

Exhibit A - Scope of Services**SERVICES TO BE PROVIDED BY THE ENGINEER**

Roadway: North South Connector
County: Comal
City: New Braunfels
Limits: **Schematic & PS&E:** from IH-35 NBFR to Alves Lane

General Work Description: Develop a Summary of Needs Study, Conceptual Design and Schematic for the new location roadway.

Standards and Specifications

Designs will be based on City of New Braunfels and AASHTO Standards.

PROJECT MANAGEMENT AND COMMUNICATION PLAN

- ◆ Develop Project Management Plan
 - Develop a Project Management Plan that will establish all the responsibilities and roles of the team members, including the prime firm and subs. The plan will also detail the procedure process for all submittals. A project specific QA/QC plan will be submitted within 30 days of NTP for approval which will detail the QA/QC process that will be followed.

- ◆ Meetings
 - Kick-Off Meeting with Team
 - Milestone Meetings (3 Total) - Milestone Meetings will be held for each of the following submittals: Summary of Needs Study, Conceptual Design, Schematic. These meeting will include City of New Braunfels staff and the Engineer's staff and are estimated to last up to 1 hour. (in New Braunfels)
 - Team Coordination Meetings - Hold staff/team meetings at the Engineers office beginning with the second week of the project. The staff attending will be appropriate based upon the current assignments (up to 8 meetings)
 - Coordination with TxDOT New Braunfels Area Office to inform them of the project and coordinate the required environmental document necessary for connection to the frontage road.
 - Engineer will provide meeting minutes for all meetings with City.

- ◆ Invoicing and Contract Document Coordination
 - Prepare monthly invoices for submission to the City for all requests for payment

- ◆ Manage Sub Consultants

- Monitor and supervise sub consultant activities (staff and schedule).
 - Review and approve sub consultant invoices.
 - Review all work products prepared by sub consultants in accordance with the QA/QC process.
 - ◆ Produce Project Scheduling
 - Prepare an initial critical path schedule in Microsoft Project format for approval by the City indicating tasks, milestones, major meetings, and reviews. Update schedule with each milestone deliverable.
 - Revise Project Schedule after each submittal if necessary.
 - ◆ Submittals
 - Prepare Submittals for City Oversight Reviews
 - Document control
 - ◆ Deliverables
 - Monthly Invoices and Progress Reports
 - Meeting Minutes after each meeting
-

PHASE 1 SUMMARY OF NEEDS STUDY

The Summary of Needs Study shall establish and address the requirements, goals and the constraints of the project. This phase is meant to serve as a discovery phase and should something significant be found that would require additional analysis than is detailed in phase 2 or 3, then a supplemental may be required. The Engineer shall:

1.1 Project Design Criteria

- ◆ Develop a Design Summary Report to determine minimum and desirable criteria for project components such as roadway, drainage, traffic, etc.
- ◆ Kick-Off Meeting with City

1.2 Data Collection

- ◆ Collect information such as As-Builts, readily available Lidar, readily available aerial photography, development plans, FEMA floodplain information.
- ◆ Obtain Geotechnical/pavement design information on nearby projects.
- ◆ Perform Existing ROW/Land Owner identification.
- ◆ Perform a site visit and document with photos.
- ◆ Collect information on new/upcoming developments in the area

1.3 Environmental Site Assessment

- ◆ Perform a constraints map level analysis of the project corridor to identify necessary future permitting including:
 - Historical property constraints
 - Potential Archeological constraints
 - Tree Mitigation constraints
 - United States Army Corps of Engineers 404 Permit Wetlands constraints
 - TxDOT Environmental Stage Gate Checklist to determine required Categorical Exclusion document necessary.
 - Any additional Environmental Permitting discovered necessary.

1.4 Civil Site Assessment

- ◆ Perform a high level route study to identify:
 - Survey Needs
 - Pedestrian Connectivity Issues
 - One on one Stakeholder Coordination Meetings (3 maximum)
 - Major Utilities
 - Traffic Study needs such as traffic count locations, warrant study locations
 - Drainage Patterns
 - Pavement Conditions

1.5 Phase 1 Deliverables

- ◆ Project Schedule
- ◆ Design Summary Report
- ◆ Site Assessment Roll Plot with Environmental and Civil constraints, key locations identified. Roll Plot will be delivered in small format (11x17), large format (22x TBD) and electronically (PDF).

It is anticipated that Phase 1 will occur in the first 2 weeks of the project schedule.

PHASE 2 CONCEPTUAL DESIGN

The primary objective of the Conceptual Design Phase is to ensure that multiple options have been explored, reviewed and analyzed.

2.1 Alternative Concept Designs

- ◆ Analyze multiple horizontal alignments and develop 2 feasible horizontal alignment alternatives for City review based on proposed development, ROW needs, utility conflicts, and construction cost considerations.
- ◆ Develop Vertical Alignments
- ◆ Develop 2 typical section alternatives based on traffic information collected and City Criteria to apply to each alignment alternative.
- ◆ Develop 4 corridor models for each alignment with each typical section.

2.2 Deliverables

- ◆ Develop 4 exhibits (11x17) of each alternative showing proposed center line, pavement edges, sidewalks, limits of construction and proposed ROW.
 - ◆ Develop 4 preliminary comparative Cost Estimates for each alternative including proposed roadway and drainage improvements, ROW, Utility Relocation, and Permitting.
-

PHASE 3 SCHEMATIC DESIGN

The primary objective of the Schematic Design Phase is to define the site and building relationships, character, and layout and establish the project scope within the requirements of the Project.

3.1 Schematic Development

- ◆ Develop Schematic on one chosen Alternative to include
 - Preliminary Roadway Engineering
 - Preliminary Drainage Engineering
 - Sizing and location of Cross Structures
 - Storm sewer sizing
 - Grading Locations
 - Preliminary Traffic Engineering
 - Preliminary Utility Engineering
 - Utility Coordination
 - Utility Relocations
 - Proposed Utility Design
 - Quantity take offs.
 - Proposed Typical Sections

- Construction Sequencing

3.2 Deliverables

- ◆ Schematic Roll Plot including typical sections
 - ◆ All preliminary calculations, models, assumptions, and documentatioin.
 - ◆ Construction Phasing Plan
 - ◆ Detailed Cost estimate broken down by proposed construction sequences.
 - ◆ One community meeting that LJA will bring support staff and materials, but will not host or organize.
-

4.0 SITE SURVEY

- ◆ See Attached Scope and Fee – McGray & McGray

ATTACHMENT 1: MCGRAY & MCGRAY

McGRAY & McGRAY LAND SURVEYORS, INC.

3301 HANCOCK DRIVE, SUITE 6
AUSTIN, TEXAS 78731
[512] 451-8591 FAX [512] 451-8791

TRANSMITTAL

TO: Mr. Derek Bohls, P.E.
LJA Engineering, Inc.
921 West New Hope Drive
Suite 603
Cedar Park, TX 78613

DATE: May 18, 2018

FROM: Karen Ruppert for Judy McGray

RE: Proposal for Topographic Design Survey
Services for the proposed intersections
of the proposed North-South Connector
Road, New Braunfels, Texas

PHONE: (512) 439-4744

EMAIL: dbohls@ljaengineering.com

WE ARE SENDING YOU X Attached _____ Under separate cover the following items:

COPIES

DESCRIPTION

1 Proposal

For Your Approval

For Your Information

As Requested

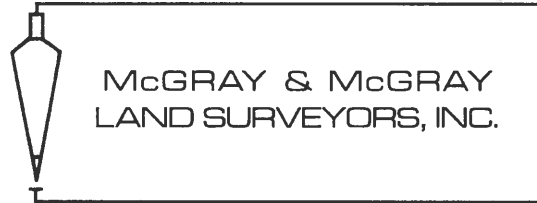
For Review and Comment

REMARKS: Thanks,
Judy
TBPLS Firm #10095500

SENT VIA: Delivery Service FedEx Mail Fax Email Other:

If you received this message incomplete or illegible, or if enclosures are not as noted, please notify us at once

May 18, 2018



Derek Bohls, P.E.
LJA Engineering
921 West New Hope Drive
Suite 603
Cedar Park, TX 78613
(512) 439-4744

VIA EMAIL
dbohls@ljaengineering.com

RE: Proposal for Topographic Design Survey Services for the proposed intersections of the Proposed North-South Connector Road, New Braunfels, Texas.

Dear Mr. Bohls:

We appreciate the opportunity to present you with this proposal for the above referenced project. The following represents our understanding of the area to survey, scope of services, and our fee proposal.

Area to Survey:

Area at the intersections as shown in Exhibit "A & B".

Scope of Services:

Survey Control:

- All data will be provided in Texas State Plane NAD83, NAVD88 coordinate system, per the existing project control, with surface to grid conversion factor noted. You will provide us with the existing control.

Design Survey (See Exhibits A & B):

- Cross sections shall be taken at 50-foot intervals along with break lines as required, to provide a digital topographic design file at 1-foot interval contours.
- Locate and identify all above ground features within the survey limits including visible structures, fences, sidewalks, driveways, handicap ramps, guardrails, signs, planters, mailboxes, visible utilities including manholes, water valves, telecom boxes, utility poles, mailboxes, water meters, sanitary sewer clean outs, etc.
- Locate and identify types of existing pavement surfaces for streets, sidewalks, driveways, etc. Locate and identify existing lane markings and signage in detail [color, width, words, symbols, etc.]. Locate and identify existing traffic signals including base and control boxes.

- Invert elevations and size/type of drainage pipes and culverts shall be identified for manholes and culverts within the project limits.

Deliverables:

- A. Survey shall be provided in AutoCAD (.dwg) format.
- B. The units of the drawing file shall be U.S. survey feet.

Fees:

Design Survey (Non-taxable):

2 Man Crew	18 hrs @	\$150.00 /hr.=	\$	2,700.00
Field Coordinator:	1 hrs @	\$98.00 /hr.=	\$	98.00
Sr. Tech:	9 hrs @	\$96.00 /hr.=	\$	864.00
Tech:	18 hrs @	\$82.00 /hr.=	\$	1,476.00
RPLS:	6 hrs @	\$145.00 /hr.=	\$	870.00
Project Manager:	2 hrs @	\$165.00 /hr.=	\$	330.00
			TOTAL: \$	6,338.00

Once we receive notice to proceed, we will visit with you to establish a schedule for this project.

Thank you for including us on this project. We look forward to the opportunity to work with you. If you think we have omitted any service you require or misinterpreted your request, please let Chris Conrad or Joe Webber know.

Sincerely,



Judith J. McGray RPLS
President
TBPLS Firm #10095500

Authorized to Proceed by:

Signature

Date

Print Name

Title

JJM:CIC:klr
Encl.



100 ft

Proposed Alignment



100'

50'

50'

N Interstate 35 Frontage Rd

EXHIBIT "A"

Google Earth

© 2018 Google

EXHIBIT "B"

Proposed Alignment

1101

50'

50'

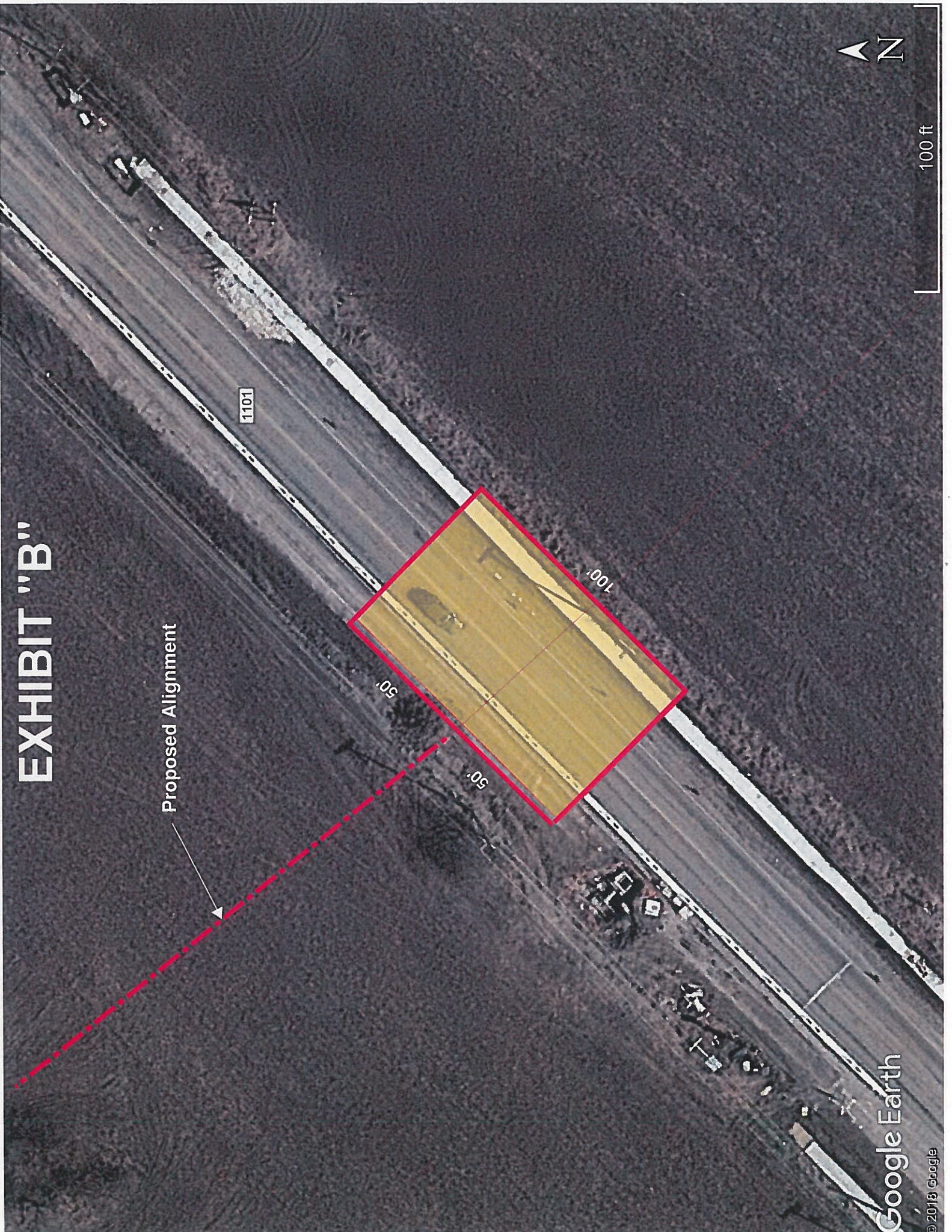
100'



100 ft

Google Earth

© 2018 Google



NORTH-SOUTH CONNECTOR - EXHIBIT B - LUMP SUM FEE ESTIMATE

EXHIBIT B

FEE SCHEDULE - Design Services for Development of Schematic and Cost Estimate - LUMP SUM

PROJECT NAME: North-South Connector

PRIME PROVIDER NAME: LJA Engineering, Inc.

Date: 5/21/2018

NORTH-SOUTH CONNECTOR PROJECT								
TASK DESCRIPTION	Senior Project Manager	Senior Engineer/Planner	Project Engineer	E.I.T.	Senior Engineering Tech	CADD Operator	Admin	Total
Project Management								
Prepare Project Management Plan	1.0							1.0
Kick-off Meeting with Team	1.0	1.0	1.0	1.0	1.0	1.0		6.0
Milestone Meetings (3 Total)	6.0		6.0					12.0
Team Coordination Meetings (8)	4.0		4.0	4.0				12.0
Coordinate with TxDOT	2.0	2.0						4.0
Meeting Minutes (All Meetings)			2.0					2.0
Master Contract and Sub Consultatn Contract Creation	2.0						2.0	4.0
Monthly Invoices	2.0						4.0	6.0
Supervise Sub Consultants		4.0						4.0
Project Schedule	2.0							2.0
Document Control			2.0					2.0
Prepare Submittals for City Oversight Reviews		4.0						4.0
HOURS SUB-TOTALS	20.0	11.0	15.0	5.0	1.0	1.0	6.0	59.0
LABOR RATE PER HOUR	\$235	\$180	\$160	\$130	\$115	\$85	\$70	
SUBTOTAL	\$4,700	\$1,980	\$2,400	\$650	\$115	\$85	\$420	\$10,350

NORTH-SOUTH CONNECTOR - EXHIBIT B - LUMP SUM FEE ESTIMATE

TASK DESCRIPTION	Senior Project Manager	Senior Engineer/ Planner	Project Engineer	E.I.T.	Senior Engineering Tech	CADD Operator	Admin	Total
Phase 1 - Summary of Needs Study								
1.1 Project Design Criteria								
Develop Design Summary Report		2.0	2.0					4.0
Kick-off Meeting with City	2.0	2.0						4.0
1.2 Data Collection								
Collect as-builts, studies, LIDAR, etc				4.0				4.0
Obtain Geotech Information				2.0				2.0
Identify Landowners/Existing ROW				2.0		2.0		4.0
Perform Site Visit			4.0	4.0				8.0
Collect new development information				2.0				2.0
1.3 Environmental Site Assessment								0.0
Prepare Constraints Map		1.0		2.0		2.0		5.0
Identify all permitting requirements		1.0		2.0				3.0
1.4 Civil Site Assessment								
Identify Survey needs			2.0					2.0
Identify Pedestrian Connectivity			2.0					2.0
Stakeholder meetings (3)	6.0		6.0					12.0
Identify Major Utilities				2.0				2.0
Traffic Study			4.0					4.0
Analyze Drainage Patterns				4.0				4.0
Identify Pavement Conditions				2.0				2.0
1.5 Prepare Deliverables								
Project Schedule				1.0				1.0
Design Summary Report				1.0				1.0
Site Assessment Roll Plot			2.0			8.0		10.0
HOURS SUB-TOTALS	8.0	6.0	22.0	28.0	0.0	12.0	0.0	76.0
LABOR RATE PER HOUR	\$235	\$180	\$160	\$130	\$115	\$85	\$70	
SUBTOTAL	\$1,880	\$1,080	\$3,520	\$3,640	\$0	\$1,020	\$0	\$11,140

NORTH-SOUTH CONNECTOR - EXHIBIT B - LUMP SUM FEE ESTIMATE

TASK DESCRIPTION	Senior Project Manager	Senior Engineer/ Planner	Project Engineer	E.I.T.	Senior Engineering Tech	CADD Operator	Admin	Total
Phase 2 - Conceptual Design								
2.1 Alternative Concept Designs								
Develop 2 Horizontal Alignments		2.0	16.0	16.0				34.0
Develop Vertical Alignments			8.0	8.0				16.0
Develop 2 Typical Sections		2.0	8.0	8.0				18.0
Develop 4 Corridor Models					40.0			40.0
Estimate Preliminary Quantities (4 Alternatives)			4.0	8.0				12.0
2.2 Deliverables								
Create 4 Alternative Exhibits	1.0	2.0		8.0		32.0		43.0
Create 4 Alternative Cost Estimates	1.0		4.0	8.0				13.0
HOURS SUB-TOTALS	2.0	6.0	40.0	56.0	40.0	32.0	0.0	176.0
LABOR RATE PER HOUR	\$235	\$180	\$160	\$130	\$115	\$85	\$70	
SUBTOTAL	\$470	\$1,080	\$6,400	\$7,280	\$4,600	\$2,720	\$0	\$22,550

TASK DESCRIPTION	Senior Project Manager	Senior Engineer/ Planner	Project Engineer	E.I.T.	Senior Engineering Tech	CADD Operator	Admin	Total
Phase 3 - Schematic Design								
3.1 Schematic Development								0.0
Preliminary Roadway Engineering		2.0	24.0	16.0				42.0
Preliminary Drainage Engineering		2.0	24.0	16.0				42.0
Preliminary Traffic Engineering		2.0	16.0	8.0				26.0
Preliminary Utility Engineering		2.0	16.0	8.0				26.0
Quantity Take Offs		2.0	8.0	8.0				18.0
Proposed Typical Sections			4.0	8.0				12.0
Construction Sequencing		4.0	8.0					12.0
3.2 Deliverables								0.0
Create Schematic Roll Plot	2.0	4.0		16.0		40.0		62.0
Summarize All Supporting Documentation				8.0				8.0
Prepare Construction Phasing Plan		2.0	16.0					18.0
Prepare Detailed Cost Estimate		2.0	8.0	16.0				26.0
Community Meeting	4.0	4.0	4.0					12.0
Prepare Exhibits/Support Material for Community Meeting				8.0		24.0		32.0
								0.0
HOURS SUB-TOTALS	6.0	26.0	128.0	112.0	0.0	64.0	0.0	336.0
LABOR RATE PER HOUR	\$235	\$180	\$160	\$130	\$115	\$85	\$70	
SUBTOTAL	\$1,410	\$4,680	\$20,480	\$14,560	\$0	\$5,440	\$0	\$46,570

NORTH-SOUTH CONNECTOR - EXHIBIT B - LUMP SUM FEE ESTIMATE

TASK DESCRIPTION	Senior Project Manager	Senior Engineer/ Planner	Project Engineer	E.I.T.	Senior Engineering Tech	CADD Operator	Admin	Total
Topographical Survey								
Design Survey - See McGray & McGray Scope and Fee								6338.0

TASK DESCRIPTION	Senior Project Manager	Senior Engineer/ Planner	Project Engineer	E.I.T.	Senior Engineering Tech	CADD Operator	Admin	Total Cost Task
Project Management	\$ 4,700	\$ 1,980	\$ 2,400	\$ 650	\$ 115	\$ 85	\$ 420	\$10,350
Phase 1 - Summary of Needs Study	\$ 1,880	\$ 1,080	\$ 3,520	\$ 3,640	\$ -	\$ 1,020	\$ -	\$11,140
Phase 2 - Conceptual Design	\$ 470	\$ 1,080	\$ 6,400	\$ 7,280	\$ 4,600	\$ 2,720	\$ -	\$22,550
Phase 3 - Schematic Design	\$ 1,410	\$ 4,680	\$ 20,480	\$ 14,560	\$ -	\$ 5,440	\$ -	\$46,570
SUBTOTAL LABOR EXPENSES	\$ 8,460	\$ 8,820	\$ 32,800	\$ 26,130	\$ 4,715	\$ 9,265	\$ 420	\$90,610
DIRECT EXPENSES	Rate	Quantity	Cost					
Mileage	\$0.58	1000	\$575.00					\$575
Courier Services (Deliveries)	\$30.00	4	\$120.00					\$120
CADD Plotting (per SQ/FT)	\$1.50	100	\$150.00					\$150
Photocopies B/W (8.5 X 11)	\$0.10	50	\$5.00					\$5
Photocopies B/W (11 X 17)	\$0.15	50	\$7.50					\$8
Photocopies Color (8 X 10)	\$0.75	50	\$37.50					\$38
Photocopies Color (11 X 17)	\$1.00	50	\$50.00					\$50
Plots (Color on Bond)	\$2.00	50	\$100.00					\$100
								\$0
SUBTOTAL DIRECT EXPENSES			\$1,045.00					\$1,045
LJA ENGINEERING, INC. TOTAL								\$91,655.00
SUBCONSULTANTS								
SURVEY (MCGRAY & MCGRAY)								\$6,338.00
TOTAL - SUB CONSULTANTS:								\$6,338.00
GRAND TOTAL								\$97,993.00

BILLING RATE SHEET

PROJECT NAME: North-South Connector

PRIME PROVIDER NAME: LJA Engineering, Inc.

Date: 5/21/2018

Billing Rate Sheet	
Title	Rate/Hr.
Senior Project Manager	\$ 235.00
Senior Engineer/Planner	\$ 180.00
Project Engineer	\$ 160.00
E.I.T.	\$ 130.00
Senior Engineering Tech	\$ 115.00
CADD Operator	\$ 85.00
Admin	\$ 70.00