

**STRUCTURAL NOTES:**

**I. GENERAL**

**A. GENERAL REFERENCE:**

ALL WORK MUST CONFORM TO THE REQUIREMENTS OF THE UNIFORM BUILDING CODE, 1997 EDITION, AND OSHA, LATEST EDITION.

**B. DESIGN LOADS:**

**1. WIND LOAD:**

V = 34 m/sec  
EXPOSURE "C"

**2. SEISMIC DESIGN:**  
ZONE 2A

**C. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING OR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.**

**D. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.**

**E. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR STRUCTURAL, MECHANICAL, AND ELECTRICAL, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.**

**F. TYPICAL DETAILS ARE NOT CUT ON DRAWINGS, BUT APPLY UNLESS NOTED OTHERWISE.**

**G. WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.**

**H. ALL CONSTRUCTION BRACING AND SHORING MUST BE DESIGNED BY THE CONTRACTOR.**

**II. SOILS**

**A. FILL MATERIAL:**

1. ANY IMPORTED ENGINEERING FILLS SHALL HAVE THE FOLLOWING GRADATION BY WEIGHT:

- 100% PASSING 150 mm SIEVE
- 70-100% PASSING 75 mm SIEVE
- 50-100% PASSING #4 SIEVE
- 15% MAXIMUM PASSING #200 SIEVE
- LIQUID LIMIT 30 MAX
- PLASTICITY INDEX 15 MAX
- MAXIMUM SOLUBLE SULFATES = 0.1%
- MAXIMUM EXPANSION POTENTIAL OF 1.5%

- 2. SLAB BASE COURSE SHALL HAVE 100% PASSING 38 mm SIEVE, 45% TO 90% PASSING #4 SIEVE, NO MORE THAN 12% PASSING #200 SIEVE.
- 3. COMPACTION TO 95% OF ASTM D-1557 AS PER ABOVE.

**B. FINISH GRADING SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO SLOPE GRADE (MINIMUM OF 5%) AWAY FROM FOUNDATIONS. GRADING SHALL ALSO ELIMINATE ANY POTENTIAL PONDING NEAR FOUNDATIONS.**

**III. CONCRETE**

**A. ALL CONCRETE SHALL BE READY MIXED CONFORMING WITH ASTM C-94 AND ATTAIN THE FOLLOWING MINIMUM STRENGTHS AT 28 DAYS:**

- 1. FOOTINGS, GRADE BEAM AND SLAB ON GRADE 21 MPa

**B. ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE PROVISIONS OF THE FOLLOWING LATEST ACI STANDARDS:**

- 1. ACI 301-SPECIFICATIONS FOR STRUCTURAL CONCRETE BUILDING.
- 2. ACI 318-BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.

**C. CONCRETE FOOTINGS AND PADS MAY BE POURED AGAINST NEAT EXCAVATIONS.**

**D. MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE AS FOLLOWS:**

- 1. CONCRETE POURED DIRECTLY AGAINST EARTH 75 mm
- 2. FORMED CONCRETE EXPOSED TO WEATHER OR EARTH 50 mm
- 3. AGAINST LEVELED BASE COURSE 50 mm

**E. ALL REINFORCING BARS, ANCHOR BOLTS AND CONCRETE INSERTS SHALL BE SECURED IN POSITION PRIOR TO PLACING CONCRETE.**

**F. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING CONCRETE. VERIFY OPENINGS WITH ELECTRICAL AND MECHANICAL DRAWINGS. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT.**

**G. NO CONSTRUCTION JOINTS (OTHER THAN THOSE SHOWN ON DRAWINGS) SHALL BE INSTALLED WITHOUT APPROVAL OF THE ENGINEER. PROVIDE 20 mm CHAMFER AT ALL EXPOSED CORNERS.**

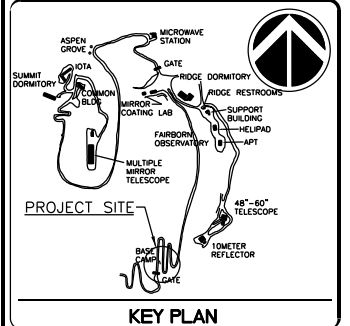
**H. CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER 24 HRS IN ADVANCE TO OBSERVE COMPLETED FOOTING EXCAVATION AND ALL REINFORCING BAR PLACEMENTS BEFORE ANY CONCRETE IS PLACED.**

**I. REINFORCING STEEL:**

- 1. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A-615M GRADE 40 (280 MPa) FOR 12 mm OR LESS, GRADE 60(420 MPa) FOR 16 mm OR GREATER.
- 2. ALL REINFORCING IN CONCRETE SHALL BE CONTINUOUS OR LAPPED IN ACCORDANCE WITH ACI 318, AND NOT LESS THAN 36 DIAMETERS.
- 3. ANCHOR BOLTS AND PLATE WASHERS SHALL CONFORM TO ASTM A36 OR A307.



**M3 Engineering + Technology Corporation**  
**ARCHITECTURE ENGINEERING TECHNOLOGY**  
 Tucson, Arizona  
 Tel. (520) 690-8209 FAX NO. (520) 293-8777



**GRAPHIC SCALE(S)**

DATE	REVISION
01/10/03	FINAL (100%)
REVISION 1	REVISION
REVISION 2	
REVISION 3	
REVISION 4	
REVISION 5	
REVISION 6	
REVISION 7	

DATE	REVISION
01/10/03	FINAL (100%)
REVISION 1	REVISION
REVISION 2	
REVISION 3	
REVISION 4	
REVISION 5	
REVISION 6	
REVISION 7	



**Smithsonian Institution**  
 Office of Facilities Engineering and Operations  
 750 9th Street N.W. Suite 5200  
 Washington DC 20560-0908

BUILDING NAME	670 MT. HOPKINS ROAD AMADO, ARIZONA
PROJECT TITLE	VERITAS PROTOTYPE FDN.
OFED PROJECT NUMBER	0382102
M/E PROJECT NUMBER	M3 PNO2260
DRAWING TITLE	STRUCTURAL GENERAL NOTES
DRAWING TYPE	STRUCTURAL
WORKING STAFF	DN AC DN
DESIGNED BY	DRAWN BY
CHECKED BY	
SHEET NO.	S 0 2
OF	DISCIPLINE TYPE SEQUENCE