



EXHIBIT C

Services to be Provided
by Engineer

EXHIBIT “C”
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

2021 Hidalgo County Roadway Inventory Assessment and Condition
Study & Report(s)

The ENGINEER will provide an inventory of all county roadways and prepare a database, which will be used to provide a condition rating for each street. The engineer will propose a pavement management system using the conditions ratings that will allow the County to improve maintenance & operations. Finally, we will prepare a GASB report.

Specific services by the ENGINEER for this “Project” will include the following:

Phase 1: Preparatory – during this phase, the ENGINEER will plan the Project scope of work to ensure compliance with the requirements. This phase will also be used to coordinate, schedule, and begin implementation of field operations.

1. The ENGINEER will review the 2006/2007 Hidalgo County GASB Report(s) to ensure continuity within this Project.
2. The ENGINEER will develop a Project Implementation Plan. This plan will ensure the project scope will be performed as required. This plan will also coordinate project meetings, plan project safety, identify roadway rating standards, and provide a process for quality control procedures.
3. The ENGINEER will meet with all County Personnel and all Precincts to coordinate:
 - a. The proposed schedule for the Project.
 - b. Monthly meetings & communications during the Project.
 - c. Each Precinct’s zone and roadway priorities (if any).
 - d. The Precincts’ documentation procedures to be followed during the project.
4. The ENGINEER will prepare a preliminary list of “new” roadways or developments in the County since the last GASB Report.
5. The ENGINEER will create a database and will configure field equipment to capture all roadway features.
6. The ENGINEER will create/update a GIS file to capture all roadway items.
7. The ENGINEER will evaluate software/systems to provide the condition ratings for each roadway. This software/system will be used for planning maintenance & operations.

SAM Engineering and Surveying



Engineering Firm Reg # 10602 Surveying Firm Reg # 101416-00
200 South 10th Street, Suite 1500, McAllen, Texas 78501 Phone: (956) 702-8880 Fax: (956) 702-8883

August 13, 2021

Jaime Cortez
Contract Specialist III
Hidalgo County Purchasing Department
100 E. Cano street, 2nd Floor
Edinburg, Texas 78539

Re: Cost Proposal- 2021 Hidalgo County Roadway Inventory Assessment and Condition Study & Report(s)

Mr. Cortez,

We are pleased to submit this proposal to provide Professional Engineering Services in relation to the above-mentioned project.

This project will provide Hidalgo County with;

- a. Inventory & assessment of all county roadways;
- b. A rating system for roadway maintenance & operations, and;
- c. Updated capitalization of roadways.

A detailed scope of work describing what the project will entail is herein provided. Please find attached the following:

- Exhibit A: Scope of Services to be provided by the Owner
- Exhibit B: Scope of Services to be provided by the Engineer
- Exhibit C: Proposed Fee & Manhour Breakdown

We appreciate the opportunity to assist Hidalgo County with this important project. Please feel free to call me at 956-207-7130 if you have any questions or would like to discuss this proposal.

Respectfully submitted,

Samuel D. Maldonado, PE, RPLS
Principal/CEO

EXHIBIT “A”
SCOPE OF SERVICES TO BE PROVIDED BY THE COUNTY

The following provides an outline of the services to be provided by the COUNTY for the proposed 2021 Street Inventory Assessment in Hidalgo County hereinafter denoted as the PROJECT.

GENERAL:

The COUNTY will provide to the ENGINEER the following:

- 1) The authorization to proceed with services through coordination with the ENGINEER.
- 2) Payment for work performed by the ENGINEER and accepted by the COUNTY in accordance with Article 6 of the Agreement.
- 3) Assistance to the ENGINEER, as needed, to obtain the required data and information from other Local, Regional, State, and Federal agencies the ENGINEER might not easily obtain.
- 4) The existing 2006/2007 GASB Report for the ENGINEER to review.
- 5) Coordination with the ENGINEER to ensure compliance of the GASB Report.
- 6) Any available relevant data the COUNTY may have on file concerning the PROJECT.
- 7) Timely review and decisions in response to the ENGINEER’S request for information and/or required submittals and deliverables, for the ENGINEER to maintain the agreed upon work schedule prepared in accordance with Exhibit “C” attached to this Work Authorization.
- 8) Attend and participate in progress meetings as required and as coordinated and conducted by the ENGINEER.

EXHIBIT “B”
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

2021 Hidalgo County Roadway Inventory Assessment and Condition
Study & Report(s)

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EXHIBIT “B”
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

Phase 2: Roadway Inventory – during this Phase, the ENGINEER will begin field work for data collection of all roadway-related County assets. This phase will include performing the roadway Condition Ratings, updating GIS files, and adding all information to the Database

Data Collection

1. The ENGINEER will measure and determine all Roadway physical conditions, which include (width, length, pavement type, begin/end location). Maximum roadway segments will be limited to one mile.
2. The ENGINEER will determine the Pavement Type of all roadways based on established guidelines and criteria.
3. The ENGINEER will report the presence of roadway-related assets, which include (sidewalks, curb & gutter, signs, streetlights, striping, etc.), which will be either documented via photos or existing/non existing notation.
4. The ENGINEER will report the presence of road drainage, or any drainage structures (if visible) as follows.
 - a Determine whether the street has deficient drainage based on visual inspection.
 - b Document the existence of Curb & Gutter, roadside ditches, culverts, or other drainage structures.
5. The ENGINEER will document roadway Right-of-Way based on visual inspection.
6. Roadway Condition Rating-
 - a The ENGINEER will provide a condition rating for all roadway defects based on scoring criteria, which will be evaluated and graded for each of the following defects:

i. Transverse Cracks	vi. Polished Aggregate
ii. Longitudinal Cracks	vii. Alligator Cracks
iii. Shrinkage Cracks	viii. Rutting
iv. Corrugations	ix. Shoving/Pushing
v. Raveling	x. Potholes
	xi. Excess Asphalt

EXHIBIT “B”
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

Update Database(s)

1. The ENGINEER will populate the Microsoft Database with all data collected in the field.
2. The ENGINEER will provide a Condition Rating Score (0-100) of the roadway conditions based on the defects and following our established rating system. This score will also be populated into database.
3. The ENGINEER will provide an estimate (\$ Costs) for roadway improvements required.
4. The ENGINEER will capitalize all existing roadways.
5. The ENGINEER will update the GIS files with all data collected in the field (conversion from Databased file).
6. The ENGINEER will populate a software/system for pavement condition index (PCI).

Phase 3: GASB Report during this Phase, the ENGINEER will compile all field data into the Databases, finalize cost estimates and prepare the project deliverables.

1. The ENGINEER will prepare the Database information by formatting a comprehensive Report. The sheet data and each individual roadway rating score will be presented in the following formats.
 - a. Alphabetical listing
 - b. Worst to best listing
 - c. Streets sorted by Precinct (and by Geographical area within each precinct)
2. The ENGINEER will prepare existing value and replacement, repair, and maintenance costs of county roads based on the information collected. This information will become part of the Database
3. The ENGINEER will prepare a GIS base file containing all roadway inventory information collected.
4. The ENGINEER will prepare a management plan with the pavement condition index system to assist the County with future maintenance and operations.
5. The ENGINEER will prepare a Draft Report for the County’s review. Maps, imagery & database files of all information collected during the project will be included Report.
6. The ENGINEER will prepare a Final Report.

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

7. Project Deliverables consists of 4 major items, as follows;
 - a. Street Inventory Database
 - b. Updated GIS base files.
 - c. Pavement Condition Index System
 - d. Updated GASB Report

EXHIBIT C
2021 Hidalgo County Roadway Inventory Assessment and Condition Study & Report(s)
(Work Authorization 1)

ESTIMATE SUMMARY OF MAN-HOURS

TASK DESCRIPTIONS		Senior Project Manager	Project Manager	Assist. Project Manager	Field Engineer (s)	Document Control Specialist	Admin/Clerical	GIS Specialist	Totals
Phase 1: Preparatory									
Preparatory									
1	Review County provided criteria, previous database, existing basemaps, and any other pertinent project documents.	10	24	80	40	15	4		173
2	Prepare Project Management Plan for services during project duration.	5	12	44	40	80	4		185
3	Prepare/Coordinate & Conduct Project Coordination meetings with Hidalgo County Officials.	20	80	40	32	55	12		239
4	Prepare preliminary list of "new" roadways or developments in the County since previous GASB Report.	1	2	20					23
5	Develop a database containing all assessment parameters.	16	32	43				347	438
6	Develop a georeferenced mapping system to contain and display all the defects and their severity.	16	32	108				867	1023
7	Evaluate software/systems to provide the condition ratings for each roadway.	4	16	96					116
Project Management									
1	Prepare and submit Monthly invoicing to County.	4	12	24	12	24	12		88
2	Coordinate Project Segment Kickoff Meetings with each Precinct to establish the Precinct's priorities and identify primary points of contact.	12	24	36		24			96
3	Coordinate with Hidalgo County Officials to obtain county road historical data (construction date, maintenance, etc.).	12	24	60		24	10		130
4	Conduct Internal Meetings with all team members to ensure adherence to scope, schedule, and budget.	48	96	96	288	140			668
5	Conduct Monthly meetings with each Precinct to review project progress, scope of work, and adhere to schedule.	48	48	144		48			288
6	Coordinate & attend field visits with Hidalgo County Officials throughout the duration of the project.	24	48	96	96	60			324
7	Process RFI's and coordinate with Hidalgo County Officials as needed to request clarifications of street limits, conflicts in name, lack of access, etc.	12	48	96	12	48	24		240
8	Conduct "Hold Points" (new tasks/scope of work) meetings and "Hands Down" (incident review) meetings as needed.	12	48	96	12	24	36		228
9	Quality Control reviews of data processing.	26	52	156	52	52			338
10	QA/QC of Database, PCI, GIS Files, GASB Report	4	20	40					64
Subtotal Labor Hours		274	618	1275	584	594	102	1214	

EXHIBIT C
2021 Hidalgo County Roadway Inventory Assessment and Condition Study & Report(s)
(Work Authorization 1)

ESTIMATE SUMMARY OF MAN-HOURS

Phase 2: Roadway Inventory									
Data Collection									
1	Perform on-site assessment identifying all roadway elements such as Apparent ROW, Pavement Type and Width, Street Length, Sidewalks, and Striping.				24	2080			2104
2	Collect georeferenced photographic evidence of all street signage including Speed Limits, Traffic Signs, Regulatory Signs, Warning Signs, Construction & Maintenance Signs, Service Signs, and Guide Signs.				24	1040			1064
3	Assess the efficacy of Roadway Drainage by; 1. Determine if street has Defficient Drainage, 2. Document existence of Curb and Gutter, 3. Document the existence of Roadside Ditches, 4. Document the existence of Culvert Structures via Georeferenced photos, 5. Document the existence of Grate Inlets, Curb Inlets, Equalizers and other Drainage Structures via georeferenced photos.				24	1040			1064
4	Provide a Condition Rating of all defects identified within County Roads.				48	4160			4208
5	Daily quality control of field activities to ensure proper categorization.	4	52	324	936				1316
6	Capture and compile photographic evidence roadway conditions.	4	208		546			832	1590
Update Database(s)									
1	Populate and maintain the database containing all assessment parameters and Condition Rating Score.	4	16	260	78	260			618
2	Provide an estimate for roadway improvements required and capitalize all existing roadways.	6	24	16	60				106
3	Develop proposed improvement schedule/categories.	6	24	120	36			48	234
4	Populate and maintain the georeferenced mapping system to contain and display all the defects and their severity.	4	16	260	78			520	878
5	Develop and maintain a PCI based on field parameters.	12	24	65				72	173
	Subtotal Hours		40	364	1165	10054	260	0	1472

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ESTIMATE SUMMARY OF MAN-HOURS

Phase 3: GASB Report										
GASB Report										
1	Prepare and present exhibits to county officials to include Database Reports, GIS Files, Management Plan, etc.		12	24	60		24		96	216
2	Calculate historical value, prepare existing value and replacement, repair, and maintenance costs of county roads based on information collected.		6	24	16	60				106
3	Identify optimal replacement and repair costs.		6	24	120	36				186
4	Prepare final GASB-34 report to present to Hidalgo County Officials.		12	80	24		24		54	194
Subtotal Labor Hours			36	152	220	96	48	0	150	
TOTAL HOURS			350	1134	2660	10734	902	102	2836	18718
Loaded Hourly Rates			\$ 150.00	\$ 125.00	\$ 100.00	\$ 86.00	\$ 76.00	\$ 45.00	\$ 66.00	
Direct Labor			\$ 52,500.00	\$ 141,750.00	\$ 266,000.00	\$ 923,124.00	\$ 68,552.00	\$ 4,590.00	\$ 187,176.00	\$ 1,643,692.00
TOTAL ESTIMATE			\$ 52,500.00	\$ 141,750.00	\$ 266,000.00	\$ 923,124.00	\$ 68,552.00	\$ 4,590.00	\$ 187,176.00	\$ 1,643,692.00

Percentage of Time on the Project	16.83%	54.52%	127.88%	516.06%	43.37%	4.90%	136.35%	
								Direct Expenses (Mileag \$ 16,436.92
								Other \$ -
								Percent Mileage by Precinct*
								PCT-1 - 37% \$ 614,247.70
								PCT-2 - 10% \$ 166,012.89
								PCT-3 - 27% \$ 448,234.81
								PCT-4 - 26% \$ 431,633.52

*Estimate based on preliminary analysis of Hidalgo County Base Map and previous Inventory reports. Final percent mileage by precinct will be known once the Inventory is completed.

\$ 1,660,128.92