BORDER-TNC T-WALL HWY v 4.1

X Approved _____ Approved As Noted
_____ Rejected

This review is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the shop drawings during the review do not relieve the Contractor from compliance with the requirements of the Plans and Specifications. Review of a specific item shall not include review of an assembly of which an item is a component. The Contractor is responsible for dimensions to be confirmed and corrected at the job site; information that pertains solely to the fabrication process or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of other trades and performing all Work in a safe and satisfactory manner.

Date 8/8/2014

McFarland Johnson

By T. Traver

SPECIAL NOTES:

1. THESE DRAWINGS WERE PREPARED BASED ON INFORMATION GIVEN IN THE FOLLOWING:
   - **CONTRACT DRAWINGS:**
     - STATE OF VERMONT AGENCY OF TRANSPORTATION CONTRACT PLANS DATED 10/30/2013. PREPARED BY MCFARLAND JOHNSON.
2. REPORT DISCREPANCIES BETWEEN CONTRACT INFORMATION AND ACTUAL CONDITIONS AS SITE WORK PROGRESSES TO THE NEEL COMPANY FOR REDESIGN. NO LIABILITY IS ACCEPTED FOR INACCURATE INFORMATION SUPPLIED BY OTHERS.
3. THE FOLLOWING ASSUMPTIONS WERE MADE:
   - FOUNDATION IS ABLE TO SUPPORT BEARING PRESSURE SHOWN IN SPECIAL NOTES 4 WITH AN ACCEPTABLE FACTOR OF SAFETY.
4. APPLIED BEARING PRESSURE AT MAXIMUM HEIGHT:
   - WINGWALL MAXIMUM PRESSURE: 4,475 psf STR I MAX
   - DESIGN IS BASED ON AASHTO LRFD METHOD.
5. **THE DESIGN CONTAINED ON THESE DRAWINGS IS BASED UPON INFORMATION PROVIDED BY THE OWNER. ON THE BASIS OF THIS INFORMATION, THE NEEL COMPANY HAS DESIGNED, AND IS RESPONSIBLE FOR, THE INTERNAL STABILITY OF THE STRUCTURE ONLY. EXTERNAL STABILITY, INCLUDING FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER.**
6. **THE NEEL COMPANY HAS NOT PERFORMED GLOBAL STABILITY SETTLEMENT AND BEARING CAPACITY ANALYSIS FOR THE WALL FOUNDATION. THESE ANALYSES WILL BE THE RESPONSIBILITY OF OTHERS.**
7. **DRAINAGE:**
   - **THE NEEL COMPANY HAS NOT PERFORMED A DRAINAGE ANALYSIS FOR THIS WALL SITE. IT IS THE OWNER'S RESPONSIBILITY TO ASSURE THAT SURFACE RUN-OFF IS DIVERTED AWAY FROM THE WALL.**
8. **SELECT BACKFILL GRADATION AND COMPACTION:**
   - **BACKFILL GRADATION AND COMPACTION BETWEEN STEMS AND AROUND PIPES ARE IMPORTANT TO THE WALL STABILITY. THE OWNER'S GEOTECHNICAL ENGINEER SHOULD PROVIDE SUFFICIENT TESTING TO INSURE COMPLIANCE WITH THE SELECT BACKFILL GRADATION AND COMPACTION SPECIFICATIONS NOTED ON THIS SHEET. PLACEMENT OF LOOSE LIFT OF BACKFILL SHALL NOT EXCEED 12 INCHES.**
9. T-WALL® FACE FORM FINISH:
   - PLAIN STEEL FORM FINISH

GENERAL NOTES:

1. PRIMARY REFERENCE:
   - AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 5TH EDITION 2010 AND INTERIMS.
2. SELECT BACKFILL BETWEEN STEMS:
   - ANGLE OF INTERNAL FRICTION - 34°
   - DENSITY - 120 pcf
   - 10% MAXIMUM PASSING #200 SIEVE
   - 100% PASSING 3" SIEVE
   - 95% STANDARD COMPACTION (ASTM D-698)
3. UNCLASSIFIED BACKFILL BEHIND STEMS:
   - ANGLE OF INTERNAL FRICTION - 30°
   - DENSITY - 120 pcf
   - 95% STANDARD COMPACTION (ASTM D-698)
4. HORIZONTAL JOINT:
   - 1/2 INCH ASPHALT JOINT MATERIAL PER ASTM D-994 AS SHOWN ON DEVELOPED ELEVATIONS.
5. VERTICAL JOINT:
   - 3/8 INCH SPACE
   - 12 INCHES WIDE FILTER CLOTH BACKING CENTERED AT JOINT, UNLESS OTHERWISE NOTED.
   - FILTER CLOTH BACKING: MIRAFI 160N OR EQUAL
6. OVERALL DIMENSIONAL TOLERANCES FOR FINISHED WALL:
   - VERTICAL ALIGNMENT (PLUMPNESS) - 3/4 INCH IN 10 FEET
   - HORIZONTAL ALIGNMENT (LINE) - 3/4 INCH IN 10 FEET
7. FOUNDATION:
   - PROOF-ROLL THE FOUNDATION SUBGRADE ALONG THE ENTIRE WALL LENGTH PRIOR TO CONSTRUCTION OF THE T-WALL®. A GEOTECHNICAL ENGINEER MUST INSPECT THE EXCAVATED FOUNDATION SUBGRADE AND PROOF-ROLLING ACTIVITIES. ANY SOFT OR UNSUITABLE MATERIALS IDENTIFIED BY INSPECTION SHALL BE REMOVED AND REPLACED WITH COMPACTED STRUCTURAL BACKFILL AS DIRECTED BY THE ENGINEER. CONTRACTOR TO PROVIDE SUFFICIENT DEWATERING SO THAT THE EXCAVATIONS ARE DRY ENOUGH FOR INSPECTION, TESTING AND CONSTRUCTION.
8. CAST-IN-PLACE CONCRETE LEVELING PAD:
   - 6 INCHES MINIMUM x 12 INCHES
   - CONCRETE STRENGTH: 2500 psi (MINIMUM) @ 28 DAYS
   - NO REBAR
   - GRADE TOLERANCE - 1/4 INCH IN 10 FEET
9. T-WALL® UNIT REBAR:
   - ASTM A615/ASTM A185
   - Fy = 60 ksi (GRADE 60)
   - BLACK
   - **WELDING IS NOT PERMITTED**
10. T-WALL® UNIT CONCRETE :
    - 5000 psi (MINIMUM) @ 28 DAYS
11. SHEAR KEYS:
    - NO REBAR
    - CONCRETE STRENGTH: 4000 psi (MINIMUM) @ 28 DAYS
    - WALL IS DESIGNED FOR SPECIFIC NUMBER OF SHEAR KEYS AS SHOWN IN TYPICAL SECTION ON SHEET 4. LOCATION OF SHEAR KEYS CAN BE ADJUSTED IF NECESSARY AT A SPECIFIC LEVEL.
    - SHEAR KEY WRAP:
      - 1/4 INCH POLYETHYLENE FOAM WRAP TWO TIMES AROUND THE SHEAR KEY.
      - SHEAR KEY WRAP: AF250 POLYETHYLENE FOAM
12. CONSTRUCTION:
    - TO BE IN ACCORDANCE WITH T-WALL® CONSTRUCTION MANUAL (v07.04) AND TYPICAL T-WALL® NOMENCLATURE ON SHEET 2.
    - T-WALL® CONSTRUCTION MANUAL (v07.04) CAN BE DOWNLOADED FROM OUR WEB SITE AT www.neelco.com, UNDER "Downloads".
    - CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DESIGN AND CONSTRUCTION OF ANY REQUIRED TEMPORARY SUPPORT OF EXCAVATION SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR.
    - ALL SURFACE RUNOFF IS TO BE DIVERTED AWAY FROM EXCAVATIONS TO AVOID THE DETERIORATION OF THE SUBGRADE SOILS DUE TO EXPOSURE TO MOISTURE.

0 1/2" 1" 1 1/2" 2"
SHEET SCALE

The design contained on these drawings is based upon information provided by the owner. On the basis of this information, The Neel Company has designed, and is responsible for, the internal stability of the structure only. External stability, including foundation and slope stability, is the responsibility of the owner.

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PRECASTER: CONCRETE SYSTEMS, INC. CSI
PROJECT #: T21882

CONTRACTOR: AL. ST. ONGE CONTRACTORS
PROJECT #:

DESIGNER

THE NEEL COMPANY
8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859
WEB: WWW.NEELCO.COM

PROJECT #: TW4301

CERTIFIED WITH RESPECT TO INTERNAL STABILITY OF T-WALL® STRUCTURES ONLY

STATE OF VERMONT — THOMAS G. NEEL — 8594 — PROFESSIONAL ENGINEER

REVISIONS

RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

SHOP DRAWINGS
NOTES

T-WALL® RETAINING WALL SYSTEM

SCALE:	NO SCALE
DATE:	4/21/14
DESIGNED BY:	KD
DRAWN BY:	ABC
CHECKED BY:	CCG
SHEET:	3

USER NAME: N/A
VECTORWORKS 2011

PLOT DATE & TIME: Tuesday, April 22, 2014 1:59:09 PM
CAD FILE NAME: 03 Notes.vwx
VW SHEET NAME: Sheet