



CITY of NOVI CITY COUNCIL

Agenda Item E
December 19, 2011

SUBJECT: Approval to award an engineering services agreement for design engineering of the Garfield Road Water Main project to URS Corporation, in the amount of \$40,944.

SUBMITTING DEPARTMENT: Department of Public Services, Engineering Division *BTU*

CITY MANAGER APPROVAL: *[Signature]*

EXPENDITURE REQUIRED	\$ 40,944
ADDITIONAL AMOUNT REQUIRED	\$ 40,944
LINE ITEM NUMBER	592-592.00-160.622

BACKGROUND INFORMATION:

This project includes the construction of approximately 3,850 LF of 12-inch water main along Garfield Road between Nine Mile and the second phase of Tuscany Reserve located near Garfield Road and Eight Mile Road. This project provides essential water main looping required for enhancing system reliability in Sections 29 and 32 and was recommended by the 2008 Distribution Study and Master Plan. As shown on the attached location map, the existing water mains serving Nine Mile Road and the developments along Eight Mile Road near Beck Road are long dead-end mains that are not looped. Water main loops provide redundancy in the event of service interruption and additional flow to maintain pressures in a service area.

The project would be combined with the already designed 12-inch water main within Tuscany Reserve Phase II per the Agreement for the Extension of Water Main with Novi Investment Company, LLC that was approved at the October 24, 2011 City Council meeting. The water main for the entire Tuscany Reserve development was designed and approved in 2006, but was later split into two phases, and only Phase I has been built. The agreement allows the City to construct the water main in Phase II along with the Garfield Road water main and requires the developer to pay the actual cost for the water main construction in Phase II.

The Garfield Road Water Main extension is currently proposed for FY14-15 in the Capital Improvement Program because it was unknown when construction of the Tuscany Reserve Phase II water main portion of the water main loop would begin. Now that an agreement is in place to facilitate the construction of the Tuscany Reserve water main, the project will be proposed for construction for FY12-13 in the next Capital Improvement Program. Staff recommends moving the project forward in the Capital Improvement Program because the water main loop will alleviate pressure concerns in this area, which in the past have decreased below the recommended 40 psi during peak demand periods. The project will also provide the necessary redundancy to maintain service to customers in the event of a water main failure in this part of the system.

Staff recommends URS Corporation (URS) be awarded the engineering services contract for this project. URS' engineering fees are based on the fixed fee schedule established in the Agreement for Professional Engineering Services for Public Projects for the City's three pre-qualified engineering consultants. The design fees for the Garfield Road Water Main project will be \$40,944 (6.9% of the estimated construction cost for the Garfield Road Water Main of \$593,385). There are no design fees for the Tuscany Reserve Phase II water main because the water main has already been designed and approved as part of the site plan review process. The construction phase engineering fees will be awarded at the time of construction award and will be based on the contractor's bid and the fee percentage in the Agreement for Professional Engineering Services for Public Projects. The construction phase will include both the Garfield Road and the Tuscany Reserve Phase II water main. A draft of the Supplemental Professional Engineering Services Agreement for this project is enclosed and includes the project scope and schedule.

Construction of the Garfield Road water main and the Tuscany Reserve Phase II water main is proposed for completion during the 2012 construction season.

RECOMMENDED ACTION: Approval to award an engineering services agreement for design engineering of the Garfield Road Water Main project to URS Corporation, in the amount of \$40,944.

	1	2	Y	N
Mayor Gatt				
Mayor Pro Tem Staudt				
Council Member Casey				
Council Member Fischer				

	1	2	Y	N
Council Member Margolis				
Council Member Mutch				
Council Member Wrobel				

Water Main Locations

Location Map



Proposed Water Main
Novi CIP Project

Proposed Water Main
on Tuscany Reserve
approved site plan

Map Author: Brian Coburn
Date: 11/7/11
Project:
Version #: v2.0



City of Novi

Engineering Division
Department of Public Services
26300 Delwal Drive
Novi, MI 48375
cityofnovi.org



1 inch = 1,200 feet

Map Legend

	Tuscany 2 Water Main		10		30
	Prop WM Garfield		12		30 DMS
	2		16		36
	4		20		42 DMS
	6		24		
	8		24 DMS		

SUPPLEMENTAL PROFESSIONAL ENGINEERING SERVICES AGREEMENT

GARFIELD ROAD WATER MAIN

This Agreement shall be considered as made and entered into as of the date of the last signature hereon, and is between the City of Novi, 45175 W. Ten Mile Road, Novi, MI 48375-3024, hereafter, "City," and URS Corporation – Great Lakes., whose address is 27777 Franklin Road, Suite 2000, Southfield, MI 48034, hereafter, "Consultant."

RECITALS:

This Agreement shall be supplemental to, and hereby incorporates the terms and conditions of the AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES FOR PUBLIC PROJECTS, and attached exhibits, entered into between the City and the Consultant on September 24, 2009.

The project includes the design and the preparation of plans and specifications for the construction of water main from Nine Mile Road to the proposed entrance for Phase II of the Tuscany Reserve residential development. The design will also include coordination as necessary to allow for the construction of the Tuscany Reserve Phase II water main along with the Garfield Road water main as one project.

NOW, THEREFORE, in consideration of the foregoing, the City and Consultant agree as follows:

Section 1. Professional Engineering Services.

For and in consideration of payment by the City as provided under the "Payment for Engineering Services" section of this Agreement, Consultant shall perform the work described in the manner provided or required by the following Scope of Services, which is attached to and made a part of this Agreement as Exhibit A, all of said services to be done in a competent, efficient, timely, good and workmanlike manner and in compliance with all terms and conditions of this Agreement.

Exhibit A Scope of Services

Section 2. Payment for Professional Engineering Services.

1. Basic Fee.

- a. Design Phase Services: The Consultant shall complete the design phase services as described herein for a lump sum fee of \$40,944, which is 6.90% of the estimated construction cost (\$593,385) as indicated on the design and construction engineering fee curve provided in Exhibit B of the Agreement for Professional Engineering Services for Public Projects.
- b. Construction Phase Services will be awarded at the time of construction award, should it occur.

2. Payment Schedule for Professional Engineering Services Fee.

Consultant shall submit monthly statements for professional engineering services rendered. The statements shall be based on Consultant's estimate of the proportion of the total services actually completed for each task as set forth in Exhibit A at the time of billing. The City shall confirm the correctness of such estimates, and may use the City's own engineer for such purposes. The monthly statements should be accompanied by such properly completed reporting forms and such other evidence of progress as may be required by the City. Upon such confirmation, the City shall pay the amount owed within 30 days.

Final billing under this agreement shall be submitted in a timely manner but not later than three (3) months after completion of the services. Billings for work submitted later than three (3) months after completion of services will not be paid. Final payment will be made upon completion of audit by the City.

3. Payment Schedule for Expenses.

All expenses required to complete the scope of services described herein, including but not limited to costs related to mileage, vehicles, reproduction, computer use, etc., shall be included in the basic fee and shall not be paid separately. However, as compensation for expenses that are not included in the standard scope of services, when incurred in direct connection with the project, and approved by the City, the City shall pay the Consultant its actual cost times a factor of 1.15.

Section 4. Ownership of Plans and Documents; Records.

1. Upon completion or termination of this agreement, all documents prepared by the Consultant, including tracings, drawings, estimates, specifications, field notes, investigations, studies, etc., as instruments of service shall become the property of the City.

2. The City shall make copies, for the use of the Consultant, of all of its maps, records, laboratory tests, or other data pertinent to the work to be performed by the Consultant under this Agreement, and also make available any other maps, records, or other materials available to the City from any other public agency or body.

3. The Consultant shall furnish to the City, copies of all maps, records, field notes, and soil tests that were developed in the course of work for the City and for which compensation has been received by the Consultant.

Section 5. Termination.

1. This Agreement may be terminated by either party upon 7- days' prior written notice to the other party in the event of substantial failure by the other party to fulfill its obligations under this agreement through no fault of the terminating party.

2. This Agreement may be terminated by the City for its convenience upon 90 days' prior written notice to the Consultant.

3. In the event of termination, as provided in this Article, the Consultant shall be paid as compensation in full for services performed to the date of that termination, an amount calculated in accordance with Section 2 of this Agreement. Such amount shall be paid by the City upon the Consultant's delivering or otherwise making available to the City, all data, drawings, specifications, reports, estimates, summaries, and that other information and materials as may have been accumulated by the Consultant in performing the services included in this Agreement, whether completed or in progress.

Section 6. Disclosure.

The Consultant affirms that it has not made or agreed to make any valuable gift whether in the form of service, loan, thing, or promise to any person or any of the person's immediate family, having the duty to recommend, the right to vote upon, or any other direct influence on the selection of consultants to provide professional engineering services to the City within the two years preceding the execution of this Agreement. A campaign contribution, as defined by Michigan law shall not be considered as a valuable gift for the purposes of this Agreement.

Section 7. Insurance Requirements.

1. The Consultant shall maintain at its expense during the term of this Agreement, the following insurance:

- A. Worker's Compensation insurance relative to all Personnel engaged in performing services pursuant to this Agreement, with coverage not less than that required by applicable law.
- B. Comprehensive General Liability insurance with maximum bodily injury limits of \$1,000,000 (One Million Dollars) each occurrence and/or aggregate and minimum Property Damage limits of \$1,000,000 (One Million Dollars) each occurrence and/or aggregate.
- C. Automotive Liability insurance covering all owned, hired, and non-owned vehicles with Personal Protection insurance to comply with the provisions of the Michigan No Fault Insurance Law including Residual Liability insurance with minimum bodily injury limits of \$1,000,000 (One Million Dollars) each occurrence and/or aggregate minimum property damage limits of \$1,000,000 (One Million Dollars) each occurrence and/or aggregate.
- D. The Consultant shall provide proof of Professional Liability coverage in the amount of not less than \$1,000,000 (One Million Dollars) per claim and/or aggregate, and Environmental Impairment coverage. The retroactive date indicated on the policy shall either be unlimited, or, shall be the date that the Consultant established its initial coverage.

In the event that Consultant is sold or dissolved, Consultant shall provide purchase, at its expense, a "tail" or extended reporting period for the professional liability coverage for a period not less than 5 years.

2. The Consultant shall be responsible for payment of all deductibles contained in any insurance required hereunder.

3. If during the term of this Agreement changed conditions or other pertinent factors should in the reasonable judgment of the City render inadequate insurance limits, the Consultant will furnish on demand such additional coverage as may reasonably be required under the circumstances. All such insurance shall be effected at the Consultant's expense, under valid and enforceable policies, issued by the insurers of recognized responsibility which are well-rated by national rating organizations and are acceptable to the City.

4. All policies shall name the Consultant as the insured and shall be accompanied by a commitment from the insurer that such policies shall not be canceled or reduced without at least thirty (30) days prior notice to the City.

With the exception of professional liability, all insurance policies shall name the City of Novi, its officers, agents, and employees as additional insured. Certificates of Insurance evidencing such coverage shall be submitted to Sue Morianti, Purchasing Manager, City of Novi, 45175 West Ten Mile Road, Novi, MI 48375-3024 prior to commencement of performance under this Agreement and at least fifteen (15) days prior to the expiration dates of expiring policies.

5. If any work is sublet in connection with this Agreement, the Consultant shall require each subconsultant to effect and maintain at least the same types and limits of insurance as fixed for the Consultant.

6. The provisions requiring the Consultant to carry said insurance shall not be construed in any manner as waiving or restricting the liability of the Consultant under this Agreement.

Section 8. Indemnity and Hold Harmless.

A. The Consultant agrees to hold harmless and indemnify the City, its officers, agents, employees from and against all claims, demands, suits liability, losses, damages or costs (including reasonable attorney fees and costs) arising out, of or resulting from the Consultant's tortious or negligent acts, errors, or omissions in performing this Agreement.

B. The City agrees, to the extent permitted by law, to indemnify and hold harmless the Consultant, its officers, partners, employees, stockholders, and sub-consultants (collectively Consultant) from and against any and all claims, suits, demands, liability, losses, damages or costs, including reasonable attorney's fees and costs arising out of or resulting from the City's tortious or negligent acts or errors in performing this Agreement.

C. Section 8(B) of this Agreement shall not apply to individual design and/or construction management projects.

The Consultant agrees that it is its responsibility and not the responsibility of the City to safeguard the property and materials used in performing this Agreement. Further, this Consultant agrees to hold the City harmless for any loss of such property and materials used pursuant to the Consultant's performance under this Agreement.

Section 9. Nondiscrimination.

The Consultant shall not discriminate against any employee, or applicant for employment because of race, color, sex, age or handicap, religion, ancestry, marital status, national origin, place of birth, or sexual preference. The Consultant further covenants that it will comply with the Civil Rights Act of 1973, as amended; and the Michigan Civil Rights Act of 1976 (78. Stat. 252 and 1976 PA 4563) and will require a similar covenant on the part of any consultant or subconsultant employed in the performance of this Agreement.

Section 10. Applicable Law.

This Agreement is to be governed by the laws of the State of Michigan and the City of Novi Charter and Ordinances.

Section 11. Approval; No Release.

Approval of the City shall not constitute nor be deemed release of the responsibility and liability of Consultant, its employees, associates, agents and subconsultants for the accuracy and competency of their designs, working drawings, and specifications, or other documents and services; nor shall that approval be deemed to be an assumption of that responsibility by the City for any defect in the designs, working drawings and specifications or other documents prepared by Consultant, its employees, subconsultants, and agents.

After acceptance of final plans and special provisions by the City, Consultant agrees, prior to and during the construction of this project, to perform those engineering services as may be required by City to correct errors or omissions on the original plans prepared by Consultant and to change the original design as required.

Section 12. Compliance With Laws.

This Contract and all of Consultants professional services and practices shall be subject to all applicable state, federal and local laws, rules or regulations, including without limitation, those which apply because the City is a public governmental agency or body. Consultant represents that it is in compliance with all such laws and eligible and qualified to enter into this Agreement.

Section 13. Notices.

Written notices under this Agreement shall be given to the parties at their addresses on page one by personal or registered mail delivery to the attention of the following persons:

City: Rob Hayes, P.E., Director of Public Services and Maryanne
Cornelius, Clerk, with a copy to Thomas R. Schultz, City Attorney

Consultant: Jan M. Hauser, P.E., Vice President Water/Wastewater

Section 14. Waivers.

No waiver of any term or condition of this Agreement shall be binding and effective unless in writing and signed by all parties, with any such waiver being limited to that circumstance only and not applicable to subsequent actions or events.

Section 15. Inspections, Notices, and Remedies Regarding Work.

During the performance of the professional services by Consultant, City shall have the right to inspect the services and its progress to assure that it complies with this Agreement. If such inspections reveal a defect in the work performed or other default in this Agreement, City shall provide Consultant with written notice to correct the defect or default within a specified number of days of the notice. Upon receiving such a notice, Consultant shall correct the specified defects or defaults within the time specified. Upon a failure to do so, the City may terminate this Agreement by written notice and finish the work through whatever method it deems appropriate, with the cost in doing so being a valid claim and charge against Consultant; or, the City may preserve the claims of defects or defaults without termination by written notice to Consultant.

All questions which may arise as to the quality and acceptability of work, the manner of performance and rate of progress of the work, and the interpretation of plans and specifications shall be decided by the City. All questions as to the satisfactory and acceptable fulfillment of the terms of this agreement shall be decided by the City.

Section 16. Delays.

No charges or claims for damages shall be made by the Consultant for delays or hindrances from any cause whatsoever during the progress of any portions of the services specified in this agreement, except as hereinafter provided.

In case of a substantial delay on the part of the City in providing to the Consultant either the necessary information or approval to proceed with the work, resulting, through no fault of the Consultant, in delays of such extent as to require the Consultant to perform its work under changed conditions not contemplated by the parties, the City will consider supplemental compensation limited to increased costs incurred as a direct result of such delays. Any claim for supplemental compensation must be in writing and accompanied by substantiating data.

When delays are caused by circumstances or conditions beyond the control of the Consultant as determined by the City, the Consultant shall be granted an extension of time for such reasonable period as may be mutually agreed upon between the parties, it being understood, however, that the permitting of the Consultant to proceed to complete the services, or any part of them, after the date to which the time of completion may have been extended, shall in no way operate as a waiver on the part of the City of any of its rights herein set forth.

Section 17. Assignment.

No portion of the project work, heretofore defined, shall be sublet, assigned, or otherwise disposed of except as herein provided or with the prior written consent of the City. Consent to sublet, assign, or otherwise dispose of any portion of the services shall not be construed to relieve the Consultant of any responsibility for the fulfillment of this agreement.

Section 18. Dispute Resolution.

The parties agree to try to resolve any disputes as to professional engineering services or otherwise in good faith. In the event that the parties cannot resolve any reasonable dispute, the parties agree to seek alternative dispute resolution methods agreeable to both parties and which are legally permissive at the time of the dispute. The parties agree to use their best efforts to resolve any good faith dispute within 90 (ninety) days notice to the other party. In the event the

parties cannot resolve that dispute as set forth above, they may seek such remedies as may be permitted by law.

WITNESSES

URS Corporation – Great Lakes

By: Jan M. Hauser
Its: Vice President

The foregoing _____ was acknowledged before me this ____ day of _____,
20 ____, by _____ on behalf of

_____.

Notary Public
____ County, Michigan
My Commission Expires: _____

WITNESSES

CITY OF NOVI

By:
Its:

The foregoing _____ was acknowledged before me this ____ day of _____,
20 ____, by _____ on behalf of the City of Novi.

Notary Public
Oakland County, Michigan
My Commission Expires: _____

EXHIBIT A - SCOPE OF SERVICES

Consultant shall provide the City professional engineering services in all phases of the Project to which this Agreement applies as hereinafter provided. These services will include serving as the City's professional engineering representative for the Project, providing professional engineering consultation and advice and furnishing customary civil, structural, mechanical and electrical engineering services and customary engineering services incidental thereto, as described below.

A. Basic Services.

[see attached]

B. Performance.

1. The Consultant agrees that, immediately upon the execution of this Agreement, it will enter upon the duties prescribed in this agreement, proceed with the work continuously, and make the various submittals on or before the dates specified in the attached schedule. The City is not liable and will not pay the Consultant for any services rendered before written authorization is received by the Consultant.
2. The Consultant shall submit, and the City shall review and approve a timeline for submission of plans and/or the completion of any other work required pursuant to this Scope of Services. The Consultant shall use its best efforts to comply with the schedule approved by the City.
3. If any delay is caused to the Consultant by order of the City to change the design or plans; or by failure of the city to designate right-of-way, or to supply or cause to be supplied any data not otherwise available to the Consultant that is required in performing the work described; or by other delays due to causes entirely beyond the control of the Consultant; then, in that event, the time schedules will be adjusted equitably in writing, as mutually agreed between the City and the Consultant at the moment a cause for delay occurs.
4. Since the work of the Consultant must be coordinated with the activities of the City (including firms employed by and governmental agencies and subdivisions working with the City), the Consultant shall advise the City in advance, of all meetings and conferences between the Consultant and any party, governmental agency, political subdivision, or third party which is necessary to the performance of the work of the Consultant.

WORK PLAN AND SCHEDULE

Background

The City of Novi will be completing a water main project by installing a new main on Garfield Road between Nine Mile Road and Chianti Drive (entrance to Tuscany Reserve), in accordance with recommendations in the 2008 Water Master Plan. The water main project will consist of installing a 12-inch water main, with isolation gate valves and wells, hydrants and service connections. The water main will run within the existing right-of-way. Surfaces disturbed by the construction will be restored.

The project will include construction of the water main within the Tuscany Reserve – Phase 2 development. This portion of the project has previously been designed (by others).

Work Plan

This work plan describes URS' approach to providing engineering services for the Garfield Road Water Main. Our approach will focus on meeting the City's needs for looping of mains as described in the Water Master Plan.

Components of the engineering services include the following:

- Topographic survey
- Soil borings and geotechnical analysis
- Preliminary design
- Construction plans and specifications
- Permitting
- Bid phase assistance
- Construction phase services

To complete this project in an efficient manner URS proposes to break it into four tasks.

Task 1: Topographic survey, geotechnical analysis and preliminary design;

Task 2: Preparation of construction plans and specifications and permitting;

Task 3: Bid phase assistance

Task 4: Construction Administration.

Each of these four tasks has specific subtasks and deliverables that are described in the following paragraphs:

WORK PLAN AND SCHEDULE

Task 1: Topographic Survey, Geotechnical Analysis and Preliminary Design

In this task URS will obtain and review existing information, such as the Tuscan Reserve and Nine Mile Road water system plans, Novi/Oakland County standard details and specifications and benchmark data; complete a topographic survey of the project area; coordinate with utility companies to obtain information on site utilities; and complete soil borings along the route to assess soil and groundwater conditions to be encountered. Three soil borings will be completed to a depth of 10 ft. A geotechnical report will be prepared to provide recommendations for excavation and dewatering.

Based on the survey and utility information, an existing site plan will be prepared, indicating site contours, utility locations and elevations, benchmark data and property boundary information. Preliminary design (30%) will be completed to illustrate the location and extent of the proposed improvements.

Deliverables will include preliminary plans, specifications and a cost estimate to meet the City's desire to review 30% complete plans. Technical memorandum discussing the results of the geotechnical analysis will also be provided.

Task 2: Preparation of construction plans/specifications and permitting

After reviewing and discussing the preliminary plans with the City, the concepts and comments in the preliminary plans will be finalized into plans suitable for bidding and construction. An updated construction cost estimate will be prepared. Specifications and a Soil Erosion and Sedimentation Control (SESC) plan will be developed for the construction activities during this phase.

The Garfield Road and Tuscan Reserve – Phase 2 portions of the project will be bid together, but as separate line items.

Deliverables for this phase will include final plans, specifications, updated cost estimate and a SESC plan. Plans will be provided to the City at 90% completion for review. Comments and changes will be incorporated and final plans completed for bidding. Permit applications (RCOC, MDEQ, etc.) will be developed and submitted as part of this task.

WORK PLAN AND SCHEDULE

Task 3: Bid phase assistance

Upon approval of the final design documents, URS will prepare bid documents and provide assistance to the City with bidding of the project. Bidding assistance will include coordinating and facilitating the pre-bid meeting, preparing contract addenda, making plan revisions, responding to bidder inquiries, review of bids and preparing a recommendation of award.

Task 4: Construction administration

URS will provide construction administration services that will include the activities listed below.

- Reviewing shop drawings;
- Coordinating/ running pre-construction meeting;
- Reviewing compliance with contract documents;
- Consultation with City Engineering staff;
- Interpretation of plans and specifications;
- Preparation and certification of pay estimates;
- Construction Staking;
- Construction inspection during active construction;
- Administering the soil erosion and sedimentation control plan;
- Attend to resident concerns and complaints, and;
- Prepare record drawings within 3 months of construction completion.

Deliverables for this task include meeting minutes, daily inspection reports, and preparation of record drawings.

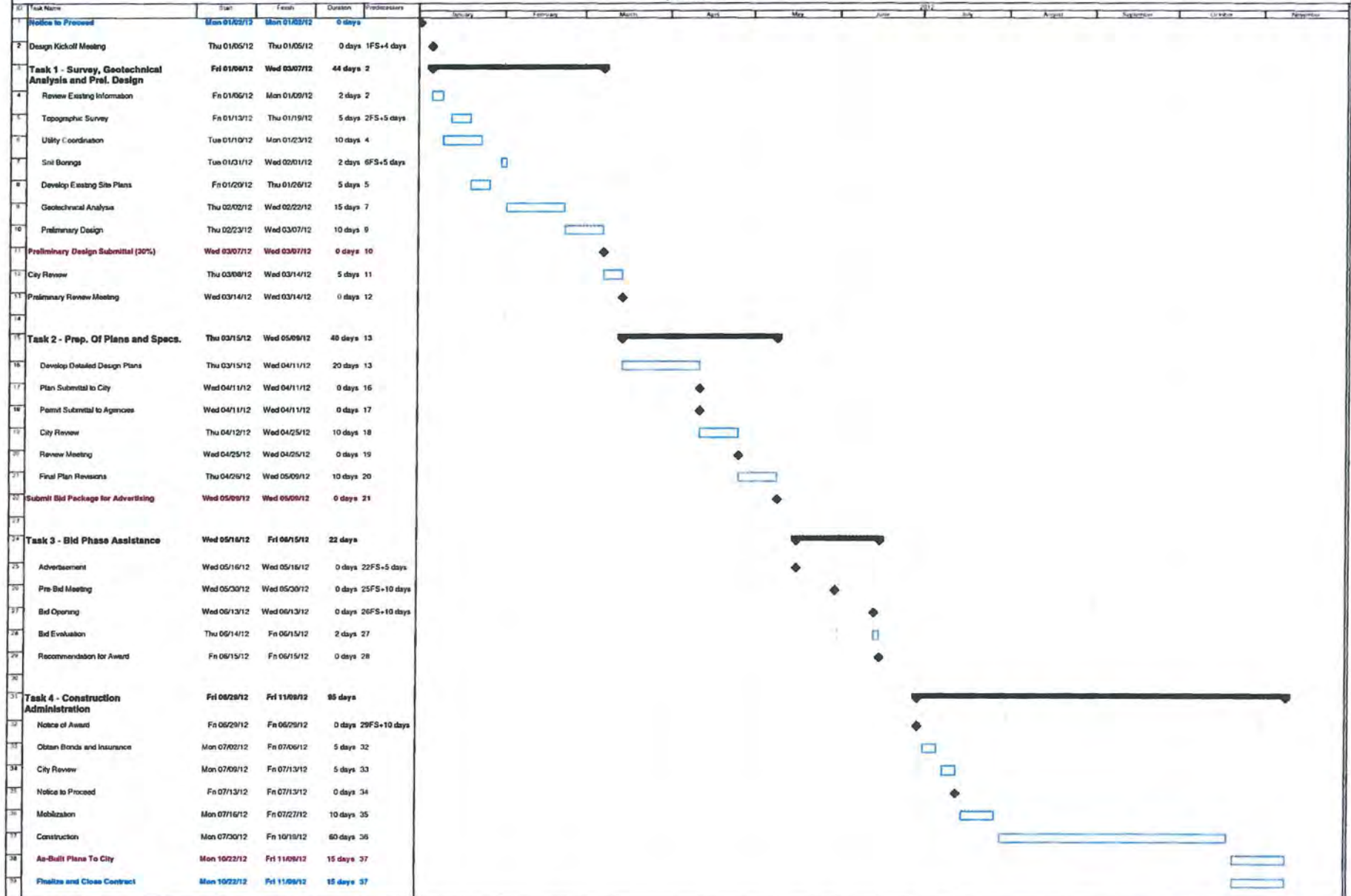
Schedule

A bar chart schedule for completion of the design of the improvements is attached.

Project Implementation Schedule

Garfield Road Water Main

City of Novi



CONSTRUCTION COST ESTIMATE

Provided below is a description of the work to be performed for the Garfield Road water main design, along with assumption used in preparing the construction cost estimate for the project. The construction cost estimates are included in the attached tables

Work Included

- 12-inch water main constructed from Nine Mile Road to Chianti Drive (3,850 l.f.);
- Gate valves and wells at 800 ft. max. intervals;
- Hydrants at 500 ft. max. intervals;
- Restoration of unpaved surfaces and driveway crossings;
- 30 service connections to right-of-way and surface/pavement restoration;

Assumptions

Assumptions made in preparing the construction cost estimate are shown below:

- Construction duration of 10 to 12 weeks;
- Water main to run within existing right-of-way;
- 6-ft. depth of bury;
- Groundwater control may be necessary

A separate estimate of the water system for the Tuscany Reserve Phase II has been prepared from the estimated quantities shown on Sheet 2 of the Composite Utility Plan prepared by Seiber, Keast & Associates, Inc., dated May 5, 2004. This estimate was included to establish the total estimated project cost for purposes of calculating the construction administration fee.

URS Corporation

City of Novi, MI

Garfield Road / Tuscany Reserve Phase 2 Water Main

Preliminary Opinion of Probable Cost

Monday, November 28, 2011

ITEM DESCRIPTION	QUANTITIES	UNIT	UNIT PRICE	TOTAL PRICE
Mobilization	1	LS	\$2,500.00	\$ 2,500.00
Bonds and Insurance	1	LS	\$6,000.00	\$ 6,000.00
General Conditions	1	LS	\$5,000.00	\$ 5,000.00
Excavation	17,750	CY	\$4.00	\$ 71,000.00
12-Inch Water Main	3,850	LF	\$65.00	\$ 250,250.00
Fittings - 45 deg.	6	EA	\$500.00	\$ 3,000.00
Fittings - 90 deg.	1	EA	\$525.00	\$ 525.00
Fittings - 12" x 6" Tee	8	EA	\$470.00	\$ 3,760.00
Granular Materials	600	CY	\$35.00	\$ 21,000.00
Backfill and Compaction	17,150	CY	\$5.00	\$ 85,750.00
Valves - 12-Inch	4	EA	\$2,750.00	\$ 11,000.00
Gate Wells	4	EA	\$2,500.00	\$ 10,000.00
Tapping Sleeves - 16" x 12"	1	EA	\$2,500.00	\$ 2,500.00
Tapping Valve - 12"	1	EA	\$2,750.00	\$ 2,750.00
Hydrants	7	EA	\$6,750.00	\$ 47,250.00
Service Conections - 1"	30	EA	\$1,200.00	\$ 36,000.00
Groundwater Control	1	LS	\$7,500.00	\$ 7,500.00
Testing	1	LS	\$7,500.00	\$ 7,500.00
Pavement and Driveway Restoration	300	SY	\$15.00	\$ 4,500.00
Restoration	5,200	SY	\$3.00	\$ 15,600.00
SUB-TOTAL				\$ 593,385

Contingency 10% \$ 59,339

TOTAL ESTIMATED CONSTRUCTION COST - GARFIELD ROAD \$ 652,724

Design Engineering 6.9% \$ 40,943.57

URS Corporation

City of Novi, MI

Tuscany Reserve Phase 2 Water Main

Preliminary Opinion of Probable Cost

Monday, November 21, 2011

ITEM DESCRIPTION	QUANTITIES	UNIT	UNIT PRICE	TOTAL PRICE	Means
Mobilization	1	LS	\$1,500.00	\$ 1,500.00	
Bonds and Insurance	1	LS	\$3,000.00	\$ 3,000.00	
General Conditions	1	LS	\$2,500.00	\$ 2,500.00	
Excavation	13,050	CY	\$3.50	\$ 45,675.00	3.37
12-Inch Water Main	2,828	LF	\$65.00	\$ 183,820.00	64
8-Inch Water Main	0	LF	\$45.00	\$ -	46
Fittings - 45 deg.	4	EA	\$500.00	\$ 2,000.00	
Fittings - 90 deg.	0	EA	\$525.00	\$ -	
Fittings - 12" x 12" Tee	2	EA	\$2,200.00	\$ 4,400.00	2350
Granular Materials	435	CY	\$35.00	\$ 15,225.00	39
Backfill and Compaction	12,615	CY	\$5.00	\$ 63,075.00	5.05
Valves - 12-Inch	5	EA	\$2,750.00	\$ 13,750.00	2650 (2009)
Gate Wells	5	EA	\$2,500.00	\$ 12,500.00	2400 (2009)
Valves - 8-Inch	0	EA	\$1,500.00	\$ -	1375 (2009)
Gate Wells	0	EA	\$2,750.00	\$ -	2400 (2009)
Hydrants	7	EA	\$6,750.00	\$ 47,250.00	6650 (2009)
Service Connections - 1"	24	EA	\$1,200.00	\$ 28,800.00	1165 (2009)
Groundwater Control	1	LS	\$5,000.00	\$ 5,000.00	
Testing	1	LS	\$1,500.00	\$ 1,500.00	
Pavement and Driveway Restoration	0	SY	\$15.00	\$ -	
Restoration	0	SY	\$3.00	\$ -	
SUB-TOTAL				\$ 429,995	
Contingency			0%	\$ -	
TOTAL ESTIMATED CONSTRUCTION COST				\$ 429,995	