

PO# 122466
rec 414492

BH
8/15/17



FCM Engineers, P.C.

9700 Richmond Ave.
Suite 250
Houston, Texas 77042
T-713-706-4414
F-713-706-4410

July 3, 2017

Mr. Donald Durgin, P.E.
RPS Klotz & Associates
1160 Dairy Ashford, Suite 500
Houston, Texas 77079

Re: 2013 Mobility Bond Program, Fort Bend County
Bellaire Blvd from FM 1464 to San Pablo
FCM Project No. 2014101
Period Ending: June 30, 2017
Invoice No. 16

Dear Mr. Durgin;

We hereby submit our invoice for the above referenced project. The total amount due for this invoice is **Twelve Thousand Three Hundred Thirty Six and Eighty Six Cents (\$12,336.86)**. This amount is for professional services as per our contract.

Ok, JSS 08/14/17
Please feel free to call me if there are any questions.

Very truly yours,
FCM Engineers, P.C.

Dr. Frank C, Mbachu, P.E. DEE
President

FCM/mh

Enclosure

FCM Engineers, P.C.
9700 Richmond Avenue, Suite 250
Houston, Texas 77042

FORT BEND 2013 MOBILITY BOND PROGRAM
BELLAIRE FROM SAN PABLO DR. TO FM 1464
FCM PROJECT NO. 2014101

Date: July 3, 2017

Project Name: Bellaire from San Pablo Dr. to FM 1464
FCM Project No: 2014101
Invoice Number: 16
Invoice Period Ending: March 20, 2017
Invoice Date: July 3, 2017

A) Basic Services									
	Amount Authorized	NTP Date	Invoice No.	Invoice Amount	% Complete	Total to Date	Previously Invoiced	Amount Due	
1. Phase I Design Basic Services	\$ 111,934.38	1/30/2015	9	\$ -	100.00%	\$ 111,934.38	\$ 111,934.38	\$ -	
2. Phase II Design Basic Services	\$ 241,045.74	1/30/2015	14	\$ -	100.00%	\$ 241,045.74	\$ 241,045.74	\$ -	
3. Phase III Design Basic Services	\$ 22,218.06	1/30/2015	16	\$ 12,336.86	79.78%	\$ 17,724.50	\$ 5,387.64	\$ 12,336.86	
Total Basic Services	\$ 375,198.18			\$ 12,336.86	98.80%	\$ 370,704.62	\$ 358,367.76	\$ 12,336.86	
B) Additional Services									
	Amount Authorized	NTP Date	Invoice No.	Invoice Amount	% Complete	Total to Date	Previously Invoiced	Amount Due	
1. Surveying - Landtech Consultants Inc.	\$ 35,760.00	1/30/2015	8	\$ -	100.00%	\$ 35,760.00	\$ 35,760.00	\$ -	
2. Geotechnical Investigations - Austin-Reed Engineers, LLC	\$ 37,009.00	1/30/2015	14	\$ -	100.00%	\$ 37,009.00	\$ 37,009.00	\$ -	
3. Traffic Control Plans - Nathelyne A. Kennedy & Associates	\$ 11,570.00	1/30/2015	14	\$ -	100.00%	\$ 11,570.00	\$ 11,570.00	\$ -	
4. Storm Water Pollution Plan - Nathelyne A. Kennedy & Associates.	\$ 8,132.00	1/30/2015	14	\$ -	100.00%	\$ 8,132.00	\$ 8,132.00	\$ -	
5. Sidewalk Addition to the Project	\$ 9,000.00	9/6/2016	15	\$ -	100.00%	\$ 9,000.00	\$ 9,000.00	\$ -	
Total Additional Services	\$ 101,471.00			\$ -		\$ 101,471.00	\$ 101,471.00	\$ -	
Total A & B Services	✓ \$476,669.18			\$ 12,336.86	99.06%	✓ \$ 472,175.62	✓ \$ 459,838.76	\$ 12,336.86	
TOTAL DUE FOR INVOICE NO.16									\$ 12,336.86



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Date: **July 3, 2017**

2013 Mobility Bond Program, Fort Bend County
Bellaire Blvd. from FM 1464 to San Pablo
FCM Project No. 2014101
Period Ending: June 30, 2017
Invoice No. 16

Authorized Amount:

Phase I - Preliminary Engineering Services = \$111,934.38

Phase II - Final Engineering Design = \$241,045.74

Phase III - Construction Services = \$22,218.06

Additional Services = \$101,471.00

Total Authorization = \$476,669.18 ✓

INVOICE SUMMARY

FCM Engineers, P.C.

Personnel	Classification	Hours	Billing Rate #	Total Amount
Frank C. Mbachu	Project Manager	14	\$174.75	\$2,446.50
David Collins	Sr. Engineer	0	\$121.50	\$0.00
Mary Huang	Project Engineer	20	\$116.85	\$2,337.00
George Williams	CAD Technician	28	\$75.12	\$2,103.36
Total		62		\$6,886.86

SUBCONSULTANTS

JAYMARK ENGINEERING CORP. (SEE ATTACHED INVOICE)	\$2,400.00
*LANDTECH (SEE ATTACHED INVOICE)	\$3,050.00
TOTAL SUBCONSULTANTS	\$5,450.00

Total this Invoice: = \$12,336.86

Previously Invoiced = ✓ \$459,838.76

Invoice to Date = ✓ \$472,175.62

* Amount by Landtech will be paid out of FCM Engineers current authorization. Landtech fee proposal for \$3050.00 to re-establish survey control points was approved. The amount will be appropriated later by Fort Bend County.

LANDTECH

Landtech, Inc.
2525 North Loop West, Suite 300
Houston, Texas 77008
T: 713-861-7068; F: 713-861-4131
TxBPE Reg. No. F-1364
TxBPLS Reg. No. 10019100

PCM ENGINEERS, PC
9700 RICHMOND AVENUE
SUITE 250
HOUSTON, TX 77042
ATTN: MR. DAVID COLLINS, P.E.

INVOICE NUMBER: 54392
DATE: 06/15/2017
PROJECT ID: 1520008
CLIENT ID: 2098

FOR PROFESSIONAL SERVICES FROM MAY 01, 2017 THROUGH MAY 31, 2017

BELLAIRE BLVD. FROM FM 1464 TO SAN PABLO DRIVE

Description	Contract Amount	Percent Complete	Prior Billed	Total Billed	Current Billed
CONSTRUCTION PHASE	3,050.00	100.00	0.00	3,050.00	3,050.00
Total	3,050.00	100.00	0.00	3,050.00	3,050.00

TOTAL INVOICE DUE 3,050.00

THANK YOU,
APPROVED BY



PAUL P. KWAN, RPLS
PRESIDENT

**Jaymark Engineering Corporation**

3730 Cypress Creek Parkway, Suite 108
Houston, TX 77068
(346) 316-1181; Fax (346) 316-1185
www.jaymarkengineering.com

INVOICE

FCM Engineers
9700 Richmond Avenue, Suite 2500
Attn: Dr. Frank C. Mbachu, P.E., DEE
Houston, TX 77042

Number: **20313**
Job: 15-020
Date: 6/28/2017

**2013 Mobility Bond Program/Fort Bend County
Bellaire Boulevard from FM1464 to San Pablo Drive Project
Bridge Design Engineering Services**

<u>Contract Amount</u>	<u>Percent Complete</u>	<u>Total Completed To Date</u>	<u>Previous Billings</u>	<u>Current Amount Due</u>	<u>Current Percentage</u>
Design Phase Engineering Services					
\$ 114,360.00	100.00%	\$ 114,360.00	\$ 114,360.00	\$ -	0.00%
Construction Phase Engineering Services					
\$ 6,000.00	40.00%	\$ 2,400.00	\$ -	\$ 2,400.00	40.00%
Additional Services - None				\$ -	
Total Amount Due Upon Receipt				\$ 2,400.00	

I certify that the amount invoiced is true and correct to the best of my knowledge.

Mark E. Taylor

Signature

6/28/2017

Date



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**2013 Mobility Bond Program, Fort Bend County
Bellaire Blvd from FM 1464 to San Pablo Drive**

PROJECT STATUS REPORT No. 16: July 3, 2017

Phase III – Construction Phase Services

A. Pre-Construction Meeting

FCM Engineers, P.C. attended the pre-construction meeting where it was concluded that the EOR will communicate with the surveyor and authorize the surveyor to go and re-establish the survey control points. The surveyor (Landtech) submitted the fee proposal to re-establish the control point in the amount of Three Thousand Fifty and Zero Cents (\$3,050.00). The amount, it was understood will be appropriated later by Fort Bend County after the amount is paid from FCM budget for Phase III Services. The surveyor completed the service and submitted the invoice for \$3,050.00 as attached.

B. Submittals Review

There are total 13 submittals reviewed and returned to the construction manager. The log of submittals is attached to this report.

C. RFI Responses

There are 13 RFI's submitted, reviewed with response and forwarded to the construction manager. The log of RFI's is attached to this report.

D. Construction Site Photographs

The construction site photographs were taken as attached to this report. The site visit was taken due to the pictures forwarded by the contractor to look at the picture showing the locations of drilled shaft.

E. List of Planned Activities for the following Months

The following activities are planned to be accomplished in July 2017.

1. Review of submittals.
2. Review and response to RFI's and provide other contract document clarifications when requested by construction manager.

 FCM Engineers, P.C.			Bellaire Boulevard from FM1464 to San Pablo Mobility Project No. 13202 LIST OF RFI's			Contractor: Allgood Construction	
RFI No	Drawing No.	Date Submitted	Description of Request	RFI Response	Date Responded	Processed Days	
1	36	4/27/2017	The Prestressed Concrete Slab Beam Design Form (PSBND) contains no data. Can the design engineer please occupy to form for all beams on each bridge?	Please refer to attached TXDOT Detail sheet for beam data	5/2/2017	2	
2	32	4/28/2017	Please provide coordinates or station/offset and elevations for all break points on the slope paving below the bridges	Please find attached updated Bridge Plan Sheets with Elevations provided on the slope paving. Dimensions and Tie-downs have been provided on the plan for the slope paving. Coordinates can be obtained using the CAD files, and can be provided upon request	5/2/2017	2	
3	n/a	4/28/2017	For the concrete items on the bridges, the bid form references all Harris County specifications with the exception of the bridge deck for the Chickory Bridges which references TXDOT Item 422. Please clarify that the San Pablo bridge deck will follow TXDOT Item 422 as well even though it is listed as Harris County Item 360. Additionally, please clarify that the following mix designations are correct 1. Class S per TXDOT Item 422 - Bridge Deck, Bridge Sidewalk, and Bridge Median 2. Class B1 per Harris County Item 421 - Columns, Caps, and Abutments, Approach Slabs 3. Class D per Harris County Item 421 - Slope Paving	Both bridges shall use Harris County Item 360 1. Use Harris County Item 421 Class C2 for Bridge Deck, Bridge Sidewalk, and Bridge 2. Use Harris County Item 421 Class A2 for Columns, Caps, Abutments, Approach Slabs 3. Use Harris County Item 421 Class D for Slope Paving	5/2/2017	2	
4	32 & 33	4/28/2017	1. The Begin and End Bridge Station/Elevation on Sheet 22 and 23 are 14+88.67/93.46' and 16+19.67/92.77'; this conflicts with the Begin and End Bridge Station/Elevation on Sheet 32 which are 14+94.74/93.46' and 16+14.74/92.77'. Please confirm the Begin and End Bridge Stations/Elevations. 2. The Begin and End Bridge Station/Elevation on Sheet 27 are 37+76.73/91.30' and 38+67.75/90.95'; this conflicts with the Begin and End Bridge Station/Elevation on Sheet 33 which are 37+81.51/91.30' and 38+61.51/90.95'. Please confirm the Begin and End Bridge Stations/Elevations. 3. The bearing for the Chickory Woods Bridge on Sheet 3 is N88°21'07"E; this conflicts with the bearing on Sheet 32 which is N88°19'43.80"E. Please confirm which is correct. 4. The bearing for the San Pablo Bridge on Sheet 3 is N86°51'04"E; this conflicts with the bearing on Sheet 33 which is N86°44'57.38"E. Please confirm which is correct. 5. Please confirm where exactly the profile grade falls on the bridge. Normally it is on the top of curb, face of curb, on the low side of the bridge. 6. The width of the bridges on Sheets 32 and 33 is 34'-1" which does not match the widths shown on Sheet 41 (Design Guidelines - Span Details - Slab Beams - Half Boulevard 0° Skew Sheet 2 of 2). Please confirm the bridge widths including sidewalk widths, travel lane widths, and median curb widths. We believe this should be 34'-0" wide total with an 8' wide sidewalk, 24' wide travel lanes, and a 2' wide median curb. 7. The Standard Abutment drawings on Sheet 40 shows an 18" Drilled Shaft under the wing walls. Please verify whether these shafts are required or not.	1. The Begin and End Stations shown on sheet 32 have been checked and verified correct as per original survey baseline. Civil plan sheets 22&23 should be corrected reflect these stations. 2. The Begin and End Stations shown on sheet 33 have been checked and verified correct as per original survey baseline. Civil plan sheets 27 should be corrected reflect these stations. 3. Bearing for the Chickory Woods Bridge on Sheet 32 has been checked and verified correct as per original survey baseline. Civil plan sheet 3 should be corrected reflect this bearing. 4. Bearing for the San Pablo Bridge on Sheet 32 has been checked and verified correct as per original survey baseline. Civil plan sheet 3 should be corrected reflect this bearing. 5. The profile grade shown on the Bridge Plan is the Top of Curb elevation. 6. Bridges has been revised 34'-0" see attached revised bridge plans. 7. We are not providing 18" drilled shafts under the wing walls, not required.	5/4/2017	2	

 FCM Engineers, P.C.			Bellaire Boulevard from FM1464 to San Pablo Mobility Project No. 13202 LIST OF RFI's			Contractor: Allgood Construction	
RFI No	Drawing No.	Date Submitted	Description of Request	RFI Response	Date Responded	Processed Days	
5	32 & 33	4/28/2017	Sheets 32 and 33 call for a 20' Approach Slab 13" Thick BAS-C which is a TxDOT Standard. The Bridge Details on Sheet 36 call for a 10" Thick Approach Slab - Harris County Standard. Which is correct?	Sheets 32 & 33 have been revised to show 10" thick as per Harris County Approach Slab Detail on sheet 36. Please see attached revised plans.	5/4/2017	2	
6	32 & 33	5/11/2017	The abutment bearings are not 90° to the baseline bearing for both bridges. Please confirm if the abutments and bents are 90° to the baseline or skewed to the baseline.	Corrected the abutment bearings. Abutment bearings are 90° to the baseline for both bridges. See attached drawings.	5/12/2017	2	
7	41	5/11/2017	The Table of Variable Values on Sheet 41 for the slab beams is missing the Dead Load Deflection values "A" and "B". Please furnish for the 4SB12, 4SB15, 5SB12, and 5SB15 beams for their applicable span lengths.	Please use the Table on TxDOT Prestressed Concrete Slab Beam Spans (TY SB 12 or SB 15) SPSB-30 (attached) for requested value.	5/12/2017	2	
8		5/17/2017	Please provide the information requested by the precaster on the attached drawings. 1. The design sheet provided (attached) only indicates the slab beam designs for the 5SB12 and the 5SB15 for a 24 ft. roadway Can you please provide us with the slab beam designs for the 4SB12 and the 4SB15 for a "24 ft. roadway". 2. On sheet no. 75 (attached) the contract drawing indicate a "Typical Transverse Section" for the 4SB12 and 5SB12 bridge only. Also indicating a shear connection detail. There was no sheet indicating a "Typical Transverse Section" for the 4SB15 and 5SB15 bridge. Can you please provide us with the contract plan sheet with the "Typical Transverse Section" for the 4SB15 and 5SB15 bridge. Can you please verify if ALL Bridges will require the "Shear Connection Detail". Also, please note that we don't have a complete set to make sure that everything is provided as required. The cover sheet "Index" does not indicate all the sheets that are included as part of this project.	1. "Can you please provide us with the slab beam design for the 4SB12 and the 4SB15 for a 24 ft. roadway. On TxDOT Sheet PSBSD: Use the 30' Roadway SB12 Beam for the 4SB15 data Use the 30' Roadway SB15 Beam for the 4SB12 data 2. Can you please provide us with the contract plan sheet with the "Typical Transverse Section" for the 4SB15 and 5SB15 bridge." The Layout is the same as the Typical Transverse Section for 4SB12/5SB12, please find attached sheet showing a Typical Transverse Section with 4SB15/5SB15. 3. "Can you please verify if ALL Bridges will require the "Shear Connection Detail." Yes, all bridges will require the Shear Connection Detail. 4. "Also, please note that we don't have a complete set to make sure that everything is provided as required. The cover sheet "Index" does not indicate all the sheets that are included as part of this project" Please refer to FCM Engineers for this item.	6/6/2017	4	



Bellaire Boulevard from FM1464 to San Pablo Mobility Project

No. 13202
LIST OF RFI'S

Contractor:
Allgood Construction

RFI No	Drawing No.	Date Submitted	Description of Request	RFI Response	Date Responded	Processed Days
9		5/17/2017	Can you please provide the following information so that I have the information need to submit the contractor NOI 1. What is the name of first water body to receive the stormwater runoff? 2. What is the segment number of the classified water body that the discharge will eventually reach? 3. Is the discharge into an MS4? 4. What is the name of the MS4 Operator 5. Are any surface water bodies receiving discharge from the construction site on the latest EPA approved CWA 303(d) list of impaired waters? 6. If yes what is the name of the impaired water body receiving the discharges from the construction site?	1. Brays Bayou 2. 1007K 3. Yes, It discharges into MS4 4. Fort Bend County Drainage District 5. Yes 6. Country Club Bayou above Tidal, Segment No. 1007K	6/5/2017	1
10		5/17/2017	As you know the NTP for the Bellaire Blvd Project #13202 was issued for 5-15-17 like we discussed in the pre-construction meeting. I have not moved on site due to not being provided with all the requested information. I have requested control staking and CAD files so that we can setup on site but this information has not been provided. As well from the engineer responses to RFI 2 and 4 there have been revisions to the plans that have not been sent out. Until I receive control staking, revised plans, and CAD files then we will not be moving on site to begin construction and would like to request a time extension from 5-15-17 until this information is provided and is correct. If you have any questions please let me know.	A time extension will be approved for the days Allgood was not able to proceed with the work due to errors or omissions in the contract plans. Once allgood has sufficient plans to proceed the total number of days delayed will be calculated and added to the contract by Change Order.	5/30/2017	1
11		6/14/2017	During the pre-construction meeting on 4-25-17 the railing for the bridge was discussed and the county had a possible desire to change the railing from a steel rail to a concrete rail for ease of maintenance. Since the pre-con there has not been any further information provided as to how we should proceed with the railing. If a decision is not made quickly it could possible delay the process of fabrication of the railing. If changes will be made from the original design can you please provide new drawings and plans. So that we can reprice the bid item pasted off the given the new quantities.	Bridge near Chickory Woods: 1. Sidewalks to Remain as shown on plans. 2. Change rail on 2' sidewalk sections to TxDOT T233 rail. Attach per detail for raised sidewalk as shown on TxDOT C223 rail. 3. Change rail on 8' sidewalk sections to TxDOT C223 rail. Bridge Near San Pablo: 1. Sidewalks to remain as shown on plans 2. Harris County Pedestrian Rail remains as shown on plans. 3. Change rail on 2' sidewalk sections to TxDOT T233 rail. Attach per detail for raised sidewalk as shown on TxDOT C223 rail. 4. Change rail on 8.5' sidewalk sections to TxDOT C223 rail.	6/17/2017	8



No. 13202

LIST OF RFI's

Contractor:
Allgood Construction

[illegible]

Bellaire Blvd from FM 1464 to San Pablo Drive



On Westside of Chickory Woods Bridge Looking East



On the West Side of Great Oaks Drainage channel Looking N.E



On the West Side of Great Oaks Channel Looking North



West of Great Oak Channel Looking North on Lay Down Area

Bellaire Blvd from FM 1464 to San Pablo Drive



Westside of Great Oaks Drainage Channel Laydown Area Looking North East



West Side of Great Oaks Drainage channel Laydown Area Looking East



East Side of San Pablo Ditch Looking West to FM 1464



East Side of San Pablo Ditch Looking Northwest

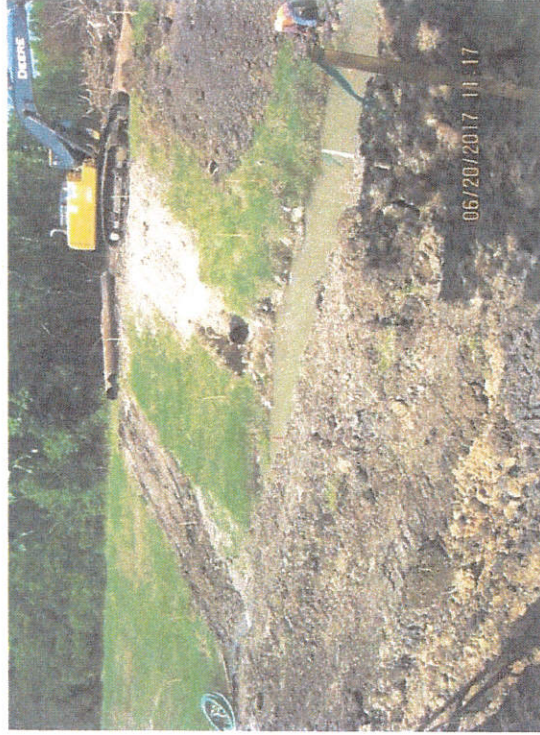
Bellaire Blvd from FM 1464 to San Pablo Drive



East Side of San Pablo Ditch Looking North on the Ditch



East Side of San Pablo Ditch Looking West to Great Oaks Drainage Channel



East Side of San Pablo Ditch Looking into the Ditch

Harris, Britten

From: Don Durgin <Don.Durgin@rpsgroup.com>
Sent: Monday, August 14, 2017 7:07 AM
To: Harris, Britten
Subject: 13202 Bellaire Invoice 016
Attachments: 13202 Bellaire Invoice 016.pdf

Britten,

I have reviewed the attached invoice and recommend approval. Please process for payment.

Stacy and I discussed that FCM should not invoice the County for work to fix design errors. I am also including the email from FCM stating that this did not happen.

FCM invoice No. 16 is correct and did not include any time used for design corrections. If you look at the attached timesheets covering May 01, 2017 through June 30, 2017 you will see that not all the time charged on the project were billed on invoice No. 16. It is standard understanding that time used for design correction is never charged to Phase III services. If you want the timesheet to be attached with the remaining invoices, please let me know. The Invoice Summary included with the invoice was supposed to indicate the amount of hours or less charged to the project. Invoice No. 16 is re-submitted with the requested timesheets. Please let me know soon if there is any question in order to avoid delay. Thanks!

Dr. Frank C. Mbachu, P.E., DEE
FCM Engineers, P.C.
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Houston, Texas 77042
Tel: (713) 706-4414
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Thanks.

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Department Manager
RPS | Infrastructure
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Formerly Klotz Associates

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