REQUEST FOR PROPOSAL
FOR HAWTHORNE AVENUE RECONSTRUCTION
PROJECT NO. SS98-806

PROJECT DESCRIPTION

The City of Rapid City (the City) proposes to totally reconstruct Hawthorne Avenue from East Meade Street to East Oakland Street and East Oakland Street from Hawthorne Avenue through to the Robbinsdale Park entrance. The reconstruction shall include storm sewer, sanitary sewer with groundwater drain, applicable water main, grading, surfacing, curb and gutter, PCC sidewalk (where needed), surface restoration, and improvements to a metering/detention pond.

The project is to be constructed over two years in two phases. Phase One shall be completed in 2001. Phase Two is anticipated to follow and would be constructed in 2002. Phase One shall be approximately four blocks - starting at East Meade Street and ending just prior to the intersection of East Ohio Street. Phase Two shall start at the East Ohio Street intersection (where Phase One ended), proceed to East Oakland, then west to the Robbinsdale Park entrance and end at Robbinsdale Park. We want to bid each phase separately and therefore will require separate plans and specification for each phase. Please refer to the attached figures.

Additional items to be included in the reconstruction are as follows:

- As part of Phase One, the water main in East Tallent Street from Ivy Avenue to Maywood shall be replaced. From your 85% submittal, continue with water main replacement in Hawthorne Avenue from STA -0+24.00-27.33'R to STA 3+03.94-11.0'R. As part of Phase Two, the water main previously planned for replacement along East Oakland Street from Ivy to Hawthorne (STA 20+09.69-1.88'R to 25+10.0-24.79'R) shall be expanded to include replacement of the water main from Hawthorne to Hoeffer. This means replacement of the East Oakland water main from Ivy Avenue to Hoeffer.
- In addition, improvements to the detention/metering dam and outlet structure located just west of the park entrance in the northwest corner of the park is proposed. This construction shall include the recommendations outlined for Element 220, in FMG's 1993 "Design Plan for Meade/Hawthorne Drainage Basin".

- We would also like to look at expanding the grading in and around Element 220 to increase its storage capacity and metering ability. It will be assumed that Element 221 will still be constructed in the future under a separate project.

In order to accomplish the above mentioned project components, we wish to amend your existing contract. The following items are to further clarify the project components. These items are from your previous 85% submittal of plans and specification for the Hawthorne Avenue Sanitary Sewer Reconstruction and Water Main Replacement, Project No. SS98-806. Other items are from the "Preliminary Design Review Hawthorne Sanitary Sewer Reconstruction and Water Main Replacement".

Item #1 - Sanitary Sewer Reconstruction

A. Incorporate your 85% submittal into the proposed Phase One and Two plans and specifications for the street reconstruction.

B. Continue with the proposed groundwater drain system and make provisions for the future extension of this groundwater drain system to other intersecting streets.

C. Replace lateral VCP sanitary sewer mains (side streets) where the proposed street reconstruction interfaces.

Item #2 - Storm Sewer

A. We would like to proceed with Alternative #1 as outlined in the "Preliminary Design Review".

B. Design criteria to be used in the design of Alternative #1 for the Meade/Hawthorne Drainage Basin shall be as follows:

STORM FREQUENCY	ALLOWABLE DEPTH AND INUNDATED AREAS
10-Year storm	No curb over topping
100-Year storm	Flow not to exceed 18" in depth at gutter and shall not inundate any dwellings at ground level

The design criteria for the 100-year storm states that the product of the depth and velocity (DVP) shall not exceed a value of 5.0 square feet per second. We may not be able to meet this criteria for all cases on this project. (Rapid City Drainage Criteria Manual)

C. It appears that some of the dwellings along Hawthorne between Meade Street and Tallent Street may be inundated by the 100-year storm using Alternative #1. Therefore, in this area, some combination of Alternative #1 and Alternative #2 may be required.

D. For purposes of storm drainage, the street shall be classified as a "local" street.

Item #3 - Street Reconstruction

A. The street shall be classified as a "local" street.

B. We would like to use the following street widths for the reconstruction of Hawthorne Avenue:

- Meade Street to Tallent Street shall be 32' gutter lip to gutter lip or 37.23' back of curb to back of curb.
- Tallent Street through East Oakland shall be 24' gutter lip to gutter lip or 29.34' back of curb to back of curb.

C. We agree with the pavement section recommendations in FMG's Geotechnical Evaluation - in particular, using "Alternative A" for asphaltic cement concrete. We also concur with the recommendation to use edge drains/under drains below the curb and gutter. Modifications to the base course gradation to promote positive drainage may also be appropriate.

D. In regards to your preliminary Design Review, we agree with offsetting the street crown to provide additional cover over the existing storm sewer. In order to accomplish this, the street center line may also need to be offset.

E. Special grading behind the back of curbs may be required in order to provide adequate channel capacity for the 100-year storm event.

F. At the intersection of Hawthorne and Meade Street, consider the future extension of Hawthorne north to St. Patrick Street in the intersection design.

Item #4 - Detention/Metering Dam and Outlet Structure Construction

A. Review recommendations for element 220 in FMG's "Design Plan for Meade/Hawthorne Drainage Basin"

B. Evaluate additional grading options to increase the storage capacity at the site.

C. Provide outlet structure improvement to better meter the discharge and to accommodate the proposed storm sewer system as outlined for Alternative #1.

We would like you to provide design services to meet the schedule outlined in the "Scope of Services" section. The "Scope of Services", however, can be summarized as follows:

1. Provide design services for the entire project from Meade Street to the Park, to the extent necessary, to provide bidable Plans and Specifications for Phase One construction.
2. After Phase One has been bid, prepare bidable Plans and Specifications for Phase Two construction.

Design criteria for the project will be as contained in “Study & Report for Municipal Water System, Rapid City, South Dakota” by FMG, Inc., 1985; the City of Rapid City Standard Specifications; the Uniform Fire Code as adopted by the City of Rapid City; and “Recommended Standards for Water Works” (Ten State Standards); and City of Rapid City Street Design Criteria Manual.

Additional background information includes the City of Rapid City Major Street Plan Drawing, City of Rapid City Drainage Criteria Manual, "Geotechnical Evaluation for Utility Reconstruction Hawthorne Avenue and East Oakland Street Between Meade Street and Ivy Avenue", Rapid City, South Dakota, January 12, 1999, by FMG, Inc.; "Design Plan for Meade/Hawthorne Drainage Basin", April, 1993, by FMG, Inc.; "Preliminary Design Review" by CETEC; and the City of Rapid City Engineer’s Estimating Guide.

SCOPE OF SERVICES REQUESTED

1. PRELIMINARY DESIGN PHASE

1.1. Review information listed on the prior pages.

1.2. Establish design criteria for various components of the project.

1.3. Define scope of any additional geotechnical investigations that may be necessary for final design, assist the City in negotiation of an agreement for geotechnical engineering services, and coordination with the geotechnical engineer.

1.4. Identify and evaluate potential utility conflicts associated with the proposed street reconstruction.

1.5. Perform the following planning and design tasks:

- Perform additional site surveys sufficient for design plans preparation. Include appropriate dwelling elevations needed for evaluation of the 100-year storm event.
- Perform preliminary horizontal and vertical alignment analysis.
- Determine need for permanent and temporary easement acquisitions.

1.6. Assist the City with property acquisition for any temporary or permanent easements and for right-of-way required. Perform legal survey for property and prepare plats and/or easement exhibits as necessary.

1.7. Prepare preliminary systems layouts in the form of plan and profile sheets showing proposed alignment, locations of all existing storm sewer inlets and mains, water hydrants, valve boxes and water mains, and sewer mains and manholes in and immediately adjacent to the construction limits. Show existing utilities locations with probable depth. Scale of plan & profile sheets shall be: 1" = 20' Horizontal, 1" = 5' Vertical.

1.8. Prepare Preliminary Design Report, including existing and proposed storm sewer inlets and pipes, water and sanitary sewer system improvements, and detention/metering dam improvements, include recommendations for review and comment by City staff, and conduct a review meeting with City staff.

1.9. Prepare preliminary opinion of probable construction cost for Phases One and Two.

2. FINAL DESIGN FOR PHASES ONE AND TWO

2.1. Provide complete plans and specifications for a unit price construction contract for Phase One.

2.2. Provide complete plans and specifications for a unit price construction contract for Phase Two.

2.3. Provide additional route and topographical survey not provided in Preliminary Design or already complete (establish land ties and bench marks, locate property corners, and field locate all existing utilities).

2.4. Construction staking information on the drawings shall include a survey control and project layout sheet that includes a survey control table and a construction survey control table. The survey control table shall include, in tabular format, the control point number, the coordinates, and a description of the monument. The construction survey control table shall be in tabular format and will include all PC's, PI's, PT's and any angle points; the corresponding stationing; point description; and coordinates.

On the plan sheets, include either: 1) Notes with station offsets of all PC's, PI's, PT's, and any angle points, curve data, location of applicable storm sewer, sanitary sewer, and water main fittings; or 2) In a tabular format the coordinates and description of intervisible control points, curve data, and coordinates of all items of work requiring field staking. Benchmark information shall be provided on each sheet.

2.5. Provide a project layout plan including lot lines (front and side), addresses of all properties adjacent to construction, and property owner names.

2.6. Information shown on the drawings shall be drafted to scale, except where specifically noted. Where scaled details are rendered illegible by drafting to scale, such may be drafted in symbol form and so noted.

2.7. Provide separate, special detail drawings at appropriate scale showing additional information necessary to construct the project but not shown adequately elsewhere in the drawings.

2.8. Coordinate directly with utility companies' engineering divisions to ensure that all existing utilities are completely and accurately located in the field; that pertinent information regarding depth, material, size, etc. are noted on the plans; and that conflicts requiring relocation of utilities or special construction techniques are fully specified in the contract documents.

2.9. Provide general sequence of construction requirements in order to assist bidders to prepare their bids.

2.10. Provide project cross sectional drawings at all 50 and 100 foot stations and at all intermediate stations where potential for alignment conflicts exist. Such areas include underground utilities potential conflicts, intersecting drive approach locations, storm sewer culvert crossings. Information shown shall include all underground utilities drafted to scale (except where specifically noted), centerline elevation, utility flow line elevation, top of curb elevation, and any special grade information.

2.11. Provide suggested conceptual Traffic Control Plans identifying detour routes and signage for various stages of construction as necessary.

2.12. Provide Detailed Specifications supplementing *City of Rapid City Standard Specifications* as necessary.

2.13. Prepare opinion of probable construction cost (engineer's estimate) for the project based upon the City of Rapid City Engineer's Estimating Guide format and average bid price.

2.14. Provide general dewatering and sediment control requirements.

2.15. Prepare and include within the detailed specifications any permits required by the contractor for construction dewatering, etc.

2.16. Prepare any permits required by the City.

2.17. Deliver the following: 1) Reproducible construction plans on 22"x34" mylar for printing by the City; 2) Complete construction plans on disk in AutoCAD 14.0 format; 3) Complete specifications on disk in Word 97 format for printing by the City; 4) A unit price Engineer's cost estimate on disk in City of Rapid City Project Workbook format (based upon the City of Rapid City Bid Items listed in the Engineer's Estimating Guide) in Excel 97

format; 5) Copies of consultant's Quantity Take Off Sheets; and 6) Provide a 100-year storm event depth of flow for the Hawthorne Channel and appropriate storm sewer and flood routing documentation.

2.18. Review design, plans and specifications, and plats or easement exhibits with City staff at preliminary design at 50%, at 65% and at 95% stages.

3. BIDDING PHASE

Provide standard bidding phase services, e.g. attend Prebid Conference, issue addenda and interpretations to the bid documents if required, review prequalification submittals if required, assist owner in evaluating bids, etc. Bid tabs will be prepared by the City of Rapid City in the Project Workbook.

4. CONSTRUCTION PHASE

Provide construction management services as negotiated, which may include:

- Attend preconstruction conference and periodic progress meetings;
- Review and take action on shop drawings, test results, and other submittals;
- Provide construction surveys under this contract or under the appropriate construction Contract bid item;
- Provide construction observation, make periodic site visits at intervals appropriate to the various stages of construction;
- Review and recommend for payment the Contractors applications for payment;
- Prepare as-constructed drawings and submit compilation of construction observation reports, photos, etc.;
- Issue statement of substantial completion;
- Issue warranty letter to contractor; and
- Attend and participate in a post construction project review and critique.

5. MEETINGS AND SUBMITTALS

5.1. Project team members will include the *consultant; City staff from Engineering Division* project management, design and construction coordination; *Operations Divisions*, e.g. Water Division (service area and O&M related issues); and *other departments* as appropriate, e.g. Planning Department (master planning, traffic planning), Fire Department (fire flows and hydrant locations).

5.2. Meetings requiring the Consultant's participation will include:

- Kick-off meeting (combination Phases One and Two);
- Preliminary design report presentation and discussion (combination Phases One and Two);
- 50% design submittal (combination Phases One and Two);
- Utility companies coordination meeting (combination Phases One and Two);
- 65% Plans and Specifications Review (Phase One);
- 95% Plans and Specifications Review (Phase One);
- Prebid Conference (Phase One);
- 65% Plans and Specifications Review (Phase Two);
- 95% Plans and Specifications Review (Phase Two);
- Prebid Conference (Phase Two).

5.3. Meetings the Consultant may need to attend as negotiated, which may include:

- Preconstruction Conference;
- Construction Progress Meetings; and
- Post Construction Meeting.

5.4. Submittals required during the design phase include:

- Preliminary Design and Report (Phases One and Two);
- 50% Plans and Specifications (Phases One and Two);
- 65% Plans and Specifications (Phase One);
- 95% Plans and Specifications (Phase One);
- 100% Plans and Specifications (Phase One);
- 65% Plans and Specifications (Phase Two);

- 95% Plans and Specifications (Phase Two); and,
- 100% Plans and Specifications (Phase Two).

PROJECT SCHEDULE

Contract Negotiations Complete	July 27, 2000
Notice to Proceed with Design	August 8, 2000
Preliminary Design Submittal (Phase One & Two)	September 22, 2001
50% Design Submittal (Phase One & Two)	October 27, 2000
65% Design Submittal (Phase One)	November 24, 2000
95% Design Submittal (Phase One)	January 26, 2001
100% P&S Submittal (Phase One)	February 21, 2001
65% Design Submittal (Phase Two)	August 17, 2000
95% Design Submittal (Phase Two)	October 5, 2001
100 P&S Submittal (Phase Two)	October 31, 2001

ESTIMATED CONSTRUCTION SCHEDULE

Phase One

Open bids	March 29, 2001
Award construction contract	April 2, 2001
Begin construction	May 1, 2001
Complete construction	September 21, 2001

Phase Two

Open bids *****	February 28, 2002
Award construction contract	March 4, 2002
Begin construction	April 1, 2002
Complete construction	August 23, 2002

***** We would like to have Phase Two Plans and Specifications complete prior to November, 2001, so that we possibly could have a November bid opening as an option.

PROPOSAL SUBMISSION

Please submit three (3) copies of your proposal no later than 4:00 p.m., July 25, 2000.