TECHNICAL NOTES AND SPECIFICATIONS

PREPARATION OF SITE

1. CLEARING DEMOLITION AND PREPARATION: THE CONTRACTOR SHALL REMOVE ALL VEGETATION THAT FALLS WITHIN THE CONSTRUCTION LINES AND DRIVEWAYS, ETC. ALL OTHER DEBRIS TO BE REMOVED WILL BE MARKED BY THE OWNER. NO OTHER TREES SHALL BE REMOVED WITHOUT THE PERMISSION OF THE OWNER.

2. THE CONTRACTOR SHALL STRIP, PILE AND REDISTRIBUTE ALL EXISTING TOPSOIL IN THE LINE OF WORK AS DIRECTED BY THE OWNER. ANY EXCESS TOPSOIL SHALL BE STOCKPILED ON THE SITE AS DIRECTED.

3. TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE EXCAVATED AND GRADED AND NEATLY PILED ON THE PROPERTY. AFTER BACKFILLING IS FINISHED AND AREAS GRADED, THE AVAILABLE TOPSOIL SHALL BE SPREAD AS DIRECTED BY OWNER.

GENERAL EXCAVATION

1. ALL EXCAVATION IS TO BE DONE AS INDICATED ON THE DRAWINGS WITH SUFFICIENT WORKING SPACE TO PERMIT THE PLACING, INSPECTION AND COMPLETION OF ALL WORK.

FOOTING EXCAVATION

1. EXCAVATE FOR FOUNDATION WALL FOOTINGS AND/OR PIERS.
2. THE DEPTH OF ALL FOOTINGS SHALL BE AS INDICATED BY THE DRAWINGS AND AS REQUIRED BY LOCAL CODES.
3. IF THE SOIL CONDITIONS ENCOUNTERED ARE NOT SUFFICIENTLY FIRM AT THE DEPTHS SHOWN, THE ARCHITECT SHALL BE INFORMED OF THE CONDITION.

ROCK EXCAVATION

1. ROCK ENCOUNTERED IN EXCESS OF (9) NINE CUBIC FEET SHALL BE REMOVED ON A UNIT COST BASIS. THE UNIT PRICE SUBMITTED, SHALL REFLECT THE DIFFERENCE BETWEEN EARTH EXCAVATION AND ROCK EXCAVATION COST PER CUBIC YARD.

EXCESS OR INSUFFICIENT MATERIAL

1. SHOULD JOB CONDITIONS REQUIRE ADDITIONAL MATERIAL TO BRING GRADES TO THOSE INDICATED ON THE PLAN, THE CONTRACTOR SHALL FURNISH SUITABLE MATERIAL AT NO ADDITIONAL COST TO THE OWNER.
2. ANY EXCESS MATERIAL SHALL BE REMOVED FROM THE PROPERTY BY THE CONTRACTOR.

BACKFILLING

1. BACKFILL SHALL BE OF EARTH, FREE FROM DEBRIS, PLACED IN HORIZONTAL LAYERS NOT OVER (12") TWELVE INCHES IN DEPTH. EACH LAYER SHALL BE THOROUGHLY TAMPED SO THAT NO SETTLEMENT IN COMPLETED WORK WILL OCCUR.

FILL UNDER CONCRETE SLABS

1. FILL UNDER CONCRETE SLABS SHALL BE AS SPECIFIED ON "BACKFILLING" ABOVE, AND PLACED IN (6") SIX INCH LAYERS.

STONE OR GRAVEL FILL

1. STONE OR GRAVEL FILL SHALL BE PLACED IN A (4") FOUR INCH LAYER UNDER CONCRETE FLOOR SLABS.
2. STONE OR GRAVEL SHALL COMPLY WITH A.S.T.M. SPECIFICATION C33 GRADED FROM (1") ONE INCH TO No. 4.
3. WHEN THE FILL IS PLACED, IT SHALL BE THOROUGHLY COMPACTED BY TAMPING AND ROLLING.

GRADING

1. FINISH GRADES SHALL BE BROUGHT TO THE LEVELS AS INDICATED ON THE DRAWINGS AND SHALL BE SLOPED TO DRAIN AWAY FROM THE BUILDING.
2. ROUGH GRADING, FOR PAVED AREAS SHALL BE WITHIN 0.2 FEET, PLUS OR MINUS, OF FINISHED SUB-GRADE ELEVATIONS.

LANDSCAPING

1. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL LANDSCAPE MATERIAL NEEDED TO RENDER THE SITE IN ACCORDANCE WITH THE PROPERTY DIAGRAM AND SITE PLAN OR AS AGREED WITH THE OWNER.
2. WORK INCLUDES: GRADING TO FINAL GRADES, INSTALLATION OF TOPSOIL AND SEEDING OF LAWN AREAS.
3. IN ADDITION, TREES AND SHRUBS ARE TO BE INSTALLED AS INDICATED, IN ACCORDANCE WITH THE BEST STANDARDS AND NURSERYMEN PRACTICE.

GRADES

1. GRADES AS SHOWN ON ELEVATIONS ARE APPROXIMATE AND ARE TO BE DETERMINED BY ACTUAL SITE CONDITIONS.
2. WHEN GRADE CHANGE REQUIRES MORE THAN (2) TWO STEPS OFF ANY PLATFORM THE CONTRACTOR SHALL PROVIDE HANDRAILS AT STEPS AND PLATFORMS.
3. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR SEEKING ENGINEERING CONSULTATION IF THE SITE SO DEMANDS.
4. FINISHED GRADES AROUND THE EXTERIOR OF THE BUILDING SHALL BE SUCH THAT NO RISER IS GREATER THAN (8") EIGHT INCHES IN HEIGHT FROM BUILDING TO GRADE.

PONDING

1. THIS CONSTRUCTION SHALL NOT CAUSE ANY PONDING OR UNSTABLE GRADES IN THE SURROUNDING AREA.
2. IF PONDING OCCURS, THE CONTRACTOR SHALL TAKE THE REQUIRED STEPS TO CORRECT THE CONDITION.

EXCAVATION OUTSIDE FOUNDATION

1. TO BE LIMITED TO (2'-0") TWO FEET FROM FOUNDATION.
2. BACKFILL TO BE CLEAN MATERIALS FREE OF TREES, WOOD AND BOULDERS IN EXCESS OF (8") EIGHT INCHES IN DIAMETER.
3. ALL FILL IS TO BE COMPACTED TO 95% MAX. DENSITY AT OPTIMUM MOISTURE CONTENT.

SOIL CLASSIFICATION:

1. FOOTINGS ARE DESIGNED TO BEAR ON SOIL HAVING A MIN. BEARING VALUE OF (2) TWO TONS PER SQ. FT.
2. SOIL AT LEVEL OF THE FOUNDATION FOOTINGS SHALL BE LOOSE MEDIUM SAND (CONFINED) STIFF CLAY DESIGNED TO CARRY (2) TWO TONS PER SQ. FT., SUBJECT TO VERIFICATION BY THE INSPECTOR AT THE SITE AFTER EXCAVATION AND BEFORE FOOTINGS ARE PLACED.
3. WHERE ACTUAL LOADS EXCEED MIN. ALLOWABLE SOIL CLASS 4, FOOTINGS ARE TO BE MODIFIED TO OBTAIN A DESIGN SAFETY FACTOR OF AT LEAST 1.5.

PROTECTION OF SIDES OF EXCAVATION

1. THE SIDES OF EVERY OPEN EXCAVATION (5'-0") FIVE FEET DEEP OR MORE, WHERE THE EARTH IS NOT SLOPED TO THE ANGLE OF REPOSE OF THE MATERIAL AND WHERE, BECAUSE OF THE COMPOSITION OF SOIL AND CLIMATE CONDITIONS, DEPTH OF EXCAVATION OR CONSTRUCTION OPERATIONS MAY PRODUCE UNSAFE CONDITIONS, SHALL BE SECURELY HELD BY ADEQUATE BRACING.

FOOTINGS & FOUNDATIONS - SPECIFICATIONS & NOTES

FOOTINGS:
1. FOOTINGS SHALL REST ON UNDISTURBED SOIL OF MIN. BEARING CAPACITY: 4,000 P.S.F. ADEQUACY OF BEARING STRATUM SHALL BE VERIFIED IN THE FIELD PRIOR TO POURING CONCRETE: ADJUST BOTTOM OF FOOTING ELEVATIONS AS REQUIRED.
2. DO NOT PLACE BACKFILL AGAINST BASEMENT WALLS UNTIL ALL FLOORS BRACING THESE WALLS ARE IN PLACE. ALL FOOTINGS TO BE 36" MIN. BELOW GRADE.
3. FOOTINGS TO BE POURED CONCRETE (MIN. 3,000 P.S.I. MIX) AS SHOWN ON DRAWINGS AND/OR REQUIRED BY THE TOWN BUILDING DEPT.
4. FOOTINGS TO BE PLACED ON FIRM AND UNDISTURBED, UNFROZEN GROUND.
5. FOOTINGS TO BE 6" MIN. WIDER ON BOTH SIDES OF WALL ABOVE AND 12" MIN. THICK. ALL FOOTINGS SHALL EXTEND AT LEAST 36" BELOW ADJOINING FINISHED GRADE LEVEL. ALL FOOTINGS TO EXTEND BELOW HOUSE DRAINS.
6. MASONRY CHIMNEY FOOTINGS SHALL BE 12" DEEP WITH 6" PROJECTIONS.
7. "LALLY" COLUMN FOOTINGS SHALL BE A MIN. OF 24" x 24" x 12" DEEP UNLESS OTHERWISE NOTED.
8. WHERE FOOTINGS ARE SUPPORTING FOUNDATION WALLS AT DIFFERENT LEVELS FROM THE FOOTING OF ADJACENT STRUCTURE, THE INFLUENCE OF THE PRESSURE UNDER THE HIGHER FOOTING ON THE STABILITY OF THE LOWER FOOTING SHALL BE CONSIDERED. INFLUENCE LINE SHALL NOT EXCEED THE RATIO OF 2'-0" HORIZONTAL TO 1'-0" VERTICAL.
9. BEFORE ANY WATERPROOFING IS APPLIED, ALL SURFACES SHALL BE DRY, CLEAN AND FREE OF ALL LOOSE MORTAR OR ANY OTHER MATERIAL. WHERE THE FOUNDATION WALL IS OF CONCRETE, ALL WIRES SHALL BE CUT OFF FLUSH WITH THE WALL, THE ENDS BENT IN, AND COVERED WITH CEMENT MORTAR. ALL SPACES AROUND SERVICE PIPES ARE TO BE TIGHTLY SEALED.
10. WATERPROOFING OF FOUNDATION WALLS SHALL BE APPLIED FROM THE BOTTOM OF THE FOOTINGS TO THE LEVEL OF THE FINISHED EXTERIOR GRADE. WATERPROOFING IS TO CONSIST OF (2) TWO COATS OF A COMMERCIAL ASPHALTIC PREPARATION, OR AN APPLICATION OF HOT ROOFER'S PITCH.
11. BLOCK WALLS TO BE PROTECTED AND FINISHED FROM WOOD PLATE TO BOTTOM OF FOOTING WITH ONE (1) COAT CEMENT STUCCO FINISH.
12. TERRADRAIN PREFABRICATED DRAINAGE SYSTEM SHALL BE APPLIED TO THE FOUNDATION WALL AS SPECIFIED BY WEBTEC, INC.

FOUNDATION WALL:
1. ALL FOUNDATIONS AND BASEMENT WALLS IF POURED CONCRETE SHALL BE FC=3,000 P.S.I. IN SIZES SHOWN ON THE DRAWINGS.
2. ALL HOLLOW MASONRY UNITS ARE TO BE CONCRETE BLOCK PER BOCA CODE 122222. THE USE OF CINDER BLOCK IS NOT PERMITTED.
3. USE 12" THICK BLOCK BELOW GRADE AT BASEMENT PERIMETER WITH MAX. 6'-0" UNBALANCED FILL. 8" CONE BLOCK MAY BE USED ABOVE GRADE
4. FILL TOP COURSE SOLID WITH CONCRETE.
5. FILL TRANSITION COURSE BETWEEN 12" AND 8" BLOCK SOLID WITH CONCRETE.
6. PROVIDE 16" x 16" SOLID MASONRY PIERS PER THE PLANS. FILL SOLID WITH CONCRETE OR USE SOLID BLOCK (INTERLOCKED).
7. DAMP PROOF EXTERIOR SURFACE BELOW GRADE WITH 2 COATS OF ASPHALT OR EQUIVALENT.
8. TERMITE SHIELDS - SHALL BE COPPER OR ALUMINUM PROPERLY INSTALLED ON THE TOP OF ALL FOUNDATION WALLS.
9. INSULATION: INSTALL STYROFOAM INSULATION PAD BETWEEN MASONRY AND WOOD PLATE ON FOUNDATION.

FOUNDATION DRAINAGE:
1. FOUNDATION DRAINS SHALL BE 4" PERFORATED P.V.C. PIPE WITH STANDARD FITTINGS AT CORNER AND ANGLES.
2. THE PIPE SHALL BE LAID ON A 4" GRAVEL BED JUST OUTSIDE OF THE FOUNDATION WALL FOOTINGS AND BE UNIFORMLY PITCHED, APPROXIMATELY 1/8" PER FOOT, TO A SITE LOW POINT OR RAINWATER DISPOSAL SYSTEM.
3. THE DRAINPIPE SHALL BE COVERED WITH GRAVEL OR CRUSHED STONE TO WITHIN 12" BELOW FINISHED GRADE.

CONCRETE

1. CONCRETE SHALL BE STONE AGGREGATE OF MIN. COMPRESSIVE STRENGTH AS NOTED BELOW:
   FOOTINGS, WALLS, PIERS 3000 P.S.I.
   SLABS 3000 P.S.I.
2. CONCRETE SUBJECT TO POTENTIALLY DESTRUCTIVE WEATHERING ACTION SUCH AS FREEZING AND THAWING SHALL BE AIR-ENTRAINED.
3. INSTALLATION SHALL BE IN ACCORDANCE WITH ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.

FORM WORK:
1. COMPLETED CONCRETE WORK SHALL MEET THE CONCRETE OUTLINES AS SHOWN ON THE DRAWINGS. ALL FORMS TO BE ERECTED PLUMB AND TRUE AND SHALL BE PROPERLY BRACED.

CONCRETE:
1. FORM WORK: COMPLETED CONCRETE WORK SHALL MEET THE CONCRETE OUTLINES AS SHOWN ON THE APPROVED DRAWINGS. ALL FORMS TO BE OILED, PROPERLY BRACED, ERECTED PLUMB & TRUE IN A WORKMANLIKE MANNER.

2. CONCRETE DESIGN MIX:

28 DAY STRENGTH	MIN. BAGS CEMENT PER CUBIC YARD	GALLONS OF WATER PER BAG OF CEMENT	SLUMP
2000 PSI	5.0	7.0	5" + - 1"
2500 PSI	5.25	6.0	5" + - 1"
3000 PSI	5.75	5.0	5" + - 1"

PLACING OF CONCRETE:
3. "TEST CYLINDERS" STRENGTH TEST SHALL BE MADE ON THE SITE & STORED ON THE SITE UNDER CONTROLLED CONDITIONS FOR AT LEAST 24 HRS. BEFORE TRANSPORTED TO "TESTING LAB".
4. (2) TWO CYLINDERS SHALL BE TAKEN FOR EACH (50) FIFTY YARDS OF CONCRETE PLACED, OR IN DESIGN, (3) THREE CYLINDERS SHALL BE TAKEN AT EACH TIME OF SAMPLING. SAMPLING SHALL BE SAME AS THAT STATED ABOVE.
5. ALL TESTING PERFORMED BY CERTIFIED MATERIALS TESTING LAB. TESTING PERFORMED IN ACCORDANCE W/ STANDARD METHOD OF TESTING (A.S.T.M. 39-62).
6. ALL REPORTS TO BE FILED WITH THE ARCHITECT & OWNER.

MIX DESIGNS:
1. PRELIMINARY TESTS OR PRE QUALIFIED MIX DESIGNS SHALL BE SUBJECT TO APPROVAL MIX No. 1 FROM REPORT NC-1954, DATED 9/16/70 BY THE Maine TESTING LABORATORY.

REINFORCING:
1. SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

CONCRETE BLOCKS:
1. AS INDICATED ON THE DRAWINGS ARE TO BE HIGH PRESSURE STEAM CURED, LOAD BEARING, SET IN RUNNING BOND, BONDED AND KEYED AT ALL INTERSECTIONS, AND REINFORCED WITH EXPANDED METAL MESH AT EVERY THIRD COURSE.
2. (2) TWO COATS OF PORTLAND CEMENT STUCCO SHALL BE APPLIED TO ALL EXPOSED CONCRETE BLOCK.
3. CONCRETE BLOCK SHALL BE HOLLOW, LOAD-BEARING UNITS CONFORMING TO ASTM C90, GRADE N-1.
4. MORTAR SHALL CONFORM TO ASTM C270, TYPE S.
5. WORKMANSHIP SHALL BE IN ACCORDANCE WITH NCMA SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF LOAD-BEARING CONCRETE MASONRY.
6. WHERE CONCRETE BLOCK WALLS ARE USED AS FOUNDATION WALLS, THE BLOCK SHALL BE OF APPROVED TYPE CAPABLE OF WITHSTANDING ALL SUPERIMPOSED LOADS.
7. ALL STRUCTURAL LOAD-BEARING WALLS TO HAVE (1) ONE ROW OF SOLID CONCRETE BLOCK OR BRICK AT TOP COURSE IN ORDER TO DISTRIBUTE SUPERIMPOSED LOADS. IN ADDITION, DURO-WALL STEEL REINFORCING SHALL BE INSTALLED EVERY OTHER BLOCK COURSE.

STRUCTURAL STEEL & MISCELLANEOUS METAL WORK

1. ALL STRUCTURAL STEEL WORK (DESIGN, FABRICATION, ERECTION AND DETAILING) SHALL CONFORM TO THE BUILDING CODE. DESIGN STRESS 22,000 P.S.I.
2. ALL STRUCTURAL STEEL SHALL BE ASTM A36-60T STEEL.
3. CONTRACTOR SHALL FURNISH AND INSTALL ALL STEEL AND MISCELLANEOUS METAL WORK SHOWN OR IMPLIED ON THE DRAWINGS OR HEREIN SPECIFIED AS FOLLOWS:

(A) STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 AND AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS. CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER UNFINISHED BOLTS ASTM A307.

(B) FIREPLACE AND ACCESSORIES INCLUDING FLUES, EXTENSIONS, COLLARS, CAPS, DUCTS, DAMPERS AND CLEANOUTS.

(C) ACCESSORIES AND CONNECTIONS FOR STEEL SHALL BE OF ADEQUATE WEIGHTS TO SUSTAIN STRESSES AND STRAINS TO WHICH THEY WILL BE NORMALLY SUBJECTED.

(D) JOIST HANGERS SHALL BE OF STEEL AS MANUFACTURED BY DONLEY BROS. OR HOHMANN AND BARNARD OR AN APPROVED EQUAL.

ROUGH CARPENTRY AND INSULATION

SILL PLATE:
1. ALL SILL PLATES ARE TO BE WOLMANIZED. UNLESS OTHERWISE NOTED USE, (2) 2" x 6" MEMBERS AT BASEMENT AND (2) 2" x 4" MEMBERS AT SLABS. INSTALL 1/2" DIAMETER, 16" LONG HOOKED ANCHOR BOLTS SET IN FOUNDATION WALL, 8" MIN. AND 4'-0" O.C. WITH (1) ONE IN EACH CORNER OR SECURE WITH GALVANIZED METAL ANCHOR STRAPS MIN. 5'-0" O.C. INSTALL APPROVED SILL SEALER.

SHEATHING:
1. PLYWOOD SHEATHING SHALL BE APA GRADE STAMPED FOR SPECIFIED SPAN AND SHALL BE OF THE FOLLOWING THICKNESS:
   ROOF: 5/8" OR 1/2" O.S.B. OR PLYWOOD.
   FLOORS: 3/4" T&G O.S.B. OR PLYWOOD.
   WALLS: 5/8" OR 1/2" O.S.B. OR PLYWOOD.

2. ALL PLYWOOD SHEATHING SHALL BE GLUE-NAILED TO FLOOR JOINTS USING APA APPROVED ELASTOMERIC CONSTRUCTION ADHESIVE (B.F. GOODRICH PL400 OR EQUAL).
3. ROOF SHEATHING SHALL BE 5/8" PLYWOOD OR O.S.B. MADE WITH EXTERIOR GLUE, NAILED TO EVERY BEARING.
4. EXTERIOR WALL SHEATHING SHALL BE 1/2" THICK PLYWOOD MADE WITH EXTERIOR GLUE NAILED TO EVERY BEARING.
5. ALL PLYWOOD AND PLYSCORE TO HAVE APPROVED STAMP THEREON BEFORE DELIVERY TO JOB SITE.

UNDER FLOORING:
1. SUB FLOORING SHALL BE 3/4" PLYWOOD MADE WITH EXTERIOR GLUE. ALL JOINTS SHALL BE STAGGERED OVER BEARING AND SHALL BE CLOSELY BUTTED, NAILED AT EVERY BEARING.
2. OVER THIS SUB FLOOR, LAY ONE LAYER OF BUILDING PAPER AND A SINGLE LAYER OF 1/2" "FLAKE BOARD" UNDERLAYMENT.
3. ALL JOINTS SHALL NOT BE COINCIDENT WITH PLYWOOD JOINTS.

STRUCTURAL LUMBER:
1. FRAMING LUMBER SHALL BE OF THE FOLLOWING MINIMUM GRADE AND SPECIES FOR THE SPECIFIED USE.
2. ALL LUMBER SHALL BE GRADE-STAMPED BY A RECOGNIZED GRADING AGENCY AND SHALL BE SURFACED DRY, MAXIMUM MOISTURE CONTENT 19%.

RAFTERS - Douglas Fir No. 1 or 2* or equal.

JOISTS - Douglas Fir No. 1 or 2* or equal.

BEAMS, GIRDERS, SIDE - Douglas Fir No. 1 or 2* or equal.

FLITCH PLATE - Douglas Fir No. 1 or 2* or equal.

PLATE BEAMS - Douglas Fir No. 1 or 2* or equal.

STUDS - Douglas Fir Studgrade* or equal.

*UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
3. APPROVED PRE-MANUFACTURED JOIST AND GIRDERS ARE PERMITTED AS INDICATED ON ARCHITECTURAL DRAWINGS.
4. LUMBER SHALL CONFORM TO THE LATEST EDITION OF THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" AS PUBLISHED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION UNLESS OTHERWISE NOTED.
5. CONSTRUCTION GRADE: DENSE No. 1 FB = 1450 P.S.I. E=1,700,000*
ALL OTHER LUMBER: DOUGLAS FIR No. 2 FB = 1350 P.S.I. E = 1,400,000*

*UNLESS SHOWN OTHERWISE ON APPROVED PLANS.

6. ALL FRAMING LUMBER TO BE USED IS TO BE DOUGLAS FIR-LARCH #2 OR BETTER, CAPABLE OF DEVELOPING THE FOLLOWING MINIMUM ALLOWABLE STRESSES:

SIZE	Fb(p.s.i.) SINGLE	Fb (p.s.i.) REPETITIVE	Ft (p.s.i.)	Fc (p.s.i.)
2"X4"	1312	1507	862	1495
2"X6"	1137	1307	747	1430
2"X8"	1050	1207	690	1365
2"X10"	962	1106	632	1300
2"X12"	872	1006	575	1300

FV	HORIZONTAL SHEAR	95 p.s.i.
FC	PERPENDICULAR TO GRAIN	625 p.s.i.
E	MODULUS OF ELASTICITY	1,600,000 p.s.i.

(A) ALL EXPOSED LUMBER SHALL BE PRESSURE TREATED.
(B) THE MIN. DISTANCE PERMITTED FROM GRADE TO WOOD SHALL BE 8".
(C) WOOD STRUCTURAL MEMBERS THAT SUPPORT MOISTURE-PERMEABLE FLOORS OR ROOFS WHICH ARE EXPOSED TO THE WEATHER, SHALL BE OF APPROVED NATURALLY DURABLE OR PRESSURE-TREATED WOOD UNLESS SEPARATED FROM SUCH FLOORS BY AN IMPERVIOUS MOISTURE BARRIER.
(D) ALL LUMBER TO BE THOROUGHLY DRIED #1 CONSTRUCTION GRADE, FREE OF LOOSE OR LARGE KNOTS, SHAKES, EXCESS SAP OR OTHER DEFECTS WHICH MIGHT IMPAIR STRENGTH.

PRE-MANUFACTURED JOISTS AND GIRDERS:
1. "TRUS JOIST" AND "MICROLLAM" BEAMS: "MICROLLAM" BEAMS AND "TRUS JOISTS" SHALL BE AS MANUFACTURED BY TRUS JOIST CORPORATION, GEORGIA PACIFIC, BOISE CASCADE OR JAGER INDUSTRIES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND DETAILS.
2. ANY AND ALL DEVIATIONS FROM RECOMMENDED INSTALLATION PROCEDURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SUB CONTRACTOR.

"MICROLLAM" ALLOWABLE STRESSES:

FB	=	2,800 P.S.I.
FV	=	285 P.S.I.
Fc	=	500 P.S.I.
Fc	=	2,700 P.S.I.
Ft	=	1,850 P.S.I.
E	=	2,000,000 P.S.I.

MULTIPLE "MICROLLAM" MEMBERS SHALL BE FASTENED TOGETHER AS FOLLOWS EXCEPT AS NOTED ON PLANS:

9 1/2" & 11 7/8" - 2 ROWS OF 1/2" DIAMETER BOLTS 24" STAGGERED TOP AND BOTTOM
14", 16" & 18" -- 3 ROWS OF 1/2" DIAMETER BOLTS 24" STAGGERED TOP AND BOTTOM

3. CONTRACTOR SHALL INSPECT ALL PRE-MANUFACTURED PRODUCTS SUCH AS "MICROLLAM" PRODUCTS AND REJECT MATERIAL THAT IS WARPED, WET, OR OTHERWISE DEFECTIVE. "MICROLLAM" PRODUCTS SHALL BE KEPT DRY THROUGH THE DURATION OF CONSTRUCTION.

FRAMING:
1. ALL MEMBERS SHALL BE ACCURATELY AND SUBSTANTIALLY FITTED TOGETHER AND THE WHOLE STRUCTURE SHALL BE WELL BRACED AT ALL POINTS.
2. PLATES AND SILLS SHALL BE HALVED TOGETHER AT ALL CORNERS AND SPLICED.
3. PLATES SHALL BE ANCHORED TO FOUNDATION WALLS USING 1/2" DIAMETER ANCHOR BOLTS PLACED 48" O.C., MINIMUM TWO BOLTS PER LENGTH OF SILL AND PLACE NO MORE THAN 12" FROM ANY CORNER, EMBED MINIMUM 7" INTO MORTER FILLED CMU, OR CONCRETE WALL -OR- APPROVED METAL STRAPS @ 48" O.C.
4. FLOOR BEAMS SHALL BE DOUBLED UNDER ALL PARALLEL PARTITIONS.
5. STUDS IN WALLS SHALL BE DOUBLED AT ALL CORNERS AND OPENINGS AND SHALL BE BRIDGED ONCE IN THE MIDDLE OF EACH STORY HEIGHT.
6. JOISTS SHALL BE DOUBLED AROUND ALL OPENINGS AND UNDER ALL PARTITIONS NOT SUPPORTED BY PARTITIONS BELOW.
7. WHERE IT IS NECESSARY TO CUT FRAMING MEMBERS FOR INSTALLATION OF MECHANICAL WORK, THE MEMBERS SO CUT SHALL BE PROPERLY REINFORCED WITH HEADERS THE FULL DEPTH OF THE MEMBER OR WITH STEEL STRAPS.
8. ALL DIMENSIONS ARE STUD TO STUD UNLESS OTHERWISE INDICATED. WINDOWS AND DOORS ARE DIMENSIONED FROM CENTER LINE OF UNIT TO STUD. SEE WINDOW AND DOOR DETAILS.
9. ALL DIMENSIONS ARE INDICATED IN WRITING ONLY AND SHALL NOT BE SCALED FROM DRAWINGS.
10. ALL EXTERIOR FRAME WALLS, BEARING WALLS AND PARTITIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLATFORM FRAMING STANDARDS WITH: 2-2" x 6" SILL, 2" x 4" STUDS SET 16" O.C. AND 4" x 4" CORNER POSTS.
11. STUD FRAMING SHALL BE 2" x 4" AND/OR 2" x 6" STUDS, 16" O.C. WITH BLOCKING PROVIDED BETWEEN STUDS AT 4'-0" O.C. VERTICALLY AND (2) 2" x 4" AND/OR 2" x 6" PLATES AT TOP AND BOTTOM.
12. STUD WALLS HIGHER THAN 12'-0" ARE TO BE FRAMED WITH 2" x 6" STUDS AT 16" O.C. STUDS SHALL BE PROPERLY BRIDGED AND COVERED WITH 5/8" OR 1/2" PLYWOOD SHEATHING AND 15 lb. FELT PAPER WITH 4" OVERLAP.
13. INTERIOR PARTITIONS SHALL BE 2" x 4" STUDS, 16" O.C. WITH 2" x 4" PLATES AT TOP AND BOTTOM UNLESS NOTED OTHERWISE ON PLAN.
14. WOOD STUD BEARING WALLS NOT FACED WITH PLYWOOD SHEATHING SHALL BE BRACED WITH SOLID BLOCKING AT INTERVALS NOT EXCEEDING 0.4 TIMES THE LENGTH OF THE STUD FOR 2" x 4" AND 25 TIMES THE LENGTH OF THE STUD FOR 2" x 6".
15. IN STUDS OF BEARING WALLS OR PARTITIONS, NOTCHES OR BORED HOLES SHALL NOT BE CUT OR BORED MORE THAN ONE THIRD THE DEPTH OF THE STUD.
16. ALL PERIMETER WALLS SHALL BE CONSIDERED AS STRUCTURAL BEARING WALLS.
17. SEE PLAN FOR SIZES OF FLOOR JOISTS, CEILING BEAMS AND RAFTERS.
18. DOUBLE JOISTS (MIN.) AND PROVIDE SOLID BLOCKING BELOW ALL STUD PARTITIONS, STRUCTURAL POSTS, AND BATHTUBS (UNLESS OTHERWISE NOTED).
19. DOUBLE MEMBERS (MIN.) AROUND OPENINGS GREATER THAN 16" WIDE.
20. TRIPLE MEMBERS AROUND PERIMETER OF OPENINGS IN EXCESS OF 30" (STAIRS, SKYLIGHTS, ETC.) UNLESS OTHERWISE NOTED.
21. ALL HEADERS ABOVE DOORS, OPENINGS, WINDOWS WIDER THAN 6' SHALL BE (2) 2" x 12" WITH 1/2" PLYWOOD BETWEEN MEMBERS, UNLESS NOTED OTHERWISE ON PLAN OR IN SPECIFICATIONS.
22. ALL HEADERS AND WOOD BEAMS SHALL BEAR ON A MINIMUM OF (2) 2x4 MEMBERS.
23. ALL 3.5" OR 4" DIAMETER "LALLY" COLUMNS USED ARE TO HAVE A STEEL OUTER CASING WITH A MIN. WALL THICKNESS OF 0.216 INCHES UNLESS MANUFACTURER'S WRITTEN SPECS INDICATE THAT THE COLUMNS ARE ABLE TO SUPPORT THE IMPOSED LOADS.
24. NO STRUCTURAL VALLEYS ARE TO BE FORMED UNLESS OTHERWISE NOTED. VALLEYS ARE TO BE FORMED BY SETTING ONE ROOF ON TOP OF ANOTHER. THE UPPER ROOF RAFTERS ARE TO BE SET ON A 2" x 12" PLATE WHICH IS TO BE SET ON TOP OF THE SHEATHING OF THE LOWER ROOF AND NAILED THRU TO THE TOPS OF THE LOWER RAFTERS.
25. HEADERS OVER OPENINGS 4 ft. WIDE AND GREATER TO BEAR ON 4" x 4" POSTS EXCEPT WHERE OTHERWISE NOTED ON PLANS.
26. ALL HEADERS FOR OPENINGS UP TO 6' TO BE (2) 2" x 10" UNLESS OTHERWISE SPECIFIED ON PLANS.
27. 4" MINIMUM BEARING FOR ALL WOOD BEAMS AND RAFTERS.
28. 1-1/4" x 3" WOOD CROSS-BRIDGING OR APPROVED METAL CROSS-BRIDGING SHALL BE INSTALLED EVERY 8'-0" O.C. BETWEEN FLOOR AND ROOF JOISTS.
29. FRAME OUT ALL STAIRWELLS AND CHIMNEY BREASTS WITH DOUBLE HEADERS AND TRIMMERS HUNG WITH APPROVED HANGERS.
30. BEFORE COVERING UP STRUCTURAL FRAMEWORK MEMBERS WITH SHEETROCK, AN INSPECTION BY THE TOWNSHIP BUILDING INSPECTOR IS REQUIRED TO CERTIFY PROPER SIZES, TYPE AND LOCATION OF MATERIALS.
31. NAILING - THE CONTRACTOR IS TO CONSULT THE ARCHITECTURAL DRAWINGS AND IF NEEDED THE BOCA CODE FOR RECOMMENDED NAILING AND FASTENING SCHEDULE.
32. GRADES AND TYPES OF LUMBER - ALL STRUCTURAL LUMBER WILL BE EQUAL TO OR GREATER THAN THE DESIGN FACTORS REQUIRED ON THE SCHEDULE OF STRUCTURAL MATERIALS.
33. INFORMATION FOR DESIGN FACTORS HAS BEEN TAKEN FROM PUBLICATIONS OF THE NATIONAL FOREST PRODUCT ASSOCIATION. THE fs FOR HEADERS AND GIRDERS IS BASED ON SINGLE MEMBER USE (ALL HEADERS WILL HAVE AN fs OF AT LEAST 1450) JOISTS AND RAFTERS ARE BASED ON RESPECTIVE MEMBER USE WITH FACTORS FOR SNOW LOADS TAKEN INTO CONSIDERATION ON ROOFS. ALLOWABLE UNIT STRESS FOR STUDS IS BASED ON COMPRESSION MATERIAL TO GRAIN (F.).
34. WHERE IT IS NECESSARY TO CUT FRAMING MEMBERS FOR INSTALLATION OF MECHANICAL WORK, THE MEMBERS SO CUT SHALL BE PROPERLY REINFORCED WITH HEADERS THE FULL DEPTH OF THE MEMBER OR WITH STEEL STRAPS.
35. DETAILS OF WOOD FRAMING SUCH AS NAILING, BLOCKING, BRIDGING, FIRE STOPPING, ETC. SHALL CONFORM TO STATE CODE MANUAL OF HOUSE FRAMING. HEADER BEAMS SUPPORTING THREE OR MORE FLOOR JOISTS SHALL BE EITHER SECURED TO TRIMMER BEAMS WITH BRIDLE IRON OR SUPPORTED ON WOOD CLEATS NOT LESS THAN 1-1/2" THICK. FLOOR BEAMS SHALL BE CUT NO DEEPER THAN 1/5 DEPTH OF BEAM FOR PIPE OR CONDUIT.
36. PROVIDE 2" CLEARANCE BETWEEN ALL FRAMING AND MASONRY ENCASING FLUE LININGS. ALL WOOD STUD WALLS 8'-0" IN HEIGHT AND ALL BEARING WALLS REQUIRE BLOCKING AT MID-HEIGHT. ALL WOOD STUD WALLS HIGHER THAN 8' IN HEIGHT SHALL HAVE SOLID BLOCKING AT 3rd POINTS. ALL FLOOR JOISTS SHALL BE BRIDGED OR BLOCKED AT MID-SPANS. FLOOR JOISTS SPANNING 17'-0" OR MORE REQUIRE TWO ROWS OF BRIDGING OR BLOCKING AT THIRD SPANS.
37. STRUCTURAL NOTE: ALL POINT LOADS AND BEAMS ARE TO HAVE FULL BEARING ON GIRDERS, POSTS, COLUMNS, PIERS, OR SOLID MASONRY DOWN TO THE FOOTINGS. PROVIDE 3/8" THICK STEEL BEARING PLATES AT LOCATIONS WHERE THE GIRDER IS WIDER THAN THE POST OR COLUMN.

SPECIAL FIRE PLACE & CHIMNEY FRAMING NOTES:

1. PROVIDE A MIN OF 4" CLEARANCE AROUND ALL FIRE PLACE, FIRE BOXES AND SMOKE CHAMBERS.
2. PROVIDE A MIN. OF 2" CLEARANCE AROUND ALL FIRE PLACE CHIMNEYS.
3. PROVIDE A MIN. OF 1" CLEARANCE AROUND ALL FIRE PLACE CHIMNEYS PASSING THROUGH ROOF CONSTRUCTION OR USE 3.5" WIDE LOAD BEARING STEEL STUDS WITHOUT THE NEED FOR C