

CAMINO REAL REGIONAL MOBILITY AUTHORITY BOARD RESOLUTION

WHEREAS, the Camino Real Regional Mobility Authority (CRRMA) has partnered with the Texas Department of Transportation (TxDOT) for the development of the Americas Managed Lanes Project and the State Loop 375 Frontage Road Ramps Project, whereby the CRRMA agreed to provide the environmental and preliminary engineering services for such projects; and

WHEREAS, the CRRMA entered into Work Authorization No. 2 with AECOM for the preparation of schematic, environmental document and Plans, Specifications and Estimates for the State Loop 375 Frontage Road Ramps Project, which was subsequently amended to add scope and fees for additional work; and

WHEREAS, TxDOT has requested that AECOM's scope be further revised to permit for the restructuring of the procurement packages associated with the referenced projects and the CRRMA and AECOM now desire to amend Work Authorization No. 2 to reflect such changes in Work Authorization No. 2.

NOW, THEREFORE, BE IT RESOLVED BY THE CAMINO REAL REGIONAL MOBILITY AUTHORITY:

THAT the Executive Director be authorized to execute Amendment No. 2 to Work Authorization No. 2 with AECOM, including any additional documents or materials as may be required, in relation to the restructuring of the Plans Specifications and Estimates packages for the State Loop 375 Frontage Road Ramps Project.

PASSED AND APPROVED THIS 13TH DAY OF FEBRUARY 2019.

**CAMINO REAL REGIONAL
MOBILITY AUTHORITY**

ATTEST:

Susan A. Melendez, Chair

Joe R. Fernandez, Board Secretary

APPROVED AS TO CONTENT:

Raymond L. Telles
Executive Director

AMENDMENT NO. 2

**WORK AUTHORIZATION NO. 2
CONTRACT FOR ENGINEERING SERVICES**

THIS AMENDMENT NO. 2 is made pursuant to the terms and conditions of Article 5 of the Contract for Engineering Services dated August 18, 2015 (the “Contract”) entered into by and between the CAMINO REAL REGIONAL MOBILITY AUTHORITY (the “CRRMA”) and AECOM (the “Engineer”).

This Amendment No. 2 seeks to amend Work Authorization No. 2 dated September 13, 2017, which was revised through Amendment No. 1 dated August 21, 2018. The Work Authorization and Amendment No. 1 were executed by and between the parties pursuant to the Contract for the development of the project known as State Loop (SL) 375 Frontage Rd Ramps Project, along SL 375 from Zaragoza POE to North Loop (FM 76).

The terms and conditions of Work Authorization No. 2, as revised by Amendment No. 1, are hereby further revised to: (1) replace the scope of services originally included in the Work Authorization as Exhibit B with the services identified herein as Exhibit B-2; and (2) supplement the fee schedule originally included in the Work Authorization, and supplemented by Amendment No. 1, with the fee schedule attached hereto as Exhibit D-1. Exhibit B-1 from Amendment No. 1 remains in full force and effect, while both Exhibit B-2 and Exhibit D-1 are attached hereto and incorporated herein for all purposes. Now, therefore, the maximum amount payable under Work Authorization No. 2 through this Amendment No. 2 is **\$2,892,994.68**.

This Amendment No. 2 shall become effective on the date of final execution of the parties hereto. All other terms and conditions of Work Authorization No. 2, as amended, not hereby revised are to remain in full force and effect.

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

AECOM

**CAMINO REAL
REGIONAL MOBILITY AUTHORITY**

By: _____

By: _____

Name: _____

Raymond L. Telles
Executive Director

Date: _____

Date: _____

EXHIBIT B-2

SERVICES TO BE PROVIDED BY THE ENGINEER

I. PROJECT SUMMARY

The State Loop (SL) 375 Braided Ramps Project is along SL375 from Zaragoza POE to North Loop (FM 76). The existing SL 375 is currently a 4 lane divided roadway. Work to be performed consists of frontage road improvements including north and south bound frontage road bridges over the UPRR, adding proposed braided ramps for Loop 375 (Americas Avenue) as follows: Two sets of braided ramps between Zaragoza POE and Pan American Drive, one set in the Northbound direction, including widening of the Loop 375 northbound mainlane over Pan American Dr. and one set in the Southbound direction; One set of braided ramps in the Southbound direction between Alameda Avenue and North Loop Drive and frontage road and major intersection improvements. This project will also consist of CPR, illumination, safety appurtenances, drainage, signing, and striping.

The project is anticipated to follow the submission dates of 60% PS&E Feb 16, 2018, 90% PS&E – March 27, 2018, 100% PS&E -May 21, 2018, Ready to let June 8, 2018 for a TxDOT let in August 2018. **The project scope was revised to meet allocated project Funds and an October 2018 letting as directed by TxDOT.**

Professional Services will be provided by the Engineer to produce final plans, specifications, and estimate (PS&E) such that the project can be let and constructed. The project will construct frontage bridges over UPRR, braided ramps and realign portions of the frontage roads along SL 375 from Zaragoza POE to North Loop; specifically braided ramps at Pan American and Zaragoza exits and entrances for the realignment of the truck traffic at the Zaragoza Port of Entry as detailed in the schematic for CSJ 2552-03-058. These services generally will include limited topographic surveying, pavement design, bridge design, development of roadway geometry, drainage design, traffic, ITS, geotechnical investigation, illumination, adjacent project coordination, document preparation, and design services necessary for the preparation of PS&E. Coordination with the COEP, El Paso County Water Improvement District #1, adjacent project design consultants, TXDOT and all utilities is required along with limited coordination with Union Pacific Railroad. The Engineer will also support the CRRMA and TxDOT in responding to any questions received by prospective bidders. Construction phase services, covered under a supplemental work authorization, will be limited to responding to requests for information, checking submitted shop drawings, change orders and developing final as-built plans as requested.

II. SERVICES TO BE PROVIDED BY THE ENGINEER

Professional services to be provided by the Engineer will conform to the latest editions of the TXDOT Project Development Process Manual, the Roadway Design Manual, Hydraulic Design Manual, the Bridge Design Manual-LRFD, Geotechnical Manual, Highway Illumination Manual, R/W Utility Manual, the PS&E Preparation Manual, and other applicable codes, ordinances, criteria, standards, regulations, policies,

guidelines, practices and procedures. Seismic analysis/design of the structures is not required except to ensure that the cap width is sufficient for movement.

The Engineer will work at the direction and supervision of the CRRMA Executive Director and its consultants, providing reports and findings, as required. The Engineer will work cooperatively and collaboratively with other governmental agencies and design consultant firms who are responsible for adjacent projects or jurisdictional approval.

Scheduling of activities below will conform to established CRRMA, TxDOT and/or other municipal review and comment periods for each deliverable of the project. The Engineer will meet the following project submission dates: 60% PS&E - Feb 16, 2018, 90% PS&E - March 27, 2018, 100% PS&E - May 21, 2018, Ready to let June 8, 2018 for a TxDOT let in August 2018 to meet all the associated TxDOT District Design Review Meetings.

The services to be provided by the Engineer may include, but is not limited to, the following key elements:

- Project Management
- Surveying
- Geotechnical Investigations
- Drainage Design
- Plans, Specifications and Estimates
- Utility coordination and accommodation

A. Project Management

The Engineer, in coordination with the CRRMA, will be responsible for directing and coordinating all activities related to the Project. Project management and administration tasks shall include a Project Management/Work Plan, Progress Reporting, Coordination/Administration, Project Control/Scheduling, and Subconsultant Management. The prime provider's efforts shall include but not limited to the following:

1. Project Management/Work Plan
 - 1.1. Develop a Project Management/Work Plan to reflect the following:
 - Organization and responsibilities
 - Coordination and communication procedures
 - Coordination meetings
 - Deliverables
 - Graphic production standards
 - Quality control/ Quality Assurance (QC/QA) procedures plan to ensure the accuracy and quality of the deliverables produced
 - Other important operational information pertaining to prime provider/CRRMA collaboration.
 - A Plan to meet the DBE goal of 10%
2. Progress Reporting
 - 2.1. Prepare and submit to the CRRMA monthly progress reports of activities completed during reporting period.
 - 2.1.1. Activities Completed
 - 2.1.2. Initiated and Ongoing Activities
 - 2.1.3. Planned Activities

- 2.1.4. Problems Encountered/Problem Remedies
 - 2.1.4.a. Review Design Alternatives Developed to meet TxDOT Budget Constraints
- 2.1.5. Overall Status including Tabulation of Percentage Complete by Task
- 2.1.6. Updated Project Schedule
 - 2.1.6.a. Revised Project Schedule to meet TxDOT Letting and Budget Constraints
- 2.2. Prepare and Submit Invoices. The progress report shall be submitted as an attachment to the invoice submittal.
 - 2.2.1. Financial and DBE Participation
 - 2.2.1.a. Revised Financial and DBE Participation to include Revised Project
 - 2.2.2. Hours Worked by Individual
 - 2.2.3. Hourly Rate
 - 2.2.4. Monthly Invoice Amount as Compared to Baseline Monthly Estimate
 - 2.2.5. Monthly Cumulative Invoice Amount as Compared to Baseline Monthly Cumulative Estimate
 - 2.2.6. Reasons for Deviations from Baseline
3. Coordination/Administration
 - 3.1. The Engineer shall prepare for and attend one kick-off meeting to discuss project guidelines and present general project requirements and expectations.
 - 3.2. Maintain a communication tracking system, identifying all formal communications.
 - 3.3. Coordinate with the CRRMA's GEC staff regularly throughout project development.
 - 3.3.a. Coordinate Revised Design alternatives with CRRMA GEC Staff
 - 3.4. Coordinate with Schematic consultant
 - 3.4.a. Coordinate Revised Design alternatives with Schematic consultant
 - 3.5. Coordination with TxDOT (additional effort for schematic revisions / update)
 - 3.5.a. Coordinate Revised Design alternatives w/TxDOT
4. Project Control/Scheduling
 - 4.1. Develop and maintain a Master Schedule for the Project indicating tasks/subtasks, critical dates, milestones, deliverables, and review requirements.
 - 4.2. Update Schedule on a Monthly Basis
 - 4.3. Include all CRRMA GEC, TXDOT and other 3rd Party Reviews in the Schedule
5. Subconsultant Management
 - 5.1. Develop and implement a plan to manage subconsultants (as part of the project management plan).
 - 5.2. Prepare subcontracts for subconsultant(s).
 - 5.3. Monitor subconsultant activities (staff and schedule).
 - 5.4. Review and recommend approval of subconsultant progress reports and invoices.

Deliverables

- Project Management Plan
- Summaries of all meetings
- Project Schedule and monthly updates
- Subconsultant Contracts, Progress Reports and Invoices

B. Surveying

All surveying shall comply with the Professional Land Surveying Practices Act, Article 5282c, Vernon's Texas Civil Statutes. All surveying shall comply with applicable rules promulgated by the Texas Board of Professional Land Surveying. The Manual of Practice published by the Society of Professional Surveyors shall be used as a guide in determining accuracy requirements and procedures

to follow. The prime provider's field surveying efforts shall include the following:

1. Project Control

Primary ground survey will be provided by the CRRMA

- 1.1. Verify primary and secondary control monuments established by others using GPS methods. The horizontal and vertical datum for the existing control monuments will be as follows:
 - Horizontal – Texas State Plane Coordinate System of 1983(NAD-83 State Plane Coordinates) (EPOCH: 2011)
 - Vertical – NAVD 88, GEOID 12B.
- 1.2. Establish secondary project control for bridge details based on the verified primary and secondary controls established by others.

2. Ground Survey

- 2.1. The boundary and topographic improvements survey of the Loop 375 roadway corridor will be conducted by others and provided to the Engineer by the CRRMA.
- 2.2. The Engineer will obtain supplemental survey to augment the provided boundary and topographic improvements survey within the project limits, as needed. Survey information beyond/outside the ROW will require permission from the impacted property Owner(s). Requests for access from private property owner(s) and surveys in private property will be the responsibility of the Engineer.
 - A telephone order to Dig Tess will be placed to have the underground utilities marked (painted) on the surface. The survey will include tying these marks.
 - The topographic survey provided to the Engineer, will include tying all visible utility features to include the following: water valves; water meters; sanitary sewer manholes; storm sewer manholes; electrical manholes; power poles; light poles; overhead lines; electrical control panels; traffic signals; traffic signs; telephone manholes and pedestals; stem walls; chain link fences; rock walls; trees, etc. The Engineer will augment the provided topographic survey to include tying in utility features in the project limits not included in the provided survey.
 - The provided survey will also include existing pavement, bridge structures, culverts, paint stripes, existing asphalt and concrete driveways, existing concrete sidewalks, ditches, stairs, steps, and existing concrete curb and gutter.
- 2.3. The Engineer will survey the following within the project limits:
 - PAN AMERICA BRIDGE; NBML structure, need clearances (underneath: abutment locations, bent/column locations, all cap elevations, limits of riprap/ retaining wall & their elevations/section, roadway and median detail). Also, NBML on top need deck elevations on the outside (shoulder and edge of deck for widening purposes, rail location and elevation; NBML shoulder & edge of pavement elevations from station 154+00 to 172+00. SBML structure (underneath: southside abutment location, cap elevation, riprap & retaining wall on the southwest side or intersection to 157+00, SBML shoulder & edge of pavement elevations from station 157+00 to 162+50.
 - SOCORRO DRIVE BRIDGE; most southern U-Turn under bridge, need clearances, abutment cap location and elevation, inside bent/column location and cap elevations, riprap location slope, retaining wall location elevation, top of curb in U-Turn, retaining wall and top of curb location with elevations for 300 feet on both northbound and southbound frontage roads.
 - ALAMEDA DRIVE BRIDGE; northbound main lane northeast section of bridge at U-Turn only, under bridge, need clearances, abutment cap location and elevations, inside bent/column location and cap elevation, riprap location slope, retaining wall location

- elevation, top of curb in U-Turn, retaining wall and top of curb location with elevations for 300 feet on northbound frontage road.
 - CANAL/RAILROAD BRIDGE; new frontage road bridges (NB & SB) proposed – complete survey of the existing U-TURN (NEED CLEARANCES) on both sides of canal/railroad. Existing bent locations, cap elevations, riprap slopes, retaining wall location, elevations and top of curb elevation for 300 feet on frontage road (4 sides). Nothing on top of the bridges.
 - NORTH LOOP BRIDGE; southwest corner of intersection from U-Turn only (SBML) (underneath: abutment locations, cap elevations, bent/column locations and cap elevations, limits of riprap, retaining walls, top of curb and their elevations. Section under the SBML to centerline, U-Turn roadway and median detail). NBML on top need deck elevations on the outside (shoulder and edge of deck, rail location and elevation to interior bent, shoulder and edge of pavement elevations from south end of bridge at or near station 240+00.
 - Drainage structure details for two (2) laterals being the Southside Road lateral at or near station 240+00 and the Juan De Herrera lateral at or near station 243+90.
 - Utilities (Level B & C) within the project limits, as well as all TxDOT utilities.
 - Locate four (4) Level A potholes, locations to be determined.
 - Locate approximately 43 boreholes.
 - Survey and coordinate access on lateral/canal ROW for topography, planimetric features and or elevations/cross-sections.
- 2.4. The Engineer will supplement design survey for any missing or obscured areas Lidar mapping could not obtain within the project area.
- 2.5. Coordinate access on UPRR Railroad ROW for any additional topography needed (RR track elevations to be obtained by others).
- 2.6. The Engineer will provide all traffic control, labor and equipment needed for the Traffic Control Plan while performing services along Loop 375 ROW, including the proposed braided ramps locations, roadway shoulder, pavement edge, rail and deck edge of bridges
- 2.7. Prepare a base map based on the proposed alignment and existing information.
- 2.11. ADDITIONAL SURVEY
- 2.11..1. The Engineer will obtain Obtain Right-of-Entry on three (3) sites along the SB-NB Turnaround north of the UPRR.
 - 2.11..2. Topographic, Planimetric and Utility Surveys on three (3) additional sites with a fourth (4) site being on Kathy Ave to Inglewood Dr. at the Newman Lateral
 - 2.11..3. Perform a Right-of-way retracement at or near all four additional sites
 - 2.11..4. Perform additional boundary surveying along Kathy Ave and Inglewood Drive at the Newman Lateral
 - 2.11..5. Write four (4) metes and bounds with sketch for easements
 - 2.11..6. Traffic Control Plan -The Engineer will provide all traffic control, labor and equipment needed for the Traffic Control Plan while performing services along Loop 375 ROW
 - 2.11..7. Process analyze QA/QC easements descriptions, 2D and merge 3D file
 - 2.11..8. Final Planimetric and Topographic Base Map showing all mapped planimetrics and supplemental field survey data described above.

Deliverables

- Final planimetric and topographic base map showing all mapped planimetrics and supplemental field survey data described above.

- Final Triangulated Irregular Network (TIN) file.
 - All electronic files shall be fully compatible with the State’s MicroStation GeoPak system without further modification or conversion.
 - All MicroStation V8 2D and 3D files will be in U.S. survey feet.

D. Geotechnical Investigations

1. Subsurface Exploration and Testing.

The Engineer shall determine the location of proposed soil borings for bridge design and embankment settlement analysis in accordance with the latest edition of the State’s Geotechnical Manual. The CRRMA will review and provide comments for a boring layout submitted by the Engineer showing the general location and depths of the proposed borings. Once the Engineer receives the State’s review comments, the Engineer shall perform soil borings (field work), soil testing and prepare the boring logs in accordance with the latest edition of the State’s Geotechnical Manual and District’s procedures and design guidelines. American Society for Testing Materials (ASTM) test procedures are only allowed in the absence of the State’s procedures. All soil classification shall be done in accordance with the Unified Soil Classification System. Traffic control for geotechnical work shall be utilized.

1.1. Perform a geotechnical engineering investigation at the site of the project.

- 1.1.1. The Engineer shall determine location of bridge borings and plan field investigations. During this phase of the project the Engineer’s Geotechnical Engineer shall use Plan-of-record drawings of the existing bridge to determine the number, location and depth of exploratory borings needed to support this project. The Engineer shall coordinate soil borings with project surveyor.
- 1.1.2. Conduct subsurface explorations and provide information needed for the design of a cost effective pavement structural section for the proposed roadway improvements.
 - Contact utility one call services to mark all existing utilities in the project corridor prior to starting work activities.
- 1.1.3. Implement traffic control as required to accomplish the exploratory drilling. Prepare and submit to TxDOT for review and approval, necessary traffic control plans and permit forms.
- 1.1.4. Advance one exploratory boring at maximum intervals of 500 lineal feet of bridge and roadway alignment to a minimum depth of 15 feet.
- 1.1.5. Perform split spoon standard penetration tests (SPT) at 2.5 foot intervals below grade to a depth of 10 feet, below a depth of 10 feet SPT will be performed at 5 foot intervals thereafter until boring termination.
- 1.1.6. Develop a laboratory soils testing program to perform moisture content (ASTM D 2216), dry unit weight (ASTM D 2937), percent passing the No. 200 sieve (ASTM D 1140), Atterburg limits determination (ASTM D 4318) and sieve analysis (ASTM D 6913) for each major soil type encountered. Utilize the index test to classify the recovered soils in accordance with the Unified Soils Classification System.
- 1.1.7. Derive soil strength utilizing the split spoon SPT blow counts or unconfined compressive strength tests (ASTM D 2166) on selected soils.
- 1.1.8. Perform a California Bearing Test (CBR) (ASTM D 1883) for each major soils type.

2. Geotechnical Design

- 2.1. The geotechnical engineering analysis shall include drill shaft capacity analysis, LPILE design parameters for single column bent foundations, and slope stability analysis to include maximum wall heights, sliding, overturning, bearing pressure and global stability based on client provided dimensions and ground geometry for all proposed structures and retaining

walls.

2.1a Analyze TxDOT Lab recommended pavement design

- 2.2. Perform an engineering evaluation in general accordance with the AASHTO pavement design guide to determine pavement base and pavement thickness for both a flexible and a rigid pavement section.
 - 2.3. Provide recommendations for illumination pole foundations, overhead sign bridge foundations, retaining wall structures (including soil nail walls) and settlement analysis.
- 2.3a Provide recommendation for ret. Wall revised design structures**
- 2.4. Summarize results of the geotechnical engineering investigations in a written report.

Deliverables

- Provide three (3) PE sealed and signed copies of report.
- Pavement Design
- Boring logs incorporated into the design set.

F. Drainage Design

1. Perform a Drainage Study.
 - 1.1. Determine the drainage requirements for the Project.
 - 1.1.1. Consider the location of retention ponding areas for storing runoff from the project.
 - 1.1.2. Identify any ROW requirements for locating/construction new ponding areas and/or drainage appurtenances.
2. Coordinate with the City of El Paso, TXDOT, and adjoining project design consultants and developers/property owners to check that all proposed drainage does not conflict with existing and future planned drainage systems.
3. Drain design will be performed using GEOPAK Drainage. Cross drainage design will be performed using WINSTORM, HY 8 or HEC RAS. Design services will include the following:
 - 3.1. Prepare drainage area maps.
 - 3.2. Prepare plan/profile sheets for storm drain systems and outfall ditches.
 - 3.3. Select standard details from TXDOT list of standards for items such as inlets, manholes, junction boxes and end treatment, etc.
 - 3.4. Prepare details for non-standard inlets, manholes and junction boxes.
 - 3.5. Prepare drainage details for outlet protection, outlet structures and utility accommodation structures.
 - 3.6. Identify pipe strength requirements.
 - 3.7. Prepare drainage facility quantity summaries.
 - 3.8. Identify potential utility conflicts and design around them, wherever possible.
 - 3.9. Take into consideration drainage impacts to pedestrian facilities, utilities, driveways, retaining walls and concrete traffic barriers.
 - 3.10. If applicable, prepare Hydraulic Data Sheets for any bridge or cross drainage structures at outfall channel. (Indicate site location such as name of creeks and stations)
 - 3.11. Develop plans for all temporary drainage facilities necessary to allow staged construction of the project and to conform with the phasing of adjacent construction projects without significant impact to the hydraulic capacity of the area.
 - 3.12. Prepare design layouts, drainage area maps, and design of all drainage components. The Engineer shall design all conventional storm drainage and cross drainage in conformance with TxDOT design guidelines.

- 3.13. Develop mitigation analysis for braided ramps, frontage road reconstruction and mainlane widening to the inside, using SWMM for project area draining into Middle Drain, Playa Drain, and Franklin Drain within the Project Limits where the outfall Q increase is greater than the allowable.
- 3.14. Perform QC/QA for drainage Analysis
 - 3.14.1. 90% Submittal Review QA/QC
 - 3.14.2. 100% Submittal Review QA/QC
 - 3.14.3. Review Comment Resolution: 60%, 90%, 100% & Division Review

Deliverables

- Three copies of the bound Drainage Study report.

H. Plans, Specifications and Estimates (PS&E)

1. Design Summary Report
 - 1.1. Review Design Summary Report provided by the CRRMA
 - 1.2. Hold a Design Conference at the 30% design stage.
2. Initial design
 - 2.1. Develop traffic control plan/detour plans
 - 2.2. Coordinate approval of pavement design
 - 2.3. Review hydrologic/hydraulic reports provided by the CRRMA
 - 2.4. Revise Schematic Design elements such as the Ramp Geometry, OSB Sign Layout, DMS Locations, Retaining Wall Locations, Bridge Widths
3. Utility Coordination
 - 3.1. Research and determination of the location of existing utilities
 - 3.2. Minimization of utility conflicts with the proposed design
 - 3.3. Coordination with utilities to avoid conflicts
 - 3.4. Develop existing utility layout plan
4. Bridge and Retaining Wall Design
 - 4.1. The Engineer shall develop bridge layout sheets and structural details for each bridge.
 - 4.2. Ramp G at NBFRR Bridge over UPRR Layouts (Sta 21+49.36 to 22+39.36)
 - 4.3. Full Span Monotube (span mainlane- 4) and Cantilever Tube Structure (sign area greater than standard- 2) (non-standard) structure design and details.
 - 4.4. The Engineer shall update the existing railroad Exhibit A package / document, done by others, to add the bridge crossing area maps, confirm track profile 1000' in both directions from bridge to update table in Exhibit A, Exhibit A for drainage pipe & ITS Fiber bored under UPRR.
 - 4.5. QC/QA for Ramp G & Exhibit A
 - 4.6. The Engineer shall develop retaining wall layouts and details for each retaining wall structure.
 - 4.6.1. Additional Wall Design:
 1. WL375SBXC_R6: SL375_CL STA 152+79.98, 61' LT to STA 157+29.52, 61' LT
 2. WL375SBML_L1: SL375_CL STA 218+23.07, 61.23' LT STA 219+88.82, 61.93' LT
 3. WL375NBEI_L2: SL375_CL STA 226+14.33, 78.55' RT STA 237+44.10, 61.42' RT
 4. WL375NBEA_T2: SL375_CL STA 145+14.73, 115.18' RT to STA 145+15.76, 89.21' RT
 5. WL375NBEA_T5: SL375_CL STA 151+04.91, 75.40' RT to STA 151+05.66, 101.39' RT

6. WL375SBFR_L2: SL375_CL STA 204+94.09, 154.14' LT to STA 208+89.09, 137.23'

4.6.2 Retaining Wall Layouts and Typical for Revised Design

1. WALL 8: LP 375 WB EXIT RAMP TO SOUTH AMERICAS AVENUE - RP Sta 117+00 to 118+25, RT; 155 ft long MSE Wall

2. WALL 11: LP 375 EB ML - ML Sta 132+00 to 138+60, RT; 660 ft long MSE Wall

4.7. Miscellaneous Wall Details

4.8. Additional QA/QC

4.8.1.90% Submittal Review

4.8.2.100% Submittal Review

4.8.2a Revised Design 100% Submittal Review

4.8.3.Review Comment Resolution: 90%, 100% & Division Review

4.8.3a Revised Design 100% Submittal & Division Review Comment Resolution

5. Roadway Design

5.1. Design final vertical and horizontal alignments. Confirm Vertical and Horizontal Alignments from schematic. (Additional effort for ramps & gore areas)

5.1a Confirm Vertical and Horizontal Alignments for revised design

5.2. Develop cross-sections and earthwork volumes

5.2a Develop cross-sections and earthwork volumes for revised design

5.3a Title Sheet, Index of Sheets, and Project Layout Sheets w/Horiz Geom for revised design

5.3. Prepare Existing and Proposed Typical Sections

5.5a Proposed Typical Sections for revised design

5.4. Prepare Horizontal Geometry and Horizontal Alignment Data Sheets

5.6a Horizontal Alignment Data Sheets for revised design

5.5. Prepare Loop 375 mainlane Roadway Plan Sheets

5.6. Prepare Plan & Profile Sheets for realigned Frontage Roads and Ramps

5.8a Roadway Plan & Profile Sheets for revised design

5.7. Sidewalk Plan & Profile Sheets (Total-7000 ft), including detail for pedestrian bridge/rail at dropoff) (Profile for 1000 ft- H: 1"=100', V: 1"=10')

5.7.1. Evaluate Driveway grades and redesign (13 Driveways)

5.8. Prepare Removal Plans

5.10a Demolition / Removal Plans for revised design

5.9. Prepare Miscellaneous Detail Sheets

5.9a Ramp Gore Grading Details for revised design

5.10. Detail design elements throughout project including illumination, driveway access, bicycle and pedestrian facilities, landscape irrigation (landscape plans provided by CRRMA) , and miscellaneous details

5.10.1. High Mast Illumination, along Loop 375 from Zaragoza to North Loop.

- HM Illumination plans showing types and locations of HM poles, ground boxes, electrical service and conduit
- Underdeck lighting plans showing types and locations of underdeck lighting, ground boxes, electrical service and conduit
- Perform electrical calculations using approved light standards

5.10.2. Driveway access at existing facilities

- Including transitions/modifications to existing roadway

5.10.3. Bicycle and pedestrian facilities

5.10.4. Submit design exceptions/waivers as required on project.

- 5.11. Identify temporary construction easements needed. Provide dimensions of required easements only; parcel descriptions and survey will not be required.
5.11a Miscellaneous Roadway Details for revised design
 - 5.13. Calculate quantities and prepare summary of quantities (Roadway, Removals)
5.13a Calculate Quantities and Prepare Summary of Quantities for revised design
 - 5.15. Perform QC/QA for additional roadway related design
 - 5.15.3. 90% Submittal Review QA/QC
 - 5.15.4. 100% Submittal Review QA/QC
5.15.4a Revised Design 100% Submittal Review
 - 5.15.5. Review Comment Resolution: 30%, 60%, 90%, 100% & Division Review
5.15.5a Revised Design 100% Submittal & Division Review Comment Resolution
6. Operational Design - Illumination/Signing & Pavement Marking/Traffic Management
Preliminary Data Gathering and Assessment – Conduct site visit
- 6.1. ILLUMINATION DESIGN along Loop 375 within project limits. Use Visual 2016 software in designing high mast luminaries to provide continuous lighting for the main lanes, ramps, and frontage roads that meets AASHTO and TxDOT photometric requirements. The lighting design will include the following:
 - 6.1.1. Review of existing illumination as-builts and studies.
 - 6.1.2. Illumination schematic showing recommended pole types and heights, and photometric contour layouts within the project ROW limits for the 30% submittal.
 - 6.1.3. Plan sheets at 1" = 100' scale showing locations of light poles, ground boxes, electrical service and conduit layout. The design will replace the existing conventional lighting with high mast lighting for the entire project length. The plan sheets will include tables for quantity summary, roadway illumination assembly and conduit and conductor schedule.
 - 6.1.4. Plan sheets at 1" = 40' scale showing locations for underpass lighting. The plan sheets will include tables for quantity summary, roadway illumination assembly and conduit and conductor schedule, and underpass lighting details. Underpass lights are included at the following locations:
 - EB braided ramps near Southside Road
 - WB braided ramps near Southside Road
 - EB bridge widening over Pan American Drive
 - EB frontage road bridge over U-turns and UPRR
 - WB frontage road bridge over U-turns and UPRR
 - WB braided ramps just west of Juan de Herrera Main Lateral
 - 6.1.5. Coordinate with electric company for point of service, provide load requirements and summarize Electrical service summary table.
 - 6.1.6. Complete voltage drop calculation summary sheet to meet state requirements and finalize conductor sizing.
 - 6.1.7. Prepare underdeck illumination detail.
 - 6.1.8. Prepare electrical schematics/ circuit diagrams for each electrical service.
 - 6.1.9. Provide Summary of Quantities for illumination design.
 - 6.1.10. Select standard details from TXDOT list of standards for items such as conduits, conductors, ground boxes, electrical service details, and high mast illumination, etc.
 - 6.1.11. Coordinate with adjacent project consultant performing High Mast Design and provide consistency review.
 - 6.2. LARGE GUIDE SIGN DESIGN – Develop large guide sign design along eastbound and westbound Loop 375 within project limits. The design will include:

- 6.2.1. Review of existing large sign plans
- 6.2.2. Prepare large guide sign plan layout sheets.
- 6.2.3. Prepare large guide sign details using SignCAD software showing dimensions, lettering, shields, borders, corner radii, etc.
 - 6.2.3a Plan sheets - large sign layouts for revised design
- 6.2.4. Prepare large sign summary sheets.
 - 6.2.4a Sign detail sheets for revised design
- 6.2.5. Provide Summary of Quantities for large signs tabulation including all guide signs.
 - 6.2.5a Sign elevation sheets for revised design
- 6.2.6. Select standard details from TXDOT list of standards for items such as overhead sign bridge structure, cantilever overhead sign support structure and foundations, etc.
 - 6.2.6a Large sign summary sheets for revised design
- 6.2.7 Summary of quantities
 - 6.2.7a Summary of quantities for revised design
- 6.2.9. Additional Guide Signs for Truck POE relocation to the future/concurrent Winn Road/Pan American Cross Street.
- 6.3. PEDESTRIAN SIGNAL DESIGN – Develop pedestrian hybrid beacon signal system for the four (4) pedestrian crossings located along the eastbound and westbound frontage roads. The design will include:
 - 6.3.1. Prepare signal plan sheets showing pole locations, signal heads, controller, service pedestal, conductor and conduit schedule
 - 6.3.2. Coordinate with electric company for point of service, provide load requirements and summarize Electrical service summary table
 - 6.3.3. Provide plan sheets showing small signs required for each pedestrian crossing
 - 6.3.4. Prepare small sign summary sheets
 - 6.3.5. Provide Summary of Quantities for pedestrian signal system
 - 6.3.6. Select standard details from TXDOT list of standards for items such as signal poles, heads, conduits, conductors, ground boxes, controller and electrical service detail etc.
- 6.4. INTELLIGENT TRANSPORTATION SYSTEM (ITS) DESIGN:
 - 6.4.1. Preliminary Data Gathering and Assessment
 - 6.4.2. Kick-off Meeting with TxDOT El Paso District and CRRMA
 - 6.4.3. Field Visit – the Engineer will conduct field visit to document field conditions, verify existing equipment
 - 6.4.4. Electrical Service Coordination - identify potential power drop locations
 - 6.4.5. Prepare CTMS existing layout removal sheets
 - 6.4.6. Prepare CTMS layout sheets
 - 6.4.7. Develop Voltage drop calculations chart
 - 6.4.8. Develop Communication schematic
 - 6.4.9. Develop Fiber distribution chart
 - 6.4.10. Prepare DMS structure details
 - 6.4.11. Prepare Detail sheets (HUB Cabinet, Foundation, CCTV, Ground Box, etc)
 - 6.4.12. Develop Quantities
 - 6.4.13. Compile TxDOT ITS standards
 - 6.4.14. ITS Fiber Relocation Design, 12,500 ft; Prop. HUB at Zaragoza
 - 6.4.15. Additional DMS Structures (2; 1 of which has a tall pole structure)
 - 6.4.16. Develop Ring Architecture Sheet and enhanced communication schematics for Ring revision.

- 6.4.17. ITS Special Specifications
- 6.4.18. Coordination with adjacent project consultant
- 6.5. SIGNING & PAVEMENT MARKING DESIGN
 - 6.5.1. Develop Signing & Pavement Marking Plans
 - 6.5.2. Prepare small guide sign details using SignCAD software showing dimensions, lettering, shields, borders, corner radii, etc.
 - 6.5.3. Prepare Summary of Small Signs and quantities table
 - 6.5.4. Compile TxDOT Signing & Pavement Marking Standards
- 6.6. QC/QA
 - 6.6.1.
 - 6.6.2.
 - 6.6.3. 90% Submittal Review
 - 6.6.4. 100% Submittal Review
 - 6.6.4a Revised Design 100% Submittal Review
 - 6.6.5. Review Comment Resolution: 90%, 100% & Division Review
 - 6.6.5a Revised Design 100% Submittal & Division Review Comment Resolution
- 7. Drainage Design
 - 7.1. Develop mitigation plan & profile sheets for runoff from braided ramps, frontage road reconstruction and mainlane widening to the inside, from SWMM for project area draining into Middle Drain, Playa Drain, and Franklin Drain within the Project Limits where the outfall Q increase is greater than the allowable
 - 7.2. Prepare mitigation details
 - 7.3. Develop hydraulic design for storm drains
 - 7.3a Develop hydraulic calcs for revised design storm drains
 - 7.4. Prepare storm drain details
 - 7.4a Prepare revised design storm drain, drainage area map, drainage plans, and drainage connection details.
 - 7.5. Develop P&P sheets for storm drains
 - 7.5a Redesign final vertical and horizontal alignments for storm drains of the alternative design
 - 7.5b Develop EPCWID Application Sheets in EPCWID Vertical Datum
 - 7.6. Develop Quantities
 - 7.7. QC/QA
 - 7.7.1. 90% Submittal Review
 - 7.7.2. 100% Submittal Review
 - 7.7.2a Revised Design 100% Submittal Review
 - 7.7.3. 90, 100% Submittal & DIV Review Comment Resolution
 - 7.7.3a Revised Design 100% Submittal & Division Review Comment Resolution
- 8. Traffic Control
 - 8.1. Attend up to two meetings as requested to present and discuss the proposed construction sequence and traffic control plans for the project. Incorporate any comments into the TCP as required from reviews or meetings as agreed.
 - 8.2. Prepare traffic control drawings including: line diagrams; detour plans; TCP; temporary construction easements, general note guidelines for contractor to follow; TCP details/standards.
 - 8.2.1 Attended 2 TCP meetings including the SRT
 - 8.2.1a General Notes for revised design
 - 8.2.2 TCP Narrative / Phase Overview (3 sheets)
 - 8.2.2a TCP Narrative / Phase Overview for revised design

- files (pdf) for each PS&E package.
- Specification list
- QC/QA redlines at (30, 60, and 90 percent) design reviews
- Preliminary (30, 60, and 90 percent) design review
- Final approved design exceptions/waivers
- Plans estimate
- Specification list, general notes, special provisions, specifications, special specifications
- Final signed and sealed construction plans

E. Utility Coordination

1. Utility Coordination

- 1.1. Conduct a records research and acquisition of available as-built utility records. This information will be placed on the base map and provided to all utility companies.
- 1.2. Designate known utilities throughout the ROW, as provided by utility owners.
- 1.3. Conduct utility coordination meetings to review record drawings and proposed improvements with affected utility owners individually at each phase submittal. Utilities that may be affected include: El Paso Electric Company, Texas Gas Service, El Paso Water Utilities, Time Warner Cable, TW Telecom, ATT Telephone, AT&T Distribution Cable, MCI, QWEST Communications, and others.
- 1.4. Prepare and issue minutes for each meeting.
- 1.5. Provide base map information to all utility companies at each submittal phase.
- 1.6. Provide copies of documentation to the CRRMA at the Final submittal phase. Utilities can request that their new service lines be included as part of the bid package provided that the utility company signs an agreement with the CRRMA and funding is provided.
- 1.7. Conduct Level D SUE
 - 1.7.1. Obtain As-Built Plans from Utility Companies
 - 1.7.2. Research for County Records
 - 1.7.3. Map Utilities as Researched
- 1.8. Conduct Level C SUE
 - 1.8.1. Tie all Existing Visible Features
 - 1.8.2. Map Utilities Recovered
- 1.9. Conduct Level B SUE
 - 1.9.1. Conduct Utilities Designation
 - 1.9.2. Map Designation and other Levels Combined
- 1.10. Conduct Level A SUE
 - 1.10.1. 4 Test Holes (10' to 15')
 - 1.10.2. Final Mapping
- 1.11. Provide Traffic Control for all LEVEL A SUE

Deliverables

- Utility base map to show utilities on plan and profiles.
- Utility conflict list at all milestone submittals.
- Utility meeting minutes.

AECOM Technical Services Inc.

Loop 375 Braided Ramps

Company	Fee
AECOM Technical Services Inc.	\$241,616.12
ZWA Surveying	\$0.00
PSI	\$18,163.36
QUANTUM	\$0.00
FXSA	\$0.00
Total	\$259,779.48

AECOM Technical Services Inc. Loop 375 Braided Ramps					
Task	AECOM Technical Services Inc.	ZWA Surveying	PSI	QUANTUM	FXSA
A. Project Management	\$24,734.22	\$0.00	\$0.00	\$0.00	\$0.00
B. Surveying	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
C. Right-Of-Way Mapping	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
D. Geotechnical Investigations	\$0.00	\$0.00	\$18,163.36	\$0.00	\$0.00
E. Schematic Design	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
F. Drainage Study	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
G. Stakeholder Coordination	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
H. Plans, Specifications and Estimates (PS&E)	\$216,881.90	\$0.00	\$0.00	\$0.00	\$0.00
I. Utility Coordination	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sub Totals	\$241,616.12	\$0.00	\$18,163.36	\$0.00	\$0.00
Direct Expenses	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$241,616.12	\$0.00	\$18,163.36	\$0.00	\$0.00
Grand Total	\$259,779.48				
Participation Percentage	93.01%	0.00%	6.99%	0.00%	0.00%
Total DBE Percentage:	6.99%				

AECOM Technical Services Inc. Loop 375 Braided Ramps													
Task Description	SENIOR PROJECT MANAGER	DESIGN MANAGER	SENIOR BRIDGE ENGINEER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	EIT	SENIOR ENGINEERING TECHNICIAN	ENGINEERING TECHNICIAN	ADMIN / CLERICAL (ENG)	TOTAL LABOR HOURS	TOTAL LABOR COST	
A. Project Management											194	\$ 24,734.22	
1. Project Management/Work Plan											0	\$ -	
2. Progress Reporting											56	\$ 6,084.18	
2.1 Prepare and Submit Monthly Progress Reports for CRRMA (Assume 10 Month Duration)											0	\$ -	
2.1.1 Activities Completed											0	\$ -	
2.1.2 Initiated and Ongoing Activities											0	\$ -	
2.1.3 Planned Activities											0	\$ -	
2.1.4 Problems Encountered/Problem Remedies											0	\$ -	
2.1.4.a. Review Design Alternatives Developed to meet TxDOT Budget Constraints	2	2				8					12	\$ 1,689.02	
2.1.5 Overall Status including Tabulation of Percentage Complete by Task											0	\$ -	
2.1.6 Updated Project Schedule											0	\$ -	
2.1.6.a. Revised Project Schedule to meet TxDOT Letting and Budget Constraints	2	4				4					10	\$ 1,657.04	
2.2 Prepare and Submit Invoices											0	\$ -	
2.2.1 Financial and DBE Participation											0	\$ -	
2.2.1.a Revised Financial and DBE Participation to include Revised Project	2			4		4				24	34	\$ 2,738.12	
2.2.2 Hours Worked by Individual											0	\$ -	
2.2.3 Hourly Rate											0	\$ -	
2.2.4 Monthly Invoice Amount as Compared to Baseline Monthly Estimate											0	\$ -	
2.2.5 Monthly Cumulative Invoice Amount as Compared to Baseline Monthly Cumulative Estimate											0	\$ -	
2.2.6 Reasons for Deviations from Baseline											0	\$ -	
3. Coordination/Administration											138	\$ 18,650.04	
3.1 Prepare and Attend One (1) Kick-off Meeting (Project guidelines, general project requirement and expectations)											0	\$ -	
3.2 Maintain a Communication Tracking System (format to be approved by CRRMA)											0	\$ -	
3.3 Coordinate with CRRMA GEC Staff											0	\$ -	
3.3.a. Coordinate Revised Design alternatives with CRRMA GEC Staff	4					4					8	\$ 1,254.40	
3.4 Coordinate with Schematic consultant											0	\$ -	
3.4.a. Coordinate Revised Design alternatives with Schematic consultant	2					4					6	\$ 845.96	
3.5 Coordinate w/TxDOT											0	\$ -	
3.5.a. Coordinate Revised Design alternatives w/TxDOT	24			20		80					124	\$ 16,549.68	
4. Project Control/Scheduling											0	\$ -	
5. Subconsultant Management											0	\$ -	
Deliverables											0	\$ -	
HOURS SUB-TOTALS	36	6	0	24	0	104	0	0	0	24	194		
CONTRACT RATE PER HOUR	\$204.22	\$202.77	\$145.14	\$144.90	\$97.71	\$109.38	\$76.31	\$109.38	\$90.23	\$54.69			
TOTAL LABOR COSTS	\$7,351.92	\$1,216.62	\$0.00	\$3,477.60	\$0.00	\$11,375.52	\$0.00	\$0.00	\$0.00	\$1,312.56	\$24,734.22		
% DISTRIBUTION OF STAFF HOURS	18.56%	3.09%	0.00%	12.37%	0.00%	53.61%	0.00%	0.00%	0.00%	12.37%			
H. Plans, Specifications and Estimates (PS&E)												1792	\$ 216,881.90
1. Update Information											0	\$ -	
1.1 Review 90% & Approved Schematic											0	\$ -	
1.2 Revise Schematic: Ramp Geometry, OSB Sign Layout, DMS Locations, Retaining Wall location, Bridge Widths											0	\$ -	
2. Design Criteria											0	\$ -	
2.1 Review & Update Design Summary Report (DSR)											0	\$ -	
2.1.1 Facility Type											0	\$ -	
2.1.2 Design Speed											0	\$ -	
2.1.3 Acceptable Level of Service (LOS)											0	\$ -	
2.1.4 Horizontal Criteria											0	\$ -	
2.1.5 Stopping Sight Distance											0	\$ -	
2.1.6 Maximum Curvature											0	\$ -	
2.1.7 Maximum Super-Elevation Rates											0	\$ -	
2.1.8 Vertical Criteria											0	\$ -	
2.1.9 Minimum and Maximum Gradient											0	\$ -	
2.1.10 K-Values											0	\$ -	
2.1.11 Vertical Clearances											0	\$ -	
2.1.12 Cross Section Criteria											0	\$ -	
2.1.13 Lane Widths											0	\$ -	
2.1.14 Shoulder Widths											0	\$ -	
2.1.15 Pavement Cross Slope and Maximum Side Slopes											0	\$ -	
2.1.16 Intersection Horizontal and Vertical Criteria											0	\$ -	
2.2 Hold DCC											0	\$ -	
3. Initial Design											0	\$ -	
3.1 Develop traffic control plan/detour plans											0	\$ -	
3.2 Obtain environmental permits											0	\$ -	
3.3 Coordinate approval of pavement design											0	\$ -	
3.4 Prepare hydrologic/hydraulic reports											0	\$ -	
4. Utility Coordination											0	\$ -	
4.1 Research and determination of the location of existing utilities											0	\$ -	
4.2 Minimization of utility conflicts with the proposed design											0	\$ -	
4.3 Utility Coordination											0	\$ -	

AECOM Technical Services Inc. Loop 375 Braided Ramps												
Task Description	SENIOR PROJECT MANAGER	DESIGN MANAGER	SENIOR BRIDGE ENGINEER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	EIT	SENIOR ENGINEERING TECHNICIAN	ENGINEERING TECHNICIAN	ADMIN / CLERICAL (ENG)	TOTAL LABOR HOURS	TOTAL LABOR COST
5. Roadway Design											568	\$ 63,653.08
5.1 Confirm Vertical and Horizontal Alignments (Additional effort for ramps & gore areas)											0	\$ -
5.1a Confirm Vertical and Horizontal Alignments for revised design	1	2		2		24					29	\$ 3,524.68
5.2 Develop cross-sections and earthwork volumes (10k LF, 200XS, 2 per 11x17 sheet)				12		60					72	\$ 8,301.60
5.2a Develop cross-sections and earthwork volumes for revised design											0	\$ -
5.3 Title Sheet, Index of Sheets, and Project Layout Sheets w/Horiz Geom (1 title, 2 index, 3 prj layouts)								16			27	\$ 3,119.14
5.3a Title Sheet, Index of Sheets, and Project Layout Sheets w/Horiz Geom for revised design	1			2		8					0	\$ -
5.4 Existing Typical Sections (2 sections per sheet)											0	\$ -
5.5 Proposed Typical Sections (3 general, 2 ml, 2 fr, 1 uturn/ramp, 1 detail)				8	24			32			64	\$ 7,004.40
5.5a Proposed Typical Sections for revised design											0	\$ -
5.6 Horizontal Alignment Data Sheets (1 cl, 2 ml, 2 fr, 9 ramp)				4	16			24			44	\$ 4,768.08
5.6a Horizontal Alignment Data Sheets for revised design											0	\$ -
5.7 Sidewalk Sheets-add total 7000 ft (incl detail for pedestrian bridge/rail at drop-off) (1000 ft of profile H - 1"=100', V - 1"=10')											0	\$ -
5.7.1 Evaluate Driveway grades & Redesign (13 driveways)											0	\$ -
5.8 Roadway Plan & Profile Sheets, incl Identify Temporary Easements (Scale: H 1"=100', V 1"=10') (11 nbf, 12 sbfr, 10 rmp, 10 LP plan only)		2		16	32			60			110	\$ 12,413.46
5.8a Roadway Plan & Profile Sheets for revised design											0	\$ -
5.9 Ramp Gore Grading Details (1 per ramp, 12 total sheets)				8	16		12	24			60	\$ 6,263.40
5.9a Ramp Gore Grading Details for revised design											0	\$ -
5.10 Demolition / Removal Plans (same base as mainlane plan sheets)				8	16		24	32			80	\$ 8,054.16
5.10a Demolition / Removal Plans for revised design											0	\$ -
5.11 Miscellaneous Roadway Details (Super table, riprap layouts, 2 misc)				4	8			16			28	\$ 3,111.36
5.11a Miscellaneous Roadway Details for revised design											0	\$ -
5.12 Submit design exceptions/waivers as required on project (assume 2 exceptions/waivers)											0	\$ -
5.13 Calculate Quantities and Prepare Summary of Quantities (Roadway, Removals)				8	12						20	\$ 2,331.72
5.13a Calculate Quantities and Prepare Summary of Quantities for revised design											0	\$ -
5.14 Compile Details/Standards											0	\$ -
5.14.2 Driveway Access (assume 1 detail sheets)											0	\$ -
5.14.3 Bicycle and pedestrian facilities (assume 2 detail sheets)											0	\$ -
5.15 QC/QA											0	\$ -
5.15.1 30% Submittal Review											0	\$ -
5.15.2 60% Submittal Review											0	\$ -
5.15.3 90% Submittal Review											0	\$ -
5.15.4 100% Submittal Review											0	\$ -
5.15.4a Revised Design 100% Submittal Review	2			16	4						22	\$ 3,164.36
5.15.5 90, 100% SUBMITTAL & DIV REVIEW COMMENT RESOLUTION											0	\$ -
5.15.5a Revised Design 100% Submittal & Division Review Comment Resolution				8	4						12	\$ 1,596.72
											0	\$ -
											0	\$ -
											0	\$ -
6. Illumination/Signing&Pvmt Mrkg/Traffic Management											197	\$ 22,418.02
6.1 ILLUMINATION DESIGN											0	\$ -
6.1.1. Review as-builts / reports											0	\$ -
6.1.2. Illumination photometric analysis											0	\$ -
6.1.3. Plan sheets - high mast lighting											0	\$ -
6.1.4. Plan sheets - underpass lighting											0	\$ -
6.1.5. Coordination with Power company;											0	\$ -
6.1.6. Voltage Drop calculations											0	\$ -
6.1.7. Electrical schematics / circuit diagrams											0	\$ -
6.1.8. Underdeck Illumination Detail											0	\$ -
6.1.9. Electrical Service Summary											0	\$ -
6.1.9. Summary of quantities											0	\$ -
6.1.10. Compile standards											0	\$ -
6.1.11. Coordination with Adjacent Project Consultant/consistency review											0	\$ -
6.2 LARGE GUIDE SIGN DESIGN											0	\$ -
6.2.1. Site Visit / Existing Plan review											0	\$ -
6.2.3. Plan sheets - large sign layouts											0	\$ -
6.2.3a Plan sheets - large sign layouts for revised design				8		12		24			44	\$ 4,700.04
6.2.4. Sign detail sheets											0	\$ -
6.2.4a Sign detail sheets for revised design				8		12		12			32	\$ 3,387.48
6.2.5. Sign elevation sheets											0	\$ -
6.2.5a Sign elevation sheets for revised design				8	12			16			36	\$ 4,081.80
6.2.6. Large sign summary sheets											0	\$ -
6.2.6a Large sign summary sheets for revised design				8	12			20			40	\$ 4,519.32
6.2.7. Summary of quantities											0	\$ -
6.2.7a Summary of quantities for revised design				8	12			8			28	\$ 3,206.76
6.2.8. Compile standards											0	\$ -
6.2.9. Additional Guide Signs for Truck POE relocation to the future/concurrent Winn Road/Pan American Cross Street											0	\$ -
6.3 PEDESTRIAN SIGNAL DESIGN											0	\$ -
6.3.1. Signal layout sheets											0	\$ -
6.3.2. Coordination with Power company; electrical summary sheet											0	\$ -
6.3.3. Small sign layout sheets											0	\$ -
6.3.4. Small sign summary sheets											0	\$ -
6.3.5. Summary of quantities											0	\$ -
6.3.6. Compile standards											0	\$ -
6.4 INTELLIGENT TRANSPORTATION SYSTEM (ITS)											0	\$ -
6.4.1. Preliminary Data Gathering and Device Locations											0	\$ -
6.4.2. Kick-Off Meeting with TxDOT El Paso District and CRRMA											0	\$ -

AECOM Technical Services Inc. Loop 375 Braided Ramps												
Task Description	SENIOR PROJECT MANAGER	DESIGN MANAGER	SENIOR BRIDGE ENGINEER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	EIT	SENIOR ENGINEERING TECHNICIAN	ENGINEERING TECHNICIAN	ADMIN / CLERICAL (ENG)	TOTAL LABOR HOURS	TOTAL LABOR COST
6.4.3 Field Visit											0	\$ -
6.4.4 Electrical Service Coordination											0	\$ -
6.4.5 Existing Removal Sheets (20 Sheets)											0	\$ -
6.4.6 ITS Layout Sheets (20 Sheets)											0	\$ -
6.4.7 Voltage Drop Calculations Chart (1 Sheet)											0	\$ -
6.4.8 Communication Schematic											0	\$ -
6.4.9 Fiber Distribution Chart											0	\$ -
6.4.10 DMS Structure Detail Sheets (2 Sheets)											0	\$ -
6.4.11 Detail sheets (HUB Cabinet, Fndation, CCTV, Grnd Box, etc)											0	\$ -
6.4.12 Develop Quantities Tables											0	\$ -
6.4.13 TxDOT ITS standards											0	\$ -
6.4.14 New ITS Fiber Trunkline Relocation (12,500 ft -144 fiber); New Proposed HUB Building											0	\$ -
6.4.15 Additional DMS Structures (2; 1 of which has a tall pole structure)											0	\$ -
6.4.16 Develop Ring Architecture Sheet; Enhanced comm. schematics for Ring Revision											0	\$ -
6.4.17 ITS Special Specifications											0	\$ -
6.4.18 Coordination with Adjacent Project Consultant/consistency review											0	\$ -
6.5 SIGNING & PVMT MRKG											0	\$ -
6.5.1. Develop Signing and Pvmr Mrkg plans											0	\$ -
6.5.2. Small Sign Details											0	\$ -
6.5.3. Summary of Small Signs & Small Sign Items (Quantities)											0	\$ -
6.5.4 TxDOT Signing & Pvmr Mrkg standards											0	\$ -
6.6 QC/QA											0	\$ -
6.6.1. 30% Submittal Review											0	\$ -
6.6.2. 60% Submittal Review											0	\$ -
6.6.3. 90% Submittal Review											0	\$ -
6.6.4. 100% Submittal Review											0	\$ -
6.6.4a Revised Design 100% Submittal Review	1			8							9	\$ 1,363.42
6.6.5. 90, 100% SUBMITTAL & DIV REVIEW COMMENT RESOLUTION				8							8	\$ 1,159.20
6.6.5a Revised Design 100% Submittal & Division Review Comment Resolution				8							8	\$ 1,159.20
7. Drainage Design											358	\$ 39,934.40
7.1 Develop mitigation plan & profile sheets for runoff from braided ramps, frontage road reconstruction and mainlane widening to the inside, from SWMM analysis for project area draining into Middle Drain, Playa Drain, and Franklin Drain within the Project Limits where the outfall Q increase is greater than the allowable.											0	\$ -
7.2 Prepare mitigation details											0	\$ -
7.3 Develop hydraulic design for culverts and storm drains											0	\$ -
7.3a Develop hydraulic calcs for revised design storm drains				24	24		32	32			112	\$ 11,764.72
7.4 Prepare culvert and storm drain details											0	\$ -
7.4a Prepare revised design storm drain, drainage area map, drainage plans, and drainage connection details				24	24		32	32			112	\$ 11,764.72
7.5 Design final vertical and horizontal alignments for storm drains											0	\$ -
7.5a Redesign final vertical and horizontal alignments for storm drains of the alternative design				12	8						20	\$ 2,520.48
7.5b Develop EPCWID Application Sheets in EPCWID Vertical Datum	2			24	12	2	16	24			80	\$ 9,123.40
7.6 Develop Quantities											0	\$ -
7.7 QC/QA											0	\$ -
7.7.1 90% Submittal Review											0	\$ -
7.7.2 100% Submittal Review											0	\$ -
7.7.2a Revised Design 100% Submittal Review	2			16		4					22	\$ 3,164.36
7.7.3 90, 100% SUBMITTAL & DIV REVIEW COMMENT RESOLUTION				8		4					12	\$ 1,596.72
7.7.3a Revised Design 100% Submittal & Division Review Comment Resolution				8		4					12	\$ 1,596.72
8. Traffic Control											669	\$ 70,534.00
8.1 Attend 2 TCP meetings including the SRT											0	\$ -
8.2 Prepare traffic control drawings											0	\$ -
8.2.1 General Notes (1 sheets)											0	\$ -
8.2.1a General Notes for revised design				1	2						3	\$ 340.32
8.2.2 TCP Narrative / Phase Overview (3 sheets)											0	\$ -
8.2.2a TCP Narrative / Phase Overview for revised design						12	4	8			24	\$ 2,492.84
8.2.3 TCP Phase Overview (6 sheets; 1"=200' D/B)											0	\$ -
8.2.3a TCP Phase Overview for revised design					24	24		32			80	\$ 8,470.32
8.2.4 Advance Warning Sign Line Diagram (Revision to incl additional sidewalk)											0	\$ -
8.2.4a Advance Warning Sign Line Diagram for revised design						8		8			16	\$ 1,750.08
8.2.5 TCP Typical Sections per Phase (10 sheets)											0	\$ -
8.2.5a TCP Typical Sections per Phase for revised design						12	32	40			84	\$ 8,129.88
8.2.6 Revise Detailed TCP Phase Layouts											0	\$ -
8.2.6a Develop Detailed TCP Phase Layouts for revised design (5 steps)					40	60	40	80			220	\$ 22,274.00
8.2.7 TCP Detour Plans (1 ea phase, 1 bridge widen, 5 total sheets)											0	\$ -
8.2.7a TCP Detour Plans for revised design					12	8	12	16			48	\$ 4,713.36
8.2.8 Temporary Ramp P&P / Details (2 p&p, 1 detail, 6 total sheets)											0	\$ -
8.2.8a Temporary Ramp P&P / Details for revised design					16	24		16			56	\$ 5,938.56
8.2.9 Temporary Shoring Layouts / Details (assume 4 temp walls)											0	\$ -
8.2.10 Temp Drainage (Additional Walls)											0	\$ -
8.2.10a Temp Drainage for revised design				8	24	32					64	\$ 7,004.40
8.2.11 Calculate Quantities and Prepare Summary of Quantities (TCP, Crash Cushion)											0	\$ -
8.2.11a Calculate Quantities and Prepare Summary of Quantities (TCP, Crash Cushion) for revised design				8		24					32	\$ 3,784.32
8.3 Compile TxDOT TCP Details/Standards											0	\$ -
8.4 QC/QA											0	\$ -
8.4.1 30% Submittal Review											0	\$ -
8.4.2 60% Submittal Review											0	\$ -
8.4.3 90% Submittal Review											0	\$ -
8.4.4 100% Submittal Review											0	\$ -

AECOM Technical Services Inc. Loop 375 Braided Ramps												
Task Description	SENIOR PROJECT MANAGER	DESIGN MANAGER	SENIOR BRIDGE ENGINEER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	EIT	SENIOR ENGINEERING TECHNICIAN	ENGINEERING TECHNICIAN	ADMIN / CLERICAL (ENG)	TOTAL LABOR HOURS	TOTAL LABOR COST
8.4.4a Revised Design 100% Submittal Review	2			16		8					26	\$ 3,601.88
8.4.5 90, 100% SUBMITTAL & DIV REVIEW COMMENT RESOLUTION											0	\$ -
8.4.5a Revised Design 100% Submittal & Division Review Comment Resolution				8		8					16	\$ 2,034.24
9. Landscaping											0	\$ -
9.1.1 Review Existing Irrigation Plans											0	\$ -
9.1.2 Prepare Irrigation Modification Layout (based on Landscape Layout provided by others)											0	\$ -
9.1.3 Irrigation Quantities											0	\$ -
10. Structure Design											160	\$ 20,342.40
BRIDGES											0	\$ -
10.1 BRAIDED RAMP LP 375 EB ENTRANCE RAMP FROM SOUTH AMERICAS AVENUE											0	\$ -
BRIDGE LAYOUT & ELEVATION (2)											0	\$ -
TYPICAL SECTIONS											0	\$ -
BORELOG DATA											0	\$ -
SUMMARY OF QUANTITIES & BEARING SEAT ELEVATIONS											0	\$ -
FOUNDATION LAYOUT											0	\$ -
FOUNDATION DETAILS (2)											0	\$ -
ABUTMENT 1 PLAN, ELEVATION & DETAILS											0	\$ -
ABUTMENT 7 PLAN, ELEVATION & DETAILS											0	\$ -
BENT 2, 6 PLAN, ELEVATION & DETAILS (Typical Inverted-T)											0	\$ -
BENT 3 PLAN, ELEVATION & DETAILS (Eccentric Inverted-T)											0	\$ -
BENT 4 PLAN, ELEVATION & DETAILS (2) (Straddle Bent)											0	\$ -
BENT 5 PLAN, ELEVATION & DETAILS (Eccentric Inverted-T)											0	\$ -
COLUMN DETAILS (2)											0	\$ -
GIRDER LAYOUT W/BEAM REPORT (2)											0	\$ -
SLAB UNIT PLAN and DETAILS (2)											0	\$ -
SLAB UNIT TYPICAL SECTIONS and DETAILS (2)											0	\$ -
BRIDGE DRAINAGE DETAILS (2) – if needed											0	\$ -
10.2 BRAIDED RAMP LP 375 WB EXIT RAMP TO SOUTH AMERICAS AVENUE											0	\$ -
BRIDGE LAYOUT & ELEVATION (2)											0	\$ -
TYPICAL SECTIONS											0	\$ -
BORELOG DATA											0	\$ -
SUMMARY OF QUANTITIES & BEARING SEAT ELEVATION											0	\$ -
FOUNDATION LAYOUT											0	\$ -
FOUNDATION DETAILS (2)											0	\$ -
ABUTMENT 1 PLAN, ELEVATION & DETAILS											0	\$ -
ABUTMENT 10 PLAN, ELEVATION & DETAILS											0	\$ -
BENT 2-6 PLAN, ELEVATION & DETAILS (Typical Inverted-T)											0	\$ -
BENT 7 PLAN, ELEVATION & DETAILS (Eccentric Inverted-T)											0	\$ -
BENT 8 PLAN, ELEVATION & DETAILS (2) (Straddle Bent)											0	\$ -
BENT 9 PLAN, ELEVATION & DETAILS (Eccentric Inverted-T)											0	\$ -
COLUMN DETAILS (2)											0	\$ -
GIRDER LAYOUT W/BEAM REPORT (3)											0	\$ -
SLAB UNIT PLAN and DETAILS (3)											0	\$ -
SLAB UNIT TYPICAL SECTIONS and DETAILS (3)											0	\$ -
BRIDGE DRAINAGE DETAILS (2) – if needed											0	\$ -
10.3 BRAIDED RAMP LP 375 WB EXIT RAMP TO ALAMEDA AVENUE											0	\$ -
BRIDGE LAYOUT & ELEVATION (3)											0	\$ -
TYPICAL SECTIONS											0	\$ -
BORELOG DATA											0	\$ -
SUMMARY OF QUANTITIES & BEARING SEAT ELEVATION											0	\$ -
FOUNDATION LAYOUT (2)											0	\$ -
FOUNDATION DETAILS (2)											0	\$ -
ABUTMENT 1 PLAN, ELEVATION & DETAILS											0	\$ -
ABUTMENT 8 PLAN, ELEVATION & DETAILS											0	\$ -
BENT 2,6,7 PLAN, ELEVATION & DETAILS (Typical Inverted-T)											0	\$ -
BENT 3 PLAN, ELEVATION & DETAILS (Eccentric Inverted-T)											0	\$ -
BENT 4 PLAN, ELEVATION & DETAILS (2) (Straddle Bent)											0	\$ -
BENT 5 PLAN, ELEVATION & DETAILS (Eccentric Inverted-T)											0	\$ -
COLUMN DETAILS (2)											0	\$ -
GIRDER LAYOUT W/BEAM REPORT (3)											0	\$ -
SLAB UNIT PLAN and DETAILS (3)											0	\$ -
SLAB UNIT TYPICAL SECTIONS and DETAILS (3)											0	\$ -
BRIDGE DRAINAGE DETAILS (2) – if needed											0	\$ -

AECOM Technical Services Inc. Loop 375 Braided Ramps												
Task Description	SENIOR PROJECT MANAGER	DESIGN MANAGER	SENIOR BRIDGE ENGINEER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	EIT	SENIOR ENGINEERING TECHNICIAN	ENGINEERING TECHNICIAN	ADMIN / CLERICAL (ENG)	TOTAL LABOR HOURS	TOTAL LABOR COST
10.4 MAINLANE BRIDGE WIDENING AT PAN AMERICAN											0	\$ -
BRIDGE LAYOUT & ELEVATION											0	\$ -
TYPICAL SECTIONS											0	\$ -
BORELOG DATA											0	\$ -
SUMMARY OF QUANTITIES & BEARING SEAT ELEVATION											0	\$ -
FOUNDATION LAYOUT											0	\$ -
ABUTMENT 1 PLAN, ELEVATION											0	\$ -
ABUTMENT 4 PLAN, ELEVATION											0	\$ -
ABUTMENT DETAILS											0	\$ -
BENT 2,3 PLAN, ELEVATION & DETAILS (2)											0	\$ -
GIRDER LAYOUT W/BEAM REPORT											0	\$ -
SLAB UNIT PLAN and DETAILS											0	\$ -
SLAB UNIT TYPICAL SECTIONS and DETAILS											0	\$ -
UBND STANDARD											0	\$ -
10.5 SBFR BRIDGE OVER UPRR											0	\$ -
BRIDGE LAYOUT & ELEVATION (2)											0	\$ -
TYPICAL SECTIONS											0	\$ -
BORELOG DATA											0	\$ -
SUMMARY OF QUANTITIES & BEARING SEAT ELEVATION											0	\$ -
FOUNDATION LAYOUT											0	\$ -
ABUTMENT 1 PLAN, ELEVATION & DETAILS (2)											0	\$ -
ABUTMENT 5 PLAN, ELEVATION & DETAILS (2)											0	\$ -
BENT 2-4 PLAN, ELEVATION											0	\$ -
BENT 2-3 DETAILS											0	\$ -
BENT 4 DETAILS											0	\$ -
GIRDER LAYOUT W/BEAM REPORT (2)											0	\$ -
SLAB UNIT PLAN and DETAILS (2)											0	\$ -
SLAB UNIT TYPICAL SECTIONS and DETAILS (2)											0	\$ -
BRIDGE DRAINAGE DETAILS (2) - if needed											0	\$ -
10.6 NBFR BRIDGE OVER UPRR											0	\$ -
BRIDGE LAYOUT & ELEVATION (2)											0	\$ -
TYPICAL SECTIONS											0	\$ -
BORELOG DATA											0	\$ -
SUMMARY OF QUANTITIES & BEARING SEAT ELEVATION											0	\$ -
FOUNDATION LAYOUT											0	\$ -
ABUTMENT 1 PLAN, ELEVATION & DETAILS (2)											0	\$ -
ABUTMENT 2 PLAN, ELEVATION & DETAILS (2)											0	\$ -
BENT 2 PLAN, ELEVATION & DETAILS (2)											0	\$ -
BENT 3 PLAN, ELEVATION & DETAILS (2)											0	\$ -
BENT 4 PLAN, ELEVATION & DETAILS (2)											0	\$ -
GIRDER LAYOUT W/BEAM REPORT (2)											0	\$ -
SLAB UNIT PLAN and DETAILS (2)											0	\$ -
SLAB UNIT TYPICAL SECTIONS and DETAILS (2)											0	\$ -
BRIDGE DRAINAGE DETAILS (2) - if needed											0	\$ -
IGND STANDARD (1)											0	\$ -
10.6.1 Ramp G @ NBFR BRIDGE OVER UPRR											0	\$ -
BRIDGE LAYOUT & ELEVATION											0	\$ -
SUMMARY OF QUANTITIES & BEARING SEAT ELEVATION											0	\$ -
FOUNDATION LAYOUT											0	\$ -
ABUTMENT 1 PLAN, ELEVATION & DETAILS (2)											0	\$ -
GIRDER LAYOUT W/BEAM REPORT											0	\$ -
SLAB UNIT PLAN and DETAILS											0	\$ -
SLAB UNIT TYPICAL SECTIONS and DETAILS											0	\$ -
IGND STANDARD											0	\$ -
											0	\$ -
											0	\$ -
											0	\$ -
											0	\$ -

AECOM Technical Services Inc. Loop 375 Braided Ramps												
Task Description	SENIOR PROJECT MANAGER	DESIGN MANAGER	SENIOR BRIDGE ENGINEER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	EIT	SENIOR ENGINEERING TECHNICIAN	ENGINEERING TECHNICIAN	ADMIN / CLERICAL (ENG)	TOTAL LABOR HOURS	TOTAL LABOR COST
10.7 MISCELLANEOUS BRIDGE DETAILS											0	\$ -
10.8 BRIDGE STANDARDS											0	\$ -
10.9 OSB (6), COSS STRUCTURES (5)											0	\$ -
OSB Foundation Design (6)											0	\$ -
COSS Foundation Design (5)											0	\$ -
10.9.1 NON-STANDARD OSB											0	\$ -
Full Span Monotube (span mainlane - 4)											0	\$ -
Cantilever (sign areas > standard) x 1											0	\$ -
Modified Monotube Structural Details											0	\$ -
Quantities, incl 1814											0	\$ -
10.10 UPDATE EXISTING EXHIBIT A; RR COORDINATION											0	\$ -
Update Existing Exhibit A (done by others) for Structure Only											0	\$ -
Update Exhibit A package / document (done by others) to add area maps, track profile 1000 ft both directions from bridge, Exhibit A for drainage pipe & ITS fiber under UPRR											0	\$ -
Coordination w/RR (2 Meetings)											0	\$ -
10.11 QC/QA											0	\$ -
30% Submittal Review											0	\$ -
60% Submittal Review											0	\$ -
90% Submittal Review											0	\$ -
100% Submittal Review											0	\$ -
60, 90, 100% SUBMITTAL & COMMENT RESOLUTION											0	\$ -
RETAINING WALLS											0	\$ -
10.12 WALL 1: LP 375 EB ML & EB ENTR RAMP - ML Sta 134+10 to 145+00, RT; 1,090 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (3)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.13 WALL 2: LP 375 EB ENTR RAMP FROM SOUTH AMERICAS AVENUE - RP Sta 108+10 to 111+70, RT; 390 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.14 WALL 3: LP 375 WB EXIT RAMP TO SOUTH AMERICAS AVENUE - RP Sta 103+47 to 108+60, LT; 543 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (2)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.15 WALL 4: LP 375 WB EXIT RAMP TO SOUTH AMERICAS AVENUE - RP Sta 103+47 to 108+60, RT; 513 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (2)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.16 WALL 5: LP 375 EB ENTR RAMP FROM SOUTH AMERICAS AVENUE - RP Sta 117+60 to 122+00, LT; 440 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
											0	\$ -

AECOM Technical Services Inc. Loop 375 Braided Ramps												
Task Description	SENIOR PROJECT MANAGER	DESIGN MANAGER	SENIOR BRIDGE ENGINEER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	EIT	SENIOR ENGINEERING TECHNICIAN	ENGINEERING TECHNICIAN	ADMIN / CLERICAL (ENG)	TOTAL LABOR HOURS	TOTAL LABOR COST
10.17 WALL 6: LP 375 EB ENTR RAMP FROM SOUTH AMERICAS AVENUE - RP Sta 117+60 to 122+00, LT; 470 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (2)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.18 WALL 7: LP 375 WB EXIT RAMP TO SOUTH AMERICAS AVENUE - RP Sta 117+00 to 118+25, LT; 125 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.19 WALL 8: LP 375 WB EXIT RAMP TO SOUTH AMERICAS AVENUE - RP Sta 117+00 to 118+25, RT; 155 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
RETAINING WALL TYPICAL SECTION for Revised Design				24				24			48	\$ 6,102.72
RETAINING WALL TYPICAL SECTION											0	\$ -
RETAINING WALL TYPICAL SECTION for Revised Design				8				12			20	\$ 2,471.76
10.20 WALL 9: LP 375 EB ML - ML Sta 125+00 to 129+25, RT; 425 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.21 WALL 10: LP 375 EB ML - ML Sta 125+00 to 129+25, RT; 425 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.22 WALL 11: LP 375 EB ML - ML Sta 132+00 to 138+60, RT; 660 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (2)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
RETAINING WALL TYPICAL SECTION for Revised Design				24				24			48	\$ 6,102.72
RETAINING WALL TYPICAL SECTION											0	\$ -
RETAINING WALL TYPICAL SECTION for Revised Design				8				12			20	\$ 2,471.76
RETAINING WALL STRUCTURAL DETAILS											0	\$ -
10.23 WALL 12: LP 375 EB ENTR RAMP FROM PAN AMERICAN DRIVE - RP Sta 104+05 to 116+20, RT; 1,215 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (3)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
RETAINING WALL STRUCTURAL DETAILS											0	\$ -
10.24 WALL 13: LP 375 WB EXIT RAMP TO PAN AMERICAN DRIVE - RP Sta 103+30 to 110+90, LT; 760 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (2)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
RETAINING WALL STRUCTURAL DETAILS											0	\$ -
10.25 WALL 14: LP 375 EB EXIT RAMP TO NORTH LOOP ROAD (FM76) - RP Sta 101+95 to 112+25, RT; 1,030 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (3)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.26 WALL 15: LP 375 EB ML - ML Sta 208+40 to 212+50, RT; 410 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.27 WALL 16: LP 375 EB FRD - FRD Sta 106+30 to 111+80, RT; 550 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (2)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.28 WALL 17: LP 375 WB FRD - FRD Sta 105+95 to 112+65, RT; 670 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (2)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.29 WALL 18: LP 375 WB ML - ML Sta 208+20 to 213+10, RT; 490 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (2)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.30 WALL 19: LP 375 EB FRD - FRD Sta 116+20 to 127+00, RT; 1,130 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (3)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.31 WALL 20: LP 375 WB FRD - FRD Sta 117+10 to 131+00, LT; 1,450 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (4)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.32 WALL 21: LP 375 WB ML - ML Sta 226+60 to 232+20, RT; 640 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (2)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.33 WALL 22: LP 375 WB FRD - FRD Sta 129+00 to 131+95, LT; 295 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.34 WALL 23: LP 375 EB ENTR RAMP FROM ALAMEDA AVENUE - RP Sta 110+50 to 116+10, RT; 560 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (2)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -

AECOM Technical Services Inc. Loop 375 Braided Ramps												
Task Description	SENIOR PROJECT MANAGER	DESIGN MANAGER	SENIOR BRIDGE ENGINEER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	EIT	SENIOR ENGINEERING TECHNICIAN	ENGINEERING TECHNICIAN	ADMIN / CLERICAL (ENG)	TOTAL LABOR HOURS	TOTAL LABOR COST
10.35 WALL 24: LP 375 WB EXIT RAMP TO ALAMEDA AVENUE - RP Sta 141+10 to 142+50, RT; 190 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.36 WALL 25: LP 375 WB EXIT RAMP TO ALAMEDA AVENUE - RP Sta 141+10 to 148+55, LT; 745 ft long MSE Wall											0	\$ -
RETAINING WALL LAYOUT (2)											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
RETAINING WALL STRUCTURAL DETAILS											0	\$ -
10.36.1 6 ADDITIONAL WALLS: LP 375 : 1. WL375SBXC_R6: SL375_CL STA 152+79.98, 61' LT to STA 157+29.52, 61' LT 2. WL375SBML_L1: SL375_CL STA 218+23.07, 61.23' LT STA 219+88.82, 61.93' LT 3. WL375NBEI_L2: SL375_CL STA 226+14.33, 78.55' RT STA 237+44.10, 61.42' RT 4. WL375NBEA_T2: SL375_CL STA 145+14.73, 115.18' RT to STA 145+15.76, 89.21' RT 5. WL375NBEA_T5: SL375_CL STA 151+04.91, 75.40' RT to STA 151+05.66, 101.39' RT 6. WL375SBFR_L2: SL375_CL STA 204+94.09, 154.14' LT to STA 208+89.09, 137.23' LT												\$ -
RETAINING WALL LAYOUT											0	\$ -
RETAINING WALL TYPICAL SECTION											0	\$ -
10.37 MISCELLANEOUS WALL DETAILS											0	\$ -
10.38 QC/QA											0	\$ -
30% Submittal Review											0	\$ -
60% Submittal Review											0	\$ -
90% Submittal Review											0	\$ -
100% Submittal Review											0	\$ -
Revised Design 100% Submittal Review				8		4					12	\$ 1,596.72
60, 90, 100% SUBMITTAL & DIV REVIEW COMMENT RESOLUTION											0	\$ -
Revised Design 100% Submittal & Division Review Comment Resolution				8		4					12	\$ 1,596.72
11. Storm Water Pollution Prevention Plan (SW3P)											0	\$ -
9.1 Prepare SW3P Narrative											0	\$ -
9.2 Prepare Storm Water Pollution Prevention Plans											0	\$ -
9.3 Prepare SW3P Manual											0	\$ -
10. Final Assembly of PS&E Package											0	\$ -
10.1 Complete final construction plans											0	\$ -
10.2 General Notes, Specifications and Provisions											0	\$ -
10.3 Form, 1002, 2229, 1814, Certs, Spl Prov, Spl Specs											0	\$ -
10.4 Construction Time Determination											0	\$ -
10.5 Construction Cost Estimate (30%, 60%, 90%, Final)											0	\$ -
											0	\$ -
											0	\$ -
											0	\$ -
11. ADA Compliance Services											0	\$ -
11.1 Perform plan review and inspections for ADA, T.A.S, and TDLR requirements											0	\$ -
12. Bid Assistance											0	\$ -
12.1 Assist with bid process and provide answers to prospective bidders											0	\$ -
12.2 Attend prebid conference											0	\$ -
Deliverables											0	\$ -
1. 30, QTS, 90, 100% Submittals											0	\$ -
2. QC redlines at (30 and 90 percent) design reviews											0	\$ -
3. Preliminary (30 and 60 Percent) Design Review											0	\$ -
4. Final hydraulic report											0	\$ -
5. Final approved design exceptions/waivers											0	\$ -
6. Plans estimate											0	\$ -
7. Specification list, general notes, special provisions, specifications, special specifications											0	\$ -
8. Final signed and sealed construction plans											0	\$ -
9. Bid document package											0	\$ -
10. Environmental Permits											0	\$ -
HOURS SUB-TOTALS	11	4	0	381	346	338	228	644	0	0	1953	
CONTRACT RATE PER HOUR	\$204.22	\$202.77	\$145.14	\$144.90	\$97.71	\$109.38	\$76.31	\$109.38	\$90.23	\$54.69		
TOTAL LABOR COSTS	\$2,246.42	\$811.08	\$0.00	\$55,206.90	\$33,807.66	\$36,970.44	\$17,398.68	\$70,440.72	\$0.00	\$0.00	\$216,881.90	
% DISTRIBUTION OF STAFF HOURS	0.56%	0.20%	0.00%	19.51%	17.72%	17.31%	11.67%	32.97%	0.00%	0.00%		
TOTAL PROJECT HOURS	47	10	0	405	346	442	228	644	0	24	2147	
PROJECT TOTALS	\$9,598.34	\$2,027.70	\$0.00	\$58,684.50	\$33,807.66	\$48,345.96	\$17,398.68	\$70,440.72	\$0.00	\$1,312.56	\$241,616.12	
TOTAL PROJECT % DISTRIBUTION OF STAFF HOURS	2.19%	0.47%	0.00%	18.86%	16.12%	20.59%	10.62%	30.00%	0.00%	1.12%		

PSI
Loop 375 Braided Ramps

Task Description	SENIOR PROJECT MANAGER	SENIOR BRIDGE ENGINEER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	EIT	SENIOR ENGINEERING TECHNICIAN	ENGINEERING TECHNICIAN	SENIOR CADD OPERATOR	CADD OPERATOR	ADMIN / CLERICAL (ENG)	TOTAL LABOR HOURS	TOTAL LABOR COST
A. Project Management												0	#N/A
1. Project Management/Work Plan												0	\$ -
1.1 Develop a Project Management/Work Plan												0	\$ -
2. Progress Reporting												0	\$ -
D. Geotechnical Investigations												112	\$ 18,163.36
1. Surface Exploration and Testing												0	\$ -
1.1 Perform geotechnical engineering investigation												0	\$ -
1.1.1. Right of entry/access coordination												0	\$ -
1.1.2 Stake Boring Locations												0	\$ -
1.1.3 Implement traffic control												0	\$ -
1.1.4 Perform split spoon standard penetration tests (SPT)												0	\$ -
1.1.5 Develop a laboratory soils testing program and utilize the index test												0	\$ -
1.1.6 Derive soil strength utilizing the split spoon SPT blow counts or unconfined compressive strength tests												0	\$ -
1.1.7 Perform California Bearing Test (CBR)												0	\$ -
2. Geotechnical Design												112	\$ 18,163.36
2.1 Determine pavement base and pavement thickness for a rigid pavement concrete section												0	\$ -
2.1a Analyze TxDOT Lab recommended pavement design	4		40									44	\$ 7,109.52
2.3 Provide recommendations for illumination pole and overhead sign bridge foundations, and ret. wall structures												0	\$ -
2.3a Provide recommendation for ret. Wall revised design structures	8		60									68	\$ 11,053.84
2.4 Summarize results of the geotechnical engineering investigations in a written report												0	\$ -
Deliverables												0	\$ -
1. Geotechnical Report (3 copies) (PE signed and sealed)												0	\$ -
HOURS SUB-TOTALS	12	0	100	0	0	0	0	0	0	0	0	112	
CONTRACT RATE PER HOUR	\$194.78	\$194.78	\$158.26	\$130.86	\$103.47	\$85.21	\$97.39	\$76.08	\$0.00	\$0.00	\$54.78		
TOTAL LABOR COSTS	\$2,337.36	\$0.00	\$15,826.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18,163.36	
% DISTRIBUTION OF STAFF HOURS	10.71%	0.00%	89.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
TOTAL PROJECT HOURS	12	0	100	0	0	0	0	0	0	0	0	112	
PROJECT TOTALS	\$2,337.36	\$0.00	\$15,826.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18,163.36	
TOTAL PROJECT % DISTRIBUTION OF STAFF HOURS	10.71%	0.00%	89.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		