GENERAL NOTES

ALL WORK SHALL BE IN COMPLIANCE WITH ALL GOVERNING CODES AND ORDINANCES, INCLUDING THE UNIFORM BUILDING CODE, NATIONAL ELECTRIC CODE, UNIFORM PLUMBING CODE, OSHA, CITY, COUNTY, STATE, AND NATIONAL STANDARDS AND SAFETY CODES. NOTHING IN THESE DRAWINGS SHALL BE CONSTRUED TO PERMIT INSTALLATION IN VIOLATION OF THESE CODES OR RESTRICTIONS.

THESE NOTES ARE PROVIDED TO SHOW BASIC AREAS OF RESPONSIBILITY, AND ANY ITEMS NOT SPECIFICALLY INCLUDED BUT NECESSARY FOR PROPER COMPLETION OF THE WORK SHALL BE INCLUDED AS A PART OF THE WORK.

WHERE DETAILS ARE NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION SHALL BE SIMILAR TO OTHER COMPARABLE WORK.

WORKMANSHIP THROUGHOUT SHALL BE OF THE BEST QUALITY OF THE TRADE INVOLVED. EACH SUB-CONTRACTOR IS CONSIDERED A SPECIALIST IN HIS RESPECTIVE FIELD AND SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY WORK IN HIS TRADE THAT CANNOT BE FULLY GUARANTEED PRIOR TO SUBMITTING HIS BID, AND SHALL SUPPLY ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THEIR WORK PROPERLY.

ALL TRADES SHALL AT ALL TIMES KEEP THE PROJECT FREE FROM WASTE MATERIALS AND SHALL LEAVE THE JOB BROOM CLEAN UPON THE COMPLETION OF THEIR WORK.

ALL GRADING TO CONFORM TO LOCAL ORDINANCE, APPENDIX J OF THE CBC, AND STANDARDS PERTAINING THERETO.

ON-SITE DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUB-CONTRACTOR. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALE.

ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS ARE TO BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGNER, OWNER, AND CONTRACTOR BOTH VERBALLY AND IN WRITING.

CUTTING AND NOTCHING IN EXTERIOR WALL AND BEARING PARTITION. ANY WOOD STUD MAY BE CUT OR NOTCHED TO DEPTH OF NOT EXCEEDING 25% OF ITS WIDTH. CUTTING OR NOTCHING OF STUDS TO A DEPTH NO GREATER THAN 40% OF THE WIDTH OF THE STUD IS PERMITTED IN NON-BEARING PARTITIONS SUPPORTING NO LOADS OTHER THAN THE WEIGHT OF THE PARTITION.

BORED HOLES. A HOLE NOT GREATER IN DIAMETER THAN 40% OF THE STUD WIDTH MAY BE BORED IN ANY WOOD STUD. BORED HOLES NOT GREATER THAN 60% OF THE WIDTH OF THE STUD ARE PERMITTED IN NON-BEARING PARTITIONS OR ANY WALL IN WHERE EACH BORED STUD IS DOUBLED, PROVIDED NOT MORE THAN 2 SUCH SUCCESSIVE DOUBLE STUDS ARE SO BORED. IN NO CASE SHALL THE EDGE OF BORED HOLE BE NEARER THAN 5/8" TO THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTIONS OF STUD AS A CUT OR NOTCH.

ALL PLYWOOD "SIDING" EXPOSED TO THE WEATHER IS TO BE EXTERIOR GLUE, EXTERIOR GRADE.

CONTRACTOR TO LAYOUT ALL BUILDING LINES, LEVELS, AND GRADES. IF BUILDING OR GRADE LINES DO NOT CONFORM TO DRAWINGS THE DESIGNER AND/OR BUILDING DIVISION IS TO BE CONTACTED.

SANITARY FACILITIES ARE TO BE PROVIDED ON THE JOB FOR CONTRACTORS, SUB-CONTRACTORS, AND BUILDING DEPARTMENT PERSONNEL.

WALLS AND SOFFITS OR ENCLOSED USEABLE SPACES UNDER STAIRS SHALL BE PROTECTED WITH 1 HOUR FIRE-RATED MATERIALS ON THE ENCLOSED SIDE. PROVIDE MINIMUM 5/8" TYPE "X" GYPSUM BOARD.

WALLS BETWEEN DWELLING AND ATTACHED GARAGES SHALL HAVE 5/8" TYPE "X" GYPSUM BOARD OR 3/4" PLASTER AS FINISH ON GARAGE SIDE, WITH A 1 3/8" SOLID CORE WOOD, SELF-CLOSING DOOR. NO DOOR MAY BE LOCATED BETWEEN A GARAGE AND A ROOM USED FOR SLEEPING PURPOSES.

IF SEPARATION BETWEEN HOUSE AND GARAGE IS A FLOOR AND CEILING ASSEMBLY, THE CEILING AND ALL SUPPORTING ELEMENTS AND POSTS MUST BE FIRE PROTECTED AND JACKETED FOR PROTECTION AGAINST MECHANICAL DAMAGE.

ALL UNDERFLOOR AREAS ARE TO BE ACCESSIBLE THROUGH AN OPENING OF NO LESS THAN 24" WIDE BY 18" HIGH, SCREENED AND COVERED, AND UNOBSTRUCTED BY PIPES, DUCTS, AND SIMILAR CONSTRUCTION.

ALL WELDING SHALL BE PERFORMED IN A SHOP OF AN APPROVED/CERTIFIED FABRICATOR IN ACCORDANCE WITH CBC, SECTION 1704 OR THE OWNER SHALL HIRE A SPECIAL INSPECTOR TO INSPECT THE CERTIFIED WELDER'S WORK DURING FABRICATION OF ASSEMBLY IN FIELD.

CODES AND STANDARDS

THESE GENERAL NOTES AND ACCOMPANYING PLANS ARE COMPLIMENTARY AND ALL CONSTRUCTION IS TO BE AS HEREIN OUTLINED AND SHOWN ON DRAWINGS.

ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH:
A. STATE AND LOCAL CODES
B. UNIFORM BUILDING CODES

THE BUILDER SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON DRAWINGS AND IN THE FIELD AND SHALL BE RESPONSIBLE FOR ANY NECESSARY ADJUSTMENTS AND/OR CORRECTIONS.

THE BUILDER IS TO PROVIDE ALL NECESSARY TEMPORARY SUPPORT FOR WALLS AND FLOORS PRIOR TO COMPLETION OF VERTICAL AND LATERAL LOAD SYSTEMS.

CONTRACTORS SHALL VERIFY ALL GRADES, CONDITIONS, AND DIMENSIONS PRIOR TO COMMENCING WORK.

IN ACCORDANCE WITH THE CALIFORNIA ENERGY CODE, TITLE 20, THE FOLLOWING INFORMATION SHALL BE INCORPORATED INTO THE BUILDING PLANS SUBMITTED TO PLAN CHECK.

SECTION (120)

1403(d) (1) ALL SWINGING DOORS AND WINDOWS EXPOSED TO AMBIENT CONDITIONS OR TO UNCONDITIONED AREAS, SUCH AS GARAGES, SHALL BE FULLY WEATHER-STRIPPED, GASKET OR OTHERWISE TREATED TO LIMIT INFILTRATION.

1403(d) (1) ALL MANUFACTURED WINDOWS AND SLIDING GLASS DOORS SHALL MEET THE AIR INFILTRATION STANDARDS OF THE A.N.S.I. WHEN TESTED IN ACCORDANCE WITH ASTM E282-73 AND SHALL BE CERTIFIED AND LABELED.

1403(d) (2) ALL FAN SYSTEMS EXHAUSTING AIR FROM THE BUILDING ENVELOPE TO THE OUTSIDE SHALL BE PROVIDED WITH BACKDRAFT DAMPERS OF AUTOMATIC DAMPERS.

1404(d) (1) ALL TRANSVERSE DUCT, PLENUM, AND FILLED JOINTS SHALL BE SEALED WITH PRESSURE SENSITIVE TAPE OR MASTIC TO PREVENT AIR LOSS.

1401(d) (2) INSULATION OF ALL DUCTS SHALL CONFORM TO THE PROVISIONS OF SECTION 1005 OF THE UNIFORM MECHANICAL CODE, 1982 EDITION.

1406(a) INDICATE THE MAKE AND MODEL NUMBER OF THE HOT WATER HEATER ON THE PLANS. THE UNIT MUST BE CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION. (AMERICAN APPLIANCE G.V.F. 433-T).

1406(d) RECIRCULATING HOT WATER PIPING IN ATTICS, GARAGES. CRAWL SPACES, OR UNHEATED SPACES OTHER THAN BETWEEN FLOORS OR IN INTERIOR WALLS SHALL BE INSULATED TO PROVIDE MAXIMUM LOSS OF NOT MORE THAN 50BTU/HR. PER LINEAR FOOT FOR LARGER SIZES.

1406(f) SHOWER HEADS, LAVATORY, AND SINK FAUCETS MUST BE OF A MAKE AND MODEL NUMBER CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION.

OCCUPANCY

BATHROOMS, WATER CLOSET COMPARTMENTS, LAUNDRY ROOMS, ETC., SHALL BE PROVIDED WITH NATURAL VENTILATION BY MEANS OF OPENABLE EXTERIOR OPENINGS WITH AN AREA NOT LESS THAN 1/20 OF THE FLOOR AREA WITH A MINIMUM OF 1 1/2 SQ. FT. OR MECHANICAL VENTILATION SYSTEMS MUST SUPPLY FIVE CHANGES PER HOUR IN BATHROOMS AND LAUNDRY ROOMS, TWO CHANGES PER HOUR IN OTHER HABITABLE ROOMS.

HABITABLE ROOMS OTHER THAN KITCHENS SHALL HAVE AN AREA NOT LESS THAN 70 SQ. FT.

HABITABLE ROOMS SHALL BE A MINIMUM CEILING HEIGHT OF 7'6". KITCHENS, HALLWAYS, BATHROOMS, AND CORRIDORS MAY BE 7'0". WHERE SLOPING CEILINGS OCCUR, THE REQUIRED CEILING HEIGHT SHALL BE PROVIDED IN AT LEAST 50% OF THE ROOM AND NO PORTION OF ANY ROOM HAVING A CEILING HEIGHT OF LESS THAN 5'0" SHALL BE CONSIDERED AS CONTRIBUTING TO THE MINIMUM REQUIRED AREAS.

AT LEAST ONE ROOM SHALL HAVE AN AREA NOT LESS THAN 120 SQ. FT.

MINIMUM HABITABLE ROOM WIDTH IS 7'0", EXCEPT FOR KITCHEN.

UNLESS AN EXTERIOR DOOR IS PROVIDED, ONE WINDOW SILL IN EACH BEDROOM SHALL HAVE A FINISHED HEIGHT OF NOT MORE THAN 44" ABOVE THE FLOOR. SUCH WINDOW SHALL HAVE A NET CLEAR OPENABLE AREA OF NOT LESS THAN 5.7 SQ. FT. WITH NO NET CLEAR DIMENSION LESS THAN 24" IN HEIGHT OR 20" IN WIDTH.

NO WATER CLOSET SPACE SHALL BE LESS THAN 30" WIDE AND 24" CLEAR IN FRONT OF THE WATER CLOSET. WATER CLOSET TO BE MINIMUM OF 15" CENTERED FROM SIDE WALLS.

NO SHOWER STALL FIXTURE SHALL HAVE A FINISHED CLEAR INSIDE NET DIMENSION OF LESS THAN 2'6" SQUARE.

DESIGN CRITERIA & ASSUMPTIONS

IN THE ABSENCE OF ANY SPECIFIC DESIGN CRITERIA TO THE CONTRARY PROVIDED BY THE CLIENT, THE FOLLOWING DESIGN ASSUMPTIONS WERE USED FOR THIS PROJECT UNLESS SPECIFIC DATA STATING OTHERWISE WAS PROVIDED TO THE ENGINEER/CONTRACTOR OR REQUIRED BY THE BUILDING OFFICIAL.

1) THE ALLOWABLE SOIL BEARING PRESSURE IS 1500 PSF ASSUMED UNLESS A PRELIMINARY SOILS REPORT IS PROVIDED BY THE CLIENT TO THE ENGINEER. THE CLIENT ACCEPTS FULL AND COMPLETE RESPONSIBILTY FOR THIS ASSUMPTION OR THE CLIENT AGREES TO PROVIDE A COMPLETE SOILS INVESTIGATION PRIOR TO COMMENCEMENT OF CONSTRUCTION.

2) THERE ARE NO ADVERSE SOIL CONDITIONS PRESENT AT THIS SITE.

3) ANY GRADING WORK PERFORMED ON THIS WAS DONE IN ACCORDANCE WITH ALL CODE REQUIREMENTS AND WORKMANSHIP WAS PERFORMED IN A FIRST CLASS MANNER.

4) THE LOADING DEAD, LIVE, WIND, SEISMIC, AND DEFLECTION CRITERIA IS APPROPRIATE FOR THIS PROJECT AND THE CLIENT HAS REVIEWED AND APPROVED THEM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

5) THE PLANS WERE PREPARED TO MEET MINIMUM REQUIREMENTS.

ACCEPTANCE OF THE ABOVE DESIGN ASSUMPTIONS BY THE LOCAL BUILDING OFFICIAL AND THE LOCAL BUILDING OFFICIAL'S APPROVAL OF THESE PLANS INDICATES THAT THIS DESIGN MEETS THE STANDARD OF PRACTICE FOR THE AREA ESTABLISHED BY THE LOCAL BUILDING OFFICIAL.

THE USE OF THESE PLANS BY THE CLIENT INDICATES FULL ACCEPTANCE AND UNDERSTANDING BY THE CLIENT OF THE PROCEEDING CRITERIA AND THAT THE CLIENT WILL NOTIFY THE ENGINEER IN WRITING PRIOR TO COMMENCEMENT OF CONSTRUCTION IF THE CLIENT IS AWARE OF ANY ADVERSE CONDITIONS WITH THIS SITE OR IF ANY OTHER CRITERIA IS NOT ACCEPTABLE TO THE CLIENT OR APPROPRIATE FOR THIS PROJECT.

THE FOLLOWING IS A LIST OF ADDITIONAL ITEMS THAT ARE NOT NORMALLY REQUIRED TO MEET MINIMUM BUILDING CODE REQUIREMENTS BUT THE OWNER MAY WISH TO HAVE THESE PREFORMED AT AN ADDITIONAL EXPENSE TO THE OWNER:

1) SOILS INVESTIGATION.
2) SPECIALIZED CONCRETE, GROUT, MORTAR MIX DESIGNS.
3) SPECIAL CONCRETE, GROUT, MORTAR INSPECTIONS.
4) STEEL/WELDING INSPECTIONS.
5) STRUCTURAL OBSERVATIONS BY ENGINEER OF RECORD.
6) PRIVATE INSPECTIONS, SUCH AS, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING, ETC.
7) SHOP DRAWINGS FOR ALL SPECIALLY FABRICATED ITEMS FOR THIS PROJECT.
8) ANY OTHER SPECIFIC ITEMS OR INSPECTIONS THE CLIENT MIGHT WISH TO HAVE DONE.

THE CLIENT AGREES TO LIMIT THE ENGINEER'S LIABILITY TO THE CLIENT AND TO ALL CONTRACTORS AND SCBCONTRACTORS ON THIS PROJECT, DUE TO PROFESSIONAL NEGLIGENT ACTS, ERRORS OR OMISSIONS OF THE ENGINEER TO THE SUM OF THE ENGINEER'S FEE.

CONCRETE NOTES

(THIS SECTION SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO ERECT ALL FORMS, POUR AND FINISH ALL STRUCTURAL CONCRETE AND FLATWORK AS INDICATED.)

CONCRETE FORMWORK – ALL FORMS SHALL BE INSTALLED WITH SUFFICIENT STRENGTH AND RIGIDITY TO REMAIN UNYIELDING, TRUE TO LINE AND LEVELS, AND PREVENT LEAKS OR BLOWOUTS, AND BE THOROUGHLY WETTED BEFORE POURING CONCRETE.

EXPANSION JOINTS SHALL BE SAW CUT EVERY 12', OR AT OWNER/CONTRACTOR OPTION.

CONCRETE REINFORCEMENTS SHALL BE GRADE 40 DEFORMED BARS CONFORMING TO ALL ASTM STANDARD SPECIFICATIONS AND SHALL BE FIRMLY WIRED IN PLACE BEFORE CONCRETE IS POURED TO COMPLY WITH CBC STANDARDS 19/ 19A. PROVIDE ALL REINFORCING ACCESSORIES AS REQUIRED BY THE MANUAL FOR DETAILING REINFORCED CONCRETE STRUCTURES (A.C.I. LATEST EDITION).

REINFORCING STEEL SHALL BE SPLICED WITH A MINIMUM LAP OF 30 BAR DIAMETERS OR 18" EXCEPT WHERE NOTED, AND SHALL HAVE A MINIMUM COVER AS FOLLOWS: FOOTINGS – 3", WALLS – 1 1/2" (EXPOSED), 2" AGAINST EARTH, COLUMNS 1 1/2".

CAST IN PLACE CONCRETE SHALL BE 2500 PSI MINIMUM IN 28 DAYS UNLESS OTHERWISE NOTED, AND SHALL HAVE 5 SACKS PER YARD MINIMUM AND 7 1/2 GALLONS OF WATER PER SACK MAXIMUM, WITH A 4" MAXIMUM SLUMP.

TRANSIT-MIX CONCRETE SHALL BE MEASURED, MIXED, AND DELIVERED IN ACCORDANCE WITH REQUIREMENTS SET FOURTH IN TENTATIVE SPECIFICATIONS FOR TRANSIT-MIX CONCRETE (ASTM C-94).

ALL EXTERIOR SLABS TO HAVE A LIGHT BROOM FINISH, UNLESS OTHERWISE INDICATED, AND SHALL BE SLOPED TO DRAIN AWAY.

EXCAVATION AND GRADING

DESIGN SOIL PRESSURE TO 1500 P.S.F. IF MASONRY, 1500 P.S.F. FOR FIREPLACE AND FOUNDATION WALLS.

CUT SLOPES FOR PERMANENT EXCAVATIONS AND FILLS SHALL NOT BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.

EXCAVATE FOR FOOTINGS BELOW ALL ORGANIC MATERIAL AND REMOVE ALL LOOSE MATERIAL FROM FOOTING EXCAVATIONS.

PROVISIONS SHALL BE MADE FOR THE CONTROL OF DRAINAGE OF SURFACE WATER AROUND THE BUILDING. CBC APPENDIX J

CONCRETE AND FOUNDATION

ALL FOOTING TO BE ON FIRM, UNDISTURBED SOIL. FOOTING TO EXTEND BELOW FROSTLINE. FOUNDATIONS SUPPORTING WOOD TO EXTEND AT LEAST 6" ABOVE ADJACENT FINISH GRADE.

EXTEND PIERS AND FOUNDATION 6" BELOW INSIDE EXCAVATED GRADE. CBC TABLE 29A.

MINIMUM THICKNESS FOR SLAB FLOORS TO BE 3-1/2". CBC 1910.

FILL UNDER GROUND-SUPPORTED SLABS TO MINIMUM OF 2" SAND.

PROVIDE KEYED CONTROL JOINTS IN ALL SLABS ON GRADE AT 12'-0" O.C. EACH WAY MAXIMUM. PROVIDE HEAVY (3/4") TOOLED JOINTS AT 5'0" O.C. AND 1/2" PRE-MOLDED EXPANSION JOINTS AT 30'0" O.C. IN ALL EXTERIOR WALKS AND SLABS.

ALL REINFORCING STEEL TO BE A-615 GRADE 40. WELDED WIRE MESH TO BE A-185.

PLACE ALL REINFORCING AS PER ACI CODES AND STANDARDS.

GROUND COVER IN CRAWL SPACES TO BE 6MIL, BLACK POLYETHYLENE.

ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY TO BE FOUNDATION GRADE REDWOOD OR PRESSURE-TREATED WOOD. (MUDSILL) CBC 2304.11.4.

VENT CRAWL SPACES 1.5 SQ. FT. FOR EACH 25 LINEAR FEET OF WALL WITH CLOSEABLE SCREENED VENTS, OR 1/150 OF THE AREA.

VAPOR BARRIERS UNDER CONCRETE SLABS ON GRADE TO 6MIL MINIMUM. VISQUEEN OR EQUAL.

BEAM POCKETS IN CONCRETE WALLS TO HAVE 1/2" AIR SPACE AROUND BEAM SIDES AND END. POSTS AND BEAMS TO REST ON ASPHALT SHINGLE OR METAL BEARING PLATE. ENDS OF GIRDERS SUPPORTED ON CONCRETE OR MASONRY SHALL HAVE NO LESS THAN 3" BEARING.

GARAGE FOUNDATIONS MUST MEET REQUIREMENTS FOR ONE-STORY BUILDINGS. CBC 2308.6 AND CHAPTER 18

CONCRETE SLAB WIRE MESH TO BE 6"X6"/10 10 WIRE MESH.

ANCHOR BOLTS TO BE A-307. IN PRESSURE TREATED WOOD SILLS, ANCHOR BOLTS TO BE 1/2" DIAMETER, EMBEDDED AT LEAST 7" INTO CONCRETE, 15" INTO UNREINFORCED MASONRY AND PLACED 6" O.C. UNLESS OTHERWISE SHOWN ON THE PLANS, AND 12" FROM ENDS OF SILLS AND CORNERS. CBC 2907(f) OR SPECIFY TYPE, MANUFACTURE, AND LOCATION OF ANCHORS.

BUILDER TO PROVIDE A CRAWL SPACE ACCESS PANEL A MINIMUM OF 18"X24" LOCATED IN AN ACCESSIBLE PLACE IN CLOSET, 20" MAXIMUM FROM PLUMBING CLEANOUTS. CBC 1209

WATERPROOF BASEMENT WALLS BEFORE BACKFILLING, AND ALSO PLACE FOOTING DRAIN TILE IF REQUIRED.

MINIMUM VERTICAL AND HORIZONTAL REINFORCEMENT FOR CONCRETE WALLS AND FOUNDATIONS SHALL CONFORM TO CBC 19.

WOOD AND PLASTICS

ALL FRAMING LUMBER SHALL BE DOUGLAS FIR/LARCH AND CONFORM TO THE LATEST RULES, GRADE MARKED AS FOLLOWS UNLESS OTHERWISE NOTED:

1. STUDS SHALL BE STUD GRADE OR BETTER s4s
2. BLOCKING MAY BE UTILITY GRADE s4s
3. PLATES MAY BE MIXED SPECIES s4s
4. HEADERS. POSTS AND 2x HORIZONTAL MEMBERS NO. 2 s4s AND BETTER
5. BEAMS AND STRINGERS SHALL BE NO. 2 OR BETTER, s4s OR ROUGH OR RESAWN AS NOTED

ALL WOOD BASE SHEATHING SHALL BE DOUGLAS FIR EXTERIOR GLUE CONFORMING TO P.S. 1-66 AND U.S. COMMERCIAL STANDARD CS-45-66 AND STAMPED WITH THE D.F.P.A. TRADEMARK.

1. VERTICAL DIAPHRAGMS TO BE STRUCT I OR AS NOTED.
2. HORIZONTAL DIAPHRAGMS TO BE II OR AS NOTED.
3. EXPOSED SHEATHING – RESAWN OR A-C EXT. GRADE.
4. SIDING EXT. GRADE AS NOTED OVER 15# FELT.
5. PROVIDE 1/8" GAP AT ALL WOOD BASE SHEATHING SHEARWALL JOINTS.

ALL SILL PLATE SHALL BE CONNECTED TO THE CONCRETE AS FOLLOWS:

1. ANCHOR BOLTS – 1/2" BY 10" AT 6'O.C. 12" FROM ENDS, 7" MIN. IMBEDMENT. UNLESS NOTED OTHERWISE SEE PLANS (2 BOLTS PER PLATE MIN.)
2. SIMPSON MUD ANCHORS – SAME AS ABOVE.
3. SHOT PINS – (AFTER CONCRETE HAS SET FOR 7 DAYS). NOT PERMITTED ON SHEARWALLS.
   A. EXTERIOR OR LOAD BEARING INTERIOR WALLS – 7/32" "RAMSET" #3348 PER ICBU REPORT #1147 OR APPROVED EQUAL, AT 36" O.C. WITH THE FIRST 2 PINS 6" AND 10" FROM EACH CUT END OF THE SILLS SHOOT STRAIGHT DOWN NO CLOSER THAN 2" FROM EDGE OF SLAB.
   B. INTERIOR OR NONBEARING WALLS – SAME FASTENER AS A. BUT AT 48" O.C. WITH ONE 6" FROM ENDS.

BOLTS SHALL HAVE STEEL PLATES OR M. I. WASHERS UNDER ALL NUTS BEARING ON WOOD, WITH BOLT HOLES DRILLED 1/16" OVER DIAMETER LOCATED 7 DIAMS FROM ENDS AND 4 DIAMS FROM EDGES OF WOOD.

PLYWOOD PANELS AT FLOOR AND ROOFS TO BE STAGGERED A MINIMUM OF 2 SUPPORT SPANS AND FACE GRAIN LAID PERPENDICULAR TO SUPPORTS. ALL PLYWOOD FLOORING SHALL BE GLUED OVER EACH SUPPORT WITH ELMERS WILHOLD OR EQUAL.

PROVIDE 2X BLOCKING FULL DEPTH OF FLOOR JOISTS AND RAFTERS 2 X 12 OR DEEPER AT 8' O.C. FOR F.J. 10' O.C. FOR RAFTERS AND AT SUPPORTS AND PARTITIONS. USE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS. PROVIDE NECESSARY BLOCKING FOR DRYWALL EDGES AND HARDWARE BACKING.

PROVIDE FIREBLOCKING AT MID-HEIGHT ON ALL WALLS OVER 10' IN HEIGHT AND/OR TO F.H.A. REQUIREMENTS FOR STUCCO WALLS.

TOP PLATES OF ALL STUD WALLS SHALL BE DOUBLED, SAME SIZE AT STUDS. LAP PLATES 48" MINIMUM WITH AT LEAST 16-16D NAILS AT 4" O.C. MINIMUM. UNLESS NOTED OTHERWISE.

FOUNDATION PLATES OR SILLS SHALL BE P.T.D.F. OR FOUNDATION GRADE REDWOOD (CBC SEC. 23).

CUTTING, NOTCHING, OR DRILLING OF BEAMS OR JOISTS TO BE PERMITTED ONLY AS DETAILED OR APPROVED BY THE GOVERNING INSPECTION AGENCY.

PROVIDE LET IN BRACES AT ENDS AND EVERY 25' OF EXTERIOR STUD WALLS AND NAIL CROSS PARTITIONS (SEC. 2518-E). EXCEPT THEY MAYBE OMITTED WHERE PLYWOOD SIDING IS USED.

ALL EXTERIOR WALL FRAMING TO RECEIVE 15 LB. WATER PROOF BUILDING PAPER UNDER EXTERIOR WALL MATERIAL. PROVIDE 2 LAYERS TYPE "D" PAPER BETWEEN WOOD BASE SHEARWALLS AND STUCCO.

ALL EXPOSED BEAMS, FACIAS, AND TRIM SHALL BE RESAWN/S4S U.O.N.

AN A.I.T.C. OR APPROVED FABRICATION CERTIFICATE OR CONFORMANCE SHALL BE SUBMITTED TO THE BUILDING INSPECTOR PRIOR TO INSULATION OF ANY STRUCTURAL GLU-LAM MEMBER. GLU-LAM BEAM SHALL BE DOUGLAS FIR (COAST REGION).

PROVIDE ALL LABOR AND MATERIALS NECESSARY TO INSTALL BASE, DOORS AND WINDOW TRIM, CLOSET RODS AND SHELVES, FINISH HARDWARE AND TOILET ACCESSORIES, SPECIAL SHELVING BRACKETS FOR DECORATIVE TRIM AND PANELING AS REQUIRED, IN ACCORDANCE WITH W.I.C. STANDARDS.

ALL WOOD TO BE IN CONTACT WITH CONCRETE OR EARTH SHALL BE PRESSURE TREATED BY AN APPROVED TREATMENT PLANT, OR BE FOUNDATION GRADE REDWOOD.

TRIM AND WOODWORK SHALL BE INSTALLED BY QUALIFIED AND COMPETENT CRAFTSMAN AS SHOWN IN THE DRAWINGS.

PRE-MANUFACTURED STRUCTURAL PLASTICS SHALL BE SUPPLIED BY APPROVED FABRICATORS. I.A.W. CBC REQUIREMENTS.

SKYLIGHTS SHALL BE ICBO APPROVED AND INSTALLED ON THE CURBS, PROPERLY FLASHED AND IN A METAL FRAMED OR SELF-FLASHING – CONTRACTORS CHOICE UNLESS OTHERWISE DETAILED.

FRAMING

ALL WOOD FRAMED CONSTRUCTION SHALL CONFORM TO CBC.

ALL LUMBER SHALL BE GRADE MARKED AND SHALL CONFORM WITH THE LATEST STANDARD GRADING AND DRESSING RULES OF THE WEST COAST LUMBER INSPECTION BUREAU. ALL PLYWOOD SHALL BEAR THE APA GRADE STAMP AND PANEL INDEX.

ALL MUDSILLS AND ALL LUMBER IN CONTACT WITH CONCRETE AND MASONRY OR WITHIN 6" OF GRADE SHALL BE PRESSURE TREATED DOUGLAS FIR OR REDWOOD.

ALL VERTICAL FRAMING SHALL BE MINIMUM STANDARD GRADE DOUGLAS FIR OR BETTER.

ALL HORIZONTAL FRAMING SHALL BE DOUGLAS FIR #2 GRADE OR BETTER.

ALL BLOCKING AND FURRING SHALL BE CONSTRUCTION GRADE OR BETTER.

ALL STRUCTURAL PLYWOOD SHEATHING SHALL BE C-D EXT.-APA (STANDARD) GRADE WITH INTERMEDIATE GLUE UNLESS NOTED OTHERWISE. ALLOWABLE SPANS SHALL CONFORM TO CBC TABLE 2308.9.3. ALL PLYWOOD SHALL BE INSTALLED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS.

WALL FRAMING FOR EXTERIOR OR BEARING WALLS SHALL BE 2 X 4 STUDS AT 16" O.C., UNLESS OTHERWISE NOTED AND DOUBLE 2X TOP PLATE WITH THE MINIMUM 48" LAP SPLICE.

PROVIDE MAXIMUM 12 GA. BY 1 1/2" WIDE METAL STRAP TIES WHERE TOP OR BOTTOM PLATES ARE INTERRUPTED AND BROKEN.

MAXIMUM HEIGHT OF UN-BRACED STUDS AT EXTERIOR WALLS OR INTERIOR BEARING WALLS SHALL BE PER CBC TABLE 2308.9.1 UNLESS NOTED OTHERWISE.

PROVIDE MID-HEIGHT FIREBLOCKING AT FLOOR, CEILING, SOFFIT, AND AT EACH STUD SPACE THAT EXCEEDS 10'-0" IN HEIGHT.

PROVIDE TEMPORARY DIAGONAL BRACING AS REQUIRED FOR ERECTION.

PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS IN SOLID BLOCKING AT 48" O.C. MINIMUM BETWEEN JOISTS UNDER PARTITIONS PERPENDICULAR TO JOISTS.

ALL EXTERIOR WALLS AND MAIN CROSS STUD PARTITIONS SHALL BE BRACED AT EACH END, OR AS NEAR THERETO AS POSSIBLE AND AT EVERY 25' – 0" OF LINEAL WALL. IF 1 X 6 BRACING IS SHOWN IT SHALL RUN DIAGONALLY IN A STRAIGHT LINE FROM THE TOP PLATE TO THE BOTTOM PLATE AND AT AN ANGLE AS NEAR AS PRACTICAL TO 45 DEGREES BUT ALWAYS AT SUFFICIENT ANGLE TO INCLUDE FOUR STUD SPACES.

GLUE LAMINATED BEAMS SHALL BE AS REQUIRED BY ENGINEER'S CALCULATIONS OR PLANS. MANUFACTURER'S CERTIFICATION OF GLU-LAM BEAMS SHALL BE PROVIDED AT THE TIME OF INSPECTION WHICH PROPERLY INDICATES THE FIBER BENDING AND GRADE SPECIFICATIONS (COMBINATION NUMBER).

ALL WOOD TO BE 2" MINIMUM HORIZONTAL DISTANCE FROM CHIMNEY OR FLUE.

PROVIDE CROSS BRIDGING OR BLOCKING AT FLOOR JOISTS AND RAFTERS 12" OR MORE IN DEPTH. RAFTERS OR JOISTS SHALL BE SUPPORTED LATERALLY BY BRIDGING AT INTERVALS NOT EXCEEDING 8'-0", UNLESS BOTH EDGES ARE HELD IN LINE.

EXTERIOR WOOD SIDING TO BE INSTALLED OVER 15# BUILDING PAPER. FOR VERTICAL SIDING PROVIDE HORIZONTAL BLOCKING SPACED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION OR LISTING, BUT NOT TO EXCEED 32"O.C.

UNDER FLOOR VENTS TO BE ON A LEAST 2 APPROXIMATELY OPPOSITE SIDES OF CRAWL SPACE AND EQUAL TO 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF UNDER FLOOR AREA. 1 VENT TO BE LOCATED WITHIN 3' OF EACH CORNER. SCREEN OPENING WITH 1/4" GALVANIZED MESH.

WOOD JOISTS FOR THE BOTTOM OF WOOD FLOORS CLOSER THAN 18", OR WOOD GIRDERS CLOSER THAN 12" TO THE GROUND UNDERFLOOR AREA AND THEIR SUPPORTS SHALL BE PRESSURE TREATED WOOD OR REDWOOD.

ALL WOOD COLUMNS AND POSTS SHALL BE FRAMED TRUE, STRAIGHT, AND PLUMB. SUPPORT SHALL BE DESIGNED TO HOLD THE COLUMN OR POST SECURELY IN POSITION AND TO PROTECT ITS BASE FROM DETERIORATION IN AREAS EXPOSED TO WATER SPLASH AND IN EXTERIOR LOCATIONS, WOOD COLUMNS, AND POSTS SHALL BE SUPPORTED BY PIERS PROJECTING AT LEAST 2" ABOVE THE FINISH FLOOR AND SHALL BEAR ON A METAL BASE PLATE OR FOUNDATION PLATE OR SILL. POSTS OR COLUMNS OF TREATED WOOD OR OF FOUNDATION GRADE REDWOOD OR CEDAR MAY BE PLACED DIRECTLY ON CONCRETE, SOLID MASONRY, OR GROUTED MASONRY.

FLOOR SHEATHING SHALL BE MINIMUM 3/4" T&G PLYWOOD OR EQUAL STRUCTURAL II, GLUE/NAILED WITH/10d NAILS AT 6"O.C. AT ALL DIAPHRAGM, WALL BOUNDARIES AND PANEL EDGES AND 10d NAILS AT 10"O.C. TO INTERMEDIATE SUPPORTS.

ROOF SHEATHING SHALL BE 1/2" PLYWOOD OR EQUAL, STRUCTURAL II, NAILED WITH 8d COMMON NAILS AT 6"O.C. AT ALL U.N.O. DIAPHRAGM WALL BOUNDARIES AND PANEL EDGES AND 8d COMMON NAILS AT 12"O.C. TO INTERMEDIATE SUPPORTS (U.N.O.).

PLYWOOD FLOOR, ROOF SHEATHING, AND NAILING SHALL BE INSPECTED AND APPROVED BY THE BUILDING INSPECTOR PRIOR COVERING WITH FLOOR OR ROOF MATERIAL.

FLOOR JOISTS:
A. BEARING: EXCEPT WHERE JOISTS ARE SUPPORTED ON A 1"X4" RIBBON STRIP AND NAILED TO THE ADJOINING STUD, THE ENDS OF EACH JOIST SHALL HAVE NOT LESS THAN 1-1/2" OF BEARING ON WOOD OR METAL, NOR LESS THAN 3" ON MASONRY.
B. BLOCKING: JOISTS SHALL BE SUPPORTED LATERALLY AT THE ENDS AND AT EACH SUPPORT BY SOLID BLOCKING EXCEPT WHERE THE ENDS OF JOISTS ARE NAILED TO A HEADER, BAND OR RIM JOIST OR TO AN ADJOINING STUD OR BY OTHER APPROVED MEANS. SOLID BLOCKING SHALL NOT BE LESS THAN 2" IN THICKNESS AND THE HAS DEPTH OF JOIST.
C. NOTCHING: NOTCHES ON THE ENDS OF JOISTS SHALL NOT EXCEED ONE-FORTH OF THE JOIST DEPTH. HOLES IN JOISTS SHALL NOT BE WITHIN 2" OF THE TOP OR BOTTOM OF THE JOISTS AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOIST. NOTCHES IN THE TOP OR THE BOTTOM OF JOISTS SHALL NOT EXCEED ONE-SIXTH THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN.
D. LAP JOISTS: FRAMING FROM OPPOSITE SIDES OF A BEAM, GIRDER, OR PARTITION SHALL BE LAPPED AT LEAST 4" OR THE OPPOSING JOISTS AND SHALL BE TIED TOGETHER AS PER TABLE 25-Q OR OTHER APPROVED MANNER.
E. FRAMING ANCHORS: JOISTS FRAMING INTO THE SIDE OF A WOOD GIRDER SHALL BE SUPPORTED BY FRAMING ANCHORS OR ON LEDGER STRIPS NOT LESS THAN 2"X2".
F. FRAMING AROUND OPENINGS: TRIMMER AND HEADER JOISTS WHEN FRAMED AROUND OPENINGS SHALL BE DOUBLED, OR LUMBER OF EQUIVALENT CROSS SECTION. WHEN THE SPAN OF THE HEADER EXCEEDS 4 FEET. THE ENDS OF ON A BEAM, PARTITION, OR WALL. TALL JOISTS OVER 12' LONG SHALL BE SUPPORTED AT HEADER BY FRAMING ANCHORS OR ON LEDGER STRIPS NOT LESS THAN 2"X2".
G. SUPPORTING BEARING PARTITIONS PERPENDICULAR TO JOISTS, SHALL NOT BE OFFSET FROM SUPPORTING GIRDERS, WALLS, OR PARTITIONS MORE THAN THE JOIST DEPTH.

ROOF AND CEILING FRAMING:
A. RAFTER SHALL BE FRAMED DIRECTLY OPPOSING EACH OTHER AT THE RIDGE. THERE SHALL BE A RIDGE AT LEAST 2" NOMINAL THICKNESS AT ALL RIDGES AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER. AT ALL VALLEYS AND HIPS THERE SHALL BE A SINGLE VALLEY OR HIP RAFTER NO LESS THAN 2" NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER.
B. RAFTER TIES: RAFTERS SHALL BE NAILED TO ADJACENT CEILING JOISTS TO FORM A CONTINUOUS TIE BETWEEN EXTERIOR WALLS WHEN SUCH JOISTS ARE PARALLEL TO THE RAFTERS. WHERE NOT PARALLEL, RAFTERS SHALL BE TIED TO 1"X4" (NOMINAL) MINIMUM SIZED CROSS TIES. RAFTER TIES SHALL BE PLACED NOT MORE THAN 4 FOOT ON CENTER.

WALL FRAMING:
A. STUDS IN EXTERIOR WALLS AND INTERIOR BEARING WALLS OF BUILDINGS NOT MORE THAN TWO STORIES IN HEIGHT SHALL BE NOT LESS THAN 2"X4" IN SIZE.
B. CRIPPLE WALLS: CRIPPLE WALLS SHALL BE FRAMED OF STUDS NOT LESS IN SIZE THAN THE STUDDING ABOVE WITH A MINIMUM LENGTH OF 24", OR SHALL BE FRAMED OF SOLID BACKING. WHEN EXCEEDING 4' IN HEIGHT, SUCH WALLS SHALL BE FRAMED OF SURDS HAVING THE SIZE REQUIRED FOR AN ADDITIONAL STORY.
C. HEADERS: FOR ALL OPENINGS 4' WIDE OR LESS IN BEARING WALLS SHALL BE PROVIDED WITH HEADERS CONSISTING OF EITHER TWO PIECES OF 2" FRAMING LUMBER PLACED ON EDGE AND SECURELY FASTENED TOGETHER OR 4" LUMBER OF EQUIVALENT CROSS SECTION. ALL OPENINGS MORE THAN 4' WIDE SHALL BE PROVIDED WITH HEADERS OR LINTELS. SUCH HEADERS OR LINTELS SHALL HAVE NOT LESS THAN 1-1/2" SOLID BEARING AT EACH END TO THE FLOOR OR BOTTOM PLATE, UNLESS OTHER APPROVED FRAMING METHODS OR JOINT DEVICES ARE USED.
D. PIPES IN WALLS: STUD PARTITIONS CONTAINING PLUMBING, HEATING, OR OTHER PIPES SHALL BE SO FRAMED, AND THE JOISTS UNDERNEATH SO SPACED, AS TO GIVE PROPER CLEARANCE FOR THE PIPING WHERE A PARTITION CONTAINING SUCH PIPING RUNS PARALLEL TO THE FLOOR JOISTS. THE JOISTS UNDERNEATH SUCH PARTITIONS SHALL BE DOUBLED AND SPACED TO PERMIT THE PASSAGE OF SUCH PIPES AND SHALL BE BRIDGED WHERE PLUMBING, HEATING, OR OTHER PIPES ARE PLACED IN OR PARTLY IN A PARTITION, NECESSITATING THE CUTTING OF THE SOLES OR PLATES, A METAL TIE NOT LESS THAN 1/8" THICK AND 1-1/2" WIDE SHALL BE FASTENED TO THE PLATE ACROSS AND TO EACH SIDE OF THE OPENING WITH NOT LESS THAN FOUR 16d NAILS EACH SIDE.
E. BRIDGING: UNLESS COVERED BY INTERIOR OR EXTERIOR WALL COVERING OR SHEATHING MEETING THE MINIMUM REQUIREMENTS OF THE 2007 CBC. ALL STUD PARTITIONS OR WALLS WITH STUDS HAVING A HEIGHT TO LEAST THICKNESS RATIO EXCEEDING NAILED THERETO TO PROVIDE ADEQUATE LATERAL SUPPORT.

NAILING NOTES

ALL NAILS TO BE COMMON WIRE (16d "SINKERS" O.K.). WHERE BOX NAILS ARE USED, THEIR NUMBER SHALL BE INCREASED BY 33%.

PRE-DRILL FOR 30d OR LARGER WHERE SPLITTING IS CAUSED.

USE CORROSION RESISTANT NAILS FOR ALL EXTERIOR, EXPOSED WOOD SIDING, FASCIAS AND TRIM.

WHERE 2X MEMBER DETAILED, USE THE NUMBER 16d SHOWN.

CARPENTRY

DESIGN CRITERIA:

WOOD	YARD LUMBER	STRUCTURAL LAMINATED WOOD BEAM
FB	1250 P.S.I.	2200 P.S.I.
E	1,800,000 P.S.I.	1,800,000 P.S.I.

OR AS SHOWN BY GRADE AND SPECIES.

DESIGN LOADS.

ROOFS--	DEAD LOAD	LIVE LOAD	TOTAL LOAD
ASPHALT SHINGLES	6	20	31
SHAKES	6	20	31
TILE	19	20	44
BUILT-UP	9	10	34
FLOORS--			
WOOD/CARPET/RESILIENT	10	40	50
CERAMIC TILE/SLATE	25	40	65
BALCONIES--			
SPACED WOOD	7	60	67

SHOULD WEATHER CONDITIONS CAUSE LOADS OTHER THAN THAT INDICATED, SUCH AS SNOW, EARTHQUAKE, HURRICANE, ETC., IT IS RECOMMENDED THAT YOU CHECK WITH YOUR LOCAL BUILDING OFFICIAL OR CONSULT A LOCAL STRUCTURAL ENGINEER TO PROVIDE FOR ALTERNATE MEMBER SIZES.

WOOD FRAMING MEMBERS TO BE AS FOLLOWS OR EQUAL EXCEPT AS SHOWN ON DRAWINGS:

A. POSTS	UTILITY GRADE DOUGLAS FIR
B. COLUMNS	NO. 1 DOUGLAS FIR
C. JOISTS, BEAMS, AND STRINGERS	NO. 2 DOUGLAS FIR
D. BLOCKING, BRIDGING, ETC.	UTILITY GRADE DOUGLAS FIR
E. STUDS 2X4 AND LARGER	"STUDS" DOUGLAS FIR OR H.F.
F. SILLS, SLEEPERS, PLATES, AND NAILING BLOCKS ON OR EMBEDDED IN CONCRETE	PRESSURE TREATED DOUGLAS FIR
G. DECKING (NOT EXPOSED)	UTILITY GRADE DOUGLAS FIR
H. DECKING (EXPOSED)	NO. 2 DOUGLAS FIR
I. RAFTERS	NO. 2 DOUGLAS FIR
J. HEADERS (INTERIOR)	NO. 2 DOUGLAS FIR
K. HEADERS (EXTERIOR)	NO. 2 DOUGLAS FIR

OTHER SIZES AS NOTED ON PLANS.

ALL WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.

ALL MISCELLANEOUS STEEL TO BE A-36, FABRICATED IN ACCORDANCE WITH AISC.

ALL BOLTS TO BE A-307.

ALL WELDING TO BE WITH E60XX OR E70XX ELECTRODES IN ACCORDANCE WITH AWS. (CERTIFIED WELDER).

ALL JOISTS OR BEAMS FRAMING INTO (NOT BEARING ON) BEAMS, HEADERS, OR GIRDERS SHALL BE SUPPORTED WITH "U" TYPE "SIMPSON" OR EQUAL JOIST BEAM HANGERS. ALL POST-BEAM AND POST-FOOTING CONNECTIONS TO BE MADE WITH "SIMPSON" POST CAP AND POST BASE, AS REQUIRED.

BLOCK SOLID BETWEEN JOISTS AND RAFTERS AT BEARING WALLS. CROSSBRIDGE OR SOLID BLOCKING AT 8'0" O.C. MAXIMUM WHEN IN DEPTH TO THICKNESS RATIO IS 6 TO 1.

ALL PLYWOOD TO BE STANDARD GRADE WITH EXTERIOR GLUE. MINIMUM PLYWOOD NAILING TO BE 8d COMMON AT 6" O.C. AT EDGES AND 10" O.C. AT INTERMEDIATE BEARINGS. STAGGER JOINTS 1/2" PLYWOOD INDEX I.D. FOR FLOORS AND ROOF 32/16.

DOUBLE FLOOR JOISTS UNDER BEARING PARTITIONS. CBC 2308.8.4.

BUILDER SHALL PROVIDE A MINIMUM OF 20"X30" ACCESS READILY ACCESSIBLE TO ATTIC SPACES AND A MINIMUM OF 30"X30" ACCESS WITH ATTIC MOUNTED FURNACE. 30" HEADSPACE IS REQUIRED. CMC .

MINIMUM CEILING HEIGHT IN HABITABLE AREAS TO BE 7'6". HALLS MAY BE REDUCED TO 7'0".

MINIMUM WIDTH FOR A CORRIDOR IS 44". CBC 1017.2.

ALL EXTERIOR DOORS OR DOORS TO UNHEATED SPACES TO BE WEATHER-STRIPPED AND HAVE A SOLID CORE.

BUILDER TO PROVIDE VAPOR BARRIERS FOR FLOORS AND CEILINGS OF 15 lb. BUILDING PAPER OR DRAFT PAPER, FOIL BACK OR KRAFT BACK INSULATION AND 4MIL POLYETHYLENE ON WARM SIDE OF INSULATION. REQUIRED TO 1 PERM.

SUPPORTING COLUMNS AND OTHER SUPPORTING ELEMENTS IN GARAGE(S) AND CARPORT(S) BENEATH ANOTHER STORY SHALL BE 1-HOUR FIRE RESISTIVE CONSTRUCTION AND ARE JACKETED. CBC 714

PROVIDE FIREBLOCKING AT FLOOR, CEILING COVES, AND SOFFITS. CBC 717.

INSTALL TRUSS TIEDOWNS AT EACH RAFTER TAIL, "SIMPSON" H-1 CLIPS.

DECK AND BALCONY GUARDRAILS TO MINIMUM OF 42" HIGH AND OPEN GUARDRAILS AND STAIR RAILING SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL DESIGN SUCH THAT NO OBJECT 4" IN DIAMETER CAN PASS THROUGH. CBC 1013.

STAIRWAY TO HAVE MAXIMUM RISE 7" AND MINIMUM RUN 11". CBC 1009.3). PROVIDE HANDRAIL FOR STAIRS, GRIP PORTION OF HANDRAIL SHALL BE GREATER THAN 1-1/4" AND LESS THAN OR EQUAL TO 2" IN CROSS SECTIONAL DIMENSION. CBC 1012. GUARDRAILS ARE REQUIRED FOR STAIRS AND PORCHES OVER 30" ABOVE GRADE. CBC 1013. MINIMUM HEADROOM 6'8". CBC 1009.2. MINIMUM WIDTH 44". CBC 1009.1.

GUARDRAILS, STAIR HANDRAILS, OR BALCONY RAILING SHALL BE DESIGNED TO RESIST A FORCE OF 50 lbs. PER LINEAL FOOT APPLIED AT THE TOP OF THE RAILING. CBC 1607.7

THERE SHALL BE A FLOOR OR LANDING ON EACH SIDE OF A DOOR. SUCH FLOOR OR LANDING SHALL BE AT THE SAME ELEVATION ON EACH SIDE OF THE DOOR LANDINGS SHALL BE LEVEL EXCEPT FOR EXTERIOR LANDINGS WHICH ARE PERMITTED TO HAVE A SLOPE NOT TO EXCEED A 2% SLOPE. CBC 1008.1.4.

SILLS OF NON-BEARING PARTITIONS OR NON-SHEAR PARTITIONS MAY BE ATTACHED TO CONCRETE SLAB WITH RAMSET PINS #3320 OR #3348 AT 3'0" O.C. CHARGE TO BE USED SHALL BE DETERMINED BY DENSITY OF SLAB.

MEMBERS SUPPORTING EXTERIOR DECKS AND/OR STAIRS SHALL COMPLY TO CBC CHAPTER 23

BEARING WALLS SHALL BE BRACED AT EACH END OF OR AS NEAR AS POSSIBLE, AT EVERY 25'0" LINEAL WALLS. THIS 1X6 NOTCHED BRACING TO RUN DIAGONALLY IN A STRAIGHT LINE FROM TOP PLATE TO THE BOTTOM PLATE AT AN ANGLE AS NEAR AS POSSIBLE TO 45 DEGREES, BUT ALWAYS AT SUFFICIENT ANGLES TO INCLUDE 4 STUD SPACES.

PROVIDE LATERAL CROSS-BRACE AT PLATE LINE OF GARAGE. CBC 2308

PROVIDE BRACING FOR EXTERIOR AND MAIN CROSS-STUD PARTITIONS. CBC 2308 3.

MANUFACTURERS CERTIFICATION OF GLU-LAM BEAMS SHALL BE PROPERLY IDENTIFIED FOR THE LOCATION AND SPECIFIC JOB SITE AT THE TIME OF INSPECTION. CBC 1704.6.2.

ALL PLUMBING WALLS TO BE OF 2X4 MATERIALS EXCEPT WHERE NECESSARY, 2X6.

ALL NAILING SHALL BE IN COMPLIANCE WITH CBC TABLE 2304.9.1.

ALL LUMBER SHALL HAVE A GRADE MARKED WITH A STAMP OF THE ASSOCIATION COVERING THE SPECIES AND UNDER WHOSE GRADING RULES IT WAS PRODUCED.

TRUSSES TO BE FABRICATED IN A SHOP OF AN I.C.C. APPROVED FABRICATOR IN ACCORDANCE WITH CBC 2303.4.

LAP ALL DOUBLE TOP PLATES 4'0" MINIMUM AT SPLICES. SILLS TO BE DF PRESSURE-TREATED AT CONCRETE.

FOUNDATION VENTS EQUAL TO 1 SQ. FT. FOR EACH 150 SQ. FT. OF UNDERFLOOR AREA. CBC 1203.3.1.

RAFTER SPANS SHALL COMPLY WITH TABLE 2308.10.3 CBC

FLOOR JOISTS SHALL COMPLY WITH SPAN TABLE 2308.8 CBC

CEILING JOIST SPANS SHALL COMPLY WITH TABLE 2308.10.2 CBC

PROVIDE DRAFT STOPS AT ALL DUCTS, VENTS, FIREPLACE FLUES, AND VERTICAL FRAMED SHAFTS AS PER CBC CHAPTER 7).

SPECIES AND GRADE OF MEMBERS SUPPORTING PORCH ROOF SHALL COMPLY TO CBC 23.

NAILING SCHEDULE MINIMUM:
A. JOISTS OR RAFTERS TO SIDE OF STUDS, 8" JOISTS OR LESS 3-16d. ADD FOR EACH ADDITIONAL 4" OF DEPTH 1-16d.
B. JOISTS FOR RAFTERS TO ALL BEARINGS, TOENAILS, 2-16d OR 3-8d.
C. STUD TO SILL OR SOLE PLATE, END NAIL 2-16d OR TOENAIL 4-8d.
D. BLOCKING BETWEEN JOISTS OR RAFTERS TOENAIL EACH SIDE EACH END 2-8d.
E. BLOCKING BETWEEN STUDS, EACH END, 2-16d.
F. 1" SHEATHING (OR LET-IN BRACE):

AT EACH END, EACH BOARD	1X6,	3-8d
" "	1X8,	2-8d
INTERMEDIATE BEARINGS	1X6,	2-8d
" "	1X8,	3-8d

G. 2" SHEATHING OR DECKING: SAME AS ABOVE, BUT WITH 16d NAILS.
H. CROSS BRIDGING TOENAIL AT EACH END, 2-8d.
I. 2X3 STRIPPING TO JOISTS AT 24", ONE STRAIGHT, ONE SLANTED, 2-16d.
J. RIBBON TO STUDS, 1" RIBBON, 2-8d.
K. DOUBLE TOP PLATE:

LOWER PLATE TO TOP OF STUD	2-16d
UPPER PLATE TO LOWER PLATE STAGGERED	16d@16"
LAPS AND INTERSECTIONS	2-16d

L. BUILT-UP BEAMS OR POSTS:

10" OR LESS IN DEPTH, STAGGERED	16d@12"
MORE THAN 10" DEPTH, STAGGERED	20d@12"

M. DOUBLE JOISTS UNDER PARTITIONS:

WHERE BLOCKED APART, EACH JOIST, EACH BLOCK	2-16d
WHERE NOT BLOCKED, STAGGERED	16d@12"

N. BOTTOM OF END (OR RIM) JOIST TO TOP PLATE, TOENAIL, 16d@8".
O. BLOCKING TO TOP PLATE, TOENAIL, 16d@8".
P. SOLE PLATE THROUGH PLY TO BLOCKING OR FRAMING, 16d@8".
Q. JOIST (2X10 MAX.) TO RIM JOIST, END NAIL, 2-16d.
R. 1/2" ROOF SHEATHING 6" ON EDGES AND 12" FIELD AS PER CBC 23.

ELECTRICAL:

ALL ELECTRICAL WIRING AND INSTALLATION SHALL BE AS REQUIRED BY STATE AND LOCAL ELECTRICAL CODES.

1. ELECTRICAL CONTRACTOR SHALL VISIT THE PROJECT SITE AND MAKE A SURVEY OF THE EXISTING CONDITIONS WHICH MAY AFFECT OR MAY BE AFFECTED BY THE WORK UNDER THIS SECTION BEFORE BID. REFERENCES MADE ON THE DRAWINGS TO EXISTING WORK OR CONDITIONS OR CORRECTIONS OF WAYS AND MEANS OF PERFORMING THE ELECTRICAL WORK IN CONJUNCTION WITH EXISTING CONDITIONS SHALL BE SUBJECT TO VERIFICATION BY THE CONTRACTOR IN HIS SURVEY AND IN THE PROGRESS OF THE WORK.
2. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT, DEVICES, WIRING MATERIALS AND AUXILIARIES NECESSARY OR REQUIRED TO COMPLETE THE ENTIRE ELECTRICAL INSTALLATION FOR SATISFACTORY FUNCTION AND OPERATION WHETHER SHOWN ON PLANS OR NOT AND SHALL INCLUDE ALL COSTS OF JOB IN HIS BID.
3. ALL EQUIPMENT SHALL BE LABELED WITH WHITE ENAMEL STENCILED LETTERS OR WITH PHENOLIC NAME PLATES SECURED WITH SCREWS OR EPOXY CEMENT. TYPEWRITTEN DIRECTORIES SHALL BE INSTALLED IN ALL DISTRIBUTION PANELS AND LOAD CENTERS.
4. CONDUIT RUNS ON PLANS ARE SHOWN DIAGRAMATICALLY AND SHALL BE RUN TO SUIT CONDITIONS IN THE FIELD IN A NEAT AND WORKMANLIKE MANNER.
5. IT IS THE INTENT OF THESE DRAWINGS THAT THIS BE A COMPLETE ELECTRICAL INSTALLATION. ANY APPARENT ERRORS OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THIS ENGINEER OR ARCHITECT AS SOON AS IT IS DETECTED.
6. THESE PLANS SHALL ONLY BE USED FOR CONSTRUCTION AFTER APPROVAL HAS BEEN OBTAINED FROM AGENCIES HAVING JURISDICTION REGARDING THIS PROJECT.
7. THE CONTRACTOR SHALL CONSULT WITH THE UTILITY COMPANIES AND GET APPROVAL FOR HIS PROPOSED SERVICE EQUIPMENT AND ARRANGEMENT PRIOR TO INSTALLATION.
8. THE CONTRACTOR SHALL CONSULT WITH AND OBTAIN THE APPROVAL OF THE ENGINEER OR ARCHITECT PRIOR TO MAKING CHANGES THAT WILL SIGNIFICANTLY EFFECT THE ELECTRICAL SYSTEM AS TO LOAD CHANGES OR COSTS.
9. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING AND COORDINATING HIS WORK WITH THE MECHANICAL PLANS AND SPECIFICATIONS FOR WORK REQUIRED BY HIM.
10. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHALL, CALIFORNIA ADMINISTRATIVE CODE TITLE 24, OSHA, NEC, UTILITY COMPANIES, AND OTHER APPLICABLE STATE AND LOCAL CODES, LAWS, ORDINANCES AND REGULATIONS. NOTHING IN THESE PLANS IS TO BE CONSTRUED SO AS TO PERMIT WORK NOT CONFORMING TO THESE CODES.

MECHANICAL EQUIPMENT

ALL EQUIPMENT SUBJECT TO CERTIFICATION LISTED IN THE BUILDING ENERGY EFFICIENCY STANDARDS, TABLE 2-53G SUCH AS FURNACES, WALL HEATERS, WATER HEATERS, PLUMBING FITTINGS, SHOWERHEADS, FAUCETS, AND FLUORESCENT LAMP BALLAST'S SHALL BE CERTIFIED TO THE CALIFORNIA ENERGY COMMISSION BY THE MANUFACTURER PRIOR TO INSTALLATION. WHEN REQUIRED BY THE OWNER OR BUILDING OFFICIAL THE MANUFACTURER OR BUILDER SHALL PROVIDE DOCUMENTATION SHOWING EQUIPMENT IS CERTIFIED.

THE BUILDER SHALL PROVIDE THE BUILDING OWNER, MANAGER, AND THE ORIGINAL OCCUPANTS A LIST OF THE HEATING, COOLING, WATER HEATING, AND LIGHTING SYSTEMS AND FEATURES, MATERIALS, COMPONENTS, AND MECHANICAL DEVICES CONSERVATION OR SOLAR DEVICES INSTALLED IN THE BUILDING, AND INSTRUCTIONS ON HOW TO USE THEM EFFICIENTLY.

ALL GAS FIRED FAN TYPE CENTRAL OR WALL FURNACES, CLOTHES DRYERS, COOKING APPLIANCES, AND POOL HEATERS SHALL BE EQUIPPED WITH INTERMITTENT IGNITION DEVICES.

ALL AIR HANDLING DUCT SYSTEMS SHALL BE CONSTRUCTED, INSTALLED, SECURED, AND INSULATED AS PROVIDED IN CHAPTER 10 ON THE UNIFORM MECHANICAL CODE.

HEATING AND AIR CONDITIONING:

SPECIFY HEATING TYPES AND FUEL AS SELECTED BY OWNER. BUILDER TO MAKE NECESSARY CHANGES TO PLANS TO ACCOMMODATE CHIMNEYS, VENTS, ETC. TO BE LOCATED AND INSTALLED AS REQUIRED.

ALL DUCTS TO BE INSTALLED WITHOUT IMPINGEMENT ON BUILDING SURFACES.

PROVIDE FURNACE ACCESS AND CLEARANCE AS REQUIRED BY UMC 703.

BUILDER SHALL PROVIDE ORIGINAL OCCUPANT WITH A LIST OF THE HEATING, COOLING, WATER HEATING AND LIGHTING SYSTEMS, AND CONSERVATION OR SOLAR DEVICES INSTALLED IN THE BUILDING ALONG WITH INSTRUCTION ON EFFICIENT USAGE.

HEATING SYSTEM TO PROVIDE 70° F AT 3'-0" ABOVE FLOOR IN EACH HABITABLE ROOM. CBC 1211

GAS FIRED WATER HEATERS AND FORCED AIR OR GRAVITY CENTRAL HEATING FURNACES ARE NOT PERMITTED IN BATHROOMS, BEDROOMS, CLOTHES CLOSETS, OR IN ANY CONFINED SPACE WITH ACCESS ONLY FROM THE ABOVE LOCATIONS, NOR SHALL ANY GAS FIRED WATER HEATER BE ALLOWED UNDER A STAIRWAY OR LANDING, UNLESS OF APPROVED SEALED COMBUSTION TYPE.

THERMOSTATICALLY CONTROLLED HEATING OR COOLING SYSTEMS (EXCEPT HEAT PUMPS) SHALL HAVE AN AUTOMATIC THERMOSTAT WITH A CLOCK MECHANISM IN WHICH THE BUILDING OCCUPANT CAN MANUALLY PROGRAM TO AUTOMATICALLY SET BACK THE THERMOSTAT SET POINTS FOR AT LEAST TWO PERIODS WITHIN 24 HOURS.

FOR FURNACE AND WATER HEATERS LOCATED IN ATTIC OR UNDERFLOOR SPACE PROVIDE THE FOLLOWING:
A. AN ACCESS OPENING AND PASSAGEWAY OF SUFFICIENT SIZE TO PERMIT REMOVAL OF THE LARGEST PIECE OF THE FURNACE AND WATER HEATER (30"X30"MIN). ACCESS OPENING WITHIN 20' OF UNIT.
B. ATTIC PASSAGEWAY TO HAVE CONTINUOUS FLOORING, 24" WIDE MINIMUM.
C. A LEVEL WORKING PLATFORM NOT LESS THAN 30" IN DEPTH IN FRONT OF FIREBOX OR IF FURNACE TEMPERATURE LIMIT CONTROL, VENT COLLAR, AIR FILTER, FUEL CONTROL VALVE, OR AIR HANDLING UNIT IS NOT SERVICEABLE FROM FIREBOX SIDE, A CONTINUOUS FLOOR NOT LESS THAN 24" IN WIDTH SHALL BE PROVIDED FROM THE PLATFORM, FIREBOX SIDE, TO AND IN FRONT OF THIS EQUIPMENT.
D. UNDERFLOOR FURNACE SUPPORTED FROM THE GROUND SHALL REST ON A CONCRETE SLAB 3" MINIMUM ABOVE ADJOINING GROUND LEVEL.
E. SUSPENDED FURNACES MUST HAVE 6" CLEARANCE TO GROUND. UPC 1311(5). UMC 708 AND 709.
F. FURNACE ROOM SHALL BE 12" WIDER THAN FURNACE.
G. MINIMUM CLEAR WORKING SPACE TO BE 3" ON SIDES, BACK AND TOP.
H. A 30" DEEP WORKING SPACE SHALL BE PROVIDED ALONG ENTIRE FRONT OF FIREBOX SIDE OF FURNACE WHEN DOOR IS OPEN.
I. AN OBSTRUCTED ACCESS WORKING SPACE NOT LESS THAN 24" IN WIDTH AND 30" IN HEIGHT SHALL BE PROVIDED. AIR FILTERS, FUEL CONTROL VALVES, VENT COLLARS, AIR HANDLING UNITS AND EXTERNALLY MOUNTED CONTROLS (15" IN AT LEAST DIMENSION, IF EQUIPMENT CAN BE SERVICED FROM OPENING WITHOUT REMOVING PERMANENT CONSTRUCTION).

HEAT PUMPS SHALL BE INSTALLED WITH A CONTROL TO PREVENT SUPPLEMENTARY HEATER OPERATION WHEN HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE. SUPPLEMENTARY HEATER OPERATION IS PERMITTED DURING TRANSIENT PERIODS, SUCH AS START-UPS, FOLLOWING ROOM THERMOSTAT SET-POINT ADVANCE, AND DURING DEFROST. SUPPLEMENTARY HEAT MAY BE DERIVED FROM ANY SOURCE OF ELECTRIC RESISTANCE HEATING OR COMBUSTION HEATING.

INSULATION NOTES

AFTER INSTALLING WALL, CEILING, OR FLOOR INSULATION, THE INSTALLER SHALL POST CONSPICUOUS LOCATION IN THE BUILDING A CERTIFICATE SIGNED BY THE INSTALLER STATING THE INSTALLATION IS CONSISTENT WITH PLANS AND SPECIFICATIONS DESCRIBED IN THE CERTIFICATE OF COMPLIANCE AND FOR WHICH THE BUILDING PERMIT WAS ISSUED AND CONFORMS WITH THE REQUIREMENTS OF CHAPTER 2-53. THE CERTIFICATE SHALL ALSO STATE THE MANUFACTURE'S NAME AND MATERIAL IDENTIFICATION, THE INSTALLED "R" VALUE, AND (IN APPLICATION OF LOOSE FILL INSULATION) THE MINIMUM INSTALLED WEIGHT PER SQUARE FOOT CONSISTENT WITH THE MANUFACTURE'S LABELED INSTALLED DESIGN DENSITY FOR THE DESIRED "R" VALUE. THIS CERTIFICATE SHALL BE IN PLACE PRIOR TO FINAL INSPECTION.

ALL INSULATION SHALL BE CERTIFIED AND LABELED AS COMPLYING WITH THE CALIFORNIA ENERGY COMMISSION'S STANDARDS FOR INSULATING MATERIALS.

SURFACE BURNING CHARACTERISTICS INTENDED FOR EXPOSED APPLICATIONS SHALL NOT EXCEED A FLAME-SPREAD RATING OF 25 AND A SMOKE DENSITY NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH CBC STANDARD 42-1.

PIPING SHALL BE INSULATED IN ACCORDANCE WITH THE BUILDING ENERGY EFFICIENCY STANDARDS, TITLE-24, SECTION 2-5312, TABLE 2-53E. HOT AND COLD WATER PIPING IN UNCONDITIONED SPACES IN BUILDINGS OCCUPANCY R (EXCEPT APARTMENTS OR HOTELS WITH FOUR OR MORE STORIES) SHALL BE INSULATED THERMAL RESISTANCE OF A LEAST R-3 FOR THE FIRST FIVE FEET OF PIPE CLOSEST TO THE WATER HEATER, OR WHATEVER SHORTER LENGTH IS IN UNCONDITIONED SPACE.

RECIRCULATING HOT WATER LINES CONVEYING WATER GREATER THAN 105 DEGREES FAHRENHEIT SHALL BE COMPLETELY INSULATED WITH AN INSTALLED RESISTANCE OF R-4 (ONE INCH MINIMUM WALL THICKNESS) FOR PIPING SIZES LESS THAN ON INCH IN DIAMETER. SEE TABLE 2-53E IF BUILDING ENERGY EFFICIENCY STANDARDS FOR RUNOUTS AND LARGER PIPING INSULATION REQUIREMENTS.

STORAGE TYPE WATER HEATERS AND STORAGE AND BACKUP TANKS FOR SOLAR WATER HEATING SYSTEMS SHALL BE EXTERNALLY WRAPPED WITH INSULATION HAVING INSTALLED THERMAL RESISTANCE OF R-12 OR GREATER. ALTERNATIVELY, TANKS MAY BE INSULATED TO A COMBINED LEVEL OF R-16, WHEN BOTH INTERNAL INSULATION AND EXTERNAL WRAP INSULATION ARE CONSIDERED INTERNAL INSULATION CAN BE INCLUDED IN THE COMBINATION INSULATION LEVEL ONLY WHERE THE R-VALUE OF SUCH INSULATION HAS BEEN LABELED ON THE TANK EXTERIOR BY THE MANUFACTURE.

WHEN EXTERNAL INSULATION IS APPLIED TO WATER HEATERS AND STORAGE AND BACKUP TANKS FOR SOLAR WATER HEATING SYSTEMS, IT SHALL HAVE A THERMAL RESISTANCE OF AT LEAST R-5.

WHEN EXTERNAL INSULATION IS APPLIED TO HEATING AND COOLING DUCTS, IT SHALL CONFORM TO THERMAL RESISTANCE REQUIREMENTS OF SECTION 1005 OF THE UNIFORM MECHANICAL CODE.

APPLICATION OF UREA FORMALDEHYDE FOAM INSULATION IS RESTRICTED TO EXTERIOR SIDEWALKS IN ALL BUILDINGS. A FOUR MIL THICKNESS PLASTIC POLYETHYLENE VAPOR BARRIER, OR EQUIVALENT PLASTIC SHEETING VAPOR BARRIER, SHALL BE INSTALLED BETWEEN THE UREA FORMALDEHYDE FOAM INSULATION AND THE EXTERIOR SPACE IN ALL APPLICATIONS.

CEILING SHALL BE INSTALLED BETWEEN FRAMING MEMBERS WITH INSULATION HAVING AN INSTALLED THERMAL RESISTANCE OF R-19 OR GREATER AS INDICATED ON PLANS.

WALLS BETWEEN CONDITIONED AND UNCONDITIONED AREAS SHALL BE INSULATED BETWEEN FRAMING MEMBERS WITH INSULATION HAVING INSTALLED THERMAL RESISTANCE OF AT LEAST R-13 OR AS INDICATED ON THE PLANS.

LIGHTING SYSTEM MEASURES

ALL LIGHTING SHALL COMPLY WITH TITLE 24, PARTS 1 & 6 OF THE CALIFORNIA CODE OF REGULATIONS. IF THE PROPER COMPLIANCE FORMS HAVE NOT BEEN PREPARED AND SUBMITTED, A LICENSED CONTRACTOR WHO HAS CONTRACTED TO PERFORM THE WORK, SHALL PREPARE AND SUBMIT THE PROPER DOCUMENTATION, TO MEET THE REQUIREMENTS.

ENVELOPE MEASURES

DOORS AND WINDOWS BETWEEN CONDITIONED AND UNCONDITIONED SPACES, SUCH AS GARAGES AND CLOSETS OR FORCED AIR GAS FURNACES USING OUTSIDE AIR FOR COMBUSTION SHALL BE WEATHER STRIPPED, CAULKED, OR SEALED TO LIMIT AIR LEAKAGE INTO OR FROM THE BUILDING ENVELOPE.

MANUFACTURED DOORS AND WINDOWS SHALL HAVE AIR INFILTRATION RATES CERTIFIED BY THE MANUFACTURER AS NOT EXCEEDING 0.33 CFM/SQUARE FOOT FOR SLIDING AND SWINGING SINGLE DOORS, 1.0 CFM/SQUARE FEET FOR SWINGING DOUBLE DOORS AND 0.33 CFM/FOOT OF OPERABLE SASH CRACK USING ASTM STANDARD SPECIFICATIONS E283-73.

SITE CONSTRUCTION DOORS AND WINDOWS, EXTERIOR JOINTS, AND OPENINGS IN THE BUILDING ENVELOPE THAT ARE OBSERVABLE SOURCES OF SIR LEAKAGE SHALL BE CAULKED, GASKET, OR OTHERWISE SEALED. FIRE RATED DOORS AND WINDOWS, UNFRAMED GLASS DOORS AND EXTERIOR ELEVATOR SHAFTS ARE EXEMPT FROM THIS REQUIREMENT. OBSERVABLE SOURCES OF AIR LEAKAGE INCLUDE:
A. EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES, BETWEEN WALL-PLATES AND FLOOR, AND BETWEEN EXTERIOR WALL PANELS.
B. OPENINGS FOR PLUMBING, ELECTRICITY, AND GAS LINES IN WALLS, CEILINGS, AND FLOORS.
C. OPENINGS IN THE ATTIC, FLOOR, SUCH AS WHERE CEILING PANELS MEET INTERIOR AND EXTERIOR WALLS AND MASONRY.
D. ALL OTHER SUCH OPENINGS IN THE BUILDING ENVELOPE.

THERMAL AND MOISTURE PROTECTION

WATERPROOFING SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURE'S WRITTEN RECOMMENDATIONS, BY APPROVED INSTALLERS, IN ACCORDANCE WITH THE PLANS AND CBC.

PROTECT ALL MEMBRANES FROM PUNCTURE OR DAMAGE DURING CONSTRUCTION. ON WATERPROOFED WALLS TO BE BACKFILLED, PROTECT FULLY WITH SHEETS OF GYPBOARD, OR SAND BACKFILL.

ALL INSULATION SHALL MEET MINIMUM ENERGY INSULATION STANDARDS AS ESTABLISHED BY CALIFORNIA ADMINISTRATIVE CODE, TITLE-25, CHAPTER 1, SUB-CHAPTER 1, ARTICLE 5. INSTALL 3 1/2" THICK FULL BAT INSULATION IN ALL EXTERIOR WALLS 6" THICK FULL BAT INSULATION IN ALL CEILINGS. THE INSULATION SHALL HAVE A MINIMUM VALUE OF R-11 IN WALLS AND R-19 IN CEILINGS.

DWELLING SHALL MEET MINIMUM STANDARDS OF NOISE INSULATION AND ENERGY INSULATION ESTABLISHED BY CALIFORNIA COMMISSION OF HOUSING AND COMMUNITY DEVELOPMENT.

PROVIDE WEATHER-STRIPPING AND THRESHOLDS AT ALL EXTERIOR DOORS.

SHINGLES AND ROOFING TILES SHALL BE INSTALLED I.A.W. CBC SECTION 3203 AND PER MANUFACTURER'S REQUIREMENTS.

MEMBRANES ROOFING SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND CBC SECTION 3203.

ALL BUILT-UP ROOFING SHALL BE JOHNS MANVILLE 400-P OR EQUAL U.O.N.

ROOF SHEATHING SHALL BE DRY, SMOOTH, AND WELL NAILED, COVER LARGE CRACKS OR KNOTHOLES WITH METAL AND SWEEP SURFACE CLEAN. PROPERLY GRADE ALL INCLINED SURFACES TO OUTLETS WITH FITTINGS IN PLACE READY FOR ROOFING APPLICATOR TO ATTACH TO HIS WORK.

FLASHING SHALL BE INSTALLED AS DETAILED IN ACCORDANCE WITH CURRENT SPECIFICATIONS FOR TYPE OF FLASHING REQUIRED. METAL FLASHING, DOWN SPOUTS, SCUPPERS TO BE 24 GAUGE GALVANIZED SHEET METAL AS REQUIRED.

ALL EXTERIOR OPENINGS SHALL BE FLASHED WITH SISALKRAFT PAPER, PAPER SHALL EXTEND A MINIMUM OF 6" BEYOND OPENING (OR EQUAL).

GRAVEL STOPS TO BE SUPPLIED BY SHEET METAL SUB-CONTRACTOR.

WINDOWS AND DOORS:

ALL GLASS DUAL GLAZE, EXCEPT IN GARAGE.

ALL SKYLIGHTS WITHIN DWELLING TO BE DOUBLE GLAZED. IF JOB BUILT A 1/16" PLASTIC PANEL, MAY BE APPLIED TO INSIDE. ALL GLASS IN SKYLIGHTS SHALL BE WIRE GLASS OR TEMPERED GLASS, MINIMUM THICKNESS 7/32". APPROVED PLASTICS MAY BE USED.

SKYLIGHTS SHALL COMPLY WITH CBC CHAPTER 34.

SKYLIGHTS SHALL NOT BE INSTALLED WITHIN THAT PORTION OF ROOF LOCATED WITHIN A DISTANCE TO PROPERTY LINE OF PUBLIC WAY WHERE OPENINGS IN EXTERIOR WALLS ARE PROHIBITED OR REQUIRED TO BE PROTECTED, WHICHEVER IS MOST RESTRICTIVE.

ALL GLAZING WITHIN 18" OF THE FLOOR OR WITHIN 24" OF A DOOR TO BE TEMPERED GLASS OR PROTECTED BY MEANS OF A SOLID BARRIER RAILING, 36" FROM FLOOR.

SLIDING GLASS DOORS TO BE TEMPERED.

SHOWER DOORS AND BATH ENCLOSURES NOT TO BE LESS THAN 3/16" FULLY TEMPERED SAFETY GLASS.

GLAZING IN AREAS SUBJECT TO HUMAN IMPACT AND IN A HAZARDOUS LOCATION SHALL BE OF SAFETY GLAZING MATERIALS, SUCH AS LAMINATED GLASS, TEMPERED GLASS, AND SAFETY PLASTIC.

WOOD DOORS:
A. DOOR FRAMES SHALL BE KILN DRIED VERTICAL GRAIN DOUGLAS FIR OR BETTER.
B. EXTERIOR DOORS TO BE MINIMUM 1-3/8" THICK SOLID CORE AND ARE TO CONFORM TO ALL APPLICABLE LOCAL SECURITY PROVISIONS.
C. INTERIOR DOORS TO BY 1-3/8" THICK HOLLOW CORE, TYPICAL.
D. THERE SHALL BE A TIGHT-FITTING DOOR FROM A ROOM IN WHICH A WATER CLOSET IS LOCATED, INTO A ROOM IN WHICH FOOD IS PREPARED OR STORED. PROVIDE COMBUSTION AIR TO WATER HEATER IN SUCH CASE.

SLIDING DOORS:
A. SHALL COMPLY WITH CERTIFICATION AND LABELING REQUIREMENTS OF ANSI A 134.4 AIR FILTRATION STANDARDS. PROVIDE ALUMINUM FRAMED FIBERGLASS SCREEN AT EACH OPEN VENT. PROVIDE LOCKING DEVICE THAT ENGAGES A STRIKE IN MANNER THAT PREVENTS IF FROM BEING DISENGAGED BY POSSIBLE MOVEMENTS. BOLT AND STRIKE SHALL BE REINFORCED SO THAT NO SEPARATION OCCURS. THE INTERIOR FUNCTION MUST PROVIDE QUICK OPENING DURING AN EMERGENCY.

ALL SLIDING, SWINGING DOORS AND WINDOW OPENINGS TO THE EXTERIOR SHALL BE FULLY WEATHER-STRIPPED, GASKET, OR OTHERWISE TREATED TO LIMIT AIR INFILTRATION.

ALL MANUFACTURED WINDOWS AND SLIDING GLASS DOORS SHALL MEET THE AIR FILTRATION STANDARDS OF THE AMERICAN NATIONAL STANDARDS INSTITUTE ASTM #283-73 WITH PRESSURE DIFFERENTIAL OF 1.57 POUNDS PER SQUARE FOOT AND SHALL BE CERTIFIED AND LABELED.

ONE EXIT DOOR 3'-0" IN WIDTH AND 6'-8" IN HEIGHT, CAPABLE OF OPENING AT LEAST 90° SHALL BE PROVIDED.

EXTERIOR AND INTERIOR FINISH

LATH AND PLASTER SHALL CONFORM TO THE APPLICABLE PORTIONS OF ALL INTERIOR AND EXTERIOR IN PLACE LATH MUST BE INSPECTED PRIOR TO APPLYING ANY PLASTER.

EXTERIOR CEMENT PLASTER SHALL BE APPLIED OVER ASPHALT BUILDING PAPER BACK LATH ON WOOD STUD FRAMING.

ALL STUCCO WORK SHALL CONSIST OF A BASE COAT, BROWN COAT, AND A FINISH STUCCO COLOR COAT.

PROVIDE EXTERIOR CORNER BEADS AND INTERNAL CORNER REINFORCEMENT FOR STUCCO WALLS.

PROVIDE GALVANIZED METAL WEEP-SCREED WITH A MINIMUM 3-1/2" ATTACHMENT FLANGE AT FOUNDATION PLATE LINE AT ALL EXTERIOR STUD WALLS TO ALLOW TRAPPED WATER TO DRAIN TO OUTSIDE. MINIMUM 4" FROM EARTH.

ALL SOLID SHEATHED WALLS SHALL HAVE TWO LAYERS OF GRADE D PAPER OVER WOOD BASE SHEATHING.

GYPSUM WALL BOARD SHALL CONFORM TO CBC CHAPTER 47, SECTION 471.1 AND TABLE 47-G FOR SINGLE APPLICATION.
ALL DRYWALL NAILING MUST BE INSPECTED PRIOR TO TAPING JOINTS:
A. PROVIDE 1/2" THICK TYPICAL EXCEPT WHERE NOTED OTHERWISE.
B. TREAT JOINTS WITH PERFORATED TAPE, BEDDING AND TAPING COMPOUND, UNLESS NOTED OTHERWISE.
C. GYPSUM WALLBOARD SHALL NOT BE INSTALLED UNTIL WEATHER PROTECTION FOR THE INSULATION IS PROVIDED.
D. ALL EDGES AND ENDS OF GYPSUM WALLBOARD SHALL OCCUR ON THE FRAMING MEMBERS, EXCEPT THOSE EDGES AND ENDS WHICH ARE PERPENDICULAR TO THE FRAMING MEMBERS. ALL EDGES AND ENDS OF GYPSUM WALLBOARD SHALL BE IN MODERATE CONTACT EXCEPT IN CONCEALED SPACES WHERE FIRE-RESISTIVE CONSTRUCTION OR DIAPHRAGM ACTION IS NOT REQUIRED.
E. THE SIZE AND SPACING OF FASTENERS SHALL COMPLY WITH CBC APPLICABLE EDITION, STATE AND LOCAL CODES. FASTENERS SHALL BE SPACED NOT LESS THAN 3/8" FROM EDGES AND ENDS OF GYPSUM WALLBOARD. FASTENERS AT THE TOP AND BOTTOM PLATES OF VERTICAL ASSEMBLIES, OR EDGES AND ENDS OF HORIZONTAL ASSEMBLIES PERPENDICULAR TO SUPPORTS, AND ALL THE WALL LINE MAY BE OMITTED EXCEPT ON SHEAR-RESISTING ELEMENTS, OR FIRE-RESISTIVE ASSEMBLIES. FASTENERS SHALL BE APPLIED IN SUCH A MANNER AS NOT TO FRACTURE THE FACE PAPER WITH THE FASTENER HEAD.

FLAME-SPREAD REQUIREMENT. ALL INTERIOR CEILING AND WALL FINISHES, EXCEPT TRIM OR WALL FABRICS SHALL HAVE A FLAME SPREAD CLASSIFICATION OF CLASS III OR BETTER AS DETERMINED BY THE CBC TUNNEL TEST STANDARD 42-1.

ALL EXTERIOR SIDING, CORNICES, CASING, SILLS AND OTHER ARCHITECTURAL DETAILED MEMBERS SHALL BE BACK-PRIMED AND END-SEALED WITH A QUALITY SEALER.

WALL SURFACES BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIAL SHALL BE CONSTRUCTED OF MATERIAL NOT ADVERSELY AFFECTED BY WATER. (IF GYPSUM BOARD IS USED, IT MUST BE APPROVED WR BOARD AND INSTALLED ACCORDING TO CBC STANDARDS.) GREEN BOARD IS NOT PERMITTED ON BATHROOM CEILINGS.

SHOWER AREA STALLS SHALL BE FINISHED WITH A SMOOTH, HARD, NON-ABSORBENT SURFACE TO A HEIGHT OF 70" ABOVE DRAIN INLET.

COMBUSTIBLE MATERIAL NOT ALLOWED WITHIN 6" OF THE FIREPLACE OPENING. NO COMBUSTIBLE MATERIAL WITHIN 12" IF THE FIREPLACE OPENING SHALL PROJECT MORE THAN 1/8" FOR EACH 1" CLEARANCE FROM SUCH OPENING.

EAVES OVER REQUIRED WINDOWS SHALL BE NOT LESS THAN 30" FROM THE SIDE AND REAR PROPERTY LINES. PROJECTIONS SHALL NOT EXTEND MORE THAN 12" INTO THE AREA WHERE OPENINGS ARE PROHIBITED. PROJECTIONS, WHERE OPENINGS ARE PROHIBITED (3 FEET) MUST BE NONCOMBUSTIBLE OF 1-HOUR FIRE RESISTIVE OR HEAVY CONSTRUCTION (CBC, SEC. 504 & 1710).

ALL UTILITY AREAS CONTAINING LAUNDRY FACILITIES SHALL BE FINISHED ON WALLS AND CEILING WITH WATERPROOF GYPSUM BOARD OR OTHER APPROVED WATER RESISTANT MATERIAL.

FLASHING AND SHEET METAL

ALL SHEET METAL SHALL BE 26 GA. GALVANIZED, UNLESS OTHERWISE NOTED. FLASH ALL INTERSECTIONS BETWEEN ROOFS AND VERTICAL WALLS IN ACCORDANCE WITH CBC SECTION 1707.

FLASH ALL EXTERIOR OPENINGS WITH THE APPROVED WATERPROOF BUILDING PAPER OR EQUAL.

CHIMNEY TOP IS TO BE PROVIDED WITH A SPARK ARRESTOR HAVING A MESH NOT EXCEEDING 1/2".

BEAMS AND OUTLOOKERS PROJECTING THROUGH EXTERIOR WALLS OF ROOF SURFACES.

PROVIDE FLASHING FOR ALL WINDOW HEAD CORNICES AND ALL WATER TABLE MOLDINGS.

ROOF VALLEY FLASHING SHALL BE PROVIDED OF NOT LESS THAN NO. 28 GALVANIZED SHEET GAUGE CORROSION RESISTANT METAL AND SHALL EXCEED AT LEAST 11" FROM THE CENTERLINE EACH WAY AND SHALL HAVE A SPLASH DIVERTER RIB NOT LESS THAN 1" HIGH AT THE FLOW LINE FORMED AS PART OF THE FLASHING. SECTIONS OF FLASHING SHALL HAVE AN END LAP OF NOT LESS THAN 4".

FASTENERS

HANGERS, FRAMING ANCHORS, AND STRAP CONNECTORS SHALL BE LISTED AND APPROVED WITH MANUFACTURER'S ITEM NUMBERS AS INDICATED ON PLANS. SUCH CONNECTORS SHALL BE GALVANIZED OR RUST INHIBITIVE PAINTED. NAILS OR BOLTS FOR CONNECTORS SHALL BE AS SPECIFIED OR PROVIDED BY MANUFACTURER. SIMPSON OR APPROVED EQUAL.

NAILING SHALL BE IN ACCORDANCE TO CBC TABLE 25-O.
FLASH AND COUNTERFLASH AT ALL ROOF TO WALL CONNECTIONS. FLASH AND CAULK WOOD ALL EXTERIOR NAILS SHALL BE GALVANIZED. PLYWOOD SHALL BE NAILED WITH COMMON NAILS.

ALL POSTS CONTAINED IN STUD WALLS THAT BEAR ON 2X SILL PLATE TO BE TOE-NAILED WITH 4-8d NAILS, UNLESS OTHERWISE NOTED. FREE-STANDING POSTS SHALL BE SET IN ICBO APPROVED POST BASES OR COLUMN BASES.

MASONRY

MORTAR SHALL BE "TYPE S" IN ACCORDANCE WITH CBC STD NO. 24-20 AND TABLE 24-A WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI IN 28 DAYS WITH 1 PART CEMENT; 1/4 TO 1/2 PART LIME; 2 1/4 TO 3 PARTS SAND.

GROUT SHALL HAVE 1 PART PORTLANS CEMENT, 3 PARTS SAND. 2 PARTS PER GRAVEL WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI IN 28 DAYS.

FURNISH ALL METAL SUPPORTS ANGLES, PLATES, ATTACHMENTS, SLEEVES AND ACCESSORIES INCLUDING REQUIRED REINFORCING. VENEER ANCHOR TIES SHALL BE 22 GA. G.I.X 1" OR NO. 9 GA. WIRE @ 16" O.C. HORIZ. AND 20" O.C. VERT. FOR MAXIMUM SUPPORT OF 2 SQ. FT.

UNIT MASONRY SHALL BE GRADE "A" LIGHTWEIGHT UNITS IN ACCORDANCE WITH ASTM C-90. BRICK SHALL CONFORM TO ASTM C-62-53.

REINFORCING STEEL SHALL BE GRADE 40 DEFORMED BARS, U.O.N., CONFORMING TO ASTM A-615., AND SHALL BE WELL SECURED PRIOR TO PLACING GROUT, LAP ALL REARS 40 DIAMETERS OR 18" MINIMUM U.O.N.

ALL VERTICAL CELLS SHALL BE SOLID GROUTED IN WALLS BELOW GRADE, AND RETAINING WALLS.

ALL BOND BEAM BLOCKS SHALL BE "DEEP CUT" UNITS.

KEEP MASONRY DAMP FOR AT LEAST 4 DAYS AFTER INSTALLATION IF HOT OR DRYING WEATHER PREVAILS.

MASONRY CLEANING SHALL USE AN ACID COMPOUND WHICH IS 100 % SOLUBLE IN WATER AND IS NOT INJURIOUS TO THE HANDS, SUCH AS SURE-CLEAN, MURAMIC ACID SHALL NOT BE USED.

METALS

STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE CBC AND A.I.S.C. MANUAL FOR THE DESIGN, FABRICATION AND ERECTION IN WORKMANSHIP AND MATERIALS (ASTM A-36). STEEL PIPE SHALL CONFORM TO ASTM A-53 GRADE "B" MACHINE BOLTS AND ANCHOR BOLTS SHALL BE ASTM A-307 GRADE "A". U.N.O.

ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS USING THE SHIELDED ARC PROCESS WITH APPROVED ELECTRODES FOR AWS SPECS (E70XX), EXPOSED WELDS SHALL BE GROUND SMOOTH AND SHOP PRIMED.

ALL WOOD FRAMING CONNECTORS, ANCHORS, HOLD DOWNS, ETC., SHALL BE SIMPSON STRONG TIE, UNLESS OTHERWISE NOTED. USE ONLY APPROVED NAILS AS SUPPLIED BY SIMPSON FOR THESE CONNECTORS.

MISCELLANEOUS METAL SHALL BE NEW MATERIAL FROM STANDARD, COLD-ROLLED SECTIONS CONFORMING TO ASTM-A-36 OR A-7. FABRICATED ITEMS TO BE WELDED SHALL BE ASTM-A-36 STEEL ONLY.

MILD STEEL, WHERE SPECIFIED, SHALL BE ASTM-A-283.

GALVANIZED STEEL SHEETS SHALL BE FED. SPEC. 00-1-716.

CAST IRON SHAPES – ASTM A-43.

ZINC FOR GALVANIZING, ASTM B-6.

PRIMER – THEMAC NO. 99G, GREEN METAL PRIMER OF FED. SPEC. TT-P-86A, TYPE II FOR STEEL OF FED. SPEC. TT-P-641B, FOR GALVANIZED.

ANCHOR BOLTS AND ANCHORS SHALL BE PROPERLY LOCATED AND BUILT INTO CONNECTION WORK, USING TEMPLATES OR OTHER METHODS TO INSURE ACCURATE LOCATION OF HARDWARE.

PAINT ALL EXPOSED SURFACES WITH APPROPRIATE PAINT AFTER CLEANING AND PRIMING PROPERLY.

PLUMBING:

PLUMBING WORK SHALL BE IN CONFORMANCE WITH THE UNIFORM PLUMBING CODE, LATEST EDITION, AND ALL LOCAL AND STATE REGULATIONS.

1 INSULATE ALL HOT & COLD WATER LINES & CONDENSATE LINES, 1" FOIL FACE FIBERGLASS WRAP WITH FIRE RETARDANT JACKET.

2 ALL COLD & HOT WATER LINES TO BE COPPER, TYPE L SOLDER TO BE 95-5 TIN ANTIMONY.

3 CONDENSATE DRAIN LINES TO BE COPPER TYPE M.

4 ALL SOIL, WASTE, VENT, DRAINAGE LINES TO BE CAST IRON OR PVC.

5 DISINFECTION OF DOMESTIC WATER SYSTEMS.
DISINFECT ALL DOMESTIC WATER PIPING SYSTEMS, HOT & COLD WITH CHLORINE SOLUTION AND THOROUGHLY FLUSH BEFORE USE. DISINFECTANT TO BE AQUEOUS SOLUTION OF CHLORINE GAS OR OF SODIUM OR CALCIUM HYPOCHLORITE.

TEST TO BE PERFORMED IN COOPERATION WITH REPRESENTATIVE OF THE LOCAL HEALTH DEPARTMENT HAVING JURISDICTION & WITNESSED BY A REPRESENTATIVE OF AN APPROVED LABORATORY OR THE ARCHITECT. DURING PERIOD OF TEST, SIGNS SHALL BE POSTED AT EACH WATER OUTLET STATING "CHLORINATION – DO NOT DRINK".

PROCEDURE: SYSTEMS TO BE THOROUGHLY FLUSHED WITH WATER AT CITY PRESSURE. AFTER FLUSHING, ALL OUTLETS SHALL BE OPENED TO ALLOW A SLOW TRICKLE OF WATER. CHLORINE SOLUTION SHALL BE NEAR CITY CONNECTION. PUMPING TO CONTINUE UNTIL AN ORTHO-TOLIDINE TEST AT EACH OUTLET SHOWS CHLORINE CONCENTRATION 50 PPM. SHUT ALL OUTLETS AND CITY SERVICE, MAINTAINING CHLORINE IN SYSTEM FOR 24 HOUR PERIOD.

AT END OF PERIOD, TEST EACH OUTLET FOR CHLORINE RESIDUAL OF 50 PPM. IF SYSTEM DOES NOT MEET TEST, REPEAT DISINFECTION. FOLLOW BY THOROUGHLY FLUSHING SYSTEM WITH CITY WATER UNTIL CHLORINE CONCENTRATION AT EACH OUTLET IS LESS THAN 0.5 PPM.

SAMPLES OF WATER TAKEN FROM EACH POTABLE WATER OUTLET SHALL BE SENT TO THE LOCAL HEALTH DEPARTMENT OR AN APPROVED TESTING LABORATORY FOR BACTERIOLOGICAL ANALYSIS.

OBTAIN CERTIFICATE OF BACTERIOLOGICAL PURITY FORM HEALTH DEPARTMENT AND THE TESTING LABORATORY AND DELIVER TO OWNER THROUGH ARCHITECT.

6 WATER LINES OUTSIDE OF BUILDING TO BE SCHEDULE 80 PVC INSTALL A 12 GAUGE COPPER WIRE MAKER LINE ON PVC PIPE.

7 ACCESS DOORS TO BE J.R. SMITH #4760, #4730 IN TILE WALLS.

8 GAS LINES TO BE SCHEDULE 40 BLACK STEEL PIPE.

9 TEST ALL SOIL, WASTE, VENT, DRAINAGE, WATER & GAS LINES PER INSPECTORS ORDERS.

10 ALL WATER LINES OUTSIDE TO BE BURIED BELOW VERIFIED FROST LINE.

11 PIPE HANGER #104 GRINNEL CO. HANGER RODS #243 GRINNEL CO. PROVIDE SEMCO TRISOLATOR AT EACH SUPPORT POINT ON ALL PIPING.

12 ALL PLUMBING FIXTURES TO BE SUPPLIED COMPLETE INCLUDING ALL "P" TRAPS, ANGLE OR STRAIGHT STOPS, ETC.

13 SEWER PIPE 5 FEET FROM BUILDING TO BE VITREOUS TILE, BELL & SPIGOT PIPE & FITTING.

14 CLEANOUTS TO BE SMITH #4043 FINISHED FLOORS WITH NON-SKID BRONZE TOP. WALL CLEANOUTS SMITH #4470. EXTERIOR CLEANOUTS #4253. SURFACE AREAS, USE #4425 ON NON-SURFACE AREA PROVIDE 16" X 16" X 6" CAST CONCRETE RING AT TOP OF BOX AND FLUSH WITH GRADE.

15 HANGERS & SUPPORTS: INSTALL PIPE THAT IT MAY EXPAND OR CONTRACT FREELY. HORIZONTAL STEEL OR COPPER PIPING SHALL HAVE HANGERS OR SUPPORTS EVERY 6' FOR 1/2" PIPE, 8' FOR 3/4" AND 1" PIPE & 10' FOR 1 1/4" AND LARGER PIPE. HORIZONTAL CAST IRON SHALL HAVE HANGERS FOR EACH LENGTH OF PIPE VERTICAL PIPING AND SHALL BE SUPPORTED AT FLOOR AND AT CEILING WITH WROUGHT IRON PIPE CLAMPS. BRANCHES FROM ALL LINES SHALL HAVE SEPARATE SUPPORTS. PROVIDE SOUND AND ELECTROLYSIS ISOLATORS AT ALL HANGERS AND SUPPORTS FOR HOT AND COLD WATER LINES

16 ALL FLOOR TYPE WATER CLOSETS SHALL BE SET ON SMITH SLOTTED CAST IRON FLOOR FLANGE.

17 ALL SOIL AND WASTE LINES TO SLOP 2% MINIMUM, VERIFY INVERTS BEFORE STARTING WORK.

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NO.	DATE

THESE PLANS ARE NOT FOR CONSTRUCTION UNLESS A "WET STAMP & SIGNATURE" FROM BOTH THE ENGINEER OF RECORD AND A APPROVAL STAMP WITH A "WET STAMP & SIGNATURE" FROM THE LOCAL GOVERNING AGENCY ARE PRESENT.

DWG. BY	L.H.
CHK'D BY	
DATE	8-27-09
JOB NO.	
FILE NO.	

EXP. 12/31/10

SHEET
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OF SHEET

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