



cityofnovi.org

CITY of NOVI CITY COUNCIL

Agenda Item 1
August 13, 2012

SUBJECT: Approval to award an amendment to the engineering services agreement with Spalding DeDecker Associates, Inc. (SDA) related to the 2012 Capital Preventative Maintenance road program in the amount of \$15,713.

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

CITY MANAGER APPROVAL: *[Signature]*

EXPENDITURE REQUIRED	\$ 15,712.80
AMOUNT BUDGETED	\$ 0 (rollover \$137,500 remaining in FY11-12 budget)
LINE ITEM NUMBER	202-202.00-866.500 (Major Roads)

BACKGROUND INFORMATION:

One of the primary goals of the Department of Public Services' asset management program is the preservation of the City's roadways to prevent costly reconstruction. Some preventative and most routine maintenance including crack sealing, road patching, curb repairs, and shoulder grading are routinely performed by in-house DPS staff to help keep the good roads in good condition. However, a key component of road preservation is capital preventative maintenance, which is maintenance that is more resource-intensive but less costly than reconstruction. The objective of preventative maintenance is to preserve good quality roads using lower-cost rehabilitation techniques, rather than allowing the roads to deteriorate to a point that requires road reconstruction involving much more effort at a higher cost. Novi's preventative maintenance program, in conjunction with the other road programs, is intended to result in an overall improvement in the quality of the City's roadways and increase the overall PASER rating for the roadway network. The City Council approved a Capital Preventative Maintenance Program (CPM) as part of the FY11-12 budget to help improve the City's local and major roadways to limit further deterioration of existing pavement defects and extend the service life of the pavement. Preventative maintenance typically addresses discrete areas or short segments of streets containing relatively minor pavement defects.

The FY11-12 CPM program originally included both major and local roadways, but the local roadways were later included with the neighborhood road program once it was determined that cost savings could be realized by combining with the similar neighborhood road work. The following major roadway segments have been selected for this year's program:

Road Segment	From	To	PASER
Wixom Road	Island Lake Drive	City Limits	7
Eleven Mile	Meadowbrook Road	Limits of Asphalt	4

Three different asphalt pavement treatment methods were proposed in this year's program: 1) traditional 2" mill and overlay, 2) 1-1/2" mill and overlay with a fabric interlayer to resist reflective cracking, and 3) a fiber-reinforced membrane to resist reflective cracking followed by a double micro-surface application. Construction bids for the third method were originally solicited without the other treatment options in June 2012; however, only one bid was received. That bid was ultimately rejected because some of the unit prices for the work could not be justified. Therefore, the bid package was modified to re-bid a project that includes the original treatment method along with the more traditional treatment methods with the intent to get more interest in the project and to invite more contractors to bid on the project.

After reviewing the bids received, Option 2 is being recommended. This rehabilitation treatment method involving a 1-1/2" mill and overlay combined with a fabric interlayer placed within the asphalt to resist reflective cracking is expected to yield the best long-term performance for this pavement. This type of fabric interlayer is an emerging technology being used more frequently in pavement cross-sections to resist cracking and provide a waterproof barrier within the pavement, ultimately extending the service life of the pavement.

The construction phase engineering fees are determined using two components: 1) the contract administration fee, which is determined using the fee percentage in Exhibit B of the Agreement For Professional Engineering Services for Public Projects, and 2) the construction inspection fee determined using a cost per inspection (crew) day from Exhibit B of the consultant's agreement that is then multiplied by the number of days of inspection specified by the contractor. The construction phase fees for this project include a contract administration fee of \$8,792.80 (5.5% of the \$159,869 construction bid) and an inspection fee of \$4,920 (\$615 per crew day, multiplied by the 8 days provided in the contractor's bid) for a total of \$13,712.80. The total fee for SDA, including \$2,000 to re-bid the project with the additional options, is \$15,712.80.

The construction contract award is proposed for consideration elsewhere on this agenda. Construction is scheduled to begin in fall 2012 and completion is anticipated this construction season.

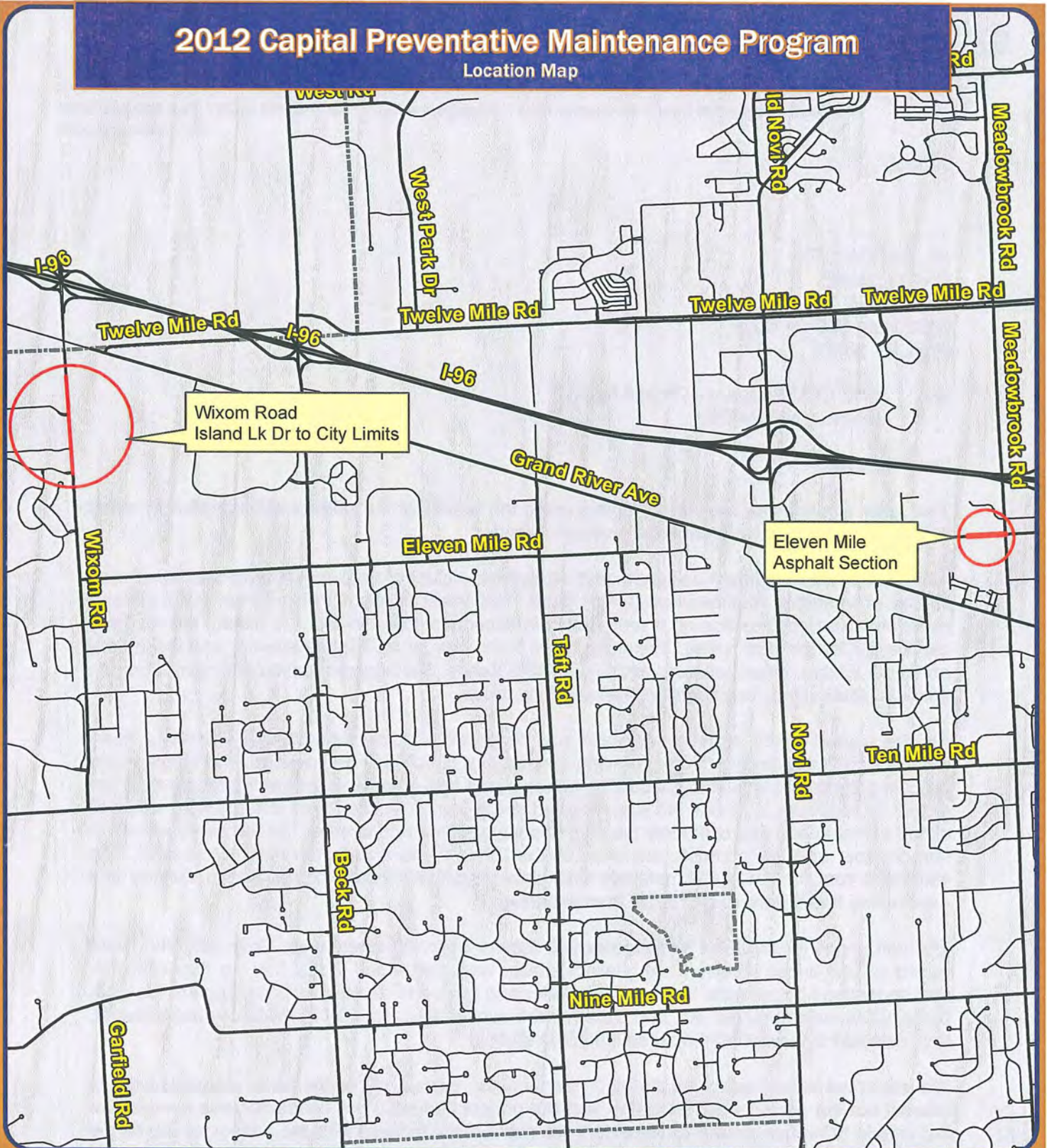
RECOMMENDED ACTION: Approval to award an amendment to the engineering services agreement with Spalding DeDecker Associates, Inc. (SDA) related to the 2012 Capital Preventative Maintenance road program in the amount of \$15,713.

	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				

2012 Capital Preventative Maintenance Program

Location Map



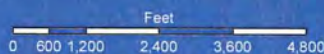
Map Author: Croy
 Date: 7/25/12
 Project: 2012 CPM
 Version #: v2.0



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

MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.



1 inch = 3,000 feet



June 27, 2012

Mr. Ben Croy, PE
Civil Engineer
City of Novi
26300 Lee BeGole Drive
Novi, MI 48375

Re: 2012 CPM Program – Project Re-Bid
Job No.: NV12-001

Dear Mr. Croy:

This letter summarizes the project to this point, the results of the original bid, decision to re-bid the project, and what we propose in moving forward.

The project was originally designed and advertised including both major road and local road capital preventative maintenance (CPM) work. The intent of the CPM program is to perform relatively minor construction on a road that is in decent condition in order to extend the roadway service life for the best value. The major road work was for all asphalt streets, and included a portion of Wixom, Meadowbrook, and Eleven Mile Roads. The concrete pavement repairs were in various subdivisions, for generally small patching areas.

For the asphalt roads, a novel approach was proposed to extend the roadway life via a fiber-reinforced membrane and micro-surfacing instead of a typical mill and overlay. The intent based on past project bids was that it would be cheaper and last at least as long if not longer than the typical fix. However, only one bid was received and the price for the major roads (HMA) was well above estimate and approximately the same as a typical mill and overlay. As the bids were not in fact cheaper and the products unproven in the City, paying a premium was not desired. The estimated cost for the novel materials was close to bid, but costs for pavement marking and maintaining traffic were much higher than expected.

The unit prices for the local streets concrete repairs were extremely high. Cost estimates were based on unit prices received last year for similar work performed in the City, so this work was well understood by potential bidders. The bidder was unable to explain the pricing due to the work being 100% subcontracted out, and stated of the quotes they received from local subcontractors, they selected the lowest and marked it up only slightly.

We attempted to negotiate with the bidding contractor, explained that the novel materials were of interest but the pricing was not in line with the project budgets. The contractor was cooperative but unable to reduce pricing to the extent we could move forward with the project as let, so the bid was rejected and the project will be re-advertised after some changes are made.



SPALDING DEDECKER ASSOCIATES, INC.

905 South Boulevard East • Rochester Hills • Michigan 48307 • Tel 248 844 5400 • Fax 248 844 5404
www.sda-eng.com

At this time, based on our discussions the project will be modified as follows and re-bid:

- Delete the local roads (concrete repairs) from the project. Having two very different types of work on such a small job is undesirable for prime firms and may have limited the number of bids.
- Delete Meadowbrook from this year's program
- Allow for alternate pavement rehabilitation methods in the bid:
 - fiber membrane and micro-surface (as in original bid)
 - mill 1.5 inches, place an interlayer material, overlay 1.5 inches
 - mill 2 inches, overlay 2 inches
(the above options are subject to change as materials are investigated and vetted, and estimates updated)

The intent will be to allow bidder's the opportunity to submit prices for one or up to all three methods, either of which would be a good fix. The option selected would need to be within the available funding, which is approximately \$127,000 for construction. It is hoped that by presenting greater competition for the fix used in the project, the providers of the novel materials will be more inclined to provide aggressive pricing to ensure their product is utilized. If in the end only a "traditional" mill and overlay is performed, the goals of the CPM program will still have been met.

Schedule

SDA will revise the log plans and proposal, and the project will be submitted to the MITN the week of July 9 for an August 1 bid open, council meeting approval August 13, construction in September.

Design Budget Amendment

SDA proposes to complete the work required to re-bid the project for an additional \$2,000, for a total project design budget of \$16,708.

Please contact me if any other information is required.

Sincerely,

SPALDING DEDECKER ASSOCIATES, INC.

David P. Eno, PE - Transportation Project Manager

attachment: 2012 CPM bid tabulation

Engineering Consultants

Infrastructure • Land Development • Surveying

**FIRST AMENDMENT TO THE
SUPPLEMENTAL PROFESSIONAL ENGINEERING SERVICES AGREEMENT**

2012 CAPITAL PREVENTATIVE MAINTENANCE ROAD PROGRAM

First Amended Agreement between the City of Novi, 45175 W. Ten Mile Road, Novi, MI 48375-3024, hereafter, "City," and Spalding DeDecker Associates, Inc., whose address is 905 South Boulevard East, Rochester Hills, MI 48307, hereafter, "Consultant," relating to modifications of the fee basis for engineering services. The following sections of the Supplemental Professional Engineering Services Agreement, as made and entered into on January 23, 2012 shall be amended as follows:

Section 2. Payment for Professional Engineering Services. The following Paragraphs shall be amended as follows:

1. Basic Fee.

a. *Unchanged*

b. Delete 1.b. in its entirety and replace with the following language:
Construction Phase Services: The Consultant shall complete the construction phase services as described herein according to the fee schedule as described below:

i. Contract Administration: The Consultant shall complete Contract Administration services for a lump sum fee of \$8,792.80, which is 5.50% of the awarded construction cost (\$159,869.00) as indicated on the Design and Construction Engineering Fee Curve, attached.
Construction Inspection: The Consultant shall complete Construction Inspection services for \$615 per crew day as described in the request for proposals. "Crew days" shall be defined by the construction contract documents as an 8 hour day. Crew days shall be billed in 4 hour increments rounded to the next half day, therefore a 10 hour day shall be 1.5 crew days, a 3 hour day is 0.5 crew days, a 6 hour day shall be 1.0 crew days. The minimum crew day charged for a no-show by the contractor shall be 2 hours (0.25 crew days) which is reflective of the actual cost to the Consultant for traveling to the site and traveling back to the office. There will be no payment to the consultant for extra crew days that were not charged to the contractor. The Consultant acknowledges that intent of using crew days for inspection services is to provide a method for the consultant to recoup costs associated with slow progress by the contractor.

2. *Unchanged*

Except as specifically set forth in this First Amendment, the Supplemental Professional Engineering Services Agreement remains in full force and effect.

WITNESSES

Spalding DeDecker Associates, Inc.

By: Maria Sedki, P.E.
Its: Project Manager

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: _____