

DAVA



ASSOCIATES, INC.

PLANNING

ENGINEERING

SURVEYING

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October 17, 2016

374LKVLY/PRO

Kimberly Moon, PE
Capitol Projects Coordinator
Town of Prescott Valley
7501 E. Civic Circle
Prescott Valley, AZ 86314

Dear Ms. Moon:

RE: Proposal for Final Design & Construction Period Engineering Services
Lake Valley Drainage/Street Project – CIP # E385

Thanks you for the opportunity to provide professional services for the lake Valley Drainage/Street Project. We appreciate the faith you have placed in us to complete the design and provide construction period services for this Community Development Block Grant (CDBG) funded project. Dava & Associates, Inc. is pleased to provide this proposal for engineering design and construction administration for the storm drain, lighting, and roadway improvements as outlined in the enclosed scope of work and summarized below:

Dava Associates Professional Services	\$51,510.00
ETC Professional Services (Quality Assurance)	\$ 9,970.00
Reimbursable Expenses	\$ 330.00
TOTAL	<u>\$61,810.00</u>

The above scope of services will be provided on a fixed fee basis in conformance with our Town Engineer Agreement. If this proposed scope of services meets with your approval, we are ready to proceed at your direction. Should you have any questions, please contact me.

Sincerely,

DAVA & ASSOCIATES, INC.


Gordon Bowers, P.E.
Civil Engineer

GB:gb

Encl.

cc: Ron Pine, PE, CFM, Engineering Division Manager
Norm Davis, P.E., Public Works Director
Ryan Judy, Deputy Town Manager

Lake Valley Drainage/Street Project, CIP # E385

SCOPE OF PROFESSIONAL SERVICES AND FEES

This project, in general, consists of design and construction period services to prepare final construction documents and provide construction survey and administration for the purpose of implementing southbound improvements along Lake Valley Road south of Lakeshore Drive funded by a Community Block Development Grant (CBDG) as further described:

The basic service tasks the CONSULTANT will accomplish for this project are listed herein.

Task 1 – Design Options:.....Fixed Fee of \$4,920

The CONSULTANT will analyze options to the preliminary design for the possible inclusion into the final design, as follows:

1. Storm Drain Options: Analysis of preliminary storm drain design to determine if more efficient sizing, alignments, and connections exist for improvement to final design of storm drain system.
2. Multi-Use Path Surfacing: Quantify replacing entire surface of multi-use path to compare with costs of approach presented in preliminary design.
3. Traffic Circulation to Liberty School: Driveways into and out of Liberty School do not line up with the median break in Lake Valley Road causing undesirable "U"-turn movements for parents and visitors to the Liberty School property. Reconfiguration of the median breaks could improve traffic circulation along Lake Valley Road. Layout alternate median breaks as part of the southbound improvement to improve access to existing Liberty School driveways.
4. Option Cost Estimates: Determine preliminary cost estimates for the Options 2 and 3 listed above for evaluating merit for inclusion in final design. Meet with Town staff and other entities as necessary to discuss merits of options.

Task 2 – Final Construction Drawings (100% Plans): Fixed Fee of \$13,850

The CONSULTANT will provide Final Construction Drawings as follows:

1. Construction Drawings (100% Plans): Update the preliminary plan sheets per additional plan review comments and Staff direction. Complete design and prepare 100% level plans. The final plans shall include the following sheets:
 - a. Cover: Prepare cover sheet that includes, vicinity map, project drawing with areas defined with sheet page numbers, legend, contacts list, table of contents, approval signature lines, etc.
 - b. Geometrics: Revise geometrics and prepare geometric sheet.
 - c. General Notes: Update general notes to reflect current ToPV construction notes.
 - d. Details: Include latest revision of ToPV Standard Details and other details that may be necessary.
 - e. Erosion Control Plan: Prepare sheets summarizing the overall project, with erosion control measures as necessary.
 - f. Plan and Profile Sheets: Prepare plan and profile sheets for the roadway improvements to reflect 2008 datum, existing roadway, and proposed improvements.
 - g. Pavement marking and signing plan.
2. Bid Documents: Prepare draft Technical Specifications, Special Provisions, and Bid Schedules. Update and revise bid documents per Staff direction.
3. Quantities and Final Cost Estimate: Determine Final Quantities and provide detailed Opinion of Probable Cost (Engineer's Estimate).
4. Submittals: Provide submittals to the Town for review. Make final corrections and resubmit, with the original comments, for approval.

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5. Utilities Coordination: Continue to coordinate with utilities and provide each utility with a copy of the final construction drawings for their information.
 6. Meetings: Meet with Town staff and other entities to update progress; address plan review comments; identify special conditions; and refine construction schedule.

Task 3 – Bidding Services Task:Fixed Fee of \$3,160

The CONSULTANT will provide Bidding Services, as follows:

5. Pre-Bid Conference: Attend, conduct, and document the Pre-Bid Conference, including preparation of agenda, sign-in sheets, and minutes.
6. Addenda: Prepare necessary addenda and submit to the Town for approval and distribution.
7. Bid Tabulation: Tabulate bids and verify lowest responsible bidder. Prepare memo for recommendation of award.
8. Coordination and Meetings: Coordination and administration of project. Meetings with Town staff to address bidding issues, schedule, and budget.

Task 4– Quality Assurance: Fixed Fee of \$10,750

The CONSULTANT will provide Quality Assurance monitoring as follows:

1. Quality Control (OC) Testing Review: Collect and review test results from the Contractor's Quality Control firm.
2. Quality Assurance (QA) Testing Review: Collect and review test results from the Town's Quality Assurance firm
3. Quality Acceptance Testing (QA): Engineering Testing Consultants (ETC) will provide verification testing of contractor activities. Such testing will include: densities, gradations, plasticity indices, proctors, marshals, cylinder compression breaks, oil content, LA abrasion, fracture face, and laboratory analysis.

Task 5 – Construction Administration:Fixed Fee of \$7,700

The CONSULTANT will provide Construction Administration for the project as follows:

1. Pre-Construction Conference: Attend, conduct, and document the Pre-Construction Meeting, including preparation of agenda, sign-in sheet, and minutes. Review contractor's preliminary schedule and all regular updates to the construction schedule.
2. Submittals: Review shop drawings, material submittals, and other data as required and submitted by the Contractor, for compliance with design concepts.
3. Professional Design Support: During construction, provide professional services to facilitate and enable construction to be accomplished in conformance to the construction drawings, specifications, and other contract documents. Clarify and/or interpret construction contract documents, when requested by the contractor and/or the Town.
4. RFI Review: Consider, evaluate and notify the Town of changes and/or alterations believed to be in the Town's best interest, due to actual field conditions encountered, etc. Provide supporting detail, including sketches and revised construction drawings, if needed, of the proposed change(s). Prepare and process any change orders, and/or any field orders that may be required. Issue instructions from the Town to the Contractor. Make recommendations to the Town on corrective actions or contractual measures that may be exercised by the Owner.
5. Construction Progress Meetings: Conduct regularly scheduled construction progress meetings with interested parties to provide coordination and to verify Contractor's understanding of each aspect of the work. Discuss project progress and issues. Prepare meeting notes for each meeting and distribute to all concerned parties.
6. Contractor's Progress Payments: Review progress payments, based on degree of completion of the work. Prepare cover letter for the Progress Payment, recommending issuance of such payment(s) by the Town.

Task 6 – Construction Observation & Coordination:.....Fixed Fee of \$4,960

The CONSULTANT will provide a qualified construction observer and perform Construction Observation as follows:

1. Observation & Coordination: Develop working relationships and act as the liaison for the Town with the Contractor. Conduct timely, on-site construction observation to monitor the progress and process of ongoing and completed construction work on an as-needed basis, to determine and certify compliance in accordance with the construction contract documents. Coordinate with the Contractor regarding schedule for staking. Coordinate with utility companies as necessary.

Task 7 – Construction Surveying:..... Fixed Fee of \$10,480

The CONSULTANT will provide the following survey services, including construction stakes, lines and grades in conformance with MAG Section 105.8 and the project specifications, as follows:

1. Locate, check and confirm control. Provide project control. Collect and calculate survey data, as needed.
2. Provide limits for clearing and grubbing and limits of removals.
3. Provide vertical and horizontal control for staking of roadway preparation.
4. Provide vertical and horizontal control for staking of curb and gutter.
5. Provide vertical and horizontal control for staking subgrade and ABC grade control.
6. Provide horizontal control for staking of right of way fencing.
7. Provide horizontal location of signing and marking.

Task 8 – Project Close-Out; Record Documents:.....Fixed Fee of \$5,660

The CONSULTANT will provide Project Close-Out Services, as follows:

1. As-Built Survey: Field surveys to collect measurements of completed construction items.
2. Final Acceptance: Perform final observations with Town and Contractor personnel and develop the “punch list” of deficiencies and incomplete work. Upon the contractor’s completion of all punch list items, conduct a final inspection to ensure and verify all punch list items are complete. Prepare an “Engineer’s Certification” for acceptance of all completed work.
3. Final Quantities: Determine final contract quantities.
4. Project Documentation and Record Drawings: Prepare and certify reproducible “Record Drawings” (one set of the scanned or digitally recorded images in Town-approved formats) showing the “as-built” condition of the work for submission to the Town for their permanent records. Submit project design file to the Town in DWG or DXF format.

Project Expenses..... Allowance Not to Exceed \$10,300

The CONSULTANT will have direct project expenses including, but not limited to: sub-consultant fees, printing, copying, submittal, review, shipping, permitting fees, and other related expenses. These direct project expenses will be billed at actual cost with a 10% markup. Sub-consultant fees listed below are also included in Task 4 fixed fee amount. Reimbursable expenses listed below have not been included in above tasks, but are included in Total Expenses.

TOTAL Consultant:	
Design (D&A)	\$21,930
Construction (D&A)	\$29,580
Total Sub-Consultant (ETC)	\$ 9,970
Reimbursable Expenses	\$ 330
Total Expenses.....	\$ 10,300
Project Total.....\$61,810	

TOWN OF PRESCOTT VALLEY
Lake Valley Drainage/Street Improvement Project,
CDBG #101-17 - CIP #E385

Services provided shall be in conformance with:

1. this agreement, and all amendments thereof,
2. Town Code, specifically, but not limited to, Chapter 16 Engineering (<http://www.pvaz.net/Index.aspx?page=274>); and
3. hence, the Maricopa Association of Governments (MAG) Uniform Standard Specifications and Details for Public Works Construction, latest edition, including latest revisions and supplements (<http://www.mag.maricopa.gov/publications.cms>); and
4. the Town of Prescott Valley, Public Works Department, Engineering Division Design and Construction Standards and Specifications (<http://www.pvaz.net/Index.aspx?page=261>)
5. All applicable local, state, and federal laws and regulations.



Engineering & Testing Consultants, Inc

Quality Control Cost Estimate

Date - October 17, 2016

Lake Valley Road, Southbound Improvements

Prescott Valley, AZ

PROPOSED SERVICES:

Structural Fills, Trench B/F, S/G, ABC, Concrete,
A/C Sampling & Testing

Quality Control Testing, Earthwork

Quality Control Technician	40	Hrs.	\$70	Per hr.	\$2,800
Senior Level Technician	4	Hrs.	\$80	Per hr.	\$320
Senior Project Engineer	1	Hrs.	\$150	Per hr.	\$150

Quality Control Testing, Asphalt

Quality Control Technician (On-site)	12	Hrs.	\$70	Per hr.	\$840
Quality Control Technician (Sampling)	4	Hrs.	\$70	Per hr.	\$280

Quality Control Testing, Concrete

Quality Control Technician	10	Hrs.	\$70	Per hr.	\$700
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Laboratory Testing

ASTM D-698 Proctor	4	Each	\$120	Per test	\$480
Marshall Density	2	Each	\$110	Per test	\$220
Furnace Oven Calibration Burn	1	Each	\$400	Per test	\$400
AC Content/Gradation by Ignition Oven	2	Each	\$150	Per test	\$300
Stability/Flow	0	Each	\$50	Per test	\$0
Theoretical Maximum Density (Rice)	2	Each	\$150	Per test	\$300
Plasticity Index - (wet prep) (ABC)	2	Each	\$100	Per test	\$200
Particle Size Analysis (Gradation)	8	Each	\$80	Per test	\$640
Plasticity Index - (dry prep)	2	Each	\$70	Per test	\$140
Sand Equivalent	2	Each	\$75	Per test	\$150
Fractured Face	4	Each	\$85	Per test	\$340
Los Angeles Abrasion (LAR) (Chips)	1	Each	\$250	Per test	\$250
Flakiness Index	2	Each	\$115	Per test	\$230
Concrete Compression Tests	16	Each	\$20	Per test	\$320

ESTIMATED COST, BASE BID/QC Tests \$9,060

Notes:

- Any night or weekend work will be billed at 1.5 times normal rates. (Not included in this proposal)
- This proposal does not include A/C or Concrete plant control.
- Rates are portal to portal from our Prescott office with no mileage charges or minimum hourly trip charges.
- This estimate is based on our review of the project documents.
- We do not intend to say that the project can be constructed within the time frame we listed.
- For estimating purposes you should use our unit rates.
- ETC will only invoice for actual time and costs for the project.
- This estimate is based on an on-call basis only and it is the responsibility of the client for scheduling.