CONTRACT AMENDMENT NO. 1
TO
WILLIAMSON COUNTY CONTRACT FOR ENGINEERING SERVICES

WILLIAMSON COUNTY ROAD AND BRIDGE PROJECT: Geotechnical/Lab Testing Services ("Project")

THIS CONTRACT AMENDMENT NO. 1 to Williamson County Contract for Engineering Services is by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and **Raba Kistner Consultants, Inc.** (the "Engineer") and becomes effective as of the date of the last party's execution below.

WHEREAS, the County and the Engineer executed the Williamson County Contract for Engineering Services dated effective **February 18, 2015** (the "Contract");

WHEREAS, pursuant to Article 14 of the Contract, the terms of the Contract may be modified by a written fully executed Contract Amendment;

WHEREAS, the "Compensation Cap" under Article 5 of the Contract limits the maximum amount payable under the Contract to **$250,000.00;** and,

WHEREAS, the Rate Schedule in Exhibit D of the Contract are limited to the rates noted in said Exhibit D; and,

WHEREAS, it has become necessary to amend the Contract.

AGREEMENT

NOW, THEREFORE, premises considered, the County and the Engineer agree that the Contract is amended as follows:

I. The hourly Rates in the original Exhibit D of the Contract are hereby amended as shown in the attached revised Exhibit D.

All other terms of the Contract are unchanged and will remain in full force and effect.

IN WITNESS WHEREOF, the County and the Engineer have executed this Contract Amendment, in duplicate, to be effective as of the date of the last party's execution below.

ENGINEER:

By: _____
Signature

Gabriel Ornelas Jr.
Printed Name

Vice President
Title

5/25/2017
Date

COUNTY:

By: _____
Signature

_____
Printed Name

_____
Title

_____
Date

Exhibit D – Rate Sheet

Additional Charges:	
Sulfate Testing	$75.00 Per Test
Technician Overtime	$70.00 Per Hour
Certified Welding Inspector	$95.00 Per Hour
Certified Welding Inspector Overtime	$133.00 Per Hour
Non Destructive Testing (Ultrasound)	$104.50 Per Hour
NDT Testing Overtime (Ultrasound)	$146.30 Per Hour
Geotechnical Technician Overtime	$84.00 Per Hour
Asphaltic Plant Observation	$84.00 Per Hour
One Man Coring Overtime	$84.00 Per Hour
Two Man Coring Overtime	$131.60 Per Hour

TITLE	HOURLY Rate
Principal	$ 200.00
Senior Engineer/Consultant	$ 200.00
Project Manager	$ 175.00
Project Engineer	$ 135.00
Engineer	$ 100.00
Engineer in Training	$ 90.00
Geotechnical Technician	$ 60.00
CADD Operator	$ 80.00
Clerical	$ 55.00
Geologist	$ 110.00
Environmental Scientist	$ 105.00
Lead Technician	$ 60.00
CMT Technician	$ 50.00
Archaeologist	$ 110.00
GIS	$ 90.00

DIRECT EXPENSES

Copies 8 1/2 x 11, 11 x 17	$0.16/page
Mylar 11 x 17	$2.10/page
Schematic Plots	$1.58/sq ft

-1	**Auger Drilling (Does not include logging)**		
	soil	per ft	$16.00
	soft rock	per ft	$19.00
-2	**Standard Wet Rotary (Does not include logging)**	per ft	$21.00
-3	**Nx Rock Core (Does not include logging)**		
	Soft rock (marl, shale)	per ft	$32.00
	Hard rock (limestone, sandstone)	per ft	$42.00
-4	**Non-conventional drilling** (barge drilling or unusual time consuming drilling i.e. through bridge)	per hr	$279.30
-5	**Field Logging Services**		
	Geotechnical Technician	per hr	$60.00
	Geologists	per hr	$110.00
	Engineer in Training	per hr	$90.00
-6	**Field Coordination**		
	Field Engineer	per hr	$100.00
	Flagman	per hr	$65.00
-7	**Mobilization**		
	Mobilization or truck-mounted rig, rill crew and support	per mile	$4.00
	Field logger trip charge	per mile	$1.00
	Mobilization non-standard equipment (4x4 all terrain rig)		At cost
	Barge mobilization and rental		At cost
-8	**Sampling**		
	Standard Penetration Test (ASTM D1586)	per test	$22.00
	Shelby Tube (ASTM D1587)	per test	$22.00
	Texas Cone Penetrometer Test (THD, Tex-132-E)	per test	$26.00
-9	**Other Expenses/Charges**		
	Standby Time	per hr	$225.00
	Mileage - non-drilling equipment	per mile	$1.00
	Grout backfill	per ft	$3.25
	Dozer/clearing cost		At cost
	Logger truck charge	per day	$55.00
	Standard pavement coring	each	$75.00
	Concrete/AC patch	each	$64.00
	Traffic control - signs, barricades		At cost
	All other outside expenses		At cost

FIELD AND LABORATORY UNIT FEES

ASPHALTIC CONCRETE

REFERENCE	FIELD SERVICES	
ASTM D 75	Sampling Raw Materials of Composite Mix	
	Technician Time	$ 50.00/hr
Asphalt Institute Manual	Asphaltic Plant Observation - To Verify Aggregate Size and Quality, Batch Weights and Temperature	
	Technician Time	60.00/hr
Asphalt Institute Manual	Asphaltic Site Observation - To Observe Preparation, Laydown Operations, Asphaltic Concrete Temperatures, Mat Thickness and Mat Density Determination	
	Technician Time	60.00/hr
ASTM D 2950	Nuclear Density Test with Inspection	16.00/ea
	Nuclear Density Test	25.00/ea

REFERENCE	LABORATORY SERVICES	
ASTM D 2172; TxDOT, TEX-210-F	Extraction Test, Bitumen Content and Aggregate Sieve Analysis of Asphaltic Concrete	$ 190.00/ea
ASTM D 2172; TxDOT, TEX-210-F	Extraction Test, Bitumen Content Only	131.00/ea
	Asphaltic Concrete Extraction; Bitumen Content and Aggregates; Sieve Analysis of Asphaltic Concrete; Molding Specimens (Hveem or Marshall); Laboratory Density (Molded Specimen); Stability Test (Hveem); and Maximum Theoretical Specific Gravity (Rice Gravity)	459.00/set
Hveem, TxDOT, TEX-206-F; Marshall, ASTM D 1559	Molding Specimens	
	Hveem or Marshall	60.00/set
	Superpave (2 per set)	124.00/set
TxDOT, TEX-207-F; ASTM D 2726	Laboratory Density Test	60.00/set
	a) Molded Specimen	60.00/set
	b) Asphalt Core	51.00/ea
	c) Superpave (2 per set)	72.00/set
Hveem, TxDOT, TEX-208-F; Marshall, ASTM D 1559	Stability Test	
	Marshall	58.00/set
	Hveem	73.00/set
Asphalt Institute Manual and TxDOT; Mix Designs	Corp of Engineers or FAA	1,914.00/ea
	TxDOT Quality Control/Quality Assurance	1,914.00/ea
	TxDOT CMHB	2,719.00/ea
	TxDOT Calibration Mix and Pans	320.00/ea
	TxDOT Black Base Design, Item 345	1,433.00/ea

ASPHALTIC CONCRETE, continued

REFERENCE	LABORATORY SERVICES	
TxDOT, TEX-200-F; ASTM C 136	Sieve Analysis of Aggregate	$ 39.00/ea
TxDOT, TEX-203-F; ASTM D 2419	Sand Equivalent Test	83.00/ea
AASHTO TP 33	Fine Aggregate Angularity	49.00/ea
ASTM D 4791-95	Flat and Elongated Particle	49.00/ea
TxDOT, TEX-201-F; ASTM C 127	Specific Gravity (Coarse or Fine Aggregate)	39.00/ea
TxDOT, TEX-201-F; ASTM C 127	Absorption (Coarse or Fine Aggregate) (Includes Specific Gravity)	60.00/ea
TxDOT, TEX-411-A; ASTM C 88	Sulfate Soundness (Time and Test)	
	Preparation Time	51.00/hr
	a) Magnesium - 5 Cycle	484.00/ea
	b) Sodium - 5 Cycle	431.00/ea
ASTM C 131; ASTM C 535	Los Angeles Abrasion Test (Time and Test)	
	Los Angeles Abrasion Test (Small or Large Coarse Aggregate)	187.00/ea
Asphalt Inst. SP-2 TxDOT, Item 3066 AASHTO PP 28-95	Superpave TM Mix Design (Includes Aggregate, Specific Gravity and Sieve Analysis) (Does Not Include TSR)	5,913.00/ea
TxDOT, TEX-227-F; AASHTO T 209; ASTM D 2041	Maximum Theoretical Specific Gravity (Rice Gravity)	90.00/ea
TxDOT, TEX-226-F; AASHTO T 283; ASTM D 4867	Moisture Sensitivity Test (Tensile Strength Ratio Test)	
	with Freeze/Thaw	513.00/ea
	without Freeze/Thaw	401.00/ea
TxDOT, Item 3157	Cold Processed – Recycled Paving Material (RPM)	
	Mixture Design	As Requested
	Mixture Verification (QC) Strength, Stability (Hveem, Modified Marshall)	755.00/set
TxDOT, TEX-126-E (Modified)	Molding and Strength	367.00/set
TxDOT, TEX-208-F (Modified)	Molding and Hveem	139.00/set
ASTM D 1559	Molding and Marshall	131.00/set
TxDOT, TEX-103-E	Molded Moisture Content	13.00/ea

CEMENT TREATED BASE

REFERENCE	FIELD SERVICES		
PCA	Sampling Raw Materials for Mix Verification Technician Time	$	50.00/hr
	Sampling Contractor Processed Material Technician Time		50.00/hr

REFERENCE	LABORATORY SERVICES		
PCA	Molding Controlled Processed Material	$	69.00/ea
PCA	Unconfined Compressive Strength Testing		31.00/ea
ASTM D 559; ASTM D 560	Durability (2 Specimens per Set) (Percent Loss in 12 Cycles) Wet Dry/Freeze Thaw		589.00/set
	Mix Design		
PCA; TxDOT, TEX-120-E; ASTM D 558	Mix Design - Cement Treated Base (Does Not Include Durability)	$	1,171.00/ea

CONCRETE

REFERENCE	FIELD SERVICES		
ASTM C 31; ASTM C 172; ASTM C 143	Sampling Concrete to Conduct Slump Test, Measure Concrete Temperature, Cast Test Specimen and Transport Test Specimen to Laboratory Next Day		
	Technician Time	$	50.00/hr
	Pick-Up of Test Specimen		50.00/hr
	Standby Time		50.00/hr
ASTM C 39; ASTM C 617	Cylinder Compressive Strength Testing and Reporting (In Conjunction with Sampling)		
	a) 6x12 or 4x8 - Normal Weight or Lightweight Structural (Minimum of 4)		17.00/ea
	b) 3x6 - Lightweight Insulating Cellular (Minimum of 6 - Includes Two Dry Densities)		25.00/ea
	c) "Hold" Cylinder (Additional Charge)		11.00/ea
	d) "Strip" Cylinder (Additional Charge)		13.00/ea
	e) Compressive Strength - 2x2 Cubes		24.00/ea
	f) Dry Density - Concrete Cylinder		44.00/ea
ASTM C 78	Flexural Strength Testing and Reporting (In Conjunction with Sampling Beams)		49.00/ea
	Air Content (In Conjunction with Sampling)		
ASTM C 231	a) Pressure		32.00/ea
ASTM C 173	b) Volumetric		38.00/ea
AASHTO T 199	c) Chase		17.00/ea
ASTM C 138	Unit Weight		29.00/ea
ASTM C 143	Additional Slump Test		24.00/ea

CONCRETE, continued

ACI 311; ACI 304	Concrete Plant Observation - To Observe and Record Aggregate Types, Batch Weights, Concrete Consistency and Mixing Time Technician Time	50.00/hr
ACI 311; ACI 304	Concrete Site Observation - To Record the Consistency of Concrete, Verify and Adjust Slump within Project Specifications and Sample for Test Specimens Technician Time	50.00/hr

REFERENCE	LABORATORY SERVICES	
ACI 211.1	Hardrock Concrete Mix Design Calculations and Proportioning to Include Six Confirmatory Cylinders (Physical Properties Not Included)	$ 301.00/ea
ACI 211.1 (303.R)	Architectural Mix Design	330.00/ea
ACI 211.2	Lightweight Structural Mix Design	310.00/ea
ASTM C 270	Masonry Mortar Mix Design Including Six Cubes and Water Retention (Physical Properties Not Included)	$ 330.00/ea
ASTM C 1202	Chloride Ion Permeability	262.00/set
ASTM C 39	Cylinders Compressive Strength Testing and Reporting F.O.B. Cylinders to Our Laboratory	28.00/ea
ASTM C 496	Splitting Tensile Strength of Concrete Cylinders Tensile Test	44.00/ea
ASTM C 666	Freeze-Thaw Test	364.00/set
ASTM C 469	Determination of Young's Modulus of Elasticity (Time, Test and Set-Up)	83.00/ea
ASTM C 803	Windsor Probe (Includes Surface Preparation)	85.00/hr
ASTM C 805	Schmidt Rebound Number	85.00/hr

CONCRETE AGGREGATES

REFERENCE	FIELD SERVICES	
ASTM D 75; TxDOT, TEX-400-A	Sampling Concrete Aggregates Technician Time	$ 50.00/hr

REFERENCE	LABORATORY SERVICES	
ASTM C 566	Moisture Content	$ 13.00/ea
ASTM C 29; TxDOT, TEX-404-A	Unit Weight (Coarse or Fine) a) Loose b) Rodded	33.00/ea 33.00/ea

ASTM C 127; ASTM C 128; TxDOT, TEX-201-F	Specific Gravity (Coarse or Fine)	39.00/ea
ASTM C 123	Lightweight Particles (Plus Cost of Materials)	58.00/test
	Absorption	
ASTM C 127; ASTM C 128; TxDOT, TEX-201-F	a) Normal Weight Aggregate (Coarse or Fine)	25.00/ea
	b) Lightweight Aggregate (Coarse)	28.00/ea
ASTM C 136; TxDOT, TEX-401-A	Sieve Analysis (Dry) for ASTM C 33 Specifications	
	a) Coarse, Per Sample	44.00/ea
	b) Fine, Per Sample	52.00/ea
ASTM C 117; TxDOT, TEX-406-A	Amount Finer than No. 200 (Decantation)	37.00/ea
ASTM C 131; ASTM C 535	Los Angeles Abrasion (Time and Test)	187.00/ea
ASTM C 88; TxDOT, TEX-411-A	Sulfate Soundness (Time and Test)	
	Preparation Time	51.00/hr
	a) Magnesium - 5 Cycle	484.00/ea
	b) Sodium - 5 Cycle	431.00/ea
ASTM C 117; ASTM C 29; ASTM C 127; ASTM C 128; ASTM C 566; TxDOT, TEX-406-A; TxDOT, TEX-404-A; TxDOT, TEX-201-F; TxDOT, TEX-401-A	Physical Properties of Aggregates - Includes Decantation, Rodded Unit Weight, Specific Gravity, Absorption, Sieve Analysis and Moisture Content (Per Aggregate Type and Size)	
	Conducted in Conjunction with Concrete Mix Design	144.00/ea
	Conducted Separate from Concrete Mix Design	187.00/ea
ASTM C 40; TxDOT, TEX-408-A	Organic Impurities	38.00/ea
ASTM C 2419; TxDOT, TEX-203-F	Sand Equivalent Values	83.00/ea
ASTM C 142	Clay Lumps and Friable Particles	56.00/ea
ASTM C 641	Staining Materials in Lightweight Concrete Aggregate	56.00/ea

CORING

REFERENCE	FIELD SERVICES	
ASTM C 42; ACI 318	Technician Time and Equipment	
	a) One Man	$ 60.00/hr
	b) Two Men	94.00/hr
	c) Reinforcing Steel Detector	29.00/day
	d) Coring	92.00/day
	e) Generator	95.00/day
	Bit Wear	
	a) Limestone Aggregate	6.00/in.in.
	b) Quartz Aggregate (River Gravel)	7.00/in.in.

REFERENCE	LABORATORY SERVICES		
ASTM C 42	Sawed Ends for Compressive Strength Test a) Limestone Aggregate	2.00/sq.in.	
ASTM C 39; ASTM C 42; ASTM C 174; ASTM C 617	Compressive Strength of Concrete Core Includes Measurements, Capping and Testing		25.00/ea
	Report Photographs		At Cost
	Laboratory Air-Dried Unit Weight		17.00/ea

LIME

REFERENCE	FIELD SERVICES		
National Lime Association	Continuous Observation to Monitor and Record Equipment Functions, Specific Gravity of the Lime Slurry and Observation of Stabilization Location and Depth Technician Time	$	50.00/hr

REFERENCE	LABORATORY SERVICES		
ASTM D 422; TxDOT, TEX-101-E, Pt. II	Sieve Analysis of Pulverized Materials for Gradation Compliance	$	63.00/ea
ASTM D 4318; TxDOT, TEX-112-E	Lime Series Curve Determination Including Five Atterberg Limits		435.00/ea

PORTLAND CEMENT

REFERENCE	LABORATORY SERVICES		
ASTM C 183	Standard Method of Sampling Hydraulic Cement	$	50.00/hr
ASTM C 109	Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or 50mm Cube Specimen)		24.00/ea
ASTM C 185	Air Content of Hydraulic Cement Mortar		49.00/ea
ASTM C 266; ASTM C 191	Time of Setting of Hydraulic Cement by Gillmore/Vicat Needles		59.00/ea
ASTM C 151	Autoclave Expansion of Portland Cement		197.00/ea
ASTM C 187	Normal Consistency of Hydraulic Cement		49.00/ea
ASTM C 188	Specific Gravity of Hydraulic Cement		57.00/ea
ASTM C 430	Fineness of Hydraulic Cement by the No. 325 Sieve		57.00/ea
ASTM C 451	Early Stiffening of Portland Cement (Paste Method)		49.00/ea
ASTM C 114	Chemical Analysis		361.00/ea

ASTM C 91	Water Retention of Masonry Cement		92.00/ea
ASTM C 150	Chemical Analysis		361.00/ea
	Physical Analysis		717.00/ea

SOILS

REFERENCE	FIELD SERVICES		
ASTM D 75	Sampling Subgrade, Fill or Base		
	Technician Time	$	50.00/hr
	In-Place Moisture-Density Test		
	Technician Time		50.00/hr
ASTM D 2922	Nuclear Density		25.00/ea
ASTM D 2167; ASTM D 1556	Volumetric Density (Sand Cone)		72.00/ea
	Fill and Embankment Observation - Testing for Compliance with the Project Specifications to Verify Proper Moisture and Compaction Conditions in Order to Produce a Quality Fill and Uniform Workmanship (Time, Test and Mileage)		
	Technician Time (Hourly Rate)		50.00/hr
	Proof Rolling Observation		50.00/hr
ASTM D 2922	Nuclear Density Test with Observation		16.00/ea

REFERENCE	LABORATORY SERVICES		
ASTM D 2216; TxDOT, TEX-103-E	Moisture Content	$	13.00/ea
	Atterberg Limits		
ASTM D 4318	a) ASTM or TxDOT (TEX-104, TEX-105-E, TEX-106-E)		83.00/ea
	Shrinkage Limit in Conjunction with Atterberg Limits		
ASTM D 427	a) Volumetric		102.00/ea
	b) Linear (TxDOT, TEX-107-E)		102.00/ea
ASTM D 422; TxDOT, TEX-101-E; TxDOT, TEX-110-E	Sieve Analysis		
	a) Washed through No. 40 (Up to 5 Sieves)		56.00/ea
	b) Washed through No. 200 (Up to 4 Sieves)		83.00/ea
	c) Additional Sieves		13.00/ea
ASTM D 1140	Amount Finer than No. 200 Sieve		56.00/ea
	Moisture-Density Relationship		
	Preparation Time		51.00/hr
ASTM D 698; ASTM D 1557	ASTM		249.00/ea
AASHTO T 99; AASHTO T 180	AASHTO		249.00/ea
TxDOT, TEX-113-E; TxDOT, TEX-114-E	TxDOT		249.00/ea
MIL STD CE 55A	Corps of Engineers		249.00/ea
ASTM C 131; ASTM D 535	Los Angeles Abrasion (Time and Test)		187.00/ea

ASTM D 1883	California Bearing Ratio - Short Method; Includes Moisture-Density Relationship and Three Test Specimens	$ 791.00/set
	Each Additional Specimen	163.00/ea
TxDOT, TEX-117-E	TxDOT Triaxial – Short Method; Includes Moisture-Density Relationship and Up to Six Test Specimens	
	Part I	1,314.00/set
	Part II	1,206.00/set
	Each Additional Specimen	148.00/ea
ASTM D 854; TxDOT, TEX-108-E	Specific Gravity	83.00/ea
ASTM D 422; TxDOT, TEX-110-E	Hydrometer Analysis (Includes Sample Preparation, Grain Size Curve and Specific Gravity)	273.00/ea
ASTM D 5084	Hydraulic Conductivity	421.00/ea
ASTM D 2166	Unit Weight	29.00/ea
TxDOT, TEX-116-E	Wet Ball Mill	206.00/ea
	Water Content and Visual Classification	13.00/ea
	Unconfined Compression (includes unit dry weight)	
	a) Soil Shelby Tube Specimens	43.00/ea
	b) Rock Core Specimens	51.00/ea
	(1) Sawed Specimen Ends	11.00/end
	Triaxial Compression	
	a) Unconsolidated-Undrained, Per Specimen	78.00/ea
	b) Unconsolidated-Undrained, Multistage	273.00/ea
	Direct Shear	
	a) Unconsolidated-Undrained	217.00/ea
	b) Consolidated-Drained (Sand)	459.00/ea
	Consolidation (Not Including Specific Gravity)	565.00/ea
	Swell Test	
	a) Pressure Method	296.00/ea
	b) Free Swell	156.00/ea

GENERAL EXPENSES

Vehicle Trip Charge	$ 40.00/trip