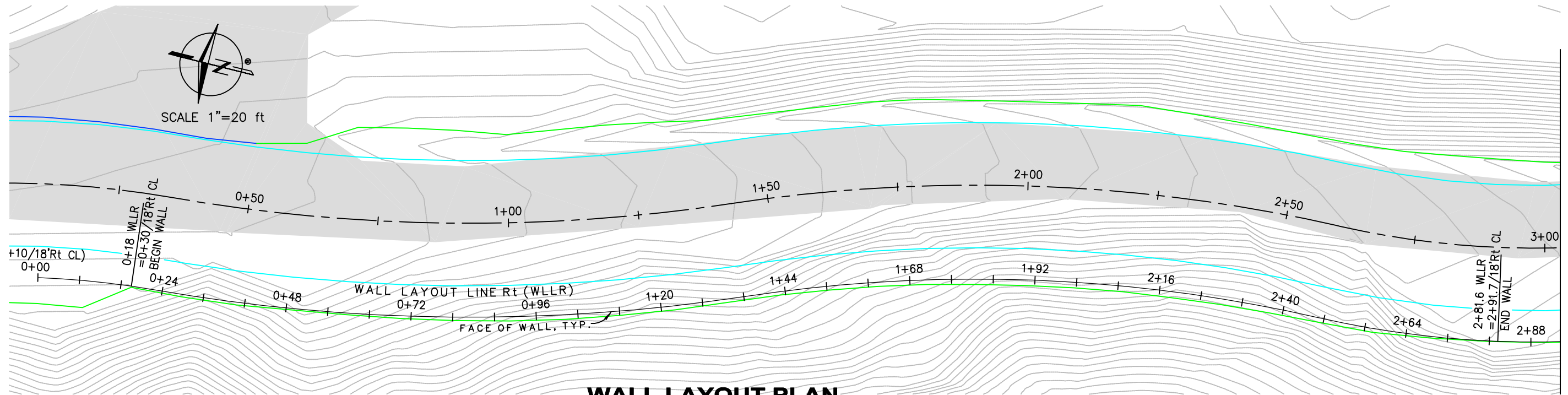


060428BW BLUE WATERS BRIDGE PROJECT | AZIZ PROJ No 410615



SPECIFICATIONS and CONSTRUCTION NOTES

- CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE, DRAWINGS, SPECIFICATIONS, AND CONSTRUCTION SEQUENCE UNDER OBSERVATION OF AND AS DIRECTED IN THE FIELD BY THE ENGINEER ENAYAT S. AZIZ, L.E.G, P.E.
- SPIRALNAILS SHALL BE HILFIKER SHOP FABRICATED SQUARE-SECTION SPIRALLED STRUCTURAL STEEL TUBING (ASTM A500 GRADE A, 0.218-INCH WALL THICKNESS) COLD FORMED TO PRODUCE ONE COMPLETE SPIRAL TWIST PER EACH 4-ft TUBE LENGTH; WITH A WELDED CONE FORMED AT THE TIP. NAIL HEAD FLANGE SHALL BE OF SIMILAR STEEL EXTERNALLY WELDED TO SPIRALNAIL WITH MIN. 1/4-INCH PENETRATION WORKING IN COMPRESSION OR SHEAR ONLY. PILASTER CHANNELS SHALL BE C4x5.4 STEEL CHANNEL WITH PRECUT HOLES FOR SPIRALNAILS AS SHOWN ON WALL ELEVATION. ALL SPIRALNAIL AND TRUSSWIRE COMPONENTS SHALL BE BLACK STEEL.
- WIRETRUSS COMPONENTS SHALL BE BOUND BY SPIRAL BINDERS ON ALL CORNERS. THE WELDED WIRE PANELS FOR THE WIRETRUSS SYSTEM SHALL W7.0xw4.5 60ksi STEEL FABRICATED IN CONFORMANCE WITH ASHTO M32 OF SMOOTH WIRE CONFORMING TO ASHTO M55. WIRE FOR THE SPIRAL BINDERS SHALL BE W4.5 SMOOTH.
- TWO SPIRALNAILS SHOULD BE TESTED AFTER DRIVEN IN PLACE TO ASSURE ADEQUATE YIELD STRENGTH. ADDITIONAL SPIRALNAILS SHALL BE TESTED, AS DETERMINED BY THE ENGINEER, IF SOIL TYPES ENCOUNTERED VARY FROM DESIGN. THE TESTING SHALL TAKE PLACE AT LEAST 24 HOURS AFTER THE SPIRALNAILS ARE DRIVEN. THE PULLOUT TEST SHALL CONSIST OF SUSTAINED LOADS TO RESIDUAL DISPLACEMENT (TYPICALLY IN 10-MINUTE INTERVALS) APPLIED IN 10% INCREMENTS OF THE DESIGN YIELD STRENGTH (Fy) OF THE SPIRALNAIL. THE INCREMENTAL LOADING SHALL BE APPLIED UNTIL 100 PERCENT OF THE Fy IS ACHIEVED OR UNTIL PULLOUT FAILURE IS GENERATED. FAILURE OCCURS WHEN A STRAIN DEFLECTION GREATER THAN 2 INCH IS OBSERVED OVER A 10-MINUTE PERIOD UNDER THE PEAK SUSTAINED LOAD. WHEN PEAK FAILURE LOAD IS LESS THAN THE MAXIMUM NAIL DESIGN LOAD, THE ADJACENT NAILS SHALL BE TESTED TO MAX DESIGN LOAD WHILE THE ENGINEER REEVALUATES SOIL NAILING DENSITY.
- DRIVING HAMMER AND PULLOUT TESTER ARE FURNISHED BY THE SUPPLIER; THE INSTALLER SHALL PROVIDE HYDRAULIC POWER AND THE HOISTING SYSTEM SUCH AS AN EXCAVATOR OR CRANE. CONTACT THE SUPPLIER BELOW TO COORDINATE THE MINIMUM HYDRAULIC POWER SUPPLY AND FITTING SIZES. SPIRALNAIL AND TRINITY WALL SYSTEM ARE MANUFACTURED BY:

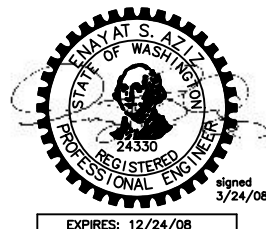
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3900 BROADWAY
EUREKA, CA 95502
(800) 762-8962 | (707) 443-2891 FAX
www.HILFIKER.COM

Contents

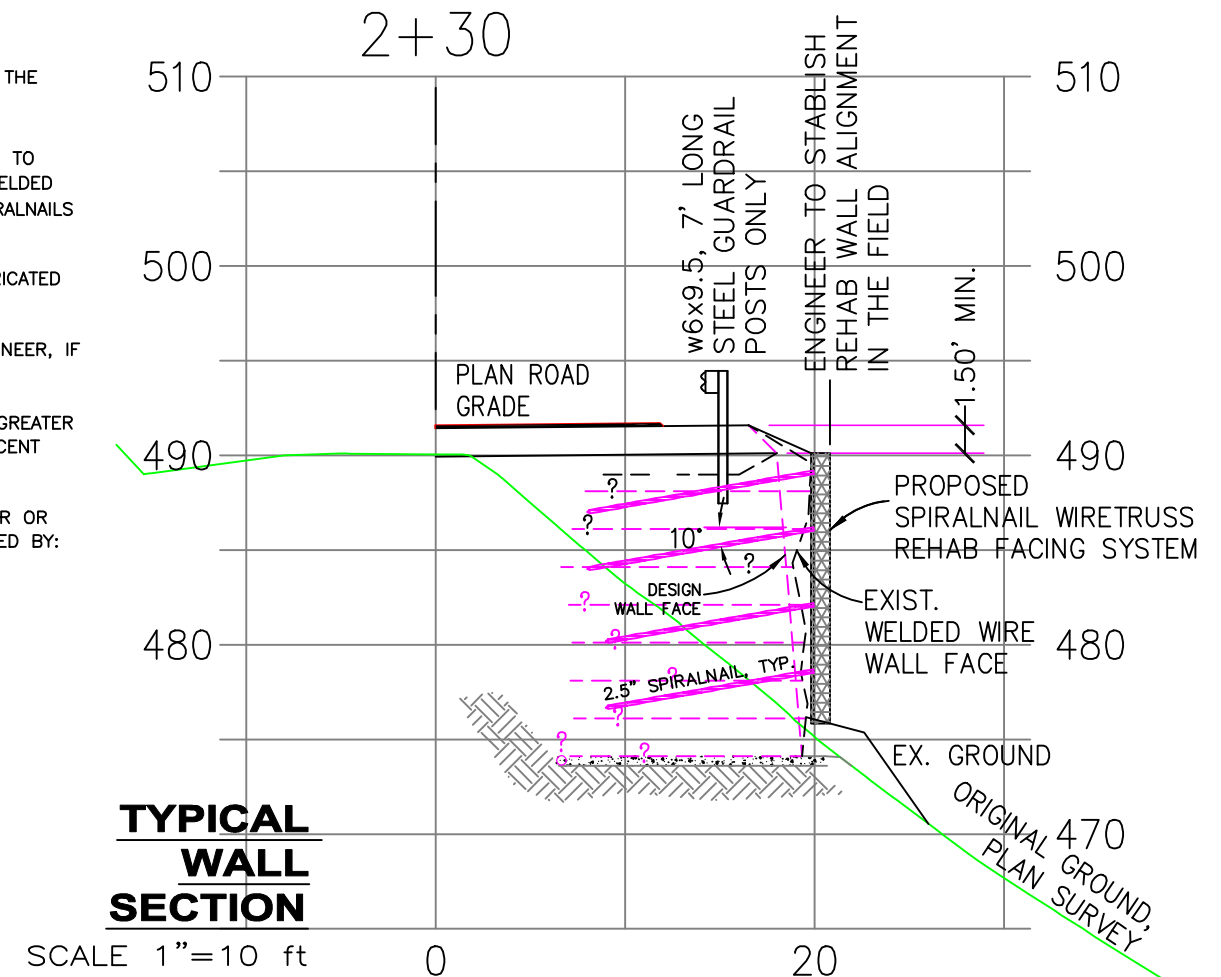
Contents	Sheet
Wall Layout Plan; Specifications; Typical Wall Section	SN1
Wall Elevation	SN2
Wall Elevation; Supplied Quantities	SN3
HilfiKER TrussWire Facing System; Construction Sequence	SN4
TrussWire Components and Assembly; Std. Spiralnail	SN5

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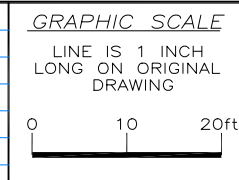


REFERENCE DRAWINGS & SPECS:
BLUE WATERS BRIDGE (41770BR1)
CLALLAM COUNTY ROAD DEPT. APRIL 18, 2006



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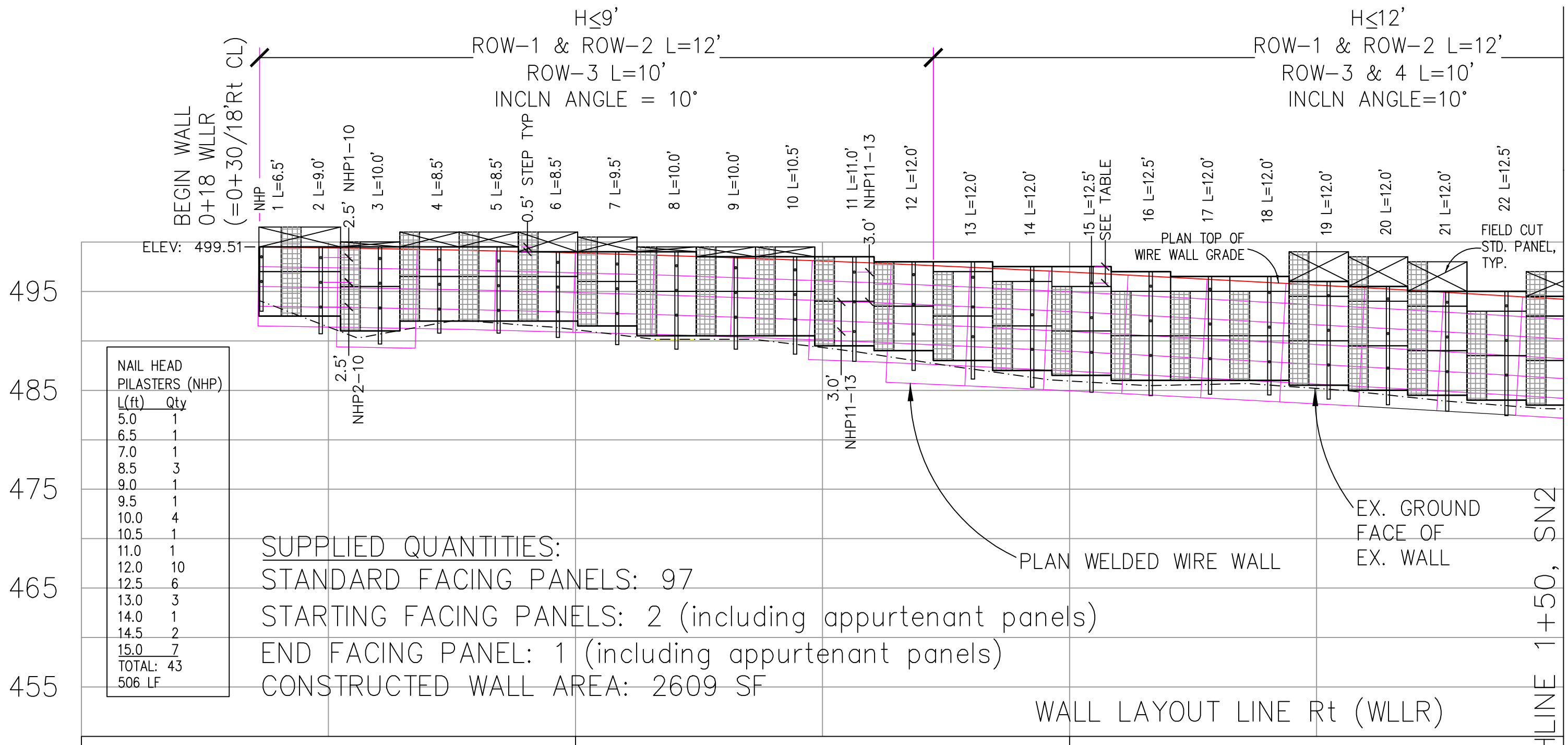
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 1902 HilfiKER Lane Eureka, CA 95503-5711

DWG DATE
24 MAR 08
REVISION DATE
24 MAR 08
SCALE
AS NOTED

CONSTRUCTION SET
WELDED WIRE WALL 2 SPIRALNAIL REHAB
BLUE WATERS BRIDGE
 CLALLAM COUNTY ROAD DEPARTMENT
CULVERT REPLACEMENT

PROJECT NO.
060428BW
SHEET
SN1
OF 5

060428BW BLUE WATERS BRIDGE PROJECT | AZIZ PROJ No 410615



NAIL HEAD PILASTERS (NHP)	
L(ft)	Qty
5.0	1
6.5	1
7.0	1
8.5	3
9.0	1
9.5	1
10.0	4
10.5	1
11.0	1
12.0	10
12.5	6
13.0	3
14.0	1
14.5	2
15.0	7
TOTAL: 43	
506 LF	

SUPPLIED QUANTITIES:
 STANDARD FACING PANELS: 97
 STARTING FACING PANELS: 2 (including appurtenant panels)
 END FACING PANEL: 1 (including appurtenant panels)
 CONSTRUCTED WALL AREA: 2609 SF

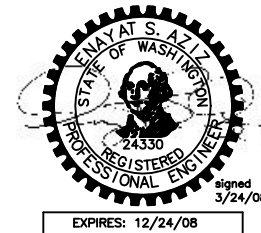
WALL LAYOUT LINE Rt (WLLR)

0+00 WLLR (=0+10/18'Rt CL) 0+50 1+00

MATCHLINE 1+50, SN2

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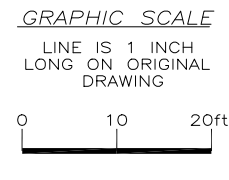
REFERENCE DRAWINGS & SPECS:
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 CLALLAM COUNTY ROAD DEPT. APRIL 18, 2006

WALL ELEVATION

SCALE 1"=10 ft

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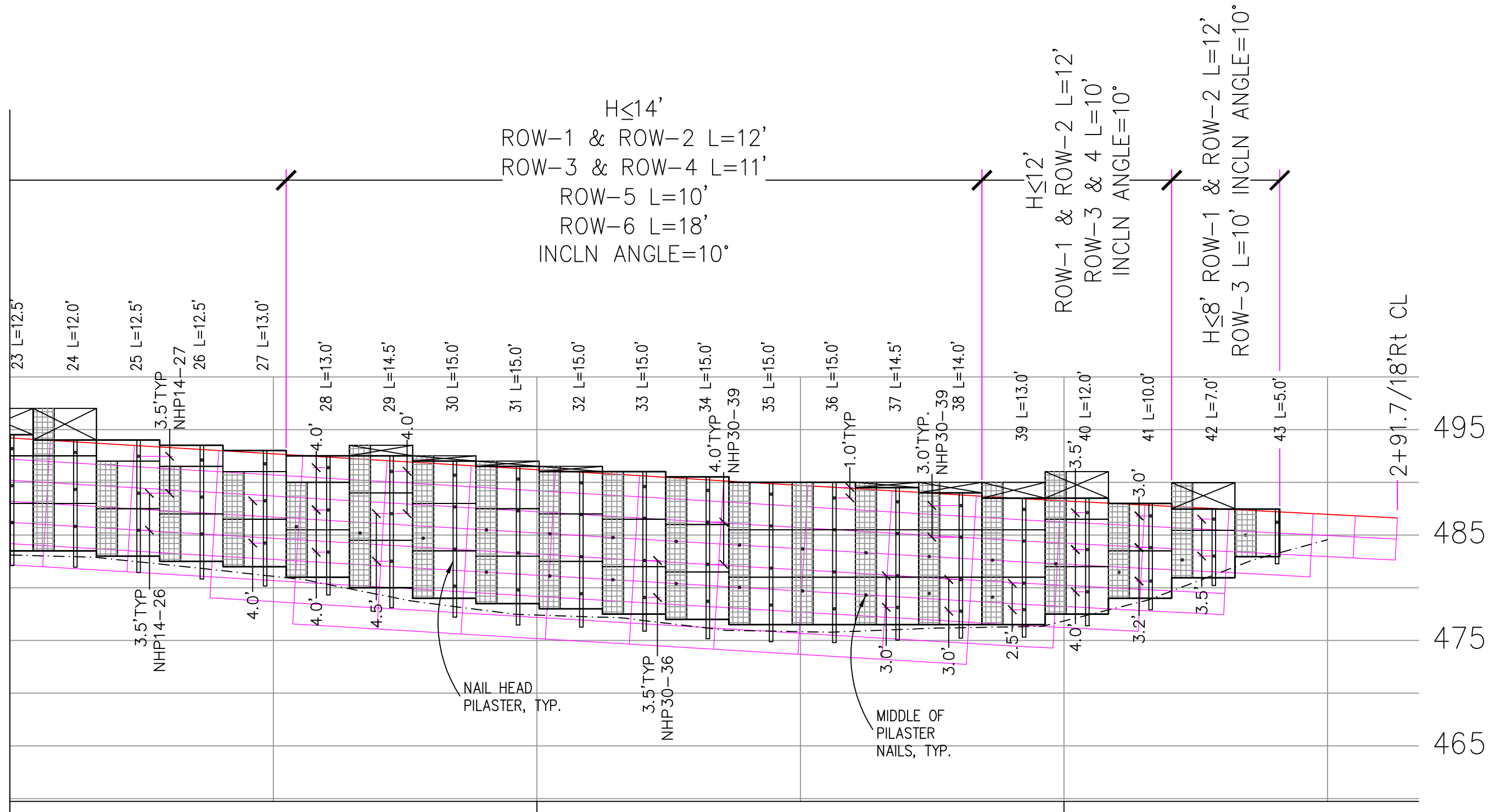
DWG DATE
 24 MAR 08
 REVISION DATE
 24 MAR 08
 SCALE
 AS NOTED

CONSTRUCTION SET

WELDED WIRE WALL 2 SPIRALNAIL REHAB
BLUE WATERS BRIDGE
 CLALLAM COUNTY ROAD DEPARTMENT
CULVERT REPLACEMENT

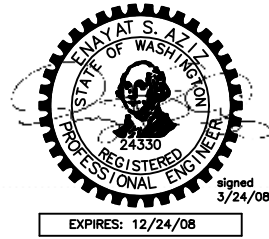
PROJECT NO.
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SN2
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MATCHLINE 1+50 SEE SHEET SN2



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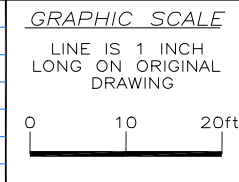
REFERENCE DRAWINGS & SPECS:
 BLUE WATERS BRIDGE (41770BR1)
 CLALLAM COUNTY ROAD DEPT. APRIL 18, 2006

WALL ELEVATION

SCALE 1"=20 ft

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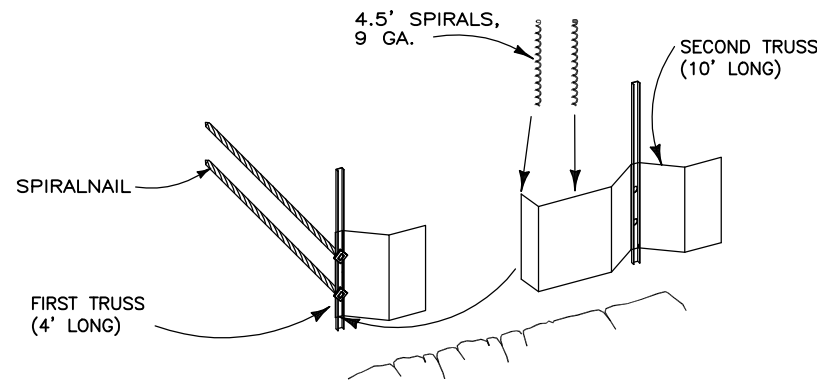
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DWG DATE
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CONSTRUCTION SET
 WELDED WIRE WALL 2 SPIRALNAIL REHAB
BLUE WATERS BRIDGE
 CLALLAM COUNTY ROAD DEPARTMENT
CULVERT REPLACEMENT

PROJECT NO.
 060428BW
 SHEET
SN3
 OF 5

060428BW BLUE WATERS BRIDGE PROJECT | AZIZ PROJ No 410615

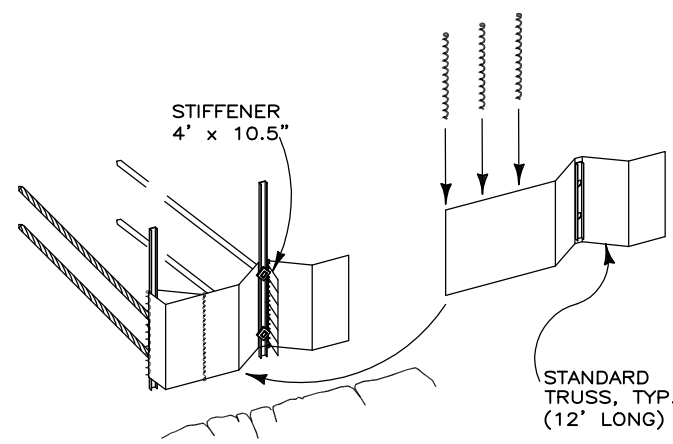


STEP 1

PLACE STARTING TRUSS PANEL ON ALIGNMENT IN FRONT OF EX. WIRE WALL AS DIRECTED BY THE ENGINEER.

PLACE THE PILASTER CHANNEL AGAINST THE EDGE OF THE TRUSS PANEL ON ALIGNMENT AND DRIVE THE CHANNEL INTO THE GROUND UNTIL THE TOP OF CHANNEL IS TO TOP OF WALL GRADE. DRIVE THE BOTTOM ROW SPIRALNAIL THROUGH THE CHANNEL HOLE INTO THE WIRE WALL.

PLACE THE FIRST TRUSS PANEL OVER THE FIRST TRUSS USING SPIRAL BINDERS TO CONNECT THE MATS AS SHOWN.



STEP 2

BEFORE DRIVING THE SPIRALNAIL INTO PLACE, ATTACH STIFFENER BESIDE THE CHANNEL WITH A SPIRAL BINDER.

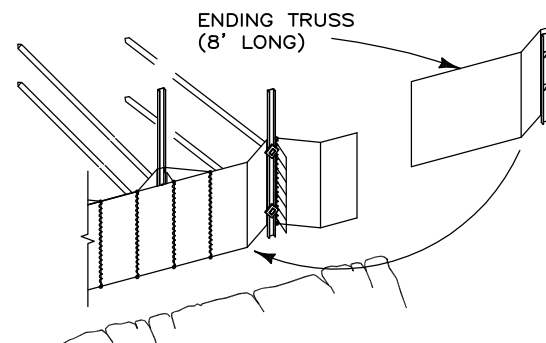
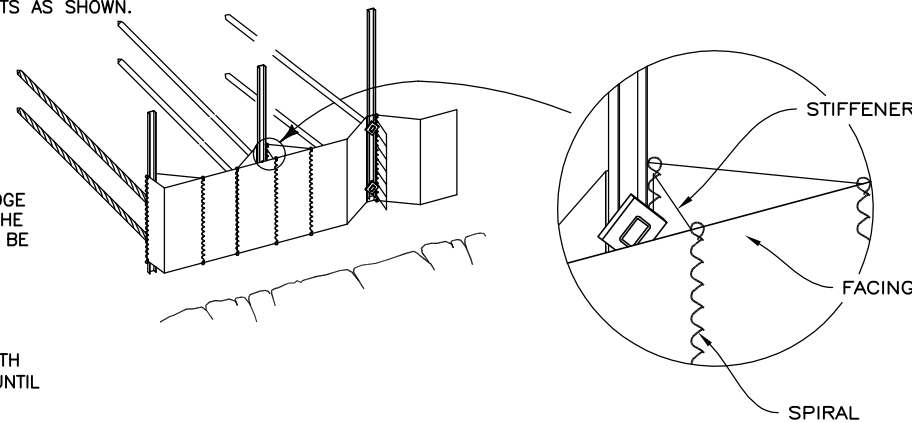
PLACE THE STANDARD TRUSS PANEL OVER THE FIRST/PREVIOUS TRUSS PANEL AND SPIRAL INTO PLACE AS SHOWN.

STEP 3

USING SPIRAL BINDERS, JOIN LEADING EDGE OF STANDARD TRUSS TO PREVIOUS TRUSS, TO FRONT EDGE OF STIFFENER AND TO THE EDGE OF THE BEND IN THE PREVIOUS TRUSS PANEL. THE SPIRAL BINDERS WILL BE 2' APART.

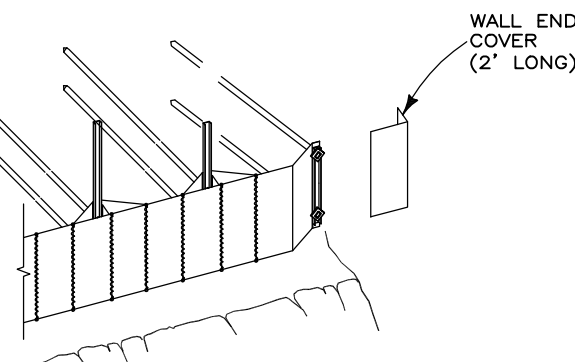
SEE DETAIL FOR JOINING STIFFENER PANEL TO THE TRUSS PANEL.

FILL THE COMPLETED WIRE TRUSS FACING SYSTEM WITH 2" TO 4" QUARRY SPALLS. REPEAT STEPS 2 & 3 UNTIL ENDING TRUSS. SEE STEP 4 FOR ENDING TRUSS PLACEMENT.



STEP 4

PLACE ENDING PANEL OVER THE FINAL STANDARD TRUSS PANEL. SPIRAL BIND TO PREVIOUS MAT AND TO STIFFENER. DRIVE SPIRALNAIL INTO PLACE.

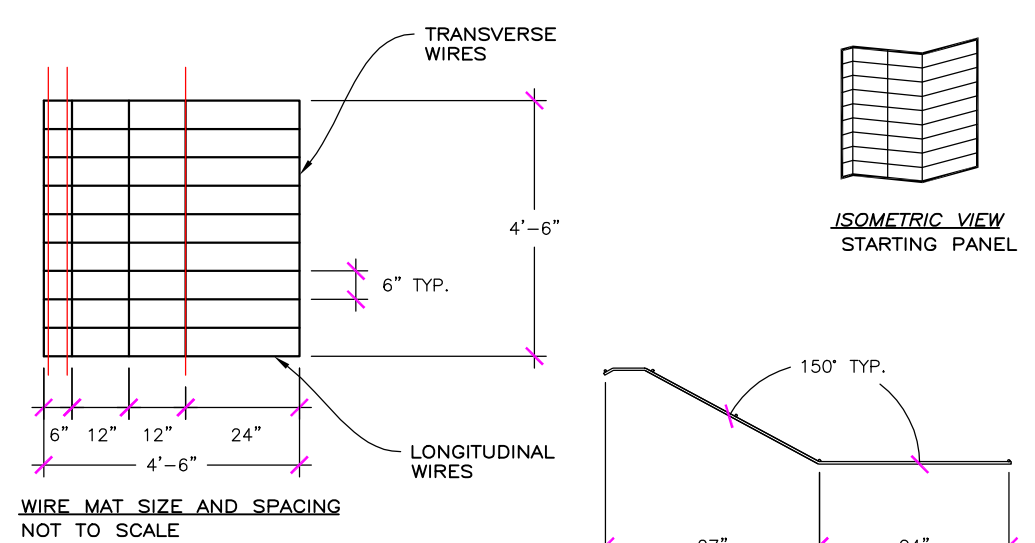


STEP 5

PLACE COVER OVER ENDING TRUSS PANEL AND SPIRAL BIND INTO PLACE.

STEP 6

START THE SECOND AND THIRD ROWS OF PANELS USING THE PROCEDURE OUTLINED IN STEPS 1 THRU 5 - CUTTING PANELS TO SIZE AS SHOWN ON WALL ELEVATION, OR USING THE LEFT-OVER CUT PANELS TO COMPLETE WALL TO GRADE.

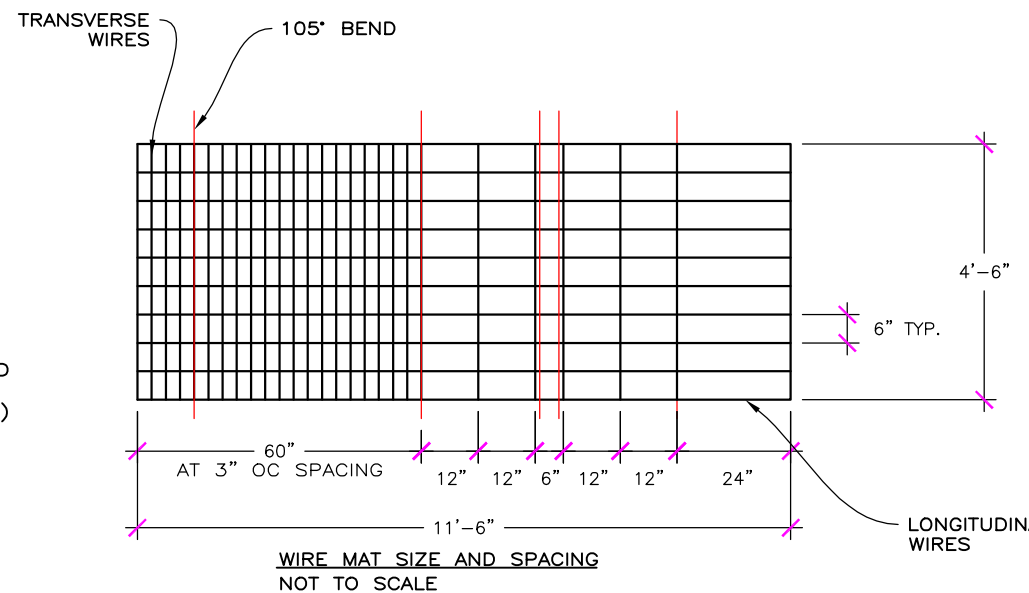


STARTING TRUSS PANEL

WIRE MAT SIZE AND SPACING NOT TO SCALE

ISOMETRIC VIEW STARTING PANEL

BENDING DETAILS SCALE: 12"=20'



FIRST TRUSS PANEL

WIRE MAT SIZE AND SPACING NOT TO SCALE

BENDING DETAILS SCALE: 12"=20'

ISOMETRIC VIEW FIRST PANEL

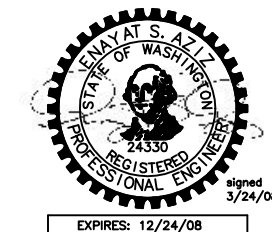
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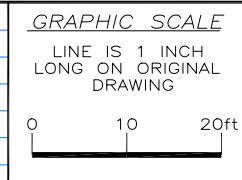
WIRETRUSS WALL ASSEMBLY & CONSTRUCTION SEQUENCE

NO SCALE



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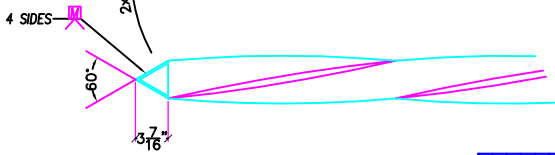
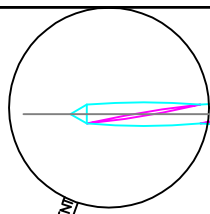
SINCE 1902
QUALITY PRODUCTS

DWG DATE
24 MAR 08
REVISION DATE
24 MAR 08
SCALE
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CONSTRUCTION SET
WELDED WIRE RETAINING WALL - 24" LIFT
BLUE WATERS BRIDGE
CLALLAM COUNTY ROAD DEPARTMENT
CULVERT REPLACEMENT

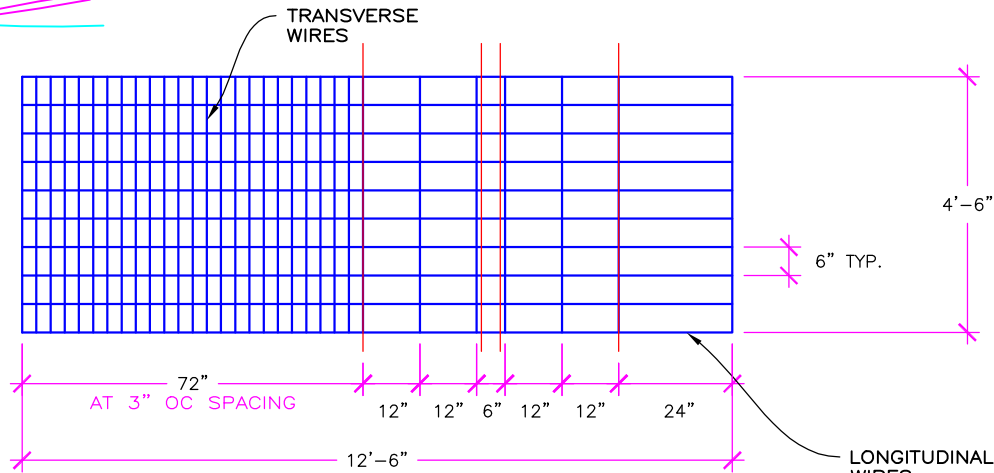
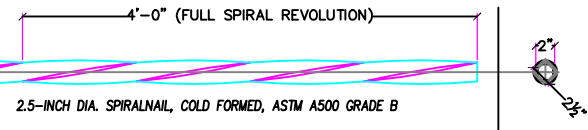
PROJECT NO.
060428BW
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OF 5

060428BW BLUE WATERS BRIDGE PROJECT | AZIZ PROJ No 410615

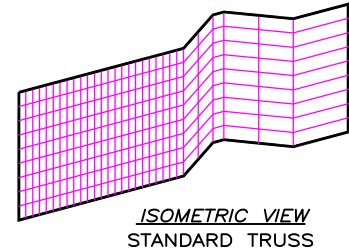


2.5-inch Dia. Standard Spiralnail

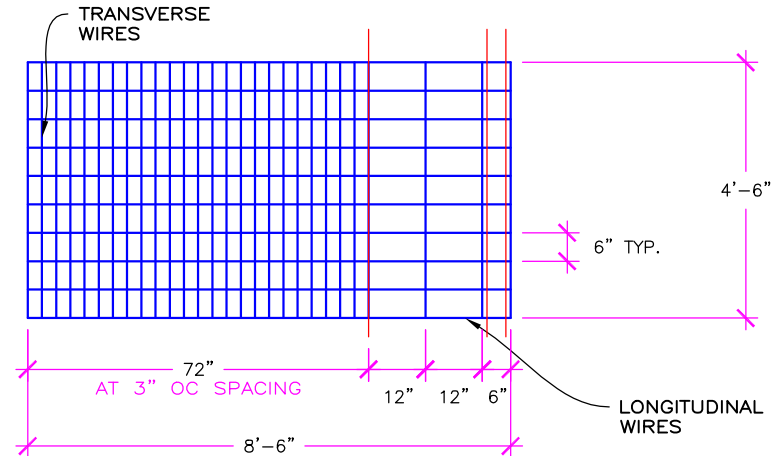
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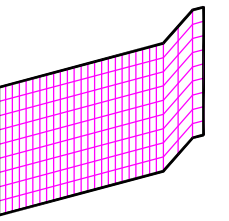
WIRE MAT SIZE AND SPACING
NOT TO SCALE



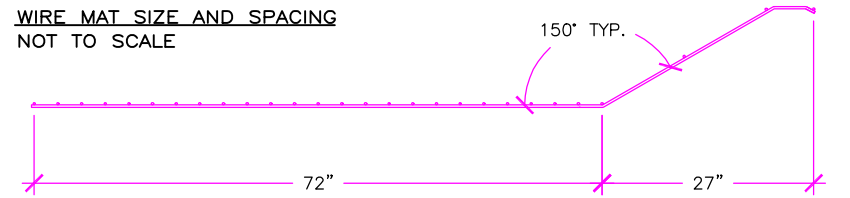
ISOMETRIC VIEW
STANDARD TRUSS



WIRE MAT SIZE AND SPACING
NOT TO SCALE

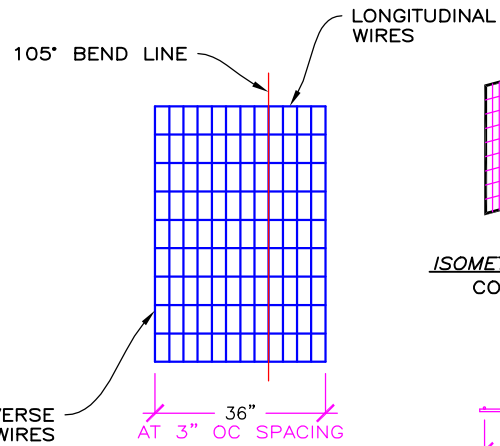


ISOMETRIC VIEW
ENDING TRUSS



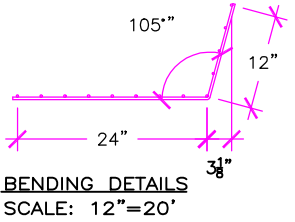
BENDING DETAILS
SCALE: 12"=20'

ENDING TRUSS PANEL



WIRE MAT SIZE AND SPACING

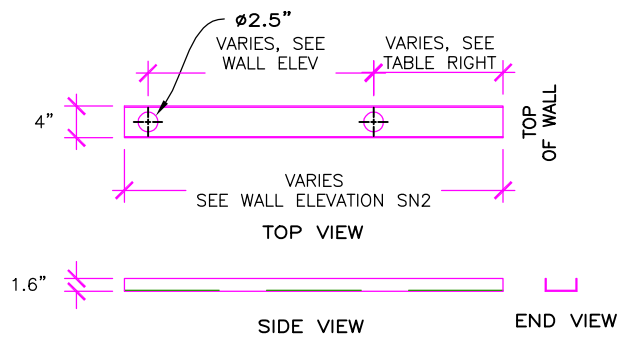
ISOMETRIC VIEW
COVER



BENDING DETAILS
SCALE: 12"=20'

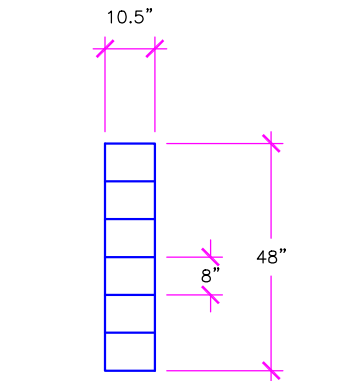
STANDARD TRUSS PANEL

BENDING DETAILS
SCALE: 12"=20'



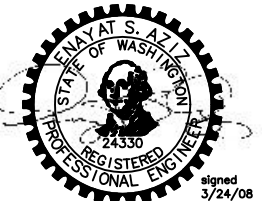
PILASTER CHANNEL
SCALE: 12"=20'

NIP No.	TOP OF PILASTER TO FIRST NAIL ROW (ft)
1	1.0
2	1.1
3	1.2
4	1.3
5	1.4
6	1.1
7	1.3
8	1.4
9	1.1
10	1.4
11	1.5
12	1.3
13	1.6
14	1.4
15	1.7
16	1.5
17	1.3
18	1.5
19	1.5
20	1.2
21	1.1
22	1.5
23	1.3
24	1.2
25	1.5
26	1.4
27	1.3
28	1.1
29	1.5
30	1.3
31	1.2
32	1.1
33	1.4
34	1.3
35	1.1
36	1.5
37	1.4
38	1.2
39	1.1
40	1.4
41	1.2
42	0.9
43	1.2



WIRE MAT SIZE AND SPACING

STIFFENER



EXPIRES: 12/24/08

WIRETRUSS WALL COMPONENTS

NO SCALE

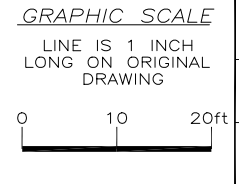
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COVER PANEL

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CULVERT REPLACEMENT

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