3444 1

EROSION & SEDIMENTATION CONTROL NOTES

IN ORDER TO PROTECT THE SOIL AND WATER RESOURCES OF THIS DEVELOPMENT AND ADJACENT LANDS, THE FOLLOWING ACTIONS WILL BE TAKEN:

WHEN CONSTRUCTION IS INITIATED ON FROZEN GROUND, WOOD WASTE COMPOST/BARK FILTER BERM SHALL BE UTILIZED IN LIEU OF SILT FENCE. SEE DETAIL, SHEET C-3.

SILT FENCE NOTES:

1. SILT FENCE AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.

2. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

3. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE GRADED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

4. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

EROSION CONTROL/TEMPORARY MEASURES

THE FOLLOWING TEMPORARY MEASURES TO CONTROL EROSION AND SEDIMENTATION SHALL BE USED.

1. SILT FENCE WILL BE INSTALLED AROUND THE LIMITS OF CLEARING ASSOCIATED WITH EACH PORTION OF THIS PROJECT. SILT FENCE SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED. SILT FENCING WILL BE INSTALLED TO SPECIFICATIONS OUTLINED IN THE MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES.

2. EACH GROUND AREA, OPENED OR EXPOSED, WHETHER DIRECTLY OR INDIRECTLY DUE TO THE PROJECT CONSTRUCTION, SHALL BE MINIMIZED AND SHALL BE STABILIZED WITHIN 15 DAYS OF THE INITIAL DISTURBANCE OF THE MINERAL SOIL, AND SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING.

3. TEMPORARY SOIL STABILIZATION SHALL BE EITHER BY TEMPORARY MULCHING, TEMPORARY SEEDING, PERMANENT BASE GRAVEL, OR ASPHALT BASE COURSE AS FOLLOWS:

TEMPORARY SEEDING:
SEED SHALL BE ARROOSTOOK RYE APPLIED AT 3.0#/1000SF. LIME SHALL BE AGRICULTURAL GROUND LIMESTONE APPLIED AT 138#/1000SF. FERTILIZER SHALL BE 10-10-10 CLASSIFICATION APPLIED AT 13.8#/1000SF. MULCH SHALL CONSIST OF HAY OR STRAW MULCH AND SPREAD EVENLY AT A RATE OF 70-90#/1000SF. TEMPORARY SEEDINGS SHALL ONLY BE MADE BETWEEN APRIL 15TH AND OCTOBER 15TH, AND SHALL NOT BE PLACED OVER SNOW. IF THE SEEDING IS NOT COMPLETED BY OCTOBER 15TH, ADDITIONAL MULCH WILL BE ADDED TO PROVIDE ADEQUATE WINTER PROTECTION AT TWICE THE STANDARD APPLICATION DONE AFTER SEPTEMBER 15T.

TEMPORARY MULCHING:
MULCH SHALL CONSIST OF CHOPPED HAY OR STRAW MULCH AND SPREAD BY MECHANICAL BLOWER, OR BY HAND IF ADJACENT TO WETLAND HABITAT, EVENLY AT A RATE OF 150-200#/1000 SF. TEMPORARY MULCH SHALL BE REMOVED PRIOR TO PERMANENT SOIL STABILIZATION. MULCH MUST NOT BE PLACED OVER SNOW.

PERMANENT BASE GRAVEL:
BASE GRAVEL UNDER PAVEMENT SHALL BE SUITABLE AS TEMPORARY SOIL STABILIZATION UNDER THE FOLLOWING CONDITIONS:
A. SLOPES SHALL BE LESS THAN 5 PERCENT.
B. GRAVEL SHALL MEET THE SPECIFICATIONS FOR BASE OF SUB-BASE GRAVEL FOR THE PROPOSED COMPLETED PAVEMENT.

4. PRIOR TO TOPSOIL REMOVAL, SILT FENCING SHALL BE STAKED AS SHOWN ON THE PLAN.

5. STRIPPED TOPSOIL SHALL BE STOCKPILED FOR REUSE DURING FINAL GRADING. THE PILE SHALL BE HEAVILY MULCHED WITH HAY WHILE STOCKPILED.

6. TO REDUCE OR ELIMINATE THE TRACKING OF EARTH MATERIALS ONTO PUBLIC RIGHT-OF-WAYS, A STABILIZED PAD OF CRUSHED STONE LOCATED AT THE DESIGNATED ACCESS POINT SHALL BE ESTABLISHED.

EROSION CONTROL/PERMANENT MEASURES

1. EXCESSIVELY STEEP SLOPES (2:1 OR GREATER) SHALL BE PROTECTED BY EROSION CONTROL EXCELSIOR BLANKET WITH BIODEGRADABLE PLASTIC OR JUTE MESH AFTER SEEDING. INSTALL PER MANF. RECOMMENDATIONS.

2. PERMANENT SEEDING SHALL BE PERFORMED DURING CONSTRUCTION OPERATIONS AS EACH DISTURBED AREA HAS BEEN BROUGHT TO FINISH GRADE.

3. THE CONTRACTOR SHALL MAINTAIN THE SEEDED AND MULCHED AREAS UNTIL FINAL ACCEPTANCE OF THE WORK. MAINTENANCE SHALL CONSIST OF PROVIDING PROTECTION AGAINST TRAFFIC AND REPAIRING ANY AREAS DAMAGED DUE TO WIND, WATER, EROSION, FIRE OR OTHER CAUSES. SUCH DAMAGED AREAS SHALL BE REPAIRED TO RE-ESTABLISH THE CONDITION AND GRADE OF THE SOIL PRIOR TO SEEDING AND SHALL THEN BE RE-FERTILIZED, RE-SEEDED AND RE-MULCHED.

EROSION CONTROL MAINTENANCE

1. THE FACILITY OPERATOR WILL BE RESPONSIBLE FOR THE PROPER OPERATION AND MAINTENANCE OF ALL STORMWATER MANAGEMENT STRUCTURES; EACH SHOULD BE KEPT FREE OF DEBRIS.

CONSTRUCTION SCHEDULE

(IN FOLLOWING SEQUENCE, COORDINATE WITH OTHER CONSTRUCTION ACTIVITIES MAINTAIN CONTINUOUSLY)

1. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
2. INSTALL SILTFENCE, PROJECT WIDE.
3. REMOVE AND STOCKPILE LOAM, PLACE SILTFENCE AT TOE.
4. SITE BLASTING AND PRIMARY EARTHWORK.
5. INSTALL DRAINAGE SYSTEM IMPROVEMENTS.
6. INSTALL DRAINAGE SYSTEM EROSION CONTROL MEASURES.
7. PROVIDE PRIMARY SLOPE STABILIZATION AND MULCHING OR TEMPORARY SEEDING.
8. FINAL SITE GRADING, PERMANENT SLOPE PROTECTION, PERMANENT SEEDING.
9. AFTER SIT IS STABILIZED, AND COMPLETE, REMOVE TEMPORARY EROSION CONTROL MEASURES.

PERMANENT SEEDING

KENTUCKY BLUEGRASS 0.46 LBS/1000 SF.

CREEPING RED FESQUE 0.46 LBS/1000 SF.

PERENNIAL RYE GRASS 0.11 LB/1000 SF.

DUST CONTROL

SPRINKLE AT A RATE OF 250 MG PER MILE OR 150 MG FOR PROJECT. SPRINKLE AS NEEDED TO CONTROL DUST WATER SHALL BE APPLIED BY TANK TRUCK WITH PRESSURE PUMP AND NOZZLE-EQUIPPED SPRAY BAR.

WINTER STABILIZATION

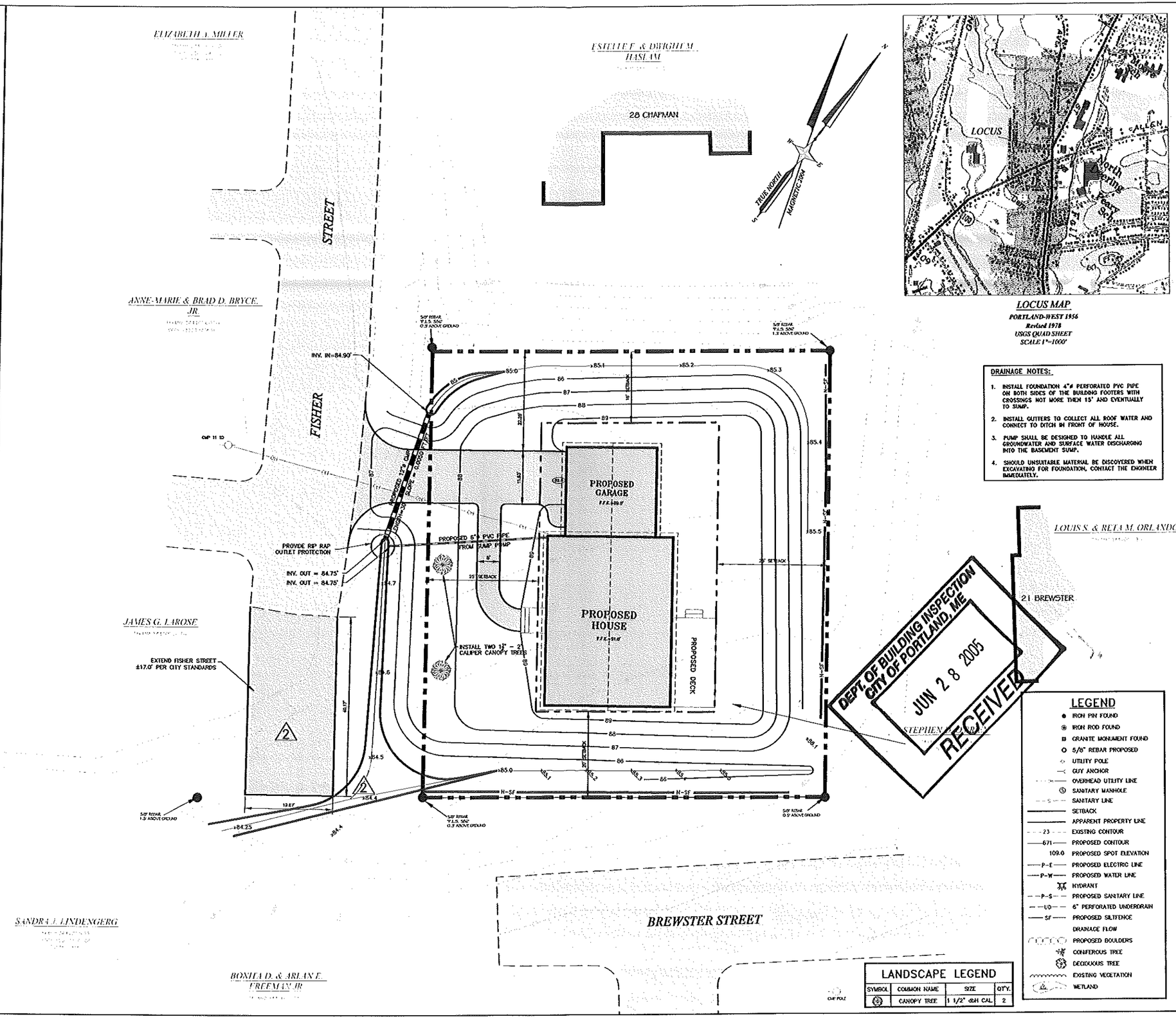
PROVIDE WINTER STABILIZATION MEASURES IN LIEU OF PERMANENT SEEDING AFTER SEPTEMBER 1, TEMPORARY SEEDING AFTER OCTOBER 1, OR SODDING AFTER NOVEMBER 15 AS FOLLOWS:

STRAW MULCH:
PLACE STRAW MULCH AT THE APPLICATION RATE OF 150 LBS/1000 SQUARE FEET ON DISTURBED AREAS LESS THAN 8% SLOPE AND NOT SUBJECT TO FLOWING WATER REQUIRING STABILIZATION. ANCHOR ALL MULCH WITH MULCH NETTING AND STAPLES OR WITH STAKE AND TWINE. STAKE AND TWINE SHALL BE APPLIED AT THE RATE OF 4 TO 8 PEGS PER SQUARE YARD WITH CRISS CROSSED TWINE STRUNG TAUT BETWEEN ALL PEGS AND SECURED AT EACH PEG WITH ONE OR MORE TURNS OF TWINE.

EROSION CONTROL MIX MULCH:
APPLY EROSION CONTROL MIX MULCH AS AN ALTERNATIVE TO STRAW MULCH OR MATS ON STEEP SLOPES ONLY AT RATES SPECIFIED IN DEP HANDOUT "MAINE EROSION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES".

MATS:
PLACE FABRICATED MULCH AND NETTING EROSION CONTROL MATS, WITH ANCHORING AS SPECIFIED BY THE MANUFACTURER, TO STABILIZE DISTURBED AREAS ON SLOPES GREATER THAN 8 %, SUBJECT TO FLOWING WATER (SUCH AS SWALE OR DITCH SECTIONS), OR CUT SLOPES SUBJECT TO WEEPING GROUNDWATER.

RIPRAP:
APPLY RIPRAP, MINIMUM D50 = 2", PLACED IN 4" LIFTS AS AN ALTERNATIVE TO STRAW MATS ON STEEP SLOPES OR FLOWING WATER CONDITIONS.



LOCUS MAP
PORTLAND-WEST 1956
Revised 1978
USGS QUAD SHEET
SCALE 1"=1000'

DRAINAGE NOTES:

1. INSTALL FOUNDATION 4"ø PERFORATED PVC PIPE ON BOTH SIDES OF THE BUILDING FOOTERS WITH CROSSINGS NOT MORE THEN 13' AND EVENTUALLY TO SUMP.
2. INSTALL GUTTERS TO COLLECT ALL ROOF WATER AND CONNECT TO DITCH IN FRONT OF HOUSE.
3. PUMP SHALL BE DESIGNED TO HANDLE ALL GROUNDWATER AND SURFACE WATER DISCHARGING INTO THE BASEMENT SUMP.
4. SHOULD UNSUITABLE MATERIAL BE DISCOVERED WHEN EXCAVATING FOR FOUNDATION, CONTACT THE ENGINEER IMMEDIATELY.

LANDSCAPE LEGEND

SYMBOL	COMMON NAME	SIZE	QTY.
	CANOPY TREE	1 1/2" dbh CAL	2

LEGEND

- IRON PIN FOUND
- IRON ROD FOUND
- GRANITE MONUMENT FOUND
- 5/8" REBAR PROPOSED
- UTILITY POLE
- GUY ANCHOR
- OVERHEAD UTILITY LINE
- SANITARY MANHOLE
- S — SANITARY LINE
- SETBACK
- APPARENT PROPERTY LINE
- 23 EXISTING CONTOUR
- 671 PROPOSED CONTOUR
- 109.0 PROPOSED SPOT ELEVATION
- P-E PROPOSED ELECTRIC LINE
- P-W PROPOSED WATER LINE
- HYDRANT
- P-S PROPOSED SANITARY LINE
- UD 6" PERFORATED UNDERDRAIN
- SF PROPOSED SILTFENCE
- DRAINAGE FLOW
- PROPOSED BOULDERS
- CONIFEROUS TREE
- DECIDUOUS TREE
- EXISTING VEGETATION
- WETLAND

NO.	REVISIONS	DATE
3	REVISED DECK LOCATION & OH UTILITY LINE	6/23/05
2	REGRADED AND EXTENDED FISHER STREET	10/8/04
1	REGRADE SITE, ADD 2 NEW TREES, EXTEND ROAD	9/20/2004

SHEET TITLE: PROPOSED SITE PLAN

SCALE: 1 inch = 10 feet
DATE: MAY 21, 2004
DRAWN BY: JBC

CLIENT/PROJECT: STEVE O'BRIEN NEW RESIDENCE

LOCATION: FISHER STREET
TOWN: PORTLAND COUNTY: CUMBERLAND STATE: MAINE

422 Corry Road
PO Box 4687
Augusta, Me 04330
1-800-244-9475

170 Green Road
Freeport, Me 04032
207-865-1695

E.S. COFFIN ENGINEERING & SURVEYING
ENGINEERING SURVEYING
E.S. COFFIN ENGINEERING & SURVEYING, INC.

STATE OF MAINE
JAMES E. COFFIN 8500
REGISTERED PROFESSIONAL ENGINEER

PROJECT: 2003-618

C-1

GENERAL NOTES:

PART 1 GENERAL

1.01 GENERAL

A. NO PROVISIONS HAVE BEEN MADE FOR ANY TEMPORARY CONDITIONS THAT MAY ARISE DURING CONSTRUCTION PRIOR TO THE COMPLETION OF THE STRUCTURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS, SHORING AND TEMPORARY BRACING DURING THE PROGRESS OF THE PROJECT.

B. PRINCIPAL OPENINGS THROUGH THE FOUNDATION ARE NOT SHOWN ON THESE DRAWINGS. THE GENERAL CONTRACTOR SHALL EXAMINE THE DRAWINGS TO DETERMINE THE REQUIRED OPENINGS, AS HE SHALL PROVIDE FOR ALL OPENINGS AND SHALL VERIFY SIZE AND LOCATION OF ALL OPENINGS WITH OTHER PROJECT REQUIREMENTS. ANY DEVIATION FROM THE OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR APPROVAL.

C. ALTERNATE CONNECTION DETAILS MAY BE USED IF SUCH DETAILS ARE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND ACCEPTANCE IS GRANTED. HOWEVER, THE STRUCTURAL ENGINEER SHALL BE THE SOLE JUDGE OF ACCEPTABILITY AND THE CONTRACTOR'S BID SHALL ANTICIPATE THE USE OF THOSE SPECIFIC DETAILS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ANY ALTERNATE DETAILS, WHICH HE PROPOSES.

D. WORK NOT INDICATED ON A PART OF THE DRAWINGS, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE INCLUDED.

E. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ADJACENT STRUCTURES, PROPERTY, AND THE PUBLIC. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS.

F. ANY MODIFICATION OR ALTERATION OF THESE CONSTRUCTION DOCUMENTS OR CHANGES IN CONSTRUCTION FROM THE INTENT OF THESE DOCUMENTS BY THE CONTRACTOR WITHOUT WRITTEN APPROVAL OF THE ENGINEER SHALL REMOVE ALL PROFESSIONAL AND LIABLE RESPONSIBILITY ON THE PART OF THE ENGINEER.

G. ALL CONTRACTORS ARE REQUIRED TO EXAMINE THE DRAWINGS AND SPECIFICATIONS CAREFULLY, VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO SUBMITTING THE PROPOSAL. FAILURE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL IN NO WAY RELIEVE THE SUCCESSFUL BIDDER FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.

H. DO NOT SCALE FROM DRAWINGS.

I. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

J. CONTRACTOR TO VERIFY BUILDING DRAWING DIMENSIONS WITH MANUFACTURER BUILDING DRAWING DIMENSIONS AND/OR ARCHITECTURAL DRAWINGS.

K. INTERIOR FLOOR DRAIN LOCATIONS AND OUTFALL TO BE DETERMINED BY OTHERS.

CONCRETE NOTES

PART 1 – GENERAL

1.01 GENERAL

A. ADHERE TO ACI COLD WEATHER CONCRETE SPECIFICATIONS, WHEN APPLICABLE.

B. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK

C. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO MAINTAIN STABILITY AND PREVENT UNDERMINING OF EXISTING FOUNDATIONS AT ALL TIMES.

D. NO FOUNDATIONS SHALL BE PLACED IN WATER OR ON FROZEN GROUND.

E. ALL FOOTINGS ARE TO BE EXCAVATED USING A BUCKET WITH A SMOOTH TOOTHLESS CUTTING EDGE. FOOTING EXCAVATIONS ARE TO BE FINISHED BY HAND FOR NOT LESS THAN THE LAST SIX INCHES.

F. ALL FINISHED FOUNDATION EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE STRUCTURAL ENGINEER OR HIS DESIGNATE BEFORE ANY CONCRETE IS PLACED.

G. THE OWNER, THE STRUCTURAL ENGINEER AND THEIR CONSULTANTS ASSUME NO RESPONSIBILITY FOR THE VALIDITY OF THE SUBSURFACE CONDITIONS DESCRIBED ON THE DRAWINGS, SPECIFICATIONS, TEST BORINGS OR TEST PITS.

H. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI 315 – "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," LATEST EDITION.

PART 2 – PRODUCTS

2.01 MATERIAL

A. REINFORCING:
1. SHALL BE GRADE 60, NEW DEFORMED BARS AND SHALL CONFORM TO ASTM A615. ALL REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706.
2. REINFORCING BARS MAY NOT BE WELDED EXCEPT WHERE DESIGNATED BY THE STRUCTURAL ENGINEER.
3. ALL WELDED WIRE FABRIC (W.W.F.) SHALL CONFORM TO ASTM 185. W.W.F. SHALL BE PROVIDED IN FLAT SHEETS.
4. ALL LAPS IN W.W.F. SHALL BE ONE MESH PLUS TWO INCHES AT SPLICES. W.W.F. SHALL BE 6X6/W1.4XW1.4 (TYP., UNO)
5. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS:
   - A. SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH – 3 INCHES (CLEAR)
   - B. FORMED SURFACES EXPOSED TO EARTH OR WEATHER
     1. #6 THROUGH #18 BARS – 2 INCHES
     2. #5 BARS & SMALLER 1 ½ INCHES
   - C. FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER SLABS, WALLS, JOISTS –2 INCHES
   - D. BEAMS, COLUMNS – 2 INCHES
6. ALL HOOKS SHOWN ON DRAWINGS SHALL BE STANDARD HOOKS UNLESS NOTED OTHERWISE.
7. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES, OR HOOKED AT DISCONTINUOUS ENDS. LAP LENGTHS SHALL BE AS GIVEN IN THE SPLICE AND DEVELOPMENT TABLE. LAP BEAM TOP BARS AT MID–SPAN AND BEAM BOTTOM BARS AT SUPPORTS, UNLESS NOTED OTHERWISE.

B. FOUNDATION WALLS & FOOTING MIX DESIGN:
1. 3000 PSI
2. 3/4" STONE
3. SLUMP 4" +/- 1"
4. 6 % AIR ENTRAINMENT

C. SLAB MIX DESIGN:
1. 4000 PSI
2. 3/4" STONE
3. SLUMP 5" +/- 1"
4. NO AIR

PART 3 – EXECUTION

3.01 SUBGRADE

A. ALL GRADING SHALL BE ACHIEVED AT SUBGRADE TO PROVIDE A CONSTANT THICKNESS OF CONCRETE.

B. STRUCTURAL FILL SHALL BE COMPACTED IN 6" LIFTS TO 95% OF ITS MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557.

C. SUBGRADE TO CONSIST OF AT LEAST 12" OF COMPACTED SAND OR GRAVEL. THIS MATERIAL SHALL BE"

SCREEN OR SIEVE SIZE	PERCENT FINER BY WEIGHT
4"	100%
½"	35% – 75%
¼"	25% – 60%
NO. 40	0–25%
NO. 200	0–5%

D. DRAINAGE STONE SHALL CONSIST OF CLEAN ANGULAR FRAGMENTS OF QUARRIED ROCK WITH UNIFORM QUALITY AND BE GRADED AS FOLLOWS:

SCREEN OR SIEVE SIZE	PERCENT FINER BY WEIGHT
2 ½"	100%
2"	95% – 100%
1"	0 – 30%
½"	0 – 5%

3.02 PLACEMENT

A. CONCRETE SLAB ON GRADE SHALL BE PLACED IN ONE CONTINUOUS PLACEMENT, WITH NO COLD JOINTS. IF COLD JOINTS ARE DESIRED, CONTRACTOR MUST PROVIDE PLACEMENT SEQUENCE AND JOINT DETAIL FOR ENGINEERS APPROVAL, PRIOR TO PLACEMENT.

B. APPLY CONCRETE SEALER AFTER THE SLAB HAS CURED FOR 30 DAYS.

C. VAPOR BARRIERS WILL BE USED UNDER SLAB TO PREVENT MOISTURE MIGRATION INTO THE SLAB, AND TO PROVIDE A BARRIER TO RADON PENETRATION.

D. VAPOR BARRIER:
1. 6 MIL POLYETHYLENE
2. PERMEANCE LESS THAN 0.3 PERMS DETERMINED IN ACCORDANCE WITH ASTM E 96.
3. BARRIER SHOULD NOT BE PUNCTURED DURING CONSTRUCTION ACTIVITIES.
4. EDGES SHOULD BE LAPPED A MINIMUM OF 6", TAPPED, AND SHOULD BE CAREFULLY FITTED AROUND OPENINGS.

E. ALL CONCRETE EXPOSED TO THE WEATHER SHALL CONTAIN 5% – 7% AIR ENTRAINMENT ADMIXTURE.

F. ALL FOOTINGS SHALL BE PLACED MONOLITHICALLY.

G. PIPES OR CONDUITS PLACED IN SLABS ON GRADE SHALL NOT BE PLACED CLOSER THAN 3 DIAMETERS ON CENTER AND SHALL HAVE AN OUTSIDE DIAMETER LESS THAN 1/3 OF THE SLAB THICKNESS. ALUMINUM COMPONENTS SHALL NOT BE PLACED IN CONCRETE. NO CONDUITS SHALL BE PLACED IN SLABS ON METAL DECK.

H. AT LOCATIONS WHERE ANY PART OF FOOTING BEARS DIRECTLY ON LEDGE, SUFFICIENT LEDGE SHALL BE REMOVED TO PROVIDE A LEVEL–BEARING SURFACE IN ALL DIRECTIONS. THOROUGHLY CLEAN LEDGE SURFACE PRIOR TO PLACING CONCRETE.

I. WHERE FOUNDATION ELEMENTS ARE TO HAVE FILL ON BOTH SIDES, EACH SIDE SHALL BE FILLED SIMULTANEOUSLY, MAINTAINING A COMMON ELEVATION.

J. CONTRACTOR SHALL PROVIDE CONTINUOUS DRAINAGE BY MECHANICAL METHODS TO CONTROL SURFACE AND UNDERGROUND WATER AS REQUIRED DURING CONSTRUCTION, SO THAT ALL EXCAVATIONS ARE DRY.

K. ALL LOCATIONS WHERE BEDROCK IS REMOVED SHALL BE FREE DRAINING SO THAT NO POCKETS OF UNDERGROUND WATER COLLECT.

L. ALL EXPOSED EDGES OF CONCRETE MEMBERS SHALL BE CHAMFERED 3/4" UNLESS SHOWN OTHERWISE ON DRAWINGS.

M. INTERIOR CONCRETE SLABS SHALL BE MOIST CURED CONTINUOUSLY FOR 7 DAYS.

N. CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F, AND IN MOIST CONDITION FOR AT LEAST THE FIRST SEVEN DAYS AFTER PLACEMENT.

O. ALL EMBEDMENTS IN CONCRETE, INCLUDING ANCHOR BOLTS, SHALL BE FIRMLY SECURED BY TIE WIRE TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT.

P. CONSOLIDATE ALL CONCRETE WITH A VIBRATOR OR OTHER MEANS RECOMMENDED BY ACI 301. HONEYCOMBED SURFACES WILL NOT BE PERMITTED.

Q. SEE ARCHITECTURAL DRAWINGS FOR DOOR AND WINDOW OPENINGS, DRIPS, WASHES, REGLETS, CONCRETE FINISHES, MASONRY ANCHORS, AND FOR MISCELLANEOUS EMBEDDED PLATES, BOLTS, ANCHORS, ANGLES, ETC. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF DRAINS. SLOPE SLABS UNIFORMLY TO DRAINS.

3.03 CONTROL JOINTS

A. PLACE CONTROL JOINTS WHERE SHOWN ON THE PLANS. SLAB SECTIONS FORMED WITH CONTROL JOINTS SHOULD BE SQUARE OR NEARLY SQUARE.

B. SAW CUT JOINTS IN CONCRETE, AT EACH CONTROL JOINT LOCATION, AS SOON AS SLAB WILL SUPPORT THE WEIGHT OF THE SOFF–CUT SAW AND OPERATOR. (NORMALLY WITHIN 2 HOURS AFTER FINISHING AT CONTROL JOINT LOCATION). THE DEPTH OF CUT SHALL BE 1" TO 1 1/4". USE 3/8" DIAMETER SONOFOAM CLOSED CELL BACKER–ROD AND SONOLASTIC SL 2 SEALANT.

C. SEAL CONTROL JOINTS TO PREVENT SPALLING OF THE CONCRETE.

3.04 CONCRETE TESTING

A. FOUR CONCRETE TEST CYLINDERS TO BE SET ASIDE FOR LABORATORY TESTING EITHER EVERY 50 CUBIC YARDS FOR ONE CONTINUOUS PLACEMENT OR EACH NEW DAY PLACEMENT, WHICH EVER PRODUCES THE MOST CYLINDERS.

B. THE TESTING FOR THE FOUR CONCRETE CYLINDERS ARE TO CONSIST OF A (1) 7–DAY TEST, (2) 28–DAY TESTS, AND (1) HOLD CYLINDER. THE TESTS SHALL INCLUDE TESTING OF THE WET AND DRY DENSITY OF THE CONCRETE AND THE COMPRESSIVE STRENGTH OF EACH SPECIMEN.

C. ALL TESTING SHALL BE PERFORMED BY A LABORATORY IN COMPLIANCE WITH ASTM C495.

DESIGN LOADING

PART 1 – LOADING

1.01 DESIGN SOIL BEARING PRESSURE

A. THE DESIGN SOIL BEARING PRESSURE IS ASSUMED TO BE 2,500 PSF.

1.02 DEAD LOAD

A. 1ST FLOOR=10 PSF

B. 2ND FLOOR=10 PSF

C. ROOF=15 PSF

1.03 LIVE LOAD

A. 1ST FLOOR=40 PSF

B. 2ND FLOOR=40 PSF

C. ROOF SNOW LOAD(Pg)=50 PSF
(Pf)=35 PSF

STRUCTURAL STEEL NOTES

PART 1 – GENERAL

1.01 STANDARD SPECIFICATIONS:

A. FABRICATION, ERECTION AND WELDING IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS. ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN ADOPTED JUNE 1989. INCLUDING ALL PUBLISHED SUPPLEMENTS.

B. WELDING SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE", AWS D1.1 (LATEST EDITION). ALL WELDING 1/4" FILLET OR LARGER.

C. BOLTING OF STRUCTURAL JOINTS SHALL BE IN ACCORDANCE WITH "AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" (LATEST EDITION).

D. NO CHANGE IN SIZE OR POSITION OF THE STRUCTURAL ELEMENTS SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

1.02 SUBMITTALS:

A. SUBMIT SHOP DRAWINGS FOR REVIEW.

1.03 PRODUCT HANDLING:

A. STORE STRUCTURAL STEEL MEMBERS AT THE PROJECT SITE ABOVE GROUND ON PLATFORMS, SKIDS, OR OTHER SUPPORTS.

B. PROTECT STEEL FROM CORROSION.

PART 2 – PRODUCTS

2.01 MATERIALS:

A. STEEL SHAPES, BARS, AND PLATES WILL BE ASTM A–36.

B. STRUCTURAL TUBING AND COLUMNS WILL BE ASTM 500, GRADE B.

C. ANCHOR BOLTS WILL BE ASTM A–307, GRADE A.

D. HIGH STRENGTH BOLTS WILL BE ASTM A–325, TYPE 1 OR 2.

E. WELDING WILL BE PERFORMED WITH 70 KSI WIRE OR ELECTRODES.

F. SHOP PAINT TO BE TNEMEC 88 RED METAL PRIMER, OR EQUIVALENT APPROVED BY THE ENGINEER.

G. NON–SHRINK GROUT SHALL BE 7000 PSI (MIN.) COMPRESSIVE STRENGTH.

H. PLACE NON–SHRINK GROUT UNDER ALL COLUMN BASE PLATES BEFORE ADDING ANY VERTICAL LOADS.

I. ALL WORK AND MATERIALS PERTAINING TO METAL DECK SHALL CONFORM TO STEEL DECK INSTITUTE CODES, SPECIFICATIONS AND RECOMMENDATIONS. METAL DECK SHALL BE GALVANIZED.

PART 3 – EXECUTION

3.01 FABRICATION:

A. FABRICATE STRUCTURAL STEEL IN ACCORDANCE WITH THE REQUIREMENTS OF THE DRAWINGS.

B. SHOP PAINT SURFACES OF ALL STEEL WORK WITH FABRICATOR'S STANDARD RUST INHIBITIVE PAINT, MINIMUM 2.0 MIL THICK.

C. SHOP CONNECTIONS, UNLESS OTHERWISE NOTED, SHALL BE MADE BY WELDING.

D. ALL STRUCTURAL STEEL SHALL BE SHOP PRIMED EXCEPT THAT STRUCTURAL STEEL TO BE FIREPROOFED SHALL NOT BE PRIMED.

E. CONNECTIONS SHOWN ON THESE DRAWINGS ARE GENERALLY SCHEMATIC. THEY ARE INTENDED TO DEFINE THE SPATIAL RELATIONSHIP OF THE FRAMED MEMBERS AND SHOW A FEASIBLE METHOD OF MAKING THE CONNECTION. A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MAINE SHALL BE RETAINED BY THE FABRICATOR SHALL DESIGN ANY CONNECTION THAT IS NOT SHOWN, OR IS NOT COMPLETELY DETAILED ON THE STRUCTURAL DRAWINGS.

F. SUBSTANTIAL ALTERATIONS OF SCHEMATIC CONNECTION DETAILS MAY IMPACT ARCHITECTURAL CONCEPT AND SHALL NOT BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

G. MINIMUM CONNECTION PLATE THICKNESS SHALL BE 1/4 INCH.

H. FOR ALL NON–COMPOSITE BEAMS, THE BEAM–TO–BEAM AND BEAM–TO–COLUMN CONNECTION SHALL DEVELOP THE END REACTION OF THE CONNECTED BEAM. THE END REACTION OF THE CONNECTED BEAM SHALL BE ASSUMED EQUAL TO ONE–HALF THE UNIFORM LOAD CARRYING CAPACITY OF THE BEAM ASSUMING FULL LATERAL SUPPORT, AS GIVEN IN PART 2 (BEAMS AND GIRDERS) OF AISC MANUAL, 9TH EDITION. A MINIMUM SHEAR CAPACITY OF 12 KIPS SHALL BE PROVIDED FOR ALL BEAMS GREATER THAN 8" DEEP AND 8 KIPS FOR BEAMS 8" DEEP OR LESS.

I. CUTS, HOLES, COPING, ETC. REQUIRED FOR WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS AND MADE IN THE SHOP. CUTS OR BURNING OF HOLES IN STRUCTURAL STEEL MEMBERS IN THE FIELD WILL NOT BE PERMITTED, UNLESS APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.

J. ALL BEAMS AND COLUMNS ENCASED IN MASONRY OR CONCRETE SHALL BE COVERED WITH A COAL TAR EPOXY COATING, 1/8" THICK, OR SHALL BE GALVANIZED.

3.02 ERECTION:

A. THE STRUCTURAL STEEL SHALL BE ERECTED PLUMB AND TRUE TO THE LINES AND ELEVATIONS INDICATED ON THE DRAWINGS.

B. ERECTION TOLERANCES SHALL BE WITHIN THE LIMITS SPECIFIED IN THE "AISC CODE OF STANDARD PRACTICE" (LATEST EDITION).

C. TEMPORARY CONNECTIONS SHALL BE ADEQUATE TO SAFELY SUPPORT ALL DEAD LOAD AND ERECTION IMPOSED STRESSES.

D. TEMPORARY BRACING SHALL BE PROVIDED, WHEREVER NECESSARY TO HOLD THE STEEL IN A HORIZONTAL AND VERTICAL PLANE UNTIL PERMANENT BOLTING HAS BEEN COMPLETED.

E. BOLTS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND BROUGHT TO SNUG TIGHT CONDITION.

F. ENLARGEMENT OF HOLES BY BURNING WITH A TORCH SHALL NOT BE ALLOWED. ALL STEEL WITH BURNT HOLE ENLARGEMENTS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

G. STRUCTURAL STEEL WEB PENETRATIONS SHALL NOT EXCEED 2" DIAMETER. PENETRATIONS SHALL BE DRILLED.

WOOD TRUSS NOTES

PART 1 – GENERAL

1.01 STANDARD SPECIFICATION

A. THE LATEST ADDITION OF WTCA SHALL APPLY.

B. TRUSS MANUFACTURER TO DESIGN LATERAL LONGITUDINAL BRACING. FINAL TRUSS PLANS TO BE STAMPED BY MANUFACTURERS ENGINEER.

C. TRUSSES TO BE DESIGNED BASED ON DESIGN LOADING.

PART 2 – PRODUCTS

2.01 MATERIAL

A. ALL METAL TIMBER CONNECTORS SHALL BE HOT–DIPPED GALVANIZED.

B. ALL BOLTS, NUTS, AND WASHERS ARE TO BE ASTM A307, HOT–DIPPED GALVANIZED.

C. ALL NAILS ARE COMMON WIRE, EXCEPT FOR PLYWOOD SHEATHING (BARBED), GALVANIZED FOR EXPOSED FRAMING. STAINLESS STEEL NAILS REQUIRED FOR SIDING AND TRIM.

PART 3 – ERECTION

3.01 PRODUCT STORAGE:

A. STORE TRUSSES AT THE PROJECT SITE ABOVE GROUND ON PLATFORMS, SKIDS, OR OTHER SUPPORTS.

B. PROTECT FROM CORROSION.

3.02 FABRICATION:

A. FABRICATE TRUSSES IN ACCORDANCE WITH THE REQUIREMENTS OF THE DRAWINGS.

3.03 ERECTION:

A. THE TRUSSES SHALL BE ERECTED PLUMB AND TRUE TO THE LINES AND ELEVATIONS INDICATED ON THE DRAWINGS.

C. TEMPORARY CONNECTIONS SHALL BE ADEQUATE TO SAFELY SUPPORT ALL DEAD LOAD AND ERECTION IMPOSED STRESSES.

D. TEMPORARY BRACING SHALL BE PROVIDED, WHEREVER NECESSARY TO HOLD THE TRUSSES IN A HORIZONTAL AND VERTICAL PLANE UNTIL PERMANENT ATTACHMENT AND BRACING HAS BEEN COMPLETED.

E. INSTALL PERMANENT BRACING PER MANUFACTURES DRAWINGS.

WOOD NOTES:

PART 1 – GENERAL

1.01 STANDARD SPECIFICATIONS

A. THE CURRENT AITC SPECIFICATION SHALL APPLY.

PART 2 – PRODUCTS

2.01 MATERIAL

A. ALL TIMBER IN CONTACT WITH MASONRY AND CONCRETE OR FRAMING LABELED "P.T." SHALL BE PRESSURE TREATED SOUTHERN PINE GRADE #1 WITH A MINIMUM Fb OF 1,350 PSI AND E OF 1,500 KSI OR BETTER.

B. CUT ENDS OF PRESSURE TREATED (P.T.) LUMBER AND TIMBER POSTS AND SILLS SHALL BE DIPPED IN A PRESERVATIVE TO COMPLY WITH AWPA M4.

C. ALL TYPICAL FRAMING TIMBER IS TO BE SPRUCE–PINE–FIR GRADE #2 WITH A MINIMUM Fb OF 750 PSI AND E OF 1,100 KSI OR BETTER.

D. ALL FRAMING TIMBER LABELED "LVL" SHALL BE BOISE CASCADE LAMINATED VENEER LUMBER WITH A Fb OF 2600 PSI AND E OF 2,000 KSI OR BETTER.

E. ALL FRAMING LABELED "BCI" SHALL BE BOISE CASCADE "EASTERN ENGINEERED WOOD PRODUCTS" WITH DESIGN PROPERTIES EQUAL OR BETTER THEN THE SPECIFIED MODEL PROPERTIES.

F. ALL FRAMING LABELED "WP PSL" SHALL BE WOLMANIZED PARALLAM PSL SERVICE LEVEL 2 BY TRUSJOIST WITH A Fb OF 2068 PSI AND E OF 1740 KSI OR BETTER.

G. ALL METAL TIMBER CONNECTORS INDICATED ON THE DRAWINGS SHALL BE HOT–DIPPED GALVANIZED.

H. ALL BOLTS, NUTS, AND WASHERS ARE TO BE ASTM A307, HOT–DIPPED GALVANIZED.

I. ALL NAILS ARE COMMON WIRE, EXCEPT FOR PLYWOOD SHEATHING (BARBED), GALVANIZED FOR EXPOSED FRAMING. STAINLESS STEEL NAILS REQUIRED FOR SIDING AND TRIM.

J. REFERENCE TO "SIMPSON" ON DRAWINGS INDICATES METAL CONNECTORS MANUFACTURED BY SIMPSON STRONG–TIE.

PART 3 – EXECUTION

3.01 ERECTION

A. PROVIDE SAME SIZE SOLID BRIDGING/BLOCKING AT MID SPAN FOR ALL JOISTS.

B. FOR EXTERIOR WALLS (2X6) PROVIDE:
1. 3–2X6'S AT CORNERS
2. DOUBLE PLATE WITH 4' MIN. SPLICE SEPARATION. ALL SPLICES SHALL OCCUR OVER STUDS.

C. AT LOCATIONS WHERE PORTIONS OF WOOD FLOOR OR ROOF DECK ARE ADDED OR REPLACED, THE FINISH FLOOR ELEVATION OF THE NEW WOOD DECK SHALL MATCH THE ADJACENT EXISTING WOOD DECK.

D. PLYWOOD FOR FLOORS AND ROOF SHALL BE INSTALLED WITH BOTH ADHESIVE AND 10D NAILS AT 6" O.C. AT SUPPORTED EDGES AND 12" O.C. ELSEWHERE.

E. FLOOR FRAMING AROUND CHASE OPENINGS FOR MECHANICAL DUCTS SHALL CONSIST OF THE FOLLOWING:
   - A. DOUBLE FLOOR–LENGTH JOISTS EACH SIDE OF OPENING WITH JOIST DEPTH SAME AS ADJACENT FLOOR FRAMING.
   - B. MEMBERS CONNECTED WITH SIMPSON DOUBLE JOIST HANGERS.

STATE OF MAINE
BENJAMIN E. MURRAY
NO. 10128
REGISTERED PROFESSIONAL ENGINEER

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REVISIONS | NO. | DATE

SHEET TITLE: NOTES

CLIENT/PROJECT: O'BRIEN RESIDENCE

LOCATION: FISHER STREET

TOWN: PORTLAND COUNTY: CUMBERLAND STATE: MAINE

SCALE: NO SCALE

DATE: JUNE 23, 2005

DRAWN BY: FRD

CHECKED BY: BEM

PROJ. NO. 2005-049

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