TC *Mirafi* Engineering Services, Inc.

365 SOUTH HOLLAND DRIVE, PENDERGRASS, GA 30567 TEL (706) 693-2226

CONSTRUCTION NOTES FOR THE PLACEMENT OF MIRAFI REINFORCEMENT AND BACKFILL SOILS FOR TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS

1.0 DESIGN CRITERIA

1.1 SOIL PARAMETERS:
SEE WALL CONTROL DRAWINGS FOR SOIL CHARACTERISTICS OF FOUNDATION MATERIAL TO BE USED IN THE DESIGN OF THE WALL SYSTEM. THE CONTRACTOR SHALL PROVIDE SOIL DESIGN PARAMETERS FOR BACKFILL MATERIAL BASED ON THE ACTUAL SOIL CHARACTERISTICS UTILIZED AT THE SITE. THE VALUE OF Ø, C, AND γ SHALL BE PROVIDED IN THE SHOP DRAWINGS.

1.2 MINIMUM FACTOR OF SAFETY

1.2.1 EXTERNAL STABILITY

SLIDING	1.5
OVERTURNING	2.0
BEARING CAPACITY	2.5

1.2.2 INTERNAL STABILITY

RUPTURE	1.5
PULLOUT	1.5

1.2.3 GLOBAL STABILITY 1.5

1.2.4 UNIFORM SURCHARGE 250 PSF

1.2.5 HYDROSTATIC FORCES NONE

1.2.6 SEISMIC FORCES
IN ACCORDANCE WITH AASHTO AND FDOT PLANS PREPARATION MANUAL.

2.0 MATERIALS

2.1 GEOSYNTHETIC REINFORCEMENT AND RETENTION FABRIC, MIRAFI 140N, SHALL BE MANUFACTURED BY TC MIRAFI, PENDERGRASS, GEORGIA.

2.2 REINFORCED BACKFILL SHALL MEET THE REQUIREMENTS IN FLORIDA DOT SPECIFICATIONS - SECTION 548 RETAINING WALL SYSTEMS.

2.3 WALL FACING SHALL BE PRE-FABRICATED STEEL WIRE FORMS COMPOSED OF A MINIMUM W3.5 SIZE STANDARD WIRE WELDED ORTHOGONALLY 4 INCHES ON CENTER. STEEL WIRE FORMS SHALL BE AS DETAILED IN THE DRAWINGS.

2.4 RING FASTENER SHALL BE BLAIR STYLE #3-LOXIT, 10 GAUGE GALVANIZED, MANUFACTURED BY DECKER MANUFACTURING CO. OR EQUIVALENT.

3.0 WALL CONSTRUCTION

3.1 FOR LOCATION AND ALIGNMENT OF REINFORCED SOIL STRUCTURES, SEE RETAINING WALL CONTROL PLANS.

3.2 STEEL WIRE FORMS, REINFORCEMENT, SOIL RETENTION FABRIC, AND COMPACTED FILL SHALL BE PLACED IN SUCCESSIVE LIFTS IN THE SEQUENCE SHOWN IN THE CONSTRUCTION DRAWINGS.

3.3 GEOSYNTHETIC REINFORCEMENT SHALL BE PLACED AT THE ELEVATIONS. LOCATION, TYPE, ORIENTATION, AND TO THE LENGTHS SHOWN ON THE CONSTRUCTION DRAWINGS. THE REINFORCEMENT SHALL BE PLACED IN A MANNER SO AS TO AVOID SLACK OR WRINKLES. PINNING OR STAKES MAY BE REQUIRED TO MAINTAIN WRINKLE-FREE PLACEMENT DURING INSTALLATION.

3.4 AT EACH REINFORCEMENT ELEVATION, BACKFILL SOILS SHALL BE COMPACTED TO A LEVEL SURFACE BEFORE PLACING THE REINFORCEMENT. ALL REINFORCEMENT SHALL BE PLACED NORMAL TO THE FACE OF THE WALL.

3.5 ADJACENT WIRE FORMS SHALL BE CONNECTED ALONG VERTICAL AND HORIZONTAL SEAMS WITH GALVANIZED INTERLOCKING FASTENERS PLACED 8 INCHES ON CENTER.

3.6 BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH FDOT SPECIFICATIONS - SECTION 548.

3.7 TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE REINFORCEMENT. A MINIMUM FILL THICKNESS OF 6 INCHES IS REQUIRED FOR THE OPERATION OF TRACKED VEHICLES OVER THE REINFORCEMENT. TURNING OF TRACKED VEHICLES SHOULD BE AVOIDED TO PREVENT TRACKS FROM DISPLACING THE FILL AND THE REINFORCEMENT.

3.8 RUBBER TIRED VEHICLES MAY PASS OVER THE REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.

3.9 TC MIRAFI ENGINEERING SERVICES, INC. IS RESPONSIBLE FOR THE INTERNAL STABILITY OF THE STRUCTURE ONLY. EXTERNAL STABILITY IS THE RESPONSBILITY OF OTHERS.

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THIS SYSTEM SHALL NOT BE USED FOR ACUTE ANGLE BIN WALLS.
THIS SYSTEM MAY BE USED IN ALL ENVIRONMENTS.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
ROAD DESIGN

RETAINING WALL SYSTEM
TC MIRAFI WIRE FORM TEMPORARY

	Names	Dates
Designed By	NPA	11/5/98
Drawn By	CGA	11/5/98
Checked By	NPA	11/5/98

Approved By [signature]
State Structures Design Engineer

Revision	Sheet No.	Index No.
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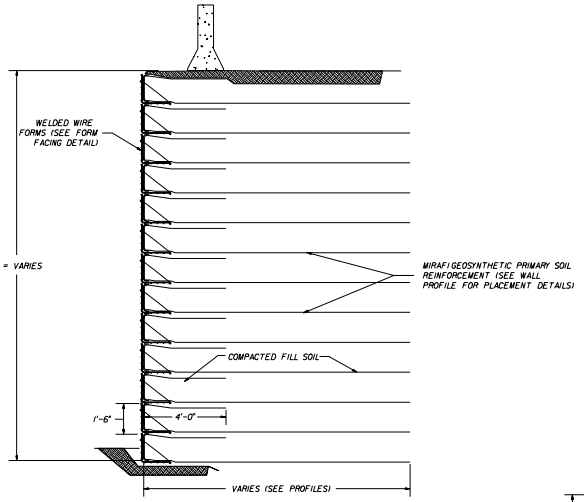
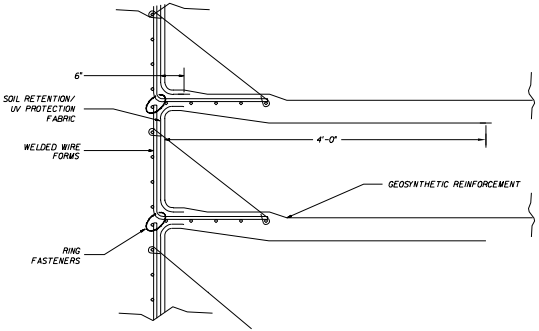


WIRE FORM
TEMPORARY WALL SECTION
NTS



WIRE FORM FACING DETAIL
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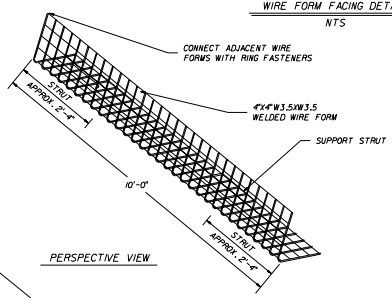
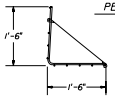
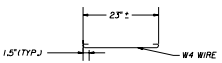


PERSPECTIVE VIEW



SECTION

INTERIM STANDARD



SUPPORT STRUT

WELDED WIRE FORM DETAIL
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ROAD DESIGN

RETAINING WALL SYSTEM
TC MIRAFI WIRE FORM TEMPORARY

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Drawn By	CDA	11/5/98	Revision / Sheet No. / Index No.
Checked By	NPA	11/5/98	00 / 2 of 4 / 510

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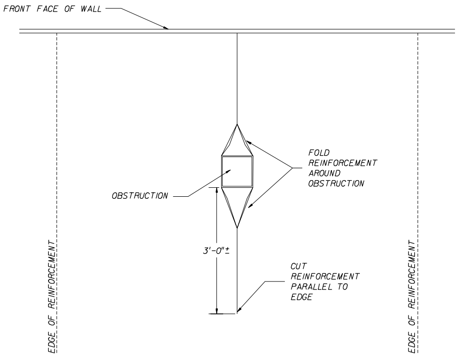

PLACEMENT AROUND OBSTRUCTIONS

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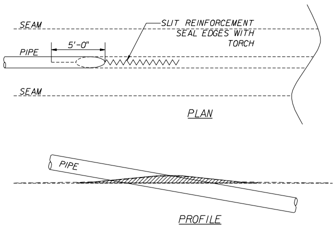

- SLIT REINFORCEMENT FROM END CLOSEST TO PIPE TO 6 FEET BEYOND.
- LAY REINFORCEMENT IN AROUND PIPE.

INSTALLATION AROUND PIPE RUNNING PARALLEL TO MACHINE (ROLL) DIRECTION OF REINFORCEMENT

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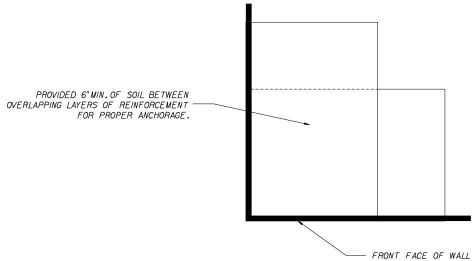

CONVEX CORNER DETAIL

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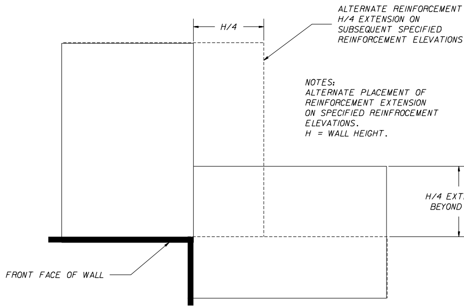

NOTES:
ALTERNATE PLACEMENT OF REINFORCEMENT EXTENSION ON SPECIFIED REINFROCEMENT ELEVATIONS.
H = WALL HEIGHT.

CONCAVE CORNER DETAIL

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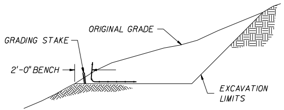
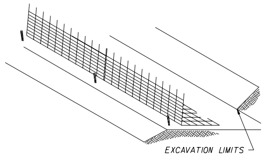
CONSTRUCTION SEQUENCE

- EXCAVATE FOR LEVEL BASE TO A LENGTH ADEQUATE FOR REINFORCEMENT EMBEDMENT.
- SET GRADING STAKES AT A 6 INCHES OFFSET TO FACILITATE PROPER WIRE FORM ALIGNMENT.
- EMBED BOTTOM BASKET 6 INCHES BELOW FINISHED GRADE AT FRONT FACE OF WALL OR AS SHOWN ON WALL PROFILE.



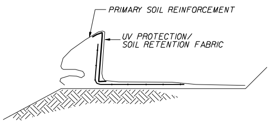
STEP 1

- FOR THE FIRST COURSE OF THE WALL, ALIGN BASKETS WITHOUT SPACES AND ATTACH WITH RING FASTENERS.
- INSTALL STRUTS AT ABOUT 5 FOOT SPACING.



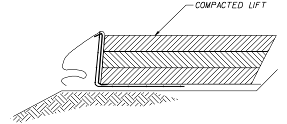
STEP 2

- PLACE UV PROTECTION/SOIL RETENTION FABRIC AT ELEVATIONS AS SHOWN.
- PLACE FACE FABRIC AGAINST WIRE FORM FACE.
- DRAPE FABRIC OVER WIRE FORM ALLOWING FOR THE REQUIRED WRAP EMBEDMENT.



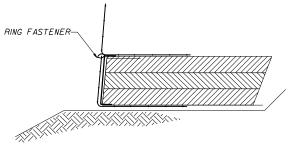
STEP 3

- PLACE BACKFILL SOIL IN 6 INCHES MAXIMUM LIFTS.
- COMPACT SOILS WITHIN IM OF WIRE FORM USING LIGHT WEIGHT COMPACTION EQUIPMENT.
- COMPACT REMAINING BACKFILL SOILS WITH STANDARD COMPACTION EQUIPMENT TO REQUIRED DENSITY.



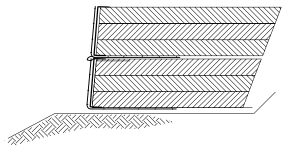
STEP 4

- PULL UV PROTECTION/SOIL RETENTION FABRIC AND PRIMARY REINFORCEMENT OVER COMPACTED FILL AND ANCHOR WITH SOIL.
- PLACE THE NEXT WIRE FORM AGAINST THE LOWER FORM AND ATTACH WITH RING FASTENERS.
- INSTALL STRUTS ON SUCCEEDING LIFT.

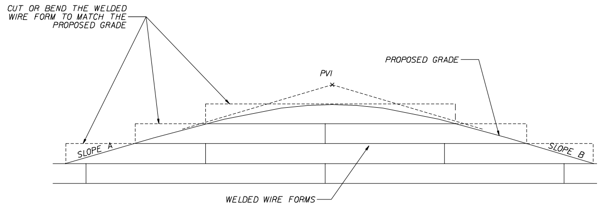


STEP 5

- REPEAT STEPS 2 THRU 5 UNTIL DESIRED HEIGHT OF WALL IS REACHED.



STEP 6



WELDED WIRE FORM ON VERTICAL CREST CURVE

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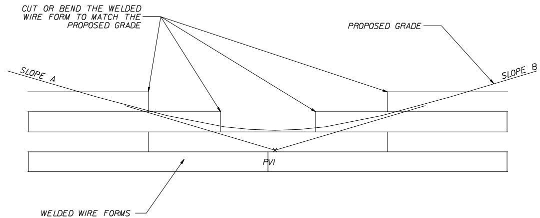

WELDED WIRE FORM ON VERTICAL SAG CURVE

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