



I. Project Information

Airport: Aurora Municipal Airport

Date: 8/29/2023

IL Project No.: ARR-4648 AIP Project No.: 3-17-SBGP-144

Project Description:

Phase 2: Airfield Pavement Rehabilitation including General Aviation Apron and Taxiway P

II. Consultant Information

Consulting Firm: Crawford, Murphy & Tilly, Inc.

Prepared by: 

Signature

D. Kyle Peabody, PE

Printed Name

Date: 8/29/2023

III. Amendment Reason Summary

List the reasons for the proposed Construction Phase Engineering Amendment

1. 6000 - The contractor required a significant amount of coordination with CMT to correctly prepare for and complete the PCC mix design and PCC Test Batch and also to prepare for and complete a second test batch.
2. 6000 - The contractor required a significant amount of coordination with CMT during the material and shop drawing review process before construction. Also many of their submittals did not follow the plans and specifications and were rejected/resubmitted requiring additional time and effort.
3. 6050 - The contractor required a significant amount of oversight during construction activities, which required CMT presence every day the contractor worked and a few CMT visits on non-work days to inspect the work completed, as the contractor appeared inexperienced with airport specifications.
4. 6000 - Project coordination with the contractor began in the fall of 2021, but construction did not begin until spring of 2022. Contractor was unable to finish the project in 2022, and resumed work in spring/summer of 2023. This extensive project length resulted in a significant increase in time and effort including over two winters.
5. 6050 - The aggregate operators strike in 2022 caused a significant reduction in productivity. Several phases of work needed to be delayed until materials could be obtained, and in some cases the materials delivered were incorrect and were rejected and removed.
6. 6050 - Contractor was unable to complete the underground structure reconstructs in 2022 because the frames/grates were backordered. This required additional phasing and construction time and effort in 2023, thus additional time and effort for CMT on site for construction observation and coordination.
7. 6000 - Coordination with IDA, Contractor and ARR regarding the expiring grant funds and options to resolve.
8. 6000 - Additional coordination was needed due to the contractor changing project managers and he was unfamiliar with the status of the most of the previous correspondence.

IV. General Project Information

Date of Original Construction Phase Engineering Agreement: 3/9/21

Original Agreement Approved Overhead & Burden Rate: 168.85

	Original per Agreement 1	Final or Requested 2	Difference (2-1)
Cost of Contractor's Construction Contract:	<u>\$499,302.00</u>	<u>\$481,983.58</u>	<u>(\$17,318.42)</u>
Cost of Construction Engineering (Not to Exceed Amount):	<u>\$83,200.00</u>	<u>\$136,100.00</u>	<u>\$52,900.00</u>
Engineering Cost as a Percent of Construction Cost:	<u>16%</u>	<u>28%</u>	
Number of Contractor Calendar Days:	<u>43</u>	<u>89</u>	<u>46.00</u>
Number of Work Days Contractor Worked on Site:	<u>30</u>	<u>57</u>	
Number of Work Days Consultant Worked on Site:	<u>29</u>	<u>59</u>	
Construction Engineering Cost per Contractor Work Day:	<u>\$2,868.97</u>	<u>\$2,387.72</u>	

V. Approved Change Authorization Extra Work

Description	IDA Approval Date	Estimated Additional Engineering Cost
#1 : Add Temporarily Closed Runway Marking to Runway 36	8/5/22	
#2 : Additional PCC Test Batch (approved via email on 3/8/2023	3/8/23	

Section VI. Personnel and Task Analysis

Aurora Municipal Airport - Phase 2: Airfield Pavement Rehabilitation including General Aviation Apron and Taxiway P

Construction Phase Services - Estimate of Cost | Estimate of Salary Expense

Work Task Description		Project thru 8-18-2023	Remaining Hours Estimated to Complete Project	Total Hours Per Amendment	Final Net Hours By Task (Per Proposed Amend.)	Hours Per Original Agreement	Project Engineer II	Project Engineer I	Senior Engineer I	Engineer I	Land Surveyor	Senior Technician I	Technician II	Technician I	Project Administrative Assistant	Intern	Per Contract	As Amended
Hourly Rate Per Agreement =						Total	\$66.95	\$52.01	\$38.62	\$30.57	\$42.88	\$37.19	\$31.13	\$26.27	\$20.40	\$17.00	Average (contract)	
Phase 2: Airfield Pavement Rehab. Construction Phase Services																		
Actual Hours By Task (To Date 8-18-2023) =		915.75					0.00	90.00	86.00	617.75	0.00	1.00	0.00	8.50	0.00	112.50		\$34,750.80
Estimate contained in executed Contract						547.00	36	0	413	48	16	12	16	0	6	0	\$21,580.46	\$37.95
Construction Cost: \$1,248,078.50																	\$39.45	
6000	Office Engineering	287.75		287.8	212.8	75	25		40	8	0	0	0		2			
6020	PreConstruction Preparation & Conference	18.5		18.5	6.5	12	4		8	0	0	0	0		0			
6030	Permitting/Agency/Code Related Coordination	0.0		0.0	(2.0)	2	0		2	0	0	0	0		0			
6040	Surveying/Layout/Project Control	10.5		10.5	(21.5)	32	0		0	0	16	0	16		0			
6050	Resident Project Engineer and Assistants (Agrmnt. Based on Est. 9 Hrs Daily for 55 Weekdays - RE and Est. 8 Hrs per visit for 4 Weekdays for Part-time Inspector)	572.5		572.5	245.5	327	0		295	32	0	0	0		0			
6060	Quality Assurance Engineering Effort	17.0		17.0	(18.0)	35	0		35	0	0	0	0		0			
6070	Utility Coordination, Relocation, Protection and Effort	0.0		0.0	(2.0)	2	0		2	0	0	0	0		0			
6080	Final Inspection and Follow-up Action	9.5	5.5	15.0	0.0	15	4		11	0	0	0	0		0			
6090	Punchlist Completion/Field Related Project Closeout	0.0	20.0	20.0	0.0	20	2		8	8	0	0	0		2			
6100	Development of Record Drawings	0.0	16.0	16.0	0.0	16	0		4	0	0	12	0		0			
6110	Construction Documentation/Materials Closeout	0.0	11.0	11.0	0.0	11	1		8	0	0	0	0		2			
Hours to date plus anticipated to completion =		915.75	52.5	968.3	421.3	547.0												
Allowance for Labor to Complete Project																	n/a	\$ 1,992.27
Total Labor																	\$ 21,580.46	\$ 36,743.07
Overhead on Labor		52.90%															\$ 11,416.06	\$ 19,437.08
General And Administrative Overhead		115.95%															\$ 25,022.54	\$ 42,603.58
Overtime Premium to Date																	\$ -	\$ 163.76
Direct Expenses																	\$ 1,435.60	\$ 3,009.96
Fixed Payment (Profit)																	\$ 8,620.00	\$ 14,780.00
Subconsultants:																	\$ 15,160.00	\$ 17,439.38
Geo Services, Inc. (material testing)		\$ -				\$15,160												
Estimate of Total Costs																	\$83,234.66	\$136,169.09
USE TOTAL COST PLUS FIXED FEE																	\$83,200.00	\$136,100.00

Amendment Amount: \$52,900.00

VI. Consultant Agreement: Personnel & Task Analysis

Original Agreement Data						Engineering Amendment Data				
Task #	Task Description	Personnel Classification	Proposed Hours	Rate \$/hour	1 Cost	Actual Personnel Classification	Actual Hours	Rate \$/hour	2 Actual Cost	Difference (2 - 1)
1	see attached				0.00				0.00	0.00
2					0.00				0.00	0.00
3					0.00				0.00	0.00
4					0.00				0.00	0.00
5					0.00				0.00	0.00
6					0.00				0.00	0.00
7					0.00				0.00	0.00
8					0.00				0.00	0.00
9					0.00				0.00	0.00
10					0.00				0.00	0.00
11					0.00				0.00	0.00
12					0.00				0.00	0.00
13					0.00				0.00	0.00

Original Agreement Data						Engineering Amendment Data				
Task #	Task Description	Personnel Classification	Proposed Hours	Rate \$/hour	1 Cost	Actual Personnel Classification	Actual Hours	Rate \$/hour	2 Actual Cost	Difference (2 - 1)
14					0.00				0.00	0.00
15					0.00				0.00	0.00
16					0.00				0.00	0.00
17					0.00				0.00	0.00
18					0.00				0.00	0.00
19					0.00				0.00	0.00
20					0.00				0.00	0.00
21					0.00				0.00	0.00
22					0.00				0.00	0.00
23					0.00				0.00	0.00
24					0.00				0.00	0.00
25					0.00				0.00	0.00
26					0.00				0.00	0.00

VII. Task Change Analysis

Provide a detailed explanation for the difference in cost for each task listed on the Consultant Agreement Task Analysis.

Task #	Explanation for Difference
1.	SEE SECTION III AMENDMENT REASON SUMMARY which includes the detailed explanation per task for the difference in hours/effort listed in the consultant agreement.
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

VIII. Construction Observation Hours Analysis: Calendar Day Study
Aurora Municipal Airport
Phase 2: Airfield Pavement Rehabilitation including General Aviation Apron and Taxiway P

Calendar Day Notes	
One calendar day used on 3/24/2022 for PCC Test Batch, then suspended	
First Day of Construction Date: 5/26/2022	
Contract Suspension: 6/7/2022 - 6/27/2022 : Unable to get materials due to Local 150 strike	
Contract Resumed: 6/27/2022	
Contract Suspension: 6/30/2022 - 7/5/2022 : Unable to get materials due to Local 150 strike	
Contract Resumed: 7/5/2022	
Contract Suspension: 8/6/2022 - 4/11/2023 : Awaiting delivery of frames and grates	
One calendar day used on 4/11/2023 for PCC Test Batch, then suspended	
Contract Resumed: 5/22/2023	
Contract Substantial Completion: 6/30/2023	

Engineering Effort	Task 6050 Effort Outside Calendar Days
	Charged to Contractor

Date	Task	Emp No	Emp Name	Reg Hrs.	OT Hrs.	Total Hrs.	Contractor Hours	Workable Day? Yes/No	Calendar Day Total	Comments
Construction Start (PCC Test Batch) March 24, 2022										
3/24/2022	6060		Finke, Neil	6.00		6.00	8	Y	1	PCC Test Batch
4/18/2022	6050	001461	Moulton, Adam	4.00		4.00				
4/19/2022	6050	001000	Marin, Antonio	0.50		0.50				
4/21/2022	6050	001000	Marin, Antonio	1.50		1.50				
4/21/2022	6050	001461	Moulton, Adam	2.00		2.00				
4/22/2022	6050	001000	Marin, Antonio	1.00		1.00				
4/22/2022	6050	001461	Moulton, Adam	1.00		1.00				
4/27/2022	6050	001461	Moulton, Adam	4.00		4.00				On site meeting with A Lamp to discuss the project
5/4/2022	6050	001000	Marin, Antonio	1.00		1.00				
5/5/2022	6050	001000	Marin, Antonio	1.00		1.00				
5/23/2022	6050	001461	Moulton, Adam	2.00		2.00				
5/25/2022	6050	001461	Moulton, Adam	5.00		5.00				
5/26/2022	6050	001461	Moulton, Adam	9.00		9.00	8	Y	2	First day of construction on site
5/27/2022	6050	001461	Moulton, Adam	10.00		10.00	8	Y	3	
5/28/2022								Y	4	Weekend
5/29/2022								Y	5	Weekend
5/30/2022								Y	6	contractor did not work
5/31/2022	6050	001461	Moulton, Adam	8.00		8.00	8	Y	7	
6/1/2022	6050	001461	Moulton, Adam	11.00		11.00	10	Y	8	
6/2/2022	6050	001461	Moulton, Adam	8.00		8.00	4	Y	9	
6/3/2022	6050	001461	Moulton, Adam	6.00		6.00	9	Y	10	
6/3/2022	6050	001461	Bozich, Jennifer	5.00		5.00				
6/4/2022								Y	11	Weekend
6/5/2022								Y	12	Weekend
6/6/2022								Y	13	contractor did not work
6/7/2022										Contract suspended, unable to get materials due to Local 150 strike
6/8/2022	6050	001461	Moulton, Adam	2.00		2.00				
6/9/2022	6050	001461	Moulton, Adam	3.00		3.00				
6/9/2022	6050	001461	Bozich, Jennifer	2.50		2.50				
6/10/2022	6050	001461	Moulton, Adam	3.00		3.00				
6/27/2022	6050	001461	Moulton, Adam	5.00		5.00	9	Y	14	Contract resumed
6/27/2022	6050	001461	Bozich, Jennifer	8.00		8.00				
6/28/2022	6050	001461	Moulton, Adam	9.00		9.00	9	Y	15	
6/28/2022	6050	001461	Bozich, Jennifer	7.50		7.50				
6/29/2022	6050	001461	Moulton, Adam	3.50		3.50	2	Y	16	
6/29/2022	6050	001461	Bozich, Jennifer	4.50		4.50				
6/30/2022	6050	001461	Moulton, Adam	2.00		2.00				Contract suspended, unable to get materials due to Local 150 strike
7/1/2022	6050	001461	Moulton, Adam	8.00		8.00				
7/1/2022	6050	001461	Bozich, Jennifer	5.50		5.50				
7/5/2022	6050	001461	Bozich, Jennifer	7.50		7.50	8	Y	17	Contract resumed
7/6/2022	6050	001461	Moulton, Adam	9.00		9.00	8	Y	18	
7/6/2022	6050	001461	Bozich, Jennifer	8.50		8.50				
7/7/2022	6050	001461	Moulton, Adam	9.00	1.50	10.50	8	Y	19	
7/7/2022	6050	001461	Bozich, Jennifer	5.00		5.00				
7/8/2022	6050	001461	Moulton, Adam	9.00	0.50	9.50	8	Y	20	
7/8/2022	6050	001461	Bozich, Jennifer	8.50		8.50				
7/9/2022								Y	21	Weekend
7/10/2022								Y	22	Weekend
7/11/2022	6050	001461	Moulton, Adam	9.00		9.00	6	Y	23	
7/11/2022	6050	001461	Bozich, Jennifer	2.50		2.50				
7/12/2022	6050	001461	Moulton, Adam	5.00		5.00	5	Y	24	
7/12/2022	6050	001461	Bozich, Jennifer	3.00		3.00				
7/13/2022	6050	001461	Moulton, Adam	8.50		8.50	8	Y	25	
7/13/2022	6050	001461	Bozich, Jennifer	8.00		8.00				
7/14/2022	6050	001461	Moulton, Adam	2.00		2.00	8	Y	26	
7/14/2022	6050	001461	Bozich, Jennifer	6.50		6.50				
7/15/2022	6050	001461	Moulton, Adam	4.00		4.00	0	N	27	Site unworkable due to rain. CMT measuring quantities and inspecting PCC pavement
7/15/2022	6050	001461	Bozich, Jennifer	4.50		4.50				
7/16/2022								Y	28	Weekend
7/17/2022								Y	29	Weekend
7/18/2022	6050	001461	Moulton, Adam	10.00		10.00	11	Y	30	
7/19/2022	6050	001461	Moulton, Adam	10.00		10.00	10	Y	31	
7/20/2022	6050	001461	Moulton, Adam	10.00		10.00	10	Y	32	
7/21/2022	6050	001461	Moulton, Adam	10.00		10.00	9	Y	33	
7/22/2022	6050	001461	Moulton, Adam	12.00		12.00	10	Y	34	
7/22/2022	6050	001461	Bozich, Jennifer	8.50		8.50				
7/23/2022								N	35	Weekend. Site unworkable due to heavy storms.
7/24/2022								N	36	Weekend. Site unworkable due to storms.
7/25/2022	6050	001461	Moulton, Adam	5.00		5.00		Y	37	Contractor did not work.
7/26/2022	6050	001461	Moulton, Adam	9.00	1.50	10.50	10	Y	38	
7/27/2022	6050	001461	Moulton, Adam	9.00	2.00	11.00	10	Y	39	
7/27/2022	6050	001461	Rybowiak, Edward	8.00		8.00				
7/28/2022	6050	001461	Moulton, Adam	8.00		8.00	9	Y	40	
7/29/2022	6050	001461	Moulton, Adam	9.00	3.00	12.00	10.5	Y	41	
7/29/2022	6050	001461	Rybowiak, Edward	8.00	1.00	9.00				
7/30/2022	6050	001461	Moulton, Adam	4.00		4.00	8	Y	42	Weekend. Crowley worked on pavement marking.
7/31/2022								Y	43	Weekend
8/1/2022	6050	001461	Moulton, Adam	4.00		4.00	3.5	Y	44	
8/2/2022	6050	001461	Moulton, Adam	6.00		6.00		Y	45	Contractor did not work.
8/3/2022	6050	001461	Moulton, Adam	2.00		2.00		Y	46	Contractor did not work.
8/4/2022	6050	001461	Moulton, Adam	2.00		2.00	4	Y	47	
8/5/2022	6050	001461	Moulton, Adam	6.00		6.00	8	Y	48	
8/6/2022	6050	001461	Moulton, Adam	2.00		2.00				Contract suspended until contract receives the frames and grates for reconstructs
10/14/2022	6050	001461	Moulton, Adam	2.00		2.00				
10/18/2022	6050	001461	Moulton, Adam	1.00		1.00				
4/11/2023	6050	001461	Moulton, Adam	6.00		6.00	6	Y	49	new PCC Test Batch
5/19/2023	6050	001461	Moulton, Adam	5.00		5.00				site visit with A Lamp for layout of remaining work
5/22/2023	6050	001461	Moulton, Adam	8.00		8.00	7	Y	50	resumption of work, beginning sawcutting for structure reconstructs
5/23/2023	6050	001461	Moulton, Adam	9.00		9.00	10	Y	51	
5/24/2023	6050	001461	Moulton, Adam	8.00		8.00	7	Y	52	
5/25/2023	6050	001461	Moulton, Adam	2.00		2.00	8	Y	53	
5/26/2023	6050	001461	Moulton, Adam	4.00		4.00	6	Y	54	
5/27/2023								Y	55	Weekend
5/28/2023								Y	56	Weekend
5/29/2023								Y	57	Contractor did not work
5/30/2023	6050	001461	Moulton, Adam	8.00		8.00	10	Y	58	
5/31/2023	6050	001461	Moulton, Adam	8.00		8.00	6	Y	59	poured PCC for structure recons
6/1/2023	6050	001461	Moulton, Adam	6.00		6.00	8	Y	60	
6/2/2023	6050	001461	Moulton, Adam	4.00		4.00	2	Y	61	
6/2/2023	6050	001720	Bales, Luke	3.50		3.50				
6/3/2023								Y	62	Weekend
6/4/2023								Y	63	Weekend
6/5/2023	6050	001720	Bales, Luke	4.00		4.00	10	Y	64	
6/6/2023	6050	001720	Bales, Luke	4.50		4.50	10	Y	65	
6/7/2023	6050	001720	Bales, Luke	8.50		8.50	10	Y	66	Poured PCC for panels adjacent to structure recons
6/8/2023	6050	001720	Bales, Luke	6.00		6.00	4	Y	67	Poured PCC for structure box outs
6/9/2023	6050	001720	Bales, Luke	3.50		3.50		Y	68	Contractor did not work
6/10/2023								Y	69	Weekend
6/11/2023								Y	70	Weekend
6/12/2023								Y	71	Contractor did not work
6/13/2023	6050	001461	Moulton, Adam	8.00		8.00	9	Y	72	
6/14/2023	6050	001461	Moulton, Adam	8.00		8.00	9	Y	73	
6/15/2023								Y	74	Contractor did not work
6/16/2023	6050	001461	Moulton, Adam	9.00		9.00	8	Y	75	
6/17/2023								Y	76	Weekend
6/18/2023										

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IX. Estimate of Cost vs. Actual Cost

Category		Estimated Amount (Attachment C per Engineering Agreement)	Actual Amount
Direct Salary Costs		<u>\$21,580.46</u>	<u>\$36,743.07</u>
Overhead on Labor	Rate % <u>52.90</u>	<u>\$11,416.06</u>	<u>\$19,437.08</u>
General & Administrative Overhead	Rate % <u>115.95</u>	<u>\$25,022.54</u>	<u>\$42,603.58</u>
Direct Non-Salary Expenses			premium labor cost <u>\$163.76</u>
Lodging		<u>(\$0.00)</u>	
Meals / Per Diem		<u>(\$0.00)</u>	
Materials & Supplies		<u>(\$0.00)</u>	
Transportation		<u>\$1,051.60</u>	<u>\$3,009.96</u>
Printing		<u>\$254.00</u>	
Testing		<u>(\$0.00)</u>	
CADD Time		<u>(\$0.00)</u>	
Other Costs (Outside Services)		<u>(\$0.00)</u>	
Other Costs (Excluding Outside Services)		<u>\$130.00</u>	
Fixed Payment		<u>\$8,620.00</u>	<u>\$14,780.00</u>
Outside Services		<u>\$15,160.00</u>	<u>\$17,439.38</u>
	Total Costs	<u>\$83,200.00</u>	<u>\$136,100.00</u>

Explain Differences between Estimated Amount and Actual Amount in Part IX.

The difference is primarily the extended level of effort for additional days on site for construction observation and office engineering resulting in an increase in direct salary costs.

XI. Amendment Questionnaire

1. Was the Material Certification completed at or before the report of substantial completion (request for final inspection) Yes No

If no, why? n/a

What was the engineering cost associated with obtaining and/or completing the materials certification after the report of substantial completion (request for final inspection)? n/a

2. Was there a change in the contractor's project scope? Yes No

If yes, what? added temp. closed rwy pavement marking and additional PCC test batch

3. Was there an overrun in calendar days? Yes No

If yes, are liquidated damages being sought? Yes No

Why or why The contractor has not submitted the justification letter for an extension of contract time.

4. Did you submit the time line reports at each billing cycle after 50% Consultant Fee per the Contract Agreement, Part II, Sec. C.? Yes No

5. If so, what was the 50% estimated cost to completion? \$93,200.00

XII. Consultant Certification

I have reviewed this request and determined that it represents AIP allowable costs incurred to provide construction engineering services according to the requirements of the original signed construction engineering agreement. I certify that I am a principal with my firm and this request does not include any non-allowable costs, such as those attributed to errors and omission. I also understand that Federal and/or State participation in any approved amendment amount is subject to funds availability.



Signature of Company Principal

Brian R. Welker, SVP & COO

Printed Name

8/29/2023

Date

XIII. Airport Project Sponsor Certification

I have reviewed this request and determined that it represents AIP allowable costs incurred to provide construction engineering services according to the requirements of the original signed construction engineering agreement. I certify that this request does not include any non-allowable costs, such as those attributed to errors and omission. I also understand that Federal and/or State participation in any approved amendment amount is subject to funds availability. I hereby recommend the Division of Aeronautics approve the amounts requested by the airport's consultant.

Signature of Sponsor Representative

Printed Name

Date

 **STEPHEN K. ANDRAS** 8/29/23

XIV. Instructions

- Both consultant and sponsor signatures are required
- The sponsor shall submit the completed and signed construction engineering amendment request to:
IDOT/Division of Aeronautics/Bureau of Airport Engineering
Attn: Michael Wilhelm, P.E.