Utah Transit Authority
669 West 200 South
Salt Lake City, Utah 84101
Phone: (801) 741-8885
Fax: (801) 741-8892

CHANGE ORDER

No. 14

TITLE: Parallel Feeder Cable Night Work

DATE: 6/27/2024

PROJECT/CODE: SGR397 - TPSS Component Replacement

This is a change order to CONTRACT No: 20-03378VW

TO: C3M Power Systems

ATTN: Salvador Benitez

DESCRIPTION OF CHANGE: Brief scope, references to scope defining documents such as RFIs, submittals, specified drawings, exhibits, etc.

In the parallel feeder cable options proposed by the contractor, they had a 10-day shutdown period for the cable replacement along the TRAX line near the 300 South (SRT2), 900 South (SRN3), and Delta Center (SRD1) substations. At the time, UTA agreed to provide alternate bus routes to accommodate a multi-day shutdown. In preparation for the shutdown, Systems Engineering spoke with Operations and agreed instead to have the contractor perform the work during regular nighttime shutdowns (between 24:000 and 4:30 hours). In addition, the contractor discovered that that the UTA drawings miss identified the conduit size as 4-inch when it's actually 3 inches in several locations, making the conduit more difficult to pull without impacting UTA systems. C3M added additional manpower and equipment to accommodate Operations request to have the work performed during regular nighttime hours and to minimize the impact of the conduit being at 40% capacity.

Direction or Authorization to Proceed (DAP) previously executed: YES _____ NO __X__

It is mutually agreed upon, there is a schedule impact due to this Change order: YES _____ NO __X__

The amount of any adjustment to time for Substantial Completion and/or Guaranteed Completion or Contract Price includes all known and stated impacts or amounts, direct, indirect and consequential, (as of the date of this Change Order) which may be incurred as a result of the event or matter giving rise to this Change Order. Should conditions arise subsequent to this Change Order that impact the Work under the Contract, including this Change Order, and justify a Change Order under the Contract, or should subsequent Change Orders impact the Work under this Change Order, UTA or the Contractor may initiate a Change Order per the General Provisions, to address such impacts as may arise.

Current Change Order		Contract		Schedule	
Lump Sum:	$641,716	Original Contract Sum:	$38,077,408	Final Completion Date Prior to This Change:	4/11/2025
Unit Cost:	-	Net Change by Previously Authorized Changes:	$7,922,466	Contract Time Change This Change Order (Calendar Days):	0
Cost Plus:	-	Previous Project Total:	$45,999,874	Final Completion Date as of This Change Order:	4/11/2025
T&M NTE:	-	Net Change This Change Order:	$641,716		
Total:	$641,716	Current Project Total:	$46,641,590		

ACCEPTED:

By: DocuSigned by: Salvador Benitez

Date: 6/27/2024

Salvador Benitez
C3M Power Systems

By: _____

Date: _____

Dean Hansen
Project Manager <$25,000

By: _____

Date: _____

Jared Scarbrough
Director of Design & Construction <75,000

By: _____

Date: _____

David Hancock
Chief Service Dev Officer <$200,000

By: _____

Date: _____

Vicki Woodward
Procurement

By: DocuSigned by: Mike Bell

Date: 7/1/2024

Mike Bell
Attorney General >$10,000

By: _____

Date: _____

Jay Fox
Executive Director >$200,000

Change Order Summary Worksheet

Previously Authorized Changes

Contract	20-03378VW C3M

Change Order No	Date	Amount of CO	Running Contract Total	Subject
Original Contract			$38,077,408	
1	7/9/2021	$0	$38,077,408	Amendment #1
2	8/20/2021	$0	$38,077,408	Amendment #2
3	3/18/2022	$82,684	$38,160,092	One Click and Trip (Impulse)
4	3/18/2022	$2,694,731	$40,854,823	Two (2) Additional DC Breakers
5	3/18/2022	$121,766	$40,976,589	Atwood Three (3) Additional Tie-Switches
6	3/18/2022	$94,192	$41,070,781	300 South Bypass Switches
7	4/15/2022	$101,525	$41,172,306	C3M - Midvale Shop ETS Trip
8	4/15/2022	$319,092	$41,491,398	C3M - OCS Overlap Conversion
9	4/15/2022	$2,563,081	$44,054,479	C3M - Option 1 and 2 Feeder Cable Replacement
10	4/29/2022	$100,000	$44,154,479	Design Services for Civil and Electrical Sites
11	4/29/2022	$193,749	$44,348,228	Replacement of di-electric flooring and standard facility
12	7/13/2023	$1,651,646	$45,999,874	HVAC/Heat Pumps
13	6/27/2024	$10,982	$46,010,856	Procurement of Exhaust Fan Replacements
Total to Date		**$ $7,933,448**		

C3M Power Systems Change Proposal

CCN# 810020
Date: 5/3/2024
Project Name: 21036M1 UTA SOGR TPSS REHAB

C3M Power Systems,LLC
1030 Hampton Park Boulevard, Suite 200

Client Address:

Utah Transit Authority
669 West 200 South
Salt Lake City, UT, 84101

ATTN: Jared Scarbrough

21036M1 UTA SOGR TPSS REHAB
C3M Contract #20-03378 CCN #810020

SUBJECT: Parallel Feeder Install During Night Outages

REFERENCE: Utah Transit Authority Construction Change Directive #810020, Parallel Feeder Construction Work Plan

Dear Mr. Jared Scarbrough:

We propose to furnish and install the necessary electrical work in accordance with the above reference(s) in addition to our electrical contract price for the sum of **$641,716.30**. Please see the accompanying documentation to substantiate this proposal.

Regarding the project construction schedule, this additional work will require an extension of time of **00** calendar days. Our costs associated with our request for time extension are included in our proposal. Costs associated with preparing modification of the contract schedule program are excluded from our quotation.

We need to be advised that the proposed change will proceed or has been cancelled in order for us to coordinate our electrical installation with the work of other trades. We will be pleased to proceed with this work upon receipt of your change order in the above amount.

Sincerely,

Salvador Benitez Jr
Project Manager
salvador.benitezjr@c3mpowersystems.com

C3M Power Systems,LLC
1030 Hampton Park Boulevard, Suite 200
Capitol Heights, Maryland , 20743
240-319-2322

ORIGINAL

C3M POWER SYSTEMS CHANGE PROPOSAL

Work Description

Original Scope is as Follows:

·The original scope of the Parallel Feeder Cables was prepared to have a complete 10 day shut down in the area to allow C3M to complete the entire scope within the 10 day shut down. Intitially C3M thought that UTA would allow for the area to have alternative bus routes provided. After further discussion with UTA that was not feasible.

·As C3M completed the conduit surveys for the available spare ducts, C3M found that the conduit duct banks for the parallel feeders shown in the original drawings were not correct. C3M Power Systems mandrelled the single spare conduit and found that the actual conduit size at various locations are 3" versus 4" where the drawings show them to be all 4" PVC. Therefore, this makes pulling the cable more difficult as the conduit fill between the two proposed 750 kCMIL and the 3" is closer to 40% fill (36.53% to be exact). This does not include the various unknown conduit routing that will cause high tensions during each cable pull. This would require more time and to ensure that both sets of parallel feeders are successfully pulled with as much minimal impact to UTA's systems as possible.

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·Updated Scope is as Follows:

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·C3M presents UTA with a proposal to perform the Parallel Feeder Cable installation during regular nightly outages instead of one complete shut down as the original scope was presented under the UTA MOD_CO-009 Cable Replacement Options. The following are detailed steps of how this proposal was determined and how it will be accomplished without during a regular night outage.

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·Phase #1 - Entire Area

· 1. Install new set of Parallel Feeder 750 kCMIL Cable into Spare Duct that has been surveyed by C3M through entire area that of cable that is to be replaced

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·Phase #2 - Between SRT2 300S & SRD1 DELTA Substations (Northbound tracks)

· 1. Install temporary jumper cables at each OCS Feeder pole between Northbound and Southbound Tracks and terminate between OCS Feeder poles between SRT2 and SRD1.

· 2. De-Energize Lockout & Tag Out Disconnects DSTR2-1B, DSRD1-2A. DSRD1-12A, DS-GA, and DS-B prior to start of un-landing of the northbound 500 KCMIL Cable from the contact wire. Once the LOTO is in place, a total of 8 guys with 3 manlifts plus a bucket truck to ensure that all the 500 kCMIL cable on the northbound tracks are disconnected and cut back to the feeder spout at the OCS pole.

· **NOTE - The disconnects will remain locked out during this entire phase and will not be removed until the new 500 kCMIL cable has been installed and terminated onto contact wire.

· 3. Prior to demolition of existing 500 kCMIL parallel feeders, confirm the correct set of cables are being unlanded and then begin demolition of the 500 kCMIL feeder cables and install new 500 kCMIL feeder cable up pole for the northbound tracks contact wire.

· 4. Hipot test newly installed 500 kCMIL feeder cable

· 5. Splice new 500 kCMIL feeder cable to the newly installed 750 kCMIL Parallel Feeder Cables throughout various nights. This will include the permanent splice at ST-01.

· 6. Also provide temporary splice at the nearest manholes at both SRT2 300S and SRD1 Delta substations for future substation upgraded equipment.

· 7. During one nightly outage, C3M will increase manpower to 15 guys with 5 manlifts and 1 bucket truck to terminate all 500 kCMIL cable on the on the northbound track contact wire. Once completed the LOTO in place can be removed and all the Disconnects DSTR2-1B, DSRD1-2A. DSRD1-12A, DS-GA, and DS-B can be reclosed.

· 8. Begin demolition of first set of trunk 500 kCMIL parallel feeder cables.

· 9. Begin installation of 2nd set of 750 kCMIL parallel feeder cables once all the existing 500s have been removed.

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·Phase #3 - Between SRT2 300S & SRD1 DELTA Substations (Southbound Tracks)

· 1.. De-Energize Lockout & Tag Out Disconnects DSRN3-3B, DSRN3-34B, DSRT-2T-2A, prior to the start of un-landing of the southbound 500 KCMIL Cable from the contact wire. Once the LOTO is in place, a total of 8 guys with 3 manlifts plus a bucket truck to ensure that all the 500 kCMIL cable on the southbound tracks are disconnected and cut back to the feeder spout at the OCS pole.

· **NOTE - The disconnects will remain locked out during this entire phase and will not be removed until the new 500 kCMIL cable has been installed and terminated onto contact wire
· 2. Prior to demolition of existing 500 kCMIL parallel feeders, confirm the correct set of cables are being unlanded and then begin demolition of the 500 kCMIL feeder cables and install new 500 kCMIL feeder cable up pole for the southbound tracks contact wire
· 3. Hipot test newly installed 500 kCMIL feeder cable
· 4. Splice new 500 kCMIL feeder cable to the newly installed 750 kCMIL Parallel Feeder Cables throughout various nights for southbound tracks, this will include the permanent splice at ST-01
· 5. Also provide temporary splice at the nearest manholes at both SRT2 300S and SRD1 Delta substations for future substation upgraded equipment.
· 6. During one nightly outage, C3M will increase manpower to 15 guys with 5 manlifts and 1 bucket truck to terminate all 500 kCMIL cable on the on the southbound track contact wire. Once completed the LOTO in place can be removed and all the Disconnects DSRN3-3B, DSRN3-34B, DSRT-2T-2A, can be reclosed.
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·Phase #4 - Between SRN3 900 S to SRT2 300 S (Northbound Tracks)

· 1. Install temporary jumper cables at each OCS Feeder pole between Northbound and Southbound Tracks and terminate between OCS Feeder poles between SRN3 and SRT2.
· 2. De-Energize Lockout & Tag Out Disconnects DSRN3-1A, DSRN3-12A, DSRT-2B, DS1, DS2 prior to start of unlanding of the northbound 500 KCMIL Cable from the contact wire. Once the LOTO is in place, a total of 8 guys with 3 manlifts plus a bucket truck to ensure that all the 500 kCMIL cable on the northbound tracks are disconnected and cut back to the feeder spout at the OCS pole.
· **NOTE - The disconnects will remain locked out during this entire phase and will not be removed until the new 500 kCMIL cable has been installed and terminated onto contact wire.
· 3. Prior to demolition of existing 500 kCMIL parallel feeders, confirm the correct set of cables are being unlanded and then begin demolition of the 500 kCMIL feeder cables and install new 500 kCMIL feeder cable up pole for the northbound tracks contact wire.
· 4. Hipot test newly installed 500 kCMIL feeder cable
· 5. Splice new 500 kCMIL feeder cable to the newly installed 750 kCMIL Parallel Feeder Cables throughout various nights.
· 6. Also provide temporary splice at the nearest manholes at both SRT2 300S and SRD1 Delta substations for future substation upgraded equipment.
· 7. During one nightly outage, C3M will increase manpower to 15 guys with 5 manlifts and 1 bucket truck to terminate all 500 kCMIL cable on the on the northbound track contact wire. Once completed the LOTO in place can be removed and all the Disconnects DSRN3-1A, DSRN3-12A, DSRT-2B, DS1, DS2 can be reclosed.
· 9. Begin installation of 2nd set of 750 kCMIL parallel feeder cables once all the existing 500s have been removed.
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·Phase #5 - Between SRN3 900 S to SRT2 300 S (Southbound Tracks)

· 1. De-Energize Lockout & Tag Out Disconnects DSRN3-1A, DSRN3-12A, DSRT-2B, DS1, DS2 prior to the start of un-landing of the southbound 500 KCMIL Cable from the contact wire. Once the LOTO is in place, a total of 8 guys with 3 manlifts plus a bucket truck to ensure that all the 500 kCMIL cable on the southbound tracks are disconnected and cut back to the feeder spout at the OCS pole.
· **NOTE - The disconnects will remain locked out during this entire phase and will not be removed until the new 500 kCMIL cable has been installed and terminated onto contact wire
· 2. Prior to demolition of existing 500 kCMIL parallel feeders, confirm the correct set of cables are being unlanded and then begin demolition of the 500 kCMIL feeder cables and install new 500 kCMIL feeder cable up pole for the southbound tracks contact wire
· 3. Hipot test newly installed 500 kCMIL feeder cable
· 4. Splice new 500 kCMIL feeder cable to the newly installed 750 kCMIL Parallel Feeder Cables throughout various nights for southbound tracks
· 5. Also provide temporary splice at the nearest manholes at both SRT2 300S and SRD1 Delta substations for future substation upgraded equipment.
· 6. During one nightly outage, C3M will increase manpower to 15 guys with 5 manlifts and 1 bucket truck to terminate all 500 kCMIL cable on the on the southbound track contact wire. Once completed the LOTO in place can be

C3M POWER SYSTEMS CHANGE PROPOSAL

removed and all the Disconnects DSRN3-1A, DSRN3-12A, DSRT-2B, DS1, DS2, can be reclosed.

- 8. Demolition of final set of 500s can be removed during various night
- 9. Removal of all temporary jumpers between

·Once each step is completed, the new parallel feeder system would be upgraded and energized for UTA beneficial use. All test reports on cables will be submitted as testing is completed

·The average crew size will be a total of (8) Guys which consists of 1- General Foreman 1 - Electrical Foreman, 3 - Journeyman, 3 - Apprentice at the Night Differential Rates

·During the (1) night increase in manpower to ensure final termination of each cable the average crew size will be (15) 1 - General Foreman 2 - Electrical Foreman, 6 - Journeyman, 6 - Apprentice at the Night Differential Rates

· Quality Manager included to inspect the work up to 3 nights per week throughout the duration of project along with inspections

·Our Scope Excludes the Following:

·Removal and Installation of Cable between MH-07. Existing 750 kCMIL Cable already exists
·Unforeseen conditions related to obstructed ducts.
·Collapsed and obstructed ducts
·Repair of any collapsed and obstructed ducts
·If C3M determines that a conduit may be collapsed, C3M will stop work and request UTA to further investigate. C3M can assist UTA with any further investigation such as installing a camera into the area of question but will be at an additional cost. This quotation only includes the installation of the parallel feeders. All survey's have been completed.
·Any repair for collapsed and or obstructed ducts to be done by others.

We reserve the right to correct this quote for errors and omissions.

This quote covers direct costs only and we reserve the right to claim for impact and consequential costs.
This price is good for acceptance within **10** days from the date of receipt.
We request a time extension of **0** days.
We will supply and install all materials, labor, and equipment as per your instructions on **CCN# 810020.**

Itemized Breakdown

Description	Qty	Total Mat.	Total Hrs.
Parallel Feeder Install	117	0.00	7,956.00
Totals	**117** Per Working Days	**0.00**	**7,956.00**

Summary

GENERAL FOREMAN - 1 EA	(397.80 Hrs @ $113.01)	Average Crew Size 8 for 117 Work Days	44,955.38
FOREMAN - 1 EA	(397.80 Hrs @ $104.71)		41,653.64
JOURNEYMAN - 3 EA	(3,978.00 Hrs @ $96.25)		382,882.50
APPRENTICE 2YR - 2 EA	(1,989.00 Hrs @ $65.82)		130,915.98
APPRENTICE 3YR - 1 EA	(1,989.00 Hrs @ $76.93)		153,013.77
Total Labor			**753,421.27**
General Expenses Summary			
QC Manager	(1.00 @ 25.00 @ $1,920.00 + 0.000 % + 0.000 % + 0.000 %)		48,000.00
5% SMALL TOOLS @ DIRECT LABOR	(8,751.60 @ 0.00 @ $2.50 + 0.000 % + 0.000 % + 0.000 %)		21,879.00
Total General Expenses			**69,879.00**
JLG BOOM LIFT 40-45'	(3.00 @ 6.00 @ $2,080.00 + 0.000 % + 0.000 % + 0.000 %)		37,440.00

C3M POWER SYSTEMS CHANGE PROPOSAL

Summary (Cont'd)

Total Equipment		**37,440.00**
Markup Total		129,111.04
P&P Bond	(@ 1.100 %)	10,888.36
Warranty/Guarantee	(@ 0.897 %)	8,976.63
Credit from Original Budget	(@ -36.446 %)	-368,000.00
Adjustments Subtotal		**-348,135.01**
Subtotal		**641,716.30**
Final Amount		**$641,716.30**

CCN# **810020**
Date: 5/3/2024
Project Name: 21036M1 UTA SOGR TPSS REHAB
Project Number: 21036M1 UTA SOGR TPSS REHAB

CLIENT ACCEPTANCE

CCN # **810020**
Final Amount: **$641,716.30**

Name: _____

Date: _____

Signature: _____

Change Order #: _____

I hereby accept this quotation and authorize the contractor to complete the above described work.

ORIGINAL