SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS	CHANGE ORDER JUSTIFICATION	CHANGE ORDER NUMBER
		8
		6/17/2022
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PROJECT:	Index-Galena Road Flood Repair	PROJECT #:	RC1532, RC1774, RR6322
PROJECT ENGINEER:	Sam Chi	FED AID #:	ER-0701 (063)

WRITTEN JUSTIFICATION

1. DESCRIPTION OF CHANGE.

This Change Order provides an equitable adjustment for the added costs associated with replacing temporary casings, casing rings, and fasteners that were stuck and unable to be retrieved due to obstructions encountered during the drilled shaft construction at Pier 2 left shaft.

2. WHAT IS REQUIRED BY CONTRACT? WHY THE CHANGE? (REFERENCE PLAN SHEETS & SPEC SECTIONS.)

The foundation for the new bridge is supported by two drilled shafts at each pier. The contract requires the shafts to be installed to a depth of 72 feet at Pier 1 and 112 feet at Pier 2 according to plan sheet BR04. During concrete pours for drilled shafts, standard procedure is for the temporary casing to be withdrawn from the shaft hole while the concrete is being placed. The temporary casing consists of individual steel cans that vary in length, approximately 20 feet long, and are removed from the excavated hole commensurate with how much concrete is poured in order to prevent voids and/or caving of the excavation wall. On October 22, 2021, during the concrete pour for the left shaft of Pier 2, the temporary casing became stuck after removing the casing up 37 LF above the design tip elevation. The Contractor made multiple attempts to extract the temporary casing without success. To prevent a cold joint in the shaft concrete which could have jeopardized the viability of the entire shaft, the Contractor and the County decided to continue the shaft pour with the casing stuck in the shaft hole. The Contractor was able to excavate down from the existing ground surface to remove the top section of the temporary casing that was not encased in concrete, leaving the remaining 66.5 LF of casing in the ground.

After discussions with the EOR and drilled shaft contractor, it was evident that an obstruction was preventing the temporary casing from being extracted. This was supported by the difficulties experienced during shaft excavation where multiple obstructions (numerous rocks and boulders) were encountered hindering the excavation progress and likely prevented the temporary casing from being removed. On November 2, 2021, SnoCo received concurrence from engineer of record (WSP) and geotechnical engineer of record (Shannon & Wilson) that the as-constructed left shaft at Pier 2, with the temporary casing remaining in place, can be accepted without modification.

On November 11, 2021, the County met with the general contractor (Goodfellow Bros) and drilled shaft contractor (Malcolm) to discuss Malcolm's letter dated November 04, 2021, which asserted that the replacement cost of the temporary casing should be covered under the shaft obstruction clause referenced in Standard Specification 6-19.3(3)E and 6-19.5. During this meeting, the County acknowledged that this was an unusual circumstance and their inability to extract the temporary casing was related to ground conditions encountered during shaft excavation; however, required additional information such as material replacement costs before moving forward with an equitable solution.

3. HOW IS CHANGE ORDER THE SOLUTION?

This change order compensates the contractor for the added costs to replace temporary casing sections and associated hardware that were abandoned during drilled shaft construction due to obstructions.

4. ALTERNATIVE(S) CONSIDERED.

No other alternatives were considered.

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5. REASON FOR ENTITLEMENT AND WHY IT CANNOT BE PAID UNDER EXISTING CONTRACT.

The Contractor is entitled to an equitable adjustment for the unanticipated condition that prevented the temporary casing from being extracted. After reviewing Standard Specification 6-19.3(3)E which deals with Shaft Obstructions, the spec language is ambiguous and does not specifically include or exclude whether a stuck casing falls within the umbrella for shaft obstruction payment by force account. Although Section 6-19.5 allows repairs to a damaged casing by force account, the stuck casing is beyond the scope of a simple repair.

6. APPROVALS: PROJECT MANAGER, TECHNICAL ADVISOR (TRAFFIC, STRUCTURAL), JURISDICTION, OTHER AGENCY.

Standard change order approval (Construction Manager, Engineering Services Director, County Engineer).

7. TIME: INCREASE OR DECREASE WORKING DAYS.

Contract time is not affected by this change.

8. COST: ESTABLISH OR VERIFY INCREASE OR DECREASE. (CONTRACTOR PROPOSAL, ENGINEER'S ESTIMATE, NEGOTIATED, SUPPLIER, BID ITEM, ETC.)

We have reached agreement on an equitable adjustment for this added work. The County received a forwarded letter from Malcolm Drilling dated June 10, 2022, which provided a cost sharing proposal that was partly supported by material and fabrication invoices for the replacement of steel casings and tooling. The invoices totaled $143K and did not capture other added costs, such as effort spent trying to extract the temporary casing, effort to excavate and recover the top casing that extended above the ground, and handling/trucking costs for delivery of the temporary casing materials. The County negotiated a reimbursement amount of $105K (Malcolm $100K + GBI markup $5k), which was based on risk ownership of the unanticipated condition. The County believes if taken to the Disputes Review Board, the outcome would not be favorable and that the actual replacement costs would exceed the negotiated equitable adjustment amount.

ATTACH BACKUP DOCUMENTATION:
Malcolm Letter June 10, 2022, 5 pages

MALCOLM
Look to the Blue

8701 S. 192nd Street | Kent, WA 98031
P: 253.395.3300 | F: 253.395.3312

June 10, 2022

Goodfellow Bros.
Index-Galena RD Flood Repair

Attention: Dennis Diteman

Subject: Pier 2 Lost Temporary Casing Reimbursement Request

Attached below is the letter that was submitted in November of 2021 that stated once final costs were realized for the replacement of the lost temporary casing at Pier 2 they would be submitted for reimbursement. The final costs for casing replacement have been incurred in full therefore Malcolm can now provide those costs to Snohomish County.

This letter being submitted today is to request reimbursement for the temporary casing that was lost at Pier 2.

Following the submittal of the below letter on November 4th, 2021, a meeting was held between Malcolm, Goodfellow and Snohomish County on November 10th. It was determined in that meeting that Malcolm and Snohomish County would share in the cost to replace the temporary casing that was lost at Pier 2. Snohomish County requested backup of the following items prior to agreeing to share in the casing replacement costs.

See below for items that were requested from Malcolm Drilling.

1. **Casing Replacement Costs:**
   - An invoice has been included below from JD Fabricators for the replacement of the casing. This total cost for this item was $72,669.00

2. **Oscillator Ring Replacement Costs:**
   - An invoice has been included below for the purchase of new oscillator rings. The total cost for this item is $70,455.00

3. **Depreciation costs, if any, for oscillator casing:**
   - Temporary reusable oscillator casing is typically not a depreciable item. Malcolm currently owns and still uses oscillator casing that is over 20-year-old. The only thing that normally gets replaced on temporary oscillator casing is the conical flush mount bolts or bolt inserts and shims as they do wear out eventually.

In total Malcolm has incurred $143,124.00 to replace the temporary casing that was lost at Pier 2. This cost does not include the additional trucking costs. This was a very difficult drilling project and Malcolm appreciates Snohomish Counties willingness to work with us on this, so to be fair to both Snohomish County, we would be willing to reduce our request for reimbursement down to $100,000.00 to get this issue closed out quickly.

If Snohomish County is agreeable to this offer, then Malcolm requests a change order be issued so a billing can be produced for the month of June.

Should there be any questions with any of the information supplied above please feel welcome to contact me.

Thank you,

Sincerely,
Malcolm Drilling Company, Inc.

Tait McCutchan
Project Manager

MALCOLM
Look to the Blue

8701 S. 192nd Street | Kent, WA 98031
P: 253.395.3300 | F: 253.395.3312

November 4, 2021

Goodfellow Bros.
Index-Galena RD Flood Repair

Attention: Dennis Diteman

Subject: Pier 2 Lost Temporary Casing

As everyone is aware Malcolm had to abandon a portion of the temporary casing on the Pier 2W shaft during the concrete pour due to a below grade obstruction preventing its removal.

This temporary casing is an integral part of Malcolm's equipment fleet so the casing that was lost due to the shaft obstructions must be replaced. In total just about 65' of casing was lost.

Malcolm has been operating under the assumption that the cost to replace this casing will be covered under the obstruction clause in the contract since it was shaft obstructions that inhibited its removal. The cost to replace the casing is currently being tracked accordingly.

Once the final cost is realized it will be forwarded on (with backup) for request of approval and payment.

Thank you,

Should there be any questions please feel welcome to contact me.

Sincerely,
Malcolm Drilling Company, Inc.

Tait McCutchan
Project Manager

JD Fabricators, Inc 2019-3

PO Box 2762
Chelan, WA 98816
US

Voice: 425-231-1399
Fax:

INVOICE

Invoice Number: 2111-5-1
Invoice Date: May 24, 2022
Page: 1

Bill To:	Ship to:
Malcolm Drilling Co. Inc 8701 S 192nd St Kent, WA 98031	Malcolm Drilling Co. Inc 8701 S 192nd St Kent, WA 98031

Customer ID	Customer PO	Payment Terms	
MALC01		Net 30 Days	
Sales Rep ID	**Shipping Method**	**Ship Date**	**Due Date**
			6/23/22

Quantity	Item	Description	Unit Price	Amount
1.00		(1) 2.0 meter double wall x 20'-0" Oscillator starter	28,701.00	28,701.00
1.00		(1) 2.0 meter single wall x 25'-0" Line can	24,398.00	24,398.00
1.00		(1) 2.0 meter single wall x 20'-0" Line can	19,570.00	19,570.00

Subtotal	72,669.00
Sales Tax	
Total Invoice Amount	72,669.00
Payment/Credit Applied	
TOTAL	**72,669.00**

Check/Credit Memo No:

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Sales Order

MALCOLM DRILLING CO., INC.

INTER-COMPANY REQUISITION
704 S. CEDAR ST.
DRAIN, OR 97435
Phone: 541-836-2700
Email: 541-836-2701

Order #	Date
S1899	11/04/2021

Bill To:
MDCI - KENT, WA
8701 SOUTH 192ND STREET
KENT, WA 98031

Ship To:
MDCI - KENT, WA
8701 SOUTH 192ND STREET
KENT, WA 98031

Customer: MDCI - KENT, WA

Contact: MDCI - KENT, WA
PO Number: MANIFEST #2653

Sales Rep	Payment Terms	FOB Point	Carrier	Ship Service	Date Scheduled
admin	Net 30	Origin	TRUCK		10/27/2021

Item #	Type	Number / Description	Unit Price	Qty Ordered	Total Price
1	Sale	407003712 - HD FEMALE PART CASING JOINT 2200/2080 SW25	$13,475.00	3 ea	$ 40,425.00
2	Sale	407003713 - HD MALE PART CASING JOINT 2200/2080 SW25	$13,475.00	2 ea	$ 26,950.00
3	Sale	407000036 CONICAL BOLT B48S - LEFFER CASING BOLT	$77.00	40 ea	$ 3,080.00
4	Sale	CREDIT ACCOUNT - A/C 0221.021	$0.00	1 ea	$ 0.00
5	Sale	ORDER - PLACED - BY VICTOR DALGORD	$0.00	1 ea	$ 0.00

CHARGED TO: 0421.012 INDEX - GALENA RD. FLOOD REPAIR
IN INDEX, WA

COST CODE: 2001G DRILLED SHAFTS 1 METER AND UNDER

PROJECT MANAGER APPROVAL: Tait McCutchan

Subtotal:	**$70,455.00**
Sales Tax:	**$0.00**
Total:	**$70,455.00**

Approval: Tait McCutchan Digitally signed by Tait McCutchan DN: C=US, E=tmccutchan@malcolmdrilling.com, O=Malcolm Drilling, CN=Tait McCutchan Reason: I am approving this document Date: 2021.11.09 07:42:35-08'00' Date: 11/9/21

November 4, 2021 12:46:54 PM MDT

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