

General Design and Construction Inspection

General Construction Administration and Inspection - Hourly and Unit Price Basis Allowances based on 120 days of construction (75% inspection)

Item	Project Task	Project Manager Michael Craig, PE	Senior Engineer Michael Mills, PE	Senior Inspector William Mitchell	Engineer Casey Howard, EI	Inspector Josh Fisher	Secretary Amanda Ellis	Total HR
1	Site Visit Repair Revisions measurements Photos	16		20		20		56
2	Design Contract Contract Documents Standard Specifications Engineering Estimates Bid Items per bridge or repair type Final Quantities Location Maps Photos Coversheet Design Sketches Design Standard drawings	80	180	240	160	40	4	704
3	Bid advertisement	4		4			4	12
4	Pre-Bid conference	4		4				8
5	Bid Opening	4		2				6
6	Bid Review	4		2				6
7	Pre- Construction Conference	4		4				8
8	Construction Administration	80	20				20	120
9	Construction Inspection*	80		320		400		1080
	Total hours	276	200	596	160	460	28	1720

Mileage Mooresville NC to Charlotte NC, 60 miles roundtrip, 140 trips

Classification	Employee			Hours	Rate	Amount
Project Manager	Michael Craig, PE			276	\$70.00	\$19,320.00
Senior Engineer	Michael Mills, PE			200	\$49.00	\$9,800.00
Senior Inspector	William Mitchell			596	\$39.00	\$23,244.00
Engineer	Casey Howard, EI			160	\$35.00	\$5,600.00
Inspector	Josh Fisher			460	\$25.00	\$11,500.00
Secretary	Amanda Ellis			28	\$27.00	\$756.00

Direct Labor		\$70,220.00
Over head rate	1.61	\$113,054.20
Sub total		\$183,274.20
Profit \$ 10%		\$18,327.42
Cost of Capital		0
Total fee Proposal		\$201,601.62

Bridge Painting and Deck Epoxy design and Construction Inspection (590368, 590378, 590431, 590407, 590406, 590375, 490477)

- Hourly and Unit Price Basis Allowances based on 60 days of construction (50% inspection)

		Project Manager	Senior Engineer	Senior Inspector	Engineer	Inspector	Secretary	
Item	Project Task	Michael Craig, PE	Michael Mills, PE	William Mitchell	Casey Howard, EI	Josh Fisher	Amanda Ellis	Total HR
10	Design Contract* Contract Documents Standard Specifications Engineering Estimates Bid Items per bridge or repair type Final Quantities Location Maps Photos Coversheet Design Sketches Design Standard drawings	40		40	80			160
11	Bid advertisement	4		4				8
12	Pre-Bid conference	4		4				8
13	Bid Opening	4		2				6
14	Bid Review	4		2				6
15	Pre- Construction Conference	4		4				8
16	CEI	24		120		120		264
	Total hours	84	0	176	80	120	0	460

Mileage

Mooresville NC to Charlotte NC, 60 miles roundtrip, 60 trips

Classification	Employee			Hours	Rate	Amount
Project Manager	Michael Craig, PE			84	\$70.00	\$5,880.00
Senior Engineer	Michael Mills, PE			0	\$49.00	\$0.00
Senior Inspector	William Mitchell			176	\$39.00	\$6,864.00
Engineer	Casey Howard, EI			80	\$35.00	\$2,800.00
Inspector	Josh Fisher			120	\$25.00	\$3,000.00
Secretary	Amanda Ellis			0	\$27.00	\$0.00

Direct Labor		\$18,544.00
Over head rate	1.61	\$29,855.84
Sub total		\$48,399.84
Profit \$10%		\$4,839.98
Cost of Capital		0
Total fee Proposal		\$53,239.82

Deck Preservation Latex Modified Concrete Deck Repair Bridge 590383, 590138, 590398, and 590396 (Construction Estimate \$1.8Mil)
- Hourly and Unit Price Basis Allowances based on 90 days of construction (75% inspection)

		Project Manager	Senior Engineer	Senior Inspector	Engineer	Inspector	Secretary	
Item	Project Task	Michael Craig, PE	Michael Mills, PE	William Mitchell	Casey Howard, EI	Josh Fisher	Amanda Ellis	Total HR
17	Design Contract* Contract Documents Standard Specifications Engineering Estimates Bid Items per bridge or repair type Final Quantities Location Maps Photos Coversheet Design Sketches Design Standard drawings	40	80		120			240
18	Bid advertisement	4		4				8
19	Pre-Bid conference	4		4				8
20	Bid Opening	4		2				6
21	Bid Review	4		2				6
22	Pre- Construction Conference	4		4				8
23	CEI	40		200		540		780
	Total hours	100	80	216	120	540	0	1056

Mileage Mooresville NC to Charlotte NC, 60 miles roundtrip, 90 trips

Classification	Employee			Hours	Rate	Amount
Project Manager	Michael Craig, PE			100	\$70.00	\$7,000.00
Senior Engineer	Michael Mills, PE			80	\$49.00	\$3,920.00
Senior Inspector	William Mitchell			216	\$39.00	\$8,424.00
Engineer	Casey Howard, EI			120	\$35.00	\$4,200.00
Inspector	Josh Fisher			540	\$25.00	\$13,500.00
Secretary	Amanda Ellis			0	\$27.00	\$0.00

Direct Labor		\$37,044.00
Over head rate	1.61	\$59,640.84
Sub total		\$96,684.84
Profit \$10%		\$9,668.48
Cost of Capital		0
Total		\$106,353.32
Boyle Engineering (SBE) - Concrete testing		\$42,000
	Total	\$148,353.32

Chloride Testing -Deck Preservation Program

		Project Manager	Senior Engineer	Senior Inspector	Engineer	Inspector	Secretary	
Item	Project Task	Michael Craig, PE	Michael Mills, PE	William Mitchell	Casey Howard, EI	Josh Fisher	Amanda Ellis	Total HR
24	Chloride Testing and Detailed deck Inspection -Field	8		60		60		128
25	Chloride Testing -Lab					40		40
26	Preservation Recommendations and specifications	8		8				16
	Total hours	16	0	68	0	100	0	184

Mileage Mooresville NC to Charlotte NC, 60 miles roundtrip,10 trips

Classification	Employee			Hours	Rate	Amount
Project Manager	Michael Craig, PE			16	\$70.00	\$1,120.00
Senior Engineer	Michael Mills, PE			0	\$49.00	\$0.00
Senior Inspector	William Mitchell			68	\$39.00	\$2,652.00
Engineer	Casey Howard, EI			0	\$35.00	\$0.00
Inspector	Josh Fisher			100	\$25.00	\$2,500.00
Secretary	Amanda Ellis			0	\$19.00	\$0.00

Direct Labor		\$6,272.00
Over head rate	1.61	\$10,097.92
Sub total		\$16,369.92
Profit 15%		\$2,455.49
Cost of Capital		0
Total fee Proposal		\$18,825.41

Direct Non-Salary Costs

Railroad Protective Liability	1	\$3,000	\$3,000.00
Mileage	16200	\$0.54	\$8,748.00
Extraction and calibration fluid for chloride testing	274	\$5.76	\$1,578.24
General Repairs - Reproduction (10 copies)	4000	\$0.06	\$240.00
General Repairs - Color Reproduction (10 copies)	4000	\$0.35	\$1,400.00
Tabs and Binders	310	\$0.75	\$232.50
Bridge Painting and Epoxy - Reproduction (10 copies)	1000	\$0.06	\$60.00
Bridge Painting and Epoxy - Color Reproduction (10 copies)	1000	\$0.35	\$350.00
Tabs and Binders	110	\$0.75	\$82.50
Bridge preservation -Latex - Reproduction (10 copies)	1000	\$0.06	\$60.00
Bridge Preservation- Latex - Color Reproduction (10 copies)	1000	\$0.35	\$350.00
Tabs and Binders	110	\$0.75	\$82.50
Total direct Non-Salary			\$16,183.74

Additional Unknown services

\$0

Grand Total

\$438,203.92

LIST OF BRIDGE STRUCTURE PAINT REPAIR DETAILS AND DRAWINGS

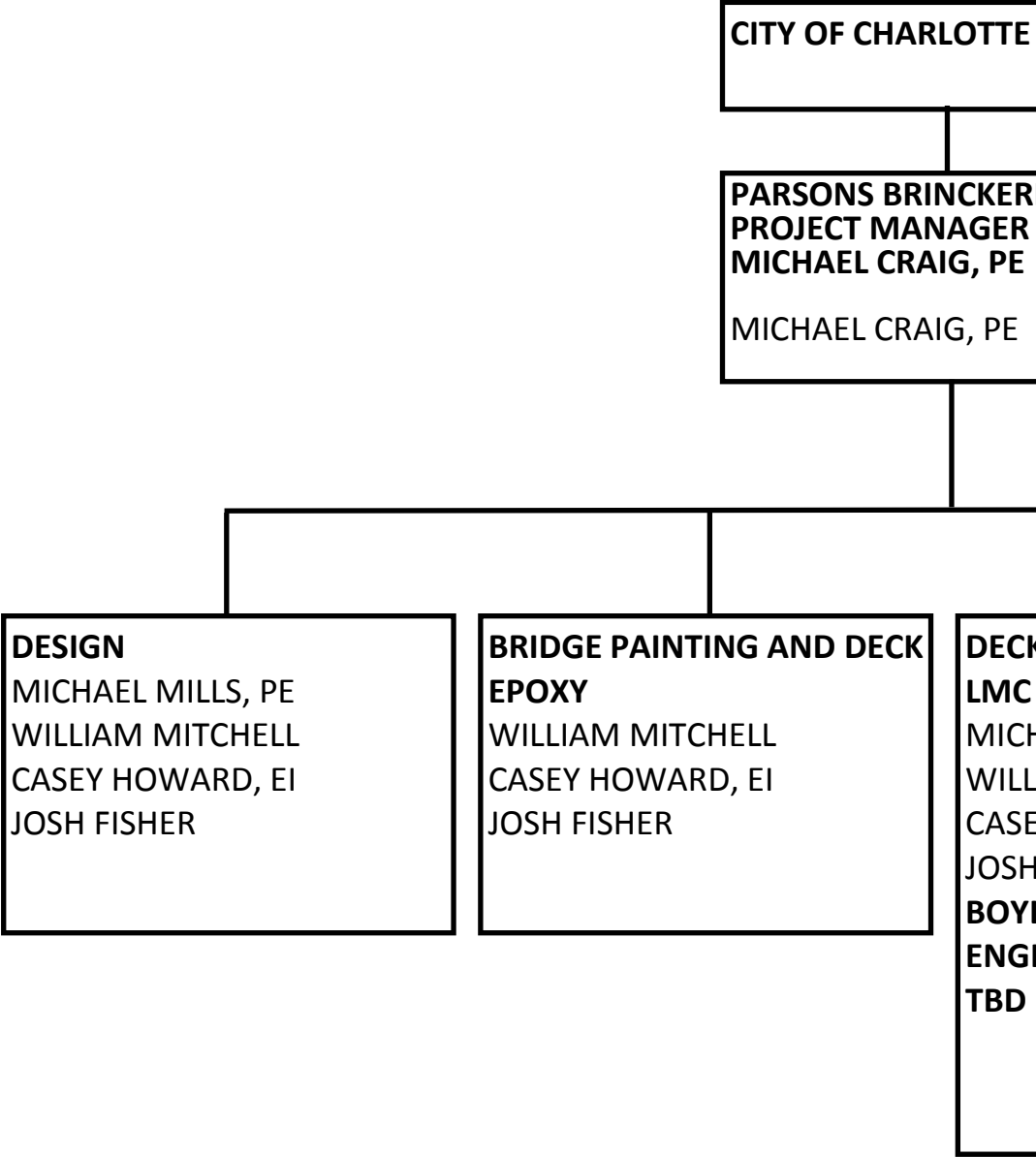
	Bridge Number	Route Carried	Route Over	Last Inspection Date
1	590254	Matheson Ave	North Davidson Street	04/19/16
2	590378	Westinghouse Blvd	Norfolk Southern RR	07/21/16
3	590383	West Tyvola Rd	Norfolk Southern RR	03/23/16
4	590384	State St	Stewart Creek	05/24/16
5	590386	Tuckaseegee Rd	Pedestrian Walkway	03/04/16
6	590395	Hillside Ave	Little Sugar Creek	06/14/16
7	590398	Medical Center Dr	Little Sugar Creek	06/22/16
8	590399	Pearl Parkway	Little Sugar Creek	04/27/16
9	590407	North Caldwell St	Seaboard Coastline RR	07/14/16
10	590431	Old Providence Rd	McAlpine Creek	04/05/16
11	590434	Sardis Lane	McAlpine Creek	06/03/16
12	590497	Sardis Rd	Seaboard Coastline RR	07/13/16
13	590555	Dwight Evans Rd	Southern RR	07/13/16
14	590556	Tyvola Rd	Sugar Creek	06/15/16
15	590617	East Harris Blvd	Campbell Creek	05/11/16
16	590696	Sequoia Red Ln	Rea Branch	03/02/16
17	591016	Johnston Rd	McAlpine Creek	05/03/16

Project Schedule

All Construction work must be completed by March 2018 prior to beginning the next NBIS inspection

ACTIVITY	START DATE	END DATE
Design of Repairs	24-Oct-16	16-Dec-16
Chloride Testing	24-Oct-16	16-Dec-16
Construction Contract Execution	16-Dec-16	31-Mar-17
Construction Inspection	3-Apr-17	6-Nov-17

on cycle





HOFF



◀ **PRESERVATION AND**

HAEL MILLS, PE
JAM MITCHELL
EY HOWARD, EI
I FISHER
LE CONSULTING
INEERS

CHLORIDE TESTING
WILLIAM MITCHELL
JOSH FISHER

PREVIOUSLY REPAIRED STRUCTURES (72/109)

590020
590021
590039
590057
590138
590144
590152
590200
590233
590234
590254
590365
590368
590374
590379
590380
590383
590384
590385
590387
590389
590390
590391
590392
590393
590394
590395
590396
590397
590398
590402
590407
590408
590411
590416
590418
590419
590420
590422
590423
590428
590431
590434
590435
590438

NOT PREV. REPAIRED STRUCTURE

590006
590007
590042
590074
590154
590232
590255
590258
590274
590386
590406
590425
590427
590433
590445
590447
590466
590467
590470
590485
590486
590554
590655
590696
590712
591013
591170
COC007
COC008
COC010
COC011
COC029
COC030
COC041
COC044
COC051
COC055

590441
590446
590477
590484
590497
590527
590547
590560
590710
591012
591015
591016
591017
591018
591019
591032
591034
591164
591168

COC004
COC006
COC013
COC037
COC039
COC046
COC049
COC052

ES (37/109)

PAINT STRUCTURES

590006
590233
590368
590374
590375
590378
590383
590384
590386
590387
590395
590398
590406
590407
590431
590434
590466
590477

COC004
COC006
COC007
COC008
COC013
COC029
COC030
COC037

HYDRO-DEMO STRUCTURES

590138
590255
590383