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A Division of L. B. Foster Company

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GENERAL NOTES

DESIGN CRITERIA

1. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH VOLUME, METHODS OF CONSTRUCTION AND QUALITY OF PREFABRICATED MATERIALS SHALL CONFORM TO THE CONTRACTING AGENCY'S TECHNICAL SPECIFICATIONS FOR RETAINED EARTH WALLS.

FACTORS OF SAFETY

- 1. OVERTURNING 2.0
2. INTERNAL PULLOUT 1.5 (ALLOW DEFORMATION 3/4")
3. OVERALL STABILITY 1.5
4. SLIDING 1.5
5. BEARING 2.5

SOIL REINFORCING MESH 0.41 Fy AT END OF DESIGN LIFE

SOIL CHARACTERISTICS ASSUMED FOR DESIGN

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 VALUES OF B, C AND S SHALL BE PROVIDED IN THE SHOP DRAWINGS.

4. THE MAXIMUM APPLIED BEARING PRESSURE AT THE FOUNDATION LEVEL IS AS SHOWN ON THE WALL ELEVATIONS FOR EACH DESIGN CASE. IT IS THE RESPONSIBILITY OF OTHERS TO DETERMINE THAT THIS APPLIED BEARING PRESSURE IS ALLOWABLE FOR THAT LOCATION.

5. ANY UNSUITABLE FOUNDATION MATERIAL BELOW THE RETAINED EARTH VOLUME AS DETERMINED BY THE ENGINEER, SHALL BE EXCAVATED AND REPLACED WITH SUITABLE MATERIAL OR OTHERWISE STABILIZED AS DIRECTED BY THE ENGINEER.

REINFORCING ELEMENTS

6. REINFORCING MESH ELEMENTS SHALL BE SHOP FABRICATED FROM COLD DRAWN STEEL ROD CONFORMING TO THE MINIMUM REQUIREMENTS OF ASTM A-63 AND SHALL BE WELDED AT THE JOINTS BETWEEN LONGITUDINAL AND TRANSVERSE WIRES IN ACCORDANCE WITH ASTM A-85. GALVANIZATION SHALL BE APPLIED AFTER MESH FABRICATION AND SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF ASTM A-123.

LOOP EMBEDS SHALL BE FABRICATED FROM COLD DRAWN STEEL ROD CONFORMING TO ASTM A-36 OR ASTM A-82. LOOP EMBEDS SHALL BE WELDED IN ACCORDANCE WITH ASTM A-85. LOOP EMBEDS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM B-633.

DESIGN

7. THE DESIGN CONTAINED ON THESE DRAWINGS IS BASED ON INFORMATION PROVIDED BY OTHERS. ON THE BASIS OF THIS INFORMATION, THE WALL COMPANY IS RESPONSIBLE FOR INTERNAL STABILITY OF THE STRUCTURE ONLY. EXTERNAL STABILITY DESIGN INCLUDING FOUNDATION AND SLOPE STABILITY IS THE RESPONSIBILITY OF OTHERS.

WALL CONSTRUCTION

8A. (SQUARE PANELS) RETAINED EARTH WALLS IN CURVES WILL FORM A SERIES OF SHORT CHORDS OF 5.0 EACH TO MATCH DESIRED WALL ALIGNMENT.

8B. (TIE PANELS) RETAINED EARTH WALLS IN CURVES WILL FORM A SERIES OF SHORT CHORDS 4.5 EACH TO MATCH DESIRED WALL ALIGNMENT.

9. FOR LOCATION AND ALIGNMENT OF RETAINED EARTH WALLS, SEE RETAINING WALL CONTROL PLANS.

10. IF MANHOLES AND DROP INLETS ARE PRESENT, THEY SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS.

11. IF PILES ARE LOCATED WITHIN REINFORCED SOIL VOLUME, THEY SHALL BE COVERED PRIOR TO CONSTRUCTION OF THE REINFORCED EARTH WALL UNLESS A METHOD TO PROTECT THE STRUCTURE WHICH IS ACCEPTABLE TO THE ENGINEER AND FOSTER GEOTECHNICAL COMPANY AND IS PROPOSED AND APPROVED IN WRITING.

12. BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 548 TO A LEVEL OF 2" (+/-) ABOVE THE MESH EMBEDDED IN THE PANELS. INSTALLATION OF REINFORCING MESH SHALL BE PERMITTED ONLY AFTER PLACEMENT AND COMPACTING OF THE BACKFILL MATERIAL HAS REACHED THE REQUIRED LEVEL.

13. WALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 548.

14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY GUARDRAIL POSTS BEHIND RETAINED EARTH PANELS. PROPER PLACEMENT OF THE TOP LAYER OF REINFORCING MESH, INDIVIDUAL REINFORCING MESH MAY BE SKEMED TO AVOID THE POST LOCATIONS IF AUTHORIZED BY THE ENGINEER. NO CUTTING OF SOIL REINFORCEMENT GRIDS ALLOWED UNLESS SHOWN ON SHOP DRAWINGS AND APPROVED BY THE ENGINEER. ANY DAMAGE DONE TO THE REINFORCING MESH DUE TO THE INSTALLATION OF THE GUARDRAIL SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

15. IF EXISTING OR FUTURE STRUCTURES, PIPES, FOUNDATIONS OR GUARDRAIL POSTS WHICH ARE WITHIN REINFORCED SOIL VOLUME INTERFERE WITH THE NORMAL PLACEMENT OF REINFORCING MESH AND SPECIFIC DIRECTION HAS NOT BEEN PROVIDED ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE WHAT COURSE OF ACTION SHOULD BE TAKEN.

16. TOP PANELS BENEATH CAST-IN-PLACE COPING SHALL HAVE #4 BARS PROTRUDING FROM THEIR TOP EDGE.

17. FOR OTHER INFORMATION PERTAINING TO WALL CONSTRUCTION PLEASE REFER TO FOSTER GEOTECHNICAL CONSTRUCTION MANUAL.

18. THE CONTRACTOR IS RESPONSIBLE FOR GRADUALLY DEFLECTING UPPER REINFORCING MESH DOWNWARD TO AVOID CONTACTS WITH PAVING AND SUBGRADE PREPARATION. THE CONTRACTOR'S ATTENTION IS DIRECTED ESPECIALLY TO SITUATIONS WHERE ROADWAY SUPER ELEVATION AND/OR SOIL MIXING ARE ANTICIPATED.

MATERIALS NOTES

19. NOMINAL MESH LENGTHS

THE REINFORCING MESH LENGTH SHOWN ON THE PLANS, MEASURED FROM BACK FACE OF PANEL ARE THE NOMINAL LENGTHS REQUIRED BY CALCULATION. THE ACTUAL FABRICATED MESH LENGTHS ARE OFTEN LONGER (UP TO 6") DUE TO MANUFACTURING TOLERANCES. THE REQUIRED HORIZONTAL TOTAL LENGTH OF GRANULAR BACKFILL IS EQUAL TO THE NOMINAL MESH LENGTH. ADDITIONAL GRANULAR BACKFILL BEYOND THE NOMINAL MESH LENGTH IS NOT REQUIRED BY CALCULATION.

20. REINFORCED BACKFILL QUANTITY

THE REINFORCED BACKFILL QUANTITY INDICATED BY FOSTER GEOTECHNICAL IS CALCULATED BY MULTIPLYING THE NOMINAL MESH LENGTHS SHOWN ON THE PLANS BY THEIR TRIBUTARY WALL SURFACE AREA AND CONVERTING THE RESULT TO A NEARER CUBIC YARD QUANTITY. THIS INFORMATION IS FURNISHED FOR THE CONTRACTOR'S INFORMATION ONLY AND IS NOT INTENDED TO PRESENT THE ACTUAL QUANTITIES REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR MUST CALCULATE HIS OWN EXCAVATION AND BACKFILL QUANTITIES BASED UPON THE SPECIFIC CONDITIONS OF THE PROJECT.

21. PANEL FINISH

THE PRECAST PANELS FOR THIS PROJECT SHALL BE A PLAIN STEEL FORM FINISH UNLESS OTHERWISE SPECIFIED ON THE RETAINED EARTH CONTROL PLANS.

22. NOTE TO CONTRACTORS

ONLY THE FOLLOWING MATERIALS ARE SUPPLIED BY FOSTER GEOTECHNICAL:

- PRECAST PANELS
- REINFORCING MESH
- HDPE EMBEDS
- HDPE BEARING PAD (NOMINAL 4.0' WELT / 35% DENSITY)
- NON-WOVEN FILTER CLOTH AND ADHESIVE IFOR PANEL JOINTS ONLY (MESTECH-TERRATEX 10, 4" OR EQUIV)

ANY OTHER MATERIALS CALLED FOR IN THE CONTRACT PLANS OR SPECIFICATIONS ARE TO BE SUPPLIED BY THE CONTRACTOR. ANY JOINT MATERIALS SHOWN AT THE INTERFACE OF PRECAST PANELS AND CAST-IN-PLACE CONCRETE STRUCTURES ARE TO BE SUPPLIED BY THE ERECTOR CONTRACTOR. ALL SANDBLASTING, PRIMEING, SEALERS OR OTHER SPECIAL APPLIED COATINGS ARE ALSO SUPPLIED / INSTALLED BY THE CONTRACTOR IN THE FIELD FOLLOWING PANEL ERECTION.

23. FOSTER GEOTECHNICAL SUPPLIES PRECAST CONCRETE FACING PANELS AND ACCESSORIES TO BE USED IN CONJUNCTION WITH OTHER MATERIALS IN THE CONSTRUCTION OF RETAINED EARTH WALLS DETAILED HEREIN. THE CONSTRUCTION AND QUALITY CONTROL PROCEDURES MANUAL FURNISHED BY FOSTER GEOTECHNICAL IS INTENDED TO PROVIDE A GENERAL EXPLANATION OF THE SYSTEM. IT IS THE CONTRACTOR'S OBLIGATION TO DEVISE AND EXECUTE A PROJECT SPECIFIC ERECTION SUPPORT / INSTALLED BY THE CONTRACTOR IN THE FIELD FOLLOWING PANEL ERECTION. THE BRACING SYSTEM SHOWN IN THE CONSTRUCTION AND QUALITY CONTROL PROCEDURES MANUAL IS GENERAL IN NATURE AND DOES NOT ACCOUNT FOR PROJECT SPECIFIC CRITERIA COMPLIANCE WITH THE GUIDELINES IN THIS MANUAL DOES NOT RELIEVE THE CONTRACTOR OF ITS RESPONSIBILITY TO ADHERE TO THE PROJECT PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS OR COMPLIANCE WITH ALL FALL PROTECTION, SAFETY, LAWS, STANDARDS AND PROCEDURES AT THE JOBSITE. CONTRACTORS SHOULD TAKE SPECIAL PRECAUTIONS TO PREVENT THE PANELS FROM SHIFTING OR FALLING DURING THE ERECTION PROCESS.

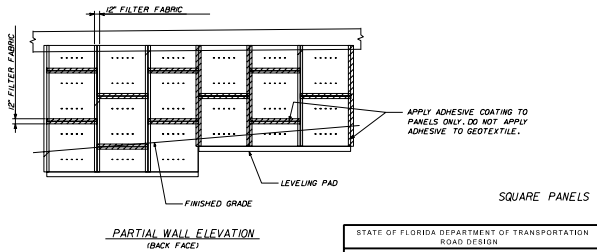
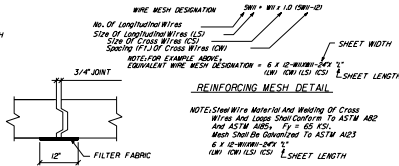
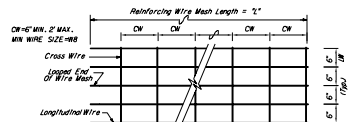
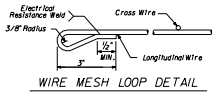
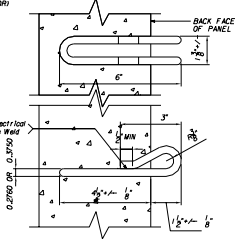
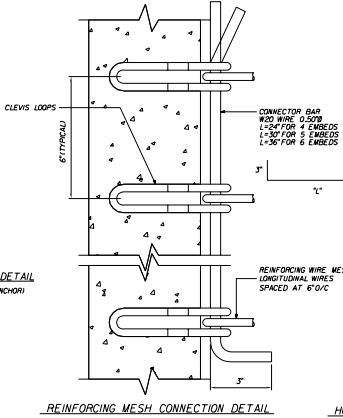
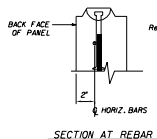
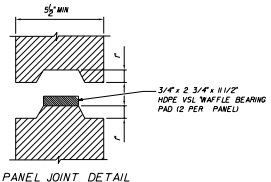
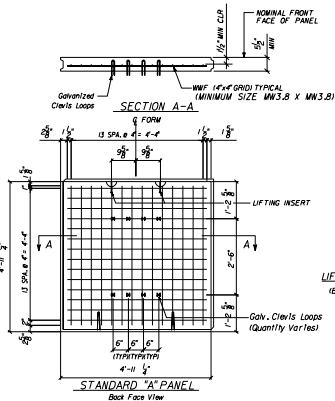
SQUARE / HEX PANELS

THIS SYSTEM SHALL BE USED IN MODERATELY OR SLIGHTLY AGGRESSIVE ENVIRONMENTS ONLY.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
ROAD DESIGN

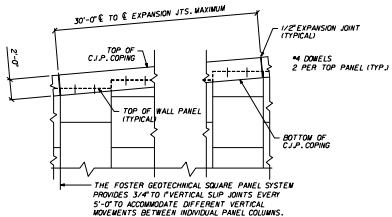
RETAINING WALL SYSTEM
FOSTER GEOTECHNICAL RETAINED
EARTH WALL

Table with 3 columns: Revised, Date, Approved; and 3 columns: Designed By, Drawn By, Checked By. Includes a signature and date 10/12/00.

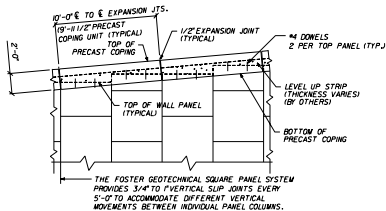


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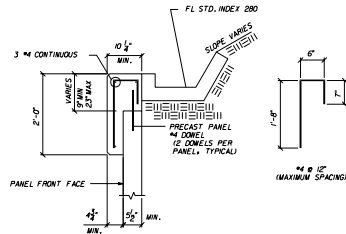
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RETAINING WALL SYSTEM FOSTER GEOTECHNICAL RETAINED EARTH WALL			
Drawn By:	TCNA 11/98	Approved By:	<i>[Signature]</i>
Checked By:	CAD 11/98	Scale:	AS SHOWN
Checked By:	GEO 11/98	Sheet No.:	2 of 12
		Project No.:	5005



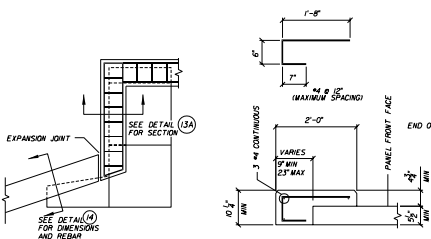
14A PARTIAL ELEVATION C.J.P. COPING
(SQUARE PANELS SHOWN, HEX PANELS SIMILAR)



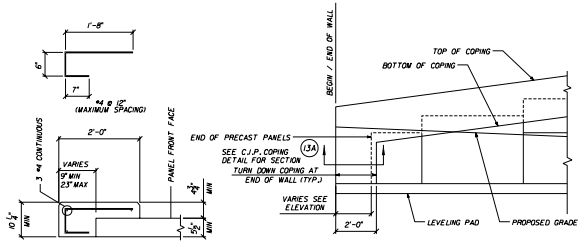
20A PARTIAL ELEVATION PRECAST COPING
(SQUARE PANELS SHOWN, HEX PANELS SIMILAR)



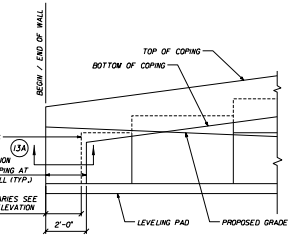
14 C.J.P. COPING W/ DITCH
(12" MIN. COVER TYP.)



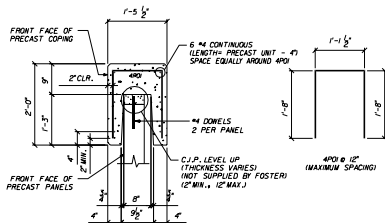
13 VERTICAL COPING (C.J.P.)
(SQUARE PANELS SHOWN, HEX PANELS SIMILAR)



13A VERTICAL COPING (C.J.P.) SECTION
(12" MIN. COVER TYP.)



15 COPING ENCLOSURE (C.J.P.)
(SQUARE PANELS SHOWN, HEX PANELS SIMILAR)



20 TYPE H_ PRECAST COPING
(STANDARD PRECAST COPING)

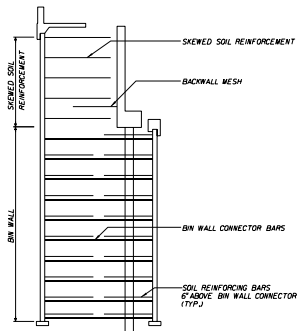
SQUARE / HEX PANELS

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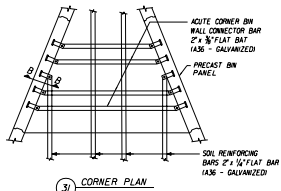
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
ROAD DESIGN

RETAINING WALL SYSTEM
FOSTER GEOTECHNICAL RETAINED
EARTH WALL

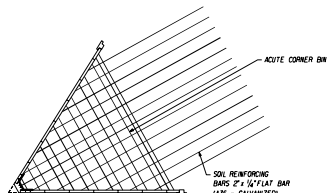
Revised	Date	Approved By
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Drawn By	CAD 11/98	[Signature]
Checked By	GED 11/98	00 3 of 12 5005



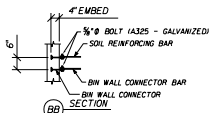
CC TYPICAL SECTION @ BIN WALL



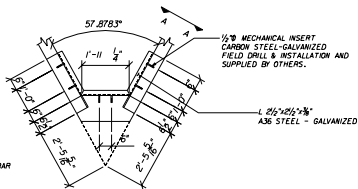
31 CORNER PLAN



BIN WALL CONNECTOR & SOIL REINF. BAR LAYOUT

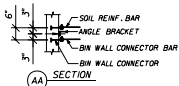


BB SECTION

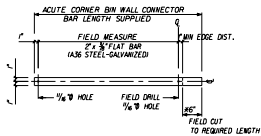


NOTES: BRACKETS TYPICALLY LOCATED IN THE CORNER BETWEEN BIN WALL CONNECTOR & SOIL REINFORCING BAR ELEVATION
BIN WALL CONNECTOR BARS & SOIL REINF. BARS NOT SHOWN

30 ANGLE BRACKET DETAIL

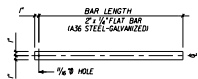


AA SECTION

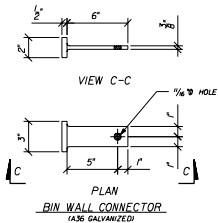


* EXPOSED STEEL ON FIELD MODIFIED END SHALL BE COATED WITH ZINC RICH PAINT

32 BIN WALL CONNECTOR BAR



33 SOIL REINFORCING BAR



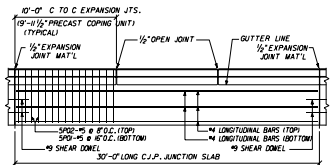
SQUARE / HEX PANELS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
ROAD DESIGN

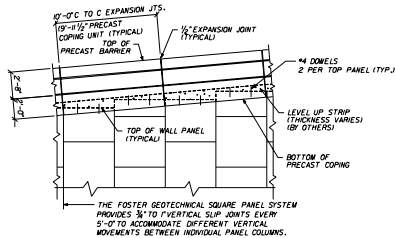
RETAINING WALL SYSTEM
FOSTER GEOTECHNICAL RETAINED
EARTH WALL

Developed By	Checked By	Approved By	Date
TENA	JJ/98	[Signature]	11/98
Drawn By	CAD	DATE SUBMITTED	DESIGN PROJECT NO.
Checked By	GED	00	4 of 12 5005

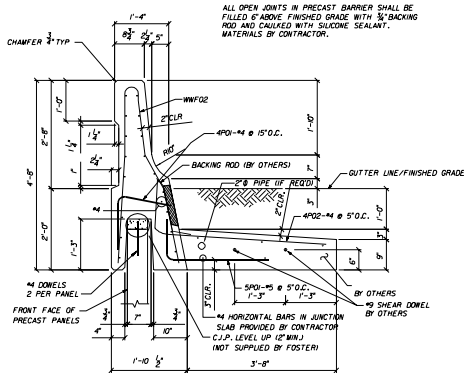
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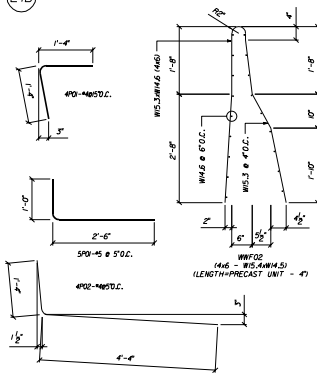
24A PLAN VIEW - PRECAST TRAFFIC BARRIER
HORIZONTAL BARS IN JUNCTION SLAB & 49 SHEAR DOWELS, NOT BY VSU



24B PARTIAL ELEVATION PRECAST BARRIER



24 TYPE HTB - PRECAST BARRIER W/COPING & JUNCTION SLAB
U.S. PATENT NO. 4,494,892



SQUARE / HEX PANELS

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD DESIGN			
RETAINING WALL SYSTEM FOSTER GEOTECHNICAL RETAINED EARTH WALL			
Drawn By	Scale	Approved By	DATE
CAD	1/8"	<i>[Signature]</i>	11/98
Checked By	6 of 12		5005

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