STRUCTURAL EARTHWORK

1. PRIOR TO PLACING STRUCTURAL FILL ALL ORGANIC MATERIAL, TOPSOIL, DEBRIS AND ANY OTHER DELETERIOUS MATERIAL SHALL BE REMOVED.

2. STRUCTURAL FILL SHALL BE AN APPROVED, WELL GRADED BANK RUN, SCREENED OR CRUSHED GRAVEL MEETING THE FOLLOWING REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
2"	100
No. 4	40-70
No. 100	5-20
No. 200	2-8 (MAXIMUM 5% FOR FROST FREE MATERIAL)

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 D698, STANDARD PROCTOR.

4. THE OWNER MAY 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.

5. SAND SHALL BE MATERIAL FREE FROM SILT, LOAM, CLAY OR ORGANIC MATTER. IT SHALL BE OBTAINED FROM APPROVED SOURCES AND MEET THE REQUIREMENTS OF THE FOLLOWING TABLE:

SIEVE DESIGNATION	% PASSING
3/8"	100
No. 4	80-95
No. 10	50-90
No. 40	20-50
No. 100	5-20
No. 200	2-10

7. SAND SHALL BE PLACED IN 6-INCH LAYERS AND COMPACTED TO 95% ASTM D698, STANDARD PROCTOR.

8. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT, A SIEVE ANALYSIS AND A LABORATORY MOISTURE-DENSITY CURVE FOR THE PROPOSED STRUCTURAL FILL AND THE SAND. THE TESTS SHALL BE CONDUCTED, AT THE CONTRACTOR'S EXPENSE, BY A TESTING FIRM APPROVED BY THE ENGINEER. ADDITIONAL SAMPLES SHALL BE TESTED UNTIL A MATERIAL MEETING THE ABOVE REQUIREMENTS IS PROVIDED.

WOOD TRUSS NOTES

1. ALL WOOD TRUSSES SHALL COMPLY WITH THE FOLLOWING CODES AND REGULATIONS:

   A. TIMBER CONSTRUCTION MANUAL - AMERICAN INSTITUTE OF TIMBER CONSTRUCTION

   B. NATIONAL DESIGN SPECIFICATION FOR STRESS-GRADE LUMBER AND ITS FASTENINGS - NATIONAL FOREST PRODUCTS ASSOCIATION

   C. DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES - TRUSS PLATE INSTITUTE.

2. LUMBER FOR WOOD TRUSSES SHALL BE KILN DRIED MACHINE STRESS RATED LUMBER WITH A STRESS RATING ADEQUATE FOR THE TRUSS DESIGN.

3. ALL LUMBER SHALL BE STRAIGHT AND NEW, IN SOUND CONDITION, KILN DRIED WITH A MAXIMUM MOISTURE CONTENT OF 16%. ALL DIMENSION LUMBER SHALL BEAR THE GRADE AND MARK OF THE ASSOCIATION UNDER WHOSE RULES IT IS PRODUCED, AND A MARK OF MILL IDENTIFICATION.

4. GUSSET PLATES AT ALL JOINTS SHALL BE SIZED BY THE TRUSS MANUFACTURER FOR 125% OF THE AXIAL LOADS.

5. THE MINIMUM NOMINAL SIZE FOR WOOD MEMBERS OF TRUSSES SHALL BE 2x4.

6. FOR 2x6 CHORDS SPACE TOP CHORD PANEL POINTS AT 5 FEET TO 7 FEET ON CENTER AND BOTTOM CHORD LESS THAN 8 FEET ON CENTER.

   SHOW LATERAL BRACING FOR ALL WEB MEMBERS EXCEEDING 6 FEET LENGTH FOR COMPRESSION AND 10 FEET LENGTH FOR TENSION MEMBERS.

   BRACING SHALL BE 2x4 MINIMUM SIZE AND SHALL BE NAILED TO ALL CROSSING TRUSSES WITH 2-16D COMMON. BRACING SHALL BE OVERLAPPED ONE TRUSS SPACING MINIMUM AT SPLICES.

   BOTTOM CHORD BRACING SHALL BE USED IF CEILING IS NOT NAILED TO TRUSS BOTTOM CHORD. SHOW BOTTOM CHORD LATERAL BRACES ON TRUSS SKETCH AT ALL BOTTOM CHORD PANEL POINTS (MAXIMUM 10 FEET ON CENTER).

   IN ADDITION TO TRUSS MANUFACTURER'S BRACING, THE CONTRACTOR SHALL INSTALL THREE CONTINUOUS ROWS OF 2X4 X-BRACING NEAR THE

CONCRETE NOTES

1. ALL CONCRETE WORK SHALL COMPLY WITH THE LATEST RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE (ACI) AND THE LOCAL BUILDING CODES.

2. ALL CONCRETE SHALL BE NORMAL WEIGHT AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF **4000 PSI** AT 28 DAYS, WITH THE FOLLOWING REQUIREMENTS:

PORTLAND CEMENT	-	ASTM C150, TYPE OR II, **6 SACKS/CY**
AGGREGATE	-	ASTM C33, MAXIMUM SIZE 1½"
WATER	-	POTABLE; **MAXIMUM WATER/CEMENT RATIO = 0.49**
SLUMP	-	2" TO 4"
ADMIXTURES	-	AIR ENTRAINING AGENT, **ASTM C260 - 4-6% AIR**
	-	HIGH RANGE WATER REDUCING AGENT CONFORMING TO ASTM C494
DESIGN MIX	-	SUBMIT A CURRENT DESIGN MIX WITH 28-DAY STRENGTH TESTS TO THE ENGINEER FOR APPROVAL.

3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.

4. LAP ALL BARS MINIMUM 40 DIAMETERS AT SPLICES UNLESS INDICATED OTHERWISE ON DRAWINGS.

5. REINFORCEMENT SHALL BE SECURELY TIED IN PLACE DURING POURING OPERATIONS USING APPROVED CHAIRS AND SPACERS AS REQUIRED. USE BOLSTERS AND HIGH CHAIRS TO HOLD SLAB REINFORCING IN PLACE; THE USE OF CONCRETE BRICKS SHALL NOT BE ALLOWED.

6. FREE FALL FROM MIXER OR TRUCK TO CONVEYANCE SHALL NOT EXCEED 3'. WHEN PLACING CONCRETE IN FINAL POSITION, THE FREE FALL SHALL NOT EXCEED 4'. THE HORIZONTAL DISTRIBUTION OF CONCRETE BY SPADING OR VIBRATION IS PROHIBITED.

7. PROPER VIBRATION OF CONCRETE IS VERY IMPORTANT IN THE PLACEMENT OF CONCRETE. THE CONCRETE CONTRACTOR SHALL MAKE PROVISION FOR BACK-UP VIBRATION EQUIPMENT.

8 SLABS SHALL RECEIVE A STEEL TROWELL FINISH.

9. CURING: SLABS - CURE WITH WATER AND BURLAP FOR MINIMUM 7 DAYS.

CENTERLINE OF THE TRUSSES TO PREVENT LATERAL MOVEMENT OF TRUSSES.

THE TOP CHORDS OF THE LOWER TRUSSES OF "PIGGY BACK" DESIGNED TRUSSES SHALL BE BRACED TO PREVENT LATERAL DEFLECTION. INSTALL CONTINUOUS 2X4 BRACING AT 4 FEET ON CENTER, WITH 2X4 DIAGONAL BRACES AT EACH END.

7. SUBMIT 6 COPIES OF SHOP DRAWINGS, INCLUDING TEMPORARY AND PERMANENT BRACING, TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.. SHOP DRAWINGS SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER, LICENSED TO PRACTICE STRUCTURAL ENGINEERING IN THE STATE OF VERMONT.

8. TEMPORARY BRACING DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH BRACING WOOD TRUSSES: COMMENTARY AND RECOMMENDATIONS (TRUSS PLATE INSTITUTE, INC. 1976).

9. PREFABRICATED WOOD TRUSSES SHALL BE FABRICATED IN AN ENCLOSED STRUCTURE UNDER CONTROLLED CONDITIONS BY AN EXPERIENCED FABRICATOR. THE TRUSS FABRICATOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND HAVE APPROVAL OF HIS SHOP DRAWING PRIOR TO COMMENCING FABRICATION. NO TRUSSES SHALL BE ERECTED UNTIL AN APPROVED ERECTION PROCEDURE AND TEMPORARY BRACING PLAN ARE AVAILABLE.

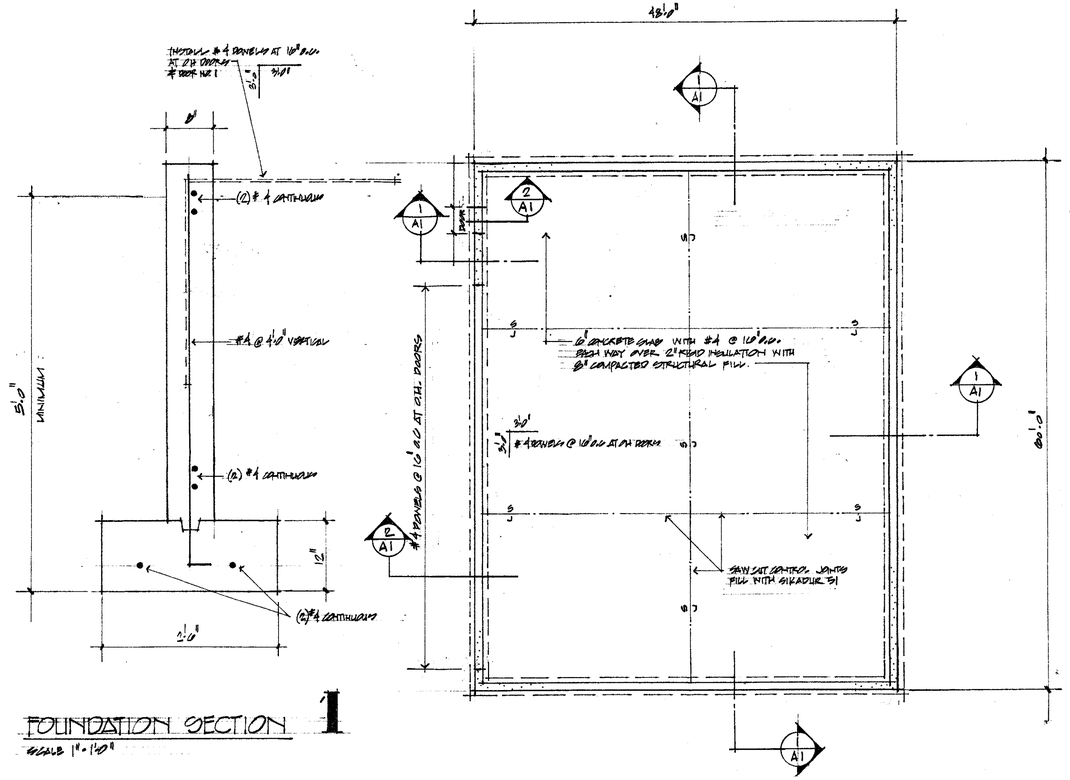
10. DESIGN LOADS:

TOP CHORD LIVE LOAD	=	60	PSF
TOP CHORD DEAD LOAD	=	10	PSF
BOTTOM CHORD LIVE LOAD	=	10	PSF
BOTTOM CHORD DEAD LOAD	=	10	PSF *
TOTAL LOAD	=	80	PSF

* IN ADDITION TRUSS BOTTOM CHORDS ONLY SHALL BE ADEQUATE TO CARRY A 200 LB CONCENTRATED LOAD PLACED ANYWHERE. LOAD DURATION FACTOR MAY BE INCREASED TO 1.50 WHEN THIS LOAD IS APPLIED.

14. DEFLECTION REQUIREMENTS

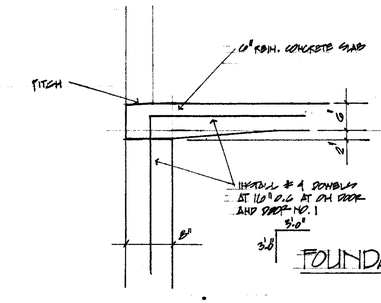
TYPICAL TRUSSES - TOTAL LOAD DEFLECTION ≤ L/240
- LIVE LOAD DEFLECTION ≤ L/360



FOUNDATION SECTION 1
SCALE 1" = 1'-0"

FOUNDATION PLAN SCALE 1/8" = 1'-0"

NOTES:
1. INSTALL 4 MIL HIGH DENSITY VAPOR BARRIER AT ADMINISTRATION AREA ONLY



FOUNDATION SECTION

WOOD CONSTRUCTION NOTES

1. LUMBER FOR MISCELLANEOUS WOOD FRAMING AND BLOCKING SHALL BE SPRUCE-PINE-FIR, CONSTRUCTION GRADE AND BETTER WITH A MINIMUM BENDING STRESS OF 775 PSI.

2. LUMBER FOR STUDS AND JOISTS SHALL BE SPRUCE-PINE-FIR, NO. 2 OR BETTER GRADE WITH A MINIMUM BENDING STRESS OF 1000 PSI. ALL LUMBER IN CONTACT WITH EXISTING CONCRETE SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE.

3. ALL LUMBER SHALL BE STRAIGHT AND NEW, IN SOUND CONDITION, KILN DRIED WITH A MAXIMUM MOISTURE CONTENT OF 19%. ALL DIMENSION LUMBER SHALL BEAR THE GRADE AND MARK OF THE ASSOCIATION UNDER WHOSE RULES IT IS PRODUCED AND A MARK OF MILL IDENTIFICATION.

4. PLYWOOD SHEATHING SHALL BE STANDARD C-D INT-EFPA WITH EXTERIOR GLUE.

5. ALL WOOD FRAMING CONSTRUCTION SHALL BE ERECTED TRUE TO LINE AND DIMENSIONS, WELL FASTENED AND PROPERLY BRACED.

CHARLES E. METZ LICENSED ARCHITECT

PROJECT:
NEW HANGAR FOR:
CIVIL AIR PATROL
TITLE: CALEDONIA COUNTY STATE AIRPORT LYNDONVILLE VT
FOUNDATION PLAN
DETAILS

APRIL 2005

CHARLES E. METZ
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DRAWING:
A1