

**STRUCTURAL NOTES**

1. ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL JURISDICTIONS COVERING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

- TIA/EIA-222-G
- TIA 807
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
- IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- TELECORDIA GR-1275
- ANSI/T 311
- 2006 101, LIFE SAFETY CODE
- MAINE UNIFORM BUILDING CODE (MUBC)
- 2008 NATIONAL ELECTRICAL CODE
- 2009 NFPA 101, LIFE SAFETY CODE
- 2009 IFC
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 13TH EDITION

2. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".

3. STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 "STRUCTURAL STEEL", UNLESS OTHERWISE NOTED.

4. STEEL TUBING SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B.

5. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 "PIPE, STEEL, BLACK AND HOT-DIPPED, ZINC-COATED WELDED AND SEAMLESS", TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.

6. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE MI., OR EQUAL. STRUT MEMBERS SHALL BE 1-5/8" X 1-5/8" X 12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.

7. FIELD CONNECTIONS SHALL BE BOLTED UNLESS OTHERWISE INDICATED. ALL BOLTS FOR STRUCTURAL CONNECTIONS SHALL BE HIGH STRENGTH BOLTS AND CONFORM TO THE LATEST EDITION OF ASTM A325 "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS, AND PLAIN HARDENED WASHERS". BOLTS SHALL BE 3/4 INCH DIA. UNLESS OTHERWISE NOTED.

8. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS 1, HILTI KWIK BOLT II, OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE FOUR (4) INCHES.

9. SLEEVE ANCHORS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 3, CLASS 3, AS MANUFACTURED BY HILTI FASTENING SYSTEMS OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE THREE (3) INCHES.

10. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF 1/2" DIAMETER STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS, AN INTERNAL THREADED INSERT, A SCREEN TUBE, AND AN EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI HIT HY-20 SYSTEM OR ENGINEER APPROVED EQUAL WITH 6" MIN. EMBEDMENT.

11. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.

12. SUBMIT SHOP DETAIL DRAWINGS OF ALL STRUCTURAL AND MISCELLANEOUS STEEL TO THE ENGINEER FOR APPROVAL, AND INCORPORATE ALL COMMENTS PRIOR TO FABRICATION.

13. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.

14. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO TAKING CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE PRIOR ENGINEER APPROVAL.

15. ALL WORK SHALL BE INSPECTED BY THE ENGINEER DURING, AND AT THE COMPLETION OF CONSTRUCTION.

**WELDING**

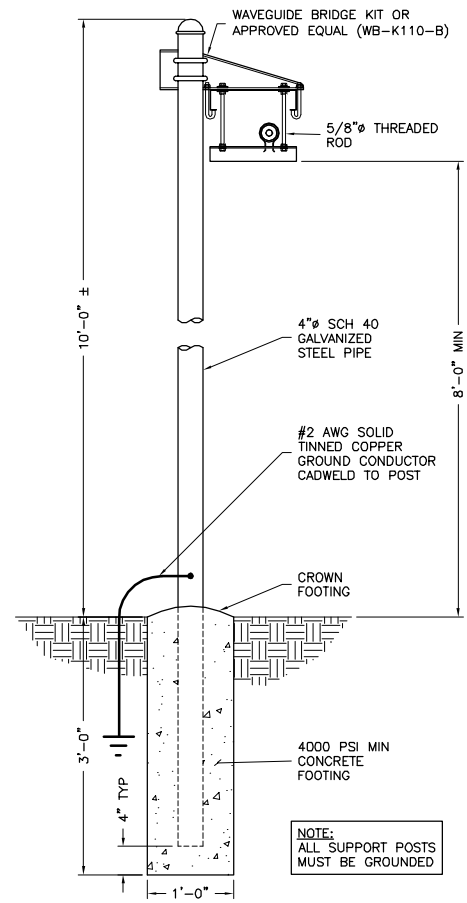
1. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE, AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES".

2. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATINGS SHALL BE REPAIRED.

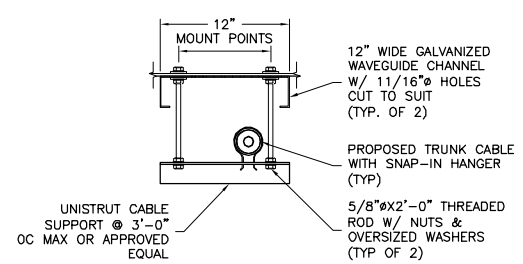
**GALVANIZING**

1. ALL STEEL MATERIALS EXPOSED TO WEATHER SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED. ALL BOLTS, ANCHORS, AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.

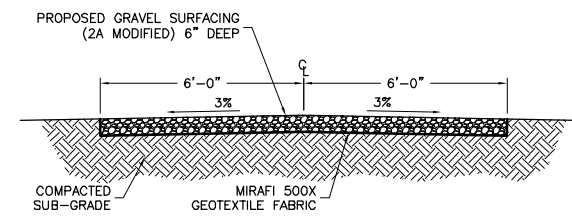
2. DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780, UNLESS OTHERWISE NOTED.



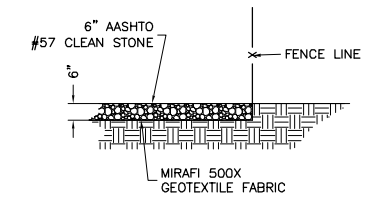
**1 CABLE BRIDGE DETAIL**  
C-2 NTS



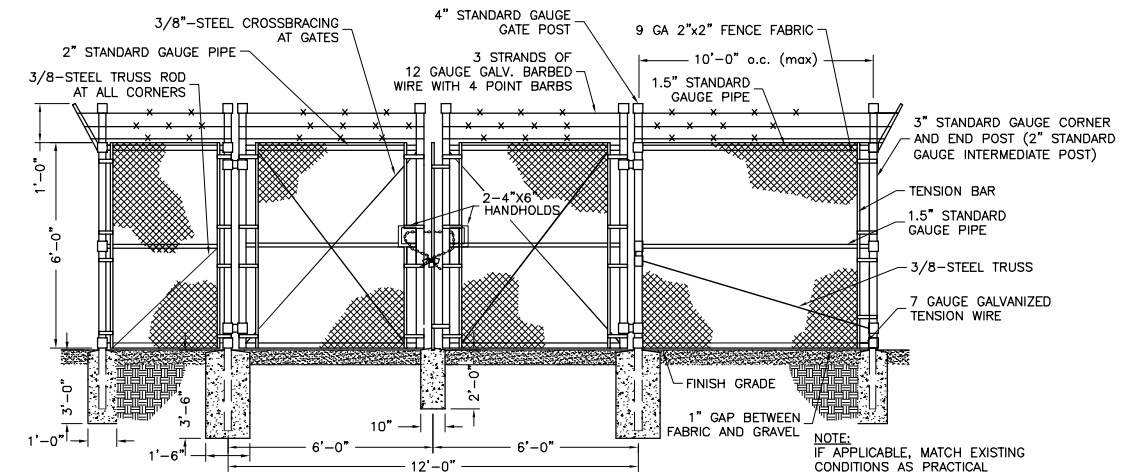
**2 CABLE SUPPORT SECTION**  
C-2 NTS



**3 GRAVEL DRIVEWAY TYPICAL SECTION**  
C-2 NTS



**4 GRAVEL COMPOUND DETAIL**  
C-2 NTS



**1 TYPICAL FENCE AND GATE DETAIL**  
C-2 NTS

| ENGINEER           | <p>NB+C ENGINEERING SERVICES, LLC.<br/>1777 GENTRY PARKWAY WEST<br/>DUBLIN, MA, SUITE 210<br/>DUBLIN, MA 01922<br/>(978) 480-9122</p>  |                      |      |             |    |   |          |                      |     |   |          |                 |     |   |          |                      |     |   |          |                 |     |
|--------------------|--|----------------------|------|-------------|----|---|----------|----------------------|-----|---|----------|-----------------|-----|---|----------|----------------------|-----|---|----------|-----------------|-----|
| APPLICANT          | <p>550 COCHRAN ROAD<br/>FRAMINGHAM, MA 01701</p>   |                      |      |             |    |   |          |                      |     |   |          |                 |     |   |          |                      |     |   |          |                 |     |
| SITE INFORMATION   | <p>ME5372<br/>LUCAS TREE<br/>636 RIVERSIDE STREET<br/>PORTLAND, ME 04103<br/>CITY OF PORTLAND</p>  |                      |      |             |    |   |          |                      |     |   |          |                 |     |   |          |                      |     |   |          |                 |     |
| DESIGN RECORD      | <table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>06/06/14</td> <td>REVISED PER COMMENTS</td> <td>DAK</td> </tr> <tr> <td>2</td> <td>05/22/14</td> <td>PRELIMINARY CDs</td> <td>DAK</td> </tr> <tr> <td>1</td> <td>03/20/14</td> <td>REVISED PER COMMENTS</td> <td>DAK</td> </tr> <tr> <td>0</td> <td>10/10/13</td> <td>PRELIMINARY ZDs</td> <td>DAK</td> </tr> </tbody> </table> | REV                  | DATE | DESCRIPTION | BY | 3 | 06/06/14 | REVISED PER COMMENTS | DAK | 2 | 05/22/14 | PRELIMINARY CDs | DAK | 1 | 03/20/14 | REVISED PER COMMENTS | DAK | 0 | 10/10/13 | PRELIMINARY ZDs | DAK |
| REV                | DATE   | DESCRIPTION          | BY   |             |    |   |          |                      |     |   |          |                 |     |   |          |                      |     |   |          |                 |     |
| 3                  | 06/06/14   | REVISED PER COMMENTS | DAK  |             |    |   |          |                      |     |   |          |                 |     |   |          |                      |     |   |          |                 |     |
| 2                  | 05/22/14   | PRELIMINARY CDs      | DAK  |             |    |   |          |                      |     |   |          |                 |     |   |          |                      |     |   |          |                 |     |
| 1                  | 03/20/14   | REVISED PER COMMENTS | DAK  |             |    |   |          |                      |     |   |          |                 |     |   |          |                      |     |   |          |                 |     |
| 0                  | 10/10/13   | PRELIMINARY ZDs      | DAK  |             |    |   |          |                      |     |   |          |                 |     |   |          |                      |     |   |          |                 |     |
| PROFESSIONAL STAMP |  |                      |      |             |    |   |          |                      |     |   |          |                 |     |   |          |                      |     |   |          |                 |     |
| ENGINEER           | <p>KRUPAKARAN KOLANDAVELU P.E.<br/>ME PROFESSIONAL ENGINEER LIC. #12979</p>  |                      |      |             |    |   |          |                      |     |   |          |                 |     |   |          |                      |     |   |          |                 |     |
| SHEET TITLE        | <p>CONSTRUCTION<br/>DETAILS &amp; NOTES</p>  |                      |      |             |    |   |          |                      |     |   |          |                 |     |   |          |                      |     |   |          |                 |     |
| SHEET NUMBER       | <p>C-2</p>   |                      |      |             |    |   |          |                      |     |   |          |                 |     |   |          |                      |     |   |          |                 |     |