

DESIGN NOTES

- Design is based on the assumption that backfill within the reinforced soil mass, methods of construction and quality of materials are to be in accordance with Project Specification Paragraph 00596A .
- Assumed Soil Characteristics:
 Wall Backfill:
 Unit Weight: 120 pcf
 Internal Friction Angle: 34°
 Cohesion = 0 psf
 Retained Backfill:
 Unit Weight: 120 pcf
 Internal Friction Angle: 34°
 Cohesion = 0 psf
 Foundation Soils :
 Unit Weight: 120 pcf
 Internal Friction Angle: 33°
 Cohesion = 0 psf

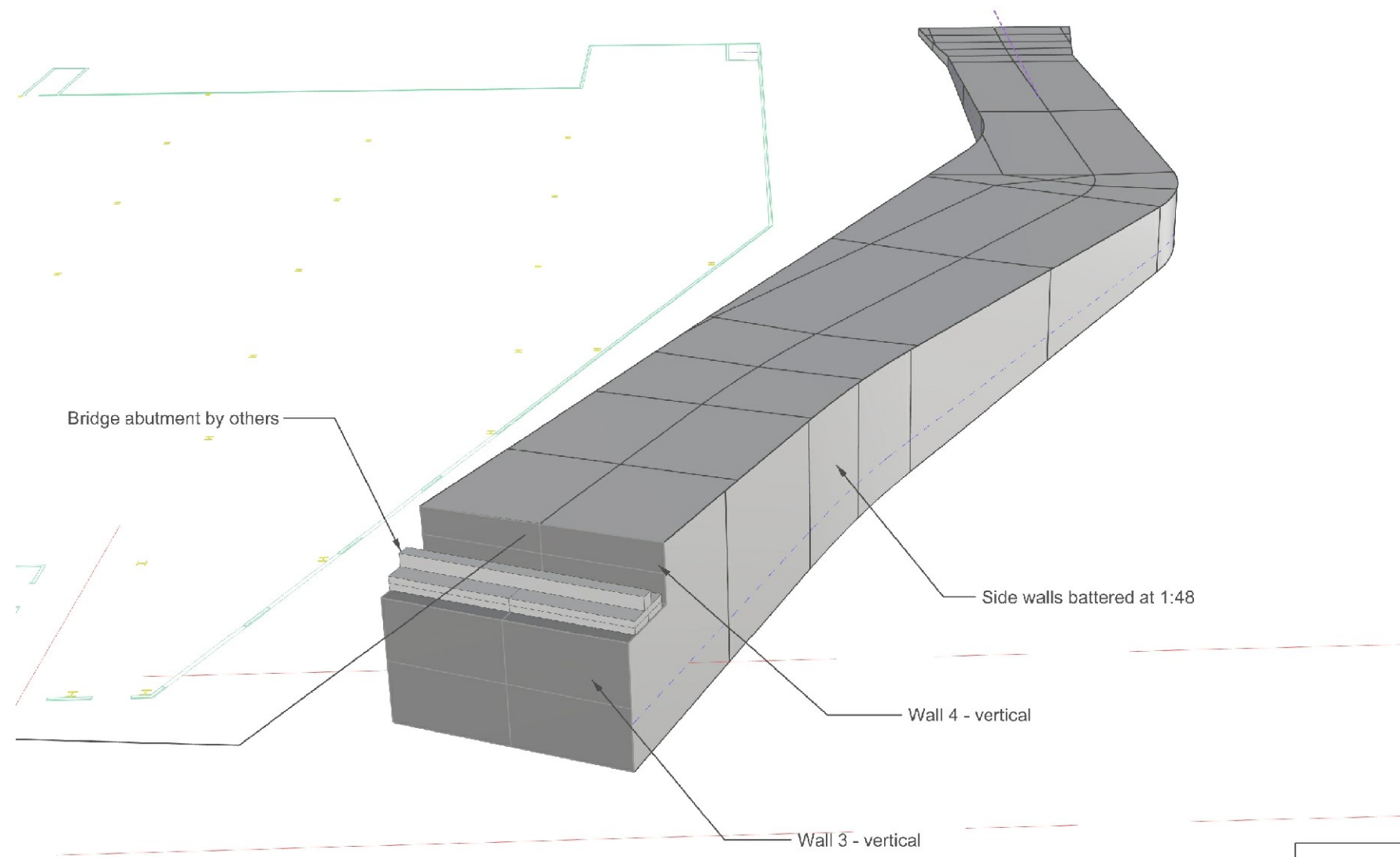
**Worst Case Unfactored Bearing Load by MSE Wall- @ 27' Height - 4780 psf
 @ 18' Height / Abutment - 5200 psf**

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.
- Design Procedure:
 Mechanically Stabilized Earth walls and Reinforced Soil Slopes, FHWA report No. FHWA-NHI-10-024.

- 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 shall be responsible for global stability and foundation competence. The Owner is responsible for all job site drainage, safety and fall protection provisions for workers in compliance with OSHA and any other applicable requirements.

WALL 1 AREA:	6,224 FT ²
WALL 2 AREA:	6,388 FT ²
WALL 3 AREA:	720 FT ²
WALL 4 AREA:	360 FT²
TOTAL SUPPLIED AREA:	13,692 FT ²



ISOMETRIC VIEW
 SCALE: NTS

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	01-31-22	KLC	Initial .pdf Release
	10-26-22	KLC	Revised per 10.25.22 Plan Check Telecon
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	09-19-23	KLC	Revised TOW per new Ramp Subgrade

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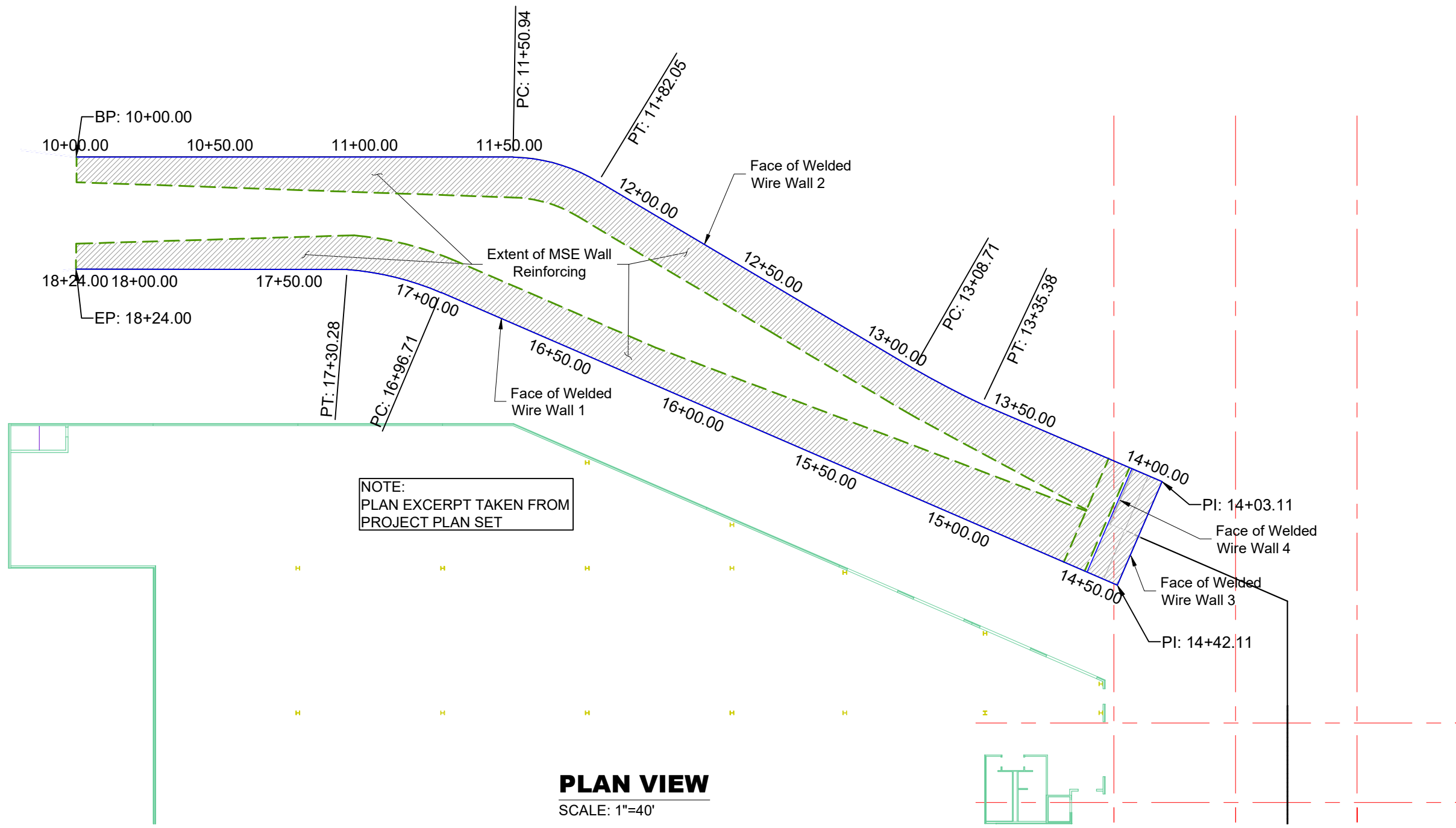
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Terminal 106 Redevelopment

**MSE WELDED WIRE WALLS
 ISOMETRIC VIEW & GENERAL
 NOTES**

HW 211123BW

PROJECT	22-005
DATE	01-31-22
DESIGN	KLC
DRAWN	KLC
SHT	1 OF 8



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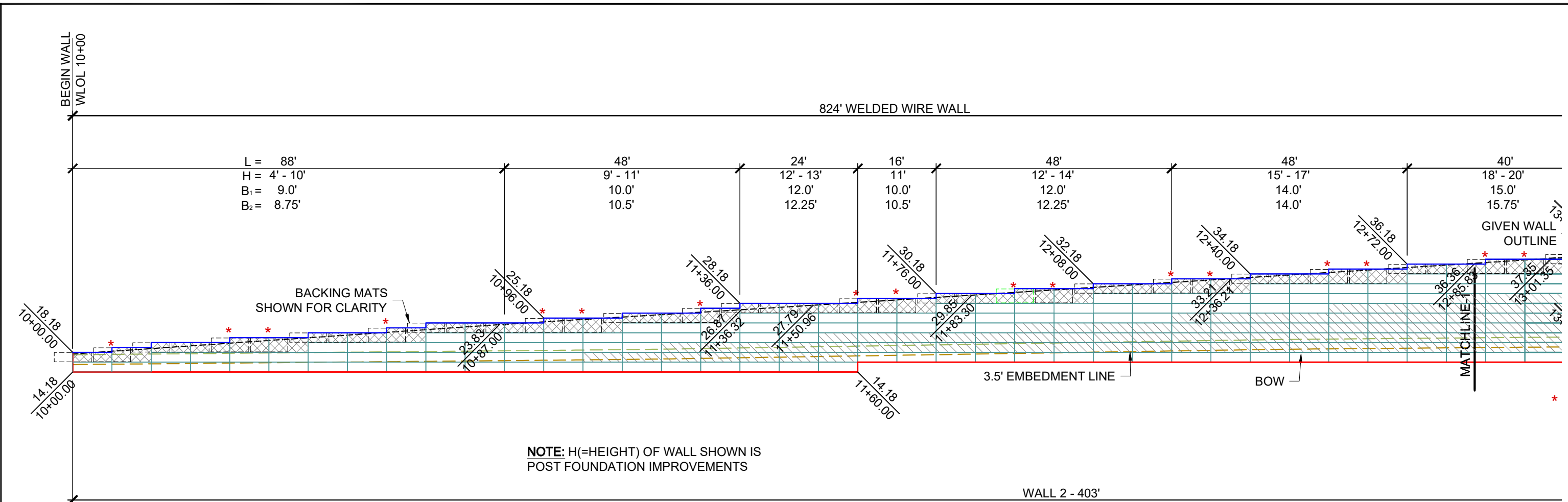
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Terminal 106 Redevelopment
MSE WELDED WIRE WALLS
PLAN VIEW

HW 211123BW

PROJECT	22-005
DATE	01-31-22
DESIGN	KLC
DRAWN	KLC
SHT	2 OF 8



WALLS - ELEVATION (REAR) VIEW

SCALE: 1" = 20'

WALL WIRE TYPE LEGEND

FINISH: COMMERCIAL GALVANIZED
SERVICE LIFE: 50 YEARS

- TYPE 1 - 8X12 W4.5x3.5 MATS
- TYPE 2 - 8X21 W4.5x4.0 MATS
- TYPE 3 - 8x21 W7.0x4.0 MATS
- TYPE 4 - 8x21 W9.5x4.0 MATS
- TYPE 5 - 8x12 W9.5x4.0 MATS

WELDED WIRE WALL PARAMETERS

Height of Wall (H) ft	Length of Cap & Prongless Mats (B ₁) ft	Base Length of Mats (B ₂) ft
≤8'	9.0'	8.75'
9'-11'	10.0'	10.5'
12'-14'	12.0'	12.25'
15'-17'	14.0'	14.0'
16'@ Abut	15.0'	15.75'
18'-20'	15.0'	15.75'
21'-23'	17.0'	17.5'
24'-27'	19.0'	19.25'

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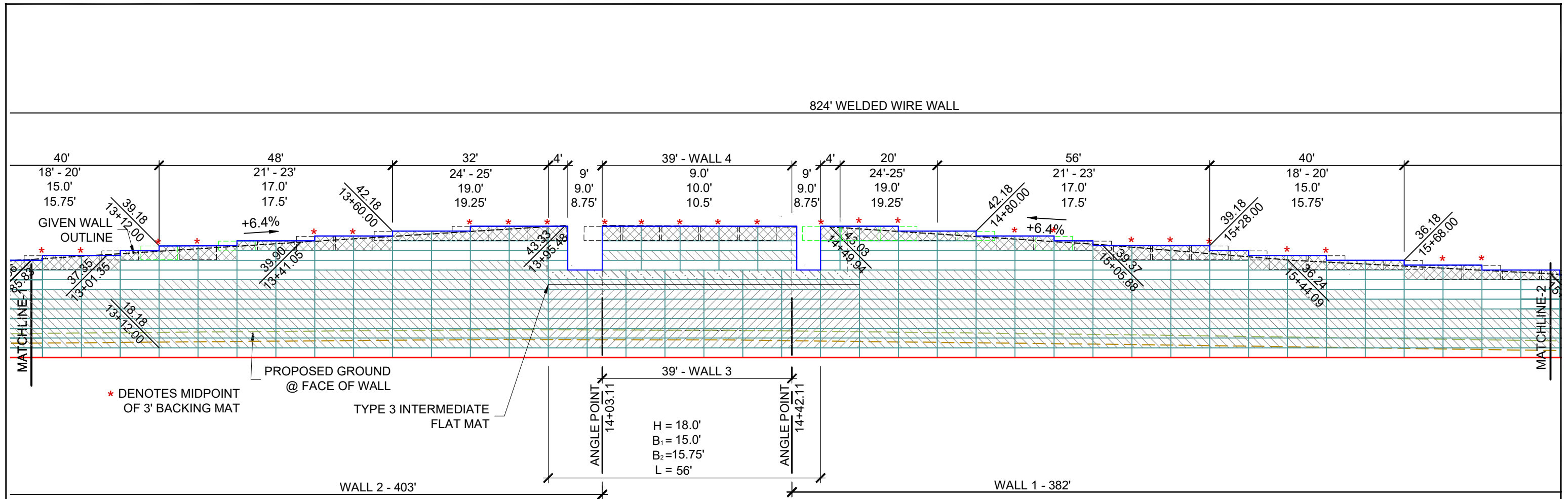
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**MSE WELDED WIRE WALLS
ELEVATION VIEW**

HW 211123BW

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DRAWN	KLC

SHT **3** OF 8



WALLS - ELEVATION (REAR) VIEW (CONT'D)

SCALE: 1" = 20'

WALL WIRE TYPE LEGEND

FINISH: COMMERCIAL GALVANIZED
SERVICE LIFE: 50 YEARS

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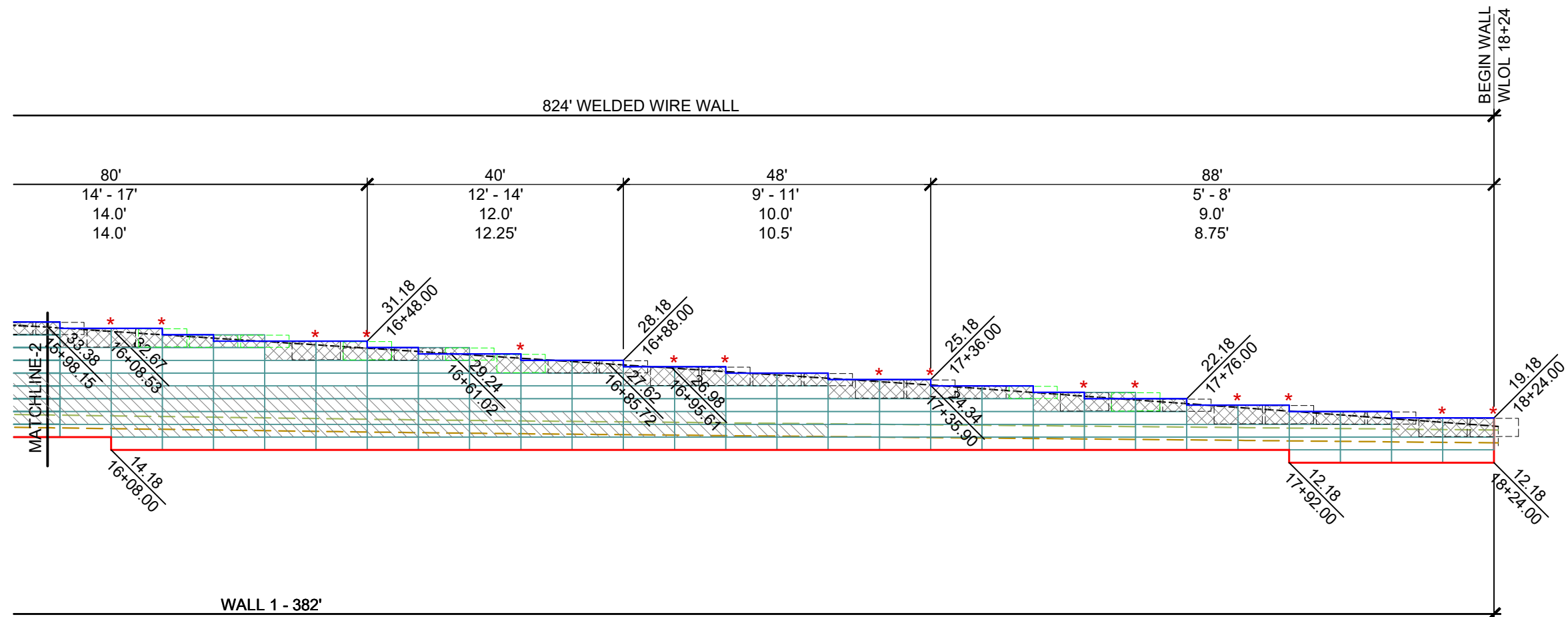
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MSE WELDED WIRE WALLS
ELEVATION VIEW

HW 211123BW

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DRAWN	KLC

SHT **4** OF 8








WALL 1 - 382'

WALLS - ELEVATION (REAR) VIEW (CONT'D)

SCALE: 1" = 20'

WALL WIRE TYPE LEGEND

FINISH: COMMERCIAL GALVANIZED
SERVICE LIFE: 50 YEARS

-  TYPE 1 - 8X12 W4.5x3.5 MATS
-  TYPE 2 - 8X21 W4.5x4.0 MATS
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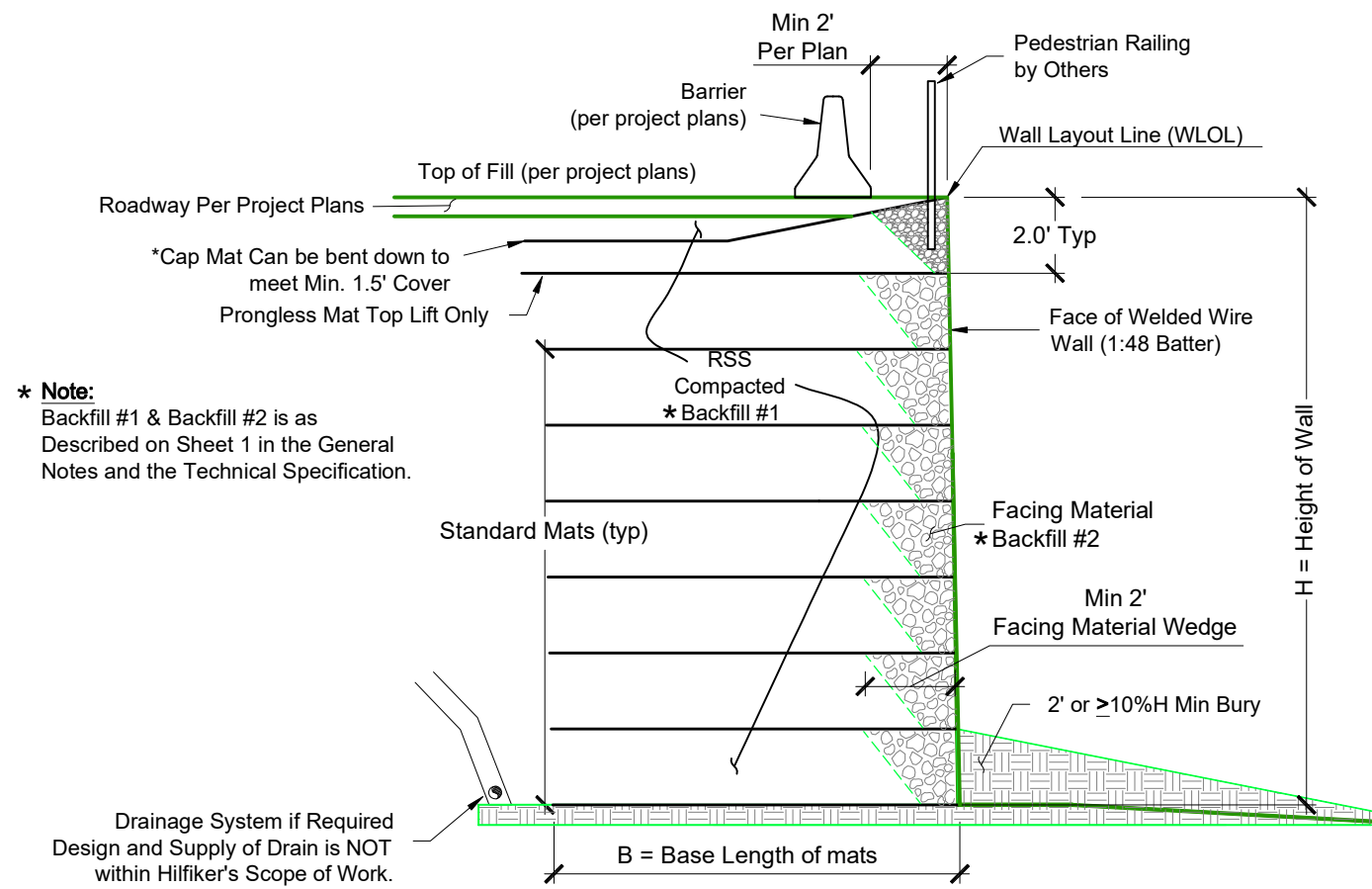
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**MSE WELDED WIRE WALLS
ELEVATION VIEW (CONT'D)**

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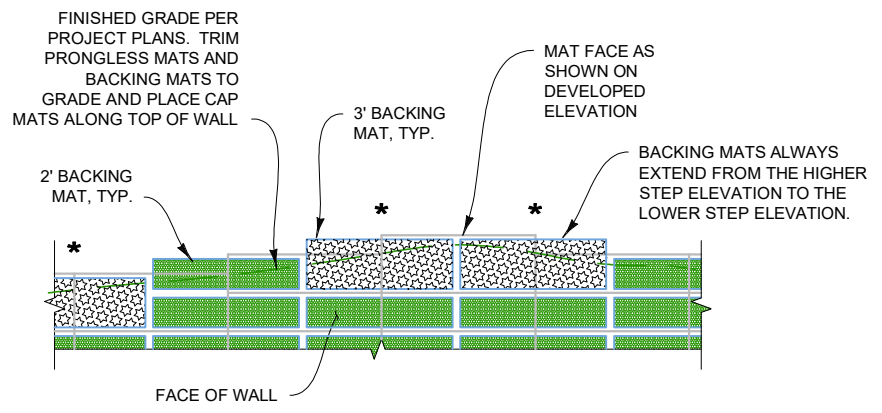
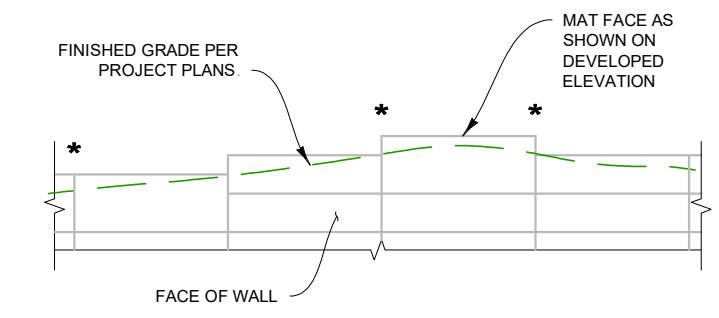
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DATE	01-31-22
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SHT **5** OF 8



TYPICAL WELDED WIRE WALL SECTION

SCALE: 1" = 5'



TRIMMING BACKING MATS ALONG TOP OF WALL
NOT TO SCALE

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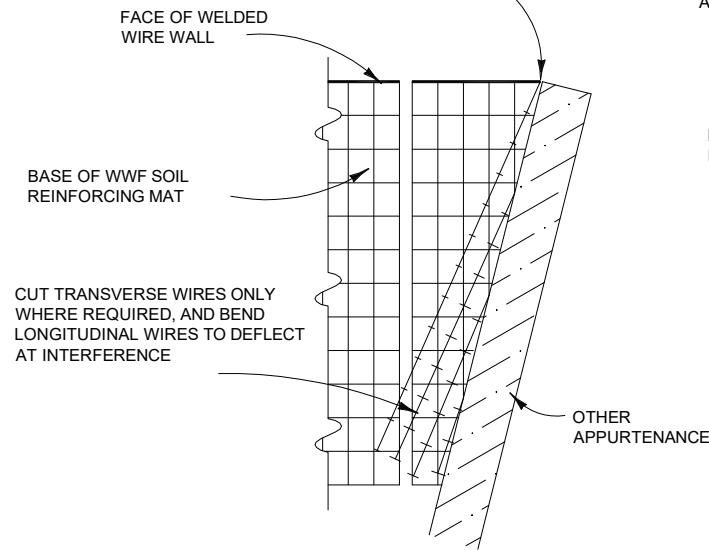
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MSE WELDED WIRE WALLS
CROSS SECTION & DETAILS

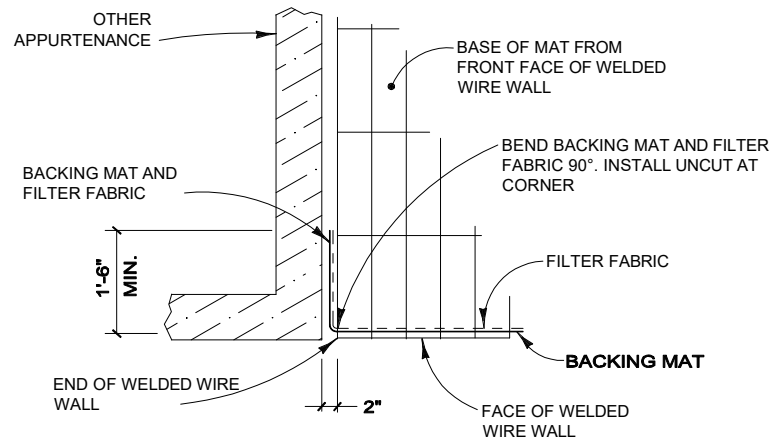
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SHT	6 OF 8

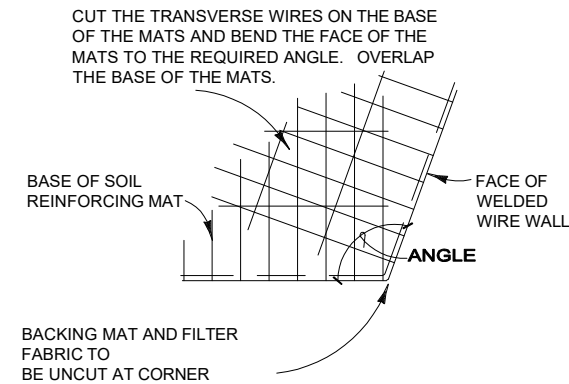
CLOSE END OF WALL AT APPURTENANCE AS SHOWN IN "WELDED WIRE WALL END AT APPURTENANCE" DETAIL, THIS SHEET



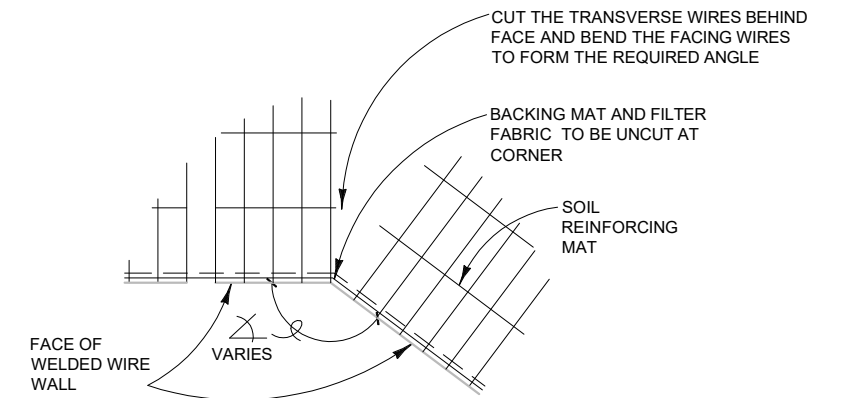
PLAN VIEW
DEFLECTED LONGITUDINAL WIRES
NOT TO SCALE



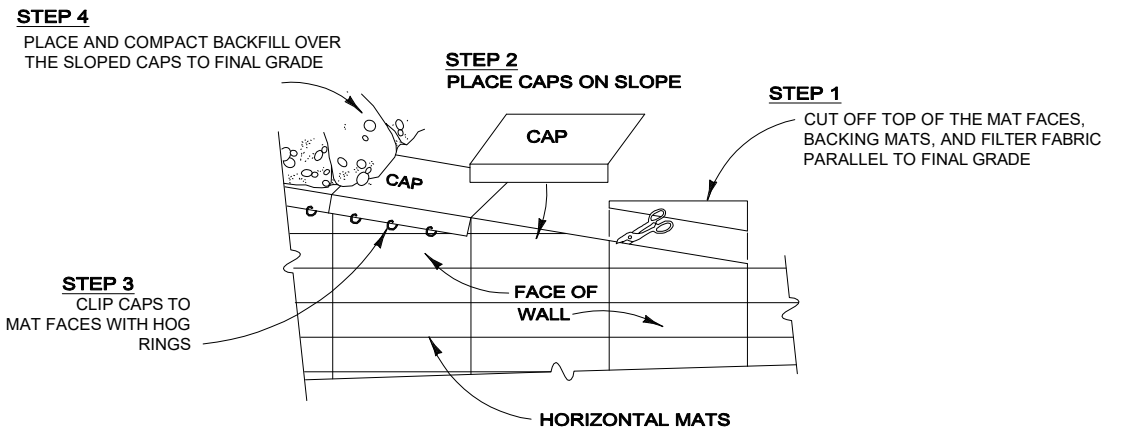
PLAN VIEW
WELDED WIRE WALL END AT OTHER APPURTENANCE
NOT TO SCALE



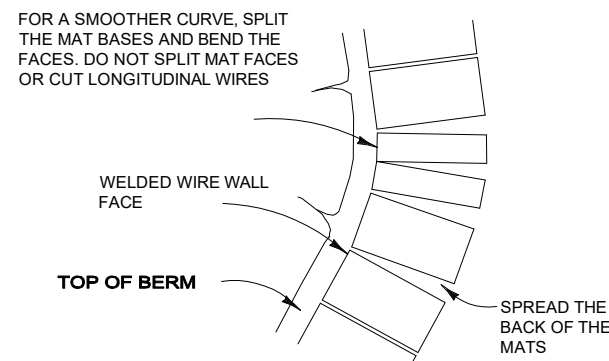
PLAN VIEW
OBTUSE CONVEX ANGLE
NOT TO SCALE



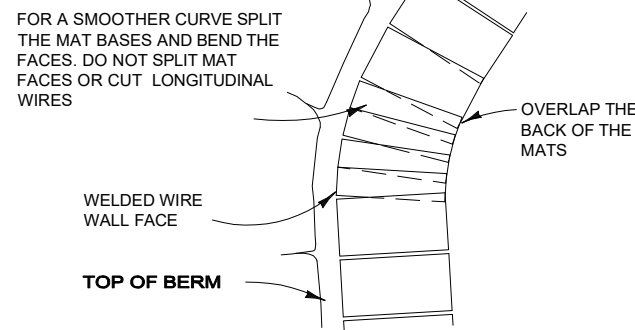
PLAN VIEW
CONCAVE ANGLE DETAIL
NOT TO SCALE



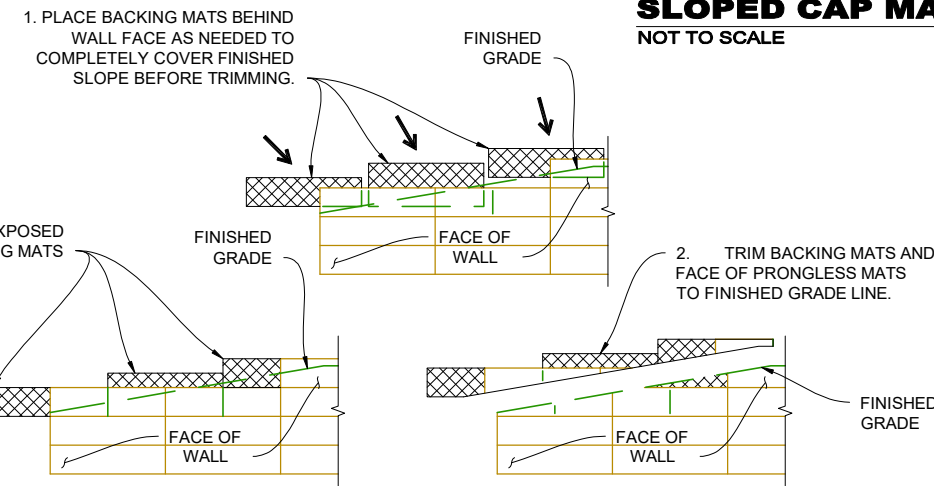
PICTORIAL ELEVATION
SLOPED CAP MAT DETAIL
NOT TO SCALE



PLAN VIEW
CONCAVE CURVE
NOT TO SCALE



PLAN VIEW
CONVEX CURVE
NOT TO SCALE



TRIMMING BACKING MATS TO GRADE
NOT TO SCALE

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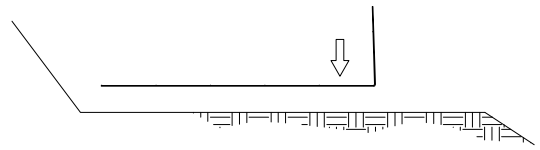
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MSE WELDED WIRE WALLS
DETAILS

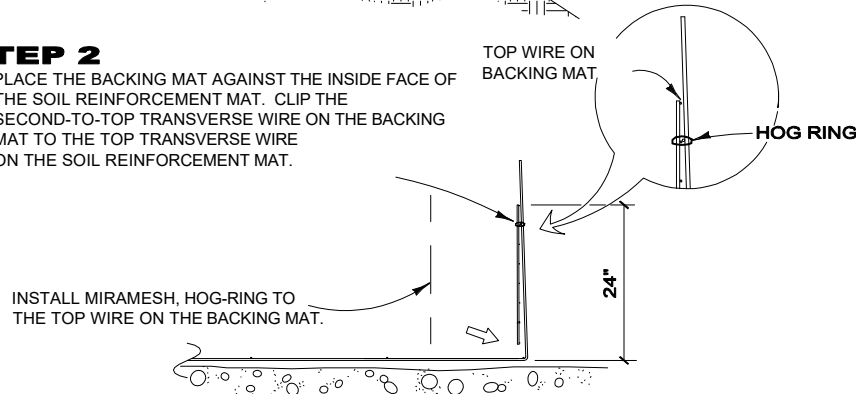
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SHT	7 OF 8

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

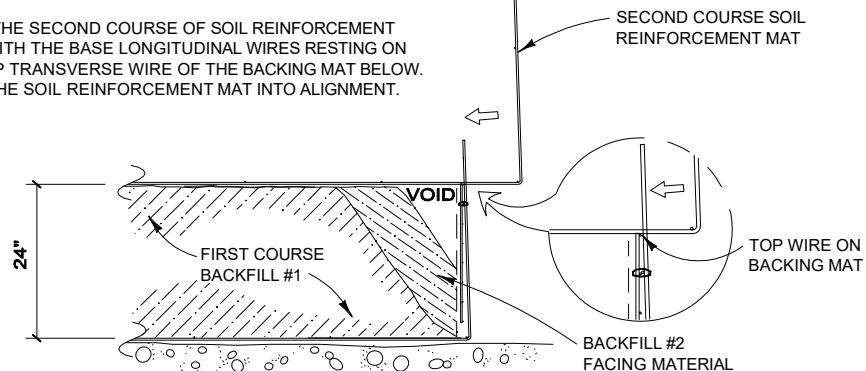


STEP 2
PLACE THE BACKING MAT AGAINST THE INSIDE FACE OF THE SOIL REINFORCEMENT MAT. CLIP THE SECOND-TO-TOP TRANSVERSE WIRE ON THE BACKING MAT TO THE TOP TRANSVERSE WIRE ON THE SOIL REINFORCEMENT MAT.



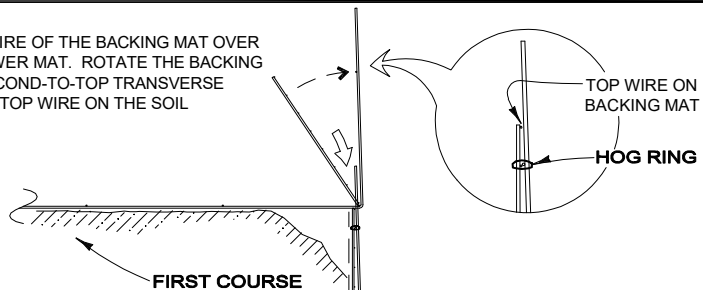
STEP 3
PLACE AND COMPACT THE BACKFILL IN LAYERS AND DENSITIES AS SPECIFIED IN THE PROJECT PLANS. LEAVE A VOID AT THE FACE AS SHOWN.

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.

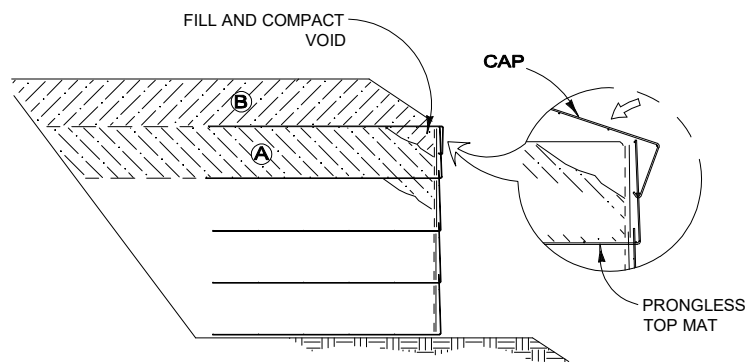
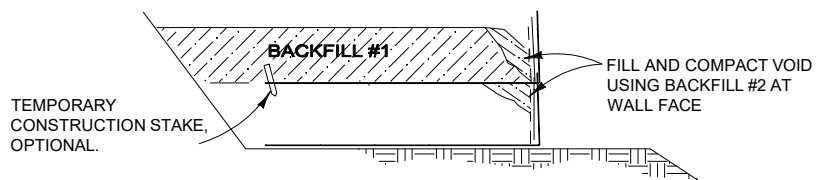


CONSTRUCTION SEQUENCE
NOT TO SCALE

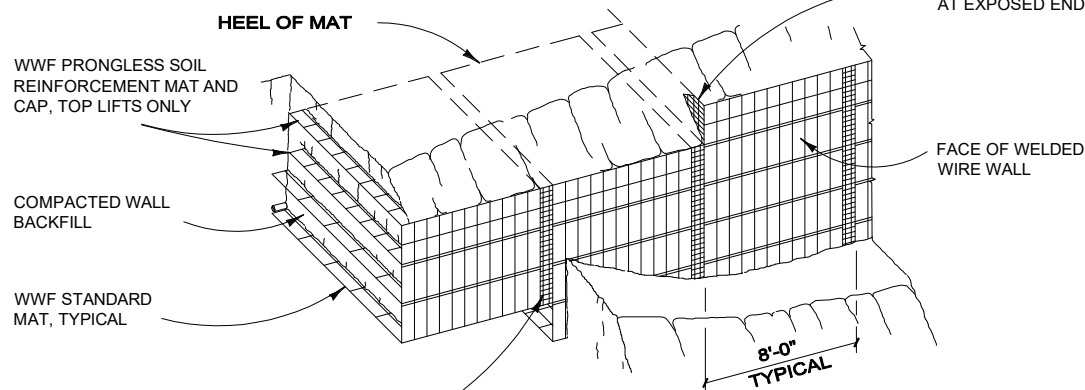
STEP 4
HOOK THE BOTTOM TRANSVERSE WIRE OF THE BACKING MAT OVER THE VERTICAL PRONGS ON THE LOWER MAT. ROTATE THE BACKING MAT TO VERTICAL AND CLIP THE SECOND-TO-TOP TRANSVERSE WIRE ON THE BACKING MAT TO THE TOP WIRE ON THE SOIL REINFORCEMENT MAT.



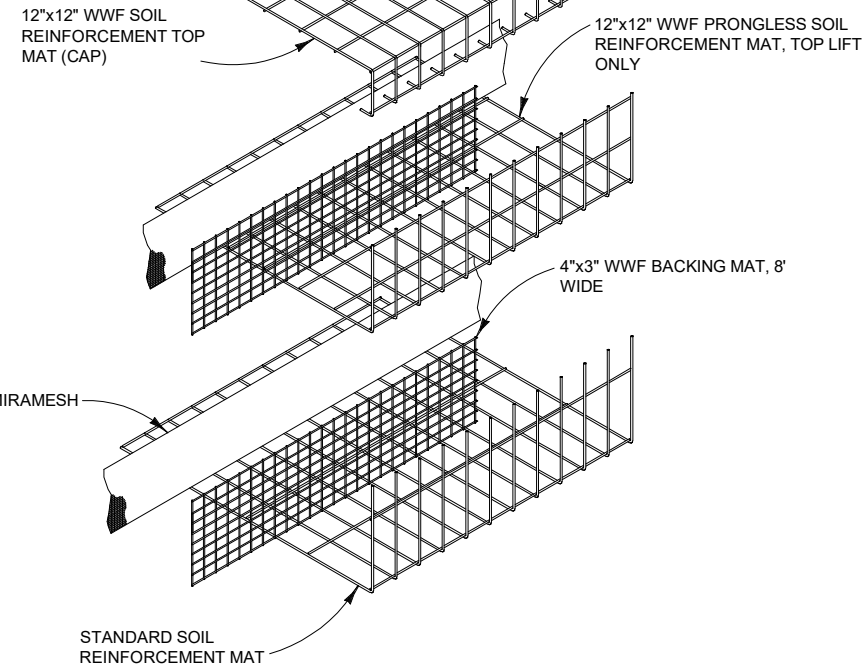
STEP 5
INSTALL THE MIRAMESH FABRIC. PLACE AND COMPACT THE BACKFILL TO THE BASE ELEVATION OF THE NEXT MAT. REPEAT STEPS 3 THROUGH 5 TO THE TOP LIFT.



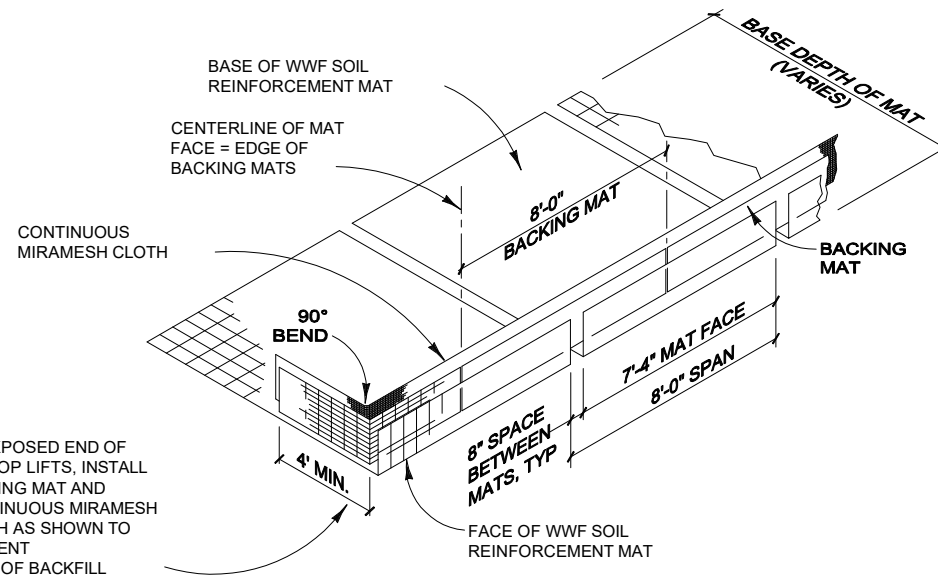
STEP 6: TOP LIFT
PLACE THE TOP LIFT PRONGLESS MAT, BACKING MAT AND MIRAMESH. PLACE AND COMPACT BACKFILL IN AREA "A". HOOK THE CAP OVER THE MIDDLE TRANSVERSE WIRE ON THE PRONGLESS MAT, AND ROTATE INTO PLACE. BACKFILL "B" TO 1'-6" MIN. COVER OVER THE CAP.



PICTORIAL ELEVATION
NOT TO SCALE



WALL COMPONENTS
NOT TO SCALE



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

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WWF BACKING MAT AND FILTER FABRIC BEHIND MAT FACES

RETURN BACKING MAT AND FILTER FABRIC AT EXPOSED END OF TOP LIFTS, TYPICAL

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MSE WELDED WIRE WALLS
CONSTRUCTION SEQUENCE &
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