DESIGN NOTES

- 1. Design is based on the assumption that backfill within the reinforced soil mass, methods of construction and quality of materials conform to the requirements of Hilfiker Retaining Walls.
- 2. Assumed Soil Characteristics:

Wall Backfill

Unit Weight: 125 pcf

Internal Friction Angle: 34° Foundation Soils: Unit Weight: 125 pcf Cohesion = 0 psf Friction Angle for Retained Backfill: Unit Weight: 125 pcf Sliding: 34° Cohesion = 0 psf Internal Friction Angle: 34°

Worst Case Unfactored Bearing Pressure by MSE Wall - @ 12.0' Height - 1950 psf.

If actual characteristics, grades or dimensions of soil materials differ from those listed above or shown on the plans, Hilfiker Retaining walls shall be notified to evaluate the need to redesign.

- 3. If during construction, the wall location, structure location or loads are different than that proposed in this plan set and calculation package, HRW shall be notified to evaluate the need for a redesign.
- The design requires a non-saturated backfill. Surface and sub-surface drainage control may be required to prevent saturation of the backfill or relieve hydrostatic pressures.

Drainage control shall be as specified in the project plans and specifications or as directed by the engineer.

Design Procedure: Mechanically Stabilized Earth walls and Reinforced Soil Slopes, FHWA report No. FHWA-NHI-00-043.

6. All information hereon is derived from the reference drawings, and is subject to geometric and geotechnical confirmation. Field verification of existing ground elevations and bottom of wall elevations should be completed prior to preparation. The applicable Hilfiker construction guide and specifications are an integral part of this submittal.

This design is intended to be responsible for the internal stability of the retaining wall only, and not for global stability or foundation bearing capacity. CES & Hilfiker Retaining Walls are not responsible for job site drainage, safety and fall protection provisions including compliance with OSHA regulations, nor the Competent Person designated for daily inspection.

SUPPLIED QUANTITIES				
WALL DESCRIPTION	FACE AREA			
SIGN WALL 1	1,152 SQ. FT.			
SIGN WALL 2 - BOTTOM TIER	756 SQ. FT.			
SIGN WALL 2 - TOP TIER	972 SQ. FT.			
ART WALL 1	360 SQ. FT.			
ART WALL 2	288 SQ. FT.			
TOTALS	3,528 SQ. FT.			

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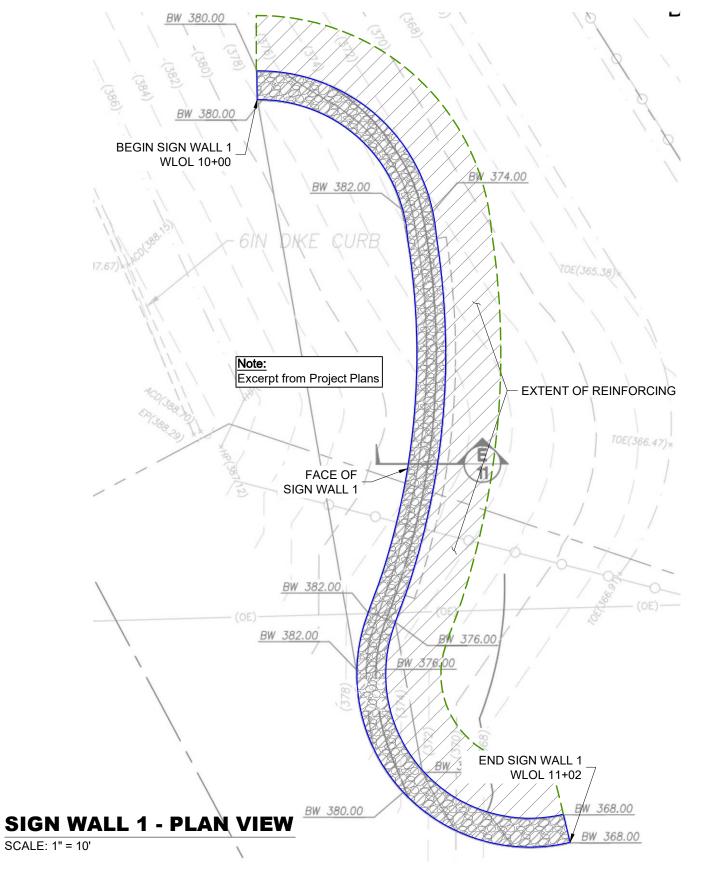
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Farmersville 198

SIGN WALL 1 - PLAN VIEW & **GENERAL NOTES**

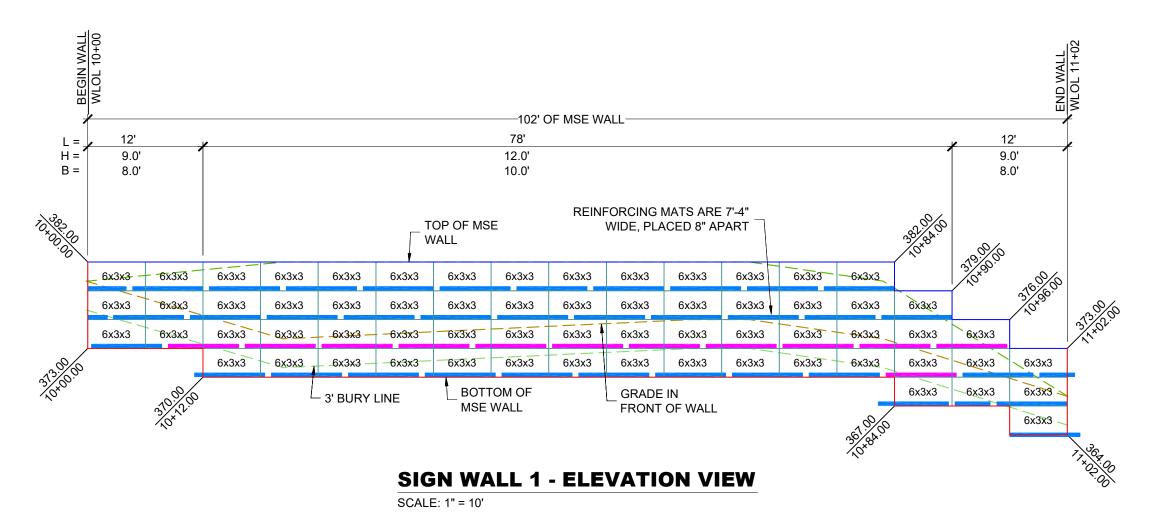
HW 221121AG PROJECT 24-005 DATE 2-14-24

DESIGN KLC DRAWN KLC



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WALL WIRE TYPE LEGEND

FINISH: COMMERCIAL GALVANIZED

SERVICE LIFE: 75 YEARS

TYPE 1 - 8X12 W7.0x3.5 MATS (7.33' WIDE)
TYPE 2 - 8x12 W9.5x4.0 MATS (7.33' WIDE)

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Gabion Faced MSE Walls

SIGN WALL 1 - ELEVATION VIEW

HW 221121AG

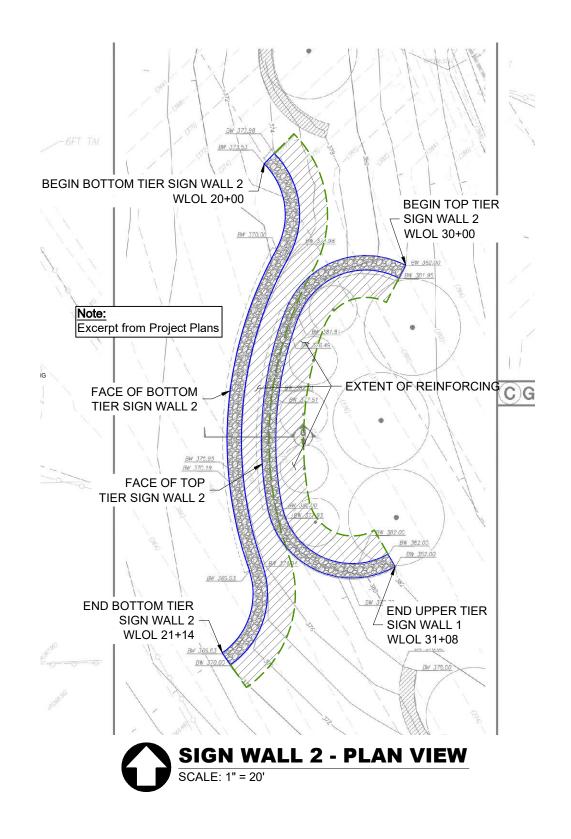
PROJECT 24-005

DATE 2-14-24

DESIGN KLC

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SHT 2 OF 8



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DATE DESCRIPTION 2-14-24 KLC Initial .pdf Release

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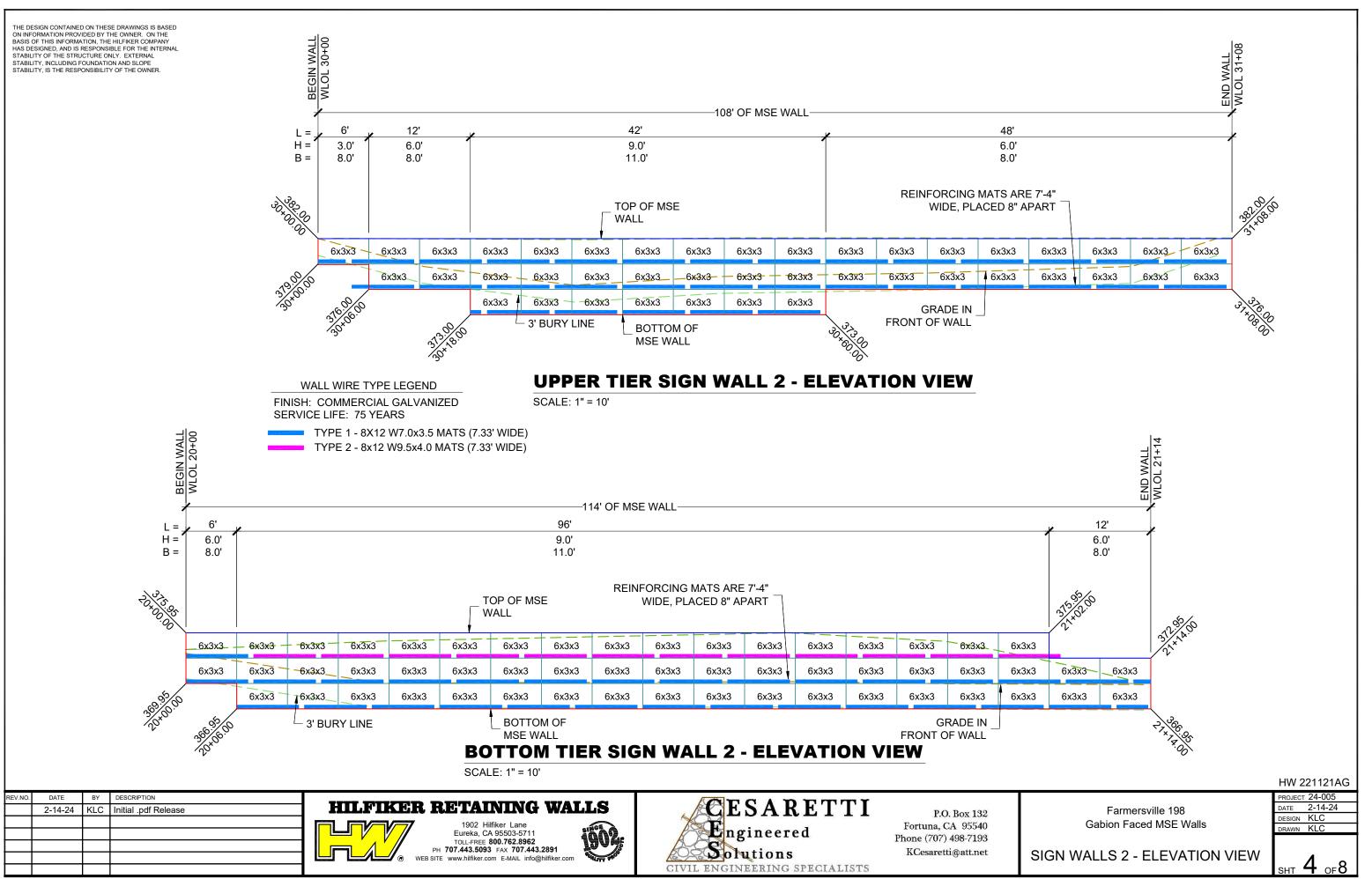
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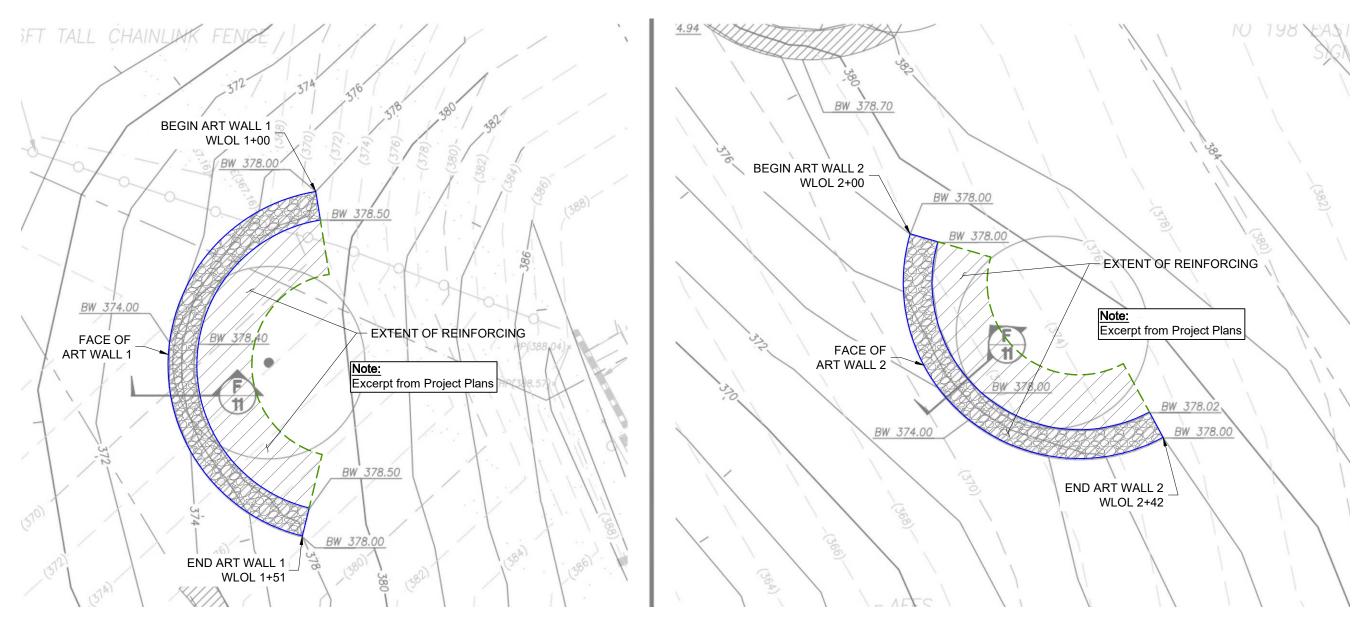
Farmersville 198 Gabion Faced MSE Walls

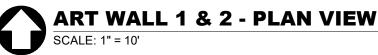
SIGN WALL 2 - PLAN VIEW

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SHT 3 OF 8







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ART WALL 1 & 2 - PLAN VIEW

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PROJECT 24-005

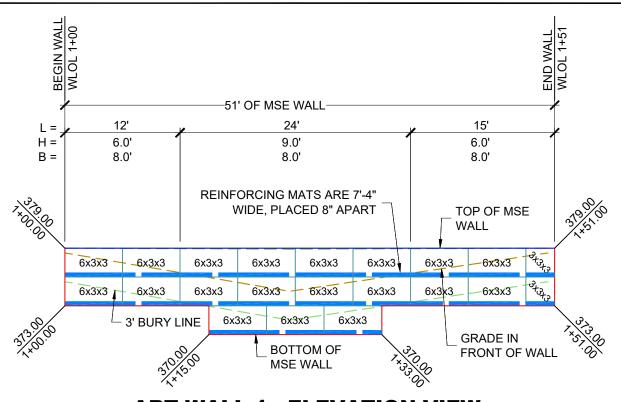
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DESIGN KLC

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SHT 5 OF 8

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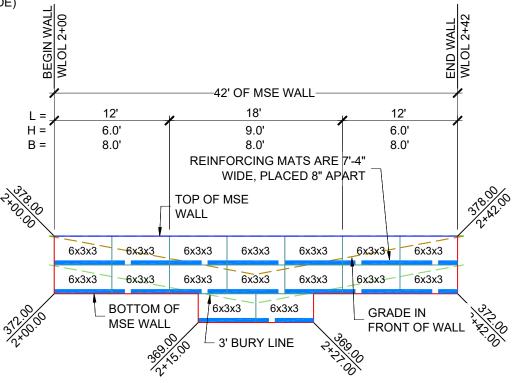
WALL WIRE TYPE LEGEND

FINISH: COMMERCIAL GALVANIZED SERVICE LIFE: 75 YEARS

> TYPE 1 - 8X12 W7.0x3.5 MATS (7.33' WIDE) TYPE 2 - 8x12 W9.5x4.0 MATS (7.33' WIDE)

ART WALL 1 - ELEVATION VIEW

SCALE: 1" = 10'



ART WALL 2 - ELEVATION VIEW

SCALE: 1" = 10'

Farmersville 198

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ART WALLS 1 & 2 - ELEVATION

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VIEW

DRAWN KLC SHT 6 OF 8

DATE 2-14-24

DESIGN KLC

HW 221121AG PROJECT 24-005

CURVED GABION STRUCTURES ONE METHOD TO CONSTRUCT CURVES OF NEARLY ANY RADIUS. SPIRAL BINDERS AND OTHER ACCESSORIES, AS NEEDED TOW WLOL Spiral Binder Connecting PANELS, HEIGHT x LENGTH Reinforcing mat to Gabion Basket Mechanically REQUIRED, FOR FRONT AND BACK FACES OF STRUCTURE. Stablized Earth (MSE) Wall Gabion Face, Vertical Filter Fabric H = Height of Wall FOR A SMOOTHER CURVE SPLIT THE MAT BASES AND BEND THE = 9.0' **COMPONENTS** FRONT. DO NOT SPLIT MAT FACES Select Granular Backfill NOT TO SCALE 3' Bury in Front of PANELS FOR ENDS OR CUT LONGITUDINAL WIRES Welded Wire Reinforcement AND BAFFLES. Wall, per Project Plans WELDED WIRE WALL Proposed Grade in TOP OF BERM Front of Wall TOP PANELS PER PROJECT PLANS SPREAD THE OPTIONAL WHERE REPLACED BY BACK OF THE TRIM TOPS AND Drain System if Required. SOIL REINFORCEMENT MATS MATS BOTTOMS TO FIT. REQ'D AT TOP Design and supply of drain is not ATTACH ALONG **PLAN VIEW** within Hilfiker's Scope of Work SIDES TO BAFFLES **CONCAVE CURVE** AND EACH FACE WITH SPIRALS. B = Base Length of mats NOT TO SCALE 3"-6"Ø Rock For Gabion Basket Fill SPIRAL ENDS AND BAFFLES TO FRONT BAFFLES @ MAX 2' O.C. Compact Subgrade, by Others AND BACK FACES. STEP 2: **TYPICAL GABION FACED MSE WALL - CROSS SECTION (H=9')** FIELD CUT TOP AND BOTTOM PANELS TO FIT STRUCTURE. NTS BOTTOM PANELS PER PROJECT PLANS OPTIONAL WHERE REPLACED BY SOIL REINFORCEMENT MATS, REQ'D AT OVERLAP THE BOTTOM. BACK OF THE **ASSEMBLY** WELDED WIRE WALL NOT TO SCALE TOP OF BERM **PLAN VIEW** THE DESIGN CONTAINED ON THESE DRAWINGS IS BASED. ON INFORMATION PROVIDED BY THE OWNER. ON THE BASIS OF THIS INFORMATION, THE HILFIKER COMPANY **CONVEX CURVE** 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 HW 221121AG PROJECT 24-005 BY DESCRIPTION **CESARETTI** Farmersville 198 HILFIKER RETAINING WALLS DATE 2-14-24 2-14-24 Initial .pdf Release P.O. Box 132 Gabion Faced MSE Walls DESIGN KLC

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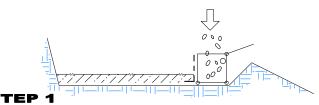
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WALL PLAN VIEW & GENERAL

NOTES



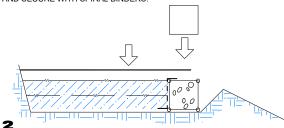
1. PLACE THE FIRST LIFT OF GABIONS AND PERMANENTLY CONNECT THE FRONT EDGE TO THE SOIL REINFORCEMENT MATS WITH A SPIRAL BINDER

2. INSTALL FILTER FABRIC, IF REQUIRED.

3. PLACE AND COMPACT THE FIRST COURSE OF BACKFILL. BACKFILL TO BE OF SUFFICIENT DEPTH TO PROTECT SOIL REINFORCEMENT MATS FROM DAMAGE OR MOVEMENT BY EQUIPMENT DURING DELIVERY OF ROCK TO THE GABIONS.

4. FILL THE GABIONS WITH SUITABLE ROCK.

5. CLOSE LID AND SECURE WITH SPIRAL BINDERS.

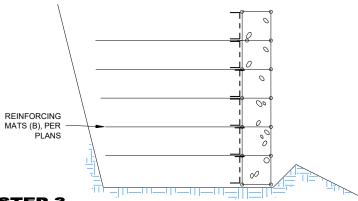


1. PLACE AND COMPACT THE REMAINING BACKFILL IN UNIFORM LIFTS OVER THE SOIL

2. PLACE SOIL REINFORCEMENT MATS ON THE BACKFILL AND THE TOP OF THE

3. PLACE THE SECOND LIFT OF GABIONS OVER THE FIRST LIFT AND CONNECT THE GABIONS AND THE SOIL REINFORCEMENT MATS TOGETHER PERMANENTLY WITH

4. PLACE AND COMPACT BACKFILL AT THE TOE OF THE WALL PER YOUR PROJECT



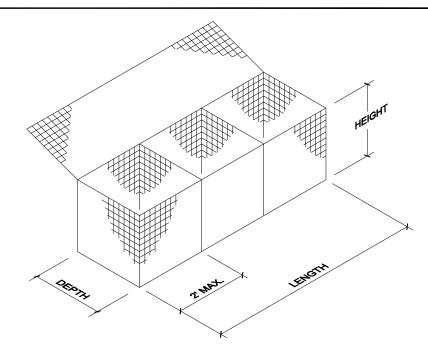
STEP 3

1. REPEAT STEP 2 TO THE TOP LIFT OF GABIONS.

2. PLACE THE FINAL LIFT OF BACKFILL PER PROJECT PLANS.

CONSTRUCTION SEQUENCE NOT TO SCALE

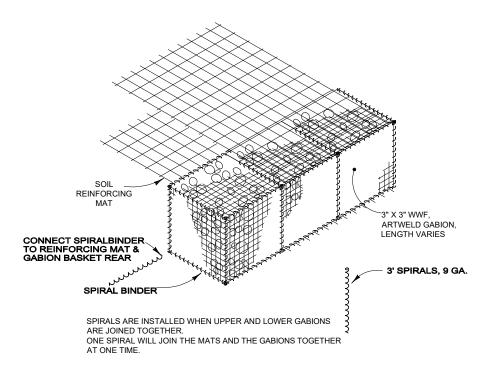
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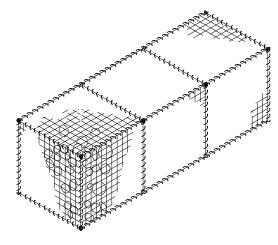
TYPICAL GABION

NOT TO SCALE

GABIONS ARE MANUFACTURED OF 3"x3" WELDED WIRE MESH, 9 GA. WITH 0.9 OZ/SF ZINC COATING.

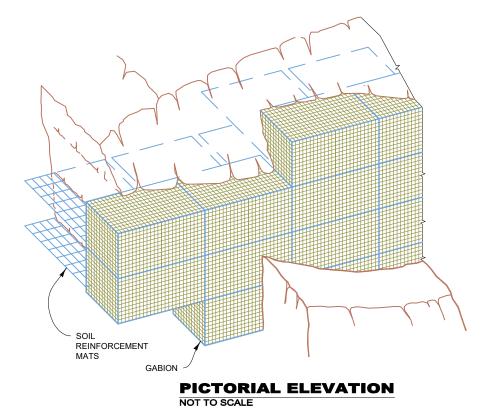


ISOMETRIC OF WALL COMPONENTS



TYPICAL ASSEMBLED GABION

NOT TO SCALE



NOT TO SCALE

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WALLS CONSTRUCTION **SEQUENCE & DETAILS**

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SHT **8** OF **8**