

MEMORIAL CITY
REDEVELOPMENT AUTHORITY,
TIRZ No. 17,
City of Houston



Agenda and Agenda Materials
Meeting of the Board of Directors


October 25, 2016

JOINT MEETING OF THE BOARD OF DIRECTORS OF THE
TIRZ 17 REDEVELOPMENT AUTHORITY/MEMORIAL CITY REDEVELOPMENT AUTHORITY
and TAX REINVESTMENT ZONE NUMBER SEVENTEEN
HOUSTON, TEXAS

Notice is hereby given that the Board of Directors of the TIRZ 17 Redevelopment Authority (aka the Memorial City Redevelopment Authority) and the Tax Reinvestment Zone Number Seventeen, City of Houston, Texas, will hold a regular joint meeting on **Tuesday, October 25, 2016, at 8:00 a.m.**, at Four Points by Sheraton, 10655 Katy Freeway, Wycliffe Room, Houston, Texas 77024, open to the public, to discuss and adopt such orders, resolutions or motions, and take direct or indirect actions as may be necessary, convenient, or desirable with respect to the following matters:

AGENDA

1. Establish quorum and call meeting to order.
2. Receive public comments.
3. Approve minutes of September 30, 2016 regular meeting.
4. Receive financial and bookkeeper's report, including payment of invoices, review of investments and project cash flow reports.
5. Design standards for small cell networks and proposed installation locations.
6. 2016 Refunding Bonds.
7. 2017 Bond Issue.
8. CIP Projects.
 - a. N. Gessner Drainage/Mobility Improvements – Phase I & II (CIP Projects T-1732A and T-1732B):
 - (i) Proposal from Klotz Associates for Phase I and II Supplemental Professional Services;
 - (ii) Authorize execution of Professional Services Agreement with Cobb, Fendley & Associates, Inc. and Task Order No. 1 for Street Paver Design;
 - (iii) Authorize execution of Interlocal Agreement with City of Houston for Funding Project Costs.
 - b. Town and Country West Drainage and Mobility Improvements (CIP Project T-1717):
 - (i) Updates from LAN.
 - c. Other CIP project updates and status reports.
9. Convene in Executive Session pursuant to Section 551.071, Texas Government Code, to conduct a private consultation with attorney, with regard to pending or contemplated litigation; and Convene in Executive Session pursuant to Section 551.072, Texas Government Code, to deliberate the purchase, exchange, lease or value of real property.
10. Reconvene in Open Session and authorize appropriate actions regarding private consultation with attorney; and reconvene in Open Session and authorize appropriate actions with regard to pending or contemplated litigation and regarding the purchase, exchange, lease or value of real property.
11. Adjournment.



Executive Director for Authority

MEMORIAL CITY REDEVELOPMENT AUTHORITY TIRZ NO. 17,
HOUSTON, TEXAS

AGENDA MEMORANDUM

TO: Memorial City Redevelopment Authority TIRZ No. 17 Board of Directors
FROM: Executive Director
SUBJECT: Agenda Item Materials

3. Approve minutes of the September 30, 2016 regular meeting.

**MINUTES OF THE JOINT MEETING OF THE
TIRZ 17 REDEVELOPMENT AUTHORITY/MEMORIAL CITY REDEVELOPMENT AUTHORITY and
TAX REINVESTMENT ZONE NUMBER SEVENTEEN
CITY OF HOUSTON, TEXAS
BOARD OF DIRECTORS**

September 30, 2016

ESTABLISH QUORUM AND CALL MEETING TO ORDER.

The Board of Directors of the TIRZ 17 Redevelopment Authority/Memorial City Redevelopment Authority and Tax Reinvestment Zone Number Seventeen, City of Houston, Texas, held a regular joint meeting on Friday, September 30, 2016, at 8:00 a.m., at the Four Points by Sheraton, 10655 Katy Freeway, Wycliffe Room, Houston, Texas 77024, inside the boundaries of the TIRZ, open to the public, and the roll was called of the duly appointed members of the Board, to-wit:

Position 1 – Marshall B. Heins
Position 2 – John Rickel
Position 3 – David P. Durham
Position 4 – Ann T. Givens, *Chair*

Position 5 – Zachary R. Hodges
Position 6 – Brad Freels, *Vice-Chair*
Position 7 – Glenn E. Airola, *Secretary*

and all of the above were present, with the exception of Directors Airola and Hodges, thus constituting a quorum. Also present were Scott Bean and Linda Clayton, both of Hawes Hill Calderon, LLC; Jessica Holoubek, Allen Boone Humphries Robinson, LLP; and Michelle Lofton, ETI Bookkeeping Services. Others attending the meeting were Jennifer Curley, COH - Economic Development Dept.; Council Member Greg Travis and Sallie Acorn, District G; Amy Peck, District A; Kristin Blomquist, First Southwest; Muhammad Ali, LAN; Edward Conger, Klotz Associates; Jim Webb, Goodman Corporation; James Vick, SWA; Joseph Ellis, McCall Gibson Swedlund Barfoot PLLC; Ben Gillis, Memorial City Management District; James Shanks and Tara Burrer, both of Halff Associates, Inc.; Robert Benz; Jack Valinski, City of Houston; Jim Shroff, Kay Haslam, Bruce Nichols, Virginia Gregory, Ed Browne, Linda Kohnen, Donna Freedman and David Tresch. Chair Givens called the meeting to order at 8:01 a.m.

RECEIVE PUBLIC COMMENTS.

Kay Haslam stated her neighborhood had recently been put in a special flood hazard zone; she stated she is in a closed basin and discussed permitting requirements to discharge into the channel; she further stated the flood plain manager is responsible for permitting; she stated there are two bridges in low elevation and not being able to afford to rebuild them higher; she discussed that FEMA regulations and requirements of developers to provide detention. Donna Freedman wanted to know why Klotz Associates was on the agenda; she asked the Board to please ask some serious questions regarding this matter. She further asked where are our retention ponds.

APPROVE MINUTES OF AUGUST 25, 2016 REGULAR MEETING.

Upon a motion duly made by Director Durham, and being seconded by Director Heins, the Board voted unanimously to approve the Minutes of the August 25, 2016, Board meeting, as presented.

RECEIVE FINANCIAL AND BOOKKEEPER'S REPORT, INCLUDING PAYMENT OF INVOICES, REVIEW OF INVESTMENTS AND PROJECT CASH FLOW REPORTS.

Ms. Lofton presented the bookkeeper's report and went over invoices, included in the Board agenda materials. Upon a motion duly made by Director Durham, and being seconded by Director Rickel, the Board voted unanimously to accept the Bookkeeper's Report and approved payment of invoices, as presented.

FY2016 AUDIT BY MCCALL GIBSON SWEDLUND BARFOOT, PLLC.

Mr. Ellis presented the Annual Financial Report, included in the Board agenda materials. He reviewed pages 1-2, Independent Auditor's Report and reported an unmodified (clean) opinion. He reviewed pages 3-7, Management's Discussion and Analysis; page 10, Statement of Activities and Government Funds Statement of Revenues, Expenditures and Changes in Fund Balance; and page 26, Schedule of Revenues, Expenditures and Changes in Fund Balance – Budget and Actual. Upon a motion duly made by Director Rickel, and being seconded by Director Durham, the Board voted unanimously to approve the FY2016 Annual Financial Report as presented.

FY2017 BUDGET.

Mr. Bean reported the FY2017 Budget recently approved by the City was included in the Board agenda materials for review. He reported an additional \$100,000 had been added to the operating budget for the lawsuit; and additional funds added for concrete replacement. Upon a motion duly made by Director Rickel, and being seconded by Director Hodges, the Board voted unanimously to approve the FY2017 Budget as presented.

FY2016 MUNICIPAL SERVICES FEE PAYMENT

Mr. Bean reviewed the invoice from the City of Houston for the municipal services fee in the amount of \$490,000, included in the Board agenda materials, and answered questions. Upon a motion duly made by Director Hodges, and being seconded by Director Durham, the Board voted unanimously to approve the municipal services fee in the amount of \$490,000.00 as presented.

AUTHORITY FINANCIAL ADVISOR

a. Bond Refunding Analysis.

Ms. Blomquist reported the Authority had an opportunity to refinance its current bond debt with no prepayment penalty. She reviewed the refunding statistics provided in the Board agenda materials and answered questions presented by the Board. She reported this would be a private placement and not on

the public market. She reported at this time the analysis did not include the developer agreements and she would provide an updated analysis at the next board meeting which would include the developer agreements. No action from the Board was required.

b. 2017 Bond Issue.

Ms. Blomquist distributed a capacity analysis, a copy is attached as Exhibit A. She reviewed the handout and answered questions. She reported the analysis included the current capacity versus an analysis including extending the life of the zone. There was general discussion regarding extending the life of the zone. There was general discussion regarding deannexation and annexation being done first and then looking at a term extension. Council Member Travis stated citizens in District G do not see the benefit of an extension; however, maybe once LAN has completed the engineering report it is possible the citizens will be more receptive to the extension. No action from the Board was required.

NORTH GESSNER (CIP PROJECTS T-1732A AND T-1732B):

a. Proposal from Klotz Associates for Phase I and II Supplemental Professional Services;

This item was tabled. Mr. Conger provided an update. No action from the Board was taken.

b. Advance Funding Agreement with TxDOT.

This item was tabled.

MEMORIAL DRIVE (CIP PROJECT T-1738A):

a. Proposal from LAN for Design and Construction Phase Services;

Mr. Ali reviewed LAN's proposal for design and construction phase services, included in the Board agenda materials, and answered questions. He stated the Memorial Drive project will require them to adhere to TxDOT standards and not the City of Houston standards and five different submittals will be required to be submitted to TxDOT.

b. Proposal from SWA for Landscape Architectural Services;

Mr. Vick reviewed the proposal from SWA for landscape architectural services, included in the Board agenda materials, and answered questions. There was general discussion regarding a shared-use path on both sides of the road. He reported landscaping is consistent with the Memorial City Management District standards.

c. Proposal from Goodman Corporation for NEPA compliance;

Mr. Webb reviewed the proposal from Goodman Corporation for NEPA compliance, included in the Board agenda materials, and answered questions.

Upon a motion duly made by Director Rickel, and being seconded by Director Heins the Board voted unanimously to (a) approve the proposal from LAN for phase II detailed design on the Memorial Drive Mobility and Drainage Improvements, as presented; (b) approve the proposal from SWA on the Memorial Drive Drainage and Mobility Improvements project for landscape architectural services, as presented; and (c) approve the proposal from Goodman Corporation to perform an environmental study for the Memorial Drive project, as presented.

d. Annexation.

Mr. Bean stated he was requesting authorization to move forward with the City on the annexation of Memorial Drive from Tallowood to the City limits. The Board was in consensus in providing the executive director authorization to work with the City on the annexation.

CIP PROJECT UPDATES FROM ENGINEERING AND PLANNING CONSULTANTS.

Mr. Bean asked Conger questions regarding Briar Branch/testing – Mr. Conger reported geotechnical testing is being done for the Briar Branch straws. Mr. Ali provided an update on the Town & Country round-about project. No action from the Board was required.

GENERAL PROFESSIONAL ENGINEERING SERVICES PROPOSAL FROM LAN.

GENERAL LANDSCAPE ARCHITECTURAL SERVICES PROPOSAL FROM SWA.

Mr. Bean reviewed the proposal from LAN for engineering services and the proposal from SWA for on call services, included in the Board agenda materials. He reported both contracts were on call service contracts and he was recommending for approval.

Upon a motion duly made by Director Rickel, and being seconded by Director Heins, the Board voted unanimously to (a) approve the proposal from LAN to provide engineering consulting services on an hourly basis for on call services in an amount not to exceed \$15,000.00, as presented; and (2) approve the proposal from SWA to provide professional design on an hourly basis for on call services in an amount not to exceed \$25,000.00, as presented.

SHARED-USE PATH PROJECT FROM MEMORIAL DRIVE TO TERRY HERSHEY PARK.

Mr. Benz provided a presentation on BW8 Enhanced Path Update Bicycle and Pedestrian Connections, and answered questions. He provided highlights connections to transportation networks; connections to places; connections to nature; project scope; partners; timeline and challenges. Upon a motion duly made by Director Rickel, and being seconded by Director Hodges, the Board voted unanimously to authorize the Executive Director to continue working and moving forward on the shared-use path project.

CONVENE IN EXECUTIVE SESSION PURSUANT TO SECTION 551.071, TEXAS GOVERNMENT CODE, TO CONDUCT A PRIVATE CONSULTATION WITH ATTORNEY, WITH REGARD TO PENDING OR CONTEMPLATED LITIGATION; AND CONVENE IN EXECUTIVE SESSION PURSUANT TO SECTION 551.072, TEXAS GOVERNMENT CODE, TO DELIBERATE THE PURCHASE, EXCHANGE, LEASE OR VALUE OF REAL PROPERTY.

An Executive Session was called at 9:14 a.m. It was noted that Director Brad Freels will not be participating in the Executive Session pertaining to Section 551.072 deliberate to purchase, exchange, lease or value of real property.

Director Brad Freels left meeting at 9:19 a.m.

RECONVENE IN OPEN SESSION AND AUTHORIZE APPROPRIATE ACTIONS REGARDING PRIVATE CONSULTATION WITH ATTORNEY; AND RECONVENE IN OPEN SESSION AND AUTHORIZE APPROPRIATE ACTIONS WITH REGARD TO PENDING OR CONTEMPLATED LITIGATION AND REGARDING THE PURCHASE, EXCHANGE, LEASE OR VALUE OF REAL PROPERTY.

The Board reconvened in Open Session at 9:28 a.m.
No action was taken

ADJOURNMENT.

There being no further business to come before the Board, Chair Givens adjourned the meeting at 9:29 a.m.

Secretary

List of Exhibits:

- A. Capacity Analysis provided by FirstSouthwest

MEMORIAL CITY REDEVELOPMENT AUTHORITY TIRZ No. 17,
HOUSTON, TEXAS

AGENDA MEMORANDUM

TO: Memorial City Redevelopment Authority TIRZ No. 17 Board of Directors
FROM: Executive Director
SUBJECT: Agenda Item Materials

4. Receive the financial and bookkeeper's report, including payment of invoices, review of investments, and project cash flow reports.

Memorial City Redevelopment Authority

Cash Management Report

September 30, 2016

ETI BOOKKEEPING SERVICES
17111 ROLLING CREEK DRIVE SUITE 108
HOUSTON TX 77090
TELEPHONE 281 444 3384 FAX 281 440 8304

Fiscal Year End: June 30, 2017

Summary

<u>Current Activity</u>	<u>Memorial City Redevelopment Authority</u>			
	<u>General Fund</u>	<u>Capital Projects</u>	<u>Debt Service</u>	<u>Total</u>
Beginning Balance	21,003,664.18	0.00	728,521.69	21,732,185.87
Revenue	4,481.55	0.00	246.86	4,728.41
Expenditures	562,332.54	0.00	0.00	562,332.54
Ending Balance	20,445,813.19	0.00	728,768.55	21,174,581.74

NOTES:

Debt Service Payments due in Fiscal Year End 2017:

Date	Series	Principal	Interest	Total
9/1/2016	2008	470,000.00	161,090.00	631,090.00
9/1/2016	2011	575,000.00	141,036.00	716,036.00
9/1/2016	2011A	1,825,000.00	470,085.00	2,295,085.00
3/1/2017	2008	-	150,632.50	150,632.50
3/1/2017	2011	-	130,456.00	130,456.00
3/1/2017	2011A	-	434,953.75	434,953.75
			Total FYE 2017	4,358,253.25

September 30, 2016

General Operating Fund

BEGINNING BALANCE: **21,003,664.18**

REVENUE:

Checking Interest - Wells Fargo	1,232.47	
Texpool Interest	266.87	
Wells Fargo/TexSTAR (Surplus Funds) Interest	2,982.21	
Voided Check(s)	0.00	
Total Revenue:		4,481.55

DISBURSEMENTS:

Checks Presented At Last Meeting	72,332.54	
Checks Written at/after Last Meeting 2635 City of Houston	490,000.00	
Total Expenditures		562,332.54

Ending Balance: **20,445,813.19**

Location of Assets:

Institution	Investment Number	Interest Rate	
Wells Fargo Checking	*5490	0.1500	10,540,591.97
TexPool	*0001	0.3799	854,912.65
Wells Fargo/TexSTAR	TexSTAR Surplus Funds	0.4123	8,803,587.90
Texas Exchange Bank CD	*3601	1.1600	246,720.67
Total			20,445,813.19
Certificate of Deposit	CD *3601	Term: 12 Months	Matures: 09/28/2017

Memorial City Redevelopment Authority
Checks Presented
October 25, 2016

Num	Name	Description	Amount
2636	Allen Boone Humphries Robinson LLP	Legal Fee	-4,910.10
2637	Blank Rome LLP	Legal Services	-14,699.65
2638	Equi-Tax, Inc	Tax Assessor Fee	-400.00
2639	eSiteful, Inc.	IT Consulting	-107.55
2640	ETI Bookkeeping Services	Bookkeeping Fee	-873.00
2641	Hawes Hill Calderon LLP	Professional Consultant	-7,500.00
2642	Klotz Associates Inc	Engineering Consultant	-48,930.32
2643	McCall Gibson Swedlund Barfoot PLLC	Auditor	-8,000.00
2644	The Goodman Corporation Inc	Contract Services	-6,100.00
2645	TML Intergovernmental Risk Pool	Insurance	-1,058.40
Total			-92,579.02

Debt Service Fund

BEGINNING BALANCE		728,521.69
REVENUE		
Wells Fargo/TexSTAR (2008 DSF) Interest	243.63	
Wells Fargo/TexSTAR (2008 Pled Rev) Interest	3.23	
Total Revenue		246.86
EXPENDITURES		
2008 Debt Service Interest Payment	0.00	
2008 Debt Service Principal Payment	0.00	
Total Expenditures		0.00
ENDING BALANCE		728,768.55

Location of Assets:

Institution	Investment Number	Interest Rate	Current Balance
Wells Fargo *4601	TexSTAR 2008 DSF	0.4123	719,252.14
Wells Fargo *4600	TexSTAR 2008 Pledged Rev	0.4123	9,516.41
		Total	728,768.55

Memorial City Redevelopment Authority
Profit & Loss Budget vs. Actual
September 2016

	September			Year To Date (3 Months)			Annual
	Actual	Budget	Variance	Actual	Budget	Variance	Budget
Ordinary Income/Expense							
Income							
1000 · Income							
8223 · Interest Income	4,728	3,081	1,647	17,121	9,242	7,879	36,969
8930 · Bond Proceeds	0	0	0	0	0	0	81,310,397
Total 1000 · Income	4,728	3,081	1,647	17,121	9,242	7,879	81,347,366
6-4320 · Increment Collections	0	0	0	0	0	0	15,073,959
6-4350 · Grants	0	0	0	0	0	0	3,450,000
Total Income	4,728	3,081	1,647	17,121	9,242	7,879	99,871,325
Expense							
3335 · Management Consulting Services							
6320 · Legal	2,723	14,583	-11,860	25,858	43,750	-17,892	175,000
6322 · Eng Consultant/General Prof.Svc	0	2,500	-2,500	7,165	7,500	-335	30,000
6323 · Legal Litigation	15,007	0	15,007	49,196	0	49,196	0
6334 · Planning Consultings	0	4,167	-4,167	0	12,500	-12,500	50,000
6337 · Construction Audit	0	0	0	7,000	7,000	0	10,000
6343 · Other	108	0	108	108	0	108	0
Total 3335 · Management Consulting Services	17,838	21,250	-3,412	89,327	70,750	18,577	265,000
5650 · Transfers							
6420 · COH Administration Fee	0	0	0	0	0	0	753,698
6430 · Municipal Services	490,000	490,000	0	490,000	490,000	0	2,256,619
Total 5650 · Transfers	490,000	490,000	0	490,000	490,000	0	3,010,317
5706 · Debt Service							
5707 · Principal	0	0	0	2,870,000	2,870,000	0	4,561,417
5708 · Interest	0	0	0	772,211	772,211	0	1,488,253
5710c · Trustee Fee	0	0	0	0	0	0	9,500
Total 5706 · Debt Service	0	0	0	3,642,211	3,642,211	0	6,059,170
6300 · Administration & Overhead							
6321 · Auditor	8,000	8,000	0	8,000	8,000	0	19,500
6333 · Bookkeeping/Accounting	874	875	-1	2,907	2,625	282	10,500
6340 · Administration Salaries/Benefit	7,500	8,333	-833	22,500	25,000	-2,500	100,000
6344 · Bond Svcs/Trustee/FA	400	0	400	1,200	0	1,200	14,300
6353 · Insurance / FDIC Assess.Fee	1,058	1,000	58	1,058	1,000	58	3,500
Total 6300 · Administration & Overhead	17,832	18,208	-376	35,665	36,625	-960	147,800
7000 · Capital Expenditure							
1709 · Lumpkin I-10 Westview	0	0	0	801,148	0	801,148	0
1717 · Town & Country W. Drain/Mobil	353	291,667	-291,314	9,213	875,000	-865,787	3,500,000
1722 · Town & Country Blv Signalizatn	1,175	0	1,175	1,175	0	1,175	0
1725 · Parks & Green Space Improv.	0	10,417	-10,417	9,261	31,250	-21,989	125,000
1731A · Detention Basin & W-140 Bridge	0	0	0	3,055	0	3,055	0

Memorial City Redevelopment Authority
Profit & Loss Budget vs. Actual
September 2016

	September			Year To Date (3 Months)			Annual
	Actual	Budget	Variance	Actual	Budget	Variance	Budget
1731B · Memorial Drainage & Mobility	0	0	0	118	0	118	0
1732A · N Gessner Drainage & Mobility	16,652	341,667	-325,015	20,712	1,025,000	-1,004,288	4,100,000
1732B · N.Gessner Drainage & Mobility	0	41,667	-41,667	0	125,000	-125,000	500,000
1734 · W140 Channel Improvements	38,013	466,667	-428,654	41,696	1,400,000	-1,358,304	5,600,000
1734B · Bunker Hill Bridge	0	70,833	-70,833	0	212,500	-212,500	850,000
1735A · Detention Basin A	118	83,333	-83,215	118	250,000	-249,882	1,000,000
1737 · MetroNational - Detention/Roads	1,086,092	0	1,086,092	1,086,092	0	1,086,092	1,119,241
1738 · T&C Way Partners, LLC	0	0	0	880,322	0	880,322	0
1738A · Memorial Dr Drainage & Mobility	600	83,333	-82,733	600	250,000	-249,400	1,000,000
1799 · Concrete Panel Replace Program	0	2,917	-2,917	0	8,750	-8,750	35,000
Total 7000 · Capital Expenditure	1,143,003	1,392,501	-249,498	2,853,510	4,177,500	-1,323,990	17,829,241
Total Expense	1,668,673	1,921,959	-253,286	7,110,713	8,417,086	-1,306,373	27,311,528
Net Income	-1,663,945	-1,918,878	254,933	-7,093,592	-8,407,844	1,314,252	72,559,797

Memorial City Redevelopment Authority
Investment Report
September 30, 2016

SCHEDULE OF INVESTMENTS

Investment Pools

Fund	Location Of Assets	Interest Rate	Beginning Balance		Interest Earned	Deposits or (Withdrawals)	Ending Balance		
			Market	N.A.V.			Market	N.A.V.	
GOF	TexPool	0.3799	854,562.54	1.00022	854,374.58	271.20	855,177.67	1.00031	854,912.65
GOF	Wells Fargo/ TexStar	0.4123	8,800,034.64	1.000274	8,797,624.09	2,981.60	8,807,206.17	1.000411	8,803,587.90
DSF	Wells Fargo/ TexStar DSF	0.4123	4,360,976.89	1.000274	4,359,782.31	(3,640,773.80)	719,547.75	1.000411	719,252.14
DSF	Wells Fargo/ TexStar PI Rev	0.4123	9,512.59	1.000274	9,509.98	3.20	9,520.32	1.000411	9,516.41

Certificates of Deposit

Fund	Location Of Assets	Interest Rate	Purchase Value	Term	Maturity Date	Beginning Balance	Deposits or (Withdrawals)	Interest Earned	Ending Balance
GOF	TX Exch *3601	1.1600	245,000.00	12 Months	9/28/2011	246,720.67	0.00	0.00	246,720.67

Collateral Pledged In Addition to FDIC

Depository Institution	Total Funds On Deposit	Custodial Institution	Securities Pledged	Collateral Description	Par Value	Market Value
Wells Fargo	10,540,591.97	BNYM	17,217,767	WUJ2246	11,766,405	12,287,020

Certification:

The District's investments are in compliance with the investment strategy as expressed in the District's Investment Policy and the Public Funds Investment Act.

Bookkeeper _____

Investment Officer _____

Investment Officer Kenneth Byrd	Date Assumed Office 8/6/2015	Training Completed 10/18/2014
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ALLEN BOONE HUMPHRIES ROBINSON LLP

To contact the ABHR Billing Department, please call 713-860-6400 or email at billing@abhr.com

October 10, 2016

MEMORIAL CITY REDEVELOPMENT AUTHORITY

Litigation
Client/Matter: MEM001-21
Statement Number: 83663
Billing Attorney: Trey Lary

REMITTANCE PAGE

Fees for services posted through September 30, 2016 307.50
Expenses and Other Items posted through September 30, 2016 0.00

Total Amount Due: \$307.50

Please return this page with your payment to the remittance address below:

Allen Boone Humphries Robinson LLP
PO Box 4346
Department 90
Houston, TX 77210-4346

Checks should be made payable to Allen Boone Humphries Robinson LLP
Please include the invoice number on your check
Total amount payable in U.S. dollars

code # 6373
10-17-2016


ALLEN BOONE HUMPHRIES ROBINSON LLP

To contact the ABHR Billing Department, please call 713-860-6400 or email at billing@abhr.com

October 10, 2016

MEMORIAL CITY REDEVELOPMENT AUTHORITY

Projects
Client/Matter: MEM001-03
Statement Number: 83662
Billing Attorney: Trey Lary

REMITTANCE PAGE


Fees for services posted through September 30, 2016 1,880.00
Expenses and Other Items posted through September 30, 2016 0.00

Total Amount Due: \$1,880.00

Please return this page with your payment to the remittance address below:

Allen Boone Humphries Robinson LLP
PO Box 4346
Department 90
Houston, TX 77210-4346

Checks should be made payable to Allen Boone Humphries Robinson LLP
Please include the invoice number on your check
Total amount payable in U.S. dollars

UADWY, CODE
10-17-2016




ALLEN BOONE HUMPHRIES ROBINSON LLP

Telephone: 713-269-1231
October 10, 2016

MEMORIAL CITY REDEVELOPMENT AUTHORITY

Ms. Michelle Lofton
ETI Bookkeeping Services
17111 Rolling Creek Drive, Suite 108
Houston, TX 77099

Client/Matter:
Statement Number:
Billing Attorney:

MEM001-03
83662
Trey Lary

Projects

Professional Fees

Fees for services posted through September 30, 2016, as follows:

Date	Professional	Hours
09/19/16	Detention Basin 1735 ✓ Jessica Holoubek	0.25
09/19/16	N Gessner Drainage & Mobility - 1732A ✓ Work on matters regarding Advance Funding Agreement with Texas Department of Transportation; telephone conference with Jim Webb regarding the same.	0.25
	Total Task Hours:	0.50
	Total Task Amount:	\$117.50
09/21/16	Town & Country W. Drain/Mobil - 1717 ✓ Discuss reimbursement under Development Agreement with Christina Mullin, Midway; follow up with auditor regarding the same; review First Amendment to Exchange Agreement regarding the same.	0.50
09/22/16	Telephone conference with Scott Bean regarding payoff of development agreement loan.	0.25
	Total Task Hours:	0.75
	Total Task Amount:	\$352.50
09/21/16	Town & Country Blv Signalization - 1722 ✓ Work on matters regarding right-of-way abandonment.	0.50
09/21/16	Telephone conference with Chris Seckinger, Midway.	1.25

Allen Boone Humphries Robinson LLP

October 10, 2016



Memorial City Redevelopment Authority
MEM001-03

Page: 2
83662

Statement Number:

regarding right-of-way abandonment and exchange; telephone conference with Muhammad Ali regarding the same; prepare letter outlining parking garage demolition options to landowner in connection with right-of-way exchange.

09/22/16 Jessica Holoubek 0.75
Work on correspondence regarding right-of-way exchange and demolition of parking garage; discuss same with Muhammad Ali; telephone conference with Scott Bean regarding the same.

Total Task Hours: 2.50
Total Task Amount: \$1,175.00
Total Fees: \$1,980.00

TASK FEE BREAKDOWN

Hours	Amount
0.25	117.50
0.50	235.00
0.75	352.50
2.50	1,175.00

Total Expenses and Other Items: \$ 1,880.00
Total Amount Due: \$ 1,880.00

Allen Boone Humphries Robinson LLP

October 10, 2016



Memorial City Redevelopment Authority
MEM001-01

Page: 2
83861

Statement Number:

Total Task Hours:	6.75
Total Task Amount:	\$2,603.75
Work on matters regarding information request from Key Haslam.	0.25

Total Task Hours:	0.25
Total Task Amount:	\$117.50
Total Fees:	\$2,721.25

Expenses and Other Items

Expenses and Other Items posted through September 30, 2016, as follows:	
09/22/16 JBH Photocopy Charges.	0.75
09/22/16 JBH Photocopy Charges.	0.60
	1.35

Total Expenses and Other Items:

Hours	Amount
6.75	2,603.75
0.25	117.50

TASK FEE BREAKDOWN

General
Public Information Requests

Total Fees:	\$ 2,721.25
Total Expenses and Other Items:	\$ 1.35
Total Amount Due:	\$ 2,722.60

BLANK ROME LLP
COUNSELORS AT LAW

717 TEXAS AVENUE
SUITE 1400
HOUSTON, TEXAS 77002
(713) 228-9601 FAX (713) 228-9605
FEDERAL TAX ID. NO. 23-1911874

MEMORIAL CITY REDEVELOPMENT AUTHORITY AND
REINVESTMENT ZONE NUMBER 17, CITY OF HOUSTON,
TEXAS
SCOTT BEAN
HAWES HILL CALDERON LLP
P.O. BOX 22167
HOUSTON, TX 77227

INVOICE DATE: OCTOBER 07, 2016
MATTER NO. 148310-00601 02752
INVOICE NO. 1612468

REGARDING: MEMORIAL CITY REDEVELOPMENT AUTHORITY AND
REINVESTMENT ZONE NUMBER 17, CITY OF HOUSTON, TEXAS
CIVIL ACTION NO. 4:16-CV-01458; RESIDENTS AGAINST FLOODING, ET
AL VS. REINVESTMENT ZONE NUMBER SEVENTEEN, CITY OF
HOUSTON, TEXAS, ET AL, IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS, HOUSTON DIVISION

DATE	INVOICE	AMOUNT	CREDITS	BALANCE
08/31/16	1604121	21,745.00	0.00	21,745.00
09/06/16	1604819	6,354.28	0.00	6,354.28
BALANCE FORWARD				\$ 28,099.28
FOR LEGAL SERVICES RENDERED THROUGH 09/30/16				\$ 14,237.00
FOR DISBURSEMENTS ADVANCED THROUGH 09/30/16				462.65
CURRENT INVOICE TOTAL				\$ 14,899.65
TOTAL AMOUNT DUE				\$ 42,998.93

REMITTANCE

Code 1523
10-11-2016

ACE / WIRE	MAIL
BANK NAME: RBS Citizens Bank Philadelphia, PA	Blank Rome LLP Attn: Finance Department One Logan Square E30 North 18th Street Philadelphia, PA 19103-6998
ADDRESS: Blank Rome LLP	
ACCOUNT TITLE: 6238669326	
ACCOUNT NUMBER: 096076150 (Domestic)	
ABA NUMBER: 07210333 (International)	
SWIFT CODE:	

October 10, 2016

Allen Boone Humphries Robinson LLP

Equi-Tax Inc.

Suite 200
17111 Rolling Creek Drive
Houston Texas 77090
281-444-4866

BILL TO
TIRZ No. 17 -
Memorial City Redevelopment Authority
c/o ETI Bookkeeping Services
17111 Rolling Creek Drive, Ste 108
Houston TX 77090

Invoice

DATE	INVOICE #
10/1/2016	50163

ESITEFUL CORPORATION
12777 Jones Road, Suite 175
Houston, TX 77070
(832)604-7083
les.lee@esiteful.com
http://www.esiteful.com

INVOICE

BILL TO
Houston TIRZ 17
Ms. Michelle Lofton
ETI Bookkeeping Services
P.O. Box 73109
Houston, TX 77273

INVOICE # 5543
DATE 10/01/2016
DUE DATE 10/01/2016
TERMS Due on receipt

832-604-7083

12777 Jones Road, Suite 175
Houston, TX 77070



DESCRIPTION	AMOUNT
Fee per Contract, Monthly Consultant Services	400.00
Total	
\$400.00	

Invoice emailed to Michelle Lofton at ETI Bookkeeping Services at
btp1@etiaccounting.com
and to Scott Bean sbean@thclp.com and Linda Clayton
lclayton@bhclp.com at Hawes Hill

Code # 6343
10-1-16
10-1-16

ACTIVITY	QTY	RATE	AMOUNT
Quarterly Hosting for 3 email exchanges (October - December 2016)	1	107.55	107.55

BALANCE DUE

\$107.55

Code # 6343
10-1-16
10-1-16

ETI Bookkeeping Services
 PO BOX 73109
 Houston, TX 77273

Invoice

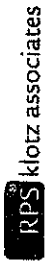
Date	Invoice #
10/12/2016	7770

Bill To
 TRIZ 17 Redevelopment Authority
 P.O. Box 73109
 Houston, Texas 77273

Description	City	Rate	Amount
Bookkeeping Counties		80.00 23.00	80.00 23.00

Total	\$873.00
Payments/Credits	\$0.00
Balance Due	\$873.00

Code # 6569
 10/17/2016



1160 Dairy Ashford, Suite 500, Houston, Texas 77079
 T 281 589 7157 F email@klotz.com www.rpsgroup.com | klotz.com

Mr. Scott Bean
 Executive Director
 Memorial City Redevelopment Authority
 8955 Katy Freeway, Suite 215
 Houston, TX 77024

October 13, 2016
 Project No: 1111,002,000
 Invoice No: 916135

TRIZ 17 Memorial City Redevelopment Authority Brlar Branch Channel Improvements & Siewa
 TRIZ 17 CIP No. T-1734A & T-1734B
 HCFCD Unit W140-01-00

For Professional Services rendered from September 30, 2016 to September 30, 2016:

Description	Contract Amount	Percent Complete	Billed to Date	Previously Invoiced	Current Invoice
Basic Services (LS)	919,543.74	70.11	644,692.13	606,078.67	38,013.46
Additional Services (T&M)	191,506.26	33.012	63,220.08	63,220.08	0.00
Total Fee	1,111,050.00		707,912.21	669,898.75	38,013.46

\$38,013.46
 0.00

Receipt:

Total Billings	Current	To-Date
Contract Amount	38,013.46	707,912.21
Balance	669,898.75	1,111,505.00
		403,592.79

Total Due This Invoice: \$38,013.46

Code # 1734
 10/20/2016

Monthly Progress Report

Project: Memorial City Redevelopment Authority / TIRZ 17
 Briar Branch (W140-01-00) Channel Improvements &
 Briar Branch 'Straws' and Bunker Hill Bridge
 CIP No: T-1734A & T-1734B
 Period: Through September 30, 2016
 Job No: 1111.002.000
 Prepared By: W. Edward Conger PE

Activities Completed this Period

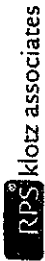
1. Ph II Final Design - Authorization received dated 03/07/14 & 09/08/16
 - a. Basic and Additional Services
 - 1.) HCFCD review process for the Drainage Impact Analysis and Report continues. HCFCD is re-addressing maintenance and review of the proposed project.
 - 2.) Additional HCFCD comments received in meeting on 11-29-15.
 - 3.) Drainage Impact Study final report complete and submitted to HCFCD on 12-18-14. Initial HCFCD responses and comments received 05-15-15. Coordination with HCFCD continues.
 - 4.) Draft Plans (90%) and Drainage Impact Study final report submitted to TIRZ 17 on 12-19-14.
 - 5.) HCFCD requested incorporation of 'Straws' into Briar Branch Drainage Impact Study Report and project.
 - 6.) Received TIRZ 17 Board approval on 05-19-16 for incorporation of 'Straws' and Bunker Hill Bridge modifications (T-1734B) into Briar Branch project and drainage analysis. Authorization received dated 09-06-16.
 - 7.) Geotechnical investigation and ESA 1 for 'Straws' begun.
 - 8.) Begin incorporating 'Straws' plans into Briar Branch plans and documents for one construction package.
 - b. Meetings
 - 1.) Project Team Meetings as required.
 - 2.) Additional meetings with TIRZ, LAN and SWA as required.
 - 3.) Attended and provided project updates at TIRZ Board Meetings as requested.
2. Ph II Sub-consultant (Survey - Kuo & Associates) - Additional survey complete.

Memorial City Redevelopment Authority / TIRZ 17

Briar Branch (W140-01-00) Channel Improvements &
 Briar Branch 'Straws' and Bunker Hill Bridge
 TIRZ 17 CIP No. T-1734A & T-1734B
 Master Agreement (07-30-13)
 Klotz Assoc. Job No. 1111.002.000

Professional Services Summary
 Through 09/30/16
 Invoice # 210125

Task	Contract Budget Fee	Authorized Amounts	Percent Complete %	Budget Amount Earned	Previously Billed	Earned This Period
Basic Services						
I. Phase I - PER (Complete)	\$0.00	\$0.00	0.00%	\$0.00	\$0.00	\$0.00
II. Phase II - Final Design	\$919,643.74	\$919,643.74	70.11%	\$644,892.12	\$606,678.66	\$38,013.46
III. Phase III - CPS (Not Authorized)	\$0.00	\$0.00	0.00%	\$0.00	\$0.00	\$0.00
SubTotal Basic Services	\$919,643.74	\$919,643.74		\$644,892.12	\$606,678.66	\$38,013.46
Additional Endorsing Services / Sub-Contracted Services / Reimbursible Expenses						
I. Additional Engineering Services	\$61,460.00					
1. TCEs - Traffic Control Plans		\$38,730.00	95.18%	\$21,372.18	\$21,372.18	\$0.00
2. SW3P - Stormwater Pollution Prevention Plans		\$17,020.00	72.83%	\$12,345.00	\$12,345.00	\$0.00
3. Signing & Striping Plans		\$20,010.00	0.00%	\$0.00	\$0.00	\$0.00
3. ESA 1 (Straws)		\$5,760.00	0.00%	\$0.00	\$0.00	\$0.00
II. SubContracted Services	\$77,924.16					
1. Aadt Topo. Survey		\$26,602.50	100.00%	\$26,602.50	\$26,602.50	\$0.00
2. Tree Protection Plan		\$10,800.00	0.00%	\$0.00	\$0.00	\$0.00
3. Geotech (Straws)		\$37,621.28	0.00%	\$0.00	\$0.00	\$0.00
III. Reimbursible Expenses	\$32,122.10					
1. Reimbursible Expenses		\$32,122.10	0.00%	\$0.00	\$0.00	\$0.00
SubTotal Additional Services	\$181,606.26	\$181,606.26		\$63,220.09	\$63,220.08	\$0.00
Total Professional Services Fees	\$1,111,050.00	\$1,111,050.00		\$707,912.20	\$669,898.74	\$38,013.46
Total Fees Earned this Period						\$38,013.46



1160 Dairy Ashford, Suite 500, Houston, Texas 77079
 T 281 589 7257 F email@klotz.com www.rpsgroup.com | klotz.com

Activities Planned for Next Period

1. Ph II Final Design.
 - a. Basic and Additional Services
 - 1.) Continue incorporating 'Straws' plans into Briar Branch plans and documents for one construction package
 - 2.) Begin update of Drainage Impact Study for on construction package.
 - 3.) Updated Plans will be submitted to HCFCD upon approval of Drainage impact report by HCFCD. Plans will be submitted to CoH upon approval by HCFCD.
 - 4.) Geotechnical Investigation and ESA 1 for 'Straws' continue.
 - 5.) Respond to comments and questions from HCFCD and TIRZ.
 - b. Meetings
 - 1.) Project Team Meetings as required.
 - 2.) Progress Mtgs. to be held to review project status with TIRZ Executive Director.
 - 3.) Additional meetings with TIRZ, LAN and SWA as required.
 - 4.) Attend and provide project update at TIRZ Board Meeting.
2. Ph II Sub-consultant (Survey - Kuo) - additional survey complete.

issues and information we are waiting to receive - None

Mr. Scott Bean
 Executive Director
 Memorial City Redevelopment Authority
 8955 Katy Freeway, Suite 215
 Houston, TX 77024

October 13, 2016
 Project No: 1111,004,000
 Invoice No: 916135

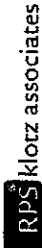
TIRZ 17 North Gessner Drainage and Mobility Improvements North Gessner Road Reconstruction from IH-10 to north of Wainview - Phase 2 Detailed Design
 TIRZ 17 CIP No: T-1732A ✓

For Professional Services rendered from September 3, 2016 to September 30, 2016:

Description	Contract Amount	Percent Complete	Billed to Date	Previously Invoiced	Current Invoice
Basic Services	474,170.00	98.08	445,045.94	463,169.26	1,496.68
Additional Services	102,390.00	51.322	52,559.06	43,538.88	9,020.18
Sub - Contracted Engineering Services	20,000.00	0.00	0.00	0.00	0.00
Reimbursable Expenses	22,800.00	0.00	0.00	0.00	0.00
Total Fee	619,360.00		517,625.00	506,708.14	10,916.86
					16,916.86
					\$10,916.86

Receipt:	Current	Previous	To-Date
Total Billings	10,916.86	506,708.14	517,625.00
Contract Amount			619,360.00
Balance			101,735.00
			Total Due This Invoice:
			\$10,916.86

CODE # 1732A
 10-17-2016



1160 Dairy Ashford, Suite 500, Houston, Texas 77079
 T 281 589 7257 E email@klotz.com W www.rpsgroup.com | www.klotz.com

Monthly Progress Report

Project: Memorial City Redevelopment Authority / TIRZ 17
 N. Gessner Drainage and Mobility Improvements - IH10 (Katy Frwy) to Westview
 PH II - Design

CIP No: T-1732A
 Period: Through September 30, 2016
 Job No: 1111,004,000
 Prepared By: W. Edward Conger PE

Activities Completed this Period

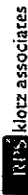
1. Ph II Final Design - Authorization received dated 11/14/14.

a. Basic and Additional Services

- 1.) Development of N. Gessner SWMM model complete. Draft Drainage Impact report begun.
- 2.) Completed development of design plans and profiles from the survey and previous PER plans.
- 3.) TIRZ Board requested to incorporate T-1732B (N. Gessner - Westview to Long Point) as part of the T-1732A construction and design plans. Updated authorization request was submitted on 05-12-16 & 09-27-16.
- 4.) ESA II needed for CoH and TxDOT project approval and design completion. Included in updated authorization request.
- 5.) CoH PW/E is now requiring additional reviews, updated PER and new TRC. Included in updated authorization request.
- 6.) The TxDOT Grant for the project will require TxDOT reviews and submittals as well as reports and plans to be updated per TxDOT procedures for TxDOT construction. These were included in the updated authorization request.
- 7.) TxDOT Grant for the project will require a TxDOT NEPA Environmental Assessment Study and Report. This was included in the updated authorization request.
- 8.) SW3P and TCP plans continue.
- 9.) Review of Traffic Signals for design continues.
- 10.) Continuous coordination with SWA for streetscape design.

b. Meetings

- 1.) Project Team Meetings as required.
- 2.) Progress Mtgs. with TIRZ Executive Director as requested.



1160 Dairy Ashford, Suite 500, Houston, Texas 77079
 T 281 589 7257 E email@klotz.com W www.rpsgroup.com | www.klotz.com

Memorial City Redevelopment Authority / TIRZ 17

North Gessner Drainage and Mobility Improvements
 - IH10 (Katy Frwy) to Westview

TIRZ 17 CIP No. T-1732A
 Master Agreement (07-30-13) Task Order No. 4
 RPS Klotz Assoc. Job No. 1111,004,000

Professional Services Summary

Through 09/30/16
 Invoice # 110130

Task	Contract Budget Fees	Authorized Amounts	Percent Complete %	Budget Amount Earned	Previously Billed	Earned This Period
Basic Services						
I. Phase I - PER Update (Not Authorized)	\$0.00	\$0.00	0.00%	\$0.00	\$0.00	\$0.00
II. Phase II - Final Design	\$474,170.00	\$474,170.00	98.06%	\$465,065.94	\$463,165.28	\$1,896.66
III. Phase III - CPS (Not Authorized)	\$0.00	\$0.00	0.00%	\$0.00	\$0.00	\$0.00
Sub Total Basic Services	\$474,170.00	\$474,170.00		\$465,065.94	\$463,165.28	\$1,896.66
Additional Engineering Services / Subcontracted Services / Reimbursible Expenses						
I. Additional Engineering Services	\$102,390.00					
1. T/CPs - Traffic Control Plans		\$23,280.00	75.17%	\$17,459.58	\$16,729.01	\$770.57
2. Traffic Signals - 2 Locations (Gessner & IH10; Gessner & Westview)		\$68,010.00	36.81%	\$25,034.48	\$16,784.87	\$8,249.61
3. SW3P - Stormwater Pollution Prevention Plans		\$11,100.00	90.32%	\$10,025.00	\$10,025.00	\$0.00
II. Subcontracted Services	\$20,000.00					
1. Add'l Sub-Consultant Services		\$0.00	0.00%	\$0.00	\$0.00	\$0.00
III. Reimbursible Expenses	\$22,300.00					
1. Reimbursible Expenses		\$22,800.00	0.00%	\$0.00	\$0.00	\$0.00
Sub Total Additional Services	\$146,190.00	\$125,190.00		\$52,559.05	\$43,538.88	\$9,020.18
Total Professional Services Fees	\$619,360.00	\$599,360.00		\$517,624.99	\$506,708.14	\$10,916.86
Total Fees Earned this Period						\$10,916.86

- 3.) Attended and provided project update at TIRZ Board Meeting as requested.
 - 4.) Additional meetings with TIRZ as required.
2. Ph II Sub-consultants – None authorized.

Activities Planned for Next Period

- 1. Ph II Final Design.
 - a. Basic and Additional Services
 - 1.) ESA II is needed for project approval and design completion.
 - 2.) Requirement from CoH PWE for additional reviews, updated PER and new TRC.
 - 3.) Requirements from TxDOT for TxDOT Grant for additional reviews and update of the reports and plans per TxDOT procedures for TxDOT construction.
 - 4.) SW3P and TCP plans continue.
 - 5.) Review of Traffic Signals for design continues.
 - 6.) Update of concepts and coordination with Mathewson Ln project continue.
 - 7.) Continue coordination with SWA for streetscape design.
 - b. Meetings
 - 1.) Project Team Meetings as required.
 - 2.) Progress Mgs. to be held to review project status with TIRZ Executive Director.
 - 3.) Additional meetings with TIRZ as required.
 - 4.) Provide project update at next TIRZ Board Meeting.
- 2. Ph II Sub-consultants – None Authorized
 - 1.) ESA II needed
 - 2.) TBD

Issues and Information we are waiting to receive –
TIRZ Board authorization and NTP are needed for the updated and expanded project scope outlined above and in the updated LOA request submitted 09-27-16.

MCCALL GIBSON SWEDLUND BARFOOT PLLC
Certified Public Accountants

13100 Woodlark Center Drive
Suite 235
Houston, Texas 77055-5610
(713) 462-2941
Fax (713) 462-2706
E-Mail: mgsc@mcgswb.com

111 Congress Avenue
Suite 400
Austin, Texas 78701
(512) 670-2109
www.mcgswb.com

September 27, 2016

TIRZ 17 Redevelopment Authority
ETI Bookkeeping Services
17111 Rolling Creek, Suite 200
Houston, TX 77059

Client Number: 574-00

Audit of Memorial City Redevelopment Authority as of and for the year ended June 30, 2016.	Interim Billing	\$ 8,000.00
---	-----------------	-------------

0000101-01-1-1-1-16
0000101-01-1-1-1-16
ES

The Goodman Corporation
 3200 Travis Street, Ste. 200
 Houston, TX 77006



THE GOODMAN CORPORATION

Invoice

Bill To	
Ms. Michelle Lofton FTI Bookkeeping Services P.O. Box 73109 Houston, TX 77273	
Date	9/30/2016
Invoice #	9-2016-27

Item	Description	Rate	Prior %	Curr %	Amount
Contract Services	Task 1 - Program Management, Oversight, and Intergovernmental Coordination for Memorial Drive	30,000.00	3%	2.00%	600.00
Contract Services	Task 2 - Program Management, Oversight, and Intergovernmental Coordination for North Gessner	100,000.00	12.5%	5.50%	5,500.00
					1738 A
					1732 A
					10.17.2014

Total	\$6,100.00
Balance Due	\$6,100.00

Phone #	713-951-7951
Fax #	713-951-7957

TO: Scott Bean, Executive Director
 FROM: David Rodgers
 DATE: October 1, 2016
 SUBJECT: TIP Project Assistance and Oversight (MCT101) - September 2016

PROGRESS REPORT

Task	Previous % Complete	Current % Complete
1 - Program Management, Oversight, and Intergovernmental Coordination for Memorial Drive	3%	8%
2 - Program Management, Oversight, and Intergovernmental Coordination for North Gessner	12.5%	18%

- Provided MCRA Board of Directors with update on AFA and project status.
- Coordinated with H-GAC and TxDOT Consultant Contracts on letting date for Memorial Drive (FY18)
- Discussed project scope with TxDOT Consultant Contracts
- Coordinated with TxDOT Planning Division on draft Advance Funding Agreement (AFA)
- Coordinated with H-GAC and TxDOT Consultant Contracts on letting date for Gessner (FY18)
- Reviewed AFA and provided comments on draft AFA to TxDOT Administrator
- Discussed draft AFA comments with Memorial Management District, ABHR, and MCRA Administrator
- Coordinated with TxDOT Planning Division staff on changes to AFA scope (to reflect 1-10 to Longpoint)
- Correspondence with Authority engineering consultants and MCRA Administrator on engineering scopes, scope review by TxDOT, and content of scope
- Discussed project scope with TxDOT Consultant Contracts
- Provided MCRA Board of Directors with update on AFA and project status.

3200 Travis Street, Suite 200 • Houston, Texas 77006-1416
 (713) 951-7951 FAX (713) 951-7957

Texas Municipal League
 Intergovernmental Risk Pool
 1821 Rutherford Lane, First Floor
 Austin, Texas 78754
 (512) 491-2300 • (800) 537-6655

BILLING STATEMENT
 Questions? Please contact Carol Platt at
 cplatt@tmlihp.org or extension 415

Memorial City Reader Auth
 Attn: Ms. Susan Hill
 PO Box 2216
 Houston, TX 77227

Statement Date: 10/01/16
 Due Date: DOZ UPON RECEIPT
 Contract No.: 6676

Date	Description	Total Amount
9/01/16	BALANCE FROM PREVIOUS STATEMENT	.00
10/01/16	Automobile Liab 16/17FY	66.00
10/01/16	Errors & Omission 16/17FY	612.00
10/01/16	General Liability 16/17FY	402.08
10/01/16	Liab 2% Pre-pay Disc	21.60-

MEMORIAL CITY READER AUTH
 PO BOX 2216
 HOUSTON, TX 77227

MEMORIAL CITY READER AUTH

10/10/58.40

MEMORIAL CITY READER AUTH
 PO BOX 2216
 HOUSTON, TX 77227

MEMORIAL CITY READER AUTH

10/10/58.40
 10/10/58.40

MEMORIAL CITY READER AUTH
 PO BOX 2216
 HOUSTON, TX 77227

HAWES HILL CALDERON
LLP



P.O. Box 22167
Houston TX 77227-2167

Invoice

TIRZ-Memorial City Redevelopment
Authority/RZ 17
PO Box 22167
Houston, TX 77227-2167

Invoice #: 43015488

Date: 10/11/2016

DATE	DESCRIPTION	AMOUNT
	Professional consulting and administration fee, October 2016	\$7,500.00

Terms: C.O.D.

Sales Tax: \$0.00
Total Amount: \$7,500.00
Amount Applied: \$0.00
Balance Due: \$7,500.00

Owed As Of: 10/11/2016

30 DAYS	30 DAYS	30 DAYS	Total Owed
---------	---------	---------	------------

Code # 6340
10-17-2016

\$7,500.00

MEMORIAL CITY REDEVELOPMENT AUTHORITY TIRZ No. 17,
HOUSTON, TEXAS

AGENDA MEMORANDUM

TO: Memorial City Redevelopment Authority TIRZ No. 17 Board of Directors
FROM: Executive Director
SUBJECT: Agenda Item Materials

5. Design Standards for Small Cell Networks and Proposed Installation Locations.

Design Standards for Small Cell Network Equipment Tax Increment Reinvestment Zone No. 17

Purpose

Tax Increment Reinvestment Zone No. 17 (also described as the TIRZ No. 17 or Memorial City TIRZ) plays a critical role in the visual enhancement of the area, including installation and maintenance of “betterments”, often in coordination with large-scale capital improvements, within the public rights-of-way such as median improvements, pavers, landscaping, sidewalks, crosswalks, street signs, wayfinding and identity markers, gateway enhancements, enhanced bus shelters, street lights, traffic management devices, benches, kiosks, bike racks, public art, and similar treatments all to establish attractive rights-of-way with features that reinforce a common brand identified for TIRZ No. 17 and the underlying Memorial City Management District and Spring Branch Management District. As part of that effort, TIRZ No. 17 has established design standards for small cell network equipment that may be installed within the boundaries of the zone. These standards are intended to:

1. Protect the brand identity for the area as established by TIRZ No. 17, Memorial City Management District and Spring Branch Management District;
2. Mitigate the negative impacts of visual clutter along area roadways and rights-of-way;
3. Complement requirements established by individual agreement with each wireless services provider or neutral host provider interested in installing, operating or maintaining a small cell network in the Houston area; and,
4. Recognize the economic value associated with increased quality of communication and data services within the area in and around TIRZ No. 17.

Limitations

1. In any instance in which the design standards for TIRZ No. 17 conflict with requirements established by agreement of the City of Houston with each wireless services provider or neutral host provider then the most restrictive shall prevail.
2. In the event that small cell network equipment is located in an area of TIRZ No. 17 and also within the boundaries of a management district, and in the event that the Board of Directors of the underlying district has established design standards related to the installation and maintenance of small cell network equipment as a means of protecting the brand identity of the district, then the standards established by the underlying district shall prevail.
3. Design standards established by TIRZ No. 17 are applicable in all rights-of-way within the boundaries of the zone.

Standards

1. Existing Poles. The City of Houston has established requirements that promote use of existing poles within public rights-of-way rather than add visual clutter through proliferation of new poles. For purposes of these standards, use of an existing pole may also include replacement of an existing pole assuming that the replacing pole is generally in the same location and results in the addition of no additional poles in the

right-of-way. If an existing pole is replaced for purposes of small cell network use, then the replacement pole shall consist of the same materials or better than the pole that is to be replaced. For example, a pole comprised of composite materials would not be replaced with a wooden pole.

2. New Poles. New poles shall be generally designed in accordance with the “wayfinder” format and shall:
 - a. Be black in color, metal in material and cylindrical in shape;
 - b. Be multifunctional in that they may have a purpose in addition to service as a pole for small cell networks in a manner that can be incorporated into street amenities and duplicated throughout the Zone; and,
 - c. support colocation with a minimum of one additional small cell network licensee or other service if it is possible to do so and keep all equipment fully concealed.
3. All new poles shall be similar in design, materials, color, shape, height, and other features as necessary to reinforce a uniform pattern. Any deviations shall require a variance as approved by the Board of Directors.
4. Concealment of Equipment.
 - a. Antenna equipment:
 - i. shall be fully concealed within an enclosed casement that shall, to the greatest extent possible, mimic the pole upon which it is placed in terms of materials (with the exception of wood), color and design;
 - ii. should not unreasonably extend beyond the width and diameter of the pole upon which it is affixed; and,
 - iii. should be constructed in a manner that leaves no visible gap between pole and antenna.
 - b. Every effort should be taken to avoid placement of additional equipment on a pole other than the antenna, fiber and associated encasements. Additional equipment shall be placed at ground level unless otherwise approved by the Board of Directors. All equipment shall be concealed to the greatest extent possible.
 - c. Control boxes that are located above ground shall be concealed either through landscaping or application of artwork. In the event that the licensee selects artwork as camouflage, then the art installation shall be completed following the same procedure utilized for electrical control boxes in management districts throughout the City of Houston. Cost of concealment and ongoing maintenance shall be fully borne by the applicant.
5. Future reconstruction and visual enhancement projects. In the event that a future reconstruction or beautification improvement project impacts small cell network equipment, including established poles, it shall be the responsibility of the licensee to replace equipment in accordance with the standards established by agreement between the licensee and the City of Houston, as well as the design standards of TIRZ No. 17 and the underlying management districts.
 - a. TIRZ No. 17, in efforts to improve mobility, reduce visual clutter, beautify corridors and otherwise improve community character, reserves the right to

- cause power and communications lines and equipment within the public rights-of-way or within easements to be placed below ground.
 - b. In the event that new poles are required, the vendor shall follow the procedures and standards established by TIRZ No. 17.
 - c. The Board of Directors of TIRZ No. 17 may establish alternative procedures, if appropriate, to expedite or otherwise simplify the process of replacement of small cell network equipment.
6. No small cell network equipment shall be placed in a manner that impedes or interrupts safe and convenient travel by pedestrians, bicyclists, as well as transit service.
 7. All areas impacted by the installation of small cell network equipment shall be returned to the precise condition that existed prior to construction unless otherwise approved by the Board of Directors. The applicant may propose an alternative to prior site conditions for consideration as part of an application.

Process

1. Licensees shall be required to submit the following information to the Executive Director of TIRZ No. 17 for review and consideration:
 - a. A fully completed copy of *Exhibit C, Application for Location Review*, (a copy of which is attached to this document) associated with the agreement between the licensee and the City of Houston.
 - b. Letter of approval, if applicable, from the Memorial City Management District or Spring Branch Management District.
 - c. Indication of the type of project as placement of equipment:
 - i. on an existing pole;
 - ii. on a replacement pole; or,
 - iii. on a new pole.
 - d. Maps including:
 - i. Aerial image indicating the exact location of the equipment
 - ii. Depiction of the location of equipment in relationship to right-of-way boundaries, adjacent owners, private property boundaries, other existing poles available for installation, other small cell network equipment, existing or proposed (if known) streetscape amenities
 - e. One or more photographs of the area for purposes of establishing context.
 - f. Illustrations, images, and/or design/construction drawings including details sufficient to show how proposed equipment complies with requirements of the City of Houston, and design standards established by TIRZ No. 17 and the underlying management districts, if applicable.
 - g. Graphic detail of surrounding property that will be impacted by installation of small cell network equipment and the plan associated with returning the site to the precise condition that existed prior to construction, or better, including:
 - i. Location of trenching activity associated with the project;
 - ii. Details regarding the type of vegetation or hardscape to be used in returning the surrounding site to an acceptable condition; and,

- iii. Notation that the surrounding site will be returned to a condition acceptable to the Executive Director of TIRZ No. 17.
 - h. In the event that a new pole is required, then an explanation of the inability to locate on existing poles.
 - i. In the event that a variance is requested to deviate from these design standards as established by TIRZ No. 17, a description of the variance and the reason that such a deviation is necessary.
2. Digital submission of all materials in a single, bookmarked PDF file is preferred, although TIRZ No. 17 reserves the right to request physical copies of materials if needed.
3. The Executive Director or designated staff shall review the application for completeness. Upon determination that the application is complete, the Executive Director shall place the item on the agenda of the Board of Directors of TIRZ No. 17. The Board of Directors shall provide approval authority for the application.
4. The Executive Director shall provide a formal letter on TIRZ No. 17 letterhead to the applicant, along with a map exhibiting the location of the facility, for submission to the City of Houston Director of Administration and Regulatory Affairs as well as City Engineer regarding the decision of the Board of Directors.

Variance from One or More Standards

If an applicant cannot meet one or more of the design standards established by TIRZ No. 17, it shall be the burden of the applicant to prove to the TIRZ No. 17 Board of Directors the hardship and that every effort was made to work within these standards.

MEMORIAL CITY REDEVELOPMENT AUTHORITY TIRZ No. 17,
HOUSTON, TEXAS

AGENDA MEMORANDUM

TO: Memorial City Redevelopment Authority TIRZ No. 17 Board of Directors
FROM: Executive Director
SUBJECT: Agenda Item Materials

6. FY 2016 Refunding Bonds.

MEMORIAL CITY REDEVELOPMENT AUTHORITY TIRZ No. 17,
HOUSTON, TEXAS

AGENDA MEMORANDUM

TO: Memorial City Redevelopment Authority TIRZ No. 17 Board of Directors
FROM: Executive Director
SUBJECT: Agenda Item Materials

7. FY 2017 Bond issue.

MEMORIAL CITY REDEVELOPMENT AUTHORITY TIRZ No. 17,
HOUSTON, TEXAS

AGENDA MEMORANDUM

TO: Memorial City Redevelopment Authority TIRZ No. 17 Board of Directors
FROM: Executive Director
SUBJECT: Agenda Item Materials

8. CIP Projects:

a. N. Gessner Drainage/Mobility Improvements – Phase I & II (CIP projects T-1732A and T-1732B):

i. Proposal from Klotz Associates for Phase I and II Supplemental Professional Services

ii. Authorize execution of Professional Services Agreement with Cobb, Fendley & Associates, Inc., and Task Order No. 1 for street paver design

iii. Authorize execution of an Interlocal Agreement with the City of Houston for funding project costs

b. Town and Country West Drainage and Mobility Improvements (CIP Project T-1717)

i. Updates from LAN

c. Other CIP project updates and status reports



1160 Dairy Ashford, Suite 500, Houston, Texas 77079
T 281 589 7257 E email@klotz.com W www.rpsgroup.com | www.klotz.com

October 12, 2016

Mr. Scott Bean
Executive Director
Memorial City Redevelopment Authority / TIRZ 17
8955 Katy Freeway, Suite 215
Houston, Texas 77024

Re: Proposal for Supplemental Phase I and Phase II Professional Services
For North Gessner Drainage and Mobility Improvements (Phases 1 and 2)
North Gessner Road from IH-10 to Long Point Road
TIRZ 17 CIP Nos. T-1732A and T-1732B
RPS Klotz Associates Project No. 1111.004.000

Dear Mr. Bean:

RPS Klotz Associates has prepared this updated proposal to provide supplemental Phase I and Phase II Professional Services for the North Gessner Drainage and Mobility Improvements Project. The Phase I Services include preparing an updated Preliminary Engineering Report (PER) with updated recommendations for the proposed project improvements for North Gessner from IH-10 to Long Point Road as well as the City of Houston Technical Review Committee (TRC) review and approval as now required by City of Houston Public Works and Engineering (PWE). The Phase II services proposed include the preparation of the North Gessner Phase 2 project detailed design, plans and specifications for the proposed improvements on North Gessner from Westview Drive to Long Point Road to be included with the Phase 1 project as a single construction project for North Gessner Road from IH-10 (Katy Freeway) to Long Point Road. The proposed projects are identified in the current TIRZ 17 five-year Capital Improvement Plan as TIRZ 17 CIP Nos. T-1732A and T-1732B. This request includes the supplemental services required for the TxDOT Grant funding for this project. These services include updating project design and plans for TxDOT letting and incorporating additional requirements the TxDOT Grant funding. The scope for these services is described in the attached Exhibits A and A-1

We propose to provide these services as a Task Order under our Master Agreement for Professional Services. The requested authorization of \$807,682.96 is detailed below.

Fees for Services

Exhibit B provides the man-hour estimate and fees requested for these Engineering Services. The proposed fees are summarized as follows:

Phase I Preliminary Design (CoH Requirements)	\$107,850.00
Phase II Basic Engineering Services (CoH Requirements)	\$127,435.00
Phase II TxDOT Design	\$460,700.00
Phase II Additional Services (TxDOT & CoH Requirements)	<u>\$111,697.96</u>
Total Supplemental Services Fee Requested	\$807,682.96

We appreciate the opportunity to continue to work with the Memorial City Redevelopment Authority (TIRZ 17) to provide Limited Phase I and Phase II Detailed Design Services for this project. Please call Edward Conger or me if you have any questions or require any additional information.

Sincerely,

Bart C. Standley, P.E.
Public Works Practice Manager

Accepted for
Memorial City Redevelopment Authority

Signature

Print

Date

BCS:gw

Accepted for the City of Houston

Signature

Print

Date

Exhibit A

Scope of Services for Supplemental Phase I and Phase II Professional Services for North Gessner Road Drainage and Mobility Improvements North Gessner from IH-10 to Long Point Road TIRZ 17 CIP Nos. T-1732A and T-1732B

This proposal is for the Professional Services to provide the necessary supplemental Phase I and Phase II Services for the North Gessner Drainage and Mobility Improvements Project from IH-10 to Long Point Road (TIRZ 17 CIP Nos. T-1732A and T-1732B). These services comprise supplemental Phase 1 services currently being required by the City of Houston Public Works and Engineering, Phase 2 services for design of N. Gessner from Westview to Long Point (T-1732B) as part of a combined construction project with N. Gessner from IH 10 to Westview (T-1732A), and provide the supplemental services required by the TxDOT Grant Funding.

The supplemental Phase I services include Preliminary Engineering services to provide an updated Preliminary Engineering Report (PER) and Technical Review Coordination required by the City of Houston Public Works and Engineering for the review and approvals required to construct this project.

The updated supplemental Phase II services include Basic and Additional Services to expand the North Gessner reconstruction project limits from Westview Drive to Long Point Road (T-1732B) and include with the TIRZ 17 CIP No. T-1732A North Gessner construction project plans. North Gessner reconstruction design will include utility upgrades and relocations as recommended in the updated PER for this project. The construction plans and documents for the proposed improvements to Gessner Road (T-1732B) will be combined with the TIRZ 17 CIP No. T-1732A North Gessner construction project plan set for a single construction project. This update includes the supplemental services required by the TxDOT Grant funding for this project. These services include updating T-1732A project plans for TxDOT letting and incorporating additional TxDOT requirements.

The following scope details the procedures that will be followed to provide the supplemental Phase I and Phase II Basic Services in accordance with City of Houston requirements:

I. Phase I - Preliminary Design

The City of Houston requires an updated PER as well as coordination with the Technical Review Committee to expedite the approval and completion of this project.

- 1. Review and Validation of Previous Draft PERs (Oct 2009 and August 2013)**
Review previous draft reports to establish updated Engineering Basis of design, evaluate current existing conditions, and evaluate previous recommendations and cost estimates.
- 2. Prepare Updated Preliminary Engineering Report (PER) and Recommendations**

Prepare Draft Update PER Report and Exhibits, conduct a review meeting with City of Houston (CoH) PWE Project Manager, update Draft PER per CoH Comments and QA/QC.

3. Technical Review Committee (TRC) Coordination

Prepare and conduct Pre-TRC Meeting, conduct a TRC Meeting, prepare a Draft RDAI, and prepare a Final RDAI.

II. Phase II - Basic Engineering Services

Phase II includes the City of Houston requirements for Basic Engineering Design services to expand the North Gessner reconstruction project limits from Westview Drive to Long Point Road (T-1732B).

A. Additional Coordination & Deliverables

- a. Additional coordination with adjacent project CoH CIP N-000809-0001-3
- b. Additional Project Progress Meetings with CoH
- c. 90% Design Submittal
- d. Final Design Submittal
- e. Private Utility Signatures (Westview to Long Point)
- f. Utility Conflict Resolution (Westview to Long Point)
- g. Update Project Manual, Front-End Documents, and Specifications
- h. Update Construction Cost Estimate

B. Roadway & Drainage Improvements Plan Production (Combine T-1732A & T-1732B)

1. Driveway Schedule and Details (2 Sheets)
2. Storm Sewer Lateral Sheets (2 Sheets)(Westview to Long Point)
3. HouStorm Inlet Analysis & Tables (1 Sheet)(Westview to Long Point, T-1732B Phase 2)

C. Water and Sanitary Sewer Design (Westview to Long Point)

1. Plan and Profile Drawings for Water and Sanitary Upgrades and Relocations
 - a. Plan-Profile Sheets (4 Sheets)

D. Drainage Design (Westview to Long Point)

1. Update Overall Drainage Area Map
2. Update Existing Conditions Drainage Area Map
3. Update Proposed Conditions Drainage Area Map
4. Update Proposed Storm System Design for Combined Project Limits
 - a. Validation of PER Recommended Alternative
 - 1.) Update Existing Conditions for Expanded SWMM Model
 - 2.) Refine Boundary Conditions
 - b. Update Proposed Conditions for Expanded SWMM Model
 - 1.) Adjust Preliminary Model to Develop System Detail
 - 2.) Update & Develop Inlet Nodes
 - 3.) Confirm & Modify Storm System
 - 4.) Update Model Pipe Elevations from Topo Survey
 - c. Execute Expanded SWMM Model for Detailed Design
 - 1.) Refine Design & Model
 - 2.) Proposed Storm Sewer Design Model Tables

5. Proposed Storm Sewer 100-Year Analysis for Expanded SWMM Model
 - a. Modify for 100yr Extreme Event Requirements
 - b. Proposed Storm Sewer 100-Year Analysis Model Tables
 6. Update Impact Analysis Final Report
 - a. Determine Impacts for 2yr & 100yr for Final Design
 - b. Prepare Updated Mitigation Recommendation w/ LOS
 - c. Prepare Updated Impact Analysis Final Report
- E. Supplemental Design Services required by the TxDOT Grant Funding**
See Exhibit A-1 for the scope of the supplemental design services required by the TxDOT Grant Funding.

III. Phase II - Additional Engineering Services

A. Environmental Site Assessment Phase II (See Attached Proposal)

B. Subcontracted Services (See Attached Proposals)

Update Geotechnical Investigation for TxDOT Requirements (Aviles Engr. Corp.)

Update Survey for TxDOT Requirements (Kuo & Assoc.)

Street Light Plans (Isani Consultants, L.P.)

Tree Protection Plans (C.N. Koehl Urban Forestry, Inc.)

Exhibit A-1

SUPPLEMENTAL SERVICES TO BE PROVIDED BY THE ENGINEER AS REQUIRED BY TxDOT GRANT FUNDING

The Engineer shall provide engineering services required for the preparation of plans, specifications and estimates (PS&E) and related documents. These services may include, but are not limited to, preparing roadway and bridge design, hydrologic and hydraulic design, traffic signal design, survey, and geotechnical data collection necessary to support the design process.

GENERAL REQUIREMENTS

1.1. Design Criteria. The Engineer shall prepare all work in accordance with the latest version of applicable State's procedures, specifications, manuals, guidelines, standard drawings, and standard specifications or previously approved special provisions and special specifications, which include: the *PS&E Preparation Manual*, *Roadway Design Manual*, *Hydraulic Design Manual*, the *Texas Manual on Uniform Traffic Control Devices (TMUTCD)*, *Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges (latest Edition)*, and other State approved manuals. When design criteria are not identified in State manuals, the Engineer shall notify the State and refer to the American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Street*, (latest Edition). In addition, the Engineer shall follow the State's District guidelines in developing the Plan, Specification, and Estimate (PS&E) package. The Engineer shall prepare each PS&E package in a form suitable for letting through the State's construction contract bidding and awarding process.

The Engineer shall identify, prepare exhibits and complete all necessary forms for each Design Exception and Waiver required within project limits. The Engineer shall submit each exception and waiver to the City of Houston and the State for coordination and processing of approvals. If subsequent changes require additional exceptions, the Engineer shall notify the City of Houston and the State in writing as soon as possible after identification of each condition that may warrant a design exception or waiver.

1.2. Right-of-Entry and Coordination. The Engineer shall notify the City of Houston or the State and secure permission to enter private property to perform any surveying, environmental, engineering or geotechnical activities needed off the City of Houston or State right-of-way. In pursuance of the State's policy with the general public, the Engineer shall not commit acts which would result in damages to private property, and the Engineer shall make every effort to comply with the wishes and address the concerns of affected private property owners. The Engineer shall contact each property owner prior to any entry onto the owner's property.

The Engineer shall notify the City of Houston and the State and coordinate with adjacent engineers on all controls at project interfaces. The Engineer shall document the coordination effort, and each engineer shall provide written concurrence regarding the agreed project controls and interfaces. In the event the Engineer and the other adjacent engineers are unable to agree, the Engineer and each adjacent engineer shall meet jointly with the City of Houston and the State for

resolution. The State will have authority over the Engineer's disagreements and the State's decision will be final.

The Engineer shall prepare each exhibit necessary for approval by each utility, and other governmental or regulatory agency in compliance with the applicable format and guidelines required by each entity and as approved by the State. The Engineer shall notify the State in writing prior to beginning any work on any outside agency's exhibit.

1.3. Progress Reporting and Invoicing. The Engineer shall invoice according to TIRZ 17 requirements.

The Engineer shall prepare a design time schedule and an estimated construction contract time schedule. The Engineer shall schedule milestone submittals at 30%, 60%, 90% and final project completion phases. The Engineer shall advise TIRZ 17 and the State in writing if the Engineer is not able to meet the scheduled milestone review date.

Once the project goes to letting, all electronic files shall be delivered within 30 days of written request in conformance with the latest version of the State's Document and Information Exchange.

The Engineer shall prepare a letter of transmittal to accompany each document submittal to the State. At a minimum, the letter of transmittal must include the State's Control-Section-Job (CSJ) number, the highway number, County, project limits, State's contract number, and State's work authorization number.

1.4. Traffic Control. The Engineer shall provide all planning, labor, and equipment to develop and to execute each Traffic Control Plan (TCP) needed by the Engineer to perform services under each Work Authorization. The Engineer shall comply with the requirements of the most recent edition of the TMUTCD. The Engineer shall submit a copy of each TCP to the State for approval or permit prior to commencing any work on any roadway or ROW. The Engineer shall provide all signs, flags, and safety equipment needed to execute the approved TCP. The Engineer shall notify the State in writing twenty-four (24) hours in advance of executing each TCP requiring a lane closure, and shall have received written concurrence from the State prior to beginning the lane closure. The Engineer's field crew shall possess a copy of the approved TCP on the job site at all times and shall make the TCP available to the State for inspection upon request.

1.5. State-Controlled Waters. N/A

1.6. Coordination. The Engineer shall coordinate issues and communications with State's internal resource areas through the State's Project Manager. The State will communicate the resolution of issues and provide the Engineer direction through the State's Project Manager.

1.7. Level of Effort. N/A

1.8. Quality Assurance (QA) and Quality Control (QC). The Engineer shall provide peer review at all levels. For each deliverable, the Engineer shall have some evidence of their internal

review and mark-up of that deliverable as preparation for submittal. A milestone submittal is not considered complete unless the required milestone documents and associated internal red-line mark-ups are submitted. The State’s Project Manager may require the Engineer to submit the Engineer’s internal mark-up (red-lines) or comments developed as part the Engineer’s quality control step. When internal mark-ups are requested by the State in advance, the State, at its sole discretion, may reject the actual deliverable should the Engineer fail to provide the evidence of quality control. The Engineer shall clearly label each document submitted for quality assurance as an internal mark-up document.

The Engineer or Engineer’s SubConsultant shall perform QA and QC on all survey procedures, field surveys, data, and products prior to delivery to the State. If, at any time, during the course of reviewing a survey submittal it becomes apparent to the State that the submittal contains errors, omissions, or inconsistencies, the State may cease its review and immediately return the submittal to the Engineer for appropriate action by the Engineer. A submittal returned to the Engineer for this reason is not a submittal for purposes of the submission schedule.

1.9. Use of the State’s Standards. The Engineer shall identify and insert as frequently as is feasible the applicable, current State’s Standard Details, District Standard Details, or miscellaneous details that have been approved for use in the plan. The Engineer shall sign, seal, and date each Standard and miscellaneous detail if the Standard selected has not been adopted for use in a District. The Engineer shall obtain approval for use of these details during the early stages of design from the State Project Manager or designated State Area Engineer. In addition, these details shall be accompanied by the appropriate general notes, special specifications, special provisions, and method of payment. The Engineer shall retain the responsibility for the appropriate selection of each Standard identified for use within their design.

1.10. Organization of Plan Sheets. The PS&E shall be complete and organized in accordance with the latest edition of the State’s PS&E Preparation Manual. The PS&E package shall be suitable for the bidding and awarding of a construction contract, and in accordance with the latest State’s policies and procedures, and the District’s PS&E Checklist.

1.11. Limited Access to State’s DCIS. The Engineer shall receive limited access to the State’s DCIS to update responsible engineer information, sign, seal and date, build specification list and develop Project estimate.

As shown on the table below, the Engineer shall access and update DCIS with the following function codes.

DCIS Update Screens	Required Criteria for Access	DCIS Code	Function
S01-Responsible Engineer Update S03-Sealing, Signing & Dating P04-Project Estimate C03-Build Specifications	Consultant Registered Professional Engineer (PE)	CONENG	
P04-Project Estimate C03-Build Specifications	Consultant does not have to be a PE	CONEST	

When requested by the State, the Engineer shall sign the following TxDOT forms: 1828, Information Security Compliance Agreement; 1980, Request for External Access to the State's Information Systems; 2110, Information Resources Confidentiality Agreement, and DR-IRI Information Access Request Form. These access rights will be revoked after the project is let.

1.12. Organization of Design Project Folder and Files (Electronic Project Files). The Engineer shall organize the electronic project files in accordance with the State's File Management System (FMS) format. With the approval of the State, the Engineer may maintain the project files in the State's ProjectWise container.

TASK DESCRIPTIONS AND FUNCTION CODES

The Engineer shall categorize each task performed to correspond with the Function Codes (FC) and Task Descriptions.

FUNCTION CODE 102(110) – FEASIBILITY STUDIES

ROUTE AND DESIGN STUDIES

110.1. Data Collection and Field Reconnaissance. The Engineer shall collect, review and evaluate data described below. The Engineer shall notify the State in writing whenever the Engineer finds disagreement with the information or documents:

1. Data, if available, from the City of Houston or the State, including “as-built plans”, existing schematics, right-of-way maps, Subsurface Utility Engineering (SUE) mapping, existing cross sections, existing planimetric mapping, environmental documents, existing channel and drainage easement data, existing traffic counts, accident data, Bridge Inspection records, Project Management Information system (PMIS) data, identified endangered species, identified hazardous material sites, current unit bid price information, current special provisions, special specifications, and standard drawings.
2. Documents for existing and proposed development along proposed route from local municipalities and local ordinances related to project development.
3. Utility plans and documents from appropriate municipalities and agencies.
4. Flood plain information and studies from the Federal Emergency Management Agency (FEMA), the United States Army Corps of Engineers (USACE), local municipalities, and other governmental agencies...
5. Conduct field reconnaissance and collect data including a photographic record of notable existing features.

110.2. Design Criteria. The Engineer shall develop the roadway design criteria based on the controlling factors specified by the City of Houston or the State (*i.e.* 4R, 3R, 2R, or special facilities), by use of the funding categories, design speed, functional classification, roadway class and any other set criteria as set forth in *PS&E Preparation Manual, Roadway Design Manual, Bridge Design Manual, Hydraulic Design Manual,*

and other deemed necessary State approved manuals. In addition, the Engineer shall prepare the Design Summary Report (DSR) and submit it electronically. The Engineer shall obtain written concurrence from the City of Houston or the State prior to proceeding with a design if any questions arise during the design process regarding the applicability of the City of Houston or the State's design criteria. If there is a conflict between the City of Houston's design criteria and the State's design criteria, the most stringent criteria shall be used.

110.3. Preliminary Cost Estimates. The Engineer shall develop a preliminary cost estimate using the Average Low Bid Unit Price. The Engineer shall estimate the total project cost including preliminary engineering, final engineering, right-of-way (ROW) acquisition, environmental compliance and mitigation, construction, and utilities.

110.4. Design Concept Conference. In accordance with the State's Project Development Process Manual, the Engineer, in cooperation with the State, shall plan, attend and document the Design Concept Conference (DCC) to be held prior to the 30 percent milestone submittal. In preparation for the DCC, the Engineer shall complete a State's Design Summary Report to serve as a checklist for the minimum required design considerations. The conference will provide for a brainstorming session in which decision makers, stakeholders and technical personnel may discuss and agree on:

1. Roadway and drainage design parameters
2. Engineering and environmental constraints
3. Project development schedule
4. Other issues as identified by the State
5. Identify any Design Exceptions and Waivers
6. Preliminary Construction Cost Estimate

110.5. Geotechnical Borings and Investigations: The Engineer shall determine the location of proposed soil borings for retaining walls, slope stability and along storm drain alignment in accordance with the latest edition of the State's Geotechnical Manual. The State will review and provide comments for a boring layout submitted by the Engineer showing the general location and depths of the proposed borings. Once the Engineer receives the State's review comments they shall perform soil borings (field work), soil testing and prepare the boring logs in accordance with the latest edition of the State's Geotechnical Manual and State District's procedures and design guidelines.

1. All geotechnical work should be performed in accordance with the latest version of the State's Geotechnical Manual. All testing shall be performed in accordance with the latest version of the State's Manual of Test Procedures. American Society for Testing Materials (ASTM) test procedures can be used only in the absence of the State's procedures. All soil classification should be done in accordance with the Unified Soil Classification System.

2. N/A

3. If applicable, the Engineer shall perform soil borings, coring for pavement removal items, piezometric readings, testing and analysis to include slope stability analysis,

settlement analysis, and foundation design recommendations along storm drain and utility alignment.

4. The Engineer shall provide a signed, sealed and dated geotechnical report which contains, but is not limited to, soil boring locations, boring logs, laboratory test results, generalized subsurface conditions, ground water conditions, piezometer data, analyses and recommendations for settlement and slope stability of the earthen embankments, skin friction tables and design capacity curves including skin friction and point bearing. The skin friction tables and design capacity curves must be present for piling and drilled shaft foundation.

5. N/A

6. The Engineer shall sign, seal and date soil boring sheets to be used in the PS&E package. The preparation of soil boring sheets must be in accordance with a State's District standards.

7. The Engineer shall coordinate with the State to determine the location of soil borings to be drilled. The soil borings shall extend a minimum of 35 feet below the footing elevation or deeper as soil conditions warrant. Spacing of soil borings shall not exceed 500 feet. The Engineer shall provide a boring layout for the State's review and comment.

8. The Engineer shall incorporate soil boring data sheets prepared, signed, sealed, and dated by the Geotechnical Engineer. The soil boring sheets shall be in accordance with the State's WINCORE software as can be found on the Texas Department of Transportation (TxDOT) website.

FUNCTION CODE 120(120) – SOCIAL/ECON/ENVIRON STUDIES

SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT

120.1. Informal Meetings. The Engineer shall provide technical assistance, preparation of exhibits for, and minutes of informal meetings requested by the public to discuss the pending impacts to neighborhoods and businesses due to roadway shutdowns, detours and access restrictions or as deemed necessary. This is not to be confused with the formal public meetings held during the National Environmental Policy Act (NEPA) process during schematic approval for Public Involvement. It is not anticipated that the Engineer's participation will be needed for the NEPA process. Assistance (exhibits, attendance, etc.) may be required for a formal public meeting/hearing associated with schematic approval work.

120.2. Environmental Permits Issues and Commitments (EPIC) Sheets. The Engineer shall complete the latest version of the EPIC sheets per information provided by the State. These sheets must be signed, sealed and dated by the Engineer as indicated in signature block. The final sheets must be submitted for the State's signature.

120.3. Environmental Study Review. The Engineer shall provide the draft and final environmental document to the State for review and implementation into the PS&E

package. The Engineer shall consider the constructability issues as it relates to the environmental impacts.

120.4. Environmental Exhibits. The Engineer shall prepare the necessary exhibits for the environmental study. The Engineer shall coordinate with the Environmental Project Manager and the State’s Environmental Engineer for the preparation of these exhibits.

120.5. N/A

FC 130 – Right-of-Way Data

All standards, procedures and equipment used by the Engineer’s Surveyor shall be such that the results of the survey will be in accordance with Board Rule 663.15, as promulgated by the Texas Board of Professional Land Surveyors.

The Engineer shall locate the existing ROW within the project limits from the current project control monuments and prepare a layout map for the project.

130.1. Right-of-Way Map. The Engineer shall review and evaluate the existing right-of-way map to verify that all construction staging and alignment considerations have been taken into account. The Engineer shall make every effort to prevent detours and utility relocations from extending beyond the existing right-of-way lines. The Engineer shall notify the State in writing if it is necessary to obtain additional construction easements or rights-of-entry and shall provide justification for such action. The Engineer shall be responsible for identifying and delineating any temporary construction easements in areas outside the City of Houston’s Right of Way or State’s Right of Way. The State shall secure the necessary legal instruments.

130.2. Utility Locations and Layouts. The Engineer shall coordinate with the City of Houston and the State to determine the location of each existing and proposed utility and attend meetings with the various utility companies to discuss potential conflicts. The Engineer shall identify and coordinate with each utility company for relocations required within each construction easement or right-of entry.

130.3. N/A

FUNCTION CODE 145(145, 164) – MANAGING CONTRACTED/DONATED PE

PROJECT MANAGEMENT AND ADMINISTRATION

The Engineer, in association with the State’s Project Manager shall be responsible for directing and coordinating all activities associated with the project to comply with TIRZ 17 policies and procedures, and to deliver that work on time.

Project Management and Coordination – The Engineer shall coordinate all subconsultant activity to include the quality and consistency of plans and administration of invoices and monthly progress reports.

The Engineer shall coordinate with necessary local entities.

FUNCTION CODE 160(150) – ROADWAY DESIGN

Design Surveys and Construction Surveys

Design Surveys and Construction Surveys include performance of surveys associated with the gathering of survey data for topography, cross-sections, and other related work in order to design a project, or during layout and staking of projects for construction.

1. PURPOSE

The purpose of a design survey is to provide field data in support of transportation systems design.

The purpose of a construction survey is to provide field data in support of highway construction.

2. DEFINITIONS

A design survey is defined as the combined performance of research, field work, analysis, computation, and documentation necessary to provide detailed topographic (3-dimensional) mapping of a project site. A design survey may include, but need not be limited to locating existing right-of-way, cross-sections or data to create cross-sections and Digital Terrain Models (DTM), horizontal and vertical location of utilities and improvements, detailing of bridges and other structures, review of right-of-way maps, establishing control points, etc.

A construction survey is defined as the combined performance of reconnaissance, field work, analysis, computation, and documentation necessary to provide the horizontal and vertical position of specific ground points to be used by the construction contractor for determining lines and grades.

3. TASKS TO BE COMPLETED

3.1. Design Surveys

The State will request design surveys on an as needed basis. The Surveys shall perform tasks including, but not limited to the following:

- i. Obtain or collect data to create cross-sections and digital terrain models.
- ii. Locate existing utilities.
- iii. Locate topographical features and existing improvements.
- iv. N/A
- v. Provide details of existing drainage features, (e.g., culverts, manholes, etc.).
- vi. N/A

- vii. Establish additional and verify existing control points. Horizontal and Vertical control ties must be made and tabulated, to other control points in the vicinity, which were established by other sources such as, the National Geodetic Survey (NGS), and the Federal Emergency Management Agency (FEMA), and any other local entities as directed by the State.
- viii. Locate existing right-of-ways.
- ix. Review right-of-way maps.
- x. Locate boreholes.
- xi. N/A
- xii. Update existing control data and prepare survey control data sheets, as directed by the State for inclusion into a construction plan set.

The Surveyors shall also prepare a *Survey Control Index Sheet* and a *Horizontal and Vertical Control Sheet(s)*, signed, sealed and dated by the professional engineer in direct responsible charge of the surveying and the responsible RPLS for insertion into the plan set. The *Survey Control Index Sheet* shows an overall view of the project control and the relationship or primary monumentation and control used in the preparation of the project; whereas, the *Horizontal and Vertical Control sheet(s)* identifies the primary survey control and the survey control monumentation used in the preparation of the project. Both the *Survey Control Index Sheet* and the *Horizontal and Vertical Control Sheet(s)* must be used in conjunction with each other as a set. The State’s forms for these sheets can be downloaded from the State’s website.

The following information shall be shown on the *Survey Control Index Sheet*:

- Overall view of the project and primary control monuments set for control of the project
- Identification of the control points
- Baseline or centerline
- Graphic (Bar) Scale
- North Arrow
- Placement of note “*The survey control information has been accepted and incorporated into this PS&E*” which shall be signed, sealed and dated by a Texas Professional Engineer employed by the State
- RPLS signature, seal, and date
- The State’s title block containing District Name, County, Highway, and CSJ

The following information shall be shown on all *Horizontal and Vertical Control Sheets*:

- Location for each control point, showing baseline or centerline alignment and North arrow.
- Station and offset (with respect to the baseline or centerline alignments) of each identified control point.

- Basis of Datum for horizontal control (base control monument/benchmark name, number, datum).
- Basis of Datum for the vertical control (base control monument, benchmark name, number, datum).
- Date of current adjustment of the datum.
- Monumentation set for Control (Description, District name/number and Location ties).
- Surface Adjustment Factor and unit of measurement.
- Coordinates (State Plan Coordinates [SPC] Zone and surface or grid).
- Relevant metadata.
- Graphic (Bar) Scale.
- Placement of note *“The survey control information has been accepted and incorporated into this PS&E”* which shall be signed, sealed and dated by a Texas Professional Engineer employed by the State.
- RPLS signature, seal and date.
- The State’s title block containing District Name, County, Highway, and CSJ.

3.2. Construction Surveys – Not included in this Authorization Request

4. TECHNICAL REQUIREMENTS

- 4.1. Design surveys and construction surveys must be performed under the supervision of a RPLS currently registered with the TBPLS.
- 4.2. Horizontal ground control used for design surveys and construction surveys, furnished to the Surveyor by the State or based on acceptable methods conducted by the Surveyor, must meet the standards of accuracy required by the State.

Reference may be made to standards of accuracy for horizontal control traverses, as described in the TxDOT Survey Manual, latest edition, or the TSPS Manual of Practice for Land Surveying in the State of Texas, as may be applicable.

- 4.3. Vertical ground control used for design surveys and construction surveys, furnished to the Surveyor by the State or based on acceptable methods conducted by the Surveyor, must meet the standards of accuracy required by the State.

Reference may be made to standards of accuracy for vertical control traverses, as described in the TxDOT Survey Manual, latest edition, or the TSPS Manual of Practice for Land Surveying in the State of Texas, as may be applicable.

- 4.4. Side shots or short traverse procedures used to determine horizontal and vertical locations must meet the following criteria:

- i. Side shots or short traverses must begin and end on horizontal and vertical ground control as described above.
- ii. Standards, procedures, and equipment (may be GPS Equipment, LiDAR, Total Stations, etc.) used must be such that horizontal locations relative to the control may be reported within the following limits:
 - Bridges and other roadway structures: less than 0.1 of one foot.
 - Utilities and improvements: less than 0.2 of one foot.
 - Cross-sections and profiles: less than 1 foot.
 - Bore holes: less than 3 feet.
- iii. Standards, procedures, and equipment (may be GPS Equipment, LiDAR, Total Stations, etc.) used must be such that vertical locations relative to the control may be reported within the following limits:
 - Bridges and other roadway structures: less than 0.02 of one foot.
 - Utilities and improvements: less than 0.1 of one foot.
 - Cross-sections and profiles: less than 0.2 of one foot.
 - Bore holes: less than 0.5 of one foot.

5. AUTOMATION REQUIREMENTS

- a. Planimetric design files (DGN) must be fully compatible with the State's *MicroStation V8i* graphics program without further modification or conversion.
- b. Electronically collected and processed field survey data files must be fully compatible with the State's computer systems without further modification or conversion. All files must incorporate only those feature codes currently being used by the State.
- c. DTM must be fully compatible with the State's *GEOPAK* system without further modification or conversion. All DTM must be fully edited and rectified to provide a complete digital terrain model with all necessary break lines.

DELIVERABLES

The deliverables to be specified in individual work authorizations for design surveys and construction surveys shall be any combination of the following:

- Digital Terrain Models (DTM) and the Triangular Irregular Network (TIN) files in a format acceptable by the State.
- Maps, plans, or sketches prepared by the Surveyor showing the results of field surveys.
- Computer printouts or other tabulations summarizing the results of field surveys.
- Digital files or media acceptable by the State containing field survey data (ASCII Data files).

- Maps, plats, plans, sketches, or other documents acquired from utility companies, private corporations, or other public agencies, the contents of which are relevant to the survey.
- Field survey notes, as electronic and hard copies.
- An 8 ½ inch by 11 inch survey control data sheet for each control point which must include, but need not be limited to, a location sketch, a physical description of the point including a minimum of two reference ties, surface coordinates, a surface adjustment factor, elevation, and the horizontal and vertical datums used. A pre-formatted survey control data sheet form in Microsoft Office Word 2010 format will be provided by the State.
- A digital and hard copy of all computer printouts of horizontal and vertical conventional traverses, GPS analysis and results, and survey control data sheets.
- All GEOPAK GPK files.
- Survey reports in a format requested by the State.

FUNCTION CODE 160(160) - ROADWAY DESIGN

ROADWAY DESIGN CONTROLS

The Engineer shall inform the State of changes made from previous initial meetings regarding each exception, waiver, and variance that may affect the design. The Engineer shall cease all work under this task until the exceptions, waivers, and variances have been resolved between the Engineer and City of Houston and the State unless otherwise directed to proceed. The Engineer shall identify, prepare exhibits, and complete all necessary forms for Design Exceptions and Waivers within project limits prior to the 30% Submittal. These exceptions shall be provided to the State for coordination and processing of approvals.

160.1. Geometric Design. The Engineer shall:

- A. Refine Schematic (This task may be deleted if the schematic is not available and replaced with Preliminary Geometric layout). The Engineer shall review the schematic provided by the State to confirm their understanding of the project and to verify completeness and accuracy of the information. The Engineer shall refine the horizontal and vertical alignment of the design schematic in English units for main lanes, cross streets. Minor modifications in the alignment must be considered to provide optimal design. Modifications must be coordinated with the State and adjacent Engineers. The State must approve the refined schematic prior to the Engineer proceeding to the 30% milestone submittal.
- B. Preliminary Geometric Project Layout. The Engineer shall develop a preliminary geometric project layout (Layout) for the full length of the project to be reviewed and approved by the State prior to the Engineer proceeding with the 30% milestone submittal package.

The Layout must consist of a planimetric file of existing features and the proposed improvements within the existing and any proposed ROW. The Layout must also include the following features: existing and proposed ROW, existing and proposed horizontal and vertical alignment and profile grade line, cross culverts, lane widths, cross slopes, ditch slopes, pavement structure, clear zone, dedicated right turn lanes, corner clips, retaining walls (if applicable) guard rail (if applicable). Existing major subsurface and surface utilities must be shown on the Layout.

The Engineer shall develop the proposed alignment to avoid the relocation of existing utilities as much as possible. The Engineer shall consider Texas Accessibility Standards (TAS) requirements when developing the Layout. The Layout must be prepared in accordance with the current Roadway Design Manual and City of Houston requirements. The Engineer shall provide horizontal and vertical alignment of the project layout in English units for main lanes and cross streets. Minor alignment alternatives must be considered to provide for an optimal design. The project layout must be coordinated with the State and adjacent Engineers, if any. The Engineer shall also provide proposed and existing typical sections with the profile grade line (PGL), lane widths, cross slopes, ROW lines, ditch shapes, pavement structures and clear zones depicted, etc.

160.2. Roadway Design.

The Engineer shall provide roadway plan and profile drawings using CADD standards as required by the State. The drawings must consist of a planimetric file of existing features and files of the proposed improvements. The roadway base map must contain line work that depicts existing surface features obtained from the schematic drawing. Existing major subsurface and surface utilities must be shown if requested by the State. Existing and proposed right-of-way lines must be shown. Plan and Profile must be shown on separate or same sheets (this depends upon width of pavement) for main lanes, frontage roads, and direct connectors.

1. Calculated roadway centerlines for mainlanes, ramps, cross streets and frontage roads, as applicable. Horizontal control points must be shown. The alignments must be calculated using GEOPAK.
2. Pavement edges for all improvements (mainlanes, direct connectors, ramps, cross streets, driveways and frontage roads, if applicable).
3. Lane and pavement width dimensions.
4. The geometrics of ramps, auxiliary and managed lanes.
5. Proposed structure locations, lengths, and widths.
6. Direction of traffic flow on all roadways. Lane lines and arrows indicating the number of lanes must also be shown.
7. Drawing scale shall be 1"= 40'
8. Control of access line, ROW lines and easements.
9. Begin and end superelevation transitions and cross slope changes.
10. Limits of riprap, block sod, and seeding.
11. Existing utilities and structures.
12. Benchmark information.

13. Radii call outs, curb location, Concrete Traffic Barrier (CTB), guard fence, crash safety items and Texas Accessibility Standards (TAS) Guidelines compliance items.

The profile view must contain the following design elements:

1. Calculated profile grade for proposed mainlanes (cite direction), direct connectors, ramps, cross streets and frontage roads, if applicable. Vertical curve data, including "K" values must be shown.
2. Existing and proposed profiles along the proposed centerline of the mainlanes, the outside shoulder line of ramps, and the outside gutter line of the designated (north, south, east or west) bound frontage roads.
3. N/A
4. N/A
5. N/A
6. Drawing vertical scale to be 1"= 4'.

160.3. Typical Sections:

The Engineer shall prepare typical sections for all proposed and existing roadways and structures. Typical sections must include width of travel lanes, shoulders, outer separations, border widths, curb offsets, managed lanes, and ROW. The typical section must also include Proposed Profile Gradeline (PGL), centerline, pavement design, longitudinal joints, side slopes, sodding or seeding limits, and sidewalks, if required, station limits, common proposed and existing structures including retaining walls, existing pavement removal, riprap, limits of embankment and excavation, etc.

160.4. Mainlane and Frontage Road Design: N/A

160.5. Interchange. N/A

160.6. Cross Streets. The Engineer shall provide an intersection layout detailing the pavement design and drainage design at the intersection of each cross street. The layout must include the horizontal and vertical alignments, curb returns, geometrics, transition length, stationing, pavement, drainage details, and Texas Accessibility Standards (TAS) compliance items. The Engineer shall design for full pavement width to the ROW and provide a transition to the existing roadway.

160.7. Cut and Fill Quantities. The Engineer shall develop an earthwork analysis to determine cut and fill quantities and provide final design cross sections at 100 foot intervals. Cross sections must be delivered in standard GEOPAK format on 11"x17" sheets.

The Engineer shall submit 8 sets of drawings at the 30%, 60%, and 90%, and final submittals, respectively.

160.8. Plan Preparation. The Engineer shall prepare roadway plans, profiles and typical sections for the proposed improvements. Prior to the 30% submittal, the Engineer shall

schedule a workshop to review profiles, and cross-sections with the State. The profile and cross sections must depict the 2 and 100 water surface elevations. The drawings will provide an overall view of the roadway and existing ground elevations with respect to the various storm design frequencies for the length of the project. This will enable the State to determine the most feasible proposed roadway profile. The State will approve the proposed profiles and cross sections before the Engineer continues with the subsequent submittals. The roadway plans must be organized in the sequence as described in the *PS&E Preparation Manual*.

160.9. Wetlands Information. N/A

160.10. Pavement Design. If applicable, the Engineer shall incorporate the pavement design developed by the State for this project. If the pavement design is not available, the State may request the Engineer to perform pavement design and submit to State for review and approval.

160.11. Pedestrian and Bicycle Facilities. The Engineer shall coordinate with the State to incorporate pedestrian and bicycle facilities as required or shown on the project's schematic. All pedestrian and bicycle facilities must be designed in accordance with the latest Texas Accessibility Standards (TAS), and the AASHTO Guide for the Development of Bicycle Facilities

FUNCTION CODE 160(161) - ROADWAY DESIGN

DRAINAGE

161.1. Data Collection. The Engineer shall provide the following data collection services:

1. Conduct field inspections to observe current conditions and the outfall, drainage easements, and land development projects. Document field inspections with digital photos.
2. Collect available applicable data including GIS data and maps, site survey data, construction plans, previous reports and studies, and readily available rainfall history for the area. Particular sources of data collected include, but are not limited to, the City of Houston, State, County, Harris County Flood Control District, and Federal Emergency Management Agency (FEMA).
3. Collect available Flood Insurance Rate Maps (FIRMs), Flood Insurance Study (FIS) study data, and models.
4. Review survey data and coordinate any additional surveying needs with State.
5. N/A
6. Meet with local government officials to obtain historical flood records. Interview local residents or local government employees to obtain additional high-water information if available. Obtain frequency of road closure and any additional high-water information from the City of Houston and the District Maintenance office.

7. N/A

161.2. Hydrologic Studies. The Engineer shall provide the following services:

1. N/A
2. Calculate discharges using appropriate hydrologic methods and as approved by the State and the City of Houston.
3. Consider the pre-construction and post-construction conditions in the hydrologic study.
4. Obtain the drainage area boundaries and hydrologic parameters such as impervious covered areas, and overland flow paths and slopes from appropriate sources including, but are not limited to, topographic maps, GIS modeling, construction plans, and existing hydrologic studies. The Engineer shall not use existing hydrologic studies without assessing of their validity. If necessary, obtain additional information such as local rainfall from official sites such as airports.
5. Include, at a minimum, the “design” frequency to be specified in the Work Authorization and the 1% Annual Exceedance Probability (AEP) storm frequency. The report must include the full range of frequencies (50%, 20% 10%, 4%, 2%, and 1% AEP).
6. N/A

161.3. Complex Hydraulic Design and Documentation. The Engineer shall provide the following services:

1. Gather information regarding existing drainage facilities and features from existing plans and other available studies or sources.
2. Perform hydraulic design and analysis using appropriate hydraulic methods, which may include computer models such as 2D models such as SWMM. Data entry for appropriate hydraulic computer programs shall consist of a combination of both on-the-ground survey and other appropriate sources including but not limited to topographic maps, GIS modeling, and construction plans and existing hydrologic studies.
3. N/A
4. N/A
5. Consider pre-construction, present and post-construction conditions.
6. Quantify impacts, beneficial or adverse, in terms of increases in peak flow rates and water surface elevations for the above listed hydraulic conditions and hydrologic events.
7. N/A
8. N/A
9. N/A
10. N/A

161.4. Storm Drains

The Engineer shall provide the following services:

1. Design and analyze storm drains using software as approved by the City of Houston and the State.

2. Size inlets, laterals, trunk line and outfall. Develop designs that minimize the interference with the passage of traffic or incur damage to the highway and local property in accordance with the City of Houston requirements and the State's Hydraulic Design Manual, District criteria.
3. Determine hydraulic grade line starting at the project outfall for each storm drain design. Use the design water surface elevation of the outfall as the starting basis (tailwater) for the design of the proposed storm sewer system.
4. N/A
5. Limit discharge into existing storm drains and existing outfalls to the capacity of the existing system,
6. Identify areas requiring trench protection, excavation, shoring, and de-watering.

161.5. Cross-Drainage Structures: N/A

1. N/A
2. N/A

161.6. Temporary Drainage Facilities: The Engineer shall provide the following services:

1. As part of the SW3P plans, develop plans for all temporary drainage facilities necessary to allow staged construction of the project and to conform with the phasing of adjacent construction projects without significant impact to the hydraulic capacity of the area. Drainage area maps are not required for temporary drainage.

161.7. Scour Analysis. N/A

161.8. Environmental Permits:

The Engineer shall notify the State project manager when site conditions may require environmental permits such as Nationwide Permit, §404 Individual Permits (including mitigation and monitoring) and U. S. Coast Guard and U.S. Army Corps of Engineers §10 Permits.

161.9. Plans, Specifications and Estimates (PS&E) Development for Hydraulics: The Engineer shall provide the following services:

- a. Prepare the PS&E package in accordance with the applicable requirements of the City of Houston and the State's specifications, standards, and manuals, including the PS&E Preparation Manual. Include the following sheets and documents, as appropriate:
 - i. Hydrologic Data Sheets
 - ii. Hydraulic Data Sheets
 - iii. N/A
 - iv. N/A
 - v. Storm Drain Plan/Profile Sheets
 - vi. N/A
 - vii. N/A

- viii. Roadway Plan & Profile Sheets including profile grade line of parallel ditches, if applicable.
- ix. All other relevant sheets
- b. N/A
- c. Identify areas requiring trench protection, excavation, shoring and de-watering.
- d. Prepare drainage area maps.
- e. If applicable, prepare plan and profile sheets for storm drain systems and outfall ditches.
- f. Select any necessary standard details from the City of Houston, the State or District’s list of standards for items such as inlets, manholes, junction boxes and end treatments.
- g. Prepare details for non-standard inlets, manholes and junction boxes.
- h. Prepare drainage details for outlet protection, outlet structures and utility accommodation structures.
- i. Identify pipe strength requirements.
- j. Prepare drainage facility quantity summaries.
- k. Identify potential utility conflicts and, if feasible, design to mitigate or avoid those identified conflicts.
- l. Consider pedestrian facilities, utility impacts, driveway grades, retaining wall and concrete traffic barrier drainage impacts.
- m. Identify existing ground elevation profiles at the ROW lines on storm sewer plan and profile sheets.
- n. Locate soil borings every 500 feet along the storm sewer alignment and take piezometric readings at 2000 feet intervals.
- o. N/A
- p. N/A
- q. N/A

FUNCTION CODE 160(162) - ROADWAY DESIGN

SIGNING, PAVEMENT MARKINGS AND SIGNALIZATION (PERMANENT)

162.1. Signing. The Engineer shall prepare drawings, specifications, and details for all signs. The Engineer shall coordinate with the City of Houston and the State (and other Engineers as required) for overall temporary, interim and final signing strategies and placement of signs outside contract limits. The Engineer shall:

- Illustrate and number the proposed signs on plan sheets.
- Select each sign foundation from State Standards.

162.2. Pavement Marking. The Engineer shall detail both permanent and temporary pavement markings and channelization devices on plan sheets. The Engineer shall coordinate with the City of Houston and the State (and other Engineers as required) for overall temporary, interim, and final pavement marking strategies. The Engineer shall select Pavement markings from the latest standards.

The Engineer shall provide the following information on sign and pavement marking layouts:

- Roadway layout.
- Center line with station numbering.
- Designation of arrow used on exit direction signs
- Culverts and other structures that present a hazard to traffic.
- Location of utilities.
- Existing signs to remain, to be removed, to be relocated or replaced.
- Proposed signs (illustrated, numbered and size).
- Proposed markings (illustrated and quantified) which include pavement markings, object markings and delineation.
- Quantities of existing pavement markings to be removed.
- Proposed delineators, object markers, and mailboxes.
- The number of lanes in each section of proposed highway and the location of changes in numbers of lanes.
- Right-of-way limits.
- Direction of traffic flow on all roadways.

162.3. Traffic Warrant Studies. The Engineer shall prepare a traffic signal warrant study to support their recommendation for the continuous activation of an existing traffic signal or a proposed traffic signal based on projected volumes. Each warrant study must include addressing pedestrian signals along with obtaining both traffic and pedestrian counts.

The Engineer shall implement each proposed traffic signal improvement within existing State ROW unless otherwise approved by the State. The Engineer shall refer to latest version of the *TMUTCD*, *Traffic Signal Manual*, and The State's roadway (ramp) and traffic standards for work performed for either temporary or permanent traffic signals. The Engineer shall develop and include a timing plan for each signal improvement.

162.4. Traffic Signals. Based upon the results of the Traffic Warrant Studies, the Engineer shall identify and prepare Traffic Signal Plans for all warranted traffic signals. The Engineer shall confirm the power source for all signals and coordinate with the appropriate utility agency. Traffic Signal Plans must be signed and sealed by a Texas Registered Professional Engineer. The Engineer shall develop all quantities, general notes, and specifications and incorporate the appropriate agency standards required to complete construction.

The Engineer shall provide the following information in the Traffic Signal Plans:

- I. Layout
 - a. Estimate and quantity sheet
 - (1) List of all bid items
 - (2) Bid item quantities
 - (3) Specification item number
 - (4) Paid item description and unit of measure
 - b. Basis of estimate sheet (list of materials)

- c. General notes and specification data.
 - d. Condition diagram
 - (1) Highway and intersection design features
 - (2) Roadside development
 - (3) Traffic control including illumination
 - e. Plan sheet(s)
 - (1) Existing traffic control that will remain (signs and markings)
 - (2) Existing utilities
 - (3) Proposed highway improvements
 - (4) Proposed installation
 - (5) Proposed additional traffic controls
 - (6) Proposed illumination attached to signal poles.
 - (7) Proposed power pole source
 - f. Notes for plan layout
 - g. Phase sequence diagram(s)
 - (1) Signal locations
 - (2) Signal indications
 - (3) Phase diagram
 - (4) Signal sequence table
 - (5) Flashing operation (normal and emergency)
 - (6) Preemption operation (when applicable)
 - (7) Contact responsible Agency to obtain interval timing, cycle length and offset
 - h. Construction detail sheets(s)
 - (1) Poles (State standard sheets)
 - (2) Detectors
 - (3) Pull Box and conduit layout
 - (4) Controller Foundation standard sheet
 - (5) Electrical chart
 - i. Marking details (when applicable)
 - j. Aerial or underground interconnect details (when applicable)
2. General Requirements
 - a. Contact local utility company
 - (1) Confirm power source
 - b. Prepare governing specifications and special provisions list
 - c. Prepare project estimate
 - d. Conduct traffic counts and prepare Traffic Signal Warrant Studies for all proposed and existing traffic signals at designated locations.
 3. Summary of Quantities
 - a. Small signs tabulation
 - b. Large signs tabulation including all guide signs
 4. Sign Detail Sheets
 - a. All signs except route markers
 - b. Design details for large guide signs

- c. Dimensioning (letters, shields, borders, etc.)
- d. Designation of shields attached to guide signs

FUNCTION CODE 160(163) - ROADWAY DESIGN

MISCELLANEOUS (ROADWAY)

The Engineer shall provide the following services:

163.1. Retaining Walls and Miscellaneous Structures. N/A

163.2. Traffic Control Plan, Detours, Sequence of Construction. The Engineer shall prepare Traffic Control Plans (TCP) including TCP typical sections, for the project. A detailed TCP must be developed in accordance with the latest edition of the TMUTCD. The Engineer shall implement the current Barricade and Construction (BC) standards and TCP standards as applicable. The Engineer shall interface and coordinate phases of work, including the TCP, with adjacent Engineers. The Engineer shall:

1. Provide a written narrative of the construction sequencing and work activities per phase and determine the existing and proposed traffic control devices (regulatory signs, warning signs, guide signs, route markers, construction pavement markings, barricades, flag personnel, temporary traffic signals, etc.) to be used to handle traffic during each construction sequence. The Engineer shall show proposed traffic control devices at grade intersections during each construction phase (stop signs, flagperson, signals, etc.). The Engineer shall show temporary roadways and detours required to maintain lane continuity throughout the construction phasing. If temporary shoring is required, prepare layouts and show the limits on the applicable TCP.
2. Coordinate with the State in scheduling a Traffic Control Workshop and submittal of the TCP for approval by the Traffic Control Approval Team (TCAT). The Engineer shall assist the State in coordinating mitigation of impacts to adjacent schools, emergency vehicles, pedestrians, bicyclists and neighborhoods.
3. Develop each TCP to provide continuous, safe access to each adjacent property during all phases of construction and to preserve existing access. The Engineer shall notify the State in the event existing access must be eliminated, and must receive approval from the State prior to any elimination of existing access.
4. Design temporary drainage to replace existing drainage disturbed by construction activities or to drain detour pavement.
5. Prepare each TCP in coordination with the State. The TCP must include interim signing for every phase of construction. Interim signing must include regulatory, warning, construction, route, and guide signs. The Engineer shall interface and coordinate phases of work, including the TCP, with adjacent Engineers, which are responsible for the preparation of the PS&E for adjacent projects.
6. Maintain continuous access to abutting properties during all phases of the TCP.
7. Make every effort to prevent detours and utility relocations from extending beyond the proposed Right-of-way lines. If it is necessary to obtain additional

permanent or temporary easements and Right-of-Entry, the Engineer shall notify the State in writing of the need and justification for such action. The Engineer shall identify and coordinate with all utility companies for relocations required.

8. Describe the type of work to be performed for each phase of sequence of construction and any special instructions (e.g. storm drain, illumination, signals, signing, paving surface sequencing or concrete placement, ROW restrictions, utilities, etc.) that the contractor should be made aware to include limits of construction, obliteration, and shifting or detouring of traffic prior to the proceeding phase.
9. Include the work limits, the location of channelizing devices, positive barrier, location and direction of traffic, work area, stations, pavement markings, and other information deemed necessary for each phase of construction.
10. N/A
11. N/A
12. N/A

163.3. Temporary Traffic Signals and Illumination: The Engineer shall immediately notify the State if the Engineer determines that an existing traffic signal or roadway illumination will be affected by the project. The Engineer shall address the adjustment or realignment of traffic signal heads and the use of detection for mainlanes and side streets on the plans as directed by the State. The Engineer shall obtain traffic movement counts to address any new timing plans to minimize the impact during construction and to determine the storage length needed for left and right turn movements. The Engineer shall address lighting of signalized intersections and shall coordinate with local utilities as approved by the State.

163.4. Illumination. The Engineer shall refer to City of Houston, CenterPoint Energy, TxDOT's *Highway Illumination Manual* and other deemed necessary State approved manuals for design of roadway lighting. The Engineer shall include safety lighting as part of each design on each traffic signal. The Engineer shall provide a preliminary layout for initial review and approval by the City of Houston, CenterPoint Energy, and the State. The Engineer shall integrate existing illumination within the project limits into the proposed design.

163.5. Storm Water Pollution Prevention Plans (SW3P). The Engineer shall develop SW3P, on separate sheets from (but in conformance with) the TCP, to minimize potential impact to receiving waterways. The SW3P must include text describing the plan, quantities, type, phase and locations of erosion control devices and any required permanent erosion control.

163.6. Compute and Tabulate Quantities. The Engineer shall provide the summaries and quantities within all formal submittals.

163.7. Special Utility Details (Water, Sanitary Sewer, etc.) The Engineer shall develop special details to accommodate or adjust utilities. Prior to developing any special utility

detail, the Engineer shall notify the City of Houston and the State in writing regarding each utility conflict that may require an accommodation. As directed by the State the Engineer shall coordinate with each utility to develop each special detail. The Engineer shall develop each utility detail or accommodation in compliance with City of Houston requirements and the State's *Utility Accommodation Rules*. The Engineer shall prepare each plan sheet, detail sheet, specification, special provision, and notes required to incorporate the details into the State's plans.

163.8. Miscellaneous Structural Details. The Engineer shall provide necessary details required to supplement standard details.

163.9. Agreements (Railroad, etc.) and Layouts. N/A

163.10. Testimony for Right of Way Hearings. N/A

163.11. Estimate. The Engineer shall independently develop and report quantities necessary to construct the contract in standard State bid format at the specified milestones and Final PS&E submittals. The Engineer shall prepare each construction cost estimates using Estimator or any approved method. The estimate shall be provided at each milestone submittal or in DCIS format at the 95% and Final PS&E submittals per State's District requirement.

163.12. Contract time determination. The Engineer shall prepare a detailed contract time estimate to determine the approximate time required for construction of the project in calendar and working days (based on the State standard definitions of calendar and working days) at the 95% and Final PS&E milestone.

163.13. Specifications and General Notes. The Engineer shall identify necessary standard specifications, special specifications, special provisions and the appropriate reference items. The Engineer shall prepare General Notes from the District's *Master List of General Notes*, Special Specifications and Special Provisions for inclusion in the plans and bidding documents. The Engineer shall provide General Notes, Special Specifications and Special Provisions in the required format.

163.14. Constructability Review. The Engineer shall provide Independent Quality Review of the constructability PS&E sets.

The Engineer shall perform constructability reviews at major project design milestones (e.g. 30%, 60%, 90%, and final plan) to identify potential constructability issues and options that would provide substantial time savings during construction. The constructability review must be performed for all roadway and structural elements such as Sequence of Work/Traffic Control, Drainage (Temporary and Permanent), Storm Water Pollution Prevention Plan (SW3P), Environmental Permits, Issues and Commitments (EPIC) addressed, identify Utility conflicts; ensuring accuracy and appropriate use of Items, Quantities, General Notes, Standard and Special

Specifications, Special Provisions, Contract Time/Schedule, Standards; and providing detailed comments in an approved format. Reviews must be captured in a Constructability Log identifying areas of concern and potential conflict. The Engineer shall provide the results of all Constructability reviews and recommendations to the State at major project design milestone submittals.

FUNCTION CODE 160(165) – ROADWAY DESIGN

Traffic Management Systems (Permanent) N/A

FUNCTION CODE 160(170) – ROADWAY DESIGN

BRIDGE DESIGN N/A

FUNCTION CODE 309(309) – DESIGN VERIF/CHANGES/ALTER

CONSTRUCTION PHASE SERVICES – Not Included in this Authorization Request

Deliverables

Plans

The Engineer shall provide the following information at each submittal:

1. 30% Plans Submittal
 - 1.1. Eight sets of 11” x 17” plan sheets for the State District Review.
 - 1.2. Estimate of construction cost.
 - 1.3. Engineer’s internal QA and QC markup set.
 - 1.4. Form 1002 and Design Exceptions with existing and proposed typical sections, location map and design exception exhibits.
 - 1.5. N/A
2. Between 30% Submittal and 60% Submittal:
 - 2.1. N/A
 - 2.2. N/A
 - 2.3. Engineer’s internal QA and QC marked up set.
 - 2.4. One set of a roll format TCP phasing layouts, one .pdf of plan sheets for TCP concept, and significant project procedures form (State Form 2229) to present at the TCAT for the State review.
 - 2.5. One set of a roll format of illumination plan concept to State review.
 - 2.6. N/A
 - 2.7. N/A
3. 60% Plans Submittal:

- 3.1. Eight sets of 11" x 17" plan sets for the State District review.
 - 3.2. Estimate of construction cost.
 - 3.3. Engineer's internal QA and QC marked up set.
 - 3.4. One set of a roll format TCP phasing layouts, one .pdf of plan sheets for TCP concept, and significant project procedures form (State Form 2229) to present at the TCAT for the State review.
 - 3.5. If applicable, a preliminary 3D model, in DGN format.
4. State Bridge Review: N/A
5. Review Submittal (90%)
- 5.1. Eight sets of 11" x 17" plan sheets for the State District Review.
 - 5.2. Estimate of construction cost.
 - 5.3. Marked up general notes
 - 5.4. Construction schedule.
 - 5.5. New Special Specifications and Special Provisions with Form 1814, if applicable.
 - 5.6. Engineer's internal QA and QC marked up set.
 - 5.7. Other supporting documents.
 - 5.8. If applicable, a detailed 3D model, in DGN format, with detail to verify the design of the 90% plan sheets.
6. District Review Submittal (95%):
- 6.1. Eight sets of 11" x 17" plan sheets for the State district review
 - 6.2. List of governing Specifications and Special Provisions in addition to those required.
 - 6.3. Marked up general notes.
 - 6.4. Plans estimate.
 - 6.5. New Special Specifications and Special Provisions with Form 1814, if applicable.
 - 6.6. Triple Zero Special Provisions.
 - 6.7. Engineer sign, seal and date supplemental sheets (8 ½" x 11").
 - 6.8. Contract time determination summary.
 - 6.9. Significant project procedures form.
 - 6.10. Right-of-Way and utilities certification.
 - 6.11. Temporary road closure letters.
 - 6.12. Construction speed zone request.
 - 6.13. Engineer's internal QA and QC marked-up set.
 - 6.14. Other supporting documents.
 - 6.15. If applicable, a detailed 3D model, in DGN format, with detail to verify the design of the 95% plan sheets.
7. Final submittal (100%).
- 7.1. Eight paper sets of 11" x 17"
 - 7.2. Revised supporting documents from 95% review comments.
 - 7.3. If applicable, a final 3D model, in DGN format.

Electronic Copies

The Engineer shall furnish the State with a CD or DVD of the final plans in the format of current CADD system used by the State, .pdf format, and in the State's File Management System (FMS) format.

The Engineer shall also provide separate CD or DVD containing cross section information (in dgn, XLR, & ASCII formats) for the State contractor to use.

The Engineer shall provide an electronic copy of MS Project file for construction time estimate.

With the approval of the State, and in lieu of the above, the Engineer may maintain the project files in the State's ProjectWise container. The handoff of the electronic files will be via email to the State, with a URN link to the project location in ProjectWise provided in the email.

Calculations

The Engineer shall provide the following:

- A 3-ring binder with all quantity and non-structural design calculations.

- A bound copy of all engineering calculations, analysis, input calculations, quantities, geometric designs (GEOPAK GPK files), etc. relating to the project's structural elements.

- Working copies of all spreadsheets and output from any programs utilized on a CD or DVD in a universally reliable format.

The Engineer may provide the calculations in .pdf format in lieu of the bound hard copies. The .pdf file should be submitted on a CD, DVD, or in ProjectWise (if applicable).

**Fee Estimate for Professional Services
 TIRZ 17 N. Gessner Drainage and Mobility Improvements (T-1732A + T-1732B)
 from IH 10 (Katy Frwy) to Long Point
 October 2016**

TOTAL PH I PRELIMINARY DESIGN (CoH Requirements)	\$	107,850.00
TOTAL PH II BASIC SERVICES (CoH Requirements)	\$	127,435.00
TOTAL PH II TXDOT DESIGN		\$460,700.00
TOTAL ADDITIONAL ENGINEERING SERVICES (TXDOT & CoH Requirements)		\$111,697.96
Total for Combined Projects (T-1732A & T-1732B)	\$	807,682.96

Fee Estimate for Professional Services
TIRZ 17 N. Gessner Drainage and Mobility Improvements (T-1732A + T-1732B)
from IH 10 (Katy Frwy) to Long Point
 October 2016

PHASE I AND PHASE II SERVICES 1.00		Dept. Manager \$ 225.00	Sr. Project Manager \$ 210.00	Project Engineer \$ 135.00	Assoc. Engineer \$ 120.00	Senior Designer \$ 120.00	Clerical / Admin \$ 80.00	Total Labor Hours	Total Labor Cost
BASIC ENGINEERING SERVICES									
<i>I. Phase I - Preliminary Design</i>									
1. Review and Validation of Previous Draft PERs (Oct 2009 and August 2013)									
a.	Review Draft Reports (Oct 2009 and August 2013)	1	8	12	16			36 \$	5,220.00
b.	Update Current Engineering Basis of Design - CoH Requirements	1	8	16				25 \$	4,065.00
c.	Evaluate Current Existing Conditions	1	8	12	18			38 \$	5,460.00
d.	Update Previous Recommendations and Cost Estimates	1	8	16	16			41 \$	5,985.00
2. Prepare Updated Preliminary Engineering Report (PER) and Recommendations									
a.	Prepare Draft Updated PER - Report and Exhibits - Combine Phase 1 & 2 (T-1732A + T-1732B)	1	49	70	70	32		222 \$	32,205.00
b.	Updated PER Submittal	1	9	18	18	24		70 \$	9,585.00
c.	Review Mtg w/COH PWE	1	4	8				13 \$	2,145.00
d.	Update Draft PER per CoH PWE Comments (Report and Exhibits)	1	4	22	24	22		75 \$	9,715.00
e.	QA/QC	2	6					8 \$	1,710.00
3. Technical Review Committee & Coordination with CoH PWE									
a.	Pre-TRC Meeting	1	9	32	32			74 \$	10,275.00
b.	TRC Meeting	1	9	32				42 \$	6,435.00
c.	Draft RDAI	1	12	24	32			69 \$	9,825.00
d.	Final RDAI	1	8	24				34 \$	5,225.00
TOTAL PH I PRELIMINARY DESIGN (CoH Requirements)		12	142	286	226	78	3	747 \$	107,850.00
<i>Phase II Basic Engineering Services - N. Gessner Rd from IH-10 to Long Point (T-1732A & T-1732B) - CoH Requirements</i>									
A. Additional CoH Coordination & Deliverables									
1.	Additional Coordination with CoH CIP Project No. N-000809-0001-3	1	8	16				25 \$	4,065.00
2.	Additional Project Coordination Meetings with CoH PWE	1	12	16				29 \$	4,905.00
3.	60% Design CoH PWE Submittal & Review Meetings	1	9	18	18	18		64 \$	8,865.00
4.	90% Design CoH PWE Submittal & Review Meetings	1	9	18	18	18		64 \$	8,865.00
5.	Final Design CoH PWE Submittal & Review Meetings	1	9	18	18	18		64 \$	8,865.00
6.	Private Utility Signatures		1	4	8			13 \$	1,710.00
7.	Utility Conflict Resolution		3	6	16			25 \$	3,360.00

Fee Estimate for Professional Services
TIRZ 17 N. Gessner Drainage and Mobility Improvements (T-1732A + T-1732B)
 from IH 10 (Katy Frwy) to Long Point
 October 2016

PHASE I AND PHASE II SERVICES		Dept. Manager \$ 225.00	Sr. Project Manager \$ 210.00	Project Engineer \$ 135.00	Assoc. Engineer \$ 120.00	Senior Designer \$ 120.00	Clerical / Admin \$ 80.00	Total Labor Hours	Total Labor Cost
1.00									
B. Roadway & Drainage Improvements Design (CoH Requirements)									
<i>See Attachment B-1 for TxDOT Roadway Plan Production</i>									
<i>1. Driveway Schedule and Details (2 Sheets)</i>									
		1	5	12	14	44		76	\$ 9,855.00
<i>2. Additional Storm Sewer Lateral Sheets (2 Sheets) (Westview to Long Point)</i>									
		1	4	12	20	20		57	\$ 7,485.00
C. Water and Sanitary Sewer Design (Westview to Long Point)									
<i>1. Plan-Profile Sheets (4 Sheets)</i>									
			6	10	14	44		74	\$ 9,570.00
D. Drainage Design (Update & Westview to Long Point)									
<i>1. Update Overall Drainage Area Map</i>									
			1	2	6	8		17	\$ 2,160.00
<i>2. Update Existing Conditions Drainage Area Map</i>									
			1	2	6	8		17	\$ 2,160.00
<i>3. Update Proposed Conditions Drainage Area Map</i>									
			1	2	6	8		17	\$ 2,160.00
<i>4. Update Proposed Storm System Design for Combined Project Limits</i>									
			2	4	6	6		18	\$ 2,400.00
a. Validation of Recommended Alternative (Westview to Long Point)									
		1	2	4	4	4		11	\$ 1,665.00
1.) Update Existing Conditions for Expanded SWMM Model									
			1	2	8	4		15	\$ 1,920.00
2.) Refine Boundary Conditions									
b. Update Proposed Conditions for Expanded SWMM Model									
		1		3	14			18	\$ 2,310.00
1.) Adjust Preliminary Model to Develop System Detail									
		1	2	5	18	4		30	\$ 3,960.00
2.) Update & Develop Inlet Nodes									
		1	3	5	11			20	\$ 2,850.00
3.) Confirm & Modify Storm System									
		1	1	2	16	4		24	\$ 3,105.00
4.) Update Model Pipe Elevations from Topo Survey									
c. Execute Expanded SWMM Model for Detailed Design									
		1	4	8	16			29	\$ 4,065.00
1.) Refine Design & Model									
			2	3	6	4		15	\$ 2,025.00
2.) Proposed Storm Sewer Design Model Tables									
5. Proposed Storm Sewer 100-Year Analysis for Expanded SWMM Model									
		1	2	3	6	6		17	\$ 2,265.00
a. Modify for 100yr Extreme Event Requirements									
		1	2	4	6			13	\$ 1,905.00
b. Proposed Storm Sewer 100-Year Analysis Model Tables									
			1	4	6	6		17	\$ 2,190.00
6. Update Impact Analysis Final Report									
			2	4	8			14	\$ 1,920.00
a. Determine Impacts for 2yr & 100yr for Final Design									
		1	2	4	16			23	\$ 3,105.00
b. Prepare Updated Mitigation Recommendation w/ LOS									
		1	4	8	12	6	2	33	\$ 4,465.00
c. Prepare Updated Impact Analysis Final Report									
		2	4					6	\$ 1,290.00
<i>7. QAT/QC</i>									
TOTAL PH II BASIC SERVICES (CoH Requirements)		18	105	217	333	266	2	941	\$ 127,435.00

Fee Estimate for Professional Services
 TIRZ 17 N. Gessner Drainage and Mobility Improvements (T-1732A + T-1732B)
 from IH 10 (Katy Frwy) to Long Point
 October 2016

PH II TxDOT DESIGN	Dept. Manager	Sr. Project Manager	Project Engineer	Assoc. Engineer	Senior Designer	Clerical / Admin	Total	Task Total
TASK DESCRIPTION	\$ 225.00	\$ 210.00	\$ 135.00	\$ 120.00	\$ 120.00	\$ 80.00		
110.1. Supplemental Data Collection and Field Reconnaissance for TxDOT		4	8			2	14	\$2,080.00
110.2. Confirm TxDOT Design Criteria for DCC		2	2	4		1	9	\$1,250.00
110.3. Update Preliminary Cost Estimates for TxDOT for DCC		2	4	8			14	\$1,920.00
110.4. Design Concept Conference (DCC)		6	10	8	8	2	34	\$4,690.00
A. Design Variances and Exceptions		2	4	8			14	\$1,920.00
110.5. Review Updated Geotechnical Borings and Investigations		2	1				3	\$555.00
Total Hours	0	18	29	28	8	5	88	\$12,415.00
Total	\$0.00	\$3,780.00	\$3,915.00	\$3,360.00	\$960.00	\$400.00	\$12,415.00	\$12,415.00
FC 120 Social, Economic and Environmental Studies and Public Involvement								
120.1. Informal Meetings		4	4	2	2	2	14	\$2,020.00
120.2. Environmental Permits Issues and Commitments (EPIC) Sheets for Plans		1	2	4			7	\$960.00
120.3. TxDOT Environmental Study for Categorical Exclusion (CE)								\$20,000.00
120.4. Environmental Exhibits		1	8	8	16		33	\$4,170.00
Total Hours	0	6	14	14	18	2	54	\$27,150.00
Total FC 120	\$0.00	\$1,260.00	\$1,890.00	\$1,680.00	\$2,160.00	\$160.00	\$7,150.00	\$27,150.00
FC 130 Right of Way Data								
130.1. Right-of-Way Map		2	4		12		18	\$2,400.00
130.2. Utility Locations and Layouts (Update for TxDOT & T-1732B)		4	8	16	24	2	54	\$6,880.00
130.3. N/A							0	\$0.00
Total Hours	0	6	12	16	36	2	72	\$9,280.00
Total FC 130	\$0.00	\$1,260.00	\$1,620.00	\$1,920.00	\$4,320.00	\$160.00	\$9,280.00	\$9,280.00
FC 145 Project Management and Administration								
Project Management and Coordination	8	88	80			60	236	\$35,880.00
Total Hours	8	88	80	0	0	60	236	\$35,880.00
Total FC 145	\$1,800.00	\$18,480.00	\$10,800.00	\$0.00	\$0.00	\$4,800.00	\$35,880.00	\$35,880.00

Fee Estimate for Professional Services
 TIRZ 17 N. Gessner Drainage and Mobility Improvements (T-1732A + T-1732B)
 from IH 10 (Katy Frwy) to Long Point
 October 2016

PH II TxDOT DESIGN	Dept. Manager	Sr. Project Manager	Project Engineer	Assoc. Engineer	Senior Designer	Clerical / Admin	Total	Task Total
FC 150 Design Surveys and Construction Surveys								
150. Survey (Kuo & Assoc) - See SubContracted Services								
Total Hours	0	0	0	0	0	0	0	\$0.00
Total FC 150	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FC 160 Roadway Design Controls								
160.1. Geometric Design								
B. Preliminary Geometric Project Layout		2	4	12	4		22	\$2,880.00
160.2. Roadway Design		16	24	88	88		216	\$27,720.00
A. Project Layouts		1	2	4	4		17	\$2,160.00
B. Final Horizontal and Vertical Alignment		2	6	16	22		46	\$5,790.00
C. Roadway Plan and Profile Sheets		12	20	88	88		210	\$26,790.00
160.3. Typical Sections		1	8	24	24		73	\$9,825.00
160.6. Cross Streets		1	8	40	40		105	\$13,665.00
160.7. Cut and Fill Quantities		2	12	40	40		94	\$11,640.00
160.8. Plan Preparation		1	2	8	8		23	\$3,105.00
160.10. Pavement Design (Provided By Aviles & TxDOT)		1	2			2	5	\$640.00
160.11. Pedestrian and Bicycle Facilities		2	4	16	16		38	\$4,800.00
Total Hours	5	56	110	336	340	2	849	\$109,015.00
Total FC 160	\$1,125.00	\$11,760.00	\$14,850.00	\$40,320.00	\$40,800.00	\$160.00	\$109,015.00	\$109,015.00
FC 161 Drainage								
161.1. Data Collection		2	4	4	4		14	\$1,920.00
162.2. Hydrologic Studies (Coordination & Review by TxDOT)		4	16	32			52	\$6,840.00
161.3. Complex Hydraulic Design and Documentation for TxDOT		1	8	32			65	\$8,985.00
161.4. Storm Drains (Update for TxDOT)		1	8	48	80		161	\$20,505.00
161.8. Environmental Permits		8	8	8	8		24	\$3,720.00
161.9. Plans, Specifications and Estimates (PS&E) Development for Hydraulics		32	44	120	140		336	\$43,860.00
Total Hours	2	62	120	244	224	0	652	\$85,830.00
Total FC 161	\$450.00	\$13,020.00	\$16,200.00	\$29,280.00	\$26,880.00	\$0.00	\$85,830.00	\$85,830.00

Fee Estimate for Professional Services
 THIRZ 17 N. Gessner Drainage and Mobility Improvements (T-1732A + T-1732B)
 from IH 10 (Katy Frwy) to Long Point
 October 2016

PH II TXDOT DESIGN	Dept. Manager	Sr.Project Manager	Project Engineer	Assoc. Engineer	Senior Designer	Clerical / Admin	Total	Task Total
FC 162 Signing, Pavement Markings, Signalization (Permanent)								
162.1. Signing		2	8	20	20		50	\$6,300.00
162.2. Pavement Marking		2	8	20	20		50	\$6,300.00
162.3. Traffic Signal Warrant Studies (1 Warrant Study at Westview only)	2	4	18	20	12		56	\$7,560.00
162.4. Traffic Signal (Permanent - Westview; Temp Signal Mods - IH 10 Frontage Roads, Mathewson, Long Point) Previously Authorized							0	\$0.00
Total Hours	2	8	34	60	52	0	156	\$20,160.00
Total FC 162	\$450.00	\$1,680.00	\$4,590.00	\$7,200.00	\$6,240.00	\$0.00	\$20,160.00	\$20,160.00
FC 163 Miscellaneous (Roadway)								
163.2. Traffic Control Plan, Detours, Sequence of Construction	4	40	64	80	80		268	\$37,140.00
163.3. Temporary Traffic Signals and Illumination (Previous Authorization)								
163.4. Illumination (Isani) - See SubContracted Services								
163.5. StormWater Pollution Prevention Plans (SW3P)		4	8	24	24		60	\$7,680.00
163.6. Compute and Tabulate Quantities		4	8	8	24	24	68	\$7,680.00
163.7. Special Utility Details (Water, Sanitary Sewer, etc.)		4	32	120	140		296	\$36,360.00
163.8. Miscellaneous Structural Details		4	4	24	24		56	\$7,140.00
163.11. Estimate		6	20	20			46	\$6,360.00
163.12. Construction Contract Time Determination		6	12				18	\$2,880.00
163.13. Specifications and General Notes								
A. CoH Specifications and General Notes		2	4	4	8		18	\$2,400.00
B. TxDOT Specifications and General Notes		2	8	36	36		82	\$10,140.00
163.14. Constructability Review	1	8	8				17	\$2,985.00
Project title sheet		1	2	6	9		18	\$2,280.00
Index of sheets		1	1	6	9		17	\$2,145.00
Standard sheets (for all)		4	8	16	24		52	\$6,720.00
Total Hours	5	86	179	344	378	24	1016	\$131,910.00
Total FC 163	\$1,125.00	\$18,060.00	\$24,165.00	\$41,280.00	\$45,360.00	\$1,920.00	\$131,910.00	\$131,910.00

Fee Estimate for Professional Services
 THRZ 17 N. Gessner Drainage and Mobility Improvements (T-1732A + T-1732B)
 from IH 10 (Katy Frwy) to Long Point
 October 2016

PH II TXDOT DESIGN	Dept. Manager	Sr. Project Manager	Project Engineer	Assoc. Engineer	Senior Designer	Clerical / Admin	Total	Task Total
LABOR SUMMARY								
Total Labor								
								\$12,415.00
								\$27,150.00
								\$9,280.00
								\$35,880.00
								\$0.00
								\$109,015.00
								\$85,830.00
								\$20,160.00
								\$131,910.00
Total Labor								\$431,640.00
Other Direct Expenses:								
Mileage			Quantity	Rate/Unit	Unit			
			750	\$0.550	mile			\$412.50
Photocopies B/W (8 1/2" X 11")			4,475	\$0.10	each			\$447.50
Photocopies B/W (11" X 17")			16,000	\$0.20	each			\$3,200.00
CoH Review Fees			300	\$80.00	sheet			\$24,000.00
Plots (color on bond)			1,000	\$1.00	square foot			\$1,000.00
Total Other Direct Expenses								\$29,060.00
TOTAL PH II TXDOT REQUIREMENTS								\$460,700.00

Fee Estimate for Professional Services
 TIRZ 17 N. Gessner Drainage and Mobility Improvements (T-1732A + T-1732B)
 from IH 10 (Katy Frwy) to Long Point
 October 2016

PHASE II SERVICES (TxDOT & CoH Requirements)								Total Cost
ADDITIONAL ENGINEERING SERVICES								
CoH - Phase 2 Environmental Site Assessment (ESA) - See attached proposal							Lump Sum	\$ 47,371.00
SUBCONTRACTED ENGINEERING SERVICES								
	Task	Cost	(w/ 8% markup)					
	Update Geotechnical Investigation for TxDOT Requirements (Aviles Engineering Corp.)	\$ 20,578.00	\$ 1,646.24	\$22,224.24				\$ 22,224.24
	Update Survey for TxDOT Requirements (Kuo & Assoc.)	\$ 24,975.00	\$ 1,998.00	\$26,973.00				\$ 26,973.00
	Street Light Plans (Isani Consultants, L.P.)	\$ 8,499.00	\$ 679.92	\$9,178.92				\$ 9,178.92
	Tree Protection Plans (C.N. Koehl Urban Forestry, Inc.)	\$ 5,510.00	\$ 440.80	\$5,950.80				\$ 5,950.80
	Subtotal Additional Services - Subcontracted Engineering Services	\$ 59,562.00	\$ 4,764.96	\$64,326.96				\$ 64,326.96
TOTAL ADDITIONAL ENGINEERING SERVICES (TxDOT & CoH Requirements)								
								\$ 111,697.96



Cielo Center, 1250 South Capital of Texas Highway, Building Three, Suite 200, Austin, TX 78746 USA
T +1 512 347-7588 F +1 512 347-8243 W www.rpsgroup.com

May 10, 2016

Jeff Anderson
RPS Klotz Associates
1160 Dairy Ashford, Suite 500
Houston, Texas, 77079

Re: Cost Proposal for Phase II Environmental Site Assessment
North Gessner Road Drainage and Mobility Improvement Project
Houston, Texas

Dear Jeff:

RPS is pleased to provide this proposal to conduct a Phase II Environmental Site Assessment (Phase II ESA) at three locations along North Gessner Road between the IH-10 access road and Long Point Road in Houston, Harris County, Texas. The Phase II ESA will be performed in accordance with the latest version of the ASTM Standard Practice E1903 and Chapter 11 of the City of Houston's Department of Public Works and Engineering Design Manual (Design Manual) dated July 2015.

The following scope of work has been developed to assess potential petroleum contaminated areas (PPCAs) identified in a Phase I Environmental Site Assessment (Phase I ESA) conducted by Lockwood, Andrews & Newnam, Inc. of Houston, Texas dated April 18, 2013. The ESA identified a three leaking petroleum storage tank (LPST) sites along North Gessner Road as recognized environmental conditions (RECs). The identified LPST sites are located at 1038 Gessner Road, 1066 Gessner Road (Building B), and 1311 Gessner Road.

Scope of Work

The Phase II ESA will be conducted assess potential impacts to soil and groundwater from the LPST sites that may be encountered during roadwork construction activities. Based on the City of Houston's requirement, the Phase II ESA will consist of completing nine soil borings (three at each PPCA location). The borings will be located in the roadway along the planned construction excavation route at each REC location. If a drilling location is in conflict with an underground existing utility, the location will be moved to within the right-of-way.

Planning/Permits/Preparation

RPS will obtain the necessary permits and approvals to conduct the investigation with the roadway. As required by the City of Houston, a mobility permit, monitoring well/soil boring permit, and a street cut permit (scheduled excavation permit) will be obtained prior to any field activities. It is assumed that a traffic control plan will not be required for the mobility permit since a only one lane closure is anticipated. The soil boring locations will be marked and geolocated in the field for utility clearance and for preparing the required colored GIS map for the soil boring permit.



Jeff Anderson
May 10, 2016
Page 3

Sample Analysis

Because all of the potential RECs identified during the Phase I ESA are LPST sites, all soil and groundwater (if collected) samples will be analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tertiary-butyl ether (MTBE) using USEPA SW-846 Method 8260B and for total petroleum hydrocarbons (TPH) using Texas Commission on Environmental Quality (TCEQ) Method TX1005. Samples will be analyzed and reported in accordance with TCEQ Texas Risk Reduction Program (TRPP) 13 protocols.

Report

RPS will prepare a report documenting the field activities and analytical results. In accordance with Chapter 11 of the Design Manual, the report will describe the lithology, the type of contamination and their potential sources, and the potential impacts to planned construction activities. The soil analytical results will be compared the Texas Risk Reduction Program (TRRP) residential Tier 1 protective concentration levels (PCLs) for the protection of groundwater (^{GW}Soil_{ing}) for a 0.5-acre source area. Groundwater analytical results will be compared to the residential Tier 1 PCLs for groundwater ingestion (^{GW}GW_{ing}).

The potential exposure to construction workers will be evaluated using the TRRP combined inhalation, ingestion, dermal, vegetable consumption (^{Total}Soil_{Comb}) and the soil to air inhalation (^{Air}Soil_{Inh-v}) residential Tier 1 PCLs. Groundwater results will be compared to the Tier 1 residential PCLs for the groundwater to air inhalation (^{Air}GW_{Inh-v}) pathway. Additionally, the soil and groundwater (if encountered) will be characterized for waste disposal purposes should the sampled materials be found to be impacted.

A draft hard copy of the Phase II ESA report will be provided for review prior to submitting the final report. An electronic file of the complete report will be submitted with the final report.

The cost to perform this scope of work is \$47,371. This work will be conducted on a time and materials basis in accordance with our 2015 rate schedule. If no groundwater is encountered, no charges will be incurred for temporary well installation or groundwater sampling and analysis.

If there are any questions, please call me at 512/347-7588.

Sincerely,

RPS

A handwritten signature in black ink, appearing to read "Mark S. Katterjohn". The signature is fluid and cursive.

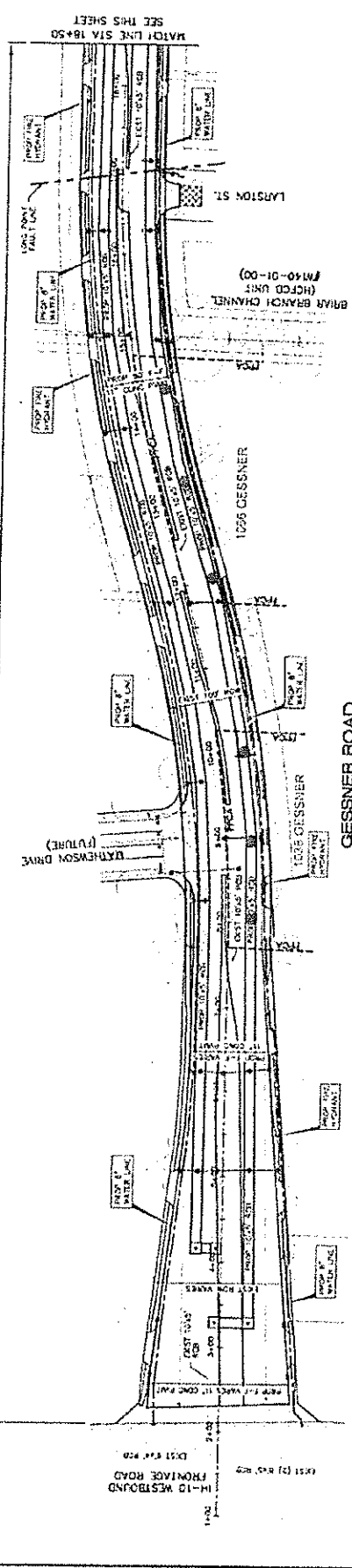
Mark S. Katterjohn, P.G.
Senior Consultant/Hydrogeologist

MSK/msk

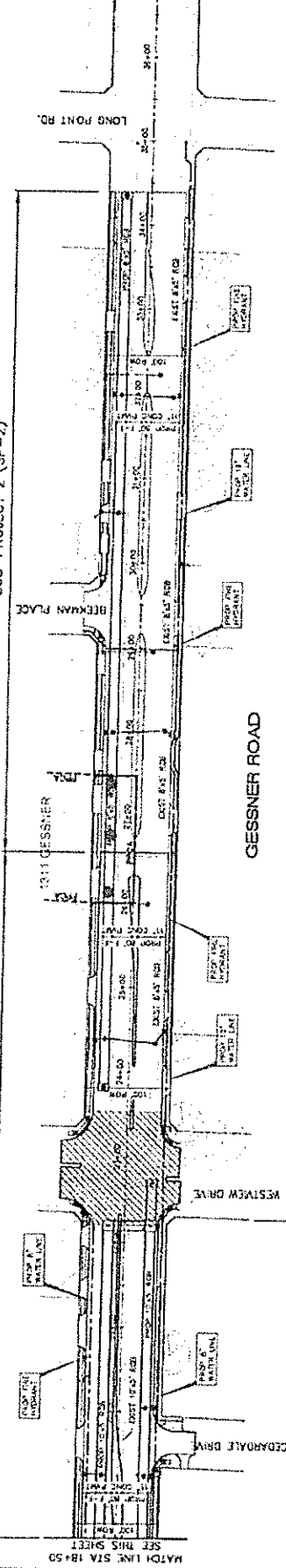
cc: Edward Conger, RPS Klotz Associates



SUB-PROJECT 1 (SP-1)



SUB-PROJECT 1 (SP-1)



KLOTZ ASSOCIATES
 11000 Katy Road, Suite 100
 Houston, Texas 77054
 Phone: 281-412-1100
 Fax: 281-412-1101

**OVERALL LAYOUT
 IH-10 TO LONG POINT
 FIGURE 1**

CITY OF HOUSTON
 NORTH GESSNER ROAD
 DRAINAGE AND VELOCITY IMPROVEMENTS
 SHEET NO. 1111-00A-00
 SCALE 1"=100'
 DATE: JULY 2013

EXHIBIT

LEGEND:

- LAND OF 17" HIGH EARTH FILL WITH 20% SAND, 80% GRAVEL, 10% FINE SAND, 10% FINE GRAVEL AND 10% FINE SAND
- LAND OF 12" HIGH EARTH FILL WITH 20% SAND, 80% GRAVEL, 10% FINE SAND, 10% FINE GRAVEL AND 10% FINE SAND
- PCCA LIMITS
- STORM SEWER MANHOLE
- STORM SEWER INLET
- 3000' SEWER JUNCTION BOX
- LONG POINT FAULT LINE
- PROPOSED BORING LOCATIONS

PCCA LIMITS:
 : 1206 GESSNER
 : 1211 GESSNER



September 16, 2016

Mr. Edward Conger, P.E.
RPS Klotz Associates
1160 Dairy Ashford, Suite 500
Houston, Texas 77079

Re: Geotechnical Investigation Proposal
Midtown Redevelopment Authority/TIRZ 17
North Gessner Road Drainage and Mobility Improvements
Houston, Texas
AEC Proposal No. G2016-09-09

Dear Mr. Conger,

Aviles Engineering Corporation (AEC) is pleased to present this geotechnical investigation proposal for the Midtown Redevelopment Authority/TIRZ 17's proposed reconstruction of North Gessner Road between IH-10 and Long Point, in Houston, Texas (Houston/Harris County County Key Map No. 450W and 490A). Based on the 90 percent complete drawings (dated May 2015) provided by RPS Klotz, the proposed improvements include: (i) installation of 10 foot by 5 foot RCB storm sewers along the majority of the project alignment; and (ii) reconstruction of the existing roadway with new concrete pavement. Based on the provided drawings, the RCB storm sewers will have a maximum invert depth of 10 feet below existing grade.

According to RPS Klotz, the geotechnical investigation should be performed in general accordance with the requirements from the City of Houston (COH) Infrastructure Design Manual (IDM) and the Texas Department of Transportation (TxDOT) Geotechnical Manual. AEC proposes to drill a total of seven borings (Borings T-1 through T-7) to 20 feet along the project alignment. The total boring footage is 140 linear feet. AEC will also incorporate the soil information from 8 borings (Borings B-1 through B-8) that were previously drilled by AEC along the project alignment in 2012. A proposed Boring Location Plan (showing both proposed and existing borings) is included in the Attachments. We will perform a site reconnaissance prior to drilling and mark the boring locations; we request that the Client arrange access to the site for our field personnel. We will contact the Texas 811 system to check underground utilities at the site; however Texas 811 does not locate water lines, storm, or sanitary sewers. We also request that existing utility drawings for the site be provided to AEC and that onsite personnel clear existing underground utilities prior to arrival of the drilling rig.

Based on our previous borings, AEC assumes that the boring locations can be accessed with a truck-mounted drill rig. Concrete coring will be required. Traffic control will be required along the entirety of the alignment. We will collect samples continuously at 2 foot intervals from the ground surface to the boring termination depths of 20 feet. In accordance with TxDOT requirements, we will perform TxDOT Cone Penetrometer (TCP) tests at 5 foot intervals throughout the borings. Undisturbed samples will be obtained of cohesive soils by pushing a Shelby tube (ASTM D 1587). Standard Penetration Test samples will be obtained of granular soils (ASTM D 1586). Representative portions of all soil samples will be sealed, packaged, and transported to our laboratory. We will note any visual evidence or odor indicating hazardous materials if encountered in the samples. Water level readings will be noted during drilling and upon completion of drilling. Upon completion of drilling, the borings will be backfilled with cement-bentonite grout, and the pavement surface patched with non-shrink grout.

Laboratory testing may consist of moisture contents, Atterberg limits, percentage passing No. 200 sieve, sieve analysis, unconfined compression, and unconsolidated-undrained triaxial tests depending on the soil types encountered. We will analyze the field and laboratory data to develop an engineering report which provides recommendations for: (i) installation of underground utilities by open cut method, including pipe loading, deflection, thrust resistance, trench excavation, shoring, and backfill; and (ii) reconstruction of roadways with concrete pavement, including pavement thickness design and subgrade preparation. We will provide two copies of the draft report and three copies of the final report. Additional report copies will be provided at \$30 each.

The lump sum fee our services is **\$20,578.00**. An itemized fee estimate is included in the attachments. The fee includes one mob/demob of a truck mounted drill rig, concrete coring, a site visit to mark the boring locations, and 5 copies of the engineering report (2 draft and 3 final). The base fee assumes that any existing underground utilities will be located by others prior to drilling. Buggy rig mobilization, tree clearing, fence/gate removal, restoration of the site to its original condition, standby time, surveying, Phase I fault study, plan/specification review, environmental assessment/testing/cleanup, and attendance at meetings are not included in the above fee. To help us maintain the estimated schedule and avoid additional fees, we request that we be provided with all pertinent project details, drawings and any proposed/preferred geotechnical-related design details at the onset of the project. Project terms and conditions will be in accordance with the Professional Services Agreement between AEC and RPS Klotz.

Weather permitting, we will perform a site reconnaissance and mark the proposed boring locations 2 business days after the required project drawings, the signed contract, and notice-to-proceed are received. Weather permitting and assuming no field delays, the drilling should take four days and the laboratory tests about 3 weeks after completion of drilling. We anticipate providing you the draft geotechnical report about 2 weeks after the laboratory test results are complete, and will provide the final geotechnical report about 2 weeks after comments on the draft report are received.

If any of the project details described in this proposal are incorrect or the scope described or the assumptions listed need to be revised, please inform us immediately so we can revise the proposal as necessary. Please sign and return a copy of this proposal to authorize AEC to proceed with the services.

We appreciate the opportunity to present this proposal, and look forward to working with you.

Respectfully submitted,
Aviles Engineering Corporation
(TBPE Firm Registration No. F-42)



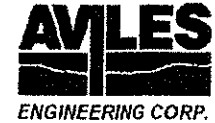
Wilber L. Wang, P.E.
Project Engineer



Shou Ting Hu, M.S.C.E., P.E.
President

Attachments: Itemized Fee Estimate, Boring Location Plan

Geotechnical Investigation
TIRZ 17 North Gessner Road Drainage and Mobility Improvements
Houston, Texas
AEC Proposal No. G2016-09-09
09/16/2016



ITEMIZED FEE ESTIMATE

7 Borings Total: 7 @ 20'

A. FIELD EXPLORATION	QTY	UNIT		RATE	AMOUNT
Mobilization/Demobilization (Truck Drilling Rig)	1	LS	@	\$300.00	\$300.00
Daily Drill Crew Travel	2	days	@	\$75.00	\$150.00
Site Reconnaissance and Boring Layout (Project Engineer)	8	hrs.	@	\$96.00	\$768.00
Lane Closure Permit and Traffic Control Plan (Staff Engineer)	4	hrs.	@	\$82.00	\$328.00
Field Coordination and Utility Clearing (Staff Engineer)	8	hrs.	@	\$82.00	\$656.00
Geologic Fault/Hazard Evaluation (Sr. Geologist)	0	hrs.	@	\$82.00	\$0.00
Concrete Coring and Patching (6" dia, up to 6" thick, \$300 min.)	7	ea.	@	\$90.00	\$630.00
Concrete Coring (6" to 12" thick)	7	ea.	@	\$48.00	\$336.00
Field Supervision and Boring Logging (Staff Engineer)	16	hrs.	@	\$82.00	\$1,312.00
Soil Drilling and Continuous Sampling (0'-20')	140	ft.	@	\$18.00	\$2,520.00
Soil Drilling and Intermittent Sampling (20'-50')	0	ft.	@	\$16.00	\$0.00
Texas Cone Penetrometer Test	28	ea.	@	\$23.00	\$644.00
Install Piezometers	0	ft.	@	\$14.00	\$0.00
Piezometer Caps	0	ea.	@	\$60.00	\$0.00
Grout Boreholes (Cement-Bentonite)	140	ft.	@	\$5.00	\$700.00
Site Cleanup	3	hrs.	@	\$185.00	\$555.00
Piezometer Readings (Two Trips, Senior Technician)	0	hrs.	@	\$66.00	\$0.00
Plug and Abandon Piezometers	0	ft.	@	\$12.00	\$0.00
Drill Crew Standby (Crew of 3)	0	hrs.	@	\$185.00	\$0.00
Vehicle Charge	36	hrs.	@	\$7.50	\$270.00
	SUBTOTAL				\$9,169.00
B. TRAFFIC CONTROL					
Coordination for Traffic Control (Staff Engineer)	6	hrs.	@	\$82.00	\$492.00
Traffic Control for Lane Closures (Single Flagman)	3	days	@	\$705.00	\$2,115.00
	SUBTOTAL				\$2,607.00
C. GEOTECHNICAL LABORATORY TESTING					
Atterberg Limits (ASTM D-4318)	20	ea.	@	\$53.00	\$1,060.00
Passing No. 200 Sieve (ASTM D-1140)	20	ea.	@	\$41.00	\$820.00
Sieve Analysis w/o Hydrometer (ASTM D-422)	2	ea.	@	\$49.00	\$98.00
Moisture Content (ASTM D-2216)	70	ea.	@	\$8.00	\$560.00
Unconfined Compression Test (ASTM D-2166)	0	ea.	@	\$39.00	\$0.00
Unconsolidated-Undrained Test (ASTM D-2850)	20	ea.	@	\$54.00	\$1,080.00
	SUBTOTAL				\$3,618.00
D. ENGINEERING ANALYSIS & REPORT PREPARATION					
Principal Engineer	2	hrs.	@	\$167.00	\$334.00
Senior Engineer	16	hrs.	@	\$123.00	\$1,968.00
Staff Engineer	24	hrs.	@	\$82.00	\$1,968.00
Clerical/Word Processor	6	hrs.	@	\$36.00	\$216.00
Reproduction (2 Copies of Draft, 3 Copies of Final Report included)	0	report	@	\$40.00	\$0.00
	SUBTOTAL				\$4,486.00
E. MEETINGS					
Principal Engineer	4	hrs.	@	\$167.00	\$668.00
Vehicle Charge	4	hrs.	@	\$7.50	\$30.00
	SUBTOTAL				\$698.00
TOTAL ESTIMATED FEE FOR GEOTECHNICAL SERVICES					\$20,578.00

September 26, 2016

Mr. W. Edward Conger, P.E.
Senior Project Manager
RPS Klotz Associates
1160 Dairy Ashford, Suite No. 500
Houston, TX 77079

Re: TIRZ 17 N. Gessner Road project – from IH-10 to Long Point Road
Scope: Topographic Survey updating Services

Dear Mr. Conger:

Kuo & Associates, Inc. is pleased to submit this proposal to perform topographic surveying for the above referenced project. The scope of work and fee will be as follows:

SCOPE OF WORK

Survey updating services will be done for the following:

- 3900 feet on N. Gessner Road
- 200 feet on Long Point Road
- 200 feet on Westview Dr.
- 200 feet on IH-10 West Bound Feeder Road

Survey shall conform to TxDOT's requirements and requirements as outlined in the City of Houston Design Manual, Chapter 2 – Survey Requirements, latest revision, as applicable. Under the general scope the following tasks will be performed:

1. Recover or re-set horizontal and vertical controls, and the controls will be tied to the Texas State Plane Coordinate System, South Central Zone NAD 83 (CORS 96) and datum NAVD 88. Tie controls to TxDOT monument near-by.
2. The survey controls/TBM will be monumented in the field not exceeding 1000 feet as per Section 2.07D of the Chapter 2 of City of Houston Infrastructure Design Manual.
3. Cross sections will be surveyed at every 100 feet interval along the project route.
4. Field verify all planimetric features, any new features will be surveyed along the road right-of-way within the limits. The survey will be extended on all sides of street intersections at least to 100' as per the requirements of design manual, unless otherwise warranted for your design.
5. Field verify all visible existing utilities (i.e. manholes, culverts, power poles, etc.). Any new utilities will be located and pipe size and flow line measure downs in the manholes and inlets (that can be opened) will be obtained
6. Texas one-call system will be notified and pipeline companies will be contacted to probe and mark their pipeline (if any) locations to be tied to the survey.
7. Attempt will be made to recover and verify sufficient monumentation along the existing roadway to establish the right-of- way lines.
8. A plan view drawings will be prepared containing all surveyed topographic information, right-of-way and abstracting information in AutoCAD format. The plan view will be provided in electronic format.
9. Tie to TSARP Monument: nearby TSARP monument will be tied to the survey and an equation will be provided in between surveyed elevation (on the CORS datum) and published elevation of the TSARP (on NAVD 88, 2001 adj)

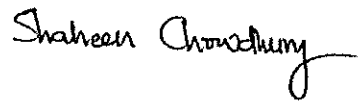
September 26, 2016
Proposal for Survey

Page No. 3

We could complete the work within 60 calendar days upon receiving notice to proceed.

We appreciate this opportunity to submit the proposal. If you need further information, please do not hesitate to contact me.

Regards,

A handwritten signature in black ink that reads "Shaheen Chowdhury". The signature is written in a cursive style with a prominent loop at the end of the last name.

Shaheen Chowdhury, P.E., R.P.L.S.
President



Consulting Engineers
& Surveyors

10700 Richmond Ave, Suite 113
Houston, TX 77042
Tel: (713) 975-8769
Fax: (713) 975-0920
www.kuoassociates.com

September 26, 2016

Mr. W. Edward Conger, P.E.
Senior Project Manager
RPS Klotz Associates
1160 Dairy Ashford, Suite No. 500
Houston, TX 77079

Re: TIRZ 17 N. Gessner Road project – from IH-10 to Long Point Road
Scope: Preparation of plan & profile drawings for utilities

Dear Conger:

Kuo & Associates, Inc. is pleased to submit this proposal to perform utility research and prepare utility plan and profile drawings for the above referenced project. Lengths of streets are estimated as more or less 3,900 linear feet on N. Gessner Road. The scope of work and fee will be as follows:

SCOPE OF WORK

We will be performing the following tasks under the scope:

- Coordinate with private utility companies as necessary to obtain record information
- Obtain record drawing on public utilities as necessary from the City of Houston and TxDOT
- Perform utility research and prepare utility plan drawings from record and field information
- Prepare profile for ground lines corresponding to the center line of the street, center line of the ditch/curb lines, right-of-way lines
- Prepare profile for the existing utilities from record and field information

The deliverable will be as AutoCAD drawing. Preparing cut sheets with project title block is beyond the scope of this proposal.

FEE & SCHEDULE:

A total lump sum fee of \$4,460.00 estimated as shown in the attached table.

Level of Efforts					
ITEM	Principal \$180.00	Project Manager \$130.00	SIT \$75.00	CADD \$75.00	Cost
Coordination with Private Utility companies for obtaining updated record information			4		\$300.00
Obtaining updated record drawing for public utilities from the City			4		\$300.00
Utility research and update of public and private utility lines on the plan view			4	16	\$1,500.00
Update of ground and utility lines in the profile view			4	24	\$2,100.00
QA/QC		2			\$260.00
Total Cost					\$4,460.00

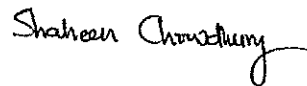
September 26, 2016
Proposal for CAD service

Page No. 2

We could complete the work within 30 calendar days upon receiving notice to proceed.

We appreciate this opportunity to submit this proposal. If you need further information, please do not hesitate to contact me.

Regards,

A handwritten signature in cursive script that reads "Shaheen Chowdhury".

Shaheen Chowdhury, P.E., R.P.L.S
President



October 9, 2015

W. Edward Conger, P.E.
Senior Associate
Klotz Associates, Inc.
1160 Dairy Ashford, Suite 500
Houston Texas 77079

**RE: Engineering Services Proposal
TIRZ 17 North Gessner Road Drainage and Mobility Improvements
IH-10 to Long Point
CIP T-1732**

Dear Mr. Conger,

Isani Consultants, L.P. (ISANI) is pleased to submit the following proposal for engineering services for the above referenced project. We will obtain the base reference files from Klotz Associates, Inc. in AutoCAD format for preparing Street Lighting Plans (SLP). The proposed fee for these services is listed on separate spreadsheets.

1. Street Lighting Plans:

1. Prepare Street Lighting Layout for review by CenterPoint Energy Street Lighting Division.
 - i. Locate street lights, conduit and pull boxes at existing locations.
 - ii. Locate additional street lights where required to maintain minimum spacing and illumination at intersections.
2. Prepare 60% design submittal plans for review.
3. Send plans to CenterPoint Energy for review and update.
4. Send Plans to TIRZ 17 for review and update.
5. Update plans for 90% review and final plan submittal.
6. Prepare conduit quantities for Construction Cost.
7. Submit final plans and quantities.
8. Sheet count for the project is estimated as four (4) sheets.

SCHEDULE

- Working days to complete the 60% Street Lighting Plans Submittal from your notice to proceed is 4 weeks.

W. Edward Conger, P.E.
TIRZ 17 North Gessner Road Drainage and Mobility Improvements
October 9, 2015
Page 2 of 2

COMPENSATION

The proposed total compensation for the above services is a lump sum amount of \$8,499.00.
The specific amount for each task is as follows:

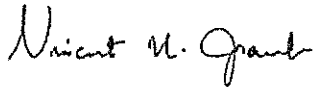
1. Street Lighting Plans \$8,499.00

ATTACHMENTS

- Man-hour Spreadsheets for Street Lighting.

Should you have any questions or require any additional information, feel free to contact me at (713) 747-2399.

Sincerely,



Vincent N. Jacob, P.E.
Managing Engineer

File: Cc



PROPOSAL FOR SUB-PROJECT 1 & SUB-PROJECT 2 (IH-10 TO LONG POINT)	
Employee Classification	Project Manager
Raw Labor Rates	Senior Engineer \$ 48.00 \$ 30.00 \$ 26.00 \$ 15.00
	Graduate Engineer
	CAD Operator
	Admin
	Sub-Total Cost (\$) \$ 55.00
	Labor Multiplier 3.00

Task No. Task Code Task Description Sheets

STREET LIGHTING PLANS (STLT)

		LEVEL OF EFFORT (hours)				Sub-Total Cost (\$)	Labor Multiplier	
Task No.	Task Code	Task Description	Project Manager	Senior Engineer	Graduate Engineer	CAD Operator	Admin	
Drawings								
1	DES-STLT	Street Lighting Plan Sheets (Scale: 1"=40'), Double Bank	2	6	8	16		
2	DES-STLT	Standard Details (COH)						
Documents								
3	STLT	Document 00410	1	2				
4	STLT	Document 01110	1	2				
Project Management								
5	STLT	Field Visit		2	2			
6	STLT	STLT Construction Cost Estimate		1	2		1	
7	STLT	QA/QC	2	1				
8	STLT	Project Management and Meetings	1	2			1	
Milestone Submittals								
9	STLT	50%	1	1	2	3		
10	STLT	90%	1	2	2	3		
11	STLT	Final	1	2	2	3	2	
Sub-Total Hours			10	21	18	25	4	
Other Expenses								
12	STLT	Postage/Courier						
13	STLT	Printing/Copying						
							\$ 25.00	\$ 25.00
							\$ 50.00	\$ 50.00
TOTAL \$								8,499.00



October 9, 2015

Ms. Morena G. Arrendondo, P.E.
RPS Klotz Associates
1160 Dairy Ashford, Suite 500
Houston, TX 77079

Re: Proposal for Urban Forestry Consulting Services on the City of Houston North Gessner Drainage and Mobility Improvement Project.
Klotz Project No. 1111.004.000

Dear Ms. Arrendondo,

As per your request, C.N. Koehl Urban Forestry, Inc proposes to provide Urban Forestry Consulting services for design phase of the North Gessner Drainage and Mobility Improvement project. Approximately 3,200 linear feet of roadway pavement will be evaluated for proposed street, driveway approach, storm, sidewalk, water and any peripheral utility construction that may be included in the project. Based on your request for proposal, and our most recent experience on past projects working with consulting civil engineers and the City of Houston's Street Tree Ordinance and Urban Forestry staff, we propose to provide the following Urban Forestry services:

Field Evaluation/Site Visit

We will walk each side of every street on which construction is proposed and evaluate the species, size, condition, and preservation feasibility of each tree. We will confirm the surveyed location of each tree and approximately locate any trees that may be impacted that were not picked up by surveyor. Proposed construction activity adjacent to each tree will be evaluated to determine impacts on long-term tree survival and compliance with City of Houston Street Tree Ordinance. The field evaluation will be scheduled in conjunction with the 60% submittal Tree Protection Plan development. The data collected will be used in development of the 60%, 90%, and final Tree Protection Plans.

Fee for Field Evaluation/Site Visit:

6.0 hours @ \$110.00/hour.....\$660.00

Tree Protection Plan for 60% Submittal

The plan and profile drawings, provided by the engineer, will be reviewed prior to the 60 percent submittal, to determine treatment for each tree. Each tree will be numbered on the drawings. A tree treatment schedule will list each tree by number, species, diameter, condition, anticipated treatment, and mitigation required by ordinance

for trees to be removed. Each tree (public and private) adjacent to construction activity will be evaluated to ensure that construction activity will not destroy too much of the structural root system. Destroying too much of the structural root system leaves the tree unstable, which could create liabilities. Should we find any conflicts with proposed construction or any liability issues we will make recommendations for minor design changes or for removal of the tree. Recommendations for minor design changes, such as shifting bends, a ts&v, vertical offset, or a fire hydrant, will be redlined on plan and profile drawings copied to our Tree Submittal Form with a brief description of recommended changes and emailed to your office. The design change recommendations and tree spreadsheet can then be reviewed by engineer and client to determine feasibility and final design approach.

Minor design changes may reduce the number of trees needing to be removed and reduce the cost of replacement plantings required by ordinance. The design review and comment process is typically the most value added aspect of our services, because the changes will preserve trees rather than requiring removal and replacement to comply with Street Tree Ordinance. If our recommendations preserve one 24" diameter ordinance tree the cost savings to the project, in removal and replacement costs, is approximately \$12,000.00.

After we receive your comments on our design change recommendations we will develop an Autocad or MicroStation drawn tree protection plan which will identify the mitigative and protective treatments needed to ensure long term tree survival and compliance with the City's Street Tree Ordinance. Plan and profile drawings, provided by the engineer, will be used to indicate each tree by number, and exact location of preservation treatments (protection fencing, root pruning trench, zero curb cutback, water line augers, etc.). The plan will also include the location, species, and size of replacement tree plantings required to comply with the Street Tree Ordinance. Details for tree treatments will be included in the tree protection plan. Quantity totals and cost estimates for each tree treatment will be provided. The tree protection plan and quantity totals and cost estimates will be emailed to you so that your staff may use the quantity estimates as needed and plot the tree protection plan as it is needed. The tree protection plan will include our logo with a signature line, which we sign at the mylar stage. The tree protection plan, specifications and quantity/cost estimate can be included in your 60% submittal so that the City's Urban Forestry staff can review our plan and provide comments prior to the final submittal. We will need 21-24 business days to complete the field evaluation and preliminary tree protection plan.

Fee for 60% Tree Protection Plan:

16.0 hours @ \$110.00/hour \$1,760.00

Tree Protection Plan for 90% submittal

We will review the construction design between the 60% and 90% submittal, following comments from the City on recommendations made in the 60% submittal, to ensure that any design changes that may have been made are incorporated into the tree protection plan. Changes necessary to the tree protection plan will be completed in the DWG or DGN drawings and resubmitted to engineer for submittal. Quantity/Cost

estimates, and specifications will be updated and forwarded to engineer. We will need 7-10 business days to complete the 90% Tree Protection Plan.

Fee for 90% Tree Protection Plan:
8.0 hours @ \$110.00/hour.....\$880.00

Tree Protection Plan for Final submittal

We will review the construction design between the 90% and final submittal, following comments from the City on recommendations made in the 90% submittal, to ensure that any design changes that may have been made are incorporated into the tree protection plan. Changes necessary to the tree protection plan will be completed in the DWG or DGN drawings and resubmitted to engineer for submittal. Quantity/Cost estimates, and specifications will be updated and forwarded to engineer. We will sign the mylar set of the Tree Protection Plans prior to final submittal. We will need 7-10 business days to complete the 90% Tree Protection Plan.

Fee for Final Tree Protection Plan:
6.0 hours @ \$110.00/hour.....\$660.00

Tree Saturation Planting Plan

We will include a Tree Saturation Planting Plan as part of the Tree Protection Plan. The Saturation Plan will be included on the Tree Protection Plan; separate sheets will not be produced for the Tree Saturation Planting Plan in order to be most cost effective with drafting and reproduction costs. Tree Saturation Plan will be completed per the "Administration Guidelines-Tree Planting and Mitigation for CIP Projects" effective March 1, 2010.

Fee for Tree Saturation Planting Plan:
5.0 hours @ \$110.00/hour..... \$550.00

Drafting AutoCAD (DWG or DGN) files of Tree Preservation Plan

We do have AutoCAD and Microstation capabilities and will provide a CAD drawn document. We will need the electronic files of proposed construction in DWG or DGN format. We will use the project title block and insert plan drawings at a 1:40 scale, triple banked on each sheet, similar to most traffic control plans. Tree treatment schedule will be included on each sheet which will call out treatments for each specific tree. This format typically allows us to fit approximately 1,200-1,500 l.f. per plan sheet, which would give us 7 to 9 sheets on this project. One to two sheets with project details will also be included, which would give us a total of 9 to 11 sheets. The drawings will be emailed or saved to CD and delivered to you, so that you may plot the files as you need them. CAD drafting will be completed in conjunction with the Preliminary and Final Plans. No additional time required.

Drafting Services Fee for DWG/DGN files of the Tree Preservation Plan:
20.0 hours @ \$50.00/hour.....\$1,000.00

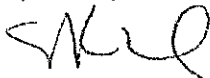
Total Fees

Urban Forestry Services for development of Tree Protection Plan.....	\$4,510.00
<u>Drafting Services Fee for DWG files.....</u>	<u>\$1,000.00</u>
Total Fee for CAD drawn Tree Protection Plan.....	\$5,510.00

We have utilized the services contained in this proposal on similar projects for The City of West University Place Infrastructure Replacement Program, City of Houston Neighborhood Street Reconstruction Program, City of Houston Surface Water Transmission Program, Houston Storm Water Management Program, City of Missouri City Street Reconstruction, City of Friendswood Street Reconstruction, City of Piney Point Street Reconstruction, City of Sugarland Street Reconstruction, City of Texas City Street Reconstruction, and numerous City of Houston waterline and sewer projects in the past. It is our goal to provide you the most effective, efficient, and value added services we can provide. We are willing to provide services in whatever capacity you deem appropriate.

If this proposal meets with your approval and you would like to retain our services, please forward your standard agreement or a notice to proceed, and we will schedule the work as soon as we receive the plan and profile sheets. We greatly appreciate the opportunity to present this proposal and look forward to working with you on this project. If you have any questions or would like to make any changes, please do not hesitate to call me at 281-391-0022.

Respectfully submitted,



Sarah Koehl
President

**MASTER AGREEMENT FOR
PROFESSIONAL ENGINEERING SERVICES**

THIS MASTER AGREEMENT ("Agreement") is made and executed as of the 18th day of October, 2016, by and between COBB, FENDLEY & ASSOCIATES, INC. (the "Engineer"), and MEMORIAL CITY REDEVELOPMENT AUTHORITY (the "Authority"). Pursuant to the terms and conditions set out in this Agreement, the Authority hereby engages Engineer to perform the services described herein ("Services"), and Engineer agrees to perform the Services for the compensation set forth herein.

ARTICLE 1

SERVICES AND AUTHORIZATION

Engineer will provide the engineering, consulting and other professional services outlined in the proposal attached hereto as Exhibit A (the "Task Order"). The terms of this Agreement shall supersede any standard or preprinted terms appearing on the face or reverse side of any Task Order. In no event shall any limitations of liability apply to any Task Order except as specifically agreed to in this Agreement.

ARTICLE 2

COMPENSATION

Authority shall compensate the Engineer for services performed in accordance with the pricing method identified in the Task Order.

ARTICLE 3

PAYMENTS

Engineer will submit monthly invoices for payment of labor expenditures and reimbursable costs incurred. Payments will be due within forty-five (45) days after receipt of invoices, unless a different time frame is identified in the Task Order or as provided by law. Past due amounts will accrue interest at the rate of one and one-half percent (1.5%) per month until paid, but shall not exceed the maximum rate permitted by the applicable laws of the State where the Services are performed.

ARTICLE 4
PERIOD OF SERVICE

Engineer shall complete the Services within the time period set forth in the Task Order.

ARTICLE 5
CHANGES IN SCOPE OF SERVICES

Authority may, at any time, make changes in the description of Services to be performed under a Task Order. In the event Authority notifies Engineer of its desire to make a change in the Services that may change the cost of performance, Engineer shall, within ten (10) working days after receiving such notice, give Authority notification of any potential change in price for the Services. Equitable adjustments to price and time of performance resulting from Services changes will be negotiated and upon mutual agreement by Authority and Engineer, the Task Order will be modified by a written instrument, signed by both parties, to reflect the changes in Services, price and schedule.

ARTICLE 6
STANDARD OF CARE

All services shall be of good quality and shall be performed in a professional manner. The standard of care for all professional and related engineering services performed or furnished by the Engineer under this Agreement will be the care and skill ordinarily used by members of the Engineer's profession, practicing under similar conditions at the same time and in the same general locality.

ARTICLE 7
INDEMNIFICATION

A. ENGINEER SHALL INDEMNIFY, AND HOLD HARMLESS THE AUTHORITY, ITS DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND ASSIGNS (THE "INDEMNIFIED PARTIES") FROM AND AGAINST CLAIMS, DEMANDS, OR CAUSES OF ACTION (AND ALL LOSSES, LIABILITIES, EXPENSES, AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING BUT NOT LIMITED TO REASONABLE ATTORNEYS' FEES AND EXPENSES, COURT COSTS, AND OTHER EXPENSES INCURRED IN ENFORCING THIS INDEMNITY PROVISION) OR FROM ANY OTHER LOSS OR CLAIM ARISING FROM THIRD PARTY PERSONAL INJURY OR PROPERTY DAMAGE BROUGHT BY ENGINEER OR ANY OF ENGINEER'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT

CONSULTANTS, OR REPRESENTATIVES, OR BY ANY THIRD PARTY, BUT ONLY TO THE EXTENT BASED UPON, OR IN CONNECTION WITH, RESULTING FROM, OR ARISING OUT OF, THE NEGLIGENT ACTS, ERRORS OR, OMISSIONS, OR MISCONDUCT OF ENGINEER'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES, IN THE PERFORMANCE OF PROFESSIONAL SERVICES.

B. FOR ENGINEER'S NON-PROFESSIONAL NEGLIGENCE, ENGINEER SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE INDEMNIFIED PARTIES FROM AND AGAINST CLAIMS, DEMANDS, OR CAUSES OF ACTION (AND ALL LOSSES, LIABILITIES, EXPENSES, AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING BUT NOT LIMITED TO REASONABLE ATTORNEYS' FEES AND EXPENSES, COURT COSTS, AND OTHER EXPENSES INCURRED IN ENFORCING THIS INDEMNITY PROVISION) OR FROM ANY OTHER LOSS OR CLAIM ARISING FROM THIRD PARTY PERSONAL INJURY OR PROPERTY DAMAGE BROUGHT BY ENGINEER OR ANY OF ENGINEER'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES, OR BY ANY THIRD PARTY, BUT ONLY TO THE EXTENT BASED UPON, OR IN CONNECTION WITH, RESULTING FROM, OR ARISING OUT OF, THE NEGLIGENT ACTS, ERRORS OR, OMISSIONS, OR MISCONDUCT OF ENGINEER'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES.

C. No provision herein shall be construed to increase the Authority's liability as provided and limited under the Texas Tort Claims Act, nor shall any such provision be construed as a waiver to any extent of any governmental immunity that the Authority may have.

ARTICLE 8 INSURANCE

A. During the term of this Agreement, Engineer shall, at its sole expense, secure and maintain in force policies of insurance of the following types:

1. Workers' compensation insurance in accordance with the laws of the State of Texas, and Employer's Liability coverage with a limit of not less than \$500,000 each employee for Occupational Disease; \$500,000 policy limit for Occupational Disease; and Employer's Liability of \$500,000 each accident.
2. Commercial General Liability insurance, including coverage for Products/Completed Operation, Blanket Contractual, Contractors' Protective

Liability Broad Form Property Damage, Personal Injury/Advertising Liability, and Bodily Injury and Property Damage with limits of not less than

\$2,000,000	general aggregate limit
\$1,000,000	each occurrence, combined single limit
\$1,000,000	aggregate Products, combined single limit
\$1,000,000	aggregate Personal Injury/Advertising Liability
\$25,000	Fire Legal Liability
\$5,000	Premises Medical

3. Business Automobile Liability coverage applying to owned, non-owned and hired automobiles, with limits of not less than \$1,000,000 each occurrence combined single limit for Bodily Injury and Property Damage combined.
4. Umbrella Excess Liability insurance written as excess of Employer's Liability, with limits not less than \$1,000,000 each occurrence combined single limit.
5. Professional Liability Insurance with limits not less than \$1,000,000 each claim/annual aggregate.

B. The Engineer shall obtain such insurance from such companies having a Bests rating of B+/VII or better and licensed or approved to transact business in the State of Texas. The Engineer, and not the Authority, shall be responsible for paying the premiums and deductibles, if any, that may from time to time be due under all of the insurance policies required of the Engineer.

C. Engineer shall furnish Authority certificates of insurance evidencing the insurance coverages required in this Article 8. In the event of lapse or cancellation of any required insurance it is hereafter the specific responsibility of the Engineer to notify the Authority immediately and to immediately reinstate the lapsed or cancelled insurance or to purchase replacement insurance that meets the requirements of this Agreement. The Engineer's failure to provide insurance as required hereunder, or the Engineer's failure to supply the required evidence of insurance, or the failure of the Authority to require evidence of insurance or to notify the Engineer of any breach by the Engineer of the requirements of these provisions or deficiencies in the insurance obtained, shall not constitute a waiver by the Authority of any of the these insurance requirements, or a waiver of any other terms and conditions of this Agreement, including the Engineer's obligations to defend, indemnify, and hold harmless the Authority, as required by Article 7.

D. The Indemnified Parties shall be added as additional insureds to all of the insurance coverages required under this Agreement, except professional liability insurance and worker's compensation. Umbrella or Excess Liability insurance shall be written to cover all insured parties, including additional insured parties, to the same extent as provided in the underlying commercial General Liability insurance policy and any endorsements thereto. All policies written on behalf of the Engineer shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees, with the exception of professional liability insurance. In addition, all of the aforesaid policies shall be endorsed to provide that they are primary coverages and not excess of any other insurance available to the Authority, and without rights of contribution or recovery against the Authority or from any such other insurance available to the Authority.

ARTICLE 9

INDEPENDENT CONTRACTOR

The Engineer shall be and shall operate as an independent contractor with respect to the Services performed under this Agreement and shall not be nor operate as an agent or employee of Authority. This Agreement is not intended to be one of hiring under the provisions of a Workers' Compensation statute or other law and shall not be so construed.

ARTICLE 10

PERSONNEL

Engineer agrees that during Engineer's performance of Services hereunder, adequate provision shall be made to staff and retain the services of such competent personnel as may be appropriate or necessary for the performance of the Services. Authority shall have the right to review the personnel assigned by Engineer, and Engineer shall remove any personnel not acceptable to Authority. Engineer may remove personnel assigned to a Task Order without Authority's prior approval, provided the progress of the Services shall not be unreasonably impaired.

ARTICLE 11

OWNERSHIP OF INSTRUMENTS OF SERVICE AND DATA

A. All documents, including original drawings, estimates, specifications, periodic construction progress notes, and data (collectively, the "Documents") shall be the property of the Authority, provided that the Engineer has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. The Engineer agrees that it shall not reuse any portion of the Documents that is unique to the Authority's project or projects for any other client, without the express written consent to the Authority, which consent will not be

unreasonably withheld. The Engineer may retain a set of reproducible record copies of the Documents, in consideration of which it mutually agreed that the Authority will use such Documents solely in connection with the project covered by the Agreement and for no other purposes, except with the express written consent of the Engineer, which consent will not be unreasonably withheld. Any use of the Documents without the express written consent of the Engineer shall be at the Authority's sole risk.

B. All materials and information that are the property of Authority and all copies or duplications thereof shall be delivered to Authority by Engineer, if requested by Authority, upon completion of Services. Engineer may retain one complete set of reproducible copies of all of its instruments of service.

ARTICLE 12 PERMITS AND LICENSES

Engineer represents to Authority that it has and will maintain during the performance of the Services under this Agreement any permits or licenses which, under the regulations of federal, state, or local governmental authority, it may be required to maintain in order to perform the Services.

ARTICLE 13 ADHERENCE TO LAWS

Engineer shall adhere to federal, state, and local laws, rules, regulations, and ordinances applicable to performance of the Services hereunder.

ARTICLE 14 CERTIFICATION OR SEALING OF INSTRUMENTS OF SERVICE BY PROFESSIONAL ENGINEER

As required by applicable law, specifications, drawings, and other engineering documents that are prepared by Engineer shall be sealed by a registered professional engineer. Such certifications or seals shall be valid for the State of Texas.

ARTICLE 15 FORCE MAJEURE

Any delays in or failure of performance by Engineer or Authority, other than the payment of money, shall not constitute default hereunder if and to the extent such delays or failures of performance are caused by occurrences beyond the reasonable control of Authority or Engineer, as the case may be, including but not limited to, acts of God or the public enemy; compliance with any order or request of any governmental authority; fires, floods, explosion, accidents; riots, strikes or other concerted acts of

workmen, whether direct or indirect; or any causes, whether or not of the same class or kind as those specifically named above, which are not within the reasonable control of Authority or Engineer respectively. In the event that any event of force majeure as herein defined occurs, Engineer shall be entitled to a reasonable extension of time for performance of its Services under the affected Task Order.

ARTICLE 16 PROJECT DELAY

If a Task Order calls for provision of Services under a guaranteed maximum price, fixed fee, or stipulated lump sum basis and the Engineer's work on any phase of the Services is extended by one or more force majeure events or other delays not attributable in whole or in part to the fault of Engineer, then the guaranteed maximum price, fixed fee, or stipulated lump sum, as the case may be, shall be equitably adjusted.

ARTICLE 17 DESIGN PHASE SERVICES

If a Task Order includes the furnishing of any Services during design, the following terms will apply:

A. The plans and specifications for the Project shall be subject to the review and approval of the city, county, state and federal agencies having jurisdiction over the Project, including but not limited to the City of Houston, Texas, Harris County Flood Control District, and the Texas Commission on Environmental Quality (the "TCEQ"). The Engineer's work regarding design shall be deemed complete when all approvals are obtained in the form normally supplied by the agency. In the event the drawings and specifications are not approved by an agency because they do not conform to the agency's design criteria in effect at the beginning of the design phase, the Engineer agrees redesign the drawings and specifications to conform to such criteria at no cost to the Authority. If, after construction of the project has begun, an error or omission due to the Engineer's negligence is discovered and the item can still be provided in the sequence of construction without premium to the Authority, the Authority will pay for this item just as if it had been included in the original design documents. If this error or omission is discovered out of sequence with the construction timetable, and such was not and could not have reasonably been discovered, then the Engineer will, in accordance with normal and customary calculations, be responsible for the reasonable difference required to have this item corrected or included (actual damages), and the Authority will pay for this item as if it had been included in the original documents.

ARTICLE 18

SERVICES RELATED TO BIDDING

If a Task Order includes the furnishing of any Services related to advertisement and bidding, the Engineer shall:

(a) assist the Authority with the advertisement of bids for the project, including preparation and distribution of notices, invitations, bid conditions and pre-qualification forms, and attendance at pre-bid conferences;

(b) assist the Authority in the opening and tabulation of bids for construction of the Project, and consult with the Authority as to the proper action to be taken, based on the engineering considerations involved;

(c) consult with and advise the Authority as to the professional responsibility and acceptability of the bidders and of subcontractors or persons proposed by the bidders, if required; and

(d) assist in the preparation and execution of formal construction contract documents using contract documents previously approved by the Authority (the "Contract Documents").

ARTICLE 19

CONSTRUCTION PHASE SERVICES

If a Task Order includes the furnishing of any Services during construction, the following terms will apply:

A. If Engineer is called upon to observe the work of Authority's construction contractor(s) for the detection of defects or deficiencies in such work, Engineer will endeavor to protect the Authority against defects and deficiencies in the work and to determine in general if the work is proceeding in accordance with the Contract Documents, but the Engineer cannot guarantee the performance of contractors. Engineer shall not review or manage the means, methods, techniques, sequences or procedures utilized by any construction contractor. Engineer shall not make inspections or reviews of the safety programs or procedures of the construction contractor(s), and shall not review their work for the purpose of ensuring their compliance with safety standards.

B. If Engineer is called upon to review submittals from construction contractors, Engineer shall review and approve or take other appropriate action upon construction contractor(s)' submittals such as shop drawings, product data and samples, but only for

the limited purpose of checking for general conformance with information given and the design concept expressed in the contract documents. The Engineer's action shall be taken with such reasonable promptness as to cause no unreasonable delay in the work while allowing sufficient time in the Engineer's professional judgment to permit adequate review. Review of such submittals will not be conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities or for substantiating instructions for installation or performance of equipment or systems designed by the construction contractor, all of which remain the responsibility of the construction contractor. The Engineer's review shall not constitute approval of safety precautions or of construction means, methods, techniques, sequences or procedures. The Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

C. Engineer shall not assume any responsibility or liability for performance of the construction services, or for the safety of persons and property during construction, or for compliance with federal, state and local statutes, rules, regulations and codes applicable to the conduct of the construction services, except to the extent that Engineer fails to exercise the usual degree of care and judgment of an ordinary, prudent professional engineer in the same or similar circumstances and conditions.

D. All services performed by others, including construction contractors and their subcontractors, shall be warranted only by such others and not by the Engineer.

ARTICLE 20 GOVERNING LAW

This Agreement shall be governed by and construed in accordance with the laws of the State of Texas.

ARTICLE 21 NOTICES AND/OR COMMUNICATIONS

All notices and/or communications to be given under this Agreement shall be in writing and shall be addressed as follows:

To Engineer

Attention:

Address:

To Authority

Attention: Scott Bean
Address: c/o Hawes Hill Calderon, LLP
10103 Fondren Road, Suite 300
Houston, TX 77096

With a copy to:

Attention: Jessica Holoubek
Address: c/o Allen Boone Humphries Robinson, LLP
Phoenix Tower
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

Either party may, by written notice to the other, change the representative or the address to which such notices, certificates, or communications are to be sent.

Any notice or communication required in writing hereunder shall be given by registered, certified, or first class mail (postage required) addressed to the party at its address set forth above. The postmark date of notices sent by mail shall be the date of notice.

ARTICLE 22

WAIVER

Waiver by either party of any breach or failure to enforce any of the terms and conditions of this Agreement at any time shall not in any way effect, limit, or waive such party's rights thereafter to enforce and compel strict compliance with all the terms and conditions of this Agreement.

ARTICLE 23

SEVERABILITY

Any provision of this Agreement prohibited by law shall be ineffective to the extent of such prohibition without invalidating the remaining provisions of this Agreement.

ARTICLE 24

ENTIRETY OF AGREEMENT

This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior negotiations and discussions concerning the subject matter hereof.

**ARTICLE 25
AMENDMENT**

This Agreement may be amended only by a written instrument signed by all parties.

**ARTICLE 26
NO THIRD-PARTY BENEFICIARIES**

Nothing contained in this Agreement, nor the performance of the parties hereunder, is intended to benefit, nor shall inure to the benefit of, any third party.

**ARTICLE 27
TERMINATION**

Either party to this Agreement may terminate this Agreement and any Task Order(s) issued hereunder without cause by giving to the other party thirty (30) days' written notice. Upon delivery of such notice by the Authority to the Engineer, unless the notice states otherwise, the Engineer shall immediately discontinue all services and deliver to the Authority copies of all completed or partially completed designs, drawings, specifications, reports, or any other document prepared by Engineer pursuant to this Agreement within fourteen (14) days of the effective date of termination, at no additional cost to the Authority.


If the Engineer elects to terminate this Agreement or a Task Order(s) issued hereunder, the Authority may, at its election, require the Engineer to complete its services under the outstanding Task Order(s), if Authority is current in paying amounts due and owing to Engineer, or becomes current within the 30 day notice period stated above. Engineer shall not be compelled to enter into additional Task Orders.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement to be effective as of the date first above written.

ENGINEER:

COBB, FENDLEY & ASSOCIATES, INC.

By: 
STEPHANIE A. FUNK

AUTHORITY:

**MEMORIAL CITY
REDEVELOPMENT AUTHORITY**

By: _____
Chair, Board of Directors

CITY OF HOUSTON, TEXAS

By _____

Name: _____

Title: _____

Date: _____

October 18, 2016



Mr. Scott Bean
Executive Director
Memorial City Redevelopment Authority/TIRZ 17
9610 Long Point, Suite 100
Houston, Texas 77055

Re: **Exhibit "A" Task Order 1
Proposal for Professional Engineering Services
For Inclusion of Street Pavers for the
Long Point Road at Gessner and Long Point Intersection**

Dear Mr. Bean:

Cobb, Fendley & Associates, Inc. ("Cobb Fendley") is pleased to provide you with a proposal for professional engineering services in connection with the coordination, design, and construction management effort for incorporating concrete pavers as the intersection aesthetic surface material. The proposed concrete pavers will be installed within the proposed intersection geometry, up to the curb returns and including the pedestrian cross walks, at the intersection of Gessner Road at Long Point Road to be reconstructed by the City of Houston.

The City of Houston is the owner of the street right-of-ways including the existing and proposed infrastructure; however, Cobb Fendley's services shall be performed for the sole benefit of TIRZ17 ("Client"), who shall be responsible for payment of those services. The Authorization and the documents referenced herein as Exhibit A of the Master Agreement for the Professional Engineering Services between CobbFendley and Memorial City Redevelopment Authority with respect to scope of professional engineering services in Task Order 1 for this project.

SCOPE OF SERVICES

The professional basic services specifics in task order 1 include and are limited to the following:

1. **Project Coordination**

- a. Attend maximum of three (3) meetings per intersection to accomplish coordination with the City of Houston Department of Public Works & Engineering offices of Mr. Tim Lincoln, P.E. (City Engineer), Kathy Lee Bullock, P.E. (Plan Review), and John Kuo, P.E. (Street & Bridge) in order to obtain their input, approval, and signature on the proposed pavers plan.
- b. Obtaining various underground and overhead private utility companies' approval and signature on the plans.
- c. Coordination with the COH construction, design consultant (RS&H), and contractor (SER) for revision and inclusion of the proposed pavers drawings into the Gessner and Long Point intersection construction drawings.
- d. Coordination with TIRZ #17 for assistance in contract negotiations with COH, change orders, and other requests pertinent to this project.

2. Design

- a. Reproduction of a new Mylar set of drawings to be incorporated into the proposed Gessner Road Construction documents.
- b. Revision of the roadway traffic control plan and construction phasing of the intersection (developed by others).
- c. Prepare and develop the technical specifications, general notes, quantity take-off, and the cost estimate. Prepare bidding and contract documents based upon ACEC joint contract documents committee standards.
- d. Prepare minutes, client correspondence, and project management during the design phase of the project.

3. Construction Management

- a. Review concrete paver manufacturer's shop drawings.
- b. Review and approve pay estimates unless Client prefers direct billing from the Contractor.
- c. Respond to the Contractor Requests for Information ("RFI") during the construction, as required.
- d. Make three (3) unannounced site visits to each of the subject intersections to monitor the Contractor's workmanship and progress.

4. Reimbursable Expenses

- a. Reproduction.
- b. Mileage.

Additional Services (to be provided only if requested and authorized by Client)

Cobb Fendley may perform additional services if required on an hourly basis only if mutually agreed upon by TIRZ #17, the Client, and Cobb Fendley by written authorization.

EXCLUSIONS FROM THE SCOPE OF SERVICES

Specific items excluded from this proposal are as follows, and Cobb Fendley shall have no responsibility to perform any of these services.

1. Application or review fees.
2. Obtaining a title report, abstracting the property or obtaining ad joiner deeds.
3. Obtaining construction permit.
4. Soil, water or other environmental testing or environmental assessment of any kind.
5. Obtaining approval of plans from Texas Department of Licensing and Regulation.

6. Topographical surveying and ROW mapping.
7. Traffic studies.
8. Hydraulic and hydrological studies and design.
9. Any other services not specifically included within the description of the Basic Services or Other Services as described above.

BASIS OF COMPENSATION

We propose to perform the afore-described Basic Services for the lump sum fee of **\$18,000.00** as itemized below:

1.	Project Coordination.....	<u>\$2,500.00</u>
2.	Design.....	<u>\$12,500.00</u>
3.	Construction Management	<u>\$2,500.00</u>
4.	Reimbursable Expenses.....	<u>\$500.00</u>

TOTAL FEE = \$18,000.00

SPECIAL PROVISIONS

Cobb Fendley will perform only such Additional Services, as are specifically agreed to in writing by Client and Cobb Fendley. Charges for additional services will be in accordance with the attached rate schedule.

A copy of the *General Terms and Conditions of the Authorization for Professional Services* is attached and constitutes a part of this agreement.

SCHEDULE OF SERVICES

Cobb Fendley is authorized to begin work on this project immediately upon receipt of Client's signature on this Authorization. Cobb Fendley will use reasonable efforts to complete the civil redesign within three weeks of its receipt of written authorization to commence services and its receipt of a Client-approved layout plan showing the layout of the street pavers.

PROPOSAL ACCEPTANCE

If this proposal is agreeable to you, please indicate your acceptance by signing in the space provided below and return one copy to us for our file. This proposal is void if not accepted within thirty days of the date hereon. The opportunity to propose professional engineering services to your firm is appreciated and we look forward to serving you on this project.

Sincerely,

COBB, FENDLEY & ASSOCIATES, INC.



Mahmoud Salehi, P.E.
Principal | Senior Project Manager

This proposal accepted by:

**TAX INCREMENTAL REINVESTMENT ZONE
No. 17**

Signature

Scott Bean

Print Name

Executive Director

Title

10-18-16

Date of Authorization

GENERAL TERMS AND CONDITIONS OF THE AUTHORIZATION FOR PROFESSIONAL SERVICES

1. DIRECT EXPENSES

Cobb Fendley's direct expenses shall be those costs incurred on or directly for the CLIENT'S project, including but not limited to necessary transportation costs including mileage at the current IRS rate, meals and lodging, laboratory tests and analyses, and printing and binding charges. These direct expenses shall be billed in accordance with the attached rate schedule.

2. OUTSIDE SERVICES

When technical or professional services are furnished by an outside source, when approved by the CLIENT, an additional amount shall be added to the cost of these services by Cobb Fendley to cover Cobb Fendley's administrative costs, as provided in the attached Cobb Fendley rate schedule.

3. COST PROJECTIONS

If included in Cobb Fendley's scope of services, opinions or estimates of probable construction costs are prepared on the basis of Cobb Fendley's experience and qualifications and represent Cobb Fendley's judgment as a professional generally familiar with the industry. However, since Cobb Fendley has no control over the cost of labor, materials, equipment or services furnished by others, over contractor's methods of determining prices, or over competitive bidding or market conditions, Cobb Fendley cannot and does not guarantee, represent or warrant that proposals, bids, or the actual construction cost will not vary from Cobb Fendley's opinions or estimates of probable construction cost.

4. PROFESSIONAL STANDARDS

Cobb Fendley agrees to perform its services in accordance with the standard of professional care used by other practicing professional engineers of ordinary prudence in the same field of engineering and performing the same type of work in CLIENT'S community under the same or similar circumstances. Cobb Fendley makes no other warranty, expressed or implied.

5. TERMINATION

Either CLIENT or Cobb Fendley may terminate this authorization by giving 30 days written notice to the other party. In such event, CLIENT shall forthwith pay Cobb Fendley in full for all work previously authorized and performed prior to effective date of termination. If no notice of termination is given, the relationships and obligations created by this Authorization shall be terminated upon completion of all applicable requirements of this Authorization. Failure by Client to make payments when due shall be cause for suspension of services or, ultimately, termination, unless and until Cobb Fendley has been paid in full all amounts due for services, expenses and other related charges, including interest on past due amounts.

6. OWNERSHIP OF DOCUMENTS

All documents prepared or furnished by Cobb Fendley pursuant to this Agreement are instruments of Cobb Fendley's professional service, and Cobb Fendley shall retain an ownership and property interest therein, including all copyrights. Cobb Fendley grants Client a license to use instruments of Cobb Fendley's professional service for the purpose of constructing, occupying or maintaining the project. Reuse or modification of any such documents by Client, without Cobb Fendley's written permission, shall be at Client's sole risk, and Client agrees to indemnify and hold Cobb Fendley harmless from all claims, damages and expenses, including attorneys' fees, arising out of such reuse by Client or by others acting through Client.

7. USE OF ELECTRONIC DOCUMENTS

Copies of documents that may be relied upon by Client are limited to the printed copies (also known as hard copies) or fully-scaled PDF files that are signed and sealed by Cobb Fendley's authorized design professionals. Files in electronic formats, or other types of information furnished by Cobb

Fendley to Client such as text, data or graphics, are only for convenience of Client. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. When transferring documents in electronic formats, Cobb Fendley makes no representations as to long-term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems or computer hardware differing from those in use by Cobb Fendley at the beginning of this project.

8. HAZARDOUS ENVIRONMENTAL CONDITIONS

Cobb Fendley shall have no liability or responsibility for the discovery, presence, handling, removal, disposal, cleanup, or exposure of persons or other property to underground substances, hazards, or conditions or other latent substances, hazards or conditions (including but not limited to contaminants, pollutants, chemicals or other hazardous or toxic solids, liquids or gases of any kind), Client acknowledges that Cobb Fendley is performing professional services for Client and Cobb Fendley is not and shall not be required to become an "arranger," "operator," "generator" or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1990 (CERCLA)

9. FORCE MAJEURE

Neither party shall be deemed in default of this agreement to the extent that any delay or failure in the performance of its obligations results from any cause beyond its reasonable control and without its negligence.

10. CONSTRUCTION PHASE SERVICES

If this Agreement provides for any construction phase services by Cobb Fendley, it is agreed that the Contractor, not Cobb Fendley, is responsible for the construction of the project, and that Cobb Fendley is not responsible for the acts or omissions of any contractor, subcontractor or material supplier; for safety precautions, programs or enforcement; or for construction means, methods, techniques, sequences and procedures employed by the Contractor. Cobb Fendley shall not be obligated to make exhaustive or continuous on-site inspections to check the quality or adequacy of construction or to verify that the work or materials of any contractor, subcontractor or materials supplier is in compliance with the plans and specifications.

11. LIMITATION OF LIABILITY FOR DAMAGES

IN THE EVENT THAT CLIENT SHALL MAKE ANY CLAIM OR FILE ANY SUIT FOR DAMAGES AGAINST COBB FENDLEY ARISING OUT OF OR RELATED TO COBB FENDLEY'S PERFORMANCE OR NON-PERFORMANCE OF THE SERVICES TO BE PROVIDED UNDER THIS AGREEMENT, COBB FENDLEY'S LIABILITY TO CLIENT FOR ANY SUCH DAMAGES SHALL BE LIMITED TO ACTUAL AND DIRECT DAMAGES TO AN AMOUNT NOT TO EXCEED THE AMOUNT FEES CHARGED BY COBB FENDLEY TO CLIENT HEREUNDER. COBB FENDLEY SHALL HAVE NO LIABILITY FOR ANY CONSEQUENTIAL OR INDIRECT DAMAGES, INCLUDING BUT NOT LIMITED TO LOST PROFITS, LOST BUSINESS OPPORTUNITIES, ADDITIONAL OVERHEAD, OR DAMAGES FOR LOSS OF USE OR LOSS OF PRODUCTION.

12. ALTERNATIVE DISPUTE RESOLUTION

In the event that any dispute shall arise between Client and Cobb Fendley regarding the parties rights or obligations under this Agreement, the parties shall, as a condition precedent to taking any action against one another make a good faith effort to resolve such disagreements by negotiation and/or non-binding mediation.

13. LEGAL EXPENSES

In the event that legal action is brought by CLIENT or Cobb Fendley against the other party to enforce any of the obligations hereunder or arising out of any dispute concerning the terms and conditions hereby created, the losing party shall pay the prevailing party such reasonable amounts for fees, costs and expenses as may be set by the court.

14. PAYMENT TO COBB FENDLEY

Monthly invoices will be issued by Cobb Fendley for all work performed under the terms of this agreement. Invoices are due and payable upon receipt. Interest at the rate of 1.5% per month may be charged on all amounts not paid within thirty (30) days after receipt, unless not permitted by law, in which case, interest will be charged at the highest amount permitted by law.

If CLIENT is not the OWNER, CLIENT agrees to pay Cobb Fendley within 10 working days of receipt of payment from OWNER.

Pending resolution of any dispute concerning any portion of any invoice submitted by Cobb Fendley, all undisputed portions shall be paid in accordance with this paragraph.

Progress payments on Cobb Fendley fees for percentage of project complete and out-of-pocket expenses incurred will be due and payable upon receipt of invoice at the end of each month. Should invoices not be paid within thirty (30) days from date of invoice, interest thereon at a rate equal to 1.5% per month on the unpaid balance shall be added each month to the sum shown as due by the invoice beginning with the date of invoice.

If payment is not received within 90 days from date of invoice, Cobb Fendley retains the right to cease further work on the project until such time that the overdue invoices are paid.

15. AUTHORIZATION OF OWNER

Client hereby authorizes Cobb Fendley to enter upon the property for the purpose of conducting Cobb Fendley services thereon. If Client is not the Owner of the property, Client agrees to obtain such authorization from the Owner and provide same in writing to Cobb Fendley.

16. CONTRACT DOCUMENTS

This signed Authorization, together with the attached General Terms and Conditions of the Authorization for Professional Services and Cobb Fendley Rate Schedule contains the entire and integrated agreement between Client and Cobb Fendley and supersedes all prior negotiations, representations or agreements, either written or oral. This agreement may only be amended by written instrument signed by both parties.

17. BENEFICIARIES AND ASSIGNMENT

This agreement is made for the sole benefit of Client and Cobb Fendley and nothing in this agreement shall create a contractual relationship or cause of action in favor of any third party against either Client or Cobb Fendley. This agreement may not be assigned without the written consent of both Client and Cobb Fendley.

Cobb, Fendley & Associates, Inc. Rate Schedule

Principal / Chief Engineer.....	(Professional VIII)*	\$270.00/HR
Senior Engineer	(Professional VII)*	\$255.00/HR
Senior Project Manager	(Professional VI)*	\$220.00/HR
Project Manager	(Professional V)*	\$200.00/HR
Senior Hydrologist.....	(Professional V)*	\$200.00/HR
Project Engineer III	(Professional III)*	\$155.00/HR
Project Engineer II	(Professional II)*	\$140.00/HR
Project Engineer I	(Professional I)*	\$120.00/HR
Senior Technician	(Technician IV)*	\$130.00/HR
Technician III	(Technician III)*	\$115.00/HR
Technician II	(Technician II)*	\$105.00/HR
Technician I	(Technician I)*	\$85.00/HR
Licensed State Land Surveyor	(Professional VI)*	\$220.00/HR
Registered Professional Land Surveyor	(Professional III)*	\$155.00/HR
4-Man Survey Crew		\$175.00/HR
3-Man Survey Crew		\$155.00/HR
2-Man Survey Crew		\$135.00/HR
1-Man Survey Crew		\$115.00/HR
Construction Manager.....	(Professional IV)*	\$185.00/HR
Senior Field Construction Observer	(Professional I)*	\$115.00/HR
Field Construction Observer	(Technician II)*	\$100.00/HR
Utility Specialist.....	(Professional II)*	\$135.00/HR
Telecommunications Designer.....	(Technician II)*	\$105.00/HR
Telecommunications Fieldman.....	(Technician I)*	\$85.00/HR
GIS Manager	(Professional III)*	\$155.00/HR
GIS Analyst.....	(Technician II)*	\$105.00/HR
Post Processing GPS Data	(Technician II)*	\$105.00/HR
Right-of-Way Agent		\$120.00/HR
Administrative		\$95.00/HR
Clerical.....		\$70.00/HR
GPS		\$35.00/HR/Receiver

* Category labels "Professional x" etc. are interim designations for 2016 and are to be implemented in lieu of previous position titles in 2017.

(Continued)

SUBSURFACE UTILITY ENGINEERING

One-Man Designating Crew (4-Hour Minimum)	\$94/HR
Two-Man Designating Crew (4-Hour Minimum)	\$156/HR
Vacuum Excavation Truck with 2 Technicians (Vac 3000 & 4000) (4-Hour Minimum) ...	\$270/HR
Vacuum Excavation Truck with 2 Technicians (Vac 6000) (4-Hour Minimum).....	\$295/HR
Ground Penetrating Radar with 1 Technician (4-Hour Minimum)	\$250/HR
Traffic Control Officer.....	@ Cost + 10%
Traffic Control (Lane Closures, etc.)	To Be Negotiated
Permits (Local, State, etc.).....	@ Cost + 10%
Designation & Traffic Control Vehicles.....	\$3.40/Mile
Location Vehicles.....	\$6.80/Mile

REIMBURSABLE EXPENSES

Technology Fee (*)	\$3.75/HR
Consultant or Specialty Contractor (Outside Firm)	@ Cost + 10%
Courier, Special Equipment Rental	@ Cost + 10%
Reasonable Out of Town Travel Expenses (Air, Hotel, Rental, etc.)	@ Cost
Mileage (Standard Car or Truck).....	IRS Approved Rate
Per Diem for Out of Town Travel (Per Day/Person)	\$36/Day
Title Plant Charges	@ Cost + 10%
Other Misc. Expenses Related to the Project.....	@ Cost + 10%

In-House Reproduction:

➤ Copies (Up to 11" x 17").....	\$0.15/Each
➤ Color Prints (Up to 11" x 17").....	\$1.50/Each
➤ Color Prints (Larger than 11" x 17")	\$3.00/Sq. Ft.
➤ Bluelines (All Sizes)	\$1.00/Each
➤ Bond Prints (All Sizes).....	\$2.00/Each
➤ Mylar Prints.....	\$12.00/Each
➤ Vellum Prints	\$9.00/Each

(*) Technology charges added to each billable man-hour.

Memorial City Redevelopment Authority/TIRZ 17

Construction Cost Estimate

Installation of Street Pavers into Gessner Road at Long Point Road Intersection
Oct-16

SECTION NO.	ITEM DESCRIPTION	UNIT	UNIT QTY.	ENGINEER'S ESTIMATE	
				UNIT PRICE	TOTAL
GENERAL AND SITE WORK ITEMS					
01565	Traffic control and regulation (work will be performed off-peak or at night)	LS	1	\$20,000.00	\$20,000.00
01570	Inlet Protection Barrier	LF	24	\$6.00	\$144.00
02221	Installation and Removal of 4-1/8" Temporary Asphalt Pavement (Black Base) and Geofabric Membrane	TON	215	\$125.00	\$26,875.00
	Concrete Reinforced Pavement 14 1/8-inch Thick (HIGH EARLY STRENGTH)	SY	136	\$120.00	\$16,320.00
	Type II curb & Gutter	LF	70	\$15.00	\$1,050.00
SUBTOTAL GENERAL AND SITE WORK ITEMS					\$64,389.00
PAVER ITEMS					
-	Concrete Paver (var. size & color) Including 1" Sand Leveling Bed and Woven Geotextile Fabric	SF	8415	\$12.00	\$100,980.00
	Conc. Collar around utility Manholes STM, SAN, TEL, and WV	EA	7	\$200.00	\$1,400.00
	2" Dia. PVC weepholes with pea gravel	LF	20	\$25.00	\$500.00
SUBTOTAL PAVER ITEMS					\$102,880.00
CONTINGENCIES (5%)					\$10,000.00
GRAND TOTAL					\$177,269.00

GESSNER PAVING INTERSECTION COST

Intersection	Unit	SF	Unit	SY	Unit Cost	Total Cost
High early strength	SF	17,898	SY	1,989	\$72	\$143,184
Lime Stabilization	SF	18,899	SY	2,100	\$6	\$12,599
Lime Stabilization	TON			34	\$180	\$6,120
Remove	SF		SY	1,989	\$5	\$9,943
Long Point East/West						
Remove	SF		SY	2,485	\$5	\$12,425
Lime Stabilization	SF	24,182	SY	2,687	\$6	\$16,121
Lime Stabilization	TON			45	\$180	\$8,100
Concrete Pavement	SF	22,365	SY	2,485	\$63	\$156,555
Sidewalk	SF			400	\$40	\$16,000
Sidewalk	LF			350	\$6	\$2,100
Driveway	SF	3,679	SY	409	\$54	\$22,074
Subtotal						\$405,222
Mobilization (10%)						\$40,522
TCP (20%)						\$81,044
Signal						\$200,000
Miscellaneous						\$10,000
Total						\$736,789



Memorial City Redevelopment Authority - TIRZ 17
One-Page Monthly Consultant Report

October 2016

Project Number: 120-11972-003
T-1717 - Town and Country West Drainage and Mobility Improvements

Ongoing Activities:

Item	Description
1	100% Mylars signed by City
2	Working with JRC committee & property owner on the final piece of ROW acquisition
3	Four Points by Sheraton Parking Lot Extension - Kicked off Contractor (Corner Rock Construction) – Oct 10th
4	Contractor has mobilized and cleared site
5	Performed weekly site visits
6	Reviewed six (6) product submittals
7	Continue Construction Administration
8	Continue on-going coordination with Four Points Hotel personnel