

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 (TO BE CONFIRMED BY PROJECT ENGINEER):
 WALL BACKFILL:
 UNIT WEIGHT: 135 PCF
 INTERNAL FRICTION ANGLE: 34°
 COHESION = 0 PSF
 RETAINED BACKFILL:
 UNIT WEIGHT: 135 PCF
 INTERNAL FRICTION ANGLE: 34°
 COHESION = 0 PSF
 FOUNDATION SOILS:
 UNIT WEIGHT: 135 PCF
 FRICTION ANGLE FOR SLIDING: 34°
 COHESION = 0 PSF
- TRAFFIC SURCHARGE LOAD - 250 PSF (LL)
- WORST CASE APPLIED BEARING PRESSURE - 3,273 PSF. (SEISMIC - 3,647 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 VERIFY WALL DESIGN IS ADEQUATE FOR ACTUAL SOILS CONDITIONS.
- 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 PROJECT ENGINEER.
- IF THE WALL BACKFILL CONTAINS MORE THAN 50% BY WEIGHT SANDS AND FINES (PASSING THE NO. 4 SIEVE) GRAVEL OR OTHER METHODS AS APPROVED BY THE HILFIKER COMPANY SHALL BE USED TO CONTAIN THE BACKFILL AT THE FACE OF THE WALL.
- DESIGN PROCEDURE: MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, FHWA REPORT NO. FHWA-NHI-00-043, 2012 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
- 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.
 PROJECT PLANS: WHPACIFIC, SHOTGUN COVE ROAD, WHITTIER, ALASKA TO EMERALD COVE TRAILHEAD, PROJECT NUMBER P0004067W, DATED 5/12/15

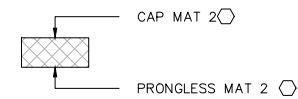
WELDED WIRE SCHEDULE

- ② 8x12 - W4.5xW3.5
- ③ 8x10.5 - W7xW3.5

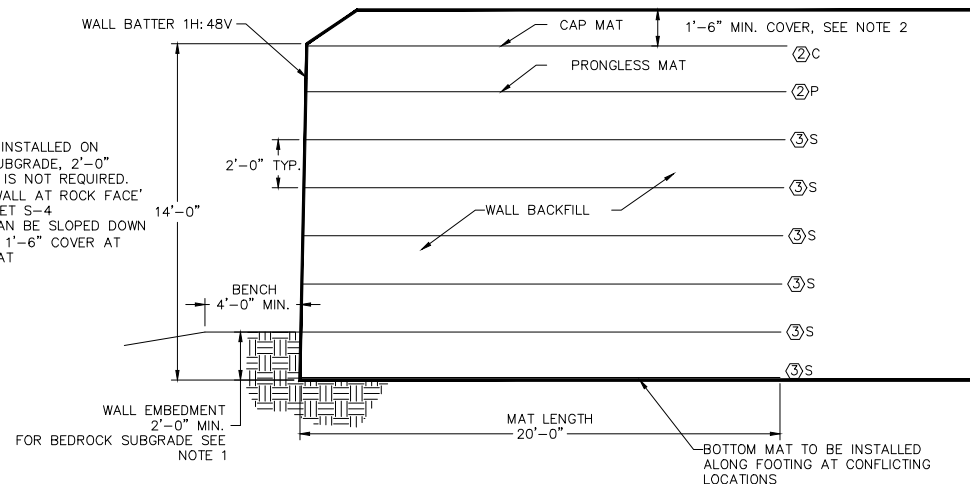
- F FLAT MAT
- P PRONGLESS MAT
- C CAP MAT
- S STANDARD

ALL WIRE TO BE HOT DIPPED GALVANIZED
 DESIGN SERVICE LIFE = 75 YEARS

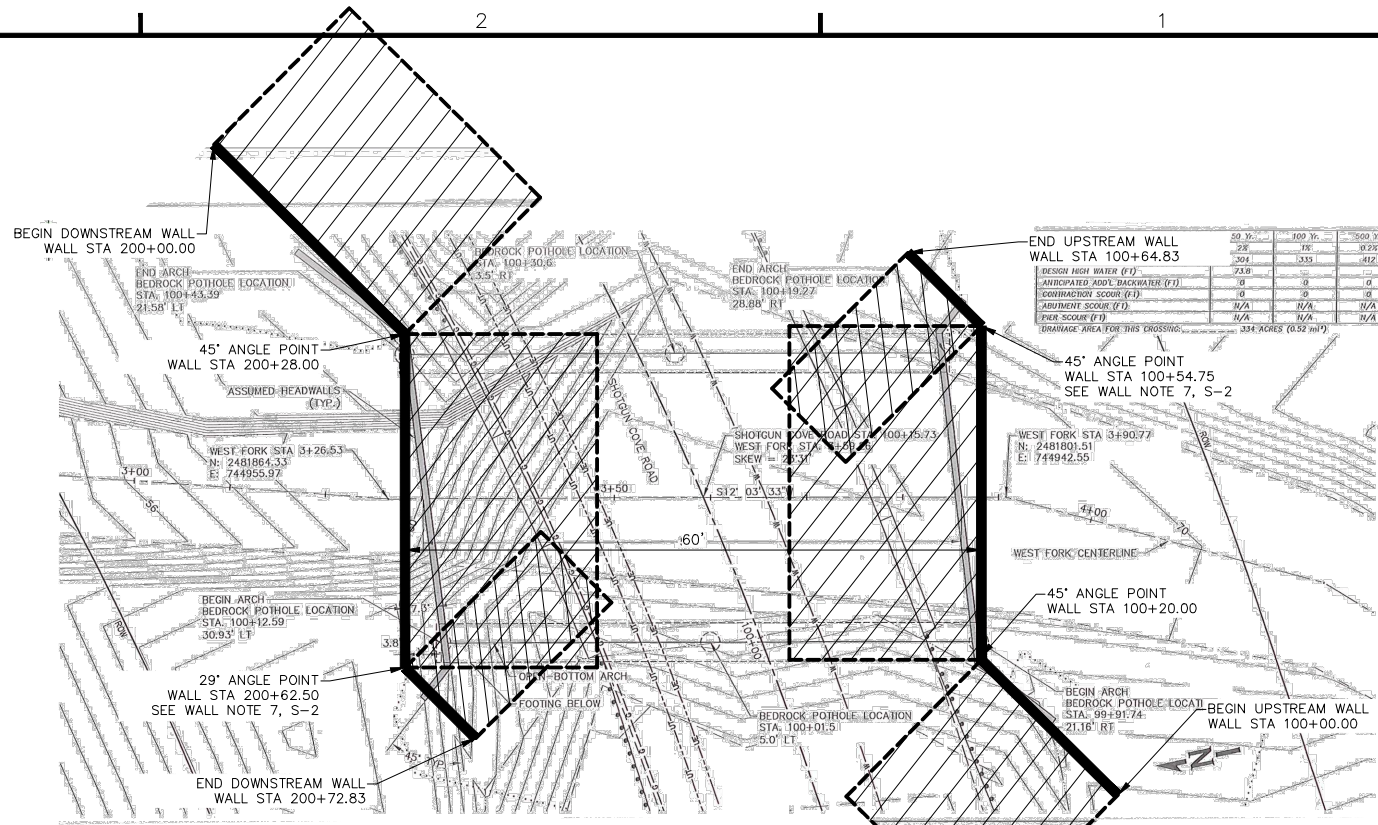
ALL MATS ARE STANDARD 8x10.5 - W7xW3.5 EXCEPT AT HATCHED AREAS THE FOLLOWING APPLIES:



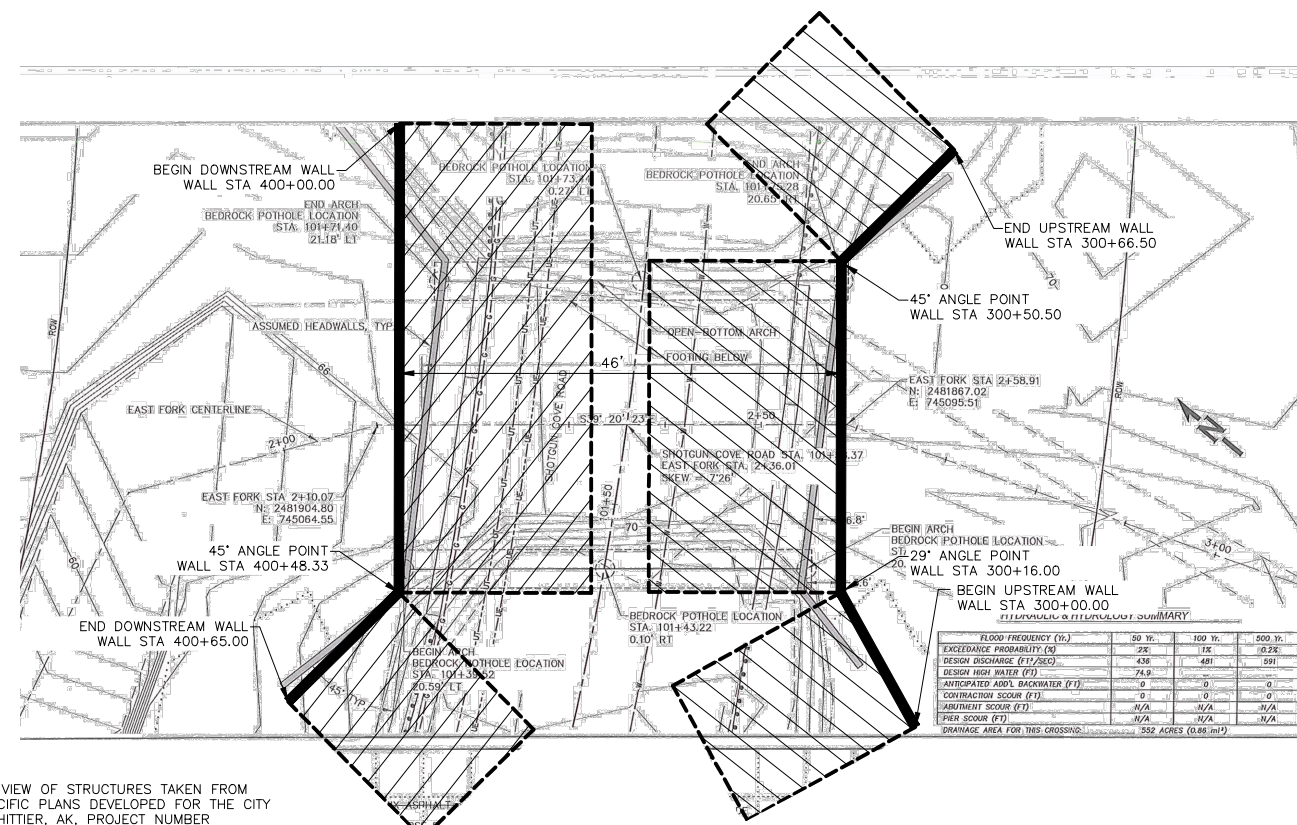
- NOTES:**
- FOR WALLS INSTALLED ON BEDROCK SUBGRADE, 2'-0" EMBEDMENT IS NOT REQUIRED. SEE 'WIRE WALL AT ROCK FACE' DETAIL, SHEET S-4
 - CAP MAT CAN BE SLOPED DOWN TO ACHIEVE 1'-6" COVER AT BACK OF MAT



WALL SECTION
 SCALE: 1"=4'



WEST FORK - PLAN VIEW
 NOT TO SCALE



EAST FORK - PLAN VIEW
 NOT TO SCALE

NOTE:
 PLAN VIEW OF STRUCTURES TAKEN FROM WHPACIFIC PLANS DEVELOPED FOR THE CITY OF WHITTIER, AK, PROJECT NUMBER P0004067W, DATED 5/12/15

REVISIONS	BY
10-14-15	CM
10-21-15	CM

PACIFIC AFFILIATES
 CONSULTING ENGINEERS
 990 W. WATERFRONT DRIVE, EUREKA, CA 95501
 TEL (707) 445-3001



WALL PLAN, SECTION & NOTES

WELDED WIRE WALL
 FOR:
 HILFIKER RETAINING WALLS
 SHOTGUN COVE ROAD PHASE 4
 WHITTIER, ALASKA
 PROJECT NO. HRW 150821AW

Date:
 September 25, 2015
 Scale: As Noted
 Drawn by: CM

SHEET NUMBER
S-1

JOB NUMBER
 15-1842

HALF SCALE

WALL NOTES:

1. BOTTOM OF WALL ELEVATION IS AT TOP OF FOOTING ELEVATION.
2. FINISH GRADE ELEVATIONS WERE NOT PROVIDED IN PROJECT PLANS.
3. BOTTOM OF WALL CAN BE STEPPED UP PROVIDED TWO FOOT EMBEDMENT OF TOE IS MAINTAINED AND FOUNDATION STEP IS APPROVED BY GEOTECHNICAL ENGINEER OF RECORD.
4. TOP OF WALL CAN BE STEPPED DOWN PROVIDED A MINIMUM SLOPE OF 1.5H:1V IS MAINTAINED TO DESIGN FINISH GRADE.
5. WHERE TOP OF STANDARD MAT IS EXPOSED AND WILL BE CAPPED, CUT PRONGS OFF PER "RETURN MATS AND TOP OF WALL DETAIL", HILFIKER STANDARD DRAWINGS, SHEET 2.
6. ALL MATS SHOWN ARE STANDARD WIDTH (8 FT) OR HALF WIDTH (4 FT), WHICH ARE FIELD CUT OUT OF A STANDARD MAT.
7. ANGLE TO BE FIELD ADJUSTED AS NECESSARY TO AVOID CONFLICT BETWEEN MAT AND CULVERT.

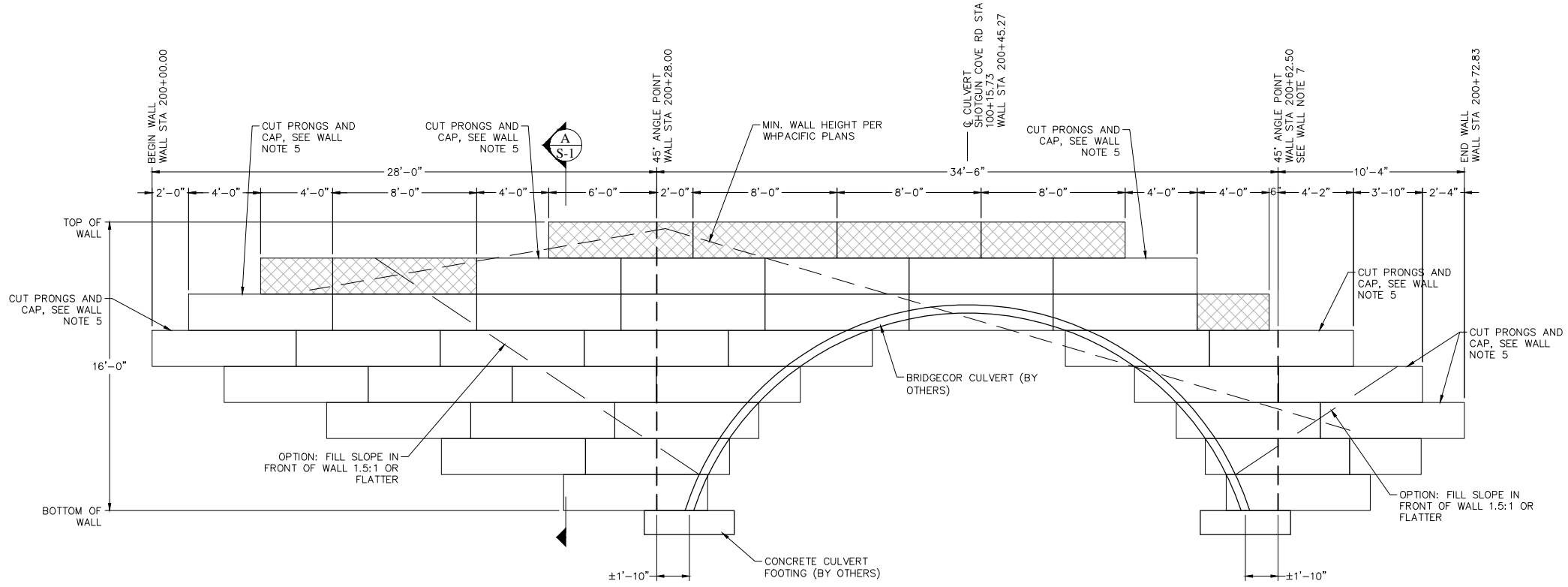
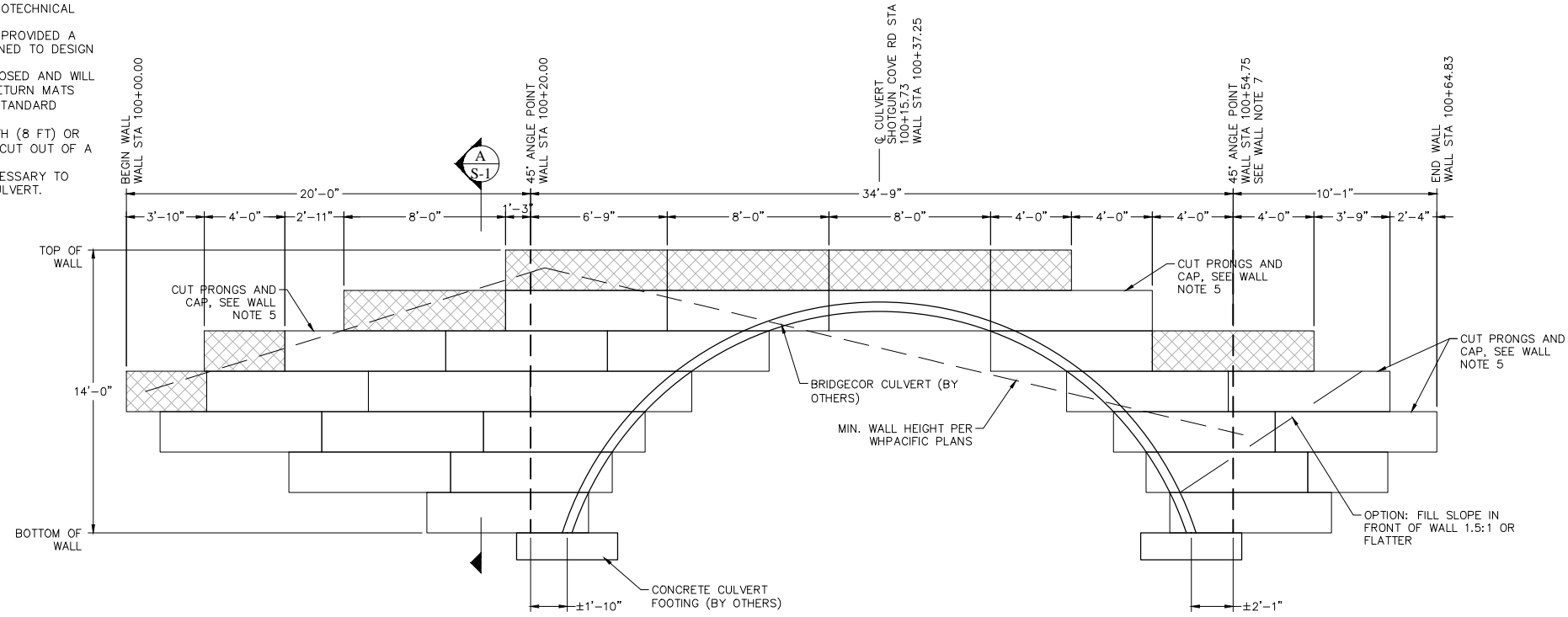
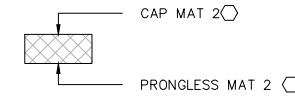
WELDED WIRE SCHEDULE

- ② 8x12 - W4.5xW3.5
- ③ 8x10.5 - W7xW3.5

- F FLAT MAT
- P PRONGLESS MAT
- C CAP MAT
- S STANDARD

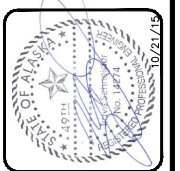
ALL WIRE TO BE HOT DIPPED GALVANIZED
DESIGN SERVICE LIFE = 75 YEARS

ALL MATS ARE STANDARD 8x10.5 - W7xW3.5 EXCEPT AT HATCHED AREAS THE FOLLOWING APPLIES:



REVISIONS	BY
10-14-15	CM
10-21-15	CM

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WEST FORK HEADWALL/WINGWALL ELEVATIONS
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WELDED WIRE WALL FOR: HILFIKER RETAINING WALLS SHOTGUN COVE ROAD PHASE 4 WHITTIER, ALASKA PROJECT NO. HRW 150821AW

Date: September 25, 2015
Scale: As Noted
Drawn by: CM

SHEET NUMBER
S-2

JOB NUMBER
15-1842

HALF SCALE

4

3

2

1

C

B

A

REVISIONS	BY
10-14-15	CM
10-21-15	CM

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STANDARD HILFIKER DETAILS

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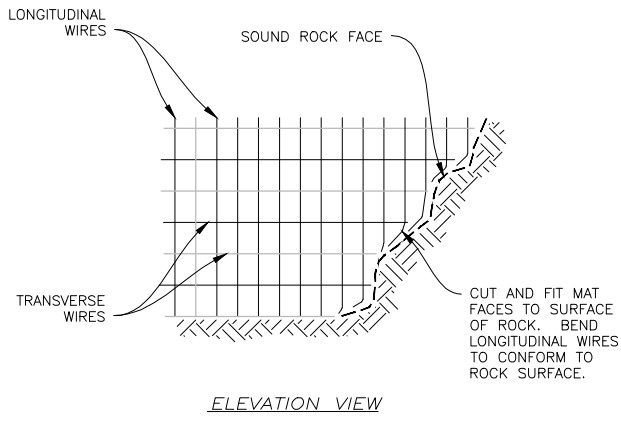
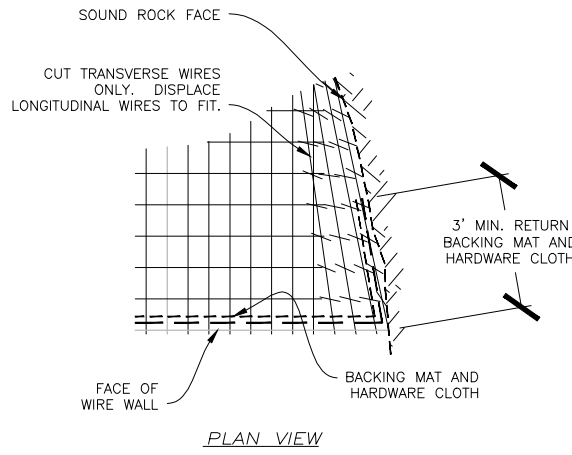
WELDED WIRE WALL FOR:
HILFIKER RETAINING WALLS
SHOTGUN COVE ROAD PHASE 4
WHITTIER, ALASKA
PROJECT NO. HRW 150821AW

Date: September 25, 2015
Scale: As Noted
Drawn by: CM

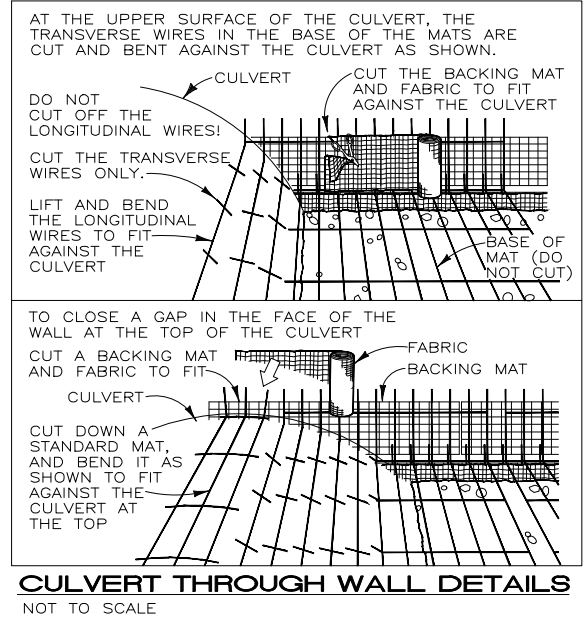
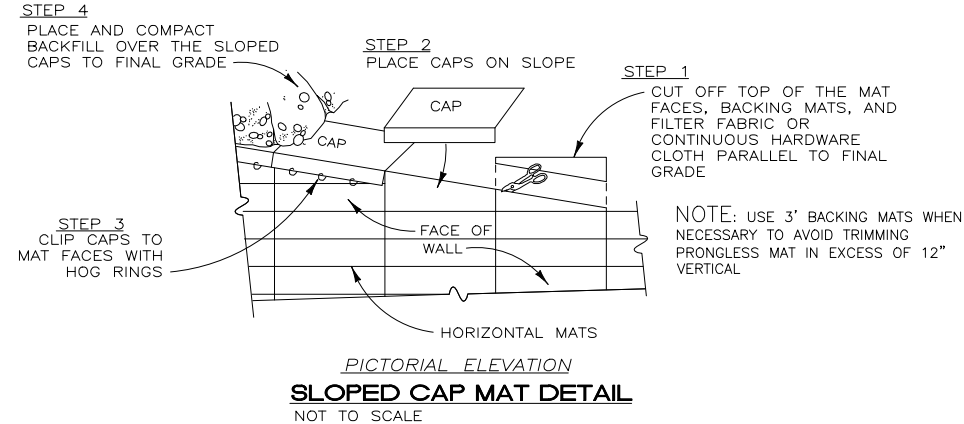
SHEET NUMBER
S-4

JOB NUMBER
15-1842

HALF SCALE



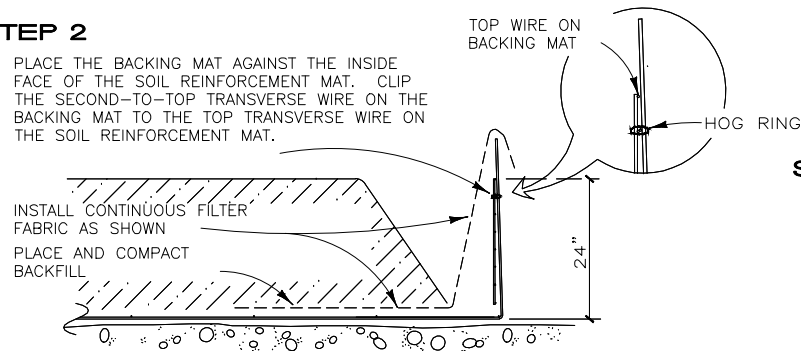
WIRE WALL DETAIL AT ROCK FACE
NOT TO SCALE



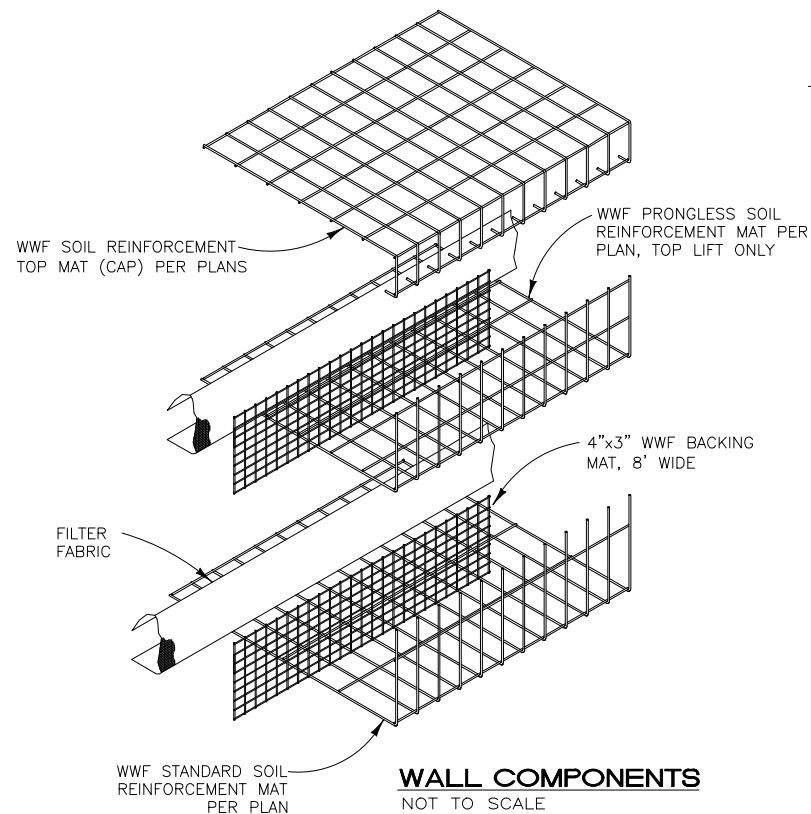
STEP 1
PLACE THE FIRST COURSE OF SOIL REINFORCEMENT MATS ON PREPARED FOUNDATION.



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.

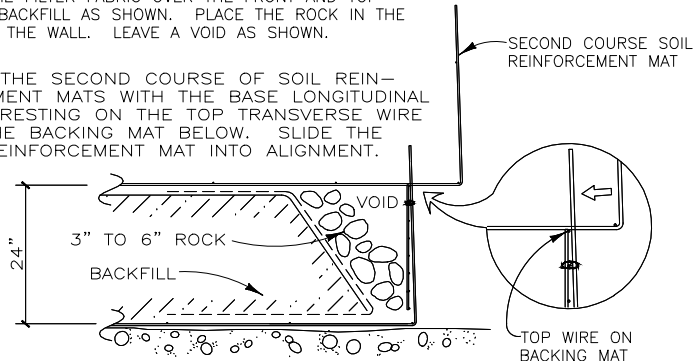


INSTALL CONTINUOUS FILTER FABRIC AS SHOWN
PLACE AND COMPACT BACKFILL

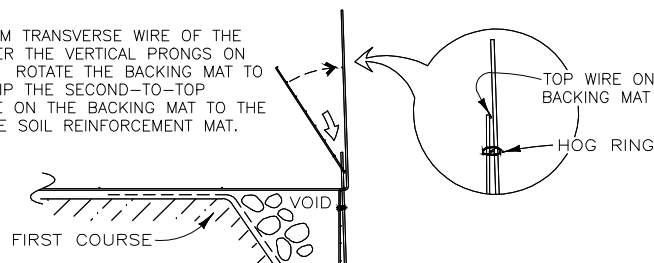


STEP 3
BRING THE FILTER FABRIC OVER THE FRONT AND TOP OF THE BACKFILL AS SHOWN. PLACE THE ROCK IN THE FACE OF THE WALL. LEAVE A VOID AS SHOWN.

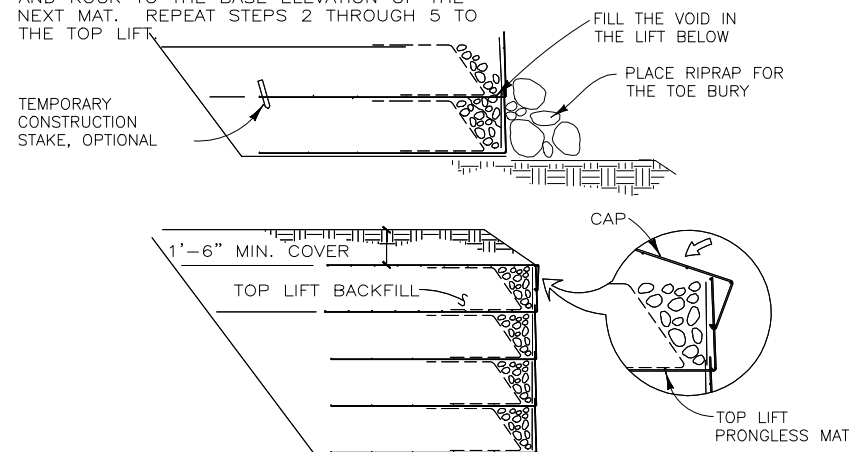
PLACE THE SECOND COURSE OF SOIL REINFORCEMENT MATS WITH THE BASE LONGITUDINAL WIRES RESTING ON THE TOP TRANSVERSE WIRE OF THE BACKING MAT BELOW. SLIDE THE SOIL REINFORCEMENT MAT INTO ALIGNMENT.



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.



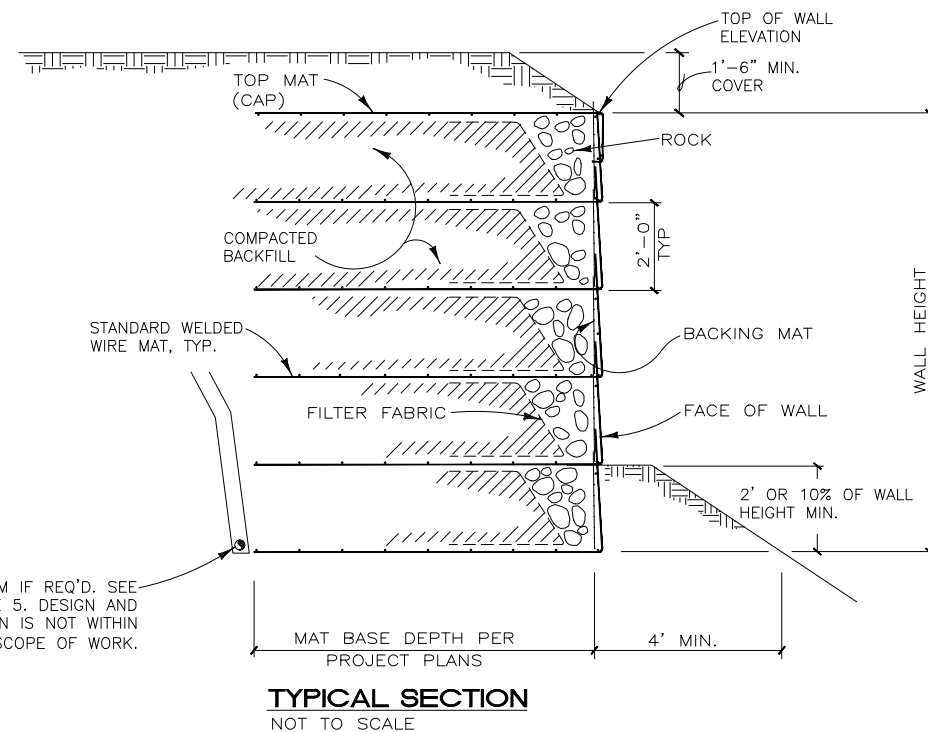
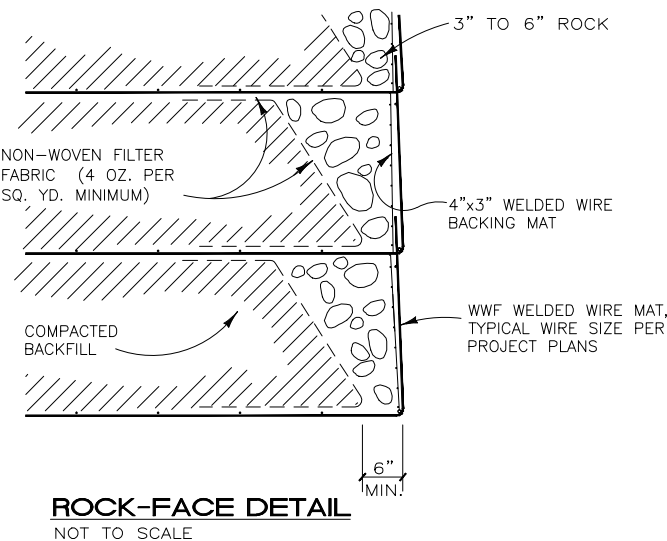
STEP 5
INSTALL THE FILTER FABRIC AS IN STEPS 2 AND 3. PLACE AND COMPACT THE BACKFILL AND ROCK TO THE BASE ELEVATION OF THE NEXT MAT. REPEAT STEPS 2 THROUGH 5 TO THE TOP LIFT.



STEP 6: TOP LIFT
PLACE THE TOP LIFT PRONGLESS MAT, BACKING MAT AND FILTER FABRIC. PLACE AND COMPACT BACKFILL AND ROCK IN THE TOP LIFT. HOOK THE CAP OVER THE MIDDLE TRANSVERSE WIRE ON THE PRONGLESS MAT, AND ROTATE INTO PLACE. PLACE AND COMPACT COVER OVER TOP MAT TO 1'-6" MINIMUM DEPTH.

CONSTRUCTION SEQUENCE

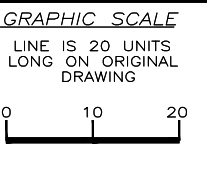
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WELDED WIRE WALL ROCK FACE DETAILS

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REV. NO.	DATE	BY	DESCRIPTION
1	04/17/02	DR	UPDATED BORDER
2	12/20/04	DR	REVISED ROCK IN WALL FACE
3	12 SEP 07	AMJ	MINOR REVISIONS, UPDATED BORDER
4	1 NOV 07	JTE	FIXED LEADERS, UPDATED LOGO



PROJ. MGR.
ENGINEER
CADD BY
DR

HILFIKER RETAINING WALLS

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DWG DATE
24 OCT 01
REVISION DATE
1 NOV 07
SCALE
NOTED

STANDARD DRAWING
WELDED WIRE RETAINING WALL, 24" LIFTS
ROCK FACE INSTALLATION
SECTION, DETAILS AND NOTES

PROJECT NO.
SHEET
1
OF 1