

**DESIGN NOTES**

- 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.
- Assumed Soil Characteristics:  
 Wall Backfill:  
 Unit Weight: 120 pcf  
 Internal Friction Angle: 35°  
 Cohesion = 0 psf  
 Retained Backfill:  
 Unit Weight: 120 pcf  
 Internal Friction Angle: 35°  
 Cohesion = 0 psf  
 Foundation Soils:  
 Unit Weight: 120 pcf  
 Internal Friction Angle for Sliding: 38°  
 Cohesion = 0 psf

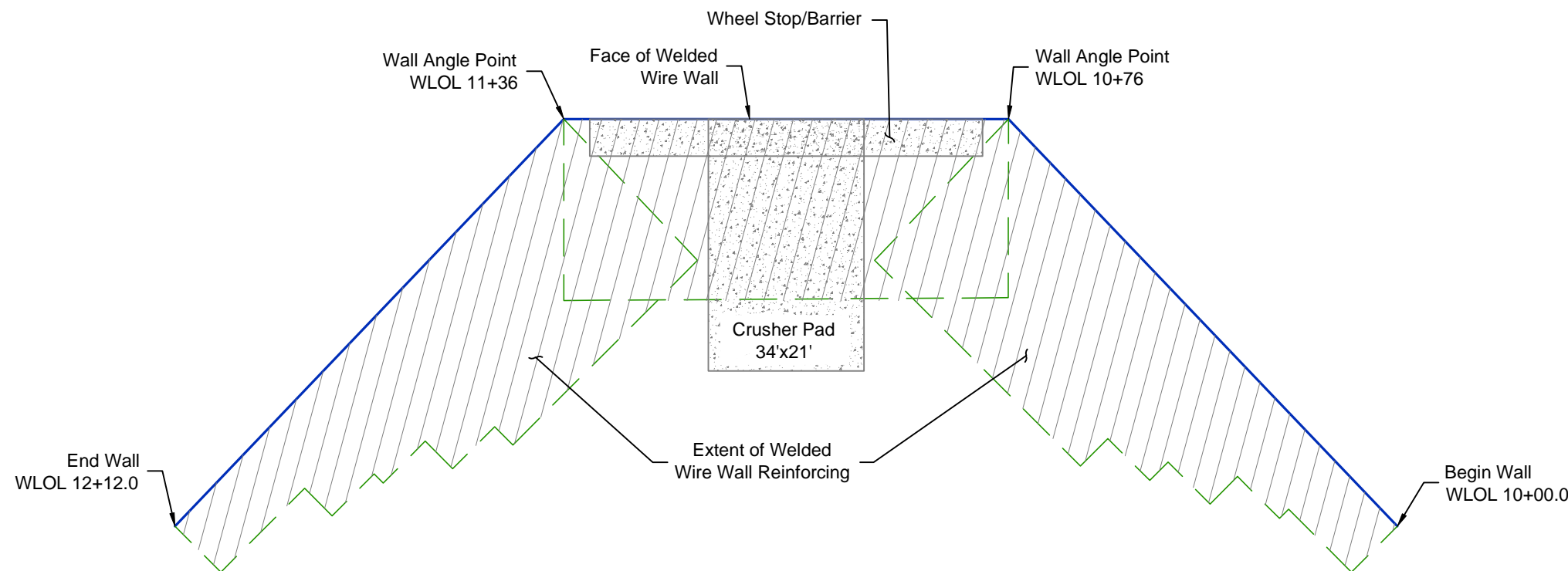
**Dump Wall**

**Live Traffic Surcharge** - CAT 777F Loader - Loaded @ 360,000 lbs distributed on a 34'x21' Concrete Slab, slab is assumed 2.0' thick LL= 505 psf T  
**Dead Load** - The traffic Barrier is approx. 530 psf 0-3.0' from the Face of the Wall  
 The Concrete Load distribution Slab is approx. 2.0' and 300 psf.

Applied Bearing Pressure - applied at loaded 34' Height - 6,500 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.

- 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.
- All information hereon is derived from the reference drawings, and is subject to geometric and geotechnical confirmation. The applicable Hilfiker construction guide and specifications are an integral part of this submittal.
- Hilfiker Retaining Walls shall be responsible only for the internal stability of the retaining wall, and not for global stability or foundation bearing capacity. The owner/contractor shall be responsible for all job site drainage, safety and fall protection provisions for workers in compliance with OSHA and any other applicable requirements.



**MSE WALL PLAN VIEW**

SCALE: 1"= 20'

**INSTALLED QUANTITIES:**

WIRE WALL AREA: 5,672 SF

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HW 160202BW

REV.NO.	DATE	BY	DESCRIPTION
	3/7/16	KLC	Initial .pdf Release
	3/30/16	KLC	Revised per Plan Check Comments (3-13-16)

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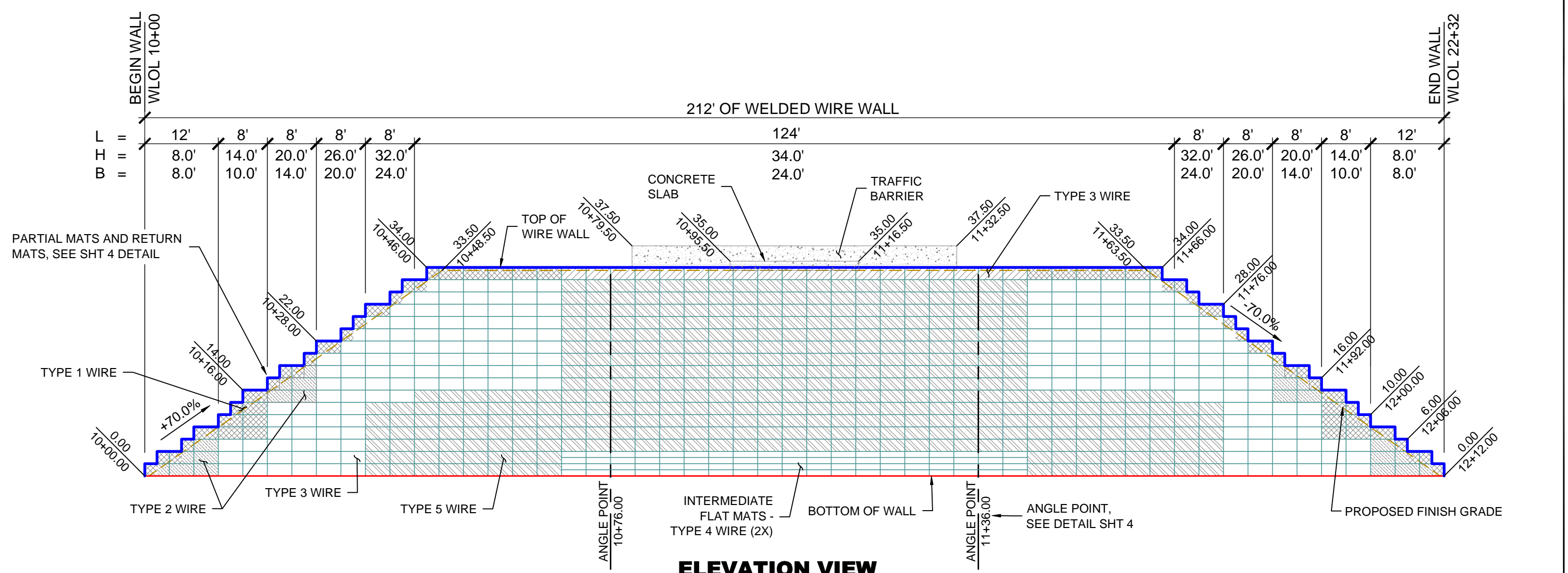
LANNON QUARRY STATIONARY JAW PLANT  
 CRUSHER RETAINING WALL  
 MSE WALL GENERAL NOTES AND  
 PLAN VIEW

PROJECT	16-016
DATE	3-7-16
DESIGN	KLC
DRAWN	KLC

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**ELEVATION VIEW**  
SCALE: 1" = 16'

WELDED WIRE WALL PARAMETERS	
Height of Wall (H) (ft)	Length of Mats (ft)
≤ 8'	8'
14'	10'
20'	14'
26'	20'
32'	24'
34'	24'

Cap & Top Mats : 12x12 W4.5x3.5 WWR (Type 1)  
 12x12 W7.0x3.5 WWR (Type 3)  
 Standard Mats : 12x24 W4.5x4.0 WWR (Type 2)  
 12x24 W7.0x4.0 WWR (Type 4)  
 12x24 W9.5x4.0 WWR (Type 5)  
 Finish: Hot Dip Galvanized - 50 Year Service Life

- WALL WIRE TYPE LEGEND**
- FINISH: Hot Dip Galvanized  
 SERVICE LIFE: 50 YEARS
- TYPE 1 - 12x12 W4.5x3.5 MATS
  - TYPE 2 - 12x24 W4.5x4.0 MATS
  - TYPE 3 - 12x12 W7.0x3.5 MATS
  - TYPE 4 - 12x24 W7.0x4.0 MATS
  - TYPE 5 - 12x24 W9.5x4.0 MATS
  - TYPE 4 W/ INTERMEDIATE FLAT MATS

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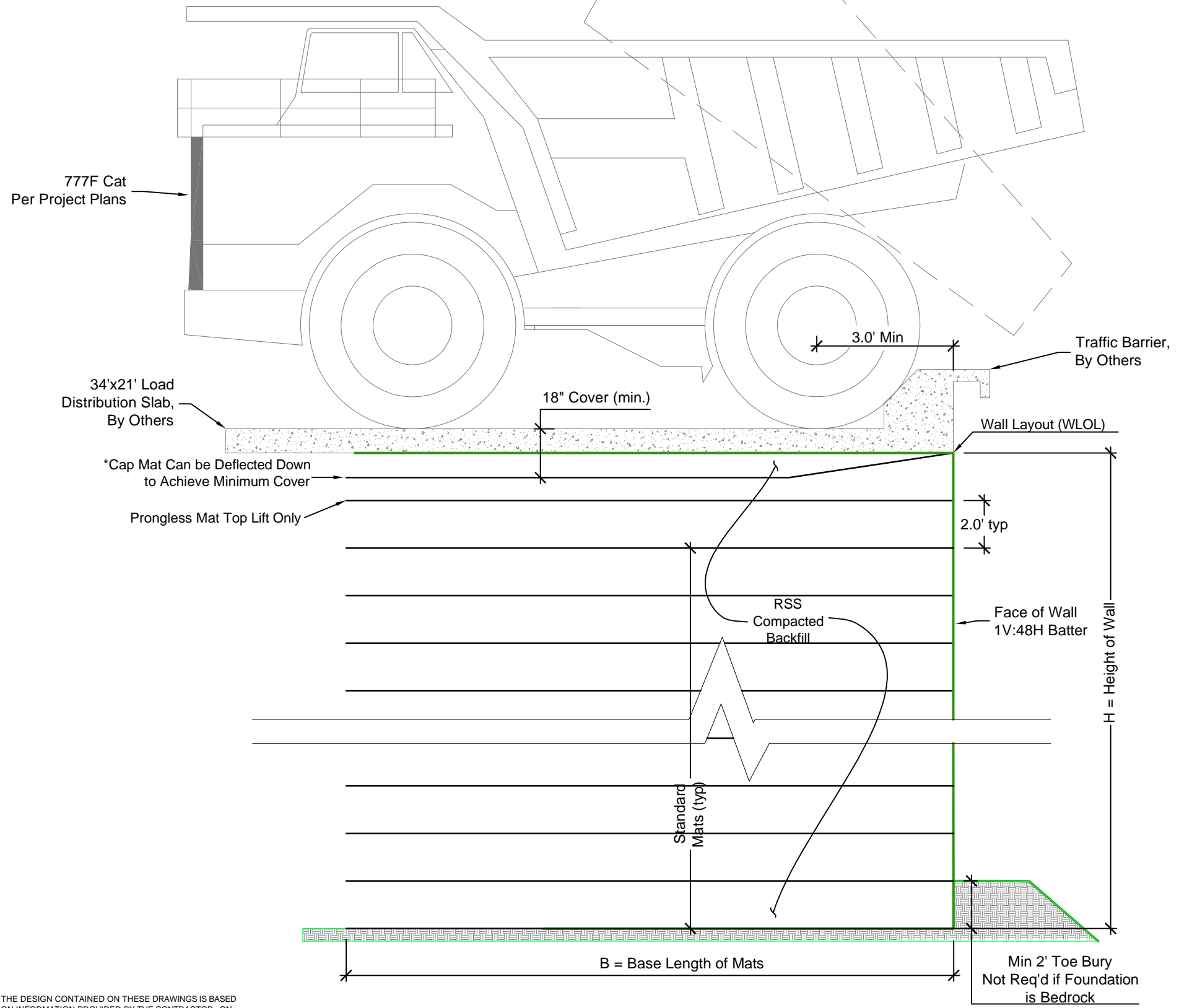
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LANNON QUARRY STATIONARY JAW PLANT  
 CRUSHER RETAINING WALL  
 MSE WALL ELEVATION VIEW

PROJECT 16-016
DATE 3-7-16
DESIGN KLC
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**WELDED WIRE WALL SECTION**  
SCALE: 1" = 5'

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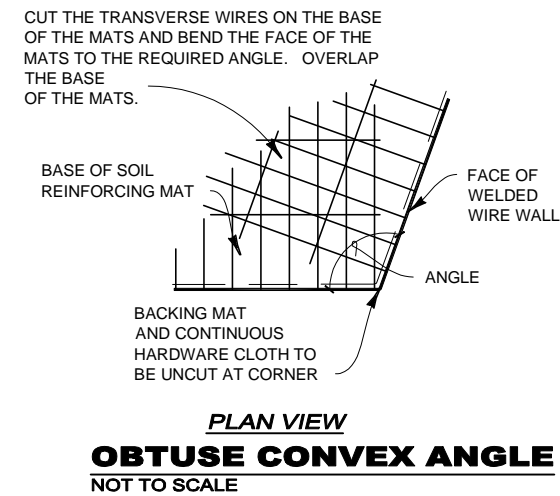
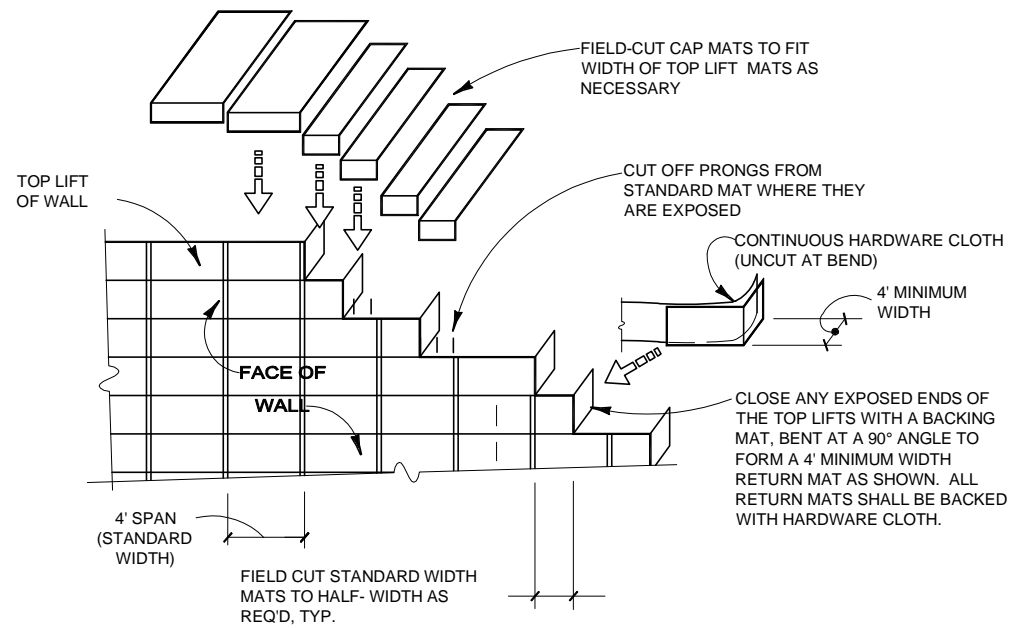
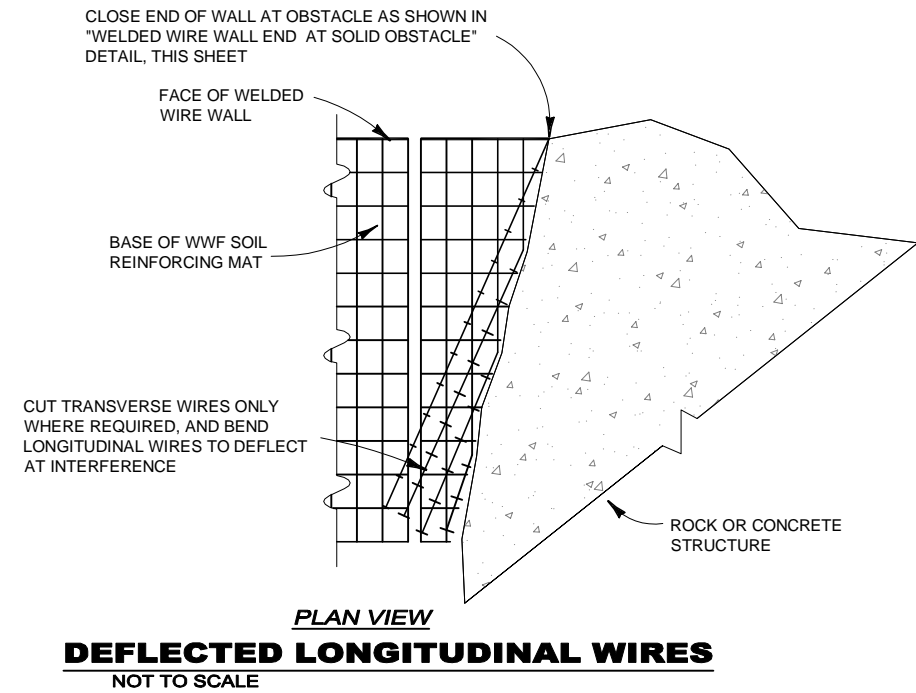
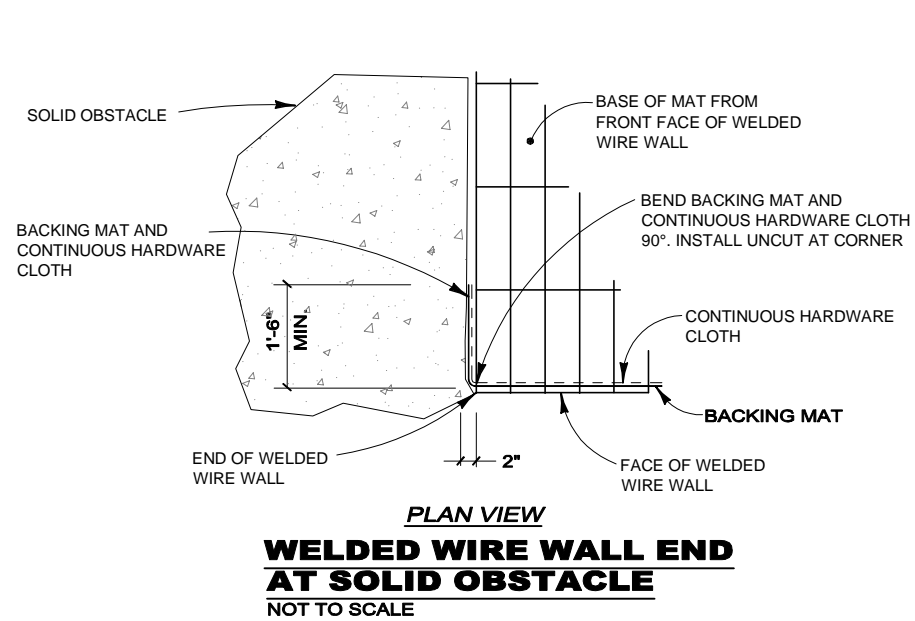
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LANNON QUARRY STATIONARY JAW PLANT  
CRUSHER RETAINING WALL  
MSE WALL CROSS SECTION VIEW

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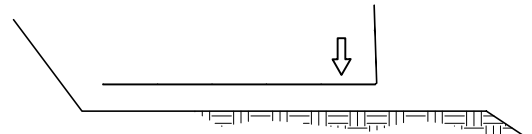
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 CRUSHER RETAINING WALL  
 MSE WALL CROSS SECTION VIEW

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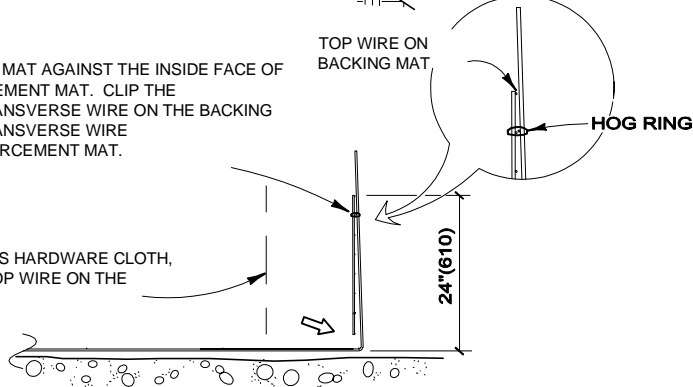
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**STEP 1**  
PLACE THE FIRST COURSE OF SOIL REINFORCEMENT MATS ON PREPARED FOUNDATION



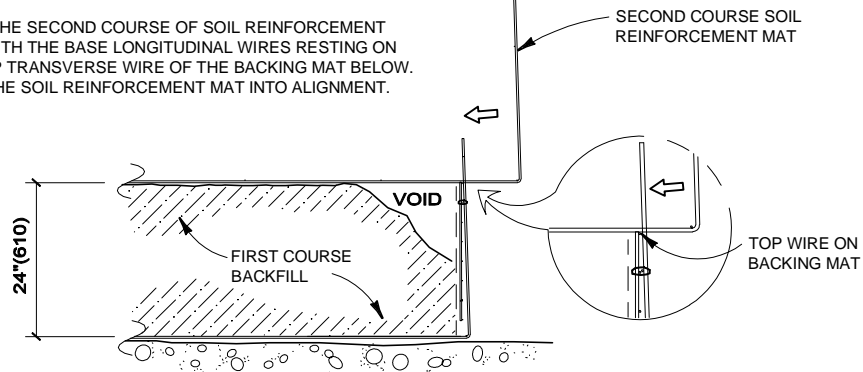
**STEP 2**  
PLACE THE BACKING MAT AGAINST THE INSIDE FACE OF THE SOIL REINFORCEMENT MAT. CLIP THE SECOND-TO-TOP TRANSVERSE WIRE ON THE BACKING MAT TO THE TOP TRANSVERSE WIRE ON THE SOIL REINFORCEMENT MAT.

INSTALL CONTINUOUS HARDWARE CLOTH, HOG-RING TO THE TOP WIRE ON THE BACKING MAT.

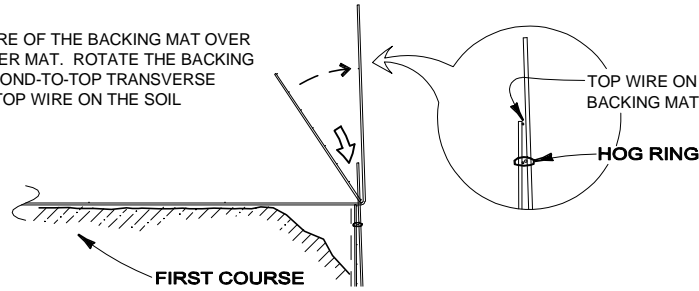


**STEP 3**  
PLACE AND COMPACT THE BACKFILL IN LAYERS AND DENSITIES AS SPECIFIED IN THE PROJECT PLANS. LEAVE A VOID AT THE FACE AS SHOWN.

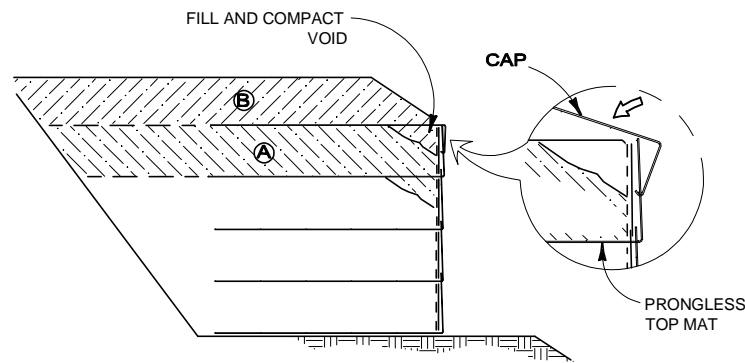
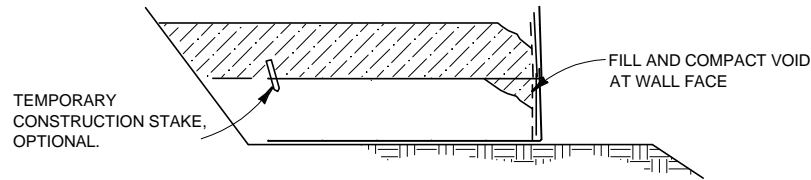
PLACE THE SECOND COURSE OF SOIL REINFORCEMENT MATS WITH THE BASE LONGITUDINAL WIRES RESTING ON THE TOP TRANSVERSE WIRE OF THE BACKING MAT BELOW. SLIDE THE SOIL REINFORCEMENT MAT INTO ALIGNMENT.



**STEP 4**  
HOOK THE BOTTOM TRANSVERSE WIRE OF THE BACKING MAT OVER THE VERTICAL PRONGS ON THE LOWER MAT. ROTATE THE BACKING MAT TO VERTICAL AND CLIP THE SECOND-TO-TOP TRANSVERSE WIRE ON THE BACKING MAT TO THE TOP WIRE ON THE SOIL REINFORCEMENT MAT.

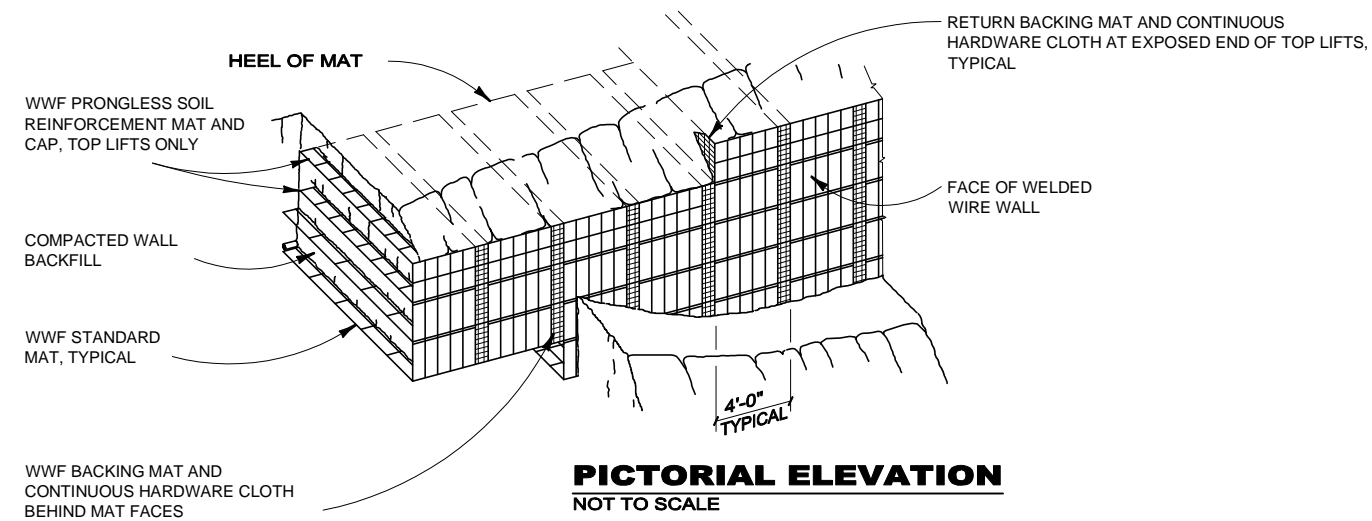


**STEP 5**  
INSTALL THE CONTINUOUS HARDWARE CLOTH. PLACE AND COMPACT THE BACKFILL TO THE BASE ELEVATION OF THE NEXT MAT. REPEAT STEPS 3 THROUGH 5 TO THE TOP LIFT.



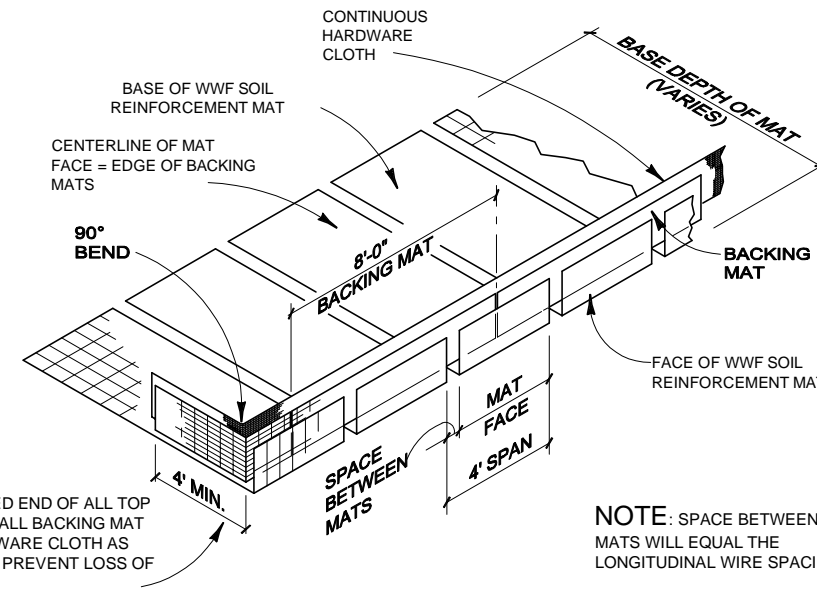
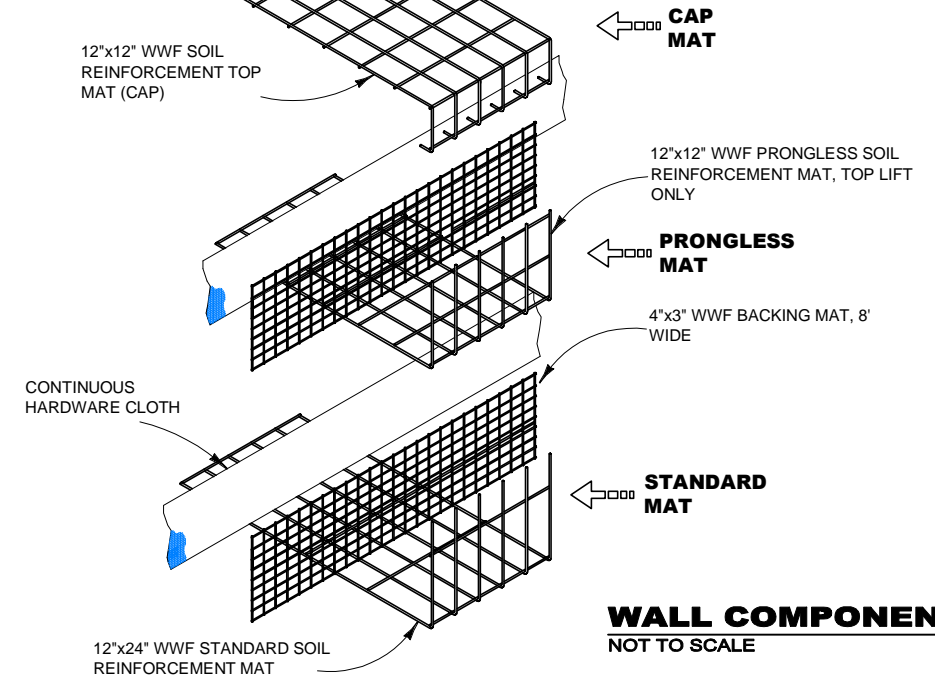
**STEP 6: TOP LIFT**  
PLACE THE TOP LIFT PRONGLESS MAT, BACKING MAT AND CONTINUOUS HARDWARE CLOTH. PLACE AND COMPACT BACKFILL IN AREA "A". HOOK THE CAP OVER THE MIDDLE TRANSVERSE WIRE ON THE PRONGLESS MAT, AND ROTATE INTO PLACE. BACKFILL "B" TO 1'-6"(457) MIN. COVER OVER THE CAP.

**CONSTRUCTION SEQUENCE**  
NOT TO SCALE



**PICTORIAL ELEVATION**  
NOT TO SCALE

NOTE: WIRE SIZES AND SPACING SHALL BE AS SHOWN IN THE PROJECT PLANS



AT EXPOSED END OF ALL TOP LIFTS, INSTALL BACKING MAT AND HARDWARE CLOTH AS SHOWN TO PREVENT LOSS OF BACKFILL

NOTE: SPACE BETWEEN THE MATS WILL EQUAL THE LONGITUDINAL WIRE SPACING

**ISOMETRIC VIEW**  
**WELDED WIRE WALL COMPONENTS WITH RETURN MAT**  
NOT TO SCALE



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