## WORK AUTHORIZATION NO. 3 AGREEMENT FOR ENGINEERING SERVICES

**THIS WORK AUTHORIZATION** is made pursuant to the terms and conditions of Section XIV of the Professional Engineering Services Agreement entered into by and between Fort Bend County, and IDC (the Engineer), on the 26<sup>th</sup> day of January, 2010.

**PART I.** The Engineer will perform engineering services generally described as planning and design work in accordance with the project description attached hereto as part of this Work Authorization. The Engineer's Scope of Work, Labor Estimate, and Schedule are further detailed in Exhibits A, B, and C, respectively, which are attached hereto and made a part of the Work Authorization.

**Part II.** The maximum amount payable under this Work Authorization is \$160,315.00. This amount is based upon fees set forth in Attachment B.

**Part III.** Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with Section II of the Agreement.

**Part IV.** This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on March 31, 2014, unless extended by a supplemental Work Authorization as provided in the Agreement.

**Part V.** This Work Authorization does not waive the parties' responsibilities and obligations provided under the Agreement.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

(Signature)

Jim Geneales

(Printed Name)

President & CEL

(Title)

IDC

9-18-13

(Date)

(Signature)

Robert E. Hebert

(Printed Name

County Judge

4-24-13

(Date)

#### **EXHIBIT A**

## SCOPE OF SERVICE WESTPARK P&R FINAL DESIGN and PS&E WA NO. 3 9/12/2013

## General Scope of the Project

The work to be performed by the Engineer under this contract modification consists of providing design services for constructing the Westpark Park and Ride facilities on Fort Bend County's property, described in F.B.C.C.F No. 972666, located within the 1980 block along the north ROW of FM 1093, approximately 1.0 mile east of Mason Road.

These facilities include separate curb and gutter driveways, from the existing FM 1093 frontage road, and access roads for bus and passenger vehicles, a parking lot for 204 passenger vehicles, a bus loading platform with tactile warning strip and canopy shelter, a building rest room. A right turn-lane/deceleration lane will also be included along the passenger vehicle driveway.

## I Civil Design:

- A. Prepare final site layout and drawings (1"=50") for proposed Right-of-Way for passenger vehicle right turn lane within FBC property and for procurement from HL&P owned property and survey documentation to turnover to TxDOT.
- B. Prepare demolition plans (1"=50') for FM 1093 pavement removal for proposed driveways and right-turn lane and inlet relocation, for other utility relocations and to identify any work to be done by others.
- C. Prepare final typical sections for site improvements
- D. Prepare final plan layout for park and ride facilities showing parking lot, roadways, sidewalks & ADA ramps, driver's restroom building, bus platform, fencing. Include legend for concrete thicknesses and base proposed for roadways, parking pavement and proposed maintenance roadway around detention pond. Show dimension control and ties to bench mark. Provide details for all pavement sections concrete pavement joint details, concrete wheel stop, curb, concrete pavement expansion joint, keyway joint and anchor joint and sidewalk details.
- E. Prepare contour layout (1"=50') for final grading including proposed elevation of high points of pavement/curb at parking, driveway, roadway elevations, platform, sidewalk, restroom slab and detention pond area grading.
- F. Prepare roadway plan and profile sheets for off-site right-turn passenger vehicle driveway/access road and bus driveway/access road. Design passenger access road, driveway for future FBC maintenance vehicle loading. Include traffic control plan for FM 1093 during construction.

#### II Drainage Design

A. Prepare final design area map to mitigate outfall to avoid any increase to the existing TxDOT system and conform to Fort Bend County Drainage Design Manual (latest edition).

- B. Prepare detailed hydraulic calculations necessary to incorporate storm sewer system changes to accommodate the ultimate design of the 10.78 acres site and restrictor sizing at connection to TxDOT facility.
- C. Prepare final storm layout for driveways, right turn lane, access roads, parking/ bus inlets, drainage swale at north end, platform roof drains and show end treatment at driveways,
- D. Prepare storm sewer plan and profiles, to be shown on the parking and driveways and access roads P&P sheets, (1"=20'H, 1"=2'V) will include plan and profile information for storm sewers extensions and relocated inlets.
- E. Prepare storm water detention facility pond/outfall plan, sections and details including reducer sizing connection to relocated TxDOT inlet.
- F. Prepare drainage details for outfall to TxDOT drainage system for TxDOT approval

## III Utility Design

- A. Prepare existing utility layout (1"=50')showing all underground facilities including water, storm sewer, telecommunications, gas, pipelines, and electrical service. Include drainage report.
- B. Provide Utility Company Coordination including: CenterPoint Gas, AT&T and other construction impacted facilities (including telecommunication companies), MUD District No. 8 for water and sanitary sewer service, HL&P for permanent electrical service to the project, and others as required to relocate as needed to avoid delays to construction.
- C. Provide Water Line Design within FBC property for water service to bus platform and driver's restroom to connect to MUD District No. 8's water line, including water meter and back flow prevention control.
- D. Provide Sanitary Sewer Design within FBC property for sanitary service to driver's restroom to connect to MUD District No. 8's sanitary service.
- E. Provide Water and Sanitary Details to meet MUD District No. 8 requirements and Fort Bend County's standards.

#### IV Signing and Striping (Deferred) (note1)

- A. Prepare layouts showing signings and pavement markings for improvements to FM 1093, parking space limits, handicapped parking, bus lanes only, driveways and detention pond entrance for maintenance equipment.
- B. Prepare Advanced Warning Signs and Layout for traffic control
- C. Prepare Signing and Striping Details

## V Miscellaneous Design

- A. Prepare Title sheet and Index
- B. Prepare Quantities and Construction Estimate for FBC review.
- C. Prepare Specifications and General Notes for Construction Bid Package Showing, notes for AT&T Texas/SBC, Paving, Utility lines, Storm Sewer, CenterPoint Energy Gas Notes, Overhead Power Notes.
- D. Prepare SW3P Drawings showing temporary control measures for construction using Fort Bend Erosion Control standards
- E. Prepare Earthwork Cross-sections for earthwork grading quantities.
- F. Coordinate with TDLR pedestrian access ramp review and approvals.
- G. Prepare Project & Construction Schedule
- H Prepare Project Manual
- I. Assemble PS&E

#### VI Parking Area Illumination (Deferred) (note1)

A. Provide Design for Area Lighting and security for parking area and driveways including underground power layout. Provide load analysis and wiring diagrams, electrical riser diagram, underground conduit layout to main service panel.
Provide Site Lighting Photometric plan. Provide Electrical Design for Panel Details and One Line Diagram; Provide Schedule for Wire and Conduit and

## VII Landscaping and Irrigation (Deferred) (note1)

- A. Meet with owner and develop preliminary landscaping design for tree/shrub planting areas.
- B. After preliminary plans are approve by the owner, develop design plans for landscaping layouts and details, and irrigation layout and details.
- C. Prepare final construction plans, specifications and quantities for landscaping and irrigation design.
- D. Prepare bid set documents.

Light Fixtures.

## VIII Architectural and Structural Design

- A. Prepare architectural plans for the bus shelter, platform, and driver restroom building, as defined during preliminary design. Work will include the preparation of construction documents and specifications for the elements including the electrical and plumbing design.
- B. Electrical design for platform lighting, restroom building and the design of conduits and wiring for parking lot lighting.
- C. Structural design for the foundations and frame of the canopy structure, foundations and walls for the restroom building and miscellaneous foundations for platform furniture.

## IX Geotechnical Investigations

- A. Obtain bore hole data and prepare geotechnical report with recommendations for construction of proposed pavement, detention pond, bus loading canopy, and light poles.
- B. A total of 16 bore holes will be drilled; 4 each at 5ft and 6 each at 20 ft.
- C. Prepare 2 copies of draft report for review.
  - \* Boring logs and test data,
  - \* Ground water conditions,
  - \*Generalized subsurface conditions.
  - \* Concrete pavement thickness recommendations,
  - \* Pavement subgrade preparation recommendations,
  - \* Slope stability analysis for the detention pond,
  - \* Light pole foundation recommendations,
  - \* Canopy foundation recommendations,
  - \* structural fill requirements and general earthwork recommendations
- D. Incorporate review comments and prepare 2 final copies.

Note: Tasks VI, VI & VII are deferred to WA No. 4

## EXHIBIT B FINAL DESIGN AND PS&E 9/12/2013

## IDC

# WESTPARK P&R FINAL DESIGN WA NO. 3

TASK DESCRIPTION	COST
I. Civil Design	
A. Final Site Layout	\$2,470
B. Demolition Plan	\$663
C. Final Typical Section	\$3,200
D.Final Plan Layout	\$8,200
E. Contour Layout	\$6,800
F. Off-site for - RT Turn Lane & Bus Driveway	\$11,130
SUBTOTAL TASK	\$32,463
II. Drainage Design	
A. Final Design Area Map	\$1,137
B. Hydraulic Calculations	\$3,277
C. Final Storm Sewer Layout	\$2,800
D. Storm Sewer Profiles (1"=40')	\$3,958
E. Storm Water Detention Facility Pond/outfall	\$5,741
F. Drainage Details Outfall to TxDOT	\$3,432
SUBTOTAL TASK	\$20,345
III. Utility Design	
A. Existing Utilities Layout	\$1,980
B. Utility Company Coordination	\$1,713
C. Water Line Design	\$3,607
D. Sanitary Sewer Design	\$3,607
E. Water and Sewer Details	\$2,493
SUBTOTAL TASK	\$13,400
IV. Signing and Striping (Deferred)(note1)	
A. Siging and Striping Layout	
B. Advanced Warning Signs Layout	
C. Signing and Striping Details	
SUBTOTAL TASK	\$0
V. Miscellaneous Design	
A. Title Sheet and Index	\$1,731
B. Quantities and Construction Estimate	\$1,496
C. Specifications & General Notes	\$1,710
D. SW3P Drawings	\$1,085
E. Earthwork Cross-sections	\$3,045
F. TDLR Coordination	\$936
G. Project & Construction Schedule	\$1,023
H. Prepare Project Manual	\$2,305
I. Assemble PS&E	\$1,298
SUBTOTAL TASK	\$14,629

TASK DESCRIPTION	COST
VI. Parking Lot Illumination (Deferred) (note1)	
A. Design for Area lighting	
Subtotal	\$0
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VII. Landscaping and Irrigation (Deferred)(note1)	
A. Preliminary Plans	
B. Design Development	
C. Construction documents	
D. Bidding	
SUBTOTAL TASK (note 1)	\$0
VIII. Architectural and Structural (PGAL)	
A. Architectural Design	
1. Cover Sheet	\$550
2. Index of Drawings	\$550
3. Code Sheet	\$1,310
4. ADA Information	\$1,320
5. Typical Mounting Heights	\$1,650
6. Floor Plan	\$4,580
7. Roof Plan/Details	\$3,720
8. Reflected Ceiling Plan	\$2,290
9. Plan Details	\$5,240
10. Exterior Elevations	\$4,160
11. Building Sections	\$3,500
12. Wall Sections	\$1,750
13. Interior Elevations/Details	\$3,500
14. Electrical/Plumbing/Security	\$3,050
Subtotal Architectural Design	\$37,170
B. Electrical Design for Canopy/Toilets	\$3,000
C. Structural Design	
1. Foundation Plan	\$1,290
2. Foundation Details	\$1,290
3. Framing Plan	\$2,310
4. Framing Elevations & Details	\$4,710
5. Calculations	\$3,960
6. Miscellaneous Details	\$3,830
Subtotal Structural Design	\$17,390
SUBTOTAL TASK	\$57,560

TASK DESCRIPTION	COST
X. Geotechnical Investigations	
A. Field Exploration	\$7,358
B. Laboroatory Testing	\$8,512
C. Prepare Draft Report	\$5,048
D. Prepare Final Report	\$1,000
SUBTOTAL TASK	\$21,918
TOTAL COST	\$160,315

NOTE 1: Items IV, VI & VII are included in WA No. 4.



EXHIBIT C
WA #3
MILESTONE SCHEDULE
FORT BEND COUNTY PARK AND RIDE PLANNING AND DESIGN
WESTPARK P&R FACILITY

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