT EDGE BLOCKING, PROVIDE TWO (2) SIMPSON STRONG-TIE "PSCL" SHEATHING CONTINUITY CLIPS IN EACH RAFTER BAY AT JOINTS BETWEEN SHEATHING.

THE PRESSURE TREATED SILL PLATE MUST BE STAINLESS STEEL OR HOT DIPPED

12. LUAN UNDERLAYMENTS SHALL ALL BE CERTIFIED AS FABRICATED WITH EXTERIOR GRADE

DESIGN LOADS THE PROJECT HAS BEEN DESIGNED WITH THESE LOADS

| git alde his manuscome and additional manuscome and a second side of the second | ROOFS | FLOORS | FLOORS | ATTIC FLOOR | BALCONIES /DECKS |
|---|---------------------|----------------------------|-------------------------------|-------------------------|--|
| DESIGN LOADS | ASPHALT SHINGLES | WOOD, CARPET OR VCT, | CERAMIC, SLATE OR STONE | UNFINISHED SHEATHING | NONE |
| DEAD LOAD (PSF) | 20 | 15 | 20 | 10 | |
| LIVE LOAD (PSF) | 30 | 40 | 30 | 10 | Annous accounted point things are more activities |
| TOTAL (PSF) | 50 | 55 | 50 | 20 | CONTRACTOR AND |

WOOD FRAMING & "CONTINUOUS LOAD PATH" ANCHORAGE

- 1. IN A RENOVATION OR ADDITION MAKE SURE NEW WORK IS ANCHORED TO EXISTING AS BEST MEETS INTENT BELOW. THE CODE UNDERSTANDS THAT THE SCOPE OF NEW WORK MAY NOT REVEAL OR MAY NOT "CURE" ALL EXISTING DEFICIENCIES.
- CODE REFERENCE R301.1 THE CONSTRUCTION OF BUILDING AND STRUCTURES SHALL RESULT IN A SYSTEM THAT PROVIDES A COMPLETE LOAD PATH CAPABLE OF TRANSFERRING ALL LOADS FROM THEIR POINT OF ORIGIN THROUGH THE LOAD-RESISTING ELEMENTS TO THE FOUNDATION. 3. THE CONTINUOUS LOAD PATH ANCHORAGE REQUIREMENTS ARE THE ICC BUILDING CODE'S
- METHOD OF ACHIEVING A MINIMUM, FIELD OBSERVABLE, BUILDING FRAME "STIFFENING" AND "ANCHORAGE" SYSTEM. THE GOAL IS SAFER STRUCTURES, BETTER ABLE TO RESIST LOCAL WIND AND SEISMIC ACTIVITY. THE BASIC CONCEPT USES A CONTINUOUS "LINE" OF BUILDING ELEMENTS, SUCH AS WALL STUDS, AND MECHANICAL ANCHORS LINKING THE ROOF RIDGES TO FOUNDATION WALL FOOTING. IMAGINE THE BUILDING LIKE A BIG TENT. WITH "GUY WIRES" FROM THE ROOF RIDGE TO THE GROUND. 4. FOR MOST BUILDINGS. A CONSISTENT RHYTHM OF COMPLETELY LINEAR LINES OF
- CONNECTIVITY CANNOT BE ACHIEVED BECAUSE THINGS GET IN THE WAY, SUCH AS DOORS AND WINDOWS. HOWEVER, THE CODE DESCRIBES AN "INTENT." IT IS THE CONTRACTOR'S RESPONSIBILITY TO INTERPRET AND MAKE EVERY REASONABLE EFFORT TO ACHIEVE THE GOAL BY USING THE COMPONENTS DESCRIBED, IN THE QUANTITIES PRESCRIBED, AND IN THE LOCATIONS REST SUTTED. 5. WALL AND ROOF SHEATHINGS CREATE CONTINUOUS "DIAPHRAGMS," THESE HELP PREVENT
- BUILDING RACKING AND TWISTING. USE "APA" RATED MATERIALS. SHEATHING MATERIAL MUST HAVE GOOD QUALITIES TO ABSORB THE REQUIRED NAILING WITHOUT BREAKING. RESIST TEARING, AND HAVE GOOD NAIL RETENTION. INSTALL THE LARGEST POSSIBLE SIZE SHEETS. STAGGER JOINTS, SUPPORT ALL JOINTS PROPERLY, AND NAIL IT WELL. 6. CORNERS ARE IMPORTANT: MAKE A STRONG BUILDING BY MAKING STRONG CORNERS. INSTALL ANCHORS AS CLOSE AS POSSIBLE TO BOTH SIDES OF EACH CORNER.
- 7. THE SYSTEMS MECHANICAL PLATES AND CONNECTORS CAN BE INSTALLED ON EITHER THE INSIDE OR OUTSIDE FACE OF THE STUDS, HOWEVER IT MUST BE CONSISTENT THROUGHOUT. (THIS ARCHITECT BELIEVES IT IS BEST ON THE INSIDE FACE OF WOOD STUD WALLS. RAFTER TO TOP PLATE CONNECTIONS ARE MUCH EASIER. USE SAW-ALL TO SLOT PLYWOOD DECKING FOR THE FLOOR TO FLOOR STRAPS, COVER WITH THE INTERIOR GYPSUM ROARD)
- 8. IT ALL LINKS TOGETHER: THE FOUNDATION WALL IS ANCHORED TO THE FOUNDATION FOOTING: THE WALL IS MADE "MONOLITHIC:" THE BOTTOM WALL PLATES ARE ANCHORED TO THE FOUNDATION WALL: THE BOTTOM PLATES ARE THEN ANCHORED TO THE WALL STUD FRAMING ABOVE; UPPER FLOOR WALLS ARE STRAPPED TO LOWER WALLS: THE TOP WALL PLATES ARE ANCHORED TO THE WALL STUD FRAMING BELOW; THE RAFTERS ARE ANCHORED TO THE TOP WALL PLATE; AND FINALLY THE RATERS ON BOTH SIDES ARE STRAPPED TOGETHER AT THE TOP OF THE ROOF RIDGE.
- 9. FOR BUILDINGS WITH ROOF AND FLOOR SPANS OF LESS THAN 20 FEET, THIS STARTS WITHIN AS CLOSE AS POSSIBLE TO EXTERIOR CORNERS (BOTH SIDES), AND THEN RE-OCCURS ALONG WALLS AT NOT GREATER THAN 48 INCH INTERVALS.
- 10. ALL PRODUCTS REFERENCED HEREIN AND TO BE USED ON THIS JOBSITE ARE BY SIMPSON STRONG-TIE BECAUSE THEY SUPPORT THE INDUSTRY WITH EXTENSIVE TESTING, EDUCATION, AND FIELD SUPPORT. ALL ANCHORS SHALL BE INSTALLED PER MFG'S. RECOMMENDATIONS, BE ATTENTIVE TO NAIL SIZES AND LENGTHS. THE SIMPSON CATALOG SHALL BE ON THE JOBSITE, NO ALTERNATE MANUFACTURERS ARE ALLOWED.
- 11. SILL PLATE ANCHORING: SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WALL AS FOLLOWS: ANCHOR BOLTS SHALL BE MIN. ONE-HALF INCH DIAMETER DEFORMED OR THREADED ROD WITH MIN. EMBEDMENT OF 7 INCHES INTO CONCRETE OR SOLID FILLED MULTI COURSE MASONRY, THE WASHER IN CONTACT WITH THE SILL PLATE SHALL BE MIN. 2 INCHES SQUARE AND 1/8" THICK. AT BLDG. CORNERS, OR THE END OF SILL PLATE SECTIONS, THE ANCHOR BOLT SHALL NOT BE MORE THAN "7 DIAMETERS" (3-1/2") FROM ENDS. IN ADDITION, ANCHORS SHALL BE PLACED ALONG WALLS AT INTERVALS NOT EXCEEDING 48 INCHES. IF ANCHOR BOLTS ARE "CAST" INTO THE FOUNDATION WALL AND "MISS" THESE OBJECTIVES, THEN SUPPLEMENT AS REQUIRED BY DRILLING AND SETTING EPOXY BOLTS OR SIMPSON "TITEN HD" MASONRY SCREWS.
- 12. NOTE, IT IS PRACTICAL TO BUILD THE WALL AS REQUIRED FOR OPENINGS, THEN DETERMINE THE BEST ANCHOR LOCATIONS. USE OF THE SIMPSON "TITEN HD" WOOD SCREWS, ALLOWS ANCHORS CLOSER TO CORNERS AND BETTER COORDINATION WITH "UPLIFT" SILL PLATE TO WALL ANCHORS.
- 13. WIND BRACING "UPLIFT": A) SILL PLATE TO WALL STUD ANCHORAGE: USE SIMPSON #SSP WITH Z-MAX HOT DIPPED GALVANIZED COATING (BECAUSE OF PRESSURE TREATED PLATE. ALSO USE STAINLESS STEEL NAILS). USE A PAIR (INSIDE AND OUT) LOCATED AT BLDG. CORNERS. THEN SINGLE UNITS AT SPACING NOT EXCEEDING 48" O.C. (SAME AS FOUNDATION ANCHOR BOLTS). B) WALL STUD TO TOP DOUBLE PLATE. USE SAME PRODUCT AT THE SILL PLATE TO WALL STUD ANCHOR, LOCATED ON THE SAME STUD. THESE TOP AND BOTTOM ANCHORS SHOULD BE IN "ALIGNMENT."
- 14. WALL-TO-WALL ANCHORAGE: WHERE WALLS CONTINUE ABOVE A FLOOR DECK, THE CONTINUITY OF UPLIFT ANCHORAGE SHALL BE MAINTAINED. UPPER WALL STUDS MUST BE LOCATED INLINE WITH LOWER WALL STUDS. USING THE SAME STUDS WHICH HAVE THE SILL PLATE TO STUD ANCHORS, INSTALL SIMPSON #CS STRAPS
- 15. WALL TO RAFTER ANCHORAGE: EVERY RAFTER SHALL BE ANCHORED TO THE WALL TOP PLATE USING ONE "HURRICANE CLIP", SIMPSON #H2.5A. ALL CEILING JOISTS (OR FLOOR JOISTS) SHALL BE SECURELY NAILED TO THE RAFTER.
- 16. RAFTER TO RIDGE BEAM (OR OTHER EXISTING STRUCTURE): USE SIMPSON #LSTA STRAPS.

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
- A. 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
- B. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, SOFFITS OVER CABINETS, DROP CEILINGS, COVE CEILINGS, ETC
- C. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF RUN; D. IN EXTERIOR CORNICES AND OTHER EXTERIOR ARCHITECTURAL ELEMENTS WHERE PERMITTED OF COMBUSTIBLE CONSTRUCTION OR WHEN ERECTED WITH COMBUSTIBLE FRAMES, AT MAX. INTERVALS OF 20 FT. IF NONCONTINUOUS, THEY SHALL HAVE
- CLOSED ENDS, WITH AT LEAST 4" OF SEPARATION BETWEEN SECTIONS. E. IN THE SPACE BEHIND COMBUSTIBLE TRIM AND FINISH WHERE PERMITTED AND ALL OTHER HOLLOW SPACES WHERE PERMITTED IN FIRE RESISTANCE RATED CONSTRUCTION AT 10' INTERVALS: OR THE SPACE SHALL BE COMPLETELY FILLED WITH NONCOMBUSTIBLE MATERIALS.
- F. 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. G. AT OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS AND FIREPLACES AT CEILING
- AND FLOOR LEVELS, WITH NONCOMBUSTIBLE U.L. RATED SYSTEMS AND MATERIALS. 3. 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
- 4. FIRESTOPPING AT CHIMNEYS AND FIREPLACES: WHERE A "SPACE" MUST BE MAINTAINED BETWEEN COMBUSTIBLE MATERIALS INSTALL FOLDED METAL PANS TO STOP FLOW OF AIR BETWEEN FLOORS AND INTO OTHER VOIDS.
- 5. THE INTEGRITY OF ALL FIRESTOPS SHALL BE MAINTAINED AND SHALL NOT BE CONCEALED UNTIL INSPECTED AND APPROVED.

PREFABRICATED WOOD TRUSSES (OPTIONAL FOR ROOF FRAMING)

APPROVED MATERIALS SECURELY FASTENED IN PLACE.

- 1. STANDARD: SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES PUBLISHED BY TRUSS PLATE INSTITUTE (TPI). QUALITY CONTROL MANUAL PUBLISHED BY TPI.
- 2. WOOD STRUCTURAL DESIGN STANDARD: NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION PUBLISHED BY N.F.P.A.
- 3. LUMBER: PROVIDE LUMBER GRADED BY A RECOGNIZED AGENCY, WITH RULES AND SERVICE COMPLYING WITH REQUIREMENTS OF AMERICAN LUMBER STANDARDS COMMITTEE AND PS 20. USE ONLY LUMBER PIECES WHICH BEAR INSPECTION SERVICE GRADE MARK.
- 4. FABRICATOR'S QUALIFICATIONS: MINIMUM OF 3 YEARS EXPERIENCE IN SUCCESSFUL FABRICATION OF TRUSSES COMPARABLE TO TYPE INDICATED FOR THIS PROJECT.
- 5. SHOP DRAWINGS: PROVIDE, SHOWING SPECIES, SIZES AND STRESS GRADES OF LUMBER TO BE USED: PITCH, SPAN, CONFIGURATION AND SPACING FOR EACH TYPE OF TRUSS REQUIRED, TYPE, SIZE, MATERIAL, FINISH, DESIGN VALUES, AND LOCATION OF METAL CONNECTOR PLATES; AND BEARING AND ANCHORAGE DETAILS SHALL BE SUBMITTED FOR REVIEW BY ARCHITECT BEFORE FABRICATION OF TRUSSES.
- 6. CERTIFICATION: SHOP DRAWINGS MUST BEAR THE SEAL OF A NEW JERSEY REGISTERED PROFESSIONAL ENGINEER.
- 7. LOADING: LIVE + DEAD LOADS
 - TOP CHORD ROOF TRUSSES LIVE LOAD 30 PSF + DEAD LOAD TRUSSES + SHEATHING AND ROOFING @ 12 PSF

BOTTOM CHORD ROOF TRUSSES - NO STORAGE AND DRYWALL @ 10 PSF

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.

MINIMUM INSULATION REQUIREMENTS:

- . USING "PRESCRIPTIVE METHOD." SHOWN BELOW ARE THE MINIMUM INSULATION LEVELS REQUIRED. TO SATISFY THE 2009 INTERNATIONAL RESIDENTIAL CODE. THE "PRESCRIPTIVE METHOD" IS VISUALLY FIELD VERIFIABLE, AND IS BASED SOLELY ON THE ACTUAL INSULATION MATERIALS INSTALLED.
- 2. PROJECT IS IN THE BORDER AREA BETWEEN CLIMATE ZONE 4 & 5, HIGHER VALUES ARE SHOWN. NOTE: THESE ARE MINIMUMS, HIGHER VALUES MAY BE PRUDENT. INSULATION SYSTEMS WHICH ARE MOST EFFECTIVE IN DEFEATING "AIR INFILTRATION" ARE HIGHLY RECOMMENDED. AIR INFILTRATION IS A MAJOR FACTOR IN DETERMINING THE EQUIPMENT SIZING OF HVAC SYSTEMS. OTHER COST SAVING MAY ALSO BE ACHIEVED.
- 3. WHEN BUILDINGS ARE MADE HIGHLY RESISTANT TO AIR INFILTRATION, THEN FRESH AIR EXCHANGE SYSTEMS ARE RECOMMENDED. SEE OTHER HVAC NOTES.

| LOCATION | MIN. INSULATION FACTOR | DESCRIPTION |
|--------------------------------|------------------------------|---|
| GLAZING | U-0.35 MAX. | THIS IS WINDOWS AND DOOR GLAZING. UNITS MUST DISPLAY THE MANUFACTURE'S DATA |
| SKYLIGHTS | U-0.60 MAX. | SKYLIGHT UNITS MUST DISPLAY THE MFG'S DATA |
| CEILINGS | R-38 | THIS IS THE HIGHEST CEILING UNDER THE ATTIC DECK, IF A "FLAT" ROOF OR CATHEDRAL CEILING THIS IS THE RATING REQUIRED IN THE RAFTERS |
| WALLS | R-20 | THIS IS PERIMETER ABOVE GRADE EXTERIOR WALLS. |
| FLOORS | R-30 | WHEN THE FLOOR IS OVER AN NON-INSULATED BASEMENT OR CRAWLSPACE. CAREFUL ATTENTION IS RECOMMENDED AT THE EXTERIOR FLOOR PERIMETER (THE RIBBON BAND) WHERE THE INSULATION SHOULD BE INSTALLED SIMILAR TO WALLS WITH VAPOR BARRIER FACING THE WARM OR INTERIOR SIDE. |
| BASEMENT PERIMETER WALLS | R-10 / 13 | WHEN THE BASEMENT IS A CONDITIONED, OR OCCUPIED SPACE THIS RATING IS REQUIRED. IF THE BASEMENT PERIMETER IS INSULATED, THEN THE FLOOR ABOVE IS NOT REQUIRED TO BE INSULATED. INSULATION SHALL EXTEND FROM THE BOTTOM OF THE FLOOR DECK ABOVE TO THE BASEMENT FLOOR. |
| SLAB PERIMETER | R-10 | SLABS MUST BE SEPARATED FROM THE EARTH BY THIS RATING FOR A MINIMUM DISTANCE OF 24" EITHER VERTICALLY AGAINST THE FOUNDATION WALL, OR HORIZONTALLY UNDER THE SLAB IN FROM THE EXTERIOR. (NOTE: THIS ARCHITECT RECOMMENDS 36", OR MORE, AS THE MIN. DISTANCE FOR REAL ENERGY SAVING) |
| CRAWLSPACE WALLS | R-10 / 13 | IF THE FLOOR ABOVE IS NOT INSULATED, AND IF A CRAWLSPACE IS NOT VENTED TO THE EXTERIOR, THEN THIS RATING IS REQUIRED. INSTALL SIMILAR TO DESCRIPTION FOR BASEMENT WALLS. |

RADIANT BARRIER

1. RADIANT BARRIERS ARE REFLECTIVE FILMS, PAINTS, MEMBRANES, ETC., WITH THE PURPOSE OF REFLECTING AWAY THE SUN'S RADIANT (HEAT) ENERGY. INSTALLED IN BUILDINGS, MANUFACTURES ARE CLAMING 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.

RECOMMENDATIONS. DO CAREFUL COORDINATION WITH THE LOCAL REPRESENTATIVE.

SURFACE COVERAGE DOES NOT HAVE TO BE PERFECT. ACHIEVE BEST COVERAGE AS IS

- SHEATHING OPTION: SOME MANUFACTURERS ARE PROVIDING WALL AND ROOF SHEATHING WITH A FACTORY APPLIED FOIL FACE, HOWEVER SPRAY FOAM INSULATIONS MAY NOT ADHERE TO THESE FOTL FACES. 3. PAINT PRODUCT OPTION: SHERWIN WILLIAMS "E-BARRIER," APPLY PER MANUFACTURER'S
- 4. SURFACES TO RECEIVE BARRIER: UNDERSIDE OF ALL ROOF SHEATHING. INSIDE SURFACE ALL ATTIC GABLE WALLS, ESPECIALLY SOUTH AND WEST FACING.

INSIDE SURFACE ALL SOUTH AND WEST FACING OCCUPIED ROOM WALLS.

PRACTICAL. THIS IS A SOFT METALLIC FINISH, AND SPRAY FOAMS WILL ADHERE.

FIBERGLASS ROOF SHINGLE SYSTEM

- 1. WIND RESISTANCE U.L. INC. LISTING CLASS "A". FIRE RATING: U.L. INC. LISTING CLASS "A". WEIGHT MIN. 200 LBS./SQUARE MIN. EXPOSURE MANUFACTURER'S RECOMMENDATIONS, HEAD CAP 2" MINIMUM. SUBMIT TECHNICAL PRODUCT DATA, INSTALLATION INSTRUCTIONS, AND RECOMMENDATIONS. PROVIDE FULL RANGE OF SAMPLES OF COLOR AND TEXTURE FOR OWNER'S SELECTION. PROVIDE SHINGLE MANUFACTURER WARRANTY ON INSTALLED WORK. PERIOD OF WARRANTY IS 30 YEARS FROM DATE OF SUBSTANTIAL COMPLETION. COLOR RECOMMENDED SHALL BE A "GREY/BLUE" WEATHERED WOOD SHAKE REPLICATION. COLOR AND MFG. SHALL BE CONFIRMED BY
- 2. MAINTENANCE STOCK SHALL BE 2% OF EACH TYPE/COLOR/TEXTURE OF SHINGLE USED IN THE WORK. DELIVER TO OWNER FOR STORAGE.
- 3. PROVIDE BLACK ALUMINUM METAL DRIP EDGES AT ALL, EAVE AND GABLE, ROOF EDGES. 4. FELT UNDERLAYMENT SHALL COMPLY WITH ASTM D 250. MIN. 30 LB.
- 5. ICE DAM PREVENTION MEMBRANE (ICE SHIELD) SHALL BE INSTALLED STARTING AT THE
- EAVE EDGE, AND EXTEND A MIN. 36" UP THE ROOF SLOPE, MEASURED FROM THE INTERIOR FACE OF THE WALL BELOW, SHALL BE COMPATIBLE WITH THE SHINGLE SELECTED.
- 6. VALLEY FLASHINGS SHALL BE EXPOSED METAL WITH MIN. 2" EXPOSURE UP EACH OPPOSING ROOF SLOPE. USE COPPER OR VERIFY OWNER'S APPROVAL FOR OTHER MATERIAL. USE ICE DAM MEMBRANE UNDER ALL VALLEYS.
- 7. ABUTTING ALL VERTICAL SURFACES, INSTALL METAL FLASHING (STEP WHEN REQUIRED), IN COMPLIANCE WITH RECOMMENDATIONS OF THE NRCA STEEP ROOF MANUAL. BUILD IN FLASHING AS WORK PROGRESSES, WORKING BETWEEN SHINGLES AS THEY ARE LAID. WHEREVER STEP FLASHINGS ARE REQUIRED, PROVIDE EXPOSED COUNTER FLASHING.
- 8. PLUMBING VENT STACK FLASHINGS, AND SIMILAR, SHALL BE NEW NEOPRENE BOOTS. NOTE "DOUBLE" (INSTALL TWO) ALL VENT STACK FLASHING BOOTS.

ATTIC VENTILATION

- 1. ATTICS REQUIRE VENTILATION TO MITIGATE THE BUILD UP OF MOISTURE ON THE UNDERSIDE OF THE ROOF SHEATHING, WHICH CAN THEN LEAD TO EARLY DETERIORATION OF THE ROOFING SUPPORT SYSTEM. THIS OCCURS WHEN THE CEILING OF THE FLOOR BELOW CANNOT TOTALLY PREVENT THE ESCAPE OF WARM MOISTURE LADEN AIR THROUGH THE INSULATION SYSTEM TO THE ATTIC.
- 2. THE TOTAL NET FEE VENTILATION AREA SHALL NOT BE LESS THAN 1 TO 150 OF THE HORIZONTAL AREA OF THE SPACE VENTILATED. THE OBJECTIVE IS TO REMOVE MOISTURE FROM ATTIC AREAS. THIS IS TO BE ACHIEVED BY INDUCING A FREE FLOW OF AIR WITHIN THE ATTIC. GENERALLY FROM BOTTOM TO TOP OF ATTIC VOLUME.
- 3. ONE-HAFT OF THE VENTILATION AREA SHALL BE PROVIDED BY CONTINUOUS RIDGE VENTS, OR ROOF VENTILATORS. CONTINUOUS RIDGE VENTS SHALL BE MANUFACTURED BY "AIR VENT INC.". THE PRODUCT SHALL BE INCLUDE AN EXTERIOR WIND BAFFLE, INSECT SCREENING, AND PROVIDE A MINIMUM FREE VENT AREA OF 18 SQ. INCHES PER LINEAR FOOT. WHERE RIDGE VENTS ARE NOT PRACTICAL, USE GRAVITY VENTILATORS, LOCATED AS HIGH AS POSSIBLE WHICH PROVIDE MIN. OF 51 SQ. INCHES OF FREE VENT AREA PER UNIT. THESE ARE TRADITIONALLY CALLED "P-51" UNITS.
- 4. ONE-HAFT OF THE VENTILATION AREA SHALL BE PROVIDED BY SOFFIT OR EAVE VENTS. CONTINUOUS SOFFIT VENTS SHALL BE MANUFACTURED BY "AIR VENT INC.", THE PRODUCT SHALL BE A CONTINUOUS STRIP VENT, ALUMINUM OR VINYL, INCLUDE INSECT SCREENING AND PROVIDE A MINIMUM FREE VENT AREA OF 9 SQ. INCHES PER LINEAR FOOT. THIS VENT STRIP SHALL BE CONTINUOUS THE ENTIRE LENGTH OF SOFFITS. NOTE: "PERFORATED" SOFFIT PANEL MATERIALS ARE GENERALLY NOT SUFFICIENT.
- 5. NON-VENTILATED ATTICS: ATTICS DO NOT REQUIRE VENTILATION WHEN THE INSULATION SYSTEM IS APPLIED DIRECTLY TO THE UNDERSIDE OF THE ROOF SHEATHING AND IF THE SYSTEM QUALIFIES AS A VAPOR BARRIER, AND MOVES THE DEW-POINT OUTSIDE THE BUILDING ENVELOPE. THE CAN BE ACCOMPLISHED USING CLOSED-CELL URETHANE SPRAY FOAM INSULATION SYSTEMS, OF SUFFICIENT THICKNESS. WHEN THESE SYSTEMS ARE USED, THE SOFFIT AND RIDGES ARE COVERED WITH INSULATIONS, AND NO SOFFIT VENTS OR RIDGE VENTS ARE USED. THE ATTICS BECOME PART OF THE LIVING ENVIRONMENT

WINDOWS:

- 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

REPLACEMENT EXTERIOR DOORS

OWNER WANTS.

- 2. JAMB TYPE: PRIMED FINGER JOINT (STANDARD), FRAME SAVER, ON-GUARD COMPOSITE,
- 3. GLAZING: CLEAR LOW-E, TRADITIONAL FIXED GRILLE FOR PAINT FINISH.
- 4. PAINT: DELIVER ALL FACTORY PRIMED.
- 5. SILL TYPE: ADA THERMAL BROKEN SILL 6. ARCHITECT'S RECOMMENDATION IS "FIBERGLASS SKIN" UNITS BY THERMA-THRU. STANLEY ALSO MAKES NICE UNITS. IMPORTANT FEATURES ARE GOOD WOOD STYLES TO MAKE HARDWARE EASY, YOU GET WHAT YOU PAY FOR.

PLUMBING: WITH PUBLIC WATER AND SANITARY SERVICE

- 1. PLUMBING SHALL BE DONE IN ACCORDANCE WITH MUNICIPAL STANDARDS AND CODE BY LICENSED PLUMBERS. 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. CONNECT NEW PLUMBING WORK SANITARY TO EXISTING LATERAL. SEE FOUNDATION PLAN. AT COMPLETION OF WORK "SNAKE" NEW AND EXISTING SANITARY LATERALS ALL THE WAY TO THE STREET MAIN TO ENSURE FULL FUNCTION AND NO BLOCKAGES DUE TO CONSTRUCTION DEBRIS OR FORGOTTEN TESTING PLUGS.
- 3. USE "BALL VALVES" ONLY FOR ABSOLUTELY EVERYTHING, NO GATE TYPE VALVES. TAKE PRECAUTIONS NOT TO LIMIT PRESSURE TO REMOTE LOCATIONS.
- 4. PROVIDE "SHOCK" RISERS AT ENDS OF MAINS. PROVIDE EXPANSION TANK ON HOT WATER 5. ALL WASTE PLUMBING IN AND BELOW THE SECOND FLOOR DECK AND BUILT INTO WALL
- CAVITIES SHALL BE COMPLETELY SURROUNDED WITH FIBERGLASS SOUND INSULATION. 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. BETTER, AVOID PIPES IN EXTERIOR WALLS. 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:

- 1. EXISTING CONDITIONS: THE HOUSE HAS A GAS FIRED HOT AIR FURNACE WITH ELECTRIC
- AC PACKAGE. ALL WILL REMAIN AS EXISTING. 2. NEW WORK, NEW ZONE: INSTALL NEW GAS FIRED HOT AIR FURNACE WITH ELECTRIC AIR
- 3. 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
- 4. SUBMITTALS: CONTRACTOR WILL PROVIDE HEAT GAIN AND HEAT LOSS CALCULATIONS TO DETERMINE EQUIPMENT AND DUCT SYSTEM SIZING. NOTE "SPRAY FOAM INSULATION SYSTEMS" AND RADIANT BARRIERS. SPRAY FOAM SYSTEMS SIGNIFICANTLY REDUCE INFILTRATION, THUS REDUCING EQUIPMENT SIZING.
- 5. NEW FURNACE TO HAVE SEALED COMBUSTION AIR INTAKE AND EXHAUST. PROVIDE INTEGRATED AIR CONDITIONING SYSTEM. ALL NEW EQUIPMENT TO HAVE ENERGY STAR RATINGS, WITH MIN AC SEER RATING OF 13 OR BETTER. 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. DUCTWORK: THE IBC 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. B. HVAC CLOSET(S) TO BE FULLY ENCLOSED IN FIBERGLASS ACOUSTIC BATT INSULATION.
- 9. THERMOSTATS: PROVIDE LUX MOD# PSPA711. 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. 10. INSULATION OF DUCTWORK: ALL DUCTWORK INSTALLED IN NON-CONDITIONED SPACE
- SHALL BE INSULATED. MIN. INSUL. VALUE SHALL BE SAME AS ATTICS. 11. AIR HANDLER FILTER RACKS: ALL FILTERS SHALL BE AT THE UNIT, SLIDE IN (LIKE DRAWERS) AND DESIGNED FOR EASY CHANGING. UNIT SHALL HAVE SPACE FOR TWO

SHALL BE METALLIC. NO VENTING INTO ATTICS OR SOFFITS ALLOWED.

DAYTON "AIR HANDLER" #6W737, SIZE 16"X25"X1"). 12. AIR HANDLER FANS: MAKE SURE FANS AND AIR VELOCITY ARE DESIGNED FOR THE ADDITIONAL FILTER RESISTANCE. 13. EXHAUST FANS AND VENTS: ALL VENTS SHALL BE DIRECT TO THE EXTERIOR THROUGH

FILTERS: A) DUST AND PARTICULATE FILTER; B) CARBON FILTER FOR ODOR CONTROL (SEE

WALL OR ROOF VENT CAPS PROVIDED WITH BACK DRAFT PREVENTION. ALL DUCTWORK

FRESH AIR EXCHANGE SYSTEM: ADD OPTION

- 1. AS BUILDINGS ARE MADE TIGHTER AND MORE ENERGY EFFICIENT, MECHANICAL CODES ARE SUGGESTING THE INTRODUCTION OF EXTERIOR FRESH AIR TO PREVENT "SICK BUILDING
- 2. ADD OPTION PROPOSAL: INSTALL ENERGY RECOVERING FRESH AIR EXCHANGER. THIS UNIT
- 3. PRODUCT: PERFECTAIRE, MODEL 8100 FRESH AIR EXCHANGER, OR APPROVED EQUAL.

ELECTRICAL SYSTEM NOTES:

- 1. LICENSED ELECTRICIANS SHALL DO ALL WORK IN ACCORDANCE WITH THE LOCAL AND NATIONAL ELECTRICAL CODE. ELECTRICIAN SHALL PROVIDED AN UNDERWRITER'S
- 2. ELECTRICIAN SHALL COMPLETE HIS PART OF THE BUILDING PERMIT APPLICATION. IF MUNICIPALITY REQUIRES LOAD CALCULATIONS OR DIAGRAMS, THEN ELECTRICAL
- 3. LAMPING: ALL NEW FIXTURES SHALL HAVE THE APPROPRIATE LAMP INSTALLED.
- 4. THE ELECTRICIAN SHALL DO ALL CIRCUIT & LOAD DISTRIBUTION DESIGN. DISTRIBUTION PANEL SHALL BE CLEARLY LABELED. 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. MAJOR EQUIPMENT, INCLUDING REFRIGERATORS, SHOULD HAVE DEDICATED CIRCUITS. PROVIDE PANEL LARGE ENOUGH FOR THE WORK SHOWN, AND PROVIDE MINIMUM 6 SPARE 20 AMP BREAKERS. ALL BREAKERS SHALL BE FULL SIZE, NOT HALF-SIZE.
- APPLIANCES, DEVISES, SWITCHES, ETC.
- 7. ALL HOLES DRILLED INTO TOP OR BOTTOM WALL PLATES, INTERIOR AND EXTERIOR, SHALL

- 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 HAVE AN EMERGENCY BACKUP POWER SOURCE, GENERALLY BATTERIES. SYSTEMS ARE
- 1. INSULATION: MATERIAL SHALL BE CLOSED CELL, URETHANE BASED, WITH NO FORMALDEHYDE PRODUCTS. R-VALUE IS GENERALLY 7 PER INCH, AGED. PRODUCT SHALL BE RECOGNIZED MANUFACTURER.
- BE EXPERT IN UNDERSTANDING CODE REQUIREMENTS AS THEY APPLY TO THESE PRODUCTS. INSTALLER SHALL PROVIDE QUALIFYING SPRAY APPLIED IGNITION BARRIERS WHEN . INSTALLER SHALL BE EXPERT IN THE USE AND APPLICATION OF THESE SPRAY FOAM

- TO BE A STAND ALONE PACKAGE. SYSTEM SHOULD BE ABLE TO OPERATE WITH OR INDEPENDENT OF EITHER THE HEATING OR COOLING SYSTEMS.

- CERTIFICATE AT THE CONCLUSION OF WORK.
- CONTRACTOR SHALL PROVIDE.
- 5. FOR OWNER'S APPROVAL, BEFORE WORK BEGINS, SUBMIT CATALOG CUTS FOR ALL FIXTURES,
- COORDINATE WITH THE HVAC CONTRACTOR AND PLUMBING CONTRACTOR TO PROVIDE SERVICE TO ALL EQUIPMENT AS REQUIRED.
- BE SEALED, USE EXPANDABLE FOAM TO PREVENT VERTICAL PASSAGE OF AIR.

SMOKE DETECTOR SYSTEM:

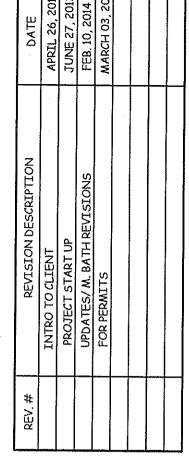
- SOURCE AND MUST BE ELECTRONICALLY INTERCONNECTED, SO THAT IF ANY DETECTOR SENDS AN ALARM SIGNAL, THEN ALL DETECTORS SOUND THE ALARM. DETECTORS SHALL AVAILABLE USING EITHER 100V DEDICATED LINE VOLTAGE CIRCUITS OR LOW VOLTAGE.

INSULATION: URETHANE SPRAY FOAM SYSTEMS

EXPANDING, SELF SKINNING, AND SHALL QUALIFY AS A VAPOR BARRIER WHEN APPLIED AT A THICKNESS OF 2-1/2 INCHES OR GREATER. PRODUCT SHALL BE FROM A NATIONALLY 2. CODE REQUIREMENTS: THE BUILDING CODE HAS SPECIFIC REQUIREMENTS FOR THE PROTECTION OF FOAM PLASTIC INSULATIONS. IN GENERAL AN IGNITION BARRIER IS

REQUIRED IN MANY LOCATIONS, SPECIFICALLY OCCUPIED SPACE. THE INSTALLER SHALL

PRODUCTS, WITH A MINIMUM OF 3-YEARS EXPERIENCE AND CERTIFIED BY THE MANUFACTURER OF THE PRODUCTS BEING USED.



PLANS NOT VALID FOR PERMITS UNLESS SIGNED 1 "RED" & IMPRESSED w/ SEAL

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