

PO # 174087  
 pms Rec 503653

**DANNENBAUM ENGINEERING CORPORATION**

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Stacy Slawinski, P.E.  
 Fort Bend County  
 301 Jackson Street  
 Richmond, Texas 77469-3108

Invoice Date: August 15, 2019  
 Invoice Period: 07/01/19 Through 07/31/19  
 Invoice Number: 479701/05/II

For Professional Services:

In connection with PS&E for FM 521 Expansion Project from FM 2234 to SH 6  
 P.O. Number 174087

DESCRIPTION OF WORK TASK	TOTAL CONTRACT AMOUNTS	PERCENT COMPLETE TO DATE	AMOUNTS EARNED TO DATE	PREVIOUSLY INVOICED AMOUNTS	CURRENT INVOICE AMOUNTS
<b>Final PS&amp;E Engineering</b>					
Roadway Design (Dannenbaum)	\$ 597,189.08	13.52%	\$ 80,714.33	\$ 65,971.16	\$ 14,743.17
Drainage Design (Dannenbaum)	\$ 496,261.25	4.00%	\$ 19,850.44	\$ 9,925.22	\$ 9,925.22
Traffic - Signing & Pavement Marking (Infratech)	\$ 125,958.58	25.36%	\$ 31,937.17	\$ 24,561.92	\$ 7,375.25
Traffic - Signals (Infratech)	\$ 252,812.30	19.13%	\$ 48,374.80	\$ 35,689.64	\$ 12,685.16
Traffic - Illumination (Infratech)	\$ 130,009.66	0.00%	\$ -	\$ -	\$ -
Misc. Roadway & TCP (Dannenbaum)	\$ 518,672.45	12.52%	\$ 64,922.00	\$ 41,457.94	\$ 23,464.06
Structural Design - Broadway Bridge (LJA)	\$ 282,225.00	4.65%	\$ 13,136.70	\$ 9,731.76	\$ 3,404.94
Structural Design - Misc. Structures (Dannenbaum)	\$ 119,876.74	0.00%	\$ -	\$ -	\$ -
Management (Dannenbaum)	\$ 226,646.78	14.97%	\$ 33,931.14	\$ 27,131.74	\$ 6,799.40
Management (LJA)	\$ 83,960.00	14.30%	\$ 12,009.00	\$ 11,273.45	\$ 735.55
Management (Infratech)	\$ 33,415.36	19.67%	\$ 6,571.77	\$ 4,259.20	\$ 2,312.57
<b>Extras</b>					
Survey (LJA)	\$ 224,235.00	47.64%	\$ 106,815.65	\$ 106,815.65	\$ -
ROW Parcel Mapping (LJA)	\$ 310,955.00	29.76%	\$ 92,548.50	\$ 77,123.75	\$ 15,424.75
Geotechnical (Associated Testing Laboratories)	\$ 264,264.00	65.86%	\$ 174,046.75	\$ 157,759.75	\$ 16,287.00
Drainage Impact Study (LJA)	\$ 457,220.00	23.52%	\$ 107,540.00	\$ 64,748.70	\$ 42,791.30
Utility Coordination (Dannenbaum)	\$ 225,379.39	0.00%	\$ -	\$ -	\$ -
SUE (LJA)	\$ 214,405.00	0.00%	\$ -	\$ -	\$ -
Project Initiation & Planning (Dannenbaum)	\$ 30,000.00	100.00%	\$ 30,000.00	\$ 30,000.00	\$ -
Items as Authorized by County	\$ 40,000.00	0.00%	\$ -	\$ -	\$ -
Direct Expenses (Dannenbaum)	\$ 26,725.00	0.00%	\$ -	\$ -	\$ -
Direct Expenses (LJA)	\$ 20,250.00	0.39%	\$ 78.30	\$ 22.04	\$ 56.26
Direct Expenses (Infratech)	\$ 612.00	16.34%	\$ 100.00	\$ 100.00	\$ -
<b>Bid/Construction Phase Services</b>					
Post Design Services (Dannenbaum)	\$ 80,340.29	0.00%	\$ -	\$ -	\$ -
Post Design Services (LJA)	\$ 72,540.00	0.00%	\$ -	\$ -	\$ -
Post Design Services (Infratech)	\$ 34,935.12	0.00%	\$ -	\$ -	\$ -
<b>Total Management &amp; Engineering Fees</b>	\$ 4,868,888.00	16.89%	\$ 822,576.55	\$ 666,571.92	\$ 156,004.63

**TOTAL AMOUNT DUE THIS INVOICE: \$156,004.63**

479701/MJK/II

OK AIA  
 8/22/19

**Progress Report No. 05  
From July 01, 2019 to July 31, 2019  
Report Date: August 12, 2019**

**Project: FM 521 Expansion Project, Precinct 1  
FM 2234 to SH 6**

**Activities this Billing Period:**

**Project Management (Dannenbaum)**

- Held weekly progress conference calls with Project Design Team.
- Coordinated and managed surveying, geotechnical, drainage, and PS&E design efforts.
- Coordinated with Fort Bend County Engineering and TxDOT Project Manager.
- Updated Design Summary Report based on comments from TxDOT.
- Following Design Concept Conference (DCC) held at TxDOT on July 10, revised Design Summary Report and responded to questions from TxDOT. TxDOT requested review and recommendations related to the following potential design changes:
  - Replace Bridge Class Culverts in lieu of extending existing culverts.
  - Remove transitions from Broadway Overpass.
  - Eliminate 14' shared use lanes and replace with designated 5' bike lane.
  - Revise 3% cross slope on outside lane to 2% normal.

**PS&E Design (Dannenbaum)**

- Continued plan set production.
- Continued Project Layouts, Typical Sections, Roadway Plans, and Intersection Layouts.
- Continued Roadway Design. Continued review of proposed profile.
- Continued conceptual Traffic Control Plan and Construction Staging.
- Continued Corridor Model and design Cross Sections. Reviewed storm sewer trunk lines to verify cover. Reviewed and revised ditch flow lines from Drainage Study.
- Reviewed bridge class culvert extensions as requested by TxDOT. Reviewed costs associated with replacing culverts or building bridges in lieu of culvert extensions. Received direction from TxDOT on 08/12 to replace existing culverts with new bridges.
- Reviewed options for Broadway Overpass over FM 521. Provided alternatives to TxDOT for further direction. Received direction from TxDOT on 07/16 to proceed with full bridge width without transitions shown in schematic design.
- Reviewed FM 521 typical section to eliminate 14' shared use lane. Provided several typical section options to TxDOT. Received direction from TxDOT on 08/07 to proceed with revised typical sections that includes 11' lanes, 2' buffers, and 5' bike lanes. The sidewalk width is reduced from 6' to 5'. 14' shared use lanes also removed from Broadway Overpass.
- Revised FM 521 typical section to change 3% cross slope on outside lane to 2% as directed by TxDOT on 08/12.

### **Survey (LJA)**

- Continued surveying field activities and ROW mapping development.
- Completed survey of UPRR tracks. Coordinated with RailPros to complete survey of railroad tracks at intersections.
- Began Level B SUE to identify utility locations.
- Coordinated with utility companies to obtain available information and verify lines are marked.
- Processed field survey results and updated topo DGN files.
- Coordinated with TxDOT to obtain all available information from Transystems. LJA will continue with their scope to complete ROW abstracting & ROW mapping submittal to TxDOT.

### **Geotechnical (Associated Testing Laboratories)**

- Specialized testing: Consolidation is in progress and Multi-Specimen Cu tests require detention pond borings.
- Analysis & Report Preparation: Preparing field data, laboratory tests, and finalized boring logs.
- Continued development of Draft Geotechnical Report.

### **Drainage Study (LJA)**

- Continued development of existing and proposed SWMM and Geopak Drainage Models.
- Coordinated with Dannenbaum to verify major conveyance system and profiles.
- All systems are complete pending review by TxDOT.
- Prepared HEC-RAS models for Clear Creek and Mustang Bayou.
- Created Hydraulic Data Sheets for Bridge Class Culvert crossings at Clear Creek and Mustang Bayou.
- Continued compiling Drainage Study report.
- Met with TxDOT on 08/09 to review proposed conveyance network, detention, profiles, and preliminary drainage findings.

### **Traffic Design (infraTECH)**

- Signing & Pavement Marking: Continued preparation of plans and details.
- Traffic Signals: Prepared preliminary signal layout, phasing, and signal preemption calculation for UPRR Exhibit A.

### **Activities Next Month:**

#### **Project Management (Dannenbaum)**

- Attend Meetings with TxDOT and Fort Bend County.

- Continue weekly conference calls with Project Design Team.
- Continue coordination with sub consultants.

### **PS&E Design (Dannenbaum)**

- Continue plan set production in preparation for 30% submittal to TxDOT.
- Continue conceptual Traffic Control Plan and Construction Staging.
- Continue review of intersections, side streets, driveways, and existing UPRR crossings.
- Continue preparation of plans for UPRR Exhibit A.
- Continue creation of 3D Corridor Model and design Cross Sections. Incorporate Broadway Overpass into model.

### **Survey (LJA)**

- Complete Level B SUE work.
- Complete update to survey CAD file.
- Continue preparation of Right of Way Maps.

### **Geotechnical (Associated Testing Laboratories)**

- Complete draft report for review by design team and for submittal to TxDOT in August.
- Complete final borings at detention ponds upon ROE clearance and authorization.

### **Drainage Study (LJA)**

- Address comments received from TxDOT at 08/09 Meeting.
- Finalize existing and proposed HEC-RAS at bridge and bridge class culvert crossings.
- Complete draft Drainage Study report for submittal to TxDOT in August.

### **Traffic Design (infraTECH)**

- Signing & Pavement Marking: Continue design and sheet production in preparation for 30% submittal.
- Traffic Signals: Prepare signal condition diagram and signal layouts.

### **Approvals and Planned Deliverables next Month:**

- Schedule follow up drainage meeting with TxDOT.



Michael J. Kaspar, P.E.  
Dannenbaum Engineering Corporation