CONCRETE NOTES

1. ALL CONCRETE WORK SHALL COMPLY WITH THE LATEST RECOMMENDATIONS AND SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE (ACI) AND THE LOCAL BUILDING CODES.
2. ALL CONCRETE SHALL BE NORMAL WEIGHT HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS WITH THE FOLLOWING REQUIREMENTS:
   PORTLAND CEMENT - ASTM C150, TYPE II, MINIMUM 5½ SACKS PER CUBIC YARD.
   AGGREGATE - ASTM C33, 1" MAXIMUM SIZE.
   WATER - POTABLE WITH A MAXIMUM WATER CEMENT RATIO OF 0.55.
   SLUMP - 3" TO 5".
   ADMIXTURES - USE AIR ENTRAINING AGENT CONFORMING TO ASTM C260 WITH 4-6% TOTAL AIR. USE WATER REDUCING AGENT CONFORMING TO ASTM C494 IN ALL CONCRETE. CALCIUM CHLORIDE SHALL NOT BE USED.
   DESIGN MIX - SUBMIT A CURRENT (MAXIMUM 18 MONTHS OLD) DESIGN MIX OF THE EXACT SAME MIX TO BE USED ON THE PROJECT, WITH 28 DAY COMPRESSIVE STRENGTH TESTS, TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING CONSTRUCTION
3. ALL REINFORCING STEEL SHALL COMPLY WITH ASTM A615, GRADE 60 EXCEPT STIRRUPS AND TIES TO BE GRADE 40. WELDED WIRE FABRIC TO CONFORM TO ASTM A185. LAP ALL BARS 30 DIAMETERS MINIMUM AT SPLICES UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
4. FOOTINGS SHALL REST ON SUITABLE UNDISTURBED SOIL OR COMPACTED GRANULAR FILL HAVING A MINIMUM BEARING CAPACITY OF 3000 PSF. ELEVATIONS OF BOTTOM OF FOOTINGS ARE SHOWN ON PLANS, BUT ARE SUBJECT TO REVISION WHEN TRUE SOIL CONDITIONS ARE EXPOSED BY EXCAVATION. THE ENGINEER SHALL BE NOTIFIED PROMPTLY OF ANY WEAK STRATA, WATER CONDITIONS OR OTHER POOR BEARING CONDITIONS.
5. CONCRETE TEMPERATURE DURING THE FIRST SEVEN DAYS SHALL BE MAINTAINED BETWEEN 50°F AND 90°F. RAPID DRYING MUST BE PREVENTED.
6. CURING
   A) HORIZONTAL SURFACES SHALL BE KEPT CONTINUOUSLY MOIST FOR A MINIMUM OF SEVEN DAYS.
   B) VERTICAL SURFACES SHALL RECEIVE 2 COATS (ONE AT TIME OF STRIPPING AND ANOTHER 3 DAYS LATER) OF AN APPROVED NON-TOXIC CURING COMPOUND.
7. ALL FOUNDATION WALLS SHALL BE ADEQUATELY BRACED TO WITHSTAND EARTH AND CONSTRUCTION LOAD PRESSURES. WALLS MUST BE AT LEAST SEVEN DAYS OLD BEFORE BACKFILLING.
8. BACKFILLING AGAINST FOUNDATION WALLS SHALL BE DONE BY PLACING SIMULTANEOUS LEVEL LAYERS ON BOTH SIDES OF THE WALL SUCH THAT THE DIFFERENCE BETWEEN ONE SIDE AND THE OTHER DOES NOT EXCEED 24 INCHES.
9. SELECT BACKFILL OUTSIDE OF FOUNDATION WALL:
   A) AN APPROVED MATERIAL FREE OF BOULDERS LARGER THAN 6", ORGANIC MATERIAL, TOPSOIL AND DEBRIS.
   B) PLACE IN MAXIMUM 8" LEVEL LIFTS AND COMPACT TO 90% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DEFINED BY ASTM D-1557.
10. SHOP DRAWINGS (ONE REPRODUCIBLE PRINT AND TWO BLUE PRINTS) PREPARED IN ACCORDANCE WITH ACI STANDARDS WILL BE REQUIRED FROM THE CONTRACTOR FOR REINFORCING STEEL TO CONSTRUCTION.

MASONRY CONSTRUCTION NOTES

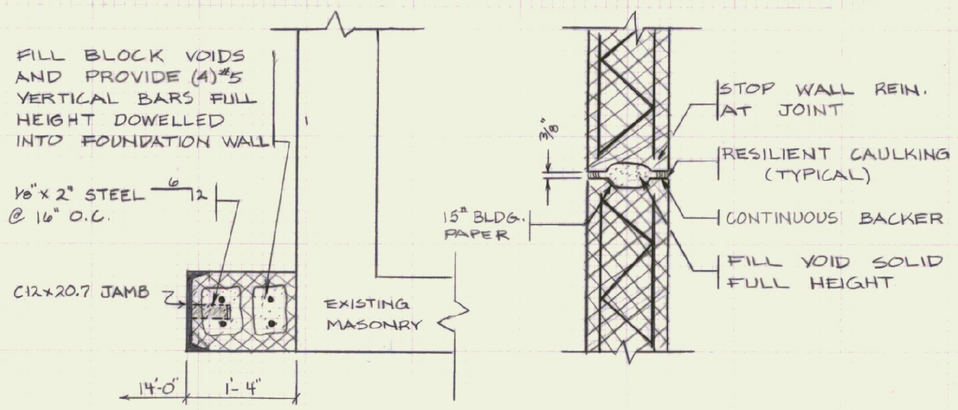
1. CONCRETE MASONRY SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE NATIONAL CONCRETE MASONRY ASSOCIATION, PORTLAND CEMENT ASSOCIATION AND AMERICAN CONCRETE INSTITUTE CODES.
2. CONCRETE MASONRY UNITS SHALL BE LIGHT WEIGHT HOLLOW LOAD-BEARING, ASTM C90, GRADE N, TYPE I, WITH A MINIMUM COMPRESSIVE STRENGTH ON THE NET AREA OF 2000 PSI, TWO CELLS WITH MINIMUM 50% SOLID.
3. MORTAR SHALL CONFORM TO ASTM C270 TYPE S WITH A MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS OF 1800 PSI.
4. HORIZONTAL WALL REINFORCEMENT TO BE UNCOATED TRUSS OR LADUR TYPE WITH NO. 9 GAGE UNCOATED WIRE CONFORMING TO ASTM A82, AS MANUFACTURED BY DUR-O-WAL, INC. OR APPROVED EQUAL. REINFORCING TO BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS INDICATED OTHERWISE ON THE PLANS.
5. NORMAL MASONRY CONSTRUCTION WEATHER CONDITIONS ASSUMES THE AIR TEMPERATURE TO BE BETWEEN 40 AND 90 DEGRESS FAHRENHEIT WITH MINIMAL WIND AND RAIN, PLUS AVERAGE RELATIVE HUMIDITY. IF CONDITIONS OTHER THAN THESE OCCUR, THE CONTRACTOR MUST MODIFY CONSTRUCTION PROCEDURES IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICES AND THE ABOVE NOTED CODES.
6. EXTERIOR WALLS SHALL BE CONSTRUCTED IN A WEATHERTIGHT MANNER WITH ALL NECESSARY FLASHING AND WEEPS. THEY SHALL RECEIVE TWO COATS OF AN APPROVED, GOOD QUALITY WATER PROOFING AGENT. RECOAT AS REQUIRED TO MAINTAIN A PERMANENT WATERTIGHT SURFACE.

GRANULAR FILL UNDER SLABS & FOOTINGS

1. PRIOR TO PLACING GRANULAR FILL ALL ORGANIC MATERIAL, TOPSOIL, DEBRIS AND ANY OTHER DELETERIOUS MATERIAL SHALL BE REMOVED.
2. GRANULAR FILL SHALL BE AN APPROVED, WELL GRADED BANK RUN OR CRUSHER RUN GRAVEL MEETING THE REQUIREMENTS OF THE FOLLOWING TABLE:

SIEVE DESIGNATION	% PASSING
2"	100
No. 4	40-70
No. 100	5-20
No. 200	4-8

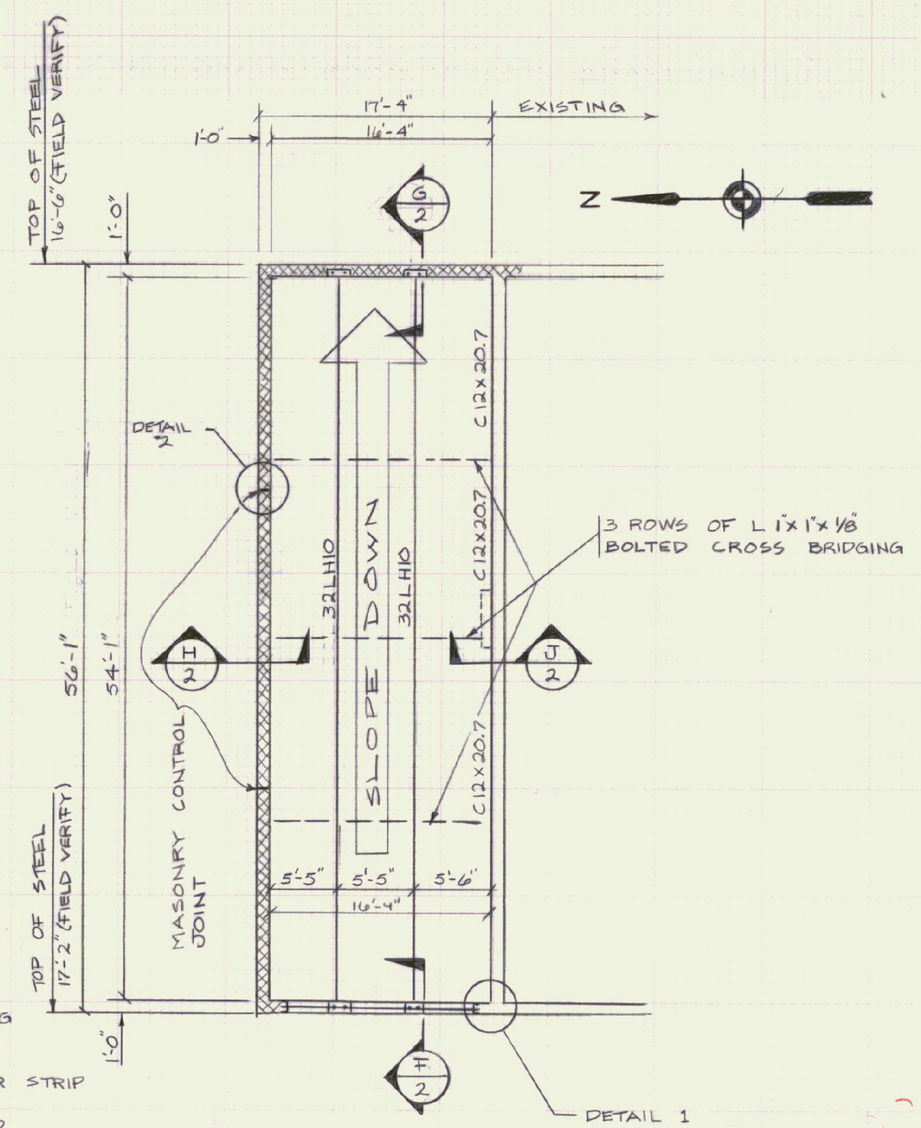
3. THE MATERIAL SHALL BE PLACED IN MAXIMUM 8" LIFTS AND COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D1557, MODIFIED PROCTOR.
4. THE OWNER WILL TAKE DENSITY TESTS ON THE COMPACTED FILL. IF THE MATERIAL TESTS LESS THAN 95%, CORRECTIVE ACTION AND ADDITIONAL TESTING WILL BE REQUIRED. THE ADDITIONAL TESTING AND CORRECTIVE ACTION WILL BE PAID FOR BY THE CONTRACTOR.



DETAIL 1 — SCALE 3/4"=1'-0"
DETAIL 2 — SCALE 3/4"=1'-0"
TYPICAL AT BOTH DOOR JAMBS

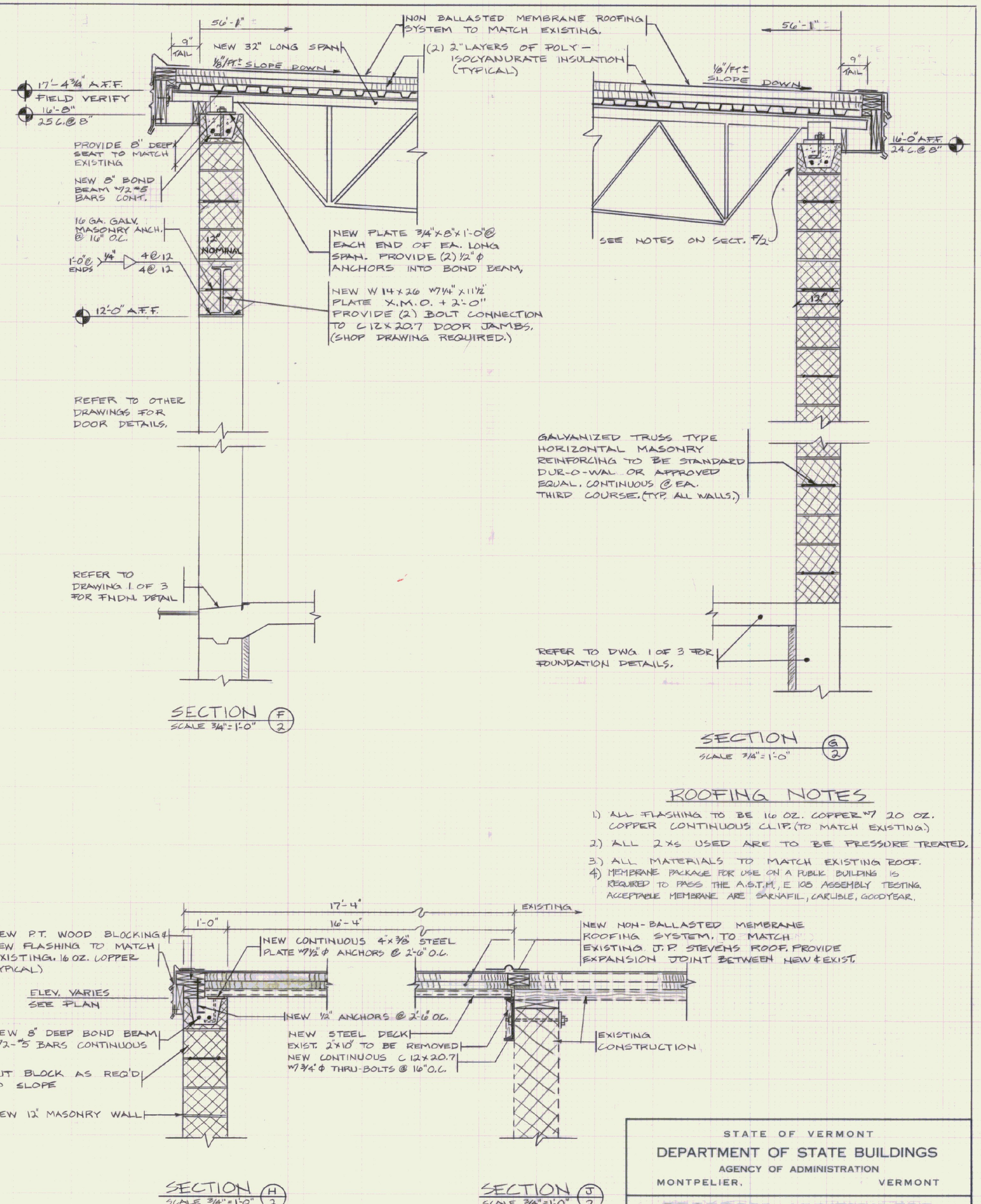
STEEL NOTES

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE "SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" OF THE A.I.S.C. AND TO THE REQUIREMENTS OF THE LOCAL BUILDING CODES. ALL WELDING SHALL CONFORM TO THE "STRUCTURAL WELDING CODE - ANSI/AWS D1.1" OF THE AMERICAN WELDING SOCIETY.
2. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING:
   STRUCTURAL SHAPES ASTM A36, Fy = 36,000 PSI
   BOLTS ASTM A325
3. ALL SHOP CONNECTIONS SHALL BE BOLTED OR WELDED. ALL FIELD CONNECTIONS SHALL BE BOLTED EXCEPT WHERE WELDING IS SPECIFICALLY CALLED FOR. BOLTS SHALL BE 3/4" ø MINIMUM WITH OPEN HOLES 1/16" LARGER.
4. ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED (MINIMUM 2 MILS DRY FILM THICKNESS) WITH AN APPROVED RUST INHIBITIVE PRIME PAINT. STEEL SHALL BE THOROUGHLY CLEANED PRIOR TO PAINTING. FIELD TOUCH UP WITH THE SAME PAINT WILL BE REQUIRED.
5. THE STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE ALL NECESSARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STEEL FRAME PLUMB AND SQUARE UNTIL THE ROOF DECK AND WALLS ARE INSTALLED.
6. THERE WILL BE NO FIELD BURNING, CUTTING OR OTHER ALTERATIONS OF PRIMARY STRUCTURAL STEEL OR LONGSPAN JOISTS WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.
7. LONGSPAN STEEL JOISTS DESIGN, FABRICATION AND ERECTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE STEEL JOIST INSTITUTE AND THE A.I.S.C.
8. STEEL JOISTS ARE NORMALLY DESIGNED TO SUPPORT UNIFORM LOADS. THE MAGNITUDE AND LOCATION OF CONCENTRATED LOADS MUST BE REVIEWED WITH THE ENGINEER PRIOR TO FABRICATION.
9. ALL ROOF DECKING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS, FACTORY MUTUAL REQUIREMENTS AND THE STEEL DECK INSTITUTE (S.D.I.) UNLESS OTHERWISE NOTED. ALL EDGES OF THE DECKING SHALL BE PROPERLY SUPPORTED. OPENINGS IN THE DECK EQUAL TO OR SMALLER THAN 8" IN DIAMETER OR 8" SQUARE SHALL HAVE A 20" SQUARE x 1/8" THICK PLATE WELDED OR SCREWED TO THE TOP OF THE DECK TO SUPPORT THE OPENING. FOR OPENINGS LARGER THAN THE ABOVE, AN L4x4x½ FRAME (BEARING ON STRUCTURAL SUPPORTS) SHALL BE USED UNLESS OTHERWISE NOTED ON PLANS.
10. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (ONE REPRODUCIBLE PRINT AND TWO BLUE PRINTS) TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION FOR THE FOLLOWING ITEMS:
    STRUCTURAL STEEL (DOOR JAMBS AND HEADER)
    LONGSPAN JOISTS
    ROOF DECKING 22 GA. G-90 FINISH
11. DESIGN LOADS:
    ROOF
    LIVE LOAD = 40 PSF
    DEAD LOAD = 15 PSF
    TOTAL = 55 PSF



ROOF FRAMING PLAN
SCALE 1/8"=1'-0"

1.) ELEVATION TOP OF STEEL NOTED ON PLAN THUS (----.)
2) ROOF DECK TO BE 22 GA. 1½" DEEP TYPE B" GALV. METAL (G-90)



ROOFING NOTES

1) ALL FLASHING TO BE 16 OZ. COPPER w/ 20 OZ. COPPER CONTINUOUS CLIP. (TO MATCH EXISTING.)
2) ALL 2Xs USED ARE TO BE PRESSURE TREATED.
3) ALL MATERIALS TO MATCH EXISTING ROOF.
4) MEMBRANE PACKAGE FOR USE ON A PUBLIC BUILDING IS REQUIRED TO PASS THE A.S.T.M., E 108 ASSEMBLY TESTING. ACCEPTABLE MEMBRANE ARE SARNAFIL, CARLISLE, GOODYEAR.

SECTION H/2 — SCALE 3/4"=1'-0"
SECTION J/2 — SCALE 3/4"=1'-0"

STATE OF VERMONT
DEPARTMENT OF STATE BUILDINGS
AGENCY OF ADMINISTRATION
MONTPELIER, VERMONT

PROPOSED ADDITION FOR AGENCY OF TRANSPORTATION MAINTENANCE FACILITY
CASTLETON, VERMONT

DATE:	SCALE:	REVISIONS:	DWG. NO.
1-23-90	AS NOTED		S-2
DRAWN BY:	APPROVED BY:		
R. TETREAULT	T. PRATT		2 OF 3