



Contract Number 009516	Contract Title Bagley and Siebert Creeks – Remove Fish Barriers	Federal Aid Number NHPP-0101(361)
Change Order Number 010	Change Description CDSM Deletion	Date August 12, 2020
Region Olympic Region	Project Engineer Dan McKernan	Phone Number 360-565-0620
Prime Contractor / Design-Builder Scarsella Bros.		

- Ordered by Engineer under the terms of Section 1-04.4 of the Standard Specifications or the RFP
- Change proposed by Contractor / Design-Builder

Evolution & Description Of Change

This change order is being prepared to address the issues that arose with the Cement Deep Soil Mixing (CDSM) work.

The Contract requires CDSM panels to be installed at the Siebert Creek site, Plan Sheet 304 – 305 and Special Provision “Cement Deep Soil Mixing (CDSM)” pages 131-144.

7/23/2020, Condon Johnson & Associates (CJA), the subcontractor in charge of the CDSM work, began work on the CDSM Test Panels. The auger impacted obstructions halfway to the target depth at three locations and was damaged. According to CJA, “the soil conditions at the project site are not amenable to soil mixing methods.” CJA requested additional subsurface investigations and reserved the right to compensation for change of conditions before they were willing to continue the CDSM work. CJA began work on the Bagley Creek bridge piers while waiting for a response to this request.

7/28/2020, a meeting was held with WSDOT Geotech, WSDOT HQ Construction, WSDOT OR Construction, The PAPEO, Scarsella Brothers (The Prime), and CJA. At this meeting WSDOT conceded that there were more cobbles and boulders than one would have anticipated by reviewing the boring logs. In addition, due to the sandy soils, the cobbles fell out of suspension and congregated in the bottom of the hole to the point of seizing the soil mixing paddles. The combination of additional cobbles and boulders with them congregating at the bottom of the hole was determined to be a differing site condition. The discussion led to agreement that the CDSM will be deleted from the Contract and in its place, drilled shafts filled with Controlled Density Fill (CDF) will be installed. WSDOT accepted the responsibility of this change to the Contract with its accompanying redesign.

As a part of this change, WSDOT agreed to compensate the Contractor for mobilization and demobilization of the soil mixing equipment and materials, and all time and materials undertaken in the attempts to complete the first two soil mixing columns.

Distribution: Copy of Change Order Page & Memorandum Page w/Backup - Project Engineer  
 Copy of ONLY Change Order Page - Prime Contractor / Design-Builder  
 Copy of Change Order Page & Memorandum Page w/o Backup - Region Construction Office  
 Original of Change Order Page & Memorandum Page w/Checklist and Approval Documentation - State Construction Office

## Change Record

Contract Number 009516	Contract Title Bagley and Siebert Creeks – Remove Fish Barrier	Change Order Number 010
<p><b>Basis Of Cost &amp; Justification:</b></p> <p>During the meeting held on 7/28/2020 WSDOT acknowledged the proposed design of CDSM was not appropriate for the site conditions. Site Conditions were different than one would assume upon review of the boring logs and the soil and cobbles behaved differently than was anticipated during design. The Contractor is entitled to compensation for the work required to demobilize and remobilize equipment and material as a result of the change from CDSM to Drilled Shafts with Control Density Fill (CDF) and incidentals that accrued when the Contractor performed the CDSM work as outlined in the contract. In addition, new pay items will be established for the revised soil stabilization shaft work. This compensation will be broken into two separate bid items, “Soil Stabilization Shafts”, L.F. for the revised work and “Deep Soil Mixing Test Panel”. lump sum which will cover the costs for attempting to perform the soil mixing work in accordance with the contract. Any obstructions that need to be removed during the Soil Stabilization Shaft work will be accounted for with a new force account item, “Removing Soil Stabilization Shaft Obstructions”.</p> <p>7/29/2020, The PAPEO requested The Prime provide a cost for the Change Order while The PAPEO conducted its own independent estimate.</p> <p>8/11/2020, The Prime submitted pricing for the revised work totaling \$2,540,681.61. This includes the Soil Stabilization Shaft construction at \$679.23/L.F. and their cost at attempting to install the Deep Soil Mixing. The Engineer’s Independent Estimate for this same work is \$2,551,493.07. The Contractor’s price is less than the Engineer’s estimate therefore it’s reasonable.</p> <p>The total cost of the change order will be the contractor’s price minus the contract price for Cement Deep Soil Mixing which is \$581,760.</p> <p>Total cost of the change order will be \$1,958,921.61.</p>		
<p><b>Contract Time:</b></p> <p>Contract time will not be impacted by this change order.</p>		
<p><b>Prior Approvals</b></p> <p>8/17/2020, Jon Deffenbacher, State Deputy Construction Engineer, approved the change and gave approval to proceed prior to execution. On 8/18/2020 Brenden Clarke (OR Construction) approved the change and on 8/19/2020 Dan McKernan approved the change.</p> <p>Due to the change order exceeding \$1,000,000 dollars Jon Deffenbacher, the State Deputy Construction Engineer was required to approve the change.</p>		
<p><b>List Attachments</b></p> <p>9516 CO#10 9516 CO#10 Change Order Checklist</p> <ul style="list-style-type: none"><li>A) CO#10 Approvals</li><li>B) CO#10 EIE</li></ul>		

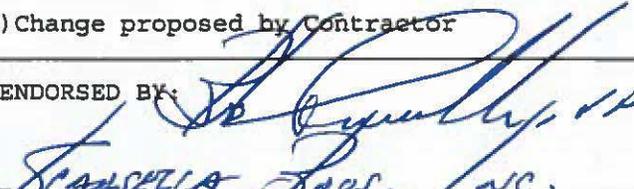
WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION  
CHANGE ORDER

DATE: 09/02/20  
PAGE 1 of 6

CONTRACT NO: 009516 FEDERAL AID NO: NHPP-0101(361)  
CONTRACT TITLE: BAGLEY AND SIEBERT CREEKS-REMOVE FISH BARRIERS  
CHANGE ORDER NO: 10 CDSM DELETION

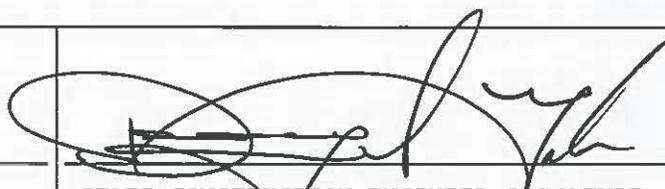
PRIME CONTRACTOR: [REDACTED] SCARSELLA BROS., INC.  
8404 S 196TH ST  
KENT WA 98031-1884 WA 98168-0697  
SEATTLE

(X) Ordered by Engineer under the terms of Section 1-04.4 of the Standard Specifications  
( ) Change proposed by Contractor

ENDORSED BY:  SCARSELLA Bros., Inc. CONTRACTOR SIGNATURE DATE: <u>Sept. 3, 2020</u>	SURETY CONSENT:  ATTORNEY IN FACT  DATE
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ORIGINAL CONTRACT AMOUNT: 22,329,329.29  
CURRENT CONTRACT AMOUNT: 22,367,254.31  
ESTIMATED NET CHANGE THIS ORDER: 1,958,921.61  
ESTIMATED CONTRACT TOTAL AFTER CHANGE: 24,326,175.92

Signature Required:  Project Engineer  State Construction Engineer  
 Regional Administrator  Other Agency

 PROJECT ENGINEER SIGNATURE DATE: <u>9/15/20</u>	 STATE CONSTRUCTION ENGINEER SIGNATURE DATE: <u>SEPTEMBER 17, 2020</u>
 REGIONAL ADMINISTRATOR SIGNATURE DATE: <u>9/17/20</u>	OTHER APPROVAL WHEN REQUIRED  SIGNATURE _____ DATE _____ REPRESENTING _____

CONTRACT NO: 009516

CHANGE ORDER NO: 10

All work, materials, and measurements to be in accordance with the provisions of the Standard Specifications and Special Provisions for the type of construction involved.

This contract is revised as follows:

**Description:**

The Contractor shall install 4.9 foot diameter Soil Stabilization Shafts in lieu of the specified Cement Deep Soil Mixing (CDSM). Soil Stabilization Shafts shall be installed per the details on pages 5 and 6 of this change order.

**Material Requirements:**

Soil Stabilization Shafts shall be constructed with unreinforced Controlled Density Fill (CDF) meeting the requirements of Section 2-09.3(1)E with the following exceptions:

- The minimum compressive strength at 28 days is revised to be 250 PSI.
- The maximum replacement of Ground Granulated Blast Furnace Slag for Portland Cement shall be 50%.
- There will be no maximum replacement of Flyash for Portland Cement; however there needs to be enough Portland Cement in the mix to ensure compressive strength of 250 psi at 28-days.
- An alternative to WSDOT Form 350-040 may be used for the CDF mix design submittal.
- There will be no aggregate gradation requirements for the CDF.

**Construction Requirements:**

Soil stabilization shaft construction shall utilize temporary casing and shall be in accordance with Section 6-19 and considering the following:

- Nondestructive testing of Soil Stabilization Shafts as specified in Section 6-19.3(1)B will not be required.
- The Soil Stabilization Shaft work is covered in the previously submitted Shaft Construction Submittal and a separate submittal per Section 6-19.3(2) will not be required.
- Cleanout of the bottom of the Soil Stabilization Shafts as specified in Section 6-19.3(3)D will not be required.
- The equipment and procedure for installation of Soil Stabilization Shafts shall be able to penetrate through the previously installed CDSM Panel 13 and deal with the expected cobbles and boulders. If encountered, shaft obstructions as defined in Section 6-19.3(3)E will be addressed under the new item "Removing Soil Stabilization Shaft Obstruction." The equipment and procedure shall also be able to penetrate through adjacent soil Stabilization Shafts to achieve the required overlap detailed on page 5 of this change order.
- Protection of fresh and curing concrete as specified in Section 6-19.3(7)G will not be required.

**Measurement:**

"Soil Stabilization Shaft" will be measured by the linear foot. The linear foot measurement will be calculated using the top of shaft elevation and the bottom of shaft elevation for each shaft as defined on page 5 and 6 of this change order.

**Payment:**

Payment will be made for the following:

"Soil Stabilization Shaft", per Linear Foot.

The unit price per linear foot for "Soil Stabilization Shaft." shall be full pay for performing the work as specified, including:

1. All shaft excavation including the disposal of all excavated material.
2. Furnishing and placing temporary shaft casing including all costs in connection with completely removing the casing after completing the shaft construction.

WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION  
CHANGE ORDER

DATE: 09/02/20  
PAGE 3 of 6

CONTRACT NO: 009516

CHANGE ORDER NO: 10

3. Furnishing and placing CDF to the top of the shaft as shown on page 5 of this change order.

"Removing Soil Stabilization Shaft Obstruction", estimated.

Payment for "Removing Soil Stabilization Shaft Obstruction will be as specified in Section 6-19.5 for "Removing Shaft Obstruction."

"Deep Soil Mixing Test Panel", per lump sum.

The lump sum price for Deep Soil Mixing Test Panel shall be full compensation for all costs incurred in the attempted installation of the CDSM test panel.

Item 23, "CDSM Panel", is deleted in its entirety.

Contract Time:

Contract time is not affected by this change order.

WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION  
CHANGE ORDER

DATE:09/02/20  
PAGE 4 of 6

CONTRACT NO:009516

CHANGE ORDER NO: 10

ITEM NO	GROUP NO	STD ITEM	UNIT OF MEASURE	UNIT PRICE	EST QTY CHANGE	EST AMT CHANGE
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ITEM DESCRIPTION:	CDSM PANEL					
0023 03	C.Y.			240.00	-2,424.00	-581,760.00

ITEM DESCRIPTION:	REMOVING SOIL STABILIZATION SHAFT OBSTRUC					
199 <del>1010</del> 03	EST.			0.00	0.00	1.00

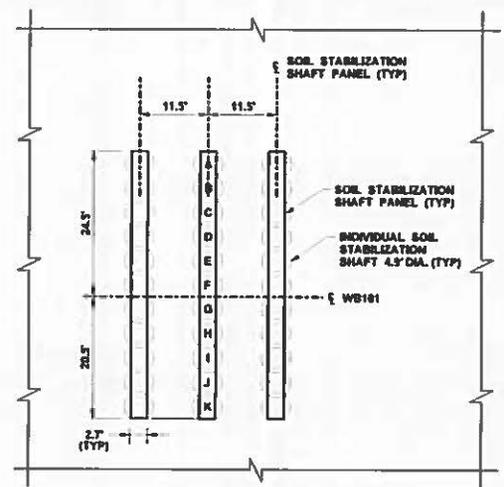
ITEM DESCRIPTION:	SOIL STABILIZATION SHAFT					
200 <del>1011</del> 03	L.F.			679.23	3,461.00	2,350,815.03

ITEM DESCRIPTION:	DEEP SOIL MIXING TEST PANEL					
201 <del>1012</del> 03	L.S.			0.00	0.00	189,865.58

AMOUNT TOTAL

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1,958,921.61  
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FILE NAME: Q:\3 Construction Projects\0516 US 101 Bagley and Siebert Creek Change Order\0419 - CD&M Change of Conditional\Backup\CADD\XL4678 SOIL STABILIZATION SHAFT PANELS 081.dwg  
 TIME: 10:01:15 AM  
 DATE: 8/19/2020  
 PLOTTED BY: HENDRIK  
 DESIGNED BY: M. ANDERSON  
 ENTERED BY: T. HENNING  
 CHECKED BY: D. McKERNAN  
 PROJ. ENGR.: D. McKERNAN  
 REGIONAL ADM.: J. WYMAN

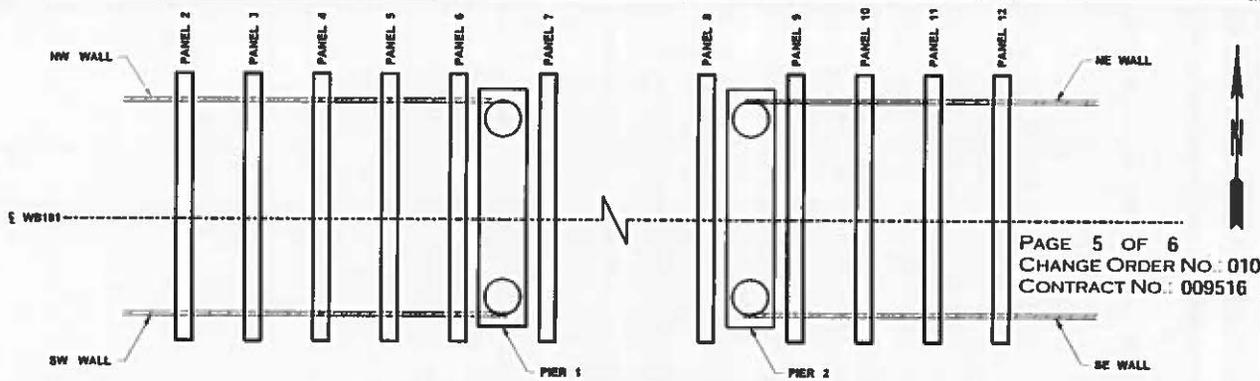


**SOIL STABILIZATION SHAFT PANEL SYSTEM PLAN**  
NOT TO SCALE

SOIL STABILIZATION SHAFT PANEL SCHEDULE			
PANEL	CENTER LINE STATION WB101	BOTTOM ELEV.	SOIL STABILIZATION SHAFT QUANTITY (L.F.)
PANEL 2	STA. WB 101 182+45.17	228' (NOTE 2,4)	243
PANEL 3	STA. WB 101 182+56.67	227' (NOTE 2,4)	244
PANEL 4	STA. WB 101 182+68.17	226' (NOTE 2,4)	237
PANEL 5	STA. WB 101 182+79.67	224' (NOTE 2,4)	231
PANEL 6	STA. WB 101 182+91.17	219' (NOTE 3)	271
PANEL 7	STA. WB 101 183+05.17	217' (NOTE 3)	301
PANEL 8	STA. WB 101 184+62.83	198' (NOTE 3)	554
PANEL 9	STA. WB 101 184+77.83	201' (NOTE 3)	515
PANEL 10	STA. WB 101 184+89.33	214' (NOTE 2,4)	293
PANEL 11	STA. WB 101 185+00.83	217' (NOTE 2,4)	296
PANEL 12	STA. WB 101 185+12.33	226' (NOTE 2,4)	276

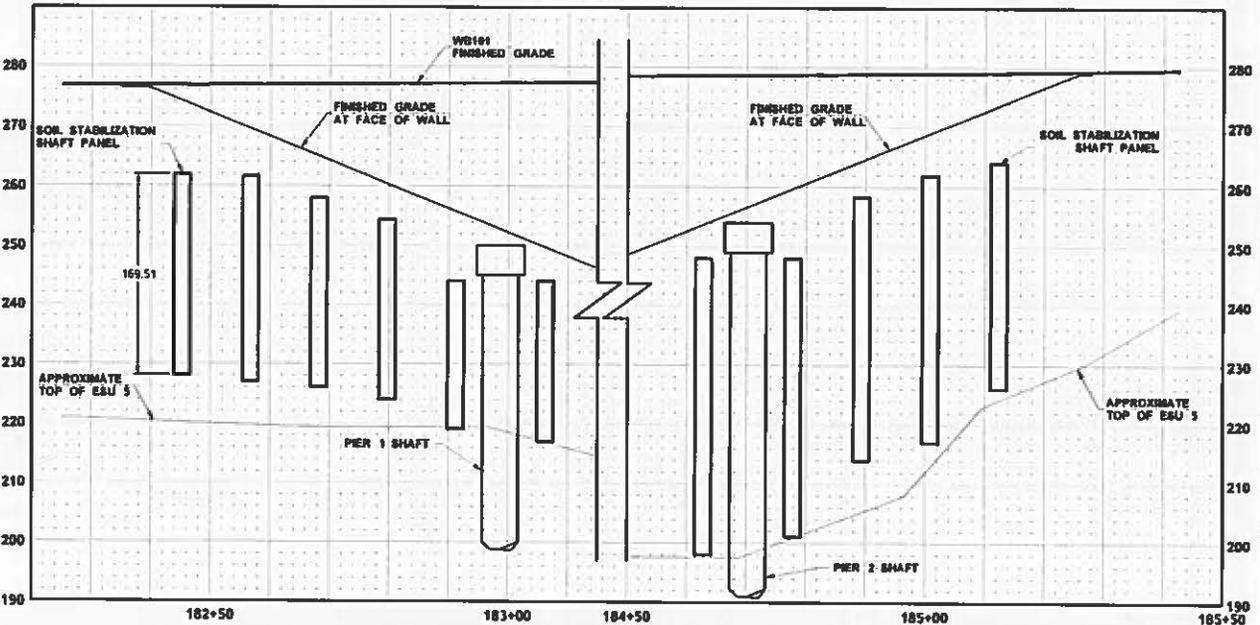
**NOTES:**

- SEE STANDARD SPECIFICATIONS 6-19 AND CHANGE ORDER TEXT FOR CONSTRUCTION REQUIREMENTS.
- BOTTOM ELEVATION OF SHAFTS A, F AND K SHALL BE AS SHOWN ON THE SOIL STABILIZATION SHAFT PANEL SCHEDULE UNLESS TOP OF ESU-5 IS HIGHER.
- APPROXIMATE ELEVATION IS SHOWN. BOTTOM OF ALL SHAFTS SHALL EXTEND TO THE TOP OF ESU-5.
- SEE SHEET 517-S FOR REQUIRED DEPTHS OF SHAFTS @ C, D, E, G, H, I AND J FOR PANELS 2, 3, 4, 5, 10, 11 AND 12.
- SOIL STABILIZATION PANEL TOP ELEVATION SHALL MEET REQUIREMENTS FOR DIMENSIONS SHOWN ON SHEET 512-S.



**SOIL STABILIZATION SHAFT PANEL PLAN**  
NOT TO SCALE

PAGE 5 OF 6  
CHANGE ORDER NO.: 010  
CONTRACT NO.: 009516



**SOIL STABILIZATION SHAFT PANEL PROFILE**

FILE NAME: Q:\3 Construction Projects\0516 US 101 Bagley and Siebert Creek Change Order\0419 - CD&M Change of Conditional\Backup\CADD\XL4678 SOIL STABILIZATION SHAFT PANELS 081.dwg TIME: 10:01:15 AM DATE: 8/19/2020 PLOTTED BY: HENDRIK DESIGNED BY: M. ANDERSON ENTERED BY: T. HENNING CHECKED BY: D. McKERNAN PROJ. ENGR.: D. McKERNAN REGIONAL ADM.: J. WYMAN				FEDERAL PROJ. NO. 18C541 CONTRACT NO.		LOCATION NO. XL4678		WASHINGTON STATE DEPARTMENT OF TRANSPORTATION		US 101 SIEBERT CREEK US 101 BAGLEY AND SIEBERT CREEKS REMOVE FISH BARRIERS SOIL STABILIZATION SHAFT PANELS		PLAN REF NO. ST1-S SHEET 1 OF 2 08/19/20	
CHANGE ORDER No. 18 REVISION				07/29/2020 DATE BY		P.D. STAMP		P.D. STAMP					

