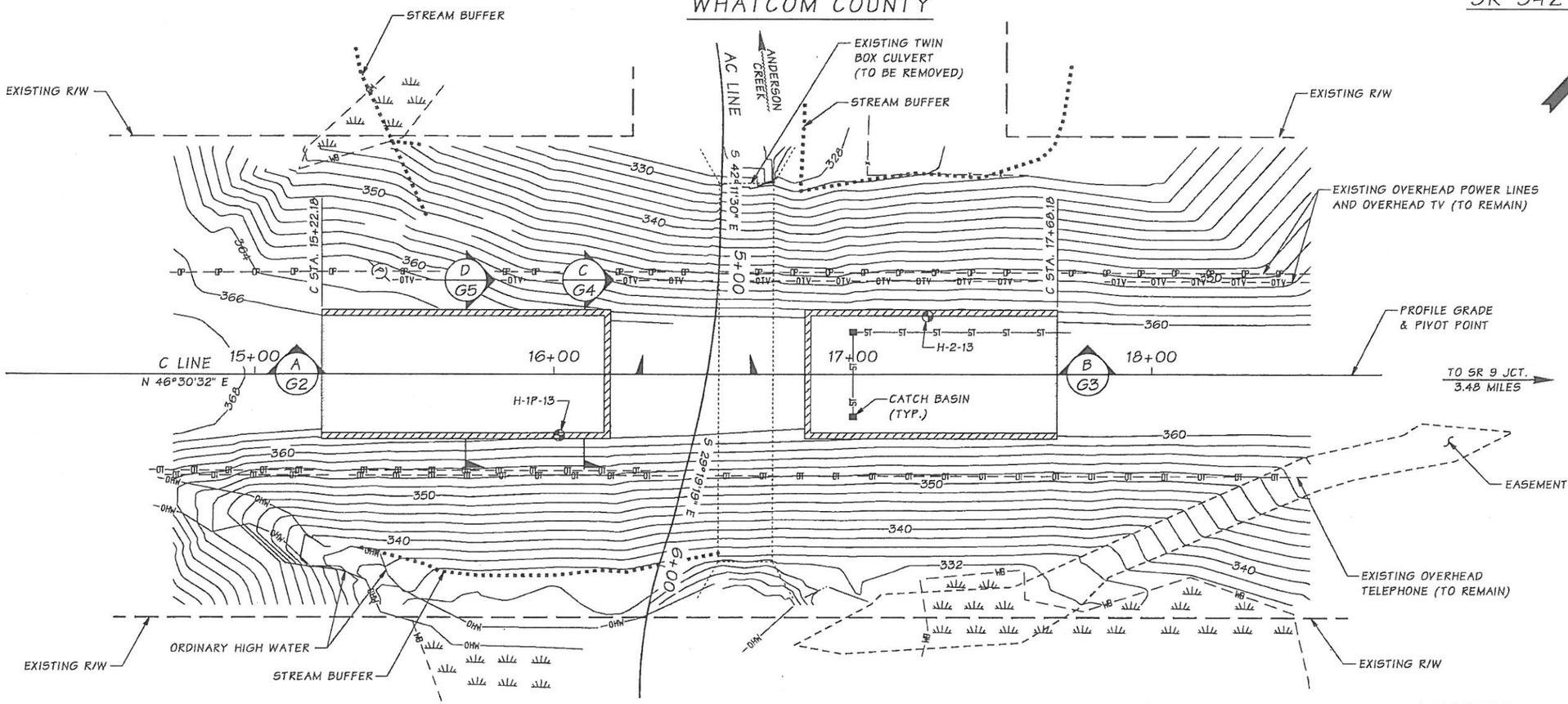
SEC. 6, T.38N., R.4E., W.M.

WHATCOM COUNTY

SR 542



PLAN

LEGEND

- B / G2 — IDENTIFIES SECTION OR VIEW; TAKEN OR SHOWN ON SHEET G2
- 1 / — IDENTIFIES DETAIL; TAKEN OR SHOWN ON THE SAME SHEET
- TEST BORING DESIGNATION AND APPROXIMATE LOCATION. H-2-13
- APPROXIMATE LIMITS OF CELLULAR CONCRETE.
- -ST- PROPOSED STORM SEWER

SR 542 FILE NO. ____ SHEET G1

State Geotechnical Engr. Tony Allen			M:\x-Team\SR 542 ANDERSON CREEK\ANDERSON CREEK GEOTECH\window files\CCW1.wnd				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Tony Allen						10	WASH.			
Designed By	Pete Palmerson	11/14									
Checked By	Tony Allen	12/14					JOB NUMBER 14A024		STPF - 0542 (038)		
Detailed By	Bontemps, W	12/14									
Bridge Projects Engr.							CONTRACT NO.				
Prelim. Plan By											
Architect/Specialist			DATE	REVISION	BY	APP'D					

Fri Mar 27 11:46:04 2015

JOHN PALMERSON — REGISTERED PROFESSIONAL ENGINEER — 44746 — 3/27/15

GEOTECHNICAL OFFICE

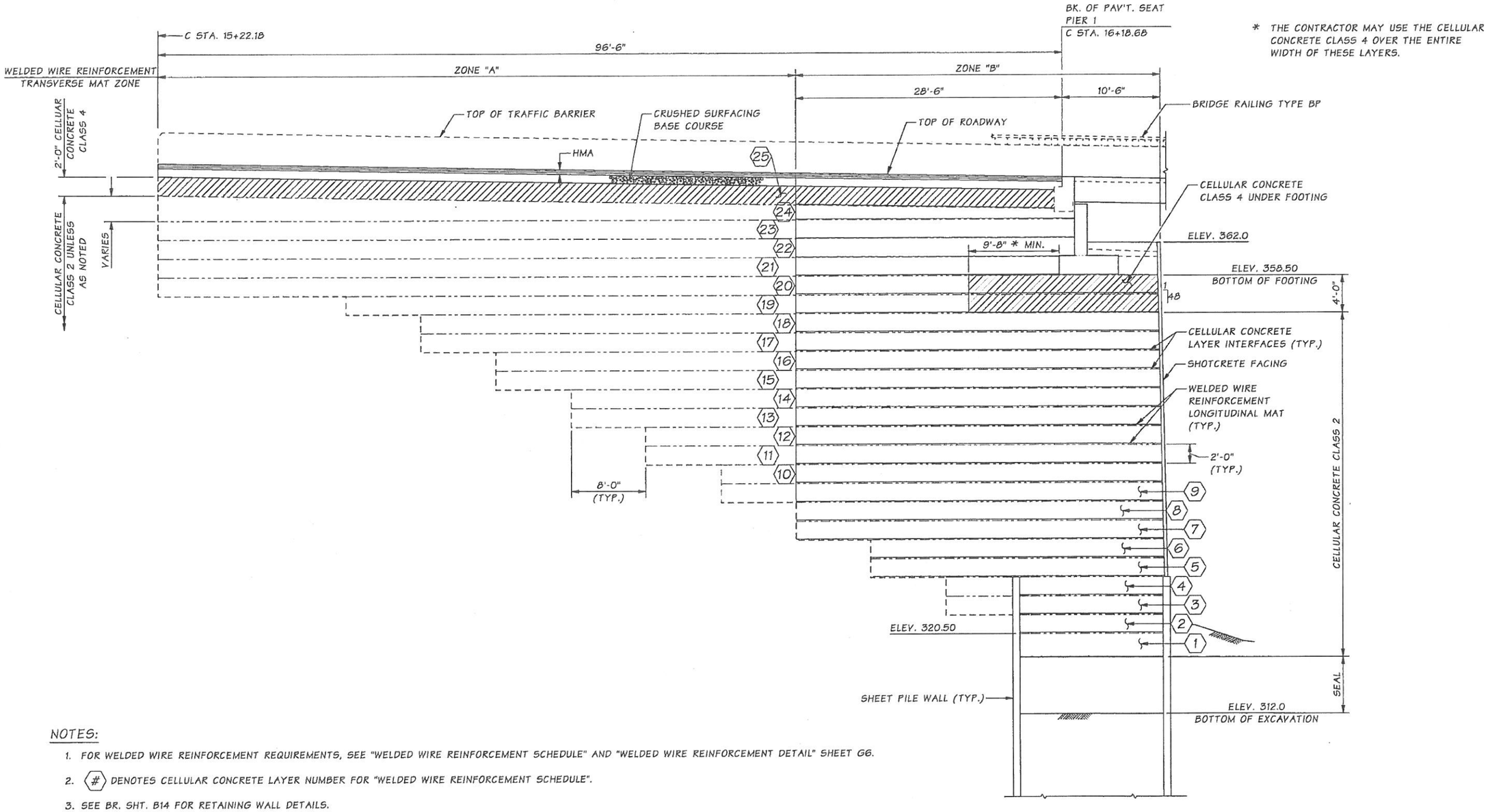
Washington State Department of Transportation

SR 542
ANDERSON CREEK CULVERT

CELLULAR CONCRETE RETAINING WALL DETAILS 1 OF 7

SHEET NO. G1

SHEET 106 OF 136 SHEETS



* THE CONTRACTOR MAY USE THE CELLULAR CONCRETE CLASS 4 OVER THE ENTIRE WIDTH OF THESE LAYERS.

NOTES:

1. FOR WELDED WIRE REINFORCEMENT REQUIREMENTS, SEE "WELDED WIRE REINFORCEMENT SCHEDULE" AND "WELDED WIRE REINFORCEMENT DETAIL" SHEET G6.
2. (#) DENOTES CELLULAR CONCRETE LAYER NUMBER FOR "WELDED WIRE REINFORCEMENT SCHEDULE".
3. SEE BR. SHT. B14 FOR RETAINING WALL DETAILS.
4. SEE SHEET RS3 FOR ROADWAY SECTIONS DETAILS.

SECTION A / G1

WELDED WIRE REINFORCEMENT TRANSVERSE MAT NOT SHOWN.

SR 542 FILE NO. ____ SHEET G2

State Geotechnical Engr. Tony Allen		M:\X-Team\SR 542 ANDERSON CREEK\ANDERSON CREEK GEOTECH\window files\ccw2.wnd				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor Tony Allen						10	WASH.			
Designed By Pete Palmerson	11/14					JOB NUMBER 14A024		STPF - 0542 (038)		
Checked By Tony Allen	12/14					CONTRACT NO.				
Detailed By Bontemps, W	12/14									
Bridge Projects Engr.										
Prelim. Plan By										
Architect/Specialist		DATE	REVISION	BY	APP'D					

Fri Mar 27 11:46:05 2015

PETER JOHN PALMERSON — STATE OF WASHINGTON — PROFESSIONAL ENGINEER — 3/27/15

GEOTECHNICAL OFFICE

Washington State Department of Transportation

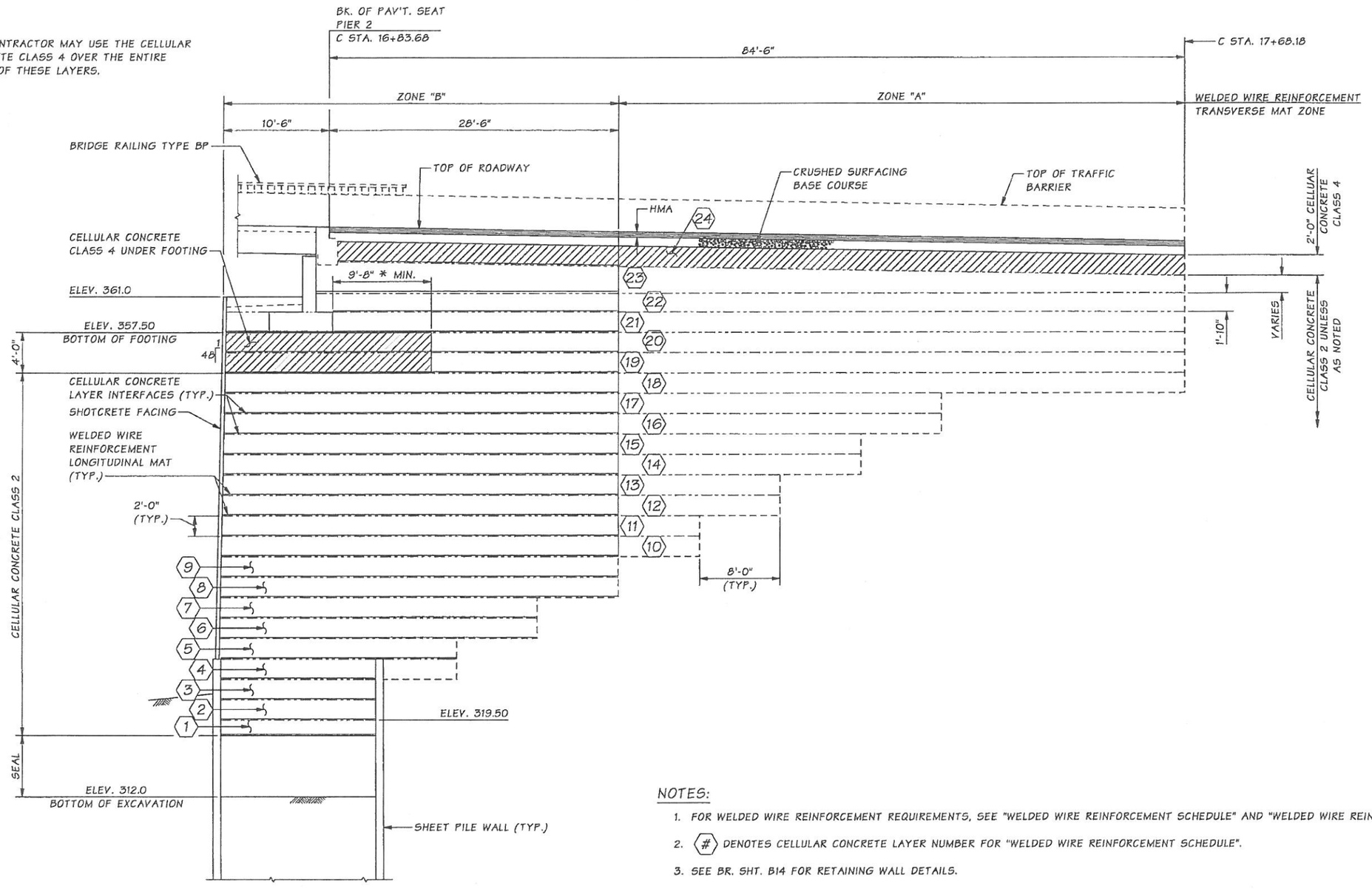
SR 542
ANDERSON CREEK CULVERT

CELLULAR CONCRETE RETAINING WALL DETAILS 2 OF 7

SHEET NO. G2

SHEET 107 OF 136 SHEETS

* THE CONTRACTOR MAY USE THE CELLULAR CONCRETE CLASS 4 OVER THE ENTIRE WIDTH OF THESE LAYERS.



SECTION B / G1

WELDED WIRE REINFORCEMENT TRANSVERSE MAT NOT SHOWN.

NOTES:

1. FOR WELDED WIRE REINFORCEMENT REQUIREMENTS, SEE "WELDED WIRE REINFORCEMENT SCHEDULE" AND "WELDED WIRE REINFORCEMENT DETAIL" SHEET G6.
2. (#) DENOTES CELLULAR CONCRETE LAYER NUMBER FOR "WELDED WIRE REINFORCEMENT SCHEDULE".
3. SEE BR. SHT. B14 FOR RETAINING WALL DETAILS.
4. SEE SHEET DR1 FOR DRAINAGE PLAN.
5. SEE SHEET DP1 FOR DRAINAGE PROFILE.
6. SEE SHEET RS3 FOR ROADWAY SECTIONS DETAILS.

SR 542 FILE NO. ____ SHEET G3

State Geotechnical Engr.	Tony Allen		M:\X-Team\SR 542 ANDERSON CREEK\ANDERSON CREEK GEOTECH\window files\CCW3.wnd			REGION NO	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Tony Allen					10	WASH.			
Designed By	Pete Palmerson	11/14				JOB NUMBER 14A024		STPF - 0542 (038)		
Checked By	Tony Allen	12/14				CONTRACT NO.				
Detailed By	Bontemps, W	12/14								
Bridge Projects Engr.										
Prelim. Plan By										
Architect/Specialist			DATE	REVISION	BY	APPD				

Fri Mar 27 11:46:07 2015

ROGER JOHN PALMERSON — STATE OF WASHINGTON — 41745 — REGISTERED PROFESSIONAL ENGINEER

GEOTECHNICAL OFFICE

3/27/15

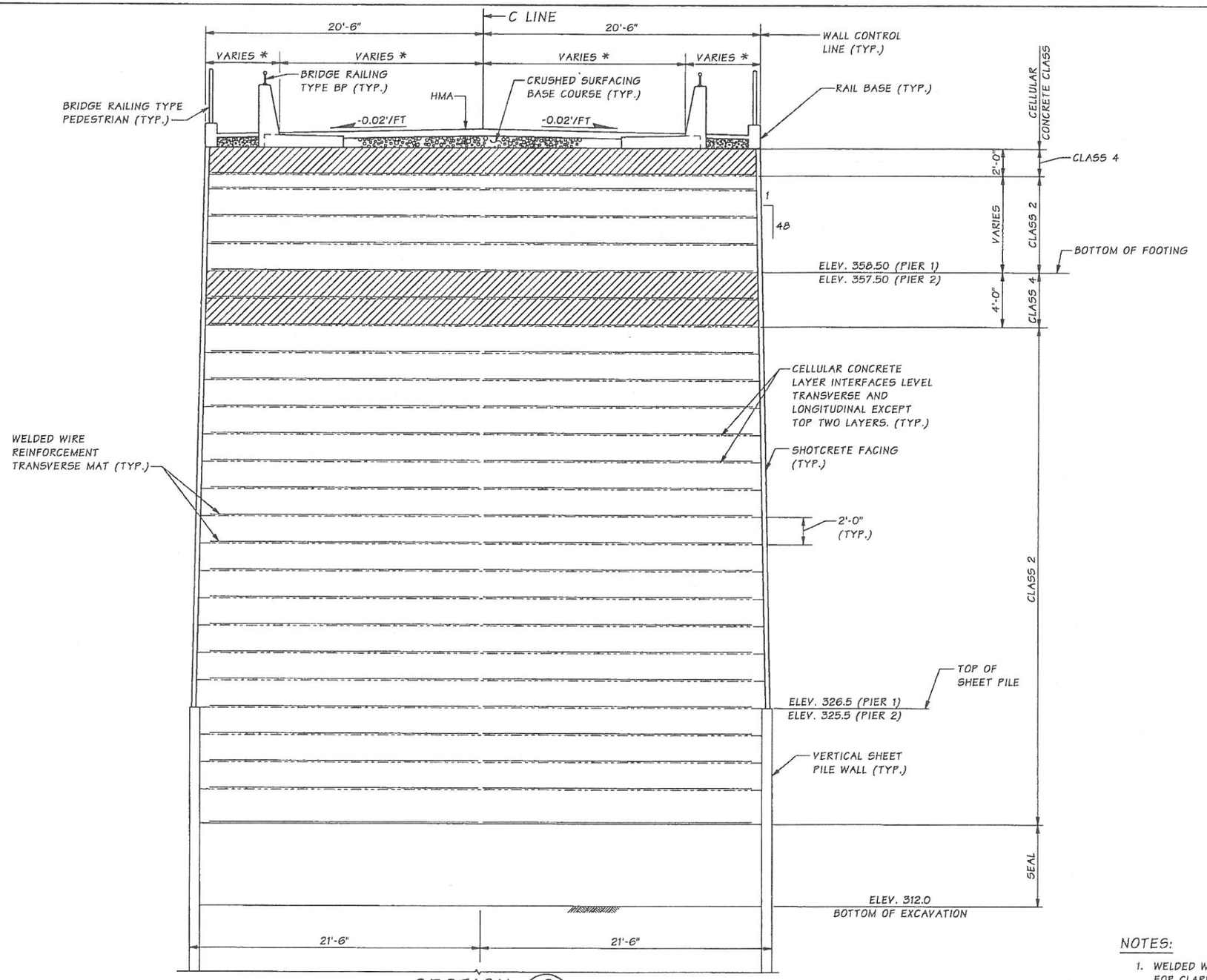
Washington State Department of Transportation

SR 542
ANDERSON CREEK CULVERT

CELLULAR CONCRETE RETAINING WALL DETAILS 3 OF 7

SHEET NO. G3

SHEET 108 OF 136 SHEETS



SECTION C
SHOWN NEAR PIER 1, PIER 2 SIMILAR G1

* SEE SHEET PV2 FOR DETAILS.
WELDED WIRE REINFORCEMENT LONGITUDINAL MAT NOT SHOWN.

NOTES:

1. WELDED WIRE REINFORCEMENT NOT SHOWN FOR CLARITY. SEE "WELDED WIRE REINFORCEMENT SCHEDULE" AND "WELDED WIRE REINFORCEMENT DETAIL" SHT. G6.

SR 542 FILE NO. ____ SHEET G4

State Geotechnical Engr	Tony Allen		M:\X-Team\SR 542 ANDERSON CREEK\ANDERSON CREEK GEOTECH\window files\CCW4.wnd				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Tony Allen						10	WASH.	STPF - 0542 (038)		
Designed By	Pete Palmerson	11/14					JOB NUMBER 14A024				
Checked By	Tony Allen	12/14					CONTRACT NO.				
Detailed By	Bontemps, W	12/14									
Bridge Projects Engr.											
Prelim. Plan By											
Architect/Specialist			DATE	REVISION	BY	APP'D					

Fri Mar 27 11:46:10 2015

PETER JOHN PALMERSON — STATE OF WASHINGTON — 21745 — REGISTERED PROFESSIONAL ENGINEER
3/27/15

GEOTECHNICAL OFFICE

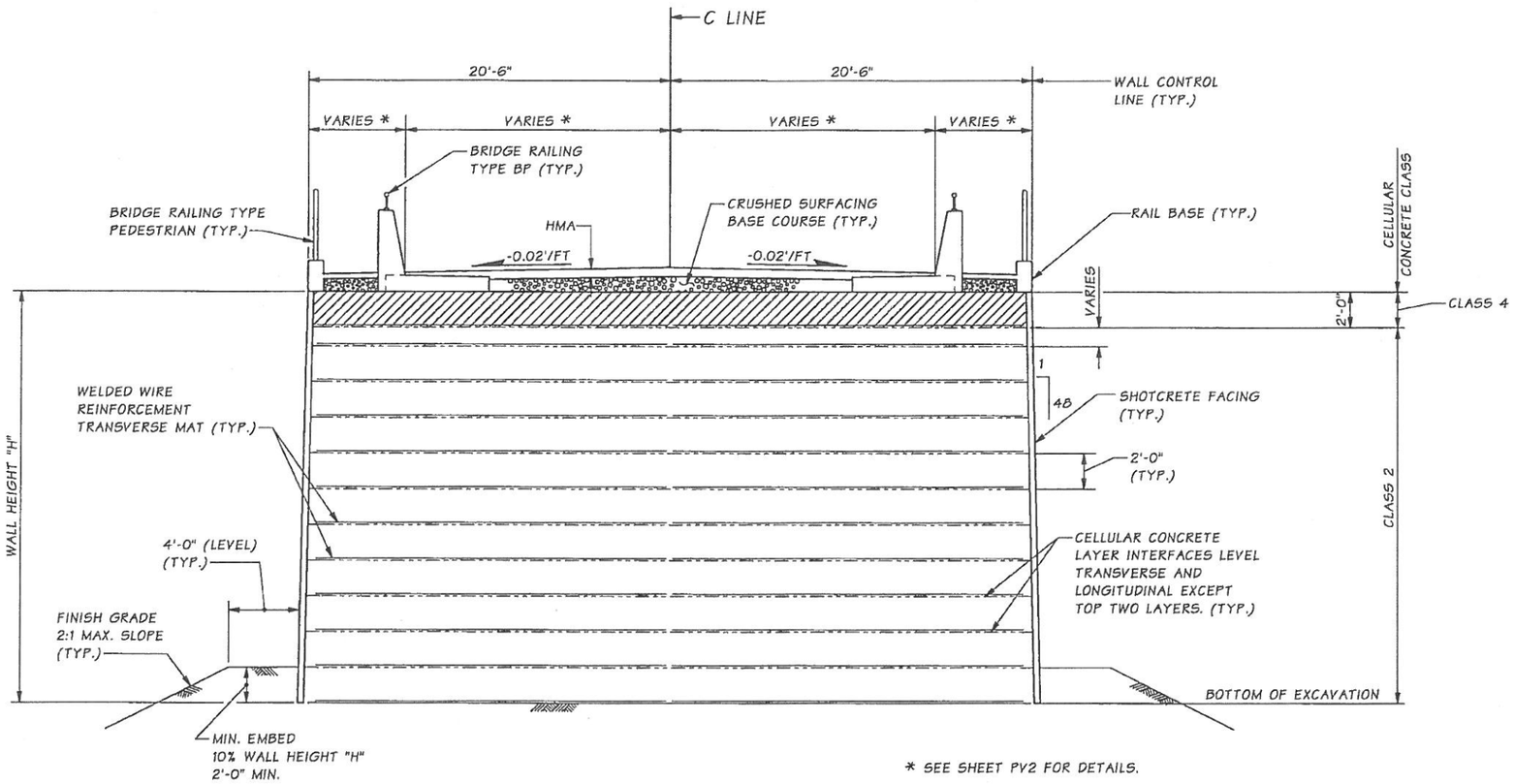
Washington State Department of Transportation

SR 542
ANDERSON CREEK CULVERT

SHEET NO. G4

CELLULAR CONCRETE RETAINING WALL DETAILS 4 OF 7

SHEET 109 OF 136 SHEETS



* SEE SHEET PV2 FOR DETAILS.

SECTION D / G1

SHOWN NEAR PIER 1
PIER 2 SIMILAR

NOTES:

1. WELDED WIRE REINFORCEMENT NOT SHOWN FOR CLARITY. SEE "WELDED WIRE REINFORCEMENT SCHEDULE" AND "WELDED WIRE REINFORCEMENT DETAIL" SHT. G6.

SR 542 FILE NO. ____ SHEET G5

State Geotechnical Engr. Tony Allen			M:\X-Team\SR 542 ANDERSON CREEK\ANDERSON CREEK GEOTECH\window files\CCW5.wmd				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Tony Allen						10	WASH.	STPF - 0542 (038)		
Designed By	Pete Palmerson	11/14					JOB NUMBER 14A024				
Checked By	Tony Allen	12/14					CONTRACT NO.				
Detailed By	Bontemps, W	12/14									
Bridge Projects Engr.											
Prelim. Plan By											
Architect/Specialist			DATE	REVISION	BY	APP'D					

Fri Mar 27 11:46:12 2015

PORTER JOHN PALMERSON REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON 37746

GEOTECHNICAL OFFICE 3/27/15

Washington State Department of Transportation

SR 542
ANDERSON CREEK CULVERT

CELLULAR CONCRETE RETAINING WALL DETAILS 5 OF 7

SHEET NO. G5

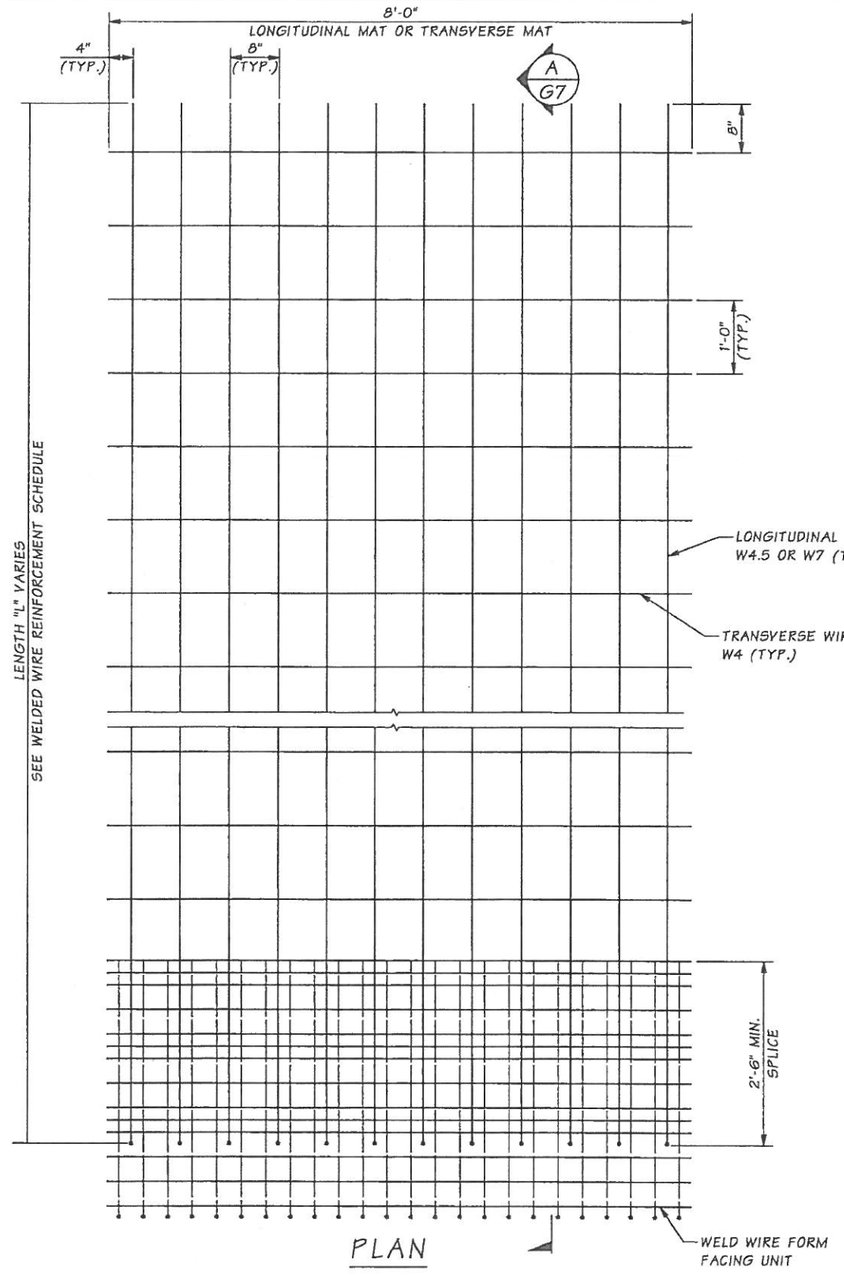
SHEET 110 OF 136 SHEETS

WELDED WIRE REINFORCEMENT SCHEDULE

PIER	LOCATION	CELLULAR CONCRETE LAYER	STYLE	LENGTH "L"
1	LONGITUDINAL MAT	1 THRU 4	8 x 12 - W4.5 x W4	15'-0"
		5 & 6	8 x 12 - W4.5 x W4	31'-0"
		7 THRU 17	8 x 12 - W4.5 x W4	39'-0"
		18, 19 & 20	8 x 12 - W7 x W4	39'-0"
		21, 22, 23, 24 & 25	8 x 12 - W4.5 x W4	25'-0"
	TRANSVERSE MAT	ALL EXCEPT LAYERS 18, 19 & 20 ZONE "B"	8 x 12 - W4.5 x W4	20'-0"
		LAYERS 18, 19 & 20 ZONE "B"	8 x 12 - W7 x W4	20'-0"
2	LONGITUDINAL MAT	1 THRU 4	8 x 12 - W4.5 x W4	15'-0"
		5	8 x 12 - W4.5 x W4	23'-0"
		6 & 7	8 x 12 - W4.5 x W4	31'-0"
		8 THRU 17	8 x 12 - W4.5 x W4	39'-0"
		18, 19 & 20	8 x 12 - W7 x W4	39'-0"
		21, 22, 23, & 24	8 x 12 - W4.5 x W4	25'-0"
	TRANSVERSE MAT	ALL EXCEPT LAYERS 18, 19 & 20 ZONE "B"	8 x 12 - W4.5 x W4	20'-0"
		LAYERS 18, 19 & 20 ZONE "B"	8 x 12 - W7 x W4	20'-0"

NOTES:

1. PLACE LONGITUDINAL WIRES OF LONGITUDINAL MAT PARALLEL TO CENTERLINE OF ROADWAY.
2. PLACE LONGITUDINAL WIRES OF TRANSVERSE MAT NORMAL TO CENTERLINE OF ROADWAY.
3. WELDED WIRE REINFORCEMENT FOR BOTH LONGITUDINAL MATS AND TRANSVERSE MATS SHALL CONFORM TO AASHTO M 55.
4. LONGITUDINAL MATS AND TRANSVERSE MATS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A 641 OR AASHTO M 111 AS APPLICABLE. MINIMUM COATING THICKNESS SHALL BE TWO OUNCES PER SQUARE FOOT AND EQUIVALENT. ALL DAMAGE TO THE GALVANIZING SHALL BE REPAIRED WITH ONE COAT OF PAINT CONFORMING TO STD. SPEC. SECTION 9-08.1(2) B.
5. LONGITUDINAL MATS AND TRANSVERSE MATS SHALL HAVE 90° BEND EXCEPT IN THE AREA ENCLOSED BY THE STEEL SHEET PILES WHERE NO BEND IS NECESSARY (SEE BR. SHT. G7 FOR DETAILS).
6. THE CONTRACTOR SHALL TRIM WELDED WIRE REINFORCEMENT INTERFERE WITH CATCH BASIN (MAX. 4 LONGITUDINAL WIRES). CUTTING OF THE LONGITUDINAL WIRE SHALL BE ALLOWED ONLY AS DIRECTED BY THE ENGINEER AT OTHER LOCATIONS.



PLAN

NOTES:

1. FOR WELDED WIRE FORM FACING UNIT DETAILS SEE SHEET G7.

WELDED WIRE REINFORCEMENT DETAIL

CONSTR. GEOTEXTILE NOT SHOWN FOR CLARITY.

SR 542 FILE NO. ____ SHEET G6

State Geotechnical Engr. Tony Allen			M:\X-Team\SR 542 ANDERSON CREEK\ANDERSON CREEK GEOTECH\window files\CCW6.wnd				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Tony Allen						10	WASH.	STPF - 0542 (058)		
Designed By	Pete Palmerson	11/14					JOB NUMBER 14A024				
Checked By	Tony Allen	12/14					CONTRACT NO.				
Detailed By	Bontemps, W	12/14									
Bridge Projects Engr.											
Prelim. Plan By											
Architect/Specialist			DATE	REVISION	BY	APP'D					

Fri Mar 27 11:46:13 2015

PETER JOHN PALMERSON — 41746 — REGISTERED PROFESSIONAL ENGINEER — 3/27/15

GEOTECHNICAL OFFICE

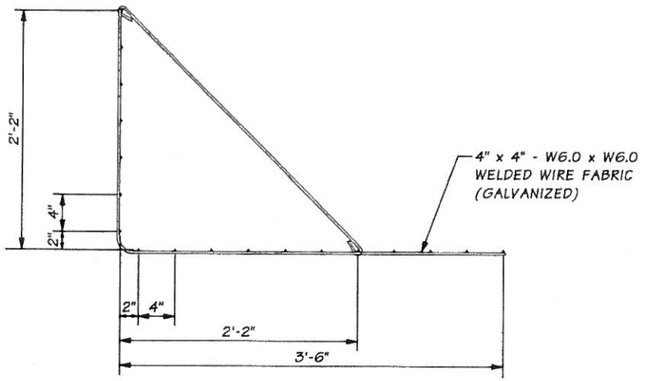
Washington State Department of Transportation

SR 542
ANDERSON CREEK CULVERT

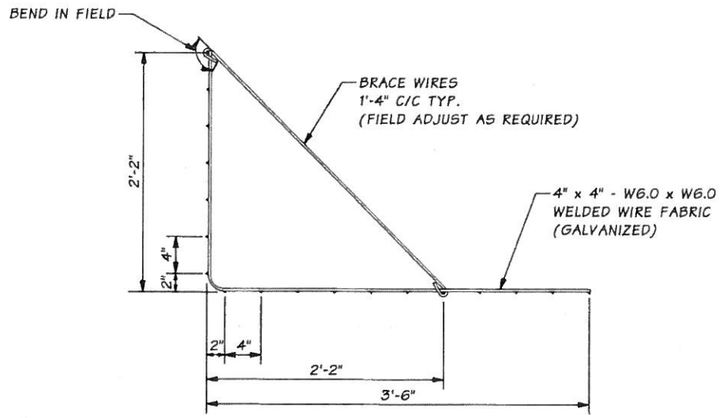
CELLULAR CONCRETE RETAINING WALL DETAILS 6 OF 7

SHEET NO. G6

SHEET 111 OF 136 SHEETS

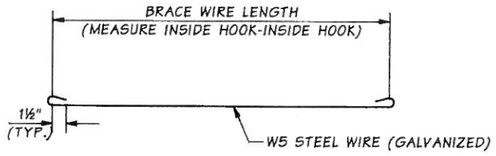


TYPE 2

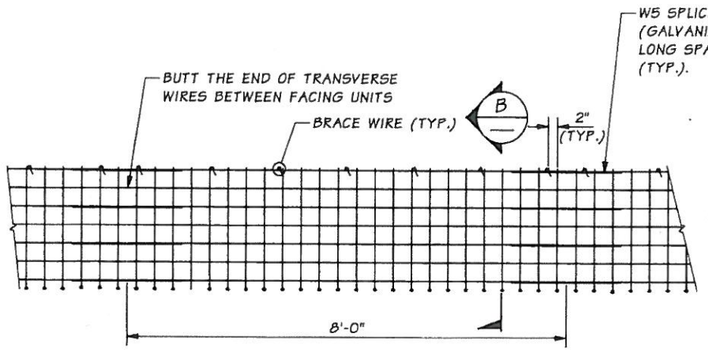


TYPE 1

SECTION B



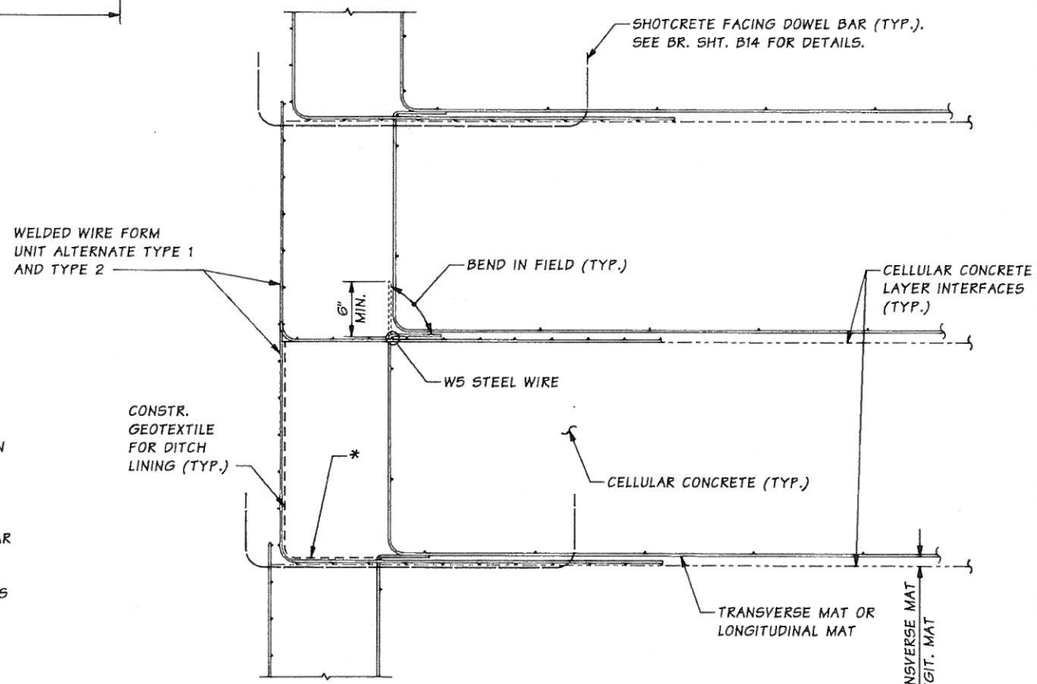
BRACE WIRE DETAIL



ELEVATION
WELDED WIRE FORM FACING UNIT

NOTES:

1. THE WELDED WIRE FORM FACING UNIT HAS BEEN DESIGNED TO SUPPORT 2 FOOT LIFTS OF CELLULAR CONCRETE. THIS FORM FACING UNIT SYSTEM IS A PROPOSED SYSTEM. THE CONTRACTOR MAY PROPOSE AN ALTERNATE SYSTEM AS REQUIRED TO CONTAIN THE CELLULAR CONCRETE FOR PLACEMENT.
2. WELDED WIRE FORM FACING UNITS, BRACE WIRES AND SPLICE WIRES SHALL CONFORM TO AASHTO M 55.
3. GALVANIZING SHALL BE IN ACCORDANCE WITH ASTM A 641 OR AASHTO M 111 AS APPLICABLE. MINIMUM COATING THICKNESS SHALL BE TWO OUNCES PER SQUARE FOOT AND EQUIVALENT. ALL DAMAGE TO THE GALVANIZING SHALL BE REPAIRED WITH ONE COAT OF PAINT CONFORMING TO STD. SPEC. SECTION 9-08.1(2) B.
4. CONSTRUCTION GEOTEXTILE FOR DITCH LINING SHALL CONFORM TO THE PROPERTIES IN TABLE 4 WOVEN DITCH LINING IN STD. SPEC. SECTION 9-33.
5. SPLICE WIRES SHALL BE USED BETWEEN FACING UNITS AT EDGES AND CORNERS.



* LINING TO EXTEND A MINIMUM OF 6" BEYOND THE BEND.

SECTION A G6
BRACE WIRE AND SHOTCRETE FACING NOT SHOWN

SR 542 FILE NO. ____ SHEET G7

Bridge Design Engr.	Khaleghi, B		M:\X-Team\SR 542 ANDERSON CREEK\ANDERSON CREEK GEOTECH\STRUCTURE\window files\CCW7.wnd				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Stoddard, RB						10	WASH.			
Designed By	Lee, CS	12/14					JOB NUMBER		STPF - 0542 (038)		
Checked By	Mizumori, A	02/15									
Detailed By	Bontemps, W	12/14					CONTRACT NO.				
Bridge Projects Engr.											
Prelim. Plan By											
Architect/Specialist			DATE	REVISION	BY	APP'D					

Fri Mar 27 11:46:15 2015

BRIDGE AND STRUCTURES OFFICE

Washington State Department of Transportation

SR 542
ANDERSON CREEK BRIDGE

CELLULAR CONCRETE RETAINING WALL DETAILS 7 OF 7

BRIDGE SHEET NO. G7
SHEET 112 OF 136 SHEETS