

Document 00911

NOTICE OF  
ADDENDUM NO. 2

Date of Addendum: 3/29/16

PROJECT NAME: Garden Oaks and Shepherd Park (Central) Drainage and Paving

PROJECT NO: M-000285-0001-4

BID DATE: April 7, 2016 (There is no change to the Bid Date.)

FROM: Ravi Kaleyatodi, P.E., CPM, Senior Assistant Director  
City of Houston, Department of Public Works and Engineering  
611 Walker, 15<sup>th</sup> Floor  
Houston, Texas 77002  
Attn: Jeffrey T. Hall, P.E., Project Manager

TO: Prospective Bidders

The referenced Addendum forms a part of the Bidding Documents and will be incorporated into the Contract documents, as applicable.

Written questions regarding this Addendum may be submitted to the Project Manager following the procedures specified in Document 00200 – Instructions to Bidders. Immediately notify the City Engineer through the named Project Manager upon finding discrepancies or omissions in the Bid Documents.

This Addendum includes:

ADDENDUM SYNOPSIS

Change to Project Manual  
Changes to Drawings  
Clarifications to Plan Holder Questions



Ravi Kaleyatodi, P.E., CPM  
Senior Assistant Director  
Department of Public Works and Engineering

DATED: 3/29/16

END OF DOCUMENT

00911-1

02-01-2004

ADDENDUM NO. 2

Document 00910

ADDENDUM NO. 2

Date of Addendum: 3/29/16

PROJECT NAME: Garden Oaks and Shepherd Park (Central) Drainage and Paving

PROJECT NO: WBS No. M-000285-0001-4

BID DATE: April 7, 2016 (There is no change to the Bid Date.)

FROM: J. Timothy Lincoln, P.E., P.E., City Engineer  
City of Houston, Department of Public Works and Engineering  
Houston, Texas 77002  
Attn: Jeffrey T. Hall, P.E., Project Manager

TO: Prospective Bidders

This Addendum forms a part of the Bidding Documents and will be incorporated into the Contract documents, as applicable. Insofar as the original Project Manual and Drawings are inconsistent, this Addendum governs.

*This Addendum uses the change page method: remove and replace or add pages, or Drawing sheets, as directed in the change instructions below. Change bars ( | ) are provided in the outside margins of pages from the Project Manual to indicate where changes have been made; no change bars are provided in added Sections. Reissued Drawing Sheets show the Addendum number below the title block and changes in the Drawings are noted by a revision mark and enclosed in a revision cloud.*

CHANGES TO PROJECT MANUAL

1. Document 00410B – Bid Form – Part B. Replace entire document.
2. Document 01110 – Summary of Work. Replace entire document.

CHANGES TO DRAWINGS

3. SHEET NO. 2: Added Sheet 243C.
4. SHEET NO. 185: Added Construction Narrative Note 1 and renumbered Notes 1, 2, 3 and 4 to 2, 3, 4 and 5 respectively.
5. SHEET NO. 195: Revised Traffic Control Typical Sections.
6. SHEET NO. 196: Revised phasing for Traffic Control Typical Sections.
7. SHEET NO. 197: Revised Traffic Control Typical Sections.
8. SHEET NO. 243C: Sheet added for Full Closure of Roadway

CLARIFICATIONS

QUESTIONS FROM PLAN HOLDERS

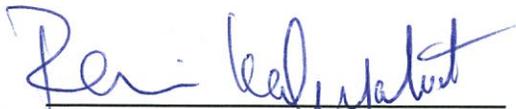
Q1.	Fly ash is called out for stabilization. Please see if only lime slurry to be used as fly ash is hard to come by and may not be recommended to be used inside residential areas.
A1.	Geotechnical consultant recommends lime-slurry stabilization for clay soils with PI of 10 and above. For soils with PI less than 10, lime-fly ash stabilization (LFA) is recommended. COH Specification 02337 (Lime/Fly Ash Stabilized Subgrade) allows for single LFA mix in a single pass for low PI soils; use of slurry will mitigate the dust. TxDOT has a list of approved fly ash sources/suppliers for Contractor reference.
Q2.	Plans on sheet 195 call to lime stabilize subgrade at temporary asphalt on some areas and some areas only states to place black base. Please clarify.
A2.	See revision(s) included in Addendum No. 2.
Q3.	Temporary asphalt at existing ditches does not address the drainage. We believe a pay item for temporary culverts (18" to 24") under the temporary asphalt be added to maintain drainage.
A3.	See revision(s) included in Addendum No. 2.
Q4.	Can pay items be added for sprinklers?
A4.	No, sprinkler costs are incidental to the project per Specification 01740 (Site Restoration) and Document 01110 (Summary of Work).
Q5.	Due to the extent of the work and traffic control phases, we show this job duration should not be less than 840 cal days. Please review.
A5.	Contract time of 635 days is appropriate
Q6.	Who is responsible to replace or/repair the paving if damaged by construction due to the proximity to road where the storm sewer is to be installed parallel to the street? These streets are W 41st; W42nd St; Lamonte In; Azalea St; Sue Barnett Dr.
A6.	Contractor is responsible for damages caused by construction activities beyond pavement and/or driveway repair limits identified in the drawings.

Q7.	There is no pay item to install the boxes on wet stable trench. STD drawings 02317-06 the table states that any box culvert larger than 6'x6' needs to be installed per this drawing if wet condition exist. I am requesting to either add a pay item or delete table.
A7.	Payment for RCB installation by open cut is on a linear foot basis in accordance with Specification 02631 (Storm Sewers). There is no additional payment for trench excavation, embedment and backfill, which is included in the unit cost for the storm sewer. Bid items for RCB of different sizes are included in Document 00410B (Bid Form-Part B) and should be priced accordingly.
Q8.	What type of backfill is required for the trench where the pipe has to be removed?
A8.	According to Specification 02221 (Removing Existing Pavement and Structures), backfill of removal areas shall be in accordance with requirements of Specification 02316 (Excavation and Backfill for Structures).
Q9.	To install these large box culverts requires the entire street to be closed to thru traffic, especially where the street is only 28' side, I request the revision of the traffic control to eliminate the requirement of maintaining one way traffic to the work zone.
A9.	See revision(s) included in Addendum No. 2
Q10.	There is a large project bidding at the same time of this project bid. The drawing/specs were listed late. This project is very complex. Request to extend the bid date for two weeks (4-7-16)
A10.	Addendum No. 1 extended bid date to April 7, 2016.
Q11.	Can a bid item be added for 2" RMC for riser at power source?
A11.	See revision(s) included in Addendum No. 2.
Q12.	Can a bid item be added for 4" PVC bore for road crossing?
A12.	See revision(s) included in Addendum No. 2.
Q13.	Can 2" conduit be changed from pull box to traffic signal pole? If so, can a bid item be added for 3" PVC?
A13.	No, there is no need to change from 2" to 3". There is no 2" conduit that goes to traffic signal poles. The 2" conduit goes from pull box to the ped poles.
Q14.	Can a bid item be added for 4/C Tray cable?
A14.	See revision(s) included in Addendum No. 2

Q15.	Will the 24" RCP and 24" Arch Pipe under the driveways have any end treatment? If so, how will they be paid?
A15.	No, end treatments are not required for culverts under the driveways.
Q16.	Sheet 195 of 385 calls out conflicting information regarding the Temporary Asphalt. Please confirm whether 8" lime stabilized subgrade and 1.5" of surface will be required for the Temporary asphalt
A16.	See revision(s) included in Addendum No. 2
Q17.	Sheet 363 of 385 shows details 02317-06 & 02317-07 for wet trench conditions. There is no pay item to cover these details. If the contractor is directed by the engineer to use this, how will we be paid?
A17.	Payment for RCB installation by open cut is on a linear foot basis in accordance with Specification 02631 (Storm Sewers). There is no additional payment for trench excavation, embedment and backfill, which is included in the unit cost for the storm sewer. Bid items for RCB of different sizes are included in Document 00410B (Bid Form-Part B) and should be priced accordingly.
Q18.	A condition is shown on plan sheet 101 that is typical throughout this project. Proposed storm sewer is to be installed just off the edge of existing paving which is not being replaced. The track hoe will have to straddle the proposed run of RCP, and the tracks will be sitting on the existing pavement/driveways that are shown to remain in place. Please confirm that the engineer has determined that the capacity of the existing paving sections and the existing driveway sections are sufficient to withstand the weight of the track hoe. If the paving or driveway fail, will the repair be measured and paid under item 97, pavement repair and restoration?
A18.	Contractor is responsible for damages caused by construction activities beyond pavement and/or driveway repair limits identified in the drawings.
Q19.	With respect to the Project Manual, General Conditions, Article 9.10, Pg. 147, please confirm that the City intends to negotiate with the Contractor any impacts on time and cost of final project work (for example, additional traffic control, completion under traffic conditions, working schedule limitations in hours) if the City elects to take Beneficial Occupancy of the Work or any portion of it prior to Final Completion, or explain how such impacts are to be addressed.
A19.	Contractor may submit claims for impacts to time and cost for City review subject to the limitations and requirements of the Contract. According to Article 4.3.6.3 of the General Conditions, the City is not liable for any claims for delay when Substantial Completion occurs prior to the expiration of Contract Time.

Q20.	The Project Manual, General Conditions, Article 8.2.1, Pg. 143 contains an unreasonably short notice period which could easily expire over a regular weekend, long weekend or holiday period. Please clarify that this notice shall be within three (3) business days, and provide that actual notice of City staff shall be sufficient, with timely written follow-up by Contractor.
A20.	Contractor shall submit all Claims and Claims for extension of Contract Time within the time limit(s) identified in the General Conditions.
Q21.	General Conditions, Article 3.25, Pg.135 includes indemnification of Owner for Owner's negligence and that is inconsistent with Texas statutory intent. Indemnitees are responsible to the extent of their negligence by TX Statute: ... a provision in a construction contract, or in an agreement collateral to or affecting a construction contract, is void and unenforceable as against public policy to the extent that it requires an indemnitor to indemnify, hold harmless, or defend a party, including a third party, against a claim caused by the negligence or fault, the breach or violation of a statute, ordinance, governmental regulation, standard, or rule, or the breach of contract of the indemnitee, its agent or employee, or any third party under the control or supervision of the indemnitee, other than the indemnitor or its agent, employee, or subcontractor of any tier. See Tex. Ins. Code §151.102. Please eliminate this "broad form indemnification" provision.
A21.	The City of Houston cannot change this provision. Public works projects fall into an exception to this statute.
Q22.	With respect to the Project Manual, Supplementary Conditions, Article 9.12.1.1 , please confirm that Liquidated Damages (LDs) relate only to achieving Substantial Completion and not to Final Completion, or explain any other intended application of the LD provision.
A22.	Liquidated damages are to be assessed each and every day beyond the Contract Time, which is the number of days to substantially complete the Work as defined in Article 1.1.14 of the General Conditions.

END OF ADDENDUM NO. 2



DATED: \_\_\_\_\_

3/29/16

  
Ravi Kaleyatodi, P.E., CPM  
Senior Assistant Director  
Department of Public Works and Engineering

END OF DOCUMENT

00910-5  
02-01-2004  
ADDENDUM NO. 2



Document 00410B

BID FORM-PART B

**1.0 TOTAL BID PRICE HAS BEEN CALCULATED BY BIDDER, USING THE FOLLOWING COMPONENT PRICES AND PROCESS (PRINT OR TYPE NUMERICAL AMOUNTS**

**A. STIPULATED PRICE:**

\$N/A

(Total Bid Price; minus Base Unit Prices, Extra Unit Prices, Cash Allowances and All Alternates, if any)

**B. BASE UNIT PRICE TABLE:**

<b>B1. UNIT PRICE-GENERAL ITEMS</b>						
<b>Item No.</b>	<b>Spec Ref.</b>	<b>Base Unit Short Title</b>	<b>Unit of Measure</b>	<b>Estimated Quantities</b>	<b>Unit Price</b> (this column controls)	<b>Total in Figures</b>
1	01502	Mobilization (See Footnote 1)	LS	1	<sup>(1)</sup> \$660,000.00	<sup>(1)</sup> \$660,000.00
2	01506/01110	Diversion Pumping	LS	1		
3	01555	Traffic Control and Regulation (See Footnote 2)	LS	1	<sup>(2)</sup> \$317,500.00	<sup>(2)</sup> \$317,500.00
4	01554	Installation of Traffic Sign (with new foundation, post and hardware)	EA	204		
5	01554	Reinstallation of Existing Sign (with new foundation, post and hardware)	EA	4		
6	01555	Install Low Profile Concrete Barriers	LF	5,812		
7	01555	Relocate Low Profile Concrete Barriers	LF	13,679		
8	01555	Remove Low Profile Concrete Barriers	LF	5,812		
9	01555	Flagmen (See Footnote 2)	LS	1	<sup>(2)</sup> \$156,000.00	<sup>(2)</sup> \$156,000.00
10	01562	Tree and Plant Protection (See Footnote 2)	LS	1	<sup>(2)</sup> \$358,000.00	<sup>(2)</sup> \$358,000.00
11	01562	Zero Curb Cutback	LF	1,080		

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
12	01562	Checker Plate	SF	270		
13	01570	Filter Fabric Fence	LF	26,405		
14	01570	Storm Inlet Sediment Trap	EA	322		
15	01570	Bagged Gravel Barrier	LF	3,220		
16	01575	Stabilized Construction Exit	EA	2		
17	01578	Ground Water Control for Open Cut Construction	LF	10,479		
18	02105	Preparatory Work for Sampling and analysis in PPCA	LS	1		
19	02120	Transportation and Disposal of Groundwater from PPCA	GAL	2,000		
20	02120	Transportation and Disposal of Type II Soil	CY	1,780		
21	02120	Transportation and Disposal of Type I Soil	CY	1,780		
22	02233	Clearing and Grubbing	AC	8		
23	02922	Sodding	SY	37,443		
24	02915	Tree Planting (100 gallon, 4" min)	EA	160		
25	02915	Tree Planting (65 gallon, 3" min)	EA	6		
26	02581	2" Sch. 40 Street Lighting Conduit	LF	667		
27	02581	2" Sch. 80 Street Lighting Conduit	LF	385		
<b><u>TOTAL GENERAL ITEMS</u></b>					\$ _____	

<b>B2. UNIT PRICE-TRAFFIC ITEMS</b>						
<b>Item No.</b>	<b>Spec Ref.</b>	<b>Description of Item</b>	<b>Unit of Measure</b>	<b>Estimated Quantities</b>	<b>Unit Price</b> (this column controls)	<b>Total in Figures</b>
28	02221	Remove Existing Pole Foundation	EA	4		
29	02582/02465	20' Mast arm Pole Assembly with Concrete Foundation	EA	1		
30	02582/02465	20' Mast arm Pole Assembly with Concrete Foundation and Luminaire(250W, HPS)	EA	1		
31	02582/02465	30' Mast arm Pole Assembly with Concrete Foundation	EA	2		
32	02893	Remove and Salvage Existing Traffic Signal Equipment	EA	1		
33	02893	Temporary Traffic Signal	LS	1		
34	02893	Sign " LEFT TURN YIELD ON GREEN " R10-12 (30"x36")	EA	4		
35	02893	Overhead Street Name Signs	EA	4		
36	02893	Pedestal Pole Assembly with Screw-In foundation(5')	EA	2		
37	02893	Pedestal Pole Assembly with Concrete foundation(15')	EA	2		
38	16710	Type "A" Pull Box With Gravel and Ground Rod	EA	10		
39	16710	Type "B" Pull Box With Gravel and Ground Rod	EA	4		
40	16710	Type "C" Pull Box With Gravel and Ground Rod	EA	1		
41	16711	1-1/2" PVC Sch. 80 Underground, Earth	LF	350		
42	16711	2" PVC SCH 80 Underground, Earth	LF	953		
43	16711	2" RMC	LF	60		

Item No.	Spec Ref.	Description of Item	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
44	16711	2 1/2" PVC SCH 80 Underground, Earth	LF	350		
45	16711	4" PVC SCH 80 Underground, Earth	LF	345		
46	16711	4" PVC SCH 80 BORED	LF	172		
47	16715	3-Section Vehicle Signal Head Assembly (RYG) (Horizontal) (H3)	EA	8		
48	16719	LED Pedestrian Signal Head Assembly (Symbolic) (Countdown)	EA	8		
49	16720	4/C # 12 Tray Cable	LF	70		
50	16720	7/C #14 AWG Solid Cable	LF	1,025		
51	16720	Bare Bond # 8 AWG Solid	LF	455		
52	16720	Bare Ground # 4 AWG Solid	LF	315		
53	16720	5/C #14 AWG Solid Cable	LF	1,020		
54	16720	3/C #14 AWG Solid Cable	LF	825		
55	16720	2/C#14 Detector Lead-In Cable (Sheilded)	LF	3,330		
56	16720	6/C #4 THHN Signal Power	LF	1,050		
57	16724	Emergency Response Management System	EA	1		
58	16727	Loop Detector Preformed (6'X6')	EA	16		
59	16730	ITS Controller Cabinet Assembly (Model 340) Including Controller (Type 2070L), Foundation and Apron	EA	1		
60	16732	Uninterruptible Power Supply	EA	1		
61	16734	WIMAX Communications Module	EA	1		

<b>Item No.</b>	<b>Spec Ref.</b>	<b>Description of Item</b>	<b>Unit of Measure</b>	<b>Estimated Quantities</b>	<b>Unit Price</b> (this column controls)	<b>Total in Figures</b>
62	16750	Accessible Pedestrian Push Button Station	EA	8		
63	16785	GPS Serial communication Module	EA	1		
<b><u>TOTAL TRAFFIC ITEMS</u></b>					\$ _____	

<b>B3. UNIT PRICE-PAVING ITEMS</b>						
<b>Item No.</b>	<b>Spec Ref.</b>	<b>Base Unit Short Title</b>	<b>Unit of Measure</b>	<b>Estimated Quantities</b>	<b>Unit Price (this column controls)</b>	<b>Total in Figures</b>
64	13501	Speed Cushions	EA	10		
65	02221	Remove/Dispose of Existing Asphalt Surface/with or without Base (including all thicknesses)	SY	18,290		
66	02221	Remove and Dispose of Existing Concrete Pavements (including all thickness, w/ or w/o asphalt overlay, including base & subgrade w/ or w/o curb, all depths)	SY	11,727		
67	02221	Remove and Dispose of Existing Driveway (All thicknesses)	SY	6,127		
68	02221	Remove and Dispose of Existing Sidewalk (All thicknesses)	SY	2,778		
69	02221/01110	Remove and Dispose of Existing Retaining wall	LF	193		
70	02315	Roadway Excavation with or without Subgrade (Dispose of Offsite)	CY	17,343		
71	02321	Cement Stabilized Sand Subgrade 8-inch thick	SY	10,914		
72	02337	8" Lime/Fly Ash Stabilized Subgrade	SY	13,894		
73	02336	8" Lime Stablized Subgrade	SY	24,102		
74	02336	Lime for Lime Stablized Subgrade (Dry Weight)	TON	831		
75	02337	Fly Ash	TON	389		
76	02711	Type A-Hot Mix Asphaltic Base Course (8-inch)	TON	5,665		
77	02714	Flexible Base Course for Temporary Driveways - Residential up to 12-feet wide	EA	234		

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
78	02714	Flexible Base Course for Temporary Driveways - Commercial up to 24-foot wide	EA	5		
79	02741	Type D-Hot Mix Asphaltic Concrete Pavement (2- inch)	TON	1,132		
80	02741	Temporary Detour Pavement or Roadway and Shoulder	SY	4,365		
81	02751	9-inch Reinforced Concrete Pavement	SY	18,472		
82	02751	9-inch Reinforced Concrete Pavement (High Early Strength)	SY	5,734		
83	02752	Street Pavement Expansion Joints with Load Transfer	LF	2,281		
84	02752	Horizontal Dowels (24-inch)	EA	387		
85	02754	Concrete Driveways - Including Excavation - 6-inch	SF	41,375		
86	02754	Concrete Driveways - Including Excavation - 7-inch	SF	10,994		
87	02762	Blast Cleaning of Pavement Markings (4-inch)	LF	2,519		
88	02767	Temporary Pavement Marking (4") (white)(SLD/BRK)(CL I)	LF	1,524		
89	02767	Temporary Pavement Marking (8") (white)(BRK)(CL I)	LF	845		
90	02767	Temporary Pavement Marking (24") (white/yellow)	LF	150		
91	02767	Thermoplastic Pavement Marking (4-inch wide) (SlD/Brk) white or yellow	LF	3,308		
92	02767	Thermoplastic Pavement Marking (12-inch wide) (Solid) white or yellow	LF	301		

<b>Item No.</b>	<b>Spec Ref.</b>	<b>Base Unit Short Title</b>	<b>Unit of Measure</b>	<b>Estimated Quantities</b>	<b>Unit Price</b> (this column controls)	<b>Total in Figures</b>
93	02767	Thermoplastic Pavement Marking (24-inch wide) (Solid) white or yellow	LF	455		
94	02771	Concrete Paving Header	LF	336		
95	02771	6-inch Concrete Curb	LF	10,724		
96	02771	1'-6" Flush Curb / Gutter	LF	6,761		
97	02775	4 1/2-inch Concrete Sidewalk (Complete in place)	SF	45,611		
98	02775	Wheelchair Ramp	SF	3,036		
99	02751/01110	Retaining Wall	LF	184		
100	02951	Pavement Repair and Restoration	SY	568		
<b><u>TOTAL PAVING ITEMS</u></b>					\$ _____	

<b>B4. UNIT PRICE-STORM SEWER ITEMS</b>						
<b>Item No.</b>	<b>Spec Ref.</b>	<b>Description of Item</b>	<b>Unit of Measure</b>	<b>Estimated Quantities</b>	<b>Unit Price</b> (this column controls)	<b>Total in Figures</b>
101	02221	Remove/Dispose Storm Manholes all Sizes/Depth	EA	24		
102	02221	Remove/Dispose Inlets all Sizes/Depth	EA	56		
103	02221/02105	Remove/Dispose Inlets all Sizes/Depth (In PPCA)	EA	2		
104	02221/02105	Remove/Dispose storm culvert 4" dia (In PPCA)	LF	6		
105	02221	Remove/Dispose storm culvert 8" dia	LF	22		
106	02221	Remove/Dispose storm culvert 12" dia	LF	23		
107	02221	Remove/Dispose storm culvert 15" dia	LF	366		
108	02221	Remove/Dispose storm culvert 18" dia	LF	1,398		
109	02221/02105	Remove/Dispose storm culvert 18" dia (In PPCA)	LF	202		
110	02221	Remove/Dispose storm culvert 24" dia	LF	284		
111	02221	Remove/Dispose storm pipe 12" dia Storm Sewer	LF	8		
112	02221	Remove/Dispose storm pipe 15" dia Storm Sewer	LF	24		
113	02221	Remove/Dispose storm pipe 18" dia Storm Sewer	LF	2,022		
114	02221/02105	Remove/Dispose storm pipe 18" dia Storm Sewer (In PPCA)	LF	28		
115	02221	Remove/Dispose storm pipe 24" dia Storm Sewer	LF	1,650		
116	02221/02105	Remove/Dispose storm pipe 24" dia Storm Sewer (In PPCA)	LF	36		
117	02221	Remove/Dispose storm pipe 30" dia Storm Sewer	LF	93		
118	02221	Remove/Dispose storm pipe 36" dia Storm Sewer	LF	317		

Item No.	Spec Ref.	Description of Item	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
119	02221	Remove/Dispose storm pipe 42" dia Storm Sewer	LF	43		
120	02221	Remove/Dispose storm pipe 60" dia Storm Sewer	LF	165		
121	02221	Remove/Dispose storm pipe 66" dia Storm Sewer	LF	336		
122	02221	Remove/Dispose storm pipe 72" dia Storm Sewer	LF	1,534		
123	02221	Remove/Dispose 84" MRC	LF	85		
124	02221	Remove/Dispose 108" MRC	LF	256		
125	02221	Remove/Dispose 5' OPEN BOX	LF	20		
126	02221	Remove/Dispose 1'x36" Box Culvert	LF	34		
127	02222	Grout Fill and Abandon 18" Storm Sewer	LF	2,319		
128	02222/02105	Grout Fill and Abandon 18" Storm Sewer (In PPCA)	LF	265		
129	02222	Grout Fill and Abandon 24" Storm Sewer	LF	905		
130	02222	Grout Fill and Abandon 30" Storm Sewer	LF	490		
131	02222	Grout Fill and Abandon 60" Storm Sewer	LF	382		
132	02222	Grout Fill and Abandon 66" Storm Sewer	LF	650		
133	02222	Grout Fill and Abandon 72" Storm Sewer	LF	361		
134	02081/02082 02087	Manhole for Concrete Box Sewers (Type S)	EA	20		
135	02081/02082 02087 02105	Manhole for Concrete Box Sewers (Type S) (In PPCA)	EA	1		
136	02081/02082 02087	Type C Manhole for 42-inch Diameter and Smaller Storm Sewers	EA	52		
137	02081/02082 02087/02105	Type C Manhole for 42-inch Diameter and Smaller Storm Sewers (In PPCA)	EA	2		

Item No.	Spec Ref.	Description of Item	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
138	02081/02082 02087	Type C Manhole for 48-inch Diameter to 72-inch Diameter Storm Sewer	EA	17		
139	02081/02632	Conflict Manhole TY A (CM-01) 14'x10'x8' (Span x Height x Length)	EA	1		
140	02081/02632	Conflict Manhole TY A (CM-02) 10'x10'x8' (Span x Height x Length)	EA	1		
141	02081/02632	Conflict Manhole TY A (CM-03, CM-05) 14'x10'x9' (Span x Height x Length)	EA	2		
142	02081/02632	Conflict Manhole TY A (CM-04) 14'x10'x14' (Span x Height x Length)	EA	1		
143	02081/02632	Conflict Manhole TY A (CM-06, CM-07, CM-08, CM-10) 12'x10'x8' (Span x Height x Length)	EA	4		
144	02081/02632	Conflict Manhole TY A (CM-11, CM-12, CM-15, CM-16) 10'x10'x8' (Span x Height x Length)	EA	4		
145	02081/02632	Conflict Manhole TY A (CM-13) 10'x10'x17' (Span x Height x Length)	EA	1		
146	02081/02632	Conflict Manhole TY A (CM-14) 10'x10'x6' (Span x Height x Length)	EA	1		
147	02081/02632 02105	Conflict Manhole TY A (CM-17) 8'x5'x8' (Span x Height x Length)(In PPCA)	EA	1		
148	02081/02632	Conflict Manhole TY B (CM-09) 12'x10'x5' (Span x Height x Length)	EA	1		
149	02081/02632	Conflict Manhole TY B (CM-18) 8'x5'x5' (Span x Height x Length)	EA	1		
150	02081/02632	Conflict Manhole TY B (CM-19) 10'x10'x8' (Span x Height x Length)	EA	1		
151	02260	Trench Safety System for Storm Sewer	LF	17,134		

Item No.	Spec Ref.	Description of Item	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
152	02260/02105	Trench Safety System for Storm Sewer (In PPCA)	LF	960		
153	02315S	Excavate and Grade New Swale or Ditch	LF	8,741		
154	02631	24-Inch Diameter (ARCH) Storm Culvert (Open Cut)	LF	820		
155	02631	24-Inch Diameter (RCP) Storm Culvert (Open Cut)	LF	281		
156	02631	24-Inch Diameter (RCP) Culvert w/ Ring Grate (Open Cut)	LF	61		
157	02631	24-Inch Diameter (RCP) Storm Sewer (Open Cut)	LF	3,532		
158	02631	24-Inch Diameter (RCP) Storm Sewer (Open Cut) (In PPCA)	LF	70		
159	02631	30-Inch Diameter (RCP) Storm Sewer (Open Cut)	LF	2,839		
160	02631	36-Inch Diameter (RCP) Storm Sewer (Open Cut)	LF	1,241		
161	02631/02105	36-Inch Diameter (RCP) Storm Sewer (Open Cut)(In PPCA)	LF	262		
162	02631	42-Inch Diameter (RCP) Storm Sewer (Open Cut)	LF	903		
163	02631	48-Inch Diameter (RCP) Storm Sewer (Open Cut)	LF	1,343		
164	02631	60-Inch Diameter (RCP) Storm Sewer (Open Cut)	LF	624		
165	02631	84-Inch Diameter (RCP) Storm Sewer (Open Cut)	LF	13		
166	02631	14-Foot by 10-Foot Box (RCB) Storm Sewer (Open Cut)	LF	1,290		
167	02631	12-Foot by 10-Foot Box (RCB) Storm Sewer (Open Cut)	LF	1,278		
168	02631	10-Foot by 10-Foot Box (RCB) Storm Sewer (Open Cut)	LF	1,134		

Item No.	Spec Ref.	Description of Item	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
169	02631	10-Foot by 8-Foot Box (RCB) Storm Sewer (Open Cut)	LF	1,026		
170	02631	8-Foot by 5-Foot Box (RCB) Storm Sewer (Open Cut)	LF	1,790		
171	02631/02105	8-Foot by 5-Foot Box (RCB) Storm Sewer (Open Cut) (In PPCA)	LF	628		
172	02631	5-Foot by 5-Foot Box (RCB) Storm Sewer (Open Cut)	LF	60		
173	02631/ TxDOT 00462	Cast-in-Place 14'X10' RCB	LF	27		
174	02632/02633	Type A Inlet	EA	81		
175	02632/02633	Type A Inlet (TXDOT detail)	EA	1		
176	02632/02633 02105	Type A Inlet (In PPCA)	EA	1		
177	02632/02633	Type BB Inlet	EA	41		
178	02632/02633 02105	Type BB Inlet (In PPCA)	EA	5		
179	02632/02633	Type C Inlet	EA	23		
180	02632/02633	Type AAD Inlet	EA	2		
181	02081/02082 02087/02632 02633	Junction Box with Lid or Inlet Top (8'X15.5'X19')	EA	1		
182	02081/02082 02087/02632 02633	Junction Box with Lid or Inlet Top (19.5X16'X15.0')	EA	1		
183	02081/02082 027087/02632 02633	Junction Box with Lid or Inlet Top (11.5'X12'X11.5')	EA	1		

<b>Item No.</b>	<b>Spec Ref.</b>	<b>Description of Item</b>	<b>Unit of Measure</b>	<b>Estimated Quantities</b>	<b>Unit Price</b> (this column controls)	<b>Total in Figures</b>
184	02081/02082 02087/02632 02633	Junction Box with Lid or Inlet Top (18'X15.5'X18.5')	EA	1		
185	02081/02082 02087/02632 02633	Junction Box with Lid or Inlet Top (12.5'X13.5'X15')	EA	1		
186	02631	Remove and Replace Exist Curb Drains with 3-inch Dia PVC Storm Sewer by Open Cut (Complete in place)	LF	415		
187	04210/01110	Brick Plug for 10'x10' Storm Sewer	EA	1		
188	04210/01110	Brick Plug for 5'x5' Storm Sewer	EA	1		
189	04210/01110	Brick Plug for 48" Storm Sewer	EA	1		
<b><u>TOTAL STORM SEWER ITEMS</u></b>					\$ _____	

<b>B5. UNIT PRICE-WASTEWATER ITEMS</b>						
<b>Item No.</b>	<b>Spec Ref.</b>	<b>Base Unit Short Title</b>	<b>Unit of Measure</b>	<b>Estimated Quantities</b>	<b>Unit Price (this column controls)</b>	<b>Total in Figures</b>
190	02082	4-foot diameter precast concrete manholes	EA	26		
191	02082	4-foot diameter precast concrete manholes (In PPCA)	EA	3		
192	02082	Extra depth, 4-foot diameter precast concrete manhole	VF	79		
193	02082	Extra depth, 4-foot diameter precast concrete manhole (In PPCA)	VF	18		
194	02082	5-foot diameter precast concrete manholes	EA	1		
195	02082	5-foot diameter precast concrete manholes (In PPCA)	EA	1		
196	02082	Extra depth, 5-foot diameter precast concrete manhole	VF	9		
197	02082	Extra depth, 5-foot diameter precast concrete manhole (In PPCA)	VF	6		
198	02082	Manhole Drop; 6-inch diameter (All Depths)	EA	5		
199	02082	Manhole Drop; 8-inch diameter (All Depths)	EA	2		
200	02082	Manhole Drop; 8-inch diameter (All Depths) (In PPCA)	EA	1		
201	02082	Manhole Drop; 10-inch diameter (All Depths)	EA	1		
202	02086	Adjust Existing Manhole Ring and Cover to New Grade	EA	8		
203	02221	Remove and dispose - 6-inch diameter sanitary sewer	LF	286		
204	02221	Remove and dispose - 8-inch diameter sanitary sewer	LF	318		
205	02221	Remove and dispose - 8-inch diameter sanitary sewer (In PPCA)	LF	6		
206	02221	Remove and dispose - 10-inch diameter sanitary sewer	LF	145		

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
207	02221	Remove and dispose - 12-inch diameter sanitary sewer	LF	409		
208	02221	Remove and dispose - 18-inch diameter sanitary sewer	LF	9		
209	02221	Remove /Dispose Sanitary Sewer Manholes all Sizes/depth	EA	16		
210	02221	Remove /Dispose Sanitary Sewer Manholes all Sizes/depth (In PPCA)	EA	2		
211	02222	Grout fill and abandon Sanitary Manhole	EA	5		
212	02222	Grout fill and abandon Sanitary Manhole (In PPCA)	EA	1		
213	02222	Grout fill and abandon 8-inch diameter sanitary sewer	LF	789		
214	02222	Grout fill and abandon 10-inch diameter sanitary sewer	LF	1,545		
215	02222	Grout fill and abandon 12-inch diameter sanitary sewer	LF	894		
216	02222	Grout fill and abandon 12-inch diameter sanitary sewer (In PPCA)	LF	617		
217	02260	Trench safety system for trench excavations of sanitary sewer	LF	5,451		
218	02260	Trench safety system for trench excavations of sanitary sewer (In PPCA)	LF	553		
219	02531	6-inch diameter sanitary sewer, by open-cut	LF	48		
220	02531	8-inch diameter sanitary sewer, by open-cut	LF	1,568		
221	02531	8-inch diameter sanitary sewer, by open-cut (In PPCA)	LF	5		
222	02531	8-inch diameter sanitary sewer, by auger	LF	183		
223	02531	10-inch diameter sanitary sewer, by open-cut	LF	1,190		

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
224	02531	12-inch diameter sanitary sewer, by open-cut	LF	1,246		
225	02531	12-inch diameter sanitary sewer, by open-cut (In PPCA)	LF	7		
226	02531	12-inch diameter sanitary sewer, by auger	LF	40		
227	02531	15-inch diameter sanitary sewer, by open-cut	LF	512		
228	02531	15-inch diameter sanitary sewer, by open-cut (In PPCA)	LF	453		
229	02531	15-inch diameter sanitary sewer, by auger (In PPCA)	LF	175		
230	02531	18-inch diameter sanitary sewer, by open-cut	LF	562		
231	02531/02502	12" Split Steel Casing for Existing 6" Sanitary Sewer	LF	10		
232	02531/02502	14" Split Steel Casing for Existing 8" Sanitary Sewer	LF	104		
233	02531/02502	16" Split Steel Casing for Existing 8" Sanitary Sewer	LF	18		
234	02531/02502	18" Split Steel Casing for Existing 12" Sanitary Sewer	LF	36		
235	02534	Sanitary Sewer Service Stub or Reconnection with Stacks,	EA	6		
236	02534	Sanitary Sewer Service Stub or Reconnection w/o Stacks	EA	6		
237	02534	Sanitary Sewer Service Stub or Reconnection with Stacks (In PPCA)	EA	2		
238	02534	6" Sanitary Sewer Service Lead	LF	361		
239	02534	6" Sanitary Sewer Service Lead (150 PSI Rated)	LF	251		

<b>Item No.</b>	<b>Spec Ref.</b>	<b>Base Unit Short Title</b>	<b>Unit of Measure</b>	<b>Estimated Quantities</b>	<b>Unit Price</b> (this column controls)	<b>Total in Figures</b>
240	02534	6" Sanitary Clean-Out	EA	19		
241	02534	6" Sanitary Clean-Out (150 PSI Rated)	EA	5		
242	02534	6" DIP Sanitary Service Line (thru Storm RCB)	LF	162		
<b><u>TOTAL WASTEWATER ITEMS</u></b>					\$ _____	

<b>B6. UNIT PRICE-WATER ITEMS</b>						
<b>Item No.</b>	<b>Spec Ref.</b>	<b>Base Unit Short Title</b>	<b>Unit of Measure</b>	<b>Estimated Quantities</b>	<b>Unit Price</b> (this column controls)	<b>Total in Figures</b>
243	02086	Adjust Water Valve Box to Grade	LF	18		
244	02086	Adjust Water Valve Box to Grade (In PPCA)	LF	5		
245	02221	Remove/Dispose 6-inch diameter water line	LF	6		
246	02221	Remove/Dispose 8-inch diameter water line	LF	2,099		
247	02221	Remove/Dispose 8-inch diameter water line (in PPCA)	LF	65		
248	02221	Remove/Dispose 12-inch diameter water line	LF	134		
249	02221	Remove/Dispose 16-inch diameter water line	LF	132		
250	02221	Remove/Dispose 6-inch diameter AC water line	LF	59		
251	02221	Remove/Dispose 8-inch diameter AC water line	LF	179		
252	02260	Trench safety system for trench excavation of water line	LF	3,476		
253	02260	Trench safety system for trench excavation of water line (In PPCA)	LF	19		
254	02511	6-inch diameter water line by open-cut	LF	55		
255	02511	8-inch diameter water line by open-cut	LF	1,266		
256	02511	8-inch diameter water line by trenchless construction	LF	154		
257	02511	8-inch diameter water line by open-cut with restrained joints	LF	1,901		
258	02511	8-inch diameter water line by open-cut with restrained joints (In PPCA)	LF	75		

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
259	02511	8-inch diameter water line by trenchless construction with restrained joints	LF	790		
260	02511	8-inch diameter water line by trenchless construction with restrained joints (In PPCA)	LF	8		
261	02511	14" (min) Split Steel Casing for (not including carrier pipe) existing 8" Water Line	LF	183		
262	02511	12-inch diameter water line by open-cut	LF	260		
263	02511	12-inch diameter water line by open-cut with restrained joints	LF	38		
264	02511	12-inch diameter water line by trenchless construction with restrained joints	LF	50		
265	02511	18" Split Steel Casing for (not including carrier pipe) existing 12" Water Line	LF	18		
266	02511	16-inch diameter water line by open-cut with restrained joints	LF	95		
267	02511	16" PVC Water Line by trenchless construction with Restrained Joints within 24" steel casing	LF	40		
268	02511	6" Plug and Clamp	EA	2		
269	02512	3/4-inch Through 1-inch Diameter Water Taps and Copper Service Line with Meter Box (Short Side)	EA	27		
270	02512	3/4-inch Through 1-inch Diameter Water Taps and Copper Service Line with Meter Box (Short Side) (In PPCA)	EA	6		
271	02512	3/4-inch Through 1-inch Diameter Water Taps and Copper Service Line with Meter Box (Long Side)	EA	56		
272	02512	1 1/2-inch Through 2-inch Diameter Water Taps and Copper Service Line with Meter Box (Short Side)	EA	1		
273	02512	1 1/2-inch Through 2-inch Diameter Water Taps and Copper Service Line with Meter Box (Long Side)	EA	1		

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
274	02513	6-inch diameter wet connection	EA	3		
275	02513	8-inch diameter wet connection	EA	58		
276	02513	8-inch diameter wet connection (In PPCA)	EA	3		
277	02513	12-inch diameter wet connection	EA	10		
278	02513	16-inch diameter wet connection	EA	2		
279	02516	Cut, plug, and abandon existing 6-inch diameter water line	EA	3		
280	02516	Cut, plug, and abandon existing 8-inch diameter water line	EA	39		
281	02516	Cut, plug, and abandon existing 8-inch diameter water line (In PPCA)	EA	3		
282	02516	Cut, plug, and abandon existing 12-inch diameter water line	EA	5		
283	02516	Cut, plug, and abandon existing 16-inch diameter water line	EA	2		
284	02520	Remove and salvage existing fire hydrant	EA	15		
285	02520	Fire hydrant assembly, all depths, including 6-inch diameter gate valve and box	EA	14		
286	02520	6-inch diameter fire hydrant branch by open-cut	LF	116		
287	02526	8"x6" Tapping Sleeve & Valve (TS&V) w/Box	EA	1		
288	02526	Relocate and reinstall Water Meter & Box (2" & smaller)	EA	6		
<b><u>TOTAL WATER ITEMS</u></b>					\$_____	

**C. EXTRA UNIT PRICE TABLE:**

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
289	01562	Extra Checker Plate	SF	200		
290	01562	Extra Zero Curb Cut	LF	200		
291	02221	Remove and dispose miscellaneous concrete and masonry (See Footnote 2)	CY	100	(2) \$15.00	(2) \$1,500.00
292	02317	6-inch over excavate trench bottom (See Footnote 2)	LF	200	(2) \$5.00	(2) \$1,000.00
293	02318	Excavation around obstructions (See Footnote 2)	CY	100	(2) \$15.00	(2) \$1,500.00
294	02318	Extra hand excavation (See Footnote 2)	CY	100	(2) \$20.00	(2) \$2,000.00
295	02318	Extra machine excavation (See Footnote 2)	CY	100	(2) \$10.00	(2) \$1,000.00
296	02318	Extra placement of backfill material (See Footnote 2)	CY	100	(2) \$10.00	(2) \$1,000.00
297	02318	Extra placement of granular fill (See Footnote 2)	CY	100	(2) \$20.00	(2) \$2,000.00
298	02318	Extra cement-stabilized sand (See Footnote 2)	CY	100	(2) \$30.00	(2) \$3,000.00
299	02511	Extra water fittings in place (See Footnote 2)	TON	2	(2) \$5,000.00	(2) \$10,000.00
300	03315	Extra grade 60 reinforcing steel in place (See Footnote 2)	LB	1,000	(2) \$10.00	(2) \$10,000.00
301	03315	Extra class "A" concrete with or without forms (See Footnote 2)	CY	100	(2) \$500.00	(2) \$50,000.00
302	02317/ 02105/ 02120	6-inch over excavate trench bottom (In PPCA)(See Footnote 2)	LF	200	(2) \$10.00	(2) \$2,000.00

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantities	Unit Price (this column controls)	Total in Figures
303	02318/ 02105/ 02120	Excavation around obstructions (In PPCA)(See Footnote 2)	CY	100	(2) \$20.00	(2) \$2,000.00
304	02318/ 02105/ 02120	Extra hand excavation (In PPCA) (See Footnote 2)	CY	100	(2) \$30.00	(2) \$3,000.00
305	02318/ 02105/ 02120	Extra machine excavation (In PPCA)(See Footnote 2)	CY	100	(2) \$20.00	(2) \$2,000.00
306	02318/ 02105/ 02120	Extra placement of backfill material (In PPCA)(See Footnote 2)	CY	100	(2) \$15.00	(2) \$1,500.00
<b><u>TOTAL EXTRA UNIT PRICES</u></b>					\$ _____	

**D. CASH ALLOWANCE TABLE:**

<b>Item No.</b>	<b>Spec Ref.</b>	<b>Cash Allowance Short Title</b>	<b>Cash Allowances in Figures (1)</b>
307	01110	Street Cut Permit	\$9,000.00
308	01110	Street Light Allowance	\$10,000.00
<b><u>TOTAL CASH ALLOWANCES</u></b>			<b><u>\$19,000.00</u></b>

**E. ALTERNATES TABLE:**

Item No.	Spec Ref.	Alternate Short Title	Total Price for alternatice in Figures
		NONE	
<b><u>TOTAL ALTERNATES</u></b>			\$ _____

REST OF PAGE INTENTIONALLY LEFT BLANK

**F. TOTAL BID PRICE:** \$ \_\_\_\_\_

(Add Totals for Items A., B., C., D., and E. above)

**2.0 SIGNATURES:** By signing this Document, I agree that I have received and reviewed all Addenda and considered all costs associated with the Addenda in calculating the Total Bid Price.

Bidder: \_\_\_\_\_  
(Print or type full name of your proprietorship, partnership, corporation, or joint venture. \*)

\*\* By: \_\_\_\_\_  
Signature Date

Name: \_\_\_\_\_  
(Print or type name) Date

Address: \_\_\_\_\_  
(Mailing)

\_\_\_\_\_  
(Street, if different)

Telephone and Fax Number: \_\_\_\_\_  
(Print or type numbers)

\* If Bid is a joint venture, add additional Bid Form signature sheets for each member of the joint venture.

\*\* Bidder certifies that the only person or parties interested in this offer as principals are those named above. Bidder has not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding.

Note : This document constitutes a government record, as defined by § 37.01 of the Texas Penal Code. Submissions of a false government record is punishable as provided in § 37.10 of the Texas Penal Code.

Footnotes for Tables B through E:

- (1) Fixed Unit Price determined prior to Bid. Cannot be adjusted by Bidder.
- (2) Minimum Bid Price determined prior to Bid. Can be increased by the Bidder, but not decreased, by crossing out the Minimum and inserting revised price on the line above. Cannot be decreased by the Bidder.
- (3) Maximum Bid Price determined prior to Bid. Can be decreased by the Bidder, but not increased, by crossing out the Maximum and inserting revised price on the line above. A Bid that increases the Maximum Bid Price may be found non-conforming and non-responsive. Cannot be increased by the Bidder.
- (4) Fixed Range Bid Price determined prior to Bid. Unit Price can be adjusted by Bidder to any amount within the range defined by crossing out prices noted and noting revised price on the line above.

Section 01110

SUMMARY OF WORK

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Summary of the Work including Work Covered by Contract Documents, Cash Allowances, City-furnished Products, Work Sequence, Contractor Use of Premises, Street Cut Ordinance, Warranty, and Additional Conditions for Substantial Completion.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work of the Contract is for construction of Garden Oaks and Shepherd Park (Central) Drainage and Paving Improvements and includes the installation of new storm sewer, storm sewer leads, storm manholes, junction boxes, inlets, sidewalks, and related appurtenances within City right-of-way throughout the project limits as identified in the Contract Drawings. The project also includes replacing street pavement, driveways, curbs, sidewalks, wheelchair ramps, permanent signs, pavement markings, street lights, a traffic signal, sanitary lines and services, sanitary manholes, water lines and services, and related appurtenances throughout the project limits as identified in the Contract Drawings. Contractor will be required to install and maintain tree protection measures, storm water management devices and traffic control for the duration of the project.
- B. The project area is generally located on the North side of the City of Houston just outside of the Inner Loop (Interstate Highway 610) between Ella Boulevard and N. Shepherd Drive. The project is generally bound by Ella Blvd on the west, N. Shepherd Drive on the east, Janisch Road on the north and Judiway Street on the south. The project limits are located within the City of Houston, and within the rights-of-way of the project streets, as reflected on the plans. The approximate locations of the project limits are as follows:
  - 1. Brinkman Street: From Janisch Road to Chamboard Lane
  - 2. Chamboard Lane: From Alba Road to Brinkman Street
  - 3. Alba Road: From Chamboard Lane to Judiway Street
- C. The purpose of the project is to construct storm drainage improvements that address and reduce the risk of structural flooding in the area by improving street conveyance and sheet flow and providing detention, as needed, for mitigation. The benefitted area of the project includes the Garden Oaks, Candlelight Plaza and Shepherd Park Plaza subdivisions.
- D. The project consists of approximately 24,206 square yards of 9-inch reinforced concrete pavement with 6-inch curb, approximately 1,132 tons of 2-inch hot mix asphalt concrete pavement with 18-inch flush curb, approximately 52,369 square feet of concrete driveways of various thicknesses, approximately 17,578 linear feet of storm sewer pipe and reinforced concrete box sewer of various sizes, approximately 5,349 linear feet of sanitary sewer lines of various sizes, including all appurtenances, and 4,630 linear feet of water lines of various sizes, including all appurtenances. Construction method for utilities is open cut unless otherwise noted as trenchless and/or auger in the Contract Drawings.
  - 1. The construction of the pavement will include the removal of the existing concrete (with and without asphalt overlay) and replacement with either 9-inch reinforced

concrete pavement with 6-inch curbs or 2-inch hot mix asphalt concrete pavement with 18-inch flush curb, as shown in the Contract Drawings. The proposed concrete pavement will have 8-inch stabilized subgrade utilizing lime and/or lime/fly ash as indicated in the Contract Drawings. The proposed asphalt concrete pavement will have 10-inch black base with 8-inch lime stabilized subgrade as indicated in the Contract Drawings.

The proposed pavement will be 9-inch high-early strength reinforced concrete pavement with 8-inch cement stabilized sand within the limits shown on Sheet No. 37A at the following street intersections:

- a. Judiway and Alba
- b. Wakefield and Alba
- c. Fisher and Alba
- d. W. 43<sup>rd</sup> and Alba
- e. Chamboard and Alba
- f. Chamboard and Dunsmere
- g. Thornton and Brinkman

The proposed pavement will be 2-inch hot mix asphalt concrete pavement with 10-inch black base and 8-inch cement stabilized sand within the limits shown on Sheet No. 37A at the following street intersections:

- a. W. 41<sup>st</sup> and Alba
- b. W. 42<sup>nd</sup> and Alba
- c. Lamonte and Alba
- d. Azalea and Alba
- e. Sue Barnett and Alba

Existing sidewalk will be removed and replaced with 5-foot wide concrete sidewalk or as indicated in the Contract Drawings. In some areas without existing sidewalk, 5-foot wide sidewalk will be installed as indicated in the Contract Drawings.

Through previous coordination efforts with the Garden Oaks Civic Club, there shall be no sidewalks installed within the Garden Oaks Subdivision unless otherwise indicated in the Contract Drawings. The approximate limits of the Garden Oaks Subdivision is along Alba Road from Sta. 22+15 to Sta. 46+78 and all side streets connected to Alba within these station limits.

Contractor will be responsible to reference the Tree Protection Plan in conjunction with the Plan and Profile sheets in order to coordinate where checker plates are to be installed in lieu of proposed sidewalk, as per provided detail. Curb type retaining walls may be utilized only on areas noted in the Contract Drawings or as directed by Project Manager.

Throughout the project site, existing driveways and sidewalks are built with concrete, exposed aggregate paving, concrete lined with brick pavers, and other decorative materials or specialty finishes. All salvageable driveway and sidewalk materials shall be removed and made available to the property owners for their use at no separate cost to the City. Driveways and sidewalks shall be replaced with the standard concrete paving as shown in the plans unless otherwise directed by the Project Manager. Decorative items, such as brick sidewalks and pads, planters, etc., that do not conflict with the proposed street, sidewalk, or driveway adjacent to the proposed construction are not required to be removed.

Sidewalks and wheelchair ramps shall comply with current City of Houston and Texas Department of Licensing and Regulation (TDLR) requirements. Additionally, Contractor will adhere to tapering the driveways from the proposed paving to the right-to-way, as shown on the plans.

2. The construction of the storm system will include the removal and/or plugging and abandonment of existing 18-inch to 84-inch storm sewers, sewer leads, manholes, inlets and outfalls, as noted in the Contract Drawings. The proposed drainage system will include leads, which will be standard 24-inch circular RCP as well as 30-inch circular RCP. The proposed storm sewer will range from 24-inch RCP to 84-inch RCP and also 14-foot x 10-foot RCB to 8-foot x 5-foot RCB. The proposed storm sewers shall be installed by open cut construction method, except as indicated in the Contract Drawings.

A small section of 14-foot x 10-foot RCB will be cast-in-place, from STA 12+35 to STA 12+62 based on Judiway St centerline as shown in Contract Drawings.

There is one existing outfall for this project. The outfall is an existing 108-inch monolithic reinforced concrete storm sewer on the west side of Judiway Street. The intent of this project is to keep this outfall in place and interconnect to the existing system at the intersection of Judiway Street and Alba Road with a new junction box and manhole within the City's right-of-way.

Additionally, there are 3 and 4-inch PVC curb drains located throughout the project limits. Reconstruction of the PVC curb drains shall be accomplished with 3-inch PVC drain pipes placed in the proposed curb at the gutter flowline, as per detail(s) in the Construction Drawings. Connections to the existing yard drain pipes shall be made within the street right-of-way, as close to the proposed street as possible. The connection shall be watertight and extend through the proposed curb, sidewalk section and control joint.

3. The construction of the sanitary sewer consists of the removal and/or abandonment of existing 6-inch, 8-inch, 10-inch, 12-inch and 18-inch sanitary sewer within the City's right-of-way and installing proposed 6-inch, 8-inch, 10-inch, 12-inch, 15-inch and 18-inch sanitary sewer as indicated in the Contract Drawings. Work on the sanitary sewers and all related appurtenances within this project are to be complete in place, including diversion pumping as needed. As part of the Work along Chamboard Lane and northern portion of Alba Road, Contractor will install new 6-inch service leads with clean-outs at the right-of-way, as indicated in the Contract Drawings. These services will serve as future reconnections as part of the City's substitute service program. The proposed sanitary sewers shall be installed by open cut construction method, except as indicated in the Contract Drawings.

Contractor shall anticipate encountering sanitary services along Alba Road from Sta. 12+00 to Sta. 20+00 (Judiway to Fisher). The approximate locations of the stacks are shown in the Contract Drawings. Contractor shall use caution and verify the exact location of these services during construction activities. Should there be conflicts with the proposed storm RCB, Contractor shall remove and dispose of the existing sanitary service and install a new 6" sanitary service line through the proposed RCB per the detail shown in the Sanitary Sewer Details, Sheet 8 of 8. Bid items for the service lines through the RCB are included in Document 00410 – Bid Form, Parts A & B. Payment for the core drilling, water stop and water-tight sealing shall be included in the unit prices for these bid items.

Sanitary sewer construction activities will be such as to maintain continuous sanitary service to residents and commercial users throughout the duration of the project.

4. The construction of water lines consists of the removal and/or plugging and abandonment of existing 6-inch, 8-inch, 12-inch and 16-inch water lines, along with associated appurtenances and replacing them with proposed 6-inch, 8-inch, 12-inch and 16-inch water lines and associated appurtenances. The proposed water lines shall be installed by open cut construction method, except as indicated in the Contract Drawings.

Contractor shall note that there are existing asbestos cement (AC) water lines within the project area.

Water line construction activities will be such as to maintain continuous water service to residents and commercial users throughout the duration of the project. Existing fire hydrants in the project limits will either remain or be salvaged, as indicated in the Contract Drawings. Water meter and valve boxes shall be adjusted to the new grade, or relocated, as indicated in the Contract Drawings.

5. Conflict manholes will be used for existing and proposed sanitary sewers and water lines that will pass through the proposed reinforced concrete box at various locations identified in the Contract Drawings. Conflict manhole details are included in the Contract Drawings.
6. Split steel pipe casings will be used to encase the existing and proposed sanitary sewers and water lines inside the conflict manholes as shown in the Contract Drawings. Split steel pipe casing will be paid by the linear foot by casing size and carrier pipe type and size.
7. Contractor will be responsible to coordinate with residents and the HOA on handling of any private features within the right-of-way a minimum of 72-hours prior to any construction activities which may impact these features. These features may include, but are not limited to: existing irrigation systems (including spray and rotary heads and related piping and electrical wiring), mailboxes, landscaping, and existing yard drains. All landscaping, irrigation and private electrical conduits and/or equipment including sprinkler systems which are affected by construction of proposed pavement, driveway, sidewalk, storm sewer, sanitary sewer, and/or water line replacement and/or due to contractor activities, will be considered incidental to the various construction bid items included in Document 00410 – Bid Form, Parts A & B. Contractor shall use caution while working within the proximity of these types of facilities so as to avoid impacts. Should impacts occur, restoration shall be to a condition that is equal to or better than prior to start of construction. The repair or replacement of these types of facilities, necessitated by construction activities, will be the contractor's responsibility at no cost to the City. Contractor should verify the operation of irrigation systems with the property owner prior to starting construction.
8. Contractor will be responsible to remove and replace permanent signs and pavement markings, as denoted in the Contract Drawings. Pavement striping shall be in accordance to standard City of Houston specifications and details.
9. Contractor will be responsible to remove and replace the traffic signal and related appurtenances at the intersection of West 43<sup>rd</sup> Street and Alba Road.

10. Contractor will be responsible to install approximately 667 linear feet of 2-inch PVC Sch 40 street light conduit and 385 linear feet of 2-inch PVC Sch 80 per CenterPoint Energy (CNP) specifications in areas identified in the Street Lighting Plans (SLP). Contractor is to provide conduits, conduit plugs, and all other materials not furnished by CNP. Additionally, Contractor is to install conduit stub-up's at the proposed street light locations and conduit stub-up's at the wood poles where street light sources are proposed. Pull boxes and warning tape can be provided by CNP when a 45-day notice is received. Contractor is also responsible for the removal of any existing street light foundations. CNP will be responsible for removal and disposal of existing street light poles. All materials and labor to perform and install this work, is to be paid on a linear foot basis, as shown in Document 00410B – Bid Form Part B. In addition, a cash allowance is included for CNP to remove the existing street light standards and installation of new street lights as indicated in the SLP. The agreement with CenterPoint Energy, dated June 18, 2015, for the removal and re-installation of the street lights is attached to this Summary of Work (Appendix A).

Contractor shall coordinate with Nora Luna (713-945-6242) of CNP Lighting Design Section, including scheduling and removal and installation of street lights and inspection of the conduit and pull boxes. Removal and installation of the street lights shall be phased to correspond with Contractor's sequence of operations. Street lights should not be removed and/or out of service until needed by Contractor.

11. Contractor will be responsible to maintain adequate traffic control for the duration of the project, as provided in the Contract Drawings. Traffic control will be accordance with the latest version of the Texas Manual of Uniform Traffic Control Devices (TMUTCD) and will include temporary signalization at the intersection of West 43<sup>rd</sup> Street and Alba Road.

Temporary asphalt pavement will be required for adequate traffic control as identified in the Traffic Control Plans. The recommended temporary asphalt pavement sections are included in the Traffic Control Plans. The stabilized subgrades identified in the Traffic Control Plans shall match the type of stabilized subgrades and street limits as identified in the Proposed Typical Sections of the Contract Drawings.

12. Contractor will be responsible to use caution and due diligence where the proposed improvements are in proximity to existing private utilities including gas lines, buried or overhead cables, power poles, etc., so as to not adversely impact such private utilities inside the project area. Contractor will contact and coordinate with the private utility agencies whose facilities may be impacted by the proposed improvements, as required. The proposed improvements cross existing CenterPoint Gas, CenterPoint Energy and AT&T Texas/SBC facilities at various locations in the project limits.

For AT&T Texas/SBC facilities, Contractor shall anticipate locating, exposing and supporting buried conduits/cables during construction at no additional cost to the City.

13. Storm sewer plugs are proposed at various locations shown on the Contract Drawings. These plugs are to be installed at locations of future tie-in connections and are to be installed in accordance with Specification Section 04210 – Brick Masonry for Utility Construction. Payment for the storm sewer plugs shown on the drawings will be paid on a unit price basis for each size plug installed.
14. There is another City of Houston Capital Improvements Project being constructed within the project limits. Pinemont Drive Paving and Drainage Improvements from Ella Boulevard to N. Shepherd Drive (WBS No. N-000475-0002-4) (the Pinemont

project) is a pavement and drainage improvement project being constructed by Reytec Construction Resources, Inc. (Reytec). The proposed improvements, as designed, have been reflected on the Contract Drawings and are generally located along Brinkman Street, north of Janisch Road. Contractor shall coordinate construction efforts with Reytec to avoid conflicts and delays in construction schedule.

It is anticipated that the Pinemont project will have completed the construction activities along Brinkman Street prior to beginning construction activities for the project. As part of the Pinemont project, a brick storm sewer plug is to be installed in the proposed 8-foot x 5-foot RCB at approximately Sta. 36+00. Contractor shall remove this storm sewer plug to make the connection to the 8-foot x 5-foot RCB at no separate payment. Cost will be considered incidental to the various bid items included in Document 00410 – Bid Form, Parts A & B.

15. Contractor will be required to install diversion pumping for storm water as part of the project. It is anticipated that there will be standing water inside of the underground storm sewers along Brinkman Street and Pinemont Drive that are installed as part of the Pinemont project. These storm sewers ultimately drain into the storm sewer system that will be installed under the Work. Contractor shall remove this storm water prior to excavating the area behind the storm sewer plug in order to remove the plug and make the connection to the 8-foot x 5-foot RCB. The pump(s) can be installed at the junction box structure near Ditch E-101-15-01 and discharge to the same ditch. This work shall be performed in accordance with Specification Section 01506 – Diversion Pumping. Payment for Diversion Pumping shall be made on a lump sum basis in accordance with Specification Section 01270 – Measurement and Payment.
16. No payment will be made for Preformed Expansion Joints when field conditions require that sidewalk move to adjacent to curb structure due to utilities conflicts.
17. Contractor will be responsible to remove and dispose of existing retaining walls from approximately Sta. 10+70 to Sta. 12+33 adjacent to existing sidewalks on both the north and south sides of W 43<sup>rd</sup> Street. Payment for removal and disposal of these existing retaining walls shall be on a linear foot basis.

Contractor will be responsible to install proposed retaining walls per Paving Detail Sheet 16 of 16 of the Contract Drawings. Payment for installing retaining walls shall be on a linear foot basis. This work shall be performed in accordance with Specification Section 02751 – Concrete Paving.

18. Contractor is to comply with O.S.H.A. regulations and state of Texas law concerning excavation, trenching and shoring.
19. Contractor will be responsible to provide tree and plant protection in accordance with City standards, specifications, details and the Tree Protection Plan (TPP) for the project.

Location(s) of tree root protection steel checker plates shall be coordinated with Project Manager. Contractor's qualified Arborist shall determine and recommend final location(s) of checker plates to Project Manager for approval.

Contractor is responsible for obtaining all tree removal permits prior to any tree removals that are not included in the TPP. Permits can be obtained from the City of Houston Department of Parks and Recreation by contacting Mr. Victor Cordova at

(832-395-8454) and/or Dale Temple at (832-395-8459). Any tree removal permit provided to the Contractor by the City of Houston prior to construction will only be issued for the trees listed for removal in the Contract Drawings.

Notify City of Houston Parks and Recreation Department representative Mr. Victor Cordova, City Forester, at (832-395-8454) at least two (2) weeks in advance of clearing and/or cutting any tree.

20. Contractor will be responsible to implement the Storm Water Pollution Prevention Plan (SWPPP) and use best practices during construction. Project construction activities will disturb an area greater than 5 acres. See Section 01410 – TPDES Requirements. Contractor shall be responsible for all fees, including notices, filings and permits, associated with SWPPP and TPDES requirements at no additional cost to the City of Houston.
21. The contractor will be responsible to obtain all necessary permits, including, but not limited to: lane closures, street cut, driveway and tree removal. Permits that are required and are not paid under Cash Allowances are incidental to all other pay items and are at no additional cost to the City of Houston.
22. Contractor is to coordinate work around existing METRO Bus Stops. There are existing METRO Bus Stops within the project limits at the intersection of West 43<sup>rd</sup> Street and Alba Road. Contractor shall coordinate with METRO prior to beginning construction as follows:
  - If a COH permit for lane and/or sidewalk closure is required, Contractor must notify METRO Bus Operations (Transportation) at the following three email addresses: [Zelma.Ridley@RideMetro.org](mailto:Zelma.Ridley@RideMetro.org), [Carl.Taylor@RideMetro.org](mailto:Carl.Taylor@RideMetro.org), and [Shirly.Mitchell@RideMetro.org](mailto:Shirly.Mitchell@RideMetro.org) a minimum of 7-10 working days in advance of commencing work.
  - Contractor shall notify METRO at 713-615-7119 two (2) weeks prior to mobilizing to the project site to coordinate bus operations during construction.
23. Contractor is responsible for coordinating with Durham Elementary School during construction activities along Brinkman Street. Contractor shall contact Durham Elementary school Principal, Amy Poerschke, at 713-613-2527 a minimum of thirty (30) days prior to starting construction activities along Brinkman and discuss construction activities and durations that will impact the school.
24. Project identification signs are required on this project. See Section 01580 – Project Identification Signs. Cost is included in Mobilization bid item of Document 00410B – Bid Form Part B.
25. The Phase II Environmental Site Assessment Report, prepared by Associated Testing Laboratories, Inc. and dated March 19, 2015 identified Potential Petroleum Contamination Areas (PPCA) at the following locations:
  - a. Brinkman Street from Sta. 18+00 to Sta. 25+75
  - b. Fisher Street from Sta. 10+00 to Sta. 15+00

The report recommends that Specification Sections 02105 and 02120 be utilized while working in these areas.

1.03 CASH ALLOWANCES

- A. Include the following specific Cash Allowances in Contract Price under provision of General Conditions Paragraph 3.11:
1. Street Cut Permit.  
Cash allowance included in Document No. 00410B.
  2. Street Light Allowance.  
Contact Nora Luna (713-945-6242) or at [nora.luna@centerpointenergy.com](mailto:nora.luna@centerpointenergy.com)  
Cash allowance included in Document No. 00410B.

1.04 ALTERNATES

- A. None.

1.05 CITY-FURNISHED PRODUCTS

- A. Items Furnished by the City for Installation and final connection by Contractor:
1. None.
- B. Contractor's Responsibilities:
1. Arrange and pay for Product delivery to the site.
  2. Receive and unload Products at the site; jointly with the City, inspect for completeness or damage.
  3. Handle, store, Install, and finish Products.
  4. Repair or replace damaged items.

1.06 WORK SEQUENCE

Contractor shall submit a sequence of construction for each major phase of construction for review by the City's post-bid construction coordinator. In the proposed sequence of construction, the Contractor shall address the proposed method and timing of major construction activities to be undertaken. Refer to Section 01326-Construction Schedule (Bar Chart) for specific details. Proposed construction sequencing shall be established so that traffic & pedestrian access, water service, sanitary sewer services, street lighting, and other private utility services shall be maintained throughout the duration of the project.

- A. Construct the Work in Phases during the construction period; coordinate construction schedule and operations with the City.
1. The construction phase for the project shall proceed from South to North as the following segments. These segment are allowed to be closed at maximum of 1500' at any given time (all station below are based off the Alba Road Centerline)
    - a. Beginning of project (Judisway) to north of Fisher (STA 22+15)(concrete pavement section)
    - b. North of Fisher (STA 22+15) to 43<sup>rd</sup> street intersection (STA 37+02.16) (Asphaltic pavement section)
    - c. 43<sup>rd</sup> street (STA 38+10.00) to Chamboard Lane (STA 46+78.04) (Asphaltic

- pavement section)
- d. Chamboard Lane (concrete pavement section)
- e. Brinkman Street from Chamboard Ln to Martin St (Concrete pavement section)
- f. Martin intersection to end of project (Ditch E01-15-01) (Concrete pavement section)

Refer to construction drawings for exact limits of concrete pavement section and asphaltic pavement section. 43<sup>rd</sup> street intersection will be constructed as concrete pavement section.

Construction of the storm sewer along Brinkman St from Chamboard Ln to Curtin St to be done in an expedited fashion and access to Bible Way Baptist Church to be restored along Brinkman until such time as access along Chamboard Ln is available.

In each segment contractor has the option of building complete pavement cross section in one phase.

Full roadway closure is allowed during installation of storm sewer along Alba Road, Chamboard Lane and Brinkman Street between cross streets. Contractor shall install temporary pavement per Traffic Control Plan Typical Section on Sheet 195 to allow local access. Proposed pavement will be installed in half and half method as shown in traffic control plans.

The following phases are recommended for the project:

2. Phase 1: This phase details the demolition, temporary construction, and proposed pavement base for Alba Road, storm sewer and utilities. Construction will be broken up into various segments, beginning at Judiway and ending at Chamboard. Alba (east side) from Judiway to Azalea and Alba (west side) from Azalea to Chamboard. Constructions will also take place on Wakefield Drive, 41st Street, Sue Barnett Drive (west of Alba), and 43rd Street. The rolling length of each construction segment shall not exceed 1500 feet.
3. Phase 2: This phase details the demolition and construction of temporary asphalt, and proposed pavement on the north side of Chamboard Lane, storm sewer and utilities. It also includes the demolition, temporary construction, and proposed reconstruction of west side of Brinkman Lane and the storm sewer, beginning at Chamboard Lane and proceeding north. Construction will also take place along Thornton Road, Candlelight Lane, and Lehman Street (west of Brinkman). The rolling length of each construction segment shall not exceed 1500 feet.
4. Phase 3: This phase details the remaining demolition and proposed pavement base of Alba Road, storm sewer and utilities. Construction will include Alba (west side) from Judiway to Azalea and Alba (east side) from Azalea to Chamboard. The rolling length of each construction segment shall not exceed 1500 feet. The pavement finished grade for the entire width will be constructed in this phase for the asphaltic pavement section along Alba Rd.
5. Phase 4: This phase details the demolition and proposed reconstruction of the north side Chamboard Lane and west side of Brinkman Street and its side streets will also be completed. The rolling length of each construction segment shall not exceed 1500 feet.
6. If the contractor chooses to use a different method of traffic control plan during the

construction than what is outlined in the contract drawings, the contractor shall be responsible to prepare and submit alternative plans to City traffic Engineers for approval 10 working days prior to implementation. These plans shall be drawn to scale and sealed by a licensed engineer in the state of Texas.

7. Contractor shall contact Traffic Operation Division to coordinate adjustment to timing of traffic signals on the W. 43rd intersection during phases of construction and no separate payment for this item; cost is incidental to the Traffic Control and Regulation bid item.
  8. Maintain residential driveway access at all times and at least one entrance at all times for commercial businesses. Place driveway signs at appropriate locations during construction, which is included in the cost for the Traffic Control and Regulation bid item of Document 00410B – Bid Form Part B.
  9. Contractor shall contact Durham Elementary school Principal, Amy Poerschke, at 713-613-2527 to coordinate School Bus Routes and parent drop off locations during construction along Brinkman Street and Candlelight Lane. Maintain school access at all times during construction, which is included in the cost for the Traffic Control and Regulation bid item of Document 00410B – Bid Form Part B.
- B. For projects with no Phases, Contractor shall not disturb more than 50% of total project linear feet of disturbed right-of-way and easement until site is restored in accordance with Section 01740 – Site Restoration.
- C. Coordination of the Work: Refer to Section 01312 - Coordination and Meetings.
1. The following are to be invited to all Construction Progress Meetings:
    - a. Costas Georghiou, P.E. (PGAL) [CGeorghiou@pgal.com]
    - b. Jeri Ji, P.E. (PGAL) [jji@pgal.com]
  2. Contractor shall coordinate with the Project Manager for special meetings.

#### 1.07 CONTRACTOR USE OF PREMISES

- A. A field office is required on this project. See Section 01520 – Temporary Field Office. Cost is incidental to Bid Item for Mobilization.
- B. Comply with procedures for access to the site and Contractor's use of rights-of-way as specified in Section 01145 - Use of Premises.
- C. Construction Operations: Limited to the City's rights-of-way provided by the City and areas shown or described in the Contract documents.
- D. Utility Outages and Shutdown: Provide a minimum of 48 hours notice to the City and private utility companies (when applicable), excluding weekends and holidays, in advance of required utility shutdown. Coordinate all work as required.
- E. Private Utility Coordination: Contractor will be responsible to use caution and due diligence where the proposed improvements are in proximity to existing private utilities including gas lines, buried or overhead cables, etc., so as to not adversely impact such private utilities within the project area. Contractor will contact and coordinate with the private utility agencies whose facilities may be impacted by the proposed improvements,

as necessary. The proposed improvements cross existing CenterPoint Gas, CenterPoint Energy and AT&T Texas/SBC facilities at various locations in the project limits.

- F. Private Utility Relocations: Pursuant to Section 40-395 of the City of Houston (City) Utility Relocation Ordinance Program (URO), the following private utilities were identified and scheduled for relocation within the scope of the project limits. Based upon the relocation schedules provided by the utility owners, the City anticipates these relocations to be completed by the dates listed below, and unless otherwise stated, clearance of these potential obstructions will be performed by their respective owners.

The following is a description of the private utilities identified for relocation within the project limits:

Utility Owner	Type of Facility	Approximate Location	Estimated Clearance Date	Anticipated Effect to Construction
CenterPoint Electric	Power Poles w/Overhead	Alba: Sta. 11+50 to 19+50 Brinkman: Sta. 29+47 Fisher: Sta. 23+22	April 2016	Proposed pavement and manhole
CenterPoint Gas	2" STL Gas	Alba: Sta. 14+50 to 47+50	March 2016	Proposed storm, water, and sanitary utilities cross gas lines
	2" STL Gas	Brinkman: Sta. 13+00 to 33+00		
	2" STL Gas	Judiway: Sta. 12+00 to 12+75		
	2" STL Gas Gas service	Wakefield: Sta. 12+25 to 15+53		
	2" STL Gas	Fisher: Sta. 15+25 to 19+00		
	2" STL Gas	W. 41st: Sta. 28+28		
	2" STL Gas	Sue Barnett: Sta. 13+67		
	2" STL Gas	Curtin: Sta. 10+72		
	2" STL Gas	Thornton: Sta. 13+32		
	2" STL Gas Gas service	Oak: Sta. 10+50 to 11+00		
	Gas service	Janisch: Sta. 10+87		
AT&T Texas/SBC	1-9" MTD	Alba: Sta. 37+40 to 37+46	June 2016	Proposed storm, water, and sanitary utilities cross duct bank

The relocation of these facilities is not anticipated to interfere with Contractor's operations, but Contractor shall develop the project construction schedule and bid accordingly. In the event that the clearance dates are deviated and proven to impact contractor's schedule, Contractor shall notify the construction project manager per Article 7 – Changes in the Work under Document 00700 - General Conditions. Contractor is invited to review all information of potential obstructions currently on file with the

Engineer.

1.08 STREET CUT ORDINANCE

- A. Excavations on or under pavement in the City's right-of-way must have a permit. Comply with City of Houston, Texas Ordinance No. 2000-1115, an ordinance amending Chapter 40 of the Code of Ordinances, Houston, Texas, relating to excavating in the Public right-of-way.
- B. Comply with the latest edition of street cut New Pavement Repair and Pavement Replacement details.
- C. Quantities are included for street cut pavement repair and replacement in applicable Specification sections for Unit Price contracts.
- D. For detailed information concerning the ordinances' latest detail drawings and permits related to compliance with excavation in the Public Right-of-Way and Street Cut, visit the City's web site at: <http://www.publicworks.houstontx.gov/documents/index.htm> or <http://www.gims.houstontx.gov/>

1.09 WARRANTY

- A. Comply with warranty requirements in accordance with Document 00700 - General Conditions.

1.10 ADDITIONAL CONDITIONS FOR SUBSTANTIAL COMPLETION

- A. In addition to requirements outlined in Document 00700 – General Conditions, for Contractor to be substantially complete with the Work and call for inspection by Project Manager to confirm, the following conditions must be met or completed:
  - 1. All pay items complete report.
  - 2. All testing shall be completed and accepted by Project Manager.
  - 3. All safety related work, including pavement striping, signing and permanent signalization, is complete and accepted by Project Manager.
  - 4. All safety related systems and equipment shall be installed, accepted by manufacturer's representative (per Specification requirements) and approved for use.
  - 5. Contractor shall contact Project Manager to complete Texas Department of Licensing and Regulation Post Construction Inspection of pedestrian elements, such as sidewalks and wheelchair ramps, for Texas Accessibility Standards.
  - 6. Traffic is operating in all lanes at all times, unless lane reductions are due to adjacent construction projects.
  - 7. All services and utilities are operational.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

## APPENDIX A



**Nora Luna**  
Service Consultant  
CenterPoint Energy Houston

4700 S. Shaver St. #1  
Houston, TX 77034  
713 945 6253  
Fax: 713 945 3773  
nora.luna@  
CenterPointEnergy.com

**June 18, 2015**

Mrs. Leaneice Brown  
City of Houston  
Houston, TX 77251

**Subject: Garden Oaks (M-000285-0001-4)**  
**Location: Garden Oaks – Alba Rd. and Chamboard Ln.**

Dear Mrs. Brown:

The *Streetlight Division* at CenterPoint Energy (CNP) has prepared a cost for the streetlights to be removed and re-installed at the subject location.

**This cost is contingent upon the City of Houston's (COH) contractor installing approximately 614' of 2" PVC conduit and pullboxes per CNP specifications. All conduit shall be installed using the conduit layout provided to you on 06/18/2015. Additionally the COH's contractor is to install conduit stub up's at the proposed streetlight locations and where the streetlight power sources are proposed. The pull boxes and warning tape can be provided by CNP when a 45 day notice is received.**

The total cost is eight thousand two hundred seventy-three dollars: **\$ 8,273.00**

**The following is a breakdown of the above mentioned cost:**

**Underground Street Light Removal Only: \$1,318.00**

(4) Cost to remove 4 existing 100W streetlights, 1 pullbox and 1 streetlight riser & install 1 streetlight riser and 75'+/- of conductor.

**Underground Street Light Re-Installation Only: \$6955.00**

(5) – Cost to re-install 4 existing and 1 new streetlights at 45W LED, 2 pullboxes and 1 street light risers

**Underground Street Light Installation Only: \$0.00**

(2) – Cost to install 2 overhead streetlights at 45W LED

Your signature below will be our acknowledgment of your acceptance to the above mentioned terms and conditions and associated charges. Also, a check for the above noted amount made payable to *CenterPoint Energy* will be required before CNP can proceed with the planned construction. Please send the check and the **original signed copy** of this agreement to my attention at: *CenterPoint Energy, 4700 S. Shaver – Bldg I, Houston, TX 77034.*

If there are any questions, please do not hesitate to contact me at (713) 945-6242. Please note this estimate is valid for a period of 180 days from the date of this agreement.

Thank You,

*Nora Luna*

Nora Luna  
Service Consultant  
CenterPoint Energy

The above requirements are approved and accepted this

\_\_\_\_\_ Day of \_\_\_\_\_, 2015,

By \_\_\_\_\_ (Signature)

\_\_\_\_\_ (Printed name)

\_\_\_\_\_ (Title)

\_\_\_\_\_ (Company)

Ian

Hlavacek

Digitally signed by Ian Hlavacek

DN: cn=ian Hlavacek,  
o=Department of Public Works and Engineering,  
ou=City of Houston,  
email=ian.hlavacek@houston  
tx.gov, c=US<sup>®</sup>

Date: 2015.09.18 15:57:45  
-05'00'

GARDEN OAKS SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

SHEET NUMBER	SHEET TITLE
	<b>GENERAL</b>
1	COVER SHEET
2	SHEET INDEX
3	GENERAL CONSTRUCTION AND PRIVATE UTILITY NOTES
4	LEGEND AND ABBREVIATIONS
5	9 GEOMETRIC DATA SUMMARY
10	13 OVERALL PROJECT LAYOUT
14	17 DRAINAGE AND PAVEMENT LAYOUT
18	21 WATER AND SANITARY LAYOUT
22	33 GARDEN OAKS EXISTING TYPICAL SECTIONS
34	37A GARDEN OAKS PROPOSED TYPICAL SECTIONS
	<b>SURVEY CONTROL</b>
38	42 SURVEY CONTROL MAP
43	49 SURVEY SWING TIES
	<b>DRAINAGE</b>
50	OFFSITE DRAINAGE AREA MAP
51	54 OVERALL DRAINAGE AREA MAP PROPOSED CONDITIONS
55	63 PROPOSED DRAINAGE AREA MAP
64	72 STORM SEWER COMPUTATIONS
	<b>PLAN AND PROFILE</b>
73	KEY NOTES
74	83 ALBA RD PLAN AND PROFILE
84	86 CHAMBOARD LN PLAN & PROFILE
87	93 BRINKMAN ST PLAN & PROFILE
94	JUDIWAY ST PLAN & PROFILE
95	WAKEFIELD DR PLAN & PROFILE
96	98 FISHER ST PLAN & PROFILE
99	103 W 41ST ST PLAN & PROFILE
104	106 W 42ND ST PLAN & PROFILE
107	110 LAMONTE LN PLAN & PROFILE
111	W 43RD PLAN & PROFILE
112	113 AZALEA ST PLAN & PROFILE
114	116 SUE BARNETT DR PLAN & PROFILE
117	DUNSMERE RD PLAN & PROFILE
118	CURTIN ST PLAN & PROFILE
119	THORNTON RD PLAN & PROFILE
120	WOODCREST DR PLAN & PROFILE
121	MARTIN ST PLAN & PROFILE
122	OAK ST PLAN & PROFILE
123	CANDLELIGHT LN PLAN & PROFILE
124	JANISCH RD PLAN & PROFILE
125	129 UTILITY PROFILES
130	131 DRIVEWAY LAYOUT
132	140 DRIVEWAY TABLE
141	CIP JUNCTION BOX AND BOX CULVERT CONFLICT MANHOLE OVERALL LAYOUT
142	JUNCTION BOX LAYOUT (JB-01)
143	JUNCTION BOX LAYOUT (JB-02)
144	JUNCTION BOX LAYOUT (JB-03)
145	146 JUNCTION BOX LAYOUT (JB-04)
147	JUNCTION BOX LAYOUT (JB-05)
148	JUNCTION BOX TYPE 3 DETAILS
149	JUNCTION BOX TYPE 2 DETAILS
150	JUNCTION BOX MISCELLANEOUS DETAILS
151	BOX CULVERT CONFLICT MANHOLE TYPE "A"
152	BOX CULVERT CONFLICT MANHOLE TYPE "B"
153	BOX CULVERTS PRECAST MISCELLANEOUS DETAILS - SCP-MD (TXDOT)
154	SINGLE BOX CULVERTS PRECAST 5' SPAN - SCP-5 (TXDOT)
155	SINGLE BOX CULVERTS PRECAST 6' SPAN - SCP-6 (TXDOT)
156	SINGLE BOX CULVERTS PRECAST 8' SPAN - SCP-8 (TXDOT)
157	SINGLE BOX CULVERTS PRECAST 10' SPAN - SCP-10 (TXDOT)
158	SINGLE BOX CULVERTS PRECAST 12' SPAN - SCP-12 (TXDOT)
159	PRECAST BOX CULVERT 14'-0" SPAN
159A	CAST-IN-PLACE BOX CULVERT 14'-0" SPAN
	<b>STORM WATER POLLUTION PREVENTION PLANS</b>
160	STORM WATER POLLUTION PREVENTION PLAN NOTES
161	171 GARDEN OAKS STORM WATER POLLUTION PREVENTION PLAN PROPOSED

172			STORM WATER POLLUTION PREVENTION PLAN DETAILS
			<b>DEMOLITION</b>
173	-	183	GARDEN OAKS DEMOLITION PLAN
			<b>TRAFFIC CONTROL</b>
184			NOTES, CHANNELIZING DEVICES AND BARRICADES
185	-	187	CONSTRUCTION NARRATIVE
187	-	194	PROJECT PHASING LAYOUT
195	-	197	TRAFFIC CONTROL PLAN TYPICAL SECTIONS
198	-	210	TRAFFIC CONTROL PLAN PHASE 1
211	-	217	TRAFFIC CONTROL PLAN PHASE 2
218	-	227	TRAFFIC CONTROL PLAN PHASE 3
228	-	234	TRAFFIC CONTROL PLAN PHASE 4
235	-	236	DETOUR PLAN
237			TYPICAL TEMPORARY PAVEMENT CONSTRUCTION (TYP-1)
238			TYPICAL ONE LANE ROADWAY WITH WORKZONE (TYP-2)
239			TYPICAL INTERSECTION WITH WORKZONE (TYP-3)
240			TYPICAL ONE LANE ROADWAY WITH WORKZONE (TYP-4)
241			TYPICAL ONE LANE ROADWAY WITH WORKZONE (TYP-5)
242			TYPICAL ONE LANE ROADWAY WITH WORKZONE (TYP-6)
242A			TYPICAL ONE LANE ROADWAY WITH WORKZONE (TYP-7)
242B			TYPICAL ONE LANE ROADWAY WITH WORKZONE (TYP-7A)
243C			TYPICAL FOR FULL CLOSURE OF ROADWAY (TYP-7B)
243			TYPICAL UTILITY WORK AND ONE LANE CLOSURE
244			TYPICAL 4-WAY INTERSECTION WITH FLAGGING OPERATION
245			TYPICAL TEE INTERSECTION WITH FLAGGING OPERATION
246			TYPICAL ONE LANE CLOSURE WITH DETOUR ROUTING
247			TYPICAL DETOUR OPERATION AT 4-WAY INTERSECTIONS
248			TYPICAL DETOUR OPERATION AT TEE INTERSECTIONS
249			TRAFFIC CONTROL FOR TRAFFIC SIGNAL CONSTRUCTION
250			TYPICAL CROSSWALK AND SIDEWALK CLOSURES
251			BARRICADE STANDARD SIDEWALK CLOSURES
252			TXDOT LOW PROFILE CONCRETE BARRIER PRECAST BARRIER (TYPE 1) LPCB-13
253			TXDOT LOW PROFILE CONCRETE BARRIER PRECAST BARRIER (TYPE 2) LPCB-13
			<b>TRAFFIC SIGNAL</b>
254			TRAFFIC SIGNAL GENERAL NOTES
255			EXISTING TRAFFIC SIGNAL LAYOUT ALBA DRIVE AT W 43RD STREET
256			PROPOSED TRAFFIC SIGNAL LAYOUT ALBA DRIVE AT W 43RD STREET
257			PROPOSED CABLE SCHEMATIC ALBA DRIVE AT W 43RD STREET
258			PROPOSED POLES AND LOOP DETECTORS SCHEDULE ALBA DRIVE AT W 43RD STREET
259			TEMPORARY TRAFFIC SIGNAL LAYOUT ALBA DRIVE AT W 43RD STREET PHASE 1 STEPS 9, 11A, 11B AND 12
260			TEMPORARY TRAFFIC SIGNAL LAYOUT ALBA DRIVE AT W 43RD STREET PHASE 3 STEPS 7, 8A, 8B AND 9
			<b>SIGNING AND PAVEMENT MARKING PLANS</b>
261	-	268	GARDEN OAKS SIGNING AND PAVEMENT MARKING PLANS
268A	-	268C	SUMMARY OF SMALL SIGNS
			<b>STREET LIGHTING</b>
269	-	276	GARDEN OAKS STREET LIGHTING PLANS
			<b>TREE PRESERVATION PLANS</b>
277			GARDEN OAKS SHEET ORIENTATION
278	-	296	GARDEN OAKS TREE PRESERVATION PLANS
297	-	302	TREE INVENTORY
303			PLANTING DETAIL/TREE INVENTORY
304	-	306	TREE PRESERVATION DETAILS
			<b>CROSS SECTIONS</b>
307	-	330	CROSS SECTIONS
			<b>STANDARD DETAILS</b>
331	-	333	GENERAL DETAILS - COH STANDARDS
334	-	348	PAVING DETAILS - COH STANDARDS
349			NOT USED
350	-	351	STREET CUT DETAILS- COH STANDARDS
352	-	352H	TRAFFIC DETAIL- COH STANDARD
353	-	353B	STRIPING DETAILS - COH STANDARD
354	-	369	STORM SEWER DETAILS - COH STANDARD
370	-	371	STORM SEWER DETAILS - TXDOT STANDARD
372	-	377	WATER LINE DETAILS - COH STANDARD
378			WATER LINE PROTECTION REQUIREMENTS - COH STANDARD
379	-	385	SANITARY SEWER DETAILS - COH STANDARD

1

DATE: 3/28/2016 7:29:02 AM  
 P:\000094\5-CAD\5900\_DGN\Sheet\094\_Index.dgn

ADDENDUM NO. 2  
 No. 1  
 Date: 3/28/16  
 Revisions



**SDPS**  
Houston Storm Drainage Program Support



**PGAL**  
 TBPE REG. NO. F-2742  
 3131 BRIARPARK, SUITE 200  
 Houston, Texas 77042  
 Phone (713) 622-1444  
 Fax (713) 968-9333



COSTAS K. GEORGIADIOU  
 58255  
 LICENSED PROFESSIONAL ENGINEER  
 STATE OF TEXAS

SURVEYED BY: LANDTECH P-5576  
 FB NO. P-5576

The seal appearing on this document was issued to Costas K. Georgiadiou, P.E. 58255 on March 28, 2016.

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING

INDEX OF SHEETS

WBS NUMBER	M-000285-0001-4
DRAWING SCALE	NTS
CITY OF HOUSTON PM	JEFFREY T. HALL, P.E.
SHEET NO.	2 OF 385



55630

# CONSTRUCTION NARRATIVE

## GENERAL NOTES FOR ALL PHASES/STEPS:

1. PLACE ADVANCE WARNING SIGNS ALONG THE PROJECT AREA.
2. PLACE DETOUR SIGNS ALONG THE PROJECT AREA WHERE APPLICABLE.
3. CLOSE THE STREETS AS PER THE STEPS SHOWN FOR PHASES .
4. RESTORE TRAFFIC TO NEW CONSTRUCTED PAVEMENT BY PROCEEDING CONSTRUCTION WITH BLOCKS AT A TIME.
5. MAINTAIN THE CONSTRUCTION ZONE SPEED LIMIT OF 30 MPH.
6. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
7. MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION. PROVIDE LOW PROFILE CONCRETE BARRIERS (LPCB) AS SHOWN ON THE TYPICAL SHEET (TYP-7) TCP-59A OF 70 FOR PROVIDING ACCESS TO DRIVEWAYS DURING CONSTRUCTION. LPCB'S SHOULD NOT BLOCK THE DRIVEWAY ACCESS DURING CONSTRUCTION.
8. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
9. USE FAST TRACK CONCRETE AT ALBA RD./43RD ST. INTERSECTION.
10. 800 FEET ROLLING CLOSURES. CONTRACTOR SHOULD CONSTRUCT THE UNDERGROUND UTILITIES AND PROPOSED PAVEMENT ON ONE SIDE OF THE STREET PER THE TRAFFIC CONTROL PLAN IN BLOCKS AND MOVE TO NEXT BLOCK BY OPENING TWO-WAY TRAFFIC, ONE DIRECTION ON THE EXISTING PAVEMENT AND OTHER ON THE PROPOSED PAVEMENT. THE TRAFFIC WILL BE SEPARATED BY LPCB WHERE THE ELEVATION DIFFERENCE IN THE EXISTING AND PROPOSED PAVEMENTS EXISTS. SEE TYPICAL SHEET (TYP-7) TCP-59A OF 70 FOR DETAILS.
11. PROPOSED STORM SEWER INCLUDES THE TRUNK LINE, LATERALS, INLETS, WATER LINES, SANITARY SEWER AND ANY OTHER ASSOCIATED UTILITIES.
12. PROPOSED CONCRETE PAVEMENT INCLUDES THE CURBS, PAVEMENT, SIDEWALK AND THE DRIVEWAYS.
13. SEE ROADWAY PLAN AND PROFILE DRAWINGS FOR EXACT WIDTH OF THE PAVEMENTS.
14. SEE ROADWAY PLAN AND PROFILE DRAWINGS FOR LIMITS OF PROPOSED ASPHALT TRANSITION, ASPHALT PAVEMENT AND CONCRETE PAVEMENT.
15. RESTORE THE PAVEMENT WITH ASPHALT FOR THE STORM SEWER LATERALS CONSTRUCTION.

## NOTES :

1. CONSTRUCT THE PROPOSED STORM SEWER BOXES BY ALLOWING FULL CLOSURE OF ROADWAY IN BETWEEN THE TWO CROSS STREETS. CONSTRUCT TEMPORARY ASPHALT PAVEMENT FOR PROVIDING ONE WAY ACCESS TO TRAFFIC DURING CONSTRUCTION OF OTHER HALF OF THE PAVEMENT AS SHOWN IN THE TRAFFIC CONTROL PLANS.
2. CONSTRUCT THE WORK IN PHASES DURING THE CONSTRUCTION PERIOD; COORDINATE CONSTRUCTION SCHEDULE AND OPERATIONS WITH THE CITY OF HOUSTON.
3. THE FOLLOWING PHASES ARE RECOMMENDED FOR THE PROJECT:

PHASE 1: THIS PHASE INCLUDES THE DEMOLITION, CONSTRUCTION OF TEMPORARY ASPHALT, PROPOSED STORM SEWER, UTILITIES, AND PROPOSED PAVEMENT BASE FOR ALBA ROAD. THE LIMITS OF CONSTRUCTION IN THIS PHASE ARE:

ALBA (EAST SIDE) - JUDIWAY TO ALTHEA  
 ALBA (WEST SIDE) - ALTHEA TO CHAMBOARD  
 CONSTRUCTION WILL ALSO TAKE PLACE ON WAKEFIELD DRIVE, 41ST STREET, SUE BARNETT DRIVE (WEST OF ALBA), AND 43RD STREET. THE MAXIMUM ROLLING LENGTH OF EACH CONSTRUCTION SEGMENT SHALL NOT EXCEED 1,500 FEET.

PHASE 2: THIS PHASE INCLUDES THE DEMOLITION, CONSTRUCTION OF TEMPORARY ASPHALT, PROPOSED STORM SEWER, UTILITIES, AND PROPOSED PAVEMENT ON THE NORTH SIDE OF CHAMBOARD AND WEST SIDE OF BRINKMAN.

THE LIMITS OF CONSTRUCTION IN THIS PHASE ARE:  
 CHAMBOARD (NORTH SIDE) -ALBA TO BRINKMAN  
 BRINKMAN (WEST SIDE) - CHAMBOARD TO THE NORTH PROJECT LIMITS

CONSTRUCTION WILL ALSO TAKE PLACE ALONG THORNTON ROAD, CANDLELIGHT LANE, AND LEHMAN STREET (WEST OF BRINKMAN). THE ROLLING LENGTH OF EACH CONSTRUCTION SEGMENT SHALL NOT EXCEED 1,500 FEET.

4. PHASE 3: THIS PHASE INCLUDES THE DEMOLITION, CONSTRUCTION OF PROPOSED STORM SEWER, UTILITIES, AND PROPOSED PAVEMENT BASE AND COMPLETE PAVEMENT CONSTRUCTION FOR THE EAST AND WEST SIDES OF ALBA ROAD. THE LIMITS OF CONSTRUCTION IN THIS PHASE ARE:

ALBA (WEST SIDE) - JUDIWAY TO ALTHEA  
 ALBA (EAST SIDE) - ALTHEA TO CHAMBOARD

CONSTRUCTION WILL ALSO TAKE PLACE ON WAKEFIELD DRIVE, 41ST STREET, SUE BARNETT DRIVE (WEST OF ALBA), AND 43RD STREET. THE MAXIMUM ROLLING LENGTH OF EACH CONSTRUCTION SEGMENT SHALL NOT EXCEED 1,500 FEET.

THE PAVEMENT FINISHED GRADE FOR THE ENTIRE WIDTH OF ALBA WILL BE CONSTRUCTED IN PHASE 3.

CONSTRUCTION WILL PROGRESS FROM SOUTH TO NORTH AND WILL ALSO INCLUDE THE REMAINING PROPOSED WORK ON ALBA ROAD S SIDE STREETS. THE ROLLING LENGTH OF EACH CONSTRUCTION SEGMENT SHALL NOT EXCEED 1,500 FEET.

5. PHASE 4: THIS PHASE INCLUDES THE DEMOLITION, PROPOSED STORM SEWER, UTILITIES, AND PROPOSED PAVEMENT BASE ON THE NORTH SIDE OF CHAMBOARD AND WEST SIDE OF BRINKMAN. THE LIMITS OF CONSTRUCTION IN THIS PHASE ARE:  
 CHAMBOARD (SOUTH SIDE) - ALBA TO BRINKMAN  
 BRINKMAN (EAST SIDE) - CHAMBOARD TO THE NORTH PROJECT LIMITS

CONSTRUCTION WILL ALSO TAKE PLACE ALONG THORNTON ROAD, CANDLELIGHT LANE, AND LEHMAN STREET (WEST OF BRINKMAN) AND OTHER SIDE STREETS AS PART OF THIS PHASE. THE ROLLING LENGTH OF EACH CONSTRUCTION SEGMENT SHALL NOT EXCEED 1,500 FEET.

## ADDITIONAL NOTES FOR CONSTRUCTION PHASING:

1. THE CONSTRUCTION PHASE OF THE PROJECT NEEDS TO GO FROM SOUTH TO NORTH AS THE FOLLOWING SEGMENTS.
2. THESE SEGMENTS ARE ALLOWED TO BE CLOSED A MAXIMUM OF 1500 FEET AT ANY GIVEN TIME
3. ALL STATIONS ARE BASED OFF THE ALBA ROAD CENTERLINE

ALBA ROAD - BEGINNING OF PROJECT (JUDIWAY), TO NORTH OF FISHER STA 22+15 - CONCRETE PAVEMENT SECTION  
 ALBA ROAD - NORTH OF FISHER STA 22+15 TO 43RD STREET INTERSECTION STA 37+02.16 - ASPHALTIC PAVEMENT SECTION  
 ALBA ROAD - 43RD STREET STA 38+10.00 TO CHAMBOARD STA 46+78.04 - ASPHALTIC PAVEMENT SECTION  
 CHAMBOARD - CONCRETE PAVEMENT SECTION  
 BRINKMAN FROM CHAMBOARD TO MARTIN INTERSECTION - CONCRETE PAVEMENT SECTION  
 MARTIN INTERSECTION TO END OF PROJECT (DITCH E101-15-01) - CONCRETE PAVEMENT SECTION

4. REFER TO CONSTRUCTION PLANS FOR EXACT LIMITS OF CONCRETE PAVEMENT SECTION AND ASPHALTIC PAVEMENT SECTION. 43RD STREET INTERSECTION WILL BE CONSTRUCTED AS CONCRETE PAVEMENT SECTION.
5. STORM SEWER ALONG BRINKMAN FROM CHAMBOARD TO CURTIN TO BE DONE IN AN EXPEDITED FASHION AND ACCESS TO BIBLE WAY BAPTIST CHURCH TO BE RESTORED ALONG BRINKMAN, UNTIL SUCH TIME AS ACCESS ALONG CHAMBOARD IS AVAILABLE.
6. IN EACH SEGMENT CONTRACTOR HAS THE OPTION OF BUILDING THE COMPLETE PAVEMENT CROSS SECTION IN ONE PHASE.

ADDENDUM NO. 2	Revisions
1	3/28/16
No.	Date



---



PGAL  
TXBE REG NO. F-2742

3131 BRIARPARK, SUITE 200  
 Houston, Texas 77042  
 Phone (713) 622-1444  
 Fax (713) 988-9333

---



engineers | construction managers  
 TBPE FIRM NO. F-4575  
 3143 YELLOWSTONE BLVD.  
 HOUSTON, TX 77054  
 TEL: (713) 747-2399  
 FAX: (713) 748-3748



VINCENT H. JACOB  
 98325  
REGISTERED PROFESSIONAL ENGINEER  
*Vincent H. Jacob*

---

SURVEYED BY: LANDTECH  
 FB NO. P-5576

3/28/2016

---

**CITY OF HOUSTON**  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING**  
**CONSTRUCTION NARRATIVE NOTES**

---

TCP-2 OF 70

SHEET 1 OF 3

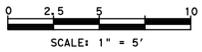
---

<small>WBS NUMBER</small>	<small>FOR CITY OF HOUSTON USE ONLY</small>
M-000285-0001-4	
<small>DRAWING SCALE</small>	
NTS	
<small>CITY OF HOUSTON PM</small>	
JEFFREY T. HALL, P.E.	
<small>SHEET NO. 185 OF 385</small>	



55680

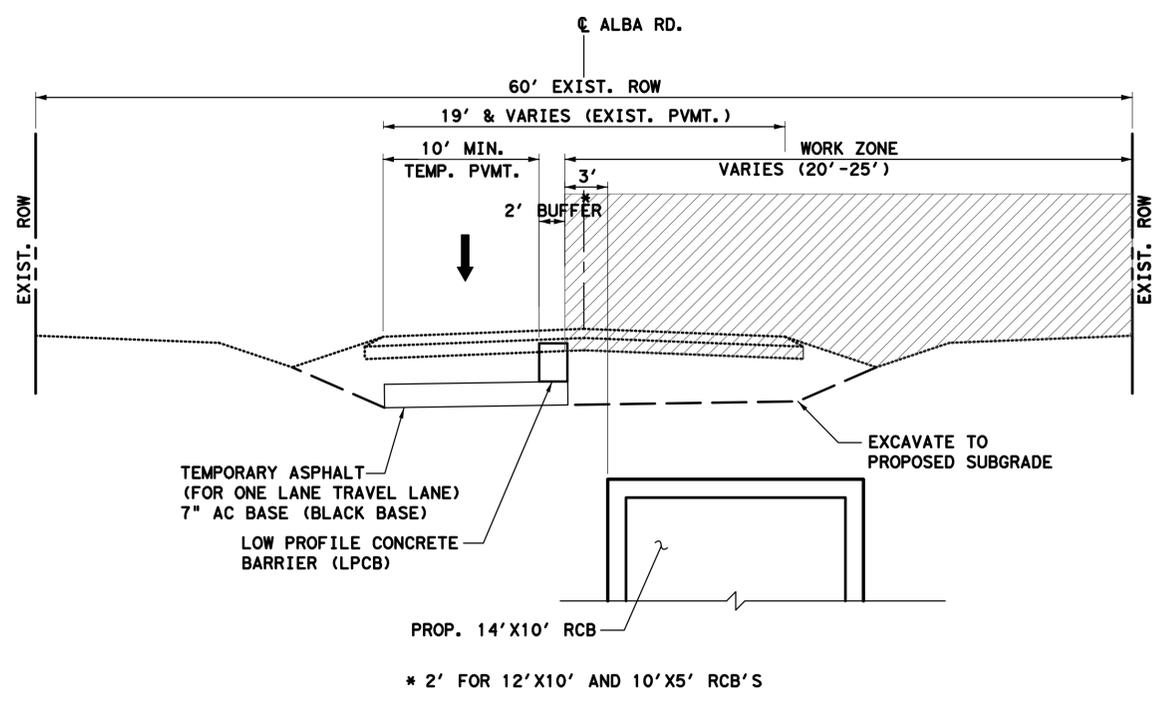
DATE: 3/28/2016 9:45:18 AM PROJECT: USF/USF/Working/Traffic Control Plans/TCP-Narrative.dgn



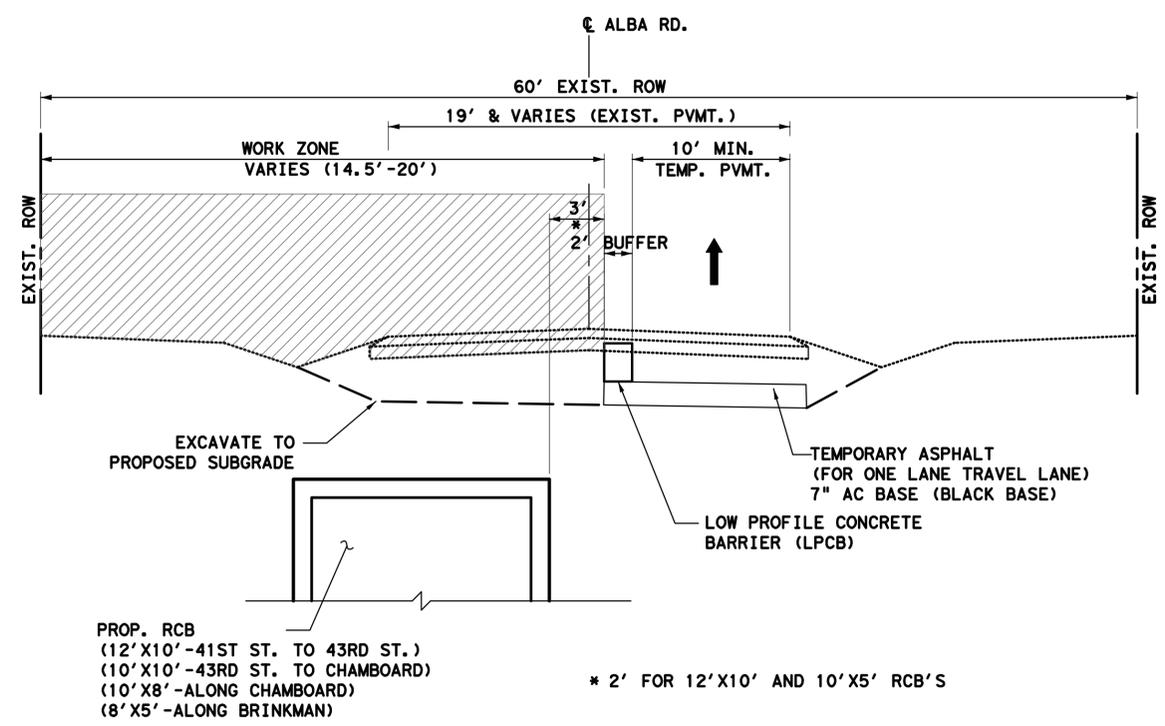
**LEGEND:**

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

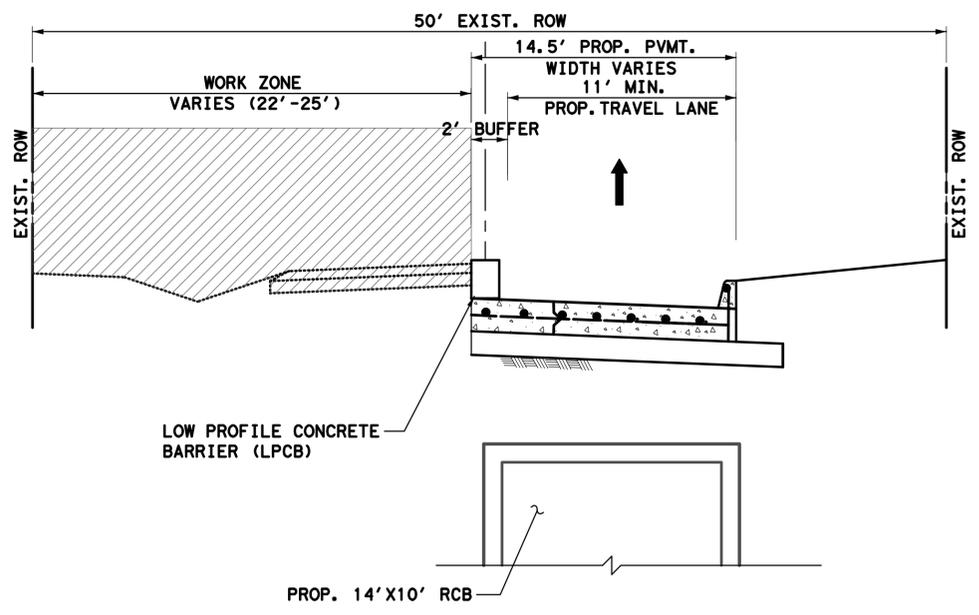
APP.	
ADDENDUM NO. 2	Revisions
No.	Date
1	3/28/16



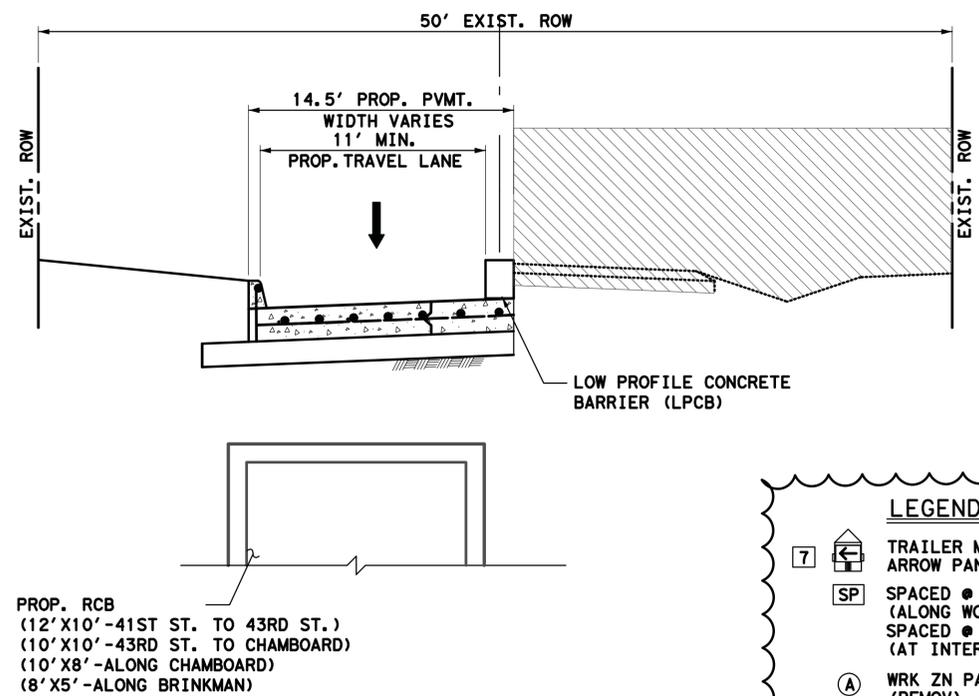
TYPICAL FOR ONE WAY ACCESS DURING CONSTRUCTION OF ONE HALF PVMT. (APPLICABLE TO ALL PHASES)



TYPICAL FOR ONE WAY ACCESS DURING CONSTRUCTION OF OTHER HALF PVMT. (APPLICABLE TO ALL PHASES)



TYPICAL FOR ONE WAY ACCESS DURING CONSTRUCTION OF ONE HALF PVMT. (APPLICABLE TO ALL PHASES)



TYPICAL FOR ONE WAY ACCESS DURING CONSTRUCTION OF OTHER HALF PVMT. (APPLICABLE TO ALL PHASES)

- LEGEND:**
- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
  - SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS)
  - SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
  - WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
  - WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
  - WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
  - WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SEE PROPOSED TYPICAL SECTIONS SHEETS (34-37A) FOR ADDITIONAL DETAILS ON:

1. PROPOSED PAVEMENT AND SUBGRADE THICKNESS
2. PROPOSED PAVEMENT WIDTHS AND CONFIGURATION
3. PROPOSED SIDEWALK AND OTHER DETAILS

**NOTES:**

1. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.

**SDPS**  
Houston Storm Drainage Program Support

**PGAL**  
TBPE REG. NO. F-2742

**iSani** CONSULTANTS  
engineers | construction managers  
TBPE FIRM NO. F-4575  
3143 YELLOWSTONE BLVD. HOUSTON, TX 77054  
TEL: (713) 747-2399 FAX: (713) 748-3748

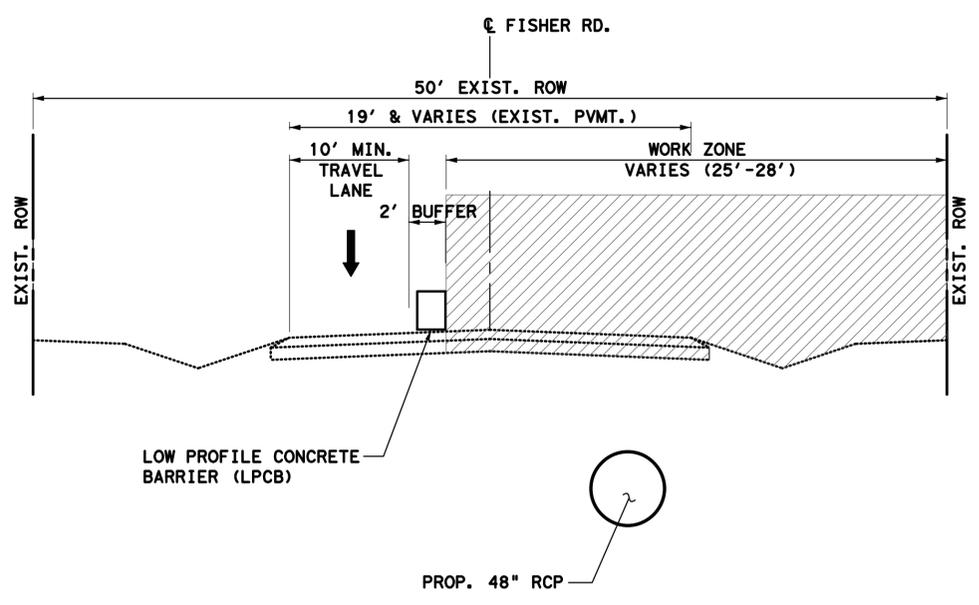
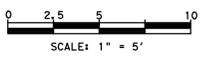
SURVEYED BY: LANDTECH FB NO. P-5576

**CITY OF HOUSTON**  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

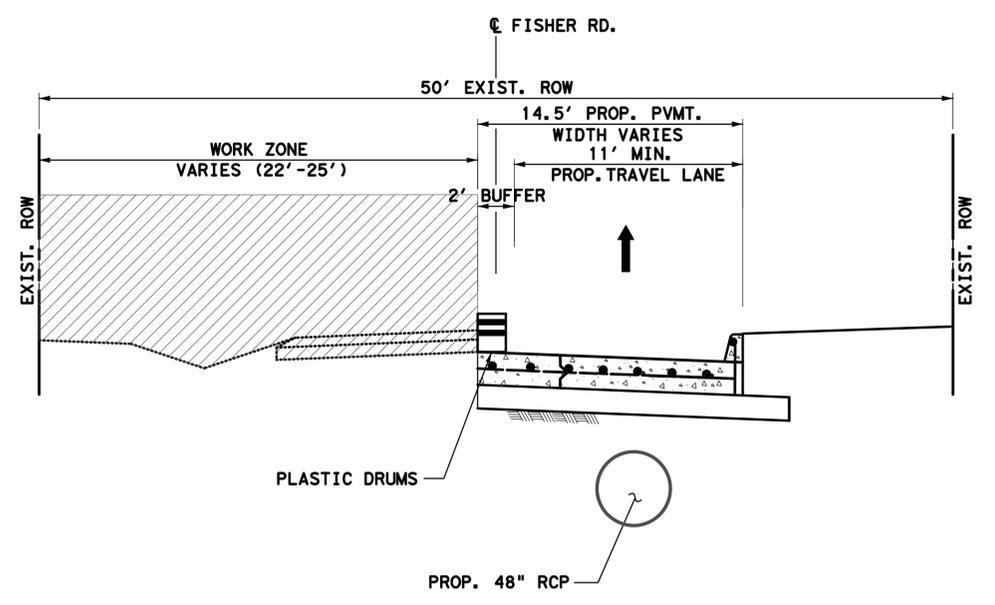
**GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING**  
TRAFFIC CONTROL PLAN TYPICAL SECTIONS

TCP-12 OF 70	SHEET 1 OF 3
WBS NUMBER M-000285-0001-4	FOR CITY OF HOUSTON USE ONLY
DRAWING SCALE 1" = 5'	
CITY OF HOUSTON PM JEFFREY T. HALL, P.E.	
SHEET NO. 195 OF 385	

DATE: 3/28/2016 9:45:21 AM P:\ACTIVE\USP\55\Working\Traffic Control Plans\TCP\Typical Sections\Sheets 1 to 3\_REV.dgn

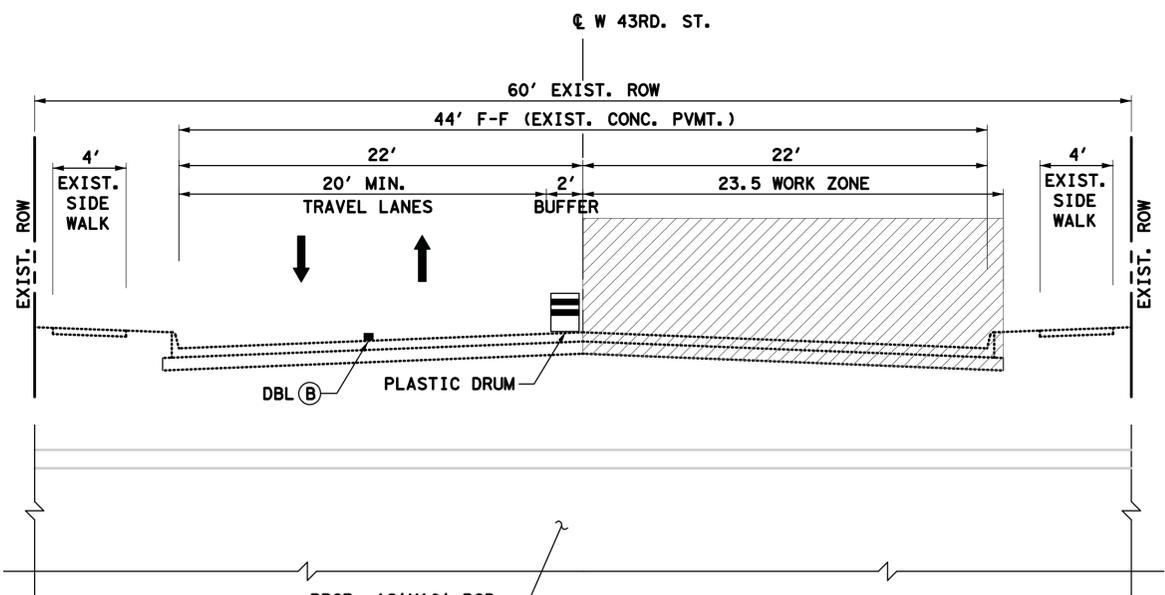


**PHASE 1 STEPS 3A & 3B**  
**PHASE 1 STEP 4A**  
**PHASE 2 STEP 5B**  
 FISHER DR. EB: ALBA RD. TO END PROJECT  
 CANDLELIGHT LN.: BRINKMAN LN. TO END PROJECT

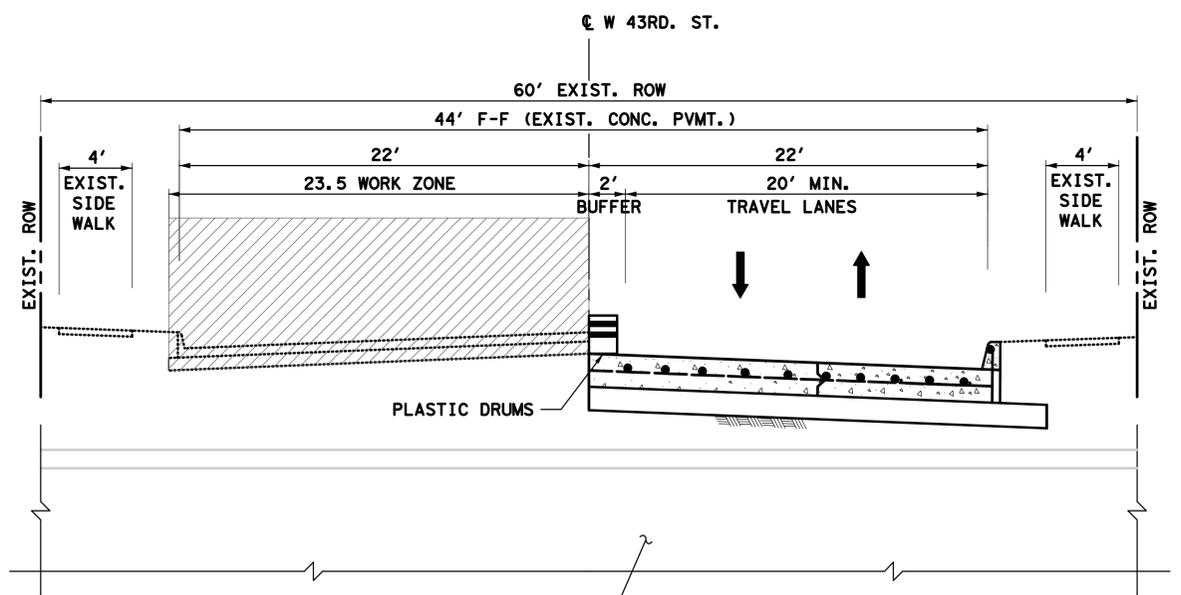


**PHASE 1 STEP 4B**  
**PHASE 2 STEP 5A**  
 FISHER DR. WB: ALBA RD. TO END PROJECT  
 CANDLELIGHT LN.: BRINKMAN LN. TO END PROJECT

- LEGEND:**
- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
  - PERMANENT CONSTRUCTION (PREVIOUS STEP)
  - TEMPORARY ASPHALT PAVEMENT
  - PLASTIC DRUM, CONE, OR TUBULAR MARKER
  - PROPOSED SIGN POST
  - TYPE III BARRICADE
  - PROPOSED TRAFFIC FLOW
  - EXISTING TRAFFIC FLOW
  - LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
  - PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
  - DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
  - DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
  - DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
  - TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



**PHASE 1 STEP 10A AND PHASE 3 STEP 8A**  
**STEP 2 (W. 43RD ST. AND ALBA)**



**PHASE 1 STEP 10B AND PHASE 3 STEP 8B**  
**STEP 3 (W. 43RD ST. AND ALBA)**

- LEGEND:**
- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
  - SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS)
  - SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
  - WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
  - WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
  - WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
  - WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

**NOTES:**

1. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.

SEE PROPOSED TYPICAL SECTIONS SHEETS (34-37A) FOR ADDITIONAL DETAILS ON:

1. PROPOSED PAVEMENT AND SUBGRADE THICKNESS
2. PROPOSED PAVEMENT WIDTHS AND CONFIGURATION
3. PROPOSED SIDEWALK AND OTHER DETAILS

**SDPS**  
Houston Storm Drainage Program Support

**PGAL**  
TBPE REG. NO. F-2742  
3131 BRIARPARK, SUITE 200  
HOUSTON, TEXAS 77042  
Phone (713) 622-1444  
Fax (713) 988-9333

**iSani**  
CONSULTANTS  
engineers | construction managers  
TBPE FIRM NO. F-4575  
3143 YELLOWSTONE BLVD.  
HOUSTON, TX 77054  
TEL: (713) 747-2399  
FAX: (713) 748-3748

STATE OF TEXAS  
VINCENT H. JACOB  
98325  
LICENSED PROFESSIONAL ENGINEER  
*Vincent H. Jacob*

SURVEYED BY: LANDTECH  
FB NO. P-5576  
3/28/2016

**CITY OF HOUSTON**  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

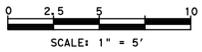
**GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING**  
TRAFFIC CONTROL PLAN  
TYPICAL SECTIONS

TCP-13 OF 70 SHEET 2 OF 3

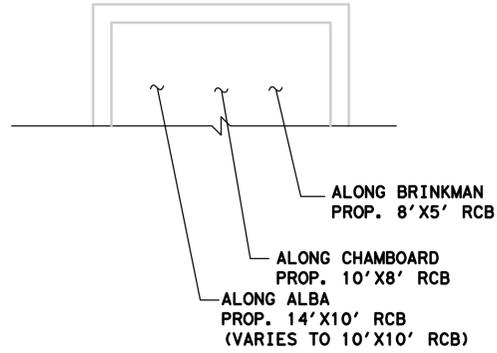
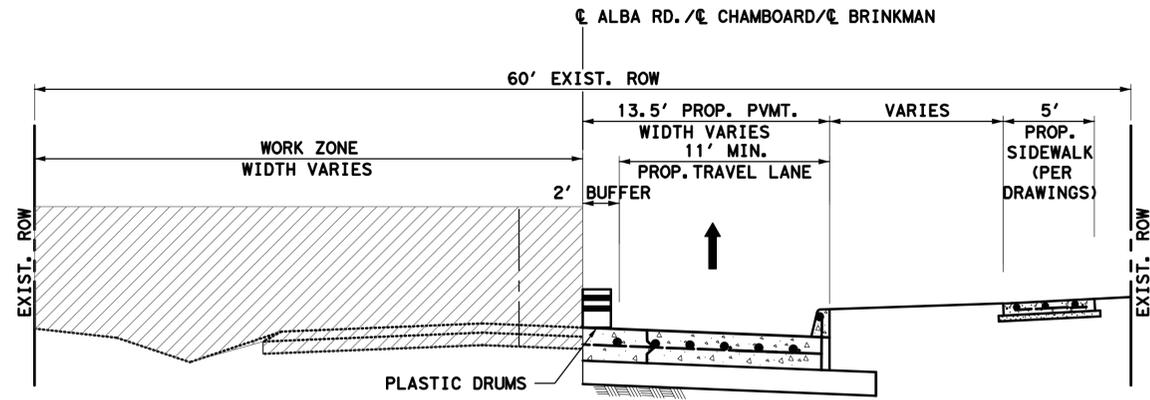
WBS NUMBER M-000285-0001-4	FOR CITY OF HOUSTON USE ONLY
DRAWING SCALE 1"=5'	
CITY OF HOUSTON PM JEFFREY T. HALL, P.E.	
SHEET NO. 196 OF 385	

Garden Oaks\_Traffic Control Plans\_100% Submittal

DATE: 3/28/2016 9:46:22 AM P:\ACTIVE\Users\Working\Traffic Control Plans\TCP-Typical Sections\Sheets 1 to 3\_REV.dgn

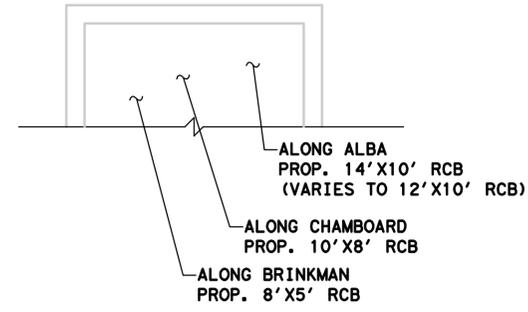
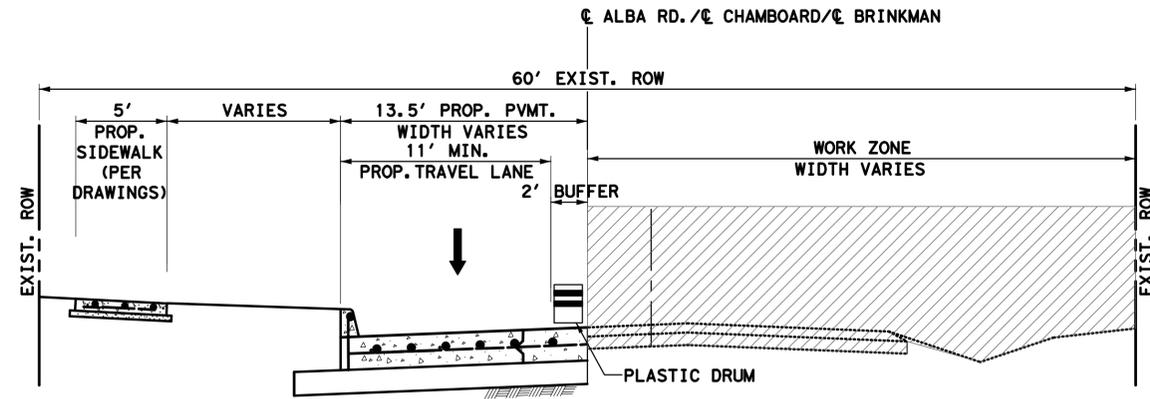


APP. ADDENDUM NO. 2  
Revisions  
1 3/28/16 Date



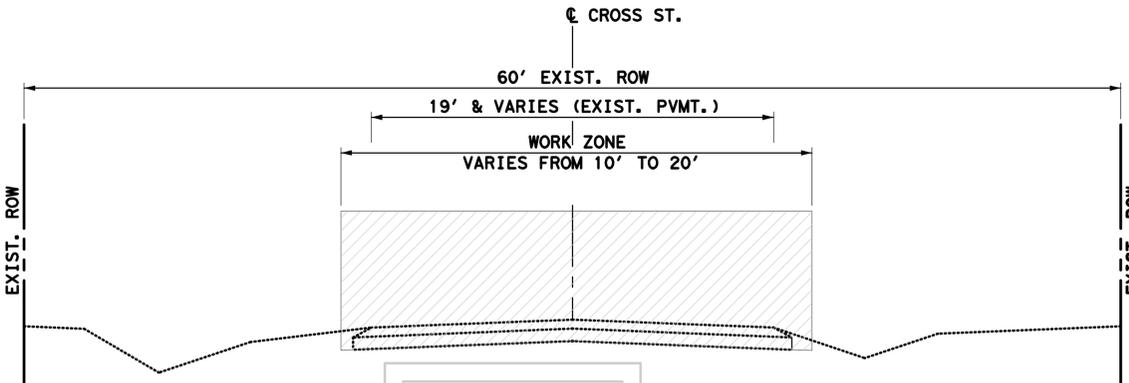
**PHASE 3 STEPS 2 AND 5**

ALBA RD.: BEGIN TO W. 41ST ST.  
(TYPICAL FOR ONE WAY ACCESS DURING  
CONSTRUCTION OF OTHER HALF PVMT.)

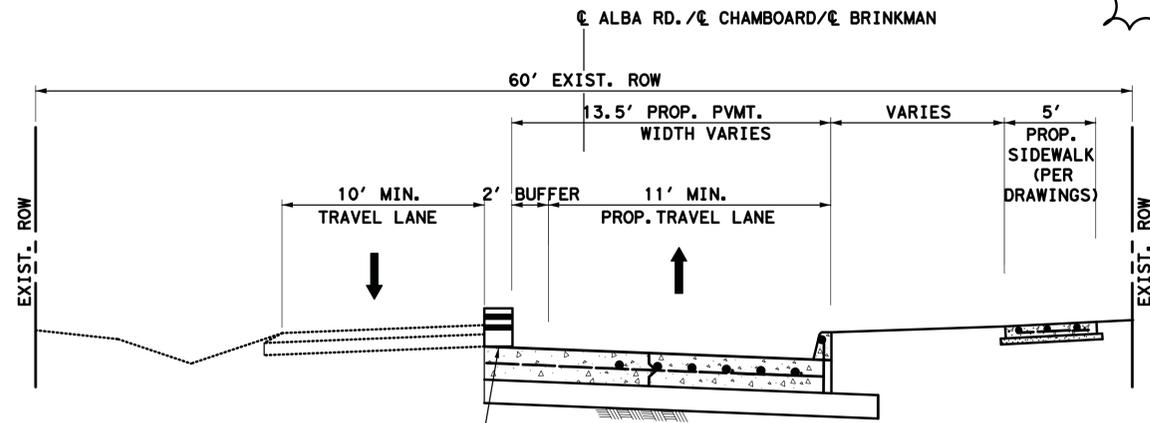


**PHASE 3 STEPS 6, 7, 9 AND 10  
PHASE 4 STEPS 1 THRU 7**

ALBA RD.: W. 41ST STREET TO CHAMBOARD  
CHAMBOARD LN.: ALBA RD. TO BRINKMAN LN.  
BRINKMAN LN.: CHAMBOARD LN. TO END PROJECT  
(TYPICAL FOR ONE WAY ACCESS DURING  
CONSTRUCTION OF OTHER HALF PVMT.)



COMPLETE STREET CLOSURE DURING STORM SEWER INSTALLATION  
SEE SHEET NO. TCP-59C OF 70 FOR TYPICAL TRAFFIC CONTROL  
DURING COMPLETE STREET CLOSURE



TYPICAL SECTION SHOWING HALF CONSTRUCTED TWO-WAY TRAFFIC  
(ONE LANE ON EXIST. PVMT. AND OTHER ON PROP. PVMT.)

**LEGEND:**

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)

**LEGEND:**

- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
- SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS)
- SPACED @ 5' C-C (AT INTERSECTIONS & ON RADII)
- WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
- WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
- WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

SEE PROPOSED TYPICAL SECTIONS SHEETS (34-37A) FOR ADDITIONAL DETAILS ON:

1. PROPOSED PAVEMENT AND SUBGRADE THICKNESS
2. PROPOSED PAVEMENT WIDTHS AND CONFIGURATION
3. PROPOSED SIDEWALK AND OTHER DETAILS

**NOTES:**

1. CONTRACTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER WORK LOCATIONS. LOW PROFILE CONCRETE BARRIER TO REMAIN AT LOCATIONS WHERE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.

**SDPS**  
Houston Storm Drainage Program Support

---

**PGAL**  
3131 BRIARPARK, SUITE 200  
Houston, Texas 77042  
Phone (713) 622-1444  
Fax (713) 988-9333

---

**iSani** CONSULTANTS  
engineers | construction managers  
TBPE FIRM NO. F-4575  
3143 YELLOWSTONE BLVD.  
HOUSTON, TX 77054  
TEL: (713) 747-2399  
FAX: (713) 748-3748

---

**CITY OF HOUSTON**  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING**

**TRAFFIC CONTROL PLAN TYPICAL SECTIONS**

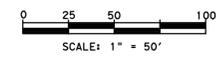
TCP-14 OF 70 SHEET 3 OF 3

WBS NUMBER M-000285-0001-4	FOR CITY OF HOUSTON USE ONLY
DRAWING SCALE 1"=5'	
CITY OF HOUSTON PM JEFFREY T. HALL, P.E.	
SHEET NO. 197 OF 385	

55680

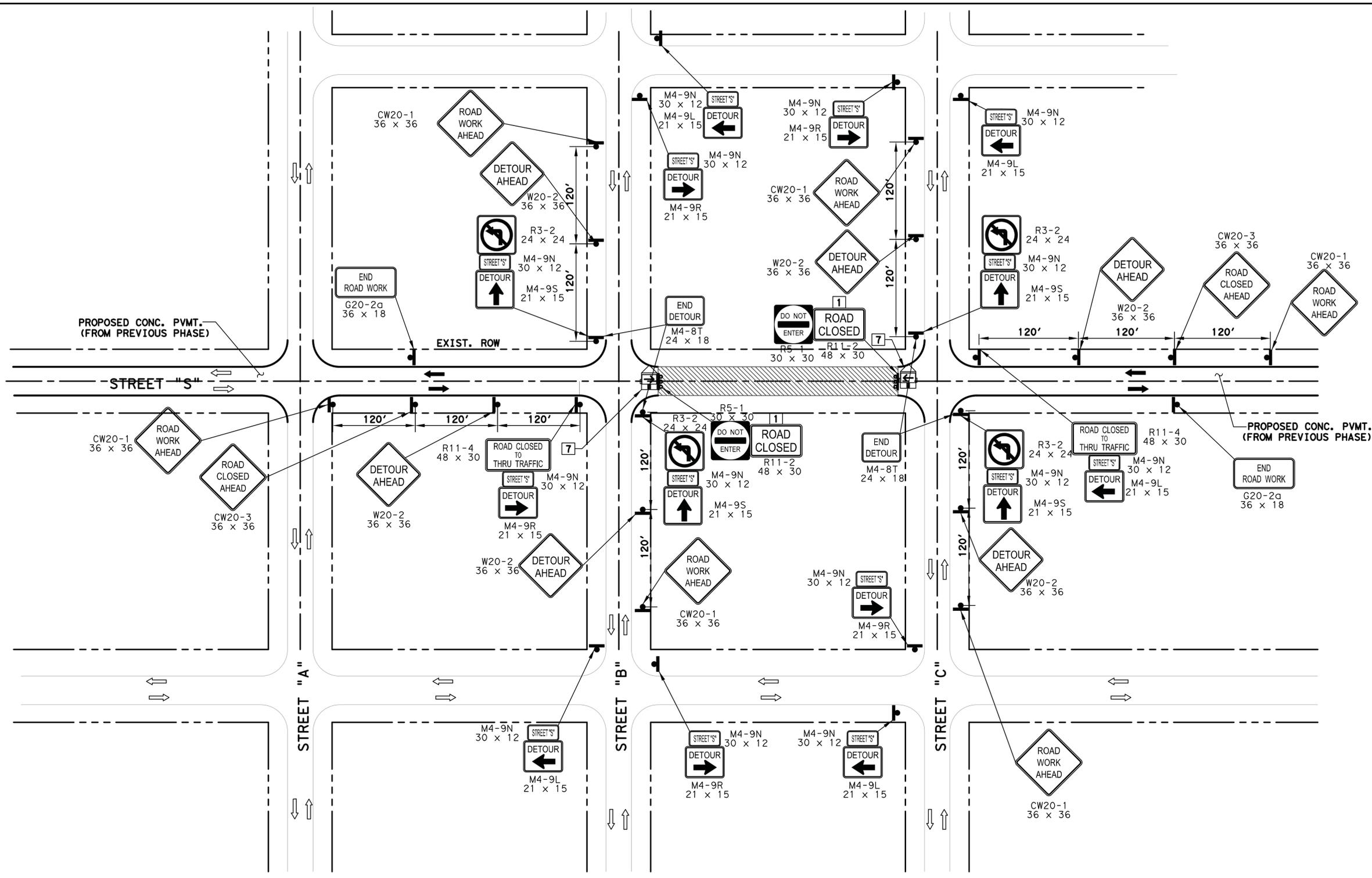
Garden Oaks\_Traffic Control Plans\_100% Submittal

DATE: 3/28/2016 9:45:22 AM  
P:\ACTIVE\USER\SE\Working\Traffic Control Plans\TCP-Typical Sections\Sheets 1 to 3\_REV.dgn



**LEGEND:**

- PERMANENT CONSTRUCTION WORK ZONE (PATTERN VARIES)
- PERMANENT CONSTRUCTION (PREVIOUS STEP)
- TEMPORARY ASPHALT PAVEMENT
- PLASTIC DRUM, CONE, OR TUBULAR MARKER
- PROPOSED SIGN POST
- TYPE III BARRICADE
- PROPOSED TRAFFIC FLOW
- EXISTING TRAFFIC FLOW
- LOW PROFILE CONCRETE BARRIER (LPCB) (TY 1 AND TY 2)
- PLASTIC DRUM (DRUM) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (LEFT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH CHEVRON (CW1-8) ON EVERY OTHER DRUM (RIGHT) (SEE LEGEND SP FOR SPACING)
- DRUM WITH VERTICAL PANEL (SEE LEGEND SP FOR SPACING)
- TUBULAR MARKERS OR TRAFFIC CONES (SEE LEGEND SP FOR SPACING)



- NOTES:**
1. SEE GENERAL NOTES ON SHEET TCP-2 OF 70 IN ADDITION TO THE BELOW.
  2. CONSTRUCTION ZONE SPEED LIMIT: 30 MPH.
  3. NO TWO CONSECUTIVE SIDE STREETS ARE TO BE CLOSED AT THE SAME TIME.
  4. AVOID EXISTING DRIVEWAYS FOR PLACING THE TRAFFIC CONTROL SIGNS.
  5. PLACE LPCB DURING THE CONSTRUCTION OF STORM SEWER AND HALF OF THE PROPOSED PAVEMENT.
  6. PLACE DRUMS DURING THE CONSTRUCTION OF OTHER HALF OF THE PROPOSED PAVEMENT.
  7. CONSTRUCTOR SHALL INSTALL LOW PROFILE CONCRETE BARRIER AT STORM SEWER LOCATIONS. LPCB TO REMAIN AT LOCATIONS WHERE THE ELEVATION DIFFERENCE BETWEEN THE DRIVING SURFACE AND WORK AREA EXCEEDS 18 INCHES.
  8. INSTALL FLASHING ARROW BOARDS OPERATED BY SOLAR POWER.

**ALBA ST. / CHAMBOARD LN. / BRINKMAN ST. (STREET "S")**  
**TYPICAL TRAFFIC CONTROL PLAN WITH FULL CLOSURE**  
**BETWEEN TWO CROSS STREETS**

- LEGEND:**
- TRAILER MOUNTED FLASHING ARROW PANEL (FAP)
  - SPACED @ 20' C-C (ALONG WORK ZONE & TAPERS)
  - WRK ZN PAV MRK 4" SOLID WHITE (REMOV)
  - WRK ZN PAV MRK 4" SOLID YELLOW (REMOV)
  - WRK ZN PAV MRK 24" SOLID WHITE (REMOV)
  - WRK ZN PAV MRK 8" DASHED WHITE (CAT-TRACK) (REMOV)

**SDPS**  
Houston Storm Drainage Program Support

---

**PGAL**  
TBPE REG. NO. F-2742

3131 BRIARPARK, SUITE 200  
Houston, Texas 77042  
Phone (713) 622-1444  
Fax (713) 988-9333

---

**iSani**  
CONSULTANTS  
engineers | construction managers  
TBPE FIRM NO. F-4575  
3143 YELLOWSTONE BLVD.  
HOUSTON, TX 77054  
TEL: (713) 747-2399  
FAX: (713) 748-3748

3/28/2016

---

**CITY OF HOUSTON**  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

---

**GARDEN OAKS AND SHEPHERD PARK (CENTRAL) DRAINAGE AND PAVING**

**TRAFFIC CONTROL PLAN**

**TYPICAL FOR FULL CLOSURE OF ROADWAY (TYP-7B)**

TCP-59C OF 70 SHEET 7B OF 8

---

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
M-000285-0001-4	
DRAWING SCALE	
1" = 50'	
CITY OF HOUSTON PM	
JEFFREY T. HALL, P.E.	
SHEET NO. 242C OF 385	

Garden Oaks\_Traffic Control Plans\_100%\_Submittal

DATE: 3/28/2016 9:45:25 AM P:\ACTIVE\Users\jacob\Working\Traffic Control Plans\TCP-Typical 7B.dgn