



PLANNING  
ENGINEERING  
SURVEYING



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August 3, 2015

374PVWTR/PRO

Neil Wadsworth, P.E.  
Utility Department Director  
7501 E. Civic Circle  
Prescott Valley, AZ 86314

Dear Mr. Wadsworth:

RE: PROPOSAL – DESIGN & CONSTRUCTION PERIOD ENGINEERING SERVICES  
Crossroads Water Main Installation Project, CIP # W378

Dava & Associates, Inc. is pleased to provide this proposal for design and construction period engineering services for the Crossroads Water Main Installation Project. Our proposed work scope is enclosed with the following estimated maximum fees summarized below:

D&A Design Period Services	\$15,540.00
Construction Period Services	\$12,190.00
Reimbursable Expenses (Allowance)	<u>\$ 110.00</u>
Design & Construction Period Total	\$27,840.00

The above scope of services will be provided on a fixed fee basis in accordance 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  
Encl.

SCOPE OF SERVICES AND FEES

**Crossroads Water Main Installation Project, CIP # W378**

This project, in general, involves the replacement of approximately 1600 feet of 8-inch water main slightly south and parallel to State Highway 69. The main is located within the Crossroads Shopping Center and was originally installed by the Shamrock Water Company. When the Crossroads development was constructed, the site earthwork was cut and filled to produce a flat pad for development. The waterline was in an area where fill occurred, and it is now at a depth of over 30 feet below grade in at least two locations which were originally natural drainage prior to the Crossroads project. The existing waterline is currently broken and shut off. This new waterline/replacement is required for water looping, especially for dual water feed into the nearby Victorian Estates residential subdivision, at a more accessible depth.

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

**Task 1 – Survey and Preliminary Plan Review:..... Fixed Fee of \$4,540**

The CONSULTANT will provide Survey and Preliminary Plan Review Services, as follows:

1. Survey & Mapping: Acquire new and available data applicable for the design of this project including collection of blue-stake mark location. The additional survey data will update the Town's topographical mapping and verify the base drawing used for project.
2. Base Map: Prepare the planimetric base map of existing conditions. Include benchmarks, found pins, property lines, easements, rights-of-way, and encroachments, as well as utilities information in the base map drawing.

**Task 2 – Initial Layout & Design: ..... Fixed Fee of \$7,010**

The CONSULTANT will provide Preliminary Drawings as follows:

1. Layout & Design: Prepare preliminary 90% level plans. The preliminary plans shall include the following sheets:
  - a. Cover: Prepare cover sheet that includes, vicinity map, project drawing with area defined, legend, contacts list, table of contents, approval signature lines, etc.
  - b. General Notes: Update general notes to reflect current ToPV construction notes.
  - c. Details: Include latest revision of applicable ToPV Standard Details and other details that may be necessary.
  - d. Plan and Profile Sheets: Prepare plan and profile sheet(s) to reflect 2008 datum, existing roadway, geometrics, and proposed improvements.
2. Quantities and Preliminary Cost Estimate: Determine initial quantities and construction prices. Prepare initial cost estimate of project costs.
3. Submittal: Submit initial plans and estimate to Town Staff for review and further direction. Make corrections and resubmit, with the original comments, for approval.
4. Utilities Coordination: Begin coordination with utilities and provide each utility with a copy of the preliminary plans for their use. Coordinate with utility companies to facilitate any required utility relocation before the project begins. Provide information to the utility companies, as needed for relocation of utilities if necessary.

**Task 3 – Final Construction Drawings (100% Plans): ..... Fixed Fee of \$2,750**

The CONSULTANT will provide Final Construction Drawings as follows:

1. Construction Drawings (100% Plans): Update the preliminary plan sheets per plan review comments and Staff direction. Complete design and prepare 100% level plans.

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 for approval.
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 4 – Bidding Services Task:..... Fixed Fee of \$1,240**

The CONSULTANT will provide Bidding Services, as follows:

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

**Task 5 – Construction Administration: ..... Fixed Fee of \$2,080**

The CONSULTANT will provide Construction Administration Services for the duration of the construction, as follows:

1. Pre-Construction Conference: Attend the Pre-Construction Conference, including review of the agenda and minutes.
2. Submittals: Prepare and maintain a project submittal review log. Review shop and material submittals, key personal contact list with emergency 24-hr contact numbers, construction schedule, and other data as required and submitted by the Contractor, for compliance with design intent and contract documents. Review the contractor's initial schedule, and all regular updates to the construction schedule.
3. Representation: Issue instructions from the Town to the Contractor. 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. Review all QC and QA tests for compliance with the contract documents. Test results will include: densities, gradations, plasticity indexes, proctors, marshals, and oil content. Provide supporting detail, including sketches, if needed, of proposed changes. Prepare an estimate of the cost and time impact of the changes and coordinate changes with the Contractor. Make recommendations to the Town on corrective actions or contractual measures that may be exercised by the Owner. Provide RFI and/or claims review, documentation, and correspondence. Prepare and process any change orders, and/or any field orders that may be required. Keep the Town informed of events and developments which could be critical to public safety and convenience.
4. Contractor's Progress Payments: Review progress payments, based on completion of the work. Prepare cover letter for the Progress Payment, recommending issuance of such payments by the Town.

**Task 6 – Construction Surveying:..... Fixed Fee of \$6,930**

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

1. Locate, check and confirm horizontal and vertical survey control.

2. Coordinate with the Contractor as to schedule for staking, acceptance of staking, and preservation of stakes.
3. Provide water main stakes at contractor requested intervals.

**Task 7 – Construction Observation: ..... Fixed Fee of \$1,640**

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

1. Coordination: Develop working relationships and act as the liaison for the Town with the Contractor. Keep the contractor aware of the inspection and testing requirements and the effect of these on the project schedule to help avoid delays and misunderstandings.
2. Observation: Conduct timely, as-needed, on-site construction observation to monitor the progress and process of ongoing and completed work, to determine and certify compliance in accordance with the contract documents. Notify the contractor and the Town, when work is unsatisfactory, faulty or defective, or does not conform to the contract requirements, or does not meet the requirements of inspections, tests, or approvals, or has been damaged prior to final acceptance. Advise Town when it is believed that work should be corrected or rejected, or should be uncovered for observation, or requires special testing, inspection, or approval. Review test results from the Contractor. Verify that compliance tests are conducted by the contractor as required by the contract documents and in presence of the required personnel (such as the Town, and OMI). Observe and report details relative to the test procedures.
3. Professional Design Support: 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 contract documents, when requested by the contractor and/or the Town.
4. Progress Meetings: Attend regularly scheduled progress meetings with Contractor, Town personnel and other interested parties to provide close coordination and to verify the Contractor's understanding of each aspect of the work, and to discuss project progress and issues. Review agenda and minutes for each meeting.

**Task 8 – Project Close-Out: ..... Fixed Fee of \$1,540**

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

1. Punch List: Perform final observations with Town and Contractor personnel and develop the "punch list" of deficiencies and incomplete work that needs to be corrected and finished for final acceptance and release of retention.
2. Final Quantities: Determine final contract quantities by survey or other methods.
3. Record Drawings: Prepare and certify reproducible "Record Drawings" (one 36" x 24" Mylar set and one set of the scanned Mylar images in Town-approved digital formats) showing the "as-built" condition of the Work for submission to the Town for their permanent records. Also, submit all planimetric and contour/dtm data used to develop the final project to the Town in DWG or DXF format.
4. Final Acceptance: Upon the contractor's completion of all punch list items, the CONSULTANT will conduct a final inspection to ensure and verify all punch list items are complete and prepare a recommendation of final acceptance letter to the Town. Prepare an "Engineer's Certification" that all work has been completed in substantial conformance with the plans, specifications, and contract documents, including modifications to reflect shop drawing review, substitutions, clarifications, and change orders.

**Project Expenses.....Allowance Not to Exceed \$110**

The CONSULTANT will have direct project expenses including, but not limited to: an allowance for Quality Assurance Testing from Engineering Testing Consultants (ETC), printing, copying, submittal and review fees, permitting fees, shipping, and other related expenses. The direct project expenses are excluded from the fees for each task and will be billed at actual cost with a 10% markup in accordance with our Town Engineer Services contract.

<b>TOTAL Tasks:</b> .....	<b>\$27,730</b>
<b>TOTAL of Expenses:</b> .....	<b>\$ 110</b>
<b>TOTAL:</b> .....	<b>\$27,840</b>

Services provided shall be in conformance with:

1. this amendment, and all amendments thereof,
2. Dava & Associates, Inc. Town Engineer Services Agreement; and
3. Town Code, specifically, but not limited to, Chapter 16 Engineering; and
4. Hence, the Maricopa Association of Governments (MAG) Uniform Standard Specifications; and Details for Public Works Construction, latest edition, including latest revisions and supplements; and
5. the Town of Prescott Valley, Public Works Department, Engineering Division Design and Construction Standards and Specifications; and
6. All applicable local, state, and federal laws and regulations.