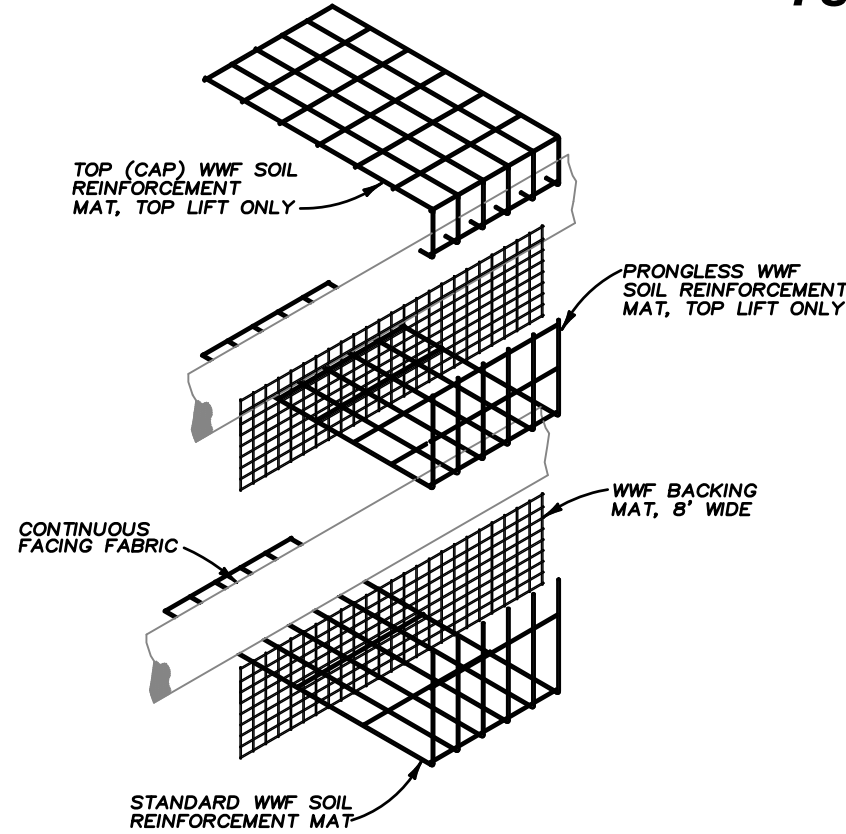
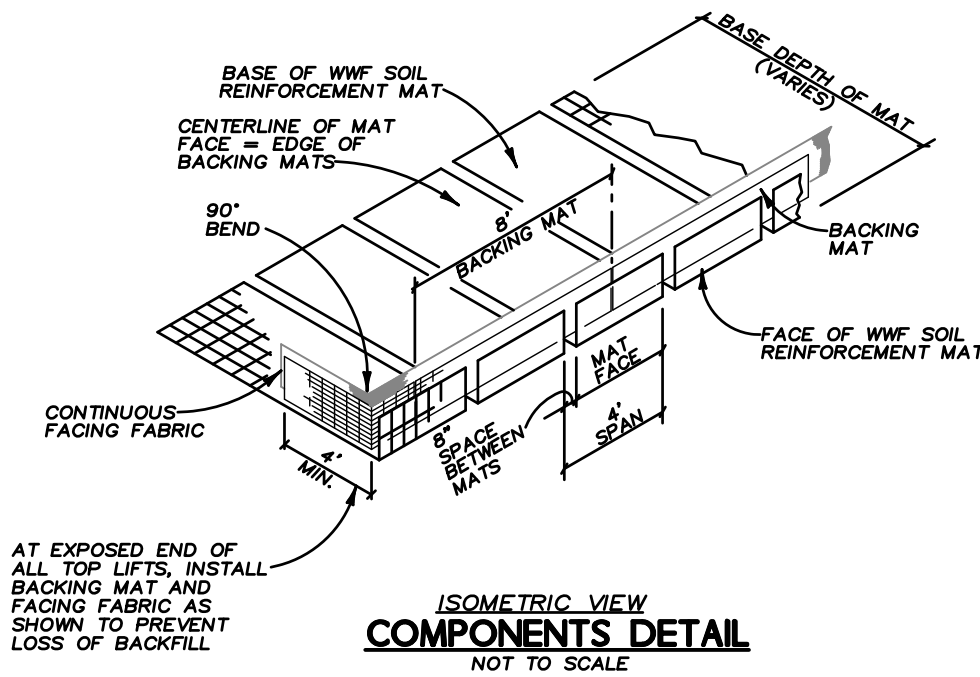


HILFIKER RETAINING WALLS

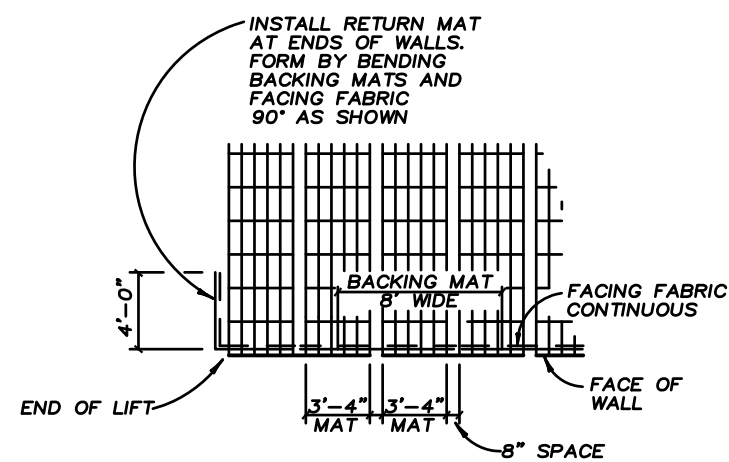
1902 Hilfiker Lane Eureka, Ca. 95503-5711
 707/443-5093 Fax 707/443-2891 Toll-Free 800/762-8962



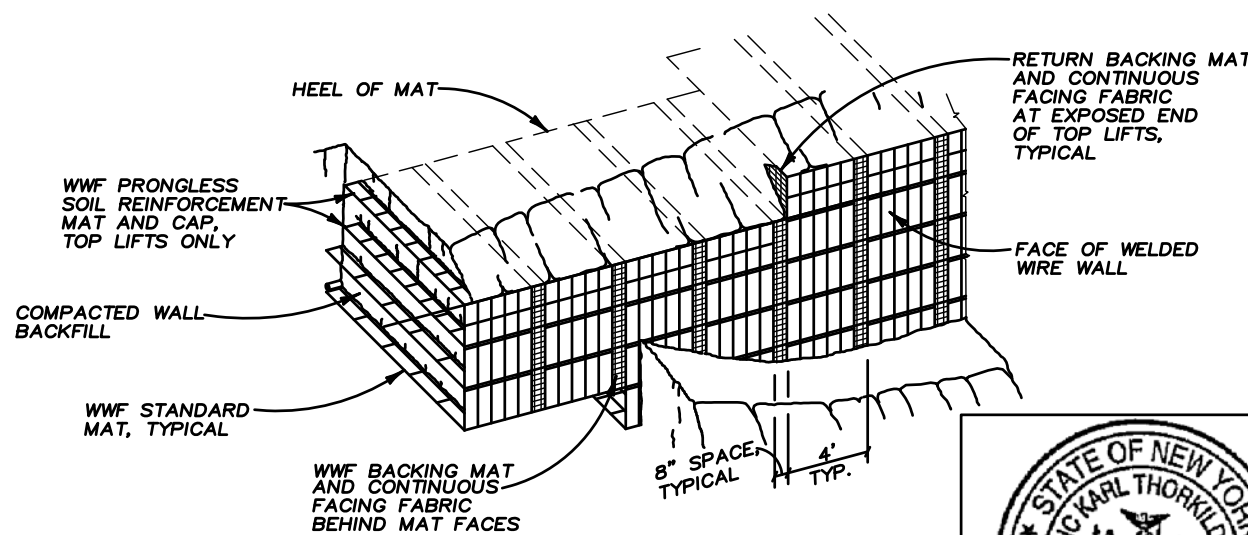
WALL COMPONENTS
NOT TO SCALE



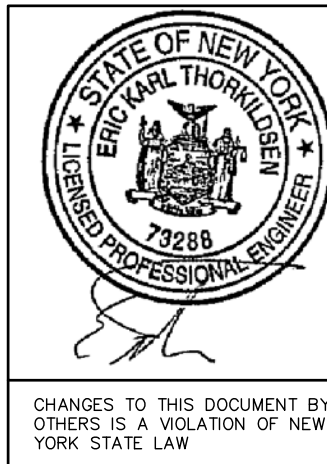
ISOMETRIC VIEW COMPONENTS DETAIL
NOT TO SCALE



PLAN RETURN BACKING MAT DETAIL
NOT TO SCALE



PICTORIAL ELEVATION
NOT TO SCALE



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DESIGN NOTES:

- DESIGN IS BASED ON THE ASSUMPTION THAT THE BACKFILL WITHIN THE REINFORCED SOIL MASS, METHODS OF CONSTRUCTION, AND QUALITY OF MATERIALS CONFORM TO THE REQUIREMENTS OF THE HILFIKER COMPANY AND THE SPECIFICATIONS.
- THE DESIGN REQUIRES A NON-SATURATED BACKFILL. SURFACE AND SUBSURFACE DRAINAGE CONTROL MAY BE REQUIRED TO PREVENT SATURATION OF BACKFILL OR RELIEVE HYDROSTATIC PRESSURES. DRAINAGE CONTROL SHALL BE AS SPECIFIED IN THE PROJECT PLANS AND SPECIFICATIONS OR AS DIRECTED BY THE OWNER'S ENGINEER.
- THE DESIGN CONTAINED ON THESE DRAWINGS IS BASED ON INFORMATION PROVIDED BY THE OWNER. ON THE BASIS OF THIS INFORMATION, HILFIKER RETAINING WALLS HAS EVALUATED, AND IS RESPONSIBLE FOR, THE INTERNAL AND EXTERNAL STABILITY OF THE STRUCTURE ONLY. GLOBAL STABILITY AND SLOPE STABILITY IS THE RESPONSIBILITY OF THE OWNER.
- ANY UNSUITABLE FOUNDATION MATERIAL BELOW THE REINFORCED SOIL VOLUME, AS DETERMINED BY THE OWNER'S ENGINEER, SHALL BE EXCAVATED FOR THE FULL LENGTH OF THE MAT REINFORCEMENTS AND TO A DEPTH AS DIRECTED BY THE OWNER'S ENGINEER. EXCAVATED UNSUITABLE MATERIAL SHALL BE REPLACED AS DIRECTED BY THE OWNER'S ENGINEER.
- SOIL - DESIGN PARAMETERS (ASSUMED)
 SELECT GRANULAR BACKFILL UNIT WEIGHT: 125 pcf
 INTERNAL FRICTION ANGLE: 34°
 COHESION: 0 psf
 RANDOM BACKFILL UNIT WEIGHT: 125 pcf
 INTERNAL FRICTION ANGLE: 34°
 COHESION: 0 psf
 FOUNDATION SOIL INTERNAL FRICTION ANGLE 34°
 COHESION: 0 psf
- THE MAXIMUM CALCULATED APPLIED BEARING PRESSURE AT THE FOUNDATION LEVEL IS AS SHOWN ON THE WALL ELEVATION. IT IS THE RESPONSIBILITY OF THE OWNER TO DETERMINE THAT THIS CALCULATED APPLIED BEARING PRESSURE IS ALLOWABLE FOR THAT LOCATION.
- 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.
- SPECIFICATIONS AND CALCULATIONS BY MACINTOSH ENGINEERING (530) 887-8151, PROJECT NO. 5541, ALONG WITH THE HILFIKER WELDED WIRE WALL CONSTRUCTION GUIDE ARE AN INTEGRAL PART OF THESE DRAWINGS.
- CONTRACTOR SHALL PROVIDE FALL PROTECTION FOR WORKERS AND EQUIPMENT DURING CONSTRUCTION IN COMPLIANCE WITH OSHA AND ANY OTHER APPLICABLE REQUIREMENTS. OWNER SHALL PROVIDE AND MAINTAIN PERMANENT FALL PROTECTION FOR PERSONNEL AND EQUIPMENT IN COMPLIANCE WITH SAME.

PROJECT SPECIFIC NOTES:

- REFERENCE DRAWINGS:
PROJECT PLANS: WTC TRANSPORTATION HUB, PROPOSED RAMP LAYOUT, PHOENIX CONTRACTORS JV, DATED FEBRUARY 28, 2008.
- DESIGN SERVICE LIFE FOR THE WELDED WIRE WALL = 2 YRS. (BLACK STEEL)

REV.	DATE	BY	DESCRIPTION
3-10-08	EKT	ISSUED FOR REVIEW	

CAD FILENAME: 5541CS1

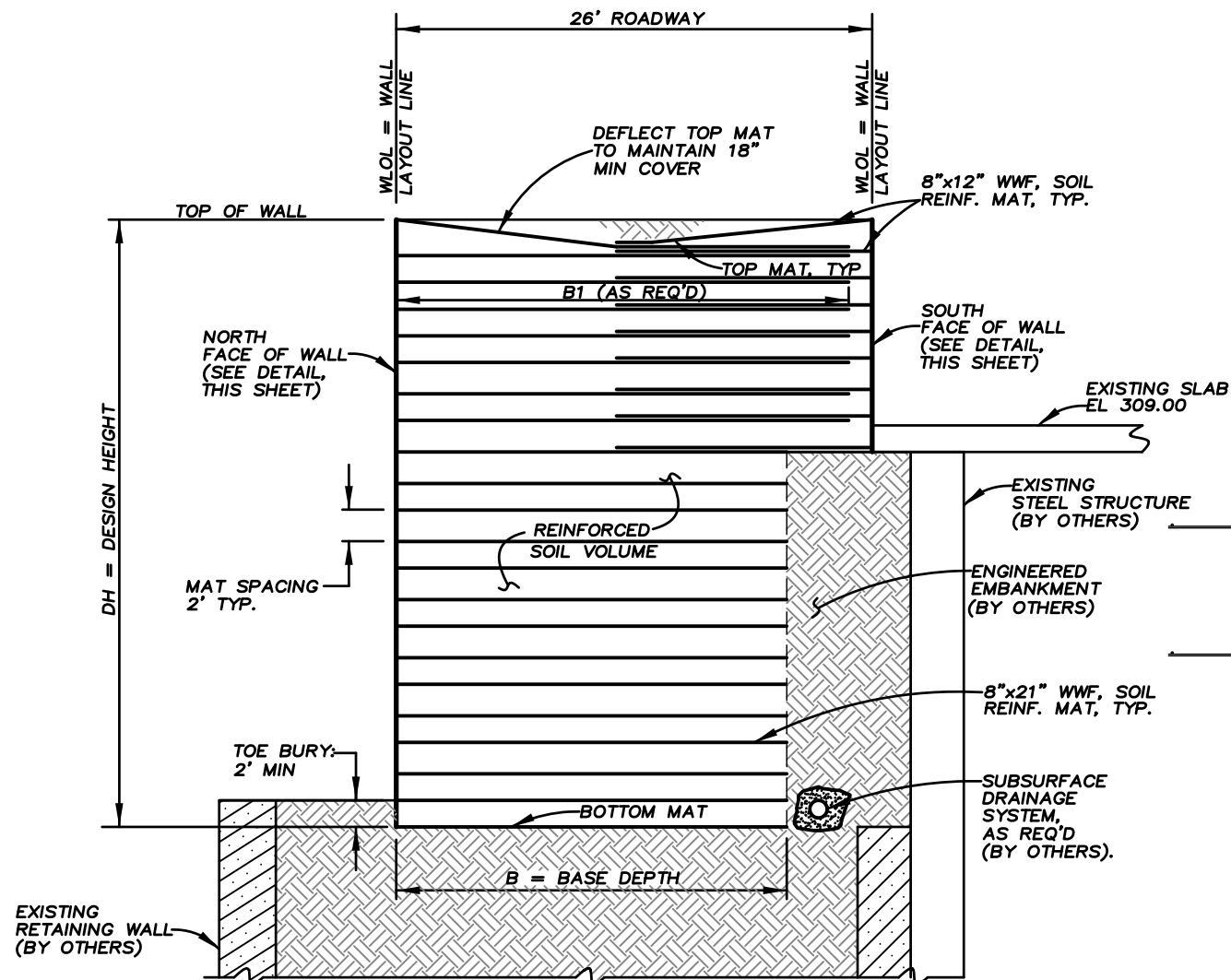
COLLINS ENGINEERS
 259 Nevada Street
 Auburn, CA 95603
 Tele. (530) 887-8151
 Fax (530) 887-0911
 www.collinsengr.com

CADD BY: KPC
 DESIGNED BY: PDR
 CHECKED BY: EKT
 DATE: MARCH 2008
 PROJECT No. 5541
 SCALE: AS SHOWN

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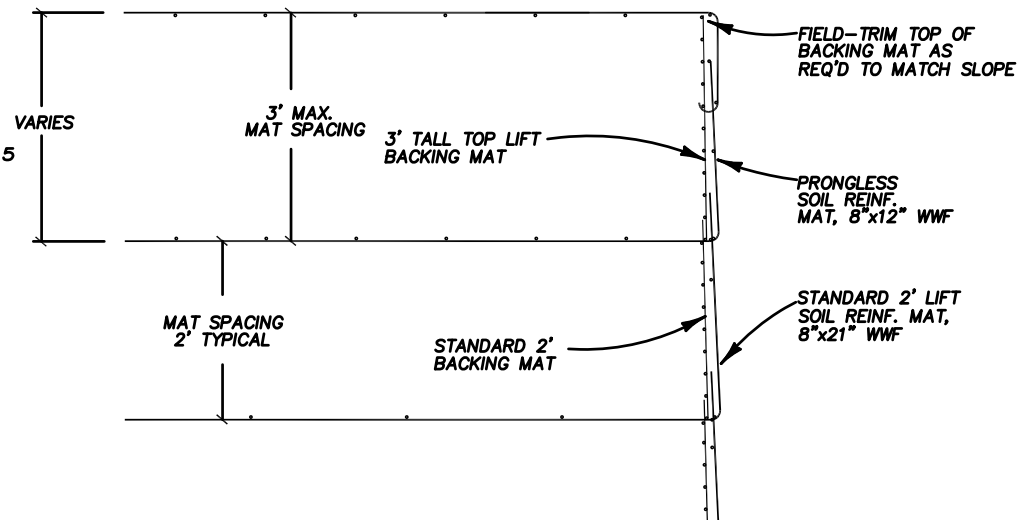


TEMPORARY WELDED WIRE RETAINING WALL: 24' Lift
WORLD TRADE CENTER PROJECT
 PACKAGE 4B
 PORT AUTHORITY OF NY AND NJ
 NEW YORK CITY
 HRW PROJECT NO: 080225BW
 SHEET NUMBER: 1 OF 3

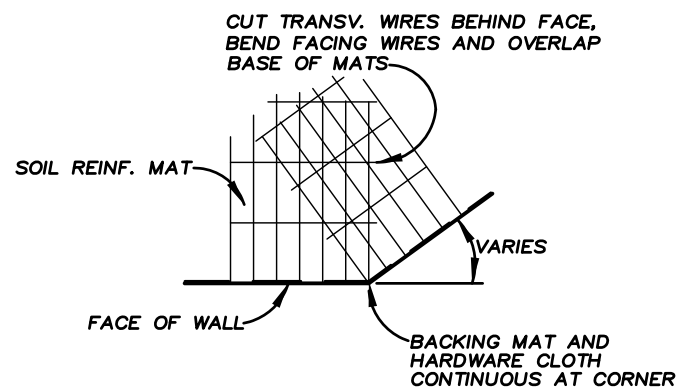


TYPICAL SECTION
NOT TO SCALE

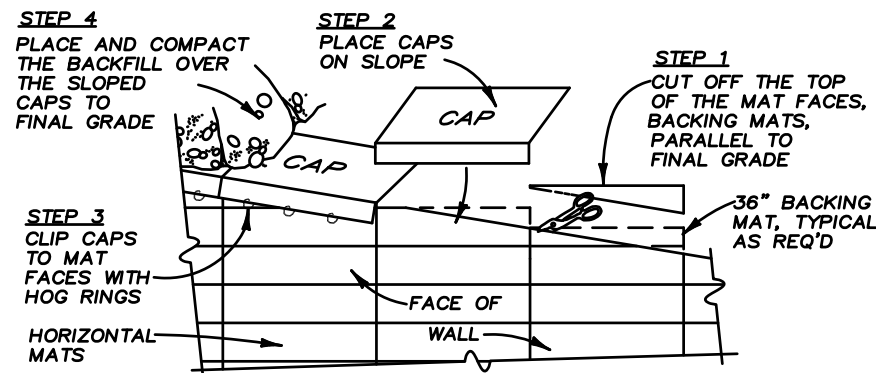
WALL FACE DETAIL
NOT TO SCALE 24" LIFT



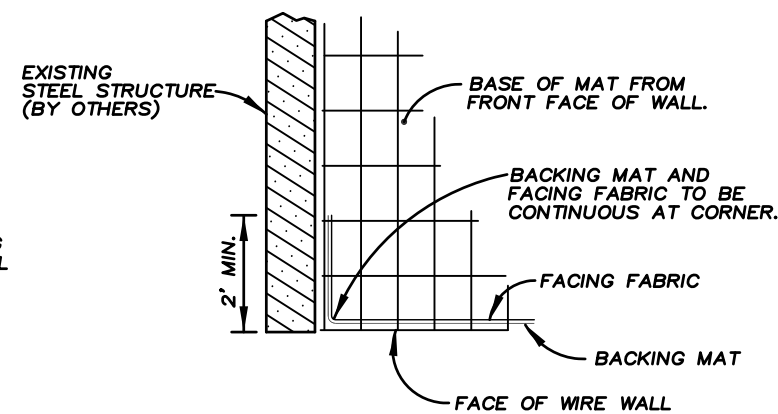
36\"/>



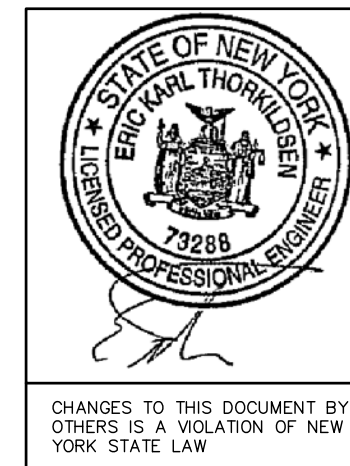
CONVEX ANGLE
NOT TO SCALE



SLOPED CAP DETAIL
NOT TO SCALE



TERMINATION OF WALL AT EXISTING STRUCTURE
NOT TO SCALE



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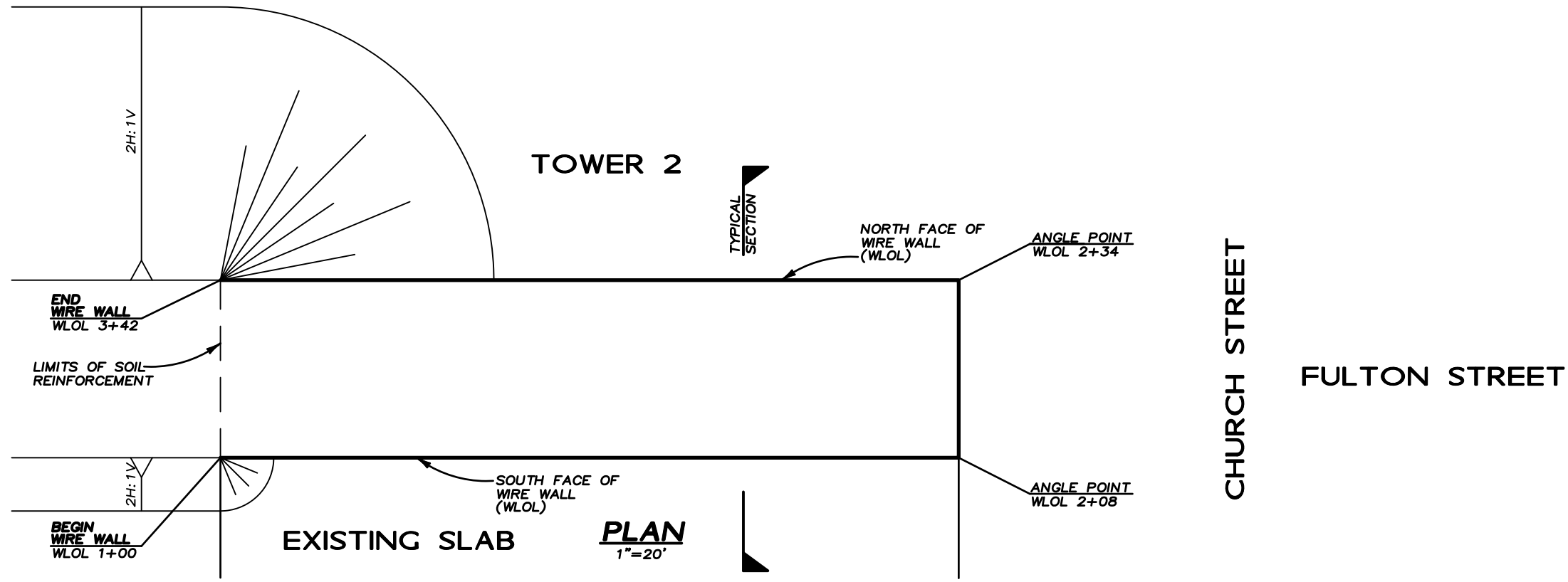
CADD BY: KPC
DESIGNED BY: PDR
CHECKED BY: EKT
DATE: MARCH 2008
PROJECT No. 5541
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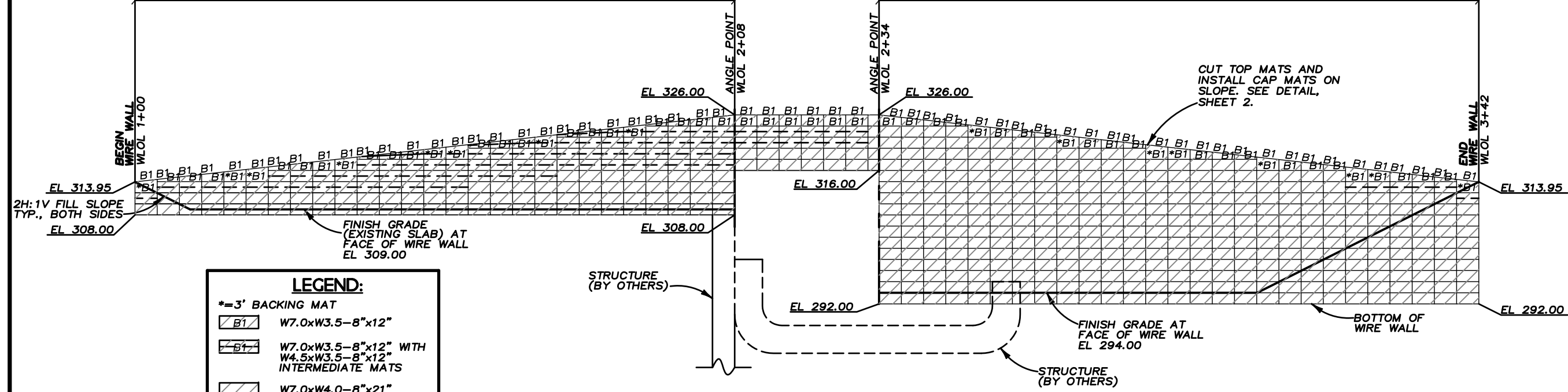


TEMPORARY WELDED WIRE RETAINING WALL: 24" Lift
WORLD TRADE CENTER PROJECT
PACKAGE 4B
PORT AUTHORITY OF NY AND NJ
NEW YORK CITY

HRW PROJECT NO: 080225BW
SHEET NUMBER: 2 OF 3



4'	20'	16'	20'	16'	16'	16'	24'	14'	16'	20'	20'	16'	24'
DH=6' B1=11' B=10.5'	DH=8' B1=11' B=10.5'	DH=10' B1=11' B=10.5'	DH=12' B1=11' B=10.5'	DH=14' B1=11' B=10.5'	DH=16' B1=13' B=12.25'	DH=18' B1=14' B=14'	DH=10' B1=11' B=10.5'	DH=34' B1=25' B=24.5'	DH=32' B1=23' B=22.75'	DH=30' B1=21' B=21'	DH=28' B1=20' B=19.25'	DH=26' B1=20' B=19.25'	DH=24' B1=18' B=17.5'
SOUTH FACE							NORTH FACE						



LEGEND:

*=3' BACKING MAT

	W7.0xW3.5-8"x12"
	W7.0xW3.5-8"x12" WITH W4.5xW3.5-8"x12" INTERMEDIATE MATS
	W7.0xW4.0-8"x21"
	W7.0xW4.0-8"x21" WITH W4.5xW4.0-8"x10.5" INTERMEDIATE MATS

DEVELOPED WIRE WALL ELEVATION

1"=20' 4,575.08 SQ. FEET OF WALL FACE (installed)

MAXIMUM CALCULATED APPLIED BEARING PRESSURE = 7,322 psf

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CAD FILENAME: 5541WW1

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 Auburn, CA 95603
 Tele. (530) 887-8151
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CADD BY: KPC
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HILFIKER RETAINING WALLS

 1802 Hilltop Lane
 Escondido, CA 92029-8711
 TEL: (760) 943-5092 FAX: (760) 943-5091
 WWW.HILFIKER.COM

TEMPORARY WELDED WIRE RETAINING WALL: 24' Lift
WORLD TRADE CENTER PROJECT
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 PORT AUTHORITY OF NY AND NJ
 NEW YORK CITY NY
 HRW PROJECT NO: 080225BW
 SHEET NUMBER: 3 OF 3